

ZS-D55

SERVICE MANUAL

Ver 1.1 2002.02

AEP Model
UK Model
Tourist Model



TAPE Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	MF-ZSD55
CD Section	Model Name Using Similar Mechanism	ZS-D50
	MD Mechanism Type	CDM-2411AAA
	Optical Pick-up Type	DAX-01A2

SPECIFICATIONS

CD player section

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wave length: 780 nm

Emission duration: Continuous

Laser output: Less than 44.6 μ W (This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block 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/-1.2 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM : 87.5 - 108 MHz

MW : 531 - 1602 kHz

LM : 153 - 279 kHz

IF

FM : 10.7 MHz

MW/LW : 450 kHz

Aerials

FM : Telescopic aerial

MW/LW : Built-in ferrite bar aeraial

Cassette-corder section

Recording system

4-track 2 channel stereo

Fast winding time

Approx. 112 s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal): 50 - 15 000 Hz

General

Speaker

Full range: 8 cm (3 1/4 in.) dia., 12 Ω ,
cone type x 2

Input

LINE IN jack (stereo minijack)

Minimum input level 138 mV

Outputs

Headphones jack (stereo minijack)

For 8 - 32 Ω impedance headphones

LINE OUT jack (stereo minijack)

Rated output level 138 mV at load impedance

47 k Ω

OPTICAL DIGITAL OUT (CD) (optical output connector)

Wavelength: 630 - 690 nm

Maximum power output

5 W + 5 W

- Continued on page 2 -

PERSONAL AUDIO SYSTEM

9-927-927-32
2002B0200-1
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Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

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 control:
 3 V DC, 2 R6 (size AA) batteries

Power consumption
 AC 20 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. 3 h

Dimensions (incl. projecting parts)
 Approx. 486 x 244 x 177 mm (w/h/d)
 (17 1/10 x 9 7/8 x 6 9/10 inches)

Mass (incl. batteries)
 Approx. 6.2 kg (13 lb. 11 oz)

Supplied accessories
 Mainns Lead (1)
 Remote control (1)

Design and specifications are subject to change without notice.

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SECTION 1 SERVICE NOTE

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

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

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

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

NOTES ON LASER DIODE EMISSION CHECK

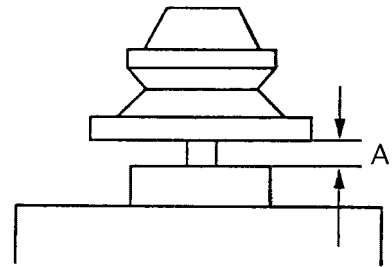
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Close the tray 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.

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.

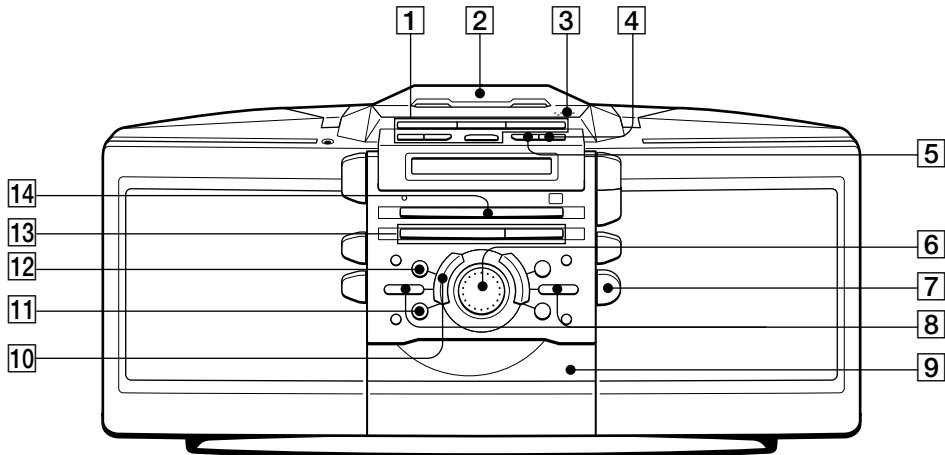


Specification : $A = 0.9 \text{ to } 1.1\text{mm}$

SECTION 2 GENERAL

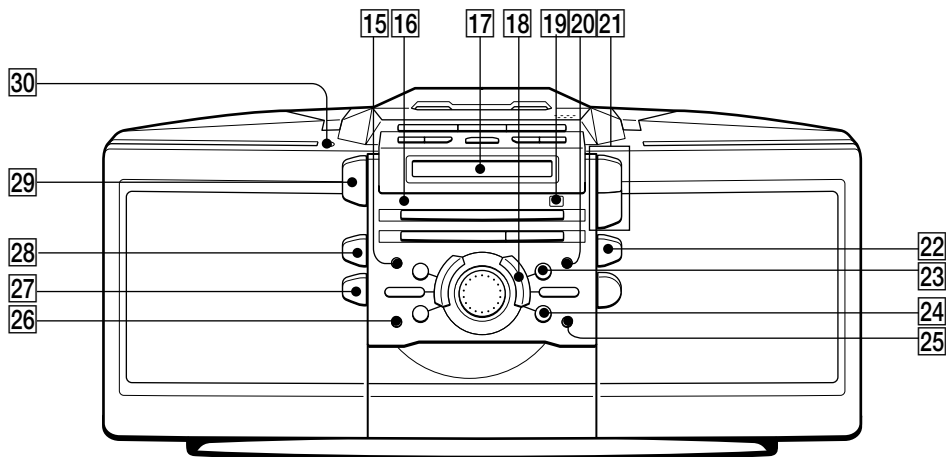
LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL : CD/RADIO/TAPE section



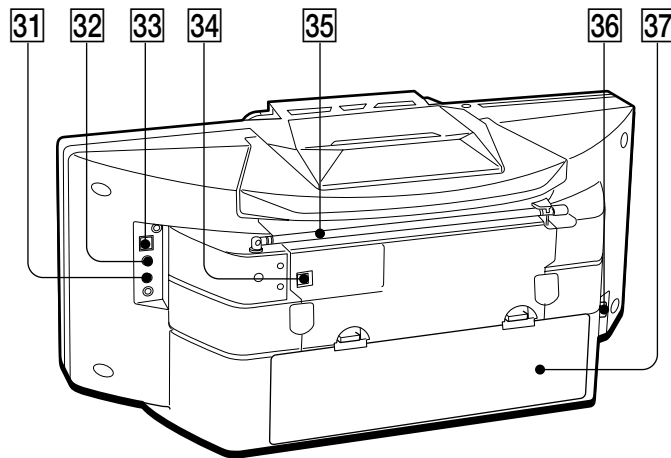
- | | | |
|---|---|--|
| <p>1 Tape operation buttons
 ●/ (REC/REC PAUSE)
 ◀◀, ▶▶ (FF/REW, AMS)
 ■ (STOP)
 ◀, ▶ (PLAY)</p> | <p>4 COUNTER RESET button
 5 DIR MODE button
 6 JOG dial
 7 ▲ CD OPEN/CLOSE button
 8 Radio operation buttons
 Tune - ◀◀, ▶▶ +</p> | <p>10 AUTO PRESET button
 11 CANCEL button
 12 CD DUB button
 13 CD operation buttons
 ▶▶ (PLAY/PAUSE)
 ■ (STOP)</p> |
| <p>2 Cassette lid
 3 ▲ PUSH OPEN/CLOSE</p> | <p>9 CD tray</p> | <p>14 BAND button</p> |

FRONT PANEL: TIMER/COM section



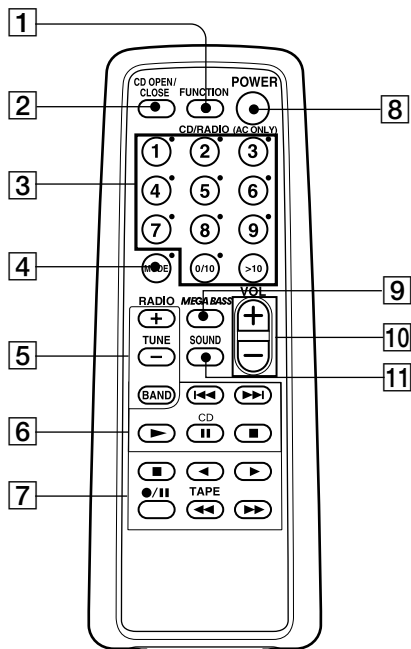
- | | |
|--|---|
| <p>15 STANDBY button
 16 OPR/BATT indicator
 17 Display window
 18 DISPLAY button
 19 Remote control receiver
 20 CLOCK button
 21 VOL +, - buttons
 22 MEGA BASS button</p> | <p>23 MODE button
 24 ENTER MEM button
 25 TIMER button
 26 SLEEP button
 27 MD(LINE) button
 28 SOUND button
 29 POWER button
 30 Ⓜ (Headphones) jack (stereo mini jack)</p> |
|--|---|

REAR PANEL



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

Remote commander

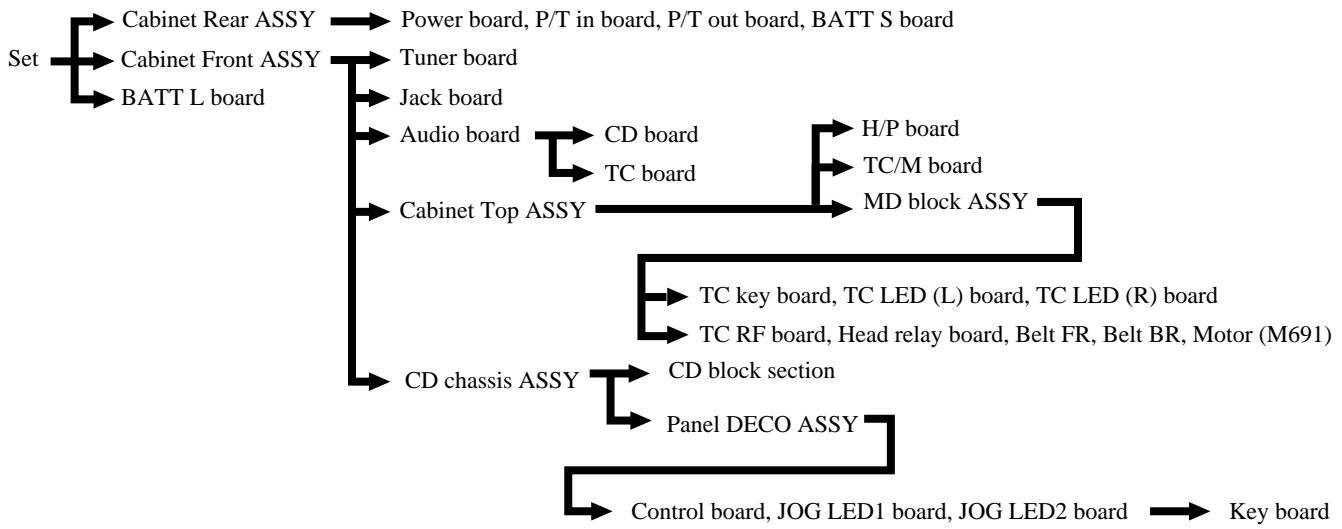


- 1** FUNCTION button
Each time you pressed, the function changes in the order
CD – Tape – Radio – Line – CD ...
- 2** ▲ CD OPEN/CLOSE button
- 3** Number buttons
- 4** MODE button
- 5** Radio operation buttons
TUNE +, – button
BAND
- 6** CD operation buttons
◀◀, ▶▶ (AMS/SEARCH)
▶ (PLAY)
⏸ (PAUSE)
■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

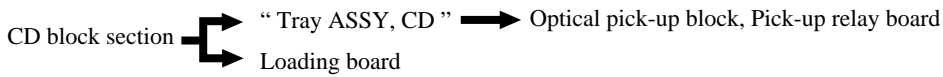
SECTION 3 DISASSEMBLY

• The equipment can be removed using the following procedure.

< MAIN SECTION >



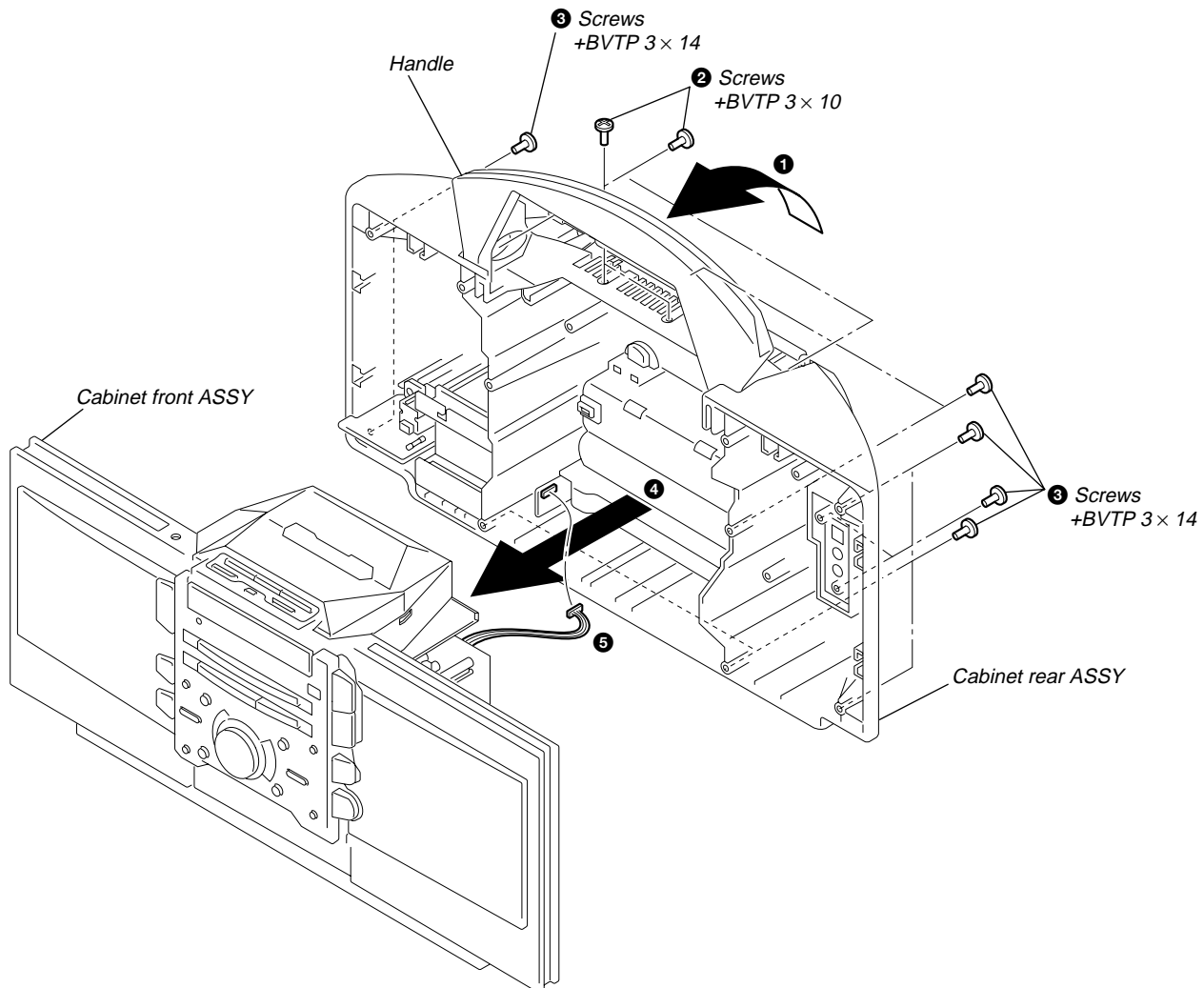
< CD BLOCK SECTION >



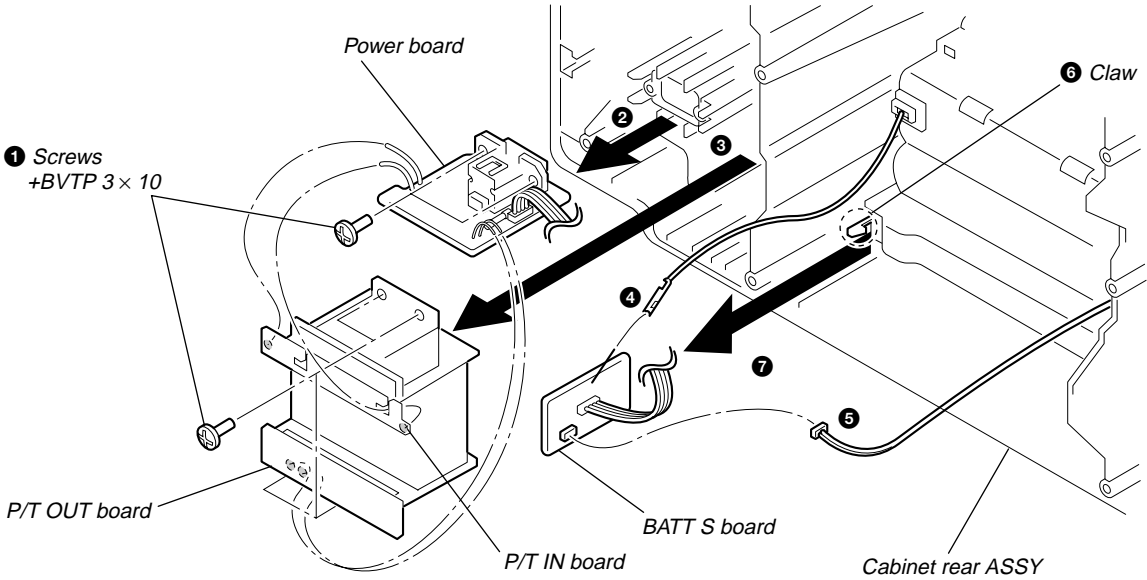
Note Follow the disassembly procedure in the numerical order given.

< MAIN SECTION >

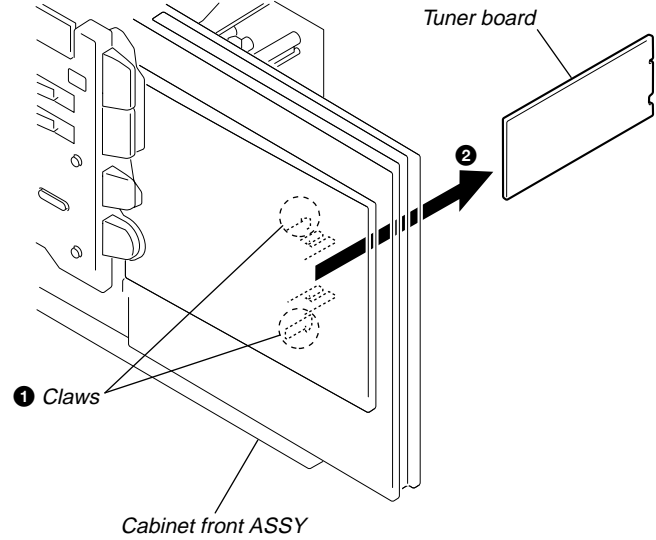
3-1. CABINET REAR ASSY, CABINET FRONT ASSY



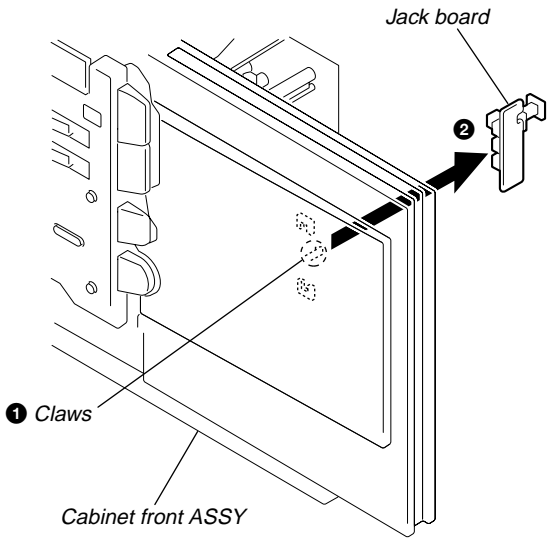
3-2. POWER BOARD, P/T IN BOARD, P/T OUT BOARD , BATT S BOARD



