

AV Surround Receiver

SR6011

- For purposes of improvement, specifications and design are subject to change without notice.
- Please use this service manual with referring to the operating instructions without fail.
- Some illustrations using in this service manual are slightly different from the actual set.

Click here!**On-line service parts list**<http://dmedia.dmglobal.com/Document/DocumentDetails/23034>[Online Parts List](#) (P5 to P7)**WEB owner's manual**<http://manuals.marantz.com/SR6011/NA/EN/index.php><http://manuals.marantz.com/SR6011/EU/EN/index.php><http://manuals.marantz.com/SR6011/AP/ZH/index.php>**CAUTION IN SERVICING****ELECTRICAL****MECHANICAL****REPAIR INFORMATION****UPDATING****Please refer to the MODIFICATION NOTICE.**

CAUTION IN SERVICING

SAFETY PRECAUTIONS

NOTE FOR SCHEMATIC DIAGRAM

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INSTRUCTIONS FOR HANDLING SEMICONDUCTORS AND OPTICAL UNIT

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SAFETY PRECAUTIONS

The following items should be checked for continued protection of the customer and the service technician.

Leakage current check

Before returning the set to the customer, be sure to carry out either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the set is defective.

Be sure to test for leakage current with the AC plug in both polarities, in addition, when the set's power is in each state (on, off and standby mode), if applicable.

CAUTION

Please heed the following cautions and instructions during servicing and inspection.

⦿ Heed the cautions!

Cautions which are delicate in particular for servicing are labeled on the cabinets, the parts and the chassis, etc. Be sure to heed these cautions and the cautions described in the handling instructions.

⦿ Cautions concerning electric shock!

- (1) An AC voltage is impressed on this set, so if you touch internal metal parts when the set is energized, you may get an electric shock. Avoid getting an electric shock, by using an isolating transformer and wearing gloves when servicing while the set is energized, or by unplugging the power cord when replacing parts, for example.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

⦿ Caution concerning disassembly and assembly!

Through great care is taken when parts were manufactured from sheet metal, there may be burrs on the edges of parts. The burrs could cause injury if fingers are moved across them in some rare cases. Wear gloves to protect your hands.

⦿ Use only designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). Be sure to use parts which have the same properties for replacement. The burrs have the same properties. In particular, for the important safety parts that are indicated by the \triangle mark on schematic diagrams and parts lists, be sure to use the designated parts.

⦿ Be sure to mount parts and arrange the wires as they were originally placed!

For safety reasons, some parts use tapes, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires by arranging them and using clamps to keep them away from heating and high voltage parts, so be sure to set everything back as it was originally placed.

⦿ Make a safety check after servicing!

Check that all screws, parts and wires removed or disconnected when servicing have been put back in their original positions, check that no serviced parts have deteriorate the area around. Then make an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and on the power. Using a 500V insulation resistance tester, check that the insulation resistance value between the inplug and the externally exposed metal parts (antenna terminal, headphones terminal, input terminal, etc.) is 1M Ω or greater. If it is less, the set must be inspected and repaired.

CAUTION

Concerning important safety parts

Many of the electric and the structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and the use of replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and the parts list in this service manual. Be sure to replace them with the parts which have the designated part number.

- (1) Schematic diagrams Indicated by the \triangle mark.
- (2) Parts lists Indicated by the \triangle mark.

The use of parts other than the designated parts could cause electric shocks, fires or other dangerous situations.

NOTE FOR SCHEMATIC DIAGRAM

WARNING:

Parts indicated by the \triangle mark have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the set to the customer, be sure to carry out either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the set is defective.

WARNING:

DO NOT return the set to the customer unless the problem is identified and remedied.

NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM / M=1,000,000 OHM

ALL CAPACITANCE VALUES ARE EXPRESSED IN MICRO FARAD, UNLESS OTHERWISE INDICATED. P INDICATES MICRO-MICRO FARAD. N INDICATES NANO FARAD. EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

NOTE FOR PARTS LIST

1. Parts indicated by "nsp" on this table cannot be supplied.
2. When ordering a part, make a clear distinction between "1" and "I" (i) to avoid mis-supplying.
3. A part ordered without specifying its part number can not be supplied.
4. Part indicated by "@" mark is not illustrated in the exploded view.

WARNING: Parts indicated by the \triangle mark have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

INSTRUCTIONS FOR HANDLING SEMICONDUCTORS AND OPTICAL UNIT

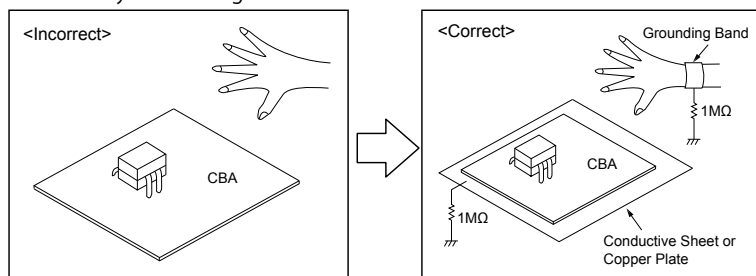
Electrostatic breakdown of the semi-conductors or optical pickup may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band (1 M ohm) that is properly grounded to remove any static electricity that may be charged on the body.

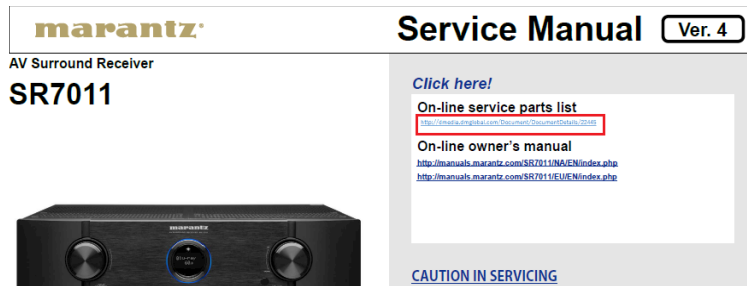
2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 M ohm) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing

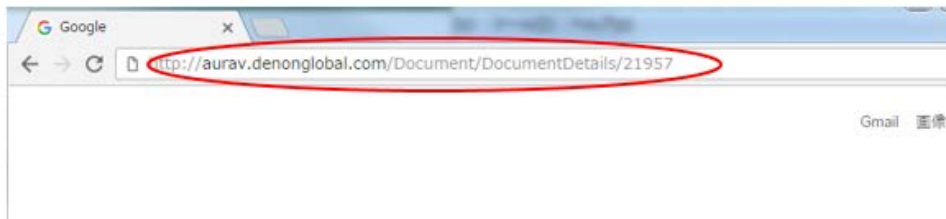


Accessing the Parts List

- (1) Click the URL link on the cover of the service manual.
Examples of display



NOTE: If the web browser does not open automatically, copy the URL and paste it into the address bar of the web browser and then press Enter.



- (2) When the login screen is displayed, enter your username and password.
- (3) Enter the 5 letters shown as the blue CAPTCHA code as single-byte characters.
If the text is unclear, click "**Refresh**" to change the CAPTCHA code, and enter it again.



- (4) Press the "**Login**" button.

Logging in to New SDI and Accessing the Parts List

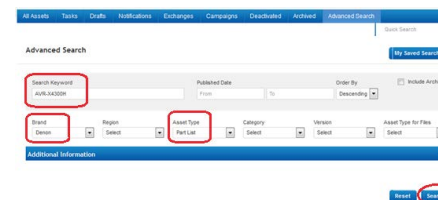
- (1) Access New SDI from the URL below.
<http://dmedia.dmglobal.com>
- (2) When the login screen is displayed, enter your username and password.
- (3) Enter the 5 letters shown as the blue CAPTCHA code as single-byte characters.
If the text is unclear, click "**Refresh**" to change the CAPTCHA code, and enter it again.



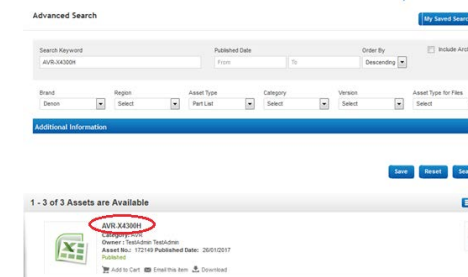
- (4) Press the "**Login**" button.
- (5) When the Home screen is displayed, click "**Advanced Search**".



- (6) Enter the following search conditions and click "**Search**".
Keyword : Model name Brand : brand name Asset Type : Part list

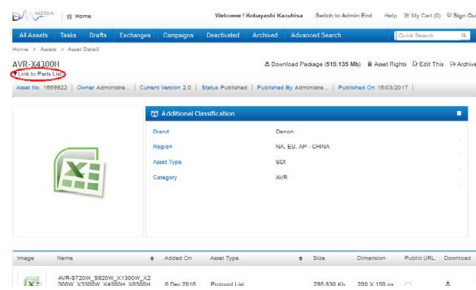


- (7) Click the model name when the search results are displayed.



Accessing the Part List from the Model Asset Screen

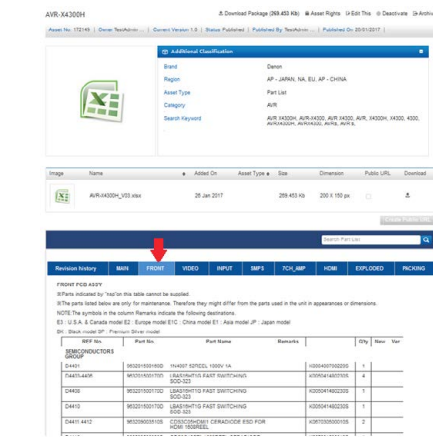
- (1) Display Model Asset from New SDI.
- (2) Click the section displayed as ▼ Link to Part Lists under the model name.



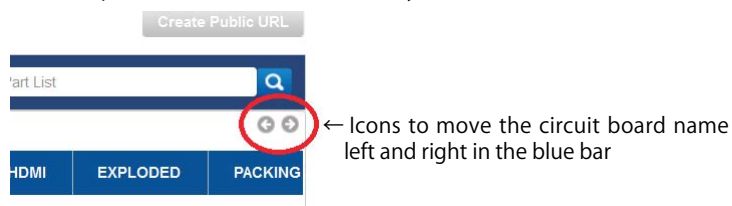
NOTE: If the ▼ Link to Parts List section is not displayed, download the parts table from the Asset list.

PRINTED CIRCUIT BOARDS Parts Table

- (1) Display the Parts List. Click the PCB name in the blue bar to display the parts list for the board.

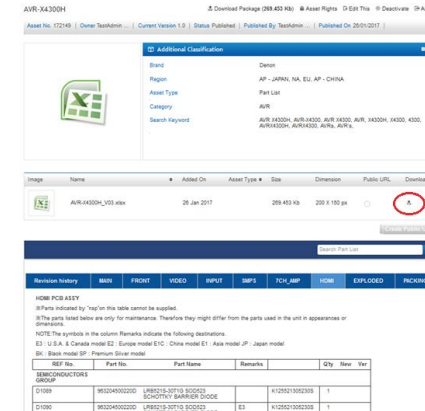


Left and right arrow icons are displayed if the circuit board name does not fit in the blue bar. Click these icons to display a different part of the name when necessary.



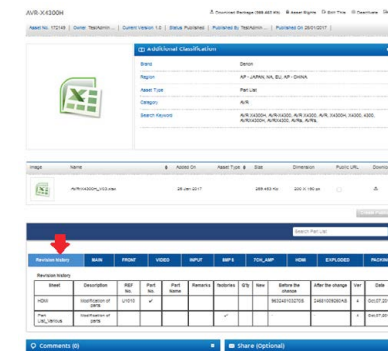
Downloading the Parts List as an Excel File

- (1) Displays the Parts List. Click the Download icon.



Revision History

- (1) Click "Revision history" in the blue bar.



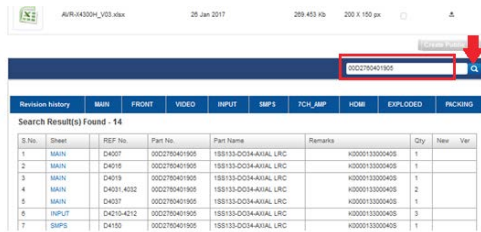
The following details are displayed.

- Sheet : Name of the changed sheet
- Description : Description of the changes
- Remarks : Destination, color information
- Factories : Factory number
- Ver : Version number after revision if changes were made to the parts list
- Date : Date of changes

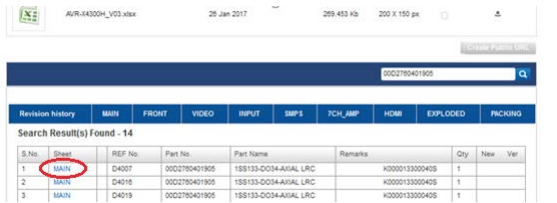
Searching Part Numbers or Ref. Numbers

You can search a Parts List for part numbers or Ref. numbers.

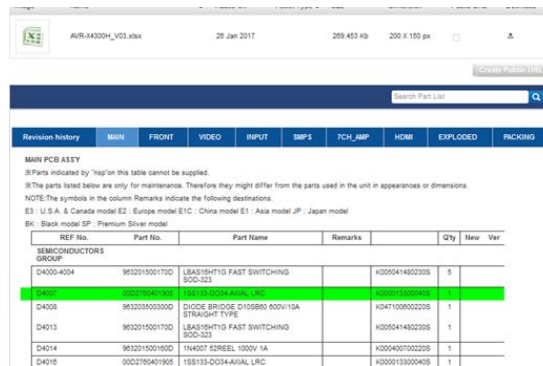
- (1) Enter the part number or Ref. number in the search window of the Parts List, and press the search button.
- (2) The search results are displayed.
The name of the sheet in which the search part is used and the part's line are displayed.



- (3) Next, click the "Sheet" section of the search results.



- (4) The Board Part Table opens and the line on which the searched part number appears is highlighted.



CAUTION IN SERVICING.

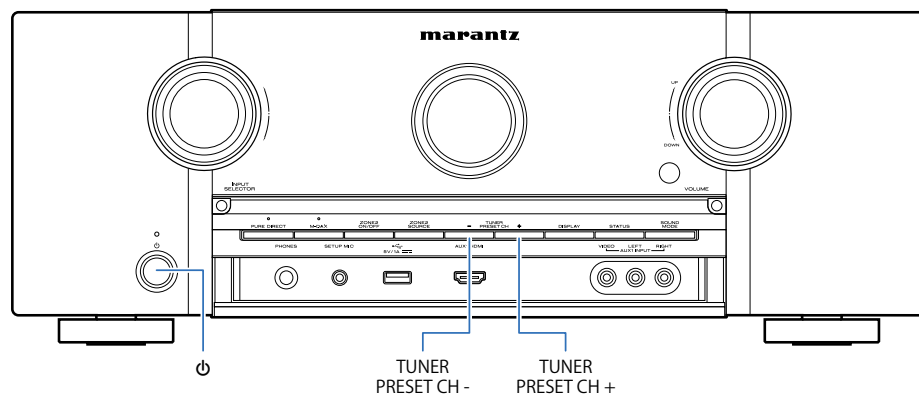
Initializing This Unit

Make sure to initialize this unit after replacing the microcomputer or any peripheral equipment, or the digital PCB.

1. Press the power button to turn off the power.
2. While holding down buttons "**TUNER PRESET CH -**" and "**TUNER PRESET CH +**" simultaneously, press the power button to turn on the power.
3. Release the buttons after confirming that the display flashes at 1-second intervals.
 - * The unit is initialized.

NOTE :

- If the unit fails to enter the service mode in step 3, repeat the procedure from step 1.
- Initializing the device restores the customized settings to the factory settings. Write down your settings in advance and reconfigure the settings after initialization.



JIG FOR SERVICING

Use the following jigs (extension cable kit) when repairing the PCBs.
Order with your dealer for the jigs your dealer if necessary.

- 8U-110084S : EXTENSION UNIT KIT : 1 Set
- 8U-110136S : EXTENSION UNIT KIT : 1 Set

(See [JIG FOR SERVICING](#))

ELECTRICAL

SCHEMATIC DIAGRAMS

SCH01 DIGITAL CONNECT
SCH02 DIGITAL POWER
SCH03 MAIN CPU
SCH04 EXPANDER
SCH05 CPU LEVEL CHG
SCH06 DIR
SCH07 AUDIO PLD
SCH08 DSP1
SCH09 DSP2
SCH10 DSP3
SCH11 DSP4
SCH12 ADC
SCH13 ZONE DAC
SCH14 CY920
SCH15 VIDEO DECODER
SCH16 HDMI SW2
SCH17 HDMI SW1
SCH18 VSP & IP & OSD
SCH19 VIDEO PLD
SCH20 HDMI TX & SCALER
SCH21 INPUT
SCH22 PREOUT
SCH23 HDAM CNT & FHDMI
SCH24 A-VIDEO
SCH25 RC-5
SCH26 RS232C TRIGGER
SCH27 SIDE CNT
SCH28 FRT CNT
SCH29 MAIN DAC1
SCH30 MAIN DAC2
SCH31 SPK
SCH32 REGULATOR
SCH33 5CH AMP
SCH34 4CH AMP

SCH35 FRONT
SCH36 HDAM1
SCH37 HDAM2
SCH38 SMPS

PRINTED CIRCUIT BOARDS

DIGITAL
INPUT, F-HDMI, CONNECT-2, CONNECT-3,
CONNECT-4
VIDEO, SIDE CNT, GUIDE, FRONT CONT FFC
SPK, SPK H2L, GUIDE TRANS, GUIDE TOP, GUIDE SIDE
5CH AMP, 4CH AMP
FRONT, HDMI FFC TOP
FRONT CNT, TUNER, BKT, HDAM, SMPS

LEVEL DIAGRAM

FRONT ch
CENTER / SURROUND ch
SUBWOOFER ch
ASSIGN1 / 2 (SURR.BACK / HEIGHT1 / HEIGHT2) ch
ZONE2 ch

BLOCK DIAGRAM

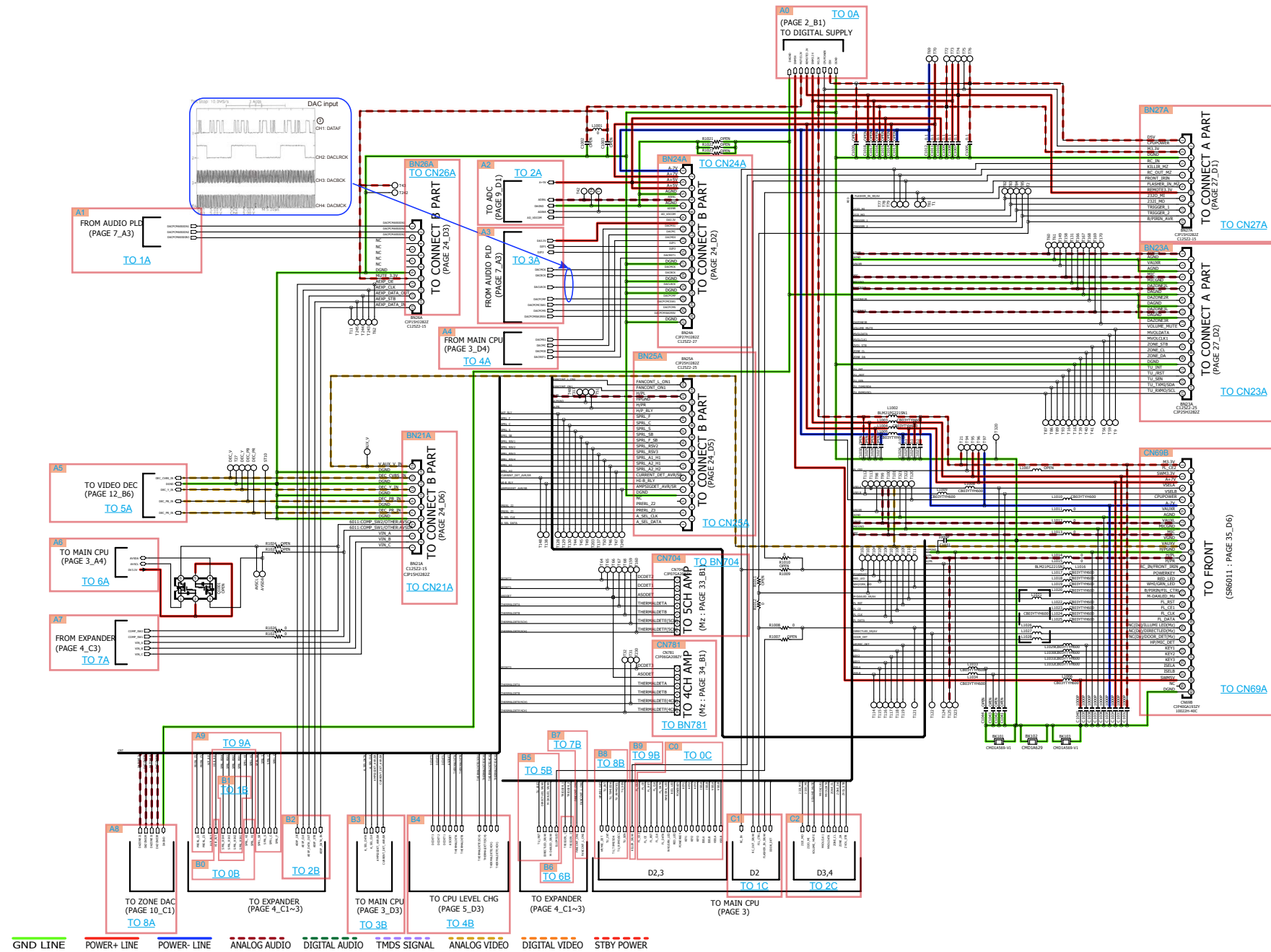
ANALOG AUDIO DIAGRAM
DIGITAL AUDIO DIAGRAM
VIDEO DIAGRAM
HDMI DIAGRAM

POWER DIAGRAM

WIRING DIAGRAM

SEMICONDUCTORS

1. IC's
2. FL DISPLAY



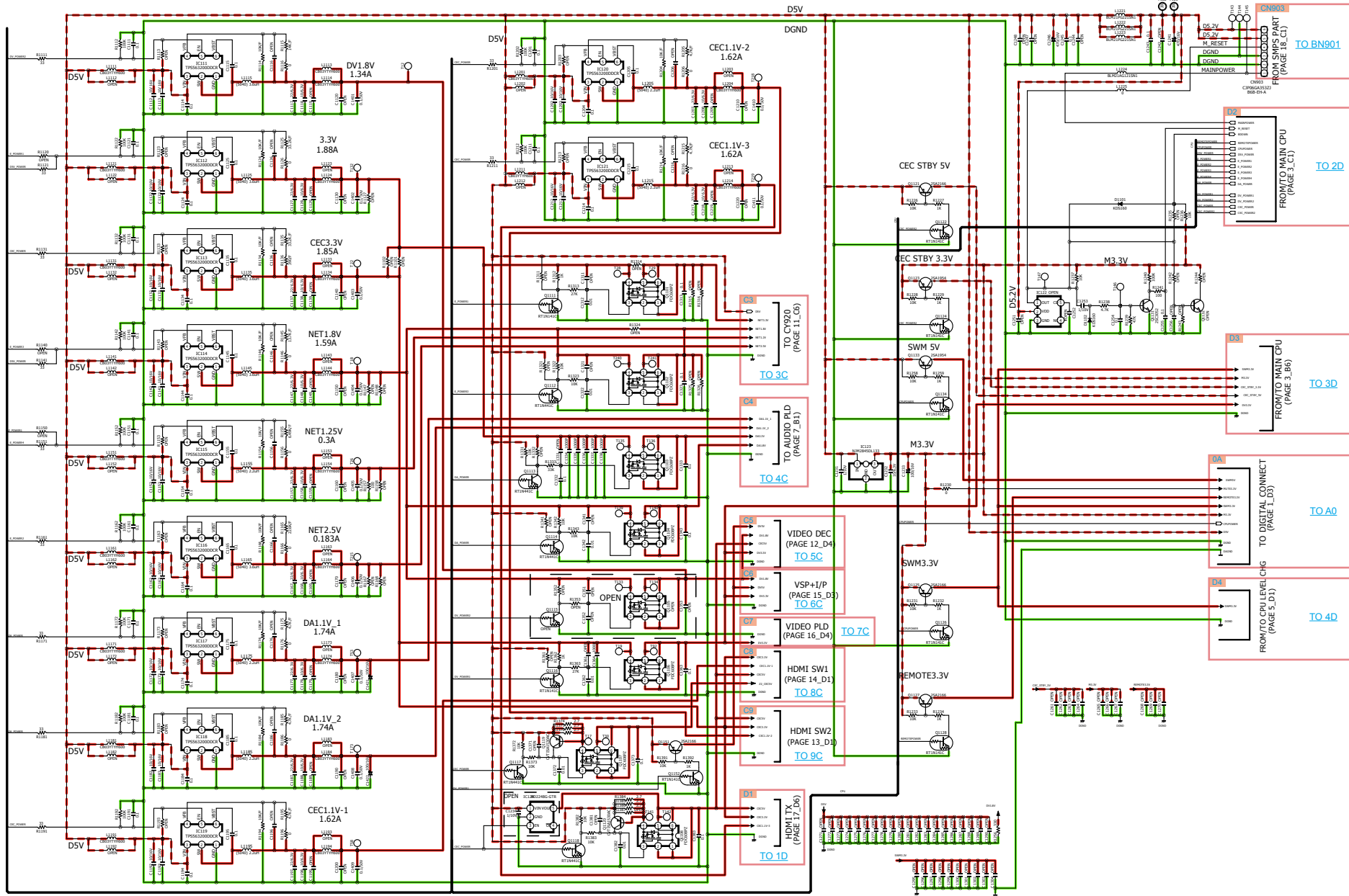
Caution in servicing

Electrical

Mechanical

Repair Information

Updating



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

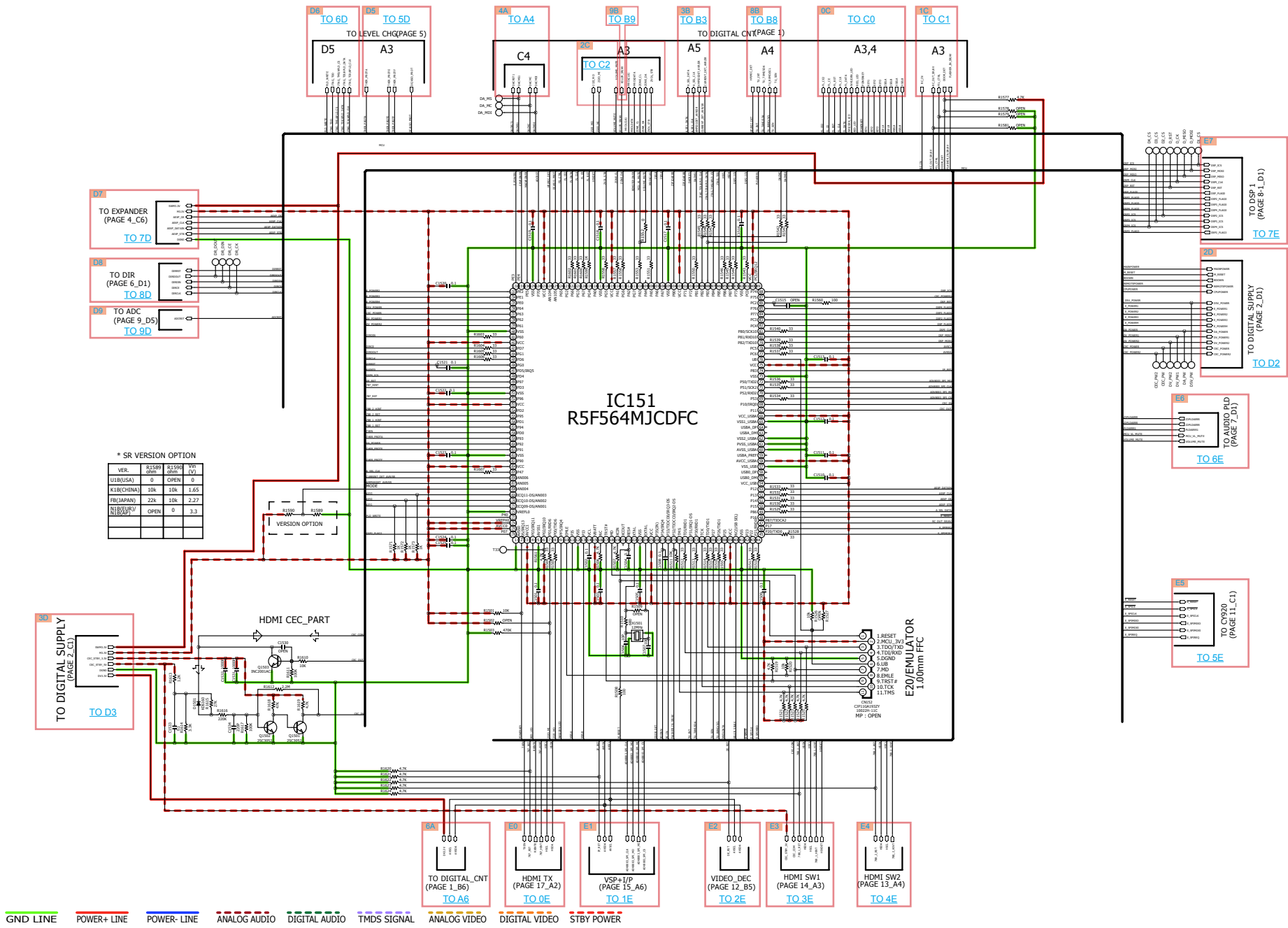
Caution in Servicing

Electrical

Mechanical

Repair Information

Updating



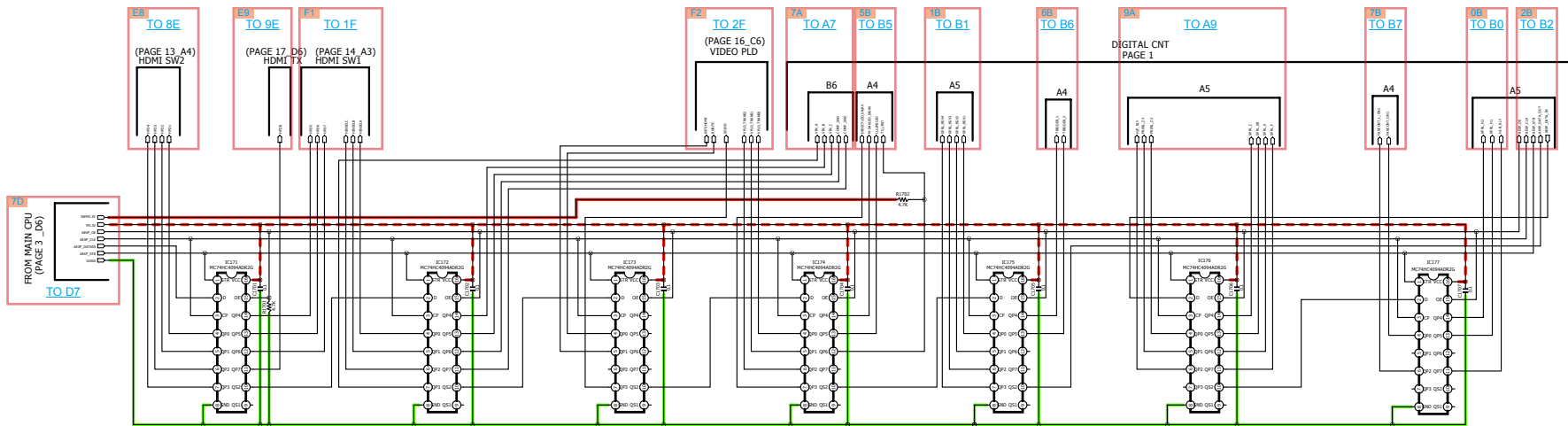
Caution in Servicing

Electrical

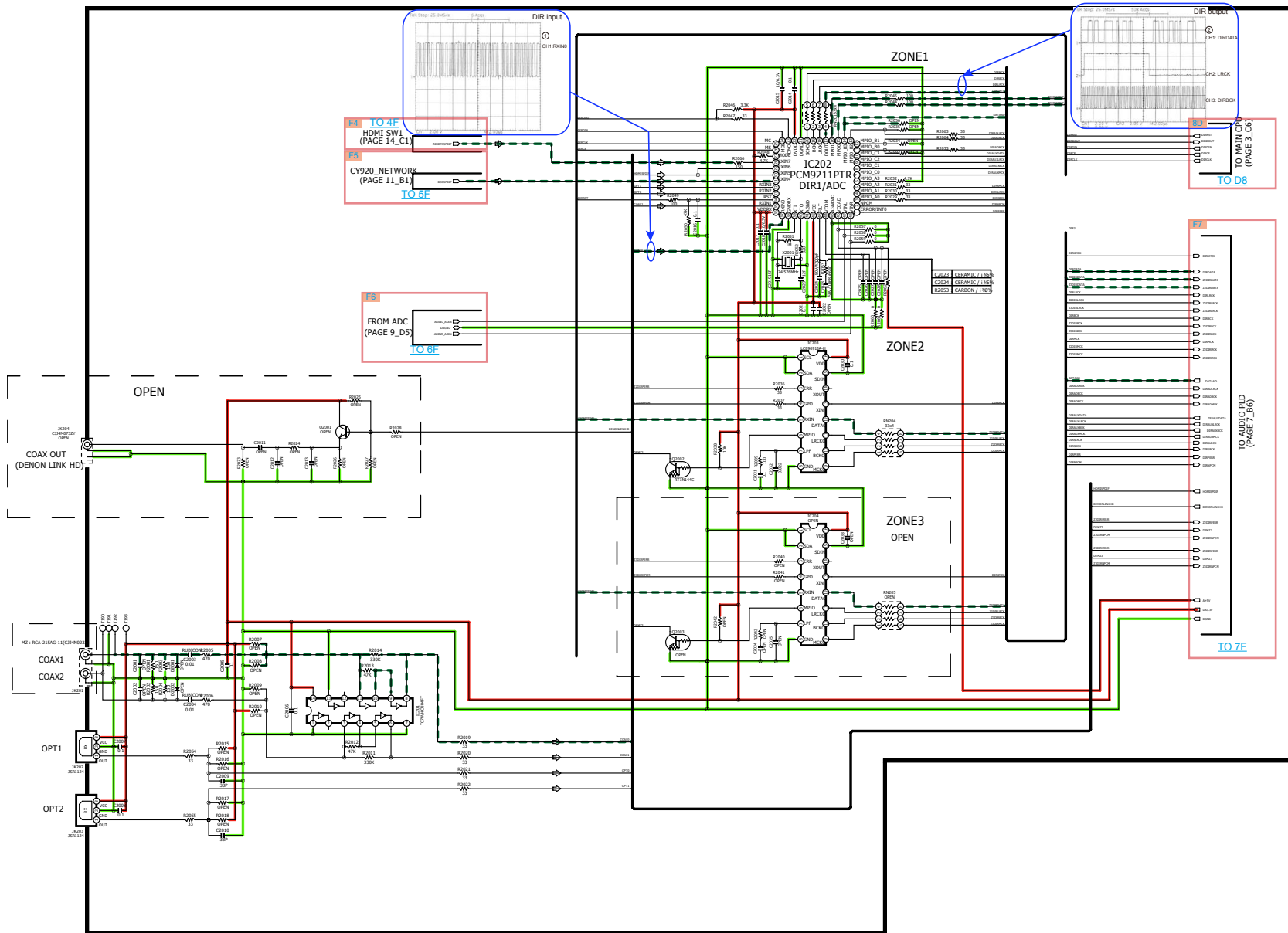
Mechanical

Repair Information

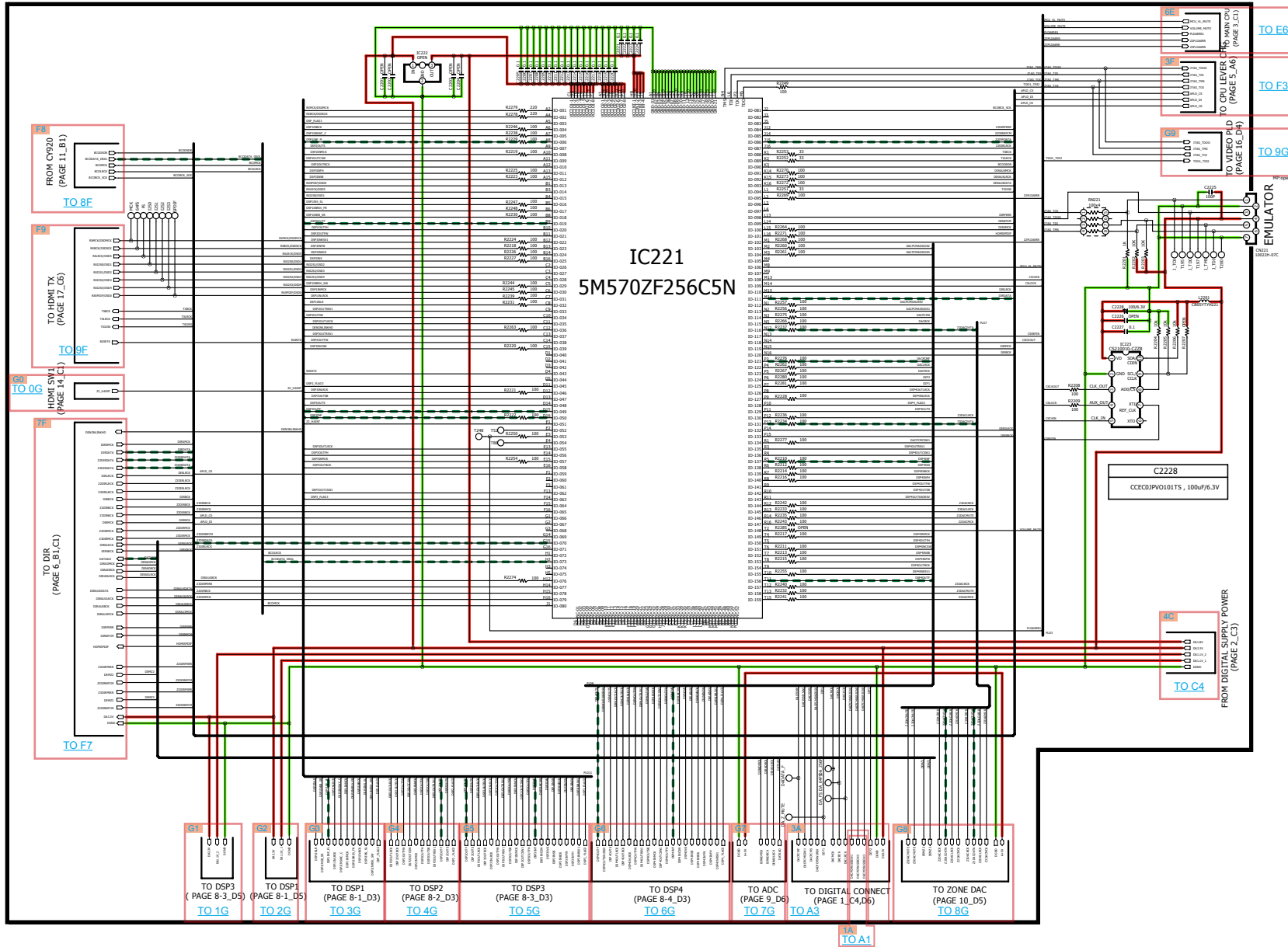
Updating



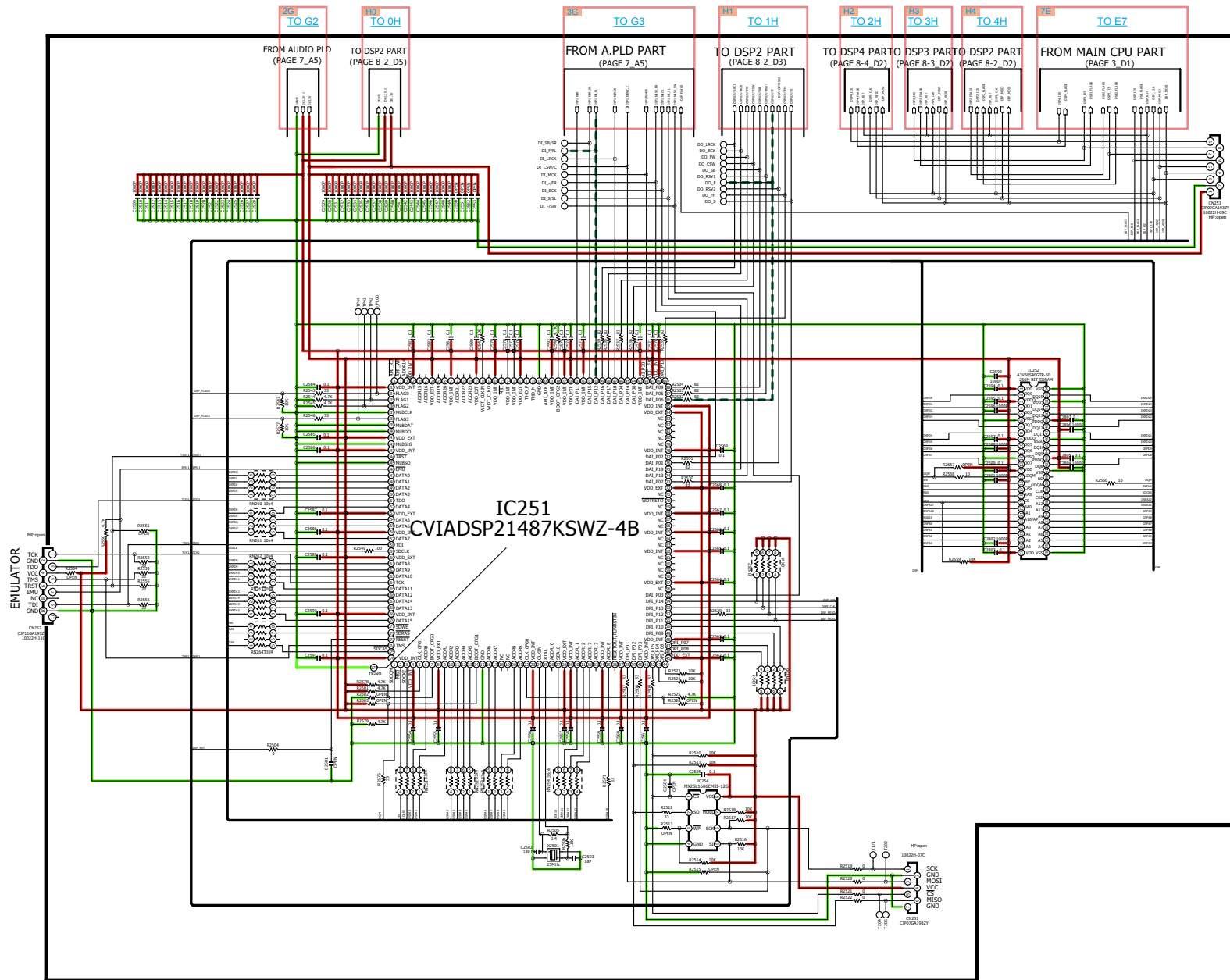
— GND LINE
 — POWER+ LINE
 — POWER- LINE
 — ANALOG AUDIO
 — DIGITAL AUDIO
 — TMDS SIGNAL
 — ANALOG VIDEO
 — DIGITAL VIDEO
 — STBY POWER



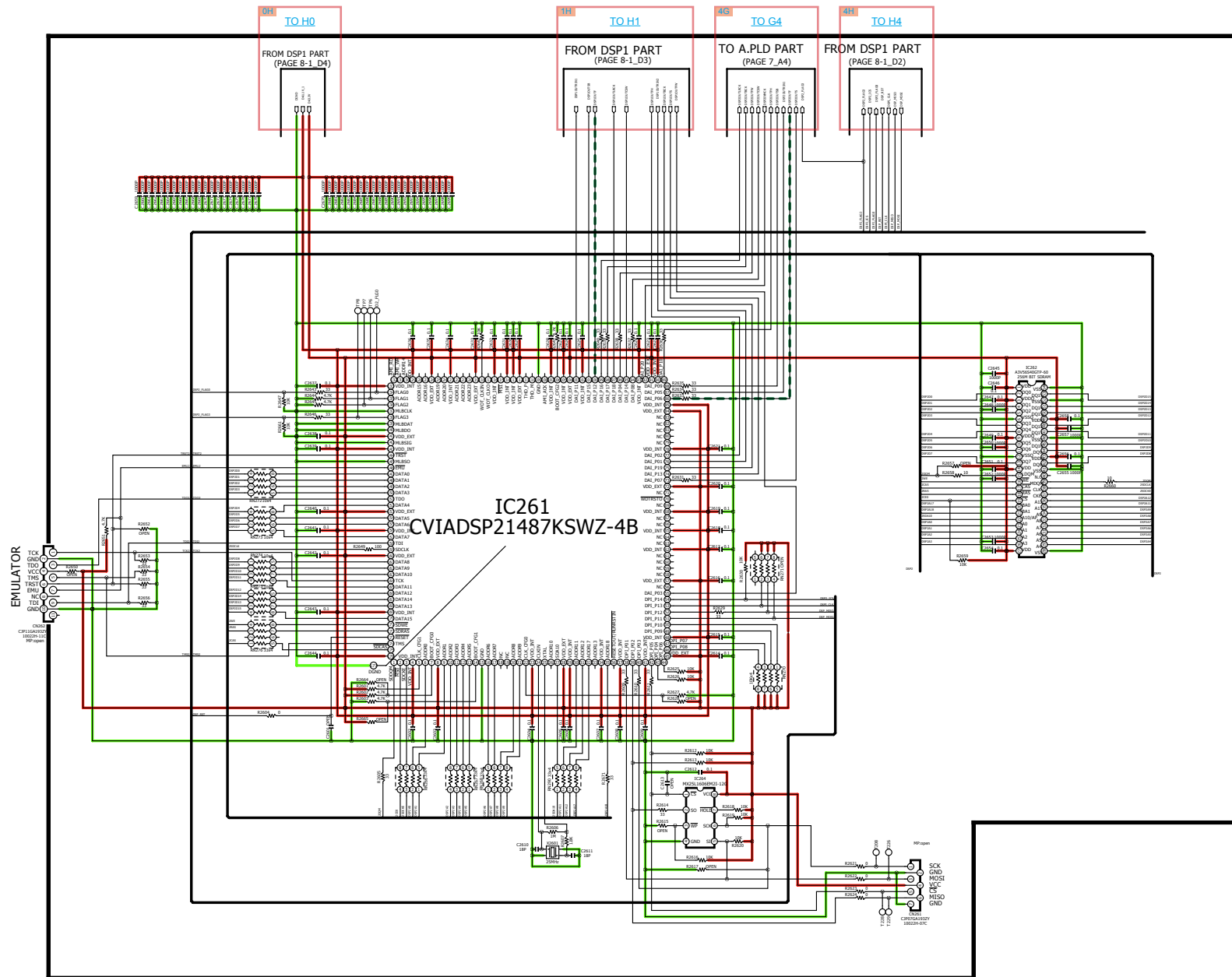
GND / 1NF POWER+ / 1NF POWER- / 1NF ANAL OG AUDIO DIGITAL AUDIO TMDS SIGNAL ANAL OG VIDEO DIGITAL VIDEO STRY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



Caution in servicing

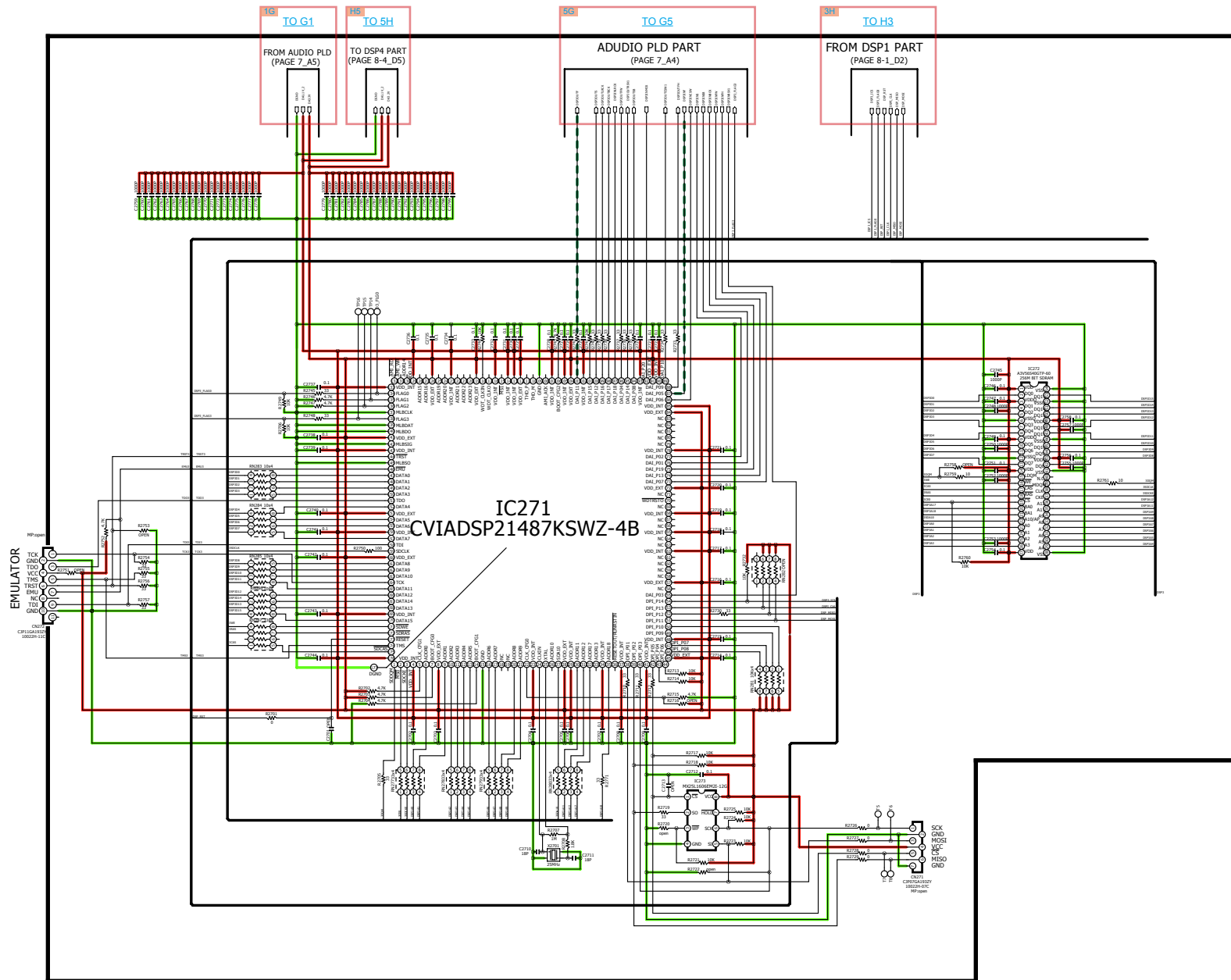
Electrical

Mechanical

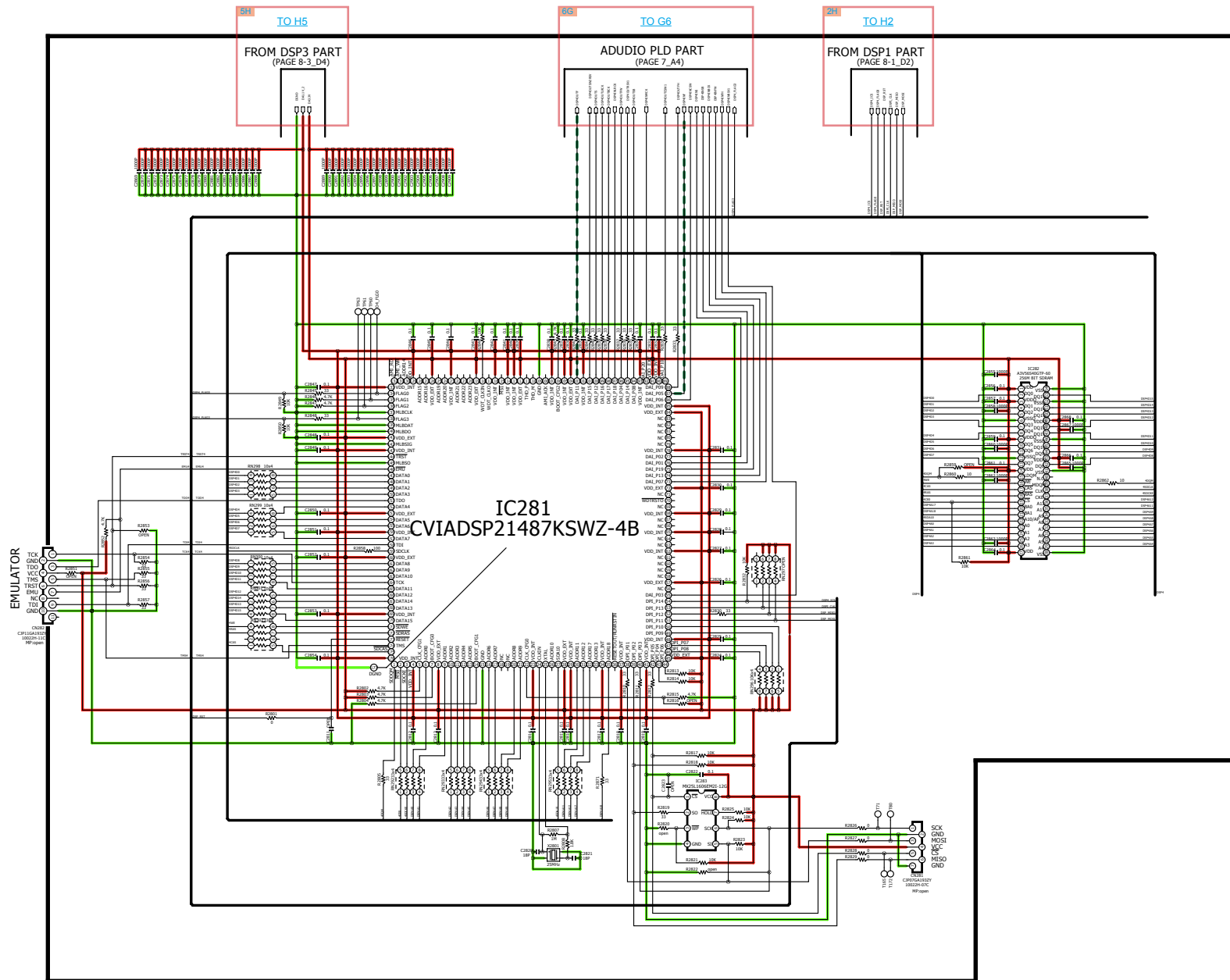
Repair Information

Updating

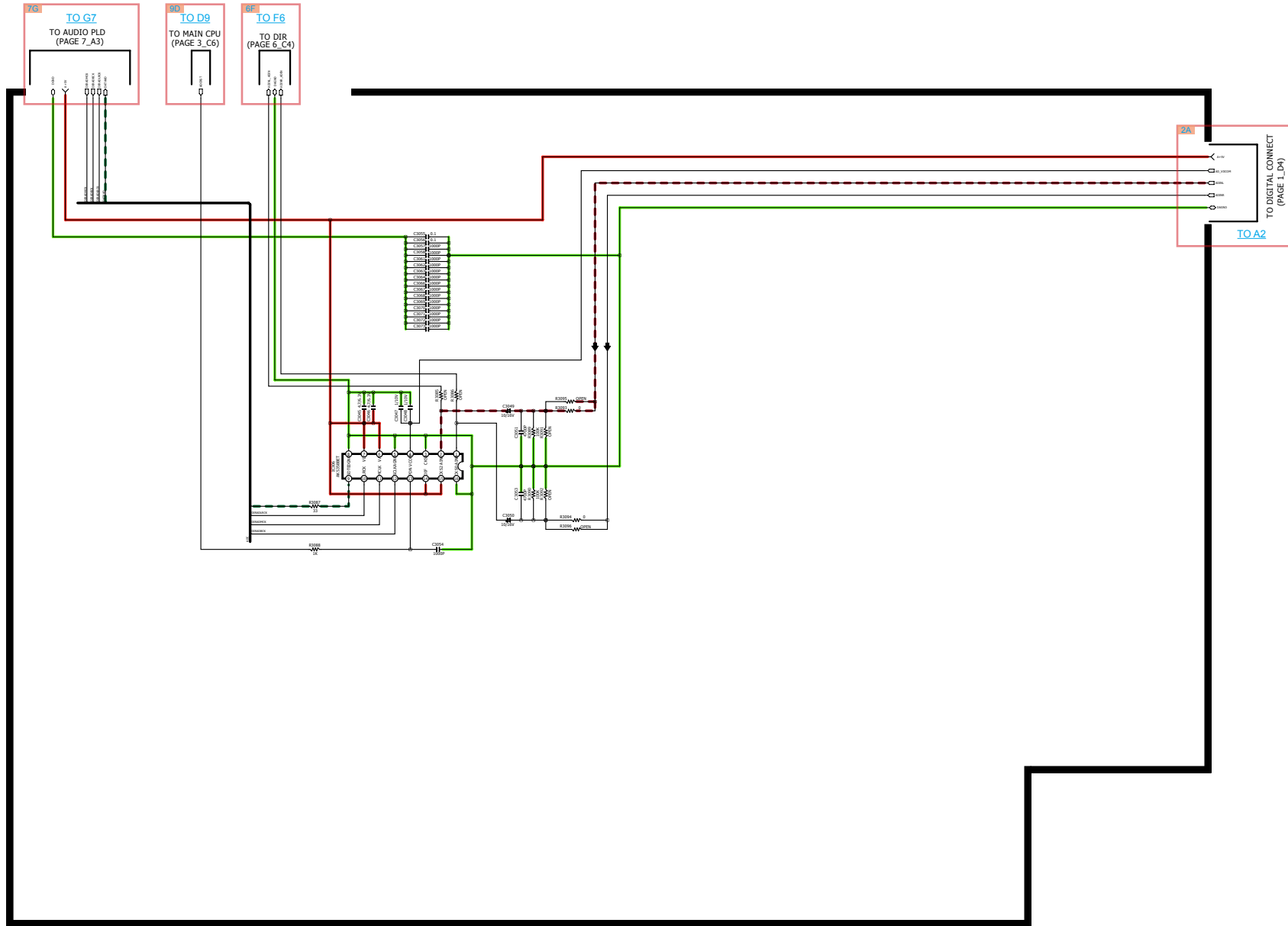
GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



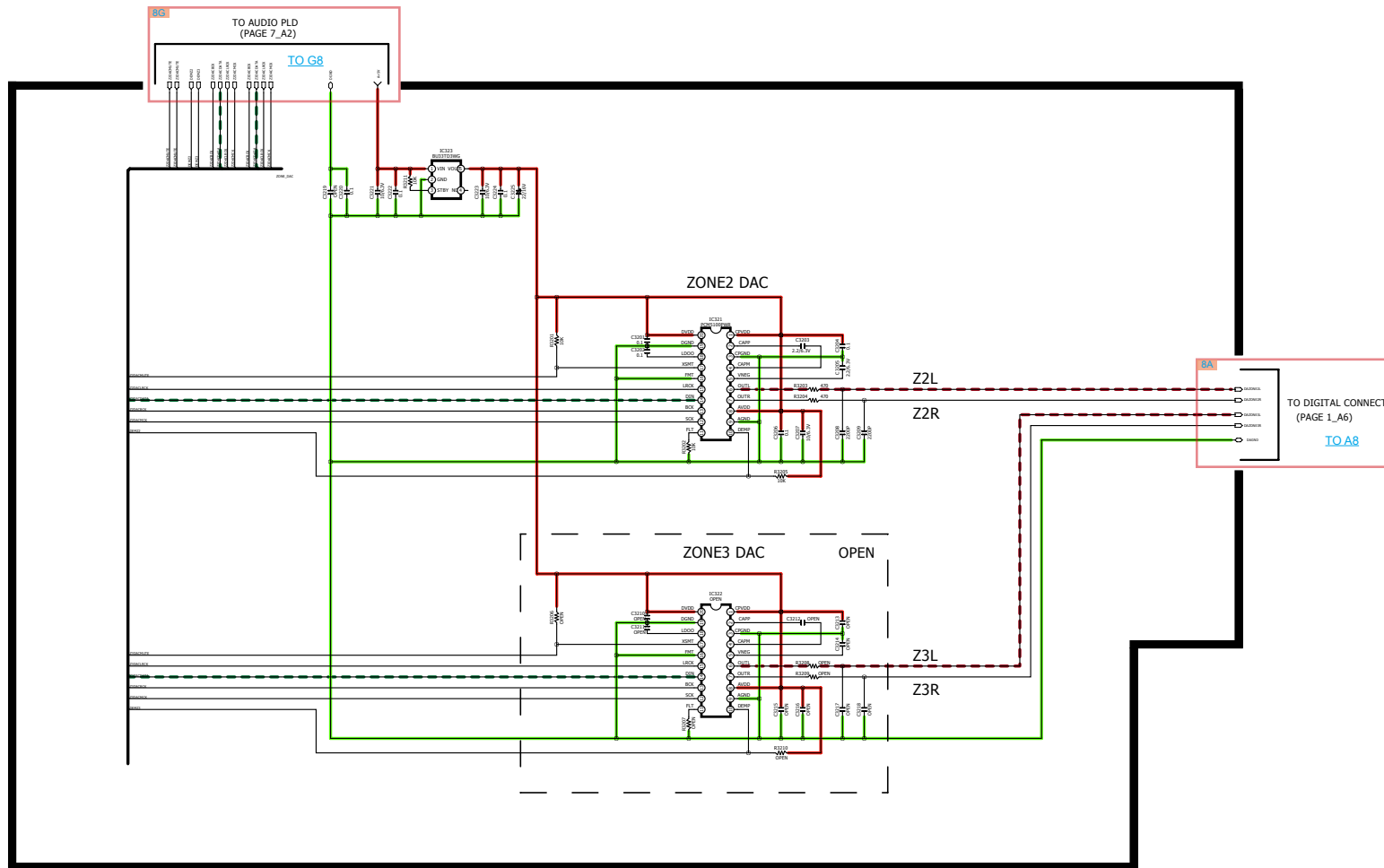
GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMD5 SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



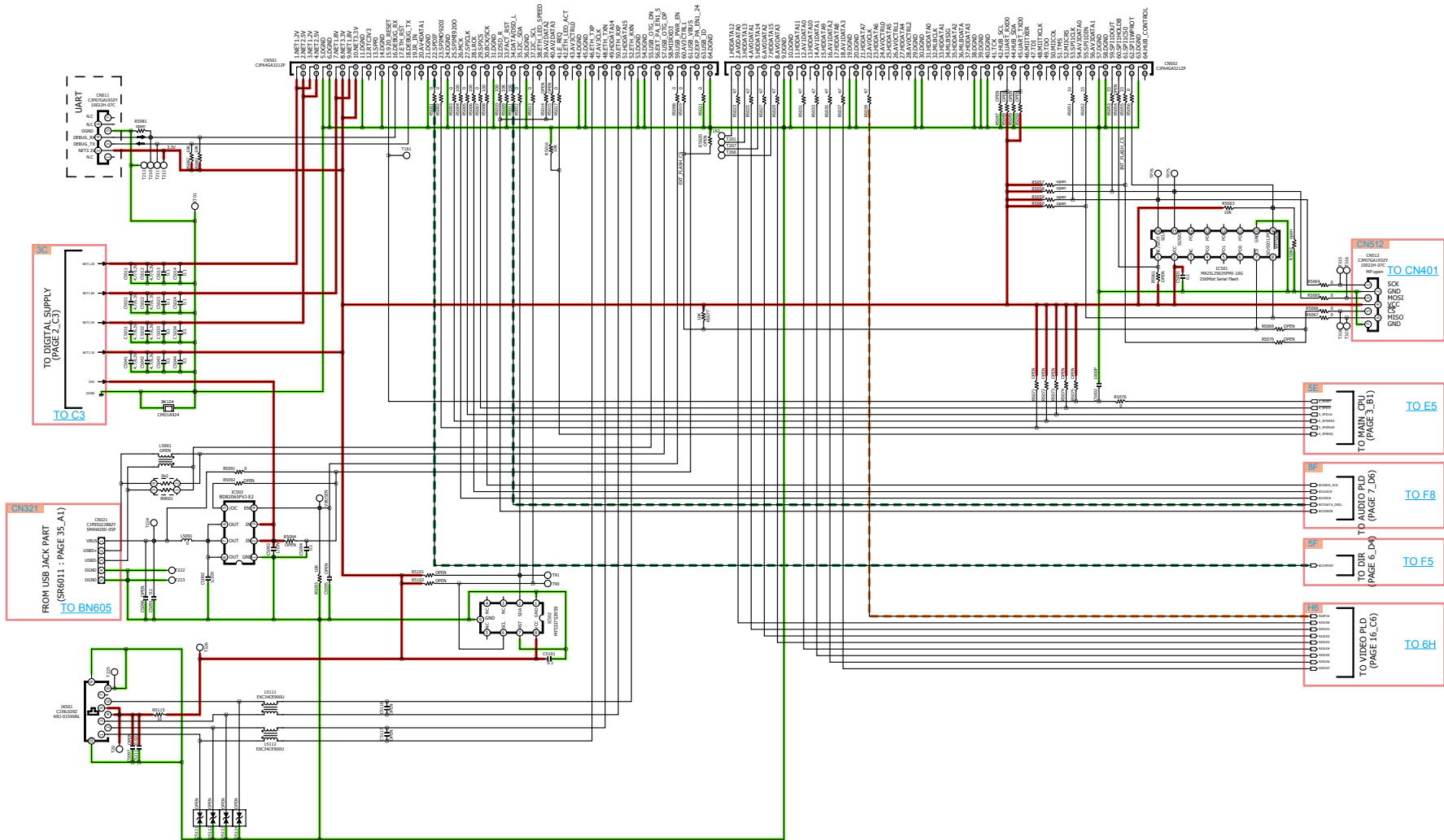
— GND LINE
 — POWER+ LINE
 — POWER- LINE
 — ANALOG AUDIO
 — DIGITAL AUDIO
 — TMDS SIGNAL
 — ANALOG VIDEO
 — DIGITAL VIDEO
 — STBY POWER



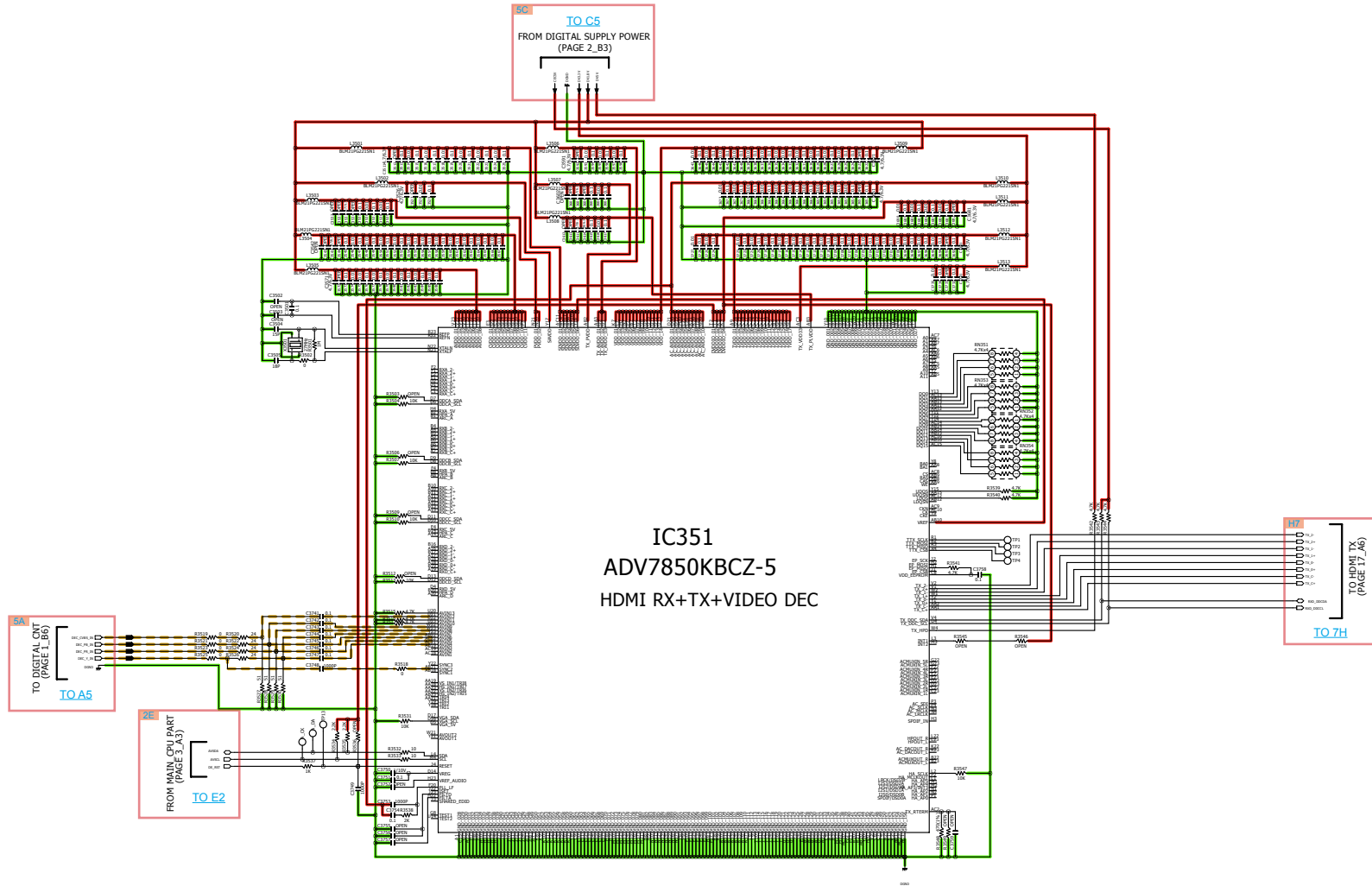
GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

BASIC CONNECTOR

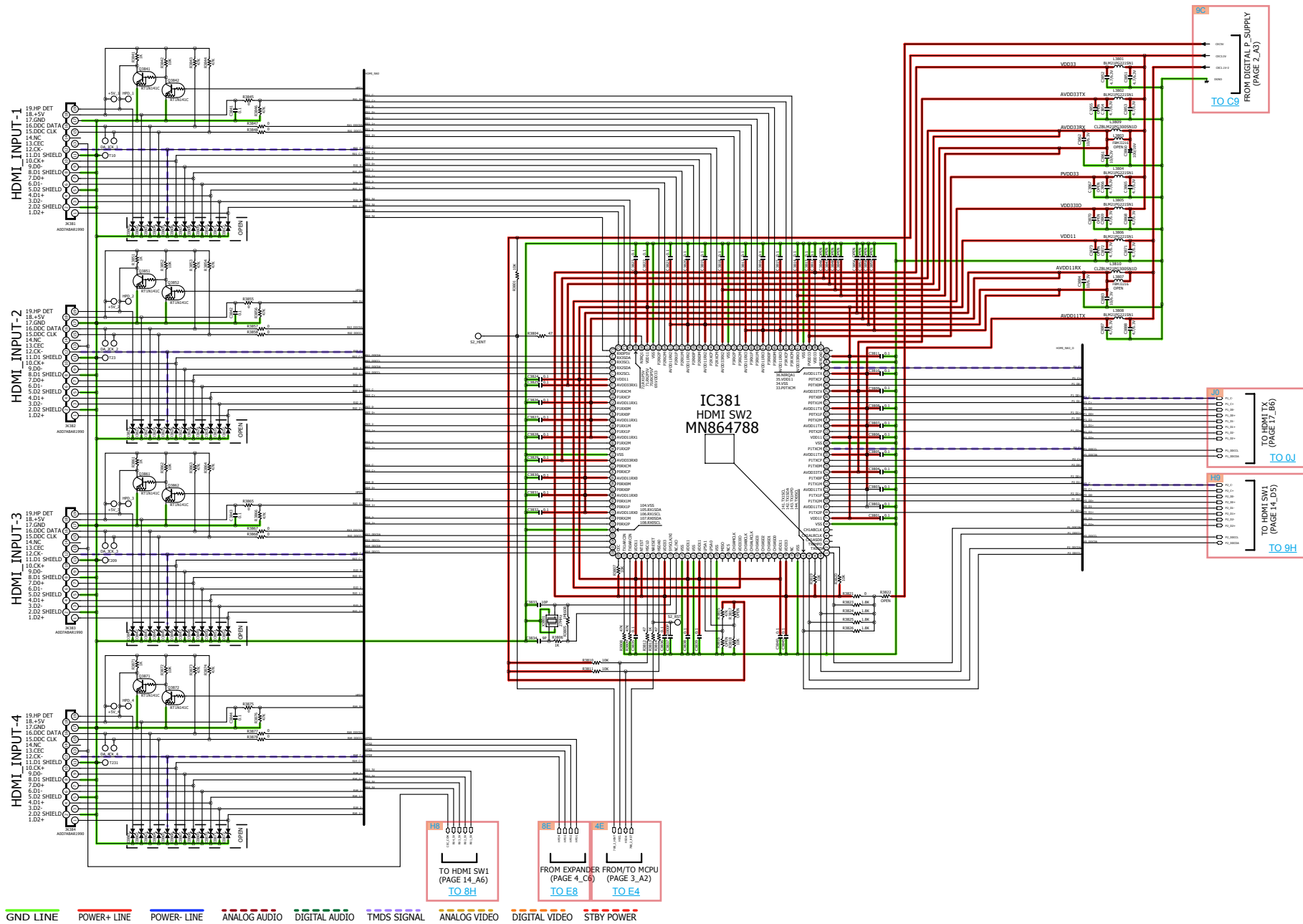
EXTENDED CONNECTOR



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



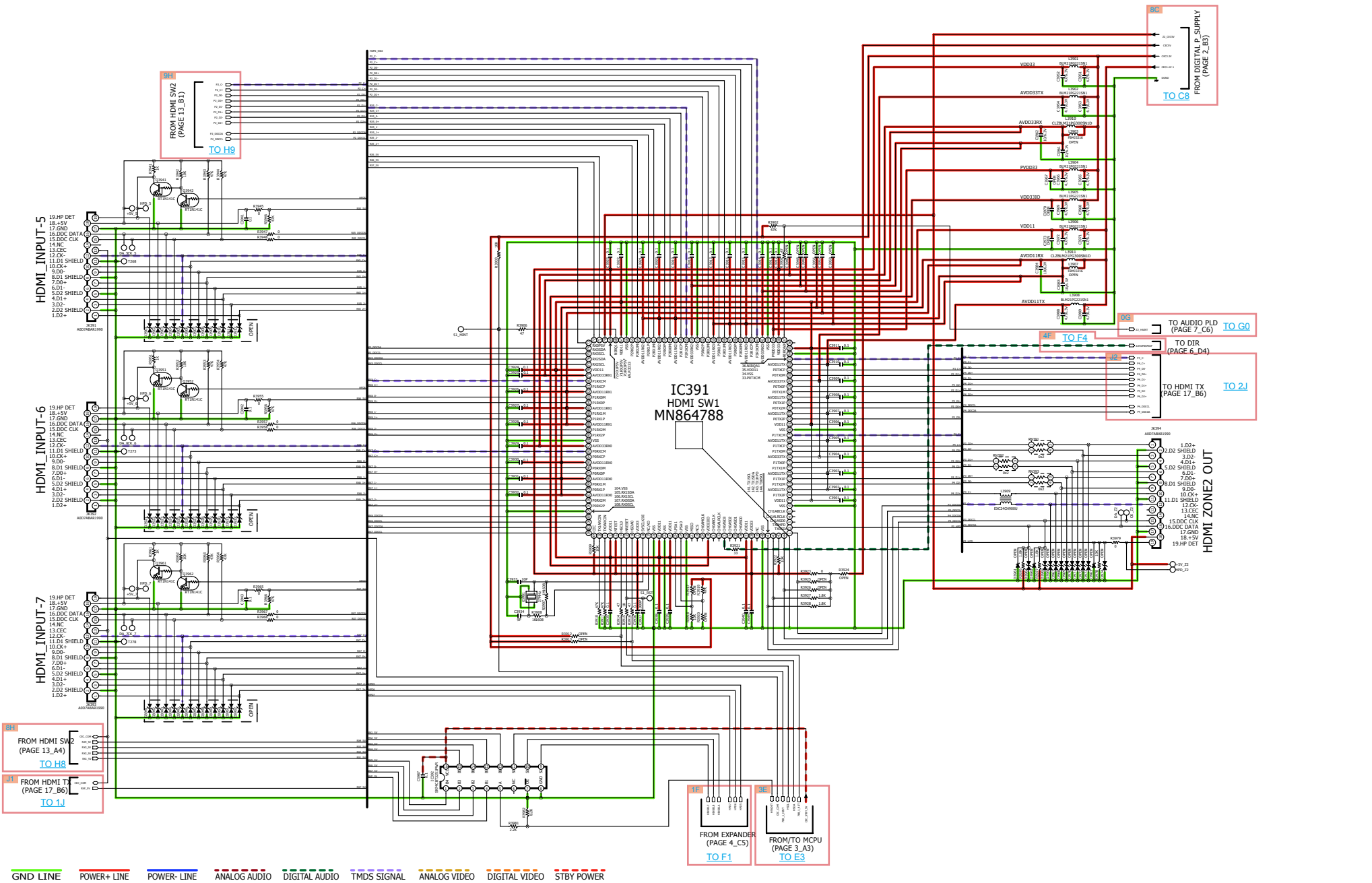
Caution in servicing

Electrical

Mechanical

Repair Information

Updating



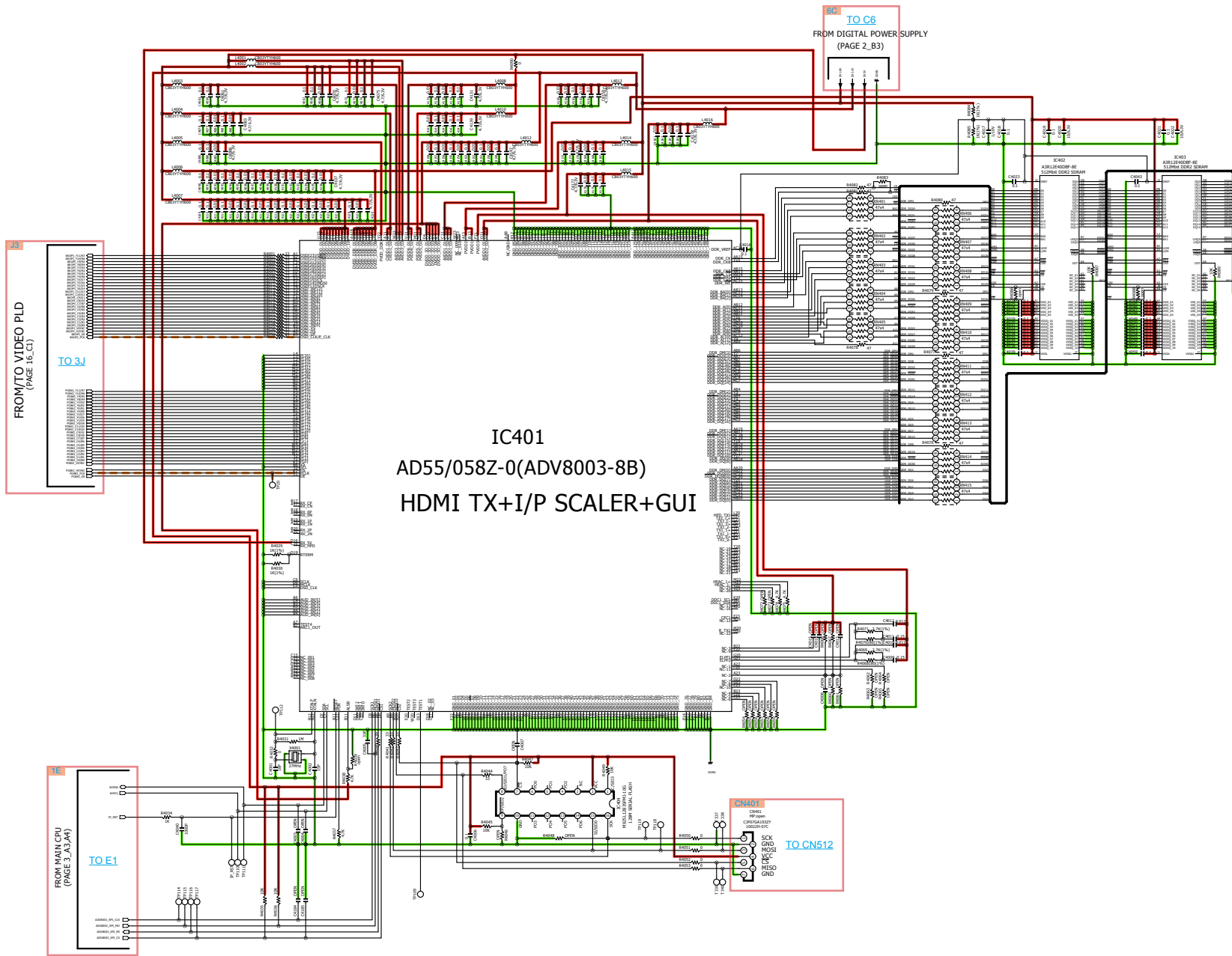
Caution in servicing

Electrical

Mechanical

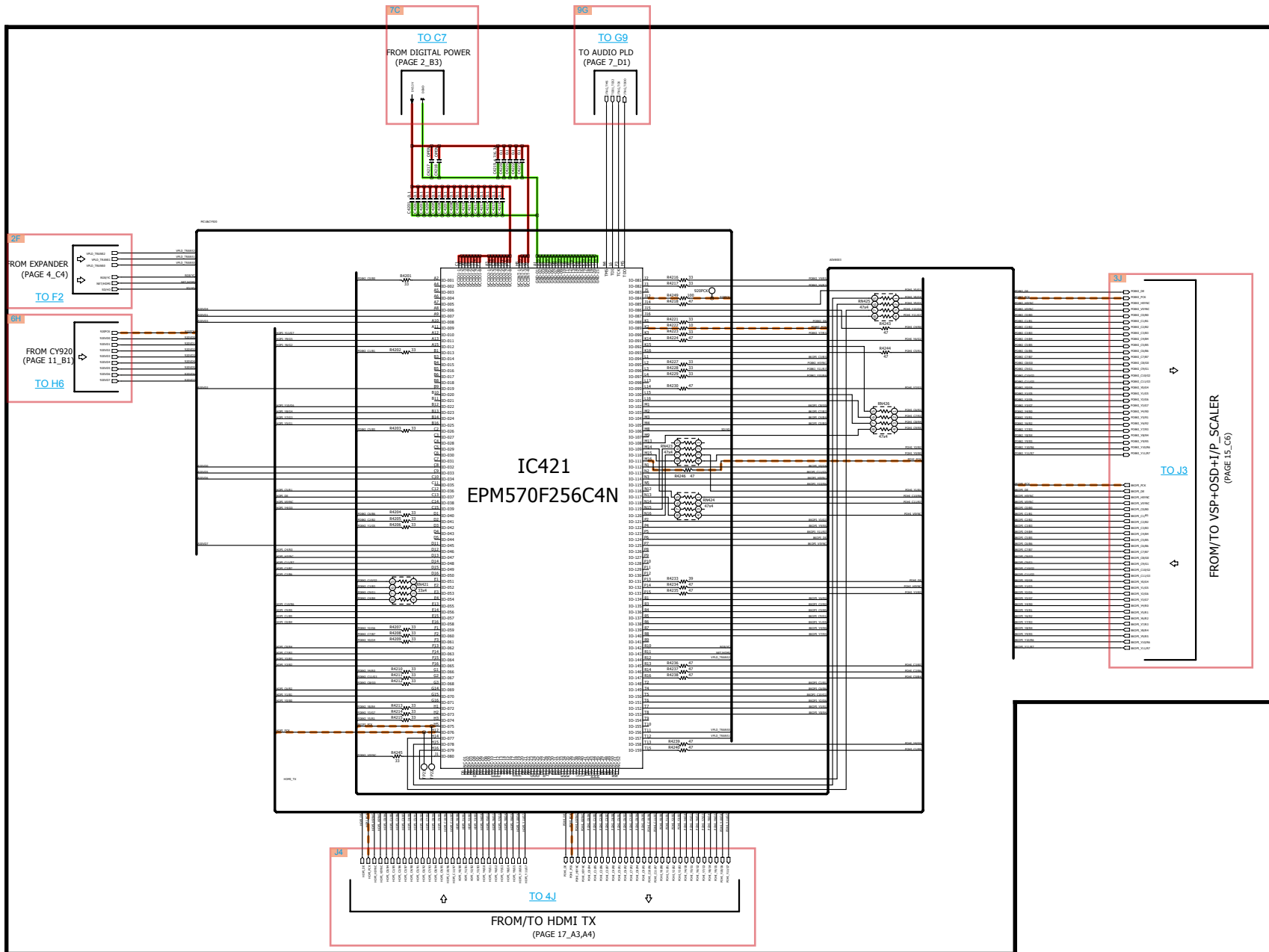
Repair Information

Updating



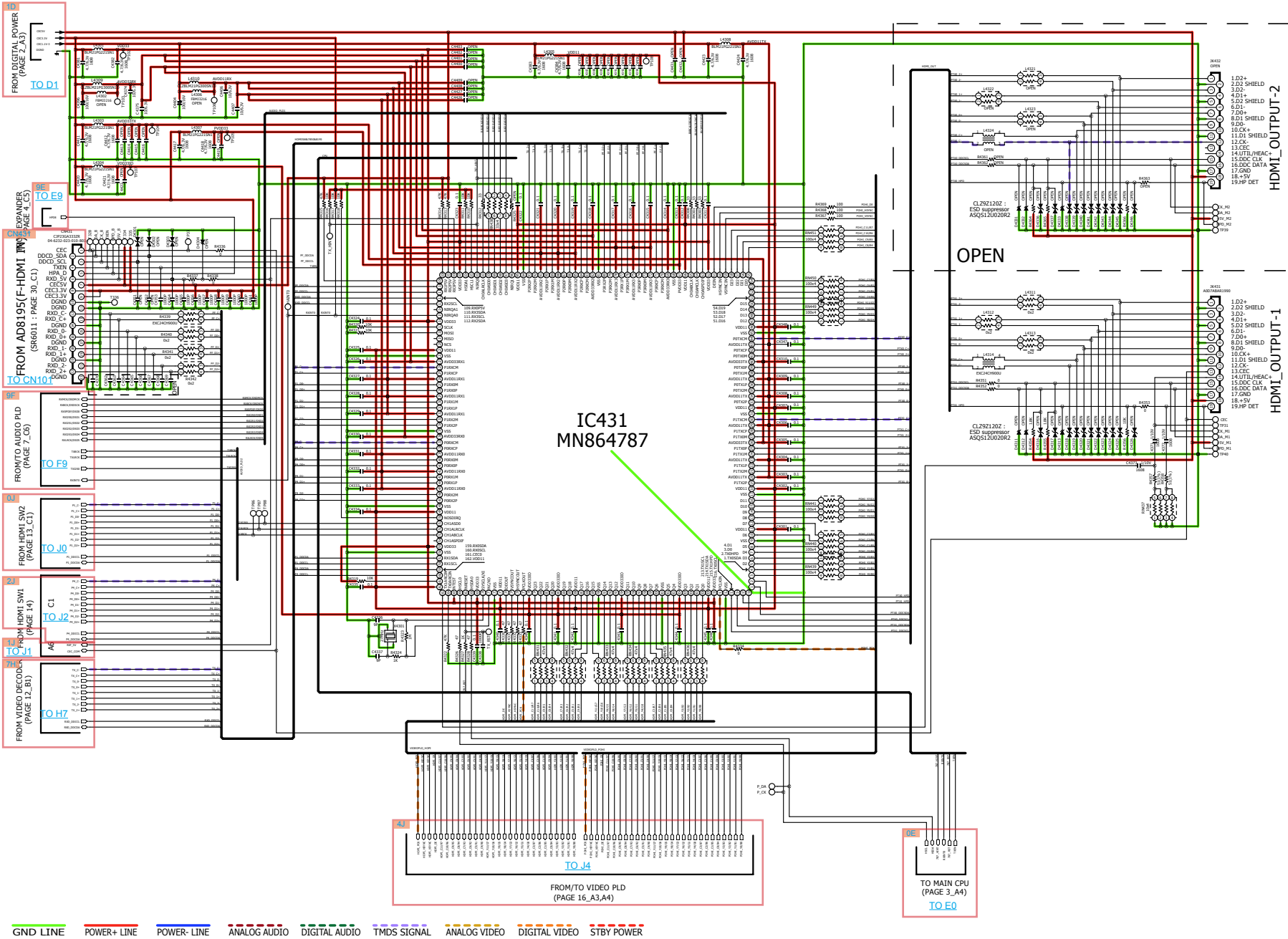
IC401
AD55/058Z-0(ADV8003-8B)
HDMI TX+I/P SCALER+GUI

GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMSD SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

Caution in servicing Electrical Mechanical Repair Information Updating



Caution in Servicing

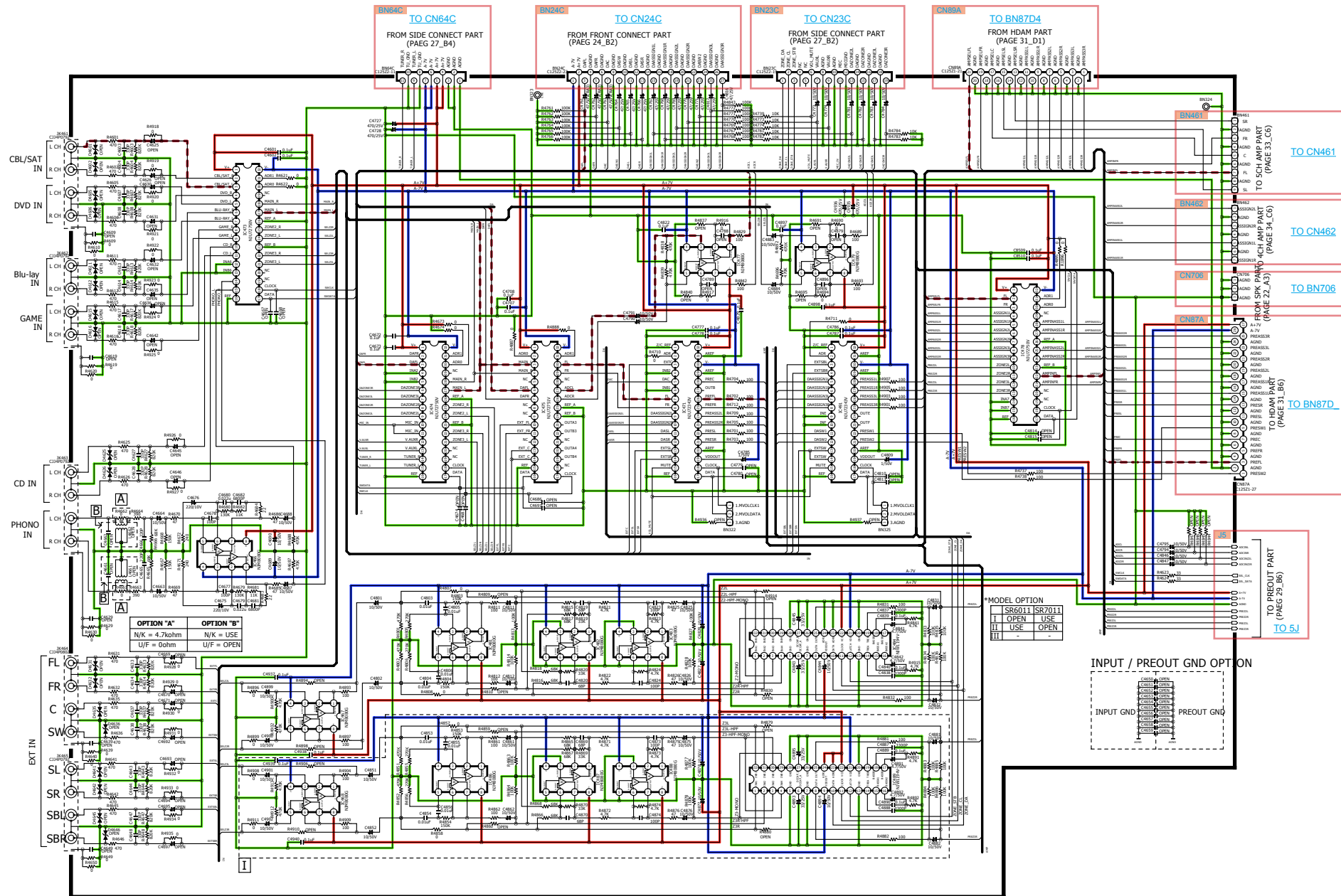
Electrical

Mechanical

Repair Information

Updating

SCH21_INPUT



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

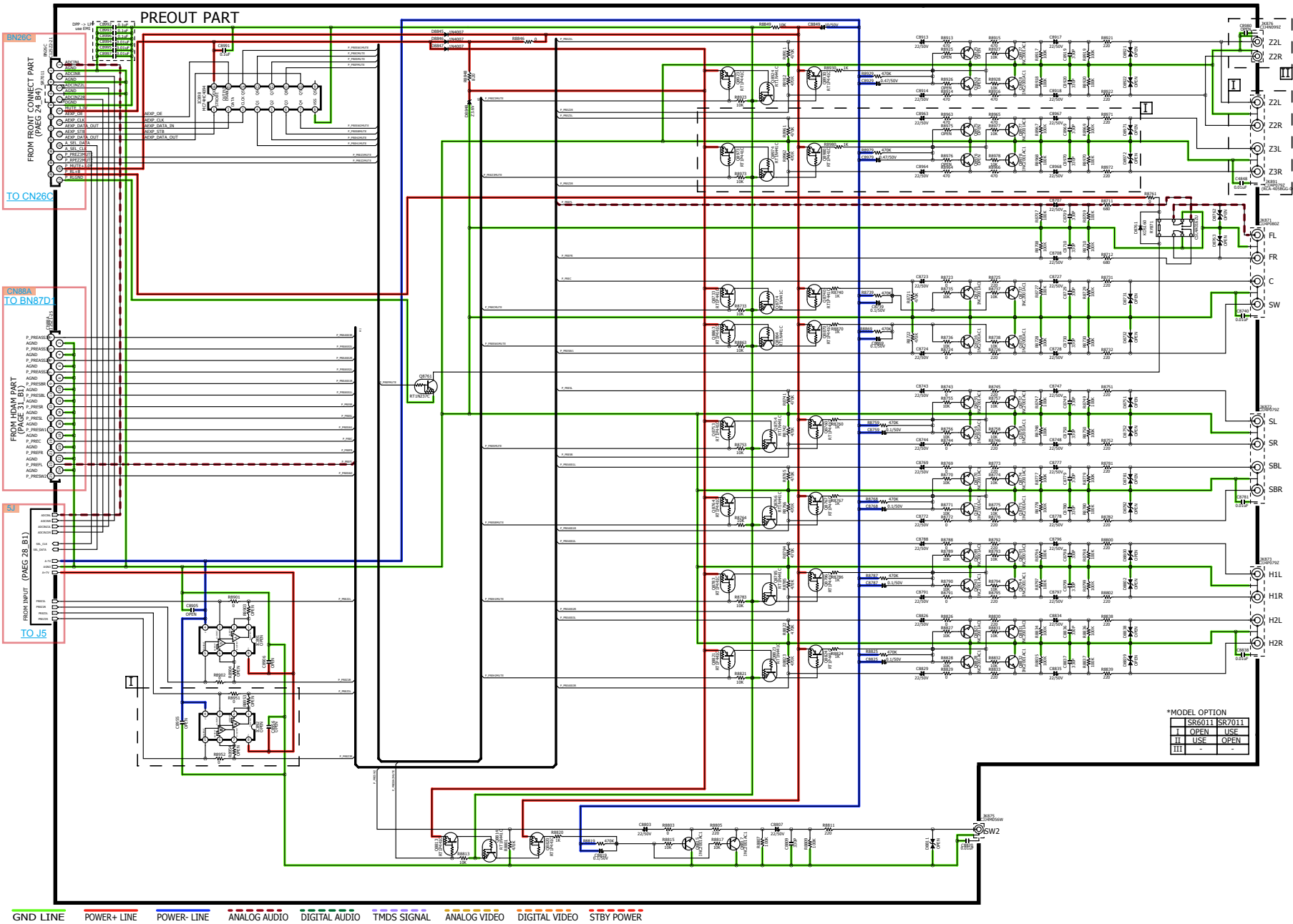
Caution in Servicing

Electrical

Mechanical

Repair Information

Updating



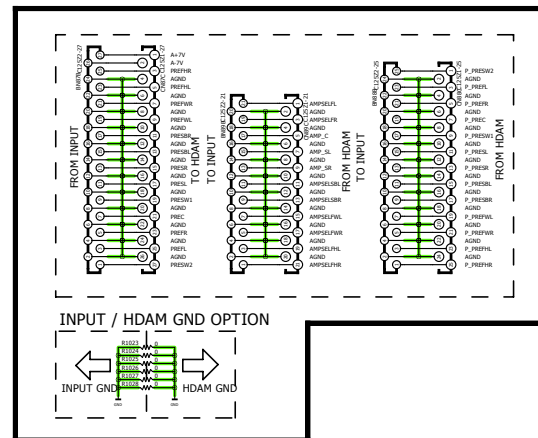
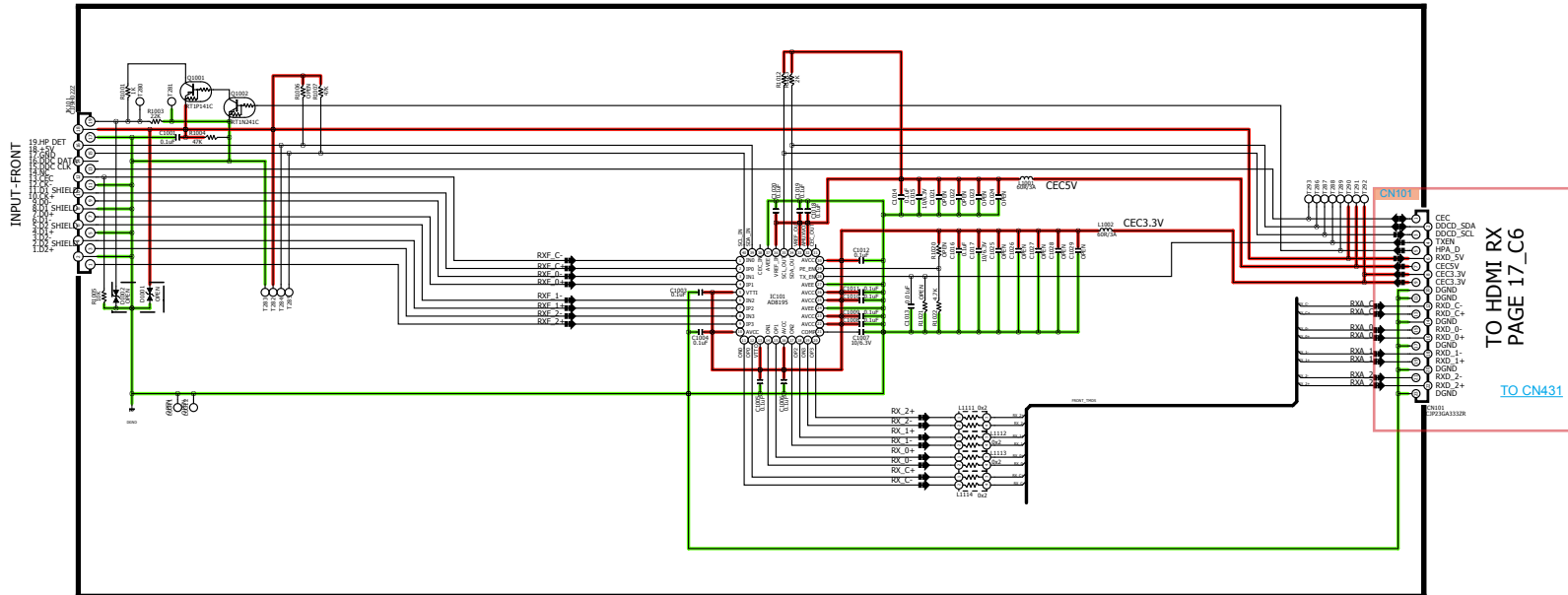
Caution in servicing

Electrical

Mechanical

Repair Information

Updating



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

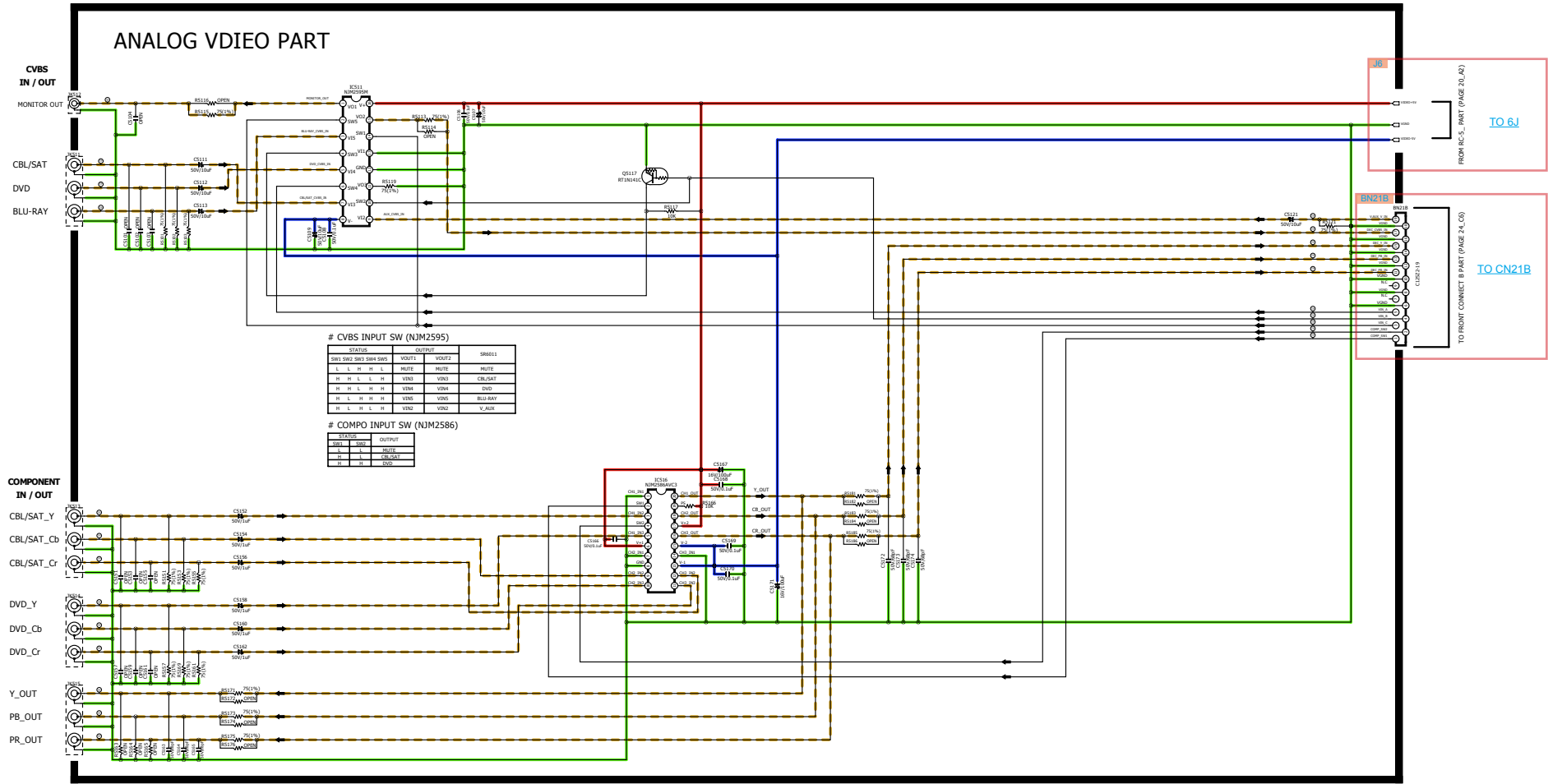
Caution in servicing

Electrical

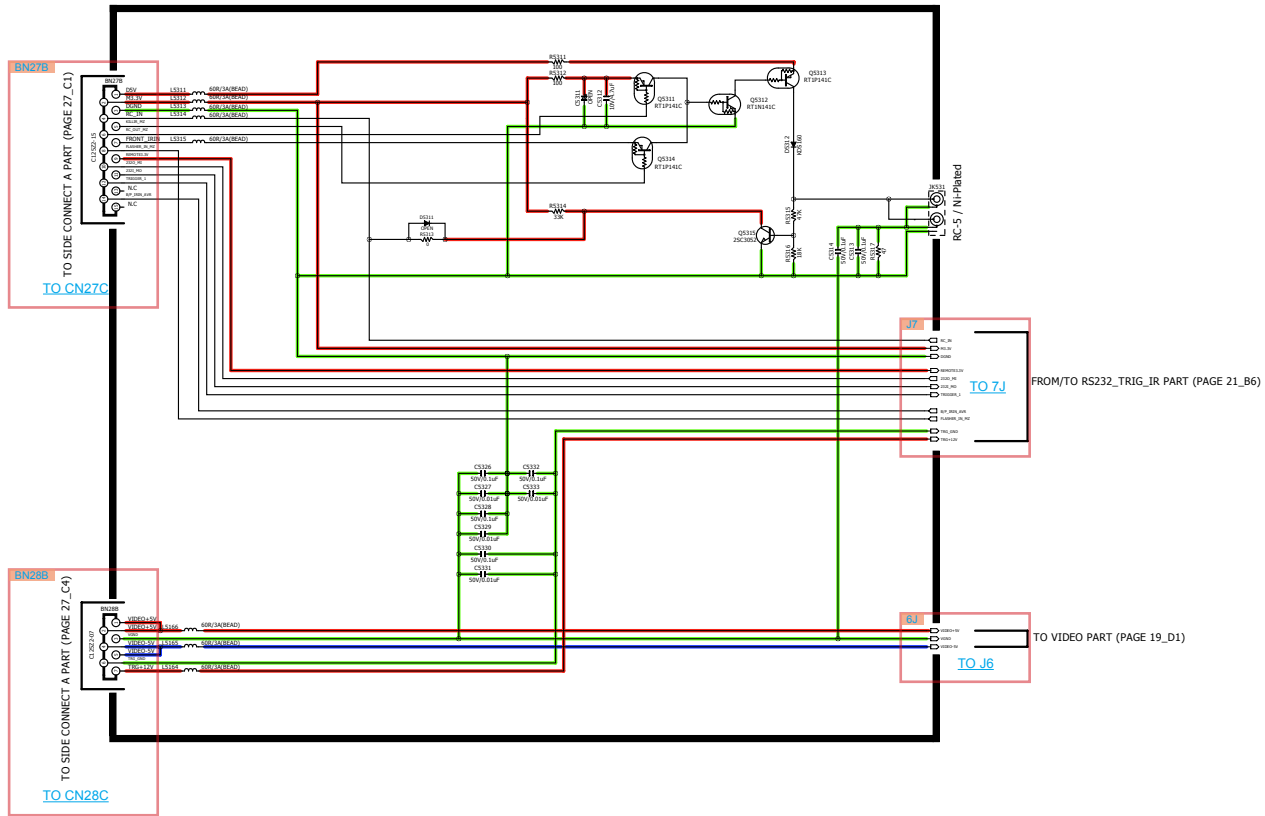
Mechanical

Repair Information

Updating



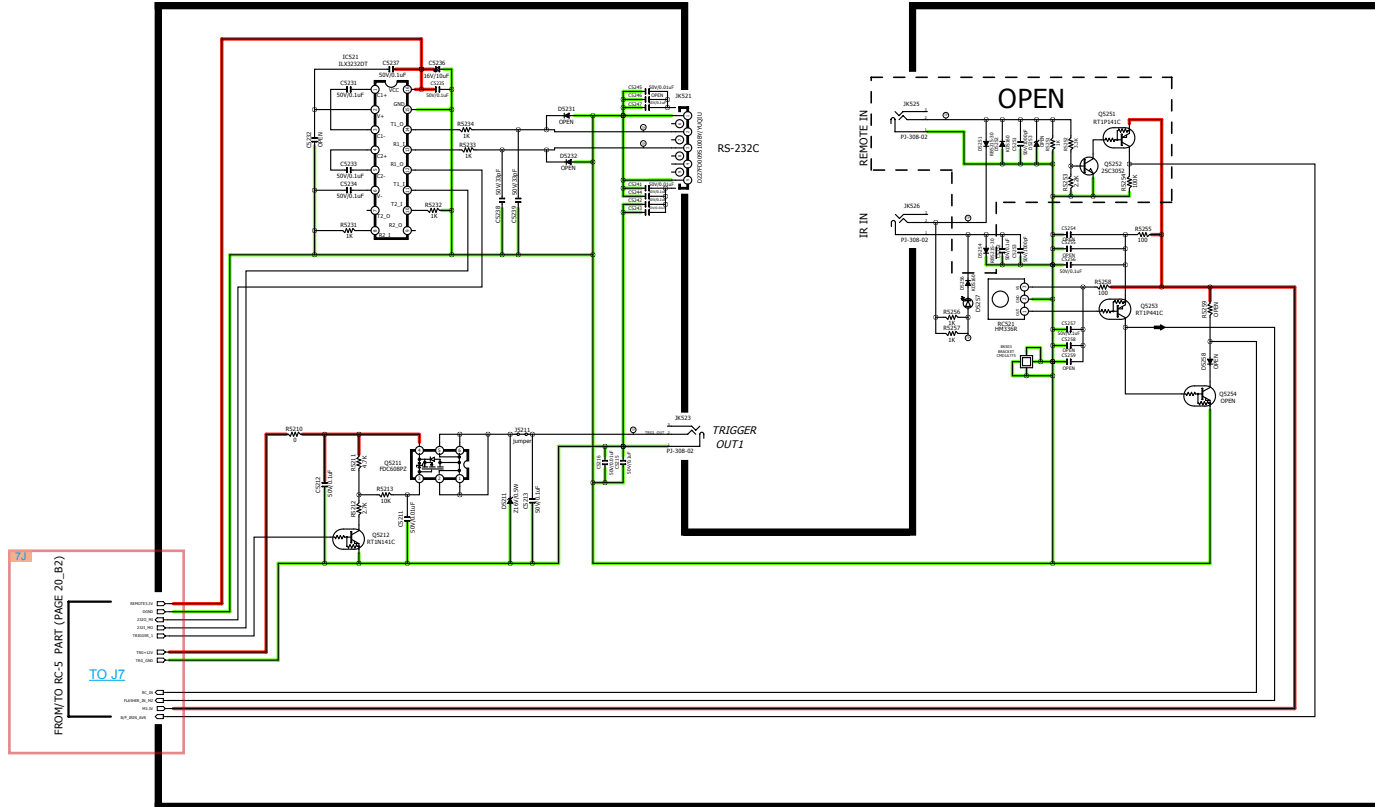
RC-5



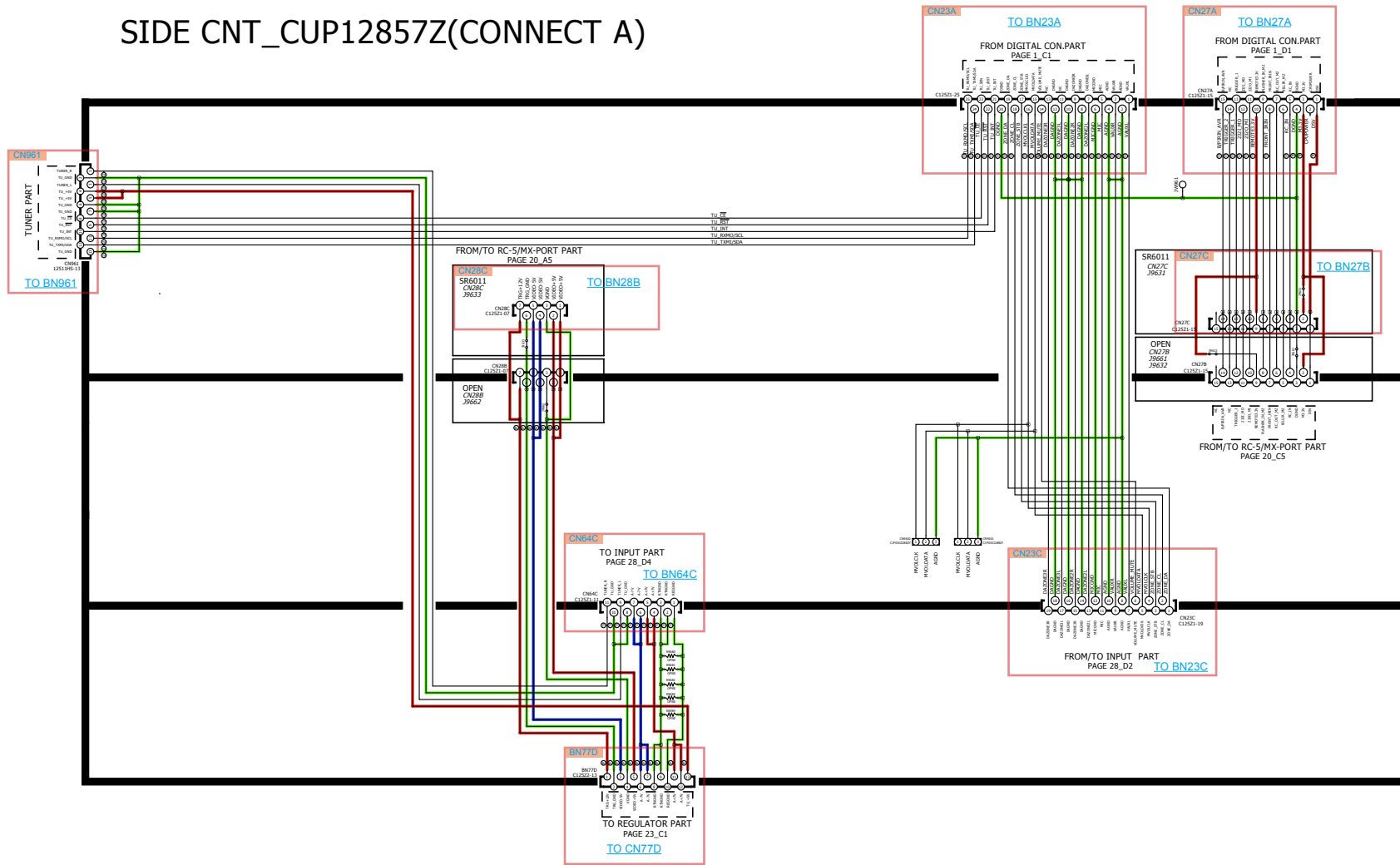
GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

RS232C/TRIGGER

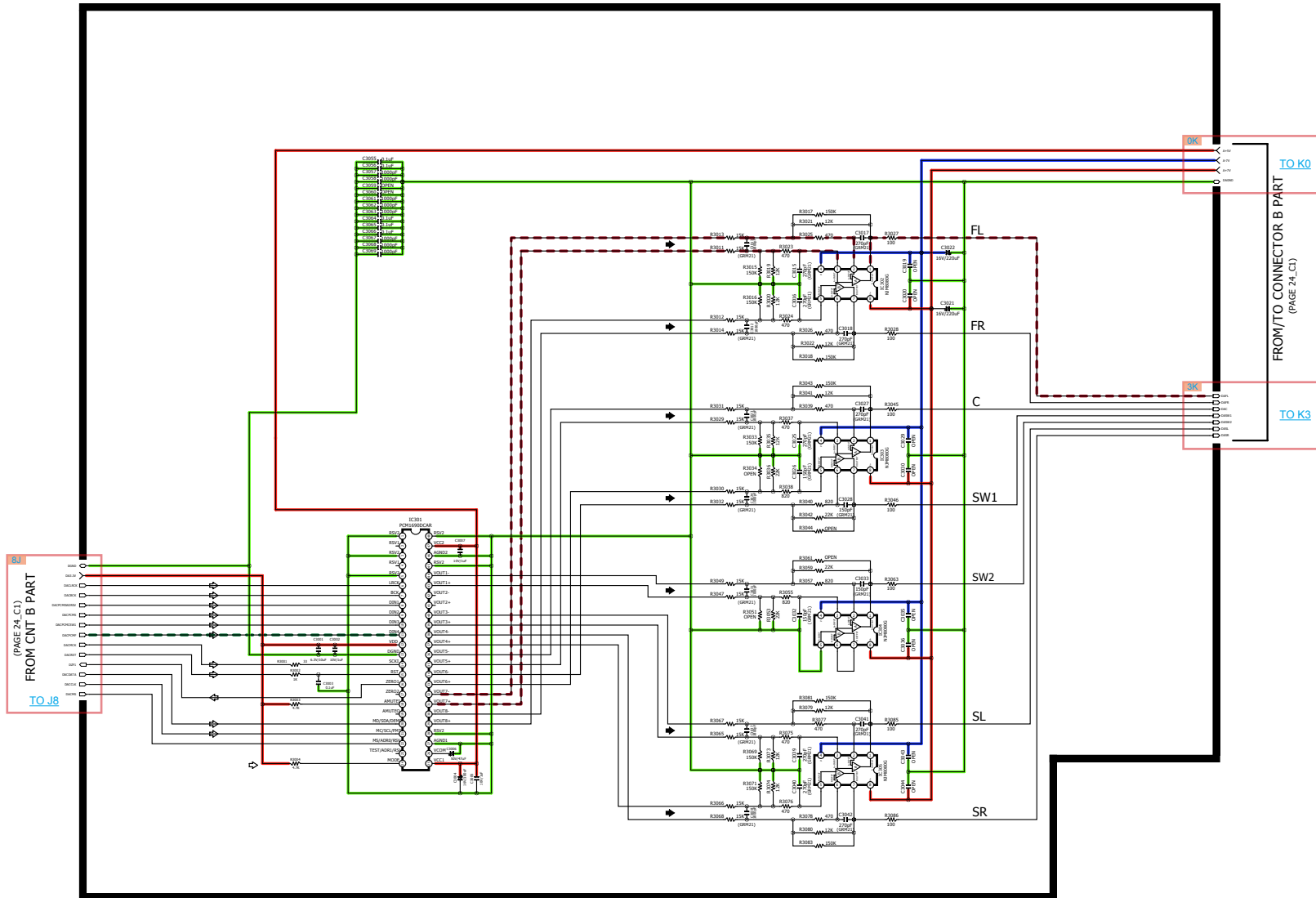
IR / FLASHER



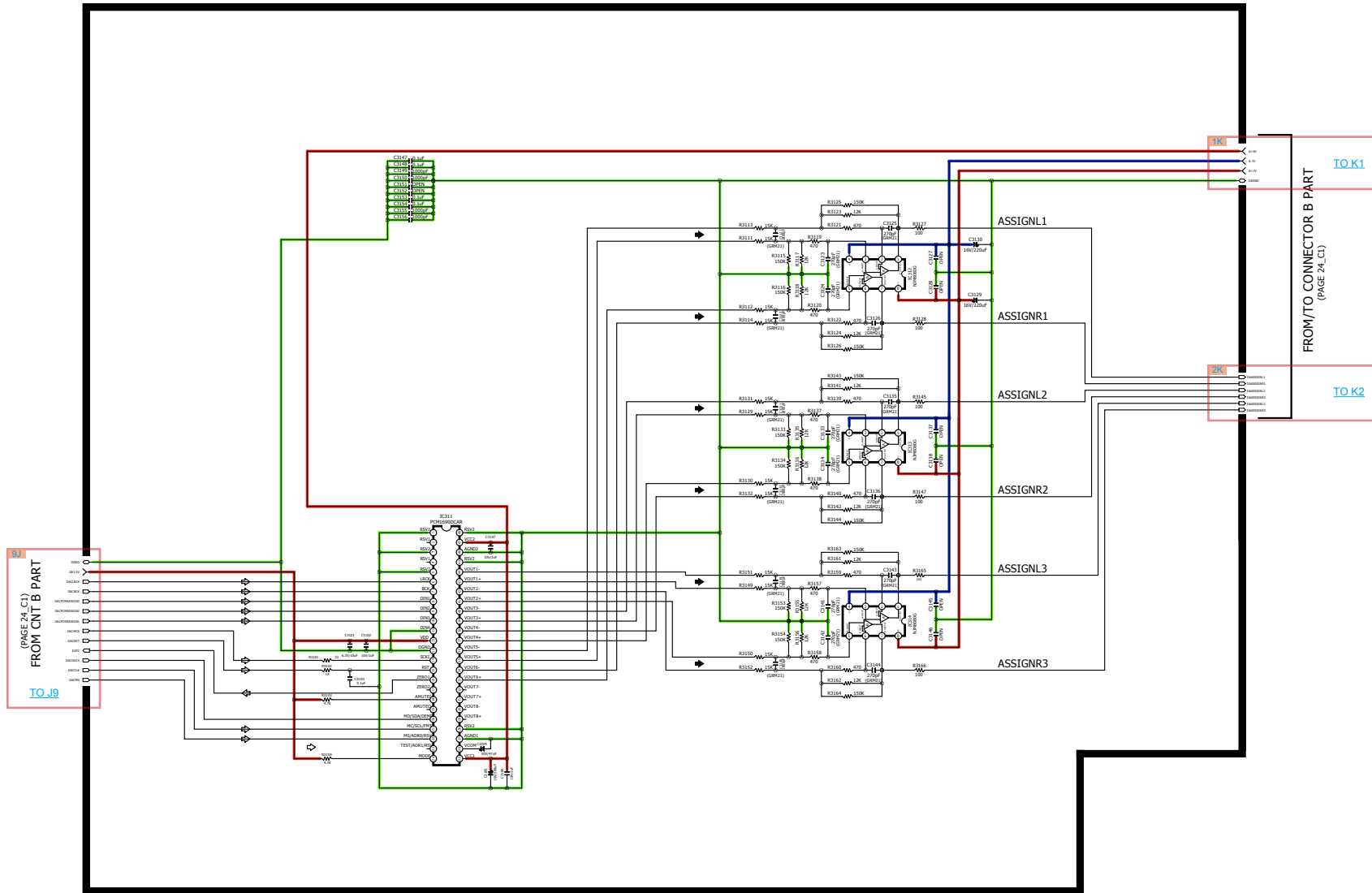
SIDE CNT_CUP12857Z(CONNECT A)



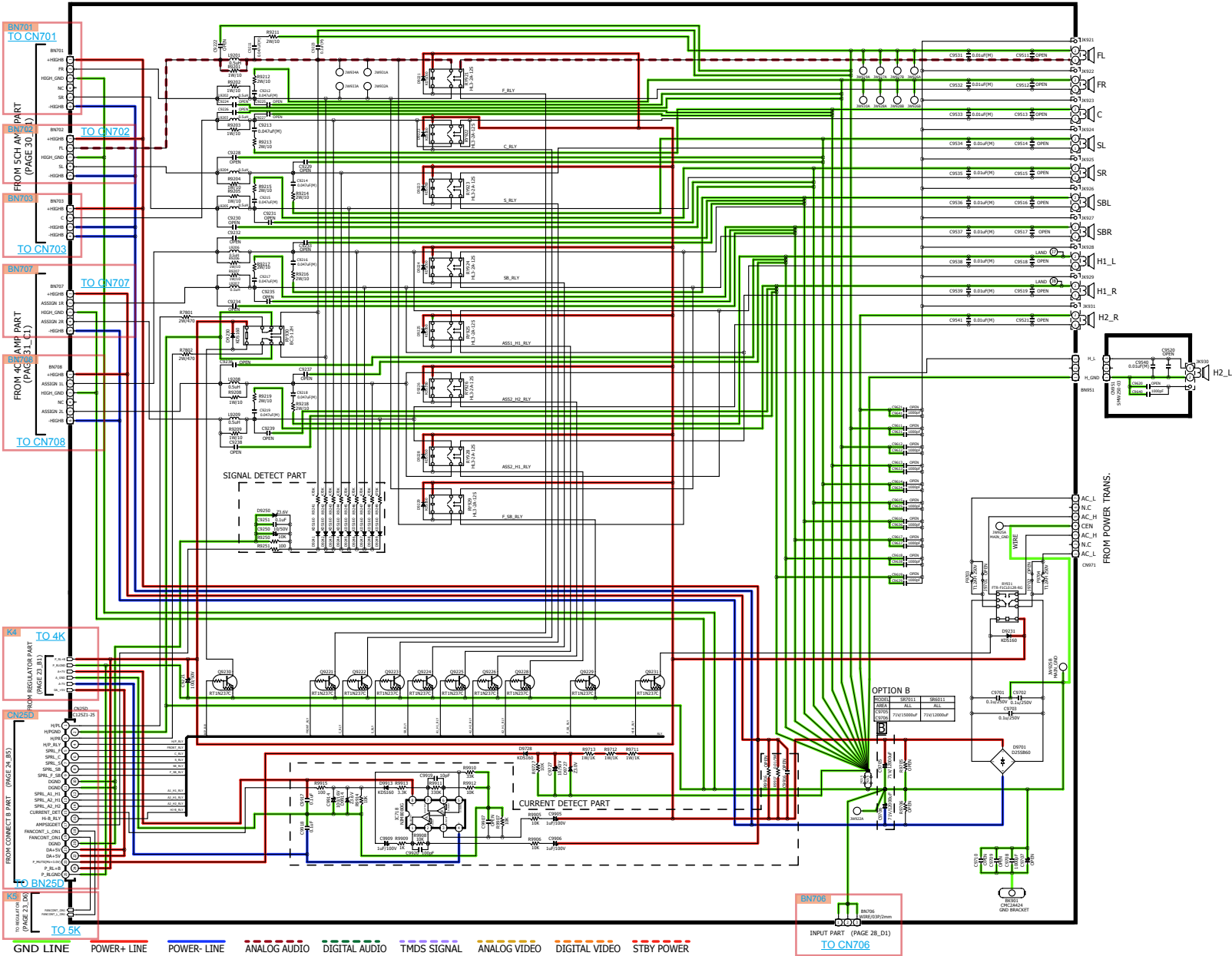
GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



— GND LINE
 — POWER+ LINE
 — POWER- LINE
 — ANALOG AUDIO
 — DIGITAL AUDIO
 — TMDS SIGNAL
 — ANALOG VIDEO
 — DIGITAL VIDEO
 — STBY POWER



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



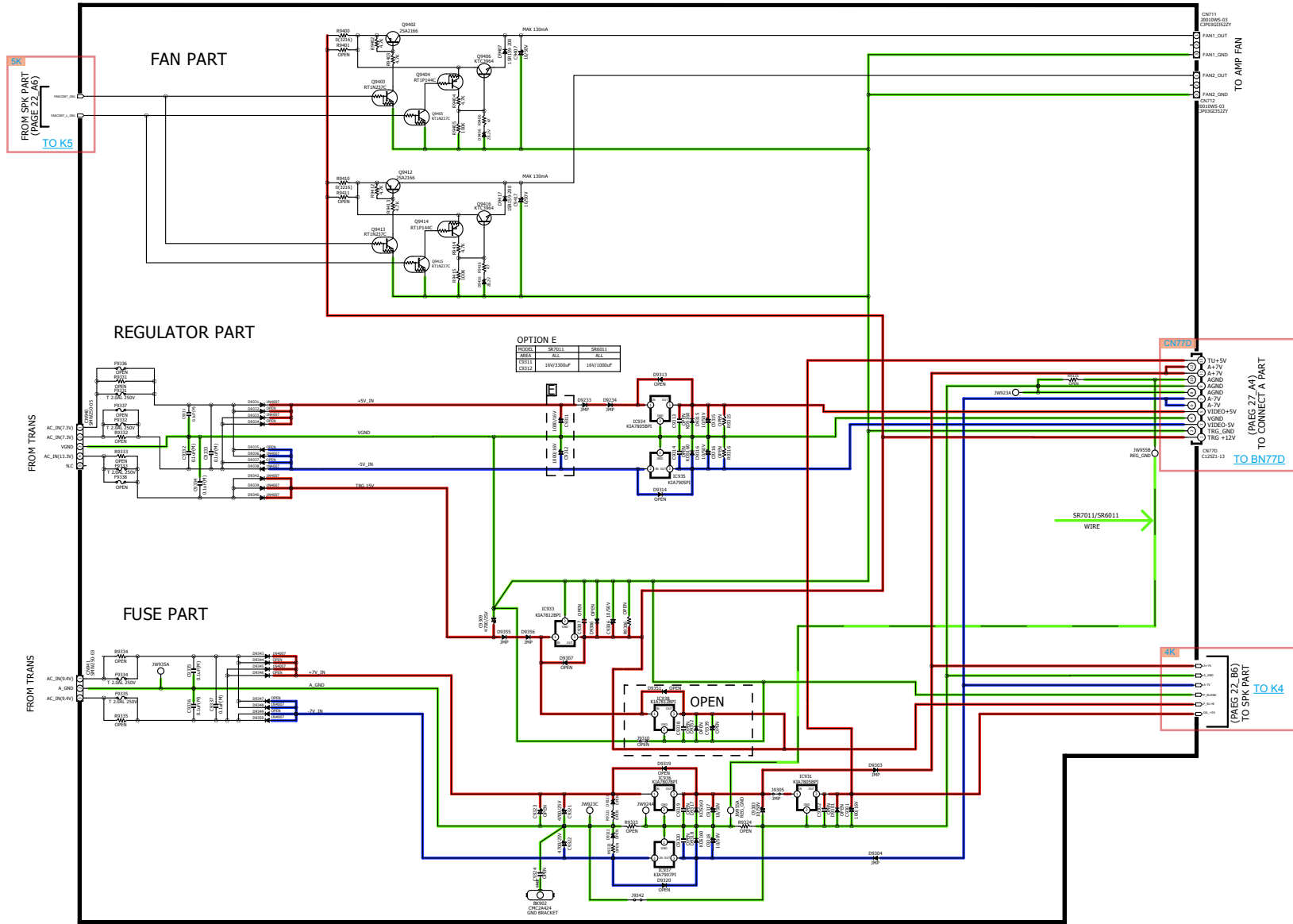
Caution in servicing

Electrical

Mechanical

Repair Information

Updating



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMSD SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER

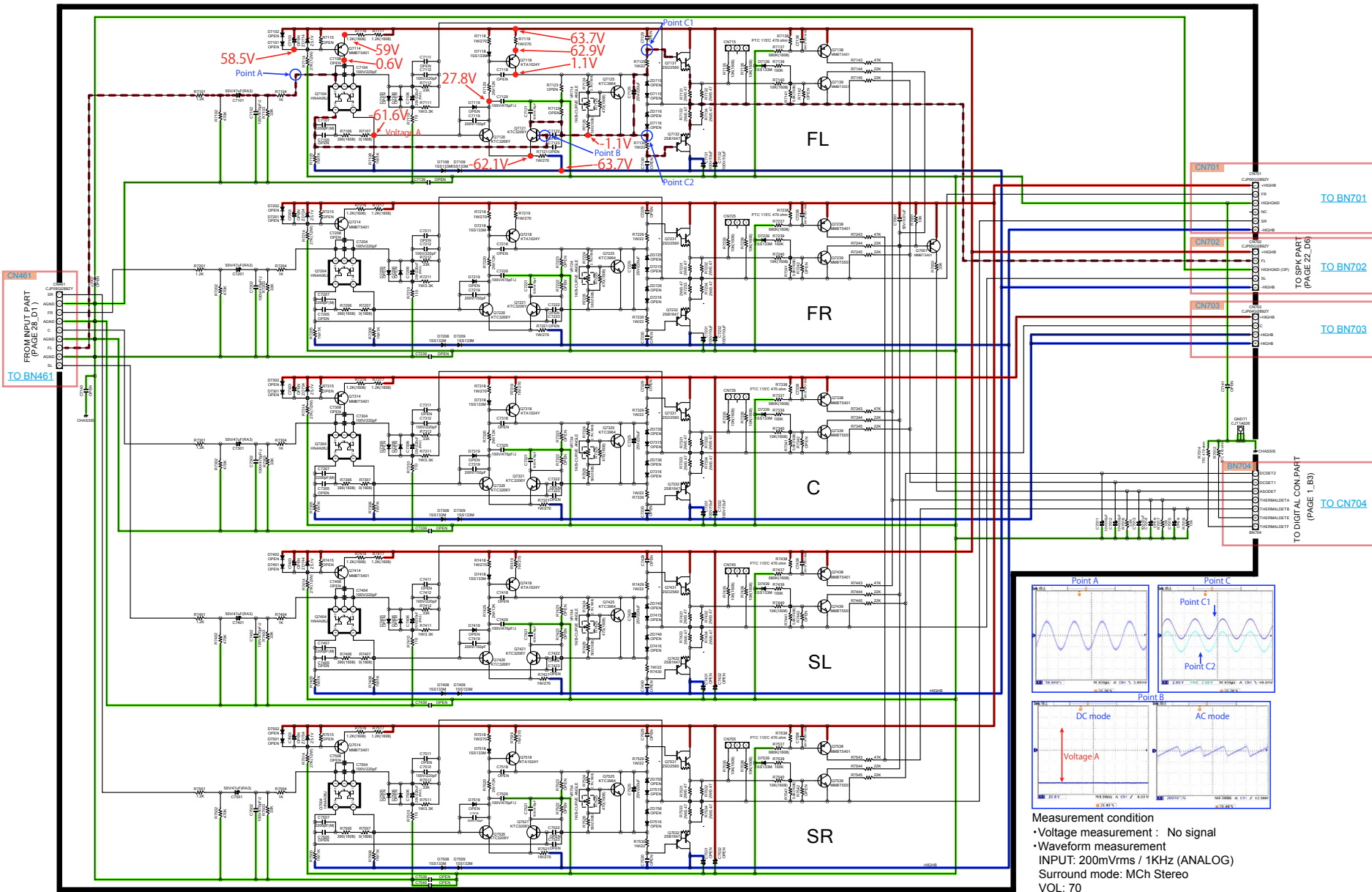
Caution in servicing

Electrical

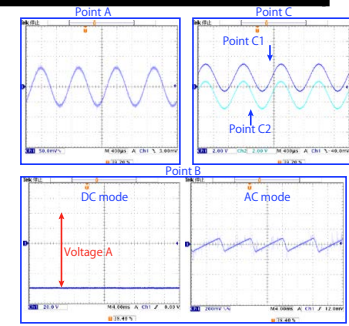
Mechanical

Repair Information

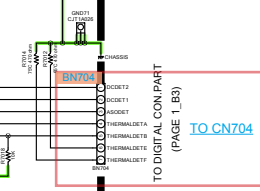
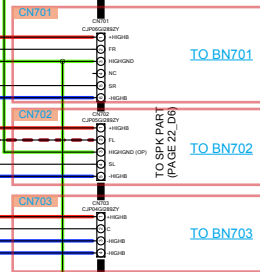
Updating



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER



Measurement condition
 •Voltage measurement : No signal
 •Waveform measurement
 INPUT: 200mVrms / 1kHz (ANALOG)
 Surround mode: Mch Stereo
 VOL: 70
 Speaker load: 8ohms



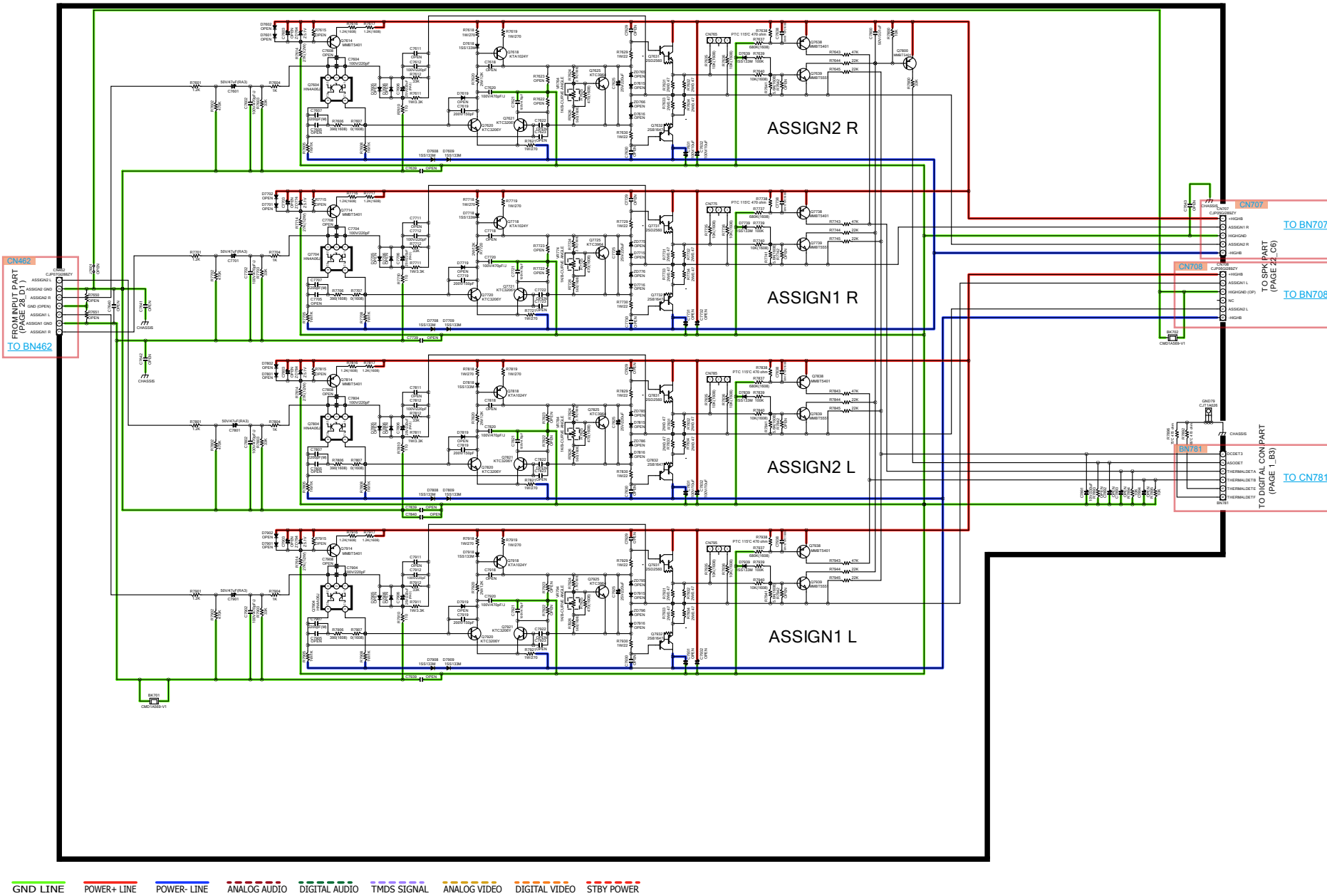
Caution in servicing

Electrical

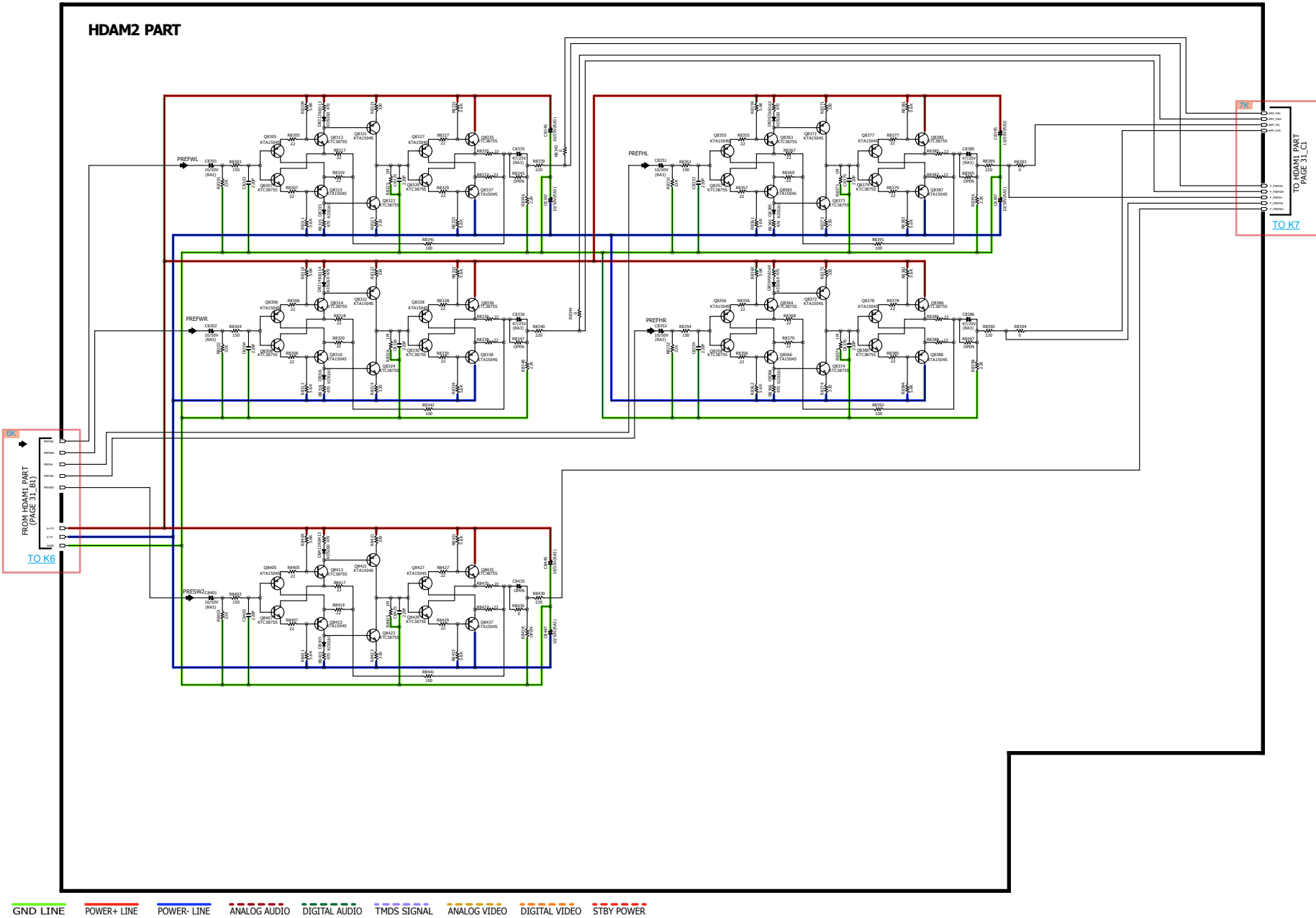
Mechanical

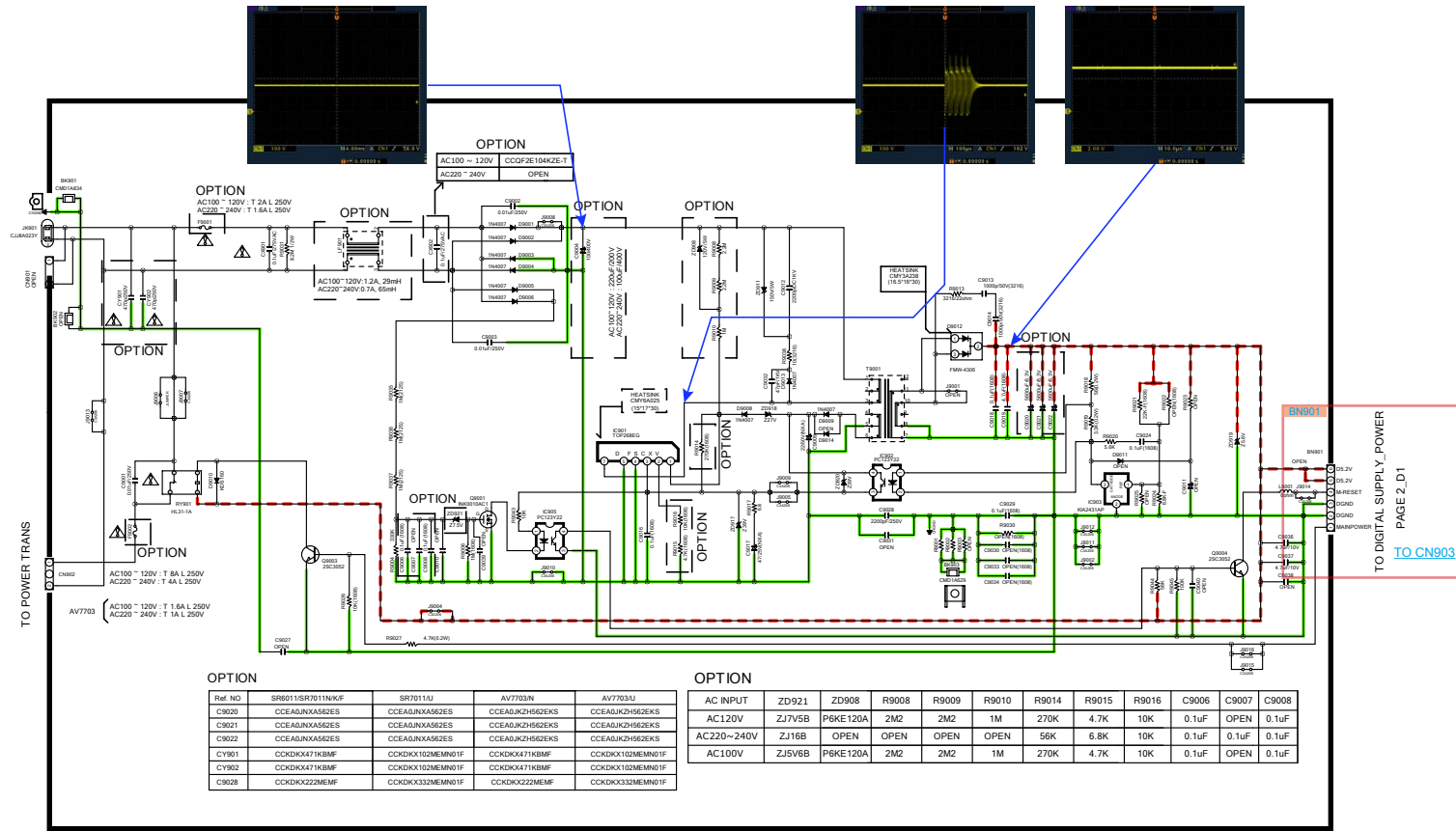
Repair Information

Updating



GND LINE POWER+ LINE POWER- LINE ANALOG AUDIO DIGITAL AUDIO TMDS SIGNAL ANALOG VIDEO DIGITAL VIDEO STBY POWER





OPTION

Ref. NO	SR6611/SR7011/KJF	SR7011/J	AV7703N	AV7703AJ
C900	CCEADJNXA562ES	CCEADJNXA562ES	CCEADJNZH562EKS	CCEADJNZH562EKS
C9021	CCEADJNXA562ES	CCEADJNXA562ES	CCEADJNZH562EKS	CCEADJNZH562EKS
C9022	CCEADJNXA562ES	CCEADJNXA562ES	CCEADJNZH562EKS	CCEADJNZH562EKS
CY901	CKDKK471KBMF	CKDKK102MEMN01F	CKDKK471KBMF	CKDKK102MEMN01F
CY902	CKDKK471KBMF	CKDKK102MEMN01F	CKDKK471KBMF	CKDKK102MEMN01F
C9028	CKDKK222MEMF	CKDKK332MEMN01F	CKDKK222MEMF	CKDKK332MEMN01F

OPTION

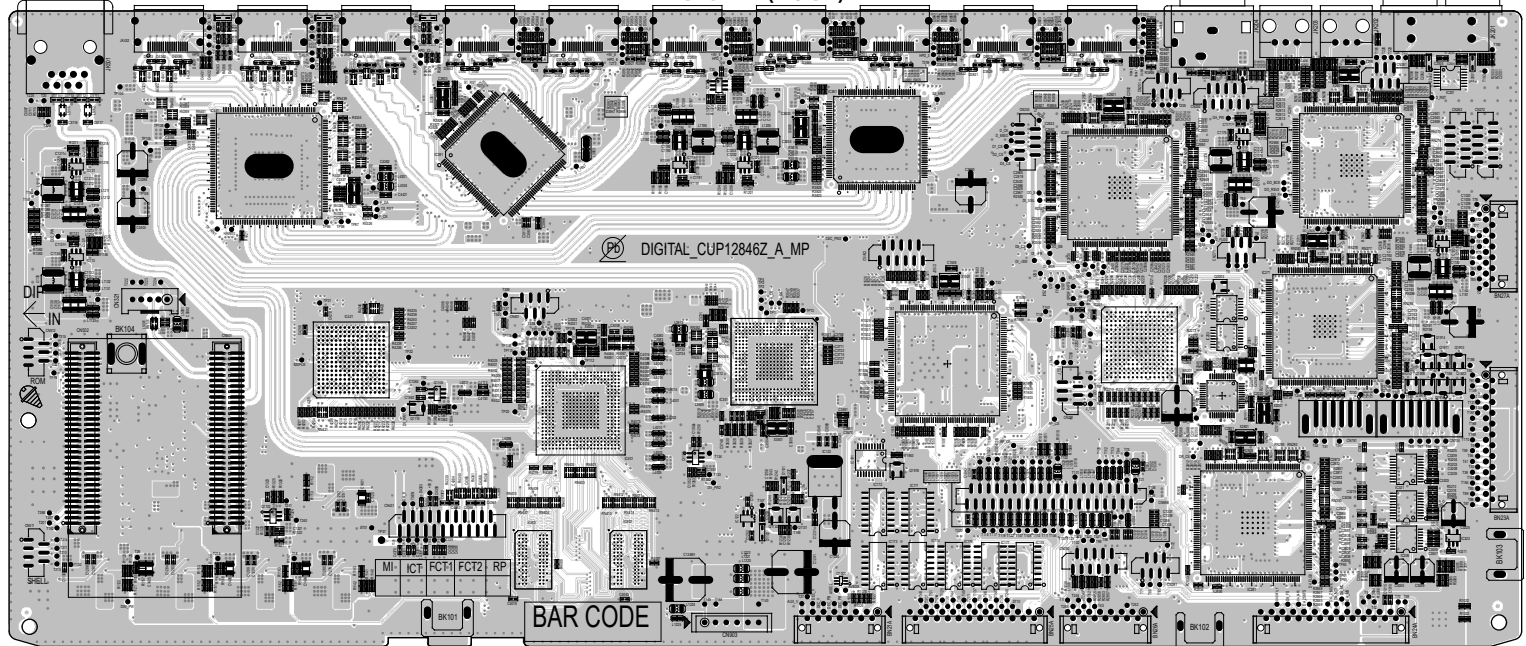
AC INPUT	ZD921	ZD908	R9008	R9009	R9010	R9014	R9015	R9016	C9006	C9007	C9008
AC120V	ZJ7V5B	PKKE120A	2M2	2M2	1M	270K	4.7K	10K	0.1uF	OPEN	0.1uF
AC220~240V	ZJ16B	OPEN	OPEN	OPEN	OPEN	56K	6.8K	10K	0.1uF	0.1uF	0.1uF
AC100V	ZJ5V6B	PKKE120A	2M2	2M2	1M	270K	4.7K	10K	0.1uF	OPEN	0.1uF

IMPORTANT SAFETY NOTICE
 COMPONENTS IDENTIFIED BY MARK Φ HAVE SPECIAL CHARACTERISTICS.
 IMPORTANT FOR SAFETY: WHEN REPLACING ANY OF THESE COMPONENTS
 USE ONLY MANUFACTURER'S SPECIFIED PARTS.
 * THE UNIT OF RESISTANCE IS OHM.
 * K = 1000 OHM, M = 1000000.
 * THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
 * R = 50 RUF.
 THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE
 IMPROVEMENT OF PERFORMANCE.

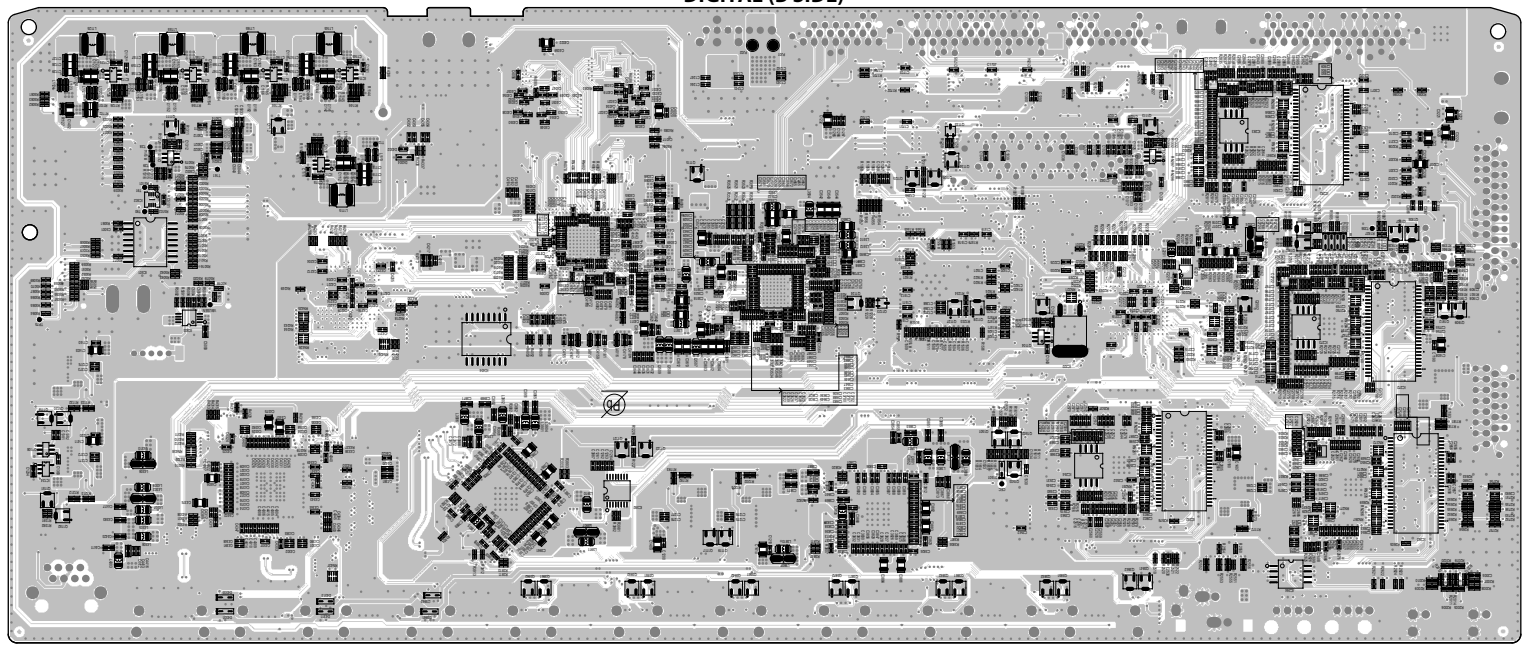
TO DIGITAL SUPPLY POWER
 PAGE 2_D1
 TO CN903

Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

DIGITAL (A SIDE)



DIGITAL (B SIDE)



Caution in servicing

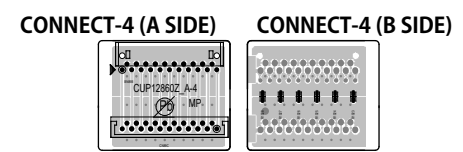
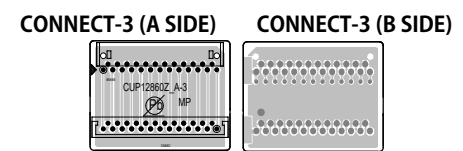
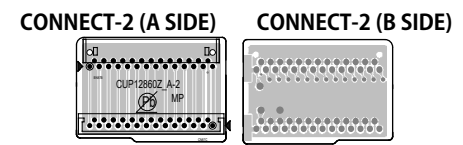
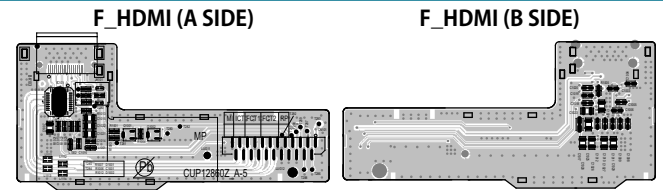
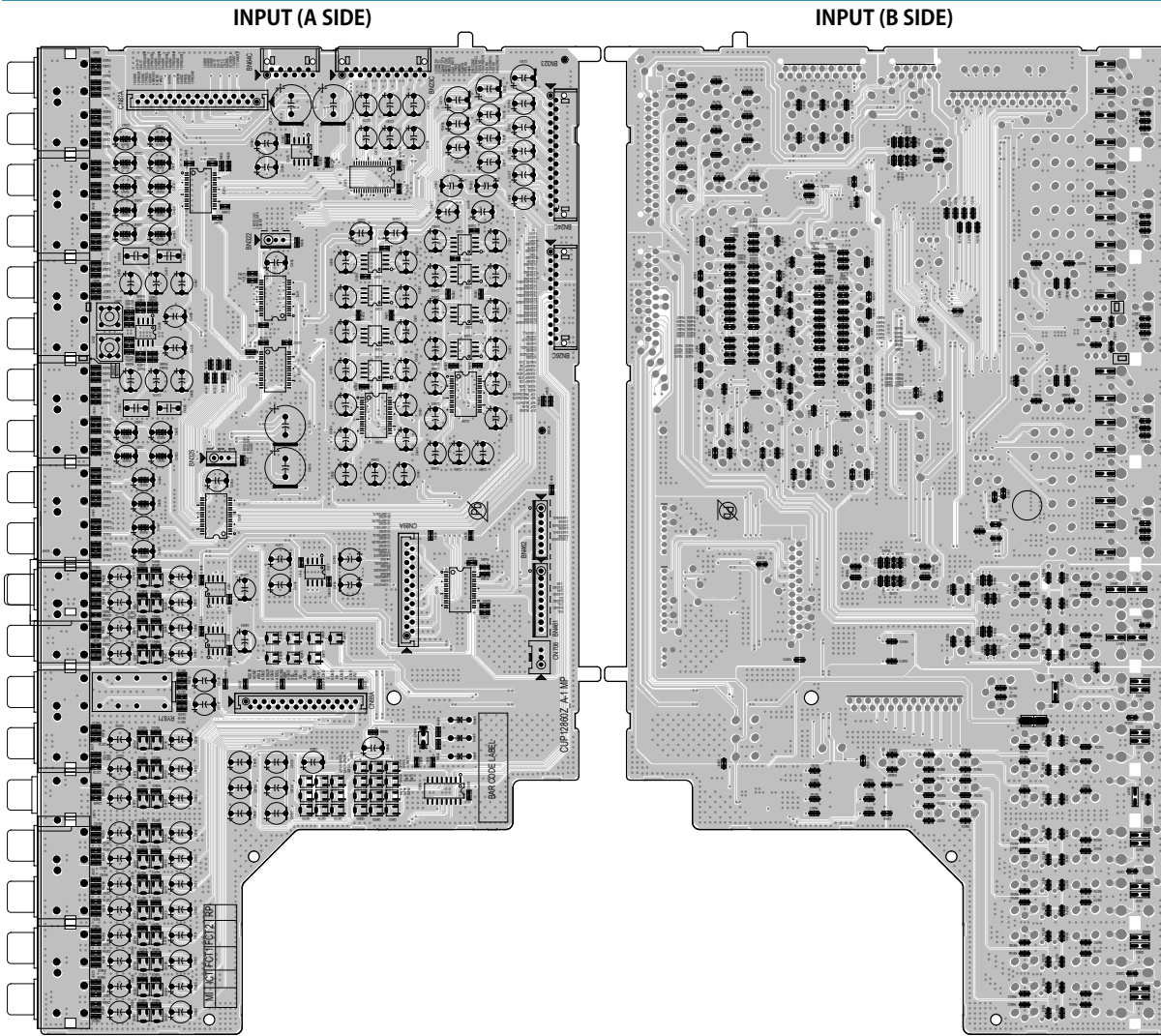
Electrical

Mechanical

Repair Information

Updating

INPUT, F-HDMI, CONNECT-2, CONNECT-3, CONNECT-4



Caution in servicing

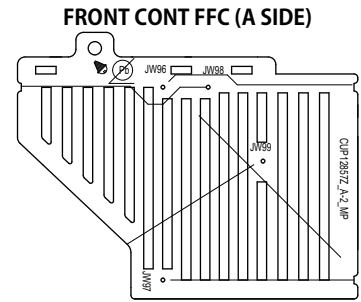
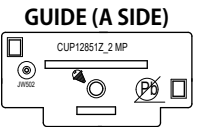
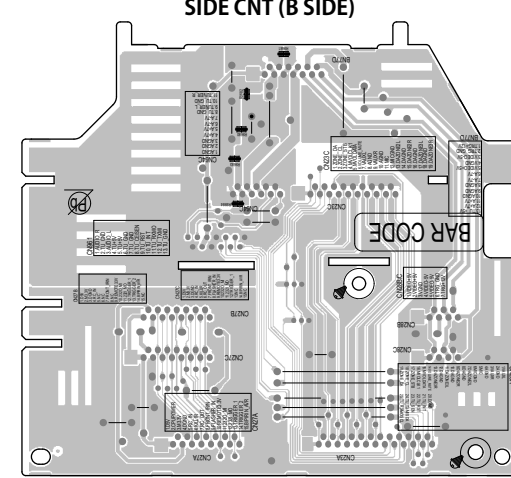
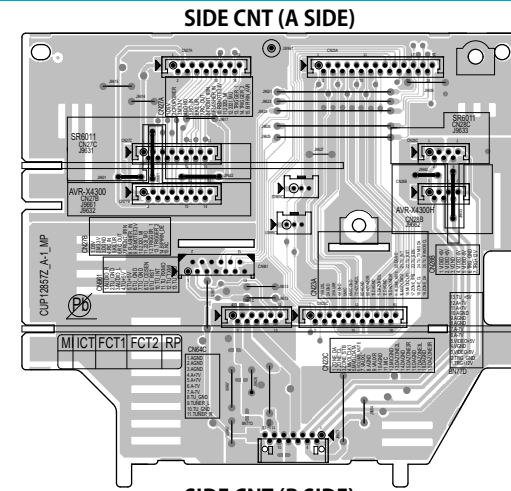
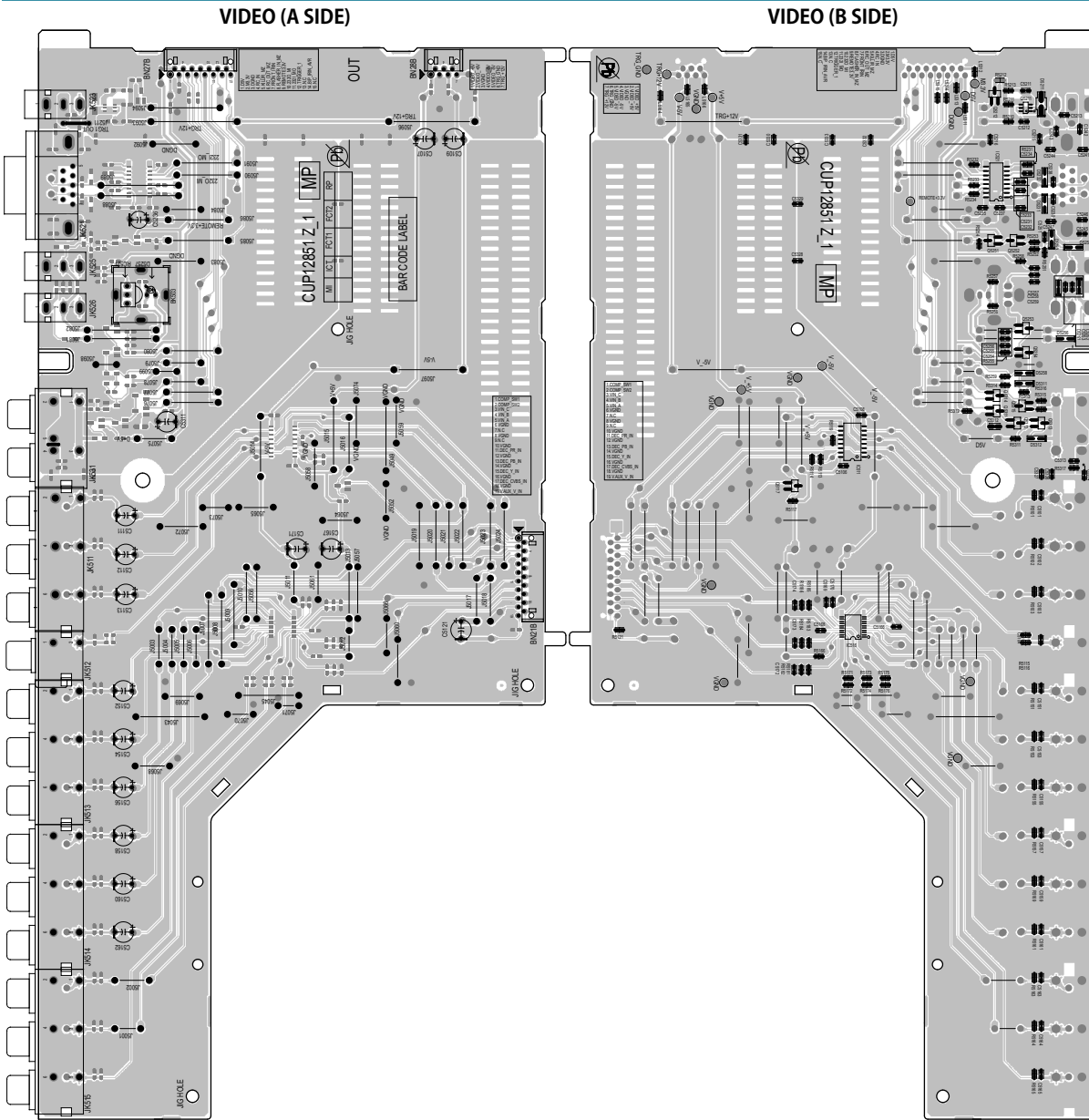
Electrical

