

HCD-GRX9000/RX900

SERVICE MANUAL

East European Model

CIS Model

HCD-RX900

E Model

HCD-GRX9000



HCD-GRX9000/RX900 are the Amplifier, CD player, Tape Deck and Tuner section in MHC-GRX9000/RX900.

Photo: HCD-RX900

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism	HCD-H991AV
	CD Mechanism Type	CDM38LH-5BD29AL
	Base Unit Type	BU-5BD29AL
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK Section	Model Name Using Similar Mechanism	HCD-GRX7/RX77S
	Tape Transport Mechanism Type	TCM-230AWR1/230PWR1

SPECIFICATIONS

Amplifier section

European and Russian models:

DIN power output (rated) 125 + 125 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
170 + 170 watts
(8 ohms at 1 kHz,
10% THD)

Music power output (reference)
275 + 275 watts
(8 ohms at 1 kHz,
10% THD)

Other models:

The following measured at AC 230 V 50/60 Hz
DIN power output (rated) 130 + 130 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
160 + 160 watts
(8 ohms at 1 kHz,
10% THD)

The following measured at AC 120, 220, 240 V
50/60 Hz

DIN power output (rated) 140 + 140 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
170 + 170 watts
(8 ohms at 1 kHz,
10% THD)

Peak music power output (reference)
3000 watts

Inputs

MD / VIDEO IN: voltage 450 mV / 250 mV,
(phono jacks) impedance 47 kilohms
MIX MIC: (phone jack) sensitivity 1 mV,
impedance 10 kilohms

Outputs

MD / VIDEO OUT: voltage 250 mV
(phono jacks) impedance 1 kilohms
PHONES: accepts headphones of 8
(stereo phone jack) ohms or more
SPEAKER: accepts impedance of 8 to
16 ohms

SUPER WOOFER: Voltage 1 V, impedance 1
kilohm

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM



SONY®

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser ($\lambda=780\text{nm}$) Emission duration: continuous
Laser output	Max. $44.6\ \mu\text{W}^*$ *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response	2 Hz – 20 kHz ($\pm 0.5\ \text{dB}$)
Wavelength	780 – 790 nm
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)	
Wavelength	600 nm
Output Level	-18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	40 – 13,000 Hz ($\pm 3\ \text{dB}$), using Sony TYPE I cassette 40 – 14,000 Hz ($\pm 3\ \text{dB}$), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
2 band models:	87.5 – 108.0 MHz
3 band (FM-MW-SW) models:	87.5 – 108.0 MHz
3 band (FM-MW-LW) models:	87.5 – 108.0 MHz
4 band models:	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

UKV tuner section (4 band models only)

Tuning range	65.0 – 74.0 MHz Stereo Plus
--------------	--------------------------------

AM tuner section

Tuning range	531 – 1,602 kHz
2 Band type:	(with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
3 Band/4 Band type:	
European and Russian models:	
MW:	531 – 1,602 kHz (with the interval set at 9 kHz)
LW:	153 – 279 kHz (with the interval set at 3 kHz)
Middle Eastern models:	
MW:	531 – 1,602 kHz (with the interval set at 9 kHz)
SW:	5.95 – 17.90 MHz (with the interval set at 5 kHz)
Other models:	
MW:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
SW:	5.95 – 17.90 MHz (with the interval set at 5 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
European and Russian models:	230 V AC, 50/60 Hz
Other models:	120 V, 220 V or 230 - 240 V AC, 50/60 Hz
Power consumption	
European and Russian models:	300 watts
Other models:	330 watts
Dimensions (w/h/d)	Approx. 280 x 335 x 380 mm (13 ¹ / ₈ x 11 ¹ / ₈ x 15 in.)

Mass

European and Russian models:	Approx. 11.7 kg (25 lbs. 13 oz.)
Other models:	Approx. 12.0 kg (26 lbs. 7 oz.)
Supplied accessories:	AM loop antenna (1) Remote RM-SR5 (1) Batteries (2) FM lead antenna (1) Speaker cords (2) Front speaker pads (8)

Design and specifications are subject to change without notice.

SECTION 1

SERVICING NOTES

TABLE OF CONTENTS

1. SERVICING NOTES	3
2. GENERAL	
Location of Controls	6
Setting the Time	7
3. DISASSEMBLY	8
4. TEST MODE	11
5. MECHANICAL ADJUSTMENTS	13
6. ELECTRICAL ADJUSTMENTS	
DECK Section	13
TUNER Section	16
CD Section	18
7. DIAGRAMS	20
7-1. Block Diagram – TUNER Section (East European, CIS models only) –	21
7-2. Block Diagram – CD Section –	23
7-3. Block Diagram – TAPE DECK Section –	25
7-4. Block Diagram – MAIN Section (1/2) –	27
7-5. Block Diagram – MAIN Section (2/2) –	29
7-6. Block Diagram – DISPLAY/KEY CONTROL/ POWER SUPPLY Section –	31
7-7. Note for Printed Wiring Boards and Schematic Diagrams	33
7-8. Printed Wiring Board – TUNER Section (East European, CIS models only) –	34
7-9. Schematic Diagram – TUNER Section (East European, CIS models only) –	35
7-10. Printed Wiring Board – CD Section –	37
7-11. Schematic Diagram – CD Section –	39
7-12. Printed Wiring Boards – CD MOTOR Section –	41
7-13. Schematic Diagram – CD MOTOR Section –	43
7-14. Printed Wiring Board – TAPE DECK Section –	45
7-15. Schematic Diagram – TAPE DECK Section –	47
7-16. Printed Wiring Board – LEAF SW Section –	49
7-17. Schematic Diagram – LEAF SW Section –	49
7-18. Printed Wiring Board – MAIN Section –	51
7-19. Schematic Diagram – MAIN Section (1/4) –	53
7-20. Schematic Diagram – MAIN Section (2/4) –	55
7-21. Schematic Diagram – MAIN Section (3/4) –	57
7-22. Schematic Diagram – MAIN Section (4/4) –	59
7-23. Printed Wiring Board – PANEL Section –	61
7-24. Schematic Diagram – PANEL Section –	63
7-25. Printed Wiring Board – CD-SW Section –	65
7-26. Schematic Diagram – CD-SW Section –	65
7-27. Printed Wiring Board – HP Section –	67
7-28. Schematic Diagram – HP Section –	68
7-29. Printed Wiring Boards – POWER AMP Section –	69
7-30. Schematic Diagram – POWER AMP Section –	71
7-31. Printed Wiring Board – TRANSFORMER Section –	73
7-32. Schematic Diagram – TRANSFORMER Section –	74
7-33. IC Pin Function Description	81
8. EXPLODED VIEWS	86
9. ELECTRICAL PARTS LIST	95

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

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

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

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

NOTES ON LASER DIODE EMISSION CHECK

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

Notes on chip component replacement

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

Flexible Circuit Board Repairing

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

CAUTION

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

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

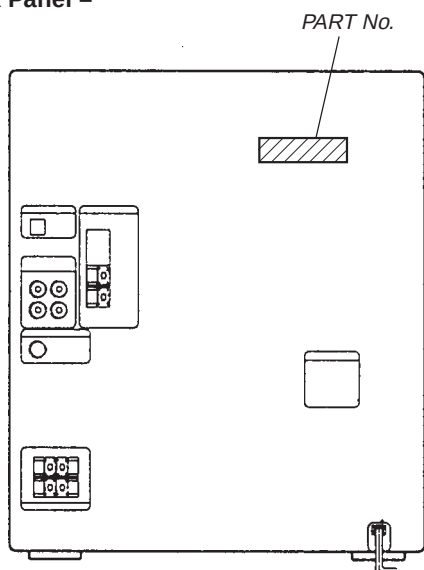
Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSSVERREGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALT-TIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLIG LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYÁZAT! : A BURKOLAT NYITÁSÁKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

MODEL IDENTIFICATION

– Back Panel –



MODEL	PART No.
E model	4-996-846-0□
Malaysia, Singapore models	4-996-846-1□
Saudi Arabia model	4-996-846-2□
East European, CIS models	4-996-846-5□

SAFETY-RELATED COMPONENT WARNING!!

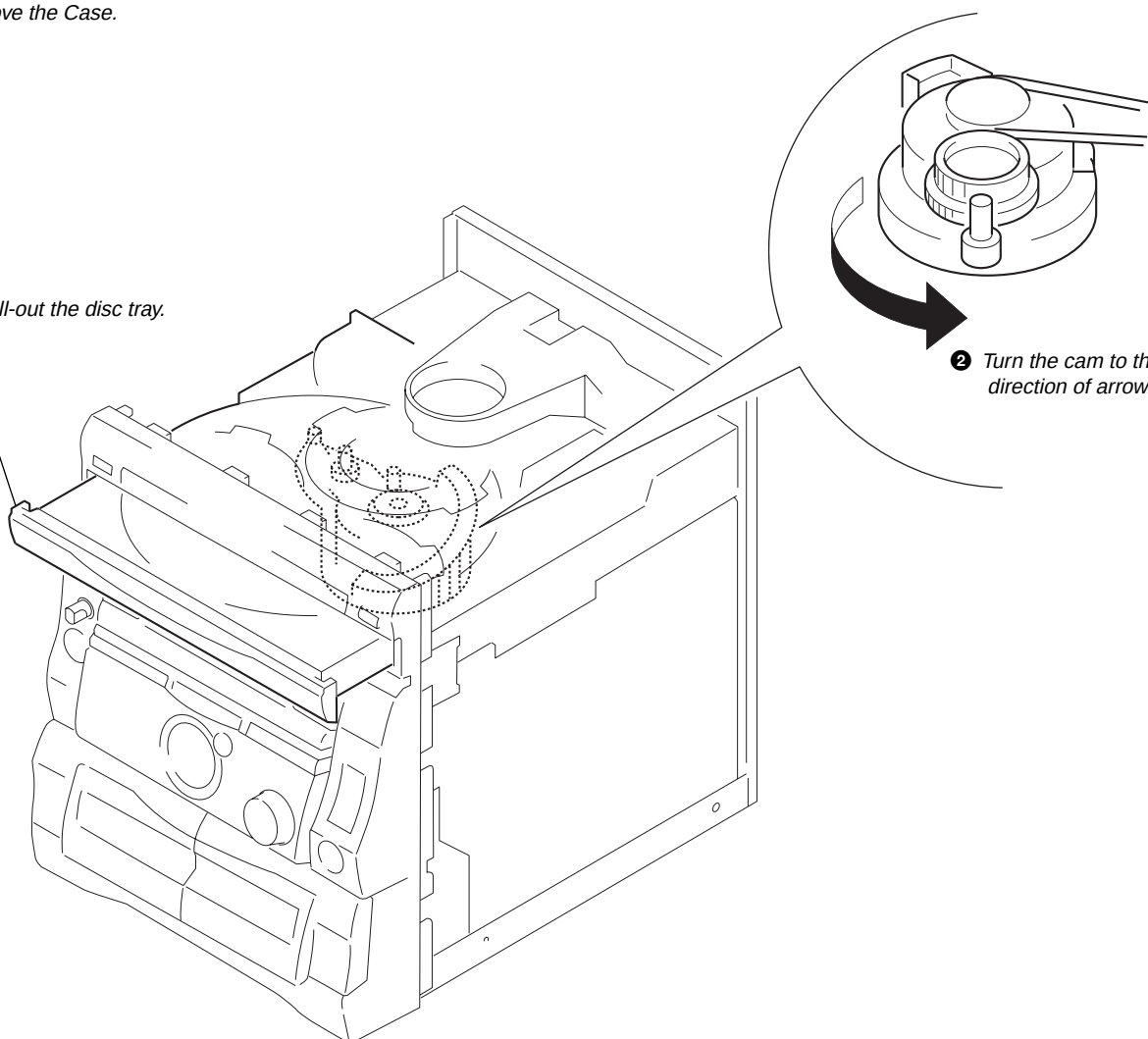
COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF.

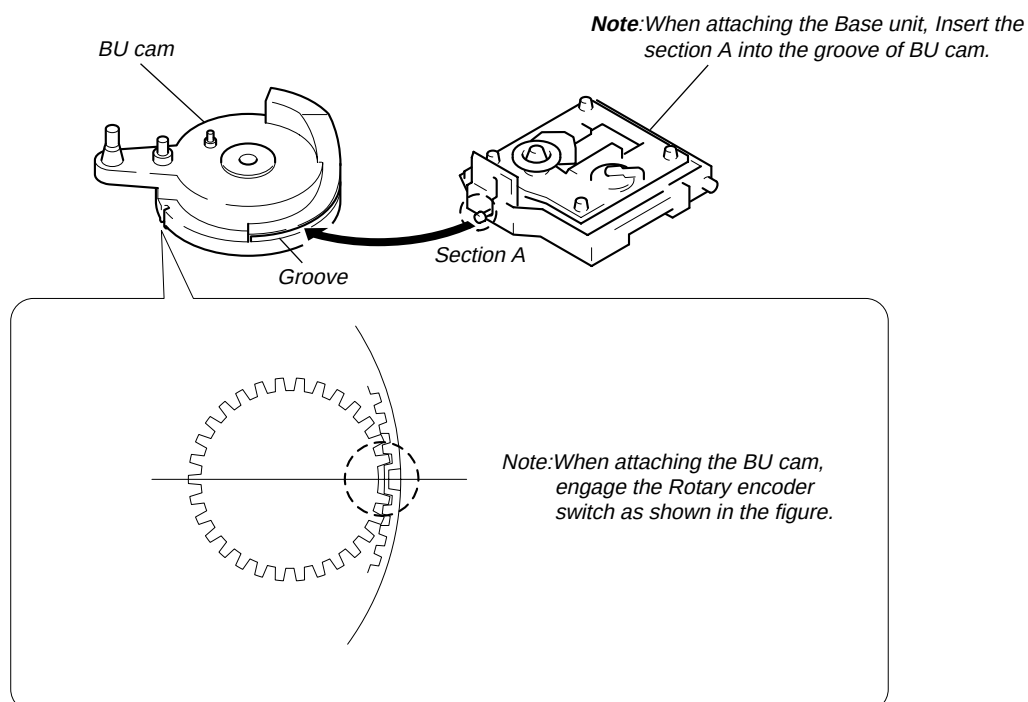
❶ Remove the Case.

❸ Pull-out the disc tray.

❷ Turn the cam to the direction of arrow.

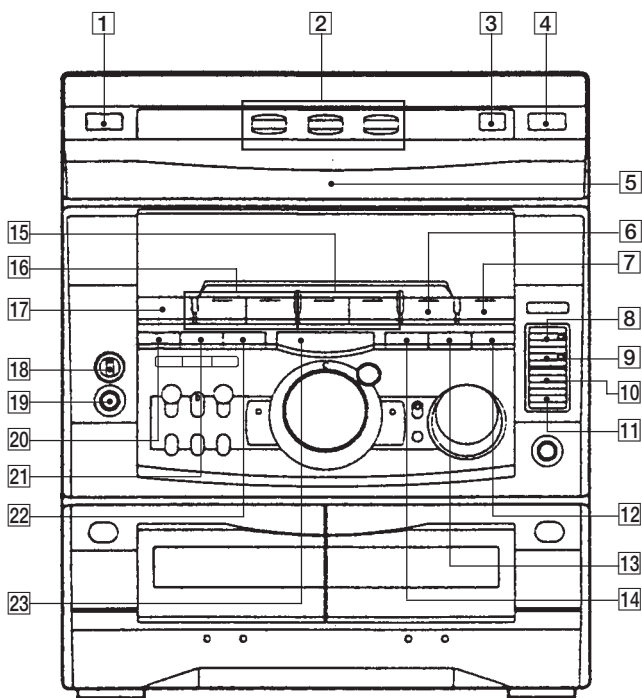


NOTE FOR INSTALLATION (ROTARY ENCODER)

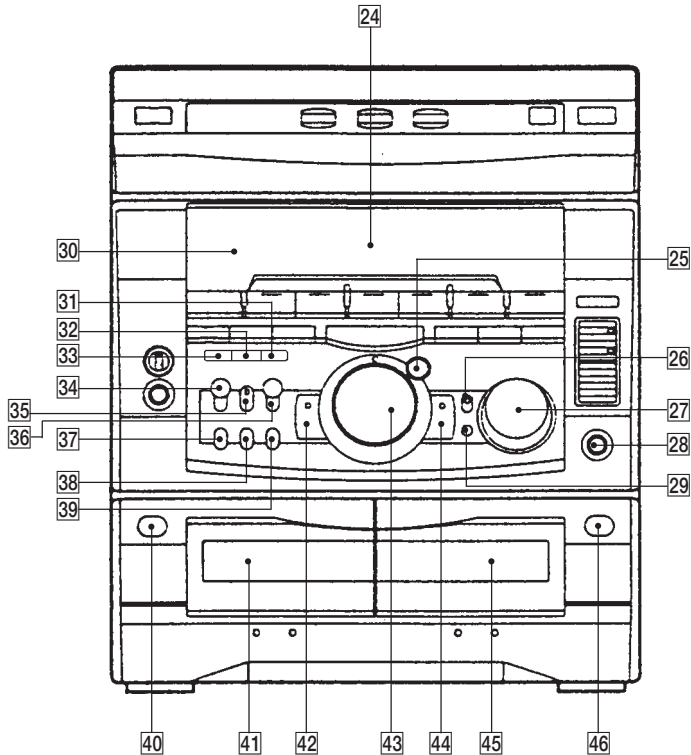


SECTION 2 GENERAL

LOCATION OF CONTROLS



- 1 I / (Power) button
- 2 DISC 1 to 3 buttons and indicators
- 3 DISC SKIP/EX-CHANGE button
- 4 ▲ (CD) button
- 5 CD disc tray
- 6 CD ►|| button and indicator
- 7 TUNER, BAND button
- 8 ● REC button and indicator
- 9 || PAUSE button and indicator
- 10 HI-DUB button
- 11 CD SYNC button
- 12 EFFECT button and indicator
- 13 SURROUND button
- 14 KARAOKE PON/MPX button
- 15 TAPE B ◀ and ▶ buttons and indicators
- 16 TAPE A ◀ and ▶ buttons and indicators
- 17 FUNCTION button
- 18 MIC LEVEL knob
- 19 MIX MIC jac
- 20 DISPLAY/DEMO button
- 21 CLOCK/TIMER SET button
- 22 TIMER SELECT button
- 23 ■ button



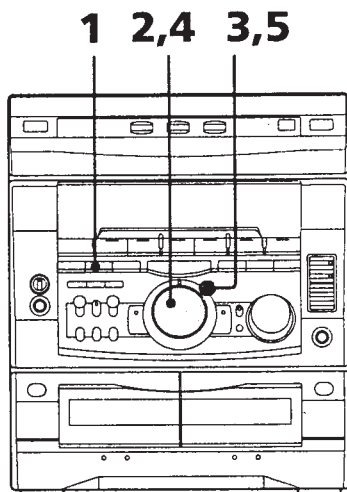
- 24 Fluorescent indicator tube
- 25 ENTER/NEXT button and indicator
- 26 GROOVE button and indicator
- 27 VOLUME knob
- 28 PHONES jack
- 29 DBFB button
- 30 Remote sensor
- 31 P FILE MEMORY button
- 32 GEQ CONTROL button
- 33 FILE SELECT button
- 34 LOOP button
- 35 NON-STOP button and indicator
- 36 FLASH button
- 37 EDIT, DIRECTION button
- 38 PLAY MODE, DOLBY NR button
- 39 REPEAT button
- 40 𐄂 button (deck A)
- 41 Tape deck A
- 42 -, ◀ button and indicator
- 43 JOG dial
- 44 +, ►► button and indicator
- 45 Tape deck B
- 46 𐄂 button (deck B)

Step 2: Setting the time

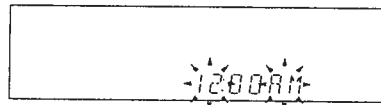
You must set the time before using the timer functions.

The clock is on a 24-hour system for the European and Russian models, and a 12-hour system for other models.

The 12-hour system model is used for illustration purposes.



- 1 Press **CLOCK/TIMER SET**.
The hour indication flashes.



- 2 Turn the jog dial to set the hour.

- 3 Press **ENTER/NEXT**.
The minute indication flashes.



- 4 Turn the jog dial to set the minute.

- 5 Press **ENTER/NEXT**.
The clock starts working.

Tips

- If you've made a mistake, start over from step 1.
- Setting the time deactivates the demo mode.
If you want to display the demo mode, press **DISPLAY/DEMO** when the power is off.

Note

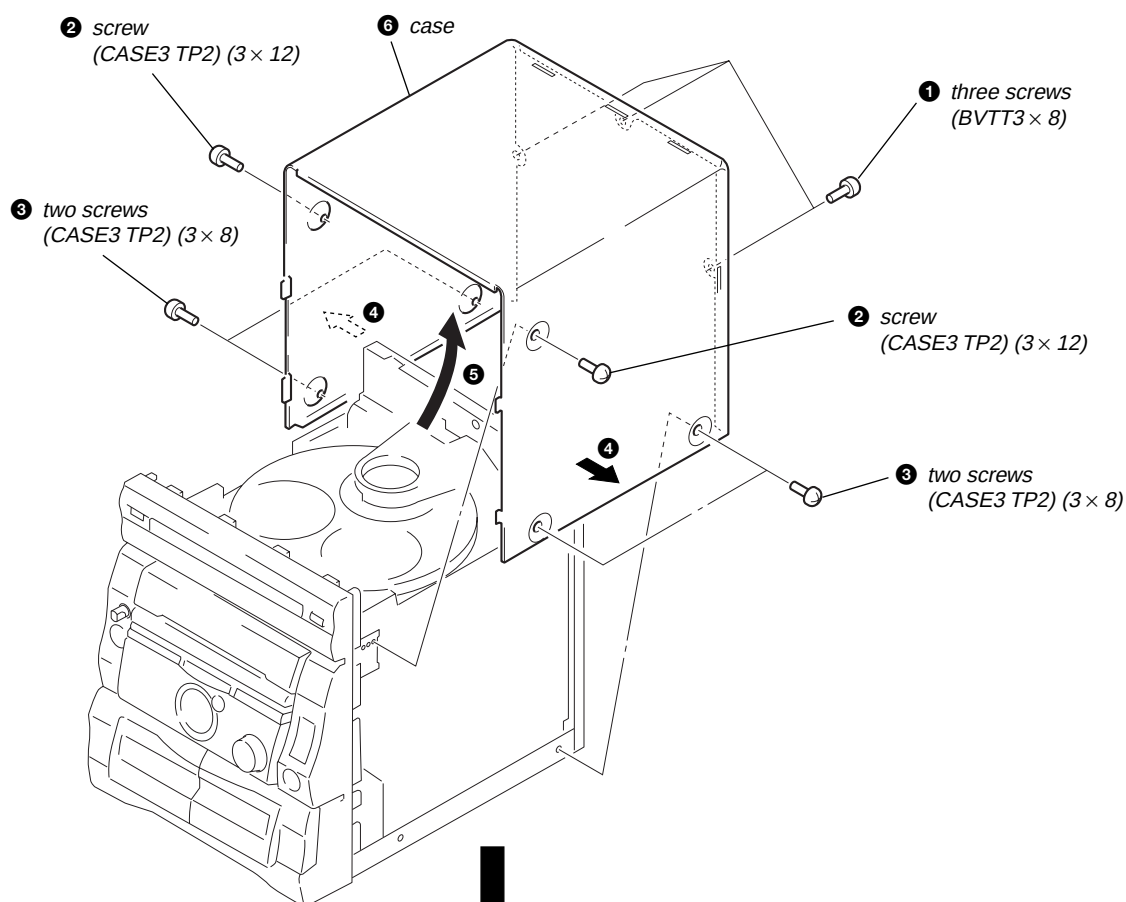
The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

- 1 Press **CLOCK/TIMER SET**.
- 2 Turn the jog dial to select **SET CLOCK**.
- 3 Press **ENTER/NEXT**.
- 4 Perform steps 2 through 5 above.

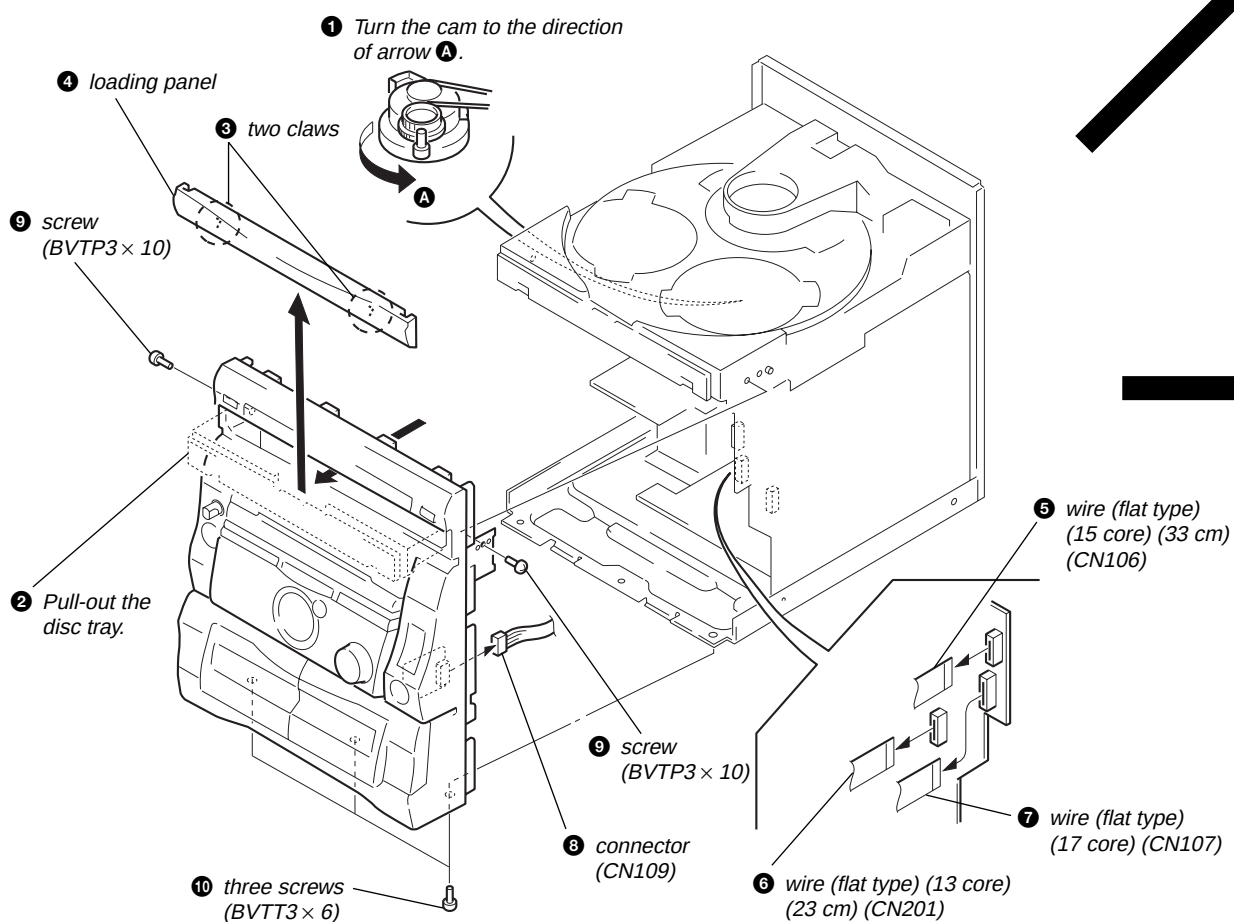
SECTION 3 DISASSEMBLY

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

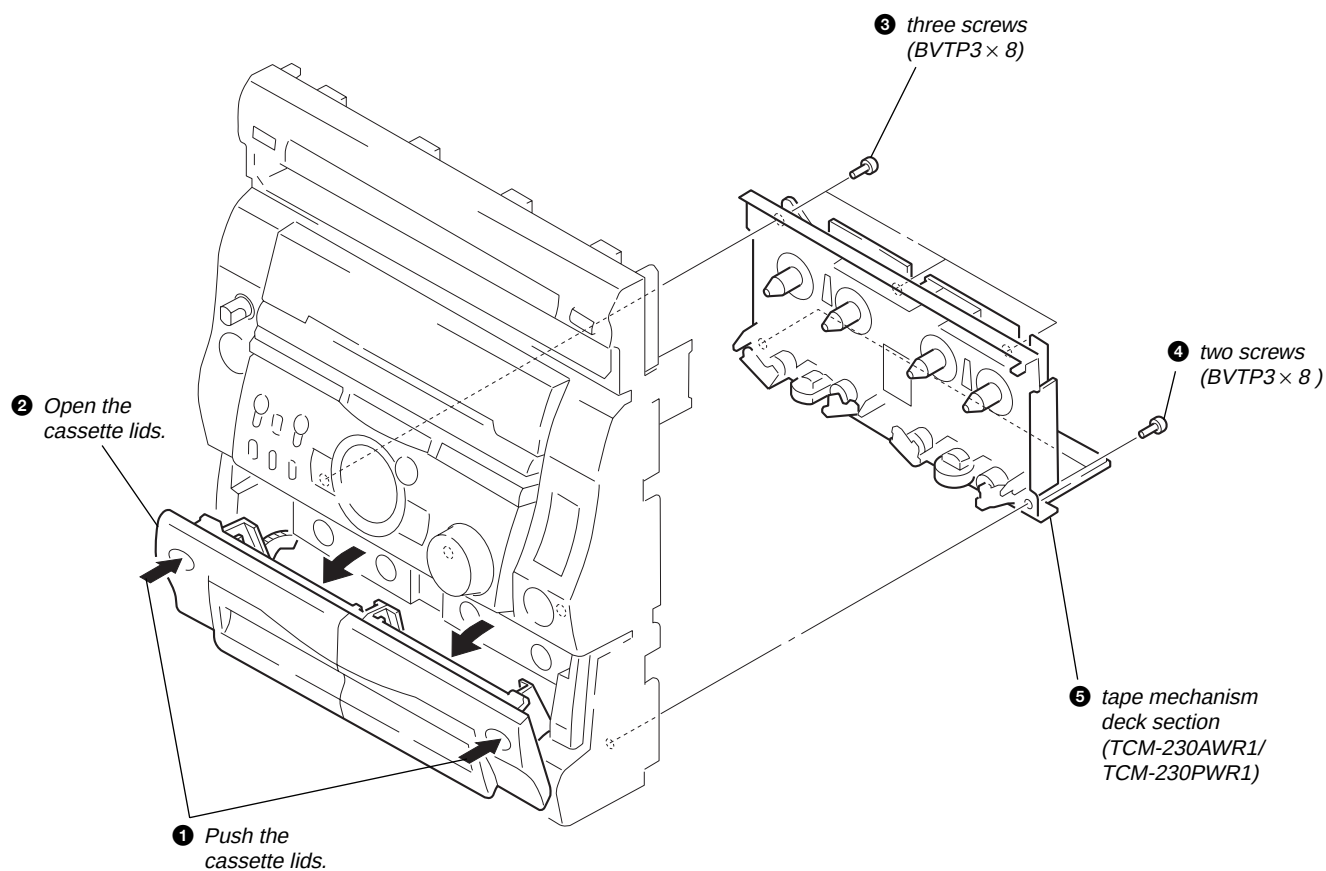
CASE



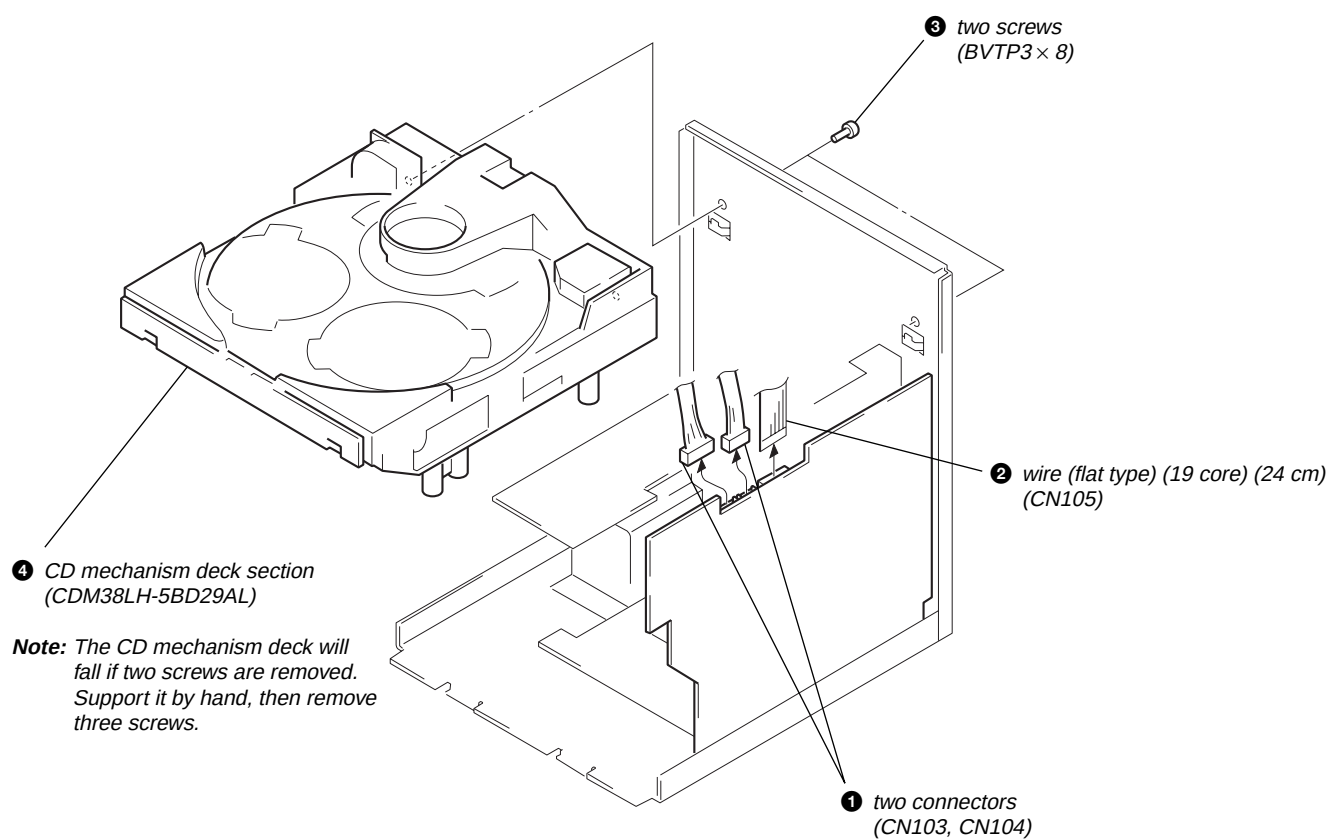
FRONT PANEL SECTION



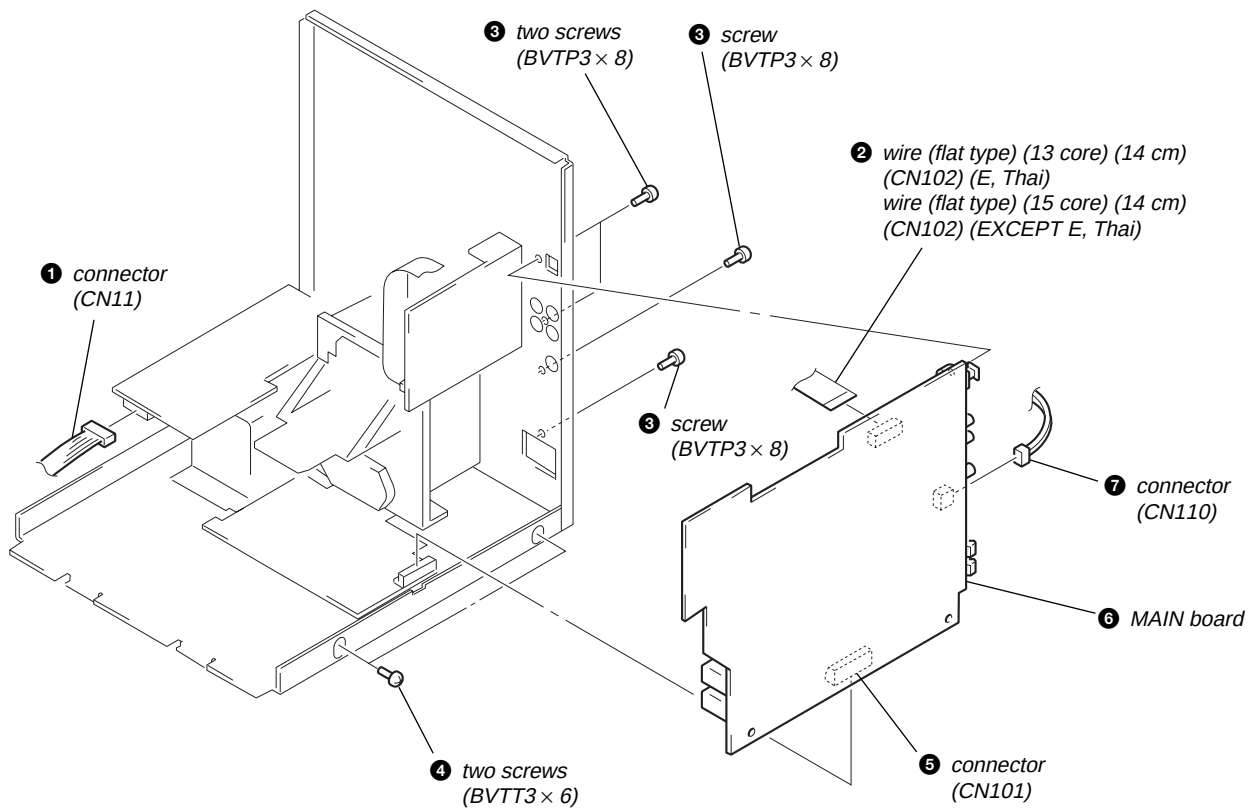
TAPE MECHANISM DECK SECTION (TCM-230AWR1/TCM-230PWR1)



CD MECHANISM DECK SECTION (CDM38LH-5BD29AL)



MAIN BOARD



SECTION 4

TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons , [ENTER/NEXT], and  simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press  button to turn the set ON.
2. Press [LOOP] button and  button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons , [ENTER/NEXT], and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Press  button to turn the set ON.
2. Select the function "CD".
3. Press three buttons , [ENTER/NEXT], and  simultaneously.
4. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
5. With the CD in stop status, press  button to move the pickup to outside track, or  button to inside track.
6. To exit from this mode, perform as follows:
 - 1) Move the pickup to the most inside track.
 - 2) Press three buttons in the same manner as step 3.

- Note:**
- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
 - Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of FUNCTION Name]

- The FUNCTION name of external input terminal can be changed over to "VIDEO" of "MD".

Procedure:

1. Press  button to turn the set OFF.
2. Press  button together with [FUNCTION] button, and the power is turned on, the display of fluorescent indicator tube changes to "MD" of "VIDEO" instantaneously, and thus the FUNCTION is changed over.

[Change-over of AM Tuner Step between 9 kHz and 10 kHz]

- A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press  button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press  button to turn the set OFF.
4. Press [ENTER/NEXT] and  buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 k STEP" or "AM 10 k STEP", and thus the channel step is changed over.

[Change-over of LW Tuner Step between 1 kHz and 3 kHz]

- A step of LW channels can be changed over between 1 kHz and 3 kHz.

Procedure:

1. Press  button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "LW".
3. Press  button to turn the set OFF.
4. Press [ENTER/NEXT] and  buttons simultaneously, and the display of fluorescent indicator tube changes to "LW 1 k STEP" or "LW 3 k STEP", and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons , [ENTER/NEXT], and [DISC 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 J0 V0". Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.

"J" value increases like 1, 2, 3 ... if rotating [JOG] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.

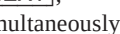
"V" value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

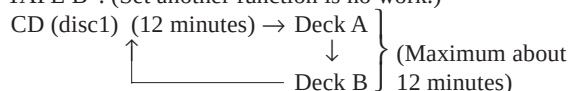
- If an error occurred:
The aging operation stops and display status.
- If no error occurs:
The aging operation continues repeatedly.

1. Operating Method of Aging Mode

- 1) Set disc in DISC1 tray.
- 2) Load the tapes recording use into the decks A and B respectively.
- 3) Press three buttons , , and  simultaneously.
- 4) The aging mode is activated, if a CD roulette mark on the fluorescent indicator tube is blinking.
- 5) To exit from the aging mode, press  button to turn the set OFF.

2. Operation Sequence

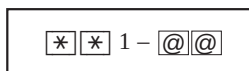
- During the aging mode in the following sequence to below.
- Starting the CD section aging for function set "CD", starting the TAPE section (deck A) aging for function set "TAPE A" or "TAPE B". (Set another function is no work.)



