

## SERVICE MANUAL

MODEL	JP	E3	E2	EK	EA	E1	E1K	E1C
AVR-2313CI		✓						
AVR-2313			✓					✓

### INTEGRATED NETWORK AV RECEIVER

• 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.

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# ABOUT THIS MANUAL

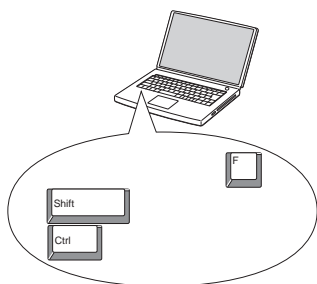
Read the following information before using the service manual.

## What you can do with this manual

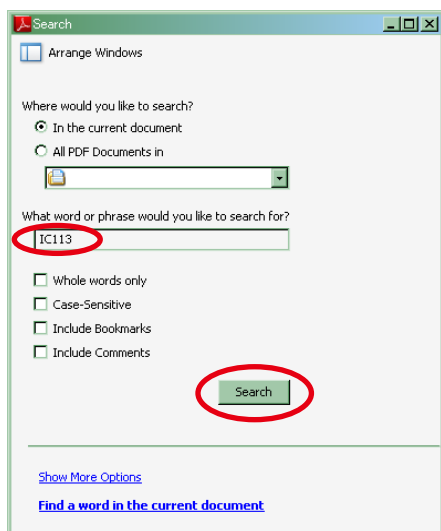
### Search for a Ref. No. (phrase) (Ctrl+Shift+F)

You can use the search function in Acrobat Reader to search for a Ref. No. in schematic diagrams, printed wiring board diagrams, block diagrams, and parts lists.

1. Press **Ctrl+Shift+F** on the keyboard.
  - The Search window appears.



2. Enter the Ref. No. you want to search for in the Search window, and then click the **Search** button.
  - A list of search results appears.

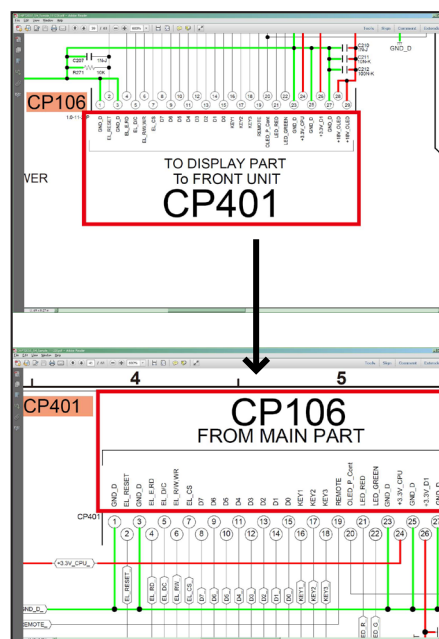


3. Click an item on the list.
  - The screen jumps to the page for that item, and the search phrase is displayed.

### Jump to the target of a schematic diagram connector

Click the Ref. No. of the target connector in the red box around a schematic diagram connector.

- The screen jumps to the target connector.



- Page magnification stays the same as before the jump.

## Using Adobe Reader (Windows version)

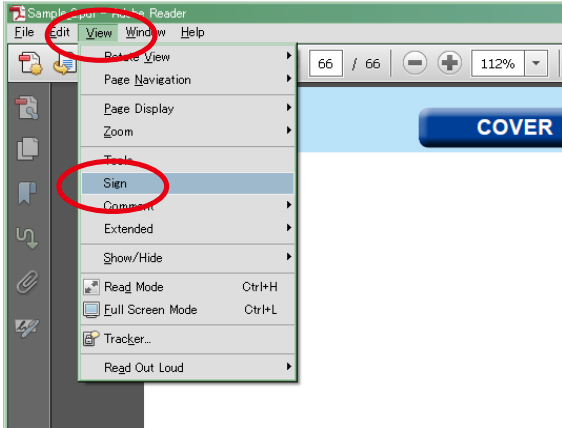
### Add notes to this data (Sign)

The Sign function lets you add notes to the data in this manual.  
Save the file once you have finished adding notes.

#### [Example using Adobe Reader X]

On the "View" menu, click "Sign".

- The Sign pane appears.



#### [Example using Adobe Reader 9]

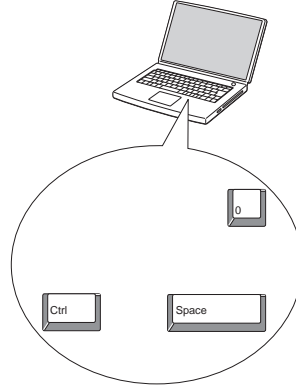
On the "Document" menu, click "Sign".

### Magnify schematic / printed wiring board diagrams - 1 (Ctrl+Space, mouse operation)

#### [Example using Adobe Reader 9,X]

Press **Ctrl+Space** on the keyboard and drag the mouse to select the area you want to view.

- The selected area is magnified.

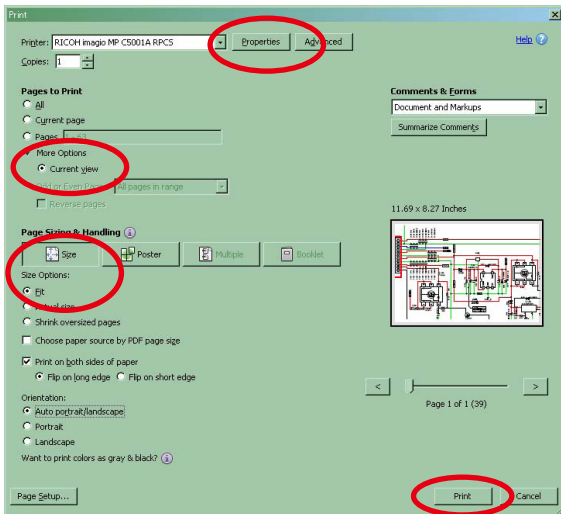


- When you want to move the area shown, hold down **Space** and drag the mouse.
- When you want to show a full page view, press **Ctrl+0** on the keyboard.

### Print a magnified part of the manual

The Properties dialog box and functions will vary depending on your printer.

1. Drag the mouse to magnify the part you want to print.
2. On the "File" menu, click "Print".
3. Configure the following settings in the Print dialog box.



4. Click the **Print** button to start printing.

#### • Properties

Click this button and check that the printer is set to a suitable paper size.

#### • Page to print

Select the following checkbox.

**"More Options" : "Current View"**

#### • Page Sizing & Handling

Select the following checkbox.

**"Size" / "Size Options" : "Fit"**

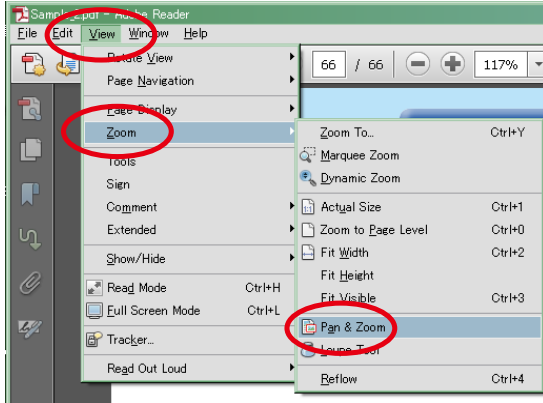
## Magnify schematic / printed wiring board diagrams - 2

### (Pan & Zoom function)

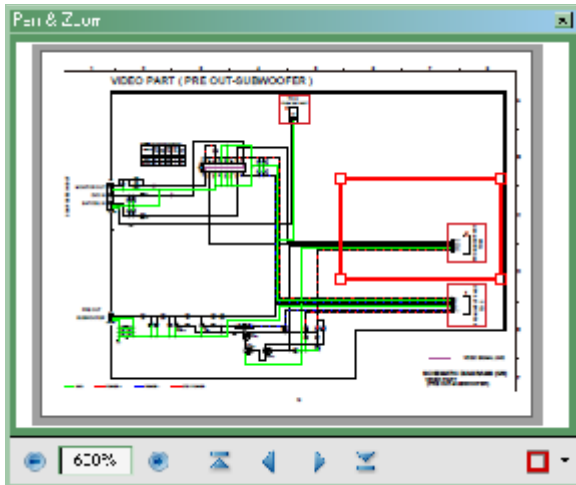
The Pan & Zoom function lets you see which part of a magnified diagram is being shown in a separate window.

#### [Example using Adobe Reader X]

On the "View" menu, point to "Zoom", and then click "Pan & Zoom".



- The Pan & Zoom window appears on the screen.



#### [Example using Adobe Reader 9]

On the "Tools" menu, point to "Select & Zoom", and then click "Pan & Zoom Window".

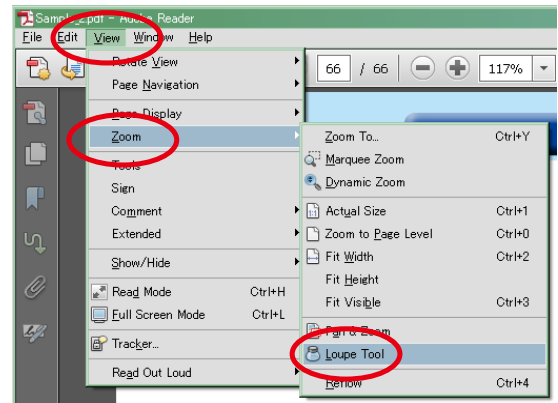
## Magnify schematic / printed wiring board diagrams - 3

### (Loupe Tool function)

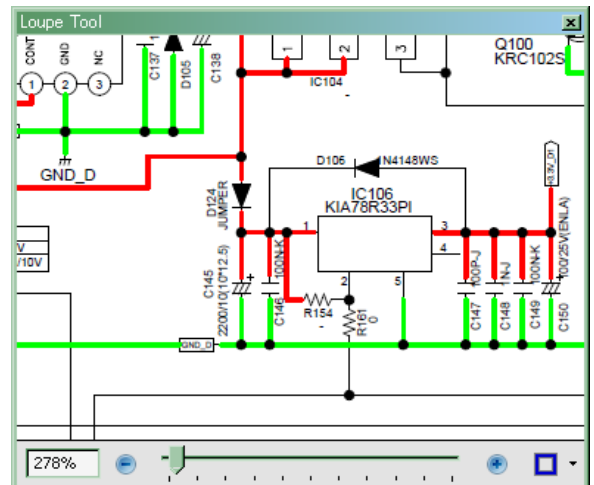
The Loupe Tool function lets you magnify a specific part of a diagram in a separate window.

#### [Example using Adobe Reader X]

On the "View" menu, point to "Zoom", and then click "Loupe Tool".



- The Loupe Tool window appears on the screen.



#### [Example using Adobe Reader 9]

On the "Tools" menu, point to "Select & Zoom", and then click "Loupe Tool Window".

## 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 $\Omega$  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. 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.
5. General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
6. General-purpose Carbon Chip Resistors are not included are not included in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

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

# TECHNICAL SPECIFICATIONS

## □ Audio Section

### • Power amplifier

**Rated output** (for 2313CI model) :

Front :

105 W + 105 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

135 W + 135 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Center :

105 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

135 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Surround :

105 W + 105 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

135 W + 135 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Surround back:

105 W + 105 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

135 W + 135 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

**Output connectors** : 6 – 16 Ω

### • Analog

**Input sensitivity/Input impedance** : 200 mV/47 kΩ

**Frequency response**: 10 Hz – 100 kHz — +1, –3 dB (DIRECT mode)

**S/N** : 100 dB (IHF–A weighted, DIRECT mode)

## □ Video section

### • Standard video connectors

**Input/output level and impedance** : 1 V<sub>p-p</sub>, 75 Ω

**Frequency response** : 5 Hz – 10 MHz — 0, –3 dB

### • Color component video connector

**Input/output level and impedance** : Y (brightness) signal — 1 V<sub>p-p</sub>, 75 Ω

P<sub>B</sub> / C<sub>B</sub> signal — 0.7 V<sub>p-p</sub>, 75 Ω

P<sub>R</sub> / C<sub>R</sub> signal — 0.7 V<sub>p-p</sub>, 75 Ω

**Frequency response** : 5 Hz – 60 MHz — 0, –3 dB

## □ Tuner section

(Note: μV at 75 Ω, 0 dBf = 1 x 10<sup>-15</sup> W)

**Receiving Range** (for E3 model) :

87.5 MHz – 107.9 MHz

**Usable Sensitivity** :

1.2 μV (12.8 dBf)

**50 dB Quieting Sensitivity** :

MONO 2.8 μV (20.2 dBf)

**S/N** :

MONO 70 dB (IHF–A weighted, DIRECT mode)

STEREO 67 dB (IHF–A weighted, DIRECT mode)

**Total harmonic Distortion** :

MONO 0.7 % (1 kHz)

STEREO 1.0 % (1 kHz)

## □ General

**Power supply** (for E3 model) : AC 120 V, 60 Hz

**Power supply** (for E2 model) : AC 230 V, 50/60 Hz

**Power supply** (for E1C model) : AC 220 V, 50 Hz

**Power consumption** : 600 W

**Power consumption in standby mode** : 0.1 W

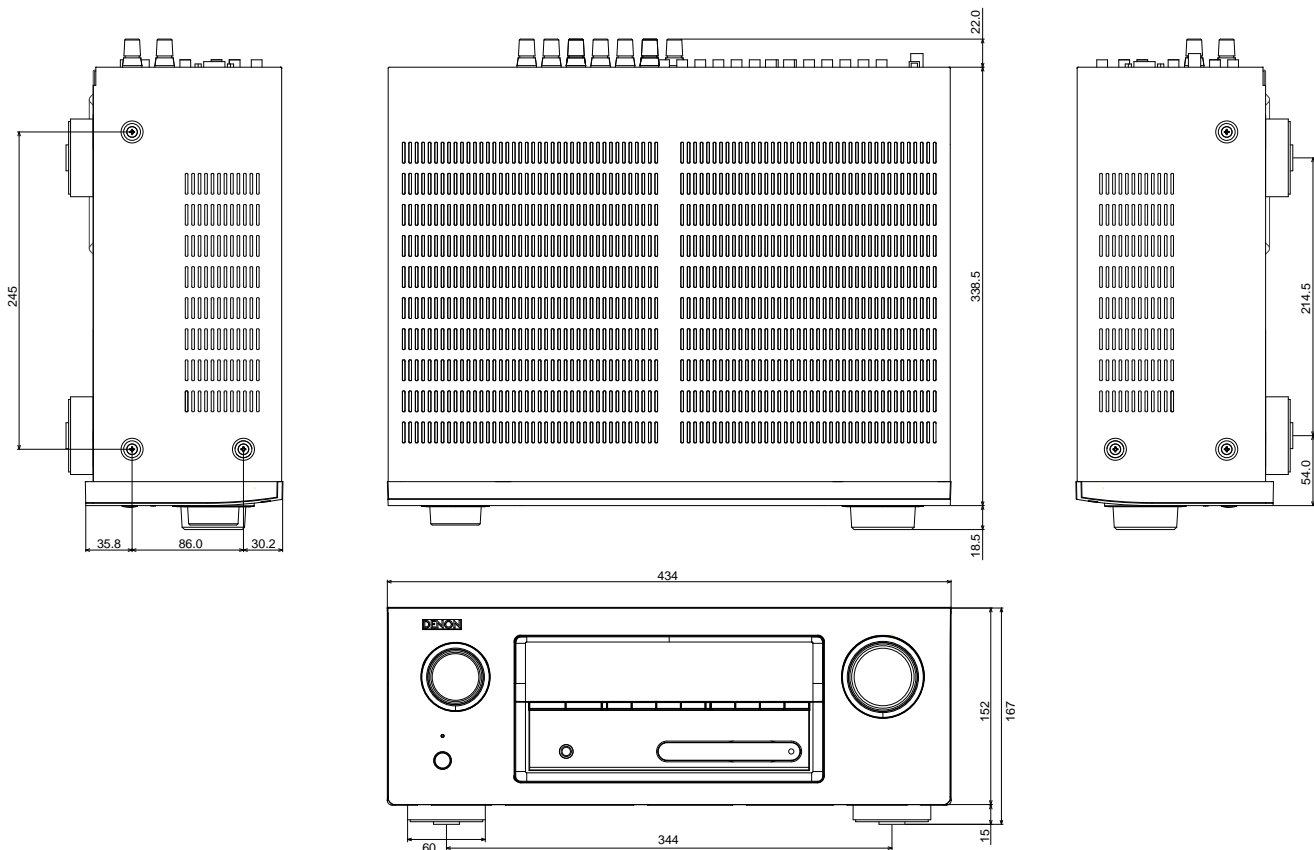
**Power consumption in CEC standby mode** : 0.5 W

**Power consumption in network standby mode** : 2.7 W

**Weight** : 10.9 kg

# DIMENSION

[AVR-2313CIE3 model]





# CAUTIONS IN SERVICING

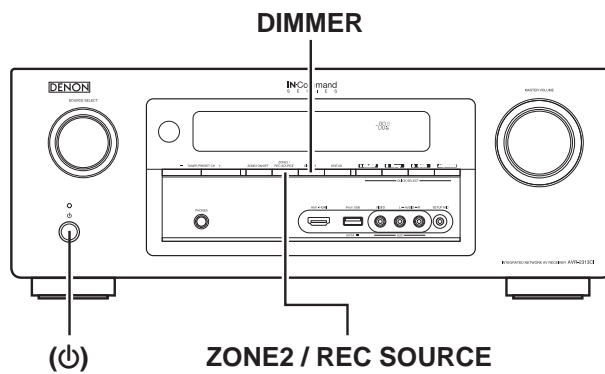
## Initializing INTEGRATED NETWORK AV RECEIVER

INTEGRATED NETWORK AV RECEIVER initialization should be performed when the  $\mu$ com, peripheral parts of  $\mu$ com, and Digital PCB were replaced.

1. Turn off the power pressing "Power operation (⏻)" button.
2. Press "Power operation (⏻)" button while simultaneously while pressing "ZONE2/REC SOURCE" and "DIMMER" buttons.
3. Check that the entire display is flashing at intervals of about 1 second, and then release the 2 buttons.  
The microprocessor will be initialized.

**NOTE:**• If step 3 fails, start over from step 1.  
• All user settings will be lost and the factory setting will be recovered after the set is initialized.  
So make sure to note down your setting beforehand for restoring after the initialization.

