

HCD-GRX50/R770/RXD7

SERVICE MANUAL



Photo: HCD-GRX50

Canadian Model
HCD-RXD7

AEP Model
HCD-R770/RXD7

UK Model
HCD-R770

E Model
Australian Model
HCD-GRX50

HCD-GRX50/R770/RXD7 are the Amplifier, CD player, Tape Deck and Tuner section in HMC-GRX50/R770/RXD7.

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CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM38LH-5BD32L
	Base Unit Name	BU-5BD32L
	Optical Pick-up Name	KSS-213D/Q-NP
Tape deck Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-230AWR2

Amplifier section

Canadian model:

Continuous RMS power output (reference)
70 + 70 watts
(6 ohms at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07%
(6 ohms at 1 kHz, 45 W)

European and Russian models:

DIN power output (rated) 80 + 80 watts
(8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
100 + 100 watts
(8 ohms at 1 kHz, 10% THD)
Music power output (reference)
170 + 170 watts
(6 ohms at 1 kHz, 10% THD)

SPECIFICATIONS

Other models:

The following measured at AC 120, 220, 240 V 50/60 Hz
DIN power output (rated) 110 + 110 watts
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
140 + 140 watts
(8 ohms at 1 kHz, 10% THD)

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM



SONY®

Specifications (continued)

Inputs	
MD/VIDEO (AUDIO) IN: (phono jacks)	voltage 450 mV/250mV, impedance 47 kilohms
MIX MIC: (phone jack)	sensitivity 1 mV, impedance 10 kilohms
Outputs	
MD OUT: (phono jacks)	voltage 250 mV, impedance 1 kilohms
PHONES: (stereo phone jack)	accepts headphones of 8 ohms or more
SPEAKER:	
Canadian model:	accepts impedance of 6 to 16 ohms
Other models:	accepts impedance of 8 to 16 ohms
SUPER WOOFER (GRX50/RXD7: Canadian models):	Voltage 1 V, impedance 1 kilohm

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 μW^* *This output is the value measured at 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 (± 0.5 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 (± 3 dB), using Sony TYPE I cassette 40 - 14,000 Hz (± 3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 - 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

UKV tuner section (3 band (FM-AM-UKV) models only)

Tuning range	65.0 - 74.0 MHz Stereo Plus
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AM tuner section

Tuning range	
2 Band type:	
Canadian model:	530 - 1,710 kHz (with the interval set at 10 kHz) 531 - 1,710 kHz (with the interval set at 9 kHz)
European and Russian models:	531 - 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 - 1,602 kHz (with the interval set at 9 kHz) 530 - 1,710 kHz (with the interval set at 10 kHz)

3 Band type:	
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	
Canadian model:	120 V AC, 60 Hz
European and Russian models:	230 V AC, 50/60 Hz
Mexican model:	120 V AC, 50/60 Hz
Australian model:	230 - 240 V AC, 50/60 Hz
Israel and Thai models:	220 V AC, 50/60 Hz
Other models:	120 V, 220 V, or 230 - 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	
Canadian model:	130 watts
European and Russian models:	165 watts
Other models:	160 watts

Dimensions (w/h/d)	Approx. 280 × 340 × 395 mm (11 ¹ / ₈ × 13 ¹ / ₂ × 15 ⁵ / ₈ in.)
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Mass	
Canadian model:	Approx. 9.2 kg
European and Russian models:	Approx. 10.1 kg
Other models:	Approx. 10 kg
Supplied accessories:	AM loop antenna (1) Remote Commander (1) Batteries (2) FM lead antenna (1) Speaker cords (2) Front speaker pads (8)

Design and specifications are subject to change without notice.

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE $\triangle$ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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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 SICHERHEITSPERIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

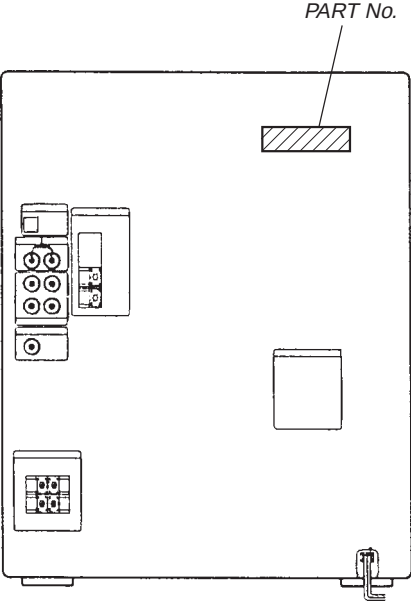
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

WARNING : 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.

VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

MODEL IDENTIFICATION
– Rear Panel –



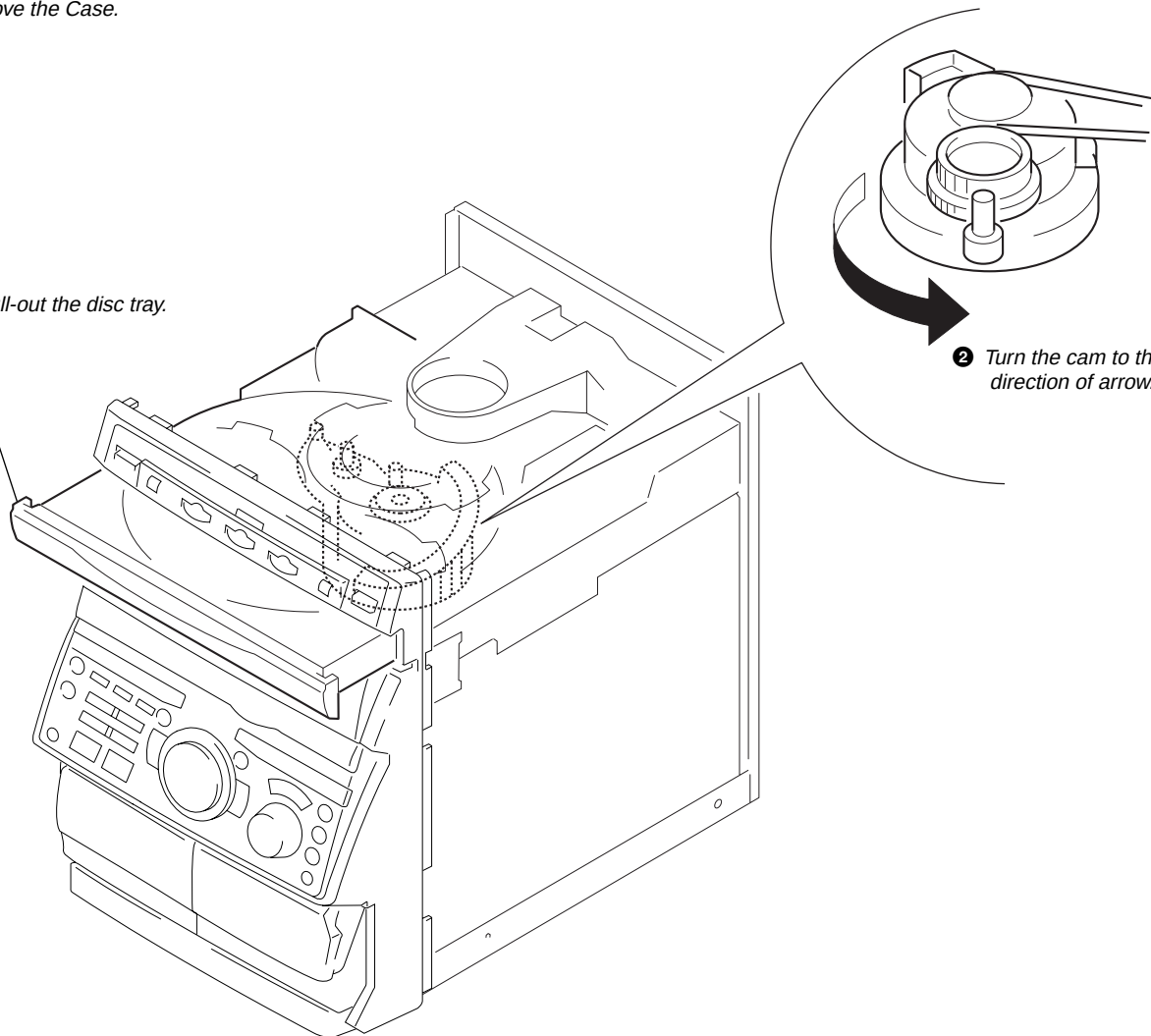
MODEL	PART No.
Argentine model	4-214-442-0□
Israel and Thai models	4-214-442-6□
120 V AC Area in E model	4-215-168-0□
Canadian model	4-215-168-1□
R770: AEP, UK, German and North European models	4-215-168-2□
RXD7: CIS model	4-215-168-3□
R770: CIS model	4-215-168-4□
RXD7: AEP, German and North European models	4-215-168-5□
240 V AC Area in E model	4-215-168-6□
Saudi Arabia model	4-215-168-7□
Singapore model	4-215-168-8□
Mexican model	4-215-168-9□
Australian model	4-220-083-0□
Taiwan model	4-220-083-1□
Korean model	4-220-083-2□

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

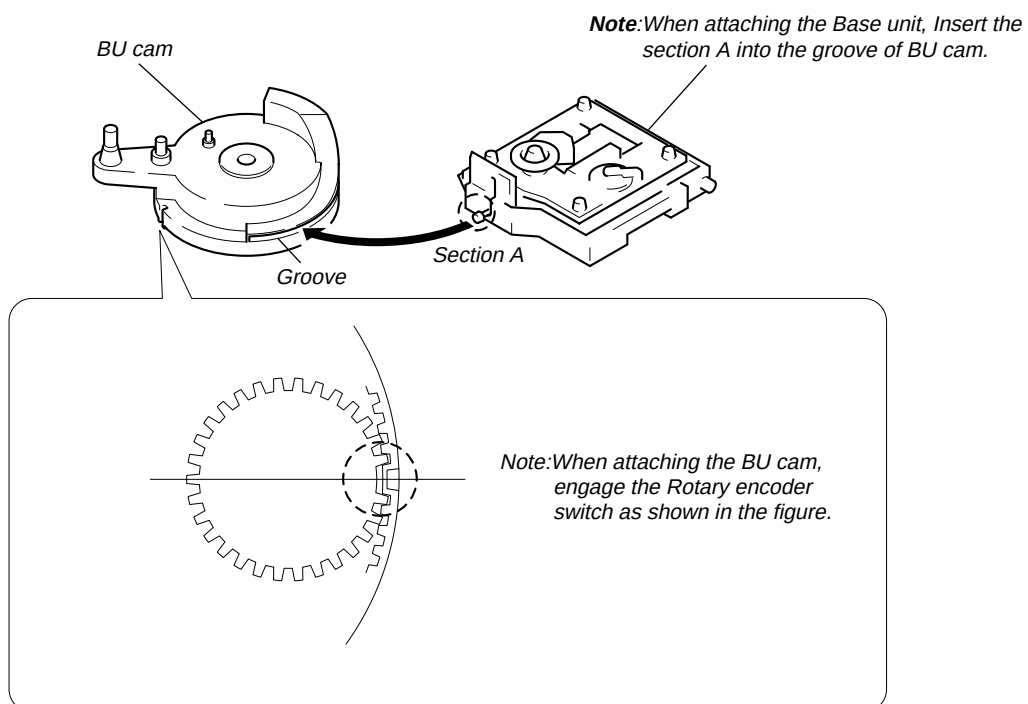
❶ Remove the Case.

❸ Pull-out the disc tray.

❷ Turn the cam to the direction of arrow.



NOTE FOR INSTALLATION (ROTARY ENCODER)

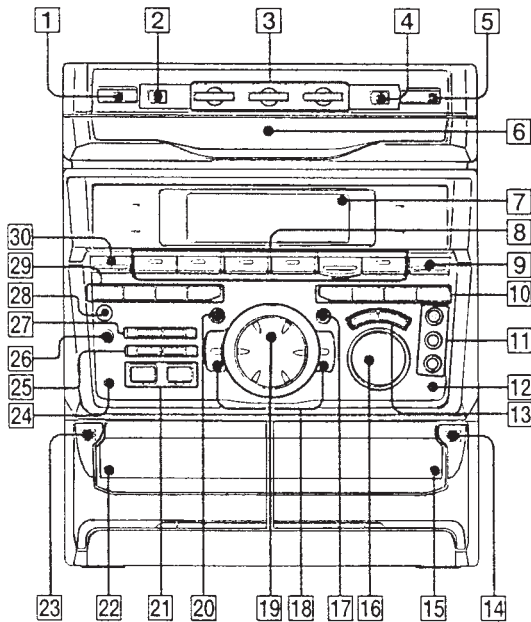


SECTION 2 GENERAL

This section is extracted from instruction manual.

LOCATION OF CONTROLS

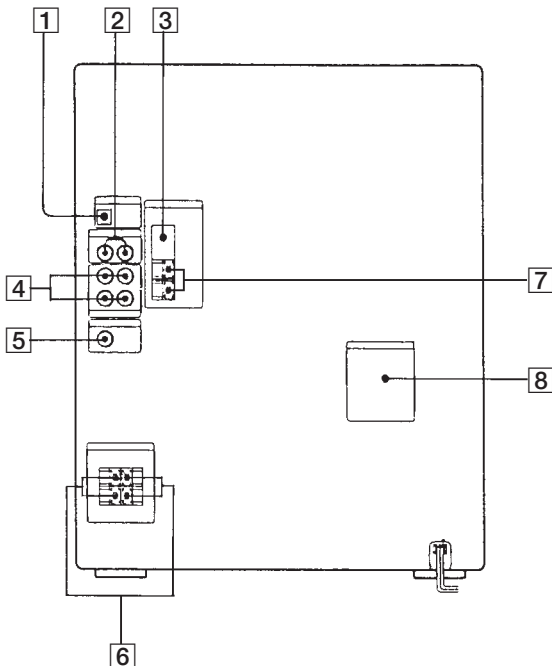
– Front Panel –



- 1 I / ϕ (power) button
- 2 POWER SAVE/DEMO button
- 3 DISC 1-3 buttons
- 4 DISC SKIP/EXCHANGE button
- 5 CD $\triangle$ button
- 6 Disc tray
- 7 Display
- 8 CD/tape operating buttons:
CD $\blacktriangleright \parallel$ (play/pause)
TAPE A $\blacktriangleright$ (play)
TAPE A $\blacktriangleleft$ (play)
TAPE B $\blacktriangleright$ (play)
TAPE B $\blacktriangleleft$ (play)
 $\blacksquare$ (stop)
- 9 TUNER/BAND button
- 10 NON-STOP button
KARAOKE PON/MPX button
SYNC EQ button
SYNC BASS button
- 11 Operating buttons for recording:
REC PAUSE/START button
HI-DUB button
CD SYNC button
- 12 PHONES jack
- 13 DBFB button
SURROUND button
- 14 Deck B $\triangle$ button
- 15 Deck B
- 16 VOLUME control
- 17 ENTER/NEXT button
- 18 $\blacktriangleleft/\blacktriangleright$, +/- buttons
- 19 Jog dial
- 20 GROOVE button
- 21 Operating buttons for DJ Effects:
LOOP button
FLASH button
- 22 Deck A
- 23 Deck A $\triangle$ button
- 24 MIX MIC jack
- 25 Clock/timer operating buttons:
CLOCK/TIMER set button
TIMER SELECT button
- 26 MIC LEVEL control
- 27 DISPLAY button
SPECTRUM ANALYZER button
- 28 ECHO LEVEL control
(Saudi Arabia model)
- 29 EDIT, DIRECTION, TUNER MEMORY button
PLAY MODE, DOLBY NR(, PTY*) button
REPEAT, STEREO/MONO button
FILE SELECT button
- 30 FUNCTION button

* For European models only.

– Rear Panel –



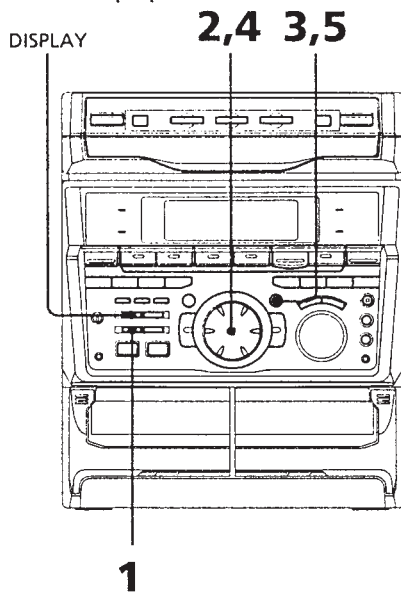
- 1 CD DIGITAL OUT terminal
- 2 VIDEO (AUDIO) IN jack
- 3 FM COAXIAL ANTENNA terminal
(R770/RXD7: AEP models)
FM ANTENNA terminal
(GRX50/RXD7: Canadian models)
- 4 MD IN/OUT jack
- 5 SUPER WOOFER jack
(GRX50/RXD7: Canadian models)
- 6 SPEAKER terminal
- 7 AM ANTENNA terminal
- 8 VOLTAGE SELECTOR switch
(GRX50: 120 V AC Area in E, 240 V AC Area in E, Saudi Arabia, Singapore, Taiwan, Argentine models)

Step 2: Setting the time

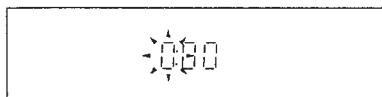
You must set the time before using the timer functions.

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

The 24-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.

continued

Step 2: Setting the time (continued)

- 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.

Tip

If you've made a mistake, start over from step 1.

To change the time

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.

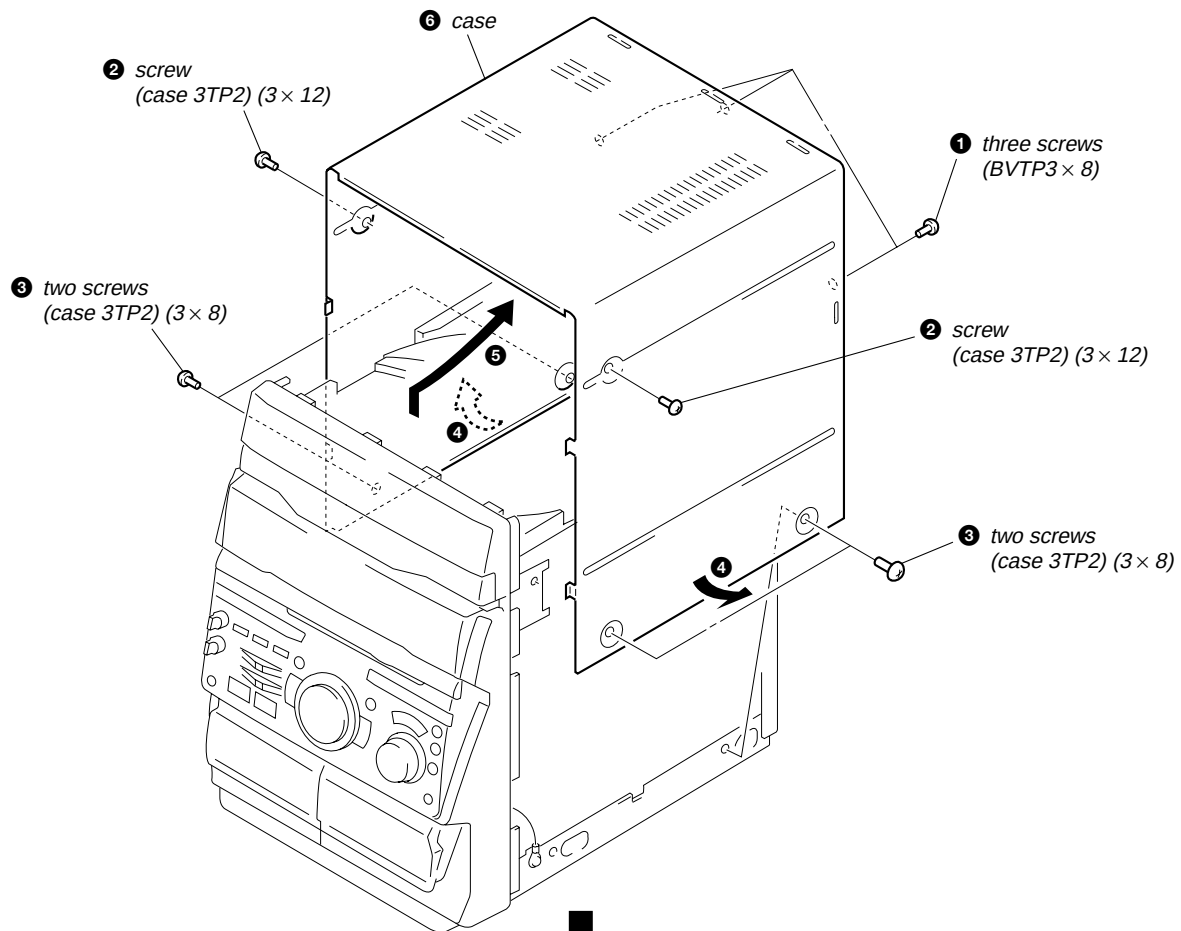
Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

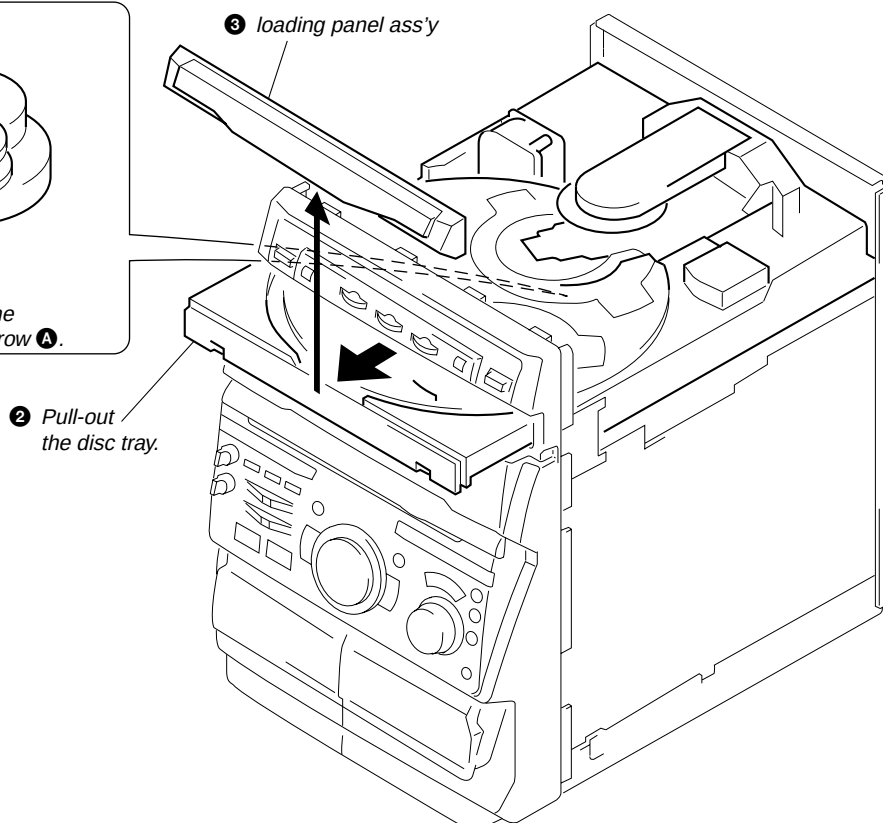
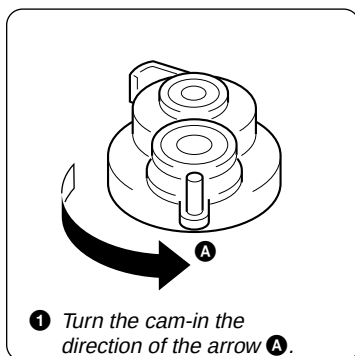
SECTION 3 DISASSEMBLY

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

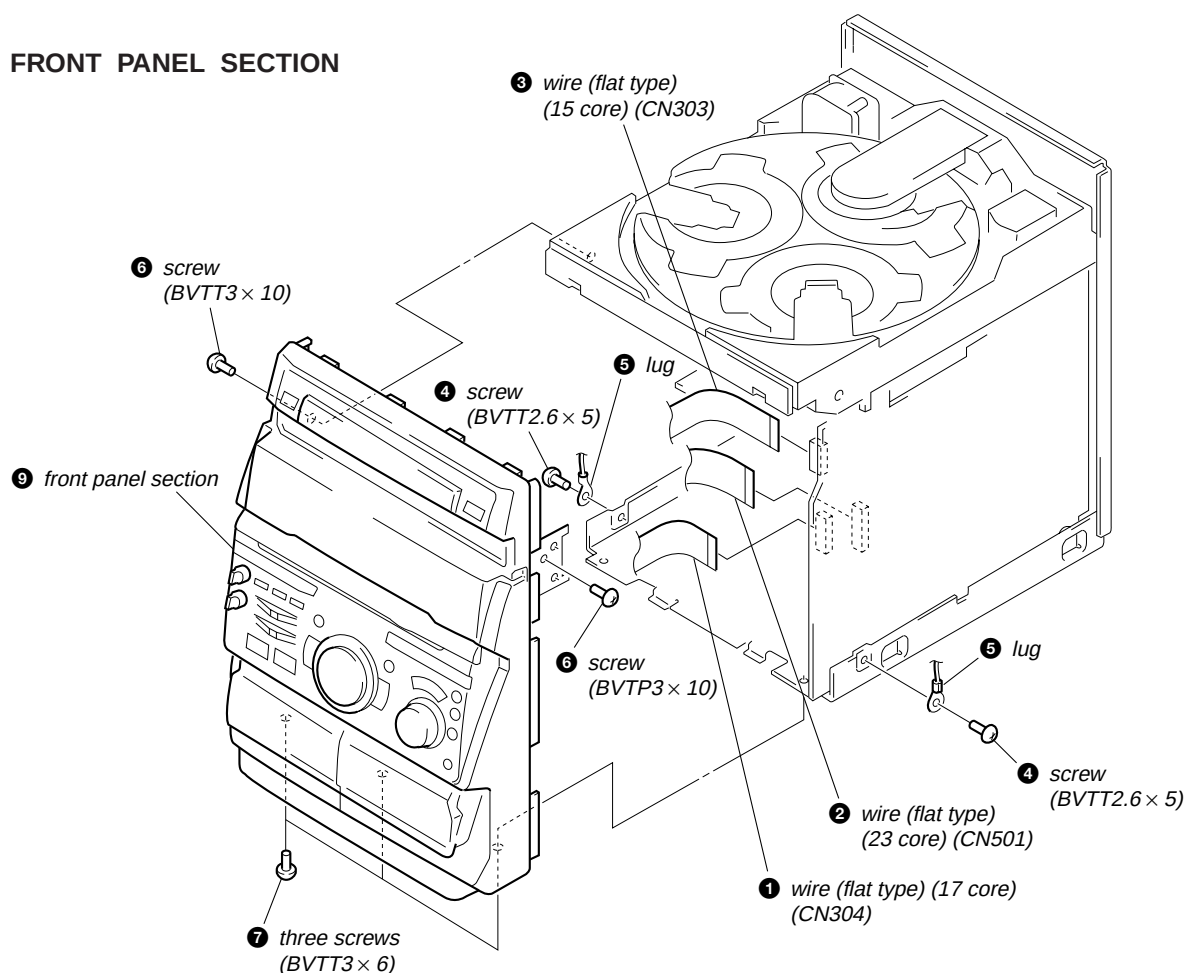
CASE



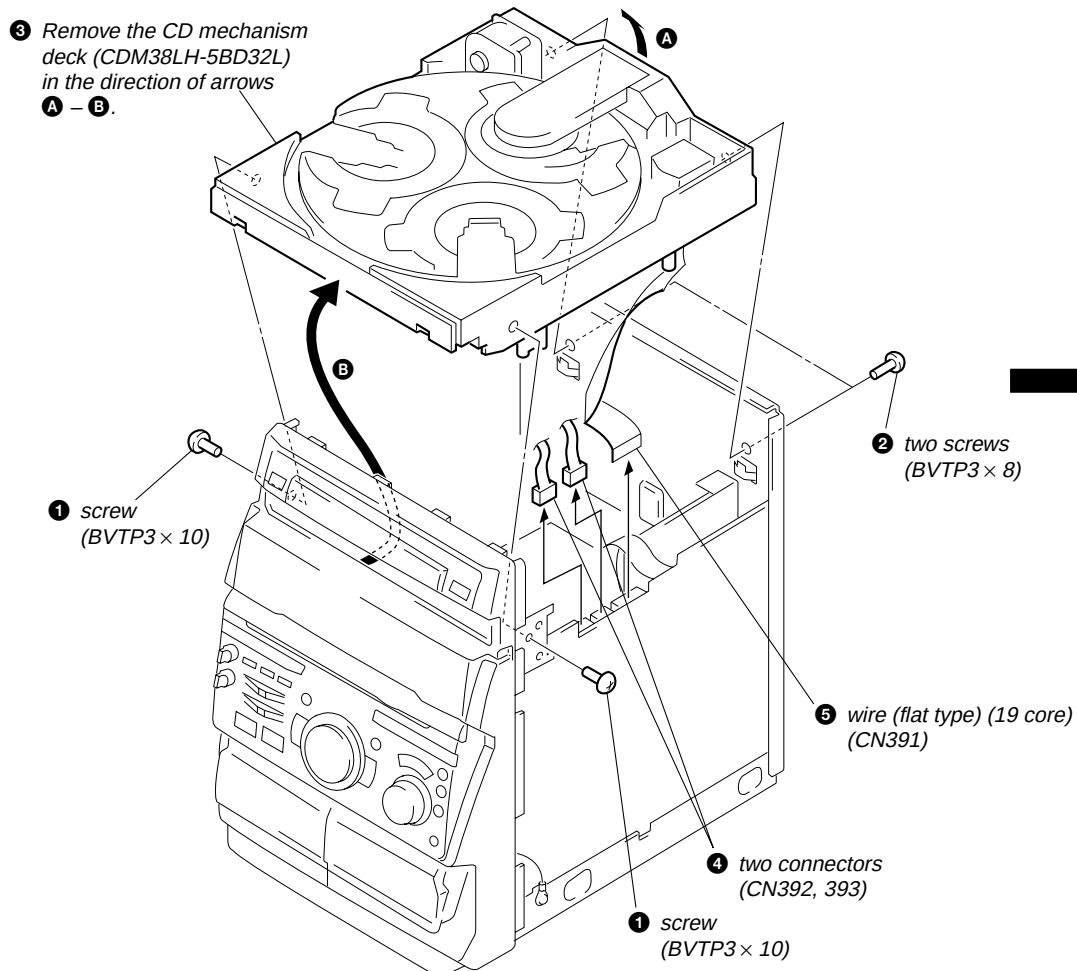
LOADING PANEL ASS'Y



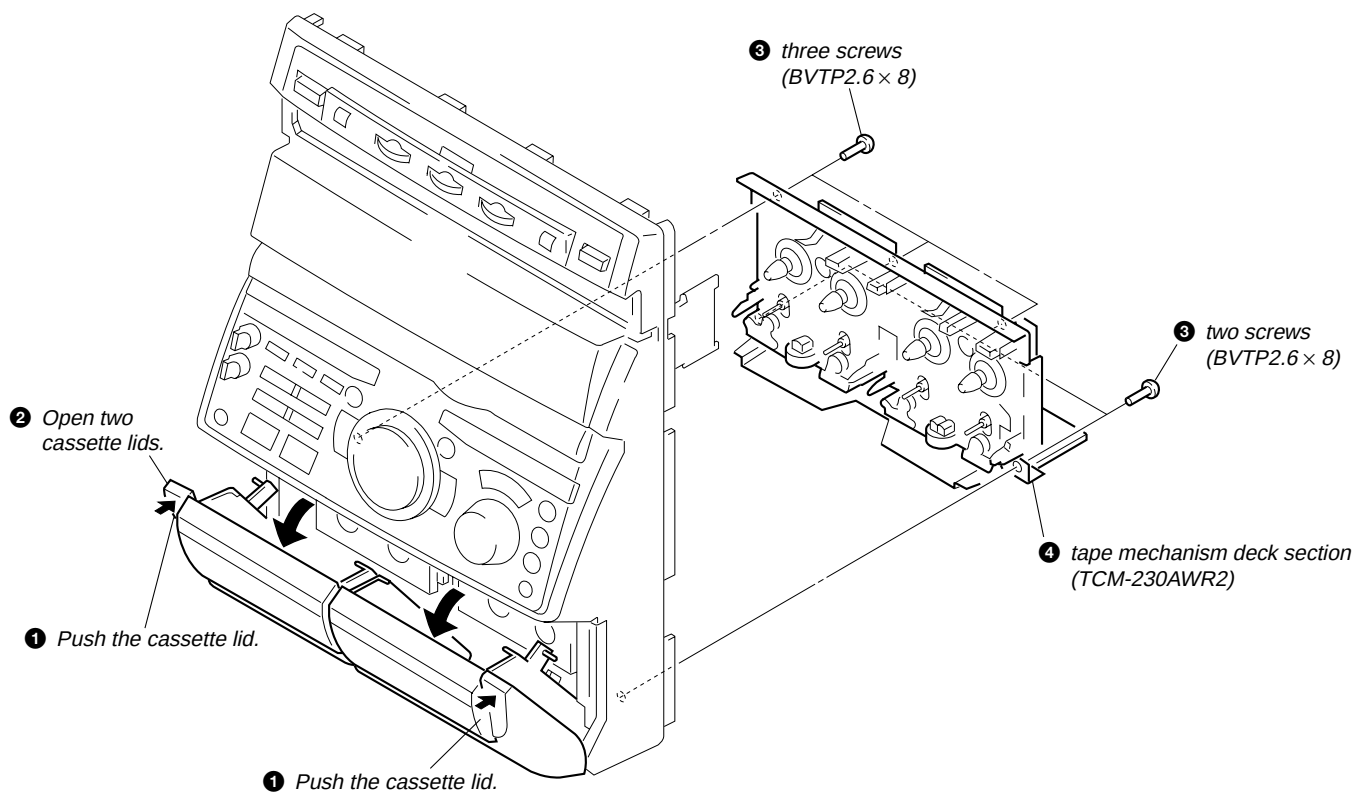
FRONT PANEL SECTION



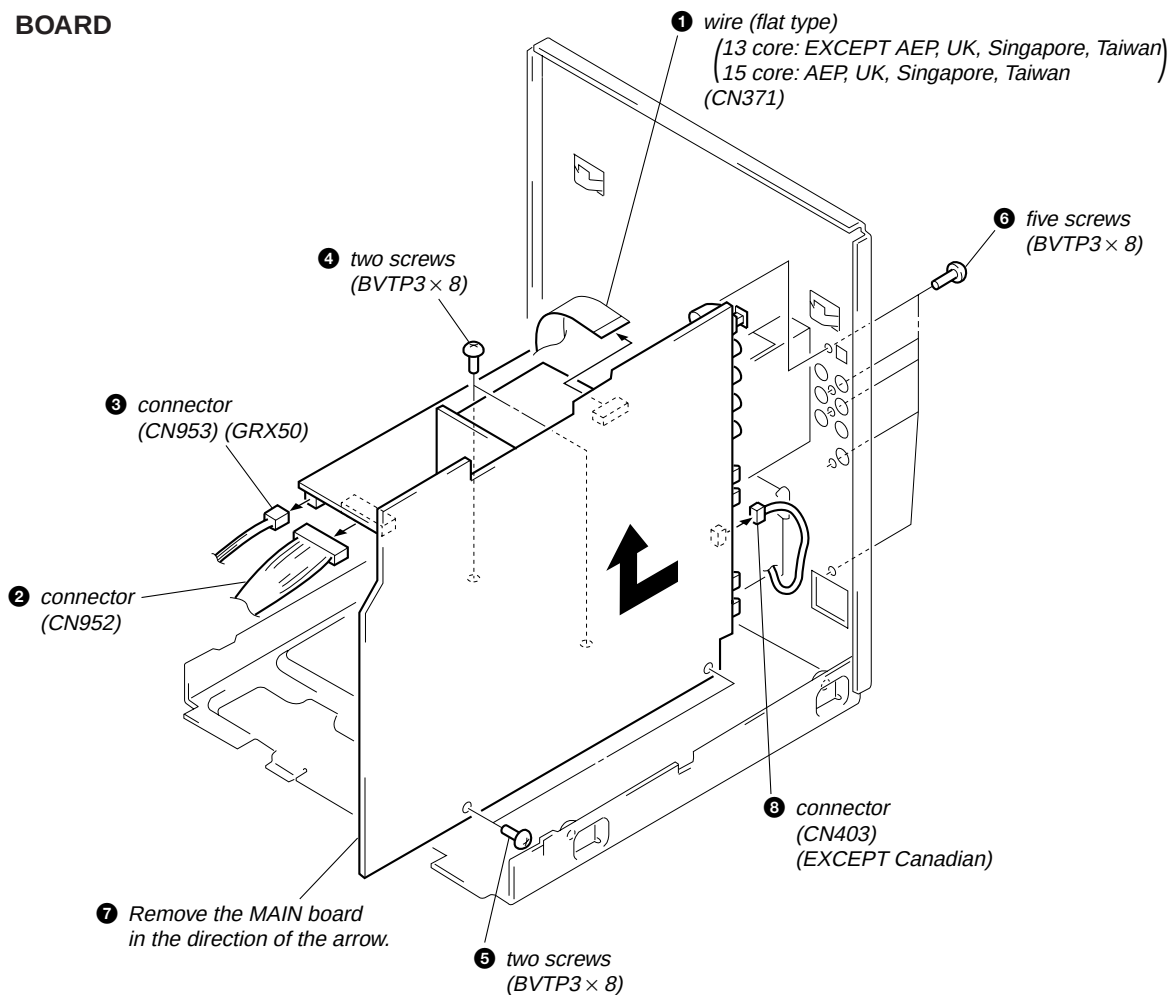
CD MECHANISM DECK SECTION (CDM38LH-5BD32L)



TAPE MECHANISM DECK SECTION (TCM-230AWR2)



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. Turn the power ON or set to the DEMO mode.
2. Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[I/⏻]** simultaneously.
3. The set is reset, and displays “COLD RESET”, then becomes DEMO mode.