3. Aging mode in CD section

- 1) Display state
- No error occurs

display



Note:

  : a letter "CD" and the remainder time (minute) alternately. (remainder time start from 12 minute)

  : track number in access.

- Error occurred

NO.	Display	Main factor
1	NO DISC ERR	Not set disc in DISC1
2	FOCUS1 ERR	Focus does not work
3	FOCUS2 ERR	Focus does not work after the disc rotate as usual
4	GFS ERR	GFS error
5	FBIAS ERR	Error in to the focus bias adjustment
6	SENSOR ERR	Disc sensor sens DISC1 is no disc
7	TABLE ERR	CD tray lotate does not work
8	TRAY ERR	Tray (include BD) move does not work

2) Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

- (1) The CD tray rotates and disc 1 is selected.
- (2) Chucking is performed.
- (3) TOC is read.
- (4) Track 1 played back for 8 seconds.
- (5) The CD tray opens and closes again.
- (6) 1 to 5 is repeated.
- (7) After 12 minutes of aging, aging is switched to the tape deck.

4. Aging mode in Tape Deck section

- 1) Display state
- No error occurs
Display action now
- Error occurred
Display action last time

NO.	Display action	Action contents	Final timing
1	TAPE A AG-1	Rewind the TAPE A	The top of tape
2	TAPE A AG-2	FWD play the TAPE A	2 minutes playing
3	TAPE A AG-3	F.F. the TAPE A	First either 20 seconds or the end of tape
4	TAPE A AG-4	REV play the TAPE A	2 minutes playing
5	TAPE A AG-5	Rewind the TAPE A	The top of tape
6	TAPE B AG-1	Rewind the TAPE B	The top of tape
7	TAPE B AG-2	FWD play the TAPE B	2 minutes playing
8	TAPE B AG-3	F.F. the TAPE B	First either 20 seconds or the end of tape
9	TAPE B AG-4	REV play the TAPE B	2 minutes playing
10	TAPE B AG-5	Rewind the TAPE B	The top of tape

2) Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

- (1) The tape in deck A is rewound to the head.
- (2) The FWD side is played back for 2 minutes.
- (3) The tape is fast forwarded (FF) for 20 seconds. The following procedure is performed when the tape end is reached before the 20 seconds.
- (4) The REV side is played back for 2 minutes.
- (5) The tape is rewound to the head (REW).
- (6) The tape in deck B is rewound to the head.
- (7) The FWD side is played back for 2 minutes.
- (8) The tape is fast forwarded (FF) for 20 seconds. The following procedure is performed when the tape end is reached before the 20 seconds.
- (9) The REV side is played back for 2 minutes.
- (10) The tape is rewound to the head (REW).
- (11) Aging is switched to the CD player.

SECTION 5 MECHANICAL ADJUSTMENTS

Precaution

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

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.03 – 0.08 oz • inch)
REV	CQ-102RC	31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.03 – 0.08 oz • inch)
FF/REW	CQ-201B	71 to 143 g • cm (0.99 – 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 6 ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjust.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-CH.
- Switches and controls should be set as follows unless otherwise specified.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, -10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

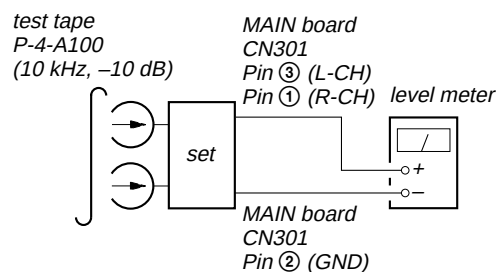
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

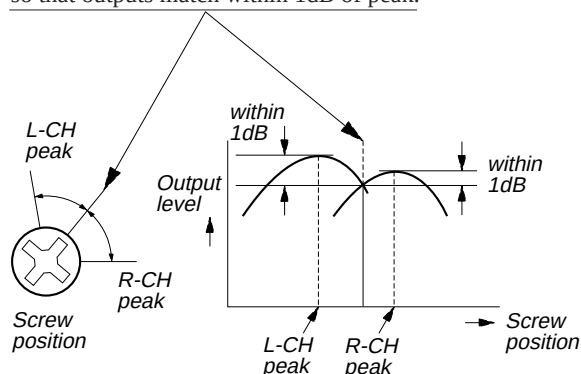
Note: Perform this adjustments for both decks

Procedure:

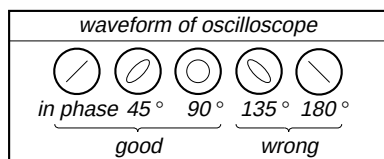
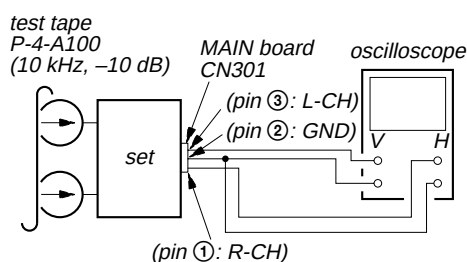
- Mode: Playback (FWD)



- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

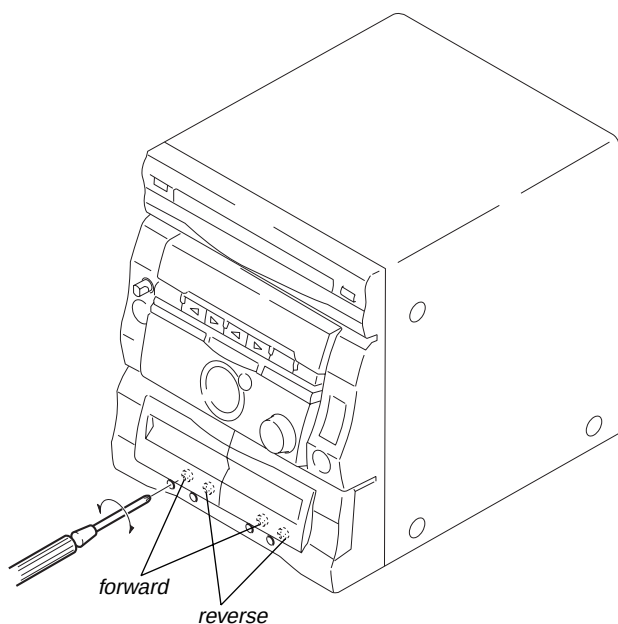


- Mode: Playback (FWD)



- Repeat steps 1 to 3 in playback (REV) mode.
- After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



Tape Speed Adjustment **DECK B**

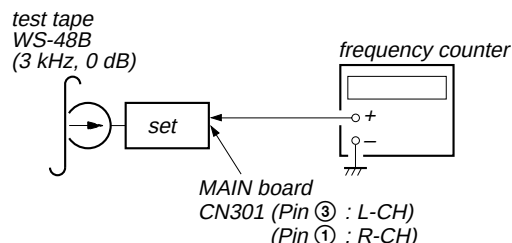
Note: Start the Tape Speed adjustment as below after setting to the test mode.

In the test mode, the tape speed is high during pressing the **HI-DUB** button.

Procedure:

- Turn the power switch on.
- Press the **■** button, **ENTER/NEXT** button and **DISC 3** button simultaneously.
(The "VOLUME" on the fluorescent indicator tube will blink while in the test mode.)
To exit from the test mode, press the **II/⏻** button.

Mode: Playback



- Insert the WS-48B into the deck B.
- Press the **▶** button on the deck B.
- Press the **HI-DUB** button in playback mode.
Then at HIGH speed mode.
- Adjust RV1001 on the LEAF SW board so that frequency counter reads $6,000 \pm 180$ Hz.
- Press the **HI-DUB** button.
Then back to NORMAL speed mode.
- Adjust RV1002 on the LEAF SW board so that frequency counter reads $3,000 \pm 90$ Hz.

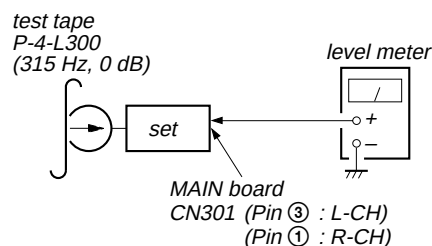
Adjustment Location: LEAF SW board

Sample value of Wow and Flutter: 0.3% or less W.RMS (JIS)
(WS-48B)

Playback level Adjustment **DECK A** **DECK B**

Procedure:

Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

CN301 PB level: 301.5 to 338.3 mV (−8.2 to −7.2 dB) level
difference between the channels: within ± 0.5 dB

Adjustment Location: AUDIO board

REC Bias Adjustment **DECK B**

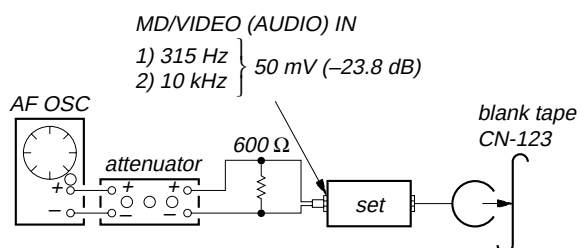
Procedure:

INTRODUCTION

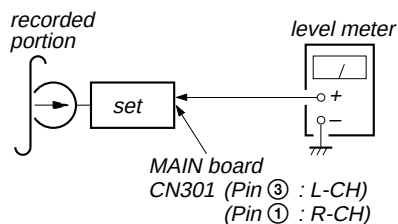
When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set. This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

(After recording, press the button without stopping will return to the position where recording was started.)

1. Press **FUNCTION** button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press button, press button, then recording start.
4. Mode: Record



5. Mode: Playback



6. Confirm playback the signal recorded in step 3 become adjustable level as follows.
If these levels do not adjustable level, adjustment the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 4 and 5.

Adjustable level: Playback output of 315 Hz to playback output of 10 kHz: ± 1.0 dB

Adjustment Location: AUDIO board

REC Level Adjustment **DECK B**

Procedure:

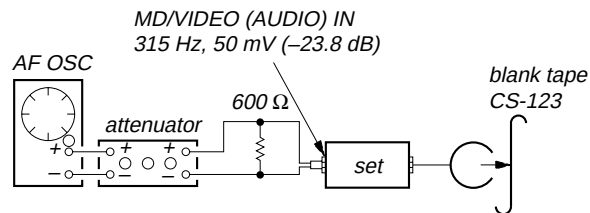
INTRODUCTION

When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set. This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

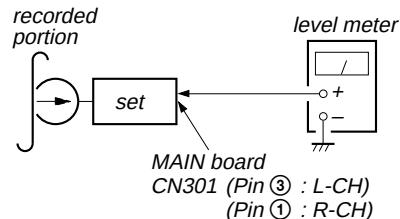
(After recording, press the button without stopping will return to the position where recording was started.)

1. Press **FUNCTION** button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press button, press button, then recording start.

4. Mode: Record



5. Mode: Playback



6. Confirm playback the signal recorded in step 3 become adjustable level as follows.

If these levels do not adjustable level, adjustment the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 4 and 5.

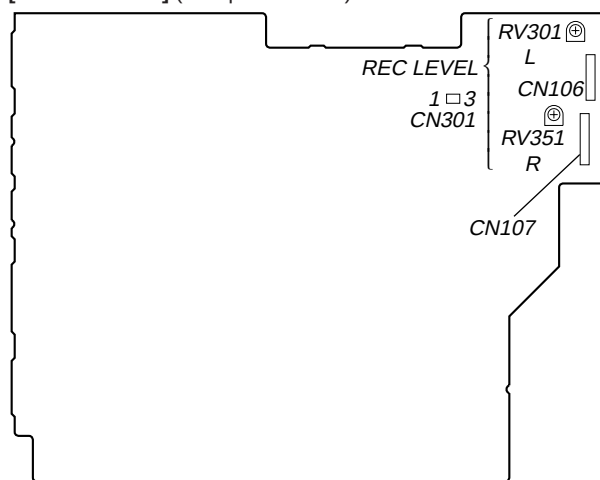
Adjustable level:

CN301 PB level: 47.2 to 53.0 mV (-24.3 to -23.3 dB)

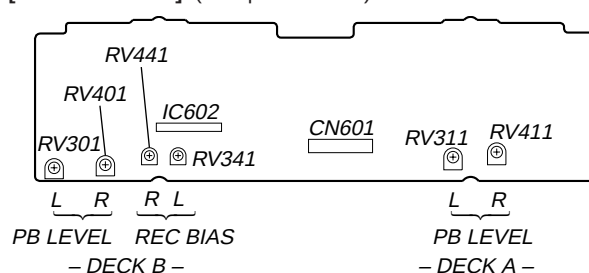
Adjustment Location: MAIN board

Adjustment Location:

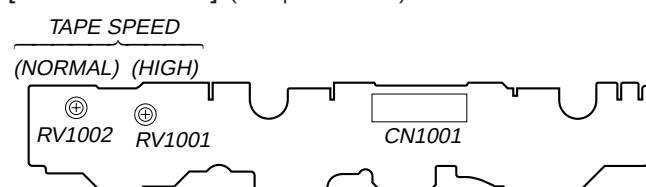
[MAIN BOARD] (Component Side)



[AUDIO BOARD] (Component Side)



[LEAF SW BOARD] (Component Side)



TUNER SECTION

0 dB=1 μ V

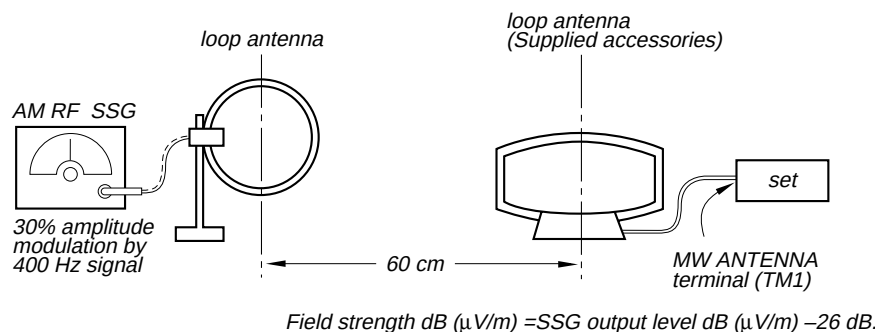
(East European, CIS models only)

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

MW Section Adjustment

Note: FM Tuned Level Adjustment should be performed after this MW Tuned Level Adjustment.

Setting:



MW Tuned Level Adjustment

Band: MW

Procedure:

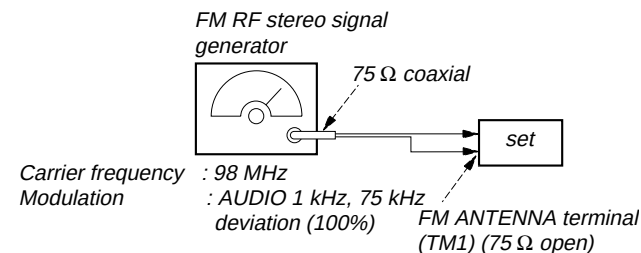
1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 1,050 kHz.
3. Adjust RV41 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location : TCB board

FM Section Adjustment

Note: This adjustment should be performed after the MW Tuned Level Adjustment due to the same adjustment element.

Setting:



FM Tuned Level Adjustment

Band: FM

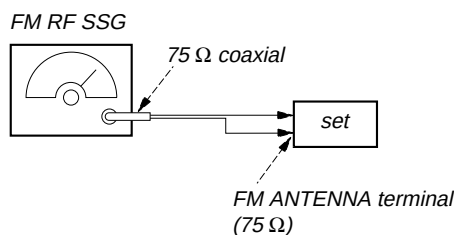
Procedure:

1. Supply a 25 dB μ 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. If the TUNED indicator does not light, adjust RV42 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: TCB board

FM Polar Adjustment

Connection 1:

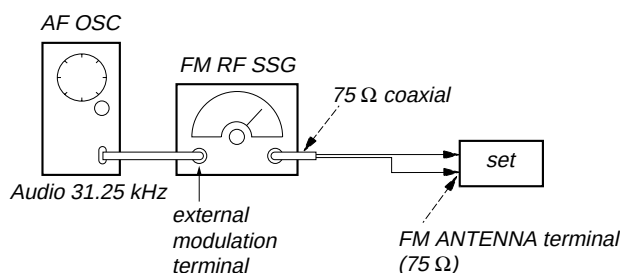


Carrier frequency: 69 MHz

Output level : 1mV (60dBμ) (at 75 Ω open)

Modulation : AUDIO 1 kHz, 10kHz deviation

Connection 2:



Carrier frequency: 69 MHz

Output level : 1mV (60 dBμ) (at 75 Ω open)

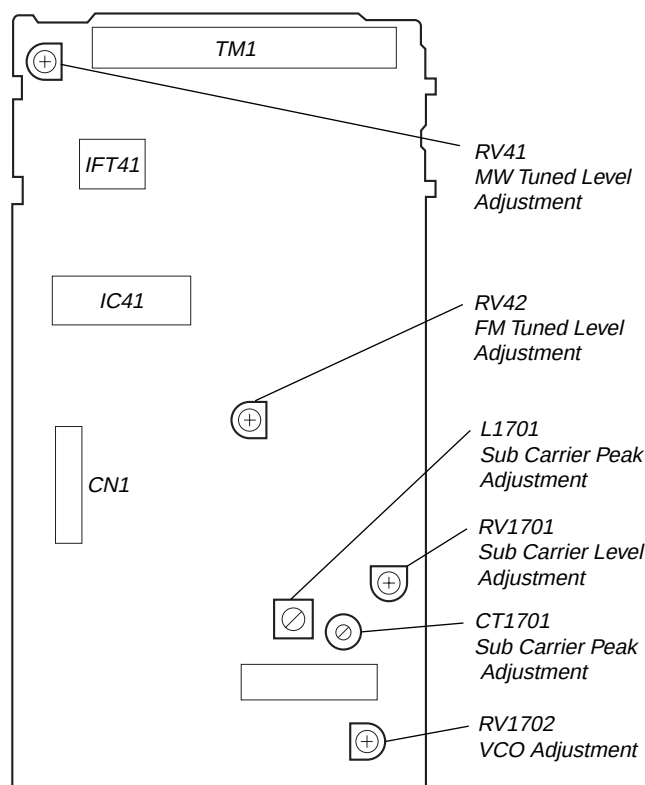
Modulation : AUDIO 31.25 kHz, 10 kHz deviation
(EXTERNAL MODULATION)

Procedure :

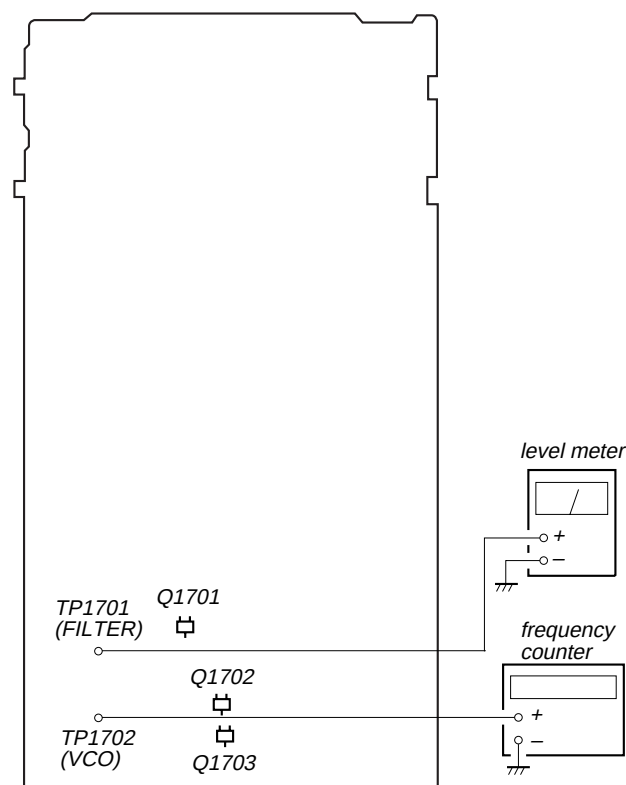
1. Set the modulation of FM RF SSG to AUDIO 1 kHz, 10 kHz deviation according to "Connection 1".
2. Tune the set to 69 MHz.
3. Adjust the RV1702 so that the reading of frequency counter connected to TP1702 becomes within 31.25 kHz $\pm$ 0.05 kHz. (VCO Adjustment)
4. Then record the reading of the level meter connected to TP1701
5. Set the modulation of FM RF SSG to AUDIO 31.25 kHz, 10 kHz deviation according to "Connection 2".
6. Tune the set to 69 MHz.
7. Set the CT1701 to be mechanical center.
8. Adjust the L1701 so that the reading of the level meter connected to TP1701 become maximum.
Then adjust the CT1701 so that the reading of the level meter connected to TP1701 becomes maximum. (SUB CARRIER PEAK Adjustment)
9. Adjust the RV1701 so that the level at the moment becomes 14dB higher value than the level recorded in step 4. (SUB CARRIER LEVEL Adjustment)

Adjustment Location :

[TCB BOARD] (Component Side)



[TCB BOARD] (Conductor Side)

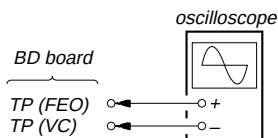


CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

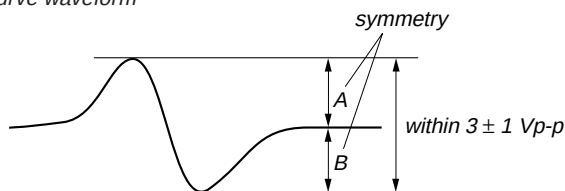
S Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (Actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

S-curve waveform

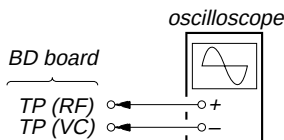


6. After check, remove the lead wire connected in step 2.

Note:

- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

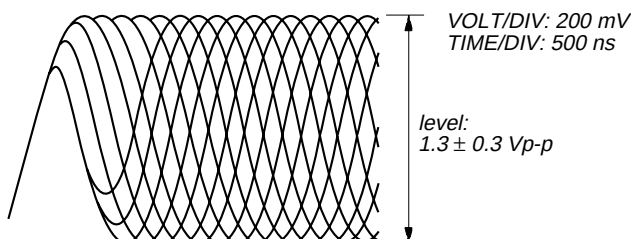


Procedure:

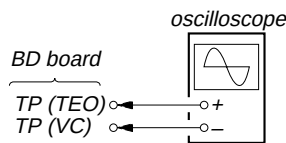
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

• FR signal



E-F Balance (Traverse) check (Without remote commander)

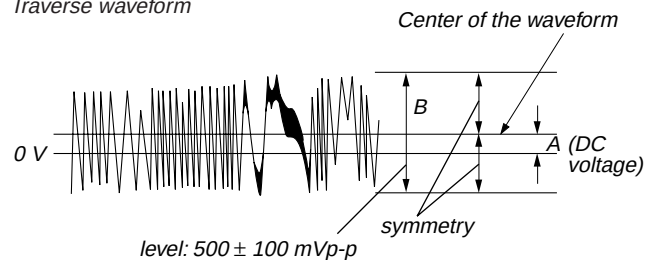


Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on. Press **FUNCTION** button to select CD.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the **■** button, **ENTER/NEXT** button and **▶||** button simultaneously several times to fluorescent indicator tube display “SHUFFLE” is blink. (The sledding servo is turned OFF.)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform. Confirm the following:

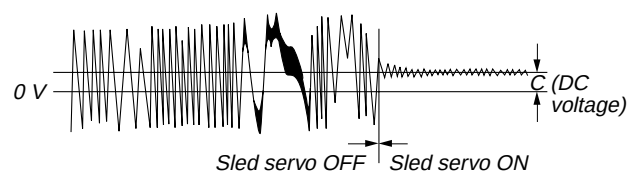
$$\frac{A}{B} \times 100 = \text{less than } \pm 7 (\%)$$

Traverse waveform



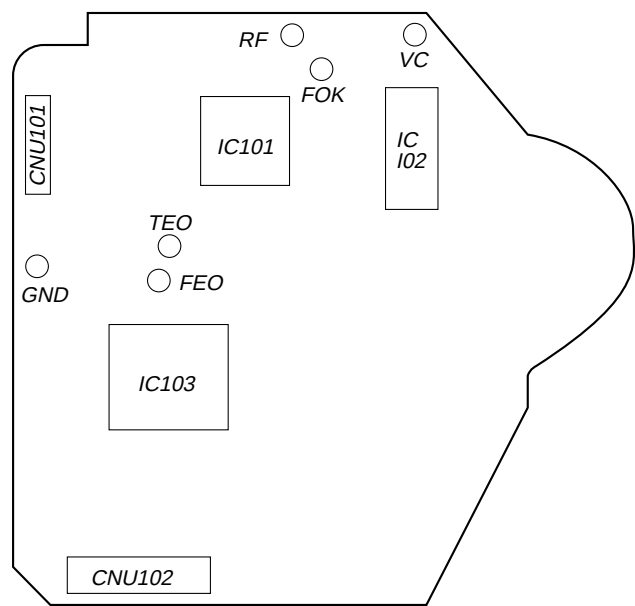
6. Press the **■** button, **ENTER/NEXT** button and **▶||** button simultaneously several times to fluorescent indicator tube display “SHUFFLE” is OFF. (The sledding servo is turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 5.

Traverse waveform



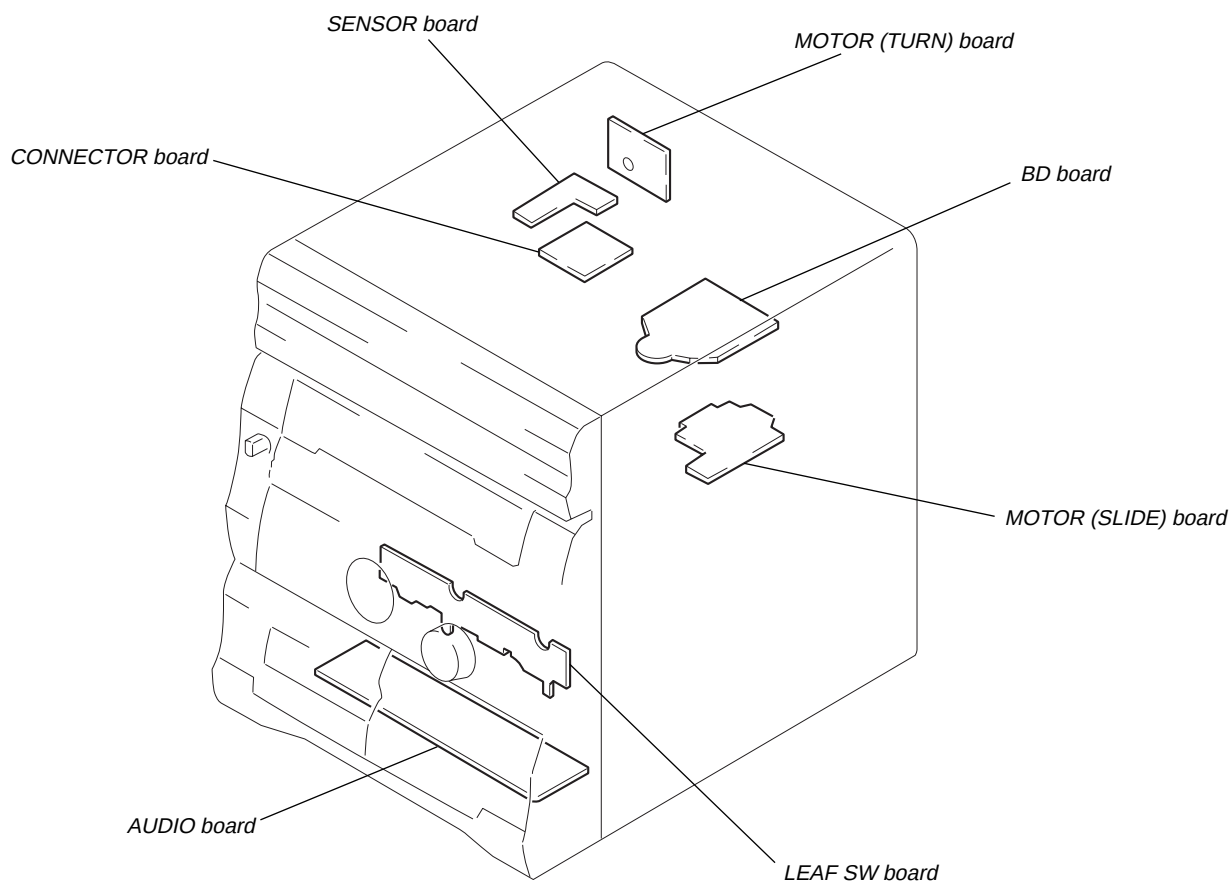
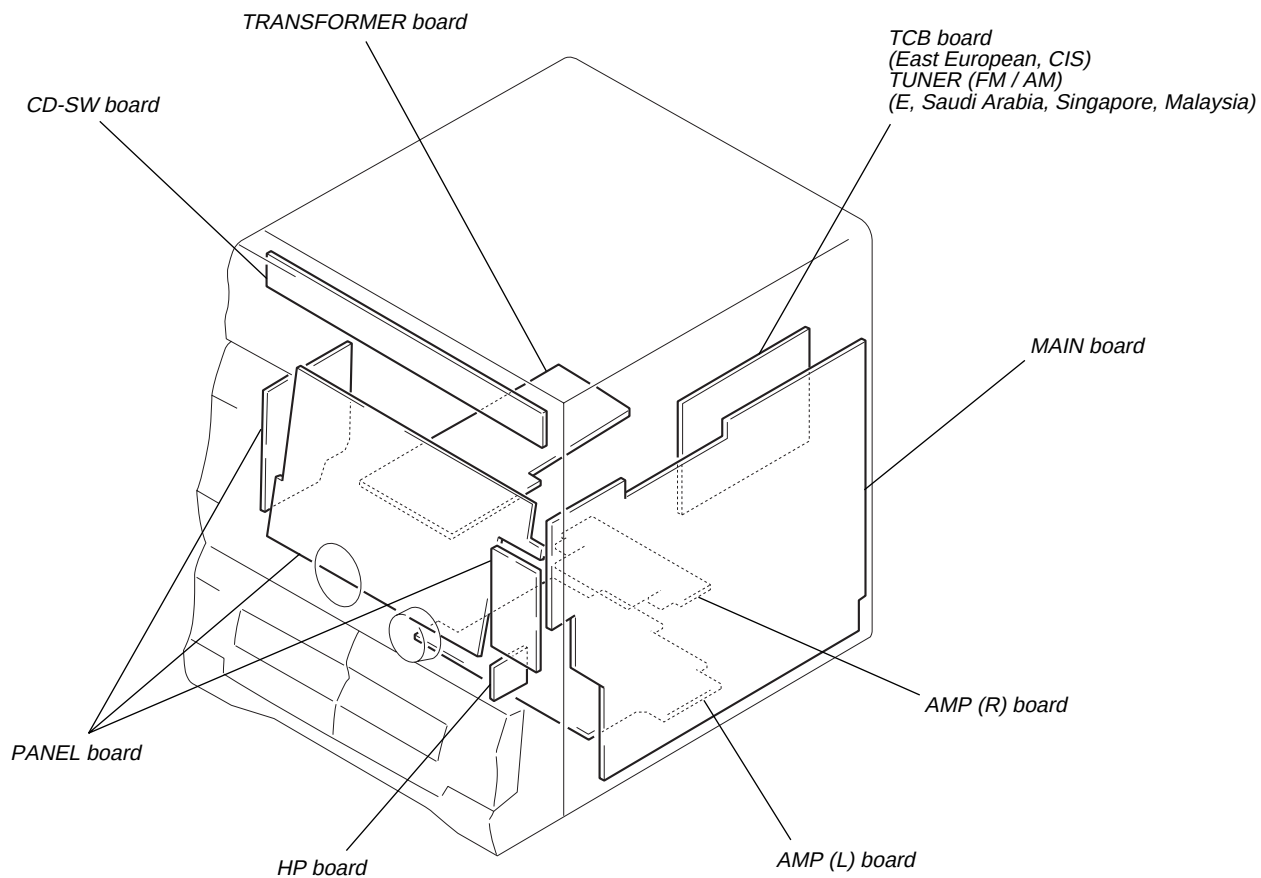
Adjustment Location:

[BD BOARD] (Conductor Side)