[AVR-2313CIE3 model]



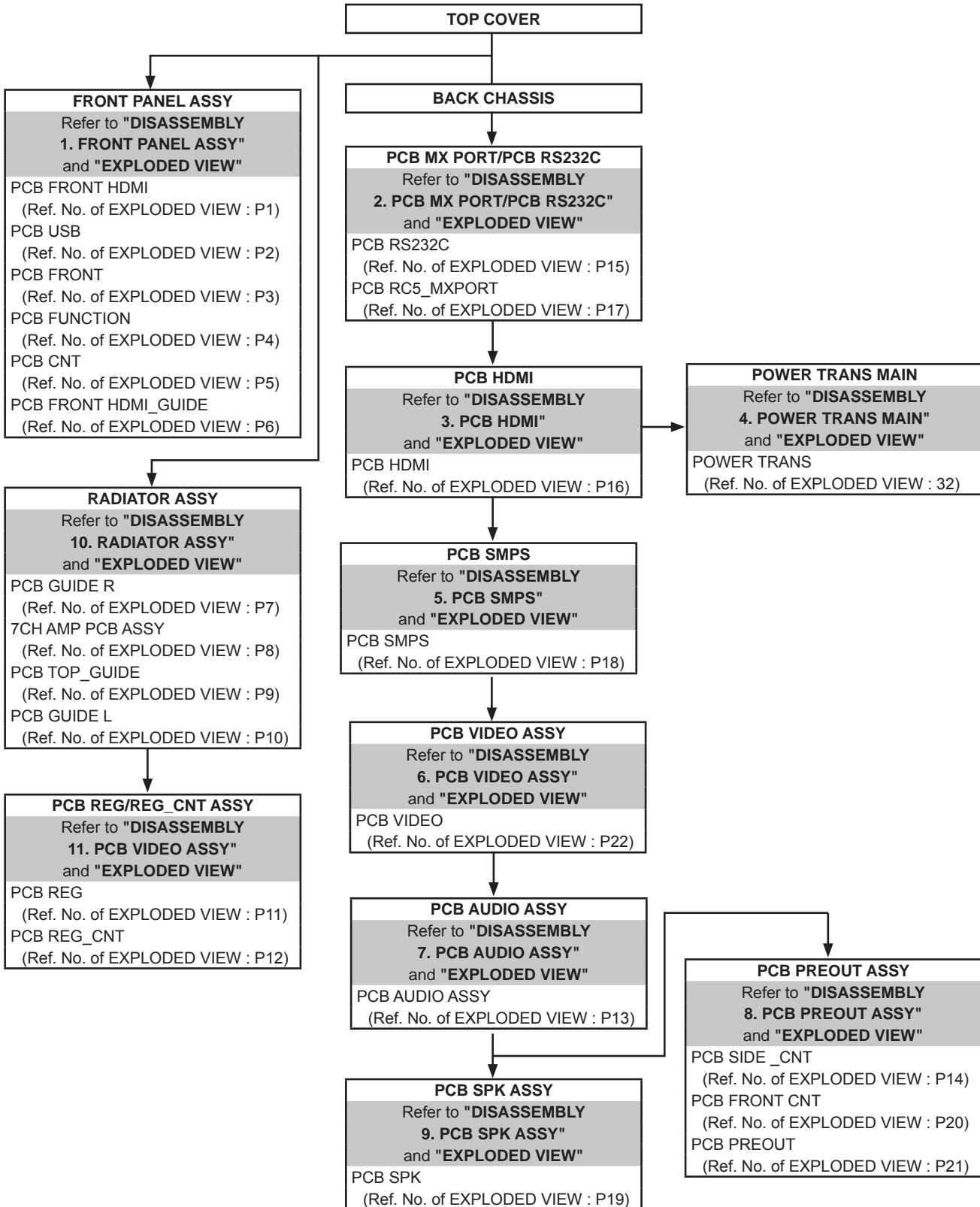
## Service Jig

When you repair the printing board, you can use the following JIG (Extension cable kit). Please order it from Denon Official Service Distributor in your region if necessary.

8U-110084S : EXTENSION UNIT KIT : 1 Set  
(Refer to 55 page.)

# DISASSEMBLY

- Disassemble in order of the arrow in the following figure.
  - In the case of the re-assembling, assemble it in order of the reverse of the following flow.
  - In the case of the re-assembling, observe "attention of assembling".
  - If wire bundles are untied or moved to perform adjustment or replace parts etc., be sure to rearrange them neatly as they were originally bundled or placed afterward.
- Otherwise, incorrect arrangement can be a cause of noise generation.



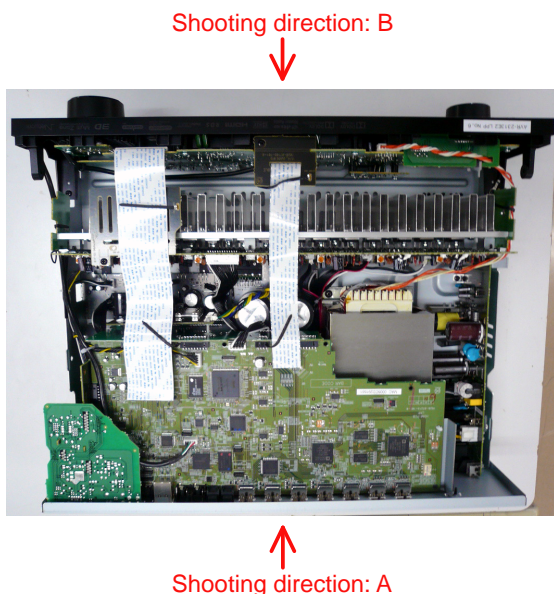
## About the photos used for "descriptions of the DISASSEMBLY" section

- The shooting direction of each photograph used herein is indicated on the left side of the respective photograph as "Shooting direction: \*\*\*".
- Refer to the diagram below about the shooting direction of each photograph.
- Photographs with no shooting direction indicated were taken from the top of the set.
- The photograph is AVR-2313CIE3 model.

### The viewpoint of each photograph (Shooting direction)

[View from the top]

Shooting direction: C →



Front side ↑

← Shooting direction: D

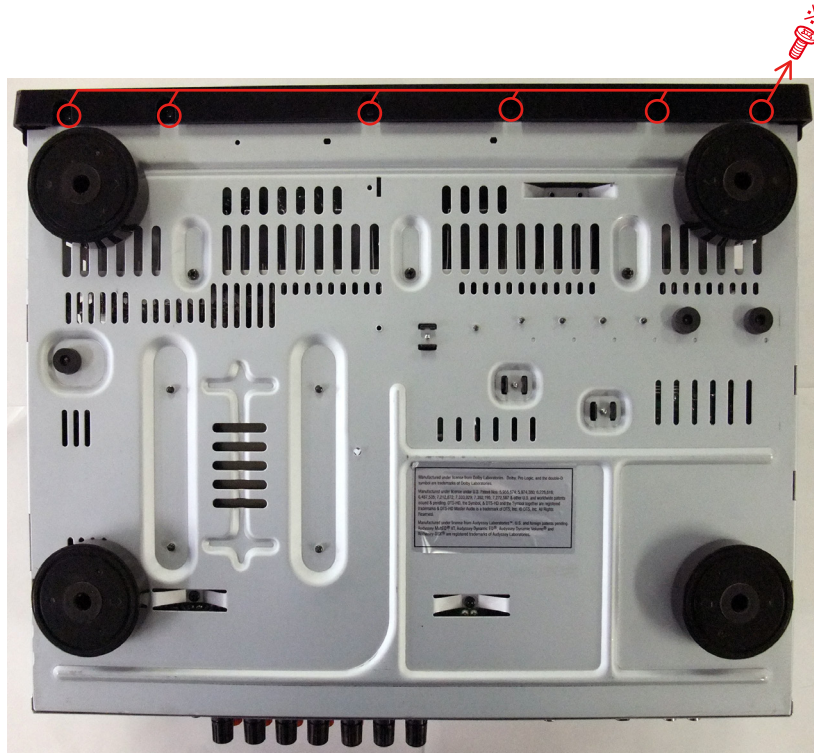
↑ Shooting direction: A

# 1. FRONT PANEL ASSY

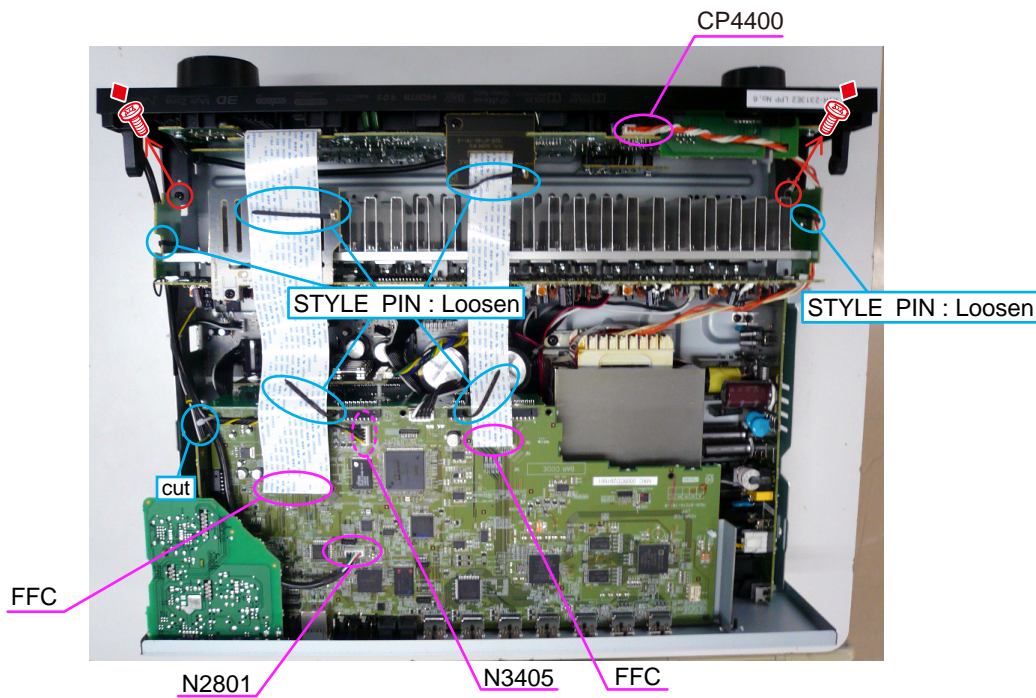
Proceeding : **TOP COVER** → **FRONT PANEL ASSY**

(1) Remove the screws.

View from the bottom



(2) Cut the wire clamp band, then disconnect the connector wires and FFC. Remove the screws.

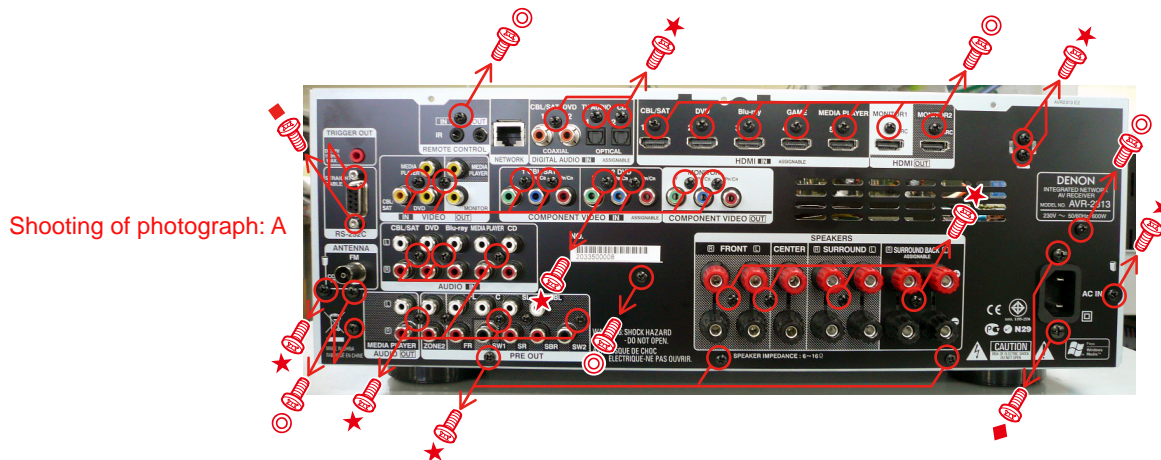


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in FRONT PANEL ASSY.

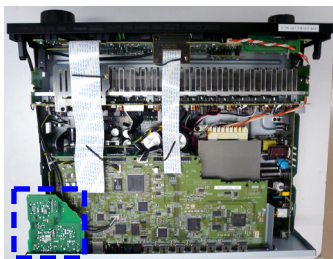
## 2. PCB MX PORT/PCB RS232C

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**

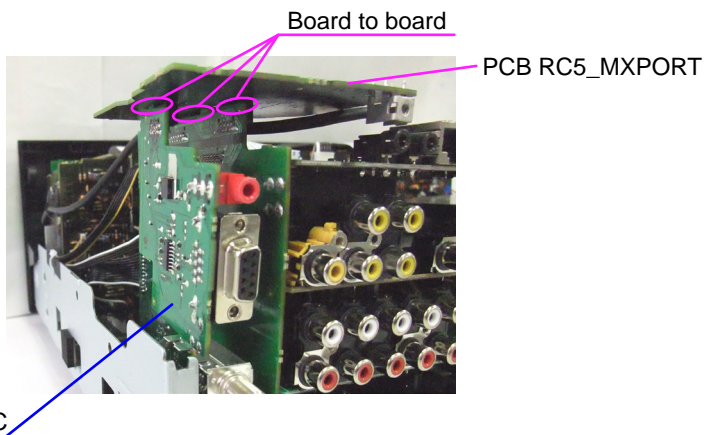
(1) Remove the screws.



(2) Disconnect the connector board.



Shooting of photograph: A

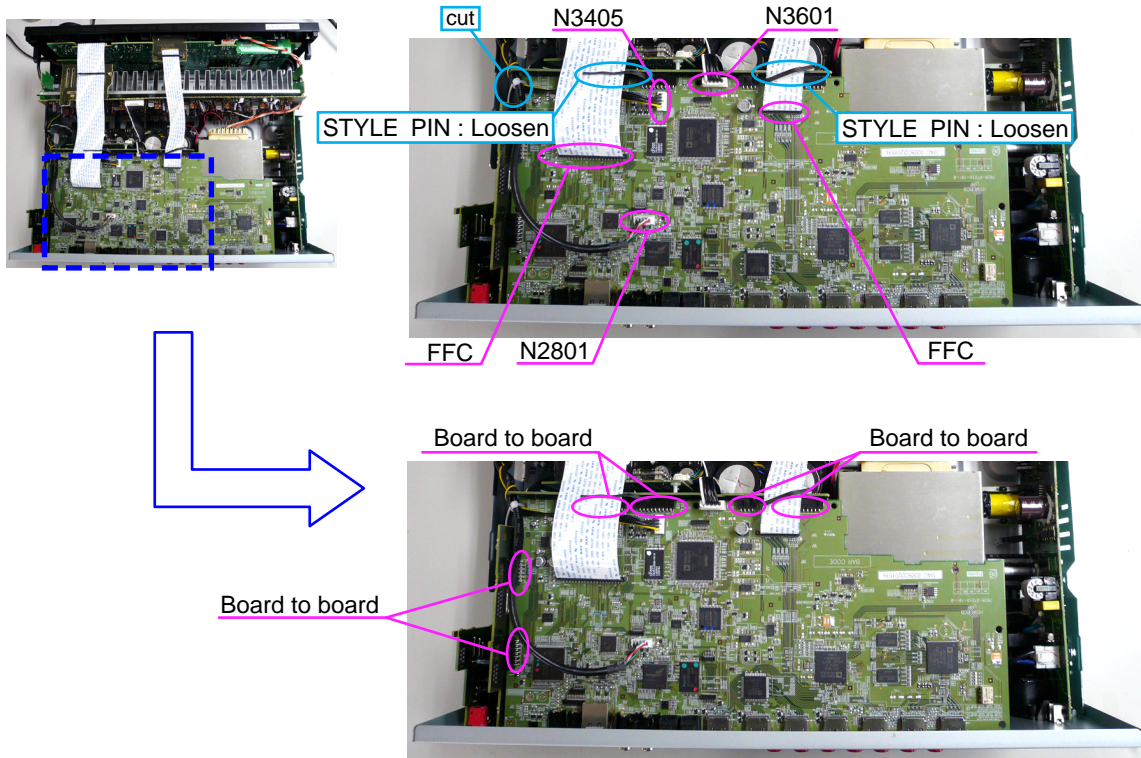


Please refer to "EXPLODED VIEW" for the disassembly method of PCB MX PORT/PCB RS232C.

### 3. PCB HDMI

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI**

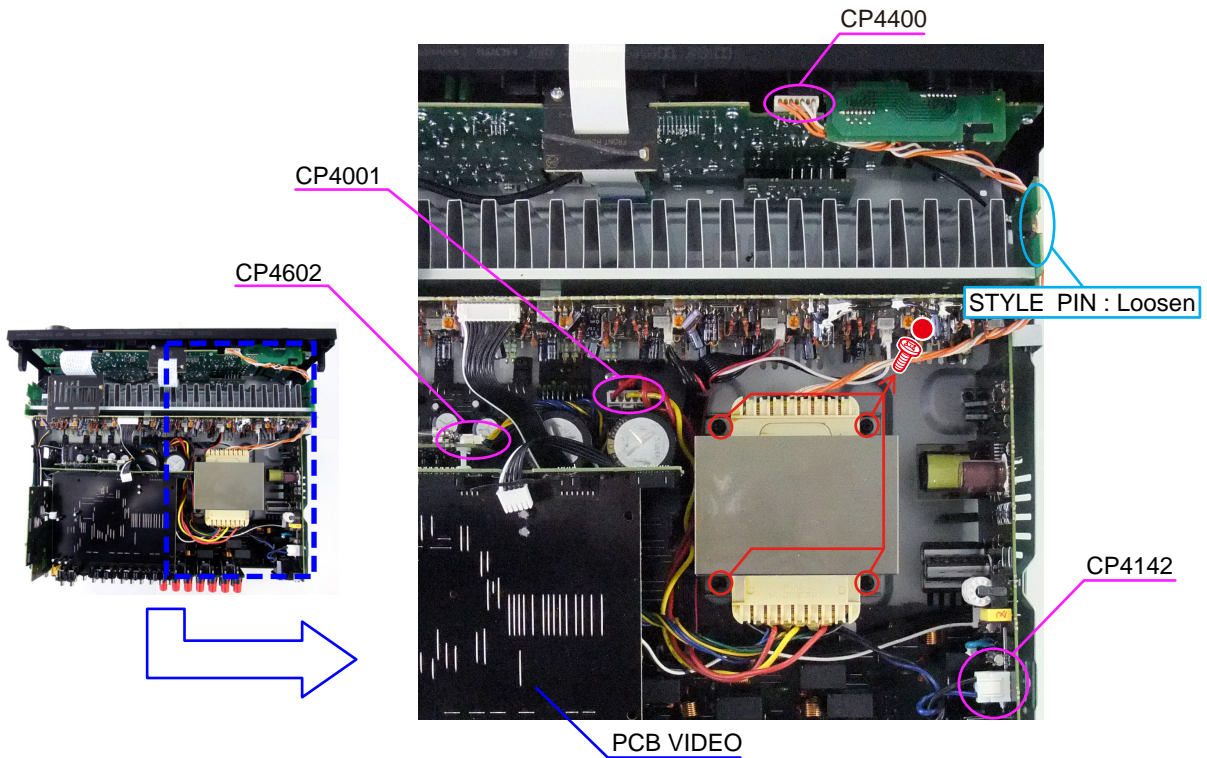
(1 ) Cut the wire clamp band, then disconnect the connector wires and FFC. Disconnect the connector board.