Mechanical

Repair Information

Updating

VIDEO, SIDE CNT, GUIDE, FRONT CONT FFC



Caution in Servicing

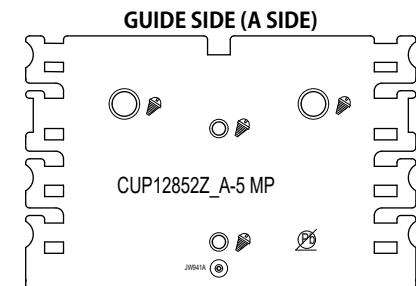
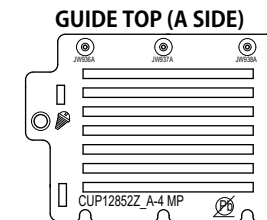
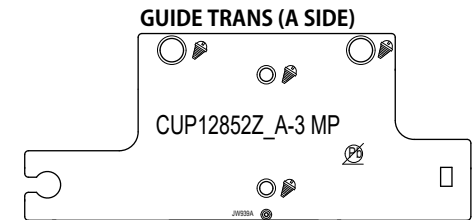
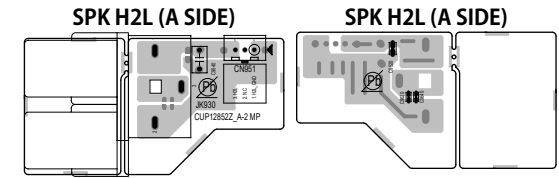
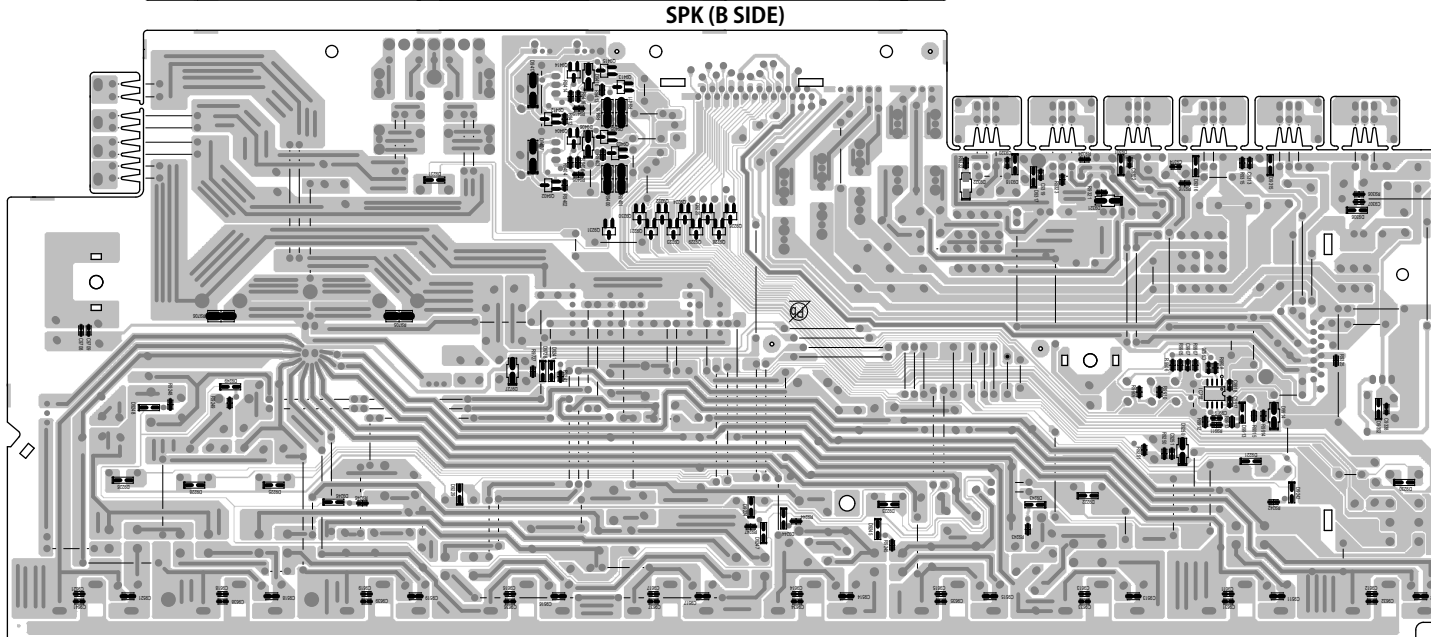
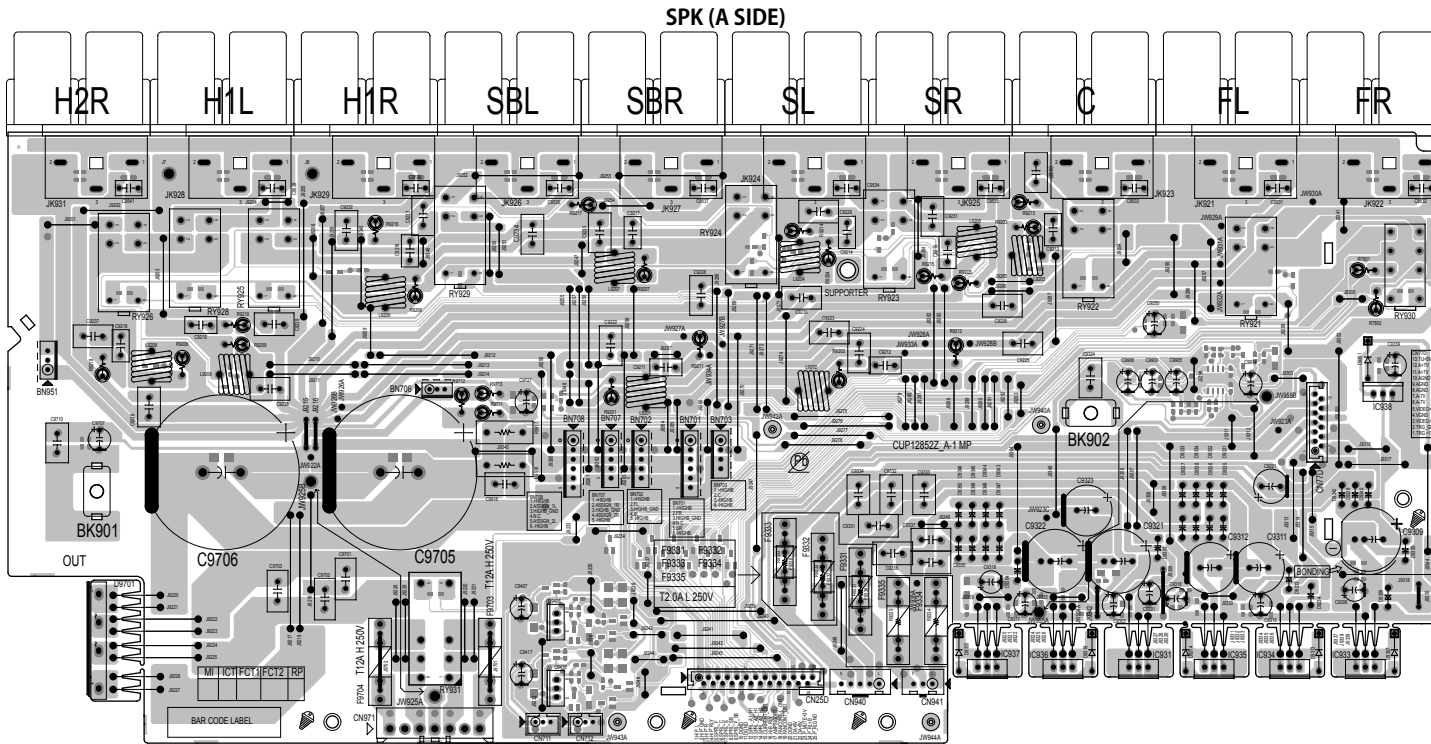
Electrical

Mechanical

Repair Information

Updating

SPK, SPK H2L, GUIDE TRANS, GUIDE TOP, GUIDE SIDE



Caution in Servicing

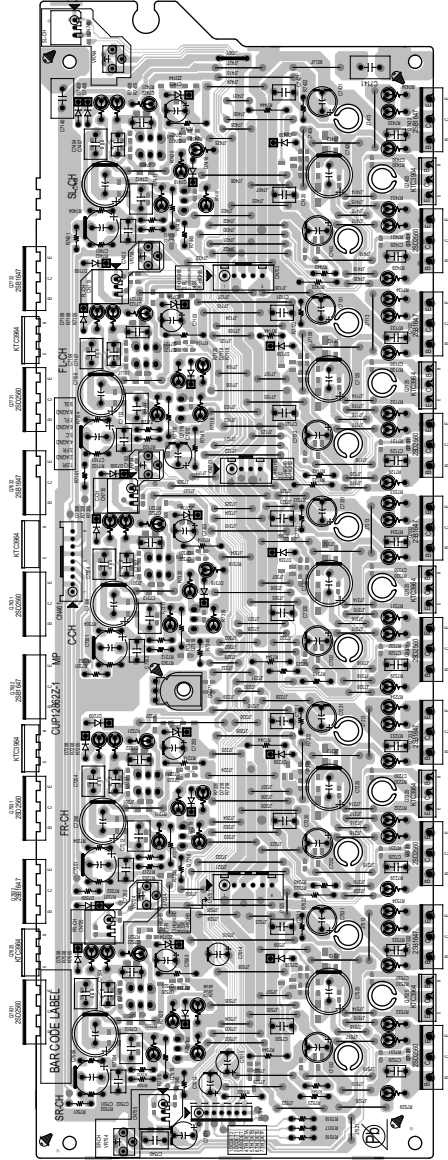
Electrical

Mechanical

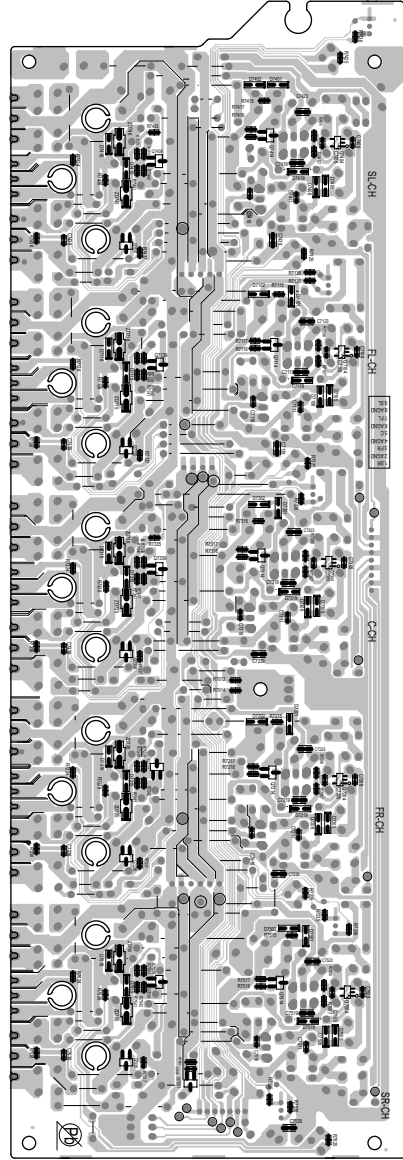
Repair Information

Updating

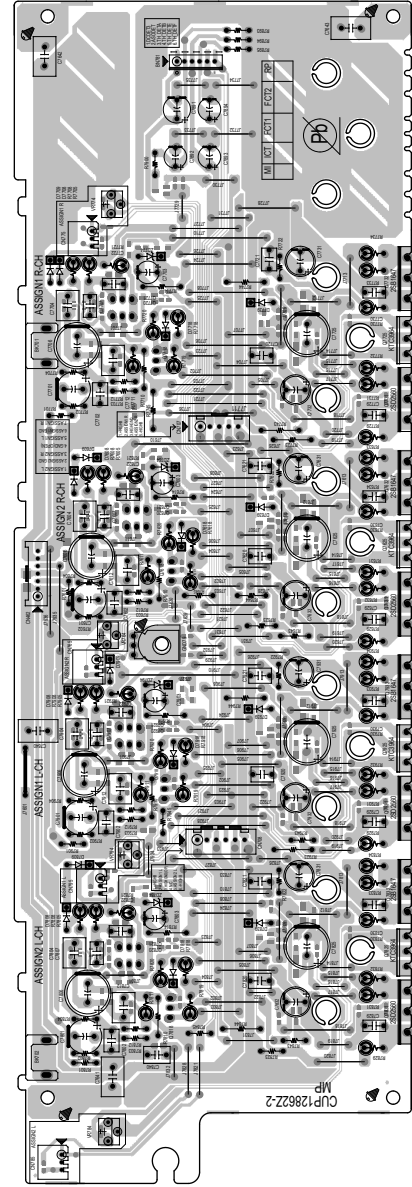
5CH AMP (A SIDE)



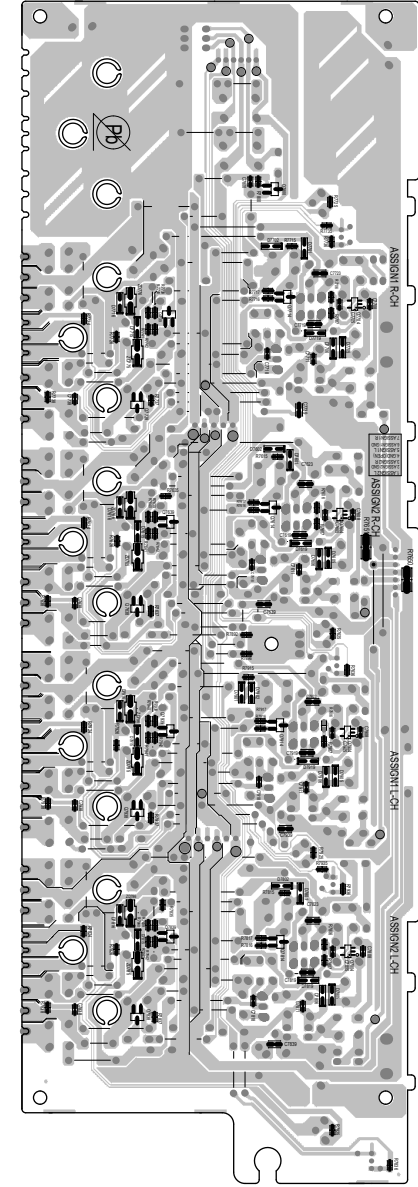
5CH AMP (B SIDE)



4CH AMP (A SIDE)

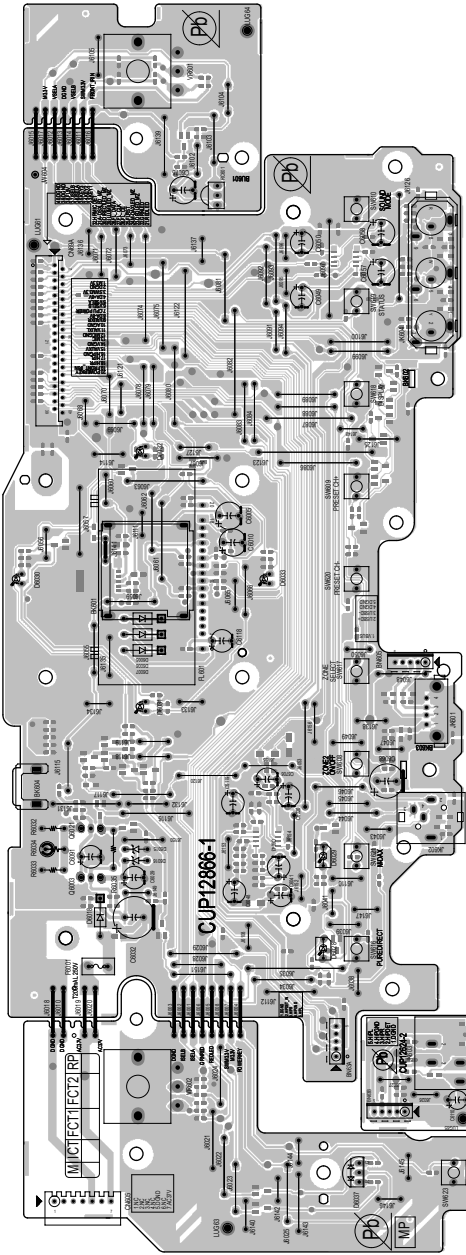


4CH AMP (B SIDE)

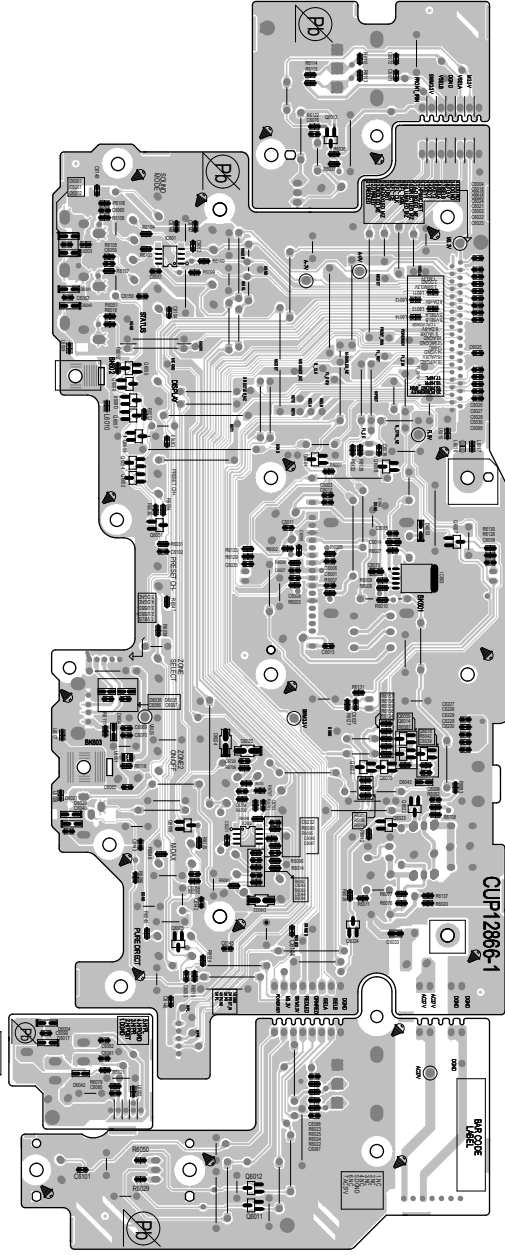


FRONT, HDMI FFC TOP

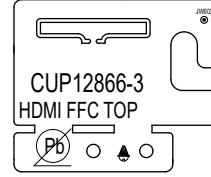
FRONT (A SIDE)



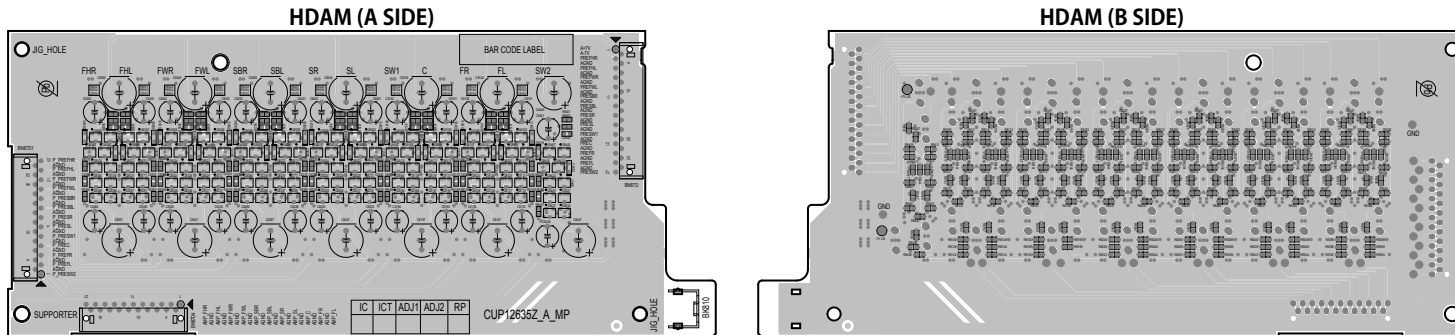
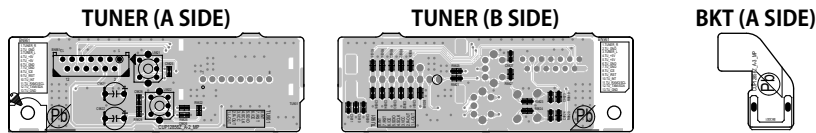
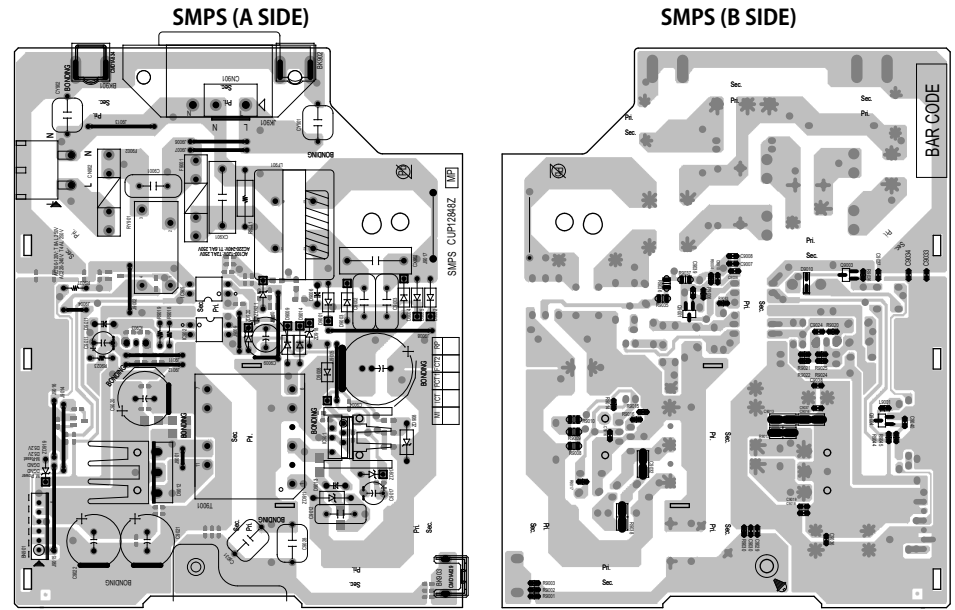
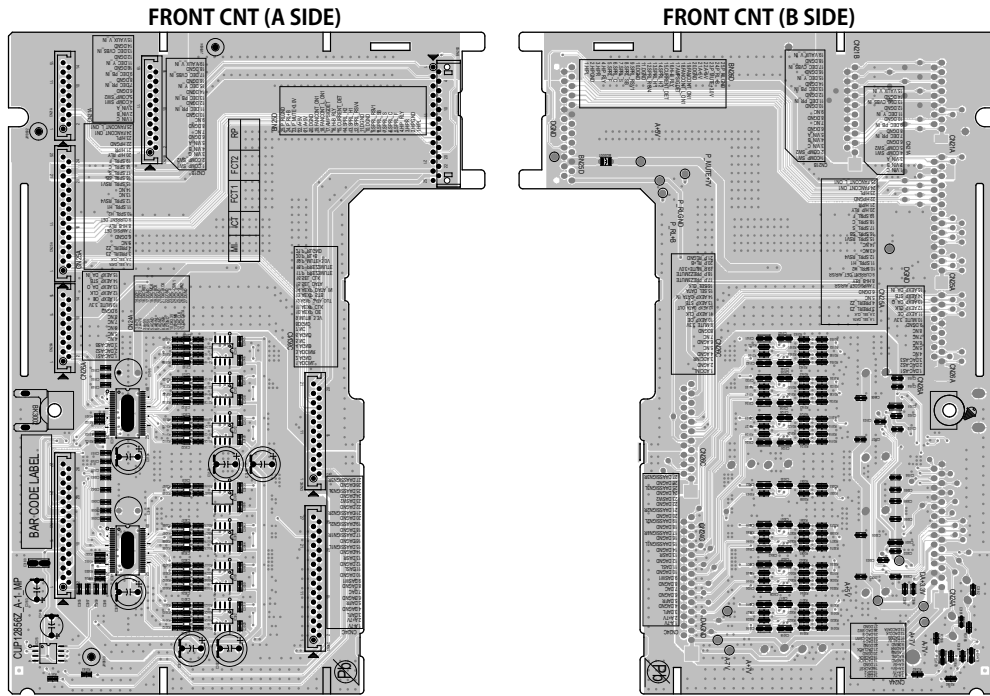
FRONT (B SIDE)



HDMI FFC TOP (A SIDE)



FRONT CNT, TUNER, BKT, HDAM, SMPS



Caution in servicing

Electrical

Mechanical

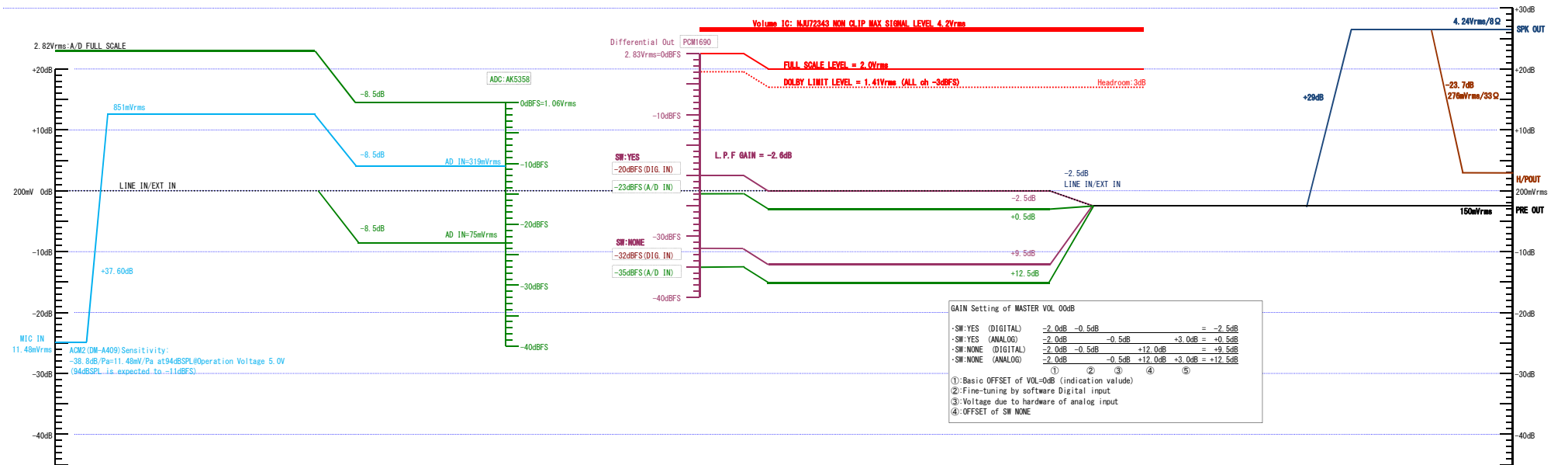
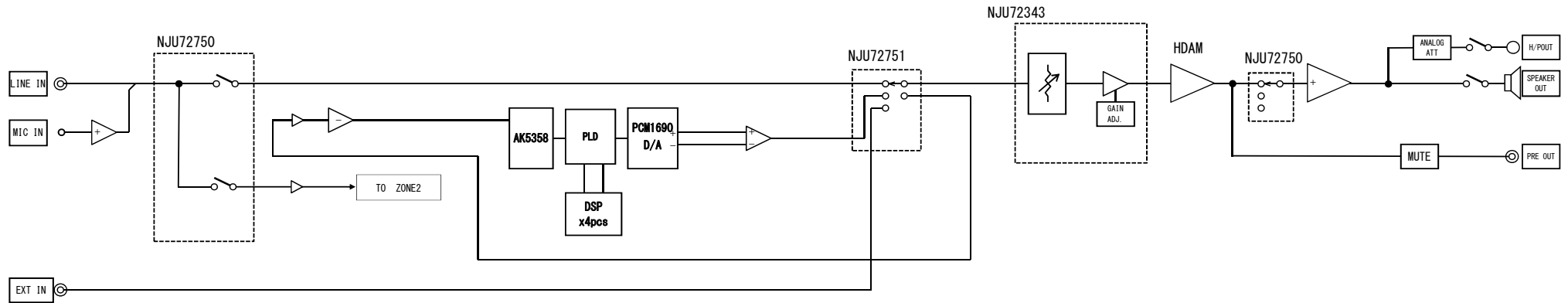
Repair Information

Updating

LEVEL DIAGRAM

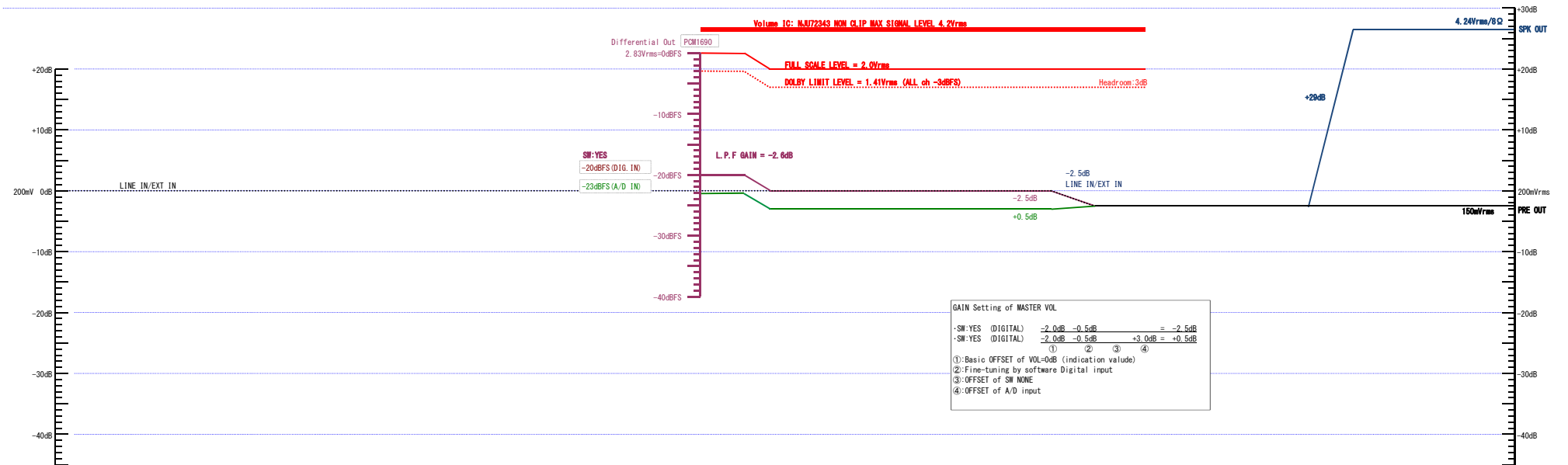
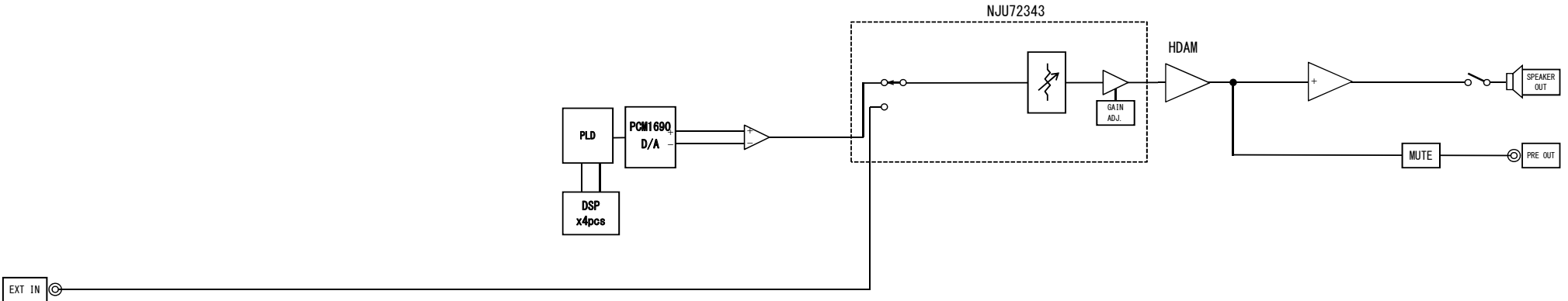
FRONT ch

SR6011 LEVEL DIAGRAM FRONT ch



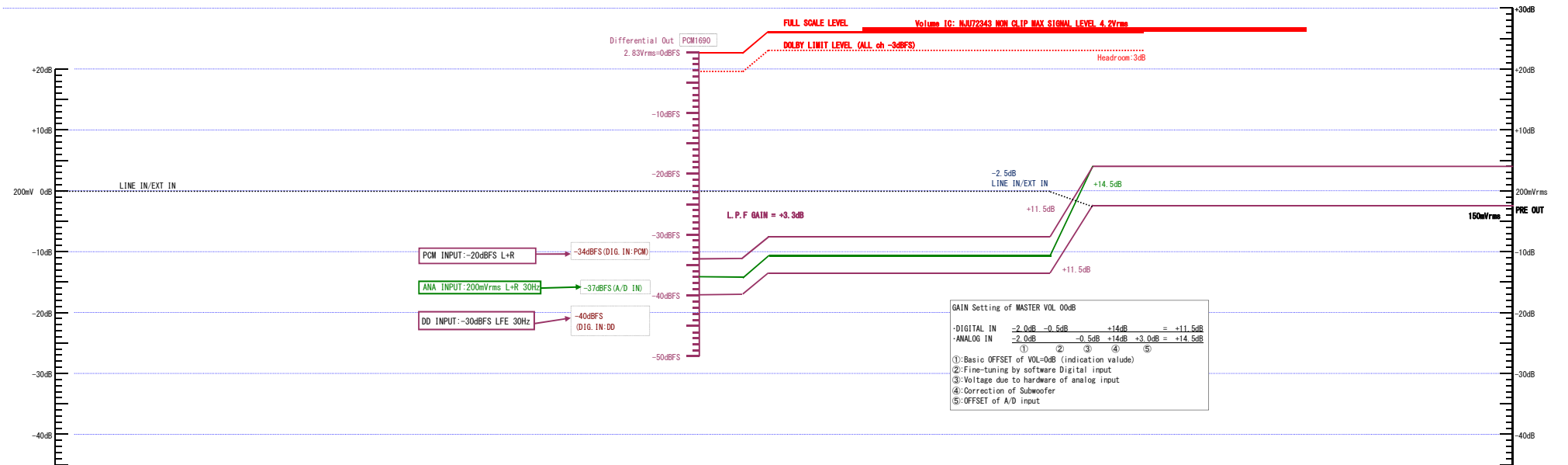
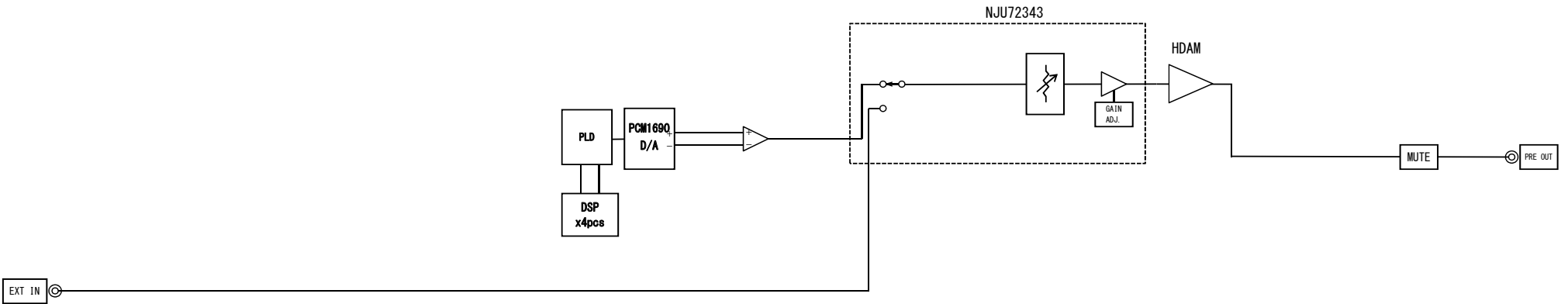


**SR6011
LEVEL DIAGRAM
CENTER/SURROUND ch**



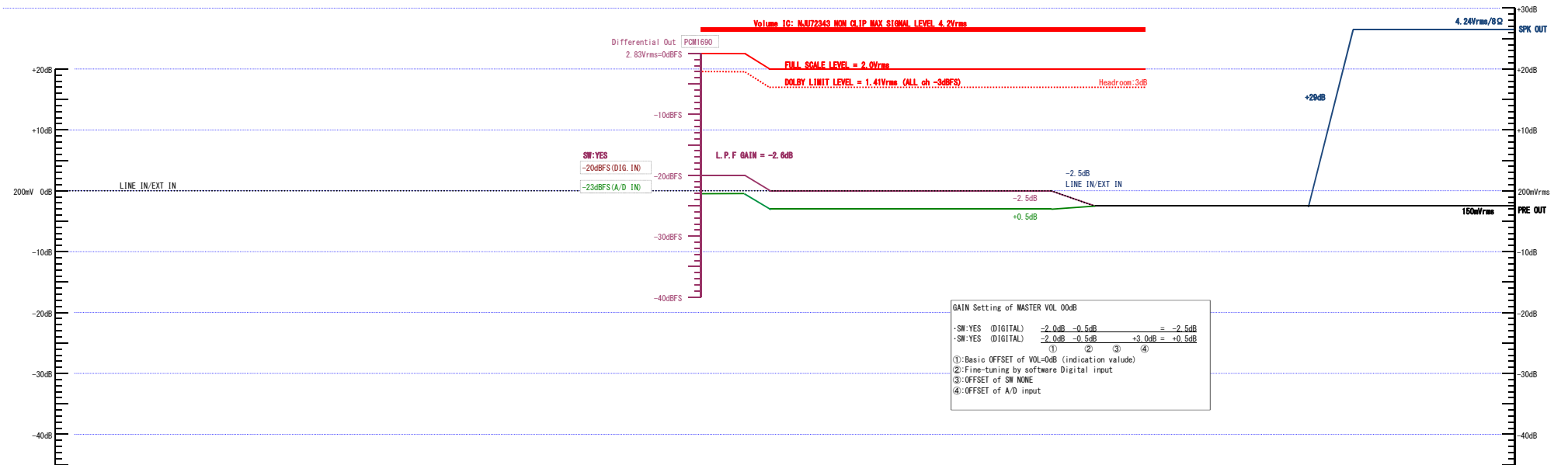
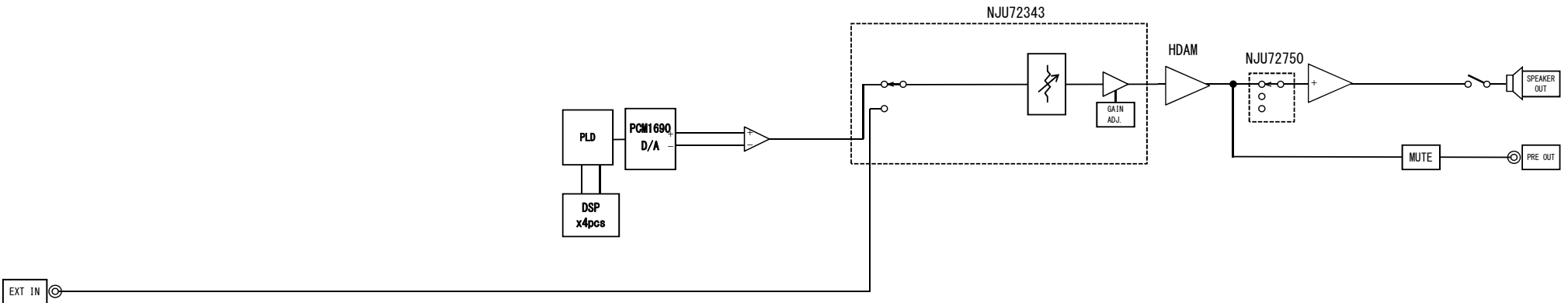


SR6011 LEVEL DIAGRAM SUB WOOFER ch



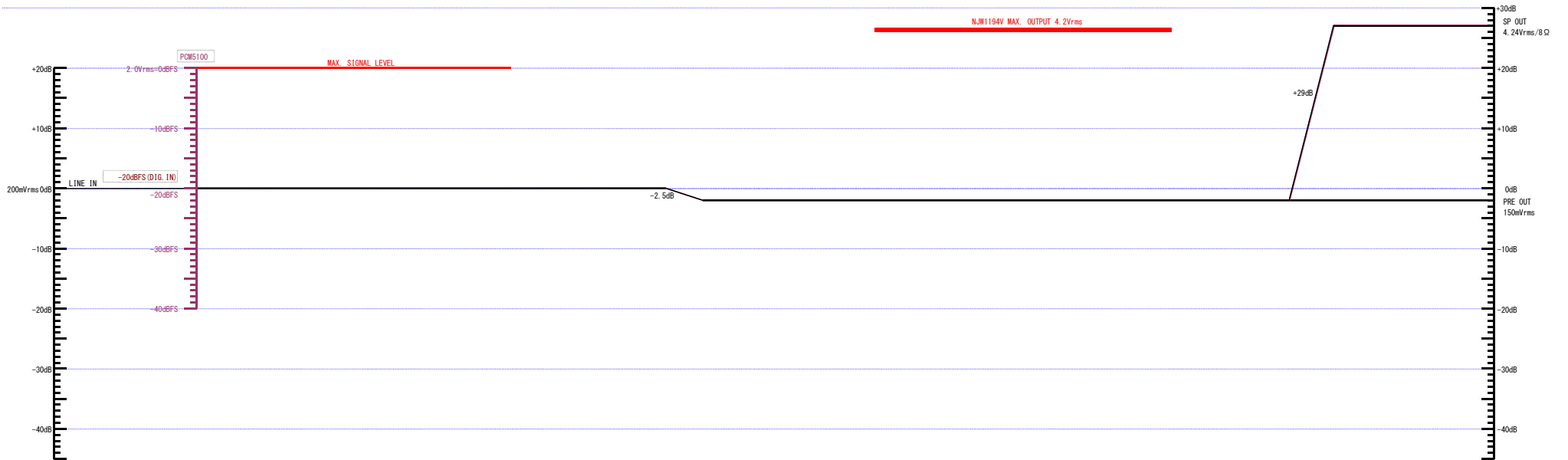
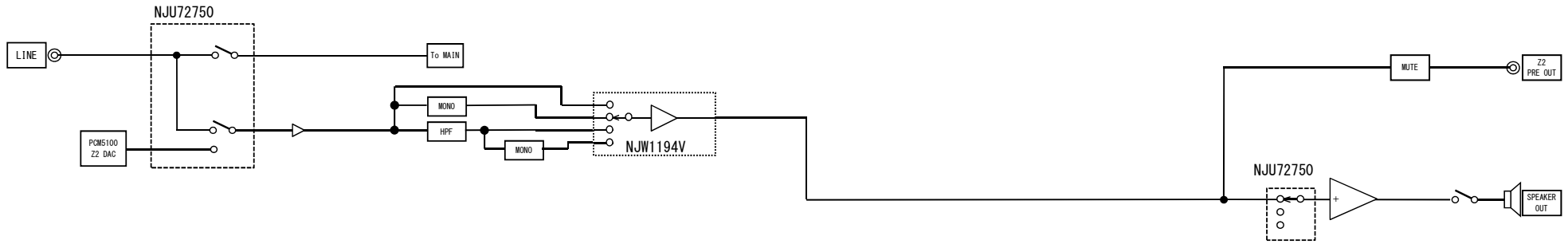


SR6011
LEVEL DIAGRAM
ASSIGN1/2 (SURROUND BACK/HEIGHT1/HEIGHT2) ch

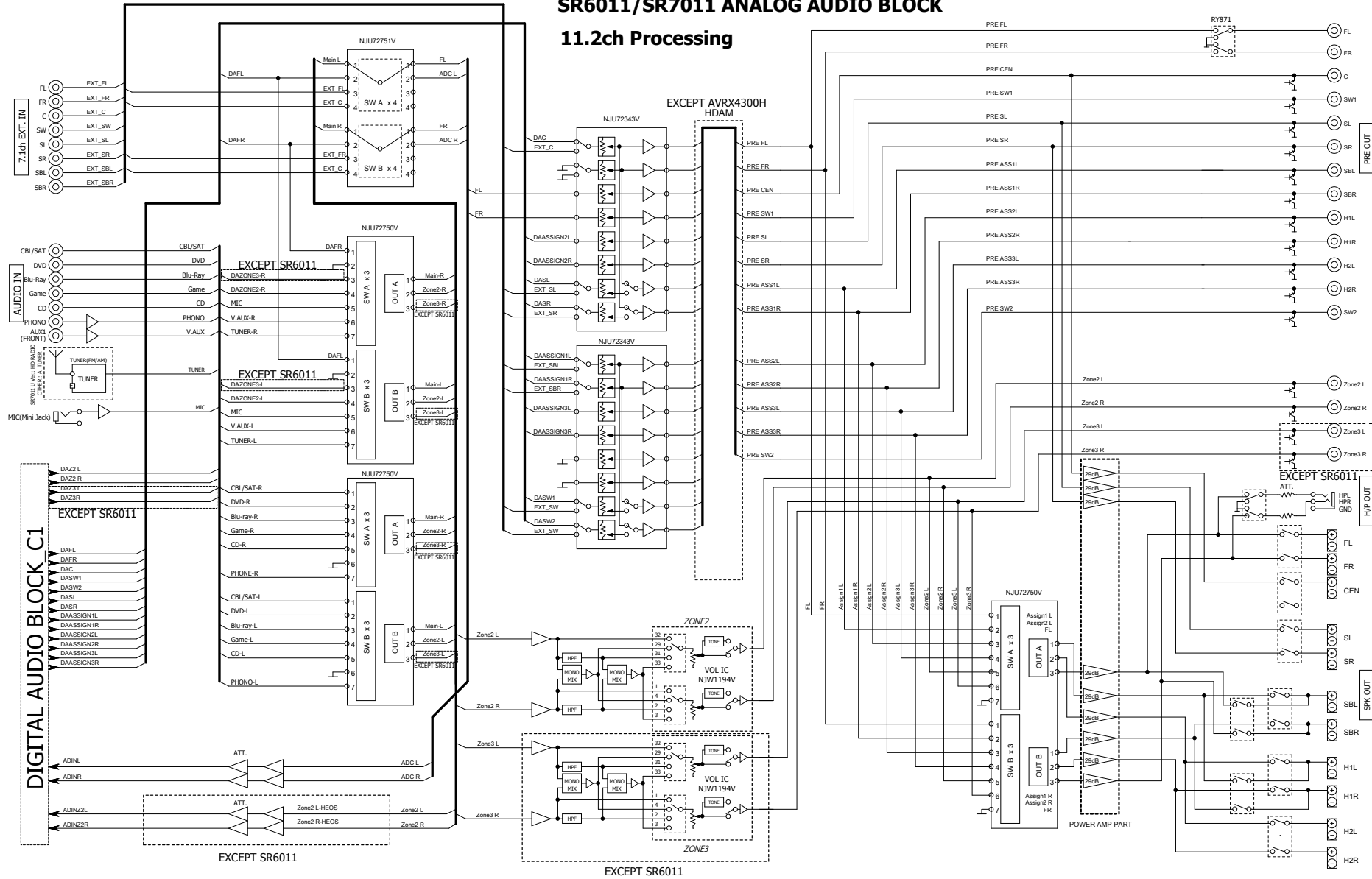




**SR6011
LEVEL DIAGRAM
ZONE2**



SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

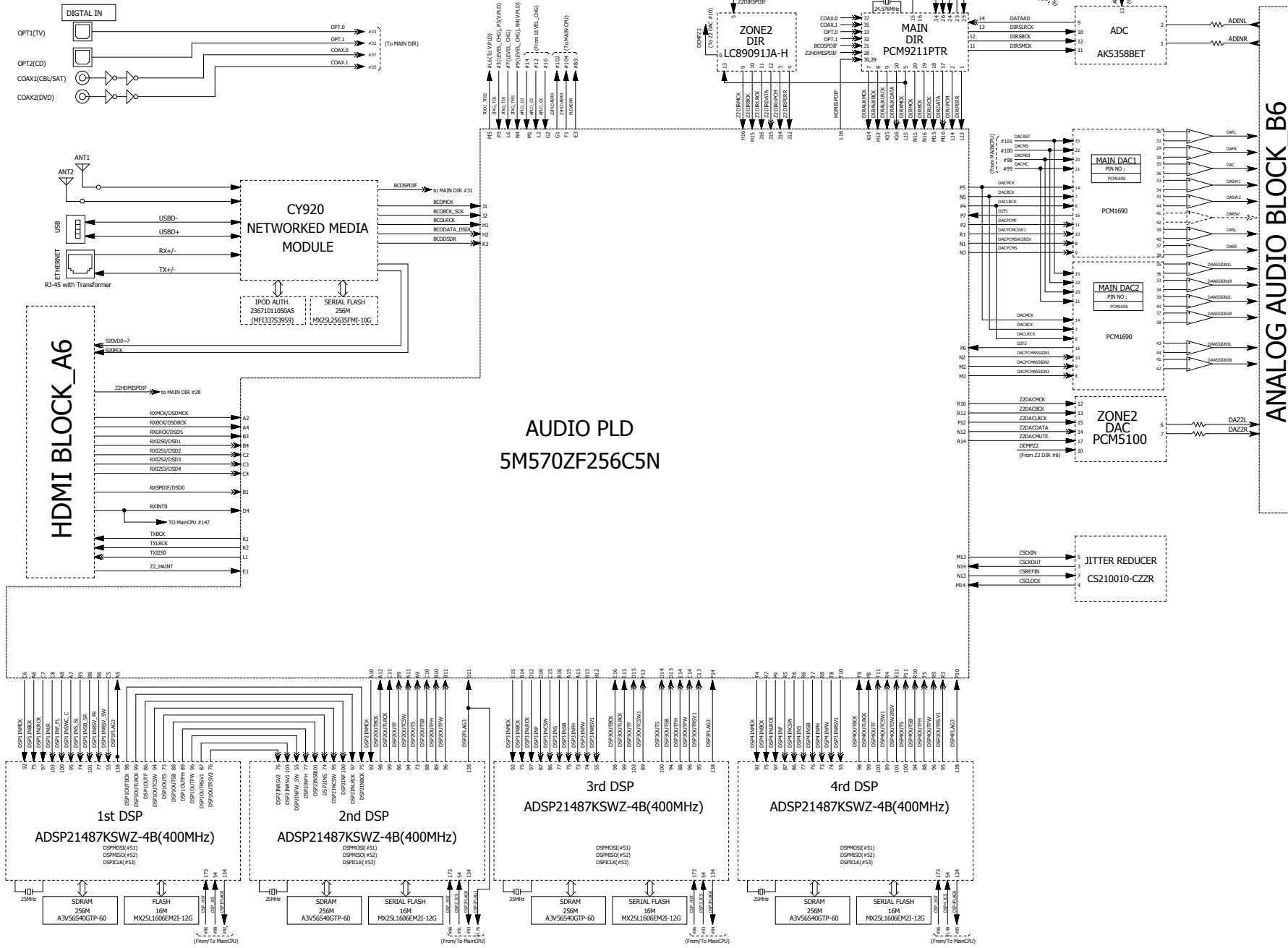
Mechanical

Repair Information

Updating

DIGITAL AUDIO DIAGRAM

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

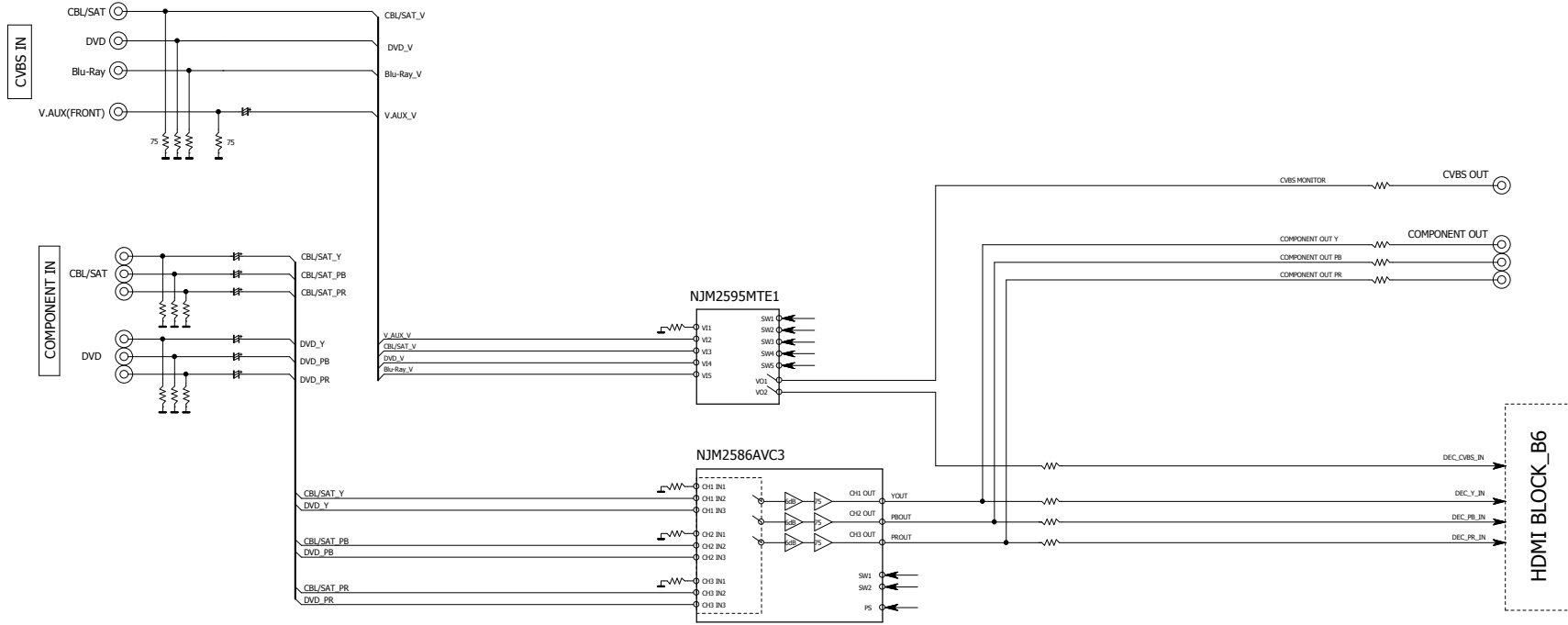
Electrical

Mechanical

Repair Information

Updating

SR6011 ANALOG VIDEO BLOCK



Caution in servicing

Electrical

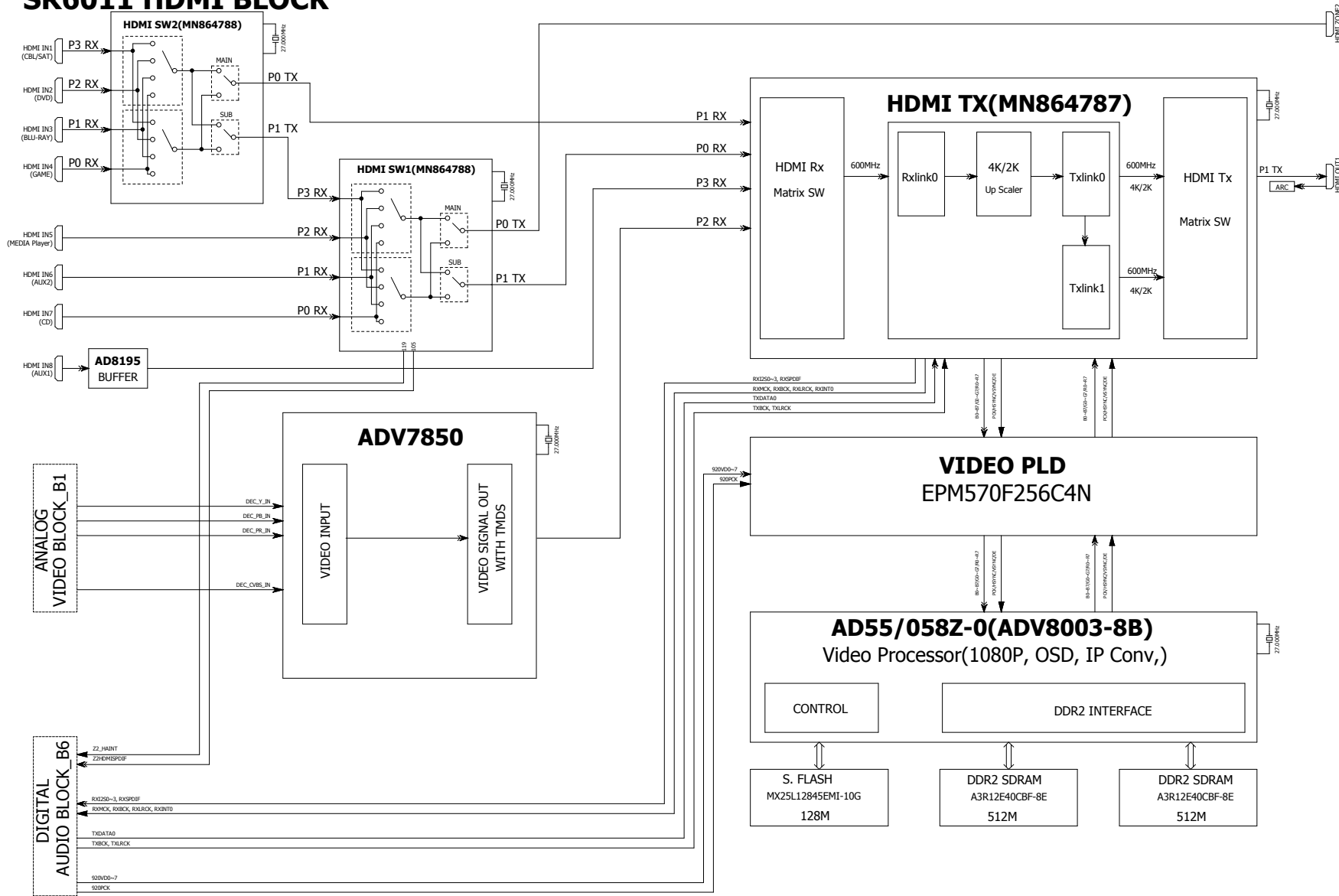
Mechanical

Repair Information

Updating

HDMI DIAGRAM

SR6011 HDMI BLOCK



Caution in Servicing

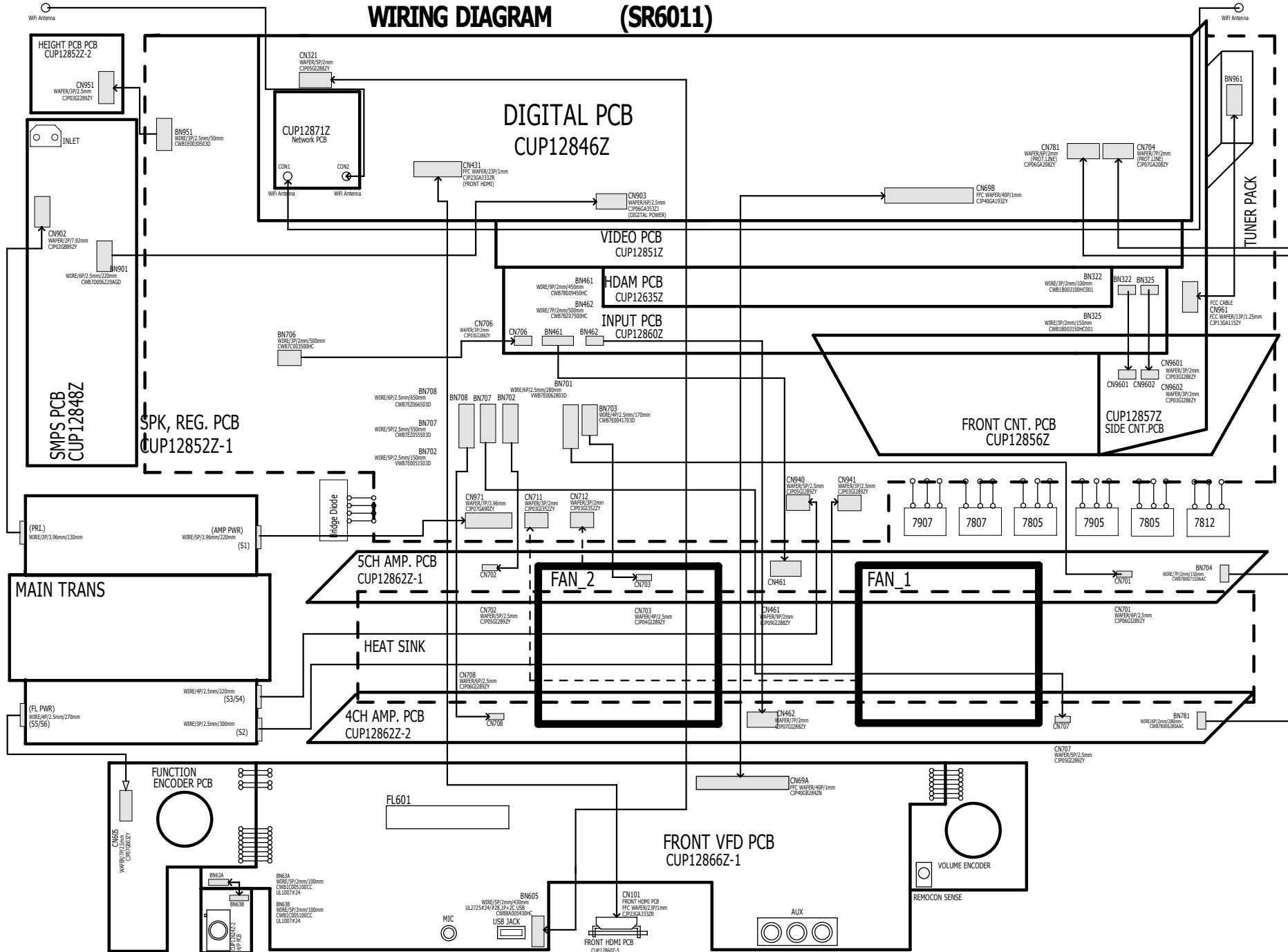
Electrical

Mechanical

Repair Information

Updating

WIRING DIAGRAM (SR6011)



Caution in servicing

Electrical

Mechanical

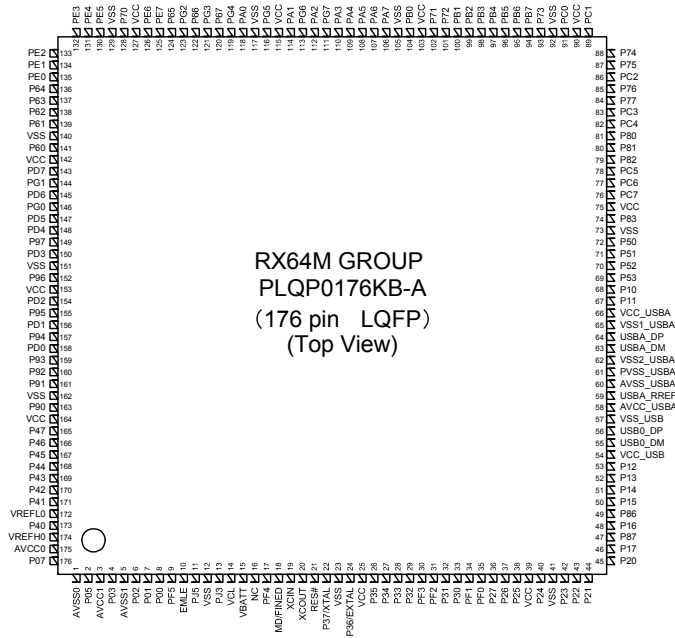
Repair Information

Updating

Only major semiconductors are shown, general semiconductors etc. are omitted to list.
The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.

1. IC's

R5F564MJCDFC (DIGITAL : IC151)



**RX64M GROUP
PLQP0176KB-A
(176 pin LQFP)
(Top View)**

R5F56108VNFPP Terminal Functions

Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
1	AVSS0	AVSS0	-	-	-	-	-	Ground pin
2	P05/IRQ13	POWER KEY	I	M3VPu	I	I	I	Detect Power switch (Release from Wait Mode,Set to interrupt)
3	AVCC1	AVCC1	-	-	-	-	-	Power supply pin
4	P03/IRQ11	RED LED	O	-	L/H	L	H	POWER/STANDBY LED control pin
5	AVSS1	AVSS1	-	-	-	-	-	Ground pin
6	P02/SCK6/IRQ10/AN120	FANDET_ON/HIGH(X4300/SR6011/SR7011)/NC(AV7703)	I/O	SW3VPu	I/L	I/L	I/L	Thermally detection input pin (for FAN control)(A/D converter)
7	P01/RXD6/IRQ9/AN119	RXD MI2320	I	Pd	I	I	I	External data input port (for AMX/FW update via 232C) :Connector is FFC
8	P00/TXD6/IRQ8/AN118	TXD MO2321	O	-	L	L	L	External data output port (for AMX/FW update via 232C) :Connector is FFC
9	PF5/IRQ4	WHITE LED(X4300(NA))/GREEN LED(X4300(EU/CH/JP)/SR6011/SR7011/AV7703)	O	-	L	L	L	POWER LED control pin

Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
10	EMLE	EMLE	I	Pd	-	-	-	E20 Emulator control pin (On chip Emulator is used,this pin should be High. Not used,it should be Low)
11	PJ5	VSEL A	I	-	I	I	I	Master Volume (Rotary encoder) signal input pin
12	VSS	VSS	-	-	-	-	-	Ground pin
13	PJ3	VSEL B	I	-	I	I	I	Master volume (Rotary encoder) signal input pin
14	VCL	VCL	I	-	-	-	-	Smoothing capacitor connection pin
15	VBATT	VBATT	-	-	-	-	-	Power supply pin
16	NC	NC	I	Pd	-	-	-	NC(Pull down)
17	TRST#/PF4	TRST#/NC(NORMRAL)	I/I	Pd	I/I	I/I	I/I	E20 Emulator control pin/When normal operating mode,set to input.
18	MD/FINED	MD	I	M3VPu	I	I	I	Pins for setting the operating mode(select the Boot Mode or User Boot Mode,Single Chip Mode)
19	XCIN	XCIN	I	Pd	-	-	-	NC(Pull down)
20	XCOUNT	XCOUNT	I	-	-	-	-	NC(open)
21	RES#	RESET	I	-	-	-	-	Reset signal input pin
22	XTAL/P37	XTAL	I	-	-	-	-	Pins for a crystal resonator (Xin=12MHz × 10)
23	VSS	VSS	-	-	-	-	-	Ground pin
24	EXTAL/P36	EXTAL	-	-	-	-	-	Pins for a crystal resonator (Xin=12MHz × 10)
25	VCC	VCC	-	-	-	-	-	Power supply pin
26	UPSEL/P35(IN)/NMI	NC(X4300/SR6011)/DOOR DET(SR7011/AV7703)	I	M3VPu	I	I	I	Front trap door open/close detect input pin (High:Door open)
27	P34/SCK6/SCK0/IRQ4	BDOWN	I	-	I	I	I	Detect power down
28	P33/TIOCC0/RXD6/RXD0/IRQ3-DS	RC IN	I	-	I	I	I	Remote input
29	P32/TIOCC0/TXD6/TXD0/IRQ2-DS	NC(X4300)/FLASHER IN(SR6011/SR7011/AV7703)	O/I	-	L/I	L/I	L/I	IR Flasher control signal input (When standby mode,set to interrupt)
30	TMS/PF3	TMS/NC(NORMRAL)	I/I	M3VPu	-/I	-/I	I	E20 Emulator control pin/When normal operating mode,set to input.
31	TDI/PF2/RXD1	TDI/RXD MITSUBISHI	I/I/I	M3VPu	-/I	-/I	I	E20 Emulator control pin/Mitsubishi writer control pin/When normal operating mode,set to input.
32	P31/IRQ1-DS	NC(SR7011/AV7703(NA))/TU GPO2_INT(X4300H/SR6011(ALL),SR7011/AV7703(EU/CH/JP))	O/I	-	L	L	L	TUNER control
33	P30/RXD1	HDRADIO MIHO(SR7011/AV7703(NA))/TU SDIO(X4300H/SR6011(ALL),SR7011/AV7703(EU/CH/JP))	I/L_O	-	L	L	L	HDRADIO/TUNER control
34	TCK/FINEC/PF1/SCK1	TCK/NC(NORMRAL)	I/I	M3VPu	-/I	-/I	I	E20 Emulator control pin/When normal operating mode,set to input.
35	TD0/TXD1/PF0	TDO/TXD MITSUBISHI	O/O/I	M3VPu	-/I	-/I	I	E20 Emulator control pin/Mitsubishi writer control pin/When normal operating mode,set to input.
36	P27/SCK1	NC(SR7011/AV7703(NA))/TU SEN(X4300H/SR6011(ALL),SR7011/AV7703(EU/CH/JP))	O	-	L	L	L	TUNER control

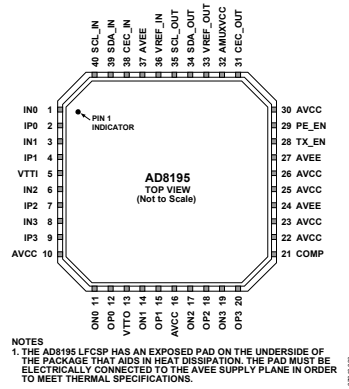
Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
37	P26/TXD1	HDRADIO MOH(SR7011/AV7703NA)/TU SCLK(X4300H/SR6011(ALL),SR7011/AV7703(EU/CH/JP))	O/O		L	L	L	HDRADIO/TUNER control
38	P25/RXD3	VOL DATA	O		L	L	L	Volume control pin (NJU72343)
39	VCC	VCC	-		-	-	-	Power supply pin
40	P24/SCK3	NC(X4300)/KILL IR(SR6011/SR7011/AV7703)	O		L	L	L	Front IR disable control pin
41	VSS	VSS	-		-	-	-	Ground pin
42	P23/TXD3/CTS0#/RTS0#	E RTS MOEI / (E SPI CS)	O	N3VPu	L	L	L	Ethernet(LEGO) control pin/ (Case of using CY920)
43	P22/SCK0	E CTS MIEO / (E SPI CLK)	I/(O)	N3VPu	I	I	I	Ethernet(LEGO) control pin/ (Case of using CY920)
44	P21/RXD0/IRQ9	E RxD MIEO / (E SPI MIEO)	I	N3VPu	I	L	I	Ethernet(LEGO) control pin/ (Case of using CY920)
45	P20/TXD0/IRQ8	E TxD MOEI / (E SPI MOEI)	O	N3VPu	L	L	L	Ethernet(LEGO) control pin/ (Case of using CY920)
46	P17/SCK1/TXD3/IRQ7	NET FACT RST / (E SPI REQ)	O(ODR/ I)	N5VPu	Z	Z	Z	Ethernet(LEGO) control pin/ (Case of using CY920)
47	P87/TXD10/TIOCA2	NC(X4300)/RC OUt(SR6011/SR7011/AV7703)	O		L/H	L/L	L/H	Remote code (RC-5) output pin
48	P16/TXD1/RXD3/IRQ6	NET5V POWER / (E RESET)	O/(ODR)	N3VPu	L	L	L	Ethernet power supply (Net5V) control pin/ (Case of using CY920)
49	P86/RXD10	SEL_DATA	O		L	L	L	Audio selector control pin (NJU72750/72751)
50	P15/RXD1/SCK3/IRQ5	AEXP STB	O		L	L	L	Expander (MC14094) control pin
51	P14/IRQ4	AEXP OE	O		L	L	L	Expander (MC14094) control pin
52	P13/TXD2/IRQ3	AEXP CLK	O		L	L	L	Expander (MC14094) control pin
53	P12/RXD2/IRQ2	AEXP DATA	O		L	L	L	Expander (MC14094) control pin
54	VCC_USB	VCC_USB	-		-	-	-	Power supply pin
55	USB0_DM	USB0_DM	-		-	-	-	NC(open)
56	USB0_DP	USB0_DP	-		-	-	-	NC(open)
57	VSS_USB	VSS_USB	-		-	-	-	Ground pin
58	AVCC_USBA	AVCC_USBA	-		-	-	-	Power supply pin
59	USBA_PREF	USBA_PREF	-		-	-	-	NC(open)
60	AVSS_USBA	AVSS_USBA	-		-	-	-	Ground pin
61	PVSS_USBA	PVSS_USBA	-		-	-	-	Ground pin
62	VSS2_USBA	VSS2_USBA	-		-	-	-	Ground pin
63	USBA_DM	USBA_DM	-		-	-	-	NC(open)
64	USBA_DP	USBA_DP	-		-	-	-	NC(open)
65	VSS1_USBA	VSS1_USBA	-		-	-	-	Ground pin
66	VCC_USBA	VCC_USBA	-		-	-	-	Power supply pin
67	P11/SCK2/IRQ1	CEC_OUT	O		L	L	-	CEC-D control pin
68	P10/IRQ0	CEC_IN	I	SW3VPu	I	I	I	CEC-D control pin
69	P53	ADV8003 SPI CS	O		L	L	L	GUI control pin(ADV8003)
70	P52/RXD2	ADV8003 SPI MI	I		L	L	L	GUI control pin(ADV8003)
71	P51/SCK2	ADV8003 SPI CLK	O		L	L	L	GUI control pin(ADV8003)
72	P50/TXD2	ADV8003 SPI MO	O		L	L	L	GUI control pin(ADV8003)
73	VSS	VSS	-		-	-	-	Ground pin
74	P83/SCK10	IP_RST	O	Pd	I	I	L	Scaler w/ GUI (ADV8003) Reset control pin
75	VCC	VCC	-		-	-	-	Power supply pin

Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
76	UB/PC7/TXD8/IRQ14	UB	I	Pd	-	-	-	Pins for setting the boot mode(select the Boot Mode or User Boot Mode)
77	PC6/RXD8/IRQ13	AVSDA	I/O	DV-3VPu	O/L	O/L	L	VIDEO I2C control pin for ADV8003/ ADV7850/ ADVM2000(except SR6011)
78	PC5/SCK8	AVSCL	I/O	DV-3VPu	O/L	O/L	L	VIDEO I2C control pin for ADV8003/ ADV7850/ ADVM2000(except SR6011)
79	P82/TXD10	DSP MOSI	O	DA3VPu	L	L	L	DSP(ADI) control pin
80	P81/RXD10	DSP MISO	I	DA3VPu	L	L	L	DSP(ADI) control pin
81	P80/SCK10	DSP CLK	O	DA3VPu	L	L	L	DSP(ADI) control pin
82	PC4/SCK5	DSP1FLAG0 / (DSP CS)	I	Pd	L	L	L	DSP(ADI) interrupt signal input pin/(Case of using CIR-RUS)
83	PC3/TXD5	DSP2FLAG0 / (DSP FLAG0)	I	Pd	L	L	L	DSP(ADI) interrupt signal input pin/(Case of using CIR-RUS)
84	P77/TXD11	DSP3FLAG0 / (DSP RST)	I	Pd	L	L	L	DSP(ADI) interrupt signal input pin/(Case of using CIR-RUS)
85	P76/RXD11	DSP4FLAG0 / (DSP BUSY)	I	Pd	L	L	L	DSP(ADI) interrupt signal input pin/(Case of using CIR-RUS)
86	PC2/RXD5	DSP RST / (DA POWER2)	O		L	L	L	DSP(ADI) reset control pin/(Case of using CIR-RUS)
87	P75/SCK11	CEC POWER2	O		L	L	L	CEC standby power control (for CEC Standby Mode 3)
88	P74	DSP1CS / (DSP ROM WRITE)	O	DA3VPu	L	L	L	DSP(ADI) control pin/(Case of using CIR-RUS&CY920)
89	PC1/SCK5/IRQ12	DAC.PLD ERR	I		L	L	L	Detect PLD error (from Audio PLD)
90	VCC	VCC	-		-	-	-	Power supply pin
91	PC0/IRQ14	DSP2CS / (NC)	O	DA3VPu	L	L	L	DSP(ADI) control pin/(Case of using CIR-RUS)
92	VSS	VSS	-		-	-	-	Ground pin
93	P73	DSP3CS / (NC)	O	DA3VPu	L	L	L	DSP(ADI) control pin/(Case of using CIR-RUS)
94	PB7/TXD9	HSDA	I/O	CE-C3VPu	L	L	L	HDMI I2C control pin for MN864787/MN864788
95	PB6/RXD9	HSCL	I/O	CE-C3VPu	L	L	L	HDMI I2C control pin for MN864787/MN864788
96	PB5/SCK9	NC / (JTAG TDO)	O		L	L	L	NC/(Case of using CY920)
97	PB4	APLD CS / (JTAG TMS)	O		L	L	L	Audio PLD (5M80ZT100C5N) control pin/(Case of using CY920)
98	PB3/SCK4/SCK6	APLD DATA / DAC DATA / (JTAG TDI)	O		L	L	L	Audio PLD (5M80ZT100C5N) control pin/DAC (PCM1690) control pin/(Case of using CY920)
99	PB2	APLD CLK / DAC CLK / (JTAG TCK)	O		L	L	L	Audio PLD (5M80ZT100C5N) control pin/DAC (PCM1690) control pin/(Case of using CY920)
100	PB1/TXD4/TXD6/IRQ4-DS	DAC MS	O		L	L	L	DAC (PCM1690) control pin
101	P72	DAC RST	O		L	L	L	DAC (PCM1690) control pin
102	P71	Z2PLD ERR	I	-	L	L	L	Detect PLD error (from Audio PLD)
103	VCC	VCC	-		-	-	-	Power supply pin
104	PB0/RXD4/RXD6/IRQ12	Z3PLD ERR	I	-	L	L	L	Detect PLD error (from Audio PLD)
105	VSS	VSS	-		-	-	-	Ground pin
106	PA7	ISEL A	I		I	I	I	Input selector (Rotary encoder) signal input pin
107	PA6	ISEL B	I		I	I	I	Input selector (Rotary encoder) signal input pin
108	PA5	VOL CLK	O		L	L	L	Volume control pin (NJU72343)
109	PA4/TXD5/SSDA5/IRQ5-DS	(Debug pin for data flash)	O		L	L	L	NC (Debug pin for data flash of MCU.Write:High)
110	PA3/RXD5/SSCL5	MVOL MUTE	O		L	L	L	Volume control pin (NJU72343)
111	TRDATA3/PG7	REMOTE POWER(232C)	O		L	L	L	232C power supply (REMOTE 3.3V) control pin
112	PA2/RXD5	NC/(USB_EN)	O		L	L	L	NC/(for X7500H/AV8804)
113	TRDATA2/PG6	ZVOL DATA	O		L	L	L	ZONE2 volume control pin (NJW1194)
114	PA1/SCK5/IRQ11	ZVOL CLK	O		L	L	L	ZONE2 volume control pin (NJW1194)
115	VCC	VCC	-		-	-	-	Power supply pin
116	TRCLK/PG5	ZVOL STB	O		L	L	L	ZONE2 volume control pin (NJW1194)

Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
117	VSS	VSS	-	-	-	-	-	Ground pin
118	PA0	H5V DET	I	-	I	I	I	HDMI IN 5V detect signal pin
119	TRSYNC/PG4	FL RST	O	-	L	L	L	FL display control pin
120	P67/IRQ15	FL CE	O	-	L	L	L	FL display control pin
121	TRDATA1/PG3	FL CLK	O	-	L	L	L	FL display control pin
122	P66	FL DATA	O	-	L	L	L	FL display control pin
123	TRDATA0/PG2	NC(X4300/SR6011)/FL CE2(SR7011/AV7703)	O	-	L	L	L	FL display control pin
124	P65	NC(X4300)/FIL_CTRL(SR6011/SR7011/AV7703)	O	-	L	L	L	Filament Power control pin (for Portal FLD)
125	PE7/IRQ7/AN105	ASO/DC DET(X4300/SR6011/SR7011)/NC(AV7703)	I	-	I	I	I	Protection detect signal input pin (for ASO and DC) (A/D converter)
126	PE6/IRQ6/AN104	MIC DET/ H/P DET	I	-	I	I	I	Headphone insert detect pin/Microphone insert detect pin (A/D converter)
127	VCC	VCC	-	-	-	-	-	Power supply pin
128	P70	ADC RST	O	-	I	L	I	A/D convertor(AK5358) reset control pin
129	VSS	VSS	-	-	-	-	-	Ground pin
130	PE5/IRQ5/AN103	MAIN POWER	O	-	L	L	L	Power supply control pin
131	PE4/AN102	CPU POWER	O	-	L	L	L	CPU power supply control pin
132	PE3/AN101	AIOS4_WAKEUP / (E POWER1)	O	-	L	L	L	Ethernet(LEGO) control pin for Standby(High:Normal,Low:Deep Standby)/ (Case of using CY920)
133	PE2/RXD12/IRQ7-D5/AN100	AIOS4_STBY_STATUS / (E POWER2)	O	-	L	L	L	Status pin for UART communication with LEGO(L: not-available, H : available)/(Case of using CY920)
134	PE1/TXD12	GUI_WRITE / (E POWER3)	O	-	L	L	L	GUI flash rom writing control/(Case of using CY920)
135	PE0/SCK12	NET3.3V POWER / (E POWER4)	O	-	L	L	L	Ethernet power supply control(Net3.3V)/(Case of using CY920)
136	P64	D5V POWER	O	-	L	L	H	Digital 5V power supply control pin(3.3V and 1.8V generate from 5V)
137	P63	CEC_POWER	O	-	L	L	※	CEC standby power supply control(CEC5V,CEC3.3V,CEC1.8V)
138	P62	DV_POWER1	O	-	L	L	L	Digital video power supply (DV5V,DV3.3V) control pin
139	P61	DV_POWER2	O	-	L	L	L	Digital video power supply (DV1.8V) control pin
140	VSS	VSS	-	-	-	-	-	Ground pin
141	P60	DIR DIN	O	-	L	L	L	DIR (PCM9211) control pin
142	VCC	VCC	-	-	-	-	-	Power supply pin
143	PD7/IRQ7/AN107	DIR CE	O	-	L	L	L	DIR (PCM9211) control pin
144	PG1	DIR DOUT	I	DA3.3Pu	I	I	I	DIR (PCM9211) control pin
145	PD6/IRQ6/AN106	DIR CLK	O	-	L	L	L	DIR (PCM9211) control pin
146	PG0	DIR RST	O	-	L	L	L	DIR (PCM9211) control pin
147	PD5/IRQ5/AN113	787_HAINT	I	-	Z	-	-	HDMI Rx (MN864787) audio interrupt signal det
148	PD4/IRQ4/AN112	DSP4CS/ (NC)	O	-	Pd	Z	L	DSP(ADI) control pin/(Case of using CY920)
149	P97	DE_RST	O	Pd	Z	-	L	Video decoder (ADV7850) reset control pin
150	PD3/IRQ3/AN111	787_HINT	I	-	Z	-	-	HDMI Tx (MN864787) interrupt signal input pin
151	VSS	VSS	-	-	-	-	-	Ground pin
152	P96	787_RST	O	Pd	Z	-	※	HDMI Tx (MN864787) reset control pin
153	VCC	VCC	-	-	-	-	-	Power supply pin
154	PD2/IRQ2/AN110	788_2_HINT	I	-	Z	-	-	HDMI Rx (MN864788) interrupt signal input pin
155	P95	788_2_RST	O	Pd	Z	-	※	HDMI Rx (MN864788) reset control pin
156	PD1/IRQ1/AN109	788_1_HINT	I	-	Z	-	-	HDMI Rx (MN864788) interrupt signal input pin

Pin	Pin Name	Symbol	I/O	Pu/Pd	STBY	STOP	CEC STBY	Function
157	P94	788_1_RST	O	Pd	Z	-	※	HDMI Rx (MN864788) reset control pin
158	PDO/IRQ0/AN108	TX EN	O	-	L	L	L	Front HDMI (AD8195) control
159	P93/AN117	THERMAL A(X4300/SR6011/SR7011)/NC(AV7703)	I	SW3VPu	I	L	I	Protection detect signal input pin (for power TR)
160	P92/RXD7/AN116	DA_POWER1	O	-	L	L	L	Digital audio power supply (DA3.3V,DA1.2V) control pin
161	P91/AN115	THERMAL E(X4300/SR6011/SR7011)/NC(AV7703)	I/I	SW3VPu	I/I	L	I/I	Protection detect signal input pin (for Heat sink)
162	VSS	VSS	-	-	-	-	-	Ground pin
163	P90/TXD7/AN114	THERMAL F(X4300/SR6011/SR7011)/NC(AV7703)	I/I	SW3VPu	I/I	L	I/I	Protection detect signal input pin (for Heat sink)
164	VCC	VCC	-	-	-	-	-	Power supply pin
165	P47/IRQ15-DS/AN007	SEL CLK	O	-	L	L	L	Audio selector control pin (NJU72750/72751)
166	P46/IRQ14-DS/AN006	CURRENT DET(X4300/SR6011/SR7011)/NC(AV7703)	I/O	-	I/L	L/L	I/L	Current level monitor pin (A/D converter)
167	P45/IRQ13-DS/AN005	AMPSIGDET(X4300/SR6011/SR7011)/NC(AV7703)	I	-	I	L	I	Signal level monitor pin (AD converter)
168	P44/IRQ12-DS/AN004	MODE	I	-	I	I	I	Region setting pin
169	P43/IRQ11-DS/AN003	KEY3	I	M3VPu	I	I	I	Key control signalinput pin (When standby mode,set to interrupt)
170	P42/IRQ10-DS/AN002	KEY2	I	M3VPu	I	I	I	Key control signalinput pin (When standby mode,set to interrupt)
171	P41/IRQ9-DS/AN001	KEY1	I	M3VPu	I	I	I	Key control signalinput pin (When standby mode,set to interrupt)
172	VREFL0	VREFL0	-	-	-	-	-	Ground pin
173	P40	NC/(PLD WRITE)	O	-	L	L	L	NC /(Case of using CY920)
174	VREFH0	VREFH0	-	-	-	-	-	Power supply pin
175	AVCC0	AVCC0	-	-	-	-	-	Power supply pin
176	P07/IRQ15	DSP2FLAG3 / (DSP FLAG3)	I	Pd	L	L	L	DSP(ADI) control pin/(Case of using CIRRUS)

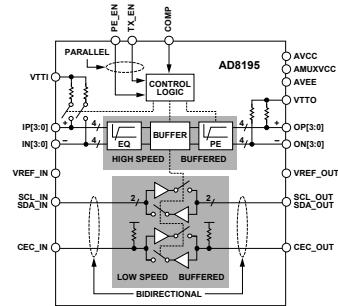
AD8195ACPZ (F-HDMI : IC101)



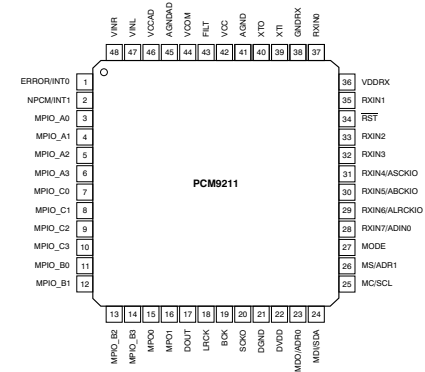
AD8195ACPZ Termini Function

Pin No.	Mnemonic	Type ¹	Description
1	IN0	HS I	High Speed Input Complement.
2	IP0	HS I	High Speed Input.
3	IN1	HS I	High Speed Input Complement.
4	IP1	HS I	High Speed Input.
5	VTTI	Power	Input Termination Supply. Nominally connected to AVCC.
6	IN2	HS I	High Speed Input Complement.
7	IP2	HS I	High Speed Input.
8	IN3	HS I	High Speed Input Complement.
9	IP3	HS I	High Speed Input.
10, 16, 22, 23, 25, 26, 30	AVCC	Power	Positive Analog Supply. 3.3 V nominal.
11	ON0	HS O	High Speed Output Complement.
12	OP0	HS O	High Speed Output.
13	VVTO	Power	Output Termination Supply. Nominally connected to AVCC.
14	ON1	HS O	High Speed Output Complement.
15	OP1	HS O	High Speed Output.
17	ON2	HS O	High Speed Output Complement.
18	OP2	HS O	High Speed Output.
19	ON3	HS O	High Speed Output Complement.
20	OP3	HS O	High Speed Output.
21	COMP	Control	Power-On Compensation Pin. Bypass to ground through a 10 µF capacitor.
24, 27, 37, Exposed Pad	AVEE	Power	Negative Analog Supply. 0 V nominal.
28	TX_EN	Control	High Speed Output Enable Parallel Interface.
29	PE_EN	Control	High Speed Preemphasis Enable Parallel Interface.
31	CEC_OUT	LS I/O	CEC Output Side.
32	AMUXVCC	Power	Positive Auxiliary Buffer Supply. 5 V nominal.