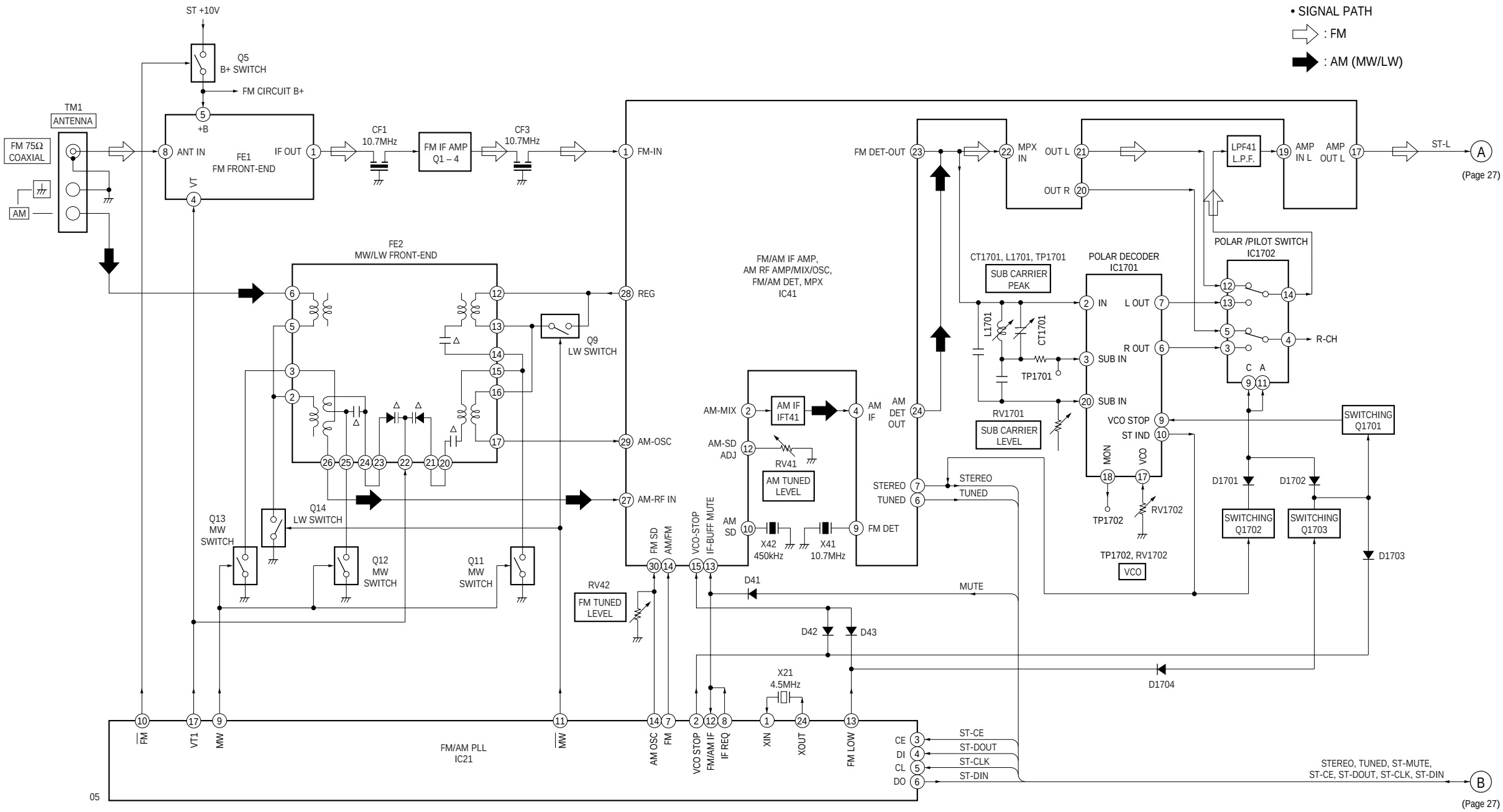


SECTION 7 DIAGRAMS

• Circuit Boards Location

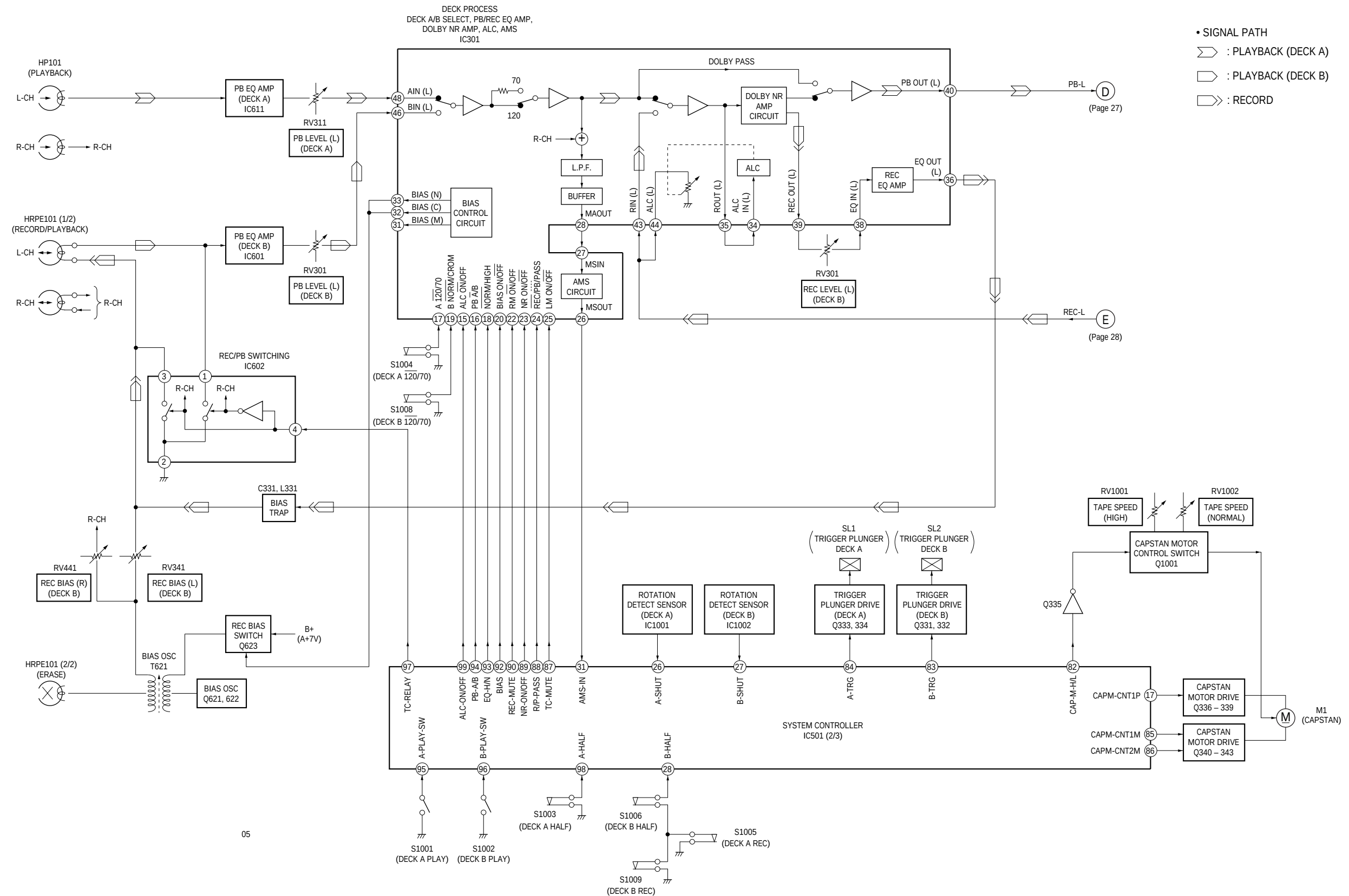


7-1. BLOCK DIAGRAM – TUNER Section (East European, CIS models only) –

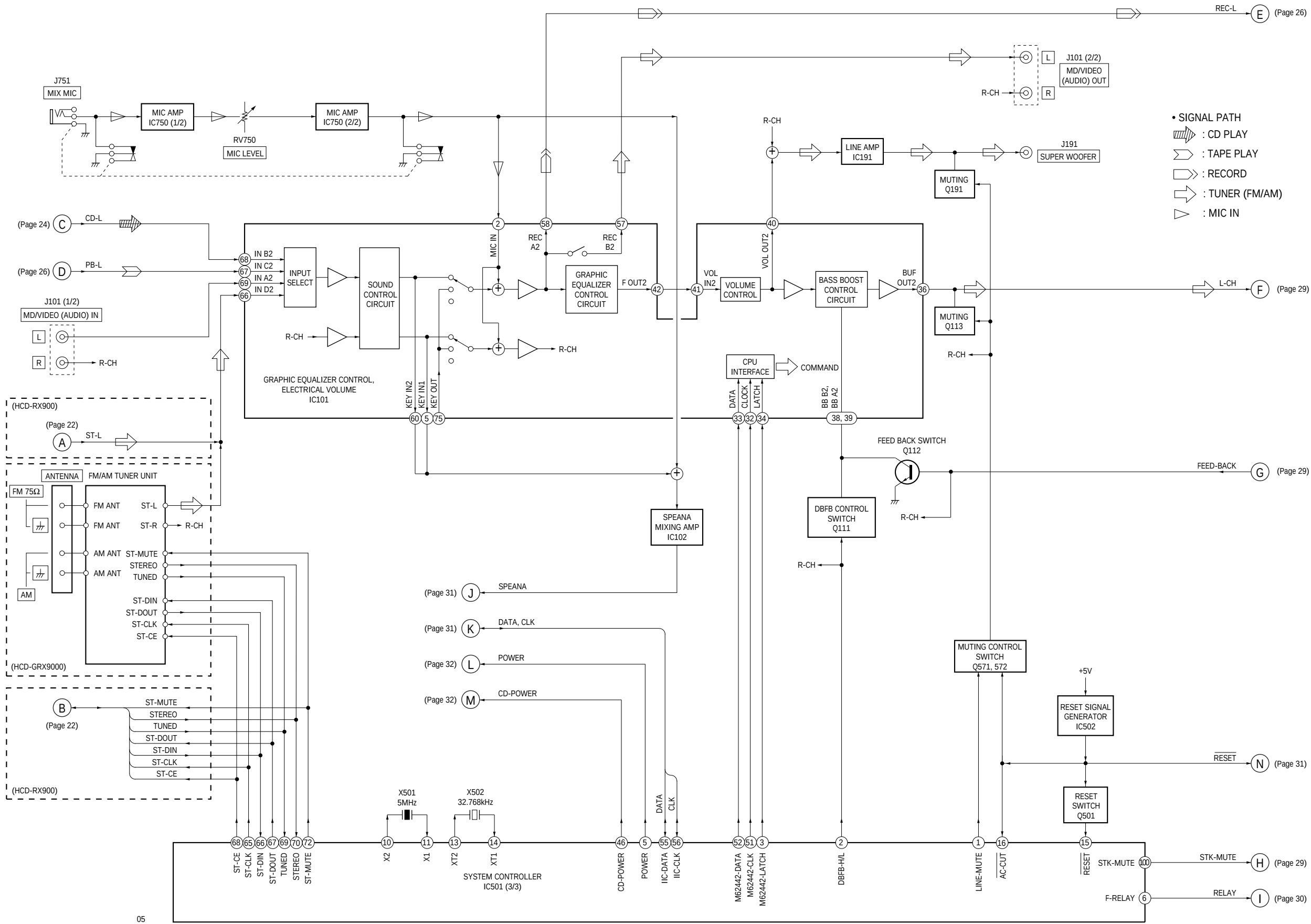




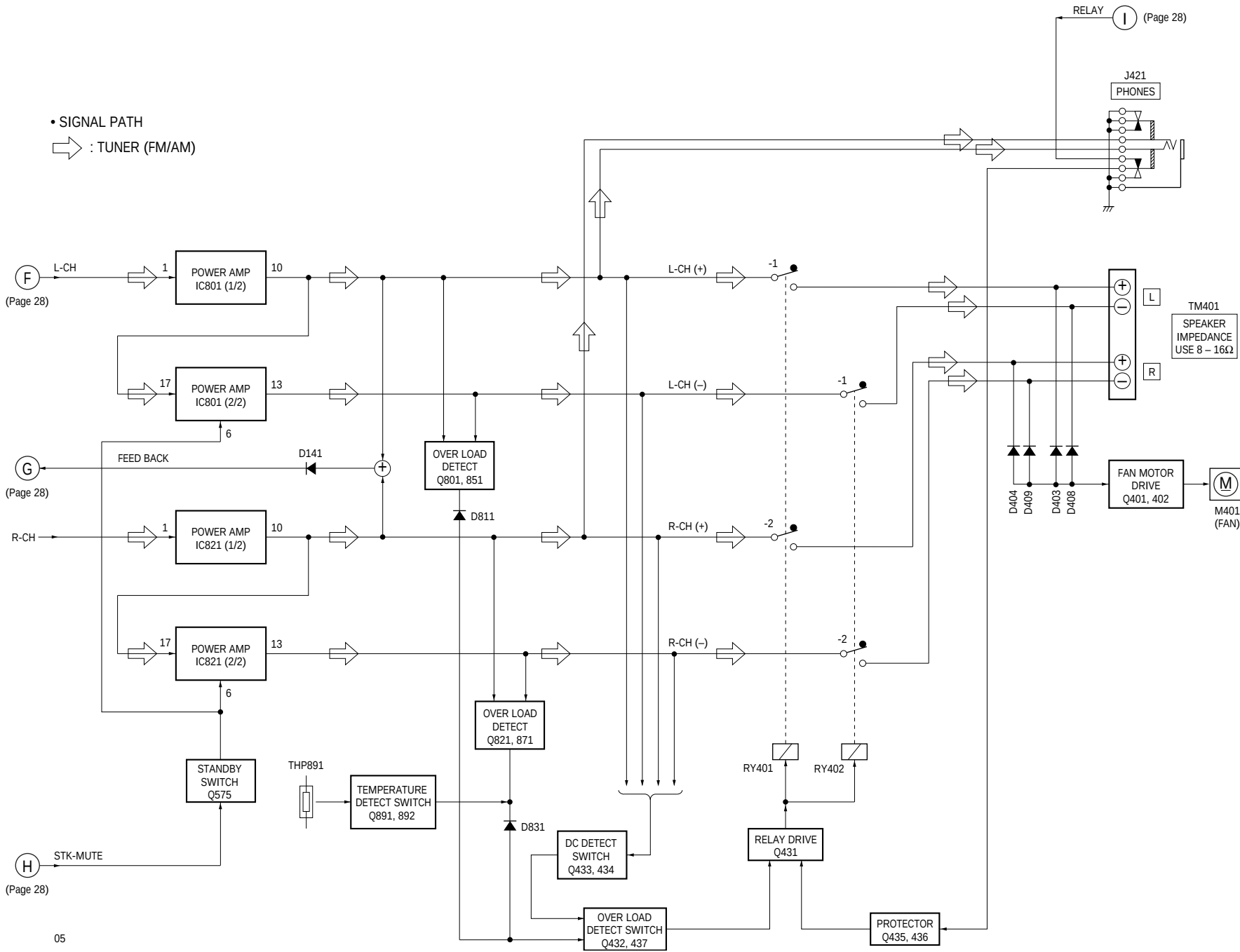
7-3. BLOCK DIAGRAM –TAPE DECK Section –



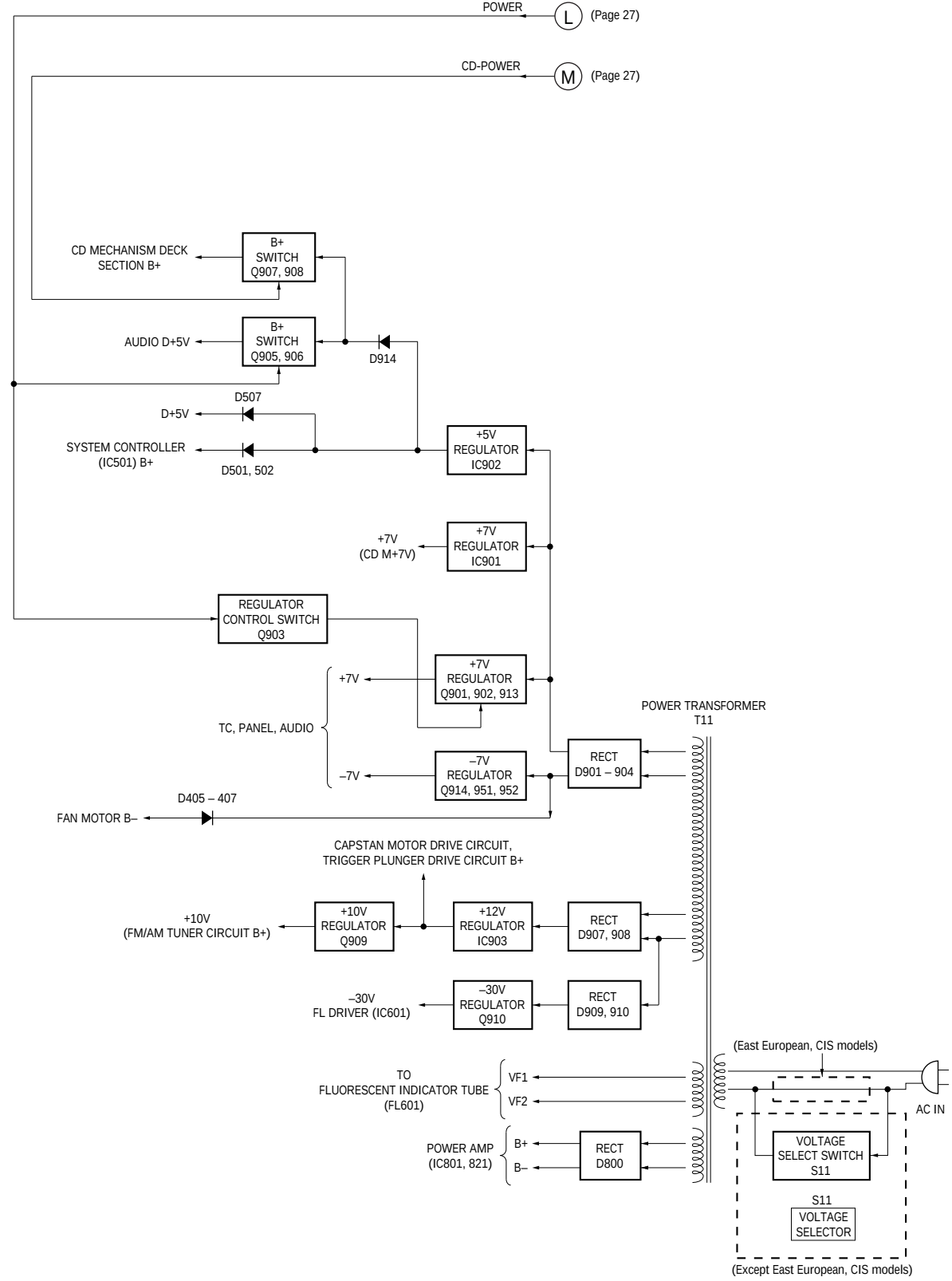
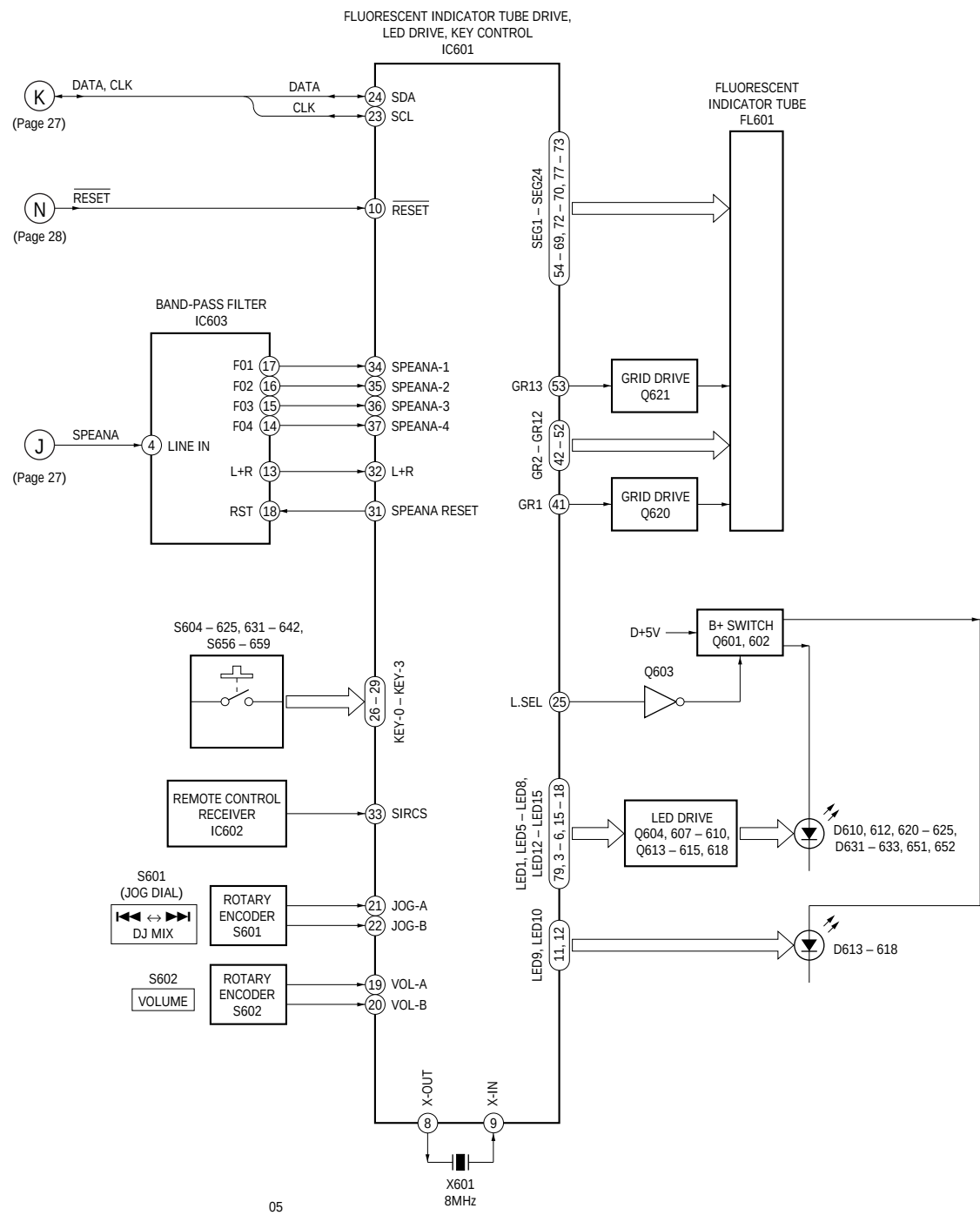
7-4. BLOCK DIAGRAM – MAIN Section (1/2) –



7-5. BLOCK DIAGRAM – MAIN Section (2/2) –



7-6. BLOCK DIAGRAM – DISPLAY/KEY CONTROL/POWER SUPPLY Section –



7-7. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

(In addition to this, the necessary note is printed in each block.)

Note on Schematic Diagram:

- 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 W and $\frac{1}{4}$ W or less unless otherwise specified.
- $\triangle$: internal component.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

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

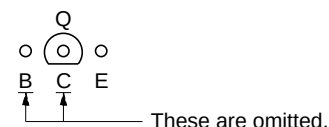
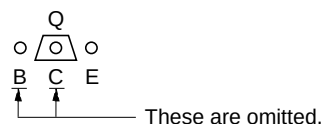
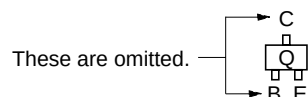
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 -  : FM
 -  : AM
 -  : PB (DECK A)
 -  : PB (DECK B)
 -  : REC (DECK B)
 -  : CD
 -  : DIGITAL OUT
 -  : MIC IN
- Abbreviation
 - EA : Saudi Arabia model.
 - EE : East European model.
 - MY : Malaysia model.
 - SP : Singapore model.

Note on Printed Wiring Boards:

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

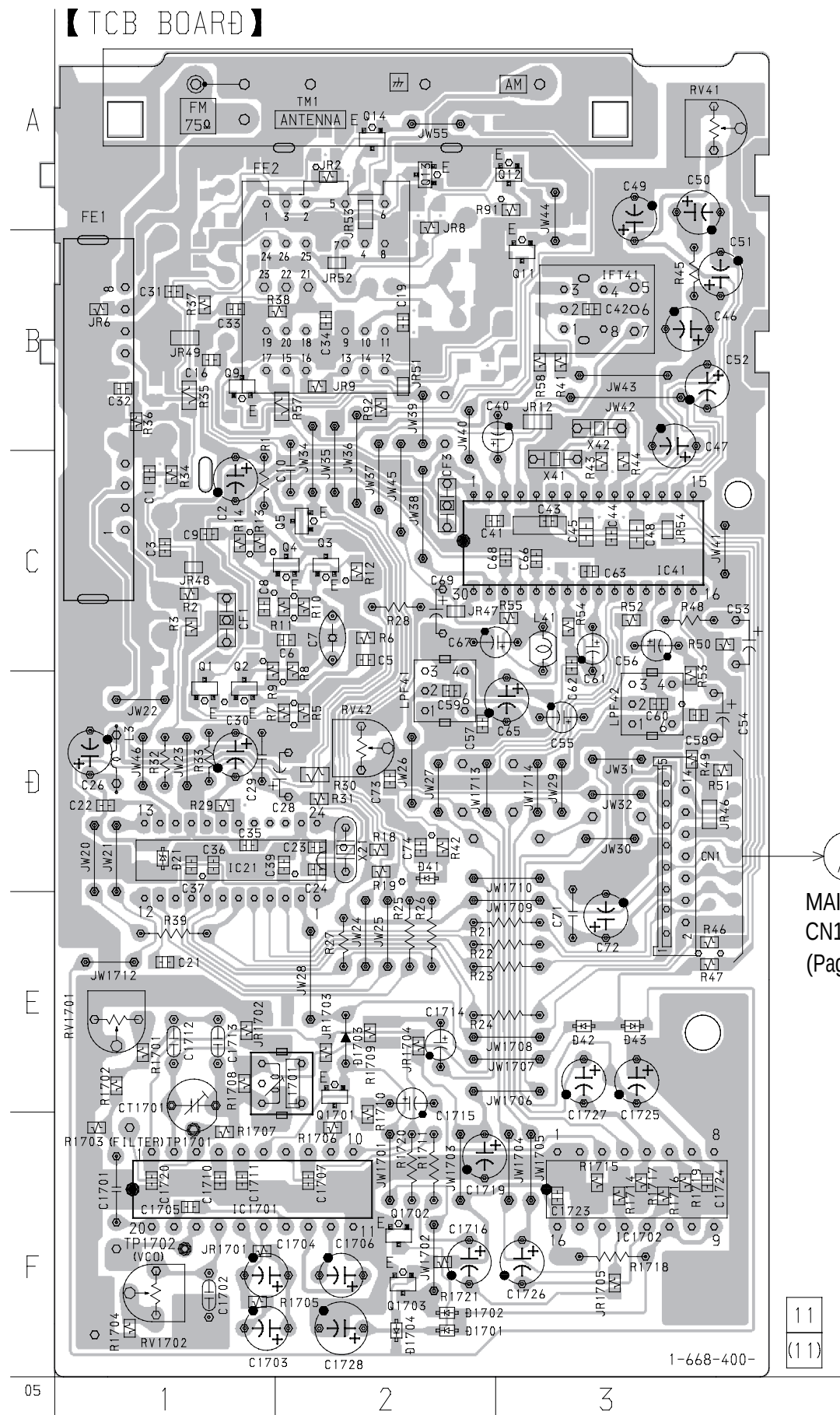
Caution:
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
(Side B)
Parts face side: Parts on the parts face side seen from the parts face are indicated.
(Side A)

- Indication of transistor.



7-8. PRINTED WIRING BOARD – TUNER Section (East European, CIS models only) –

• See page 20 for Circuit Boards Location.

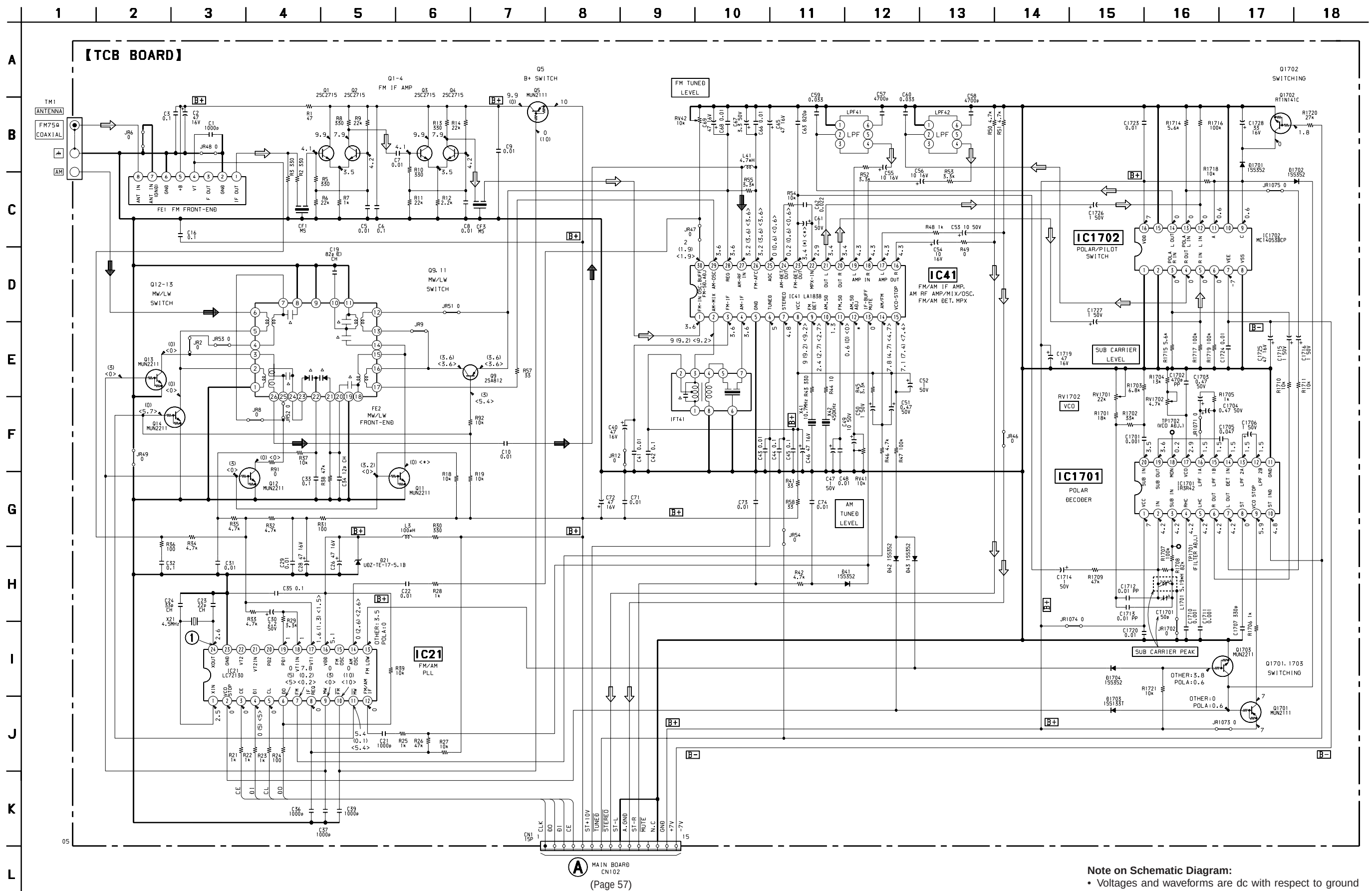


• Semiconductor Location

Ref. No.	Location
D21	D-1
D41	D-2
D42	E-3
D43	E-3
D1701	F-2
D1702	F-2
D1703	E-2
D1704	F-2
IC21	D-1
IC41	C-3
IC1701	F-1
IC1702	F-3
Q1	D-1
Q2	D-2
Q3	C-2
Q4	C-2
Q5	C-2
Q9	B-1
Q11	B-3
Q12	A-3
Q13	A-2
Q14	A-2
Q1701	E-2
Q1702	F-2
Q1703	F-2

MAIN BOARD
CN102
(Page 52)

7-9. SCHEMATIC DIAGRAM – TUNER Section (East European, CIS models only) –
 • See page 75 for Waveforms. • See pages 76 and 77 for IC Block Diagrams.



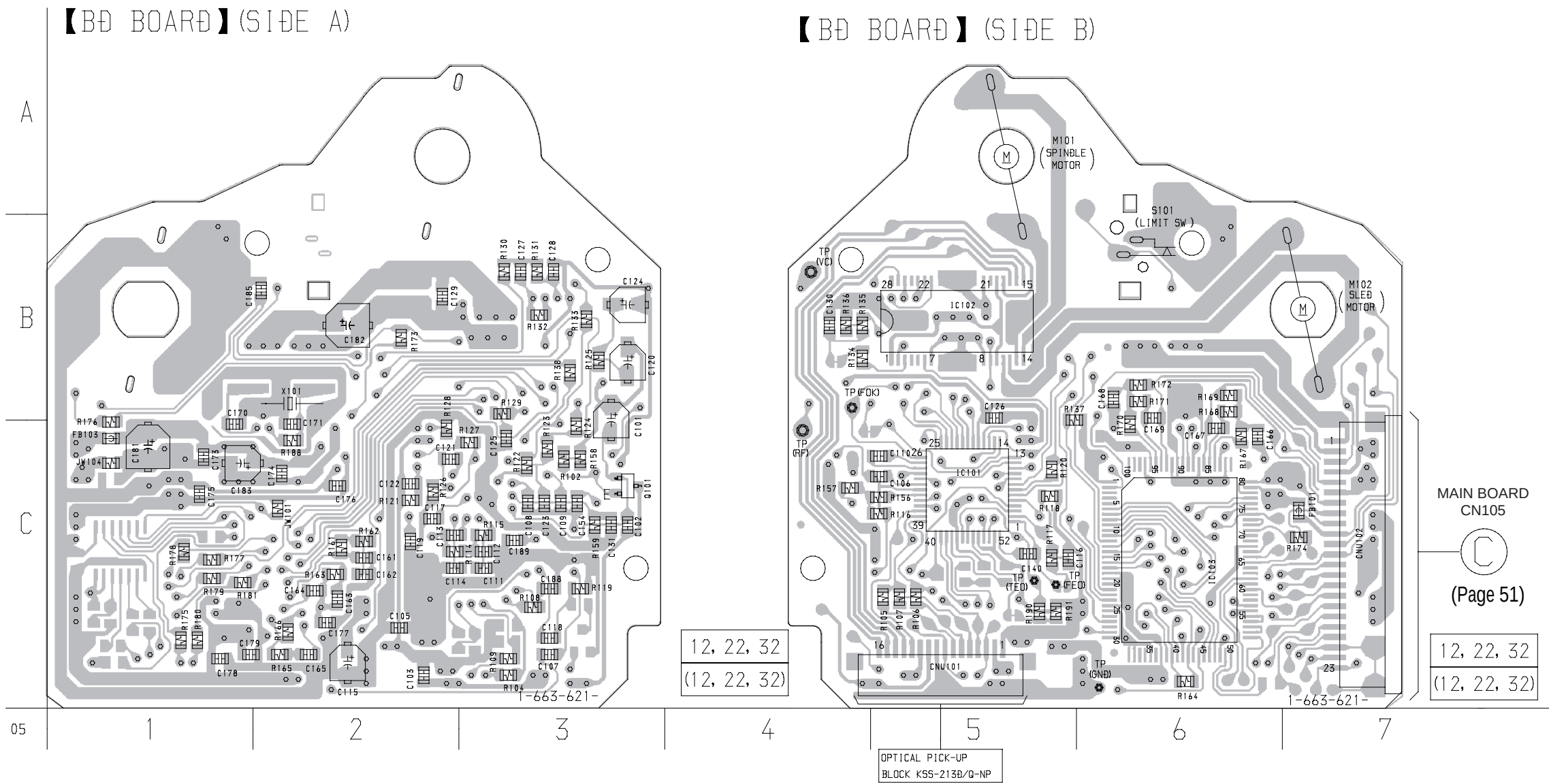
Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
 () : MW
 < : LW
 * : Impossible to measure

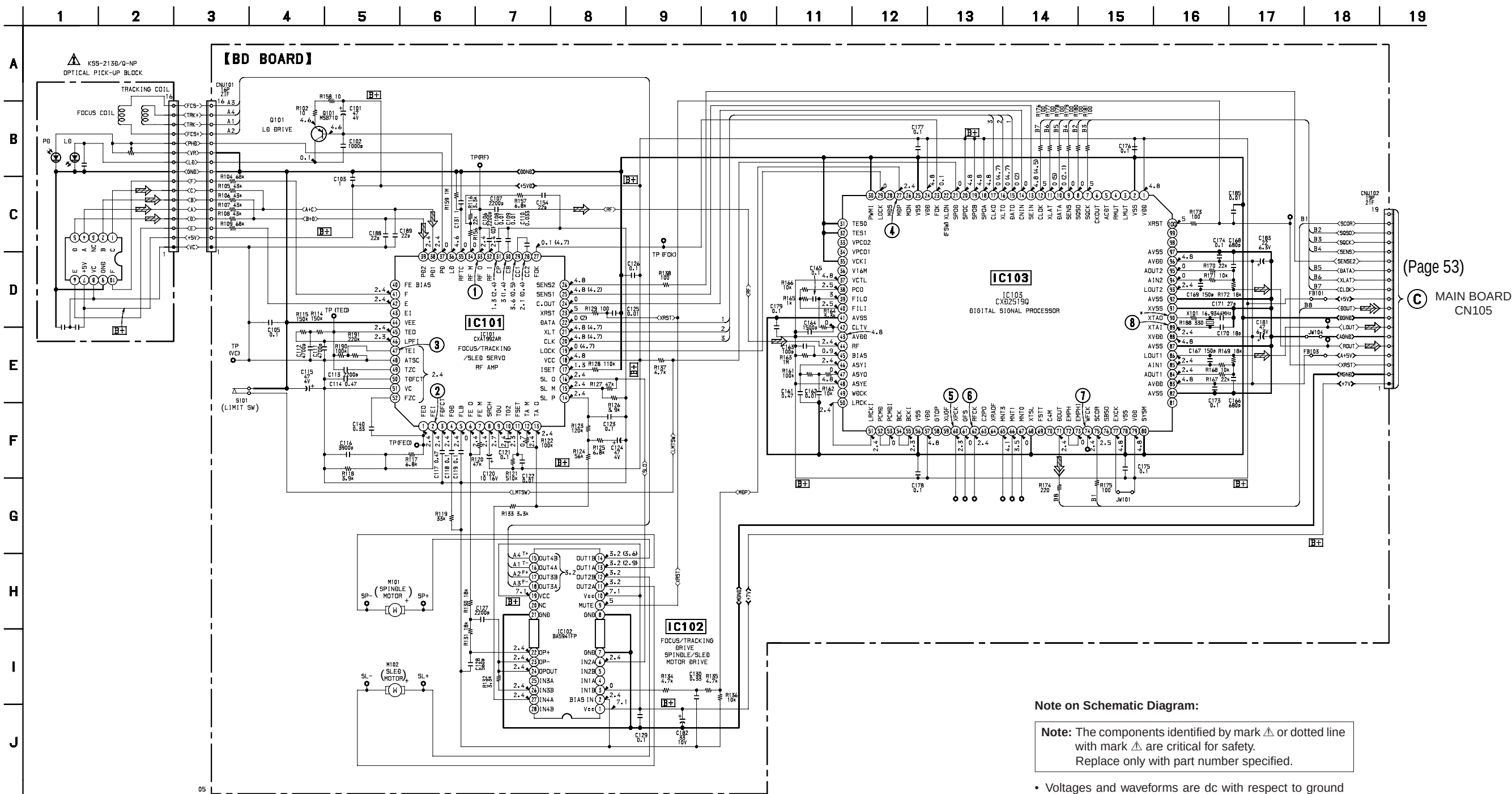
7-10. PRINTED WIRING BOARD – CD Section –
• See page 20 for Circuit Boards Location.

• Semiconductor
Location

Ref. No.	Location
IC101	C-5
IC102	B-5
IC103	C-6
Q101	C-3

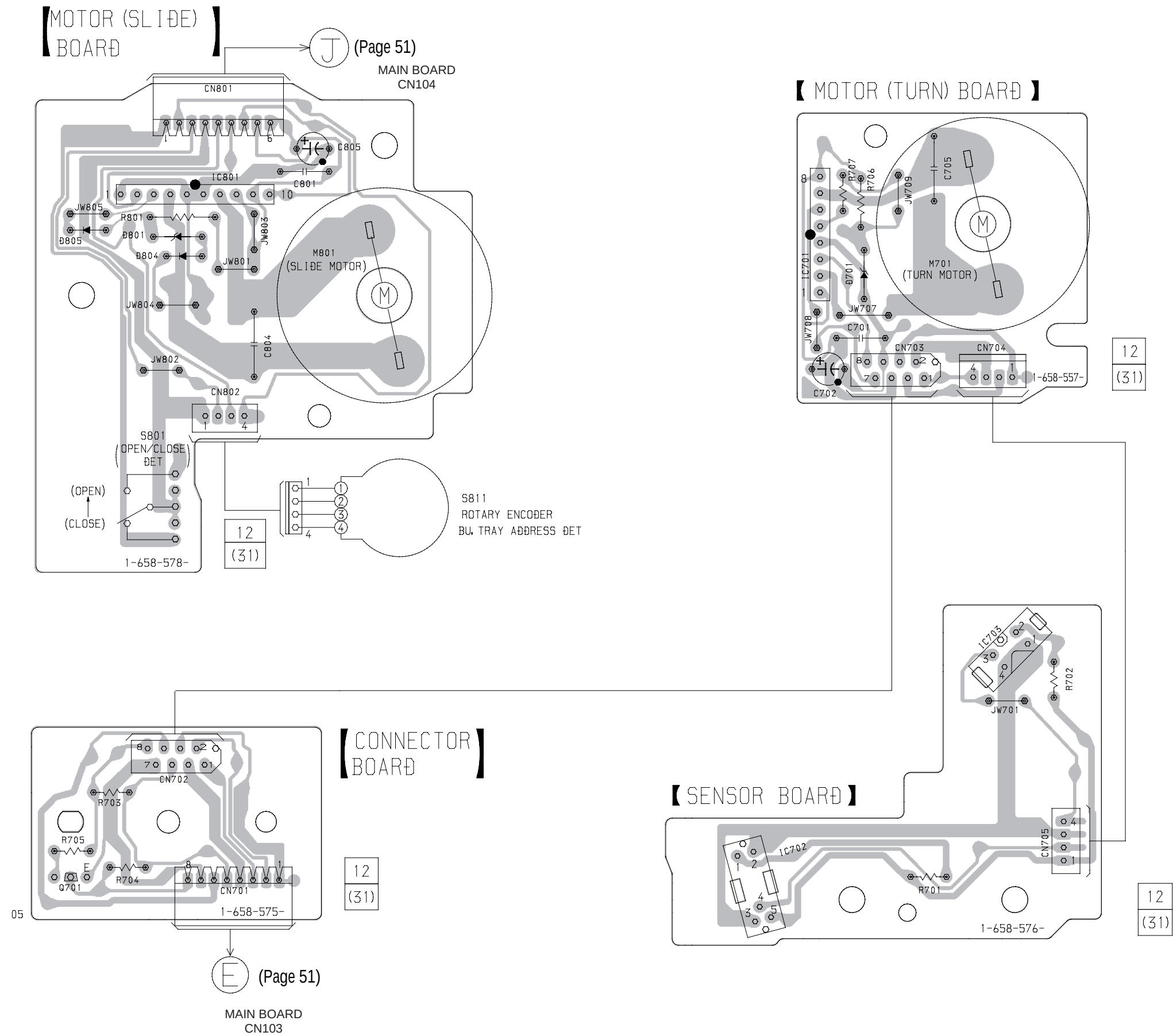


7-11. SCHEMATIC DIAGRAM – CD Section – • See page 75 for Waveforms. • See pages 78 and 79 for IC Block Diagrams.



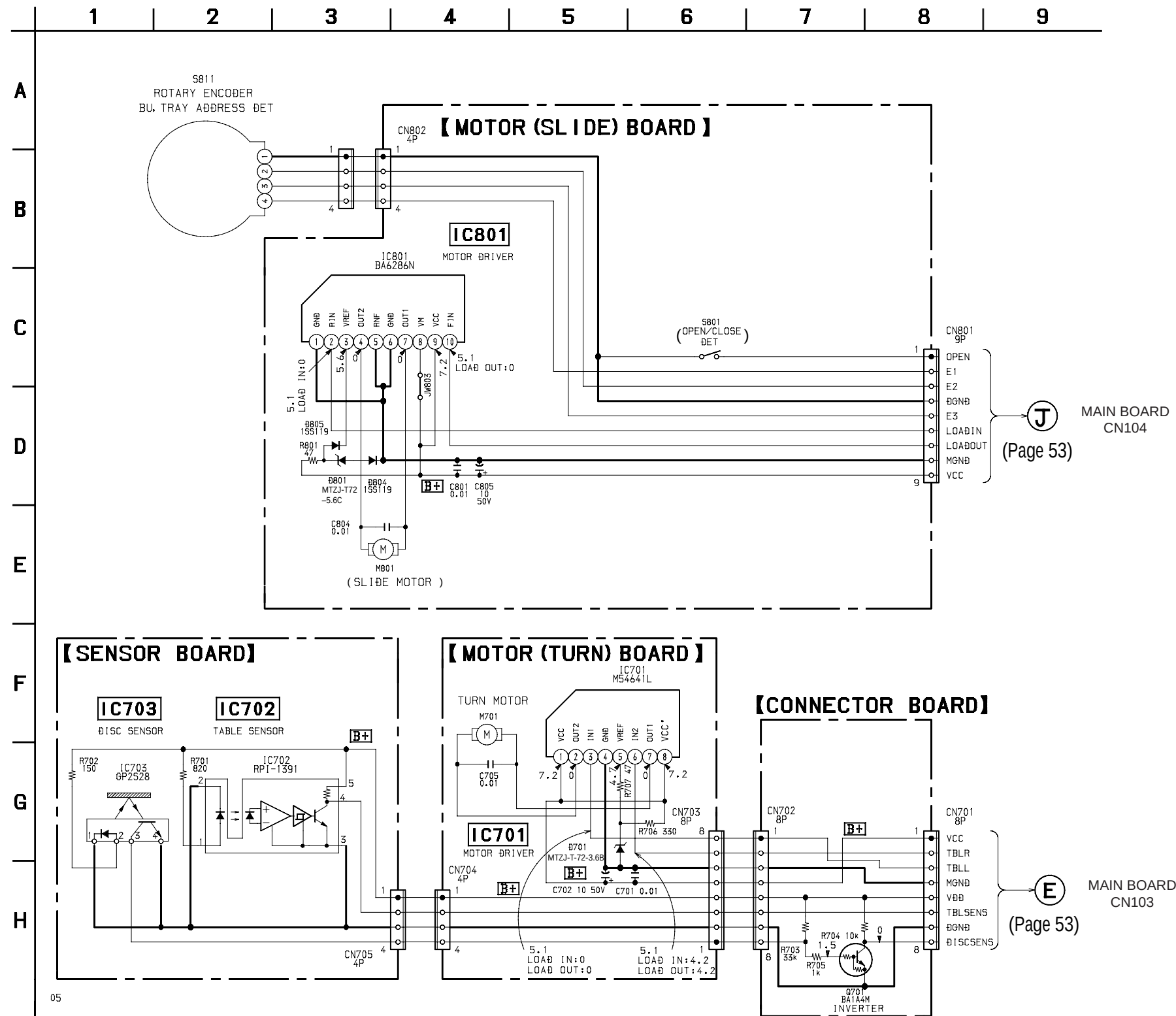
(Page 53)
C MAIN BOARD
CN105

7-12. PRINTED WIRING BOARDS – CD MOTOR Section –
• See page 20 for Circuit Boards Location.



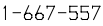
7-13. SCHEMATIC DIAGRAM – CD MOTOR Section –

- See page 80 for IC Block Diagrams.

