

CFD-V6

SERVICE MANUAL

AEP Model

Ver 1.0 2004.02



Model Name Using	CD Section	CFD-V8
Similar Mechanism	Tape Section	CFD-V8
CD Mechanism Type		KSM-213CDP
Optical Pick-up Type		KSS-213C
Tape Transport Mechanism Type		MF-V5-117

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 +1/-2 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM: 87.6 - 107.0 MHz

AM: 531 - 1602 kHz

Antenna

FM: Telescopic antenna

AM: Built-in ferrite bar antenna

Cassette-corder section

Recording system

4-track 2 channel stereo

Fast winding time

Approx. 120 s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal): 80 - 10 000 Hz

General

Speaker

Full range: 10 cm dia., 3.2 Ω , cone type (2)

Outputs

Headphones jack (stereo minijack)

For 16 - 68 Ω impedance headphones

Power output

1.8 W + 1.8 W (at 3.2 Ω , 10 % harmonic distortion in AC operation)

Power requirements

For CD radio cassette-corder: 230V AC, 60Hz

9 V DC, 6 size D (R20) batteries

Power consumption

AC 20 W

- Continued on next page -

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Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

FM-AM RECEIVER

Battery life

For CD radio cassette-corder:

FM recording
Sony R20P: approx. 13.5 h
Sony alkaline LR20: approx. 20 h
Tape playback
Sony R20P: approx. 7.5 h
Sony alkaline LR20: approx. 15 h
CD playback
Sony R20P: approx. 2.5 h
Sony alkaline LR20: approx. 7 h

Dimensions

Approx. 420 x 165 x 256 mm (w/h/d)
(16 5/8 x 6 1/2 x 10 1/8 inches) (incl. projecting parts)

Mass

Approx. 4.1 kg (9 lb. 1 oz) (incl. batteries)

Supplied accessory

AC power cord (1)

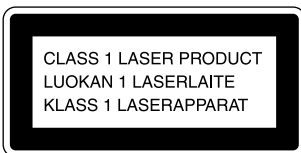
Design and specifications are subject to change without notice.

• Abbreviation

CET : East European & Russian

Information

For customers in Europe



This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located at the bottom of the player.

CAUTION

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

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.

REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1 SERVICING NOTES

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

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

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

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

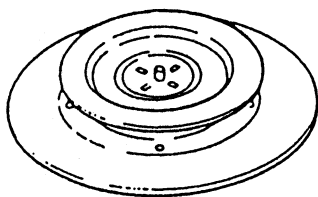
NOTES ON LASER DIODE EMISSION CHECK

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

CHUCK PLATE JIG ON REPAIRING

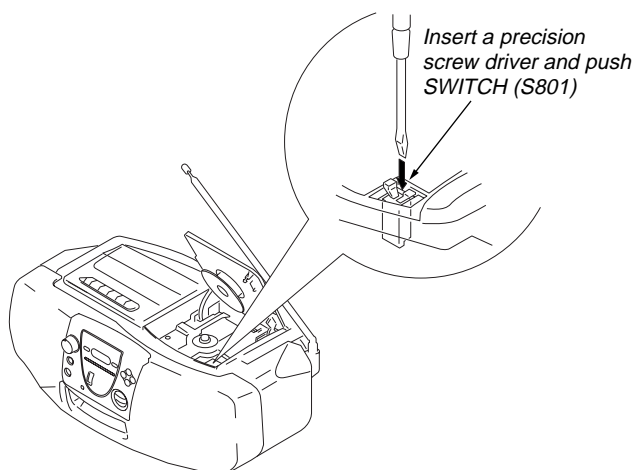
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

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



LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Press CD open knob.
2. Open the lid for CD.
3. Push on SWITCH (S801) as following figure.
4. 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.



● UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

LF : LEAD FREE MARK

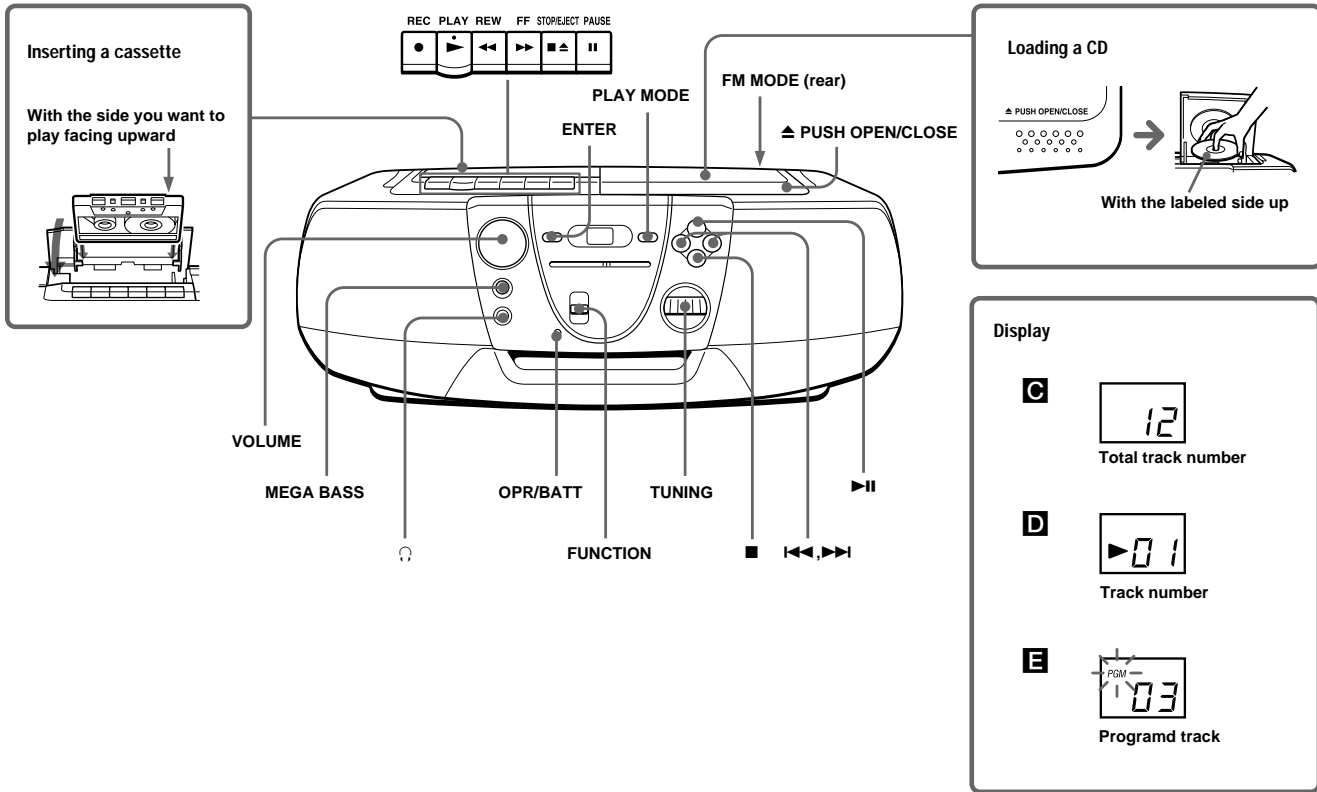
Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time. Soldering irons using a temperature regulator should be set to about 350°C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SECTION 2 GENERAL

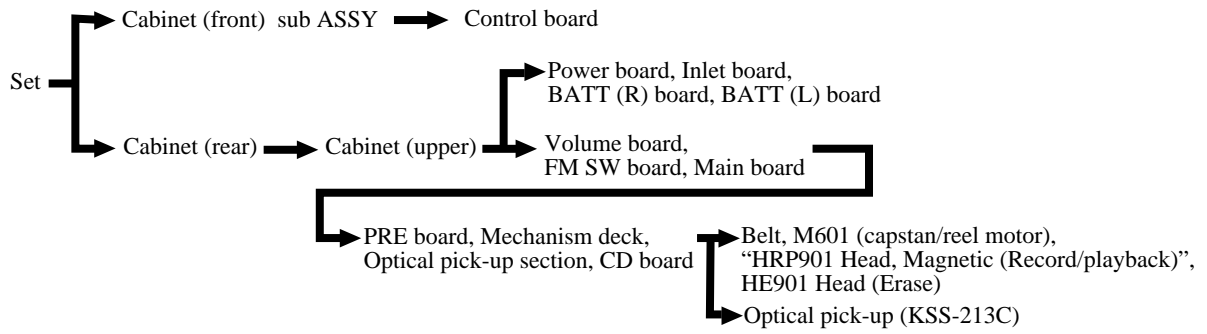
This section is extracted from instruction manual.

LOCATION AND FUNCTION OF CONTROLS



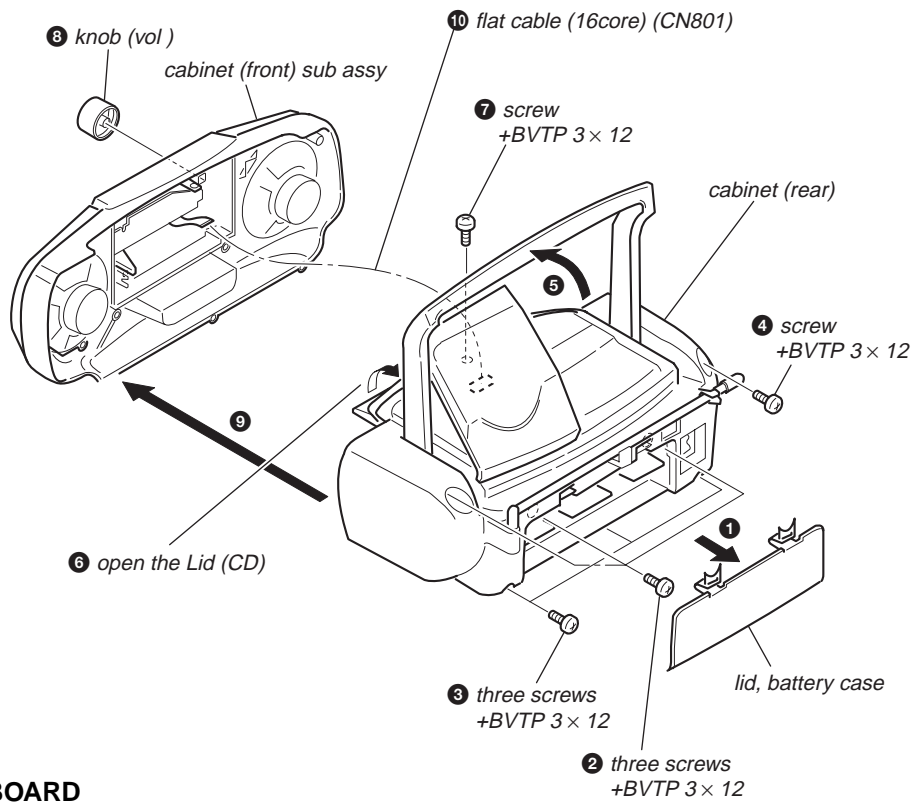
SECTION 3 DISASSEMBLY

● The equipment can be removed using the following procedure.

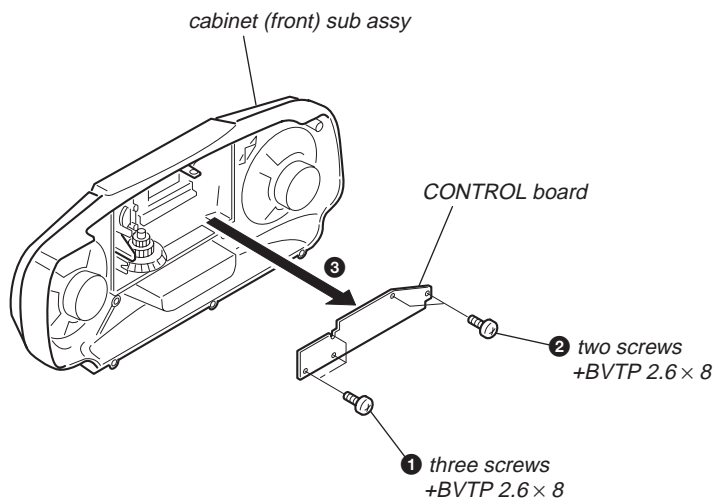


Note : Follow the disassembly procedure in the numerical order given.

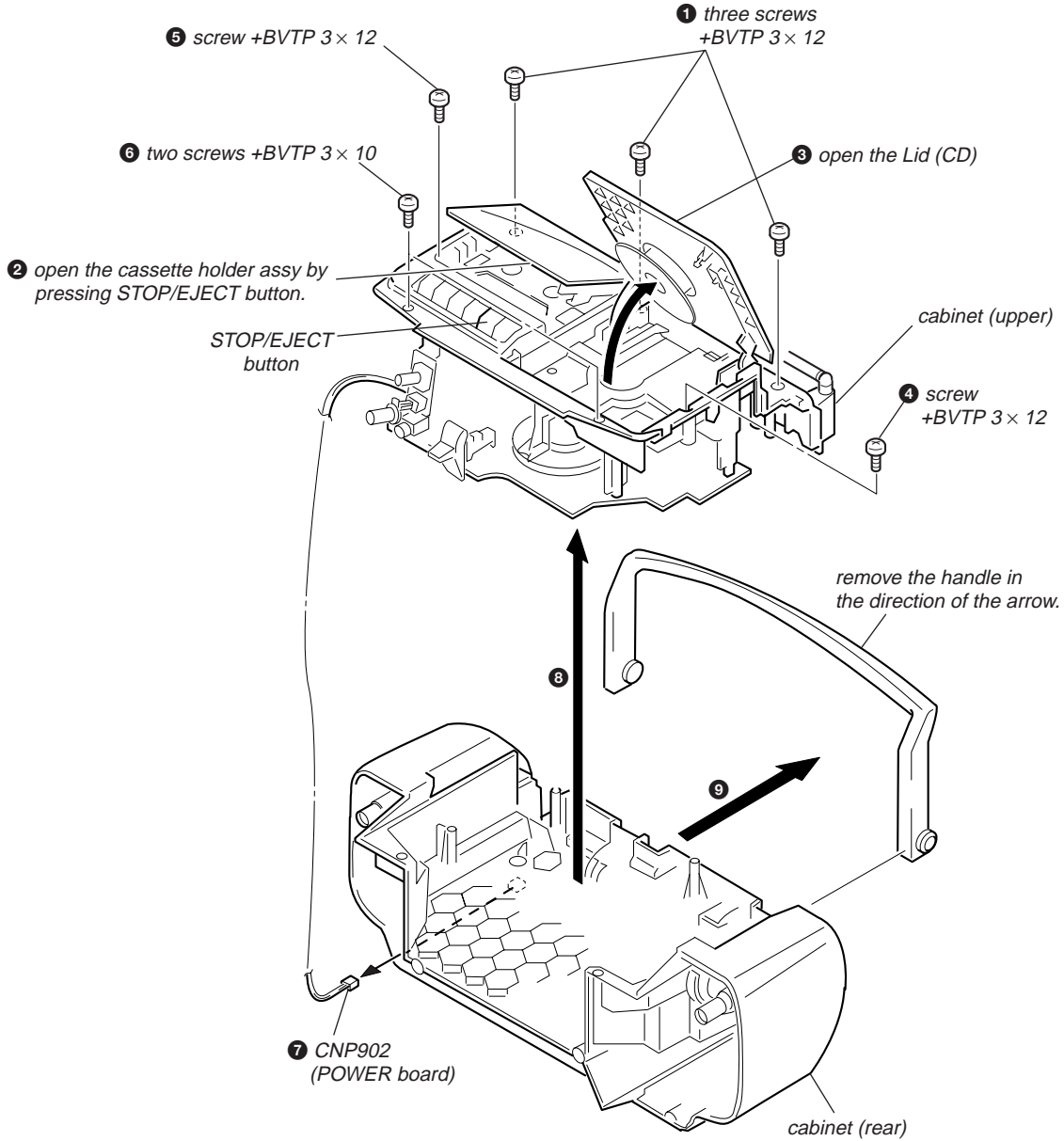
3-1. CABINET (FRONT) SUB ASSY, CABINET (REAR)



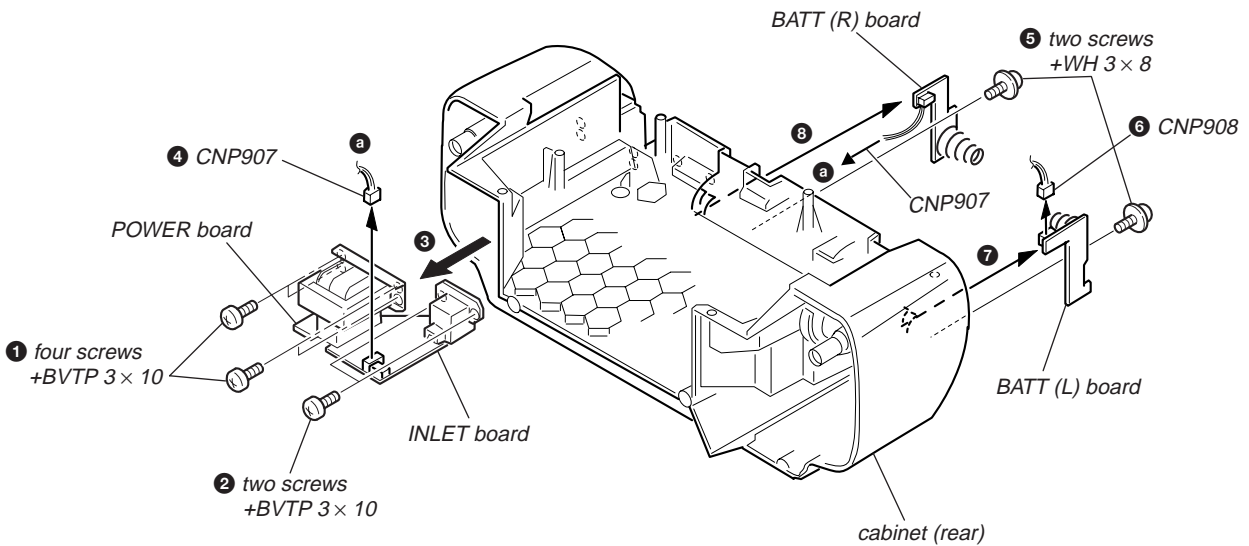
3-2. CONTROL BOARD



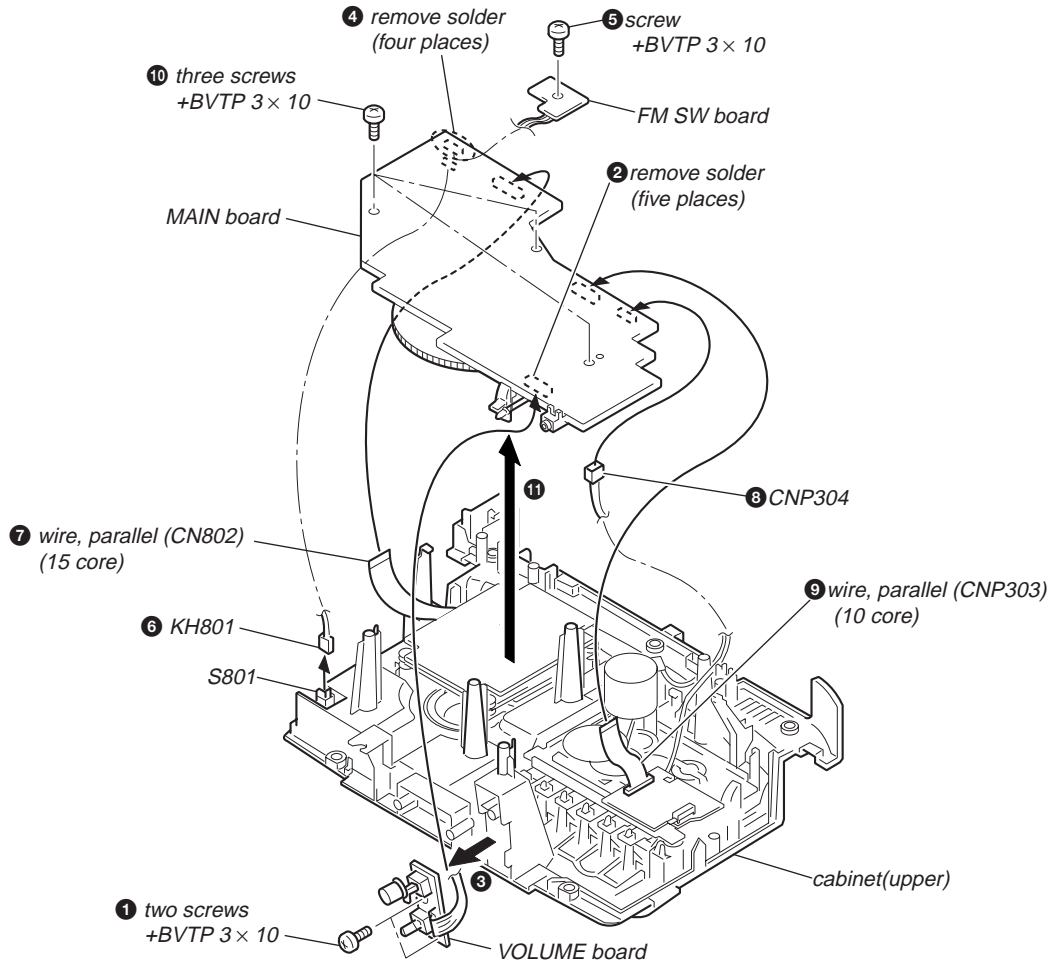
3-3. CABINET (UPPER)