[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. Turn the power ON or set to the DEMO mode.
2. Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[DISC 1]** simultaneously.
3. The set is reset, and becomes standby state.

[Change-over the AM Tuning Interval] (EXCEPT AEP, UK, and Saudi Arabia models)

- The AM tuning interval can be changed over 9 kHz or 10 kHz.

Procedure:

1. Press the **[I/⏻]** button to turn the power ON.
2. Select the function “TUNER”, and press the **[TUNER/BAND]** button to select the BAND “AM”.
3. Press the **[I/⏻]** button to turn the power OFF.
4. Press the **[ENTER/NEXT]** and **[I/⏻]** buttons simultaneously, and the display on the fluorescent indicator tube changes to “AM 9 k STEP” or “AM 10 k STEP”, and thus the tuning interval is changed over.

[CD Delivery Mode]

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

Procedure:

1. Press the **[I/⏻]** button to turn the power ON.
2. Press the **[LOOP]** and **[I/⏻]** buttons simultaneously.
3. A message “LOCK” is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

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

Procedure:

1. Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[DISC 2]** simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press the **[DISC 2]** button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays “K 0 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 turn the JOG dial clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
“V” value increases like 1, 2, 3 ... if turn the **[VOLUME]** dial clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[CD Service Mode]

- This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the **[I/⏻]** button to turn the power ON.
2. Select the function “CD”.
3. Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[△]** simultaneously.
4. Set to the Sled Servo mode.
5. With the CD in stop status, turn the JOG dial clockwise to move the optical pick-up to outside track, or turn it counterclockwise to inside track.
6. To exit from this mode, perform as follows.
 - 1) Move the optical pick-up to the most inside track.
 - 2) Disconnect the power cord.

- Notes:**
- Always move the optical pick-up 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.

[Aging Mode]

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

CD section and tape deck section work in parallel.

- If an error occurred:

The aging operation stops only an error occurred sections and display then status.

- If no error occurs:

The aging operation continues repeatedly.

Procedure:

1. Set disc in DISC1 tray.
2. Load the tapes into the decks A and B respectively.
3. Press the **[PLAY MODE]** button to set the "ALL DISCS" mode, and press the **[REPEAT]** button to "REPEAT" off.
4. Press the **[FUNCTION]** button to select the function "CD".
5. Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[DISC SKIP/EX-CHANGE]** simultaneously.
6. The aging mode is activated, if the indicator of disc tray number on the fluorescent indicator tube is blinking.
7. To exit from the aging mode, press the **[I/O]** button to turn the power OFF and operate the cold reset. (Refer to the "MC Cold Reset")

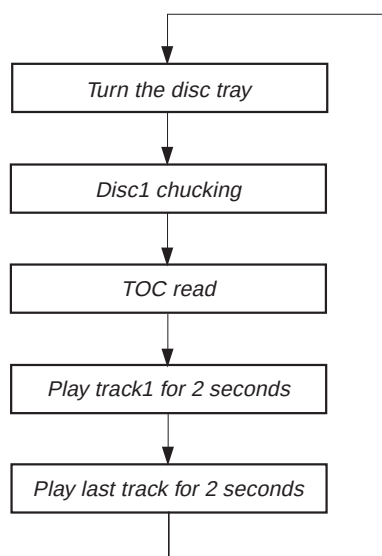
1. Display at the Aging Mode

- Display operating state of CD section and tape deck section alternately.
- If an error occurred, stop display which that section.

2. CD Section

- Display at the aging mode is the same as the normal operation.
- The sequence during the aging mode is following as below.

Aging mode sequence (CD section) :



- Display at an error occurred

1) Display of the error count

- (1) Press three buttons of **[■]**, **[ENTER/NEXT]**, and **[CD SYNC]** simultaneously.
- (2) Display of the error count following as below.

Display

EMC**EDC**

Notes:

EMC** : The number of mechanical error.

EDC** : The number of no disc error after chucking the disc.

2) Display of mechanical error

Display

E**M##\$\$&&

Notes:

** : The number of mechanical error. ("00" is latest one)

(Press the **[PLAY MODE]** button to changes next error display)

: Not used.

\$\$: Loading error. (Second figure is not used)

D : The error in the midst of close at the except mechanical trouble.

E : The error in the midst of open at the except mechanical trouble.

C : The error in the midst of chuck up at the except mechanical trouble.

F : The error in the midst of EX-open at the except mechanical trouble.

&& : Loading error. (Second figure in not used)

1: The error in the midst of chuck up.

2: The error in the midst of chuck down.

3: Time up of EX-open

4: Time up of EX-close.

3) Display of no disc error

Display

E**D##\$\$&&

Notes:

** : The number of mechanical error. ("00" is latest one)

(Press the **[REPEAT]** button to changes next error display)

:

01: Focus error

02: GFS error

03: Set up error

\$\$:

00: No disc error when does not chucking retry.

02: No disc error when chucking retry to completion.

&& : The state when judged no disc error. (Second figure is not used)

1: Stop

2: Set up

3: TOC read

4: Access

5: Play

6: Pause

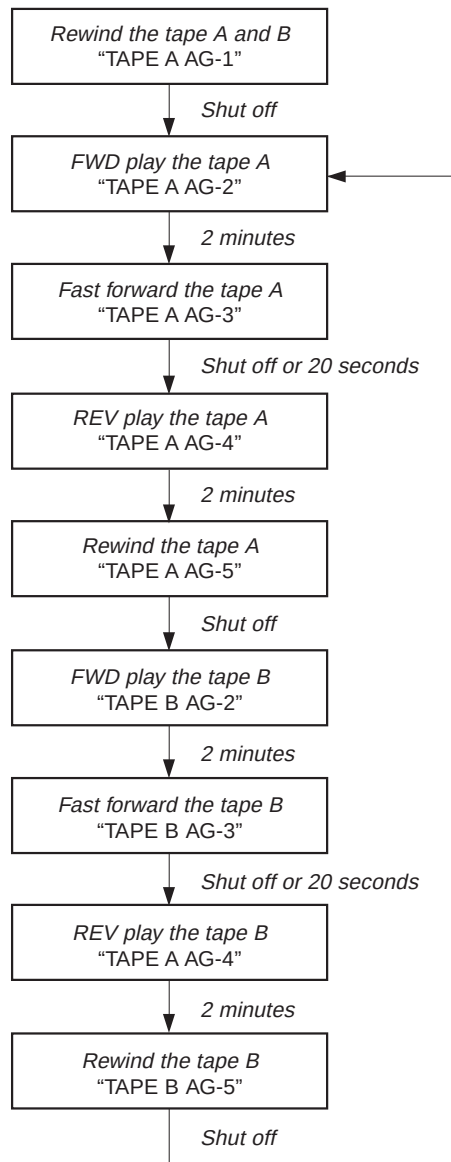
7: Manual search (Play)

8: Manual search (Pause)

3. Tape Deck Section

- The sequence during the aging mode is following as below.
- If an error occurred, stop display that step.

Aging mode sequence (Tape deck section) :



Note: "TAPE * AG-*" is display of each step.

SECTION 5 MECHANICAL ADJUSTMENTS

Precaution

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

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. 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

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. 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.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to the DOLBY NR OFF.
9. Set to the test mode.
 - (1) Press the **[I/C]** button to turn the power ON.
 - (2) Select the function "TAPE A or B".
 - (3) Press the button of **[■]**, **[ENTER/NEXT]**, and **[DISC 3]** simultaneously, to set the tape deck test mode and blink the indicator of disc tray number on the fluorescent indicator tube.
 - (4) To exit from the test mode, press the **[I/C]** button.

• 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

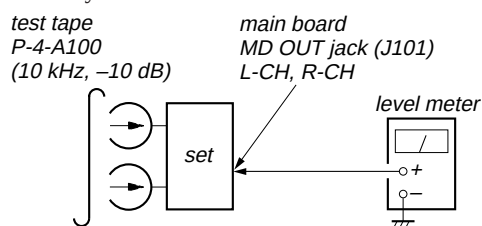
DECK A

DECK B

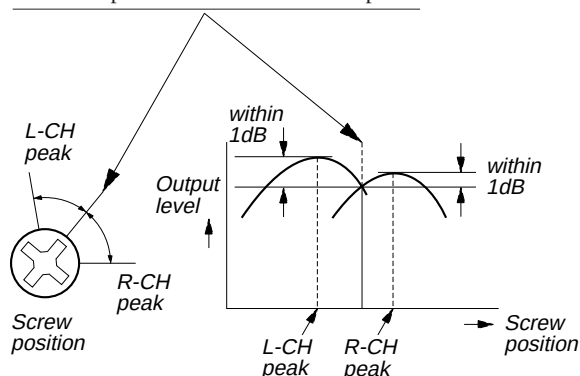
Note: Perform this adjustments for both decks

Procedure:

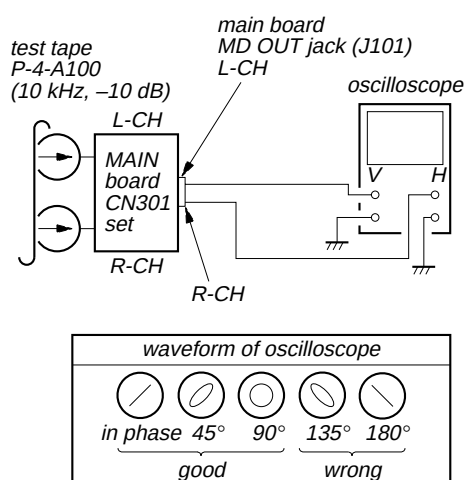
1. Mode: Playback



- 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.

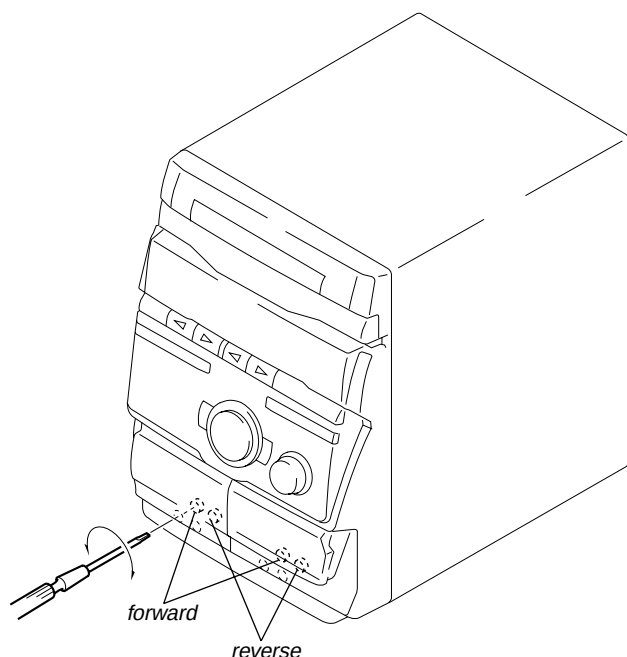


- Mode: Playback



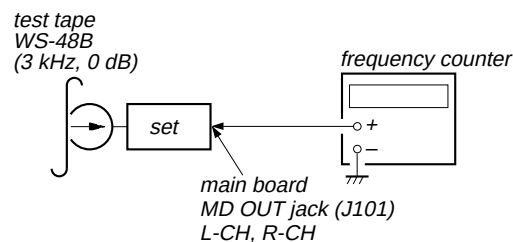
- Repeat step 1 to 3 in playback (REV) mode.
- After the adjustments, apply suitable locking compound to the parts adjusted.

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



Tape Speed Adjustment **DECK B**

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.

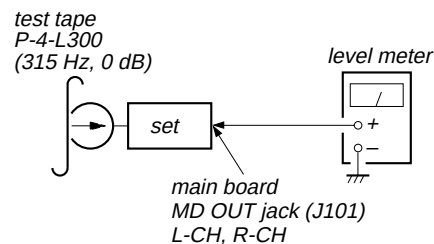
Adjustment Location: LEAF SW board

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:

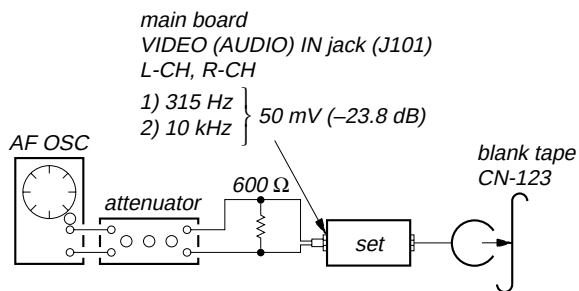
J101 PB level: 301.5 to 338.3 mV (-8.2 to -7.2 dB) level
difference between the channels: within ± 0.5 dB

Adjustment Location: AUDIO board

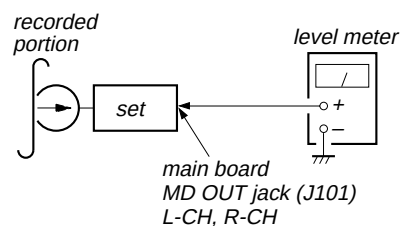
REC Bias Adjustment **DECK B**

Procedure:

1. Mode: Record
FUNCTION: VIDEO



2. Mode: Playback



3. Confirm playback the signal recorded in step 1 become specification values as follows.
If these values are out of specification values, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1 and 2.

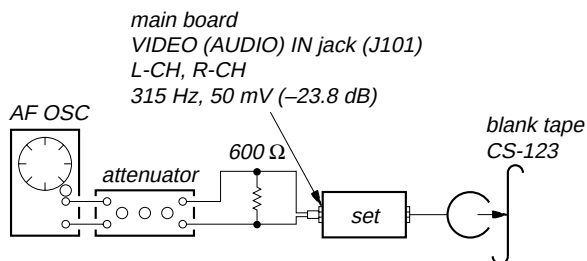
Specification values: Playback output of 315 Hz to playback output of 10 kHz: ± 0.5 dB

Adjustment Location: AUDIO board

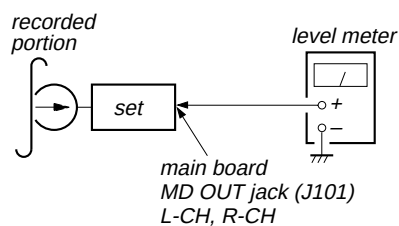
REC Level Adjustment **DECK B**

Procedure:

1. Mode: Record
FUNCTION: VIDEO



2. Mode: Playback



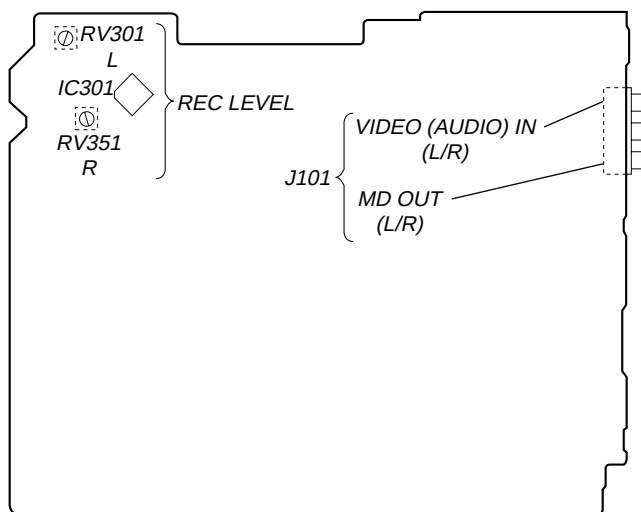
3. Confirm playback the signal recorded in step 1 become specification values as follows.
If these values are out of specification values, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 1 and 2.

Specification values:

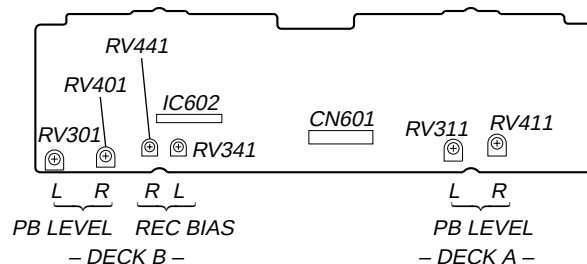
J101 PB level: 47.2 to 53.0 mV (-24.3 to -23.3 dB)

Adjustment Location: MAIN board

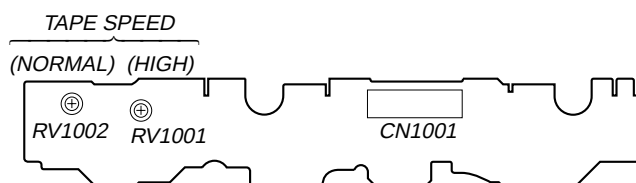
– MAIN BOARD (Conductor Side) –



– AUDIO BOARD (Component Side) –



– LEAF SW BOARD (Component Side) –

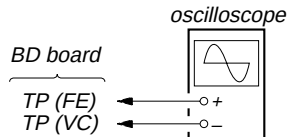


CD SECTION

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.

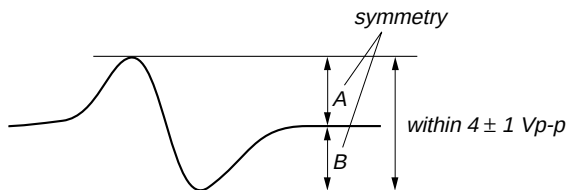
S-Curve Check



Procedure:

1. Connect oscilloscope to TP (FE).
2. Connect between TP (FE1) and TP (VC) by lead wire.
3. Connect between TP (AGCCON) and TP (GND) by lead wire.
4. Turn the power ON.
5. Load a disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
6. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 4 ± 1 Vp-p.

S-curve waveform

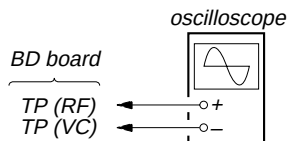


7. After check, remove the lead wire connected in step 2 and 3.

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.

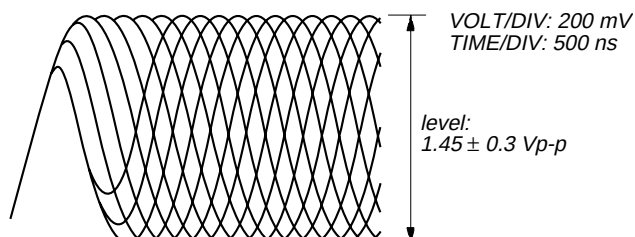
RF Level Check



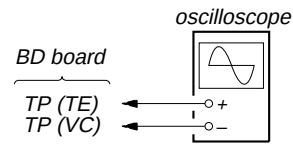
Procedure:

1. Connect oscilloscope to TP (RF).
2. Connect between TP (AGCCON) and TP (GND) by lead wire.
3. Turn the power ON.
4. Load a disc (YEDS-18) and playback.
5. Confirm that the oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

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



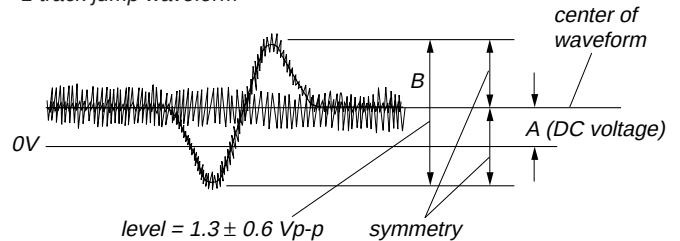
E-F Balance (1 Track Jump) Check



Procedure :

1. Connect oscilloscope to TP (TE) and TP (VC).
2. Turn the power ON.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the (CD) button. (Becomes the 1 track jump mode)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

1 track jump waveform

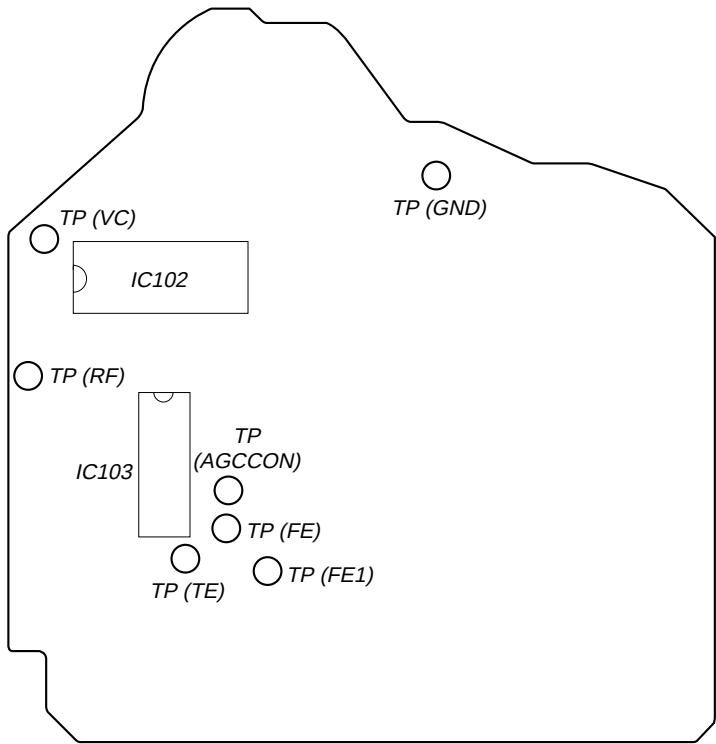


Specified level: $\frac{A}{B} \times 100 = \text{less than } \pm 22\%$

6. After check, remove the lead wire connected in step 1.

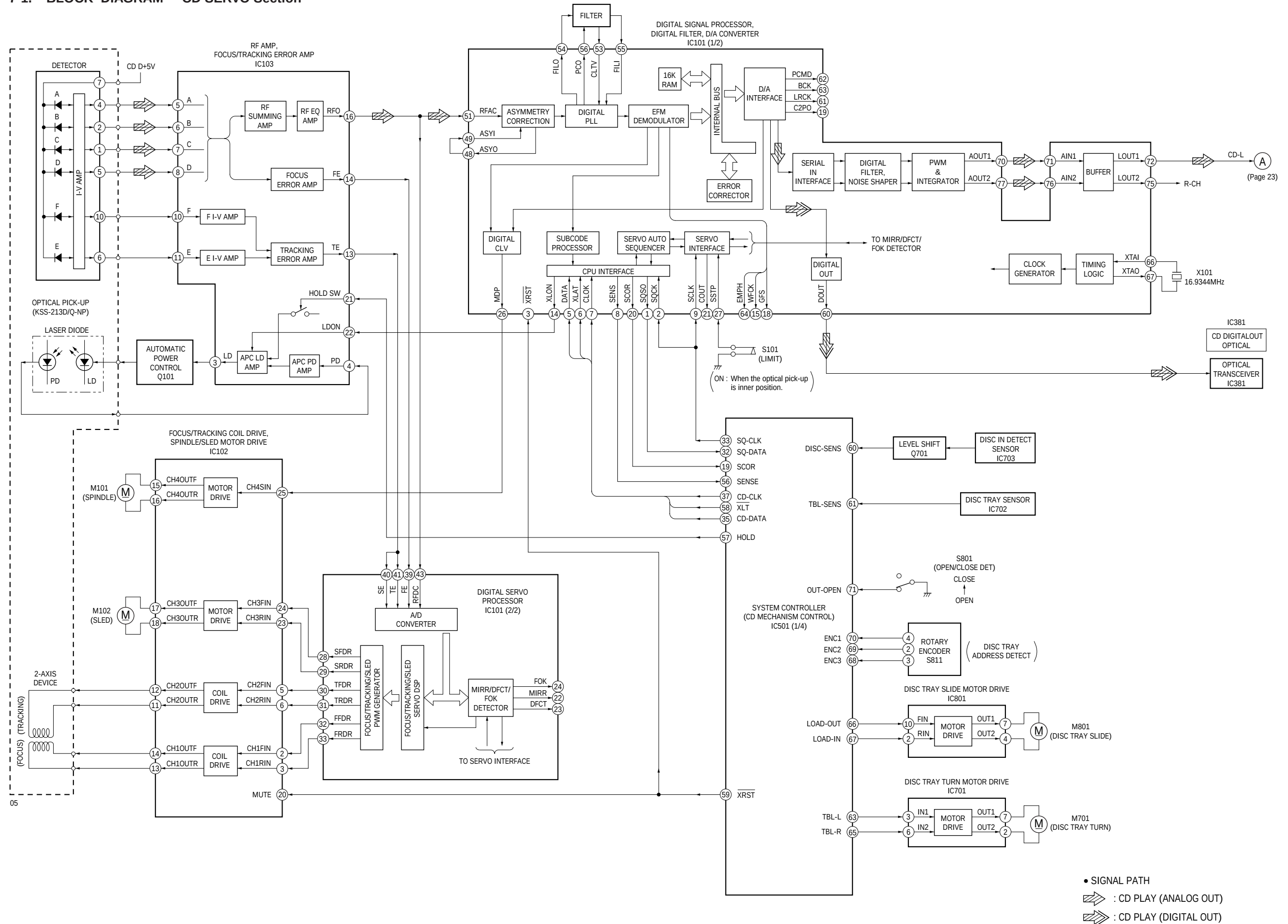
Checking Location:

– BD BOARD (Side B) –

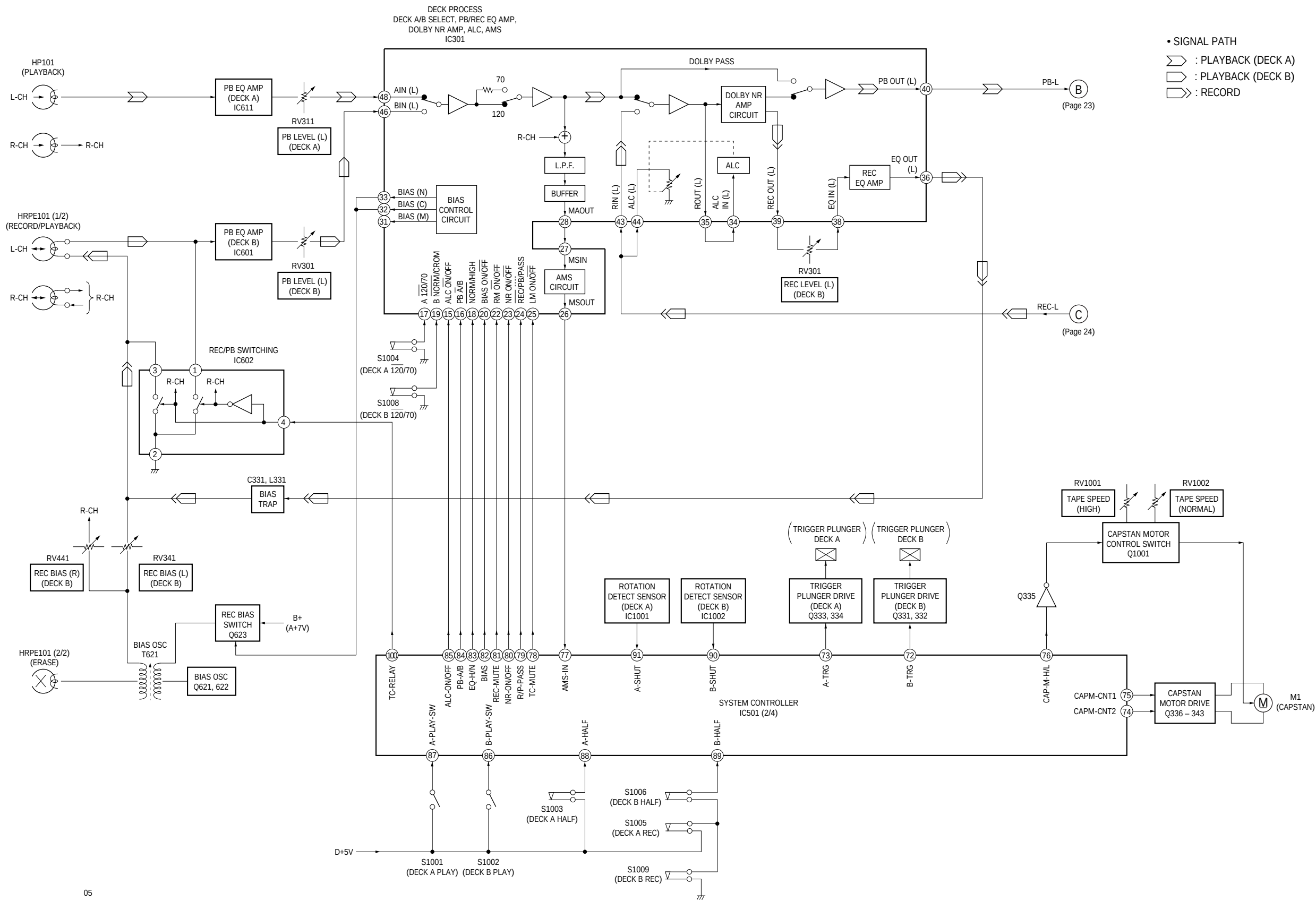


SECTION 7 DIAGRAMS

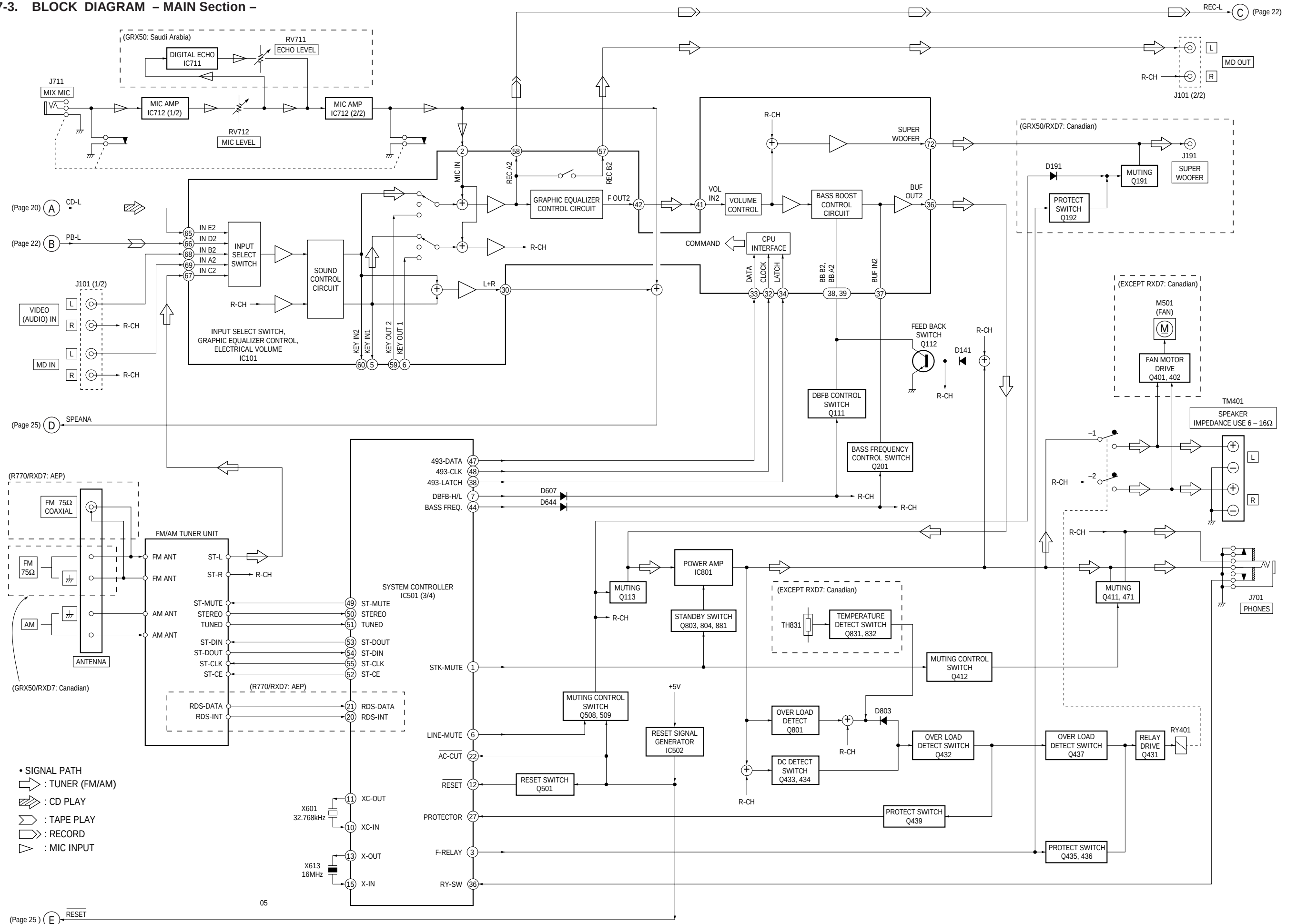
7-1. BLOCK DIAGRAM – CD SERVO Section –



7-2. BLOCK DIAGRAM – TAPE DECK Section –



7-3. BLOCK DIAGRAM – MAIN Section –





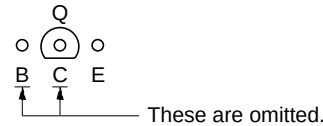
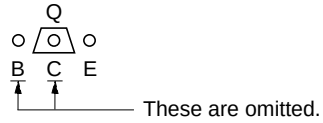
7-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - : parts mounted on the conductor side.
 - △ : internal component.
 - ▨ : 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.