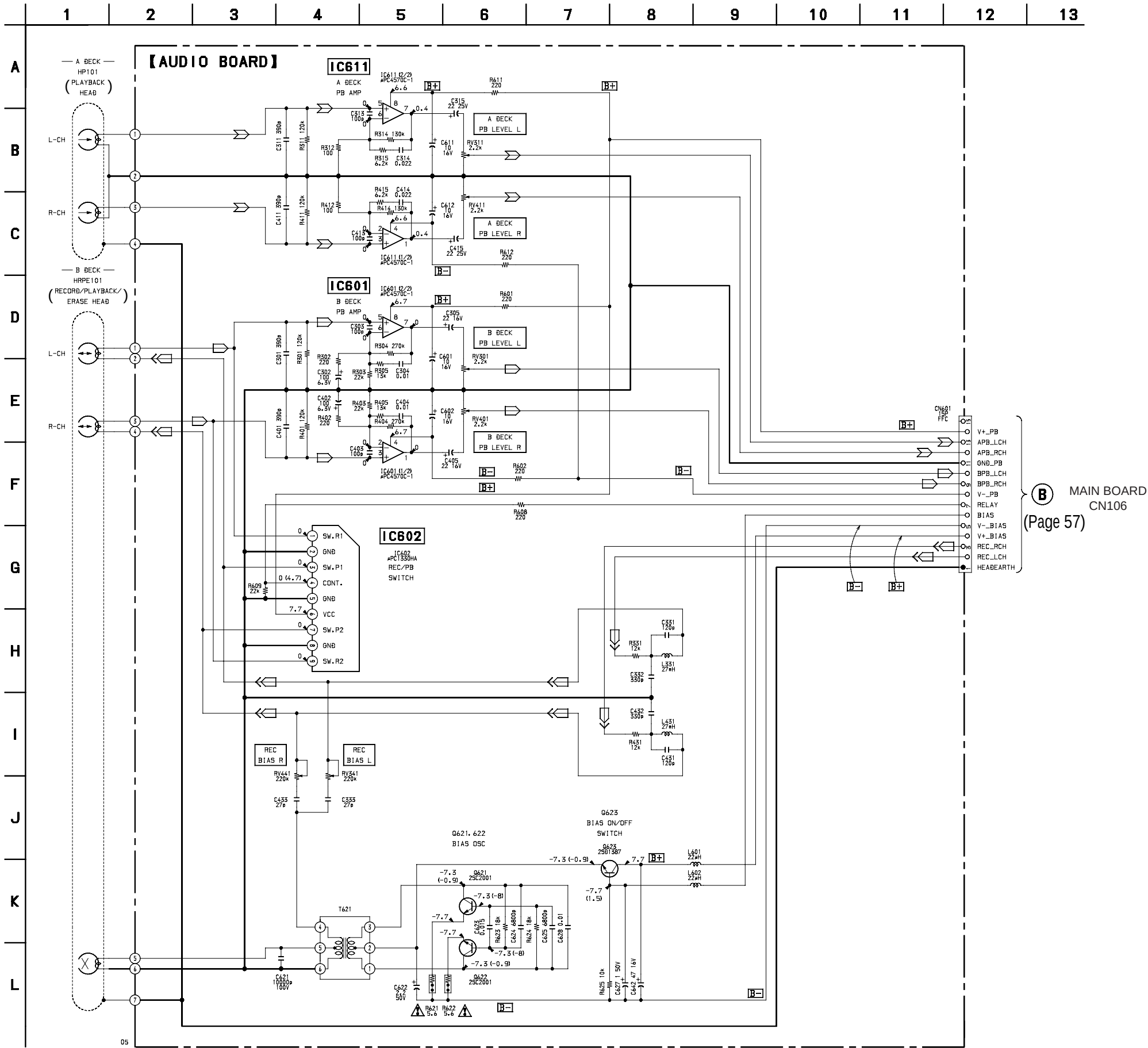


Note on Schematic Diagram:

- Voltages are dc with respect to ground under no-signal conditions.
- no mark : STOP



7-15. SCHEMATIC DIAGRAM – TAPE DECK Section –
• See page 80 for IC Block Diagram.

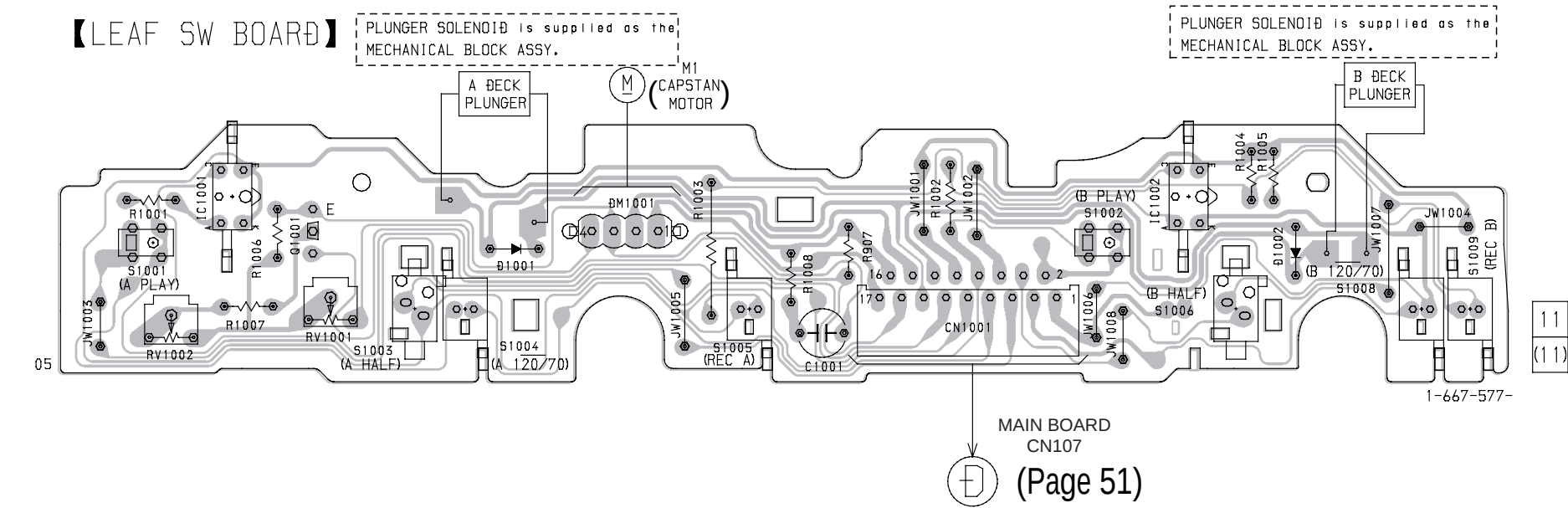


Note on Schematic Diagram:

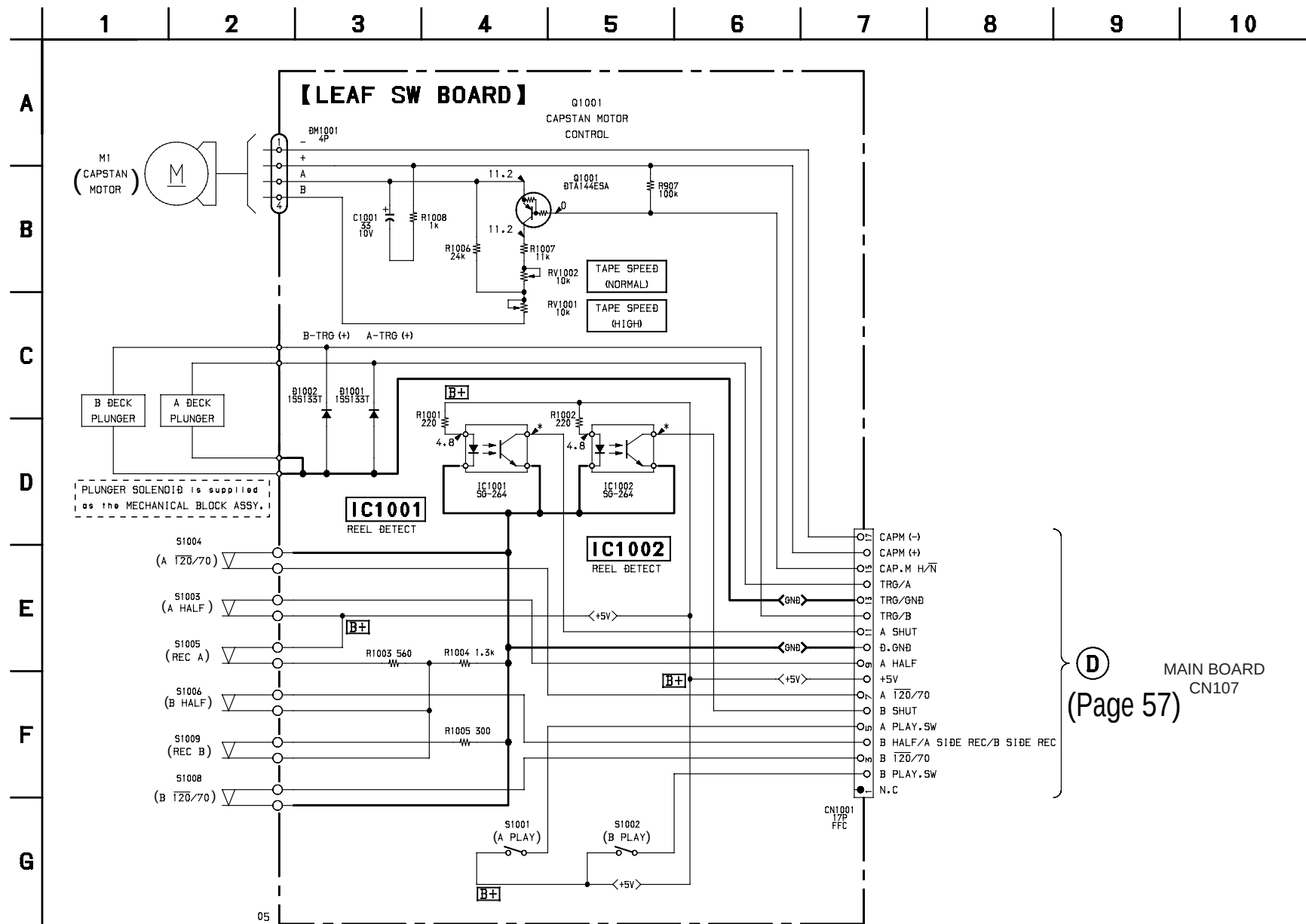
Note: The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety. Replace only with part number specified.

- Voltages are dc with respect to ground under no-signal conditions.
no mark : PLAY
() : REC

7-16. PRINTED WIRING BOARD – LEAF SW Section – • See page 20 for Circuit Boards Location.



7-17. SCHEMATIC DIAGRAM – LEAF SW Section –

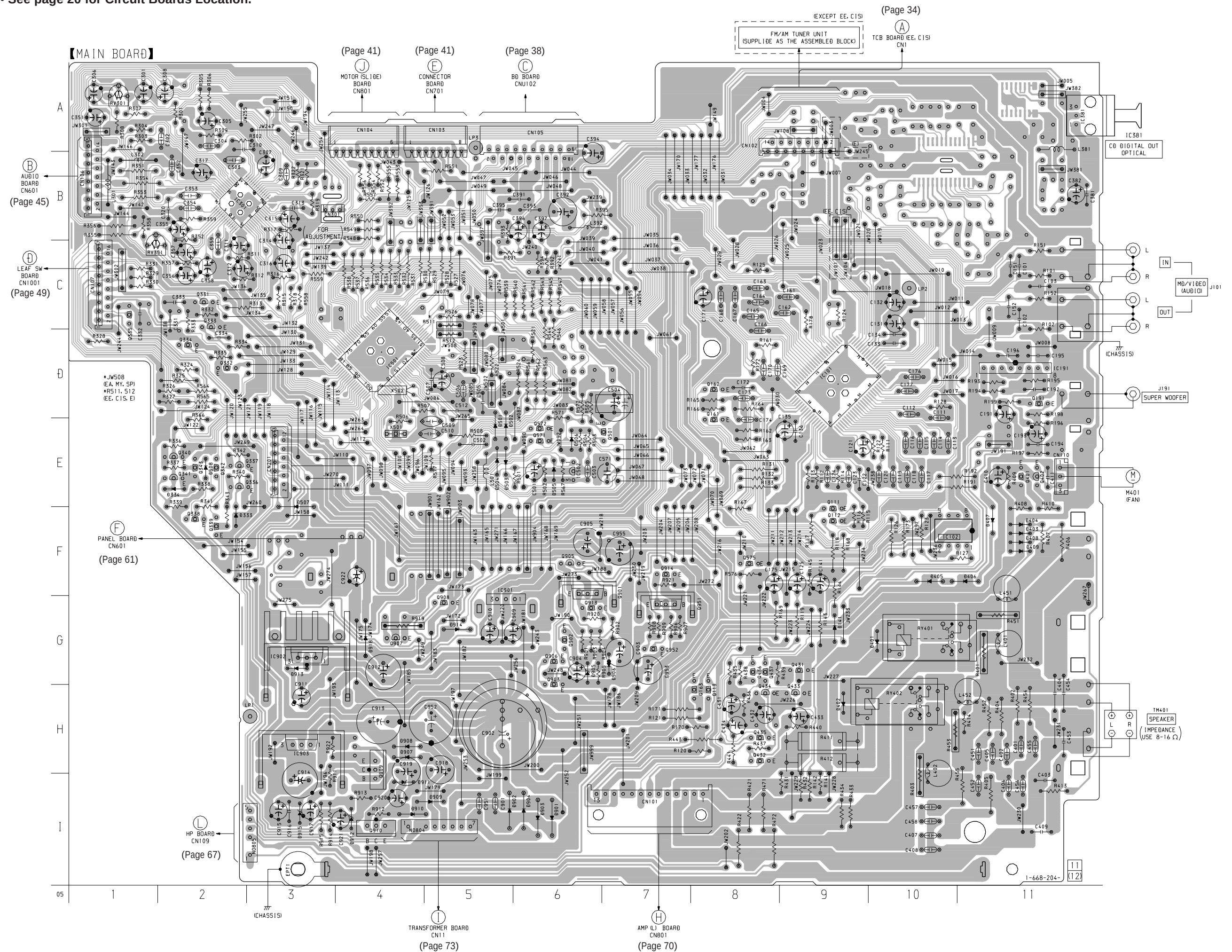


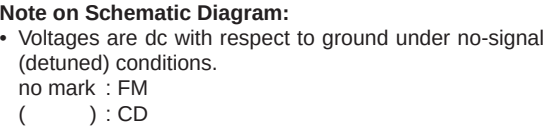
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D141	G-9	Q111	F-9
D333	F-2	Q112	F-9
D334	E-2	Q113	H-8
D401	G-10	Q161	E-8
D402	H-9	Q162	D-8
D403	F-11	Q163	H-8
D404	F-11	Q191	D-11
D405	F-10	Q331	C-2
D406	F-11	Q332	D-2
D407	F-11	Q333	C-2
D408	F-11	Q334	D-2
D409	F-11	Q335	C-1
D501	E-5	Q336	E-2
D502	E-5	Q337	E-2
D503	E-5	Q338	F-2
D504	E-5	Q339	F-2
D505	E-6	Q340	E-2
D506	E-6	Q341	E-2
D507	E-3	Q342	E-2
D508	E-2	Q343	E-2
D901	I-6	Q401	E-11
D902	I-5	Q402	E-11
D903	I-6	Q431	G-9
D904	I-6	Q432	H-8
D905	G-6	Q433	H-9
D906	G-7	Q434	H-8
D907	H-4	Q435	H-8
D908	H-4	Q436	G-8
D909	I-5	Q437	G-8
D910	I-4	Q501	E-7
D911	I-4	Q571	E-6
D912	I-4	Q572	E-6
D913	G-3	Q575	F-8
D914	G-5	Q901	F-6
D915	I-3	Q902	G-6
		Q903	G-6
IC101	D-9	Q905	F-6
IC102	F-10	Q906	G-6
IC191	D-11	Q907	G-4
IC301	B-2	Q908	G-5
IC381	A-11	Q909	H-4
IC501	D-4	Q910	I-4
IC502	E-6	Q913	G-6
IC901	G-5	Q914	F-7
IC902	G-3	Q951	G-7
IC903	H-3	Q952	G-7

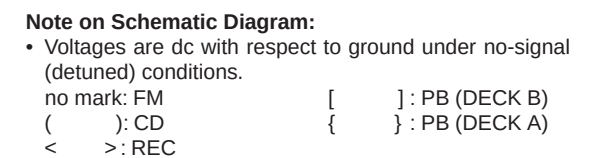
Note on Schematic Diagram:

- Voltages are dc with respect to ground under no-signal conditions.
- no mark : PLAY
- () : REC
- * : Impossible to measure



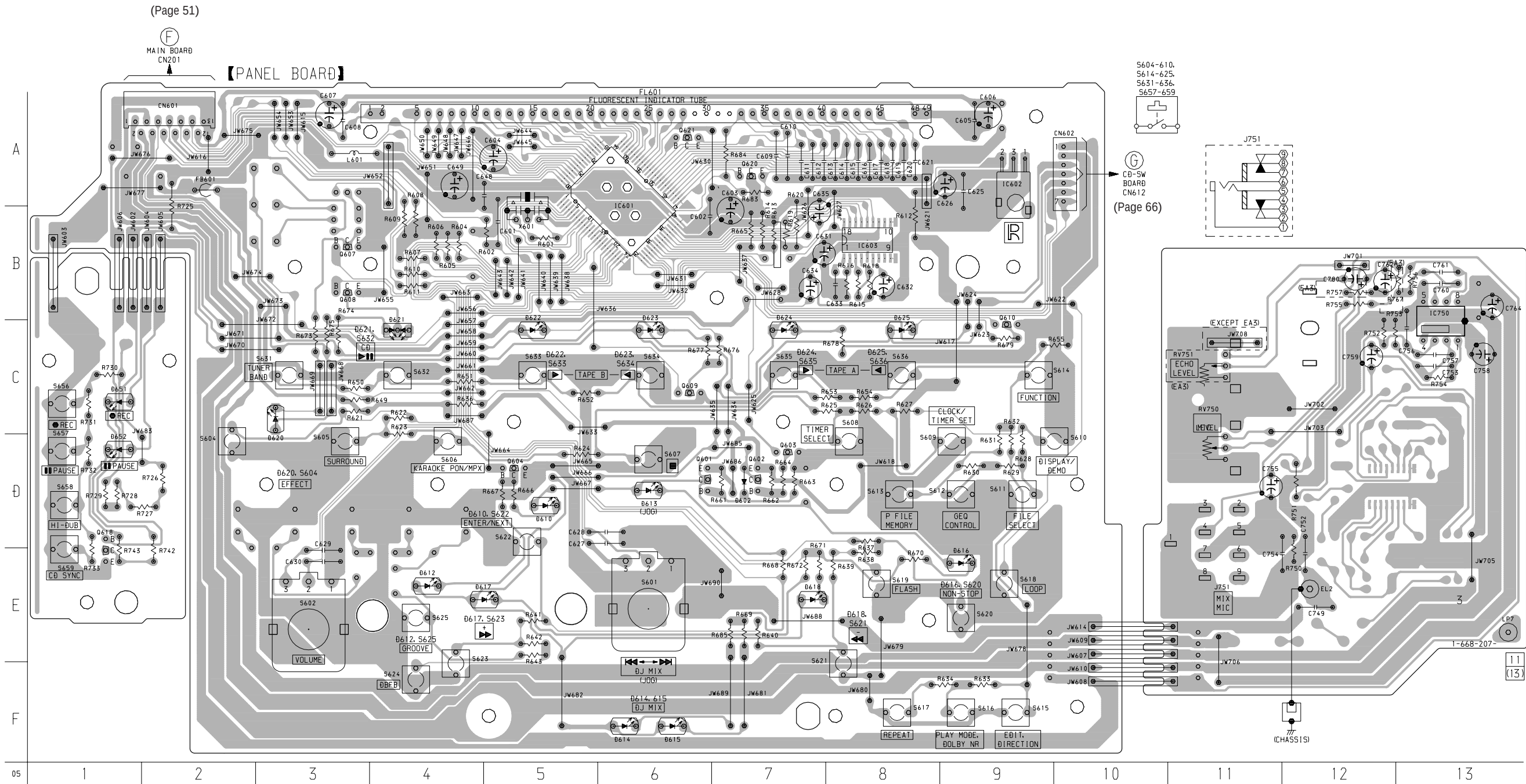


Note: The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.



– 59 –

7-23. PRINTED WIRING BOARD – PANEL Section –
• See page 20 for Circuit Boards Location.

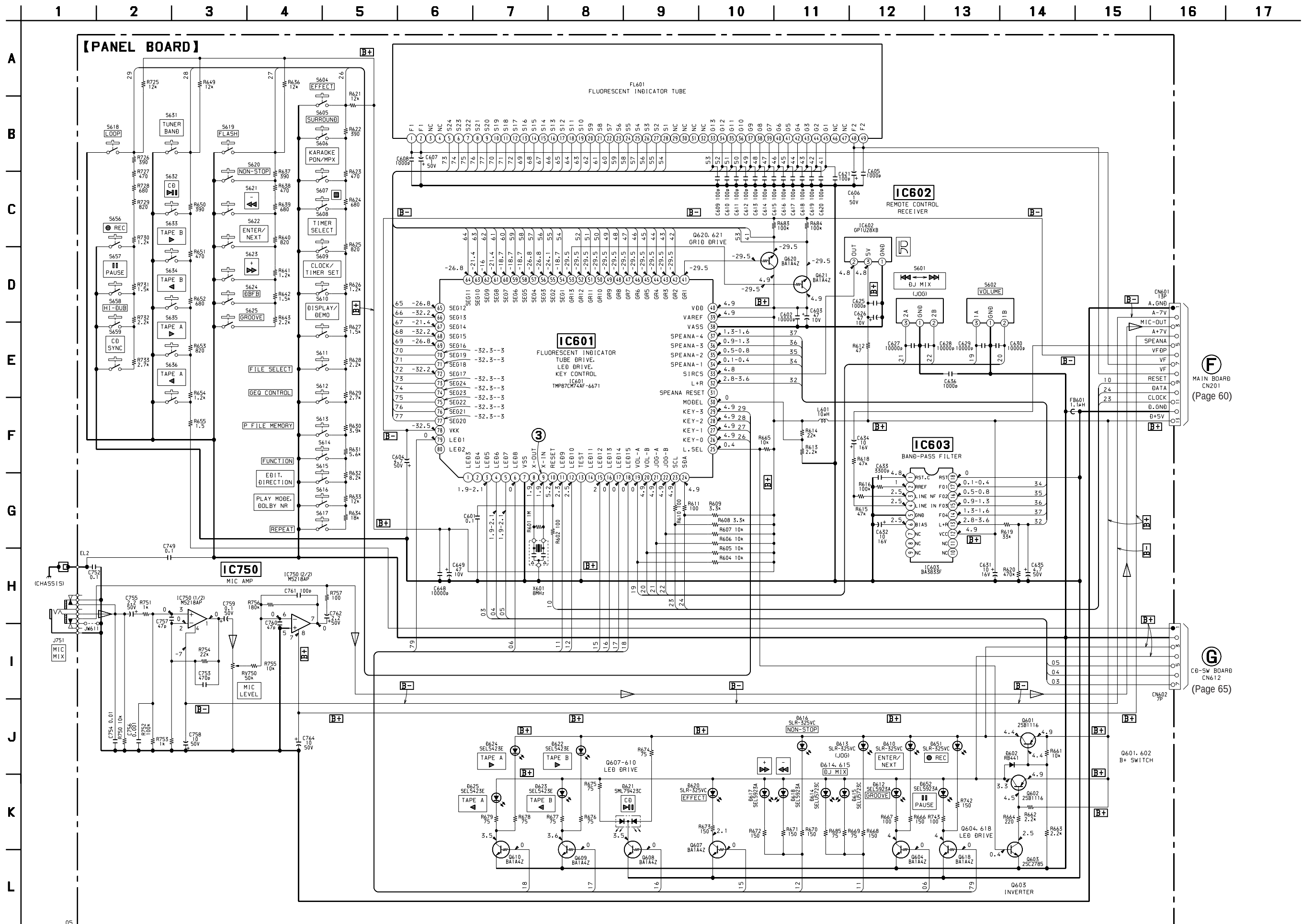


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D602	D-7	D651	C-1	Q610	C-9
D610	D-5	D652	D-1	Q618	E-1
D612	E-4			Q620	A-7
D613	D-6	IC601	B-6	Q621	A-6
D614	F-6	IC602	A-9		
D615	F-6	IC603	B-8		
D616	E-9	IC750	C-13		
D617	E-4				
D618	E-7	Q601	D-6		
D620	C-3	Q602	D-7		
D621	C-4	Q603	D-7		
D622	C-5	Q604	D-5		
D623	C-6	Q607	B-3		
D624	C-7	Q608	B-3		
D625	C-8	Q609	C-6		

7-24. SCHEMATIC DIAGRAM – PANEL Section –

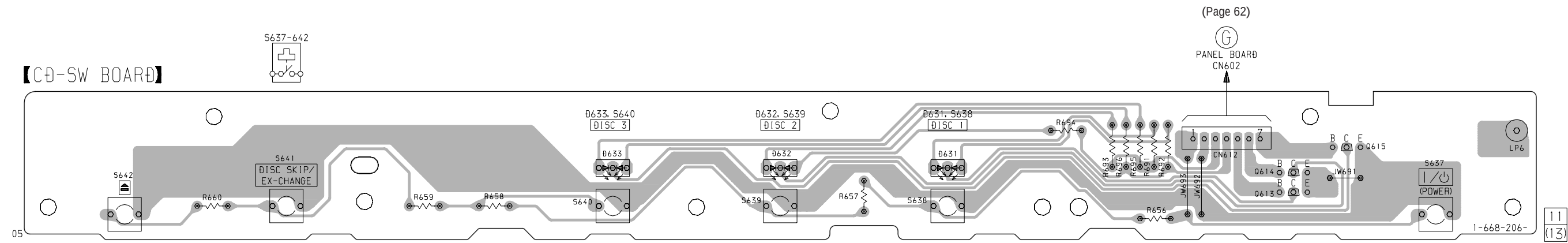
• See page 75 for Waveform. • See page 80 for IC Block Diagrams.



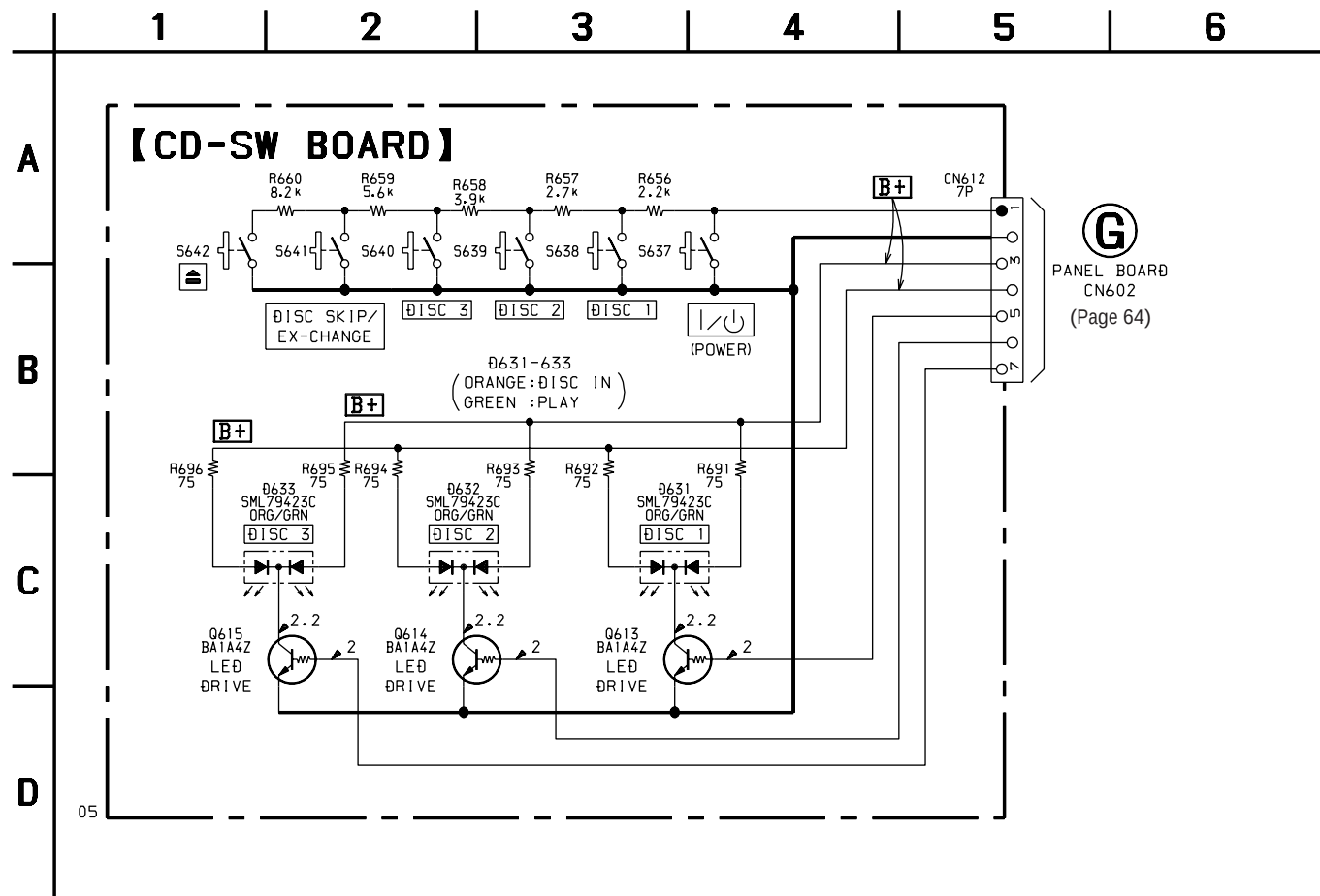
Note on Schematic Diagram:
 • Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : FM

7-25. PRINTED WIRING BOARD – CD-SW Section –

- See page 20 for Circuit Boards Location.



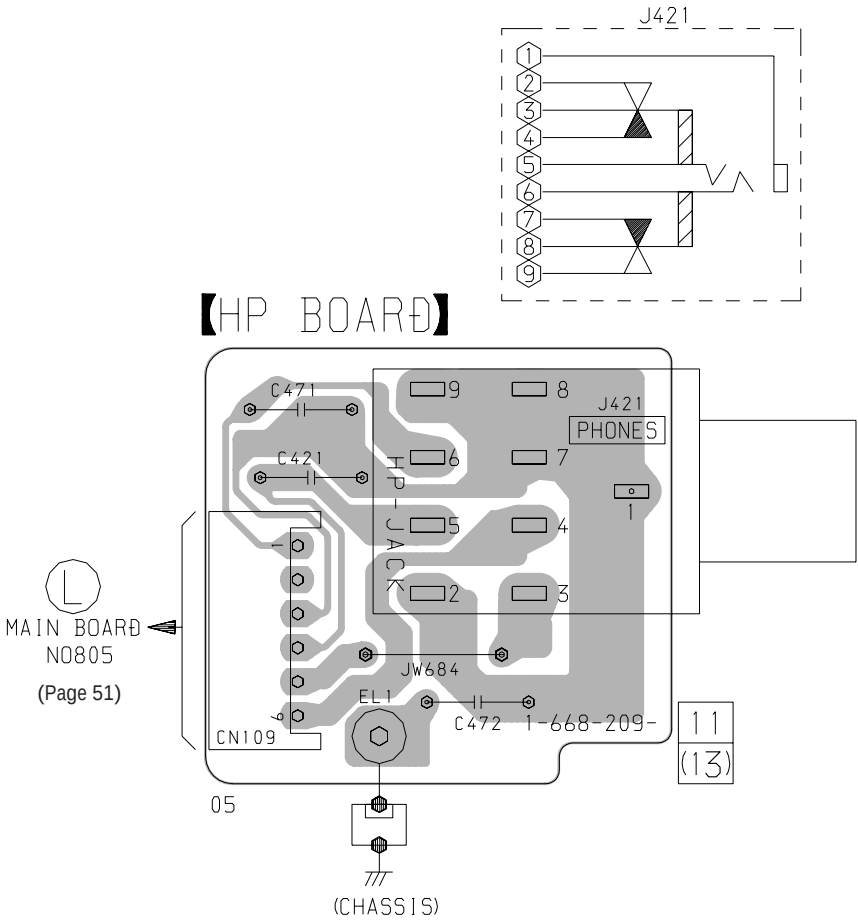
7-26. SCHEMATIC DIAGRAM – CD-SW Section –



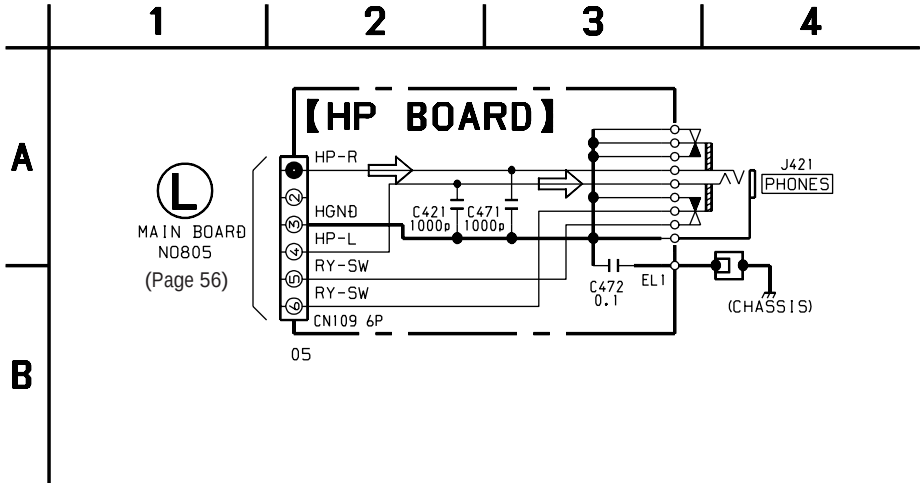
Note on Schematic Diagram:

- Voltages are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM

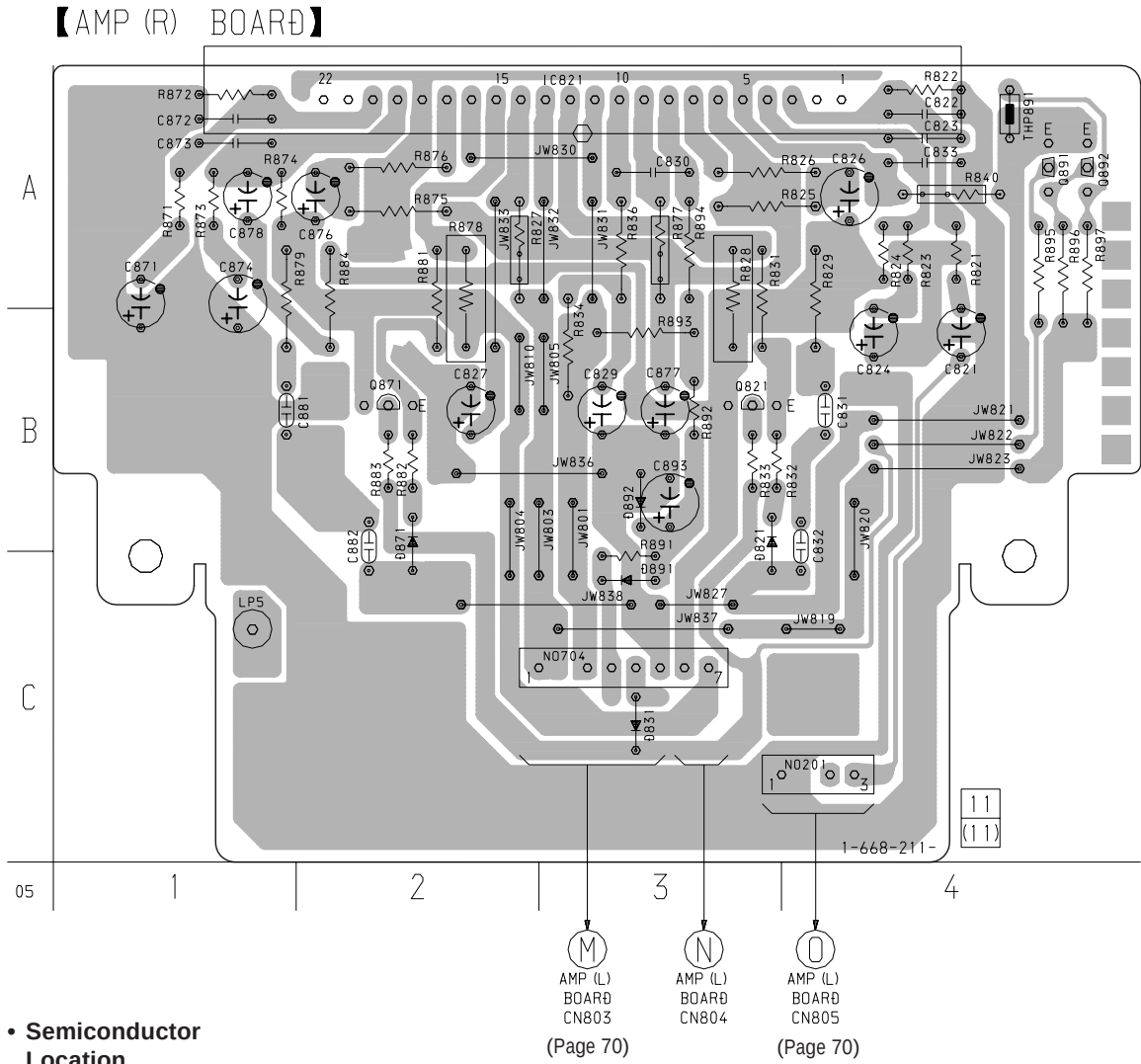
7-27. PRINTED WIRING BOARD – HP Section –
• See page 20 for Circuit Boards Location.



7-28. SCHEMATIC DIAGRAM – HP Section –



7-29. PRINTED WIRING BOARDS – POWER AMP Section –
• See page 20 for Circuit Boards Location.