#### 4. POWER TRANS MAIN

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **POWER TRANS MAIN**

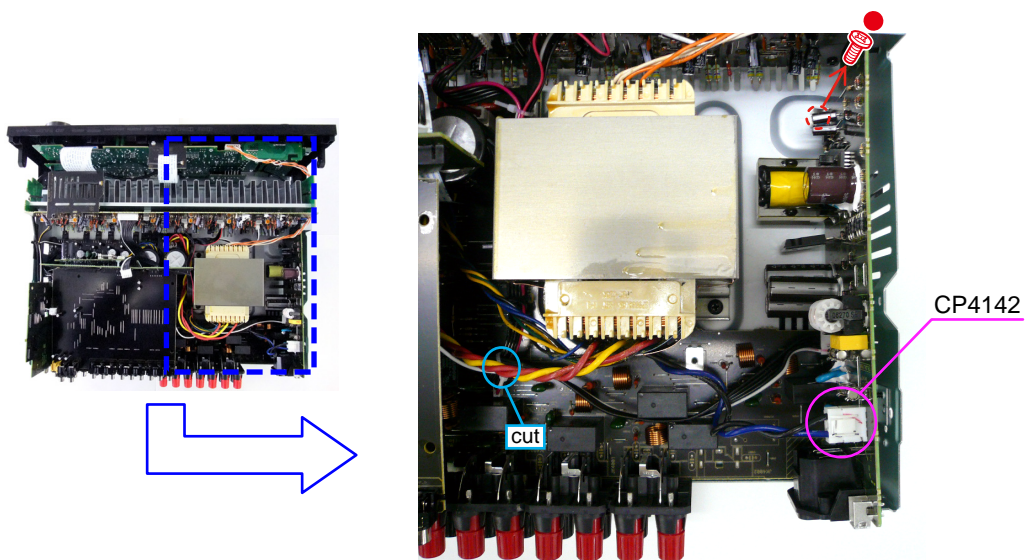
(1) Disconnect the connector wires, then remove the screws.



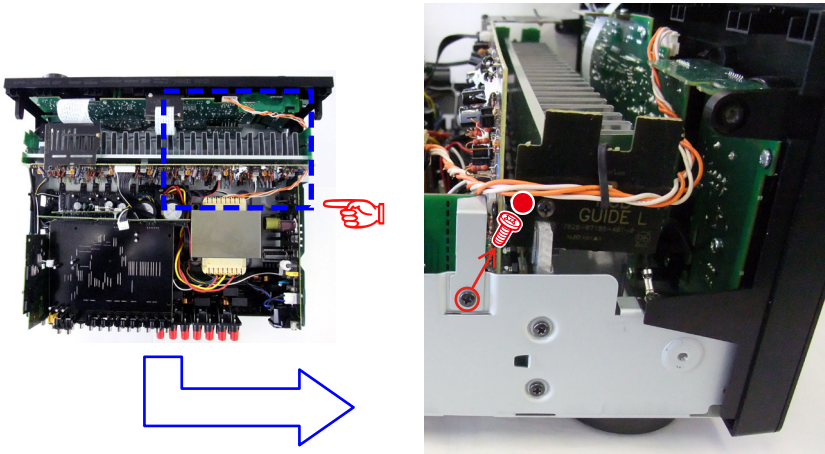
#### 5. PCB SMPS ASSY

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **PCB SMPS ASSY**

(1) Cut the wire clamp band, then disconnect the connector wire. Remove the screw.



(2) Remove the screws.

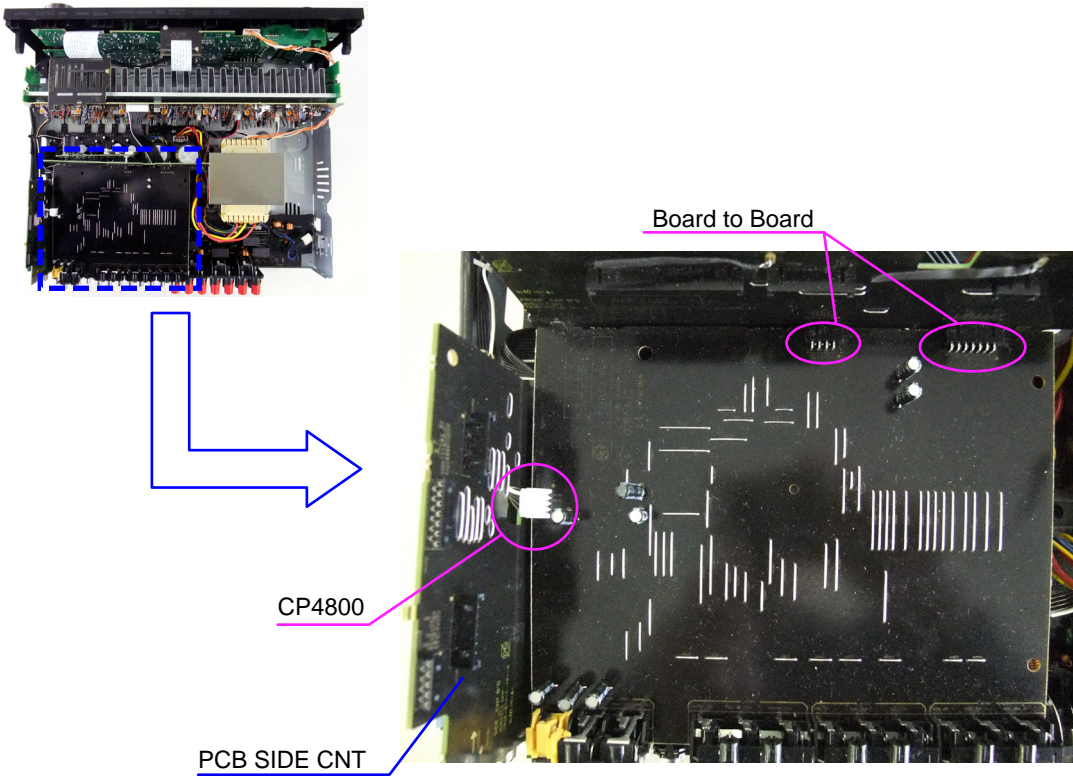


Shooting of photograph: D

## 6. PCB VIDEO

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **PCB SMPS ASSY** → **PCB VIDEO**

(1) Disconnect the connector wire and connector board.

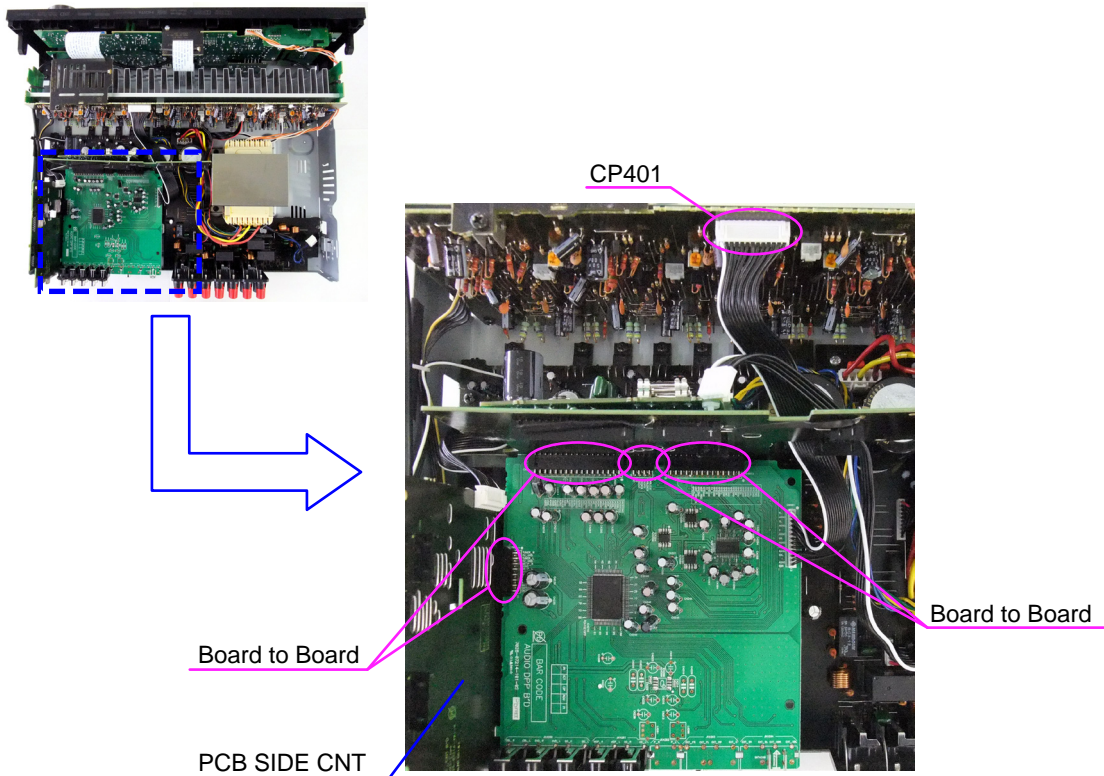




## 7. PCB AUDIO

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **PCB SMPS ASSY** → **PCB VIDEO** → **PCB AUDIO**

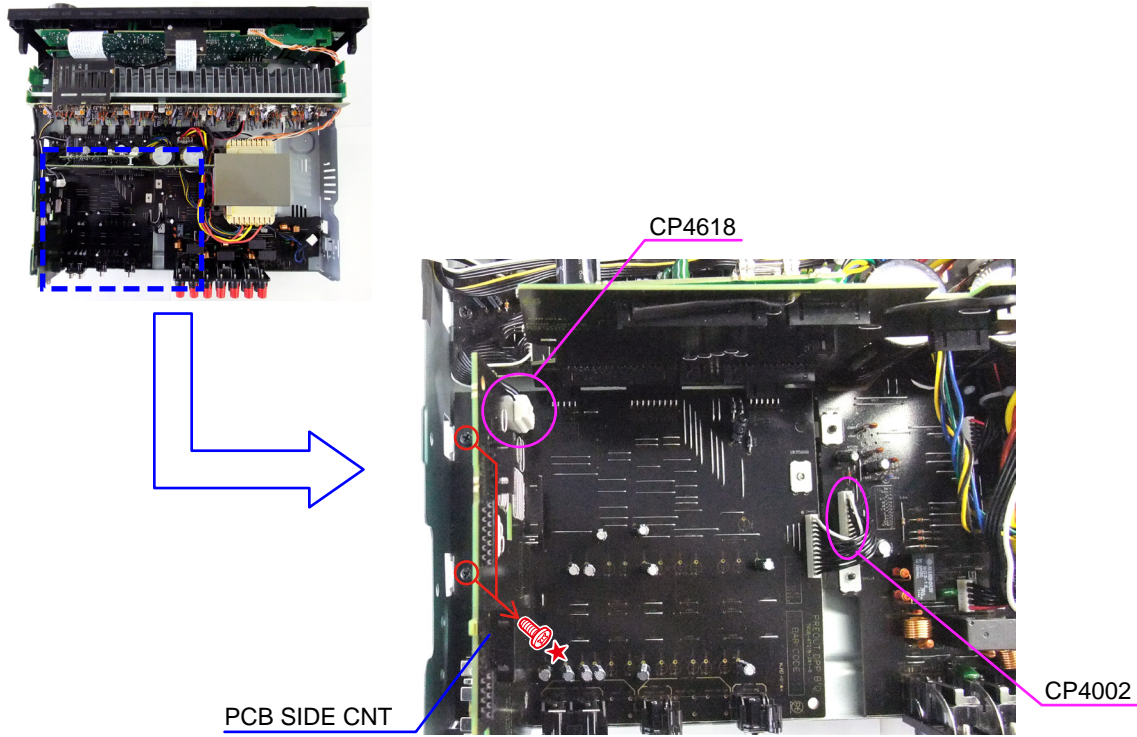
(1) Disconnect the connector wire and connector board.



## 8. PCB PREOUT

Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **PCB SMPS ASSY** → **PCB VIDEO** → **PCB AUDIO**  
→ **PCB PREOUT**

(1) Remove the screws, then disconnect the connector wires

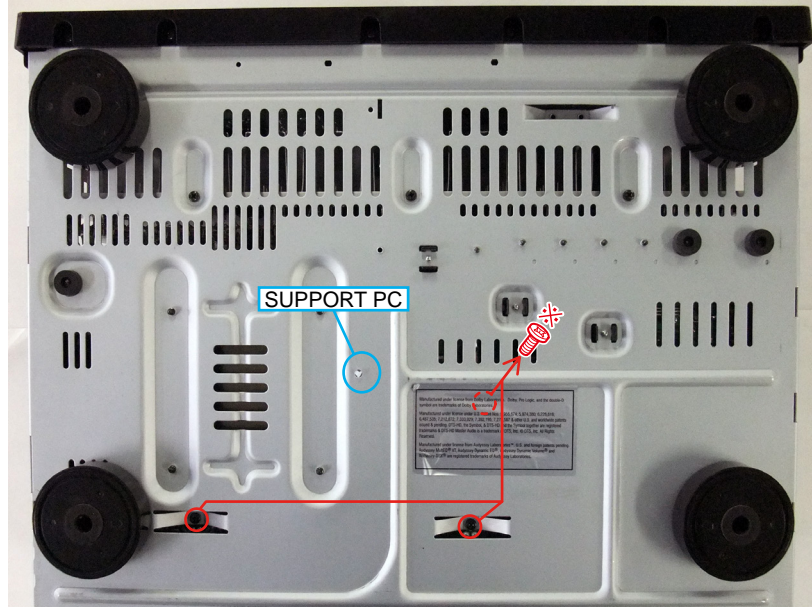


## 9. PCB SPK

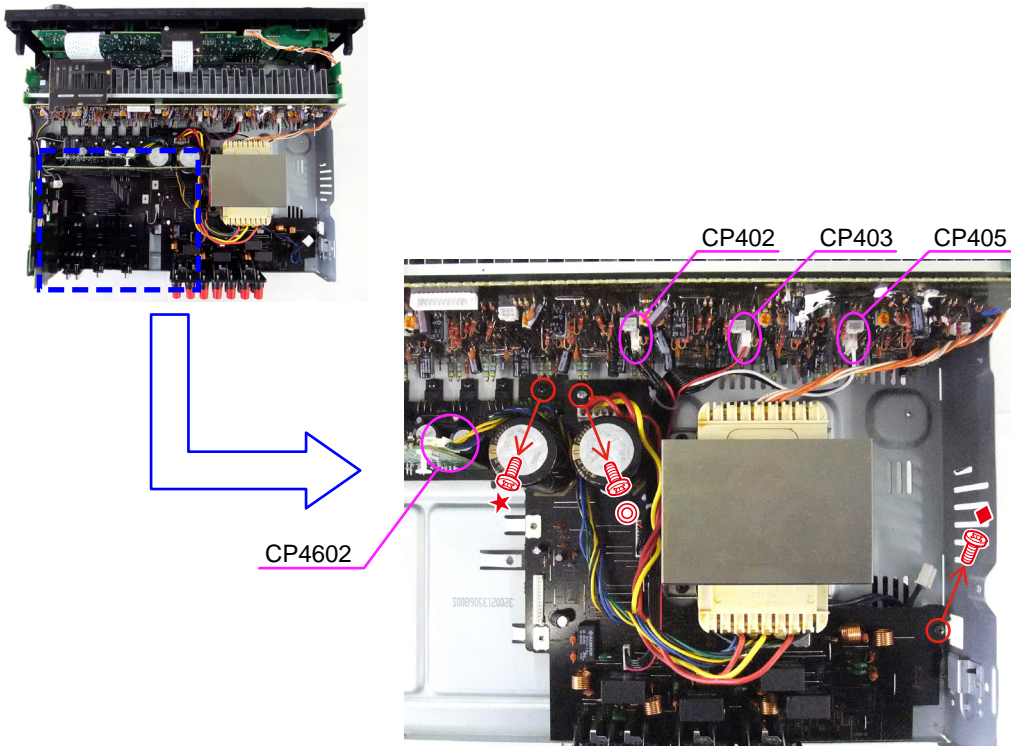
Proceeding : **TOP COVER** → **BACK CHASSIS** → **PCB MX PORT/PCB RS232C**  
→ **PCB HDMI** → **PCB SMPS ASSY** → **PCB VIDEO** → **PCB AUDIO**  
→ **PCB SPK**

(1) Remove the screws and SUPPORT PC.