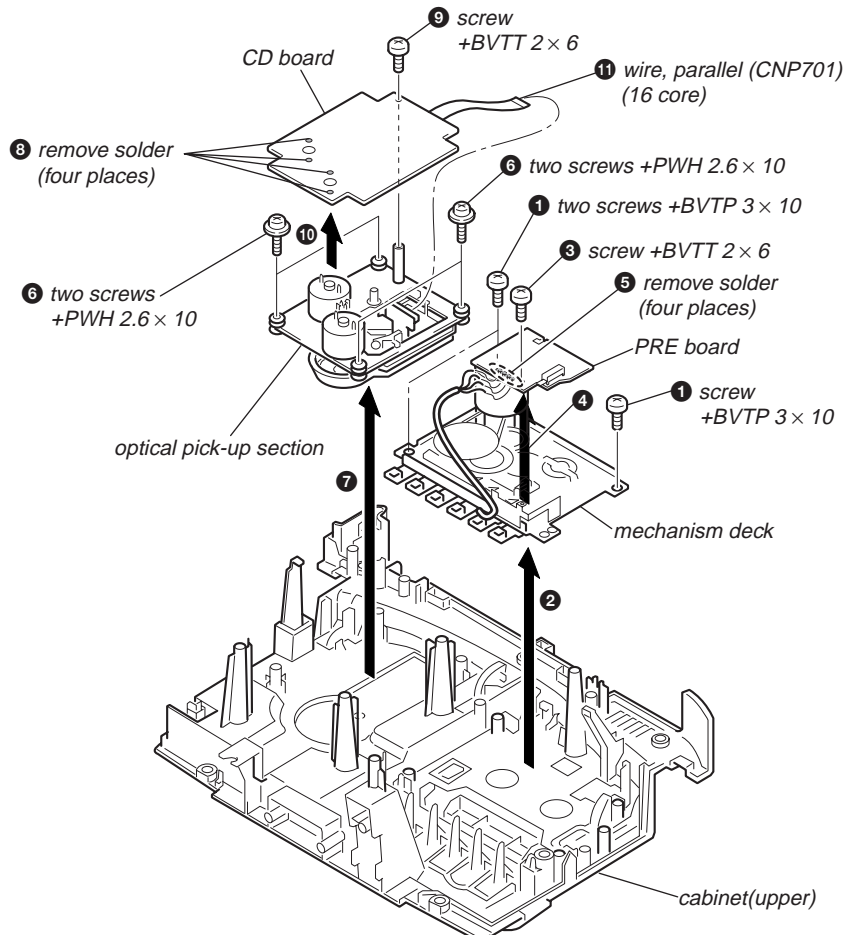
3-4. POWER BOARD, INLET BOARD, BATT (R) BOARD, BATT (L) BOARD



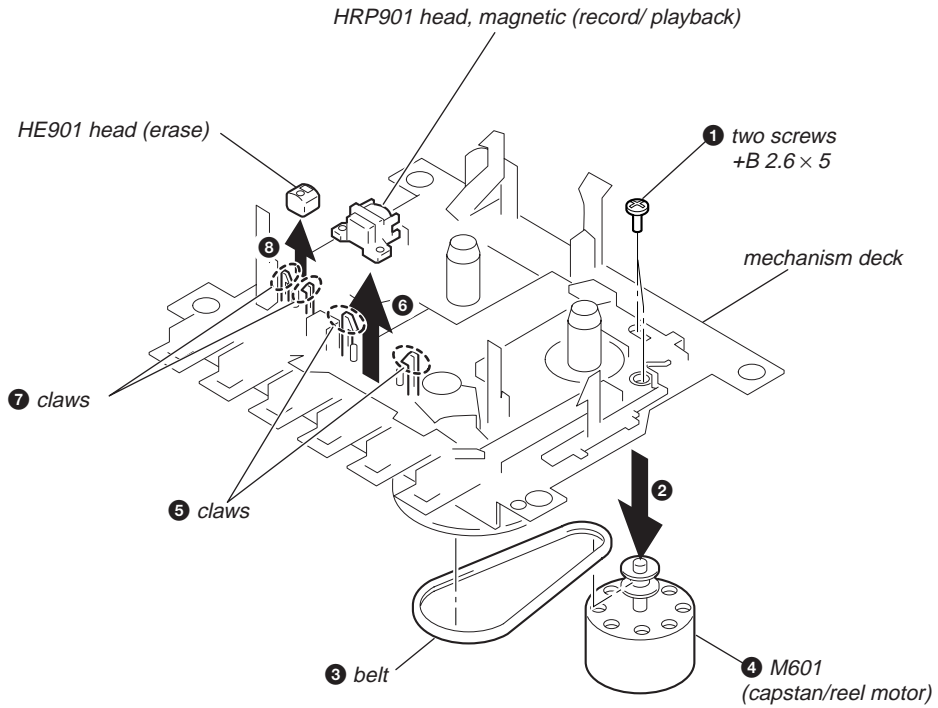
3-5. VOLUME BOARD, FM SW BOARD, MAIN BOARD



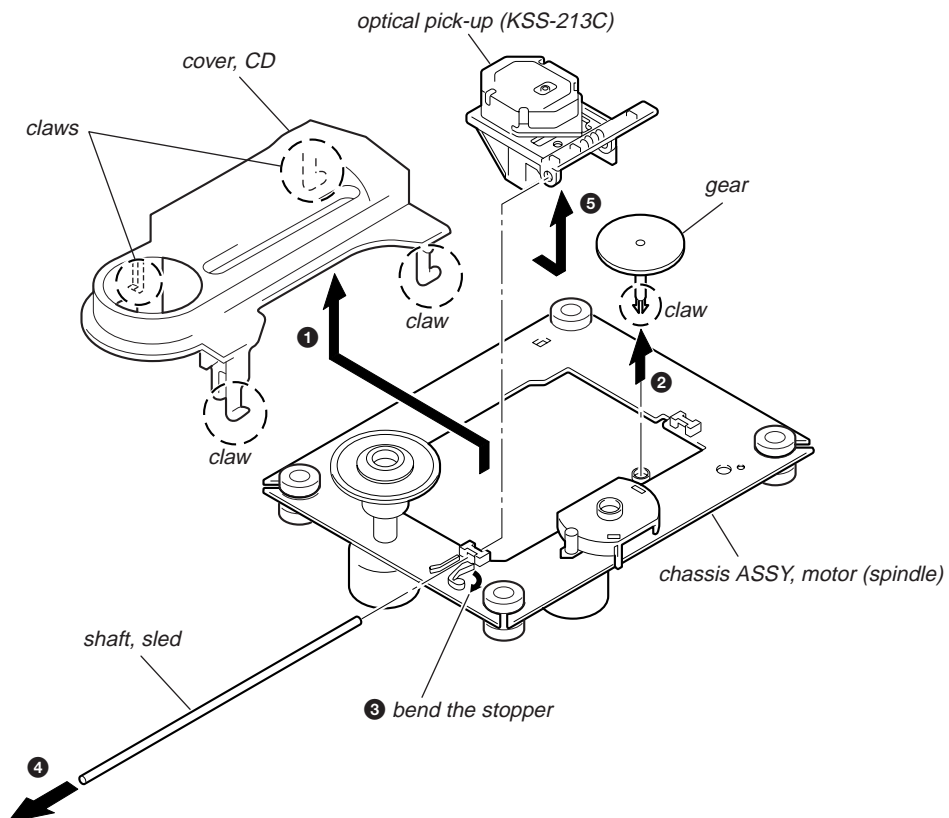
3-6. PRE BOARD, MECHANISM DECK, OPTICAL PICK-UP SECTION, CD BOARD



3-7. BELT, M601 (CAPSTAN / REEL MOTOR), “ HRP901 HEAD, MAGNETIC (RECORD/PLAYBACK) ”, HE901 HEAD (ERASE)



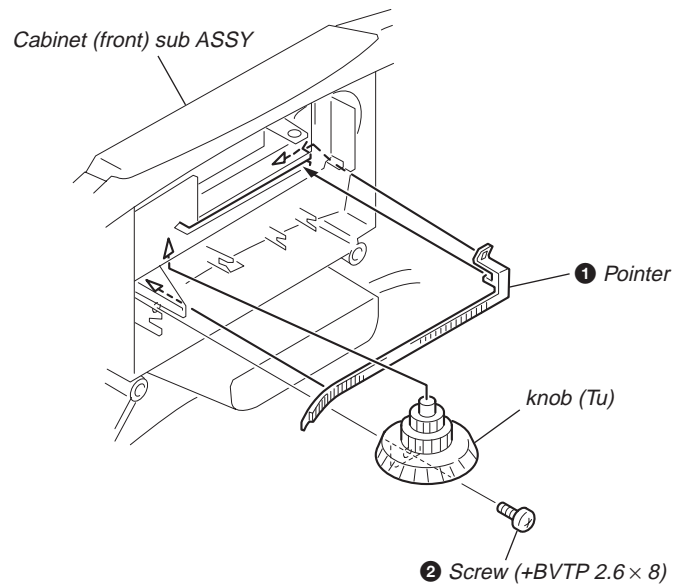
3-8. OPTICAL PICK-UP (KSS-213C)



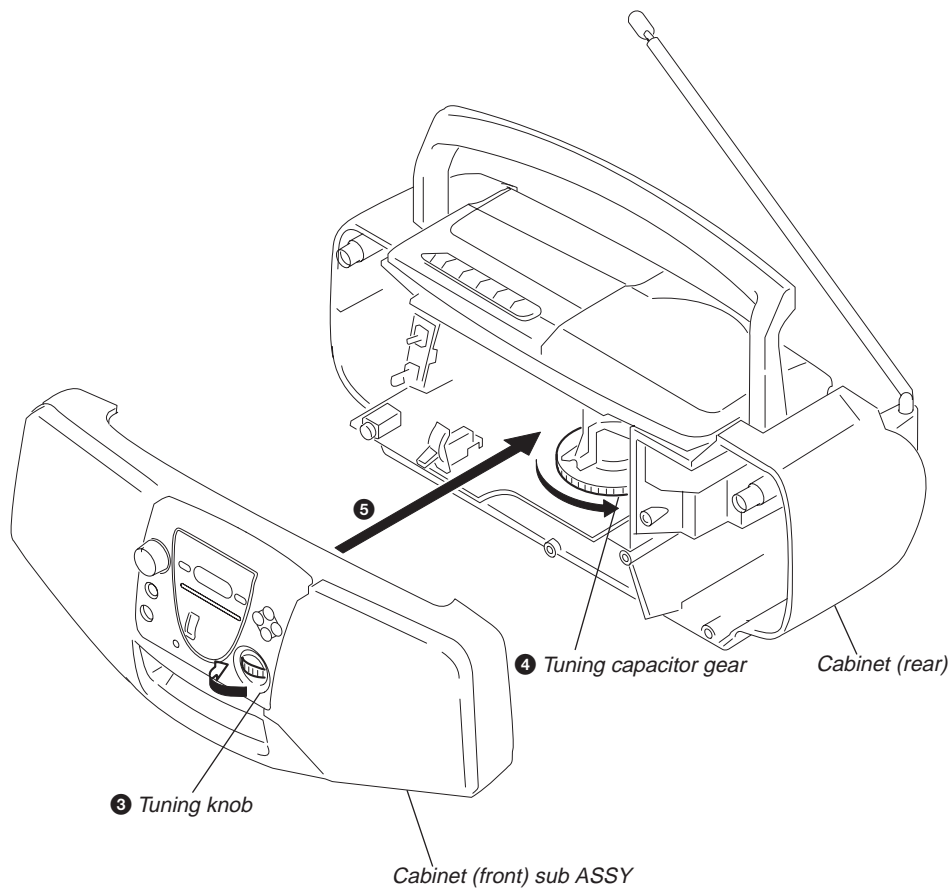
SECTION 4 DIAL POINTER INSTALLATION

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

- ❶ Align the pointer with the groove of “cabinet (front) sub ASSY” and insert it as shown in the illustration.
- ❷ Align knob (TU) with “cabinet (front) sub ASSY” and fasten the screw.



- ❸ Turn the tuning knob fully in the direction of the allow as shown in the illustration.
- ❹ Turn the tuning capacitor gear fully in the direction of the allow as shown in the illustration.
- ❺ Fasten the “cabinet (front) sub ASSY” and cabinet (rear) with the screws.



SECTION 5 ADJUSTMENTS

5-1. MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belts
capstan	
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage (9V) unless otherwise noted.

Torque Measurement

Torque	Torque Meter	Meter Reading
Forward	CQ-102C	1.77 – 5.88 mN•m (18 – 60 g•cm) (0.25 – 0.83 oz•inch)
Forward Back Tension	CQ-102C	0.1 – 0.49 mN•m (1.0 – 5.0 g•cm) (0.014 – 0.069 oz•inch)
Fast Forward	CQ-201B	4.42 – 9.31 mN•m (45 – 95 g•cm) (0.62 – 1.32 oz•inch)
Rewind	CQ-201B	4.42 – 9.31 mN•m (45 – 95 g•cm) (0.62 – 1.32 oz•inch)

Tape Tension Measurement

Torque Meter	Meter Reading
CQ-403A	more than 60g (more than 2.12 oz)

5-2. ELECTRICAL ADJUSTMENTS

TAPE RECORDER SECTION

0dB = 0.775V

Standard Output Level

Output terminal	HP OUT
load impedance	32 Ω
output signal level	0.25V (-10dB)

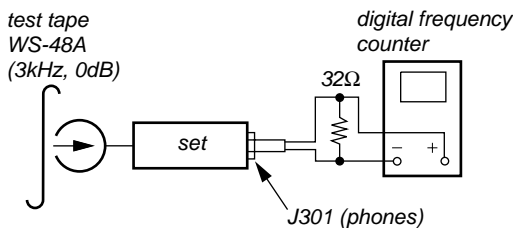
Test Tape

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

Tape Speed Adjustment

Procedure :

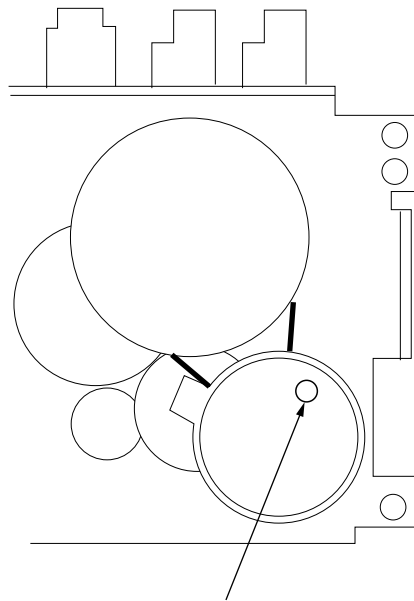
Mode : Playback



Adjustment Value : 3,000Hz
Standard Value : 2,940 - 3,060Hz

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

Adjustment Location : Mechanism deck



Tape speed adjustment control inside motor

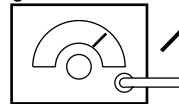
TUNER SECTION

0dB = 1 μV

AM Section

Function switch : AM
 Volume : MIN

AM RF signal generator



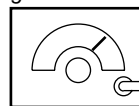
Put the lead-wire antenna close to the set.

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

FM Section

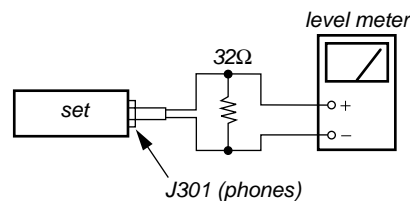
Function switch : FM
 Volume : MIN

FM RF signal generator



0.01μF telescopic antenna terminal

22.5kHz frequency deviation by 1kHz signal.
 Output level : as low as possible



- 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.	
T2	455kHz

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L4	520kHz
CT4	1,780kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3	620kHz
CT3	1,400kHz

FM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	10.7MHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L2	86.5MHz
CT2	109.5MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	86.5MHz
CT1	109.5MHz

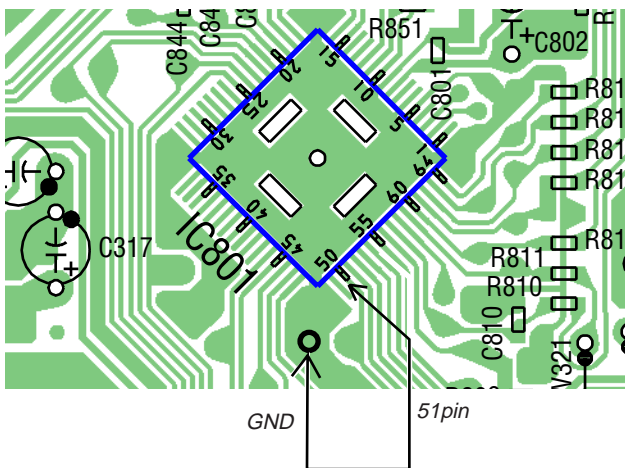
Adjustment Location : Main board (See page 12)

CD SECTION

How to put the set into CD Test Mode

- Set the function switch to power off.
- Set the function switch to CD.
- Set Test mode by momentarily shorting both of the IC801 51pin to GND. (Shorting the terminals momentarily is sufficient).
The set is into CD test mode (BB is displayed).
- Turn the power off to release test mode.

[MAIN BOARD] (Conductor side)

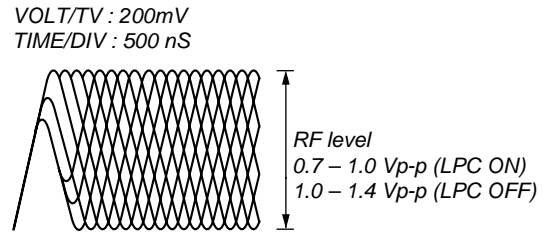


TEST mode : momentarily short

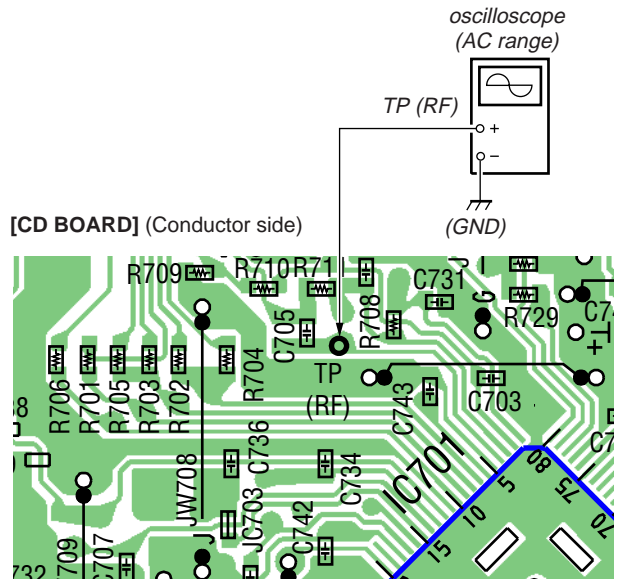
CD section adjustments are done automatically in this set. In case of operation check, confirm that focus bias.

