

# HCD-GX470/GX570

## SERVICE MANUAL

Ver. 1.2 2006.06

US Model  
Canadian Model



Photo: HCD-GX470

- HCD-GX470 is the amplifier, CD player, tape deck and tuner section in MHC-GX470.
- HCD-GX570 is the amplifier, CD player, tape deck and tuner section in MHC-GX570.

CD Section	Model Name Using Similar Mechanism	HCD-GX555
	CD Mechanism Type	CDM74KF-K6BD83S
	Base Unit Name	BU-K6BD83S-WOD
	Optical Pick-up Block Name	KSM-213DCP
TAPE Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	CWN42FF609

### SPECIFICATIONS

#### Main unit

AUDIO POWER SPECIFICATIONS  
POWER OUTPUT AND TOTAL HARMONIC DISTORTION: (The United States model only)  
With 6 ohm loads, both channels driven, from 120 – 10,000 Hz; rated 125 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

#### Amplifier section

##### GX470

###### Front speaker

Continuous RMS power output (reference): 125 + 125 watts (6 ohms at 1 kHz, 10% THD)  
Total harmonic distortion: less than 0.07% (6 ohms at 1 kHz, 80 W)

###### Subwoofer

Continuous RMS power output (reference): 150 watts (6 ohms at 80 Hz, 10% THD)  
Total harmonic distortion: less than 0.07% (6 ohms at 80 Hz, 90 W)

##### GX570

###### Front speaker:

Continuous RMS power output (reference): 145 + 145 W (6 ohms at 1 kHz, 10% THD)  
Total harmonic distortion: less than 0.07% (6 ohms at 1 kHz, 80 W)

###### Subwoofer:

Continuous RMS power output (reference): 170 W (6 ohms at 80 Hz, 10% THD)  
Total harmonic distortion: less than 0.07% (6 ohms at 80 Hz, 90 W)

###### Inputs

AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms

###### Outputs

PHONES (stereo mini jack): accepts headphones of 8 ohms or more  
SPEAKER: accepts impedance of 6 to 16 ohms  
SUBWOOFER OUT: accepts impedance of 6 to 16 ohms

###### Inputs:

AUDIO IN (stereo mini jack): voltage 250 mV, impedance 47 kilohms

###### Outputs:

PHONES (stereo mini jack): accepts headphones of 8 ohms or more  
SPEAKER: accepts impedance of 6 to 16 ohms  
SUBWOOFER OUT: accepts impedance of 6 to 16 ohms

#### CD player section

System: Compact disc and digital audio system  
Laser Diode Properties

Emission duration: continuous  
Laser Output\*: Less than 44.6μW  
\*This output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.

Frequency response: 20 Hz – 20 kHz  
Signal-to-noise ratio: More than 90 dB  
Dynamic range: More than 90 dB

#### Tape deck section

Recording system: 4-track 2-channel, stereo  
Frequency response: 50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

– Continued on next page –

## COMPACT DISC DECK RECEIVER

## Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section:

Tuning range

87.5 – 108.0 MHz (100 kHz step)

Antenna: FM lead antenna

Antenna terminals: 75 ohms unbalanced

Intermediate frequency: 10.7 MHz

AM tuner section:

Tuning range

530 – 1,710 kHz (with 10 kHz tuning interval)

531 – 1,710 kHz (with 9 kHz tuning interval)

Antenna: AM loop antenna, external antenna terminal

Intermediate frequency: 450 kHz

## General

Power requirements

AC 120 V, 60 Hz

Power consumption

USA model:

GX470: 240 watts

GX570: 270 watts

Canadian model:

GX470: 320 VA

GX570: 360 VA

Dimensions (w/h/d) (excl. speakers):

GX470: Approx. 280 × 328 × 412.3 mm

GX570: Approx. 280 × 348 × 412.3 mm

Mass (excl. speakers): Approx. 9.4 kg

Design and specifications are subject to change without notice.

## Notes on chip component replacement

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

## Flexible Circuit Board Repairing

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

## SAFETY CHECK-OUT

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

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.

Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

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

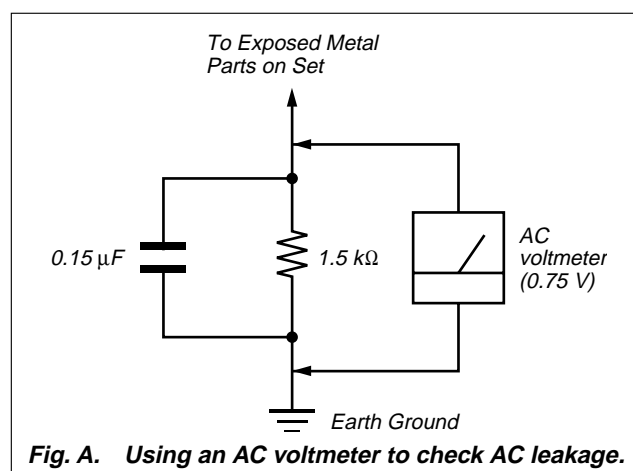


Fig. A. Using an AC voltmeter to check AC leakage.

## ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

### 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.

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 COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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## SECTION 1 SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic 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.

**UNLEADED SOLDER**

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

**LF: LEAD FREE MARK**




Unleaded solder has the following characteristics.


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

**RELEASING THE ANTITHEFT LOCK**

The disc table lock function for the antitheft of an demonstration disc in the store is equipped.

**Releasing Procedure :**

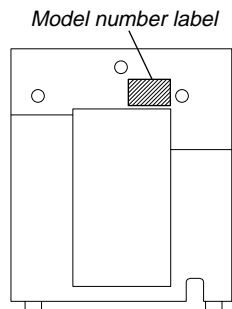
1. Press the  button to turn the power on.
2. While pressing the  button, press the  button until "UNLOCKED" displayed on the fluorescent indicator tube (around 5 seconds).

**Note:** When "LOCKED" is displayed, the antitheft lock is not released by turning power on/off with the  button.

**NOTES ON REPLACEMENT OF IC901 ON THE MAIN BOARD**

IC901 on the MAIN board cannot exchange with single. When IC901 is damaged, exchange the entire mounted board.

**MODEL IDENTIFICATION  
– Back Panel –**



Label indication	Model
2-664-530-0□	GX570: US
2-664-531-0□	GX570: Canadian
2-664-532-0□	GX470: US
2-664-533-0□	GX470: Canadian

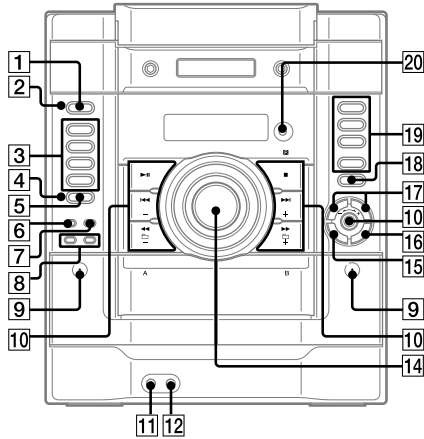
This section is extracted from instruction manual.

## SECTION 2 GENERAL

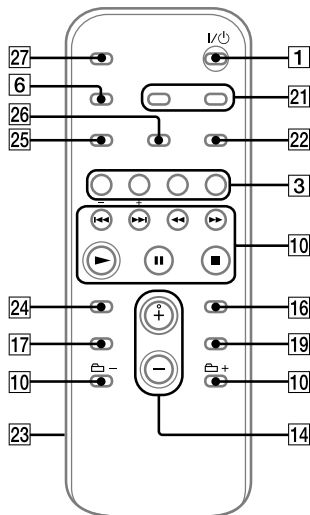
- GX470 -

### Guide to parts and controls

#### Unit



#### Remote



This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons on the unit having the same or similar names.

**1** I/⏻ (power) button

Press to turn on the system.

**2** STANDBY indicator

Lights up when the system is turned off.

**3** CD button

Press to select the CD function.

**TUNER/BAND button**

Press to select the TUNER function. Press to select FM or AM reception mode.

**Unit: TAPE A/B button**

**Remote: TAPE button**

Press to select the TAPE function. Press to select TAPE A or TAPE B.

**AUDIO IN button**

Press to select the AUDIO IN function.

**FUNCTION button**

Press to select the function.

**4** SUBWOOFER indicator

Lights up when the subwoofer is turned on.

**5** SUBWOOFER button

Press to turn on and off the subwoofer.

**6** DISPLAY button

Press to change the information on the display.

**7** PLAY MODE/TUNING MODE button

Press to select the play mode of a CD, MP3 or tape. Press to select the tuning mode.

**8** Buttons for synchro recording or manual recording  
REC PAUSE/START button,  
CD SYNC button

Press to record on a tape.

**9** PUSH ⏻ button

Press to insert or eject a tape.

**10** Playback buttons

Unit: ▷||| (play/pause) button

Remote: ▶ (play) button,

|| (pause) button

Press to start or pause playback.

■ (stop) button

Press to stop playback.

◀◀/▶▶ (go back/go forward) button

Press to select a track or file.

Unit: TUNING +/- button

Remote: +/- (tuning) button

Press to tune in the desired station.

📁 +/- (select folder) button (page 11)

Press to select a folder on an MP3 disc.

◀◀/▶▶ (rewind/fast forward) button

Press to find a point in a track or file.

MULTI JOG dial (◀◀/▶▶ (go back/go forward), +/- (tuning))

Turn to select a track or file. Turn to tune in the desired station. (Same as the ◀◀/▶▶, +/- buttons on the remote)

**11** PHONES jack

Connect the headphones.

**12** AUDIO IN jack

Connect to an audio component.

**14** Unit: VOLUME control

Turn to adjust the volume.

**Remote: VOLUME +/- button**

Press to adjust the volume.

**15** EQ BAND button

Press to select the frequency band.

**16** ENTER button

Press to enter the settings.

**17** Sound buttons

Unit: GROOVE button,

SURROUND button

Remote: EQ button

Press to select the sound.

**18** ⏻ (open/close) button

Press to insert and eject a disc.

**19** DISC 1 - 3 button

Press to select a disc. Press to switch to the CD function from other function.

Unit: DISC SKIP/EX-CHANGE button

Press to select a disc. Press to exchange a disc while playing.

Remote: DISC SKIP button

Press to select a disc.

**20** Remote sensor

**21** CLOCK/TIMER SELECT button  
CLOCK/TIMER SET button

Press to set the clock and the timers.

**22** REPEAT/FM MODE button

Press to listen to a disc, a single track or file repeatedly. Press to select the FM reception mode (monaural or stereo).

**23** Battery compartment lid

**24** CLEAR button

Press to delete a pre-programmed track.

**25** TUNER MEMORY button

Press to preset the radio station.

**26** PLAY MODE/TUNING MODE button

Press to select the play mode of a CD, MP3 or tape.

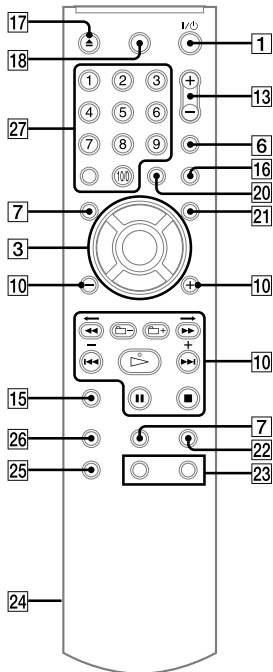
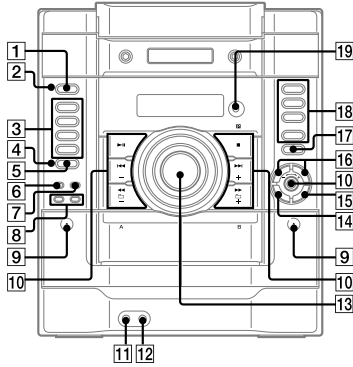
Press to select the tuning mode.

**27** SLEEP button

Press to set the Sleep Timer.

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## Basic Operations



### How to Subscribe

XM \$12.95 monthly service subscription sold separately. XM Connect and Play (TM) antenna required to receive XM service (sold separately). Installation costs and other fees and taxes, including a one-time activation fee may apply. Subscription fee is consumer only. All fees and programming subject to change. Channels with frequent explicit language are indicated with an XL. Channel blocking is available for XM radio receivers by calling 1-800-XMRADIO. Subscriptions subject to Customer Agreement available at [xmradio.com](http://xmradio.com). XM service only available in the 48 contiguous United States. XM Ready and XM Connect-and-Play are trademarks of XM Satellite Radio Inc. (C)2006 XM Satellite Radio Inc. All rights reserved.

### Activate XM Service

Find the 8-character XM Radio ID of the Connect-and-Play antenna. With the Connect-and-Play antenna connected to the unit, the Radio ID can be found by selecting channel 0 on the radio. Press >10, 10/0, 10/0, 10/0 on the remote in that order to select channel 0. Record the Radio ID here for reference:  
(NOTE: The XM Radio ID does not use the letters I, O, S, or F.)  
Activate your XM Satellite Radio service online at <http://activate.xmradio.com> or by calling 1-800-XMRADIO (1-800-967-2346). You will need a major credit card. XM will send a signal from the satellites to activate the full channel lineup. Activation normally takes 10 to 15 minutes, but during peak busy periods, you may need to keep your player on for up to an hour. When you can access the full channel lineup on your player, you're done.

### Notes on XM Satellite Radio

- To ensure optimal reception of XM's satellite signal, move your antenna to various window locations around your home to see where the best reception will be received. Most XM customers place the antenna in a south-facing window with a clear view to the sky.
- Residents in Canada please see information about XM Canada at the following webpage: (<http://www.xmradio.ca/>)

### To set the clock

- Turn on the system.  
Press I/⏻ (power) **1**.
- Select the clock set mode.  
Press CLOCK/TIMER SET **23** on the remote. If the current mode appears on the display, press ◀▶▶▶ **10** repeatedly to select "CLOCK SET" and then press ENTER **15**.
- Set the time.  
Press ◀▶▶▶ **10** repeatedly to set the hour, and then press ENTER **15**. Use the same procedure to set the minutes.  
When you turn off the system after setting the clock, the clock display appears instead of the demonstration display.  
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

## Selecting a music source

Press the following buttons (or press FUNCTION **3**) on the remote repeatedly).

To select	Press
CD	CD <b>3</b> .
Tuner	TUNER/BAND <b>3</b> .
Tape (deck A or B)	TAPE on the remote (or TAPE A/B on the unit) <b>3</b> .
Component (connected using an audio cord)	AUDIO IN <b>3</b> on the unit.

## Adjusting the sound

### To adjust the volume

Press VOLUME +/- on the remote (or turn the VOLUME control on the unit) **13**.

### To add a sound effect

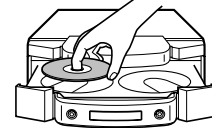
To	Press
Reinforce the bass and create a more powerful sound	GROOVE <b>16</b> on the unit repeatedly until "GROOVE" appears.
Set the surround effect	SURROUND <b>16</b> on the unit repeatedly until "SURR" appears.
Select the preset sound effect	EQ <b>16</b> on the remote repeatedly. To cancel, press EQ <b>16</b> on the remote repeatedly until "EQ OFF" appears.

### To turn on the subwoofer

Press SUBWOOFER **5** on the unit repeatedly until "SUB ON" appears. The SUBWOOFER indicator **4** on the unit lights up. If you later disconnect the subwoofer, repeat the procedure until "SUB OFF" appears. The volume of the subwoofer is linked to the front speakers.

## Playing a CD/MP3 disc

- Select the CD function.  
Press CD **3**.
- Place a disc.  
Press OPEN/CLOSE ▲ on the remote (or ⏏ (open/close) on the unit) **17**, and place a disc with the label side up on the disc tray.



To insert additional discs, press DISC SKIP **18** to rotate the disc tray.

To close the disc tray, press OPEN/CLOSE ▲ on the remote (or ⏏ (open/close) on the unit) **17** again.

Do not force the disc tray closed with your finger, as this may damage the unit.

- Start playback.  
Press ▶ (play) on the remote (or ▷|| (play/pause) on the unit) **10**.

To	Press
Pause playback	(pause) on the remote (or ▷   (play/pause) on the unit) <b>10</b> . To resume play, press the button again.
Stop playback	■ (stop) <b>10</b> .
Select a folder on an MP3 disc	⏏ +/- (select folder) <b>10</b> .
Select a track or file	◀▶▶▶ (go back/go forward) (or turn the MULTI JOG dial on the unit) <b>10</b> .
Find a point in a track or file	Hold down ◀▶▶▶ (rewind/fast forward) <b>10</b> during playback, and release the button at the desired point.
Select Repeat Play	REPEAT <b>21</b> on the remote repeatedly until "REP" or "REP1" appears.
Select a disc	DISC SKIP (or DISC 1 - 3 on the unit) <b>18</b> in stop mode.
Switch to CD function from other function	DISC 1 - 3 <b>18</b> on the unit (Automatic Source Selection).
Exchange other discs while playing	EX-CHANGE <b>18</b> on the unit.

### To change the play mode

Press PLAY MODE **7** repeatedly while the player is stopped. You can select normal play ("ALL DISCS" for all discs or "1 DISC" for a disc or "⏏\*" for all MP3 files in the folder on the disc), shuffle play ("ALL DISCS SHUF" or "1 DISC SHUF" or "⏏ SHUF\*"), or program play ("PGM").

\*When playing a CD-DA disc, ⏏ (SHUF) Play performs the same operation as 1 DISC (SHUF) Play.

### To select a CD track using the number buttons

Press the number buttons **27** on the remote during normal play. For example, to enter 20, press >10, 2, 10/0, in that order.

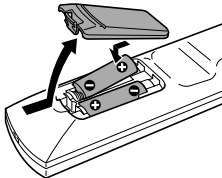
### Notes on Repeat Play

- All tracks or files on a disc are played repeatedly up to five times.
- You cannot select "REP" and "ALL DISCS SHUF" at the same time.
- "REP1" indicates that a single track or file is repeated until you stop it.

## Before using the system

### To use the remote

Slide and remove the battery compartment lid **24**, and insert the two supplied R6 (size AA) batteries, ⚡ side first, matching the polarities shown below.



- With normal use, the batteries should last for about six months.
- Do not mix an old battery with a new one or mix different types of batteries.
- If you do not use the remote for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.

### To receive the XM Satellite Radio

**Introducing XM Satellite Radio**  
XM Radio is the satellite radio service with millions of listeners across the U.S. Broadcasting live daily, XM Radio offers 160 digital radio channels offering music, news, sports, comedy, talk, entertainment, traffic and weather reports, with high quality digital sound.

**Notes on playing MP3 discs**

- Do not save other types of files or unnecessary folders on a disc that has MP3 files.
- Folders that have no MP3 files are skipped.
- MP3 files are played back in the order that they are recorded onto the disc.
- The system can only play MP3 files that have a file extension of ".MP3".
- If there are files on the disc that have the ".MP3" file extension, but that are not MP3 files, the unit may produce noise or may malfunction.
- The maximum number of:
  - folders is 150 (including the root folder).
  - MP3 files is 255.
  - MP3 files and folders that can be contained on a single disc is 300.
  - folder levels (the tree structure of files) is 8.
- Compatibility with all MP3 encoding/writing software, recording device, and recording media cannot be guaranteed. Incompatible MP3 discs may produce noise or interrupted audio or may not play at all.

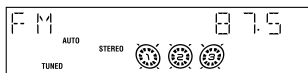
**Notes on playing multisession discs**

- If the disc begins with a CD-DA (or MP3) session, it is recognized as a CD-DA (or MP3) disc, and playback continues until another session is encountered.
- A disc with a mixed CD format is recognized as a CD-DA (audio) disc.

## Listening to the radio

**To listen to FM or AM**

- 1 Select "FM" or "AM."  
Press TUNER/BAND [3] repeatedly.
- 2 Select the tuning mode.  
Press TUNING MODE [7] repeatedly until "AUTO" appears.
- 3 Tune in the desired station.  
Press +/- on the remote (or TUNING +/- on the unit) [10]. Scanning stops automatically when a station is tuned in, and then "TUNED" and "STEREO" (for stereo programs) appear.

**To stop automatic scanning**

Press ■ (stop) [10].

**To tune in a station with a weak signal**

If "TUNED" does not appear and the scanning does not stop, press TUNING MODE [7] repeatedly until "AUTO" and "PRESET" disappear, and then press +/- on the remote (or TUNING +/- on the unit) [10] repeatedly to tune in the desired station.

**To reduce static noise on a weak FM stereo station**

Press FM MODE [22] on the remote repeatedly until "MONO" appears to turn off stereo reception.

**To listen to XM**

You can operate and listen to the XM satellite Radio by connecting your XM Connect-and-Play Antenna. Before using the system, connect the XM Connect-and-Play antenna to the XM jack of the system (see "Hooking up the system securely").

- 1 Select "XM."  
Press XM on the remote (or TUNER/BAND repeatedly) [3].
- 2 Select the All Channel mode.  
Press TUNING MODE [7] repeatedly until "CAT" and "PRESET" disappear.
- 3 Tune in the desired channel.  
Press +/- on the remote (or TUNING +/- on the unit) [10] repeatedly.

**To select a channel by Category mode**

- 1 Press XM on the remote (or TUNER/BAND repeatedly) [3].
- 2 Press TUNING MODE [7] repeatedly until "CAT" appears.
- 3 Press CATEGORY +/- [10] repeatedly.
- 4 Press +/- on the remote (or TUNING +/- on the unit) [10] repeatedly.

**To select a channel using the number buttons**

Press the number buttons [27] on the remote. For example, to enter 20, press >10, 10/0, 2, 10/0, in that order. You cannot enter 255 or more.

**Notes**

- If you select a channel that is not broadcasted, "OFF AIR" appears and the previous channel is selected.
- If you select a channel using the number buttons in Category mode, the tuning mode changes to All Channel mode automatically.

## Playing a tape

- 1 Select a tape deck.  
Press TAPE (or TAPE A/B on the unit) [3] repeatedly.
- 2 Insert a tape.  
Press PUSH [9] on the unit, and insert the TYPE I (normal) tape into the cassette holder with the side you want to play facing forward. Make sure there is no slack in the tape to avoid damaging the tape or the tape deck. Press PUSH [9] on the unit again to close the cassette holder.
- 3 Start playback.  
Press ► (play) on the remote (or ▷|| (play/pause) on the unit) [10]. Do not eject the tape during playback or recording, as this may cause irreparable damage to the tape and the cassette holder.

To	Press
Pause playback	(pause) on the remote (or ▷   (play/pause) on the unit) [10]. To resume play, press the button again.
Stop playback	■ (stop) [10].
Rewind or fast forward	◀◀/▶▶ (rewind/fast forward) [10].
Select Relay Play*	PLAY MODE [7] repeatedly until "RELAY" appears.

\* After the playback of the front side of deck A, deck B plays the front side, and then stops.

## Changing the display

To	Press
Change information on the display*	DISPLAY [6] repeatedly when the system is turned on.
Change Display mode (See below.)	DISPLAY [6] repeatedly when the system is turned off.

\* For example, you can view CD/CD-G/MP3 disc information, such as the track or file number or folder name during normal play, or the total playing time while the player is stopped. You can also view XM radio information, such as the channel name, song title and artist name.

The system offers the following display modes.

Display mode	When the system is off <sup>1)</sup> ,
Demonstration	The clock display is replaced by lighting and flashing of the display window.
Clock	The clock is displayed.
Power Saving Mode <sup>2)</sup>	The display is turned off to conserve power. The timer and clock continue to operate.

<sup>1)</sup>The STANDBY indicator [2] on the unit lights up when the system is off.

<sup>2)</sup>When the system is in Power Saving Mode, the following functions are unavailable:

- setting the clock.
- changing the AM tuning interval.
- turning on the system by pressing the function buttons (for example, CD [3]).
- changing the CD power manage function.
- resetting the system to factory settings.

**Notes on the display information**

- The following are not displayed:
  - total playing time for a CD-DA disc depending on the play mode.
  - total playing time for an MP3 disc.
  - remaining playing time for an MP3 file.
- The following are not displayed correctly:
  - elapsed playing time of an MP3 file encoded using a VBR (variable bit rate).
  - folder and file names that do not follow either the ISO9660 Level 1, Level 2 or Joliet in the expansion format.
- The following are displayed:
  - ID3 tag information for MP3 files when ID3 version 1 and version 2 tags are used.
  - up to 30 characters of ID3 tag information using uppercase letters (A to Z), numbers (0 to 9), and symbols (" \$ % ' ( ) \* , - . / < = > @ [ \ ] \_ ` { } ! ? ^ ).

## Using optional audio components

**To connect an optional headphones**

Connect headphones to the PHONES jack [11] on the unit.

**To connect an optional component**

Connect additional audio component to the AUDIO IN jack [12] on the unit using an audio analog cord (not supplied). Turn down the volume on the system, and then select the AUDIO IN function.

## Other Operations

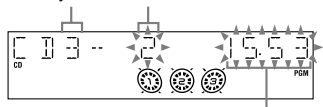
### Creating your own CD program (Program Play)

Use buttons on the remote to create your own program.

- 1 Press CD [3] to select the CD function.
- 2 Press PLAY MODE [7] repeatedly until "PGM" appears while the player is stopped.
- 3 Press DISC SKIP [18] repeatedly to select a disc.
- 4 Press [10] repeatedly until the desired track number appears.

When programming MP3 files, press [10] +/- (select folder) [10] repeatedly to select the desired folder, and then select the desired file.

Disc tray number Selected track or file number



Total playing time of program (including selected track or file)

- 5 Press ENTER [15] to add the track or file to the program.  
"--:--" appears when the total program time exceeds 100 minutes for a CD, or when you select an MP3 file.
- 6 Repeat steps 3 through 5 to program additional tracks or files, up to a total of 25 tracks or files.
- 7 To play your program of tracks or files, press [10].  
The program remains available until you open the disc tray. To play the same program again, press [10].

#### To cancel Program Play

Press PLAY MODE [7] repeatedly until "PGM" disappears while the player is stopped.

**To delete the last track or file of the program**  
Press CLEAR [20] while the player is stopped.

**To view program information, such as total playing time and the number of tracks**  
Press DISPLAY [6] repeatedly while the player is stopped.

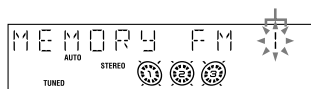
### Presetting radio stations

You can preset your favorite radio stations and tune them in instantly by selecting the corresponding preset number.

Use buttons on the remote to preset stations.

- 1 Tune in the desired station (see "Listening to the radio").
- 2 Press TUNER MEMORY [26].

Preset number



Press +/- [10] repeatedly to select your desired preset number.

If another station is already assigned to the selected preset number, the station is replaced by the new stations.

- 4 Press ENTER [15].
- 5 Repeat steps 1 through 4 to store other stations.  
You can preset up to 20 FM, 10 AM and 20 XM stations. The preset stations are retained for about half a day even if you disconnect the power cord or if a power failure occurs.
- 6 To call up a preset radio station, press TUNING MODE [7] repeatedly until "PRESET" appears, and then press +/- [10] repeatedly to select the desired preset number.

#### Note on presetting XM stations

You cannot preset XM stations except when you receive the station.

### Recording onto a tape

You can record on a TYPE I (normal) tape in two ways:

#### CD Synchro Recording:

You can record an entire CD onto a tape. The recording level is adjusted automatically.

#### Manual Recording:

You can record just the portions you like from a sound source, including connected audio components.

Use buttons on the unit to control tape recording.

- 1 Load a recordable tape into deck B with the side you want to record facing forward, and then press TAPE A/B [3] repeatedly to select TAPE B.
- 2 Prepare the recording source.

#### For CD Synchro Recording:

Press CD [3] to select the CD function. Load the disc you want to record, and press DISC SKIP repeatedly to select the disc.

When recording a folder from an MP3 disc, press PLAY MODE [7] repeatedly to select "[ ]" and then press [10] +/- (select folder) [10] repeatedly to select the desired folder.

To record only your favorite CD tracks or MP3 files in your desired order, perform steps 2 to 6 of "Creating your own CD program."

#### For Manual Recording:

Select the desired source to record.

- 3 Set deck B to stand by for recording.

#### For CD Synchro Recording:

Press CD SYNC [8].

#### For Manual Recording:

Press REC PAUSE/START [8].

- 4 Start recording.

While recording, you cannot listen to other sources.

#### For CD Synchro Recording:

Press REC PAUSE/START [8]. When the recording is completed, the CD player and the tape deck stop automatically.

#### For Manual Recording:

Press REC PAUSE/START [8], and then start playing the desired recording source.

If there is noise while recording from the tuner, reposition the appropriate antenna to reduce the noise.

#### To stop recording

Press [10] (stop) [10].

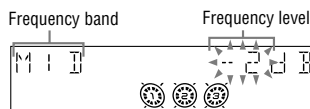
#### Notes

- Recording stops if you change to a different function.
- When loud sound signals are input, the system automatically adjusts the recording level to prevent distortion of the recorded sound signal (Auto Level Control function).
- You cannot eject the disc during CD Synchro Recording.

### Creating your own sound effect

You can raise or lower the levels of specific frequency ranges, and then store the setting as "USER" in the memory.

- 1 Select the audio emphasis you want for your basic sound using EQ on the remote, and SURROUND and GROOVE on the unit [16].
- 2 Press EQ BAND [14] on the unit repeatedly to select a frequency band, and then turn the MULTI JOG dial [10] on the unit to adjust the frequency level. Repeat this for each band you want to adjust.



- 3 Hold down EQ [16] on the remote until "COMPLETE" appears.  
The setting is stored in the memory.
- 4 To call up the personal sound effect, press EQ [16] on the remote repeatedly until "USER" appears.

#### To cancel the sound effect

Press EQ [16] on the remote repeatedly until "EQ OFF" appears.

### Using the Timers

The system offers three timer functions. You cannot activate both the Play Timer and the Rec Timer at the same time. If you use either with the Sleep Timer, the Sleep Timer has priority.

#### Sleep Timer:

You can fall asleep to music. This function works even if the clock is not set.

Press SLEEP [25] repeatedly. If you select "AUTO," the system automatically turns off after the current disc or tape stops or in 100 minutes.  
Do not select "AUTO" during Synchro Recording of a tape.

#### Play Timer:

You can wake up to CD, tape or tuner at a preset time.

#### Rec Timer:

You can record a preset radio station at a specified time.

Use buttons on the remote to control the Play Timer and the Rec Timer. Make sure you have set the clock.

- 1 Prepare the sound source.

#### For Play Timer:

Prepare the sound source, and then press VOLUME +/- [13] to adjust the volume.

To start from a specific CD track or MP3 file, create your own program.

#### For Rec Timer:

Tune in the preset radio station.

- 2 Press CLOCK/TIMER SET [23].

- 3 Press [10] repeatedly to select "PLAY SET" or "REC SET," and then press ENTER [15].  
"ON" appears, and the hour indication flashes.

- 4 Set the time to start playing or recording.

Press [10] repeatedly to set the hour, and then press ENTER [15].

The minute indication flashes. Use the procedure above to set the minutes.

- 5 Use the same procedure as in step 4 to set the time to stop playing or recording.

- 6 Select the sound source or prepare the tape.

#### For Play Timer:

Press [10] repeatedly until the desired sound source appears, and then press ENTER [15]. The display shows the timer settings.

#### For Rec Timer:

Load a recordable tape into deck B. The display shows the timer settings.

- 7 Press I/⏻ (power) [1] to turn off the system.

The system turns on 15 seconds before the preset time. If the system is on at the preset time, the Play Timer and the Rec Timer will not play or record.

#### To activate or check the timer again

Press CLOCK/TIMER SELECT [23], press [10] repeatedly until "PLAY SELECT" or "REC SELECT" appears, and then press ENTER [15].

#### To cancel the timer

Repeat the same procedure as above until "TIMER OFF" appears, and then press ENTER [15].

#### To change the setting

Start over from step 1.

#### Tips

- The Play Timer setting remains as long as the setting is not canceled manually.
- The volume is reduced to minimum during the Rec Timer.
- The Rec Timer is canceled automatically after the Rec Timer has been activated.



## SECTION 3 DISASSEMBLY

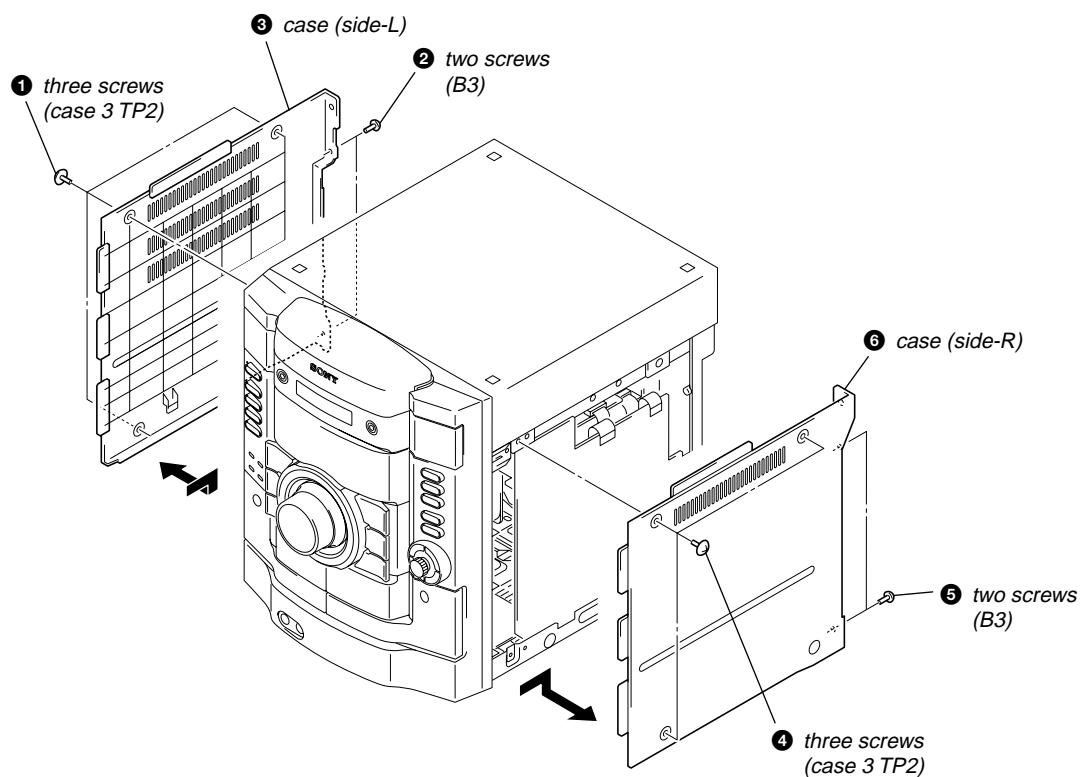
- This set can be disassembled in the order shown below.

### 3-1. DISASSEMBLY FLOW

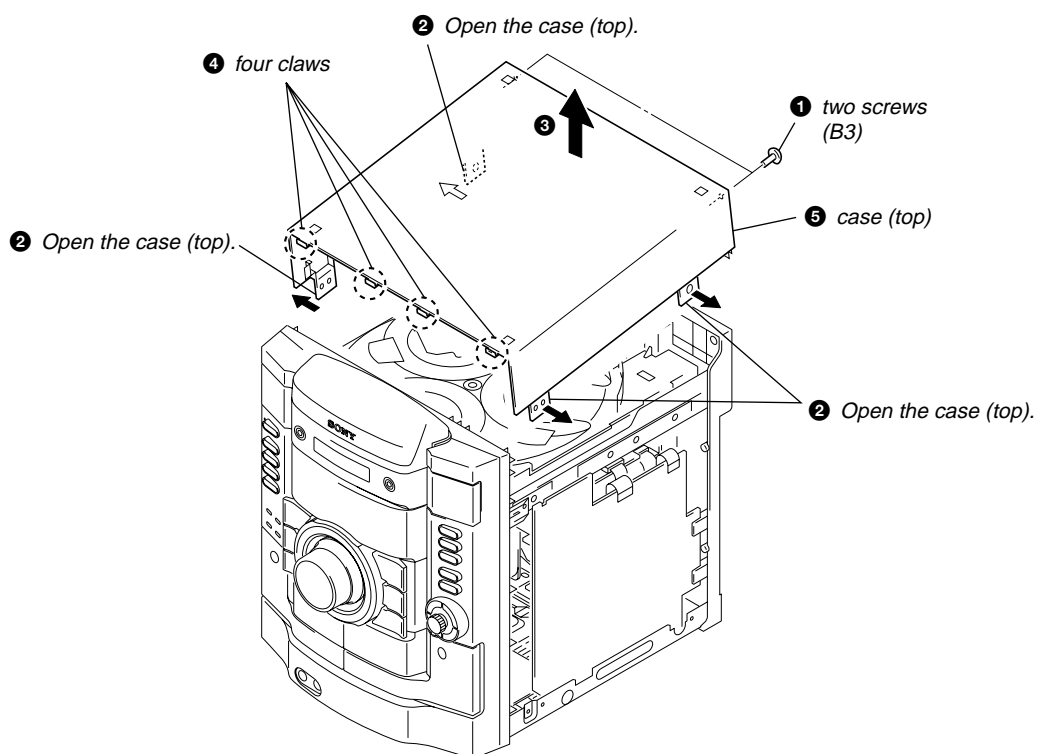


**Note:** Follow the disassembly procedure in the numerical order given.

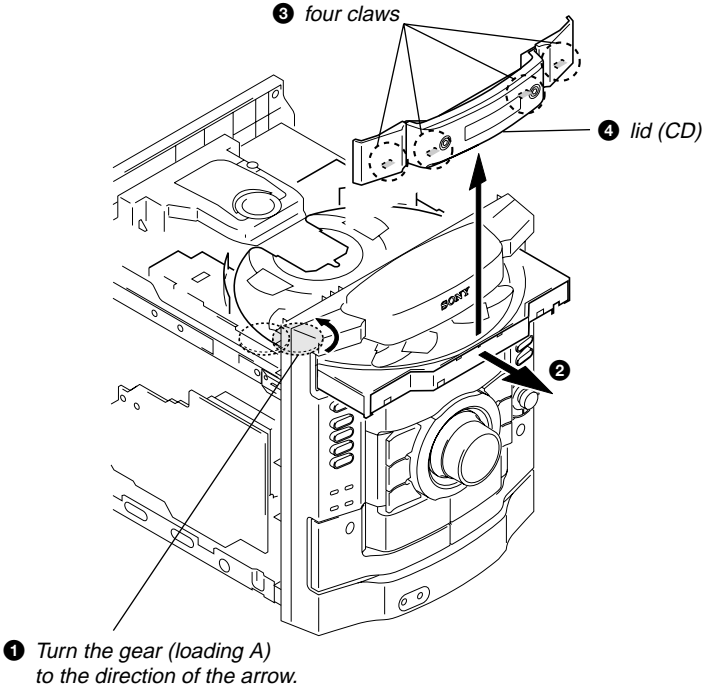
## 3-2. CASE (SIDE-L), CASE (SIDE-R)



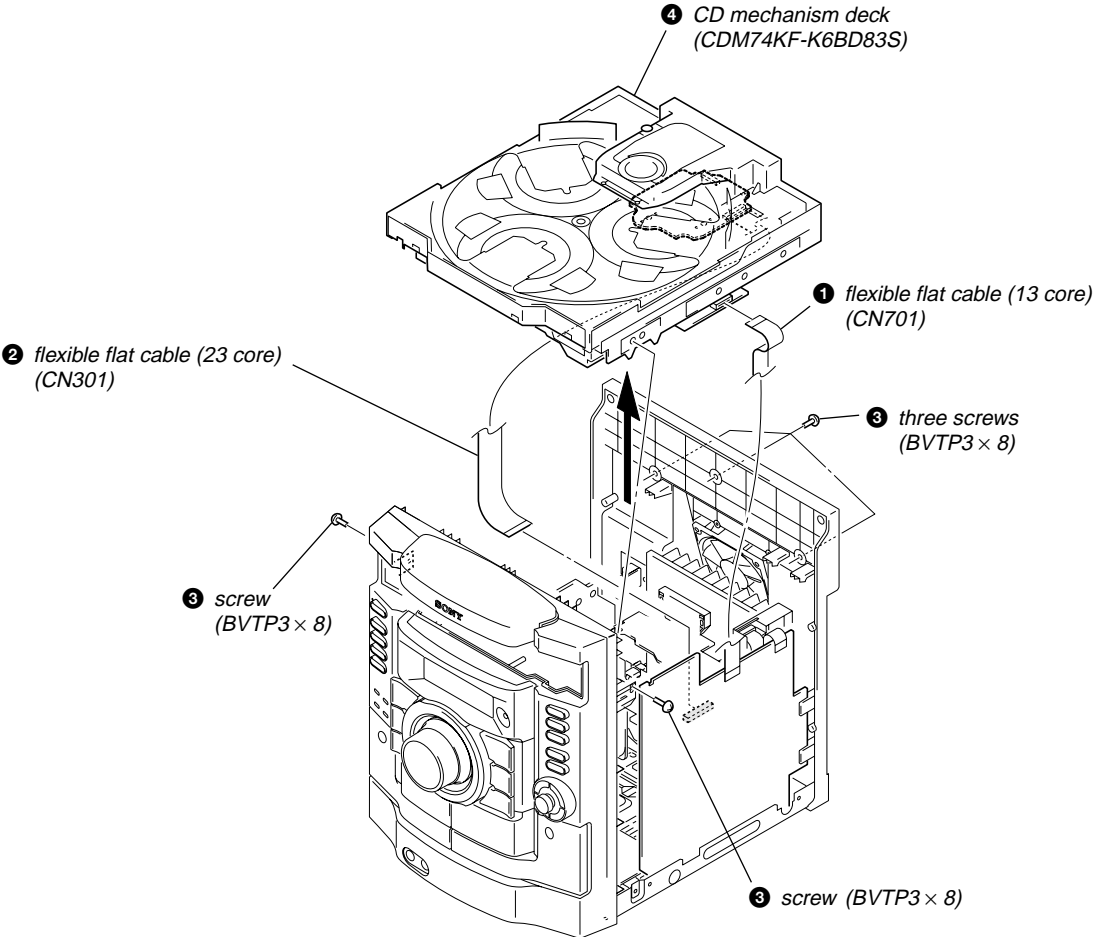
## 3-3. CASE (TOP)



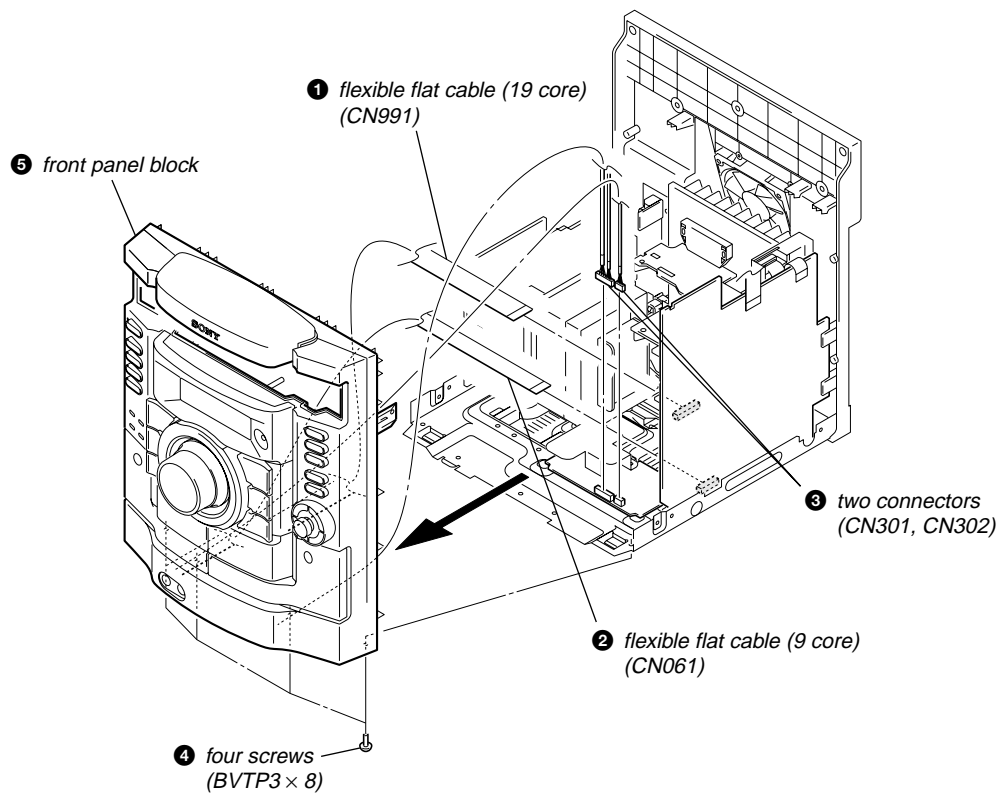
3-4. LID (CD)



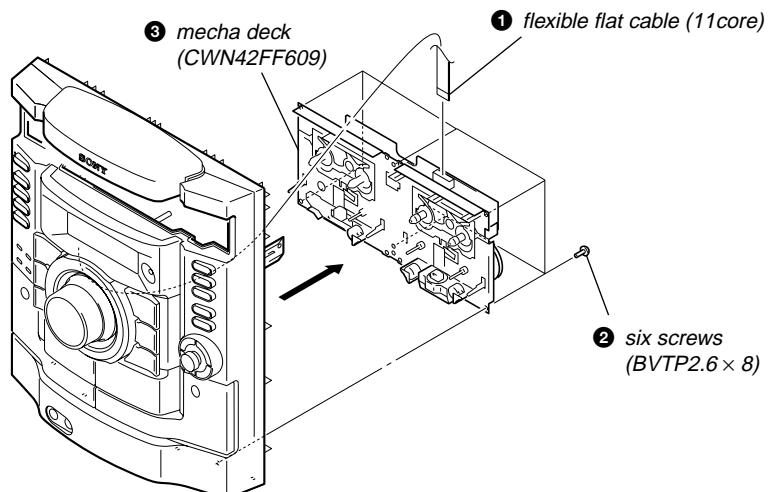
3-5. CD MECHANISM DECK (CDM74KF-K6BD83S)



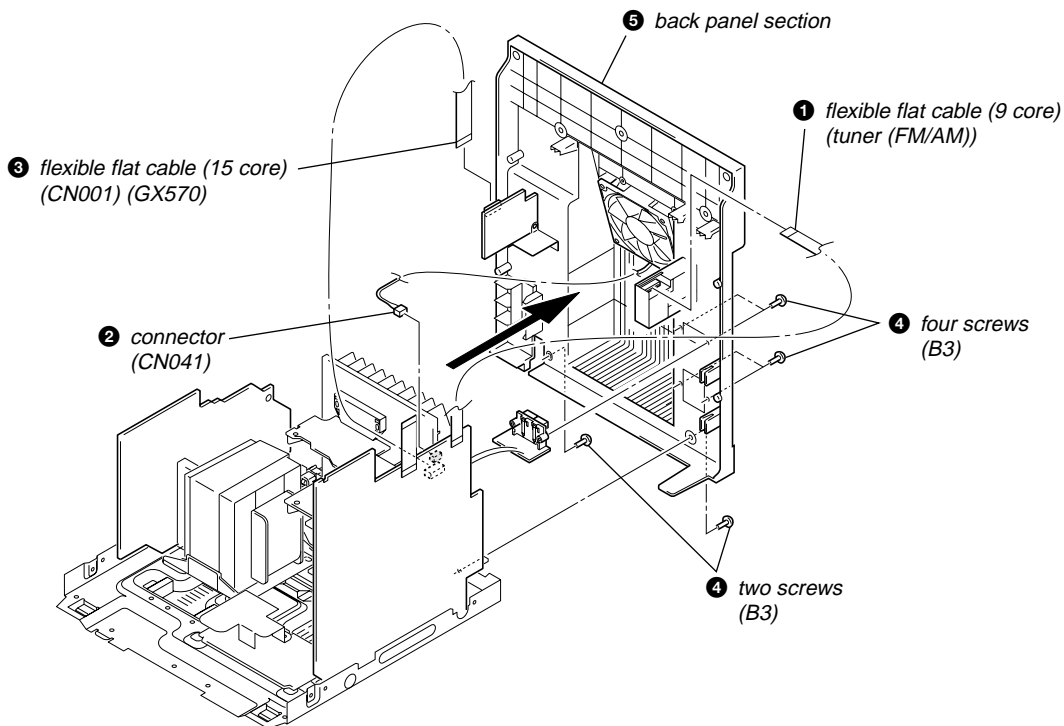
## 3-6. FRONT PANEL BLOCK



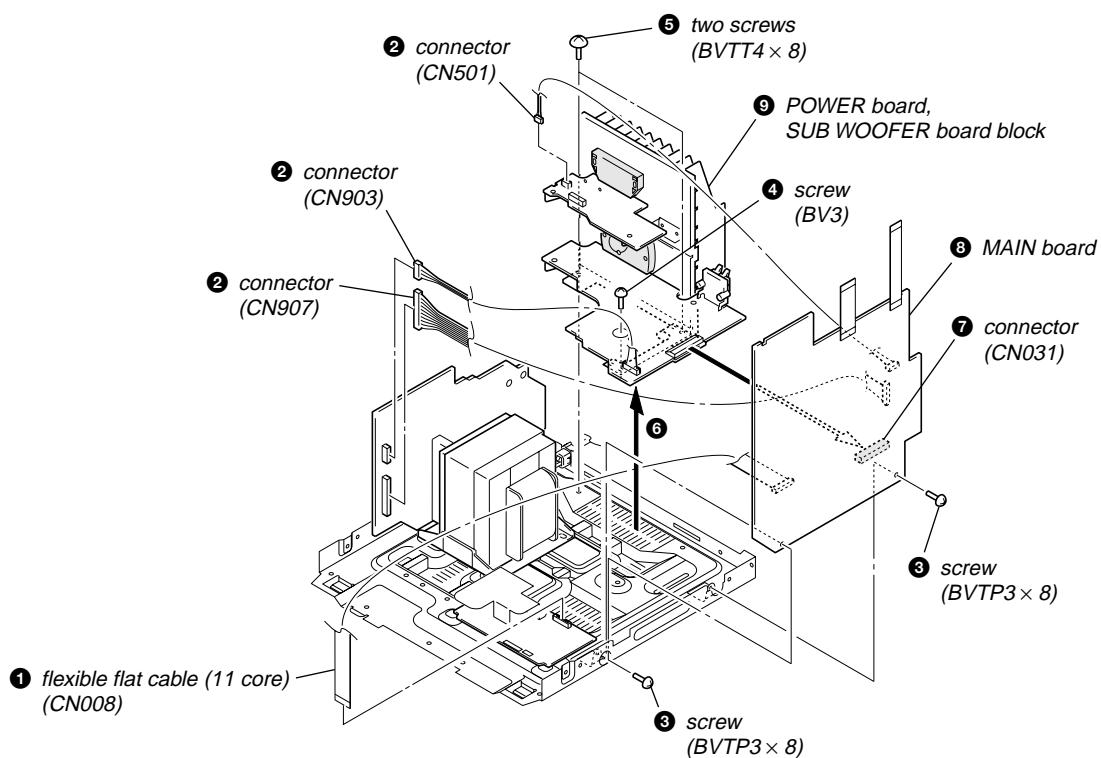
## 3-7. MECHA DECK (CWN42FF609)