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

Note:

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

Note:

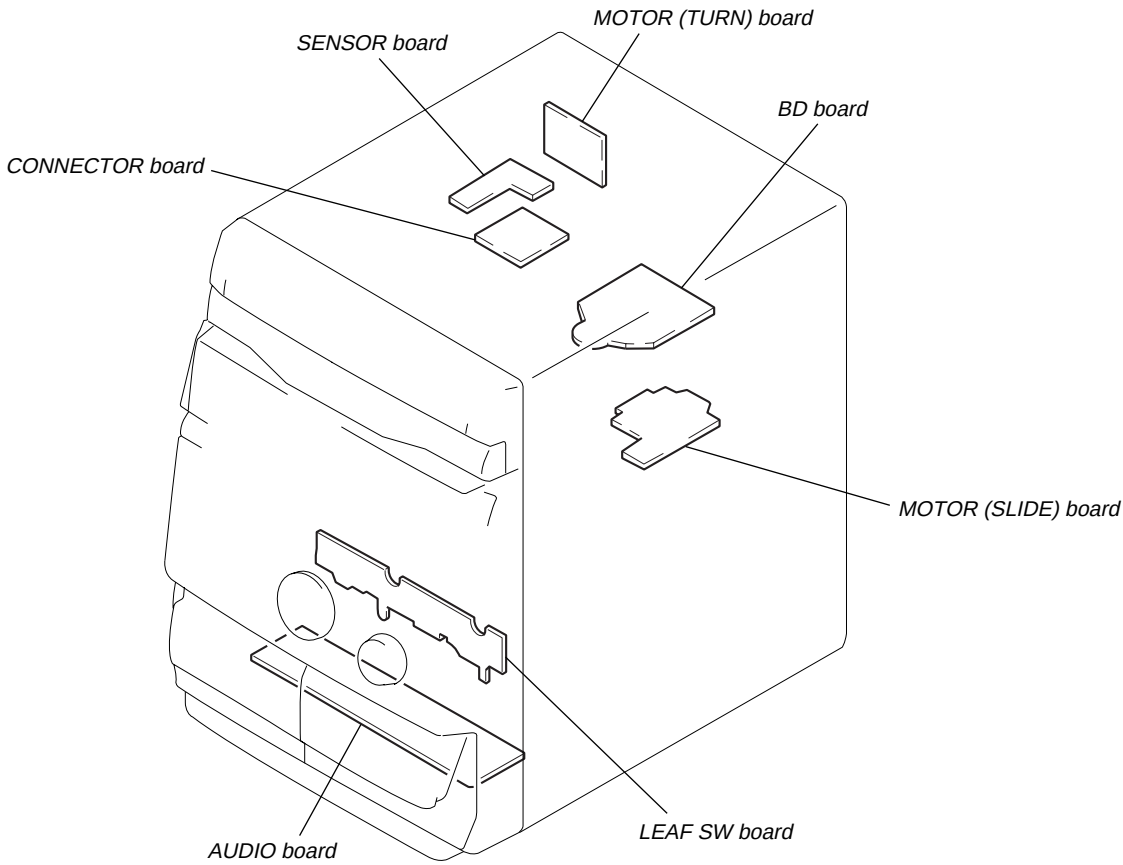
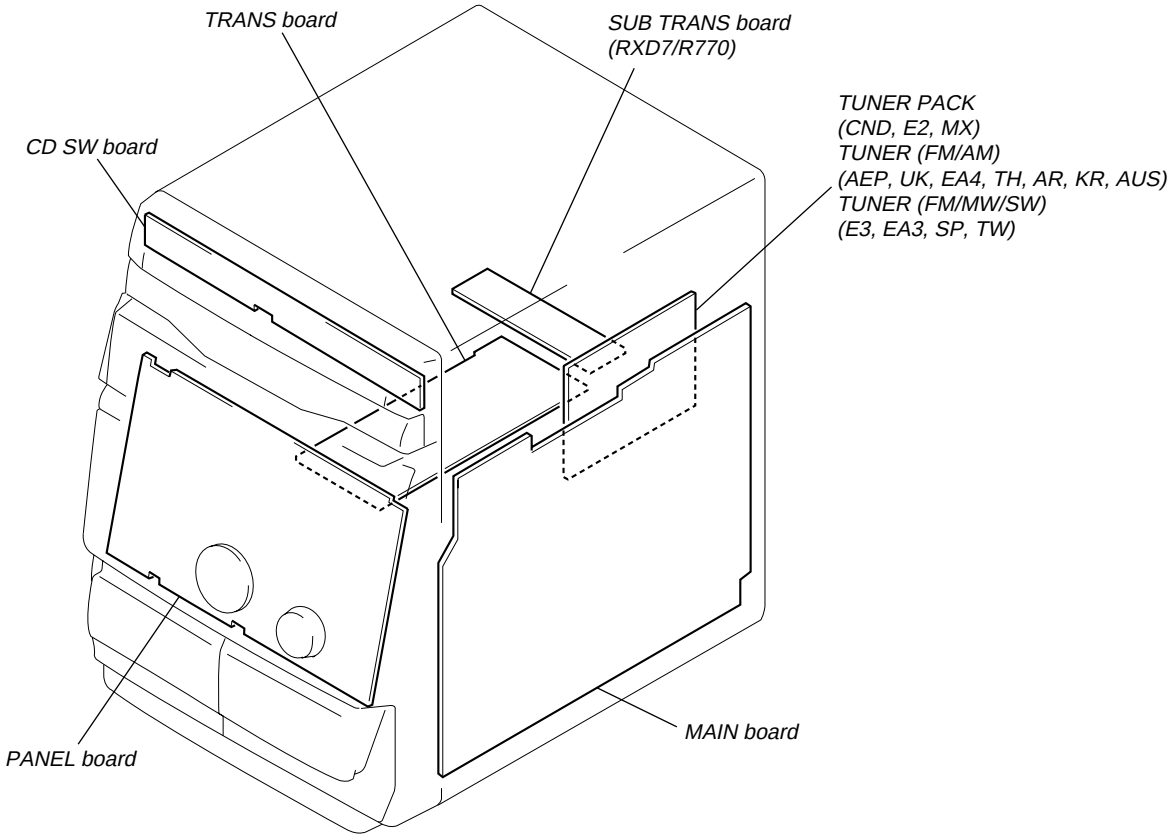
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ⎓ : 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.
 - ➡ : TUNER (FM/AM)
 - ➡ : PLAYBACK (DECK A)
 - ➡ : PLAYBACK (DECK B)
 - ➡ : RECORD
 - ➡ : CD PLAY (ANALOG OUT)
 - ➡ : CD PLAY (DIGITAL OUT)
 - ➡ : MIC INPUT
- Abbreviation
 - AED : North European model.
 - AR : Argentine model.
 - AUS : Australian model.
 - CND : Canadian model.
 - E2 : 120 V AC Area in E model.
 - E3 : 240 V AC Area in E model.
 - EA3 : Saudi Arabia model.
 - EA4 : Israel model.
 - G : German model.
 - KR : Korean model.
 - MX : Mexican model.
 - SP : Singapore model.
 - TH : Thai model.
 - TW : Taiwan model.

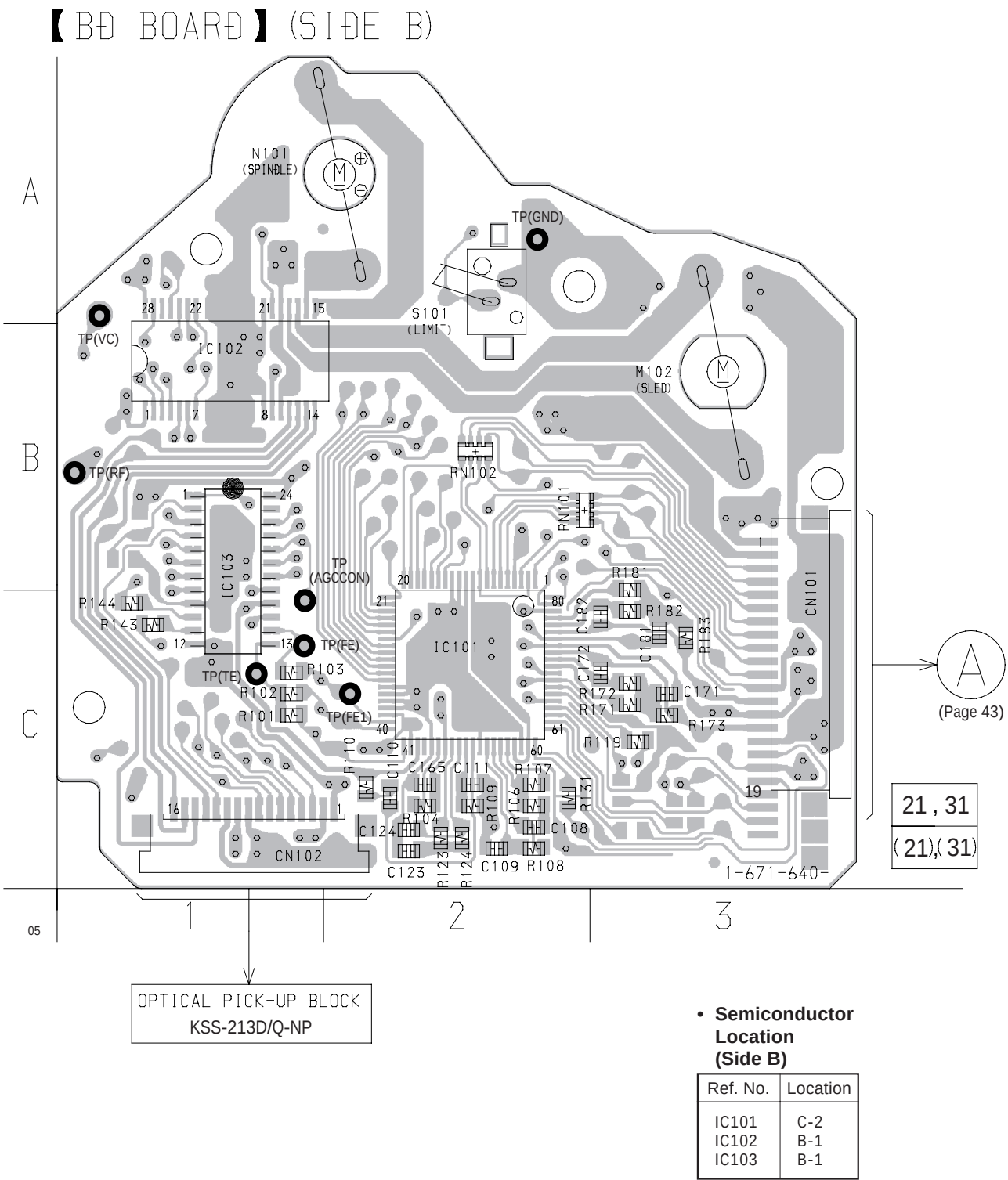
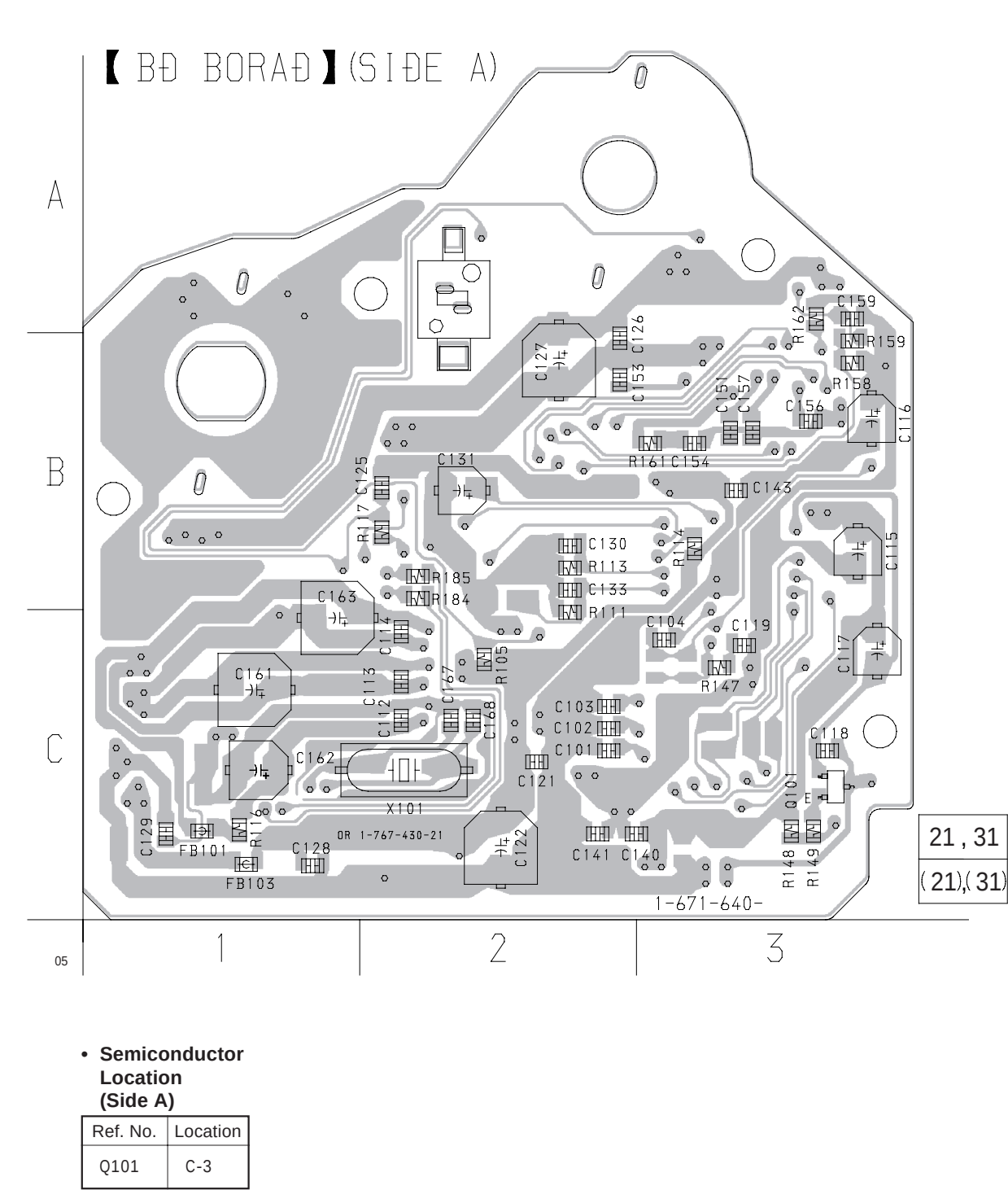
• Circuit Boards Location

• Abbreviation

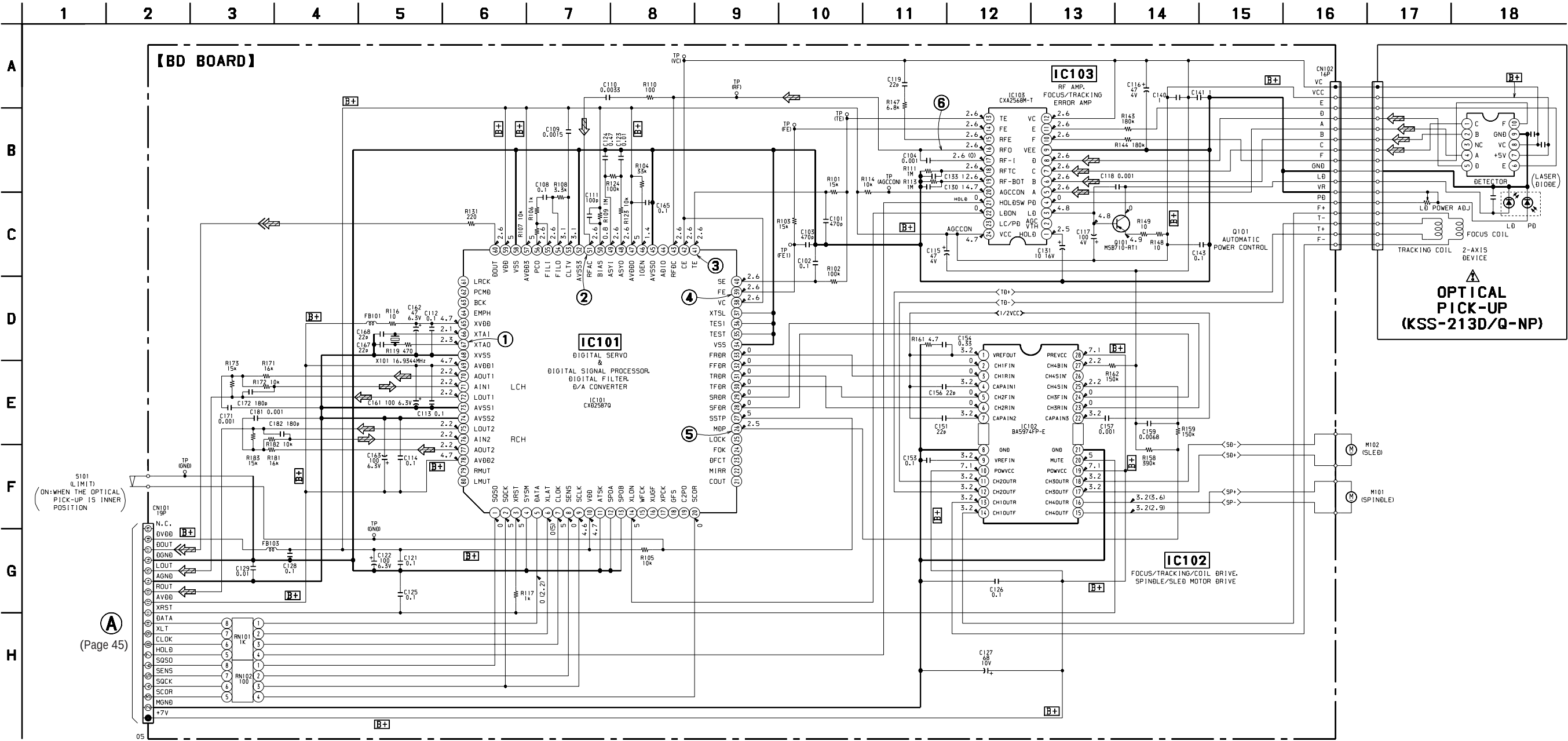
- | | | | |
|-----|----------------------------|-----|-------------|
| AR | : Argentine | EA4 | : Israel |
| AUS | : Australian | KR | : Korean |
| CND | : Canadian | MX | : Mexican |
| E2 | : 120 V AC Area in E model | SP | : Singapore |
| E3 | : 240 V AC Area in E model | TH | : Thai |
| EA3 | : SaudiArabia | TW | : Taiwan |



7-6. PRINTED WIRING BOARD – BD Board – • See page 28 for Circuit Boards Location.



7-7. SCHEMATIC DIAGRAM – BD Board – • See page 59 for Waveforms. • See page 64 for IC Block Diagrams.

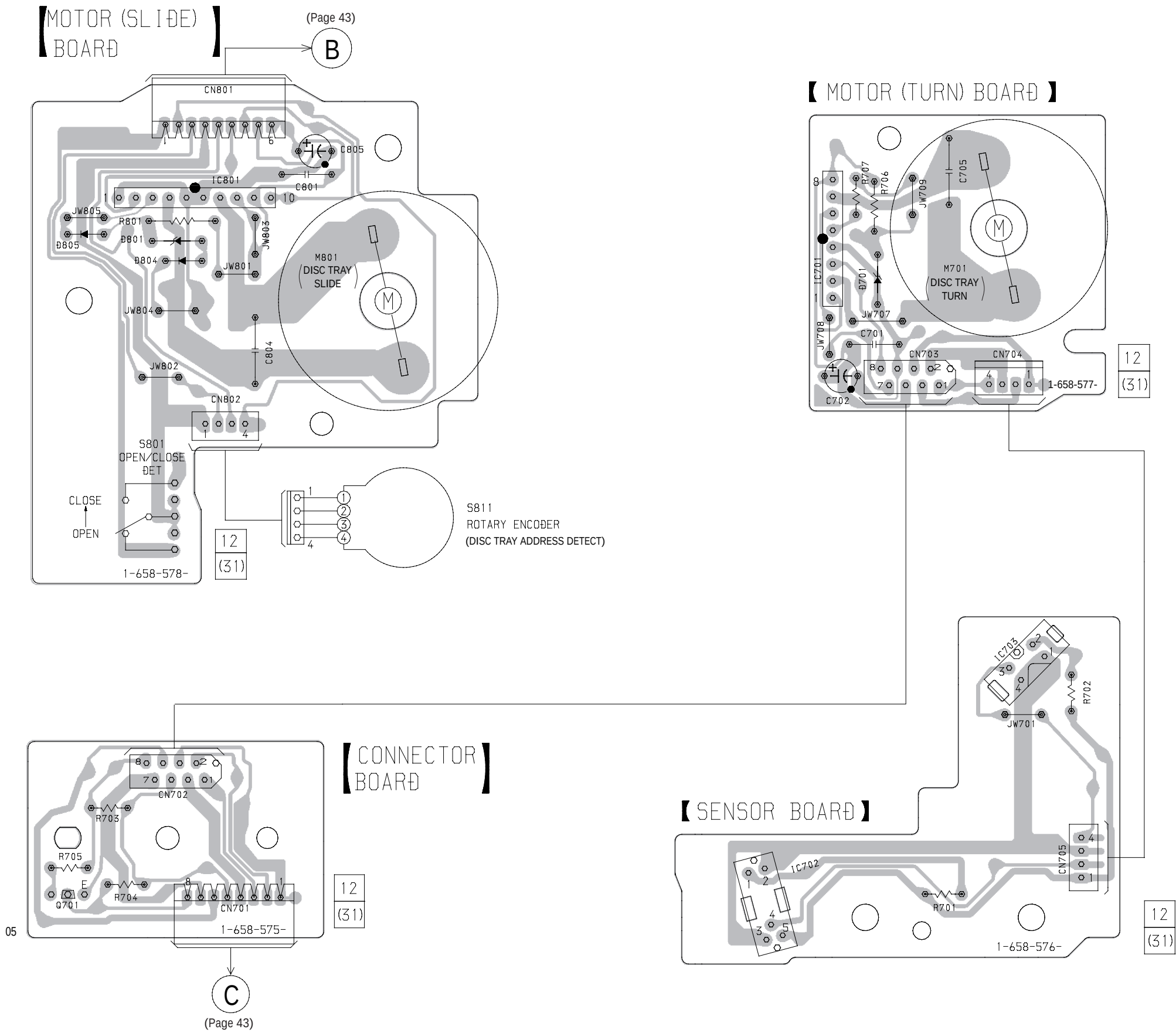


• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD STOP
() : CD PLAY

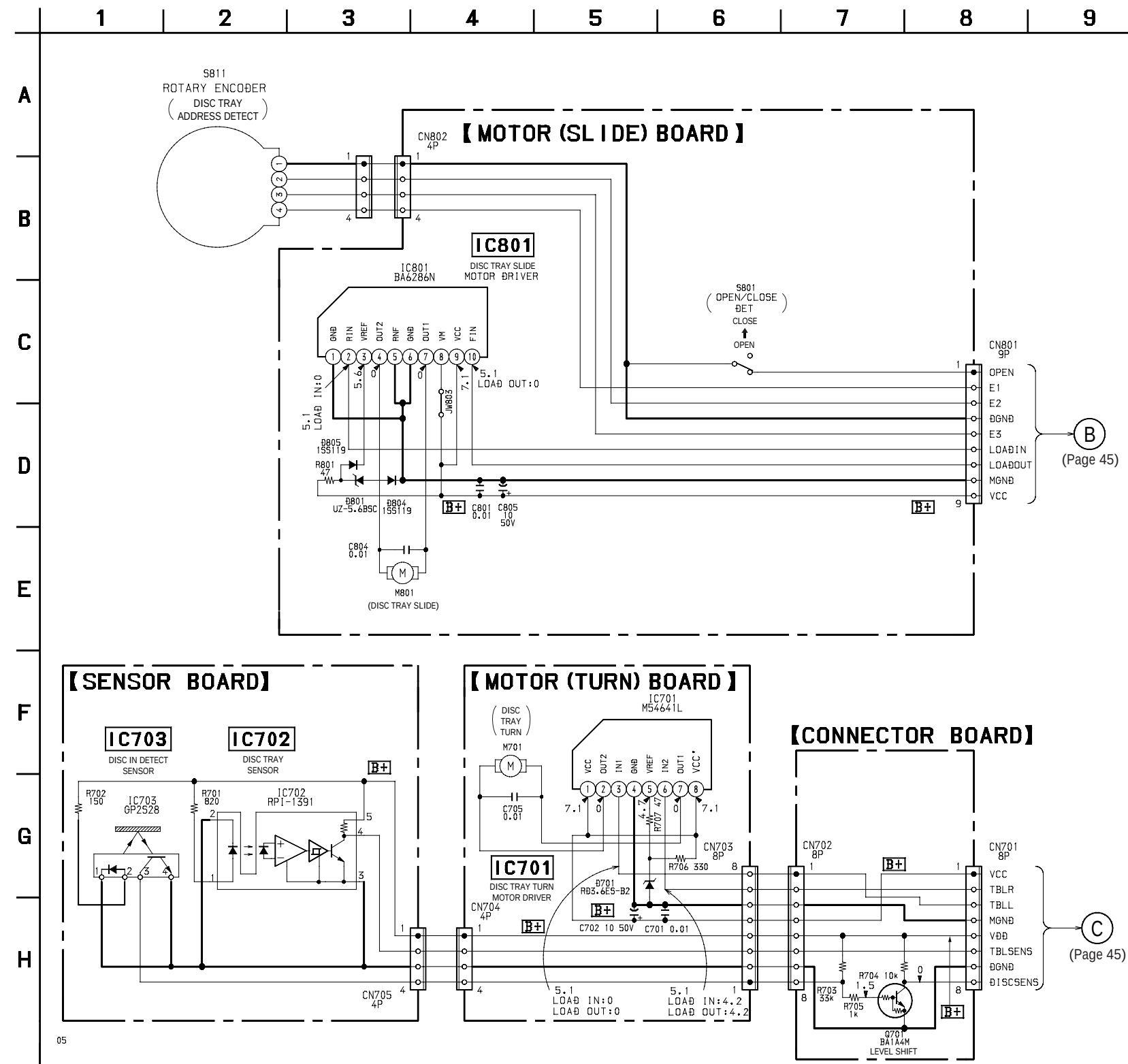
The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-8. PRINTED WIRING BOARDS – CD MOTOR Section – • See page 28 for IC Circuit Boards Location.

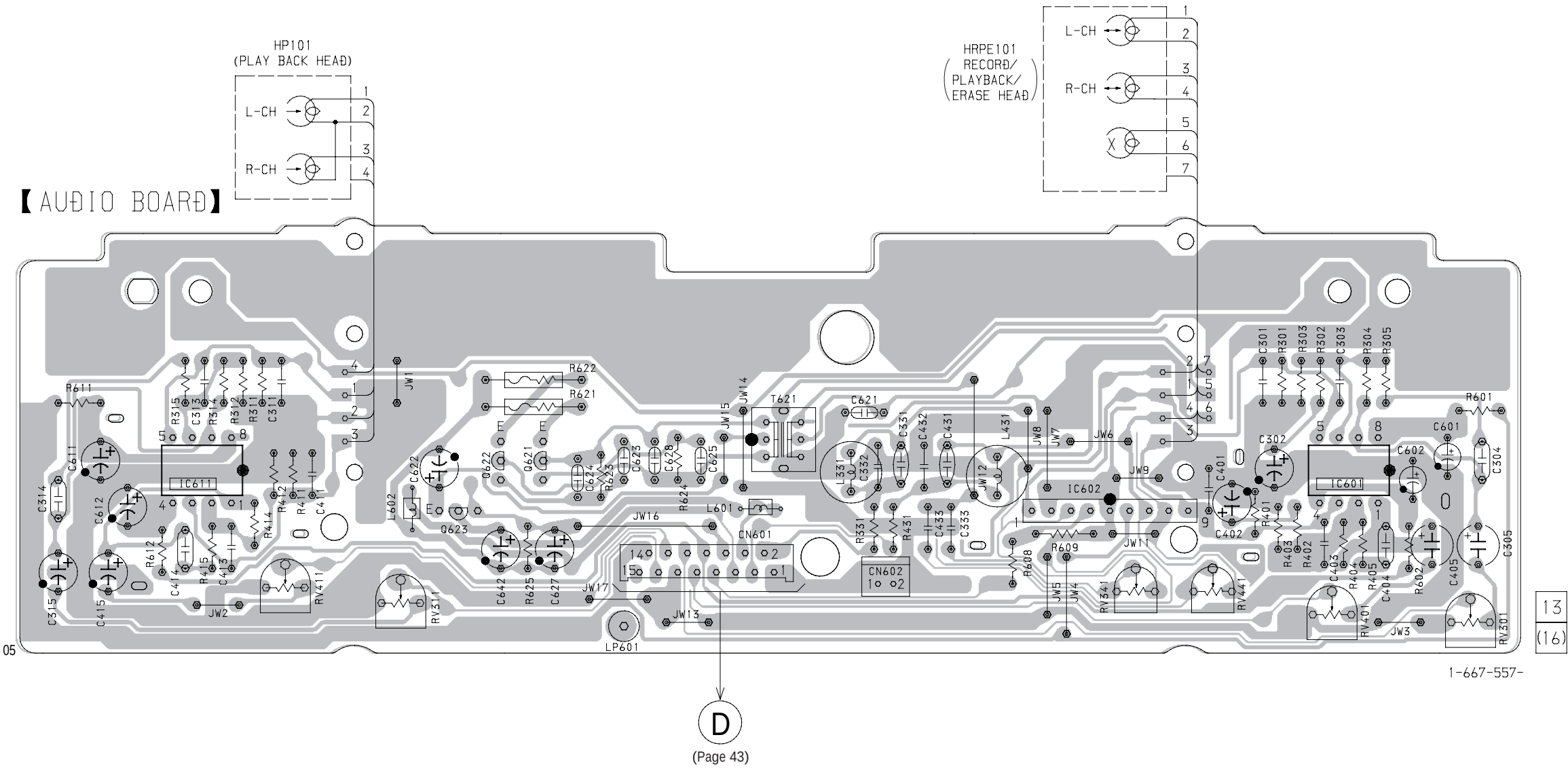


7-9. SCHEMATIC DIAGRAM – CD MOTOR Section – • See page 65 for IC Block Diagrams.

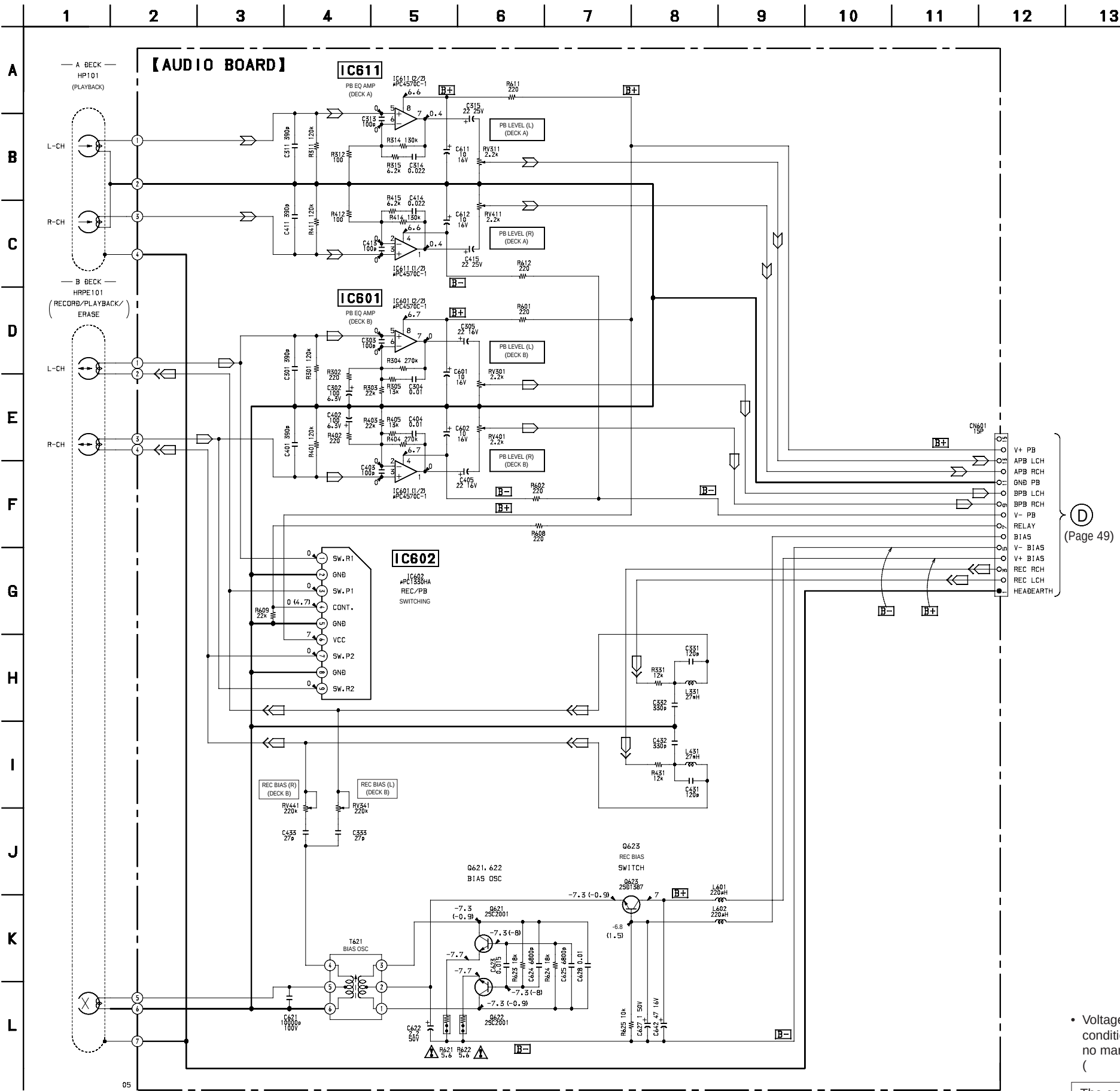


• Voltages are dc with respect to ground under no-signal conditions.
no mark : CD STOP

7-10. PRINTED WIRING BOARD – AUDIO Board – • See page 28 for Circuit Boards Location.



7-11. SCHEMATIC DIAGRAM – AUDIO Board – • See page 66 for IC Block Diagram.