Focus Bias Check

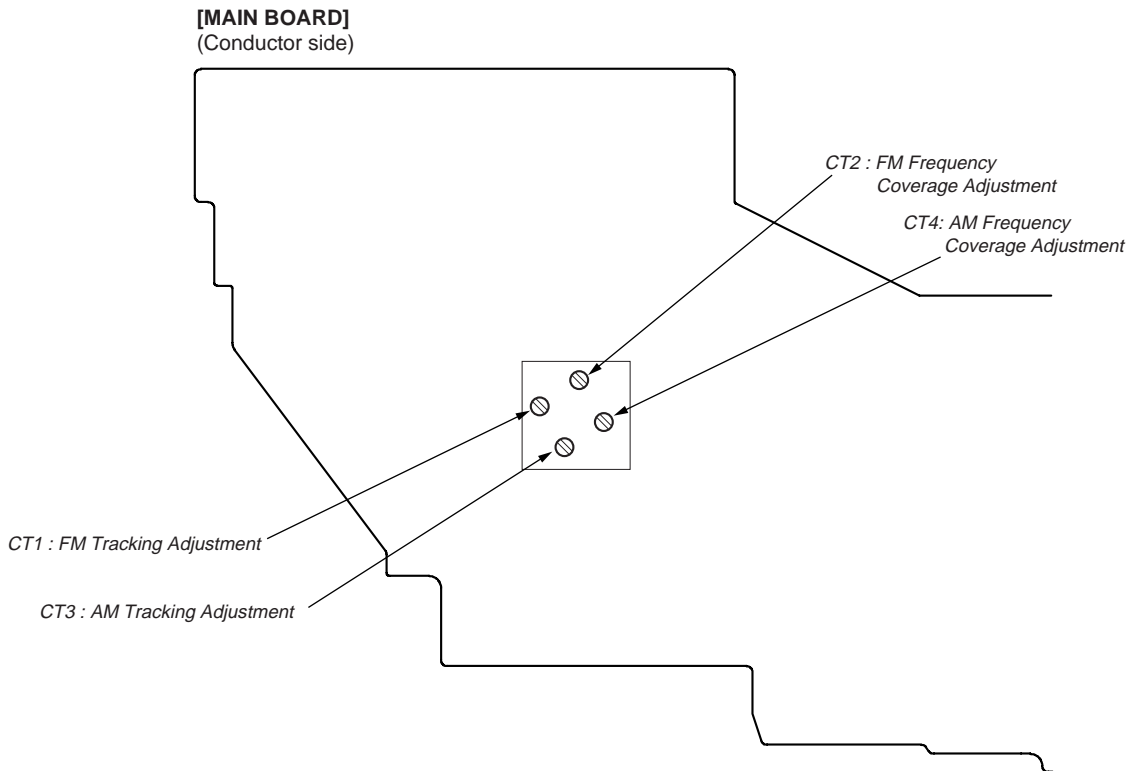
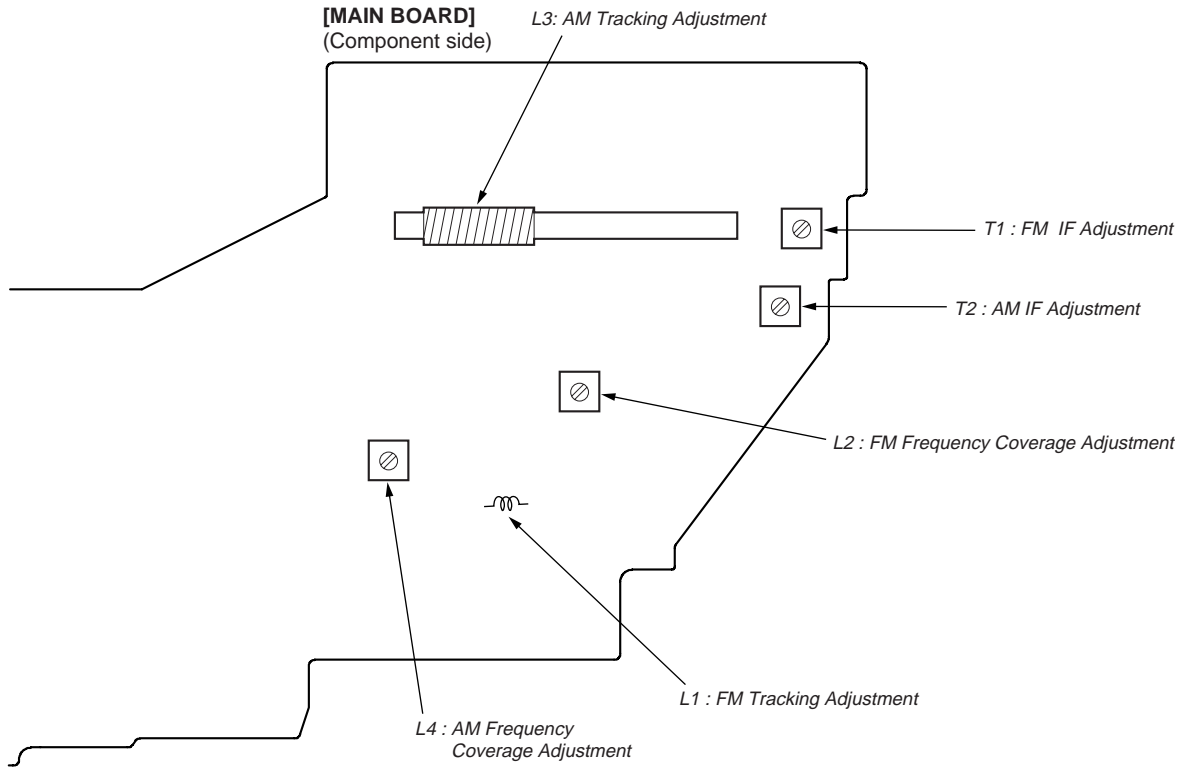
- Connect the oscilloscope between TP (RF) and GND on CD board.
 - Insert the disc (YEDS-18). (Part No. : 3-702-101-01)
 - Press the $\triangleright|||$ button two times (LPC ON).
 - Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
A good eye pattern means that the diamond shape (\diamond) in the center of the waveform can be clearly distinguished.
- RF Signal Reference Waveform (eye pattern)



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



Adjustment Location :



SECTION 6 DIAGRAMS

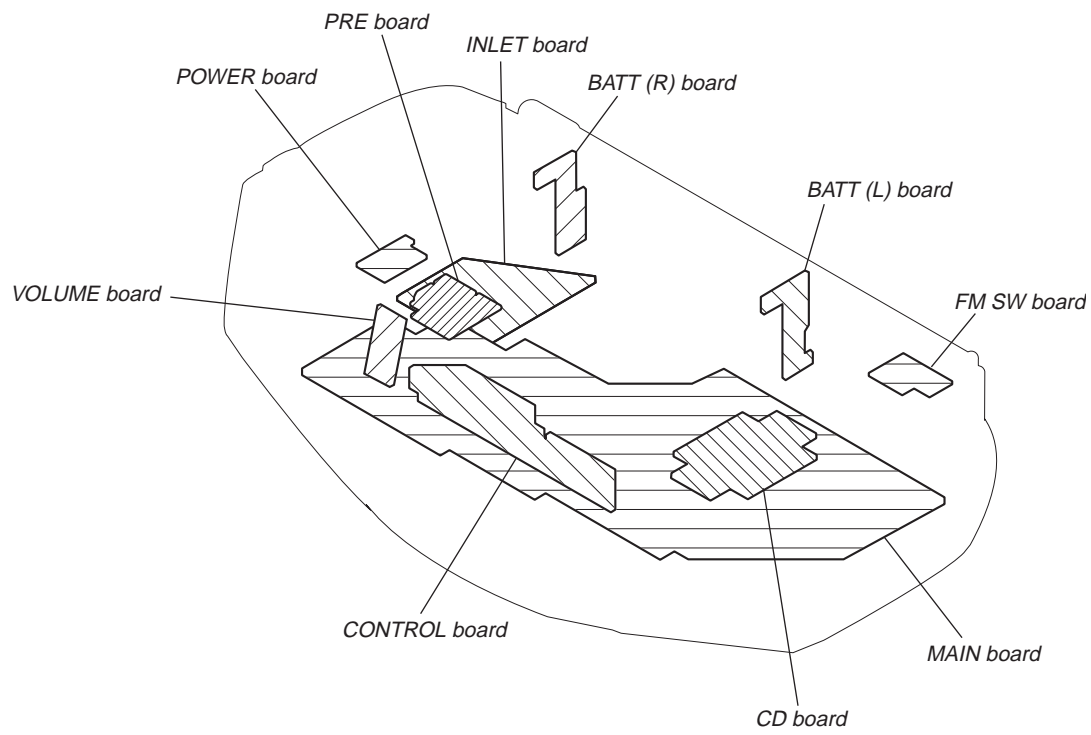
6-1. IC PIN FUNCTION DESCRIPTION

IC801 μ PD789316GK-503-9ET SIGNAL PROCESSOR, D/A CONVERTER, LCD DRIVE, SYSTEM CONTROL

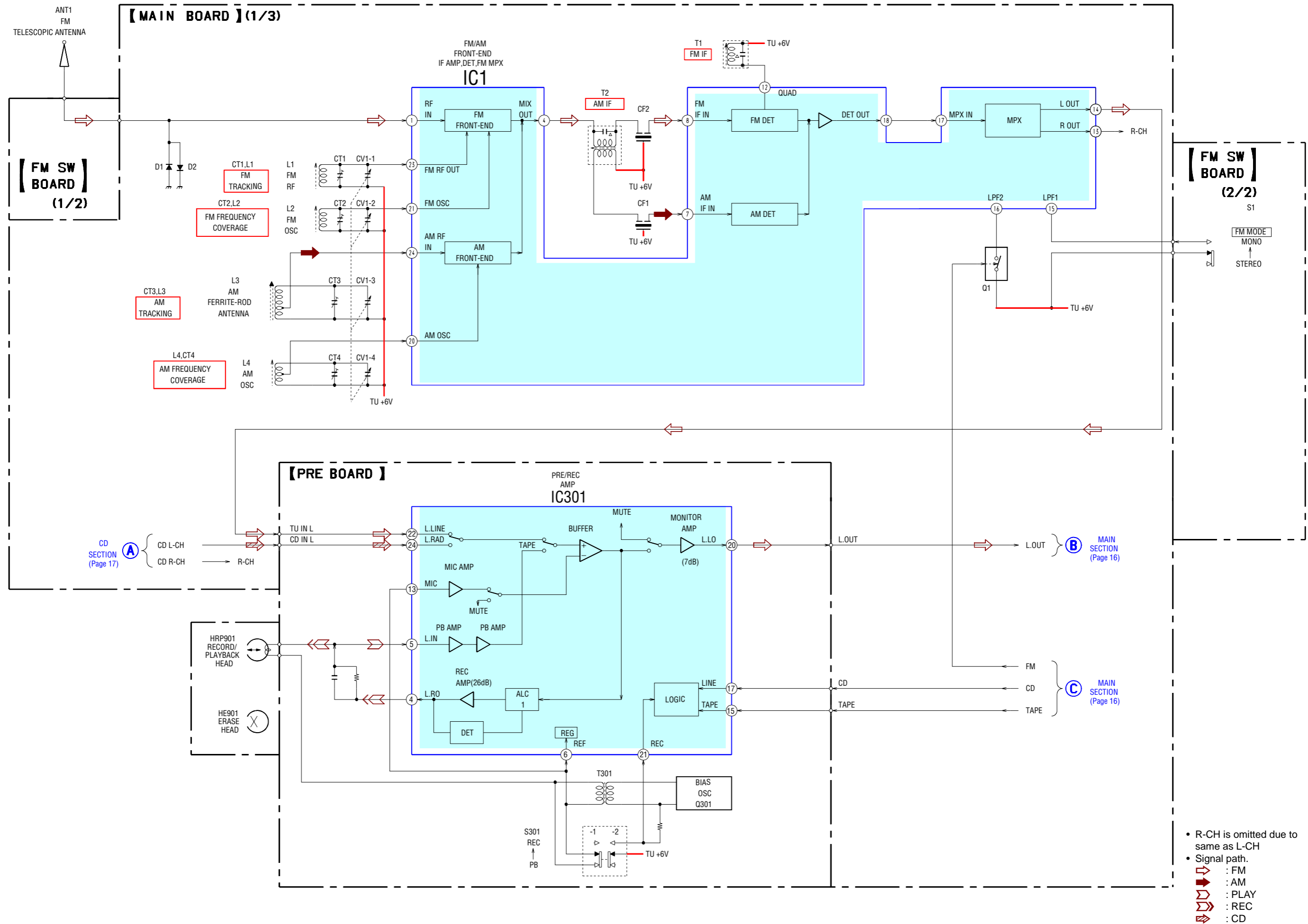
Pin No.	Pin name	I/O	Description
1 to 4	NC	—	Not used (open)
5	IC	—	Connect to ground.
6	XT1	I	Connect to ground.
7	XT2	—	Not used (open)
8	VDD	—	Power supply terminal (B+ 3.3 V)
9	VSS	—	Ground terminal
10	CL1	I	Oscillator terminal (4 MHz)
11	CL2	—	Oscillator terminal (4 MHz)
12	$\overline{\text{RESET}}$	I	Reset signal input
13	NC	—	Not used (open)
14	SYNC-R	—	Not used (open)
15	CE	O	Chip enable signal output
16	C-RST	O	Reset signal output to the LC78645E (IC701)
17	CAPH	—	Charge pump capacitor terminal
18	CAPL	—	Charge pump capacitor terminal
19 to 21	VLC0 to 2	—	Capacitor connect terminal
22 to 25	COM0 to 3	O	LCD common drive output
26 to 43	S0 to 17	—	Not used (open)
44 to 48	S18 to 22	O	LCD segment drive output
49	S23	—	Not used (open)
50	ENTER	I	Key (ENTER) input
51	MODE	I	Key (MODE) input
52	PLAY	I	Key (\blacktriangleright PLAY) input
53	FR	I	Key ($\blacktriangleleft\triangleleft$ FR) input
54	FF	I	Key ($\triangleright\triangleright\blacktriangleright$ FF) input
55	STOP	I	Key (\square STOP) input
56	DOOR	I	Door open/close input
57	WRQ	I	Command signal input
58	TEST	I	Test mode signal terminal input (TEST: L)
59	MUTE	O	Mute signal output
60	FSEQ	I	Frame SYNC signal input
61	DRF	I	DRF (Defect RF) input
62	DO	O	Serial data output
63	DIN	I	Serial data input
64	CLK	I	Clock signal input

CFD-V6

• Circuit Boards Location

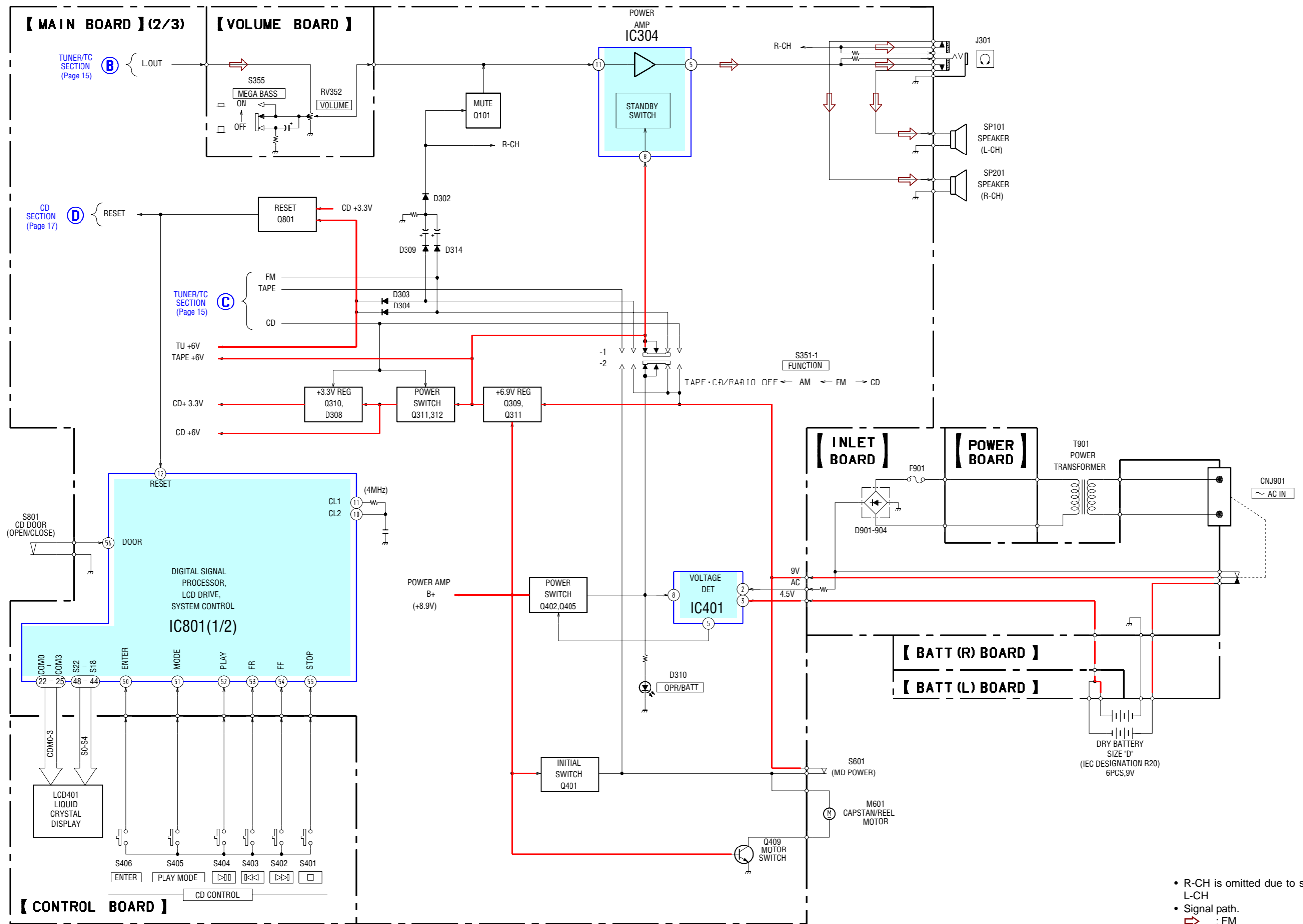


6-2. BLOCK DIAGRAMS -TUNER/TC SECTION-



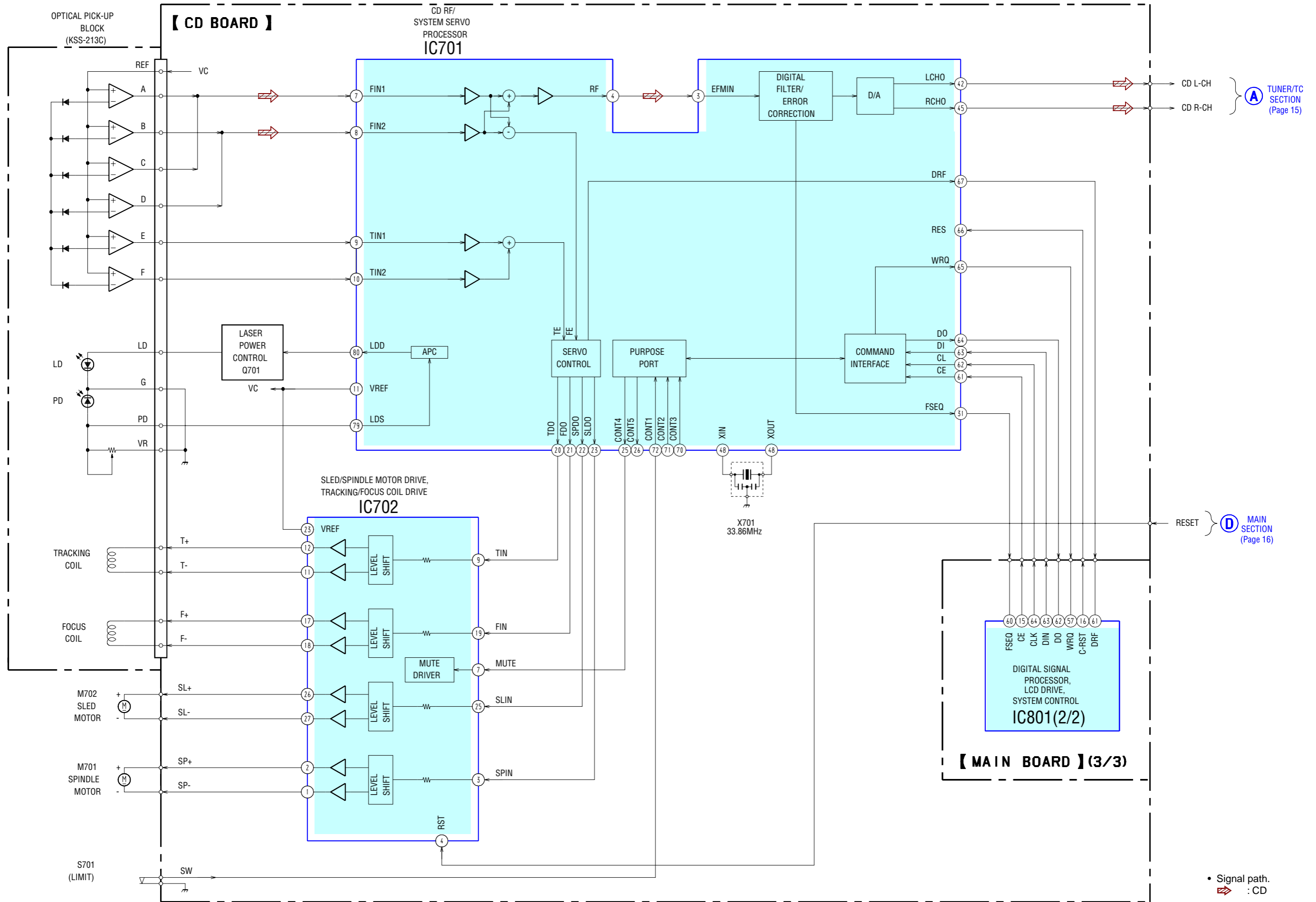
- R-CH is omitted due to same as L-CH
- Signal path.
- ◀ : FM
- ▶ : AM
- ◀▶ : PLAY
- ▶◀ : REC
- ◀▶◀▶ : CD