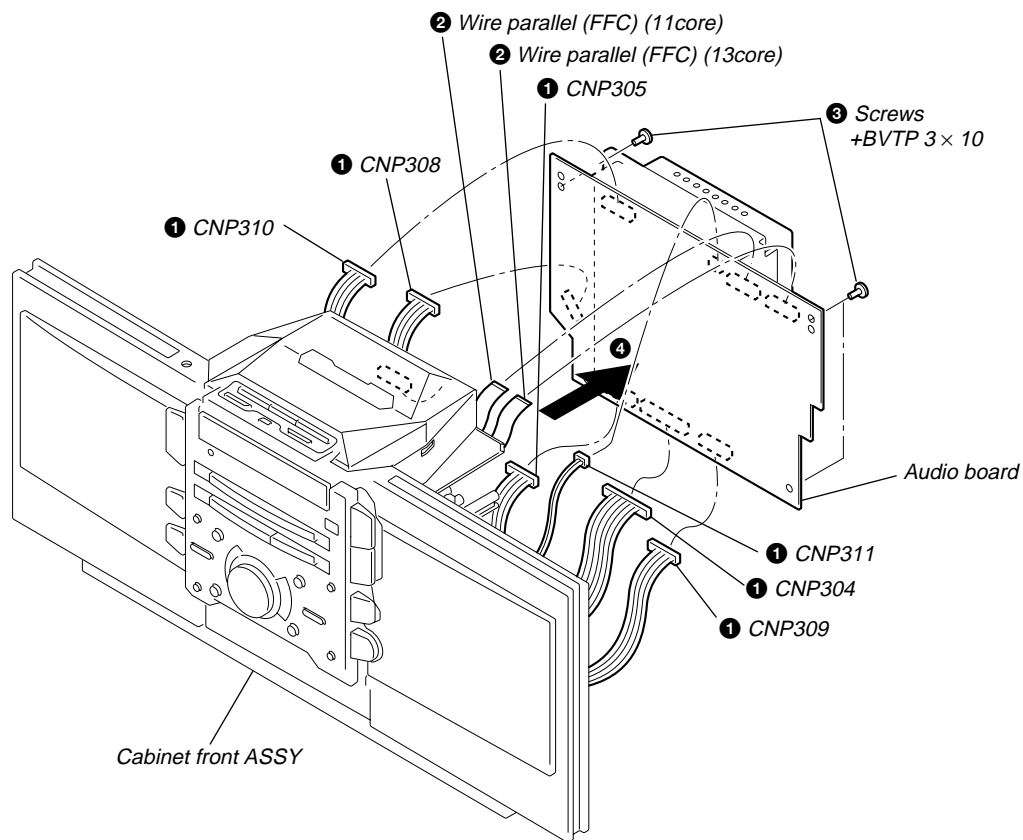
3-3. TUNER BOARD



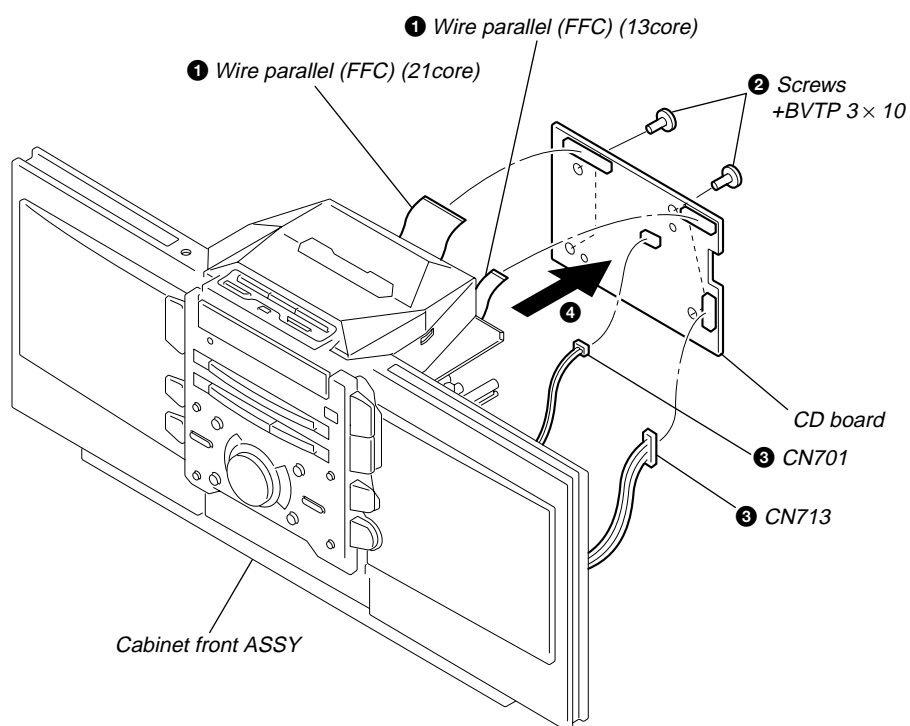
3-4. JACK BOARD



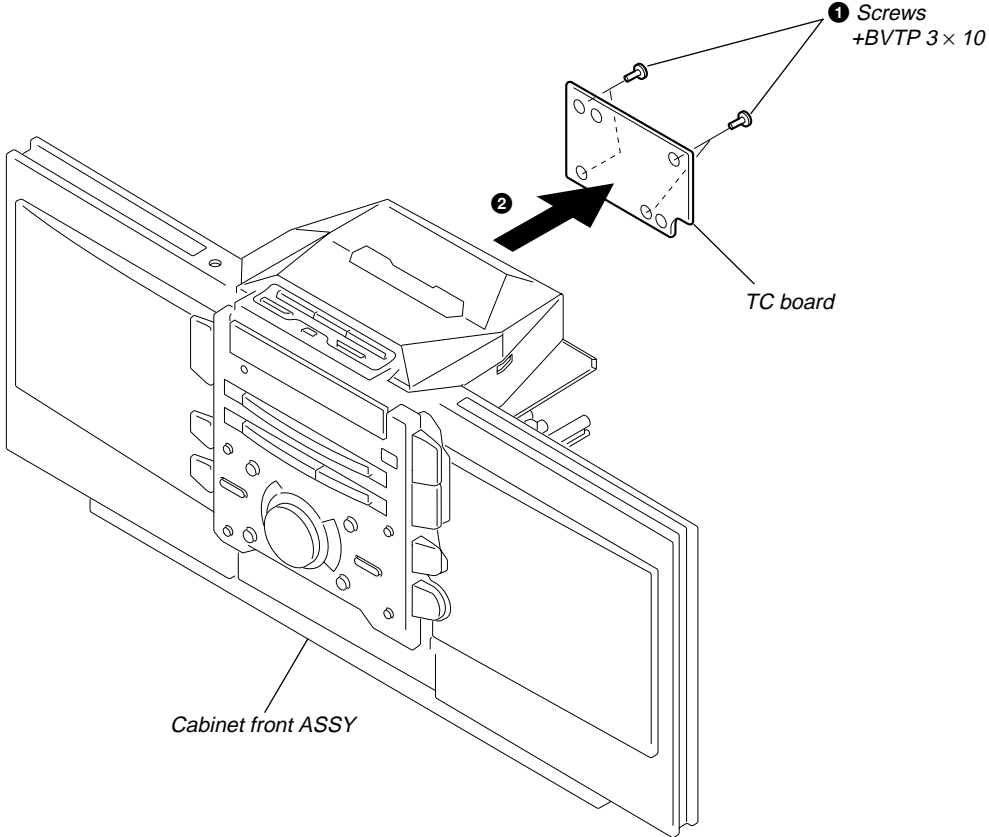
3-5. AUDIO BOARD



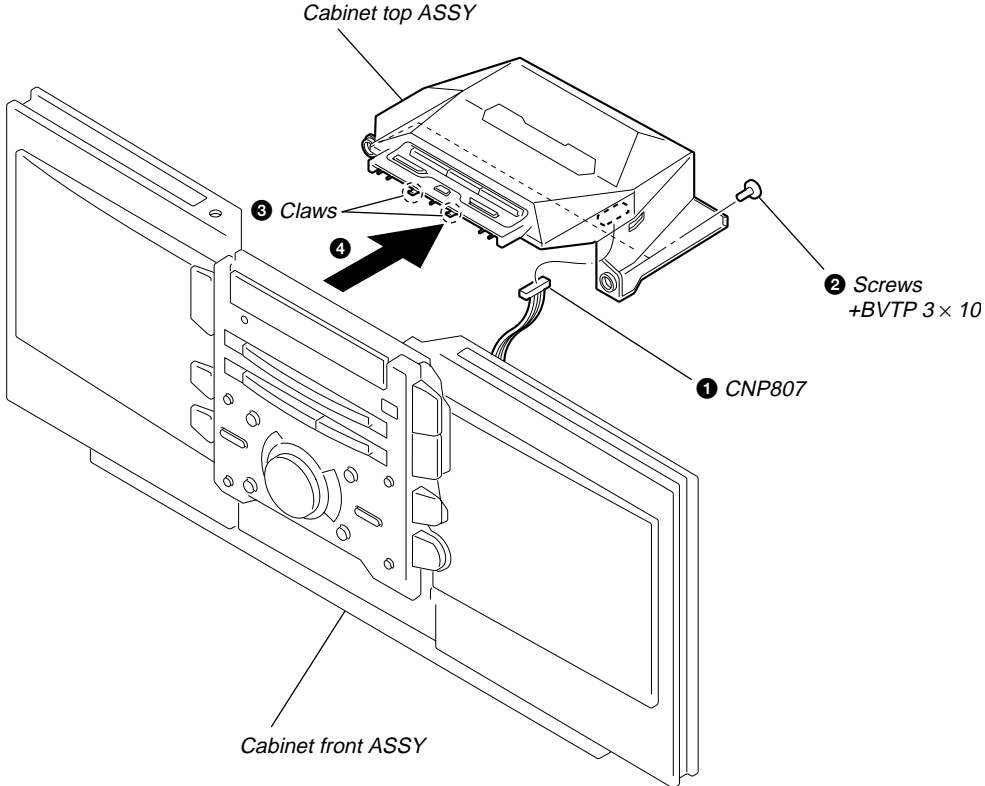
3-6. CD BOARD



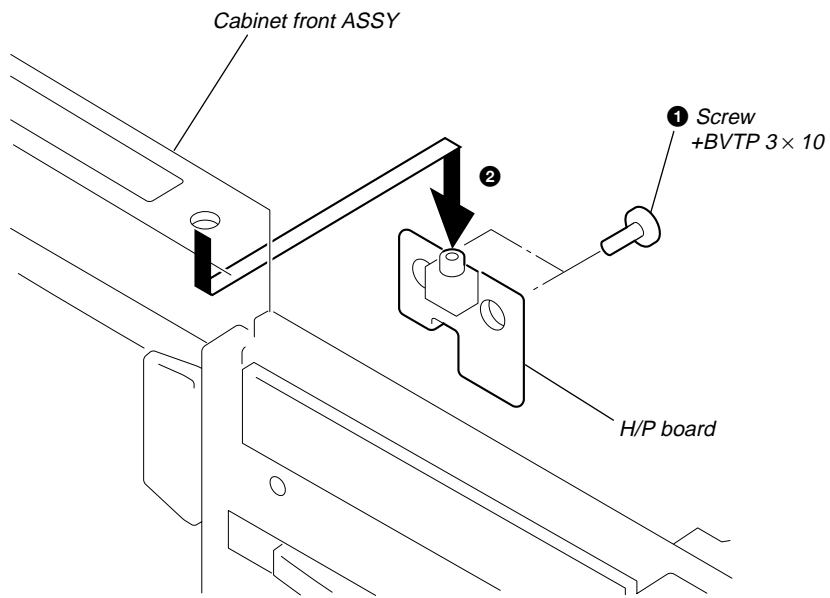
3-7. TC BOARD



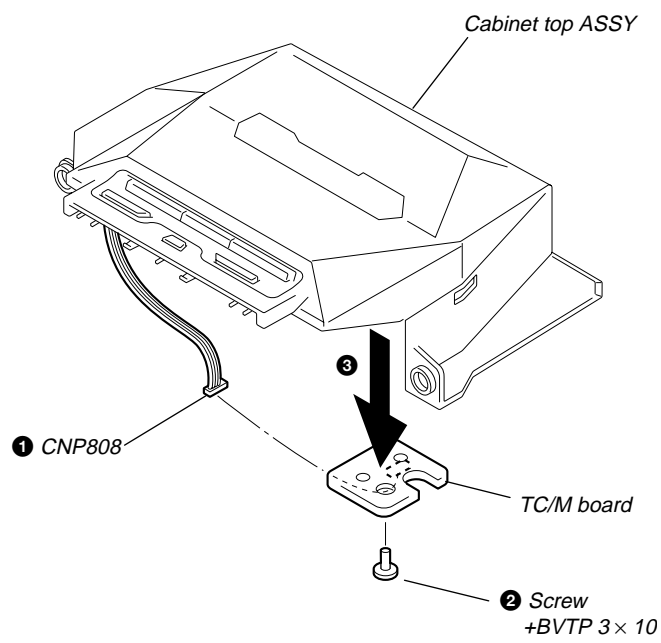
3-8. CABINET TOP ASSY



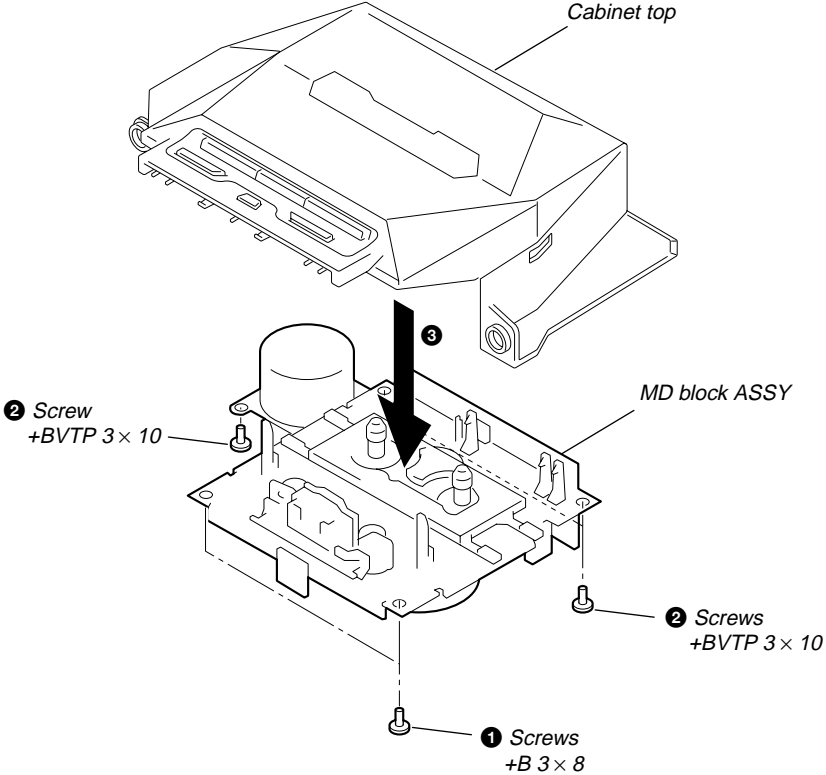
3-9. H/P BOARD



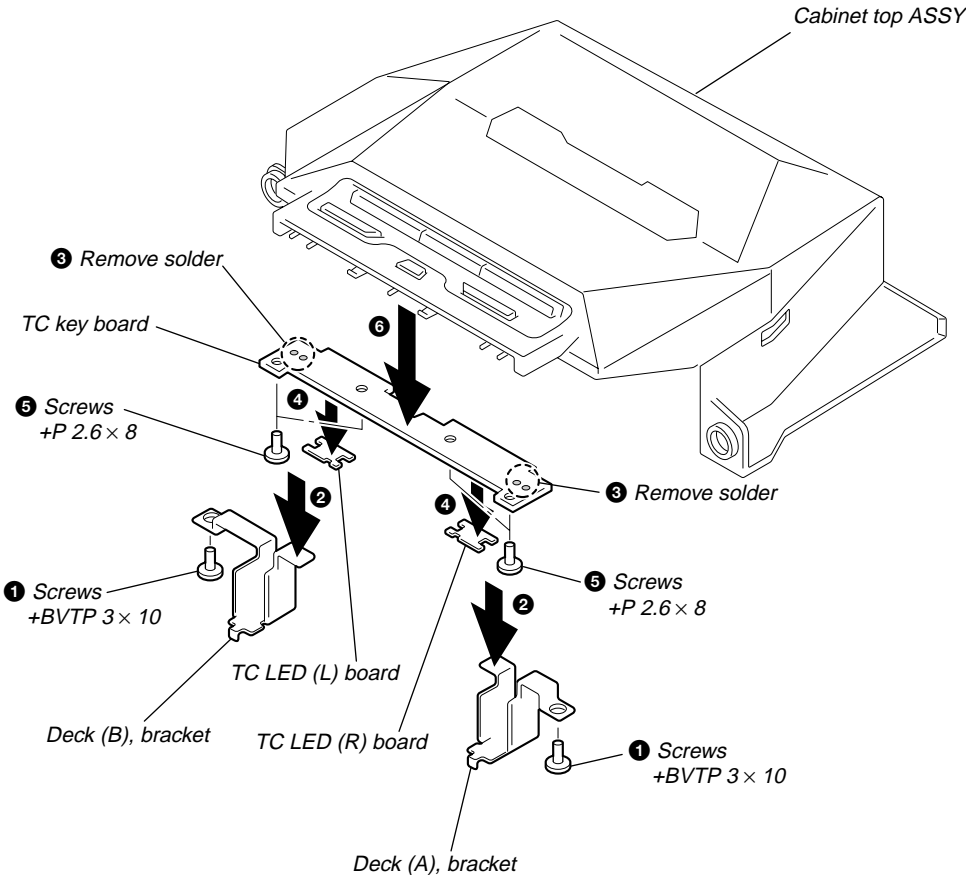
3-10. TC/M BOARD



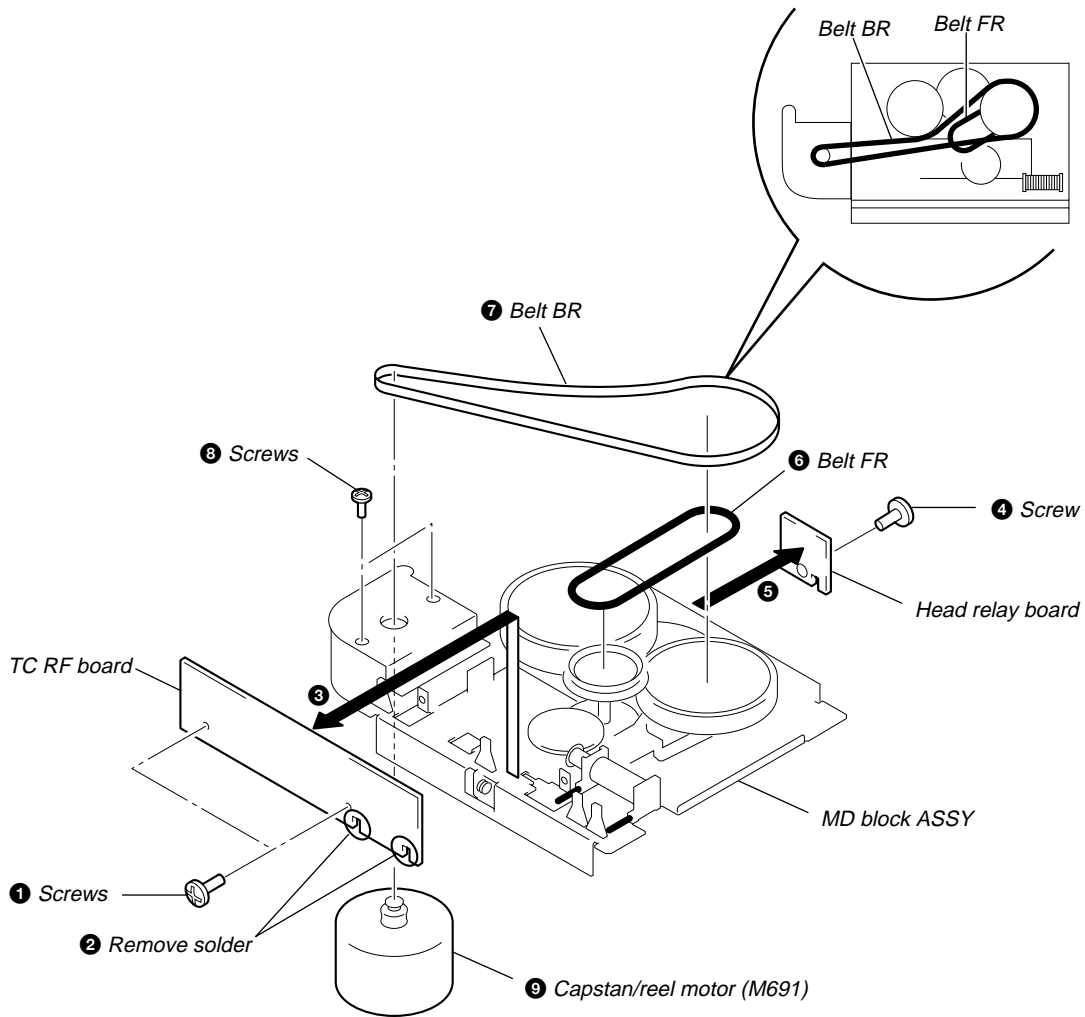
3-11. MD BLOCK ASSY



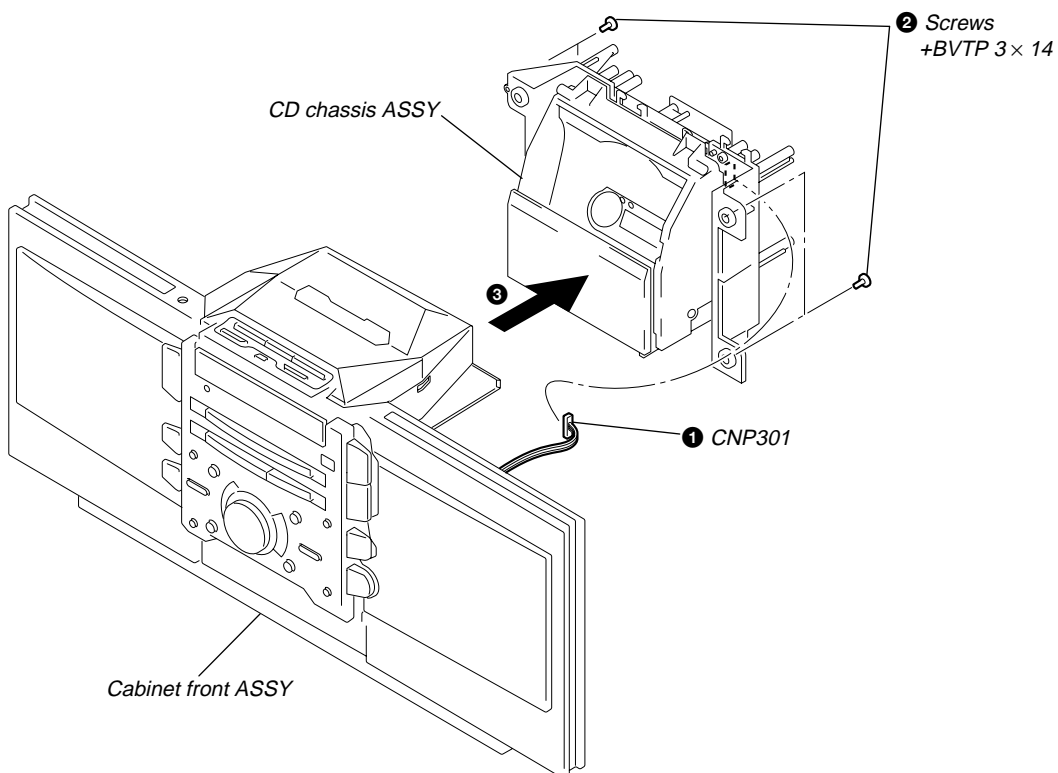
3-12. TC LED (L) BOARD, TC LED (R) BOARD, TC KEY BOARD



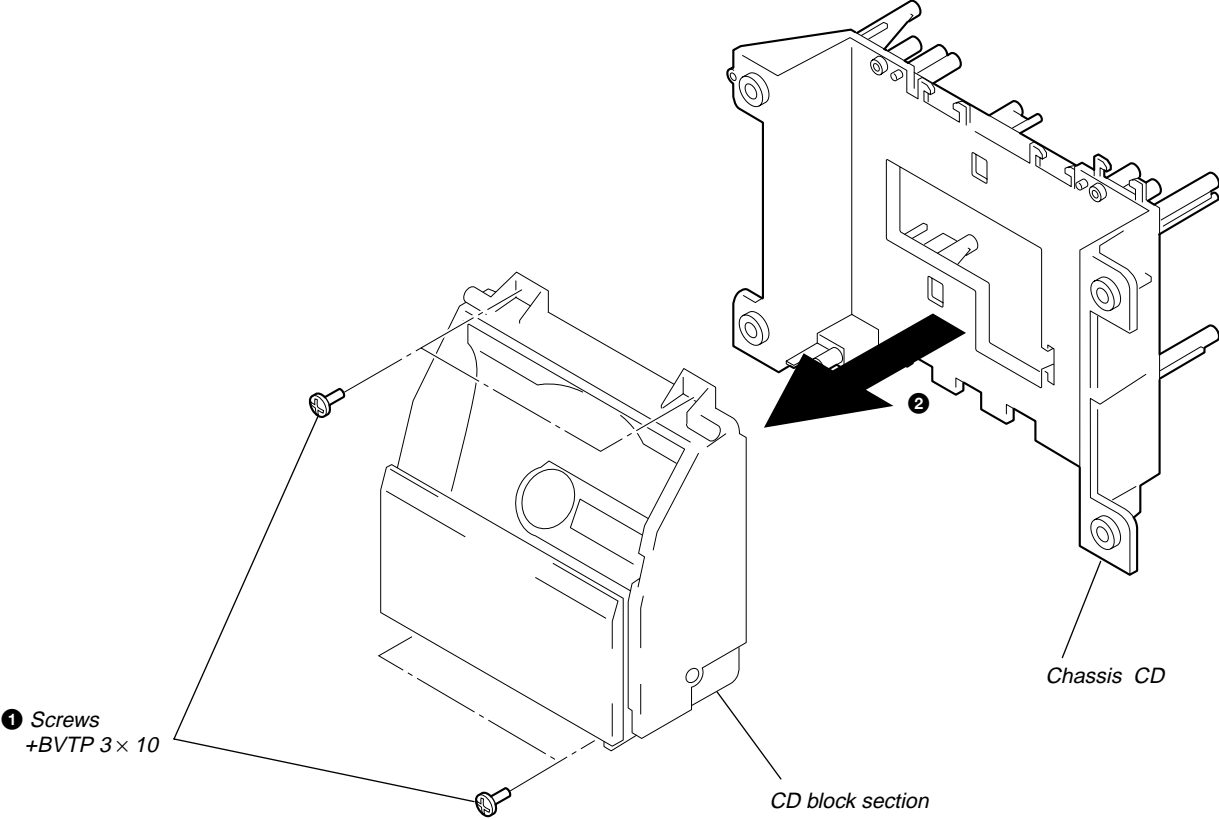
3-13. TC RF BOARD, HEAD RELAY BOARD, BELT FR, BELT BR, CAPSTAN/REEL MOTOR (M691)



3-14. CD CHASSIS ASSY

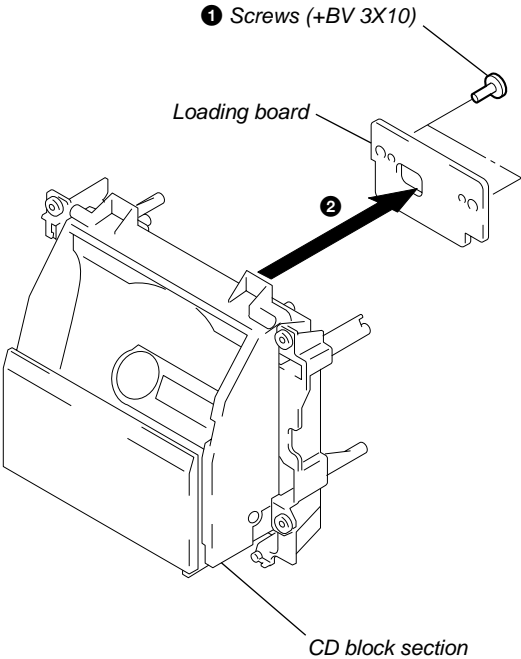


3-15. CD BLOCK SECTION

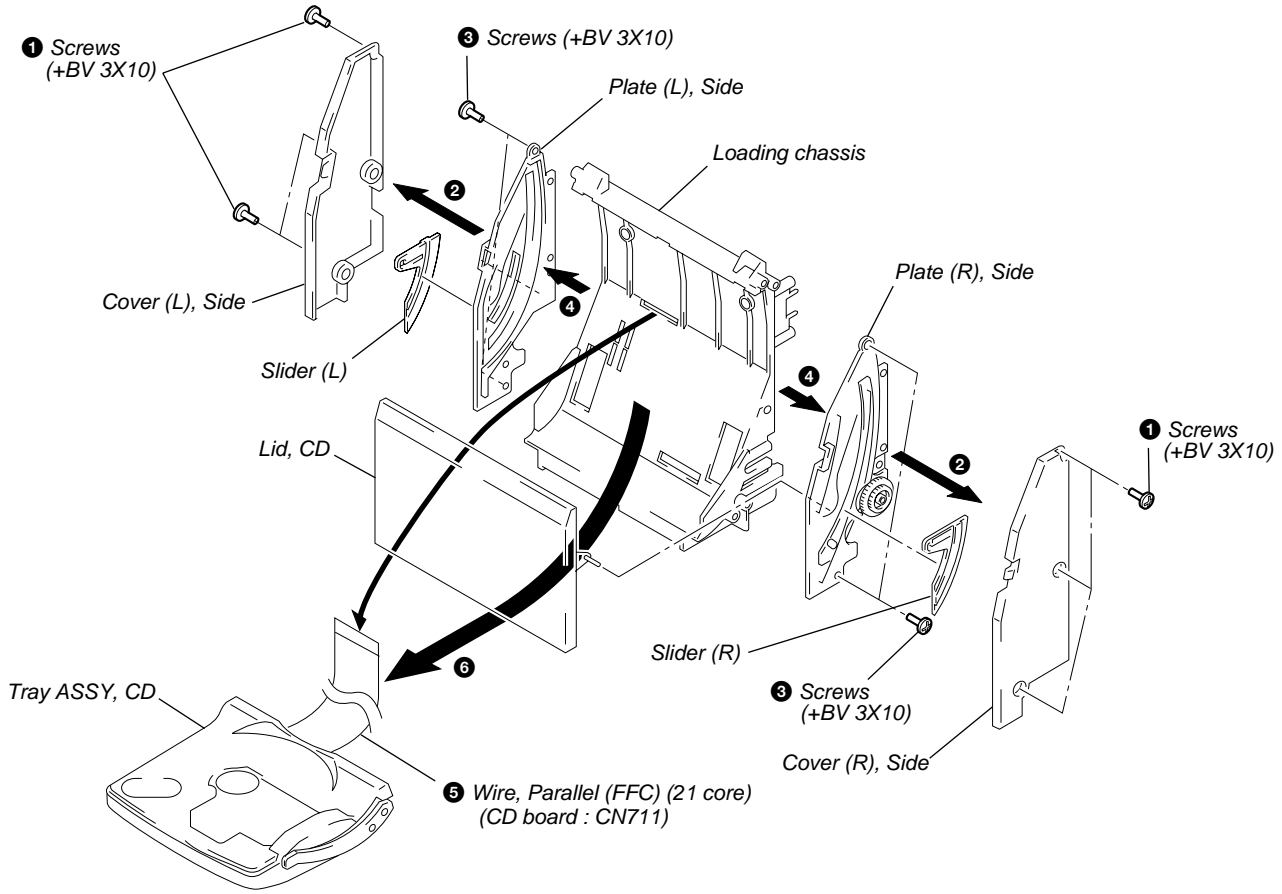


< CD BLOCK SECTION >

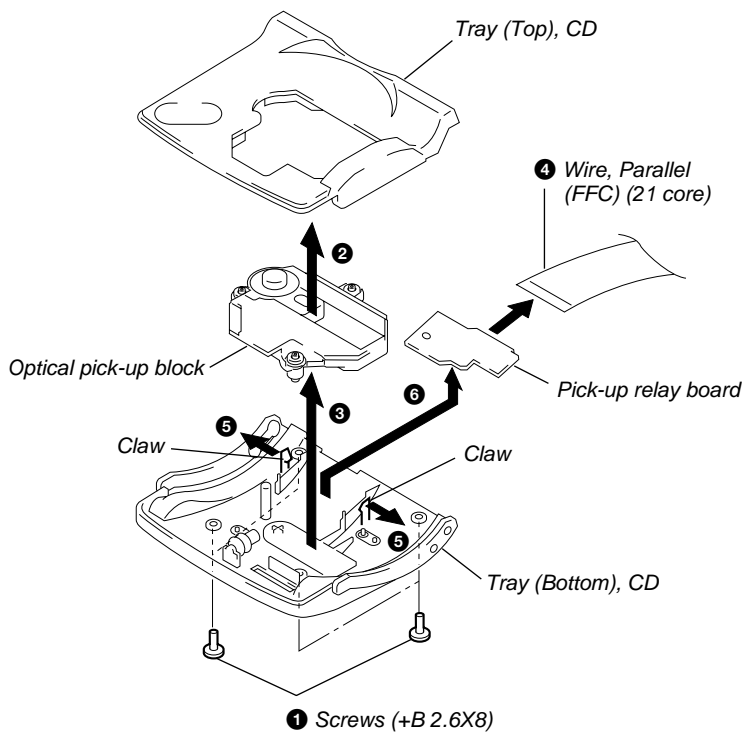
3-16. LOADING BOARD



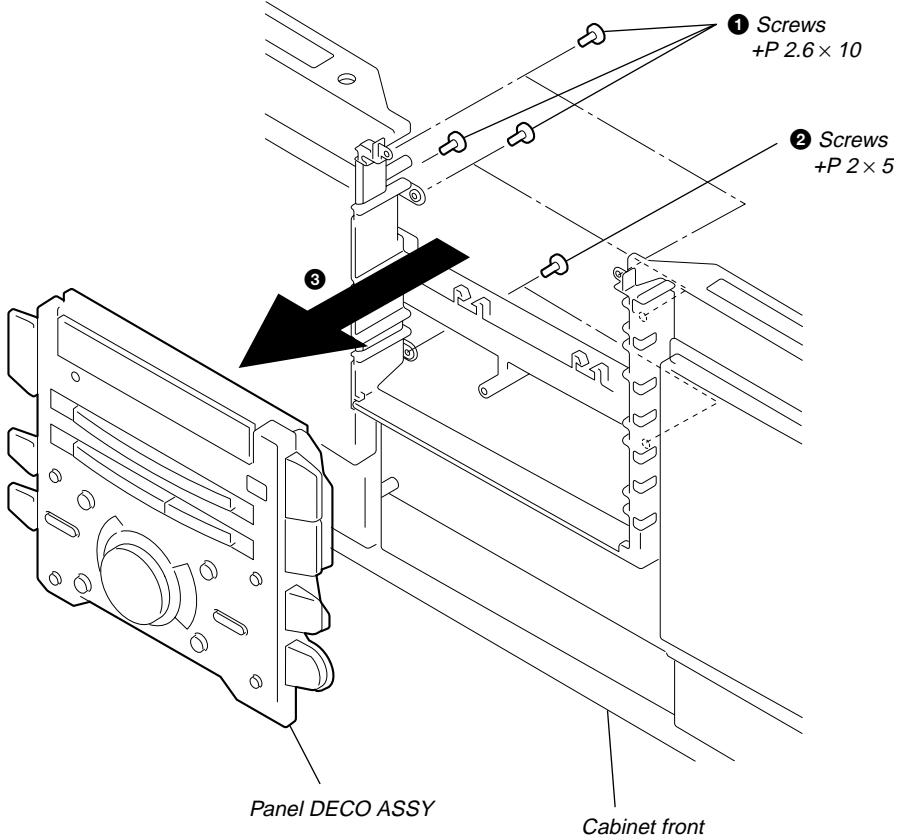
3-17. " TRAY ASSY, CD "



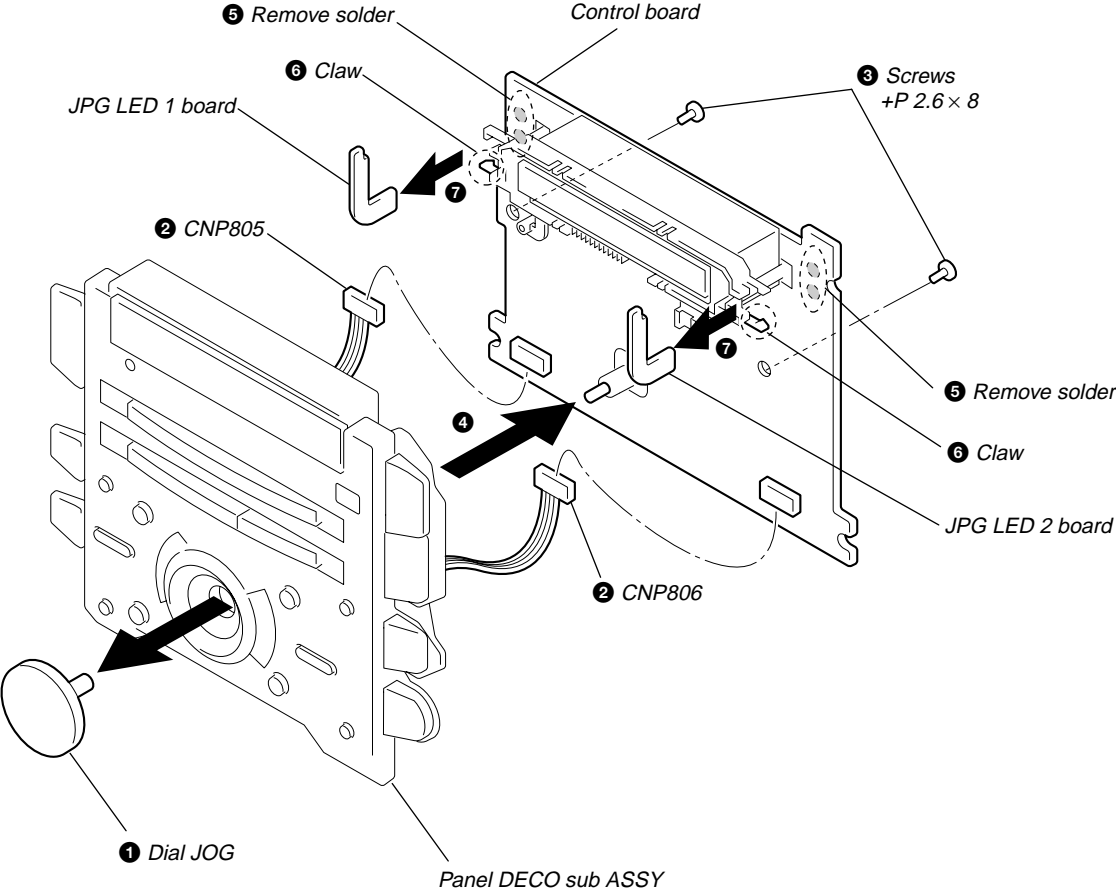
3-18. OPTICAL PICK-UP BLOCK, PICK-UP RELAY BOARD



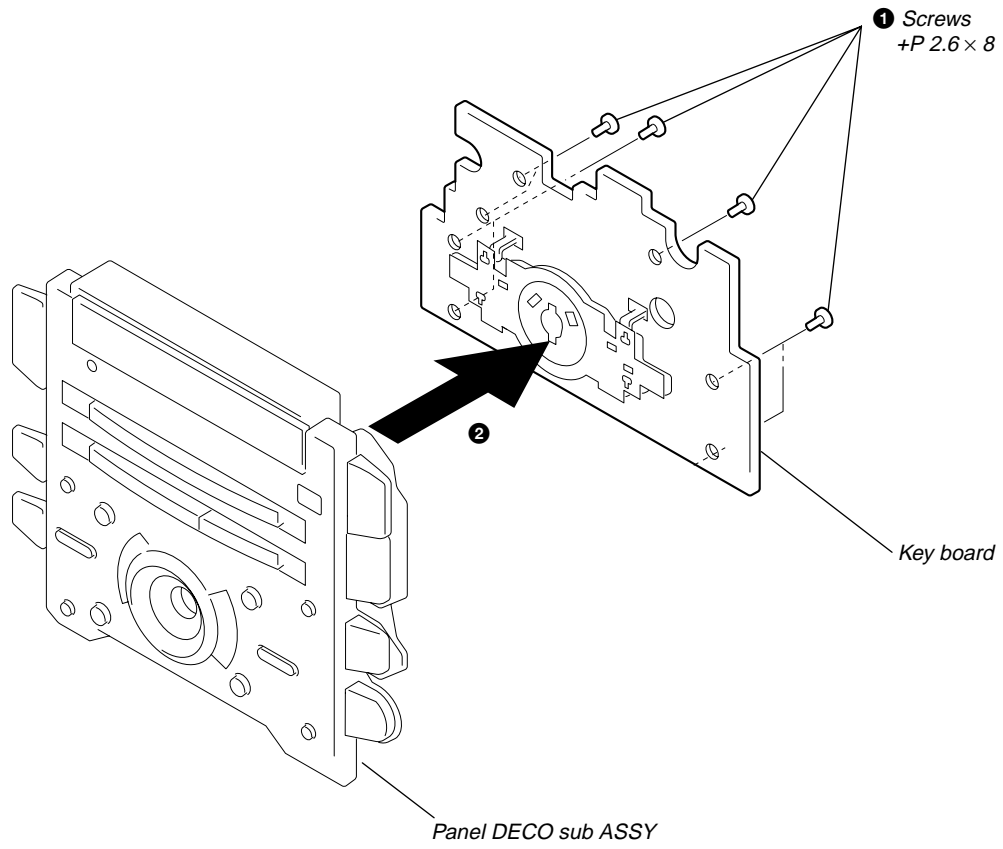
3-19. PANEL DECO ASSY



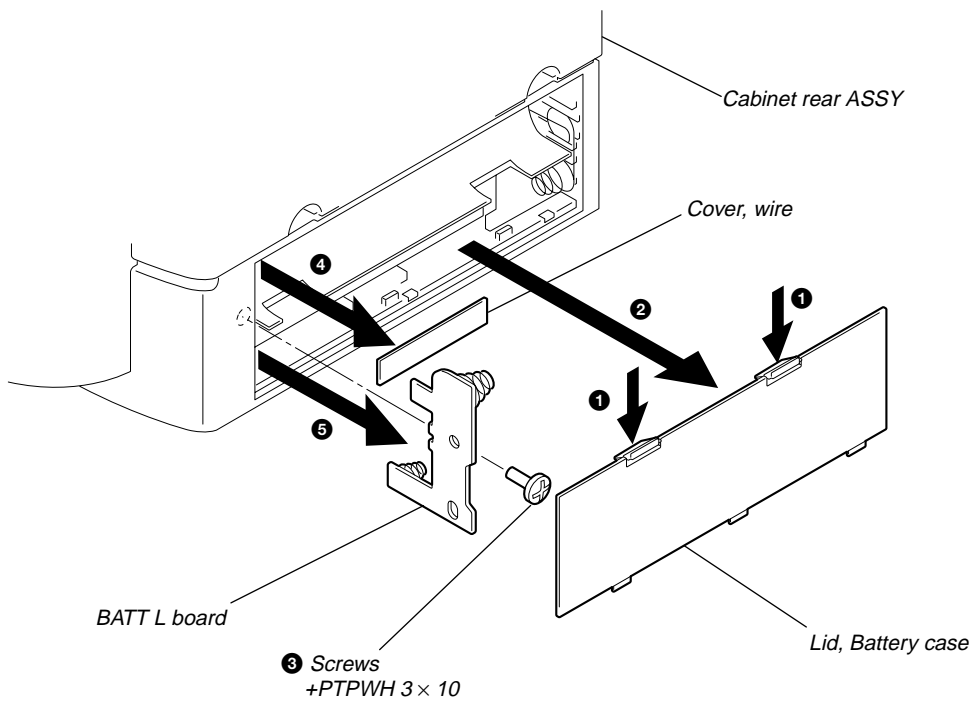
3-20. CONTROL BOARD, JOG LED 1 BOARD, JOG LED 2 BOARD



3-21. KEY BOARD



3-22. BATT L BOARD



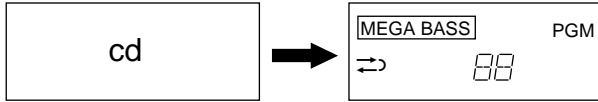
SECTION 4 TEST MODE

CD SECTION

1. Entering CD test mode

Connect power supply cord or insert dry batteries, short Test point (TEST-1) on the key board. (You need a moment for the short) (Power button is possible with both of ON or OFF to enter test mode).