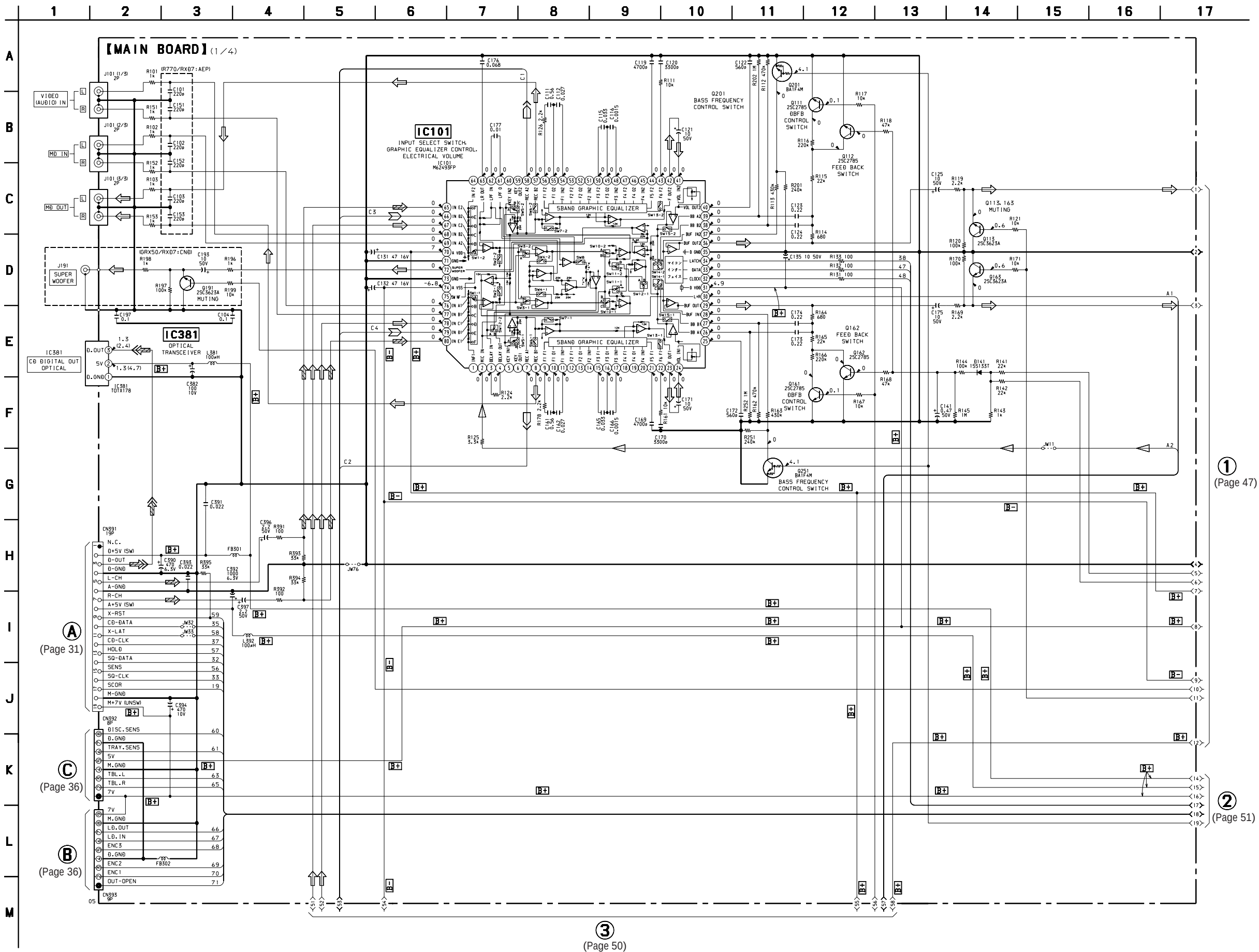
• Voltages are dc with respect to ground under no-signal conditions.
no mark : TAPE PLAY
() : RECORD

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

Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



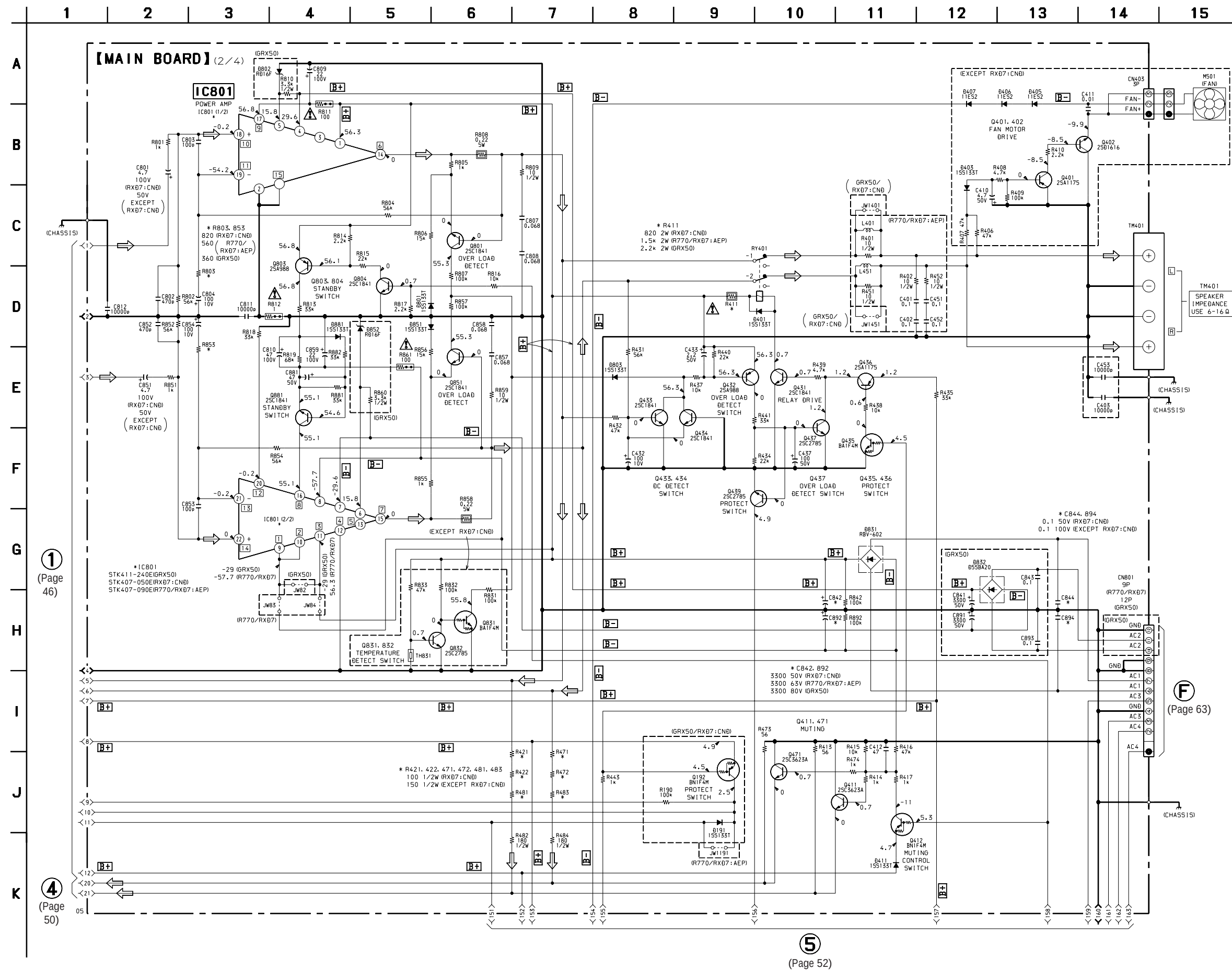
7-15. SCHEMATIC DIAGRAM – MAIN Board (1/4) –



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark : TUNER (FM/AM)
() : CD PLAY

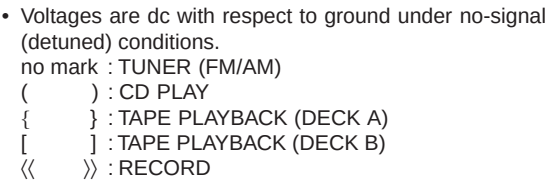
7-16. SCHEMATIC DIAGRAM – MAIN Board (2/4) –

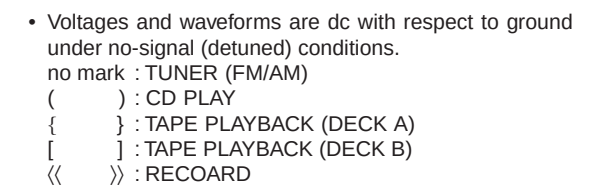


• Voltages are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

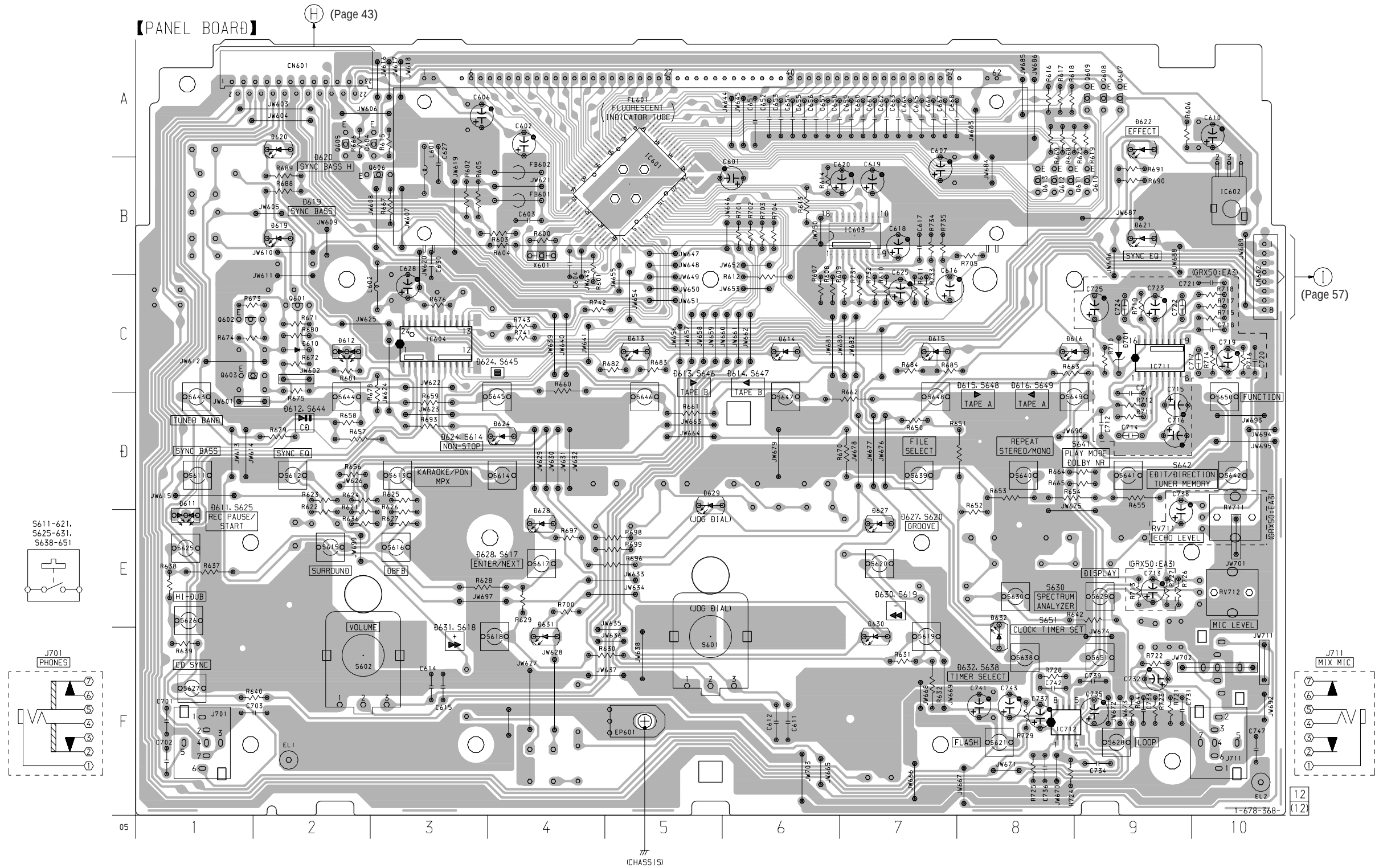
The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.





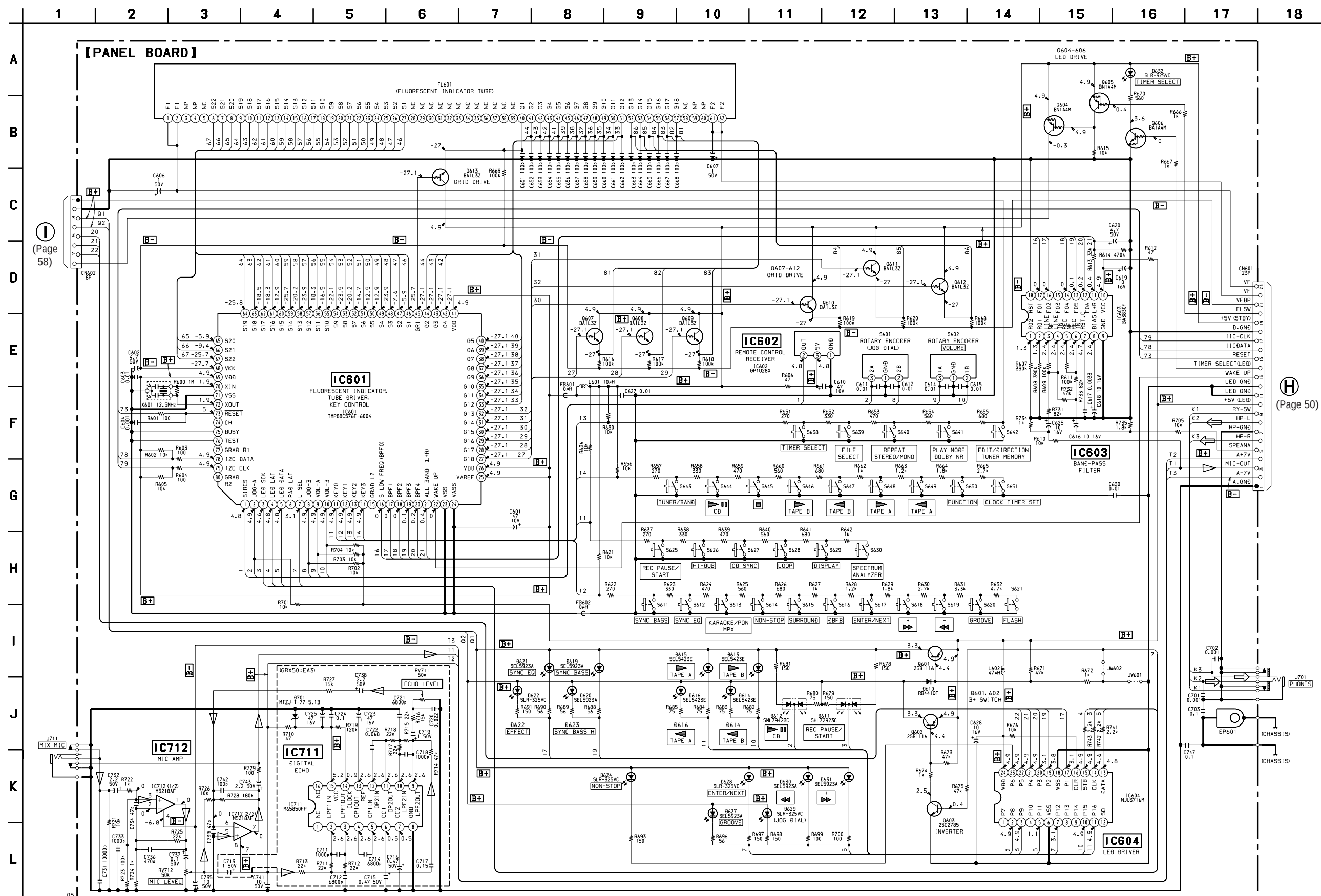
7-19. PRINTED WIRING BOARD – PANEL Board – • See page 28 for Circuit Boards Location.



• Semiconductor Location

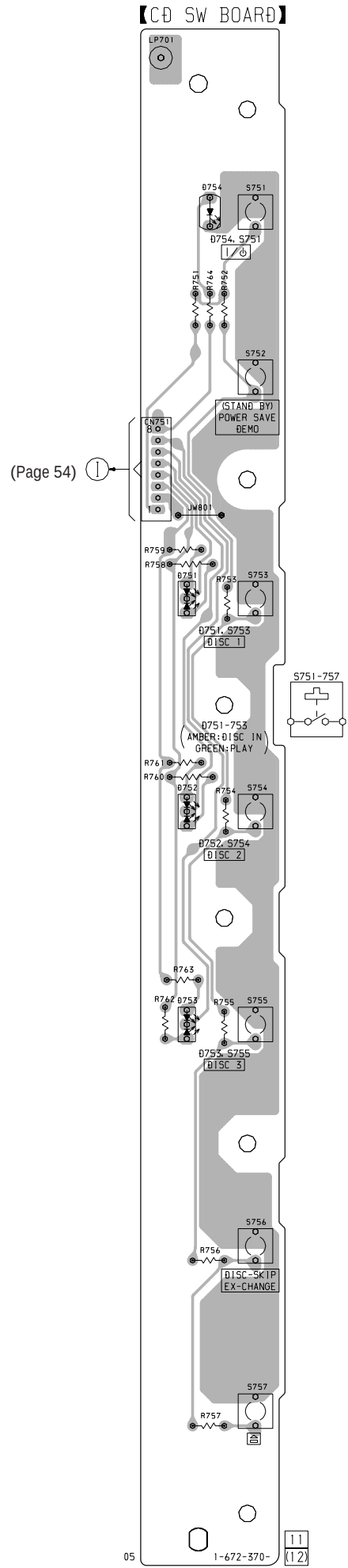
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D610	C-2	D628	E-4	Q601	C-2
D611	E-1	D629	D-5	Q602	C-1
D612	C-2	D630	F-7	Q603	C-1
D613	C-5	D631	F-4	Q604	A-3
D614	C-6	D632	F-8	Q605	A-2
D615	C-7	D701	C-9	Q606	B-3
D616	C-8			Q607	A-9
D619	B-2	IC601	B-5	Q608	A-9
D620	A-2	IC602	B-10	Q609	A-9
D621	B-9	IC603	B-7	Q610	B-9
D622	A-9	IC604	C-3	Q611	B-8
D624	D-4	IC711	C-9	Q612	B-8
D627	E-7	IC712	F-8	Q613	B-8

7-20. SCHEMATIC DIAGRAM – PANEL Board– • See page 59 for Waveforms. • See page 66 for IC Block Diagrams.

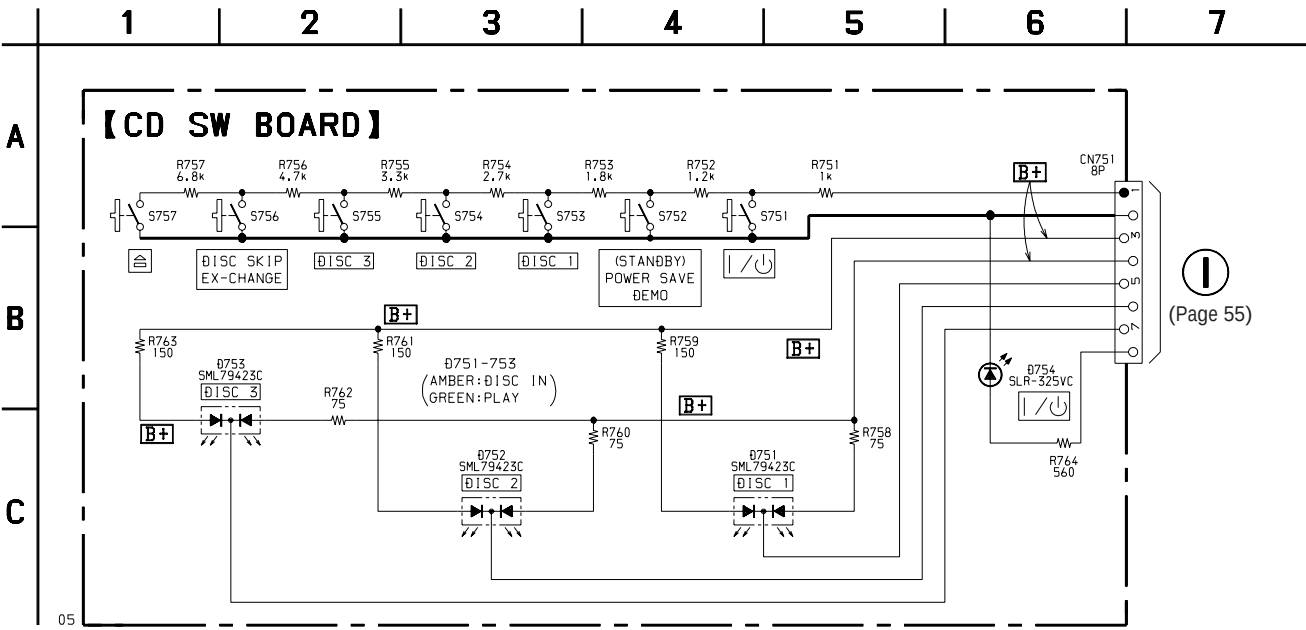


• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER (FM/AM)

7-21. PRINTED WIRING BOARD – CD SW Board – • See page 28 for Circuit Boards Location.

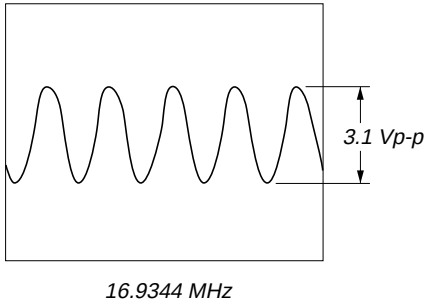


7-22. SCHEMATIC DIAGRAM – CD SW Board –

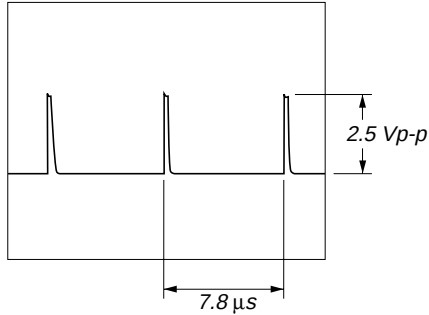


• Waveforms
– BD Board –

① IC101 ⑥7 (XTAO)

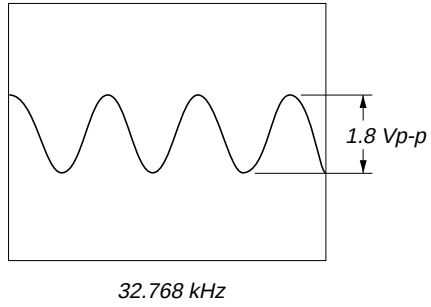


⑤ IC101 ②⑥ (MDP)

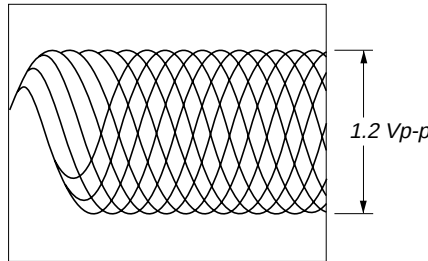


– MAIN Board –

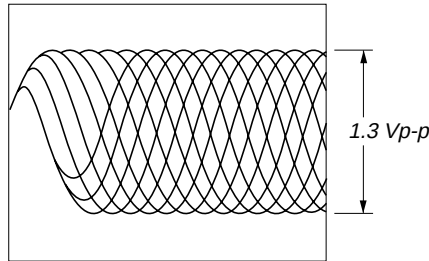
① IC501 ⑩ (XC-IN)



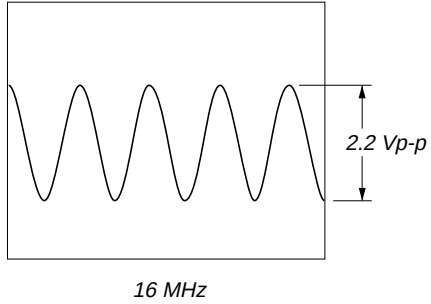
② IC101 ⑤① (RF AC) (CD Play Mode)



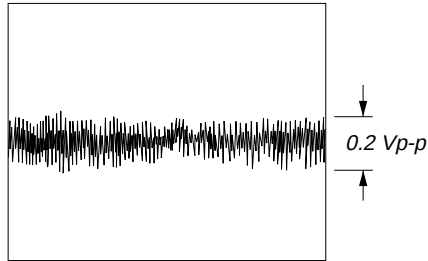
⑥ IC102 ⑩⑨ (RFO) (CD Play Mode)



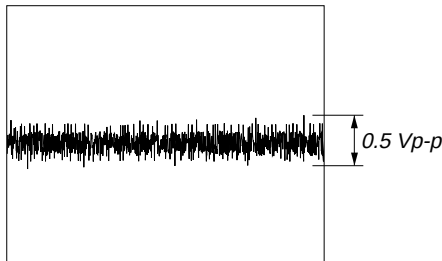
② IC501 ⑩⑤ (XIN)



③ IC101 ④① (TE) (CD Play Mode)

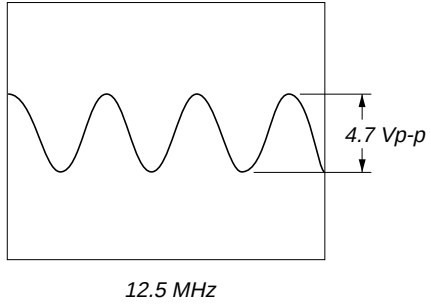


④ IC101 ③⑨ (FE) (CD Play Mode)



– PANEL Board –

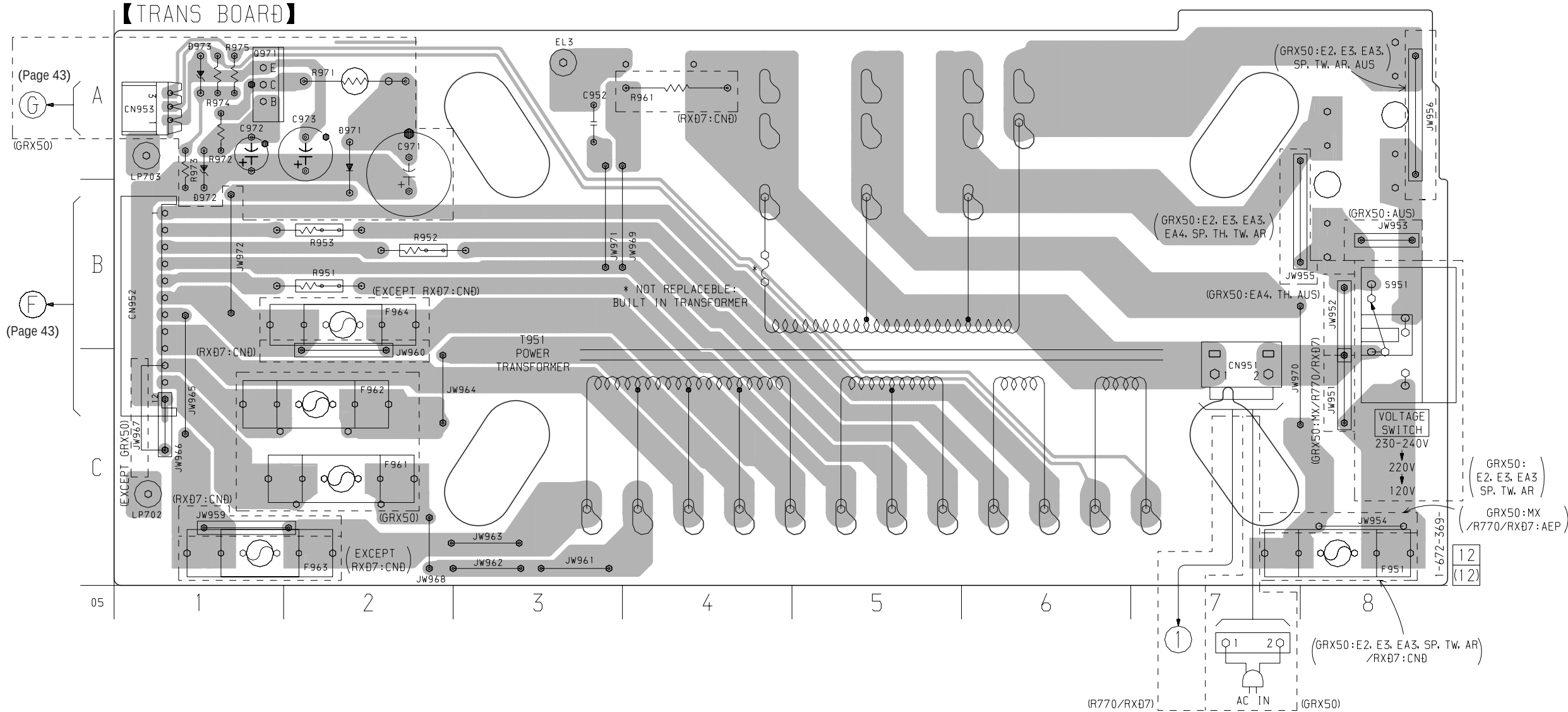
① IC601 ⑦② (XOUT)



7-23. PRINTED WIRING BOARDS – TRANSFORMER Section – • See page 28 for Circuit Boards Location.

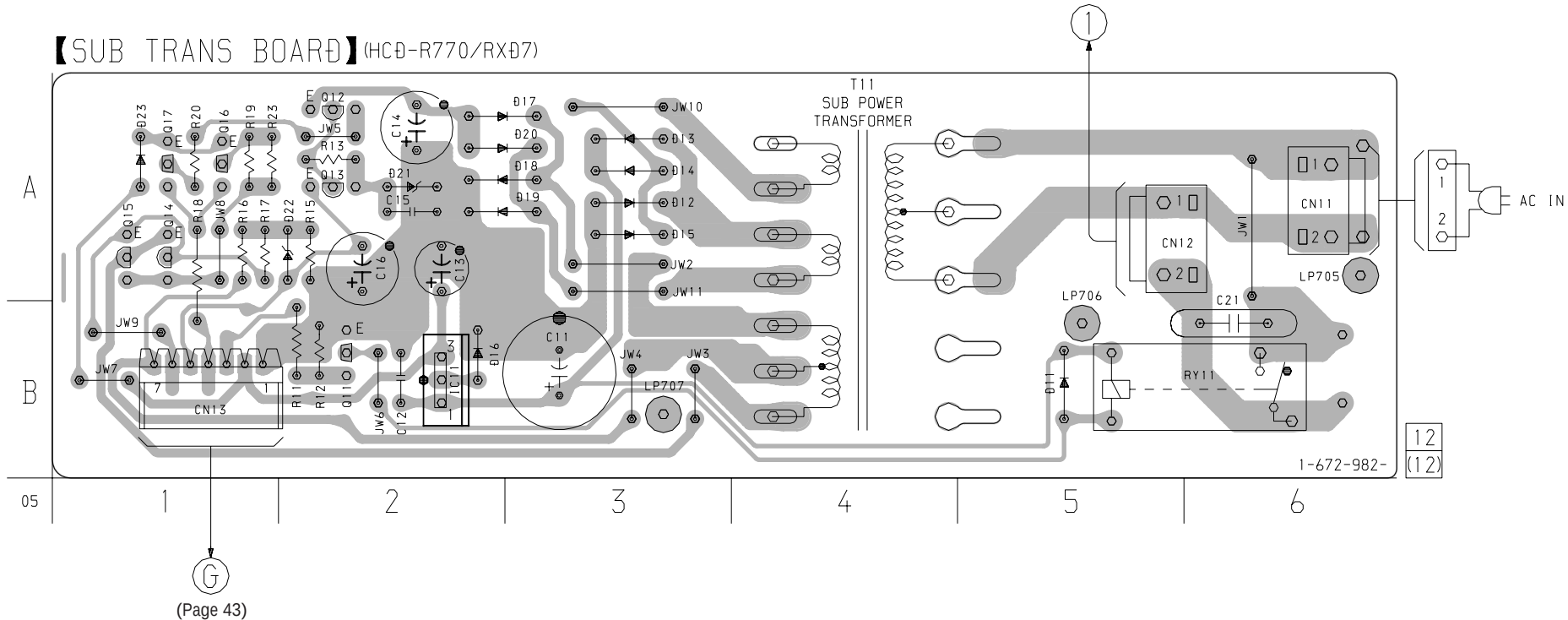
• Semiconductor Location

Ref. No.	Location
D971	A-2
D972	A-1
D973	A-1
Q971	A-1

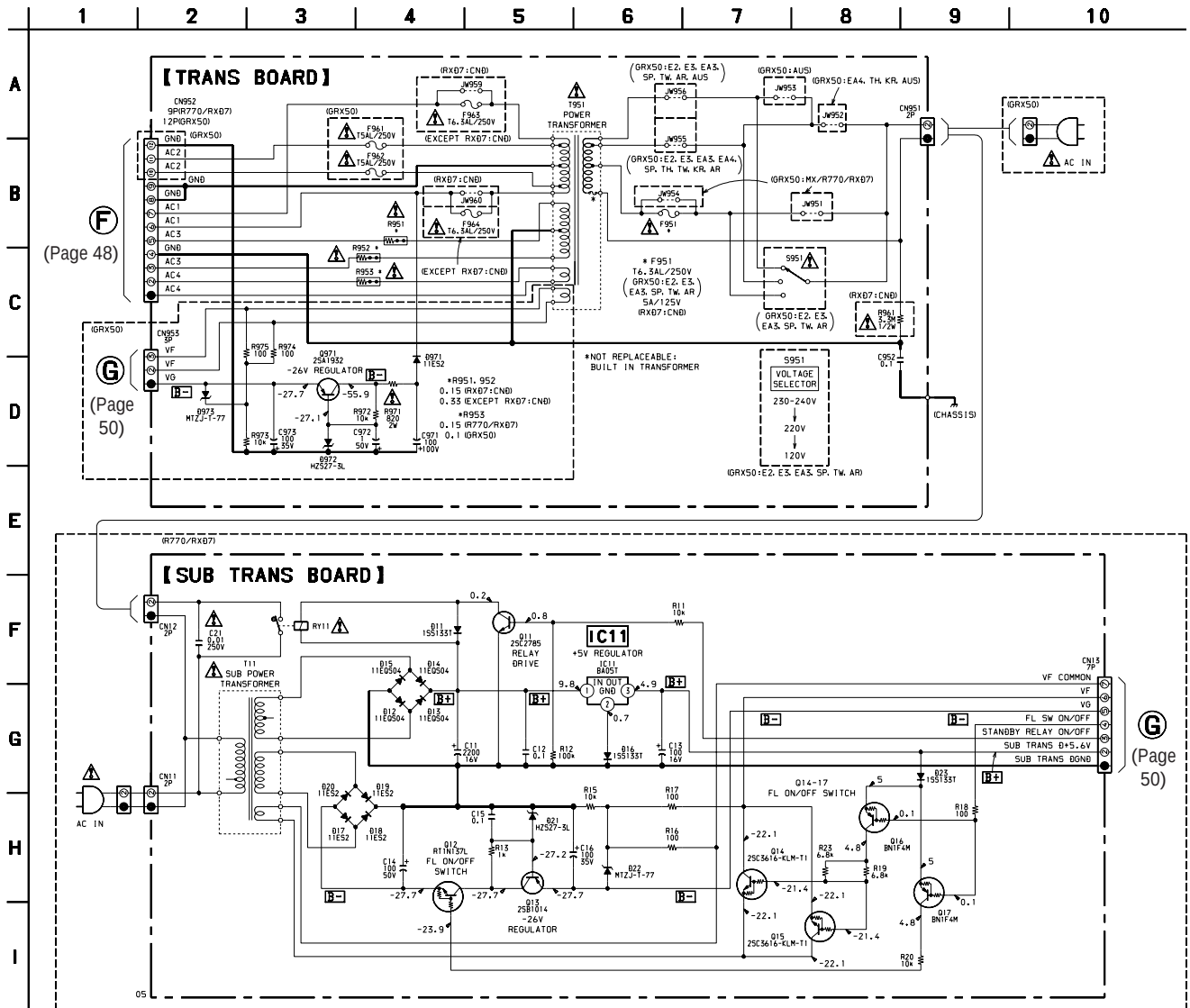


• Semiconductor Location

Ref. No.	Location
D11	B-5
D12	A-3
D13	A-3
D14	A-3
D15	A-3
D16	B-2
D17	A-2
D18	A-2
D19	A-2
D20	A-2
D21	A-2
D22	A-2
D23	A-1
IC11	B-2
Q11	B-2
Q12	A-2
Q13	A-2
Q14	A-1
Q15	A-1
Q16	A-1
Q17	A-1