View from the bottom



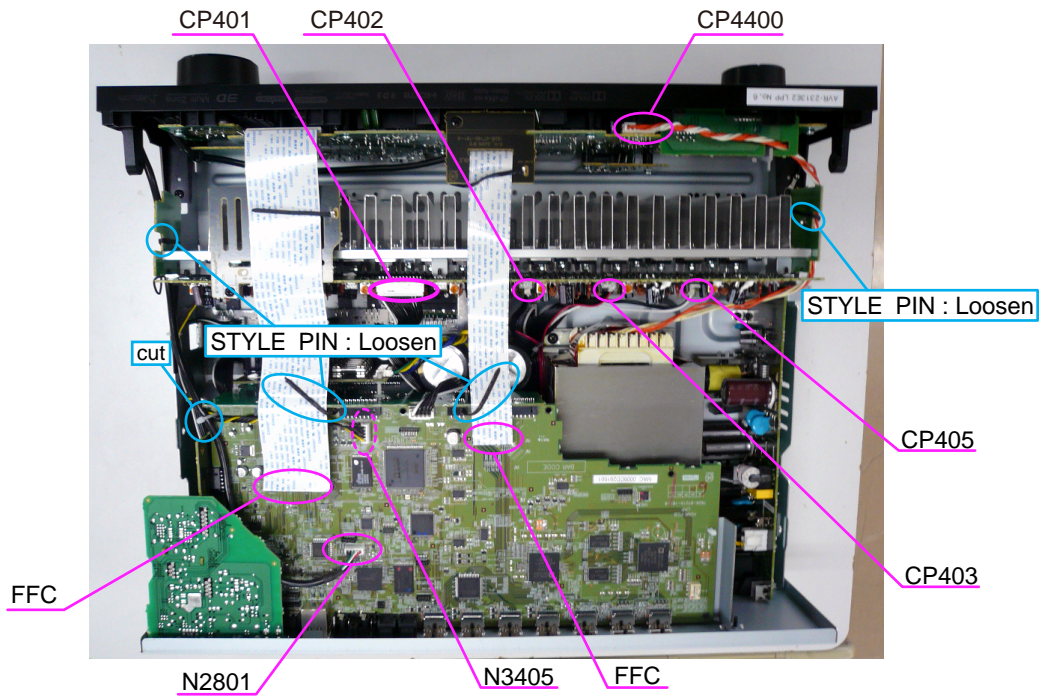
(2) Remove the screws, then disconnect the connector wires.



## 10.RADIATOR ASSY

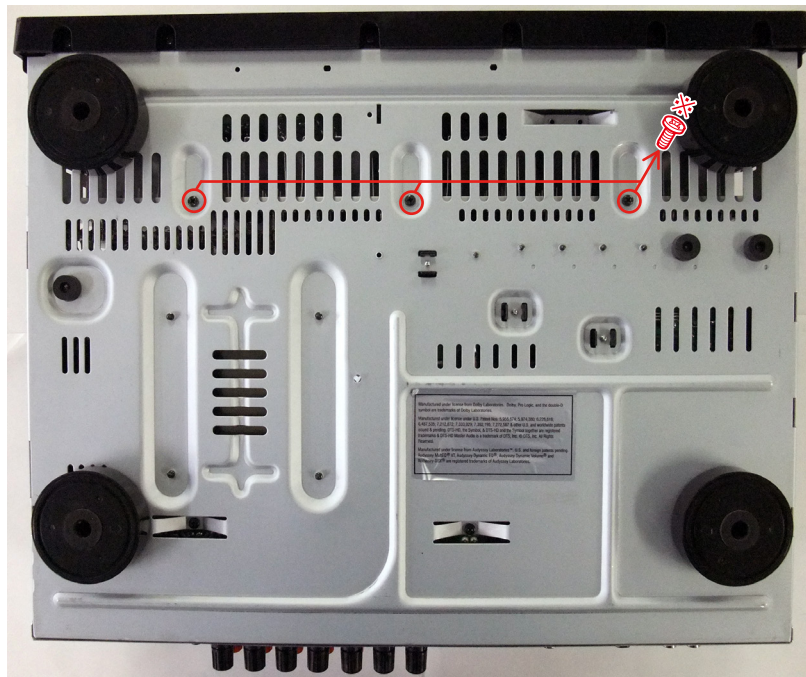
Proceeding : **TOP COVER** → **RADIATOR ASSY**

(1) Cut the wire clamp band. Remove the screws, then disconnect the connector wires.

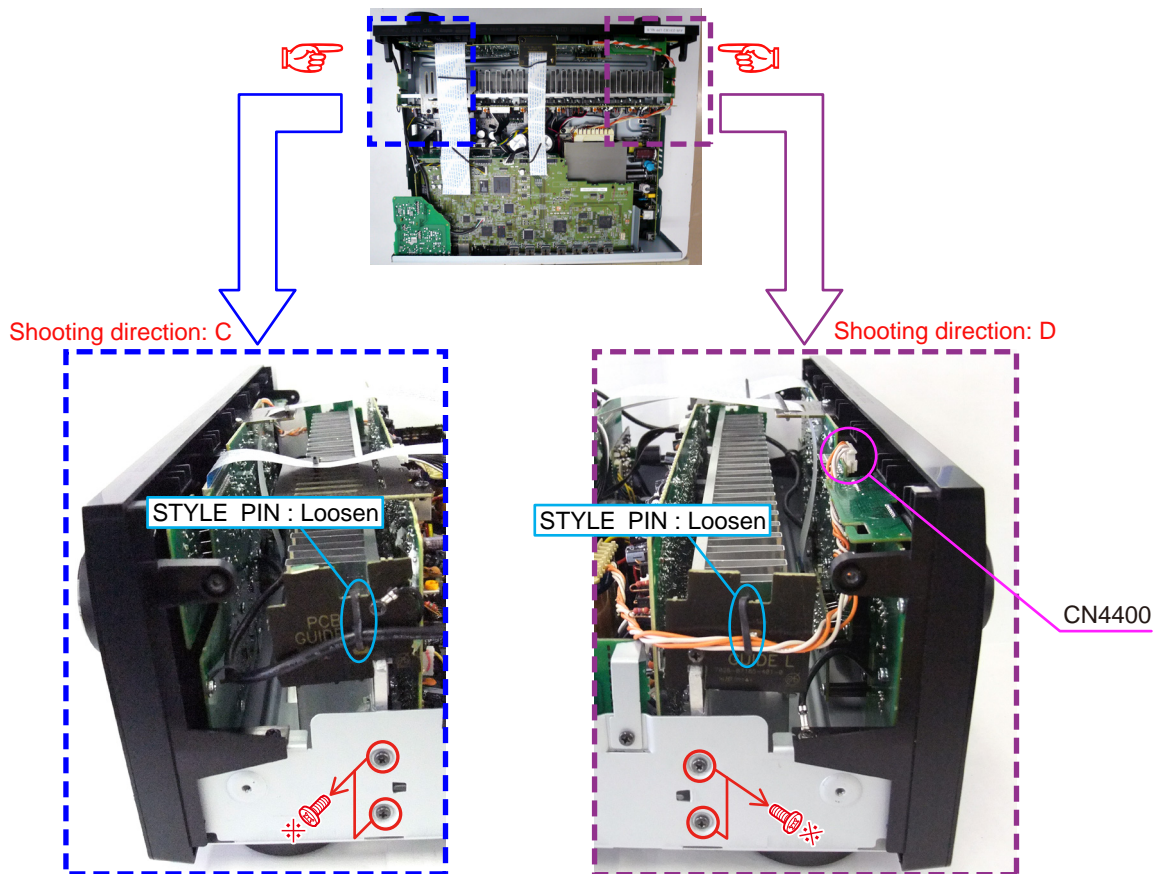


(2) Remove the screws.

View from the bottom



(3) Remove the screws, then disconnect the connector wire.

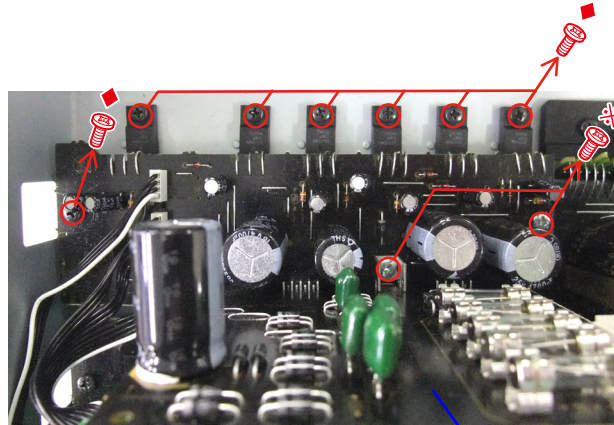
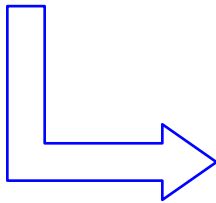
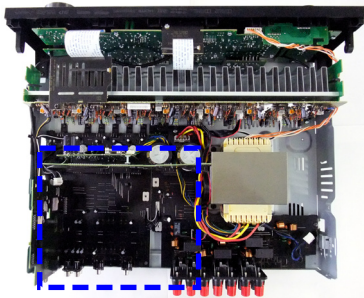


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in RADIATOR ASSY.

## 11.PCB REG/REG\_CNT ASSY

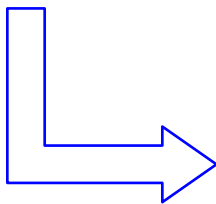
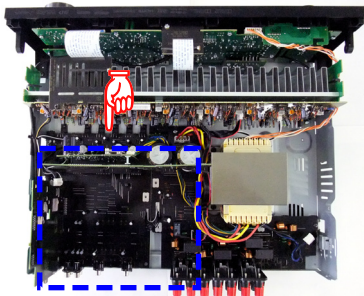
Proceeding : **TOP COVER** → **RADIATOR ASSY** → **PCB REG/REG\_CNT ASSY**

(1) Remove the screws.



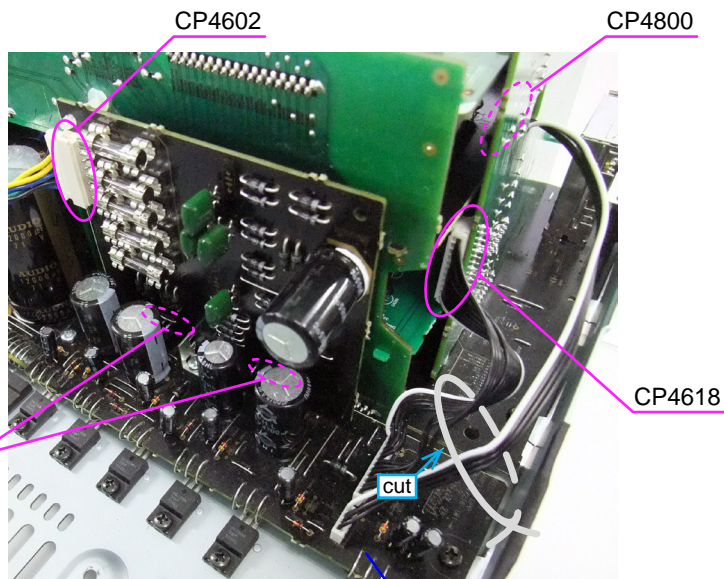
PCB REG

(2) Cut the wire clamp band, then disconnect the connector wire and connector board.



Shooting of photograph: B

Board to Board



PCB REG

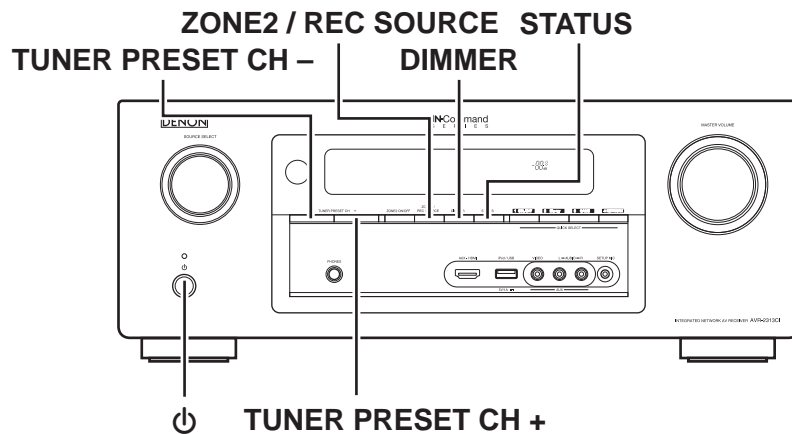
Please refer to "EXPLODED VIEW" for the disassembly method of each PCB.

# SPECIAL MODE

## Special mode setting button

- ※ No.1 - 5, 7, 8 : Press the "Power operation (b)" button to turn on the power while pressing both the buttons A, B and the button C at the same time.
- ※ No.6 : Turn on the power, then press and hold down the A and B buttons for over 3 seconds.

No.	Mode	Button A	Button B	Button C	Contents
1	Version display (µcom/DSP Error Display)	STATUS	DIMMER	-	Firmware versions such as Main or DSP are displayed in the FL Display. Errors are displayed when they occur. (Refer to 24 page)
2	User Initialization mode (Installer Setup settings are not initialized.)	TUNER PRESET CH +	TUNER PRESET CH -	-	Backup data initialization is carried out. (Installer Setup settings are not initialized.)
3	Factory Initialization mode (Installer Setup settings are also initialized.)	ZONE2/REC SOURCE	DIMMER	-	Backup data initialization is carried out. (Installer Setup settings are also initialized.)
4	PANEL/REMOTE LOCK Selection mode	ZONE2/REC SOURCE	TUNER PRESET CH +	-	Selects to reject operations through panel buttons and the master volume knob on the main unit and operations via the remote control.
5	Service Related Selection mode	ZONE2/REC SOURCE	DIMMER	STATUS	Selects the "Diagnostic mode" or "Displaying the protection history mode" or "232C standby clear mode".
6	Remote ID Setup mode	STATUS	DIMMER	-	When using multiple DENON AV receivers in the same room, make this setting so that only the desired AV receiver operates. (Refer to 37 page)
7	Mode for switching tuner frequency step (E2 model Only)	TUNER PRESET CH +	DIMMER	-	Change tuner frequency step to FM:50kHz/200kHz
8	Installer Setup mode (AVR-2313CIE3 model only)	ZONE2/REC SOURCE	TUNER PRESET CH -	-	Access the Remote Maintenance mode via the internet. Installer Setup is displayed on GUI/Option Menu. ※ Refer to AVR_RemoteMaintenance_.pdf of SDI.



# 1. $\mu$ com/DSP Version display mode

## 1.1. Operation specifications

### $\mu$ com/DSP version display mode:

When the set is started up in this mode, the version information is displayed.

### Starting up:

Press the "Power operation ( $\phi$ )" button to turn on the power while pressing the "STATUS" and "DIMMER" buttons. Now, press the "STATUS" button to the display the 2nd item information on the FL Display.

※ When the version is displayed on the FL Display, the version list is also displayed on the GUI.

## 1.2. Display Order

Error information(Refer to 1.3. Error display) → ① Model destination information → ② Serial Number → ③ Firmware Package Version → ④ Main  $\mu$ -com → ⑤ Main 1st Boot Loader → ⑥ DSP ROM → ⑦ Audio PLD → ⑧ GUI SFLASH → \*⑨ Ethernet(DM860A) 1st Boot Loader, Hardware ID → \*⑩ Ethernet(DM860A) 2nd Boot Loader → \*⑪ Ethernet(DM860A) IMAGE → \*⑫ Ethernet(DM860A)MAC ADDRESS information

① Model destination information :

Model	FLD
AVR-2313CI E3 model	A V R 2 3 1 3 E 3
AVR-2313 E2 model	A V R 2 3 1 3 E 2
AVR-2313 E1C model	A V R 2 3 1 3 E 1 C

② Serial Number :

FLD	S / N .	*	*	*	*	*	*	*	*	*	*
-----	---------	---	---	---	---	---	---	---	---	---	---

③ Firmware Package Version :

FLD	P a c k a g e	:	*	*	*	*	*
-----	---------------	---	---	---	---	---	---

④ Main  $\mu$ -com :

FLD	M a i n	:	*	*	*	*	*	*	*
-----	---------	---	---	---	---	---	---	---	---

⑤ Main 1st Boot Loader :

FLD	M a i n F B L	:	*	*	.	*	*
-----	---------------	---	---	---	---	---	---

⑥ DSP ROM :

FLD	D S P	:	*	*	.	*	*
-----	-------	---	---	---	---	---	---

⑦ Audio PLD :

FLD	A u d i o P L D	:	*	*	.	*	*
-----	-----------------	---	---	---	---	---	---

⑧ GUI SFLASH :

Model	FLD
AVR-2313CI E3 model	G U I : 5 9 1 1 * * * *
AVR-2313 E2 model	G U I : 5 9 1 2 * * * *
AVR-2313 E1C model	G U I : 5 9 1 5 * * * *



⑨ Ethernet(DM860A) 1st Boot Loader, Hardware ID :

FLD		E	t	h	e	r	n	e	t		F	B	L				
-----	--	---	---	---	---	---	---	---	---	--	---	---	---	--	--	--	--

↓  
Press the "STATUS" button.

FLD	*	*	*	*	*	*	-	b	d								
-----	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

⑩ Ethernet(DM860A) 2nd Boot Loader :

FLD		E	t	h	e	r	n	e	t		S	B	L				
-----	--	---	---	---	---	---	---	---	---	--	---	---	---	--	--	--	--

↓  
Press the "STATUS" button.

FLD	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	-	0	A
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

⑪ Ethernet(DM860A) IMAGE :

FLD		E	t	h	e	r	n	e	t		I	M	G				
-----	--	---	---	---	---	---	---	---	---	--	---	---	---	--	--	--	--

↓  
Press the "STATUS" button.

FLD	*	*	*	*	*	*	*	*	*	*	*	*	*	*				
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

⑫ Ethernet(DM860A)MAC ADDRESS information :

FLD	*	E	t	h	e	r	n	e	t		M	A	C				
-----	---	---	---	---	---	---	---	---	---	--	---	---	---	--	--	--	--

↓  
Press the "STATUS" button.

FLD		*	*	*	*	*	*	-	*	*	*	*	*	*				
-----	--	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

### 1.3. Error display

See the following table for each "Error information" display and its explanation (status).  
 Display order is ①,②,③,④,⑤.