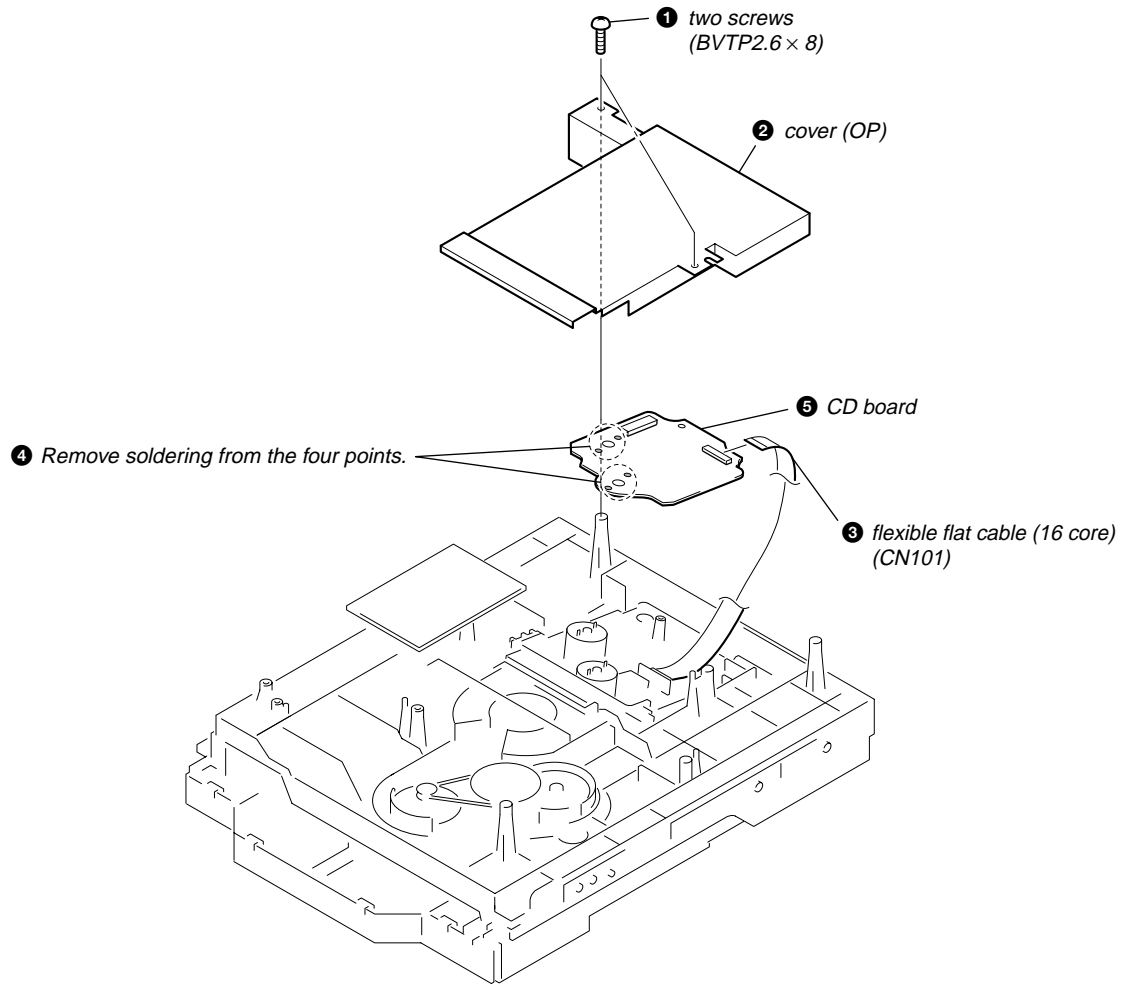
3-8. BACK PANEL SECTION



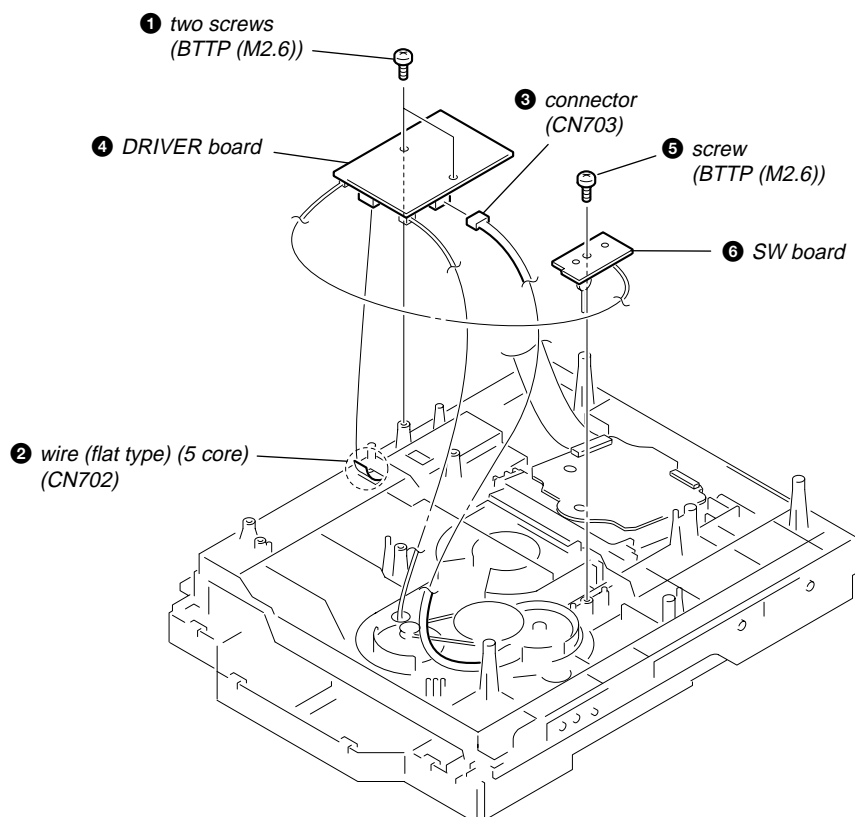
3-9. MAIN BOARD



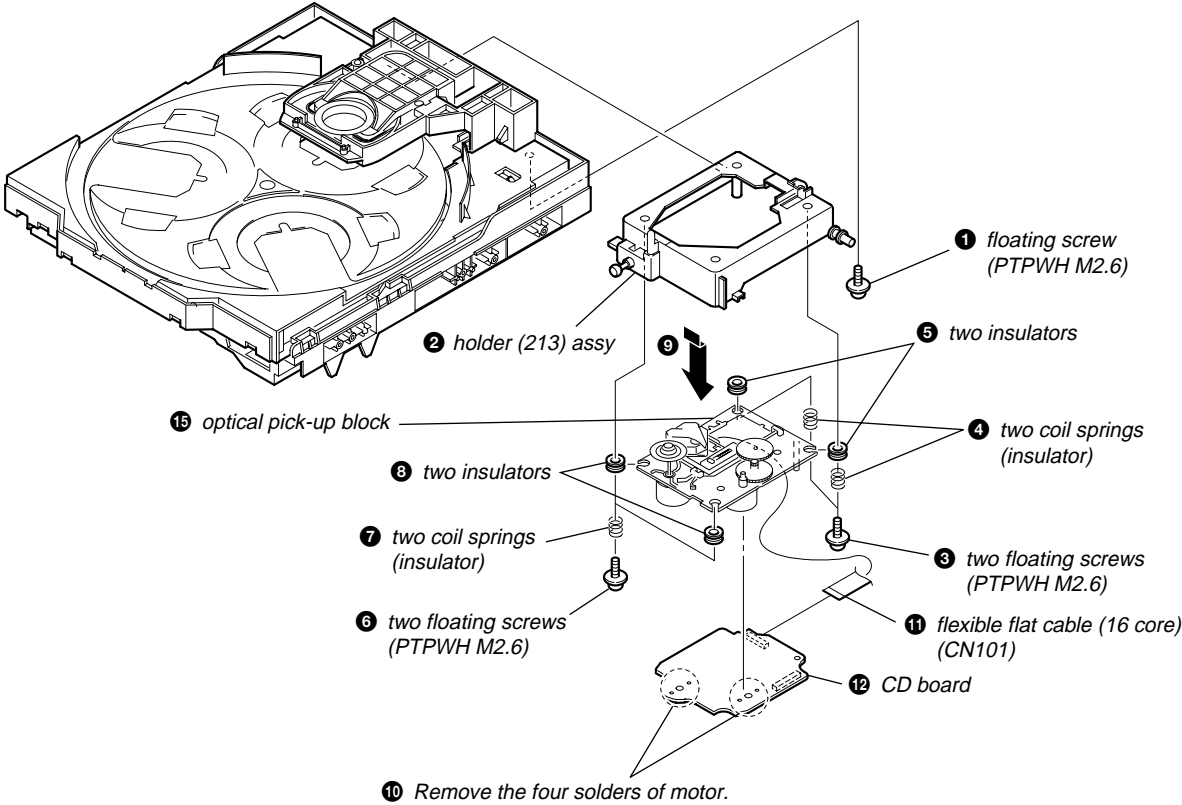
## 3-10. CD BOARD



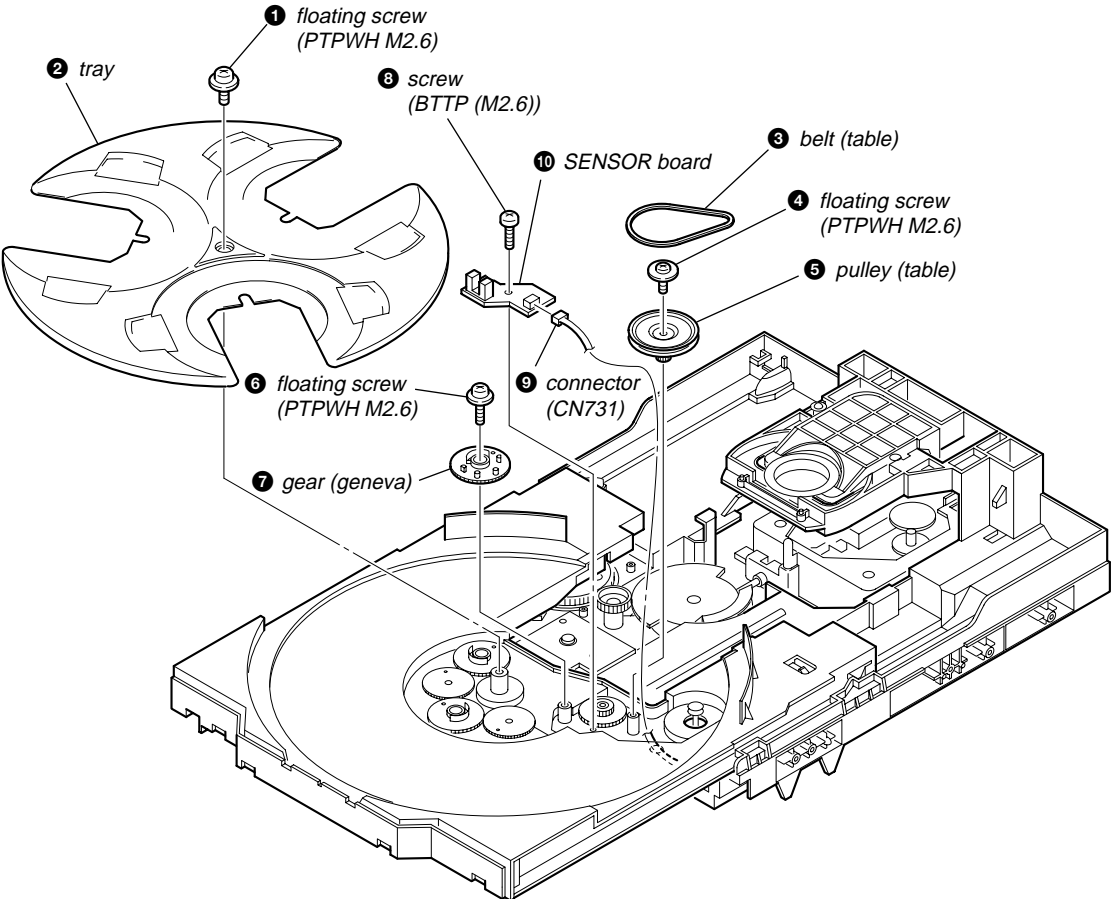
## 3-11. DRIVE BOARD, SW BOARD



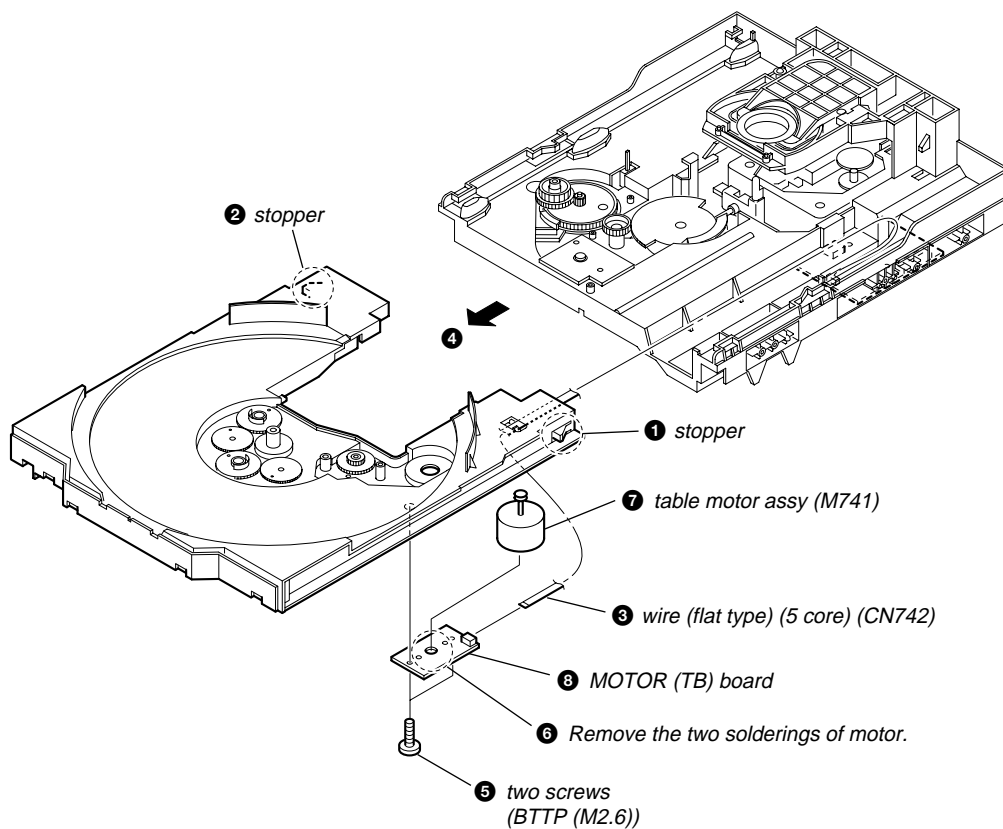
3-12. OPTICAL PICK-UP BLOCK



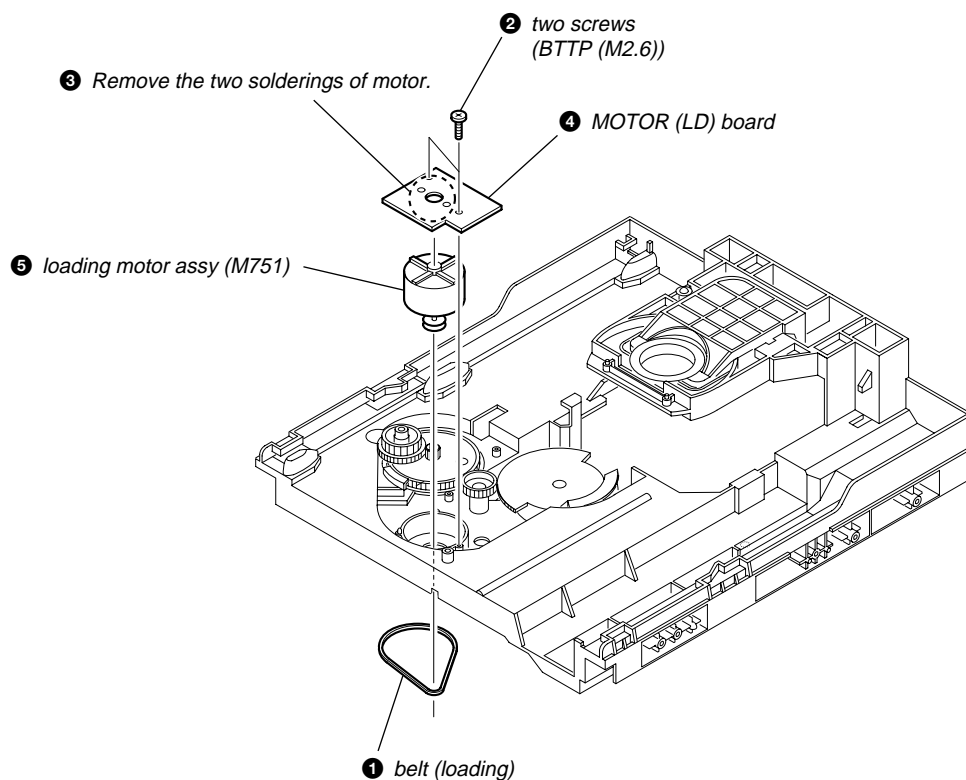
3-13. SENSOR BOARD



## 3-14. MOTOR (TB) BOARD



## 3-15. MOTOR (LD) BOARD





## SECTION 4 TEST MODE

### COLD RESET

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

#### Procedure:

1. Press three buttons of **[ ]**, **[▶▶]** and **[DISC1]** simultaneously.
2. The message "COLD RESET" is displayed on the fluorescent indicator tube momentarily, then becomes standby states.

### TUNING STEP CHANGE-OVER

A step of AM tuning interval can be changed over between 9 kHz and 10 kHz.

#### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press the **[TUNER/BAND]** button to select "AM".
3. Press the **[I/O]** button to turn the power off.
4. Press two buttons of **[TUNING -]** and **[I/O]** simultaneously.
5. The message "AM 9K STEP" or "AM 10K STEP" is displayed on the fluorescent indicator tube, and thus the tuning interval is changed over.

### CD SHIP (LOCK) 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/O]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press two buttons of **[▶▶]** and **[POWER]** simultaneously.
4. The message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

### CD SHIP (LOCK) MODE & COLD RESET

This mode is used to perform CD ship (lock) mode and cold reset simultaneously.

#### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press three buttons of **[ ]**, **[CD]** and **[▶▶]** simultaneously.
4. The message "COLD RESET" is displayed on the fluorescent indicator tube momentarily, then becomes standby states.

### ANTITHEFT LOCK MODE

This mode is used to unable to take sample disc out of disc table in the shop.

#### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press two buttons of **[ ]** and **[▶▶]** for 5 seconds.
4. The message "LOCKED" is displayed on the fluorescent indicator tube and the disc table is locked. (Even if pressing the **[▶▶]** button, the message "LOCKED" is displayed on the fluorescent indicator tube and the disc table is locked)
5. To release this mode, press two buttons of **[ ]** and **[▶▶]** for 5 seconds.
6. The message "UNLOCKED" is displayed on the fluorescent indicator tube and the disc table is unlocked.

### AMP TEST MODE (GX470 ONLY)

This mode is used to display the parameter of amplifier IC and display the VACS status.

#### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press three buttons of **[ ]**, **[▶▶]** and **[▶▶]** simultaneously.
3. When the AMP test mode is activated, the message "AMP TEST IN" is displayed on the fluorescent indicator tube momentarily, then amplifier adjustment mode is displayed on the fluorescent indicator tube.
4. Press the **[REC PAUSE/START]** button to changed over between VACS status display mode and the amplifier IC parameter display mode.
5. In this mode, press the **[ENTER]** button to changed over DBFB on/off, and "DBFB ON" or "DBFB OFF" is displayed on the fluorescent indicator tube.
6. In this mode, press the **[SURROUND]** button to changed over surround on/off, and "SURROUND ON" or "SURROUND OFF" is displayed on the fluorescent indicator tube.
7. In this mode, press the **[EQ BAND]** button to enter the equalizer adjustment mode.  
In the equalizer adjustment mode, press the **[EQ BAND]** button to change over the adjustment band as LOW/MID/HIGH. And turn the multi jog knob to adjust the equalizer level of each bands.
8. To release the amplifier IC parameter display mode or equalizer adjustment mode, press the **[I/O]** button to the power off.

### MC TEST MODE (GX470 ONLY)

This mode is used to check operations of microprocessor.

#### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press three buttons of **[ ]**, **[▶▶]** and **[DISC3]** simultaneously.
3. When the MC test mode is activated, VACS level is displayed on the fluorescent indicator tube momentarily.
4. Turn the multi jog knob clockwise, the message "ALL EQ MAX" is displayed on the fluorescent indicator tube momentarily and turn the multi jog knob counterclockwise, the message "ALL EQ MIN" is displayed on the fluorescent indicator tube momentarily.
5. Press the **[ENTER]** button, the message "ALL EQ FLAT" is displayed on the fluorescent indicator tube momentarily.
6. Turn the **[VOLUME]** knob clockwise, the message "VOLUME MAX" is displayed on the fluorescent indicator tube momentarily and turn the **[VOLUME]** knob counterclockwise, the message "VOLUME MIN" is displayed on the fluorescent indicator tube momentarily.
7. Press the **[REC PAUSE/START]** button to changed over VACS on/off.
8. Press the **[I/O]** button to release from this mode, then cold reset is performed.

## VERSION DISPLAY MODE

This mode is used to check the model, destination and software version.

### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press three buttons of **[ ]**, **[▶▶]** and **[DISC 2]** simultaneously.
3. Fluorescent indicator tube, and LEDs are all turned on.
4. Press the **[REC PAUSE/START]** button to display the software version and year, month, day of the software creation.
5. Press the **[CDSYNC]** button to display the model and destination.
6. To release this mode, press three buttons of **[ ]**, **[▶▶]** and **[DISC 2]** simultaneously.

## CD ERROR CODE DISPLAY MODE (GX470 ONLY)

This mode can be used for error code display of CD section.

### Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press three buttons of **[ ]**, **[CD]** and **[DISC 1]** simultaneously.
4. When this mode is activated, mechanism deck error code is displayed on the fluorescent indicator tube.
5. Press the **[REC PAUSE/START]** button to changed over between optical pick-up error code display mode and mechanism deck error code mode.
6. Turn the multi jog knob to change over display of error history.
7. To release this mode, press the **[I/O]** button to turn the power off.

### 1. Mechanism Deck Error Code Mode

When this mode is entered, mechanism deck error code is displayed with the 10-character format on the fluorescent indicator tube.

#### The first digit from the left indicates:

The first digit from the left indicates which mode the error history is. In the mechanism deck error code mode, "M" is displayed on the fluorescent indicator tube.

#### The second digit from the left indicates:

(Error history number display)

The second digit from the left indicates which order the error history is. "1" indicates the latest error history, and each time the number increases by one, the error history goes back to one-previous error.

#### The third and 4th digit from the left indicates:

(Error status display)

The third and 4th digit from the left indicates which error status is indicated.

Display	Status
0 0	No error
0 8	Table operation time-out (Table does not move to the target position within the specified time)
1 6	In the chucking down operation, the operation was retried by the maximum number of times but the operation could not be completed
1 7	In the chucking up and down operation, the reverse recovery processing was attempted but it could not be recovered
1 8	In the chucking up operation, the operation was retried by the maximum number of times but the operation could not be completed
2 0	Loading operation time-out (Table does not move to the target position within the specified time)
2 2	As the chuck was in the ex-open status at the initialization, the closing was attempted but could not be completed

#### The 5th and 6th digit from the left indicates:

(Present status display)

The 5th and 6th digit from the left indicates which operating status when an error occurred is indicated.

Display	Status
0 1	Open completion status
0 2	From open status, the movement to chucking down position is under way
0 3	From chucking down position, the open operation is under way
0 4	Chucking down completion status
1 0	The chucking down operation is under way
1 1	The chucking up operation is under way
1 2	Close completion status
1 3	From close status, the ex-open operation is under way
1 4	From ex-open status, the close operation is under way
1 8	Ex-pen completion status

#### The 7th and 8th digit from the left indicates:

(Motor status display)

The 7th and 8th digit from the left indicates which motor output status when an error occurred is indicated.

Display	Status
× 0	No table motor output
× 1	Table motor forward output
× 2	Table motor backward output
× 3	Table motor break output
0 ×	No loading motor output
1 ×	Loading motor forward output
2 ×	Loading motor backward output
3 ×	Loading motor break output

#### The 9th and 10 th digit from the left indicates:

(Tray status display)

The 9th and 10th digit from the left indicates which target processing when an error occurred is indicated.

Display	Status
0 1	Open operation
1 2	Close operation
1 8	Ex-open operation

## 2. Optical Pick-up Error Code Mode

When this mode is entered, optical pick-up error code is displayed with the 8-character format on the fluorescent indicator tube.

### The first digit from the left indicates:

The first digit from the left indicates which mode the error history is. In the optical pick-up error code mode, “D” is displayed on the fluorescent indicator tube.

### The second digit from the left indicates:

#### (Error history No. display)

The second digit from the left indicates which order the error history is. “1” indicates the latest error history, and each time the number increases by one, the error history goes back to one-previous error.

### The third and 4th digit from the left indicates:

#### (Error status display)

The third and 4th digit from the left indicates which error status is indicated.

Display	Status
0 1	Not focused (TOC read without a disc)
0 2	GFS NG (TOC read with a disc chucked)
0 3	Start operation time-over
0 4	Defocused continuously (Defocused during TOC reading)
0 5	Q code not entered for specified time
0 6	Tracking not turned ON
0 7	Blank disc (Blank disc TOC read)

### The 5th and 6th digit from the left indicates:

#### (Error step display)

The 5th and 6th digit from the left indicates which processing when a trouble occurred

Display	Contents
0 1	Power OFF in progress
0 2	Initialize in progress
0 3	Oscillation stopping
0 4	From oscillation stop, oscillation starting
0 5	Stopping
0 6	Stop operation is under way
0 7	Start operation in progress
0 8	TOC read in progress
0 9	Search operation is under way
0 A	Playback operation is under way
0 B	Pause operation is under way
0 C	Playback manual search operation is under way
0 D	Pause manual search operation is under way
0 E	—






### The 7th and 8th digit from the left indicates:

The 7th and 8th digit from the left indicates which operation in progress when a trouble occurred. (Step of each processing of the 5th and 6th digits is indicated)

## 5 REPEAT LIMIT CANCEL MODE

Number of repeat for CD playback is 5 times when the repeat mode is “REPEAT”. This mode is used to enables CD to repeat playback for limitless times.






### Procedure:

1. Press the  button to turn the power on.
2. Press the  button to select “CD”.
3. Press three buttons of ,  and  simultaneously.
4. The message “LIMIT OFF” is displayed on the fluorescent indicator tube momentarily, CD repeat 5 limit is cancelled.

## CD POWER MANAGE

This mode is used to changed over CD power on/off for decreasing of reception noise in the tuner mode.

### Procedure:

1. Press the  button to turn the power on.
2. Press the  button to select “CD”.
3. Press the  button to turn the power off.
4. Press two buttons of  and  simultaneously.
5. The message “CD POWER ON” or “CD POWER OFF” is displayed on the fluorescent indicator tube, and CD power on/off changed over in the tuner mode.

**SECTION 5  
MECHANICAL ADJUSTMENTS**

**PRECAUTION**

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
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	2.6 – 6.9 mN·m (30 – 70 g·cm) (0.41 – 0.97 oz·inch)
FWD Back Tension	CQ-102C	0.15 – 0.59 mN·m (1.5 – 6.0 g·cm) (0.021 – 0.083 oz·inch)
FF/REW	CQ-201B	5.4 – 16.7 mN·m (55 – 170 g·cm) (0.76 – 2.35 oz·inch)

**TAPE TENSION MEASUREMENT**

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 100 g (more than 3.53 oz)

## 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. After the adjustments, apply suitable locking compound to the parts adjusted.

**Adjustment Location:** Playback Head (DECK-A)  
Record/Playback/Erase Head (DECK-A)

**TEST TAPE**

Tape	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	Azimuth Adjustment

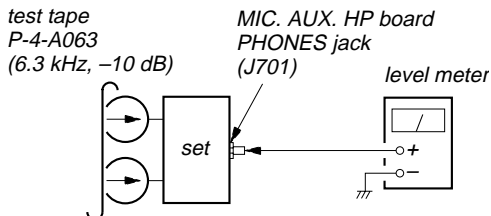
**RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT**

**Note 1:** Remove the mecha deck before this adjustment.  
(Refer to Section 3. DISASSEMBLY (See page 9))

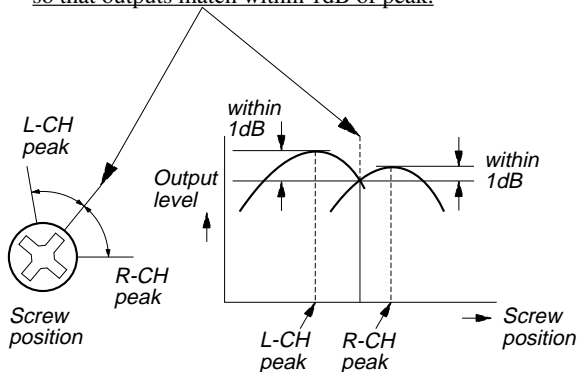
**Note 2:** Perform this adjustment for both decks.

**Procedure:**

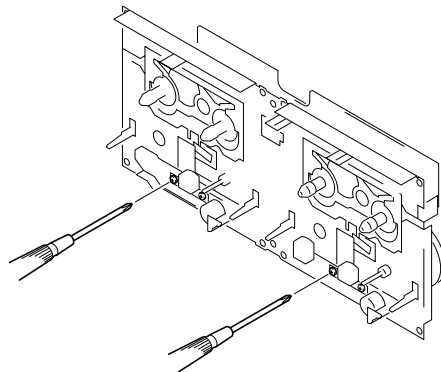
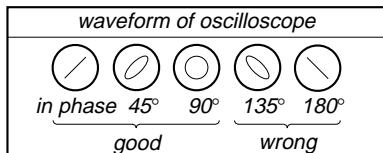
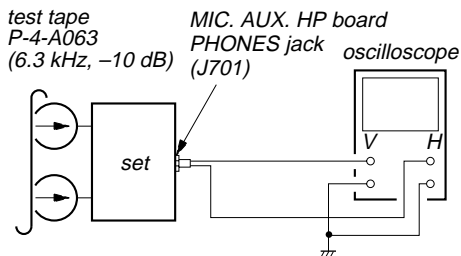
1. Mode: Playback



2. 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.



3. Mode: Playback

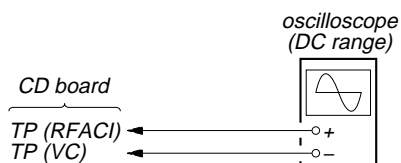


## CD SECTION

### Note:

1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 M $\Omega$  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.
5. Check the focus bias check when optical pick-up block is replaced.

### FOCUS BIAS CHECK

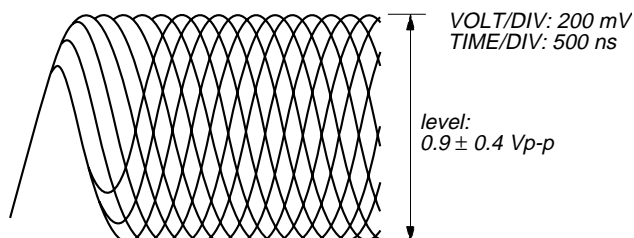
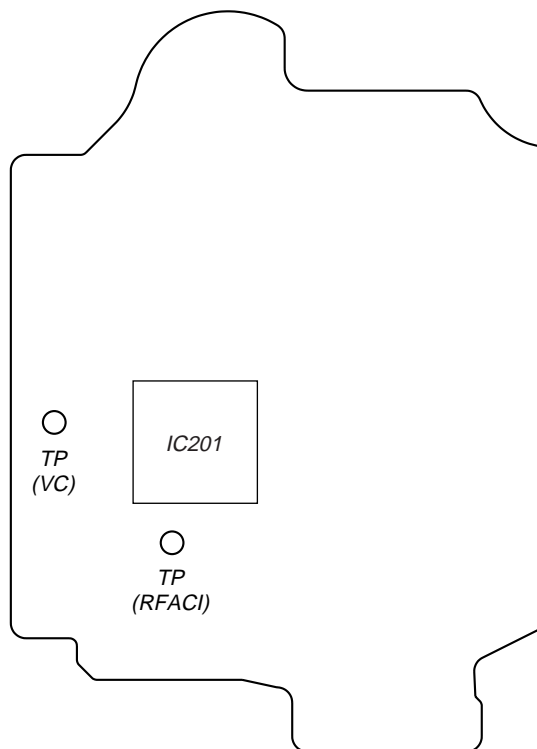


### Procedure :

1. Connect oscilloscope to TP (RFACI) and TP (VC) on the CD board.
2. Press the button to turn the power on, and press the button to open the CD disc table.
3. Set disc (YEDS-18) on the tray and press the button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)  
A good eye pattern means that the diamond shape ( $\diamond$ ) in the center of the waveform can be clearly distinguished.

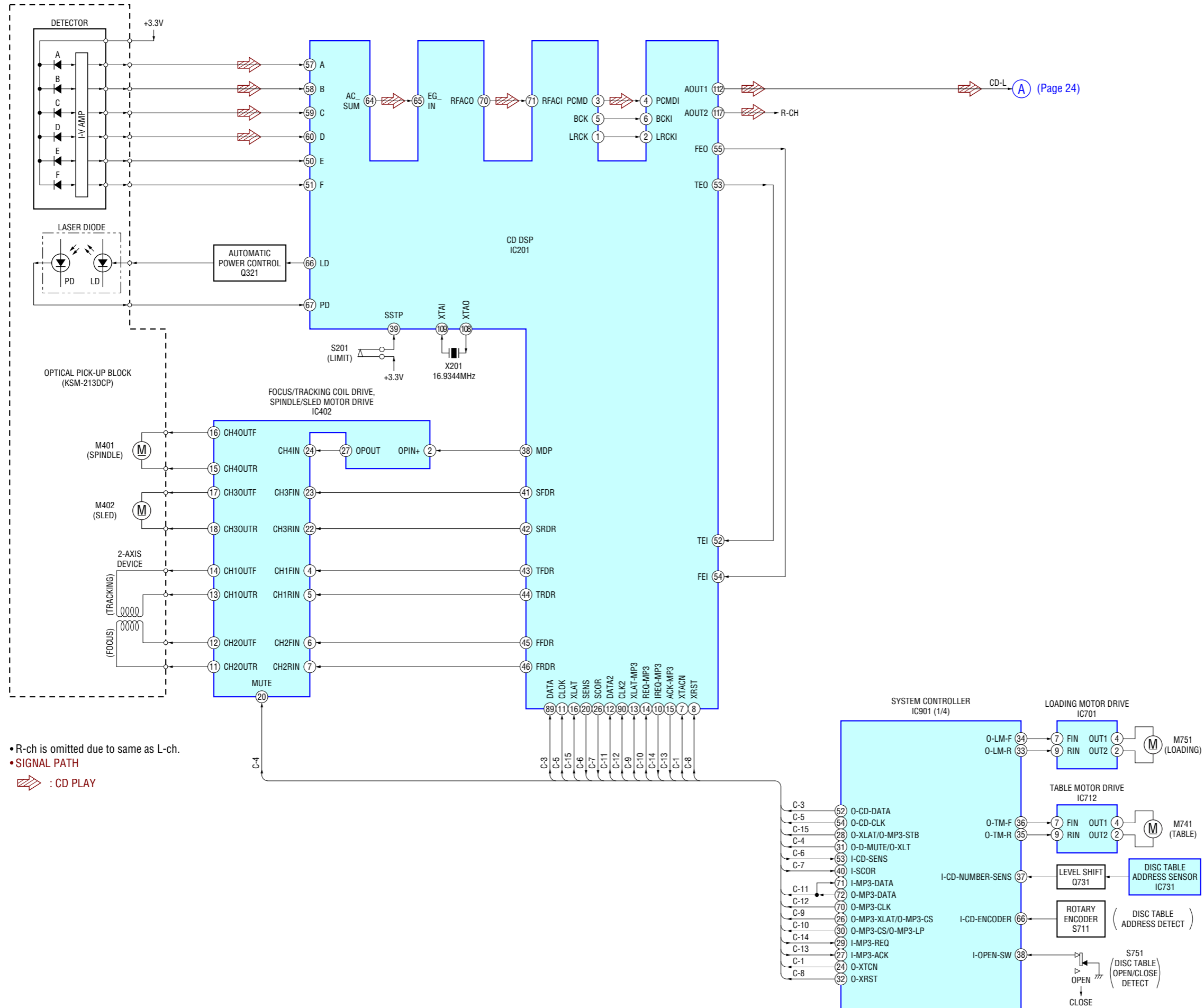
### Connecting Location:

– CD Board (Conductor Side) –

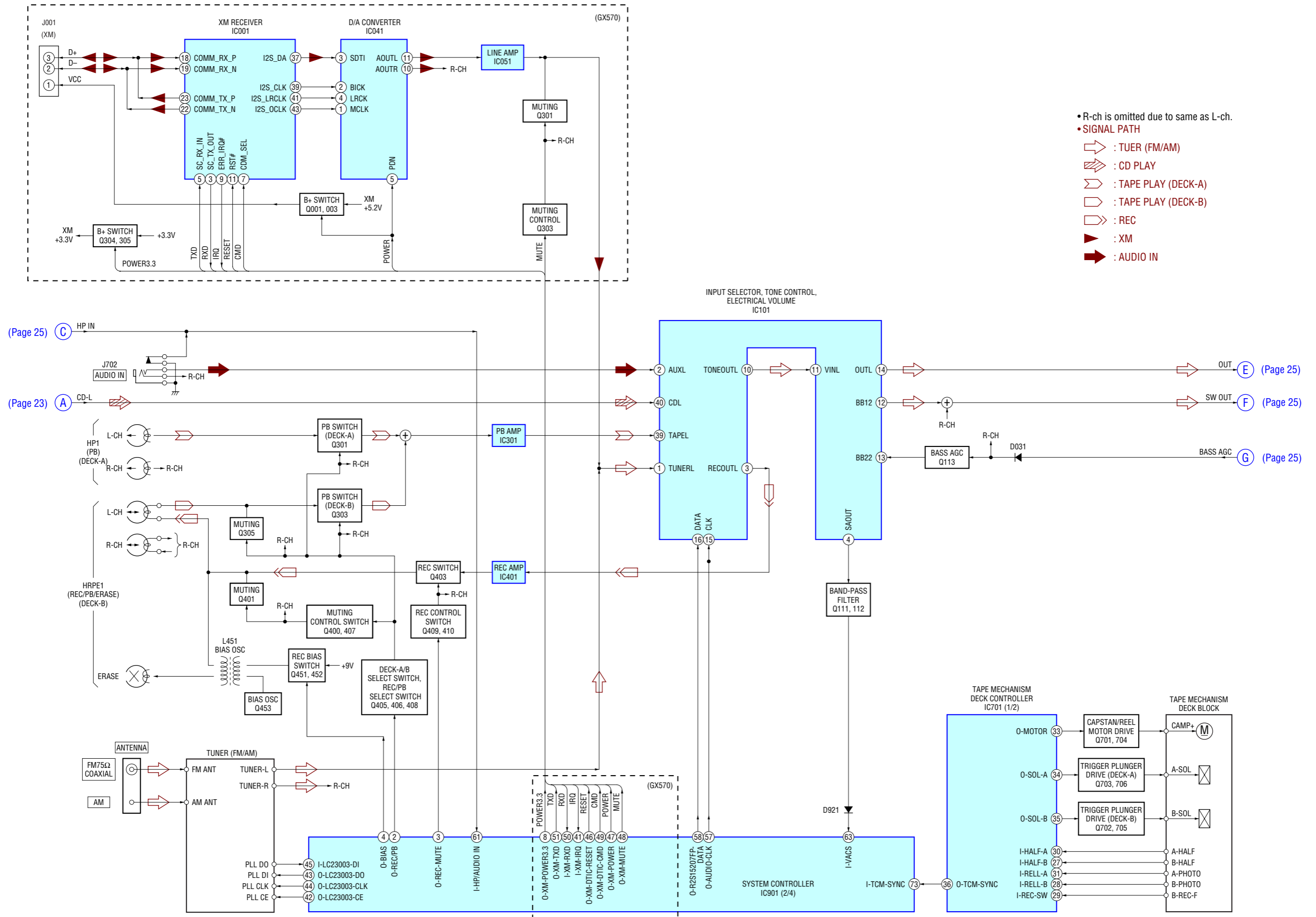


## SECTION 7 DIAGRAMS

### 7-1. BLOCK DIAGRAM – CD SERVO Section –

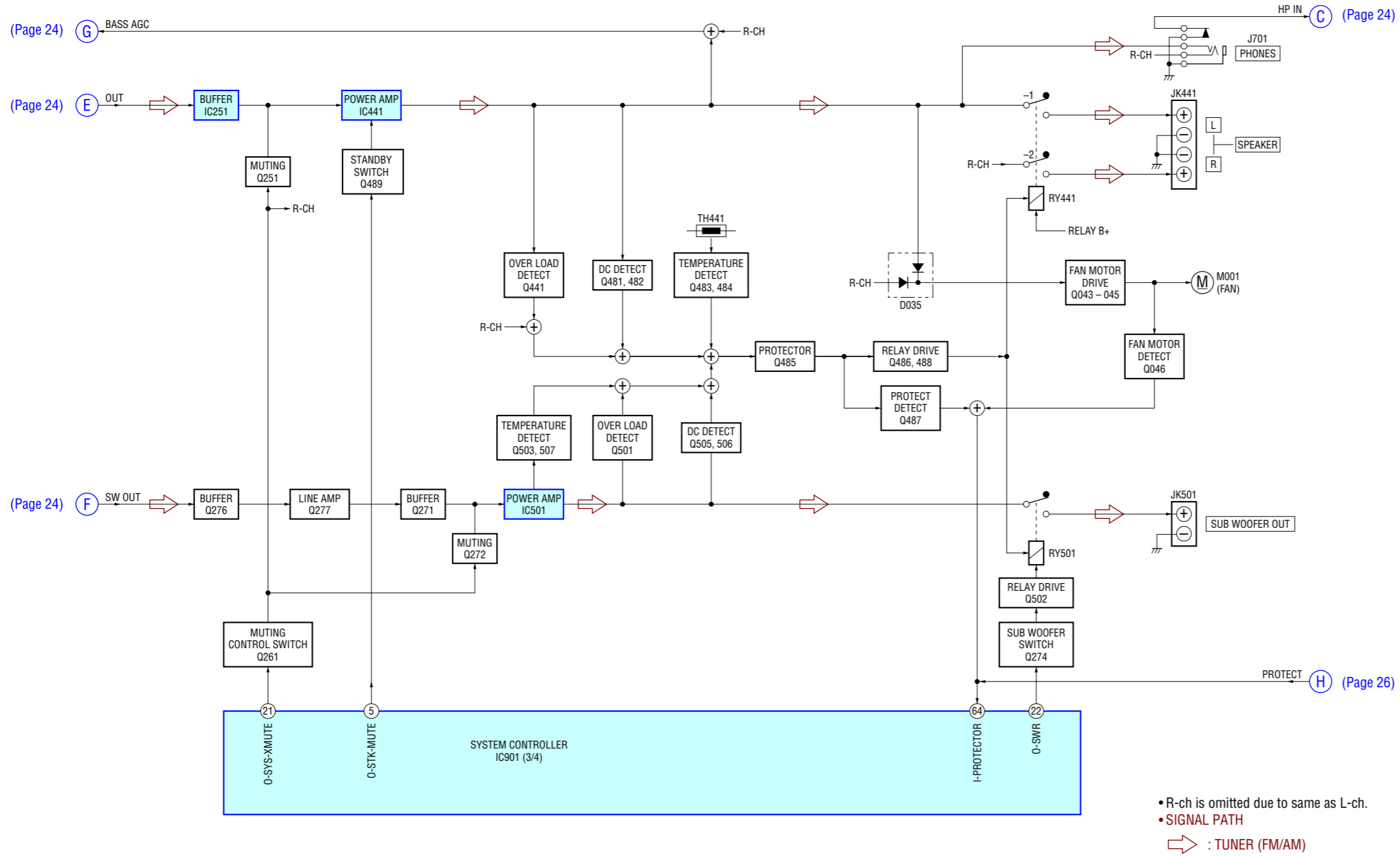


7-2. BLOCK DIAGRAM – MAIN Section –

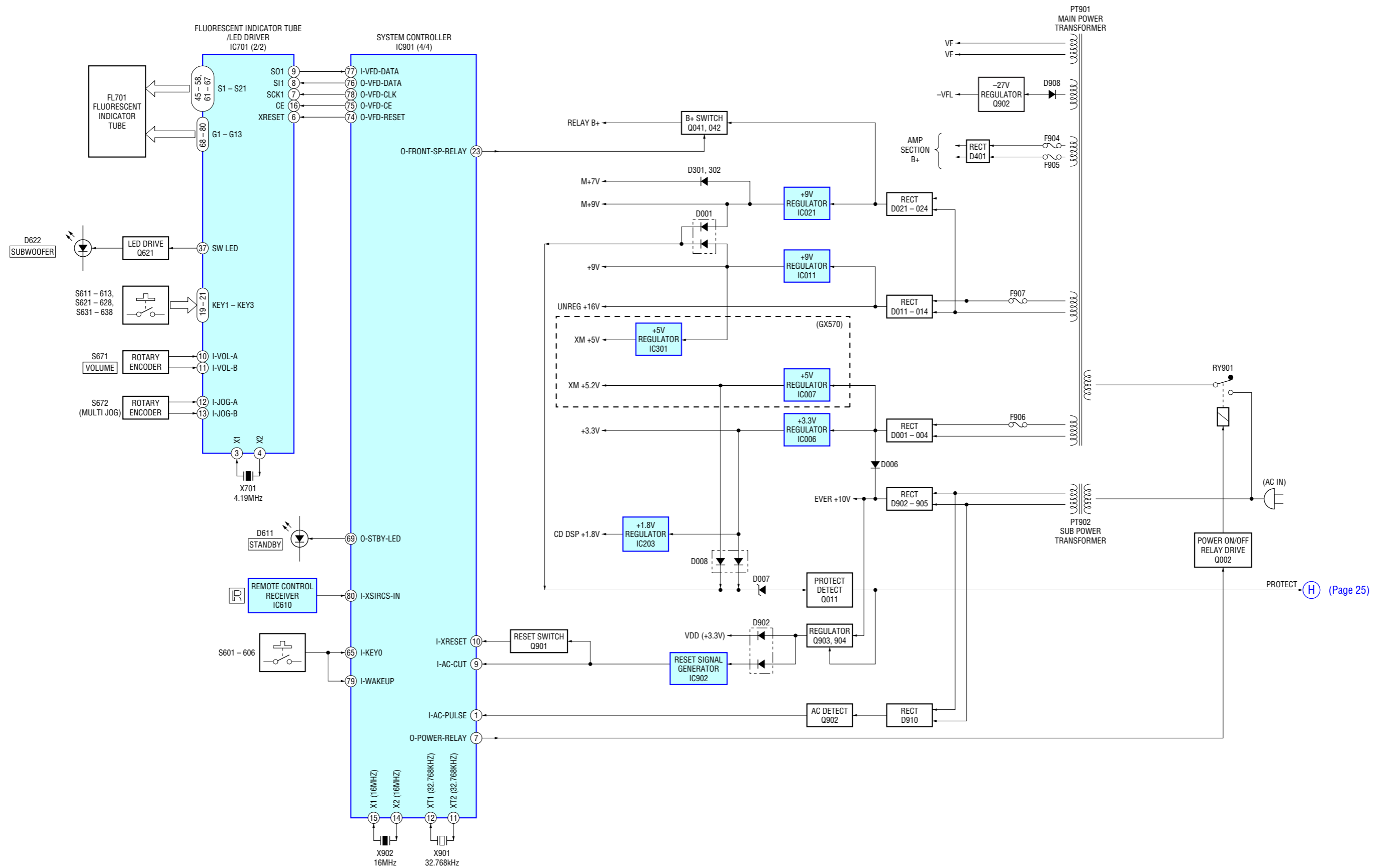




7-3. BLOCK DIAGRAM – AMP Section –



7-4. BLOCK DIAGRAM – PANEL, POWER SUPPLY Section –



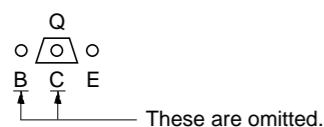
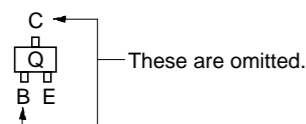
• Note For Printed Wiring Boards and Schematic Diagrams

**Note on Printed Wiring Board:**

- : parts extracted from the component side.
  - : parts extracted from the conductor side.
  - △ : 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.  
 (Conductor Side)  
 Parts face side: Parts on the parts face side seen from the parts face are indicated.  
 (Component Side)

• Indication of transistor



**Note on Schematic Diagram:**

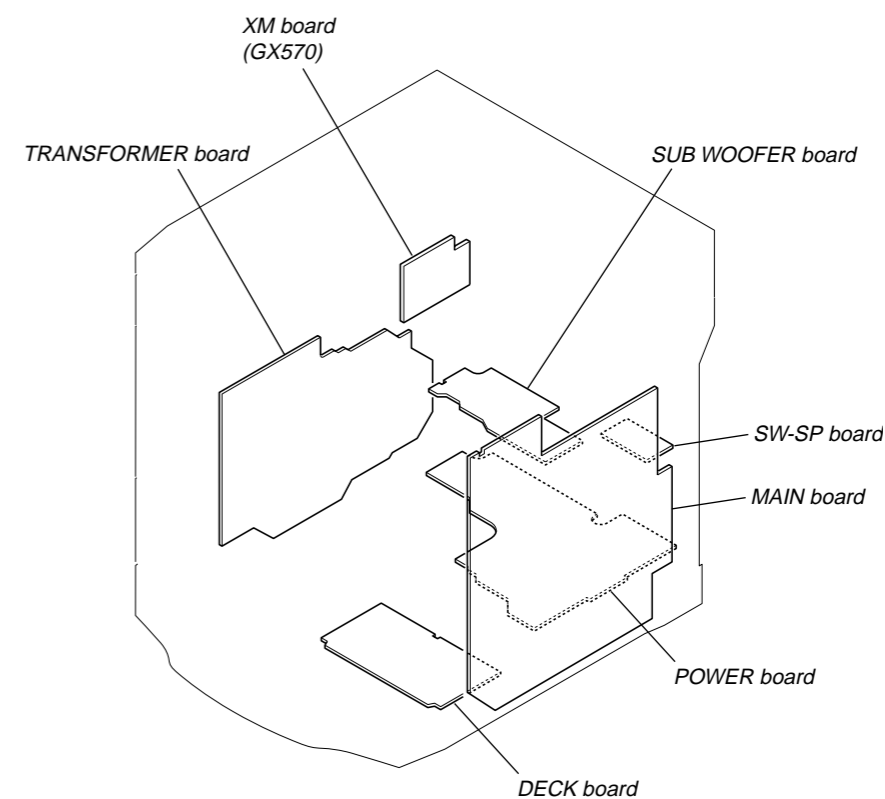
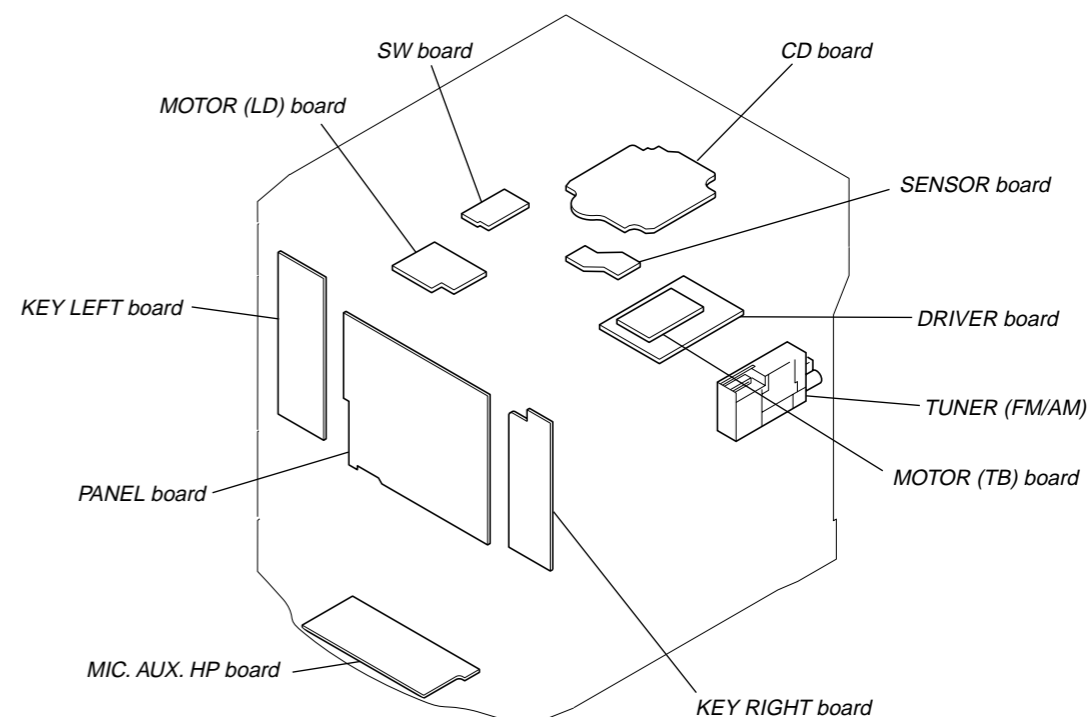
- All capacitors are in  $\mu F$  unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4 W$  or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