6-3. BLOCK DIAGRAMS -MAIN SECTION-




- R-CH is omitted due to same as L-CH
- Signal path.
- ➡ : FM

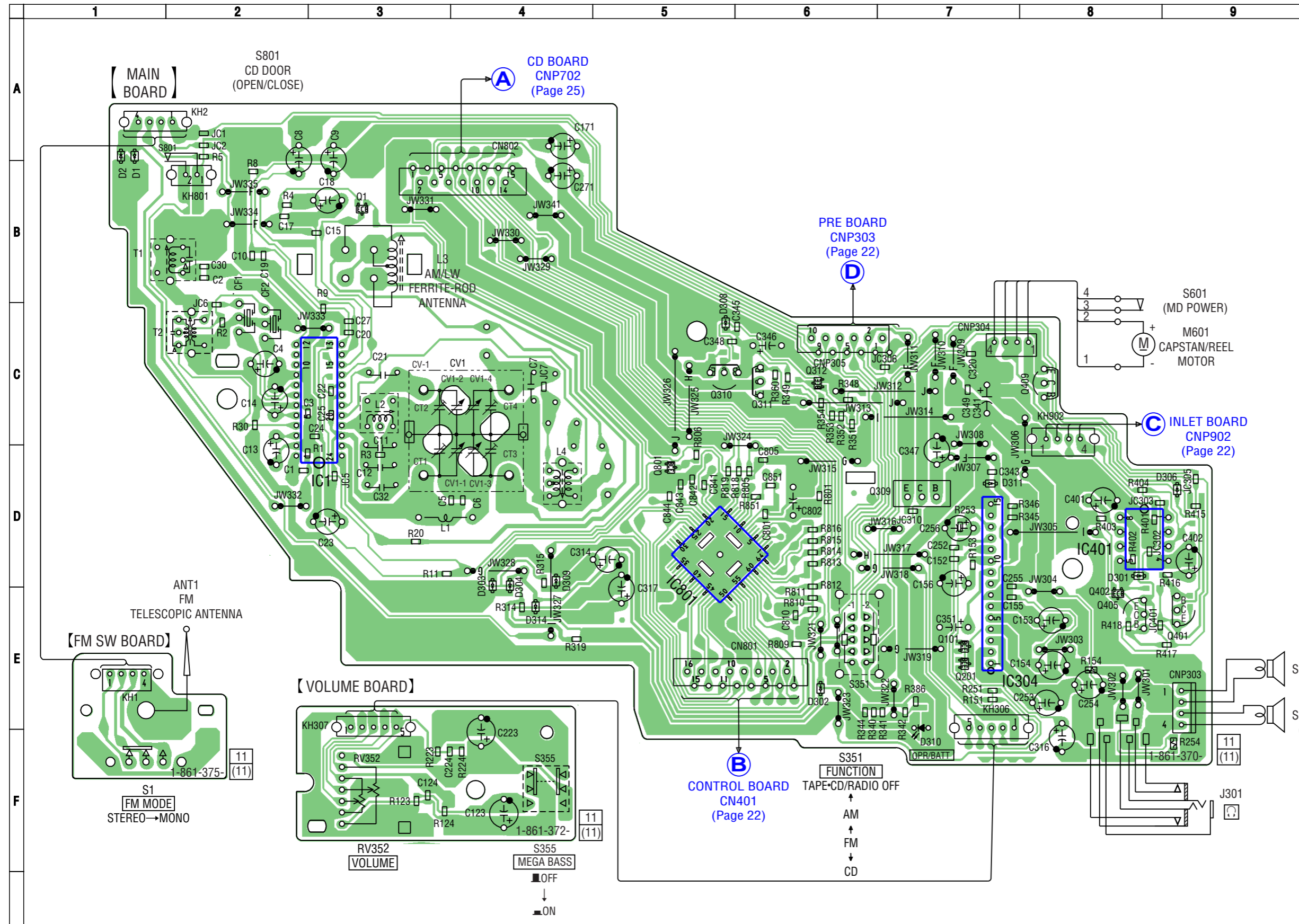
6-4. BLOCK DIAGRAMS -CD SECTION-



A TUNER/TC SECTION (Page 15)

D MAIN SECTION (Page 16)

6-5. PRINTED WIRING BOARDS – MAIN SECTION – ● Refer to page 14 for Circuit Boards Location.  : Uses unleaded solder.



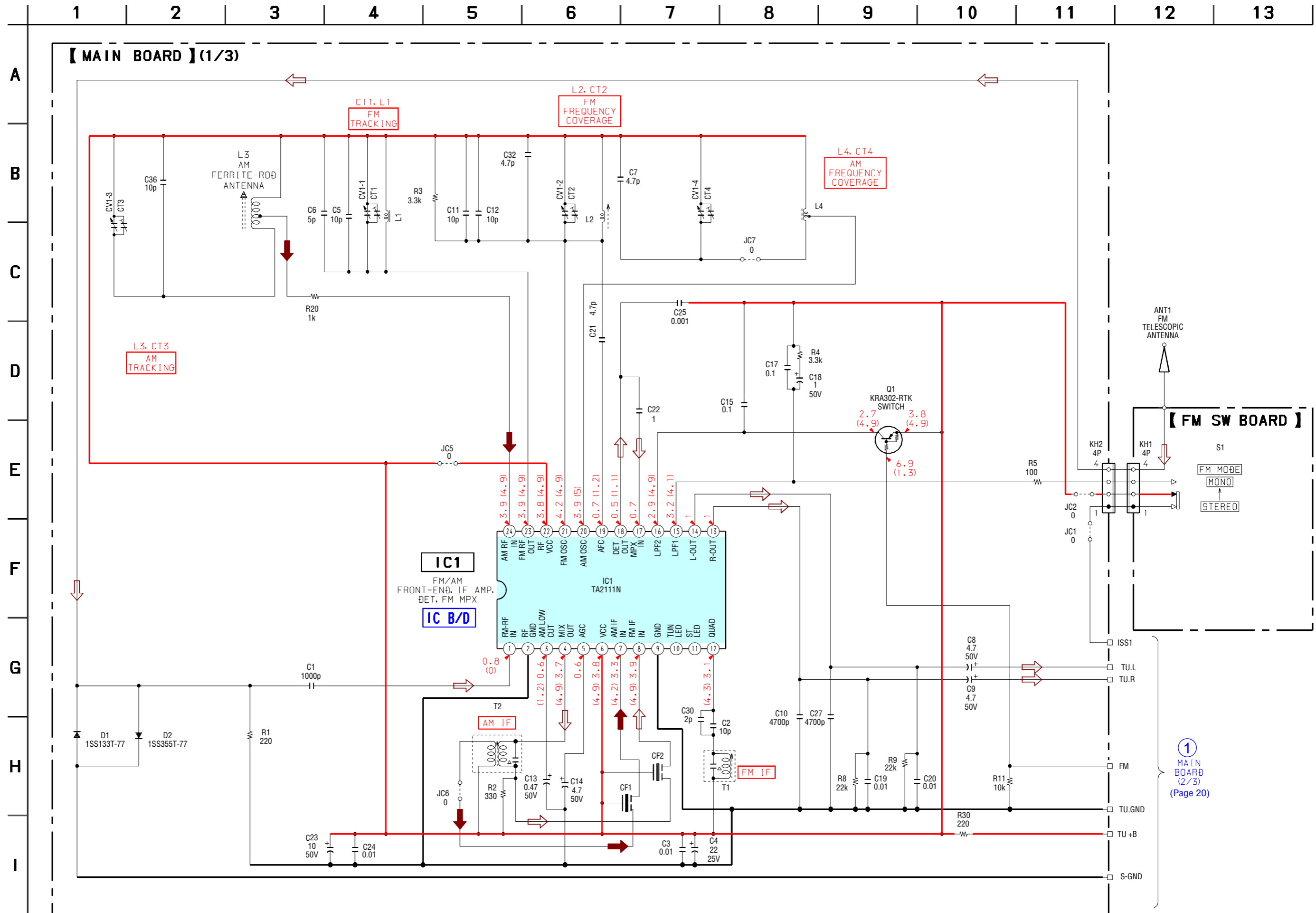
● Semiconductor Location

Ref. No.	Location
D1	A-1
D2	A-1
D301	D-8
D302	E-6
D303	D-4
D304	D-4
D306	D-9
D308	C-5
D309	D-4
D310	E-7
D311	D-7
D314	E-4
IC1	C-3
IC304	E-7
IC401	D-8
IC801	D-5
Q1	B-3
Q101	E-7
Q201	E-7
Q309	D-7
Q310	C-5
Q311	C-6
Q312	C-6
Q401	E-9
Q402	E-8
Q405	E-8
Q409	C-8
Q801	D-5

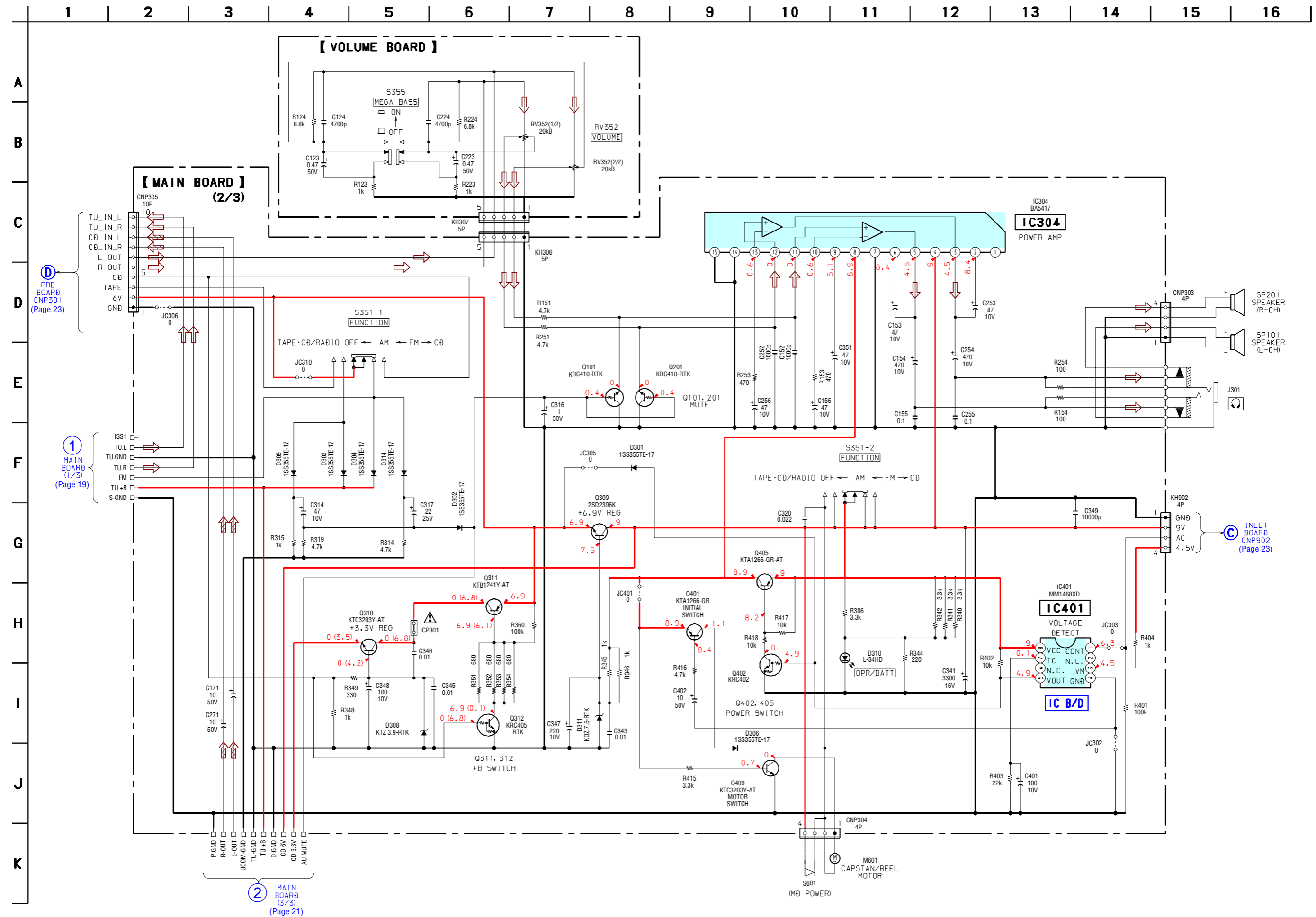
Note:

- : parts extracted from the component side.
- △ : internal component.
- : Pattern from the side which enables seeing.
- Abbreviation
CET : East European & Russian

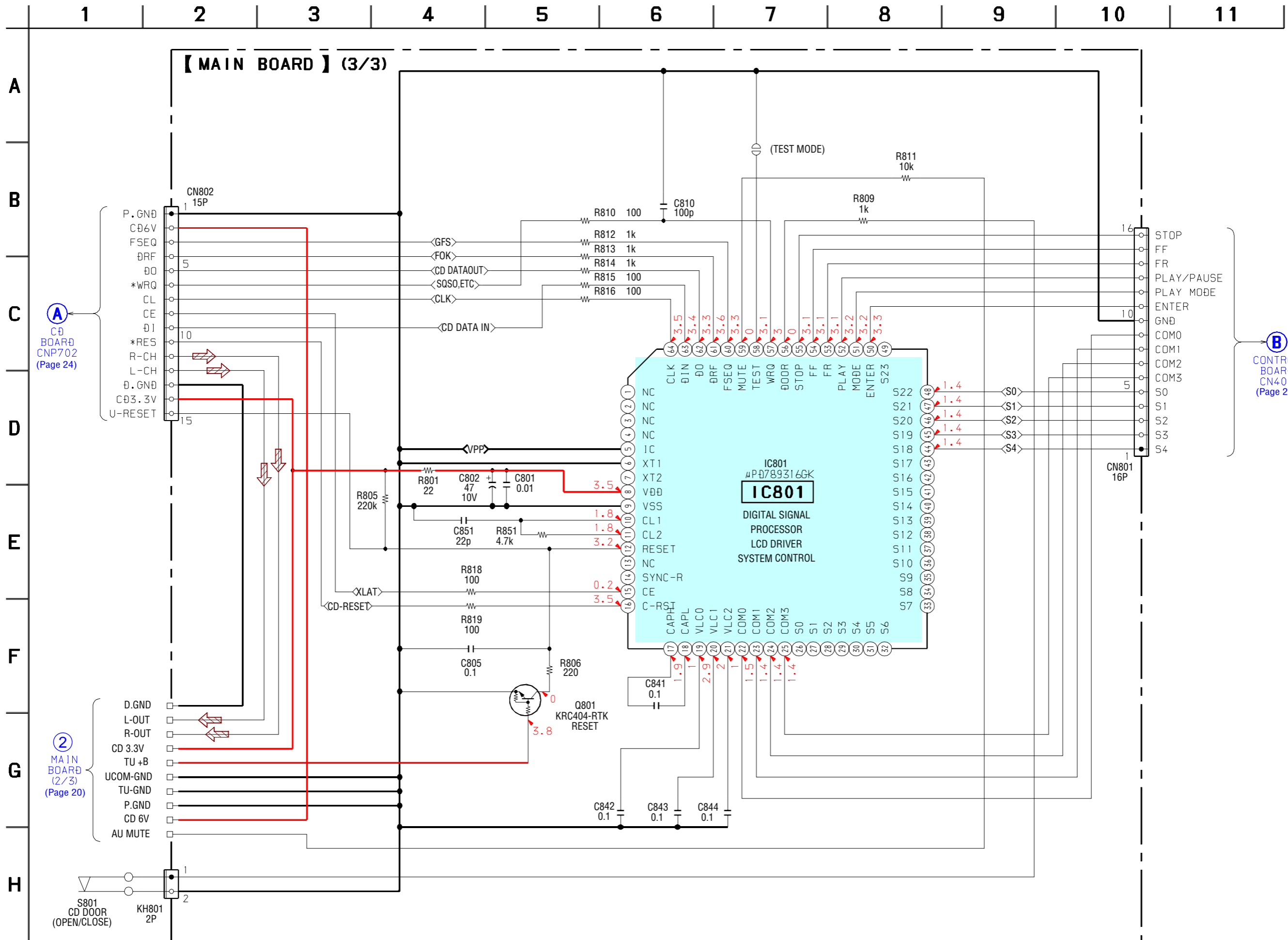
6-6. SCHEMATIC DIAGRAMS – MAIN SECTION (1/3) –



6-7. SCHEMATIC DIAGRAMS – MAIN SECTION (2/3) –



6-8. SCHEMATIC DIAGRAMS – MAIN SECTION (3/3) – • Refer to page 13 for IC Pin Function Description.




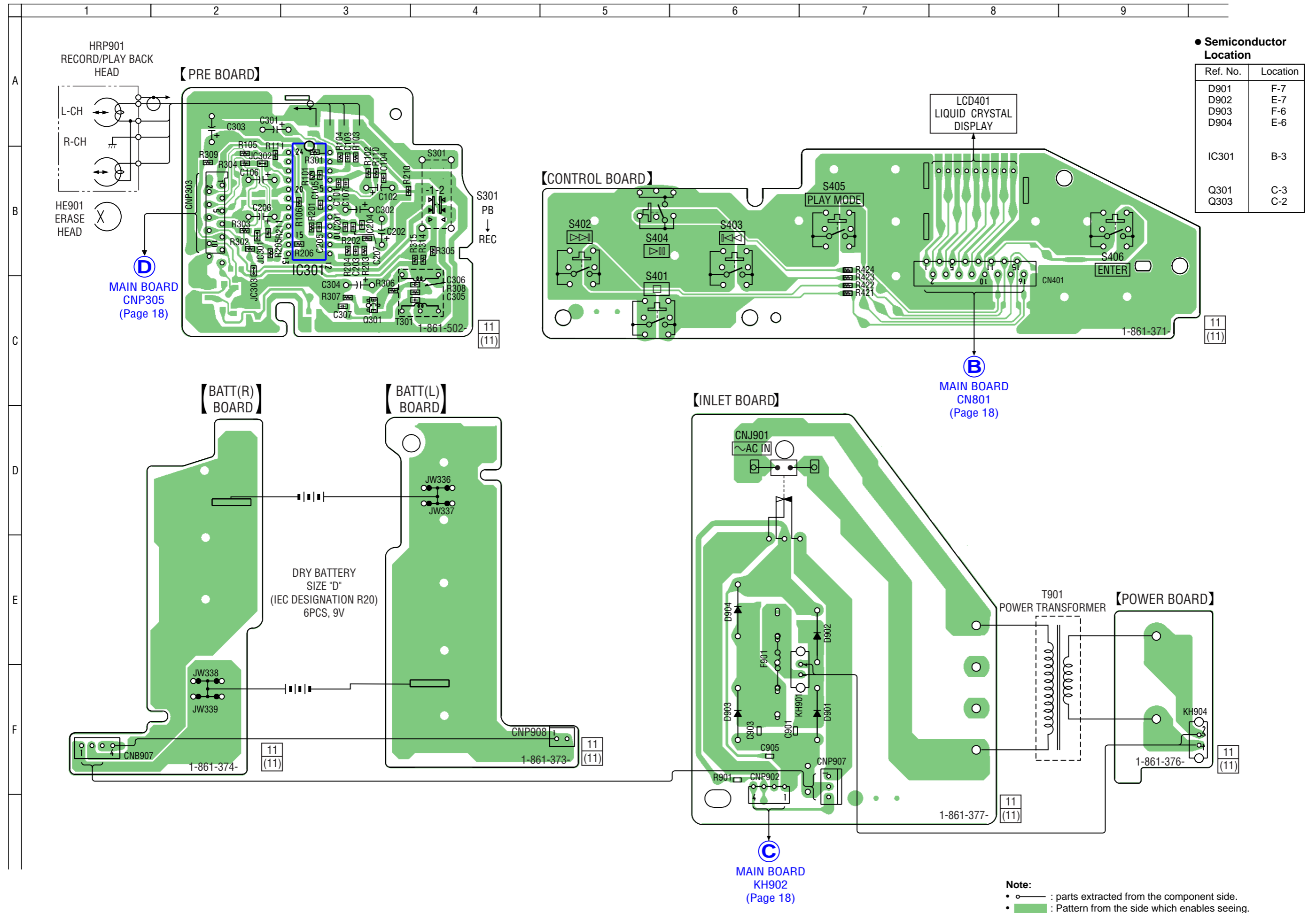
① CD BOARD CNP702 (Page 24)