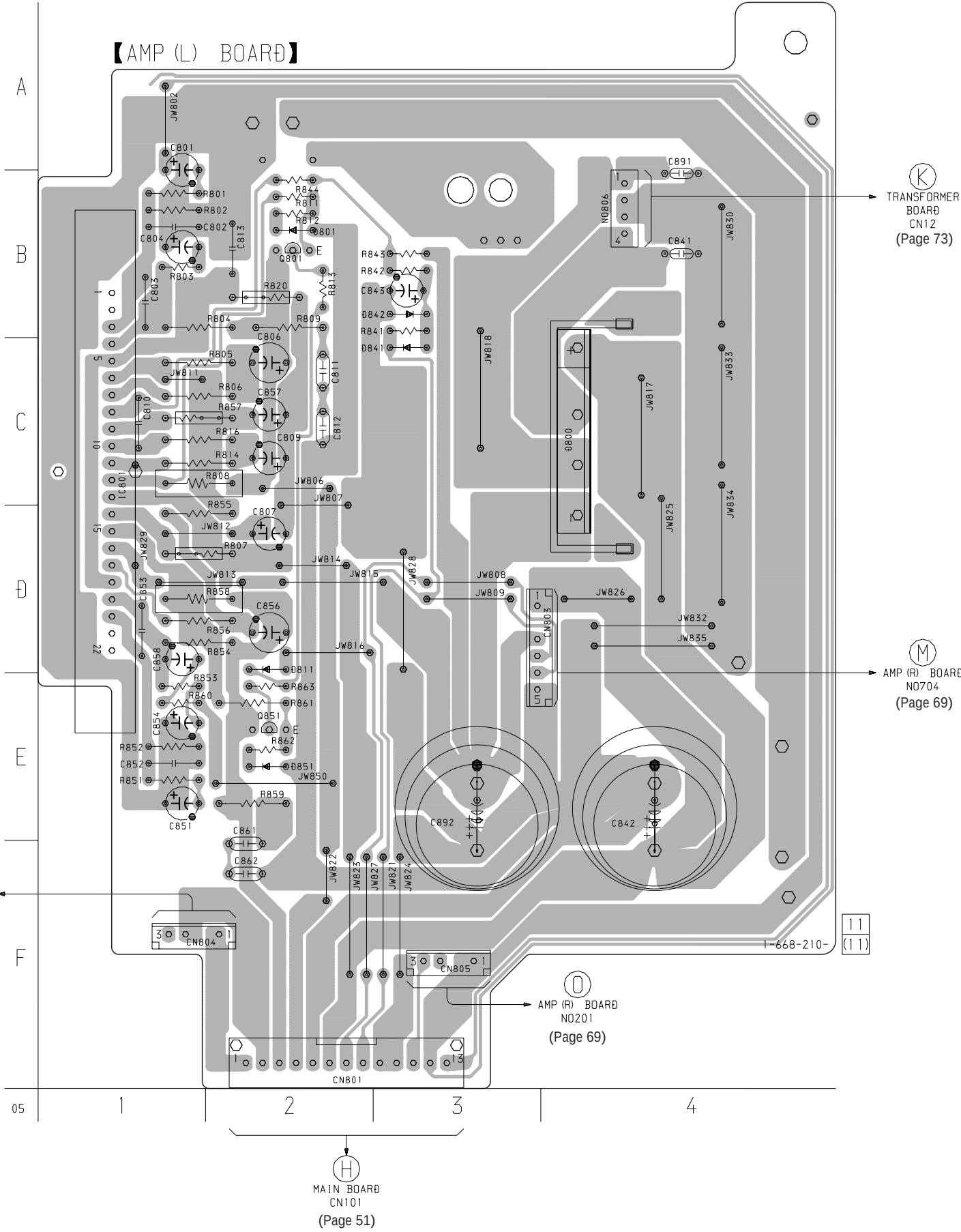


• Semiconductor Location
AMP (R) BOARD

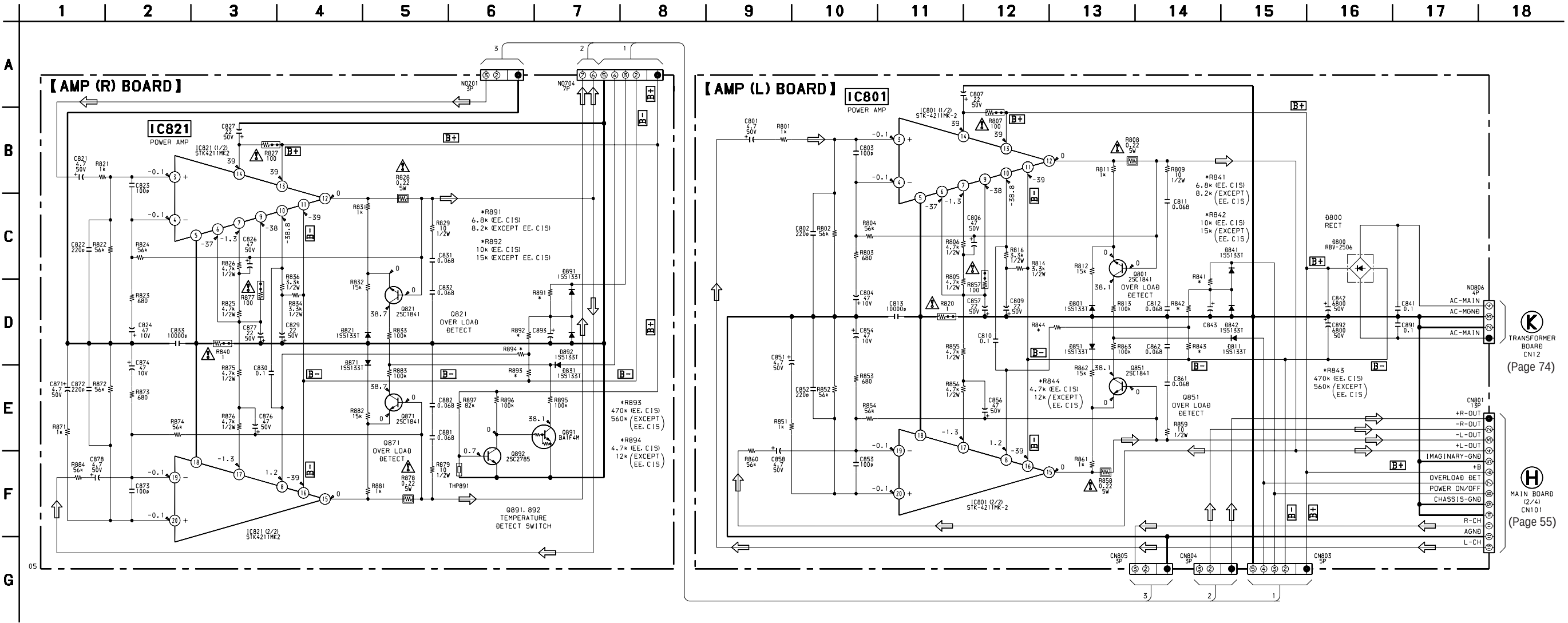
Ref. No.	Location
D821	B-3
D831	C-3
D871	B-2
D891	C-3
D892	B-3
IC821	A-3
Q821	B-3
Q871	B-2
Q891	A-4
Q892	A-4

• Semiconductor Location
AMP (L) BOARD

Ref. No.	Location
D800	C-4
D801	B-2
D811	D-2
D841	C-3
D842	B-3
D851	E-2
IC801	C-1
Q801	B-2
Q851	E-2



7-30. SCHEMATIC DIAGRAM – POWER AMP Section –

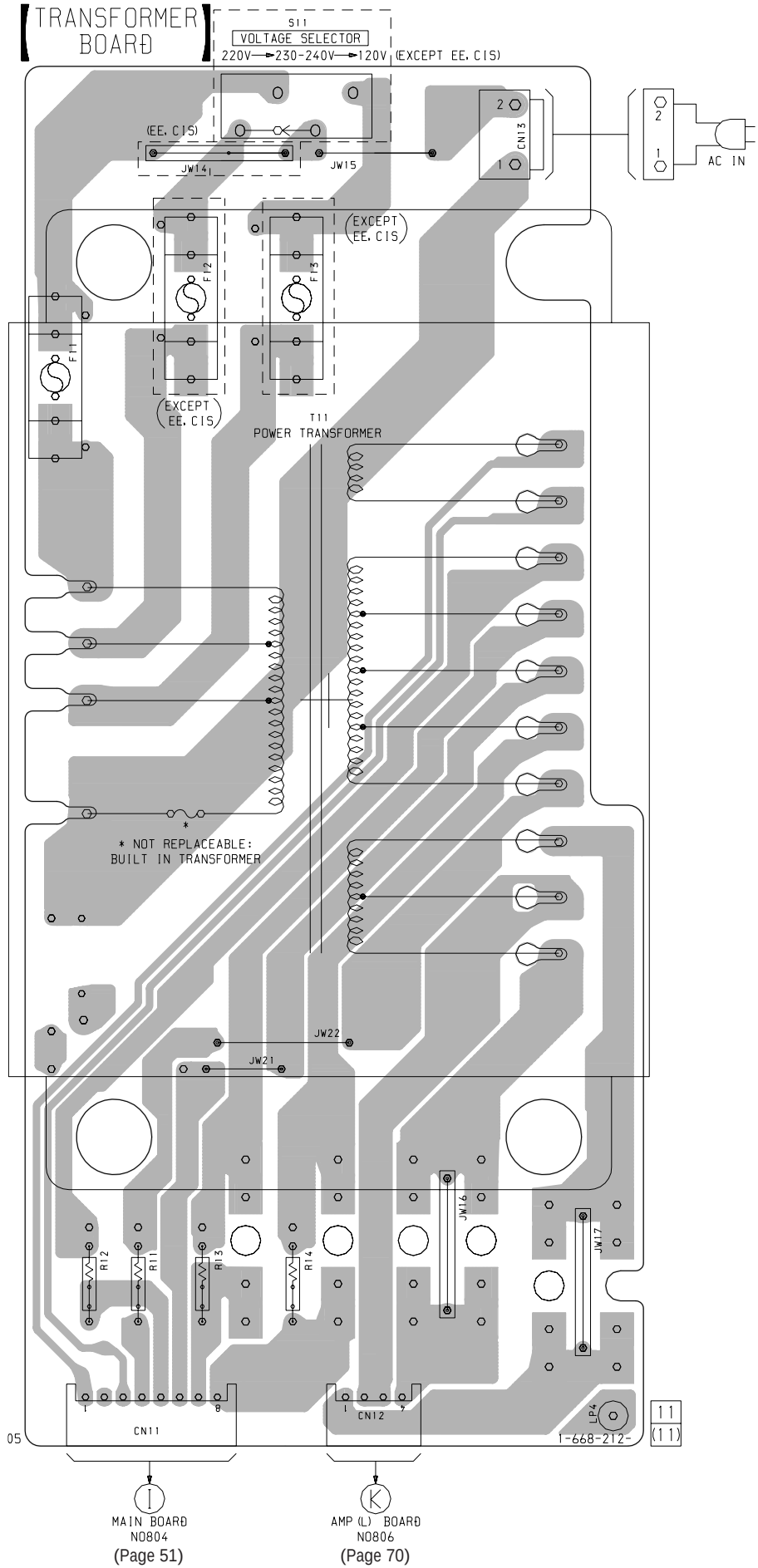


Note on Schematic Diagram:

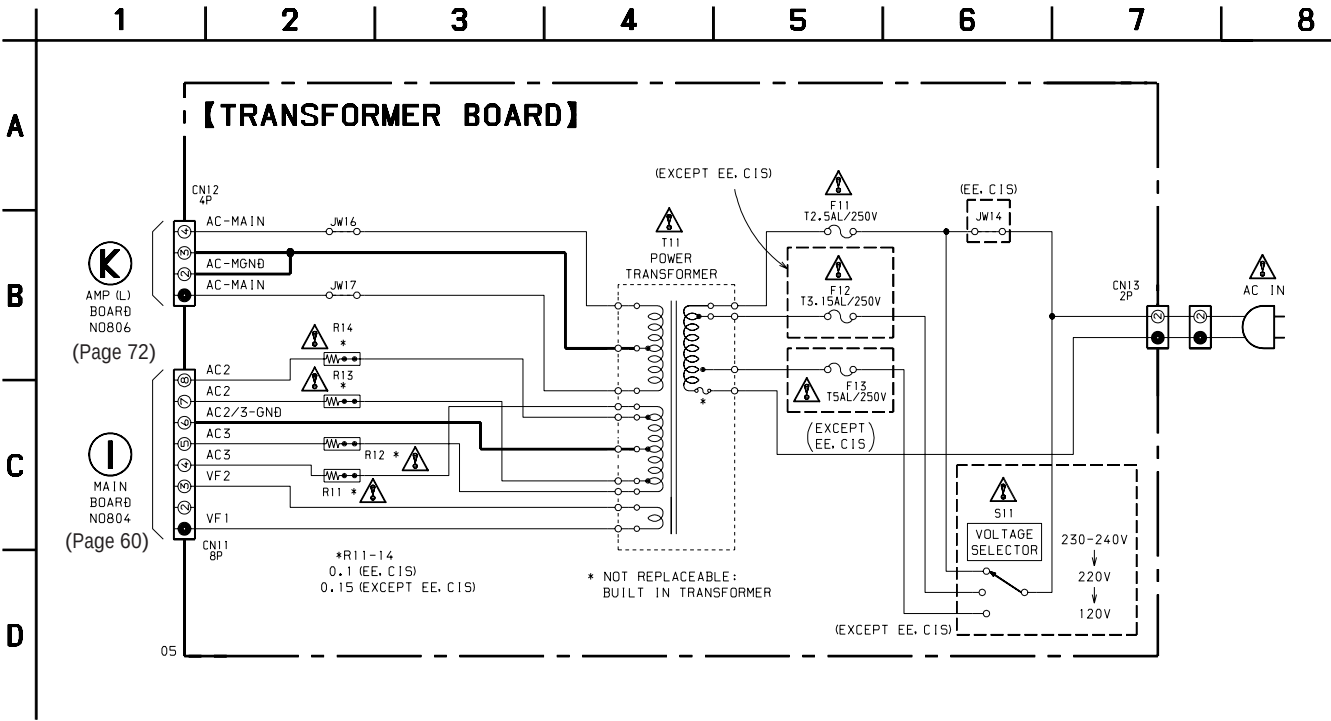
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

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

7-31. PRINTED WIRING BOARD – TRANSFORMER Section –
• See page 20 for Circuit Boards Location.



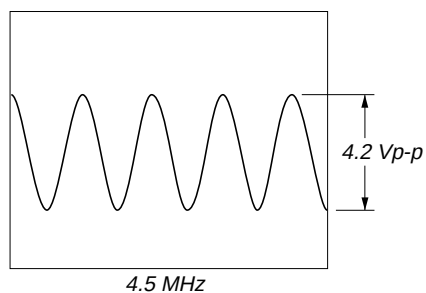
7-32. SCHEMATIC DIAGRAM – TRANSFORMER Section –



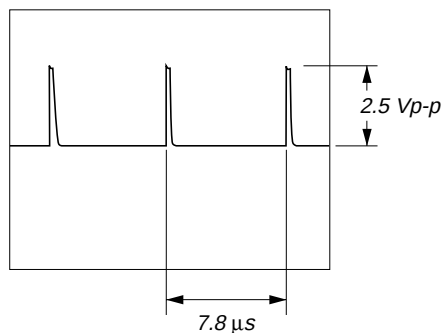
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

• Waveforms
– TCB Board –
(East European, CIS)

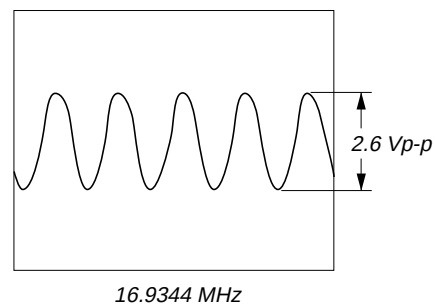
① IC21 ②④ (XOUT)



④ IC103 ②⑦ (MDP)

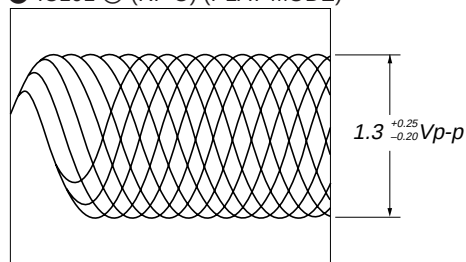


⑧ IC103 ②⑨ (XTAI)

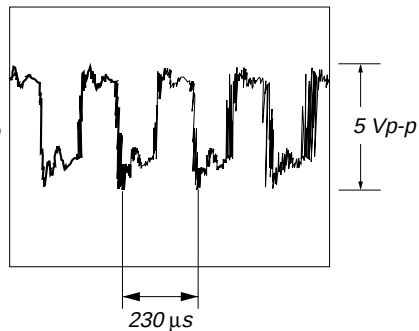


– BD Board –

① IC101 ③③ (RF O) (PLAY MODE)

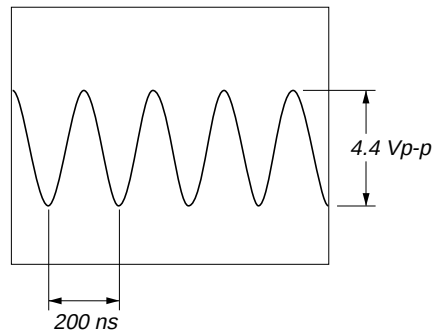


⑤ IC103 ②⑩ (XPCK)

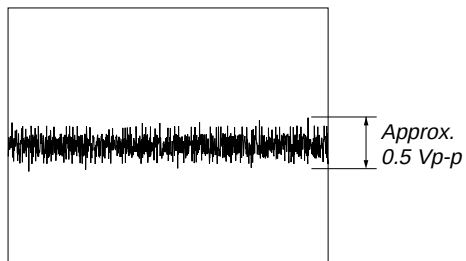


– MAIN Board –

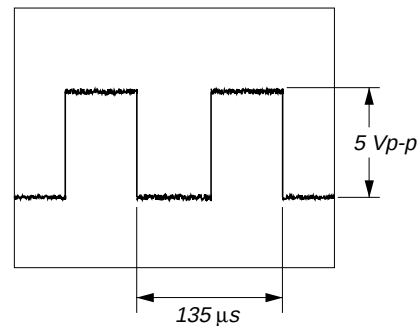
① IC501 ①① (X1)



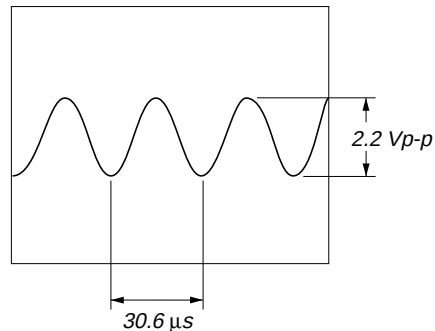
② IC101 ② (FEI) (PLAY MODE)



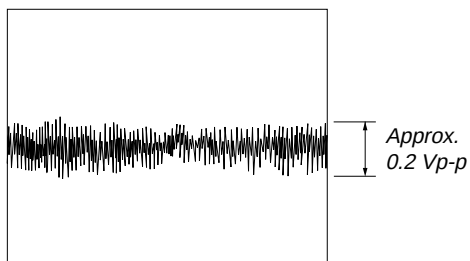
⑥ IC103 ②② (RFCK)



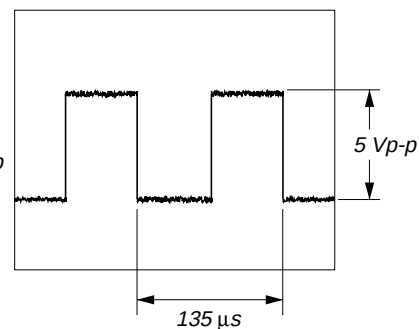
② IC501 ①④ (XT1)



③ IC101 ④⑦ (TEI) (PLAY MODE)

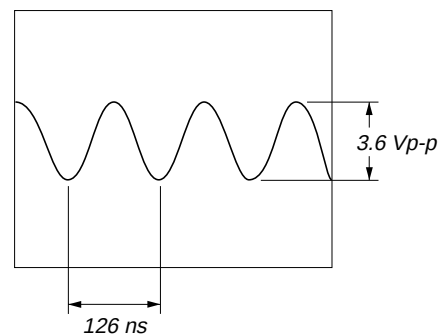


⑦ IC103 ⑦④ (WFCK)



– PANEL Board –

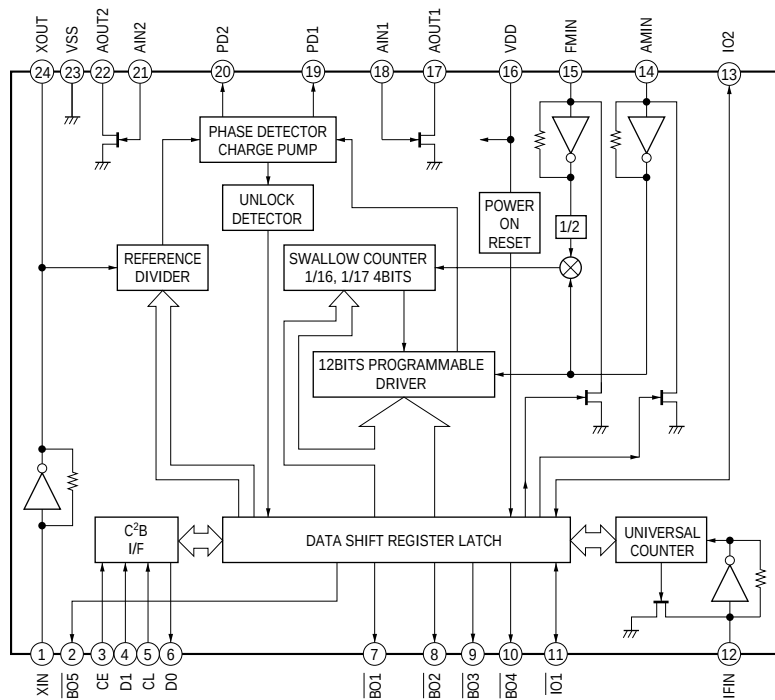
③ IC601 ⑨ (X-IN)



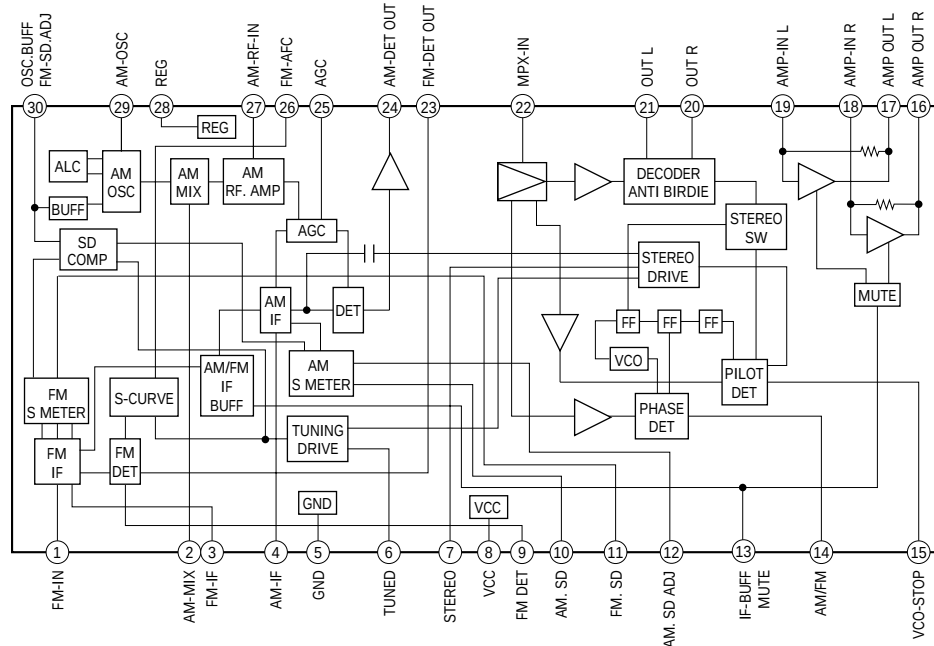
• IC Block Diagrams

– TCB Board –

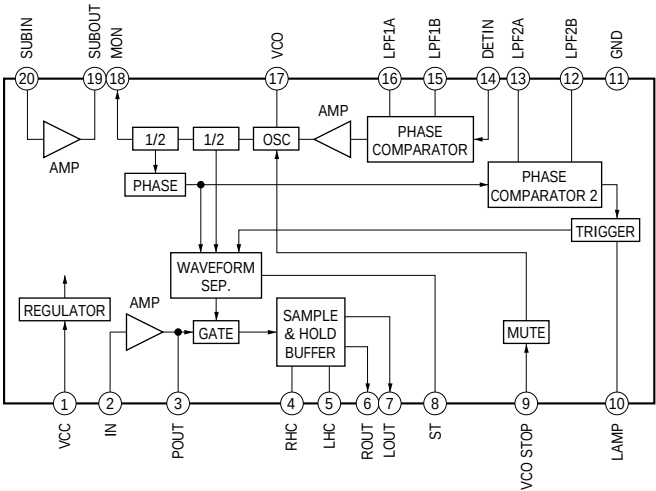
IC21 LC72130 (East European, CIS models)



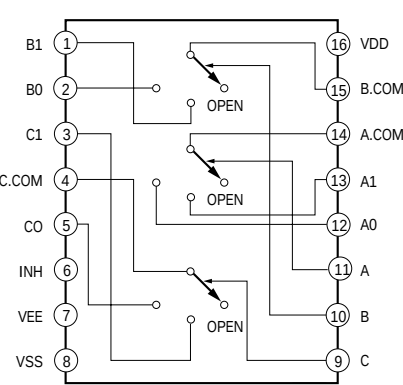
IC41 LA1838 (East European, CIS models)



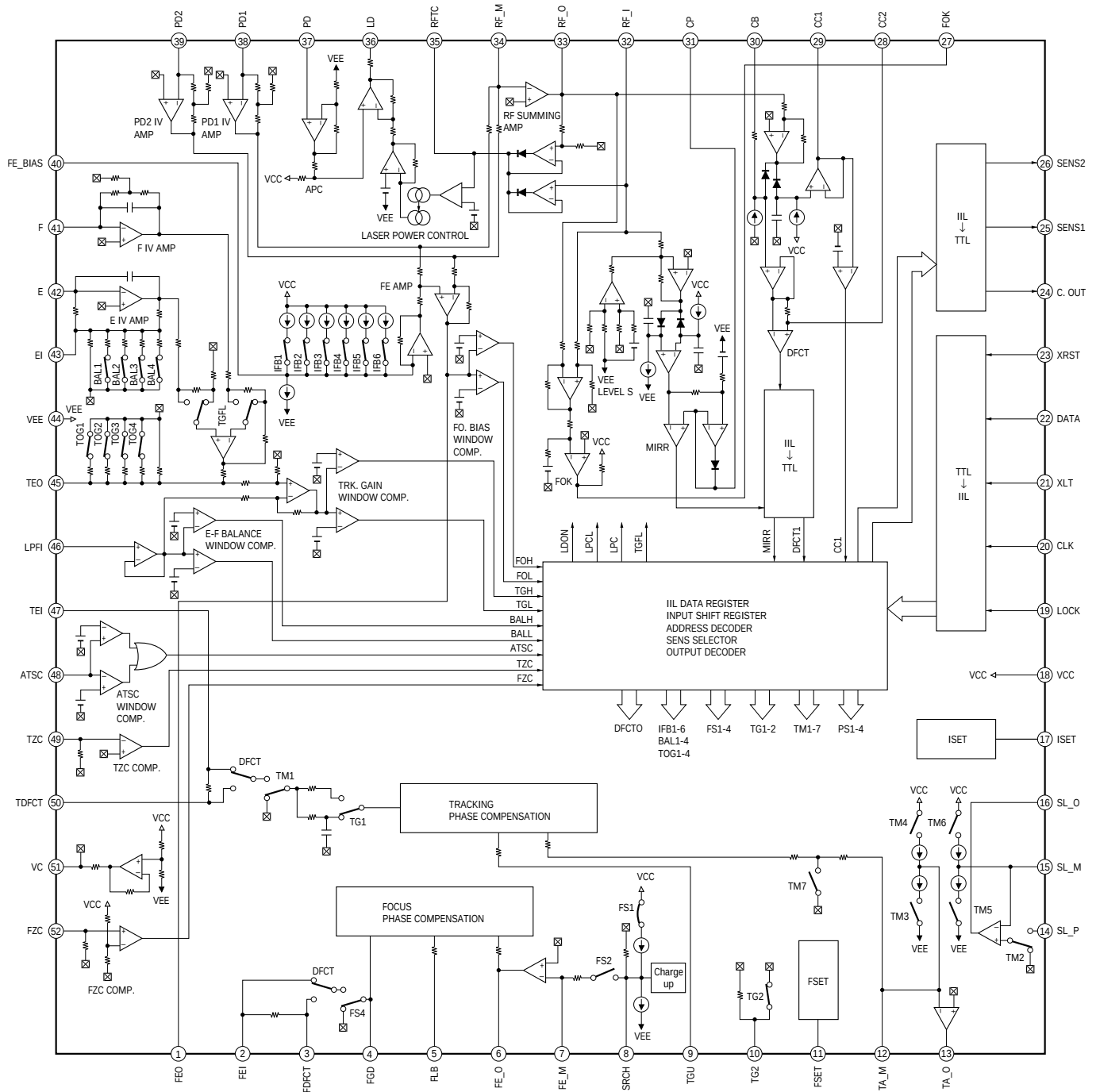
IC1701 IR3R42 (East European, CIS models)



IC1702 μ PD4053BC (East European, CIS models)



IC101 CXA1992AR

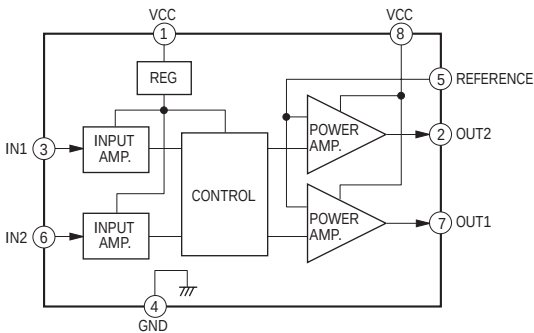


The schematic diagram illustrates a 4-channel audio amplifier circuit. The IC has 40 pins, with the top row labeled IN4B, IN4A, IN3B, IN3A, OP OUT, OP IN (-), OP IN (+), GND, NC, VCC, OUT3A, OUT3B, OUT4A, and OUT4B, and the bottom row labeled VCC, BIAS IN, IN1B, IN1A, IN2B, IN2A, GND, GND, MUTE, VCC, OUT2A, OUT2B, OUT1A, and OUT1B. The circuit includes four input channels (IN1A, IN1B, IN2A, IN2B) and four output channels (OUT1A, OUT2A, OUT3A, OUT4A). Each input channel has a differential input stage with two op-amp buffers. The outputs are connected to four level shifters, which are then connected to four op-amp buffers. The circuit is powered by VCC and GND, and includes a MUTE control pin.

[illegible]

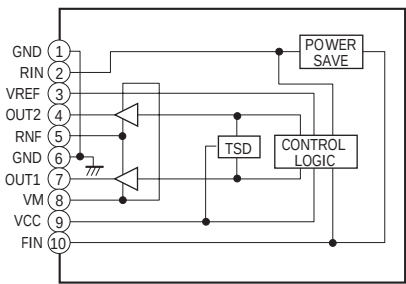
- MOTOR (TURN) Board -

IC701 M54641L



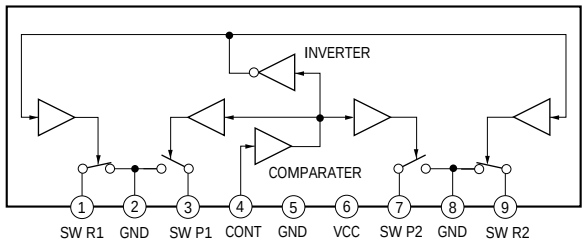
- MOTOR (SLIDE) Board -

IC801 BA6286N



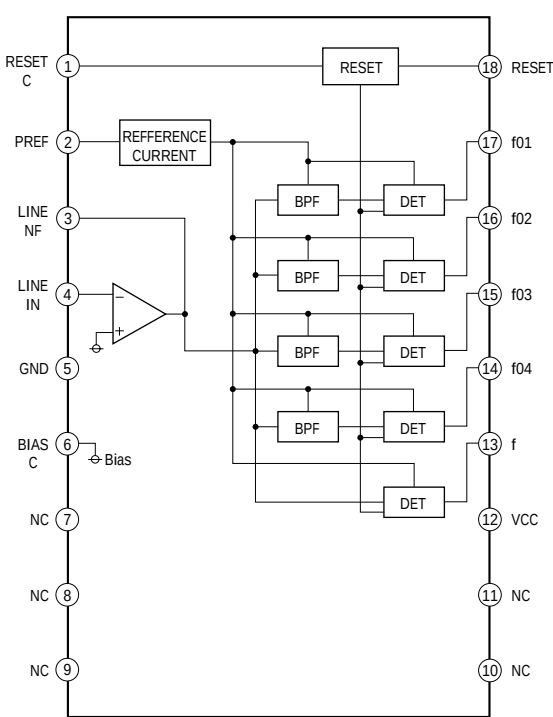
- AUDIO Board -

IC602 μ PC1330HA



- PANEL Board -

IC603 BA3833F-E2



7-33. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 μ PD780018AYGF-012-3BA (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	LINE-MUTE	O	Line muting on/off control signal output terminal “L”: muting on
2	DBFB-H/L	O	DBFB normal/high selection signal output to the M62442FP (IC101) “L”: DBFB high, “H”: DBFB low
3	M62442-LATCH	O	Serial data latch pulse output to the M62442FP (IC101)
4	KEYCON-LATCH	O	Serial data latch pulse output terminal Not used (open)
5	POWER	O	Power on/off control signal output for the audio system (+5V) and deck, panel, audio system (+7V) “L”: power on, “H”: standby
6	F-RELAY	O	Relay drive signal output for the speaker protect “H”: on
7	R-RELAY	O	Relay drive signal output for the speaker protect “H”: on Not used (open)
8	PL-RELAY	O	Relay drive signal output for the speaker protect “H”: on Not used (open)
9	VPP	—	Ground terminal
10	X2	O	Main system clock output terminal (5 MHz)
11	X1	I	Main system clock input terminal (5 MHz)
12	VDD	—	Power supply terminal (+5V)
13	XT2	O	Sub system clock output terminal (32.768 kHz)
14	XT1	I	Sub system clock input terminal (32.768 kHz)
15	<u>RESET</u>	I	System reset signal input from the reset signal generator (IC502) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
16	<u>AC-CUT</u>	I	AC off detection signal input from the reset signal generator (IC502)
17	CAPM-CNT1P	O	Capstan motor (M1) drive signal output terminal
18	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2519Q (IC103)
19	SOFT-TEST	O	Output terminal for the software test (open)
20	NCO	O	Not used (open)
21	RDS-INT	I	Serial data reading clock signal input terminal Not used (fixed at “L”)
22	RDS-DATA	I	Serial data input terminal Not used (fixed at “L”)
23	AVDD	—	Power supply terminal (+5V) (for A/D conversion)
24	AVREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
25	ADJ	I	Setting terminal for the CD test mode Normally: fixed at “H”
26	A-SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector (IC1001)
27	B-SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector (IC1002)
28	B-HALF	I	Detection input from the deck-B half detect switch (S1006)
29	CLK-CHECK	I	Not used (fixed at “L”)
30	SPEC-IN	I	Setting terminal for the version
31	AMS-IN	I	Automatic music sensor detection signal input from the HA12215F (IC301)
32	DEMO-CHANGE	I	Setting terminal for the demonstration H/L Fixed at “L”
33	AVSS	—	Ground terminal (for A/D conversion)
34	SQ-DATA-IN	I	Sub-code Q data input from the CXD2519Q (IC103)
35	NCO	O	Not used (open)
36	SQ-CLK (D-OUT ON/OFF)	O	Sub-code Q data reading clock signal output to the CXD2519Q (IC103)
37	SUPERWOOFER- ON/OFF	O	Super woofer speaker on/off control signal output terminal Not used (open)
38	SUPERWOOFER MODE	O	Super woofer speaker mode control signal output terminal Not used (open)
39	NIL	I	Not used (fixed at “L”)
40	VSS	—	Ground terminal
41	DELAY-CONT	O	Serial data latch pulse output terminal Not used (open)
42	PL-LATCH	O	Serial data latch pulse output terminal Not used (open)

Pin No.	Pin Name	I/O	Function
43	COM-DIN	I	Serial data input terminal Not used (fixed at “L”)
44	COM-DOUT	O	Serial data output terminal Not used (open)
45	COM-CLK	O	Serial data transfer clock signal output terminal Not used (open)
46	CD-POWER	O	Power on/off control signal output for the CD mechanism deck section “H”: power on, “L”: standby
47	CD-DATA	O	Serial data output to the CXD2519Q (IC103)
48	CD-CLK	O	Serial data transfer clock signal output to the CXD2519Q (IC103)
49	PL-CLK	O	Serial data transfer clock signal output terminal Not used (open)
50	PL-DATA	O	Serial data output terminal Not used (open)
51	M62442-CLK	O	Serial data transfer clock signal output to the M62442FP (IC101)
52	M62442-DATA	O	Serial data output to the M62442FP (IC101)
53	LEVEL-CONT-A	O	Level control signal output terminal Not used (open)
54	LEVEL-CONT-B	O	Level control signal output terminal Not used (open)
55	IIC-DATA	I/O	Communication data bus with the fluorescent indicator tube driver (IC601)
56	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the fluorescent indicator tube driver (IC601)
57	$\overline{\text{XRST}}$	O	Reset signal output to the CXA1992AR (IC101), BA5941FP (IC102) and CXD2519Q (IC103) on the CD mechanism deck section “L”: reset
58	XLT	O	Serial data latch pulse output to the CXD2519Q (IC103)
59	FOCUS-SW	O	Focus control signal output terminal Not used (open)
60	TBL-L	O	Motor drive signal output to the disc tray turn motor driver (IC701) *1
61	TBL-R	O	Motor drive signal output to the disc tray turn motor driver (IC701) *1
62	NCO	O	Not used (open)
63	LOAD-OUT	O	Motor drive signal output to the disc tray slide motor driver (IC801) *2
64	LOAD-IN	O	Motor drive signal output to the disc tray slide motor driver (IC801) *2
65	ST-CLK	O	PLL serial data transfer clock signal output to the FM/AM tuner unit or PLL (IC21)
66	ST-DIN	I	PLL serial data input from the FM/AM tuner unit or PLL (IC21)
67	ST-DOUT	O	PLL serial data output to the FM/AM tuner unit or PLL (IC21)
68	ST-CE	O	PLL chip enable signal output to the FM/AM tuner unit or PLL (IC21)
69	TUNED	I	Tuning detection signal input from the FM/AM tuner unit or LA1838 (IC41) “L”: tuned
70	STEREO	I	FM stereo detection signal input from the FM/AM tuner unit or LA1838 (IC41) “L”: stereo
71	VSS	—	Ground terminal
72	ST-MUTE	O	Tuner muting control signal output to the FM/AM tuner unit or LA1838 (IC41) “L”: muting on
73	SENS2	I	Internal status (SENSE) signal input from the CXA1992AR (IC101)
74	SENS	I	Internal status (SENSE) signal input from the CXD2519Q (IC103)

*1 Disc tray turn motor (M701) control

Mode Terminal	STOP	COUNTER- CLOCKWISE	CLOCKWISE	BRAKE
TBL-L (pin 60)	“H”	“L”	“H”	“L”
TBL-R (pin 61)	“H”	“H”	“L”	“L”

*2 Disc tray slide motor (M801) control

Mode Terminal	STOP	TABLE IN	TABLE OUT	BRAKE
LOAD-OUT (pin 63)	“H”	“H”	“L”	“L”
LOAD-IN (pin 64)	“H”	“L”	“H”	“L”

Pin No.	Pin Name	I/O	Function
75	DISC-SENS	I	Disc status detection signal input from the disc sensor (IC703)
76	TBL-SENS	I	Disc tray status detection signal input from the disc tray sensor (IC702)
77	CAPM-CNT2P	O	Capstan motor drive signal output terminal Not used (open)
78	ENC3	I	Detection signal input from the disc tray address detect rotary encoder (S811)
79	ENC2	I	
80	ENC1	I	
81	OUT-OPEN	I	Detection signal input from the disc tray open/close detect switch (S801) “L”: open, “H”: close
82	CAP-M-H/L	O	High/normal speed selection signal output of the capstan motor (M1) “L”: high speed, “H”: normal speed
83	B-TRG	O	Deck-B side trigger plunger (SL2) drive signal output terminal
84	A-TRG	O	Deck-A side trigger plunger (SL1) drive signal output terminal
85	CAPM-CNT1M	O	Capstan motor (M1) drive signal output terminal
86	CAPM-CNT2M	O	Capstan motor (M1) drive signal output terminal
87	TC-MUTE	O	Line muting on/off selection signal output to the HA12215F (IC301) “L”: muting off, “H”: muting on
88	R/P-PASS	O	Recording/playback/pass selection signal output to the HA12215F (IC301) “L”: recording mode
89	NR-ON/OFF	O	Dolby NR on/off selection signal output to the HA12215F (IC301) “L”: dolby off, “H”: dolby on
90	REC-MUTE	O	Recording muting on/off selection signal output to the HA12215F (IC301) “L”: muting on, “H”: muting off
91	CLK-OUT	O	Clock output for the check Not used (open)
92	BIAS	O	Recording bias on/off selection signal output to the HA12215F (IC301) “L”: bias off, “H”: bias on
93	EQ-H/N	O	Normal/high speed selection signal output to the HA12215F (IC301) “L”: normal speed, “H”: high speed
94	PB-A/B	O	Deck-A/B selection signal output to the HA12215F (IC301) “L”: deck-A, “H”: deck-B
95	A-PLAY-SW	I	Detection input from the deck- A play detect switch (S1001) “H”: deck-A play
96	B-PLAY-SW	I	Detection input from the deck- B play detect switch (S1002) “H”: deck-B play
97	TC-RELAY	O	Recording/playback select signal output to the REC/PB switch (IC602) “L”: playback, “H”: recording
98	A-HALF	I	Detection input from the deck-A cassette detect switch (S1003) “L”: cassette in, “H”: no cassette
99	ALC-ON/OFF	O	Automatic limiter control signal output to the HA12215F (IC301) “L”: limiter on
100	STK-MUTE	O	Power amplifier on/off selection signal output terminal “L”: on, “H”: standby

• **PANEL BOARD IC601 TMP87CM74AF-6671**

(FLUORESCENT INDICATOR TUBE DRIVE, LED DRIVE, KEY CONTROL)