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

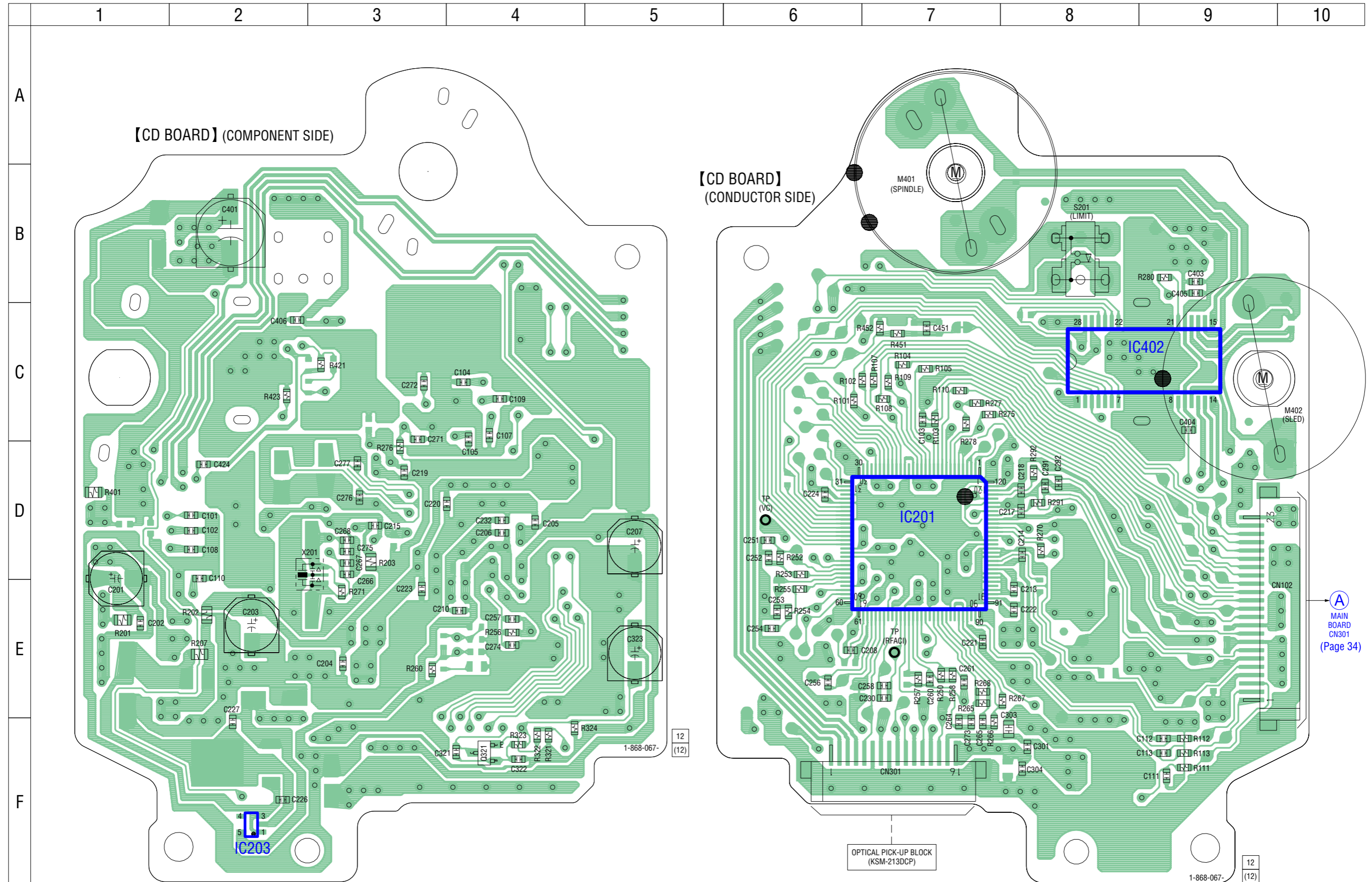
**Note:**  
 Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - CD Board —
  - no mark : CD PLAY
  - XM Board —
  - no mark : XM
  - Other Boards —
  - no mark : TUNER (FM/AM)
  - ( ) : CD PLAY
  - << >> : TAPE PLAY
  - { } : TAPE REC
  - [ ] : XM
  - \* : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ↳ : TUNER (FM/AM)
  - ↳ : CD PLAY
  - ↳ : TAPE PLAY (DECK-A)
  - ↳ : TAPE PLAY (DECK-B)
  - ↳ : REC
  - ↳ : XM
  - ↳ : AUDIO IN

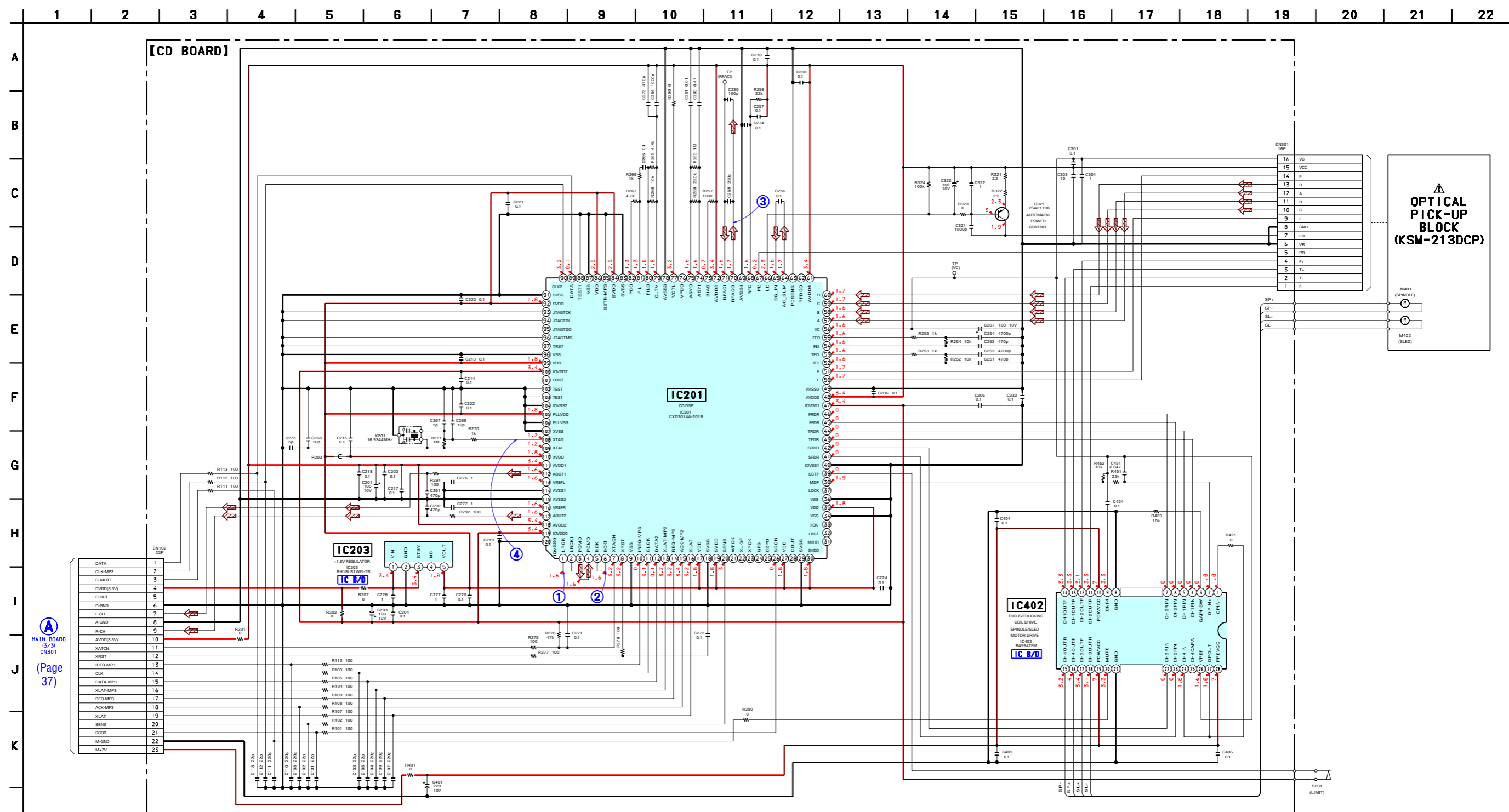
• Circuit Boards Location



7-5. PRINTED WIRING BOARD – CD Board – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.



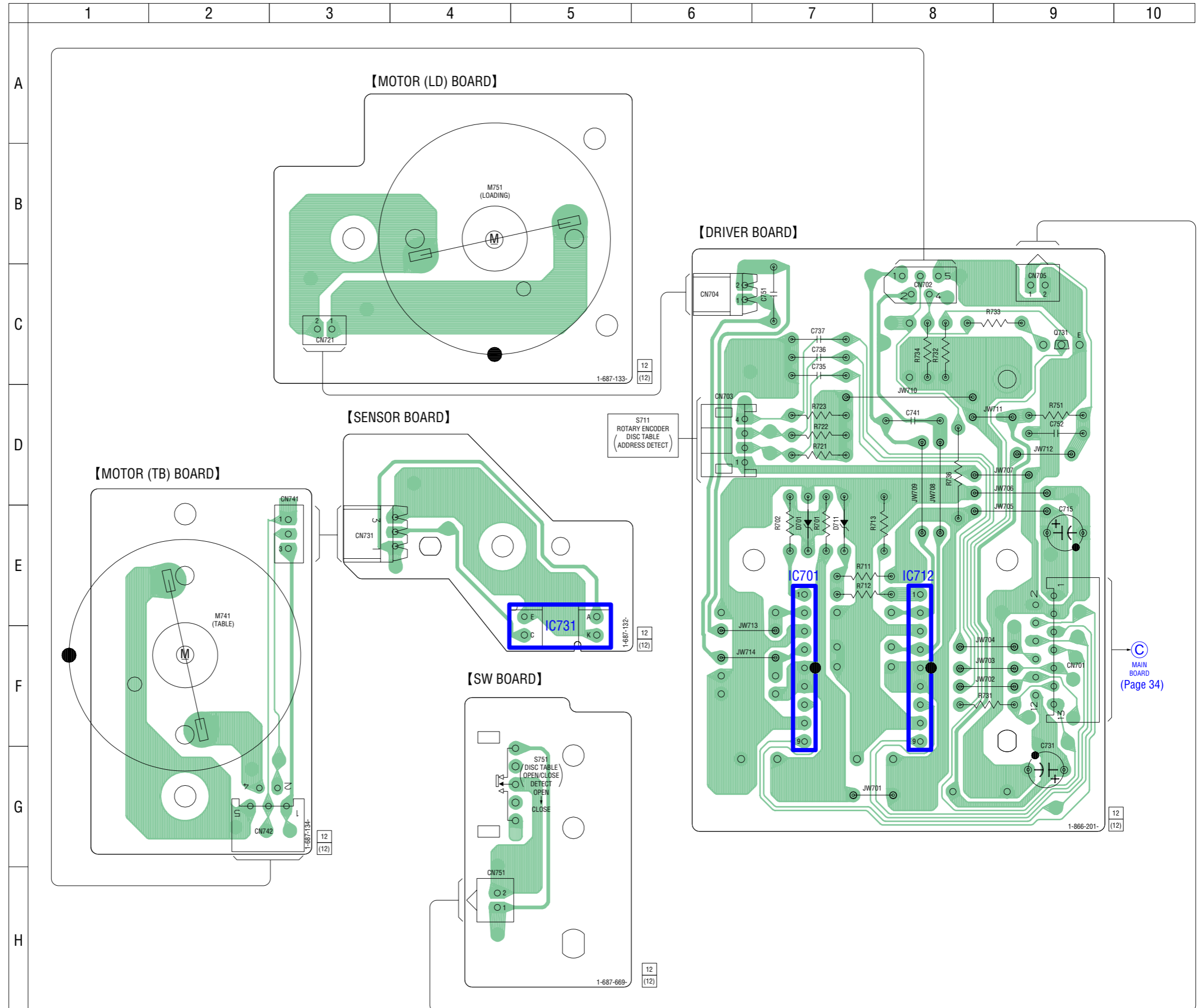
7-6. SCHEMATIC DIAGRAM – CD Board – • See page 51 for Waveforms. • See page 53 for IC Block Diagrams. • See page 56 for IC Pin Function Description.



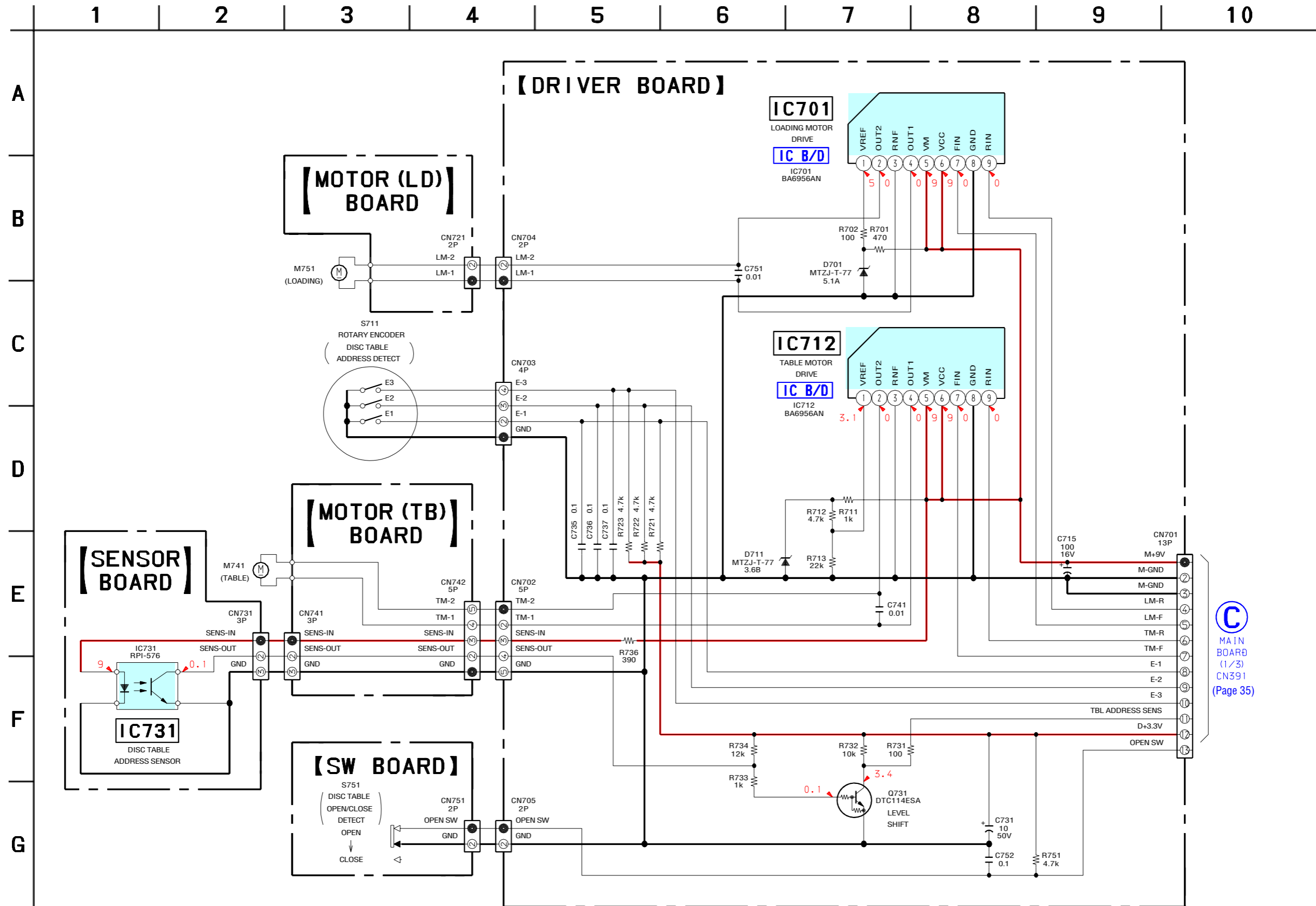
7-7. PRINTED WIRING BOARDS – CHANGER Section – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.

• Semiconductor Location


Ref. No.	Location
D701	E-7
D711	E-7
IC701	F-7
IC712	F-8
IC731	F-5
Q731	C-9



7-8. SCHEMATIC DIAGRAM – CHANGER Section – • See page 53 for IC Block Diagrams.

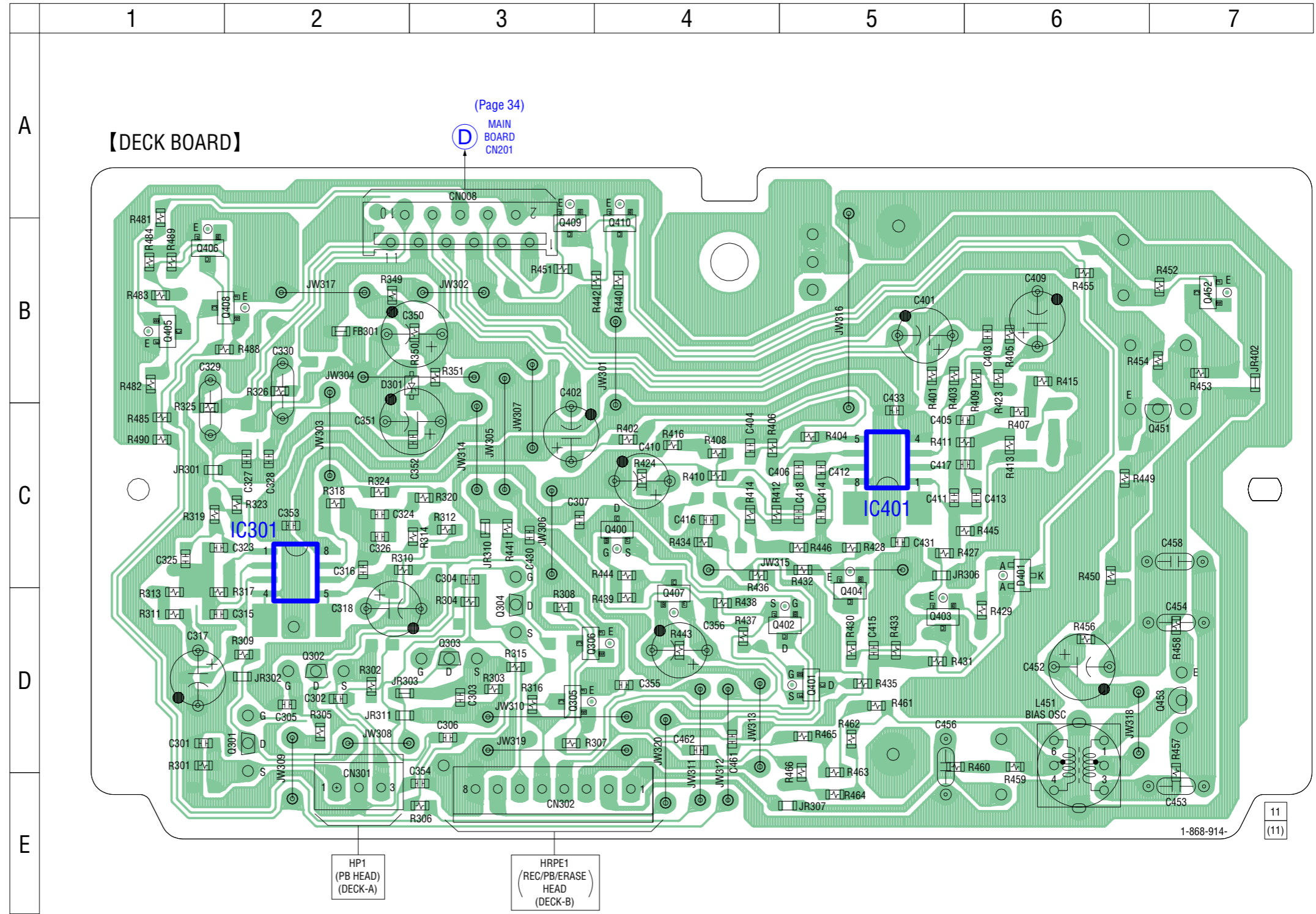


③ MAIN BOARD (1/3) CN391 (Page 35)

7-9. PRINTED WIRING BOARD – DECK Board – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.

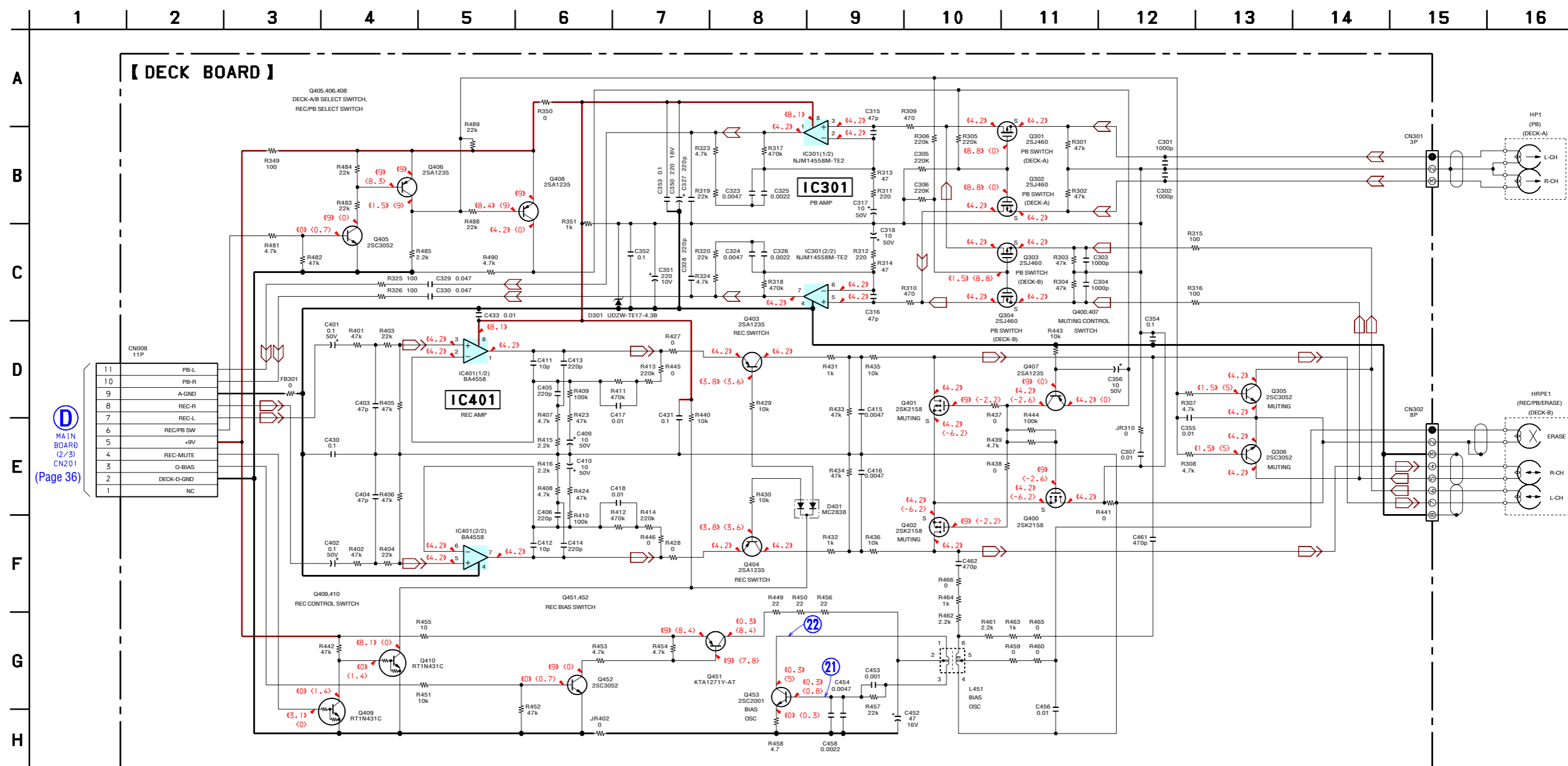
• Semiconductor Location

Ref. No.	Location
D301	B-3
D401	C-6
IC301	C-2
IC401	C-5
Q301	D-2
Q302	D-2
Q303	D-3
Q304	D-3
Q305	D-3
Q306	D-3
Q400	C-4
Q401	D-5
Q402	D-5
Q403	D-5
Q404	D-5
Q405	B-1
Q406	B-1
Q407	D-4
Q408	B-2
Q409	B-3
Q410	B-4
Q451	C-7
Q452	B-7
Q453	D-7



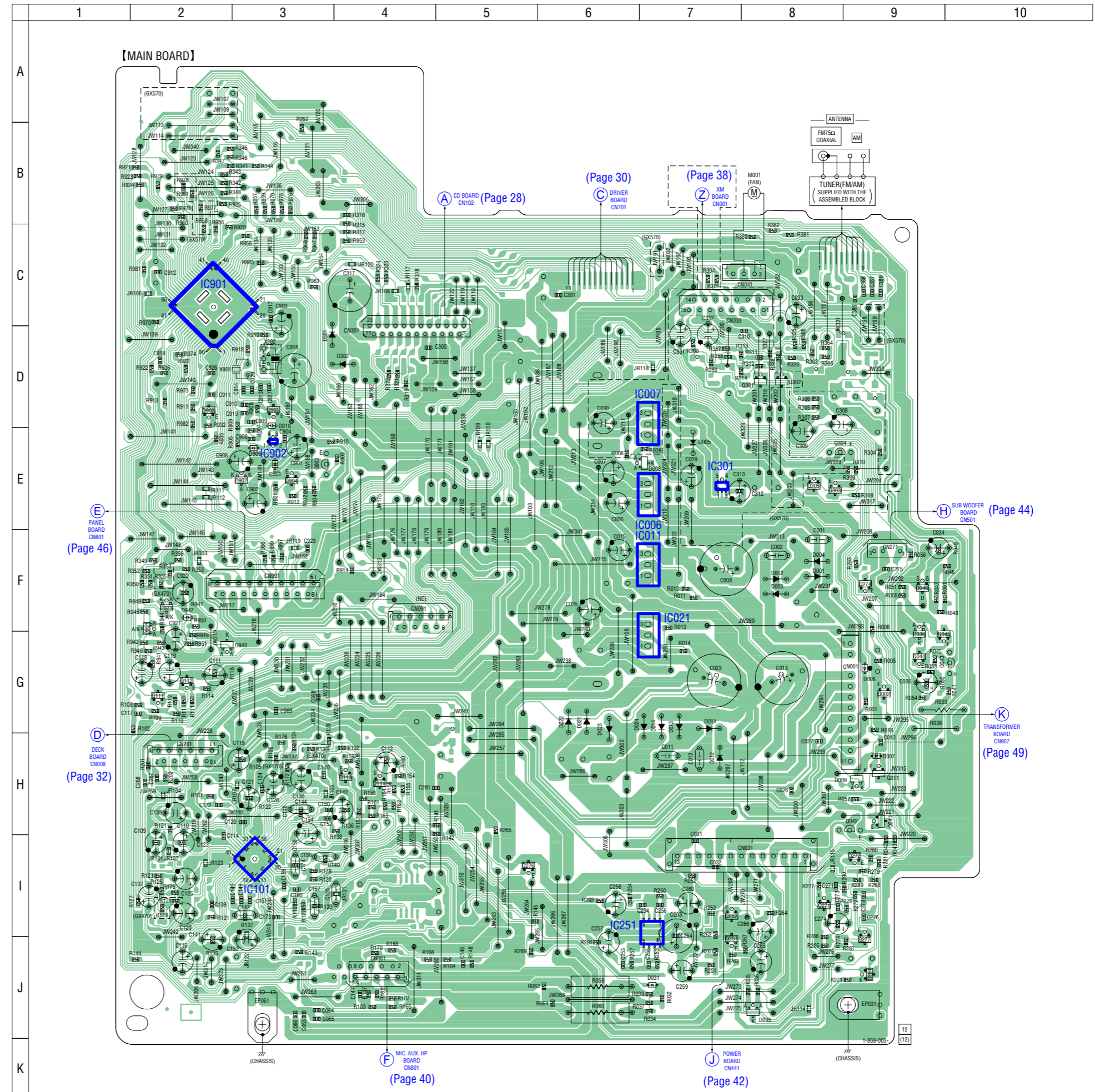


7-10. SCHEMATIC DIAGRAM – DECK Board – • See page 51 for Waveforms.



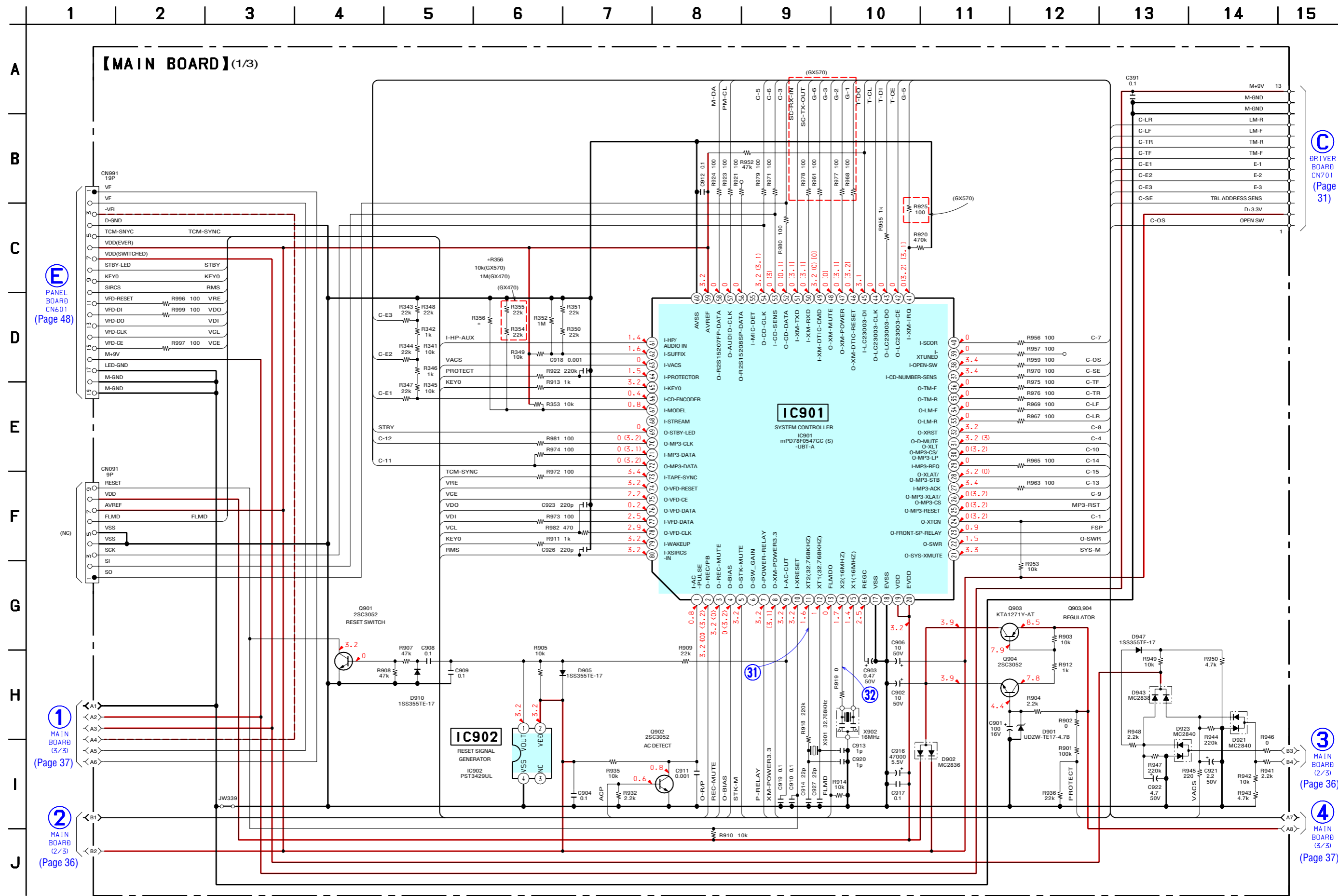
• Semiconductor Location

Ref. No.	Location
D001	F-8
D002	F-8
D003	F-8
D004	F-8
D005	E-7
D006	G-9
D007	H-9
D008	E-7
D009	H-9
D011	G-7
D012	H-7
D013	G-7
D014	G-7
D021	G-6
D022	G-6
D023	G-6
D024	G-7
D031	J-7
D035	J-8
D036	G-9
D301	D-3
D302	D-4
D901	E-3
D902	E-3
D905	E-3
D910	D-3
D921	F-2
D923	F-2
D943	G-2
D947	F-2
IC006	E-7
IC007	E-7
IC011	F-7
IC021	G-7
IC101	I-3
IC251	I-7
IC301	E-7
IC901	C-2
IC902	E-3
Q002	G-9
Q011	H-9
Q041	H-9
Q042	H-9
Q043	G-9
Q044	G-9
Q045	G-9
Q046	F-9
Q111	G-2
Q112	G-2
Q113	H-4
Q114	H-4
Q251	J-7
Q252	I-7
Q261	J-9
Q271	I-8
Q272	I-9
Q274	F-9
Q276	I-5
Q277	J-9
Q301	D-8
Q302	D-8
Q303	E-8
Q304	E-8
Q305	E-8
Q901	D-3
Q902	D-2
Q903	E-3
Q904	E-3



Note: IC901 on the MAIN board cannot exchange with single. When IC901 is damaged, exchange the entire mounted board.

7-12. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 51 for Waveforms. • See page 56 for IC Pin Function Description.



Note: IC901 on the MAIN board cannot exchange with single. When IC901 is damaged, exchange the entire mounted board.

DRIVER BOARD CN701 (Page 31)

MAIN BOARD (2/3) (Page 36)

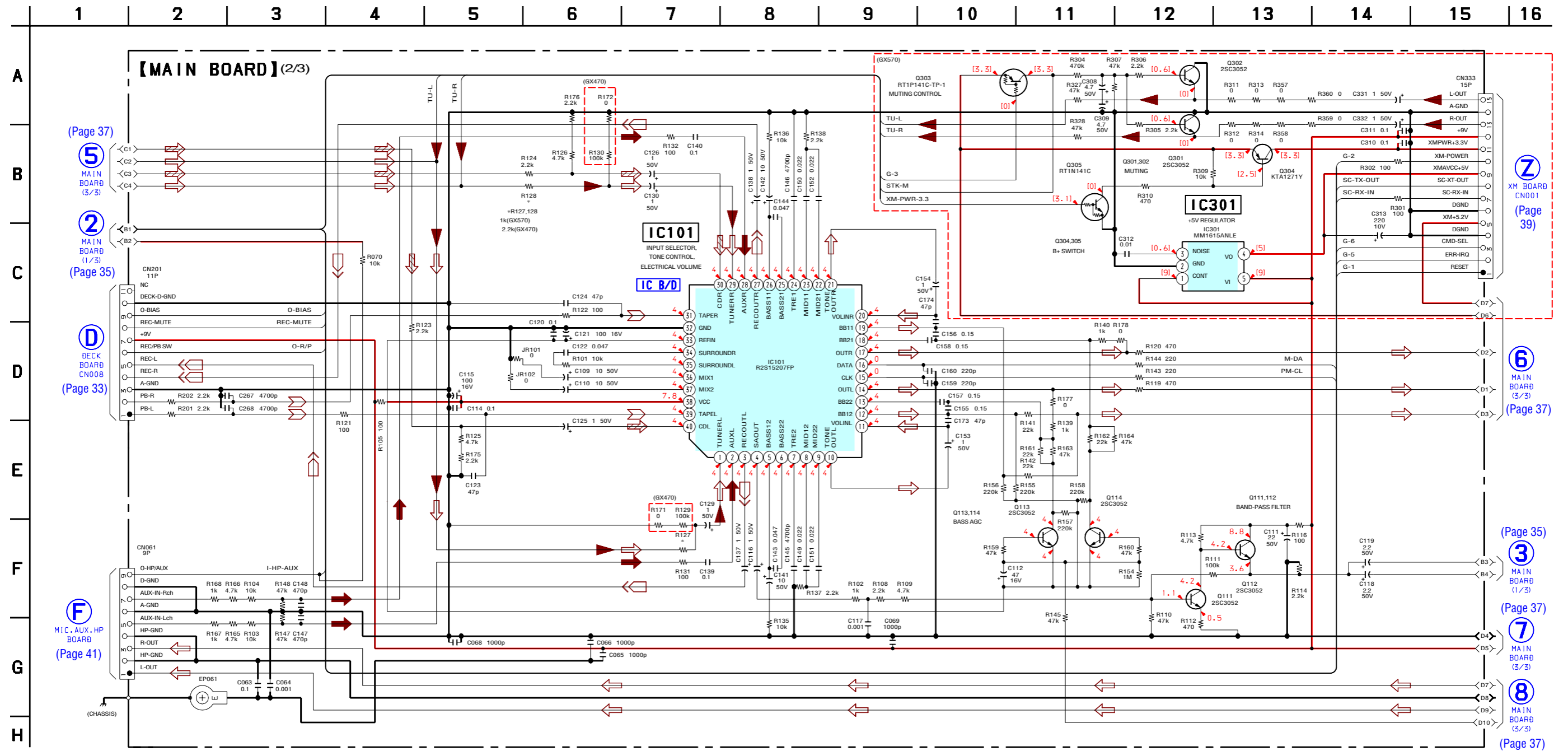
MAIN BOARD (3/3) (Page 37)

PANEL BOARD CN601 (Page 48)

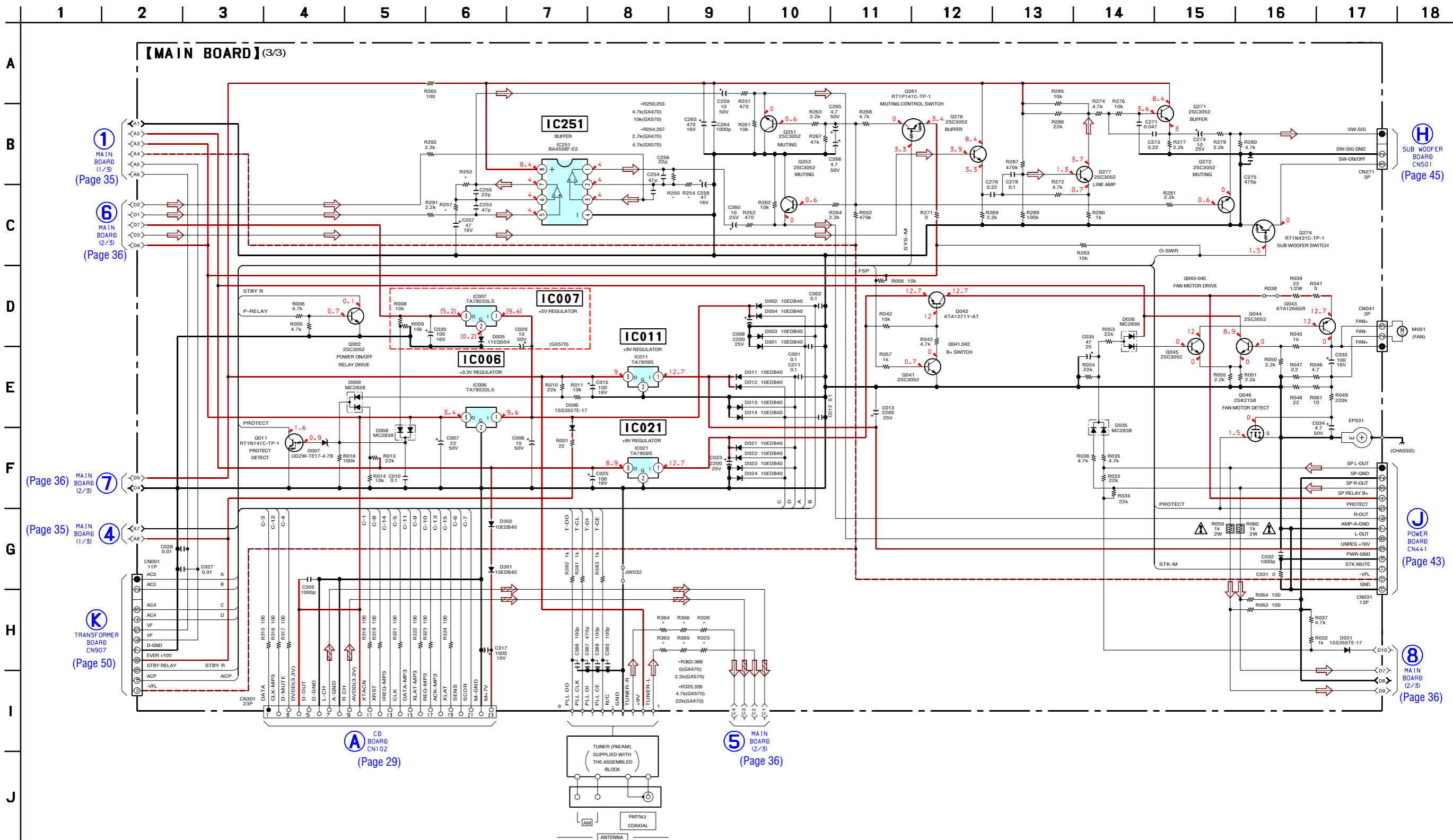
MAIN BOARD (3/3) (Page 37)

MAIN BOARD (2/3) (Page 36)

7-13. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 53 for IC Block Diagrams.

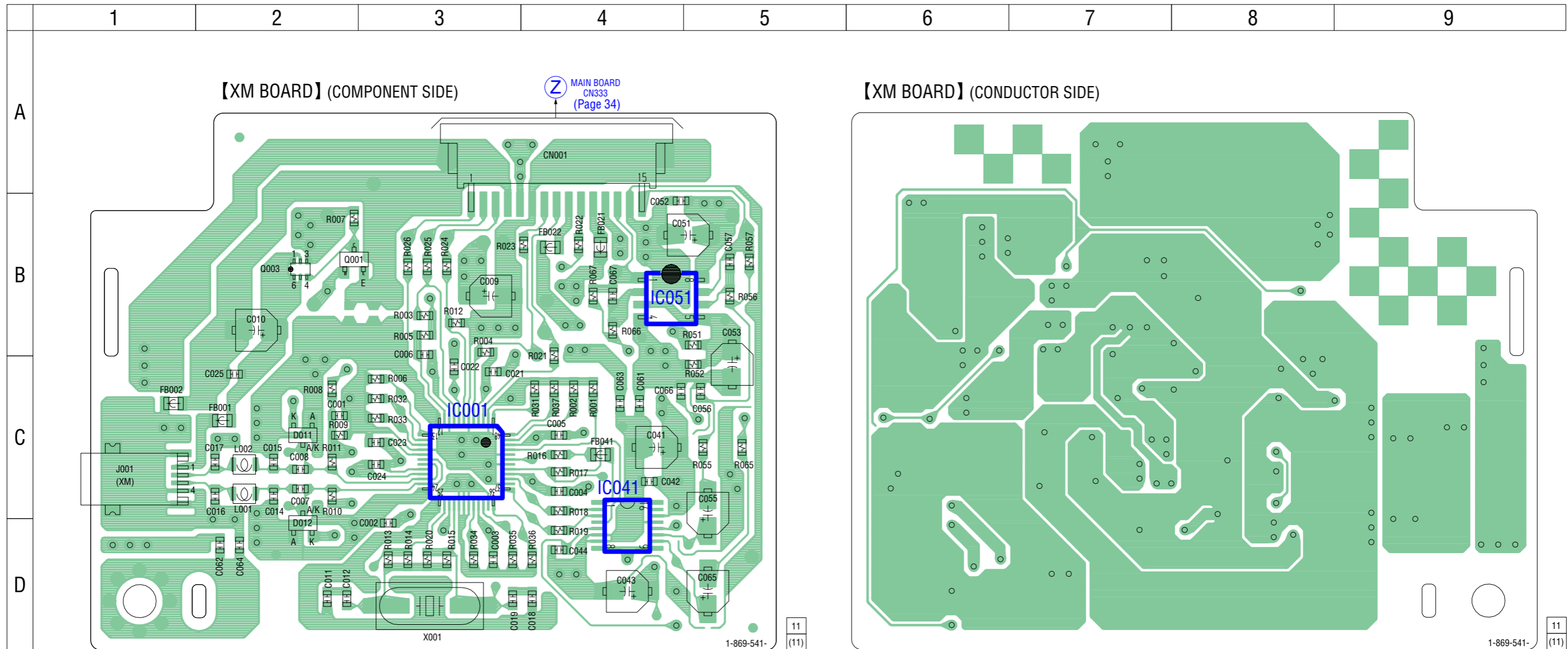


7-14. SCHEMATIC DIAGRAM – MAIN Board (3/3) –



7-15. PRINTED WIRING BOARD – XM Board (GX570) –

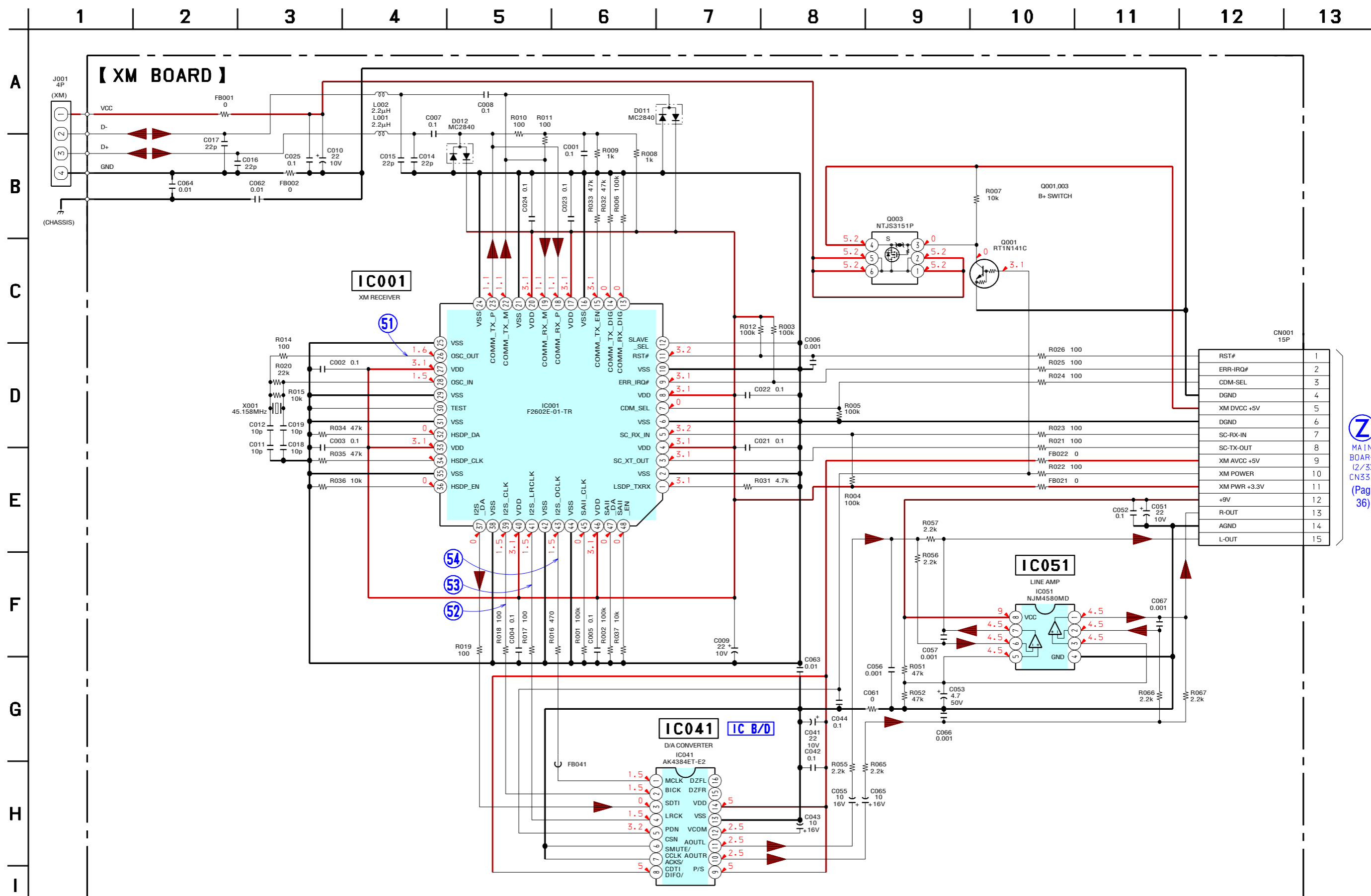
• See page 27 for Circuit Boards Location.  : Uses unleaded solder.



• Semiconductor Location

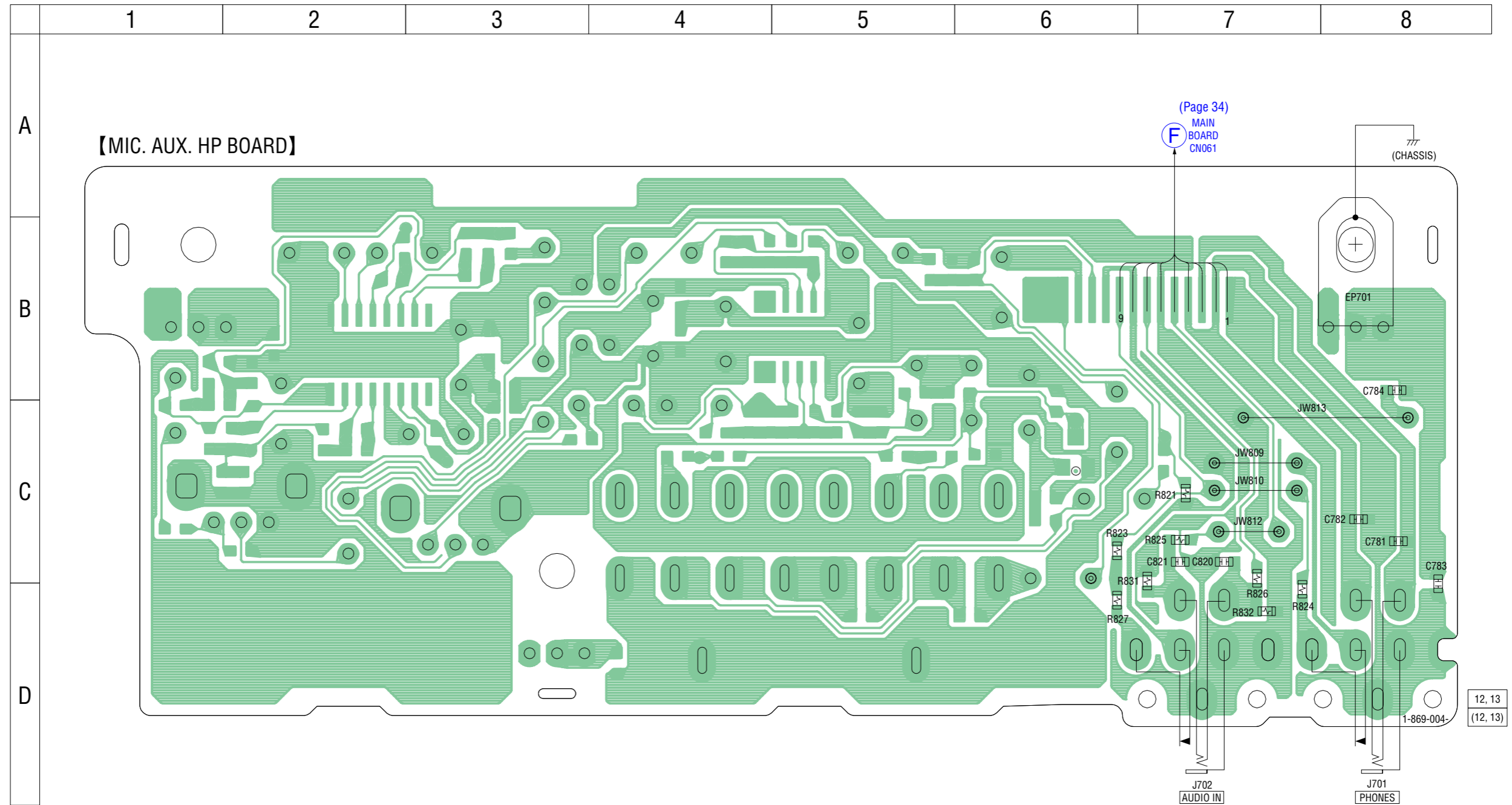
Ref. No.	Location
D011	C-2
D012	D-2
IC001	C-3
IC041	D-4
IC051	B-4
Q001	B-2
Q003	B-2

7-16. SCHEMATIC DIAGRAM – XM Board (GX570) – • See page 51 for Waveforms. • See page 53 for IC Block Diagrams. • See page 56 for IC Pin Function Description.



