

HBD-DZ170/DZ171/DZ175/DZ310/ DZ510/DZ610/DZ810

SERVICE MANUAL



Ver. 1.0 2010.01



Photo: HBD-DZ170

US Model
HBD-DZ170/DZ171/DZ175

Canadian Model
HBD-DZ175

E Model
HBD-DZ310/DZ510/DZ610/DZ810

- HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810 are the amplifier, DVD/CD and tuner section in DAV-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810.

This system incorporates with Dolby* Digital and Dolby Pro Logic (II) adaptive matrix surround decoder and the DTS** Digital Surround System.

* Manufactured under license from Dolby Laboratories.

Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.

** Manufactured under license under U.S. Patent #'s:

5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS and DTS Digital Surround are registered trademarks and the DTS logos and Symbol are trademarks of DTS, Inc. © 1996-2008 DTS, Inc. All Rights Reserved.

Model Name Using Similar Mechanism	HCD-FZ900KW/FZ900M
Mechanism Type	CDM85MB-DVBU102
Optical Pick-up Name	KHM-313CAA

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS for the U.S. model

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(FTC)

Front L + Front R With 3 ohms loads, both channels driven, from 180 - 20,000 Hz; rated 84 watts per channel minimum RMS power, with no more than 1% total harmonic distortion from 250 milli watts to rated output.

Amplifier Section (DAV-DZ170/DAV-DZ171/DAV-DZ175)

U.S. models:

POWER OUTPUT (reference):

Front L/Front R/Center/
Surround L/Surround R:
167 watts (per channel at 3 ohms, 1 kHz)
Subwoofer: 165 watts (at 3 ohms, 80 Hz)

Other models:

POWER OUTPUT (rated):

Front L + Front R 108 W + 108 W (at 3 ohms, 1 kHz, 1% THD)

POWER OUTPUT (reference):

Front L/Front R/Center/
Surround L/Surround R:
167 watts (per channel at 3 ohms, 1 kHz)
Subwoofer: 165 watts (at 3 ohms, 80 Hz)

Inputs (Analog)

TV/CABLE (AUDIO IN) Sensitivity: 450/250 mV

AUDIO IN Sensitivity: 250/125 mV

Inputs (Digital)

TV/CABLE (COAXIAL IN/OPTICAL IN)

Impedance: 75 ohms/-

Input Stream: Dolby

Digital 5.1ch/DTS 5.1ch/

Linear PCM 2ch

(Sampling Frequency: less

than 48 kHz)

Amplifier Section (DAV-DZ310/DAV-DZ510/DAV-DZ610/ DAV-DZ810)

DAV-DZ310

POWER OUTPUT (rated):

Front L + Front R 108 W + 108 W (at 3 ohms, 1 kHz, 1% THD)

POWER OUTPUT (reference):

Front L/Front R/Center/
Surround L/Surround R:
142 watts (per channel at 3 ohms, 1 kHz)
Subwoofer: 140 watts (at 3 ohms, 80 Hz)

DAV-DZ510/DAV-DZ610/DAV-DZ810

POWER OUTPUT (rated):

Front L + Front R 108 W + 108 W (at 3 ohms, 1 kHz, 1% THD)

POWER OUTPUT (reference):

Front L/Front R/Center/
Surround L/Surround R:
167 watts (per channel at 3 ohms, 1 kHz)
Subwoofer: 165 watts (at 3 ohms, 80 Hz)

Inputs (Analog)

TV (AUDIO IN)

AUDIO IN

MIC

Inputs (Digital)

DAV-DZ310:

TV (Audio Return Channel)

Sensitivity: 450/250 mV
Sensitivity: 250/125 mV
Sensitivity: 1 mV

Input Stream: Dolby
Digital 5.1ch/DTS 5.1ch/
Linear PCM 2ch
(Sampling Frequency: less
than 48 kHz)

DAV-DZ510/DAV-DZ610/DAV-DZ810:

TV (Audio Return Channel/OPTICAL IN)

Input Stream: Dolby
Digital 5.1ch/DTS 5.1ch/
Linear PCM 2ch
(Sampling Frequency: less
than 48 kHz)

– Continued on next page –

DVD RECEIVER

9-889-740-01

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Sony Corporation

Audio&Video Business Group

Published by Sony Techno Create Corporation

SONY®

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

Super Audio CD/DVD System

(DAV-DZ170/DAV-DZ171/DAV-DZ175)

Laser Diode Properties Emission Duration: Continuous
Laser Output: Less than 44.6 μ W

* This output is the value measurement at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Signal format system NTSC

Super Audio CD/DVD System

(DAV-DZ310/DAV-DZ510/DAV-DZ610/DAV-DZ810)

Laser Diode Properties Emission Duration: Continuous
Laser Output: Less than 44.6 μ W

* This output is the value measurement at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Signal format system

Mexican and Latin American models:

NTSC

Other models: NTSC/PAL

USB Section

⚡ (USB) port:

Maximum current: 500 mA

Tuner Section

System PLL quartz-locked digital synthesizer

Tuning range

North American models: 87.5 MHz - 108.0 MHz (100 kHz step)

Other models: 87.5 MHz - 108.0 MHz (50 kHz step)

Antenna (aerial) FM wire antenna (aerial)

Antenna (aerial) terminals 75 ohms, unbalanced

Intermediate frequency 10.7 MHz

Video Section

Outputs VIDEO: 1 Vp-p 75 ohms

COMPONENT:

Y: 1 Vp-p 75 ohms

Pb/Cb, Pr/Cr: 0.7 Vp-p 75 ohms

HDMI OUT: Type A (19 pin)

General

(DAV-DZ170/DAV-DZ171/DAV-DZ175)

Power requirements 120 V AC, 60 Hz

Power consumption On: 170 W

Standby: 0.2 W*

* Valid when the system is in the following status:

– “DEMO” is set to “OFF.”

– [CONTROL FOR HDMI] is set to [OFF].

Dimensions (approx.) 430 mm \times 66 mm \times 385 mm

(17 in \times 2 5/8 in \times 15 1/4 in) (w/h/d)

incl. projecting parts

Mass (approx.) 4.4 kg (9 lb 12 oz)

General

(DAV-DZ310/DAV-DZ510/DAV-DZ610/DAV-DZ810)

Power requirements

North American and Mexican models:

120 V AC, 60 Hz

Taiwan models: 120 V AC, 50/60 Hz

Argentine models: 220 V - 240 V AC, 50/60 Hz

Latin American models: 110 V - 240 V AC, 50/60 Hz

Other models: 220 V - 240 V AC, 50/60 Hz

Power consumption

DAV-DZ310/DAV-DZ510/DAV-DZ610

On: 170 W

Standby: Taiwan models: 0.2 W*,

Other models: 0.25 W*

DAV-DZ810

On: 175 W

Standby: 0.25 W*

* Valid when the system is in the following status:

– “DEMO” is set to “OFF.”

– [CONTROL FOR HDMI] is set to [OFF].

– “S-AIR STBY” is set to “STBY OFF.” (DAVDZ810 only)

Dimensions (approx.) 430 mm \times 66 mm \times 385 mm (w/h/d)

incl. projecting parts

Mass (approx.) 4.4 kg

Supported file format

MP3 (MPEG 1 Audio Layer-3)

File Extension: mp3

Bitrate: 32 kbps - 320 kbps

Sampling frequencies: 32/44.1/48 kHz

WMA (USB device only)

File Extension: wma

Bitrate: 48 kbps - 192 kbps

Sampling frequencies: 44.1 kHz

AAC (USB device only)

File Extension: m4a

Bitrate: 48 kbps - 320 kbps

Sampling frequencies: 44.1 kHz

DivX (DAV-DZ310/DAV-DZ510/DAV-DZ610/DAV-DZ810)

File Extension: avi/divx

Video codec: DivX video

Bitrate: 10.08 Mbps (MAX)

Frame rate: 30 fps

Resolution: 720 \times 576

Audio codec: MP3

MPEG4

File format: MP4 File Format

File Extension: mp4/m4v

Video codec: MPEG4 Simple Profile (AVC is not compatible.)

Bitrate: 4 Mbps

Frame rate: 30 fps

Resolution: 720 \times 576

Audio codec: AAC-LC (HE-AAC is not compatible.)

DRM: Not compatible

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

SPECIAL COMPONENT NOTICE

The components identified by mark \triangle contain confidential information.

Strictly follow the instructions whenever the components are repaired and/or replaced.

NOTICE POUR COMPOSANTS SPÉCIAUX

Les composants identifiés par la marque \triangle contiennent des informations confidentielles.

Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

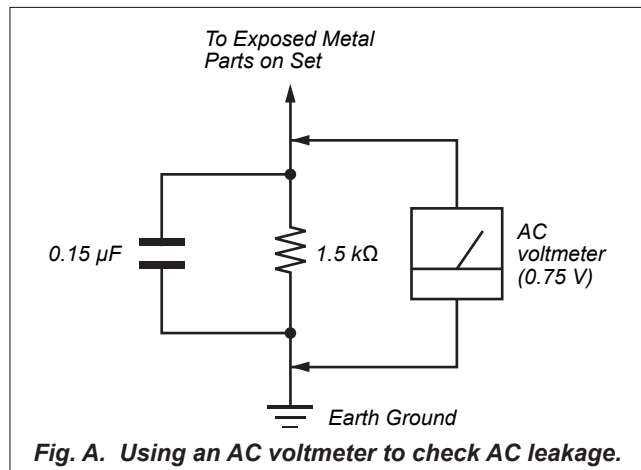
SAFETY CHECK-OUT (US Model)

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)



Except US, Canadian Model

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



This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear or bottom exterior.

CAUTION

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

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 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.

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

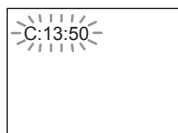
Unleaded solder has the following characteristics.

- 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.

Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the system from malfunctioning, a 5-character service number (e.g., C 13 50) with a combination of a letter and 4 digits appears on the TV screen or front panel display. In this case, check the following table.



First 3 characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➔ Clean the disc with a soft cloth (page 63).
E XX (XX is a number)	To prevent a malfunction, the system has performed the self-diagnosis function. ➔ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

When the version number appears on the TV screen

When you turn on the system, the version number [VER.X.XX] (X is a number) may appear on the TV screen. Although this is not a malfunction and for Sony service use only, normal system operation will not be possible. Turn off the system, and then turn on the system again to operate.



MODEL IDENTIFICATION

– Back Panel –



Parts No.

Model	Part No.
DZ175: US model	4-159-511-1□
DZ175: CND model	4-159-511-2□
DZ170: US model	4-159-511-3□
DZ171: US model	4-159-511-4□
DZ310: E12 model	4-159-511-6□
DZ310: E3 model	4-159-511-7□
DZ310: SP model	4-159-511-9□
DZ310: E32 model	4-159-512-3□
DZ510: E12 model	4-159-512-8□
DZ610: E12 model	4-159-513-0□
DZ610: E3 model	4-159-513-1□
DZ610: E15 model	4-159-513-2□
DZ610: SP model	4-159-513-4□
DZ810: E12 model	4-159-514-1□
DZ810: E3 model	4-159-514-2□
DZ810: E15, EA models	4-159-514-3□
DZ810: SP model	4-159-514-4□
DZ810: E32 model	4-159-514-7□

- Abbreviation
 - CND : Canadian model
 - E3 : 240V AC area in E model
 - E12 : 220 – 240V AC area in E model
 - E15 : Iranian model
 - E32 : 110 – 240V AC area in E model
 - EA : Saudi Arabia model
 - SP : Singapore model

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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 pickup block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH

1. Open the case and turn POWER on with no disc inserted.
2. Confirm that the following operation is performed while observing the objecting lens from the clearance of DVD mechanism deck.
 - 1) Confirm that laser beam is spread.
 - 2) Up and down motion of the objective lens. (2 times)

DISC TRAY LOCK

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

Setting Procedure :

1. Press the [I/⏻] button to turn the set on.
2. Press the [FUNCTION] button to set DVD function.
3. Insert a disc.
4. Press the [■] button and the [▲] button simultaneously for five seconds.
5. The message "LOCKED" is displayed and the tray is locked.

Releasing Procedure :

1. Press the [■] button and the [▲] button simultaneously for five seconds again.
2. The message "UNLOCKED" is displayed and the tray is unlocked.

Note: When "LOCKED" is displayed, the tray lock is not released by turning power on/off with the [I/⏻] button.

On cleaning discs, disc/lens cleaners

- Do not use cleaning discs or disc/lens cleaners (including wet or spray types). These may cause the apparatus to malfunction.

IMPORTANT NOTICE

Caution: This system is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen.

Projection televisions are especially susceptible to this.

Attention when transported

Use this mode when returning the set to the customer after repair.

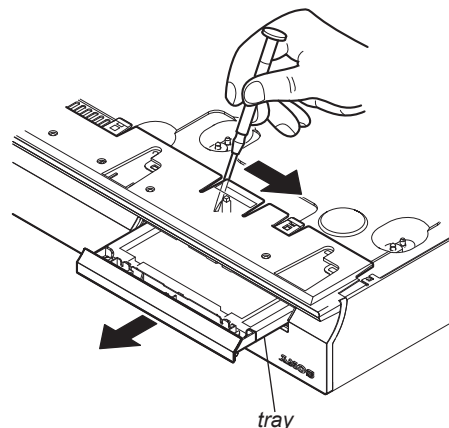
Procedure:

1. Press the [I/⏻] button to turn the set on.
2. Press the [FUNCTION] button to set the function "DVD".
3. Remove all discs, and then press two buttons [▶] and [I/⏻] simultaneously.
4. After a message "MECHA LOCK" is displayed on the fluorescent indicator tube, pull out the AC plug.
5. To exit from this mode, press the [I/⏻] button to turn the set on.

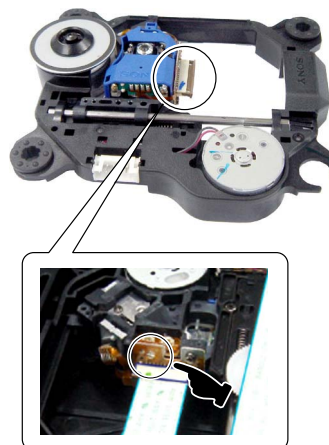
How to open the disc table when power switch turns off

Insert a tapering driver into the aperture of the unit bottom, and slide it in the direction of the arrow.

Insert a screwdriver from between the front panel and the chassis and slide the rod in the direction of the arrow.



Precaution when installing a new OP unit/ Precaution before unsoldering the static electricity prevention solder bridge



When installing a new OP unit, be sure to connect the flexible printed circuit board first of all before removing the static electricity prevention solder bridge by unsoldering.

Remove the static electricity prevention solder bridge by unsoldering after the flexible printed circuit board has already been connected.

(Do not remove nor unsolder the solder bridge as long as the OP unit is kept standalone.)

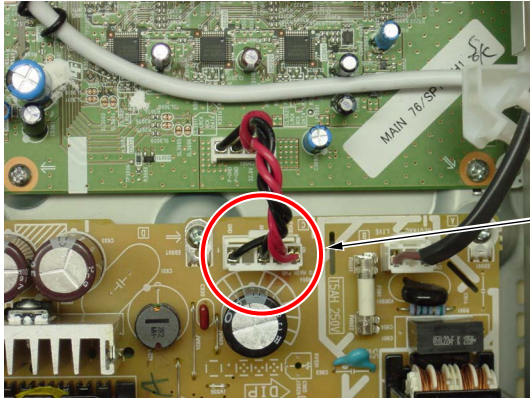
Discharge the charged electricity in capacitors to prevent electric shock as follows

When disassembling the machine, be sure to discharge the charged electricity in the following capacitors.
Use a resistor of 800 ohms, 2 Watts for discharging the following capacitors.

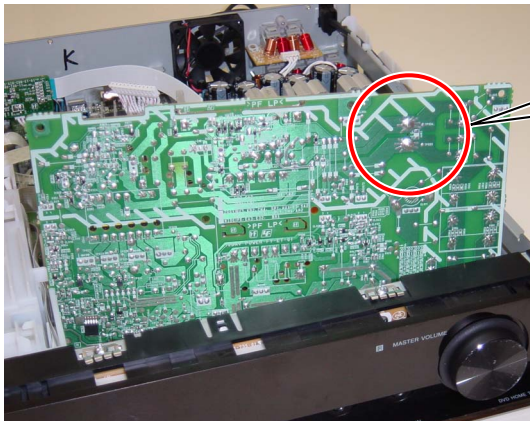
POWER board

C903: 390V

C932, C933, C934, CN904: 30V



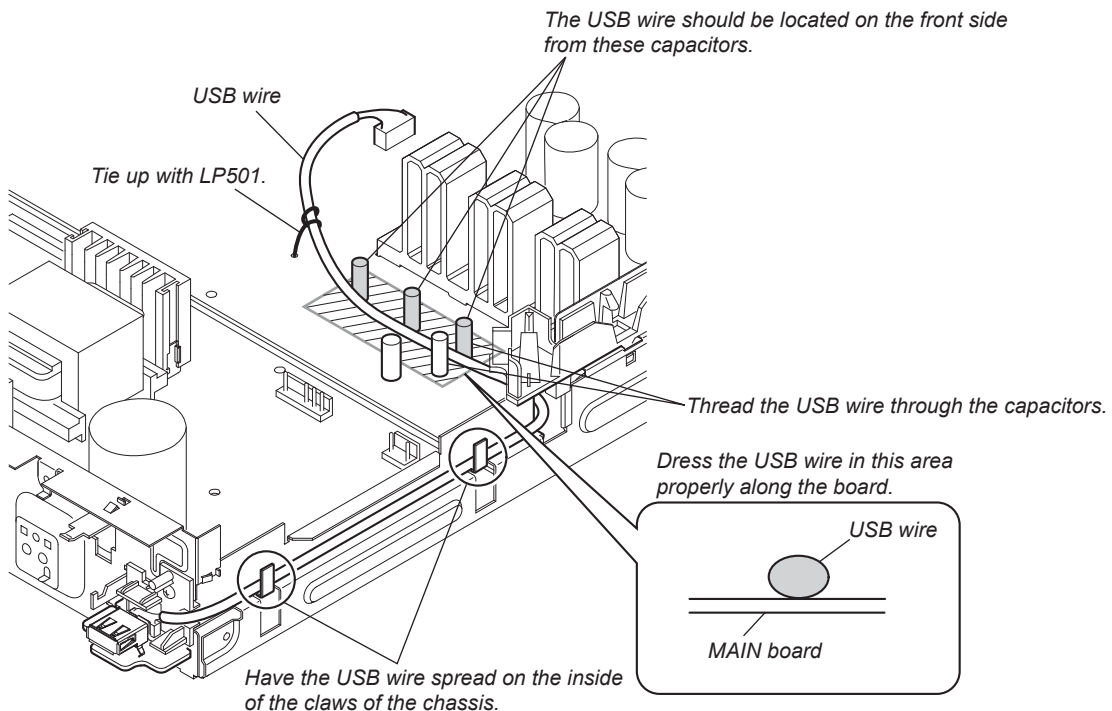
Point of capacitor discharge for C932, C933, C934:
Connect to the red and black wire of CN904.



Point of capacitor discharge for C903:
Connect to the foot of C903.

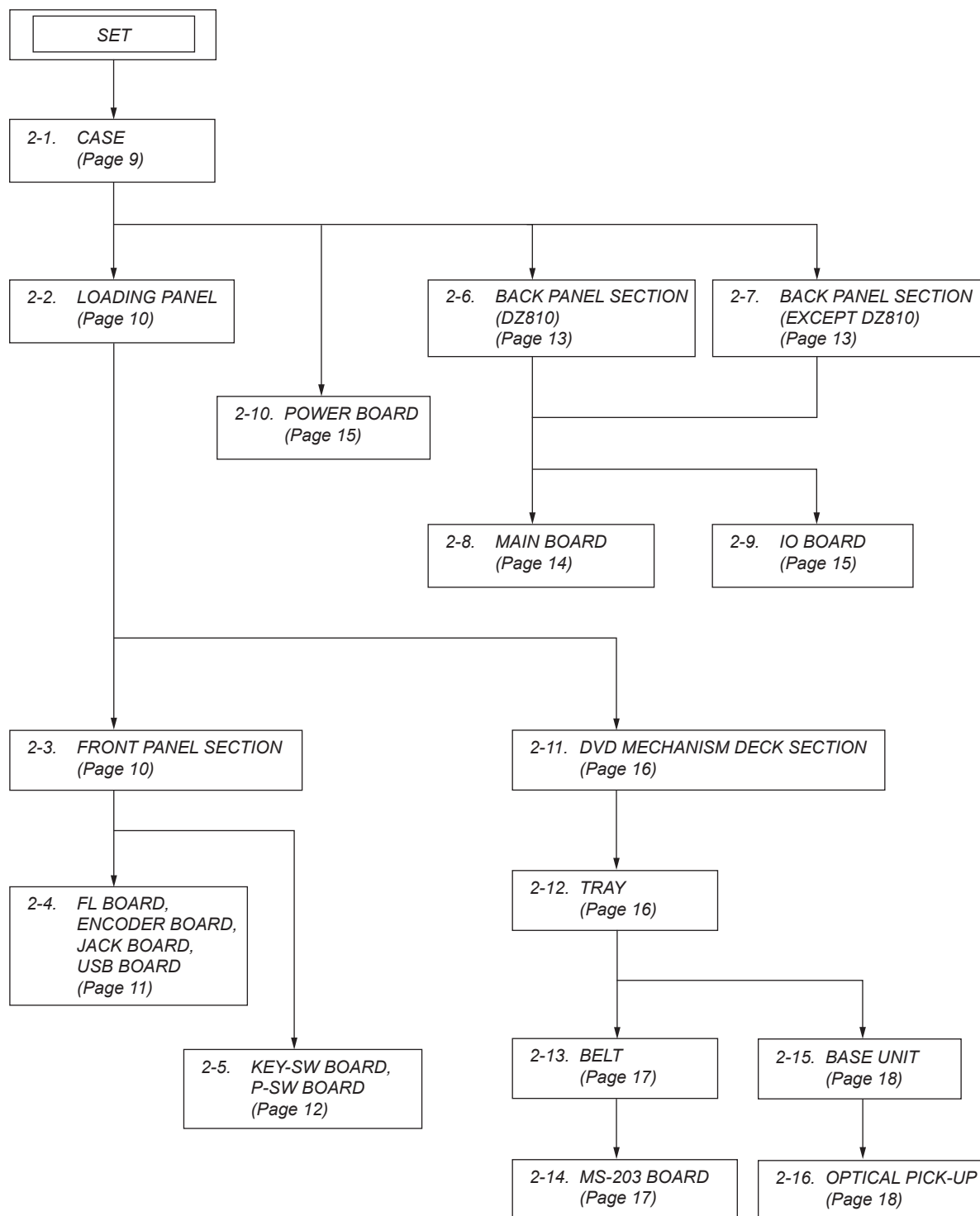
800Ω/2W

Arranging the USB wire



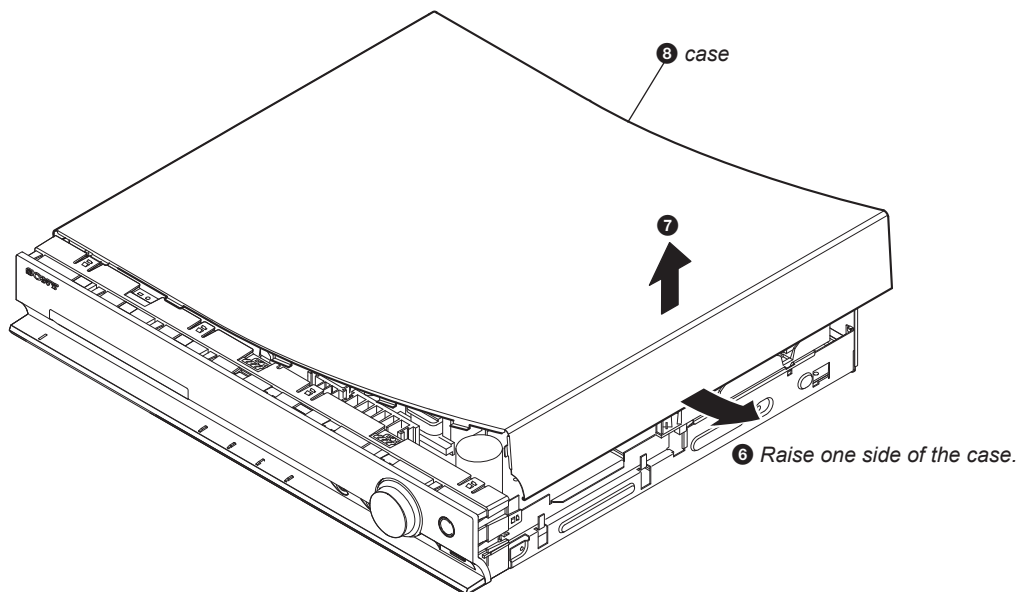
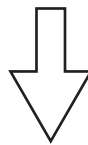
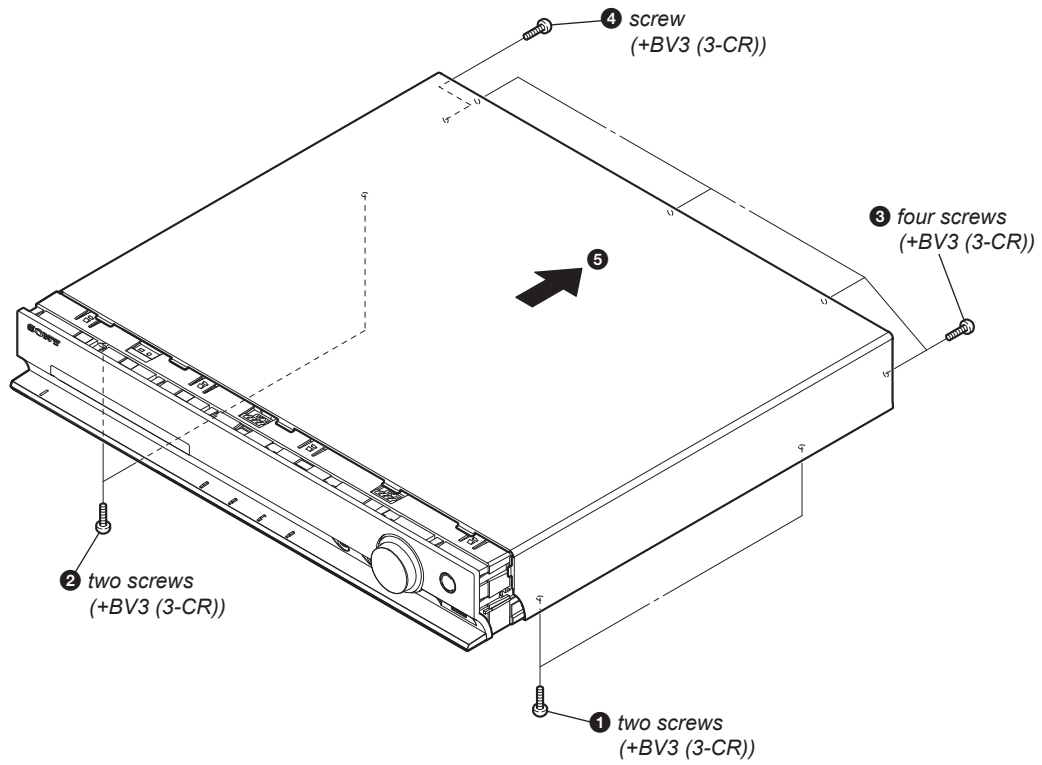
**SECTION 2
DISASSEMBLY**

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

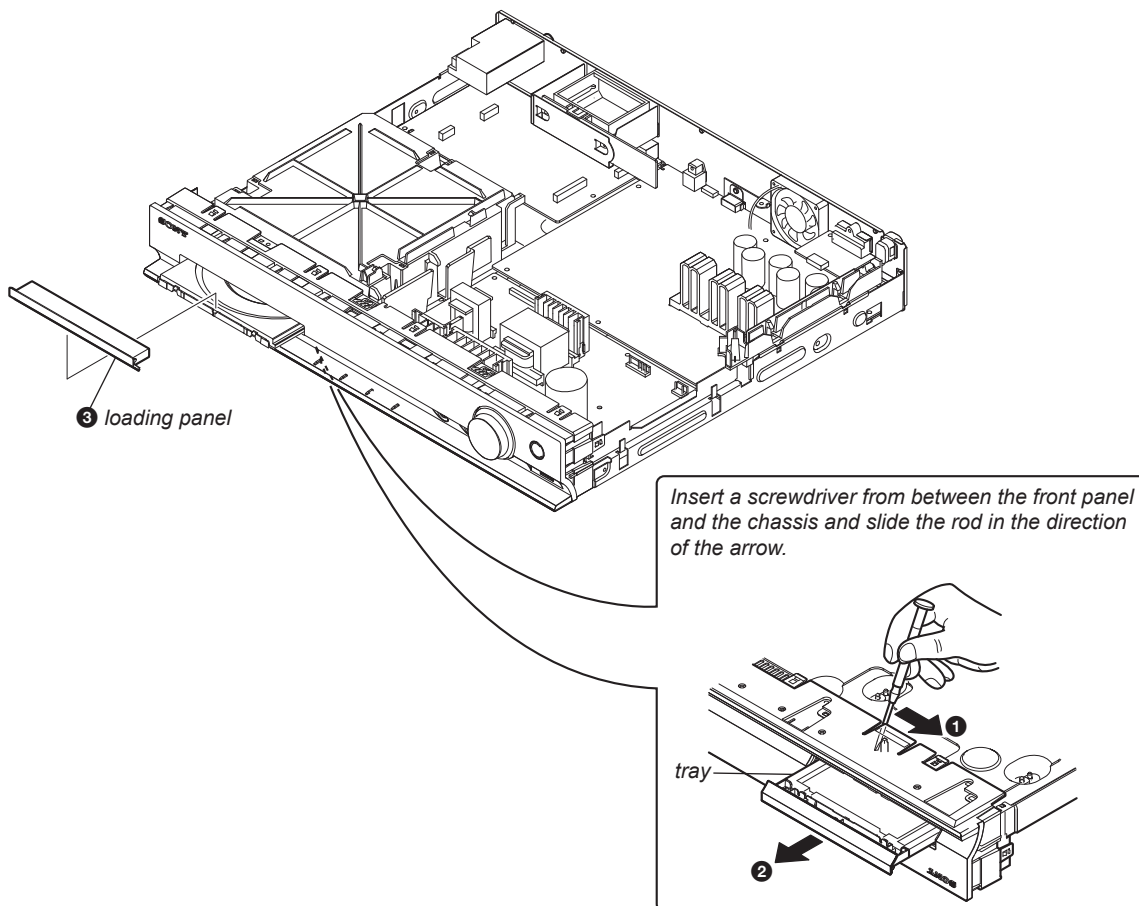


Note: Follow the disassembly procedure in the numerical order given.

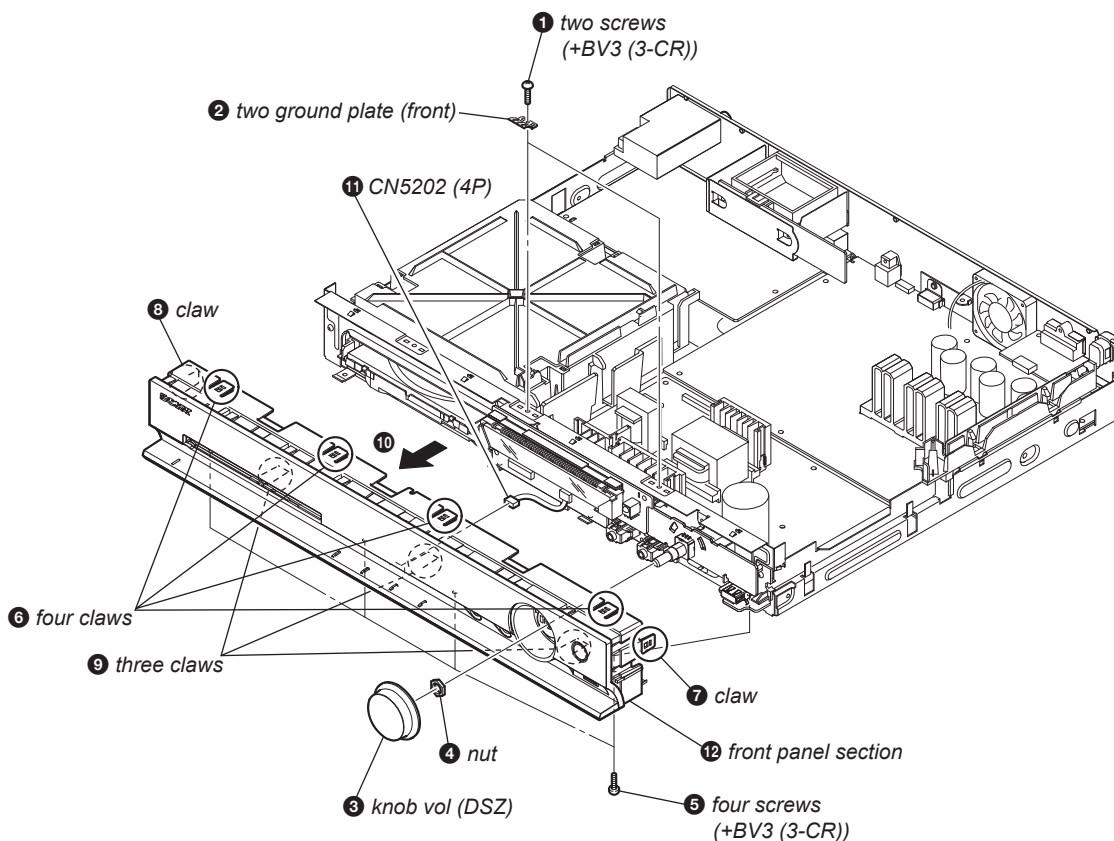
2-1. CASE



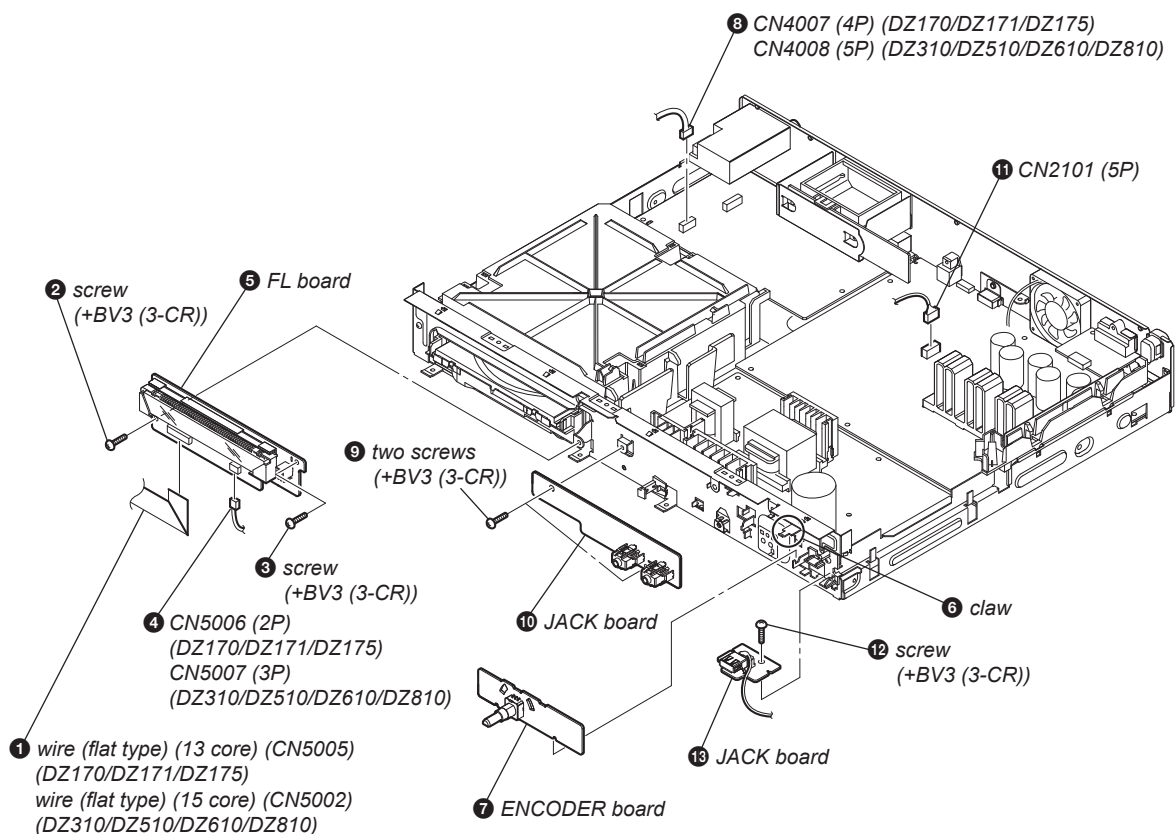
2-2. LOADING PANEL



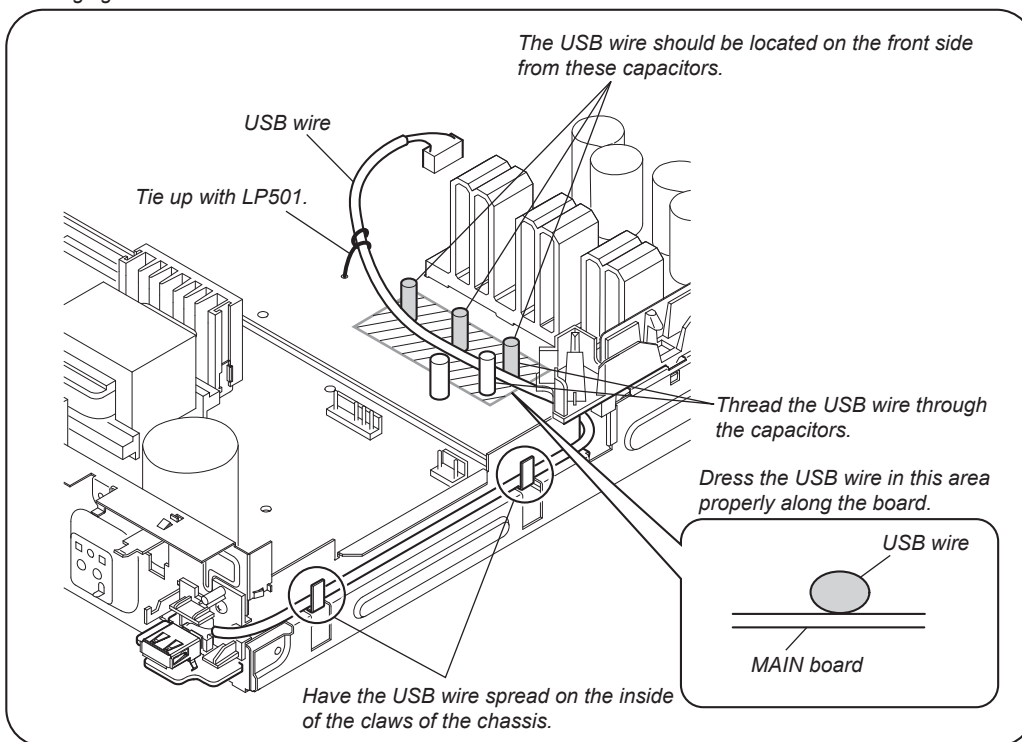
2-3. FRONT PANEL SECTION



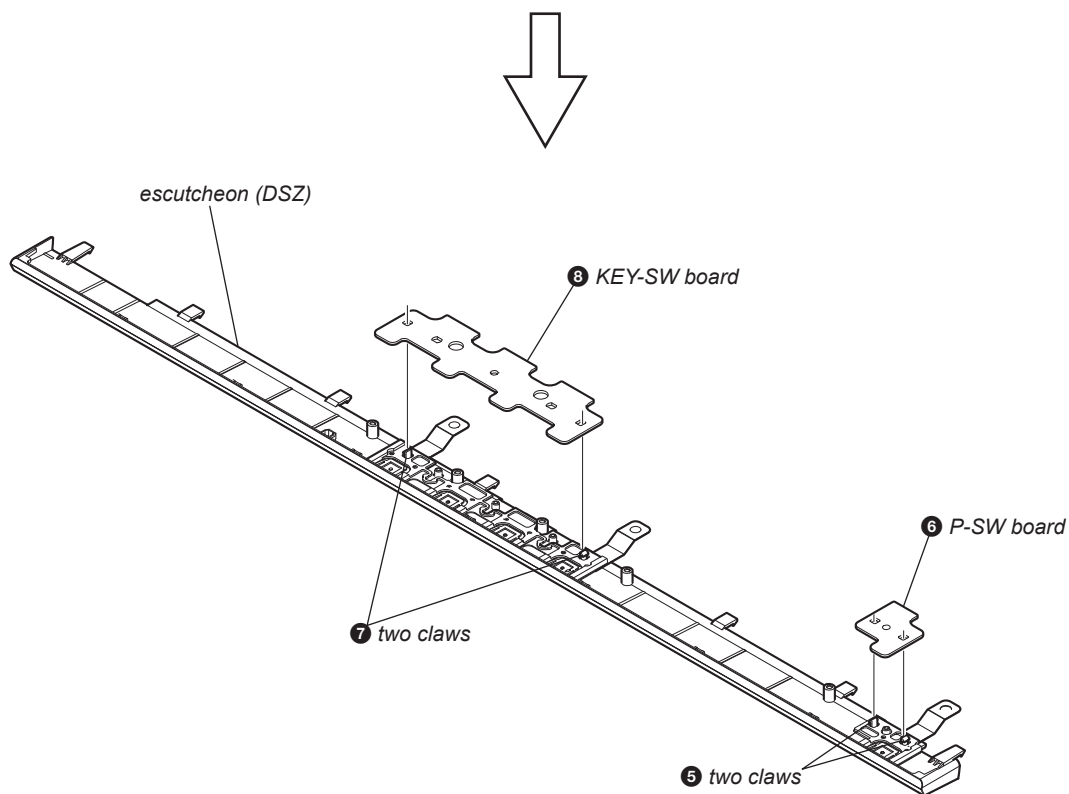
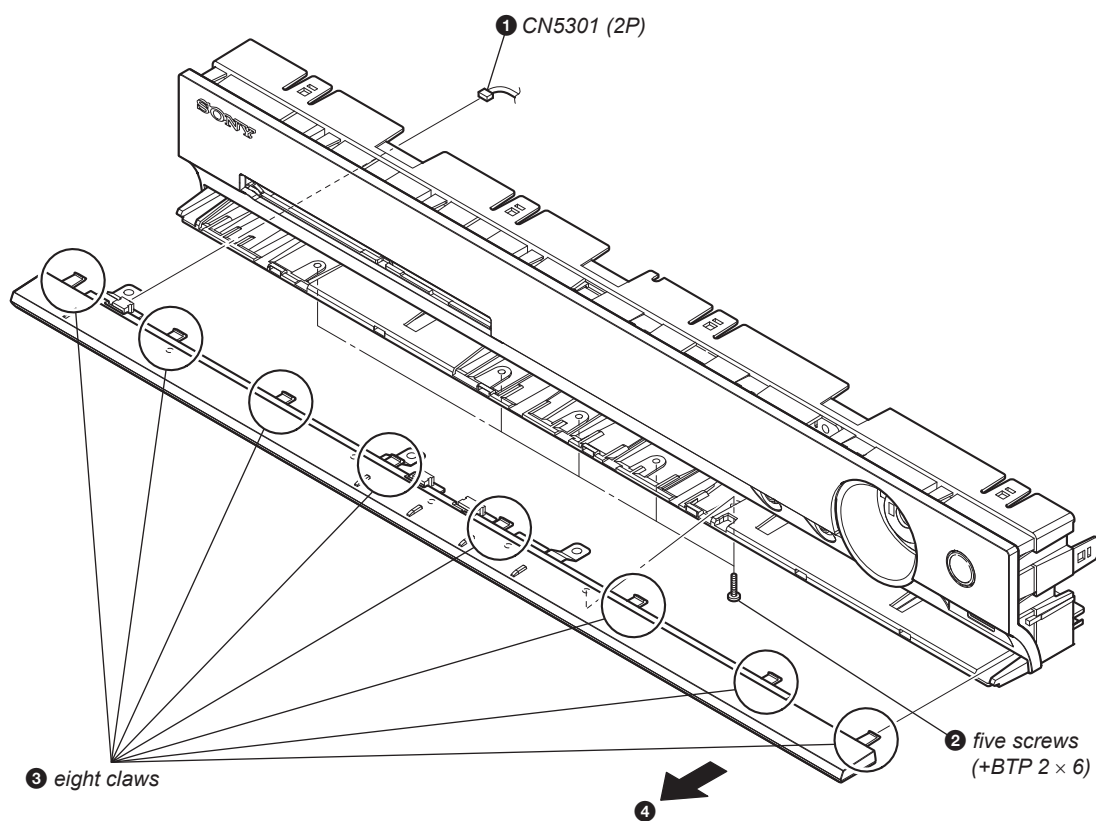
2-4. FL BOARD, ENCODER BOARD, JACK BOARD, USB BOARD