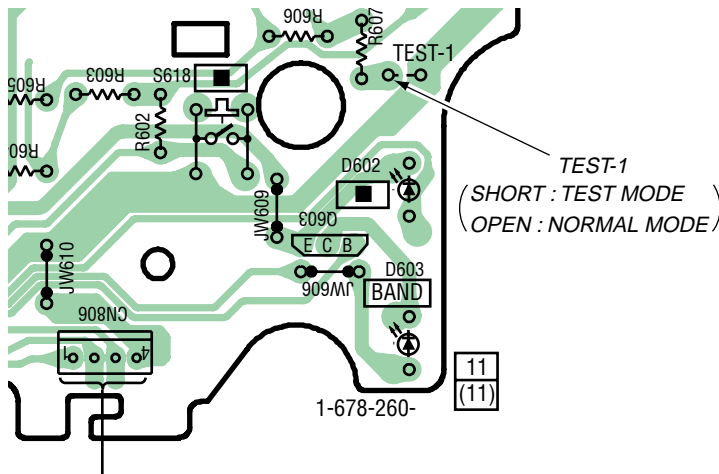
The LCD display changes as in the diagram and the unit goes into test mode.



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 ignore this value.

[KEY BOARD] (Conductor side)



2. Exiting test mode

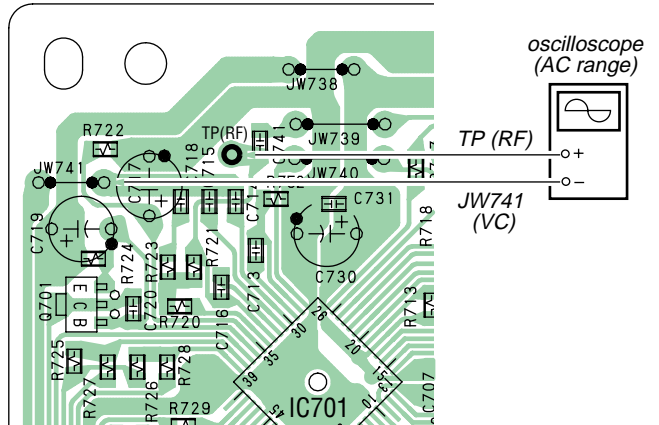
With the unit in test mode, when you press the POWER button to OFF, power is off and test mode ends.

● RF LEVEL and jitter check

Test mode PLAY status

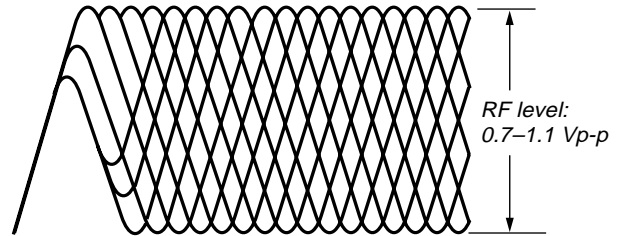
Connection Point : CD board (Conductor side)

[CD BOARD] (Conductor side)



Check to see that the jitter is less than 9.0 nsec. and RF level is between 0.7 – 1.1V_{p-p}.

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



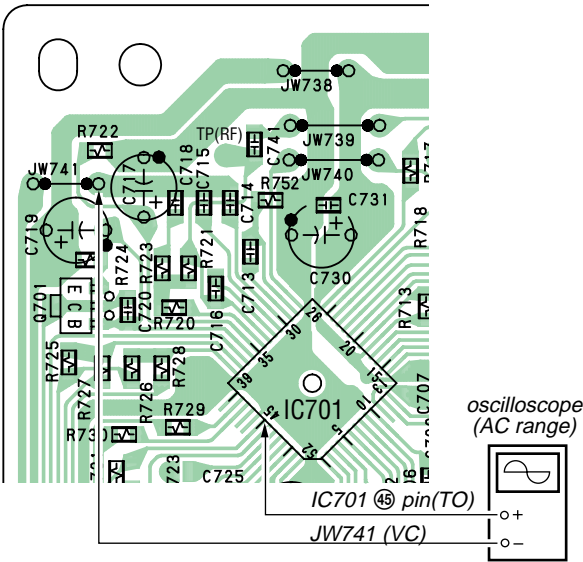
SECTION 5 ADJUSTMENTS

● TRAVERSE SIGNAL check

Test mode PLAY status

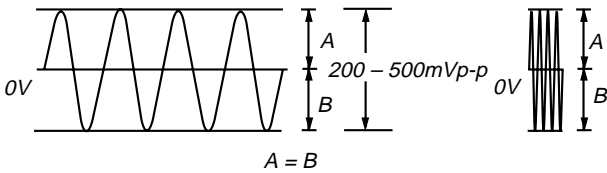
Connection Point : CD board (Conductor side)

[CD BOARD] (Conductor side)



Press the ►► or ◀◀ from test mode PLAY status.
Check to see that the traverse signal level is between 200 to 500mVp-p.

Note:
Extend the sweep time
for easier view.



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/erase 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	3.54 to 5.98 mN • m (36 to 61 g • cm) (0.5 to 0.84 oz • inch)
Forward Back Tension	CQ-102C	0.2 to 0.58 mN • m (2 to 6 g • cm) (0.028 to 0.083 oz • inch)
Reverse	CQ-102RC	3.54 to 5.98 mN • m (36 to 61 g • cm) (0.5 to 0.84 oz • inch)
Reverse Back Tension	CQ-102RC	0.2 to 0.58 mN • m (2 to 6 g • cm) (0.028 to 0.083 oz • inch)
FF/REW	CQ-201B	5.99 to 14.02 mN • m (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

1. 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.)
2. The adjustments should be performed for both 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

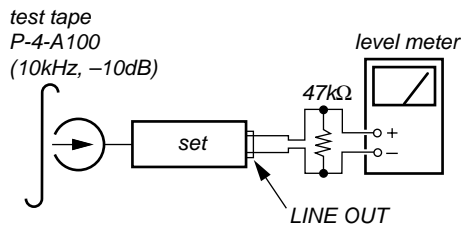
Output terminal	LINE OUT
load impedance	47kΩ
output signal level	0.5V (-3.8dB)

Test Tape

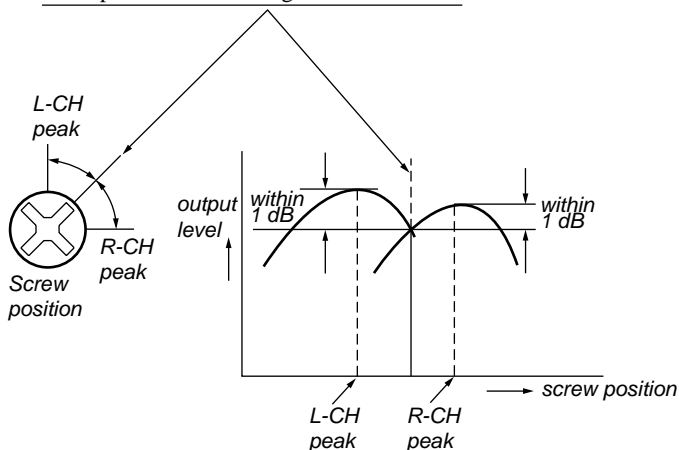
Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback/Erase Head Azimuth Adjustment Procedure :

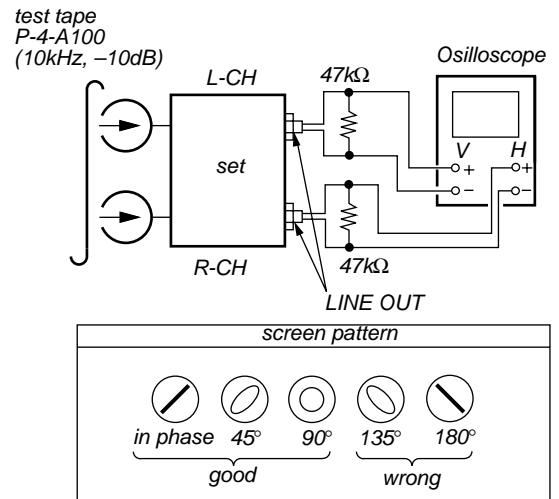
1. Mode : FWD playback



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.

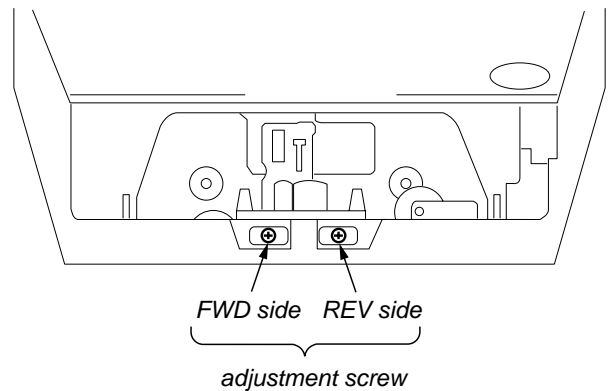


3. Phase Check
Mode : FWD playback



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.

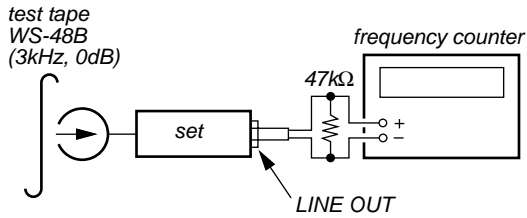
Adjustment Location : - record/playback/erase head -



Tape Speed Adjustment

Procedure :

– FWD Playback Mode –

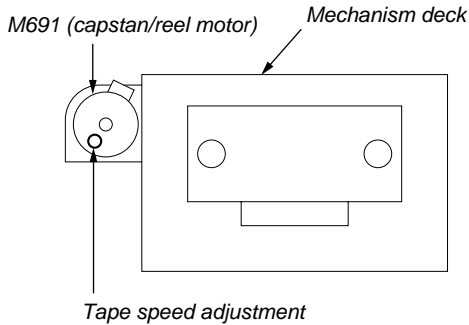


1. Set to FWD playback mode.
2. Adjust M691 (capstan/reel motor) so that the frequency counter reading becomes 3,000Hz.

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 : M691 (capstan/reel motor)

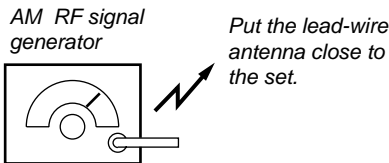


TUNER SECTION 0dB = 1μV

AM Section

RADIO BAND button : MW or LW

Volume : MIN

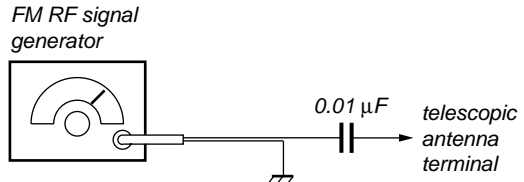


30% amplitude modulation by 400Hz signal.
Output level : as low as possible

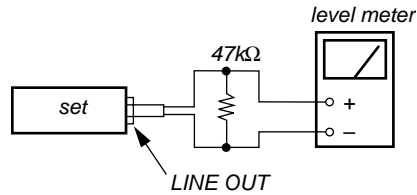
FM Section

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 21)

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

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	450kHz

MW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter.
Confirmation	531kHz	Standard value : 0.5 – 1.5V
	1,611kHz	Standard value : 4.6 – 5.8V

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3 – 1	621kHz
CT3	1,404kHz

LW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	153kHz	Standard value : 0.2 – 0.9V
L4	279kHz	Adjustment value : 5.0V
		Standard value : 4.9 – 5.1V

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

FM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T2	10.7MHz

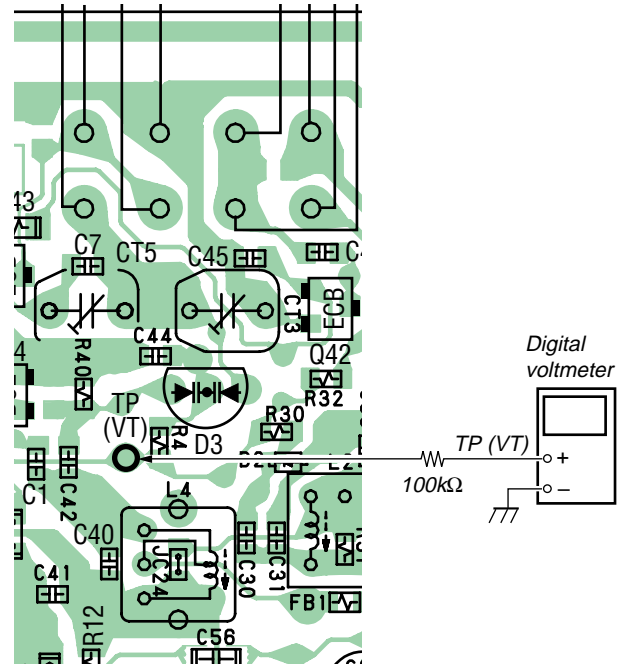
FM FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	87.5MHz	Standard value : 1.2 – 2.0V
L2	108MHz	Adjustment value : 4.0V Standard value : 3.8 – 4.2V

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

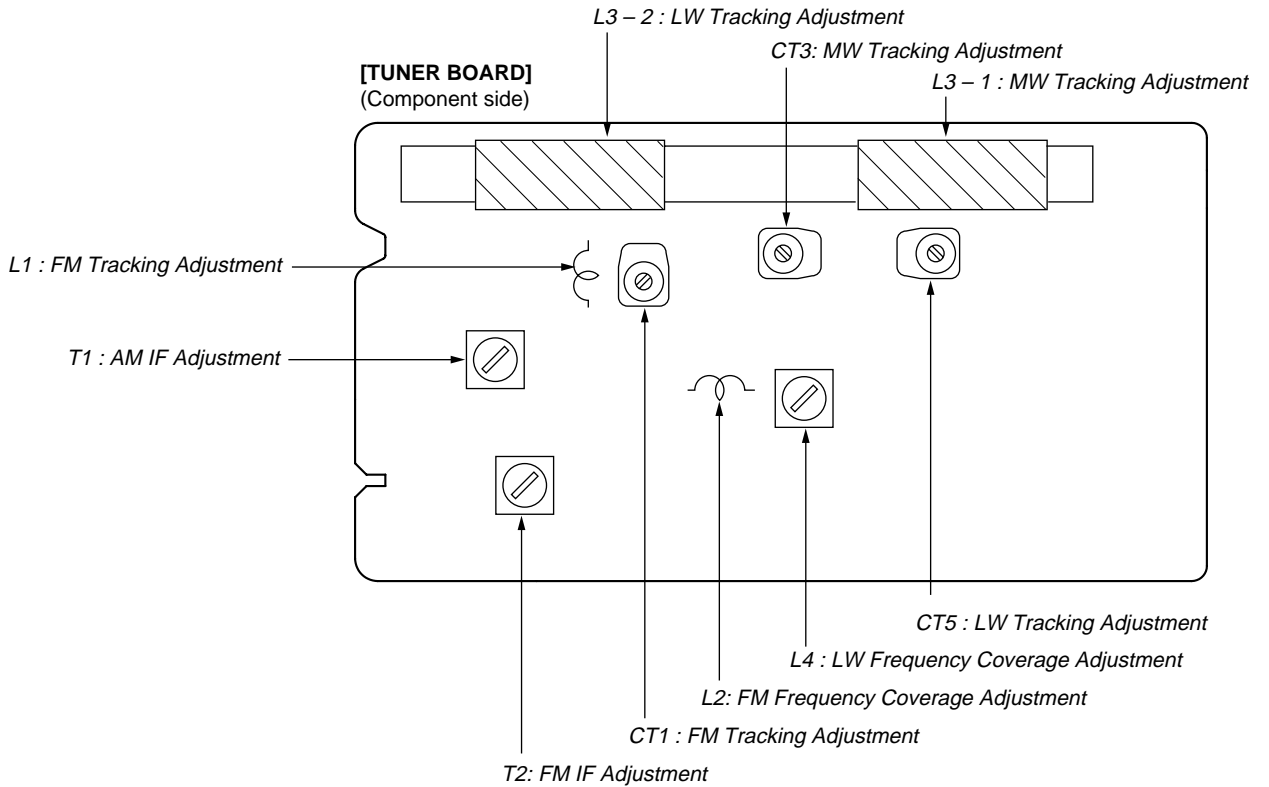
Frequency Coverage Adjustment

Connect Location :

[TUNER BOARD] (Conductor side)



Adjustment Location :



SECTION 6 DIAGRAMS

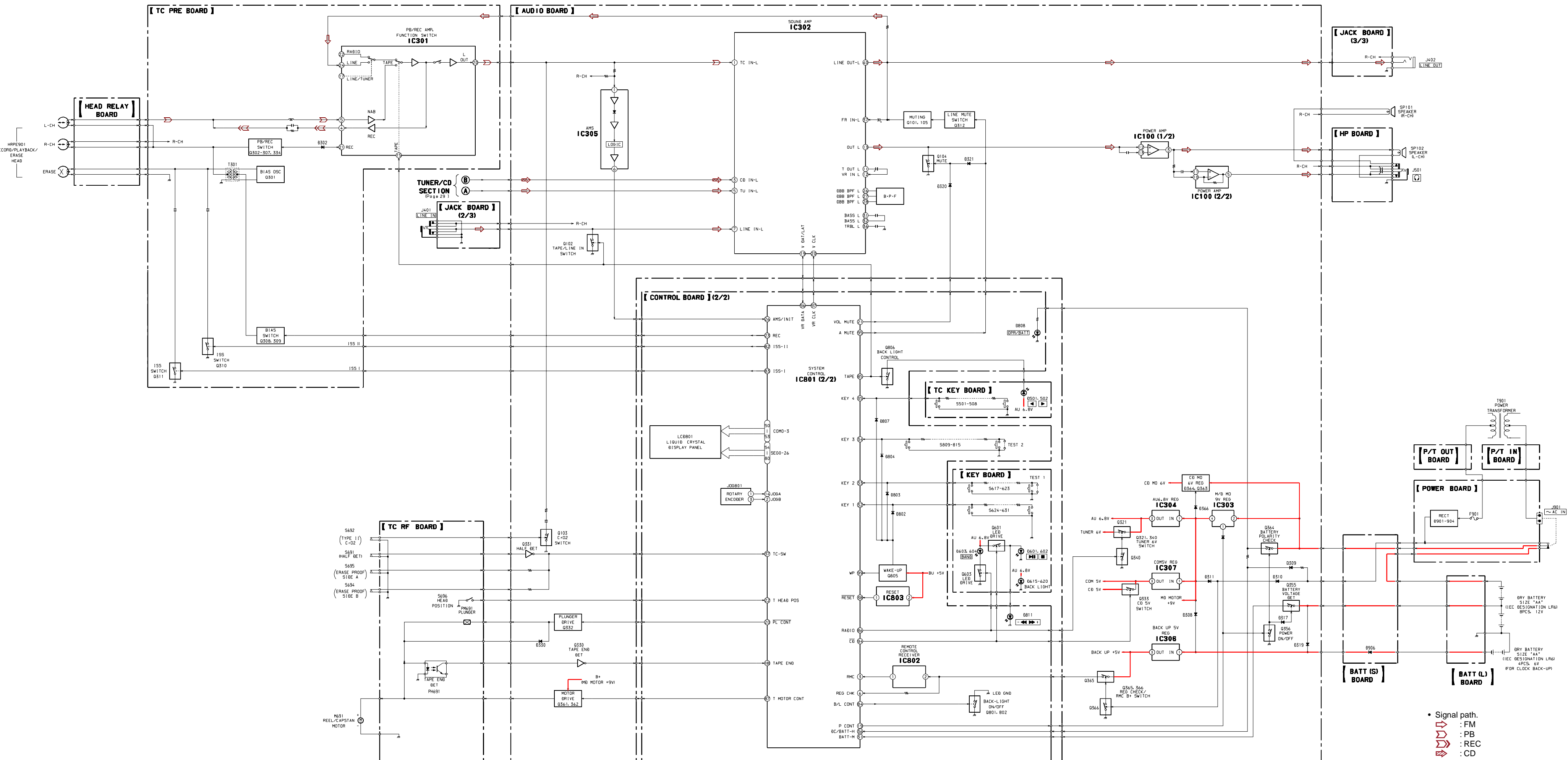
6-1. EXPLANATION OF IC TERMINALS

IC801 CXP83124A-044Q (SYSTEM CONTROL) CONTROL BOARD

Pin No.	Pin name	I/O	Description
1	C-SCOR	I	CD DSP command data input.
2	JOG B	I	JOG801 input.
3	RMC	I	Remote control signal input.
4	R-MUTE	O	Tuner mute signal output.
5	NC	–	Not used (OPEN).
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	JOG A	I	JOG801 input.
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-CON	O	POWER ON/OFF control output.
20	PL-CONT	O	Plunger ON/OFF control output.
21	VOL-MUTE	O	Audio mute signal output.
22	T-HEAD POS	I	Head position detect input.
23	REC	O	REC bias ON/OFF control output.
24	RADIO DST (A)	I	Destination setting terminal.
25	RADIO DST (B)	I	Destination setting terminal.
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	OP/CL	I	CD tray open/close detect input.
31	BATT-M	I	Battery voltage detection terminal.
32	KEY 1	I	Key input terminal.
33	KEY 2	I	Key input terminal.
34	KEY 3	I	Key input terminal.
35	KEY 4	I	Key input terminal.
36	DC/BATT-H	I	Battery voltage detection terminal.
37	TC SW	I	Tape tab detect input.
38	RESET	I	System Reset terminal.
39	OSC-IN	I	System clock oscillator input (4.21MHz).
40	OSC-OUT	O	System clock oscillator output (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 – 53	COM0-3	O	LCD common output.
54 – 80	SEG0–SEG26	O	LCD segment output.
81	NC	–	Not used (OPEN).
82	ISS-II	O	ISS-2 control output.
83	ISS-I	O	ISS-1 control output.
84	B/L-CONT	O	Back-light ON/OFF control output.
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 lach 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	$\overline{\text{CD}}$	O	Function output for CD.
95	A-MUTE	O	Audio mute signal output.
96	VR-DATA/CE	O	Volume data/chip enable output.
97	VR-CLK	O	Volume clock output.
98	C-XRST	O	CD reset signal output.
99	WP	I	Wake-up signal input.
100	TAPE END	I	Tape end detect input.

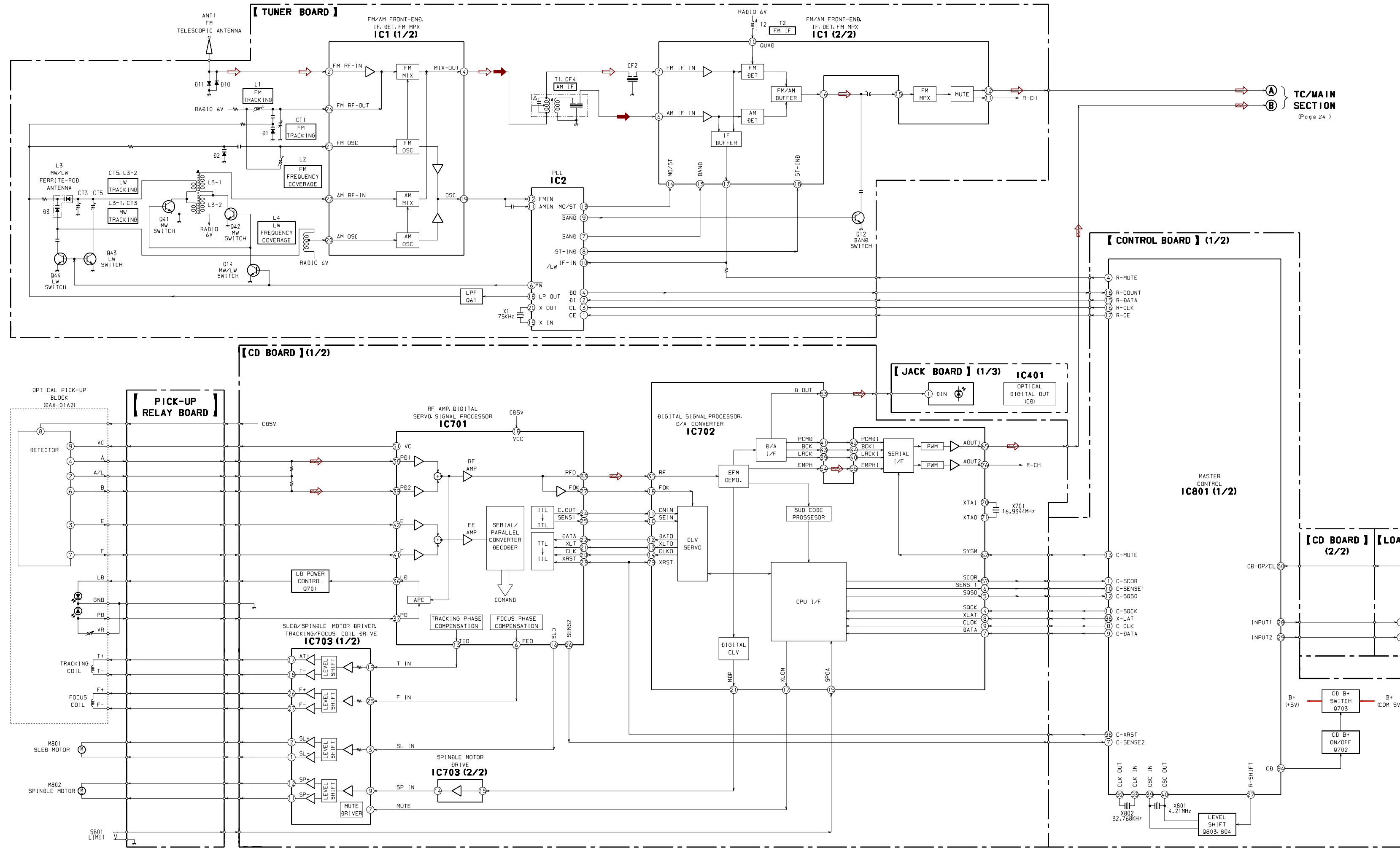
6-2. BLOCK DIAGRAMS (TAPE, MAIN SECTION)



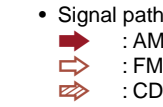
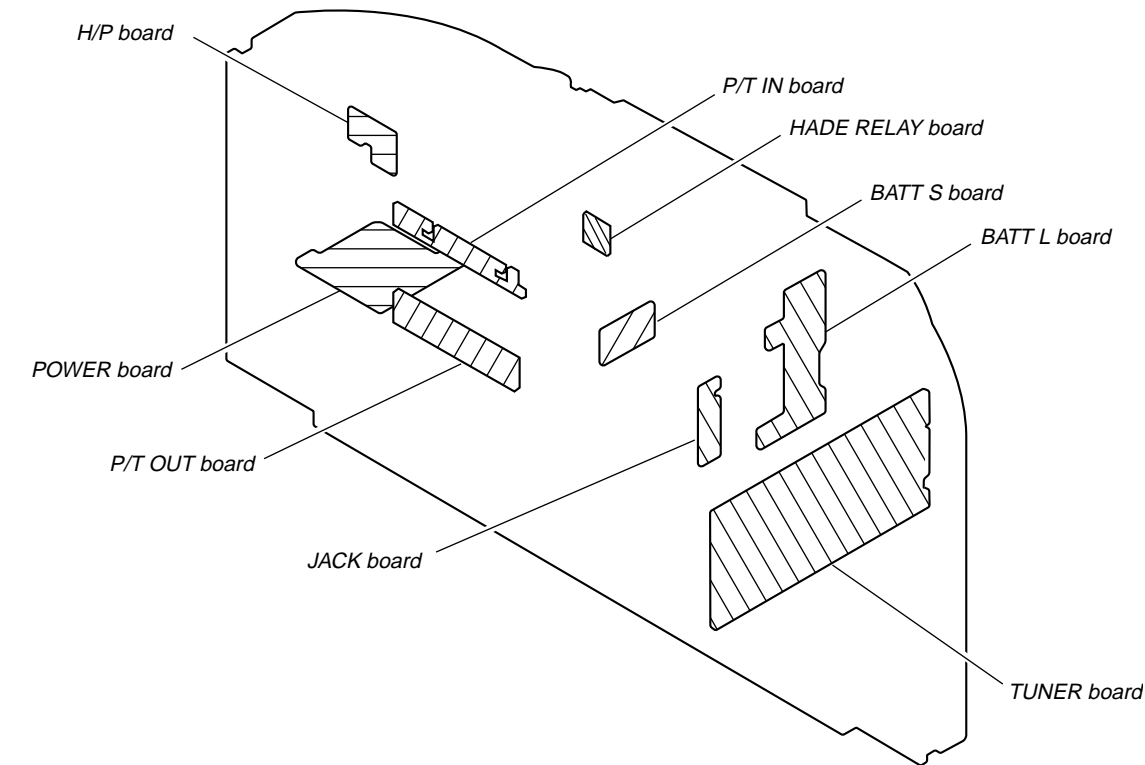
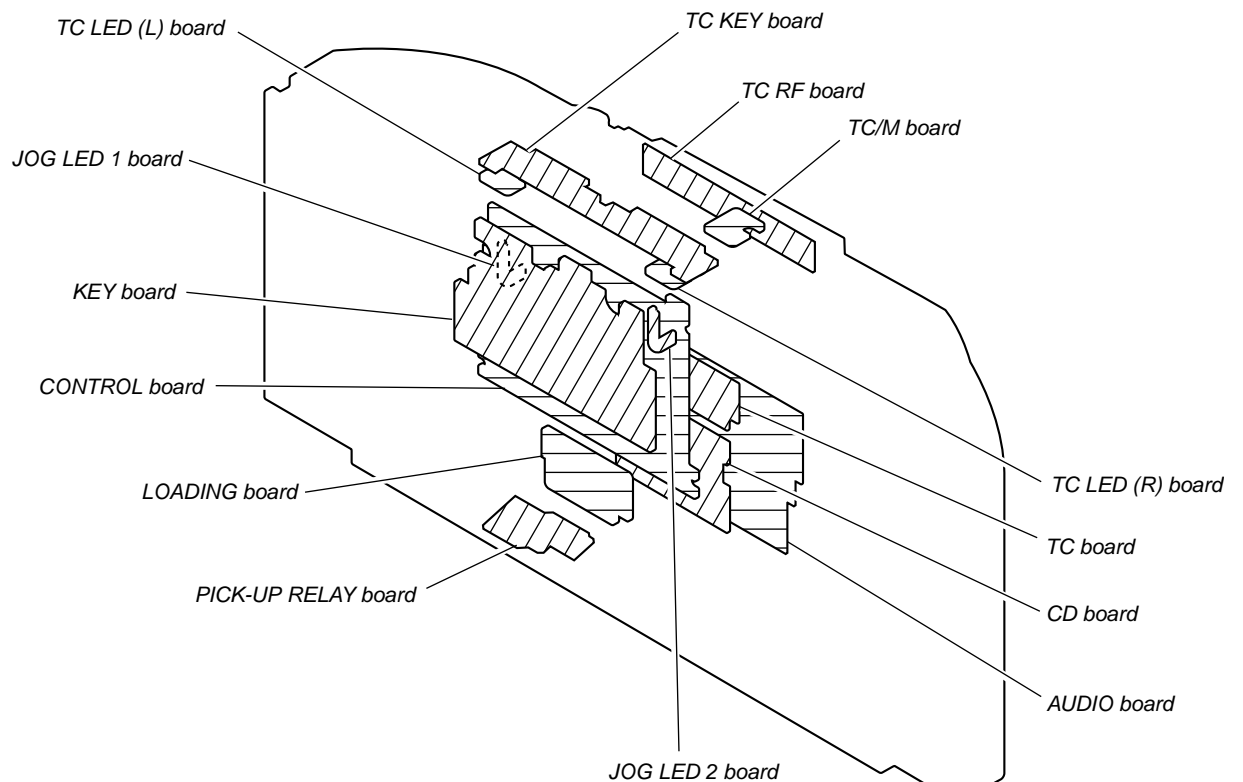
- Signal path.
- ➔ : FM
- ➔ : PB
- ➔ : REC
- ➔ : CD

R-CH IS OMITTED; SAME AS L-CH

6-3. BLOCK DIAGRAMS (TUNER, CD SECTION)