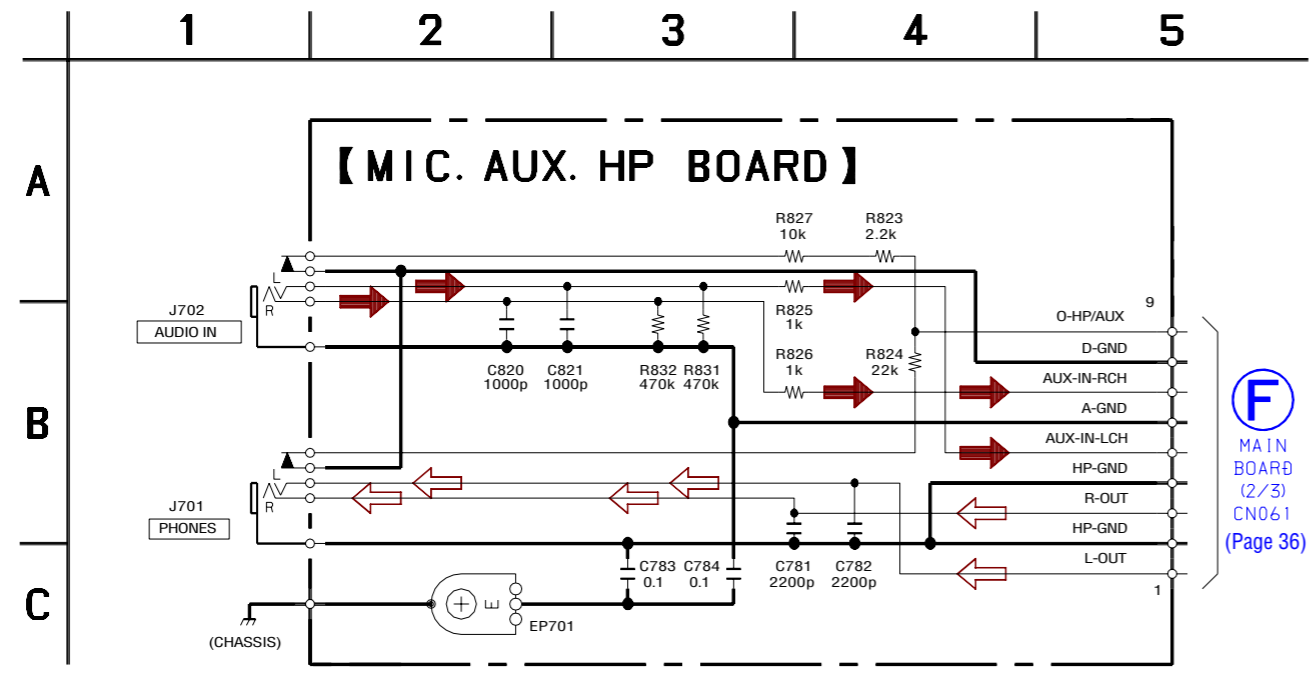
MAIN BOARD (2/3) CN333 (Page 36)


7-17. PRINTED WIRING BOARD – MIC. AUX. HP Board – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.

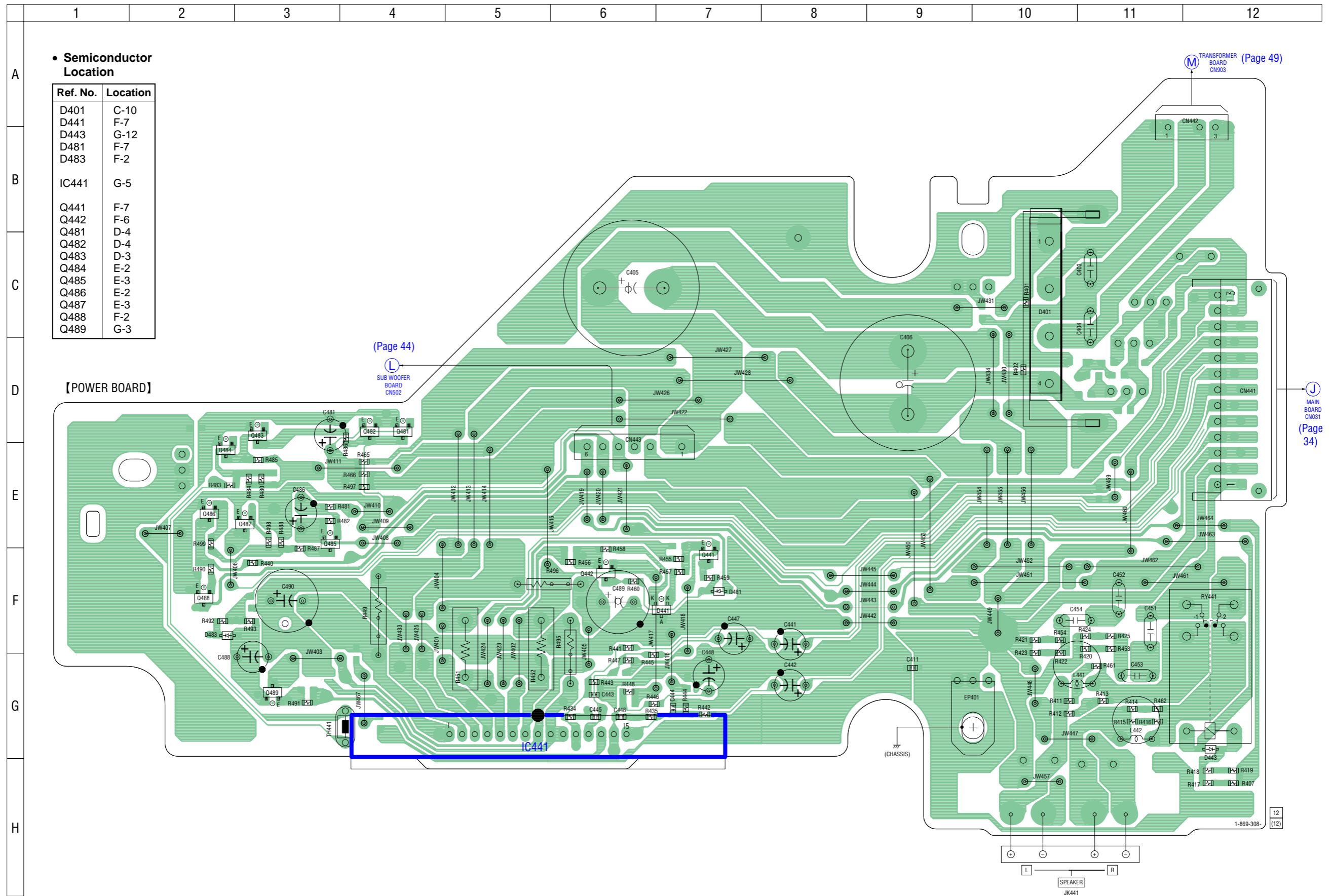




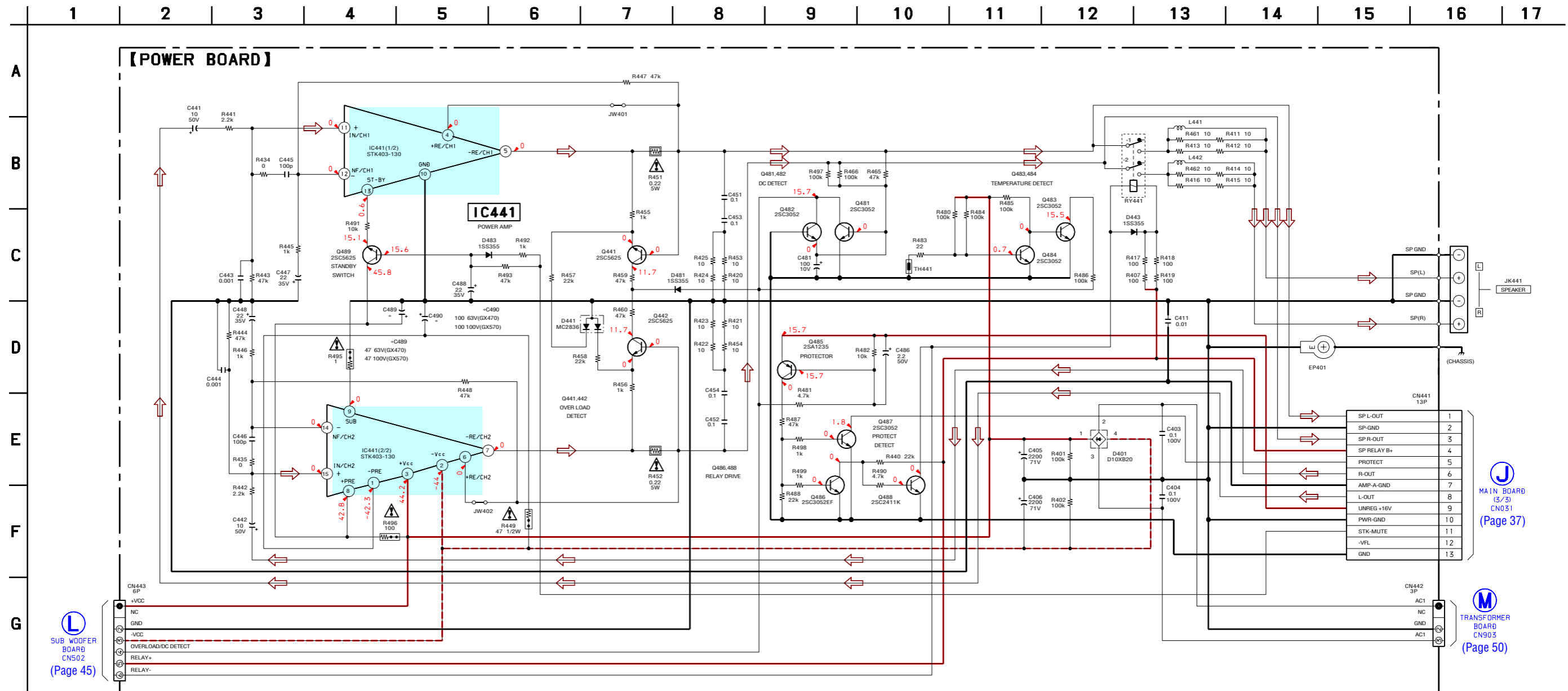
7-18. SCHEMATIC DIAGRAM – MIC. AUX. HP Board –




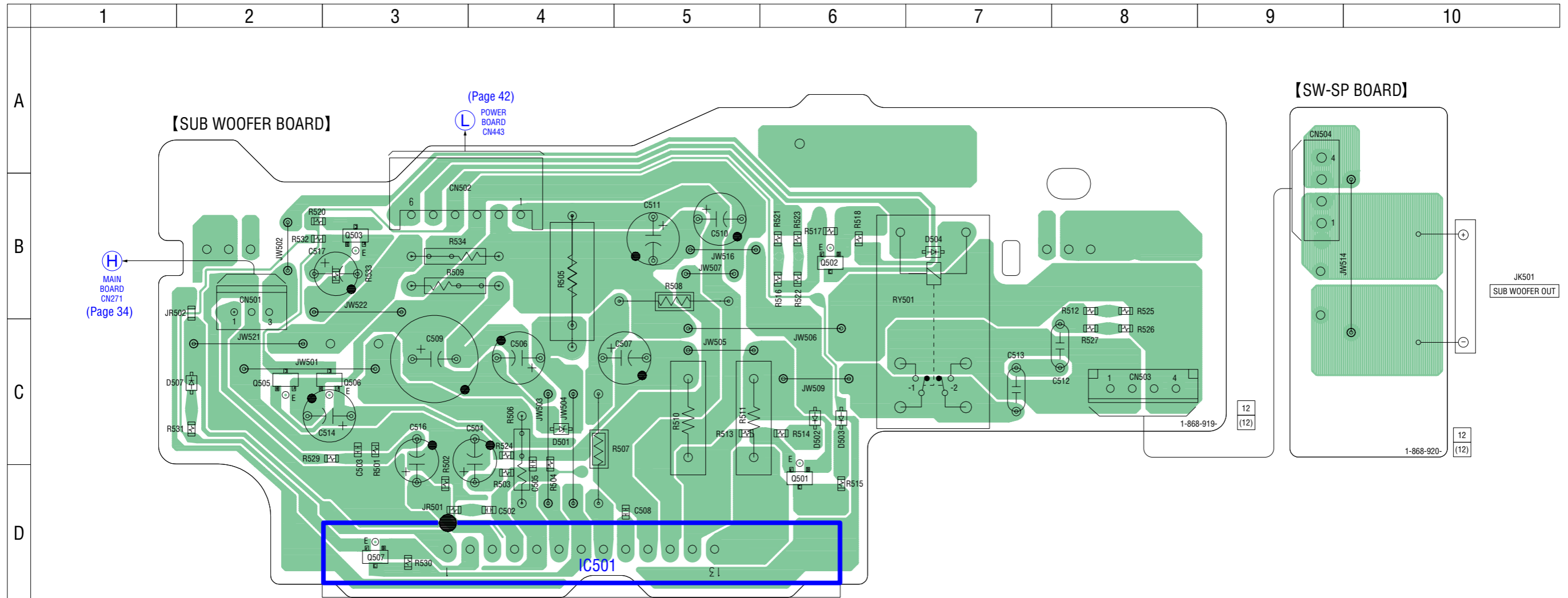
7-19. PRINTED WIRING BOARD – POWER Board – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.



7-20. SCHEMATIC DIAGRAM – POWER Board –



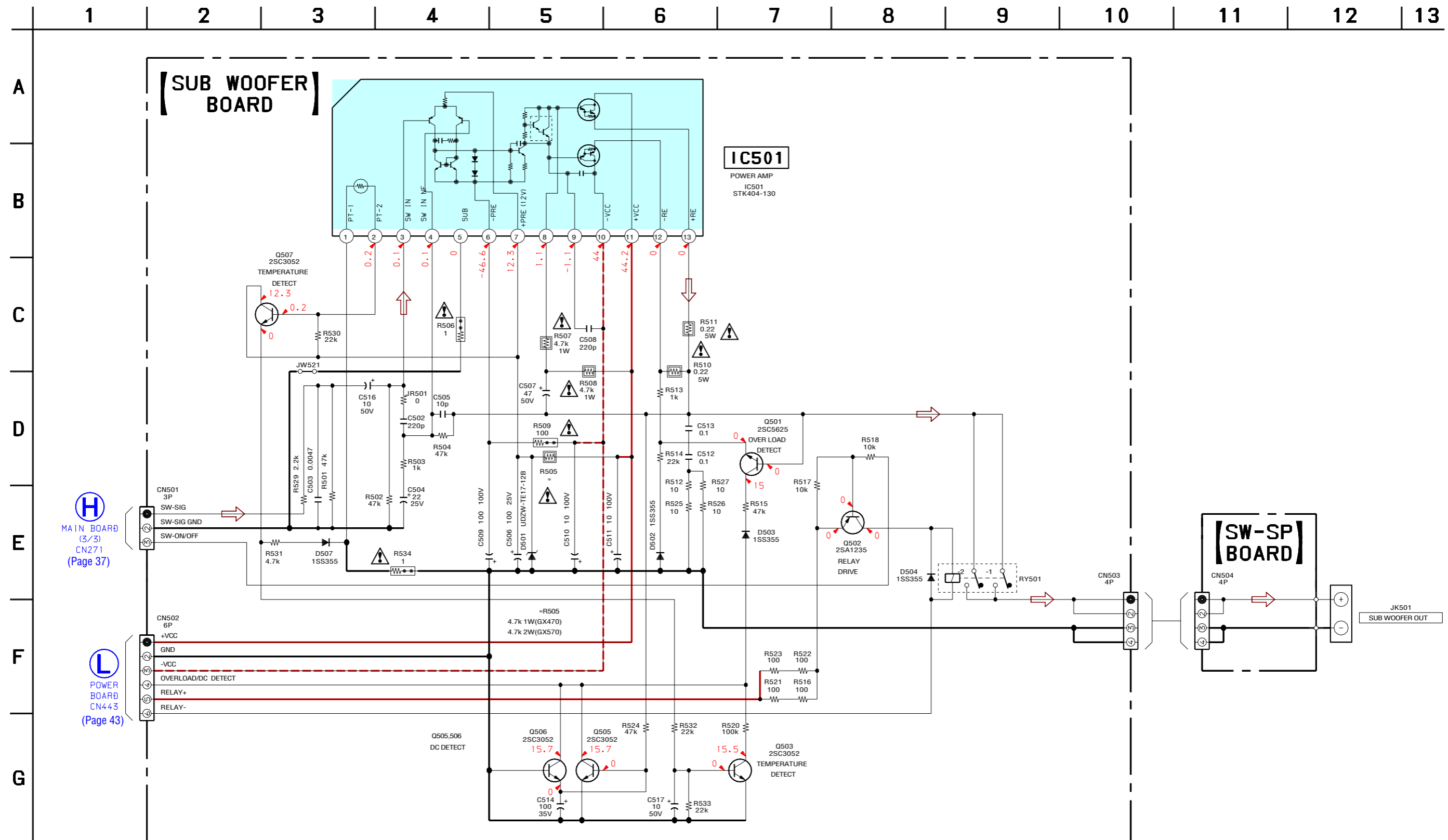
7-21. PRINTED WIRING BOARDS – SUB WOOFER Section – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.



• Semiconductor Location

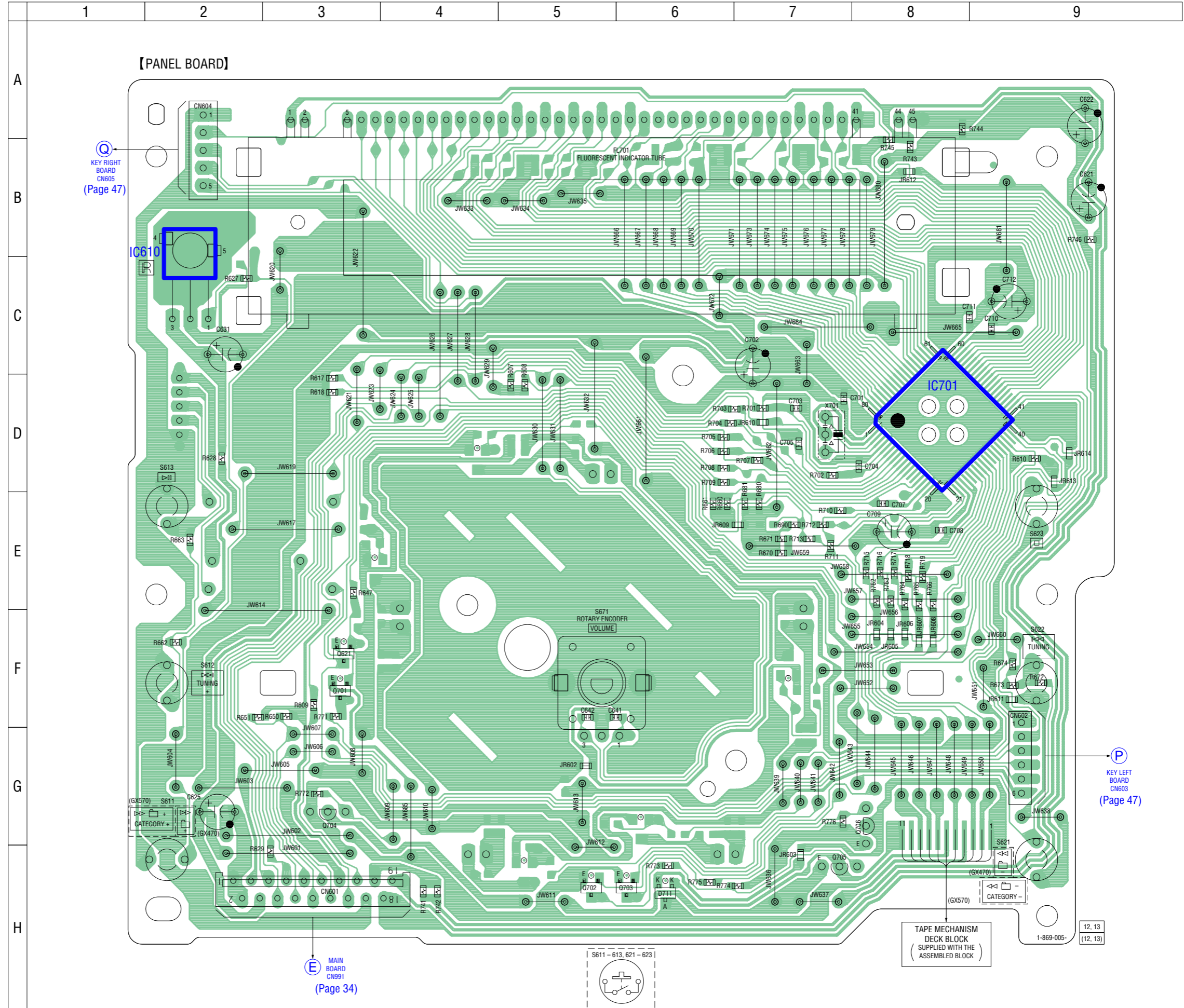
Ref. No.	Location
D501	C-4
D502	C-6
D503	C-6
D504	B-7
D507	C-2
IC501	D-4
Q501	D-6
Q502	B-6
Q503	B-3
Q505	C-2
Q506	C-3
Q507	D-3


7-22. SCHEMATIC DIAGRAM – SUB WOOFER Section –

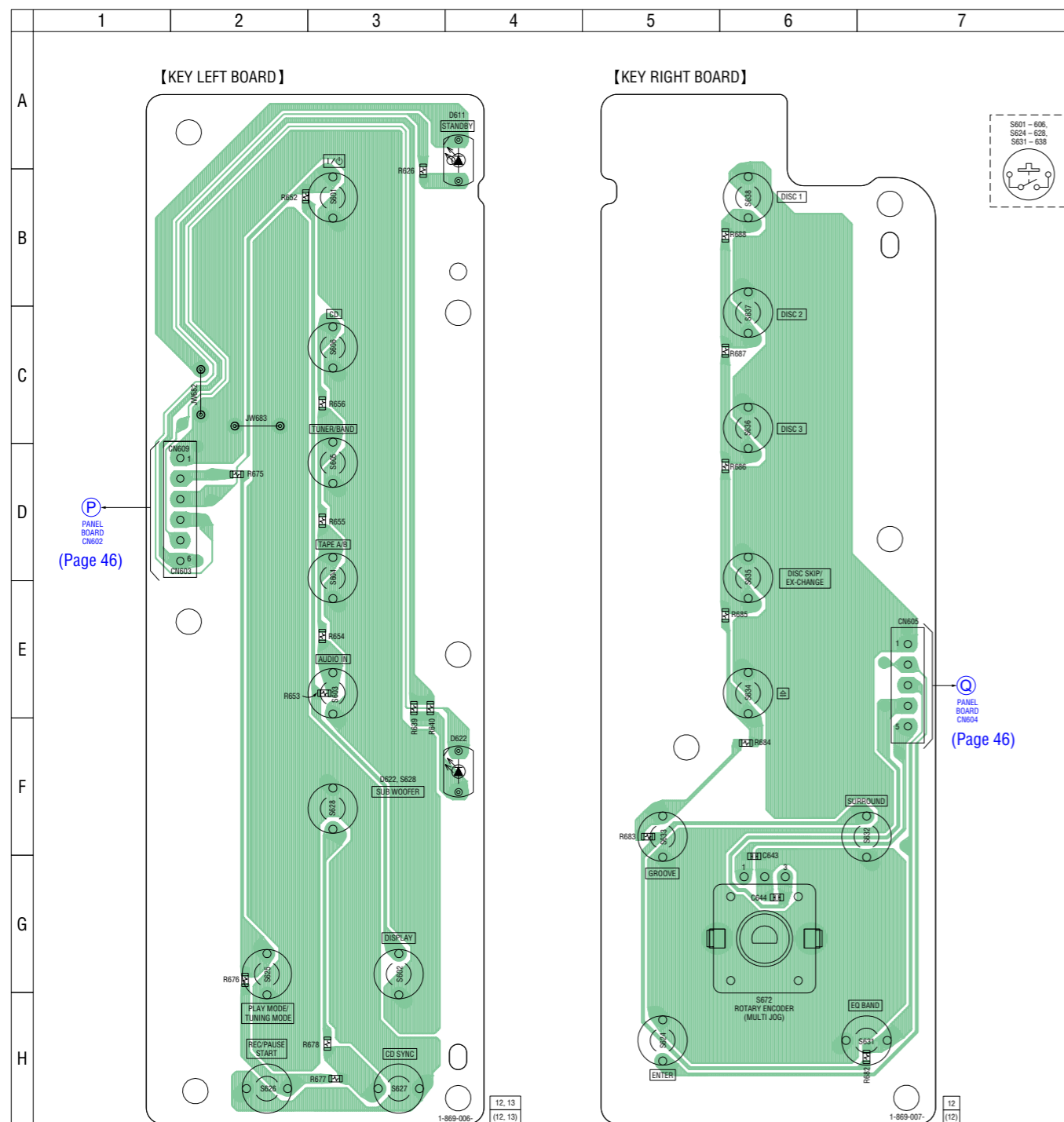


• Semiconductor Location

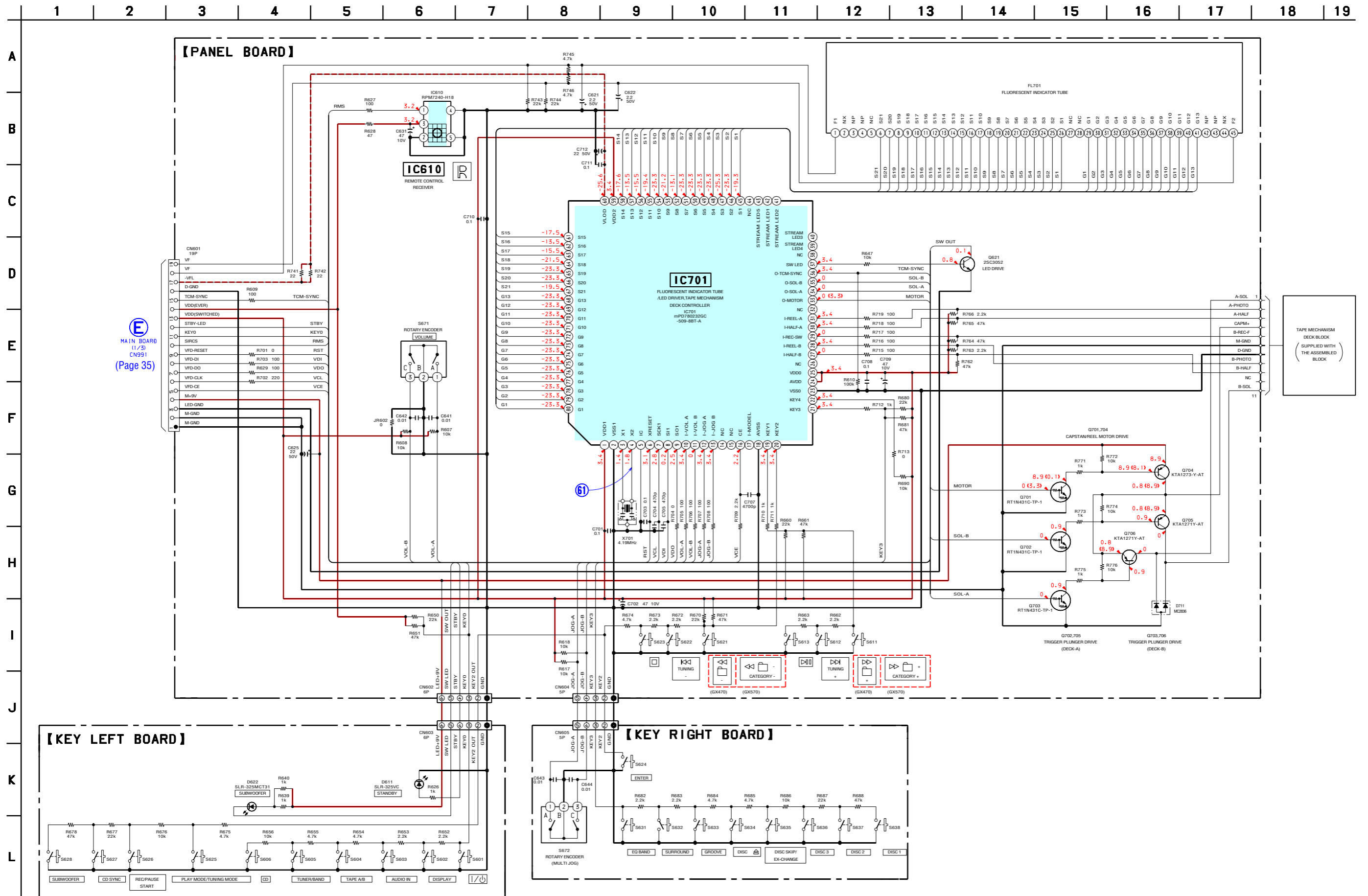
Ref. No.	Location
D711	H-6
IC610	B-1
IC701	D-8
Q621	F-3
Q701	F-3
Q702	H-5
Q703	H-6
Q704	G-3
Q705	H-7
Q706	G-8




7-24. PRINTED WIRING BOARDS – KEY Section – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.

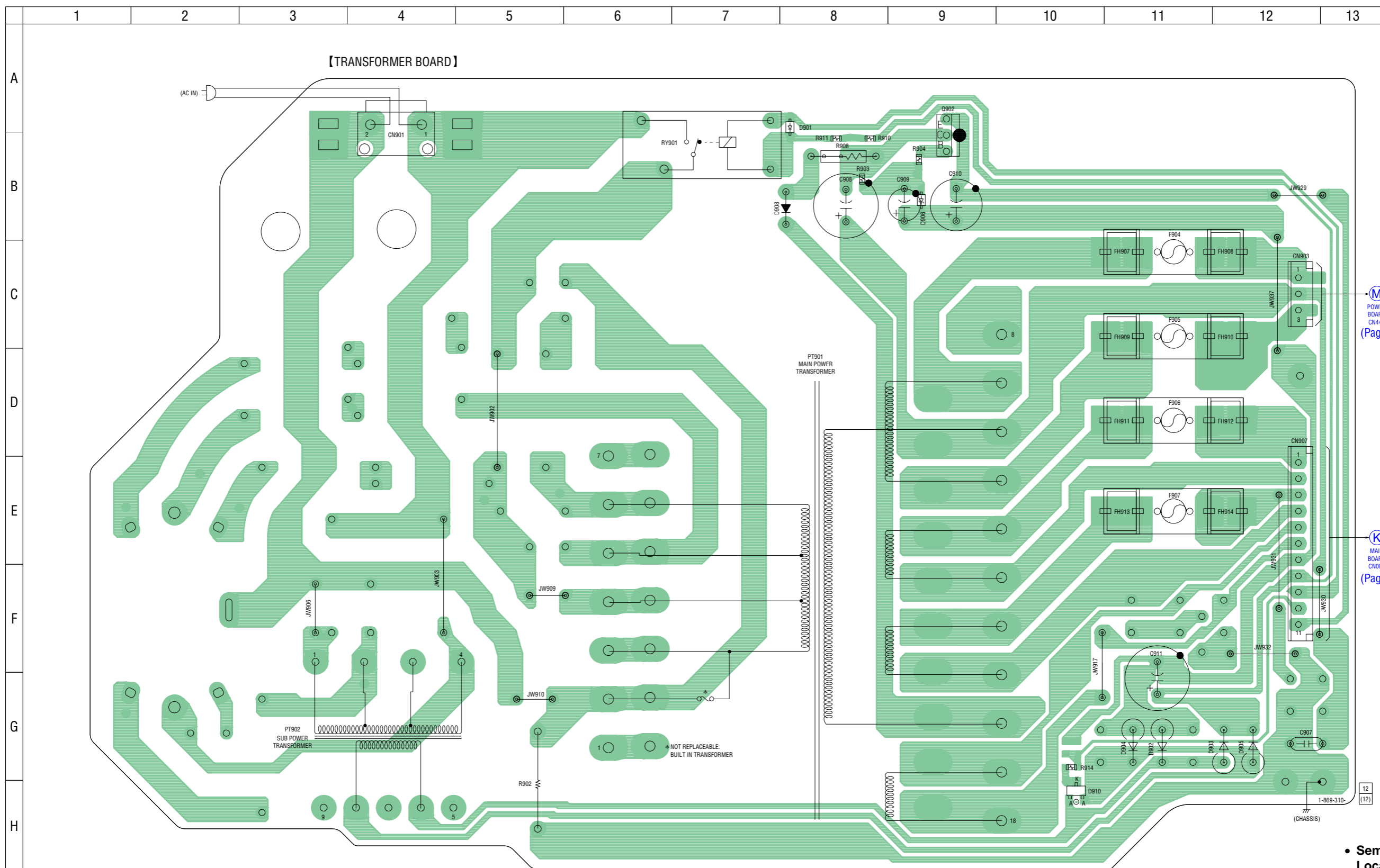


7-25. SCHEMATIC DIAGRAM – PANEL Section – • See page 51 for Waveforms. • See page 56 for IC Pin Function Description.





7-26. PRINTED WIRING BOARD – TRANSFORMER Board – • See page 27 for Circuit Boards Location.  : Uses unleaded solder.



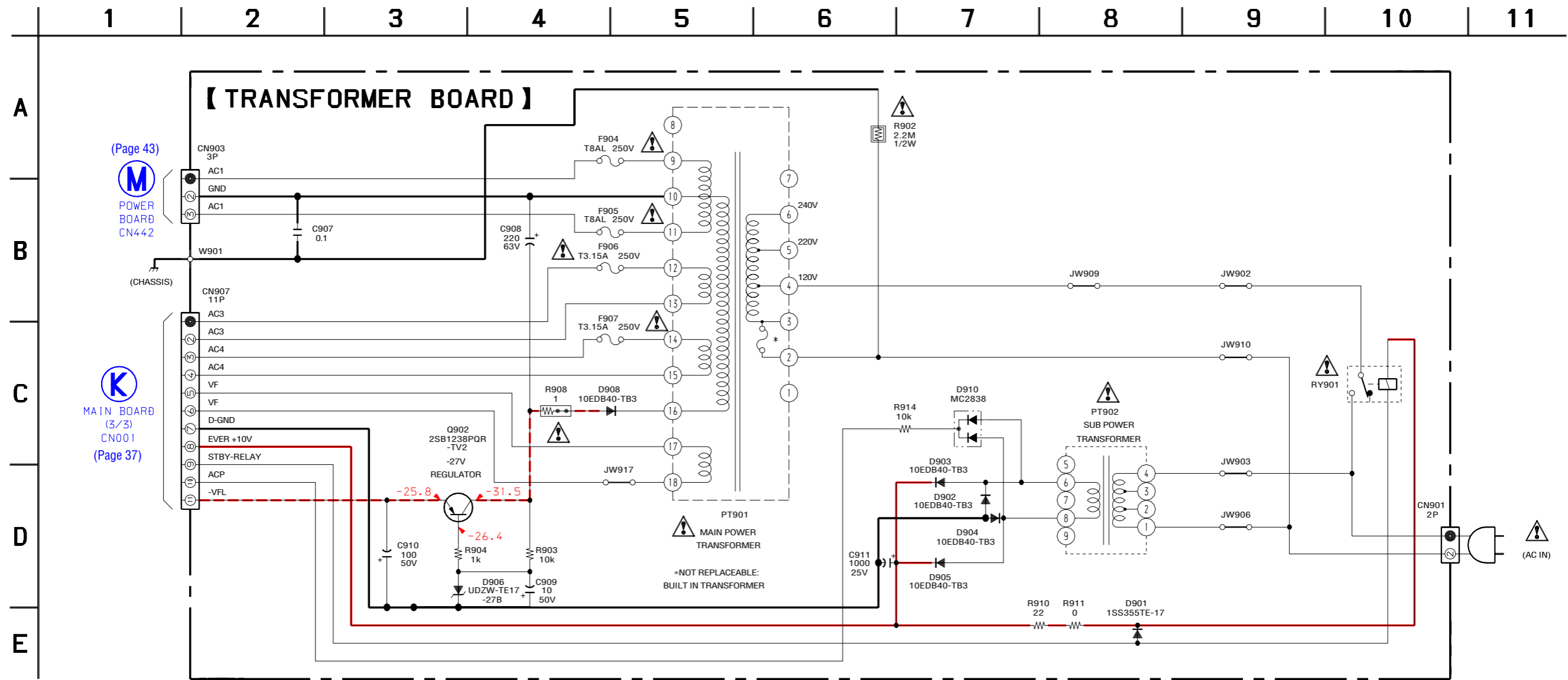
**(M)**  
POWER BOARD  
CN442  
(Page 42)

**(K)**  
MAIN BOARD  
CN001  
(Page 34)

• Semiconductor Location

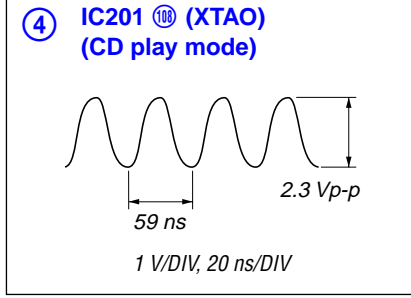
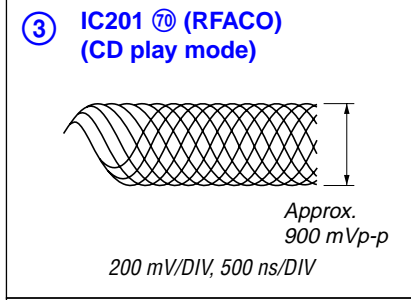
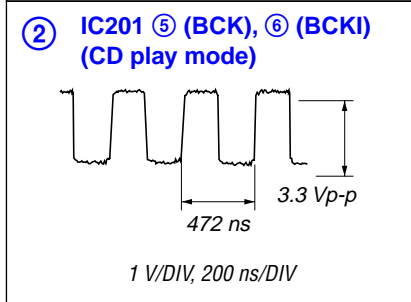
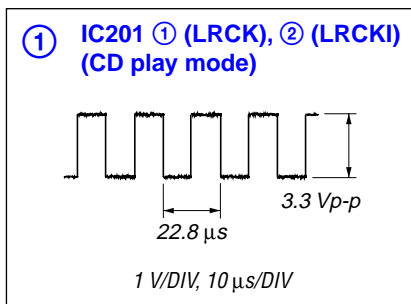
Ref. No.	Location
D901	A-8
D902	G-11
D903	G-11
D904	G-11
D905	G-12
D906	B-9
D908	B-8
D910	H-10
Q902	B-9

7-27. SCHEMATIC DIAGRAM – TRANSFORMER Board –

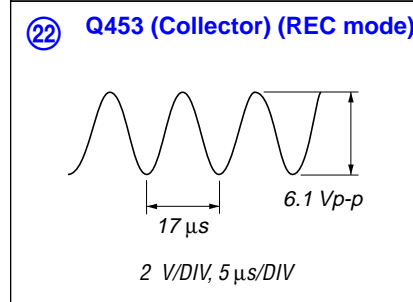
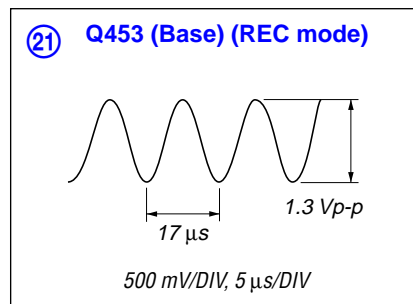


• Waveforms

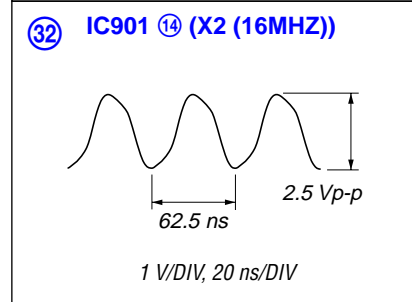
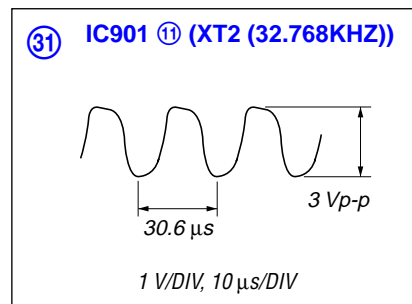
– CD Board –



– DECK Board –

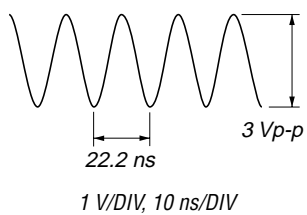


– MAIN Board –

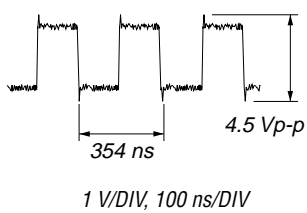


– XM Board –

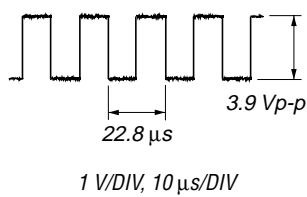
⑤① IC001 ②⑧ (OSC\_OUT)  
(XM mode)



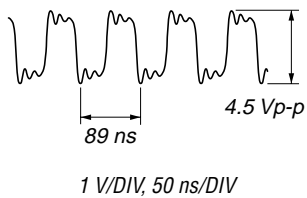
⑤② IC001 ③⑨ (I2S\_CLK)  
(XM mode)



⑤③ IC001 ④① (I2S\_LRCLK)  
(XM mode)

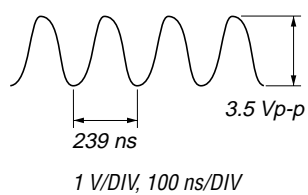


⑤④ IC001 ④③ (I2S\_OCLK)  
(XM mode)



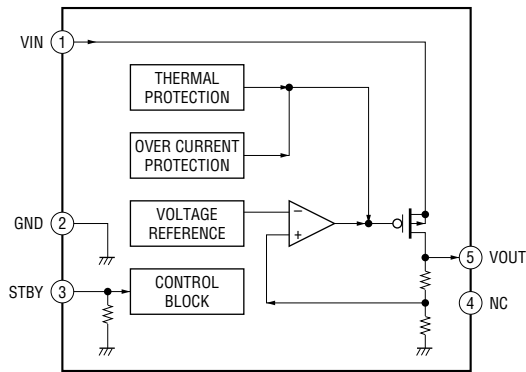
– PANEL Board –

⑥① IC701 ④ (X2)

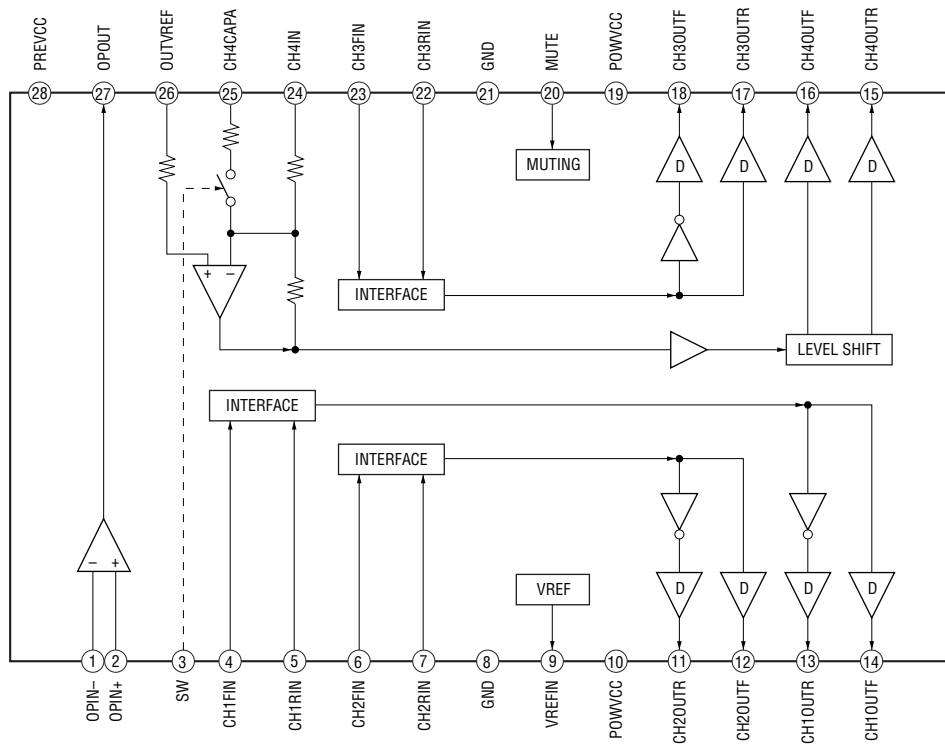


• IC Block Diagrams  
 – CD Board –

IC203 BH18LB1WG-TR

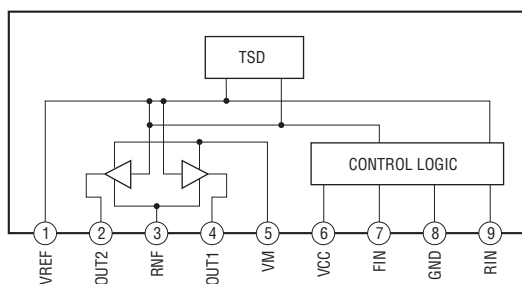


IC402 BA5947FM-E2



– DRIVER Board –

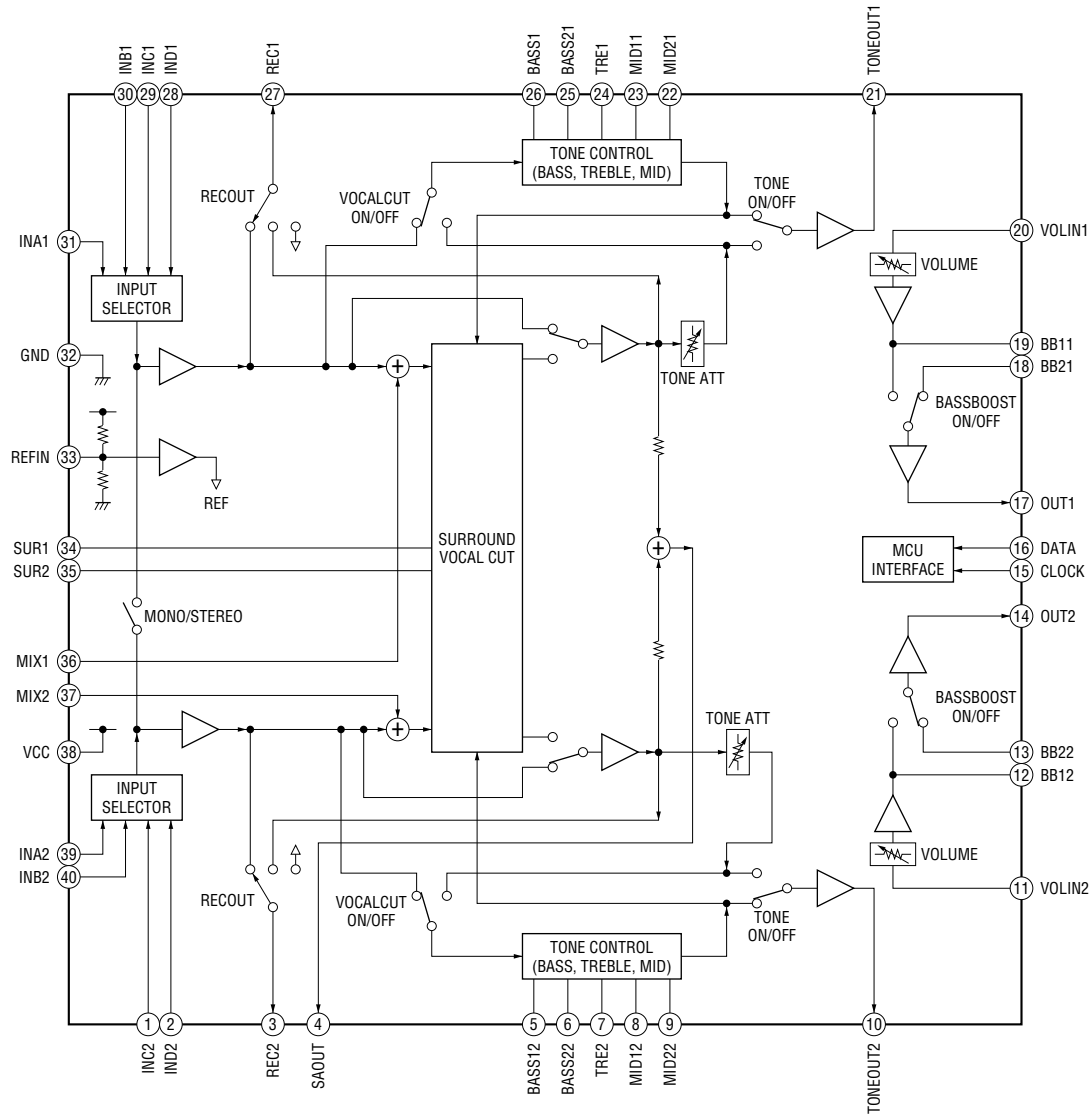
IC701, 712 BA6956AN



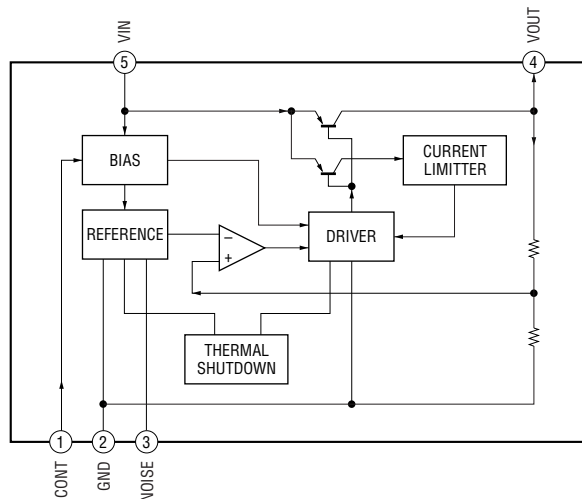
# HCD-GX470/GX570

– MAIN Board –

## IC101 R2S15207FP

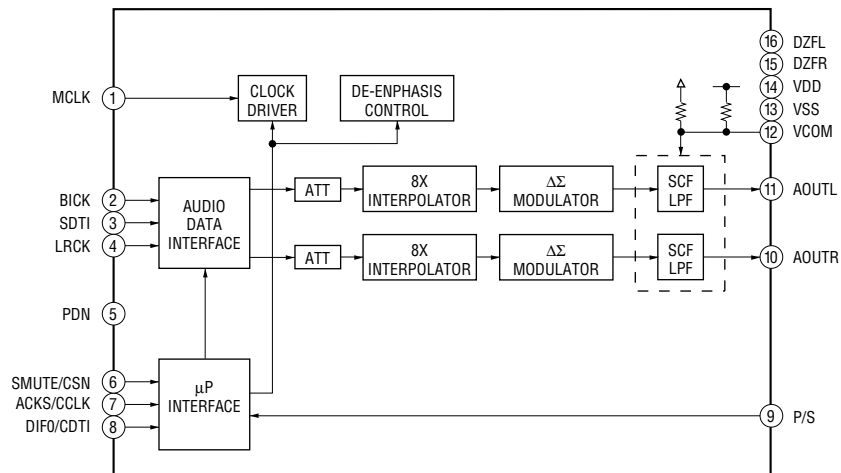


## IC301 MM1615ANLE



– XM Board –

IC041 AK4384ET-E2



# HCD-GX470/GX570

## • IC Pin Function Description

### CD BOARD IC201 CXD3014A-201R (CD DSP)

Pin No.	Pin Name	I/O	Description
1	LRCK	O	L/R sampling clock signal output terminal
2	LRCKI	I	L/R sampling clock signal input terminal
3	PCMD	O	Serial data output terminal
4	PCMDI	I	Serial data input terminal
5	BCK	O	Bit clock signal output terminal
6	BCKI	I	Bit clock signal input terminal
7	XTACN	I	Oscillation circuit on/off control signal input from the system controller "L": oscillation stop, "H": self-oscillation
8	XRST	I	System reset signal input from the system controller "L": reset
9	VSS	-	Ground terminal
10	IREQ-MP3	O	MP3 data request signal output to the system controller
11	CLOK	I	CD serial data transfer clock signal input from the system controller
12	DATA2	I	MP3 serial data input from the system controller
13	XLAT-MP3	I	MP3 serial data latch pulse signal input from the system controller
14	REQ-MP3	I	MP3 data request signal input from the system controller
15	ACK-MP3	O	MP3 acknowledge signal output to the system controller
16	XLAT	I	CD serial data latch pulse signal input from the system controller
17	VDD	-	Power supply terminal (+1.8V)
18	SVSS	-	Ground terminal
19	SVDD	-	Power supply terminal (+1.8V)
20	SENS	O	Internal status (SENSE) signal output to the system controller
21	WFCK	O	Write frame clock signal output terminal Not used
22	XUGF	O	XUGF signal output terminal Not used
23	XPCK	O	XPCK signal output terminal Not used
24	GFS	O	Guard frame sync signal output terminal Not used
25	C2PO	O	C2 pointer signal output terminal Not used
26	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller
27	VDD	-	Power supply terminal (+1.8V)
28	COUT	O	Numbers of track counted signal output terminal Not used
29	SVSS	-	Ground terminal
30	SVDD	-	Power supply terminal (+1.8V)
31	MIRR	O	Mirror signal output terminal Not used
32	DFCT	O	Defect signal output terminal Not used
33	FOK	O	Focus OK signal output terminal Not used
34	VSS	-	Ground terminal
35	VDD	-	Power supply terminal (+1.8V)
36	VSS	-	Ground terminal
37	LOCK	O	GFS is sampled by 460 Hz "H" output when GFS is "H" Not used
38	MDP	O	Spindle motor servo control signal output terminal
39	SSTP	I	Disc inner position detection signal input terminal
40	IOVSS1	-	Ground terminal
41	SFDR	O	Sled servo drive signal (+) output terminal
42	SRDR	O	Sled servo drive signal (-) output terminal
43	TFDR	O	Tracking servo drive signal (+) output terminal
44	TRDR	O	Tracking servo drive signal (-) output terminal
45	FFDR	O	Focus servo drive signal (+) output terminal