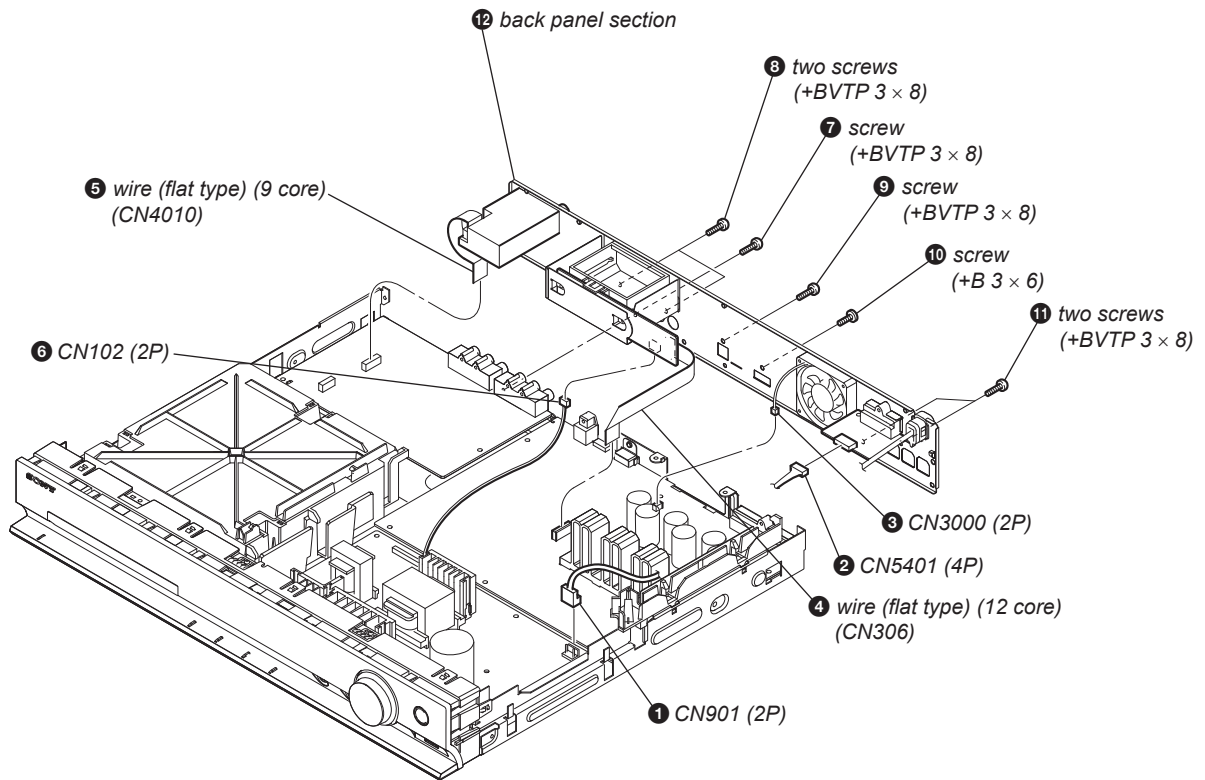
Arranging the USB wire



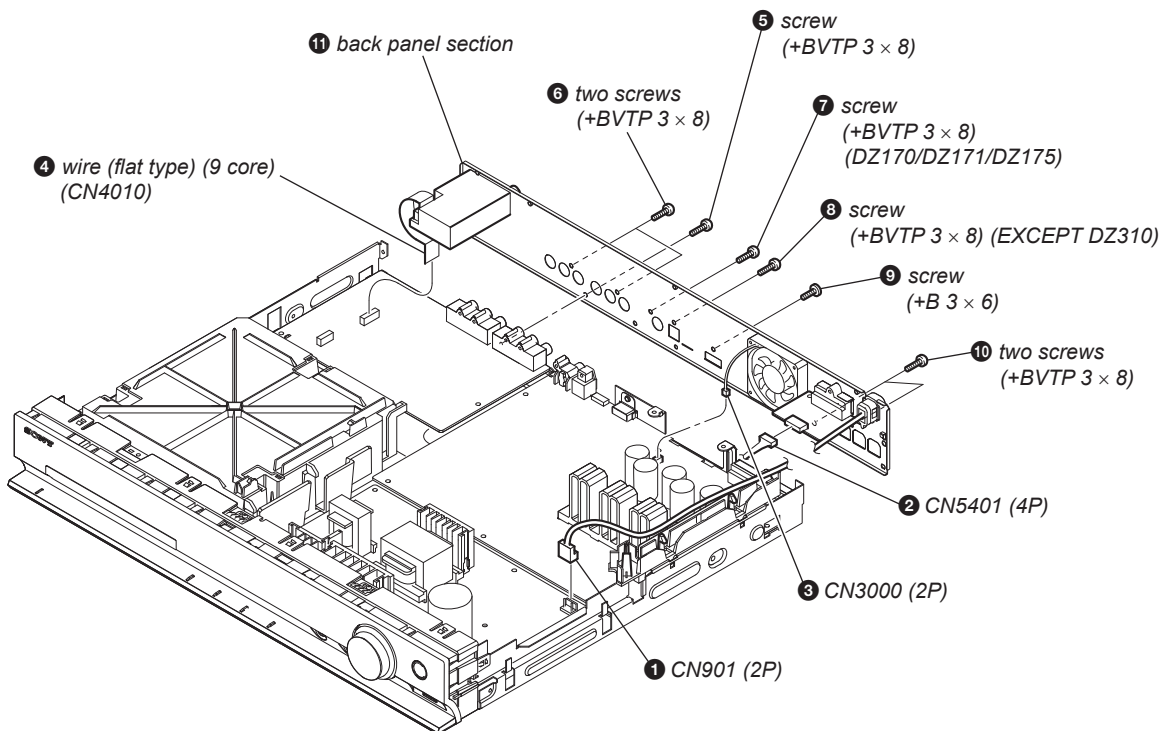
2-5. KEY-SW BOARD, P-SW BOARD



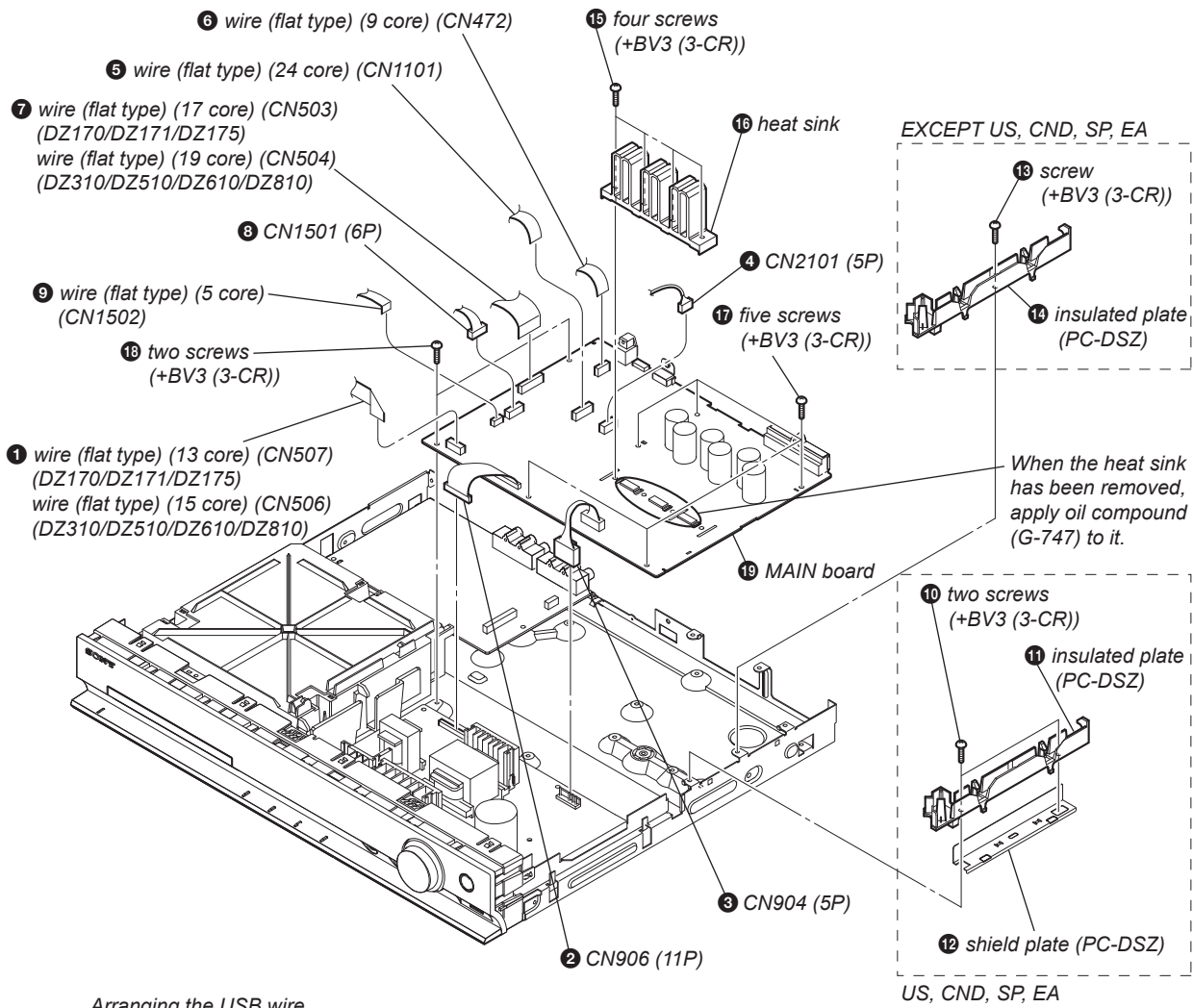
2-6. BACK PANEL SECTION (DZ810)



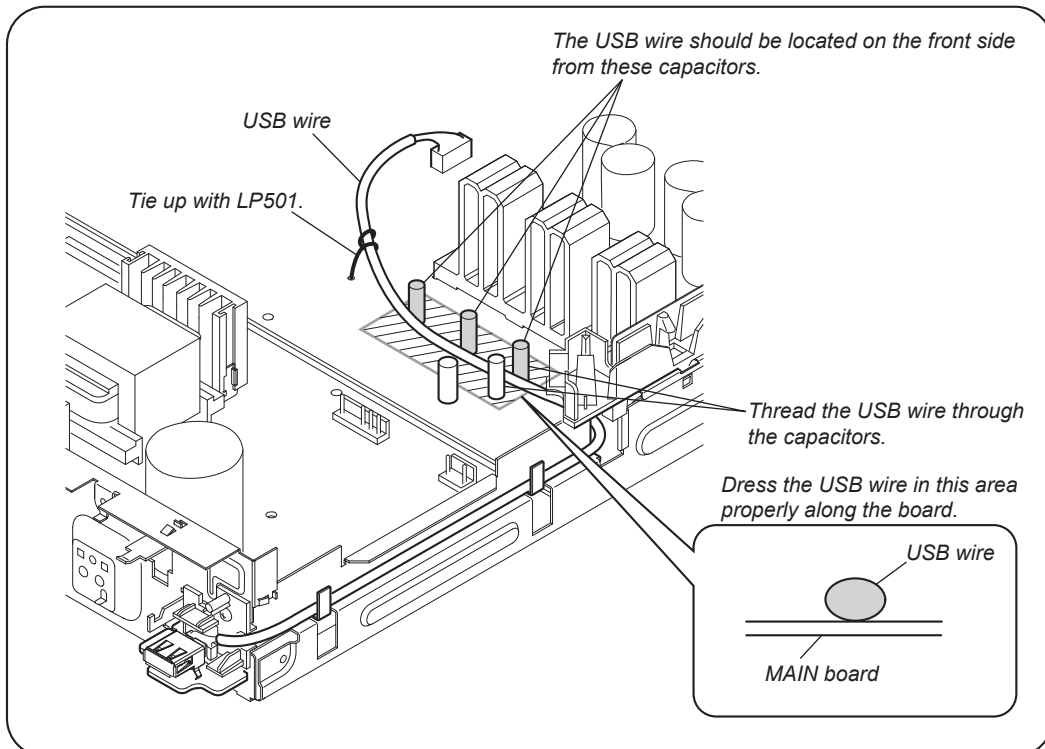
2-7. BACK PANEL SECTION (EXCEPT DZ810)



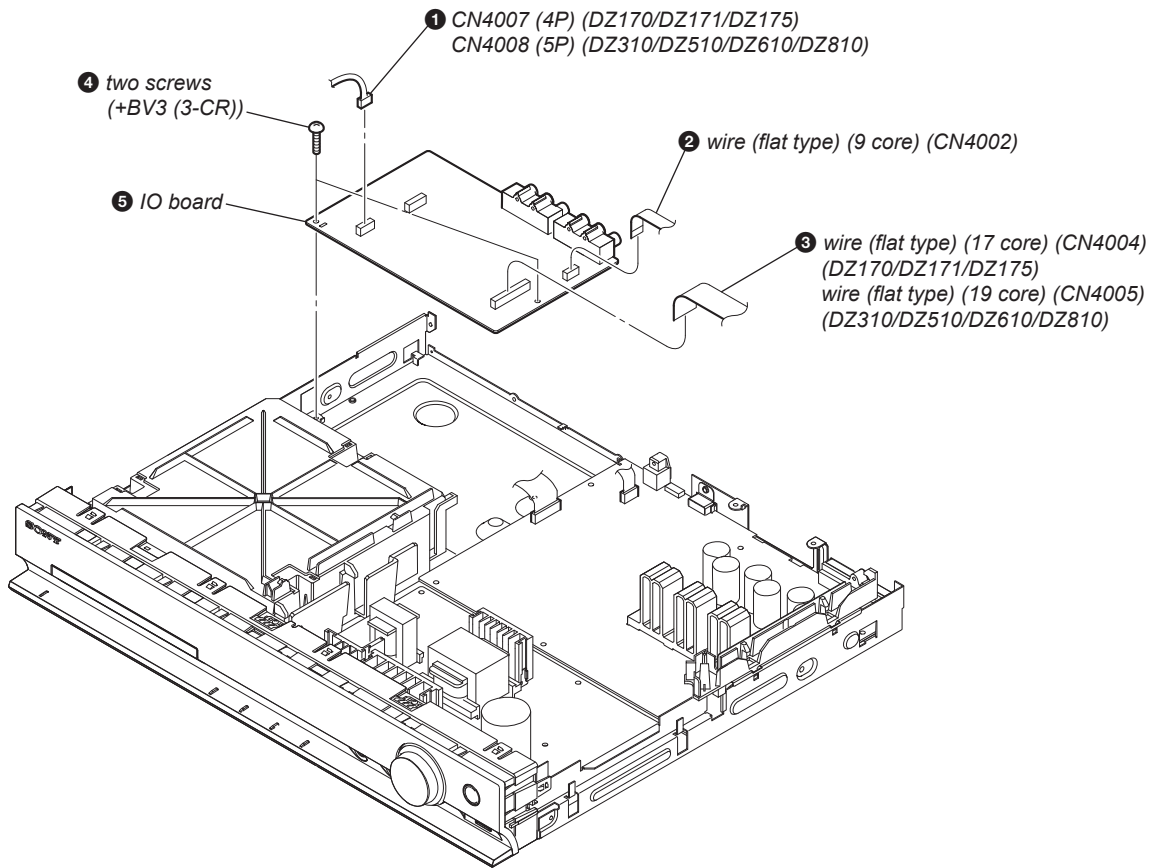
2-8. MAIN BOARD



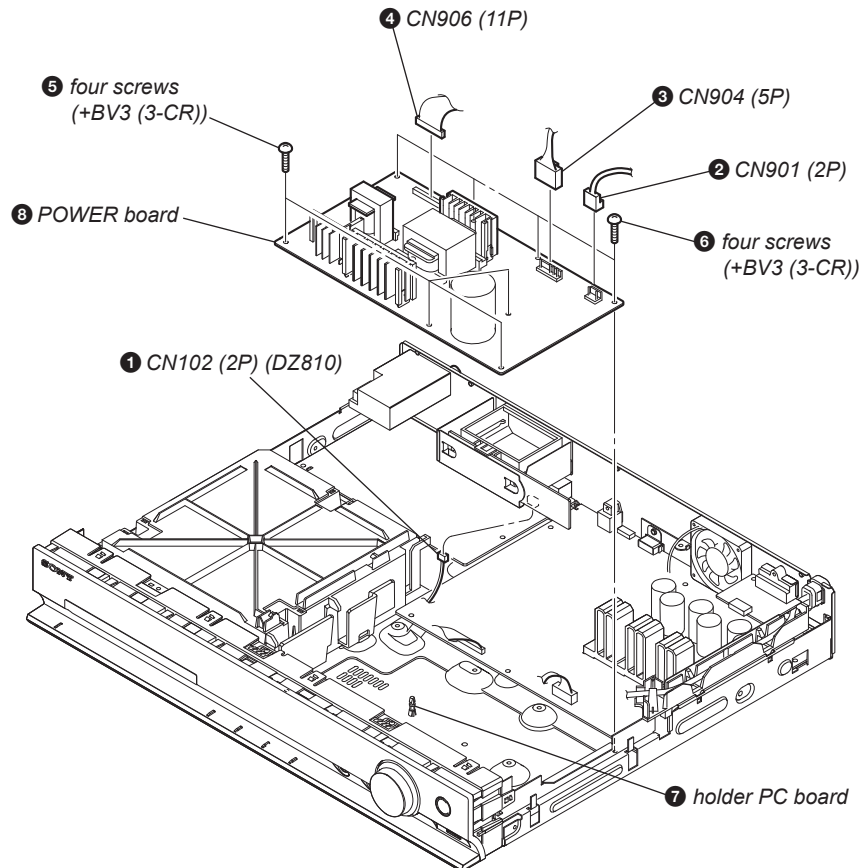
Arranging the USB wire



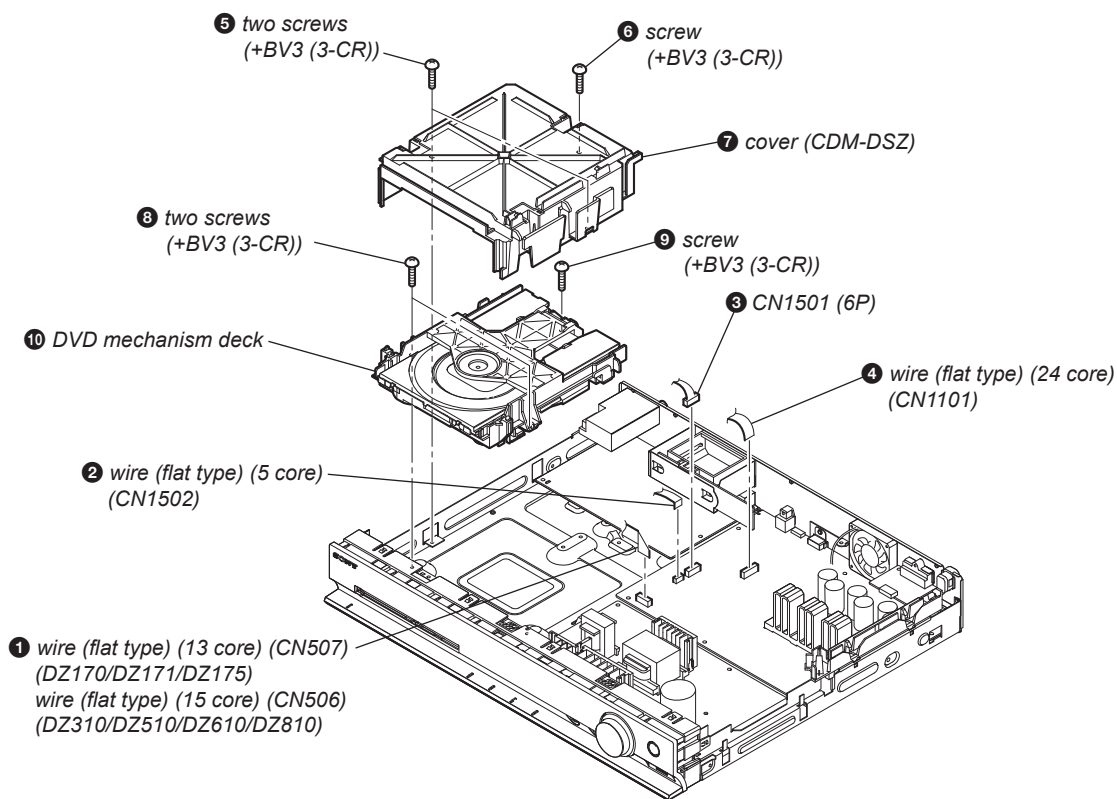
2-9. IO BOARD



2-10. POWER BOARD

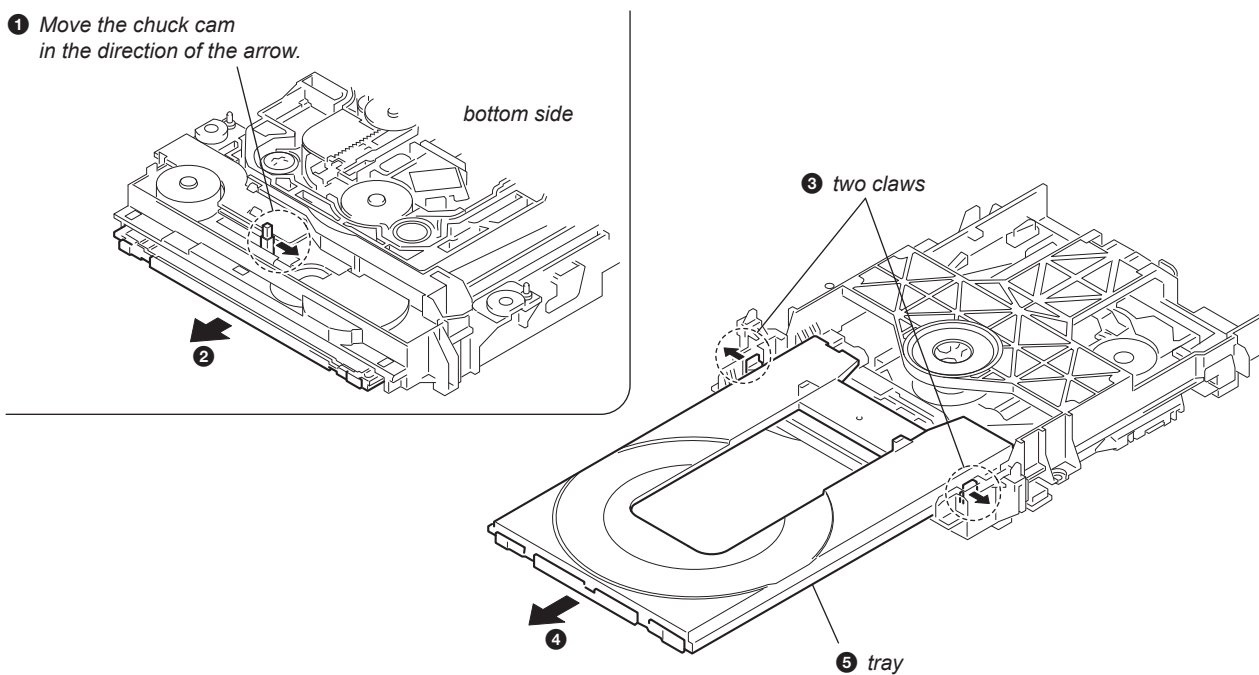


2-11. DVD MECHANISM DECK SECTION

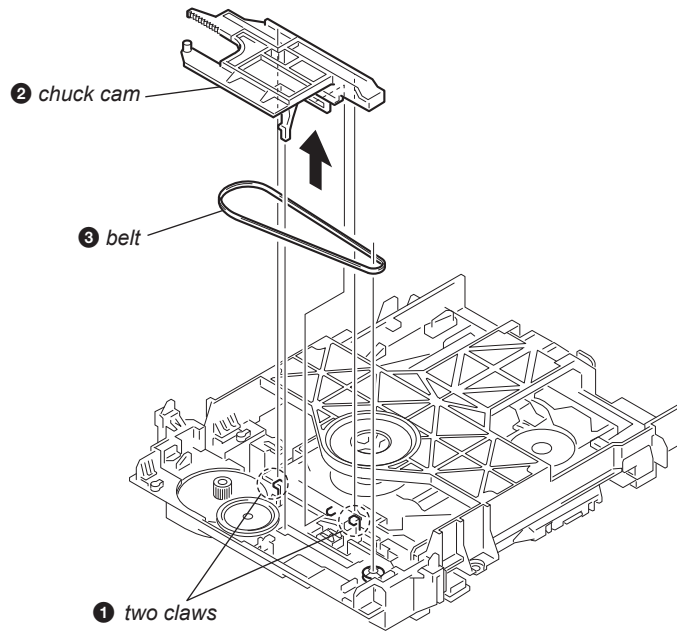


2-12. TRAY

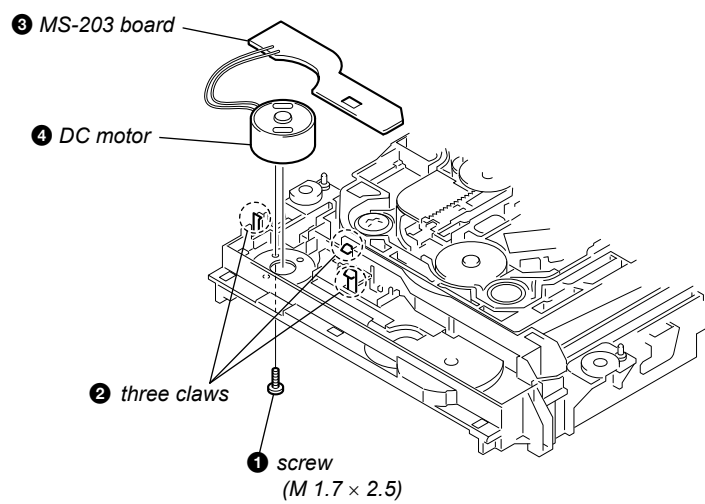
- 1 Move the chuck cam in the direction of the arrow.



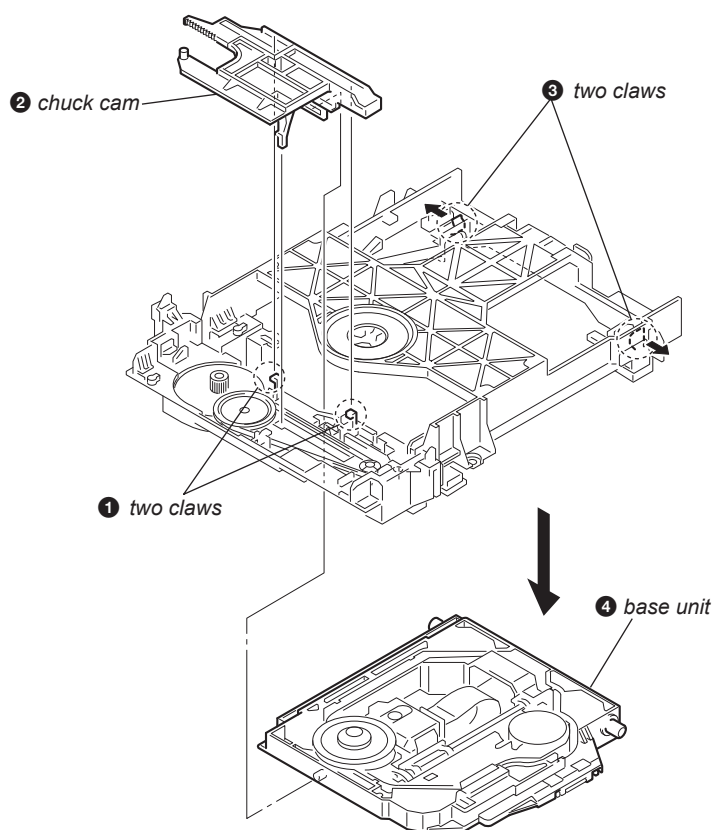
2-13. BELT



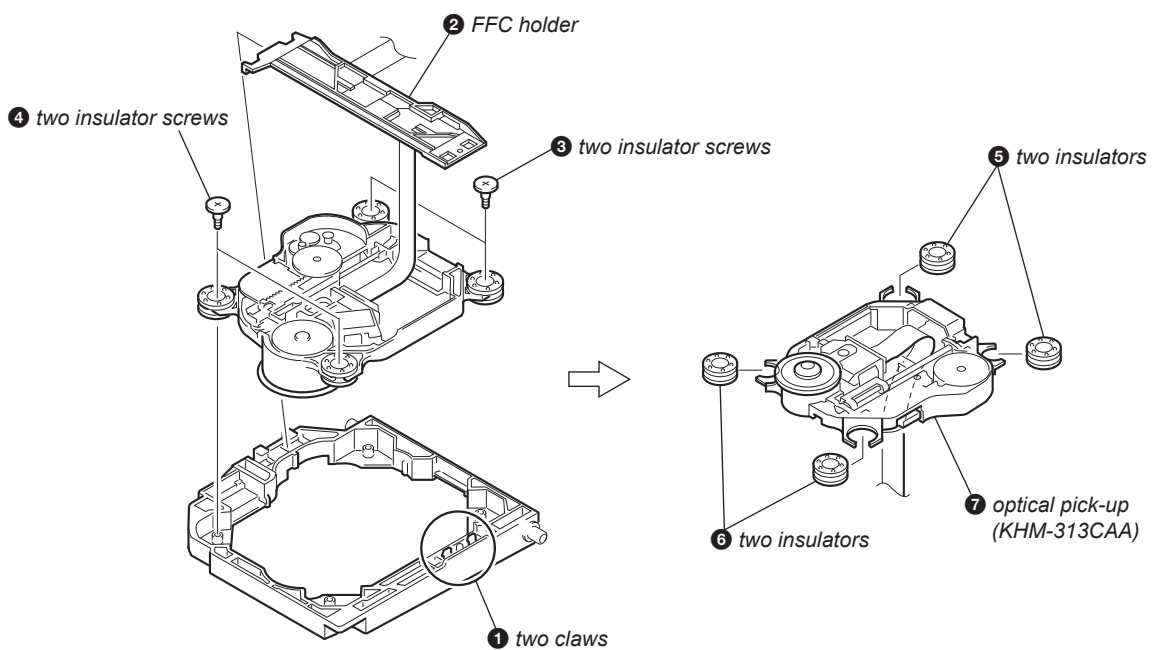
2-14. MS-203 BOARD



2-15. BASE UNIT



2-16. OPTICAL PICK-UP



SECTION 3

TEST MODE

Note: Incorrect operations may be performed if the test mode is not entered properly.
In this case, press the [I/⏻] button to turn the power off, and retry to enter the test mode.

1. 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 customers.

Procedure:

- Press the [I/⏻] button to turn the power on.
- Press three buttons [▶], [FUNCTION] and [I/⏻] simultaneously.
- When this button is operated, display as “COLD RESET” for a while and all of the settings are reset.

2. Panel Test Mode

- This mode is used to check the software version, FL and KEY.

2-1. Display Test Mode

Procedure:

- Press the [I/⏻] button to turn the power on.
- While pressing the [■] and the [▶] buttons simultaneously, turn the [VOLUME] control in the direction of (+).
- When the display test mode is activated, all segments are turned on. When the mode in, “REC TO USB” is turn off.
- To exit from this mode, while pressing the [■] and the [▶] buttons simultaneously, turn the [VOLUME] control in the direction of (+).

2-2. Version Test Mode

Procedure:

- When the display test mode is activated, press the [FUNCTION] button and the message “DSZ2” (DZ170/DZ171), “DSZ2-” (DZ175), “DSZ2K” (DZ310), “DSZ3K” (DZ510), “DSZ4K” (DZ610), “DSZ7K” (DZ810) are displayed, the version test mode is activated.
- Whenever the [FUNCTION] button is pressed, the display changes in the following order.

→ “DSZ2” (Model name) → “NA*1” (Destination) → MC Version →

*1: NA changes depending on destination.

- Press the [REC TO USB] button when the MC version is on display. The date of software production is displayed.
- Press the [REC TO USB] button again and the version is displayed.
- To exit from this mode, while pressing the [■] and the [▶] buttons simultaneously, turn the [VOLUME] control in the direction of (+).

2-3. FL Pattern Test Mode

Procedure:

- When the display test mode is activated, press the [▲] button, to select the FL pattern test mode. When the FL pattern test mode, half segments of FL display and “REC TO USB” are turn on.
- Press the [▲] button, half segments of FL display and “REC TO USB” are turn off.
- Next press the [▲] button, all segments of FL display is turn on.
- To exit from this mode, while pressing the [■] and the [▶] buttons simultaneously, turn the [VOLUME] control in the direction of (+).

2-4. Key Test Mode

Procedure:

- When the display test mode is activated, press the [I/⏻] button, to select the key test mode.
- To enter the KEY test mode, the fluorescent indicator displays “K0 V0”. Each time another button is pressed, “KEY” value increases. However, once a button is pressed, it is no longer taken into account. When all keys are pressed correctly, “K6 V0” is displayed.
- When the [VOLUME] control is turned in the direction of (+), “V0” is changed to “V1”, then ... “V9”.
When the [VOLUME] control is turned in the direction of (–), “V0” is changed to “V9”, then ... “V1”.
- To exit from this mode, while pressing the [■] and the [▶] buttons simultaneously, turn the [VOLUME] control in the direction of (+).

3. Disc Tray Lock

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

Setting Procedure :

- Press the [I/⏻] button to turn the set on.
- Press the [FUNCTION] button to set DVD function.
- Insert a disc.
- Press the [■] button and the [▲] button simultaneously for five seconds.
- The message “LOCKED” is displayed and the tray is locked.

Releasing Procedure :

- Press the [■] button and the [▲] button simultaneously for five seconds again.
- The message “UNLOCKED” is displayed and the tray is unlocked.

Note: When “LOCKED” is displayed, the tray lock is not released by turning power on/off with the [I/⏻] button.

4. DVD Version Display

- The STR and DVD microprocessor versions are displayed.

Procedure:

- Press the [I/⏻] button to turn the set on.
- Press the [▶] button and the [I/⏻] button simultaneously for three seconds. A SC version display is presented.
- Pressing the [FUNCTION] button presents a DV version display. Pressing the [FUNCTION] button again returns to the SC version display.
- To exit from this mode, press any button other than the [FUNCTION] button.

5. Product Out

- This mode moves the optical pick-up to the position durable to vibration and clears all data including preset data stored in the STR RAM to initial conditions. Use this mode when returning the set to the customer after repair.

Procedure:

- Press the [I/⏻] button to turn the power on.
- Press the [FUNCTION] button to set the function “DVD/CD”.
- Remove all discs, and then press three buttons [■], [▲] and turn the [VOLUME] control in the direction of (+).
- Displayed to message “SERVICE IN” on the fluorescent indicator tube when pressing in turn the [4] → [DVD MENU] → [CLEAR] buttons on the remote commander.
- After the “STANDBY” blinking display finishes, the message “MECHA LOCK” ⇔ “UNPLUG” is displayed on the fluorescent indicator tube disconnect the AC power plug, then the product out mode is set.
The STR RAM initialization is executed upon a next power-on after the power is turned off.

6. Color System Change (E3, E12, E15, EA, SP models)

- Color system change to video signal format (NTSC/PAL).

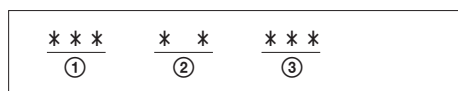
Procedure:

1. Press the [I/⏻] button to turn the set on.
2. Press the [FUNCTION] button to set the function “DVD/CD”.
3. Press the [I/⏻] button to turn the set OFF.
4. Press two buttons [FUNCTION] and [I/⏻] simultaneously, and the display of fluorescent indicator tube changes to “COLOR PAL” or “COLOR NTSC”.

7. D.C.A.C. (AUTOMATIC ACOUSTIC FIELD CALIBRATION) TEST MODE

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button to set the function “DVD/CD”.
3. Insert Calibration mic (ECM-AC2) supplied as an accessory into the A.CAL MIC jack.
4. Press three buttons [■], [▲] and [REC TO USB] simultaneously.
5. Confirm that the following are shown on the display panel.
The JACK inserted/non-inserted detection display and the display.



① MIC detection condition

NON : Not detected
IN : Detected

② Presence of DIGITAL sound data input to the microprocessor

NG: Input absent
OK: Input present

③ AD value (255h) of MIC input to the microprocessor

6. To exit from this mode, press three buttons [■], [▲] and [REC TO USB] simultaneously.

8. PROTECTION FACTOR (SD DETECTION/DC DETECTION) IDENTIFICATION TEST MODE

When an error is detected, the FL tube alternately displays “PROTECTOR ⇔ PUSH POWER”.

↓ Press the [I/⏻] button.

* Buttons other than the [I/⏻] button are invalid.

“STANDBY” blinks three times on the FL tube.

↓

The protection release state (POWER OFF) is established.
(No FL tube display)

↓ Press the [I/⏻] button two times.

The power to the system turns on, and the normal operation is established. (Restore)

During the protection state:

1. If the AC plug is connected or disconnected during the protection state, the protection state is released, and the normal operation is established. (The protection state is not maintained.)
2. The protection factor is displayed by pressing the [RETURN] → [3] → [2] → [0] → [0] → [ANGLE] buttons of the remote commander.
(during the “PROTECTOR ⇔ PUSH POWER” display).
⇒ When SD is detected: Repeats “SD DETECT ⇔ PROTECTOR”.
⇒ When DC is detected: Repeats “DC DETECT ⇔ PROTECTOR”.
⇒ When TSD is detected: Repeats “TEMP DETECT ⇔ PROTECTOR”.

PL: SD detection

When the “L” output from the SD (shutdown) port on the S-MASTER POWER Driver Shutdown and voltage descent (15V or less) of 30V power supply (PVDD) are detected.

DC detection

When the “L” output from the power/speaker error detection circuit (DC detection port) is detected for two seconds continually, the power system other than that of the FL tube is turned off, and the protection state is established.

TSD detection

When the “L” output from the thermal shutdown port on the motor driver is detected.

DVD SECTION

9-1. GENERAL DESCRIPTION

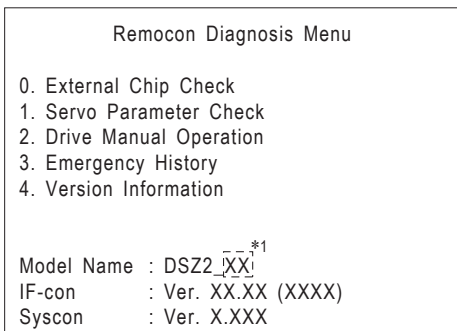
- The IOP measurement allows you to make diagnosis and adjustment simply by using the remote commander and monitor TV. The instructions, diagnosis results, etc. are given on the on-screen display (OSD).
Be sure to execute the IOP measurement when a BU (Base Unit) is replaced.

9-2. HOW TO ENTER TEST MODE

While pressing the [■] and the [▲] buttons simultaneously, turn the [VOLUME] control in the direction of (+) with the DVD player in power on.
The Test Mode starts, displayed “SERVICE IN” on this model display then the menu shown below will be displayed on the TV screen.

* The display of the “Model Name” of the “Remocon Diagnosis Menu” change with the model and the destination. Refer to below on the model name.

- DZ170 : DSZ2
- DZ171 : DSZ2
- DZ175 : DSZ2-
- DZ310 : DSZ2K
- DZ510 : DSZ3K
- DZ610 : DSZ4K
- DZ810 : DSZ7K



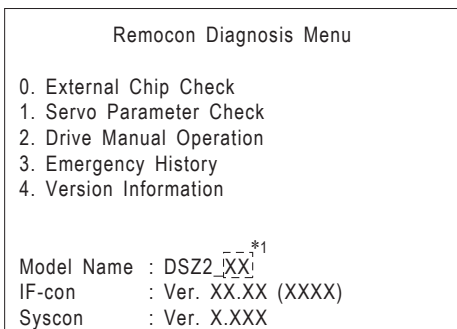
*1: Changes depending on destination

The menu above is the Remocon Diagnosis Menu screen which consists of five main functions. At the bottom of the menu screen, the model name and IF-con version. To exit from the Test Mode, press the [I/⏻] button on the remote commander.

9-3. EXECUTING IOP MEASUREMENT

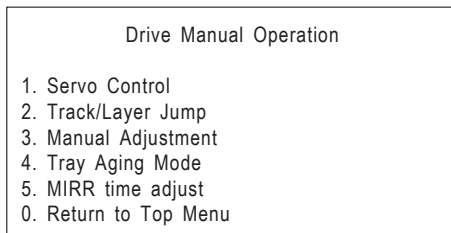
In order to execute IOP measurement, the following standard procedures must be followed.

- (1) In power on, while pressing the [■] and the [▲] buttons simultaneously, turn the [VOLUME] control in the direction of (+).

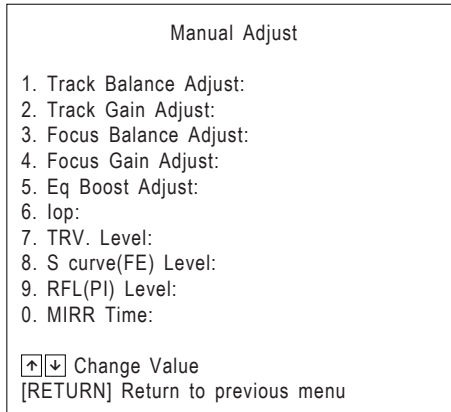


*1: Changes depending on destination

- (2) Select “2. Drive Manual Operation” by pressing the [2] button on the remote commander. The screen will appear as shown.

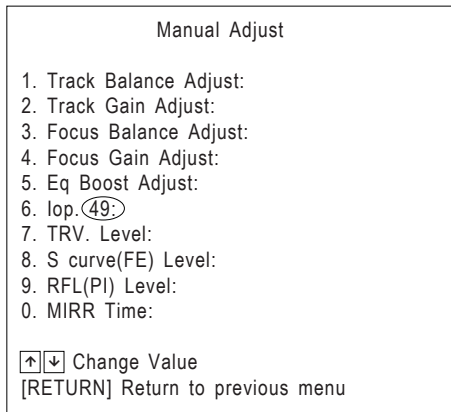


- (3) Select “3. Manual Adjustment” by pressing the [3] button on the remote commander. The screen will appear as shown.



- (4) Select “6. IOP” by pressing the [6] button on the remote commander.

- (5) Wait until a hexadecimal number appear.



- (6) Convert each data from hexadecimal to decimal using conversion table.

- (7) Please find the label on the rear of the BU (Base Unit). The default IOP value is written in the label.

- (8) Subtract between these two values.

- (9) If the remainder is smaller than 93 (decimal), then it is OK. However if the value is higher than 93, then the BU is defective and need to be change.

- (10) Press the [RETURN] button on the remote commander to return back to previous menu.

- (11) Press the [0] button on the remote commander to return to Top Menu.

9-4. EMERGENCY HISTORY

To check the emergency history, please follow the following procedure.

- (1) From the Top Menu of Remocon Diagnosis Menu, select “3. Emergency History Check” by pressing the [3] button on the remote commander. The following screen appears on the on-screen display.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
01.	01 05 04 04	00 92 46	00
	00 00 00 00	00 00 23	45
02.	02 02 01 01	00 A9 4B	00
	00 00 00 00	00 00 23	45
[Next]	Next Page	[Prev]	Prev Page
[0]	Return to Top Menu		

- (2) You can check the total time when the laser is turned on during playback of DVD and CD from the above menu. The maximum time, which can be displayed are 999h 59min.
- (3) You can check the error code of latest 10 emergency history from the above menu. To view the previous or next page of emergency history, press [◀◀] or [▶▶] button on the remote commander. The error code consists of the following three blocks. The first block indicates the error code. The second block indicates the parameter and the third block indicates the time of error code as shown below.

• Error Code

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
01.	^{*1} 01 ^{*2} 05 04 04	00 92 46	00
	00 00 00 00	00 00 23	45 ^{*3}
02.	02 02 01 01	00 A9 4B	00
	00 00 00 00	00 00 23	45
[Next]	Next Page	[Prev]	Prev Page
[0]	Return to Top Menu		

*1 : Error Code

*2 : Parameter of error code

*3 : Time of error code

The meaning of error code is as below:

- 01: Communication error (No reply from syscon)
- 02: Syscon hung up
- 03: Power OFF request when syscon hung up
- 19: Thermal shutdown
- 24: MoveSledHome error
- 25: Mechanical move error (5 Changer)
- 26: Mechanical move stack error
- 30: DC motor adjustment error
- 31: DPD offset adjustment error
- 32: TE balance adjustment error
- 33: TE sensor adjustment error
- 34: TE loop gain adjustment error
- 35: FE loop gain adjustment error
- 36: Bad jitter after adjustment
- 40: Focus NG
- 42: Focus layer jump NG
- 51: Spindle stop error
- 52: Open kick spindle error

- 60: Focus on error
- 61: Seek fail error
- 62: Read Q data/ID error
- 70: Lead in data read fail
- 71: TOC read time out (CD)
- 80: Can't buffering
- 81: Unknown media type

9-4-1. Clear the Laser Hour

Press [DISPLAY] button and then press [CLEAR] button on the remote commander. The data for both CD and DVD data are reset.