AD8195ACPZ Block diagram



PCM9211 (DIGITAL : IC202)



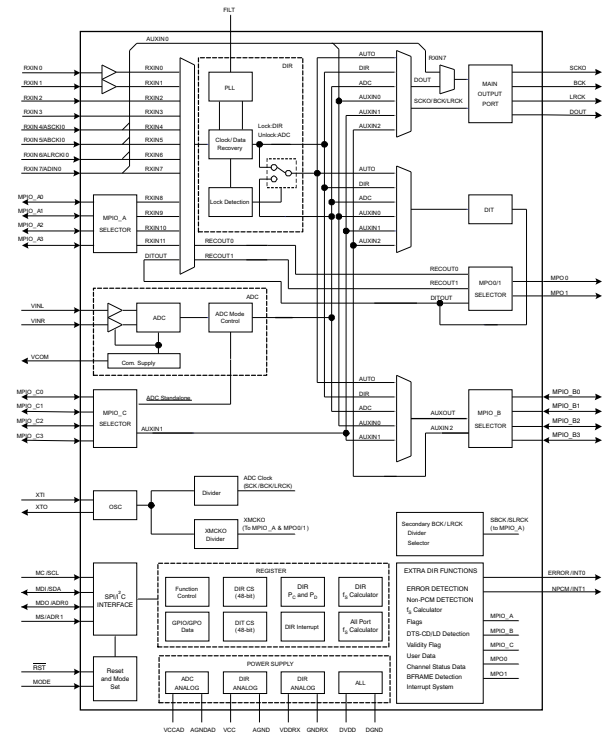
PIN Functions

PIN				DESCRIPTION
NO.	NAME	I/O	5-V TOLERANT	
1	ERROR/INT0	O	No	DIR Error detection output / Interrupt0 output
2	NPCM/INT1	O	No	DIR Non-PCM detection output / Interrupt1 output
3	MPIO_A0	I/O	Yes	Multipurpose I/O, Group A(1)
4	MPIO_A1	I/O	Yes	Multipurpose I/O, Group A(1)
5	MPIO_A2	I/O	Yes	Multipurpose I/O, Group A(1)
6	MPIO_A3	I/O	Yes	Multipurpose I/O, Group A(1)
7	MPIO_C0	I/O	Yes	Multipurpose I/O, Group C(1)
8	MPIO_C1	I/O	Yes	Multipurpose I/O, Group C(1)
9	MPIO_C2	I/O	Yes	Multipurpose I/O, Group C(1)
10	MPIO_C3	I/O	Yes	Multipurpose I/O, Group C(1)
11	MPIO_B0	I/O	Yes	Multipurpose I/O, Group B(1)
12	MPIO_B1	I/O	Yes	Multipurpose I/O, Group B(1)
13	MPIO_B2	I/O	Yes	Multipurpose I/O, Group B(1)
14	MPIO_B3	I/O	Yes	Multipurpose I/O, Group B(1)
15	MPO0	O	No	Multipurpose output 0
16	MPO1	O	No	Multipurpose output 1
17	DOUT	O	No	Main output port, serial digital audio data output
18	LRCK	O	No	Main output port, LR clock output
19	BCK	O	No	Main output port, Bit clock output
20	SCKO	O	No	Main output port, System clock output
21	DGND	-	-	Ground, for digital
22	DVDD	-	-	Power supply, 3.3 V (typ.), for digital
23	MDO/ADR0	I/O	Yes	Software control I/F, SPI data output / I2C slave address setting0(2)
24	MDI/SDA	I/O	Yes	Software control I/F, SPI data input / I2C data input/output(2)(3)
25	MC/SCL	I	Yes	Software control I/F, SPI clock input / I2C clock input(2)

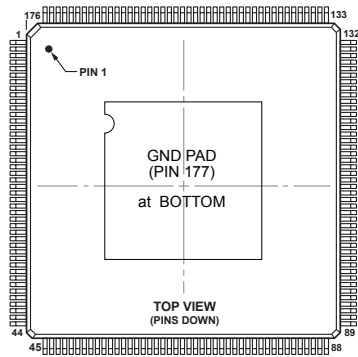
PIN				DESCRIPTION
NO.	NAME	I/O	5-V TOLERANT	
26	MS/ADR1	I	Yes	Software control I/F, SPI chip select / I2C slave address setting ¹⁽²⁾
27	MODE	I	No	Control mode setting, (see the Serial Control Mode section, Control Mode Pin Setting)
28	RXIN7/ADIN0	I	Yes	Biphase signal, input 7 / AUXIN0, serial audio data input ²
29	RXIN6/ALRCKI0	I	Yes	Biphase signal, input 6 / AUXIN0, LR clock input ²
30	RXIN5/ABCKI0	I	Yes	Biphase signal, input 5 / AUXIN0, bit clock input ²
31	RXIN4/ASCKI0	I	Yes	Biphase signal, input 4 / AUXIN0, system clock input ²
32	RXIN3	I	Yes	Biphase signal, input 3 ²
33	RXIN2	I	Yes	Biphase signal, input 2 ²
34	RST	I	Yes	Reset Input, active low ² (4)
35	RXIN1	I	Yes	Biphase signal, input 1, built-in coaxial amplifier
36	VDDR _X	-	-	Power supply, 3.3 V (typ.), for RXIN0 and RXIN1.
37	RXIN0	I	Yes	Biphase signal, input 0, built-in coaxial amplifier
38	GNDR _X	-	-	Ground, for RXIN
39	XTI	I	No	Oscillation circuit input for crystal resonator or external XTI clock source input ⁵
40	XTO	O	No	Oscillation circuit output for crystal resonator
41	AGND	-	-	Ground, for PLL analog
42	VCC	-	-	Power supply, 3.3 V (typ.), for PLL analog
43	FILT	O	No	External PLL loop filter connection terminal; must connect recommended filter
44	VCOM	O	No	ADC common voltage output; must connect external decoupling capacitor
45	AGNDAD	-	-	Ground, for ADC analog
46	VCCAD	-	-	Power supply, 5.0 V (typ.), for ADC analog
47	VINL	I	No	ADC analog voltage input, left channel
48	VINR	I	No	ADC analog voltage input, right channel

- (1) Schmitt trigger input
- (2) Schmitt trigger input
- (3) Open-drain configuration in I2C mode
- (4) Onboard pull-down resistor (50 k Ω , typical)
- (5) CMOS Schmitt trigger input

PCM9211 BLOCK DIAGRAM



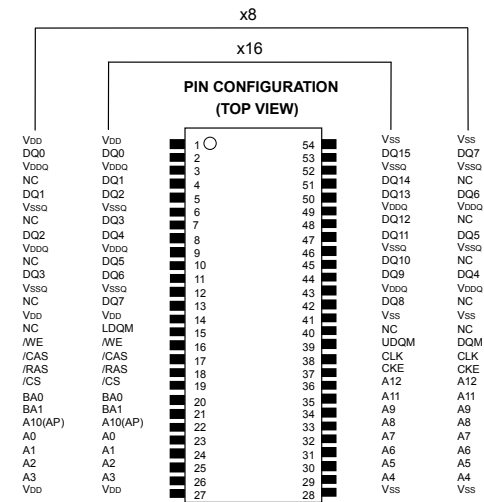
ADSP21487KSWZ4B (DIGITAL : IC251 / IC261 / IC271 / IC281)



ADSP21487KSWZ3B Terminal Function

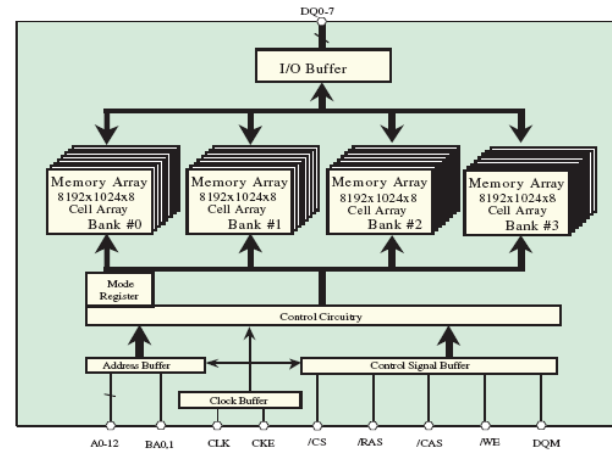
Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.
SDDQM	1	V _{DD_EXT}	45	DAI_P10	89	V _{DD_INT}	133
MS0	2	DPL_P08	46	V _{DD_INT}	90	FLAG0	134
SDCKE	3	DPL_P07	47	V _{DD_EXT}	91	FLAG1	135
V _{DD_INT}	4	V _{DD_INT}	48	DAI_P20	92	FLAG2	136
CLK_CFG1	5	DPL_P09	49	V _{DD_INT}	93	NC	137
ADDR0	6	DPL_P10	50	DAI_P08	94	FLAG3	138
BOOT_CFG0	7	DPL_P11	51	DAI_P14	95	NC	139
V _{DD_EXT}	8	DPL_P12	52	DAI_P04	96	NC	140
ADDR1	9	DPL_P13	53	DAI_P18	97	V _{DD_EXT}	141
ADDR2	10	DPL_P14	54	DAI_P17	98	NC	142
ADDR3	11	DAI_P03	55	DAI_P16	99	V _{DD_INT}	143
ADDR4	12	NC	56	DAI_P12	100	TRST	144
ADDR5	13	V _{DD_EXT}	57	DAI_P15	101	NC	145
BOOT_CFG1	14	NC	58	V _{DD_INT}	102	EMU	146
GND	15	NC	59	DAI_P11	103	DATA0	147
ADDR6	16	NC	60	V _{DD_EXT}	104	DATA1	148
ADDR7	17	NC	61	V _{DD_INT}	105	DATA2	149
NC	18	V _{DD_INT}	62	BOOT_CFG2	106	DATA3	150
NC	19	NC	63	V _{DD_INT}	107	TDO	151
ADDR8	20	NC	64	AML_ACK	108	DATA4	152
ADDR9	21	V _{DD_INT}	65	GND	109	V _{DD_EXT}	153
CLK_CFG0	22	NC	66	THD_M	110	DATA5	154
V _{DD_INT}	23	NC	67	THD_P	111	DATA6	155
CLKIN	24	V _{DD_INT}	68	V _{DD_THD}	112	V _{DD_INT}	156
XTAL	25	NC	69	V _{DD_INT}	113	DATA7	157
ADDR10	26	WDTRSTO	70	V _{DD_INT}	114	TDI	158
SDA10	27	NC	71	MST	115	SDCLK	159
V _{DD_EXT}	28	V _{DD_EXT}	72	V _{DD_INT}	116	V _{DD_EXT}	160
V _{DD_INT}	29	DAI_P07	73	WDT_CLKO	117	DATA8	161
ADDR11	30	DAI_P13	74	WDT_CLKIN	118	DATA9	162
ADDR12	31	DAI_P19	75	V _{DD_EXT}	119	DATA10	163
ADDR17	32	DAI_P01	76	ADDR23	120	TCK	164
ADDR13	33	DAI_P02	77	ADDR22	121	DATA11	165
V _{DD_INT}	34	V _{DD_INT}	78	ADDR21	122	DATA12	166
ADDR18	35	NC	79	V _{DD_INT}	123	DATA14	167
RESETOUT/RUNRSTIN	36	NC	80	ADDR20	124	DATA13	168
V _{DD_INT}	37	NC	81	ADDR19	125	V _{DD_INT}	169
DPL_P01	38	NC	82	V _{DD_EXT}	126	DATA15	170
DPL_P02	39	NC	83	ADDR16	127	SDWE	171
DPL_P03	40	V _{DD_EXT}	84	ADDR15	128	SDRAS	172
V _{DD_INT}	41	V _{DD_INT}	85	V _{DD_INT}	129	RESET	173
DPL_P05	42	DAI_P06	86	ADDR14	130	TMS	174
DPL_P04	43	DAI_P05	87	AML_WR	131	SDCAS	175
DPL_P06	44	DAI_P09	88	AML_RD	132	V _{DD_INT}	176
				GND	177*		

A3V56S40GTP-60 (DIGITAL : IC252 / IC262 / IC272 / IC282)

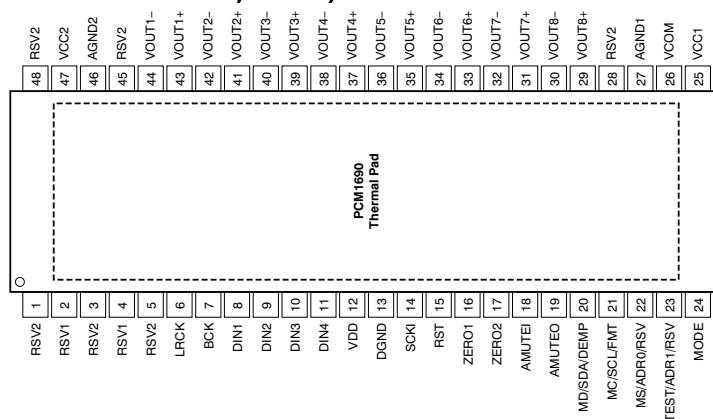


- CLK : Master Clock
- CKE : Clock Enable
- /CS : Chip Select
- /RAS : Row Address Strobe
- /CAS : Column Address Strobe
- /WE : Write Enable
- DQ0-7 : Data I/O (A3V56S30GTP)
- DQ0-15 : Data I/O (A3V56S40GTP)
- DQM : Output Disable / Write Mask (A3V56S30GTP)
- U.L. DQM : Output Disable / Write Mask (A3V56S40GTP)
- A0-12 : Address Input
- BA0,1 : Bank Address
- VDD : Power Supply
- VDDQ : Power Supply for Output
- VSS : Ground
- VSSQ : Ground for Output

Block Diagram



PCM1690 (FRONT CNT : IC301, IC311)



PCM1690 Pin Function

TERMINAL NAME	PIN	I/O	PULL-DOWN	5-V TOLERANT	DESCRIPTION
RSV2	1	—	—	—	Reserved, tied to analog ground
RSV1	2	—	—	—	Reserved, left open
RSV2	3	—	—	—	Reserved, tied to analog ground
RSV1	4	—	—	—	Reserved, left open
RSV2	5	—	—	—	Reserved, tied to analog ground
LRCK	6	I	Yes	No	Audio data word clock input
BCK	7	I	Yes	No	Audio data bit clock input
DIN1	8	I	No	No	Audio data input for DAC1 and DAC2
DIN2	9	I	No	No	Audio data input for DAC3 and DAC4
DIN3	10	I	No	No	Audio data input for DAC5 and DAC6
DIN4	11	I	No	No	Audio data input for DAC7 and DAC8
VDD	12	—	—	—	Digital power supply, +3.3 V
DGND	13	—	—	—	Digital ground
SCK1	14	I	No	Yes	System clock input
RST	15	I	Yes	Yes	Reset and power-down control input with active low
ZERO1	16	O	No	No	Zero detect flag output 1
ZERO2	17	O	No	No	Zero detect flag output 2
AMUTEI	18	I	No	Yes	Analog mute control input with active low
AMUTEO	19	O	No	Yes	Analog mute status output(1) with active low
MD/SDA/DEMP	20	I/O	No	Yes	Input data for SPI, data for I2C(1), de-emphasis control for hardware control mode
MC/SCL/FMT	21	I	No	Yes	Clock for SPI, clock for I2C, format select for hardware control mode
MS/ADR0/RSV	22	I	Yes	Yes	Chip Select for SPI, address select 0 for I2C, reserve (set low) for hardware control mode
TEST/ADR1/RSV	23	I/O	No	Yes	Test (factory use, left open) for SPI, address select 1 for I2C, reserve (set low) for hardware control mode
MODE	24	I	No	No	Control port mode selection. Tied to VDD: SPI, left open: H/W mode, tied to DGND: I2C

TERMINAL NAME	PIN	I/O	PULL-DOWN	5-V TOLERANT	DESCRIPTION
VCC1	25	—	—	—	Analog power supply 1, +5 V
VCOM	26	—	—	—	Voltage common decoupling
AGND1	27	—	—	—	Analog ground 1
RSV2	28	—	—	—	Reserved, tied to analog ground
VOU8+	29	O	No	No	Positive analog output from DAC8
VOU8-	30	O	No	No	Negative analog output from DAC8
VOU7+	31	O	No	No	Positive analog output from DAC7
VOU7-	32	O	No	No	Negative analog output from DAC7
VOU6+	33	O	No	No	Positive analog output from DAC6
VOU6-	34	O	No	No	Negative analog output from DAC6
VOU5+	35	O	No	No	Positive analog output from DAC5
VOU5-	36	O	No	No	Negative analog output from DAC5
VOU4+	37	O	No	No	Positive analog output from DAC4
VOU4-	38	O	No	No	Negative analog output from DAC4
VOU3+	39	O	No	No	Positive analog output from DAC3
VOU3-	40	O	No	No	Negative analog output from DAC3
VOU2+	41	O	No	No	Positive analog output from DAC2
VOU2-	42	O	No	No	Negative analog output from DAC2

TERMINAL NAME	PIN	I/O	PULL-DOWN	5-V TOLERANT	DESCRIPTION
VOU1+	43	O	No	No	Positive analog output from DAC1
VOU1-	44	O	No	No	Negative analog output from DAC1
RSV2	45	—	—	—	Reserved, tied to analog ground
AGND2	46	—	—	—	Analog ground 2
VCC2	47	—	—	—	Analog power supply 2, +5 V
RSV2	48	—	—	—	Reserved, tied to analog ground

(1) Open-drain configuration in out mode.

Caution in servicing

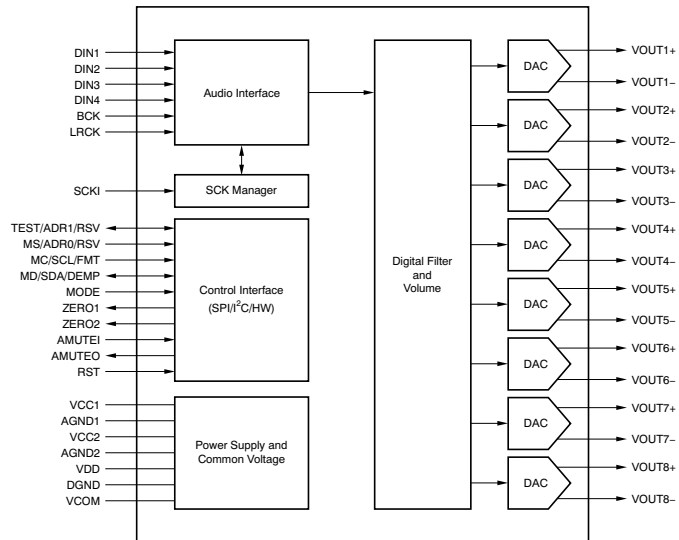
Electrical

Mechanical

Repair Information

Updating

PCM1690 FUNCTIONAL BLOCK DIAGRAM



PCM5100 (DIGITAL : IC321)

PCM510X (top view)

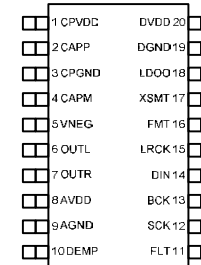


Table 2. TERMINAL FUNCTIONS, PCM510x

TERMINAL NAME	NO.	I/O	DESCRIPTION
CPVDD	1	-	Charge pump power supply, 3.3V
CAPP	2	O	Charge pump flying capacitor terminal for positive rail
CPGND	3	-	Charge pump ground
CAPM	4	O	Charge pump flying capacitor terminal for negative rail
VNEG	5	O	Negative charge pump rail terminal for decoupling, -3.3V
OUTL	6	O	Analog output from DAC left channel
OUTR	7	O	Analog output from DAC right channel
AVDD	8	-	Analog power supply, 3.3V
AGND	9	-	Analog ground
DEMP	10	I	De-emphasis control for 44.1kHz sampling rate ⁽¹⁾ : Off (Low) / On (High)
FLT	11	I	Filter select : Normal latency (Low) / Low latency (High)
SCK	12	I	System clock input
BCK	13	I	Audio data bit clock input
DIN	14	I	Audio data input
LRCK	15	I	Audio data word clock input
FMT	16	I	Audio format selection : I ² S (Low) / Left justified (High)
XSMT	17	I	Soft mute control : Soft mute (Low) / soft un-mute (High)
LDOO	18	-	Internal logic supply rail terminal for decoupling
DGND	19	-	Digital ground
DVDD	20	-	Digital power supply, 3.3V

PCM5100 Block Diagram

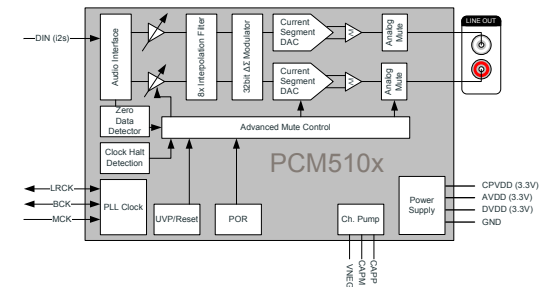


Figure 1. PCM510x Functional Block Diagram

Caution in servicing

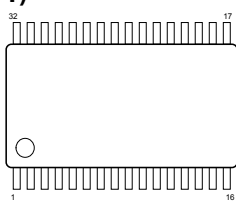
Electrical

Mechanical

Repair Information

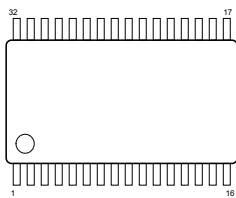
Updating

NJU72343 (INPUT : IC471/IC491)



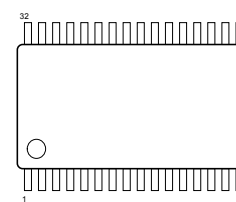
No.	Symbol	Function	No.	Symbol	Function
1	AREF	Analog reference potential	17	DATA	IC control data input
2	ADR	Address selection	18	CLOCK	IC control clock input
3	InA2	Ach input2	19	VDDOUT	Digital power supply output
4	InB2	Bch input2	20	AREF	Analog reference potential
5	InA1	Ach input1	21	OutH	Hch output
6	InB1	Bch input1	22	OutG	Gch output
7	InC	Cch input	23	OutF	Fch output
8	InD	Dch input	24	OutE	Ech output
9	InE	Ech input	25	OutD	Dch output
10	InF	Fch input	26	OutC	Gch output
11	InG1	Gch input1	27	OutB	Bch output
12	InH1	Hch input1	28	OutA	Ach output
13	InG2	Cch input2	29	AREF	Analog reference potential
14	InH2	Dch input2	30	V-	Power supply(-)
15	MUTE	External mute control	31	AREF	Analog reference potential
16	REF	Digital reference potential	32	V+	Power supply(+)

NJU72750 (INPUT : IC474)



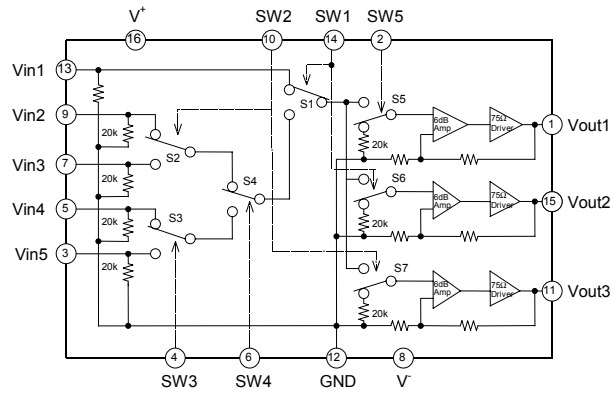
No.	Symbol	Function	No.	Symbol	Function
1	V+	Power supply(+)	17	DATA	IC control data input
2	InA1	Ach input1	18	CLOCK	IC control clock input
3	InB1	Bch input1	19	NC	-
4	InA2	Ach input2	20	NC	-
5	InB2	Bch input2	21	OutB3	Bch output3
6	InA3	Ach input3	22	OutA3	Ach output3
7	InB3	Bch input3	23	REF_B	Bch reference potential
8	InA4	Ach input4	24	OutB2	Bch output2
9	InB4	Bch input4	25	OutA2	Ach output2
10	InA5	Ach input5	26	REF_A	Ach reference potential
11	InB5	Bch input5	27	OutB1	Bch output1
12	InA6	Ach input6	28	OutA1	Ach output1
13	InB6	Bch input6	29	NC	-
14	InA7	Ach input7	30	ADR0	Address selection pin 0
15	InB7	Bch input7	31	ADR1	Address selection pin 1
16	REF	BIAS reference potential	32	V-	Power supply(-)

NJU72751 (INPUT : IC475)

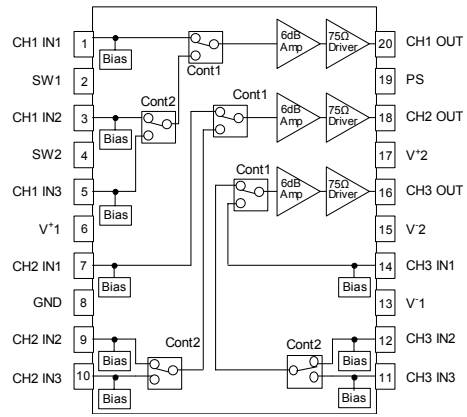


No.	Symbol	Function	No.	Symbol	Function
1	V+	Power supply(+)	17	CLOCK	IC control clock input
2	ADR0	Address selection pin 0	18	NC	-
3	InA1	Ach input1	19	OutB4	Bch output4
4	InB1	Bch input1	20	OutA4	Ach output4
5	NC	-	21	NC	-
6	InA2	Ach input2	22	OutB3	Bch output3
7	InB2	Bch input2	23	OutA3	Ach output3
8	NC	-	24	REF_B	Bch reference potential
9	NC	-	25	REF_A	Ach reference potential
10	InA3	Ach input3	26	OutB2	Bch output2
11	InB3	Bch input3	27	OutA2	Ach output2
12	NC	-	28	NC	-
13	InA4	Ach input4	29	OutB1	Bch output1
14	InB4	Bch input4	30	OutA1	Ach output1
15	REF	BIAS reference potential	31	ADR1	Address selection pin 1
16	DATA	IC control data input	32	V-	Power supply(-)

NJM2595MTE1 (VIDEO : IC511)



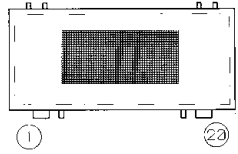
NJM2586AVC3 (VIDEO : IC516)



SSOP20-C3

2. FL DISPLAY

FLD (GP1261AI) (FRONT : FL601)



PIN CONNECTION

CONNECTION	PIN NO.
F-	1
NP	2
NC	3
NC	4
NC	5
NC	6
TEST	7
INT	8
RESET	9
DIO	10
CLK	11
CS	12
OSC	13
NC	14
VH	15
PGND	16
LGND	17
VDD	18
NP	19
F+	20

NOTE

- 1) F-, F+ ----Filament
- 2) NP -----No pin
- 3) DL -----Datum Line
- 4) VDD -----Logic Voltage Supply pin
- 5) LGND ----Logic GND pin
- 6) PGND ----Power GND pin
- 7) VH -----High Voltage Supply pin
- 8) OSC ----Pin for self-oscillation
- 9) CS -----Chip Select Input pin
- 10) CLK -----Shift Register Clock
- 11) DA ----Serial Data Input
- 12) RESET --Reset Input
- 13) INT -----Int pin
- 14) TSA, B --Test pin
- 15) Solder composition is Sn-3Ag-0.5Cu.
- 16) NC -----No connection
(NC pin should be electrically open on the PC board)

PATTERN DETAIL

T1		T2		T3		T15		T16		T17				
1-1	2-1	3-1	4-1	5-1	6-1	7-1	8-1	42-1	43-1	44-1	45-1	46-1	47-1	48-1
1-2	2-2	3-2	4-2	5-2	6-2	7-2	8-2	42-2	43-2	44-2	45-2	46-2	47-2	48-2
1-3	2-3	3-3	4-3	5-3	6-3	7-3	8-3	42-3	43-3	44-3	45-3	46-3	47-3	48-3
1-4	2-4	3-4	4-4	5-4	6-4	7-4	8-4	42-4	43-4	44-4	45-4	46-4	47-4	48-4
1-5	2-5	3-5	4-5	5-5	6-5	7-5	8-5	42-5	43-5	44-5	45-5	46-5	47-5	48-5
1-6	2-6	3-6	4-6	5-6	6-6	7-6	8-6	42-6	43-6	44-6	45-6	46-6	47-6	48-6
1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	42-7	43-7	44-7	45-7	46-7	47-7	48-7
1-8	2-8	3-8	4-8	5-8	6-8	7-8	8-8	42-8	43-8	44-8	45-8	46-8	47-8	48-8
1-9	2-9	3-9	4-9	5-9	6-9	7-9	8-9	42-9	43-9	44-9	45-9	46-9	47-9	48-9
1-10	2-10	3-10	4-10	5-10	6-10	7-10	8-10	42-10	43-10	44-10	45-10	46-10	47-10	48-10
1-11	2-11	3-11	4-11	5-11	6-11	7-11	8-11	42-11	43-11	44-11	45-11	46-11	47-11	48-11
1-12	2-12	3-12	4-12	5-12	6-12	7-12	8-12	42-12	43-12	44-12	45-12	46-12	47-12	48-12
1-13	2-13	3-13	4-13	5-13	6-13	7-13	8-13	42-13	43-13	44-13	45-13	46-13	47-13	48-13
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1-17	2-17	3-17	4-17	5-17	6-17	7-17	8-17	42-17	43-17	44-17	45-17	46-17	47-17	48-17
1-18	2-18	3-18	4-18	5-18	6-18	7-18	8-18	42-18	43-18	44-18	45-18	46-18	47-18	48-18
1-19	2-19	3-19	4-19	5-19	6-19	7-19	8-19	42-19	43-19	44-19	45-19	46-19	47-19	48-19
1-20	2-20	3-20	4-20	5-20	6-20	7-20	8-20	42-20	43-20	44-20	45-20	46-20	47-20	48-20
1-21	2-21	3-21	4-21	5-21	6-21	7-21	8-21	42-21	43-21	44-21	45-21	46-21	47-21	48-21
1-22	2-22	3-22	4-22	5-22	6-22	7-22	8-22	42-22	43-22	44-22	45-22	46-22	47-22	48-22
1-23	2-23	3-23	4-23	5-23	6-23	7-23	8-23	42-23	43-23	44-23	45-23	46-23	47-23	48-23
T1	T2	T3	T15	T16	T17	-	-	-	-	-	-	-	-	-

ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	17G(AD3)	18G(AD4)
D0	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	S9	-
D1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	3d	-
D2	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	2d	-
D3	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	3e	-
D4	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	2e	-
D5	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	3c	-
D6	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2c	-
D7	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3g	-
D8	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	2g	-
D9	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	3f	-
D10	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	2f	-
D11	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	3b	-
D12	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	2b	-
D13	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3a	-
D14	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	2a	-
D15	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	Dp	-
D16	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	dB	-
D17	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	1d	-
D18	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	1e	-
D19	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	1c	-
D20	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1g	-
D21	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	1f	-
D22	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	1b	-
D23	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	1a	AUTO
D24	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	S1	HDMI
D25	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	S2	DIGITAL
D26	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	S3	ANALOG
D27	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	S4	S.BACK
D28	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	S5	DI
D29	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	S6	dts
D30	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	S7	AUDYSSEY
D31	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	S8	TUNED
D32	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	MUTE	STEREO
D33	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	PCM	RDS
D34	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	Z2	SLEEP
AD1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	DIG.	-
AD2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ANA.	-

DISASSEMBLY

Flowchart

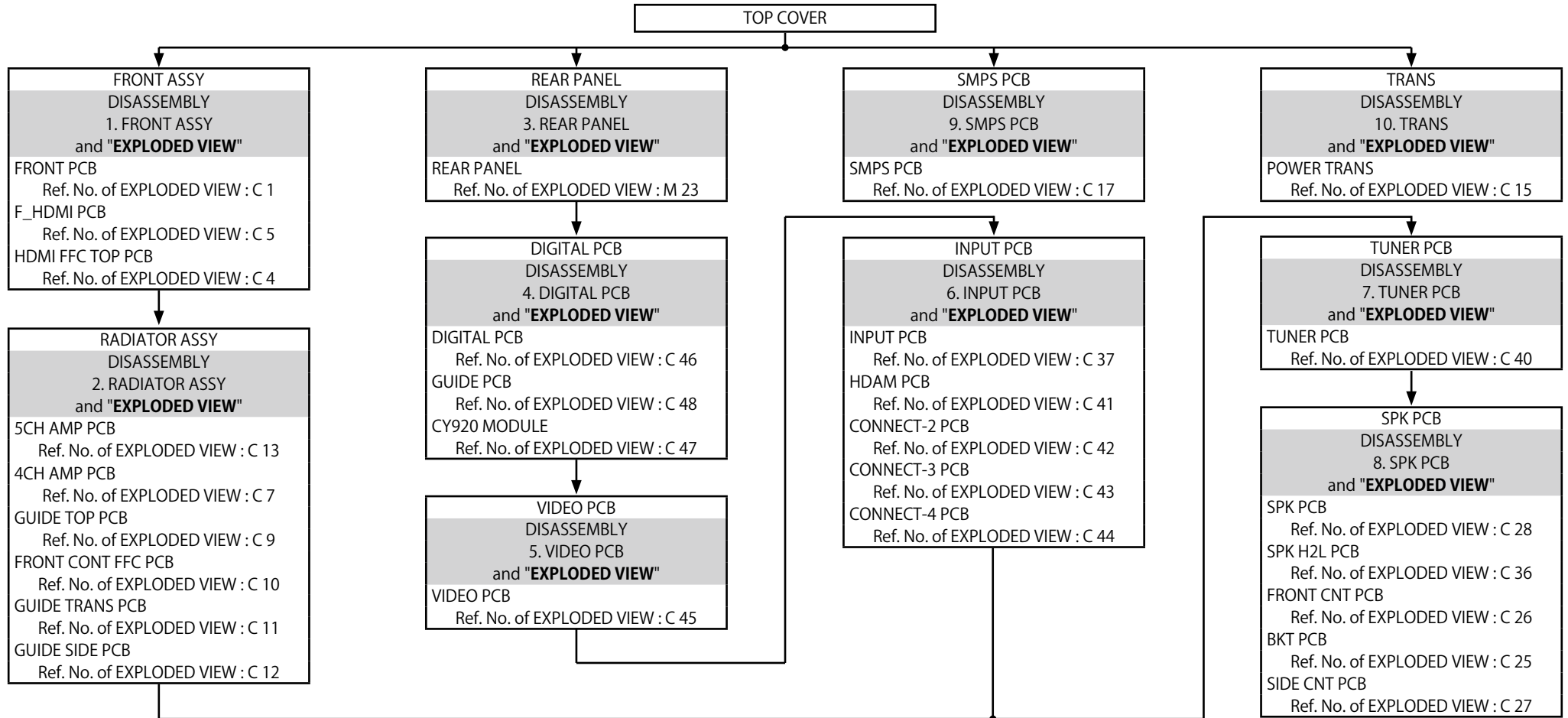
1. FRONT ASSY
2. RADIATOR ASSY
3. REAR PANEL
4. DIGITAL PCB
5. VIDEO PCB
6. INPUT PCB
7. TUNER PCB
8. SPK PCB
9. SMPS PCB
10. TRANS

EXPLODED VIEW

PACKING VIEW

Flowchart

- Remove each part following the flow below.
- Reassemble the removed parts in the reverse order.
- Read "[SAFETY PRECAUTIONS](#)" before reassembling the removed parts.
- If wire bundles are removed or moved during adjustment or part replacement, reshape the wires after completing the work. Failure to shape the wires correctly may cause problems such as noise.
- See "[EXPLODED VIEW](#)"

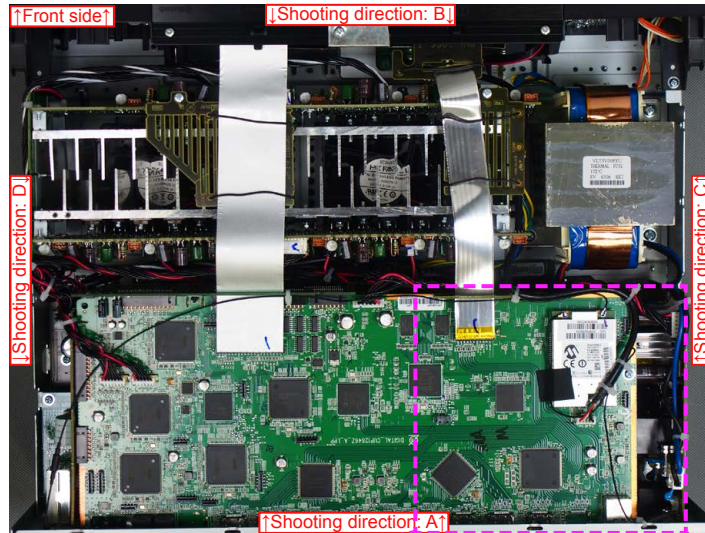


Explanatory Photos for DISASSEMBLY

- For the shooting direction of each photos used in this manual, see the photo below.
- **A, B, C and D** in the photo below indicate the shooting directions of photos.
- The photographs with no shooting direction indicated were taken from the top of the unit.
- Photos of SR6011 U are used in this manual.

The viewpoint of each photograph

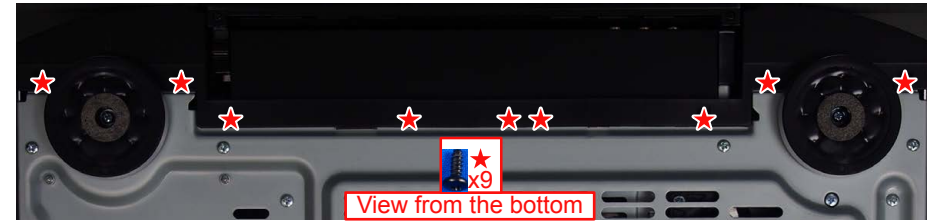
(Shooting direction : X) [View from the top]



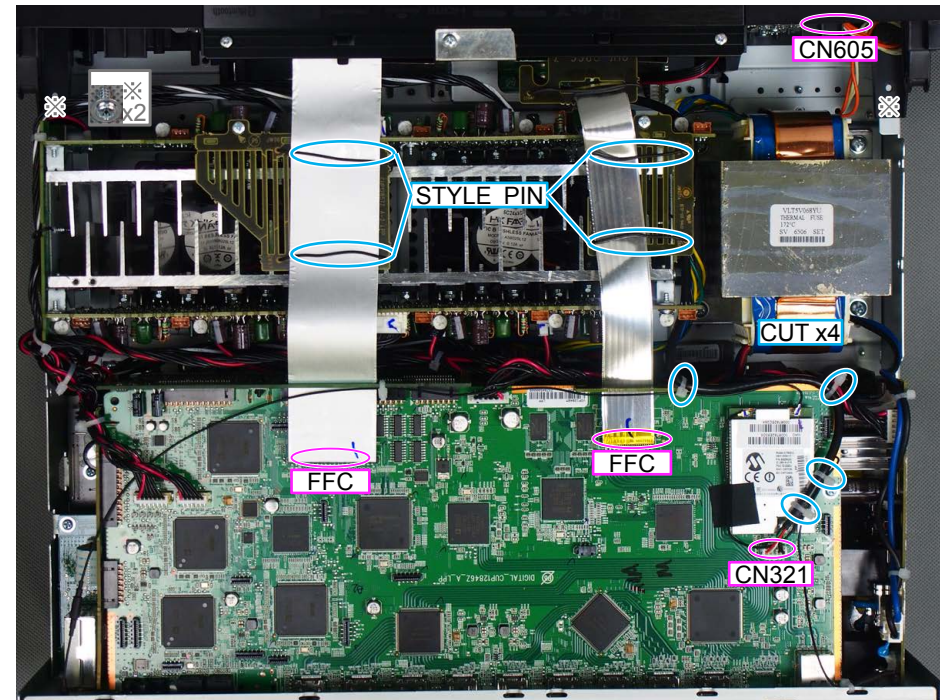
1. FRONT ASSY

Proceeding : **TOP COVER** → **FRONT ASSY**

- (1) Remove the screws.



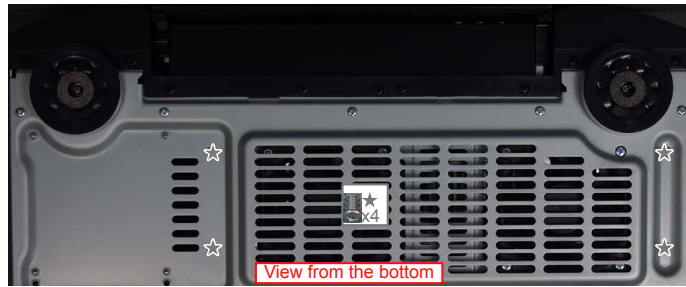
- (2) Remove the screws. Remove the FFC.
Cut the wire clamp, then remove the STYLE PIN and connector.



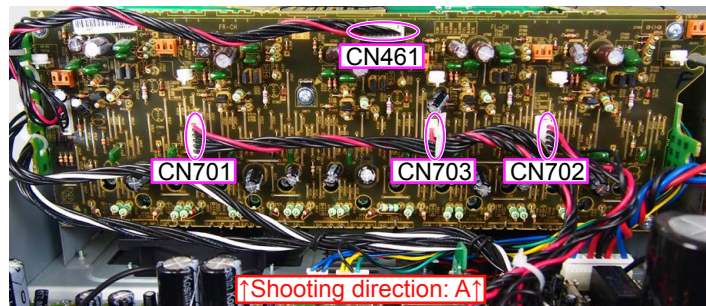
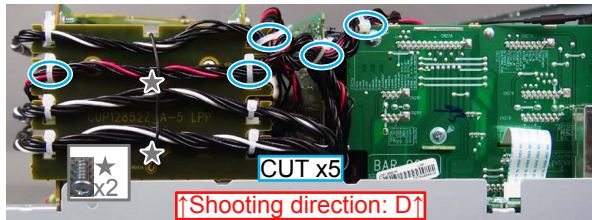
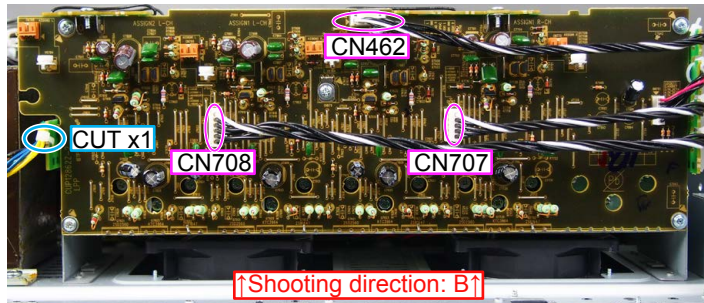
2. RADIATOR ASSY

Proceeding: **TOP COVER** → **FRONT ASSY** → **RADIATOR ASSY**

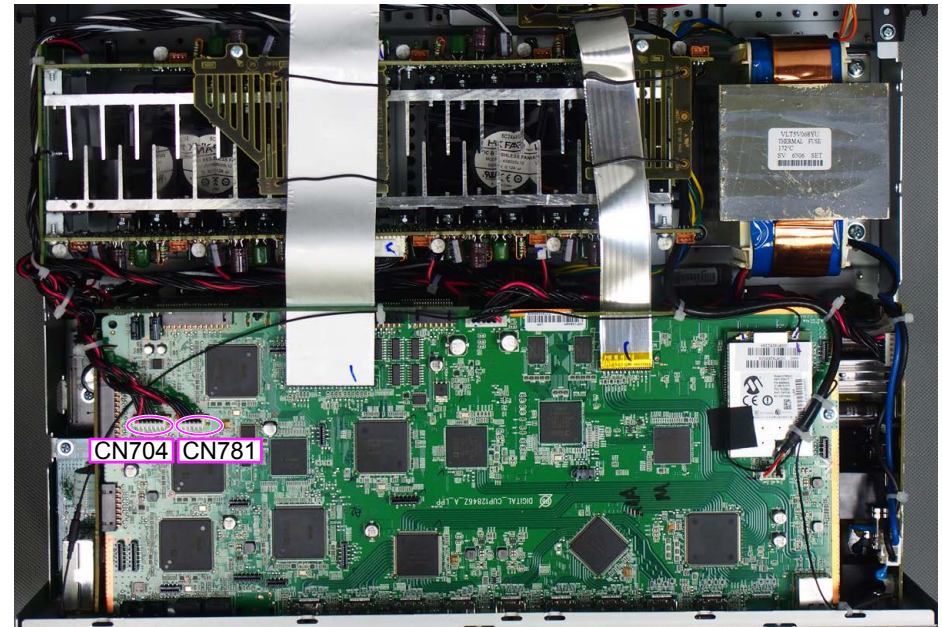
(1) Remove the screws.



(2) Remove the screws. Cut the wire clamp, then remove the connector.



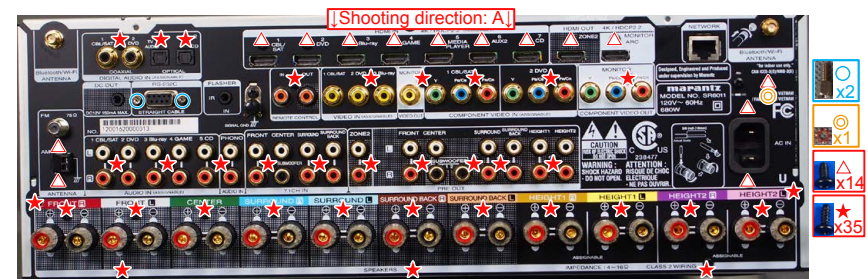
(3) Remove the connector.



3. REAR PANEL

Proceeding: **TOP COVER** → **FRONT ASSY** → **RADIATOR ASSY** → **REAR PANEL**

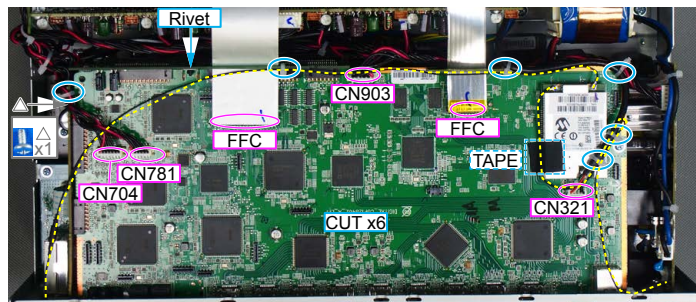
(1) Remove the screws.



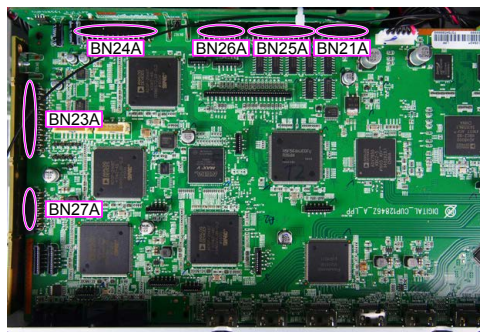
4. DIGITAL PCB

Proceeding : **TOP COVER** → **REAR PANEL** → **DIGITAL PCB**

- (1) Remove the screws. Remove the Rivet. Cut the wire clamp, then remove the connector. Remove the TAPE. Remove the FFC.



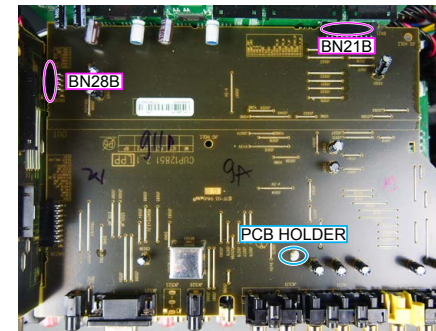
- (3) Remove the connector.



5. VIDEO PCB

Proceeding : **TOP COVER** → **REAR PANEL** → **DIGITAL PCB** → **VIDEO PCB**

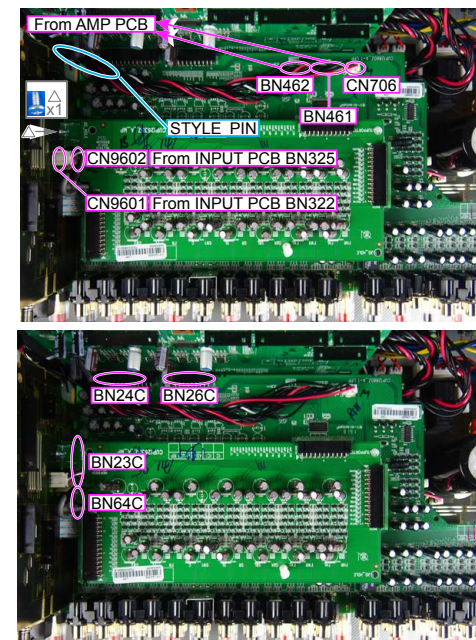
- (1) Remove the connector. Remove the PCB HOLDER.



6. INPUT PCB

Proceeding : **TOP COVER** → **REAR PANEL** → **DIGITAL PCB** → **VIDEO PCB**
→ **INPUT PCB**

- (1) Remove the screws. Remove the connector.



7. TUNER PCB

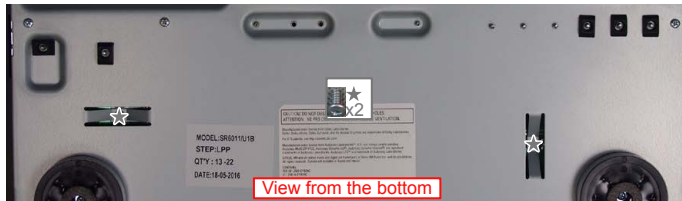
Proceeding: TOP COVER → REAR PANEL → DIGITAL PCB → VIDEO PCB
→ INPUT PCB → TUNER PCB

See "EXPLODED VIEW" for instructions on removing the TUNER PCB.

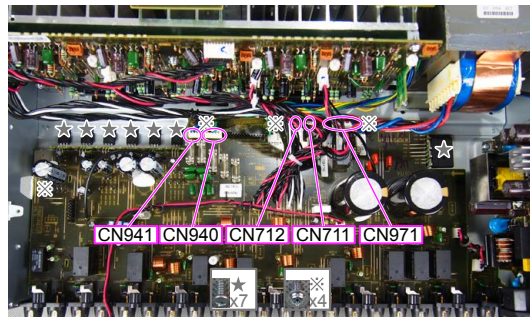
8. SPK PCB

Proceeding: TOP COVER → FRONT ASSY → RADIATOR ASSY → REAR PANEL
→ DIGITAL PCB → VIDEO PCB → INPUT PCB → TUNER PCB
→ SPK PCB

(1) Remove the screws.



(2) Remove the screws. Remove the connector.



9. SMPS PCB

Proceeding: TOP COVER → SMPS PCB

See "EXPLODED VIEW" for instructions on removing the SMPS PCB.

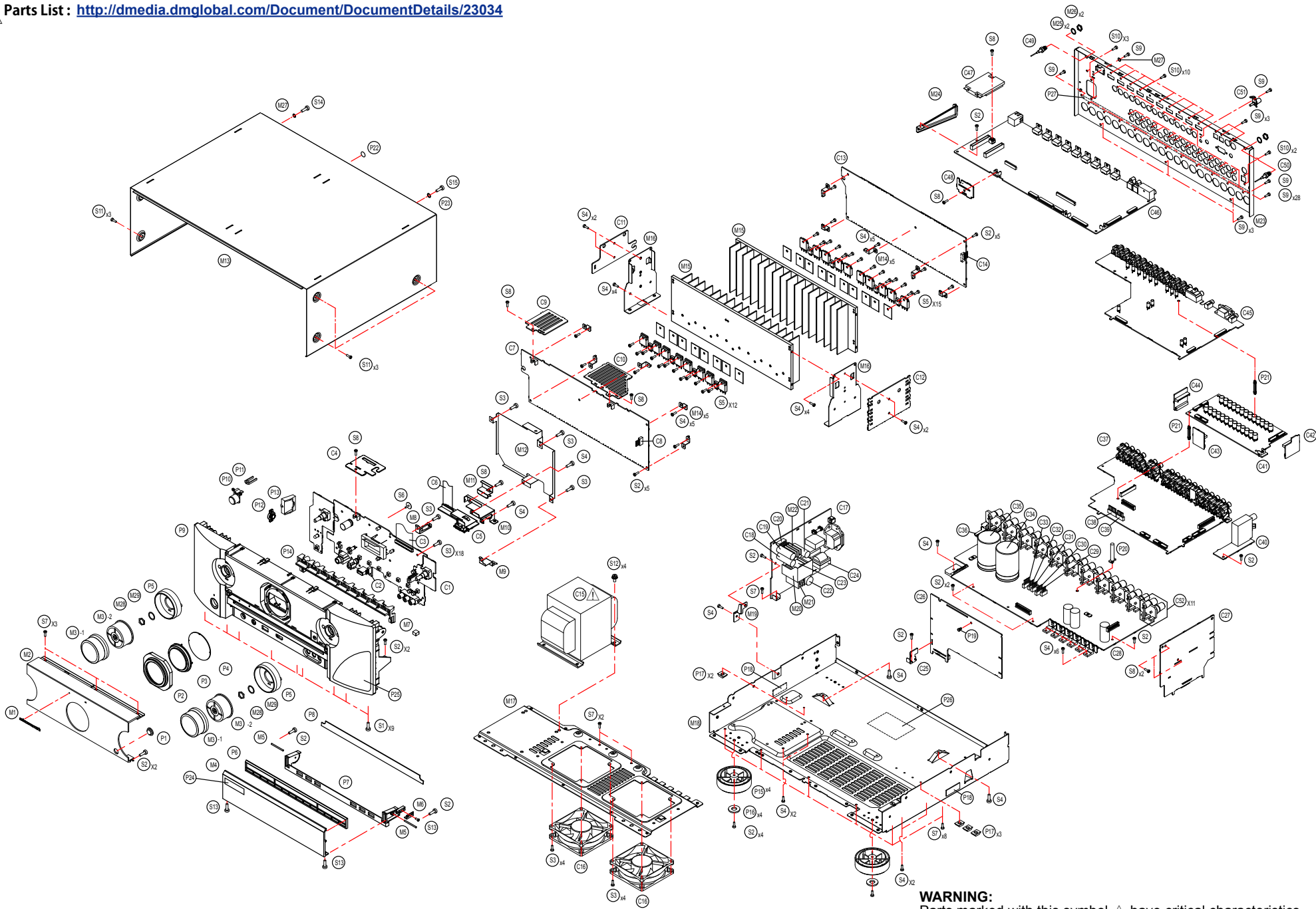
10. TRANS


Proceeding: TOP COVER → TRANS

See "EXPLODED VIEW" for instructions on removing the transformer (TRANS).

EXPLODED VIEW

Parts List : <http://dmedia.dmglobal.com/Document/DocumentDetails/23034>



WARNING:
Parts marked with this symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Caution in Servicing

Electrical

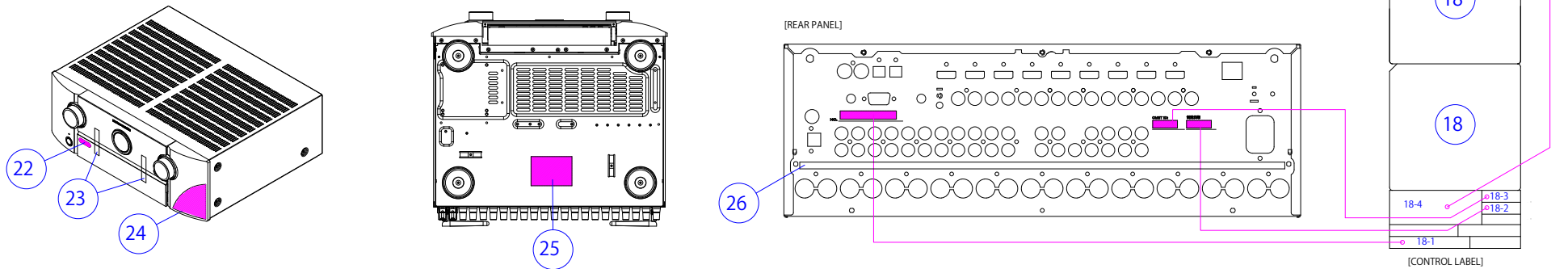
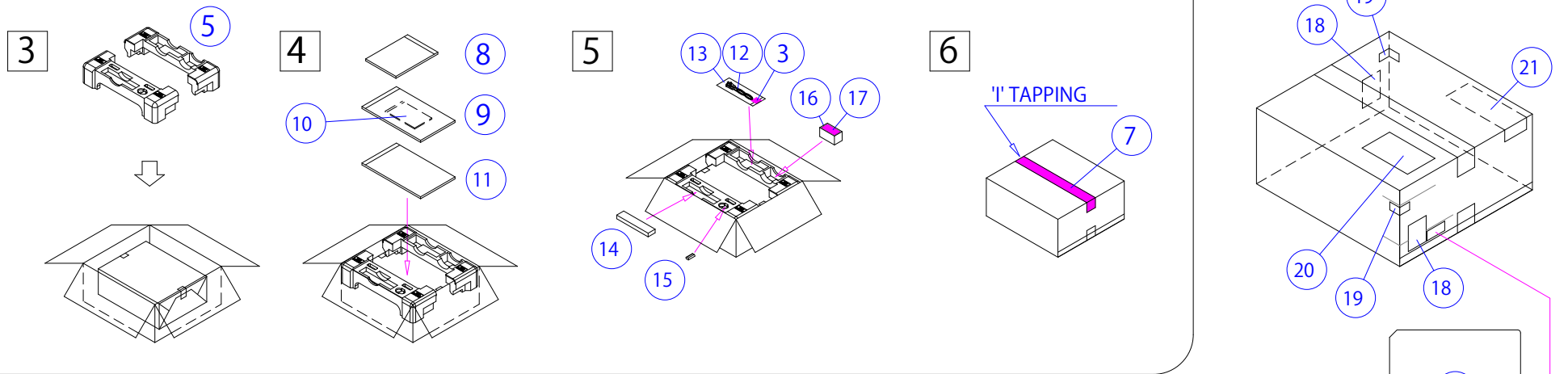
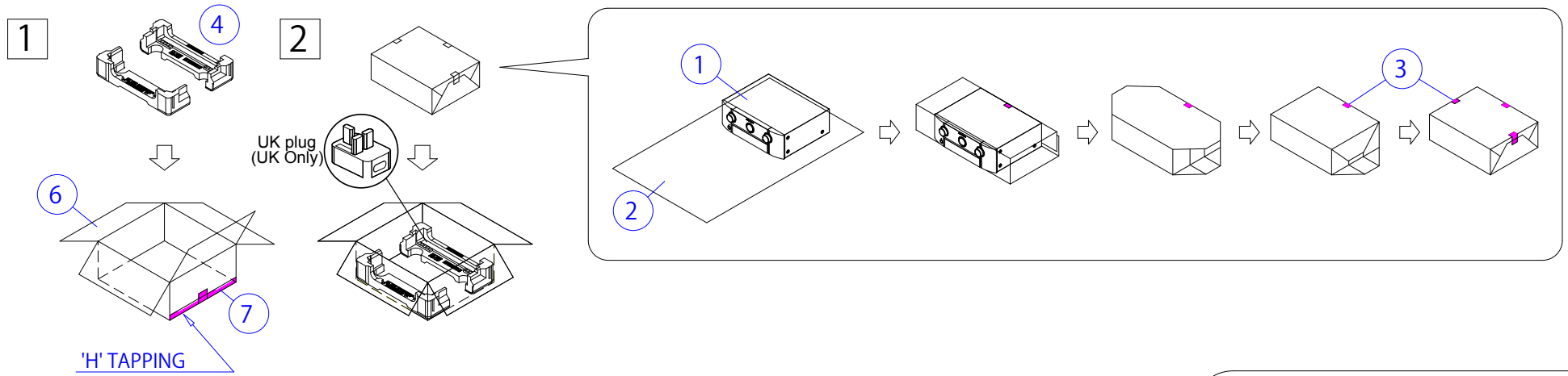
Mechanical

Repair Information

Updating

PACKING VIEW

Parts List : <http://dmedia.dmglobal.com/Document/DocumentDetails/23034>



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

REPAIR INFORMATION

TROUBLE SHOOTING

1. POWER
2. Analog video
3. HDMI/DVI
4. AUDIO
5. Network / Bluetooth / USB
6. SMPS

AUDIO CHECK PATH

HDMI "Rx/Tx" Failure Detection

1. Prior checking
2. Preparations for checking HDMI Switcher reception/transmission register
3. Starting detecting the point of failure
4. Device implementation location

CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK

SPECIAL MODE

Special mode setting button

1. Version Display Mode
2. PANEL / REMOTE LOCK Selection Mode
- 3-1. Selecting the Mode for Service-related
- 3-2. Protection History Display Mode
- 3-3. 232C Standby Clear Mode
- 3-4. Operation Info Mode
- 3-5. TUNER STEP mode (U / N only)
4. Protection Pass Mode
5. CY920 Reboot Mode
6. CY920 Initialization Mode
7. Clearing the Operation Info

PROTECTION DIAGRAM

DIAGNOSTIC MODE

Service Path Check Mode

DIAGNOSTIC PATH DIAGRAM

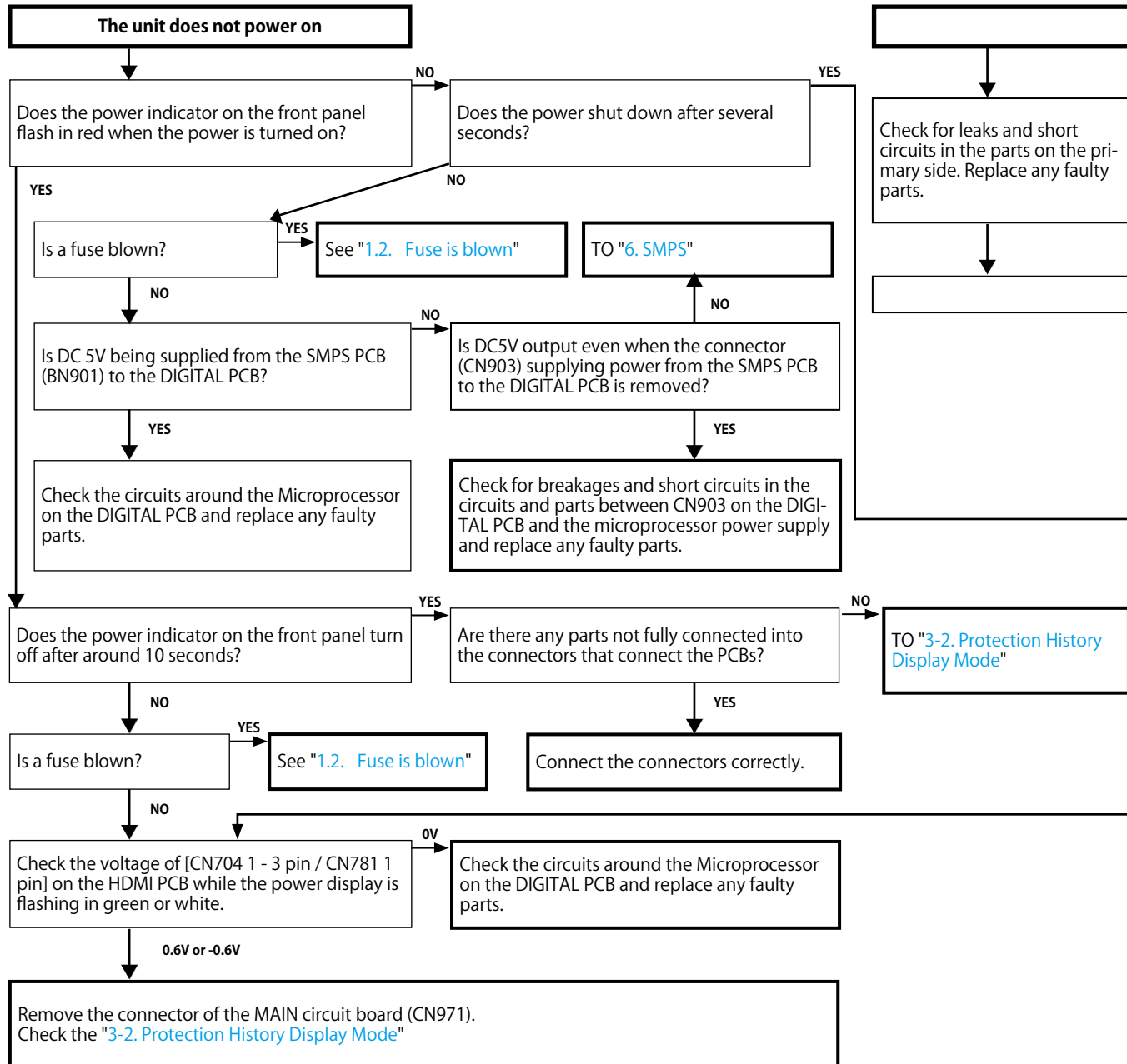
JIG FOR SERVICING

ADJUSTMENT

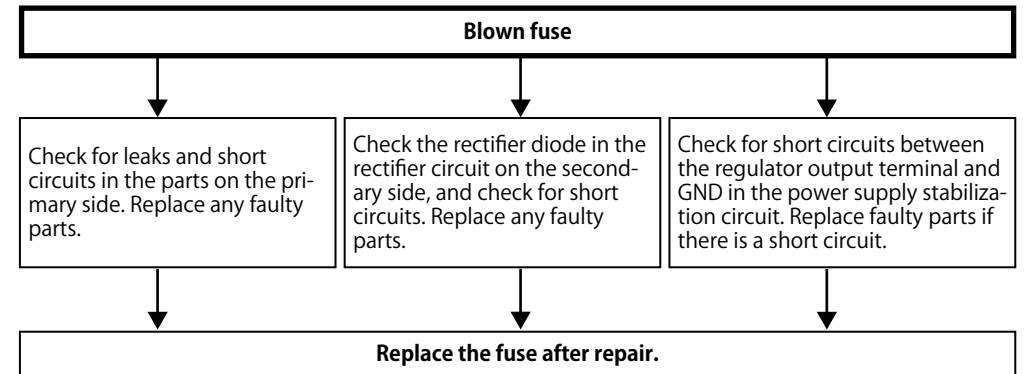
TROUBLE SHOOTING

1. POWER

1.1. The unit does not power on



1.2. Fuse is blown



Caution in servicing

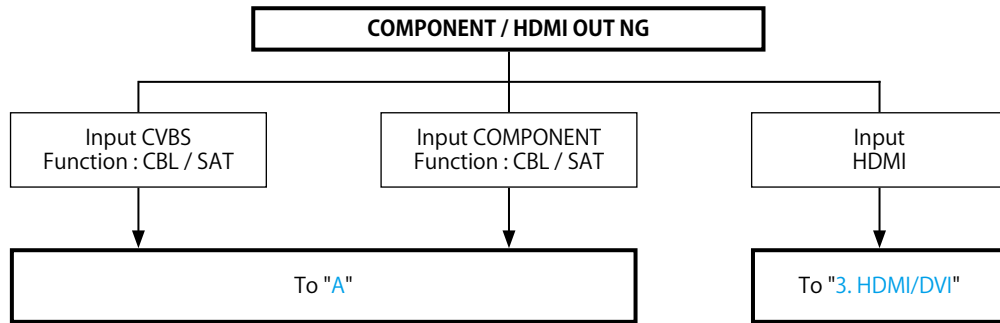
Electrical

Mechanical

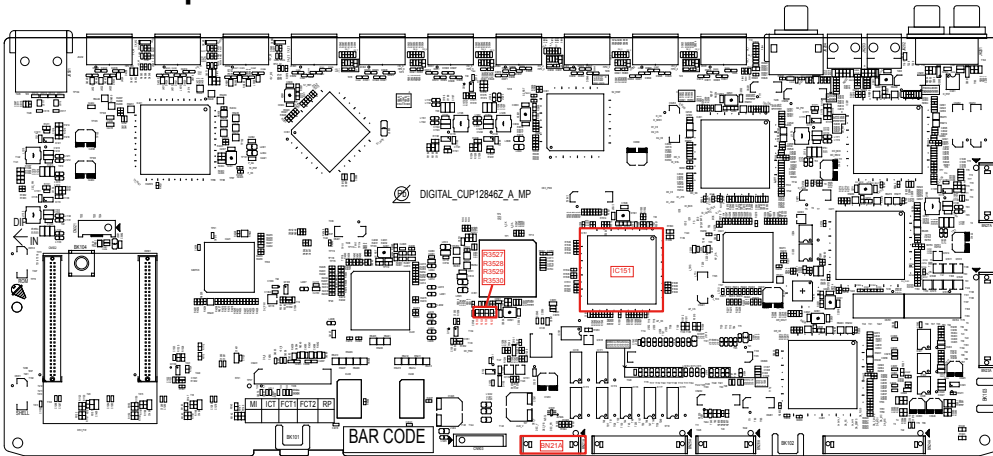
Repair Information

Updating

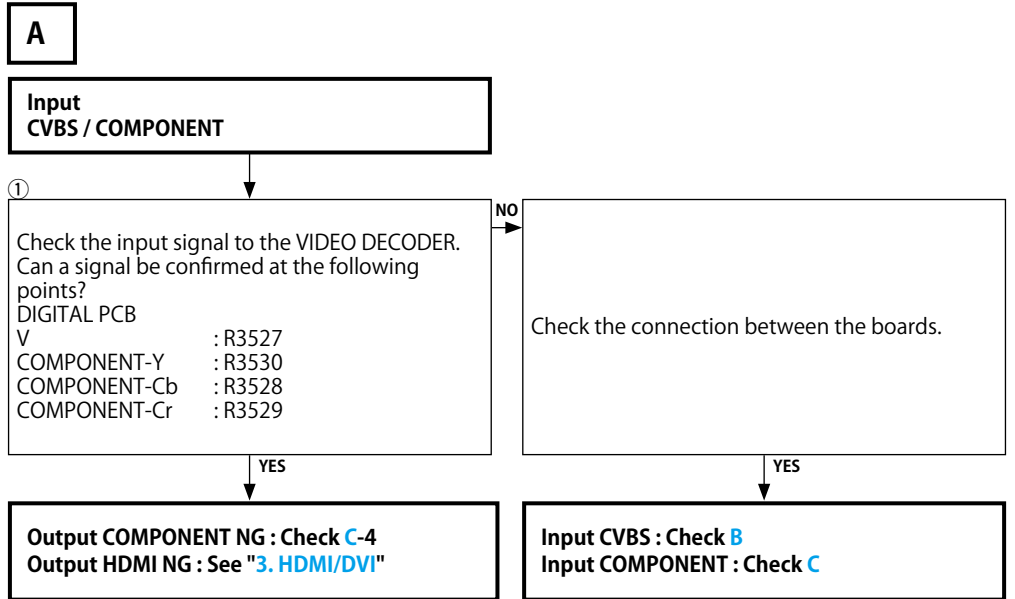
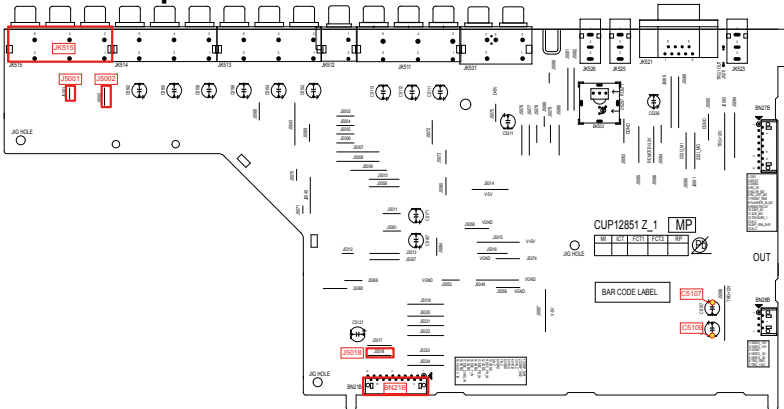
2. Analog video

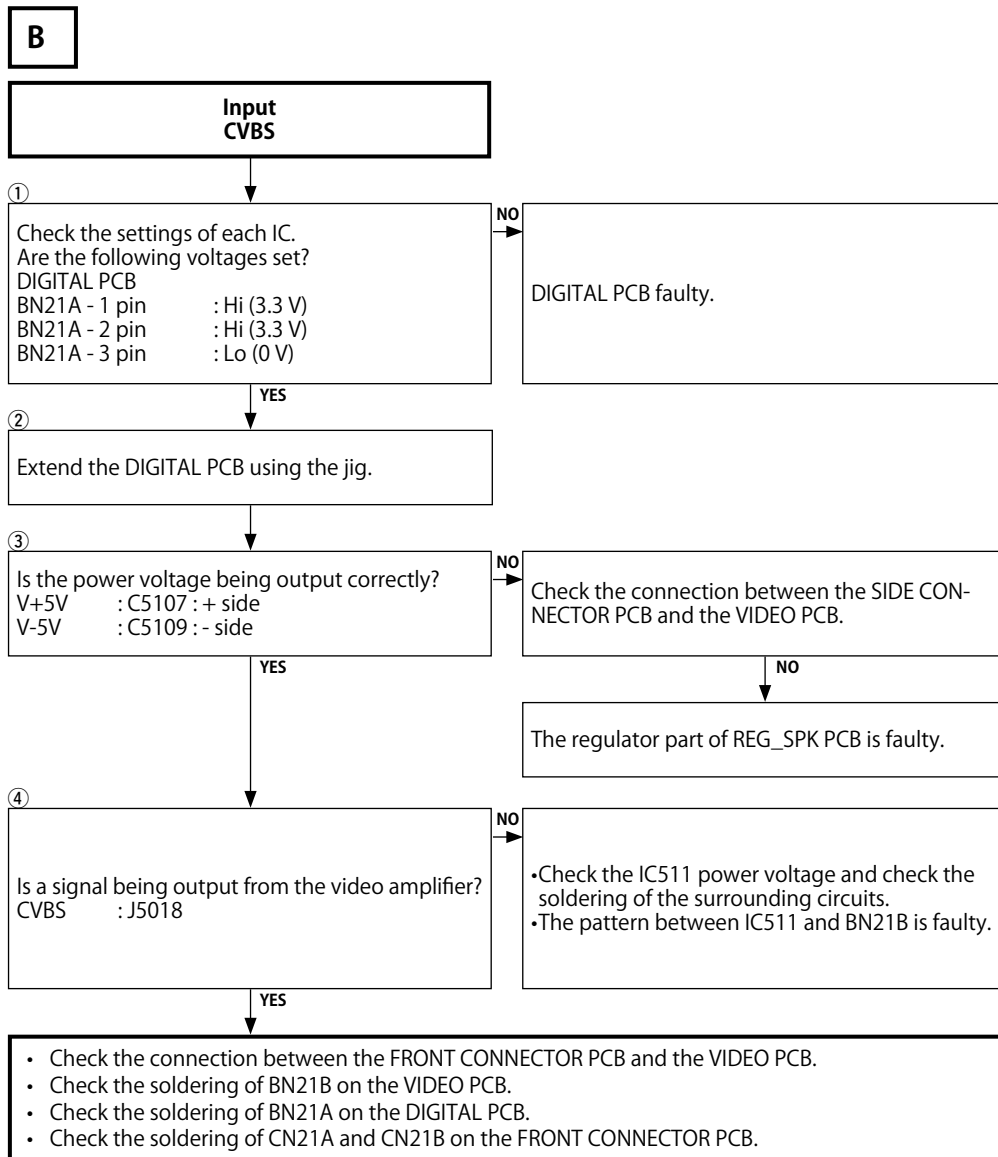


DIGITAL test point

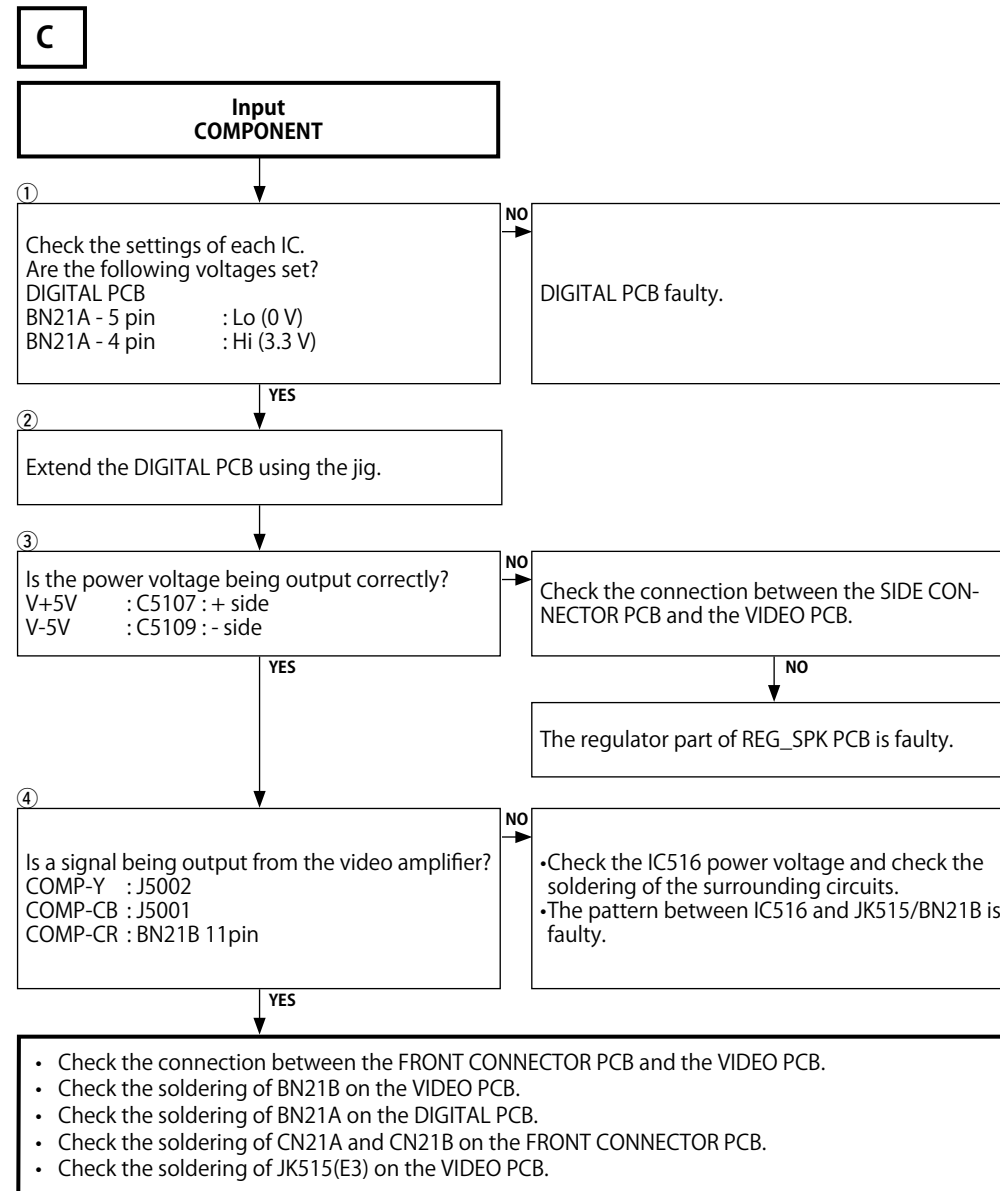


VIDEO test point





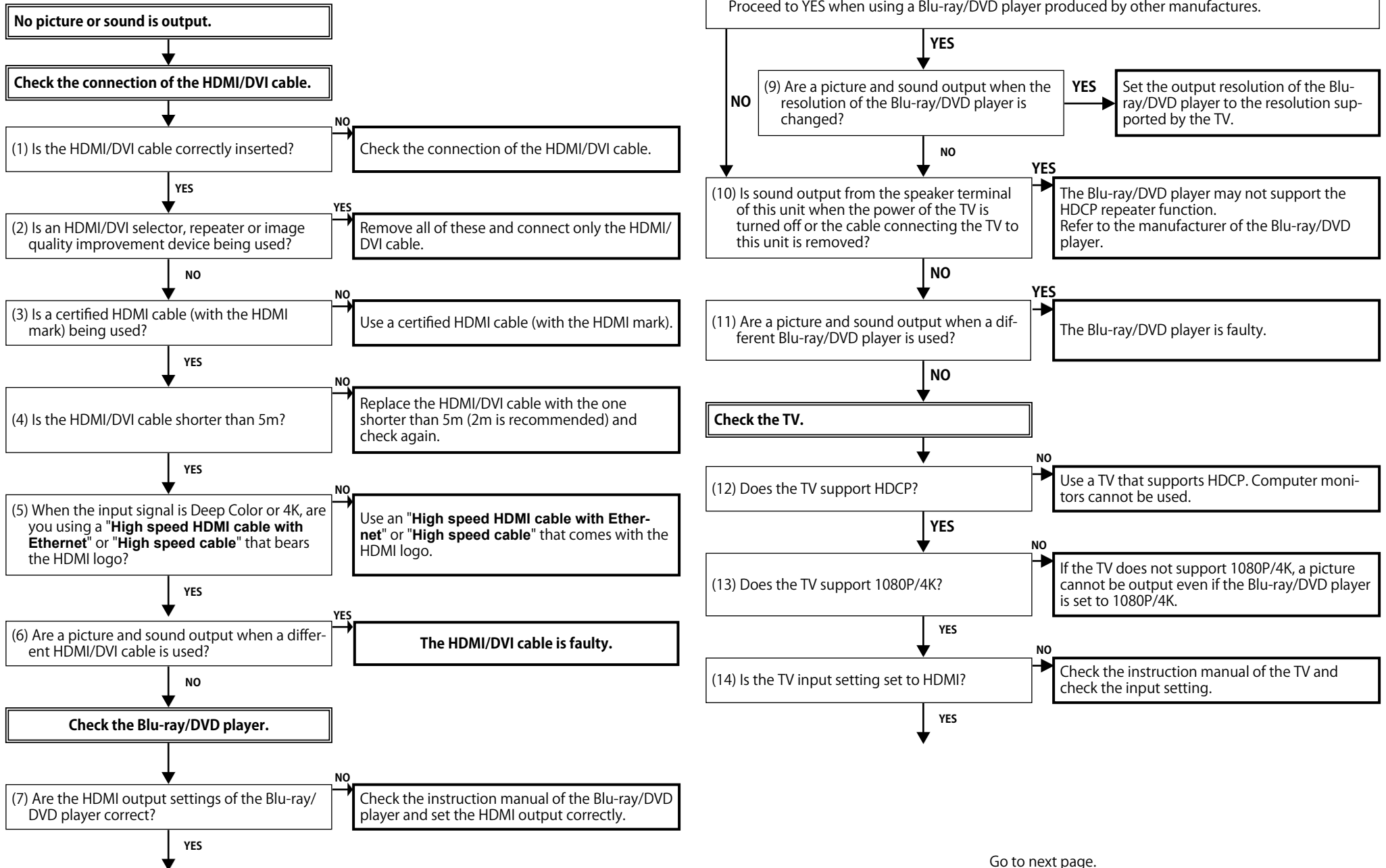
※ These instructions refer to the VIDEO PCB unless otherwise specified.