Condition	Status	FL Display	Trouble shooting
① Firm Check NG	Compared with the destination setting on the board. This is displayed when the model name or destination information written into the firmware does not match. (※)	F I R M E R R O R	<ul style="list-style-type: none"> <li>• Please check the destination-resistors (R3017/R3018, HDMI PCB).</li> <li>• Please write the firmware of correct destination.</li> </ul>
② DIR NG	No response from DIR.	D I R E R R O R 0 1	<ul style="list-style-type: none"> <li>• Please check DIR (U2205, HDMI PCB) and around circuits.</li> </ul>
③ DSP NG	When DSP code boot is performed, the DSP FLAG0 port does not change to "H" even if DSP reset is executed.	D S P E R R O R 0 1	<ul style="list-style-type: none"> <li>• Please check DSP (U2001, HDMI PCB) and around circuits.</li> </ul>
	Before DSP command is issued, the DSP BUSY port does not change to "L".	D S P E R R O R 0 2	
	When DSP data read is performed, executing WRITE="L" does not result in ACK="H".	D S P E R R O R 0 3	
	When DSP data read is performed, executing REQ="L" does not result in ACK="L".	D S P E R R O R 0 4	
	When DSP data writing is performed, executing WRITE="H" does not result in ACK="H".	D S P E R R O R 0 5	
	When DSP data writing is performed, executing REQ="L" does not result in ACK="L".	D S P E R R O R 0 6	
④ IP SCALER NG	An error occurred in testing writing data between IP SCALER and DDR.	I P S C A L E R E R R 0 1	<ul style="list-style-type: none"> <li>• Please check IP SCALER (U1601, HDMI PCB) and around circuits.</li> </ul>
	Testing writing data between IP SCALER and DDR resulted in no response.	I P S C A L E R E R R 0 2	
⑤ EEPROM NG	Error occurs in EEPROM checksum.(*** is a block address number.)	E 2 P R O M E R R * * *	

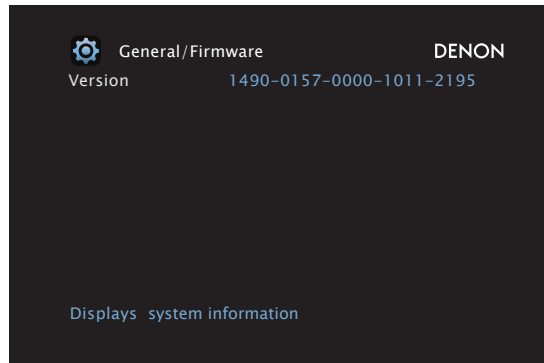
Status	FL Display
※ The written Firmware and product settings (model name, brand name, destination) are compared. If Firmware that is not designed for this product is written, ▲ or ▼ is displayed in the first column, as shown on the right.	▲ M a i n : * * * * * * * * *
	▲ D S P : * * * . * * *
	▲ A u d i o P L D : * * * . * * *
	▲ G U I : * * * * * * * * *
	▼ G U I : * * * * * * * * *

### 1.4. Version display on the Setup Menu

Use the following procedure to display the firmware version.

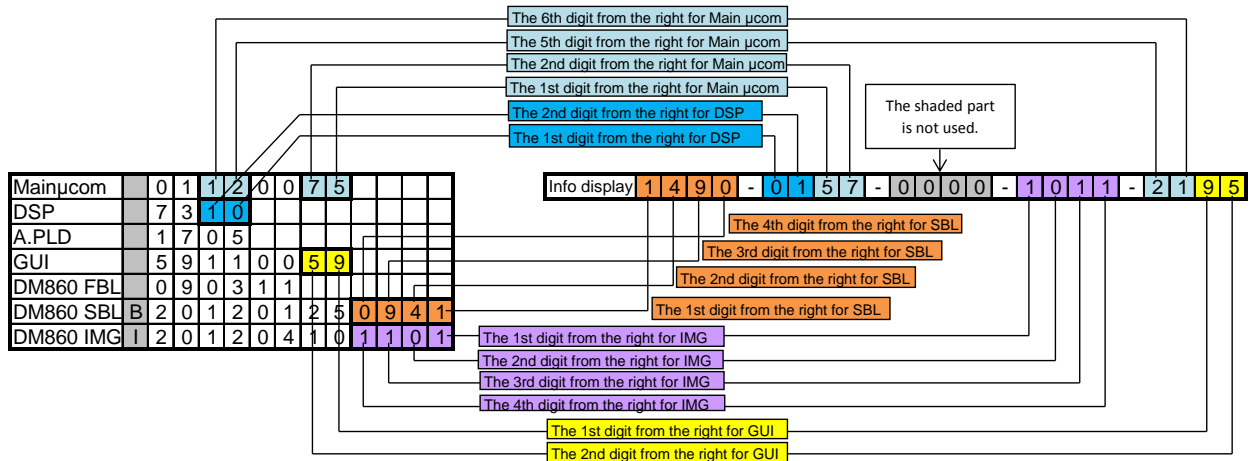
- (1) Press the "SETUP" button on the remote control.
- (2) Select "General-Information-Firmware".

A version with 20 digits is displayed as shown in the following image.



GUI Image

The displayed 20 digits are derived from each device version as shown below.



※ This firmware version No. (xxxx-xxxx-xxxx-xxxx) is included in the service contact document. These 20 digits are also included in the document.

## 2. PANEL/REMOTE LOCK Selection mode

### 2.1. Behavior specifications

In this mode, you can switch between the PANEL LOCK MODE and the Mode for preventing remote control acceptance.

### 2.2. Starting up

Press the "Power operation (⏻)" button to turn on power while pressing the "ZONE2/REC SOURCE" and "TUNER PRESET CH +" buttons.

Press the "TUNER PRESET CH +" button to select the mode and the "STATUS" button to confirm the selection.

### 2.3. Mode selection method and how each mode is displayed

Each time you press the "TUNER PRESET CH +" button, the mode displayed on the FL DISPLAY changes.

While the desired mode name is displayed on the FL DISPLAY, press the "STATUS" button. The set is restarted and the selected mode takes effect.

The currently set item is marked with " \* " .

①

FLD		F	P	/	V	O	L		L	O	C	K		O	n
-----	--	---	---	---	---	---	---	--	---	---	---	---	--	---	---

Operations using the main unit panel buttons and the master volume knob are rejected.

②

FLD		F	P		L	O	C	K						O	n
-----	--	---	---	--	---	---	---	---	--	--	--	--	--	---	---

Operations using the main unit panel buttons are rejected.

③

FLD		F	P		L	O	C	K				*	O	f	f
-----	--	---	---	--	---	---	---	---	--	--	--	---	---	---	---

Panel lock mode is cancelled.

④

FLD		R	C		L	O	C	K						O	n
-----	--	---	---	--	---	---	---	---	--	--	--	--	--	---	---

Operations using the remote control are rejected.

⑤

FLD		R	C		L	O	C	K				*	O	f	f
-----	--	---	---	--	---	---	---	---	--	--	--	---	---	---	---

RC lock mode is cancelled.

### 3. Service Related Selection mode

#### 3.1. Behavior specifications

In this mode, you can switch between the Diagnostic mode (SERVICE CHECK) and the Displaying the protection mode (PROTECTION) and the 232C clear mode (RS232C RESET).

#### 3.2. Starting up

Press the "Power operation (⏻)" button to turn on power while pressing the "ZONE2/REC SOURCE", "DIMMER" and "STATUS" buttons.

Press the "TUNER PRESET CH +" button to select the mode and press the "STATUS" button to restart the set and make the setting take effect.

①

FLD		1	.	S	E	R	V	I	C	E		C	H	E	C	K
-----	--	---	---	---	---	---	---	---	---	---	--	---	---	---	---	---



This mode is used for confirming the Video and Audio (signal) paths. (Diagnostic mode)  
The signal paths of the set can be easily confirmed after repair.

②

FLD		2	.	P	R	O	T	E	C	T	I	O	N			
-----	--	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--



The protection history can be checked.

③

FLD		3	.	R	S	2	3	2	C		R	E	S	E	T	
-----	--	---	---	---	---	---	---	---	---	--	---	---	---	---	---	--

The 232C standby mode is changed to the Normal standby mode.

#### 3.3. Canceling diagnostic mode

Turn off the power by pressing the "Power operation (⏻)" button.



### 3.4. DIAGNOSTIC MODE (Video/Audio (signal) path confirmation mode)

This mode is used for confirming the Video and Audio (signal) paths. (Troubleshooting)  
 Confirming the operation of unit can be easily done after repair.  
 Backup data will not be lost.

#### 3.4.1. Starting diagnostic mode

Press the "Power operation (b)" button to turn on power while pressing the "ZONE2/REC SOURCE", "DIMMER" and "STATUS" buttons.  
 TUNED, STEREO and RDS are lit in FL display.(Refer to 29 page.)

#### 3.4.2. Canceling diagnostic mode




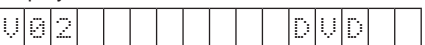





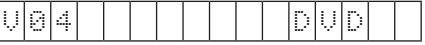

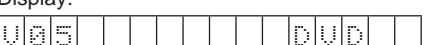


Turn off the power by pressing the ON/Standby button.

#### 3.4.3. Operation

Use the remote control (RC-1156) that is supplied with the AVRxx12 model. Press buttons on the remote control in the order indicated in the "Details of how to operate remote control" column in the following table to establish the confirmation path.  
 You will find using another remote control unit with the macro functions very useful. To use the macro functions, program a macro function to output a remote control code in accordance with the steps in the table below.

#### 3.4.4. Video system confirmation items

fig.XX : Refer to the block diagram of the fig.XXth.

Confirmation item	Setting and display	Details of how to operate remote controller *a)	Output sequence of remote control codes ※ It is useful to form a macro program. *b)	Contents of confirmation	Remarks
1 Analog Video (signal) Path  	VIDEO Conversion : OFF All ZONE : ON Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·Input : CVBS / Output : CVBS ·Input : USB (Picture) / Output : CVBS ·Input Component / Output : Component ·Input HDMI / Output : HDMI (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 1/CODE1 (Main Zone) Initialization		
		4.Press [ZONE SELECT], Select "MAIN"	③ZONE2 POWER ON		
2 Analog or HDMI to HDMI (signal) Path  	VIDEO Conversion : ON IP Scaler : Analog&HDMI Resolution : Auto Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·Input CVBS / Output : HDMI ·Input Component / Output : HDMI ·Input HDMI / Output : HDMI ·Input : USB (Picture) / Output : HDMI (※ As the input source, you can switch from DVD to other ones.)	Confirm the input pass one by one. Because it becomes only the input of the highest input becomes Convert/ (signal) Path if it inputs it at the same time. (HDMI input > Component input > CVBS input)
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 2/ABC (Main Zone) Initialization		
		4.Press [ZONE SELECT], Select "MAIN"	③ZONE2 POWER ON		
3 GUI FUNCTION  	VIDEO Conversion : ON IP Scaler : Analog&HDMI Resolution : Auto Menu : ON All ZONE :ON Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·GUI Display / Output : HDMI (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 2/ABC (Main Zone) Initialization		
		4.Press [ZONE SELECT], Select "MAIN"	③ZONE2 POWER ON		
4 CEC FUNCTION (Control Monitor : HDMI Monitor1)  	HDMI Control : ON Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·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. (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 3/DEF (Main Zone) Initialization & CEC Control ON &Control Monitor1		
		4.Press [ZONE SELECT], Select "MAIN"	③DVD (Main Zone)		
5 CEC FUNCTION (Control Monitor : HDMI Monitor2)  	HDMI Control : ON Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·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. (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 4/GHI (Main Zone) Initialization & CEC Control ON &Control Monitor2		
		4.Press [ZONE SELECT], Select "MAIN"	③DVD (Main Zone)		
6 HDMI Audio (signal) Path (Audio : AMP)  	Audio : AMP(When checking the audio output from AMP) Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·Input : HDMI (Signal of PCM, Dolby Digital or DTS) / Output : Speakers ·Input : HDMI (Signal of HD Audio) / Output : Speakers (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 5/JKL (Main Zone) Initialization & Select Audio AMP		
		4.Press [ZONE SELECT], Select "MAIN"	③DVD (Main Zone)		
7 HDMI Audio (signal) Path (Audio : TV)  	Audio : TV(When checking the audio output from TV) Display: 	1.Press [AMP]	①ZONE2 POWER OFF	·Input : HDMI (Signal of PCM or Dolby Digital or DTS) / Output : HDMI (Audio output from connected TV) (※ As the input source, you can switch from DVD to other ones.)	
		2.Press [ZONE SELECT] , Select "ZONE2"			
		3.Press [ZONE OFF]	②KEY 6/MNO (Main Zone) Initialization & Audio Select TV		
		4.Press [ZONE SELECT], Select "MAIN"	③DVD (Main Zone)		

3.4.5. Audio system confirmation items



fig.XX : Refer to the block diagram of the fig.XXth.

Confirmation item	Setting and display	Details of how to operate remote controller	Output sequence of remote control codes ※ It is useful to form a macro program.	Contents of confirmation	Remarks
1    <b>fig.8</b>	Analog (signal) Path Input Mode : Fixed ANALOG SURROUND mode : DIRECT Amp assign : Sourround Back Display: A01 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [7/PQRS]  8.Press [DVD]	①ZONE2 POWER OFF  ②KEY 7/PQRS (Main Zone) Initialization & Amp assign NORMAL& Input Mode Fixed ANALOG & SURROUND mode DIRECT  ④DVD (Main Zone)	·Input : Analog / Output : Speakers (Front L/R) ·Input : Analog / Output : Pre OUT (Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
2    <b>fig.9</b>	DIGITAL (signal) Path (MAIN) Input Mode : Fixed DIGITAL Amp assign : Sourround Back Display: A02 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [8/TUV]  6.Press [DVD]	①ZONE2 POWER OFF  ②KEY 8/TUV (Main Zone) Initialization & Amp assign NORMAL& Input Mode Fixed DIGITAL  ③DVD (Main Zone)	·Input : Digital / Output : Speakers (Front L/R) ·Input : Analog / Output : Pre OUT (Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
3    <b>fig.10</b>	HDMI (signal) Path Input Mode : Fixed HDMI Amp assign : Sourround Back Display: A05 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [MOVIE]  6.Press [DVD]	①ZONE2 POWER OFF  ②MOVIE Select Initialization &Amp assign NORMAL & Input Mode Fixed HDMI  ③DVD (Main Zone)	·Input : HDMI / Output : Speakers (Front L/R) ·Input : Analog / Output : Pre OUT (Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
4    <b>fig.11</b>	A/D (signal) Path (Main Zone) Amp assign : Sourround Back SURROUND mode : Multi ch STEREO Vol -20dB Speaker Config : SSSSY (Front/Center/Surround/Sourround Back : Small, SW : Yes) Display: A06 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [MUSIC]  6.Press [DVD]	①ZONE2 POWER OFF  ②MUSIC Initialization &Amp assign NORMAL & SURROUND mode : Multi ch STEREO & Volume -20dB  ④DVD (Main Zone)	·Input : Analog / Output : Speakers (Front L/R) ·Input : Analog / Output : SW(20Hz), Pre OUT (Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
5    <b>fig.12</b>	Amp Assign (signal) Path (Amp Assign : ZONE2) Amp assign : ZONE2 ZONE2 Function : Source Zone2 Vol -20dB Display: A07 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [GAME]  6.Press [ZONE SELECT], Select "ZONE2" 7.Press [ZONE ON] 8.Press [ZONE SELECT], Select "MAIN" 9.Press [DVD]	①ZONE2 POWER OFF  ②GAME Initialization & Amp assign ZONE2 & SURROUND mode : Multi ch STEREO & ZONE2 Volume -20dB  ③ZONE2 POWER ON  ④DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) ·Input : Analog / Output : LINE OUT(ZONE2 L/R) (※ As the input source, you can switch from DVD to other ones.)	
6    <b>fig.13</b>	Amp Assign (signal) Path (Amp Assign : BiAMP) Amp assign : BiAMP SURROUND mode : Multi ch STEREO Vol -20dB Display: A11 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [◀◀]  6.Press [DVD]	①ZONE2 POWER OFF  ②◀◀ Initialization & Amp assign BiAMP & SURROUND mode : Multi ch STEREO & Volume -20dB  ③DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) ·Input : Analog / Output : Pre OUT (SURR BACK L/R) (※ As the input source, you can switch from DVD to other ones.)	
7    <b>fig.13</b>	Amp Assign (signal) Path (Amp Assign : Front-B) Amp assign : Front-B SURROUND mode : Multi ch STEREO Vol -20dB Display: A12 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [▶▶]  6.Press [DVD]	①ZONE2 POWER OFF  ②▶▶ Initialization & Amp assign Front-B & SURROUND mode Multi ch STEREO & Volume -20dB  ③DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) ·Input : Analog / Output : Pre OUT (SB L/R) (※ As the input source, you can switch from DVD to other ones.)	
8    <b>fig.14</b>	Front Height (signal) Path Amp assign : Front Height SURROUND mode : Multi ch STEREO Vol -20dB Surround Parameter-Speaker : F.Height Display: A14 [     ] DVD [  ]	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [+10/MEMORY]  6.Press [DVD]	①ZONE2 POWER OFF  ②MEMORY/+10 (Main Zone) Initialization & Amp assign NORMAL & SURROUND mode:Multi ch STEREO & Volume -20dB & Surround Parameter-Speaker : F.Height  ③DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) (※ As the input source, you can switch from DVD to other ones.)	



Confirmation item	Setting and display	Details of how to operate remote controller	Output sequence of remote control codes ※ It is useful to form a macro program.	Contents of confirmation	Remarks																	
9 Front Wide (signal) Path  <b>fig.14</b>	Amp assign : NORMAL SURROUND mode : Multi ch STEREO Vol -20dB Surround Parameter-Speaker : F.Wide Display: <table border="1"> <tr> <td>F</td><td>1</td><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>D</td><td>V</td><td>D</td><td></td><td></td> </tr> </table>	F	1	5										D	V	D			1.Press [AMP] 2.Press [ZONE SELECT], Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "MAIN" 5.Press [SLEEP] 6.Press [DVD]	①ZONE2 POWER OFF  ②SLEEP MODE Initialization &Amp assign NORMAL & SURROUND mode:Multi ch STEREO & Volume -20dB Surround Parameter-Speaker : F.Wide ③DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) ( ※ As the input source, you can switch from DVD to other ones.)	
F	1	5										D	V	D								



### 3.5. Errors checking mode (Displaying the protection history)

#### 3.5.1. Operation specifications

##### Error mode (Displaying the protection history):

When the set is started up in this mode, the error information is displayed.

#### 3.5.2. About the display on the FL display

When the "STATUS" button is pressed after the error (protection history display) mode is set, a history like the one shown below is displayed, depending on the conditions.