● Circuit Boards Location

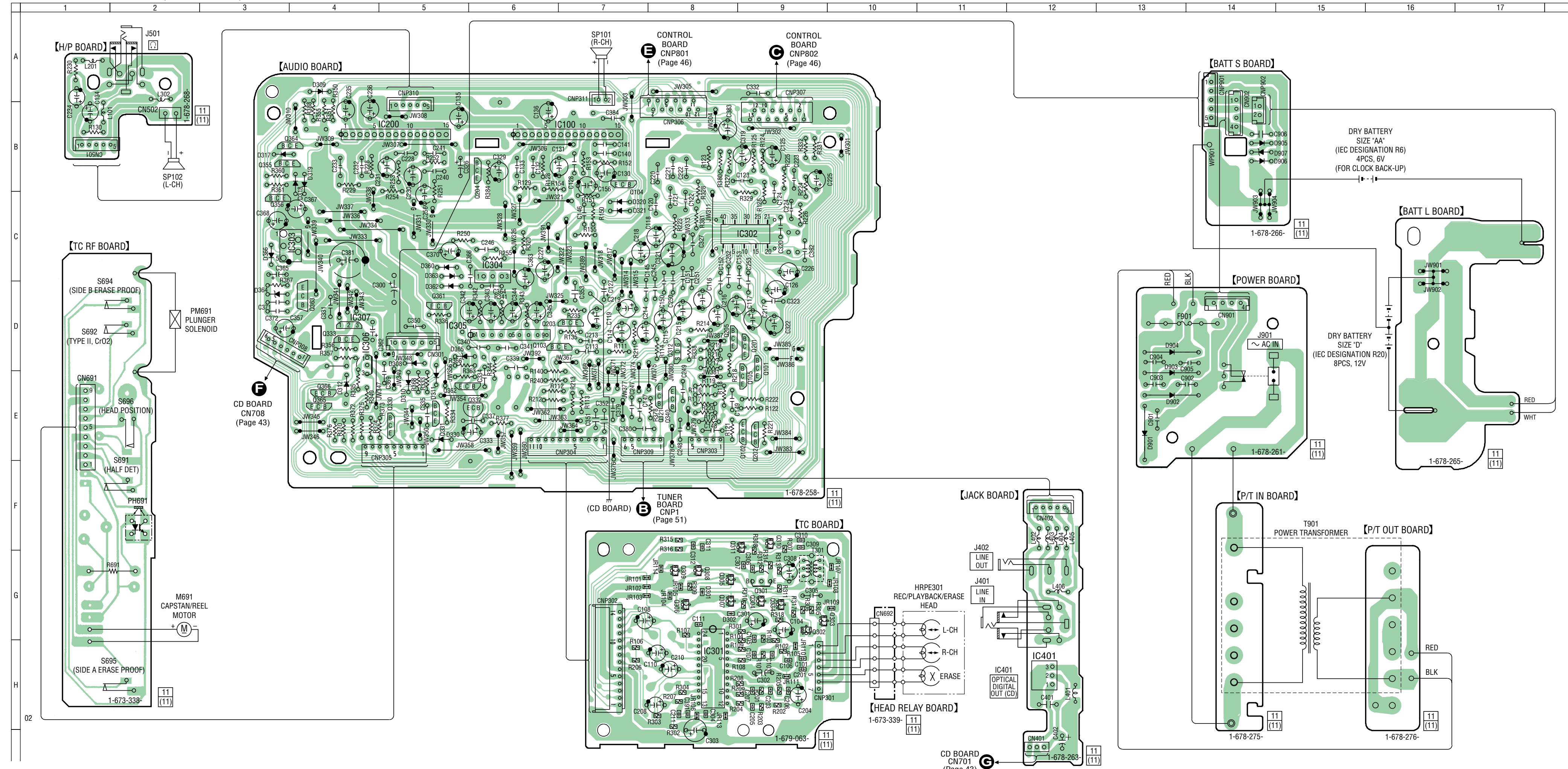


6-4. PRINTED WIRING BOARDS (MAIN SECTION)

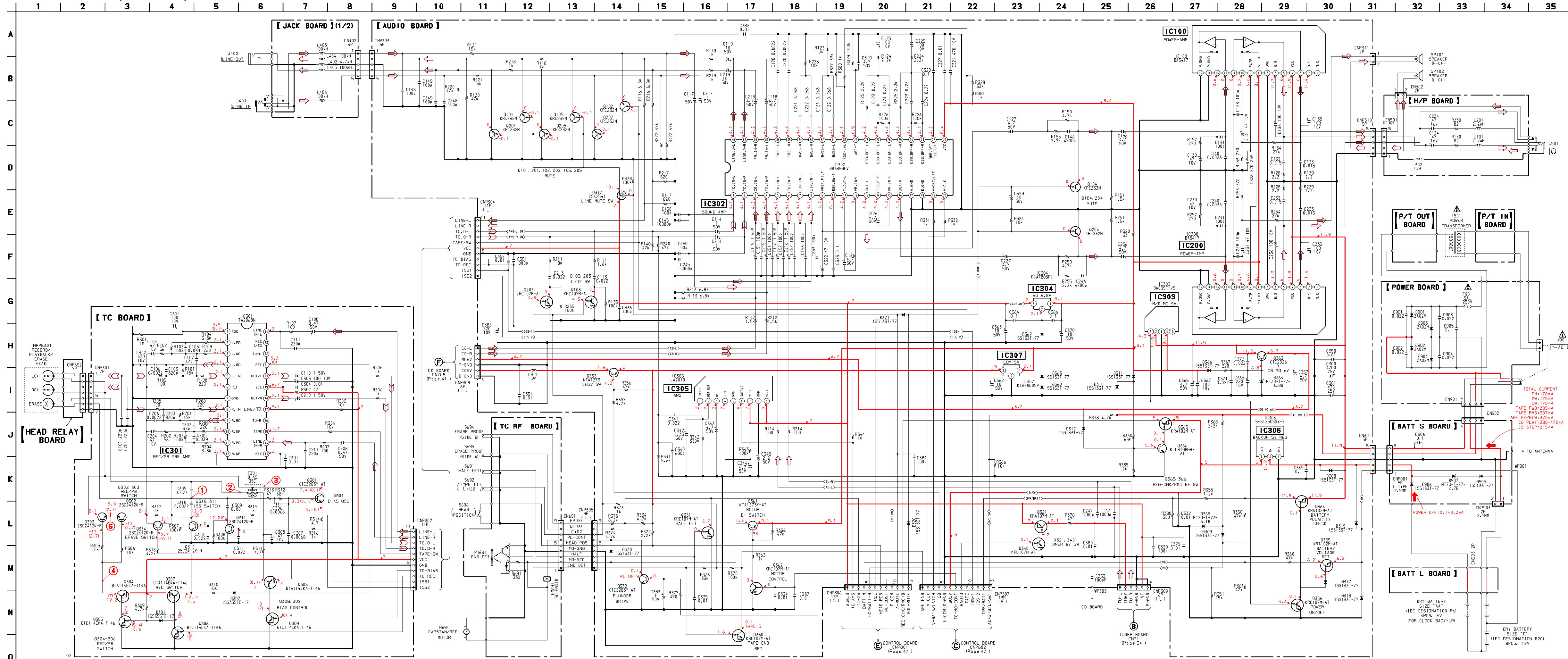
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D301	G-8	Q101	D-9
D302	G-8	Q102	E-9
D308	D-5	Q103	D-6
D309	A-4	Q104	B-7
D310	E-5	Q105	E-9
D311	E-5	Q201	D-9
D312	E-4	Q202	E-9
D317	B-3	Q203	D-7
D318	B-4	Q204	B-6
D319	B-4	Q205	D-8
D320	C-7	Q301	G-9
D321	C-7	Q302	G-9
D330	E-5	Q303	G-9
D360	C-5	Q304	G-9
D362	D-5	Q305	G-8
D363	C-5	Q306	G-8
D364	D-3	Q307	G-8
D365	D-5	Q308	G-8
D366	C-3	Q309	G-8
D901	E-13	Q310	F-9
D902	E-13	Q311	F-9
D903	D-13	Q312	D-8
D904	D-13	Q321	E-8
D905	B-14	Q330	E-5
		Q331	E-5
D906	B-14	Q332	E-6
D907	B-14	Q333	D-4
		Q334	G-9
		Q340	E-8
		Q355	B-3
IC100	B-7	Q356	C-3
IC200	B-5	Q361	D-5
IC301	H-8	Q362	E-5
IC302	C-9	Q363	D-4
IC303	C-3	Q364	B-3
IC304	C-6	Q365	E-4
IC305	D-6	Q366	E-4
IC306	D-4		
IC307	D-4		
IC401	H-12		

Note:
 ○ : parts extracted from the component side.
 ● : Pattern from the side which enables seeing.
 (The other layers' patterns are not indicated.)

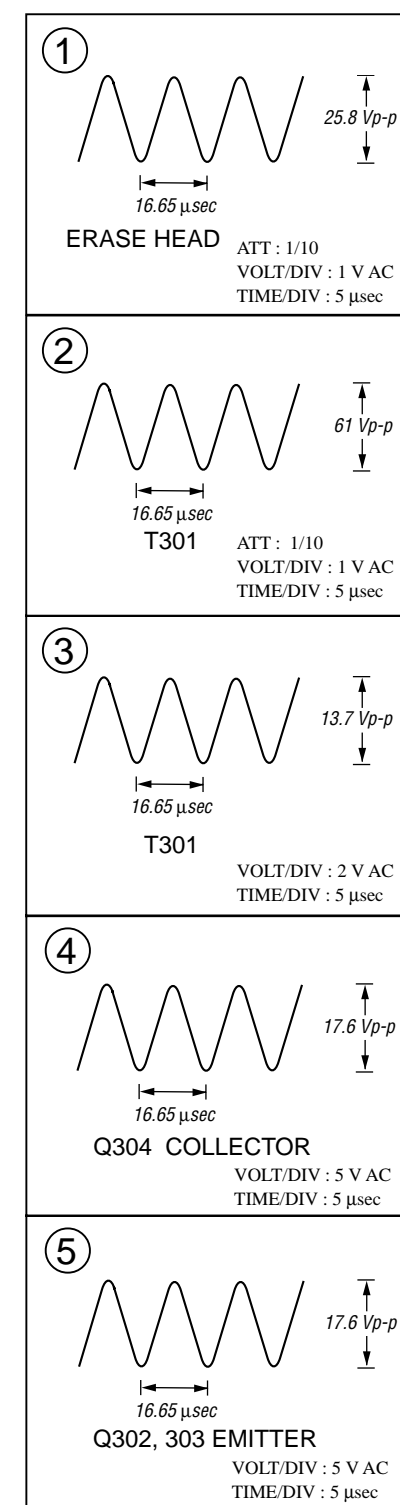


6-5. SCHEMATIC DIAGRAM (MAIN SECTION) • Refer to page 39 for Waveforms.

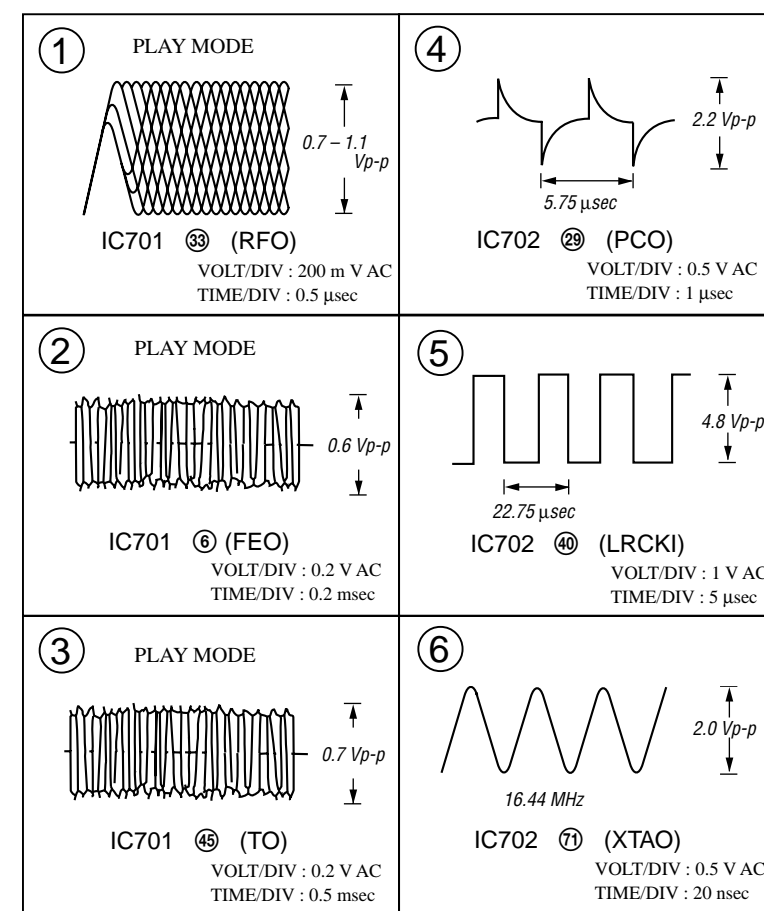


- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4 \text{ W}$ or less unless otherwise specified.
- Note:** The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.
- --- : 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 (COMMON), TAPE PLAY (TAPE SECTION)
 - () : REC
 - 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 an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path:
 - --- : FM
 - --- : PB
 - --- : REC
 - --- : CD

● Waveforms (MAIN Section)



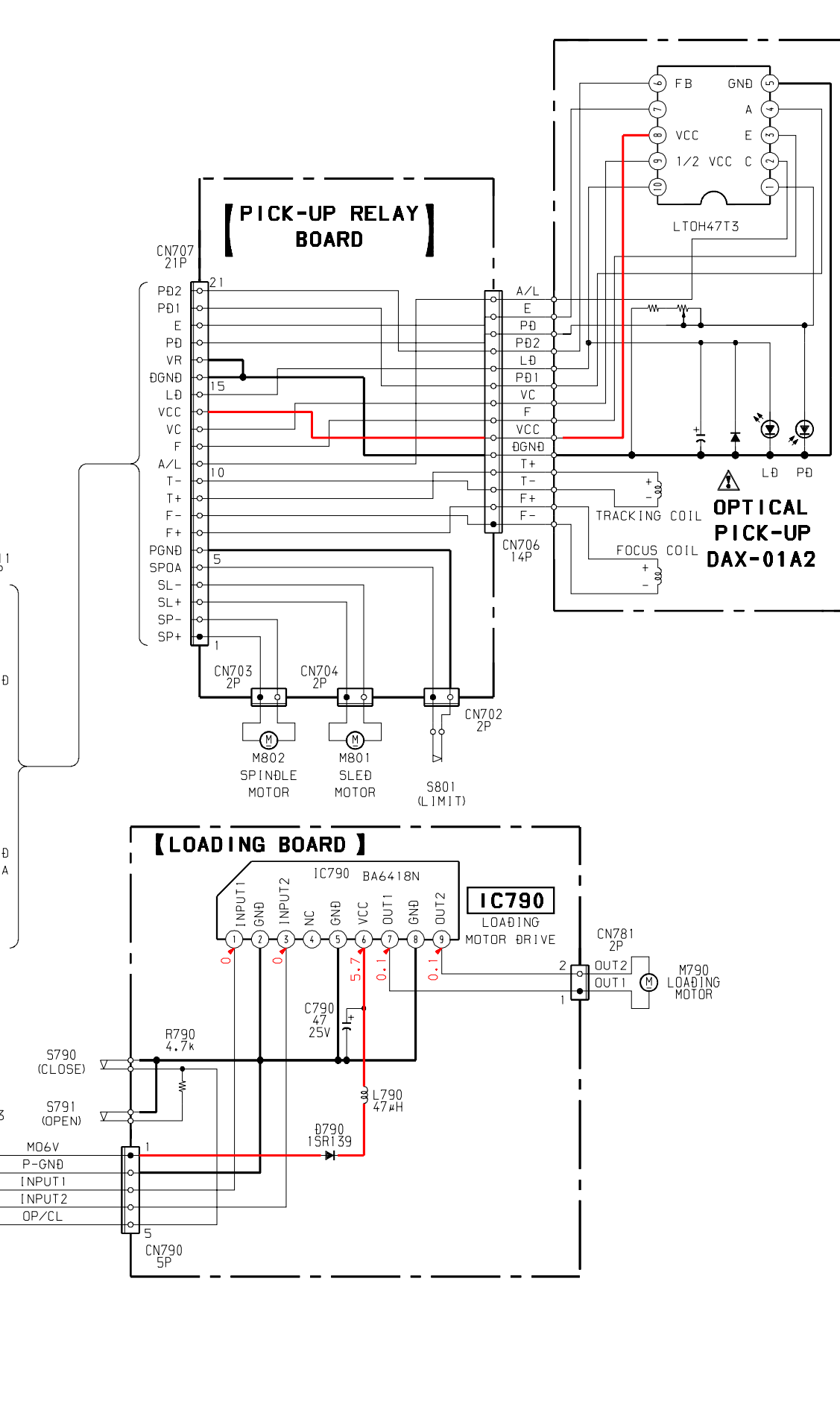
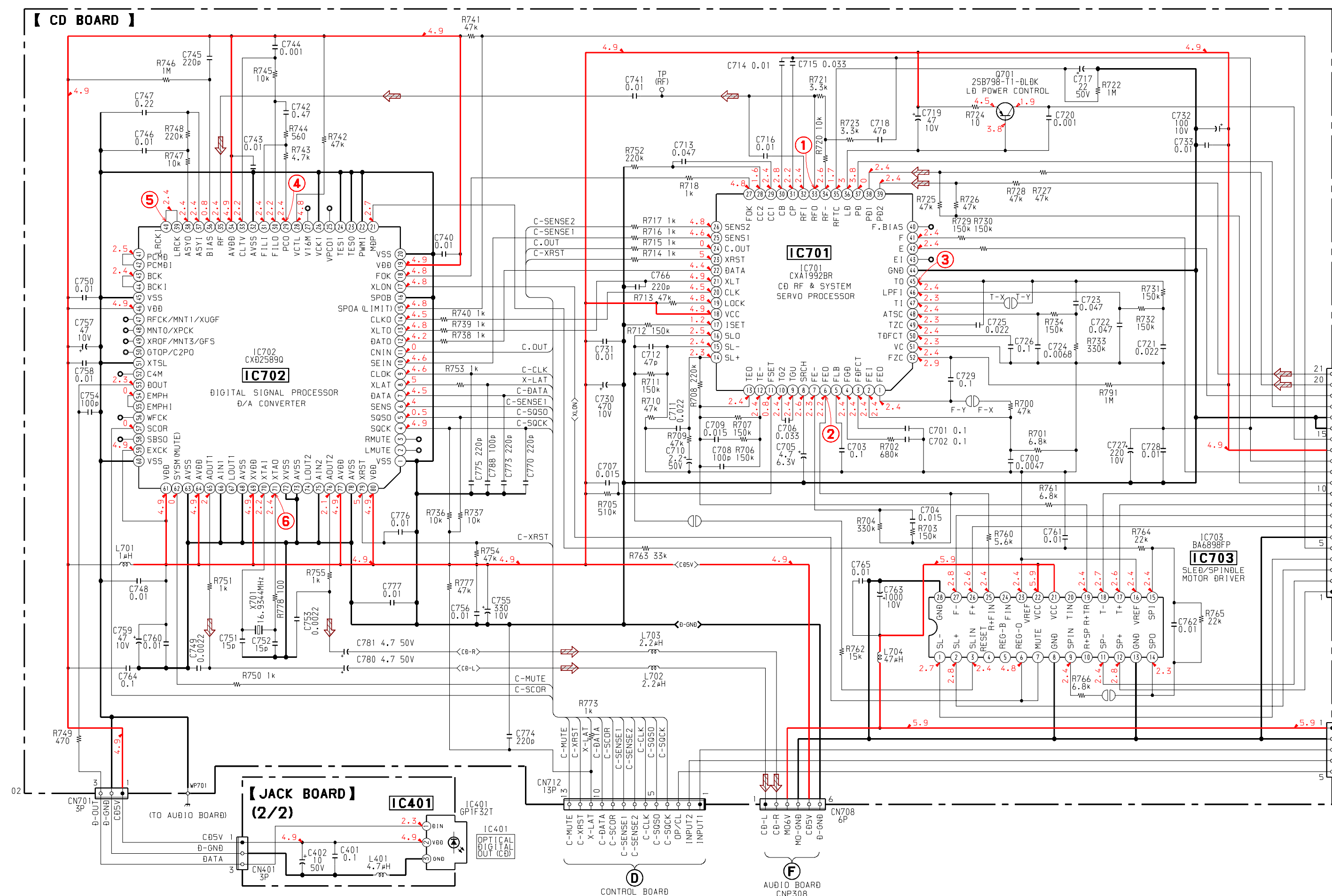
● Waveforms (CD Section)



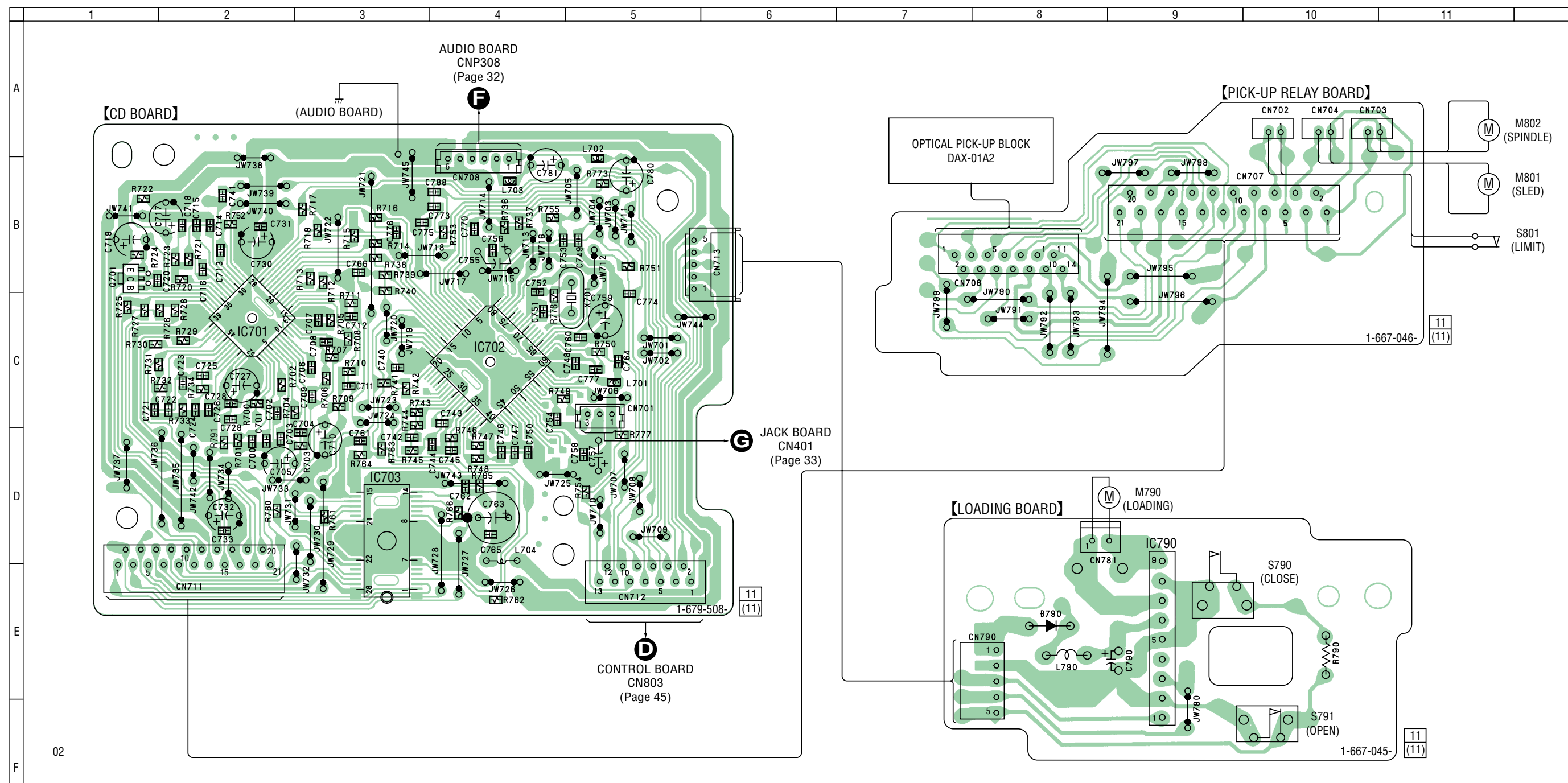
Note:
 • All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $\frac{1}{2}\text{W}$ or less unless otherwise specified.
 • **Note:** The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

• **—**: 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 conditions.
 • Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
 • Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 • Circled numbers refer to waveforms.
 • Signal path.
 • **↔**: CD

A
B
C
D
E
F
G
H
I
J
K



6-7. PRINTED WIRING BOARDS (CD SECTION)



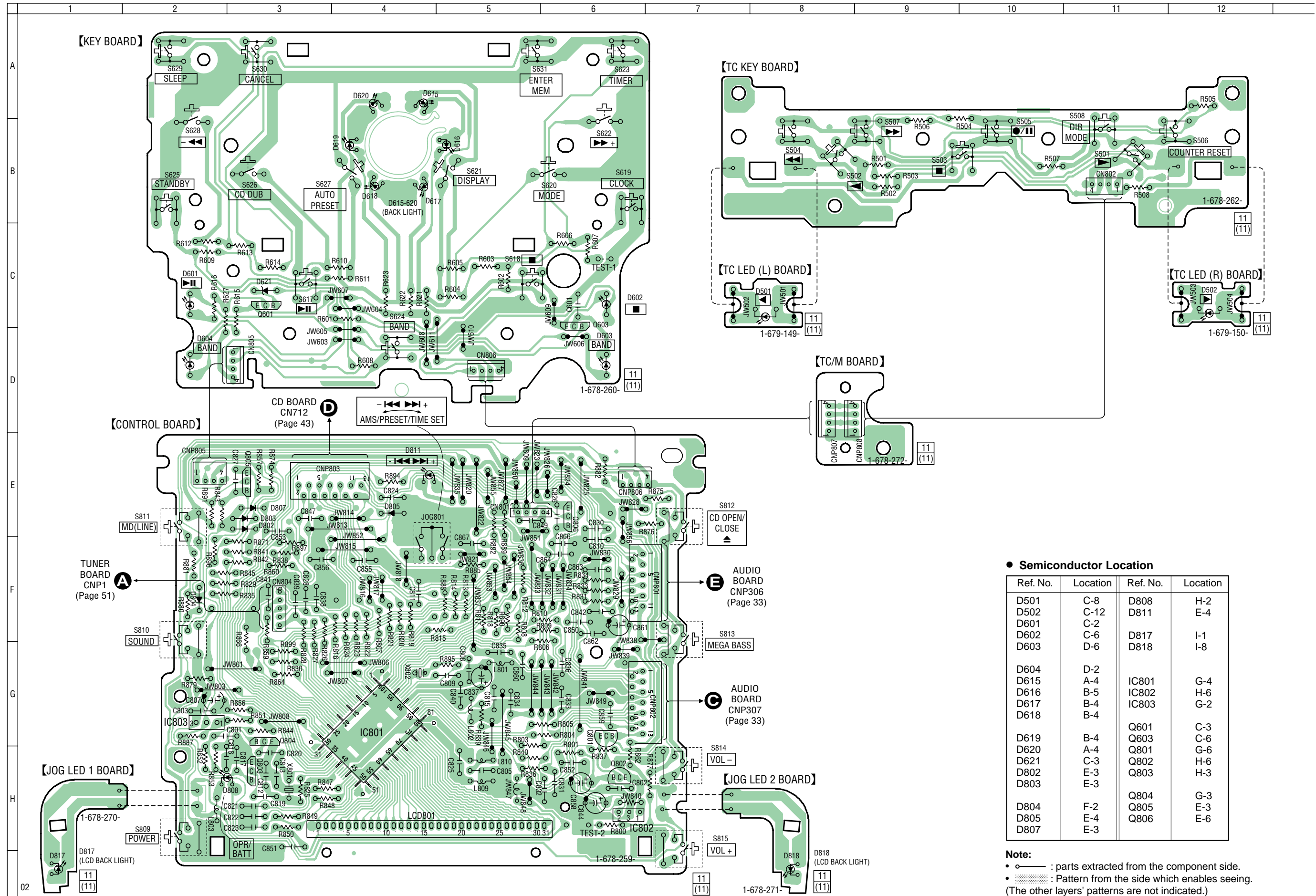
● Semiconductor Location

Ref. No.	Location
D790	E-8
IC701	C-2
IC702	C-4
IC703	D-3
IC790	E-9
Q701	B-1

Note:

- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

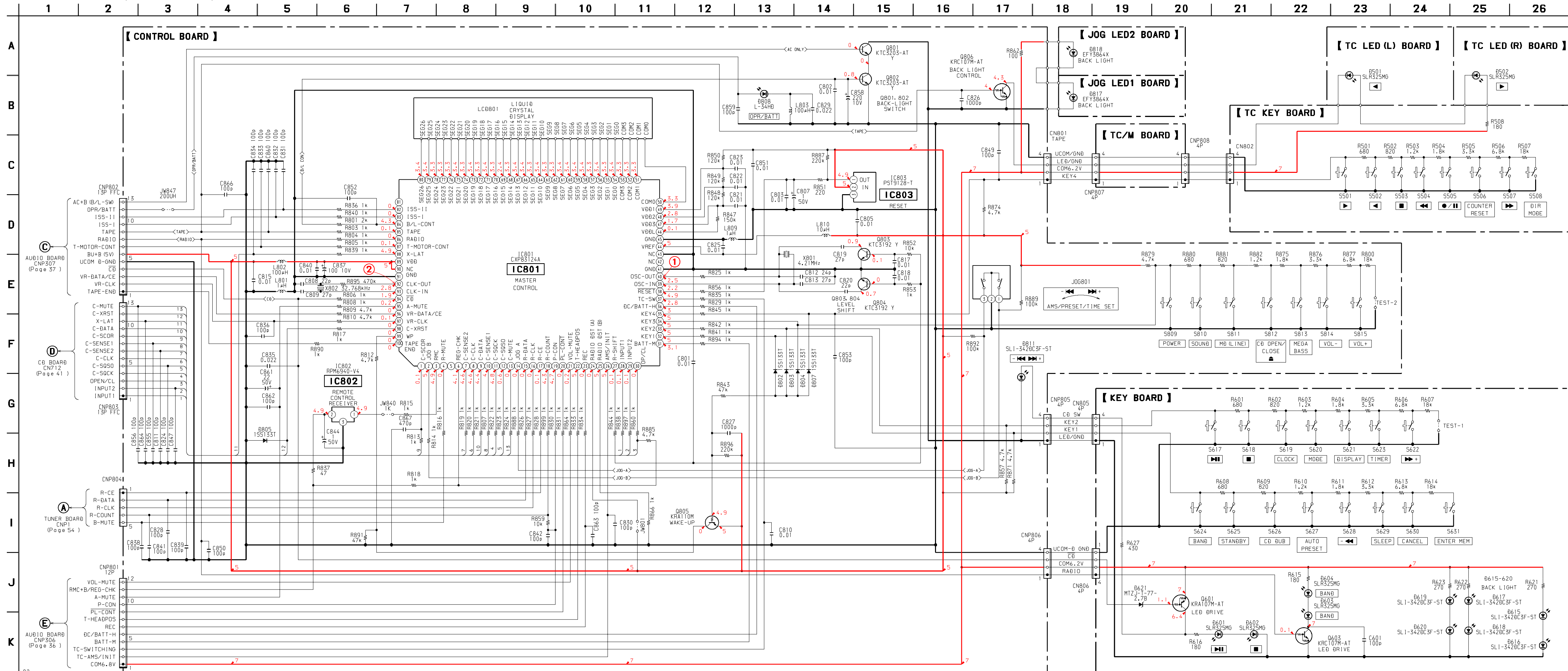
6-8. PRINTED WIRING BOARDS (CONTROL SECTION)



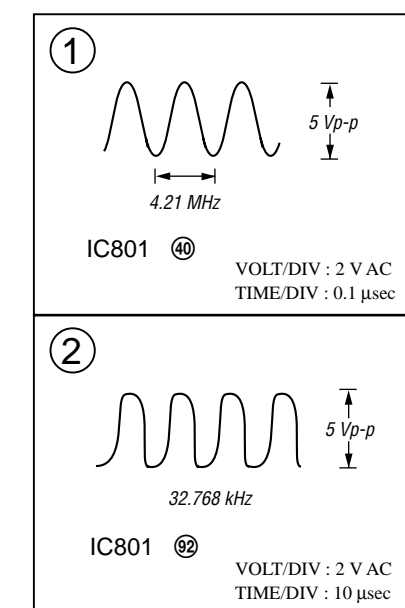
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D501	C-8	D808	H-2
D502	C-12	D811	E-4
D601	C-2	D817	I-1
D602	C-6	D818	I-8
D603	D-6		
D604	D-2		
D615	A-4	IC801	G-4
D616	B-5	IC802	H-6
D617	B-4	IC803	G-2
D618	B-4		
D619	B-4	Q601	C-3
D620	A-4	Q603	C-6
D621	C-3	Q801	G-6
D802	E-3	Q802	H-6
D803	E-3	Q803	H-3
D804	F-2	Q804	G-3
D805	E-4	Q805	E-3
D807	E-3	Q806	E-6

Note:
 • ○ : parts extracted from the component side.
 • ◐ : Pattern from the side which enables seeing.
 (The other layers' patterns are not indicated.)