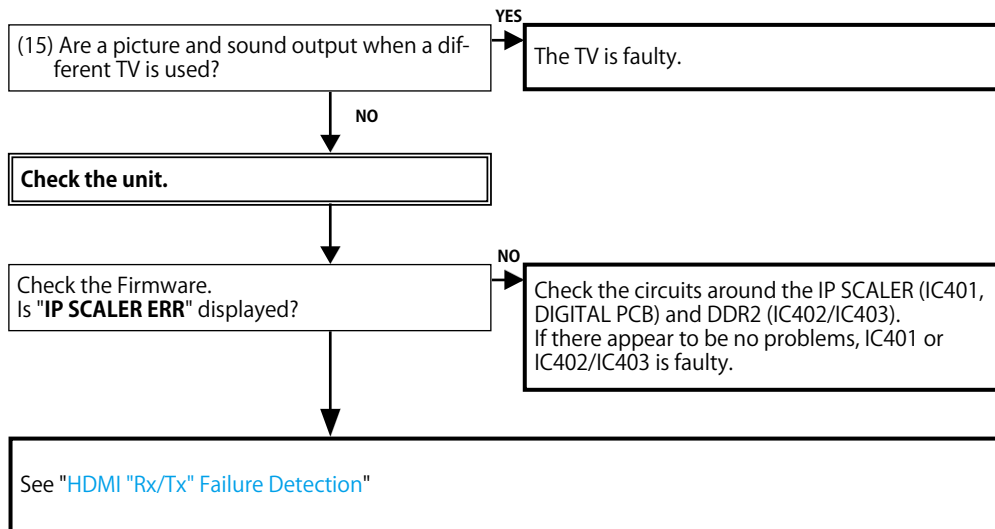
※ These instructions refer to the VIDEO PCB unless otherwise specified.

3. HDMI/DVI

3.1. No picture or sound is output (HDMI to HDMI)

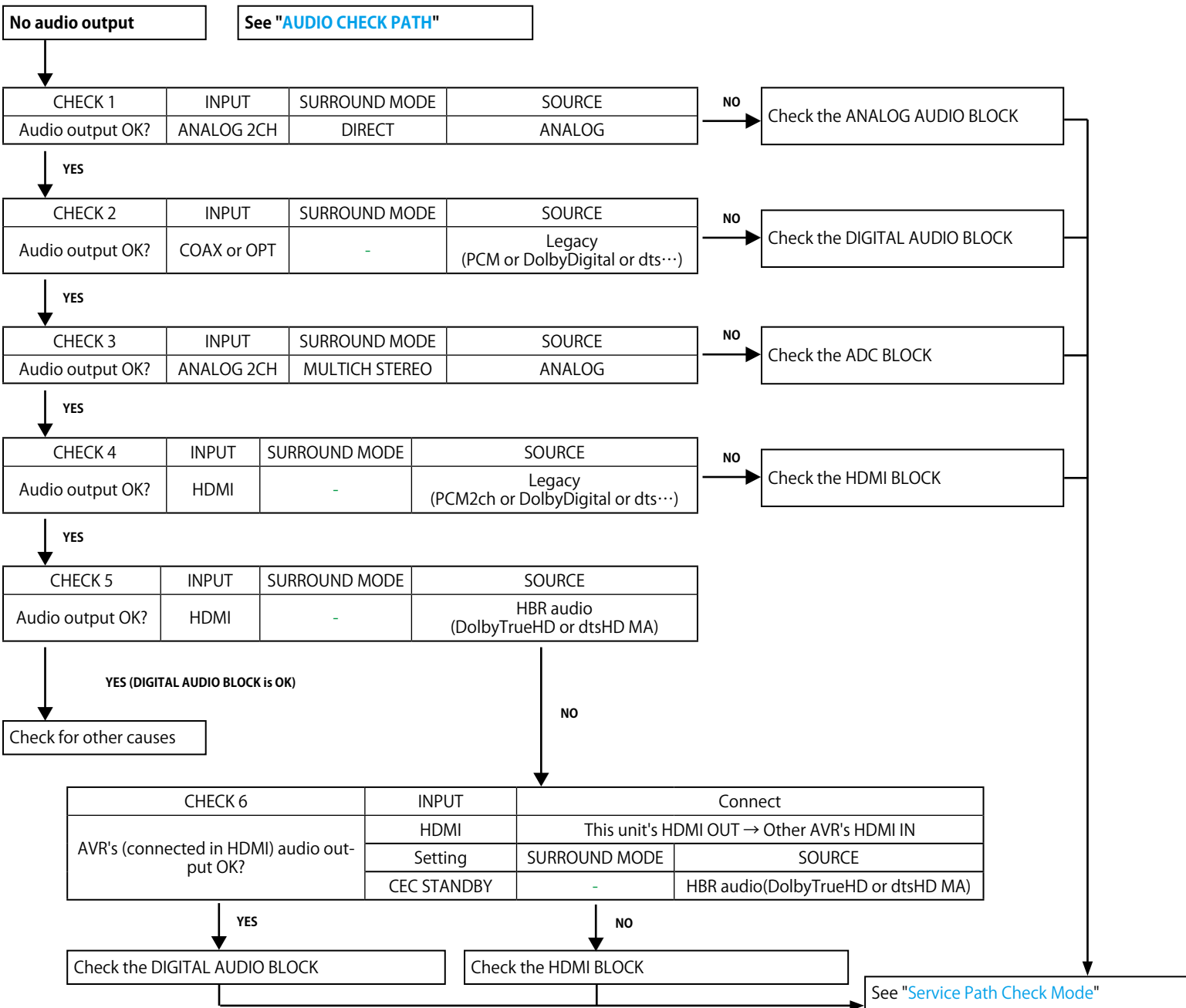


Go to next page.

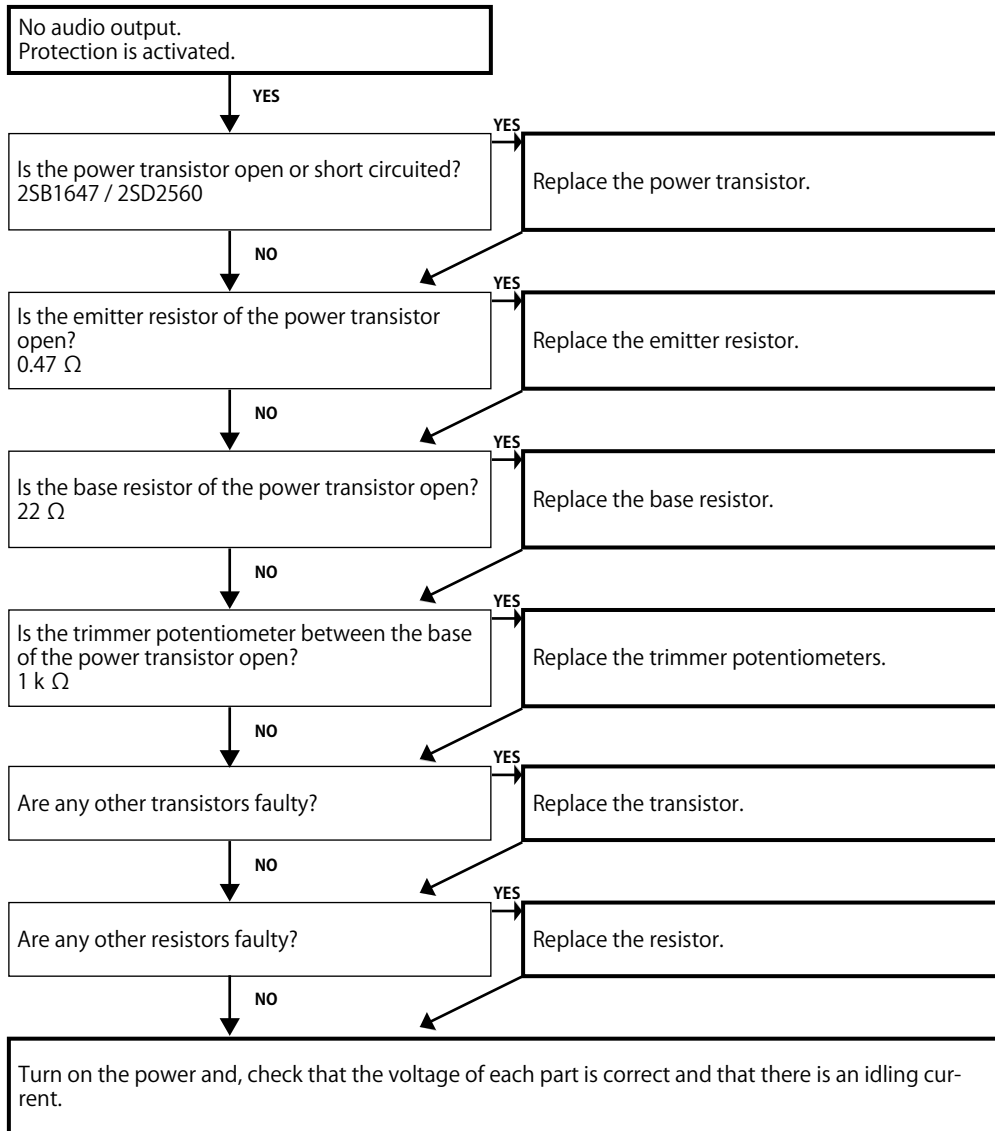


4. AUDIO

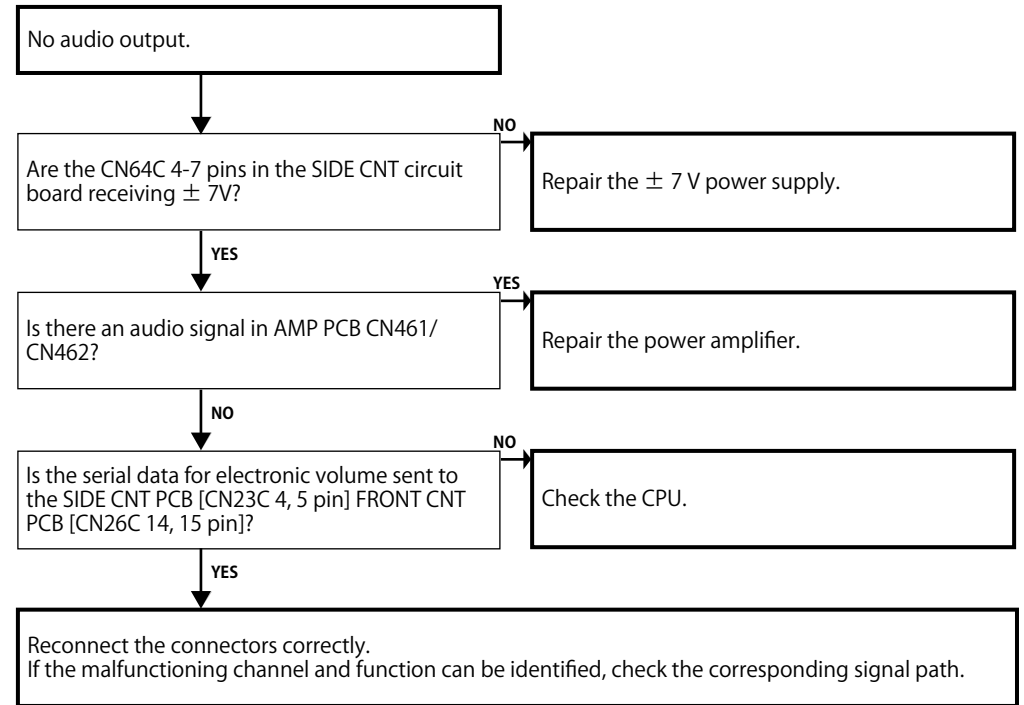
4.1. AUDIO CHECK



4.2. Power AMP (AMP PCB)

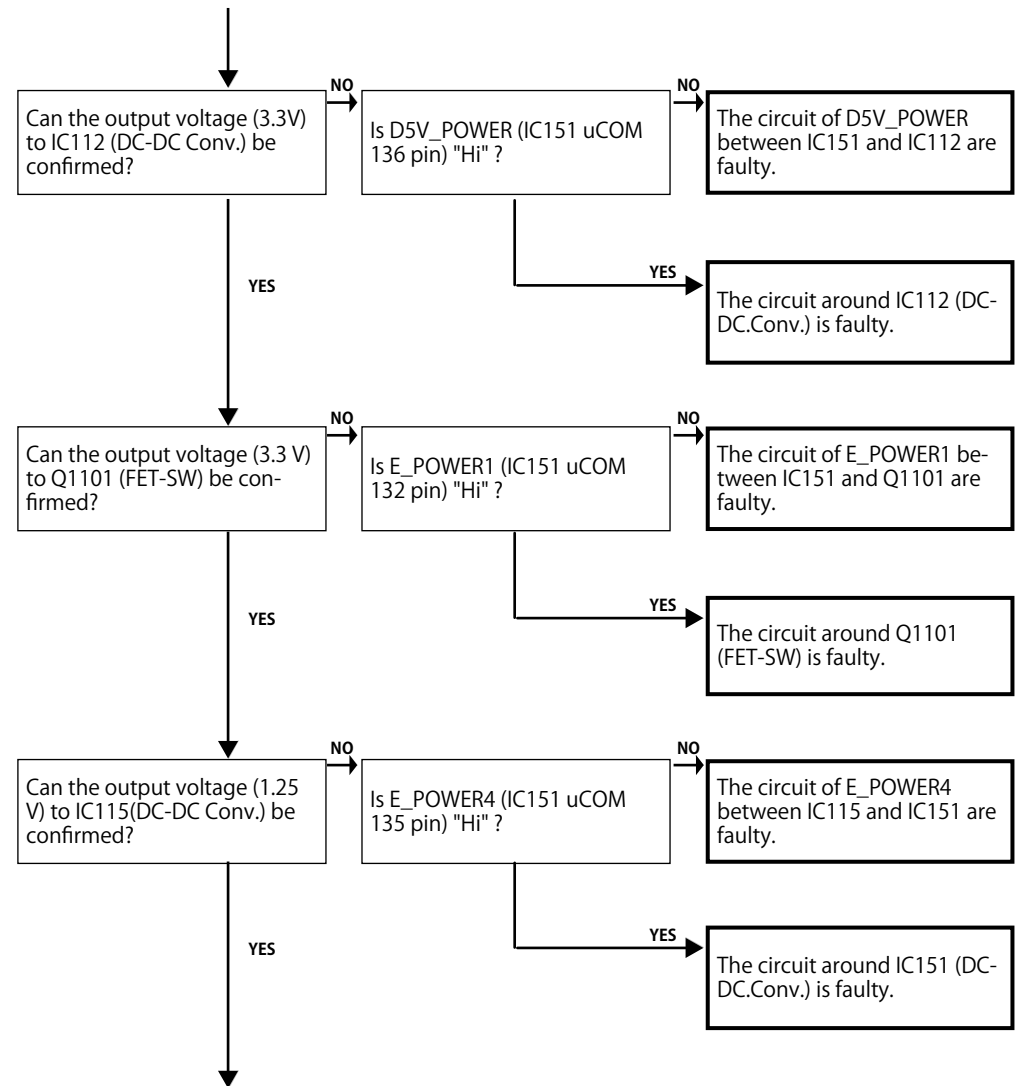
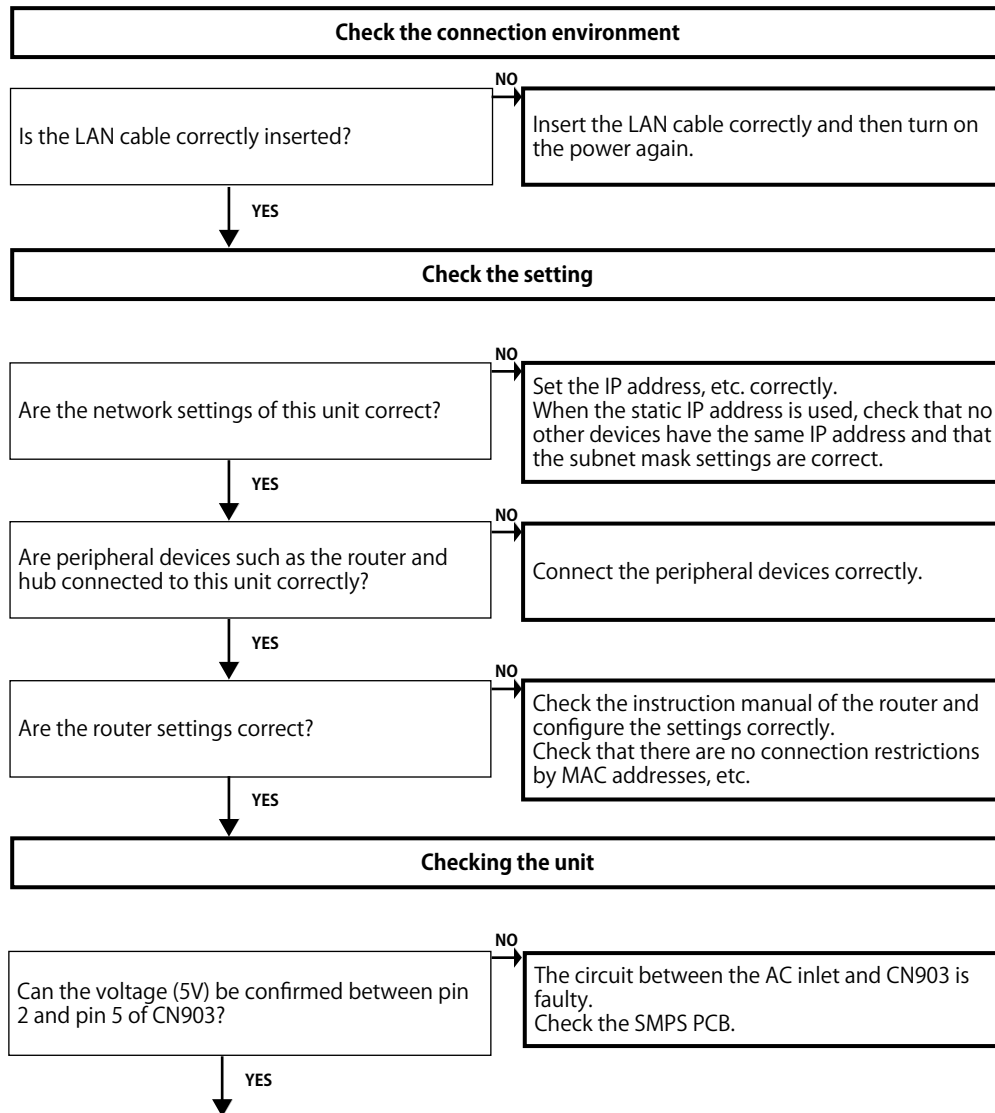


4.3. Analog audio

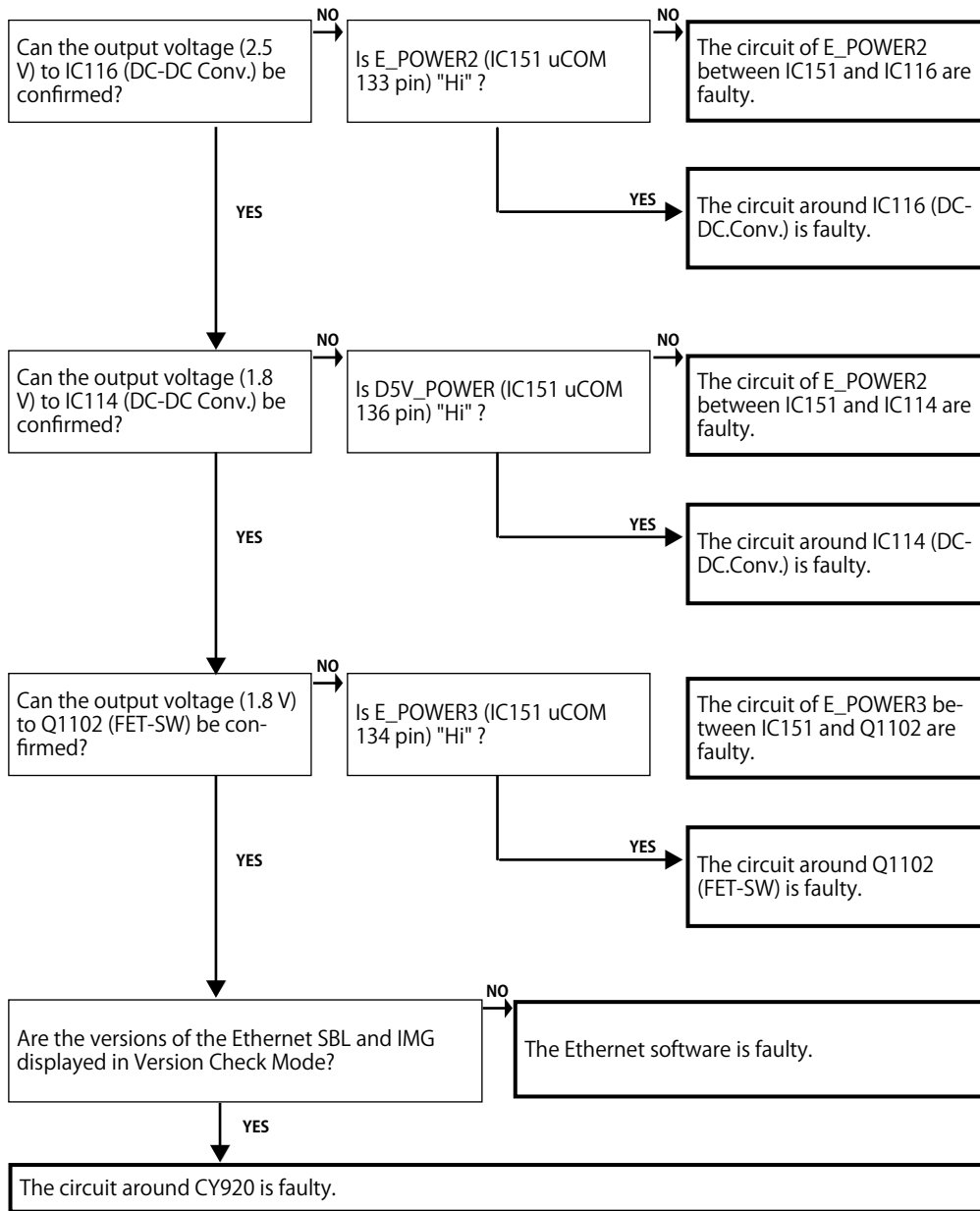


5. Network / Bluetooth / USB

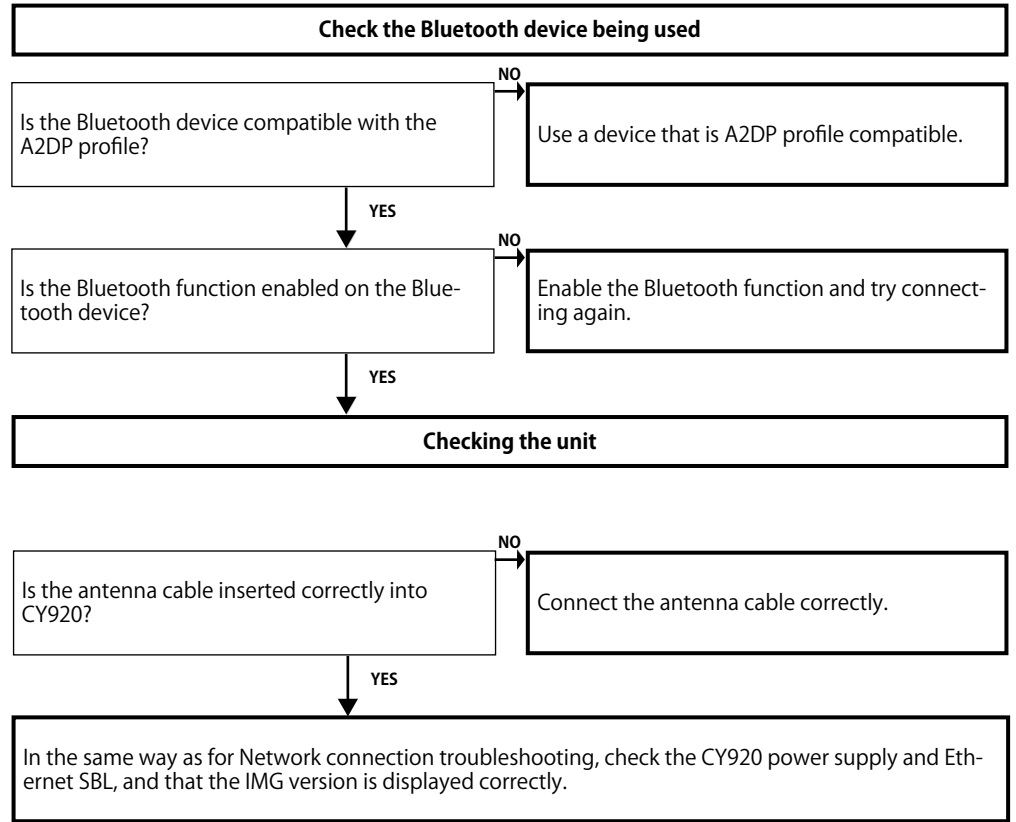
5.1. Cannot connect to the network



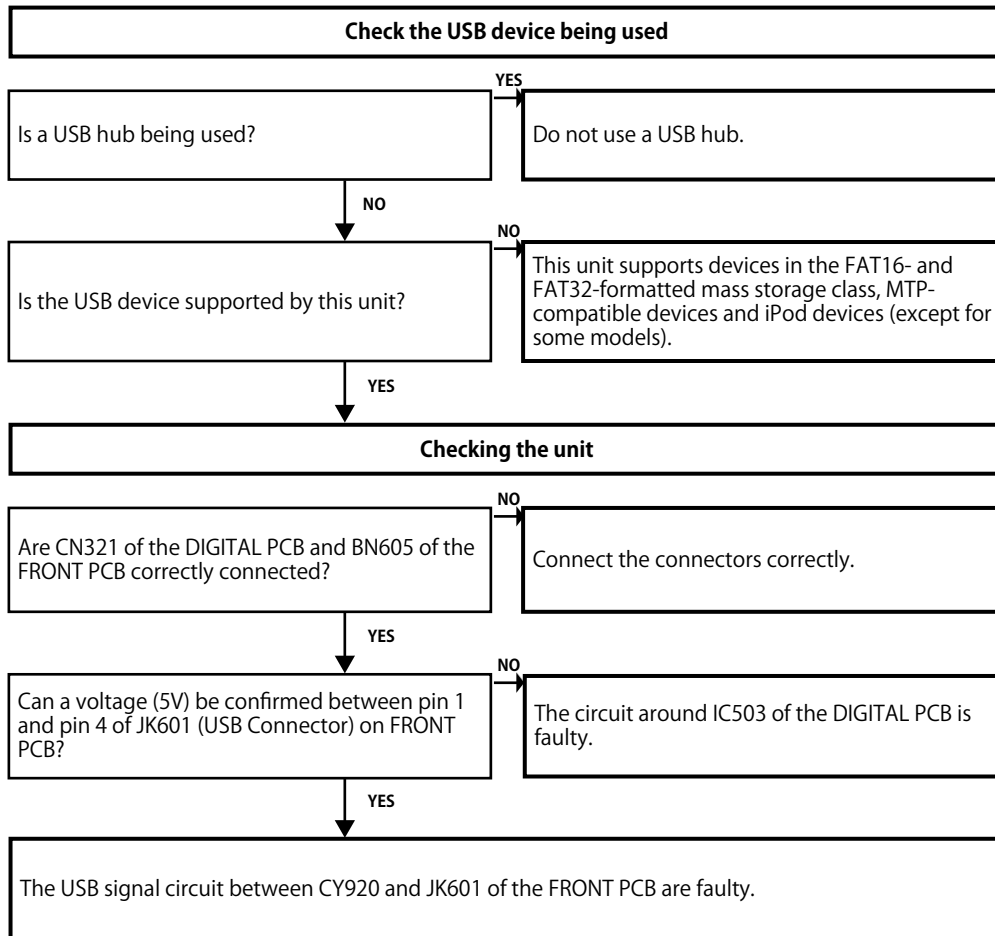
Go to next page.



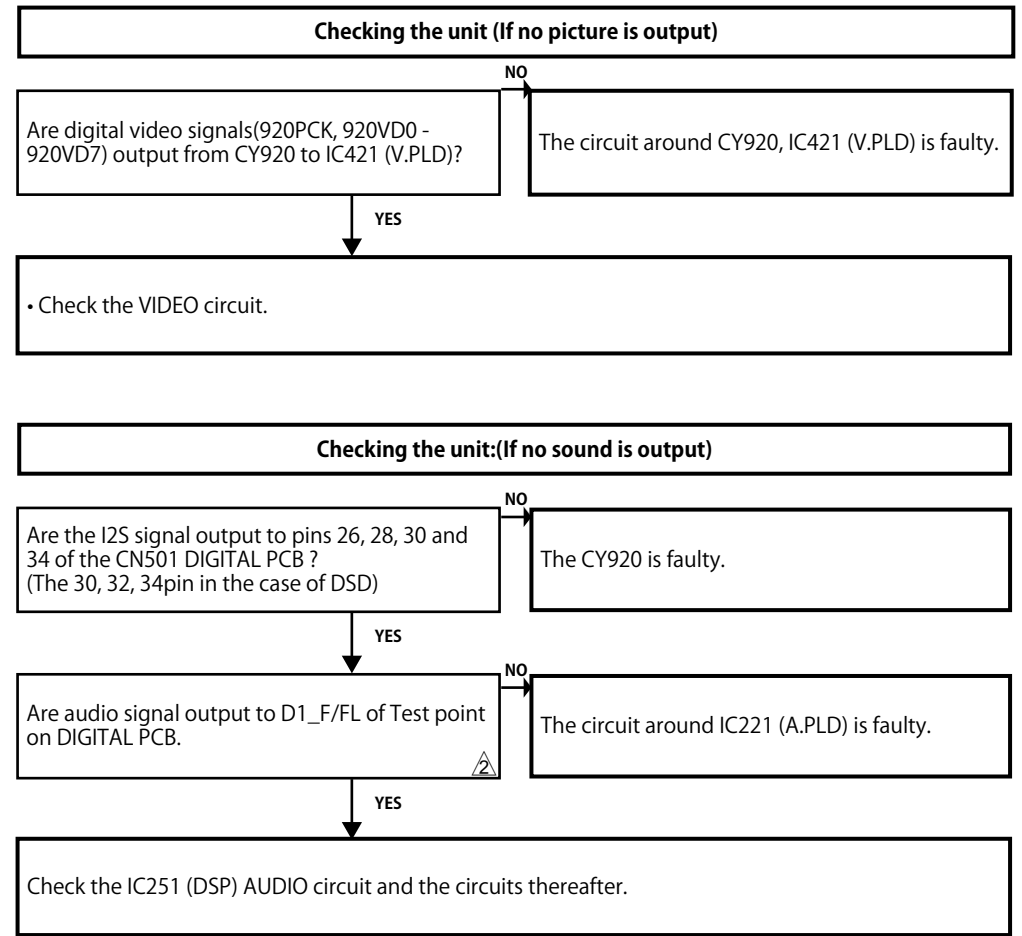
5.2. Cannot establish a Bluetooth connection



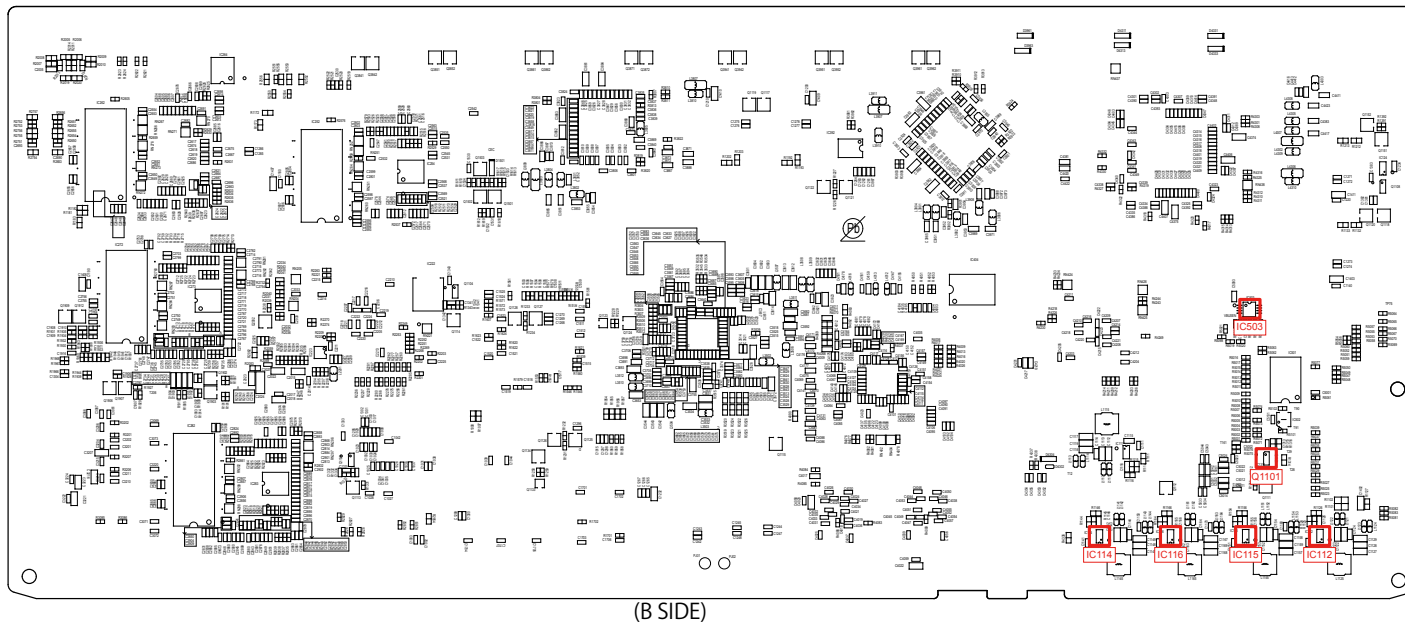
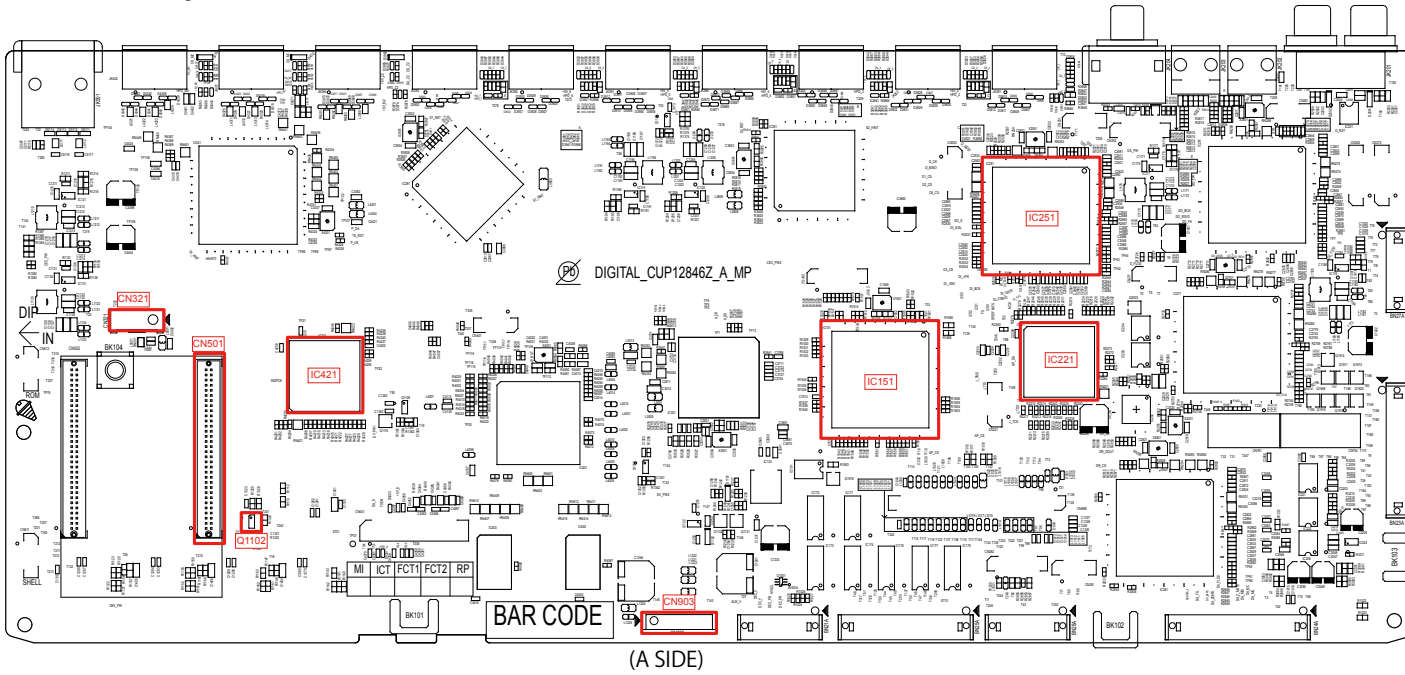
5.3. Cannot recognize the connected USB device



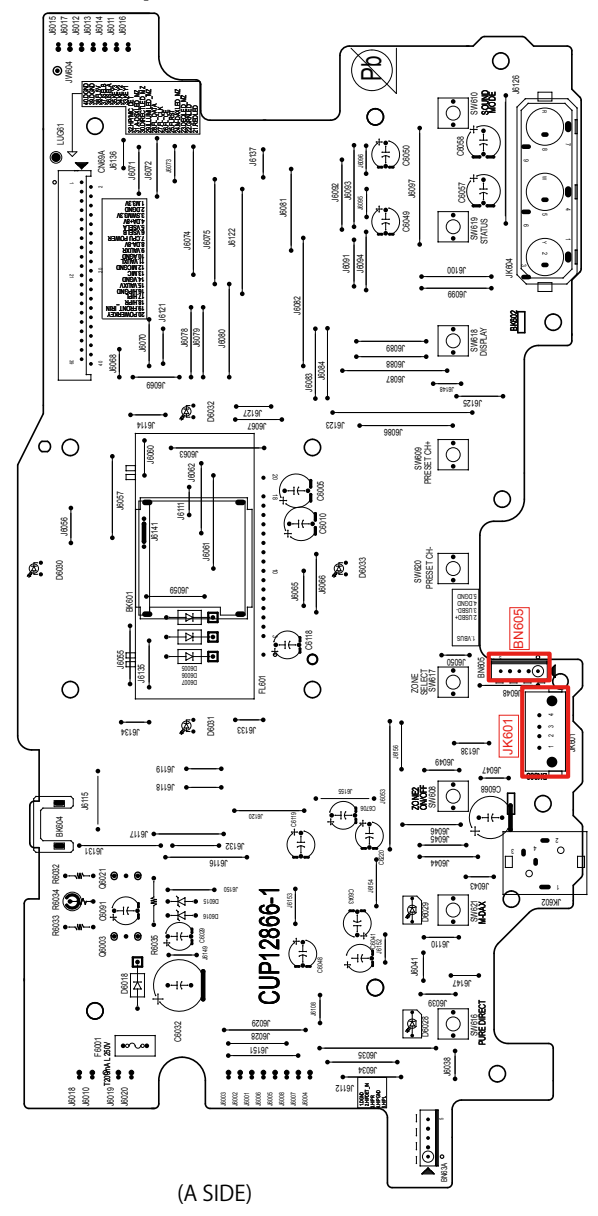
5.4. No picture or sound is output



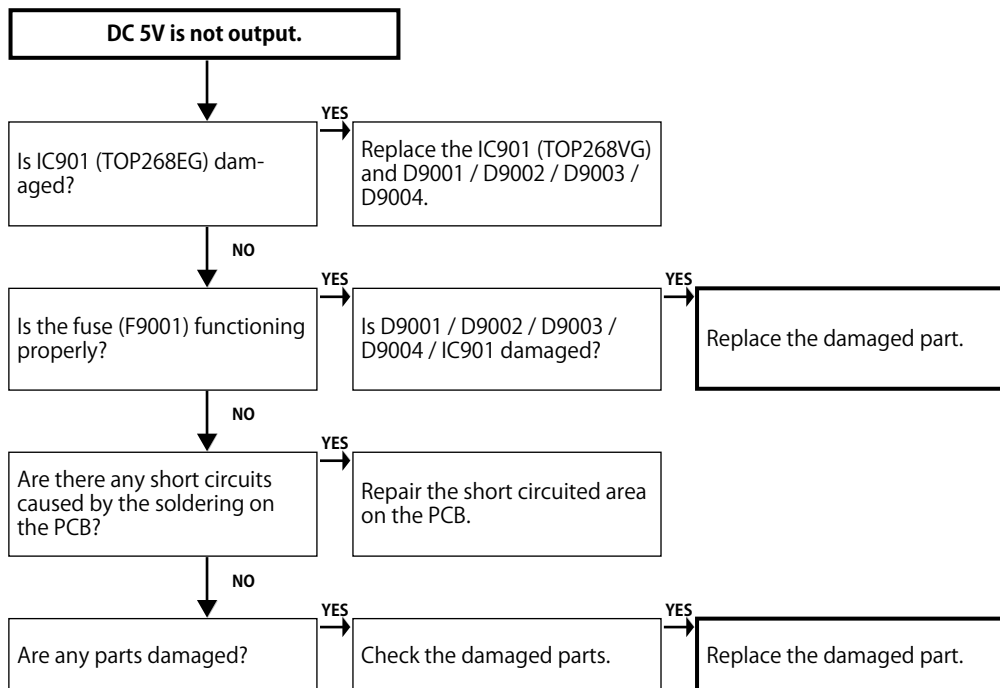
DIGITAL test point



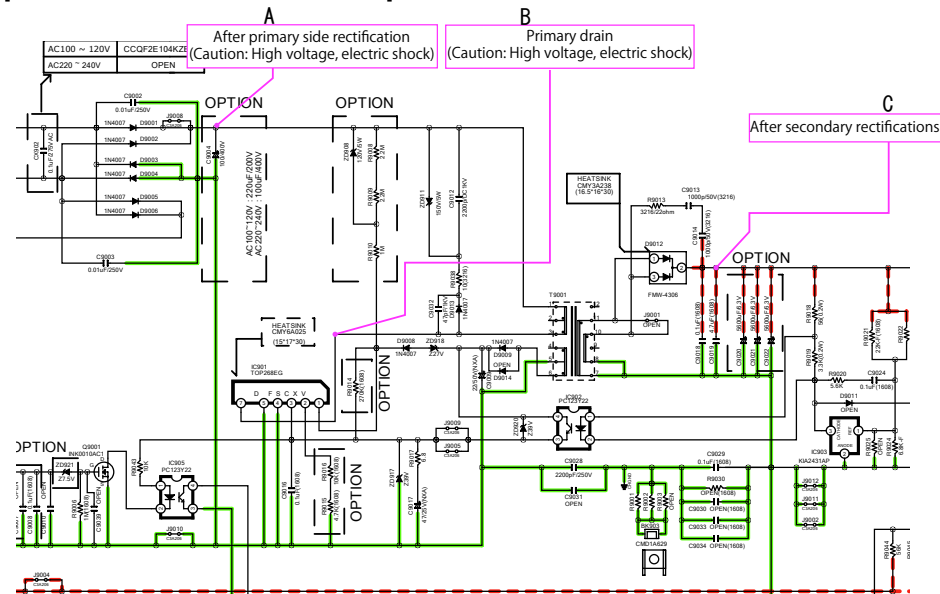
USB test point



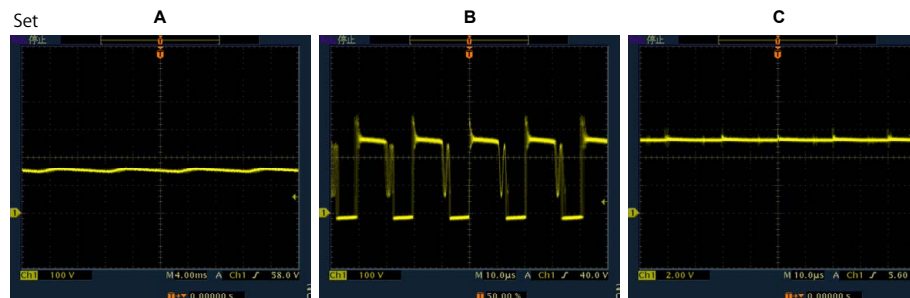
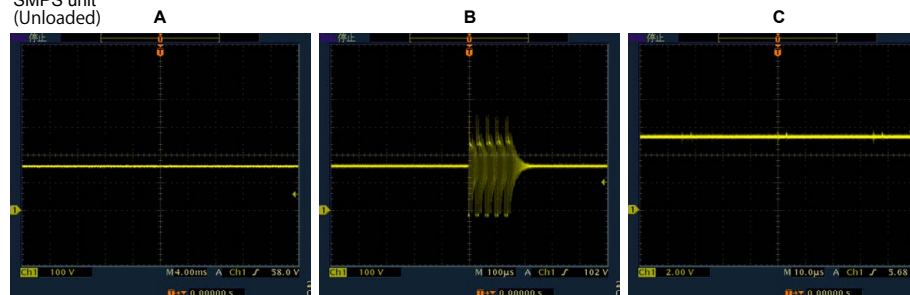
6. SMPS



Operation waveform for each part



SMPS unit (Unloaded)



Caution in servicing

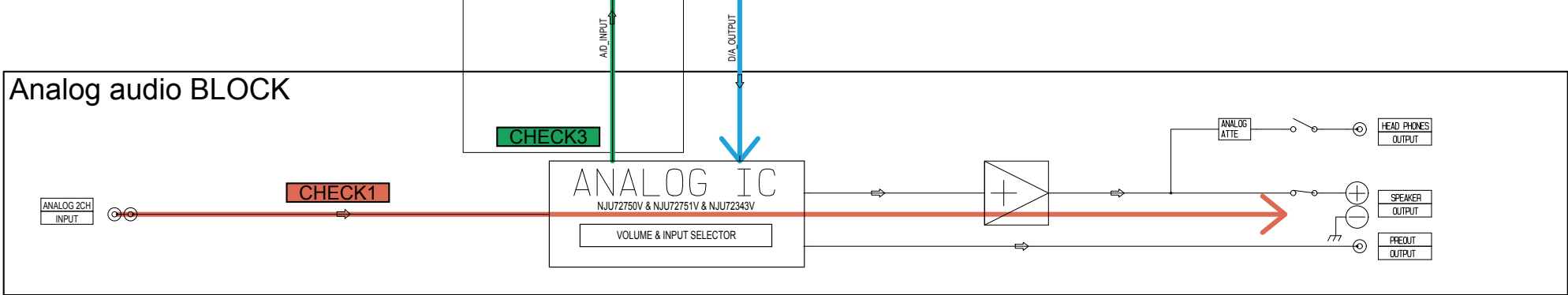
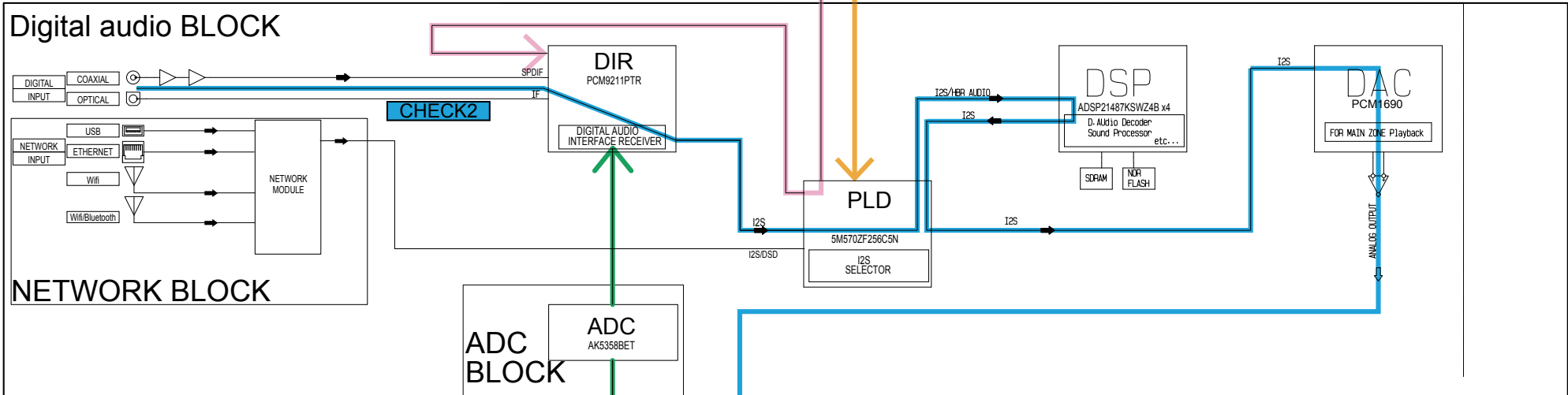
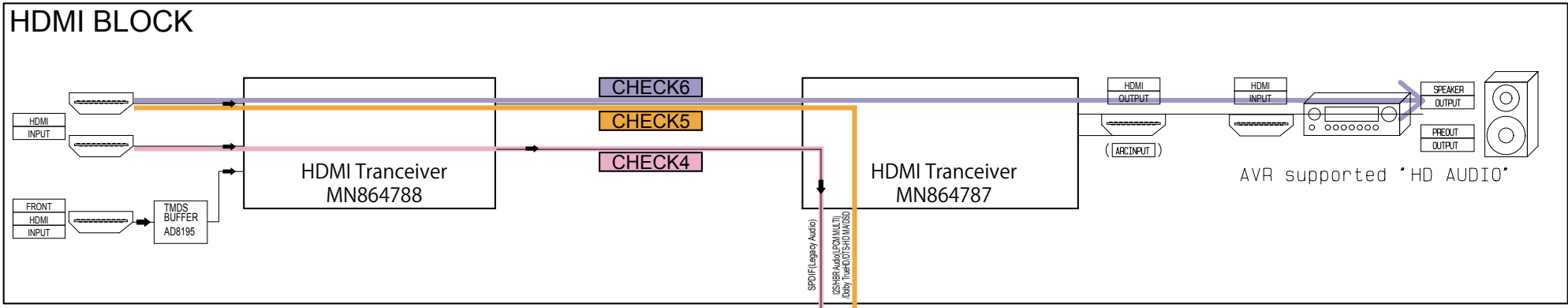
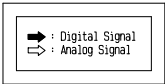
Electrical

Mechanical

Repair Information

Updating

AUDIO CHECK PATH



Caution in servicing

Electrical

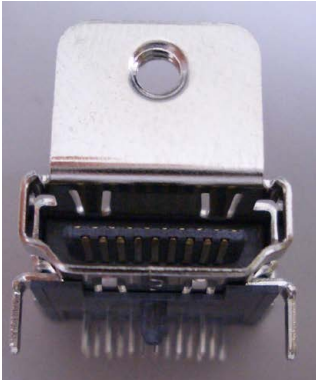
Mechanical

Repair Information

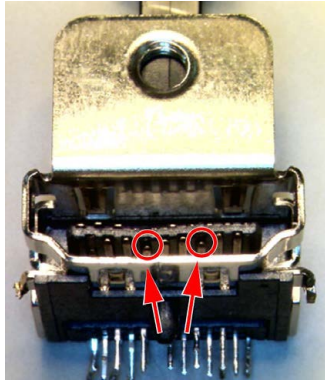
Updating

1. Prior checking

Check item (0) : Checking the HDMI connector
Checking the condition of the HDMI pin (rear/front).



OK



NG

Check for deformed pins.

None of the pins are deformed.

There are deformed pins.

Replace the HDMI connector.

3. Check by following the flow chart for starting detection of the points of failure.

2. Preparations for checking HDMI Switcher reception/transmission register

2-1. Necessary devices

- 1) Check the product settings.
- 2-a) Player with an HDMI terminal
- 2-b) TV with an HDMI terminal (* NOTE : Do not use a computer monitor.)
- 3) Windows PC
- 4) Serial communication software "termite.exe"
(Download the software from http://www.compuphase.com/software_termite.htm and install it.)
- 5) HDMI cable
- 6) RS-232C Straight cable
- 7) 8U-2120100S WRITING KIT
- 8) oscilloscope

2-2. Device Connection Method

Connect the TV and the AVR to the player using an HDMI cable and connect the AVR to the PC through an RS-232C cable as shown in Figure 1.

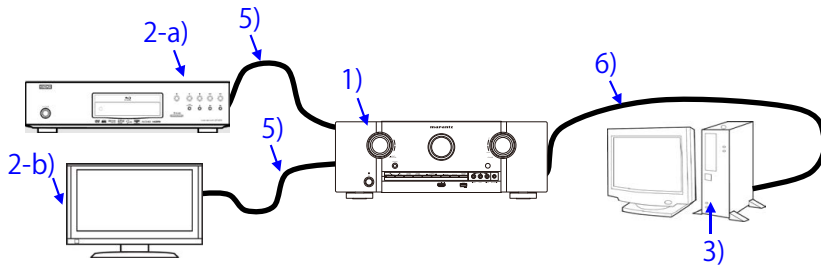


Figure 1-1 Device Connection Method (SR6011)

2-3. Device configuration method

PC settings : Execute the serial communication program, Termite.exe.

After executing Termite.exe, click [Settings].

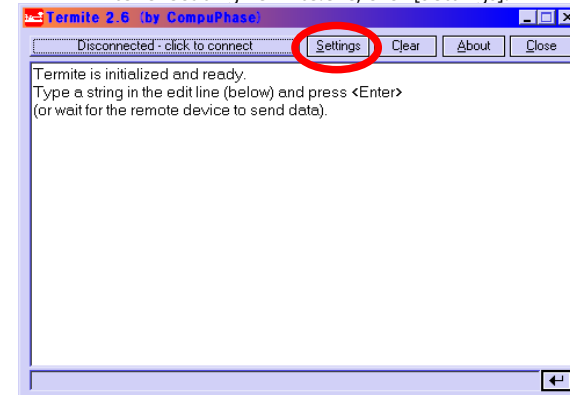


Figure 2 Screen After Executing Termite.exe

The serial port setup screen will be displayed.

Configure the settings as shown in Figure 3 and click the [OK] button.

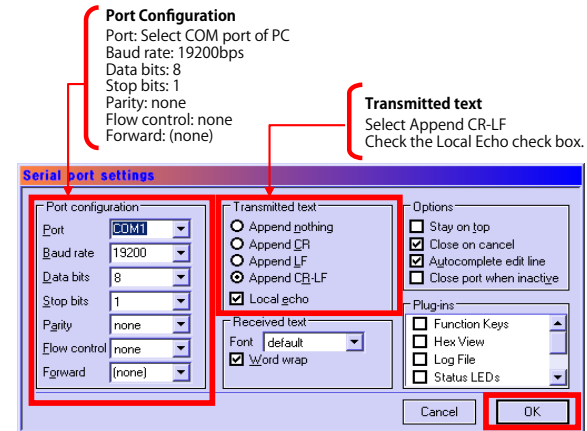


Figure 3 Serial Port Setup Screen

Click the [click to connect] button to start communication.
 After a connection is established successfully, the display of the button name will change as shown in Figure 4.

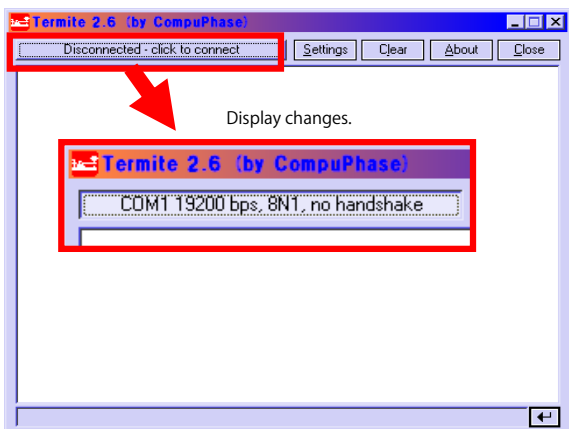


Figure 4 Change of the Display of the Communication Start Button Name

TV settings : Switch to the HDMI input in the AVR connection.
 Player settings : Turn the unit power on and configure it to play disks.
 AVR settings : While the power is on, hold down buttons "DIMMER" and "STATUS" for at least 3 seconds.
 (Continue to press and hold the buttons until all segments of the FLD volume illuminate.)
 ※ When the power is turned on after initialization, "Setup Assistant" will be displayed.
 After exiting "Setup Assistant" execute the above.

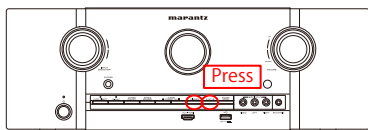


Figure 6-1. AVR settings (SR6011)

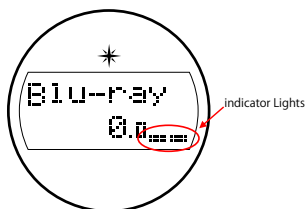


Figure 6 FLD Display When Set

When the settings are correct, the following message will be displayed in the window of Termite.
 [00]Start Sub CPU Log Mode

 (**** is a version of Sub CPU.)

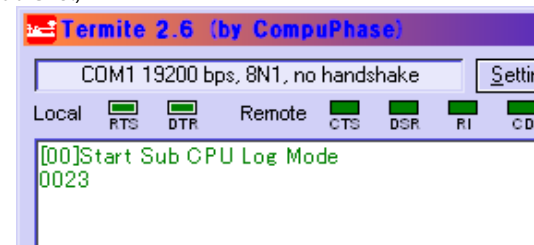


Figure 7 Display of Termite When AVR is Set

The setup is now complete.

Method for sending commands

Enter the command in the transmission command entry section, click the [Send] button and send the command.

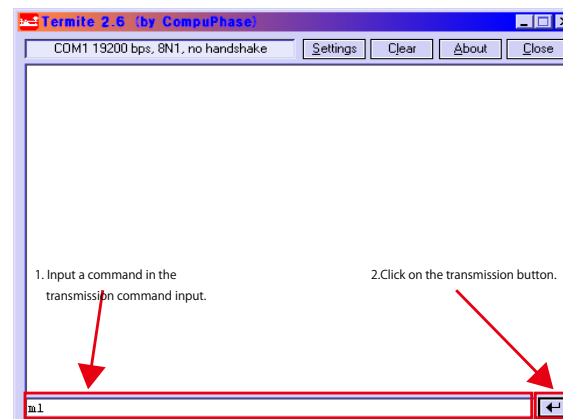
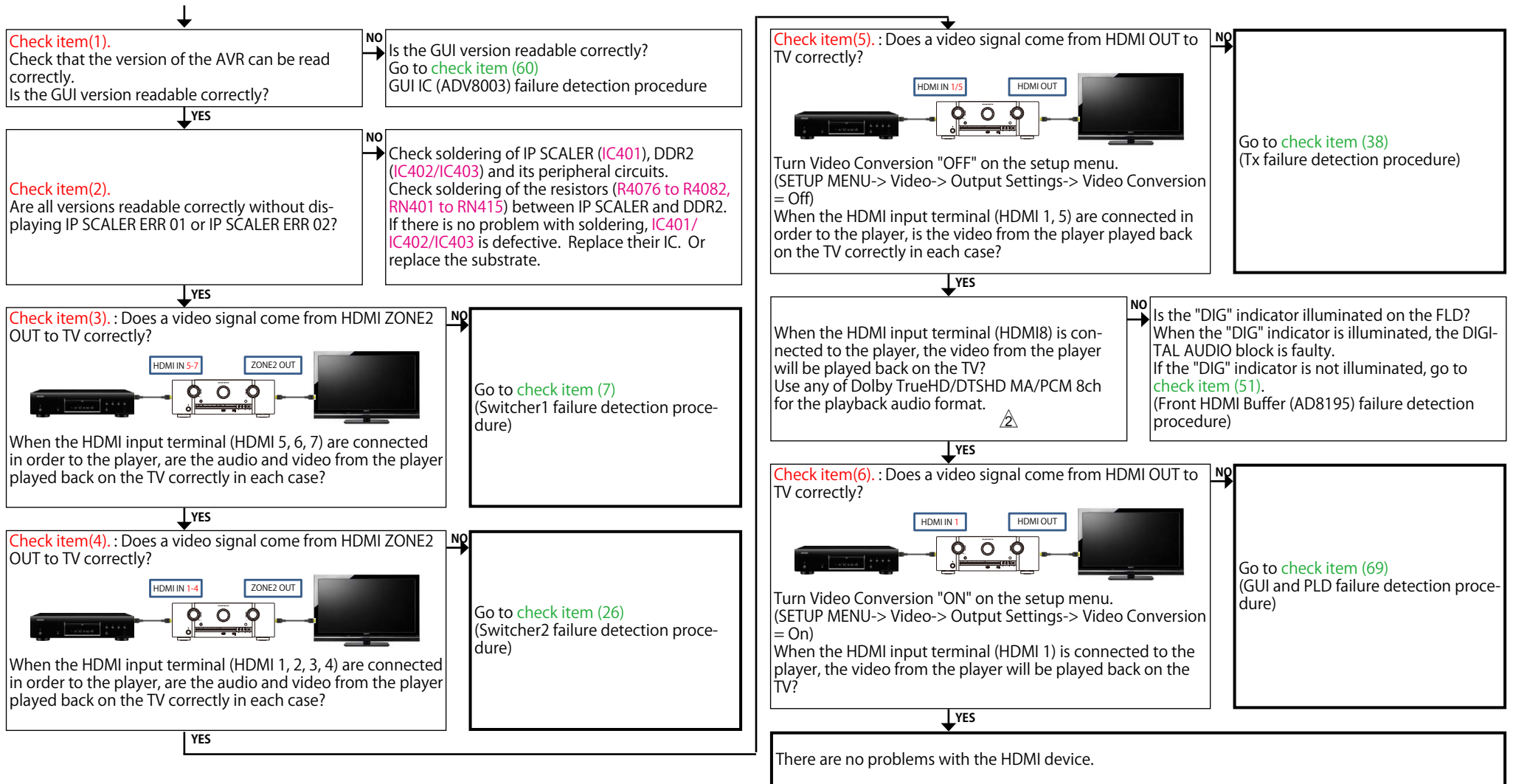


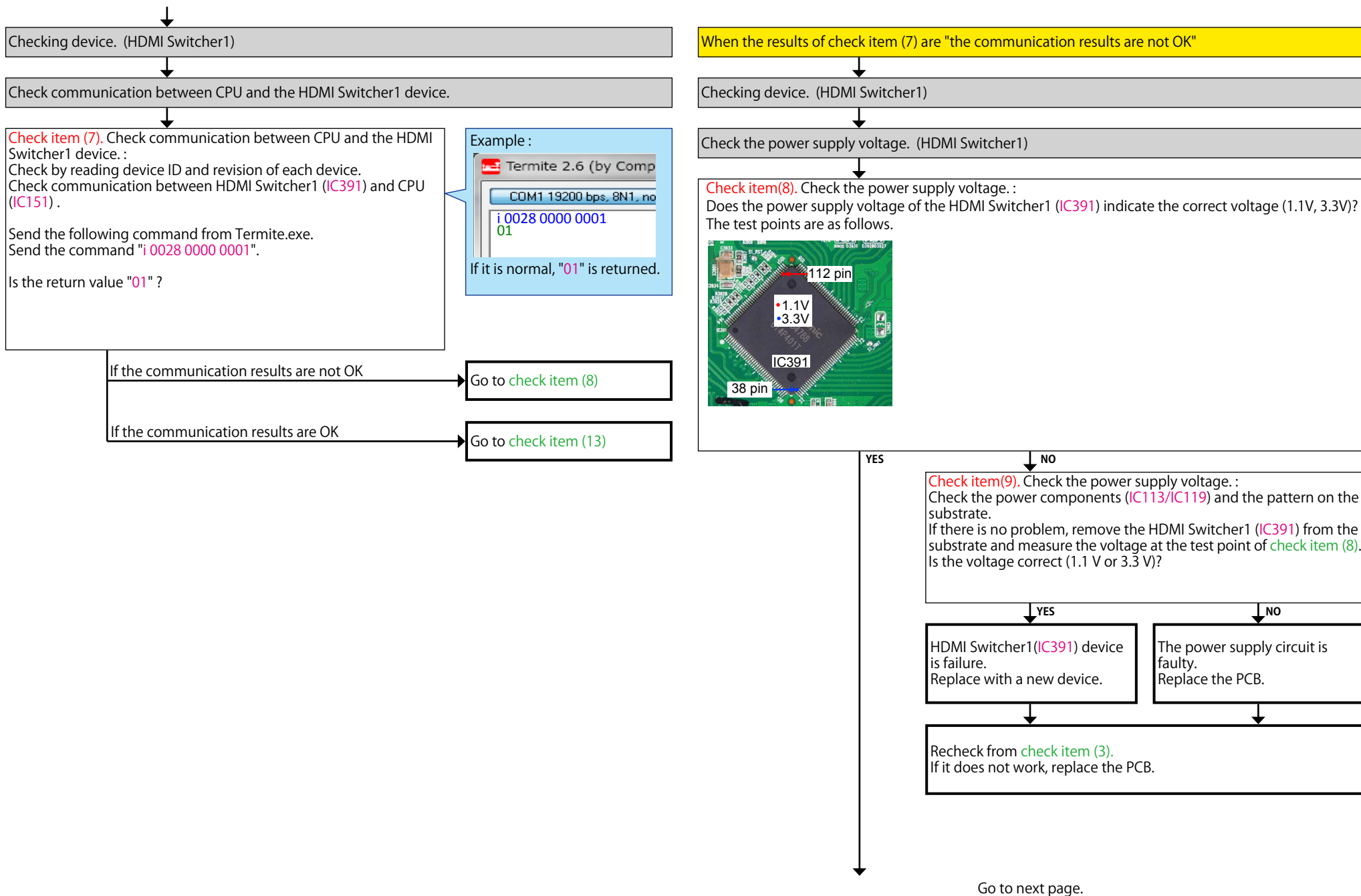
Figure 8 Method for Sending Termite Commands

3. Starting detecting the point of failure

3-1 Check the "HDMI/DVI" item in troubleshooting.

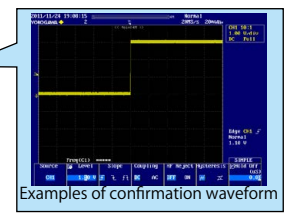


3-2 Switcher1 failure detection procedure



Checking the reset waveform. (HDMI Switcher1)

Check item(10). Checking the reset waveform :
Check the waveform.
Is the "S1_RST" waveform of the TP near the HDMI Switcher1 (IC391) correct (like the one shown in the diagram) when the power is turned on?



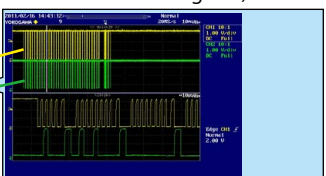
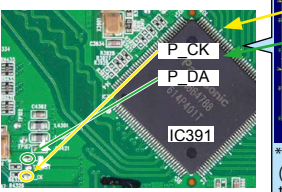
Examples of confirmation waveform

NO

Check the reset circuit between CPU (IC151) and HDMI Switcher1 (IC391).
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.
Recheck from **check item (3)**.
If it does not work, replace the PCB.

Check the I2C communication line. (HDMI Switcher1)

Check item(11). Check the I2C communication line :
Check the CPU.
Is the "P_DA, P_CK" waveform of the TP near the HDMI Switcher1 (IC391) correct (like the one shown in the diagram) when the power is turned on?



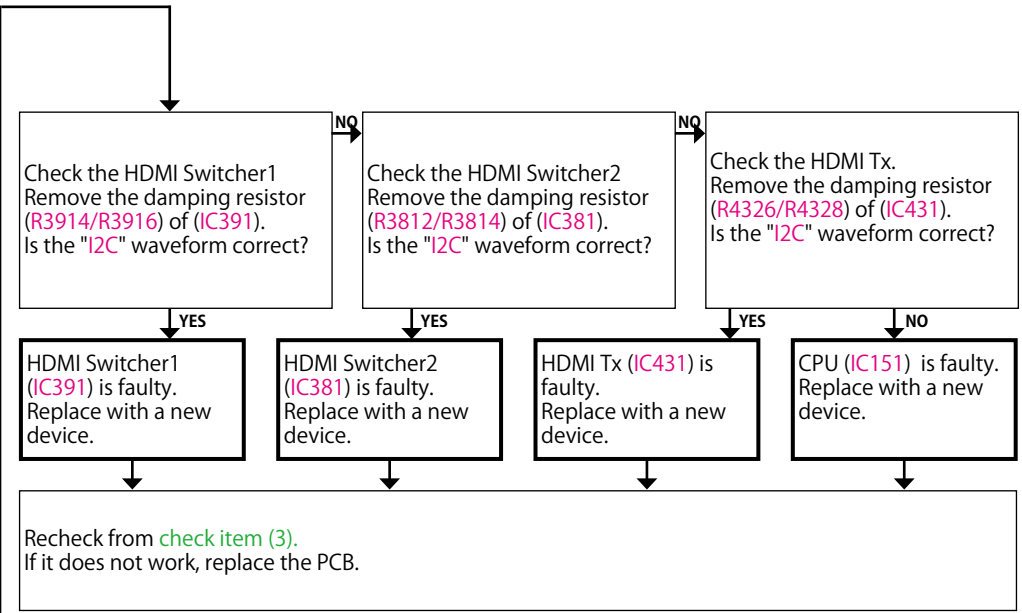
*The diagram shows an example.
(Signal patterns vary depending on the timing.)
Points for checking waveforms
- Crest value (3.3 V normally)
- Signal change
- SCL frequency (400 kHz normally)

NO

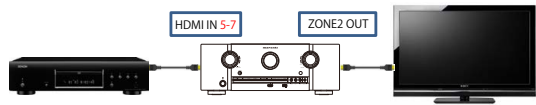
Check item(12). Check the I2C communication line :
Check HDMI Switcher1, 2 (IC391 or IC381), HDMI Tx (IC431) and CPU (IC151) patterns as well as soldering.
If there is no problem, go to the next step.

HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from **check item (3)**.
If it does not work, replace the PCB.



When the results of check item (7) are "the communication results are OK"



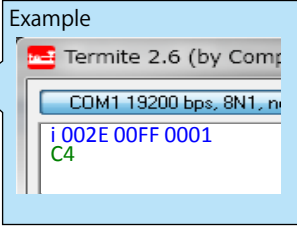
※ In order to check, connect the player to the HDMI terminal and configure the player as AVR source. Next, turn on the power for the player and TV and start playback on the player.

Checking the +5V/DDC status register (HDMI Switcher1)

Check item(13). Checking the 5V status register :
Send the following command from Termite.exe.

Send the command "i 002E 00FF 0001".

Case of IN5
Is the return value "C4 or C0" ?
(IN6 : "A2 or A0", IN7 : "91 or 90")



YES

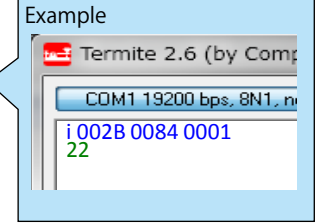
NO

Go to check item (15)

Check item(14). Checking the DDC status register :
Send the following command from Termite.exe.

Case of IN5
Send the command "i 002B 0084 0001".
Case of IN6
Send the command "i 002B 0054 0001".
Case of IN7
Send the command "i 002B 0024 0001".

Move to the branch destination according to the value returned.



"00 or 04"
(Detection of DDC is not OK.)

Go to check item (16)

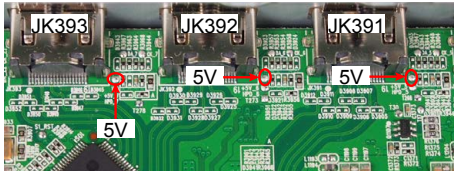
"22 or 11"
(Detection of DDC is OK)

Go to check item (17)

When the results of check item (13) are "NO"
(Detection of 5V is not OK)

Check the +5V voltage. (HDMI IN5 - 7)

Check item(15). Check the +5V voltage.
Does the test point near HDMI input terminal (JK391/JK392/JK393) indicate 5V?



YES

HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

NO

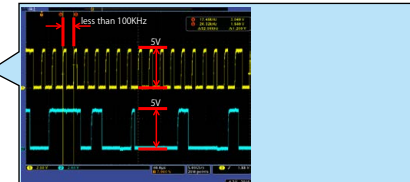
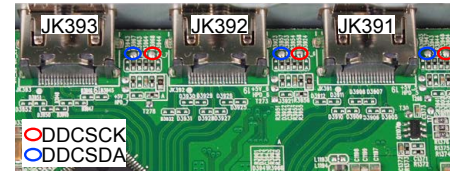
Check for a short circuit in the 5 V line and the 5 V Switch IC (IC392).
If there is no problem, the HDMI Switcher1 (IC391) or the 5 V Switch IC (IC392) is faulty
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

When the results of check item (14) are "00 or 04"
(Detection of DDC is not OK.)

Check the DDC line. (HDMI IN5 - 7)

Check item(16). Check the DDC line :
Are waveforms of "DDCSCK" and "DDCSDA" observed at the test point near the HDMI input terminal(JK391/JK392/JK393)?



This diagram shows an example of the DDC communication waveform.
-The high level voltage is 5V.
-The frequency of the DDC CLK is 100 KHz or less.
Check at each test point.

YES

HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

NO

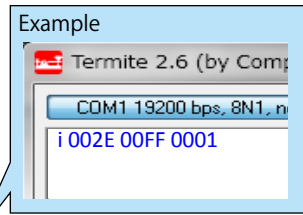
Check for a short circuit in the DDC line.
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

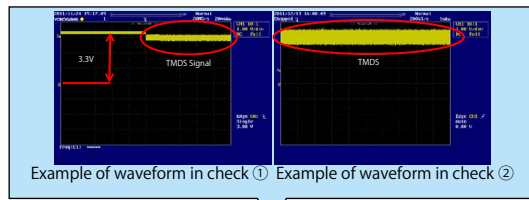
When the results of check item (14) are "22 or 11"
(Detection of DDC is OK.)

Checking the TMDS status register (HDMI Switcher1)

Check item(17). Checking register of the TMDS CLK detection status register:
Send the following command from Termite.exe.
Send the command "i 002E 00FF 0001".
When the following value is returned, go to Yes.
HDMI IN5 "C4", HDMI IN6 "A2", HDMI IN7 "91"
When the following value is returned, go to No.
HDMI IN5 "C0", HDMI IN6 "A0", HDMI IN7 "90"



NO



Example of waveform in check ① Example of waveform in check ②

Check item (18). Checking the TMDS input waveform. :
Check the TMDS waveform at the following test point.
Is the waveform like the sample?



- HDMI IN5
55/56/58/59/61/62/64/65 pin
- HDMI IN6
80/81/83/84/86/87/89/90 pin
- HDMI IN7
93/94/96/97/99/100/102/103 pin

YES

NO

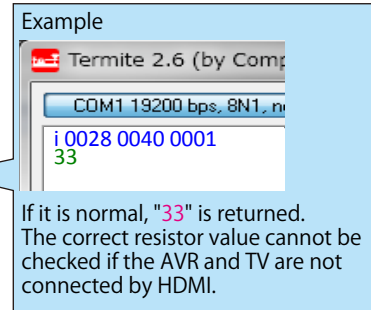
HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Check for a short circuit in the pattern of the TMDS line of the HDMI Switcher1 (IC391) from the HDMI input terminal.
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

Checking the HPD/RXSENSE status register. (HDMI ZONE2 OUT)

Check item(19). Check the HPD and RXSENSE register value of the device.
Send the following command from Termite.exe.
Send the command "i 0028 0040 0001".
Check the value.
Move to the branch destination according to the value returned.



If it is normal, "33" is returned.
The correct resistor value cannot be checked if the AVR and TV are not connected by HDMI.

"33 or 23 or 13 or 03"
(Detection of HPD is OK / Detection of RXSENSE is OK)
Go to check item (20)

"31 or 21 or 11 or 01"
(Detection of HPD is OK / Detection of RXSENSE is not OK)
Go to check item (23)

"32 or 22 or 12 or 02"
(Detection of HPD is not OK / Detection of RXSENSE is OK)
Go to check item (24)

"30 or 20 or 10 or 00"
(Detection of HPD is not OK / Detection of RXSENSE is not OK)
Go to check item (25)

When the results of check item (19) are "33 or 23 or 13 or 03"
(Detection of HPD is OK / Detection of RXSENSE is OK)

Checking the EDID register. (HDMI ZONE2 OUT)

Check item(20). Check the Monitor EDID :
 ① Unplug the AC cord. Plug the AC cord into a power outlet.
 ② Send the transmission command "m_3" from Termite.exe.
 Are the first eight bytes of the returned value "00FFFFFFFFF00"?

Example

```

    CDM1 19200 bps, 8N1, no handshake
    m_3
    00FFFFFFFFF00D1177945540000
    3213010380351E782E6085A6564A9C25
    125054A56808180810081C0A9C08140
    D1C061C0B30023A801871382D40582C
    4500132B2100001E000000FF00394339
    
```

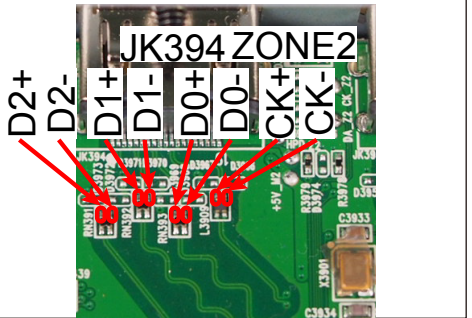
The first eight bytes are normally "00FFFFFFFFF00".
 The correct resistor value cannot be checked if the AVR and TV are not connected by HDMI.

YES **NO**

Example of waveform in check ① Example of waveform in check ②

This diagram shows an example of the DDC communication waveform.
 -The high level voltage is 5V.
 -The frequency of the DDC CLK is 100 KHz or less.
 Check at each test point.

Check item(21). Checking the TMSDS :
 Check the TMSDS waveform at the following test point.



YES **NO**

Check for a short circuit in the TMSDS line.
 If there is no problem, the HDMI Switcher1 (IC391) is faulty.
 Replace with a new device.

HDMI Switcher1 (IC391) is faulty.
 Replace with a new device.

Check item(22). Check the communication :
 Do "CK" and "DA" indicate (5V) at the test point near HDMI output connector (JK394)?



YES **NO**

Check for a short circuit in the DDC line.
 If there is no problem, the HDMI Switcher1 (IC391) is faulty.
 Replace with a new device.

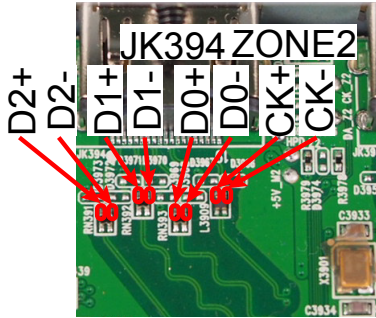
HDMI Switcher1 (IC391) is faulty.
 Replace with a new device.

Recheck from check item (3).
 If it does not work, replace the PCB.

When the results of check item (19) are "31 or 21 or 11 or 01"
(Detection of HPD is OK / Detection of RXSENSE is not OK)

Check the TMDS. (HDMI ZONE2 OUT)

Check item(23). Checking the RXSENSE :
Does the test point near HDMI output terminal (JK394) indicate (3.3V)?



YES NO

Check for a short circuit in the TMDS line.
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

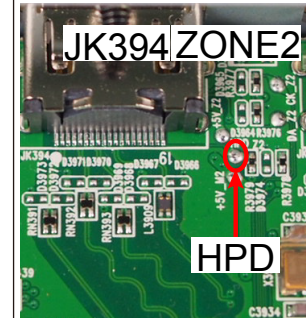
HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

When the results of check item (19) are "32 or 22 or 12 or 02"
(Detection of HPD is not OK / Detection of RXSENSE is OK)

Check the HPD. (HDMI ZONE2 OUT)

Check item(24). Checking the HPD :
Does the test point near HDMI output terminal (JK394) indicate Hi(3-5V)?



YES NO

Check for a short circuit in the HPD line.
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

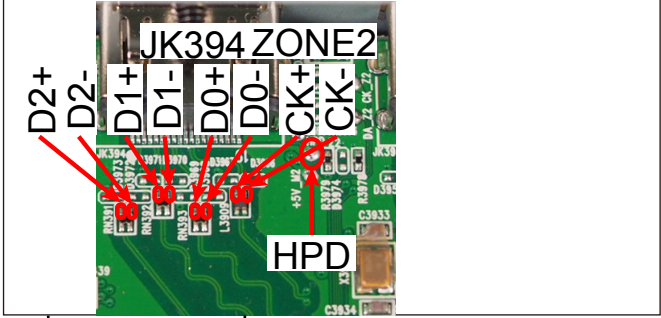
HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

When the results of check item (19) are "30 or 20 or 10 or 00"
(Detection of HPD is not OK / Detection of RXSENSE is not OK)

Check the TMDS/HPD. (HDMI ZONE2 OUT)

Check item(25). Checking the HPD and RXSENSE. :
Does the test point near HDMI output terminal (JK394) indicate (3.3V)?
Does the test point (HPD) near HDMI output terminal (JK394) indicate "Hi(3-5V)"?

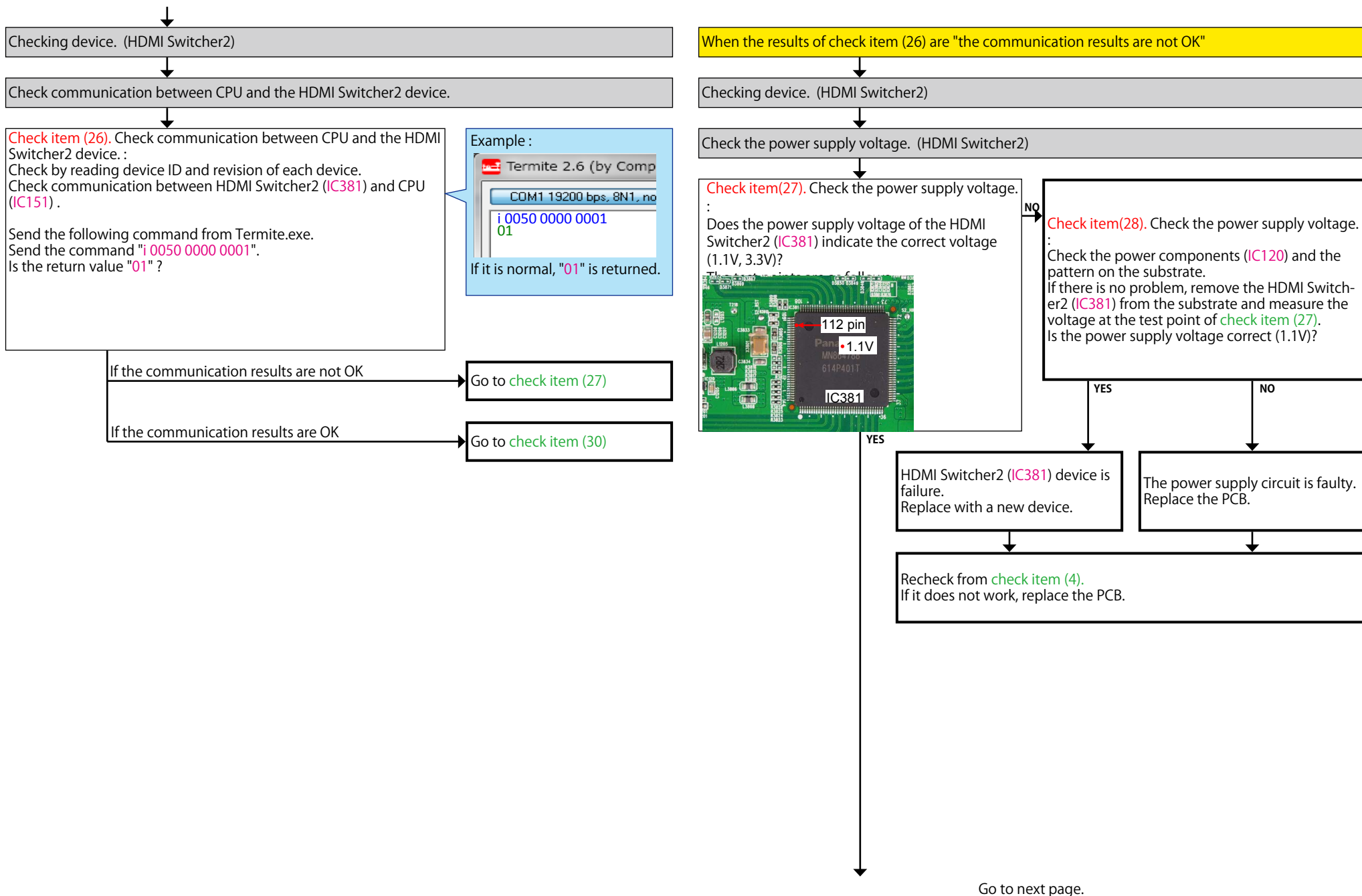


YES
NO
Check for a short circuit in the TMDS/ HPD line.
If there is no problem, the HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Recheck from check item (3).
If it does not work, replace the PCB.