- (1) Normal (when there has been no protection incident)

FLD	N	O		P	R	O	T	E	C	T									
-----	---	---	--	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--

- (2) For ASO (when the last protection incident was ASO protection)

FLD	P	R	T	:	A	S	O												
-----	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--

**Cause:** The line between speaker terminals is shorted, or speakers with impedance of less than the rated value.

**Supplementary information:** As the excess current is detected after operation of the speaker relay, a short on the speaker terminal and the connected speaker can be identified.

If the power is turned on without correcting the abnormality, the protection function will work about 5 seconds later and the power supply will be shut off.

- (3) For DC (when the last protection incident was DC protection)

FLD	P	R	T	:	D	C													
-----	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	--

**Cause:** DC output of the power amplifier is abnormal.

If the power is turned on without correcting the abnormality, the protection function will work about 5 seconds later and the power supply will be shut off.

- (4) For THERMAL (when the last protection incident was THERMAL(A) or THERMAL(B) protection)

FLD	P	R	T	:	T	H	E	R	M	A	L	A							
-----	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--

FLD	P	R	T	:	T	H	E	R	M	A	L	B							
-----	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--

**Cause:** The temperature of the heat sink is excessive.

If the power is turned on without correcting the abnormality, the protection function will work about 5 seconds later and the power supply will be shut off.

※ Additional causes of protection can be due to loose connections, associated components, Microprocessor, etc.

When the "STATUS" button is pressed again after the protection history as shown above is displayed, the normal display reappears.

### 3.5.3. Clearing the protection history

There are two ways to clear the protection history, as described below.

- (1) Start up the set in error (protection display) mode and display the error, then press and hold down the "DIMMER" button for 3 seconds.

FLD	F	R	T	:	D	C													
-----	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	--

↓ Press and hold down "DIMMER" button for 3 seconds.

FLD	F	R	T	:	C	L	E	A	R										
-----	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--

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

FLD	N	O		P	R	O	T	E	C	T									
-----	---	---	--	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--

- (2) Initialize. (Refer to "Initializing INTEGRATED NETWORK AV RECEIVER" 9 page.)

※ If you want to save a backup, perform the method in 2.3.(1).

### Warning indication by the POWER LED

If the power is turned off when a protection incident has been detected, the POWER LED (red) flashes as a warning according to the conditions in which the protection incident occurred.

- (1) ASO/DC PROTECTION : Flashes at intervals of 0.5 seconds (0.25 seconds lit, 0.25 seconds off)
- (2) THERMAL (A/B) PROTECTION : Flashes at intervals of 2 seconds (1 second lit, 1 second off)

### 3.6. 232C standby clear mode

#### 3.6.1. Operation specifications

##### 232C standby clear mode:

This switches the 232C standby mode to the Normal standby mode.

##### Starting up:

Press the "STATUS" button while the following is displayed to switch to the Normal standby mode.

FLD		3	.	R	S	2	3	2	C		R	E	S	E	T				
-----	--	---	---	---	---	---	---	---	---	--	---	---	---	---	---	--	--	--	--

## 4. Remote ID Setup mode

### 4.1. Specifications

When using multiple DENON AV receivers in the same room, make this setting so that only the desired AV receiver operates.

### 4.2. Setting the AV receivers

#### Starting up:

Turn on the power, then press and hold down the "STATUS" and "DIMMER" buttons for over 3 seconds.

- (1) When Remote ID Setup mode is started, the following is displayed.

FLD				R	E	M	O	T	E		I	D		?		
-----	--	--	--	---	---	---	---	---	---	--	---	---	--	---	--	--

- (2) Press the "QUICK SELECT 1 - 4" button that corresponds to the number you want to set.

Button	FL Display																
QUICK SELECT 1	<table border="1"> <tr> <td></td><td></td><td></td><td>R</td><td>E</td><td>M</td><td>O</td><td>T</td><td>E</td><td></td><td>I</td><td>D</td><td></td><td>1</td><td></td><td></td> </tr> </table>				R	E	M	O	T	E		I	D		1		
			R	E	M	O	T	E		I	D		1				
QUICK SELECT 2	<table border="1"> <tr> <td></td><td></td><td></td><td>R</td><td>E</td><td>M</td><td>O</td><td>T</td><td>E</td><td></td><td>I</td><td>D</td><td></td><td>2</td><td></td><td></td> </tr> </table>				R	E	M	O	T	E		I	D		2		
			R	E	M	O	T	E		I	D		2				
QUICK SELECT 3	<table border="1"> <tr> <td></td><td></td><td></td><td>R</td><td>E</td><td>M</td><td>O</td><td>T</td><td>E</td><td></td><td>I</td><td>D</td><td></td><td>3</td><td></td><td></td> </tr> </table>				R	E	M	O	T	E		I	D		3		
			R	E	M	O	T	E		I	D		3				
QUICK SELECT 4	<table border="1"> <tr> <td></td><td></td><td></td><td>R</td><td>E</td><td>M</td><td>O</td><td>T</td><td>E</td><td></td><td>I</td><td>D</td><td></td><td>4</td><td></td><td></td> </tr> </table>				R	E	M	O	T	E		I	D		4		
			R	E	M	O	T	E		I	D		4				

- (3) Turn off the power using "Power operation (⏻)" button.

- (4) Turn on the power using "Power operation (⏻)" button.

- ※ When Remote ID Setup mode is running, operations other than the "QUICK SELECT 1 - 4" buttons or "Power operation (⏻)" buttons on the main unit are not received.
- ※ For the remote control that is supplied with this unit, you cannot change the REMOTE ID.

#### NOTE:

If the IDs do not match, "AVAMP\*" (\* is the main unit's remote control ID) appears on the display when the remote control unit is operated.



**BLOCK DIAGRAM**

**fig.1**

**VIDEO DIAGRAM**

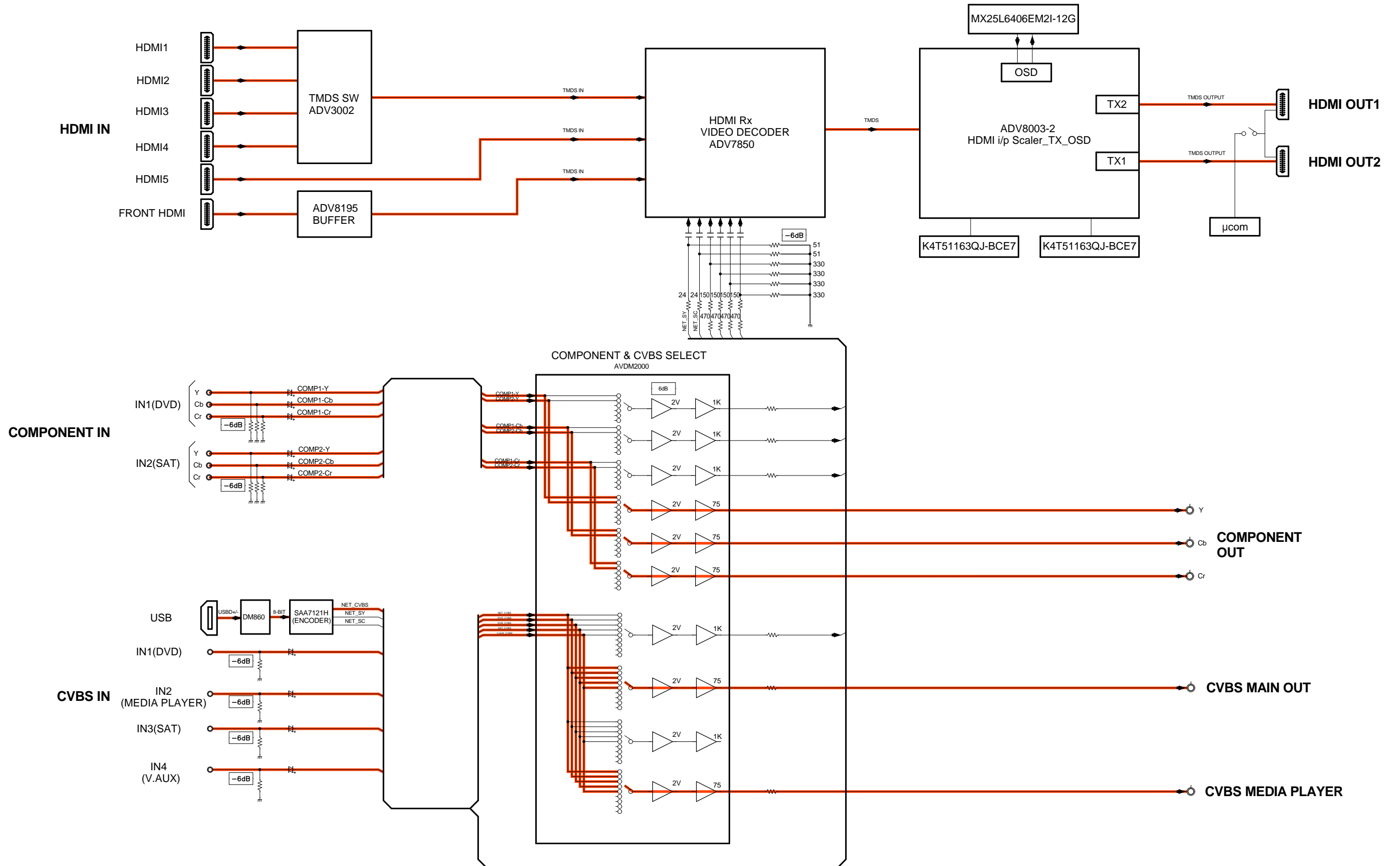
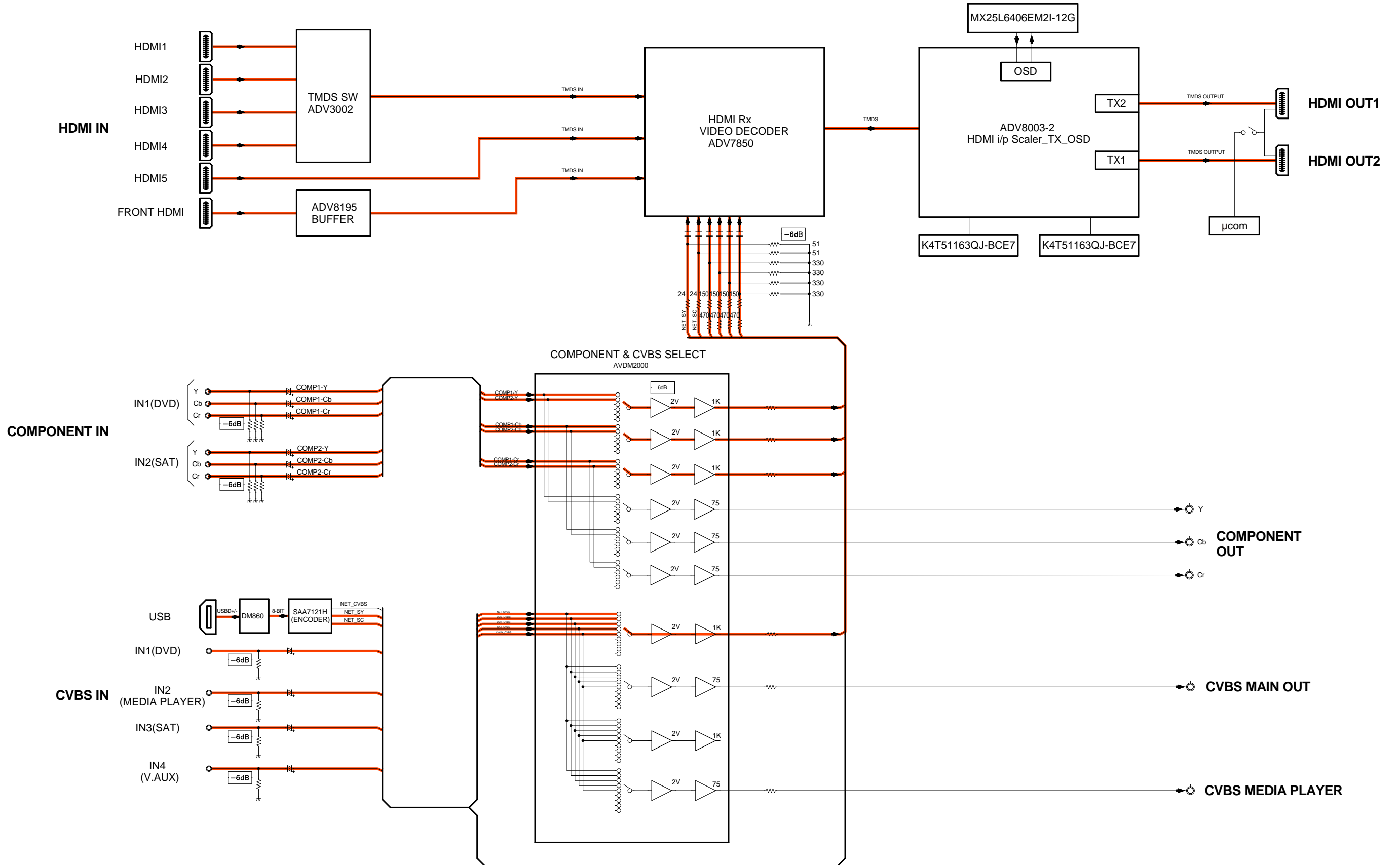


fig.2

VIDEO DIAGRAM





**fig.3**

**VIDEO DIAGRAM**

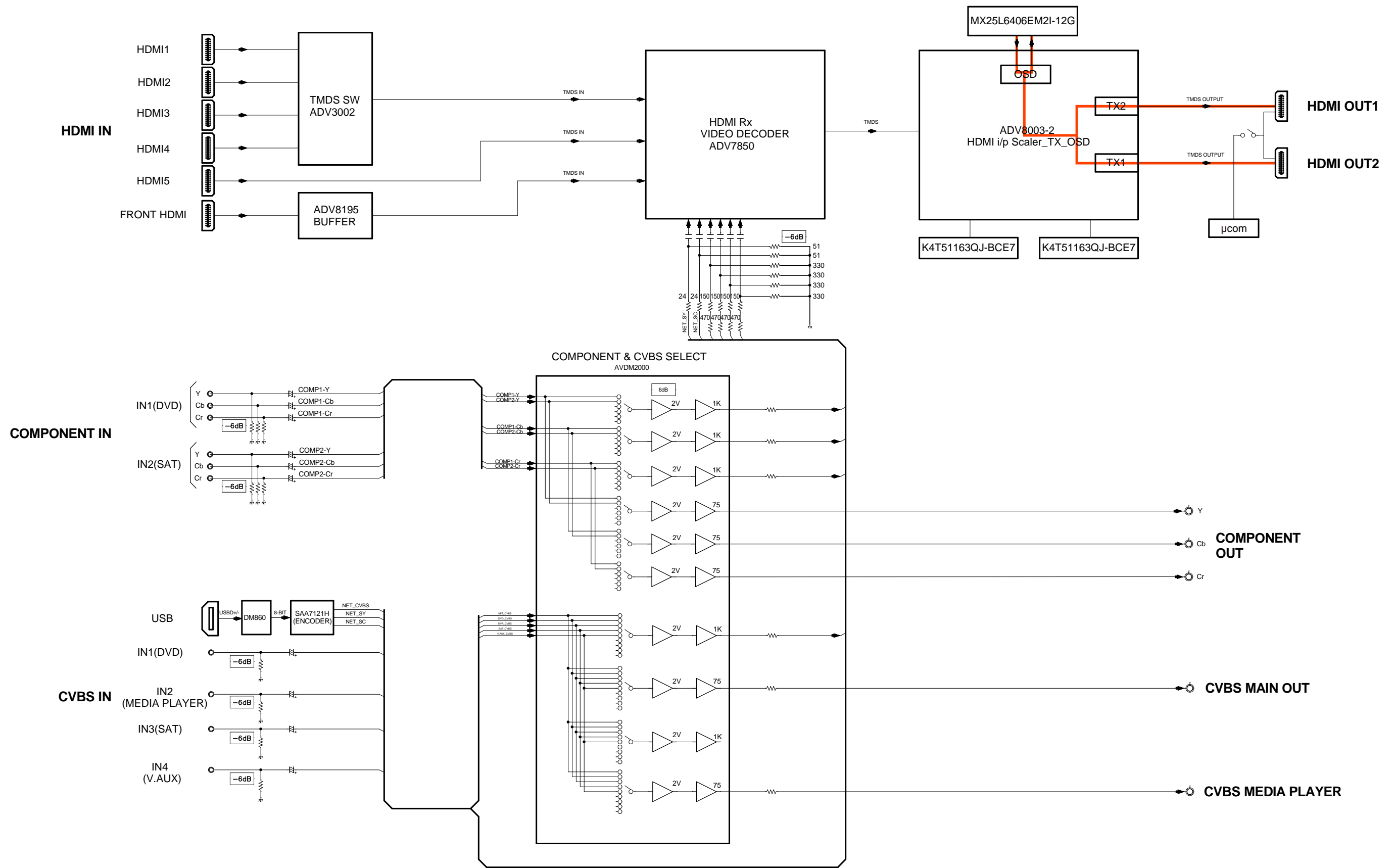
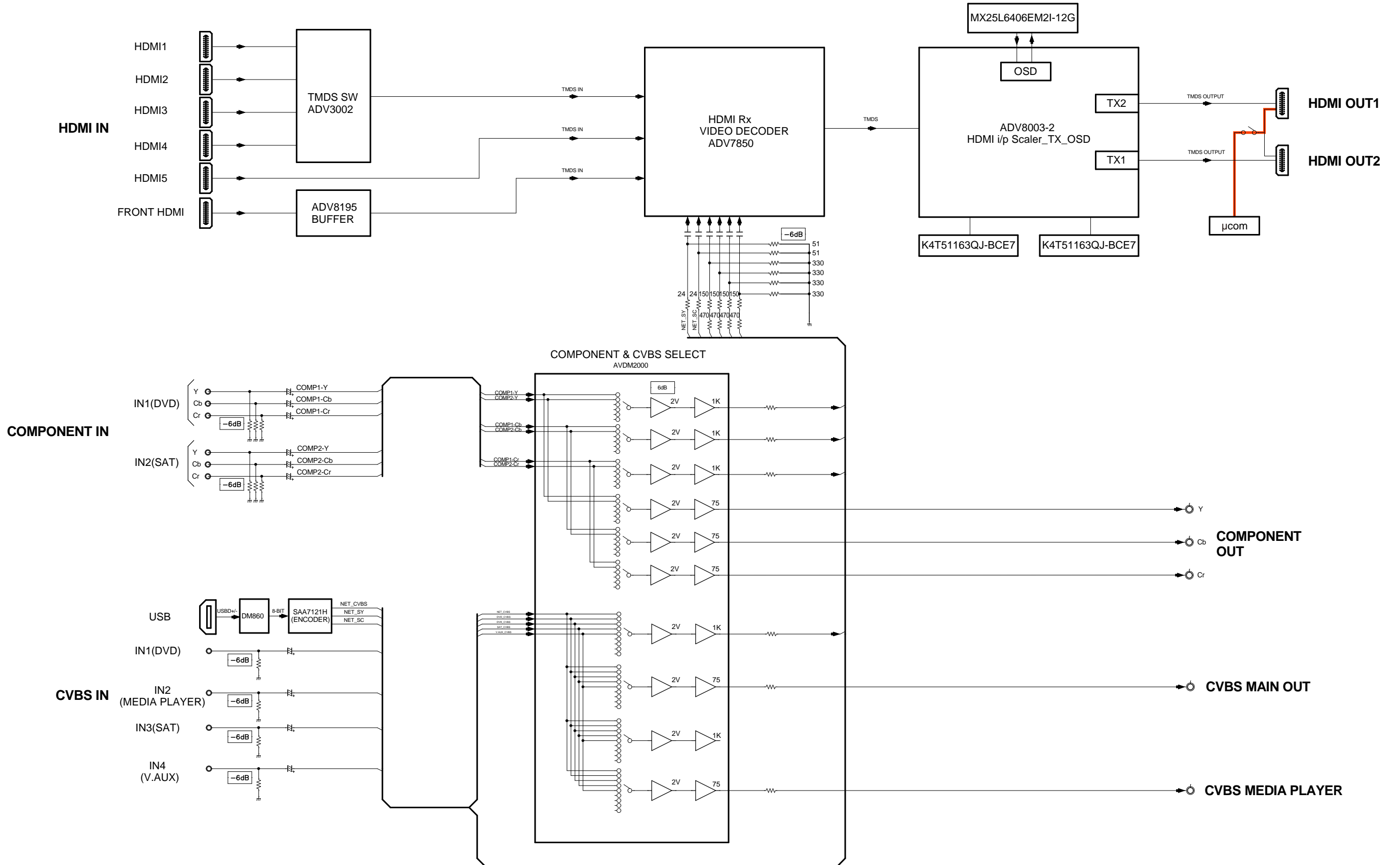