Pin No.	Pin Name	I/O	Function
1	LED3	O	LED drive signal output terminal Not used (open)
2	LED4	O	LED drive signal output terminal Not used (open)
3	LED5	O	LED drive signal output terminal (DISC 3)
4	LED6	O	LED drive signal output terminal (DISC 2)
5	LED7	O	LED drive signal output terminal (DISC 1)
6	LED8	O	LED drive signal output terminal (ENTER/NEXT, GROOVE)
7	VSS	—	Ground terminal
8	X-OUT	O	System clock output terminal (8 MHz)
9	X-IN	I	System clock input terminal (8 MHz)
10	<u>RESET</u>	I	System reset signal input from the reset signal generator (IC502) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
11	LED9	O	LED drive signal output terminal (JOG, DJ MIX)
12	LED10	O	LED drive signal output terminal (NON-STOP, + ►►, – ◄◄)
13	TEST	I	Connected to ground
14	LED11	O	LED drive signal output terminal Not used (open)
15	LED12	O	LED drive signal output terminal (EFFECT)
16	LED13	O	LED drive signal output terminal (CD ►►)
17	LED14	O	LED drive signal output terminal (TAPE B ►►/◄◄)
18	LED15	O	LED drive signal output terminal (TAPE A ►►/◄◄)
19	VOL-A	I	Rotary encoder pulse input from the S602 (VOLUME)
20	VOL-B	I	Rotary encoder pulse input from the S602 (VOLUME)
21	JOG-A	I	Jog dial pulse input from the S601 (◄◄ ↔ ►► DJ MIX)
22	JOG-B	I	Jog dial pulse input from the S601 (◄◄ ↔ ►► DJ MIX)
23	SCL	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC501)
24	SDA	I/O	Communication data bus with the system controller (IC501)
25	L.SEL	O	LED selection signal output terminal
26	KEY-0	I	Key input terminal (A/D input) (S604 to 617) EFFECT, SURROUND, KARAOKE PON/MPX, ■, TIMER SELECT, CLOCK/TIMER SET, DISPLAY/DEMO, FILE SELECT, GEQ CONTROL, P FILE MEMORY, FUNCTION, REPEAT STEREO/MONO, EDIT DIRECTION, PLAY MODE DOLBY NR TUNER MEMORY keys input
27	KEY-1	I	Key input terminal (A/D input) (S619 to 625) FLASH, NON-STOP, – ◄◄, ENTER/NEXT, + ►►, DBFB, GROOVE keys input
28	KEY-2	I	Key input terminal (A/D input) (S631 to 642) TUNER BAND, CD ►► , TAPE B ►►/◄◄, TAPE A ►►/◄◄, ON/STANDBY, DISC 1/2/3, DISC SKIP/EX-CHANGE, ▲ keys input
29	KEY-3	I	Key input terminal (A/D input) (S618, 656 to 659) ● REC, PAUSE, HI-DUB, CD SYNC, keys input
30	MODEL	I	Destination setting terminal
31	SPEANA RESET	O	Reset signal output the spectrum analyzer band-pass filter (IC603) “H”: reset
32	L+R	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for VACS, non-stop signal)
33	SIRCS	I	Remote control signal input from the remote control receiver (IC602)
34	SPEANA-1	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for low frequency)

Pin No.	Pin Name	I/O	Function
35	SPEANA-2	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for low and middle frequency)
36	SPEANA-3	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for middle and high frequency)
37	SPEANA-4	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for high frequency)
38	VASS	—	Ground terminal (for A/D conversion)
39	VAREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
40	VDD	—	Power supply terminal (+5V)
41 to 53	GR1 to GR13	O	Grid drive signal output to the fluorescent indicator tube (FL601)
54 to 69	SEG1 to SEG16	O	Segment drive signal output to the fluorescent indicator tube (FL601)
70 to 72	SEG19 to SEG17	O	Segment drive signal output to the fluorescent indicator tube (FL601)
73 to 77	SEG24 to SEG20	O	Segment drive signal output to the fluorescent indicator tube (FL601)
78	VKK	—	Power supply terminal (−30V) (for fluorescent indicator tube drive)
79	LED1	O	LED drive signal output terminal (● REC, ■ PAUSE)
80	LED2	O	LED drive signal output terminal Not used (open)

SECTION 8

EXPLODED VIEWS

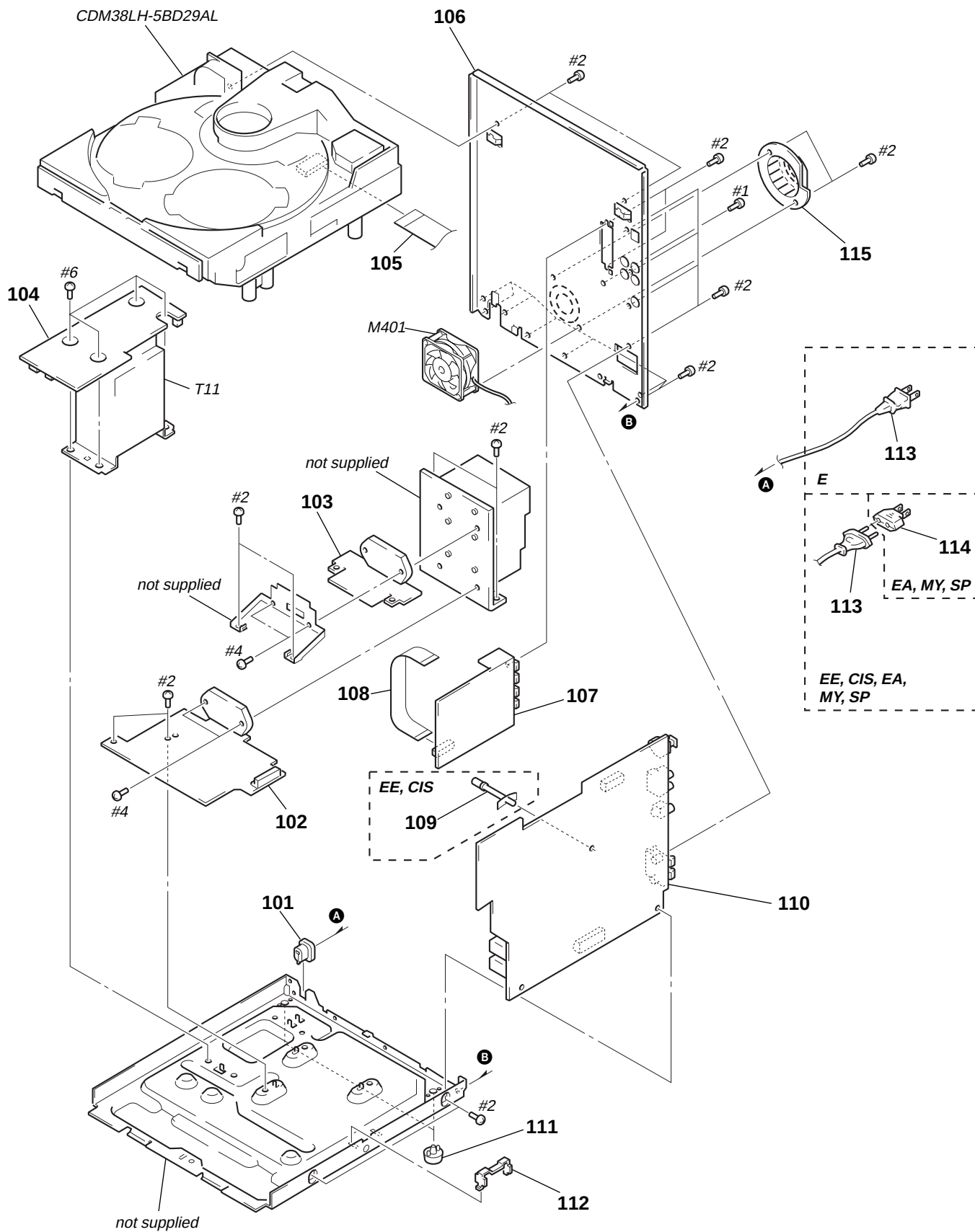
NOTE:

- SP : Singapore

- 86 –

– 87 –

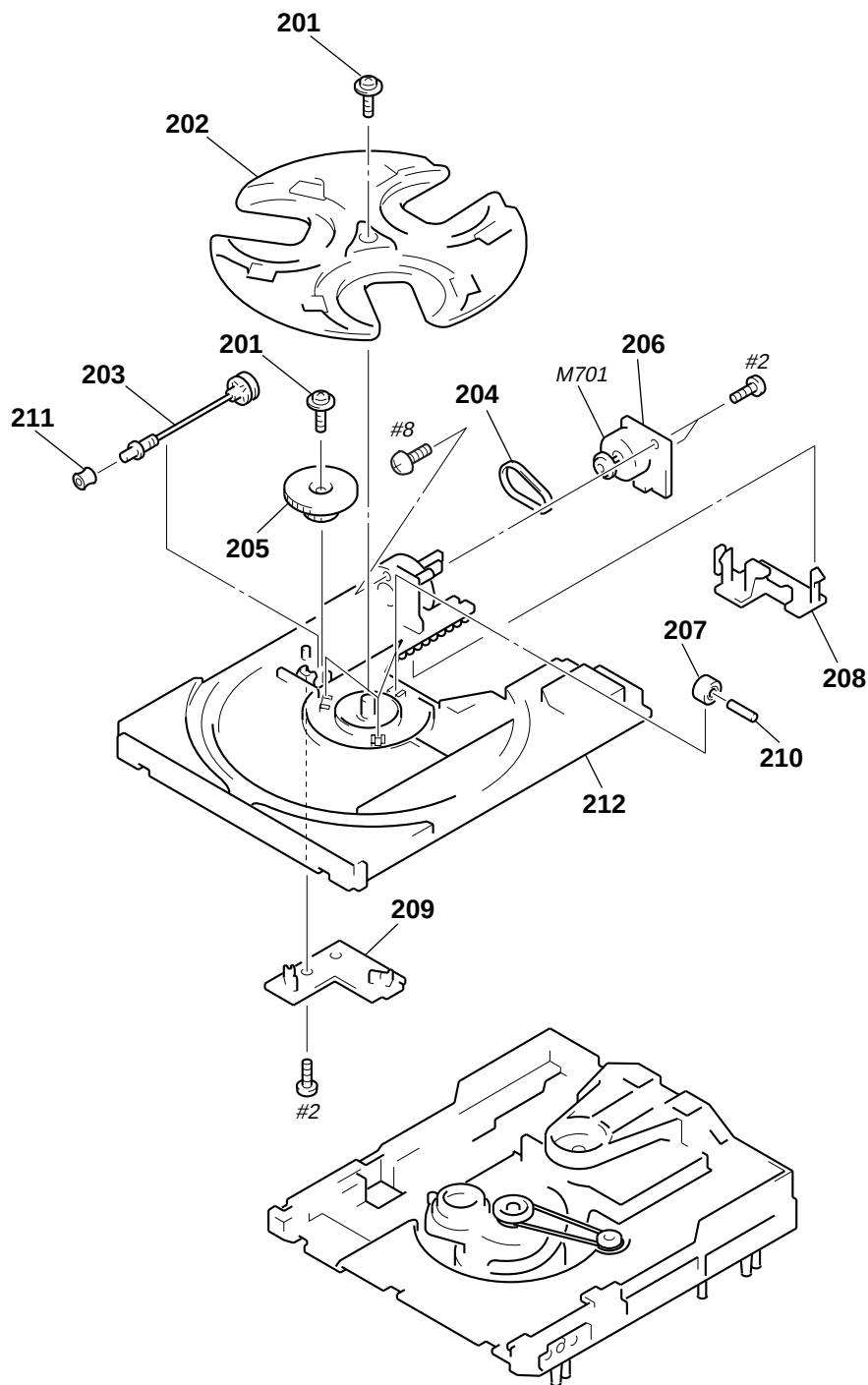
(3) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	3-703-244-00	BUSHING (2104), CORD (EE, CIS, EA, MY, SP)		108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14cm)	
101	3-703-571-11	BUSHING (S) (4516), CORD (E)					(EXCEPT E)
* 102	A-4407-181-A	AMP (L) BOARD, COMPLETE (EE, CIS)		109	4-924-098-91	HOLDER, PC BOARD (EE, CIS)	
* 102	A-4407-182-A	AMP (L) BOARD, COMPLETE (E, EA, MY, SP)		* 110	A-4407-152-A	MAIN BOARD, COMPLETE (EE, CIS)	
* 103	A-4407-185-A	AMP (R) BOARD, COMPLETE (EE, CIS)		* 110	A-4407-153-A	MAIN BOARD, COMPLETE (EA, MY, SP)	
				* 110	A-4407-154-A	MAIN BOARD, COMPLETE (E)	
* 103	A-4407-186-A	AMP (R) BOARD, COMPLETE (E, EA, MY, SP)					
* 104	1-668-212-11	TRANSFORMER BOARD		111	4-965-822-01	FOOT	
105	1-783-570-11	WIRE (FLAT TYPE) (19 CORE)		* 112	4-988-533-01	HOLDER, PWB	
* 106	4-996-846-01	PANEL, BACK (E)		△ 113	1-575-651-11	CORD, POWER (EE, CIS, EA, MY, SP)	
* 106	4-996-846-11	PAENL, BACK (MY, SP)		△ 113	1-575-653-11	CORD, POWER (E)	
				△ 114	1-569-008-21	ADAPTOR, CONVERSION 2P (EA, MY, SP)	
* 106	4-996-846-21	PANEL, BACK (EA)					
* 106	4-996-846-51	PANEL, BACK (EE, CIS)		115	4-999-706-01	COVER (BPAT)	
107	1-693-420-11	TUNER (FM/AM) (E)		M401	1-763-072-11	FAN, D.C.	
107	1-693-421-11	TUNER (FM/AM) (EA, MY, SP)		△ T11	1-431-662-11	TRANSFORMER, POWER (EE, CIS)	
107	A-4303-587-A	TCB BOARD, COMPLETE (EE, CIS)		△ T11	1-431-663-11	TRANSFORMER, POWER (EXCEPT EE, CIS)	
108	1-769-976-11	WIRE (FLAT TYPE) (13 CORE) (14cm) (E)					

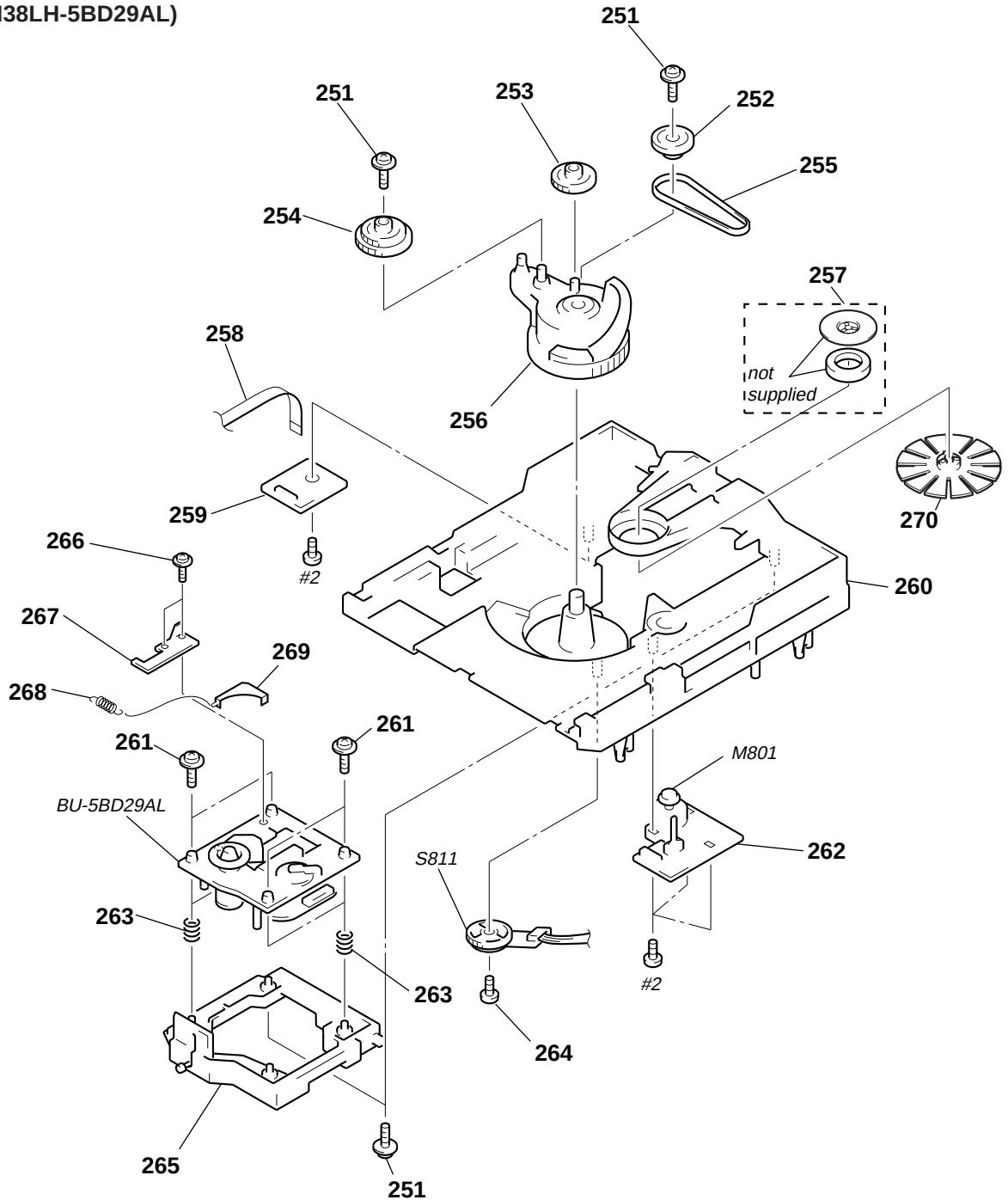
The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

(4) CD MECHANISM DECK SECTION-1
(CDM38LH-5BD29AL)



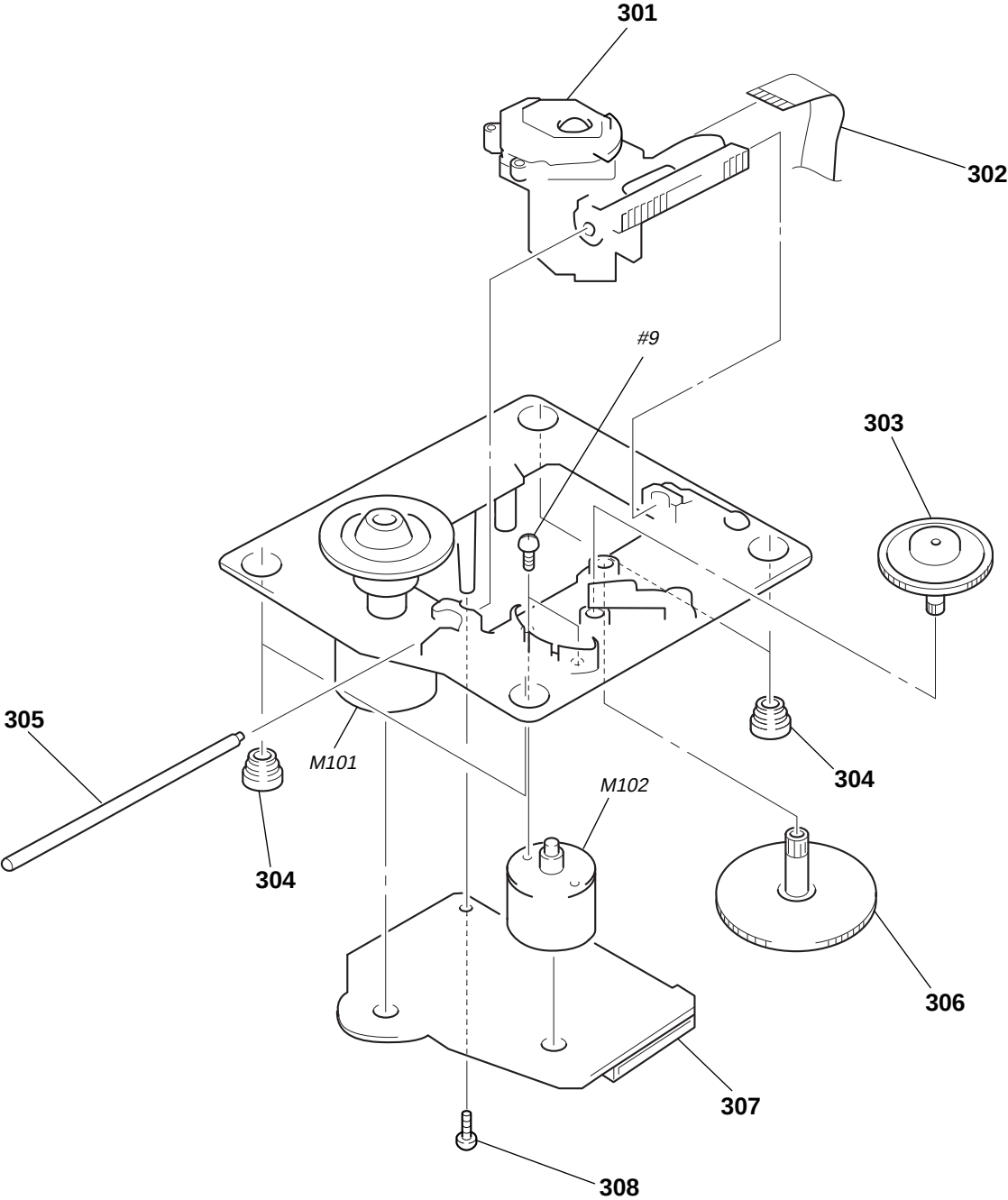
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-981-789-11	BRACKET (2), YOKE		208	4-977-941-01	BEARING (WORM)	
202	4-977-945-01	TRAY (TURN)		* 209	1-658-576-11	SENSOR BOARD	
203	X-4946-665-1	SHAFT ASSY, WORM		210	4-934-376-01	SHAFT (ROLLER)	
204	4-977-943-01	BELT (TURN) (1.2)		211	4-981-187-01	COLLAR (WORM)	
205	4-977-956-01	WHEEL, WORM		212	4-977-944-01	TRAY (SLIDE)	
* 206	1-658-577-11	MOTOR (TURN) BOARD		M701	A-4672-004-A	MOTOR ASSY (TURN)	
207	4-988-162-01	ROLLER					

(5) CD MECHANISM DECK SECTION-2
(CDM38LH-5BD29AL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-981-789-11	BRACKET (2), YOKE		* 262	1-658-578-11	MOTOR (SLIDE) BOARD	
252	4-977-954-01	PULLEY (SL)		263	4-982-447-01	SPRING (BU), COMPRESSION	
253	4-977-953-01	GEAR (SL-A)		264	4-951-620-41	SCREW (2.6), +BVTP	
254	4-977-955-01	GEAR (SL-B)		265	X-4949-570-1	HOLDER (BU) ASSY	
255	4-977-942-01	BELT (SL) (1.4)		266	4-989-494-01	SCREW (SLIDER), STEP	
256	X-4946-667-1	CAM ASSY, BU		267	4-989-492-11	SLIDER (38)	
257	1-452-925-21	MAGNET ASSY		268	4-989-819-11	SPRING, TENSION	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)		269	4-989-491-11	COVER, LENS	
* 259	1-658-575-11	CONNECTOR BOARD		270	4-933-142-21	PULLEY (L), PRESS	
* 260	X-4946-668-1	CHASSIS (CDM) ASSY		M801	A-4672-004-A	MOTOR ASSY (SLIDE)	
261	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	

(6) BASE UNIT SECTION
(BU-5BD29AL)



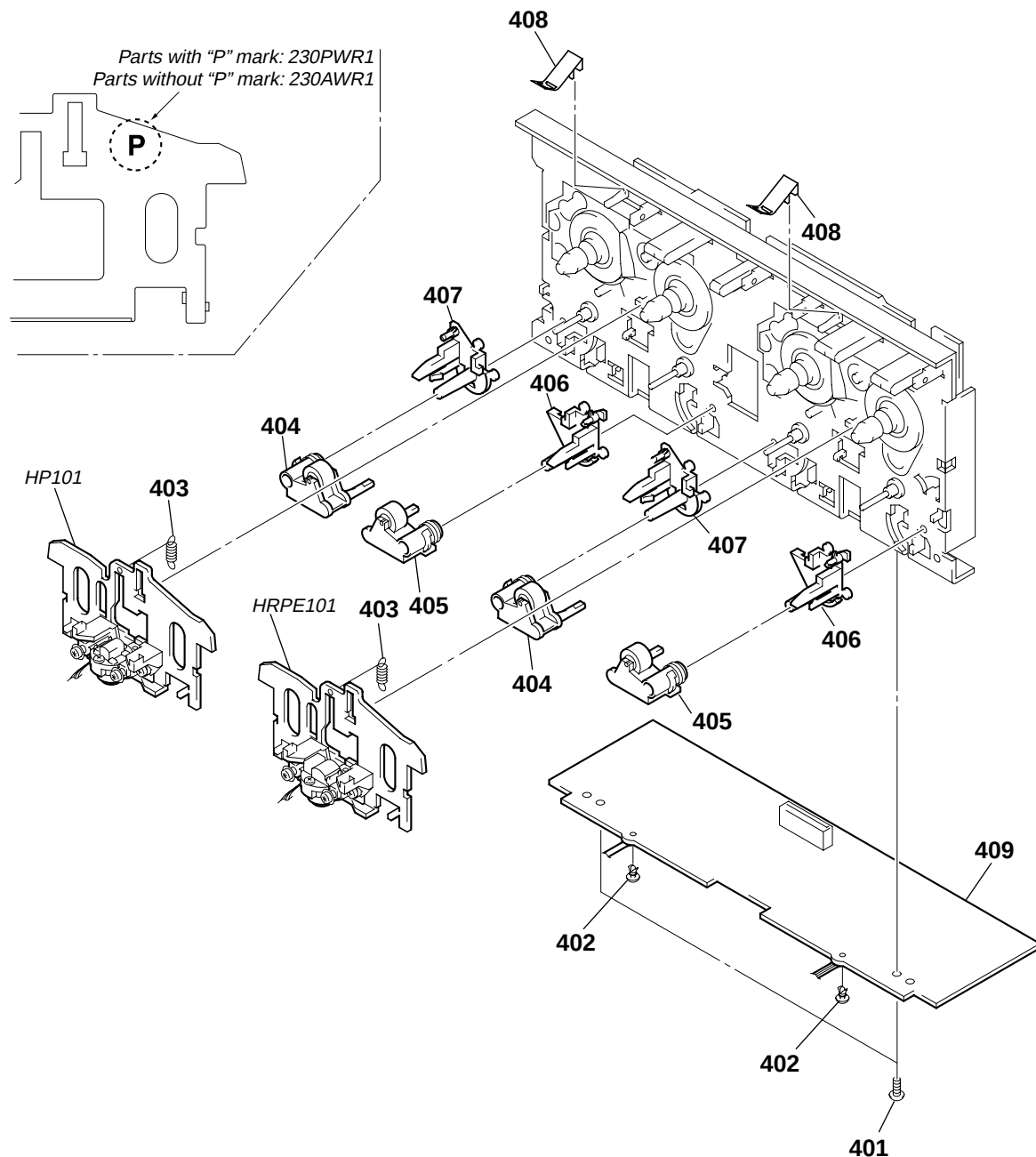
The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
$\triangle$ 301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP		306	4-917-564-01	GEAR (P), FLATNESS	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		* 307	A-4699-522-A	BD BOARD, COMPLETE	
303	4-917-567-01	GEAR (M)		308	4-951-620-01	SCREW (2.6X8), +BVTP	
304	4-951-940-01	INSULATOR (BU)		M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
305	4-917-565-01	SHAFT, SLED		M102	X-4917-504-1	MOTOR ASSY (SLED)	

(7) TAPE MECHANISM DECK SECTION-1

(TCM-230AWR1)
(TCM-230PWR1)

***NOTE:** Two types of parts which are not interchangeable are available for the Head deck (A) ASSY and Head deck (B) ASSY.
When replacing the parts, refer to the following figure, and use the appropriate part

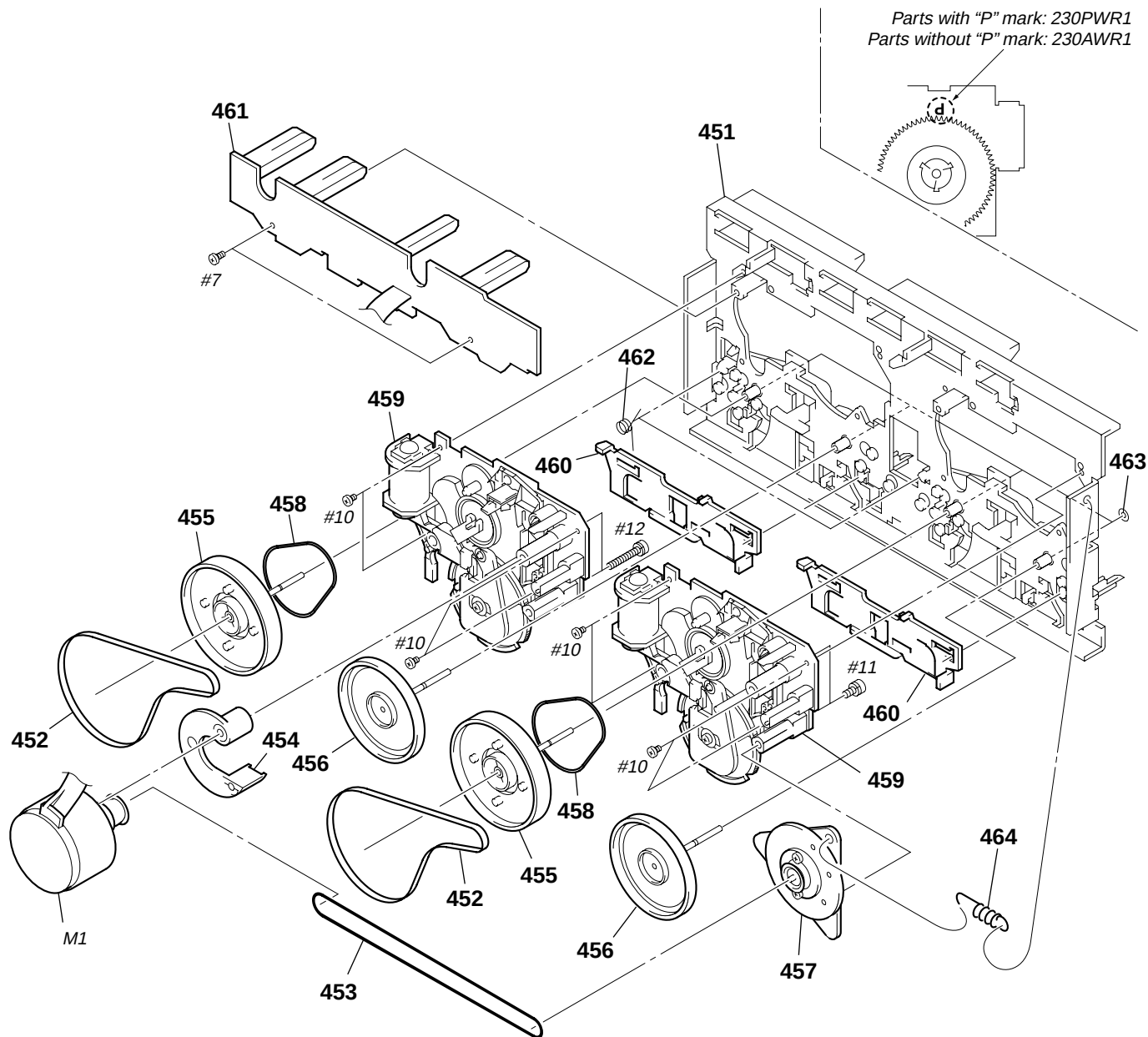


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
401	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		408	3-016-567-01	SPRING (CASSETTE), LEAF	
402	3-911-116-21	RIVET, PUSH		* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	
403	3-016-574-01	SPRING (HEAD), TENSION		HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR1) (*NOTE)	
404	X-3374-156-1	PINCH LEVER (REV) ASSY		HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR1) (*NOTE)	
405	X-3374-155-1	PINCH LEVER (FWD) ASSY		HRPE101A-2056-682-A	DECK (B) ASSY, HEAD (230AWR1) (*NOTE)		
406	3-016-564-01	BASE (PINCH LEVER FWD)		HRPE101A-2056-684-A	DECK (B) ASSY, HEAD (230PWR1) (*NOTE)		
407	3-016-565-01	BASE (PINCH LEVER REV)					

(8) TAPE MECHANISM DECK SECTION-2

(TCM-230AWR1)
(TCM-230PWR1)

***NOTE:** Two types of parts which are not interchangeable are available for the mechanical block assembly. When replacing the parts, refer to the following figure, and use the appropriate part.



Ref. No.	Part No.	Description	Remark
* 451	X-3374-214-1	CHASSIS ASSY, MAIN	
452	3-016-570-01	BELT (CAPSTAN)	
453	3-016-569-01	BELT (TENSION)	
454	3-017-360-01	BRACKET (MOTOR)	
455	X-3374-234-7	FLYWHEEL (FWD) ASSY	
456	X-3374-235-1	FLYWHEEL (REV) ASSY	
457	X-3374-238-1	PULLEY ASSY, TENSION	
458	3-024-405-01	BELT (FR2)	
459	A-2004-629-A	MECHANICAL BLOCK ASSY (230AWR1)	(*NOTE)

Ref. No.	Part No.	Description	Remark
459	A-2004-630-A	MECHANICAL BLOCK ASSY (230PWR1)	(*NOTE)
460	3-016-566-01	SLIDER, REVERSE	
* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
462	3-016-575-01	SPRING, TORSION	
463	3-019-208-01	WASHER, STOPPER	
464	3-027-453-01	SPRING (GROUND), TENSION	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

SECTION 9 ELECTRICAL PARTS LIST

AMP (L)

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
- Abbreviation
EA : Saudi Arabia
EE : East European
MY : Malaysia
SP : Singapore

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

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

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

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark				
*	A-4407-181-A	AMP (L) BOARD, COMPLETE (EE, CIS)						D841	8-719-911-19	DIODE	1SS119			
*	A-4407-182-A	AMP (L) BOARD, COMPLETE (E, EA, MY,SP)						D842	8-719-911-19	DIODE	1SS119			

		< CAPACITOR >						D851	8-719-911-19	DIODE	1SS119			
										< IC >				
C801	1-126-963-11	ELECT	4.7uF	20%	50V									
C802	1-162-286-31	CERAMIC	220PF	10%	50V		IC801	8-749-921-04	IC	STK-4211MK-2				
C803	1-162-282-31	CERAMIC	100PF	10%	50V									
C804	1-104-664-11	ELECT	47uF	20%	10V				< TRANSISTOR >					
C806	1-126-967-11	ELECT	47uF	20%	50V									
								Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
C807	1-126-965-11	ELECT	22uF	20%	50V		Q851	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				
C809	1-126-965-11	ELECT	22uF	20%	50V									
C810	1-164-159-11	CERAMIC	0.1uF		50V				< RESISTOR >					
C811	1-136-495-11	FILM	0.068uF	5%	50V									
C812	1-136-495-11	FILM	0.068uF	5%	50V		R801	1-249-417-11	CARBON	1K	5%	1/4W		
								R802	1-249-438-11	CARBON	56K	5%	1/4W	
C813	1-162-306-11	CERAMIC	0.01uF	20%	16V		R803	1-249-415-11	CARBON	680	5%	1/4W		
C841	1-136-165-00	FILM	0.1uF	5%	50V		R804	1-249-438-11	CARBON	56K	5%	1/4W		
C842	1-126-307-11	ELECT	6800uF	20%	50V		R805	1-260-107-11	CARBON	4.7K	5%	1/2W		
C843	1-126-934-11	ELECT	220uF	20%	10V									
C851	1-126-963-11	ELECT	4.7uF	20%	50V		R806	1-260-107-11	CARBON	4.7K	5%	1/2W		
								△R807	1-212-881-11	FUSIBLE	100	5%	1/4W F	
C852	1-162-286-31	CERAMIC	220PF	10%	50V		△R808	1-220-893-11	METAL	0.22	10%	5W F		
C853	1-162-282-31	CERAMIC	100PF	10%	50V		R809	1-260-076-11	CARBON	10	5%	1/2W		
C854	1-104-664-11	ELECT	47uF	20%	10V		R811	1-249-417-11	CARBON	1K	5%	1/4W		
C856	1-126-967-11	ELECT	47uF	20%	50V									
C857	1-126-965-11	ELECT	22uF	20%	50V		R812	1-249-431-11	CARBON	15K	5%	1/4W		
								R813	1-249-441-11	CARBON	100K	5%	1/4W	
C858	1-126-963-11	ELECT	4.7uF	20%	50V		R814	1-260-105-11	CARBON	3.3K	5%	1/2W		
C861	1-136-495-11	FILM	0.068uF	5%	50V		R816	1-260-105-11	CARBON	3.3K	5%	1/2W		
C862	1-136-495-11	FILM	0.068uF	5%	50V		△R820	1-202-972-61	FUSIBLE	1	5%	1/4W F		
C891	1-136-165-00	FILM	0.1uF	5%	50V									
C892	1-126-307-11	ELECT	6800uF	20%	50V		R841	1-249-427-11	CARBON	6.8K	5%	1/4W (EE, CIS)		
		< CONNECTOR >						R841	1-249-428-11	CARBON	8.2K	5%	1/4W (EXCEPT EE, CIS)	
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P						R842	1-249-429-11	CARBON	10K	5%	1/4W (EE, CIS)	
CN803	1-691-767-11	PLUG (MICRO CONNECTOR) 5P												
CN804	1-691-765-11	PLUG (MICRO CONNECTOR) 3P						R842	1-249-431-11	CARBON	15K	5%	1/4W (EXCEPT EE, CIS)	
CN805	1-691-765-21	PLUG (MICRO CONNECTOR) 3P						R843	1-247-895-00	CARBON	470K	5%	1/4W (EE, CIS)	
		< DIODE >												
D800	8-719-060-53	DIODE	RBV-2506				R843	1-247-897-11	CARBON	560K	5%	1/4W (EXCEPT EE, CIS)		
D801	8-719-911-19	DIODE	1SS119											
D811	8-719-911-19	DIODE	1SS119											

AMP (L)

AMP (R)

Ref. No.	Part No.	Description			Remark
R844	1-249-425-11	CARBON	4.7K	5%	1/4W (EE, CIS)
R844	1-249-430-11	CARBON	12K	5%	1/4W (EXCEPT EE, CIS)
R851	1-249-417-11	CARBON	1K	5%	1/4W
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-249-415-11	CARBON	680	5%	1/4W
R854	1-249-438-11	CARBON	56K	5%	1/4W
R855	1-260-107-11	CARBON	4.7K	5%	1/2W
R856	1-260-107-11	CARBON	4.7K	5%	1/2W
△R857	1-212-881-11	FUSIBLE	100	5%	1/4W F
△R858	1-220-893-11	METAL	0.22	10%	5W F
R859	1-260-076-11	CARBON	10	5%	1/2W
R860	1-249-438-11	CARBON	56K	5%	1/4W
R861	1-249-417-11	CARBON	1K	5%	1/4W
R862	1-249-431-11	CARBON	15K	5%	1/4W
R863	1-249-441-11	CARBON	100K	5%	1/4W

*	A-4407-185-A	AMP (R) BOARD, COMPLETE (EE, CIS)			
*	A-4407-186-A	AMP (R) BOARD, COMPLETE (E, EA, MY,SP)			

< CAPACITOR >					
C821	1-126-963-11	ELECT	4.7uF	20%	50V
C822	1-162-286-31	CERAMIC	220PF	10%	50V
C823	1-162-282-31	CERAMIC	100PF	10%	50V
C824	1-104-664-11	ELECT	47uF	20%	10V
C826	1-126-967-11	ELECT	47uF	20%	50V
C827	1-126-965-11	ELECT	22uF	20%	50V
C829	1-126-965-11	ELECT	22uF	20%	50V
C830	1-164-159-11	CERAMIC	0.1uF		50V
C831	1-136-495-11	FILM	0.068uF	5%	50V
C832	1-136-495-11	FILM	0.068uF	5%	50V
C833	1-162-306-11	CERAMIC	0.01uF	20%	16V
C871	1-126-963-11	ELECT	4.7uF	20%	50V
C872	1-162-286-31	CERAMIC	220PF	10%	50V
C873	1-162-282-31	CERAMIC	100PF	10%	50V
C874	1-104-664-11	ELECT	47uF	20%	10V
C876	1-126-967-11	ELECT	47uF	20%	50V
C877	1-126-965-11	ELECT	22uF	20%	50V
C878	1-126-963-11	ELECT	4.7uF	20%	50V
C881	1-136-495-11	FILM	0.068uF	5%	50V
C882	1-136-495-11	FILM	0.068uF	5%	50V
C893	1-126-934-11	ELECT	220uF	20%	10V
< DIODE >					
D821	8-719-911-19	DIODE	1SS119		
D831	8-719-911-19	DIODE	1SS119		
D871	8-719-911-19	DIODE	1SS119		
D891	8-719-911-19	DIODE	1SS119		
D892	8-719-911-19	DIODE	1SS119		
< IC >					
IC821	8-749-921-04	IC	STK-4211MK-2		
< TRANSISTOR >					
Q821	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		