Emg. History Check			
Laser Hours	CD	0h	0min
	DVD	0h	0min
01.	01 05 04 04	00 92 46	00
	00 00 00 00	00 00 23	45
02.	02 02 01 01	00 A9 4B	00
	00 00 00 00	00 00 23	45
[Next]	Next Page	[Prev]	Prev Page
[0]	Return to Top Menu		

9-4-2. Clear the Emergency History

Press [DVD TOP MENU] button and then press [CLEAR] button on the remote commander. The error code for all emergency history would be reset.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
01.	00 00 00 00	00 00 00	00
	00 00 00 00	00 00 00	00
02.	00 00 00 00	00 00 00	00
	00 00 00 00	00 00 00	00
[Next]	Next Page	[Prev]	Prev Page
[0]	Return to Top Menu		

9-4-3. Clear the Initialize Setup Data

Press [DVD MENU] button and then press [CLEAR] button on the remote commander.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
initialize setup data...			
[Next]	Next Page	[Prev]	Prev Page
[0]	Return to Top Menu		

9-4-4. Return to the Top Menu of Remocon Diagnosis Menu

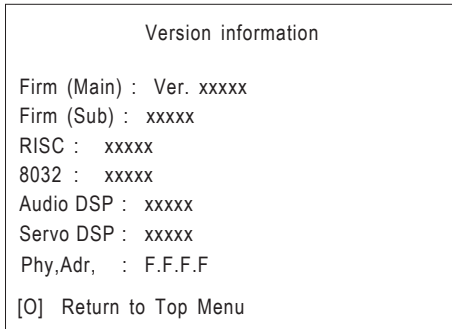
Press [0] button on the remote commander.

SECTION 4 ELECTRICAL ADJUSTMENTS

9-5. CHECK VERSION INFORMATION

To check the version information, please follow the following procedure.

- (1) From the Top Menu of Remocon Diagnosis Menu, select "4. Version Information" by pressing the [4] button on the remote commander. The following screen appears on the on-screen display.



To return to the Top Menu of Remocon Diagnosis Menu, press [0] button on the remote commander.

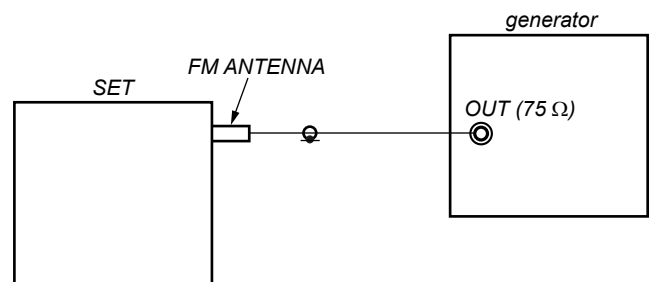
DVD SECTION

When the optical pick-up assy is replaced, perform the "EXECUTING IOP MEASUREMENT".

EXECUTING IOP MEASUREMENT (See page 21)

TUNER SECTION

[FM Tune Level Check]



Procedure:

1. Turn the power on.
2. Input the following signal from Signal Generator to FM antenna input directly.

* Carrier Freq : A = 87.5 MHz, B = 98 MHz, C = 108 MHz
 Deviation : 75 kHz
 Modulation : 1 kHz
 ANT input : 35 dBu (EMF)

Note: Please use 75 ohm "coaxial cable" to connect SG and the set. You cannot use video cable for checking.
 Please use SG whose output impedance is 75 ohm.

3. Set to FM tuner function and tune A, B and C signals.
4. Confirm "TUNED" is lit on the display for A, B and C signals.

The mark of "TUNED" means "The selected station signal is received in good condition."

SECTION 5 DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Printed Wiring Boards.

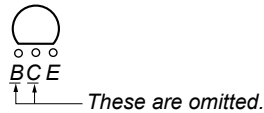
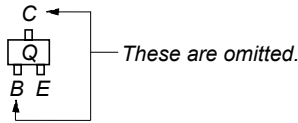
Note:

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

Caution:

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

- Indication of transistor.



- Abbreviation

CND : Canadian model
E3 : 240V AC area in E model
E12 : 220 – 240V AC area in E model
E15 : Iranian model
E32 : 110 – 240V AC area in E model
EA : Saudi Arabia model
SP : Singapore model

For Schematic Diagrams.

Note:

- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- \triangle : Internal component.
- : Panel designation.

Note:

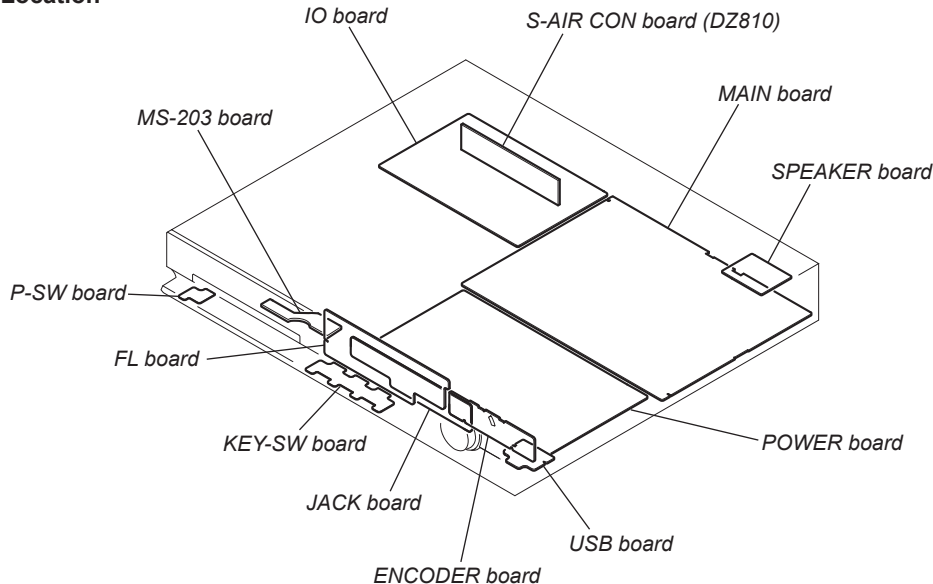
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Note:

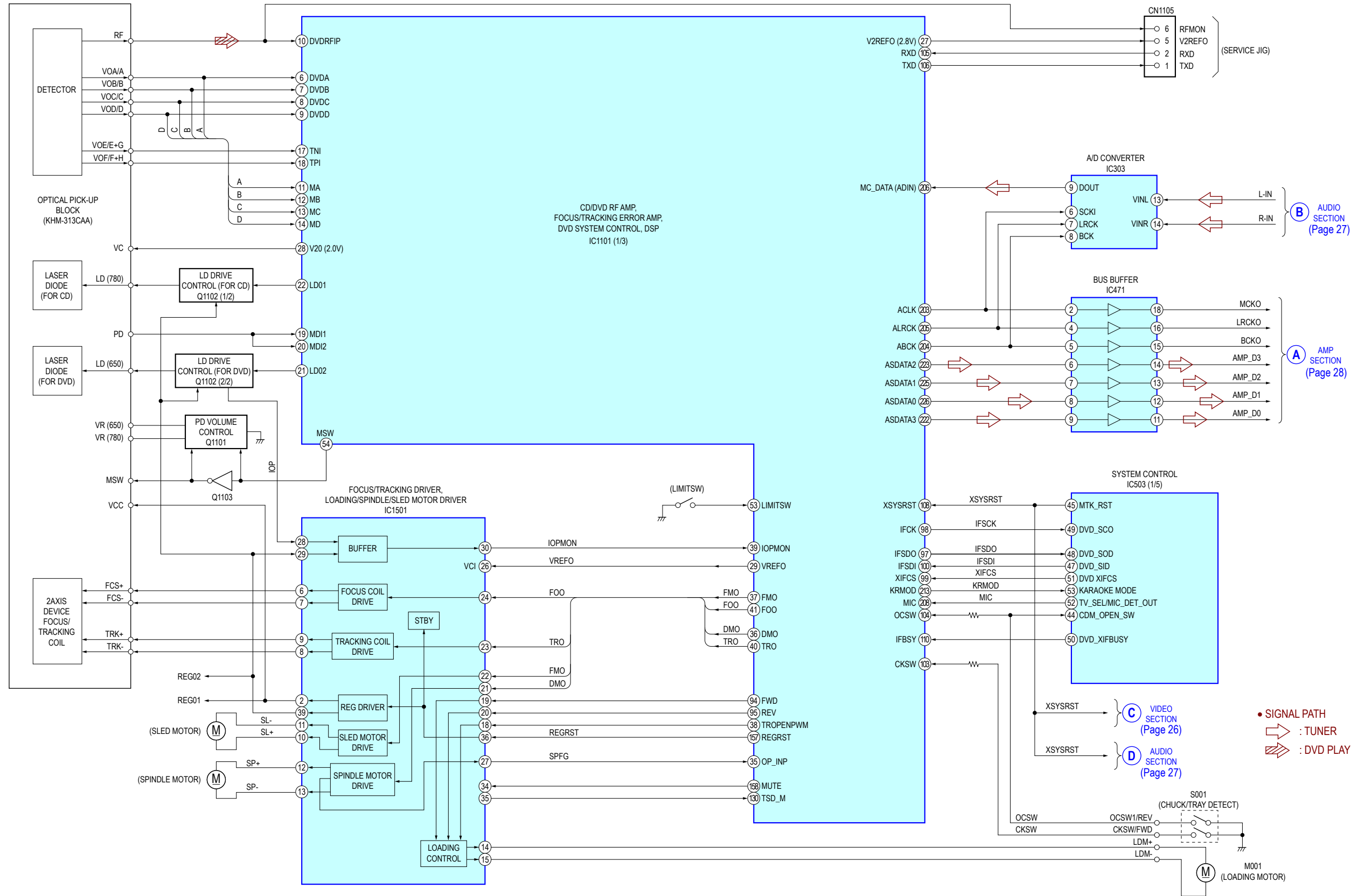
Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- — : B+ Line.
- - - - : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages and waveforms are dc with respect to ground in service mode.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- no mark: TUNER (FM)
- < > : DVD PLAY
- * : Impossible to measure
- Voltages are taken with VOM (Input impedance 10 M Ω).
- Circled numbers refer to waveforms.
- Signal path.
 - ⇨ : TUNER
 - ⇨ : DVD PLAY
 - ⇨ : VIDEO
 - ⇨ : Y
 - ⇨ : CHROMA
 - ⇨ : COMPONENT VIDEO
 - ⇨ : MIC
- Abbreviation
 - CND : Canadian model
 - E3 : 240V AC area in E model
 - E12 : 220 – 240V AC area in E model
 - E15 : Iranian model
 - E32 : 110 – 240V AC area in E model
 - EA : Saudi Arabia model
 - SP : Singapore model

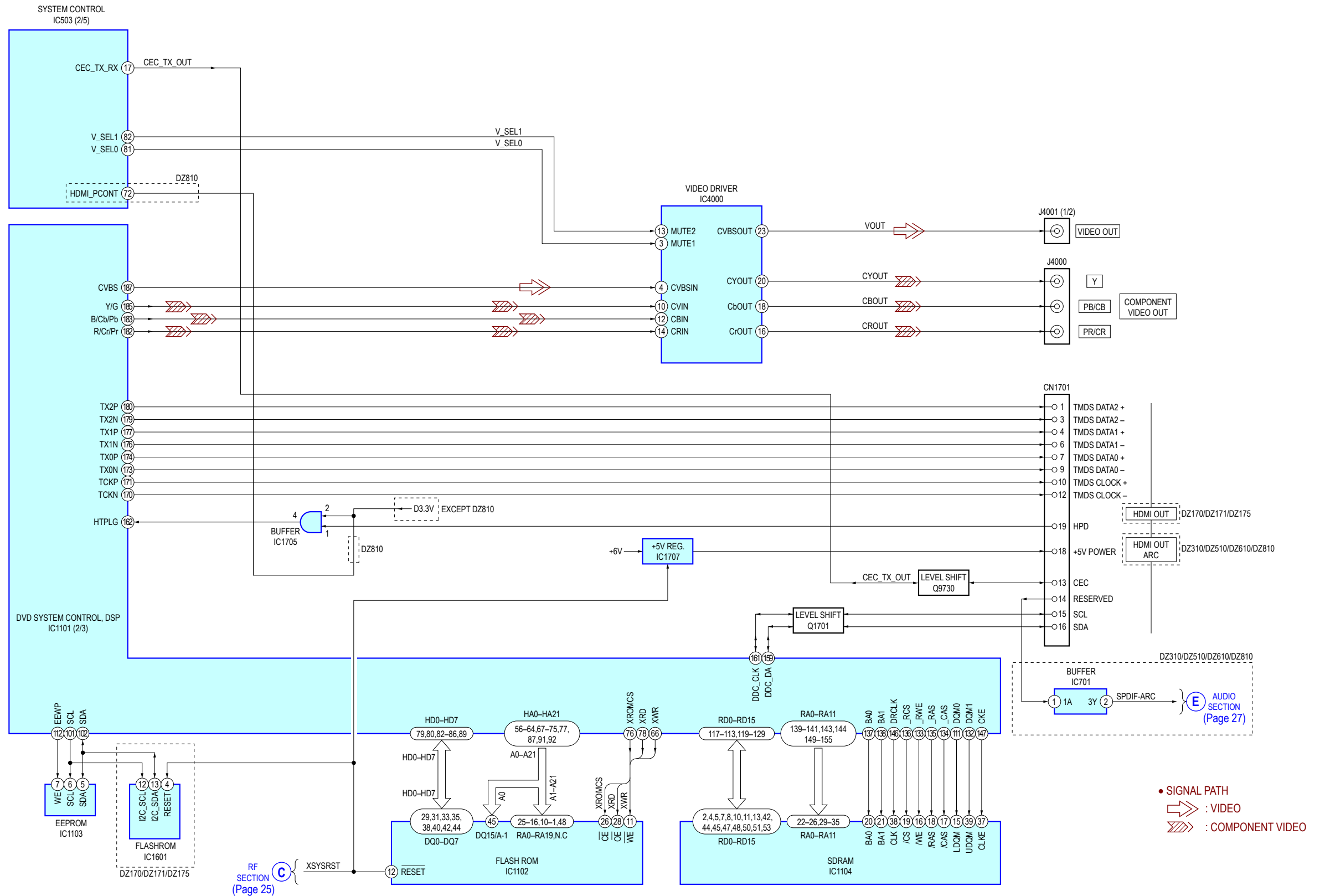
- Circuit Boards Location



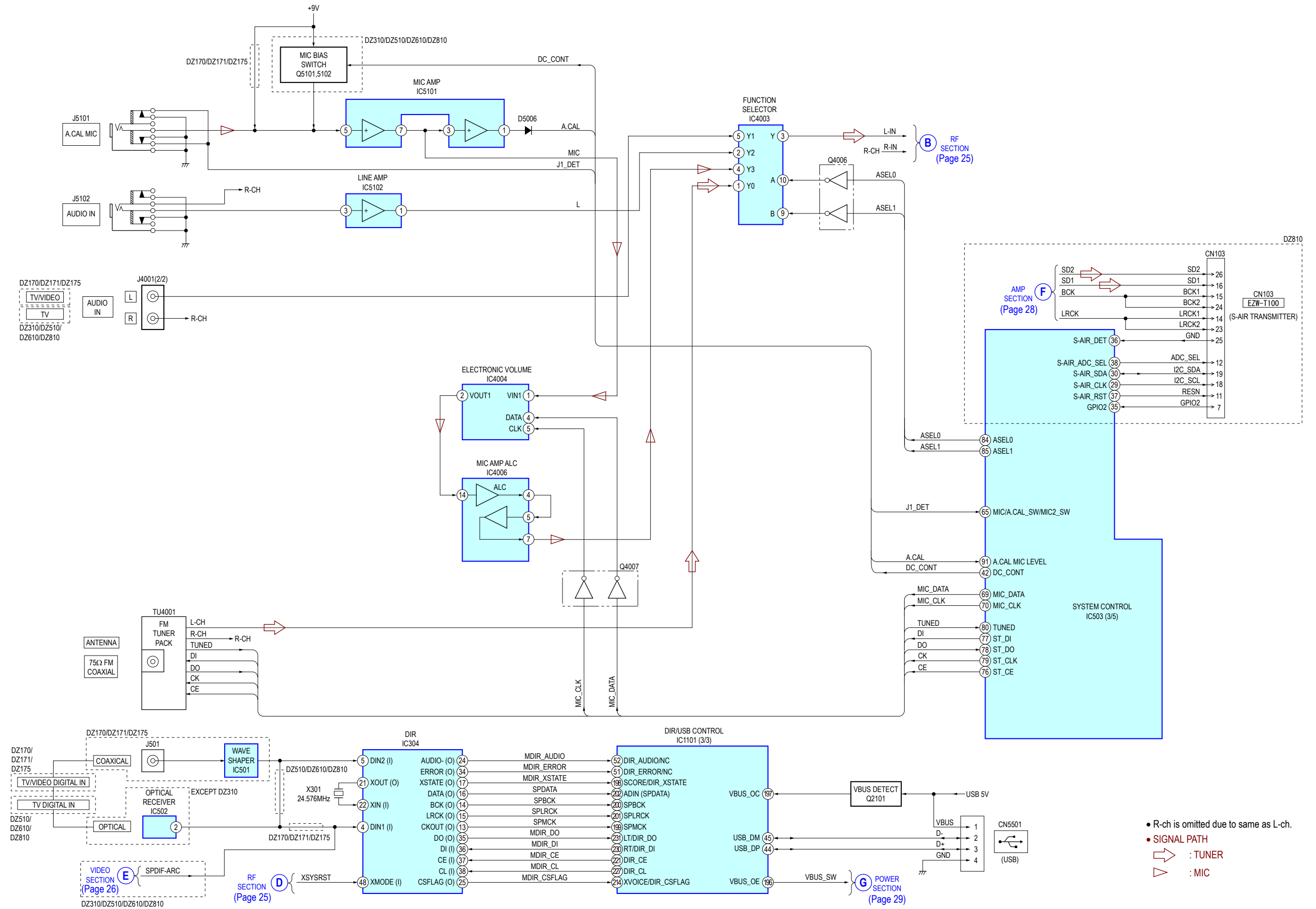
5-1. BLOCK DIAGRAM – RF Section –



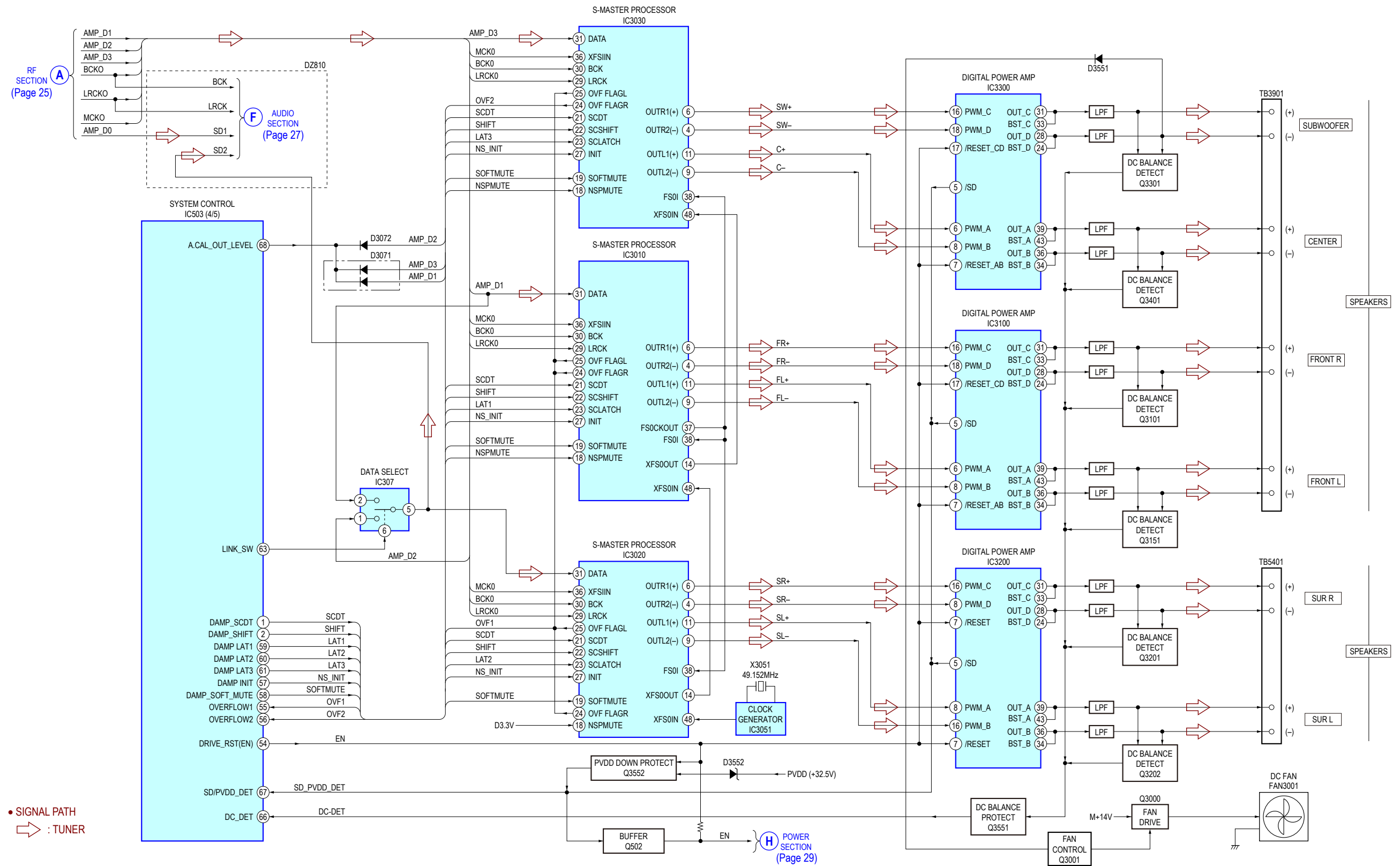
5-2. BLOCK DIAGRAM – VIDEO Section –



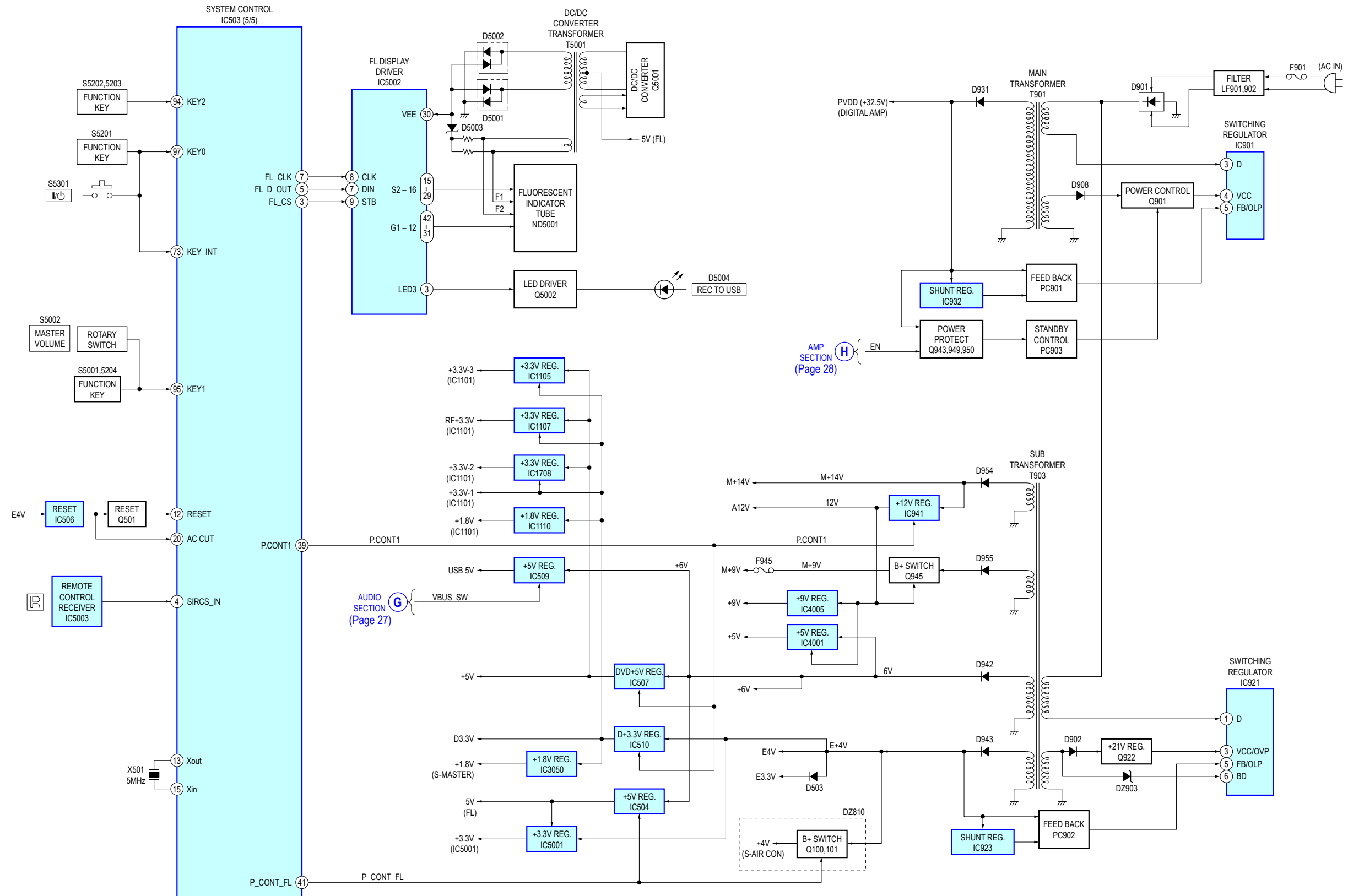
5-3. BLOCK DIAGRAM – AUDIO Section –



5-4. BLOCK DIAGRAM – AMP Section –

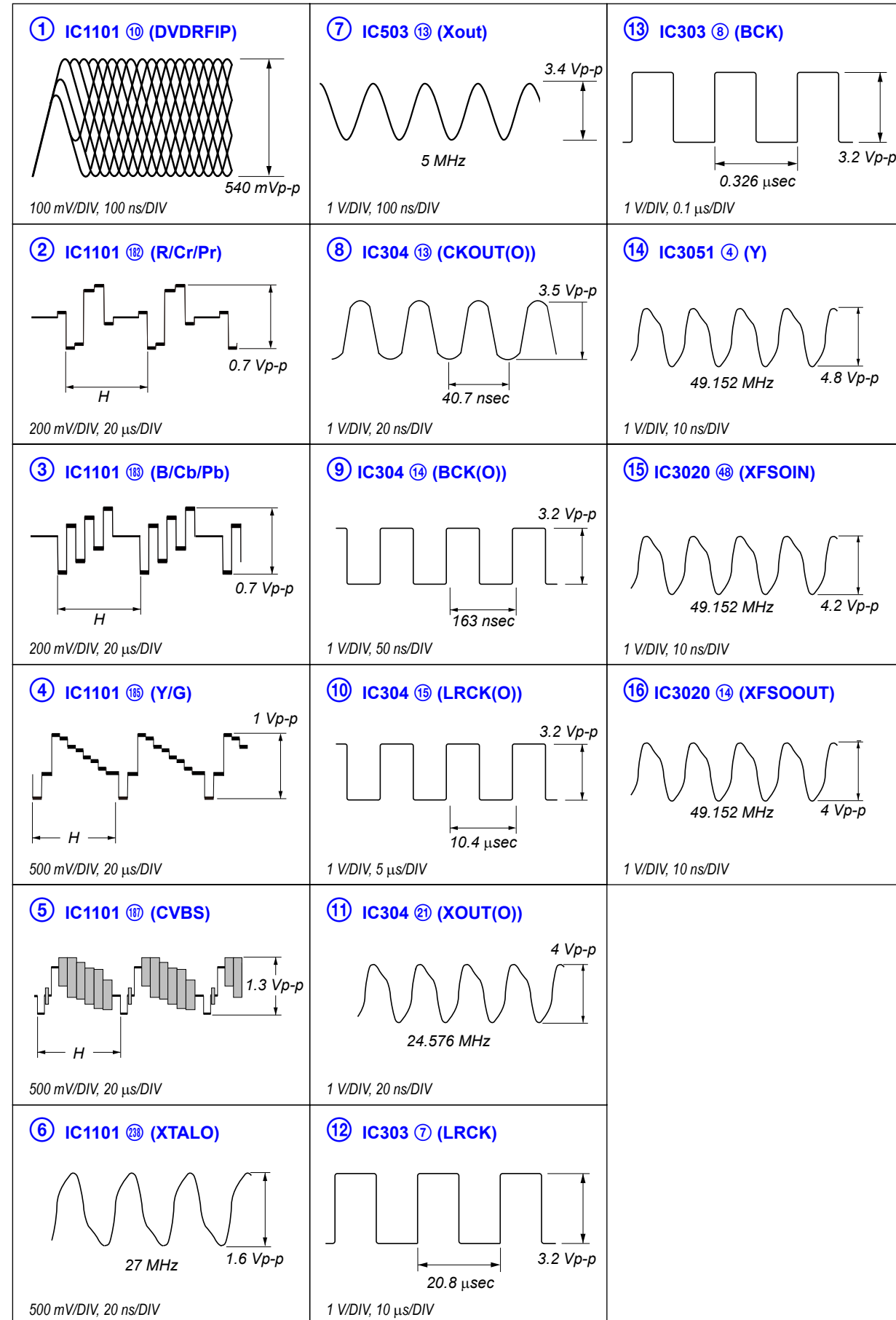


5-5. BLOCK DIAGRAM – POWER Section –

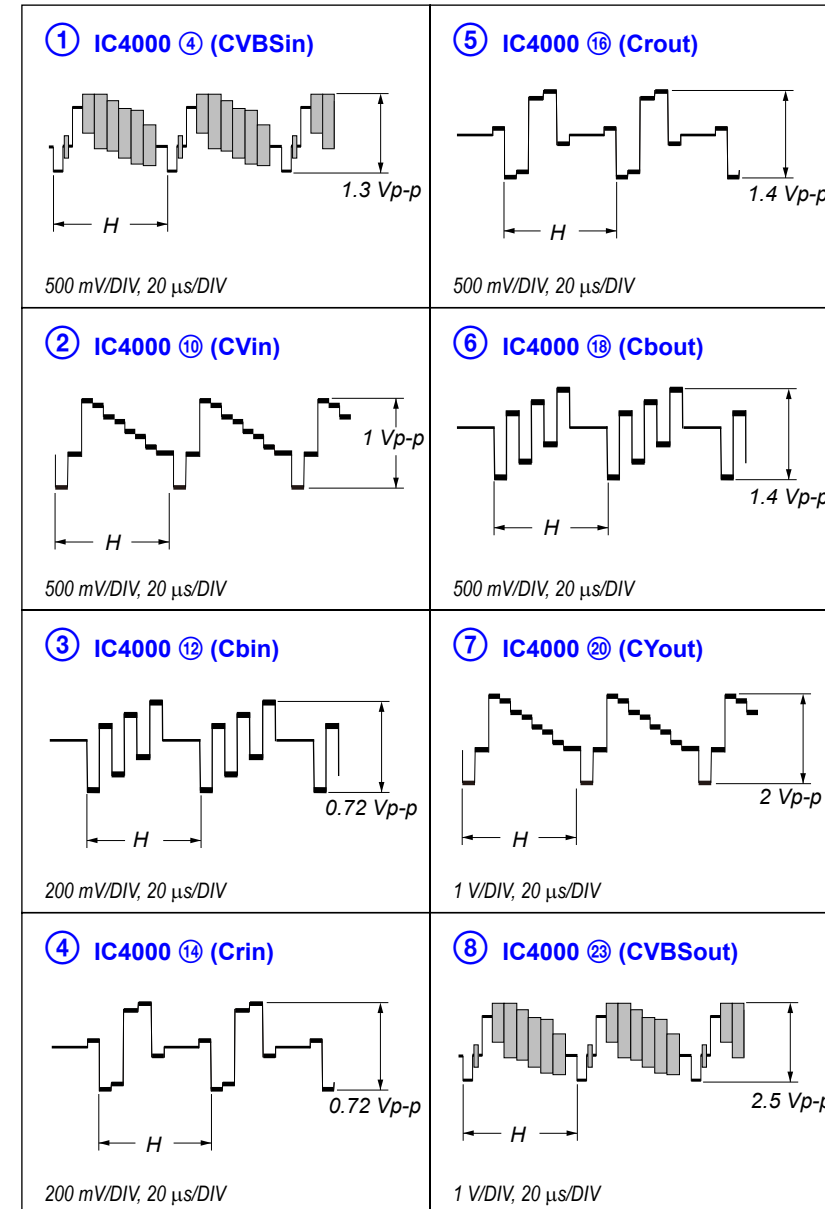


• Waveforms

– MAIN Board –

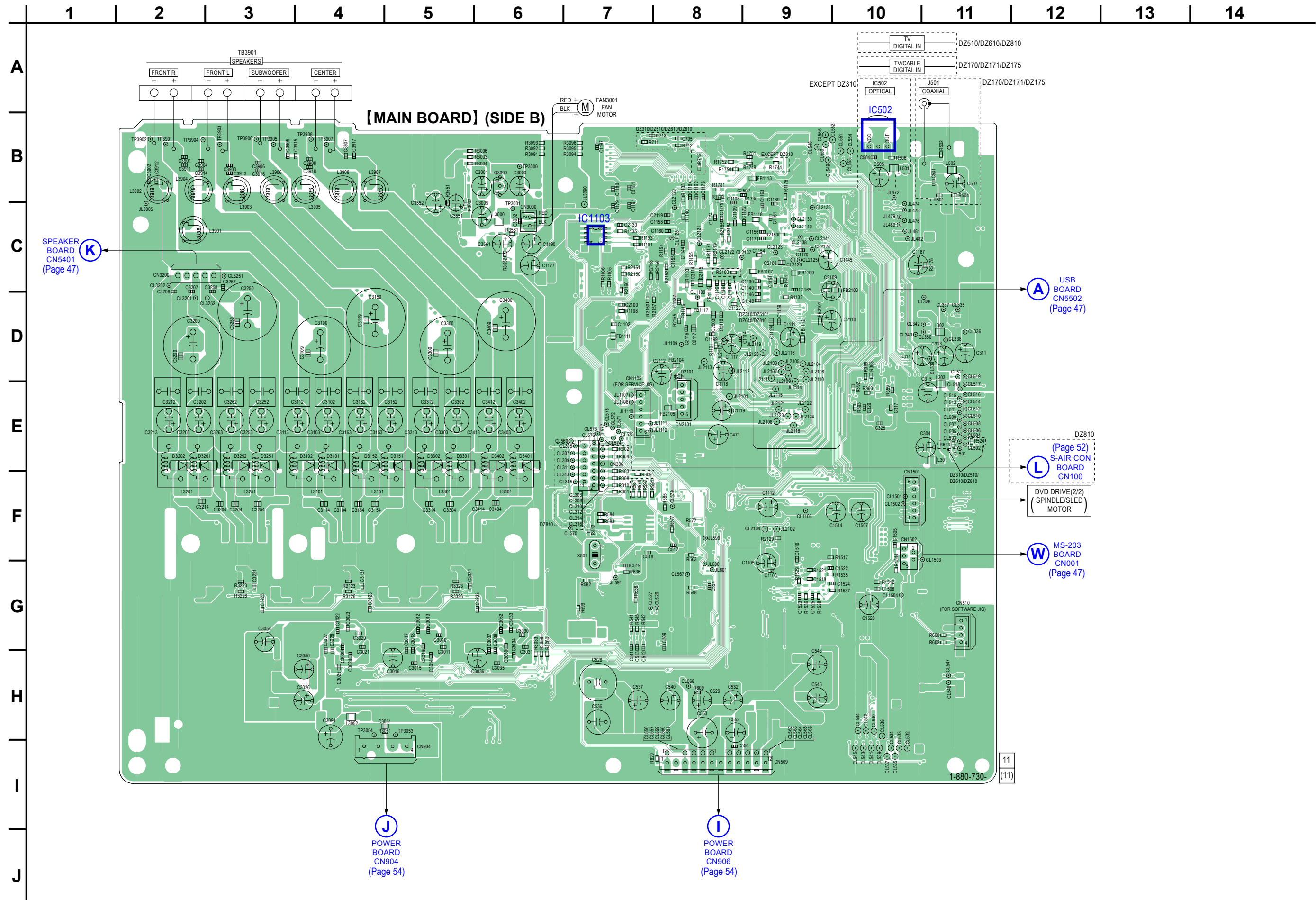


– IO Board –



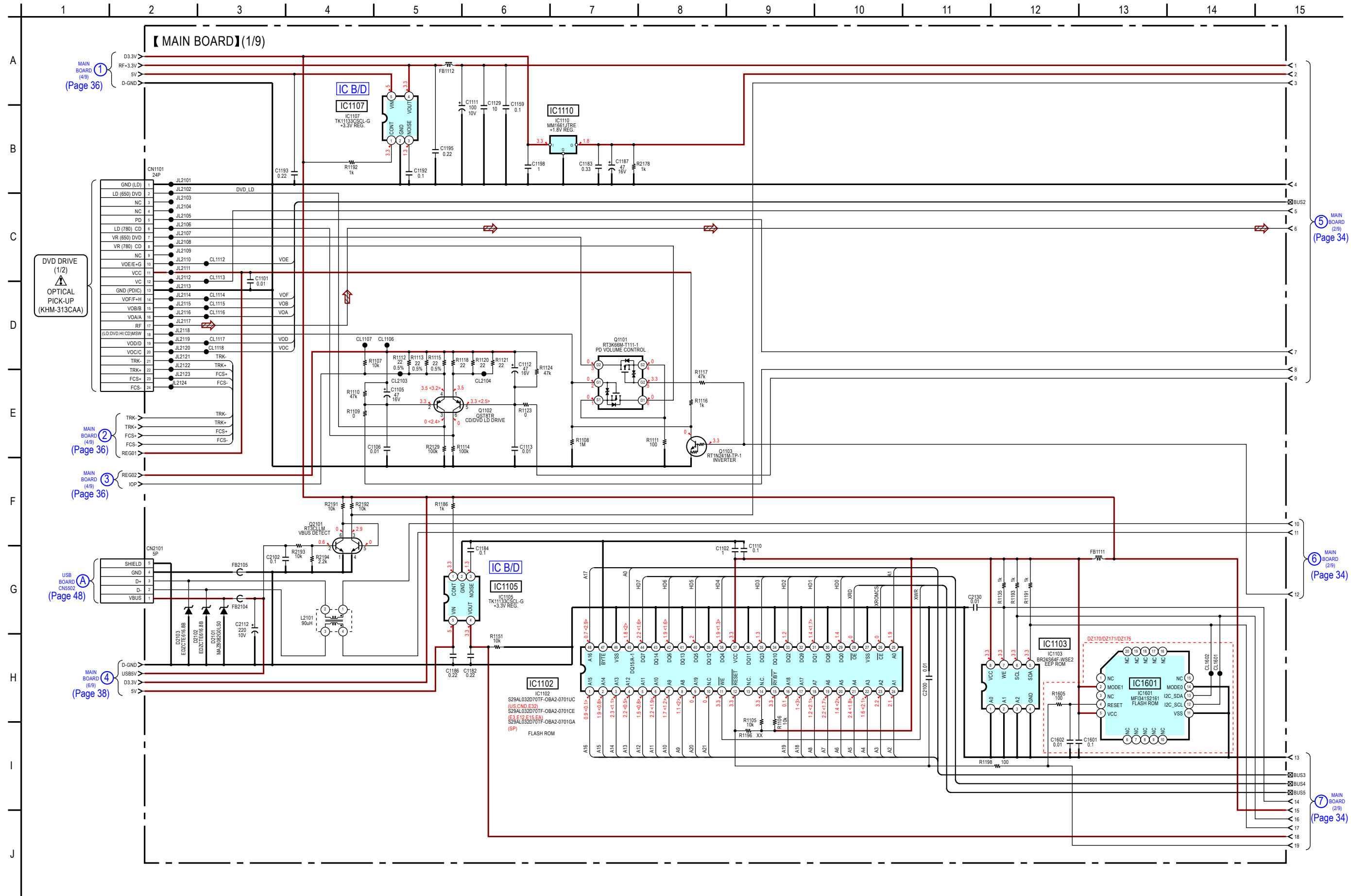
5-7. PRINTED WIRING BOARD – MAIN Section (2/2) – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.

Note: When IC1103 on the Main board is damaged, exchange the new Main board for the Main board which IC damaged.

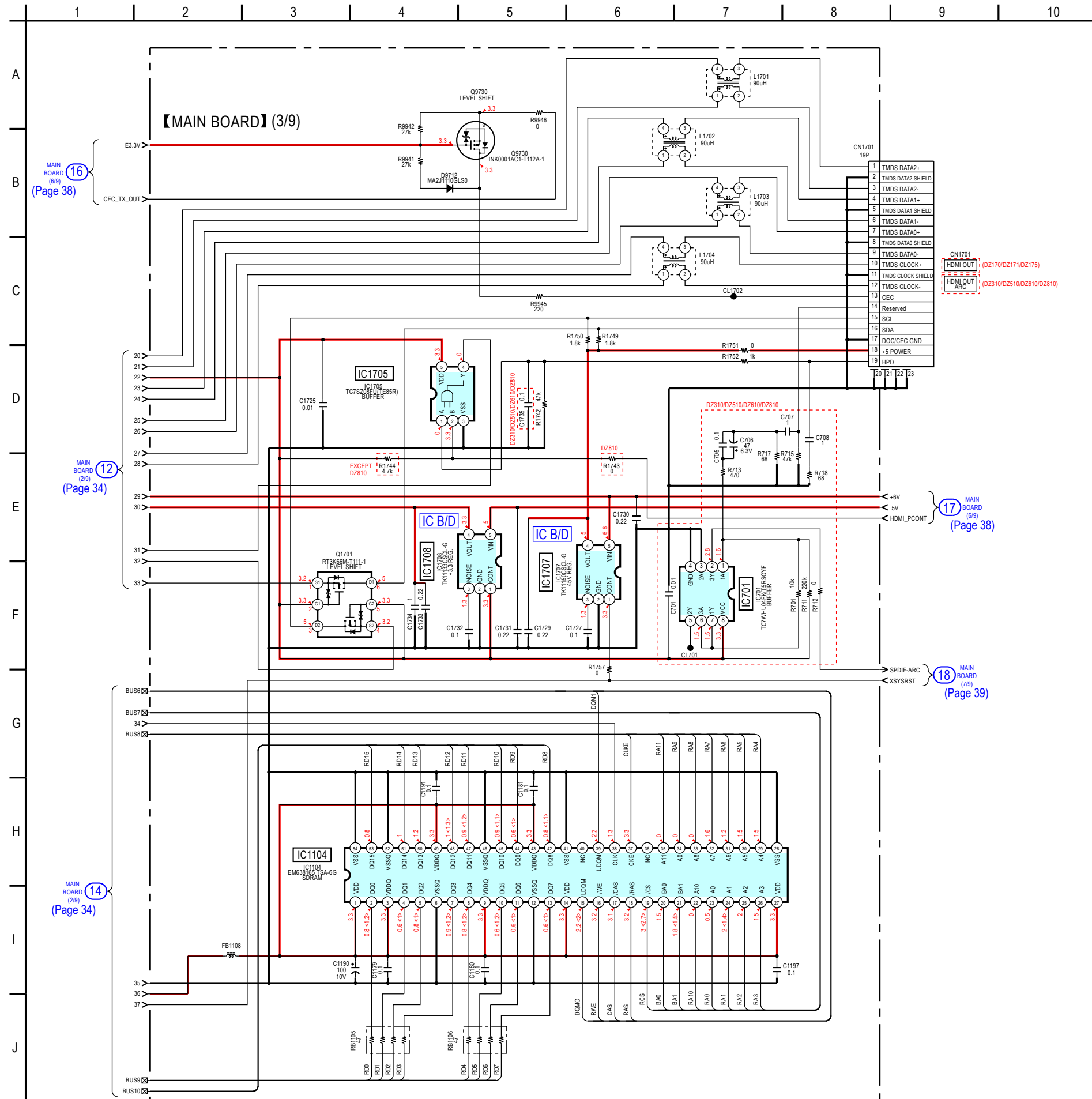


Note: When IC1103 on the Main board is damaged, exchange the new Main board for the Main board which IC damaged.