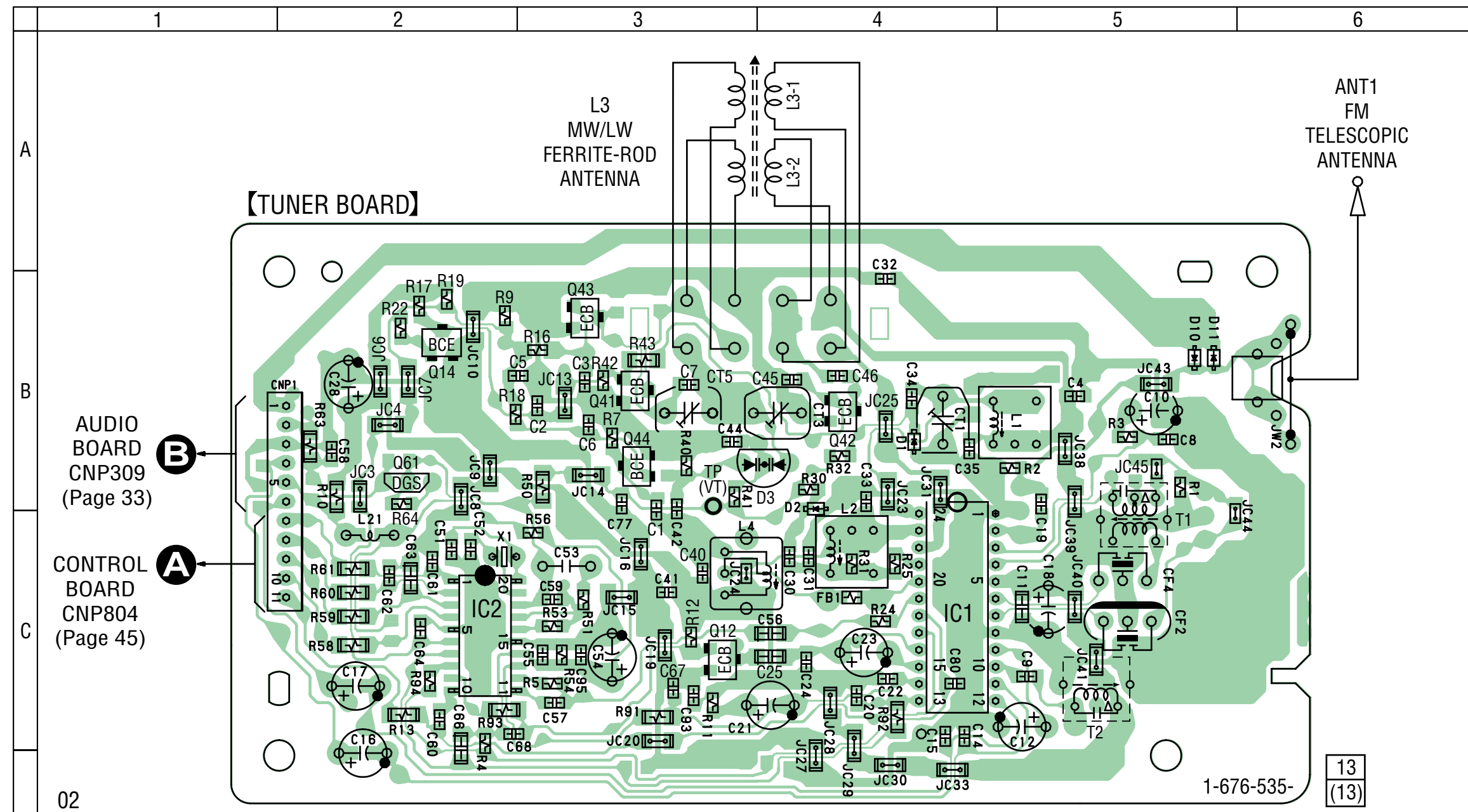


Waveforms (CONTROL Section)



- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - : 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
 - Voltages are taken with a VOM (Input impedance 10 M Ω). 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.

6-10. PRINTED WIRING BOARDS (TUNER SECTION)



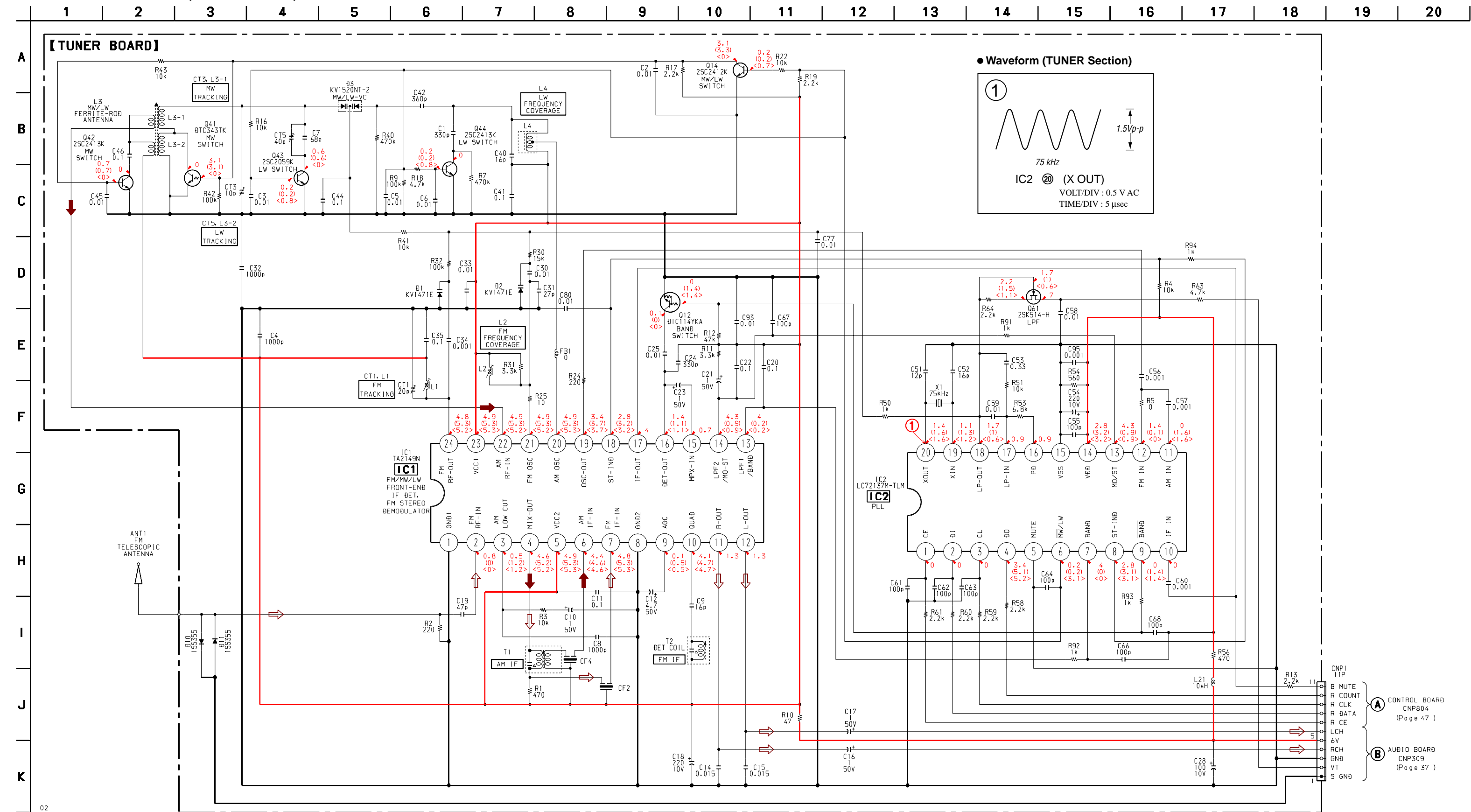
● Semiconductor Location

Ref. No.	Location
D1	B-4
D2	B-4
D3	B-4
D10	B-5
D11	B-5
IC1	C-4
IC2	C-2
Q12	C-3
Q14	B-2
Q41	B-3
Q42	B-4
Q43	B-3
Q44	B-3
Q61	B-2

Note:

- : parts extracted from the component side.
- ⊗ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

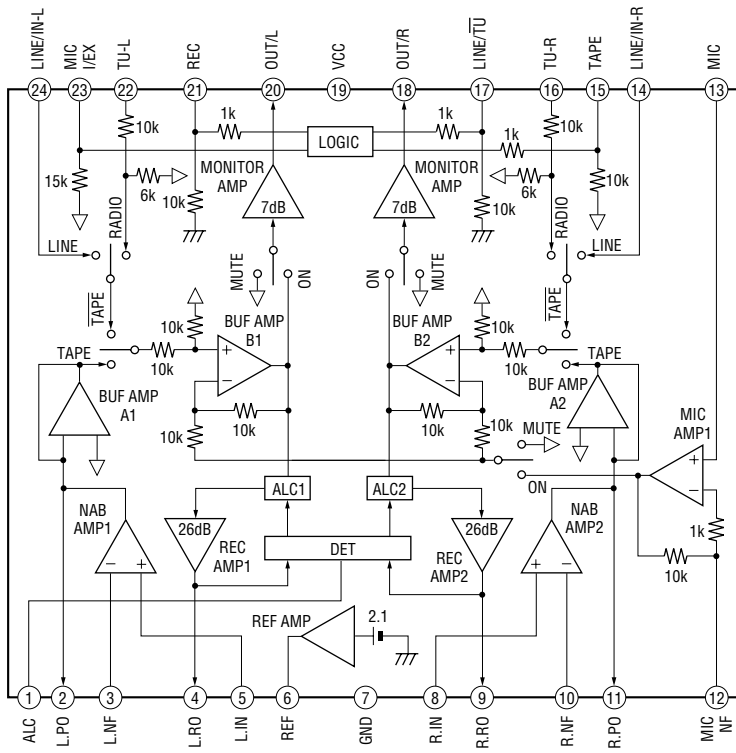
6-11. SCHEMATIC DIAGRAM (TUNER SECTION)



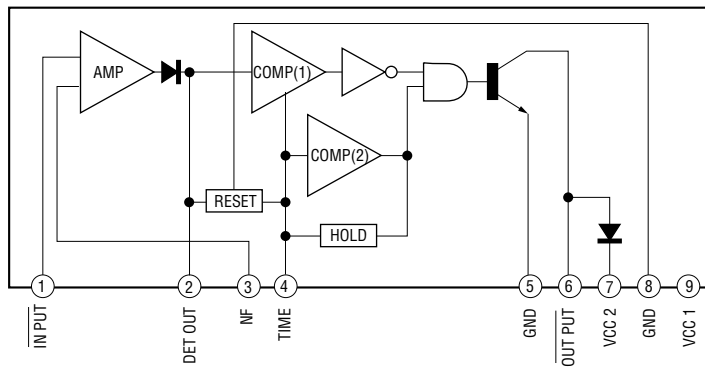
- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4W$ or less unless otherwise specified.
 - Δ : internal component.
 - : B+ Line.
 - : adjustment for repair.
 - Power voltage is 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 Ω). 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
 - ◻ : AM

● IC Block Diagrams (Main Section)

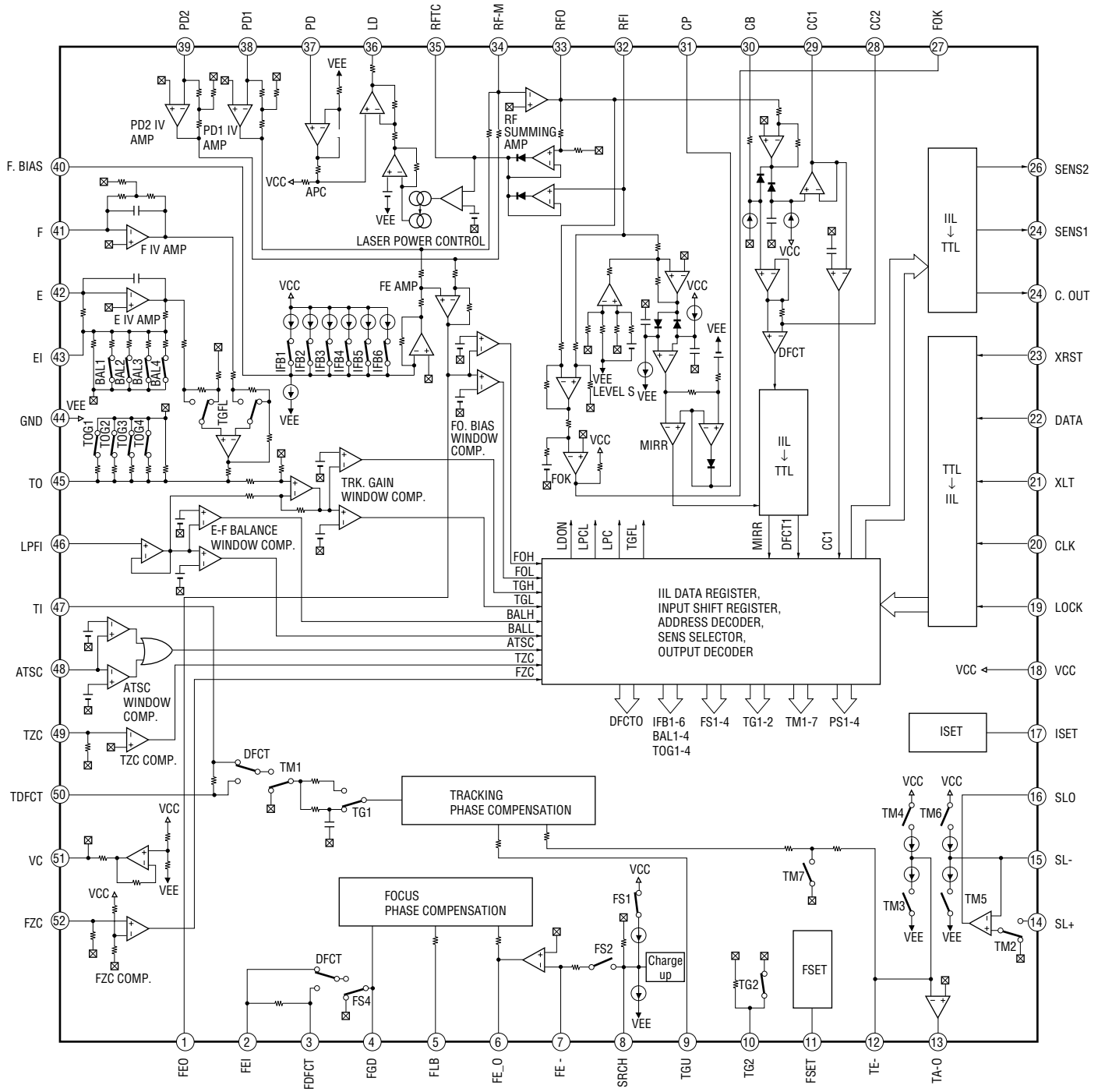
IC301 TA2068N



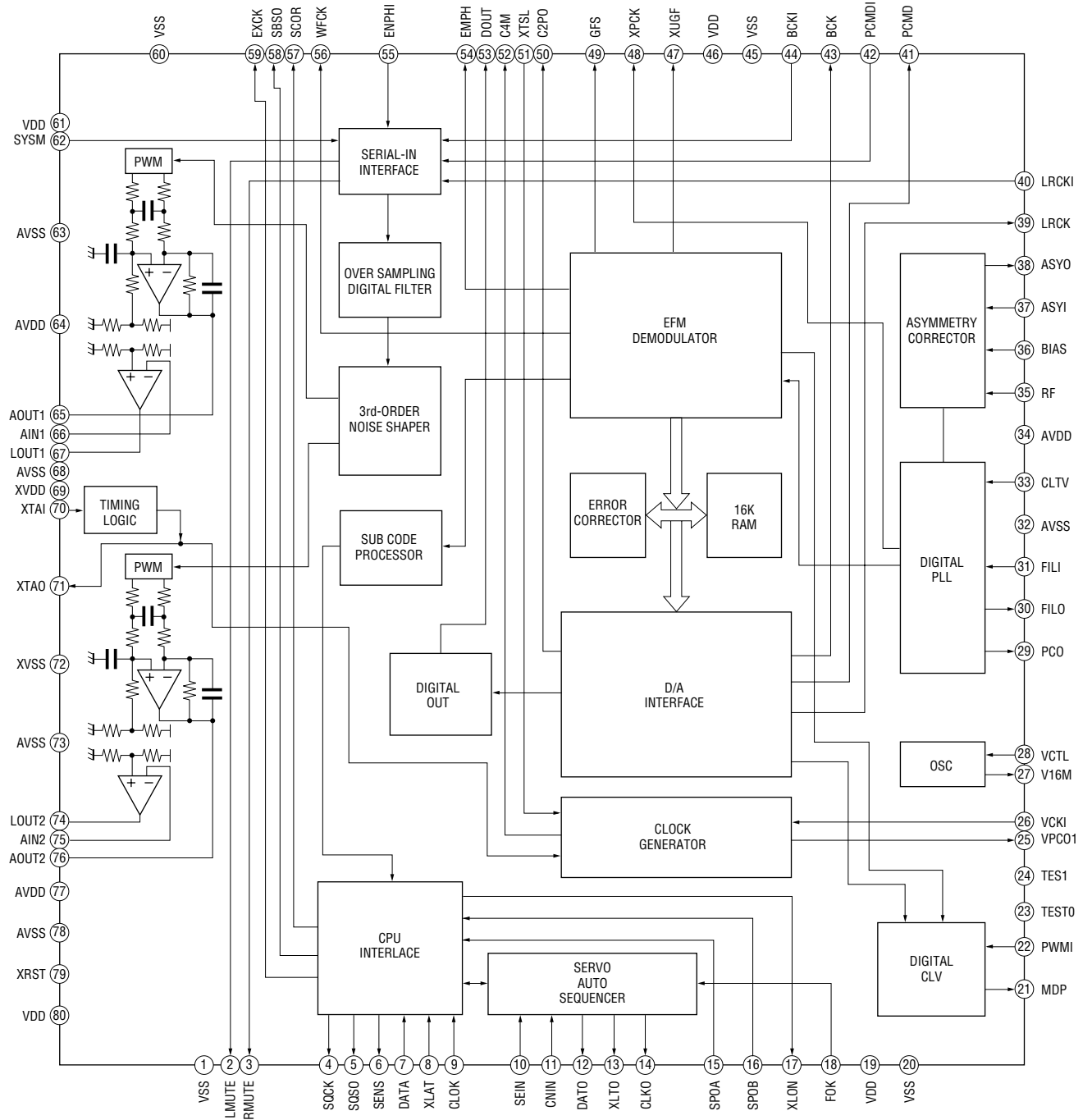
IC305 LA2010



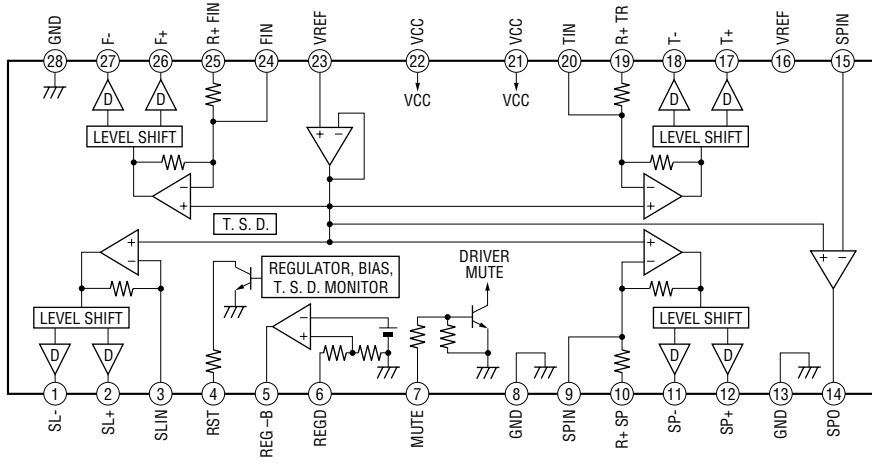
● IC Block Diagrams (CD Section)
IC701 CXA1992BR



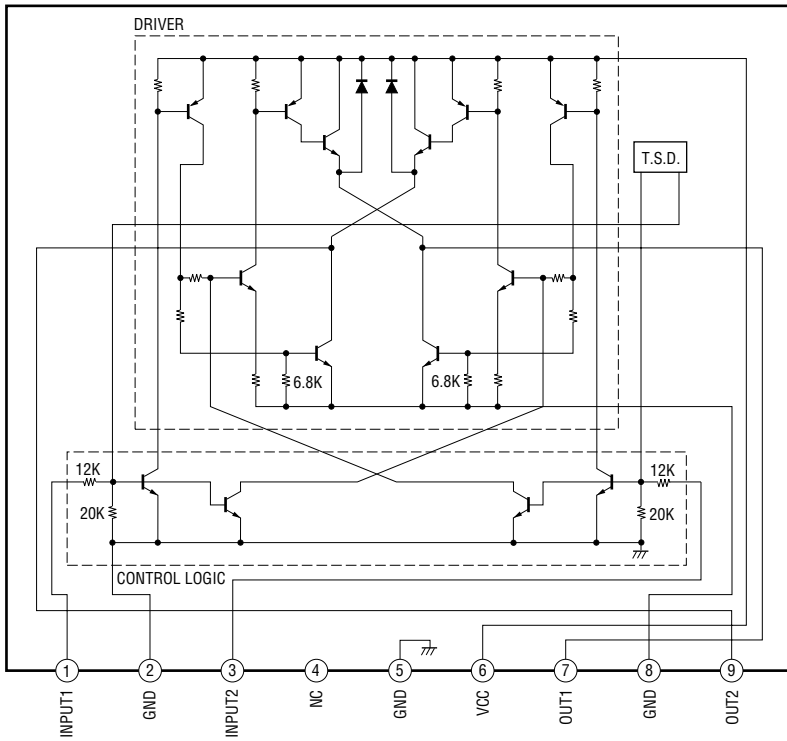
IC702 CXD2589Q



IC703 BA6898FP

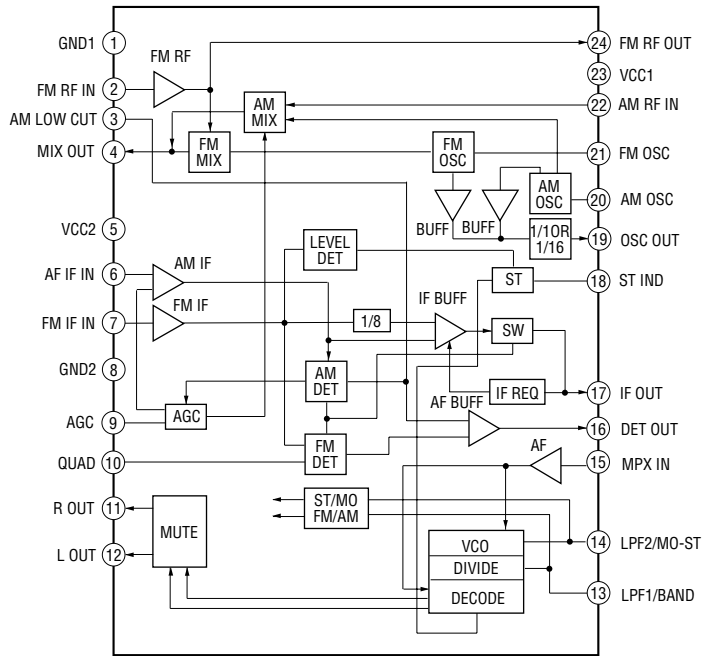


IC790 BA6418N

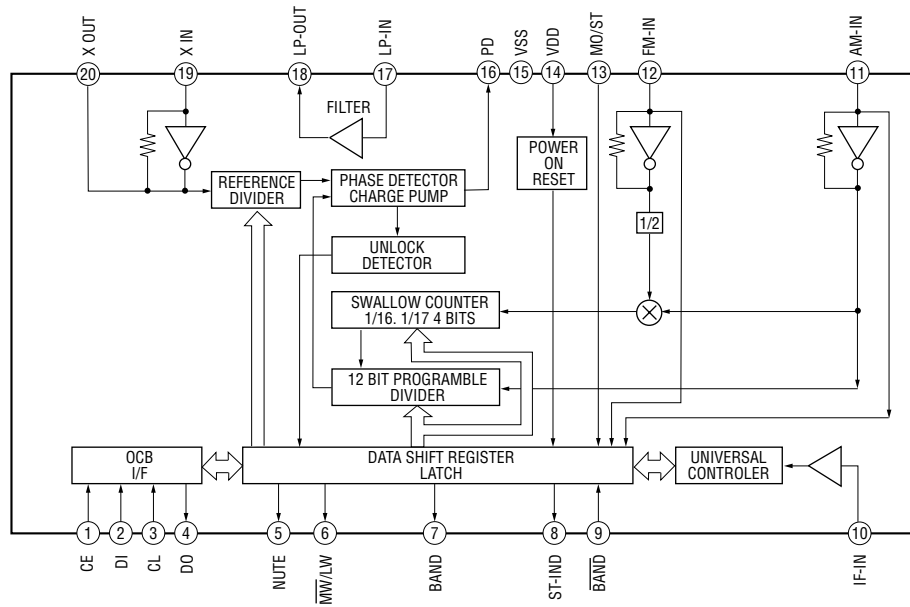


● IC Block Diagrams (Tuner Section)

IC1 TA2149N



IC2 LC72137M-TLM



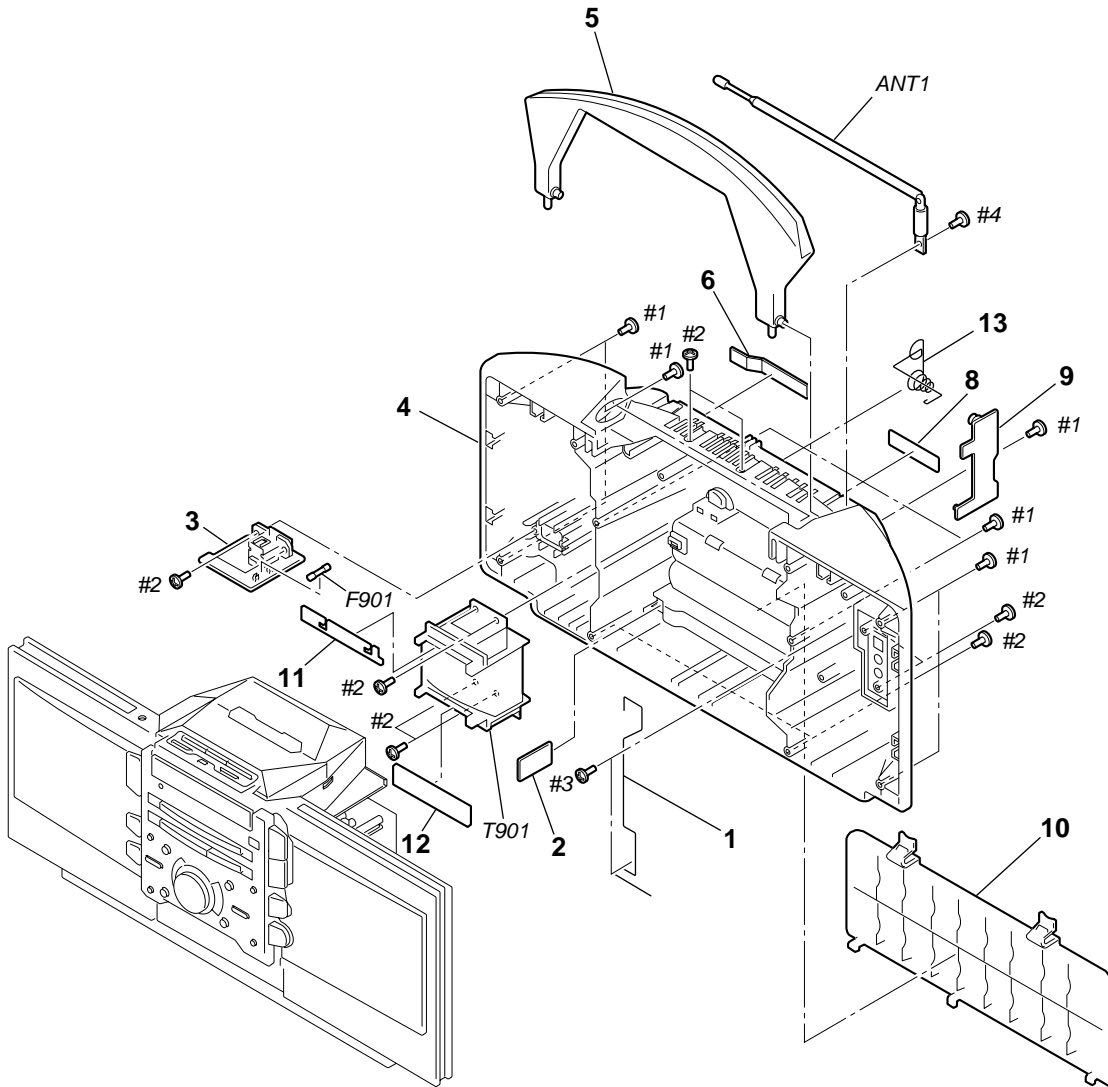
SECTION 7 EXPLODED VIEWS

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.