Pin No.	Pin Name	I/O	Description
46	FRDR	O	Focus servo drive signal (-) output terminal
47	IOVDD1	-	Power supply terminal (+3.3V)
48	AVDD0	-	Power supply terminal (+3.3V)
49	AVSS0	-	Ground terminal
50	E	I	E signal input from the optical pick-up block
51	F	I	F signal input from the optical pick-up block
52	TEI	I	Tracking error signal input terminal
53	TEO	O	Tracking error signal output terminal
54	FEI	I	Focus error signal input terminal
55	FEO	O	Focus error signal output terminal
56	VC	O	Middle point voltage output terminal
57	A	I	A signal input from the optical pick-up block
58	B	I	B signal input from the optical pick-up block
59	C	I	C signal input from the optical pick-up block
60	D	I	D signal input from the optical pick-up block
61	AVDD4	-	Power supply terminal (+3.3V)
62	RFDCO	O	RFDC signal output terminal Not used
63	PDSSENS	I	Reference voltage input terminal for PD
64	AC_SUM	O	RFAC summing amplifier signal output terminal
65	EQ_IN	I	RF equalizer circuit input terminal
66	LD	O	Laser diode on/off control signal output to the automatic power control circuit "H": laser diode on
67	PD	I	Light amount monitor input from the laser diode of optical pick-up block
68	RFC	I	Equalizer cut off frequency adjustment terminal
69	AVSS4	-	Ground terminal
70	RFACO	O	EFM signal output terminal
71	RFACI	I	EFM signal input terminal
72	AVDD3	-	Power supply terminal (+3.3V)
73	BIAS	I	Asymmetry circuit constant current input terminal
74	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
75	ASYO	O	Playback EFM full-swing output terminal
76	VPCO	O	Charge pump output terminal for broad-band EFM PLL
77	VCTL	I	VCO2 control voltage input terminal for broad-band EFM PLL
78	AVSS3	-	Ground terminal
79	CLTV	I	VCO1 control voltage input terminal for multiplier
80	FILO	O	Filter output terminal for master PLL
81	FILI	I	Filter input terminal for master PLL
82	PCO	O	Charge pump output terminal for master PLL
83	SVSS	-	Ground terminal
84	SVDD	-	Power supply terminal (+1.8V)
85	SSTB-MP3	I	MP3 standby on/off control signal input terminal "L": standby Not used
86	VDD	-	Power supply terminal (+1.8V)
87	VSS	-	Ground terminal
88	TEST1	I	Input terminal for the test Normally: fixed at "L"
89	DATA	I	CD serial data input from the system controller
90	CLK2	I	MP3 serial data transfer clock signal input from the system controller
91	SVSS	-	Ground terminal

Pin No.	Pin Name	I/O	Description
92	SVDD	-	Power supply terminal (+2.5V)
93	JTAGTCK	I	Clock signal input terminal (for JTAG) Not used
94	JTAGTDI	I	Data input terminal (for JTAG) Not used
95	JTAGTDO	O	Data output terminal (for JTAG) Not used
96	JTAGTMS	I	Mode select signal input terminal (for JTAG) Not used
97	TRST	I	Reset signal input terminal (for JTAG) Not used
98	VSS	-	Ground terminal
99	VDD	-	Power supply terminal (+1.8V)
100	IOVDD2	-	Power supply terminal (+3.3V)
101	DOUT	O	Digital audio signal output terminal Not used
102	TEST	I	Input terminal for the test Normally: fixed at "L"
103	TES1	I	Input terminal for the test Normally: fixed at "L"
104	IOVSS2	-	Ground terminal
105	PLLVD	-	Power supply terminal (+1.8V)
106	PLLVSS	-	Ground terminal
107	XVSS	-	Ground terminal
108	XTAO	O	System clock output terminal (16.9344 MHz)
109	XTAI	I	System clock input terminal (16.9344 MHz)
110	XVDD	-	Power supply terminal (+1.8V)
111	AVDD1	-	Power supply terminal (+3.3V)
112	AOUT1	O	L-ch analog audio signal output terminal
113	VREFL	O	L-ch reference voltage output terminal
114	AVSS1	-	Ground terminal
115	AVSS2	-	Ground terminal
116	VREFR	O	R-ch reference voltage output terminal
117	AOUT2	O	R-ch analog audio signal output terminal
118	AVDD2	-	Power supply terminal (+3.3V)
119	IOVDD0	-	Power supply terminal (+3.3V)
120	IOVSS0	-	Ground terminal

## MAIN BOARD IC901 uPD78F0547GC (S)-UBT-A (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	I-AC-PULSE	I	AC power detection signal input terminal
2	O-REC/PB	O	Recording/playback selection signal output terminal "L": playback, "H": recording
3	O-REC-MUTE	O	Recording muting on/off control signal output terminal "L": muting on
4	O-BIAS	O	Recording bias on/off control signal output terminal "H": bias on
5	O-STK-MUTE	O	Standby signal output to the power amplifier (for front speaker)
6	O-SW_GAIN	O	Sub woofer gain control signal output terminal Not used
7	O-POWER-RELAY	O	Power on/off relay drive signal output terminal "H": power on
8	O-XM-POWER3.3	O	Power on/off control signal output terminal for XM section (GX570)
9	I-AC-CUT	I	AC power off detection signal input terminal
10	I-XRESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
11	XT2 (32.768KHZ)	O	Sub system clock output terminal (32.768 kHz)
12	XT1 (32.768KHZ)	I	Sub system clock input terminal (32.768 kHz)
13	FLMDO	I	Internal flash memory data writing mode control signal input terminal
14	X2 (16MHZ)	O	Main system clock output terminal (16 MHz)
15	X1 (16MHZ)	I	Main system clock input terminal (16 MHz)
16	REGC	-	External capacitor connection terminal for regulator
17	VSS	-	Ground terminal
18	EVSS	-	Ground terminal
19	VDD	-	Power supply terminal (+3.3V)
20	EVDD	-	Power supply terminal (+3.3V)
21	O-SYS-MUTE	O	Muting on/off control signal output terminal "L": muting on
22	O-SWR	O	Sub woofer speaker on/off relay drive signal output terminal "L": sub woofer speaker on
23	O-FRONT-SP-RELAY	O	Front speaker on/off relay drive signal output terminal "H": front speaker on
24	O-XTCN	O	Oscillation circuit on/off control signal output to the CD DSP "L": oscillation stop, "H": self-oscillation
25	O-MP3-RST	O	System reset signal output terminal "L": reset Not used
26	O-MP3-XLAT/ O-MP3-CS	O	MP3 serial data latch pulse signal output to the CD DSP
27	I-MP3-ACK	I	MP3 acknowledge signal input from the CD DSP
28	O-XLAT/ O-MP3-STB	O	CD serial data latch pulse signal output to the CD DSP
29	I-MP3-REQ	I	MP3 data request signal input from the CD DSP
30	O-MP3-CS/ O-MP3-LP	O	MP3 data request signal output to the CD DSP
31	O-D-MUTE/ O-XLT	O	System reset signal output to the motor/coil driver "L": reset
32	O-XRST	O	System reset signal output to the CD DSP "L": reset
33	O-LM-R	O	Loading motor control signal output terminal (reverse direction)
34	O-LM-F	O	Loading motor control signal output terminal (forward direction)
35	O-TM-R	O	Table motor control signal output terminal (reverse direction)
36	O-TM-F	O	Table motor control signal output terminal (forward direction)
37	I-CD-NUMBER-SENS	I	Disc table address sensor input terminal
38	I-OPEN-SW	I	Disc table open/close detection switch input terminal "L": open, "H": close
39	I-XTUNED	I	Tuning detection signal input terminal Not used

Pin No.	Pin Name	I/O	Description
40	I-SCOR	I	Subcode sync (S0+S1) detection signal input from the CD DSP
41	I-XM-IRQ	I	Interrupt request signal input from the XM receiver (GX570)
42	O-LC23003-CE	O	Chip enable signal output to the tuner (FM/AM)
43	O-LC23003-DO	O	Serial data output to the tuner (FM/AM)
44	O-LC23003-CLK	O	Serial data transfer clock signal output to the tuner (FM/AM)
45	I-LC23003-DI	I	Serial data input from the tuner (FM/AM)
46	O-XM-DTIC-RESET	O	Reset signal output to the XM receiver (GX570)
47	O-XM-POWER	O	Power on/off control signal output terminal for XM section (GX570)
48	O-XM-MUTE	O	Muting control signal output terminal for XM section (GX570)
49	O-XM-DTIC-CMD	O	Command mode select signal output to the XM receiver (GX570)
50	I-XM-RXD	I	Receive data input from the XM receiver (GX570)
51	O-XM-TXD	O	Transmit data output to the XM receiver (GX570)
52	O-CD-DATA	O	CD serial data output to the CD DSP
53	I-CD-SENS	I	Internal status (SENSE) signal input from the CD DSP
54	O-CD-CLK	O	CD serial data transfer clock signal output to the CD DSP
55	I-MIC-DET	I	Microphone plug insert detection signal input terminal "L": microphone plug insert Not used
56	O-R2S15208SP-DATA	O	Serial data output terminal Not used
57	O-AUDIO-CLK	O	Serial data transfer clock signal output to the electrical volume
58	O-R2S15207FP-DATA	O	Serial data output to the electrical volume
59	AVREF	I	Reference voltage (+3.3V) input terminal
60	AVSS	-	Ground terminal
61	I-HP/AUDIO IN	I	Headphone plug and audio in plug insert detection signal input terminal "L": headphone plug or audio in plug insert
62	I-SUFFIX	I	Setting terminal for the model and destination
63	I-VACS	I	VACS signal input terminal (A/D input)
64	I-PROTECTOR	I	Protector detection signal input terminal
65	I-KEY0	I	Front panel key input terminal (A/D input)
66	I-CD-ENCODER	I	Disc table address sensor (rotary encoder) input terminal
67	I-MODEL	I	Setting terminal for the model and destination
68	I-STREAM	I	Audio signal input for stream LED (A/D input) Not used
69	O-STBY-LED	O	LED drive signal output terminal for STANDBY indicator "H": LED on
70	O-MP3-CLK	O	MP3 serial data transfer clock signal output to the CD DSP
71	I-MP3-DATA	I	MP3 serial data input terminal
72	O-MP3-DATA	O	MP3 serial data output to the CD DSP
73	I-TCM-SYNC	I	Sync signal input from the tape mechanism deck controller
74	O-VFD-RESET	O	System reset signal output to the fluorescent indicator tube/LED driver "L": reset
75	O-VFD-CE	O	Chip enable signal output to the fluorescent indicator tube/LED driver
76	O-VFD-DATA	O	Serial data output to the fluorescent indicator tube/LED driver
77	I-VFD-DATA	I	Serial data input from the fluorescent indicator tube/LED driver
78	O-VFD-CLK	O	Serial data transfer clock signal output to the fluorescent indicator tube/LED driver
79	I-WAKEUP	I	Wake up signal input terminal
80	I-XSIRCS-IN	I	SIRCS signal input from the remote control receiver

**PANEL BOARD IC701 uPD780232GC-509-8BT-A  
(FLUORESCENT INDICATOR TUBE/LED DRIVER, TAPE MECHANISM DECK CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	VDD1	-	Power supply terminal (+3.3V)
2	VSS1	-	Ground terminal
3	X1	I	System clock input terminal (4.19 MHz)
4	X2	O	System clock output terminal (4.19 MHz)
5	IC	I	Input terminal for the IC test Normally: fixed at "L"
6	XRESET	I	System reset signal input from the system controller "L": reset
7	SCK1	I	Serial data transfer clock signal input from the system controller
8	SII	I	Serial data input from the system controller
9	SO1	O	Serial data output to the system controller
10	I-VOL A	I	Jog dial pulse input from the rotary encoder (VOLUME) (A phase input)
11	I-VOL B	I	Jog dial pulse input from the rotary encoder (VOLUME) (B phase input)
12	I-JOG A	I	Jog dial pulse input from the rotary encoder (multi jog) (A phase input)
13	I-JOG B	I	Jog dial pulse input from the rotary encoder (multi jog) (B phase input)
14, 15	NC	I	Not used
16	CE	I	Chip select signal input from the system controller
17	I-MODEL	I	Destination setting terminal
18	AVSS	-	Ground terminal
19 to 22	KEY1 to KEY4	I	Front panel key input terminal (A/D input)
23	VSS0	-	Ground terminal
24	AVDD	-	Power supply terminal (+5V)
25	VDD0	-	Power supply terminal (+5V)
26	NC	I	Not used
27	I-HALF-B	I	Deck-B cassette detection signal input from the tape mechanism deck block "L": cassette in
28	I-REEL-B	I	Deck-B tape reel rotating detection signal input from the tape mechanism deck block
29	I-REC-SW	I	Recording-proof detection signal input from the tape mechanism deck block "L": recording possible
30	I-HALF-A	I	Deck-A cassette detection signal input from the tape mechanism deck block "L": cassette in
31	I-REEL-A	I	Deck-A tape reel rotating detection signal input from the tape mechanism deck block
32	NC	I	Not used
33	O-MOTOR	O	Capstan/reel motor drive signal output terminal "H": motor on
34	O-SOL-A	O	Deck-A side trigger plunger drive signal output terminal "H": plunger on
35	O-SOL-B	O	Deck-B side trigger plunger drive signal output terminal "H": plunger on
36	O-TCM-SYNC	O	Sync signal output to the system controller
37	SW LED	O	LED rive signal output of the SUBWOOFER indicator "H": LED on
38	NC	I	Not used
39 to 43	STREAM LED1 to STREAM LED5	O	LED rive signal output terminal "H": LED on Not used
44	NC	I	Not used
45 to 58	S1 to S14	O	Segment drive signal output to the fluorescent indicator tube
59	VDD2	-	Power supply terminal (+5V)
60	VLOD	-	Power supply terminal (-27V)
61 to 67	S15 to S21	O	Segment drive signal output to the fluorescent indicator tube
68 to 80	G13 to G11	O	Grid drive signal output to the fluorescent indicator tube

## XM BOARD IC001 F2602E-01-TR (XM RECEIVER) (GX570)

Pin No.	Pin Name	I/O	Description
1	LSDP_TXRX	-	Not used
2	VSS	-	Ground terminal
3	SC_XT_OUT	O	Serial data output to the system controller
4	VDD	-	Power supply terminal (+3.3V)
5	SC_RX_IN	I	Serial data input from the system controller
6	VSS	-	Ground terminal
7	CDM_SEL	I	Command mode select signal input from the system controller
8	VDD	-	Power supply terminal (+3.3V)
9	ERR_IRQ#	O	Interrupt request signal output to the system controller
10	VSS	-	Ground terminal
11	RST#	I	Reset signal input from the system controller
12	SLAVE_SET	I	Master/slave mode setting terminal "L": Master mode, "H": Slave mode Fixed at "L" in this set
13	COMM_RX_DIG	-	Not used
14	COMM_TX_DIG	-	Not used
15	COMM_TX_EN	-	Not used
16	VSS	-	Ground terminal
17	VDD	-	Power supply terminal (+3.3V)
18	CDMM_RX_P	I	XM receiver differential signal (positive) input terminal
19	CDMM_RX_M	I	XM receiver differential signal (negative) input terminal
20	VDD	-	Power supply terminal (+3.3V)
21	VSS	-	Ground terminal
22	CDMM_TX_M	O	XM transmitter differential signal (negative) output terminal
23	CDMM_TX_P	O	XM transmitter differential signal (positive) output terminal
24, 25	VSS	-	Ground terminal
26	OSC_OUT	O	System clock output terminal (45.158 MHz)
27	VSS	-	Ground terminal
28	OSC_IN	I	System clock input terminal (45.158 MHz)
29	VSS	-	Ground terminal
30	TEST	-	Not used
31	VSS	-	Ground terminal
32	HSDP_DATA	-	Not used
33	VSS	-	Ground terminal
34	HSDP_CLK	-	Not used
35	VDD	-	Power supply terminal (+3.3V)
36	HSDP_EN	-	Not used
37	I2S_DA	O	I2S digital audio data output terminal
38	VSS	-	Ground terminal
39	I2S_CLK	O	I2S bit clock signal output terminal
40	VDD	-	Power supply terminal (+3.3V)
41	I2S_LRCLK	O	I2S L/R sampling clock signal output terminal
42	VSS	-	Ground terminal
43	I2S_OCLK	O	I2S over sample clock signal output terminal
44	VSS	-	Ground terminal
45	SAII_CLK	-	Not used
46	VDD	-	Power supply terminal (+3.3V)
47	SAII_DA	-	Not used
48	SAII_EN	-	Not used

### SECTION 8 EXPLODED VIEWS

**NOTE:**

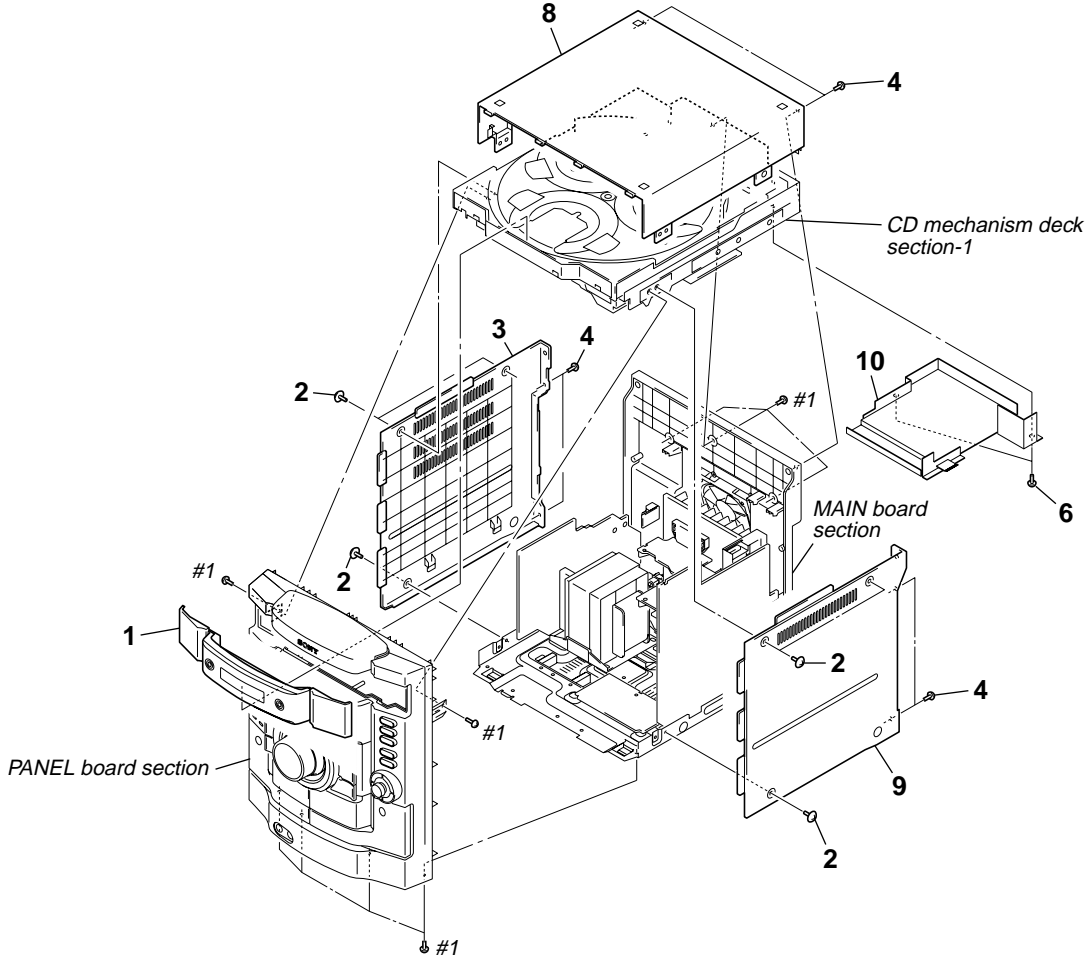
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  
  ↑  ↑  
  Parts Color    Cabinet's Color
- Abbreviation  
CND : Canadian model

- 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.
- Accessories are given in the last of the electrical parts list.

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

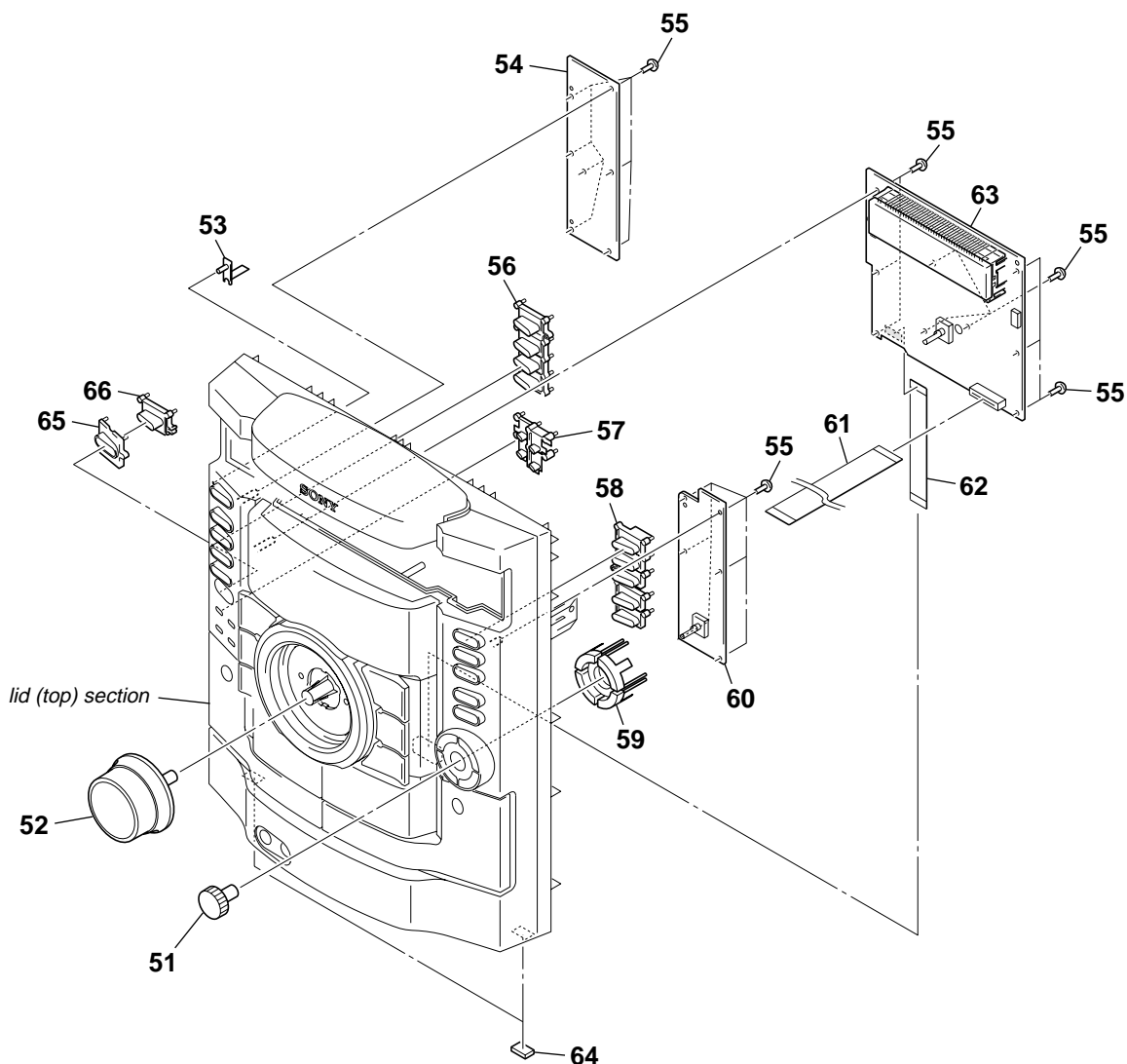
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**8-1. CASE SECTION**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	2-658-299-61	LID (CD) (GX470)		8	2-599-854-01	CASE (TOP) (GX470: US/GX570: US)	
1	2-658-299-71	LID (CD) (GX570)		8	2-599-854-11	CASE (TOP) (GX470: CND/GX570: CND)	
2	3-363-099-32	SCREW (CASE 3 TP2)		9	2-599-856-01	CASE (SIDE-R) (GX470: US/GX570: US)	
3	2-599-855-01	CASE (SIDE-L) (GX470: US/GX570: US)		9	2-599-856-11	CASE (SIDE-R) (GX470: CND/GX570: CND)	
3	2-599-855-11	CASE (SIDE-L) (GX470: CND/GX570: CND)		10	2-675-793-01	COVER (OP)	
4	3-254-143-11	SCREW (B3), (+) BV TAPPING		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-S	
6	4-951-620-01	SCREW (2.6X8), +BVTP					

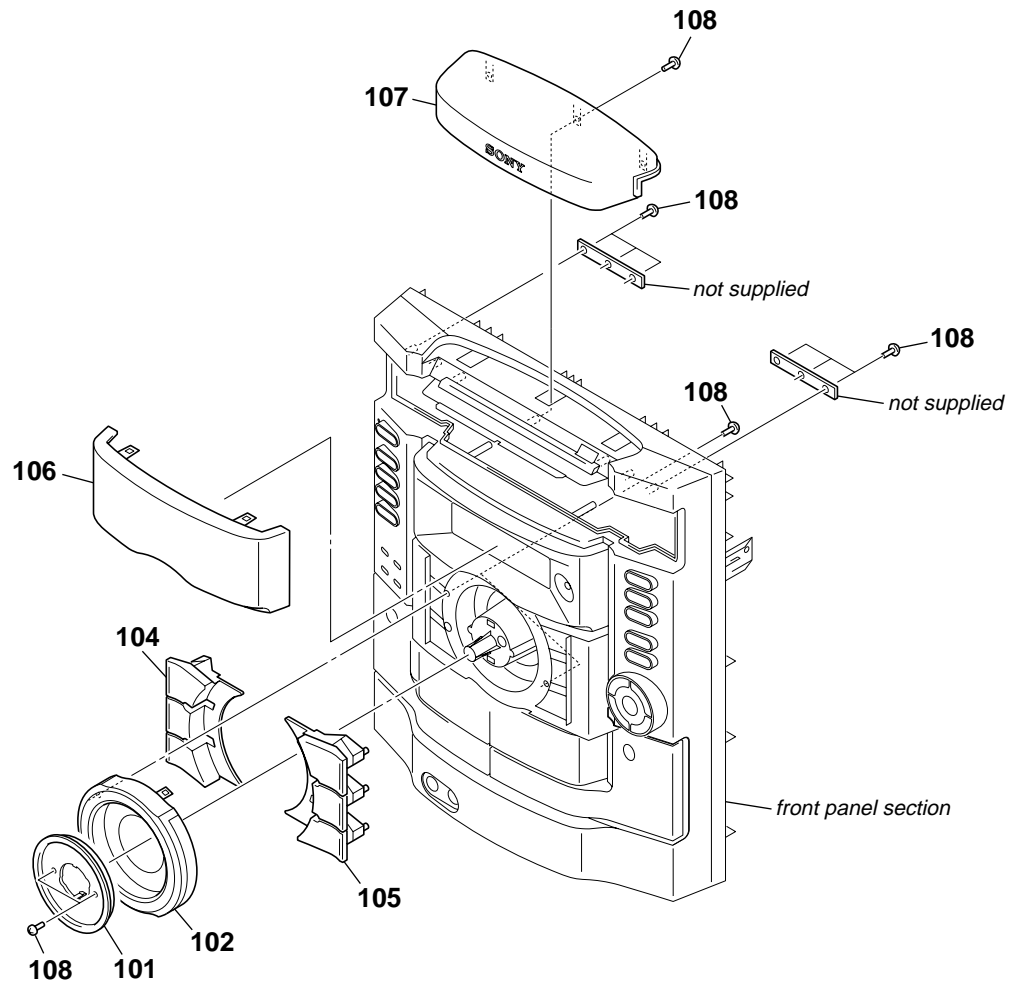
## 8-2. PANEL BOARD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	2-658-294-11	KNOB (JOG)		59	2-658-281-01	KEY (JOG) (GROOVE, SURROUND, ENTER, EQ BAND)	
52	2-658-293-01	KNOB (VOL B)		60	A-1159-681-A	KEY RIGHT BOARD, COMPLETE	
53	2-658-279-01	INDICATOR (POWER)		61	1-831-952-21	CABLE, FLEXIBLE FLAT (19 CORE)	
54	A-1159-677-A	KEY LEFT BOARD, COMPLETE		62	1-831-779-21	CABLE, FLEXIBLE FLAT (11 CORE)	
55	4-951-620-01	SCREW (2.6X8), +BVTP		63	A-1163-173-A	PANEL BOARD, COMPLETE	
56	2-658-275-01	KEY (POWER) (I/⏻, CD, TUNER/BAND, TAPE A/B, AUDIO IN)		64	4-225-252-01	CUSHION (FOOT)	
57	2-658-274-01	KEY (REC)		65	2-658-277-01	RING (SUB WOOFER)	
58	2-658-276-01	KEY (CD) (DISC 1, DISC 2, DISC 3, DISC SKIP/EX-CHANGE, ⏮)		66	2-658-278-01	KEY (SUB WOOFER)	

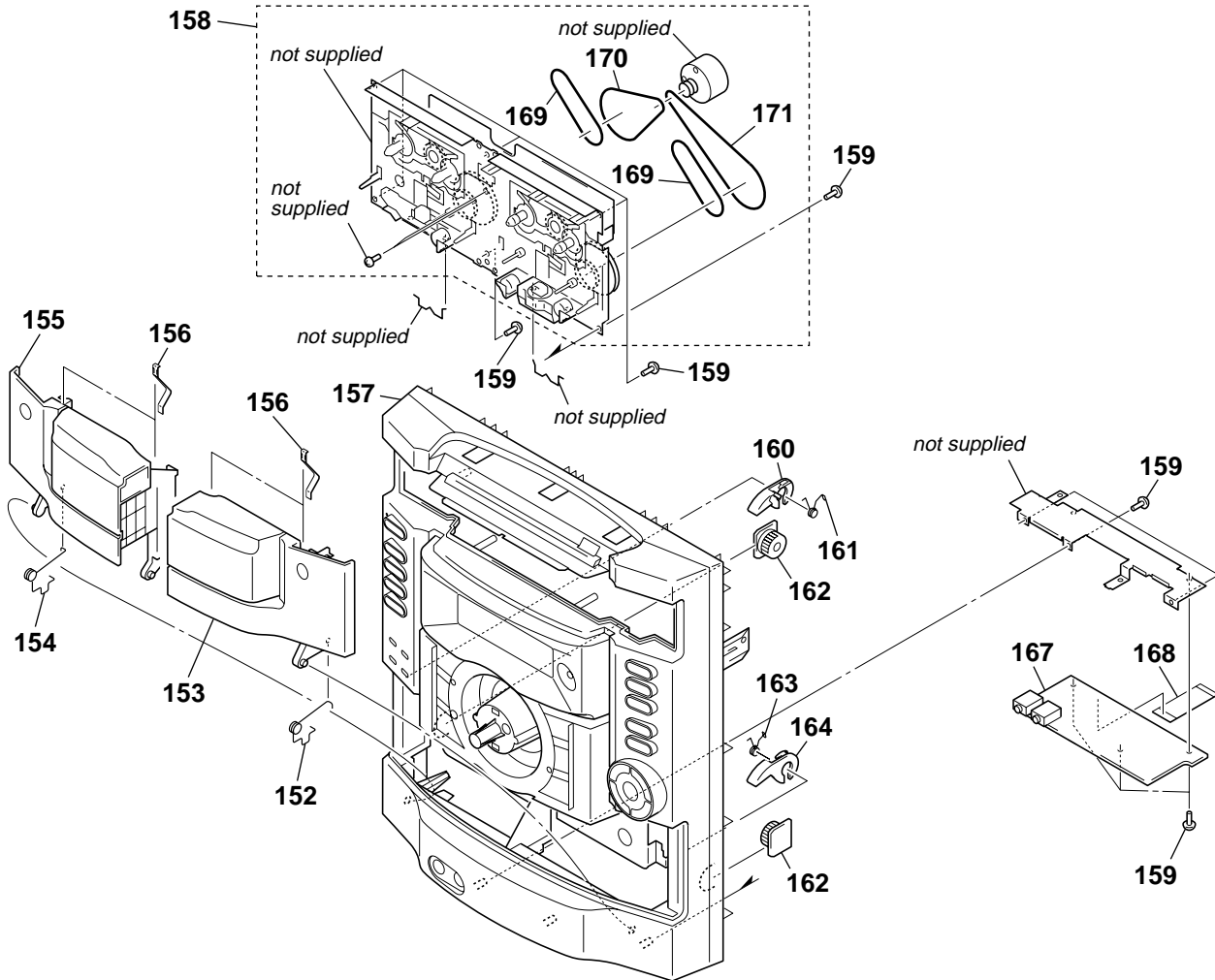


8-3. LID (TOP) SECTION



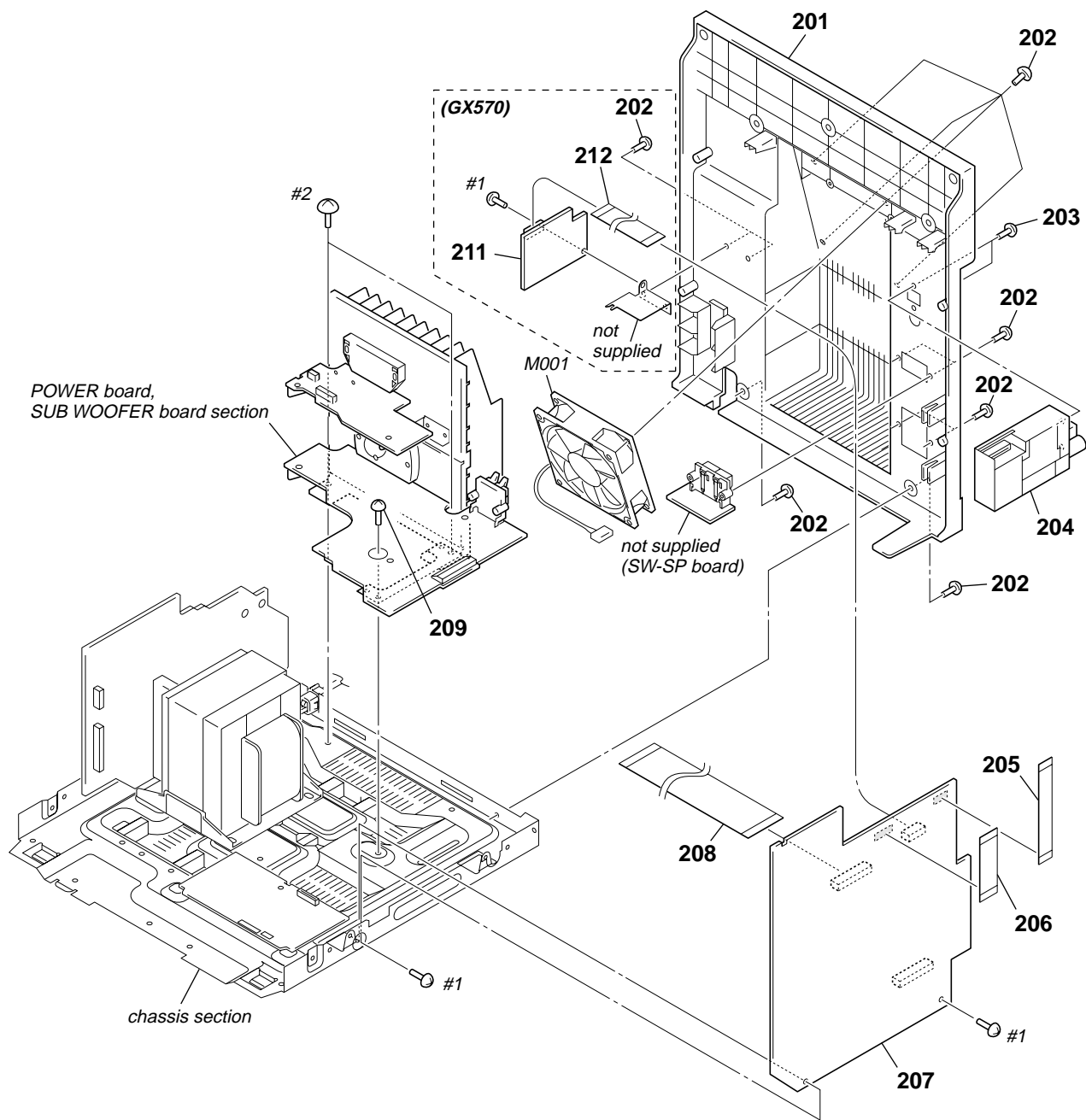
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	2-658-285-13	REFLECTOR (VOL)		105	2-658-287-11	KEY (CENTER R) (□, ▷▷ TUNING +, ▷▷ □+, CATEGORY +) (GX570)	
102	X-2109-227-1	RING (VOL) ASSY (SERVICE)		106	2-658-283-51	WINDOW (DISPLAY) (GX570)	
104	2-658-286-01	KEY (CENTER L) (▷▷, ◀◀ TUNING -, ◀◀ □-) (GX470)		106	2-664-867-01	WINDOW (DISPLAY) (GX470)	
104	2-658-286-11	KEY (CENTER L) (▷▷, ◀◀ TUNING -, ◀◀ □-, CATEGORY -) (GX570)		107	X-2109-229-1	LID (TOP B) ASSY (SERVICE) (GX570)	
105	2-658-287-01	KEY (CENTER R) (□, ▷▷ TUNING +, ▷▷ □+) (GX470)		107	X-2109-230-1	LID (TOP B) ASSY (SERVICE) (GX470)	
				108	4-951-620-01	SCREW (2.6X8), +BVTP	

## 8-4. FRONT PANEL SECTION



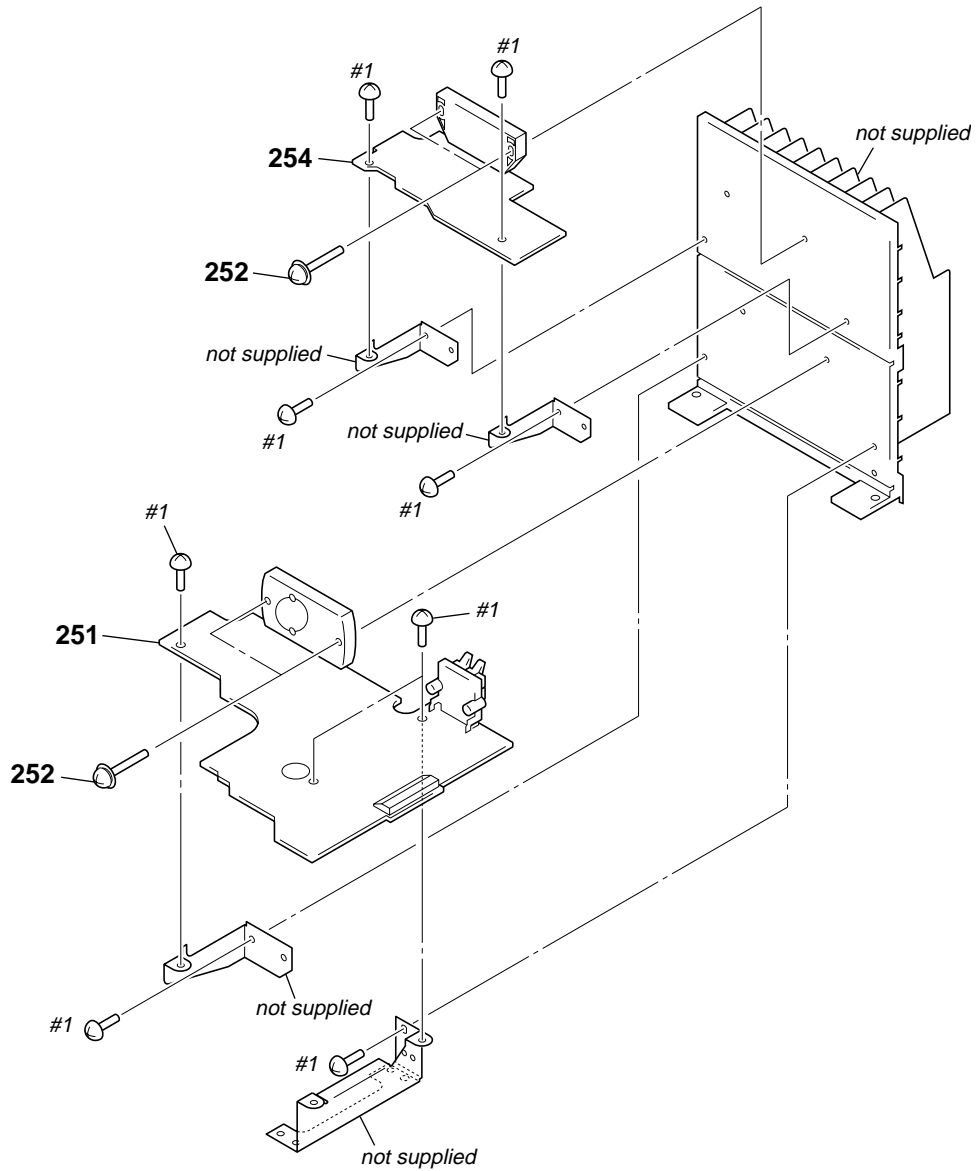
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
152	2-658-304-01	SPRING (CASS R)		159	4-951-620-01	SCREW (2.6X8), +BVTP	
153	2-658-271-01	BOX, CASSETTE (R) (GX570)		160	4-231-825-01	CAM (B), HEART	
153	2-658-271-11	BOX, CASSETTE (R) (GX470)		161	4-231-841-01	SPRING (HEART CAM-B)	
154	2-658-303-01	SPRING (CASS L)		162	4-224-104-41	DAMPER	
155	2-658-270-11	BOX, CASSETTE (L) (GX570)		163	4-231-836-01	SPRING (HEART CAM-A)	
155	2-658-270-21	BOX, CASSETTE (L) (GX470)		164	4-231-824-01	CAM (A), HEART	
156	4-238-631-11	TAPE SPRING		167	A-1159-739-A	MIC. AUX. HP BOARD, COMPLETE	
157	X-2109-216-1	PANEL (SERVICE) ASSY, FRONT (GX570: US)		168	1-831-772-21	CABLE, FLEXIBLE FLAT (9 CORE)	
157	X-2109-223-1	PANEL (SERVICE) ASSY, FRONT (GX570: CND)		169	4-235-777-01	BELT (FR)	
157	X-2109-224-1	PANEL (SERVICE) ASSY, FRONT (GX470: US)		170	2-683-559-01	BELT (AF)	
157	X-2109-225-1	PANEL (SERVICE) ASSY, FRONT (GX470: CND)		171	4-683-560-01	BELT (BF)	
158	1-417-656-21	MECHA DECK (CWN42FF609)					

8-5. MAIN BOARD SECTION



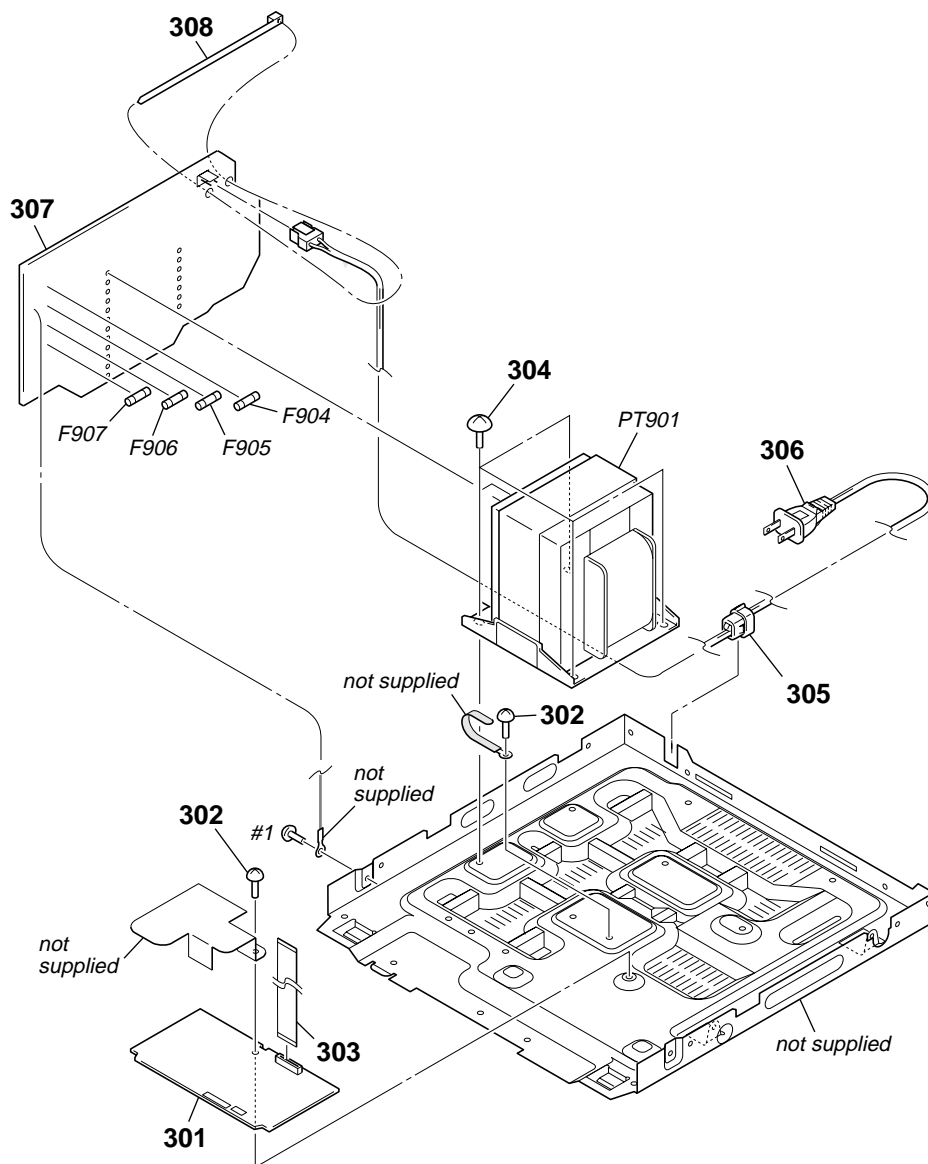
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	2-658-298-51	PANEL, BACK (GX470: CND)		207	A-1163-189-A	MAIN BOARD, COMPLETE (GX570)	
201	2-664-764-11	PANEL, BACK (GX570: US)		207	A-1163-190-A	MAIN BOARD, COMPLETE (GX470)	
201	2-664-764-21	PANEL, BACK (GX470: US)		208	1-831-771-21	CABLE, FLEXIBLE FLAT (23 CORE)	
201	2-664-764-71	PANEL, BACK (GX570: CND)		209	3-077-331-01	+BV3 (3-CR)	
202	3-254-143-11	SCREW (B3), (+) BV TAPPING		211	A-1167-407-A	XM BOARD, COMPLETE (GX570)	
203	3-252-829-01	SCREW (B3), (+) BV TAPPING		212	1-832-848-21	WIRE (FLAT TYPE) (15 CORE) (GX570)	
204	1-693-713-11	TUNER (FM/AM)		M001	1-787-344-11	FAN, DC	
205	1-831-769-21	CABLE, FLEXIBLE FLAT (9 CORE)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
206	1-831-786-21	CABLE, FLEXIBLE FLAT (13 CORE)		#2	7-685-881-09	SCREW +BVTT 4X8 (S)	

## 8-6. POWER BOARD, SUB WOOFER BOARD SECTION



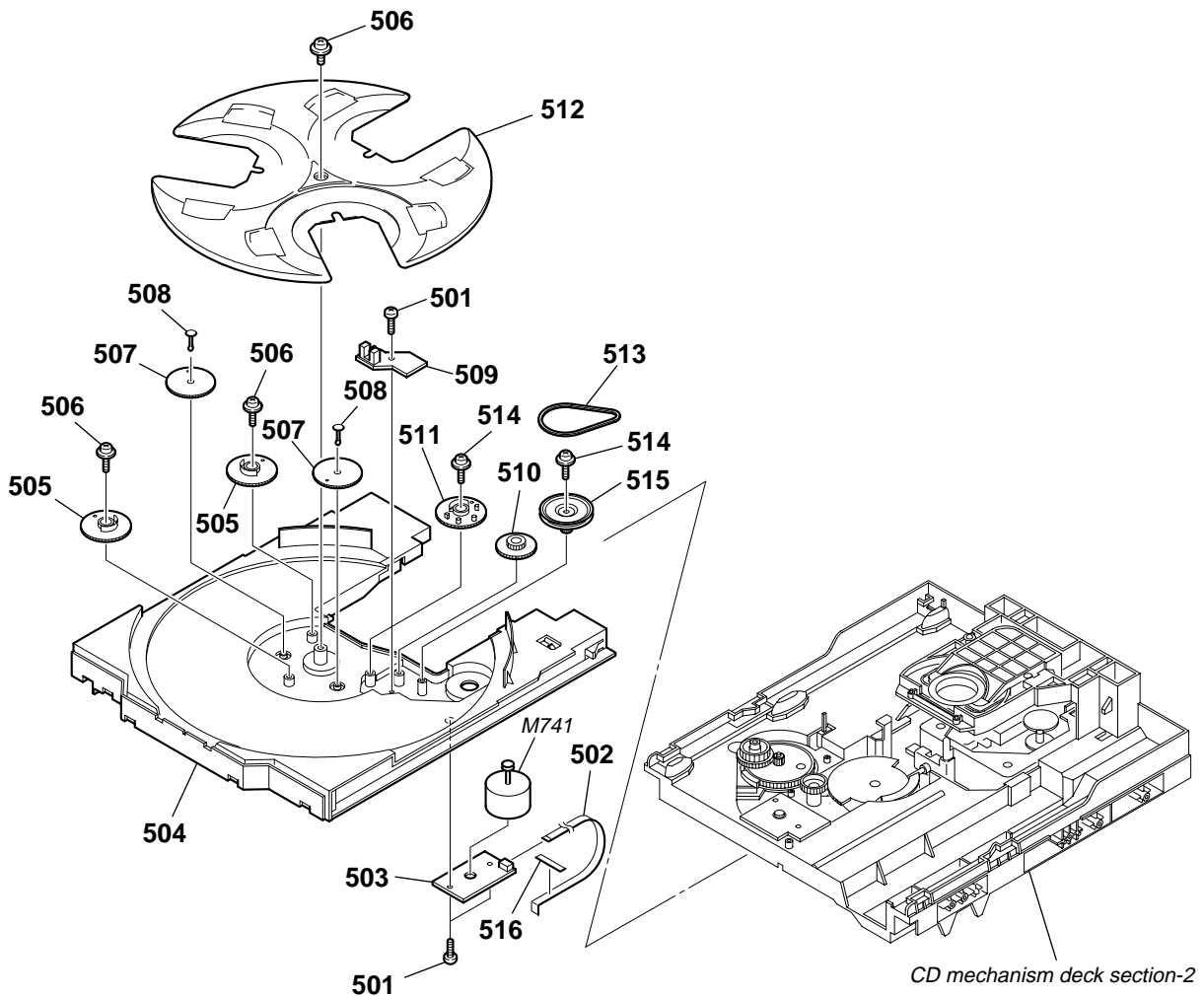
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	A-1163-222-A	POWER BOARD, COMPLETE (GX570)		254	A-1178-854-A	SUB WOOFER BOARD, COMPLETE (GX470)	
251	A-1163-223-A	POWER BOARD, COMPLETE (GX470)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
252	3-905-609-31	SCREW (TRANSISTOR)					
254	A-1163-250-A	SUB WOOFER BOARD, COMPLETE (GX570)					