Ref. No.	Part No.	Description	Remark		
Q871	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		
Q891	8-729-029-86	TRANSISTOR	DTC124ESA		
Q892	8-729-620-05	TRANSISTOR	2SC2603-EF		
< RESISTOR >					
R821	1-249-417-11	CARBON	1K	5%	1/4W
R822	1-249-438-11	CARBON	56K	5%	1/4W
R823	1-249-415-11	CARBON	680	5%	1/4W
R824	1-249-438-11	CARBON	56K	5%	1/4W
R825	1-260-107-11	CARBON	4.7K	5%	1/2W
R826	1-260-107-11	CARBON	4.7K	5%	1/2W
△ R827	1-212-881-11	FUSIBLE	100	5%	1/4W F
△ R828	1-220-893-11	METAL	0.22	10%	5W F
R829	1-260-076-11	CARBON	10	5%	1/2W
R831	1-249-417-11	CARBON	1K	5%	1/4W
R832	1-249-431-11	CARBON	15K	5%	1/4W
R833	1-249-441-11	CARBON	100K	5%	1/4W
R834	1-260-105-11	CARBON	3.3K	5%	1/2W
R836	1-260-105-11	CARBON	3.3K	5%	1/2W
△ R840	1-202-972-61	FUSIBLE	1	5%	1/4W F
R871	1-249-417-11	CARBON	1K	5%	1/4W
R872	1-249-438-11	CARBON	56K	5%	1/4W
R873	1-249-415-11	CARBON	680	5%	1/4W
R874	1-249-438-11	CARBON	56K	5%	1/4W
R875	1-260-107-11	CARBON	4.7K	5%	1/2W
R876	1-260-107-11	CARBON	4.7K	5%	1/2W
△ R877	1-212-881-11	FUSIBLE	100	5%	1/4W F
△ R878	1-220-893-11	METAL	0.22	10%	5W F
R879	1-260-076-11	CARBON	10	5%	1/2W
R881	1-249-417-11	CARBON	1K	5%	1/4W
R882	1-249-431-11	CARBON	15K	5%	1/4W
R883	1-249-441-11	CARBON	100K	5%	1/4W
R884	1-249-438-11	CARBON	56K	5%	1/4W
R891	1-249-427-11	CARBON	6.8K	5%	1/4W (EE, CIS)
R891	1-249-428-11	CARBON	8.2K	5%	1/4W (EXCEPT EE, CIS)
R892	1-249-429-11	CARBON	10K	5%	1/4W (EE, CIS)
R892	1-249-431-11	CARBON	15K	5%	1/4W (EXCEPT EE, CIS)
R893	1-247-895-00	CARBON	470K	5%	1/4W (EE, CIS)
R893	1-247-897-11	CARBON	560K	5%	1/4W (EXCEPT EE, CIS)
R894	1-249-425-11	CARBON	4.7K	5%	1/4W (EE, CIS)
R894	1-249-430-11	CARBON	12K	5%	1/4W (EXCEPT EE, CIS)
R895	1-249-441-11	CARBON	100K	5%	1/4W
R896	1-249-441-11	CARBON	100K	5%	1/4W
R897	1-249-440-11	CARBON	82K	5%	1/4W

< THERMISTOR >

THP891 1-807-796-11 THERMISTOR

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			Ref. No.	Part No.	Description	Remark		
*	A-2007-731-A	AUDIO BOARD, COMPLETE				Q622	8-729-142-46	TRANSISTOR	2SC2001-LK		
		*****				Q623	8-729-801-93	TRANSISTOR	2SD1387		
		< CAPACITOR >				< RESISTOR >					
C301	1-162-289-31	CERAMIC	390PF	10%	50V	R301	1-247-881-00	CARBON	120K	5%	1/4W
C302	1-126-968-11	ELECT	100uF	20%	6.3V	R302	1-249-409-11	CARBON	220	5%	1/4W
C303	1-162-282-31	CERAMIC	100PF	10%	50V	R303	1-249-433-11	CARBON	22K	5%	1/4W
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	R304	1-247-889-00	CARBON	270K	5%	1/4W
C305	1-107-715-11	ELECT	22uF	20%	16V	R305	1-247-858-11	CARBON	13K	5%	1/4W
C311	1-162-289-31	CERAMIC	390PF	10%	50V	R311	1-247-881-00	CARBON	120K	5%	1/4W
C313	1-162-282-31	CERAMIC	100PF	10%	50V	R312	1-247-807-31	CARBON	100	5%	1/4W
C314	1-130-487-00	MYLAR	0.022uF	5%	50V	R314	1-247-882-11	CARBON	130K	5%	1/4W
C315	1-126-233-11	ELECT	22uF	20%	50V	R315	1-247-850-11	CARBON	6.2K	5%	1/4W
C331	1-137-427-11	FILM	120PF	5%	50V	R331	1-249-430-11	CARBON	12K	5%	1/4W
C332	1-162-288-31	CERAMIC	330PF	10%	50V	R401	1-247-881-00	CARBON	120K	5%	1/4W
C333	1-162-209-31	CERAMIC	27PF	5%	50V	R402	1-249-409-11	CARBON	220	5%	1/4W
C401	1-162-289-31	CERAMIC	390PF	10%	50V	R403	1-249-433-11	CARBON	22K	5%	1/4W
C402	1-126-968-11	ELECT	100uF	20%	6.3V	R404	1-247-889-00	CARBON	270K	5%	1/4W
C403	1-162-282-31	CERAMIC	100PF	10%	50V	R405	1-247-858-11	CARBON	13K	5%	1/4W
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	R411	1-247-881-00	CARBON	120K	5%	1/4W
C405	1-107-715-11	ELECT	22uF	20%	16V	R412	1-247-807-31	CARBON	100	5%	1/4W
C411	1-162-289-31	CERAMIC	390PF	10%	50V	R414	1-247-882-11	CARBON	130K	5%	1/4W
C413	1-162-282-31	CERAMIC	100PF	10%	50V	R415	1-247-850-11	CARBON	6.2K	5%	1/4W
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	R431	1-249-430-11	CARBON	12K	5%	1/4W
C415	1-126-233-11	ELECT	22uF	20%	50V	R601	1-249-409-11	CARBON	220	5%	1/4W
C431	1-137-427-11	FILM	120PF	5%	50V	R602	1-249-409-11	CARBON	220	5%	1/4W
C432	1-162-288-31	CERAMIC	330PF	10%	50V	R608	1-249-409-11	CARBON	220	5%	1/4W
C433	1-162-209-31	CERAMIC	27PF	5%	50V	R609	1-249-433-11	CARBON	22K	5%	1/4W
C601	1-104-396-11	ELECT	10uF	20%	16V	R611	1-249-409-11	CARBON	220	5%	1/4W
C602	1-104-396-11	ELECT	10uF	20%	16V	R612	1-249-409-11	CARBON	220	5%	1/4W
C611	1-104-396-11	ELECT	10uF	20%	16V	△R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
C612	1-104-396-11	ELECT	10uF	20%	16V	△R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
C621	1-137-150-11	FILM	0.01uF	5%	100V	R623	1-249-432-11	CARBON	18K	5%	1/4W
C622	1-126-961-11	ELECT	2.2uF	20%	50V	R624	1-249-432-11	CARBON	18K	5%	1/4W
C623	1-136-155-00	FILM	0.015uF	5%	50V	R625	1-249-429-11	CARBON	10K	5%	1/4W
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	< VARIABLE RESISTOR >					
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	RV301	1-238-598-11	RES, ADJ, CARBON	2.2K		
C627	1-124-903-11	ELECT	1uF	20%	50V	RV311	1-238-598-11	RES, ADJ, CARBON	2.2K		
C628	1-136-153-00	FILM	0.01uF	5%	50V	RV341	1-241-768-11	RES, ADJ, CARBON	220K		
C642	1-104-664-11	ELECT	47uF	20%	16V	RV401	1-238-598-11	RES, ADJ, CARBON	2.2K		
		< CONNECTOR >				RV411	1-238-598-11	RES, ADJ, CARBON	2.2K		
CN601	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P				RV441	1-241-768-11	RES, ADJ, CARBON	220K		
		< IC >				< TRANSFORMER >					
IC601	8-759-111-44	IC uPC4570C-1				T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
IC602	8-759-143-54	IC uPC1330HA				*****					
IC611	8-759-111-44	IC uPC4570C-1				*	A-4699-522-A	BD BOARD, COMPLETE			
		< COIL >				< CAPACITOR >					
L331	1-410-780-11	INDUCTOR	27mH			C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
L431	1-410-780-11	INDUCTOR	27mH			C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
L601	1-414-193-41	INDUCTOR	220uH			C103	1-164-346-11	CERAMIC CHIP	1uF	16V	
L602	1-414-193-41	INDUCTOR	220uH			C105	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
		< TRANSISTOR >				C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK								

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		
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C108	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C109	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C122	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C123	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C126	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C162	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C176	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C182	1-126-393-11	ELECT CHIP	33uF	20%	10V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V

< CONNECTOR >

CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P
CNU102	1-778-874-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P

Ref. No.	Part No.	Description	Remark		
< FERRITE BEAD >					
FB101	1-414-234-11	INDUCTOR CHIP 0UH			
FB103	1-414-234-11	INDUCTOR CHIP 0UH			
< IC >					
IC101	8-752-080-62	IC CXA1992AR			
IC102	8-759-429-32	IC BA5941FP-E2			
IC103	8-752-380-64	IC CXD2519Q			
< SHORT >					
JW101	1-216-295-00	SHORT	0		
JW104	1-216-295-00	SHORT	0		
< TRANSISTOR >					
Q101	8-729-010-08	TRANSISTOR MSB710-R			
< RESISTOR >					
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-063-00	RES, CHIP	3.9K	5%	1/10W
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W
R120	1-216-089-00	RES, CHIP	47K	5%	1/10W
R121	1-216-114-00	RES, CHIP	510K	5%	1/10W
R122	1-216-097-00	RES, CHIP	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-00	RES, CHIP	3.9K	5%	1/10W
R127	1-216-089-00	RES, CHIP	47K	5%	1/10W
R128	1-216-098-00	METAL CHIP	110K	5%	1/10W
R129	1-216-025-00	RES, CHIP	100	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R138	1-216-025-00	RES, CHIP	100	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R159	1-216-121-00	RES, CHIP	1M	5%	1/10W
R161	1-216-097-00	RES, CHIP	100K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-121-00	RES, CHIP	1M	5%	1/10W
R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W

BD

CD-SW

CONNECTOR

HP

LEAF SW

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark	
R165	1-216-049-11	RES, CHIP	1K	5%	1/10W		S640	1-762-875-21	SWITCH, KEYBOARD (DISC 3)					
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W		S641	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)					
R167	1-216-081-00	METAL CHIP	22K	5%	1/10W									
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W		S642	1-762-875-21	SWITCH, KEYBOARD (▲)	*****				
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W									
R170	1-216-081-00	METAL CHIP	22K	5%	1/10W		*	1-658-575-11	CONNECTOR BOARD	*****				
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W		< CONNECTOR >							
R172	1-216-079-00	METAL CHIP	18K	5%	1/10W									
R173	1-216-025-00	RES, CHIP	100	5%	1/10W									
R174	1-216-033-00	METAL CHIP	220	5%	1/10W		* CN701	1-568-946-11	PIN, CONNECTOR 8P					
							CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P					
R175	1-216-025-00	RES, CHIP	100	5%	1/10W									
R176	1-216-025-00	RES, CHIP	100	5%	1/10W									
R177	1-216-025-00	RES, CHIP	100	5%	1/10W									
R178	1-216-025-00	RES, CHIP	100	5%	1/10W									
R179	1-216-025-00	RES, CHIP	100	5%	1/10W		R703	1-249-435-11	CARBON	33K	5%	1/4W		
							R704	1-249-429-11	CARBON	10K	5%	1/4W		
R180	1-216-025-00	RES, CHIP	100	5%	1/10W		R705	1-249-417-11	CARBON	1K	5%	1/4W		
R181	1-216-025-00	RES, CHIP	100	5%	1/10W		*****							
R188	1-216-037-00	METAL CHIP	330	5%	1/10W									
R190	1-216-097-00	RES, CHIP	100K	5%	1/10W		*	1-668-209-11	HP BOARD	*****				
R191	1-216-105-00	RES, CHIP	220K	5%	1/10W		< CAPACITOR >							
		< SWITCH >												
S101	1-572-085-11	SWITCH, LEAF (LIMIT)					C421	1-162-294-31	CERAMIC	0.001uF	10%	50V		
		< VIBRATOR >					C471	1-162-294-31	CERAMIC	0.001uF	10%	50V		
							C472	1-164-159-11	CERAMIC	0.1uF		50V		
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)												

*	1-668-206-11	CD-SW BOARD					* CN109	1-564-521-11	PLUG, CONNECTOR 6P					
		*****					< LEAD >							
		< DIODE >					EL1	1-690-880-41	LEAD (WITH CONNECTOR)					
D631	8-719-056-13	LED SML79423C-TP15 (DISC 1)												
D632	8-719-056-13	LED SML79423C-TP15 (DISC 2)												
D633	8-719-056-13	LED SML79423C-TP15 (DISC 3)					J421	1-784-224-11	JACK (LARGE TYPE) (PHONES)	*****				
		< TRANSISTOR >												
Q613	8-729-029-68	TRANSISTOR DTC114TSA					*	A-2007-732-A	LEAF SW BOARD, COMPLETE	*****				
Q614	8-729-029-68	TRANSISTOR DTC114TSA					< CAPACITOR >							
Q615	8-729-029-68	TRANSISTOR DTC114TSA												
		< RESISTOR >					C1001	1-107-716-11	ELECT	33uF	20%	10V		
R656	1-249-421-11	CARBON	2.2K	5%	1/4W									
R657	1-249-422-11	CARBON	2.7K	5%	1/4W									
R658	1-249-424-11	CARBON	3.9K	5%	1/4W		CN1001	1-568-860-11	SOCKET, CONNECTOR 17P					
R659	1-249-426-11	CARBON	5.6K	5%	1/4W		CN1001	1-784-459-11	CONNECTOR, FFC/FPC 17P					
R660	1-249-428-11	CARBON	8.2K	5%	1/4W		< DIODE >							
R691	1-247-804-11	CARBON	75	5%	1/4W									
R692	1-247-804-11	CARBON	75	5%	1/4W		D1001	8-719-911-19	DIODE 1SS119					
R693	1-247-804-11	CARBON	75	5%	1/4W		D1002	8-719-911-19	DIODE 1SS119					
R694	1-247-804-11	CARBON	75	5%	1/4W		< CABLE HOLDER >							
R695	1-247-804-11	CARBON	75	5%	1/4W									
R696	1-247-804-11	CARBON	75	5%	1/4W		*	DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P				
		< SWITCH >					< PHOTO INTERRUPTER >							
S637	1-762-875-21	SWITCH, KEYBOARD (I/⏻(POWER))					IC1001	8-749-014-38	PHOTO INTERRUPTER SG-264					
S638	1-762-875-21	SWITCH, KEYBOARD (DISC 1)					IC1002	8-749-014-38	PHOTO INTERRUPTER SG-264					
S639	1-762-875-21	SWITCH, KEYBOARD (DISC 2)												

Ref. No.	Part No.	Description	Remark			
< TRANSISTOR >						
Q1001	8-729-029-56	TRANSISTOR	DTA144ESA			
Q1001	8-729-900-65	TRANSISTOR	DTA144ES			
< RESISTOR >						
R907	1-247-879-11	CARBON	100K	5%	1/4W	
R1001	1-249-409-11	CARBON	220	5%	1/4W	
R1002	1-249-409-11	CARBON	220	5%	1/4W	
R1003	1-249-414-11	CARBON	560	5%	1/4W	
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W	
R1005	1-247-818-11	CARBON	300	5%	1/4W	
R1006	1-247-864-11	CARBON	24K	5%	1/4W	
R1007	1-247-856-00	CARBON	11K	5%	1/4W	
R1008	1-249-417-11	CARBON	1K	5%	1/4W	
< VARIABLE RESISTOR >						
RV1001	1-241-785-11	RES, ADJ, CARBON 10K				
RV1002	1-241-785-11	RES, ADJ, CARBON 10K				
< SWITCH >						
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (A PLAY)				
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (B PLAY)				
S1003	1-771-333-11	SWITCH, LEAF (A HALF)				
S1004	1-771-205-11	SWITCH, LEAF (A 120/70)				
S1005	1-771-205-11	SWITCH, LEAF (REC A)				
S1006	1-771-333-11	SWITCH, LEAF (B HALF)				
S1008	1-771-205-11	SWITCH, LEAF (B 120/70)				
S1009	1-771-205-11	SWITCH, LEAF (REC B)				

*	A-4407-152-A	MAIN BOARD, COMPLETE (EE, CIS)				
*	A-4407-153-A	MAIN BOARD, COMPLETE (EA, MY, SP)				
*	A-4407-154-A	MAIN BOARD, COMPLETE (E)				

	7-685-646-79	SCREW +BVTP	3X8	TYPE2	N-S	
< CAPACITOR >						
C101	1-162-286-31	CERAMIC	220PF	10%	50V	
C102	1-162-286-31	CERAMIC	220PF	10%	50V	
C103	1-164-159-11	CERAMIC	0.1uF		50V	
C111	1-137-195-11	FILM	0.56uF	5%	50V	
C112	1-136-158-00	FILM	0.027uF	5%	50V	
C113	1-136-167-00	FILM	0.15uF	5%	50V	
C114	1-130-480-00	MYLAR	0.0056uF	5%	50V	
C115	1-136-159-00	FILM	0.033uF	5%	50V	
C116	1-130-473-00	MYLAR	0.0015uF	5%	50V	
C117	1-136-153-00	FILM	0.01uF	5%	50V	
C118	1-130-467-00	MYLAR	470PF	5%	50V	
C119	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C120	1-136-153-00	FILM	0.01uF	5%	50V	
C121	1-126-964-11	ELECT	10uF	20%	50V	
C122	1-162-291-31	CERAMIC	560PF	10%	50V	
C123	1-136-165-00	FILM	0.1uF	5%	50V	
C124	1-136-165-00	FILM	0.1uF	5%	50V	
C125	1-126-964-11	ELECT	10uF	20%	50V	
C131	1-104-664-11	ELECT	47uF	20%	16V	
C132	1-104-664-11	ELECT	47uF	20%	16V	

Ref. No.	Part No.	Description	Remark			
C133	1-164-159-11	CERAMIC 0.1uF		50V		
C134	1-164-159-11	CERAMIC 0.1uF		50V		
C135	1-126-964-11	ELECT 10uF	20%	50V		
C136	1-164-159-11	CERAMIC 0.1uF		50V		
C141	1-126-959-11	ELECT 0.47uF	20%	50V		
C151	1-162-286-31	CERAMIC 220PF	10%	50V		
C152	1-162-286-31	CERAMIC 220PF	10%	50V		
C161	1-137-195-11	FILM 0.56uF	5%	50V		
C162	1-136-158-00	FILM 0.027uF	5%	50V		
C163	1-136-167-00	FILM 0.15uF	5%	50V		
C164	1-130-480-00	MYLAR 0.0056uF	5%	50V		
C165	1-136-159-00	FILM 0.033uF	5%	50V		
C166	1-130-473-00	MYLAR 0.0015uF	5%	50V		
C167	1-136-153-00	FILM 0.01uF	5%	50V		
C168	1-130-467-00	MYLAR 470PF	5%	50V		
C169	1-130-479-00	MYLAR 0.0047uF	5%	50V		
C170	1-136-153-00	FILM 0.01uF	5%	50V		
C171	1-126-964-11	ELECT 10uF	20%	50V		
C172	1-162-291-31	CERAMIC 560PF	10%	50V		
C173	1-136-165-00	FILM 0.1uF	5%	50V		
C174	1-136-165-00	FILM 0.1uF	5%	50V		
C175	1-126-964-11	ELECT 10uF	20%	50V		
C176	1-136-495-11	FILM 0.068uF	5%	50V		
C177	1-136-153-00	FILM 0.01uF	5%	50V		
C191	1-126-964-11	ELECT 10uF	20%	50V		
C192	1-162-292-31	CERAMIC 680PF	10%	50V		
C193	1-126-964-11	ELECT 10uF	20%	50V		
C194	1-162-286-31	CERAMIC 220PF	10%	50V		
C195	1-162-306-11	CERAMIC 0.01uF	20%	16V		
C196	1-162-306-11	CERAMIC 0.01uF	20%	16V		
C301	1-126-160-11	ELECT 1uF	20%	50V		
C302	1-130-479-00	MYLAR 0.0047uF	5%	50V		
C303	1-136-165-00	FILM 0.1uF	5%	50V		
C304	1-136-165-00	FILM 0.1uF	5%	50V		
C305	1-126-964-11	ELECT 10uF	20%	50V		
C306	1-126-160-11	ELECT 1uF	20%	50V		
C307	1-126-959-11	ELECT 0.47uF	20%	50V		
C308	1-126-964-11	ELECT 10uF	20%	50V		
C309	1-136-173-00	FILM 0.47uF	5%	50V		
C310	1-162-290-31	CERAMIC 470PF	10%	50V		
C311	1-126-964-11	ELECT 10uF	20%	50V		
C312	1-126-959-11	ELECT 0.47uF	20%	50V		
C313	1-162-294-31	CERAMIC 0.001uF	10%	50V		
C314	1-126-964-11	ELECT 10uF	20%	50V		
C315	1-126-963-11	ELECT 4.7uF	20%	50V		
C316	1-104-665-11	ELECT 100uF	20%	10V		
C317	1-104-665-11	ELECT 100uF	20%	10V		
C320	1-162-290-31	CERAMIC 470PF	10%	50V		
C331	1-164-159-11	CERAMIC 0.1uF		50V		
C332	1-164-159-11	CERAMIC 0.1uF		50V		
C333	1-162-600-11	CERAMIC 0.0047uF	20%	16V		
C334	1-162-600-11	CERAMIC 0.0047uF	20%	16V		
C351	1-126-160-11	ELECT 1uF	20%	50V		
C352	1-130-479-00	MYLAR 0.0047uF	5%	50V		
C353	1-136-165-00	FILM 0.1uF	5%	50V		
C354	1-136-165-00	FILM 0.1uF	5%	50V		
C355	1-126-964-11	ELECT 10uF	20%	50V		
C356	1-126-160-11	ELECT 1uF	20%	50V		

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C357	1-126-959-11	ELECT	0.47uF	20%	50V	C916	1-164-159-11	CERAMIC	0.1uF		50V
C358	1-126-964-11	ELECT	10uF	20%	50V						
C359	1-136-173-00	FILM	0.47uF	5%	50V	C917	1-126-933-11	ELECT	100uF	20%	16V
C381	1-162-306-11	CERAMIC	0.01uF	20%	16V	C918	1-126-968-11	ELECT	100uF	20%	50V
C382	1-104-665-11	ELECT	100uF	20%	10V	C919	1-126-968-11	ELECT	100uF	20%	50V
C391	1-164-159-11	CERAMIC	0.1uF		50V	C920	1-126-964-11	ELECT	10uF	20%	50V
C392	1-126-916-11	ELECT	1000uF	20%	6.3V	C921	1-126-947-11	ELECT	47uF	20%	35V
C393	1-164-159-11	CERAMIC	0.1uF		50V	C951	1-136-165-00	FILM	0.1uF	5%	50V
C394	1-126-925-11	ELECT	470uF	20%	10V	C952	1-126-943-11	ELECT	2200uF	20%	25V
C395	1-162-290-31	CERAMIC	470PF	10%	50V	C953	1-104-666-11	ELECT	220uF	20%	25V
C396	1-126-961-11	ELECT	2.2uF	20%	50V	C955	1-104-661-00	ELECT	330uF	20%	16V
C397	1-126-961-11	ELECT	2.2uF	20%	50V			< CONNECTOR >			
C405	1-136-495-11	FILM	0.068uF	5%	50V	CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P			
C406	1-136-495-11	FILM	0.068uF	5%	50V	* CN102	1-568-832-11	SOCKET, CONNECTOR 13P (E)			
						CN102	1-568-834-11	SOCKET, CONNECTOR 15P (EXCEPT E)			
C407	1-136-495-11	FILM	0.068uF	5%	50V	* CN103	1-568-946-11	PIN, CONNECTOR 8P			
						* CN104	1-568-947-11	PIN, CONNECTOR 9P			
C408	1-136-495-11	FILM	0.068uF	5%	50V						
C409	1-164-159-11	CERAMIC	0.1uF		50V	* CN105	1-568-862-11	SOCKET, CONNECTOR 19P			
						CN106	1-568-834-11	SOCKET, CONNECTOR 15P			
C410	1-126-963-11	ELECT	4.7uF	20%	50V	* CN107	1-568-836-11	SOCKET, CONNECTOR 17P			
C411	1-164-159-11	CERAMIC	0.1uF		50V	CN110	1-564-506-11	PLUG, CONNECTOR 3P			
C431	1-126-934-11	ELECT	220uF	20%	10V	* CN201	1-568-832-11	SOCKET, CONNECTOR 13P			
C432	1-104-665-11	ELECT	100uF	20%	10V						
C433	1-126-961-11	ELECT	2.2uF	20%	50V			< DIODE >			
C434	1-126-966-11	ELECT	33uF	20%	50V	D141	8-719-911-19	DIODE 1SS119			
C455	1-136-495-11	FILM	0.068uF	5%	50V	D333	8-719-911-19	DIODE 1SS119			
						D334	8-719-911-19	DIODE 1SS119			
C456	1-136-495-11	FILM	0.068uF	5%	50V	D401	8-719-911-19	DIODE 1SS119			
						D402	8-719-911-19	DIODE 1SS119			
C457	1-136-495-11	FILM	0.068uF	5%	50V						
C458	1-136-495-11	FILM	0.068uF	5%	50V	D403	8-719-911-19	DIODE 1SS119			
						D404	8-719-911-19	DIODE 1SS119			
						D405	8-719-024-99	DIODE 11ES2-NTA2B			
C501	1-104-664-11	ELECT	47uF	20%	10V	D406	8-719-024-99	DIODE 11ES2-NTA2B			
C502	1-164-159-11	CERAMIC	0.1uF		50V	D407	8-719-024-99	DIODE 11ES2-NTA2B			
C503	1-136-173-00	FILM	0.47uF	5%	50V						
C504	1-126-916-11	ELECT	1000uF	20%	6.3V	D408	8-719-911-19	DIODE 1SS119			
C505	1-162-306-11	CERAMIC	0.01uF	20%	16V	D409	8-719-911-19	DIODE 1SS119			
						D501	8-719-024-99	DIODE 11ES2-NTA2B			
C506	1-136-165-00	FILM	0.1uF	5%	50V	D502	8-719-024-99	DIODE 11ES2-NTA2B			
C507	1-164-159-11	CERAMIC	0.1uF		50V	D503	8-719-911-19	DIODE 1SS119			
C508	1-104-665-11	ELECT	100uF	20%	10V						
C509	1-102-958-00	CERAMIC	20PF	5%	50V	D504	8-719-911-19	DIODE 1SS119			
C510	1-102-514-11	CERAMIC	22PF	5%	50V	D505	8-719-911-19	DIODE 1SS119			
						D506	8-719-911-19	DIODE 1SS119			
C512	1-162-294-31	CERAMIC	0.001uF	10%	50V	D507	8-719-024-99	DIODE 11ES2-NTA2B			
C571	1-109-889-11	ELECT	1uF	20%	50V	D508	8-719-911-19	DIODE 1SS119			
C901	1-136-165-00	FILM	0.1uF	5%	50V						
C902	1-128-548-11	ELECT	4700uF	20%	25V	D901	8-719-024-99	DIODE 11ES2-NTA2B			
C903	1-104-666-11	ELECT	220uF	20%	25V	D902	8-719-024-99	DIODE 11ES2-NTA2B			
						D903	8-719-024-99	DIODE 11ES2-NTA2B			
C904	1-104-664-11	ELECT	47uF	20%	16V	D904	8-719-024-99	DIODE 11ES2-NTA2B			
C905	1-104-661-00	ELECT	330uF	20%	16V	D905	8-719-933-36	DIODE HZS6B1L			
C909	1-126-964-11	ELECT	10uF	20%	50V						
C910	1-104-665-11	ELECT	100uF	20%	10V	D906	8-719-911-19	DIODE 1SS119			
C911	1-126-964-11	ELECT	10uF	20%	50V	D907	8-719-024-99	DIODE 11ES2-NTA2B			
						D908	8-719-024-99	DIODE 11ES2-NTA2B			
C912	1-126-767-11	ELECT	1000uF	20%	16V	D909	8-719-024-99	DIODE 11ES2-NTA2B			
C913	1-126-943-11	ELECT	2200uF	20%	25V	D910	8-719-024-99	DIODE 11ES2-NTA2B			
C914	1-126-767-11	ELECT	1000uF	20%	16V						
C915	1-104-664-11	ELECT	47uF	20%	16V	D911	8-719-934-25	DIODE HZS33-1L			
						D912	8-719-921-48	DIODE MTZJ-T-72-5.6C			

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D913	8-719-911-19	DIODE 1SS119		Q434	8-729-620-05	TRANSISTOR 2SC2603-EF	
D914	8-719-024-99	DIODE 11ES2-NTA2B		Q435	8-729-029-86	TRANSISTOR DTC124ESA	
D915	8-719-935-69	DIODE HZS11B1LTA		Q436	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< GROUND PLATE >		Q437	8-729-029-86	TRANSISTOR DTC124ESA	
* EPT1	4-870-539-11	PLATE, GROUND		Q501	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< IC >		Q571	8-729-029-40	TRANSISTOR DTA124ESA	
IC101	8-759-495-24	IC M62442FP-TP		Q572	8-729-029-40	TRANSISTOR DTA124ESA	
IC102	8-759-634-51	IC M5218AP		Q575	8-729-029-86	TRANSISTOR DTC124ESA	
IC191	8-759-634-50	IC M5218AL		Q901	8-729-209-15	TRANSISTOR 2SD2012	
IC301	8-759-495-26	IC HA12215		Q902	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC381	8-749-923-04	IC TOTX178 (CD DIGITAL OUT, OPTICAL)		Q903	8-729-029-68	TRANSISTOR DTC114TSA	
IC501	8-759-537-36	IC uPD780018AYGF-012-3BA		Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
IC502	8-759-635-63	IC M51943BSL		Q906	8-729-029-40	TRANSISTOR DTA124ESA	
IC901	8-759-604-86	IC M5F7807L		Q907	8-729-040-20	TRANSISTOR RT1P137L-TP	
IC902	8-759-231-53	IC TA7805S		Q908	8-729-029-86	TRANSISTOR DTC124ESA	
IC903	8-759-231-58	IC TA7812S		Q909	8-729-026-68	TRANSISTOR 2SD2525(TP)	
		< JACK >		Q910	8-729-030-19	TRANSISTOR 2SB1640	
J101	1-695-188-31	JACK, PIN 4P (MD/VIDEO (AUDIO), IN/OUT)		Q913	8-729-620-05	TRANSISTOR 2SC2603-EF	
J191	1-774-785-11	JACK, PIN 1P (SUPER WOOFER)		Q914	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< COIL >		Q951	8-729-141-83	TRANSISTOR 2SB1094-LK	
L381	1-410-521-11	INDUCTOR 100uH		Q952	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L392	1-410-521-11	INDUCTOR 100uH				< RESISTOR >	
L401	1-420-872-00	COIL, AIR-CORE (EE, CIS)		R101	1-249-417-11	CARBON 1K 5% 1/4W	
L402	1-420-872-00	COIL, AIR-CORE (EE, CIS)		R102	1-249-417-11	CARBON 1K 5% 1/4W	
L451	1-420-872-00	COIL, AIR-CORE (EE, CIS)		R111	1-247-826-00	CARBON 620 5% 1/4W	
L452	1-420-872-00	COIL, AIR-CORE (EE, CIS)		R112	1-247-903-00	CARBON 1M 5% 1/4W	
L501	1-410-509-11	INDUCTOR 10uH		R113	1-247-903-00	CARBON 1M 5% 1/4W	
		< TRANSISTOR >		R114	1-249-419-11	CARBON 1.5K 5% 1/4W	
Q111	8-729-620-05	TRANSISTOR 2SC2603-EF		R115	1-249-433-11	CARBON 22K 5% 1/4W	
Q112	8-729-620-05	TRANSISTOR 2SC2603-EF		R116	1-247-887-00	CARBON 220K 5% 1/4W	
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK		R117	1-249-429-11	CARBON 10K 5% 1/4W	
Q161	8-729-620-05	TRANSISTOR 2SC2603-EF		R118	1-249-437-11	CARBON 47K 5% 1/4W	
Q162	8-729-620-05	TRANSISTOR 2SC2603-EF		R119	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q163	8-729-141-30	TRANSISTOR 2SC3623A-LK		R120	1-249-441-11	CARBON 100K 5% 1/4W	
Q191	8-729-141-30	TRANSISTOR 2SC3623A-LK		R121	1-249-429-11	CARBON 10K 5% 1/4W	
Q331	8-729-116-59	TRANSISTOR 2SB1068TP		R123	1-249-437-11	CARBON 47K 5% 1/4W	
Q332	8-729-029-66	TRANSISTOR DTC114ESA		R124	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q333	8-729-116-59	TRANSISTOR 2SB1068TP		R125	1-247-843-11	CARBON 3.3K 5% 1/4W	
Q334	8-729-029-66	TRANSISTOR DTC114ESA		R126	1-249-437-11	CARBON 47K 5% 1/4W	
Q335	8-729-029-66	TRANSISTOR DTC114ESA		R127	1-249-437-11	CARBON 47K 5% 1/4W	
Q336	8-729-116-59	TRANSISTOR 2SB1068TP		R128	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK		R131	1-247-807-31	CARBON 100 5% 1/4W	
Q338	8-729-029-21	TRANSISTOR DTA114ESA-TP		R132	1-247-807-31	CARBON 100 5% 1/4W	
Q339	8-729-029-66	TRANSISTOR DTC114ESA		R133	1-247-807-31	CARBON 100 5% 1/4W	
Q340	8-729-116-59	TRANSISTOR 2SB1068TP		R141	1-249-433-11	CARBON 22K 5% 1/4W	
Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK		R142	1-249-433-11	CARBON 22K 5% 1/4W	
Q342	8-729-029-21	TRANSISTOR DTA114ESA-TP		R143	1-249-417-11	CARBON 1K 5% 1/4W	
Q343	8-729-029-66	TRANSISTOR DTC114ESA		R144	1-249-441-11	CARBON 100K 5% 1/4W	
Q401	8-729-119-76	TRANSISTOR 2SA1175-HFE		R145	1-247-903-00	CARBON 1M 5% 1/4W	
Q402	8-729-111-29	TRANSISTOR 2SD1616A-K		R151	1-249-417-11	CARBON 1K 5% 1/4W	
Q431	8-729-620-05	TRANSISTOR 2SC2603-EF		R152	1-249-417-11	CARBON 1K 5% 1/4W	
Q432	8-729-119-76	TRANSISTOR 2SA1175-HFE		R161	1-247-826-00	CARBON 620 5% 1/4W	
Q433	8-729-620-05	TRANSISTOR 2SC2603-EF		R162	1-247-903-00	CARBON 1M 5% 1/4W	
				R163	1-247-903-00	CARBON 1M 5% 1/4W	
				R164	1-249-419-11	CARBON 1.5K 5% 1/4W	
				R165	1-249-433-11	CARBON 22K 5% 1/4W	
				R166	1-247-887-00	CARBON 220K 5% 1/4W	

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R167	1-249-429-11	CARBON	10K	5%	1/4W	R354	1-247-807-31	CARBON	100	5%	1/4W
R168	1-249-437-11	CARBON	47K	5%	1/4W	R355	1-249-421-11	CARBON	2.2K	5%	1/4W
R169	1-249-421-11	CARBON	2.2K	5%	1/4W						
R170	1-249-441-11	CARBON	100K	5%	1/4W	R356	1-249-428-11	CARBON	8.2K	5%	1/4W
R171	1-249-429-11	CARBON	10K	5%	1/4W	R357	1-249-428-11	CARBON	8.2K	5%	1/4W
						R358	1-249-425-11	CARBON	4.7K	5%	1/4W
R173	1-249-437-11	CARBON	47K	5%	1/4W	R359	1-249-435-11	CARBON	33K	5%	1/4W
R178	1-249-421-11	CARBON	2.2K	5%	1/4W	R391	1-247-807-31	CARBON	100	5%	1/4W
R191	1-249-437-11	CARBON	47K	5%	1/4W						
R192	1-249-437-11	CARBON	47K	5%	1/4W	R392	1-247-807-31	CARBON	100	5%	1/4W
R193	1-249-437-11	CARBON	47K	5%	1/4W	R393	1-249-435-11	CARBON	33K	5%	1/4W
						R394	1-249-435-11	CARBON	33K	5%	1/4W
R194	1-247-843-11	CARBON	3.3K	5%	1/4W	R401	1-260-076-11	CARBON	10	5%	1/2W
R195	1-249-429-11	CARBON	10K	5%	1/4W						(EE, CIS)
R196	1-249-417-11	CARBON	1K	5%	1/4W	R403	1-260-076-11	CARBON	10	5%	1/2W
R197	1-249-441-11	CARBON	100K	5%	1/4W						(EE, CIS)
R198	1-249-417-11	CARBON	1K	5%	1/4W						
						R404	1-260-076-11	CARBON	10	5%	1/2W
R199	1-249-429-11	CARBON	10K	5%	1/4W						(EE, CIS)
R301	1-249-435-11	CARBON	33K	5%	1/4W	R405	1-260-076-11	CARBON	10	5%	1/2W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W						(EE, CIS)
R303	1-247-807-31	CARBON	100	5%	1/4W	R406	1-249-437-11	CARBON	47K	5%	1/4W
R304	1-247-807-31	CARBON	100	5%	1/4W	R407	1-249-437-11	CARBON	47K	5%	1/4W
						R408	1-249-425-11	CARBON	4.7K	5%	1/4W
R305	1-249-421-11	CARBON	2.2K	5%	1/4W						
R306	1-249-428-11	CARBON	8.2K	5%	1/4W	R409	1-249-441-11	CARBON	100K	5%	1/4W
R307	1-249-428-11	CARBON	8.2K	5%	1/4W	R410	1-249-421-11	CARBON	2.2K	5%	1/4W
R308	1-249-425-11	CARBON	4.7K	5%	1/4W	△ R411	1-216-456-00	METAL OXIDE	820	5%	2W F
R309	1-249-433-11	CARBON	22K	5%	1/4W	△ R412	1-216-456-00	METAL OXIDE	820	5%	2W F
						R413	1-249-437-11	CARBON	47K	5%	1/4W
R311	1-247-903-00	CARBON	1M	5%	1/4W						
R312	1-247-884-11	CARBON	160K	5%	1/4W	R414	1-249-437-11	CARBON	47K	5%	1/4W
R313	1-249-441-11	CARBON	100K	5%	1/4W	R421	1-260-091-11	CARBON	220	5%	1/2W
R315	1-249-429-11	CARBON	10K	5%	1/4W	R422	1-260-091-11	CARBON	220	5%	1/2W
R316	1-249-432-11	CARBON	18K	5%	1/4W	R431	1-249-438-11	CARBON	56K	5%	1/4W
						R432	1-249-437-11	CARBON	47K	5%	1/4W
R317	1-249-429-11	CARBON	10K	5%	1/4W						
R318	1-249-429-11	CARBON	10K	5%	1/4W	R433	1-249-437-11	CARBON	47K	5%	1/4W
R319	1-247-893-11	CARBON	390K	5%	1/4W	R434	1-249-438-11	CARBON	56K	5%	1/4W
R321	1-249-422-11	CARBON	2.7K	5%	1/4W	R435	1-249-425-11	CARBON	4.7K	5%	1/4W
R322	1-249-428-11	CARBON	8.2K	5%	1/4W	R437	1-249-429-11	CARBON	10K	5%	1/4W
						R438	1-249-429-11	CARBON	10K	5%	1/4W
R324	1-247-876-11	CARBON	75K	5%	1/4W						
R325	1-249-437-11	CARBON	47K	5%	1/4W	R439	1-249-425-11	CARBON	4.7K	5%	1/4W
R326	1-249-437-11	CARBON	47K	5%	1/4W	R440	1-249-429-11	CARBON	10K	5%	1/4W
R327	1-249-437-11	CARBON	47K	5%	1/4W	R441	1-249-429-11	CARBON	10K	5%	1/4W
R328	1-247-876-11	CARBON	75K	5%	1/4W	R443	1-249-417-11	CARBON	1K	5%	1/4W
						R451	1-260-076-11	CARBON	10	5%	1/2W
R329	1-249-417-11	CARBON	1K	5%	1/4W						(EE, CIS)
R330	1-249-425-11	CARBON	4.7K	5%	1/4W						
R331	1-249-425-11	CARBON	4.7K	5%	1/4W	R453	1-260-076-11	CARBON	10	5%	1/2W
R332	1-249-415-11	CARBON	680	5%	1/4W						(EE, CIS)
R333	1-249-421-11	CARBON	2.2K	5%	1/4W	R454	1-260-076-11	CARBON	10	5%	1/2W
											(EE, CIS)
R334	1-249-415-11	CARBON	680	5%	1/4W	R455	1-260-076-11	CARBON	10	5%	1/2W
R335	1-249-421-11	CARBON	2.2K	5%	1/4W						(EE, CIS)
R336	1-249-437-11	CARBON	47K	5%	1/4W	R471	1-260-091-11	CARBON	220	5%	1/2W
R337	1-249-417-11	CARBON	1K	5%	1/4W	R472	1-260-091-11	CARBON	220	5%	1/2W
R338	1-249-411-11	CARBON	330	5%	1/4W						
						R501	1-249-413-11	CARBON	470	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W	R502	1-249-425-11	CARBON	4.7K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W	R503	1-249-437-11	CARBON	47K	5%	1/4W
R341	1-249-411-11	CARBON	330	5%	1/4W	R504	1-249-437-11	CARBON	47K	5%	1/4W
R342	1-249-437-11	CARBON	47K	5%	1/4W	R505	1-249-429-11	CARBON	10K	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W						
						R507	1-247-897-11	CARBON	560K	5%	1/4W
R351	1-249-435-11	CARBON	33K	5%	1/4W	R508	1-249-425-11	CARBON	4.7K	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W	R511	1-249-427-11	CARBON	6.8K	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W						(EE, CIS, E)