7-24. SCHEMATIC DIAGRAM – TRANSFORMER Section –



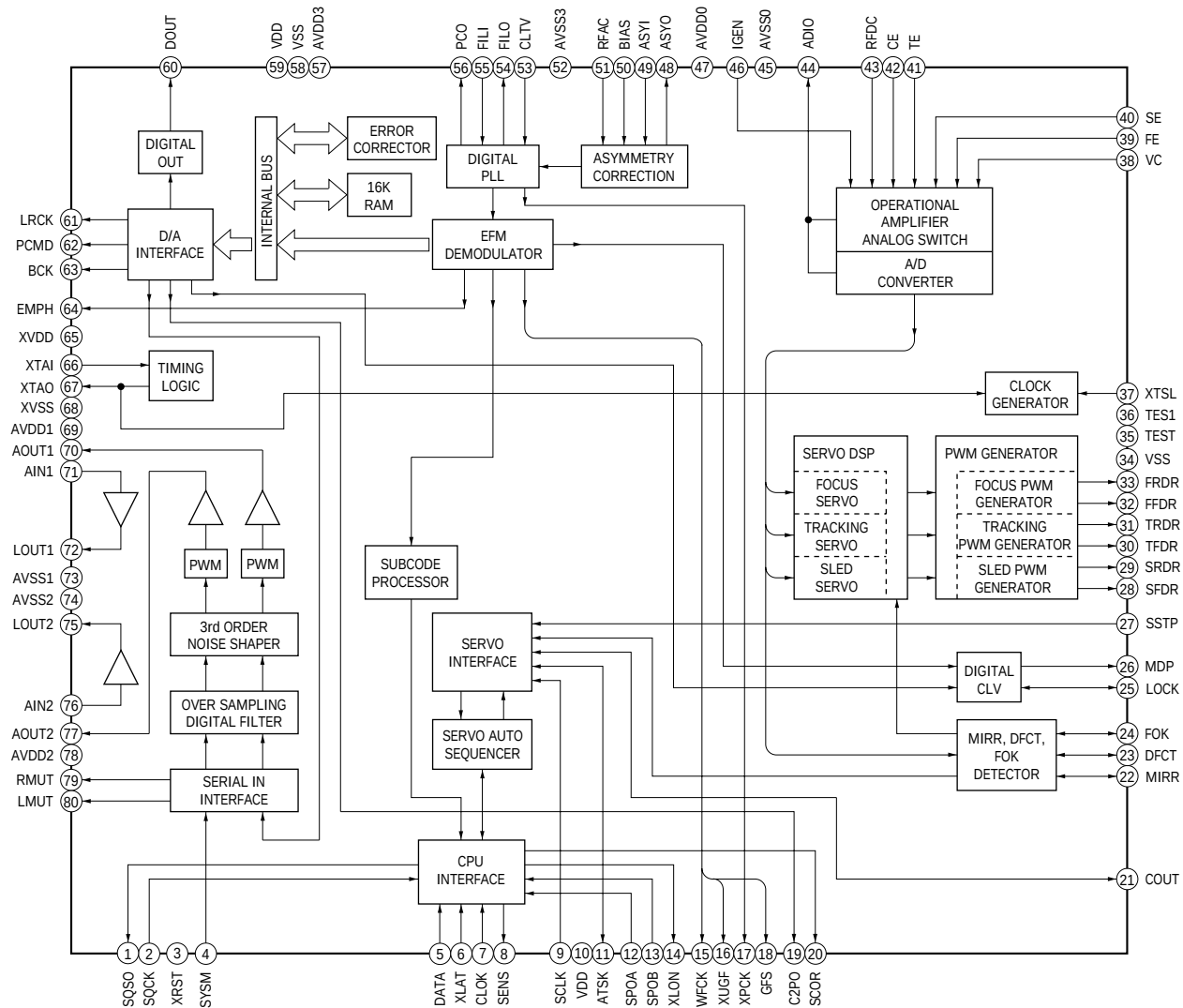
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER (FM/AM)

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

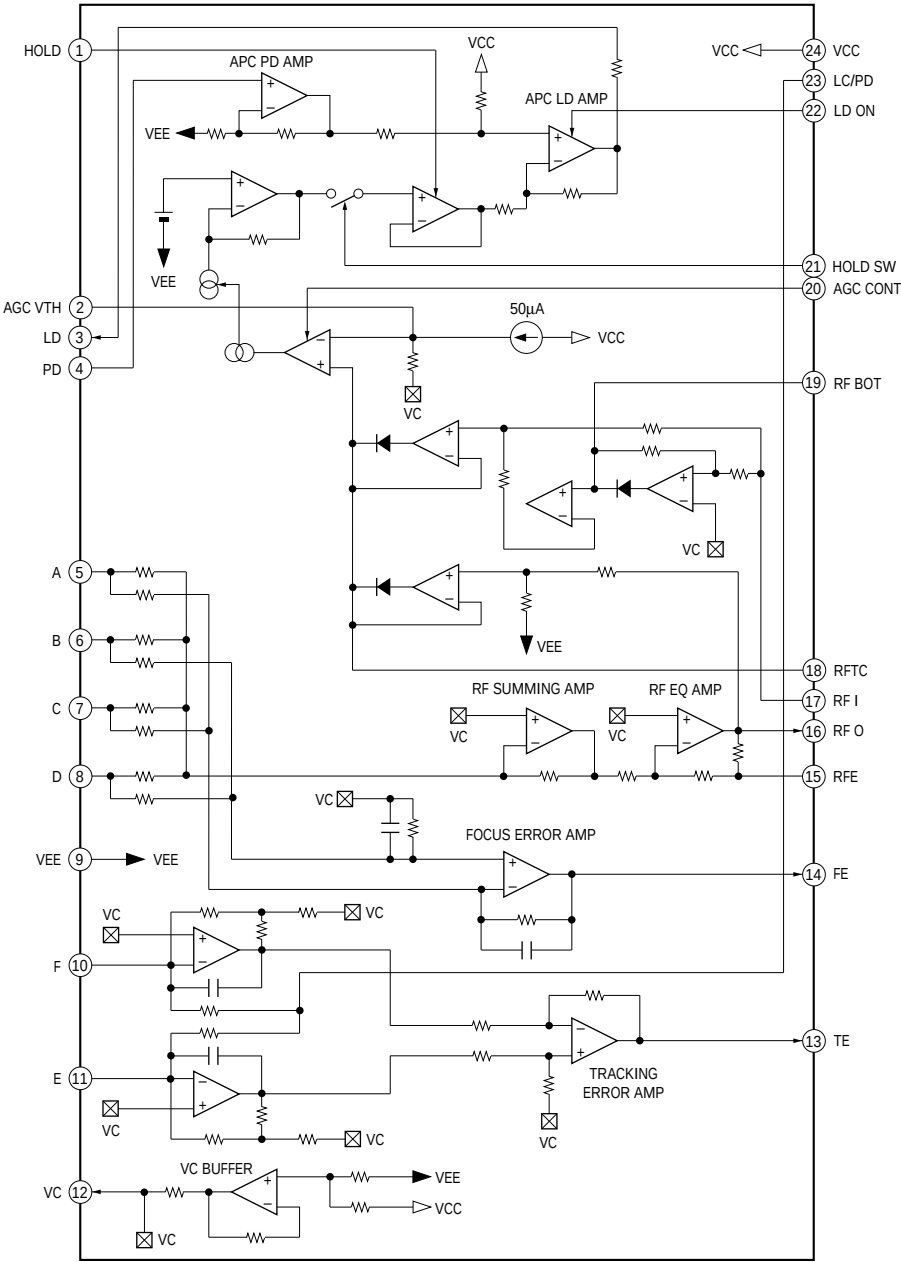
Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• IC Block Diagrams
– BD Board –

IC101 CXD2587Q

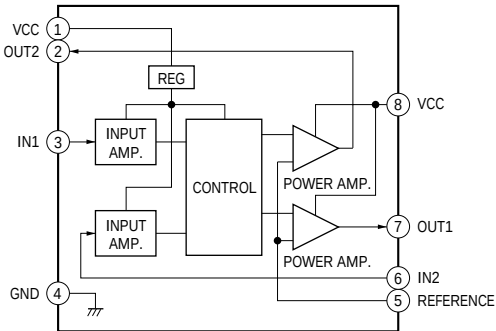


IC103 CXA2568M-T6



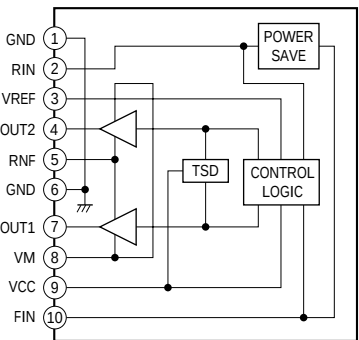
– MOTOR (TURN) Board –

IC701 M54641L



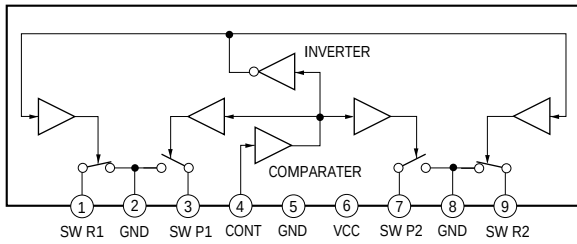
– MOTOR (SLIDE) Board –

IC801 BA6286N



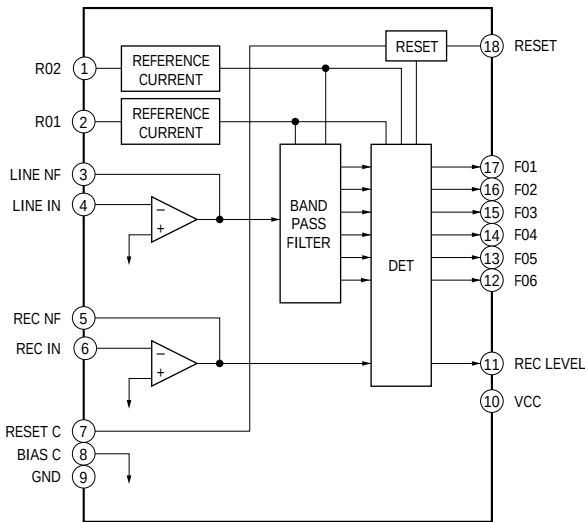
– AUDIO Board –

IC602 μ PC1330HA

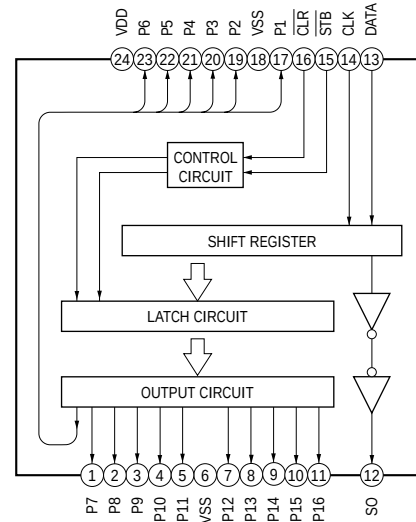


– PANEL Board –

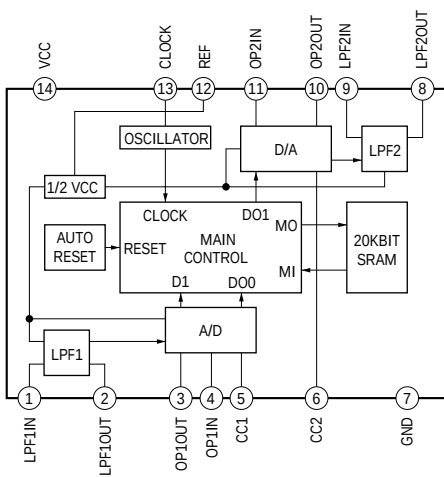
IC603 BA3830F



IC604 NJU3716M-T2



IC711 M65850FP (HCD-GRX50: Saudi Arabia)



7-25. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 M30622MA-A01FP (SYSTEM CONTROLLER (CD MECHANISM CONTROL))

Pin No.	Pin Name	I/O	Function
1	STK-MUTE	O	Power amplifier on/off selection signal output terminal “L”: standby mode, “H”: on
2	POWER	O	Power on/off control signal output for the audio system (+5V) and deck, panel, audio system (+7V) “L”: standby mode, “H”: power on
3	F-RELAY	O	Relay drive signal output for the speaker protect “H”: relay on
4	R-RELAY	O	Relay drive signal output for the speaker protect “H”: relay on Not used (open)
5	CD-POWER	O	Power on/off control signal output for the CD mechanism deck section “L”: standby mode, “H”: power on
6	LINE-MUTE	O	Line muting on/off control signal output terminal “L”: muting on
7	DBFB-H/L	O	DBFB normal/high selection signal output to the M62493FP (IC101) “L”: DBFB high, “H”: DBFB low
8	BYTE	I	External data bus line byte selection signal input terminal Fixed at “L” in this set
9	CNVSS	—	Ground terminal
10	XC-IN	I	Sub system clock input terminal (32.768 kHz)
11	XC-OUT	O	Sub system clock output terminal (32.768 kHz)
12	<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”
13	X-OUT	O	Main system clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	X-IN	I	Main system clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal Fixed at “H” in this set
18	WAKE UP	I	Wakeup control signal input from the fluorescent indicator tube driver (IC601) “H” active
19	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2587Q (IC101) on the CD block
20	RDS-INT	I	Serial data transfer clock signal input from the RDS decoder on FM/AM tuner unit Used for the HCD-R770 and HCD-RXD7: AEP models
21	RDS-DATA	I	Serial data input from the RDS decoder on FM/AM tuner unit Used for the HCD-R770 and HCD-RXD7: AEP models
22	<u>AC-CUT</u>	I	AC off detection signal input from the reset signal generator (IC502) “L”: AC cut checked
23	PL-CLK	O	Serial data transfer clock signal output to the pro-logic circuit Not used (open)
24	PL-DATA	O	Serial data output to the pro-logic circuit Not used (open)
25	PL-LAT	O	Serial data latch pulse output to the pro-logic circuit Not used (open)
26	TIMER LED	O	LED drive signal output of the TIMER SELECT indicator (D632) “H”: LED on
27	PROTECTOR	I	Protect on/off detection signal input from the speaker protect circuit “L”: protect on, “H”: protect off
28	V MUTE	O	Muting on/off control signal output terminal “L”: muting off Not used (open)
29	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the fluorescent indicator tube driver (IC601)
30	IIC-DATA	I/O	Communication data bus with the fluorescent indicator tube driver (IC601)
31	NCO	O	Not used (open)
32	SQ-DATA	I	Subcode Q data input from the CXD2587Q (IC101) on the CD block
33	SQ-CLK	O	Subcode Q data reading clock signal output to the CXD2587Q (IC101) on the CD block
34	SW MODE	O	Not used (open)
35	CD-DATA	O	Serial data output to the CXD2587Q (IC101) on the CD block
36	RY-SW	I	Connection detect signal input of the headphone jack (J701) “L”: no connected, “H”: headphone connected
37	CD-CLK	O	Serial data transfer clock signal output to the CXD2587Q (IC101) on the CD block
38	493-LATCH	O	Serial data latch pulse output to the M62493FP (IC101)

Pin No.	Pin Name	I/O	Function
39	STBY LED	O	LED drive signal output of the I/⓪ indicator (D754) “H”: LED on (standby mode)
40	VC L+R/L-R	O	Virtual cinema L+R/L-R selection signal output terminal Not used (open)
41	VC BYPASS	O	Virtual cinema bypass control signal output terminal Not used (open)
42	FL SW	O	Filament on/off selection signal output for the fluorescent indicator tube (FL601) “L”: on, “H”: off Used for the HCD-R770 and HCD-RXD7 models
43	STBY RELAY	O	Main power on/off control signal output terminal “L”: standby mode, “H”: power on Used for the HCD-R770 and HCD-RXD7 models
44	BASS FREQ.	O	Sync bass frequency normal/high selection signal output to the M62493FP (IC101) “L”: sync bass off (normal), “H”: sync bass high
45	FUNC SEL1	O	Not used (open)
46	FUNC SEL0	O	Not used (open)
47	493-DATA	O	Serial data output to the M62493FP (IC101)
48	493-CLK	O	Serial data transfer clock signal output to the M62493FP (IC101)
49	ST-MUTE	O	Tuner muting control signal output to the FM/AM tuner unit “H”: muting on
50	STEREO	I	FM stereo detection signal input from the FM/AM tuner unit “L”: stereo
51	TUNED	I	Tuning detection signal input from the FM/AM tuner unit “L”: tuned
52	ST-CE	O	PLL chip enable signal output to the FM/AM tuner unit
53	ST-DOUT	O	PLL serial data output to the FM/AM tuner unit
54	ST-DIN	I	PLL serial data input from the FM/AM tuner unit
55	ST-CLK	O	PLL serial data transfer clock signal output to the FM/AM tuner unit
56	SENSE	I	Internal status detection monitor input from the CXD2587Q (IC101) on the CD block
57	HOLD	O	Laser power control signal output to the CXA2568M (IC103) on the CD block
58	$\overline{\text{XLT}}$	O	Serial data latch pulse output to the CXD2587Q (IC101) on the CD block
59	$\overline{\text{XRST}}$	O	Reset signal output to the CXD2587Q (IC101) and BA5974FP (IC102) on the CD block “L”: reset
60	DISC-SENS	I	Disc status detection signal input from the disc sensor (IC703)
61	TBL-SENS	I	Disc tray status detection signal input from the disc tray sensor (IC702)
62	VCC	—	Power supply terminal (+5V)
63	TBL-L	O	Motor drive signal output to the disc tray turn motor driver (IC701) “L” active *1
64	VSS	—	Ground terminal
65	TBL-R	O	Motor drive signal output to the disc tray turn motor driver (IC701) “L” active *1
66	LOAD-OUT	O	Motor drive signal output to the disc tray slide motor driver (IC801) “H” active *2
67	LOAD-IN	O	Motor drive signal output to the disc tray slide motor driver (IC801) “H” active *2
68 to 70	ENC3 to ENC1	I	Detection signal input from the disc tray address detect rotary encoder (S811)
71	OUT-OPEN	I	Detection signal input from the disc tray open/close detect switch (S801) “L”: open, “H”: close
72	B-TRG	O	Deck-B side trigger plunger drive signal output terminal “H”: plunger on
73	A-TRG	O	Deck-A side trigger plunger drive signal output terminal “H”: plunger on

*1 Disc tray turn motor (M701) control

Mode Terminal	Stop	Counter- clockwise	Clockwise	Brake
TBL-L (pin ⑥③)	“H”	“L”	“H”	“L”
TBL-R (pin ⑥⑤)	“H”	“H”	“L”	“L”

*2 Disc tray slide motor (M801) control

Mode Terminal	Stop	Table In	Table Out	Brake
LOAD-OUT (pin ⑥⑥)	“L”	“L”	“H”	“H”
LOAD-IN (pin ⑥⑦)	“L”	“H”	“L”	“H”

Pin No.	Pin Name	I/O	Function
74	CAPM-CNT2	O	Capstan motor (M1) drive signal output terminal “H” active *3
75	CAPM-CNT1	O	Capstan motor (M1) drive signal output terminal “H” active *3
76	CAP-M-H/L	O	High/normal speed selection signal output of the capstan motor (M1) “L”: normal speed, “H”: high speed
77	AMS-IN	I	Whether a music is present or not from HA12215F (IC301) is detected at automatic music sensor “L”: music is present, “H”: music is not present
78	TC-MUTE	O	Line muting on/off selection signal output to the HA12215F (IC301) “L”: muting off, “H”: muting on
79	R/P-PASS	O	Recording/playback/pass selection signal output to the HA12215F (IC301) “L”: recording mode, “H”: pass, “Hi-z”: playback mode
80	NR-ON/OFF	O	Dolby NR on/off selection signal output to the HA12215F (IC301) “L”: dolby off, “H”: dolby on
81	REC-MUTE	O	Recording muting on/off selection signal output to the HA12215F (IC301) “L”: muting on, “H”: muting off
82	BIAS	O	Recording bias on/off selection signal output to the HA12215F (IC301) “L”: bias off, “H”: bias on
83	EQ-H/N	O	Normal/high speed selection signal output to the HA12215F (IC301) “L”: normal speed, “H”: high speed
84	PB-A/B	O	Deck-A/B selection signal output to the HA12215F (IC301) “L”: deck-A, “H”: deck-B
85	ALC-ON/OFF	O	Automatic limiter control signal output to the HA12215F (IC301) “L”: limiter on
86	B-PLAY-SW	I	Detection input from the deck- B play detect switch (S1002) “H”: deck-B play
87	A-PLAY-SW	I	Detection input from the deck- A play detect switch (S1001) “H”: deck-A play
88	A-HALF	I	Detection input from the deck-A cassette detect switch (S1003) “L”: cassette in, “H”: no cassette
89	B-HALF	I	Detection input from the deck-B half detect switch (S1006)
90	B-SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector (IC1002)
91	A-SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector (IC1001)
92	SOFT-TEST	O	Output terminal for the software test (open)
93	HEADPHONE MUTE	O	Muting on/off control signal output terminal “L”: muting on Not used (open)
94	KEY/CD ADJ	I	Setting terminal for the CD adjustment mode Not used (open)
95	MODEL-IN	I	Destination setting terminal
96	AVSS	—	Ground terminal (for A/D conversion)
97	SPEC-IN	I	Setting terminal for the version
98	AVREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	TC-RELAY	O	Recording/playback select signal output to the REC/PB switch (IC602) “L”: playback, “H”: recording

*3 Capstan motor (M1) control

Mode Terminal	Stop	Forward Direction	Reverse Direction	Brake
CAPM-CNT1 (pin 75)	“L”	“L”	“H”	“H”
CAPM-CNT2 (pin 74)	“L”	“H”	“L”	“H”

• **PANEL BOARD IC601 TMP88CS76F-6004 (FLUORESCENT INDICATOR TUBE DRIVER, KEY CONTROL)**

Pin No.	Pin Name	I/O	Function
1	SIRCS	I	Remote control signal input from the remote control receiver (IC602)
2	JOG-A	I	Jog dial pulse input from the rotary encoder (S601 JOG) (A phase input)
3	LED SCK	O	Serial data transfer clock signal output to the LED driver (IC604)
4	LED LAT	O	Serial data latch pulse signal output to the LED driver (IC604)
5	LED DATA	O	Serial data output to the LED driver (IC604)
6	PAD LAT	O	Not used (open)
7	L SEL	O	LED selection signal output terminal
8	JOG-B	I	Jog dial pulse input from the rotary encoder (S601 JOG) (B phase input)
9	VOL-A	I	Jog dial pulse input from the rotary encoder (S602 VOLUME) (A phase input)
10	VOL-B	I	Jog dial pulse input from the rotary encoder (S602 VOLUME) (B phase input)
11	KEY0	I	Key input terminal (A/D input) (S625 to S630) REC PAUSE/START, HI-DUB, CD SYNC, LOOP, DISPLAY, SPECTRUM ANALYZER keys input
12	KEY1	I	Key input terminal (A/D input) (S611 to S621) SYNC BASS, SYNC EQ, KARAOKE PON/MPX, NON-STOP, SURROUND, DBFB, ENTER/NEXT, + ►►, – ◄◄, GROOVE, FLASH keys input
13	KEY2	I	Key input terminal (A/D input) (S638 to S642 and S751 to S757) TIMER SELECT, FILE SELECT, REPEAT STEREO/MONO, PLAY MODE/DOLBY NR, EDIT/DIRECTION TUNER MEMORY, I/⌂, (STANDBY) POWER SAVE DEMO, DISC 1/2/3, DISC SKIP EX-CHANGE, ⏮ keys input
14	KEY3	I	Key input terminal (A/D input) (S643 to S651) TUNER/BAND, ►◄ CD, ■, ► TAPE B, ◄ TAPE B, ► TAPE A, ◄ TAPE A, FUNCTION, CLOCK/TIMER SET keys input
15	GRAD L2	O	Not used (open)
16	S LOW FREQ (BPF0)	I	Spectrum analyzer drive (super low frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 40 Hz)
17	BPF1	I	Spectrum analyzer drive (low frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 100 Hz)
18	BPF2	I	Spectrum analyzer drive (low and middle frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 400 Hz)
19	BPF3	I	Spectrum analyzer drive (middle and high frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 2 kHz)
20	BPF4	I	Spectrum analyzer drive (high frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 6 kHz)
21	ALL BAND (L+R)	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for VACS, non-stop signal)
22	WAKE UP	O	Wakeup control signal output to the system controller (IC501) “H” active
23	VSS	—	Ground terminal
24	VASS	—	Ground terminal (for A/D conversion)
25	VAREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
26	VDD	—	Power supply terminal (+5V)
27 to 32	G18 to G13	O	Grid drive signal output to the fluorescent indicator tube (FL601)
33 to 40	G12 to G5	O	Grid drive signal output to the fluorescent indicator tube (FL601)
41	VDD	—	Power supply terminal (+5V)
42 to 44	G4 to G2	O	Grid drive signal output to the fluorescent indicator tube (FL601)
45	G1	O	Grid drive signal output to the fluorescent indicator tube (FL601)
46 to 67	S1 to S22	O	Segment drive signal output to the fluorescent indicator tube (FL601)
68	VKK	—	Power supply terminal (–30V) (for fluorescent indicator tube drive)
69	VDD	—	Power supply terminal (+5V)

Pin No.	Pin Name	I/O	Function
70	XIN	I	System clock input terminal (12.5 MHz)
71	VSS	—	Ground terminal
72	XOUT	O	System clock output terminal (12.5 MHz)
73	$\overline{\text{RESET}}$	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”
74	CH	O	Not used (open)
75	BUSY	I	Not used (fixed at “L”)
76	TEST	I	Connected to ground
77	GRAD R1	O	Not used (open)
78	I2C DATA	I/O	Communication data bus with the system controller (IC501)
79	I2C CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC501)
80	GRAD R2	O	Not used (open)

SECTION 8 EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑ ↑
Parts Color Cabinet's Color

- Abbreviation

AED : North European

AR : Argentine

AUS : Australian

CND : Canadian

E2 : 120 V AC Area in E model

E3 : 240 V AC Area in E model

EA3 : Saudi Arabia

EA4 : Israel

G : German

KR : Korean

MX : Mexican

SP : Singapore

TH : Thai

TW : Taiwan

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

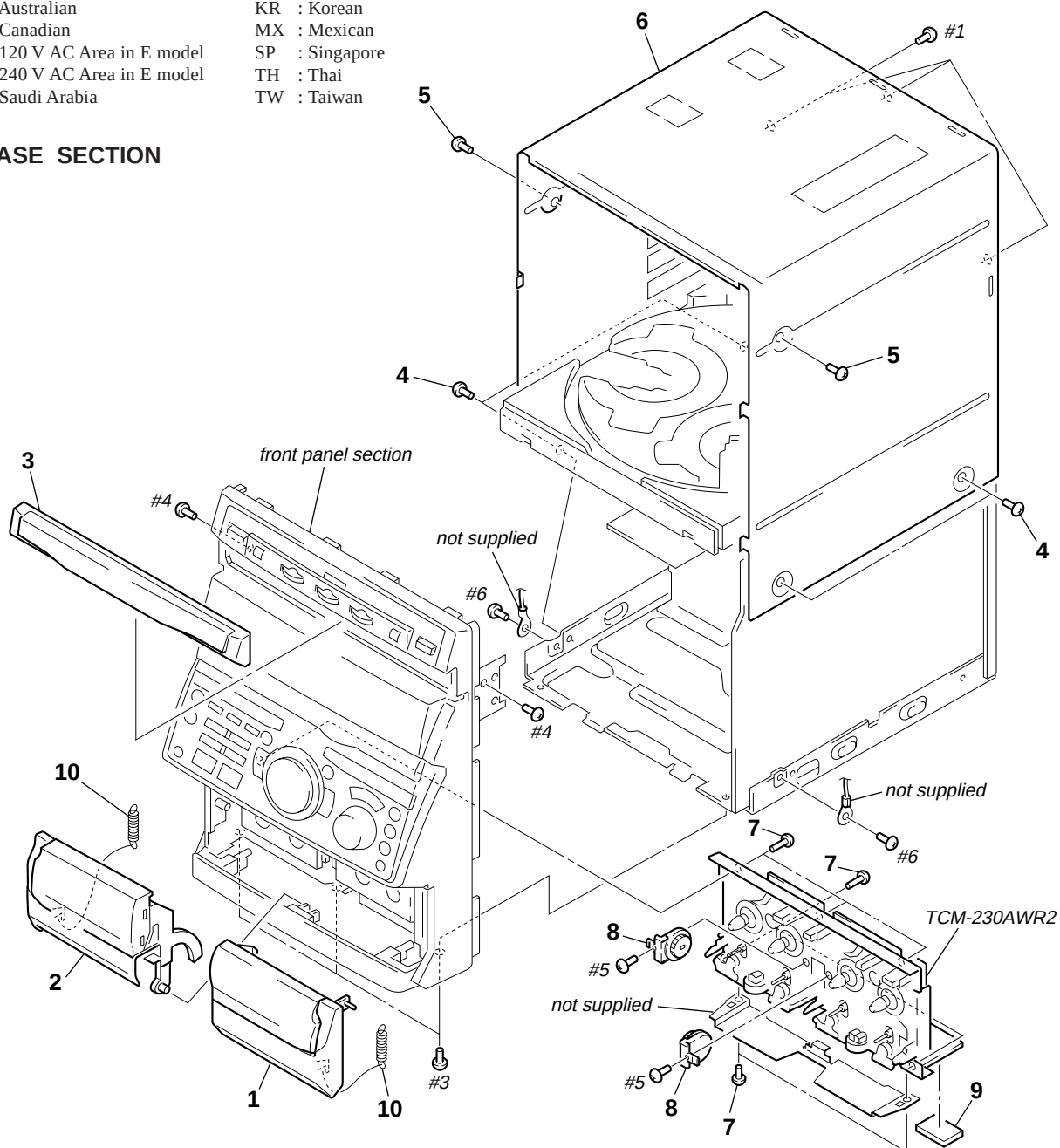
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list is given in the last of the electrical parts list.

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

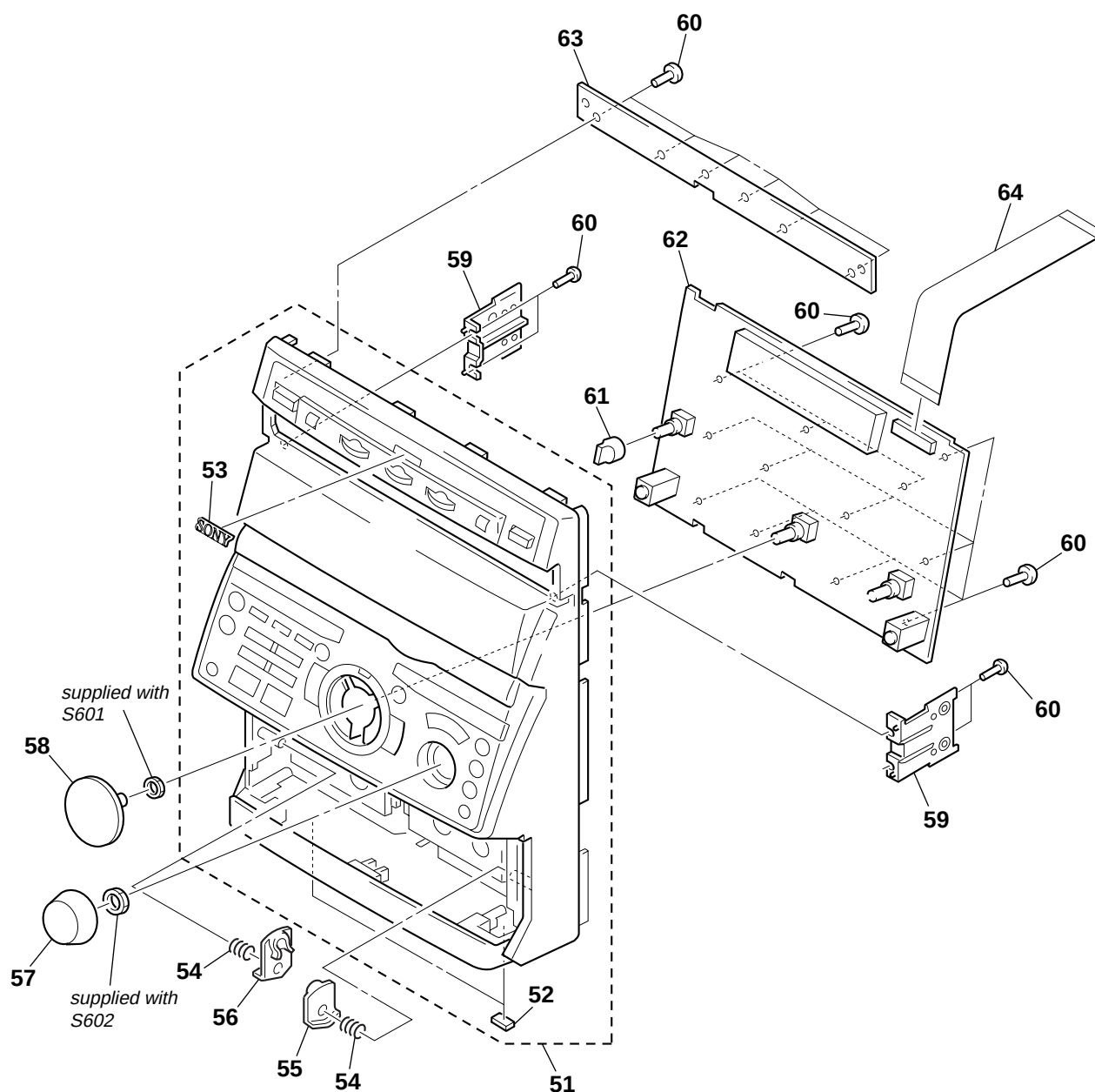
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4950-832-1	HOLDER (R) ASSY, CASSETTE (SILVER)		4	3-363-099-11	SCREW (CASE 3 TP2) (3X8) (SILVER)	
1	X-4950-971-1	HOLDER (R) ASSY, CASSETTE (GLAY)		5	3-363-099-41	SCREW (CASE 3 TP2) (3X12) (GLAY)	
2	X-4950-828-1	HOLDER (L) ASSY, CASSETTE (SILVER)		5	3-363-099-71	SCREW (CASE 3 TP2) (3X12) (SILVER)	
2	X-4950-970-1	HOLDER (L) ASSY, CASSETTE (GLAY)		* 6	4-214-443-01	CASE (SILVER)	
3	X-4950-751-1	PANEL ASSY, LOADING (SILVER) (GRX50)		* 6	4-215-752-01	CASE (GLAY)	
3	X-4950-752-1	PANEL ASSY, LOADING (RXD7)		7	4-951-620-01	SCREW (2.6X8), +BVTP	
3	X-4950-957-1	PANEL ASSY, LOADING (R770)		8	4-215-062-01	DAMPER	
3	X-4951-471-1	PANEL ASSY, LOADING (GLAY) (GRX50)		9	4-985-642-01	CUSHION	
4	3-363-099-01	SCREW (CASE 3 TP2) (3X8) (GLAY)		10	4-219-087-01	SPRING, TENSION	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-4950-822-1	PANEL ASSY, FRONT (SILVER) (GRX50)		57	4-214-384-51	KNOB (VOL) (R770)	
51	X-4950-823-1	PANEL ASSY, FRONT (RXD7: AEP)		58	4-214-383-11	KNOB (JOG) (GRX50/RXD7)	
51	X-4950-938-1	PANEL ASSY, FRONT (RXD7: CND)		58	4-214-383-51	KNOB (JOG) (R770)	
51	X-4950-982-1	PANEL ASSY, FRONT (R770)		* 59	4-996-716-01	HOLDER (CDM)	
51	X-4951-448-1	PANEL ASSY, FRONT (GLAY) (GRX50: E3)		60	4-951-620-01	SCREW (2.6X8), +BVTP	
51	X-4951-449-1	PANEL ASSY, FRONT (GLAY) (GRX50: EA3)		61	4-214-385-11	KNOB (MIC) (GRX50/RXD7)	
52	4-930-336-61	FOOT (FELT)		61	4-214-385-51	KNOB (MIC) (R770)	
53	4-962-708-71	EMBLEM (4-A), SONY		* 62	A-4417-722-A	PANEL BOARD, COMPLETE	(EXCEPT GRX50: EA3)
54	4-214-775-11	SPRING, PUSH CATCHER RETURN		* 62	A-4419-727-A	PANEL BOARD, COMPLETE (GRX50: EA3)	
55	4-214-761-11	CATCHER (B), PUSH		* 63	A-4417-727-A	CD SW BOARD, COMPLETE	
56	4-214-760-11	CATCHER (A), PUSH		64	1-773-188-11	WIRE (FLAT TYPE) (23 CORE)	
57	4-214-384-11	KNOB (VOL) (GRX50/RXD7)					