② MAIN BOARD (2/3) (Page 20)

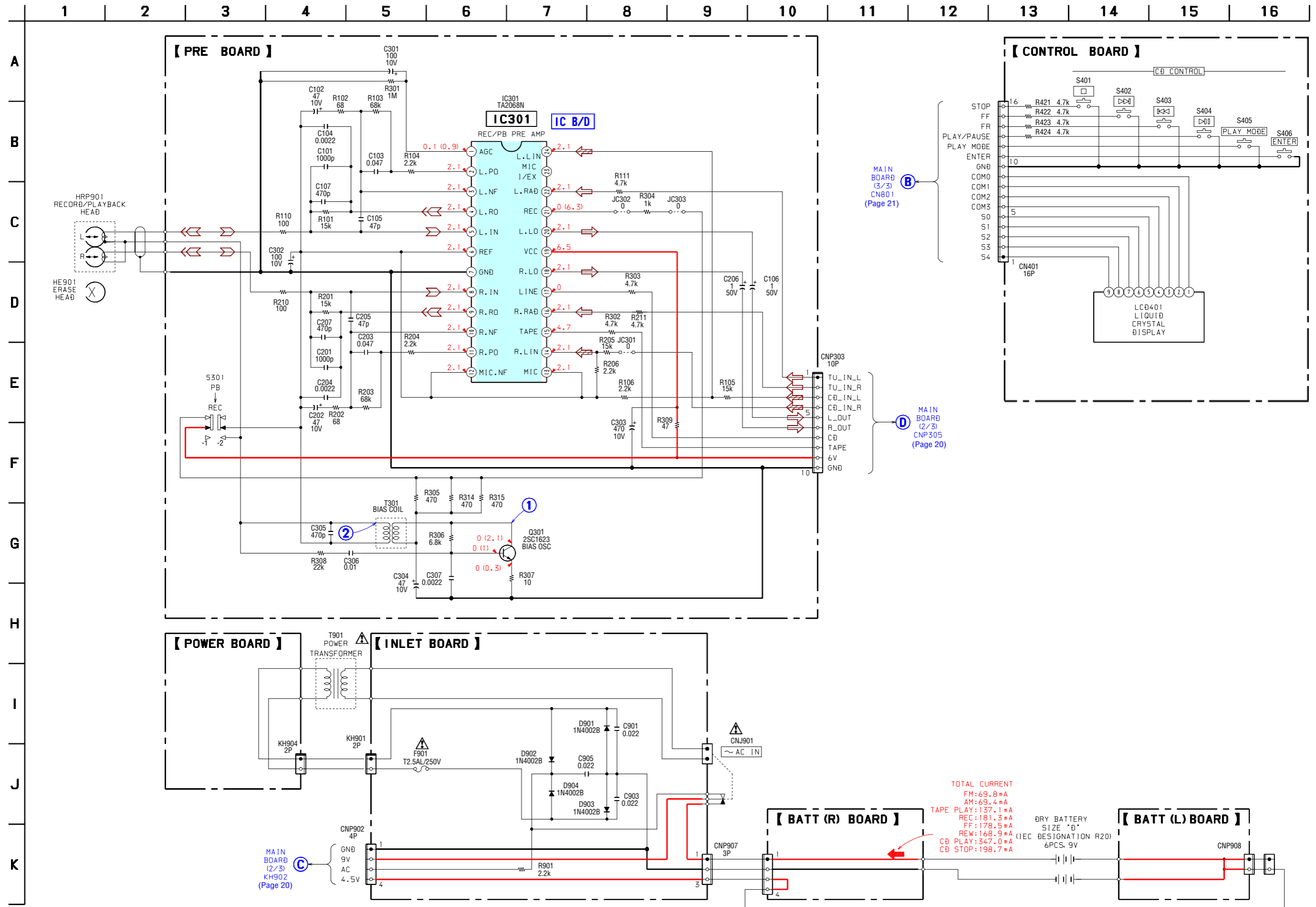
③ CONTROL BOARD CN401 (Page 23)

6-9. PRINTED WIRING BOARDS – CONTROL/POWER SECTION – ● Refer to page 14 for Circuit Boards Location.

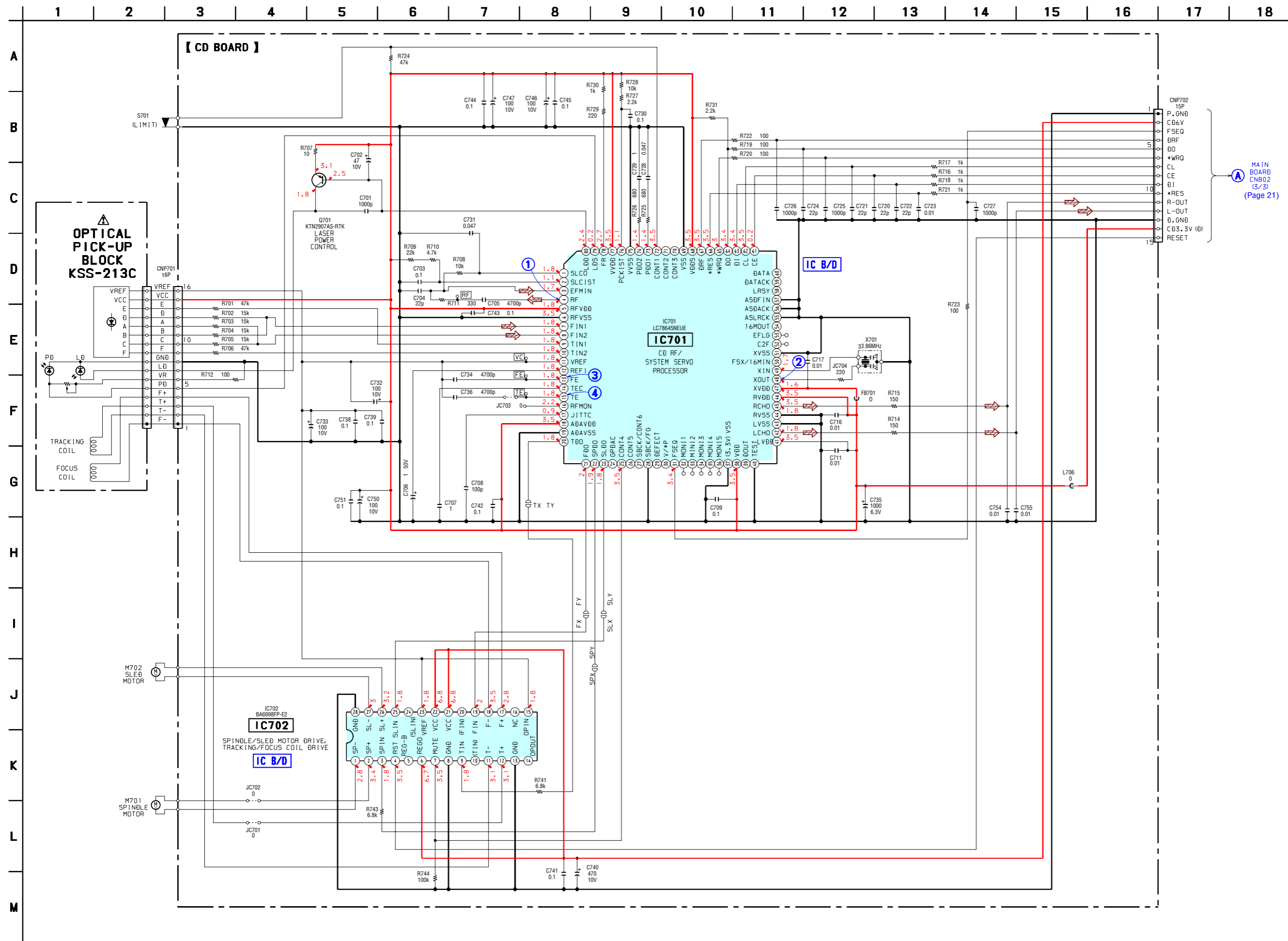
 : Uses unleaded solder.



6-10. SCHEMATIC DIAGRAMS – CONTROL/POWER SECTION –

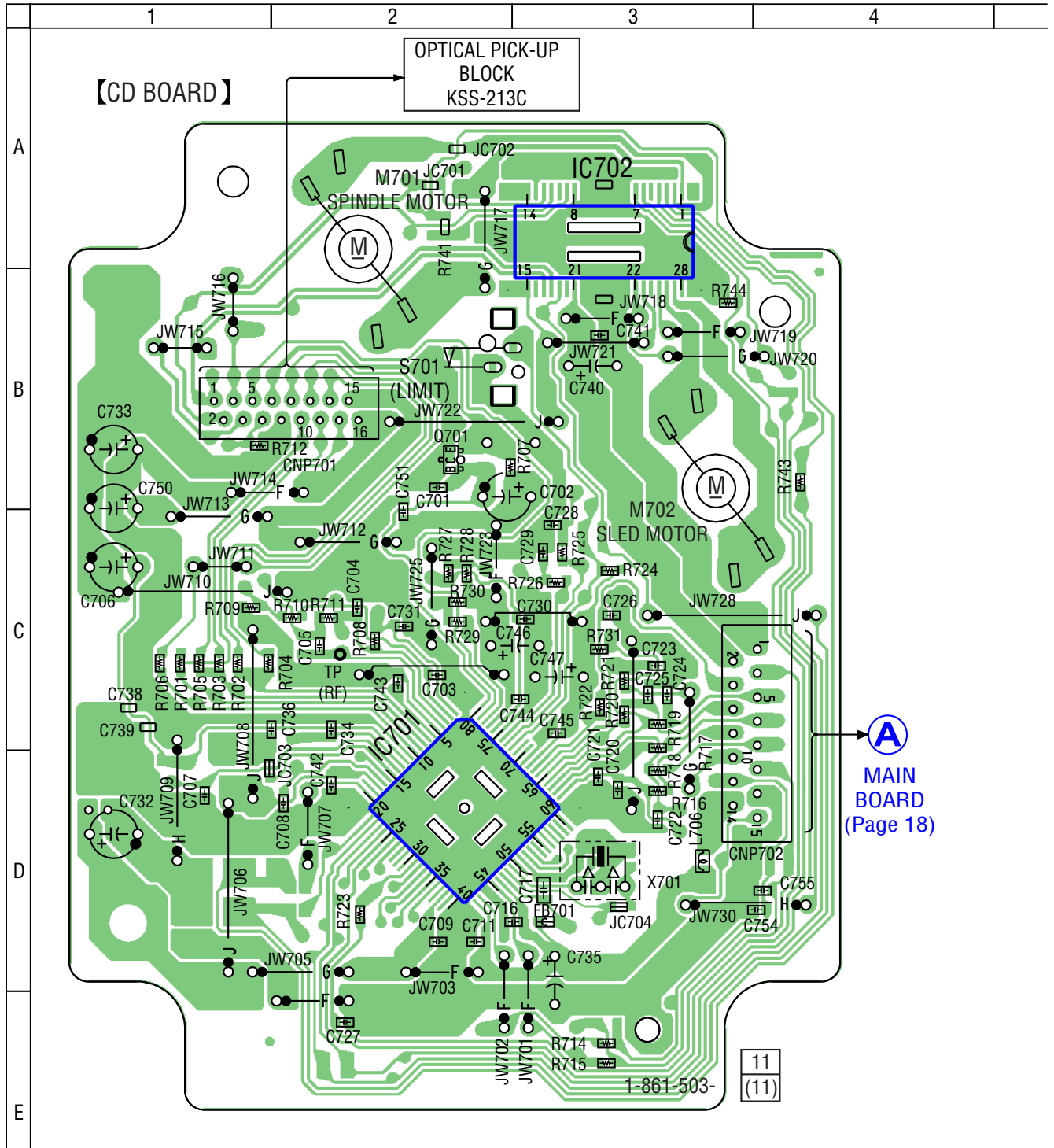


6-11. SCHEMATIC DIAGRAMS – CD SECTION –



6-12. PRINTED WIRING BOARD – CD SECTION –

● REFER TO PAGE 14 FOR CIRCUIT BOARDS LOCATION.  : USES UNLEADED SOLDER.



● Semiconductor Location

Ref. No.	Location
IC701	D-2
IC702	A-3
Q701	B-2

Note:

- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
- △ : internal component.

Note on Schematic Diagram:

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

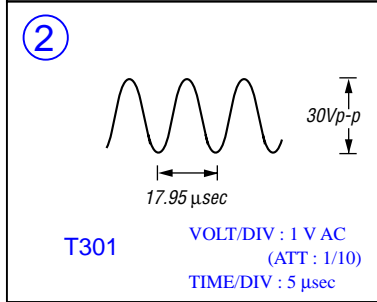
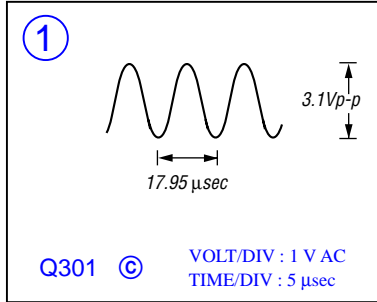
Note:

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

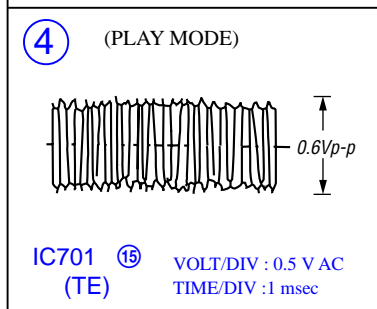
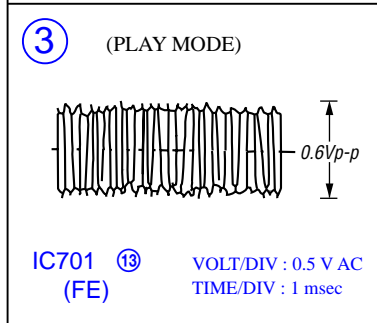
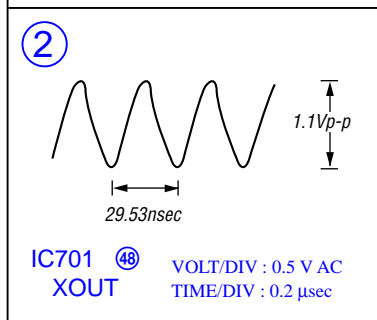
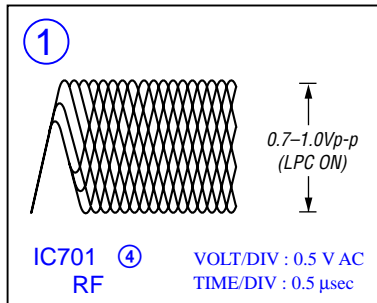
- : B+ Line.
- : adjustment for repair.
- Power voltage is dc 9 V and fed with regulated dc power supply from battery terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (RADIO SECTION),
TAPE PLAY (TAPE SECTION)
- () : AM (RADIO SECTION),
REC (TAPE SECTION)
- 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
 - : PB
 - : REC
 - : CD
- Abbreviation
CET : East European & Russian