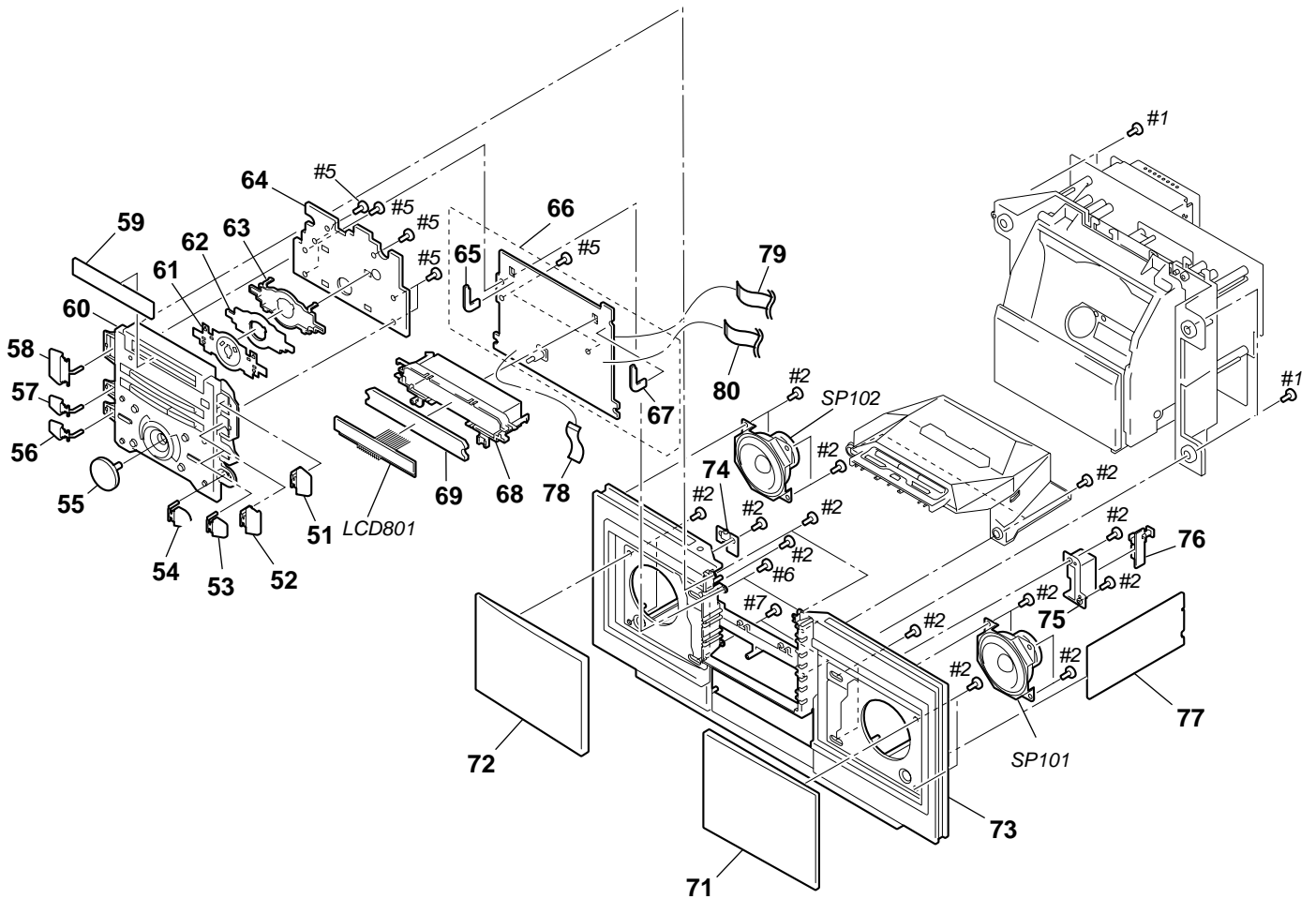
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

7-1. REAR CABINET SECTION



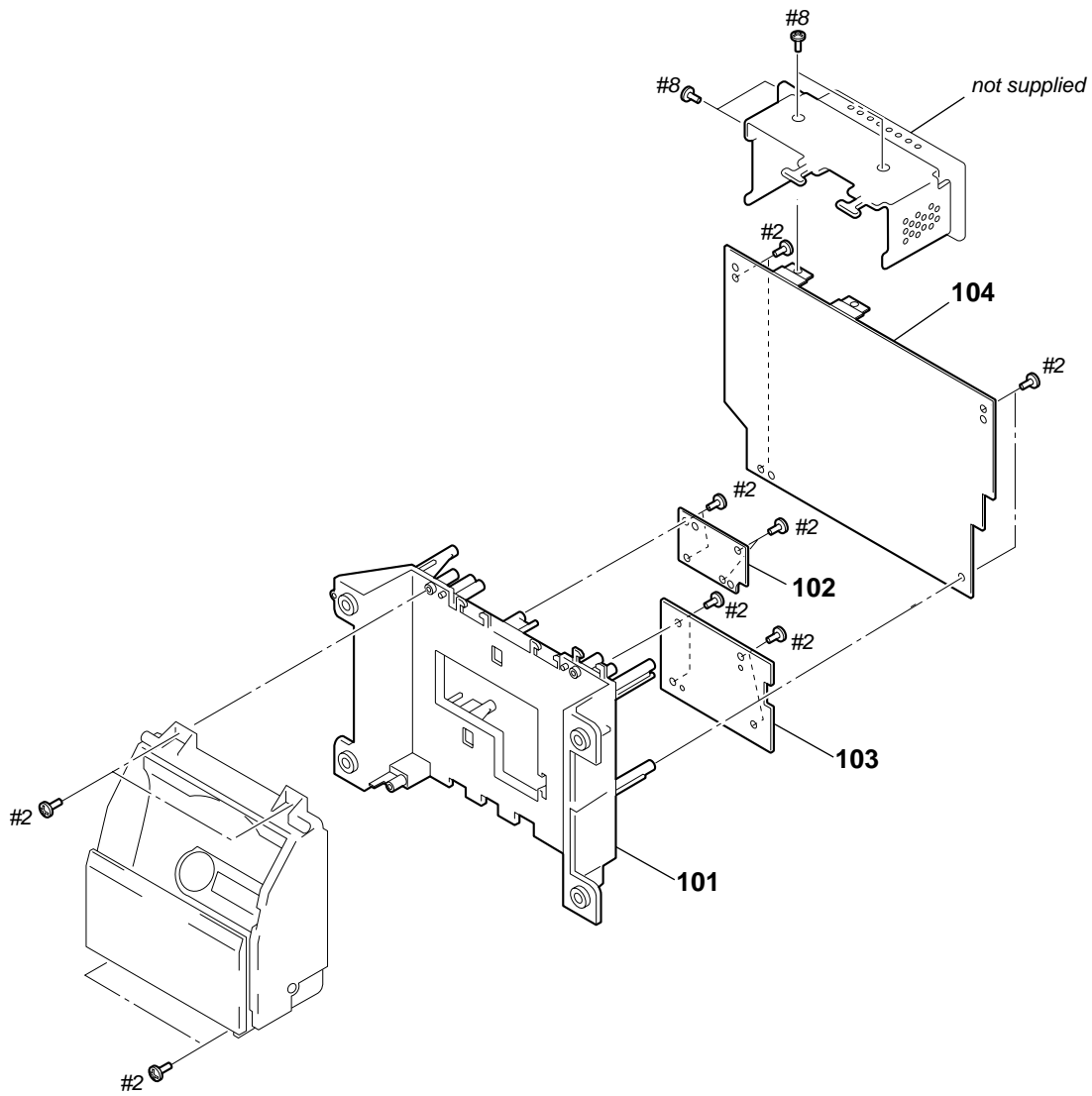
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-046-554-01	ANTENNA, TERMINAL		10	3-389-436-31	LID, BATTERY CASE	
* 2	1-678-266-11	BATT S BOARD		* 11	1-678-275-11	P/T IN BOARD	
* 3	1-678-261-11	POWER BOARD					
4	3-046-543-21	CABINET, REAR		* 12	1-678-276-11	P/T OUT BOARD	
5	3-046-548-01	HANDLE		13	3-046-555-01	BATTERY (+-), SPRING	
				ANT1	1-501-480-11	ANTENNA, TELESCOPIC	
6	3-047-896-01	BATTERY SPRING COVER		Δ F901	1-532-505-51	FUSE (5AL/250V)	
8	3-047-897-01	COVER WIRE		Δ T901	1-435-552-11	TRANSFORMER, POWER	
* 9	1-678-265-11	BATT L BOARD					

7-2. FRONT CABINET SECTION



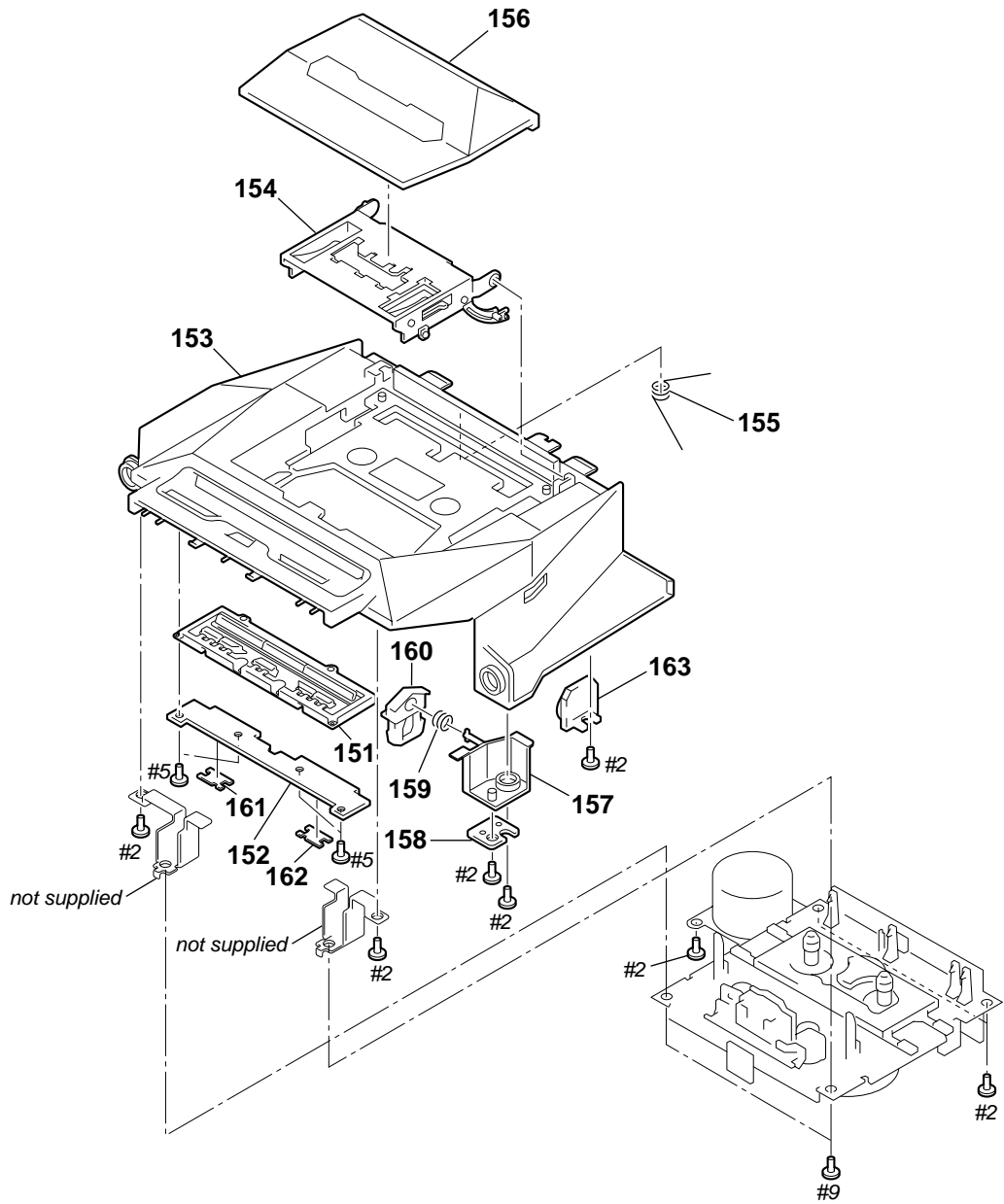
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-046-496-01	BUTTON, VOLUME (+)		* 67	1-678-271-11	JOG LED 2 BOARD	
52	3-046-497-01	BUTTON, VOLUME (-)		68	3-046-527-01	HOLDER, LCD	
53	3-046-501-01	EJECT, BUTTON (CD)		69	3-046-529-01	ILLUMINATOR (LCD)	
54	3-046-500-01	BUTTON (MEGA BASS)		71	X-3379-085-1	NETSP FRAME SUB ASSY R	
55	3-046-526-01	DIAL, JOG		72	X-3379-084-1	NETSP FRAME SUB ASSY L	
56	3-046-499-01	BUTTON (MD) (LINE)		73	3-046-493-01	CABINET, FRONT	
57	3-046-498-01	BUTTON (SOUND)		* 74	1-678-268-11	H/P BOARD	
58	3-046-495-01	BUTTON (POWER)		* 75	3-046-549-01	HOLDER, JACK	
59	3-046-525-01	WINDOW, LCD		* 76	1-678-263-11	JACK BOARD	
60	X-3379-086-1	PANEL DECO SUB ASSY		* 77	A-3322-563-A	TUNER BOARD, COMPLETE	
61	3-046-528-01	PLATE (LCD), LIGHT GUIDE		78	1-792-735-11	CABLE, FLEXIBLE FLAT	
62	3-046-530-01	HOLDER, LIGHTING		79	1-792-736-11	CABLE, FLEXIBLE FLAT	
63	3-046-531-01	ILLUMINATOR (JOG)		80	1-792-737-11	CABLE, FLEXIBLE FLAT	
* 64	A-3322-713-A	KEY BOARD, COMPLETE		LCD801	1-804-013-11	DISPLAY PANEL, LIQUID CRYSTAL	
* 65	1-678-270-11	JOG LED 1 BOARD		SP101	1-529-740-11	SPEAKER (8cm) (R-CH)	
* 66	A-3323-573-A	CONTROL BOARD, COMPLETE		SP102	1-529-740-11	SPEAKER (8cm) (L-CH)	

7-3. CD BLOCK SECTION



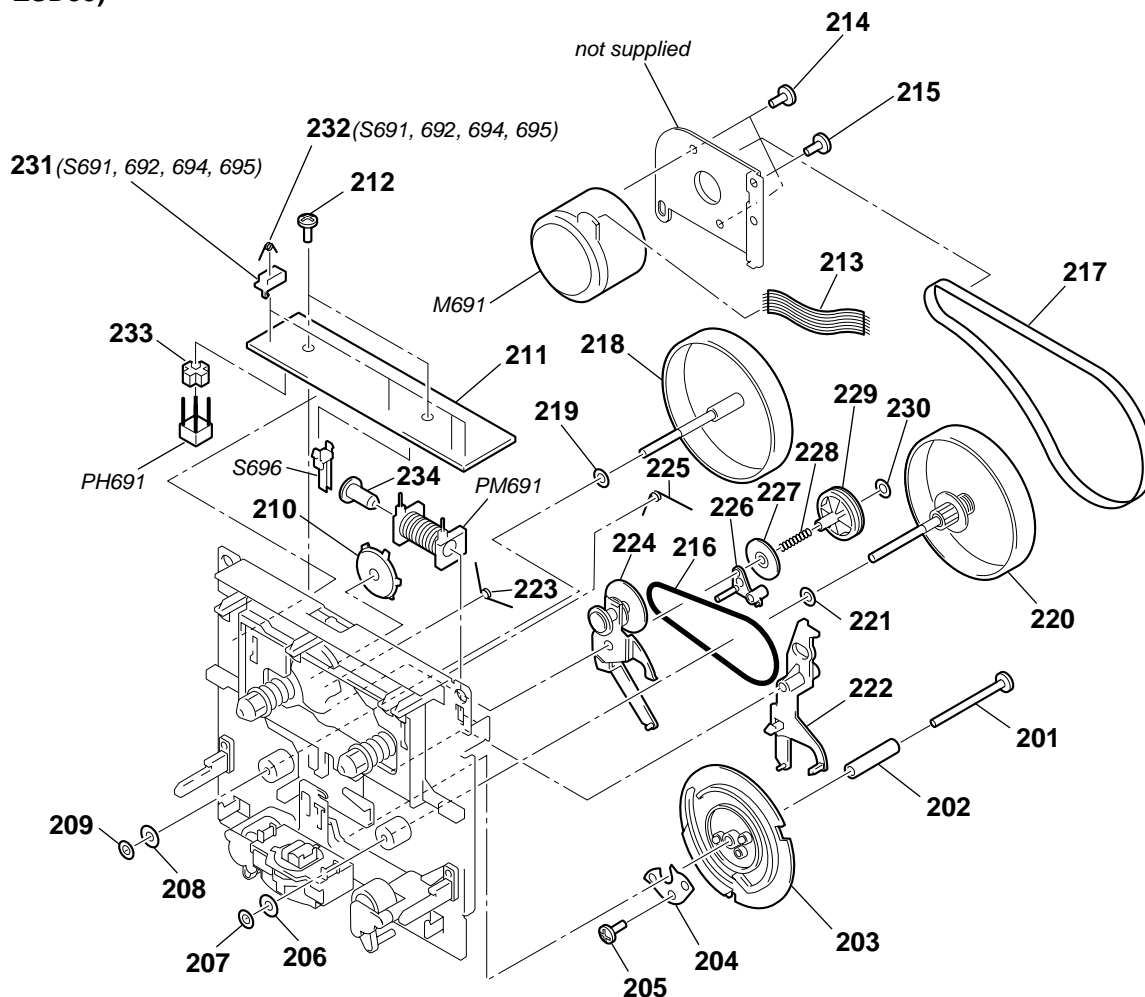
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
* 101	3-046-534-01	CHASSIS, CD		* 103	A-3322-981-A	CD BOARD, COMPLETE	
* 102	A-3322-825-A	TC BOARD, COMPLETE		* 104	A-3322-979-A	AUDIO BOARD, COMPLETE	

7-4. TOP CABINET SECTION



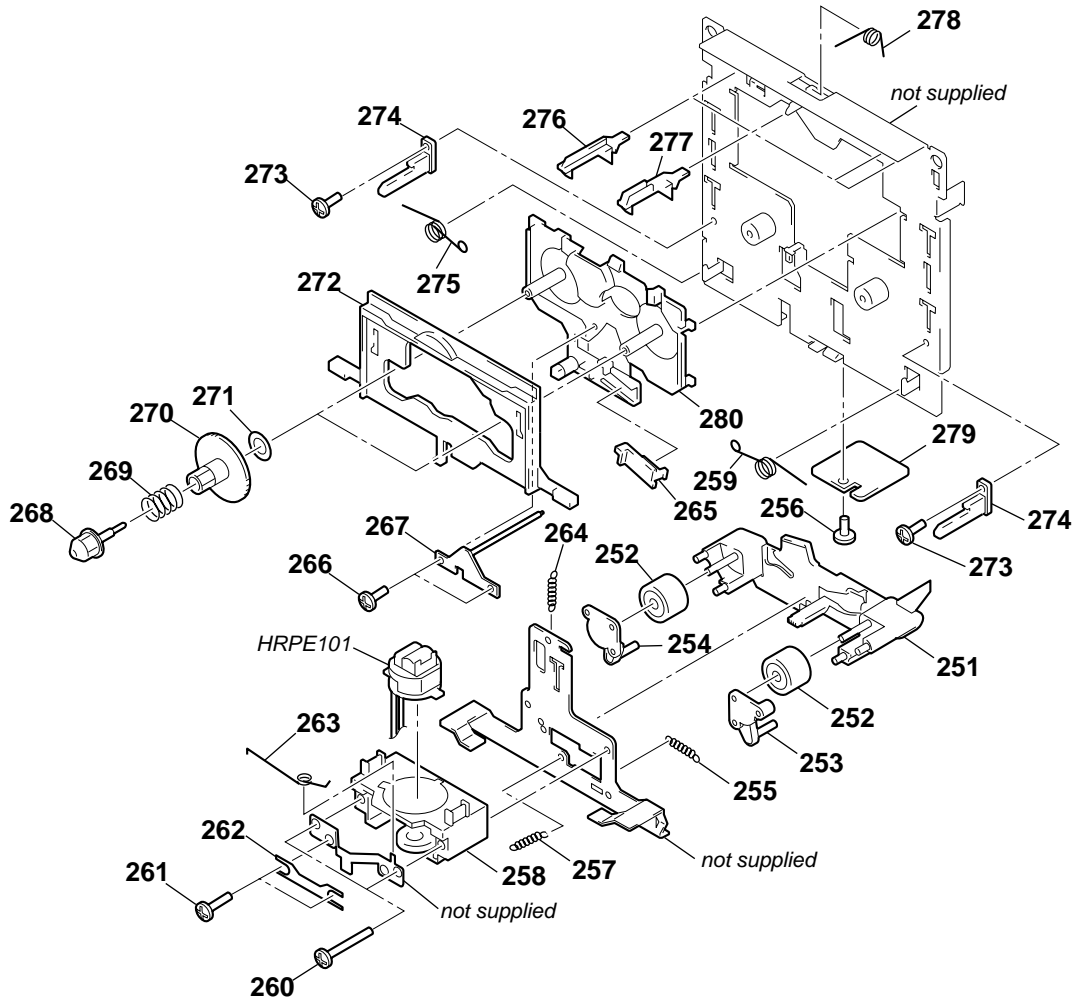
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-046-552-01	BUTTON (TAPE)		* 158	1-678-272-11	TC/M BOARD	
* 152	1-678-262-11	TC KEY BOARD		159	3-029-159-01	SPRING, PUSH CATCHER RETURN	
153	3-046-544-01	CABINET, TOP		160	3-043-966-01	CATCHER, PUSH	
154	3-046-547-01	CASSETTE, HOLDER		* 161	1-679-149-11	TC LED (L) BOARD	
155	3-046-562-01	SPRING, CASSETTE		* 162	1-679-150-11	TC LED (R) BOARD	
156	X-3379-087-1	LIDCASSETTE SUB ASSY		163	3-047-468-21	DAMPER	
157	3-047-898-01	HOLDER PUSH CATCH					

7-5. MECHANISM-DECK SECTION (1/2)
(MF-ZSD55)



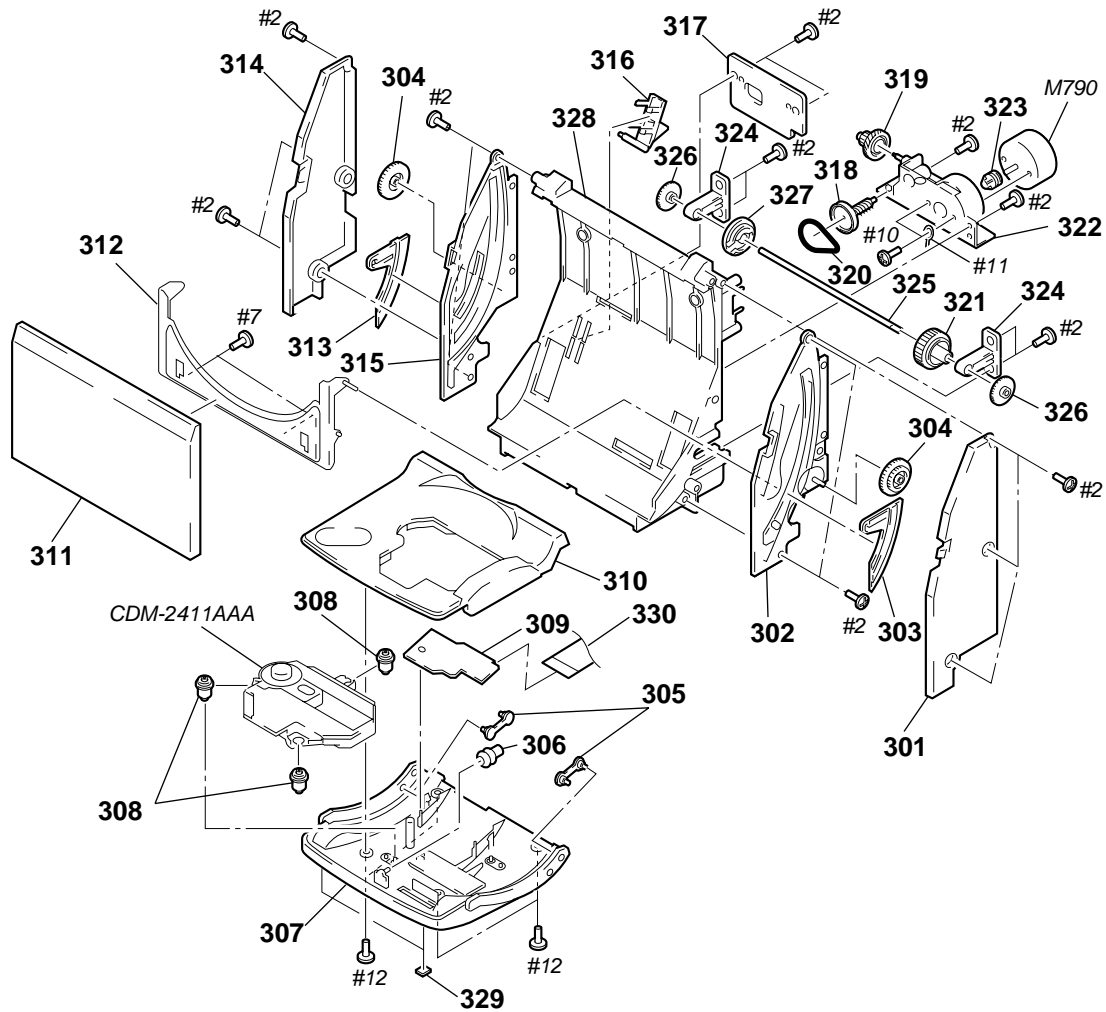
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-043-921-01	SCREW		221	3-029-626-01	WASHER	
202	3-029-591-01	COLLAR		222	3-029-589-01	TRIGGER, ARM	
203	3-043-906-01	GEAR, CAM		223	3-029-611-01	SPRING	
204	3-034-597-01	CAM, ARM		224	3-029-593-01	CLUTCH	
205	3-704-418-14	SCREW (M1.7X4), TAPPING		225	3-029-612-01	SPRING	
206	3-043-924-01	WASHER		226	3-043-911-01	ARM(UD A)	
207	3-029-622-01	WASHER		227	3-029-595-01	GEAR (UD)	
208	3-043-923-01	WASHER		228	3-043-918-01	SPRING	
209	3-029-620-01	WASHER		229	3-043-907-01	PULLEY (D)	
210	3-029-587-01	COVER		230	3-043-926-01	WASHER	
* 211	1-673-338-11	TC RF BOARD		231	3-034-694-01	BOX(SW) (S691,692, 694, 695)	
212	3-043-922-01	SCREW		232	3-043-910-01	SPRING (SW) (S691,692, 694, 695)	
* 213	1-792-386-11	WIRE MM		233	3-029-600-01	SPACER	
214	3-043-920-01	SCREW		234	3-044-171-01	SOLENOID	
215	3-029-614-01	SCREW		M691	3-045-799-01	MOTOR ASSY (CAPSTAN/REEL) (INCLUDING PULLEY)	
216	3-043-909-01	BELT (FR)		PH691	8-719-078-47	PHOTO INTERRUPTER SG-211V	
217	3-043-908-01	BELT		PM691	1-454-896-11	SOLENOID, PLUNGER	
218	3-044-168-01	FLYWHEEL (LA) ASSY		S696	1-771-893-11	MODE (SW) (HEAD POSITION)	
219	3-029-625-01	WASHER					
220	3-044-169-01	FLYWHEEL (RA) ASSY					

7-6. MECHANISM-DECK SECTION (2/2)
(MF-ZSD55)



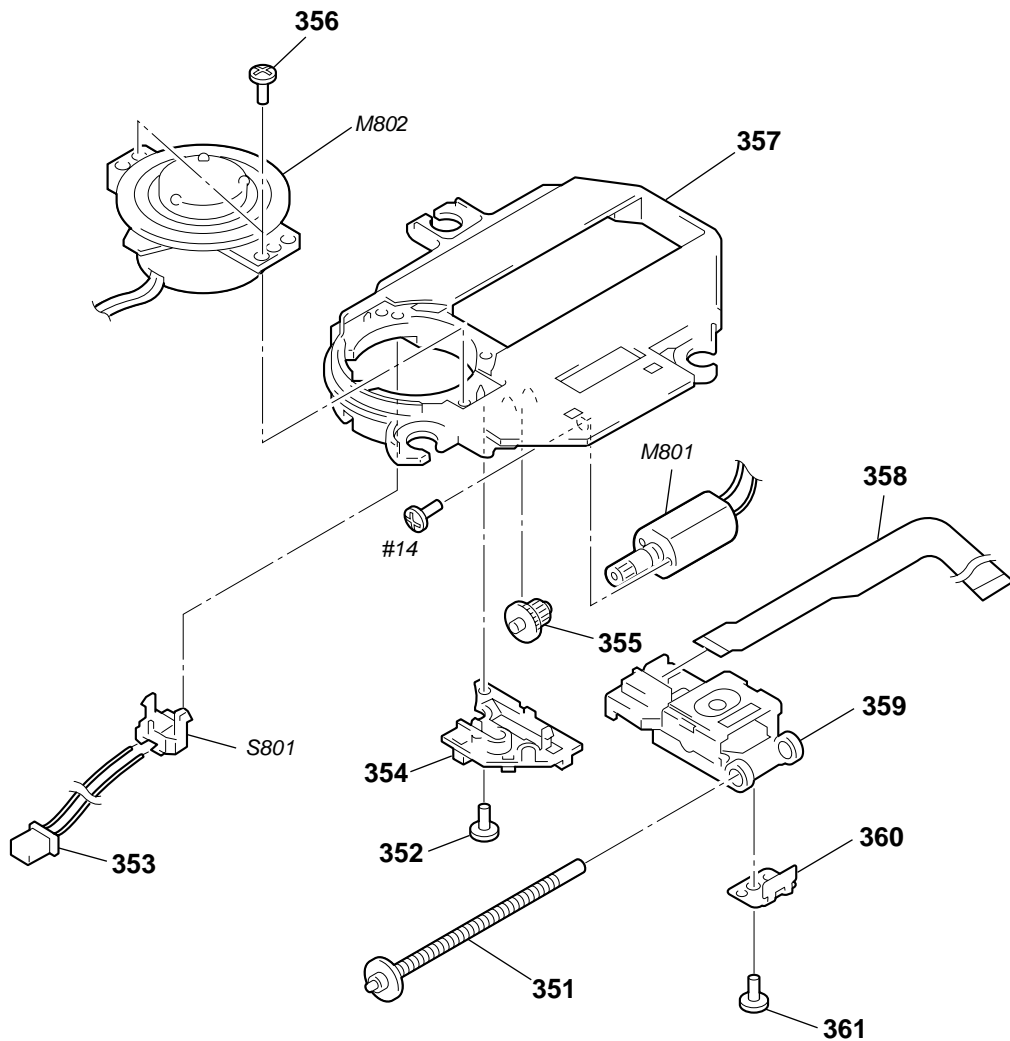
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	3-029-573-01	LEVER (HD)		* 267	3-044-167-01	PLATE (D) ASSY	
252	3-029-576-01	PINCH, ROLLER		268	3-029-578-01	REEL, CAP	
253	3-029-574-01	PINCH (R), CAP		269	3-029-602-01	SPRING	
254	3-029-575-01	PINCH (L), CAP		270	3-029-579-01	REEL, GEAR	
255	3-043-916-01	SPRING		271	3-043-925-01	WASHER	
256	3-029-617-01	SCREW		272	3-029-582-01	BRAKE, LEVER	
257	3-043-915-01	SPRING		273	3-029-615-01	SCREW	
258	3-029-570-01	FRAME (HD)		274	3-029-581-01	GUIDE (C)	
259	3-043-913-01	SPRING		275	3-043-912-01	SPRING	
260	3-029-616-01	SCREW		276	3-029-585-01	ARM(SW)	
261	3-043-919-01	SCREW		277	3-029-584-01	ARM(CS)	
262	3-043-905-01	SPRING (AZ)		278	3-029-610-01	SPRING	
263	3-043-914-01	SPRING		* 279	1-673-339-11	HEAD RELAY BOARD	
264	3-043-917-01	SPRING		280	3-029-583-01	FRAME (A)	
265	3-029-580-01	LEVER (ST)		HRPE101	1-418-847-11	HEAD ASSY, HOLDER (RECORD/PLAYBACK/ERASE)	
266	3-029-614-01	SCREW					

7-7. CD SECTION
(VLM-ZSD55-142)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-017-025-11	COVER (R), SIDE		* 317	1-667-045-11	LOADING BOARD	
302	3-017-012-11	PLATE (R), SIDE		318	3-017-031-11	GEAR (A)	
303	3-017-014-11	SLIDER (R)		319	3-017-032-11	GEAR (B)	
304	3-017-027-11	GEAR (C)		320	3-017-030-01	BELT	
305	3-017-016-11	SHAFT, TRAY					
				321	3-017-008-11	GEAR (R), TIMING	
306	4-975-811-01	INSULATOR		322	3-017-036-11	CHASSIS, GEAR	
307	3-017-022-21	TRAY (BOTTOM), CD		323	2-627-174-01	PULLEY (M)	
308	4-975-762-11	INSULATOR		324	3-017-009-11	BEARING	
* 309	1-667-046-11	PICK-UP RELAY BOARD		325	3-017-010-11	SHAFT	
310	3-020-624-21	TRAY (TOP), CD					
				326	3-017-028-11	GEAR (D)	
311	3-046-535-01	LID, CD		327	3-017-029-11	GEAR (L), TIMING	
312	X-3374-204-1	WINDOW ASSY, CD		328	3-017-024-21	CHASSIS, LOADING	
313	3-017-013-11	SLIDER (L)		329	3-034-848-01	CUSHION	
314	3-017-035-11	COVER (L), SIDE		330	1-782-663-11	WIRE (FLAT TYPE)	
315	3-017-011-11	PLATE (L), SIDE					
				M790	1-698-999-11	MOTOR, DC (LOADING)	
316	3-017-017-11	LEVER, DETECTION					

**7-8. 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
351	A-3303-970-A	SCREW ASSY, FEED		358	1-660-965-11	PC BOARD, SLIDE FLEXIBLE	
352	3-318-203-11	SCREW (B1.7), TAPPING		\triangle 359	X-4950-060-1	OPTICAL PICK-UP (DAX-01A2)	
353	1-690-530-81	LEAD (WITH CONNECTOR)		360	4-972-165-01	RACK	
354	4-972-163-04	SPRING, SLED					
355	4-974-003-01	GEAR (B)		361	4-973-631-01	SCREW	
356	3-719-401-11	SCREW (B1.7), TAPPING		M801	A-3303-403-A	MOTOR ASSY (SLED) (INCLUDING GEAR)	
357	4-972-162-01	CHASSIS		M802	A-3304-989-A	MOTOR ASSY, TURNTABLE (SPINDLE)	
				S801	1-571-099-21	SWITCH (1 KEY) (LIMIT)	