CDM38LH-5BD32L

not supplied

114

#2

106

107

105

104

103

102

#10

T951

101

109

#2

110

M501
EXCEPT CND

111

112

E2, E3, TH, MX

E3

EA3, SP, TW

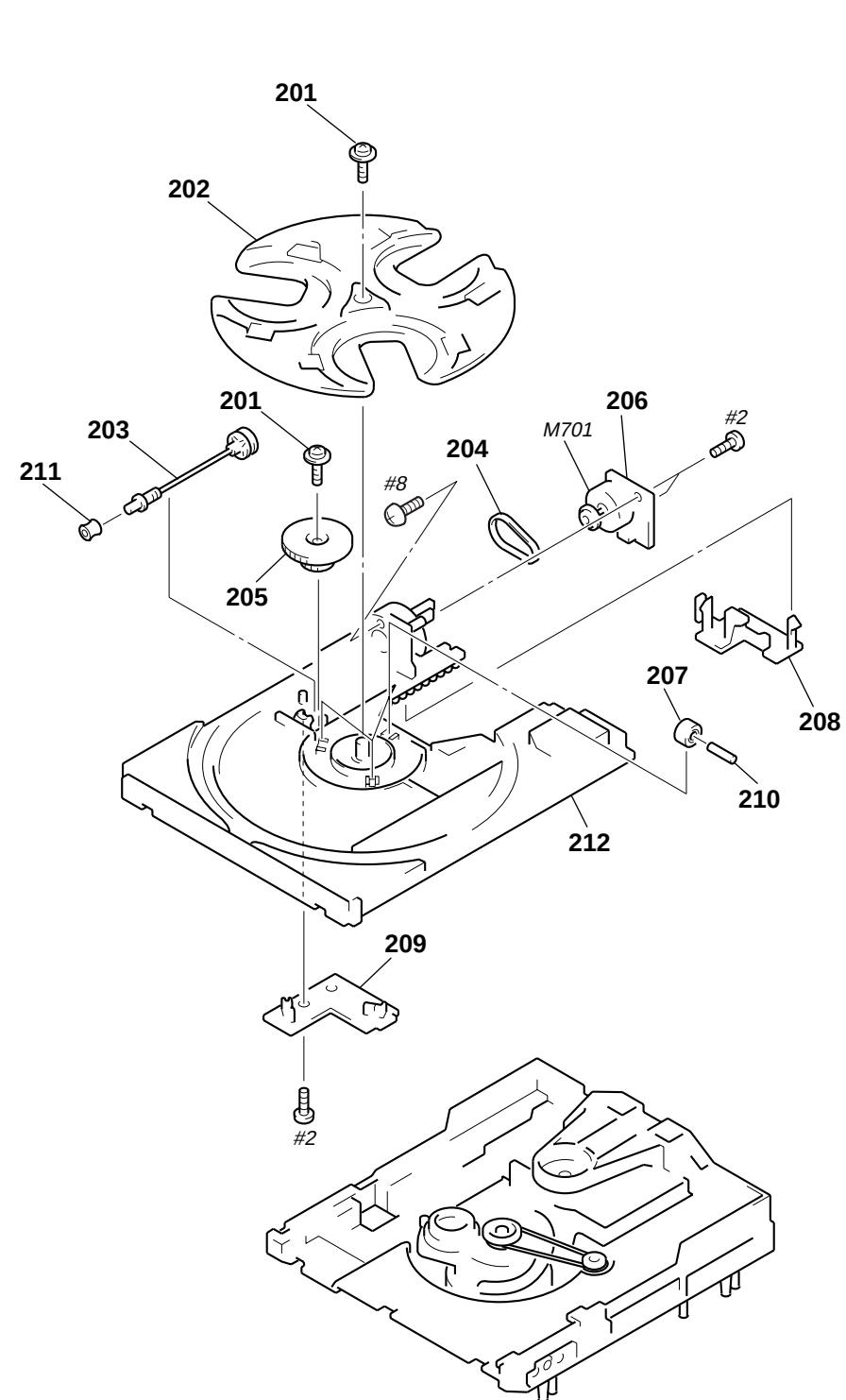
AEP, UK, EA3, EA4, SP, TW, AR, KR

CND

AUS

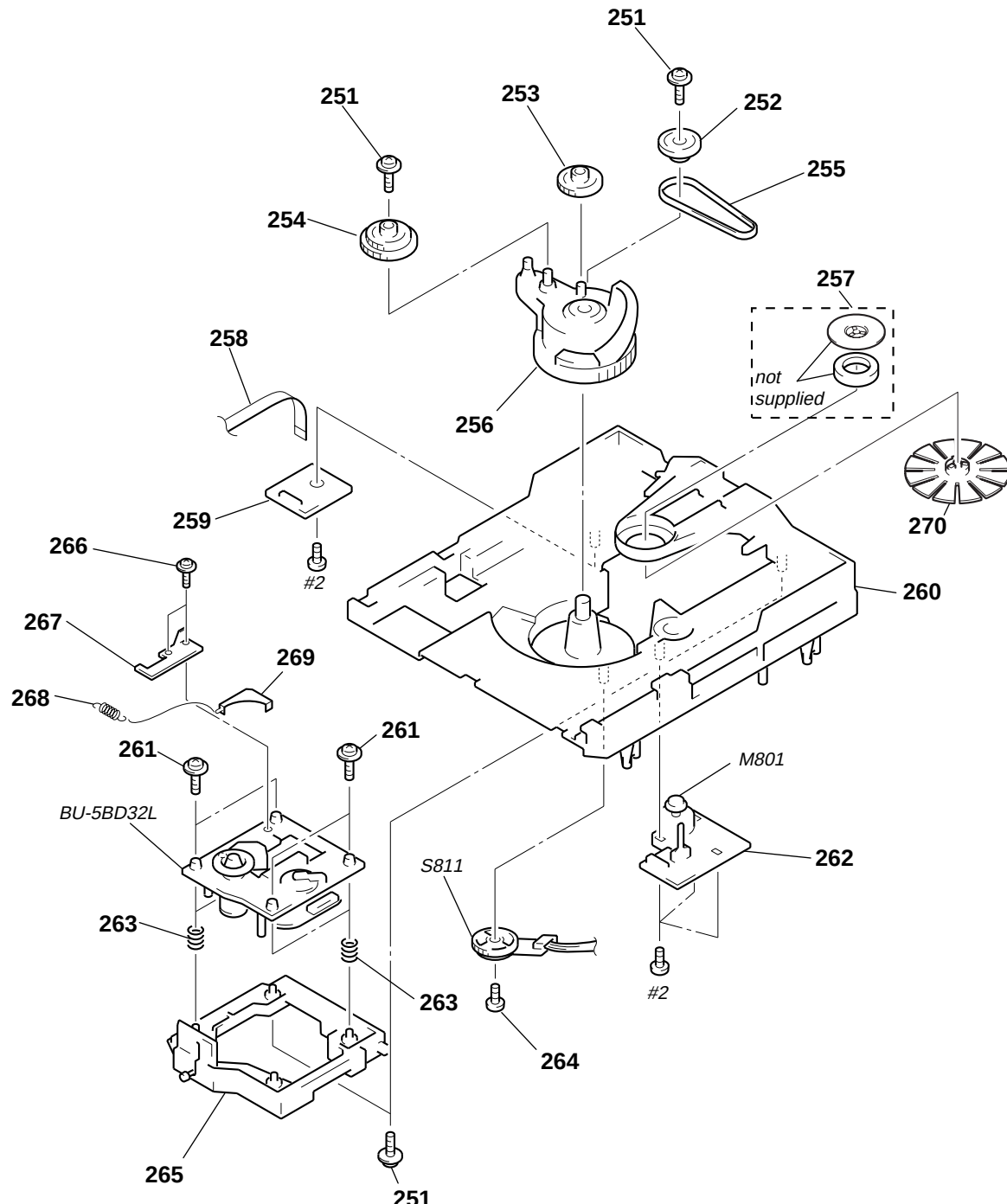
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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(4) CD MECHANISM DECK SECITON-1
(CDM38LH-5BD32L)



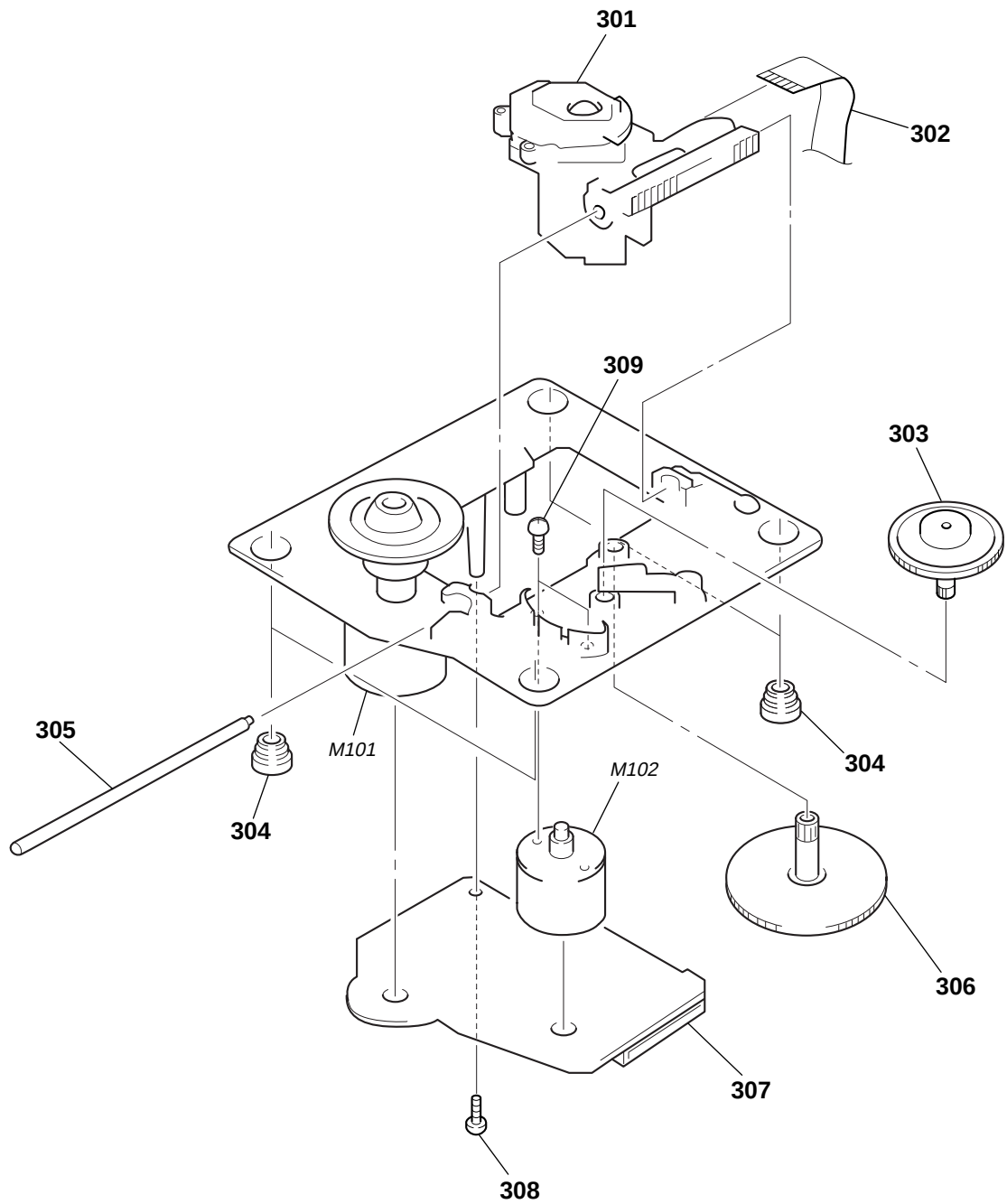
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-981-789-11	BRACKET (2), YOKE		207	4-988-162-01	ROLLER	
202	4-977-945-01	TRAY (TURN)		208	4-977-941-01	BEARING (WORM)	
203	X-4946-665-1	SHAFT ASSY, WORM		* 209	1-658-576-11	SENSOR BOARD	
204	4-977-943-01	BELT (TURN) (1.2)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

(5) CD MECHANISM DECK SECITON-2
(CDM38LH-5BD32L)



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 (2), LENS	
* 259	1-658-575-11	CONNECTOR BOARD		270	4-993-142-21	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 (+PTPWHM2.6), FLOATING		S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	

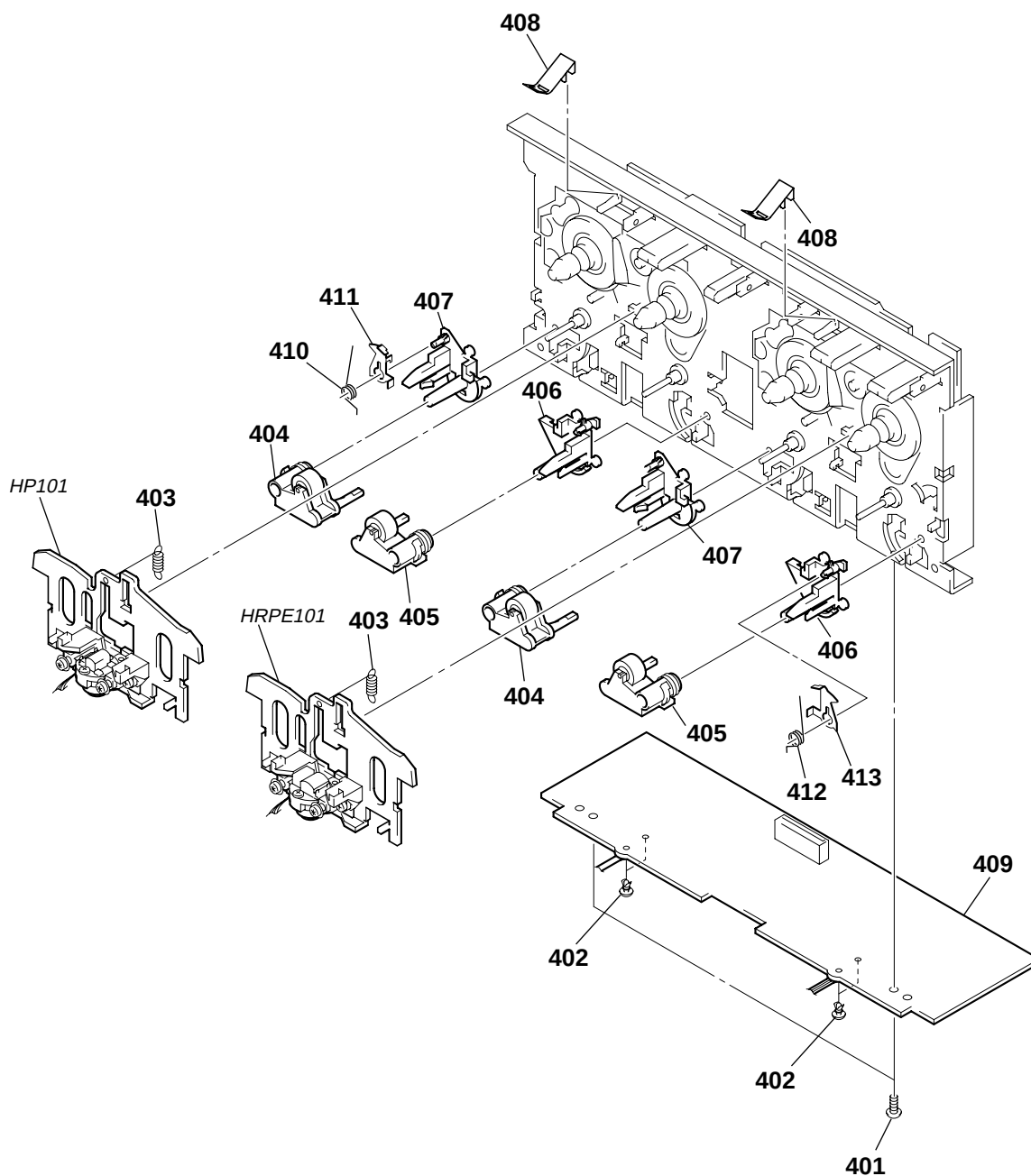
(6) BASE UNIT SECTION
(BU-5BD32L)



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Δ 301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP		* 307	A-4724-486-A	BD BOARD, COMPLETE	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		308	4-951-620-01	SCREW (2.6X8), +BVTP	
303	4-917-567-01	GEAR (M)		309	3-713-786-51	SCREW +P 2X3	
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)	
306	4-917-564-01	GEAR (P), FLATNESS					

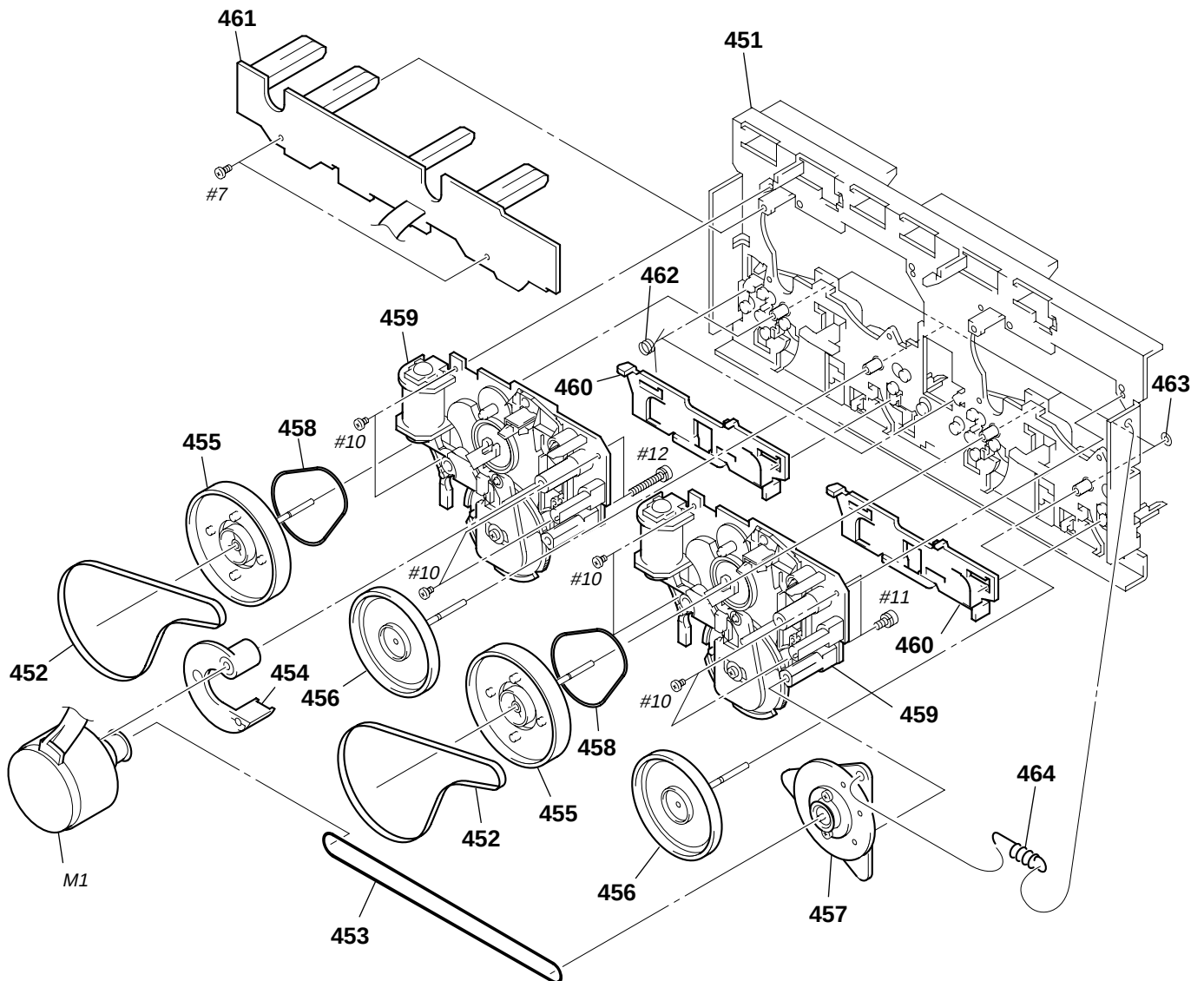
(7) TAPE MECHANISM DECK SECTION-1
(TCM-230AWR2)



Ref. No.	Part No.	Description	Remark
401	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
402	3-911-116-21	RIVET, PUSH	
403	3-016-574-11	SPRING (HEAD), TENSION	
404	X-3374-156-4	PINCH LEVER (REV) ASSY	
405	X-3374-155-4	PINCH LEVER (FWD) ASSY	
406	3-016-564-01	BASE (PINCH LEVER FWD)	
407	3-016-565-01	BASE (PINCH LEVER REV)	
408	3-026-892-01	SPRING (CASSETTE), LEAF	

Ref. No.	Part No.	Description	Remark
* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	
410	3-032-809-02	SPRING (L), TORSION	
411	3-016-572-01	LEVER (EJECT PREVENTION L)	
412	3-032-810-02	SPRING (R), TORSION	
413	3-016-573-01	LEVER (EJECT PREVENTION R)	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD	
HRPE101A	A-2056-682-A	DECK (B) ASSY, HEAD	

(8) TAPE MECHANISM DECK SECTION-2
(TCM-230AWR2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 451	X-3374-214-3	CHASSIS ASSY, MAIN		459	A-2004-629-A	MECHANICAL BLOCK ASSY	
452	3-016-570-01	BELT (CAPSTAN)		460	3-016-566-01	SLIDER, REVERSE	
453	3-016-569-01	BELT (TENSION)		* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
454	3-017-360-01	BRACKET (MOTOR)		462	3-016-575-11	SPRING, TORSION	
455	X-3376-497-1	FLYWHEEL (FWD) ASSY		463	3-019-208-01	WASHER, STOPPER	
456	X-3374-235-1	FLYWHEEL (REV) ASSY		464	3-027-453-01	SPRING (GROUND), TENSION	
457	X-3374-238-1	PULLEY ASSY, TENSION		465	3-030-823-01	SCREW (+BVTT) (2X3.5)	
458	3-024-405-01	BELT (FR2)		M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

AUDIO

SECTION 9 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX 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
AED : North European model.
AR : Argentine model.
AUS : Australian model.
CND : Canadian model.
E2 : 120 V AC Area in E model.
E3 : 240 V AC Area in E model.
EA3 : Saudi Arabia model.

- EA4 : Israel model.
- G : German model.
- KR : Korean model.
- MX : Mexican model.
- SP : Singapore model.
- TH : Thai model.
- TW : Taiwan model.

- 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.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2007-731-A	AUDIO BOARD, COMPLETE *****		C642	1-104-664-11	ELECT 47uF 20% 16V	
		< CAPACITOR >				< CONNECTOR >	
C301	1-162-289-31	CERAMIC 390PF 10% 50V		CN601	1-568-834-11	SOCKET, CONNECTOR 15P	
C302	1-126-968-11	ELECT 100uF 20% 6.3V		CN601	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P	
C303	1-162-282-31	CERAMIC 100PF 10% 50V				< IC >	
C304	1-130-483-00	MYLAR 0.01uF 5% 50V		IC601	8-759-111-44	IC uPC4570C-1	
C305	1-107-715-11	ELECT 22uF 20% 16V		IC602	8-759-143-54	IC uPC1330HA	
				IC611	8-759-111-44	IC uPC4570C-1	
C311	1-162-289-31	CERAMIC 390PF 10% 50V				< COIL >	
C313	1-162-282-31	CERAMIC 100PF 10% 50V		L331	1-410-780-11	INDUCTOR 27mH	
C314	1-130-487-00	MYLAR 0.022uF 5% 50V		L431	1-410-780-11	INDUCTOR 27mH	
C315	1-126-233-11	ELECT 22uF 20% 50V		L601	1-414-193-41	INDUCTOR 220uH	
C331	1-137-427-11	FILM 120PF 5% 50V		L602	1-414-193-41	INDUCTOR 220uH	
						< TRANSISTOR >	
C332	1-162-288-31	CERAMIC 330PF 10% 50V		Q621	8-729-142-46	TRANSISTOR 2SC2001-LK	
C333	1-162-209-31	CERAMIC 27PF 5% 50V		Q622	8-729-142-46	TRANSISTOR 2SC2001-LK	
C401	1-162-289-31	CERAMIC 390PF 10% 50V		Q623	8-729-801-93	TRANSISTOR 2SD1387	
C402	1-126-968-11	ELECT 100uF 20% 6.3V				< RESISTOR >	
C403	1-162-282-31	CERAMIC 100PF 10% 50V		R301	1-247-881-00	CARBON 120K 5% 1/4W	
				R302	1-249-409-11	CARBON 220 5% 1/4W	
C404	1-130-483-00	MYLAR 0.01uF 5% 50V		R303	1-249-433-11	CARBON 22K 5% 1/4W	
C405	1-107-715-11	ELECT 22uF 20% 16V		R304	1-247-889-00	CARBON 270K 5% 1/4W	
C411	1-162-289-31	CERAMIC 390PF 10% 50V		R305	1-247-858-11	CARBON 13K 5% 1/4W	
C413	1-162-282-31	CERAMIC 100PF 10% 50V					
C414	1-130-487-00	MYLAR 0.022uF 5% 50V		R311	1-247-881-00	CARBON 120K 5% 1/4W	
				R312	1-247-807-31	CARBON 100 5% 1/4W	
C415	1-126-233-11	ELECT 22uF 20% 50V		R314	1-247-882-11	CARBON 130K 5% 1/4W	
C431	1-137-427-11	FILM 120PF 5% 50V		R315	1-247-850-11	CARBON 6.2K 5% 1/4W	
C432	1-162-288-31	CERAMIC 330PF 10% 50V		R331	1-249-430-11	CARBON 12K 5% 1/4W	
C433	1-162-209-31	CERAMIC 27PF 5% 50V					
C601	1-104-396-11	ELECT 10uF 20% 16V		R401	1-247-881-00	CARBON 120K 5% 1/4W	
				R402	1-249-409-11	CARBON 220 5% 1/4W	
C602	1-104-396-11	ELECT 10uF 20% 16V		R403	1-249-433-11	CARBON 22K 5% 1/4W	
C611	1-104-396-11	ELECT 10uF 20% 16V		R404	1-247-889-00	CARBON 270K 5% 1/4W	
C612	1-104-396-11	ELECT 10uF 20% 16V		R405	1-247-858-11	CARBON 13K 5% 1/4W	
C621	1-137-150-11	FILM 0.01uF 5% 100V					
C622	1-126-961-11	ELECT 2.2uF 20% 50V		R411	1-247-881-00	CARBON 120K 5% 1/4W	
C623	1-136-155-00	FILM 0.015uF 5% 50V					
C624	1-130-481-00	MYLAR 0.0068uF 5% 50V					
C625	1-130-481-00	MYLAR 0.0068uF 5% 50V					
C627	1-124-903-11	ELECT 1uF 20% 50V					
C628	1-136-153-00	FILM 0.01uF 5% 50V					

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R412	1-247-807-31	CARBON	100	5%	1/4W		C130	1-164-346-11	CERAMIC CHIP	1uF			16V
R414	1-247-882-11	CARBON	130K	5%	1/4W		C131	1-124-779-00	ELECT CHIP	10uF	20%		16V
R415	1-247-850-11	CARBON	6.2K	5%	1/4W		C133	1-164-346-11	CERAMIC CHIP	1uF			16V
R431	1-249-430-11	CARBON	12K	5%	1/4W		C140	1-164-346-11	CERAMIC CHIP	1uF			16V
							C141	1-164-346-11	CERAMIC CHIP	1uF			16V
R601	1-249-409-11	CARBON	220	5%	1/4W								
R602	1-249-409-11	CARBON	220	5%	1/4W		C143	1-163-038-00	CERAMIC CHIP	0.1uF			25V
R608	1-249-409-11	CARBON	220	5%	1/4W		C151	1-163-235-11	CERAMIC CHIP	22PF	5%		50V
R609	1-249-433-11	CARBON	22K	5%	1/4W		C153	1-163-038-00	CERAMIC CHIP	0.1uF			25V
R611	1-249-409-11	CARBON	220	5%	1/4W		C154	1-110-501-11	CERAMIC CHIP	0.33uF	10%		16V
							C156	1-163-235-11	CERAMIC CHIP	22PF	5%		50V
R612	1-249-409-11	CARBON	220	5%	1/4W								
△R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F	C157	1-163-009-11	CERAMIC CHIP	0.001uF	10%		50V
△R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F	C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%		50V
R623	1-249-432-11	CARBON	18K	5%	1/4W		C161	1-126-206-11	ELECT CHIP	100uF	20%		6.3V
R624	1-249-432-11	CARBON	18K	5%	1/4W		C162	1-126-205-11	ELECT CHIP	47uF	20%		6.3V
							C163	1-126-206-11	ELECT CHIP	100uF	20%		6.3V
R625	1-249-429-11	CARBON	10K	5%	1/4W								
< VARIABLE RESISTOR >							C165	1-163-038-00	CERAMIC CHIP	0.1uF			25V
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K					C167	1-163-235-11	CERAMIC CHIP	22PF	5%		50V
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K					C168	1-163-235-11	CERAMIC CHIP	22PF	5%		50V
RV341	1-241-768-11	RES, ADJ, CARBON 220K					C171	1-163-009-11	CERAMIC CHIP	0.001uF	10%		50V
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K					C172	1-163-123-00	CERAMIC CHIP	180PF	5%		50V
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K											
RV441	1-241-768-11	RES, ADJ, CARBON 220K					C181	1-163-009-11	CERAMIC CHIP	0.001uF	10%		50V
< TRANSFORMER >							C182	1-163-123-00	CERAMIC CHIP	180PF	5%		50V
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION					< CONNECTOR >						
*****							CN101	1-778-874-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P				
*****							CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P				
*****							< FERRITE BEAD >						
*	A-4724-486-A	BD BOARD, COMPLETE					FB101	1-500-445-21	FERRITE	0uH			
*****							FB103	1-500-445-21	FERRITE	0uH			
< CAPACITOR >							< IC >						
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V		IC101	8-752-386-85	IC	CXD2587Q			
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		IC102	8-759-549-28	IC	BA5974FP-E2			
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V		IC103	8-752-085-51	IC	CXA2568M-T6			
C104	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V		< TRANSISTOR >						
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		Q101	8-729-010-08	TRANSISTOR	MSB710-R			
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V		< RESISTOR >						
C110	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V		R101	1-216-077-00	METAL CHIP	15K	5%		1/10W
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V		R102	1-216-097-00	RES,CHIP	100K	5%		1/10W
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V		R103	1-216-077-00	METAL CHIP	15K	5%		1/10W
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V		R104	1-216-085-00	METAL CHIP	33K	5%		1/10W
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V		R105	1-216-073-00	METAL CHIP	10K	5%		1/10W
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V		R106	1-216-049-11	RES,CHIP	1K	5%		1/10W
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V		R107	1-216-073-00	METAL CHIP	10K	5%		1/10W
C117	1-126-209-11	ELECT CHIP	100uF	20%	4V		R108	1-216-061-00	METAL CHIP	3.3K	5%		1/10W
C118	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V		R109	1-216-121-00	RES,CHIP	1M	5%		1/10W
C119	1-163-235-11	CERAMIC CHIP	22PF	5%	50V		R110	1-216-025-00	RES,CHIP	100	5%		1/10W
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V		R111	1-216-121-00	RES,CHIP	1M	5%		1/10W
C122	1-126-206-11	ELECT CHIP	100uF	20%	6.3V		R113	1-216-121-00	RES,CHIP	1M	5%		1/10W
C123	1-163-021-00	CERAMIC CHIP	0.01uF	10%	50V		R114	1-216-073-00	METAL CHIP	10K	5%		1/10W
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V		R116	1-216-001-00	METAL CHIP	10	5%		1/10W
C125	1-163-038-00	CERAMIC CHIP	0.1uF		25V		R117	1-216-049-11	RES,CHIP	1K	5%		1/10W
C126	1-163-038-00	CERAMIC CHIP	0.1uF		25V								
C127	1-128-065-11	ELECT CHIP	68uF	20%	10V		R119	1-216-041-00	METAL CHIP	470	5%		1/10W
C128	1-163-038-00	CERAMIC CHIP	0.1uF		25V								
C129	1-163-031-11	CERAMIC CHIP	0.01uF		50V								

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

BD	CD SW	CONNECTOR	LEAF SW
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Ref. No.	Part No.	Description	Remark
R123	1-216-073-00	METAL CHIP 10K 5%	1/10W
R124	1-216-097-00	RES,CHIP 100K 5%	1/10W
R131	1-216-033-00	METAL CHIP 220 5%	1/10W
R143	1-216-103-00	METAL CHIP 180K 5%	1/10W
R144	1-216-103-00	METAL CHIP 180K 5%	1/10W
R147	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R148	1-216-001-00	METAL CHIP 10 5%	1/10W
R149	1-216-001-00	METAL CHIP 10 5%	1/10W
R158	1-216-111-00	METAL CHIP 390K 5%	1/10W
R159	1-216-101-00	METAL CHIP 150K 5%	1/10W
R161	1-216-308-00	METAL CHIP 4.7 5%	1/10W
R162	1-216-101-00	METAL CHIP 150K 5%	1/10W
R171	1-216-078-00	RES,CHIP 16K 5%	1/10W
R172	1-216-073-00	METAL CHIP 10K 5%	1/10W
R173	1-216-077-00	METAL CHIP 15K 5%	1/10W
R181	1-216-078-00	RES,CHIP 16K 5%	1/10W
R182	1-216-073-00	METAL CHIP 10K 5%	1/10W
R183	1-216-077-00	METAL CHIP 15K 5%	1/10W
< NETWORK RESISTER >			
RN101	1-233-576-11	RES, CHIP NETWORK 100	
RN102	1-233-576-11	RES, CHIP NETWORK 100	
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
< VIBRATOR >			
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)	

*	A-4417-727-A	CD SW BOARD, COMPLETE	

< LED >			
D751	8-719-056-13	LED SML79423C-TP15 (DISC 1)	
D752	8-719-056-13	LED SML79423C-TP15 (DISC 2)	
D753	8-719-056-13	LED SML79423C-TP15 (DISC 3)	
D754	8-719-063-93	LED SLR325VC-N-T32 (I/⌚)	
< RESISTOR >			
R751	1-249-417-11	CARBON 1K 5%	1/4W
R752	1-249-418-11	CARBON 1.2K 5%	1/4W
R753	1-249-420-11	CARBON 1.8K 5%	1/4W
R754	1-249-422-11	CARBON 2.7K 5%	1/4W
R755	1-247-843-11	CARBON 3.3K 5%	1/4W
R756	1-249-425-11	CARBON 4.7K 5%	1/4W
R757	1-249-427-11	CARBON 6.8K 5%	1/4W
R758	1-247-804-11	CARBON 75 5%	1/4W
R759	1-249-407-11	CARBON 150 5%	1/4W
R760	1-247-804-11	CARBON 75 5%	1/4W
R761	1-249-407-11	CARBON 150 5%	1/4W
R762	1-247-804-11	CARBON 75 5%	1/4W
R763	1-249-407-11	CARBON 150 5%	1/4W
R764	1-249-414-11	CARBON 560 5%	1/4W
< SWITCH >			
S751	1-762-875-21	SWITCH, KEYBOARD (I/⌚)	

Ref. No.	Part No.	Description	Remark
S752	1-762-875-21	SWITCH, KEYBOARD ((STANDBY) POWER SAVE DEMO)	
S753	1-762-875-21	SWITCH, KEYBOARD (DISC 1)	
S754	1-762-875-21	SWITCH, KEYBOARD (DISC 2)	
S755	1-762-875-21	SWITCH, KEYBOARD (DISC 3)	
S756	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP EX-CHANGE)	
S757	1-762-875-21	SWITCH, KEYBOARD (≡)	

*	1-658-575-11	CONNECTOR BOARD	

< CONNECTOR >			
CN701	1-568-946-11	PIN, CONNECTOR 8P	
CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P	
< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR DTC114ES	
< RESISTOR >			
R703	1-249-435-11	CARBON 33K 5%	1/4W
R704	1-249-429-11	CARBON 10K 5%	1/4W
R705	1-249-417-11	CARBON 1K 5%	1/4W

*	A-2007-732-A	LEAF SW BOARD, COMPLETE	

< CAPACITOR >			
C1001	1-107-716-11	ELECT 33uF 20% 10V	
< CONNECTOR >			
CN1001	1-784-459-11	CONNECTOR, FFC/FPC 17P	
< DIODE >			
D1001	8-719-911-19	DIODE 1SS119	
D1002	8-719-911-19	DIODE 1SS119	
< CONNECTOR >			
* DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P	
< PHOTO INTERRUPTER >			
IC1001	8-749-014-38	PHOTO INTERRUPTER SG-264	
IC1002	8-749-014-38	PHOTO INTERRUPTER SG-264	
< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR DTA144ESA	
< 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