• Waveforms

– CONTROL/POWER SECTION –

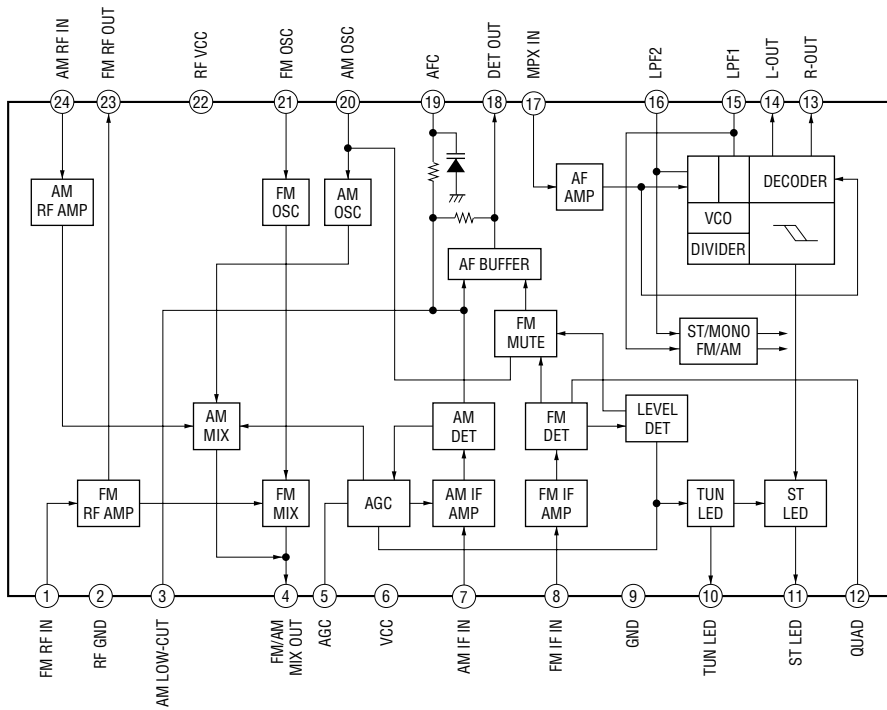


– CD SECTION –



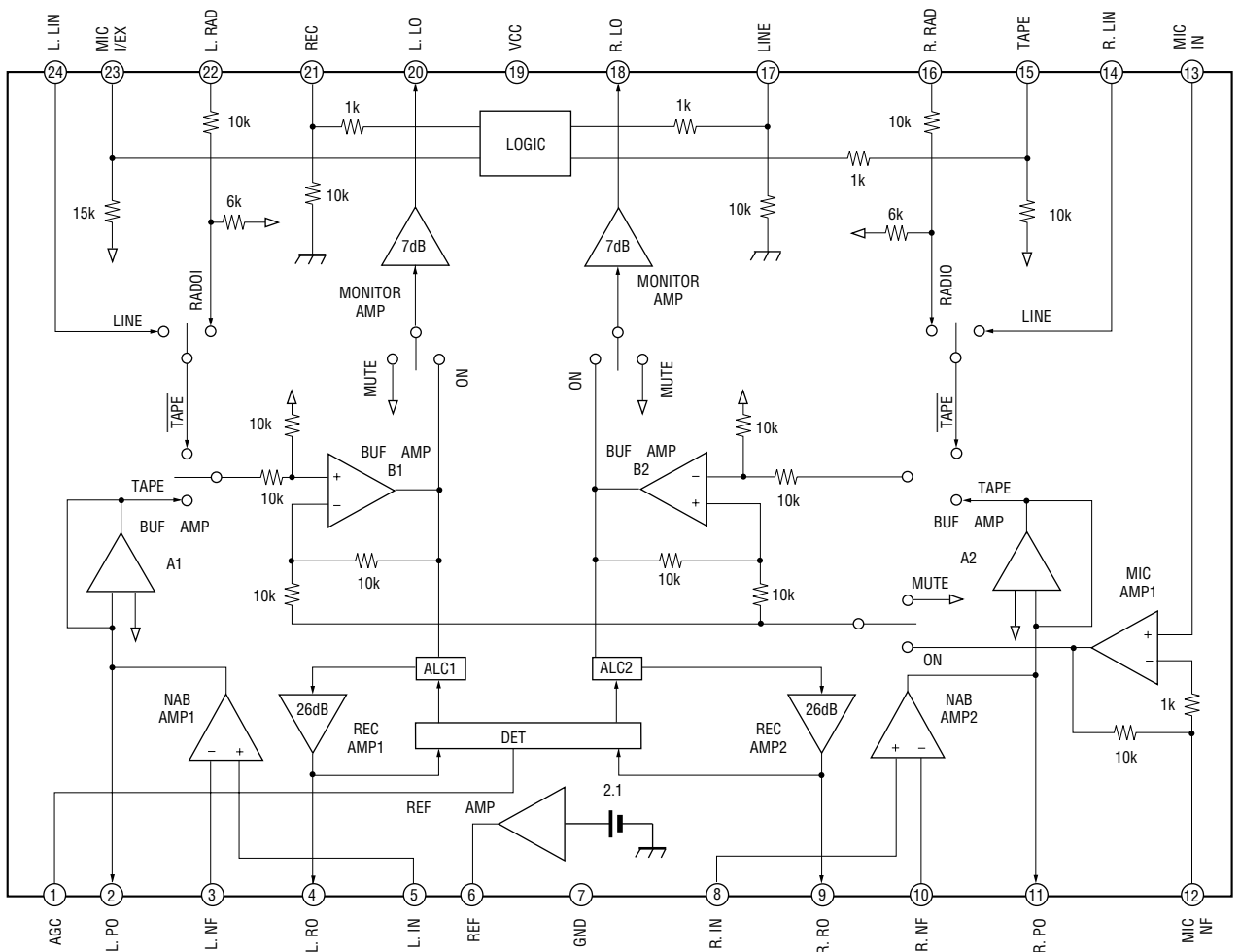
• IC BLOCK DIAGRAMS –MAIN SECTION–

IC1 TA2111N



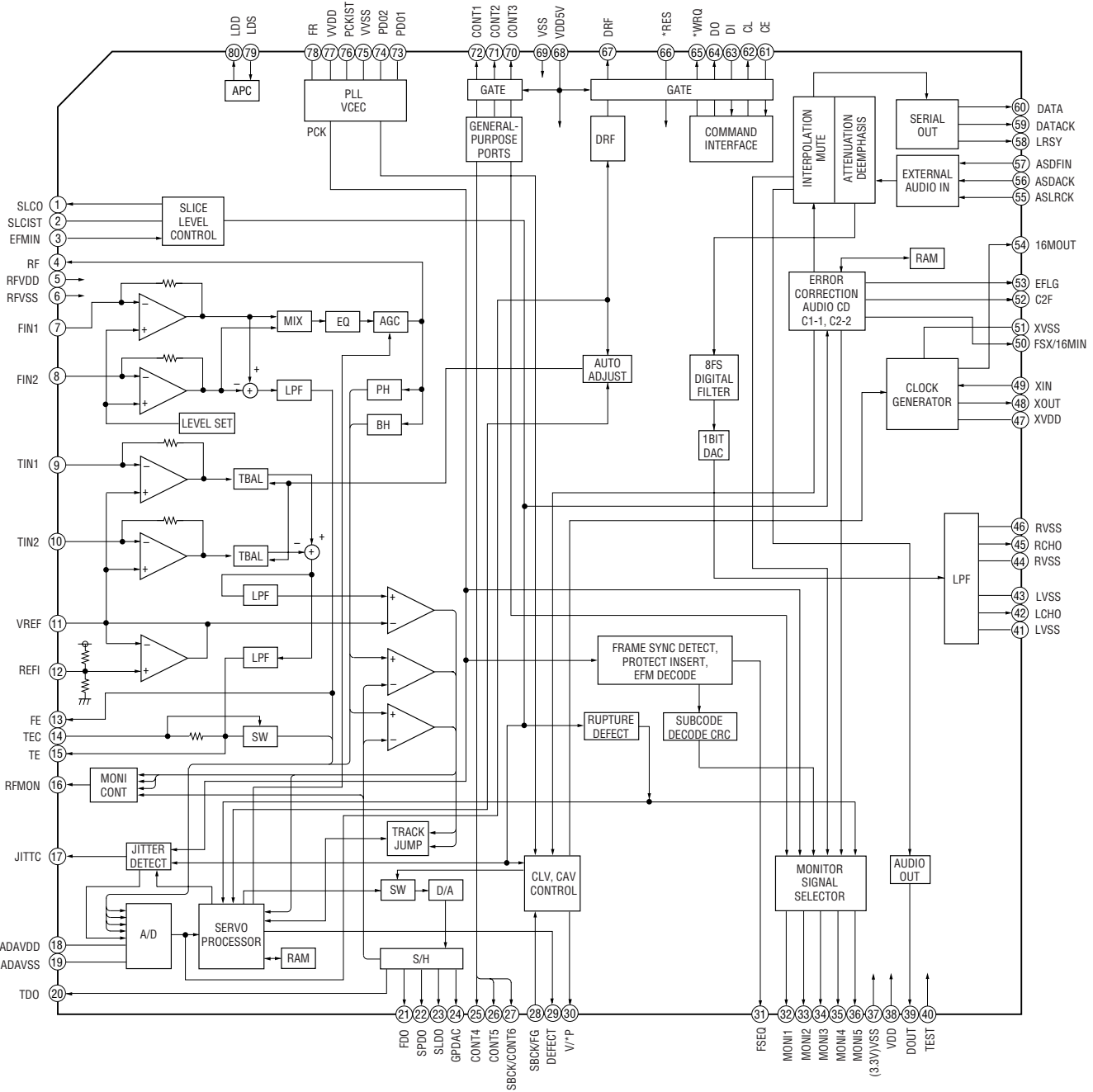
• IC BLOCK DIAGRAMS –CONTROL/POWER SECTION–

IC301 TA2068N

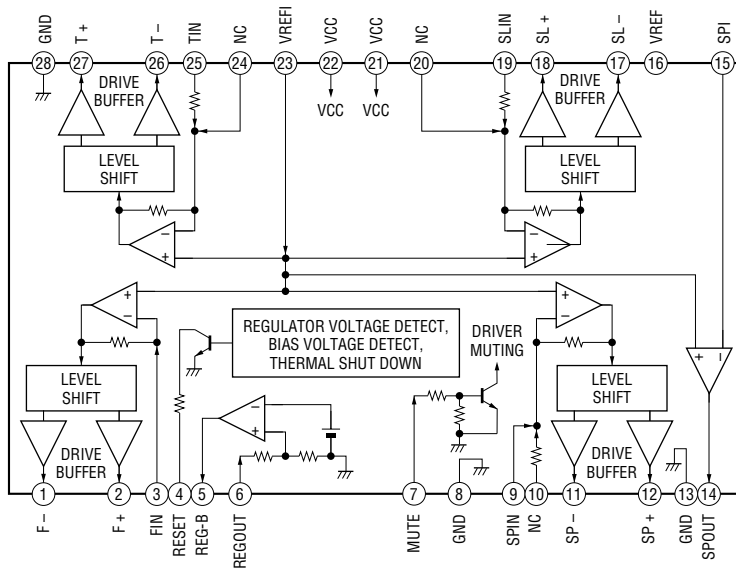


• IC BLOCK DIAGRAMS –CD SECTION–

IC701 LC78645NE-U-E

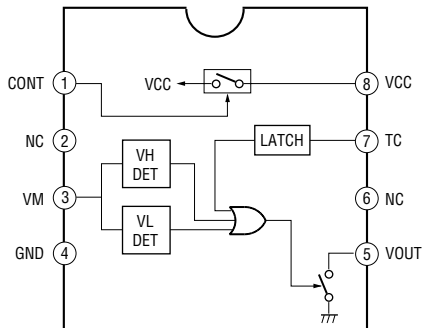


IC702 BA6998FP-E2



• IC BLOCK DIAGRAMS –MAIN SECTION–

IC401 MM1468XD



SECTION 7 EXPLODED VIEWS

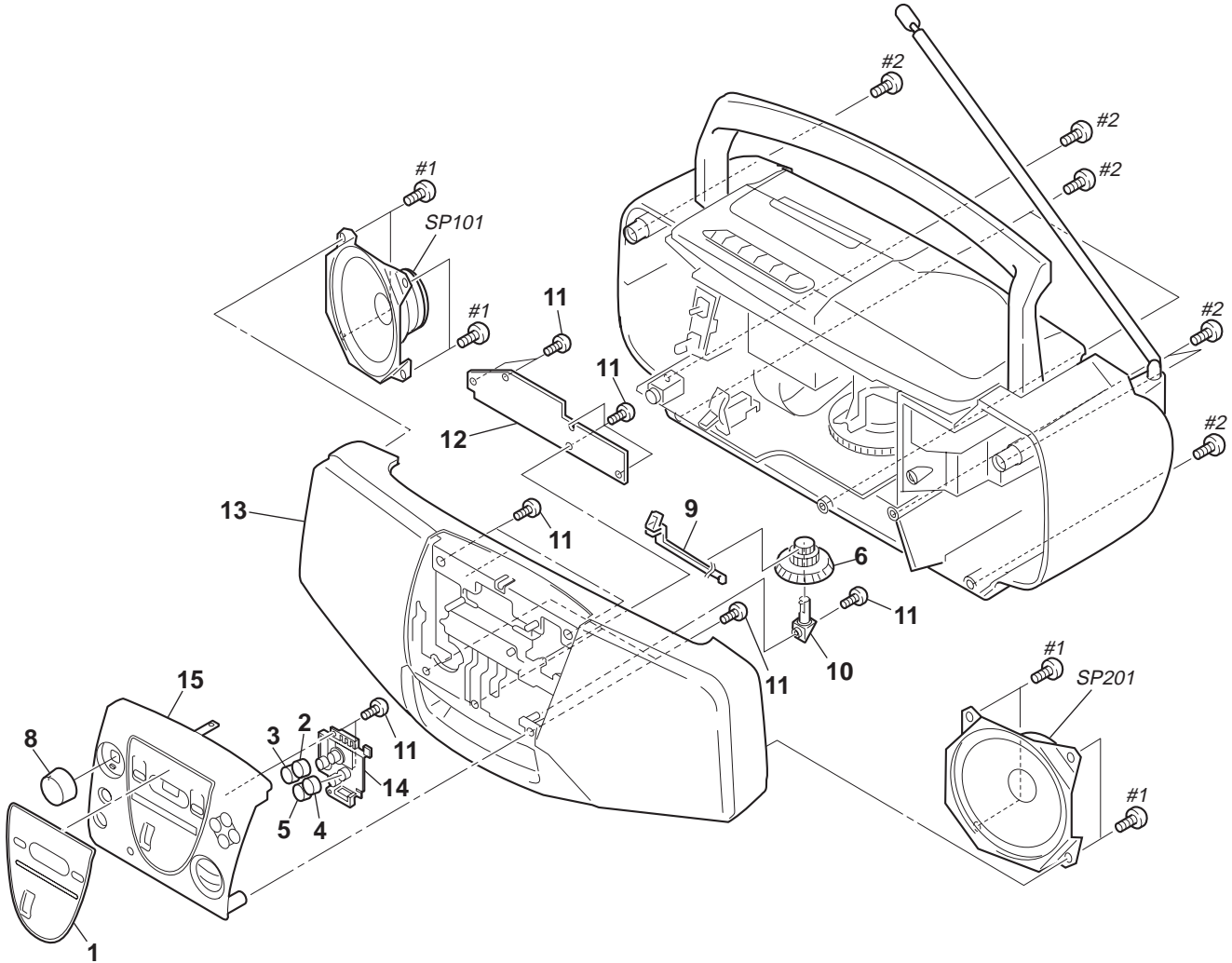
NOTE :

- -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.

- Abbreviation
CET : East European & Russian

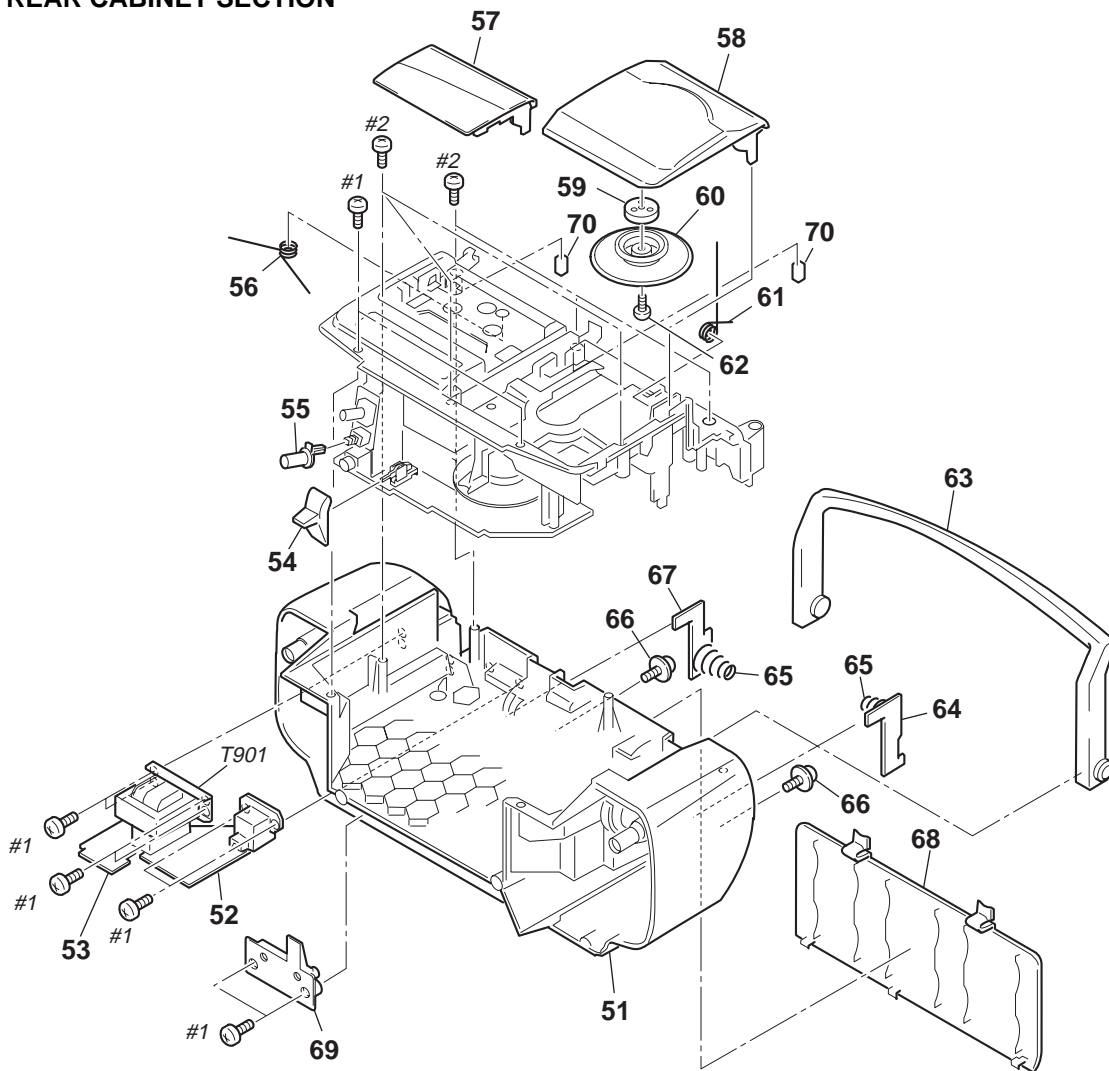
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

7-1. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-259-518-41	WINDOW (LCD)		* 12	A-4542-902-A	CONTROL BOARD, COMPLETE	
2	3-259-520-01	BUTTON (GD/P) (▶▶)		13	X-3384-200-1	CABINET (FRONT) SUB ASSY	
3	3-259-912-01	BUTTON (CD/R) (◀◀)		14	3-259-913-01	FRAME (BUTTON)	
4	3-259-911-01	BUTTON (CD/F) (▶▶)		15	3-259-517-11	PANEL	
5	3-259-521-01	BUTTON (GD/S) (■)		SP101	1-529-723-11	SPEAKER (10cm) (L-CH)	
6	3-229-954-11	KNOB (TUNE)		SP201	1-529-723-11	SPEAKER (10cm) (R-CH)	
8	3-259-519-01	KNOB (VOL)		#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
9	3-031-551-01	POINTER		#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
10	3-031-558-01	SHAFT (TU)					
11	4-951-620-01	SCREW (2.6X8), +BVTP					