8-7. CHASSIS SECTION



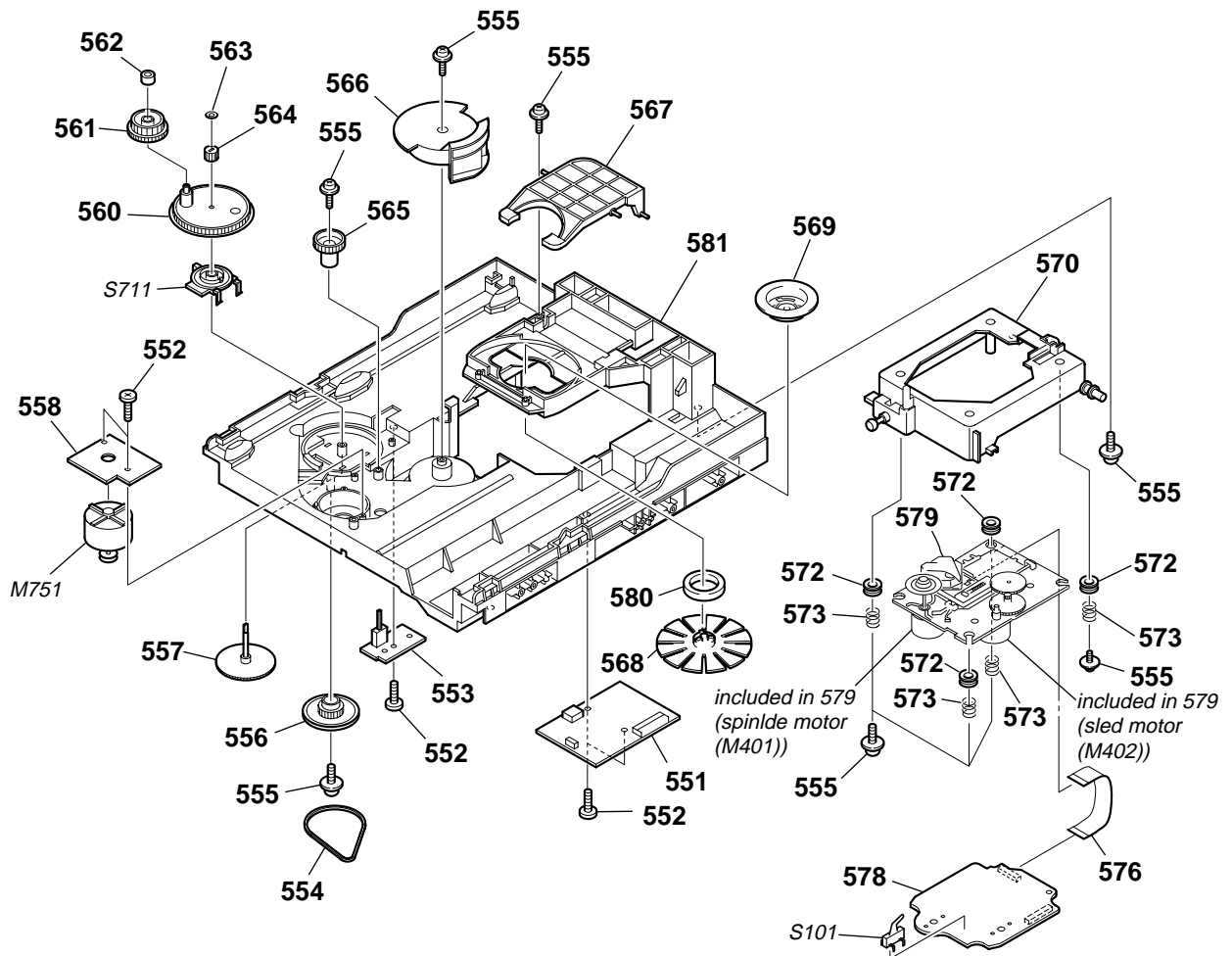
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	A-1171-482-A	DECK BOARD, COMPLETE		△ F904	1-533-949-33	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)	
302	3-077-331-01	+BV3 (3-CR)		△ F905	1-533-949-33	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)	
303	1-831-928-21	CABLE, FLEXIBLE FLAT (11 CORE)		△ F906	1-532-465-33	FUSE (T3.15AL/250V)	
304	4-900-386-01	SCREW		△ F907	1-532-465-33	FUSE (T3.15AL/250V)	
305	3-703-244-00	BUSHING (2104), CORD		△ PT901	1-443-924-11	TRANSFORMER, POWER (GX470)	
△ 306	1-830-190-11	CORD, POWER		△ PT901	1-443-925-11	TRANSFORMER, POWER (GX570)	
307	A-1163-241-A	TRANSFORMER BOARD, COMPLETE		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
308	3-701-748-00	CLAMP					

## 8-8. CD MECHANISM DECK SECTION-1 (CDM74KF-K6BD83S)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
501	4-218-253-62	SCREW (M2.6), +BTTP		510	4-243-820-01	GEAR (TABLE)	
502	1-828-938-51	WIRE (FLAT TYPE) (5 CORE)		511	4-243-819-01	GEAR (GENEVA)	
503	1-687-134-12	MOTOR (TB) BOARD		512	4-243-816-11	TRAY	
504	4-243-815-11	TABLE (LOADING)		513	4-243-823-11	BELT (TABLE)	
505	4-245-571-02	GEAR (STOPPER)		514	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
506	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING		515	4-243-821-01	PULLEY (TABLE)	
507	4-245-570-01	GEAR (JOINT)		516	3-231-598-01	SHEET (BA)	
508	4-245-572-01	BUSHING (GEAR)		M741	A-1108-965-A	MOTOR ASSY, TABLE	
509	1-687-132-12	SENSOR BOARD					

8-9. CD MECHANISM DECK SECTION-2  
(CDM74KF-K6BD83S)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
551	A-1103-756-B	DRIVER BOARD, COMPLETE		568	X-2102-809-2	PULLEY (KH) ASSY	
552	4-218-253-52	SCREW (M2.6), +BTTP		569	4-231-189-01	PULLEY (B), CHUCKING	
553	1-687-669-12	SW BOARD		570	X-2055-190-1	HOLDER (213) ASSY	
554	4-244-034-11	BELT (LOADING)		572	4-227-549-11	INSULATOR	
555	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		573	4-227-045-31	SPRING (INSULATOR), COIL	
556	4-225-844-01	GEAR (LOADING A)		576	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
557	4-224-613-11	GEAR (SHAFT)		578	A-1134-279-A	CD BOARD, COMPLETE	
558	1-687-133-12	MOTOR (LD) BOARD		△579	A-4735-357-A	OPTICAL PICK-UP BLOCK (KSM-213DHAP) (including spindle motor (M401), sled motor (M402))	
560	4-244-108-01	GEAR, SWING		580	1-471-035-21	MAGNET ASSY	
561	4-224-609-01	GEAR (LOADING C)		581	4-243-817-22	CHASSIS	
562	4-224-608-01	COLLAR, SWING		M751	A-1108-966-A	MOTOR ASSY, LOADING	
563	3-016-533-11	WASHER (FR), STOPPER		S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	
564	4-224-611-01	GEAR (LOADING B)		S711	1-477-680-12	ENCODER, ROTARY (DISC TABLE ADDRESS DETECT)	
565	4-224-606-01	GEAR (RV)					
566	4-243-818-01	GEAR (U/D)					
567	4-243-822-02	LEVER (LIFTER)					

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  
CND : Canadian 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:  $\mu$ , for example:  
uA... :  $\mu$ A...      uPA... :  $\mu$ PA...  
uPB... :  $\mu$ PB...    uPC... :  $\mu$ PC...  
uPD... :  $\mu$ PD...
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

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

Les composants identifiés par une marque  $\Delta$  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-1134-279-A	CD BOARD, COMPLETE *****					
		< CAPACITOR >					
C101	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C256	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C102	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C257	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C103	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C258	1-164-230-11	CERAMIC CHIP 220PF 5% 50V	
C104	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C260	1-117-863-11	CERAMIC CHIP 0.47uF 10% 6.3V	
C105	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C261	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C107	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C264	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C108	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C265	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C109	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C266	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C110	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C267	1-162-910-11	CERAMIC CHIP 5PF 0.25PF 50V	
C111	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C268	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C112	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C271	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C113	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C272	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C201	1-128-995-21	ELECT CHIP 100uF	20% 10V	C273	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C202	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C274	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C203	1-128-995-21	ELECT CHIP 100uF	20% 10V	C275	1-162-910-11	CERAMIC CHIP 5PF 0.25PF 50V	
C204	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C276	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C205	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C277	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C206	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C291	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C207	1-128-995-21	ELECT CHIP 100uF	20% 10V	C292	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C208	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C301	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C210	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C303	1-137-710-11	CERAMIC CHIP 10uF 20% 6.3V	
C213	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C304	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C214	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C321	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C215	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C322	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C217	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C323	1-128-995-21	ELECT CHIP 100uF 20% 10V	
C218	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C401	1-128-394-11	ELECT CHIP 220uF 20% 10V	
C219	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C404	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C220	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C405	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C221	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C406	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C222	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C424	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C223	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C451	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C224	1-164-360-11	CERAMIC CHIP 0.1uF	16V			< CONNECTOR >	
C226	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	CN102	1-770-706-21	CONNECTOR, FFC/FPC 23P	
C227	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P	
C230	1-162-927-11	CERAMIC CHIP 100PF	5% 50V			< IC >	
C232	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC201	8-753-246-30	IC CXD3014A-201R	
C251	1-164-315-11	CERAMIC CHIP 470PF	5% 50V	IC203	6-709-050-01	IC BH18LB1WG-TR	
C252	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	IC402	6-705-808-01	IC BA5947FM-E2	
C253	1-164-315-11	CERAMIC CHIP 470PF	5% 50V				
C254	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V				



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >			A-1171-482-A	DECK BOARD, COMPLETE *****	
Q321	6-551-120-01	TRANSISTOR 2SA2119K				< CAPACITOR/RESISTOR >	
		< RESISTOR/FERRITE BEAD >					
R101	1-216-809-11	METAL CHIP 100 5%	1/10W	C301	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
R102	1-216-809-11	METAL CHIP 100 5%	1/10W	C302	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
R103	1-216-809-11	METAL CHIP 100 5%	1/10W	C303	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
R104	1-216-809-11	METAL CHIP 100 5%	1/10W	C304	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
R105	1-216-809-11	METAL CHIP 100 5%	1/10W	C305	1-216-849-11	METAL CHIP 220K 5%	1/10W
R107	1-216-809-11	METAL CHIP 100 5%	1/10W	C306	1-216-849-11	METAL CHIP 220K 5%	1/10W
R108	1-216-809-11	METAL CHIP 100 5%	1/10W	C307	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
R109	1-216-809-11	METAL CHIP 100 5%	1/10W	C315	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
R110	1-216-809-11	METAL CHIP 100 5%	1/10W	C316	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
R111	1-216-809-11	METAL CHIP 100 5%	1/10W	C317	1-126-964-11	ELECT 10uF 20%	50V
R112	1-216-809-11	METAL CHIP 100 5%	1/10W	C318	1-126-964-11	ELECT 10uF 20%	50V
R113	1-216-809-11	METAL CHIP 100 5%	1/10W	C323	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
R201	1-216-295-00	SHORT CHIP 0		C324	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
R202	1-216-295-00	SHORT CHIP 0		C325	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
R203	1-500-445-21	FERRITE, EMI (SMD) (2012)		C326	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
R207	1-216-295-00	SHORT CHIP 0		C327	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R250	1-216-857-11	METAL CHIP 1M 5%	1/10W	C328	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R252	1-216-833-11	METAL CHIP 10K 5%	1/10W	C329	1-136-161-00	MYLAR 0.047uF 5%	50V
R253	1-216-821-11	METAL CHIP 1K 5%	1/10W	C330	1-136-161-00	MYLAR 0.047uF 5%	50V
R254	1-216-833-11	METAL CHIP 10K 5%	1/10W	C350	1-126-934-11	ELECT 220uF 20%	16V
R255	1-216-821-11	METAL CHIP 1K 5%	1/10W	C351	1-126-934-11	ELECT 220uF 20%	16V
R256	1-216-837-11	METAL CHIP 22K 5%	1/10W	C352	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R257	1-216-845-11	METAL CHIP 100K 5%	1/10W	C353	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R258	1-216-849-11	METAL CHIP 220K 5%	1/10W	C354	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R260	1-216-864-11	SHORT CHIP 0		C355	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
R265	1-216-829-11	METAL CHIP 4.7K 5%	1/10W	C356	1-126-964-11	ELECT 10uF 20%	50V
R266	1-216-821-11	METAL CHIP 1K 5%	1/10W	C401	1-126-956-11	ELECT 0.1uF 20%	50V
R267	1-216-829-11	METAL CHIP 4.7K 5%	1/10W	C402	1-126-956-11	ELECT 0.1uF 20%	50V
R268	1-216-833-11	METAL CHIP 10K 5%	1/10W	C403	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
R270	1-216-821-11	METAL CHIP 1K 5%	1/10W	C404	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
R271	1-216-857-11	METAL CHIP 1M 5%	1/10W	C405	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R275	1-216-809-11	METAL CHIP 100 5%	1/10W	C406	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R276	1-216-841-11	METAL CHIP 47K 5%	1/10W	C409	1-126-964-11	ELECT 10uF 20%	50V
R277	1-216-809-11	METAL CHIP 100 5%	1/10W	C410	1-126-964-11	ELECT 10uF 20%	50V
R278	1-216-809-11	METAL CHIP 100 5%	1/10W	C411	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
R280	1-216-864-11	SHORT CHIP 0		C412	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V
R291	1-216-809-11	METAL CHIP 100 5%	1/10W	C413	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R292	1-216-809-11	METAL CHIP 100 5%	1/10W	C414	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
R321	1-216-789-11	METAL CHIP 2.2 5%	1/10W	C415	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
R322	1-216-789-11	METAL CHIP 2.2 5%	1/10W	C416	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
R323	1-216-864-11	SHORT CHIP 0		C417	1-107-726-91	CERAMIC CHIP 0.01uF 10%	16V
R324	1-216-845-11	METAL CHIP 100K 5%	1/10W	C418	1-107-726-91	CERAMIC CHIP 0.01uF 10%	16V
R401	1-216-295-00	SHORT CHIP 0		C430	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R421	1-216-864-11	SHORT CHIP 0		C431	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R423	1-216-833-11	METAL CHIP 10K 5%	1/10W	C433	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
R451	1-216-837-11	METAL CHIP 22K 5%	1/10W	C452	1-126-947-11	ELECT 47uF 20%	35V
R452	1-216-833-11	METAL CHIP 10K 5%	1/10W	C453	1-130-471-00	MYLAR 0.001uF 5%	50V
		< VIBRATOR >		C454	1-130-479-00	MYLAR 0.0047uF 5%	50V
X201	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)		C456	1-130-483-00	MYLAR 0.01uF 5%	50V
*****				C458	1-130-475-00	MYLAR 0.0022uF 5%	50V
				C461	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
				C462	1-162-962-11	CERAMIC CHIP 470PF 10%	50V

# HCD-GX470/GX570

## DECK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< CONNECTOR >					
CN008	1-568-830-11	CONNECTOR, FFC 11P		R306	1-216-849-11	METAL CHIP 220K	5% 1/10W
CN301	1-815-444-11	PIN, CONNECTOR (PWB) 3P		R307	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
CN302	1-815-449-11	PIN, CONNECTOR (PWB) 8P		R308	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
		< DIODE >		R309	1-216-817-11	METAL CHIP 470	5% 1/10W
D301	6-501-165-01	DIODE UDZW-TE17-4.3B		R310	1-216-817-11	METAL CHIP 470	5% 1/10W
D401	6-500-335-01	DIODE MC2838-T112-1		R311	1-216-813-11	METAL CHIP 220	5% 1/10W
		< JUMPER RESISTOR >		R312	1-216-813-11	METAL CHIP 220	5% 1/10W
FB301	1-216-864-11	SHORT CHIP 0		R313	1-216-805-11	METAL CHIP 47	5% 1/10W
		< IC >		R314	1-216-805-11	METAL CHIP 47	5% 1/10W
IC301	6-702-457-01	IC NJM14558M-TE2		R315	1-216-809-11	METAL CHIP 100	5% 1/10W
IC401	8-759-909-71	IC BA4558F		R316	1-216-809-11	METAL CHIP 100	5% 1/10W
		< JUMPER RESISTOR >		R317	1-216-853-11	METAL CHIP 470K	5% 1/10W
JR301	1-216-864-11	SHORT CHIP 0		R318	1-216-853-11	METAL CHIP 470K	5% 1/10W
JR302	1-216-864-11	SHORT CHIP 0		R319	1-216-837-11	METAL CHIP 22K	5% 1/10W
JR306	1-216-864-11	SHORT CHIP 0		R320	1-216-837-11	METAL CHIP 22K	5% 1/10W
JR307	1-216-864-11	SHORT CHIP 0		R323	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
JR310	1-216-864-11	SHORT CHIP 0		R324	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
JR311	1-216-864-11	SHORT CHIP 0		R325	1-216-809-11	METAL CHIP 100	5% 1/10W
JR402	1-216-864-11	SHORT CHIP 0		R326	1-216-809-11	METAL CHIP 100	5% 1/10W
		< COIL >		R349	1-216-809-11	METAL CHIP 100	5% 1/10W
L451	1-443-760-11	TRANSFORMER, BIAS OSCILLATION		R350	1-216-864-11	SHORT CHIP 0	
		< TRANSISTOR >		R351	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q301	6-550-290-01	FET 2SJ460-T		R401	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q302	6-550-290-01	FET 2SJ460-T		R402	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q303	6-550-290-01	FET 2SJ460-T		R403	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q304	6-550-290-01	FET 2SJ460-T		R404	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q305	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R405	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R406	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q400	8-729-045-62	FET 2SK2158-T2B		R407	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q401	8-729-045-62	FET 2SK2158-T2B		R408	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q402	8-729-045-62	FET 2SK2158-T2B		R409	1-216-845-11	METAL CHIP 100K	5% 1/10W
Q403	8-729-600-22	TRANSISTOR 2SA1235-F		R410	1-216-845-11	METAL CHIP 100K	5% 1/10W
Q404	8-729-600-22	TRANSISTOR 2SA1235-F		R411	1-216-853-11	METAL CHIP 470K	5% 1/10W
Q405	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R412	1-216-853-11	METAL CHIP 470K	5% 1/10W
Q406	8-729-600-22	TRANSISTOR 2SA1235-F		R413	1-216-849-11	METAL CHIP 220K	5% 1/10W
Q407	8-729-600-22	TRANSISTOR 2SA1235-F		R414	1-216-849-11	METAL CHIP 220K	5% 1/10W
Q408	8-729-600-22	TRANSISTOR 2SA1235-F		R415	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q409	6-551-276-01	TRANSISTOR RT1N431C-TP-1		R416	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q410	6-551-276-01	TRANSISTOR RT1N431C-TP-1		R423	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q451	8-729-037-13	TRANSISTOR KTA1271Y		R424	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q452	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R427	1-216-864-11	SHORT CHIP 0	
Q453	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2		R428	1-216-864-11	SHORT CHIP 0	
		< RESISTOR >		R429	1-216-833-11	METAL CHIP 10K	5% 1/10W
R301	1-216-841-11	METAL CHIP 47K	5% 1/10W	R430	1-216-833-11	METAL CHIP 10K	5% 1/10W
R302	1-216-841-11	METAL CHIP 47K	5% 1/10W	R431	1-216-821-11	METAL CHIP 1K	5% 1/10W
R303	1-216-841-11	METAL CHIP 47K	5% 1/10W	R432	1-216-821-11	METAL CHIP 1K	5% 1/10W
R304	1-216-841-11	METAL CHIP 47K	5% 1/10W	R433	1-216-841-11	METAL CHIP 47K	5% 1/10W
R305	1-216-849-11	METAL CHIP 220K	5% 1/10W	R434	1-216-841-11	METAL CHIP 47K	5% 1/10W
				R435	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R436	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R437	1-216-864-11	SHORT CHIP 0	
				R438	1-216-864-11	SHORT CHIP 0	
				R439	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
				R440	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R441	1-216-864-11	SHORT CHIP 0	
				R442	1-216-841-11	METAL CHIP 47K	5% 1/10W
				R443	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R444	1-216-845-11	METAL CHIP 100K	5% 1/10W

DECK

DRIVER

KEY LEFT

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
R445	1-216-864-11	SHORT CHIP	0			< TRANSISTOR >		
R446	1-216-864-11	SHORT CHIP	0					
R449	1-216-801-11	METAL CHIP	22	5%	1/10W			
R450	1-216-801-11	METAL CHIP	22	5%	1/10W			
R451	1-216-833-11	METAL CHIP	10K	5%	1/10W			
R452	1-216-841-11	METAL CHIP	47K	5%	1/10W			
R453	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R454	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R455	1-216-797-11	METAL CHIP	10	5%	1/10W			
R456	1-216-801-11	METAL CHIP	22	5%	1/10W			
R457	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R458	1-216-793-11	METAL CHIP	4.7	5%	1/10W			
R459	1-216-864-11	SHORT CHIP	0					
R460	1-216-864-11	SHORT CHIP	0					
R461	1-216-825-11	METAL CHIP	2.2K	5%	1/10W			
R462	1-216-825-11	METAL CHIP	2.2K	5%	1/10W			
R463	1-216-821-11	METAL CHIP	1K	5%	1/10W			
R464	1-216-821-11	METAL CHIP	1K	5%	1/10W			
R465	1-216-864-11	SHORT CHIP	0					
R466	1-216-864-11	SHORT CHIP	0					
R481	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R482	1-216-841-11	METAL CHIP	47K	5%	1/10W			
R483	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R484	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R485	1-216-825-11	METAL CHIP	2.2K	5%	1/10W			
R488	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R489	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R490	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
*****								
	A-1103-756-B	DRIVER BOARD, COMPLETE	*****					
		< CAPACITOR >						
C715	1-126-933-11	ELECT	100uF	20%	16V			
C731	1-126-964-11	ELECT	10uF	20%	50V			
C735	1-164-159-21	CERAMIC	0.1uF		50V			
C736	1-164-159-21	CERAMIC	0.1uF		50V			
C737	1-164-159-21	CERAMIC	0.1uF		50V			
C741	1-162-306-11	CERAMIC	0.01uF	20%	16V			
C751	1-162-306-11	CERAMIC	0.01uF	20%	16V			
C752	1-164-159-21	CERAMIC	0.1uF		50V			
		< CONNECTOR >						
CN701	1-784-735-11	CONNECTOR, FFC 13P						
CN702	1-784-766-11	CONNECTOR, FFC 5P						
* CN703	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P						
CN704	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P						
		< DIODE >						
D701	8-719-921-42	DIODE MTZJ-5.1A						
D711	8-719-109-69	DIODE RD3.6ESB2						
		< IC >						
IC701	8-759-598-69	IC BA6956AN						
IC712	8-759-598-69	IC BA6956AN						
Q731	8-729-029-66	TRANSISTOR	DTC114ESA					
		< RESISTOR >						
R701	1-249-413-11	CARBON	470	5%	1/4W			
R702	1-247-807-31	CARBON	100	5%	1/4W			
R711	1-249-417-11	CARBON	1K	5%	1/4W			
R712	1-249-425-11	CARBON	4.7K	5%	1/4W			
R713	1-249-433-11	CARBON	22K	5%	1/4W			
R721	1-249-425-11	CARBON	4.7K	5%	1/4W			
R722	1-249-425-11	CARBON	4.7K	5%	1/4W			
R723	1-249-425-11	CARBON	4.7K	5%	1/4W			
R731	1-247-807-31	CARBON	100	5%	1/4W			
R732	1-249-429-11	CARBON	10K	5%	1/4W			
R733	1-249-417-11	CARBON	1K	5%	1/4W			
R734	1-249-430-11	CARBON	12K	5%	1/4W			
R736	1-249-412-11	CARBON	390	5%	1/4W			
R751	1-249-425-11	CARBON	4.7K	5%	1/4W			
*****								
	A-1159-677-A	KEY LEFT BOARD, COMPLETE	*****					
		< DIODE >						
D611	6-501-483-01	LED SLR-325VCT31P (STANDBY)						
D622	8-719-060-27	LED SLR-325MCT31 (SUBWOOFER)						
		< RESISTOR >						
R626	1-216-821-11	METAL CHIP	1K	5%	1/10W			
R639	1-216-821-11	METAL CHIP	1K	5%	1/10W			
R640	1-216-821-11	METAL CHIP	1K	5%	1/10W			
R652	1-216-825-11	METAL CHIP	2.2K	5%	1/10W			
R653	1-216-825-11	METAL CHIP	2.2K	5%	1/10W			
R654	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R655	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R656	1-216-833-11	METAL CHIP	10K	5%	1/10W			
R675	1-216-829-11	METAL CHIP	4.7K	5%	1/10W			
R676	1-216-833-11	METAL CHIP	10K	5%	1/10W			
R677	1-216-837-11	METAL CHIP	22K	5%	1/10W			
R678	1-216-841-11	METAL CHIP	47K	5%	1/10W			
		< SWITCH >						
S601	1-762-875-21	SWITCH, KEYBOARD (I/Ⓚ)						
S602	1-762-875-21	SWITCH, KEYBOARD (KARAOKE)						
S603	1-762-875-21	SWITCH, KEYBOARD (AUDIO IN)						
S604	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)						
S605	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)						
S606	1-762-875-21	SWITCH, KEYBOARD (CD)						
S625	1-762-875-21	SWITCH, KEYBOARD (ILLUMINATION)						
S626	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)						
S627	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)						
S628	1-762-875-21	SWITCH, KEYBOARD (SUBWOOFER)						
*****								

# HCD-GX470/GX570

**KEY RIGHT**   **MAIN**

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
	A-1159-681-A	KEY RIGHT BOARD, COMPLETE *****				C063	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CAPACITOR >				C064	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C643	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C065	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C644	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C066	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< RESISTOR >				C068	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
R682	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C069	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
R683	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C109	1-126-964-11	ELECT	10uF	20%	50V
R684	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	C110	1-126-964-11	ELECT	10uF	20%	50V
R685	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	C111	1-126-965-11	ELECT	22uF	20%	50V
R686	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R687	1-216-837-11	METAL CHIP	22K	5%	1/10W	C112	1-126-947-11	ELECT	47uF	20%	35V
R688	1-216-841-11	METAL CHIP	47K	5%	1/10W	C114	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< SWITCH >				C115	1-126-933-11	ELECT	100uF	20%	16V
S624	1-762-875-21	SWITCH, KEYBOARD (ENTER)				C116	1-126-960-11	ELECT	1uF	20%	50V
S631	1-762-875-21	SWITCH, KEYBOARD (EQ BAND)				C117	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
S632	1-762-875-21	SWITCH, KEYBOARD (SURROUND)				C118	1-126-961-11	ELECT	2.2uF	20%	50V
S633	1-762-875-21	SWITCH, KEYBOARD (GROOVE)				C119	1-126-961-11	ELECT	2.2uF	20%	50V
S634	1-762-875-21	SWITCH, KEYBOARD (DISC ≡)				C120	1-164-360-11	CERAMIC CHIP	0.1uF		16V
S635	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)				C121	1-126-933-11	ELECT	100uF	20%	16V
S636	1-762-875-21	SWITCH, KEYBOARD (DISC 3)				C122	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
S637	1-762-875-21	SWITCH, KEYBOARD (DISC 2)				C123	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
S638	1-762-875-21	SWITCH, KEYBOARD (DISC 1)				C124	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
S672	1-786-418-11	SWITCH, ROTARY (ENCODER) (MULTI JOG)				C125	1-126-960-11	ELECT	1uF	20%	50V
*****						C126	1-126-960-11	ELECT	1uF	20%	50V
A-1163-189-A	MAIN BOARD, COMPLETE (GX570)					C129	1-126-960-11	ELECT	1uF	20%	50V
A-1163-190-A	MAIN BOARD, COMPLETE (GX470)					C130	1-126-960-11	ELECT	1uF	20%	50V
		*****				C137	1-126-960-11	ELECT	1uF	20%	50V
7-685-872-01	SCREW +BVTT 3X8 (S)					C138	1-126-960-11	ELECT	1uF	20%	50V
		< CAPACITOR >				C139	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C001	1-136-497-81	FILM	0.1uF	5%	50V	C140	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C002	1-136-497-81	FILM	0.1uF	5%	50V	C141	1-126-964-11	ELECT	10uF	20%	50V
C006	1-126-964-11	ELECT	10uF	20%	50V	C142	1-126-964-11	ELECT	10uF	20%	50V
C007	1-126-965-11	ELECT	22uF	20%	50V	C143	1-137-374-11	MYLAR	0.047uF	5%	50V
C008	1-126-943-11	ELECT	2200uF	20%	25V	C144	1-137-374-11	MYLAR	0.047uF	5%	50V
C010	1-165-621-11	CERAMIC CHIP	0.1uF		50V	C145	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C011	1-136-497-81	FILM	0.1uF	5%	50V	C146	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C012	1-136-497-81	FILM	0.1uF	5%	50V	C147	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C013	1-126-943-11	ELECT	2200uF	20%	25V	C148	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C015	1-126-933-11	ELECT	100uF	20%	16V	C149	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C023	1-126-943-11	ELECT	2200uF	20%	25V	C150	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C025	1-126-933-11	ELECT	100uF	20%	16V	C151	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C026	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C152	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C027	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C153	1-126-960-11	ELECT	1uF	20%	50V
C029	1-126-964-11	ELECT	10uF	20%	50V (GX570)	C154	1-126-960-11	ELECT	1uF	20%	50V
C030	1-126-933-11	ELECT	100uF	20%	16V (GX570)	C155	1-136-167-00	MYLAR	0.15uF	5%	50V
C031	1-216-864-11	SHORT CHIP	0			C156	1-136-167-00	MYLAR	0.15uF	5%	50V
C032	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C157	1-136-167-00	MYLAR	0.15uF	5%	50V
C033	1-126-933-11	ELECT	100uF	20%	16V	C158	1-136-167-00	MYLAR	0.15uF	5%	50V
C034	1-126-963-11	ELECT	4.7uF	20%	50V	C159	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C035	1-126-947-11	ELECT	47uF	20%	35V	C160	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
						C173	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
						C174	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
						C253	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
						C254	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
						C255	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
						C256	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
						C257	1-126-947-11	ELECT	47uF	20%	35V
						C258	1-126-947-11	ELECT	47uF	20%	35V
						C259	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description	Remark
C260	1-124-261-00	ELECT	10uF	20%	25V			< CONNECTOR >	
C263	1-126-935-11	ELECT	470uF	20%	16V				
C264	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	* CN031	1-573-094-11	SOCKET, CONNECTOR 13P	
C265	1-126-963-11	ELECT	4.7uF	20%	50V	CN041	1-819-131-11	PIN, CONNECTOR 3P	
C266	1-126-963-11	ELECT	4.7uF	20%	50V	CN061	1-568-828-11	CONNECTOR, FFC 9P	
C267	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	CN091	1-568-828-11	CONNECTOR, FFC 9P	
						CN201	1-568-830-11	CONNECTOR, FFC 11P	
C268	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V				
C271	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	CN301	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
C273	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	* CN333	1-691-047-21	HOUSING, CONNECTOR 15P (GX570)	
C274	1-124-261-00	ELECT	10uF	20%	25V	CN991	1-784-780-11	CONNECTOR, FFC 19P	
C275	1-164-362-11	CERAMIC CHIP	470PF	5%	50V			< DIODE >	
C276	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	D001	6-500-522-21	DIODE 10EDB40-TB3	
C278	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D002	6-500-522-21	DIODE 10EDB40-TB3	
C281	1-162-974-11	CERAMIC CHIP	0.01uF		50V	D003	6-500-522-21	DIODE 10EDB40-TB3	
C305	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D004	6-500-522-21	DIODE 10EDB40-TB3	
C308	1-126-963-11	ELECT	4.7uF	20%	50V (GX570)	D005	8-719-085-36	DIODE 11EQS04-TB5 (GX570)	
C309	1-126-963-11	ELECT	4.7uF	20%	50V (GX570)	D006	8-719-988-61	DIODE 1SS355TE-17	
C310	1-164-156-11	CERAMIC CHIP	0.1uF		25V (GX570)	D007	6-501-166-01	DIODE UDW-TE17-4.7B	
C311	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (GX570)	D008	8-719-000-08	DIODE MC2838	
C312	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V (GX570)	D009	6-500-335-01	DIODE MC2838-T112-1	
C313	1-126-934-11	ELECT	220uF	20%	16V (GX570)	D011	6-500-522-21	DIODE 10EDB40-TB3	
C317	1-126-926-11	ELECT	1000uF	20%	10V	D012	6-500-522-21	DIODE 10EDB40-TB3	
C331	1-126-960-11	ELECT	1uF	20%	50V (GX570)	D013	6-500-522-21	DIODE 10EDB40-TB3	
C332	1-126-960-11	ELECT	1uF	20%	50V (GX570)	D014	6-500-522-21	DIODE 10EDB40-TB3	
C385	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	D021	6-500-522-21	DIODE 10EDB40-TB3	
C386	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	D022	6-500-522-21	DIODE 10EDB40-TB3	
C387	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	D023	6-500-522-21	DIODE 10EDB40-TB3	
C388	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	D024	6-500-522-21	DIODE 10EDB40-TB3	
C391	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D031	8-719-988-61	DIODE 1SS355TE-17	
C901	1-126-933-11	ELECT	100uF	20%	16V	D035	8-719-000-08	DIODE MC2838	
C902	1-126-964-11	ELECT	10uF	20%	50V	D036	8-719-000-07	DIODE MC2836	
C903	1-126-959-11	ELECT	0.47uF	20%	50V	D301	6-500-522-21	DIODE 10EDB40-TB3	
C904	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D302	6-500-522-21	DIODE 10EDB40-TB3	
C906	1-126-964-11	ELECT	10uF	20%	50V	D901	6-501-166-01	DIODE UDW-TE17-4.7B	
C908	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D902	8-719-000-07	DIODE MC2836	
C909	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D905	8-719-988-61	DIODE 1SS355TE-17	
C910	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D910	8-719-988-61	DIODE 1SS355TE-17	
C911	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D921	6-500-848-01	DIODE MC2840-T112-1	
C912	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D923	6-500-848-01	DIODE MC2840-T112-1	
C913	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V	D943	8-719-000-08	DIODE MC2838	
C914	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	D947	8-719-988-61	DIODE 1SS355TE-17	
C916	1-114-154-11	DOUBLE LAYER	47000uF		5.5V			< IC >	
C917	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC006	6-702-771-01	IC TA78033LS	
C918	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	IC007	6-703-547-01	IC TA7805LS (GX570)	
C919	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC011	8-759-701-59	IC NJM78M09FA	
C920	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V	IC021	8-759-701-59	IC NJM78M09FA	
						IC101	6-709-331-01	IC R2S15207PF	
C921	1-126-961-11	ELECT	2.2uF	20%	50V	IC251	8-759-909-71	IC BA4558F	
C922	1-126-963-11	ELECT	4.7uF	20%	50V	IC301	6-707-282-01	IC MM1615ANLE (GX570)	
C923	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	IC901	(Not supplied)	IC uPD78F0547GC (S)-UBT-A	
C926	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	IC902	8-759-713-61	IC PST3429UL	
C927	1-162-919-11	CERAMIC CHIP	22PF	5%	50V			< JUMPER RESISTOR >	
						JR101	1-216-864-11	SHORT CHIP 0	
						JR102	1-216-864-11	SHORT CHIP 0	
						JR103	1-216-864-11	SHORT CHIP 0	

**Note:** IC901 on the MAIN board cannot exchange with single.  
When IC901 is damaged, exchange the entire mounted board.

# HCD-GX470/GX570

**MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
JR104	1-216-864-11	SHORT CHIP	0				
JR105	1-216-864-11	SHORT CHIP	0	R010	1-216-837-11	METAL CHIP 22K	5% 1/10W
				R011	1-216-833-11	METAL CHIP 10K	5% 1/10W
JR106	1-216-864-11	SHORT CHIP	0	R013	1-216-837-11	METAL CHIP 22K	5% 1/10W
JR107	1-216-864-11	SHORT CHIP	0	R014	1-216-833-11	METAL CHIP 10K	5% 1/10W
JR108	1-216-864-11	SHORT CHIP	0	R016	1-216-845-11	METAL CHIP 100K	5% 1/10W
JR109	1-216-864-11	SHORT CHIP	0				
JR110	1-216-864-11	SHORT CHIP	0	R032	1-216-821-11	METAL CHIP 1K	5% 1/10W
				R033	1-216-837-11	METAL CHIP 22K	5% 1/10W
JR111	1-216-864-11	SHORT CHIP	0	R034	1-216-837-11	METAL CHIP 22K	5% 1/10W
JR112	1-216-864-11	SHORT CHIP	0	R035	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
JR114	1-216-864-11	SHORT CHIP	0	R036	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
JR115	1-216-864-11	SHORT CHIP	0				
JR117	1-216-864-11	SHORT CHIP	0	R037	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
				R039	1-260-308-11	CARBON 22	5% 1/2W
JR118	1-216-864-11	SHORT CHIP	0	R041	1-216-864-11	SHORT CHIP 0	
JR119	1-216-864-11	SHORT CHIP	0	R042	1-216-833-11	METAL CHIP 10K	5% 1/10W
JR120	1-216-864-11	SHORT CHIP	0	R043	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
JR121	1-216-864-11	SHORT CHIP	0				
JR122	1-216-864-11	SHORT CHIP	0	R045	1-216-821-11	METAL CHIP 1K	5% 1/10W
				R046	1-216-793-11	METAL CHIP 4.7	5% 1/10W
JR123	1-216-864-11	SHORT CHIP	0	R047	1-216-789-11	METAL CHIP 2.2	5% 1/10W
		< TRANSISTOR >		R048	1-216-801-11	METAL CHIP 22	5% 1/10W
Q002	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R049	1-216-849-11	METAL CHIP 220K	5% 1/10W
Q011	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R050	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q041	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R051	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q042	8-729-037-13	TRANSISTOR	KTA1271Y	R052	1-216-853-11	METAL CHIP 470K	5% 1/10W
Q043	8-729-037-03	TRANSISTOR	KTA1266GR-AT	R053	1-216-837-11	METAL CHIP 22K	5% 1/10W
				R054	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q044	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R055	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q045	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R056	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q046	8-729-045-62	FET	2SK2158-T2B	R057	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q111	8-729-120-28	TRANSISTOR	2SC1623-L5L6	△R059	1-215-892-11	METAL OXIDE 1K	5% 2W F
Q112	8-729-120-28	TRANSISTOR	2SC1623-L5L6	△R060	1-215-892-11	METAL OXIDE 1K	5% 2W F
Q113	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R061	1-216-797-11	METAL CHIP 10	5% 1/10W
Q114	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R063	1-216-809-11	METAL CHIP 100	5% 1/10W
Q251	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R064	1-216-809-11	METAL CHIP 100	5% 1/10W
Q252	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R070	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q261	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R101	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q271	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R102	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q272	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R103	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q274	6-551-276-01	TRANSISTOR	RT1N431C-TP-1	R104	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q276	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R105	1-216-809-11	METAL CHIP 100	5% 1/10W
Q277	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R108	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q301	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (GX570)	R109	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q302	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (GX570)	R110	1-216-841-11	METAL CHIP 47K	5% 1/10W
Q303	8-729-027-23	TRANSISTOR	DTA114EKA-T146 (GX570)	R111	1-216-845-11	METAL CHIP 100K	5% 1/10W
Q304	8-729-037-13	TRANSISTOR	KTA1271Y (GX570)	R112	1-216-817-11	METAL CHIP 470	5% 1/10W
Q305	8-729-027-43	TRANSISTOR	DTC114EKA-T146 (GX570)	R113	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q901	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R114	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
Q902	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R116	1-216-809-11	METAL CHIP 100	5% 1/10W
Q903	8-729-037-13	TRANSISTOR	KTA1271Y	R119	1-216-817-11	METAL CHIP 470	5% 1/10W
Q904	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R120	1-216-817-11	METAL CHIP 470	5% 1/10W
		< RESISTOR >		R121	1-216-809-11	METAL CHIP 100	5% 1/10W
R001	1-216-801-11	METAL CHIP	22 5% 1/10W	R122	1-216-809-11	METAL CHIP 100	5% 1/10W
R005	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R123	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R006	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R124	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R008	1-216-833-11	METAL CHIP	10K 5% 1/10W	R125	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
			(GX570)	R126	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R009	1-216-833-11	METAL CHIP	10K 5% 1/10W	R127	1-216-821-11	METAL CHIP 1K	5% 1/10W
			(GX570)				(GX570)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R127	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX470)	R254	1-216-826-11	METAL CHIP	2.7K 5% 1/10W (GX470)
R128	1-216-821-11	METAL CHIP	1K 5% 1/10W (GX570)	R254	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R128	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX470)	R257	1-216-826-11	METAL CHIP	2.7K 5% 1/10W (GX470)
R129	1-216-845-11	METAL CHIP	100K 5% 1/10W (GX470)	R257	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R130	1-216-845-11	METAL CHIP	100K 5% 1/10W (GX470)	R261	1-216-833-11	METAL CHIP	10K 5% 1/10W
R131	1-216-809-11	METAL CHIP	100 5% 1/10W	R262	1-216-833-11	METAL CHIP	10K 5% 1/10W
R132	1-216-809-11	METAL CHIP	100 5% 1/10W	R263	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R135	1-216-833-11	METAL CHIP	10K 5% 1/10W	R264	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R136	1-216-833-11	METAL CHIP	10K 5% 1/10W	R265	1-216-809-11	METAL CHIP	100 5% 1/10W
R137	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R267	1-216-841-11	METAL CHIP	47K 5% 1/10W
R138	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R268	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R139	1-216-821-11	METAL CHIP	1K 5% 1/10W	R269	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R140	1-216-821-11	METAL CHIP	1K 5% 1/10W	R271	1-216-864-11	SHORT CHIP	0
R141	1-216-837-11	METAL CHIP	22K 5% 1/10W	R272	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R142	1-216-837-11	METAL CHIP	22K 5% 1/10W	R274	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R143	1-216-813-11	METAL CHIP	220 5% 1/10W	R276	1-216-833-11	METAL CHIP	10K 5% 1/10W
R144	1-216-813-11	METAL CHIP	220 5% 1/10W	R277	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R145	1-216-841-11	METAL CHIP	47K 5% 1/10W	R279	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R147	1-216-841-11	METAL CHIP	47K 5% 1/10W	R280	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R148	1-216-841-11	METAL CHIP	47K 5% 1/10W	R281	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R154	1-216-857-11	METAL CHIP	1M 5% 1/10W	R283	1-216-833-11	METAL CHIP	10K 5% 1/10W
R155	1-216-849-11	METAL CHIP	220K 5% 1/10W	R285	1-216-833-11	METAL CHIP	10K 5% 1/10W
R156	1-216-849-11	METAL CHIP	220K 5% 1/10W	R286	1-216-837-11	METAL CHIP	22K 5% 1/10W
R157	1-216-849-11	METAL CHIP	220K 5% 1/10W	R287	1-216-853-11	METAL CHIP	470K 5% 1/10W
R158	1-216-849-11	METAL CHIP	220K 5% 1/10W	R289	1-216-845-11	METAL CHIP	100K 5% 1/10W
R159	1-216-841-11	METAL CHIP	47K 5% 1/10W	R290	1-216-821-11	METAL CHIP	1K 5% 1/10W
R160	1-216-841-11	METAL CHIP	47K 5% 1/10W	R291	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R161	1-216-837-11	METAL CHIP	22K 5% 1/10W	R292	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R162	1-216-837-11	METAL CHIP	22K 5% 1/10W	R301	1-216-809-11	METAL CHIP	100 5% 1/10W (GX570)
R163	1-216-841-11	METAL CHIP	47K 5% 1/10W	R302	1-216-809-11	METAL CHIP	100 5% 1/10W (GX570)
R164	1-216-841-11	METAL CHIP	47K 5% 1/10W	R304	1-216-853-11	METAL CHIP	470K 5% 1/10W (GX570)
R165	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R305	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX570)
R166	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R306	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX570)
R167	1-216-821-11	METAL CHIP	1K 5% 1/10W	R307	1-216-841-11	METAL CHIP	47K 5% 1/10W (GX570)
R168	1-216-821-11	METAL CHIP	1K 5% 1/10W	R308	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R171	1-216-864-11	SHORT CHIP	0 (GX470)	R309	1-216-833-11	METAL CHIP	10K 5% 1/10W (GX570)
R172	1-216-864-11	SHORT CHIP	0 (GX470)	R310	1-216-817-11	METAL CHIP	470 5% 1/10W (GX570)
R175	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R311	1-216-864-11	SHORT CHIP	0 (GX570)
R176	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R312	1-216-864-11	SHORT CHIP	0 (GX570)
R177	1-216-864-11	SHORT CHIP	0	R313	1-216-864-11	SHORT CHIP	0 (GX570)
R178	1-216-864-11	SHORT CHIP	0	R314	1-216-864-11	SHORT CHIP	0 (GX570)
R201	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R315	1-216-809-11	METAL CHIP	100 5% 1/10W
R202	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R316	1-216-809-11	METAL CHIP	100 5% 1/10W
R250	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX470)	R317	1-216-809-11	METAL CHIP	100 5% 1/10W
R250	1-216-833-11	METAL CHIP	10K 5% 1/10W (GX570)	R318	1-216-809-11	METAL CHIP	100 5% 1/10W
R251	1-216-817-11	METAL CHIP	470 5% 1/10W	R319	1-216-809-11	METAL CHIP	100 5% 1/10W
R252	1-216-817-11	METAL CHIP	470 5% 1/10W	R321	1-216-809-11	METAL CHIP	100 5% 1/10W
R253	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX470)				
R253	1-216-833-11	METAL CHIP	10K 5% 1/10W (GX570)				

# HCD-GX470/GX570

## MAIN

Ref. No.	Part No.	Description	Quantity	Percentage	Remark	Ref. No.	Part No.	Description	Quantity	Percentage	Remark
R322	1-216-809-11	METAL CHIP	100	5%	1/10W	R907	1-216-841-11	METAL CHIP	47K	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W	R908	1-216-841-11	METAL CHIP	47K	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W						
R325	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GX570)	R909	1-216-837-11	METAL CHIP	22K	5%	1/10W
R325	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX470)	R910	1-216-833-11	METAL CHIP	10K	5%	1/10W
R326	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GX570)	R911	1-216-821-11	METAL CHIP	1K	5%	1/10W
R326	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX470)	R912	1-216-821-11	METAL CHIP	1K	5%	1/10W
R327	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX570)	R913	1-216-821-11	METAL CHIP	1K	5%	1/10W
R328	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX570)	R914	1-216-833-11	METAL CHIP	10K	5%	1/10W
R341	1-216-833-11	METAL CHIP	10K	5%	1/10W	R918	1-216-849-11	METAL CHIP	220K	5%	1/10W
R342	1-216-821-11	METAL CHIP	1K	5%	1/10W	R919	1-216-864-11	SHORT CHIP	0		
R343	1-216-837-11	METAL CHIP	22K	5%	1/10W	R920	1-216-853-11	METAL CHIP	470K	5%	1/10W
R344	1-216-837-11	METAL CHIP	22K	5%	1/10W	R921	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/10W	R922	1-216-849-11	METAL CHIP	220K	5%	1/10W
R346	1-216-821-11	METAL CHIP	1K	5%	1/10W	R923	1-216-809-11	METAL CHIP	100	5%	1/10W
R347	1-216-837-11	METAL CHIP	22K	5%	1/10W	R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R348	1-216-837-11	METAL CHIP	22K	5%	1/10W	R925	1-216-809-11	METAL CHIP	100	5%	1/10W (GX570)
R349	1-216-833-11	METAL CHIP	10K	5%	1/10W	R932	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R350	1-216-837-11	METAL CHIP	22K	5%	1/10W	R935	1-216-833-11	METAL CHIP	10K	5%	1/10W
R351	1-216-837-11	METAL CHIP	22K	5%	1/10W	R936	1-216-837-11	METAL CHIP	22K	5%	1/10W
R352	1-216-857-11	METAL CHIP	1M	5%	1/10W	R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W	R942	1-216-833-11	METAL CHIP	10K	5%	1/10W
R354	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX470)	R943	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R355	1-216-837-11	METAL CHIP	22K	5%	1/10W (GX470)	R944	1-216-849-11	METAL CHIP	220K	5%	1/10W
R356	1-216-833-11	METAL CHIP	10K	5%	1/10W (GX570)	R945	1-216-813-11	METAL CHIP	220	5%	1/10W
R356	1-216-857-11	METAL CHIP	1M	5%	1/10W (GX470)	R946	1-216-864-11	SHORT CHIP	0		
R357	1-216-864-11	SHORT CHIP	0 (GX570)			R947	1-216-849-11	METAL CHIP	220K	5%	1/10W
R358	1-216-864-11	SHORT CHIP	0 (GX570)			R948	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R359	1-216-864-11	SHORT CHIP	0 (GX570)			R949	1-216-833-11	METAL CHIP	10K	5%	1/10W
R360	1-216-864-11	SHORT CHIP	0 (GX570)			R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R363	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (GX570)	R952	1-216-841-11	METAL CHIP	47K	5%	1/10W
R363	1-216-864-11	SHORT CHIP	0 (GX470)			R953	1-216-833-11	METAL CHIP	10K	5%	1/10W
R364	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (GX570)	R955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R364	1-216-864-11	SHORT CHIP	0 (GX470)			R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R365	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (GX570)	R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R365	1-216-864-11	SHORT CHIP	0 (GX470)			R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R366	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (GX570)	R961	1-216-809-11	METAL CHIP	100	5%	1/10W (GX570)
R366	1-216-864-11	SHORT CHIP	0 (GX470)			R963	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-821-11	METAL CHIP	1K	5%	1/10W	R965	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-821-11	METAL CHIP	1K	5%	1/10W	R967	1-216-809-11	METAL CHIP	100	5%	1/10W
R383	1-216-821-11	METAL CHIP	1K	5%	1/10W	R968	1-216-809-11	METAL CHIP	100	5%	1/10W (GX570)
R901	1-216-845-11	METAL CHIP	100K	5%	1/10W	R969	1-216-809-11	METAL CHIP	100	5%	1/10W
R902	1-216-864-11	SHORT CHIP	0			R970	1-216-809-11	METAL CHIP	100	5%	1/10W
R903	1-216-833-11	METAL CHIP	10K	5%	1/10W	R971	1-216-809-11	METAL CHIP	100	5%	1/10W
R904	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R905	1-216-833-11	METAL CHIP	10K	5%	1/10W	R973	1-216-809-11	METAL CHIP	100	5%	1/10W
						R974	1-216-809-11	METAL CHIP	100	5%	1/10W
						R975	1-216-809-11	METAL CHIP	100	5%	1/10W
						R976	1-216-809-11	METAL CHIP	100	5%	1/10W
						R977	1-216-809-11	METAL CHIP	100	5%	1/10W (GX570)
						R978	1-216-809-11	METAL CHIP	100	5%	1/10W (GX570)
						R979	1-216-809-11	METAL CHIP	100	5%	1/10W
						R980	1-216-809-11	METAL CHIP	100	5%	1/10W
						R981	1-216-809-11	METAL CHIP	100	5%	1/10W