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R1008	1-249-417-11	CARBON 1K 5%	1/4W			C162	1-136-158-00	FILM 0.027uF 5%	50V		
		< VARIABLE RESISTOR >				C165	1-136-159-00	FILM 0.033uF 5%	50V		
RV1001	1-241-785-11	RES, ADJ, CARBON 10K				C166	1-130-473-00	MYLAR 0.0015uF 5%	50V		
RV1002	1-241-785-11	RES, ADJ, CARBON 10K				C169	1-130-479-00	MYLAR 0.0047uF 5%	50V		
		< SWITCH >				C170	1-130-477-00	MYLAR 0.0033uF 5%	50V		
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK A PLAY)				C171	1-126-964-11	ELECT 10uF 20%	50V		
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK B PLAY)				C172	1-162-291-31	CERAMIC 560PF 10%	50V		
S1003	1-771-333-11	SWITCH, LEAF (DECK A HALF)				C173	1-136-169-00	FILM 0.22uF 5%	50V		
S1004	1-771-205-11	SWITCH, LEAF (DECK A 120/70)				C174	1-136-169-00	FILM 0.22uF 5%	50V		
S1005	1-771-205-11	SWITCH, LEAF (DECK A REC)				C175	1-126-964-11	ELECT 10uF 20%	50V		
S1006	1-771-333-11	SWITCH, LEAF (DECK B HALF)				C176	1-136-495-11	FILM 0.068uF 5%	50V		
S1008	1-771-205-11	SWITCH, LEAF (DECK B 120/70)				C177	1-136-153-00	FILM 0.01uF 5%	50V		
S1009	1-771-205-11	SWITCH, LEAF (DECK B REC)				C193	1-126-964-11	ELECT 10uF 20%	50V		(GRX50/RXD7: CND)
*****						C197	1-164-159-11	CERAMIC 0.1uF	50V		
*	A-4417-714-A	MAIN BOARD, COMPLETE				C301	1-126-960-11	ELECT 1uF 20%	50V		
		(GRX50: E2, MX, AR)				C302	1-130-479-00	MYLAR 0.0047uF 5%	50V		
*	A-4417-718-A	MAIN BOARD, COMPLETE (RXD7: CND)				C303	1-136-165-00	FILM 0.1uF 5%	50V		
*	A-4417-732-A	MAIN BOARD, COMPLETE				C304	1-136-165-00	FILM 0.1uF 5%	50V		
		(GRX50: E3, SP, TW)				C305	1-126-964-11	ELECT 10uF 20%	50V		
*	A-4417-868-A	MAIN BOARD, COMPLETE (R770/RXD7: AEP)				C306	1-126-960-11	ELECT 1uF 20%	50V		
*	A-4419-729-A	MAIN BOARD, COMPLETE (GRX50: EA3)				C307	1-126-959-11	ELECT 0.47uF 20%	50V		
*	A-4419-821-A	MAIN BOARD, COMPLETE				C308	1-126-964-11	ELECT 10uF 20%	50V		
		(GRX50: EA4, TH, KR, AUS)				C309	1-137-194-81	FILM 0.47uF 5%	50V		
*****						C310	1-162-290-31	CERAMIC 470PF 10%	50V		
7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S					C311	1-126-964-11	ELECT 10uF 20%	50V		
		< CAPACITOR >				C312	1-126-959-11	ELECT 0.47uF 20%	50V		
C101	1-162-286-21	CERAMIC 220PF 10% 50V				C313	1-162-294-31	CERAMIC 0.001uF 10%	50V		
		(R770/RXD7: AEP)				C314	1-126-964-11	ELECT 10uF 20%	50V		
C102	1-162-286-21	CERAMIC 220PF 10% 50V				C315	1-126-963-11	ELECT 4.7uF 20%	50V		
		(R770/RXD7: AEP)				C316	1-104-665-11	ELECT 100uF 20%	10V		
C103	1-162-286-21	CERAMIC 220PF 10% 50V				C317	1-104-665-11	ELECT 100uF 20%	10V		
		(R770/RXD7: AEP)				C320	1-162-290-31	CERAMIC 470PF 10%	50V		
C104	1-164-159-11	CERAMIC 0.1uF 50V				C333	1-162-600-11	CERAMIC 0.0047uF 30%	16V		
C111	1-137-195-11	FILM 0.56uF 5% 50V				C334	1-162-600-11	CERAMIC 0.0047uF 30%	16V		
C112	1-136-158-00	FILM 0.027uF 5% 50V				C351	1-126-960-11	ELECT 1uF 20%	50V		
C115	1-136-159-00	FILM 0.033uF 5% 50V				C352	1-130-479-00	MYLAR 0.0047uF 5%	50V		
C116	1-130-473-00	MYLAR 0.0015uF 5% 50V				C353	1-136-165-00	FILM 0.1uF 5%	50V		
C119	1-130-479-00	MYLAR 0.0047uF 5% 50V				C354	1-136-165-00	FILM 0.1uF 5%	50V		
C120	1-130-477-00	MYLAR 0.0033uF 5% 50V				C355	1-126-964-11	ELECT 10uF 20%	50V		
C121	1-126-964-11	ELECT 10uF 20% 50V				C356	1-126-960-11	ELECT 1uF 20%	50V		
C122	1-162-291-31	CERAMIC 560PF 10% 50V				C357	1-126-959-11	ELECT 0.47uF 20%	50V		
C123	1-136-169-00	FILM 0.22uF 5% 50V				C358	1-126-964-11	ELECT 10uF 20%	50V		
C124	1-136-169-00	FILM 0.22uF 5% 50V				C359	1-137-194-81	FILM 0.47uF 5%	50V		
C125	1-126-964-11	ELECT 10uF 20% 50V				C382	1-104-665-11	ELECT 100uF 20%	10V		
C131	1-104-664-11	ELECT 47uF 20% 16V				C390	1-126-935-11	ELECT 470uF 20%	6.3V		
C132	1-104-664-11	ELECT 47uF 20% 16V				C391	1-161-494-00	CERAMIC 0.022uF	25V		
C135	1-126-964-11	ELECT 10uF 20% 50V				C392	1-126-916-11	ELECT 1000uF 20%	6.3V		
C141	1-126-959-11	ELECT 0.47uF 20% 50V				C393	1-161-494-00	CERAMIC 0.022uF	25V		
C151	1-162-286-21	CERAMIC 220PF 10% 50V				C394	1-126-925-11	ELECT 470uF 20%	10V		
		(R770/RXD7: AEP)				C396	1-126-961-11	ELECT 2.2uF 20%	50V		
C152	1-162-286-21	CERAMIC 220PF 10% 50V				C397	1-126-961-11	ELECT 2.2uF 20%	50V		
		(R770/RXD7: AEP)				C401	1-136-165-00	FILM 0.1uF 5%	50V		(R770/RXD7: AEP)
C153	1-162-286-21	CERAMIC 220PF 10% 50V				C402	1-136-165-00	FILM 0.1uF 5%	50V		(R770/RXD7: AEP)
		(R770/RXD7: AEP)				C403	1-162-306-11	CERAMIC 0.01uF 20%	16V		(R770/RXD7: AEP)
C161	1-137-195-11	FILM 0.56uF 5% 50V									

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C410	1-126-963-11	ELECT	4.7uF	20%	50V	C853	1-162-282-31	CERAMIC	100PF	10%	50V
			(EXCEPT RXD7: CND)			C854	1-104-665-11	ELECT	100uF	20%	10V
C411	1-162-306-11	CERAMIC	0.01uF	20%	16V	C857	1-136-495-11	FILM	0.068uF	5%	50V
			(EXCEPT RXD7: CND)			C858	1-136-495-11	FILM	0.068uF	5%	50V
C412	1-107-717-11	ELECT	47uF	20%	50V	C859	1-128-560-11	ELECT	22uF	20%	100V
C432	1-104-665-11	ELECT	100uF	20%	10V	C881	1-126-967-11	ELECT	47uF	20%	50V
C433	1-126-961-11	ELECT	2.2uF	20%	50V	C891	1-127-811-11	ELECT	3300uF	20%	50V
									(GRX50)		
C437	1-126-968-11	ELECT	100uF	20%	50V	C892	1-127-751-11	ELECT	3300uF	20%	50V
C451	1-136-165-00	FILM	0.1uF	5%	50V				(RXD7: CND)		
			(R770/RXD7: AEP)			C892	1-127-752-11	ELECT	3300uF	20%	63V
C452	1-136-165-00	FILM	0.1uF	5%	50V				(R770/RXD7: AEP)		
			(R770/RXD7: AEP)			C892	1-127-814-11	ELECT	3300uF	20%	80V
C453	1-162-306-11	CERAMIC	0.01uF	20%	16V				(GRX50)		
			(R770/RXD7: AEP)			C893	1-136-165-00	FILM	0.1uF	5%	50V
C501	1-126-964-11	ELECT	10uF	20%	50V				(GRX50)		
C502	1-164-159-11	CERAMIC	0.1uF		50V	C894	1-130-777-00	FILM	0.1uF	10%	100V
C503	1-136-165-00	FILM	0.1uF	5%	50V				(EXCEPT RXD7: CND)		
C504	1-126-926-11	ELECT	1000uF	20%	10V	C894	1-136-165-00	FILM	0.1uF	5%	50V
C508	1-109-889-11	ELECT	1uF	20%	50V				(RXD7: CND)		
						C901	1-136-165-00	FILM	0.1uF	5%	50V
C610	1-102-953-00	CERAMIC	18PF	5%	50V	C902	1-126-936-11	ELECT	3300uF	20%	16V
C611	1-102-514-11	CERAMIC	22PF	5%	50V	C903	1-126-933-11	ELECT	100uF	20%	16V
C614	1-162-306-11	CERAMIC	0.01uF	20%	16V	C904	1-104-664-11	ELECT	47uF	20%	16V
C616	1-104-665-11	ELECT	100uF	20%	10V	C905	1-104-665-11	ELECT	100uF	20%	10V
C662	1-162-306-11	CERAMIC	0.01uF	20%	16V						
						C906	1-136-165-00	FILM	0.1uF	5%	50V
C664	1-104-665-11	ELECT	100uF	20%	10V	C907	1-128-548-11	ELECT	4700uF	20%	25V
C698	1-162-306-11	CERAMIC	0.01uF	20%	16V	C909	1-126-964-11	ELECT	10uF	20%	50V
C699	1-104-665-11	ELECT	100uF	20%	10V	C910	1-104-665-11	ELECT	100uF	20%	10V
C801	1-126-963-11	ELECT	4.7uF	20%	50V	C911	1-126-964-11	ELECT	10uF	20%	50V
			(EXCEPT RXD7: CND)								
C801	1-128-581-11	ELECT	4.7uF	20%	100V	C912	1-126-926-11	ELECT	1000uF	20%	10V
			(RXD7: CND)			C913	1-126-964-11	ELECT	10uF	20%	50V
C802	1-162-290-31	CERAMIC	470PF	10%	50V	C914	1-126-767-11	ELECT	1000uF	20%	16V
C803	1-162-282-31	CERAMIC	100PF	10%	50V	C915	1-104-664-11	ELECT	47uF	20%	16V
C804	1-104-665-11	ELECT	100uF	20%	10V	C916	1-162-306-11	CERAMIC	0.01uF	20%	16V
C807	1-136-495-11	FILM	0.068uF	5%	50V						
C808	1-136-495-11	FILM	0.068uF	5%	50V	C917	1-126-933-11	ELECT	100uF	20%	16V
						C951	1-136-165-00	FILM	0.1uF	5%	50V
C809	1-128-560-11	ELECT	22uF	20%	100V	C952	1-126-768-11	ELECT	2200uF	20%	16V
C810	1-128-578-11	ELECT	1uF	20%	100V	C953	1-126-933-11	ELECT	100uF	20%	16V
C811	1-162-306-11	CERAMIC	0.01uF	20%	16V	C955	1-104-665-11	ELECT	100uF	20%	10V
C812	1-162-306-11	CERAMIC	0.01uF	20%	16V						
						C956	1-136-165-00	FILM	0.1uF	5%	50V
C841	1-127-811-11	ELECT	3300uF	20%	50V				< CONNECTOR >		
			(GRX50)			CN303	1-784-776-11	CONNECTOR, FFC 15P			
C842	1-127-751-11	ELECT	3300uF	20%	50V	CN304	1-784-778-11	CONNECTOR, FFC 17P			
			(RXD7: CND)			CN371	1-784-774-11	CONNECTOR, FFC 13P (GRX50: E2, EA4, TH, MX, AR, KR, AUS/RXD7: CND)			
C842	1-127-752-11	ELECT	3300uF	20%	63V						
			(R770/RXD7: AEP)			CN371	1-784-776-11	CONNECTOR, FFC 15P			
C842	1-127-814-11	ELECT	3300uF	20%	80V				(GRX50: E3, EA3, SP, TW/R770/RXD7: AEP)		
			(GRX50)			CN391	1-784-741-11	CONNECTOR, FFC 19P			
C843	1-136-165-00	FILM	0.1uF	5%	50V						
			(GRX50)			CN392	1-785-334-11	PIN, CONNECTOR (LIGHT ANGLE) 8P			
C844	1-130-777-00	FILM	0.1uF	10%	100V	CN393	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE) 9P			
			(EXCEPT RXD7: CND)			* CN403	1-564-518-11	PLUG, CONNECTOR 3P (EXCEPT RXD7: CND)			
C844	1-136-165-00	FILM	0.1uF	5%	50V	CN501	1-784-784-11	CONNECTOR, FFC 23P			
			(RXD7: CND)						< DIODE >		
C851	1-126-963-11	ELECT	4.7uF	20%	50V						
			(EXCEPT RXD7: CND)			D141	8-719-911-19	DIODE 1SS119			
C851	1-128-581-11	ELECT	4.7uF	20%	100V	D191	8-719-911-19	DIODE 1SS119 (GRX50/RXD7: CND)			
			(RXD7: CND)			D331	8-719-911-19	DIODE 1SS119			
C852	1-162-290-31	CERAMIC	470PF	10%	50V						

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D333	8-719-911-19	DIODE 1SS119		IC903	8-759-701-79	IC NJM7812FA	
D334	8-719-911-19	DIODE 1SS119				< JACK >	
D335	8-719-911-19	DIODE 1SS119					
D401	8-719-911-19	DIODE 1SS119		J101	1-774-411-11	JACK, PIN 6P (VIDEO (AUDIO) IN, MD IN/OUT)	
D403	8-719-911-19	DIODE 1SS119 (EXCEPT RXD7: CND)		J191	1-774-785-11	JACK, PIN 1P (SUPER WOOFER)	(GRX50/RXD7: CND)
D405	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT RXD7: CND)				< COIL >	
D406	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT RXD7: CND)					
D407	8-719-024-99	DIODE 11ES2-NTA2B (EXCEPT RXD7: CND)		L381	1-410-521-11	INDUCTOR 100uH	
D411	8-719-911-19	DIODE 1SS119		L392	1-410-521-11	INDUCTOR 100uH	
D501	8-719-911-19	DIODE 1SS119		L401	1-420-872-00	COIL, AIR-CORE (R770/RXD7: AEP)	
D502	8-719-911-19	DIODE 1SS119		L451	1-420-872-00	COIL, AIR-CORE (R770/RXD7: AEP)	
D503	8-719-911-19	DIODE 1SS119		L501	1-410-509-11	INDUCTOR 10uH	
D504	8-719-911-19	DIODE 1SS119				< TRANSISTOR >	
D505	8-719-911-19	DIODE 1SS119		Q111	8-729-119-78	TRANSISTOR 2SC403SP-51	
D506	8-719-911-19	DIODE 1SS119		Q112	8-729-119-78	TRANSISTOR 2SC403SP-51	
D509	8-719-911-19	DIODE 1SS119		Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D607	8-719-911-19	DIODE 1SS119		Q161	8-729-119-78	TRANSISTOR 2SC403SP-51	
D644	8-719-911-19	DIODE 1SS119		Q162	8-729-119-78	TRANSISTOR 2SC403SP-51	
D801	8-719-911-19	DIODE 1SS119		Q163	8-729-141-30	TRANSISTOR 2SC3623ALK	
D802	8-719-118-97	DIODE RD16F-T7B2 (GRX50)		Q191	8-729-141-30	TRANSISTOR 2SC3623A-LK	(GRX50/RXD7: CND)
D803	8-719-911-19	DIODE 1SS119		Q192	8-729-900-63	TRANSISTOR DTA124ES	(GRX50/RXD7: CND)
D831	8-719-302-38	DIODE RBV-602-01		Q201	8-729-900-36	TRANSISTOR DTC124ES	
D832	8-719-302-37	DIODE RBV-602 (GRX50)		Q251	8-729-900-36	TRANSISTOR DTC124ES	
D851	8-719-911-19	DIODE 1SS119		Q331	8-729-118-00	TRANSISTOR 2SB1116-L	
D852	8-719-118-97	DIODE RD16F-T7B2 (GRX50)		Q332	8-729-900-80	TRANSISTOR DTC114ES	
D881	8-719-911-19	DIODE 1SS119		Q333	8-729-118-00	TRANSISTOR 2SB1116-L	
D901	8-719-024-99	DIODE 11ES2-NTA2B		Q334	8-729-900-80	TRANSISTOR DTC114ES	
D902	8-719-024-99	DIODE 11ES2-NTA2B		Q335	8-729-900-80	TRANSISTOR DTC114ES	
D903	8-719-024-99	DIODE 11ES2-NTA2B		Q336	8-729-116-59	TRANSISTOR 2SB1068TP	
D904	8-719-024-99	DIODE 11ES2-NTA2B		Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
D905	8-719-933-36	DIODE HZS6B1L		Q338	8-729-422-57	TRANSISTOR UN4111	
D906	8-719-911-19	DIODE 1SS119		Q339	8-729-900-80	TRANSISTOR DTC114ES	
D907	8-719-024-99	DIODE 11ES2-NTA2B		Q340	8-729-116-59	TRANSISTOR 2SB1068TP	
D908	8-719-024-99	DIODE 11ES2-NTA2B		Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
D909	8-719-024-99	DIODE 11ES2-NTA2B		Q342	8-729-422-57	TRANSISTOR UN4111	
D910	8-719-024-99	DIODE 11ES2-NTA2B		Q343	8-729-900-80	TRANSISTOR DTC114ES	
D915	8-719-935-69	DIODE HZS11B1LTA		Q401	8-729-119-77	TRANSISTOR 2SA1175-FEK	(EXCEPT RXD7: CND)
D921	8-719-911-19	DIODE 1SS119 (GRX50)		Q402	8-729-111-29	TRANSISTOR 2SD1616A-K	(EXCEPT RXD7: CND)
D922	8-719-911-19	DIODE 1SS119 (GRX50)		Q411	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D923	8-719-911-19	DIODE 1SS119 (GRX50)		Q412	8-729-900-63	TRANSISTOR DTA124ES	
D924	8-719-024-99	DIODE 11ES2-NTA2B (GRX50)		Q431	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
D925	8-719-024-99	DIODE 11ES2-NTA2B (GRX50)		Q432	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
		< FERRITE BEAD >		Q433	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
FB301	1-412-473-21	INDUCTOR 0uH		Q434	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
FB302	1-412-473-21	INDUCTOR 0uH		Q435	8-729-900-36	TRANSISTOR DTC124ES	
		< IC >		Q436	8-729-119-77	TRANSISTOR 2SA1175-FEK	
IC101	8-759-571-55	IC M62493FP-A		Q437	8-729-119-79	TRANSISTOR 2SC2785-FEK	
IC301	8-759-495-26	IC HA12215		Q439	8-729-119-79	TRANSISTOR 2SC2785-FEK	
IC381	8-749-923-04	IC TOTX178 (CD DIGITAL OUT OPTICAL)		Q471	8-729-141-30	TRANSISTOR 2SC3623A-LK	
IC501	8-759-571-18	IC M30622MA-A01FP		Q501	8-729-119-78	TRANSISTOR 2SC403SP-51	
IC502	8-759-635-63	IC M51943BSL		Q508	8-729-900-63	TRANSISTOR DTA124ES	
IC801	8-749-015-37	IC STK411-240E (GRX50)		Q509	8-729-900-63	TRANSISTOR DTA124ES	
IC801	8-749-015-43	IC STK407-050E (RXD7: CND)					
IC801	8-749-015-45	IC STK407-090E (R770/RXD7: AEP)					
IC901	8-759-604-86	IC M5F7807L					
IC902	8-759-231-53	IC TA7805S					

MAIN

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				R167	1-249-429-11	CARBON	10K	5%	1/4W	
Q803	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				R168	1-249-437-11	CARBON	47K	5%	1/4W	
Q804	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				R169	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q831	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA (EXCEPT RXD7: CND)				R170	1-249-441-11	CARBON	100K	5%	1/4W	
Q832	8-729-119-79	TRANSISTOR	2SC2785-FEK (EXCEPT RXD7: CND)				R171	1-249-429-11	CARBON	10K	5%	1/4W	
							R178	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q851	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				R190	1-249-441-11	CARBON	100K	5%	1/4W (GRX50/RXD7: CND)	
Q881	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				R196	1-249-417-11	CARBON	1K	5%	1/4W (GRX50/RXD7: CND)	
Q901	8-729-209-15	TRANSISTOR	2SD2012										
Q902	8-729-119-78	TRANSISTOR	2SC403SP-51				R197	1-249-441-11	CARBON	100K	5%	1/4W (GRX50/RXD7: CND)	
Q903	8-729-900-36	TRANSISTOR	DTC124ES										
Q904	8-729-900-36	TRANSISTOR	DTC124ES				R198	1-249-417-11	CARBON	1K	5%	1/4W (GRX50/RXD7: CND)	
							R199	1-249-429-11	CARBON	10K	5%	1/4W (GRX50/RXD7: CND)	
Q905	8-729-040-20	TRANSISTOR	RT1P137L-TP										
Q907	8-729-040-20	TRANSISTOR	RT1P137L-TP										
Q908	8-729-900-36	TRANSISTOR	DTC124ES										
Q909	8-729-026-68	TRANSISTOR	2SD2525 (TP)				R201	1-247-888-11	CARBON	240K	5%	1/4W	
Q913	8-729-119-78	TRANSISTOR	2SC403SP-51				R202	1-247-903-00	CARBON	1M	5%	1/4W	
							R251	1-247-888-11	CARBON	240K	5%	1/4W	
Q914	8-729-119-77	TRANSISTOR	2SA1175-FEK				R252	1-247-903-00	CARBON	1M	5%	1/4W	
Q923	8-729-900-36	TRANSISTOR	DTC124ES				R301	1-249-435-11	CARBON	33K	5%	1/4W	
Q951	8-729-141-83	TRANSISTOR	2SB1094-LK										
Q952	8-729-119-77	TRANSISTOR	2SA1175-FEK				R302	1-249-421-11	CARBON	2.2K	5%	1/4W	
							R303	1-247-807-31	CARBON	100	5%	1/4W	
		< RESISTOR >					R304	1-247-807-31	CARBON	100	5%	1/4W	
							R305	1-249-421-11	CARBON	2.2K	5%	1/4W	
R101	1-249-417-11	CARBON	1K	5%	1/4W		R306	1-249-428-11	CARBON	8.2K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W								
R103	1-249-417-11	CARBON	1K	5%	1/4W		R307	1-249-428-11	CARBON	8.2K	5%	1/4W	
R111	1-249-429-11	CARBON	10K	5%	1/4W		R308	1-249-425-11	CARBON	4.7K	5%	1/4W	
R112	1-247-895-00	CARBON	470K	5%	1/4W		R309	1-249-433-11	CARBON	22K	5%	1/4W	
							R311	1-247-903-00	CARBON	1M	5%	1/4W	
R113	1-247-894-11	CARBON	430K	5%	1/4W		R312	1-247-884-11	CARBON	160K	5%	1/4W	
R114	1-249-415-11	CARBON	680	5%	1/4W								
R115	1-249-433-11	CARBON	22K	5%	1/4W		R313	1-249-441-11	CARBON	100K	5%	1/4W	
R116	1-247-887-00	CARBON	220K	5%	1/4W		R315	1-249-429-11	CARBON	10K	5%	1/4W	
R117	1-249-429-11	CARBON	10K	5%	1/4W		R316	1-249-432-11	CARBON	18K	5%	1/4W	
							R317	1-249-429-11	CARBON	10K	5%	1/4W	
R118	1-249-437-11	CARBON	47K	5%	1/4W		R318	1-249-429-11	CARBON	10K	5%	1/4W	
R119	1-249-421-11	CARBON	2.2K	5%	1/4W								
R120	1-249-441-11	CARBON	100K	5%	1/4W		R319	1-247-893-11	CARBON	390K	5%	1/4W	
R121	1-249-429-11	CARBON	10K	5%	1/4W		R321	1-249-422-11	CARBON	2.7K	5%	1/4W	
R124	1-249-421-11	CARBON	2.2K	5%	1/4W		R322	1-249-428-11	CARBON	8.2K	5%	1/4W	
							R324	1-247-876-11	CARBON	75K	5%	1/4W	
R125	1-247-843-11	CARBON	3.3K	5%	1/4W		R325	1-247-876-11	CARBON	75K	5%	1/4W	
R126	1-249-421-11	CARBON	2.2K	5%	1/4W								
R131	1-247-807-31	CARBON	100	5%	1/4W		R326	1-249-437-11	CARBON	47K	5%	1/4W	
R132	1-247-807-31	CARBON	100	5%	1/4W		R327	1-249-437-11	CARBON	47K	5%	1/4W	
R133	1-247-807-31	CARBON	100	5%	1/4W		R328	1-249-437-11	CARBON	47K	5%	1/4W	
							R329	1-249-417-11	CARBON	1K	5%	1/4W	
R141	1-249-433-11	CARBON	22K	5%	1/4W		R330	1-249-425-11	CARBON	4.7K	5%	1/4W	
R142	1-249-433-11	CARBON	22K	5%	1/4W								
R143	1-249-417-11	CARBON	1K	5%	1/4W		R331	1-249-425-11	CARBON	4.7K	5%	1/4W	
R144	1-249-441-11	CARBON	100K	5%	1/4W		R332	1-249-415-11	CARBON	680	5%	1/4W	
R145	1-247-903-00	CARBON	1M	5%	1/4W		R333	1-249-421-11	CARBON	2.2K	5%	1/4W	
							R334	1-249-415-11	CARBON	680	5%	1/4W	
R151	1-249-417-11	CARBON	1K	5%	1/4W		R335	1-249-421-11	CARBON	2.2K	5%	1/4W	
R152	1-249-417-11	CARBON	1K	5%	1/4W								
R153	1-249-417-11	CARBON	1K	5%	1/4W		R336	1-249-437-11	CARBON	47K	5%	1/4W	
R161	1-249-429-11	CARBON	10K	5%	1/4W		R337	1-249-417-11	CARBON	1K	5%	1/4W	
R162	1-247-895-00	CARBON	470K	5%	1/4W		R338	1-249-411-11	CARBON	330	5%	1/4W	
							R339	1-249-437-11	CARBON	47K	5%	1/4W	
R163	1-247-894-11	CARBON	430K	5%	1/4W		R340	1-249-437-11	CARBON	47K	5%	1/4W	
R164	1-249-415-11	CARBON	680	5%	1/4W								
R165	1-249-433-11	CARBON	22K	5%	1/4W		R341	1-249-411-11	CARBON	330	5%	1/4W	
R166	1-247-887-00	CARBON	220K	5%	1/4W		R342	1-249-437-11	CARBON	47K	5%	1/4W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R343	1-249-417-11	CARBON	1K	5%	1/4W	R452	1-260-076-11	CARBON	10	5%	1/2W
R351	1-249-435-11	CARBON	33K	5%	1/4W						(R770/RXD7: AEP)
R352	1-249-421-11	CARBON	2.2K	5%	1/4W	R471	1-260-087-81	CARBON	100	5%	1/2W
											(RXD7: CND)
R353	1-247-807-31	CARBON	100	5%	1/4W	R471	1-260-089-11	CARBON	150	5%	1/2W
R354	1-247-807-31	CARBON	100	5%	1/4W						(EXCEPT RXD7: CND)
R355	1-249-421-11	CARBON	2.2K	5%	1/4W	R472	1-260-087-81	CARBON	100	5%	1/2W
R356	1-249-428-11	CARBON	8.2K	5%	1/4W						(RXD7: CND)
R357	1-249-428-11	CARBON	8.2K	5%	1/4W						
						R472	1-260-089-11	CARBON	150	5%	1/2W
R358	1-249-425-11	CARBON	4.7K	5%	1/4W						(EXCEPT RXD7: CND)
R359	1-249-435-11	CARBON	33K	5%	1/4W	R473	1-249-402-11	CARBON	56	5%	1/4W
R391	1-247-807-31	CARBON	100	5%	1/4W	R474	1-249-417-11	CARBON	1K	5%	1/4W
R392	1-247-807-31	CARBON	100	5%	1/4W	R481	1-260-087-81	CARBON	100	5%	1/2W
R393	1-249-435-11	CARBON	33K	5%	1/4W						(RXD7: CND)
						R481	1-260-089-11	CARBON	150	5%	1/2W
R394	1-249-435-11	CARBON	33K	5%	1/4W						(EXCEPT RXD7: CND)
R401	1-260-076-11	CARBON	10	5%	1/2W						
						R482	1-260-087-81	CARBON	100	5%	1/2W
R402	1-260-076-11	CARBON	10	5%	1/2W						(RXD7: CND)
						R482	1-260-089-11	CARBON	150	5%	1/2W
R406	1-249-437-11	CARBON	47K	5%	1/4W						(EXCEPT RXD7: CND)
						R483	1-260-087-81	CARBON	100	5%	1/2W
R407	1-249-437-11	CARBON	47K	5%	1/4W						(RXD7: CND)
						R483	1-260-089-11	CARBON	150	5%	1/2W
											(EXCEPT RXD7: CND)
R408	1-249-425-11	CARBON	4.7K	5%	1/4W	R484	1-260-087-81	CARBON	100	5%	1/2W
											(RXD7: CND)
R409	1-249-441-11	CARBON	100K	5%	1/4W						
						R484	1-260-089-11	CARBON	150	5%	1/2W
R410	1-249-421-11	CARBON	2.2K	5%	1/4W						(EXCEPT RXD7: CND)
						R501	1-249-413-11	CARBON	470	5%	1/4W
△ R411	1-215-893-11	METAL OXIDE	1.5K	5%	2W F	R502	1-249-425-11	CARBON	4.7K	5%	1/4W
						R503	1-249-437-11	CARBON	47K	5%	1/4W
△ R411	1-216-456-00	METAL OXIDE	820	5%	2W F	R504	1-249-437-11	CARBON	47K	5%	1/4W
											(RXD7: CND)
						R505	1-249-429-11	CARBON	10K	5%	1/4W
△ R411	1-215-894-11	METAL OXIDE	2.2K	5%	2W F	R508	1-249-421-11	CARBON	2.2K	5%	1/4W
						R509	1-249-441-11	CARBON	100K	5%	1/4W
						R510	1-249-409-11	CARBON	220	5%	1/4W
R413	1-249-402-11	CARBON	56	5%	1/4W	R521	1-249-437-11	CARBON	47K	5%	1/4W
R414	1-249-417-11	CARBON	1K	5%	1/4W						
R415	1-249-429-11	CARBON	10K	5%	1/4W	R522	1-249-419-11	CARBON	1.5K	5%	1/4W
R416	1-249-437-11	CARBON	47K	5%	1/4W	R523	1-249-427-11	CARBON	6.8K	5%	1/4W
											(R770/RXD7: AEP)
R417	1-249-417-11	CARBON	1K	5%	1/4W						
R421	1-260-087-81	CARBON	100	5%	1/2W	R523	1-249-433-11	CARBON	22K	5%	1/4W
											(GRX50: E2, MX, AR)
R421	1-260-089-11	CARBON	150	5%	1/2W	R523	1-249-437-11	CARBON	47K	5%	1/4W
											(GRX50: EA3, EA4, TH, KR, AUS)
R422	1-260-087-81	CARBON	100	5%	1/2W						
						R524	1-247-843-11	CARBON	3.3K	5%	1/4W
R422	1-260-089-11	CARBON	150	5%	1/2W						(GRX50: EA4, TH, KR, AUS)
						R524	1-249-435-11	CARBON	33K	5%	1/4W
											(GRX50: EA3)
R431	1-249-438-11	CARBON	56K	5%	1/4W	R524	1-249-437-11	CARBON	47K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W						(GRX50: E2, MX, AR/R770/RXD7: AEP)
R434	1-249-433-11	CARBON	22K	5%	1/4W	R527	1-249-429-11	CARBON	10K	5%	1/4W
R435	1-249-435-11	CARBON	33K	5%	1/4W	R536	1-249-429-11	CARBON	10K	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W						
						R550	1-247-843-11	CARBON	3.3K	5%	1/4W
R438	1-249-429-11	CARBON	10K	5%	1/4W	R551	1-249-429-11	CARBON	10K	5%	1/4W
R439	1-249-425-11	CARBON	4.7K	5%	1/4W	R567	1-247-807-31	CARBON	100	5%	1/4W
R440	1-249-433-11	CARBON	22K	5%	1/4W	R568	1-249-429-11	CARBON	10K	5%	1/4W
R441	1-249-435-11	CARBON	33K	5%	1/4W	R569	1-249-429-11	CARBON	10K	5%	1/4W
R443	1-249-417-11	CARBON	1K	5%	1/4W						
						R570	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-260-076-11	CARBON	10	5%	1/2W	R571	1-249-429-11	CARBON	10K	5%	1/4W
						R577	1-249-429-11	CARBON	10K	5%	1/4W
						R610	1-247-891-00	CARBON	330K	5%	1/4W