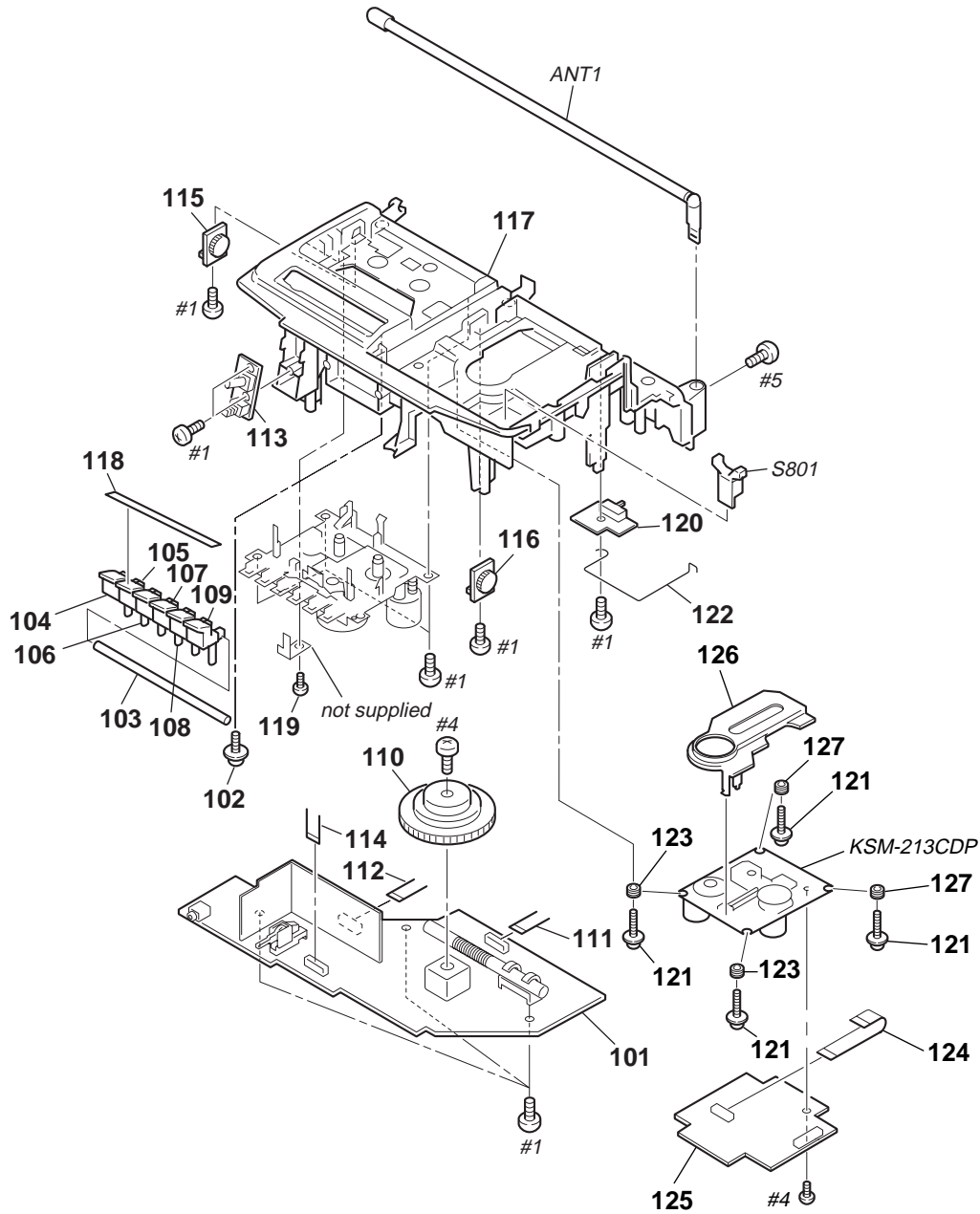
7-2. REAR CABINET SECTION



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

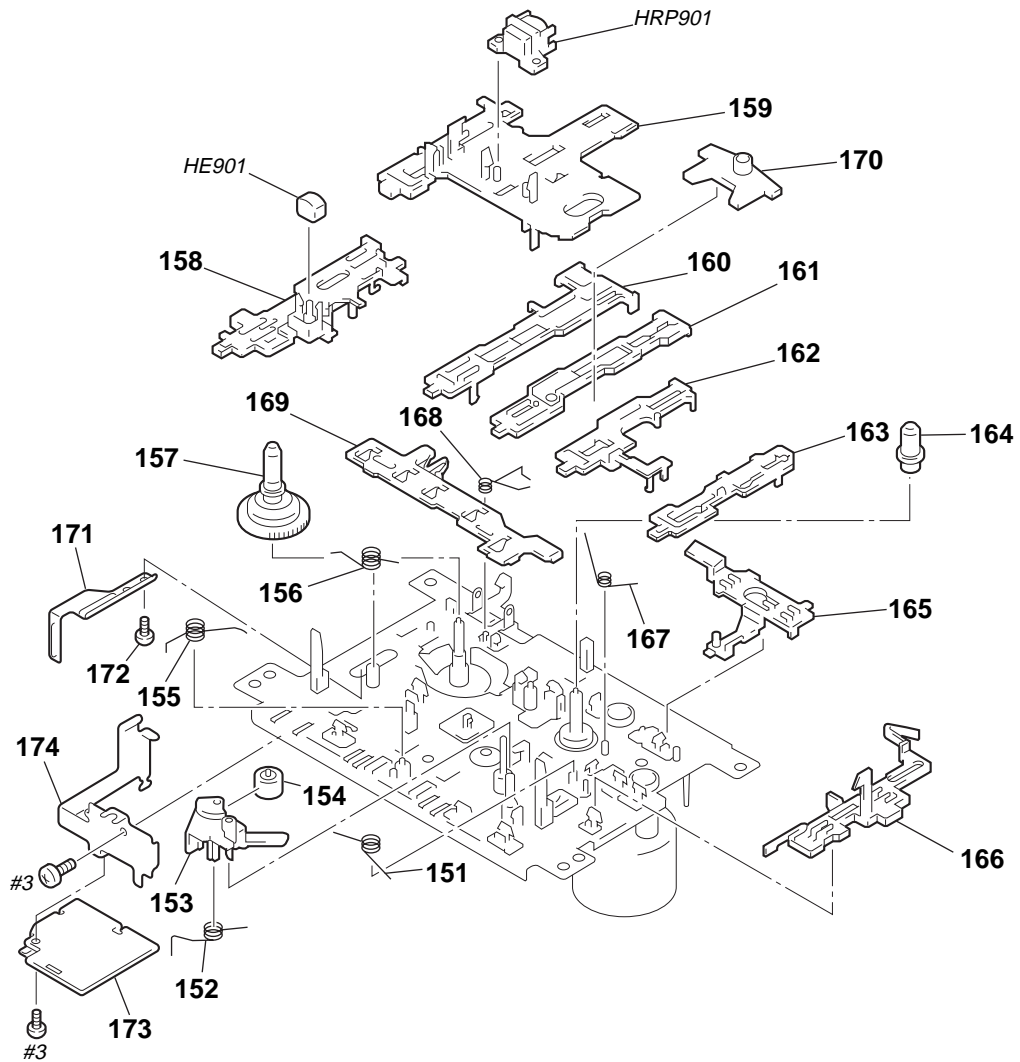
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-229-958-11	CABINET (REAR)		63	3-031-540-81	HANDLE	
* 52	A-4542-911-A	INLET BOARD, COMPLETE		* 64	1-861-373-11	BATT (L) BOARD	
* 53	1-861-376-11	POWER BOARD		65	3-028-154-01	TERMINAL (-), BATT	
54	3-229-947-11	KNOB (FUNCTION)		66	4-960-167-01	SCREW (3X8) (DIA. 10), +WH	
55	3-259-522-11	BUTTON (MB)		* 67	1-861-374-11	BATT (R) BOARD	
56	3-031-561-01	SPRING (CASSETTE)		68	3-036-134-81	LID, BATTERY CASE	
57	3-043-830-02	HOLDER, CASSETTE		69	3-034-633-01	COVER (VOL SEL)	
58	3-031-538-91	LID (CD)		70	3-015-345-21	CUSHION	
59	1-452-899-11	MAGNET		Δ T901	1-435-921-21	TRANSFORMER, POWER	
60	3-019-395-01	PLATE, CHUCKING		#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
61	3-031-562-03	SPRING (CD)		#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
62	4-951-620-11	SCREW (2.6X10), +BVTP					

7-3. UPPER CABINET SECTION



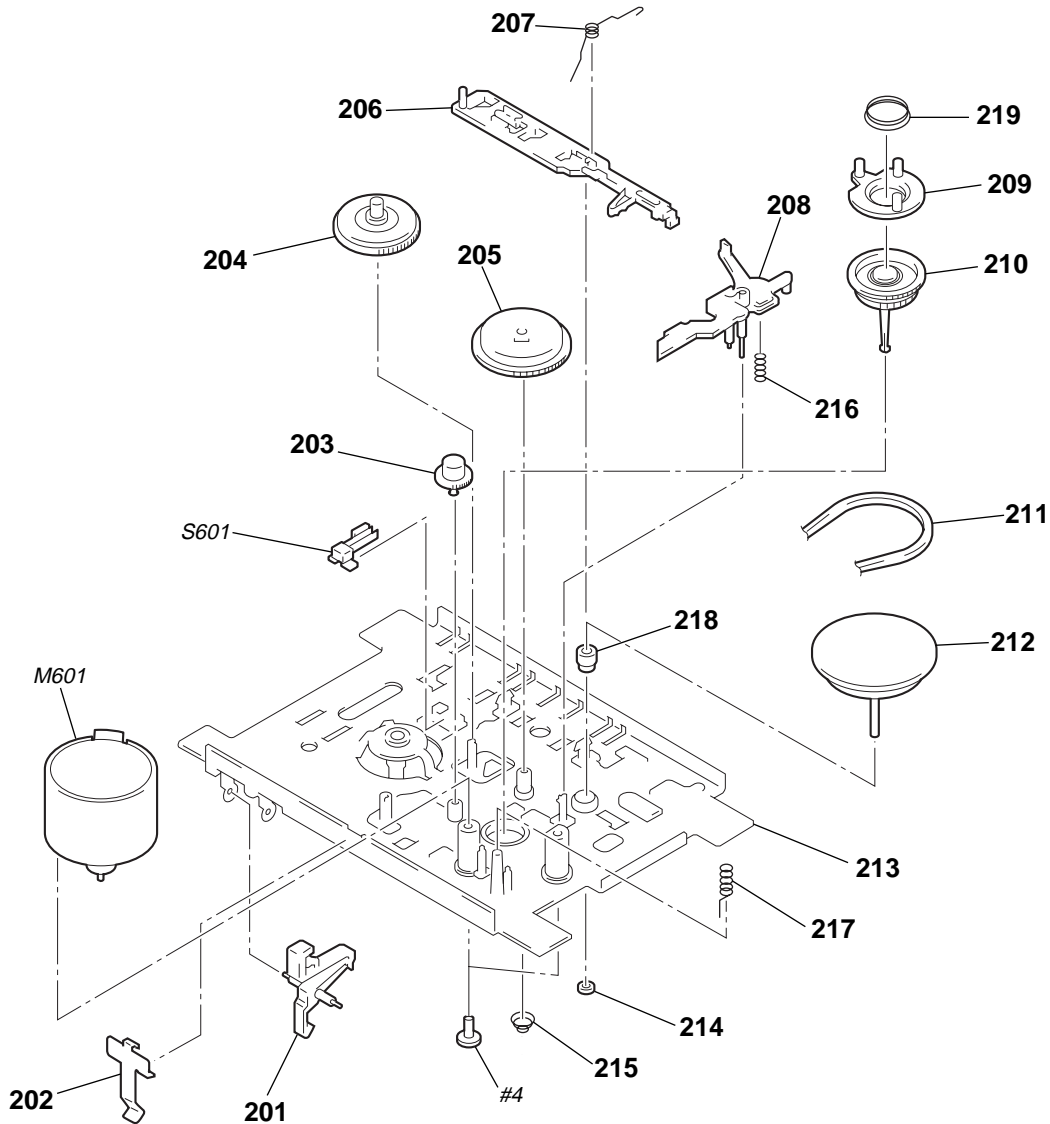
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-4542-898-A	MAIN BOARD, COMPLETE		117	3-229-959-01	CABINET (UPPER)	
102	4-960-167-01	SCREW (3X8) (DIA. 10), +WH		118	3-225-866-01	CUSHION (MD BUTTON)	
103	3-031-560-01	SHAFT (MD)		119	4-951-620-11	SCREW (2.6X10), +BVTP	
104	3-031-541-61	BUTTON (REC)		* 120	1-861-375-11	FM SW BOARD	
105	3-031-542-62	BUTTON (PLAY)					
106	3-031-543-61	BUTTON (REW)		121	3-921-725-11	SCREW (2.6X10), +PWH	
107	3-031-544-61	BUTTON (FF)		122	3-226-992-01	TERMINAL (ANTENNA)	
108	3-031-545-62	BUTTON (STOP)		123	3-931-379-21	RUBBER, VIBRATION PROOF	
109	3-031-546-61	BUTTON (PAUSE)		124	1-757-689-11	CABLE, FLEXIBLE FLAT (16 CORE) (105mm)	
110	3-031-559-01	GEAR (PVC 2 BAND)		* 125	A-4542-958-A	CD BOARD, COMPLETE	
* 111	1-757-584-11	CABLE, FLEXIBLE FLAT (15 CORE)		126	3-923-736-01	COVER, CD	
* 112	1-757-688-11	CABLE, FLEXIBLE FLAT (10 CORE)		127	3-931-379-31	RUBBER, VIBRATION PROOF	
* 113	A-4542-903-A	VOLUME BOARD, COMPLETE		ANT1	1-501-883-21	ANTENNA, TELESCOPIC	
* 114	1-757-583-11	CABLE, FLEXIBLE FLAT (16 CORE)		S801	1-692-960-11	SWITCH, PUSH (1 KEY) (CD DOOR)	
115	3-922-112-21	DAMPER		#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
116	3-922-112-41	DAMPER		#4	7-621-775-20	SCREW +B 2.6X5	
				#5	7-682-548-04	SCREW +B 3X8	

7-4. MECHANISM DECK SECTION (1)
(MF-V5-117)



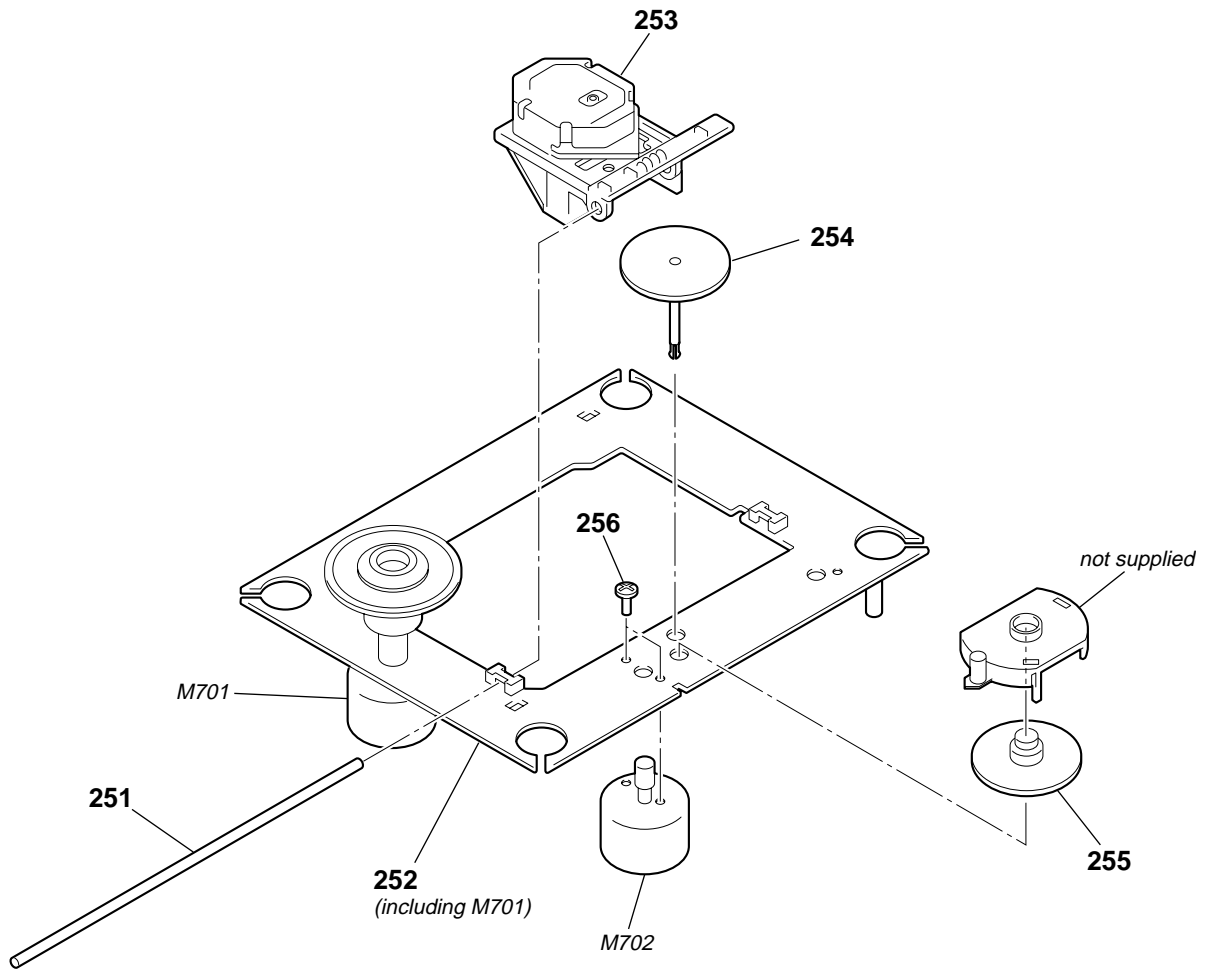
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-933-010-01	SPRING (S/P), TORSION		* 165	3-933-021-01	SLIDER (FRP)	
152	3-933-025-01	SPRING (P), TORSION		* 166	3-933-006-01	SLIDER (EJECT)	
153	3-040-857-01	LEVER (P)		167	3-934-833-01	SPRING (FRP)	
154	3-933-024-01	ROLLER, PINCH		168	3-022-794-02	SPRING (BT)	
155	3-933-019-01	SPRING (F/R), TORSION		169	3-933-007-01	PLATE, LOCK	
156	3-933-028-01	SPRING (FWD), TORSION		* 170	3-012-114-01	LEVER (FR)	
157	3-933-016-01	GEAR (S REEL)		171	3-222-727-01	LEVER (REC)	
158	3-008-590-01	SLIDER (REC)		172	4-951-620-01	SCREW (2.6X8), +BVTP	
159	3-008-592-01	BASE (H), HEAD		* 173	A-4542-959-A	PRE BOARD, COMPLETE	
* 160	3-008-588-01	SLIDER (REW)		174	3-222-726-01	CHASSIS (TC)	
* 161	3-008-589-13	SLIDER (FF)		HE901	1-543-876-11	HEAD (ERASE)	
* 162	3-008-587-01	SLIDER (STOP)		HRP901	1-500-691-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
* 163	3-008-591-01	SLIDER (PAUSE)		#3	7-685-853-04	SCREW +BVTT 2X6	
164	3-933-004-01	CLAW, REEL					

7-5. MECHANISM DECK SECTION (2)
(MF-V5-117)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-933-029-01	LEVER, ERASING PREVENTION		213	3-932-993-01	CHASSIS, OUTSERT	
202	3-933-182-01	SPRING, CASSETTE		214	3-343-358-01	RING, RETAINING	
203	3-932-995-01	GEAR (MID)		215	3-933-005-01	SPRING (CAM), COMPRESSION	
204	X-3371-667-1	CLUTCH ASSY		216	3-939-383-02	SPRING, COMPRESSION	
205	3-932-997-01	GEAR (CAM)		217	3-937-760-01	SPRING (GROUND), COMPRESSION	
* 206	3-932-999-01	SLIDER (SW)		218	3-934-336-01	BEARING	
207	3-932-998-01	SPRING (GROUND), TORSION		219	3-009-650-02	SPRING (K), COMPRESSION	
208	3-009-648-01	LEVER (S.OFF)		M601	A-3320-446-A	MOTOR ASSY (CAPSTAN/REEL)	(including PULLEY)
209	3-936-438-01	LEVER (K)		S601	1-762-679-11	SWITCH, LEAF (MD POWER)	
210	X-3373-572-1	REEL ASSY (N), T		#4	7-621-775-20	SCREW +B 2.6X5	
211	3-933-020-11	BELT					
212	X-3377-877-3	FLYWHEEL ASSY					

7-6. CD BLOCK SECTION (KSM-213CDP)



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
251	2-626-908-01	SHAFT, SLED		255	2-627-003-01	GEAR B (BP)	
252	X-2162-709-1	CHASSIS ASSY (CDP) , MOTOR (SPINDLE) (including M701)		256	3-713-786-51	SCREW +P 2X3	
\triangle 253	8-848-483-05	OPTICAL PICK-UP KSS-213C		M702	X-2625-769-1	GEAR ASSY (MB), MOTOR (SLED) (including GEAR)	
254	2-624-188-02	GEAR (A)					

**SECTION 8
ELECTRICAL PARTS LIST**

BATT (L) **BATT (R)**
CD

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

- Items marked “**” are not stocked since they are seldom required for routine service.
 Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
 In each case, u: μ , for example:
 uA. . . : μ A. . . uPA. . . : μ PA. . .
 uPB. . . : μ PB. . . uPC. . . : μ PC. . . uPD. . . : μ PD. . .
- CAPACITORS
 uF: μ F
- COILS
 uH: μ H
- Abbreviation
 CET : East European & 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
*	1-861-373-11	BATT (L) BOARD *****	
	3-028-154-01	TERMINAL (-), BATT < CONNECTOR >	
* CNP908	1-815-550-11	PIN, CONNECTOR (PWB) 2P *****	
*	1-861-374-11	BATT (R) BOARD *****	
	3-028-154-01	TERMINAL (-), BATT *****	
	A-4542-958-A	CD BOARD, COMPLETE ***** < CAPACITOR >	
C701	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C702	1-126-947-11	ELECT 47uF 20%	10V
C703	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C704	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C705	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C706	1-126-960-11	ELECT 1uF 20%	50V
C707	1-115-156-11	CERAMIC CHIP 1uF	10V
C708	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C709	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C711	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C716	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C717	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C720	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C721	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C722	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C723	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C724	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C725	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C726	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C727	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C728	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C729	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
C730	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C731	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C732	1-104-665-11	ELECT 100uF 20%	10V
C733	1-104-665-11	ELECT 100uF 20%	10V

Ref. No.	Part No.	Description	Remark
C734	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C735	1-126-916-11	ELECT 1000uF 20%	6.3V
C736	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C738	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C739	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C740	1-126-935-11	ELECT 470uF 20%	10V
C741	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C742	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C743	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C744	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C745	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C746	1-104-665-11	ELECT 100uF 20%	10V
C747	1-104-665-11	ELECT 100uF 20%	10V
C750	1-104-665-11	ELECT 100uF 20%	10V
C751	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C754	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C755	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
		< CONNECTOR >	
CNP701	1-770-168-11	CONNECTOR, FFC/FPC 16P	
CNP702	1-784-737-11	CONNECTOR, FFC 15P	
		< INDUCTOR >	
FB701	1-469-701-21	INDUCTOR 0uH	
		< IC >	
IC701	6-701-617-01	IC LC78645NE-U-E	
IC702	6-701-787-11	IC BA5826FP-E2	
		< JUMPER RESISTOR >	
JC701	1-216-864-11	METAL CHIP 0 5%	1/10W
JC702	1-216-864-11	METAL CHIP 0 5%	1/10W
JC703	1-216-864-11	METAL CHIP 0 5%	1/10W
JC704	1-216-813-11	METAL CHIP 220 5%	1/10W
		< COIL >	
L706	1-216-864-11	METAL CHIP 0 5%	1/10W
		< TRANSISTOR >	
Q701	8-729-054-57	TRANSISTOR KTN2907AS-RTK	

CD
CONTROL
FM SW
INLET

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R701	1-216-841-11	METAL CHIP 47K 5%	1/10W
R702	1-216-835-11	METAL CHIP 15K 5%	1/10W
R703	1-216-835-11	METAL CHIP 15K 5%	1/10W
R704	1-216-835-11	METAL CHIP 15K 5%	1/10W
R705	1-216-835-11	METAL CHIP 15K 5%	1/10W
R706	1-216-841-11	METAL CHIP 47K 5%	1/10W
R707	1-216-797-11	METAL CHIP 10 5%	1/10W
R708	1-216-833-11	METAL CHIP 10K 5%	1/10W
R709	1-216-837-11	METAL CHIP 22K 5%	1/10W
R710	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R711	1-216-815-11	METAL CHIP 330 5%	1/10W
R712	1-216-809-11	METAL CHIP 100 5%	1/10W
R714	1-216-811-11	METAL CHIP 150 5%	1/10W
R715	1-216-811-11	METAL CHIP 150 5%	1/10W
R716	1-216-821-11	METAL CHIP 1K 5%	1/10W
R717	1-216-821-11	METAL CHIP 1K 5%	1/10W
R718	1-216-821-11	METAL CHIP 1K 5%	1/10W
R719	1-216-809-11	METAL CHIP 100 5%	1/10W
R720	1-216-809-11	METAL CHIP 100 5%	1/10W
R721	1-216-821-11	METAL CHIP 1K 5%	1/10W
R722	1-216-809-11	METAL CHIP 100 5%	1/10W
R723	1-216-809-11	METAL CHIP 100 5%	1/10W
R724	1-216-841-11	METAL CHIP 47K 5%	1/10W
R725	1-216-819-11	METAL CHIP 680 5%	1/10W
R726	1-216-819-11	METAL CHIP 680 5%	1/10W
R727	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R728	1-216-833-11	METAL CHIP 10K 5%	1/10W
R729	1-216-813-11	METAL CHIP 220 5%	1/10W
R730	1-216-821-11	METAL CHIP 1K 5%	1/10W
R731	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R741	1-218-867-11	METAL CHIP 6.8K 5%	1/10W
R743	1-218-867-11	METAL CHIP 6.8K 5%	1/10W
R744	1-216-845-11	METAL CHIP 100K 5%	1/10W
< SWITCH >			
S701	1-571-936-11	SWITCH, LEAF (LIMIT)	
< VIBRATOR >			
X701	1-795-158-21	VIBRATOR, CERAMIC (33.86MHZ)	