fig.4

VIDEO DIAGRAM



**fig.5**

**VIDEO DIAGRAM**

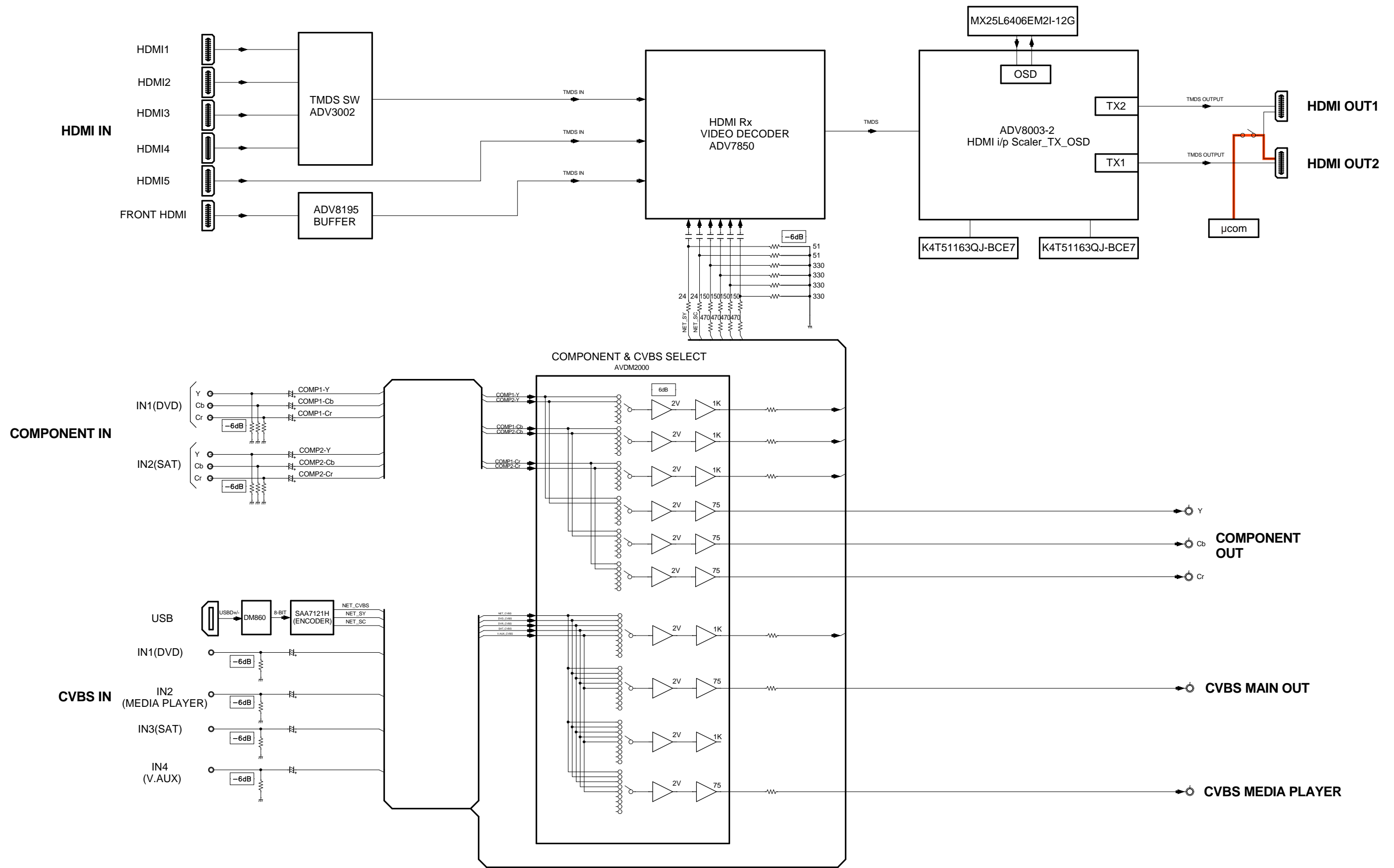


fig.6

AUDIO DIAGRAM

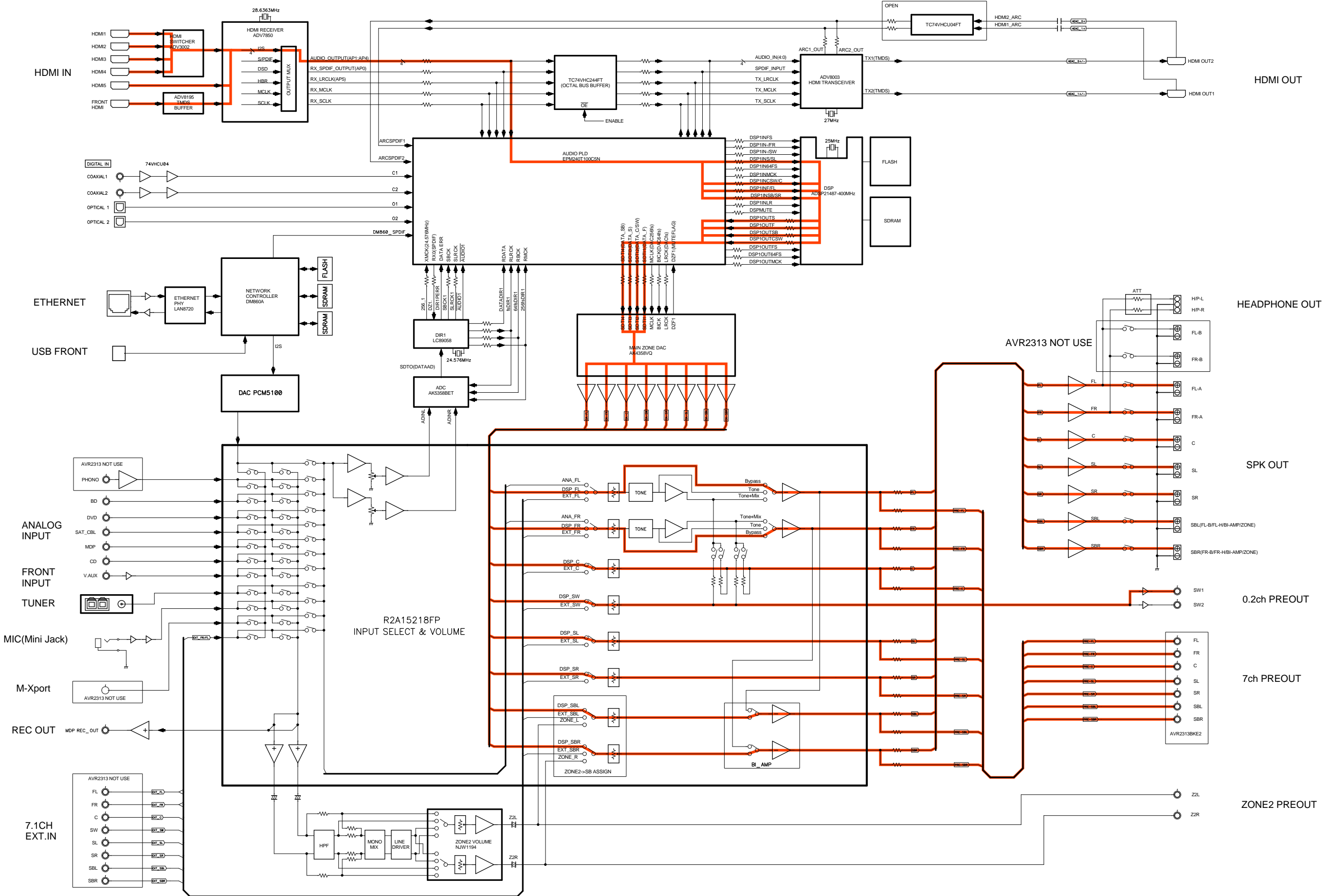


fig.7

AUDIO DIAGRAM

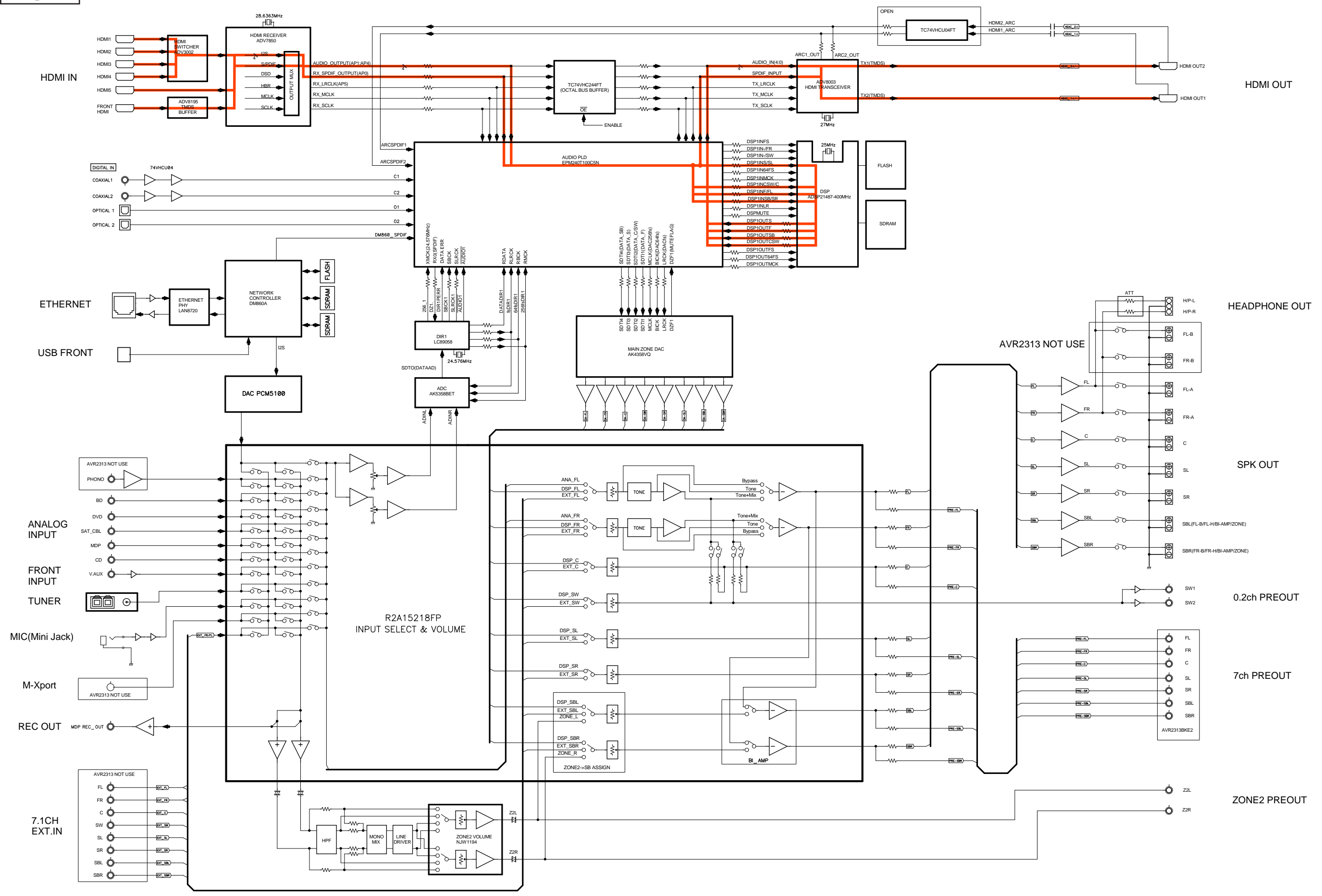


fig.8

AUDIO DIAGRAM

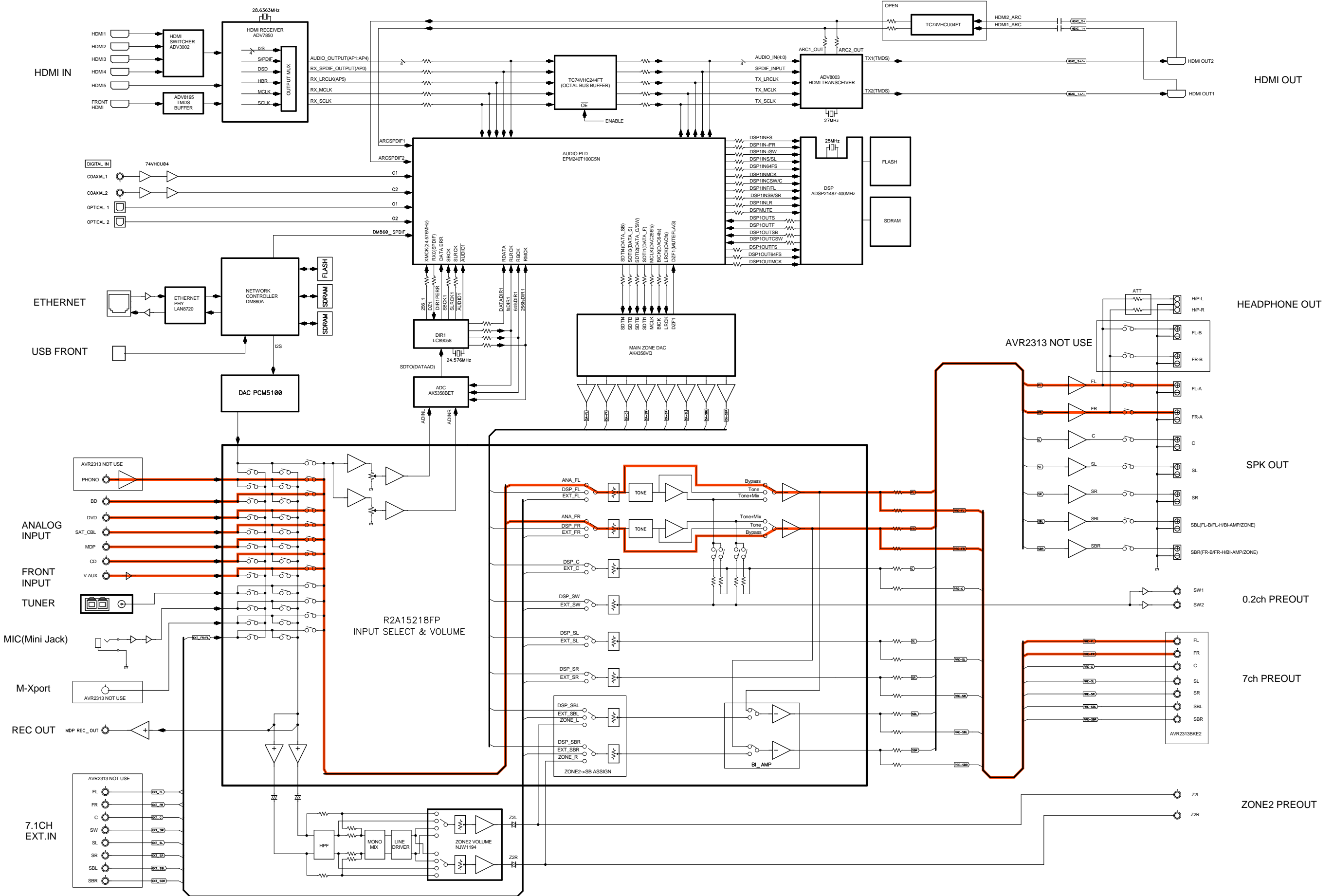


fig.9

AUDIO DIAGRAM