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R982	1-216-817-11	METAL CHIP	470 5% 1/10W	C631	1-126-947-11	ELECT	47uF 20% 35V
R996	1-216-809-11	METAL CHIP	100 5% 1/10W	C641	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R997	1-216-809-11	METAL CHIP	100 5% 1/10W	C642	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R999	1-216-809-11	METAL CHIP	100 5% 1/10W	C701	1-164-156-11	CERAMIC CHIP	0.1uF 25V
		< VIBRATOR >		C702	1-126-947-11	ELECT	47uF 20% 35V
X901	1-579-463-11	VIBRATOR, CRYSTAL (32.768kHz)		C703	1-164-156-11	CERAMIC CHIP	0.1uF 25V
X902	1-795-482-11	VIBRATOR, CERAMIC (16MHz)		C704	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
*****				C705	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
	A-1159-739-A	MIC. AUX. HP BOARD, COMPLETE		C707	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
		*****		C708	1-164-156-11	CERAMIC CHIP	0.1uF 25V
		< CAPACITOR >		C709	1-126-947-11	ELECT	47uF 20% 35V
C781	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C710	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C782	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C711	1-165-621-11	CERAMIC CHIP	0.1uF 50V
C783	1-165-621-11	CERAMIC CHIP	0.1uF 50V	C712	1-126-965-11	ELECT	22uF 20% 50V
C784	1-165-621-11	CERAMIC CHIP	0.1uF 50V			< CONNECTOR >	
C820	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	CN601	1-784-780-11	CONNECTOR, FFC 19P	
C821	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V			< DIODE >	
		< EARTH TERMINAL >		D711	8-719-000-07	DIODE MC2836	
* EP701	1-537-738-21	TERMINAL, EARTH				< FLUORESCENT INDICATOR >	
		< JACK >		FL701	1-519-871-11	INDICATOR TUBE, FLUORESCENT	
J701	1-794-702-11	JACK, HEADPHONE (PHONES)				< IC >	
J702	1-794-702-11	JACK, HEADPHONE (AUDIO IN)		IC610	6-600-446-01	IC RPM7240-H18	
		< RESISTOR >		IC701	6-806-287-01	IC uPD780232GC-509-8BT-A	
R823	1-216-825-11	METAL CHIP	2.2K 5% 1/10W			< JUMPER RESISTOR >	
R824	1-216-837-11	METAL CHIP	22K 5% 1/10W	JR602	1-216-864-11	SHORT CHIP	0
R825	1-216-821-11	METAL CHIP	1K 5% 1/10W	JR603	1-216-864-11	SHORT CHIP	0
R826	1-216-821-11	METAL CHIP	1K 5% 1/10W	JR604	1-216-864-11	SHORT CHIP	0
R827	1-216-833-11	METAL CHIP	10K 5% 1/10W	JR605	1-216-864-11	SHORT CHIP	0
R831	1-216-853-11	METAL CHIP	470K 5% 1/10W	JR606	1-216-864-11	SHORT CHIP	0
R832	1-216-853-11	METAL CHIP	470K 5% 1/10W	JR607	1-216-864-11	SHORT CHIP	0
*****				JR608	1-216-864-11	SHORT CHIP	0
	1-687-133-12	MOTOR (LD) BOARD		JR609	1-216-864-11	SHORT CHIP	0
		*****		JR610	1-216-864-11	SHORT CHIP	0
		< CONNECTOR >		JR611	1-216-864-11	SHORT CHIP	0
CN742	1-784-727-11	CONNECTOR, FFC 5P		JR612	1-216-864-11	SHORT CHIP	0
*****				JR613	1-216-864-11	SHORT CHIP	0
	A-1163-173-A	PANEL BOARD, COMPLETE		JR614	1-216-864-11	SHORT CHIP	0
		*****				< TRANSISTOR >	
	2-658-282-01	GUIDE, FL		Q621	8-729-120-28	TRANSISTOR	2SC1623-L5L6
		< CAPACITOR >		Q701	6-551-276-01	TRANSISTOR	RT1N431C-TP-1
C621	1-126-961-11	ELECT	2.2uF 20% 50V	Q702	6-551-276-01	TRANSISTOR	RT1N431C-TP-1
C622	1-126-961-11	ELECT	2.2uF 20% 50V	Q703	6-551-276-01	TRANSISTOR	RT1N431C-TP-1
C625	1-128-131-11	ELECT	22uF 20% 50V	Q704	8-729-040-76	TRANSISTOR	KTA1273-Y-AT
		< RESISTOR >		Q705	8-729-037-13	TRANSISTOR	KTA1271Y
R607	1-216-833-11	METAL CHIP	10K 5% 1/10W	Q706	8-729-037-13	TRANSISTOR	KTA1271Y
R608	1-216-833-11	METAL CHIP	10K 5% 1/10W			< RESISTOR >	
R609	1-216-809-11	METAL CHIP	100 5% 1/10W			< RESISTOR >	

# HCD-GX470/GX570

**PANEL**   **POWER**

Ref. No.	Part No.	Description	Remark
R610	1-216-845-11	METAL CHIP	100K 5% 1/10W
R617	1-216-833-11	METAL CHIP	10K 5% 1/10W
R618	1-216-833-11	METAL CHIP	10K 5% 1/10W
R627	1-216-809-11	METAL CHIP	100 5% 1/10W
R628	1-216-805-11	METAL CHIP	47 5% 1/10W
R629	1-216-809-11	METAL CHIP	100 5% 1/10W
R647	1-216-833-11	METAL CHIP	10K 5% 1/10W
R650	1-216-837-11	METAL CHIP	22K 5% 1/10W
R651	1-216-841-11	METAL CHIP	47K 5% 1/10W
R660	1-216-837-11	METAL CHIP	22K 5% 1/10W
R661	1-216-841-11	METAL CHIP	47K 5% 1/10W
R662	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R663	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R670	1-216-837-11	METAL CHIP	22K 5% 1/10W
R671	1-216-841-11	METAL CHIP	47K 5% 1/10W
R672	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R673	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R674	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R680	1-216-837-11	METAL CHIP	22K 5% 1/10W
R681	1-216-841-11	METAL CHIP	47K 5% 1/10W
R690	1-216-833-11	METAL CHIP	10K 5% 1/10W
R701	1-216-864-11	SHORT CHIP	0
R702	1-216-813-11	METAL CHIP	220 5% 1/10W
R703	1-216-809-11	METAL CHIP	100 5% 1/10W
R704	1-216-864-11	SHORT CHIP	0
R705	1-216-809-11	METAL CHIP	100 5% 1/10W
R706	1-216-809-11	METAL CHIP	100 5% 1/10W
R707	1-216-809-11	METAL CHIP	100 5% 1/10W
R708	1-216-809-11	METAL CHIP	100 5% 1/10W
R709	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R710	1-216-821-11	METAL CHIP	1K 5% 1/10W
R711	1-216-821-11	METAL CHIP	1K 5% 1/10W
R712	1-216-821-11	METAL CHIP	1K 5% 1/10W
R713	1-216-864-11	SHORT CHIP	0
R715	1-216-809-11	METAL CHIP	100 5% 1/10W
R716	1-216-809-11	METAL CHIP	100 5% 1/10W
R717	1-216-809-11	METAL CHIP	100 5% 1/10W
R718	1-216-809-11	METAL CHIP	100 5% 1/10W
R719	1-216-809-11	METAL CHIP	100 5% 1/10W
R741	1-216-801-11	METAL CHIP	22 5% 1/10W
R742	1-216-801-11	METAL CHIP	22 5% 1/10W
R743	1-216-837-11	METAL CHIP	22K 5% 1/10W
R744	1-216-837-11	METAL CHIP	22K 5% 1/10W
R745	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R746	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R762	1-216-841-11	METAL CHIP	47K 5% 1/10W
R763	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R764	1-216-841-11	METAL CHIP	47K 5% 1/10W
R765	1-216-841-11	METAL CHIP	47K 5% 1/10W
R766	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R771	1-216-821-11	METAL CHIP	1K 5% 1/10W
R772	1-216-833-11	METAL CHIP	10K 5% 1/10W
R773	1-216-821-11	METAL CHIP	1K 5% 1/10W
R774	1-216-833-11	METAL CHIP	10K 5% 1/10W
R775	1-216-821-11	METAL CHIP	1K 5% 1/10W
R776	1-216-833-11	METAL CHIP	10K 5% 1/10W

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S611	1-762-875-21	SWITCH, KEYBOARD (▷▷, SELECT FOLDER +)	(GX470)
S611	1-762-875-21	SWITCH, KEYBOARD (▷▷, SELECT FOLDER +, CATEGORY +)	(GX570)
S612	1-762-875-21	SWITCH, KEYBOARD (▷▷II, TUNING +)	
S613	1-762-875-21	SWITCH, KEYBOARD (▷III)	
S621	1-762-875-21	SWITCH, KEYBOARD (<<, SELECT FOLDER -)	(GX470)
S621	1-762-875-21	SWITCH, KEYBOARD (<<, SELECT FOLDER -, CATEGORY -)	(GX570)
S622	1-762-875-21	SWITCH, KEYBOARD (I<<, TUNING -)	
S623	1-762-875-21	SWITCH, KEYBOARD (□)	
S671	1-479-670-11	ENCODER, ROTARY (VOLUME)	
< VIBRATOR >			
X701	1-795-054-21	VIBRATOR, CERAMIC (4.19MHz)	
*****			
A-1163-222-A		POWER BOARD, COMPLETE (GX570)	
A-1163-223-A		POWER BOARD, COMPLETE (GX470)	
*****			
7-685-872-01		SCREW +BVTT 3X8 (S)	
< CAPACITOR >			
C403	1-137-749-11	MYLAR	0.1uF 100V
C404	1-137-749-11	MYLAR	0.1uF 100V
C405	1-137-847-21	ELECT	2200uF 20% 71V (GX570)
C406	1-137-847-21	ELECT	2200uF 20% 71V (GX570)
C411	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C441	1-126-964-11	ELECT	10uF 20% 50V
C442	1-126-964-11	ELECT	10uF 20% 50V
C443	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C444	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C445	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C446	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C447	1-126-965-11	ELECT	22uF 20% 50V
C448	1-126-965-11	ELECT	22uF 20% 50V
C451	1-136-165-00	FILM	0.1uF 5% 50V
C452	1-136-165-00	FILM	0.1uF 5% 50V
C453	1-136-165-00	FILM	0.1uF 5% 50V
C454	1-136-165-00	FILM	0.1uF 5% 50V
C481	1-104-665-11	ELECT	100uF 20% 25V
C486	1-126-961-11	ELECT	2.2uF 20% 50V
C488	1-126-965-11	ELECT	22uF 20% 50V
C489	1-128-552-51	ELECT	47uF 20% 63V (GX470)
C489	1-128-562-11	ELECT	47uF 20% 100V (GX570)
C490	1-128-563-11	ELECT	100uF 20% 100V (GX570)
C490	1-128-576-11	ELECT	100uF 20% 63V (GX470)
< CONNECTOR >			
* CN441	1-573-087-11	PIN, CONNECTOR 13P	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< DIODE >		R445	1-216-821-11	METAL CHIP 1K 5%	1/10W
D401	6-500-360-01	DIODE D10XB20		R446	1-216-821-11	METAL CHIP 1K 5%	1/10W
D441	8-719-000-07	DIODE MC2836		R447	1-216-841-11	METAL CHIP 47K 5%	1/10W
D443	8-719-988-61	DIODE 1SS355TE-17		R448	1-216-841-11	METAL CHIP 47K 5%	1/10W
D481	8-719-988-61	DIODE 1SS355TE-17		△ R449	1-212-974-00	FUSIBLE 47 5%	1/2W F
D483	8-719-988-61	DIODE 1SS355TE-17		△ R451	1-220-893-11	METAL 0.22 10%	5W F
		< IC >		△ R452	1-220-893-11	METAL 0.22 10%	5W F
IC441	6-600-221-01	IC STK403-130-E		R453	1-216-797-11	METAL CHIP 10 5%	1/10W
		< JACK >		R454	1-216-797-11	METAL CHIP 10 5%	1/10W
JK441	1-694-785-11	TERMINAL BOARD (SPEAKER)		R455	1-216-821-11	METAL CHIP 1K 5%	1/10W
		< COIL >		R456	1-216-821-11	METAL CHIP 1K 5%	1/10W
L441	1-422-009-13	COIL, AIR-CORE		R457	1-216-837-11	METAL CHIP 22K 5%	1/10W
L442	1-422-009-13	COIL, AIR-CORE		R458	1-216-837-11	METAL CHIP 22K 5%	1/10W
		< TRANSISTOR >		R459	1-216-841-11	METAL CHIP 47K 5%	1/10W
Q441	6-551-268-01	TRANSISTOR 2SC5625		R460	1-216-841-11	METAL CHIP 47K 5%	1/10W
Q442	6-551-268-01	TRANSISTOR 2SC5625		R461	1-216-797-11	METAL CHIP 10 5%	1/10W
Q481	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R462	1-216-797-11	METAL CHIP 10 5%	1/10W
Q482	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R465	1-216-841-11	METAL CHIP 47K 5%	1/10W
Q483	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R466	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q484	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R480	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q485	8-729-600-22	TRANSISTOR 2SA1235-F		R481	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
Q486	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R482	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q487	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R483	1-216-801-11	METAL CHIP 22 5%	1/10W
Q488	8-729-901-87	TRANSISTOR 2SC2411K-CQ		R484	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q489	6-551-268-01	TRANSISTOR 2SC5625		R485	1-216-845-11	METAL CHIP 100K 5%	1/10W
		< RESISTOR >		R486	1-216-845-11	METAL CHIP 100K 5%	1/10W
R401	1-216-845-11	METAL CHIP 100K 5%	1/10W	R487	1-216-841-11	METAL CHIP 47K 5%	1/10W
R402	1-216-845-11	METAL CHIP 100K 5%	1/10W	R488	1-216-837-11	METAL CHIP 22K 5%	1/10W
R407	1-216-809-11	METAL CHIP 100 5%	1/10W	R490	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R411	1-216-797-11	METAL CHIP 10 5%	1/10W	R491	1-216-833-11	METAL CHIP 10K 5%	1/10W
R412	1-216-797-11	METAL CHIP 10 5%	1/10W	R492	1-216-821-11	METAL CHIP 1K 5%	1/10W
R413	1-216-797-11	METAL CHIP 10 5%	1/10W	R493	1-216-841-11	METAL CHIP 47K 5%	1/10W
R414	1-216-797-11	METAL CHIP 10 5%	1/10W	△ R495	1-202-972-61	FUSIBLE 1 5%	1/4W F
R415	1-216-797-11	METAL CHIP 10 5%	1/10W	△ R496	1-212-881-11	FUSIBLE 100 5%	1/4W F
R416	1-216-797-11	METAL CHIP 10 5%	1/10W	R497	1-216-845-11	METAL CHIP 100K 5%	1/10W
R417	1-216-809-11	METAL CHIP 100 5%	1/10W	R498	1-216-821-11	METAL CHIP 1K 5%	1/10W
R418	1-216-809-11	METAL CHIP 100 5%	1/10W	R499	1-216-821-11	METAL CHIP 1K 5%	1/10W
R419	1-216-809-11	METAL CHIP 100 5%	1/10W			< RELAY >	
R420	1-216-797-11	METAL CHIP 10 5%	1/10W	RY441	1-755-307-11	RELAY (GX470)	
R421	1-216-797-11	METAL CHIP 10 5%	1/10W	RY441	1-755-308-11	RELAY (GX570)	
R422	1-216-797-11	METAL CHIP 10 5%	1/10W			< THERMISTOR >	
R423	1-216-797-11	METAL CHIP 10 5%	1/10W	TH441	1-807-796-11	THERMISTOR	
R424	1-216-797-11	METAL CHIP 10 5%	1/10W			*****	
R425	1-216-797-11	METAL CHIP 10 5%	1/10W			1-687-132-12	SENSOR BOARD
R434	1-216-864-11	SHORT CHIP 0				*****	
R435	1-216-864-11	SHORT CHIP 0				< CONNECTOR >	
R440	1-216-837-11	METAL CHIP 22K 5%	1/10W	CN731	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P	
R441	1-216-825-11	METAL CHIP 2.2K 5%	1/10W			< IC >	
R442	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	IC731	6-600-022-01	IC RPI-576	
R443	1-216-841-11	METAL CHIP 47K 5%	1/10W			*****	
R444	1-216-841-11	METAL CHIP 47K 5%	1/10W				

# HCD-GX470/GX570

**SUB WOOFER**   **SW**   **SW-SP**   **TRANSFOMER**

Ref. No.	Part No.	Description	Remark
	A-1163-250-A	SUB WOOFER BOARD, COMPLETE (GX570)	
	A-1178-854-A	SUB WOOFER BOARD, COMPLETE (GX470)	
		*****	
		< CAPACITOR >	
C502	1-162-960-11	CERAMIC CHIP 220PF	10% 50V
C503	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C504	1-104-662-91	ELECT 22uF	20% 25V
C505	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C506	1-104-665-11	ELECT 100uF	20% 25V
C507	1-126-967-11	ELECT 47uF	20% 50V
C508	1-164-230-11	CERAMIC CHIP 220PF	5% 50V
C509	1-128-563-11	ELECT 100uF	20% 100V
C510	1-128-582-11	ELECT 10uF	20% 100V
C511	1-128-582-11	ELECT 10uF	20% 100V
C512	1-136-497-81	FILM 0.1uF	5% 50V
C513	1-136-497-81	FILM 0.1uF	5% 50V
C514	1-126-948-11	ELECT 100uF	20% 35V
C516	1-126-964-11	ELECT 10uF	20% 50V
C517	1-126-964-11	ELECT 10uF	20% 50V
		< CONNECTOR >	
CN501	1-815-444-11	PIN, CONNECTOR (PWB) 3P	
CN502	1-819-134-11	PIN, CONNECTOR 6P	
CN503	1-819-132-11	PIN, CONNECTOR 4P	
		< DIODE >	
D501	6-501-176-01	DIODE UDZW-TE17-12B	
D502	8-719-988-61	DIODE 1SS355TE-17	
D503	8-719-988-61	DIODE 1SS355TE-17	
D504	8-719-988-61	DIODE 1SS355TE-17	
D507	8-719-988-61	DIODE 1SS355TE-17	
		< IC >	
IC501	6-600-091-01	IC STK404-130S	
		< JUMPER RESISTOR >	
JR501	1-216-864-11	SHORT CHIP 0	
JR502	1-216-864-11	SHORT CHIP 0	
		< TRANSISTOR >	
Q501	6-551-268-01	TRANSISTOR 2SC5625	
Q502	8-729-600-22	TRANSISTOR 2SA1235-F	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q505	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q506	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R501	1-216-841-11	METAL CHIP 47K	5% 1/10W
R502	1-216-841-11	METAL CHIP 47K	5% 1/10W
R503	1-216-821-11	METAL CHIP 1K	5% 1/10W
R504	1-216-841-11	METAL CHIP 47K	5% 1/10W
△ R505	1-215-873-00	METAL OXIDE 4.7K	5% 1W F (GX470)
△ R505	1-215-896-00	METAL OXIDE 4.7K	5% 2W F (GX570)
△ R506	1-202-972-61	FUSIBLE 1	5% 1/4W F

Ref. No.	Part No.	Description	Remark
△ R507	1-215-873-00	METAL OXIDE 4.7K	5% 1W F
△ R508	1-215-873-00	METAL OXIDE 4.7K	5% 1W F
△ R509	1-212-881-11	FUSIBLE 100	5% 1/4W F
△ R510	1-220-893-11	METAL 0.22	10% 5W F
△ R511	1-220-893-11	METAL 0.22	10% 5W F
R512	1-216-797-11	METAL CHIP 10	5% 1/10W
R513	1-216-821-11	METAL CHIP 1K	5% 1/10W
R514	1-216-837-11	METAL CHIP 22K	5% 1/10W
R515	1-216-841-11	METAL CHIP 47K	5% 1/10W
R516	1-216-809-11	METAL CHIP 100	5% 1/10W
R517	1-216-833-11	METAL CHIP 10K	5% 1/10W
R518	1-216-833-11	METAL CHIP 10K	5% 1/10W
R520	1-216-845-11	METAL CHIP 100K	5% 1/10W
R521	1-216-809-11	METAL CHIP 100	5% 1/10W
R522	1-216-809-11	METAL CHIP 100	5% 1/10W
R523	1-216-809-11	METAL CHIP 100	5% 1/10W
R524	1-216-841-11	METAL CHIP 47K	5% 1/10W
R525	1-216-797-11	METAL CHIP 10	5% 1/10W
R526	1-216-797-11	METAL CHIP 10	5% 1/10W
R527	1-216-797-11	METAL CHIP 10	5% 1/10W
R529	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R530	1-216-837-11	METAL CHIP 22K	5% 1/10W
R531	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R532	1-216-837-11	METAL CHIP 22K	5% 1/10W
R533	1-216-837-11	METAL CHIP 22K	5% 1/10W
△ R534	1-202-972-61	FUSIBLE 1	5% 1/4W F
		< RELAY >	
RY501	1-755-307-11	RELAY	
		*****	
	1-687-669-12	SW BOARD	*****
S751	1-786-514-11	SWITCH, LEVER (SLIDE) (DISC TABLE OPEN/CLOSE DETECT)	*****
		*****	
		SW-SP BOARD	*****
		< JACK >	
JK501	1-780-242-11	TERMINAL BOARD, PUSH (ANTENNA) 2P (SUB WOOFER OUT)	*****
		*****	
	A-1163-241-A	TRANSFORMER BOARD, COMPLETE	*****
	1-533-233-31	FUSE HOLDER	
		< CAPACITOR >	
C907	1-136-165-00	FILM 0.1uF	5% 50V
C908	1-128-553-11	ELECT 220uF	20% 63V
C909	1-126-964-11	ELECT 10uF	20% 50V
C910	1-126-968-11	ELECT 100uF	20% 50V
C911	1-126-942-61	ELECT 1000uF	20% 25V
		< CONNECTOR >	
* CN901	1-793-660-11	PIN, CONNECTOR (PC BOARD) 3P	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
CN903	1-819-131-11	PIN, CONNECTOR 3P		C024	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
CN907	1-819-139-11	PIN, CONNECTOR 11P		C025	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
		< DIODE >		C041	1-128-993-21	ELECT CHIP 22uF 20%	10V
D901	8-719-988-61	DIODE 1SS355TE-17		C042	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
D902	6-500-522-21	DIODE 10EDB40-TB3		C043	1-124-779-00	ELECT CHIP 10uF 20%	16V
D903	6-500-522-21	DIODE 10EDB40-TB3		C044	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
D904	6-500-522-21	DIODE 10EDB40-TB3		C051	1-128-993-21	ELECT CHIP 22uF 20%	10V
D905	6-500-522-21	DIODE 10EDB40-TB3		C052	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
D906	6-501-184-01	DIODE UDWZ-TE17-27B		C053	1-128-996-11	ELECT CHIP 4.7uF 20%	50V
D908	6-500-522-21	DIODE 10EDB40-TB3		C055	1-124-779-00	ELECT CHIP 10uF 20%	16V
D910	8-719-000-08	DIODE MC2838		C056	1-164-357-11	CERAMIC CHIP 0.001uF 5%	50V
		< TRANSFORMER >		C057	1-164-357-11	CERAMIC CHIP 0.001uF 5%	50V
△PT902	1-443-926-11	TRANSFORMER, POWER		C061	1-216-864-11	SHORT CHIP 0	
		< TRANSISTOR >		C062	1-107-726-91	CERAMIC CHIP 0.01uF 10%	16V
Q902	8-729-048-66	TRANSISTOR 2SB1238-PQR-TV2		C063	1-107-726-91	CERAMIC CHIP 0.01uF 10%	16V
		< RESISTOR >		C064	1-107-726-91	CERAMIC CHIP 0.01uF 10%	16V
△R902	1-202-723-00	SOLID 2.2M 20%	1/2W F	C065	1-124-779-00	ELECT CHIP 10uF 20%	16V
R903	1-216-833-11	METAL CHIP 10K 5%	1/10W	C066	1-164-357-11	CERAMIC CHIP 0.001uF 5%	50V
R904	1-216-821-11	METAL CHIP 1K 5%	1/10W	C067	1-164-357-11	CERAMIC CHIP 0.001uF 5%	50V
△R908	1-202-972-61	FUSIBLE 1 5%	1/4W F			< CONNECTOR >	
R910	1-216-801-11	METAL CHIP 22 5%	1/10W	CN001	1-793-580-11	CONNECTOR, FFC (LIF (NON-Z1F)) 15P	
R911	1-216-864-11	SHORT CHIP 0				< DIODE >	
R914	1-216-833-11	METAL CHIP 10K 5%	1/10W	D011	6-500-848-01	DIODE MC2840-T112-1	
		< RELAY >		D012	6-500-848-01	DIODE MC2840-T112-1	
△RY901	1-755-334-11	RELAY, AC POWER				< JUMPER RESISTOR/FERRITE BEAD >	
		*****		FB001	1-216-295-00	SHORT CHIP 0	
		A-1167-407-A XM BOARD, COMPLETE (GX570)		FB002	1-216-295-00	SHORT CHIP 0	
		*****		FB021	1-216-295-00	SHORT CHIP 0	
		< CAPACITOR >		FB022	1-216-295-00	SHORT CHIP 0	
C001	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FB041	1-414-813-11	FERRITE, EMI (SMD) (2012)	
C002	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< IC >	
C003	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC001	6-709-251-01	IC F2602E-01-TR	
C004	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC041	6-708-476-01	IC AK4384ET-E2	
C005	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC051	8-759-656-83	IC NJM4580MD- (TE2)	
C006	1-164-357-11	CERAMIC CHIP 0.001uF 5%	50V			< CONNECTOR >	
C007	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	J001	1-793-642-21	CONNECTOR (USB) (4P), SQUARE (XM)	
C008	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< COIL >	
C009	1-128-993-21	ELECT CHIP 22uF 20%	10V	L001	1-469-523-91	INDUCTOR 2.2uH	
C010	1-128-993-21	ELECT CHIP 22uF 20%	10V	L002	1-469-523-91	INDUCTOR 2.2uH	
C011	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V			< TRANSISTOR >	
C012	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V	Q001	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C014	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	Q003	6-551-248-01	TRANSISTOR NTJS3151PT1G	
C015	1-162-919-11	CERAMIC CHIP 22PF 5%	50V			< RESISTOR >	
C016	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	R001	1-216-845-11	METAL CHIP 100K 5%	1/10W
C017	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	R002	1-216-845-11	METAL CHIP 100K 5%	1/10W
C018	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V	R003	1-216-845-11	METAL CHIP 100K 5%	1/10W
C019	1-162-915-11	CERAMIC CHIP 10PF 0.5PF	50V	R004	1-216-845-11	METAL CHIP 100K 5%	1/10W
C021	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R005	1-216-845-11	METAL CHIP 100K 5%	1/10W
C022	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R006	1-216-845-11	METAL CHIP 100K 5%	1/10W
C023	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V				

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**XM**

Ref. No.	Part No.	Description	Quantity	Percentage	Remark
R007	1-216-833-11	METAL CHIP	10K	5%	1/10W
R008	1-216-821-11	METAL CHIP	1K	5%	1/10W
R009	1-216-821-11	METAL CHIP	1K	5%	1/10W
R010	1-216-809-11	METAL CHIP	100	5%	1/10W
R011	1-216-809-11	METAL CHIP	100	5%	1/10W
R012	1-216-845-11	METAL CHIP	100K	5%	1/10W
R014	1-216-809-11	METAL CHIP	100	5%	1/10W
R015	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R016	1-216-817-11	METAL CHIP	470	5%	1/10W
R017	1-216-809-11	METAL CHIP	100	5%	1/10W
R018	1-216-809-11	METAL CHIP	100	5%	1/10W
R019	1-216-809-11	METAL CHIP	100	5%	1/10W
R020	1-216-837-11	METAL CHIP	22K	5%	1/10W
R021	1-216-809-11	METAL CHIP	100	5%	1/10W
R022	1-216-809-11	METAL CHIP	100	5%	1/10W
R023	1-216-809-11	METAL CHIP	100	5%	1/10W
R024	1-216-809-11	METAL CHIP	100	5%	1/10W
R025	1-216-809-11	METAL CHIP	100	5%	1/10W
R026	1-216-809-11	METAL CHIP	100	5%	1/10W
R031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R032	1-216-841-11	METAL CHIP	47K	5%	1/10W
R033	1-216-841-11	METAL CHIP	47K	5%	1/10W
R034	1-216-841-11	METAL CHIP	47K	5%	1/10W
R035	1-216-841-11	METAL CHIP	47K	5%	1/10W
R036	1-216-833-11	METAL CHIP	10K	5%	1/10W
R037	1-216-833-11	METAL CHIP	10K	5%	1/10W
R051	1-216-841-11	METAL CHIP	47K	5%	1/10W
R052	1-216-841-11	METAL CHIP	47K	5%	1/10W
R055	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R056	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R057	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R066	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R067	1-216-828-11	METAL CHIP	3.9K	5%	1/10W

< VIBRATOR >

X001	1-760-841-11	VIBRATOR, CRYSTAL (45.158MHz)			
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MISCELLANEOUS

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61	1-831-952-21	CABLE, FLEXIBLE FLAT (19 CORE)			
62	1-831-779-21	CABLE, FLEXIBLE FLAT (11 CORE)			
158	1-417-656-21	MECHA DECK (CWN42FF609)			
168	1-831-772-21	CABLE, FLEXIBLE FLAT (9 CORE)			
204	1-693-713-11	TUNER (FM/AM)			
205	1-831-769-21	CABLE, FLEXIBLE FLAT (9 CORE)			
206	1-831-786-21	CABLE, FLEXIBLE FLAT (13 CORE)			
208	1-831-771-21	CABLE, FLEXIBLE FLAT (23 CORE)			
212	1-832-848-21	WIRE (FLAT TYPE) (15 CORE) (GX570)			
303	1-831-928-21	CABLE, FLEXIBLE FLAT (11 CORE)			
△ 306	1-830-190-11	CORD, POWER			
502	1-828-938-51	WIRE (FLAT TYPE) (5 CORE)			
576	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)			
△ 579	A-4735-357-A	OPTICAL PICK-UP BLOCK (KSM-213DHAP) (including spindle motor (M401), sled motor (M402))			
580	1-471-035-21	MAGNET ASSY			

Ref. No.	Part No.	Description	Remark
△ F904	1-533-949-33	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)	
△ F905	1-533-949-33	FUSE, CYLINDRICAL (TIME LUG) (T8AL/250V)	
△ F906	1-532-465-33	FUSE (T3.15AL/250V)	
△ F907	1-532-465-33	FUSE (T3.15AL/250V)	
M001	1-787-344-11	FAN, DC	
M741	A-1108-965-A	MOTOR ASSY, TABLE	
M751	A-1108-966-A	MOTOR ASSY, LOADING	
△ PT901	1-443-924-11	TRANSFORMER, POWER (GX470)	
△ PT901	1-443-925-11	TRANSFORMER, POWER (GX570)	
S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	
S711	1-477-680-12	ENCODER, ROTARY (DISC TABLE ADDRESS DETECT)	

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## SERVICE MANUAL

Ver. 1.1 2006.04

### SUPPLEMENT-1

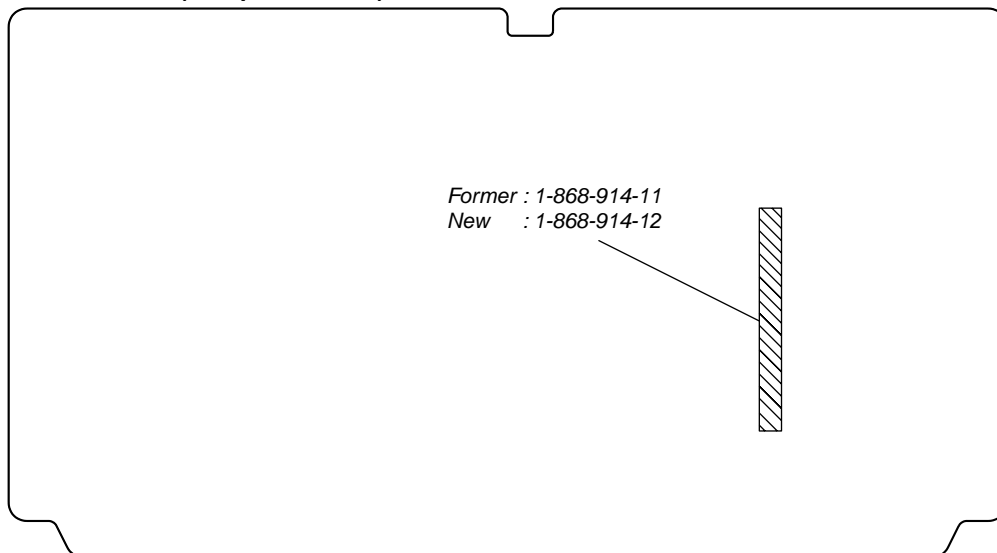
File this supplement with the service manual.

**Subject: Change of DECK board (Suffix-12)**

In this set, DECK board has been changed in the midway of production. Printed wiring board and schematic diagram of new type, and changed parts list are described in this supplement-1. Refer to original service manual and supplement-2 for other information.

#### 1. NEW/FORMER DESCRIPTION

– DECK Board (Component Side) –

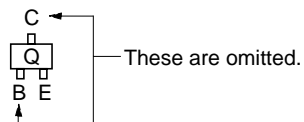


## 2. DIAGRAMS

### • 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.
- : Pattern from the side which enables seeing.  
(The other layers' patterns are not indicated.)
- Indication of transistor



#### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.

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

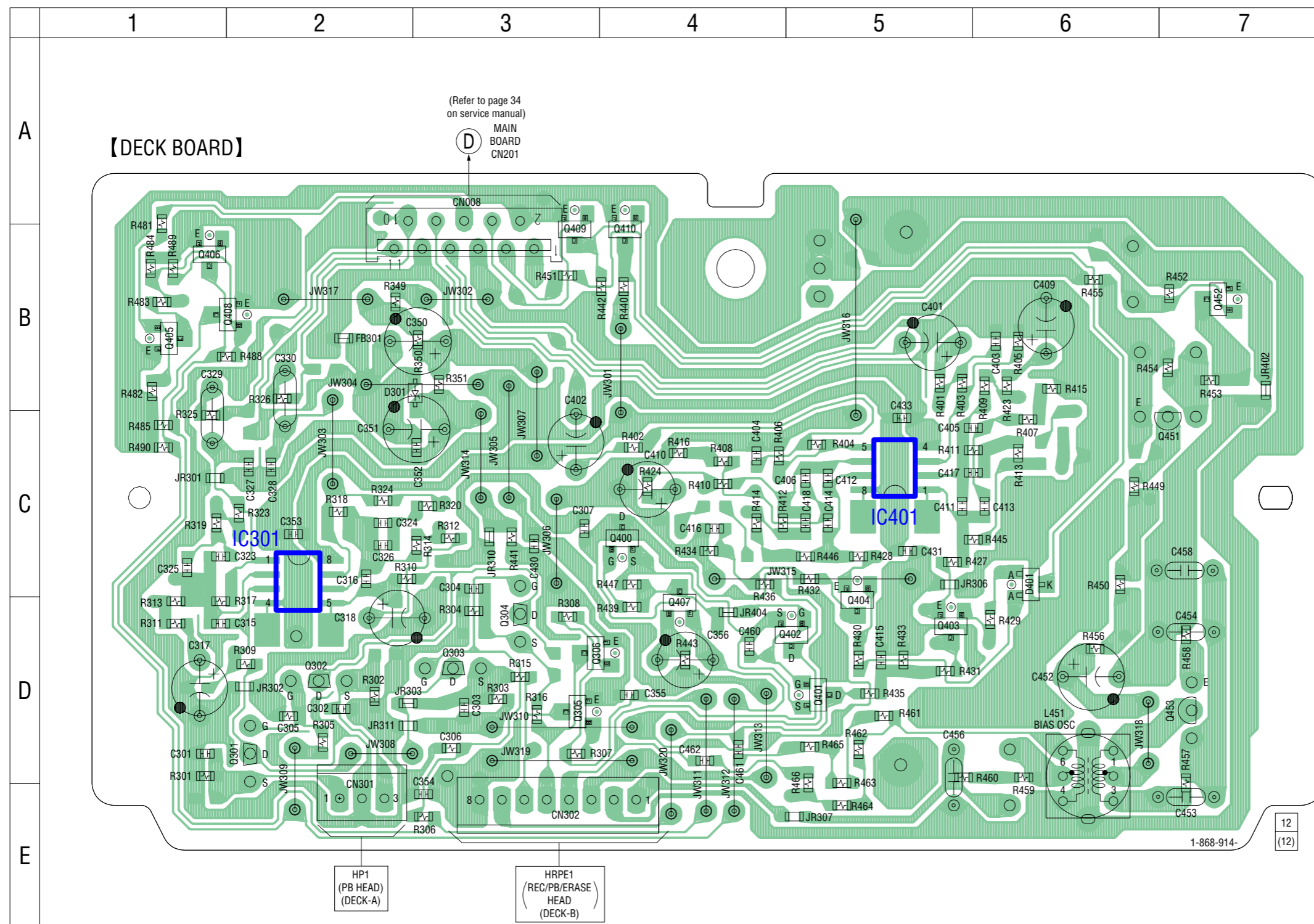
- **—** : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- $\langle\langle \quad \rangle\rangle$  : TAPE PLAY
- $\{ \quad \}$  : REC
- Voltages are taken with a VOM (Input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - $\Sigma$  : TAPE PLAY (DECK-A)
  - $\square$  : TAPE PLAY (DECK-B)
  - $\square\rangle\rangle$  : REC



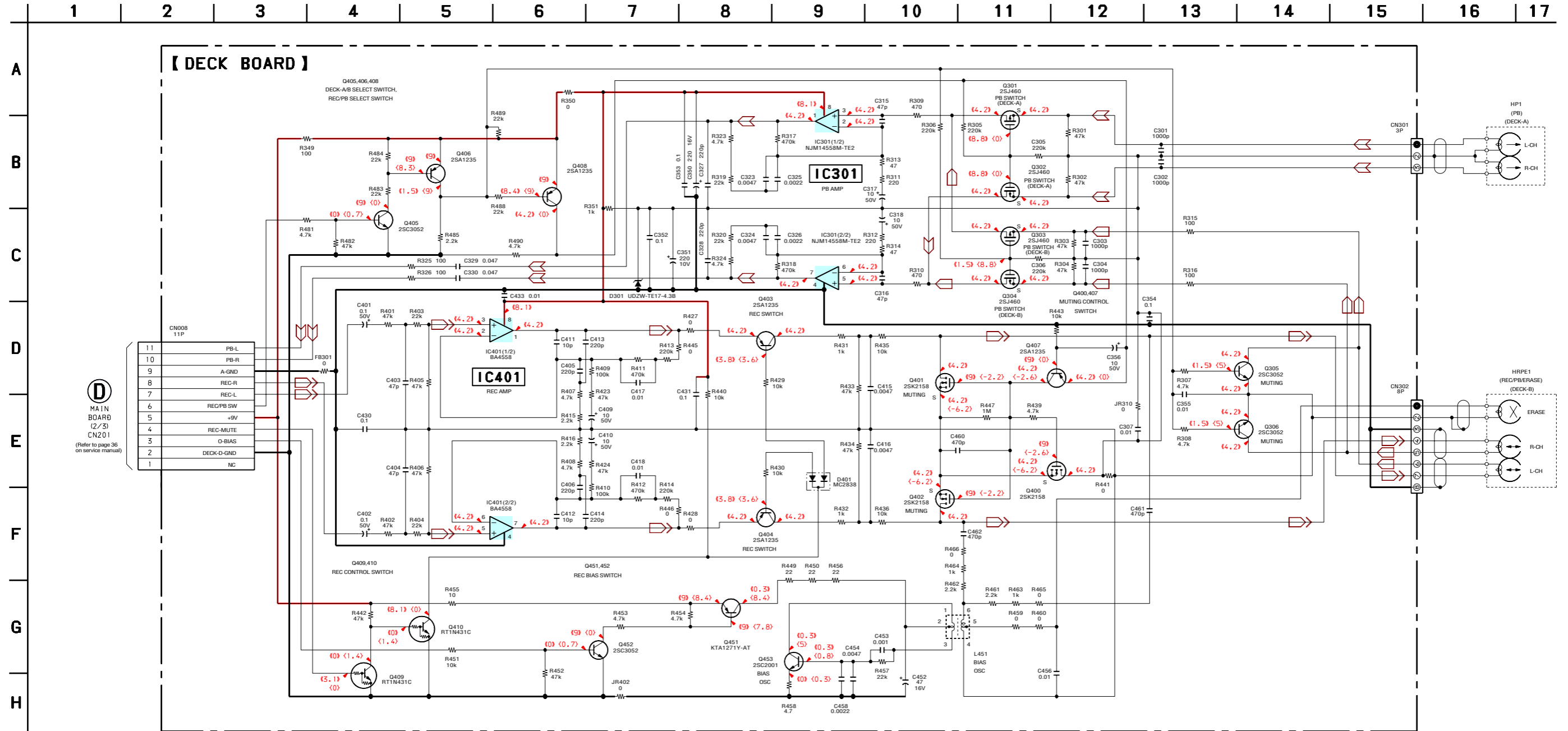
2-1. PRINTED WIRING BOARD – DECK Board –  : Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D301	B-3
D401	C-6
IC301	C-2
IC401	C-5
Q301	D-2
Q302	D-2
Q303	D-3
Q304	D-3
Q305	D-3
Q306	D-3
Q400	C-4
Q401	D-5
Q402	D-5
Q403	D-5
Q404	D-5
Q405	B-1
Q406	B-1
Q407	D-4
Q408	B-2
Q409	B-3
Q410	B-4
Q451	C-7
Q452	B-7
Q453	D-7



2-2. SCHEMATIC DIAGRAM – DECK Board –



### 3. 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

- 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,  $\mu$ :  $\mu$ , for example:  
uA... :  $\mu$ A...      uPA... :  $\mu$ PA...  
uPB... :  $\mu$ PB...    uPC... :  $\mu$ PC...  
uPD... :  $\mu$ PD...
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-1171-482-A	DECK BOARD, COMPLETE *****					
		< CAPACITOR/RESISTOR >					
C301	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C417	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V
C302	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C418	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V
C303	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C430	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C304	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C431	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C305	1-216-849-11	METAL CHIP	220K 5% 1/10W	C433	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C306	1-216-849-11	METAL CHIP	220K 5% 1/10W	C452	1-126-947-11	ELECT	47uF 20% 35V
C307	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C453	1-130-471-00	MYLAR	0.001uF 5% 50V
C315	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C454	1-130-479-00	MYLAR	0.0047uF 5% 50V
C316	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C456	1-130-483-00	MYLAR	0.01uF 5% 50V
C317	1-126-964-11	ELECT	10uF 20% 50V	C458	1-130-475-00	MYLAR	0.0022uF 5% 50V
C318	1-126-964-11	ELECT	10uF 20% 50V	C460	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
C323	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C461	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
C324	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C462	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
C325	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V			< CONNECTOR >	
C326	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	CN008	1-568-830-11	CONNECTOR, FFC 11P	
C327	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	CN301	1-815-444-11	PIN, CONNECTOR (PWB) 3P	
C328	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	CN302	1-815-449-11	PIN, CONNECTOR (PWB) 8P	
C329	1-136-161-00	MYLAR	0.047uF 5% 50V			< DIODE >	
C330	1-136-161-00	MYLAR	0.047uF 5% 50V	D301	6-501-165-01	DIODE UDZW-TE17-4.3B	
C330	1-136-161-00	MYLAR	0.047uF 5% 50V	D401	6-500-335-01	DIODE MC2838-T112-1	
C350	1-126-934-11	ELECT	220uF 20% 16V			< JUMPER RESISTOR >	
C351	1-126-934-11	ELECT	220uF 20% 16V	FB301	1-216-864-11	SHORT CHIP	0
C352	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V			< IC >	
C353	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	IC301	6-702-457-01	IC NJM14558M-TE2	
C354	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	IC401	8-759-909-71	IC BA4558F	
C355	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V			< JUMPER RESISTOR >	
C356	1-126-964-11	ELECT	10uF 20% 50V	JR301	1-216-864-11	SHORT CHIP	0
C401	1-126-956-11	ELECT	0.1uF 20% 50V	JR302	1-216-864-11	SHORT CHIP	0
C402	1-126-956-11	ELECT	0.1uF 20% 50V	JR306	1-216-864-11	SHORT CHIP	0
C403	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	JR307	1-216-864-11	SHORT CHIP	0
C404	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	JR310	1-216-864-11	SHORT CHIP	0
C405	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	JR311	1-216-864-11	SHORT CHIP	0
C406	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	JR402	1-216-864-11	SHORT CHIP	0
C409	1-126-964-11	ELECT	10uF 20% 50V	JR404	1-216-864-11	SHORT CHIP	0
C410	1-126-964-11	ELECT	10uF 20% 50V			< TRANSFORMER >	
C411	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	L451	1-443-760-11	TRANSFORMER, BIAS OSCILLATION	
C412	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V				
C413	1-162-960-11	CERAMIC CHIP	220PF 10% 50V				
C414	1-162-960-11	CERAMIC CHIP	220PF 10% 50V				
C415	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V				
C416	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V				

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## DECK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRANSISTOR >				R407	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q301	6-550-290-01	FET	2SJ460-T	R408	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q302	6-550-290-01	FET	2SJ460-T	R409	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q303	6-550-290-01	FET	2SJ460-T	R410	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q304	6-550-290-01	FET	2SJ460-T	R411	1-216-853-11	METAL CHIP	470K 5% 1/10W
Q305	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R412	1-216-853-11	METAL CHIP	470K 5% 1/10W
Q306	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R413	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q400	8-729-045-62	FET	2SK2158-T2B	R414	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q401	8-729-045-62	FET	2SK2158-T2B	R415	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
Q402	8-729-045-62	FET	2SK2158-T2B	R416	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
Q403	8-729-600-22	TRANSISTOR	2SA1235-F	R423	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q404	8-729-600-22	TRANSISTOR	2SA1235-F	R424	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q405	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R427	1-216-864-11	SHORT CHIP	0
Q406	8-729-600-22	TRANSISTOR	2SA1235-F	R428	1-216-864-11	SHORT CHIP	0
Q407	8-729-600-22	TRANSISTOR	2SA1235-F	R429	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q408	8-729-600-22	TRANSISTOR	2SA1235-F	R430	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q409	6-551-276-01	TRANSISTOR	RT1N431C-TP-1	R431	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q410	6-551-276-01	TRANSISTOR	RT1N431C-TP-1	R432	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q451	8-729-037-13	TRANSISTOR	KTA1271Y	R433	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q452	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R434	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q453	8-729-011-92	TRANSISTOR	2SC2001TP-K1K2	R435	1-216-833-11	METAL CHIP	10K 5% 1/10W
< RESISTOR >				R436	1-216-833-11	METAL CHIP	10K 5% 1/10W
R301	1-216-841-11	METAL CHIP	47K 5% 1/10W	R439	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R302	1-216-841-11	METAL CHIP	47K 5% 1/10W	R440	1-216-833-11	METAL CHIP	10K 5% 1/10W
R303	1-216-841-11	METAL CHIP	47K 5% 1/10W	R441	1-216-864-11	SHORT CHIP	0
R304	1-216-841-11	METAL CHIP	47K 5% 1/10W	R442	1-216-841-11	METAL CHIP	47K 5% 1/10W
R305	1-216-849-11	METAL CHIP	220K 5% 1/10W	R443	1-216-833-11	METAL CHIP	10K 5% 1/10W
R306	1-216-849-11	METAL CHIP	220K 5% 1/10W	R445	1-216-864-11	SHORT CHIP	0
R307	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R446	1-216-864-11	SHORT CHIP	0
R308	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R447	1-216-857-11	METAL CHIP	1M 5% 1/10W
R309	1-216-817-11	METAL CHIP	470 5% 1/10W	R449	1-216-801-11	METAL CHIP	22 5% 1/10W
R310	1-216-817-11	METAL CHIP	470 5% 1/10W	R450	1-216-801-11	METAL CHIP	22 5% 1/10W
R311	1-216-813-11	METAL CHIP	220 5% 1/10W	R451	1-216-833-11	METAL CHIP	10K 5% 1/10W
R312	1-216-813-11	METAL CHIP	220 5% 1/10W	R452	1-216-841-11	METAL CHIP	47K 5% 1/10W
R313	1-216-805-11	METAL CHIP	47 5% 1/10W	R453	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R314	1-216-805-11	METAL CHIP	47 5% 1/10W	R454	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R315	1-216-809-11	METAL CHIP	100 5% 1/10W	R455	1-216-797-11	METAL CHIP	10 5% 1/10W
R316	1-216-809-11	METAL CHIP	100 5% 1/10W	R456	1-216-801-11	METAL CHIP	22 5% 1/10W
R317	1-216-853-11	METAL CHIP	470K 5% 1/10W	R457	1-216-837-11	METAL CHIP	22K 5% 1/10W
R318	1-216-853-11	METAL CHIP	470K 5% 1/10W	R458	1-216-793-11	METAL CHIP	4.7 5% 1/10W
R319	1-216-837-11	METAL CHIP	22K 5% 1/10W	R459	1-216-864-11	SHORT CHIP	0
R320	1-216-837-11	METAL CHIP	22K 5% 1/10W	R460	1-216-864-11	SHORT CHIP	0
R323	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R461	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R324	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R462	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R325	1-216-809-11	METAL CHIP	100 5% 1/10W	R463	1-216-821-11	METAL CHIP	1K 5% 1/10W
R326	1-216-809-11	METAL CHIP	100 5% 1/10W	R464	1-216-821-11	METAL CHIP	1K 5% 1/10W
R349	1-216-809-11	METAL CHIP	100 5% 1/10W	R465	1-216-864-11	SHORT CHIP	0
R350	1-216-864-11	SHORT CHIP	0	R466	1-216-864-11	SHORT CHIP	0
R351	1-216-821-11	METAL CHIP	1K 5% 1/10W	R481	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R401	1-216-841-11	METAL CHIP	47K 5% 1/10W	R482	1-216-841-11	METAL CHIP	47K 5% 1/10W
R402	1-216-841-11	METAL CHIP	47K 5% 1/10W	R483	1-216-837-11	METAL CHIP	22K 5% 1/10W
R403	1-216-837-11	METAL CHIP	22K 5% 1/10W	R484	1-216-837-11	METAL CHIP	22K 5% 1/10W
R404	1-216-837-11	METAL CHIP	22K 5% 1/10W	R485	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R405	1-216-841-11	METAL CHIP	47K 5% 1/10W	R488	1-216-837-11	METAL CHIP	22K 5% 1/10W
R406	1-216-841-11	METAL CHIP	47K 5% 1/10W	R489	1-216-837-11	METAL CHIP	22K 5% 1/10W
				R490	1-216-829-11	METAL CHIP	4.7K 5% 1/10W

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Canadian Model

## SERVICE MANUAL

Ver. 1.2 2006.06

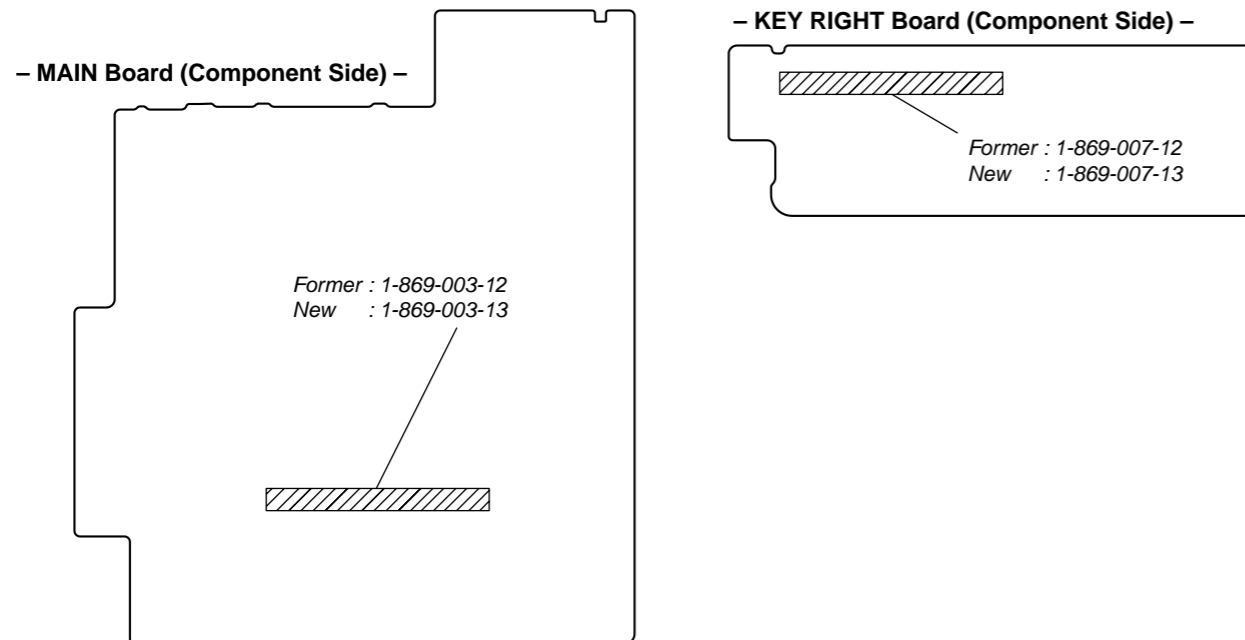
### SUPPLEMENT-2

File this supplement with the service manual.