5-8. SCHEMATIC DIAGRAM – MAIN Section (1/9) – • See page 56 for IC Block Diagrams.

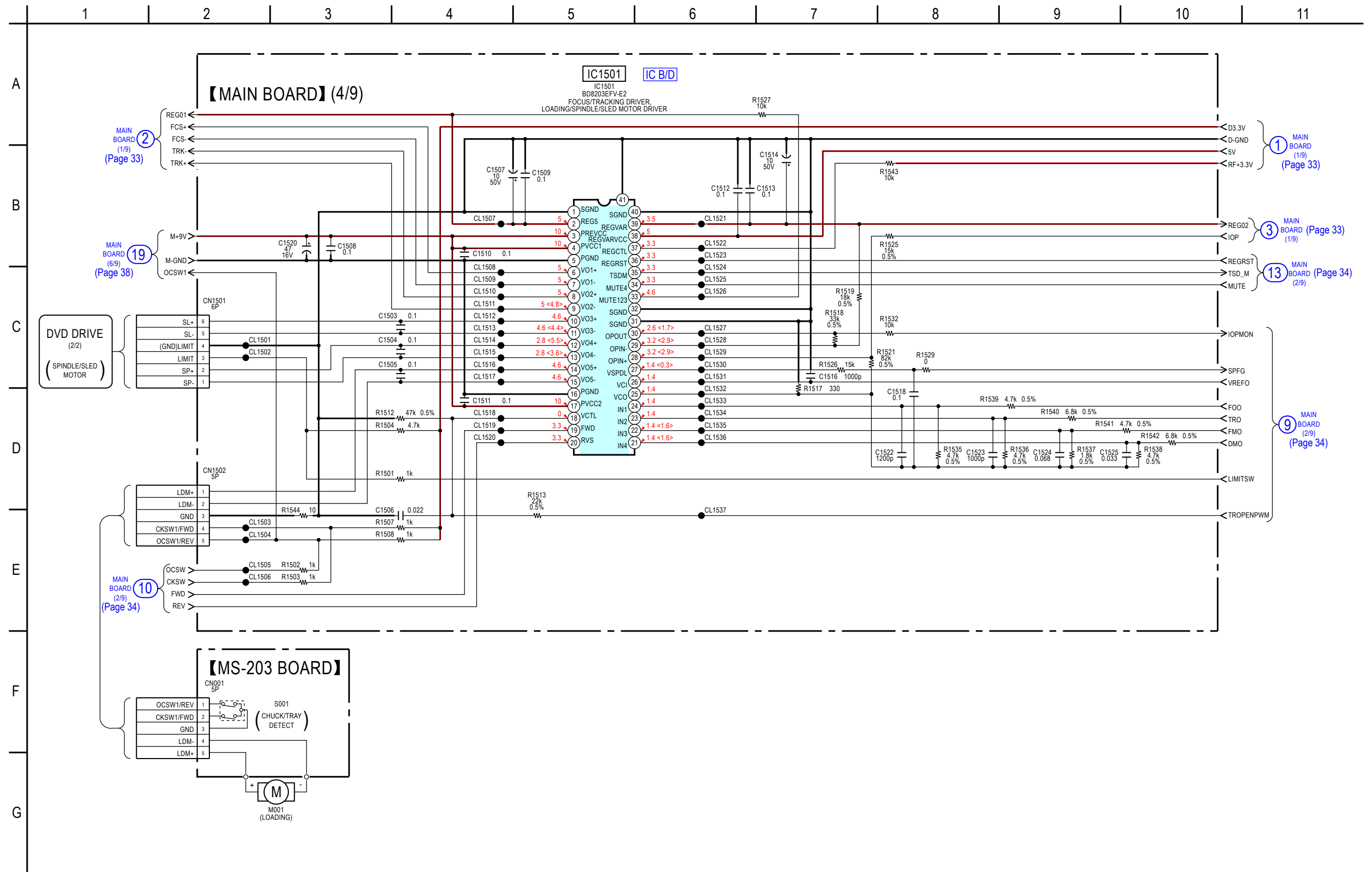


5-10. SCHEMATIC DIAGRAM – MAIN Section (3/9) – • See page 56 for IC Block Diagrams.

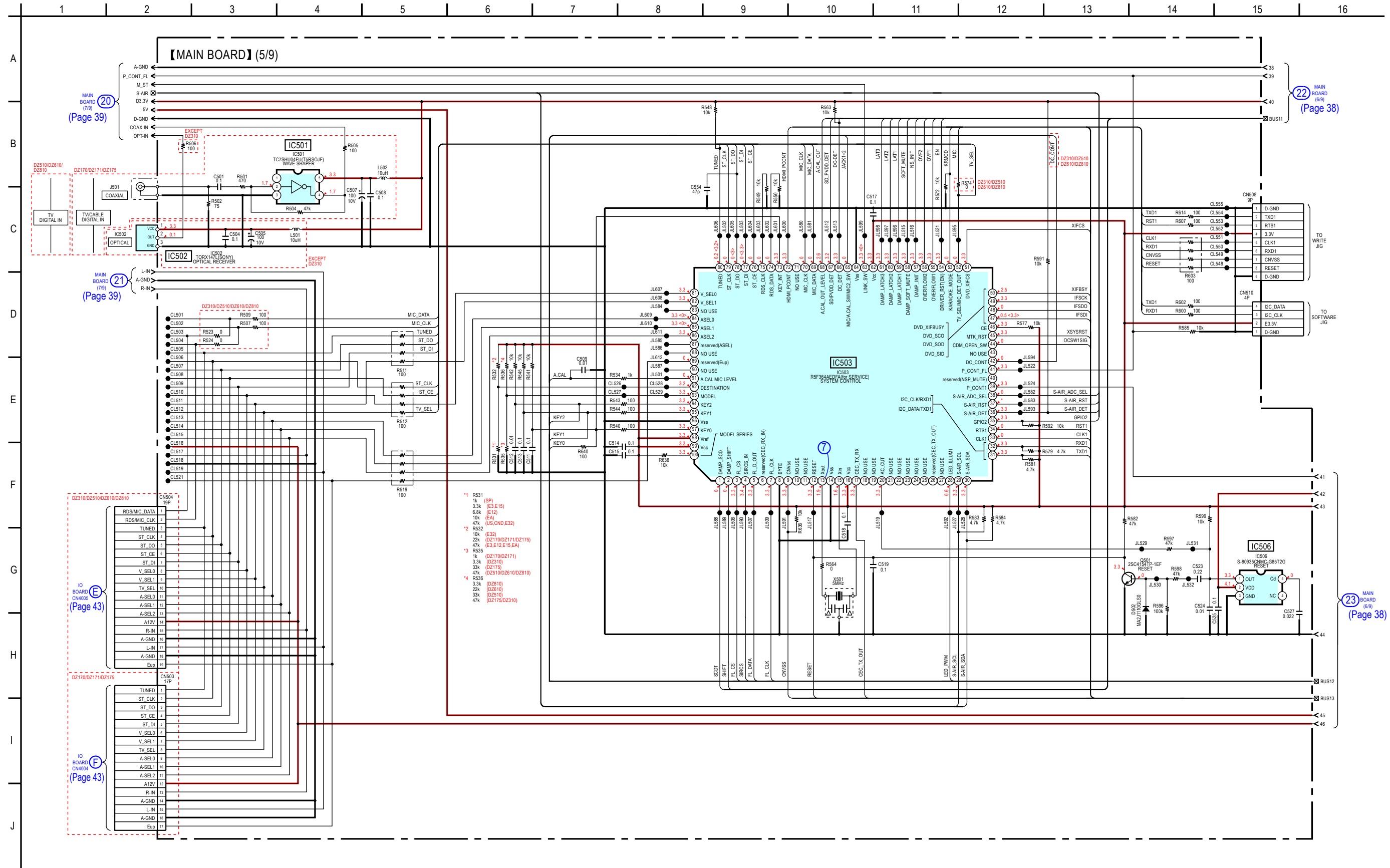


Note: When IC1501 on the Main board is damaged, exchange the new Main board for the Main board which IC damaged.

5-11. SCHEMATIC DIAGRAM – MAIN Section (4/9) – • See page 56 for IC Block Diagram.

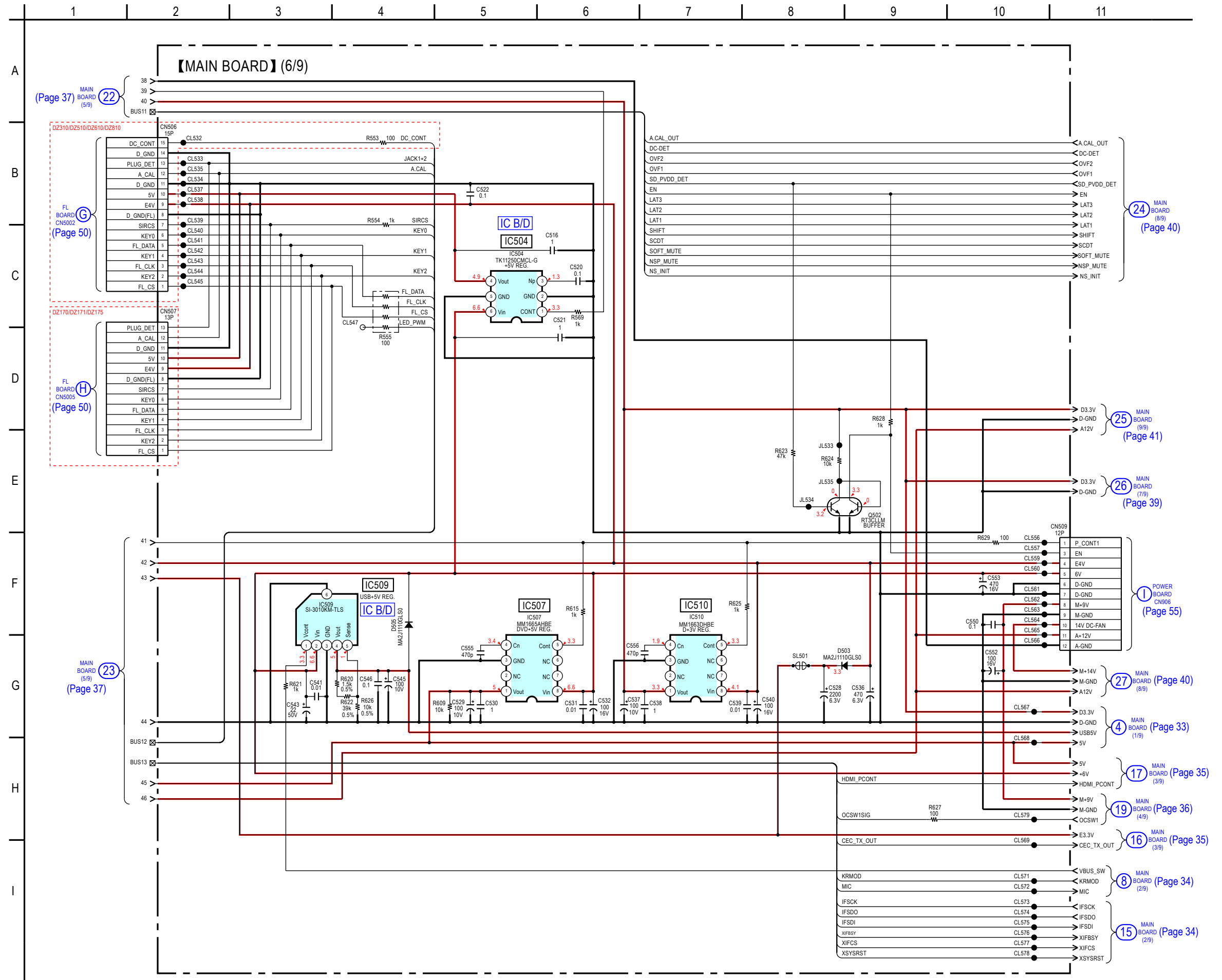


5-12. SCHEMATIC DIAGRAM – MAIN Section (5/9) – • See page 30 for waveform. • See page 67 for IC Pin Function Description of IC503.

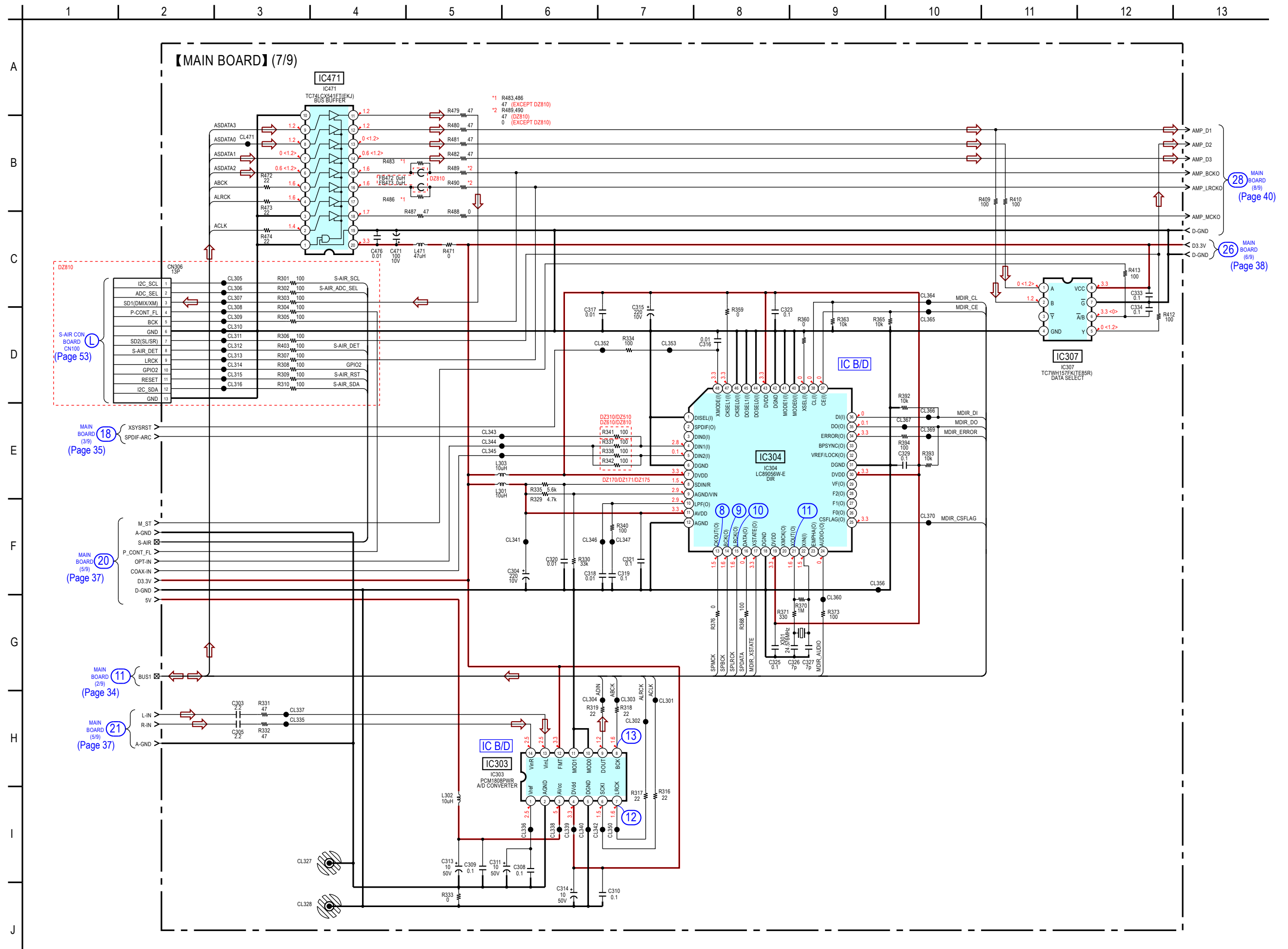


Note: When IC507 on the Main board is damaged, exchange the new Main board for the Main board which IC damaged.

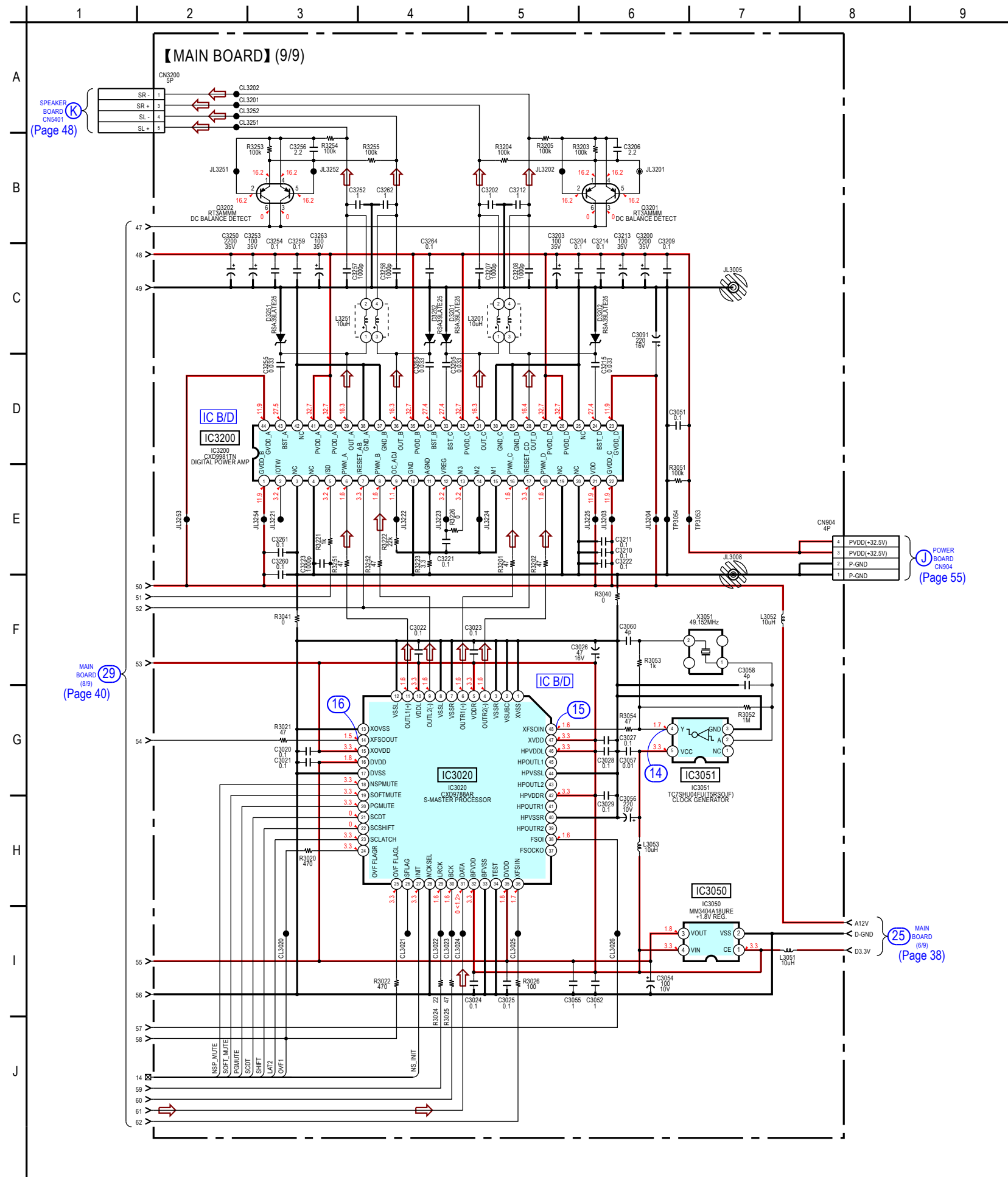
5-13. SCHEMATIC DIAGRAM – MAIN Section (6/9) – • See page 56 for IC Block Diagrams.



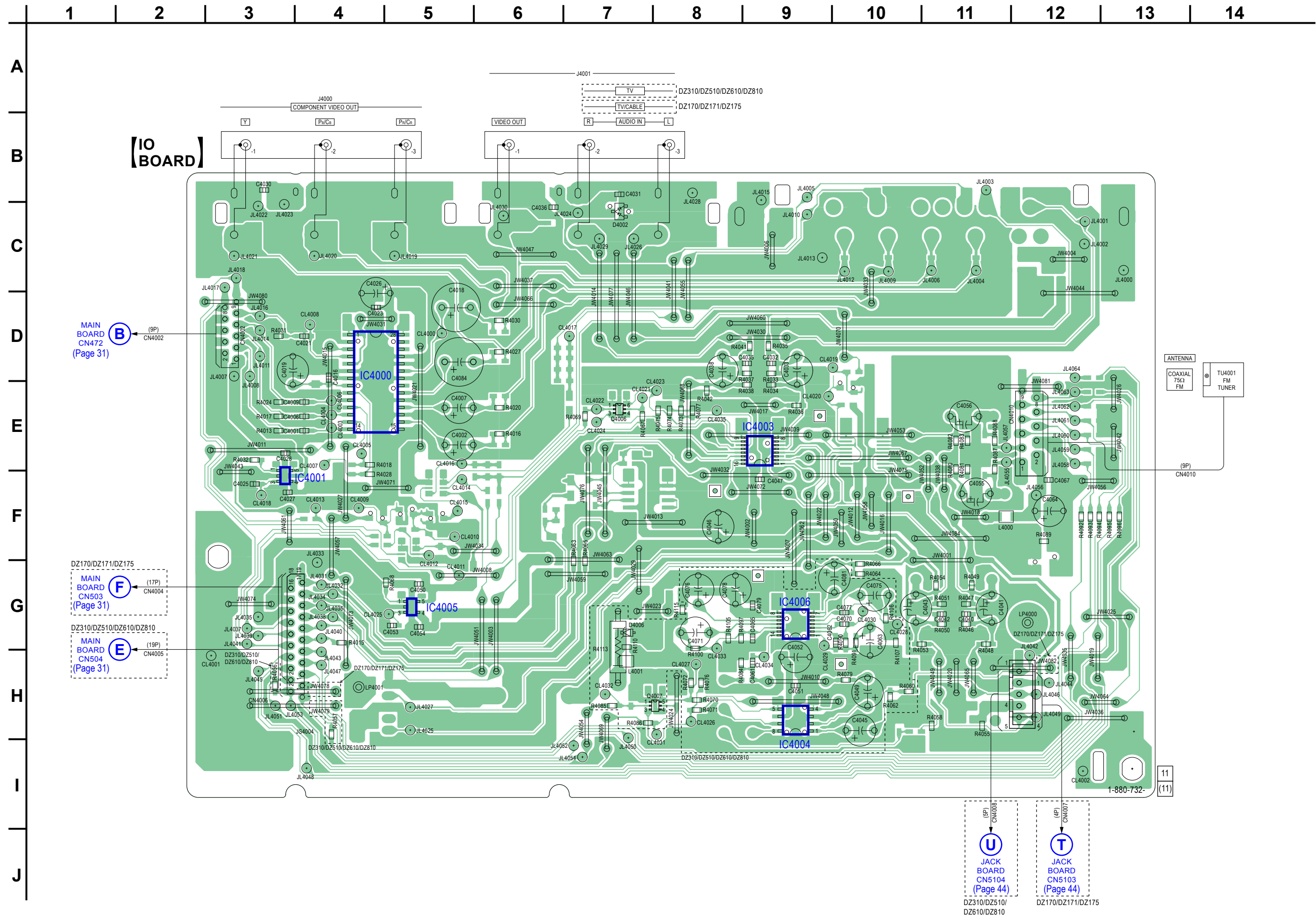
5-14. SCHEMATIC DIAGRAM – MAIN Section (7/9) – • See page 30 for waveforms. • See page 57 for IC Block Diagrams.



5-16. SCHEMATIC DIAGRAM – MAIN Section (9/9) – • See page 30 for waveforms. • See page 58, 59 for IC Block Diagrams.



5-17. PRINTED WIRING BOARD – IO Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.



[IO BOARD]

MAIN BOARD CN472 (Page 31) (9P) CN4002 (B)

DZ170/DZ171/DZ175 MAIN BOARD CN503 (Page 31) (17P) CN4004 (F)

DZ310/DZ510/DZ610/DZ810 MAIN BOARD CN504 (Page 31) (19P) CN4005 (E)

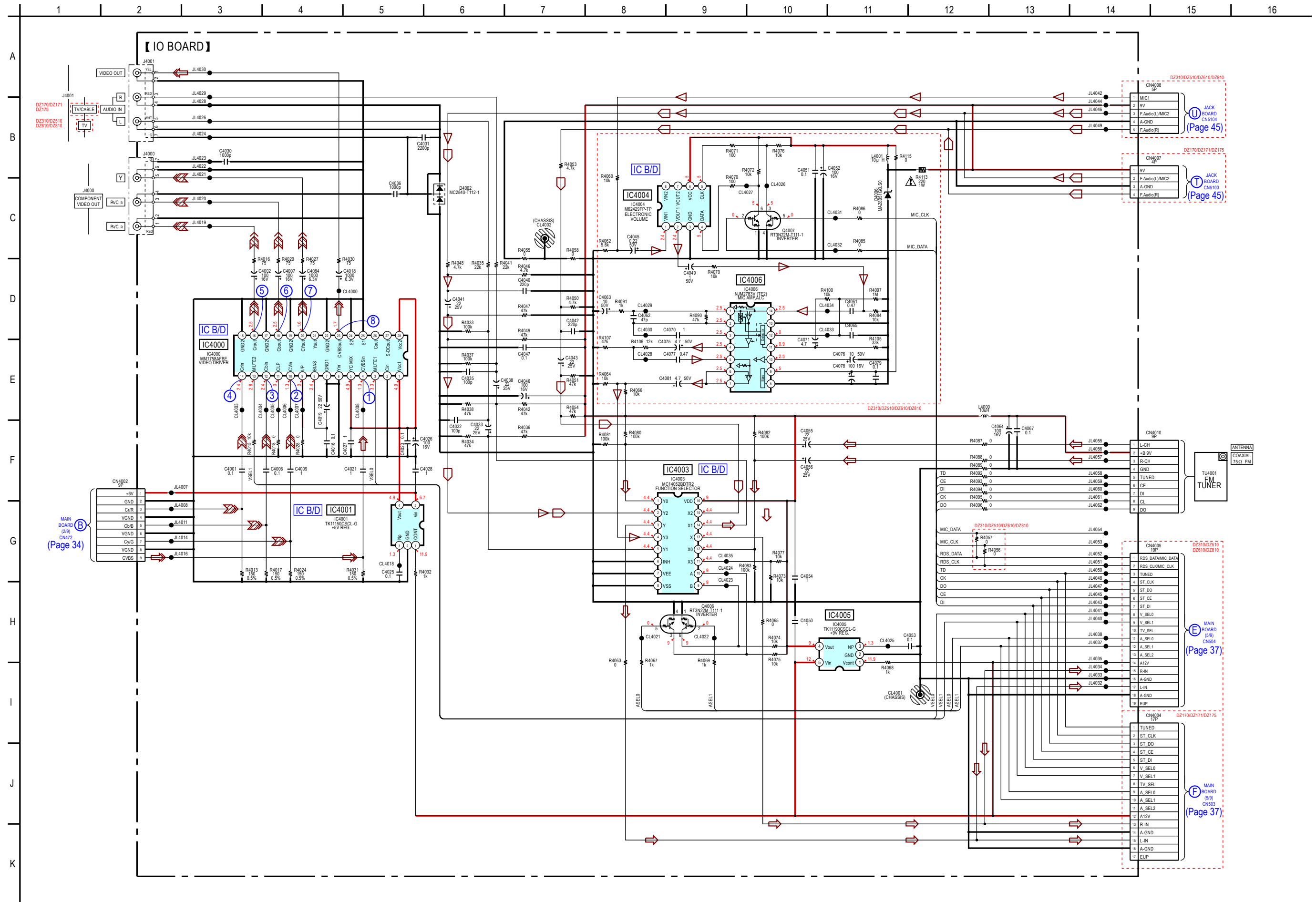
(5P) CN4006 (U) JACK BOARD CN5104 (Page 44) DZ310/DZ510/DZ610/DZ810


(4P) CN4007 (T) JACK BOARD CN5103 (Page 44) DZ170/DZ171/DZ175

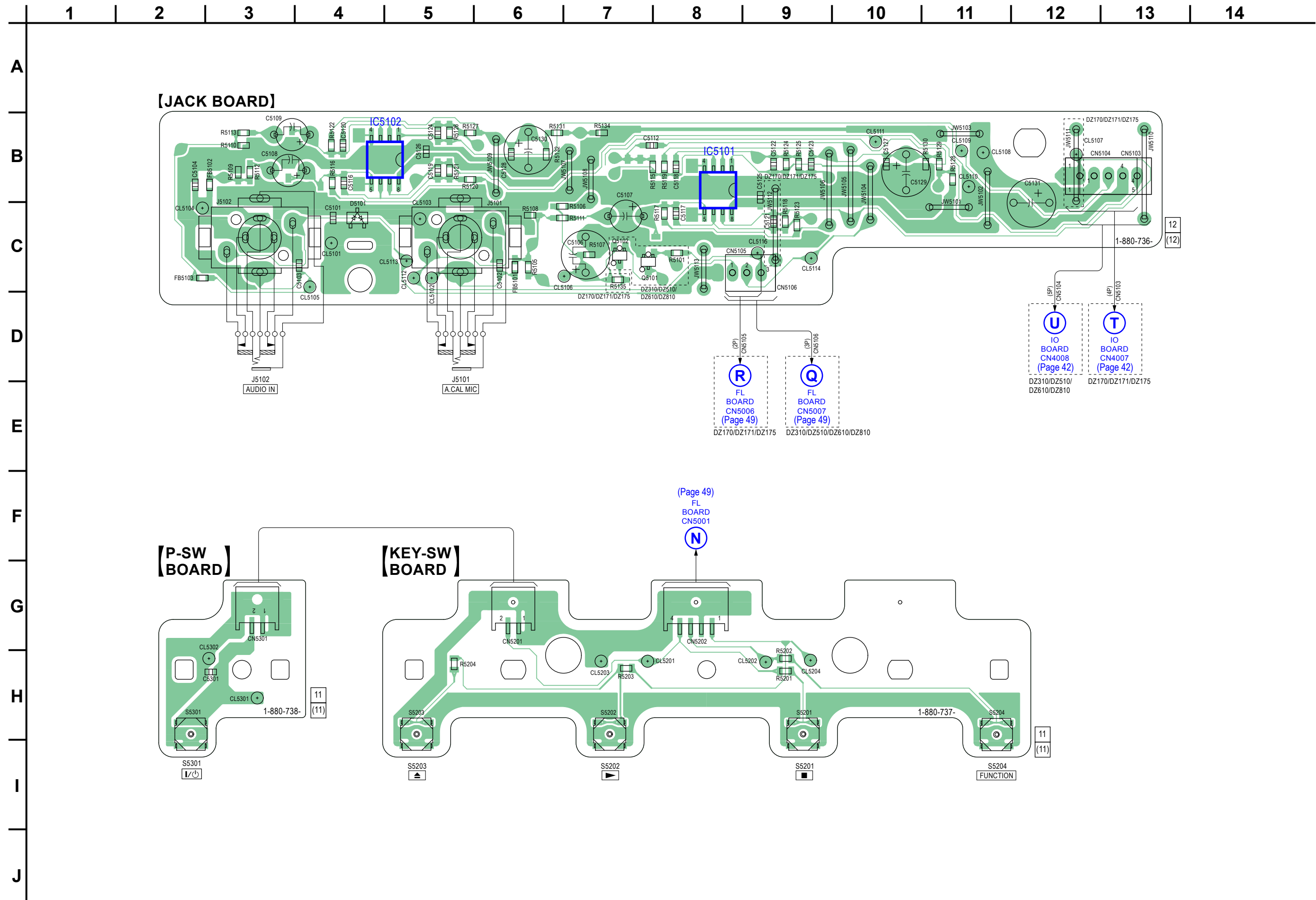
ANTENNA COAXIAL 75Ω FM TU4001 FM TUNER (9P) CN4010

1-880-732 (11)

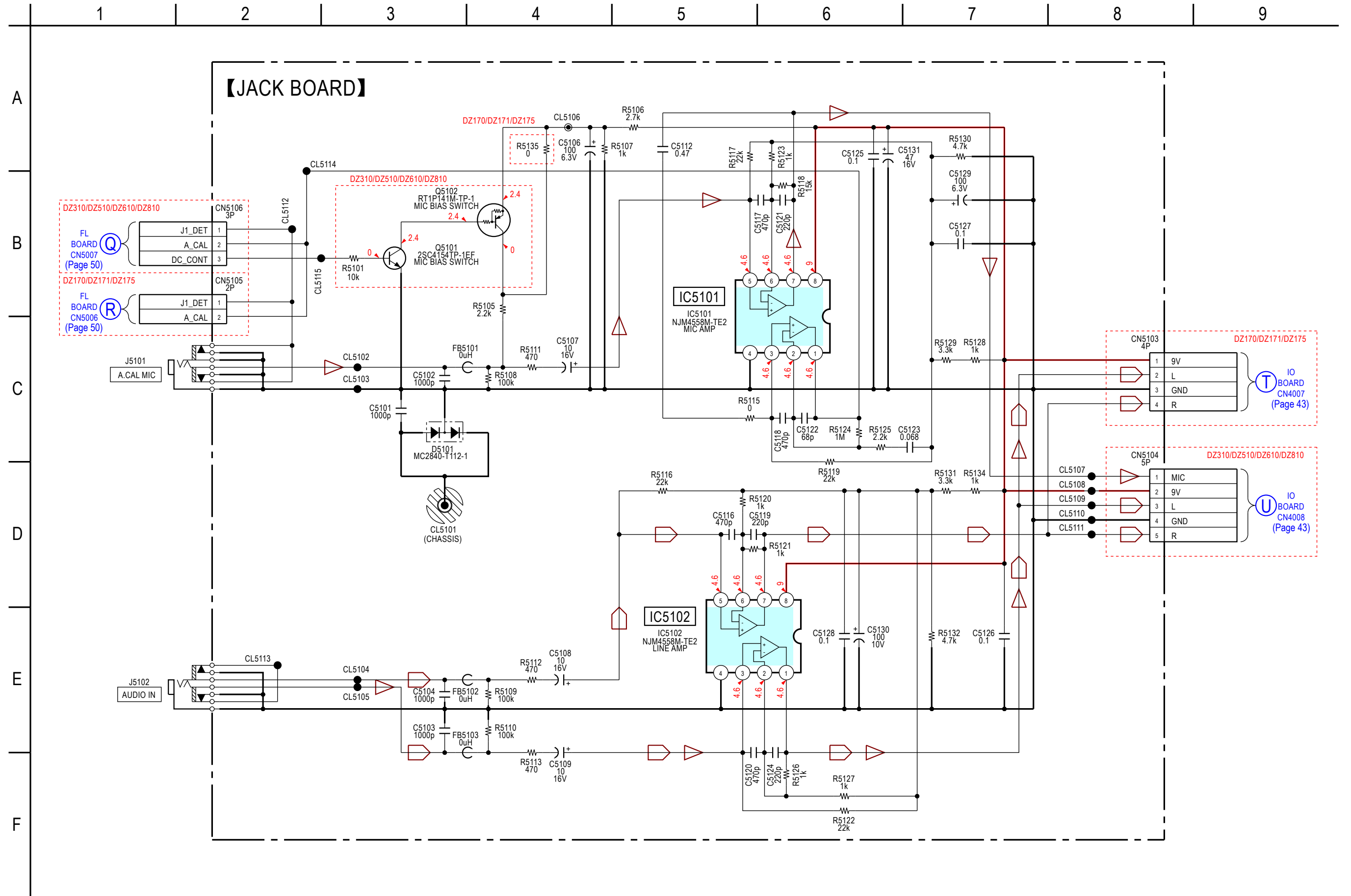
5-18. SCHEMATIC DIAGRAM – IO Section – • See page 30 for waveforms. • See page 56, 60, 61 for IC Block Diagrams.



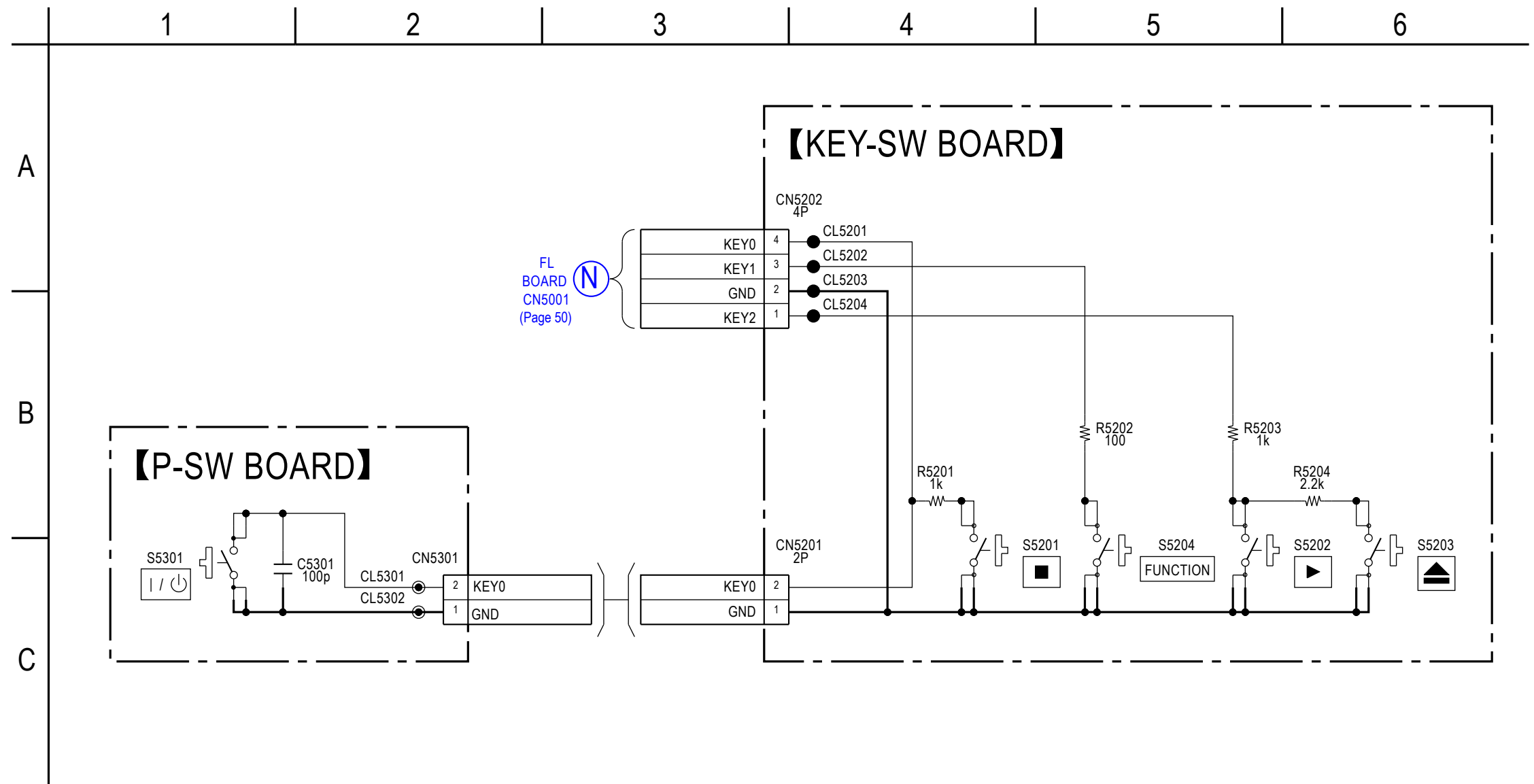
5-19. PRINTED WIRING BOARDS – JACK, KEY-SW, P-SW Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.