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R617	1-249-429-11	CARBON	10K	5%	1/4W	R805	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-247-807-31	CARBON	100	5%	1/4W	R806	1-249-431-11	CARBON	15K	5%	1/4W
R619	1-247-807-31	CARBON	100	5%	1/4W	R807	1-249-441-11	CARBON	100K	5%	1/4W
R620	1-247-807-31	CARBON	100	5%	1/4W	R808	1-220-893-11	METAL	0.22	10%	5W
					(R770/RXD7: AEP)	R809	1-260-076-11	CARBON	10	5%	1/2W
R621	1-247-807-31	CARBON	100	5%	1/4W	R810	1-260-105-11	CARBON	3.3K	5%	1/2W
					(R770/RXD7: AEP)						(GRX50)
R622	1-249-425-11	CARBON	4.7K	5%	1/4W	△ R811	1-212-881-11	FUSIBLE	100	5%	1/4W F
						△ R812	1-202-972-61	FUSIBLE	1	5%	1/4W F
R626	1-247-807-31	CARBON	100	5%	1/4W	R813	1-249-435-11	CARBON	33K	5%	1/4W
R627	1-247-807-31	CARBON	100	5%	1/4W	R814	1-249-421-11	CARBON	2.2K	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W						
R630	1-247-807-31	CARBON	100	5%	1/4W	R815	1-249-433-11	CARBON	22K	5%	1/4W
R632	1-247-807-31	CARBON	100	5%	1/4W	R816	1-249-429-11	CARBON	10K	5%	1/4W
						R817	1-249-421-11	CARBON	2.2K	5%	1/4W
R633	1-247-807-31	CARBON	100	5%	1/4W	R818	1-249-435-11	CARBON	33K	5%	1/4W
R635	1-249-413-11	CARBON	470	5%	1/4W	R819	1-249-439-11	CARBON	68K	5%	1/4W
R636	1-247-807-31	CARBON	100	5%	1/4W						
R637	1-249-417-11	CARBON	1K	5%	1/4W	R831	1-249-441-11	CARBON	100K	5%	1/4W
R639	1-247-807-31	CARBON	100	5%	1/4W						(EXCEPT RXD7: CND)
						R832	1-249-441-11	CARBON	100K	5%	1/4W
R642	1-247-807-31	CARBON	100	5%	1/4W						(EXCEPT RXD7: CND)
R643	1-247-807-31	CARBON	100	5%	1/4W	R833	1-249-437-11	CARBON	47K	5%	1/4W
					(R770/RXD7)						(EXCEPT RXD7: CND)
R649	1-247-807-31	CARBON	100	5%	1/4W	R842	1-249-441-11	CARBON	100K	5%	1/4W
					(R770/RXD7)	R851	1-249-417-11	CARBON	1K	5%	1/4W
R650	1-247-807-31	CARBON	100	5%	1/4W						
R651	1-247-807-31	CARBON	100	5%	1/4W	R852	1-249-438-11	CARBON	56K	5%	1/4W
						R853	1-247-820-11	CARBON	360	5%	1/4W
R652	1-247-807-31	CARBON	100	5%	1/4W						(GRX50)
R653	1-247-807-31	CARBON	100	5%	1/4W	R853	1-249-414-11	CARBON	560	5%	1/4W
R654	1-247-807-31	CARBON	100	5%	1/4W						(R770/RXD7: AEP)
R655	1-247-807-31	CARBON	100	5%	1/4W	R853	1-249-416-11	CARBON	820	5%	1/4W
R656	1-247-807-31	CARBON	100	5%	1/4W						(RXD7: CND)
						R854	1-249-438-11	CARBON	56K	5%	1/4W
R657	1-247-807-31	CARBON	100	5%	1/4W						
R658	1-249-417-11	CARBON	1K	5%	1/4W	R855	1-249-417-11	CARBON	1K	5%	1/4W
R659	1-247-807-31	CARBON	100	5%	1/4W	R856	1-249-431-11	CARBON	15K	5%	1/4W
R660	1-247-807-31	CARBON	100	5%	1/4W	R857	1-249-441-11	CARBON	100K	5%	1/4W
R661	1-247-807-31	CARBON	100	5%	1/4W	R858	1-220-893-11	METAL	0.22	10%	5W
						R859	1-260-076-11	CARBON	10	5%	1/2W
R663	1-247-807-31	CARBON	100	5%	1/4W						
R665	1-247-807-31	CARBON	100	5%	1/4W	R860	1-260-105-11	CARBON	3.3K	5%	1/2W
R666	1-247-807-31	CARBON	100	5%	1/4W						(GRX50)
R667	1-247-807-31	CARBON	100	5%	1/4W	△ R861	1-212-881-11	FUSIBLE	100	5%	1/4W F
R668	1-247-807-31	CARBON	100	5%	1/4W	R881	1-249-435-11	CARBON	33K	5%	1/4W
						R882	1-249-435-11	CARBON	33K	5%	1/4W
R669	1-247-807-31	CARBON	100	5%	1/4W	R892	1-249-441-11	CARBON	100K	5%	1/4W
R670	1-247-807-31	CARBON	100	5%	1/4W						
R671	1-247-807-31	CARBON	100	5%	1/4W	R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R686	1-247-807-31	CARBON	100	5%	1/4W	R902	1-249-415-11	CARBON	680	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W	R903	1-249-419-11	CARBON	1.5K	5%	1/4W
						R904	1-249-414-11	CARBON	560	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W	R905	1-249-425-11	CARBON	4.7K	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W						
R690	1-247-807-31	CARBON	100	5%	1/4W	R906	1-247-843-11	CARBON	3.3K	5%	1/4W
R691	1-247-807-31	CARBON	100	5%	1/4W	R907	1-249-415-11	CARBON	680	5%	1/4W
R801	1-249-417-11	CARBON	1K	5%	1/4W	R908	1-249-429-11	CARBON	10K	5%	1/4W
						R909	1-249-430-11	CARBON	12K	5%	1/4W
R802	1-249-438-11	CARBON	56K	5%	1/4W	R911	1-249-409-11	CARBON	220	5%	1/4W
R803	1-247-820-11	CARBON	360	5%	1/4W						
					(GRX50)						
R803	1-249-414-11	CARBON	560	5%	1/4W	R920	1-249-383-11	CARBON	1.5	5%	1/6W
					(R770/RXD7: AEP)	R921	1-249-383-11	CARBON	1.5	5%	1/6W
R803	1-249-416-11	CARBON	820	5%	1/4W	R931	1-249-429-11	CARBON	10K	5%	1/4W
					(RXD7: CND)						
R804	1-249-438-11	CARBON	56K	5%	1/4W						< VARIABLE RESISTOR >
						RV301	1-238-600-11	RES, ADJ, CARBON 10K			

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MAIN

MOTOR (SLIDE)

MOTOR (TURN)

PANEL

Ref. No.	Part No.	Description	Remark
RV351	1-238-600-11	RES, ADJ, CARBON 10K	
		< RELAY >	
RY401	1-755-168-11	RELAY	
		< THERMISTOR >	
TH831	1-807-796-11	THERMISTOR (EXCEPT RXD7: CND)	
		< TERMINAL >	
TM401	1-694-302-11	TERMINAL BOARD (CHECKER PIN) (SPEAKER) (R770/RXD7: AEP)	
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SPEAKER) (GRX50/RXD7: CND)	
		< VIBRATOR >	
X601	1-567-098-41	VIBRATOR, CRYSTAL (32.768KHz)	
X613	1-781-107-21	VIBRATOR, CERAMIC (16MHz)	

*	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	
C702	1-126-964-11	ELECT 10uF 20% 50V	
C705	1-162-306-11	CERAMIC 0.01uF 20% 16V	
		< CONNECTOR >	
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P	
CN704	1-506-469-11	PIN, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B	
		< IC >	
IC701	8-759-633-65	IC M54641L	
		< RESISTOR >	
R706	1-249-411-11	CARBON 330 5% 1/4W	
R707	1-249-401-11	CARBON 47 5% 1/4W	

*	A-4417-722-A	PANEL BOARD, COMPLETE	
		(EXCEPT GRX50: EA3)	
*	A-4419-727-A	PANEL BOARD, COMPLETE (GRX50: EA3)	

*	4-214-439-11	HOLDER, FL TUBE	
		< CAPACITOR >	
C601	1-124-589-11	ELECT 47uF 20% 16V	
C602	1-126-163-11	ELECT 4.7uF 20% 50V	
C603	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C604	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C606	1-126-160-11	ELECT 1uF 20% 50V	
C607	1-126-160-11	ELECT 1uF 20% 50V	
C610	1-124-589-11	ELECT 47uF 20% 16V	
C611	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C612	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C614	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C615	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C616	1-126-157-11	ELECT 10uF 20% 16V	
C617	1-162-303-11	CERAMIC 0.0033uF 30% 16V	
C618	1-126-157-11	ELECT 10uF 20% 16V	
C619	1-126-157-11	ELECT 10uF 20% 16V	
C620	1-126-163-11	ELECT 4.7uF 20% 50V	
C625	1-126-157-11	ELECT 10uF 20% 16V	
C627	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C628	1-126-157-11	ELECT 10uF 20% 16V	
C630	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C651	1-162-282-31	CERAMIC 100PF 10% 50V	
C652	1-162-282-31	CERAMIC 100PF 10% 50V	
C653	1-162-282-31	CERAMIC 100PF 10% 50V	
C654	1-162-282-31	CERAMIC 100PF 10% 50V	
C655	1-162-282-31	CERAMIC 100PF 10% 50V	
C656	1-162-282-31	CERAMIC 100PF 10% 50V	
C657	1-162-282-31	CERAMIC 100PF 10% 50V	
C658	1-162-282-31	CERAMIC 100PF 10% 50V	
C659	1-162-282-31	CERAMIC 100PF 10% 50V	
C660	1-162-282-31	CERAMIC 100PF 10% 50V	
C661	1-162-282-31	CERAMIC 100PF 10% 50V	
C662	1-162-282-31	CERAMIC 100PF 10% 50V	
C663	1-162-282-31	CERAMIC 100PF 10% 50V	
C664	1-162-282-31	CERAMIC 100PF 10% 50V	
C665	1-162-282-31	CERAMIC 100PF 10% 50V	
C666	1-162-282-31	CERAMIC 100PF 10% 50V	
C667	1-162-282-31	CERAMIC 100PF 10% 50V	
C668	1-162-282-31	CERAMIC 100PF 10% 50V	
C701	1-162-294-31	CERAMIC 0.001uF 10% 50V	

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PANEL

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark					
C702	1-162-294-31	CERAMIC	0.001uF	10%	50V	D621	8-719-057-97	LED SEL5923A-TP15 (SYNC EQ)						
C703	1-164-159-11	CERAMIC	0.1uF		50V	D622	8-719-063-93	LED SLR325VC-N-T32 (EFFECT)						
C711	1-162-294-31	CERAMIC	0.001uF	10%	50V	D624	8-719-063-93	LED SLR325VC-N-T32 (NON-STOP)						
					(GRX50: EA3)	D627	8-719-057-97	LED SEL5923A-TP15 (GROOVE)						
C712	1-162-305-11	CERAMIC	0.0068uF	30%	16V	D628	8-719-063-93	LED SLR325VC-N-T32 (ENTER/NEXT)						
					(GRX50: EA3)	D629	8-719-063-93	LED SLR325VC-N-T32 (JOG DIAL)						
C713	1-126-160-11	ELECT	1uF	20%	50V									
					(GRX50: EA3)	D630	8-719-057-97	LED SEL5923A-TP15 (- ►►)						
C714	1-136-495-11	FILM	0.068uF	5%	50V	D631	8-719-057-97	LED SEL5923A-TP15 (+ ◄◄)						
					(GRX50: EA3)	D632	8-719-063-93	LED SLR325VC-N-T32 (TIMER SELECT)						
						D701	8-719-109-85	DIODE RD5.1ES-B2 (GRX50: EA3)						
C715	1-124-465-00	ELECT	0.47uF	20%	50V				< EARTH TERMINAL >					
					(GRX50: EA3)									
C716	1-124-465-00	ELECT	0.47uF	20%	50V	* EP601	1-537-738-21	TERMINAL, EARTH						
					(GRX50: EA3)				< FERRITE BEAD >					
C717	1-136-167-00	FILM	0.15uF	5%	50V									
					(GRX50: EA3)	FB601	1-412-473-21	INDUCTOR 0uH						
C718	1-162-294-31	CERAMIC	0.001uF	10%	50V	FB602	1-412-473-21	INDUCTOR 0uH						
					(GRX50: EA3)				< FLUORESCENT INDICATOR TUBE >					
C719	1-126-160-11	ELECT	1uF	20%	50V									
					(GRX50: EA3)	FL601	1-517-831-11	INDICATOR TUBE, FLUORESCENT						
									< IC >					
C720	1-161-494-00	CERAMIC	0.022uF		25V									
					(GRX50: EA3)	IC601	8-759-589-13	IC TMP88CS76F-6004						
C721	1-162-305-11	CERAMIC	0.0068uF	30%	16V	IC602	8-749-011-05	IC GP1U28X						
					(GRX50: EA3)	IC603	8-759-083-77	IC BA3830F						
C722	1-136-495-11	FILM	0.068uF	5%	50V	IC604	8-759-342-19	IC NJU3716M-T2						
					(GRX50: EA3)	IC711	8-759-496-40	IC M65850FP (GRX50: EA3)						
C723	1-124-589-11	ELECT	47uF	20%	16V									
					(GRX50: EA3)	IC712	8-759-636-55	IC M5218AFP						
C724	1-136-165-00	FILM	0.1uF	5%	50V				< JACK >					
					(GRX50: EA3)									
C725	1-124-589-11	ELECT	47uF	20%	16V									
					(GRX50: EA3)	J701	1-785-569-11	JACK (SMALL TYPE) (PHONES)						
C731	1-162-306-11	CERAMIC	0.01uF	20%	16V	J711	1-785-569-11	JACK (SMALL TYPE) (MIX MIC)						
C732	1-124-257-00	ELECT	2.2uF	20%	50V				< COIL >					
C733	1-162-294-31	CERAMIC	0.001uF	10%	50V									
C734	1-162-215-31	CERAMIC	47PF	5%	50V	L601	1-410-509-11	INDUCTOR 10uH						
						L602	1-410-517-11	INDUCTOR 47uH						
C735	1-124-261-00	ELECT	10uF	20%	50V				< TRANSISTOR >					
C736	1-162-290-31	CERAMIC	470PF	10%	50V									
C737	1-124-463-00	ELECT	0.1uF	20%	50V	Q601	8-729-118-00	TRANSISTOR 2SB1116-L						
C738	1-124-257-00	ELECT	2.2uF	20%	50V	Q602	8-729-118-00	TRANSISTOR 2SB1116-L						
					(GRX50: EA3)	Q603	8-729-119-78	TRANSISTOR 2SC403SP-51						
C739	1-162-215-31	CERAMIC	47PF	5%	50V	Q604	8-729-422-57	TRANSISTOR UN4111						
						Q605	8-729-422-57	TRANSISTOR UN4111						
C741	1-124-261-00	ELECT	10uF	20%	50V	Q606	8-729-900-80	TRANSISTOR DTC114ES						
C742	1-162-282-31	CERAMIC	100PF	10%	50V	Q607	8-729-900-74	TRANSISTOR DTC143TS						
C743	1-124-257-00	ELECT	2.2uF	20%	50V	Q608	8-729-900-74	TRANSISTOR DTC143TS						
C747	1-164-159-11	CERAMIC	0.1uF		50V	Q609	8-729-900-74	TRANSISTOR DTC143TS						
						Q610	8-729-900-74	TRANSISTOR DTC143TS						
< CONNECTOR >						Q611	8-729-900-74	TRANSISTOR DTC143TS						
CN601	1-784-745-11	CONNECTOR, FFC 23P												
< DIODE >						Q612	8-729-900-74	TRANSISTOR DTC143TS						
D610	8-719-050-84	DIODE RB441Q-40T-72												
D611	8-719-073-47	LED SML72923C-TP15 (REC PAUSE/START)												
D612	8-719-056-13	LED SML79423C-TP15 (►► CD)												
D613	8-719-058-03	LED SEL5423E-TP15 (► TAPE B)												
D614	8-719-058-03	LED SEL5423E-TP15 (◄ TAPE B)												
						Q613	8-729-900-74	TRANSISTOR DTC143TS	< RESISTOR >					
D615	8-719-058-03	LED SEL5423E-TP15 (► TAPE A)												
D616	8-719-058-03	LED SEL5423E-TP15 (◄ TAPE A)												
D619	8-719-057-97	LED SEL5923A-TP15 (SYNC BASS)												
D620	8-719-057-97	LED SEL5923A-TP15 (SYNC BASS H)												
						R600	1-247-903-00	CARBON 1M 5% 1/4W						
						R601	1-247-807-31	CARBON 100 5% 1/4W						
						R602	1-249-429-11	CARBON 10K 5% 1/4W						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R603	1-247-807-31	CARBON	100	5%	1/4W	R670	1-249-414-11	CARBON	560	5%	1/4W
R604	1-247-807-31	CARBON	100	5%	1/4W	R671	1-249-437-11	CARBON	47K	5%	1/4W
						R672	1-249-417-11	CARBON	1K	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W	R673	1-249-437-11	CARBON	47K	5%	1/4W
R606	1-249-401-11	CARBON	47	5%	1/4W	R674	1-249-417-11	CARBON	1K	5%	1/4W
R607	1-247-893-11	CARBON	390K	5%	1/4W						
R608	1-247-893-11	CARBON	390K	5%	1/4W	R675	1-249-437-11	CARBON	47K	5%	1/4W
R609	1-249-441-11	CARBON	100K	5%	1/4W	R676	1-249-429-11	CARBON	10K	5%	1/4W
						R678	1-249-407-11	CARBON	150	5%	1/4W
R610	1-249-429-11	CARBON	10K	5%	1/4W	R679	1-249-407-11	CARBON	150	5%	1/4W
R611	1-249-441-11	CARBON	100K	5%	1/4W	R680	1-247-804-11	CARBON	75	5%	1/4W
R612	1-249-401-11	CARBON	47	5%	1/4W						
R613	1-249-435-11	CARBON	33K	5%	1/4W	R681	1-249-407-11	CARBON	150	5%	1/4W
R614	1-247-895-00	CARBON	470K	5%	1/4W	R682	1-247-804-11	CARBON	75	5%	1/4W
						R683	1-247-804-11	CARBON	75	5%	1/4W
R615	1-249-429-11	CARBON	10K	5%	1/4W	R684	1-247-804-11	CARBON	75	5%	1/4W
R616	1-249-441-11	CARBON	100K	5%	1/4W	R685	1-247-804-11	CARBON	75	5%	1/4W
R617	1-249-441-11	CARBON	100K	5%	1/4W						
R618	1-249-441-11	CARBON	100K	5%	1/4W	R688	1-249-402-11	CARBON	56	5%	1/4W
R619	1-249-441-11	CARBON	100K	5%	1/4W	R689	1-249-402-11	CARBON	56	5%	1/4W
						R690	1-249-402-11	CARBON	56	5%	1/4W
R620	1-249-441-11	CARBON	100K	5%	1/4W	R691	1-249-407-11	CARBON	150	5%	1/4W
R621	1-249-429-11	CARBON	10K	5%	1/4W	R693	1-249-407-11	CARBON	150	5%	1/4W
R622	1-249-410-11	CARBON	270	5%	1/4W						
R623	1-249-411-11	CARBON	330	5%	1/4W	R696	1-249-402-11	CARBON	56	5%	1/4W
R624	1-249-413-11	CARBON	470	5%	1/4W	R697	1-249-407-11	CARBON	150	5%	1/4W
						R698	1-249-407-11	CARBON	150	5%	1/4W
R625	1-249-414-11	CARBON	560	5%	1/4W	R699	1-247-807-31	CARBON	100	5%	1/4W
R626	1-249-415-11	CARBON	680	5%	1/4W	R700	1-247-807-31	CARBON	100	5%	1/4W
R627	1-249-417-11	CARBON	1K	5%	1/4W						
R628	1-249-418-11	CARBON	1.2K	5%	1/4W	R701	1-249-429-11	CARBON	10K	5%	1/4W
R629	1-249-420-11	CARBON	1.8K	5%	1/4W	R702	1-249-429-11	CARBON	10K	5%	1/4W
						R703	1-249-429-11	CARBON	10K	5%	1/4W
R630	1-249-422-11	CARBON	2.7K	5%	1/4W	R704	1-249-429-11	CARBON	10K	5%	1/4W
R631	1-247-843-11	CARBON	3.3K	5%	1/4W	R705	1-249-429-11	CARBON	10K	5%	1/4W
R632	1-249-425-11	CARBON	4.7K	5%	1/4W						
R636	1-249-429-11	CARBON	10K	5%	1/4W	R710	1-249-401-11	CARBON	47	5%	1/4W
R637	1-249-410-11	CARBON	270	5%	1/4W						(GRX50: EA3)
						R711	1-249-433-11	CARBON	22K	5%	1/4W
R638	1-249-411-11	CARBON	330	5%	1/4W						(GRX50: EA3)
R639	1-249-413-11	CARBON	470	5%	1/4W	R712	1-249-433-11	CARBON	22K	5%	1/4W
R640	1-249-414-11	CARBON	560	5%	1/4W						(GRX50: EA3)
R641	1-249-415-11	CARBON	680	5%	1/4W	R713	1-249-433-11	CARBON	22K	5%	1/4W
R642	1-249-417-11	CARBON	1K	5%	1/4W						(GRX50: EA3)
						R714	1-249-437-11	CARBON	47K	5%	1/4W
R650	1-249-429-11	CARBON	10K	5%	1/4W						(GRX50: EA3)
R651	1-249-410-11	CARBON	270	5%	1/4W						
R652	1-249-411-11	CARBON	330	5%	1/4W	R715	1-249-433-11	CARBON	22K	5%	1/4W
R653	1-249-413-11	CARBON	470	5%	1/4W						(GRX50: EA3)
R654	1-249-414-11	CARBON	560	5%	1/4W	R716	1-249-431-11	CARBON	15K	5%	1/4W
											(GRX50: EA3)
R655	1-249-415-11	CARBON	680	5%	1/4W	R717	1-249-433-11	CARBON	22K	5%	1/4W
R656	1-249-429-11	CARBON	10K	5%	1/4W						(GRX50: EA3)
R657	1-249-410-11	CARBON	270	5%	1/4W	R718	1-249-433-11	CARBON	22K	5%	1/4W
R658	1-249-411-11	CARBON	330	5%	1/4W						(GRX50: EA3)
R659	1-249-413-11	CARBON	470	5%	1/4W	R719	1-247-881-00	CARBON	120K	5%	1/4W
											(GRX50: EA3)
R660	1-249-414-11	CARBON	560	5%	1/4W						
R661	1-249-415-11	CARBON	680	5%	1/4W	R721	1-249-429-11	CARBON	10K	5%	1/4W
R662	1-249-417-11	CARBON	1K	5%	1/4W	R722	1-249-417-11	CARBON	1K	5%	1/4W
R663	1-249-418-11	CARBON	1.2K	5%	1/4W	R723	1-249-441-11	CARBON	100K	5%	1/4W
R664	1-249-420-11	CARBON	1.8K	5%	1/4W	R724	1-249-417-11	CARBON	1K	5%	1/4W
						R725	1-249-433-11	CARBON	22K	5%	1/4W
R665	1-249-422-11	CARBON	2.7K	5%	1/4W						
R666	1-249-417-11	CARBON	1K	5%	1/4W	R726	1-249-429-11	CARBON	10K	5%	1/4W
R667	1-249-417-11	CARBON	1K	5%	1/4W	R727	1-249-431-11	CARBON	15K	5%	1/4W
R668	1-249-441-11	CARBON	100K	5%	1/4W						(GRX50: EA3)
R669	1-249-441-11	CARBON	100K	5%	1/4W	R728	1-247-885-00	CARBON	180K	5%	1/4W
						R729	1-247-807-31	CARBON	100	5%	1/4W

PANEL	SENSOR	SUB TRANS
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Ref. No.	Part No.	Description	Remark		
R731	1-249-440-11	CARBON	82K	5%	1/4W
R732	1-249-437-11	CARBON	47K	5%	1/4W
R733	1-249-440-11	CARBON	82K	5%	1/4W
R734	1-249-417-11	CARBON	1K	5%	1/4W
R735	1-249-420-11	CARBON	1.8K	5%	1/4W
R741	1-249-421-11	CARBON	2.2K	5%	1/4W
R742	1-249-421-11	CARBON	2.2K	5%	1/4W
R743	1-249-421-11	CARBON	2.2K	5%	1/4W
< VARIABLE RESISTOR >					
RV711	1-225-739-11	RES, VAR 50K (ECHO LEVEL) (GRX50: EA3)			
RV712	1-225-739-11	RES, VAR 50K (MIC LEVEL)			
< ROTARY ENCODER/SWITCH >					
S601	1-473-534-11	ENCODER, ROTARY (JOG DIAL)			
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)			
S611	1-762-875-21	SWITCH, KEYBOARD (SYNC BASS)			
S612	1-762-875-21	SWITCH, KEYBOARD (SYNC EQ)			
S613	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON/MPX)			
S614	1-762-875-21	SWITCH, KEYBOARD (NON-STOP)			
S615	1-762-875-21	SWITCH, KEYBOARD (SURROUND)			
S616	1-762-875-21	SWITCH, KEYBOARD (DBFB)			
S617	1-762-875-21	SWITCH, KEYBOARD (ENTER/NEXT)			
S618	1-762-875-21	SWITCH, KEYBOARD (+ ►►)			
S619	1-762-875-21	SWITCH, KEYBOARD (- ◀◀)			
S620	1-762-875-21	SWITCH, KEYBOARD (GROOVE)			
S621	1-762-875-21	SWITCH, KEYBOARD (FLASH)			
S625	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)			
S626	1-762-875-21	SWITCH, KEYBOARD (HI-DUB)			
S627	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S628	1-762-875-21	SWITCH, KEYBOARD (LOOP)			
S629	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S630	1-762-875-21	SWITCH, KEYBOARD (SPECTRUM ANALYZER)			
S638	1-762-875-21	SWITCH, KEYBOARD (TIMER SELECT)			
S639	1-762-875-21	SWITCH, KEYBOARD (FILE SELECT)			
S640	1-762-875-21	SWITCH, KEYBOARD (REPEAT, STEREO/MONO)			
S641	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE, DOLBY NR)			
S642	1-762-875-21	SWITCH, KEYBOARD (EDIT/DIRECTION, TUNER MEMORY)			
S643	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)			
S644	1-762-875-21	SWITCH, KEYBOARD (► CD)			
S645	1-762-875-21	SWITCH, KEYBOARD (■)			
S646	1-762-875-21	SWITCH, KEYBOARD (► TAPE B)			
S647	1-762-875-21	SWITCH, KEYBOARD (◀ TAPE B)			
S648	1-762-875-21	SWITCH, KEYBOARD (► TAPE A)			
S649	1-762-875-21	SWITCH, KEYBOARD (◀ TAPE A)			
S650	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
S651	1-762-875-21	SWITCH, KEYBOARD (CLOCK/TIMER SET)			

Ref. No.	Part No.	Description	Remark		
*	1-658-576-11	SENSOR BOARD *****			
		< PHOTO INTERRUPTER >			
IC702	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
		< PHOTO REFLECTOR >			
IC703	8-749-924-30	PHOTO REFLECTOR GP2S28			
		< RESISTOR >			
R701	1-249-416-11	CARBON 820 5% 1/4W			
R702	1-249-407-11	CARBON 150 5% 1/4W			

*	A-4417-729-A	SUB TRANS BOARD, COMPLETE (RXD7: CND)			
*	A-4419-030-A	SUB TRANS BOARD, COMPLETE (R770/RXD7: AEP)			

		< CAPACITOR >			
C11	1-126-768-11	ELECT 2200uF 20% 16V (R770/RXD7)			
C12	1-164-159-11	CERAMIC 0.1uF 50V (R770/RXD7)			
C13	1-126-933-11	ELECT 100uF 20% 16V (R770/RXD7)			
C14	1-126-968-11	ELECT 100uF 20% 50V (R770/RXD7)			
C15	1-164-159-11	CERAMIC 0.1uF 50V (R770/RXD7)			
C16	1-126-948-11	ELECT 00uF 20% 35V (R770/RXD7)			
△C21	1-113-925-11	CERAMIC 0.01uF 20% 250V (R770/RXD7)			
		< CONNECTOR >			
CN11	1-564-321-00	PIN, CONNECTOR 2P (R770/RXD7)			
* CN12	1-564-321-21	PIN, CONNECTOR 2P (R770/RXD7)			
CN13	1-785-333-11	PIN, CONNECTOR (LIGHT ANGLE) 7P (R770/RXD7)			
		< DIODE >			
D11	8-719-911-19	DIODE 1SS119 (R770/RXD7)			
D12	8-719-210-21	DIODE 11EQS04 (R770/RXD7)			
D13	8-719-210-21	DIODE 11EQS04 (R770/RXD7)			
D14	8-719-210-21	DIODE 11EQS04 (R770/RXD7)			
D15	8-719-210-21	DIODE 11EQS04 (R770/RXD7)			
D16	8-719-911-19	DIODE 1SS119 (R770/RXD7)			
D17	8-719-024-99	DIODE 11ES2-NTA2B (R770/RXD7)			
D18	8-719-024-99	DIODE 11ES2-NTA2B (R770/RXD7)			
D19	8-719-024-99	DIODE 11ES2-NTA2B (R770/RXD7)			
D20	8-719-024-99	DIODE 11ES2-NTA2B (R770/RXD7)			
D21	8-719-986-60	DIODE HZS27-3LTA (R770/RXD7)			
D22	8-719-109-63	DIODE RD3.0ESB2 (R770/RXD7)			
D23	8-719-911-19	DIODE 1SS119 (R770/RXD7)			

Ref. No.	Part No.	Description	Remark		
< TRANSISTOR >					
Q11	8-729-119-78	TRANSISTOR	2SC403SP-51 (R770/RXD7)		
Q12	8-729-040-19	TRANSISTOR	RT1N137L-TP (R770/RXD7)		
Q13	8-729-118-01	TRANSISTOR	2SB1116 (R770/RXD7)		
Q14	8-729-048-13	TRANSISTOR	2SC3616-KLM-T1 (R770/RXD7)		
Q15	8-729-048-13	TRANSISTOR	2SC3616-KLM-T1 (R770/RXD7)		
Q16	8-729-900-63	TRANSISTOR	DTA124ES (R770/RXD7)		
Q17	8-729-900-63	TRANSISTOR	DTA124ES (R770/RXD7)		
< RESISTOR >					
R11	1-249-429-11	CARBON	10K	5%	1/4W (R770/RXD7)
R12	1-249-441-11	CARBON	100K	5%	1/4W (R770/RXD7)
R13	1-249-417-11	CARBON	1K	5%	1/4W (R770/RXD7)
R15	1-249-429-11	CARBON	10K	5%	1/4W (R770/RXD7)
R16	1-247-807-31	CARBON	100	5%	1/4W (R770/RXD7)
R17	1-247-807-31	CARBON	100	5%	1/4W (R770/RXD7)
R18	1-247-807-31	CARBON	100	5%	1/4W (R770/RXD7)
R19	1-249-427-11	CARBON	6.8K	5%	1/4W (R770/RXD7)
R20	1-249-429-11	CARBON	10K	5%	1/4W (R770/RXD7)
R23	1-249-427-11	CARBON	6.8K	5%	1/4W (R770/RXD7)
< RELAY >					
△ RY11	1-755-276-11	RELAY, POWER (R770/RXD7)			
< TRANSFORMER >					
△ T11	1-433-587-11	TRANSFORMER, POWER (RXD7: CND)			
△ T11	1-433-588-11	TRANSFORMER, POWER (R770/RXD7: AEP)			

*	1-672-369-11	TRANS BOARD *****			
	1-533-217-31	HOLDER, FUSE			
< CAPACITOR >					
C971	1-128-563-11	ELECT	100uF	20%	100V (GRX50)
C972	1-126-960-11	ELECT	1uF	20%	50V (GRX50)
C973	1-126-948-11	ELECT	100uF	20%	35V (GRX50)
< CONNECTOR >					
CN951	1-564-321-00	PIN, CONNECTOR 2P (GRX50)			
CN952	1-564-524-11	PLUG, CONNECTOR 9P (R770/RXD7)			
* CN952	1-564-527-11	PLUG, CONNECTOR 12P (GRX50)			
CN953	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P (GRX50)			

Ref. No.	Part No.	Description	Remark		
< DIODE >					
D971	8-719-024-99	DIODE	11ES2-NTA2B (GRX50)		
D972	8-719-986-60	DIODE	HZS27-3LTA (GRX50)		
D973	8-719-109-63	DIODE	RD3.0ESB2 (GRX50)		
< FUSE >					
△ F951	1-532-420-11	FUSE GLASS TUBE 5A/125V (RXD7: CND)			
△ F951	1-532-506-31	FUSE T6.3AL/250V (GRX50: E2, E3, EA3, SP, TW, AR)			
△ F961	1-532-505-31	FUSE T5AL/250V (GRX50)			
△ F962	1-532-505-31	FUSE T5AL/250V (GRX50)			
△ F963	1-532-506-31	FUSE T6.3AL/250V (EXCEPT RXD7: CND)			
△ F964	1-532-506-31	FUSE T6.3AL/250V (EXCEPT RXD7: CND)			
< TRANSISTOR >					
Q971	8-729-048-52	TRANSISTOR 2SA1932 (TP) (GRX50)			
< RESISTOR >					
△ R951	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (RXD7: CND)
△ R951	1-219-122-91	FUSIBLE	0.33	5%	1/4W F (EXCEPT RXD7: CND)
△ R952	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (RXD7: CND)
△ R952	1-219-122-91	FUSIBLE	0.33	5%	1/4W F (EXCEPT RXD7: CND)
△ R953	1-219-120-11	FUSIBLE	0.15	5%	1/4W F (R770/RXD7)
△ R953	1-219-119-81	FUSIBLE	0.1	5%	1/4W F (GRX50)
△ R961	1-202-725-00	SOLID	3.3M	10%	1/2W (RXD7: CND)
△ R971	1-216-456-00	METAL OXIDE	820	5%	2W F (GRX50)
R972	1-249-429-11	CARBON	10K	5%	1/4W (GRX50)
R973	1-249-429-11	CARBON	10K	5%	1/4W (GRX50)
R974	1-247-807-31	CARBON	100	5%	1/4W (GRX50)
R975	1-247-807-31	CARBON	100	5%	1/4W (GRX50)
< SWITCH >					
△ S951	1-771-291-11	SWITCH, POWER (VOLTAGE SELECTOR) (GRX50: E2, E3, EA3, SP, TW, AR)			
< TRANSFORMER >					
△ T951	1-433-563-11	TRANSFORMER,POWER (RXD7:CND)			
△ T951	1-433-564-11	TRANSFORMER,POWER (R770/RXD7: AEP)			
△ T951	1-433-565-11	TRANSFORMER,POWER (GRX50)			

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

HCD-GRX50/R770/RXD7

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS				*****	
		*****				HARDWARE LIST	
		*****				*****	
64	1-773-188-11	WIRE (FLAT TYPE) (23 CORE)		#1	7-685-872-09	SCREW +BVTT 3X8 (S)	
104	1-773-042-11	WIRE (FLAT TYPE) (17 CORE)		#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
105	1-773-024-11	WIRE (FLAT TYPE) (15 CORE)		#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
106	1-783-570-11	WIRE (FLAT TYPE) (19 CORE)		#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
109	1-769-977-11	WIRE (FLAT TYPE) (13 CORE)		#5	7-685-852-04	SCREW +BVTT 2X5 (S)	
		(GRX50: EXCEPT SP, TW/RXD7: CND)					
109	1-773-009-11	WIRE (FLAT TYPE) (15 CORE)		#6	7-685-861-01	SCREW +BVTT 2.6X5 (S)	
		(GRX50: SP, TW/R770/RXD7: AEP)		#7	7-685-851-04	SCREW +BVTT 2X4 (S)	
110	1-233-544-14	TUNER PACK (RXD7: CND)		#8	7-621-775-10	SCREW +B 2.6X4	
110	1-233-545-11	TUNER (FM/AM) (GRX50: EA4, TH, AR, AUS)		#9	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
110	1-233-545-14	TUNER PACK (GRX50: E2, MX)		#10	7-685-880-09	SCREW +BVTT 4X6 (S)	
110	1-233-546-11	TUNER (FM/MW/SW)					
		(GRX50: E3, EA3, SP, TW)		#11	7-628-254-15	SCREW +PS 2.6X6	
				#12	7-628-254-50	SCREW +PS 2.6X16	
110	1-693-443-11	TUNER (FM/AM) (R770/RXD7: AEP)					
△ 111	1-575-651-11	CORD, POWER (R770: AEP/RXD7: AEP, UK/					
		GRX50: EA3, EA4, SP, TW, AR)					
△ 111	1-575-653-11	CORD, POWER (GRX50: E2, E3, TH, MX)					
△ 111	1-690-608-11	CORD, POWER (GRX50: AUS)					
△ 111	1-690-609-21	CORD, POWER (RXD7: CND)					
△ 111	1-769-079-21	CORD, POWER (GRX50: KR)					
△ 112	1-569-007-11	ADAPTOR, CONVERSION 2P (GRX50: E3)					
△ 112	1-569-008-21	ADAPTOR, CONVERSION 2P					
		(GRX50: EA3, SP, TW)					
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					
HRPE101A	2056-682-A	DECK (B) ASSY, HEAD					
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN					
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)					
M102	X-4917-504-1	MOTOR ASSY (SLED)					
M501	1-698-792-11	FAN, DC (EXCEPT CND)					
M801	A-4672-004-A	MOTOR ASSY (SLIDE)					
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)					
△ T11	1-433-587-11	TRANSFORMER, POWER (RXD7: CND)					
△ T11	1-433-588-11	TRANSFORMER, POWER (R770/RXD7: AEP)					
△ T951	1-433-563-11	TRANSFORMER, POWER (RXD7: CND)					
△ T951	1-433-564-11	TRANSFORMER, POWER (R770/RXD7: AEP)					
△ T951	1-433-565-11	TRANSFORMER, POWER (GRX50)					

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