**Subject: Change of MAIN and KEY RIGHT boards  
(Suffix-13)**

In this set, MAIN and KEY RIGHT boards have been changed in the midway of production.  
Printed wiring board and schematic diagram of new type, and changed parts list are described in this supplement-2.  
Refer to original service manual and supplement-1 for other information.

#### 1. NEW/FORMER DESCRIPTION

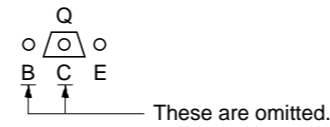
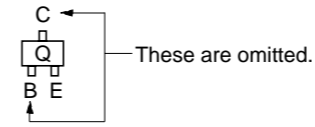


#### 2. DIAGRAMS

##### • 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.
- △ : internal component.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)
- : Indication of transistor



##### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

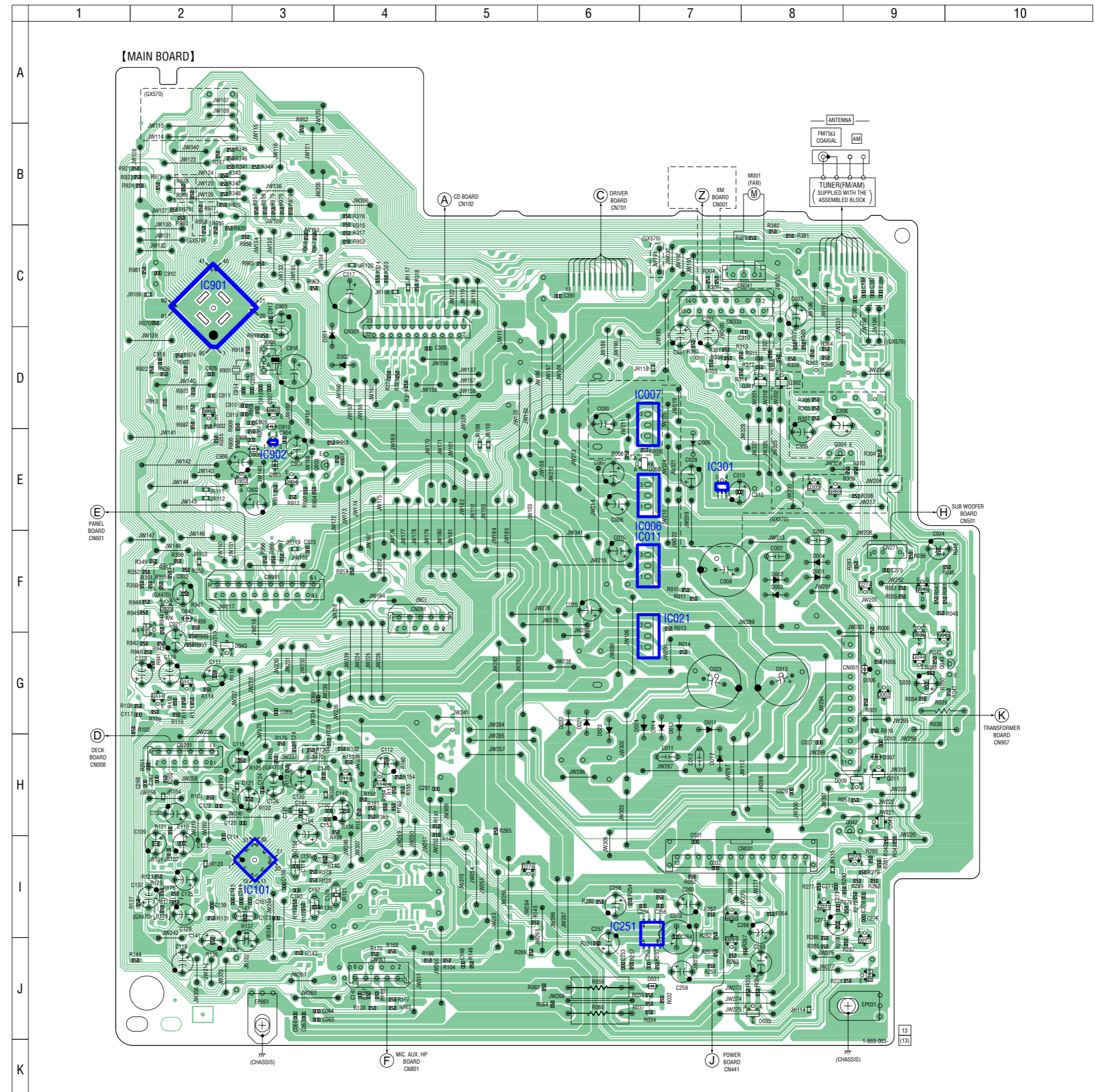
<p><b>Note:</b> The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p><b>Note:</b> Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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- : B+ Line.
- : B- Line.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
- no mark : TUNER (FM/AM)
- ( ) : CD PLAY
- << >> : TAPE PLAY
- { } : TAPE REC
- [ ] : XM
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- ⇨ : TUNER (FM/AM)
- ⇨ : CD PLAY
- ⇨ : TAPE PLAY
- ⇨ : REC
- ⇨ : XM
- ⇨ : AUDIO IN

2-1. PRINTED WIRING BOARD – MAIN Board –  :Uses unleaded solder.

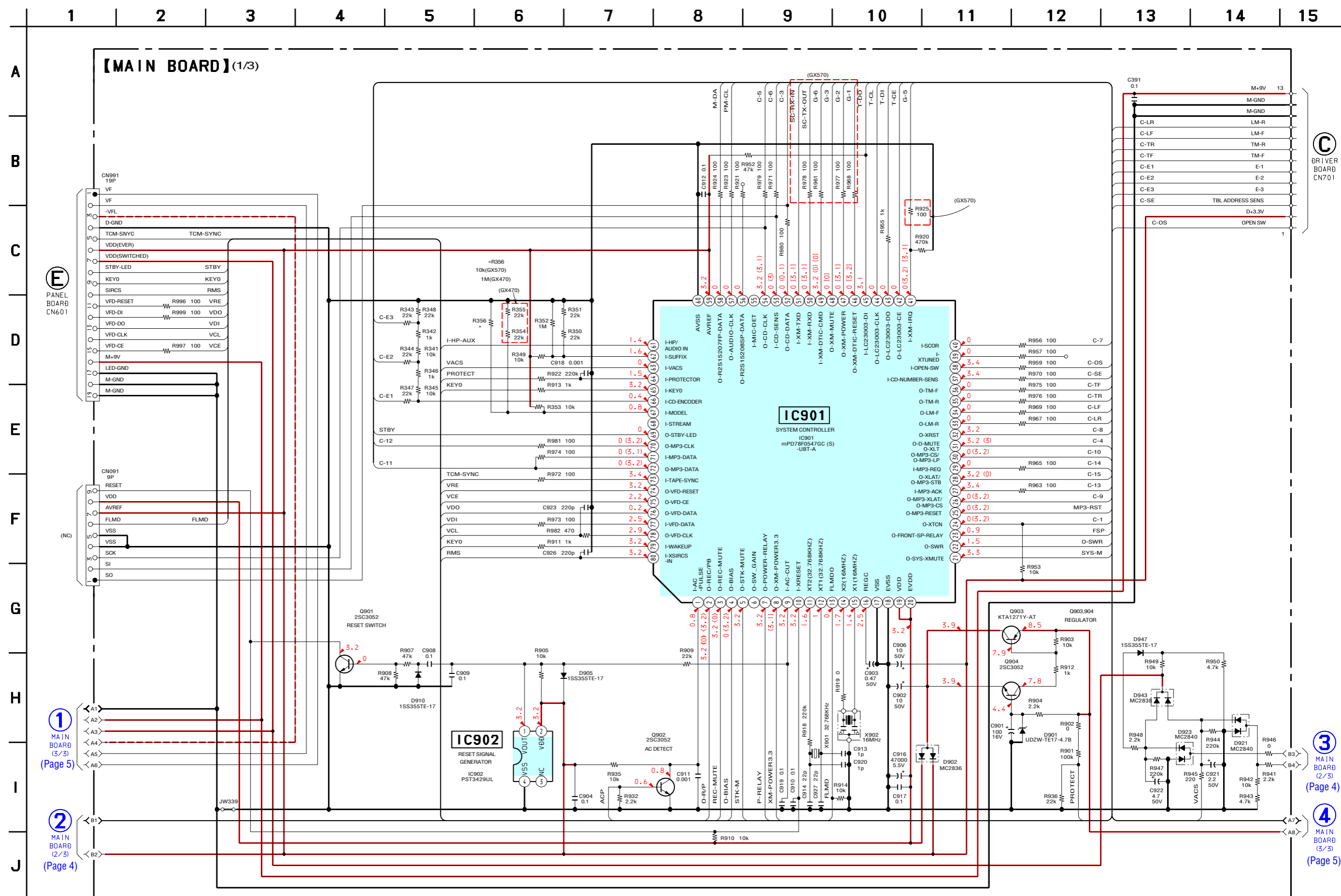
• Semiconductor Location

Ref. No.	Location
D001	F-8
D002	F-8
D003	F-8
D004	F-8
D005	E-7
D006	G-9
D007	H-9
D008	E-7
D009	H-9
D011	G-7
D012	H-7
D013	G-7
D014	G-7
D021	G-6
D022	G-6
D023	G-6
D024	G-7
D031	J-7
D035	J-8
D036	G-9
D301	D-3
D302	D-4
D901	E-3
D902	E-3
D910	D-3
D921	F-2
D923	F-2
D943	G-2
D947	F-2
IC006	E-7
IC007	E-7
IC011	F-7
IC021	G-7
IC101	I-3
IC251	I-7
IC301	E-7
IC901	C-2
IC902	E-3
Q002	G-9
Q011	H-9
Q041	H-9
Q042	H-9
Q043	G-9
Q044	G-9
Q045	G-9
Q046	F-9
Q111	G-2
Q112	G-2
Q113	H-4
Q114	H-4
Q251	J-7
Q252	I-7
Q261	J-9
Q271	I-8
Q272	I-9
Q274	F-9
Q276	I-5
Q277	J-9
Q301	D-8
Q302	D-8
Q303	E-8
Q304	E-8
Q305	E-8
Q901	D-3
Q902	D-2
Q903	E-3
Q904	E-3



Note: IC901 on the MAIN board cannot exchange with single. When IC901 is damaged, exchange the entire mounted board.

2-2. SCHEMATIC DIAGRAM – MAIN Board (1/3) –



**(E)**  
PANEL BOARD  
CN601

**(C)**  
DRIVER BOARD  
CN701

**1**  
MAIN BOARD  
(3/3)  
(Page 5)

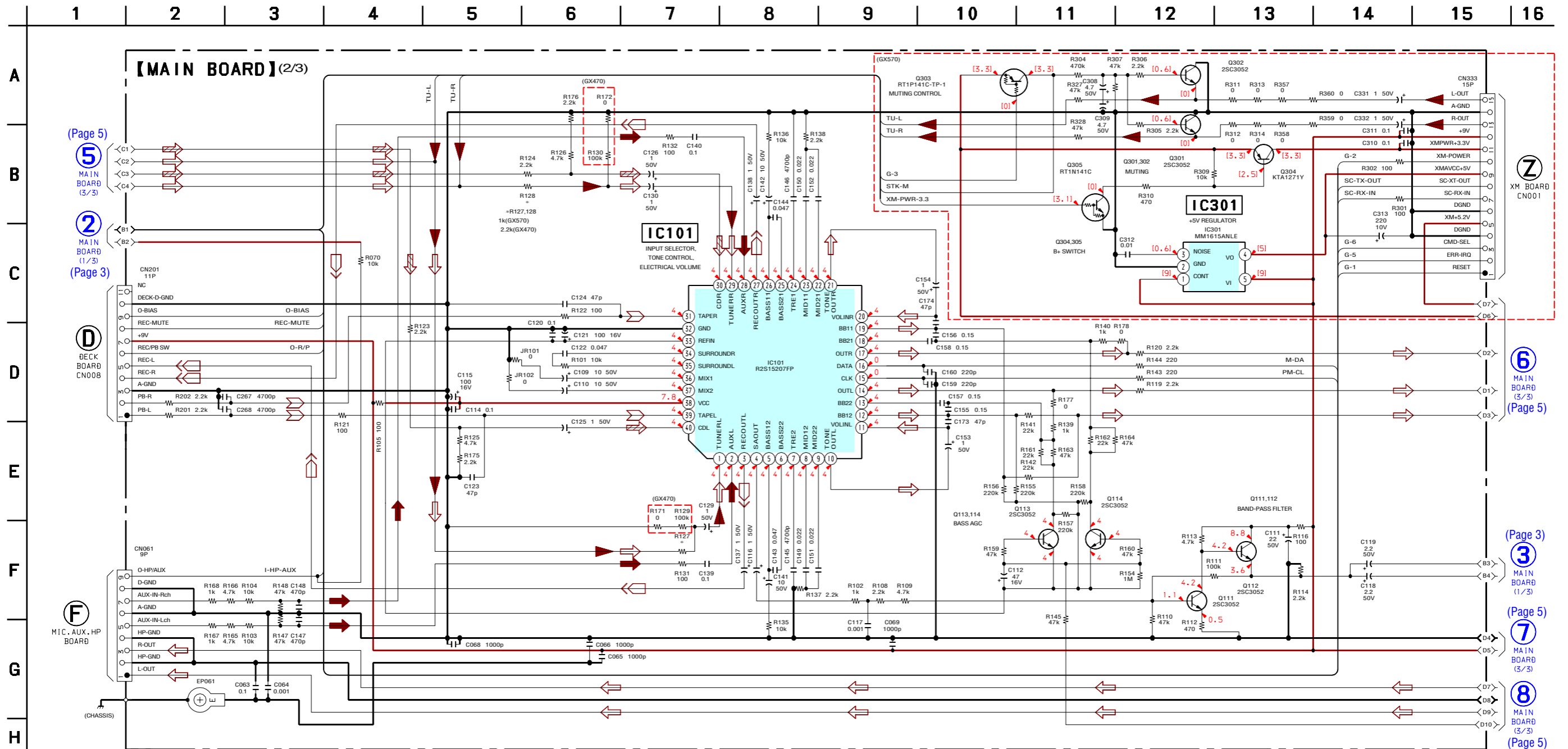
**2**  
MAIN BOARD  
(2/3)  
(Page 4)

**3**  
MAIN BOARD  
(2/3)  
(Page 4)

**4**  
MAIN BOARD  
(3/3)  
(Page 5)

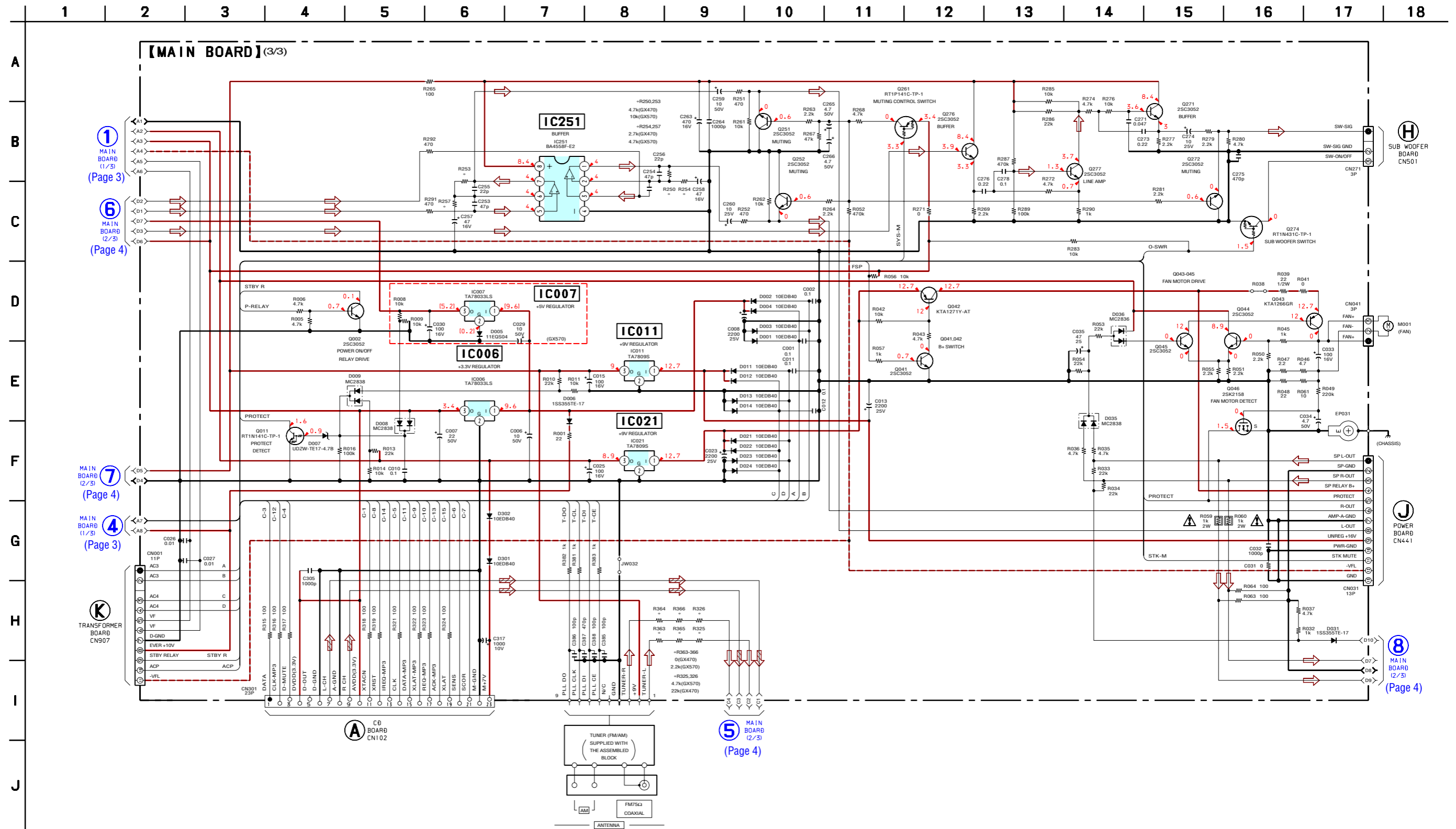
**Note:** IC901 on the MAIN board cannot exchange with single. When IC901 is damaged, exchange the entire mounted board.

2-3. SCHEMATIC DIAGRAM – MAIN Board (2/3) –

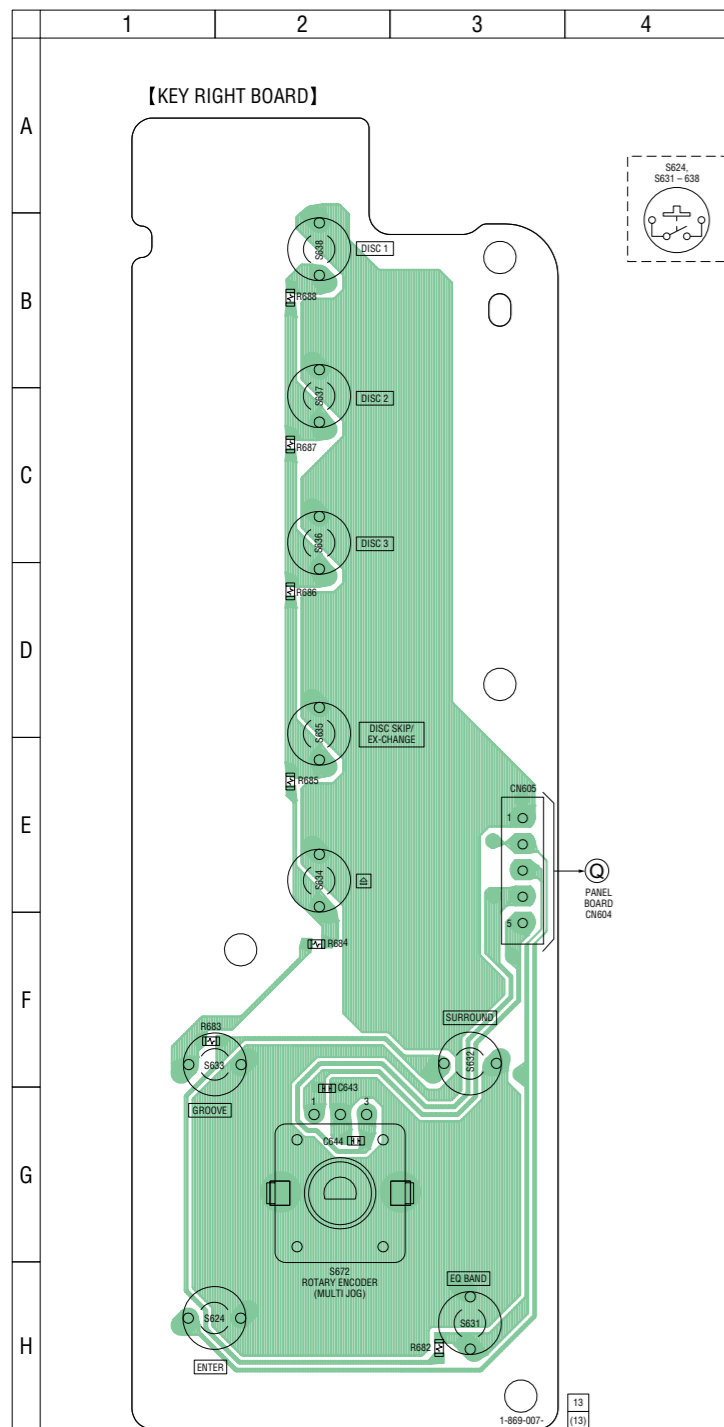




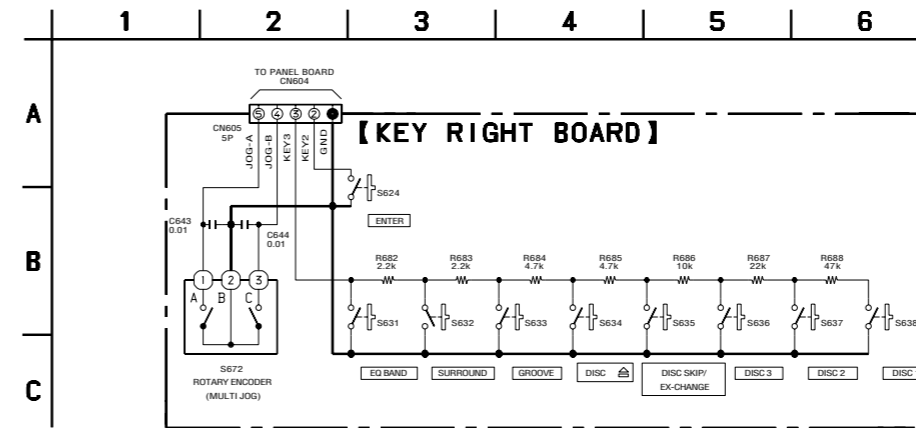
2-4. SCHEMATIC DIAGRAM - MAIN Board (3/3) -



2-5. PRINTED WIRING BOARD – KEY RIGHT Board –  :Uses unleaded solder.



2-6. SCHEMATIC DIAGRAM – KEY RIGHT Board –



### 3. 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

- 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:  $\mu$ , for example:  
uA... :  $\mu$ A...      uPA... :  $\mu$ PA...  
uPB... :  $\mu$ PB...    uPC... :  $\mu$ PC...  
uPD... :  $\mu$ PD...  
• CAPACITORS  
uF:  $\mu$ F  
• COILS  
uH:  $\mu$ H

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

Les composants identifiés par une marque  $\Delta$  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-1159-681-A	KEY RIGHT BOARD, COMPLETE *****		C015	1-126-933-11	ELECT 100uF 20%	16V
		< CAPACITOR >		C023	1-126-943-11	ELECT 2200uF 20%	25V
C643	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C025	1-126-933-11	ELECT 100uF 20%	16V
C644	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C026	1-162-974-11	CERAMIC CHIP 0.01uF	50V
		< RESISTOR >		C027	1-162-974-11	CERAMIC CHIP 0.01uF	50V
R682	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	C029	1-126-964-11	ELECT 10uF 20%	50V (GX570)
R683	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	C030	1-126-933-11	ELECT 100uF 20%	16V (GX570)
R684	1-216-829-11	METAL CHIP 4.7K 5%	1/10W	C031	1-216-864-11	SHORT CHIP 0	
R685	1-216-829-11	METAL CHIP 4.7K 5%	1/10W	C032	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
R686	1-216-833-11	METAL CHIP 10K 5%	1/10W	C033	1-126-933-11	ELECT 100uF 20%	16V
R687	1-216-837-11	METAL CHIP 22K 5%	1/10W	C034	1-126-963-11	ELECT 4.7uF 20%	50V
R688	1-216-841-11	METAL CHIP 47K 5%	1/10W	C035	1-126-947-11	ELECT 47uF 20%	35V
		< SWITCH >		C063	1-164-156-11	CERAMIC CHIP 0.1uF	25V
S624	1-762-875-21	SWITCH, KEYBOARD (ENTER)		C064	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
S631	1-762-875-21	SWITCH, KEYBOARD (EQ BAND)		C065	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
S632	1-762-875-21	SWITCH, KEYBOARD (SURROUND)		C066	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
S633	1-762-875-21	SWITCH, KEYBOARD (GROOVE)		C068	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
S634	1-762-875-21	SWITCH, KEYBOARD (DISC $\Delta$ )		C069	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
S635	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)		C109	1-126-964-11	ELECT 10uF 20%	50V
S636	1-762-875-21	SWITCH, KEYBOARD (DISC 3)		C110	1-126-964-11	ELECT 10uF 20%	50V
S637	1-762-875-21	SWITCH, KEYBOARD (DISC 2)		C111	1-126-965-11	ELECT 22uF 20%	50V
S638	1-762-875-21	SWITCH, KEYBOARD (DISC 1)		C112	1-126-947-11	ELECT 47uF 20%	35V
S672	1-786-418-11	SWITCH, ROTARY (ENCODER) (MULTI JOG) *****		C114	1-164-360-11	CERAMIC CHIP 0.1uF	16V
A-1163-189-A	MAIN BOARD, COMPLETE (GX570)			C115	1-126-933-11	ELECT 100uF 20%	16V
A-1163-190-A	MAIN BOARD, COMPLETE (GX470) *****			C116	1-126-960-11	ELECT 1uF 20%	50V
7-685-872-01	SCREW +BVTT 3X8 (S)			C117	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
		< CAPACITOR >		C118	1-126-961-11	ELECT 2.2uF 20%	50V
C001	1-136-497-81	FILM 0.1uF 5%	50V	C119	1-126-961-11	ELECT 2.2uF 20%	50V
C002	1-136-497-81	FILM 0.1uF 5%	50V	C120	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C006	1-126-964-11	ELECT 10uF 20%	50V	C121	1-126-933-11	ELECT 100uF 20%	16V
C007	1-126-965-11	ELECT 22uF 20%	50V	C122	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
C008	1-126-943-11	ELECT 2200uF 20%	25V	C123	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
C010	1-165-621-11	CERAMIC CHIP 0.1uF	50V	C124	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
C011	1-136-497-81	FILM 0.1uF 5%	50V	C125	1-126-960-11	ELECT 1uF 20%	50V
C012	1-136-497-81	FILM 0.1uF 5%	50V	C126	1-126-960-11	ELECT 1uF 20%	50V
C013	1-126-943-11	ELECT 2200uF 20%	25V	C129	1-126-960-11	ELECT 1uF 20%	50V
				C130	1-126-960-11	ELECT 1uF 20%	50V
				C137	1-126-960-11	ELECT 1uF 20%	50V
				C138	1-126-960-11	ELECT 1uF 20%	50V
				C139	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C140	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V

# HCD-GX470/GX570

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C141	1-126-964-11	ELECT	10uF 20% 50V	C332	1-126-960-11	ELECT	1uF 20% 50V
C142	1-126-964-11	ELECT	10uF 20% 50V				(GX570)
C143	1-137-374-11	MYLAR	0.047uF 5% 50V	C385	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C144	1-137-374-11	MYLAR	0.047uF 5% 50V	C386	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C145	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V				
C146	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C387	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
C147	1-164-362-11	CERAMIC CHIP	470PF 5% 50V	C388	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C148	1-164-362-11	CERAMIC CHIP	470PF 5% 50V	C391	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C149	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C901	1-126-933-11	ELECT	100uF 20% 16V
C150	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C902	1-126-964-11	ELECT	10uF 20% 50V
C151	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V				
C152	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C903	1-126-959-11	ELECT	0.47uF 20% 50V
C153	1-126-960-11	ELECT	1uF 20% 50V	C904	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C154	1-126-960-11	ELECT	1uF 20% 50V	C906	1-126-964-11	ELECT	10uF 20% 50V
C155	1-136-167-00	MYLAR	0.15uF 5% 50V	C908	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C156	1-136-167-00	MYLAR	0.15uF 5% 50V	C909	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C157	1-136-167-00	MYLAR	0.15uF 5% 50V				
C158	1-136-167-00	MYLAR	0.15uF 5% 50V	C910	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C159	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	C911	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C160	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	C912	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C173	1-162-949-11	CERAMIC CHIP	47PF 5% 50V	C913	1-162-905-11	CERAMIC CHIP	1PF 0.25PF 50V
C174	1-162-949-11	CERAMIC CHIP	47PF 5% 50V	C914	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C253	1-162-923-11	CERAMIC CHIP	47PF 5% 50V				
C254	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C916	1-114-154-11	DOUBLE LAYER	47000uF 5.5V
C255	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C917	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C256	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C918	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C257	1-126-947-11	ELECT	47uF 20% 35V	C919	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C258	1-126-947-11	ELECT	47uF 20% 35V	C920	1-162-905-11	CERAMIC CHIP	1PF 0.25PF 50V
C259	1-126-964-11	ELECT	10uF 20% 50V				
C260	1-124-261-00	ELECT	10uF 20% 25V	C921	1-126-961-11	ELECT	2.2uF 20% 50V
C263	1-126-935-11	ELECT	470uF 20% 16V	C922	1-126-963-11	ELECT	4.7uF 20% 50V
C264	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C923	1-162-960-11	CERAMIC CHIP	220PF 10% 50V
C265	1-126-963-11	ELECT	4.7uF 20% 50V	C926	1-162-960-11	CERAMIC CHIP	220PF 10% 50V
C266	1-126-963-11	ELECT	4.7uF 20% 50V	C927	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C267	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V				
C268	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	< CONNECTOR >			
C271	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	* CN031	1-573-094-11	SOCKET, CONNECTOR 13P	
C273	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V	CN041	1-819-131-11	PIN, CONNECTOR 3P	
C274	1-124-261-00	ELECT	10uF 20% 25V	CN061	1-568-828-11	CONNECTOR, FFC 9P	
C275	1-164-362-11	CERAMIC CHIP	470PF 5% 50V	CN091	1-568-828-11	CONNECTOR, FFC 9P	
C276	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V	CN201	1-568-830-11	CONNECTOR, FFC 11P	
C278	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
C281	1-162-974-11	CERAMIC CHIP	0.01uF 50V	CN301	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
C305	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	* CN333	1-691-047-21	HOUSING, CONNECTOR 15P (GX570)	
C308	1-126-963-11	ELECT	4.7uF 20% 50V	CN991	1-784-780-11	CONNECTOR, FFC 19P	
			(GX570)				
C309	1-126-963-11	ELECT	4.7uF 20% 50V	< DIODE >			
			(GX570)	D001	6-500-522-21	DIODE 10EDB40-TB3	
C310	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D002	6-500-522-21	DIODE 10EDB40-TB3	
			(GX570)	D003	6-500-522-21	DIODE 10EDB40-TB3	
C311	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D004	6-500-522-21	DIODE 10EDB40-TB3	
			(GX570)	D005	8-719-085-36	DIODE 11EQS04-TB5 (GX570)	
C312	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V	D006	8-719-988-61	DIODE 1SS355TE-17	
			(GX570)	D007	6-501-166-01	DIODE UDZW-TE17-4.7B	
C313	1-126-934-11	ELECT	220uF 20% 16V	D008	8-719-000-08	DIODE MC2838	
			(GX570)	D009	6-500-335-01	DIODE MC2838-T112-1	
C317	1-126-926-11	ELECT	1000uF 20% 10V	D011	6-500-522-21	DIODE 10EDB40-TB3	
C331	1-126-960-11	ELECT	1uF 20% 50V	D012	6-500-522-21	DIODE 10EDB40-TB3	
			(GX570)	D013	6-500-522-21	DIODE 10EDB40-TB3	
				D014	6-500-522-21	DIODE 10EDB40-TB3	
				D021	6-500-522-21	DIODE 10EDB40-TB3	
				D022	6-500-522-21	DIODE 10EDB40-TB3	
				D023	6-500-522-21	DIODE 10EDB40-TB3	
				D024	6-500-522-21	DIODE 10EDB40-TB3	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D031	8-719-988-61	DIODE 1SS355TE-17		Q112	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D035	8-719-000-08	DIODE MC2838		Q113	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D036	8-719-000-07	DIODE MC2836		Q114	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D301	6-500-522-21	DIODE 10EDB40-TB3		Q251	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D302	6-500-522-21	DIODE 10EDB40-TB3		Q252	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D901	6-501-166-01	DIODE UDZW-TE17-4.7B		Q261	8-729-027-23	TRANSISTOR DTA114EKA-T146	
D902	8-719-000-07	DIODE MC2836		Q271	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D905	8-719-988-61	DIODE 1SS355TE-17		Q272	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D910	8-719-988-61	DIODE 1SS355TE-17		Q274	6-551-276-01	TRANSISTOR RT1N431C-TP-1	
D921	6-500-848-01	DIODE MC2840-T112-1		Q276	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D923	6-500-848-01	DIODE MC2840-T112-1		Q277	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D943	8-719-000-08	DIODE MC2838		Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (GX570)	
D947	8-719-988-61	DIODE 1SS355TE-17		Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (GX570)	
		< IC >		Q303	8-729-027-23	TRANSISTOR DTA114EKA-T146 (GX570)	
IC006	6-702-771-01	IC TA78033LS		Q304	8-729-037-13	TRANSISTOR KTA1271Y (GX570)	
IC007	6-703-547-01	IC TA7805LS (GX570)		Q305	8-729-027-43	TRANSISTOR DTC114EKA-T146 (GX570)	
IC011	8-759-701-59	IC NJM78M09FA		Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC021	8-759-701-59	IC NJM78M09FA		Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC101	6-709-331-01	IC R2S15207FP		Q903	8-729-037-13	TRANSISTOR KTA1271Y	
IC251	8-759-909-71	IC BA4558F		Q904	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC301	6-707-282-01	IC MM1615ANLE (GX570)				< RESISTOR >	
IC901	(Not supplied)	IC uPD78F0547GC (S)-UBT-A		R001	1-216-801-11	METAL CHIP 22 5% 1/10W	
IC902	8-759-713-61	IC PST3429UL		R005	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
		< JUMPER RESISTOR >		R006	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JR101	1-216-864-11	SHORT CHIP 0		R008	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JR102	1-216-864-11	SHORT CHIP 0				(GX570)	
JR103	1-216-864-11	SHORT CHIP 0		R009	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JR104	1-216-864-11	SHORT CHIP 0				(GX570)	
JR105	1-216-864-11	SHORT CHIP 0		R010	1-216-837-11	METAL CHIP 22K 5% 1/10W	
JR106	1-216-864-11	SHORT CHIP 0		R011	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JR107	1-216-864-11	SHORT CHIP 0		R013	1-216-837-11	METAL CHIP 22K 5% 1/10W	
JR108	1-216-864-11	SHORT CHIP 0		R014	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JR109	1-216-864-11	SHORT CHIP 0		R016	1-216-845-11	METAL CHIP 100K 5% 1/10W	
JR110	1-216-864-11	SHORT CHIP 0		R032	1-216-821-11	METAL CHIP 1K 5% 1/10W	
JR111	1-216-864-11	SHORT CHIP 0		R033	1-216-837-11	METAL CHIP 22K 5% 1/10W	
JR112	1-216-864-11	SHORT CHIP 0		R034	1-216-837-11	METAL CHIP 22K 5% 1/10W	
JR114	1-216-864-11	SHORT CHIP 0		R035	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JR115	1-216-864-11	SHORT CHIP 0		R036	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JR117	1-216-864-11	SHORT CHIP 0		R037	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JR118	1-216-864-11	SHORT CHIP 0		R039	1-260-308-11	CARBON 22 5% 1/2W	
JR119	1-216-864-11	SHORT CHIP 0		R041	1-216-864-11	SHORT CHIP 0	
JR120	1-216-864-11	SHORT CHIP 0		R042	1-216-833-11	METAL CHIP 10K 5% 1/10W	
JR121	1-216-864-11	SHORT CHIP 0		R043	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
JR122	1-216-864-11	SHORT CHIP 0		R045	1-216-821-11	METAL CHIP 1K 5% 1/10W	
JR123	1-216-864-11	SHORT CHIP 0		R046	1-216-793-11	METAL CHIP 4.7 5% 1/10W	
		< TRANSISTOR >		R047	1-216-789-11	METAL CHIP 2.2 5% 1/10W	
Q002	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R048	1-216-801-11	METAL CHIP 22 5% 1/10W	
Q011	8-729-027-43	TRANSISTOR DTC114EKA-T146		R049	1-216-849-11	METAL CHIP 220K 5% 1/10W	
Q041	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R050	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q042	8-729-037-13	TRANSISTOR KTA1271Y		R051	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q043	8-729-037-03	TRANSISTOR KTA1266GR-AT		R052	1-216-853-11	METAL CHIP 470K 5% 1/10W	
Q044	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R053	1-216-837-11	METAL CHIP 22K 5% 1/10W	
Q045	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R054	1-216-837-11	METAL CHIP 22K 5% 1/10W	
Q046	8-729-045-62	FET 2SK2158-T2B		R055	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R056	1-216-833-11	METAL CHIP 10K 5% 1/10W	
				R057	1-216-821-11	METAL CHIP 1K 5% 1/10W	
				△R059	1-215-892-11	METAL OXIDE 1K 5% 2W F	

**Note:** IC901 on the MAIN board cannot exchange with single.  
When IC901 is damaged, exchange the entire mounted board.

# HCD-GX470/GX570

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
△R060	1-215-892-11	METAL OXIDE	1K 5% 2W F	R159	1-216-841-11	METAL CHIP	47K 5% 1/10W
R061	1-216-797-11	METAL CHIP	10 5% 1/10W	R160	1-216-841-11	METAL CHIP	47K 5% 1/10W
R063	1-216-809-11	METAL CHIP	100 5% 1/10W	R161	1-216-837-11	METAL CHIP	22K 5% 1/10W
R064	1-216-809-11	METAL CHIP	100 5% 1/10W	R162	1-216-837-11	METAL CHIP	22K 5% 1/10W
R070	1-216-833-11	METAL CHIP	10K 5% 1/10W	R163	1-216-841-11	METAL CHIP	47K 5% 1/10W
R101	1-216-833-11	METAL CHIP	10K 5% 1/10W	R164	1-216-841-11	METAL CHIP	47K 5% 1/10W
R102	1-216-821-11	METAL CHIP	1K 5% 1/10W	R165	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R103	1-216-833-11	METAL CHIP	10K 5% 1/10W	R166	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R104	1-216-833-11	METAL CHIP	10K 5% 1/10W	R167	1-216-821-11	METAL CHIP	1K 5% 1/10W
R105	1-216-809-11	METAL CHIP	100 5% 1/10W	R168	1-216-821-11	METAL CHIP	1K 5% 1/10W
R108	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R171	1-216-864-11	SHORT CHIP	0 (GX470)
R109	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R172	1-216-864-11	SHORT CHIP	0 (GX470)
R110	1-216-841-11	METAL CHIP	47K 5% 1/10W	R175	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R111	1-216-845-11	METAL CHIP	100K 5% 1/10W	R176	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R112	1-216-817-11	METAL CHIP	470 5% 1/10W	R177	1-216-864-11	SHORT CHIP	0
R113	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R178	1-216-864-11	SHORT CHIP	0
R114	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R201	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R116	1-216-809-11	METAL CHIP	100 5% 1/10W	R202	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R119	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R250	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX470)
R120	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R250	1-216-833-11	METAL CHIP	10K 5% 1/10W (GX570)
R121	1-216-809-11	METAL CHIP	100 5% 1/10W	R251	1-216-817-11	METAL CHIP	470 5% 1/10W
R122	1-216-809-11	METAL CHIP	100 5% 1/10W	R252	1-216-817-11	METAL CHIP	470 5% 1/10W
R123	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R253	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX470)
R124	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R253	1-216-833-11	METAL CHIP	10K 5% 1/10W (GX570)
R125	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R254	1-216-826-11	METAL CHIP	2.7K 5% 1/10W (GX470)
R126	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R254	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R127	1-216-821-11	METAL CHIP	1K 5% 1/10W (GX570)	R255	1-216-826-11	METAL CHIP	2.7K 5% 1/10W (GX470)
R127	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX470)	R255	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R128	1-216-821-11	METAL CHIP	1K 5% 1/10W (GX570)	R257	1-216-826-11	METAL CHIP	2.7K 5% 1/10W (GX470)
R128	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (GX470)	R257	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (GX570)
R129	1-216-845-11	METAL CHIP	100K 5% 1/10W (GX470)	R261	1-216-833-11	METAL CHIP	10K 5% 1/10W
R130	1-216-845-11	METAL CHIP	100K 5% 1/10W (GX470)	R262	1-216-833-11	METAL CHIP	10K 5% 1/10W
R131	1-216-809-11	METAL CHIP	100 5% 1/10W	R263	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R132	1-216-809-11	METAL CHIP	100 5% 1/10W	R264	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R135	1-216-833-11	METAL CHIP	10K 5% 1/10W	R265	1-216-809-11	METAL CHIP	100 5% 1/10W
R136	1-216-833-11	METAL CHIP	10K 5% 1/10W	R267	1-216-841-11	METAL CHIP	47K 5% 1/10W
R137	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R268	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R138	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R269	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R139	1-216-821-11	METAL CHIP	1K 5% 1/10W	R271	1-216-864-11	SHORT CHIP	0
R140	1-216-821-11	METAL CHIP	1K 5% 1/10W	R272	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R141	1-216-837-11	METAL CHIP	22K 5% 1/10W	R274	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R142	1-216-837-11	METAL CHIP	22K 5% 1/10W	R276	1-216-833-11	METAL CHIP	10K 5% 1/10W
R143	1-216-813-11	METAL CHIP	220 5% 1/10W	R277	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R144	1-216-813-11	METAL CHIP	220 5% 1/10W	R279	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R145	1-216-841-11	METAL CHIP	47K 5% 1/10W	R280	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R147	1-216-841-11	METAL CHIP	47K 5% 1/10W	R281	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R148	1-216-841-11	METAL CHIP	47K 5% 1/10W	R283	1-216-833-11	METAL CHIP	10K 5% 1/10W
R154	1-216-857-11	METAL CHIP	1M 5% 1/10W	R285	1-216-833-11	METAL CHIP	10K 5% 1/10W
R155	1-216-849-11	METAL CHIP	220K 5% 1/10W	R286	1-216-837-11	METAL CHIP	22K 5% 1/10W
R156	1-216-849-11	METAL CHIP	220K 5% 1/10W	R287	1-216-853-11	METAL CHIP	470K 5% 1/10W
R157	1-216-849-11	METAL CHIP	220K 5% 1/10W	R289	1-216-845-11	METAL CHIP	100K 5% 1/10W
R158	1-216-849-11	METAL CHIP	220K 5% 1/10W	R290	1-216-821-11	METAL CHIP	1K 5% 1/10W

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R291	1-216-817-11	METAL CHIP	470	5%	1/10W	R355	1-216-837-11	METAL CHIP	22K	5%	1/10W
R292	1-216-817-11	METAL CHIP	470	5%	1/10W						(GX470)
R301	1-216-809-11	METAL CHIP	100	5%	1/10W	R356	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(GX570)						(GX570)
R302	1-216-809-11	METAL CHIP	100	5%	1/10W	R356	1-216-857-11	METAL CHIP	1M	5%	1/10W
					(GX570)						(GX470)
R304	1-216-853-11	METAL CHIP	470K	5%	1/10W	R357	1-216-864-11	SHORT CHIP	0	(GX570)	
					(GX570)	R358	1-216-864-11	SHORT CHIP	0	(GX570)	
R305	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R359	1-216-864-11	SHORT CHIP	0	(GX570)	
					(GX570)	R360	1-216-864-11	SHORT CHIP	0	(GX570)	
R306	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R363	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
					(GX570)						(GX570)
R307	1-216-841-11	METAL CHIP	47K	5%	1/10W	R363	1-216-864-11	SHORT CHIP	0	(GX470)	
					(GX570)	R364	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						(GX570)
					(GX570)						
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W	R364	1-216-864-11	SHORT CHIP	0	(GX470)	
					(GX570)	R365	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R310	1-216-817-11	METAL CHIP	470	5%	1/10W						(GX570)
					(GX570)	R365	1-216-864-11	SHORT CHIP	0	(GX470)	
R311	1-216-864-11	SHORT CHIP	0	(GX570)							
R312	1-216-864-11	SHORT CHIP	0	(GX570)	R366	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
R313	1-216-864-11	SHORT CHIP	0	(GX570)							(GX570)
R314	1-216-864-11	SHORT CHIP	0	(GX570)	R366	1-216-864-11	SHORT CHIP	0	(GX470)		
R315	1-216-809-11	METAL CHIP	100	5%	1/10W						
R316	1-216-809-11	METAL CHIP	100	5%	1/10W	R381	1-216-821-11	METAL CHIP	1K	5%	1/10W
R317	1-216-809-11	METAL CHIP	100	5%	1/10W	R382	1-216-821-11	METAL CHIP	1K	5%	1/10W
R318	1-216-809-11	METAL CHIP	100	5%	1/10W	R383	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R901	1-216-845-11	METAL CHIP	100K	5%	1/10W
R319	1-216-809-11	METAL CHIP	100	5%	1/10W	R902	1-216-864-11	SHORT CHIP	0		
R321	1-216-809-11	METAL CHIP	100	5%	1/10W						
R322	1-216-809-11	METAL CHIP	100	5%	1/10W	R903	1-216-833-11	METAL CHIP	10K	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W	R904	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W	R905	1-216-833-11	METAL CHIP	10K	5%	1/10W
						R907	1-216-841-11	METAL CHIP	47K	5%	1/10W
R325	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R908	1-216-841-11	METAL CHIP	47K	5%	1/10W
					(GX570)						
R325	1-216-837-11	METAL CHIP	22K	5%	1/10W	R909	1-216-837-11	METAL CHIP	22K	5%	1/10W
					(GX470)	R910	1-216-833-11	METAL CHIP	10K	5%	1/10W
R326	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R911	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(GX570)	R912	1-216-821-11	METAL CHIP	1K	5%	1/10W
R326	1-216-837-11	METAL CHIP	22K	5%	1/10W	R913	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(GX470)						
R327	1-216-837-11	METAL CHIP	22K	5%	1/10W	R914	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(GX570)	R918	1-216-849-11	METAL CHIP	220K	5%	1/10W
R328	1-216-837-11	METAL CHIP	22K	5%	1/10W	R919	1-216-864-11	SHORT CHIP	0		
					(GX570)	R920	1-216-853-11	METAL CHIP	470K	5%	1/10W
R341	1-216-833-11	METAL CHIP	10K	5%	1/10W	R921	1-216-809-11	METAL CHIP	100	5%	1/10W
R342	1-216-821-11	METAL CHIP	1K	5%	1/10W						
R343	1-216-837-11	METAL CHIP	22K	5%	1/10W	R922	1-216-849-11	METAL CHIP	220K	5%	1/10W
R344	1-216-837-11	METAL CHIP	22K	5%	1/10W	R923	1-216-809-11	METAL CHIP	100	5%	1/10W
						R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/10W	R925	1-216-809-11	METAL CHIP	100	5%	1/10W
R346	1-216-821-11	METAL CHIP	1K	5%	1/10W						(GX570)
R347	1-216-837-11	METAL CHIP	22K	5%	1/10W	R932	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R348	1-216-837-11	METAL CHIP	22K	5%	1/10W						
R349	1-216-833-11	METAL CHIP	10K	5%	1/10W	R935	1-216-833-11	METAL CHIP	10K	5%	1/10W
						R936	1-216-837-11	METAL CHIP	22K	5%	1/10W
R350	1-216-837-11	METAL CHIP	22K	5%	1/10W	R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R351	1-216-837-11	METAL CHIP	22K	5%	1/10W	R942	1-216-833-11	METAL CHIP	10K	5%	1/10W
R352	1-216-857-11	METAL CHIP	1M	5%	1/10W	R943	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R354	1-216-837-11	METAL CHIP	22K	5%	1/10W	R944	1-216-849-11	METAL CHIP	220K	5%	1/10W
					(GX470)	R945	1-216-813-11	METAL CHIP	220	5%	1/10W
						R946	1-216-864-11	SHORT CHIP	0		
						R947	1-216-849-11	METAL CHIP	220K	5%	1/10W
						R948	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
						R949	1-216-833-11	METAL CHIP	10K	5%	1/10W

# HCD-GX470/GX570

## MAIN

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R952	1-216-841-11	METAL CHIP	47K	5%	1/10W
R953	1-216-833-11	METAL CHIP	10K	5%	1/10W
R955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R963	1-216-809-11	METAL CHIP	100	5%	(GX570) 1/10W
R965	1-216-809-11	METAL CHIP	100	5%	1/10W
R967	1-216-809-11	METAL CHIP	100	5%	1/10W
R968	1-216-809-11	METAL CHIP	100	5%	1/10W
R969	1-216-809-11	METAL CHIP	100	5%	(GX570) 1/10W
R970	1-216-809-11	METAL CHIP	100	5%	1/10W
R971	1-216-809-11	METAL CHIP	100	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R973	1-216-809-11	METAL CHIP	100	5%	1/10W
R974	1-216-809-11	METAL CHIP	100	5%	1/10W
R975	1-216-809-11	METAL CHIP	100	5%	1/10W
R976	1-216-809-11	METAL CHIP	100	5%	1/10W
R977	1-216-809-11	METAL CHIP	100	5%	1/10W
R978	1-216-809-11	METAL CHIP	100	5%	(GX570) 1/10W
R979	1-216-809-11	METAL CHIP	100	5%	(GX570) 1/10W
R980	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-809-11	METAL CHIP	100	5%	1/10W
R982	1-216-817-11	METAL CHIP	470	5%	1/10W
R996	1-216-809-11	METAL CHIP	100	5%	1/10W
R997	1-216-809-11	METAL CHIP	100	5%	1/10W
R999	1-216-809-11	METAL CHIP	100	5%	1/10W

### < VIBRATOR >

X901	1-579-463-11	VIBRATOR, CRYSTAL (32.768kHz)
X902	1-795-482-11	VIBRATOR, CERAMIC (16MHz)



MEMO