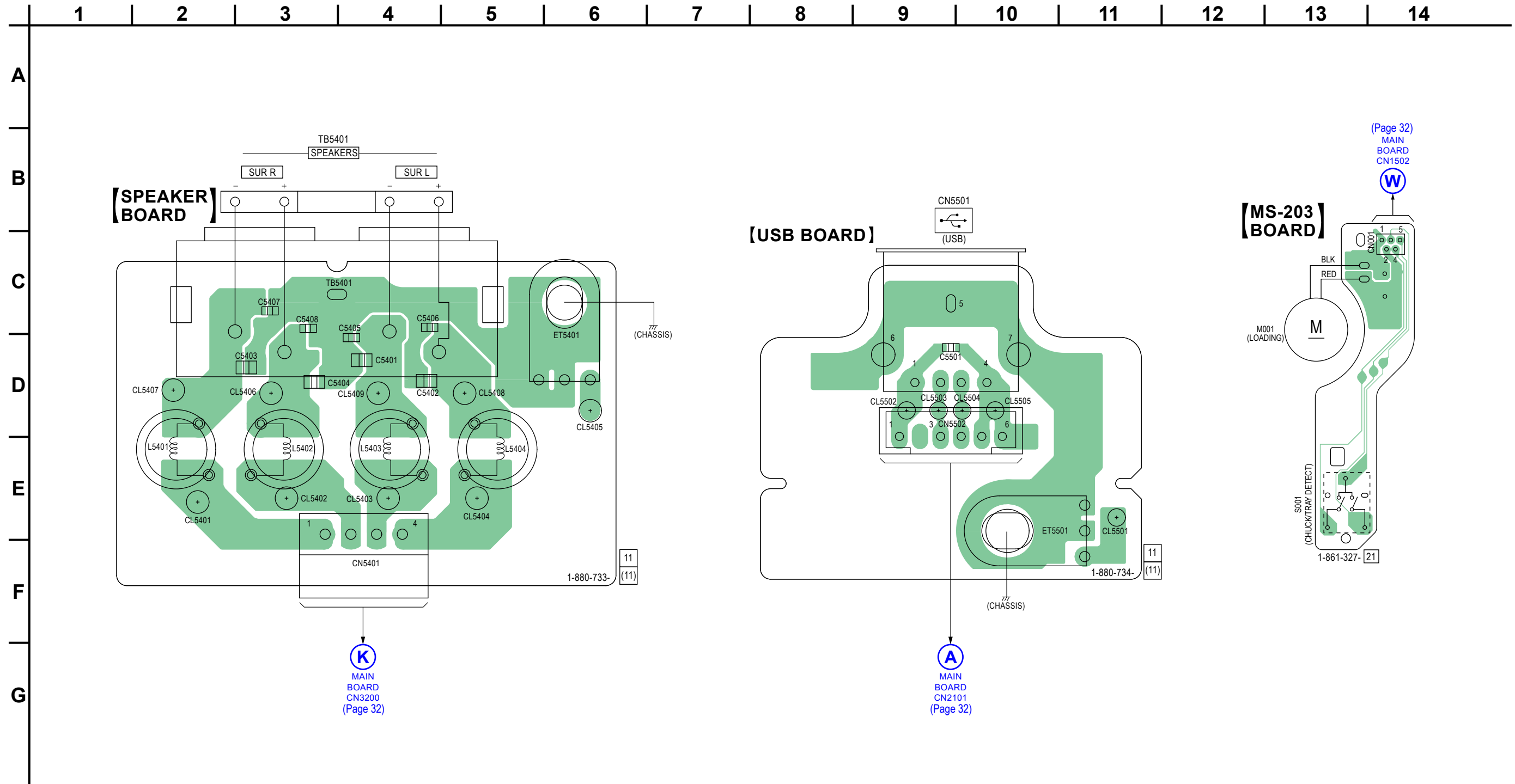
5-20. SCHEMATIC DIAGRAM – JACK Section –



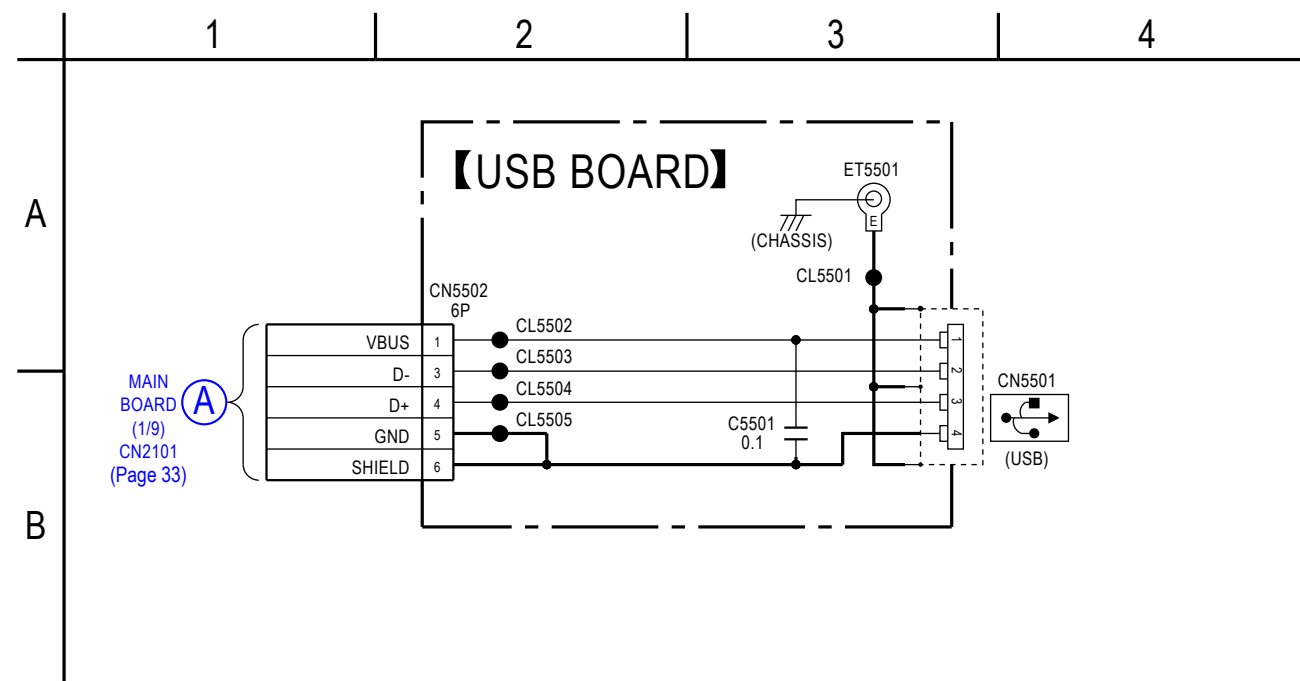
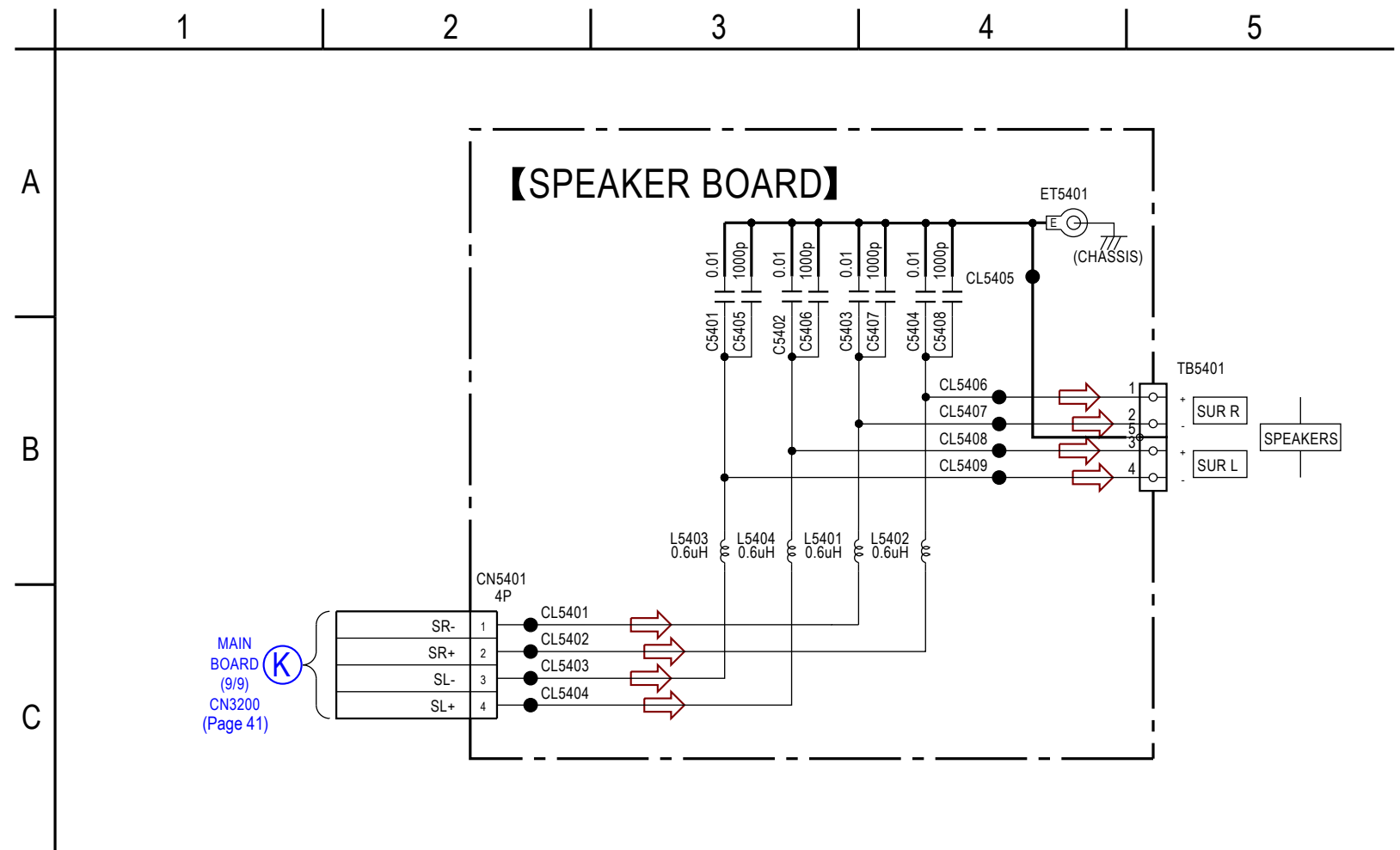
5-21. SCHEMATIC DIAGRAM – KEY-SW, P-SW Section –



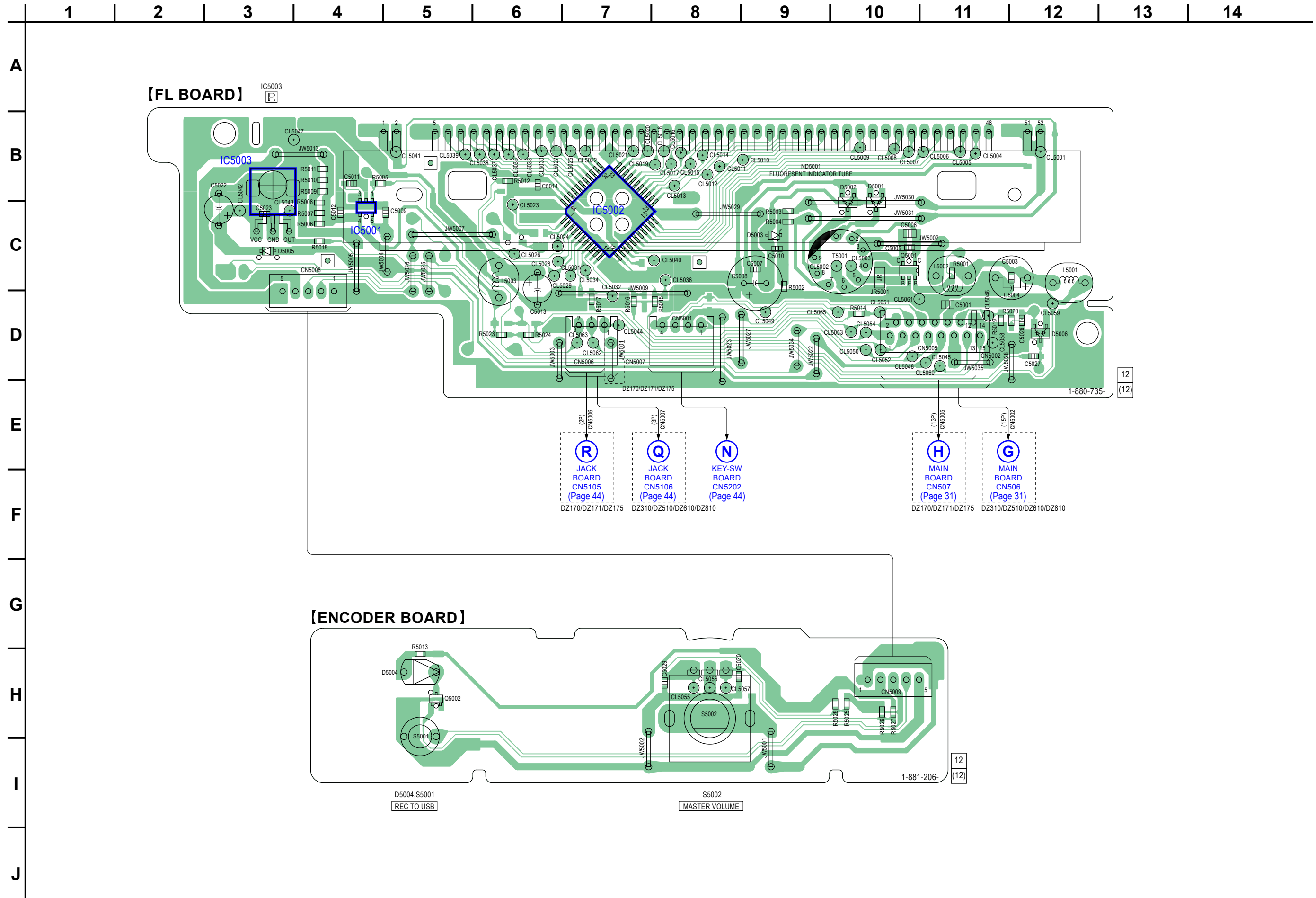
5-22. PRINTED WIRING BOARDS – SPEAKER, USB, MS-203 Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.



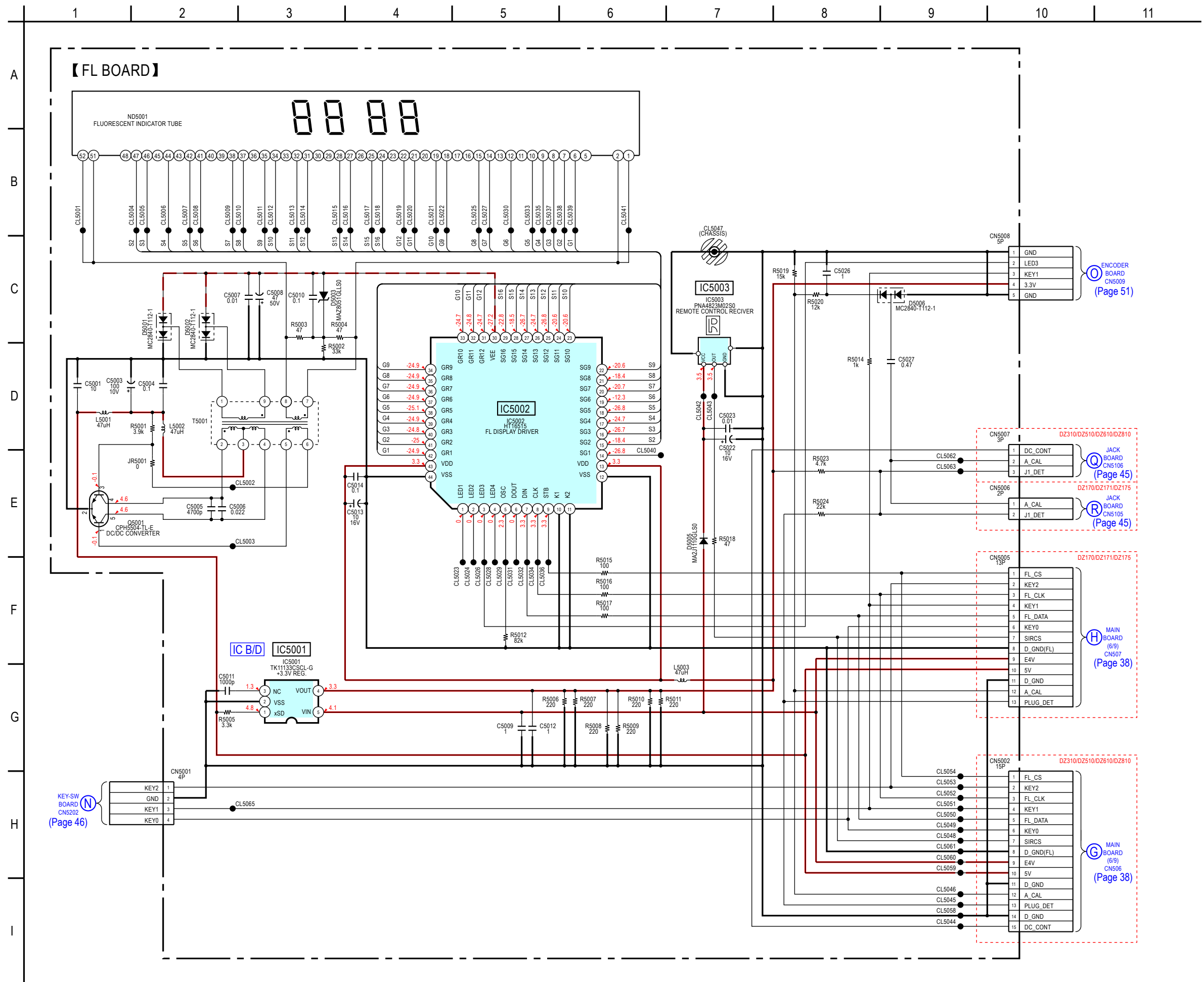
5-23. SCHEMATIC DIAGRAM – SPEAKER, USB Section –



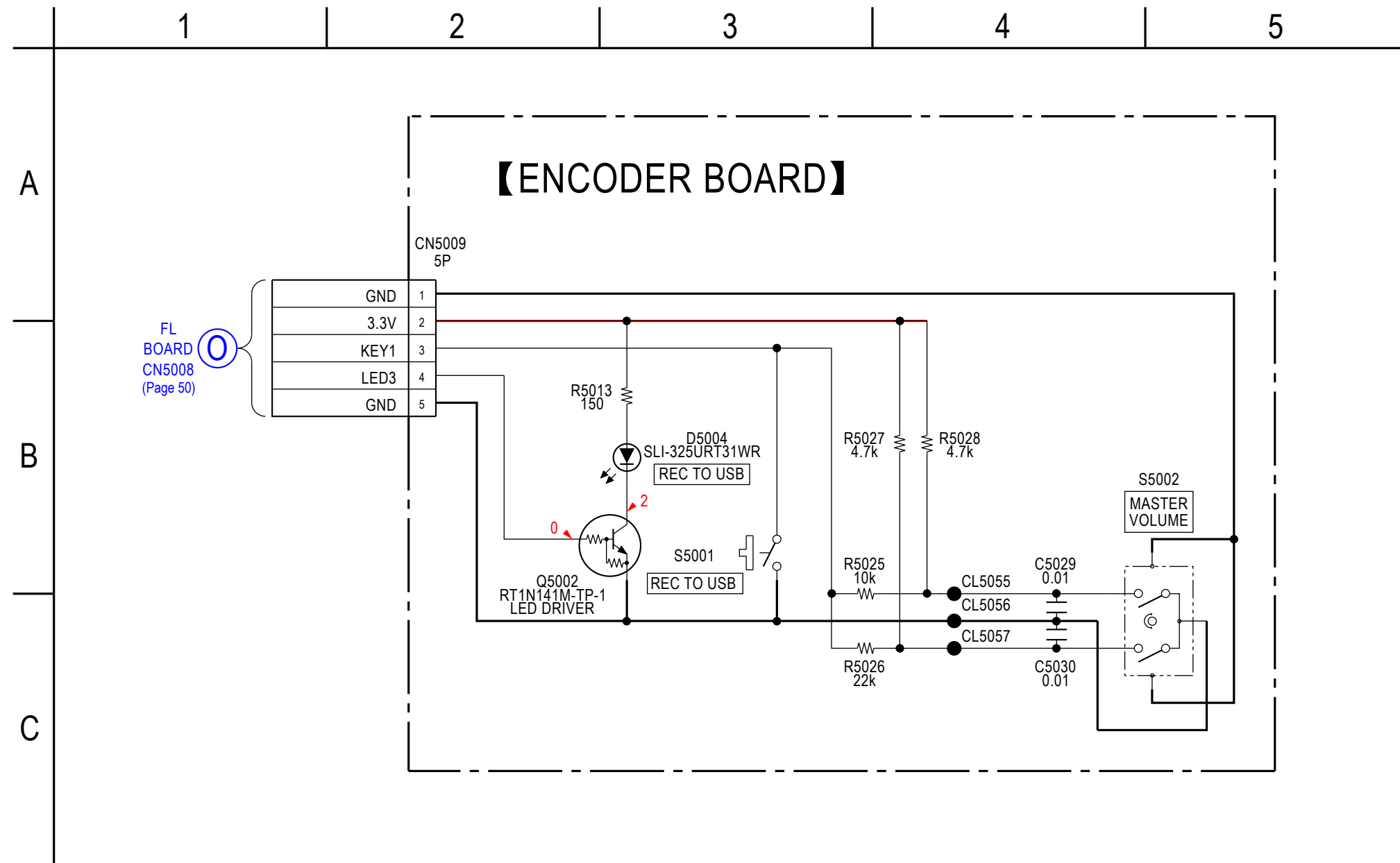
5-24. PRINTED WIRING BOARDS – FL, ENCODER Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.



5-25. SCHEMATIC DIAGRAM – FL Section – • See page 56 for IC Block Diagrams.



5-26. SCHEMATIC DIAGRAM – ENCODER Section –



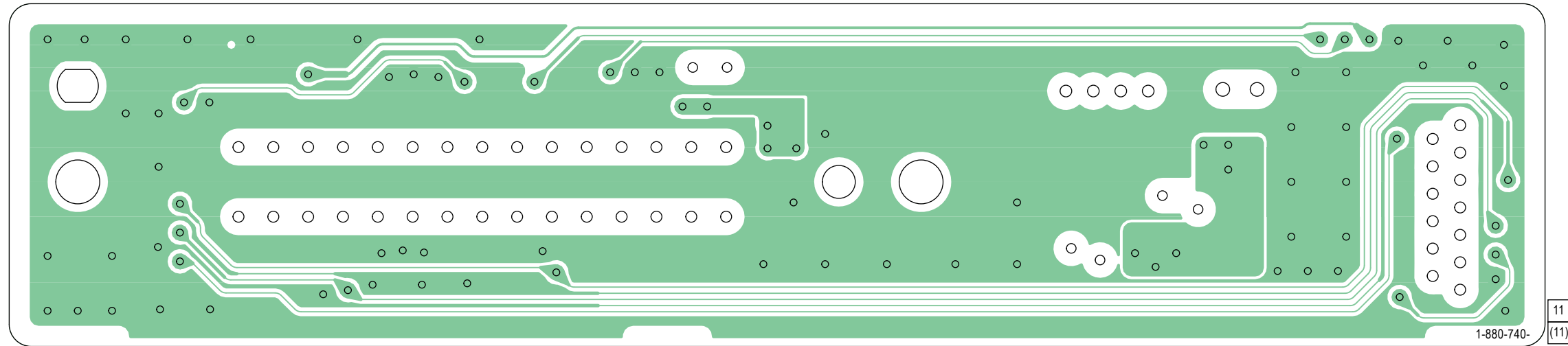
FL BOARD CN5008 (Page 50)

5-27. PRINTED WIRING BOARD – S-AIR CON Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.

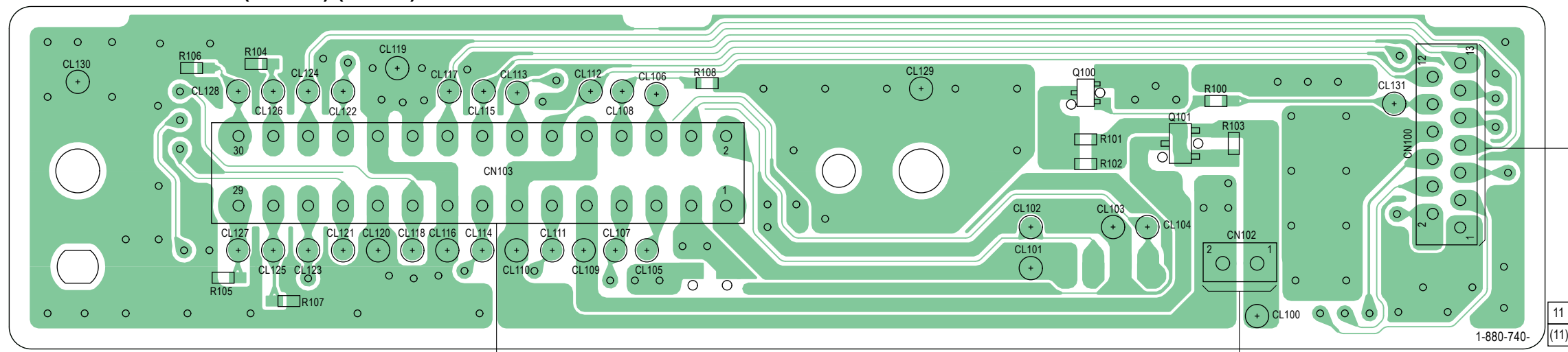
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
--	---	---	---	---	---	---	---	---	---	----	----	----	----	----

A
B
C
D
E
F
G
H
I
J

[S-AIR CON BOARD] (SIDE A) (DZ810)



[S-AIR CON BOARD] (SIDE B) (DZ810)

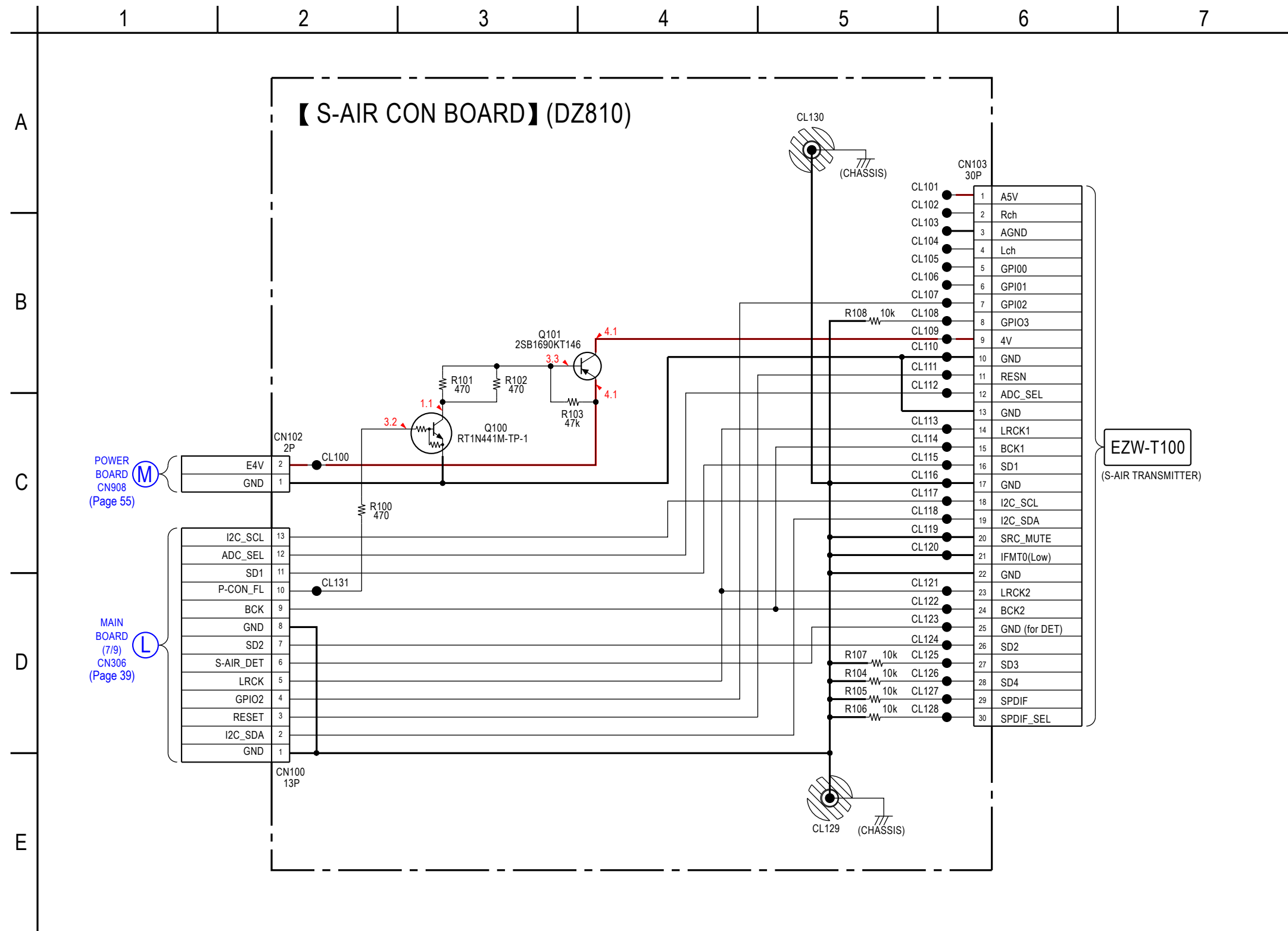


EZW-T100
(S-AIR TRANSMITER)

M
POWER BOARD
CN908
(Page 54)

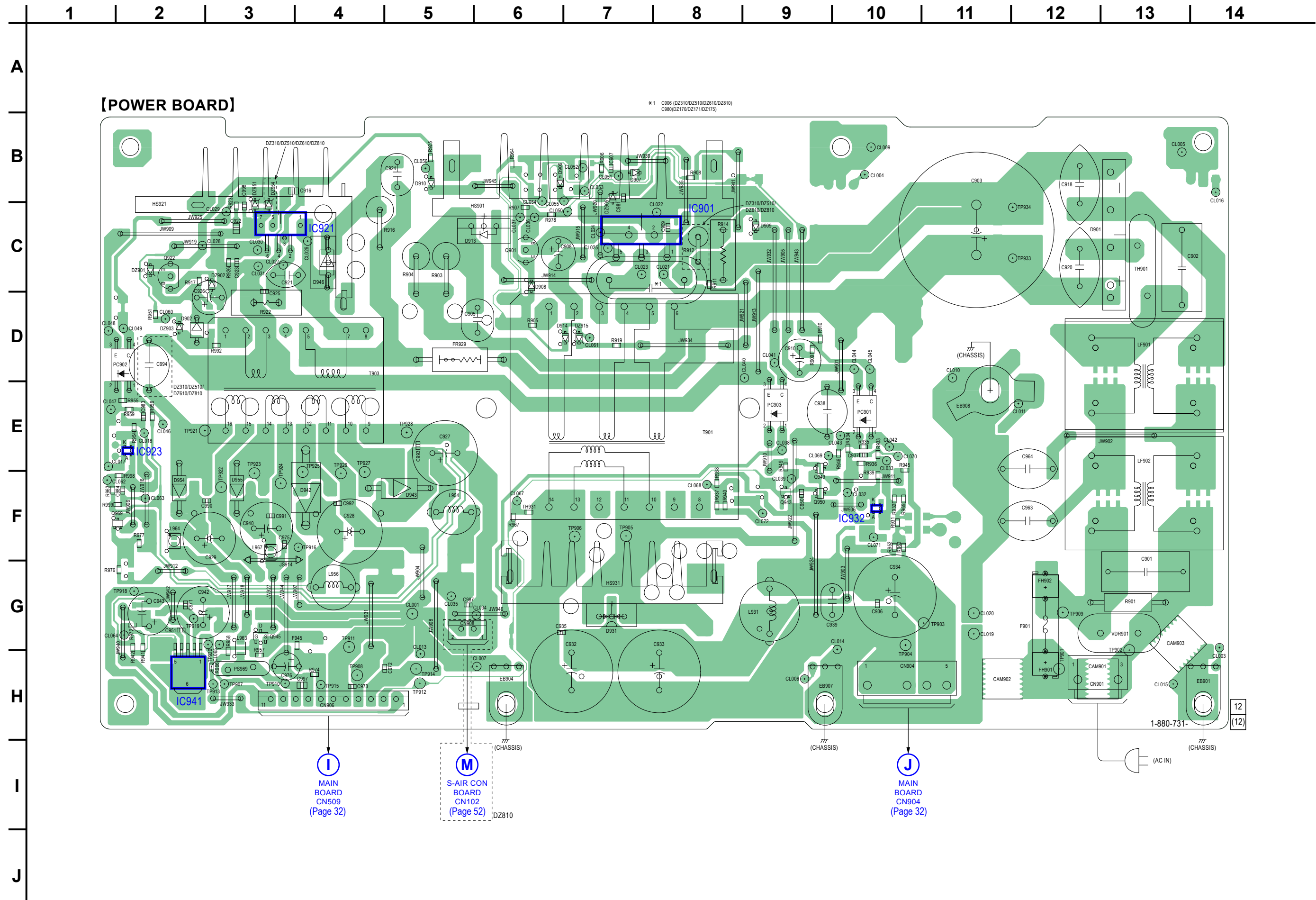
L MAIN BOARD
CN306
(Page 32)

5-28. SCHEMATIC DIAGRAM – S-AIR CON Section –



5-29. PRINTED WIRING BOARD – POWER Section – • See page 24 for Circuit Boards Location. •  : Uses unleaded solder.

Note: When IC921 on the Power board is damaged, exchange the new Power board for the Power board which IC damaged.



I
MAIN BOARD
CN509
(Page 32)

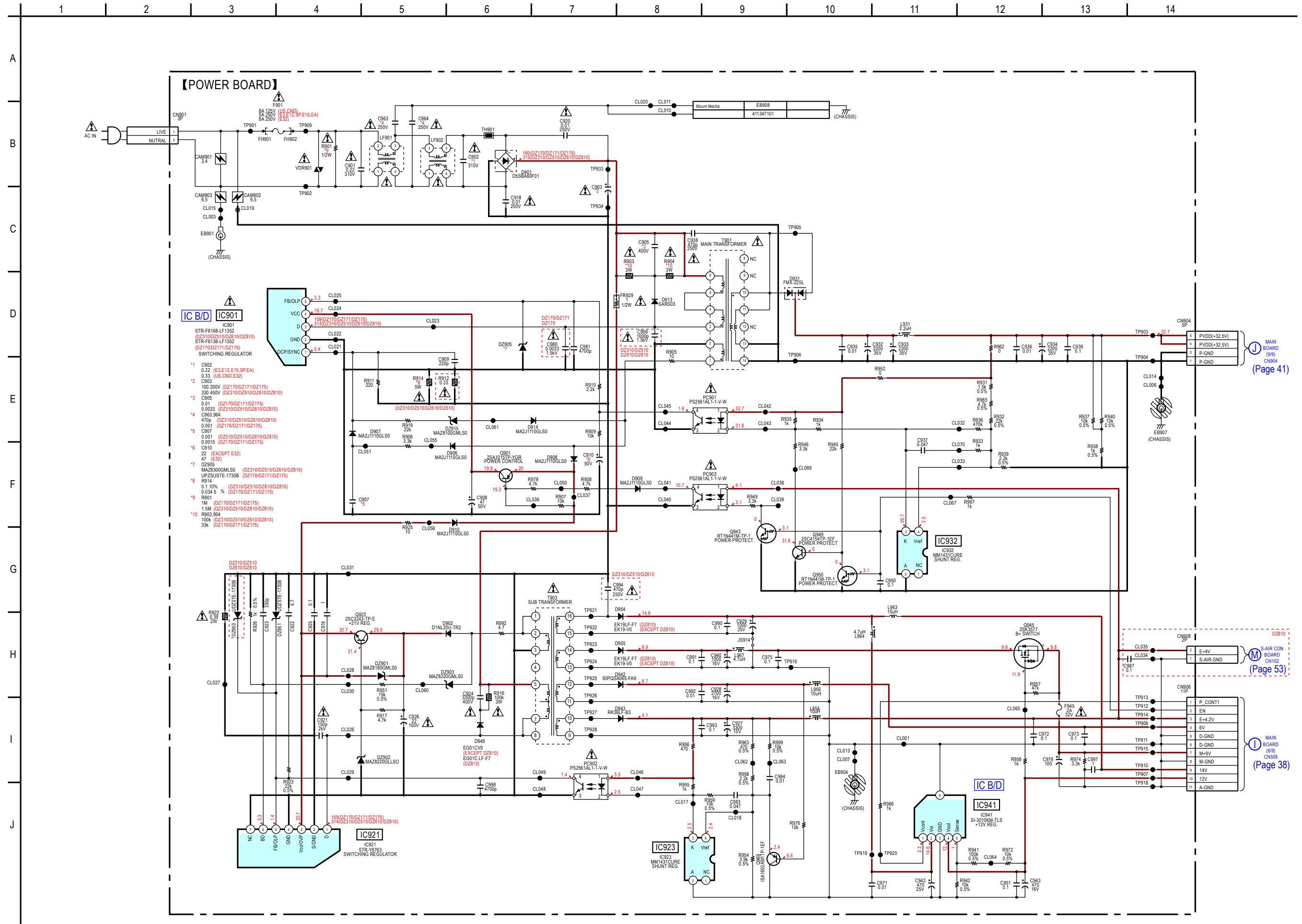
M
S-AIR CON BOARD
CN102
(Page 52)

J
MAIN BOARD
CN904
(Page 32)

12
(12)

5-30. SCHEMATIC DIAGRAM – POWER Section – • See page 56, 62 for IC Block Diagrams.

Note: When IC921 on the Power board is damaged, exchange the new Power board for the Power board which IC damaged.



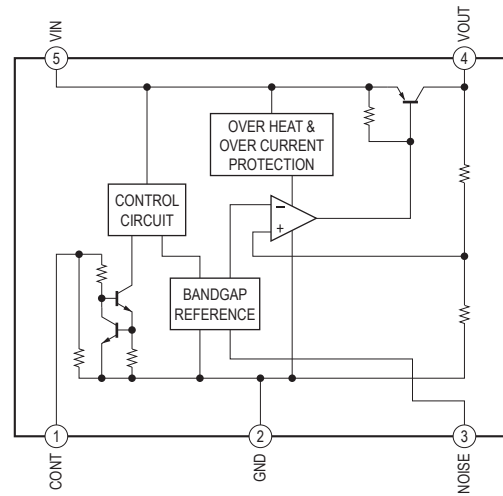
MAIN BOARD (89) CN904 (Page 41)

S-AIR CON BOARD CN102 (Page 53)

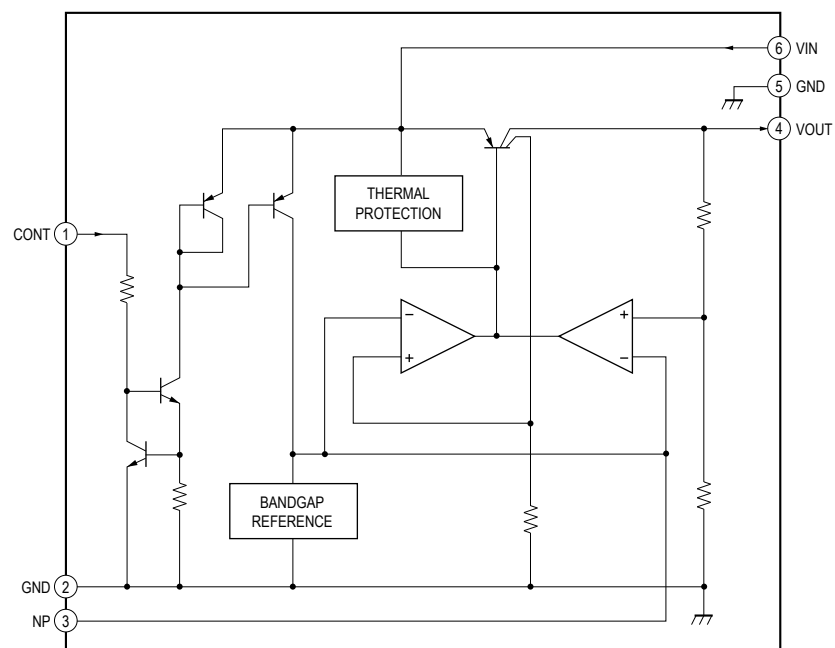
MAIN BOARD (69) CN909 (Page 38)

• IC Block Diagrams

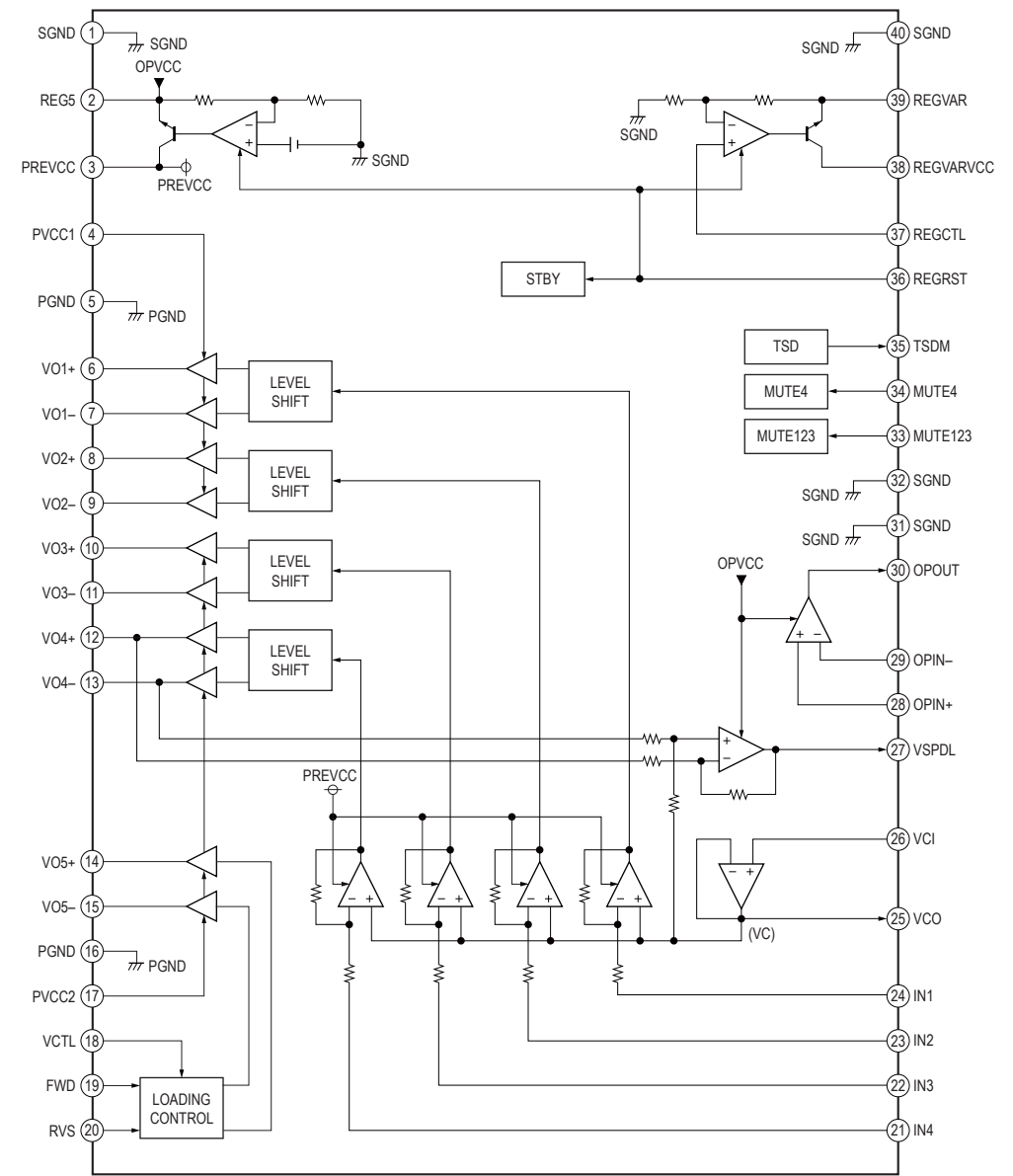
IC1105 TK11133CSCL-G (MAIN Board (1/9))
 IC1107 TK11133CSCL-G (MAIN Board (1/9))
 IC1707 TK11150CSCL-G (MAIN Board (3/9))
 IC1708 TK11133CSCL-G (MAIN Board (3/9))
 IC4001 TK11150CSCL-G (IO Board)
 IC5001 TK11133CSCL-G (FL Board)



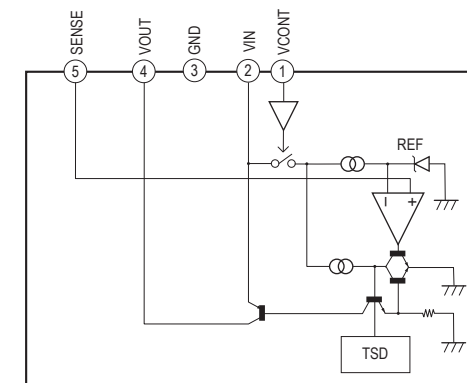
IC504 TK11250CMCL-G (MAIN Board (6/9))



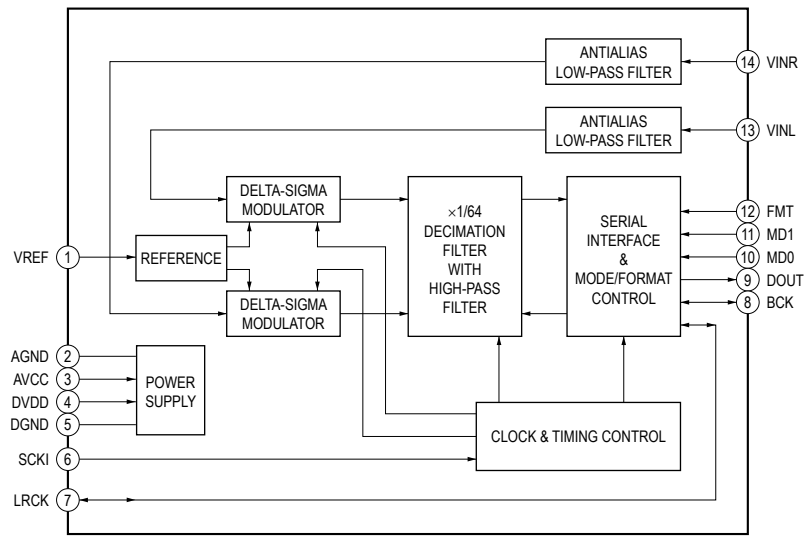
IC1501 BD8203EFV-E2 (MAIN Board (4/9))



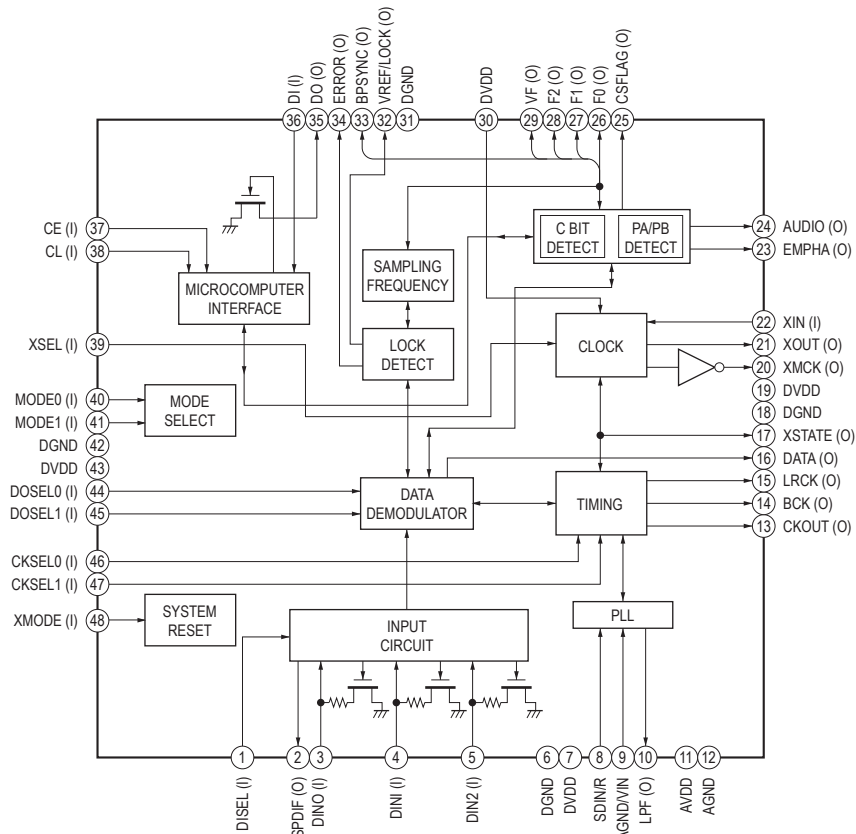
IC509 SI-3010KM-TLS (MAIN Board (6/9))
 IC941 SI-3010KM-TLS (POWER Board)