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

MAIN

MOTOR (SLIDE)

MOTOR (TURN)

Ref. No.	Part No.	Description			Remark
R512	1-249-425-11	CARBON	4.7K	5%	1/4W(E)
R512	1-249-435-11	CARBON	33K	5%	1/4W (EE, CIS)
R521	1-247-807-31	CARBON	100	5%	1/4W
R524	1-249-429-11	CARBON	10K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-247-807-31	CARBON	100	5%	1/4W
R528	1-247-807-31	CARBON	100	5%	1/4W
R529	1-247-807-31	CARBON	100	5%	1/4W
R530	1-247-807-31	CARBON	100	5%	1/4W
R531	1-247-807-31	CARBON	100	5%	1/4W
R532	1-247-807-31	CARBON	100	5%	1/4W
R533	1-247-807-31	CARBON	100	5%	1/4W
R534	1-247-807-31	CARBON	100	5%	1/4W
R535	1-247-807-31	CARBON	100	5%	1/4W
R536	1-247-807-31	CARBON	100	5%	1/4W
R537	1-247-807-31	CARBON	100	5%	1/4W
R538	1-247-807-31	CARBON	100	5%	1/4W
R539	1-247-807-31	CARBON	100	5%	1/4W
R540	1-247-807-31	CARBON	100	5%	1/4W
R541	1-247-807-31	CARBON	100	5%	1/4W
R542	1-247-807-31	CARBON	100	5%	1/4W
R543	1-247-807-31	CARBON	100	5%	1/4W
R544	1-249-429-11	CARBON	10K	5%	1/4W
R545	1-247-807-31	CARBON	100	5%	1/4W
R546	1-247-843-11	CARBON	3.3K	5%	1/4W
R547	1-247-807-31	CARBON	100	5%	1/4W
R548	1-247-807-31	CARBON	100	5%	1/4W
R549	1-247-807-31	CARBON	100	5%	1/4W
R550	1-247-807-31	CARBON	100	5%	1/4W
R551	1-247-807-31	CARBON	100	5%	1/4W
R552	1-247-807-31	CARBON	100	5%	1/4W
R553	1-249-429-11	CARBON	10K	5%	1/4W
R554	1-247-807-31	CARBON	100	5%	1/4W
R555	1-249-429-11	CARBON	10K	5%	1/4W
R556	1-247-807-31	CARBON	100	5%	1/4W
R557	1-249-429-11	CARBON	10K	5%	1/4W
R558	1-247-807-31	CARBON	100	5%	1/4W
R559	1-249-429-11	CARBON	10K	5%	1/4W
R561	1-247-807-31	CARBON	100	5%	1/4W
R562	1-247-807-31	CARBON	100	5%	1/4W
R563	1-247-807-31	CARBON	100	5%	1/4W
R564	1-247-807-31	CARBON	100	5%	1/4W
R565	1-247-807-31	CARBON	100	5%	1/4W
R566	1-247-807-31	CARBON	100	5%	1/4W
R567	1-247-807-31	CARBON	100	5%	1/4W
R571	1-249-421-11	CARBON	2.2K	5%	1/4W
R572	1-249-441-11	CARBON	100K	5%	1/4W
R576	1-249-429-11	CARBON	10K	5%	1/4W
R577	1-249-417-11	CARBON	1K	5%	1/4W
R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R902	1-249-415-11	CARBON	680	5%	1/4W
R903	1-249-419-11	CARBON	1.5K	5%	1/4W
R904	1-249-414-11	CARBON	560	5%	1/4W
R905	1-249-425-11	CARBON	4.7K	5%	1/4W
R906	1-247-843-11	CARBON	3.3K	5%	1/4W
R907	1-249-415-11	CARBON	680	5%	1/4W
R908	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R909	1-249-430-11	CARBON	12K	5%	1/4W
R911	1-249-409-11	CARBON	220	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-249-425-11	CARBON	4.7K	5%	1/4W
R914	1-249-409-11	CARBON	220	5%	1/4W
R915	1-249-409-11	CARBON	220	5%	1/4W
R920	1-249-383-11	CARBON	1.5	5%	1/6W
R921	1-249-383-11	CARBON	1.5	5%	1/6W
< VARIABLE RESISTOR >					
RV301	1-238-600-11	RES, ADJ, CARBON 10K			
RV351	1-238-600-11	RES, ADJ, CARBON 10K			
< RELAY >					
RY401	1-755-141-11	RELAY			
RY402	1-755-141-11	RELAY			
< TERMINAL >					
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN)			(SPEAKER)
< VIBRATOR >					
X501	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

*	1-658-578-11	MOTOR (SLIDE) BOARD			*****
< CAPACITOR >					
C801	1-162-306-11	CERAMIC	0.01uF	20%	16V
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V
C805	1-126-964-11	ELECT	10uF	20%	50V
< CONNECTOR >					
* CN801	1-568-947-11	PIN, CONNECTOR 9P			
< DIODE >					
D801	8-719-921-48	DIODE MTZJ-T-72-5.6C			
D804	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
< IC >					
IC801	8-759-274-09	IC BA6286N			
< RESISTOR >					
R801	1-249-401-11	CARBON	47	5%	1/4W
< SWITCH >					
S801	1-762-527-11	SWITCH, ROTARY (OPEN/CLOSE DET)			

*	1-658-577-11	MOTOR (TURN) BOARD			*****
< CAPACITOR >					
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C702	1-126-964-11	ELECT	10uF	20%	50V		C635	1-126-163-11	ELECT	4.7uF	20%	50V	
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V		C636	1-162-294-31	CERAMIC	0.001uF	10%	50V	
< CONNECTOR >							C648	1-162-306-11	CERAMIC	0.01uF	20%	16V	
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P					C649	1-124-589-11	ELECT	47uF	20%	16V	
CN704	1-506-469-11	PIN, CONNECTOR 4P					C749	1-164-159-11	CERAMIC	0.1uF		50V	
< DIODE >							C752	1-164-159-11	CERAMIC	0.1uF		50V	
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B					C753	1-162-290-31	CERAMIC	470PF	10%	50V	
< IC >							C754	1-162-306-11	CERAMIC	0.01uF	20%	16V	
IC701	8-759-633-65	IC M54641L					C755	1-126-961-11	ELECT	2.2uF	20%	50V	
< RESISTOR >							C756	1-162-294-31	CERAMIC	0.001uF	10%	50V	
R706	1-249-411-11	CARBON	330	5%	1/4W		C757	1-162-215-31	CERAMIC	47PF	5%	50V	
R707	1-249-401-11	CARBON	47	5%	1/4W		C758	1-126-964-11	ELECT	10uF	20%	50V	
*****							C759	1-126-956-00	ELECT	0.1uF	20%	50V	
							C760	1-162-215-31	CERAMIC	47PF	5%	50V	
							C761	1-162-282-31	CERAMIC	100PF	10%	50V	
							C762	1-126-961-11	ELECT	2.2uF	20%	50V	
							C764	1-126-964-11	ELECT	10uF	20%	50V	
< CONNECTOR >													
*	A-4407-170-A	PANEL BOARD, COMPLETE (EE, CIS)					* CN601	1-568-856-11	SOCKET, CONNECTOR 13P				
*	A-4407-171-A	PANEL BOARD, COMPLETE (EA)				< DIODE >							
*	A-4407-172-A	PANEL BOARD, COMPLETE (E, MY, SP)	*****										
< CAPACITOR >							D602	8-719-986-73	DIODE RB441Q				
							D610	8-719-063-93	LED SLR325VC-N-T32 (ENTER/NEXT)				
							D612	8-719-057-97	LED SEL5923A-TP15 (GROOVE)				
							D613	8-719-063-93	LED SLR325VC-N-T32 (JOG)				
							D614	8-719-064-65	LED SELU5723C-TP15 (DJ MIX)				
C601	1-164-159-11	CERAMIC	0.1uF		50V		D615	8-719-064-65	LED SELU5723C-TP15 (DJ MIX)				
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V		D616	8-719-063-93	LED SLR325VC-N-T32 (NON-STOP)				
C603	1-124-589-11	ELECT	47uF	20%	16V		D617	8-719-057-97	LED SEL5923A-TP15 (+, ►►)				
C604	1-126-163-11	ELECT	4.7uF	20%	50V		D618	8-719-057-97	LED SEL5923A-TP15 (-, ◄◄)				
C605	1-162-294-31	CERAMIC	0.001uF	10%	50V		D620	8-719-063-93	LED SLR325VC-N-T32 (EFFECT)				
C606	1-126-160-11	ELECT	1uF	20%	50V		D621	8-719-056-13	LED SML79423C-TP15 (CD, ►►)				
C607	1-126-160-11	ELECT	1uF	20%	50V		D622	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ►)				
C608	1-162-294-31	CERAMIC	0.001uF	10%	50V		D623	8-719-058-03	LED SEL5423E-TP15 (TAPE B, ◄)				
C609	1-162-282-31	CERAMIC	100PF	10%	50V		D624	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ►)				
C610	1-162-282-31	CERAMIC	100PF	10%	50V		D625	8-719-058-03	LED SEL5423E-TP15 (TAPE A, ◄)				
C611	1-162-282-31	CERAMIC	100PF	10%	50V		D651	8-719-063-93	LED SLR325VC-N-T32 (● REC)				
C612	1-162-282-31	CERAMIC	100PF	10%	50V		D652	8-719-057-97	LED SEL5923A-TP15 (■ PAUSE)				
C613	1-162-282-31	CERAMIC	100PF	10%	50V		< LEAD >						
C614	1-162-282-31	CERAMIC	100PF	10%	50V		EL2	1-690-880-51	LEAD (WITH CONNECTOR)				
C615	1-162-282-31	CERAMIC	100PF	10%	50V		< FERRITE BEAD >						
C616	1-162-282-31	CERAMIC	100PF	10%	50V		FB601	1-410-397-21	FERRITE BEAD INDUCTOR				
C617	1-162-282-31	CERAMIC	100PF	10%	50V		< FLUORESCENT INDICATOR TUBE >						
C618	1-162-282-31	CERAMIC	100PF	10%	50V		FL601	1-517-731-11	INDICATOR TUBE, FLUORESCENT				
C619	1-162-282-31	CERAMIC	100PF	10%	50V		< IC >						
C620	1-162-282-31	CERAMIC	100PF	10%	50V		IC601	8-759-496-12	IC TMP87CM74AF-6671				
C621	1-162-282-31	CERAMIC	100PF	10%	50V		IC602	8-749-011-05	IC GP1U28X				
C625	1-162-294-31	CERAMIC	0.001uF	10%	50V		IC603	8-759-495-25	IC BA3833F-E2				
C626	1-124-589-11	ELECT	47uF	20%	16V		IC750	8-759-634-51	IC M5218AP				
C627	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C628	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C629	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C630	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C631	1-126-157-11	ELECT	10uF	20%	16V								
C632	1-126-157-11	ELECT	10uF	20%	16V								
C633	1-162-303-11	CERAMIC	0.0033uF	30%	16V								
C634	1-126-157-11	ELECT	10uF	20%	16V								

PANEL

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
J751	1-784-224-11	< JACK >					R640	1-249-416-11	CARBON	820	5%	1/4W	
		JACK (LARGE TYPE) (MIX MIC)					R641	1-249-418-11	CARBON	1.2K	5%	1/4W	
							R642	1-249-419-11	CARBON	1.5K	5%	1/4W	
							R643	1-249-421-11	CARBON	2.2K	5%	1/4W	
L601	1-410-509-11	< COIL >					R649	1-249-430-11	CARBON	12K	5%	1/4W	
		INDUCTOR 10uH					R650	1-249-412-11	CARBON	390	5%	1/4W	
							R651	1-249-413-11	CARBON	470	5%	1/4W	
							R652	1-249-415-11	CARBON	680	5%	1/4W	
Q601	8-729-118-00	< TRANSISTOR >					R653	1-249-416-11	CARBON	820	5%	1/4W	
		TRANSISTOR 2SB1116-L					R654	1-249-418-11	CARBON	1.2K	5%	1/4W	
		TRANSISTOR 2SB1116-L					R655	1-249-419-11	CARBON	1.5K	5%	1/4W	
		TRANSISTOR 2SC2603-EF					R661	1-249-429-11	CARBON	10K	5%	1/4W	
Q604	8-729-029-68	TRANSISTOR	DTC114TSA				R662	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q607	8-729-029-68	TRANSISTOR	DTC114TSA				R663	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q608	8-729-029-68	TRANSISTOR	DTC114TSA				R664	1-249-409-11	CARBON	220	5%	1/4W	
Q609	8-729-029-68	TRANSISTOR	DTC114TSA				R665	1-249-429-11	CARBON	10K	5%	1/4W	
Q610	8-729-029-68	TRANSISTOR	DTC114TSA				R666	1-249-407-11	CARBON	150	5%	1/4W	
Q618	8-729-029-68	TRANSISTOR	DTC114TSA				R667	1-247-807-31	CARBON	100	5%	1/4W	
Q620	8-729-029-68	TRANSISTOR	DTC114TSA				R668	1-249-407-11	CARBON	150	5%	1/4W	
Q621	8-729-029-68	TRANSISTOR	DTC114TSA				R669	1-247-804-11	CARBON	75	5%	1/4W	
< RESISTOR >							R670	1-249-407-11	CARBON	150	5%	1/4W	
							R671	1-249-407-11	CARBON	150	5%	1/4W	
							R672	1-249-407-11	CARBON	150	5%	1/4W	
							R673	1-249-407-11	CARBON	150	5%	1/4W	
R601	1-247-903-00	CARBON	1M	5%	1/4W		R674	1-247-804-11	CARBON	75	5%	1/4W	
R602	1-247-807-31	CARBON	100	5%	1/4W		R675	1-247-804-11	CARBON	75	5%	1/4W	
R604	1-249-429-11	CARBON	10K	5%	1/4W		R676	1-247-804-11	CARBON	75	5%	1/4W	
R605	1-249-429-11	CARBON	10K	5%	1/4W		R677	1-247-804-11	CARBON	75	5%	1/4W	
R606	1-249-429-11	CARBON	10K	5%	1/4W		R678	1-247-804-11	CARBON	75	5%	1/4W	
R607	1-249-429-11	CARBON	10K	5%	1/4W		R679	1-247-804-11	CARBON	75	5%	1/4W	
R608	1-247-843-11	CARBON	3.3K	5%	1/4W		R683	1-249-441-11	CARBON	100K	5%	1/4W	
R609	1-247-843-11	CARBON	3.3K	5%	1/4W		R684	1-249-441-11	CARBON	100K	5%	1/4W	
R610	1-247-807-31	CARBON	100	5%	1/4W		R685	1-247-804-11	CARBON	75	5%	1/4W	
R611	1-247-807-31	CARBON	100	5%	1/4W		R725	1-249-430-11	CARBON	12K	5%	1/4W	
R612	1-249-401-11	CARBON	47	5%	1/4W		R726	1-249-412-11	CARBON	390	5%	1/4W	
R613	1-249-421-11	CARBON	2.2K	5%	1/4W		R727	1-249-413-11	CARBON	470	5%	1/4W	
R614	1-249-433-11	CARBON	22K	5%	1/4W		R728	1-249-415-11	CARBON	680	5%	1/4W	
R615	1-249-437-11	CARBON	47K	5%	1/4W		R729	1-249-416-11	CARBON	820	5%	1/4W	
R616	1-249-441-11	CARBON	100K	5%	1/4W		R730	1-249-418-11	CARBON	1.2K	5%	1/4W	
R618	1-249-437-11	CARBON	47K	5%	1/4W		R731	1-249-419-11	CARBON	1.5K	5%	1/4W	
R619	1-249-435-11	CARBON	33K	5%	1/4W		R732	1-249-421-11	CARBON	2.2K	5%	1/4W	
R620	1-247-895-00	CARBON	470K	5%	1/4W		R733	1-249-422-11	CARBON	2.7K	5%	1/4W	
R621	1-249-430-11	CARBON	12K	5%	1/4W		R742	1-249-407-11	CARBON	150	5%	1/4W	
R622	1-249-412-11	CARBON	390	5%	1/4W		R743	1-247-807-31	CARBON	100	5%	1/4W	
R623	1-249-413-11	CARBON	470	5%	1/4W		R750	1-249-429-11	CARBON	10K	5%	1/4W	
R624	1-249-415-11	CARBON	680	5%	1/4W		R751	1-249-417-11	CARBON	1K	5%	1/4W	
R625	1-249-416-11	CARBON	820	5%	1/4W		R752	1-249-441-11	CARBON	100K	5%	1/4W	
R626	1-249-418-11	CARBON	1.2K	5%	1/4W		R753	1-249-417-11	CARBON	1K	5%	1/4W	
R627	1-249-419-11	CARBON	1.5K	5%	1/4W		R754	1-249-433-11	CARBON	22K	5%	1/4W	
R628	1-249-421-11	CARBON	2.2K	5%	1/4W		R755	1-249-429-11	CARBON	10K	5%	1/4W	
R629	1-249-422-11	CARBON	2.7K	5%	1/4W		R756	1-247-885-00	CARBON	180K	5%	1/4W	
R630	1-249-424-11	CARBON	3.9K	5%	1/4W		R757	1-247-807-31	CARBON	100	5%	1/4W	
R631	1-249-426-11	CARBON	5.6K	5%	1/4W		< VARIABLE RESISTOR >						
R632	1-249-428-11	CARBON	8.2K	5%	1/4W		RV750	1-225-574-11	RES, VAR, CARBON 50K (MIC LEVEL)				
R633	1-249-430-11	CARBON	12K	5%	1/4W								
R634	1-249-432-11	CARBON	18K	5%	1/4W								
R636	1-249-430-11	CARBON	12K	5%	1/4W								
R637	1-249-412-11	CARBON	390	5%	1/4W								
R638	1-249-413-11	CARBON	470	5%	1/4W								
R639	1-249-415-11	CARBON	680	5%	1/4W								

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< SWITCH >			A-4303-587-A	TCB BOARD, COMPLETE (EE, CIS)	

S601	1-473-534-11	ENCODER, ROTARY (I◀◀↔▶▶I, DJ MIX (JOG))				< CAPACITOR >	
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)		C1	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S604	1-762-875-21	SWITCH, KEYBOARD (EFFECT)		C2	1-104-664-11	ELECT 47uF 20%	16V
S605	1-762-875-21	SWITCH, KEYBOARD (SURROUND)		C3	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S606	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON/MPX)		C5	1-163-031-11	CERAMIC CHIP 0.01uF	50V
				C6	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S607	1-762-875-21	SWITCH, KEYBOARD (■)		C7	1-101-004-00	CERAMIC 0.01uF	50V
S608	1-762-875-21	SWITCH, KEYBOARD (TIMER SELECT)		C8	1-163-031-11	CERAMIC CHIP 0.01uF	50V
S609	1-762-875-21	SWITCH, KEYBOARD (CLOCK/TIMER SET)		C9	1-163-031-11	CERAMIC CHIP 0.01uF	50V
S610	1-762-875-21	SWITCH, KEYBOARD (DISPLAY/DEMO)		C10	1-162-306-11	CERAMIC CHIP 0.01uF 30%	16V
S611	1-762-875-21	SWITCH, KEYBOARD (FILE SELECT)		C16	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S612	1-762-875-21	SWITCH, KEYBOARD (GEQ CONTROL)		C19	1-163-249-11	CERAMIC CHIP 82PF 5%	50V
S613	1-762-875-21	SWITCH, KEYBOARD (P FILE MEMORY)		C21	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S614	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)		C22	1-163-031-11	CERAMIC CHIP 0.01uF	50V
S615	1-762-875-21	SWITCH, KEYBOARD (EDIT, DIRECTION)		C23	1-163-235-11	CERAMIC CHIP 22PF 5%	50V
S616	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE, DOLBY NR)		C24	1-163-239-11	CERAMIC CHIP 33PF 5%	50V
S617	1-762-875-21	SWITCH, KEYBOARD (REPEAT)					
S618	1-762-875-21	SWITCH, KEYBOARD (LOOP)		C26	1-104-664-11	ELECT 47uF 20%	16V
S619	1-762-875-21	SWITCH, KEYBOARD (FLASH)		C28	1-104-664-11	ELECT 47uF 20%	16V
S620	1-762-875-21	SWITCH, KEYBOARD (NON-STOP)		C29	1-162-306-11	CERAMIC 0.01uF 30%	16V
S621	1-762-875-21	SWITCH, KEYBOARD (–, ◀◀)		C30	1-126-961-11	ELECT 2.2uF 20%	50V
				C31	1-163-031-11	CERAMIC CHIP 0.01uF	50V
S622	1-762-875-21	SWITCH, KEYBOARD (ENTER/NEXT)					
S623	1-762-875-21	SWITCH, KEYBOARD (+, ▶▶)		C32	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S624	1-762-875-21	SWITCH, KEYBOARD (DBFB)		C33	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S625	1-762-875-21	SWITCH, KEYBOARD (GROOVE)		C34	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
S631	1-762-875-21	SWITCH, KEYBOARD (TUNER, BAND)		C35	1-163-038-00	CERAMIC CHIP 0.1uF	25V
				C36	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S632	1-762-875-21	SWITCH, KEYBOARD (CD, ▶▶)					
S633	1-762-875-21	SWITCH, KEYBOARD (TAPE B, ▶▶)		C37	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S634	1-762-875-21	SWITCH, KEYBOARD (TAPE B, ◀◀)		C39	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S635	1-762-875-21	SWITCH, KEYBOARD (TAPE A, ▶▶)		C40	1-104-664-11	ELECT 47uF 20%	16V
S636	1-762-875-21	SWITCH, KEYBOARD (TAPE A, ◀◀)		C41	1-163-031-11	CERAMIC CHIP 0.01uF	50V
				C42	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S656	1-762-875-21	SWITCH, KEYBOARD (● REC)					
S657	1-762-875-21	SWITCH, KEYBOARD (PAUSE)		C43	1-163-031-00	CERAMIC CHIP 0.01uF	50V
S658	1-762-875-21	SWITCH, KEYBOARD (HI-DUB)		C44	1-163-038-00	CERAMIC CHIP 0.1uF	25V
S659	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)		C45	1-163-077-00	CERAMIC CHIP 0.1uF	50V
		< VIBRATOR >		C46	1-104-664-11	ELECT 47uF 20%	16V
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)		C47	1-126-301-11	ELECT 1.0uF 20%	50V
		*****		C48	1-163-059-00	CERAMIC CHIP 0.01uF	50V
*	1-658-576-11	SENSOR BOARD		C49	1-126-964-11	ELECT 10uF 20%	50V
		*****		C50	1-126-960-11	ELECT 1.0uF 20%	50V
		<PHOTO INTERRUPTER/REFLECTOR >		C51	1-126-959-11	ELECT 0.47uF 20%	50V
				C52	1-126-960-11	ELECT 1.0uF 20%	50V
IC702	8-749-924-18	PHOTO INTERRUPTER RPI-1391					
IC703	8-749-924-30	PHOTO REFLECTOR GP2S28		C53	1-126-964-11	ELECT 10uF 20%	50V
		< TRANSISTOR >		C54	1-104-396-11	ELECT 10uF 20%	16V
Q701	8-729-900-80	TRANSISTOR DTC114ES		C55	1-104-396-11	ELECT 10uF 20%	16V
		< RESISTOR >		C56	1-104-396-11	ELECT 10uF 20%	16V
				C57	1-163-017-00	CERAMIC CHIP 0.0047uF 10%	50V
R701	1-249-416-11	CARBON 820 5% 1/4W					
R702	1-249-407-11	CARBON 150 5% 1/4W		C58	1-163-017-00	CERAMIC CHIP 0.0047uF 10%	50V
		*****		C59	1-163-989-11	CERAMIC CHIP 33000PF 10%	25V
				C60	1-163-989-11	CERAMIC CHIP 33000PF 10%	25V
				C61	1-126-301-11	ELECT 1.0uF 20%	50V
				C62	1-163-033-00	CERAMIC CHIP 0.022uF	50V
				C63	1-163-139-00	CERAMIC CHIP 820PF 5%	50V
				C65	1-104-664-11	ELECT 47uF 20%	16V
				C66	1-163-031-11	CERAMIC CHIP 0.01uF	50V
				C67	1-126-162-11	ELECT 3.3uF 20%	50V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C68	1-163-031-11	CERAMIC	0.01uF		50V		IC1701	8-759-063-04	IC IR3R42				
C69	1-104-664-11	ELECT	47uF	20%	16V		IC1702	8-759-140-53	IC uPD4053BC				
C71	1-162-306-11	CERAMIC	0.01uF	30%	16V								
C72	1-104-664-11	ELECT	47uF	20%	16V				< IFT >				
C73	1-163-031-11	CERAMIC CHIP	0.01uF		50V								
							IFT41	1-431-974-11	TRANSFORMER, IF (CERAMIC FILTER)				
C74	1-163-031-11	CERAMIC CHIP	0.01uF		50V								
C1701	1-162-294-31	CERAMIC CHIP	1000PF	10%	50V				< SHORT >				
C1702	1-130-014-00	FILM	470PF	5%	50V								
C1703	1-126-959-11	ELECT	0.47uF	20%	50V		JR2	1-216-295-00	SHORT	0			
C1704	1-126-959-11	ELECT	0.47uF	20%	50V		JR6	1-216-295-00	SHORT	0			
							JR8	1-216-295-00	SHORT	0			
C1705	1-163-035-00	CERAMIC CHIP	0.047uF		50V		JR9	1-216-295-00	SHORT	0			
C1706	1-126-960-11	ELECT	1.0uF	20%	50V		JR12	1-216-296-00	SHORT	0			
C1707	1-163-129-00	CERAMIC CHIP	330PF	5%	50V								
C1710	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V		JR46	1-216-296-00	SHORT	0			
C1711	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V		JR47	1-216-295-00	SHORT	0			
							JR48	1-216-295-00	SHORT	0			
C1712	1-130-736-11	FILM	0.01uF	5%	50V		JR49	1-216-296-00	SHORT	0			
C1713	1-130-736-11	FILM	0.01uF	5%	50V		JR51	1-216-295-00	SHORT	0			
C1714	1-126-960-11	ELECT	1.0uF	20%	50V								
C1715	1-126-960-11	ELECT	1.0uF	20%	50V		JR52	1-216-295-00	SHORT	0			
C1716	1-126-960-11	ELECT	1.0uF	20%	50V		JR53	1-216-296-00	SHORT	0			
							JR54	1-216-295-00	SHORT	0			
C1719	1-104-664-11	ELECT	47uF	20%	16V		JR1701	1-216-295-00	SHORT	0			
C1720	1-163-031-11	CERAMIC CHIP	0.01uF		50V		JR1702	1-216-295-00	SHORT	0			
C1723	1-163-031-11	CERAMIC CHIP	0.01uF		50V								
C1724	1-163-031-11	CERAMIC CHIP	0.01uF		50V		JR1703	1-216-295-00	SHORT	0			
C1725	1-104-664-11	ELECT	47uF	20%	16V		JR1704	1-216-295-00	SHORT	0			
							JR1705	1-216-295-00	SHORT	0			
C1726	1-126-960-11	ELECT	1.0uF	20%	50V								
C1727	1-126-960-11	ELECT	1.0uF	20%	50V				< COIL >				
C1728	1-126-966-11	ELECT	33uF	20%	16V								
		< CERAMIC FILTER >					L3	1-410-521-11	MICRO INDUCTOR			100uH	
							L41	1-407-500-00	MICRO INDUCTOR			4.7mH	
							L1701	1-409-497-11	COIL (FILTER)				
CF1	1-567-389-11	FILTER, CERAMIC											
CF3	1-567-389-11	FILTER, CERAMIC							< LOW-PASS FILTER >				
		< CONNECTOR >					LPF41	1-239-845-11	FILTER, LOW PASS				
* CN1	1-568-834-11	SOCKET, CONNECTOR 15P					LPF42	1-239-845-11	FILTER, LOW PASS				
		< TRIMMER >							< TRANSISTOR >				
							Q1	8-729-201-27	TRANSISTOR	2SC2715Y			
CT1701	1-141-444-11	CAP, CERAMIC TRIMMER 50PF					Q2	8-729-201-27	TRANSISTOR	2SC2715Y			
CT1701	1-141-569-11	CAP, ADJ 50PF					Q3	8-729-201-27	TRANSISTOR	2SC2715Y			
							Q4	8-729-201-27	TRANSISTOR	2SC2715Y			
		< DIODE >					Q5	8-729-424-08	TRANSISTOR	MUN2111			
D21	8-719-976-99	DIODE DTZ5.1B					Q9	8-729-216-22	TRANSISTOR	2SA812-M5M6			
D41	8-719-016-74	DIODE 1SS352					Q11	8-729-421-22	TRANSISTOR	MUN2211			
D42	8-719-016-74	DIODE 1SS352					Q12	8-729-421-22	TRANSISTOR	MUN2211			
D43	8-719-016-74	DIODE 1SS352					Q13	8-729-421-22	TRANSISTOR	MUN2211			
D1701	8-719-016-74	DIODE 1SS352					Q14	8-729-421-22	TRANSISTOR	MUN2211			
D1702	8-719-016-74	DIODE 1SS352					Q1701	8-729-424-08	TRANSISTOR	MUN2111			
D1703	8-719-991-19	DIODE 1SS133T					Q1702	8-729-027-43	TRANSISTOR	RT1N141C			
D1704	8-719-016-74	DIODE 1SS352					Q1703	8-729-421-22	TRANSISTOR	MUN2211			
		< FRONT-END >							< RESISTOR >				
FE1	1-693-335-11	FRONT END (3 GANG)					R1	1-249-401-11	CARBON	47	5%	1/4W	
FE2	1-233-514-11	ENCAPSULATED COMPONENT					R2	1-216-037-00	METAL CHIP	330	5%	1/10W	
							R3	1-216-037-00	METAL CHIP	330	5%	1/10W	
		< IC >					R5	1-216-037-00	METAL CHIP	330	5%	1/10W	
							R6	1-216-081-00	METAL CHIP	22K	5%	1/10W	
IC21	8-759-288-54	IC LC72130											
IC41	8-759-495-82	IC LA1838					R7	1-216-049-11	METAL CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R8	1-216-037-00	METAL CHIP	330	5%	1/10W	R1714	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R9	1-216-081-00	METAL CHIP	22K	5%	1/10W						
R10	1-216-037-00	METAL CHIP	330	5%	1/10W	R1715	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R11	1-216-081-00	METAL CHIP	22K	5%	1/10W	R1716	1-216-097-00	METAL CHIP	100K	5%	1/10W
						R1717	1-216-097-00	METAL CHIP	100K	5%	1/10W
R12	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R1718	1-249-429-11	CARBON	10K	5%	1/4W
R13	1-216-037-00	METAL CHIP	330	5%	1/10W	R1719	1-216-097-00	METAL CHIP	100K	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W						
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W	R1720	1-249-434-11	CARBON	27K	5%	1/4W
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W	R1721	1-216-073-00	METAL CHIP	10K	5%	1/10W
R21	1-249-417-11	CARBON	1K	5%	1/4W			< VARIABLE RESISTOR >			
R22	1-249-417-11	CARBON	1K	5%	1/4W						
R23	1-249-417-11	CARBON	1K	5%	1/4W	RV41	1-238-600-11	RES, ADJ, CARBON 10K			
R24	1-247-807-31	CARBON	100	5%	1/4W	RV42	1-238-600-11	RES, ADJ, CARBON 10K			
R25	1-249-417-11	CARBON	1K	5%	1/4W	RV1701	1-238-601-11	RES, ADJ, CARBON 22K			
						RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K			
R26	1-249-437-11	CARBON	47K	5%	1/4W						
R27	1-249-429-11	CARBON	10K	5%	1/4W			< TERMINAL >			
R28	1-249-417-11	CARBON	1K	5%	1/4W						
R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	TM1	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)			
R30	1-216-186-00	METAL CHIP	330	5%	1/8W						
								< TEST PIN>			
R31	1-216-025-00	METAL CHIP	100	5%	1/10W						
R32	1-249-425-11	CARBON	4.7K	5%	1/4W	TP1701	1-536-354-00	PIN, POST			
R33	1-249-425-11	CARBON	4.7K	5%	1/4W	TP1702	1-536-354-00	PIN, POST			
R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W						
R35	1-216-214-00	METAL CHIP	4.7K	5%	1/8W			< VIBRATOR >			
R36	1-216-025-00	METAL CHIP	100	5%	1/10W	X21	1-760-549-31	VIBRATOR, CRYSTAL (4.5MHz)			
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W	X41	1-767-825-21	FILTER, CERAMIC (10.7MHz)			
R38	1-216-089-00	METAL CHIP	47K	5%	1/10W	X42	1-527-981-00	FILTER, CERAMIC (450kHz)			
R39	1-249-429-11	CARBON	10K	5%	1/4W	*****					
R41	1-216-013-00	METAL CHIP	33	5%	1/10W	*	1-668-212-11	TRANSFORMER BOARD			

R42	1-216-065-00	METAL CHIP	4.7K	5%	1/10W						
R43	1-216-037-00	METAL CHIP	330	5%	1/10W						
R44	1-216-001-00	METAL CHIP	10	5%	1/10W		1-533-217-31	HOLDER, FUSE			
R45	1-247-843-11	CARBON	3.3K	5%	1/4W		7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
R46	1-216-065-00	METAL CHIP	4.7K	5%	1/10W						
								< CONNECTOR >			
R47	1-216-097-00	METAL CHIP	100K	5%	1/10W						
R48	1-249-417-11	CARBON	1.0K	5%	1/4W	CN11	1-564-523-11	PLUG, CONNECTOR 8P			
R49	1-216-295-00	SHORT	0			* CN12	1-564-519-11	PLUG, CONNECTOR 4P			
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	CN13	1-564-321-00	PIN, CONNECTOR 2P			
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W						
								< FUSE >			
R52	1-216-061-00	METAL CHIP	3.3K	5%	1/10W						
R53	1-216-061-00	METAL CHIP	3.3K	5%	1/4W	△ F11	1-532-464-31	FUSE T2.5AL/250V			
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W	△ F12	1-532-465-31	FUSE T3.15AL/250V (EXCEPT EE, CIS)			
R55	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	△ F13	1-532-505-31	FUSE T5AL/250V (EXCEPT EE, CIS)			
R57	1-216-162-00	METAL CHIP	33	5%	1/8W						
								< RESISTOR >			
R58	1-216-013-00	METAL CHIP	33	5%	1/10W						
R91	1-216-295-00	SHORT	0			△ R11	1-219-119-81	FUSIBLE	0.1	5%	1/4W F (EE, CIS)
R92	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R1701	1-216-079-00	METAL CHIP	18K	5%	1/10W	△ R11	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (EXCEPT EE, CIS)
R1702	1-216-085-00	METAL CHIP	33K	5%	1/10W						
						△ R12	1-219-119-81	FUSIBLE	0.1	5%	1/4W F (EE, CIS)
R1703	1-216-069-00	METAL CHIP	6.8K	5%	1/10W						
R1704	1-216-076-00	METAL CHIP	13K	5%	1/10W	△ R12	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (EXCEPT EE, CIS)
R1705	1-216-049-11	METAL CHIP	1K	5%	1/10W						
R1706	1-216-049-11	METAL CHIP	1K	5%	1/10W	△ R13	1-219-119-81	FUSIBLE	0.1	5%	1/4W F (EE, CIS)
R1707	1-216-097-00	METAL CHIP	100K	5%	1/10W						
R1708	1-216-095-00	METAL CHIP	82K	5%	1/10W	△ R13	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (EXCEPT EE, CIS)
R1709	1-216-089-00	METAL CHIP	47K	5%	1/10W						
R1710	1-216-073-00	METAL CHIP	10K	5%	1/10W	△ R14	1-219-119-81	FUSIBLE	0.1	5%	1/4W F (EE, CIS)
R1711	1-249-429-11	CARBON	10K	5%	1/4W						

HCD-GRX9000/RX900

TRANSFORMER

Ref. No.	Part No.	Description	Remark
△ R14	1-219-120-11	FUSIBLE 0.15 5% 1/4W F (EXCEPT EE, CIS)	
< SWITCH >			
△ S11	1-771-291-11	SWITCH, POWER (VOLTAGE SELECTOR) (EXCEPT EE, CIS)	
< TRANSFORMER >			
△ T11	1-431-662-11	TRANSFORMER, POWER (EE, CIS)	
△ T11	1-431-663-11	TRANSFORMER, POWER (EXCEPT EE, CIS)	

MISCELLANEOUS			

6	1-769-984-11	WIRE (FLAT TYPE) (13 CORE) (23cm)	
10	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
11	1-773-025-11	WIRE (FLAT TYPE) (15 CORE) (33cm)	
105	1-783-570-11	WIRE (FLAT TYPE) (19 CORE)	
107	1-693-420-11	TUNER (FM/AM) (E)	
107	1-693-421-11	TUNER (FM/AM) (EA, MY, SP)	
108	1-769-976-11	WIRE (FLAT TYPE) (13 CORE) (14cm) (E)	
108	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (14cm) (EXCEPT E)	
△ 113	1-575-651-11	CORD, POWER (EE, CIS, EA, MY, SP)	
△ 113	1-575-653-11	CORD, POWER (E)	
△ 114	1-569-008-21	ADAPTOR, CONVERSION 2P (EA, MY, SP)	
257	1-452-925-21	MAGNET ASSY	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
△ 301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD (230AWR1)	
HP101	A-2056-683-A	DECK (A) ASSY, HEAD (230PWR1)	
HRPE101A	A-2056-682-A	DECK (B) ASSY, HEAD (230AWR1)	
HRPE101A	A-2056-684-A	DECK (B) ASSY, HEAD (230PWR1)	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M401	1-763-072-11	FAN, D.C.	
M701	A-4672-004-A	MOTOR ASSY (TURN)	
M801	A-4672-004-A	MOTOR ASSY (SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	
△ T11	1-431-662-11	TRANSFORMER, POWER (EE, CIS)	
△ T11	1-431-663-11	TRANSFORMER, POWER (EXCEPT EE, CIS)	

HARDWARE LIST

#1	7-685-872-09	SCREW +BVTT 3X8 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S
#5	7-685-871-01	SCREW +BVTT 3X6 (S)
#6	7-685-880-09	SCREW +BVTT 4X6 (S)
#7	7-685-851-04	SCREW +BVTT 2X4 (S)
#8	7-621-775-10	SCREW +B 2.6X4
#9	7-621-255-15	SCREW +P 2X3
#10	7-685-850-04	SCREW +BVTT 2X3 (S)

Ref. No.	Part No.	Description	Remark
#11	7-628-254-15	SCREW +PS 2.6X6	
#12	7-628-254-50	SCREW +PS 2.6X16	

ACCESSORIES & PACKING MATERIALS

1-475-572-11	COMMANDER, STANDARD (RM-SR5)
1-501-374-11	ANTENNA, LOOP
1-501-659-41	ANTENNA (FM) (EXCEPT EE, CIS)
1-501-804-11	ANTENNA (FM) (EE, CIS)
3-862-005-11	MANUAL, INSTRUCTION (ENGLISH)
3-862-005-21	MANUAL, INSTRUCTION (FRENCH, SPANISH) (E, EA, MY, SP)
3-862-005-41	MANUAL, INSTRUCTION (CHINESE) (EA, MY, SP)
3-862-005-51	MANUAL, INSTRUCTION (ARABIC) (EA)
3-862-005-91	MANUAL, INSTRUCTION (POLISH, RUSSIAN) (EE, CIS)
4-991-151-21	COVER, BATTERY (for RM-SR5)

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