*	A-4542-902-A	CONTROL BOARD, COMPLETE	

< CONNECTOR >			
* CN401	1-784-738-11	CONNECTOR, FFC 16P	
< LIQUID CRYSTAL DISPLAY >			
LCD401	1-804-219-11	DISPLAY PANEL, LIQUID CRYSTAL	
< RESISTOR >			
R421	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R422	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R423	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R424	1-216-829-11	METAL CHIP 4.7K 5%	1/10W

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S401	1-771-550-31	SWITCH, TACTILE (□)	
S402	1-762-875-21	SWITCH, KEYBOARD (▷▷)	
S403	1-762-875-21	SWITCH, KEYBOARD (◁◁)	
S404	1-771-550-31	SWITCH, TACTILE (▷□□)	
S405	1-786-050-21	SWITCH, KEY BOARD (PLAY MODE)	
S406	1-762-875-21	SWITCH, KEYBOARD (ENTER)	

*	1-861-375-11	FM SW BOARD	

< CABLE HOLDER >			
* KH1	1-565-385-11	HOLDER, CABLE 4P	
< SWITCH >			
S1	1-786-114-11	SWITCH, SLIDE (ST/MO)	

*	A-4542-911-A	INLET BOARD, COMPLETE	

	1-533-233-31	FUSE HOLDER	
< CAPACITOR >			
C901	1-162-995-11	CERAMIC CHIP 0.022uF	50V
C903	1-162-995-11	CERAMIC CHIP 0.022uF	50V
C905	1-162-995-11	CERAMIC CHIP 0.022uF	50V
< JACK >			
△CNJ901	1-526-838-11	INLET, AC 2P (∼AC IN)	
< CONNECTOR >			
* CNP902	1-815-552-11	PIN, CONNECTOR (PWB) 4P	
* CNP907	1-815-444-11	PIN, CONNECTOR (PWB) 3P	
< DIODE >			
D901	8-719-063-79	DIODE 1N4002B	
D902	8-719-063-79	DIODE 1N4002B	
D903	8-719-063-79	DIODE 1N4002B	
D904	8-719-063-79	DIODE 1N4002B	
< FUSE >			
△F901	1-533-469-12	FUSE (T2.5AL/250V)	
< CABLE HOLDER >			
* KH901	1-573-287-11	HOLDER, CABLE 2P	
< RESISTOR >			
R901	1-216-825-11	METAL CHIP 2.2K 5%	1/10W

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

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4542-898-A	MAIN BOARD, COMPLETE *****		C351	1-126-947-11	ELECT 47uF 20%	35V
	3-031-559-01	GEAR (PVC 2 BAND)		C401	1-104-658-91	ELECT 100uF 20%	10V
	7-621-775-20	SCREW +B 2.6X5		C402	1-126-964-11	ELECT 10uF 20%	50V
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S		C801	1-162-974-11	CERAMIC CHIP 0.01uF	50V
		< CAPACITOR >		C802	1-126-947-11	ELECT 47uF 20%	35V
C1	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	C805	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C2	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V	C810	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C3	1-162-974-11	CERAMIC CHIP 0.01uF	50V	C811	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C4	1-104-662-91	ELECT 22uF 20%	25V	C841	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C5	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V	C842	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C6	1-162-910-11	CERAMIC CHIP 5PF 0.25PF	50V	C843	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C7	1-162-195-31	CERAMIC 4.7PF 10%	50V	C844	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C8	1-126-963-11	ELECT 4.7uF 20%	50V	C851	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C9	1-126-963-11	ELECT 4.7uF 20%	50V			< FILTER >	
C10	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V	CF1	1-781-962-11	FILTER, CERAMIC	
C11	1-162-199-31	CERAMIC 10PF 5%	50V	CF2	1-795-277-11	CERAMIC FILTER	
C12	1-162-199-31	CERAMIC 10PF 5%	50V			< CONNECTOR >	
C13	1-126-959-11	ELECT 0.47uF 20%	50V	CN801	1-784-777-11	CONNECTOR, FFC 16P	
C14	1-126-963-11	ELECT 4.7uF 20%	50V	CN802	1-784-737-11	CONNECTOR, FFC 15P	
C15	1-164-156-11	CERAMIC CHIP 0.1uF	25V	CNP303	1-815-445-11	PIN, CONNECTOR (PWB) 4P	
C17	1-164-156-11	CERAMIC CHIP 0.1uF	25V	* CNP304	1-815-552-11	PIN, CONNECTOR (PWB) 4P	
C18	1-126-960-11	ELECT 1uF 20%	50V	* CNP305	1-784-732-11	CONNECTOR, FFC 10P	
C19	1-162-974-11	CERAMIC CHIP 0.01uF	50V			< VARIABLE CAPACITOR >	
C20	1-162-974-11	CERAMIC CHIP 0.01uF	50V	CV1	1-141-637-11	CAP, VAR (TUNING)	
C21	1-162-195-31	CERAMIC 4.7PF 10%	50V			< DIODE >	
C22	1-115-156-11	CERAMIC CHIP 1uF	10V	D1	8-719-988-61	DIODE 1SS355TE-17	
C23	1-126-964-11	ELECT 10uF 20%	50V	D2	8-719-988-61	DIODE 1SS355TE-17	
C24	1-162-974-11	CERAMIC CHIP 0.01uF	50V	D301	8-719-988-61	DIODE 1SS355TE-17	
C25	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	D302	8-719-988-61	DIODE 1SS355TE-17	
C27	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V	D303	8-719-988-61	DIODE 1SS355TE-17	
C30	1-162-907-11	CERAMIC CHIP 2PF 0.25PF	50V	D304	8-719-988-61	DIODE 1SS355TE-17	
C32	1-162-195-31	CERAMIC 4.7PF 10%	50V	D306	8-719-988-61	DIODE 1SS355TE-17	
C152	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	D308	8-719-082-09	DIODE KDZ3.9V-RTK	
C153	1-126-947-11	ELECT 47uF 20%	35V	D309	8-719-988-61	DIODE 1SS355TE-17	
C154	1-126-925-91	ELECT 470uF 20%	10V	D310	8-719-059-97	DIODE L-34HD	
C155	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D311	8-719-084-00	DIODE KDZ7.5V-RTK	
C156	1-126-947-11	ELECT 47uF 20%	35V	D314	8-719-988-61	DIODE 1SS355TE-17	
C171	1-126-964-11	ELECT 10uF 20%	50V			< IC >	
C252	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	IC1	8-759-829-93	IC TA2111N	
C253	1-126-947-11	ELECT 47uF 20%	35V	IC304	8-759-426-51	IC BA5417	
C254	1-126-925-91	ELECT 470uF 20%	10V	IC401	8-759-646-86	IC MM1468XD	
C255	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC801	8-759-696-92	IC uPD789316GK-503-9ET	
C256	1-126-947-11	ELECT 47uF 20%	35V			< IC LINK >	
C271	1-126-964-11	ELECT 10uF 20%	50V	△ ICP301	1-533-674-11	IC LINK (0.5A/50V)	
C314	1-126-947-11	ELECT 47uF 20%	35V			< JACK >	
C316	1-126-960-11	ELECT 1uF 20%	50V	J301	1-815-325-11	JACK (♂)	
C317	1-104-662-91	ELECT 22uF 20%	25V				
C320	1-162-995-11	CERAMIC CHIP 0.022uF	50V				
C341	1-126-936-11	ELECT 3300uF 20%	16V				
C343	1-162-974-11	CERAMIC CHIP 0.01uF	50V				
C345	1-162-974-11	CERAMIC CHIP 0.01uF	50V				
C346	1-162-974-11	CERAMIC CHIP 0.01uF	50V				
C347	1-126-923-91	ELECT 220uF 20%	10V				
C348	1-104-658-91	ELECT 100uF 20%	10V				
C349	1-162-974-11	CERAMIC CHIP 0.01uF	50V				

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MAIN

PRE

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< SHORT >		R254	1-216-025-11	RES-CHIP 100 5%	1/10W
JC1	1-216-864-11	SHORT CHIP 0		R314	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
JC2	1-216-864-11	SHORT CHIP 0		R315	1-216-821-11	METAL CHIP 1K 5%	1/10W
JC4	1-216-864-11	SHORT CHIP 0		R319	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
JC5	1-216-864-11	SHORT CHIP 0		R340	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
JC6	1-216-864-11	SHORT CHIP 0		R341	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
JC7	1-216-864-11	SHORT CHIP 0		R342	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
JC302	1-216-864-11	SHORT CHIP 0		R344	1-216-813-11	METAL CHIP 220 5%	1/10W
JC303	1-216-864-11	SHORT CHIP 0		R345	1-216-821-11	METAL CHIP 1K 5%	1/10W
JC305	1-216-864-11	SHORT CHIP 0		R346	1-216-821-11	METAL CHIP 1K 5%	1/10W
JC306	1-216-864-11	SHORT CHIP 0		R348	1-216-821-11	METAL CHIP 1K 5%	1/10W
JC310	1-216-864-11	SHORT CHIP 0		R349	1-216-815-11	METAL CHIP 330 5%	1/10W
JC401	1-216-864-11	SHORT CHIP 0		R351	1-216-819-11	METAL CHIP 680 5%	1/10W
		< CABLE HOLDER >		R352	1-216-819-11	METAL CHIP 680 5%	1/10W
* KH2	1-565-385-11	HOLDER, CABLE 4P		R353	1-216-819-11	METAL CHIP 680 5%	1/10W
* KH306	1-565-386-11	HOLDER, CABLE 5P		R354	1-216-819-11	METAL CHIP 680 5%	1/10W
* KH801	1-573-287-11	HOLDER, CABLE 2P		R360	1-216-845-11	METAL CHIP 100K 5%	1/10W
* KH902	1-565-385-11	HOLDER, CABLE 4P		R386	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
		< COIL >		R401	1-216-845-11	METAL CHIP 100K 5%	1/10W
L1	1-406-998-11	COIL, AIR-CORE (FM TRACKING)		R402	1-216-833-11	METAL CHIP 10K 5%	1/10W
L2	1-411-949-11	COIL, AIR-CORE (FM FREQUENCY COVEREGE)		R403	1-216-837-11	METAL CHIP 22K 5%	1/10W
L3	1-754-175-11	ANTENNA, FERRITE-ROD (MW) (AM TRACKING)		R404	1-216-821-11	METAL CHIP 1K 5%	1/10W
L4	1-406-040-00	COIL (OSC) (AM FREQUENCY COVEREGE)		R415	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
		< TRANSISTOR >		R416	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
Q1	8-729-054-02	TRANSISTOR KRA302-RTK		R417	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q101	8-729-054-24	TRANSISTOR KRC410-RTK		R418	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q201	8-729-054-24	TRANSISTOR KRC410-RTK		R801	1-216-801-11	METAL CHIP 22 5%	1/10W
Q309	8-729-021-82	TRANSISTOR 2SD2396K		R805	1-216-849-11	METAL CHIP 220K 5%	1/10W
Q310	8-729-036-86	TRANSISTOR KTC3203Y-AT		R806	1-216-813-11	METAL CHIP 220 5%	1/10W
Q311	8-729-055-41	TRANSISTOR KTB1241Y-AT		R809	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q312	8-729-054-19	TRANSISTOR KRC405-RTK		R810	1-216-809-11	METAL CHIP 100 5%	1/10W
Q401	8-729-037-03	TRANSISTOR KTA1266GR-AT		R811	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q402	8-729-054-16	TRANSISTOR KRC402-RTK		R812	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q405	8-729-037-03	TRANSISTOR KTA1266GR-AT		R813	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q409	8-729-036-86	TRANSISTOR KTC3203Y-AT		R814	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q801	8-729-054-18	TRANSISTOR KRC404-RTK		R815	1-216-809-11	METAL CHIP 100 5%	1/10W
		< RESISTOR >		R816	1-216-809-11	METAL CHIP 100 5%	1/10W
R1	1-216-813-11	METAL CHIP 220 5%	1/10W	R818	1-216-809-11	METAL CHIP 100 5%	1/10W
R2	1-216-815-11	METAL CHIP 330 5%	1/10W	R819	1-216-809-11	METAL CHIP 100 5%	1/10W
R3	1-216-827-11	METAL CHIP 3.3K 5%	1/10W	R851	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R4	1-216-827-11	METAL CHIP 3.3K 5%	1/10W				
R5	1-216-809-11	METAL CHIP 100 5%	1/10W				
R8	1-216-837-11	METAL CHIP 22K 5%	1/10W				
R9	1-216-837-11	METAL CHIP 22K 5%	1/10W				
R11	1-216-833-11	METAL CHIP 10K 5%	1/10W				
R20	1-216-821-11	METAL CHIP 1K 5%	1/10W				
R30	1-216-813-11	METAL CHIP 220 5%	1/10W				
R151	1-216-829-11	METAL CHIP 4.7K 5%	1/10W				
R153	1-216-817-11	METAL CHIP 470 5%	1/10W				
R154	1-216-025-11	RES-CHIP 100 5%	1/10W				
R251	1-216-829-11	METAL CHIP 4.7K 5%	1/10W				
R253	1-216-817-11	METAL CHIP 470 5%	1/10W				
		< SWITCH >		S351	1-572-300-22	SWITCH, LEVER SLIDE (FUNCTION)	
		< TRANSFORMER >					
				T1	1-424-702-11	COIL (FM IF)	
				T2	1-424-703-11	COIL (AM IF)	

				A-4542-959-A	PRE BOARD, COMPLETE		

		< CAPACITOR >					
				C101	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
				C102	1-126-947-11	ELECT 47uF 20%	10V
				C103	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
				C104	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
				C105	1-162-923-11	CERAMIC CHIP 47PF 5%	50V

CFD-V6

PRE	POWER	VOLUME
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Ref. No.	Part No.	Description	Remark
C106	1-126-960-11	ELECT 1uF 20%	50V
C107	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
C201	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C202	1-126-947-11	ELECT 47uF 20%	10V
C203	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C204	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
C205	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
C206	1-126-960-11	ELECT 1uF 20%	50V
C207	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
C301	1-104-665-11	ELECT 100uF 20%	10V
C302	1-104-665-11	ELECT 100uF 20%	10V
C303	1-126-935-11	ELECT 470uF 20%	10V
C304	1-126-947-11	ELECT 47uF 20%	10V
C305	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
C306	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C307	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
< CONNECTOR >			
CNP303	1-695-371-31	CONNECTOR, FFC 10P	
< IC >			
IC301	8-759-264-71	IC TA2068N	
< JUMPER RESISTOR >			
JC301	1-216-864-11	METAL CHIP 0 5%	1/10W
JC302	1-216-864-11	METAL CHIP 0 5%	1/10W
JC303	1-216-864-11	METAL CHIP 0 5%	1/10W
JC304	1-216-864-11	METAL CHIP 0 5%	1/10W
< TRANSISTOR >			
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R101	1-216-835-11	METAL CHIP 15K 5%	1/10W
R102	1-216-807-11	METAL CHIP 68 5%	1/10W
R103	1-216-843-11	METAL CHIP 68K 5%	1/10W
R104	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R105	1-216-835-11	METAL CHIP 15K 5%	1/10W
R106	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R110	1-216-809-11	METAL CHIP 100 5%	1/10W
R111	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R201	1-216-835-11	METAL CHIP 15K 5%	1/10W
R202	1-216-807-11	METAL CHIP 68 5%	1/10W
R203	1-216-843-11	METAL CHIP 68K 5%	1/10W
R204	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R205	1-216-835-11	METAL CHIP 15K 5%	1/10W
R206	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R210	1-216-025-11	RES-CHIP 100 5%	1/10W
R211	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R301	1-216-857-11	METAL CHIP 1M 5%	1/10W
R302	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R303	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R304	1-216-821-11	METAL CHIP 1K 5%	1/10W
R305	1-216-817-11	METAL CHIP 470 5%	1/10W
R306	1-218-867-11	METAL CHIP 6.8K 5%	1/10W
R307	1-216-797-11	METAL CHIP 10 5%	1/10W

Ref. No.	Part No.	Description	Remark
R308	1-216-837-11	METAL CHIP 22K 5%	1/10W
R309	1-216-805-11	METAL CHIP 47 5%	1/10W
R314	1-216-817-11	METAL CHIP 470 5%	1/10W
R315	1-216-817-11	METAL CHIP 470 5%	1/10W
< SWITCH >			
S301	1-762-565-11	SWITCH, SLIDE (REC/PB)	
< TRANSFORMER >			
T301	1-416-041-11	TRANSFORMER, BIAS OSCILLATION	

*	1-861-376-11	POWER BOARD	*****
< CABLE HOLDER >			
* KH904	1-573-287-11	HOLDER, CABLE 2P	*****

*	A-4542-903-A	VOLUME BOARD, COMPLETE	*****
< CAPACITOR >			
C123	1-115-870-11	ELECT 0.47uF 20%	50V
C124	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C223	1-115-870-11	ELECT 0.47uF 20%	50V
C224	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
< CABLE HOLDER >			
* KH307	1-565-386-11	HOLDER, CABLE 5P	
< RESISTOR >			
R123	1-216-821-11	METAL CHIP 1K 5%	1/10W
R124	1-218-867-11	METAL CHIP 6.8K 5%	1/10W
R223	1-216-821-11	METAL CHIP 1K 5%	1/10W
R224	1-218-867-11	METAL CHIP 6.8K 5%	1/10W
< VARIABLE RESISTOR >			
RV352	1-227-188-11	RES, VAR, CARBON 20K/20K (VOLUME)	
< SWITCH >			
S355	1-786-141-11	SWITCH, PUSH (2 KEY) (MEGA BASS)	*****

MISCELLANEOUS			

59	1-452-899-11	MAGNET	
* 111	1-757-584-11	CABLE, FLEXIBLE FLAT (15 CORE)	
* 112	1-757-688-11	CABLE, FLEXIBLE FLAT (10 CORE)	
* 114	1-757-583-11	CABLE, FLEXIBLE FLAT (16 CORE) (120mm)	
124	1-757-689-11	CABLE, FLEXIBLE FLAT (16 CORE) (105mm)	
252	X-2162-709-1	CHASSIS ASSY (CDP) , MOTOR (SPINDLE)	(including M701)
△ 253	8-848-483-05	OPTICAL PICK-UP KSS-213C	
ANT1	1-501-883-21	ANTENNA, TELESCOPIC	
HE901	1-543-876-11	HEAD (ERASE)	
HRP901	1-500-691-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	

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

Ref. No.	Part No.	Description	Remark
M601	A-3320-446-A	MOTOR ASSY (CAPSTAN/REEL)	(including PULLEY)
M702	X-2625-769-1	GEAR ASSY (MB), MOTOR (SLED)	(including GEAR)
S601	1-762-679-11	SWITCH, LEAF (MD POWER)	
S801	1-692-960-11	SWITCH, PUSH (1 KEY) (CD DOOR)	
SP101	1-529-723-21	SPEAKER (10cm) (L-CH)	
SP201	1-529-723-21	SPEAKER (10cm) (R-CH)	
△ T901	1-435-921-11	TRANSFORMER, POWER	

ACCESSORIES

△	1-769-412-22	CORD, POWER	
	3-259-425-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH)	(AEP)
	3-259-425-21	MANUAL, INSTRUCTION (FRENCH, GERMAN)	(AEP)
	3-259-425-31	MANUAL, INSTRUCTION	(DUTCH, POTUGUESE)(AEP)
	3-259-425-51	MANUAL, INSTRUCTION (SWEDISH, FINNISH)	(CET)
	3-259-425-61	MANUAL, INSTRUCTION (POLISH)(CET)	
	3-259-425-71	MANUAL, INSTRUCTION	(CZECH, HUNGARIAN)(CET)
	3-259-425-81	MANUAL, INSTRUCTION	(RUSSIAN, SLOVAKIAN)(CET)

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