**SECTION 8
ELECTRICAL PARTS LIST**

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -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
- Abbreviation
IT : Italian EE : East European
JE : Tourist CIS : Russian

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-3322-979-A	AUDIO BOARD, COMPLETE *****		C216	1-126-960-11	ELECT	1uF 20% 50V
	7-685-645-79	SCREW +P 3X6	TYPE2 NON-SLIT	C217	1-126-960-11	ELECT	1uF 20% 50V
		< CAPACITOR >		C218	1-126-963-11	ELECT	4.7uF 20% 50V
C113	1-127-880-21	CERAMIC	0.022uF 10% 50V	C219	1-126-964-11	ELECT	10uF 20% 50V
C114	1-126-960-11	ELECT	1uF 20% 50V	C220	1-130-475-00	MYLAR	0.0022uF 5% 50V
C115	1-126-960-11	ELECT	1uF 20% 50V	C221	1-136-495-11	MYLAR	0.068uF 5% 50V
C116	1-126-960-11	ELECT	1uF 20% 50V	C222	1-136-495-11	MYLAR	0.068uF 5% 50V
C117	1-126-960-11	ELECT	1uF 20% 50V	C223	1-136-169-00	MYLAR	0.22uF 5% 50V
C118	1-126-963-11	ELECT	4.7uF 20% 50V	C224	1-136-169-00	MYLAR	0.22uF 5% 50V
C119	1-126-964-11	ELECT	10uF 20% 50V	C225	1-104-665-11	ELECT	100uF 20% 10V
C120	1-130-475-00	MYLAR	0.0022uF 5% 50V	C226	1-126-963-11	ELECT	4.7uF 20% 50V
C121	1-136-495-11	MYLAR	0.068uF 5% 50V	C227	1-126-963-11	ELECT	4.7uF 20% 50V
C122	1-136-495-11	MYLAR	0.068uF 5% 50V	C228	1-162-282-31	CERAMIC	100PF 10% 50V
C123	1-136-169-00	MYLAR	0.22uF 5% 50V	C230	1-104-664-11	ELECT	47uF 20% 10V
C124	1-136-169-00	MYLAR	0.22uF 5% 50V	C231	1-104-664-11	ELECT	47uF 20% 10V
C125	1-104-665-11	ELECT	100uF 20% 10V	C232	1-130-485-00	MYLAR	0.015uF 5% 50V
C126	1-126-963-11	ELECT	4.7uF 20% 50V	C233	1-130-485-00	MYLAR	0.015uF 5% 50V
C127	1-126-963-11	ELECT	4.7uF 20% 50V	C235	1-104-665-11	ELECT	100uF 20% 10V
C128	1-162-282-31	CERAMIC	100PF 10% 50V	C236	1-104-665-11	ELECT	100uF 20% 10V
C130	1-104-664-11	ELECT	47uF 20% 10V	C240	1-162-303-11	CERAMIC	0.0033uF 30% 16V
C131	1-104-664-11	ELECT	47uF 20% 10V	C241	1-162-282-31	CERAMIC	100PF 10% 50V
C132	1-130-485-00	MYLAR	0.015uF 5% 50V	C245	1-162-306-11	CERAMIC	0.01uF 30% 16V
C133	1-130-485-00	MYLAR	0.015uF 5% 50V	C246	1-127-872-21	CERAMIC	4700PF 10% 50V
C135	1-104-665-11	ELECT	100uF 20% 10V	C247	1-162-294-31	CERAMIC	0.001uF 10% 50V
C136	1-104-665-11	ELECT	100uF 20% 10V	C248	1-162-282-31	CERAMIC	100PF 10% 50V
C140	1-162-303-11	CERAMIC	0.0033uF 30% 16V	C249	1-162-282-31	CERAMIC	100PF 10% 50V
C141	1-162-282-31	CERAMIC	100PF 10% 50V	C250	1-162-282-31	CERAMIC	100PF 10% 50V
C145	1-162-306-11	CERAMIC	0.01uF 30% 16V	C251	1-162-282-31	CERAMIC	100PF 10% 50V
C146	1-127-872-21	CERAMIC	4700PF 10% 50V	C252	1-162-282-31	CERAMIC	100PF 10% 50V
C147	1-162-294-31	CERAMIC	0.001uF 10% 50V	C253	1-162-282-31	CERAMIC	100PF 10% 50V
C148	1-162-282-31	CERAMIC	100PF 10% 50V	C256	1-126-963-11	ELECT	4.7uF 20% 50V
C149	1-162-282-31	CERAMIC	100PF 10% 50V	C300	1-128-548-11	ELECT	4700uF 20% 25V
C150	1-162-282-31	CERAMIC	100PF 10% 50V	C319	1-126-963-11	ELECT	4.7uF 20% 50V
C151	1-162-282-31	CERAMIC	100PF 10% 50V	C320	1-127-888-21	CERAMIC	0.1uF 10% 50V
C152	1-162-282-31	CERAMIC	100PF 10% 50V	C321	1-126-925-11	ELECT	470uF 20% 10V
C153	1-162-282-31	CERAMIC	100PF 10% 50V	C322	1-104-664-11	ELECT	47uF 20% 10V
C156	1-126-963-11	ELECT	4.7uF 20% 50V	C323	1-127-888-21	CERAMIC	0.1uF 10% 50V
C213	1-127-880-21	CERAMIC	0.022uF 10% 50V	C326	1-104-666-11	ELECT	220uF 20% 25V
C214	1-126-960-11	ELECT	1uF 20% 50V	C327	1-162-306-11	CERAMIC	0.01uF 30% 16V
C215	1-126-960-11	ELECT	1uF 20% 50V	C329	1-126-964-11	ELECT	10uF 20% 50V
				C331	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C332	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C333	1-126-960-11	ELECT	1uF 20% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C334	1-162-306-11	CERAMIC	0.01uF 30% 16V	D362	8-719-991-33	DIODE 1SS133T-77	
C335	1-162-306-11	CERAMIC	0.01uF 30% 16V	D363	8-719-991-33	DIODE 1SS133T-77	
C336	1-162-282-31	CERAMIC	100PF 10% 50V	D364	8-719-109-97	DIODE RD6.8ES-B2	
C337	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C339	1-162-282-31	CERAMIC	100PF 10% 50V	D365	8-719-109-85	DIODE RD5.1ES-B2	
				D366	8-719-991-33	DIODE 1SS133T-77	
C340	1-162-292-31	CERAMIC	680PF 10% 50V			< IC >	
C341	1-162-843-11	CERAMIC	0.022uF 10% 16V				
C342	1-124-252-00	ELECT	0.33uF 20% 50V	IC100	8-759-426-51	IC BA5417	
C343	1-126-963-11	ELECT	4.7uF 20% 50V	IC200	8-759-426-51	IC BA5417	
C344	1-126-963-11	ELECT	4.7uF 20% 50V	IC302	8-759-657-36	IC IC BD3859FV	
				IC303	8-759-564-82	IC BA09ST-V5	
C345	1-126-961-11	ELECT	2.2uF 20% 50V	IC304	8-759-646-52	IC KIA7805API	
C350	1-130-483-00	MYLAR	0.01uF 5% 50V				
C351	1-162-294-31	CERAMIC	1000PF 10% 50V	IC305	8-759-800-71	IC LA2010	
C352	1-162-306-11	CERAMIC	0.01uF 30% 16V	IC306	8-759-479-70	IC S-81250SGY-B	
C353	1-162-282-31	CERAMIC	100PF 10% 50V	IC307	8-759-683-11	IC KIA78L05BP	
						< COIL >	
C357	1-126-963-11	ELECT	4.7uF 20% 50V	L403	1-410-521-11	INDUCTOR 100uH	
C362	1-126-964-11	ELECT	10uF 20% 50V	L404	1-410-521-11	INDUCTOR 100uH	
C363	1-126-964-11	ELECT	10uF 20% 50V	L405	1-410-521-11	INDUCTOR 100uH	
C364	1-127-888-21	CERAMIC	0.1uF 10% 50V	L406	1-410-521-11	INDUCTOR 100uH	
C365	1-126-934-11	ELECT	220uF 20% 10V			< TRANSISTOR >	
C366	1-127-888-21	CERAMIC	0.1uF 10% 50V	Q101	8-729-905-50	TRANSISTOR DTC343TS	
C367	1-104-665-11	ELECT	100uF 20% 10V	Q102	8-729-905-50	TRANSISTOR DTC343TS	
C368	1-126-963-11	ELECT	4.7uF 20% 50V	Q103	8-729-036-77	TRANSISTOR KRC107M	
C369	1-127-888-21	CERAMIC	0.1uF 10% 50V	Q104	8-729-905-50	TRANSISTOR DTC343TS	
C370	1-126-964-11	ELECT	10uF 20% 50V	Q105	8-729-905-50	TRANSISTOR DTC343TS	
C371	1-161-494-00	CERAMIC	0.022uF 25V	Q201	8-729-905-50	TRANSISTOR DTC343TS	
C372	1-161-494-00	CERAMIC	0.022uF 25V	Q202	8-729-905-50	TRANSISTOR DTC343TS	
C379	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q203	8-729-036-77	TRANSISTOR KRC107M	
C380	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q204	8-729-905-50	TRANSISTOR DTC343TS	
C381	1-126-941-11	ELECT	470uF 20% 25V	Q205	8-729-905-50	TRANSISTOR DTC343TS	
C382	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q312	8-729-052-54	TRANSISTOR 2SK2541	
C383	1-126-934-11	ELECT	220uF 20% 10V	Q321	8-729-037-34	TRANSISTOR KRA107M	
C384	1-162-282-31	CERAMIC	100PF 10% 50V	Q330	8-729-036-77	TRANSISTOR KRC107M	
				Q331	8-729-036-77	TRANSISTOR KRC107M	
				Q332	8-729-036-86	TRANSISTOR KTC3203Y-AT	
				Q333	8-729-040-76	TRANSISTOR KTA1273-Y-AT	
				Q340	8-729-036-77	TRANSISTOR KRC107M	
				Q355	8-729-037-29	TRANSISTOR KRA102M	
				Q356	8-729-036-77	TRANSISTOR KRC107M	
				Q361	8-729-040-76	TRANSISTOR KTA1273-Y-AT	
				Q362	8-729-036-77	TRANSISTOR KRC107M	
				Q363	8-729-052-52	TRANSISTOR KTC2026Y	
				Q364	8-729-037-29	TRANSISTOR KRA102M	
				Q365	8-729-037-29	TRANSISTOR KRA102M	
				Q366	8-729-036-89	TRANSISTOR KTC3198GR-AT	
						< RESISTOR >	
				R111	1-249-420-11	CARBON 1.8K 5% 1/4W	
				R112	1-249-419-11	CARBON 1.5K 5% 1/4W	
				R113	1-249-427-11	CARBON 6.8K 5% 1/4W	
				R114	1-247-807-31	CARBON 100 5% 1/4W	
				R116	1-249-427-11	CARBON 6.8K 5% 1/4W	
				R117	1-249-416-11	CARBON 820 5% 1/4W	
				R118	1-249-417-11	CARBON 1K 5% 1/4W	
				R119	1-249-417-11	CARBON 1K 5% 1/4W	

AUDIO**BATT L****BATT S****CD**

Ref. No.	Part No.	Description	Remark
R120	1-249-437-11	CARBON 47K 5%	1/4W
R121	1-249-431-11	CARBON 15K 5%	1/4W
R122	1-249-437-11	CARBON 47K 5%	1/4W
R123	1-249-429-11	CARBON 10K 5%	1/4W
R124	1-249-421-11	CARBON 2.2K 5%	1/4W
R125	1-249-421-11	CARBON 2.2K 5%	1/4W
R126	1-249-441-11	CARBON 100K 5%	1/4W
R128	1-249-385-11	CARBON 2.2 5%	1/6W
R129	1-249-385-11	CARBON 2.2 5%	1/6W
R135	1-249-441-11	CARBON 100K 5%	1/4W
R140	1-249-437-11	CARBON 47K 5%	1/4W
R150	1-249-425-11	CARBON 4.7K 5%	1/4W
R151	1-249-419-11	CARBON 1.5K 5%	1/4W
R152	1-249-410-11	CARBON 270 5%	1/4W
R153	1-249-410-11	CARBON 270 5%	1/4W
R154	1-249-434-11	CARBON 27K 5%	1/4W
R155	1-249-421-11	CARBON 2.2K 5%	1/4W
R211	1-249-420-11	CARBON 1.8K 5%	1/4W
R212	1-249-419-11	CARBON 1.5k 5%	1/4W
R213	1-249-427-11	CARBON 6.8K 5%	1/4W
R214	1-247-807-31	CARBON 100 5%	1/4W
R216	1-249-427-11	CARBON 6.8K 5%	1/4W
R217	1-249-416-11	CARBON 820 5%	1/4W
R218	1-249-417-11	CARBON 1K 5%	1/4W
R219	1-249-417-11	CARBON 1K 5%	1/4W
R220	1-249-437-11	CARBON 47K 5%	1/4W
R221	1-249-431-11	CARBON 15K 5%	1/4W
R222	1-249-437-11	CARBON 47K 5%	1/4W
R223	1-249-429-11	CARBON 10K 5%	1/4W
R224	1-249-421-11	CARBON 2.2K 5%	1/4W
R225	1-249-421-11	CARBON 2.2K 5%	1/4W
R226	1-249-441-11	CARBON 100K 5%	1/4W
R228	1-249-385-11	CARBON 2.2 5%	1/6W
R229	1-249-385-11	CARBON 2.2 5%	1/6W
R235	1-249-441-11	CARBON 100K 5%	1/4W
R240	1-249-437-11	CARBON 47K 5%	1/4W
R250	1-249-425-11	CARBON 4.7K 5%	1/4W
R251	1-249-419-11	CARBON 1.5K 5%	1/4W
R252	1-249-410-11	CARBON 270 5%	1/4W
R253	1-249-410-11	CARBON 270 5%	1/4W
R254	1-249-434-11	CARBON 27K 5%	1/4W
R255	1-249-421-11	CARBON 2.2K 5%	1/4W
R320	1-249-399-11	CARBON 33 5%	1/4W
R327	1-249-435-11	CARBON 33K 5%	1/4W
R328	1-249-435-11	CARBON 33K 5%	1/4W
R329	1-249-441-11	CARBON 100K 5%	1/4W
R331	1-249-417-11	CARBON 1K 5%	1/4W
R332	1-249-417-11	CARBON 1K 5%	1/4W
R333	1-249-425-11	CARBON 4.7K 5%	1/4W
R334	1-249-425-11	CARBON 4.7K 5%	1/4W
R335	1-249-430-11	CARBON 12K 5%	1/4W
R336	1-249-437-11	CARBON 47K 5%	1/4W
R338	1-249-441-11	CARBON 100K 5%	1/4W
R340	1-249-439-11	CARBON 68K 5%	1/4W
R341	1-249-426-11	CARBON 5.6K 5%	1/4W
R342	1-247-891-00	CARBON 330K 5%	1/4W
R343	1-249-441-11	CARBON 100K 5%	1/4W

Ref. No.	Part No.	Description	Remark
R344	1-249-417-11	CARBON 1K 5%	1/4W
R350	1-249-437-11	CARBON 47K 5%	1/4W
R351	1-249-431-11	CARBON 15K 5%	1/4W
R355	1-249-418-11	CARBON 1.2K 5%	1/4W
R356	1-249-437-11	CARBON 47K 5%	1/4W
R357	1-249-425-11	CARBON 4.7K 5%	1/4W
R360	1-249-437-11	CARBON 47K 5%	1/4W
R361	1-249-437-11	CARBON 47K 5%	1/4W
R363	1-249-417-11	CARBON 1K 5%	1/4W
R366	1-249-429-11	CARBON 10K 5%	1/4W
R367	1-249-409-11	CARBON 220 5%	1/4W
R368	1-249-421-11	CARBON 2.2K 5%	1/4W
R370	1-249-441-11	CARBON 100K 5%	1/4W
R372	1-249-421-11	CARBON 2.2K 5%	1/4W
R373	1-249-417-11	CARBON 1K 5%	1/4W
R374	1-249-425-11	CARBON 4.7K 5%	1/4W
R375	1-249-428-11	CARBON 8.2K 5%	1/4W
R376	1-249-435-11	CARBON 33K 5%	1/4W
R377	1-249-413-11	CARBON 470 5%	1/4W
R378	1-249-401-11	CARBON 47 5%	1/4W
R380	1-249-417-11	CARBON 1K 5%	1/4W
R381	1-249-417-11	CARBON 1K 5%	1/4W
R384	1-249-429-11	CARBON 10K 5%	1/4W
R388	1-247-818-91	CARBON 300 5%	1/4W

*	1-678-265-11	BATT L BOARD	*****
	3-046-556-01	BATTERY (-), SPRING	
	3-046-557-01	BATTERY (S) (+.-), SPRING	

*	1-678-266-11	BATT S BOARD	*****
		< CAPACITOR >	
C906	1-127-888-21	CERAMIC 0.1uF 10% 50V	
		< CONNECTOR >	
* CNP901	1-564-520-11	PLUG, CONNECTOR 5P	
* CNP903	1-564-505-11	PLUG, CONNECTOR 2P	
		< DIODE >	
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	
		< POST PIN >	
WP901	1-536-354-00	POST PIN	

	A-3322-981-A	CD BOARD, COMPLETE	*****
		< CAPACITOR >	
C700	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C701	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V	
C702	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V	
C703	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C704	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	C770	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C705	1-131-375-00	TANTALUM	4.7uF	10%	10V	C773	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C706	1-115-185-11	CERAMIC CHIP	0.033uF	10%	50V	C774	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C707	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	C775	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C708	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C776	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C709	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	C777	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C710	1-126-961-11	ELECT	2.2uF	20%	50V	C780	1-126-963-11	ELECT	4.7uF	20%	50V
C711	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	C781	1-126-963-11	ELECT	4.7uF	20%	50V
C712	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C788	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C713	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V	< CONNECTOR >					
C714	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	* CN701	1-580-155-11	PIN, CONNECTOR (PC BOARD)	3P		
C715	1-115-185-11	CERAMIC CHIP	0.033uF	10%	50V	* CN708	1-580-158-11	PIN, CONNECTOR (PC BOARD)	6P		
C716	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	CN711	1-770-528-31	CONNECTOR, FFC/FPC	21P		
C717	1-126-965-11	ELECT	22uF	20%	50V	CN712	1-695-374-31	CONNECTOR, FFC/FPC	13P		
C718	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	CN713	1-506-987-11	PIN, CONNECTOR (PC BOARD)	5P		
C719	1-104-664-11	ELECT	47uF	20%	10V	< IC >					
C720	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	IC701	8-752-082-14	IC	CXA1992BR		
C721	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	IC702	8-752-384-13	IC	CXD2589Q		
C722	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V	IC703	8-759-473-42	IC	BA6898FP		
C723	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V	< COIL >					
C724	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	L701	1-410-993-42	INDUCTOR CHIP	1uH		
C725	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	L702	1-410-997-42	INDUCTOR CHIP	2.2uH		
C726	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	L703	1-410-997-42	INDUCTOR CHIP	2.2uH		
C727	1-126-934-11	ELECT	220uF	20%	10V	L704	1-412-852-11	INDUCTOR	47uH		
C728	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	< TRANSISTOR >					
C729	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	Q701	8-729-101-07	TRANSISTOR	2SB798-DL		
C730	1-126-925-11	ELECT	470uF	20%	10V	< RESISTOR >					
C731	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R700	1-216-089-91	RES-CHIP	47K	5%	1/10W
C732	1-104-665-11	ELECT	100uF	20%	10V	R701	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
C733	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R702	1-216-117-00	METAL CHIP	680K	5%	1/10W
C734	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R703	1-216-101-00	METAL CHIP	150K	5%	1/10W
C735	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	R704	1-216-109-00	METAL CHIP	330K	5%	1/10W
C736	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R705	1-216-114-00	RES-CHIP	510K	5%	1/10W
C737	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	R706	1-216-101-00	METAL CHIP	150K	5%	1/10W
C738	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R707	1-216-101-00	METAL CHIP	150K	5%	1/10W
C739	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	R708	1-216-105-91	RES-CHIP	220K	5%	1/10W
C740	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R709	1-216-089-91	RES-CHIP	47K	5%	1/10W
C741	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R710	1-216-089-91	RES-CHIP	47K	5%	1/10W
C742	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	R711	1-216-101-00	METAL CHIP	150K	5%	1/10W
C743	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R712	1-216-101-00	METAL CHIP	150K	5%	1/10W
C744	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	R713	1-216-089-91	RES-CHIP	47K	5%	1/10W
C745	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	R714	1-216-049-91	RES-CHIP	1K	5%	1/10W
C746	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R715	1-216-049-91	RES-CHIP	1K	5%	1/10W
C747	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	R716	1-216-049-91	RES-CHIP	1K	5%	1/10W
C748	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R717	1-216-049-91	RES-CHIP	1K	5%	1/10W
C749	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	R718	1-216-049-91	RES-CHIP	1K	5%	1/10W
C750	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R720	1-216-073-00	METAL CHIP	10K	5%	1/10W
C751	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	R721	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
C752	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	R722	1-216-121-91	RES-CHIP	1M	5%	1/10W
C753	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	R723	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
C754	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R724	1-216-001-00	METAL CHIP	10	5%	1/10W
C755	1-126-924-11	ELECT	330uF	20%	10V	R725	1-216-089-91	RES-CHIP	47K	5%	1/10W
C756	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	R726	1-216-089-91	RES-CHIP	47K	5%	1/10W
C757	1-104-664-11	ELECT	47uF	20%	10V						
C758	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						
C759	1-104-664-11	ELECT	47uF	20%	10V						
C760	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						
C761	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						
C762	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						
C763	1-126-926-11	ELECT	1000uF	20%	10V						
C764	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V						
C765	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V						
C766	1-163-001-11	CERAMIC CHIP	220PF	10%	50V						

CD**CONTROL****JOG LED 1****JOG LED 2**

Ref. No.	Part No.	Description	Remark
R727	1-216-089-91	RES-CHIP 47K 5%	1/10W
R728	1-216-089-91	RES-CHIP 47K 5%	1/10W
R729	1-216-101-00	METAL CHIP 150K 5%	1/10W
R730	1-216-101-00	METAL CHIP 150K 5%	1/10W
R731	1-216-101-00	METAL CHIP 150K 5%	1/10W
R732	1-216-101-00	METAL CHIP 150K 5%	1/10W
R733	1-216-109-00	METAL CHIP 330K 5%	1/10W
R734	1-216-101-00	METAL CHIP 150K 5%	1/10W
R736	1-216-073-00	METAL CHIP 10K 5%	1/10W
R737	1-216-073-00	METAL CHIP 10K 5%	1/10W
R738	1-216-049-91	RES-CHIP 1K 5%	1/10W
R739	1-216-049-91	RES-CHIP 1K 5%	1/10W
R740	1-216-049-91	RES-CHIP 1K 5%	1/10W
R741	1-216-089-91	RES-CHIP 47K 5%	1/10W
R742	1-216-089-91	RES-CHIP 47K 5%	1/10W
R743	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R744	1-216-043-91	RES-CHIP 560 5%	1/10W
R745	1-216-073-00	METAL CHIP 10K 5%	1/10W
R746	1-216-121-91	RES-CHIP 1M 5%	1/10W
R747	1-216-073-00	METAL CHIP 10K 5%	1/10W
R748	1-216-105-91	RES-CHIP 220K 5%	1/10W
R749	1-216-041-00	METAL CHIP 470 5%	1/10W
R750	1-216-049-91	RES-CHIP 1K 5%	1/10W
R751	1-216-049-91	RES-CHIP 1K 5%	1/10W
R752	1-216-105-91	RES-CHIP 220K 5%	1/10W
R753	1-216-049-91	RES-CHIP 1K 5%	1/10W
R754	1-216-089-91	RES-CHIP 47K 5%	1/10W
R755	1-216-049-91	RES-CHIP 1K 5%	1/10W
R760	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R761	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R762	1-216-077-91	RES-CHIP 15K 5%	1/10W
R763	1-216-085-00	METAL CHIP 33K 5%	1/10W
R764	1-216-081-00	METAL CHIP 22K 5%	1/10W
R765	1-216-081-00	METAL CHIP 22K 5%	1/10W
R766	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R773	1-216-049-91	RES-CHIP 1K 5%	1/10W
R777	1-216-089-91	RES-CHIP 47K 5%	1/10W
R778	1-216-025-91	CARBON 100 5%	1/4W
R791	1-247-903-00	CARBON 1M 5%	1/4W

< VIBRATOR >

X701 1-767-226-11 VIBRATOR, CRYSTAL (16.9344MHz)

* A-3323-572-A CONTROL BOARD, COMPLETE

* 1-678-270-11 JOG LED 1 BOARD

* 1-678-271-11 JOG LED 2 BOARD
*****3-046-527-01 HOLDER, LCD
3-046-528-01 PLATE (LCD), LIGHT GUIDE
3-046-529-01 ILLUMINATOR (LCD)

< CAPACITOR >

C801 1-162-306-11 CERAMIC 0.01uF 30% 16V
C802 1-162-306-11 CERAMIC 0.01uF 30% 16V
C803 1-162-306-11 CERAMIC 0.01uF 30% 16V

Ref. No.	Part No.	Description	Remark
C805	1-162-306-11	CERAMIC 0.01uF 30%	16V
C807	1-126-960-11	ELECT 1uF 20%	50V
C808	1-102-514-11	CERAMIC 22PF 5%	50V
C809	1-102-516-11	CERAMIC 27PF 5%	50V
C810	1-162-306-11	CERAMIC 0.01uF 30%	16V
C811	1-162-282-31	CERAMIC 100PF 10%	50V
C812	1-102-960-00	CERAMIC 24PF 5%	50V
C813	1-128-802-21	CERAMIC 27PF 5%	50V
C815	1-162-306-11	CERAMIC 0.01uF 30%	16V
C817	1-162-306-11	CERAMIC 0.01uF 30%	16V
C818	1-162-306-11	CERAMIC 0.01uF 30%	16V
C819	1-128-802-21	CERAMIC 27PF 5%	50V
C820	1-128-801-21	CERAMIC 22PF 5%	50V
C821	1-162-306-11	CERAMIC 0.01uF 30%	16V
C822	1-162-306-11	CERAMIC 0.01uF 30%	16V
C823	1-162-306-11	CERAMIC 0.01uF 30%	16V
C824	1-162-282-31	CERAMIC 100PF 10%	50V
C825	1-162-306-11	CERAMIC 0.01uF 30%	16V
C826	1-162-294-31	CERAMIC 0.001uF 10%	50V
C827	1-162-294-31	CERAMIC 0.001uF 10%	50V
C828	1-162-282-31	CERAMIC 100PF 10%	50V
C829	1-161-494-00	CERAMIC 0.022uF 25V	
C830	1-162-282-31	CERAMIC 100PF 10%	50V
C831	1-162-282-31	CERAMIC 100PF 10%	50V
C832	1-162-282-31	CERAMIC 100PF 10%	50V
C833	1-162-282-31	CERAMIC 100PF 10%	50V
C834	1-162-282-31	CERAMIC 100PF 10%	50V
C835	1-161-494-00	CERAMIC 0.022uF 25V	
C836	1-162-282-31	CERAMIC 100PF 10%	50V
C837	1-104-665-11	ELECT 100uF 20%	10V
C838	1-162-282-31	CERAMIC 100PF 10%	50V
C839	1-162-282-31	CERAMIC 100PF 10%	50V
C840	1-162-306-11	CERAMIC 0.01uF 30%	16V
C841	1-162-282-31	CERAMIC 100PF 10%	50V
C842	1-162-282-31	CERAMIC 100PF 10%	50V
C844	1-126-964-11	ELECT 10uF 20%	50V
C847	1-162-282-31	CERAMIC 100PF 10%	50V
C849	1-162-282-31	CERAMIC 100PF 10%	50V
C850	1-162-282-31	CERAMIC 100PF 10%	50V
C851	1-162-306-11	CERAMIC 0.01uF 30%	16V
C852	1-162-282-31	CERAMIC 100PF 10%	50V
C853	1-162-282-31	CERAMIC 100PF 10%	50V
C855	1-162-282-31	CERAMIC 100PF 10%	50V
C856	1-162-282-31	CERAMIC 100PF 10%	50V
C858	1-126-934-11	ELECT 220uF 20%	10V
C859	1-162-282-31	CERAMIC 100PF 10%	50V
C860	1-162-282-31	CERAMIC 100PF 10%	50V
C861	1-126-965-11	ELECT 22uF 20%	50V
C862	1-162-282-31	CERAMIC 100PF 10%	50V
C863	1-162-282-31	CERAMIC 100PF 10%	50V
C864	1-162-282-31	CERAMIC 100PF 10%	50V
C866	1-162-282-31	CERAMIC 100PF 10%	50V
C867	1-162-290-31	CERAMIC 470PF 10%	50V

< CONNECTOR >

* CNP801 1-695-373-31 PIN, CONNECTOR (PC BOARD) 12P
* CNP802 1-695-374-31 PIN, CONNECTOR (PC BOARD) 13P

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* CNP803	1-695-374-31	PIN, CONNECTOR (PC BOARD) 13P		R812	1-249-425-11	CARBON 4.7K 5%	1/4W
* CNP805	1-580-165-11	PIN, CONNECTOR (PC BOARD) 4P		R813	1-249-417-11	CARBON 1K 5%	1/4W
* CNP806	1-580-165-11	PIN, CONNECTOR (PC BOARD) 4P		R814	1-249-417-11	CARBON 1K 5%	1/4W
		< DIODE >		R815	1-249-417-11	CARBON 1K 5%	1/4W
D802	8-719-991-33	DIODE 1SS133T-77		R816	1-249-417-11	CARBON 1K 5%	1/4W
D803	8-719-991-33	DIODE 1SS133T-77		R817	1-249-417-11	CARBON 1K 5%	1/4W
D804	8-719-991-33	DIODE 1SS133T-77		R818	1-249-417-11	CARBON 1K 5%	1/4W
D805	8-719-991-33	DIODE 1SS133T-77		R819	1-249-417-11	CARBON 1K 5%	1/4W
D807	8-719-991-33	DIODE 1SS133T-77		R820	1-249-417-11	CARBON 1K 5%	1/4W
D808	8-719-059-97	LED L-34HD (OPR/BATT)		R821	1-249-417-11	CARBON 1K 5%	1/4W
D811	8-719-080-38	LED SLR-332DU3F-LMN (-I◀◀ ▶▶I+)		R822	1-249-417-11	CARBON 1K 5%	1/4W
D817	8-719-080-40	LED EFY3864X (LCD BACK LIGHT)		R823	1-249-417-11	CARBON 1K 5%	1/4W
D818	8-719-080-40	LED EFY3864X (LCD BACK LIGHT)		R824	1-249-417-11	CARBON 1K 5%	1/4W
		< IC >		R825	1-249-417-11	CARBON 1K 5%	1/4W
IC801	8-752-908-76	IC CXP83124A-044Q		R826	1-249-417-11	CARBON 1K 5%	1/4W
IC802	8-759-648-23	IC RPM6940-H4		R827	1-249-417-11	CARBON 1K 5%	1/4W
IC803	8-759-645-87	IC IC PST9128-T		R828	1-249-417-11	CARBON 1K 5%	1/4W
		< ENCODER >		R829	1-249-417-11	CARBON 1K 5%	1/4W
J0G801	1-476-058-11	ENCODER (-I◀◀AMS/PRESET/TIME SET ▶▶I+)		R830	1-249-417-11	CARBON 1K 5%	1/4W
		< JUMPER WIRE >		R831	1-249-417-11	CARBON 1K 5%	1/4W
JW840	1-247-831-91	INDUCTOR 1K 5% 1/4W		R833	1-249-417-11	CARBON 1K 5%	1/4W
JW847	1-410-336-31	INDUCTOR 220uH		R834	1-249-417-11	CARBON 1K 5%	1/4W
		< COIL >		R835	1-249-417-11	CARBON 1K 5%	1/4W
L801	1-414-142-11	INDUCTOR 1uH		R836	1-249-417-11	CARBON 1K 5%	1/4W
L802	1-410-521-11	INDUCTOR 100uH		R837	1-249-401-11	CARBON 47 5%	1/4W
L803	1-410-521-11	INDUCTOR 100uH		R838	1-249-417-11	CARBON 1K 5%	1/4W
L809	1-414-142-11	INDUCTOR 1uH		R839	1-249-417-11	CARBON 1K 5%	1/4W
L810	1-410-509-11	INDUCTOR 10uH		R840	1-249-417-11	CARBON 1K 5%	1/4W
		< LIQUID CRYSTAL DISPLAY >		R841	1-249-417-11	CARBON 1K 5%	1/4W
LCD801	1-804-013-11	DISPLAY PANEL, LIQUID CRYSTAL		R842	1-249-417-11	CARBON 1K 5%	1/4W
		< TRANSISTOR >		R843	1-249-437-11	CARBON 47K 5%	1/4W
Q801	8-729-036-86	TRANSISTOR KTC3203Y-AT		R844	1-249-417-11	CARBON 1K 5%	1/4W
Q802	8-729-036-86	TRANSISTOR KTC3203Y-AT		R845	1-249-417-11	CARBON 1K 5%	1/4W
Q803	8-729-922-66	TRANSISTOR 2SC2410SN		R847	1-247-883-00	CARBON 150K 5%	1/4W
Q804	8-729-922-66	TRANSISTOR 2SC2410SN		R848	1-247-881-00	CARBON 120K 5%	1/4W
Q805	8-729-037-23	TRANSISTOR KRA110M-AT		R849	1-247-881-00	CARBON 120K 5%	1/4W
Q806	8-729-036-77	TRANSISTOR KRC107M		R850	1-247-881-00	CARBON 120K 5%	1/4W
		< RESISTOR >		R851	1-249-409-11	CARBON 220 5%	1/4W
R800	1-249-432-11	CARBON 18K 5% 1/4W		R852	1-249-429-11	CARBON 10K 5%	1/4W
R801	1-247-838-00	CARBON 2K 5% 1/4W		R853	1-249-417-11	CARBON 1K 5%	1/4W
R803	1-249-417-11	CARBON 1K 5% 1/4W		R856	1-249-417-11	CARBON 1K 5%	1/4W
R804	1-249-417-11	CARBON 1K 5% 1/4W		R857	1-249-425-11	CARBON 4.7K 5%	1/4W
R805	1-249-417-11	CARBON 1K 5% 1/4W		R859	1-249-429-11	CARBON 10K 5%	1/4W
R806	1-249-417-11	CARBON 1K 5% 1/4W		R860	1-249-417-11	CARBON 1K 5%	1/4W
R807	1-249-417-11	CARBON 1K 5% 1/4W		R862	1-247-807-31	CARBON 100 5%	1/4W
R808	1-249-417-11	CARBON 1K 5% 1/4W		R864	1-249-417-11	CARBON 1K 5%	1/4W
R809	1-249-425-11	CARBON 4.7K 5% 1/4W		R866	1-249-417-11	CARBON 1K 5%	1/4W
R810	1-249-425-11	CARBON 4.7K 5% 1/4W		R871	1-249-425-11	CARBON 4.7K 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
				R885	1-249-425-11	CARBON 4.7K 5%	1/4W
				R887	1-247-887-00	CARBON 220K 5%	1/4W