3-3 Switcher2 failure detection procedure



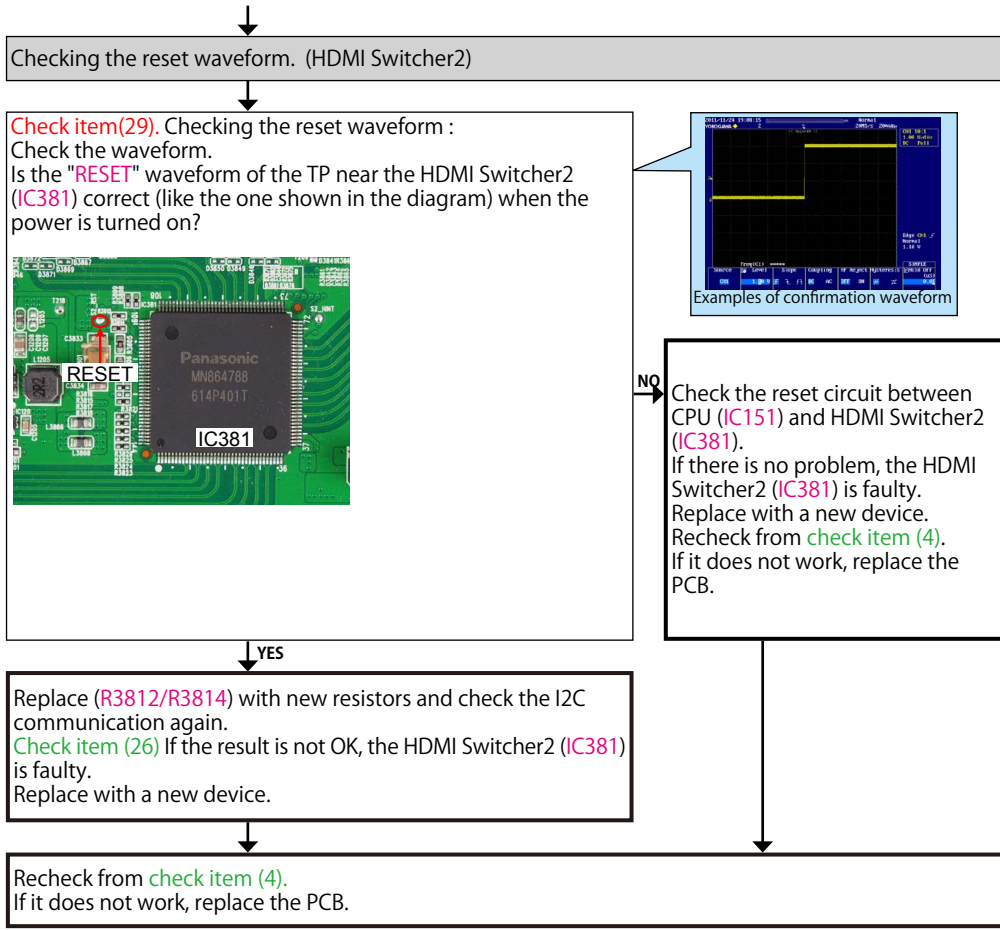
Caution in servicing

Electrical

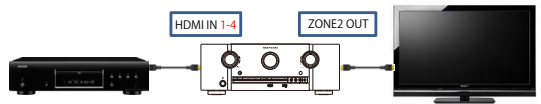
Mechanical

Repair Information

Updating



When the results of check item (26) are "the communication results are OK"

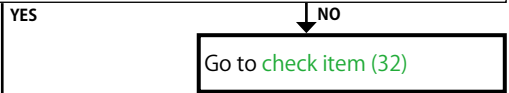
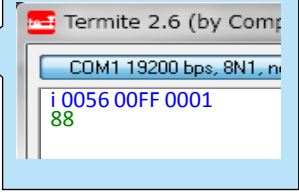


※ In order to check, connect the player to the HDMI terminal and configure the player as AVR source.
Next, turn on the power for the player and TV and start playback on the player.

Checking the +5V/DDC status register (HDMI Switcher2)

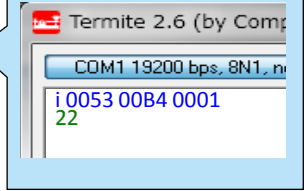
Check item(30). Checking the 5V status register :
Send the following command from Termite.exe.
Send the command "i 0056 00FF 0001".
Case of IN1
Is the return value "88 or 80" ?
(IN2 : "44 or 40", IN3 : "22 or 20", IN4 : "11 or 10")

Example



Check item(31). Checking the DDC status register :
Send the following command from Termite.exe.
Case of IN1
Send the command "i 0053 00B4 0001".
Case of IN2
Send the command "i 0053 0084 0001".
Case of IN3
Send the command "i 0053 0054 0001".
Case of IN4
Send the command "i 0053 0024 0001".
Move to the branch destination according to the value returned.

Example



"00 or 04"
(Detection of DDC is not OK.)

Go to **check item (33)**

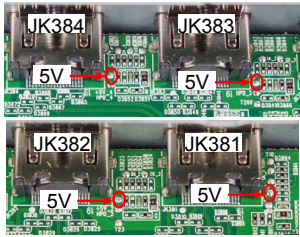
"22 or 11"
(Detection of DDC is OK)

Go to **check item (34)**

When the results of check item (30) are "NO"
(Detection of 5V is not OK)

Check the +5V voltage. (HDMI IN1 - 4)

Check item(32). Check the +5V voltage.
Does the test point near HDMI input terminal (JK381/JK382/JK383/JK384) indicate 5V?



YES

HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

NO

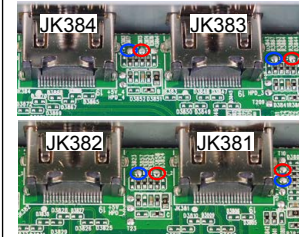
Check for a short circuit in the 5 V line and the 5 V Switch IC (IC392).
If there is no problem, the HDMI Switcher2 (IC381) or the 5 V Switch IC (IC392) is faulty.
Replace with a new device.

Recheck from check item (4).
If it does not work, replace the PCB.

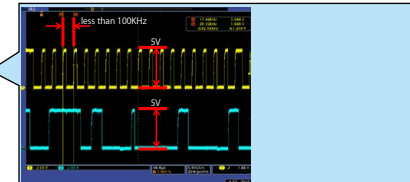
When the results of check item (31) are "00 or 04"
(Detection of DDC is not OK)

Check the DDC line. (HDMI IN1 - 4)

Check item(33). Check the DDC line :
Are waveforms of "DDCSCK" and "DDCSDA" observed at the test point near the HDMI input terminal(JK381/JK382/JK383/JK384)?



○DDCSCK
○DDCSDA



This diagram shows an example of the DDC communication waveform.
-The high level voltage is 5V.
-The frequency of the DDC CLK is 100 KHz or less.
Check at each test point.

YES

HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

NO

Check for a short circuit in the DDC line.
If there is no problem, the HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

Recheck from check item (4).
If it does not work, replace the PCB.

When the results of check item (31) are "22 or 11"
(Detection of DDC is OK.)

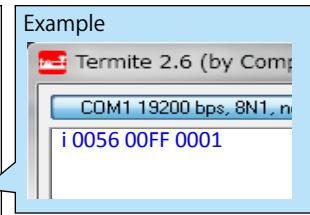
Checking the TMDS status register (HDMI Switcher2)

Check item(34). Checking register of the TMDS CLK detection status register :

Send the following command from Termite.exe.
Send the command "i 0056 00FF 0001".

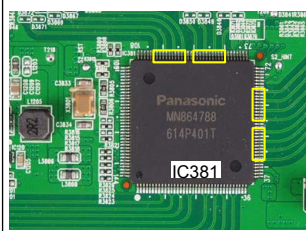
When the following value is returned, go to Yes.
HDMI IN1 "88", HDMI IN2 "44", HDMI IN3 "22", HDMI IN4 "11"

When the following value is returned, go to No.
HDMI IN1 "80", HDMI IN2 "40", HDMI IN3 "20", HDMI IN4 "10"

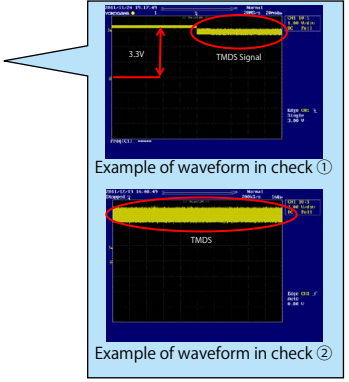


NO

Check item (35). Checking the TMDS input waveform. :
Check the TMDS waveform at the following test point.
Is the waveform like the sample?



- HDMI IN1
42/43/45/46/48/49/51/52 pin
- HDMI IN2
55/56/58/59/61/62/64/65 pin
- HDMI IN3
80/81/83/84/86/87/89/90 pin
- HDMI IN4
93/94/96/97/99/100/ 102/103 pin



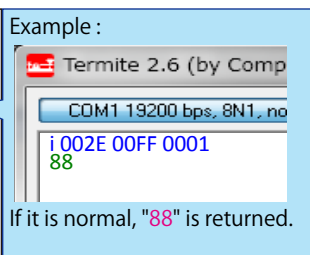
YES

Checking the TMDS status register (HDMI Switcher2 -> HDMI Switcher1)

Check item(36). Check the TMDS CLK detection status of the register.

Send the following command from Termite.exe.
Send the command "i 002E 00FF 0001".

Is the return value "88" ?



NO

YES

HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

NO

Check for a short circuit in the pattern of the TMDS line of the HDMI Switcher2 (IC381) from the HDMI input terminal.
If there is no problem, the HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

Recheck from **check item (4)**.
If it does not work, replace the PCB.

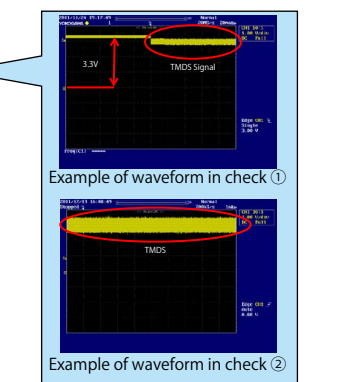
YES

HDMI Switcher1 (IC391) is faulty.
Replace with a new device.

Check item (37). Checking the TMDS input waveform. :
Check the TMDS waveform at the following test point.
Is the waveform like the sample?



- 42/43/45/46/48/49/51/52 pin

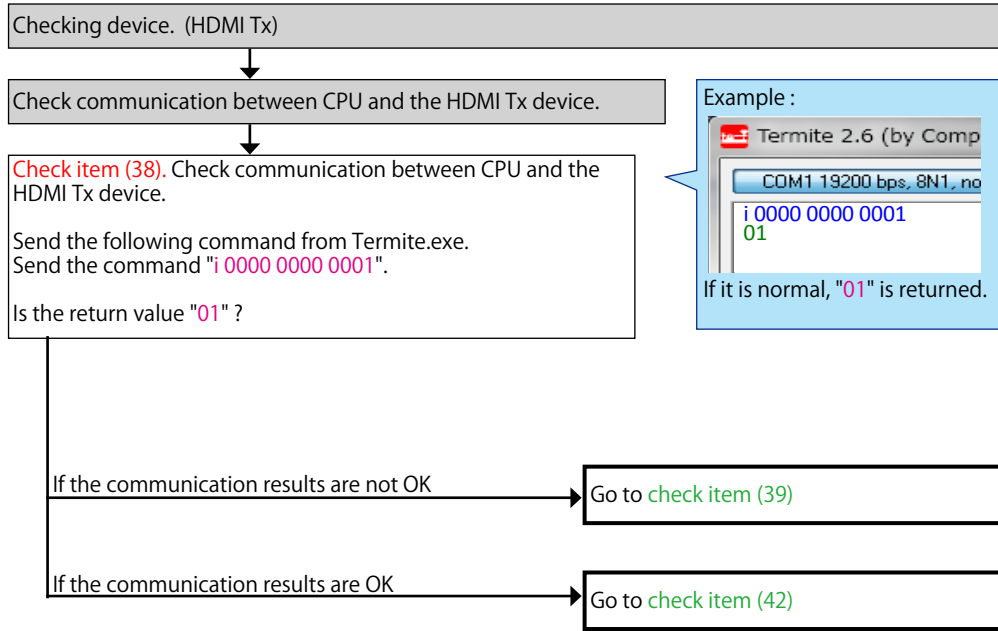


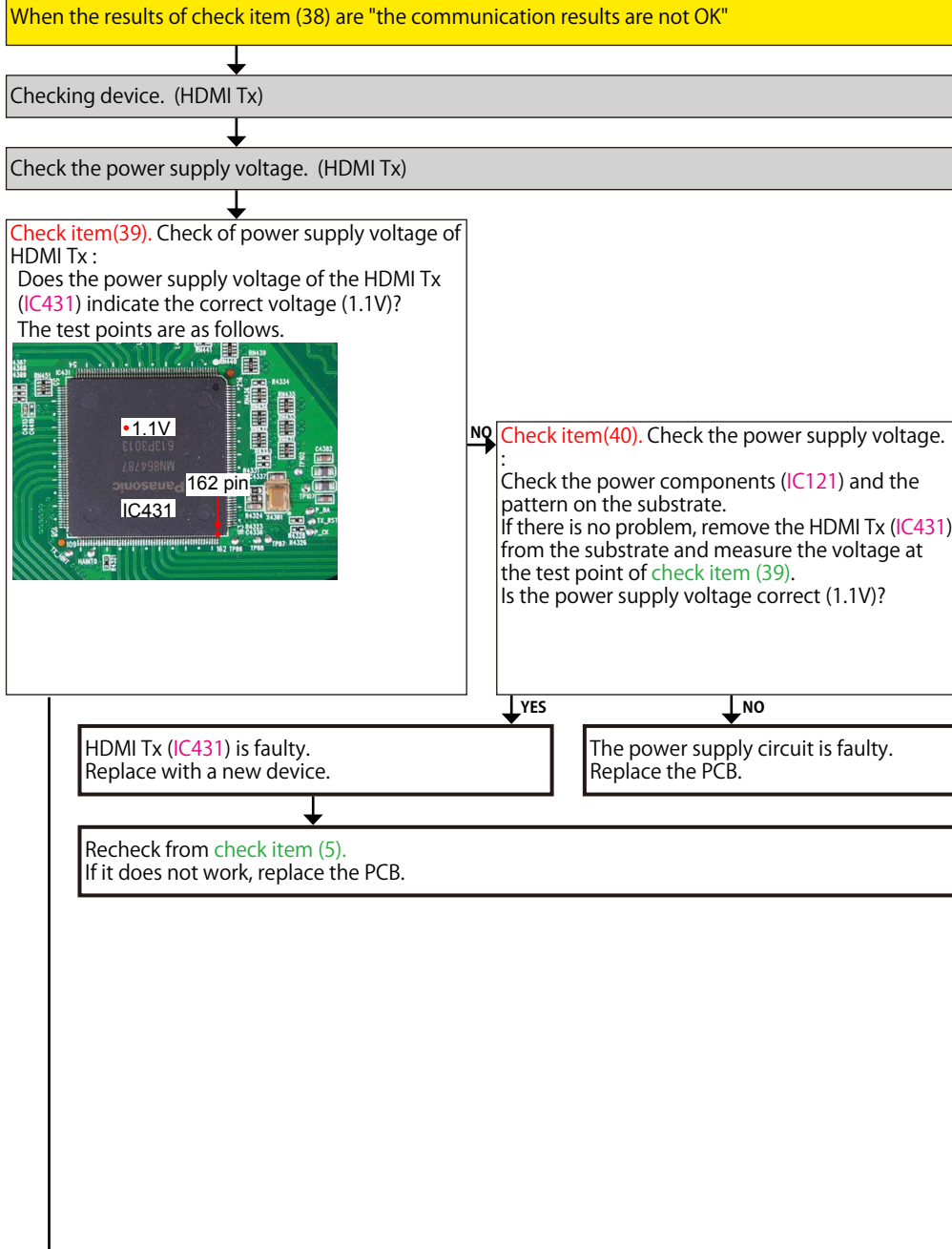
Recheck from **check item (4)**.
If it does not work, replace the PCB.

NO

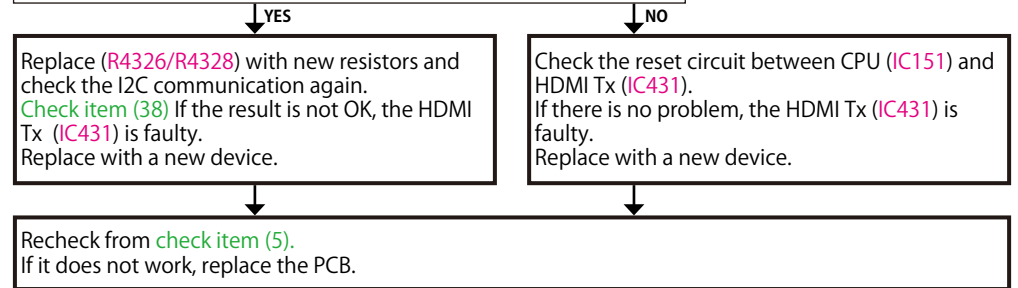
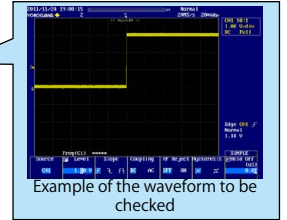
Check for a short circuit in the TMDS line.
If there is no problem, the HDMI Switcher2 (IC381) is faulty.
Replace with a new device.

3-4 Tx failure detection procedure

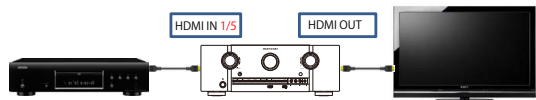




Check item(41). Checking the reset waveform :
When the power is turned on, is the "TX_RST" waveform correct (as shown in the figure)?
The test points are as follows.



When the results of check item (38) are "the communication results are OK"



Turn Video Conversion "OFF" on the setup menu.
 (SETUP MENU-> Video-> Output Settings-> Video Conversion = Off)
 ※ In order to check, connect the player to the HDMI terminal and configure the player as AVR source.
 Next, turn on the power for the player and TV and start playback on the player.

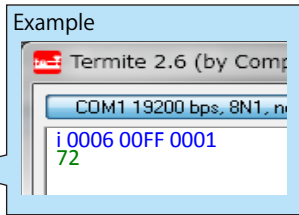
Checking the TMDS status register (Switcher1/2 -> HDMI Tx)

Check item(42). Check the TMDS CLK detection status of the register.

Send the following command from Termit.exe.
 Send the command "i 0006 00FF 0001".

When the following value is returned, go to Yes.
 HDMI IN1 "72" HDMI IN5 "71"

When the following value is returned, go to No.
 HDMI IN1 "70", HDMI IN5 "70"



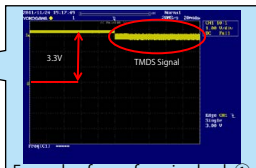
YES

NO

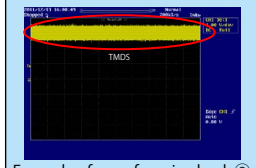
Check item (44). Checking the TMDS input waveform. :
 Check the TMDS waveform at the following test point.
 Is the waveform like the sample?



HDMI IN1
 124/125/127/128/130/131/133/134 pin
 HDMI IN5
 137/138/140/141/143/144/146/147 pin



Example of waveform in check ①



Example of waveform in check ②

YES

NO

HDMI Tx (IC431) is faulty.
 Replace with a new device.

Recheck from check item (4).
 If it does not work, replace the PCB.

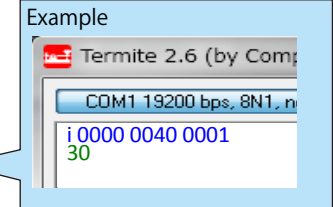
Case of HDMI IN1
 HDMI Switcher2 (IC381) is faulty.
 Replace with a new device.

Case of HDMI IN5
 HDMI Switcher1 (IC391) is faulty.
 Replace with a new device.

Checking the HPD/RXSENSE status register. (HDMI OUT)

Check item(43). Check the HPD and RXSENSE register value of the HDMI TX device
 Send the following command from Termit.exe.
 Send the command "i 0000 0040 0001".

Check the value.
 Move to the branch destination according to the value returned.



"30"
 (Detection of HPD is OK / Detection of RXSENSE is OK) → Go to check item (45)

"10"
 (Detection of HPD is OK / Detection of RXSENSE is not OK) → Go to check item (48)

"20"
 (Detection of HPD is not OK / Detection of RXSENSE is OK) → Go to check item (49)

"00"
 (Detection of HPD is not OK / Detection of RXSENSE is not OK) → Go to check item (50)

Caution in servicing

Electrical

Mechanical

Repair Information

Updating

When the results of check item (43) are "30"
(Detection of HPD is OK / Detection of RXSENSE is OK)

Checking the EDID register. (HDMI OUT)

Check item(45). Check the Monitor EDID :
 ① Unplug the AC cord. Plug the AC cord into a power outlet.
 ② Send the transmission command "m_1" from Termite.exe.
 Are the first eight bytes of the returned value "00FFFFFFF00"?

Example

```

    m_1
    00FFFFFFF000D1177945540000
    3213010380351E782E6085A6564A9C25
    125054A56B08180810081C0A9C08140
    D1C661C0B300023A801871382D40582C
    4500132B2100001E000000FF00394339
    
```

The first eight bytes are normally "00FFFFFFF00".
 The correct resistor value cannot be checked if the AVR and TV are not connected by HDMI.

YES **NO**

Example of waveform in check ① Example of waveform in check ②

This diagram shows an example of the DDC communication waveform.
 -The high level voltage is 5V.
 -The frequency of the DDC CLK is 100 KHz or less.
 Check at each test point.

Check item(46). Checking the TMDS :
 Check the TMDS waveform at the following test point.

Check item(47). Check the communication :
 Are the waveforms for "CLK" and "DATA" at the test point near the HDMI output terminal (JK431) correct (as shown in the figure)?

YES **NO**

Check for a short circuit in the TMDS line.
 If there is no problem, the HDMI Tx (IC431) is faulty.
 Replace with a new device.

YES **NO**

Check for a short circuit in the DDC line.
 If there is no problem, the HDMI Tx (IC431) is faulty.
 Replace with a new device.

HDMI Tx (IC431) is faulty.
 Replace with a new device.

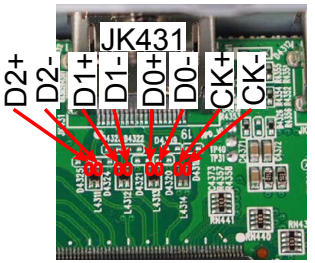
HDMI Tx (IC431) is faulty.
 Replace with a new device.

Recheck from check item (5).
 If it does not work, replace the PCB.

When the results of check item (43) are "10"
(Detection of HPD is OK / Detection of RXSENSE is not OK)

Check the TMDS. (HDMI OUT)

Check item(48). Checking the RXSENSE. :
Does the test point near HDMI output terminal (JK431) indicate (3.3V)?



YES NO

Check for a short circuit in the TMDS line.
If there is no problem, the HDMI Tx (IC431) is faulty.
Replace with a new device.

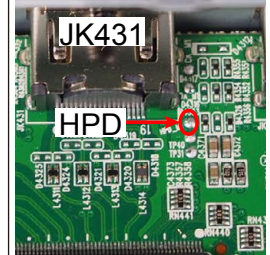
HDMI Tx (IC431) is faulty.
Replace with a new device.

Recheck from check item (5).
If it does not work, replace the PCB.

When the results of check item (43) are "20"
(Detection of HPD is not OK / Detection of RXSENSE is OK)

Check the HPD. (HDMI OUT)

Check item(49). Checking the HPD. :
Does the test point (HPD) near HDMI output terminal (JK431) indicate "Hi(3-5V)"?



YES NO

Check for a short circuit in the HPD line.
If there is no problem, the HDMI Tx (IC431) is faulty.
Replace with a new device.

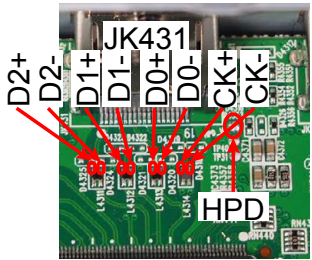
HDMI Tx (IC431) is faulty.
Replace with a new device.

Recheck from check item (5).
If it does not work, replace the PCB.

When the results of check item (43) are "00"
(Detection of HPD is not OK / Detection of RXSENSE is not OK)

Check the TMDS/HPD. (HDMI OUT)

Check item(50). Checking the HPD and RXSENSE. :
Does the test point near HDMI output terminal (JK431) indicate (3.3V)?
Does the test point (HPD) near HDMI output terminal (JK431) indicate "Hi(3-5V)"?



YES NO

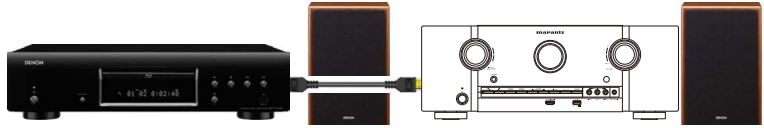
Check for a short circuit in the TMDS/ HPD line.
If there is no problem, the HDMI Tx (IC431) is faulty.
Replace with a new device.

HDMI Tx (IC431) is faulty.
Replace with a new device.

Recheck from check item (5).
If it does not work, replace the PCB.

3-5 Front HDMI Buffer (AD8195) failure detection procedure

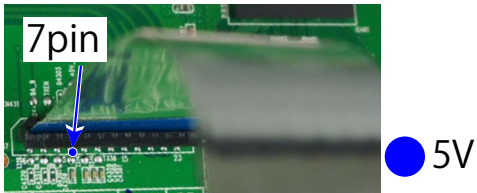
Checking operation between the HDMI (Front HDMI Buffer) and the player



※ In order to check, connect the player to the HDMI terminal and configure the player as AVR source. Check the sound output while turning on the player.

Check the power supply voltage. (Front HDMI Buffer)

Check item(51). Check the power supply voltage. : Does the power supply voltage of the Front HDMI FFC base (CN431) indicate the correct voltage (5V)? The test points are as follows.



YES **Check item(52).** Check the power supply voltage. : Check the FFT SW (Q1108) and peripheral pattern. If there is no problem, remove the Front HDMI FFC from the substrate and measure the voltage at the test point of **check item (51)**. Is the power supply voltage correct (5 V)?

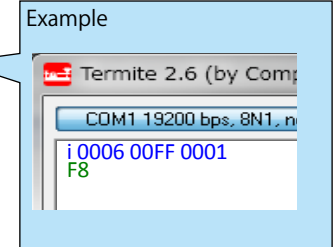
YES
Front HDMI Buffer (IC101) is faulty. Replace with a new device.

NO
Replace the FET SW (Q1108) and recheck from **check item (51)**. If it does not work, replace the PCB.

Recheck from **check item (5)**. If it does not work, replace the PCB.

Checking the +5V/DDC status register (Front HDMI Buffer)

Check item(53). Checking the 5V status register : Send the following command from Termite.exe. Send the command "i 0006 00FF 0001".
Check the value. Move to the branch destination according to the value returned.

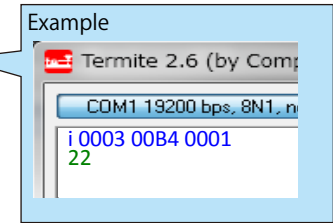


"78 or 70"
(Detection of 5V is not OK.)

Go to **check item (55)**

"F8 or F0"
(Detection of 5V is OK)

Check item(54). Checking the status register : Send the following command from Termite.exe. Send the command "i 0003 00B4 0001".
Check the value. Move to the branch destination according to the value returned.



"00 or 04"
(Detection of DDC is not OK.)

Go to **check item (56)**

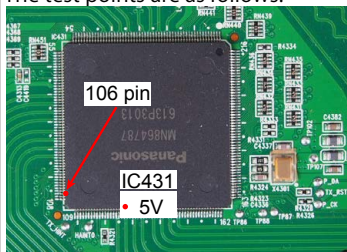
"22"
(Detection of DDC is OK)

Go to **check item (57)**

When the results of check item (53) are "78 or 70"
(Detection of 5V is not OK.)

Check the +5V voltage. (Front HDMI Buffer)

Check item(55). Check the +5V voltage.
Does the HDMI Tx (IC431) test point indicate (5V)?
The test points are as follows.



NO
Check for a short circuit in the 5 V line, the Front HDMI FFC, and the 5 V Switch (IC392).
If there is no problem, the HDMI Tx (IC431) or the 5 V Switch (IC392) is faulty.
Replace with a new device.

YES

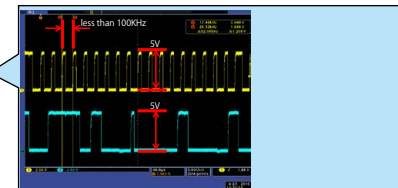
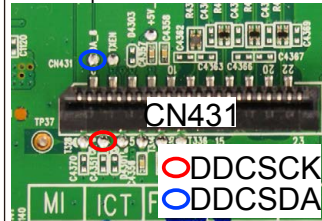
HDMI Tx (IC431) is faulty.
Replace with a new device.

Recheck from check item (5).
If it does not work, replace the PCB.

When the results of check item (54) are "00 or 04"
(Detection of DDC is not OK.)

Check the DDC Line. (Front HDMI Buffer)

Check item(56). Check the DDC line :
Are the "DDCSCK" and "DDCSDA" waveforms for the HDMI Tx (IC431) signal correct (as shown in the figure)?
The test points are as follows.



This diagram shows an example of the DDC communication waveform.
-The high level voltage is 5V.
-The frequency of the DDC CLK is 100 KHz or less.
Check at each test point.

NO

Check for a short circuit in the DDC line and check the Front HDMI FFC.
If there is no problem, the Front HDMI Buffer(IC101) is faulty.
Replace with a new device.

YES

HDMI Tx (IC431) is faulty.
Replace with a new device.

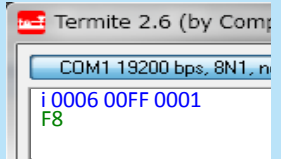
Recheck from check item (5).
If it does not work, replace the PCB.

When the results of check item (54) are "22"
(Detection of DDC is OK)

Checking the TMDS status register (Front HDMI Buffer)

Check item(57). Check the TMDS CLK detection status of the register.
Send the following command from Termit.exe.
Send the command "i 0006 00FF 0001".
When the following value is returned, go to Yes.
"F8"
When the following value is returned, go to No.
"F0"

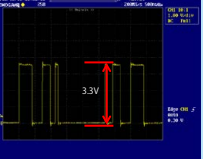
Example



YES

NO

Check item(59). Check the AUDIO signal output :
Check the AUDIO signal waveform at the following test point.
Is the waveform like the sample?



The diagram shows an example of the waveform of I2S0.
Waveform check points
- Crest value (3.3 V normally)
- Signal change
Check the waveform of each pin.

YES

NO

The DIGITAL AUDIO block is faulty.
Check the DIGITAL AUDIO device.
Check "AUDIO" in troubleshooting.
If it does not work, replace the PCB.

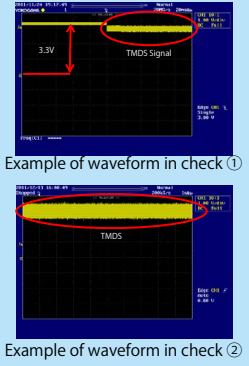
HDMI Tx (IC431) is faulty.
Replace with a new device.

Recheck from **check item (5)**.
If it does not work, replace the PCB.

Check item (58). Checking the TMDS input waveform :
Check the TMDS waveform at the following test point.
Is the waveform like the sample?



70/71/73/74/76/77/79/80 pin



YES

NO

HDMI Tx (IC431) is faulty.
Replace with a new device.

Check for a short circuit in the TMDS line and the Front HDMI FFC.
If there is no problem, the Front HDMI Buffer (IC101) is faulty.
Replace with a new device.

Recheck from **check item (5)**.
If it does not work, replace the PCB.

Caution in servicing

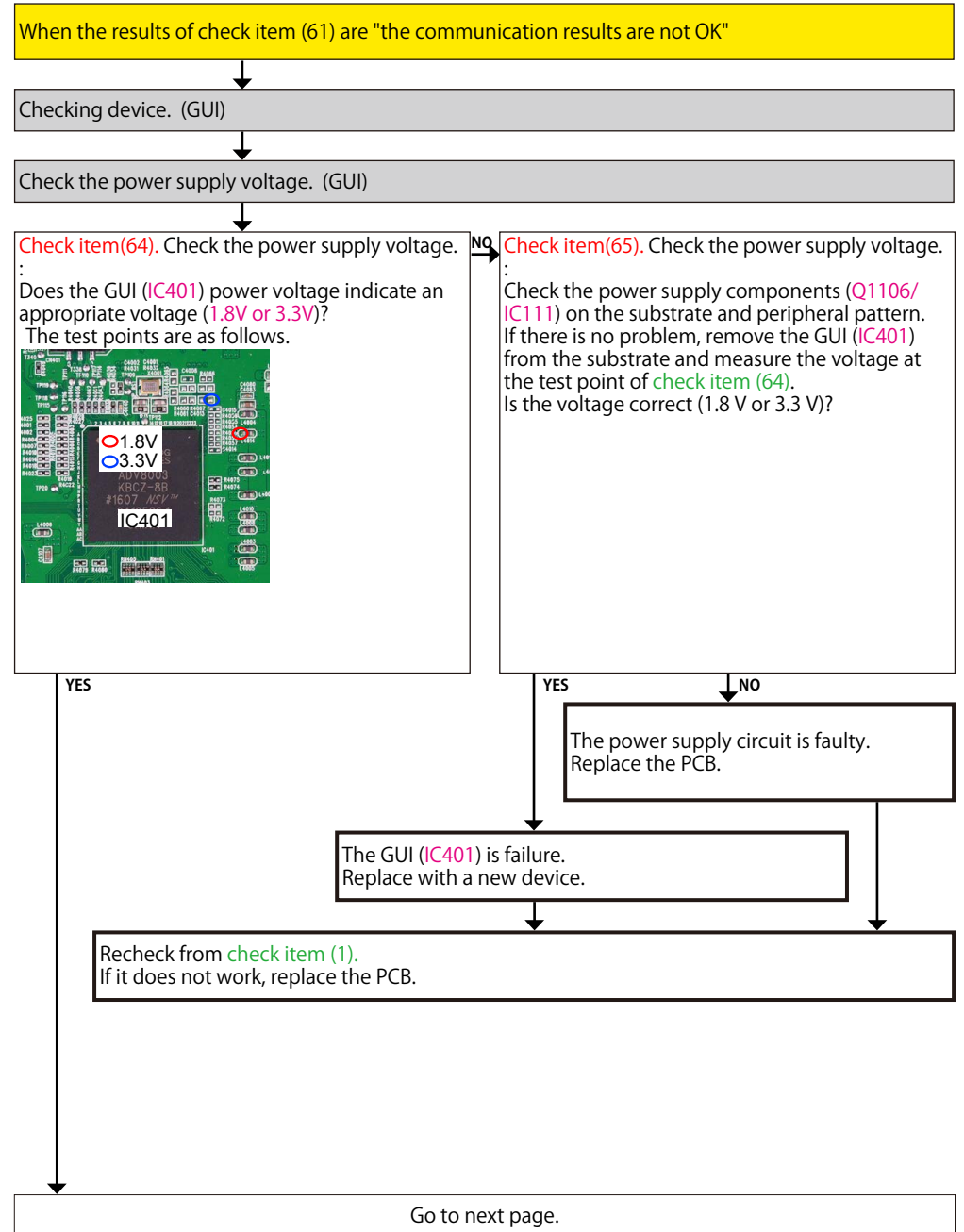
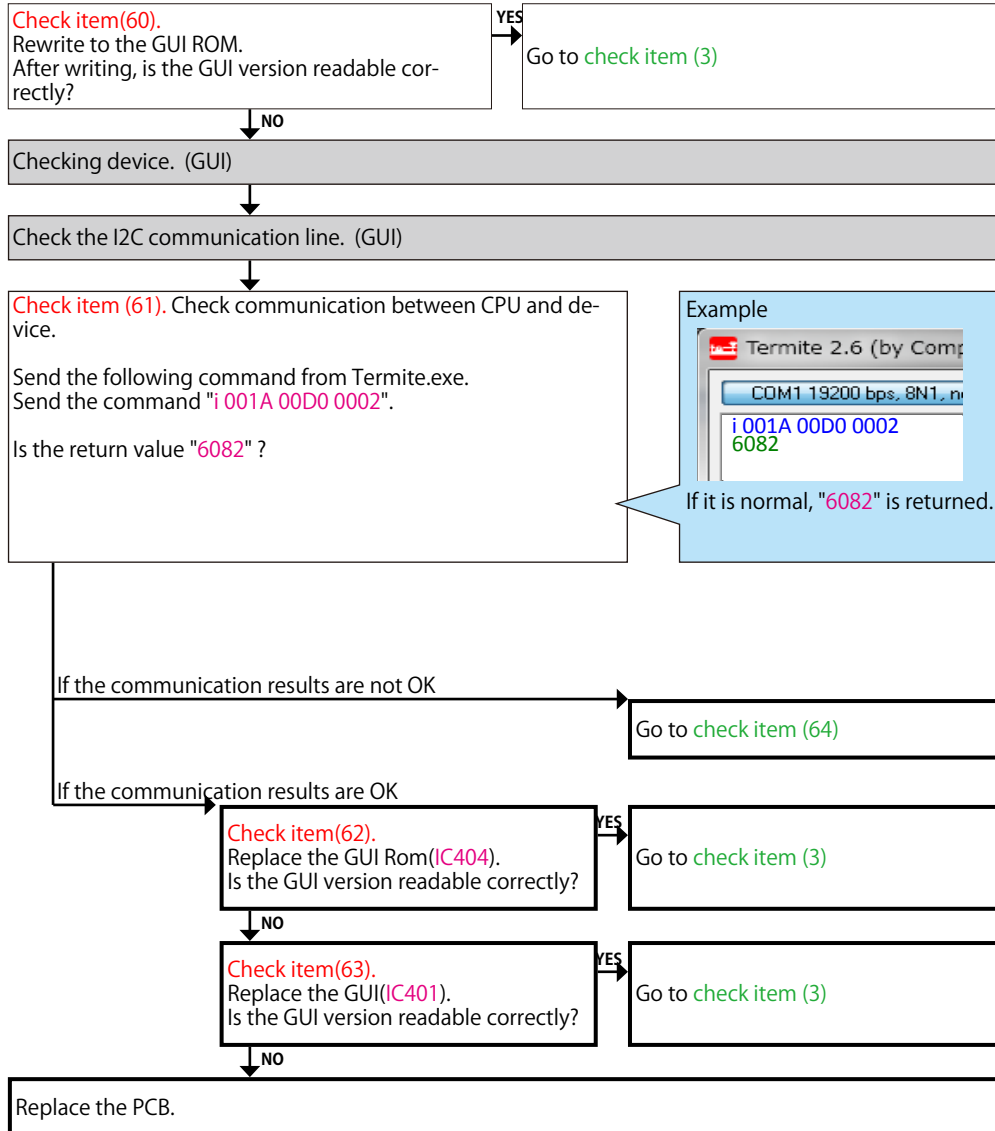
Electrical

Mechanical

Repair Information

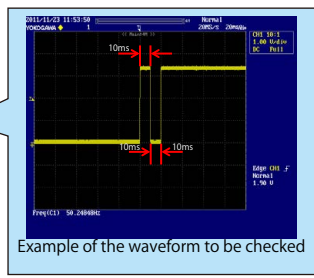
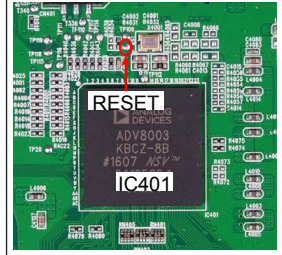
Updating

3-6 GUI (ADV8003) failure detection procedure



Checking the reset waveform.

Check item(66). Checking the reset :
Check the CPU.
Is the waveform of the TP near the GUI (IC401) correct (like the one shown in the diagram) when the power is turned on?

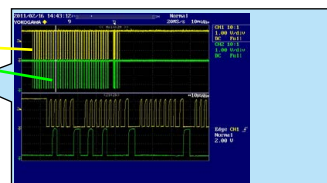
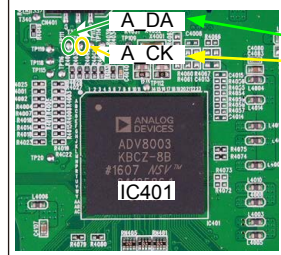


YES
NO
Check the reset circuit between CPU (IC151) and GUI (IC401).
If there is no problem, the GUI (IC401) is faulty.
Replace with a new device.

Recheck from **check item (1)**.
If it does not work, replace the PCB.

Check the I2C communication line.

Check item(67). Check the I2C communication line :
Check the CPU.
Is the waveform of the TP near the GUI (IC401) correct (like the one shown in the diagram) when the power is turned on?



*The diagram shows an example.
(Signal patterns vary depending on the timing.)
Points for checking waveforms
- Crest value (3.3 V normally)
- Signal change
- SCL frequency (400 kHz normally)

YES
NO
Check item(68). Check the I2C communication line :
Check GUI (IC401), HDMI Decoder (IC351) and CPU(IC151) patterns as well as soldering.
If there is no problem, go to the next step.

Check the HDMI Decoder.
Remove the damping resistor (R3532/R353) of HDMI Decoder (IC351).
Is the "I2C" waveform correct?

NO
The GUI (IC401) is failure.
Replace with a new device.

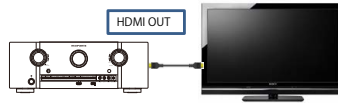
YES
HDMI Decoder (IC351) is faulty.
Replace with a new device.

The GUI (IC401) is failure.
Replace with a new device.

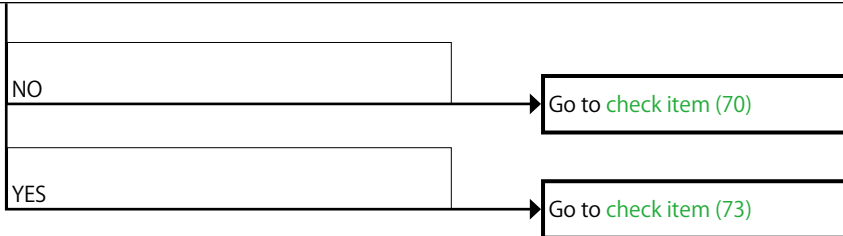
Recheck from **check item (1)**.
If it does not work, replace the PCB.

3-7 GUI and PLD failure detection procedure

Check item(69). Does a video signal come from HDMI OUT to TV correctly? :



Turn Video Conversion "ON" on the setup menu.
 (SETUP MENU-> Video-> Output Settings-> Video Conversion = On)
 When the "SETUP" button on a remote control is pressed, is "MENU" displayed on TV which is connected to the HDMI output terminal on the AVR?



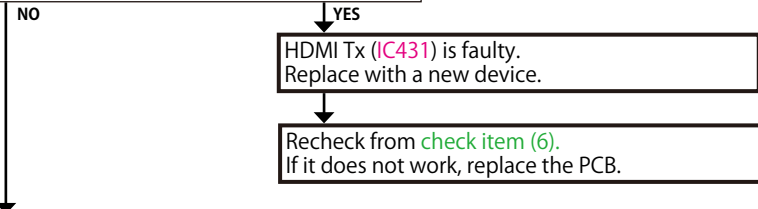
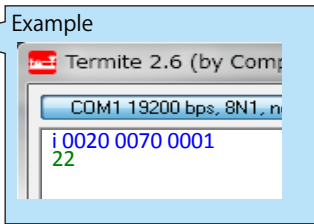
When the results of check item (69) are "NO"
 (When the menu display is not OK)

Check the Video signal line. (GUI -> HDMI Tx)

Check item(70). Check the format of the resistor video signal :

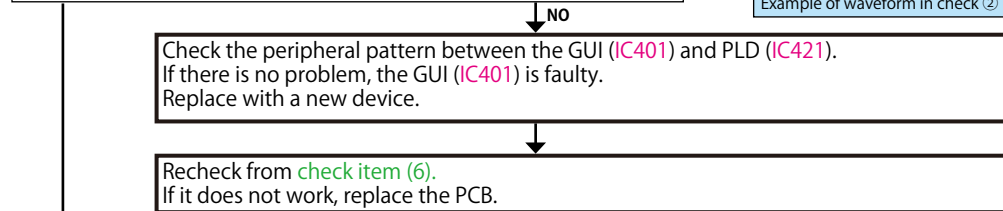
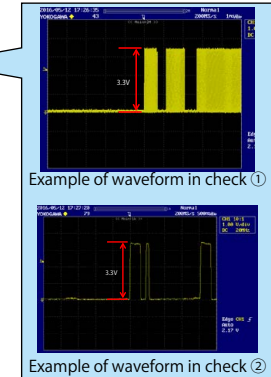
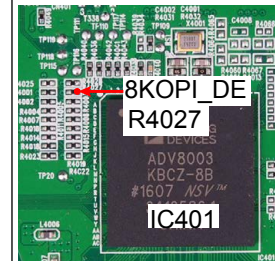
Send the following command from Termit.exe.
 Send the command "i 0020 0070 0001".

Is the return value "22/21/20/1F/15/14/13/11/10/06/05/04/02" ?



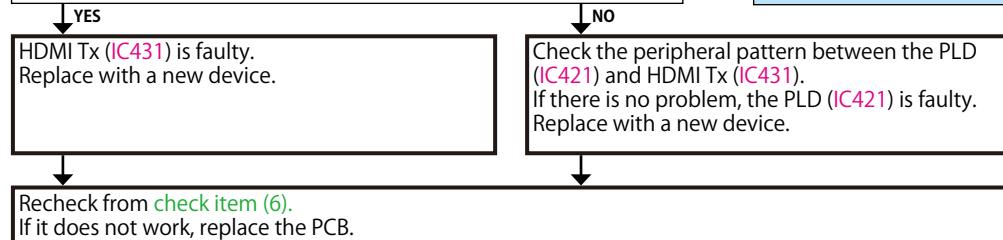
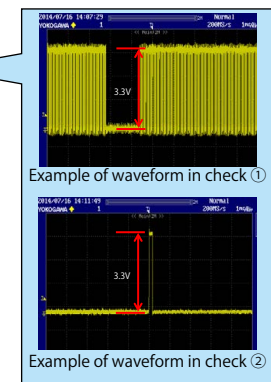
Check the Video signal line. (GUI -> PLD)

Check item(71). Check the PLD video signal line from the GUI :
 Check the video signal waveform at the following test point.
 Is the waveform like the sample?



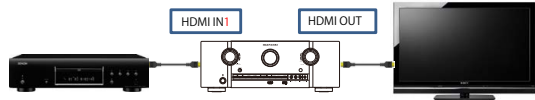
Check the Video signal line. (PLD -> HDMI Tx)

Check item(72). Check the HDMI Tx video signal line from the PLD :
 Check the video signal waveform at the following test point.
 Is the waveform like the sample?



Caution in servicing
 Electrical
 Mechanical
 Repair Information
 Updating

When the results of check item (69) are "YES"
(When the menu display is OK)

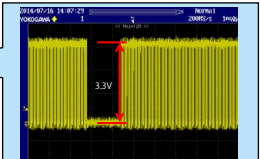
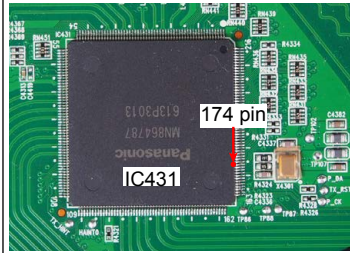


Turn Video Conversion "ON" on the setup menu.
(SETUP MENU-> Video-> Output Settings-> Video Conversion = On)
In order to check, connect the player to the HDMI terminal and configure the player as AVR source.
Next, turn on the power for the player and TV and start playback on the player.

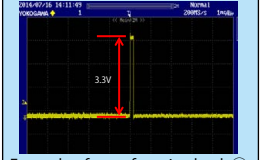
Check the Video signal line. (HDMI Tx -> GUI)

Check the Video signal line. (HDMI Tx -> PLD)

Check item(73). Check the HDMI Tx video signal line from the HDMI Tx:
Check the video signal waveform at the following test point.
Is the waveform like the sample?



Example of waveform in check ①



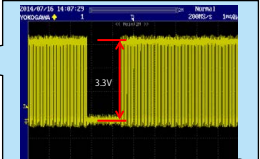
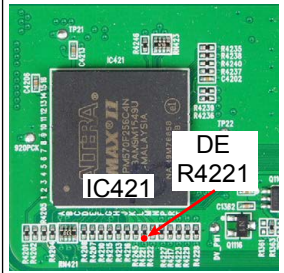
Example of waveform in check ②

NO
Check the peripheral pattern between the HDMI Tx (IC431) and PLD (IC421).
If there is no problem, the HDMI Tx (IC431) is faulty.
Replace with a new device.

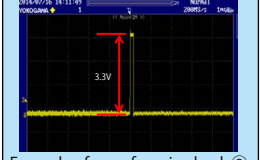
Recheck from check item (6).
If it does not work, replace the PCB.

Check the Video signal line. (PLD -> GUI)

Check item(74). Check the GUI video signal line from the PLD :
Check the video signal waveform at the following test point.
Is the waveform like the sample?



Example of waveform in check ①



Example of waveform in check ②

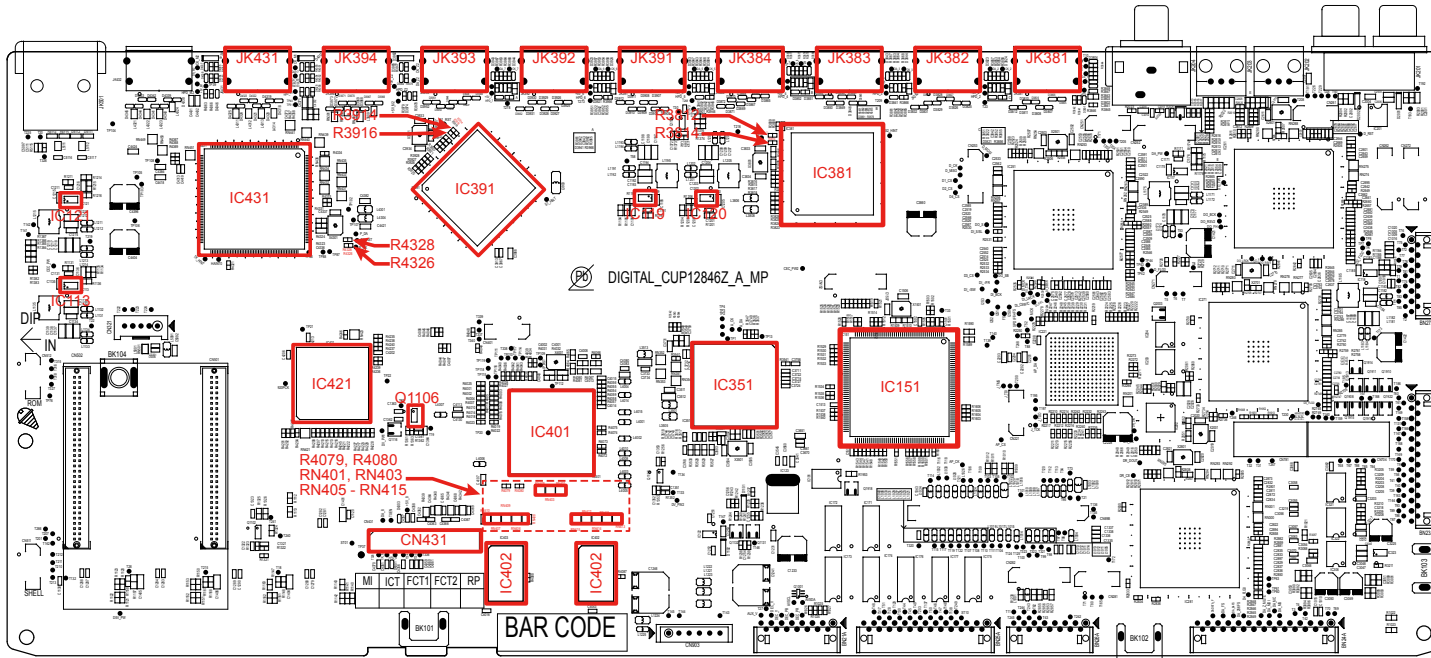
YES
The GUI (IC401) is failure.
Replace with a new device.

NO
Check the peripheral pattern between the PLD (IC421) and GUI (IC401).
If there is no problem, the PLD (IC421) is faulty.
Replace with a new device.

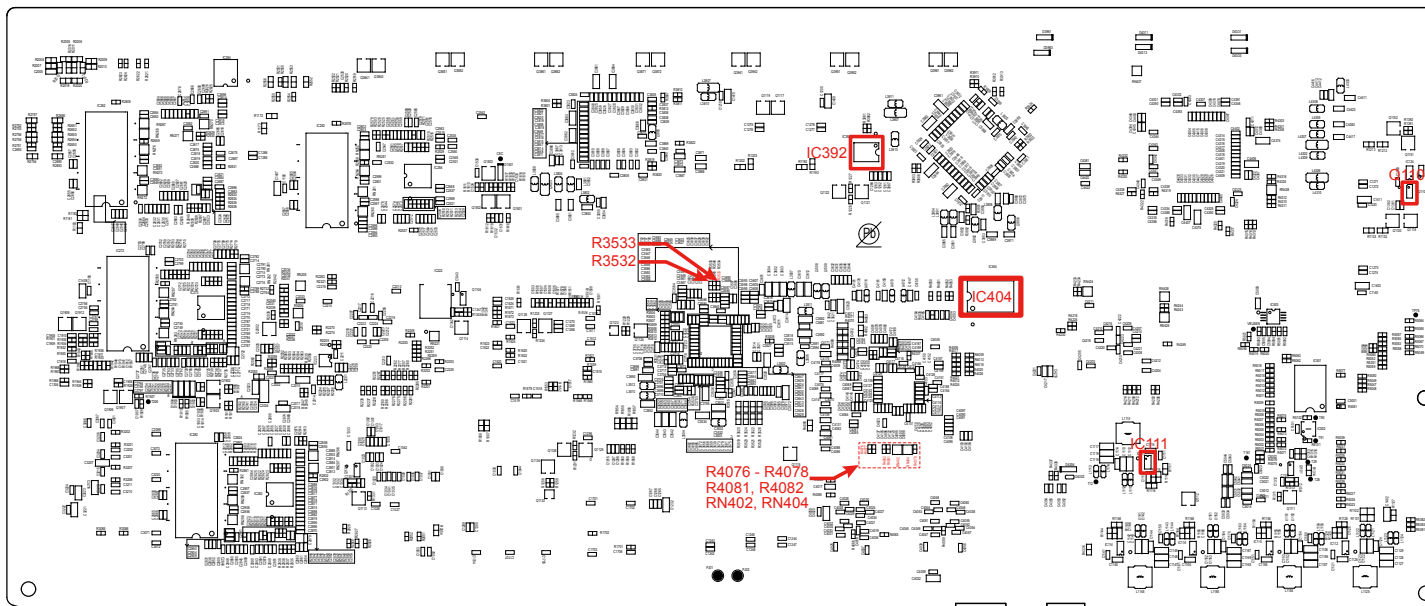
Recheck from check item (6).
If it does not work, replace the PCB.

4. Device implementation location

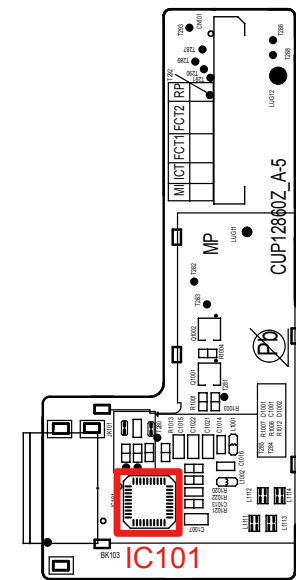
DIGITAL (A SIDE)



DIGITAL (B SIDE)



F HDMI (A SIDE)



Caution in servicing

Electrical

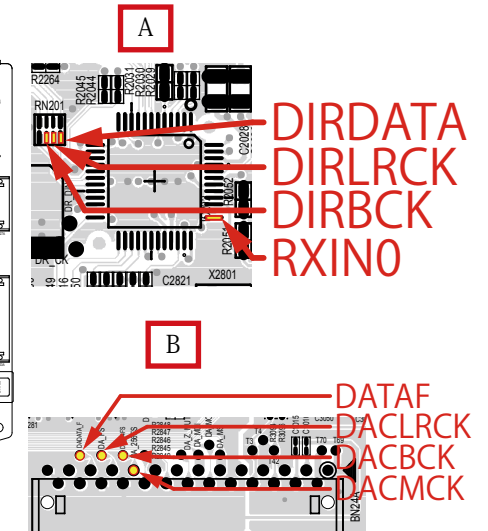
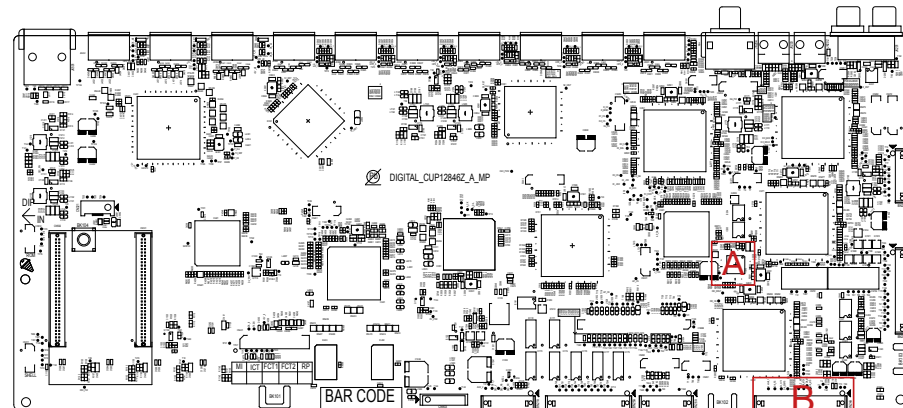
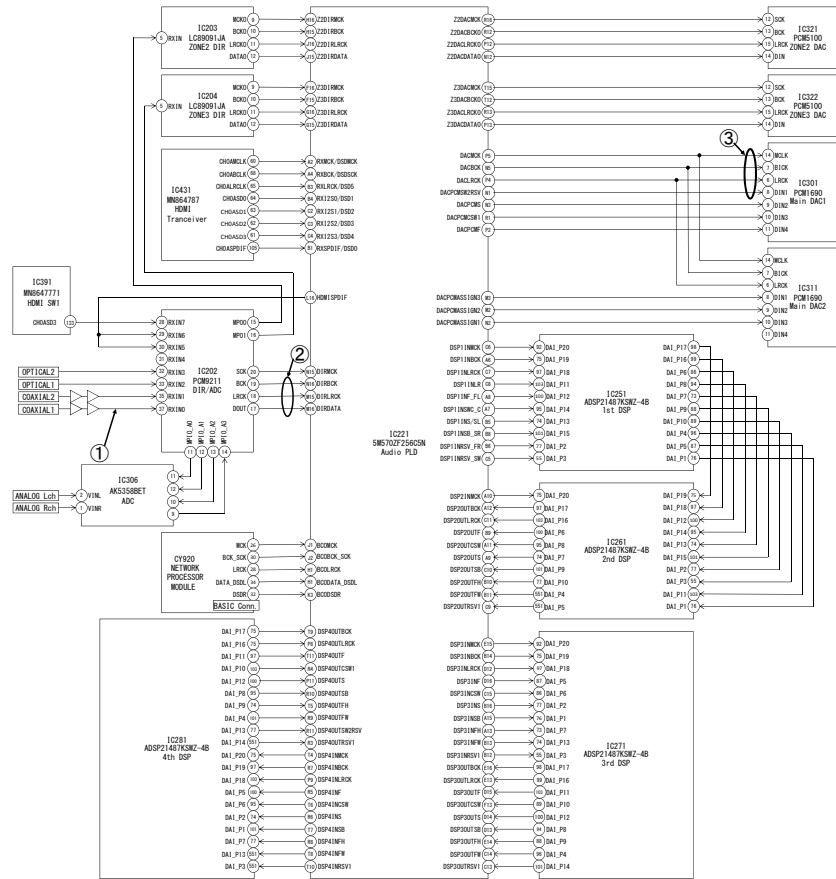
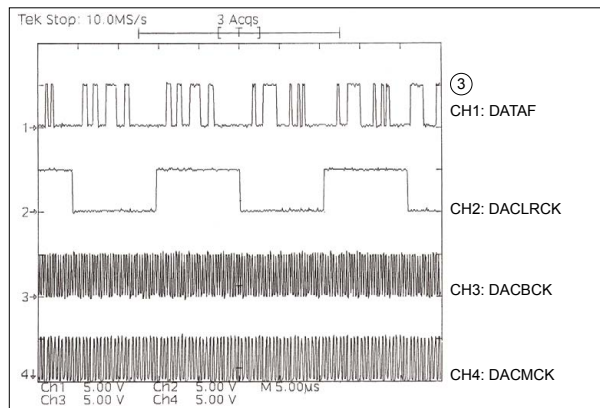
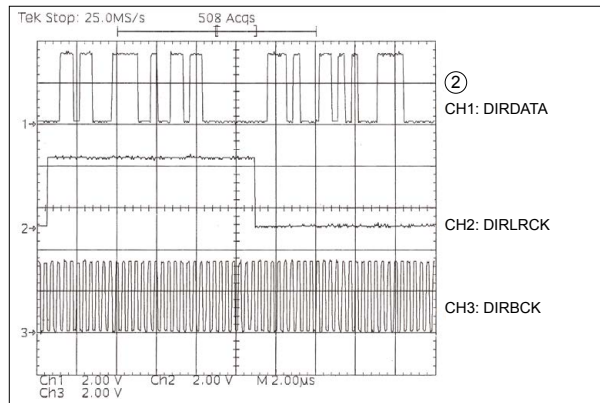
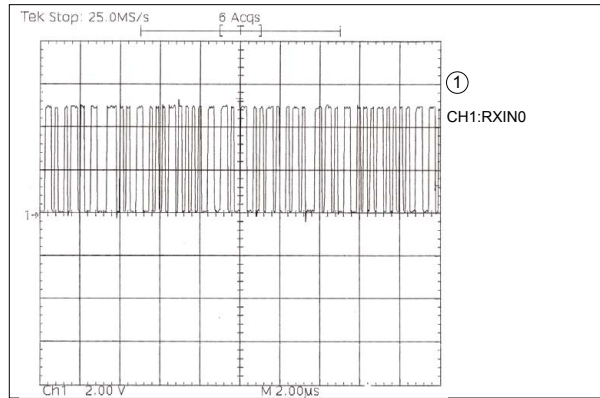
Mechanical

Repair Information

Updating

CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK

WAVE FORM



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

SPECIAL MODE

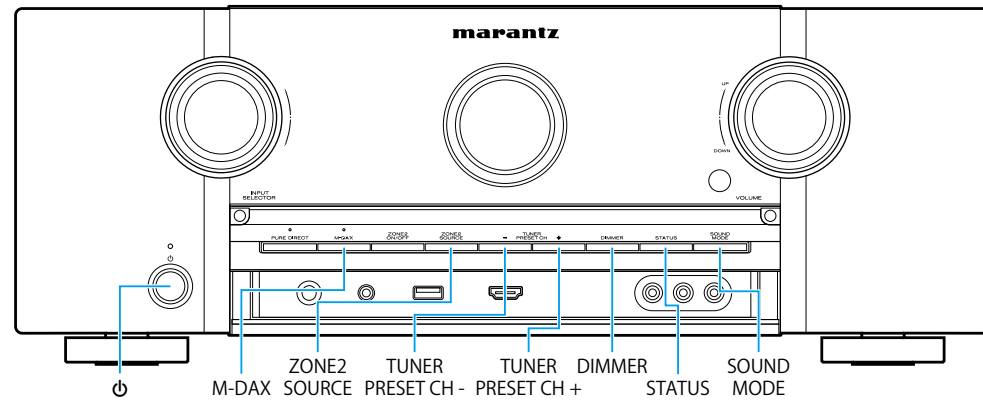
Special mode setting button

- ※ No. 1 - 4, 7 - 10 : While holding down buttons "A", "B" and "C" simultaneously, press the power button to turn on the power.
- ※ No. 5, 6 : While the power is on, hold down buttons "A" and "B" for at least 3 seconds .
- ※ No. 11 : While holding down buttons "A", "B" and "C" simultaneously, insert the AC plug into the wall outlet to turn on the power.

No.	Mode	Button A	Button B	Button C	Descriptions
1	Version Display (u-COM / DSP Error Display)	DIMMER	STATUS	-	Displays the version of firmware such as the main firmware or DSP. Errors that have occurred are displayed. (See 1. Version Display Mode)
2	PANEL / REMOTE LOCK Selection Mode	M-DAX	DIMMER	-	Start this unit in the PANEL/REMOTE LOCK selection mode so that PANEL LOCK and Remote Lock can be switched between On and Off. (See 2. PANEL / REMOTE LOCK Selection Mode) PANEL LOCK MODE : No. 2 - 1 - No. 2 - 3
2-1	PANEL LOCK Mode (with Volume)	↑	↑	-	Disables reception from all keys and encoders on the front panel except the power button (including the volume).
2-2	PANEL LOCK Mode (without Volume)	↑	↑	-	Disables reception from all keys and encoders on the front panel except the power button and volume encoder.
2-3	PANEL LOCK mode is turned off	↑	↑	-	Releases the PANEL LOCK.
3	Selecting the Mode for Service-related	ZONE2 SOURCE	STATUS	-	This is a display for turning on each service-related mode. Service-related modes: No. 3-1 - No. 3-4 (See 3-1. Selecting the Mode for Service-related)
3-1	Check the Video/Audio path Mode	TUNER PRESET CH +	-	-	This is a special mode for service confirmation used during repair work to simplify the confirmation work for the Audio channel / video channel. (See Service Path Check Mode)
3-2	Protection history display mode	↑	-	-	Displays the protection occurrence history. (See 3-2. Protection History Display Mode)
3-3	232C Standby Clear Mode	↑	-	-	Switches from 232C standby mode to normal standby mode. (See 3-3. 232C Standby Clear Mode)
3-4	Operation Info Mode	↑	-	-	Displays the accumulated operating time of the unit, the number of times the power was switched on, and the number of occurrences of each protection. (See 3-4. Operation Info Mode)
3-5	TUNER STEP Mode (U and N model only)	↑	-	-	Enables reception STEP of the ANALOG TUNER to be changed. (See 3-5. TUNER STEP mode (U / N only))
4	Protection Pass Mode	DIMMER	STATUS	SOUND MODE	Enables the power to be turned on when protection detection is disabled. (See 4. Protection Pass Mode)
5	CY920 Reboot Mode	TUNER PRESET CH +	STATUS	-	The CY920 is restarted after CY920 hang up. (See 5. CY920 Reboot Mode)
6	CY920 Initialization Mode	TUNER PRESET CH -	DIMMER	-	Enter this mode only after replacing Flash for CY920 and rewriting the firmware. (See 6. CY920 Initialization Mode)
7	User Initialization Mode	M-DAX	ZONE2 SOURCE	-	Initializes backup data. (Settings for the Installer Setup are not initialized) (Reboot the CY920)
8	Factory Initialization Mode	TUNER PRESET CH -	TUNER PRESET CH +	-	Initializes backup data. (Settings for the Installer Setup are initialized) (CY920 is not Reboot) (See CAUTION IN SERVICING.)
9	Clearing the Operation Info	TUNER PRESET CH +	DIMMER	-	Clear the accumulated operating time of the unit, the number of times the power was switched on, and the number of occurrences of each protection. (See 7. Clearing the Operation Info)

Go to next page.

No.	Mode	Button A	Button B	Button C	Descriptions
10	USB Update mode	TUNER PRESET CH +	STATUS	-	Switches this unit to USB Update mode. (See 2. Updating via USB)
11	Forced USB All Device Write Mode	TUNER PRESET CH +	STATUS	-	Mode used when this unit cannot be recovered. Forcibly switches this unit to USB update mode. (See 2.9. Forced USB All Device Write Mode)



1. Version Display Mode

1.1. Actions

Version information is displayed when the device is started in this mode.

1.2. Starting up

While holding down buttons "DIMMER" and "STATUS" simultaneously, press the power button to turn on the power.

then press the "STATUS" button to display the information in section 1.3 on the display.

※ The version list is also displayed on GUI while the version is displayed on the display.

1.3. Display Order

Error information (See "1.4. Error display") → ① Model destination information → ② Firmware Package

→ ③ Main μ-com → ④ DSP1, 2 ROM → ⑤ DSP3, 4 ROM → ⑥ Audio PLD

→ ⑦ Video PLD → ⑧ GUI SFLASH → ⑨ Ethernet 1st Boot Loader, Hardware ID

→ ⑩ Ethernet 2nd Boot Loader, Rhapsody Flag → ⑪ Ethernet IMAGE

→ ⑫ Network MAC ADDRESS information → ⑬ Bluetooth MAC Address information

① Model destination information :

L1	SR6011 \
L2	SN-*****
L3	*****

\ : Region (U, N, K, F)

② Firmware Package :

L1	PACKAGE
L2	
L3	****

③ Main μ-com :

L1	MAIN *
L2	%%##
L3	BL-**_**

% : Main version, # : Sub version

④ DSP1, 2 ROM :

L1	D1 **_**
L2	
L3	D2 **_**

⑤ DSP3, 4 ROM :

L1	D3 **_**
L2	
L3	D4 **_**

⑥ Audio PLD :

L1	A.PLD
L2	
L3	**_**

⑦ Video PLD :

L1	V.PLD
L2	
L3	**_**

⑧ GUI SFLASH :

L1	GUI
L2	XXYZ*****
L3	

X : Model code, Y : Model, Z : Region

⑨ Ethernet 1st Boot Loader, Hardware ID :

L1	NET FBL
L2	*****
L3	---**

⑩ Ethernet 2nd Boot Loader, Rhapsody Flag :

L1	NET SBL
L2	*****
L3	*****-**

⑪ Ethernet IMAGE :

L1	NET IMG
L2	*****
L3	*****

⑫ Network MAC ADDRESS information :

L1	NET MAC
L2	*****
L3	-*****

⑬ Bluetooth MAC ADDRESS information :

L1	BT MAC
L2	*****
L3	-*****

1.4. Error display

See the table below for descriptions of the displayed errors and countermeasures for these.

If multiple errors occur, only one item is displayed.

The priority order is ②, ③, ④, ⑤, ⑥, ①.

Condition	States	Display	TROUBLE SHOOTING																																				
① Firm Check NG (#: 1/2/3/4) ▲	<p>The model name, brand name and region information written in the firmware are compared to the region settings in the PCB. This error is displayed if the information does not match.</p> <p>"▲" is displayed as the first character if the firmware is not correct (see the illustrations on the right).</p>	<table border="1"> <tr><td>L1</td><td>FIRM</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td></td></tr> </table> <table border="1"> <tr><td>L1</td><td>MAIN ▲</td></tr> <tr><td>L2</td><td>****</td></tr> <tr><td>L3</td><td>BL-**, **</td></tr> </table> <table border="1"> <tr><td>L1</td><td>DSP# ▲</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td>**, **</td></tr> </table> <table border="1"> <tr><td>L1</td><td>A.PLD ▲</td></tr> <tr><td>L2</td><td></td></tr> <tr><td>L3</td><td>**, **</td></tr> </table> <table border="1"> <tr><td>L1</td><td>U.PLD ▲</td></tr> <tr><td>L2</td><td></td></tr> <tr><td>L3</td><td>**, **</td></tr> </table> <table border="1"> <tr><td>L1</td><td>GUI ▲</td></tr> <tr><td>L2</td><td>*****</td></tr> <tr><td>L3</td><td></td></tr> </table>	L1	FIRM	L2	ERROR	L3		L1	MAIN ▲	L2	****	L3	BL-**, **	L1	DSP# ▲	L2	ERROR	L3	**, **	L1	A.PLD ▲	L2		L3	**, **	L1	U.PLD ▲	L2		L3	**, **	L1	GUI ▲	L2	*****	L3		<ul style="list-style-type: none"> •Check the resistor for setting the region(R1590 / R1589, DIGITAL PCB). •Write the firmware for the correct region.
L1	FIRM																																						
L2	ERROR																																						
L3																																							
L1	MAIN ▲																																						
L2	****																																						
L3	BL-**, **																																						
L1	DSP# ▲																																						
L2	ERROR																																						
L3	**, **																																						
L1	A.PLD ▲																																						
L2																																							
L3	**, **																																						
L1	U.PLD ▲																																						
L2																																							
L3	**, **																																						
L1	GUI ▲																																						
L2	*****																																						
L3																																							
② IP SCALER NG	<p>An error occurs in Loop back Test of the DDR memory which is performed during the initial setting of i/p Scaler(ADV8003).</p> <p>During the initial setting of i/p Scaler (ADV8003), there is not the reply of the Loop back Test result of the DDR memory .</p>	<table border="1"> <tr><td>L1</td><td>IP</td></tr> <tr><td>L2</td><td>SCALER</td></tr> <tr><td>L3</td><td>ERR 01</td></tr> </table> <table border="1"> <tr><td>L3</td><td>ERR 02</td></tr> </table>	L1	IP	L2	SCALER	L3	ERR 01	L3	ERR 02	<ul style="list-style-type: none"> •Check the circuits around the IP SCALER (IC401, DIGITAL PCB) and DDR2 (IC402/IC403). If there appear to be no problems, IC401 or IC402/IC403 is faulty. 																												
L1	IP																																						
L2	SCALER																																						
L3	ERR 01																																						
L3	ERR 02																																						
③ GUI Serial Flash NG	<p>If the Main CPU version is not supported by the GUI Serial Flash (ADV8003).</p> <p>"▼" is displayed as the first character of the GUI firmware version.</p>	<table border="1"> <tr><td>L1</td><td>GUI VER.</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td></td></tr> </table>	L1	GUI VER.	L2	ERROR	L3		<ul style="list-style-type: none"> •Check the firmware version. 																														
L1	GUI VER.																																						
L2	ERROR																																						
L3																																							

Go to next page.

Condition	States	Display	TROUBLE SHOOTING						
④ DIR NG	This error is displayed if there is no response from the DIR.	<table border="1"> <tr><td>L1</td><td>DIR</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td>01</td></tr> </table>	L1	DIR	L2	ERROR	L3	01	•Check the DIR (IC202, DIGITAL PCB) and surrounding circuits.
L1	DIR								
L2	ERROR								
L3	01								
⑤ DSP# NG (# : 1/2/3/4)	The DSP FLAG0 port does not enter "Hi" status while booting a DSP code even after resetting DSP.	<table border="1"> <tr><td>L1</td><td>DSP#</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td>01</td></tr> </table>	L1	DSP#	L2	ERROR	L3	01	•Check the DSP (IC251/IC261/IC271/IC281, DIGITAL PCB) and surrounding circuits.
	L1	DSP#							
	L2	ERROR							
	L3	01							
	The DSP FLAG0 port does not enter "Hi" status before issuing a DSP command.	<table border="1"> <tr><td>L3</td><td>02</td></tr> </table>	L3	02					
L3	02								
Setting WRITE to "Lo" does not set ACK to "Hi" during DSP data reading.	<table border="1"> <tr><td>L3</td><td>03</td></tr> </table>	L3	03						
L3	03								
Setting REQ to "Lo" does not set ACK to "Lo" during DSP data reading.	<table border="1"> <tr><td>L3</td><td>04</td></tr> </table>	L3	04						
L3	04								
Setting WRITE to "Hi" does not set ACK to "Hi" during DSP data writing.	<table border="1"> <tr><td>L3</td><td>05</td></tr> </table>	L3	05						
L3	05								
Setting REQ to "Lo" does not set ACK to "Lo" during DSP data writing.	<table border="1"> <tr><td>L3</td><td>06</td></tr> </table>	L3	06						
L3	06								
⑥ EEPROM NG	An error occurred in a checksum of the EEPROM(*** is a block address number).	<table border="1"> <tr><td>L1</td><td>BACKUP</td></tr> <tr><td>L2</td><td>ERROR</td></tr> <tr><td>L3</td><td>***</td></tr> </table>	L1	BACKUP	L2	ERROR	L3	***	
L1	BACKUP								
L2	ERROR								
L3	***								

2. PANEL / REMOTE LOCK Selection Mode

2.1. Actions

Switch the PANEL LOCK and REMOTE LOCK modes between on and off.

2.2. Starting up

While holding down buttons "M-DAX" and "DIMMER" simultaneously, press the power button to turn on the power.

Select the desired mode using the "TUNER PRESET CH+" button, then press the "STATUS" button to confirm.

2.3. Displaying and Selecting Each Mode

The information shown on the display switches each time the "TUNER PRESET CH+" button is pressed.

Press the "STATUS" button to set the currently displayed mode and restart the device.

The setting with "*" is selected for each mode.

①

L1	P/V LOCK
L2	*On
L3	

The buttons on the unit and the master volume knob does not function.



②

L1	FP LOCK
L2	On
L3	

The buttons on the unit does not function.



③

L1	FP LOCK
L2	Off
L3	

The PANEL LOCK mode is turned off.



④

L1	RC LOCK
L2	On
L3	

The device cannot be operated by the remote control.



⑤

L1	RC LOCK
L2	*Off
L3	

The REMOTE LOCK mode is turned off.

3-1. Selecting the Mode for Service-related

3-1.1. Actions

Select diagnostic mode (service path check mode), protection history display mode, or 232C standby clear mode.

3-1.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.

Select the desired mode using the "TUNER PRESET CH+" button, then press the "STATUS" button to confirm.

3-1.3. Displaying and Selecting Each Mode

The information shown on the display switches each time the "TUNER PRESET CH+" button is pressed.

Press the "STATUS" button to set the currently displayed mode and restart the device.

①

L1	1SERVICE
L2	CHECK
L3	

Service Path Check Mode : See "DIAGNOSTIC MODE"

The Video and Audio paths can be checked.

This function is convenient for confirming problem paths in the product and checking the paths after repairing.



②

L1	2PROTECT
L2	
L3	

The protection history can be checked.



③

L1	3RS232C
L2	RESET
L3	

Switches from 232C standby mode to normal standby mode.



④

L1	4OP INFO
L2	
L3	

Operation Info for the unit can be checked.



⑤

L1	5TUNER
L2	FREQ
L3	

Enables reception STEP of the ANALOG TUNER to be changed.

3-1.4. Canceling the selected mode

Press the power button to turn off the power.

3-2. Protection History Display Mode

3-2.1. Actions

This mode enables the unit to record and display the event when the THERMAL, ASO or DC protection is activated.

If protections have been activated multiple times, the latest protection operation is recorded.

3-2.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.

Select the "2. PROTECTION" using the "TUNER PRESET CH +/-" button, then press the "STATUS" button then to confirm.

3-2.3. Protection information and displays

· Press the "STATUS" button in Protection History Display Mode.

· The protection history can be checked.

(a) If no protections has occurred.

L1	PROTECT
L2	HISTORY
L3	:NO

(b) ASO (if the last protection is ASO)

L3	:ASO
----	------

Cause A short circuit occurred between the speaker terminals, or speakers with an impedance outside the rating were connected.

Note : Short circuits in speaker terminals or speakers can be identified.

If the power is turned on in the abnormal state, protection is activated after around 6 seconds and the power is turned off.

(c) DC (if the last protection is DC)

L3	:DC
----	-----

Cause : DC output of the power amplifier is abnormal.

If the power is turned on in the abnormal state, protection is activated after around 6 seconds and the power is turned off.

(e) Case of THERMAL (when the last protection incident is THERMAL(E) protection)

L3	:THM E
----	--------

Cause : Abnormal heat sink temperature.

If the power is turned on in the abnormal state, protection is activated after around 180 seconds and the power is turned off.

(e) Case of CURRENT (when the last protection incident is CURRENT protection)

L3	:CURRENT
----	----------

Cause : An over current flowed in power amp.

If the power is turned on in the abnormal state, protection is activated after around 90 seconds and the power is turned off.

Caution : These protections may also be activated due to other factors such as disconnection of connectors or operations around the microcomputer.

After viewing the above protection history, press the "STATUS" button to return to the normal display.

3-2.4. Clearing the Protection History

There are two ways to clear the protection history.

- (a) Activate Protection History Display Mode. Press the "STATUS" button to display the protection history. Press and hold the "DIMMER" button for 3 seconds.

L1	PROTECT
L2	HISTORY
L3	#DC

Press and hold the "DIMMER" button for 3 seconds.



L3	CLEAR
----	-------

The above message is displayed and the protection history is cleared.



L3	#NO
----	-----

- (b) Initialize this unit. (See "CAUTION IN SERVICING.")

※ Use the method in 3-2.4. (a) if you do not want to erase your settings from this unit.

Warning Displays by POWER LED

If the power is turned Off while a protection is being detected, the POWER LED flashes in red to warn you depending on the protection status as follows.

- (a) ASO/DC protection: Flashes at 0.5-second intervals (0.25 seconds lit, 0.25 seconds unlit)
(b) THERMAL (E) protection: Flashes at 2-second intervals (1 seconds lit, 1 seconds unlit)

3-3. 232C Standby Clear Mode

3-3.1. Actions

Switches from 232C standby mode to normal standby mode.

3-3.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.

Select the "3.RS232C RESET" using the "TUNER PRESET CH+" button, then press the "STATUS" button then to confirm.

L1	3.RS232C
L2	RESET
L3	

3-4. Operation Info Mode

3-3.1. Actions

This mode enables the unit to display the accumulated operating time, power On count and each protection count.

3-3.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.

Select the "4. OP INFO" using the "TUNER PRESET CH+ / -" button, then press the "STATUS" button to confirm.

3-3.3. Operations

Press the "STATUS" button after starting up this device in Operation Info mode. The following information is displayed in the following order.

(a) Accumulated operating time

L1	Operate
L2	Time:
L3	_____H

↑ Time display
↓ "STATUS"

(b) Power On count

L1	Power On
L2	Time:
L3	_____

↑ Count display
↓ "STATUS"

(c) DC / ASO Protection count

L1	Protect
L2	DC :____
L3	ASO:____

↓ "STATUS"

(d) Thermal Protection (E) count

L1	Protect
L2	TH E:____
L3	

↓ "STATUS"

(e) Current Protection count

L1	Protect
L2	CURRENT:
L3	_____

↓ "STATUS"

(Returns to normal display)

3-5. TUNER STEP mode (U / N only)

3-4.1. Actions

This is a special mode for enabling reception STEP of the ANALOG TUNER to be changed.

3-4.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.

Select the "5. TUNER FRQ SET" using the "TUNER PRESET CH +/-" button, then press the "STATUS" button then to confirm.

3-4.3. Displays

Start up this unit in TUNER STEP mode, select the desired option using the "TUNER PRESET CH +/-" button, then enter using the "STATUS" button.