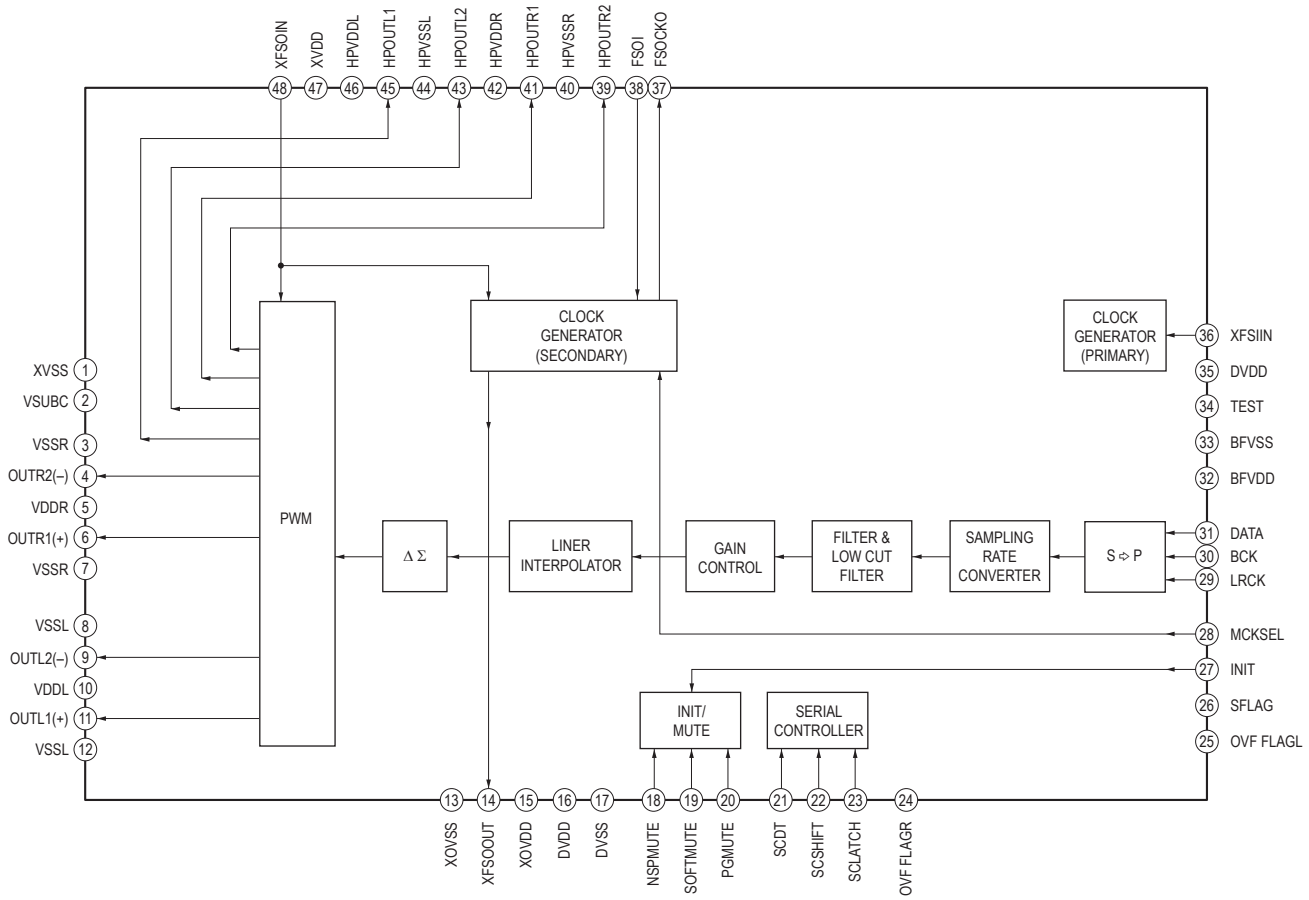
IC303 PCM1808PWR (MAIN Board (7/9))



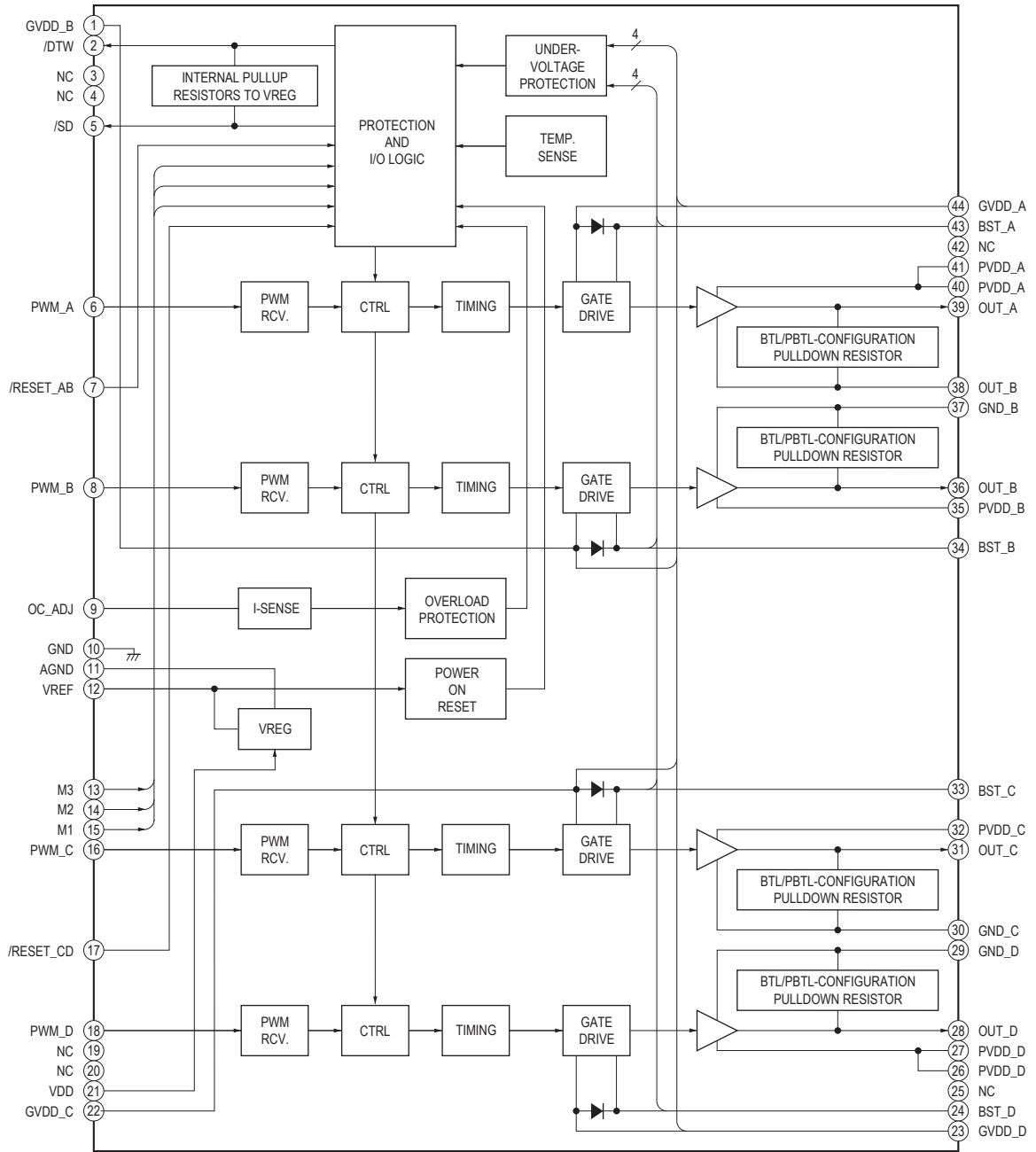
IC304 LC89056W-E (MAIN Board (7/9))



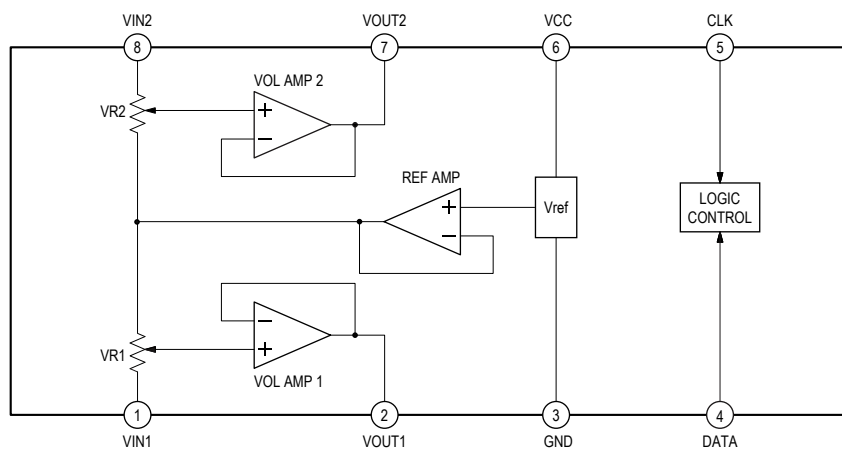
IC3010 CXD9788R (MAIN Board (8/9))
 IC3030 CXD9788R (MAIN Board (8/9))
 IC3020 CXD9788R (MAIN Board (9/9))



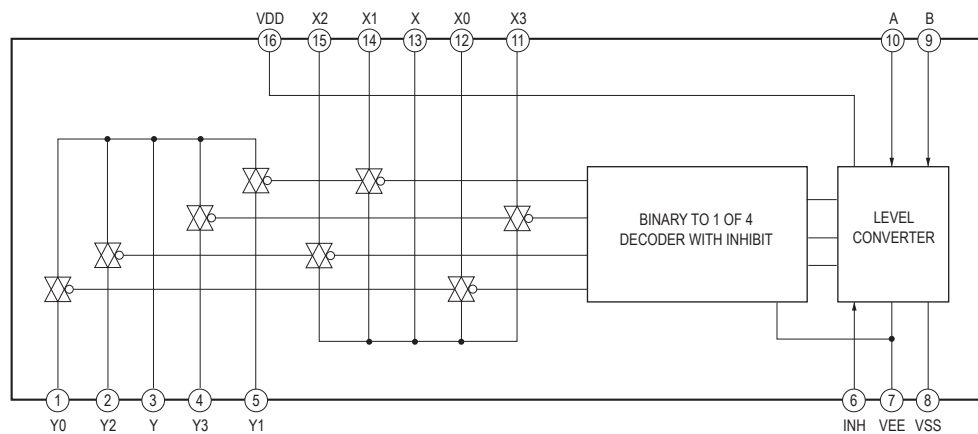
IC3100 CXD9981TN (MAIN Board (8/9))
 IC3300 CXD9981TN (MAIN Board (8/9))
 IC3200 CXD9981TN (MAIN Board (9/9))



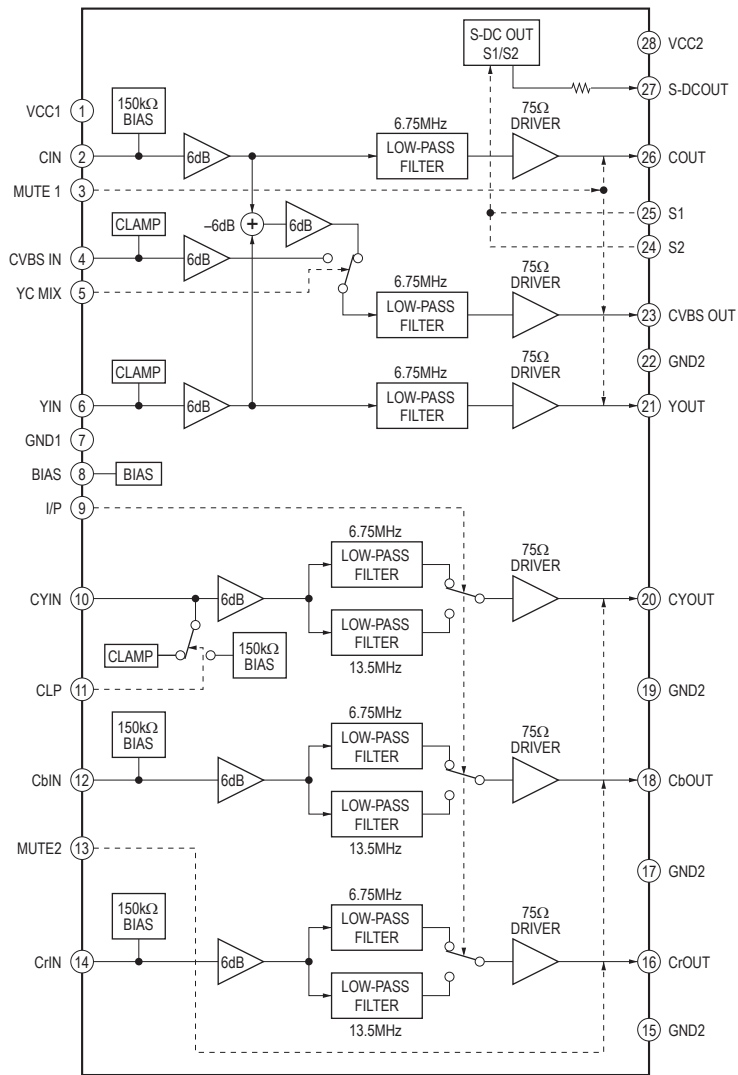
IC4004 M62429FP-TP (IO Board)



IC4003 MC14052BDR2 (IO Board)



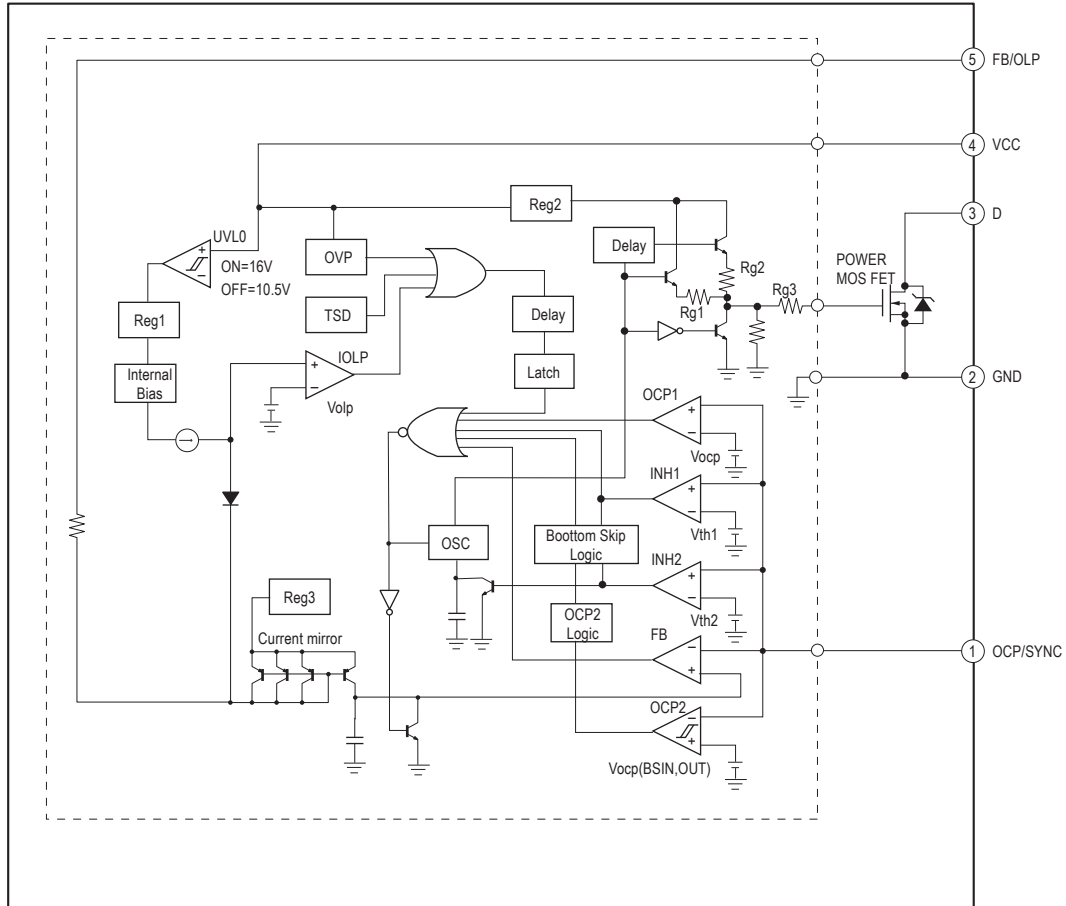
IC4000 MM1758AFBE (IO Board)



HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

IC901 STR-F6138-LF1352 (POWER Board) (DZ170/DZ171/DZ175)

IC901 STR-F6168-LF1352 (POWER Board) (DZ310/DZ510/DZ610/DZ810)



• IC Pin Function Description

MAIN BOARD (2/9) IC1101 CXD9917R-B (DZ170/DZ171/DZ175)/CXD9927R-B (DZ310/DZ510/DZ610/DZ810)
(CD/DVD RF AMP, FOCUS/TRACKING ERROR AMP, DVD SYSTEM CONTROL, DSP, DIR/USB/HDMI CONTROL)

Pin No.	Pin Name	I/O	Description
1	OSN	—	RF offset cancellation capacitor connecting terminal
2	RFGC	I	RF AGC loop capacitor connecting terminal
3	IREF	I	Current reference setting terminal
4	AVDD3	—	Power supply (VDD3.3V)
5	AGND	—	Ground
6	DVDA	I	AC coupled input path A
7	DVDB	I	AC coupled input path B
8	DVDC	I	AC coupled input path C
9	DVDD	I	AC coupled input path D
10	DVDRFIP	I	DC coupled DVD RF signal input RFIP
11	MA	I	DC coupled main-beam RF signal input A
12	MB	I	DC coupled main-beam RF signal input B
13	MC	I	DC coupled main-beam RF signal input C
14	MD	I	DC coupled main-beam RF signal input D
15	SA	—	Not used. (Open)
16	SB	—	Not used. (Open)
17	TNI	I	DC coupled main-beam RF signal input E
18	TPI	I	DC coupled main-beam RF signal input F
19	MDI1	I	Laser power monitor input
20	MDI2	I	Laser power monitor input
21	LDO2	O	Laser diode (DVD) drive signal output
22	LDO1	O	Laser diode (CD) drive signal output
23	SVDD3	—	Power supply (RF+3.3V)
24	CSO	O	Not used. (Open)
25	RFLVL	O	RFRP low pass output
26	SGND	—	Ground
27	V2REFO	O	Reference voltage (2.8V) output
28	V20	O	Reference voltage (2.0V) output
29	VREFO	O	Reference voltage (1.4V) output
30	FEO	O	Focus error monitor output
31	TEO	O	Tracking error monitor output
32	TEZISLV	O	TE Slicing Level output
33	OP_OUT	O	Op amp output
34	OP_INN	I	Op amp negative input
35	OP_INP	I	Spindle feedback signal input
36	DMO	O	Spindle motor control PWM signal output
37	FMO	O	Sled motor control PWM signal output
38	TROPENPWM	O	Tray Loading motor PWM signal output
39	IOPMON	I	Iop Monitor input
40	TRO	O	Tracking servo control signal output
41	FOO	O	Focus servo control signal output
42	AGND18	—	Ground
43	AVDD18	—	Power supply (+1.8V)
44	USB_DP	I/O	USB port serial data input/output
45	USB_DM	I/O	USB port serial data input/output
46	USB_VDD3	—	USB power supply (+3.3V)
47	USB_VSS	—	USB ground
48	PAD_VRT	—	Not used. (Pull up)
49	USB_VDD18	—	Power supply (+1.8V)
50	USB_VSS	I	Ground
51	DIR_ERROR/NC	I	Not used. (Pull down)
52	DIR_AUDIO/NC	I	Not used. (Pull down)
53	LIMITSW	I	LIMIT SW signal input
54	MSW	O	DVD/CD PD -VR select signal output
55	DVDD18	—	Power supply (+1.8V)
56 to 62	HA2 to HA8	O	Flash ROM address bus A2 to A8 output

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

Pin No.	Pin Name	I/O	Description
63, 64	HA18, HA19	O	Flash ROM address bus A18, A19 output
65	DVDD3	—	Power supply (+3.3V)
66	XWR	O	Flash ROM write signal output
67 to 74	HA16 to HA9	O	Flash ROM address bus A16 to A9 output
75	HA20	O	Flash ROM address bus A20 output
76	XROMCS	O	Flash ROM chip select signal output
77	HA1	O	Flash ROM address bus A1 output
78	XRD	O	Flash ROM read signal output
79, 80	HD0, HD1	I/O	Flash ROM data bus D0, D1 input/output
81	DVSS	—	Ground terminal
82 to 86	HD2 to HD6	I/O	Flash ROM data bus D2 to D6 input/output
87	HA21	I/O	Flash ROM data bus D21 input/output
88	RESERVED	—	Not used. (Open)
89	HD7	I/O	Flash ROM data bus D7 input/output
90	DVSS	—	Ground terminal
91, 92	HA17, HA0	O	Flash ROM address bus A17, A0 output
93	DVDD18	—	Power supply (+1.8V)
94	FWD	O	Tray loading motor control (FWR) signal output
95	REV	O	Tray loading motor control (REV) signal output
96	DVDD3	—	Power supply (+3.3V)
97	IFSDO	O	CPU I/F serial data output
98	IFCK	O	CPU I/F serial clock output
99	xIFCS	O	CPU I/F chip select output
100	IFSDI	I	CPU I/F serial data input
101	SCL	O	EEPROM serial clock output
102	SDA	I/O	EEPROM serial data input/output
103	CKSW	I	Chuck/Tray detect switch signal input
104	OCSW	I	Chuck/Tray detect switch signal input
105	RXD	I	RXD signal input from Jig
106	TXD	O	TXD signal output to Jig
107	ICE	O	Not used. (Open)
108	xSYSRST	I	System reset signal input
109	RESERVED	I	Not used. (Open)
110	xIFBSY	I	Busy signal input from CPU I/F
111	DQM0	O	SDRAM lower byte mask enable signal output
112	EEWP	O	EEPROM ready/Busy wake up signal output
113 to 117	RD7 to RD3	I/O	SDROM data bus D7 to D3 input/output
118	DVDD3	—	Power supply (+3.3V)
119 to 121	RD2 to RD0	I/O	SDROM data bus D2 to D0 input/output
122 to 129	RD15 to RD8	I/O	SDROM data bus D15 to D8 input/output
130	TSD_M	I	TSD signal input
131	DVDD3	—	Power supply (+3.3V)
132	DQM1	O	SDRAM upper byte mask enable signal output
133	_RWE	O	SDRAM write enable signal output
134	_CAS	O	SDRAM column address strobe signal output
135	_RAS	O	SDRAM row address strobe signal output
136	_RCS	O	SDRAM chip select signal output
137, 138	BA0, BA1	O	SDRAM bank address 0, 1 output
139	RA10	O	SDRAM address bus A10 output
140, 141	RA0, RA1	O	SDRAM address bus A0, A1 output
142	DVDD18	—	Power supply (+1.8V)
143, 144	RA2, RA3	O	SDRAM address bus A0, A3 output
145	DVDD3	—	Power supply (+3.3V)
146	DRCLK	O	SDRAM clock output
147	CKE	O	SDRAM clock enable signal output
148	DVSS	—	Ground
149	RA11	O	SDRAM address bus A11 output
150 to 155	RA9 to RA4	O	SDRAM address bus A9 to A4 output
156	DVDD3	—	Power supply (+3.3V)

Pin No.	Pin Name	I/O	Description
157	REGRST	O	REG reset signal output for Focus/Tracking/Sledding motor driver
158	MUTE	O	Mute signal output for Spindle motor
159	DDC_DA	I/O	HDMI DDC line data input/output
160	DVDD18	—	Power supply (+1.8V)
161	DDC_CLK	I/O	HDMI DDC line clock input/output
162	HTPLG	I	HDMI HPD signal input
163	AGND3	—	Ground
164	EXT_RES	—	Ext. resistor connected terminal
165, 166	AVDD3	—	Power supply (+3.3V)
167	EXT_CAP	—	Ext. capacitor connected terminal
168, 169	AGND3, AGND18	—	Ground
170	TXCN	O	HDMI TXD-clock output
171	TXCP	O	HDMI TXD-clock output
172	AVDD18	—	Power supply (+1.8V)
173	TX0N	O	HDMI TXD-0 output
174	TX0P	O	HDMI TXD-0 output
175	AGND18	—	Power supply (+1.8V)
176	TX1N	O	HDMI TXD-1 output
177	TX1P	O	HDMI TXD-1 output
178	AVDD18	—	Power supply (+1.8V)
179	TX2N	O	HDMI TXD-2 output
180	TX2P	O	HDMI TXD-2 output
181	AGND18	—	Power supply (+1.8V)
182	R/Cr/Pr	O	Video chroma R/Cr/Pr signal output
183	B/Cb/Pb	O	Video chroma B/Cb/Pb signal output
184	DACVSSA	—	Ground
185	Y/G	O	Video Y/chroma G signal output
186	DACVDDA	—	Power supply (+3.3V)
187	CVBS	O	Video Composite signal output
188	DACVSSB	—	Ground
189	C	O	Video chroma signal output (Not used in this set)
190	DACVddb	—	Power supply (+3.3V)
191	Y	O	Video Y signal output (Not used in this set)
192	DACVSSC	—	Ground
193	FS	I	Full Scale Adjustment setting terminal
194	VREF	I	Reference Voltage input terminal
195	DACVDDC	—	Power supply (+3.3V)
196	VBUS_OE	O	VBUS power control signal output
197	VBUS_OC	I	VBUS over current detect signal input
198	SCORE/DIR_XSTATE	I	DIR status signal input
199	SPMCK	I	DIR MCK clock input
200	SPBCK	I	DIR BCK clock input
201	SPLRCK	I	DIR LACK clock input
202	ADIN (SPDATA)	I	DIR digital data input
203	ACLK	O	A/D converter and DAMP clock output
204	ABCK	O	A/D converter and DAMP BCK clock output
205	ALRCK	O	A/D converter and DAMP LRCK clock output
206	MC_DATA (ADIN)	I	A/D converter digital data input
207	DVDD3	—	Power supply (+3.3V)
208	MIC	O	Mic detect status signal input
209	WIDE	O	WIDE select signal output (Not used in this set)
210	RGB_SEL/DSEL	O	Video output select signal output (Not used in this set)
211	TRG_SW	I	Not used. (Pull up)
212	DVDD18	—	Power supply (+3.3V)
213	KMOD	O	KARAOKE mode information signal output
214	XVOICE/DIR_CSFLAG	I	XVOICE signal input
215	SPDIF	O	Not used. (Open)
216	APLLVDD3	—	Power supply (+3.3V)
217	APLLCAP	—	Ext capacitor connected terminal

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

Pin No.	Pin Name	I/O	Description
218	APLLVSS	—	Ground
219	ADACVSS2	—	Ground
220	ADACVSS1	—	Ground
221	DIR_CE	O	DIR I/F chip select signal output
222	ASDATA3	O	Audio digital signal output to S-AIR transmitter
223	ASDATA2	O	Audio digital signal output to D-AMP
224	AVCM	—	Ext capacitor connected terminal
225	ASDATA1	O	Audio digital signal output to D-AMP
226	ASDATA0	O	Audio digital signal output to D-AMP
227	DIR_CL	O	DIR I/F clock output
228	ADACVDD1	—	Power supply (+3.3V)
229	ADACVDD2	—	Power supply (+3.3V)
230	Rt/DIR_DI	O	DIR I/F data output
231	Lt/DIR_DO	I	DIR I/F data input
232	ADACVSS3	—	Ground
233	ADACVDD3	—	Power supply (+3.3V)
234	SADCVDD18	—	Power supply (+1.8V)
235	SADCVSS18	—	Ground
236	RFGND18	—	Ground
237	RFVDD18	—	Power supply (+1.8V)
238	XTALO	O	Crystal output for main clock (27MHz)
239	XTALI	I	Crystal input for main clock (27MHz)
240	JITFO	O	The output terminal of RF jitter meter
241	JITFN	I	The input terminal of RF jitter meter
242	PLLSS	—	Ground
243	PLLVD3	—	Power supply (+3.3V)
244	LPFON	O	The negative output of loop filter amplifier
245	LPFIP	I	The positive input terminal of loop filter amplifier
246	LPFIN	I	The negative input terminal of loop filter amplifier
247	LPFOP	O	The positive output of loop filter amplifier
248	ADCVDD3	—	Power supply (+3.3V)
249	ADCVSS	—	Ground
250	RFVDD3	—	Power supply (+3.3V)
251	RFRPDC	O	RF ripple detect output
252	RFRPAC	I	RF ripple detect input (through AC-coupling)
253	HRFZC	I	High frequency RF ripple zero crossing
254	CRTPLP	O	Defect level filter capacitor connected terminal
255	RFGND18	—	Power supply (+3.3V)
256	OSP	O	RF offset cancellation capacitor connecting terminal

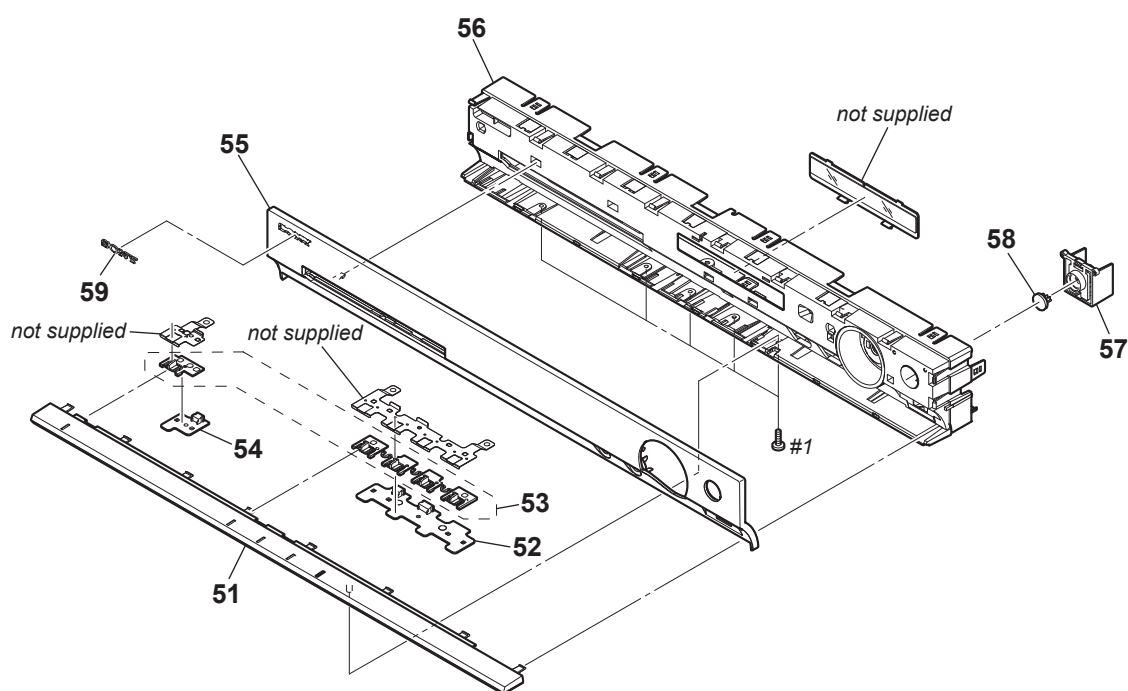
MAIN BOARD (5/9) IC503 R5F364AEDFA (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	DAMP_SCD	O	DAMP processor data output
2	DAMP_SHIFT	O	DAMP processor clock output
3	FL_CS	O	FL driver chip select signal output
4	SIRCS_IN	I	Sircs signal input
5	FL_D_OUT	O	FL and LED driver data output
6	reserved (CEC_RX_IN)	O	CEC data input (Not used in this set)
7	FL_CLK	O	FL and LED driver clock output
8	BYTE	I	External data bus input. (Connected to ground)
9	CNVSS	I	Change processor mode input
10	NO USE	—	Not used. (Open)
11	NO USE	—	Not used. (Open)
12	RESET	I	System reset signal input
13	XOUT	O	Crystal output for main clock (5MHz)
14	VSS	—	Ground
15	XIN	I	Crystal input for main clock (5MHz)
16	VCC	—	Power supply (BUP +3.3V)
17	CEC_TX_RX	I/O	CEC data input/output
18	NO USE	—	Not used. (Open)
19	NO USE	—	Not used. (Open)
20	AC_CUT	I	AC-CUT detect signal input
21	NO USE	—	Not used. (Open)
22	NO USE	—	Not used. (Open)
23	NO USE	—	Not used. (Open)
24	NO USE	—	Not used. (Open)
25	NO USE	—	Not used. (Open)
26	reserved (CEC_TX_OUT)	O	CEC data output (Not used in this set)
27	NO USE	—	Not used. (Open)
28	LED_ILLUMI	O	LED drive PWM signal output for illumination (Not used in this set)
29	S-AIR_SCL	I/O	S-AIR serial clock input/output
30	S-AIR_SDA	I/O	S-AIR serial data input/output
31	I2C_DATA/TXD1	I/O	I2C data (debug) and Flash Write TXD data input/output
32	I2C_CLK/RXD1	I/O	I2C clock (debug) and Flash Write RXD data input/output
33	CLK1	O	Flash Write CLK signal output
34	RST1	O	Flash Write RST signal output
35	GPIO2	I	S-AIR interrupt signal input
36	S-AIR_DET	I	S-AIR unit detect signal input
37	S-AIR_RST	O	S-AIR reset signal and SRC reset signal output
38	S-AIR_ADC_SEL	O	S-AIR AD converter select signal output
39	P_CONT1	O	Power control signal output
40	reserved (NSP_MUTE)	—	Not used.
41	P_CONT_FL	O	Power control signal output
42	DC_CONT	O	A.CAL MIC DC control signal output
43	NO USE	—	Not used. (Open)
44	CDM_OPEN_SW	I	CDM open switch signal input
45	MTK_RST	O	Reset signal output to CDX9917R or CDX9927R
46	CE	I	Flash Write CE signal input
47	DVD_SID	O	Serial data output to CDX9917R or CDX9927R
48	DVD_SOD	I	Serial data input from CDX9917R or CDX9927R
49	DVD_SCO	I	Serial clock input from CDX9917R or CDX9927R
50	DVD_XIFBUSY	O	Busy request signal output to CDX9917R or CDX9927R
51	DVD_XIFCS	I	Chip select signal input
52	TV_SEL/ MIC_DET_OUT	O	Mic detect status signal output
53	KARAOKE_MODE	I	KARAOKE mode information signal input.
54	DRIVER_RST(EN)	O	D-AMP driver reset signal output
55	OVERFLOW1	I	D-AMP processor F/C/S over flow detect signal input
56	OVERFLOW2	I	D-AMP processor SW over flow detect signal input
57	DAMP_INIT	O	D-AMP processor reset signal output

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

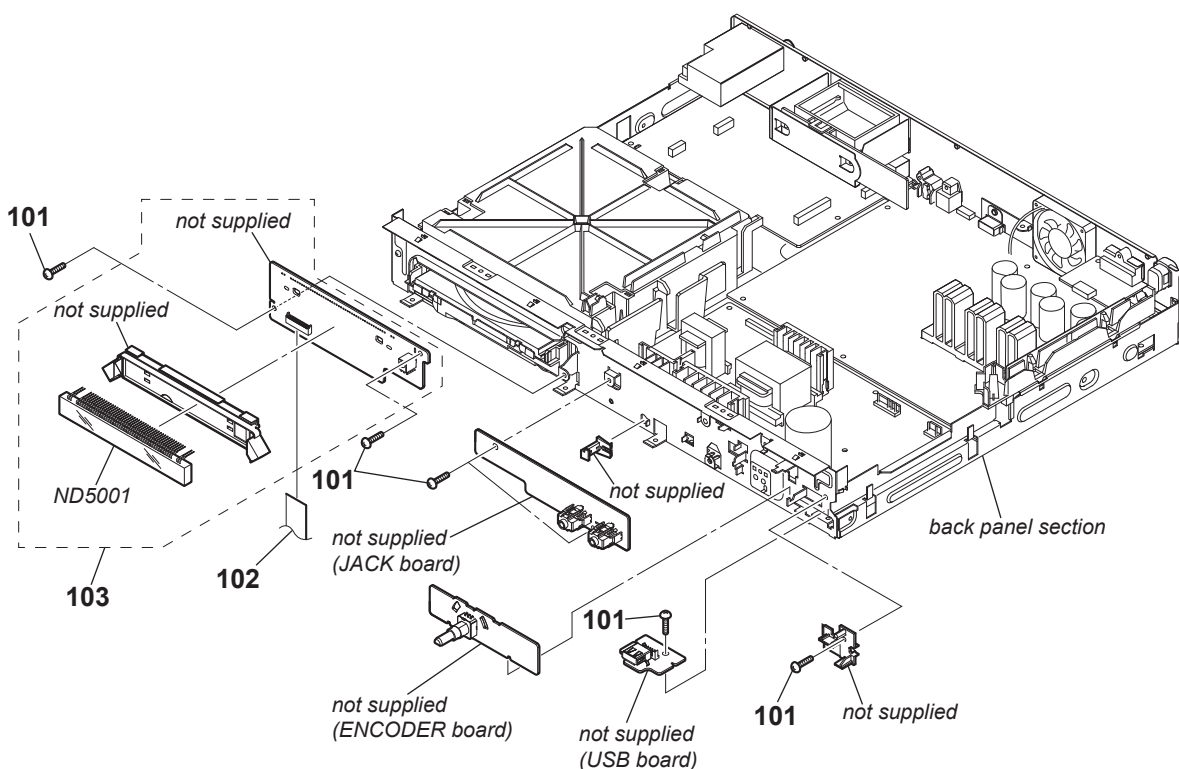
Pin No.	Pin Name	I/O	Description
58	DAMP_SOFT_MUTE	O	D-AMP processor soft muting signal output
59	DAMP_LATCH1	O	D-AMP processor latch-1 (Front L/R) signal output
60	DAMP_LATCH2	O	D-AMP processor latch-2 (Surround L/R) signal output
61	DAMP_LATCH3	O	D-AMP processor latch-3 (Center/Subwoofer) signal output
62	VCC	—	Power supply (BUP+3.3V)
63	LINK_SW	O	LINK (S-AIR Headphone) control signal output
64	VSS	—	Ground
65	MIC/A.CAL_SW MIC2_SW	I	MIC insert detect signal input
66	DC_DET	I	Speaker DC balance protect signal input
67	SD/PVDD_DET	I	D-AMP driver shut down signal and PVDD detect signal input
68	A.CAL_OUT_LEVEL	I	Speaker output detect signal input for audio calibration
69	MIC_DATA	O	MIC volume data output
70	MIC_CLK	O	MIC volume clock output
71	NO USE	—	Not used. (Open)
72	HDMI_PCONT	O	HDMI hot plug power control signal output
73	KEY_INT	I	Wakeup signal input from function key
74	RDS-DATA	I	RDS data input (Not used in this set)
75	RDS_CLK	I	RDS clock input (Not used in this set)
76	ST_CE	O	TUNER chip enable signal output
77	ST_DI	O	TUNER serial data output
78	ST_DO	I	TUNER serial data input
79	ST_CLK	O	TUNER serial clock output
80	TUNED	I	TUNER TUNED signal input
81	V_SEL0	O	Video select signal output
82	V_SEL1	O	Video select signal output
83	NO USE	—	Not used. (Open)
84	ASEL0	O	Audio select signal output
85	ASEL1	O	Audio select signal output
86	ASEL2	O	Audio select signal output
87	reserved (ASEL)	—	Not used. (Open)
88	NO USE	—	Not used. (Open)
89	reserved (EUP)	—	Not used.
90	NO USE	—	Not used. (Open)
91	A.CAL MIC LEVEL	I	MIC input level detect signal input for Auto Calibration
92	DESTINATION	I	Destination select input
93	MODEL	I	Model select input
94	KEY2	I	Key 2 input
95	KEY1	I	Key 1 input
96	VSS	—	Ground
97	KEY0	I	Key 0 input
98	Vref	—	Reference voltage (3.3V)
99	VCC	—	Power supply (+3.3V)
100	MODEL SERIES	I	Series select input

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-159-494-11	ESCUTCHEON (DSZ) (DZ175)		53	4-159-495-01	BUTTON (PLAY)	
51	4-159-494-21	ESCUTCHEON (DSZ) (DZ170)		54	A-1746-219-A	P-SW BOARD, COMPLETE	
51	4-159-494-31	ESCUTCHEON (DSZ) (DZ171)		55	4-159-490-01	WINDOW (DSZ)	
51	4-159-494-51	ESCUTCHEON (DSZ) (DZ310)		56	4-159-491-01	BASE, FRONT (DSZ)	
51	4-159-494-81	ESCUTCHEON (DSZ) (DZ510)		57	4-159-496-02	BASE, BUTTON (USB)	
51	4-159-494-91	ESCUTCHEON (DSZ) (DZ610)		58	4-159-497-01	BUTTON (USB-DSZ)	
51	4-168-139-31	ESCUTCHEON (DSZ-2) (DZ810)		59	4-160-803-01	EMBLEM, SONY (4.5A)	
52	A-1746-218-A	KEY-SW BOARD, COMPLETE		#1	7-685-504-19	SCREW +BTP 2X6 TYPE2 N-S	

6-3. FRONT BOARDS SECTION

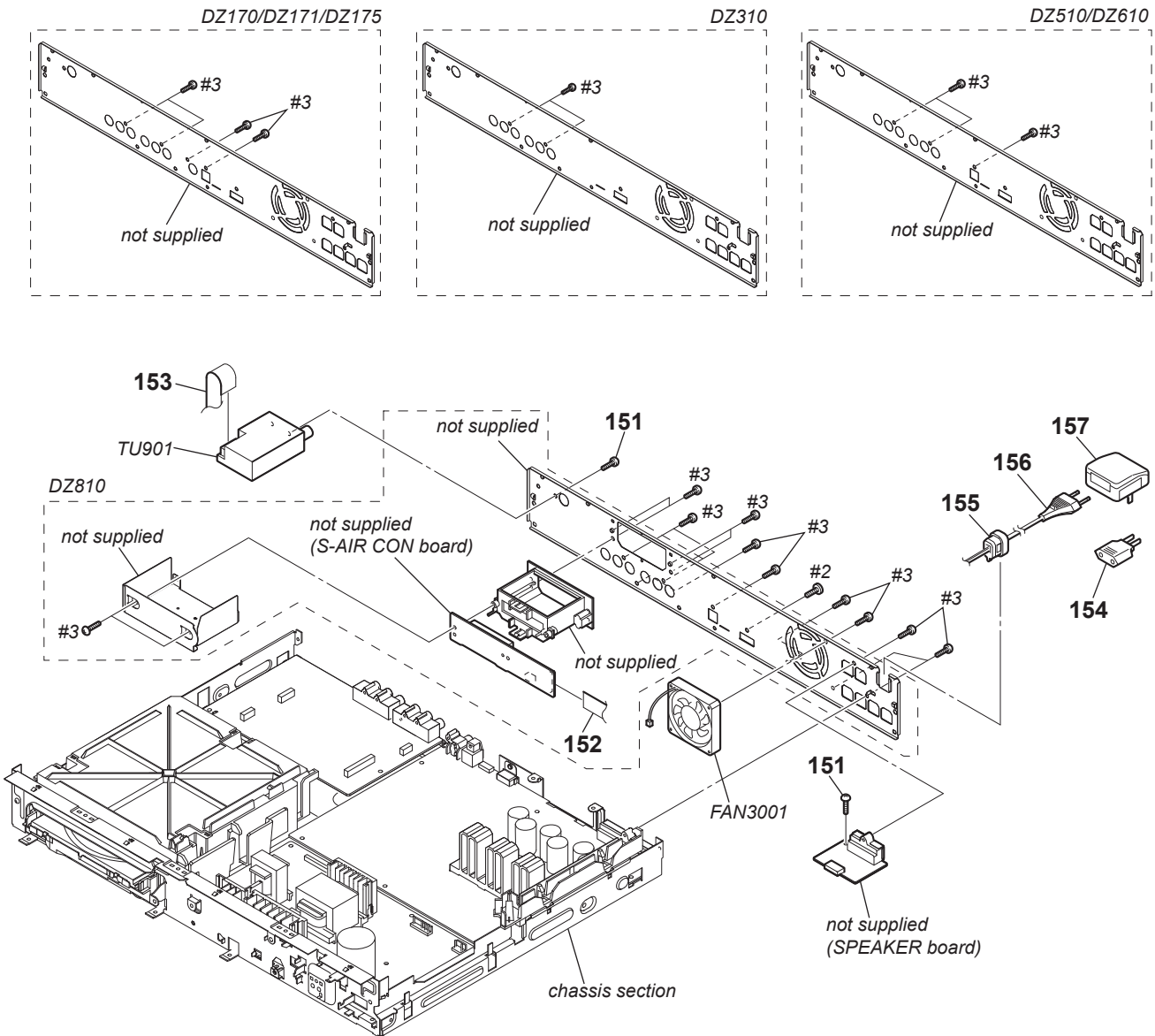


Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark
101	3-077-331-21	+BV3 (3-CR)	
102	1-832-579-21	CABLE, FLEXIBLE FLAT (13 CORE) (DZ170/DZ171/DZ175)	
102	1-832-589-21	CABLE, FLEXIBLE FLAT (15 CORE) (DZ310/DZ510/DZ610/DZ810)	