CONTROL**HEAD RELAY****H/P****JACK****KEY**

Ref. No.	Part No.	Description			Remark
R888	1-249-417-11	CARBON	1K	5%	1/4W
R889	1-249-441-11	CARBON	100K	5%	1/4W
R890	1-249-417-11	CARBON	1K	5%	1/4W
R891	1-249-437-11	CARBON	47K	5%	1/4W
R892	1-249-441-11	CARBON	100K	5%	1/4W
R894	1-249-417-11	CARBON	1K	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
R899	1-249-417-11	CARBON	1K	5%	1/4W
< SWITCH >					
S809	1-771-951-11	SWITCH, TACTILE (POWER)			
S810	1-771-951-11	SWITCH, TACTILE (SOUND)			
S811	1-771-951-11	SWITCH, TACTILE (MD(LINE))			
S812	1-771-951-11	SWITCH, TACTILE (CD OPEN/CLOSE ▲)			
S813	1-771-951-11	SWITCH, TACTILE (MEGA BASS)			
S814	1-771-951-11	SWITCH, TACTILE (VOL-)			
S815	1-771-951-11	SWITCH, TACTILE (VOL+)			
< VIBRATOR >					
X801	1-767-184-11	VIBRATOR, CERAMIC (4.21MHz)			
X802	1-767-697-11	VIBRATOR, CRYSTAL (32.768kHz)			

	1-673-339-11	HEAD RELAY BOARD			

< CONNECTOR >					
CN692	1-580-167-11	PIN, CONNECTOR (PC BOARD) 6P			

*	1-678-268-11	H/P BOARD			

< CAPACITOR >					
C134	1-104-664-11	ELECT	47uF	20%	16V
C234	1-104-664-11	ELECT	47uF	20%	16V
< JACK >					
J501	1-566-891-11	JACK (♫)			
< COIL >					
L101	1-414-146-31	INDUCTOR	2.2uH		
L201	1-414-146-31	INDUCTOR	2.2uH		
L302	1-414-142-11	INDUCTOR	1uH		
< RESISTOR >					
R130	1-249-404-00	CARBON	82	5%	1/4W
R230	1-249-404-00	CARBON	82	5%	1/4W

*	1-678-263-11	JACK BOARD			

< CAPACITOR >					
C401	1-127-888-21	CERAMIC	0.1uF	10%	50V
C402	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
< IC >					
IC401	8-749-921-12	IC GP1F32T (OPTICAL DIGITAL OUT(CD))			
< JACK >					
J401	1-566-891-21	JACK (LINE IN)			
J402	1-566-822-21	JACK (LINE OUT)			
< COIL >					
L401	1-410-324-11	INDUCTOR	4.7uH		
L402	1-410-324-11	INDUCTOR	4.7uH		

*	A-3322-713-A	KEY BOARD, COMPLETE			

	3-046-530-01	HOLDER, LIGHTING			
	3-046-531-01	ILLUMINATOR (JOG)			
< CAPACITOR >					
C601	1-162-282-31	CERAMIC	100PF	10%	50V
< DIODE >					
D601	8-719-080-39	LED L-704GD (▶▶)			
D602	8-719-080-39	LED L-704GD (■)			
D603	8-719-080-39	LED L-704GD (BAND)			
D604	8-719-080-39	LED L-704GD (BAND)			
D615	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D616	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D617	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D618	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D619	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D620	8-719-080-37	LED SLI-342DC3F-ST (BACK LIGHT)			
D621	8-719-981-95	DIODE MTZJ-2.7B			
< TRANSISTOR >					
Q601	8-729-037-34	TRANSISTOR KRA107M			
Q603	8-729-036-77	TRANSISTOR KRC107M			
< RESISTOR >					
R601	1-249-415-11	CARBON	680	5%	1/4W
R602	1-249-416-11	CARBON	820	5%	1/4W
R603	1-249-418-11	CARBON	1.2K	5%	1/4W
R604	1-249-420-11	CARBON	1.8K	5%	1/4W
R605	1-247-843-11	CARBON	3.3K	5%	1/4W
R606	1-249-427-11	CARBON	6.8K	5%	1/4W
R607	1-249-432-11	CARBON	18K	5%	1/4W
R608	1-249-415-11	CARBON	680	5%	1/4W
R609	1-249-416-11	CARBON	820	5%	1/4W
R610	1-249-418-11	CARBON	1.2K	5%	1/4W
R611	1-249-420-11	CARBON	1.8K	5%	1/4W
R612	1-247-843-11	CARBON	3.3K	5%	1/4W
R613	1-249-427-11	CARBON	6.8K	5%	1/4W
R614	1-249-432-11	CARBON	18K	5%	1/4W
R615	1-249-408-11	CARBON	180	5%	1/4W
R616	1-249-408-11	CARBON	180	5%	1/4W
R621	1-249-410-11	CARBON	270	5%	1/4W
R622	1-249-410-11	CARBON	270	5%	1/4W

KEY**LOADING****PICK-UP RELAY****POWER****P/T IN****P/T OUT****TC**

Ref. No.	Part No.	Description	Remark
R623	1-249-410-11	CARBON 270	5% 1/4W
R627	1-247-822-11	CARBON 430	5% 1/4W
		< SWITCH >	
S617	1-771-550-31	SWITCH, TACTILE (▶▶)	
S618	1-771-550-31	SWITCH, TACTILE (■)	
S619	1-771-550-31	SWITCH, TACTILE (CLOCK)	
S620	1-554-813-21	SWITCH, KEY BOARD (MODE)	
S621	1-554-813-21	SWITCH, KEY BOARD (DISPLAY)	
S622	1-554-813-21	SWITCH, KEY BOARD (▶▶+)	
S623	1-771-550-31	SWITCH, TACTILE (TIMER)	
S624	1-771-550-31	SWITCH, TACTILE (BAND)	
S625	1-771-550-31	SWITCH, TACTILE (STANDBY)	
S626	1-554-813-21	SWITCH, KEY BOARD (CD DUB)	
S627	1-554-813-21	SWITCH, KEY BOARD (AUTO PRESET)	
S628	1-554-813-21	SWITCH, KEY BOARD (-◀◀)	
S629	1-771-550-31	SWITCH, TACTILE (SLEEP)	
S630	1-771-550-31	SWITCH, TACTILE (CANCEL)	
S631	1-771-550-31	SWITCH, TACTILE (ENTER MEM)	

*	1-667-045-11	LOADING BOARD	*****
	7-623-510-01	LUG, 4	
		< 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	1-249-425-11	CARBON 4.7K	5% 1/4W
		< SWITCH >	
S790	1-762-951-11	SWITCH, PUSH (CLOSE)	
S791	1-762-951-11	SWITCH, PUSH (OPEN)	

*	1-667-046-11	PICK-UP RELAY BOARD	*****
*	1-580-937-11	TERMINAL, SOLDERLESS	
		< CONNECTOR >	
CN702	1-565-874-31	PIN, CONNECTOR (PC BOARD) 2P	
CN703	1-565-874-11	PIN, CONNECTOR (PC BOARD) 2P	

Ref. No.	Part No.	Description	Remark
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	

*	1-678-261-11	POWER BOARD	*****
		< 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
		< 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	
		< FUSE >	
△ F901	1-532-505-51	FUSE (5AL/250V)	
		< HOLDER, FUSE >	
FH901	1-533-233-31	HOLDER, FUSE	
FH902	1-533-233-31	HOLDER, FUSE	
		< JACK >	
△ J901	1-526-838-11	INLET, AC (~ AC IN)	
		< TRANSFORMER >	
△ T901	1-435-552-11	TRANSFORMER, POWER	

*	1-678-275-11	P/T IN BOARD	*****

*	1-678-276-11	P/T OUT BOARD	*****

*	A-3322-825-A	TC BOARD, COMPLETE	*****
		< CAPACITOR >	
C101	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C103	1-163-139-00	CERAMIC CHIP 820PF	5% 50V
C104	1-104-664-11	ELECT 47uF	20% 10V
C105	1-162-587-11	CERAMIC CHIP 0.039uF	10% 25V
C106	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C107	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C108	1-126-959-11	ELECT 0.47uF	20% 50V
C110	1-126-960-11	ELECT 1uF	20% 50V
C111	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C201	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C203	1-163-139-00	CERAMIC CHIP 820PF	5% 50V
C204	1-104-664-11	ELECT 47uF	20% 10V
C205	1-162-587-11	CERAMIC CHIP 0.039uF	10% 25V

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

TC

TC KEY

Ref. No.	Part No.	Description	Remark
C206	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C207	1-163-109-00	CERAMIC CHIP 47PF 5%	50V
C208	1-126-959-11	ELECT 0.47uF 20%	50V
C210	1-126-960-11	ELECT 1uF 20%	50V
C211	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C301	1-104-665-11	ELECT 100uF 20%	10V
C302	1-126-925-11	ELECT 470uF 20%	10V
C303	1-104-665-11	ELECT 100uF 20%	10V
C304	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C305	1-130-488-00	MYLAR 0.027uF 5%	50V
C306	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
C307	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
C308	1-104-664-11	ELECT 47uF 20%	10V
C309	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C310	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C311	1-163-033-91	CERAMIC CHIP 0.022uF	50V
C312	1-163-033-91	CERAMIC CHIP 0.022uF	50V
C391	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
< CONNECTOR >			
CNP301	1-580-168-11	PIN, CONNECTOR (PC BOARD) 7P	
* CNP302	1-766-594-11	PIN, CONNECTOR (PC BOARD) 11P	
< DIODE >			
D301	8-719-988-61	DIODE 1SS355TE-17	
D302	8-719-988-61	DIODE 1SS355TE-17	
< IC >			
IC301	8-759-264-71	IC TA2068N	
< JUMPER RESISTOR >			
JR101	1-216-295-91	SHORT 0	
JR102	1-216-295-91	SHORT 0	
JR103	1-216-295-91	SHORT 0	
JR104	1-216-295-91	SHORT 0	
JR105	1-216-295-91	SHORT 0	
JR106	1-216-295-91	SHORT 0	
JR107	1-216-295-91	SHORT 0	
JR108	1-216-295-91	SHORT 0	
JR109	1-216-295-91	SHORT 0	
JR110	1-216-295-91	SHORT 0	
JR111	1-216-295-91	SHORT 0	
JR113	1-216-295-91	SHORT 0	
JR114	1-216-295-91	SHORT 0	
< TRANSISTOR >			
Q301	8-729-036-86	TRANSISTOR KTC3203Y-AT	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q305	8-729-900-53	TRANSISTOR DTC114EK	
Q306	8-729-900-53	TRANSISTOR DTC114EK	
Q307	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q308	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q309	8-729-900-53	TRANSISTOR DTC114EK	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

Ref. No.	Part No.	Description	Remark
Q311	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q334	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R101	1-216-077-91	RES-CHIP 15K 5%	1/10W
R102	1-216-019-00	METAL CHIP 56 5%	1/10W
R103	1-216-097-91	RES-CHIP 100K 5%	1/10W
R104	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R105	1-216-025-91	RES-CHIP 100 5%	1/10W
R106	1-216-049-91	RES-CHIP 1K 5%	1/10W
R107	1-216-025-91	RES-CHIP 100 5%	1/10W
R108	1-216-033-00	METAL CHIP 220 5%	1/10W
R109	1-216-033-00	METAL CHIP 220 5%	1/10W
R201	1-216-077-91	RES-CHIP 15K 5%	1/10W
R202	1-216-019-00	METAL CHIP 56 5%	1/10W
R203	1-216-097-91	RES-CHIP 100K 5%	1/10W
R204	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R205	1-216-025-91	RES-CHIP 100 5%	1/10W
R206	1-216-049-91	RES-CHIP 1K 5%	1/10W
R207	1-216-025-91	RES-CHIP 100 5%	1/10W
R208	1-216-033-00	METAL CHIP 220 5%	1/10W
R209	1-216-033-00	METAL CHIP 220 5%	1/10W
R301	1-216-121-91	RES-CHIP 1M 5%	1/10W
R302	1-216-017-91	RES-CHIP 47 5%	1/10W
R303	1-216-073-00	METAL CHIP 10K 5%	1/10W
R304	1-216-073-00	METAL CHIP 10K 5%	1/10W
R305	1-216-073-00	METAL CHIP 10K 5%	1/10W
R306	1-216-073-00	METAL CHIP 10K 5%	1/10W
R307	1-216-097-91	RES-CHIP 100K 5%	1/10W
R308	1-216-097-91	RES-CHIP 100K 5%	1/10W
R309	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R310	1-216-073-00	METAL CHIP 10K 5%	1/10W
R311	1-216-308-00	METAL CHIP 4.7 5%	1/10W
R312	1-216-093-91	RES-CHIP 68K 5%	1/10W
R313	1-216-017-91	RES-CHIP 47 5%	1/10W
R314	1-216-308-00	METAL CHIP 4.7 5%	1/10W
R315	1-216-049-91	RES-CHIP 1K 5%	1/10W
R316	1-216-049-91	RES-CHIP 1K 5%	1/10W
R317	1-216-049-91	RES-CHIP 1K 5%	1/10W
R318	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
< TRANSFORMER >			
T301	1-429-820-11	TRANSFORMER, BIAS OSCILLATION	

* 1-678-262-11	TC KEY BOARD, COMPLETE		

< RESISTOR >			
R501	1-249-415-11	CARBON 680 5%	1/4W
R502	1-249-416-11	CARBON 820 5%	1/4W
R503	1-249-418-11	CARBON 1.2K 5%	1/4W
R504	1-249-420-11	CARBON 1.8K 5%	1/4W
R505	1-247-843-11	CARBON 3.3K 5%	1/4W
R506	1-249-427-11	CARBON 6.8K 5%	1/4W
R507	1-249-432-11	CARBON 18K 5%	1/4W
R508	1-249-408-11	CARBON 180 5%	1/4W

TC KEY

TC LED (L)

TC LED (R)

TC/M

TC RF

TUNER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< SWITCH >		C6	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
S501	1-762-798-11	SWITCH, TACTILE (▶)		C7	1-162-925-11	CERAMIC CHIP 68PF 5%	50V
S502	1-762-798-11	SWITCH, TACTILE (◀)		C8	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
S503	1-762-798-11	SWITCH, TACTILE (■)		C9	1-164-237-11	CERAMIC CHIP 16PF 5%	50V
S504	1-762-798-11	SWITCH, TACTILE (◀◀)		C10	1-126-960-11	ELECT 1uF 20%	50V
S505	1-762-798-11	SWITCH, TACTILE (●/■)		C11	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
S506	1-762-798-11	SWITCH, TACTILE (COUNTER RESET)		C12	1-126-963-11	ELECT 4.7uF 20%	50V
S507	1-762-798-11	SWITCH, TACTILE (▶▶)		C14	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V
S508	1-762-798-11	SWITCH, TACTILE (DIR MODE)		C15	1-164-245-11	CERAMIC CHIP 0.015uF 10%	25V
*****				C16	1-126-960-11	ELECT 1uF 20%	50V
*	1-679-149-11	TC LED (L) BOARD		C17	1-126-960-11	ELECT 1uF 20%	50V
		*****		C18	1-126-934-11	ELECT 220uF 20%	10V
		< DIODE >		C19	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
D501	8-719-050-06	LED SLR-325MGT31 (▶)		C20	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
*****				C21	1-126-960-11	ELECT 1uF 20%	50V
*	1-679-150-11	TC LED (R) BOARD		C22	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
		*****		C23	1-126-960-11	ELECT 1uF 20%	50V
		< DIODE >		C24	1-162-961-11	CERAMIC CHIP 330PF 10%	50V
D502	8-719-050-06	LED SLR-325MGT31 (◀)		C25	1-163-059-91	CERAMIC CHIP 0.01uF 10%	50V
*****				C28	1-104-665-11	ELECT 100uF 20%	10V
*	1-678-272-11	TC/M BOARD		C30	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
		*****		C31	1-163-237-11	CERAMIC CHIP 27PF 5%	50V
		< CONNECTOR >		C32	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
CNP807	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P		C33	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
CNP808	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P		C34	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
*****				C35	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
	1-673-338-11	TC RF BOARD		C40	1-164-237-11	CERAMIC CHIP 16PF 5%	50V
		*****		C41	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
		< CONNECTOR >		C42	1-164-391-11	CERAMIC CHIP 360PF 5%	50V
CN691	1-580-170-11	PIN, CONNECTOR (PC BOARD) 9P		C44	1-127-888-21	CERAMIC 0.1uF 10%	50V
		< PHOTO INTERRUPTER >		C45	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
PH691	8-729-021-62	PHOTO INTERRUPTER SG-211		C46	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
		< RESISTOR >		C51	1-162-916-11	CERAMIC CHIP 12PF 5%	50V
R691	1-249-411-11	CARBON 330 5% 1/4W		C52	1-164-237-11	CERAMIC CHIP 16PF 5%	50V
		< SWITCH >		C53	1-136-171-00	FILM 0.33uF 5%	50V
S696	1-771-661-11	SWITCH, LEAF (HEAD POSITION)		C54	1-126-934-11	ELECT 220uF 20%	10V
*****				C55	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
*	A-3322-563-A	TUNER BOARD		C56	1-163-205-00	CERAMIC CHIP 0.001uF 5%	50V
		*****		C57	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
		< CAPACITOR >		C58	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C1	1-163-263-11	CERAMIC CHIP 330PF 5%	50V	C59	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C2	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	C60	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C3	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C61	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C4	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	C62	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C5	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C63	1-163-181-00	CERAMIC CHIP 100PF 5%	50V
		< FILTER >		C64	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
CF2	1-767-441-11	FILTER, CERAMIC		C66	1-163-181-00	CERAMIC CHIP 100PF 5%	50V
CF4	1-781-344-12	FILTER, AM CERAMIC		C67	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
				C68	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
				C77	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
				C80	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
				C93	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
				C95	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V

TUNER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< CONNECTOR >		L4	1-411-199-31	COIL, LW OSC (LW FREQUENCY COVERAGE)	
* CNP1	1-785-663-11	PIN, CONNECTOR (PC BOARD) 11P		L21	1-410-509-11	INDUCTOR 10uH	
		< TRIMMER >				< TRANSISTOR >	
CT1	1-141-227-00	CAP, TRIMMER 20PF (FM TRACKING)		Q12	8-729-027-46	TRANSISTOR DTC114YKA-T146	
CT3	1-141-304-21	CAP, TRIMMER 10PF (MW TRACKING)		Q14	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
CT5	1-141-605-11	CAP, ADJ (LW TRACKING)		Q41	8-729-920-31	TRANSISTOR DTC343TK	
		< DIODE >		Q42	8-729-931-02	TRANSISTOR 2SC2413KQ	
D1	8-719-078-48	DIODE DIODE KV1471ETR1-3		Q43	8-729-920-38	TRANSISTOR 2SC2059K-N	
D2	8-719-078-48	DIODE DIODE KV1471ETR1-3		Q44	8-729-931-02	TRANSISTOR 2SC2413KQ	
D3	8-719-050-69	DIODE DIODE KV1520N		Q61	8-729-106-07	TRANSISTOR 2SK514-H	
D10	8-719-988-61	DIODE 1SS355TE-17				< RESISTOR >	
D11	8-719-988-61	DIODE 1SS355TE-17		R1	1-216-817-11	METAL CHIP 470 5% 1/16W	
		< FERRITE BEAD >		R2	1-216-033-00	METAL CHIP 220 5% 1/10W	
FB1	1-216-295-91	SHORT 0		R3	1-216-833-91	RES-CHIP 10K 5% 1/16W	
		< IC >		R4	1-216-073-00	METAL CHIP 10K 5% 1/10W	
IC1	8-759-662-67	IC IC TA2149N		R5	1-216-864-11	METAL CHIP 0 5% 1/16W	
IC2	8-759-483-40	IC LC72137M-TLM		R7	1-216-113-00	METAL CHIP 470K 5% 1/10W	
		< JUMPER >		R9	1-216-845-11	METAL CHIP 100K 5% 1/16W	
JC3	1-216-295-91	SHORT 0		R10	1-216-017-91	RES-CHIP 47 5% 1/10W	
JC4	1-216-296-91	SHORT 0		R11	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
JC6	1-216-295-91	SHORT 0		R12	1-216-089-91	RES-CHIP 47K 5% 1/10W	
JC7	1-216-296-91	SHORT 0		R13	1-216-206-00	RES-CHIP 2.2K 5% 1/8W	
JC8	1-216-295-91	SHORT 0		R16	1-216-073-00	METAL CHIP 10K 5% 1/10W	
JC9	1-216-296-91	SHORT 0		R17	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
JC10	1-216-295-91	SHORT 0		R18	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
JC13	1-216-296-91	SHORT 0		R19	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
JC14	1-216-295-91	SHORT 0		R22	1-216-073-00	METAL CHIP 10K 5% 1/10W	
JC15	1-216-296-91	SHORT 0		R24	1-216-813-11	METAL CHIP 220 5% 1/16W	
JC16	1-216-295-91	SHORT 0		R25	1-216-001-00	METAL CHIP 10 5% 1/10W	
JC19	1-216-296-91	SHORT 0		R30	1-216-835-11	METAL CHIP 15K 5% 1/16W	
JC20	1-216-295-91	SHORT 0		R31	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
JC23	1-216-296-91	SHORT 0		R32	1-216-845-11	METAL CHIP 100K 5% 1/16W	
JC24	1-216-295-91	SHORT 0		R40	1-216-113-00	METAL CHIP 470K 5% 1/10W	
JC25	1-216-296-91	SHORT 0		R41	1-216-833-91	RES-CHIP 10K 5% 1/16W	
JC27	1-216-295-91	SHORT 0		R42	1-216-097-91	RES-CHIP 100K 5% 1/10W	
JC28	1-216-296-91	SHORT 0		R43	1-216-222-00	RES-CHIP 10K 5% 1/8W	
JC29	1-216-295-91	SHORT 0		R50	1-216-049-91	RES-CHIP 1K 5% 1/10W	
JC30	1-216-296-91	SHORT 0		R51	1-216-833-91	RES-CHIP 10K 5% 1/16W	
JC31	1-216-295-91	SHORT 0		R53	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
JC33	1-216-296-91	SHORT 0		R54	1-216-043-91	RES-CHIP 560 5% 1/10W	
JC38	1-216-295-91	SHORT 0		R56	1-216-041-00	METAL CHIP 470 5% 1/10W	
JC39	1-216-296-91	SHORT 0		R58	1-216-206-00	RES-CHIP 2.2K 5% 1/8W	
JC40	1-216-295-91	SHORT 0		R59	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
JC41	1-216-296-91	SHORT 0		R60	1-216-206-00	RES-CHIP 2.2K 5% 1/8W	
JC43	1-216-295-91	SHORT 0		R61	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
JC44	1-216-864-11	METAL CHIP 0 5% 1/16W		R63	1-216-214-00	RES-CHIP 4.7K 5% 1/8W	
JC45	1-216-295-91	SHORT 0		R64	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
		< COIL >		R91	1-216-198-91	RES-CHIP 1K 5% 1/8W	
L1	1-416-533-11	COIL, AIR-CORE (FM TRACKING)		R92	1-216-049-91	RES-CHIP 1K 5% 1/10W	
L2	1-416-509-11	COIL, AIR-CORE (FM FREQUENCY COVERAGE)		R93	1-216-198-91	RES-CHIP 1K 5% 1/8W	
L3	1-754-116-11	ANTENNA, FERRITE-ROD (LW MW TRACKING)		R94	1-216-049-91	RES-CHIP 1K 5% 1/10W	
						< TRANSFORMER >	
				T1	1-433-741-11	TRANSFORMER, IF (AM IF)	
				T2	1-419-465-11	COIL (DET) (FM IF)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< VIBRATOR >				***** HARDWARE LIST *****	
X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)					

		MISCELLANEOUS *****		#1	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
78	1-792-735-11	CABLE, FLEXIBLE FLAT		#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
79	1-792-736-11	CABLE, FLEXIBLE FLAT		#3	7-685-903-31	SCREW +PTPWH 3X10 (TYPE2)	
80	1-792-737-11	CABLE, FLEXIBLE FLAT		#4	7-682-548-04	SCREW +B 3X8	
* 213	1-792-386-11	WIRE MM		#5	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
330	1-782-663-11	WIRE (FLAT TYPE)		#6	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	
353	1-690-530-81	LEAD (WITH CONNECTOR)		#7	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
358	1-660-965-11	PC BOARD, SLIDE FLEXIBLE		#8	7-685-645-79	SCREW +P 3X6 TYPE2 NON-SLIT	
ANT1	1-501-480-11	ANTENNA, TELESCOPIC		#9	7-682-548-09	SCREW +B 3X8	
△ 359	X-4950-060-1	OPTICAL PICK-UP (DAX-01A2)		#10	7-621-773-86	SCREW +B 2.6X4	
△ F901	1-532-505-51	FUSE (5AL/250V)		#11	7-623-510-01	LUG, 4	
HRPE1011-418-847-11		HEAD ASSY, HOLDER (RECORD/PLAYBACK/ ERASE)		#12	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
LCD801	1-804-013-11	DISPLAY PANEL, LIQUID CRYSTAL		#14	7-627-850-17	SCREW PRECISION +P 1.4X2.5	
M691	3-045-799-01	MOTOR ASSY (CAPSTAN/REEL) (INCLUDING PULLEY)					
M790	1-698-999-11	MOTOR, DC					
M801	A-3303-403-A	MOTOR ASSY (SLED) (INCLUDING GEAR)					
M802	A-3303-971-A	MOTOR ASSY, TURNTABLE (SPINDLE)					
PH691	8-719-078-47	PHOTO INTERRUPTER SG-211V					
PM691	1-454-896-11	SOLENOID, PLUNGER					
S696	1-771-893-11	MODE (SW) (HEAD POSITION)					
SP101	1-529-740-11	SPEAKER (8cm) (R-CH)					
SP102	1-529-740-11	SPEAKER (8cm) (L-CH)					
S801	1-571-099-21	SWITCH (1 KEY) (LIMIT)					
△ T901	1-435-552-11	TRANSFORMER, POWER					

		ACCESSORIES *****					
△	1-769-412-13	CORD, POWER					
△	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)					
	3-046-452-31	MANUAL, INSTRUCTION (GREEK,SPANISH) (AEP,UK,JE)					
	3-046-452-41	MANUAL, INSTRUCTION (FRENCH,GERMAN) (AEP,JE)					
	3-046-452-51	MANUAL, INSTRUCTION (DUTCH, PORTUGUESE) (AEP,JE)					
	3-046-452-61	MANUAL, INSTRUCTION (ITALIAN) (IT)					
	3-046-452-71	MANUAL, INSTRUCTION (SWEDISH,FINNISH) (EE,CIS)					
	3-046-452-81	MANUAL, INSTRUCTION (POLISH,CZECH, HUNGARIAN) (EE,CIS)					
	3-046-452-91	MANUAL, INSTRUCTION (SLOVAK,RUSSIAN) (EE,CIS)					
	A-3258-054-A	REMOTE COMMANDER RMT-CD55AD					
	3-027-153-11	LID, BATTERY CASE (FOR RMT-CD55AD)					

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

Printing Method for Large Sized Documents Such As Circuit Diagrams

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

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

Printing by Specifying a Range

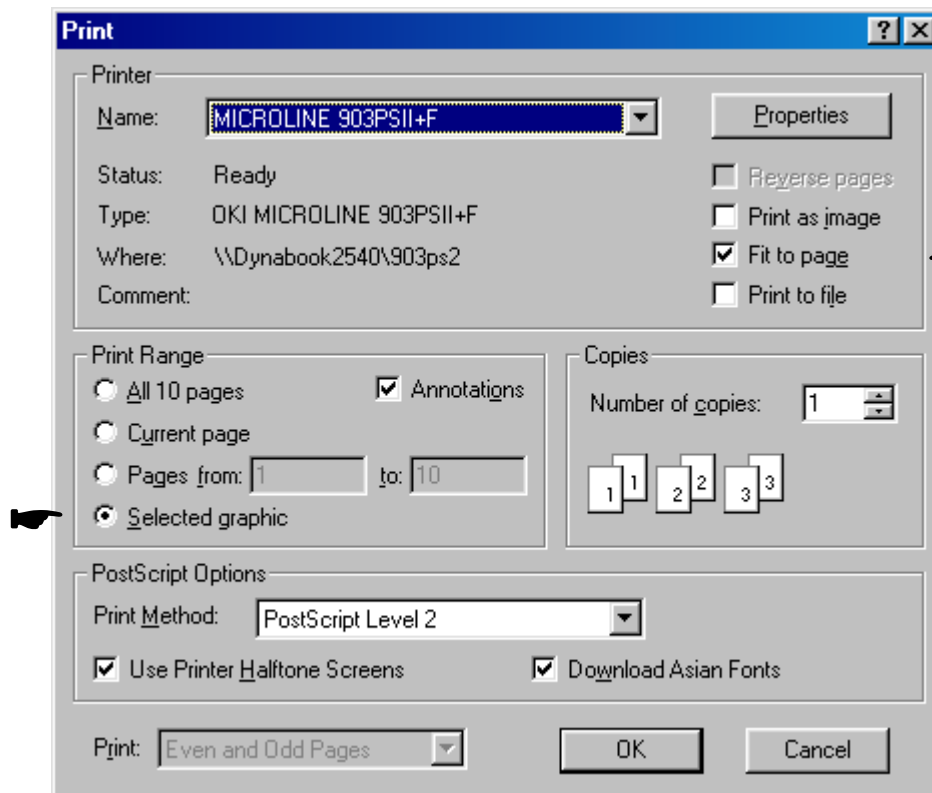
In printing out the drawings such as a schematic diagram and a printed wiring board larger than the printed paper size, they can be printed by specifying the range. (Acrobat Reader Version 4.0 or later)

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

(Keep pressing  , select )



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



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