The following information is displayed in the following order.

(a) AM9 kHz / FM50 kHz is selected

L1	Tuner-FRQ
L2	AM9✓
L3	FM50

"TUNER PRESET CH +" ↓ ↑ "TUNER PRESET CH -"

(b) AM10 kHz / FM200 kHz is selected

L1	Tuner-FRQ
L2	AM10✓
L3	FM200

↓ "STATUS"

(c) Press the power button to turn off the power.

(d) Press the power button to turn on the power.

4. Protection Pass Mode

4.1. Actions

- This mode allows the power to be turned on without activating protections.
- This mode functions in the same way as normal power-on, except that protections are not activated.

4.2. Operations

While holding down buttons "**DIMMER**", "**STATUS**" and "**SOUND MODE**" simultaneously, press the power button to turn on the power.

The device returns to the normal display message after the following is displayed.

L1	Protect
L2	Pass
L3	

This is displayed for 5 seconds before returning to the normal display.

5. CY920 Reboot Mode

5.1. Actions

- The CY920 is restarted after CY920 hang up.
- The CY920 can be restarted even in the network standby setting. ("Setup menu" – "Network" – "IP Control" – "Always On")

5.2. Operations

- (1) Turn the "**MAIN ZONE**" button On and set the input source to NETWORK.
- (2) While the power is On, hold down buttons "**TUNER PRESET CH +**" and "**STATUS**" for at least 3 seconds.

Display during CY920 reboot

L1	Network
L2	Restart
L3	

- (4) Returns to the normal display.

NOTE :

- After rebooting CY920, the same operation is not accepted for 1 minute.
- Reception is prohibited during update, save and load.

6. CY920 Initialization Mode

6.1. Actions

The following items are initialized.

- (1) Favorites
- (2) Quick Select
- (3) Presets
- (4) Internet Radio Recently Played
- (5) Flickr contacts
- (6) User ID
- (7) Resume Playback station

6.2. Operations

While the power is on, hold down buttons "**TUNER PRESET CH -**" and "**DIMMER**" for at least 3 seconds.

Initializing Display

L1	Initial
L2	Wait
L3	
L2	Wait.
L2	Wait..
L2	Wait...

Complete Display

L1	Complete
L2	
L3	

This is displayed for 5 seconds before returning to the normal display.

Failed Display

L1	Failed
L2	
L3	

7. Clearing the Operation Info

7.1. Actions

• Displays the accumulated operating time of the unit, the number of times the power was switched on, and the number of occurrences of each protection.

7.2. Operations

Remove all input/output terminals and the AC plug.

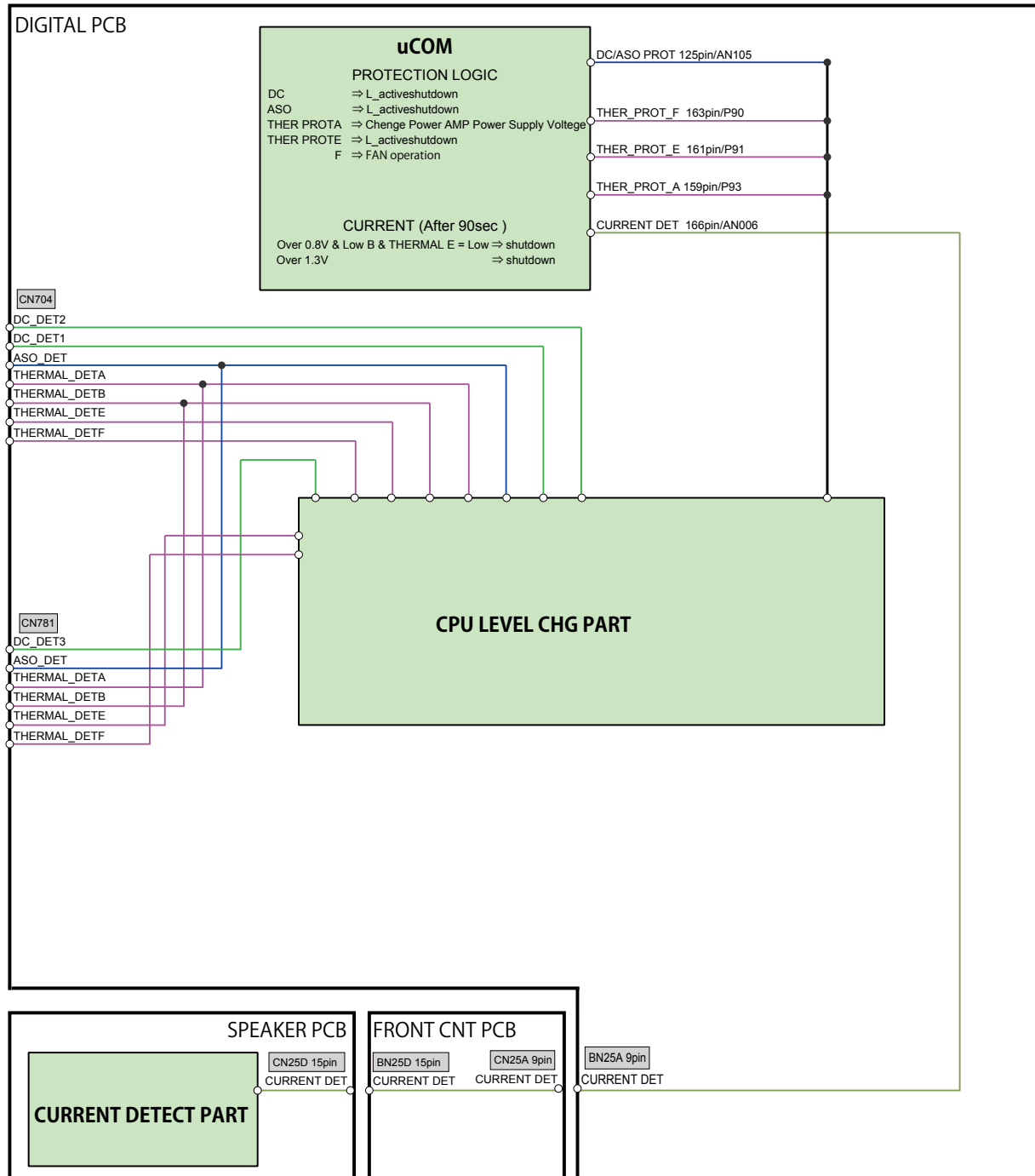
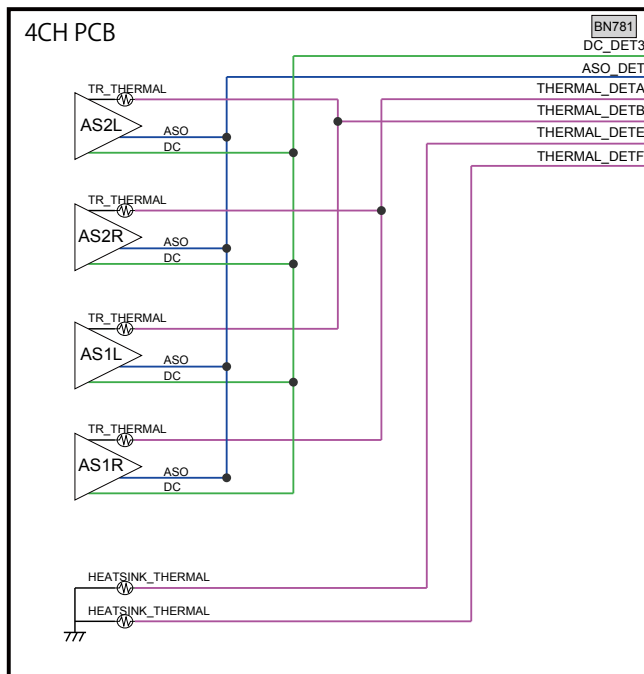
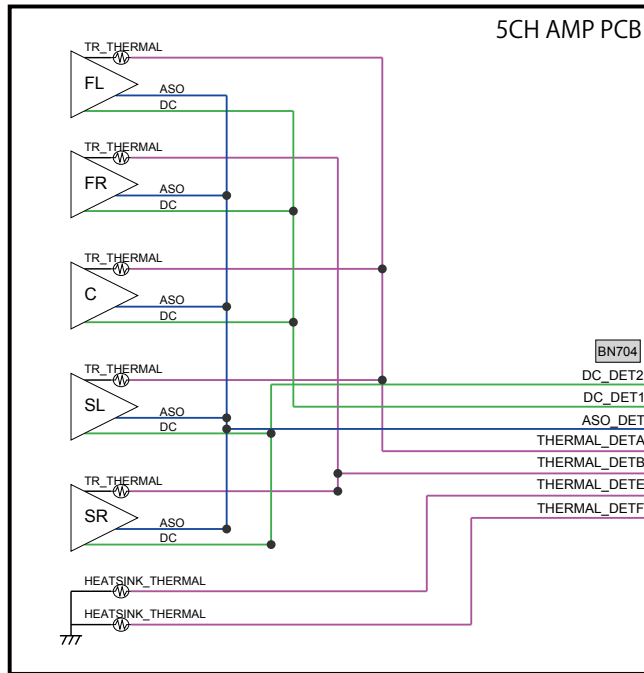
Connect the AC plug again and place the product in standby mode.

While holding down buttons "**DIMMER**" and "**INTERNET RADIO**" simultaneously, press the power button to turn on the power.

L1	PRODUCT
L2	MODE
L3	

When "**PRODUCT MODE**" appears on the display, release the button and press the "**power**" button and "**ZONE2 ON/OFF**" to place the product in standby mode.

PROTECTION DIAGRAM



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

Service Path Check Mode

1.1. Actions

This function is convenient for confirming problem paths in the product and checking the paths after repairing.
The Video and Audio paths can be checked.
The backup data is not rewritten.

1.2. Starting up

While holding down buttons "ZONE2 SOURCE" and "STATUS" simultaneously, press the power button to turn on the power.
Select the "1. SERVICE CHECK" using the "TUNER PRESET CH+" button, then press the "STATUS" button then to confirm.
The "TUNED", "STEREO" and "RDS" segments are lit in this mode.

1.3. Canceling diagnostic mode

Press the power button to turn off the power.



1.4. Selecting items to check

Press the ① button to switch between video items and audio items.
Press the ② or ③ button to select the previous or next item.

Actions	The unit			Remote control unit		
	①	②	③	①	②	③
	Audio ⇄ Video	PREVIOUS	NEXT	Audio ⇄ Video	PREVIOUS	NEXT
Button	DIMMER	TUNER PRESET CH-	TUNER PRESET CH+	SLEEP	CURSOR ◀	CURSOR ▶

1.5. Audio system confirmation items

See the block diagram fig.XXth.

Paths to be confirmed		Display	Settings	What to confirm
1	Analog	 A01ANLG ***. *dB	Input Source : CBL/SAT Input Mode : Analog (fixed) Sound mode : DIRECT Amp assign : 9.1ch Floor Layout : 5.1&SB Height Sp : 2ch Dolby Sp : None Height Layout : Front Height MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (Front L/R) • Analog input ⇒ Pre OUT output (Front L/R) (※ The input source can be switched to any source except CBL/SAT.)
2	DIGITAL (MAIN)	 A2DIG. ***. *dB	Input Source : CBL/SAT Input Mode : DIGITAL (fixed) Sound mode : MULTI CH STEREO Amp assign : 9.1ch Floor Layout : 5.1&SB Height Sp : 2ch Dolby Sp : None Height Layout : Front Height Speaker Select : Floor Speaker Config ALL Speaker = Small / SW = Yes(2ch) MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • Digital input ⇒ Speaker output (Front L/R, Center, Surround L/R, S.Back L/R) • Digital input ⇒ Pre output (Front L/R, Center, Surround L/R, S.Back L/R, Subwoofer1/2) (※ The input source can be switched to any source except CBL/SAT.)

Paths to be confirmed		Display	Settings	What to confirm
3	DIGITAL (ZONE2)	fig.03a fig.03b fig.03c	A03Z2DIG ****. *dB Input Source : Online Music Input Mode : Auto Sound mode : STEREO Amp assign : 7.1ch + ZONE2 Floor Layout : 5ch Height Sp : 2ch Dolby Sp : None Height Layout : Front Height MAIN ZONE : On ZONE2 : On	<ul style="list-style-type: none"> • Digital(PCM) input ⇒ Speaker output (Height2 (ZONE2) L/R) • Digital(PCM) input ⇒ Pre OUT output (ZONE2 L/R) (※ The input source can be switched to any source except Online Music.)
4	HDMI	fig.04a fig.04b fig.04c	A05HDMI ****. *dB Input Source : CBL/SAT Input Mode : HDMI (fixed) Sound mode : STEREO Amp assign : 9.1ch Floor Layout : 5ch&SB Height Sp : 2ch Dolby Sp : None Height Layout : Front Height MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • HDMI input ⇒ Speaker output (Front L/R) • HDMI input ⇒ Pre OUT output (Front L/R) (※ The input source can be switched to any source except CBL/SAT.)
5	Analog AD (MAIN ZONE)	fig.05a fig.05b	A06AD ****. *dB Input Source : CBL/SAT Input Mode : Analog (fixed) Sound mode : MULTI CH STEREO Amp assign : 9.1ch Floor Layout : 5ch&SB Height Sp : 2ch Dolby Sp : None Height Layout : Front Height Speaker Select : Floor & Height Speaker Config ALL Speaker = Small/SW = Yes(2ch) MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (Front L/R, Center, Surround L/R, S.Back L/R, Height1 L/R) • Analog input ⇒ Speaker output, SW(20Hz) (Front L/R, Center, Surround L/R, S.Back L/R, Height1 L/R, Subwoofer1/2) (※ The input source can be switched to any source except CBL/SAT.) (※ Volume 60 is the value when Absolute settings are used. The value is -20 when Relative settings are used)
6	Analog Amp Assign (Amp Assign : ZONE2)	fig.06	A07Z2ASS ****. *dB Input Source : CBL/SAT Input Mode : Auto Sound mode : STEREO Z2 Source : Source Amp assign : 7.1ch + ZONE2 Floor Layout : 5ch Height Sp : 2ch Dolby Sp : None Height Layout : Front Height MAIN ZONE : On ZONE2 : On	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (Height2 (ZONE2) L/R) • Analog input ⇒ Pre OUT output (ZONE2 L/R) (※ The input source can be switched to any source except CBL/SAT.) (※ Volume 60 is the value when Absolute settings are used. The value is -20 when Relative settings are used)
7	Amp Assign (Amp Assign : BiAMP)	fig.07a fig.07b	A11BiAMP ****. *dB Input Source : CBL/SAT Input Mode : Auto Sound mode : MULTI CH STEREO Amp assign : 7.1ch + BiAMP Floor Layout : 5ch Height Sp : 2ch Dolby Sp : None Height Layout : Front Height MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (Height1 L/R (Top Front)) • Analog input ⇒ Speaker output (Height2 L/R (Top Front)) (※ The input source can be switched to any source except CBL/SAT.) (※ Volume 60 is the value when Absolute settings are used. The value is -20 when Relative settings are used)

Paths to be confirmed		Display	Settings	What to confirm
8	Front Height	fig.08a fig.08b	A14FH ***. *dB	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (Height1 L/R (Top Front), Height2 L/R (Top Front)) • Analog input ⇒ Pre OUT output (Height1 L/R (Top Front), Height2 L/R (Top Rear)) • Pre OUT output (※ The input source can be switched to any source except CBL/SAT.) (※ Volume 60 is the value when Absolute settings are used. The value is -20 when Relative settings are used)
9	7.1ch	fig.09	A197.1IN ***. *dB	<ul style="list-style-type: none"> • 7.1ch IN input ⇒ Speaker output (Front L/R, Center, Surround L/R, S.Back L/R) • Pre OUT output (Front L/R, Center, Surround L/R, S.Back L/R, Subwoofer1/2)
10	Front Amp ⇒ Surround Back	fig.10a fig.10b	A20SB ***. *dB	<ul style="list-style-type: none"> • Analog input ⇒ Speaker output (S.Back L/R) • Pre OUT output (※ The input source can be switched to any source except CBL/SAT.) (※ Volume 60 is the value when Absolute settings are used. The value is -20 when Relative settings are used)

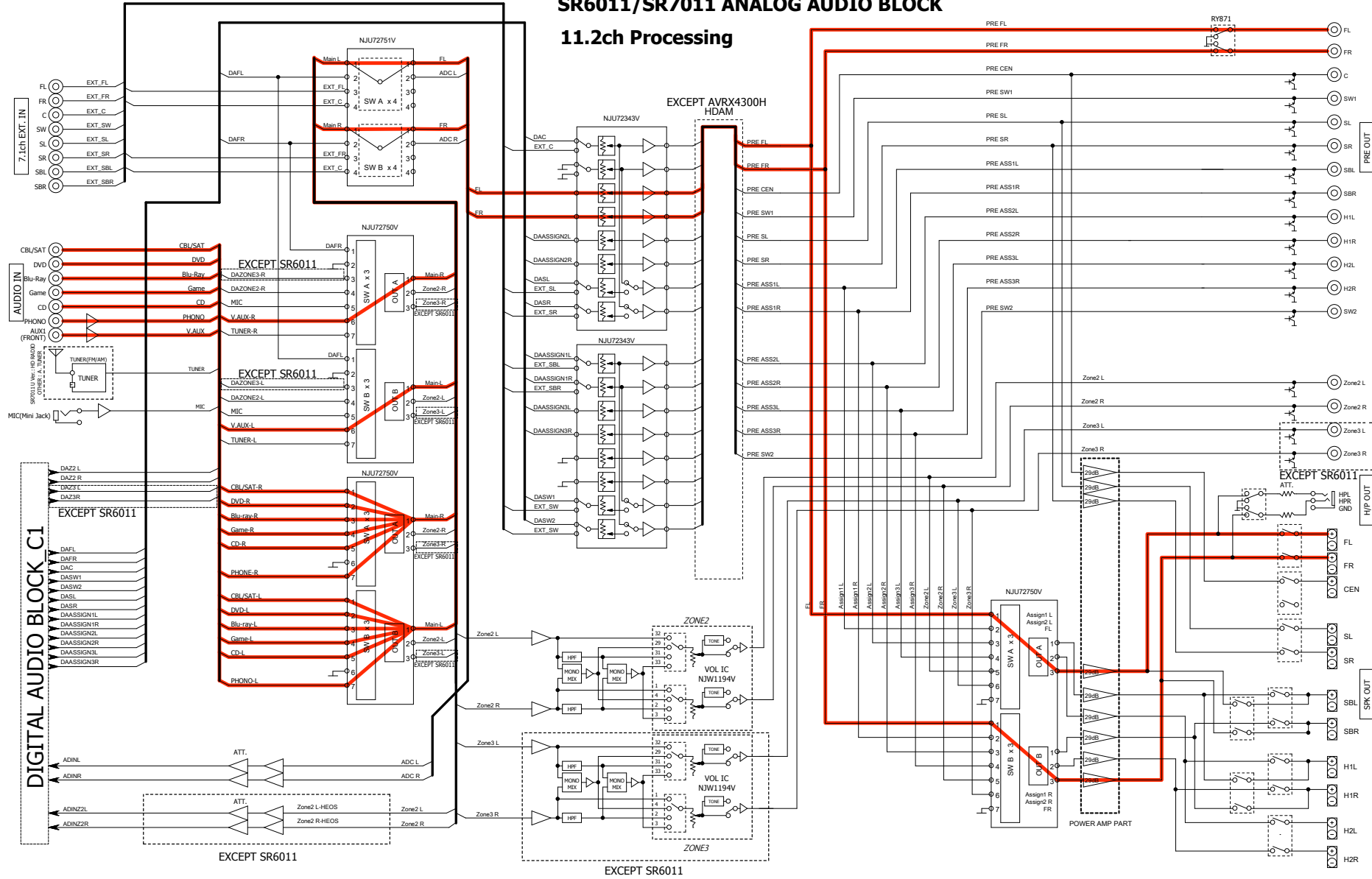
1.6. Confirmation items for the video system

See the block diagram fig.XXth.

Paths to be confirmed		Display	Settings	What to confirm
1	Analog Video pass fig.11	U01VIDEO ***. *dB	Input Source : CBL/SAT Video Conversion (IP Scaler) : OFF, All sources MAIN ZONE : On ZONE2 : On	<ul style="list-style-type: none"> • CVBS input ⇒ CVBS output • Component input ⇒ Component output (※ The input source can be switched to any source except CBL/SAT.)
2	Video Convert (Analog or HDMI ⇒ HDMI) fig.12a fig.12b	U02CONV ***. *dB	Input Source : CBL/SAT Video Conversion (IP Scaler) : ON, All sources IP Scaler : "Analog & HDMI", All sources Resolution : "Auto", All sources MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • CVBS input ⇒ IP Scaler ⇒ HDMI output. • Component input ⇒ IP Scaler ⇒ HDMI output. • HDMI input ⇒ IP Scaler ⇒ HDMI output. • ETHERNET input ⇒ IP Scaler ⇒ HDMI output. (※ The input source can be switched to any source except CBL/SAT.)
3	HDMI pass (MAIN ZONE) fig.13	U03HDMI ***. *dB	Input Source : CBL/SAT Video Conversion (IP Scaler) : OFF, All sources MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • HDMI input (MAIN function) ⇒ HDMI output (MAIN) (※ The input source can be switched to any source except CBL/SAT.)
4	HDMI CEC (Control Monitor : HDMI Monitor1) fig.14	U04CEC ***. *dB	Input Source : CBL/SAT HDMI Control : On Control Monitor : Monitor1 (if checking the HDMI Monitor Out1) MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • When the power supply of a TV is put in the standby mode, make sure that the power supply of this unit is also put in the standby mode. (※ The input source can be switched to any source except CBL/SAT.) <ul style="list-style-type: none"> • The ARC path can also be checked (check this using the TV input source).
5	HDMI Audio (Audio : AVR) fig.15a fig.15b fig.15c	U05H-AVR ***. *dB	Input Source : CBL/SAT HDMI Control : Off HDMI Audio : AVR (if checking the audio output from AVR)	<ul style="list-style-type: none"> • HDMI input (PCM, DolbyDigital, DTS) ⇒ Speaker output. • HDMI input(HD audio) ⇒ Speaker output. (※ The input source can be switched to any source except CBL/SAT.)
6	HDMI Audio (Audio : TV) fig.16a fig.16b	U06H-TV ***. *dB	HDMI Audio : TV (if checking the audio output from TV)	<ul style="list-style-type: none"> • HDMI input (PCM, DolbyDigital, DTS) ⇒ HDMI output (audio output from connected TV) (※ The input source can be switched to any source except CBL/SAT.)
7	GUI fig.17	U07MENU ***. *dB	Input Source : CBL/SAT Video Conversion (IP Scaler) : ON, All sources IP Scaler : "Analog & HDMI", All sources Resolution : "AUTO", All sources Setup Menu : On MAIN ZONE : On ZONE2 : Off	<ul style="list-style-type: none"> • GUI display ⇒ HDMI output. (※ The input source can be switched to any source except CBL/SAT.)
8	HDMI pass (MAIN ZONE2) fig.18	U08Z2HD ***. *dB	Input Source : CBL/SAT ZONE2 Source : Source MAIN ZONE : On ZONE2 : On	<ul style="list-style-type: none"> • HDMI input (ZONE2 Function) ⇒ HDMI output (ZONE2) (※ The input source can be switched to any source except CBL/SAT.)

fig.01

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

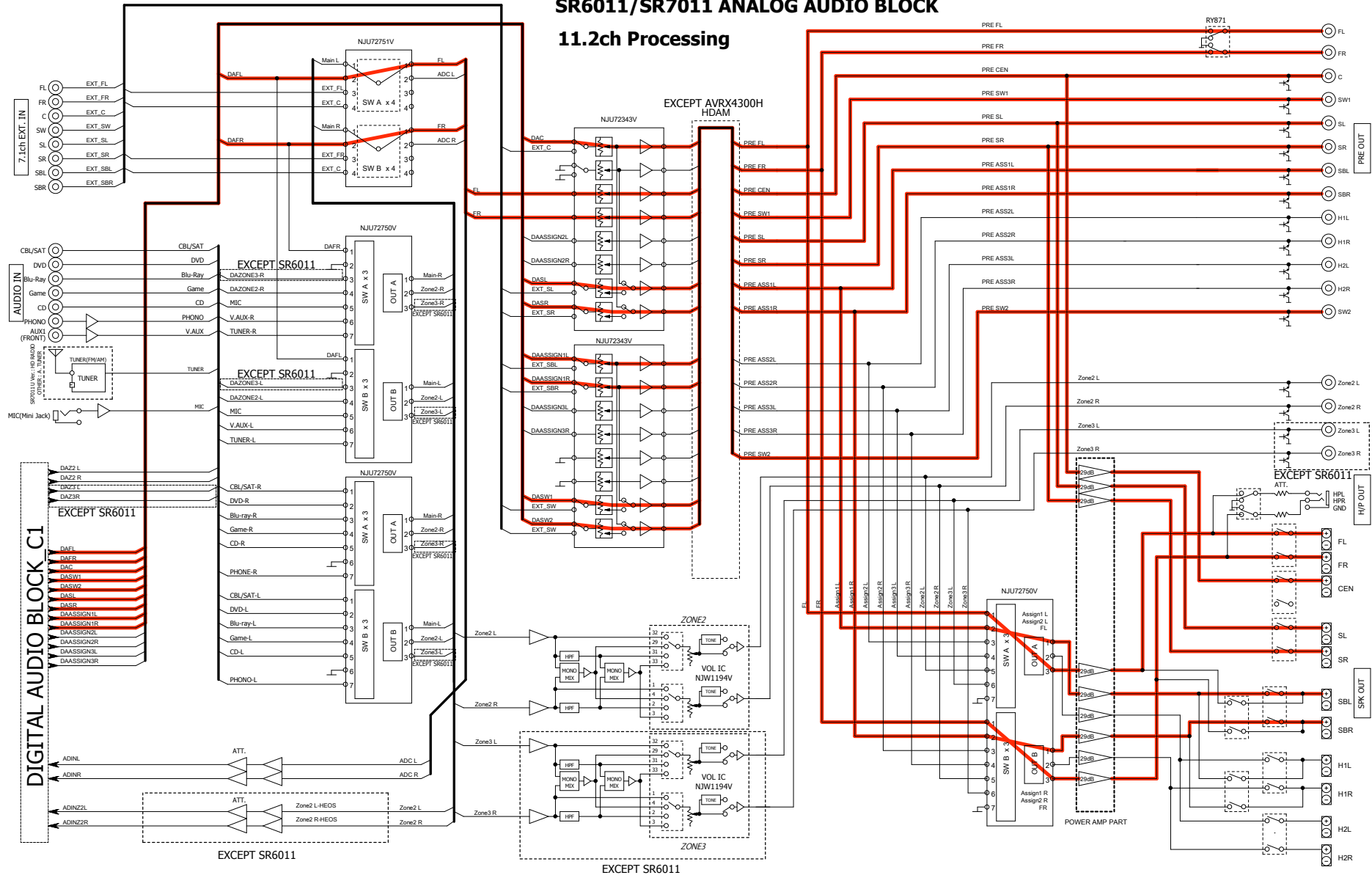
Mechanical

Repair Information

Updating

fig.02a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

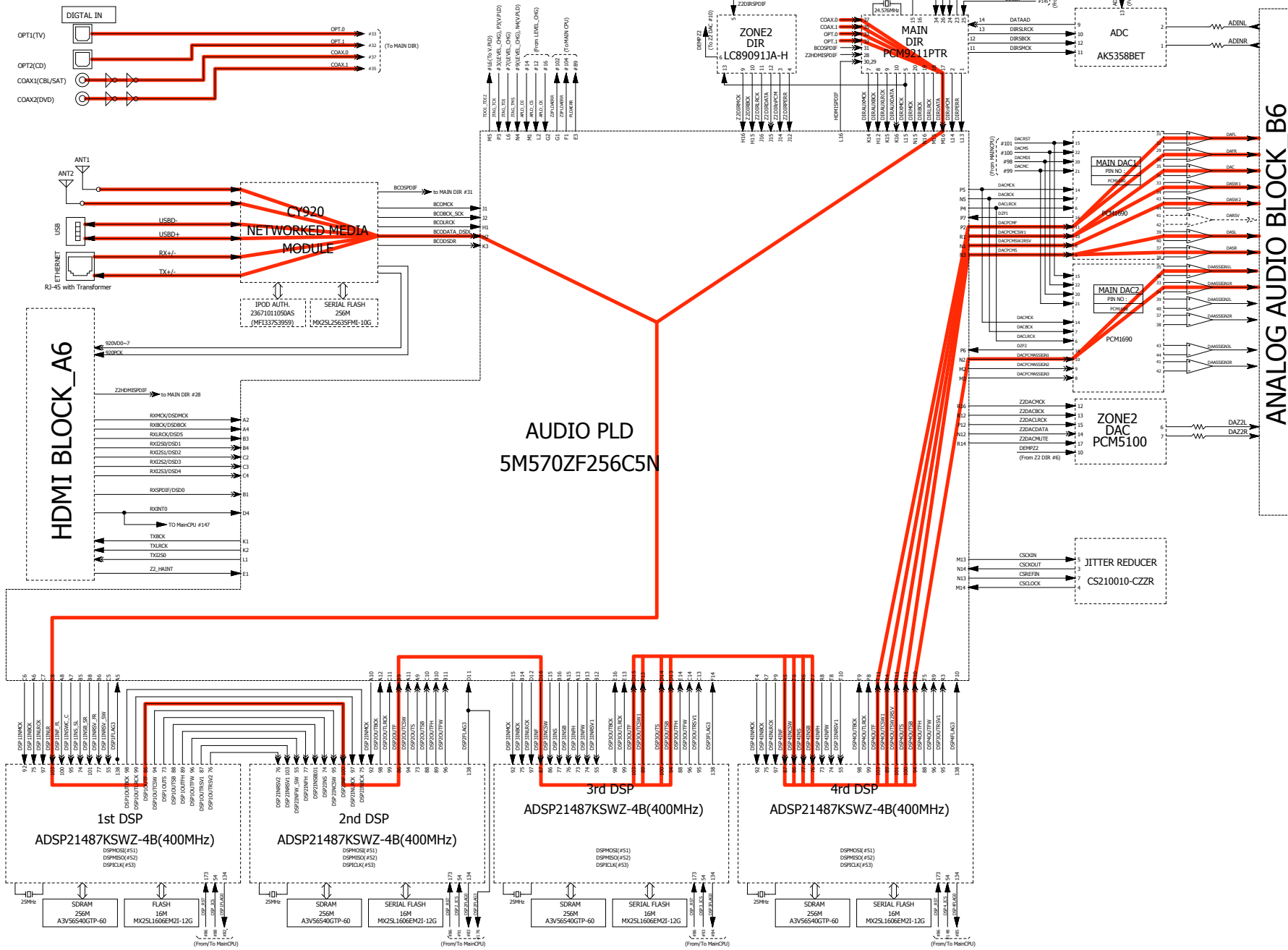
Mechanical

Repair Information

Updating

fig.02b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

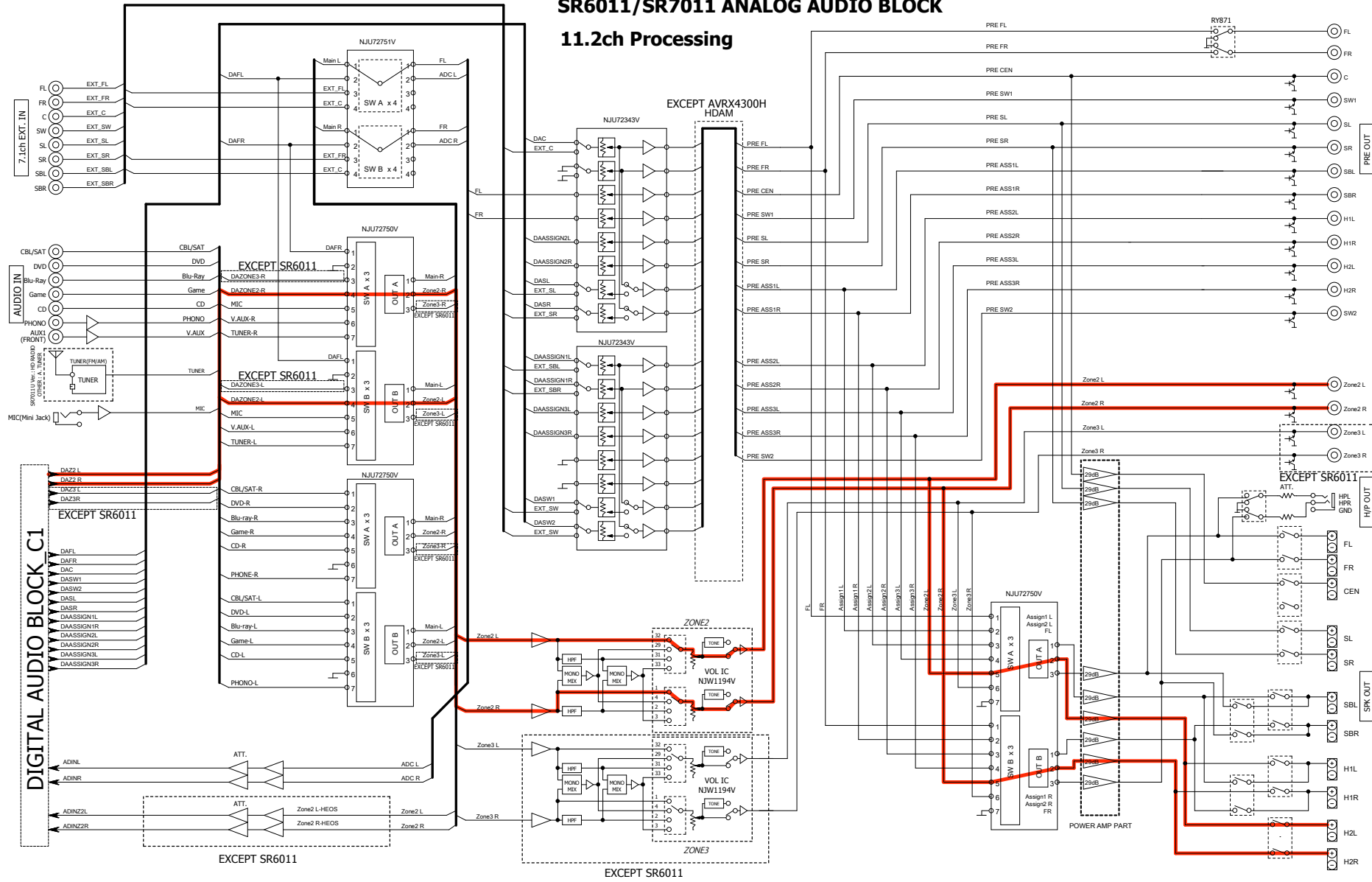
Mechanical

Repair Information

Updating

fig.03a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

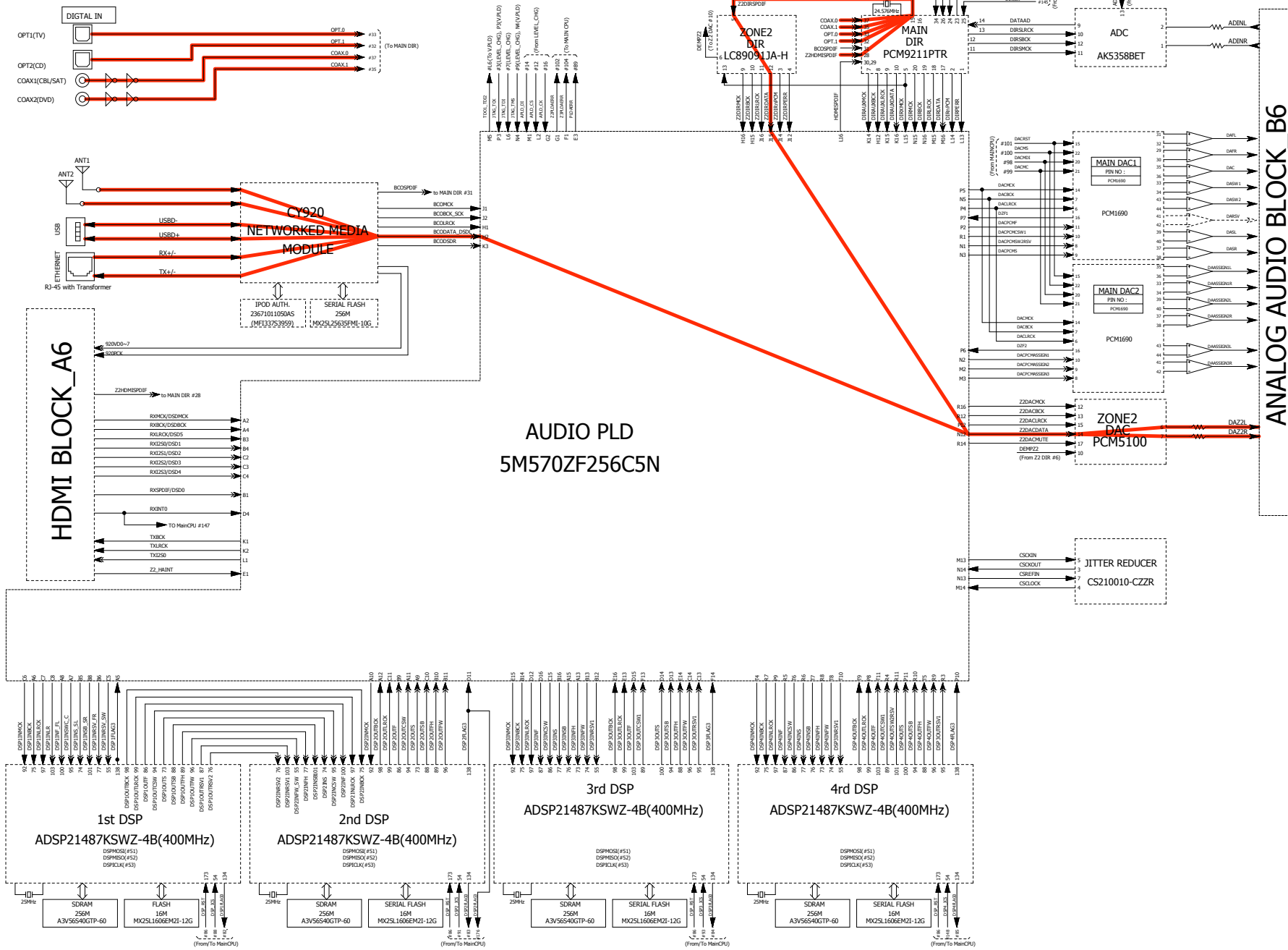
Mechanical

Repair Information

Updating

fig.03b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

fig.03c

SR6011 HDMI BLOCK

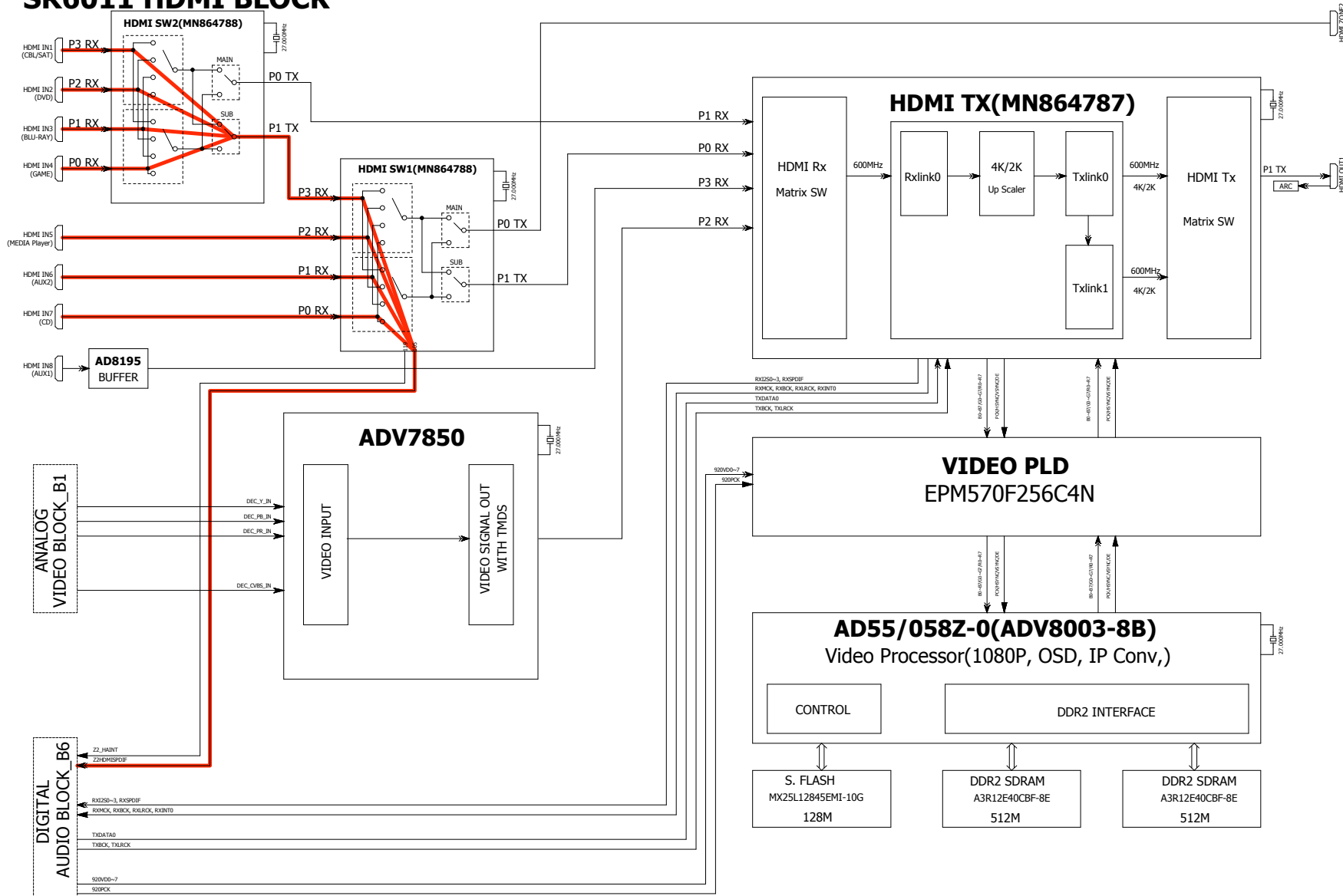
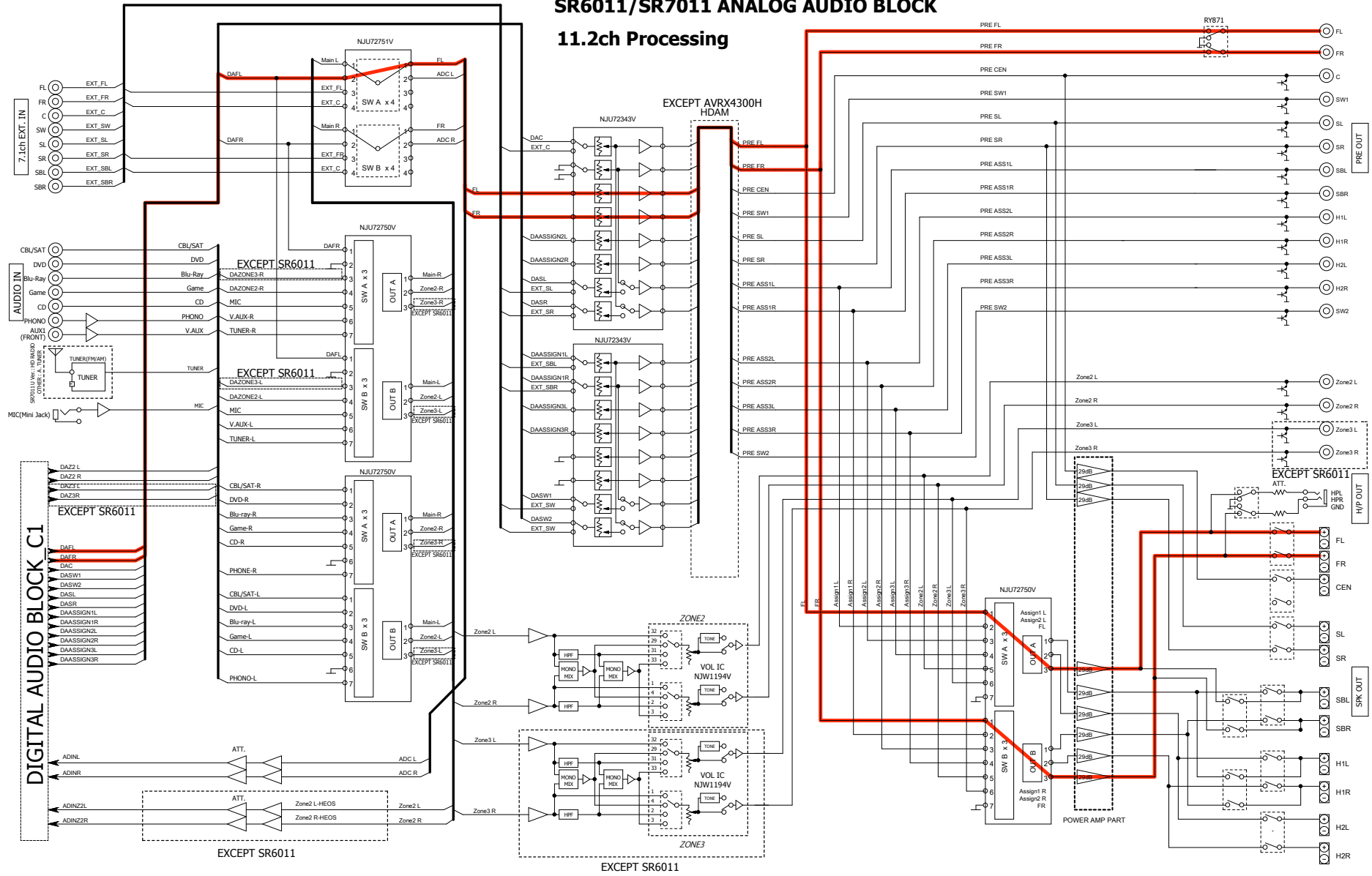


fig.04a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

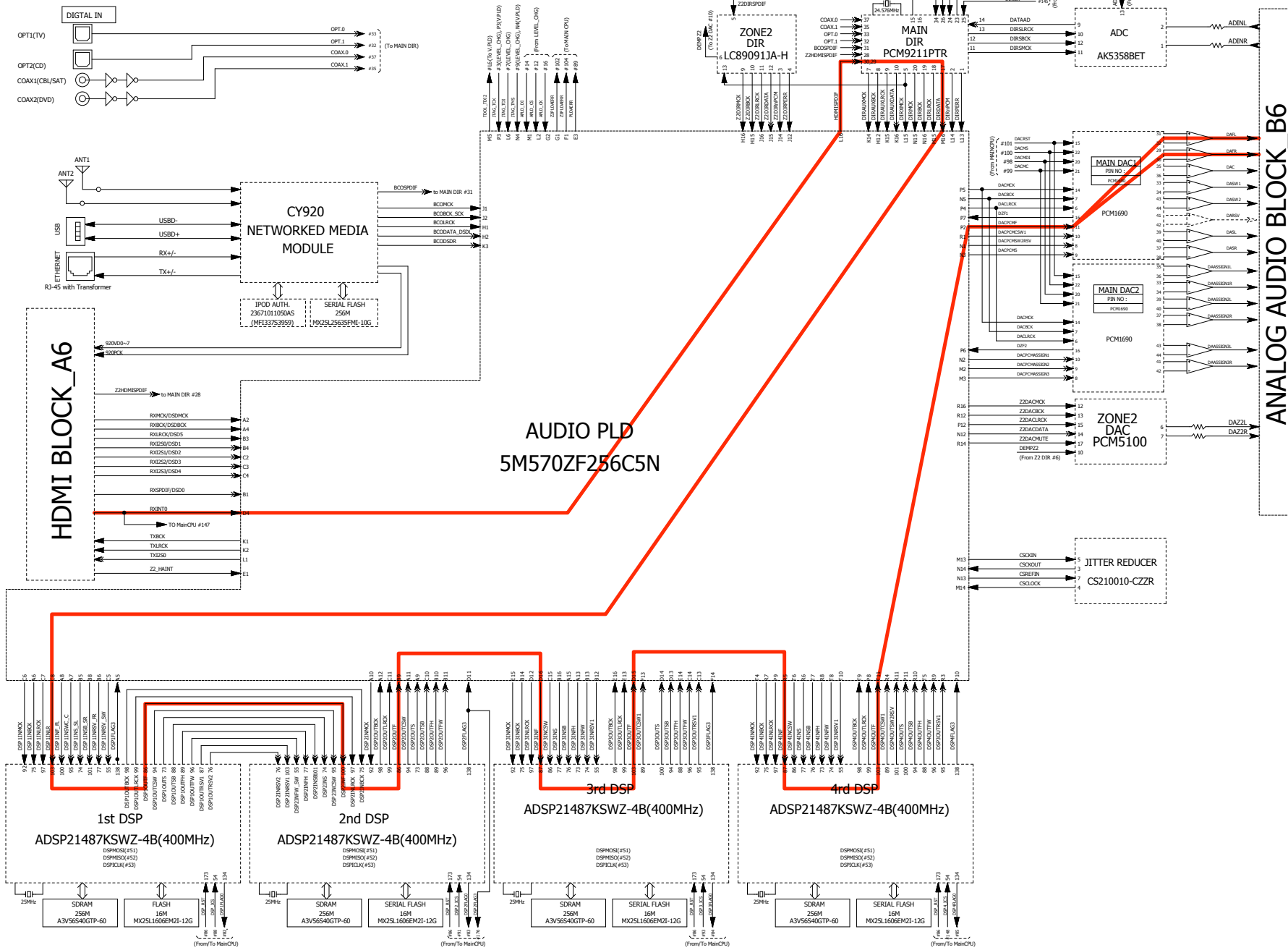
Mechanical

Repair Information

Updating

fig.04b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

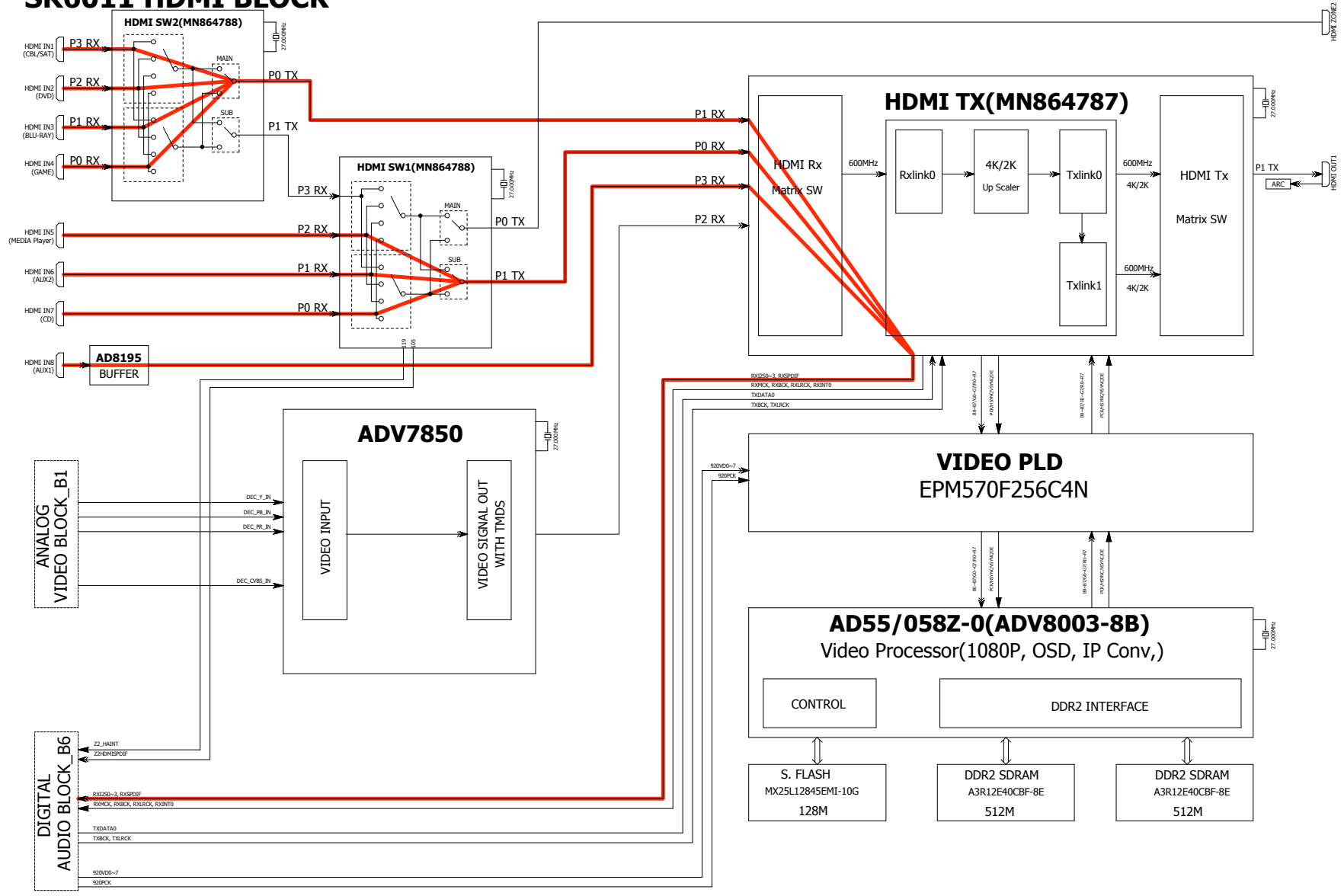
Mechanical

Repair Information

Updating

fig.04c

SR6011 HDMI BLOCK



Caution in servicing

Electrical

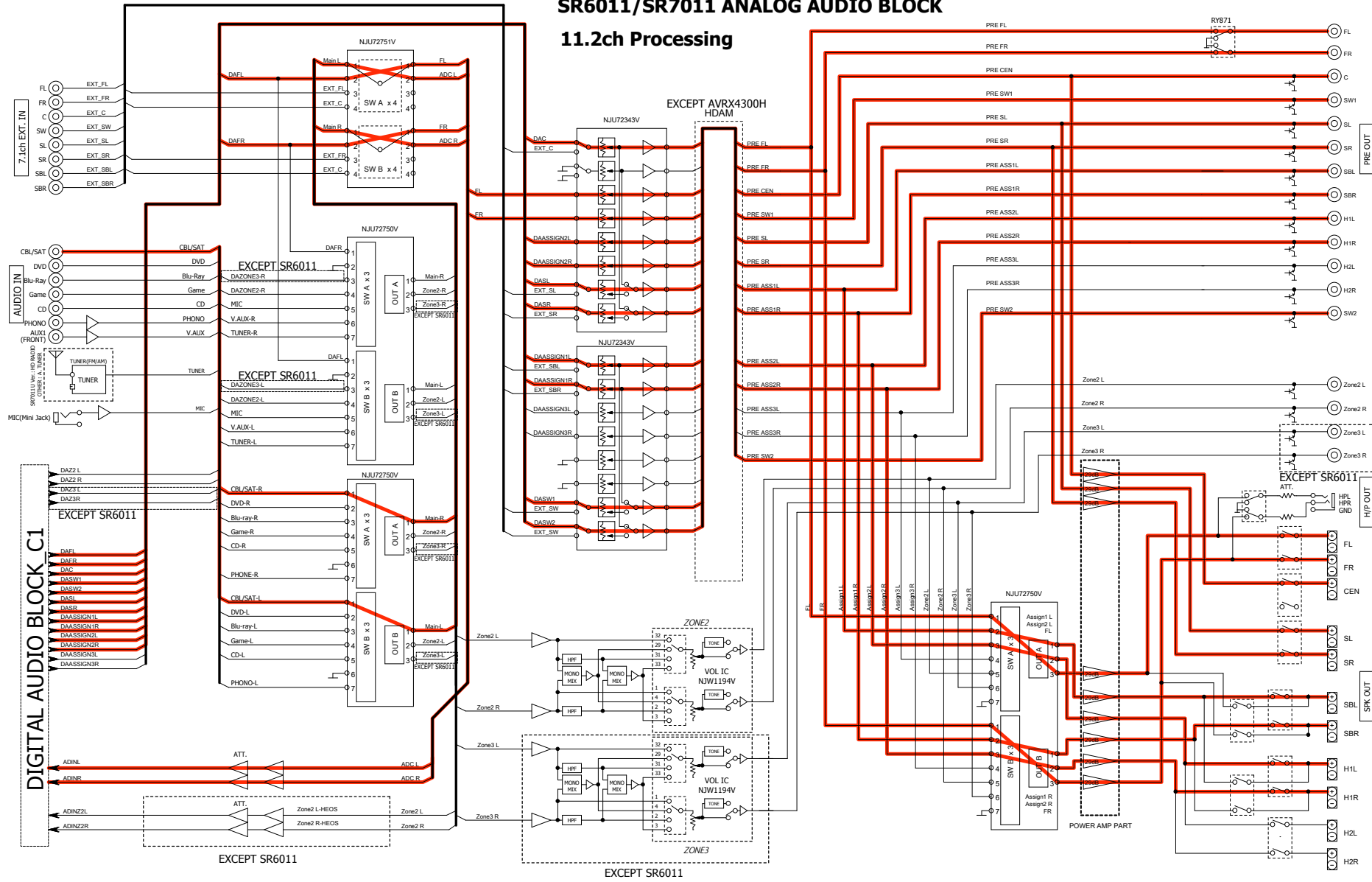
Mechanical

Repair Information

Updating

fig.05a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

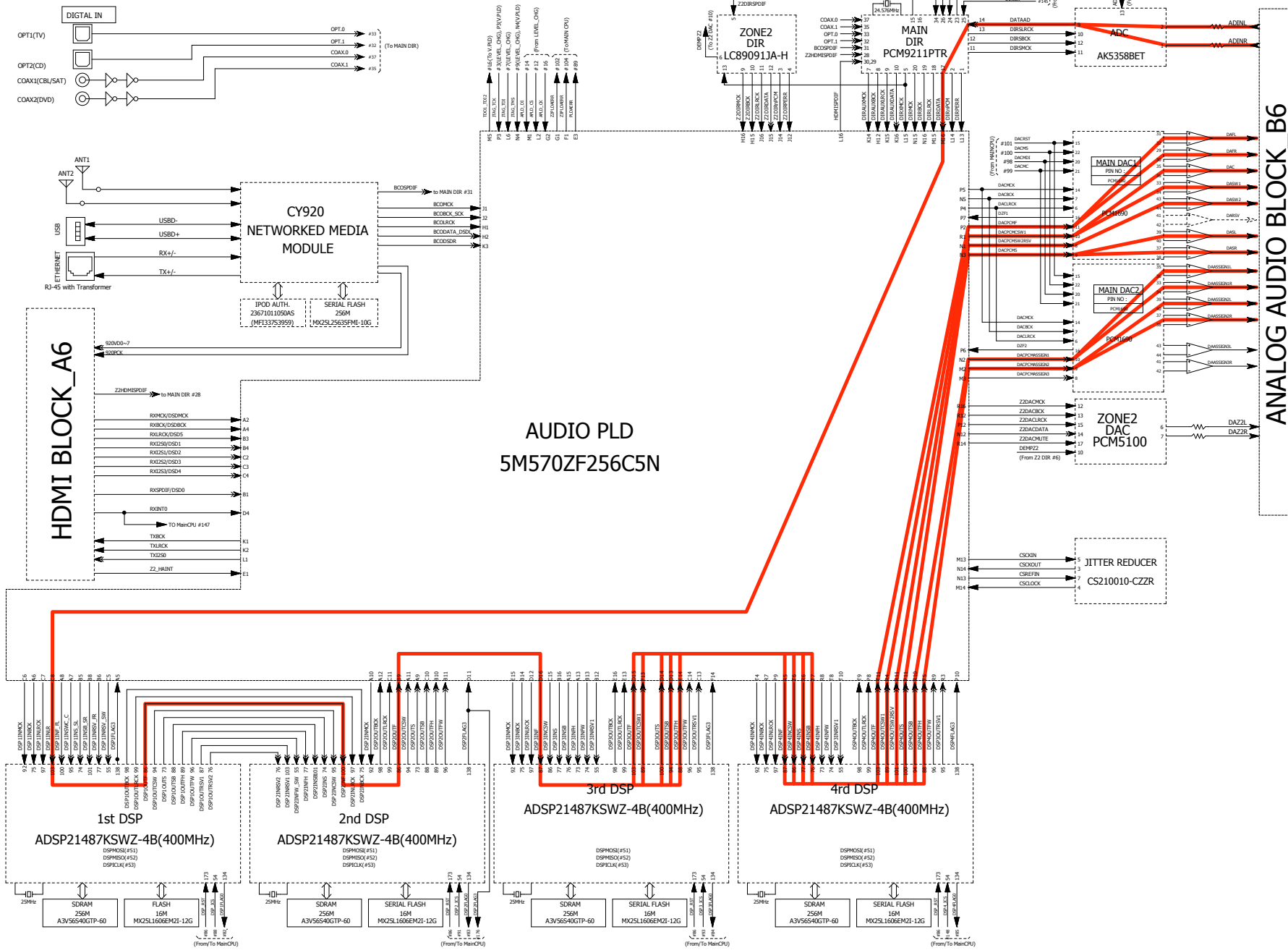
Mechanical

Repair Information

Updating

fig.05b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

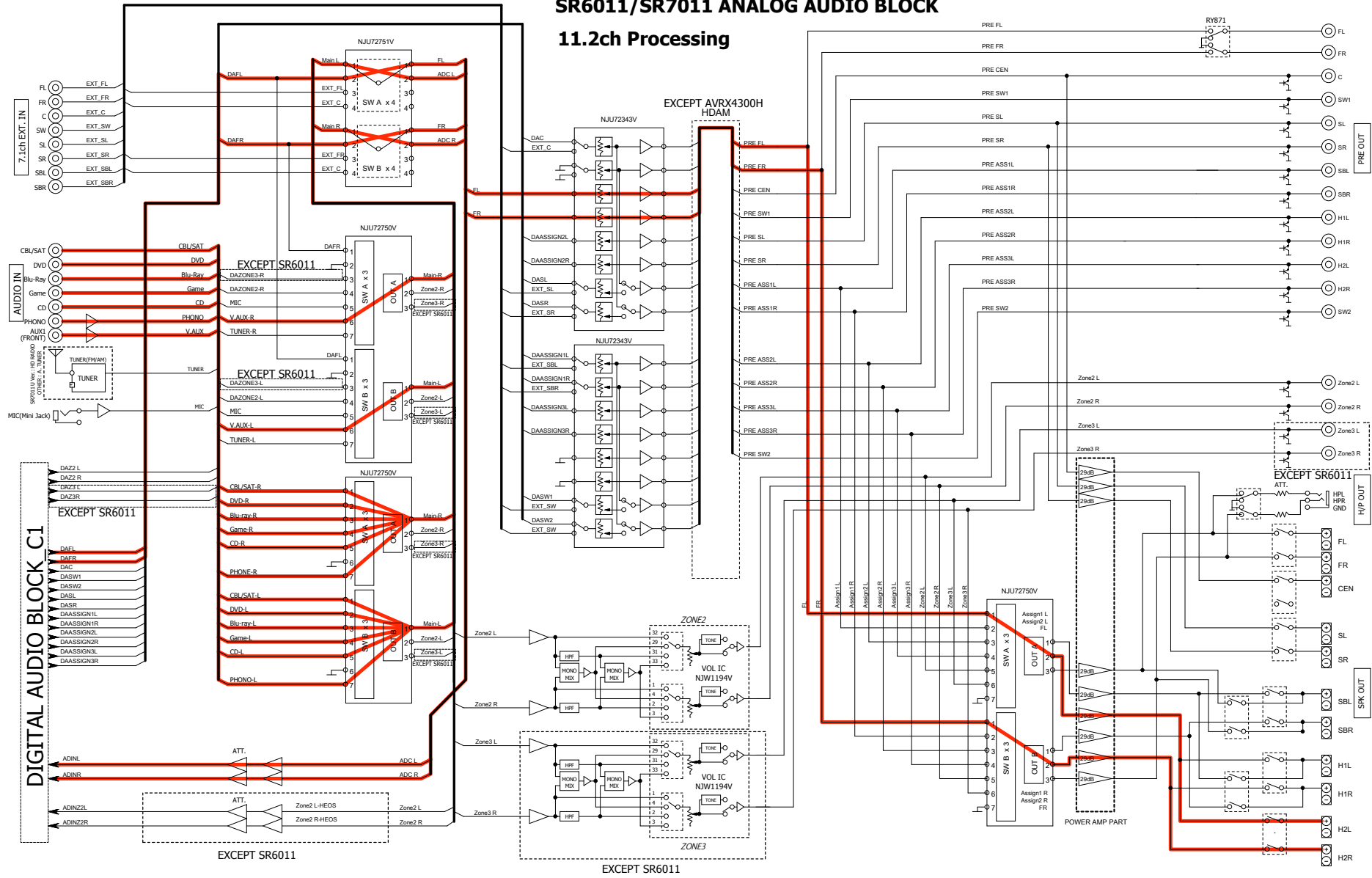
Mechanical

Repair Information

Updating

fig.07a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

fig.07b

SR6011 DIGITAL AUDIO BLOCK(ADI)

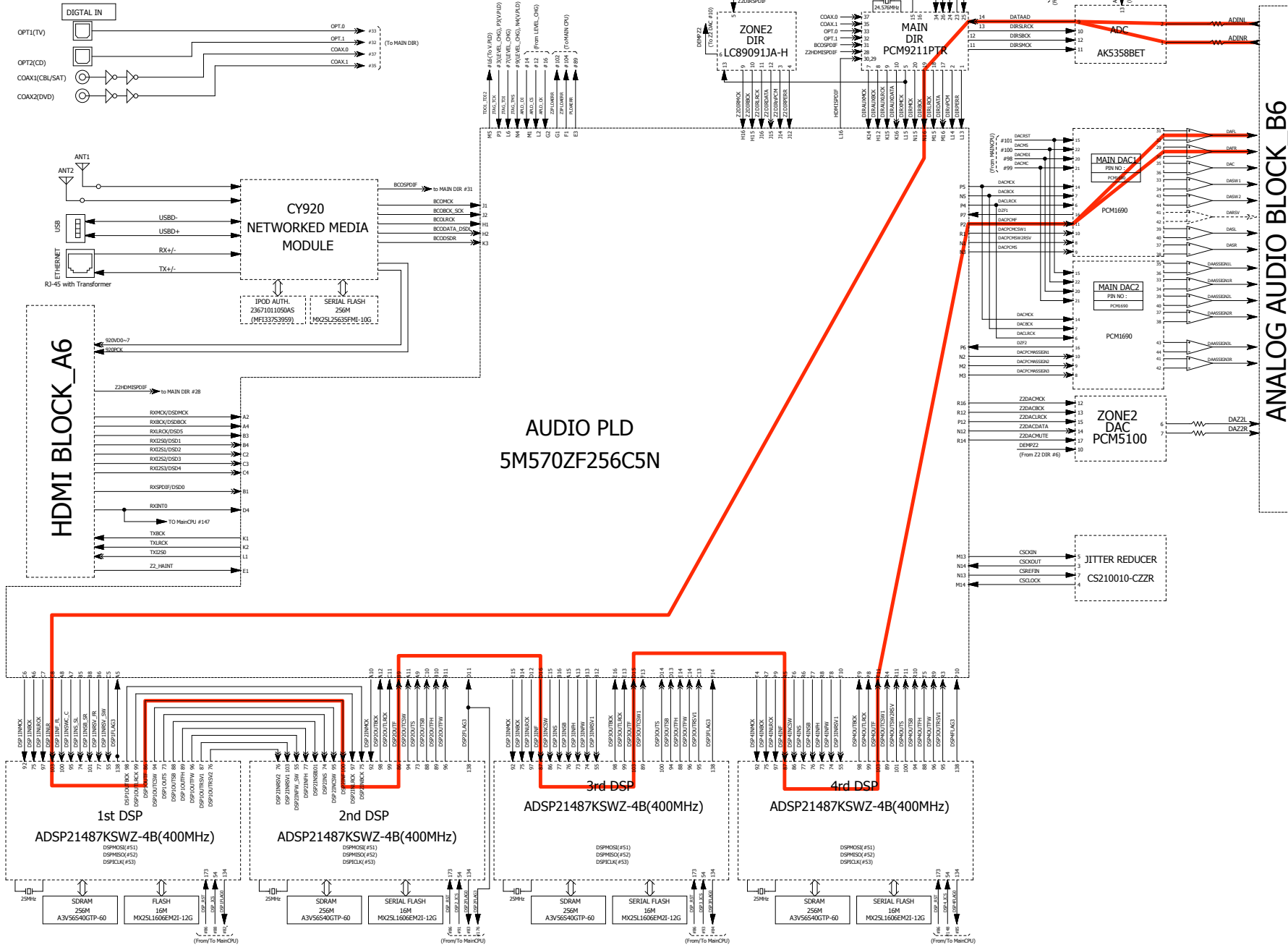
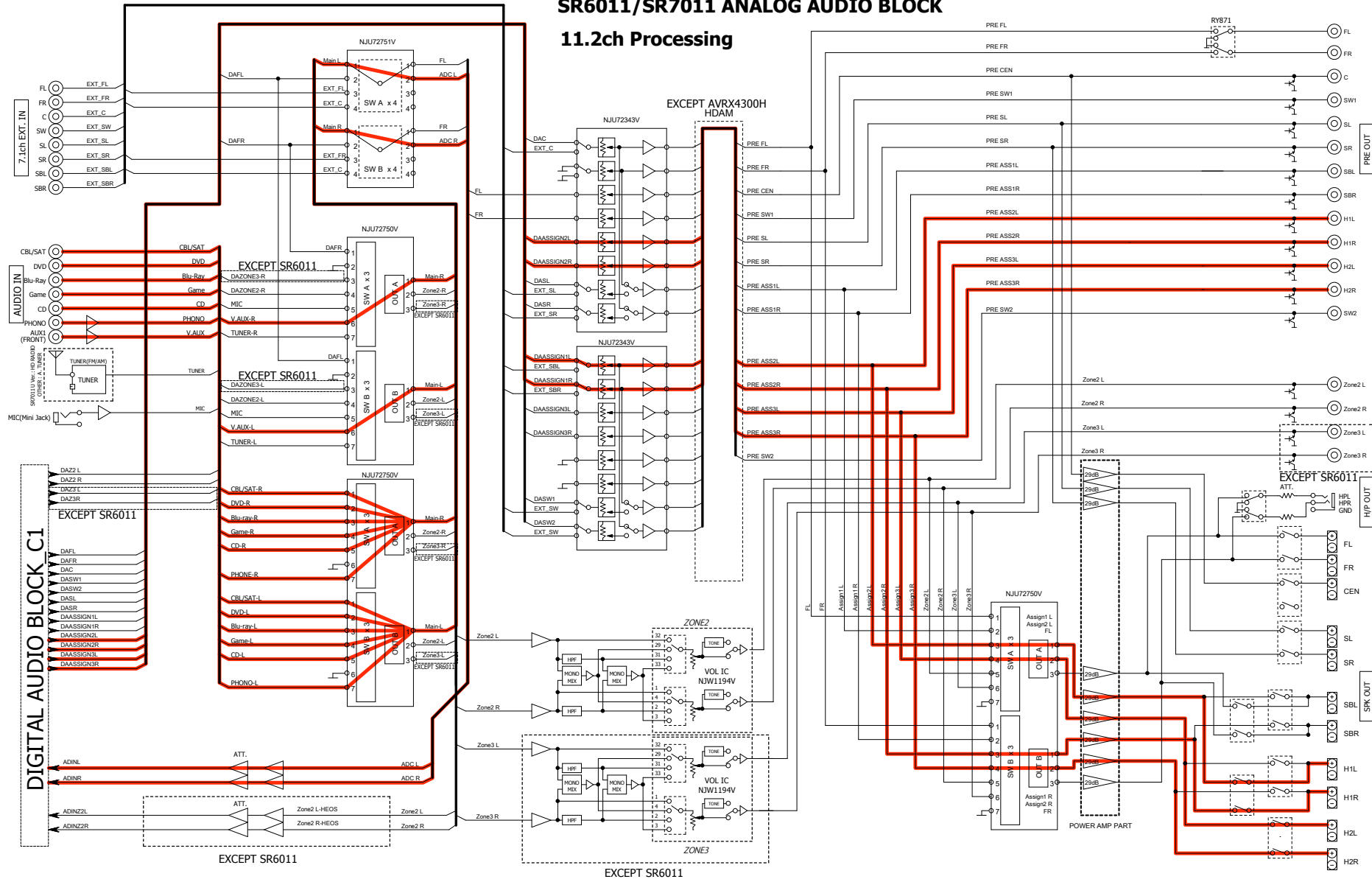