Ref. No.	Part No.	Description	Remark
103	A-1746-404-A	FL BOARD, COMPLETE (DZ310/DZ510/DZ610/DZ810)	
103	A-1746-473-A	FL BOARD, COMPLETE (DZ170/DZ171/DZ175)	
ND5001	1-483-107-21	FLUORESCENT INDICATOR TUBE	

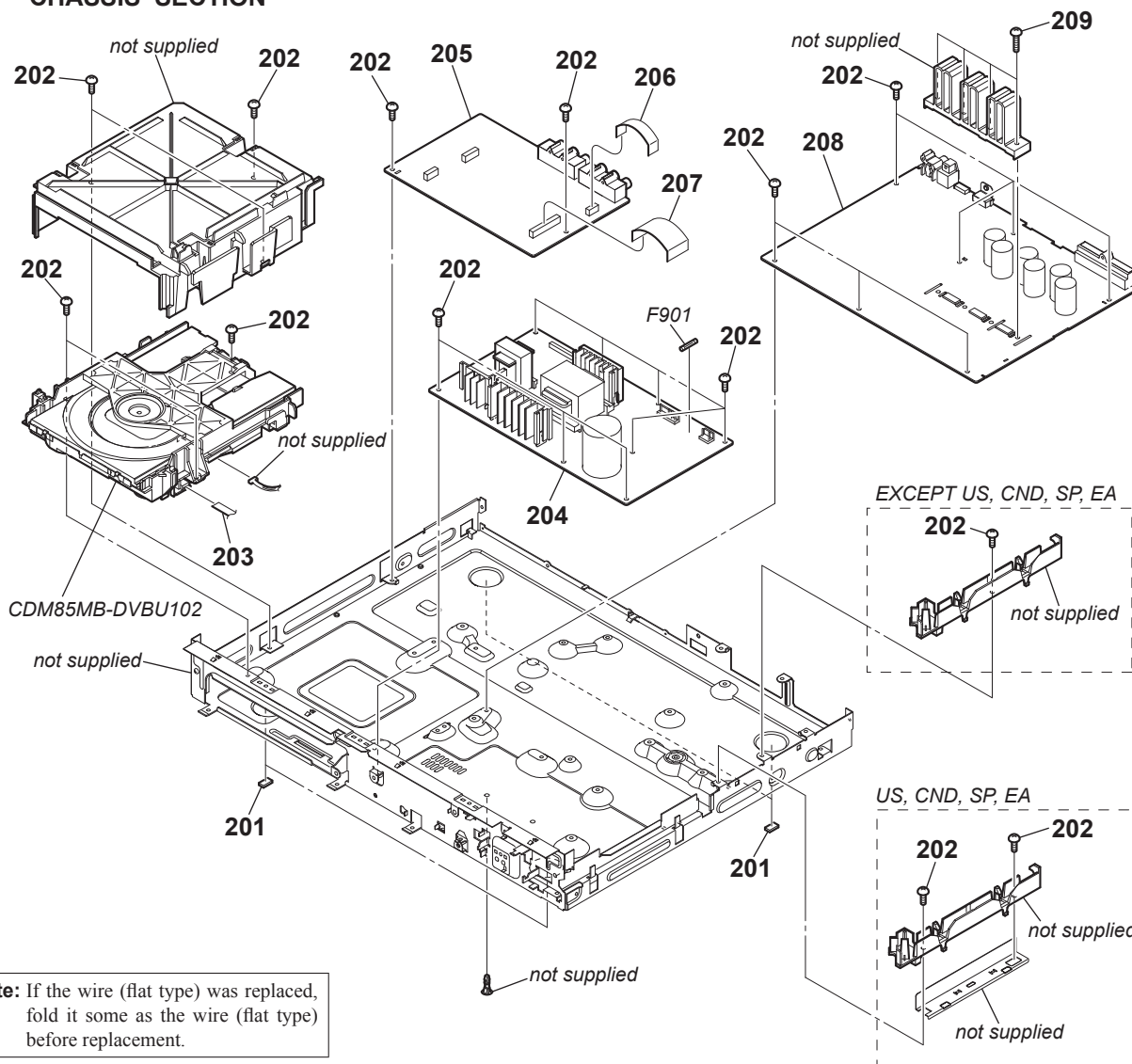
6-4. BACK PANEL SECTION



Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-077-331-21	+BV3 (3-CR)		△ 156	1-837-308-11	CORD, POWER-SUPPLY (DZ170/DZ171/DZ175)	
152	1-832-576-21	CABLE, FLEXIBLE FLAT (13 CORE) (DZ810)		△ 157	1-770-019-71	ADAPTOR, CONVERSION PLUG 3P (EA)	
153	1-832-813-21	CABLE, FLEXIBLE FLAT (9 CORE)		FAN3001	1-787-396-21	FAN, DC (50 SQUARE)	
△ 154	1-569-008-33	ADAPTOR, CONVERSION (E32)		TU901	1-693-780-11	TUNER (FM) (DZ310/DZ510/DZ610/DZ810)	
155	3-703-244-00	BUSHING, CORD (2104)		TU901	1-693-781-11	TUNER (FM) (DZ170/DZ171/DZ175)	
△ 156	1-834-966-41	CORD, POWER-SUPPLY (DZ310/DZ510/DZ610/DZ810)		#2	7-682-547-04	SCREW +B 3X6	
				#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

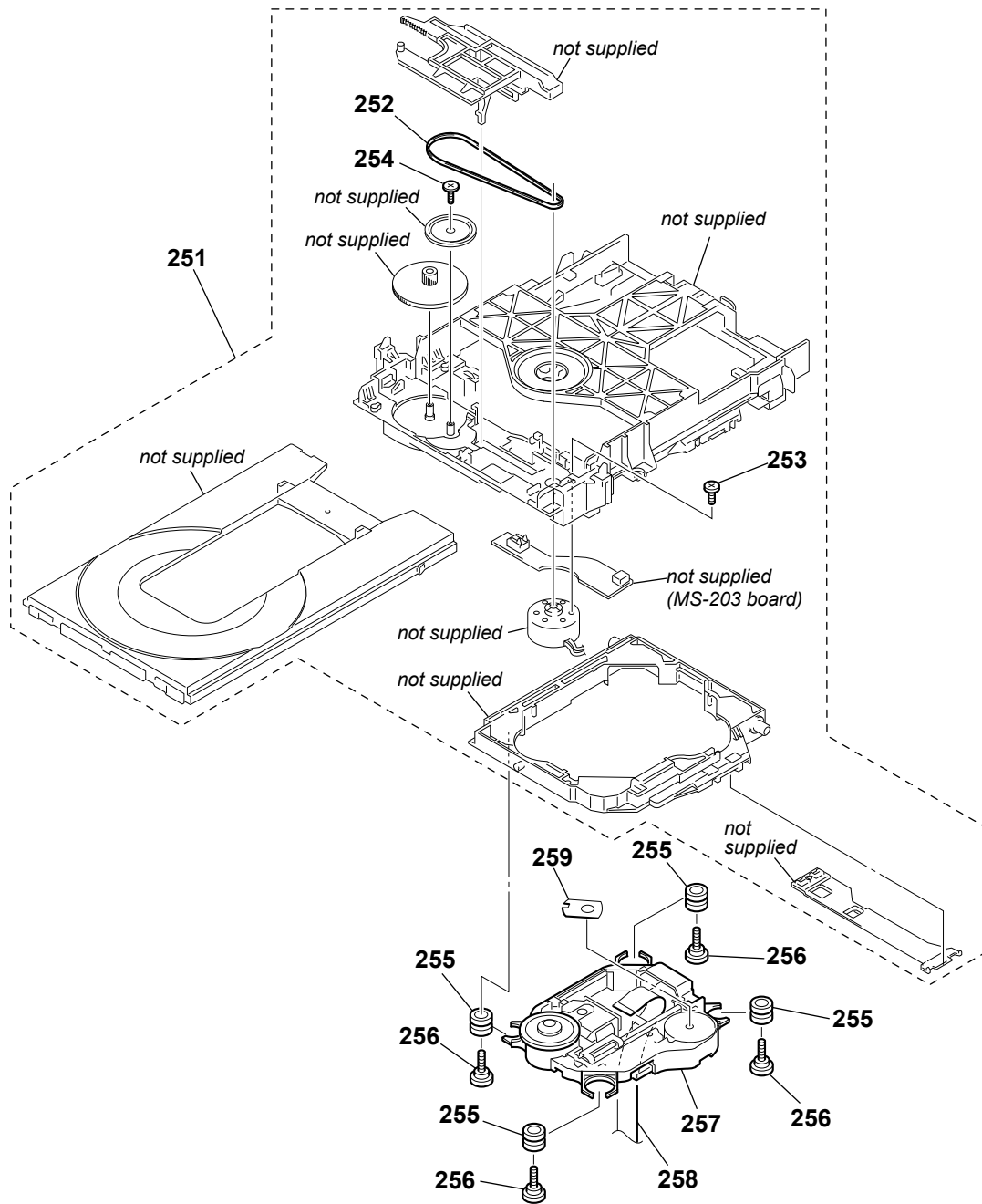
6-5. CHASSIS SECTION



Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-151-413-01	CUSHION (EGD)		208	A-1746-805-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ510)	
202	3-077-331-21	+BV3 (3-CR)		208	A-1746-806-A	MAIN BOARD, COMPLETE (for SERVICE)	
203	1-832-538-21	CABLE, FLEXIBLE FLAT (5 CORE)		208	A-1746-807-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ610:E3,E15)
204	A-1745-461-A	POWER BOARD, COMPLETE		208	A-1746-813-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ610:SP)
204	A-1745-463-A	POWER BOARD, COMPLETE	(DZ310:E3,E12,SP/DZ510/DZ610)	208	A-1746-814-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ810:E3,E15)
204	A-1745-467-A	POWER BOARD, COMPLETE (DZ310:E32)		208	A-1746-815-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ810:EA)
204	A-1761-521-A	POWER BOARD, COMPLETE	(DZ810:E3,E12,SP,E15,EA)	208	A-1746-818-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ810:SP)
204	A-1761-527-A	POWER BOARD, COMPLETE (DZ810:E32)		208	A-1758-220-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ810:E32)
205	A-1746-407-A	IO BOARD, COMPLETE (DZ310/DZ510)		208	A-1758-231-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ610:E12)
205	A-1746-494-A	IO BOARD, COMPLETE (DZ170/DZ171/DZ175)		208	A-1760-259-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ310:E32)
205	A-1746-535-A	IO BOARD, COMPLETE (DZ610)		208	A-1760-292-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ810:E12)
205	A-1746-740-A	IO BOARD, COMPLETE (DZ810)		209	3-077-331-11	+BV3 (3-CR)	
206	1-832-553-21	CABLE, FLEXIBLE FLAT (9 CORE)		F901	1-533-311-12	FUSE, GLASS (DIA. 5) (8A/125V) (US,CND)	
207	1-832-592-21	CABLE, FLEXIBLE FLAT (17 CORE)	(DZ170/DZ171/DZ175)	F901	1-576-232-51	FUSE (H.B.C.) (5A/250V) (E3,E12,SP,E15,EA)	
207	1-832-602-21	CABLE, FLEXIBLE FLAT (19 CORE)	(DZ310/DZ510/DZ610/DZ810)	F901	1-576-233-51	FUSE (H.B.C.) (6.3A/250V) (E32)	
208	A-1746-794-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ310:E3)				
208	A-1746-795-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ310:SP)				
208	A-1746-801-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ175)					
208	A-1746-802-A	MAIN BOARD, COMPLETE (for SERVICE)	(DZ170/DZ171)				

6-6. DVD MECHANISM DECK SECTION
(CDM85MB-DVBU102)



Note: If the wire (flat type) was replaced, fold it some as the wire (flat type) before replacement.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	A-1749-923-A	CDM85 (MB) ASSY		256	3-087-599-01	SCREW, INSULATOR	
252	3-088-371-01	BELT		△ 257	8-820-321-12	OPTICAL PICK-UP (KHM-313CAA/C2RP1)	
253	4-974-725-11	SCREW (M1.7X2.5), P		258	1-828-773-51	WIRE (FLAT TYPE) (24 CORE)	
254	4-674-137-11	SCREW (PTP2X5)		259	3-113-851-01	SHEET (E12)	
255	2-634-618-01	INSULATOR					

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

SECTION 7

ELECTRICAL PARTS LIST

ENCODER **FL**

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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- CAPACITORS
uF: μ F
- COILS
uH: μ H

- SEMICONDUCTORS
In each case, μ : for example:
uA. . . : μ A. . . , uPA. . . , μ PA. . . ,
uPB. . . : μ PB. . . , uPC. . . , μ PC. . . ,
uPD. . . : μ PD. . .

- Abbreviation
CND : Canadian model
E3 : 240V AC area in E model
E12 : 220 – 240V AC area in E model
E15 : Iranian model
E32 : 110 – 240V AC area in E model
EA : Saudi Arabia model
SP : Singapore model

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

The components identified by mark $\hat{\Delta}$ contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque $\hat{\Delta}$ contiennent des informations confidentielles. Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		ENCODER BOARD *****		C5013	1-126-157-11	ELECT 10uF 20%	16V
		< CAPACITOR >		C5014	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C5029	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C5022	1-126-157-11	ELECT 10uF 20%	16V
C5030	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C5023	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
		< DIODE >		C5026	1-115-156-11	CERAMIC CHIP 1uF	10V
D5004	6-502-469-01	LED SLI-325URT31WR (REC TO USB)		C5027	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
		< TRANSISTOR >				< CONNECTOR >	
Q5002	8-729-028-96	TRANSISTOR DTC114EUA-T106		* CN5001	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
		< RESISTOR >		CN5002	1-779-552-21	CONNECTOR, FFC (LIF (NON-ZIF)) 15P (DZ310/DZ510/DZ610/DZ810)	
R5013	1-216-811-11	METAL CHIP 150	5% 1/10W	CN5005	1-779-550-21	CONNECTOR, FFC (LIF (NON-ZIF)) 13P (DZ170/DZ171/DZ175)	
R5025	1-216-833-11	METAL CHIP 10K	5% 1/10W	CN5006	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P (DZ170/DZ171/DZ175)	
R5026	1-216-837-11	METAL CHIP 22K	5% 1/10W	CN5007	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P (DZ310/DZ510/DZ610/DZ810)	
R5027	1-216-829-11	METAL CHIP 4.7K	5% 1/10W			< DIODE >	
R5028	1-216-829-11	METAL CHIP 4.7K	5% 1/10W	D5001	6-500-848-01	DIODE MC2840-T112-1	
		< SWITCH >		D5002	6-500-848-01	DIODE MC2840-T112-1	
S5001	1-762-875-21	SWITCH, KEYBOARD (REC TO USB)		D5003	6-501-729-01	DIODE MAZ8051GLLS0	
		< ROTARY ENCODER >		D5005	6-501-817-01	DIODE MA2J1110GLS0	
S5002	1-480-136-11	ENCODER, ROTARY (12 TYPE) (MASTER VOLUME)		D5006	6-500-848-01	DIODE MC2840-T112-1	
*****						< IC >	
A-1746-404-A	FL BOARD, COMPLETE (DZ310/DZ510/DZ610/DZ810)			IC5001	6-702-302-01	IC TK11133CSCL-G	
A-1746-473-A	FL BOARD, COMPLETE (DZ170/DZ171/DZ175) *****			IC5002	6-713-497-01	IC HT16515	
	< CAPACITOR >			IC5003	6-600-767-01	IC PNA4823M02S0 (IR)	
C5001	1-100-909-11	CERAMIC CHIP 10uF	10% 6.3V			< JUMPER RESISTOR >	
C5003	1-126-382-11	ELECT 100uF	20% 16V	JR5001	1-216-296-11	SHORT CHIP 0	
C5004	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V			< COIL >	
C5005	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	L5001	1-410-671-31	INDUCTOR 47uH	
C5006	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V	L5002	1-410-671-31	INDUCTOR 47uH	
		< FLUORESCENT INDICATOR TUBE >		L5003	1-410-671-31	INDUCTOR 47uH	
C5007	1-162-974-11	CERAMIC CHIP 0.01uF	50V	ND5001	1-483-107-21	FLUORESCENT INDICATOR TUBE	
C5008	1-119-943-11	ELECT 47uF	20% 50V			< TRANSISTOR >	
C5009	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	Q5001	6-550-065-01	TRANSISTOR CPH5504-TL-E	
C5010	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V				
C5011	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V				
C5012	1-165-908-11	CERAMIC CHIP 1uF	10% 10V				

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

FL IO

Ref. No.	Part No.	Description	Remark		
< RESISTOR >					
R5001	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R5002	1-216-839-11	METAL CHIP	33K	5%	1/10W
R5003	1-216-805-11	METAL CHIP	47	5%	1/10W
R5004	1-216-805-11	METAL CHIP	47	5%	1/10W
R5005	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R5006	1-216-813-11	METAL CHIP	220	5%	1/10W
R5007	1-216-813-11	METAL CHIP	220	5%	1/10W
R5008	1-216-813-11	METAL CHIP	220	5%	1/10W
R5009	1-216-813-11	METAL CHIP	220	5%	1/10W
R5010	1-216-813-11	METAL CHIP	220	5%	1/10W
R5011	1-216-813-11	METAL CHIP	220	5%	1/10W
R5012	1-216-844-11	METAL CHIP	82K	5%	1/10W
R5014	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5015	1-216-809-11	METAL CHIP	100	5%	1/10W
R5016	1-216-809-11	METAL CHIP	100	5%	1/10W
R5017	1-216-809-11	METAL CHIP	100	5%	1/10W
R5018	1-216-805-11	METAL CHIP	47	5%	1/10W
R5019	1-216-835-11	METAL CHIP	15K	5%	1/10W
R5020	1-216-834-11	METAL CHIP	12K	5%	1/10W
R5023	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5024	1-216-837-11	METAL CHIP	22K	5%	1/10W
< TRANSFORMER >					
T5001	1-443-645-11	TRANSFORMER, DC CONVERTER			

	A-1746-407-A	IO BOARD, COMPLETE (DZ310/DZ510)			
	A-1746-494-A	IO BOARD, COMPLETE (DZ170/DZ171/DZ175)			
	A-1746-535-A	IO BOARD, COMPLETE (DZ610)			
	A-1746-740-A	IO BOARD, COMPLETE (DZ810)			

< CAPACITOR >					
C4001	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4002	1-126-933-11	ELECT	100uF	20%	16V
C4006	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4007	1-126-933-11	ELECT	100uF	20%	16V
C4009	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4016	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4018	1-126-916-11	ELECT	1000uF	20%	6.3V
C4019	1-126-965-91	ELECT	22uF	20%	50V
C4021	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4023	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4026	1-126-933-11	ELECT	100uF	20%	16V
C4027	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4028	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4030	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C4031	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C4032	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C4033	1-104-662-91	ELECT	22uF	20%	25V
C4035	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C4036	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C4038	1-104-662-91	ELECT	22uF	20%	25V
C4040	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C4041	1-104-662-91	ELECT	22uF	20%	25V
C4042	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C4043	1-104-662-91	ELECT	22uF	20%	25V

Ref. No.	Part No.	Description	Remark		
C4045	1-126-957-11	ELECT	0.22uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4046	1-126-933-11	ELECT	100uF	20%	16V
C4047	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4049	1-126-960-11	ELECT	1uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4050	1-114-813-11	CERAMIC CHIP	1uF	10%	16V
C4051	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (DZ310/DZ510/DZ610/DZ810)
C4052	1-126-933-11	ELECT	100uF	20%	16V (DZ310/DZ510/DZ610/DZ810)
C4053	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4054	1-114-813-11	CERAMIC CHIP	1uF	10%	16V
C4055	1-104-662-91	ELECT	22uF	20%	25V
C4056	1-104-662-91	ELECT	22uF	20%	25V
C4061	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V (DZ310/DZ510/DZ610/DZ810)
C4062	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DZ310/DZ510/DZ610/DZ810)
C4063	1-126-964-11	ELECT	10uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4064	1-126-933-11	ELECT	100uF	20%	16V
C4065	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V (DZ310/DZ510/DZ610/DZ810)
C4067	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4070	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V (DZ310/DZ510/DZ610/DZ810)
C4071	1-126-963-11	ELECT	4.7uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4075	1-126-963-11	ELECT	4.7uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4076	1-126-964-11	ELECT	10uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4077	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V (DZ310/DZ510/DZ610/DZ810)
C4078	1-126-933-11	ELECT	100uF	20%	16V (DZ310/DZ510/DZ610/DZ810)
C4079	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (DZ310/DZ510/DZ610/DZ810)
C4081	1-126-963-11	ELECT	4.7uF	20%	50V (DZ310/DZ510/DZ610/DZ810)
C4084	1-126-916-11	ELECT	1000uF	20%	6.3V
< CONNECTOR >					
CN4002	1-779-277-11	CONNECTOR, FFC (LIF (NON-ZIF)) 9P			
CN4004	1-779-285-11	CONNECTOR, FFC (LIF (NON-ZIF)) 17P (DZ170/DZ171/DZ175)			
CN4005	1-779-287-11	CONNECTOR, FFC (LIF (NON-ZIF)) 19P (DZ310/DZ510/DZ610/DZ810)			
CN4007	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P (DZ170/DZ171/DZ175)			
CN4008	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P (DZ310/DZ510/DZ610/DZ810)			
CN4010	1-784-770-11	CONNECTOR, FFC 9P			
< DIODE >					
D4002	6-500-848-01	DIODE MC2840-T112-1			
D4006	6-501-728-01	DIODE MAZ8051G0LS0 (DZ310/DZ510/DZ610/DZ810)			
< IC >					
IC4000	6-710-470-01	IC MM1758AFBE			
IC4001	6-705-337-01	IC TK11150CSCL-G			

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

IO	JACK
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Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark
IC4003	8-759-430-37	IC MC14052BDTR2			R4064	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC4004	6-706-078-01	IC M62429FP-TP (DZ310/DZ510/DZ610/DZ810)			R4065	1-216-864-11	SHORT CHIP	0
IC4005	6-712-744-01	IC TK11190CSCL-G			R4066	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC4006	6-713-989-01	IC NJM2783V(TE2) (DZ310/DZ510/DZ610/DZ810)			R4067	1-216-821-11	METAL CHIP	1K 5% 1/10W
		< JACK >			R4068	1-216-821-11	METAL CHIP	1K 5% 1/10W
J4000	1-822-283-11	JACK, PIN 3P (COMPONENT VIDEO OUT)			R4069	1-216-821-11	METAL CHIP	1K 5% 1/10W
J4001	1-822-280-11	JACK, PIN 3P (VIDEO OUT, TV/CABLE (AUDIO IN R/L)) (DZ170/DZ171/DZ175)			R4070	1-216-809-11	METAL CHIP	100 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
J4001	1-822-280-11	JACK, PIN 3P (VIDEO OUT, TV (AUDIO IN R/L)) (DZ310/DZ510/DZ610/DZ810)			R4071	1-216-809-11	METAL CHIP	100 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
		< COIL >			R4072	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
L4000	1-469-525-91	INDUCTOR 10uH			R4073	1-216-833-11	METAL CHIP	10K 5% 1/10W
L4001	1-469-525-91	INDUCTOR 10uH (DZ310/DZ510/DZ610/DZ810)			R4074	1-216-833-11	METAL CHIP	10K 5% 1/10W
		< TRANSISTOR >			R4075	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q4006	6-552-200-01	FET RT3N22M-T111-1			R4076	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
Q4007	6-552-200-01	FET RT3N22M-T111-1 (DZ310/DZ510/DZ610/DZ810)			R4077	1-216-833-11	METAL CHIP	10K 5% 1/10W
		< RESISTOR >			R4079	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4013	1-218-827-11	METAL CHIP 150 0.5% 1/10W			R4080	1-216-845-11	METAL CHIP	100K 5% 1/10W
R4015	1-216-833-11	METAL CHIP 10K 5% 1/10W			R4081	1-216-845-11	METAL CHIP	100K 5% 1/10W
R4016	1-218-285-11	METAL CHIP 75 5% 1/10W			R4082	1-216-845-11	METAL CHIP	100K 5% 1/10W
R4017	1-218-827-11	METAL CHIP 150 0.5% 1/10W			R4083	1-216-845-11	METAL CHIP	100K 5% 1/10W
R4018	1-216-864-11	SHORT CHIP 0			R4084	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4020	1-218-285-11	METAL CHIP 75 5% 1/10W			R4085	1-216-864-11	SHORT CHIP	0 (DZ310/DZ510/DZ610/DZ810)
R4024	1-218-827-11	METAL CHIP 150 0.5% 1/10W			R4086	1-216-864-11	SHORT CHIP	0 (DZ310/DZ510/DZ610/DZ810)
R4027	1-218-285-11	METAL CHIP 75 5% 1/10W			R4087	1-216-864-11	SHORT CHIP	0
R4028	1-216-864-11	SHORT CHIP 0			R4088	1-216-864-11	SHORT CHIP	0
R4030	1-218-285-11	METAL CHIP 75 5% 1/10W			R4089	1-216-864-11	SHORT CHIP	0
R4031	1-218-827-11	METAL CHIP 150 0.5% 1/10W			R4090	1-216-841-11	METAL CHIP	47K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4032	1-216-821-11	METAL CHIP 1K 5% 1/10W			R4091	1-216-821-11	METAL CHIP	1K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4033	1-216-845-11	METAL CHIP 100K 5% 1/10W			R4092	1-216-864-11	SHORT CHIP	0
R4034	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4093	1-216-864-11	SHORT CHIP	0
R4035	1-216-837-11	METAL CHIP 22K 5% 1/10W			R4094	1-216-864-11	SHORT CHIP	0
R4036	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4095	1-216-864-11	SHORT CHIP	0
R4037	1-216-845-11	METAL CHIP 100K 5% 1/10W			R4096	1-216-864-11	SHORT CHIP	0
R4038	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4097	1-216-857-11	METAL CHIP	1M 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4041	1-216-837-11	METAL CHIP 22K 5% 1/10W			R4100	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4042	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4105	1-216-839-11	METAL CHIP	33K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4046	1-216-829-11	METAL CHIP 4.7K 5% 1/10W			R4106	1-216-834-11	METAL CHIP	12K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4047	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4107	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R4048	1-216-829-11	METAL CHIP 4.7K 5% 1/10W			△ R4113	1-215-865-11	METAL OXIDE	220 5% 1W F (DZ310/DZ510/DZ610/DZ810)
R4049	1-216-841-11	METAL CHIP 47K 5% 1/10W			R4115	1-216-864-11	SHORT CHIP	0
R4050	1-216-829-11	METAL CHIP 4.7K 5% 1/10W			*****			
R4051	1-216-841-11	METAL CHIP 47K 5% 1/10W			JACK BOARD			
R4053	1-216-829-11	METAL CHIP 4.7K 5% 1/10W			*****			
R4054	1-216-841-11	METAL CHIP 47K 5% 1/10W			< CAPACITOR >			
R4055	1-216-864-11	SHORT CHIP 0			C5101	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
R4056	1-216-864-11	SHORT CHIP 0 (DZ310/DZ510/DZ610/DZ810)			C5102	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
R4057	1-216-864-11	SHORT CHIP 0 (DZ310/DZ510/DZ610/DZ810)			C5103	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
R4058	1-216-864-11	SHORT CHIP 0			C5104	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
R4060	1-216-833-11	METAL CHIP 10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)			C5106	1-124-584-00	ELECT	100uF 20% 6.3V
R4062	1-216-830-11	METAL CHIP 5.6K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)						
R4063	1-216-864-11	SHORT CHIP 0						

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

JACK KEY-SW

Ref. No.	Part No.	Description	Remark
C5107	1-126-157-11	ELECT 10uF 20%	16V
C5108	1-126-157-11	ELECT 10uF 20%	16V
C5109	1-126-157-11	ELECT 10uF 20%	16V
C5112	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C5116	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C5117	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C5118	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C5119	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
C5120	1-164-315-11	CERAMIC CHIP 470PF 5%	50V
C5121	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
C5122	1-162-925-11	CERAMIC CHIP 68PF 5%	50V
C5123	1-110-563-11	CERAMIC CHIP 0.068uF 10%	16V
C5124	1-162-960-11	CERAMIC CHIP 220PF 10%	50V
C5125	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C5126	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C5127	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C5128	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C5129	1-124-584-00	ELECT 100uF 20%	6.3V
C5130	1-124-584-00	ELECT 100uF 20%	10V
C5131	1-124-589-11	ELECT 47uF 20%	16V
< DIODE >			
D5101	6-500-848-01	DIODE MC2840-T112-1	
< FERRITE BEAD >			
FB5101	1-500-236-22	BEAD, FERRITE (CHIP) (1608)	
FB5102	1-500-236-22	BEAD, FERRITE (CHIP) (1608)	
FB5103	1-500-236-22	BEAD, FERRITE (CHIP) (1608)	
< IC >			
IC5101	8-759-100-96	IC uPC4558G2	
IC5102	8-759-100-96	IC uPC4558G2	
< JACK >			
J5101	1-819-878-31	JACK (A.CAL MIC)	
J5102	1-819-878-31	JACK (AUDIO IN)	
< TRANSISTOR >			
Q5101	8-729-620-13	TRANSISTOR 2SC4154TP-1EF (DZ310/DZ510/DZ610/DZ810)	
Q5102	8-729-028-73	TRANSISTOR DTA114EUA-T106 (DZ310/DZ510/DZ610/DZ810)	
< RESISTOR >			
R5101	1-216-833-11	METAL CHIP 10K 5%	1/10W (DZ310/DZ510/DZ610/DZ810)
R5105	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R5106	1-216-826-11	METAL CHIP 2.7K 5%	1/10W
R5107	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5108	1-216-845-11	METAL CHIP 100K 5%	1/10W
R5109	1-216-845-11	METAL CHIP 100K 5%	1/10W
R5110	1-216-845-11	METAL CHIP 100K 5%	1/10W
R5111	1-216-817-11	METAL CHIP 470 5%	1/10W
R5112	1-216-817-11	METAL CHIP 470 5%	1/10W
R5113	1-216-817-11	METAL CHIP 470 5%	1/10W
R5115	1-216-864-11	SHORT CHIP 0	
R5116	1-216-837-11	METAL CHIP 22K 5%	1/10W
R5117	1-216-837-11	METAL CHIP 22K 5%	1/10W
R5118	1-216-835-11	METAL CHIP 15K 5%	1/10W
R5119	1-216-837-11	METAL CHIP 22K 5%	1/10W

Ref. No.	Part No.	Description	Remark
R5120	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5121	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5122	1-216-837-11	METAL CHIP 22K 5%	1/10W
R5123	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5124	1-216-857-11	METAL CHIP 1M 5%	1/10W
R5125	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R5126	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5127	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5128	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5129	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
R5130	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R5131	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
R5132	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R5134	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5135	1-216-864-11	SHORT CHIP 0 (DZ170/DZ171/DZ175)	

		A-1746-218-A	KEY-SW BOARD, COMPLETE

< CONNECTOR >			
* CN5201	1-580-055-21	PIN, CONNECTOR (SMD) 2P	
CN5202	1-580-057-11	PIN, CONNECTOR (SMD) 4P	
< RESISTOR >			
R5201	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5202	1-216-809-11	METAL CHIP 100 5%	1/10W
R5203	1-216-821-11	METAL CHIP 1K 5%	1/10W
R5204	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
< SWITCH >			
S5201	1-786-650-21	SWITCH, TACTILE (■)	
S5202	1-786-650-21	SWITCH, TACTILE (▶)	
S5203	1-786-650-21	SWITCH, TACTILE (▲)	
S5204	1-786-650-21	SWITCH, TACTILE (FUNCTION)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Ⓔ	A-1746-794-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ310:E3)		C507	1-104-658-91	ELECT 100uF 20% 10V	(DZ170/DZ171/DZ175)
Ⓔ	A-1746-795-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ310:SP)		C508	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(DZ170/DZ171/DZ175)
Ⓔ	A-1746-801-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ175)		C509	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
Ⓔ	A-1746-802-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ170/DZ171)		C511	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1746-805-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ510)		C512	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
Ⓔ	A-1746-806-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ610:E3,E15)		C513	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1746-807-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ610:SP)		C514	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1746-813-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ810:E3,E15)		C515	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1746-814-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ810:EA)		C516	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
Ⓔ	A-1746-815-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ810:SP)		C517	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1746-818-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ810:E32)		C518	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1758-220-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ310:E12)		C519	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1758-231-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ610:E12)		C520	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
Ⓔ	A-1760-259-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ310:E32)		C521	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
Ⓔ	A-1760-292-A	MAIN BOARD, COMPLETE (for SERVICE) (DZ810:E12)		C522	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
		*****		C523	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
		< CAPACITOR >		C524	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C303	1-100-742-91	CERAMIC CHIP 2.2uF 20% 10V		C525	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C304	1-126-923-91	ELECT 220uF 20% 10V		C527	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
C305	1-100-742-91	CERAMIC CHIP 2.2uF 20% 10V		C528	1-104-656-11	ELECT 2200uF 20% 6.3V	
C308	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C529	1-104-658-91	ELECT 100uF 20% 10V	
C309	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C530	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C310	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C531	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C311	1-126-964-11	ELECT 10uF 20% 50V		C532	1-126-933-11	ELECT 100uF 20% 16V	
C313	1-126-964-11	ELECT 10uF 20% 50V		C536	1-104-655-91	ELECT 470uF 20% 6.3V	
C314	1-126-964-11	ELECT 10uF 20% 50V		C537	1-104-658-91	ELECT 100uF 20% 10V	
C315	1-126-923-91	ELECT 220uF 20% 10V		C538	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C316	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C539	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C317	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C540	1-126-933-11	ELECT 100uF 20% 16V	
C318	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C541	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C319	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C543	1-126-965-91	ELECT 22uF 20% 50V	
C320	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C545	1-104-658-91	ELECT 100uF 20% 10V	
C321	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C546	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C323	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C550	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C325	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C552	1-126-933-11	ELECT 100uF 20% 16V	
C326	1-162-912-11	CERAMIC CHIP 7PF 0.5PF 50V		C553	1-126-935-11	ELECT 470uF 20% 16V	
C327	1-162-912-11	CERAMIC CHIP 7PF 0.5PF 50V		C554	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C329	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C555	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C333	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C556	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C334	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C701	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(DZ310/DZ510/DZ610/DZ810)
C471	1-104-658-91	ELECT 100uF 20% 10V		C705	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(DZ310/DZ510/DZ610/DZ810)
C476	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C706	1-165-708-11	ELECT CHIP 47uF 20% 6.3V	(DZ310/DZ510/DZ610/DZ810)
C501	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(DZ170/DZ171/DZ175)	C707	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	(DZ310/DZ510/DZ610/DZ810)
C504	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(EXCEPT DZ310)	C708	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	(DZ310/DZ510/DZ610/DZ810)
C505	1-104-658-91	ELECT 100uF 20% 10V	(EXCEPT DZ310)	C1101	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C1102	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
				C1105	1-126-947-11	ELECT 47uF 20% 35V	
				C1106	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C1108	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C1109	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C1110	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C1111	1-104-658-91	ELECT 100uF 20% 10V	
				C1112	1-126-947-11	ELECT 47uF 20% 35V	
				C1113	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C1114	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C1115	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1191	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1116	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1192	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1117	1-126-947-11	ELECT 47uF	20% 35V	C1193	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1118	1-126-947-11	ELECT 47uF	20% 35V	C1195	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1119	1-126-947-11	ELECT 47uF	20% 35V	C1197	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1120	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	C1198	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C1121	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	C1199	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C1122	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	C1503	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1123	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	C1504	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1124	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	C1505	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1125	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1506	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C1126	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1507	1-126-964-11	ELECT 10uF	20% 50V
C1127	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1508	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1129	1-100-909-11	CERAMIC CHIP 10uF	10% 6.3V	C1509	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1130	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1510	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1132	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1511	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1133	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1512	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1135	1-100-436-91	CERAMIC CHIP 0.033uF	10% 25V	C1513	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1136	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1514	1-126-964-11	ELECT 10uF	20% 50V
C1137	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1516	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C1138	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C1518	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1139	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C1520	1-126-947-11	ELECT 47uF	20% 35V
C1140	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1522	1-164-730-11	CERAMIC CHIP 0.0012uF	10% 50V
C1144	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1523	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C1145	1-126-964-11	ELECT 10uF	20% 50V	C1524	1-110-563-11	CERAMIC CHIP 0.068uF	10% 16V
C1146	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1525	1-100-436-91	CERAMIC CHIP 0.033uF	10% 25V
C1147	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V	C1601	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1148	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V				(DZ170/DZ171/DZ175)
C1149	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1602	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C1151	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V				(DZ170/DZ171/DZ175)
C1152	1-162-916-11	CERAMIC CHIP 12PF	5% 50V	C1725	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C1153	1-162-916-11	CERAMIC CHIP 12PF	5% 50V	C1727	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1154	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1729	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1155	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1730	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1156	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1731	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1158	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1732	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1159	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C1733	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V
C1160	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1734	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C1161	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C1735	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1162	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V				(DZ310/DZ510/DZ610/DZ810)
C1163	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C2100	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C1164	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C2102	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1165	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2108	1-127-760-11	CERAMIC CHIP 4.7uF	10% 6.3V
C1169	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2109	1-104-658-91	ELECT 100uF	20% 10V
C1170	1-162-965-11	CERAMIC CHIP 0.0015uF	10% 50V	C2110	1-104-658-91	ELECT 100uF	20% 10V
C1171	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2112	1-126-923-91	ELECT 220uF	20% 10V
C1172	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2114	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1174	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C2115	1-100-909-11	CERAMIC CHIP 10uF	10% 6.3V
C1175	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C2116	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1176	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C2117	1-100-909-11	CERAMIC CHIP 10uF	10% 6.3V
C1177	1-126-923-91	ELECT 220uF	20% 10V	C2118	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C1179	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2119	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C1180	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2130	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C1181	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C2502	1-164-172-11	CERAMIC CHIP 0.0056uF	10% 25V
C1182	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V	C2503	1-127-760-11	CERAMIC CHIP 4.7uF	10% 6.3V
C1183	1-128-934-11	CERAMIC CHIP 0.33uF	20% 10V	C3000	1-126-933-11	ELECT 100uF	20% 16V
C1184	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C3001	1-126-947-11	ELECT 47uF	20% 35V
C1186	1-127-715-11	CERAMIC CHIP 0.22uF	10% 16V	C3002	1-100-597-91	CERAMIC CHIP 0.1uF	10% 25V
C1187	1-126-947-11	ELECT 47uF	20% 35V	C3003	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C1190	1-104-658-91	ELECT 100uF	20% 10V	C3005	1-126-964-11	ELECT 10uF	20% 50V
				C3010	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C3011	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3156	1-114-869-11	CERAMIC CHIP	2.2uF	10%	6.3V
C3012	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3159	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3013	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3160	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3014	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3161	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3015	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3162	1-114-885-51	FILM	1uF	5%	50V
C3016	1-165-726-31	ELECT	56uF	20%	16V	C3163	1-112-246-11	ELECT	100uF	20%	35V
C3017	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3164	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3018	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3165	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3019	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3200	1-112-831-31	ELECT	2200uF	20%	35V
C3020	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3202	1-114-885-51	FILM	1uF	5%	50V
C3021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3203	1-112-246-11	ELECT	100uF	20%	35V
C3022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3204	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3023	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3205	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3024	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3206	1-114-869-11	CERAMIC CHIP	2.2uF	10%	6.3V
C3025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3207	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3026	1-126-947-11	ELECT	47uF	20%	35V	C3208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3027	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3209	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3028	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3210	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3029	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3211	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3030	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3212	1-114-885-51	FILM	1uF	5%	50V
C3031	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3213	1-112-246-11	ELECT	100uF	20%	35V
C3032	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3214	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3033	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3215	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3034	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3221	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3035	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3222	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3036	1-165-726-31	ELECT	56uF	20%	16V	C3223	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3037	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3250	1-112-831-31	ELECT	2200uF	20%	35V
C3038	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3252	1-114-885-51	FILM	1uF	5%	50V
C3039	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3253	1-112-246-11	ELECT	100uF	20%	35V
C3051	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C3254	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3052	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3255	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3054	1-104-658-91	ELECT	100uF	20%	10V	C3256	1-114-869-11	CERAMIC CHIP	2.2uF	10%	6.3V
C3055	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3257	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3056	1-126-923-91	ELECT	220uF	20%	10V	C3258	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3057	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C3259	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3058	1-162-909-11	CERAMIC CHIP	4PF	0.25PF	50V	C3260	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3060	1-162-909-11	CERAMIC CHIP	4PF	0.25PF	50V	C3261	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3071	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C3262	1-114-885-51	FILM	1uF	5%	50V
C3091	1-126-934-11	ELECT	220uF	20%	16V	C3263	1-112-246-11	ELECT	100uF	20%	35V
C3100	1-112-831-31	ELECT	2200uF	20%	35V	C3264	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3102	1-114-885-51	FILM	1uF	5%	50V	C3265	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3103	1-112-246-11	ELECT	100uF	20%	35V	C3300	1-112-831-31	ELECT	2200uF	20%	35V
C3104	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C3302	1-114-885-51	FILM	1uF	5%	50V
C3105	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V	C3303	1-112-246-11	ELECT	100uF	20%	35V
C3106	1-114-869-11	CERAMIC CHIP	2.2uF	10%	6.3V	C3304	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3109	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C3305	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3306	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V
C3111	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3309	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3112	1-114-885-51	FILM	1uF	5%	50V	C3310	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3113	1-112-246-11	ELECT	100uF	20%	35V	C3311	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3114	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C3312	1-114-885-51	FILM	1uF	5%	50V
C3115	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V	C3313	1-112-246-11	ELECT	100uF	20%	35V
C3121	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3314	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C3122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3315	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C3123	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C3321	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3150	1-112-831-31	ELECT	2200uF	20%	35V	C3322	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3152	1-114-885-51	FILM	1uF	5%	50V	C3323	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3153	1-112-246-11	ELECT	100uF	20%	35V	C3400	1-112-831-31	ELECT	2200uF	20%	35V
C3154	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C3402	1-114-885-51	FILM	1uF	5%	50V
C3155	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V	C3403	1-112-246-11	ELECT	100uF	20%	35V