fig.08a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

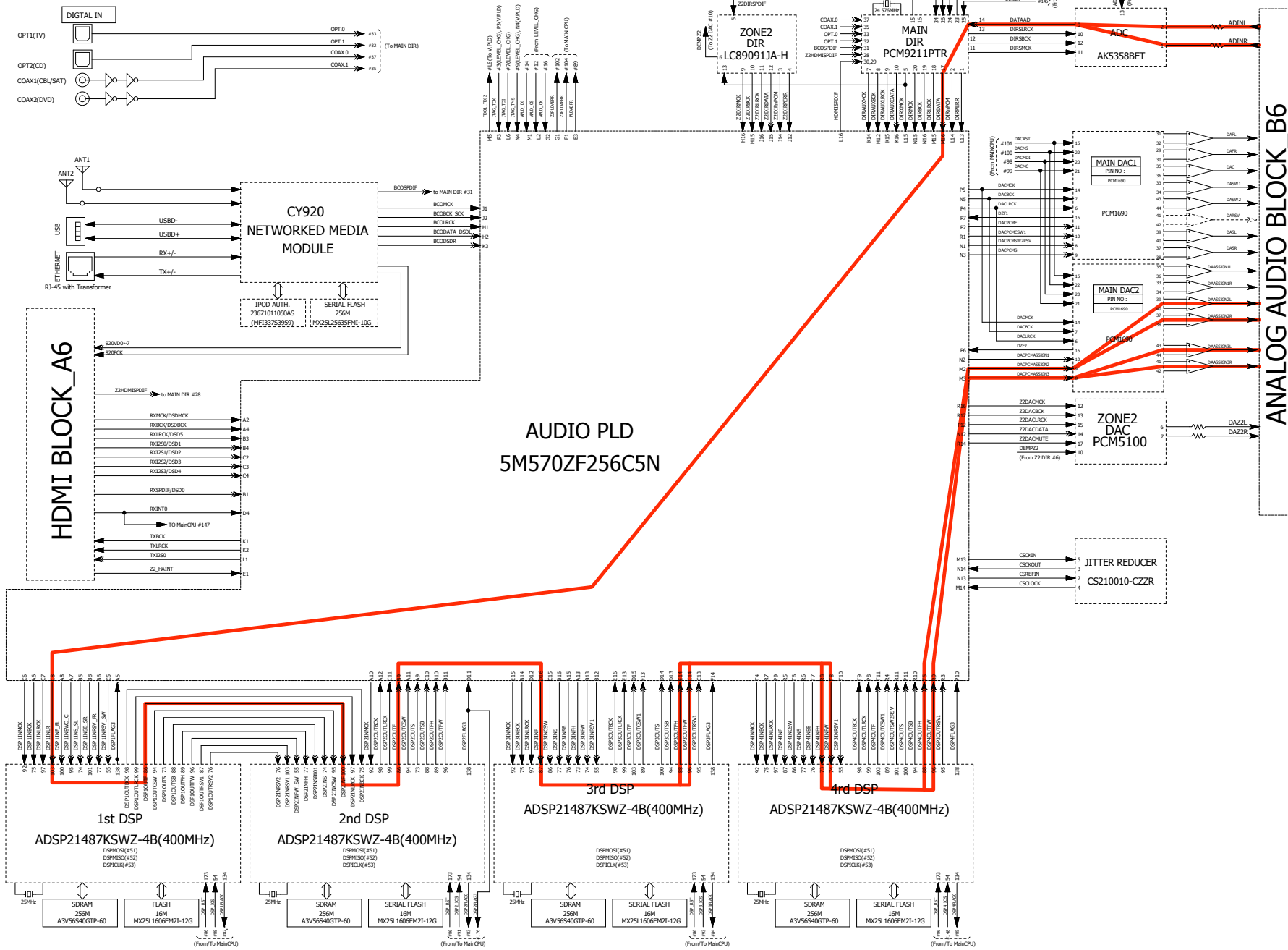
Mechanical

Repair Information

Updating

fig.08b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

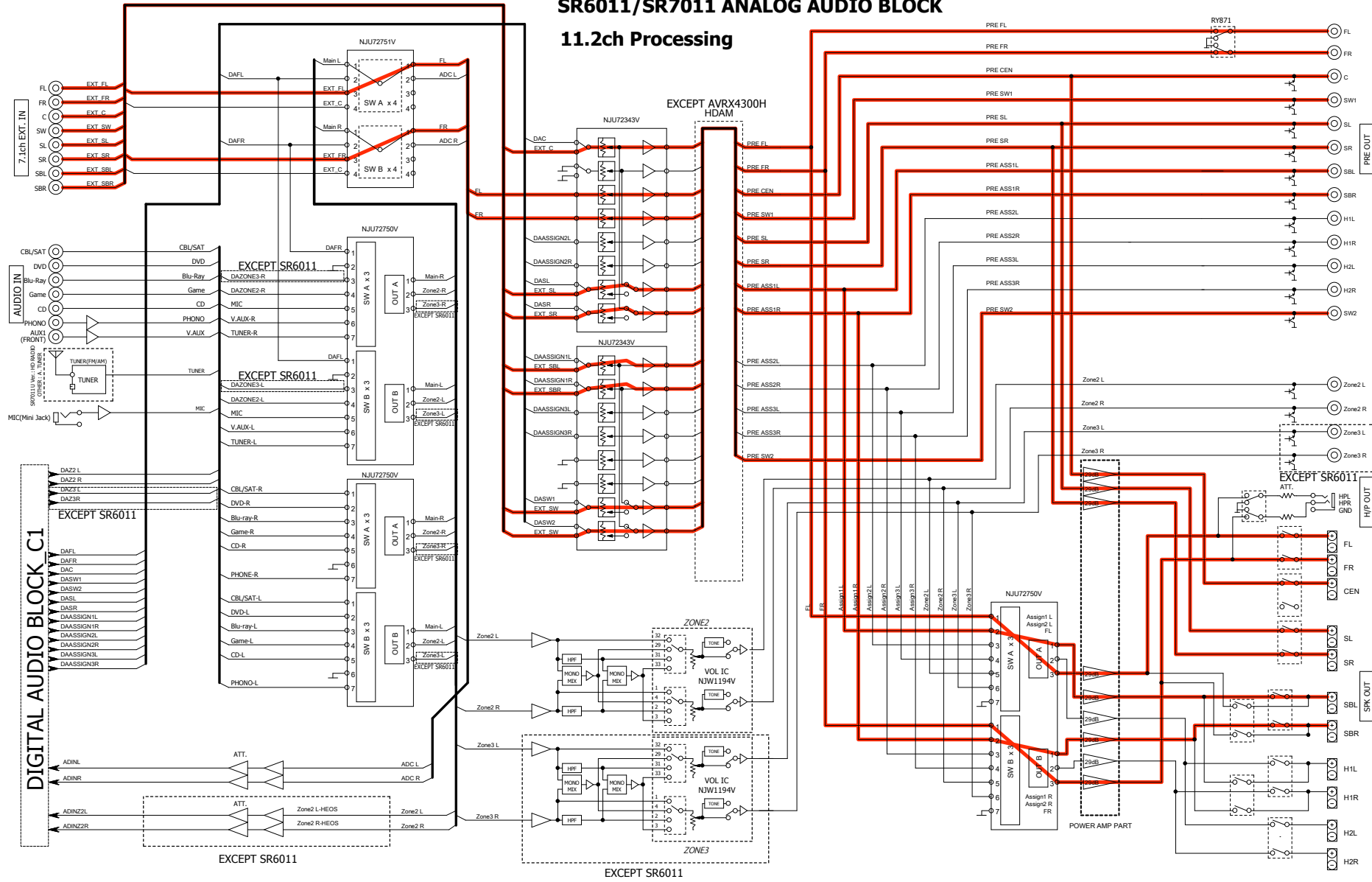
Mechanical

Repair Information

Updating

fig.09

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in Servicing

Electrical

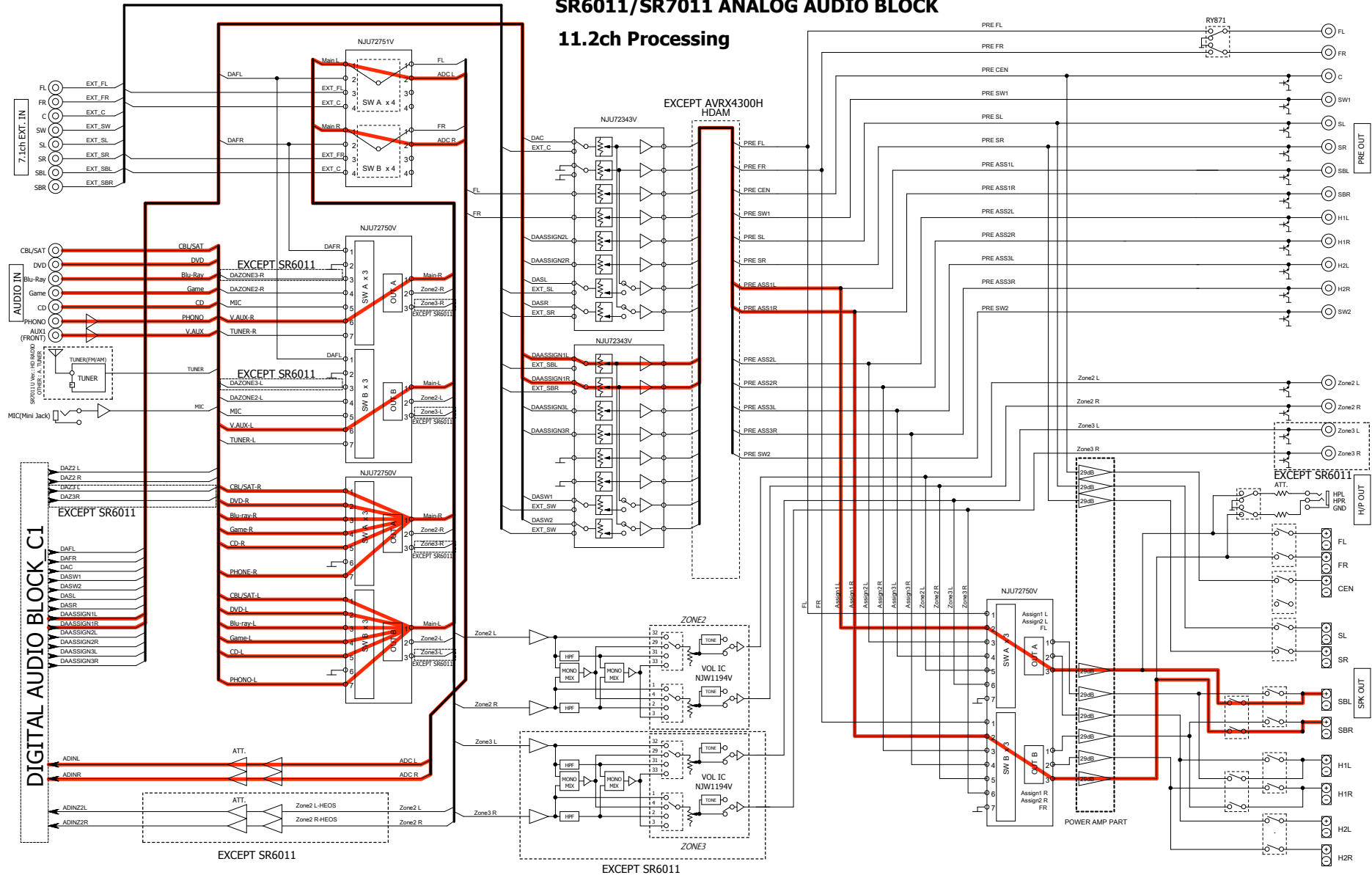
Mechanical

Repair Information

Updating

fig.10a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

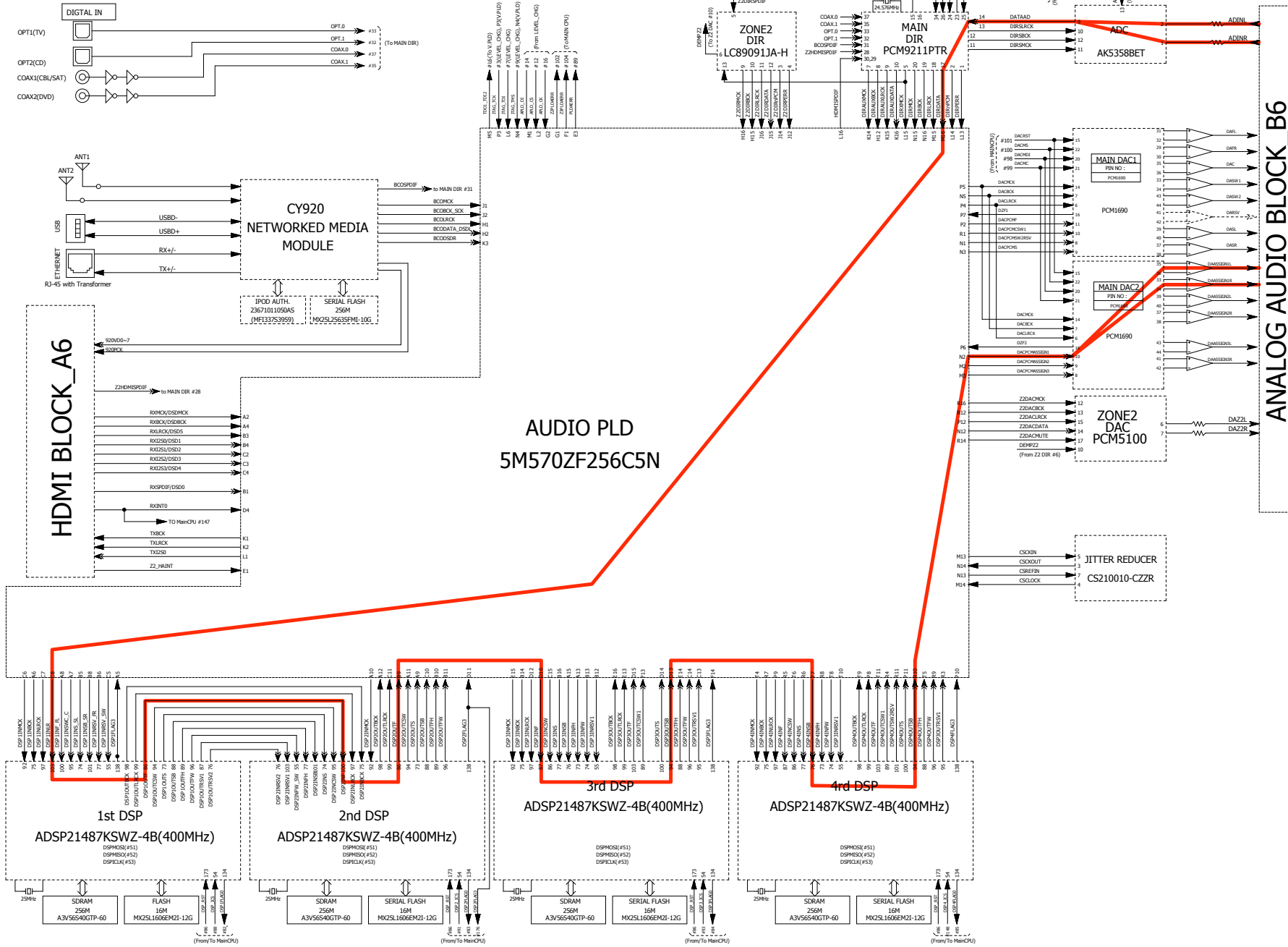
Mechanical

Repair Information

Updating

fig.10b

SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing

Electrical

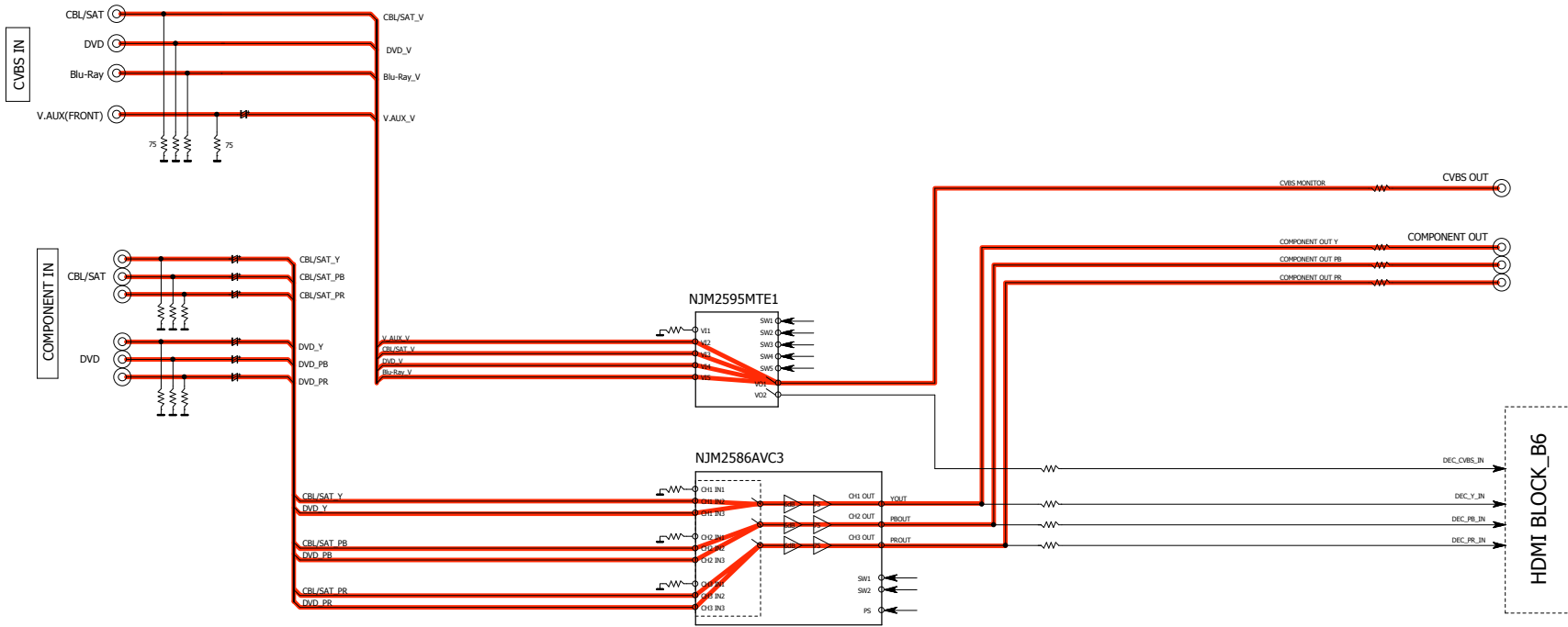
Mechanical

Repair Information

Updating

fig.11

SR6011 ANALOG VIDEO BLOCK



Caution in servicing

Electrical

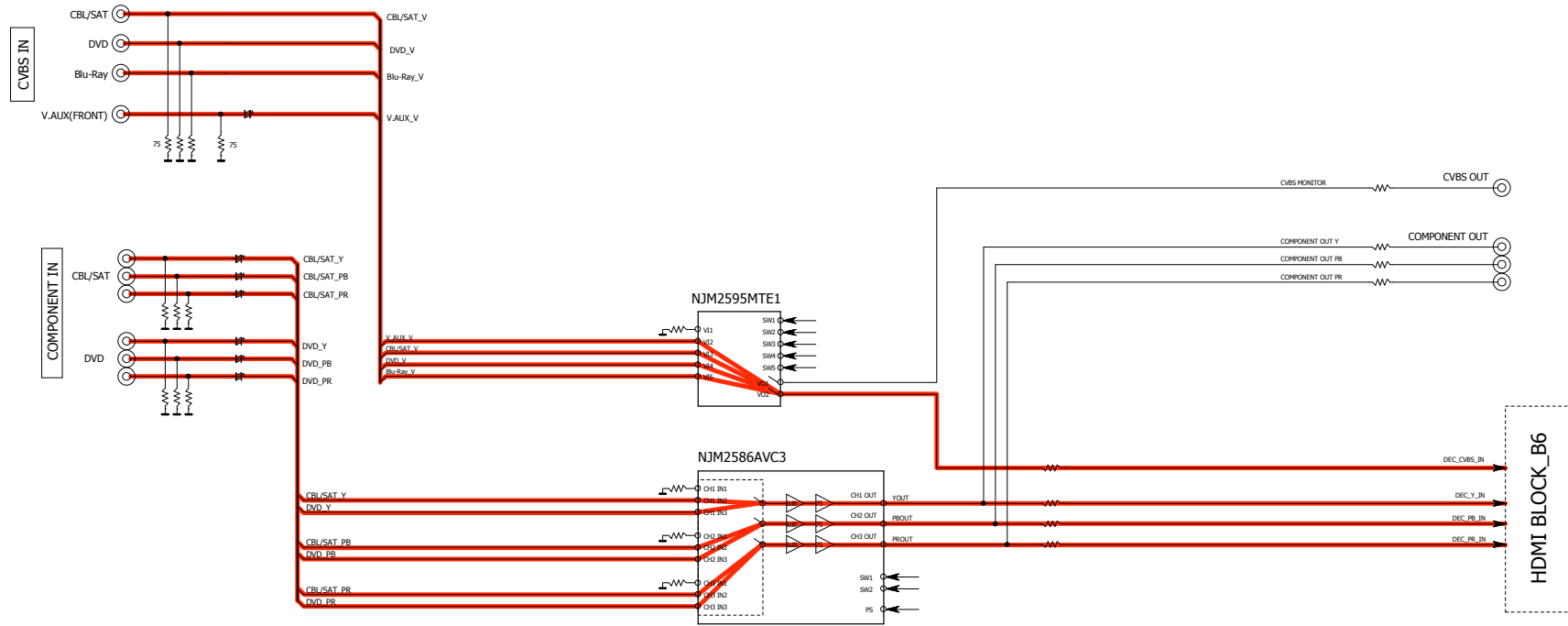
Mechanical

Repair Information

Updating

fig.12a

SR6011 ANALOG VIDEO BLOCK



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

fig.12b

SR6011 HDMI BLOCK

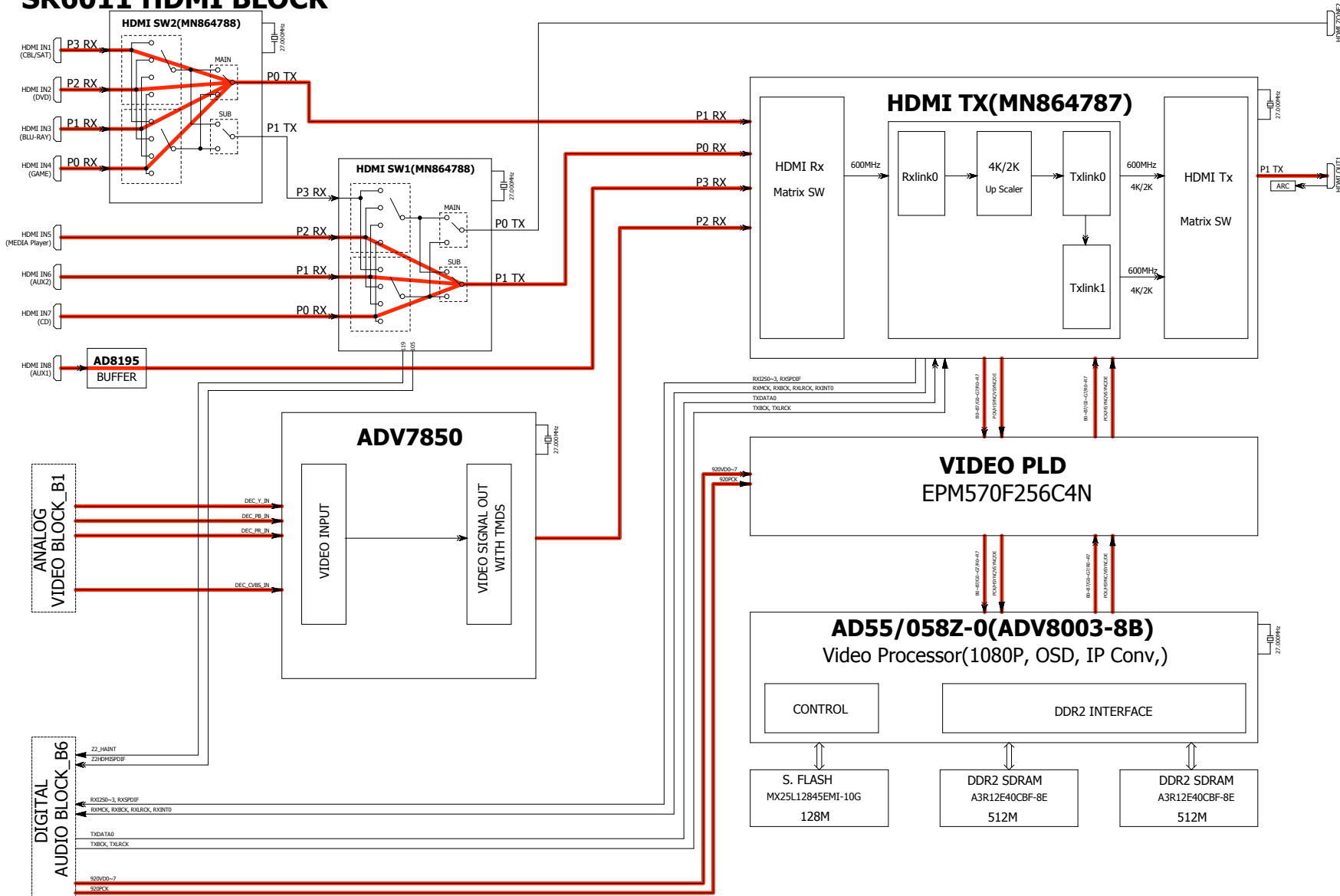
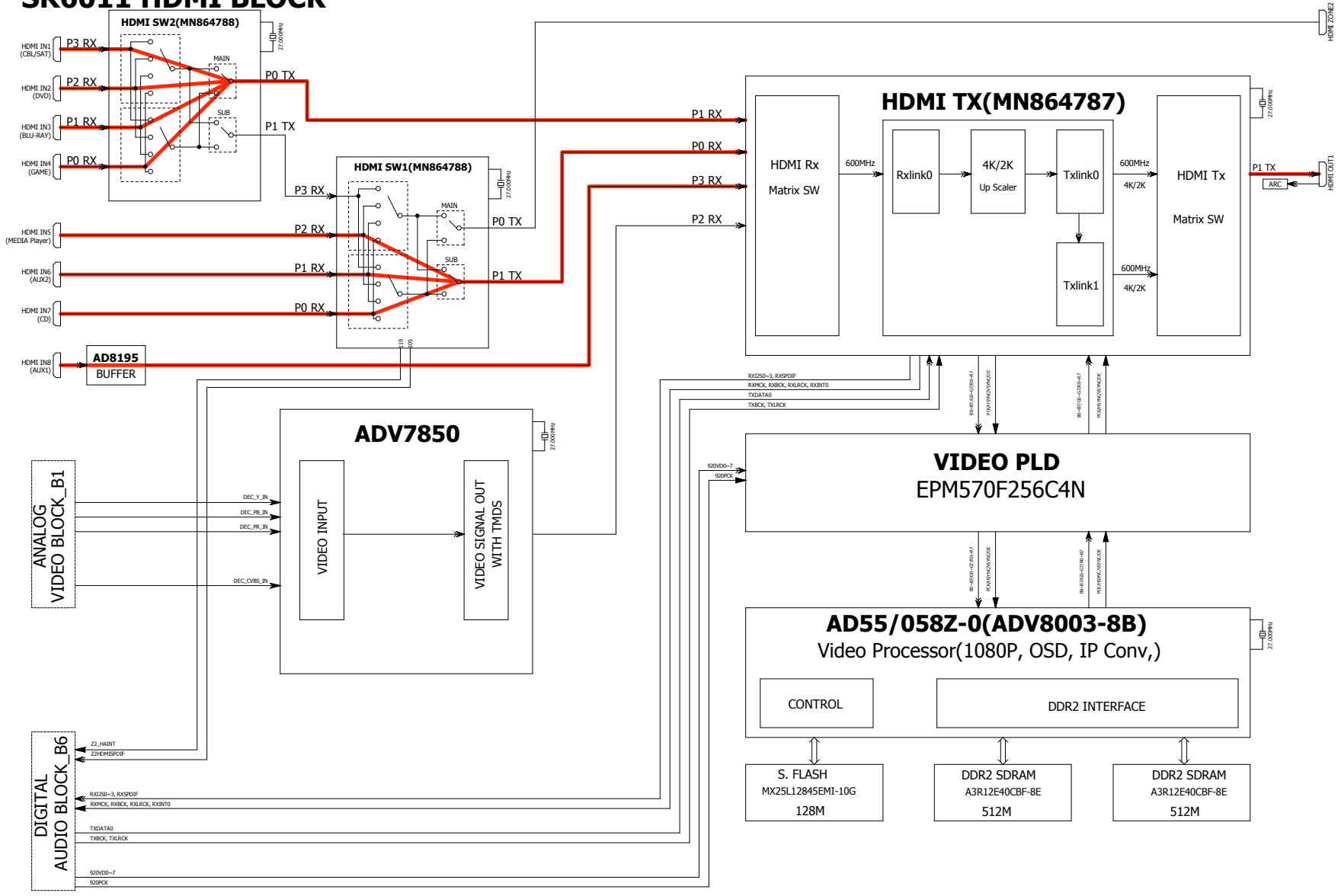


fig.13

SR6011 HDMI BLOCK



Caution in servicing

Electrical

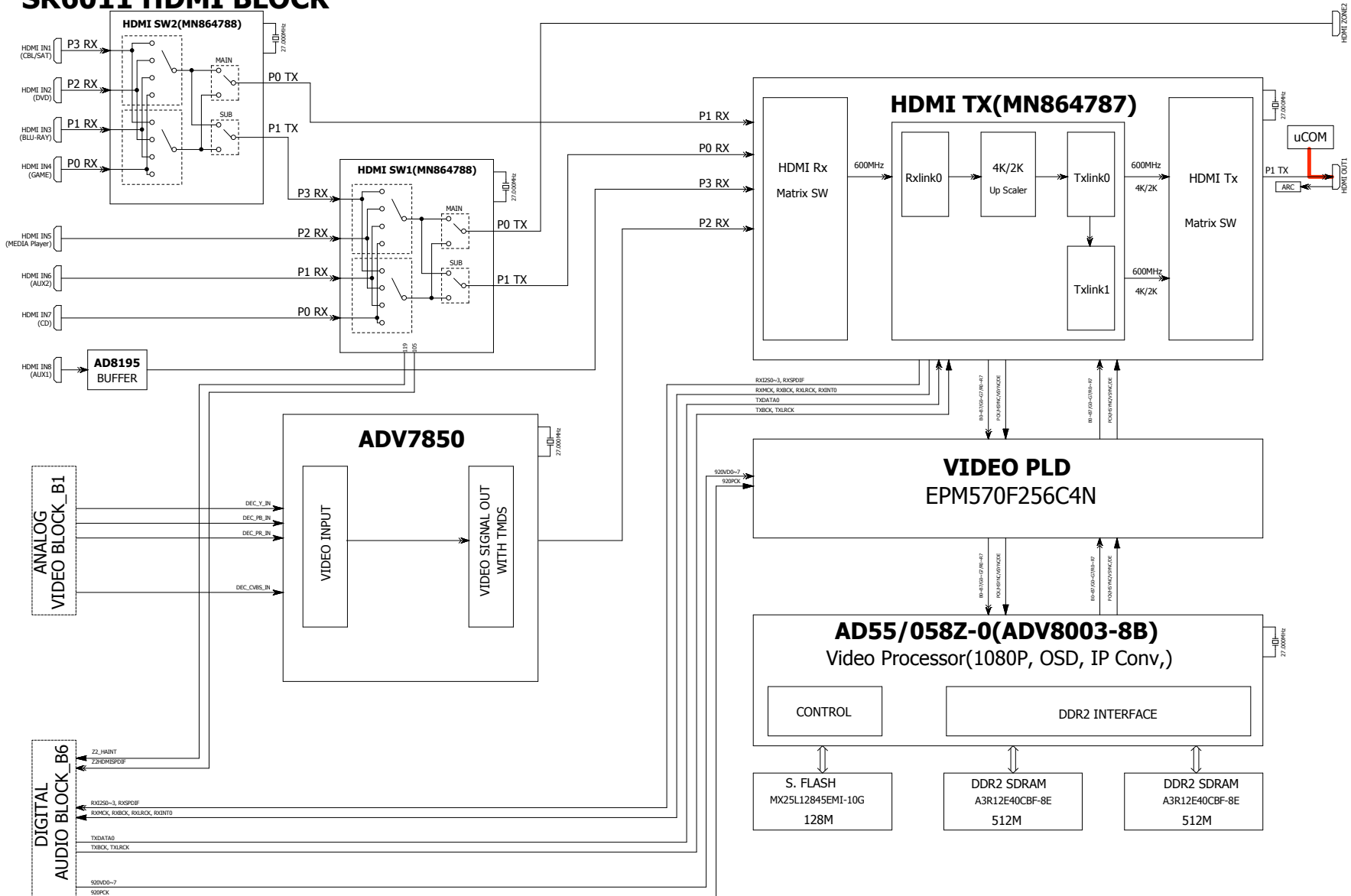
Mechanical

Repair Information

Updating

fig.14

SR6011 HDMI BLOCK



Caution in servicing

Electrical

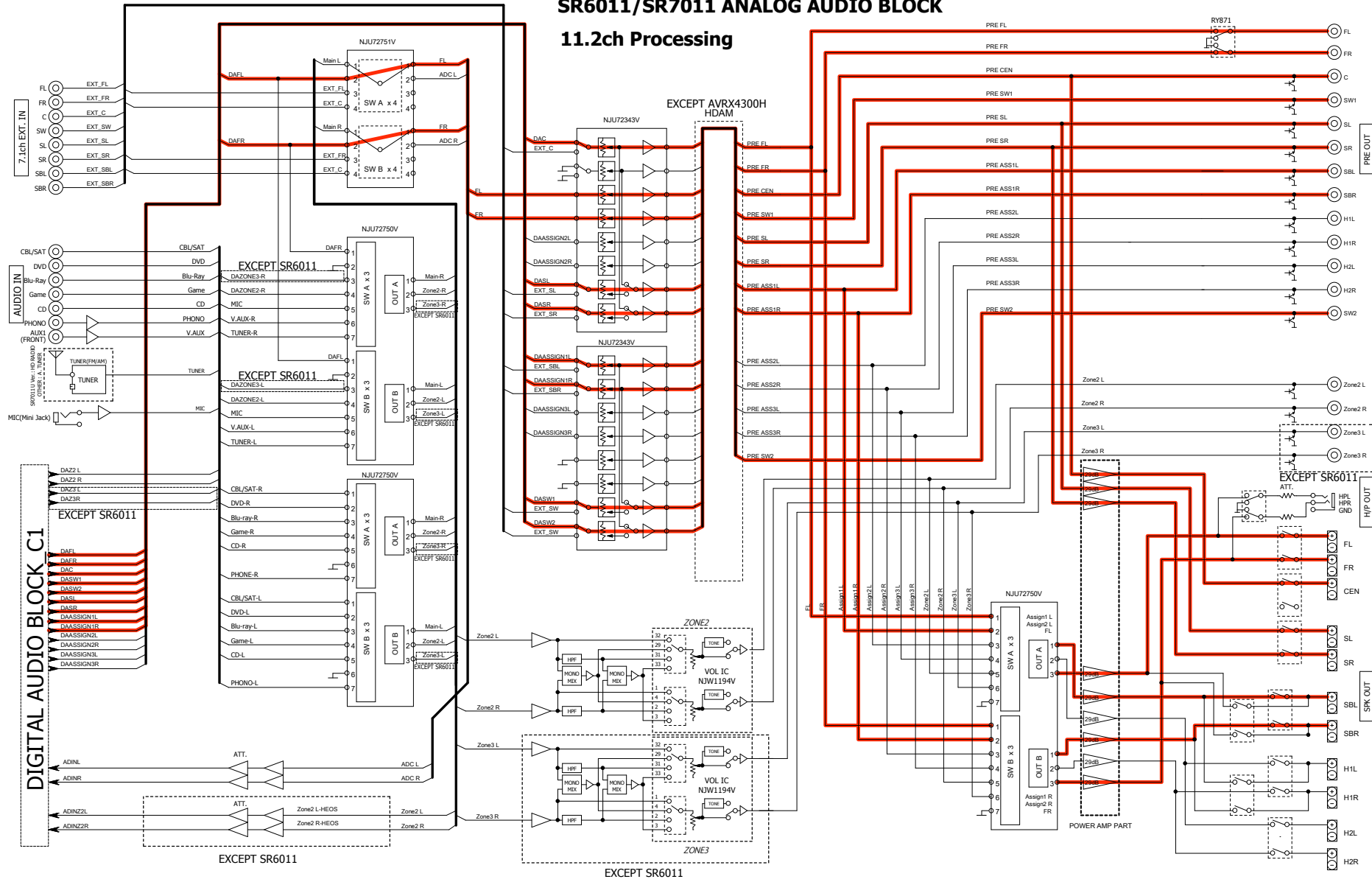
Mechanical

Repair Information

Updating

fig.15a

SR6011/SR7011 ANALOG AUDIO BLOCK 11.2ch Processing



Caution in servicing

Electrical

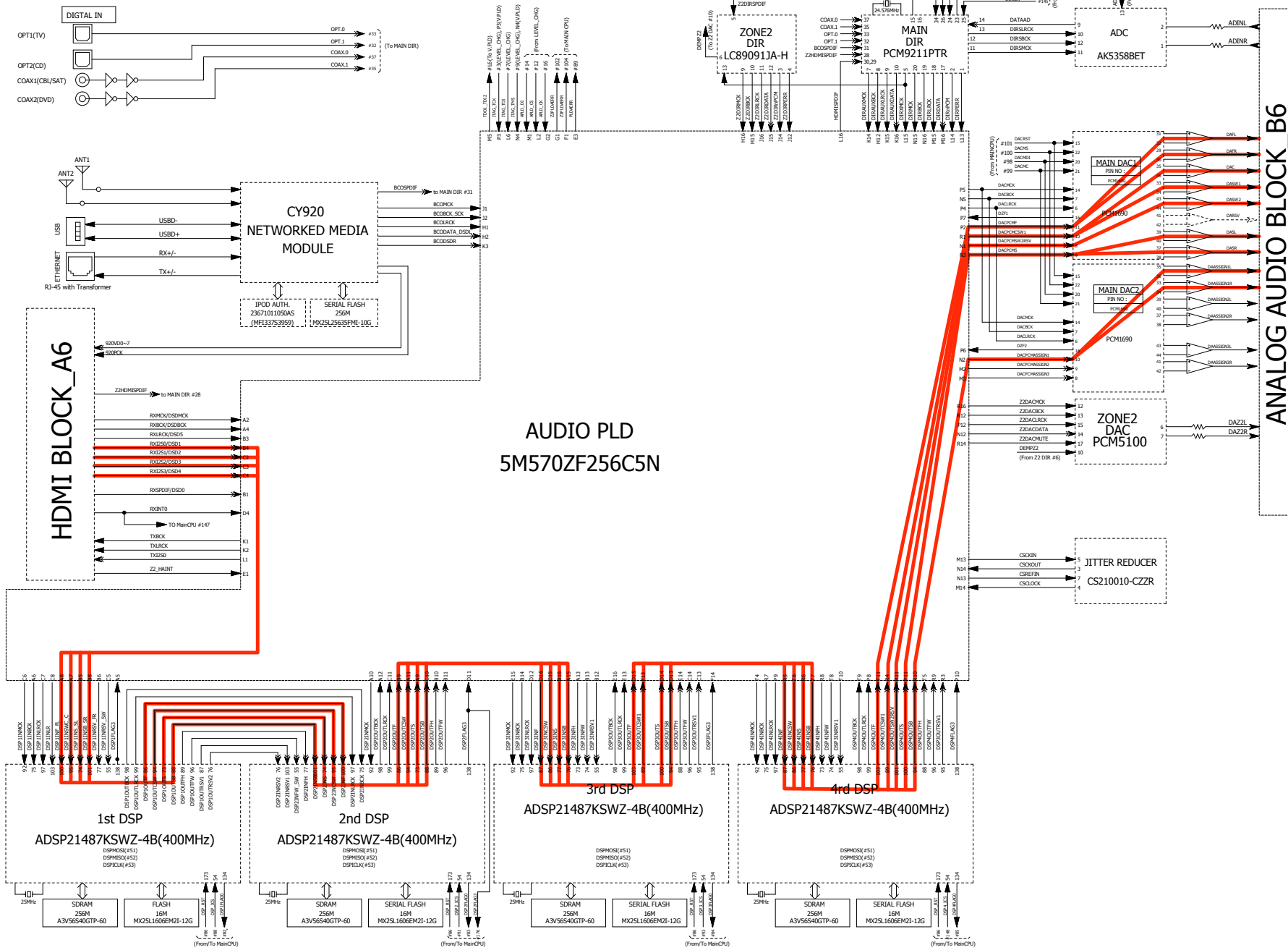
Mechanical

Repair Information

Updating

fig.15b

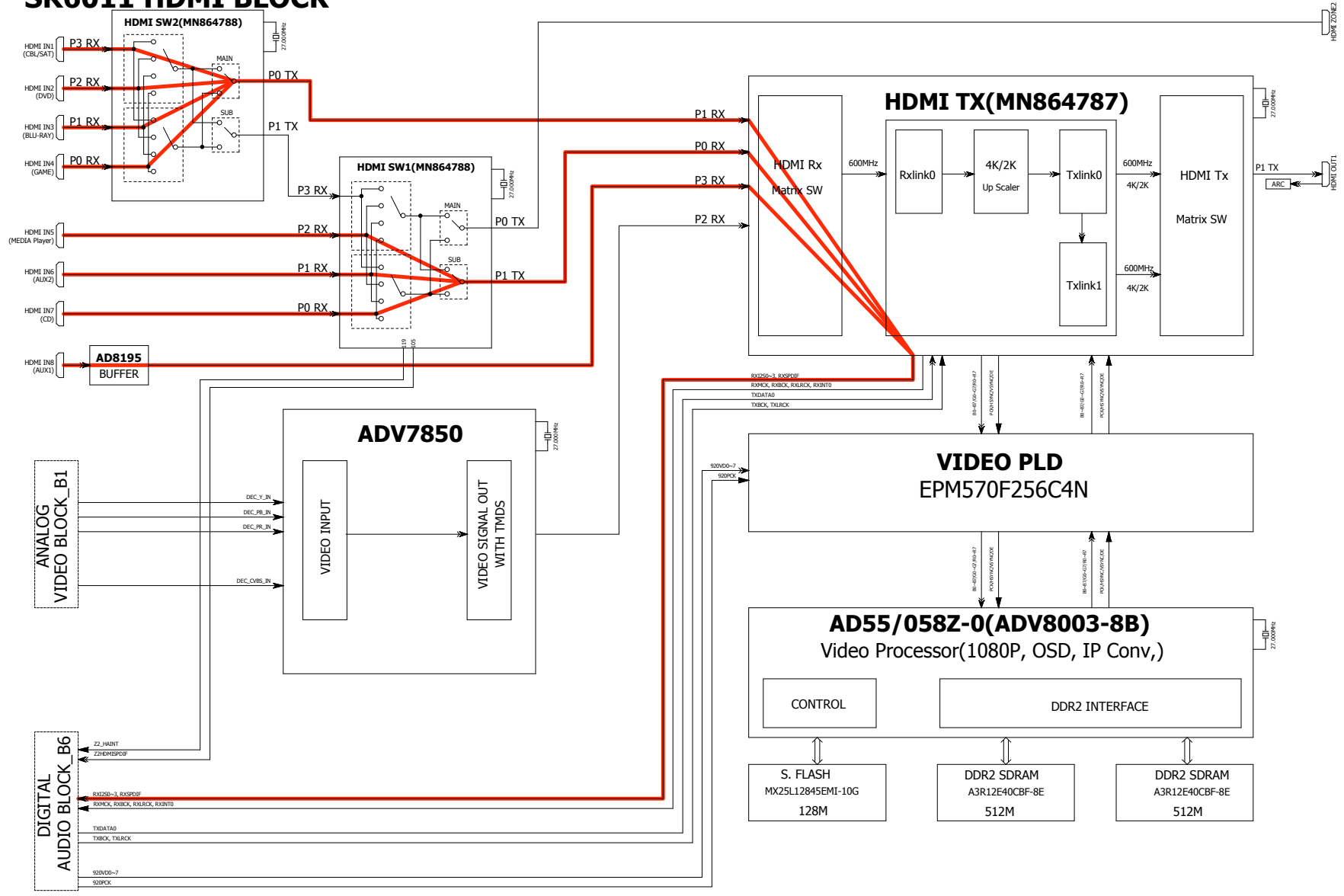
SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing
Electrical
Mechanical
Repair Information
Updating

fig.15c

SR6011 HDMI BLOCK



Caution in servicing

Electrical

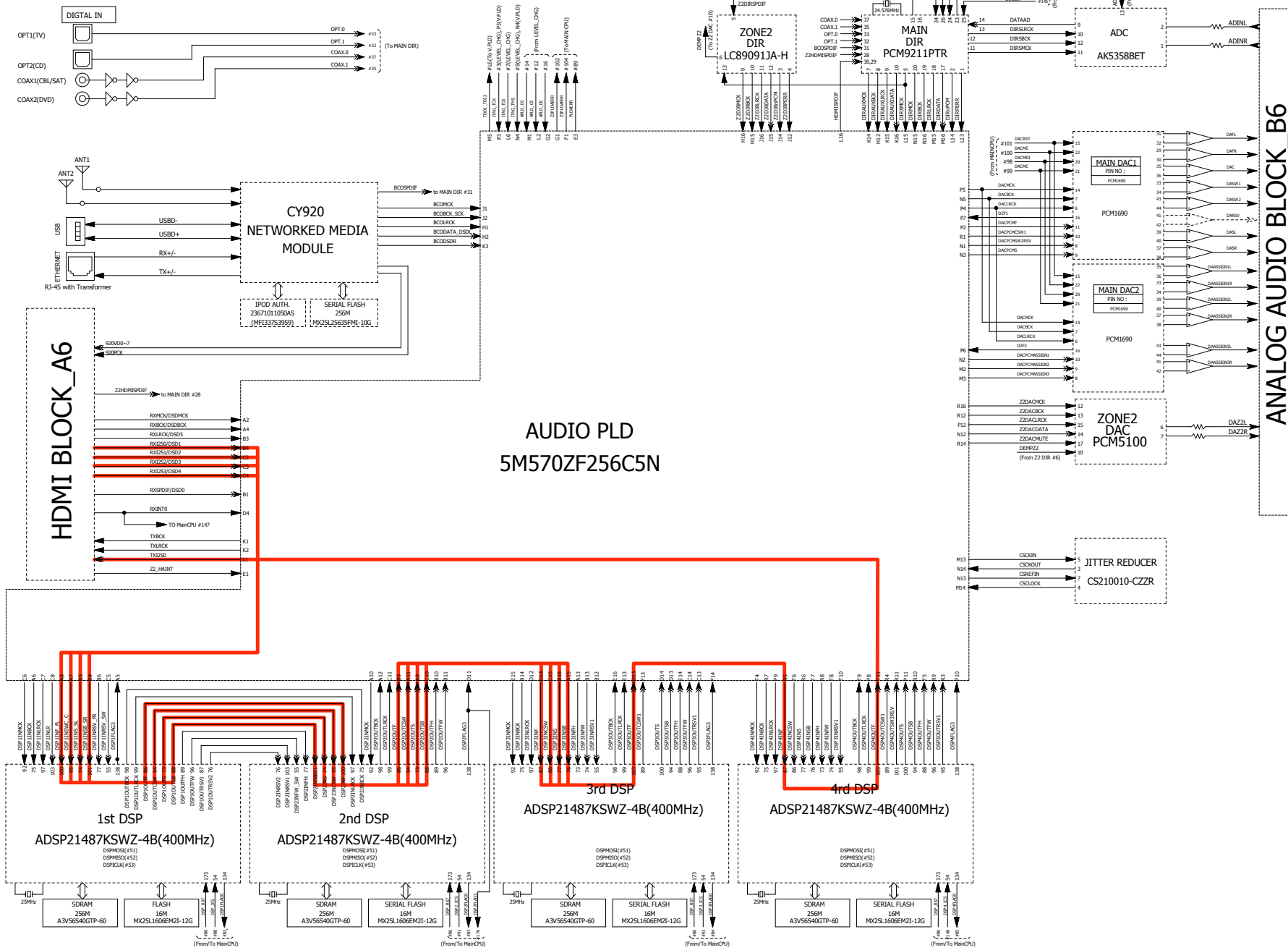
Mechanical

Repair Information

Updating

fig.16a

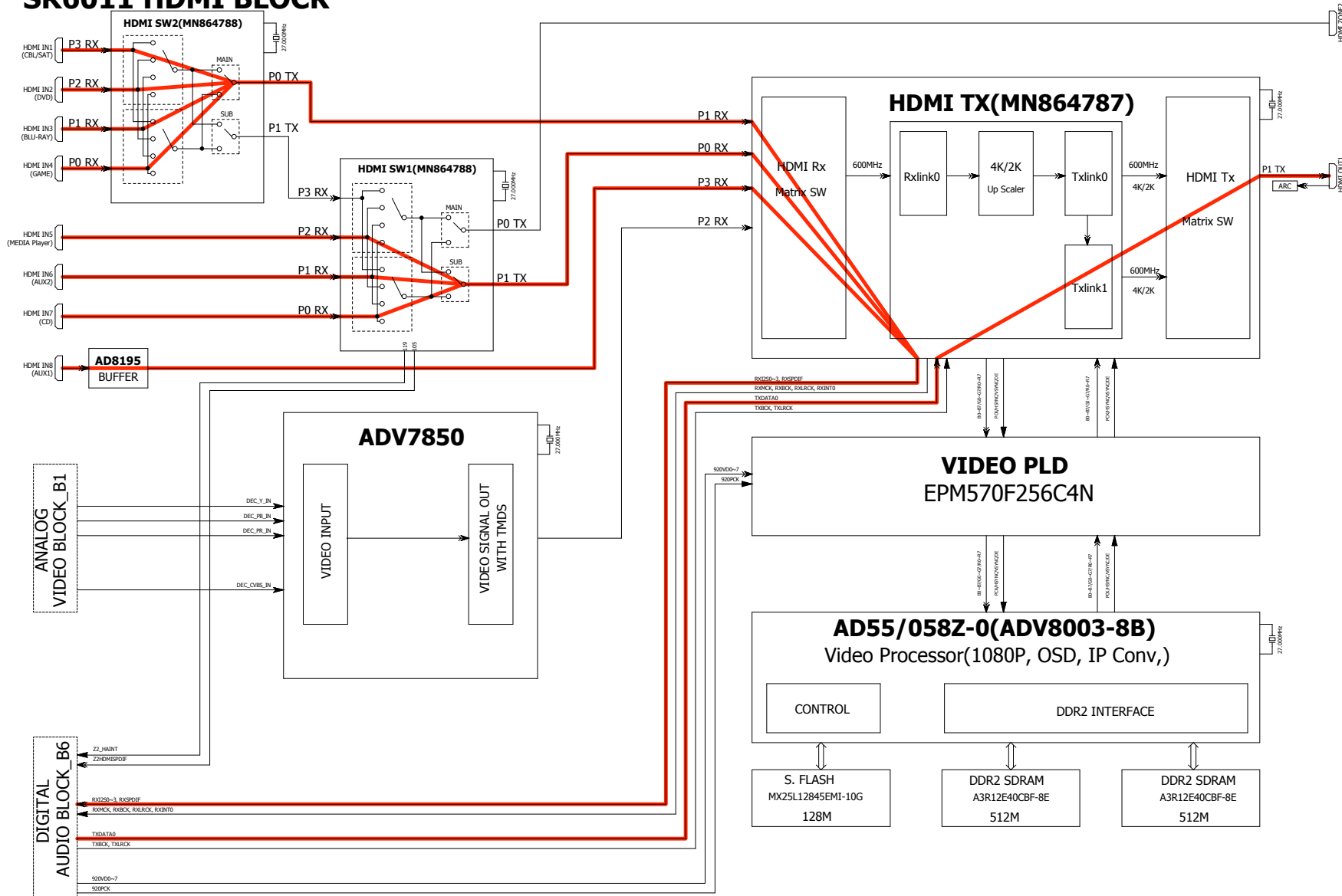
SR6011 DIGITAL AUDIO BLOCK(ADI)



Caution in servicing
Electrical
Mechanical
Repair Information
Updating

fig.16b

SR6011 HDMI BLOCK



Caution in servicing

Electrical

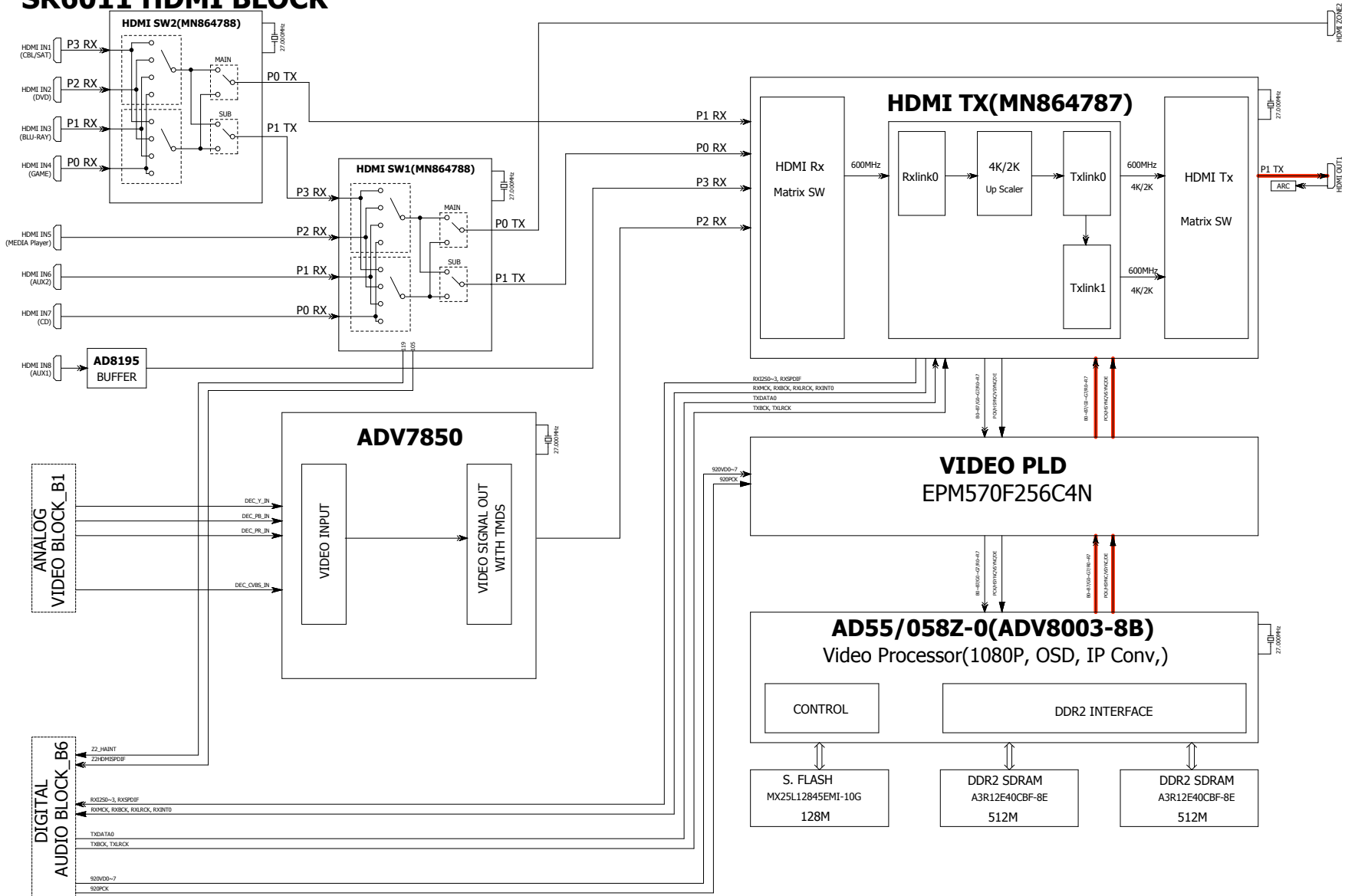
Mechanical

Repair Information

Updating

fig.17

SR6011 HDMI BLOCK



Caution in servicing

Electrical

Mechanical

Repair Information

Updating

JIG FOR SERVICING

Use the following jigs (extension cable kit) when repairing the PCBs.
Order with your dealer for the jigs your dealer if necessary.

CAUTION : Incorrect connections may cause malfunction.

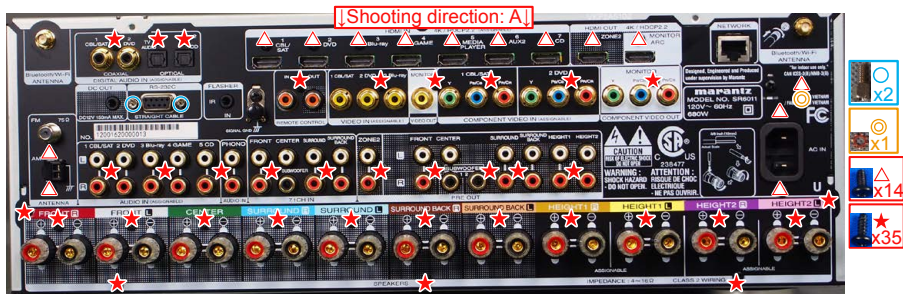
Connection of Jig for DIGITAL PCB

---Items to Be Prepared---

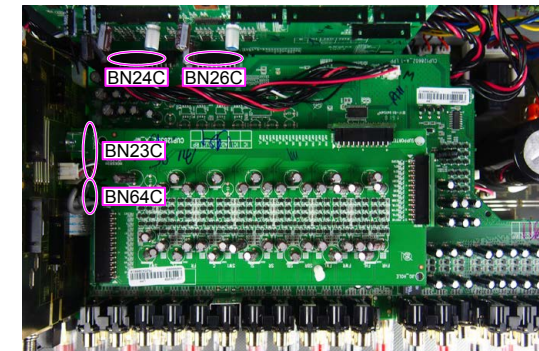
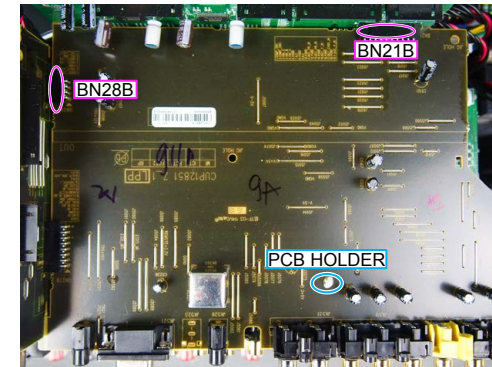
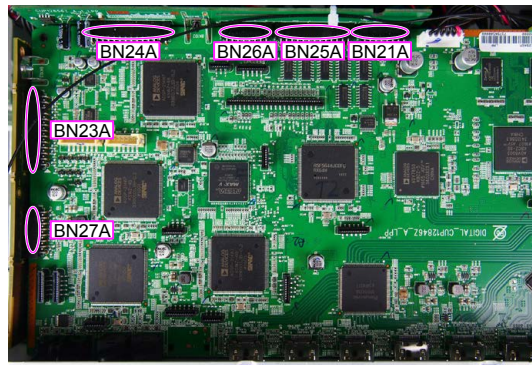
8U-110084S : EXTENSION UNIT KIT	:	1 Set
8U-110136S : EXTENSION UNIT KIT	:	1 Set
Insulation sheet (Not supplied)	:	3 sheet
Ground lead (Not supplied)	:	3 pc

-Proceeding-

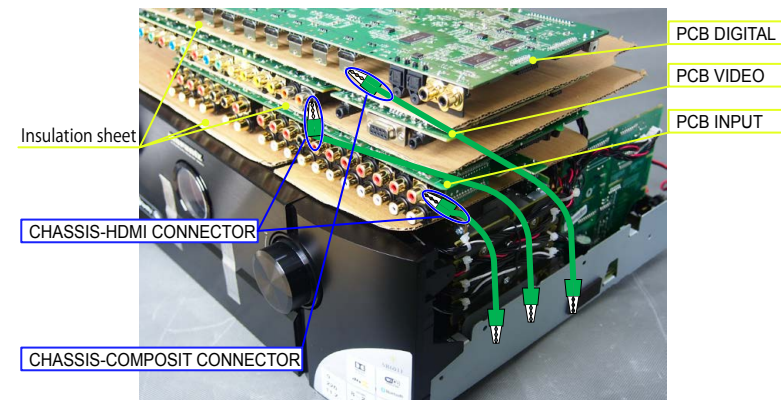
(1) Remove the screws.



(2) Remove the connector PCB.



(3) Remove the DIGITAL PCB from the chassis and turn it over.
Place an insulation sheet larger than the PCB underneath the DIGITAL PCB.
※ Connect the earth of the PCB to the chassis using an earth wire, etc.



Caution in
servicing

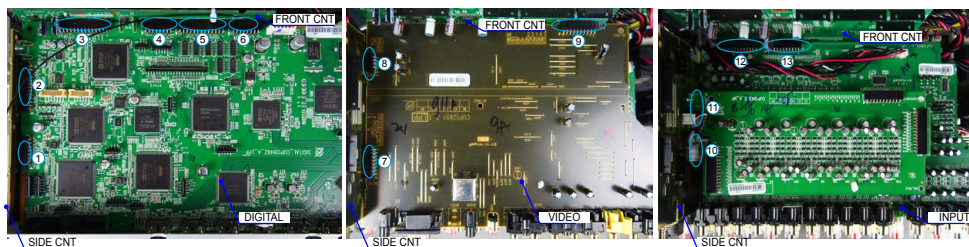
Electrical

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Updating

(4) Connect the expansion cables.



Board-to-Board Connections

No.	Pin	Ref. No.	PCB		Ref. No.	PCB
①	15pin	CN27A	SIDE CNT	↔	BN27A	DIGITAL
②	25pin	CN23A	SIDE CNT	↔	BN23A	DIGITAL
③	27pin	CN24A	FRONT CNT	↔	BN24A	DIGITAL
④	15pin	CN26A	FRONT CNT	↔	BN26A	DIGITAL
⑤	25pin	CN25A	FRONT CNT	↔	BN25A	DIGITAL
⑥	15pin	CN21A	FRONT CNT	↔	BN21A	DIGITAL
⑦	15pin	CN27C	SIDE CNT	↔	BN27B	VIDEO
⑧	7pin	CN28C	SIDE CNT	↔	BN28B	VIDEO
⑨	19pin	CN21B	FRONT CNT	↔	BN21B	VIDEO
⑩	11pin	CN64C	SIDE CNT	↔	BN64C	INPUT
⑪	19pin	CN23C	SIDE CNT	↔	BN23C	INPUT
⑫	27pin	CN24C	FRONT CNT	↔	BN24C	INPUT
⑬	21pin	CN26C	FRONT CNT	↔	BN26C	INPUT

ADJUSTMENT

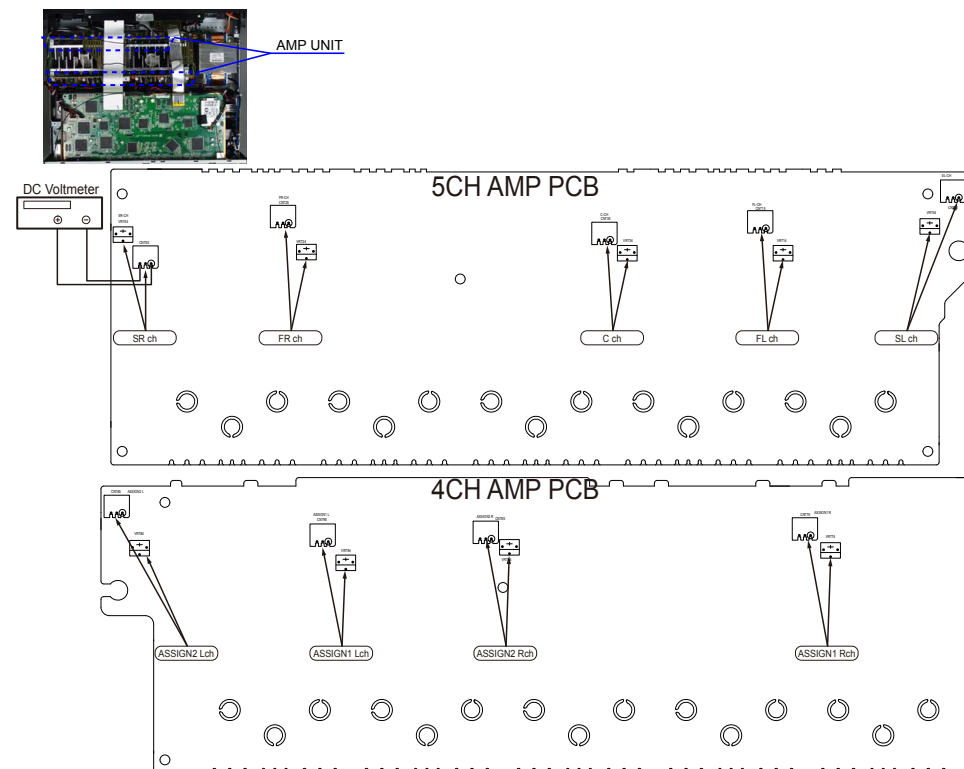
Adjusting Idling Current

1. Preparation

- (1) Prepare a DC voltmeter.
- (2) Place the unit under normal usage conditions, away from highly ventilated areas such as next to an air conditioning machine or electric fan.
The set requires an ambient temperature of 15°C to 30°C and standard humidity.
- (3) Settings of This Unit
 - POWER (Power source switch) STANDBY
 - SPEAKER (Speaker terminal) No load(Do not connect equipment such as speakers or dummy resistors.)

2. Adjustment Procedure

- (1) Remove the top cover and turn VR714 (ALL Channel) of the AMP PCB counterclockwise(○) as far as possible.
- (2) Connect the DC Voltmeter to the test points.
 - FRONT-Lch : CN715
 - FRONT-Rch : CN725
 - CENTER ch : CN735
 - SURROUND-Lch : CN745
 - SURROUND-Rch : CN755
 - ASSIGN-2Rch : CN765
 - ASSIGN-1Rch : CN775
 - ASSIGN-2Lch : CN785
 - ASSIGN-1Lch : CN795
- (3) Connect the power cord to an outlet. Next, press the power button to turn on the power.
- (4) Set this unit as follows.
 - MASTER VOLUME : "---" (○ min.) : turn counterclockwise to the lowest position.
 - SPEAKER (Speaker terminal) : No load(Do not connect equipment such as speakers or dummy resistors.)
 - MODE : MCH STEREO
 - FUNCTION : DVD
- (5) Turn VR714 clockwise (○) and adjust the voltage of the test point to "**6.5mV ± 0.5mV DC**" within 2 minutes.
- (6) 10 minutes after the preliminary adjustment, turn VR714 and set the voltage to "**8.0mV ± 0.5mV DC**".
- (7) Adjust the variable resistance of each channel using the same method.



UPDATING

PROCEDURE AFTER REPLACING THE PCB.

PROCEDURE AFTER REPLACING THE U-COM, ETC.

FIRMWARE UPDATE PROCEDURE

1. Items necessary for update
2. Updating via USB
3. Updating via DPMS

PROCEDURE AFTER REPLACING THE PCB.

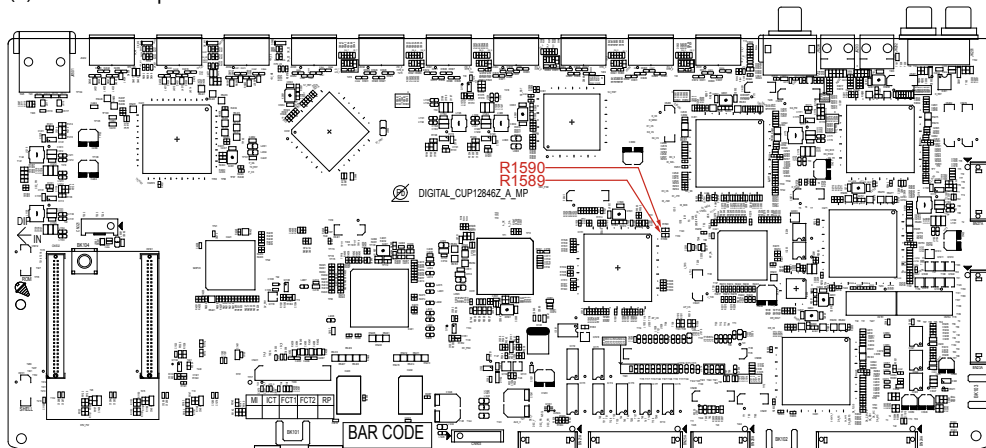
The procedure after replacing the printed circuit boards is as follows.

(1) Change the resistor for setting the region.

Model Area	DIGITAL PCB	
	R1589	R1590
North America (U)	0	OPEN
Europe (N)	OPEN	0
China (K)	10k	10k

See the PCB below.

(2) Be sure to replace the software with the latest version.



PROCEDURE AFTER REPLACING THE U-COM, ETC.

The procedure after replacing the u-COM (microprocessor), flash ROM, etc. is as follows.

PCB Name	Ref. No.	Description	Procedure after Replacement	Remark
DIGITAL	IC151	R5F564MJCDFC 32BIT	B	SOFTWARE : Main
DIGITAL	IC254 IC264 IC273 IC283	MX25L1606EM2I-12G	B	SOFTWARE : DSP1/2/3/4 ROM
DIGITAL	IC404	MX25L12835FMI-10G 128M	B	SOFTWARE : GUI ROM
DIGITAL	IC221	5M570ZF256C5N	B	SOFTWARE : AUDIO PLD
DIGITAL	IC421	EPM570F256C4N	B	SOFTWARE : VIDEO PLD
MODULE	C47	CY920 MODULE (CY920 Model)	D	SOFTWARE : SBL.bcd / IMG.bcd ※1
DIGITAL	IC501	MX25L25635FMI-10G (CY920 Model)	C	SOFTWARE : IMG.bcd ※1

※1 The firmware for the CY920 MODULE is written to the INTERNAL ROM of the CY920 and the IC501 (EXTERNAL ROM) of the DIGITAL circuit board.

"CY920 Error" appears in the display if the DIGITAL PCB or the CY920 is replaced, as this results in the version of the INTERNAL ROM differing from that of the EXTERNAL ROM.

In this case, see "[2.10. Update Procedure in the Event of a CY920 Error](#)".

(This does not require special operations such as pushing multiple buttons at the same time. The firmware also cannot be updated via DPMS.)

Procedure after Replacement

A : The software has been written. The software is not written at the time of replacement.

B : The software has been written. The software may need to be rewritten by version updates. Check the version.

C : The software has not been written. The software needs to be written after replacement.

See "[FIRMWARE UPDATE PROCEDURE](#)" for information on writing the software.

D : "The software has been written. Be sure to rewrite with the latest software for your service region.

See "[FIRMWARE UPDATE PROCEDURE](#)" for information on writing the software.

FIRMWARE UPDATE PROCEDURE

1. Items necessary for update

Items necessary for update are as follows.

Update Type	Needed Part for Update	Requirement	Offered / not Offered		
			Standard Service Equipment Not offered by D&M	Purchase from D&M Article code	Download from SDI
Via USB	USB Stick (USB 2.0 : Min 1GB)	Formatting FAT 32	X	-	2.3. File structure on USB Memory
Via DPMS	Internet Connection by Broadband Circuit	-	X	-	-
	Modem	-	X	-	-
	Router	-	X	-	-
	Ethernet cable (CAT-5 or greater is recommended)	-	X	-	-

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Updating

2. Updating via USB

The latest firmware can be downloaded to a USB memory for updates.

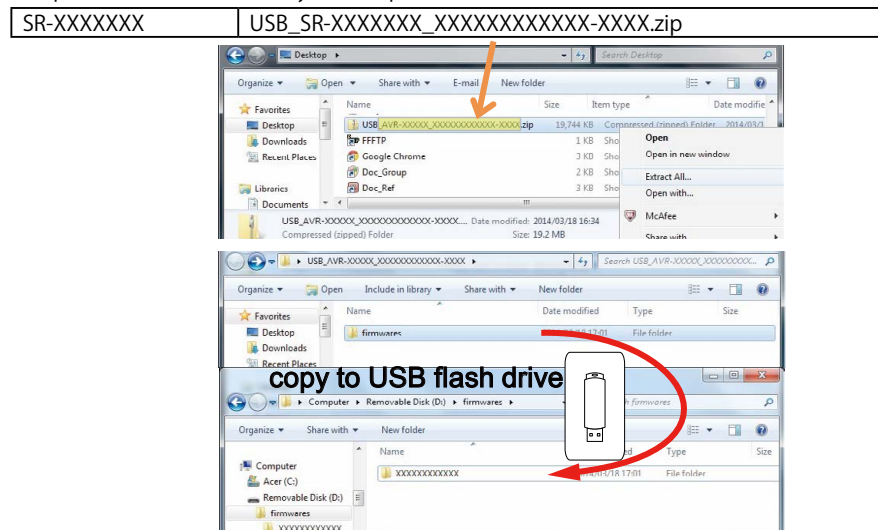
2.1. Connecting to the USB Memory

(1) Preparation

- Use a memory that supports USB2.0.
- USB format : Prepare a USB memory formatted in FAT16 or FAT32.
- Do not run the USB memory through a hub.
- Do not connect a computer to the USB port of this unit using a USB cable.
- Do not use an extension cable when connecting the USB unit.
- If a USB memory device cannot be updated, replace it with a different USB memory device and perform the update again.

2.2. Unzipping the Downloaded File

Unzip the downloaded file on your computer.



The **"firmwares"** folder is created upon unzipping the file.

Copy that folder to USB flash drive.

The **"firmwares"** folder must be in the root directly of the USB flash drive (memory).

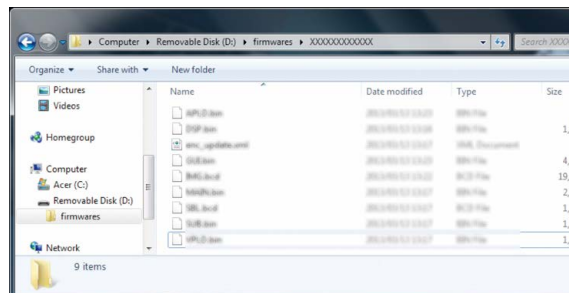
2.3. File structure on USB Memory

Copy the update files to the USB memory with the following structure.

USB memory root

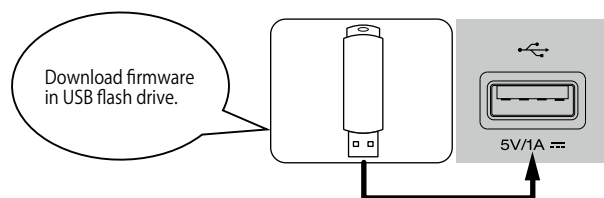
Model Name	Model Area	Product ID
SR6011 U	North America (U)	100100500100
SR6011 N	Europe (N)	100100500200
SR6011 K	China (K)	100100500500

- + firmwares
- + X00100XXXXXX
- + APLD.bin
- + VPLD.bin
- + DSP1.bin
- + DSP2.bin
- + DSP3.bin
- + DSP4.bin
- + enc_update.xml
- + GUI.bin
- + IMG.bcd
- + MAIN.bin
- + SBL.bcd



2.4. Insert the USB memory into the USB port.

NOTE : Remove the LAN cable from this unit when performing updates.



2.5. Start the update.

While holding down buttons "TUNER PRESET CH +" and "STATUS" simultaneously, press the power button to turn on the power.

2.6. Display during USB update

After around half minutes, display shows the following message.

L1	USB Updt
L2	Start
L3	

2.7. Press the "ENTER" key on the remote control unit or this unit.

Then start Firmware Update.

L1	Update
L2	File
L3	Check

2.8. The firmware update finishes.

When the update is completed, the following message appears on the display, then the unit returns to the normal status.

L1	Updating
L2	Complete
L3	

---Cautions on Firmware Update---

- Never remove the USB memory before the update is finished.
- Do not turn off the power until updating is completed.
- It takes around 1 hour to complete the update.

Once an update is started, normal operations cannot be performed until it is completed. The GUI menu settings and image adjustment settings of this unit may be initialized. Note down the settings before updating, and set them again after updating.

2.9. Forced USB All Device Write Mode

2.9.1. Actions

Mode used when this unit cannot be recovered.
Forcibly switches this unit to USB update mode.

2.9.2. Operations

While holding down buttons the "TUNER PRESET CH +" and "STATUS" buttons simultaneously, insert the AC plug to turn the power on.

L1	USB All
L2	Update
L3	Wait

L3	Wait.
----	-------

L3	Wait..
----	--------

L3	Wait...
----	---------

2.9.3. The firmware update finishes.

Returns to the normal status after update is completed.

2.10. Update Procedure in the Event of a CY920 Error

2.10.1. Actions

Perform the following update procedure if "CY920 Error" appears in the display when the power is turned on after replacing the DIGITAL PCB or the CY920.

2.10.2. Operations

- (1) Remove the AC power plug and turn off the power.
- (2) Copy the update file to a USB memory device and insert the USB memory device in the USB port.
- (3) Insert the AC plug and turn on the power.
- (4) The update starts automatically after "CY920 Error" appears in the display.

L1	Update
L2	File
L3	Check

- (5) The firmware update finishes.

L1	Updating
L2	Complete
L3	

The unit restarts after the update is finished.

- (6) After the update, check that "CY920 Error" is no longer displayed, and check the version of the new firmware.
See "1. Version Display Mode"

2.11. About the error codes

See the table below for error codes and details of faults when the firmware is updated through USB memory.

The error code is displayed as four digits made up of the Device ID below together with **YY (**: Device ID, YY: Error Code).

Device ID	Device Name
00	n/a(※ 1)
01	Main CPU
11	DSP
12	DSP2(※ 2)
13	DSP3(※ 2)
19	DSP4(※ 2)
15	Audio PLD
22	Video PLD
2A	GUI Serial Flash
02	CY920 2nd BootLoader
03	CY920 Image

※ 1 Used when there are no device related errors

※ 2 For SR6011

Error Code	USB Update Error Display	Details of Error code	Remedies
01	Error**01	Unable to detect USB.	Reinsert or Try a new USB device and try again.
02	Error**02	No Firmware File in USB.	Check the file and try again.
03	Error**03	The Firmware File in the USB does not support your model and area.	Make sure the model name and area of the Firmware File and try again.
04	Error**04	Failed to obtain the Firmware information (Device Information)	Try a new USB device and try again.
05	Error**05	Time Out while obtaining the Firmware information (Device Information)	Start the USB Update again.
06	Error**06	Failed to obtain the Firmware information (Package Version)	Try a new USB device and try again.
07	Error**07	Time Out while obtaining the Firmware information (Package Version)	Start the USB Update again.
08	Error**08	Error notification received while requesting the Firmware Info.	Try a new USB device, Unplug and reconnect the AC plug, and try again.

Error Code	USB Update Error Display	Details of Error code	Remedies
09	Error**09	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.
0A	Error**0A	Unable to detect USB for Firmware Download.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
0B	Error**0B	No Firmware File for Firmware Download.	Check the file, Unplug and reconnect the AC plug, and try again.
0C	Error**0C	Received value with the invalid Package Version.	Unplug and reconnect the AC plug, and try again.
10	Error**10	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
11	Error**11	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
12	Error**12	Abnormal data in Update Packet received from CY920 (Packet No Error).	Unplug and reconnect the AC plug, and try again.
13	Error**13	Failed in Block Erase before rewriting Main.	Unplug and reconnect the AC plug, and try again.
14	Error**14	Failed in Block Write while rewriting Main	Unplug and reconnect the AC plug, and try again.
15	Error**15	Error in Verify after rewriting Main (Check Sum Error).	Unplug and reconnect the AC plug, and try again.
16	Error**16	Setup failure of the XModem transfer method.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
20	Error**20	Unable to detect USB after SBL Mode.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
21	Error**21	No Firmware File in USB after SBL Mode.	Check the file, Unplug and reconnect the AC plug, and try again.
22	Error**22	After SBL Mode, the Firmware File in the USB does not support your model and area.	Make sure the model name and area of the Firmware File, Unplug and reconnect the AC plug, and try again.

Error Code	USB Update Error Display	Details of Error code	Remedies
23	Error**23	Failed to obtain the entire Firmware information after SBL Mode.	Try a new USB device, Unplug and reconnect the AC plug, and try again.
24	Error**24	Time Out while obtaining the entire Firmware information after SBL Mode.	Unplug and reconnect the AC plug, and try again.
25	Error**25	Failed to transit to SBL Mode	Unplug and reconnect the AC plug, and try again.
26	Error**26	Time Out in Download (writing to SDRAM) for Firmware Download.	Unplug and reconnect the AC plug, and try again.
27	Error**27	Failed to write to EEPROM after SBL Mode.	Unplug and reconnect the AC plug, and try again.
36	Error**36	Unable to detect USB.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
37	Error**37	No Firmware File in USB.	Check the file, Unplug and reconnect the AC plug, and try again.
38	Error**38	The Firmware File in the USB does not support your model and area.	Make sure the model name and area of the Firmware File, Unplug and reconnect the AC plug, and try again.
39	Error**39	Time Out in USB Check.	Unplug and reconnect the AC plug, and try again.
3A	Error**3A	Unable to detect USB for Firmware Download.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
3B	Error**3B	No Firmware File for Firmware Download.	Check the file, Unplug and reconnect the AC plug, and try again.
3C	Error**3C	Error notification received while requesting the Firmware Info.	Try a new USB device, Unplug and reconnect the AC plug, and try again.
3D	Error**3D	Time Out while obtaining Firmware information.	Try a new USB device, Unplug and reconnect the AC plug, and try again.
3F	Error**3F	Failed to transit to SBL Mode.	Unplug and reconnect the AC plug, and try again.

Error Code	USB Update Error Display	Details of Error code	Remedies
50	Error**50	Unable to detect USB.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
51	Error**51	No Firmware File in USB.	Check the file, Unplug and reconnect the AC plug, and try again.
52	Error**52	The Firmware File in the USB does not support your model and area.	Make sure the model name and area of the Firmware File, Unplug and reconnect the AC plug, and try again.
54	Error**54	Error notification received while requesting the Firmware Info.	Try a new USB device, Unplug and reconnect the AC plug, and try again.
55	Error**55	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.
56	Error**56	Unable to detect USB for Firmware Download.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
57	Error**57	No Firmware File for Firmware Download.	Check the file, Unplug and reconnect the AC plug, and try again.
5A	Error**5A	Invalid Device ID in response or no response from Sub for the "C" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
5B	Error**5B	NACK received in response or no response from Sub for the "L" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
5C	Error**5C	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
5D	Error**5D	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
5E	Error**5E	Abnormal data in Update Packet received from CY920 (Packet No Error).	Unplug and reconnect the AC plug, and try again.
5F	Error**5F	Setup failure of the XModem transfer method.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.

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Error Code	USB Update Error Display	Details of Error code	Remedies
60	Error**60	NACK received in response or no response from Sub for the "P" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
61	Error**61	Mismatched Check Sum in response or no response from Sub for the "I" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
62	Error**62	Failed to start up Sub in Power On sequence during Update.	Unplug and reconnect the AC plug, and try again.
63	Error**63	Failed to transit to Application Mode.	Unplug and reconnect the AC plug, and try again.
64	Error**64	Failed to transit to Boot Loader Mode.	Unplug and reconnect the AC plug, and try again.
80	Error**80	Write Enable Latch Bit not set in Read after issuing the "WREN" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
81	Error**81	Block Erase failed in Read after issuing the "BE" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
82	Error**82	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
83	Error**83	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
84	Error**84	Abnormal data in Update Packet received from CY920 (Packet No Error).	Unplug and reconnect the AC plug, and try again.
85	Error**85	Setup failure of the XModem transfer method	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
86	Error**86	Mismatched Check Sum in Check Sum comparison after rewriting.	Unplug and reconnect the AC plug, and try again.

Error Code	USB Update Error Display	Details of Error code	Remedies
A2	Error**A2	Unable to detect USB.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
A3	Error**A3	No Firmware File in USB.	Check the file, Unplug and reconnect the AC plug, and try again.
A4	Error**A4	The Firmware File in the USB does not support your model and area.	Make sure the model name and area of the Firmware File, Unplug and reconnect the AC plug, and try again.
A6	Error**A6	Error notification received while requesting the Firmware Info.	Try a new USB device, Unplug and reconnect the AC plug, and try again.
A7	Error**A7	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.
AE	Error**AE	Unable to detect USB for Firmware Download.	Reinsert or try a new USB device, Unplug and reconnect the AC plug, and try again.
AF	Error**AF	No Firmware File for Firmware Download.	Check the file, Unplug and reconnect the AC plug, and try again.
B1	Error**B1	Time Out in Download (writing to SDRAM) for Firmware Download.	Unplug and reconnect the AC plug, and try again.
B2	Error**B2	Error notification received after rewriting the CY920 Firm.	Unplug and reconnect the AC plug, and try again.
B3	Error**B3	Error in Firmware Update (Time Out).	Unplug and reconnect the AC plug, and try again.
B4	Error**B4	Failed to transit to Boot Loader Mode.	Unplug and reconnect the AC plug, and try again.
B5	Error**B5	Failed to transit to Application Mode.	Unplug and reconnect the AC plug, and try again.

---Checking the firmware version after updating---

After updating the firmware, check the version.

See "1. Version Display Mode"

3. Updating via DPMS

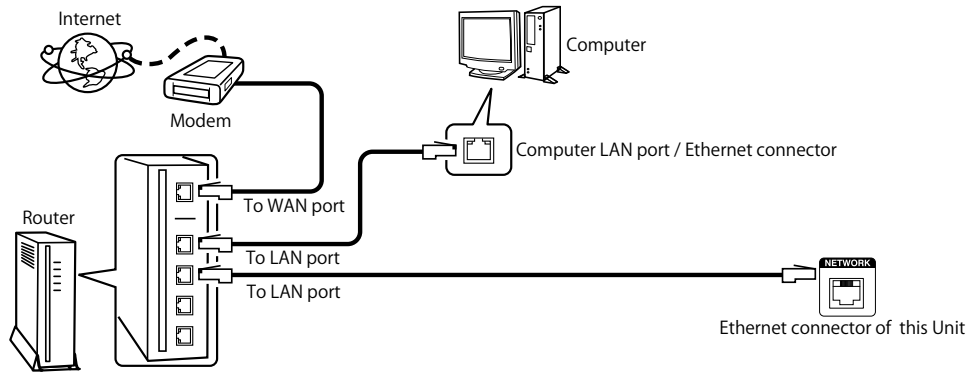
Download the latest firmware from our website and update the firmware.

3.1. Network Connection

(1) System Requirements

- Internet Connection by Broadband Circuit
- Modem
- Router
- Ethernet cable (CAT-5 or greater is recommended)

(2) Setting



3.2. Check and update the firmware

Check if there is a firmware update available. It is also possible to check approximately how long the update will take.

- (1) Press the **"SETUP"** button on the remote control to display the GUI menu.
- (2) Press the cursor button to select **"General"** → **"Firmware"** → **"Update"** → **"Check for Update"**.
- (3) Press the **"ENTER"** button.
 - The latest version of the firmware uploaded to the web is displayed.
 - If the latest firmware version is on the web, proceed to (4).
 - If the latest firmware is already installed, press the **"SETUP"** button to exit the menu.
- (4) Select **"Start"** using the cursor buttons, and then press **"ENTER"**.
 - The power display lights in red and the GUI screen display disappears during the update. The remaining time of the update is shown on the display of the unit.
 - Returns to the normal status after update is completed.

---Cautions on Firmware Update---

- For the update procedure, a proper broadband Internet connection environment and settings are required.
- Do not turn off the power until updating is completed.
- It takes around 1 hour to complete the update.

Once an update is started, normal operations cannot be performed until it is completed.

The GUI menu settings and image adjustment settings of this unit may be initialized.

Note down the settings before updating, and set them again after updating.

3.3. About the error codes

See the following table for details on the error code display, details of the error code, remedies when updating the firmware via DPMS. (DPMS : D&M Product Management Server)

The error code is displayed as four digits made up of the Device ID below together with **YY (**: Device ID, YY: Error Code).

Device ID	Device Name
00	n/a(※ 1)
01	Main CPU
11	DSP
12	DSP2(※ 2)
13	DSP3(※ 2)
19	DSP4(※ 2)
15	Audio PLD
22	Video PLD
2A	GUI Serial Flash
02	CY920 2nd BootLoader
03	CY920 Image

※ 1 Used when there are no device related errors

※ 2 For SR6011

Error Code	DPMS Update Error Display	Details of Error code	Remedies
01	Error**01	Connection to DPMS failed.	Check the network connection, then try again.
03	Error**03	Connection to DPMS failed.	Check the network connection, then try again.
04	Error**04	Failed to obtain the Firmware information (Device Information)	Check the network connection, then try again.
05	Error**05	Time Out while obtaining the Firmware information (Device Information)	Check the network connection, then try again.
06	Error**06	Failed to obtain the Firmware information (Package Version)	Check the network connection, then try again.
07	Error**07	Time Out while obtaining the Firmware information (Package Version)	Check the network connection, then try again.
08	Error**08	Error notification received while requesting the Firmware Info.	Check the network connection, Unplug and reconnect the AC plug, and try again.
09	Error**09	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.

Error Code	DPMS Update Error Display	Details of Error code	Remedies
0A	Error**0A	Error(NG) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
0C	Error**0C	Error(Connect failure) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
0D	Error**0D	Received value with the invalid Package Version.	Unplug and reconnect the AC plug, and try again.
0E	Error**0E	Connection to DPMS failed. (Cannot get NTP)	Check the network connection, then try again.
10	Error**10	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
11	Error**11	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
12	Error**12	Abnormal data in Update Packet received from CY920 (Packet No Error).	Unplug and reconnect the AC plug, and try again.
13	Error**13	Failed in Block Erase before rewriting Main.	Unplug and reconnect the AC plug, and try again.
14	Error**14	Failed in Block Write while rewriting Main	Unplug and reconnect the AC plug, and try again.
15	Error**15	Error in Verify after rewriting Main (Check Sum Error).	Unplug and reconnect the AC plug, and try again.
16	Error**16	Setup failure of the XModem transfer method.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
20	Error**20	After SBL Mode IP Address acquisition failure (AutoIP).	Check the network connection, Unplug and reconnect the AC plug, and try again.
21	Error**21	After SBL Mode IP Address acquisition failure (Time Out).	Check the network connection, Unplug and reconnect the AC plug, and try again.
22	Error**22	DPMS login incorrect notification after SBL.	Check the network connection, Unplug and reconnect the AC plug, and try again.

Error Code	DPMS Update Error Display	Details of Error code	Remedies
24	Error**24	DPMS connection failure notification after SBL.	Check the network connection, Unplug and reconnect the AC plug, and try again.
25	Error**25	Failed to transit to SBL Mode.	Unplug and reconnect the AC plug, and try again.
26	Error**26	Error in Firmware Download (Time Out).	Unplug and reconnect the AC plug, and try again.
27	Error**27	Failed to write to EEPROM after SBL Mode.	Unplug and reconnect the AC plug, and try again.
36	Error**36	DPMS login incorrect notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.
38	Error**38	DPMS connection failure notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.
39	Error**39	DPMS connection Time Out Error.	Unplug and reconnect the AC plug, and try again.
3A	Error**3A	Error(NG) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
3C	Error**3C	Error(Connect failure) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
3D	Error**3D	After SBL Mode IP Address acquisition failure (AutoIP).	Check the network connection, Unplug and reconnect the AC plug, and try again.
3E	Error**3E	After SBL Mode IP Address acquisition failure (Time Out).	Unplug and reconnect the AC plug, and try again.
3F	Error**3F	Failed to transit to SBL Mode.	Unplug and reconnect the AC plug, and try again.
50	Error**50	DPMS login incorrect notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.
52	Error**52	DPMS connection failure notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.

Error Code	DPMS Update Error Display	Details of Error code	Remedies
54	Error**54	Error notification received while requesting the Firmware Info.	Check the network connection, Unplug and reconnect the AC plug, and try again.
55	Error**55	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.
56	Error**56	Error(NG) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
58	Error**58	Error(Connect failure) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
5A	Error**5A	Invalid Device ID in response or no response from Sub for the "C" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
5B	Error**5B	NACK received in response or no response from Sub for the "L" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
5C	Error**5C	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
5D	Error**5D	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
5E	Error**5E	Abnormal data in Update Packet received from CY920 (Packet No Error).	Unplug and reconnect the AC plug, and try again.
5F	Error**5F	Setup failure of the XModem transfer method.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
60	Error**60	NACK received in response or no response from Sub for the "P" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
61	Error**61	Mismatched Check Sum in response or no response from Sub for the "I" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.

Caution in servicing

Electrical

Mechanical

Repair Information

Updating

Error Code	DPMS Update Error Display	Details of Error code	Remedies
62	Error**62	Failed to start up Sub in Power On sequence during Update.	Unplug and reconnect the AC plug, and try again.
80	Error**80	Write Enable Latch Bit not set in Read after issuing the "WREN" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
81	Error**81	Block Erase failed in Read after issuing the "BE" command.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
82	Error**82	No Update Packet received from CY920 (Time Out).	Unplug and reconnect the AC plug, and try again.
83	Error**83	Abnormal data in Update Packet received from CY920 (CRC Error).	Unplug and reconnect the AC plug, and try again.
84	Error**84	Abnormal data in Update Packet received from CY920 (PacketNoError).	Unplug and reconnect the AC plug, and try again.
85	Error**85	Setup failure of the XModem transfer method.	Unplug and reconnect the AC plug, and try again. If the same error occurs even when it is retried, the device may be malfunctioning.
86	Error**86	Mismatched Check Sum in Check Sum comparison after rewriting.	Unplug and reconnect the AC plug, and try again.
A0	Error**A0	IP Address acquisition failure (AutoIP).	Check the network connection, Unplug and reconnect the AC plug, and try again.
A1	Error**A1	IP Address acquisition failure (Time Out).	Unplug and reconnect the AC plug, and try again.
A2	Error**A2	DPMS login incorrect notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.
A4	Error**A4	DPMS connection failure notification.	Check the network connection, Unplug and reconnect the AC plug, and try again.
A6	Error**A6	Error notification received while requesting the Firmware Info.	Check the network connection, Unplug and reconnect the AC plug, and try again.

Error Code	DPMS Update Error Display	Details of Error code	Remedies
A7	Error**A7	Time Out while obtaining Firmware information.	Unplug and reconnect the AC plug, and try again.
AE	Error**AE	Error(NG) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
B0	Error**B0	Error(Connect failure) notification received while requesting Firmware Download.	Check the network connection, Unplug and reconnect the AC plug, and try again.
B1	Error**B1	Error in Firmware Download (Time Out).	Check the network connection, Unplug and reconnect the AC plug, and try again.
B2	Error**B2	Error notification received after rewriting the CY920 Firm.	Unplug and reconnect the AC plug, and try again.
B3	Error**B3	Error in Firmware Update (Time Out).	Unplug and reconnect the AC plug, and try again.
B4	Error**B4	Failed to transit to Boot Loader Mode.	Unplug and reconnect the AC plug, and try again.
B5	Error**B5	Failed to transit to Application Mode.	Unplug and reconnect the AC plug, and try again.

---Checking the Firmware Version After the Update---

After updating the firmware, check the version.

See "1. Version Display Mode"

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