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C3404	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V	D2102	6-501-592-01	DIODE EDZCTE616.8B	
C3405	1-100-436-91	CERAMIC CHIP	0.033uF 10% 25V	D2103	6-501-592-01	DIODE EDZCTE616.8B	
C3406	1-114-869-11	CERAMIC CHIP	2.2uF 10% 6.3V	D3071	6-500-335-01	DIODE MC2838-T112-1	
C3409	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V	D3072	6-501-817-01	DIODE MA2J1110GLS0	
C3410	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D3101	6-501-696-01	DIODE RSA39LTE25	
C3411	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D3102	6-501-696-01	DIODE RSA39LTE25	
C3412	1-114-885-51	FILM	1uF 5% 50V	D3151	6-501-696-01	DIODE RSA39LTE25	
C3413	1-112-246-11	ELECT	100uF 20% 35V	D3152	6-501-696-01	DIODE RSA39LTE25	
C3414	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V	D3201	6-501-696-01	DIODE RSA39LTE25	
C3415	1-100-436-91	CERAMIC CHIP	0.033uF 10% 25V	D3202	6-501-696-01	DIODE RSA39LTE25	
C3551	1-115-871-11	ELECT	1uF 20% 50V	D3251	6-501-696-01	DIODE RSA39LTE25	
C3552	1-126-964-11	ELECT	10uF 20% 50V	D3252	6-501-696-01	DIODE RSA39LTE25	
C3553	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	D3301	6-501-696-01	DIODE RSA39LTE25	
C3556	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D3302	6-501-696-01	DIODE RSA39LTE25	
C3561	1-126-947-11	ELECT	47uF 20% 35V	D3401	6-501-696-01	DIODE RSA39LTE25	
C3901	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D3402	6-501-696-01	DIODE RSA39LTE25	
C3902	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D3551	6-500-848-01	DIODE MC2840-T112-1	
C3903	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D9712	6-501-817-01	DIODE MA2J1110GLS0	
C3904	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V			< FERRITE BEAD >	
C3905	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	FB472	1-469-094-21	FERRITE, EMI (SMD) (1608) (DZ810)	
C3906	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	FB473	1-469-094-21	FERRITE, EMI (SMD) (1608) (DZ810)	
C3907	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	* FB1106	1-400-973-21	INDUCTOR (EMI FERRITE)	
C3908	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	* FB1107	1-400-973-21	INDUCTOR (EMI FERRITE)	
C3911	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1108	1-400-973-21	INDUCTOR (EMI FERRITE)	
C3912	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V				
C3913	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1109	1-400-973-21	INDUCTOR (EMI FERRITE)	
C3914	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1111	1-400-974-21	INDUCTOR (EMI FERRITE)	
C3915	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1112	1-400-974-21	INDUCTOR (EMI FERRITE)	
C3916	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1113	1-400-974-21	INDUCTOR (EMI FERRITE)	
C3917	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1115	1-400-974-21	INDUCTOR (EMI FERRITE)	
C3918	1-114-323-11	CERAMIC CHIP	0.01uF 10% 50V	* FB1116	1-400-974-21	INDUCTOR (EMI FERRITE)	
		< CONNECTOR >		* FB1117	1-400-974-21	INDUCTOR (EMI FERRITE)	
CN306	1-779-281-11	CONNECTOR, FFC (LIF (NON-ZIF)) 13P (DZ810)		* FB1118	1-400-974-21	INDUCTOR (EMI FERRITE)	
CN472	1-820-112-41	CONNECTOR, FFC/FPC 9P		* FB2101	1-400-973-21	INDUCTOR (EMI FERRITE)	
CN503	1-820-116-41	CONNECTOR, FFC/FPC 17P (DZ170/DZ171/DZ175)		* FB2103	1-400-973-21	INDUCTOR (EMI FERRITE)	
CN504	1-820-117-41	CONNECTOR, FFC/FPC 19P (DZ310/DZ510/DZ610/DZ810)		FB2104	1-469-379-11	FERRITE, EMI (SMD) (2012)	
CN506	1-820-115-41	CONNECTOR, FFC/FPC 15P (DZ310/DZ510/DZ610/DZ810)		FB2105	1-469-379-11	FERRITE, EMI (SMD) (2012)	
CN507	1-785-468-41	CONNECTOR, FFC/FPC 13P (DZ170/DZ171/DZ175)		FB2120	1-469-118-21	FERRITE, EMI (SMD) (1608)	
CN508	1-784-861-51	CONNECTOR, FFC (LIF (NON-ZIF)) 9P		FB2121	1-469-118-21	FERRITE, EMI (SMD) (1608)	
CN510	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P		FB2122	1-469-118-21	FERRITE, EMI (SMD) (1608)	
CN1101	1-815-763-32	CONNECTOR, FFC/FPC 24P		FB2125	1-469-118-21	FERRITE, EMI (SMD) (1608)	
CN1105	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P				< IC >	
CN1501	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P		IC303	6-710-554-01	IC PCM1808PWR	
CN1502	1-779-273-11	CONNECTOR, FFC (LIF (NON-ZIF)) 5P		IC304	8-759-825-15	IC LC89056W-E	
CN1701	(Not supplied)	CONNECTOR, HDMI 19P (HDMI OUT) (DZ170/DZ171/DZ175)		IC307	8-759-680-48	IC TC7WH157FK(TE85R)	
CN1701	(Not supplied)	CONNECTOR, HDMI 19P (HDMI OUT (ARC)) (DZ310/DZ510/DZ610/DZ810)		IC471	6-707-853-01	IC TC74LCX541FT(EKJ)	
CN2101	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		IC501	6-706-492-01	IC TC7SHU04FU(T5RSOJF) (DZ170/DZ171/DZ175)	
CN3000	1-564-704-41	PIN, CONNECTOR (SMALL TYPE) 2P		IC502	6-600-466-01	IC TORX147L(SONY) (TV/CABLE (DIGITAL IN OPTICAL)) (DZ170/DZ171/DZ175)	
		< DIODE >		IC502	6-600-466-01	IC TORX147L(SONY) (TV (DIGITAL IN OPTICAL)) (DZ510/DZ610/DZ810)	
D502	6-501-817-01	DIODE MA2J1110GLS0		IC503	A-1748-165-A	IC R5F364AEDFA (for SERVICE)	
D503	6-501-817-01	DIODE MA2J1110GLS0		IC504	6-705-338-01	IC TK11250CMCL-G	
D505	6-501-817-01	DIODE MA2J1110GLS0		IC506	6-705-203-01	IC S-80935CNMC-G85T2G	
D2101	6-501-749-01	DIODE MAZ8082G0LS0		IC507	(Not supplied)	IC MM1665AHBE	
				IC509	6-712-613-01	IC SI-3010KM-TLS	
				IC510	6-709-584-01	IC MM1663DHBE	

Note: When IC507 on the Main board is damaged, exchange the new Main board for the Main board which IC damaged.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC701	6-709-888-01	IC TC7WHU04FK(T5RSOYF (DZ310/DZ510/DZ610/DZ810))		L3908	1-457-077-11	COIL, AIR-CORE	
IC1101	6-714-722-01	IC CXD9927R-B (DZ170/DZ171/DZ175)				< TRANSISTOR >	
IC1101	6-714-723-01	IC CXD9917R-B (DZ310/DZ510/DZ610/DZ810)		Q501	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC1102	6-715-100-01	IC MX29LV320DBTI-70-OHI-1001UC (US,CND,E32)		Q502	6-551-272-01	TRANSISTOR RT3CLLM	
IC1102	6-715-101-01	IC MX29LV320DBTI-70-OHI-1001CE (E3,E12,E15,EA)		Q1101	6-552-279-01	FET RT3K66M-T111-1	
				Q1102	6-550-653-01	TRANSISTOR QST8TR	
				Q1103	8-729-029-06	TRANSISTOR DTC124EUA-T106	
IC1102	6-715-102-01	IC MX29LV320DBTI-70-OHI-1001GA (SP)		Q1701	6-552-279-01	FET RT3K66M-T111-1	
IC1103	(Not supplied)	IC BR24S64F-WE2		Q2101	6-551-272-01	TRANSISTOR RT3CLLM	
IC1104	6-714-642-01	IC EM638165 TSA-6G		Q3000	8-729-111-29	TRANSISTOR 2SD1616A-K	
IC1105	6-702-302-01	IC TK11133CSCL-G		Q3001	6-551-272-01	TRANSISTOR RT3CLLM	
IC1107	6-702-302-01	IC TK11133CSCL-G		Q3101	6-551-271-01	TRANSISTOR RT3AMMM	
IC1110	6-707-739-01	IC MM1661JTRE		Q3151	6-551-271-01	TRANSISTOR RT3AMMM	
IC1501	(Not supplied)	IC BD8203EFV-E2		Q3201	6-551-271-01	TRANSISTOR RT3AMMM	
IC1601	6-713-555-01	IC MFI341S2161 (DZ170/DZ171/DZ175)		Q3202	6-551-271-01	TRANSISTOR RT3AMMM	
IC1705	8-759-592-47	IC TC7S208FU(TE85R)		Q3301	6-551-271-01	TRANSISTOR RT3AMMM	
IC1707	6-705-337-01	IC TK11150CSCL-G		Q3401	6-551-271-01	TRANSISTOR RT3AMMM	
IC1708	6-702-302-01	IC TK11133CSCL-G		Q3551	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC3010	6-705-979-01	IC CXD9788AR		Q3552	6-551-272-01	TRANSISTOR RT3CLLM	
IC3020	6-705-979-01	IC CXD9788AR		Q9730	6-551-714-01	FET INK0001AC1-T112A-1	
IC3030	6-705-979-01	IC CXD9788AR				< RESISTOR >	
IC3050	6-714-743-01	IC MM3404A18URE		R301	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
IC3051	6-706-492-01	IC TC7SHU04FU(T5RSOJF)		R302	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
IC3100	6-714-477-01	IC CXD9981TN		R303	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
IC3200	6-714-477-01	IC CXD9981TN		R304	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
IC3300	6-714-477-01	IC CXD9981TN		R305	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
		< JACK >		R306	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
J501	1-822-282-11	JACK, PIN 1P (TV/CABLE (DIGITAL IN COAXIAL)) (DZ170/DZ171/DZ175)		R307	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
		< COIL >		R308	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
L301	1-469-525-91	INDUCTOR 10uH		R309	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
L302	1-469-525-91	INDUCTOR 10uH		R310	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ810)
L303	1-469-525-91	INDUCTOR 10uH		R316	1-216-801-11	METAL CHIP 22 5%	1/10W
L471	1-469-527-91	INDUCTOR 47uH		R317	1-216-801-11	METAL CHIP 22 5%	1/10W
L501	1-469-525-91	INDUCTOR 10uH (EXCEPT DZ310)		R318	1-216-801-11	METAL CHIP 22 5%	1/10W
L502	1-469-525-91	INDUCTOR 10uH (DZ170/DZ171/DZ175)		R319	1-216-801-11	METAL CHIP 22 5%	1/10W
L1701	1-457-374-21	COIL, COMMON MODE CHOKE		R329	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
L1702	1-457-374-21	COIL, COMMON MODE CHOKE		R330	1-216-839-11	METAL CHIP 33K 5%	1/10W
L1703	1-457-374-21	COIL, COMMON MODE CHOKE		R331	1-216-805-11	METAL CHIP 47 5%	1/10W
L1704	1-457-374-21	COIL, COMMON MODE CHOKE		R332	1-216-805-11	METAL CHIP 47 5%	1/10W
L2101	1-457-374-21	COIL, COMMON MODE CHOKE		R333	1-216-864-11	SHORT CHIP 0	
L3000	1-469-527-91	INDUCTOR 47uH		R334	1-216-809-11	METAL CHIP 100 5%	1/10W
L3051	1-469-525-91	INDUCTOR 10uH		R335	1-216-830-11	METAL CHIP 5.6K 5%	1/10W
L3052	1-469-525-91	INDUCTOR 10uH		R337	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ170/DZ171/DZ175)
L3053	1-469-525-91	INDUCTOR 10uH		R338	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ170/DZ171/DZ175)
L3101	1-457-579-11	COIL, CHOKE 10uH		R340	1-216-809-11	METAL CHIP 100 5%	1/10W
L3151	1-457-579-11	COIL, CHOKE 10uH		R341	1-216-809-11	METAL CHIP 100 5%	1/10W (DZ310/DZ510/DZ610/DZ810)
L3201	1-457-579-11	COIL, CHOKE 10uH					
L3251	1-457-579-11	COIL, CHOKE 10uH					
L3301	1-457-579-11	COIL, CHOKE 10uH					
L3401	1-457-579-11	COIL, CHOKE 10uH					
L3901	1-457-078-11	COIL, AIR-CORE					
L3902	1-457-077-11	COIL, AIR-CORE					
L3903	1-457-078-11	COIL, AIR-CORE					
L3904	1-457-077-11	COIL, AIR-CORE					
L3905	1-457-078-11	COIL, AIR-CORE					
L3906	1-457-077-11	COIL, AIR-CORE					
L3907	1-457-078-11	COIL, AIR-CORE					

Note: When IC1103 and IC1501 on the Main board are damaged, exchange the new Main board for the Main board which IC damaged.

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

MAIN

Ref. No.	Part No.	Description	Quantity	Remark	Ref. No.	Part No.	Description	Quantity	Remark
R342	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ510/DZ610/DZ810)	R531	1-216-827-11	METAL CHIP	3.3K	5% 1/10W (E3,E15)
R359	1-216-864-11	SHORT CHIP	0		R531	1-218-867-11	METAL CHIP	6.8K	0.5% 1/10W (E12)
R360	1-216-864-11	SHORT CHIP	0		R531	1-216-833-11	METAL CHIP	10K	5% 1/10W (EA)
R363	1-216-833-11	METAL CHIP	10K	5% 1/10W	R531	1-216-841-11	METAL CHIP	47K	5% 1/10W (US,CND,E32)
R365	1-216-833-11	METAL CHIP	10K	5% 1/10W	R532	1-216-833-11	METAL CHIP	10K	5% 1/10W (E32)
R368	1-216-809-11	METAL CHIP	100	5% 1/10W	R532	1-216-837-11	METAL CHIP	22K	5% 1/10W (DZ170/DZ171/DZ175)
R370	1-216-857-11	METAL CHIP	1M	5% 1/10W	R532	1-216-841-11	METAL CHIP	47K	5% 1/10W (E3,E12,E15,EA)
R371	1-216-815-11	METAL CHIP	330	5% 1/10W	R534	1-216-821-11	METAL CHIP	1K	5% 1/10W
R373	1-216-809-11	METAL CHIP	100	5% 1/10W	R535	1-216-821-11	METAL CHIP	1K	5% 1/10W (DZ170/DZ171)
R376	1-216-864-11	SHORT CHIP	0		R535	1-216-827-11	METAL CHIP	3.3K	5% 1/10W (DZ310)
R392	1-216-833-11	METAL CHIP	10K	5% 1/10W	R535	1-216-839-11	METAL CHIP	33K	5% 1/10W (DZ175)
R393	1-216-833-11	METAL CHIP	10K	5% 1/10W	R535	1-216-841-11	METAL CHIP	47K	5% 1/10W (DZ510/DZ610/DZ810)
R394	1-216-809-11	METAL CHIP	100	5% 1/10W	R536	1-216-827-11	METAL CHIP	3.3K	5% 1/10W (DZ810)
R403	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ810)	R536	1-216-837-11	METAL CHIP	22K	5% 1/10W (DZ610)
R409	1-216-809-11	METAL CHIP	100	5% 1/10W	R536	1-216-839-11	METAL CHIP	33K	5% 1/10W (DZ510)
R410	1-216-809-11	METAL CHIP	100	5% 1/10W	R536	1-216-841-11	METAL CHIP	47K	5% 1/10W (DZ175/DZ310)
R412	1-216-809-11	METAL CHIP	100	5% 1/10W	R540	1-216-809-11	METAL CHIP	100	5% 1/10W
R413	1-216-809-11	METAL CHIP	100	5% 1/10W	R541	1-216-833-11	METAL CHIP	10K	5% 1/10W
R471	1-216-864-11	SHORT CHIP	0		R542	1-216-833-11	METAL CHIP	10K	5% 1/10W
R472	1-216-801-11	METAL CHIP	22	5% 1/10W	R543	1-216-809-11	METAL CHIP	100	5% 1/10W
R473	1-216-801-11	METAL CHIP	22	5% 1/10W	R544	1-216-809-11	METAL CHIP	100	5% 1/10W
R474	1-216-801-11	METAL CHIP	22	5% 1/10W	R545	1-216-833-11	METAL CHIP	10K	5% 1/10W
R479	1-216-805-11	METAL CHIP	47	5% 1/10W	R548	1-216-833-11	METAL CHIP	10K	5% 1/10W
R480	1-216-805-11	METAL CHIP	47	5% 1/10W	R549	1-216-833-11	METAL CHIP	10K	5% 1/10W
R481	1-216-805-11	METAL CHIP	47	5% 1/10W	R550	1-216-833-11	METAL CHIP	10K	5% 1/10W
R482	1-216-805-11	METAL CHIP	47	5% 1/10W	R553	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ310/DZ510/DZ610/DZ810)
R483	1-216-805-11	METAL CHIP	47	5% 1/10W (EXCEPT DZ810)	R554	1-216-821-11	METAL CHIP	1K	5% 1/10W
R486	1-216-805-11	METAL CHIP	47	5% 1/10W (EXCEPT DZ810)	R555	1-234-372-11	RES, NETWORK	100X4 (1005)	
R487	1-216-805-11	METAL CHIP	47	5% 1/10W	R563	1-216-833-11	METAL CHIP	10K	5% 1/10W
R488	1-216-864-11	SHORT CHIP	0		R564	1-216-864-11	SHORT CHIP	0	
R489	1-216-805-11	METAL CHIP	47	5% 1/10W (DZ810)	R569	1-216-821-11	METAL CHIP	1K	5% 1/10W
R489	1-216-864-11	SHORT CHIP	0	(EXCEPT DZ810)	R572	1-216-833-11	METAL CHIP	10K	5% 1/10W
R490	1-216-805-11	METAL CHIP	47	5% 1/10W (DZ810)	R574	1-216-864-11	SHORT CHIP	0	(DZ310/DZ510/DZ610/DZ810)
R490	1-216-864-11	SHORT CHIP	0	(EXCEPT DZ810)	R577	1-216-833-11	METAL CHIP	10K	5% 1/10W
R501	1-216-817-11	METAL CHIP	470	5% 1/10W (DZ170/DZ171/DZ175)	R579	1-216-829-11	METAL CHIP	4.7K	5% 1/10W
R502	1-218-285-11	METAL CHIP	75	5% 1/10W (DZ170/DZ171/DZ175)	R581	1-216-829-11	METAL CHIP	4.7K	5% 1/10W
R504	1-216-841-11	METAL CHIP	47K	5% 1/10W (DZ170/DZ171/DZ175)	R582	1-216-841-11	METAL CHIP	47K	5% 1/10W
R505	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ170/DZ171/DZ175)	R583	1-216-829-11	METAL CHIP	4.7K	5% 1/10W
R506	1-216-809-11	METAL CHIP	100	5% 1/10W (EXCEPT DZ310)	R584	1-216-829-11	METAL CHIP	4.7K	5% 1/10W
R507	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R585	1-216-833-11	METAL CHIP	10K	5% 1/10W
R509	1-216-809-11	METAL CHIP	100	5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R591	1-216-833-11	METAL CHIP	10K	5% 1/10W
R511	1-234-372-11	RES, NETWORK	100X4 (1005)		R592	1-216-833-11	METAL CHIP	10K	5% 1/10W
R512	1-234-372-11	RES, NETWORK	100X4 (1005)		R596	1-216-845-11	METAL CHIP	100K	5% 1/10W
R519	1-234-372-11	RES, NETWORK	100X4 (1005)		R597	1-216-841-11	METAL CHIP	47K	5% 1/10W
R523	1-216-864-11	SHORT CHIP	0	(DZ310/DZ510/DZ610/DZ810)	R598	1-216-841-11	METAL CHIP	47K	5% 1/10W
R524	1-216-864-11	SHORT CHIP	0	(DZ310/DZ510/DZ610/DZ810)	R599	1-216-833-11	METAL CHIP	10K	5% 1/10W
R531	1-216-821-11	METAL CHIP	1K	5% 1/10W (SP)	R600	1-216-809-11	METAL CHIP	100	5% 1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R602	1-216-809-11	METAL CHIP	100 5% 1/10W	R1151	1-216-833-11	METAL CHIP	10K 5% 1/10W
R603	1-234-372-11	RES, NETWORK	100X4 (1005)	R1154	1-216-809-11	METAL CHIP	100 5% 1/10W
R607	1-216-809-11	METAL CHIP	100 5% 1/10W	R1155	1-216-809-11	METAL CHIP	100 5% 1/10W
R609	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1156	1-216-809-11	METAL CHIP	100 5% 1/10W
R614	1-216-809-11	METAL CHIP	100 5% 1/10W	R1159	1-216-805-11	METAL CHIP	47 5% 1/10W
R615	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1160	1-216-805-11	METAL CHIP	47 5% 1/10W
R620	1-218-851-11	METAL CHIP	1.5K 0.5% 1/10W	R1161	1-216-801-11	METAL CHIP	22 5% 1/10W
R621	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1162	1-216-805-11	METAL CHIP	47 5% 1/10W
R622	1-218-885-11	METAL CHIP	39K 0.5% 1/10W	R1163	1-216-805-11	METAL CHIP	47 5% 1/10W
R623	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1164	1-216-805-11	METAL CHIP	47 5% 1/10W
R624	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1165	1-216-805-11	METAL CHIP	47 5% 1/10W
R625	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1171	1-216-809-11	METAL CHIP	100 5% 1/10W
R626	1-218-871-11	METAL CHIP	10K 0.5% 1/10W	R1176	1-216-833-11	METAL CHIP	10K 5% 1/10W
R627	1-216-809-11	METAL CHIP	100 5% 1/10W	R1183	1-216-805-11	METAL CHIP	47 5% 1/10W
R628	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1184	1-216-805-11	METAL CHIP	47 5% 1/10W
R629	1-216-809-11	METAL CHIP	100 5% 1/10W	R1185	1-216-805-11	METAL CHIP	47 5% 1/10W
R636	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1186	1-216-821-11	METAL CHIP	1K 5% 1/10W
R638	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1191	1-216-821-11	METAL CHIP	1K 5% 1/10W
R640	1-216-809-11	METAL CHIP	100 5% 1/10W	R1192	1-216-821-11	METAL CHIP	1K 5% 1/10W
R701	1-216-833-11	METAL CHIP	10K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1193	1-216-821-11	METAL CHIP	1K 5% 1/10W
R711	1-216-849-11	METAL CHIP	220K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1198	1-216-809-11	METAL CHIP	100 5% 1/10W
R712	1-216-864-11	SHORT CHIP	0 (DZ310/DZ510/DZ610/DZ810)	R1501	1-216-821-11	METAL CHIP	1K 5% 1/10W
R713	1-216-817-11	METAL CHIP	470 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1502	1-216-821-11	METAL CHIP	1K 5% 1/10W
R715	1-216-841-11	METAL CHIP	47K 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1503	1-216-821-11	METAL CHIP	1K 5% 1/10W
R717	1-216-807-11	METAL CHIP	68 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1504	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R718	1-216-807-11	METAL CHIP	68 5% 1/10W (DZ310/DZ510/DZ610/DZ810)	R1507	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1101	1-216-809-11	METAL CHIP	100 5% 1/10W	R1508	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1103	1-218-864-11	METAL CHIP	5.1K 0.5% 1/10W	R1512	1-218-887-11	METAL CHIP	47K 0.5% 1/10W
R1105	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1513	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R1106	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1517	1-216-815-11	METAL CHIP	330 5% 1/10W
R1107	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1518	1-218-883-11	METAL CHIP	33K 0.5% 1/10W
R1108	1-216-857-11	METAL CHIP	1M 5% 1/10W	R1519	1-218-877-11	METAL CHIP	18K 0.5% 1/10W
R1109	1-216-864-11	SHORT CHIP	0	R1521	1-218-893-11	METAL CHIP	82K 0.5% 1/10W
R1110	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1525	1-218-875-11	METAL CHIP	15K 0.5% 1/10W
R1111	1-216-809-11	METAL CHIP	100 5% 1/10W	R1526	1-216-835-11	METAL CHIP	15K 5% 1/10W
R1112	1-211-977-11	METAL CHIP	22 0.5% 1/10W	R1527	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1113	1-211-977-11	METAL CHIP	22 0.5% 1/10W	R1529	1-216-864-11	SHORT CHIP	0
R1114	1-216-845-11	METAL CHIP	100K 5% 1/10W	R1532	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1115	1-211-977-11	METAL CHIP	22 0.5% 1/10W	R1535	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R1116	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1536	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R1117	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1537	1-218-853-11	METAL CHIP	1.8K 0.5% 1/10W
R1118	1-216-801-11	METAL CHIP	22 5% 1/10W	R1538	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R1120	1-216-801-11	METAL CHIP	22 5% 1/10W	R1539	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R1121	1-216-801-11	METAL CHIP	22 5% 1/10W	R1540	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
R1123	1-216-864-11	SHORT CHIP	0	R1541	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R1124	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1542	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
R1125	1-216-805-11	METAL CHIP	47 5% 1/10W	R1543	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1132	1-216-845-11	METAL CHIP	100K 5% 1/10W	R1544	1-216-797-11	METAL CHIP	10 5% 1/10W
R1133	1-216-864-11	SHORT CHIP	0	R1605	1-216-809-11	METAL CHIP	100 5% 1/10W (DZ170/DZ171/DZ175)
R1135	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1730	1-216-826-11	METAL CHIP	2.7K 5% 1/10W
R1136	1-216-835-11	METAL CHIP	15K 5% 1/10W	R1742	1-216-841-11	METAL CHIP	47K 5% 1/10W
R1140	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R1743	1-216-864-11	SHORT CHIP	0 (DZ810)
R1141	1-216-855-11	METAL CHIP	680K 5% 1/10W	R1744	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT DZ810)
R1142	1-216-845-11	METAL CHIP	100K 5% 1/10W	R1749	1-216-824-11	METAL CHIP	1.8K 5% 1/10W
R1146	1-216-805-11	METAL CHIP	47 5% 1/10W	R1750	1-216-824-11	METAL CHIP	1.8K 5% 1/10W
				R1751	1-216-864-11	SHORT CHIP	0
				R1752	1-216-821-11	METAL CHIP	1K 5% 1/10W
				R1757	1-216-864-11	SHORT CHIP	0
				R1781	1-216-827-11	METAL CHIP	3.3K 5% 1/10W

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R1782	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R3045	1-216-864-11	SHORT CHIP	0		
R2101	1-218-841-11	METAL CHIP	560	0.5%	1/10W	R3051	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2103	1-216-864-11	SHORT CHIP	0		(DZ310/DZ510/DZ610/DZ810)	R3052	1-216-857-11	METAL CHIP	1M	5%	1/10W
R2110	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	R3053	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2114	1-216-801-11	METAL CHIP	22	5%	1/10W	R3054	1-216-805-11	METAL CHIP	47	5%	1/10W
R2115	1-216-864-11	SHORT CHIP	0			R3059	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2120	1-216-809-11	METAL CHIP	100	5%	1/10W	R3060	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2129	1-216-845-11	METAL CHIP	100K	5%	1/10W	R3065	1-216-809-11	METAL CHIP	100	5%	1/10W
R2130	1-216-809-11	METAL CHIP	100	5%	1/10W	R3074	1-216-805-11	METAL CHIP	47	5%	1/10W
R2131	1-216-809-11	METAL CHIP	100	5%	1/10W	R3075	1-216-805-11	METAL CHIP	47	5%	1/10W
R2136	1-216-805-11	METAL CHIP	47	5%	1/10W	R3076	1-216-805-11	METAL CHIP	47	5%	1/10W
R2150	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R3080	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2151	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R3091	1-216-864-11	SHORT CHIP	0		
R2152	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R3092	1-216-864-11	SHORT CHIP	0		
R2155	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3093	1-216-864-11	SHORT CHIP	0		
R2156	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3094	1-216-864-11	SHORT CHIP	0		
R2157	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3095	1-216-864-11	SHORT CHIP	0		
R2158	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3096	1-216-864-11	SHORT CHIP	0		
R2159	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3101	1-216-805-11	METAL CHIP	47	5%	1/10W
R2160	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3102	1-216-805-11	METAL CHIP	47	5%	1/10W
R2167	1-216-864-11	SHORT CHIP	0			R3103	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2168	1-216-815-11	METAL CHIP	330	5%	1/10W	R3104	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2178	1-216-821-11	METAL CHIP	1K	5%	1/10W	R3105	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2179	1-216-809-11	METAL CHIP	100	5%	1/10W	R3121	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2180	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3122	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2184	1-216-809-11	METAL CHIP	100	5%	1/10W	R3123	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R2185	1-216-809-11	METAL CHIP	100	5%	1/10W	R3126	1-216-864-11	SHORT CHIP	0		
R2191	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3151	1-216-805-11	METAL CHIP	47	5%	1/10W
R2192	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3152	1-216-805-11	METAL CHIP	47	5%	1/10W
R2193	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3153	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2194	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3154	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3001	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3155	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3002	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3201	1-216-805-11	METAL CHIP	47	5%	1/10W
R3003	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R3202	1-216-805-11	METAL CHIP	47	5%	1/10W
R3004	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R3203	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3006	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3204	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3010	1-216-817-11	METAL CHIP	470	5%	1/10W	R3205	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3011	1-216-805-11	METAL CHIP	47	5%	1/10W	R3221	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3012	1-216-817-11	METAL CHIP	470	5%	1/10W	R3222	1-216-837-11	METAL CHIP	22K	5%	1/10W
R3013	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3223	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R3014	1-216-801-11	METAL CHIP	22	5%	1/10W	R3226	1-216-864-11	SHORT CHIP	0		
R3015	1-216-805-11	METAL CHIP	47	5%	1/10W	R3251	1-216-805-11	METAL CHIP	47	5%	1/10W
R3016	1-216-809-11	METAL CHIP	100	5%	1/10W	R3252	1-216-805-11	METAL CHIP	47	5%	1/10W
R3020	1-216-817-11	METAL CHIP	470	5%	1/10W	R3253	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3021	1-216-805-11	METAL CHIP	47	5%	1/10W	R3254	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3022	1-216-817-11	METAL CHIP	470	5%	1/10W	R3255	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3024	1-216-801-11	METAL CHIP	22	5%	1/10W	R3301	1-216-805-11	METAL CHIP	47	5%	1/10W
R3025	1-216-805-11	METAL CHIP	47	5%	1/10W	R3302	1-216-805-11	METAL CHIP	47	5%	1/10W
R3026	1-216-809-11	METAL CHIP	100	5%	1/10W	R3303	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3030	1-216-817-11	METAL CHIP	470	5%	1/10W	R3304	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3032	1-216-817-11	METAL CHIP	470	5%	1/10W	R3305	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3033	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3321	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3034	1-216-801-11	METAL CHIP	22	5%	1/10W	R3322	1-216-837-11	METAL CHIP	22K	5%	1/10W
R3035	1-216-805-11	METAL CHIP	47	5%	1/10W	R3323	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R3036	1-216-809-11	METAL CHIP	100	5%	1/10W	R3326	1-216-864-11	SHORT CHIP	0		
R3040	1-216-864-11	SHORT CHIP	0			R3401	1-216-805-11	METAL CHIP	47	5%	1/10W
R3041	1-216-864-11	SHORT CHIP	0			R3402	1-216-805-11	METAL CHIP	47	5%	1/10W
R3042	1-216-864-11	SHORT CHIP	0			R3403	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3043	1-216-864-11	SHORT CHIP	0			R3404	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3044	1-216-864-11	SHORT CHIP	0			R3405	1-216-845-11	METAL CHIP	100K	5%	1/10W

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

POWER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
△ C963	1-112-869-51	CERAMIC	470PF 10% 250V (DZ310/DZ510/DZ610/DZ810)	DZ954	8-719-083-71	DIODE UDZSUSTE-1730B (DZ310/DZ510/DZ610/DZ810)	
△ C963	1-112-870-51	CERAMIC	0.001uF 20% 250V (DZ170/DZ171/DZ175)			< FUSE >	
△ C964	1-112-869-51	CERAMIC	470PF 10% 250V (DZ310/DZ510/DZ610/DZ810)	△ F945	1-576-794-11	FUSE, MICRO (1608) 2A	
△ C964	1-112-870-51	CERAMIC	0.001uF 20% 250V (DZ170/DZ171/DZ175)			< FUSE HOLDER >	
C971	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	FH901	1-533-217-41	HOLDER, FUSE	
C972	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V	FH902	1-533-217-41	HOLDER, FUSE	
C973	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V			< RESISTOR >	
C975	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V				
C976	1-126-933-11	ELECT	100uF 20% 16V	△ FR929	1-246-373-11	FUSIBLE 1 10% 1/2W F	
△ C980	1-117-828-11	FILM	0.0033uF 3% 1.5KV (DZ170/DZ171/DZ175)			< IC >	
C981	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	△ IC901	6-707-741-01	IC STR-F6138-LF1352 (DZ170/DZ171/DZ175)	
C983	1-100-756-91	CERAMIC CHIP	0.047uF 10% 50V	△ IC901	6-707-742-01	IC STR-F6168-LF1352 (DZ310/DZ510/DZ610/DZ810)	
C984	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	IC921	(Not supplied)	IC STR-Y6763	
C987	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V (DZ810)	IC923	6-711-947-01	IC MM1431CURE	
C990	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V	IC932	6-711-947-01	IC MM1431CURE	
C991	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V	IC941	6-712-613-01	IC SI-3010KM-TLS	
C992	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V			< COIL >	
C993	1-100-566-91	CERAMIC CHIP	0.1uF 10% 25V	L931	1-457-878-65	COIL, CHOKE 2.2uH	
△ C994	1-112-869-51	CERAMIC	470PF 10% 250V (DZ310/DZ510/DZ610)	L954	1-457-578-11	COIL, CHOKE 10uH	
C997	1-116-078-11	CERAMIC CHIP	1uF 10% 50V	L956	1-457-578-11	COIL, CHOKE 10uH	
C998	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	L963	1-469-525-91	INDUCTOR 10uH	
		< CONNECTOR >		L964	1-457-725-11	COIL, CHOKE 4.7uH	
CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P		L967	1-457-725-11	COIL, CHOKE 4.7uH	
CN904	1-785-102-11	PIN, CONNECTOR (3.96mm PITCH) 4P				< LINE FILTER >	
* CN906	1-764-334-11	PLUG, CONNECTOR 11P		△ LF901	1-457-054-21	COIL, LINE FILTER (E3,E12,SP,E15,EA)	
CN908	1-564-505-11	PLUG, CONNECTOR 2P (DZ810)		△ LF901	1-457-449-11	COIL, LINE FILTER (US,CND,E32)	
		< DIODE >		△ LF902	1-457-054-21	COIL, LINE FILTER (E3,E12,SP,E15,EA)	
D901	8-719-082-57	DIODE D5SBA60F01		△ LF902	1-457-449-11	COIL, LINE FILTER (US,CND,E32)	
D902	8-719-063-74	DIODE D1NL20U-TR2				< PHOTO COUPLER >	
D906	6-501-817-01	DIODE MA2J1110GLS0		△ PC901	6-600-276-01	PHOTO COUPLER PS2561AL1-1-V-W	
D907	6-501-817-01	DIODE MA2J1110GLS0		△ PC902	6-600-276-01	PHOTO COUPLER PS2561AL1-1-V-W	
D908	6-501-817-01	DIODE MA2J1110GLS0		△ PC903	6-600-276-01	PHOTO COUPLER PS2561AL1-1-V-W	
D909	6-501-817-01	DIODE MA2J1110GLS0				< TRANSISTOR >	
D910	6-501-817-01	DIODE MA2J1110GLS0		Q901	8-729-201-53	TRANSISTOR 2SA1015-GR	
D913	6-500-241-01	DIODE SARS03		Q922	6-550-702-01	TRANSISTOR 2SC3243-TP-E	
D914	6-501-817-01	DIODE MA2J1110GLS0		Q943	8-729-029-14	TRANSISTOR DTC144EUA-T106	
D931	6-501-849-01	DIODE FMX-22SL		Q945	6-552-458-01	FET 2SK3577	
D942	6-502-518-01	DIODE 50PQSA065-FA9		Q949	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
D943	8-719-080-53	DIODE RK36LF-B3		Q950	8-729-029-14	TRANSISTOR DTC144EUA-T106	
D946	6-502-234-01	DIODE EG01C LF-F7 (DZ810)		Q969	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
D946	8-719-030-25	DIODE EG01CV0 (EXCEPT DZ810)				< RESISTOR >	
D954	6-500-288-11	DIODE EK19LF-F7 (DZ810)		△ R901	1-219-759-11	METAL 1M 5% 1/2W F (DZ170/DZ171/DZ175)	
D954	8-719-080-59	DIODE EK19-V0 (EXCEPT DZ810)		△ R901	1-240-938-91	METAL 1.5M 5% 1/2W F (DZ310/DZ510/DZ610/DZ810)	
D955	6-500-288-11	DIODE EK19LF-F7 (DZ810)		△ R903	1-250-297-65	METAL OXIDE 100K 5% 3W F (DZ310/DZ510/DZ610/DZ810)	
D955	8-719-080-59	DIODE EK19-V0 (EXCEPT DZ810)		△ R903	1-250-299-65	METAL OXIDE 33K 5% 3W F (DZ170/DZ171/DZ175)	
DZ901	6-501-782-01	DIODE MAZ8180GMLS0					
DZ902	6-502-231-01	DIODE MAZ8220GLLS0					
DZ903	6-501-787-01	DIODE MAZ8220GMLS0					
DZ905	6-501-792-01	DIODE MAZ8300GMLS0 (DZ310/DZ510/DZ610/DZ810)					
DZ905	8-719-083-71	DIODE UDZSUSTE-1730B (DZ170/DZ171/DZ175)					
DZ915	6-501-760-01	DIODE MAZ8100GMLS0					
DZ951	8-719-083-71	DIODE UDZSUSTE-1730B					

Note: When IC921 on the Power board is damaged, exchange the new Power board for the Power board which IC damaged.

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

POWER
S-AIR CON
SPEAKER

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
△ R904	1-250-297-65	METAL OXIDE	100K	5%	3W	F			< TRANSFORMER >				
			(DZ310/DZ510/DZ610/DZ810)										
△ R904	1-250-299-65	METAL OXIDE	33K	5%	3W	F	△ T901	1-443-649-11	TRANSFORMER, CONVERTER (DZ170/DZ171/DZ175)				
			(DZ170/DZ171/DZ175)										
R905	1-216-797-11	METAL CHIP	10	5%	1/10W		△ T901	1-443-874-11	TRANSFORMER, CONVERTER (DZ310/DZ510/DZ610/DZ810)				
R906	1-216-827-11	METAL CHIP	3.3K	5%	1/10W								
R907	1-216-833-11	METAL CHIP	10K	5%	1/10W		△ T903	1-445-320-11	TRANSFORMER, CONVERTER				
									< THERMISTOR >				
R908	1-216-829-11	METAL CHIP	4.7K	5%	1/10W								
R909	1-216-833-11	METAL CHIP	10K	5%	1/10W		△ TH901	1-805-841-21	THERMISTOR, NTC 3.0 (US,CND,E32)				
R910	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		△ TH901	1-805-842-21	THERMISTOR, NTC 6.0 (E3,E12,SP,E15,EA)				
R911	1-216-813-11	METAL CHIP	220	5%	1/10W				< VARISTOR >				
△ R912	1-216-363-00	METAL OXIDE	0.33	5%	2W	F							
			(DZ310/DZ510/DZ610/DZ810)										
△ R914	1-220-891-11	METAL	0.1	10%	5W	F	△ VDR901	1-802-839-11	VARISTOR				
			(DZ310/DZ510/DZ610/DZ810)						*****				
△ R914	1-248-180-11	METAL	0.034	5%	5W	F			S-AIR CON BOARD (DZ810)				
			(DZ170/DZ171/DZ175)						*****				
△ R916	1-250-297-65	METAL OXIDE	100K	5%	3W	F			< CONNECTOR >				
R917	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		CN100	1-779-550-21	CONNECTOR, FFC (LIF (NON-ZIF)) 13P				
R919	1-216-837-11	METAL CHIP	22K	5%	1/10W		CN102	1-564-517-11	PLUG, CONNECTOR 2P				
								CN103	1-821-744-11	CONNECTOR, CARD EDGE 30P (EZW-T100)			
△ R922	1-250-262-41	METAL	0.39	5%	2W	F			< TRANSISTOR >				
R923	1-218-879-11	METAL CHIP	22K	0.5%	1/10W		Q100	8-729-029-14	TRANSISTOR DTC144EUA-T106				
R925	1-216-797-11	METAL CHIP	10	5%	1/10W		Q101	6-550-363-01	TRANSISTOR 2SB1690KT146				
R926	1-218-847-11	METAL CHIP	1K	0.5%	1/10W				< RESISTOR >				
R931	1-218-851-11	METAL CHIP	1.5K	0.5%	1/10W								
R932	1-218-879-11	METAL CHIP	22K	0.5%	1/10W		R100	1-216-817-11	METAL CHIP	470	5%	1/10W	
R933	1-216-821-11	METAL CHIP	1K	5%	1/10W		R101	1-216-817-11	METAL CHIP	470	5%	1/10W	
R934	1-216-821-11	METAL CHIP	1K	5%	1/10W		R102	1-216-817-11	METAL CHIP	470	5%	1/10W	
R935	1-216-821-11	METAL CHIP	1K	5%	1/10W		R103	1-216-841-11	METAL CHIP	47K	5%	1/10W	
R936	1-216-853-11	METAL CHIP	470K	5%	1/10W		R104	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R937	1-218-871-11	METAL CHIP	10K	0.5%	1/10W								
R938	1-218-847-11	METAL CHIP	1K	0.5%	1/10W		R105	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R939	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W		R106	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R940	1-218-871-11	METAL CHIP	10K	0.5%	1/10W		R107	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R941	1-218-895-11	METAL CHIP	100K	0.5%	1/10W		R108	1-216-833-11	METAL CHIP	10K	5%	1/10W	

R942	1-218-871-11	METAL CHIP	10K	0.5%	1/10W				SPEAKER BOARD				
R945	1-216-837-11	METAL CHIP	22K	5%	1/10W				*****				
R946	1-216-827-11	METAL CHIP	3.3K	5%	1/10W				< CAPACITOR >				
R949	1-216-827-11	METAL CHIP	3.3K	5%	1/10W		C5401	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
R951	1-218-875-11	METAL CHIP	15K	0.5%	1/10W		C5402	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
R952	1-216-864-11	SHORT CHIP	0				C5403	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
R954	1-218-861-11	METAL CHIP	3.9K	0.5%	1/10W		C5404	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
R955	1-216-821-11	METAL CHIP	1K	5%	1/10W		C5405	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
R956	1-216-817-11	METAL CHIP	470	5%	1/10W								
R957	1-216-841-11	METAL CHIP	47K	5%	1/10W		C5406	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
R958	1-216-821-11	METAL CHIP	1K	5%	1/10W		C5407	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
R959	1-218-871-11	METAL CHIP	10K	0.5%	1/10W		C5408	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
R962	1-216-864-11	SHORT CHIP	0						< CONNECTOR >				
R963	1-218-839-11	METAL CHIP	470	0.5%	1/10W		* CN5401	1-564-519-11	PLUG, CONNECTOR 4P				
R965	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W				< COIL >				
R966	1-216-821-11	METAL CHIP	1K	5%	1/10W		L5401	1-457-077-11	COIL, AIR-CORE				
R967	1-216-821-11	METAL CHIP	1K	5%	1/10W		L5402	1-457-078-11	COIL, AIR-CORE				
R972	1-218-871-11	METAL CHIP	10K	0.5%	1/10W		L5403	1-457-077-11	COIL, AIR-CORE				
R974	1-216-827-11	METAL CHIP	3.3K	5%	1/10W		L5404	1-457-078-11	COIL, AIR-CORE				
R976	1-216-833-11	METAL CHIP	10K	5%	1/10W								
R978	1-216-829-11	METAL CHIP	4.7K	5%	1/10W								
R992	1-216-793-11	METAL CHIP	4.7	5%	1/10W								
R998	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W								
R999	1-218-871-11	METAL CHIP	10K	0.5%	1/10W								

HBD-DZ170/DZ171/DZ175/DZ310/DZ510/DZ610/DZ810

SPEAKER **USB**

Ref. No.	Part No.	Description	Remark
		< TERMINAL BOARD >	
TB5401	1-780-452-11	TERMINAL BOARD (SPEAKER) 2P (SPEAKERS (SUR R,SUR L))	

		USB BOARD *****	
		< CAPACITOR >	
C5501	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
		< CONNECTOR >	
CN5501	1-822-423-11	CONNECTOR, USB (A) 4P (USB)	
CN5502	1-784-922-11	PIN, CONNECTOR 5P	

		MISCELLANEOUS *****	
102	1-832-579-21	CABLE, FLEXIBLE FLAT (13 CORE) (DZ170/DZ171/DZ175)	
102	1-832-589-21	CABLE, FLEXIBLE FLAT (15 CORE) (DZ310/DZ510/DZ610/DZ810)	
152	1-832-576-21	CABLE, FLEXIBLE FLAT (13 CORE) (DZ810)	
153	1-832-813-21	CABLE, FLEXIBLE FLAT (9 CORE)	
△ 156	1-834-966-41	CORD, POWER-SUPPLY (DZ310/DZ510/DZ610/DZ810)	
△ 156	1-837-308-11	CORD, POWER-SUPPLY (DZ170/DZ171/DZ175)	
△ 157	1-770-019-71	ADAPTOR, CONVERSION PLUG 3P (EA)	
△ 158	1-569-008-33	ADAPTOR, CONVERSION (E32)	
203	1-832-538-21	CABLE, FLEXIBLE FLAT (5 CORE)	
206	1-832-553-21	CABLE, FLEXIBLE FLAT (9 CORE)	
207	1-832-592-21	CABLE, FLEXIBLE FLAT (17 CORE) (DZ170/DZ171/DZ175)	
207	1-832-602-21	CABLE, FLEXIBLE FLAT (19 CORE) (DZ310/DZ510/DZ610/DZ810)	
△ 257	8-820-321-12	OPTICAL PICK-UP (KHM-313CAA/C2RP1)	
258	1-828-773-51	WIRE (FLAT TYPE) (24 CORE)	
△ F901	1-533-311-12	FUSE, GLASS (DIA. 5) (8A/125V) (US,CND)	
△ F901	1-576-232-51	FUSE (H.B.C.) (5A/250V) (E3,E12,SP,E15,EA)	
△ F901	1-576-233-51	FUSE (H.B.C.) (6.3A/250V) (E32)	
FAN3001	1-787-396-21	FAN, DC (50 SQUARE)	
TU901	1-693-780-11	TUNER (FM) (DZ310/DZ510/DZ610/DZ810)	
TU901	1-693-781-11	TUNER (FM) (DZ170/DZ171/DZ175)	

MEMO