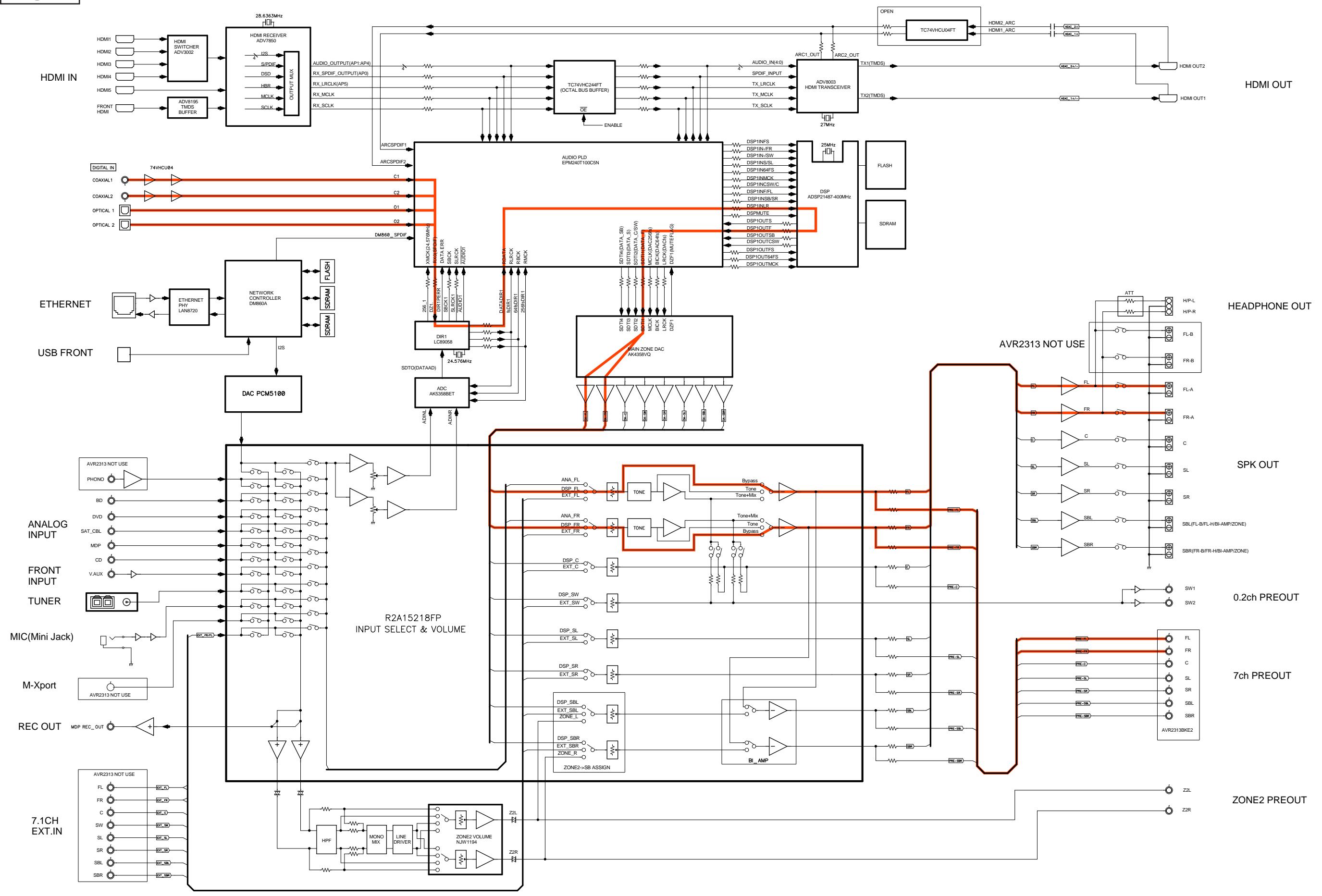


fig.10

AUDIO DIAGRAM

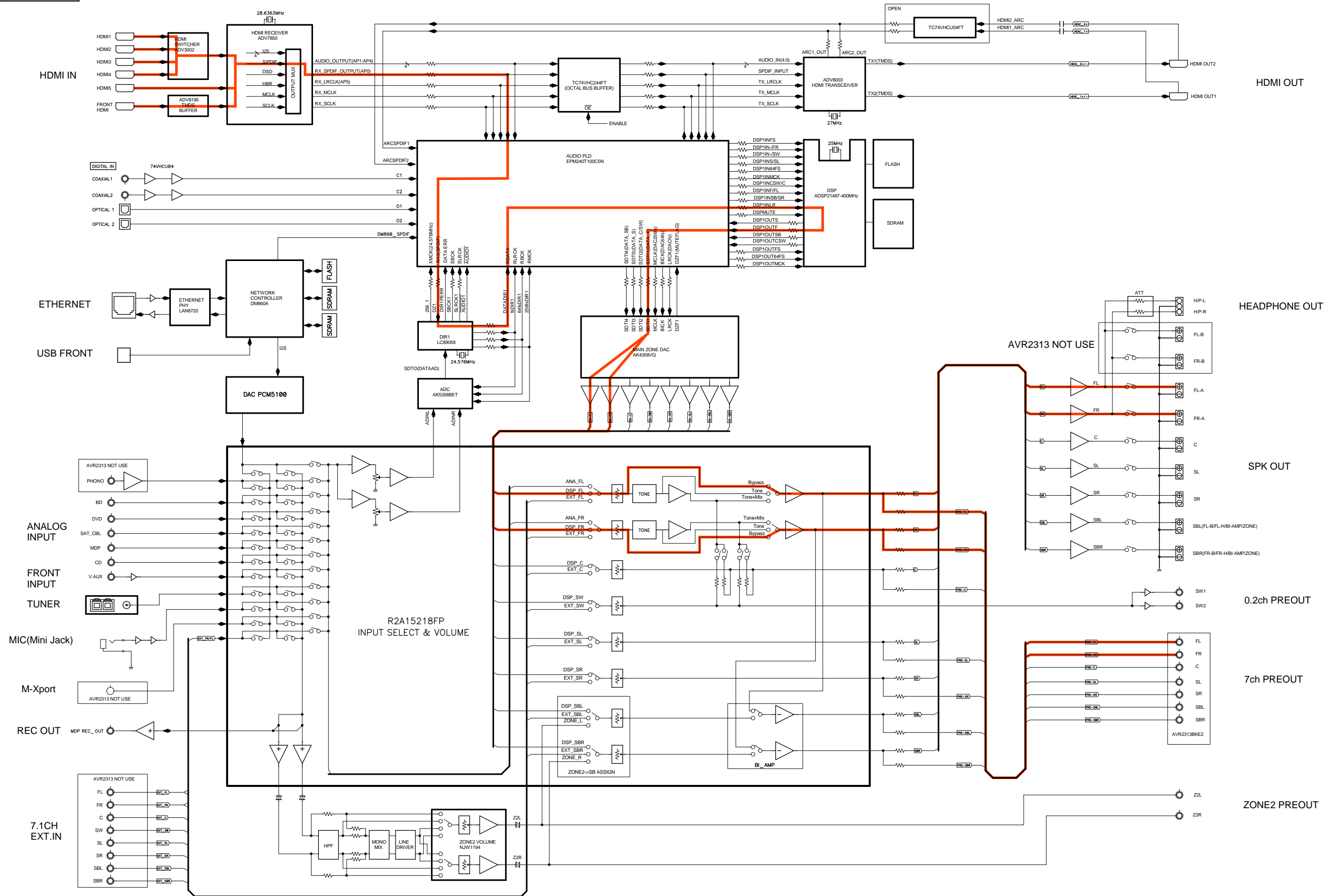




fig.11

AUDIO DIAGRAM

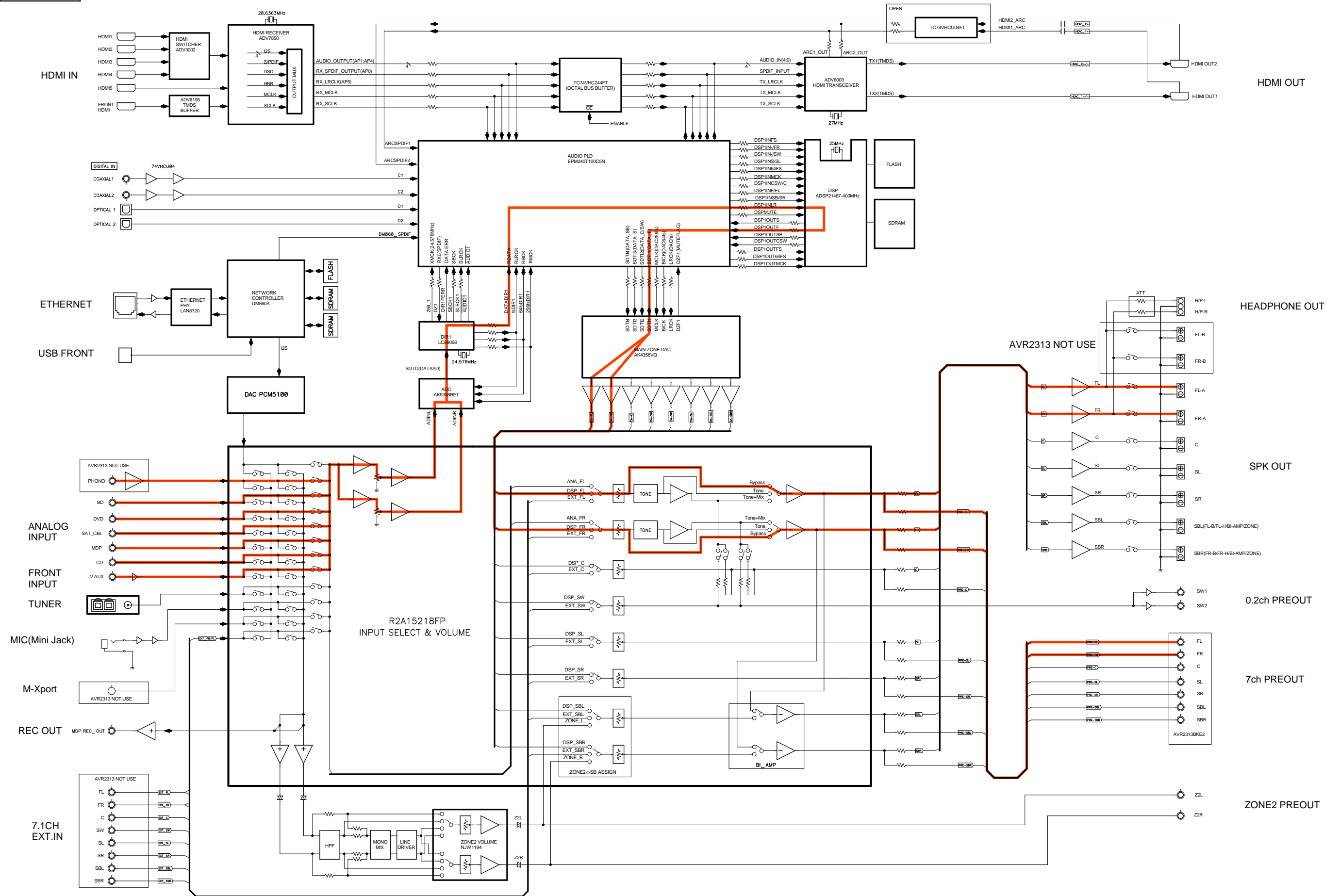


fig.12

AUDIO DIAGRAM

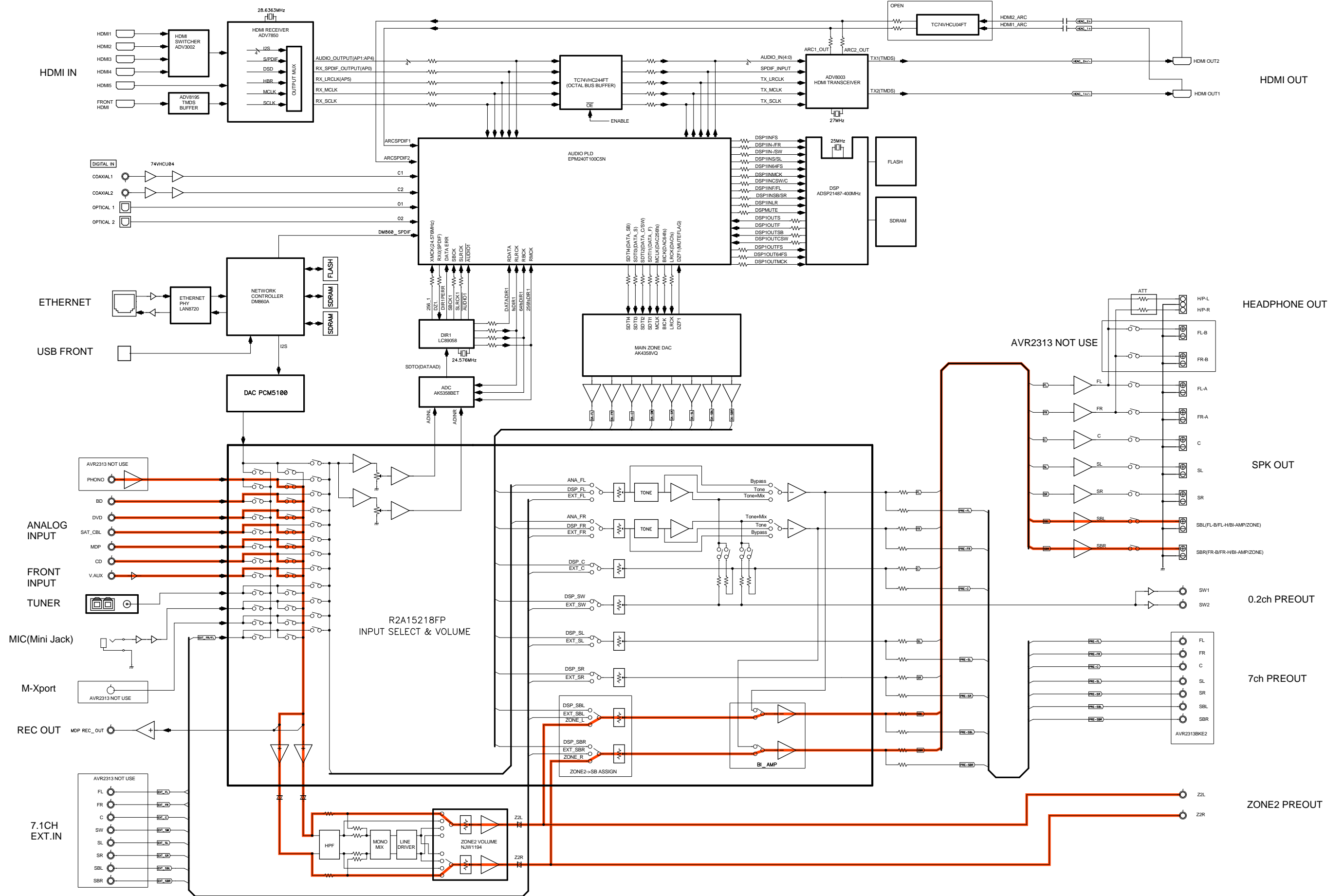


fig.13

AUDIO DIAGRAM

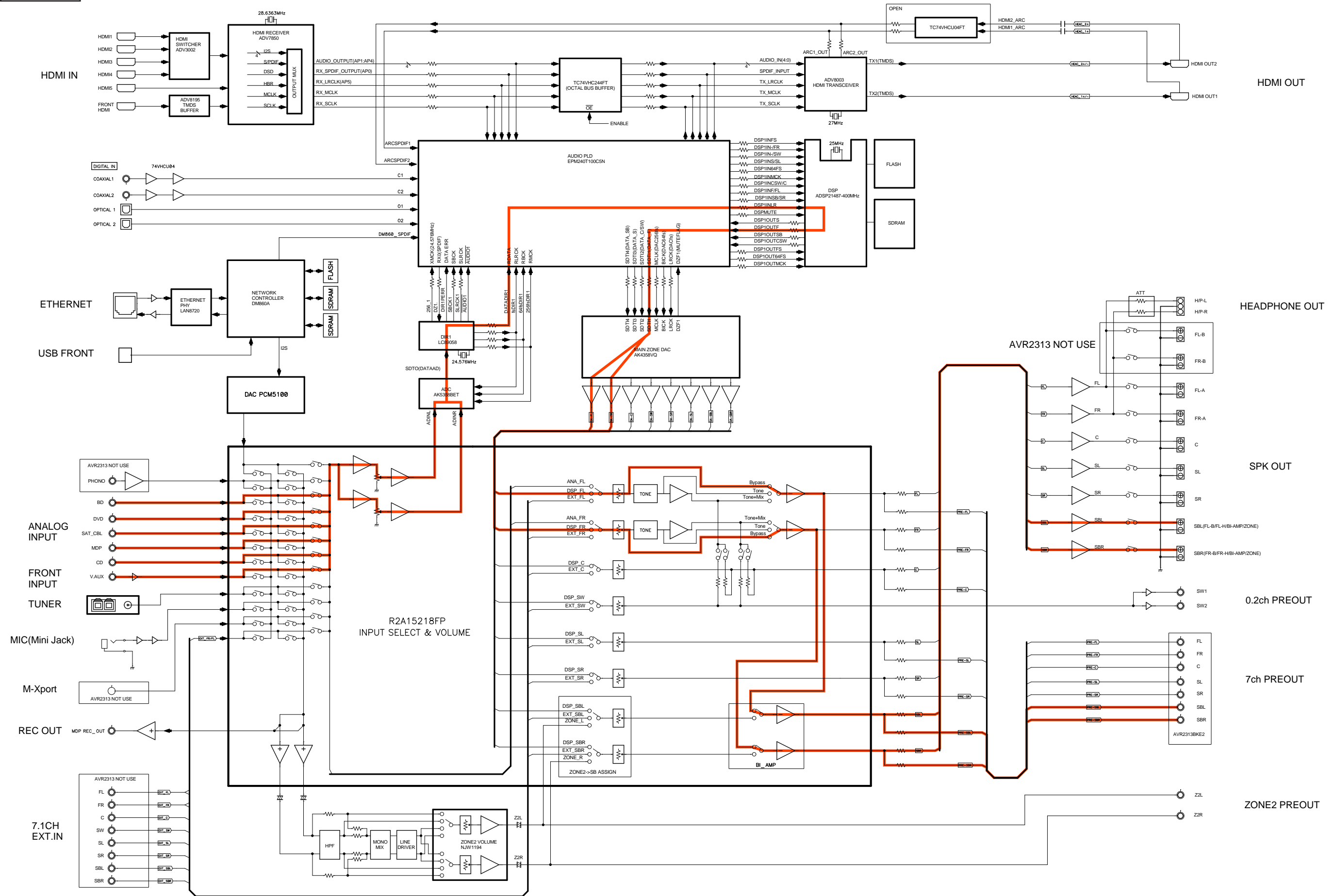
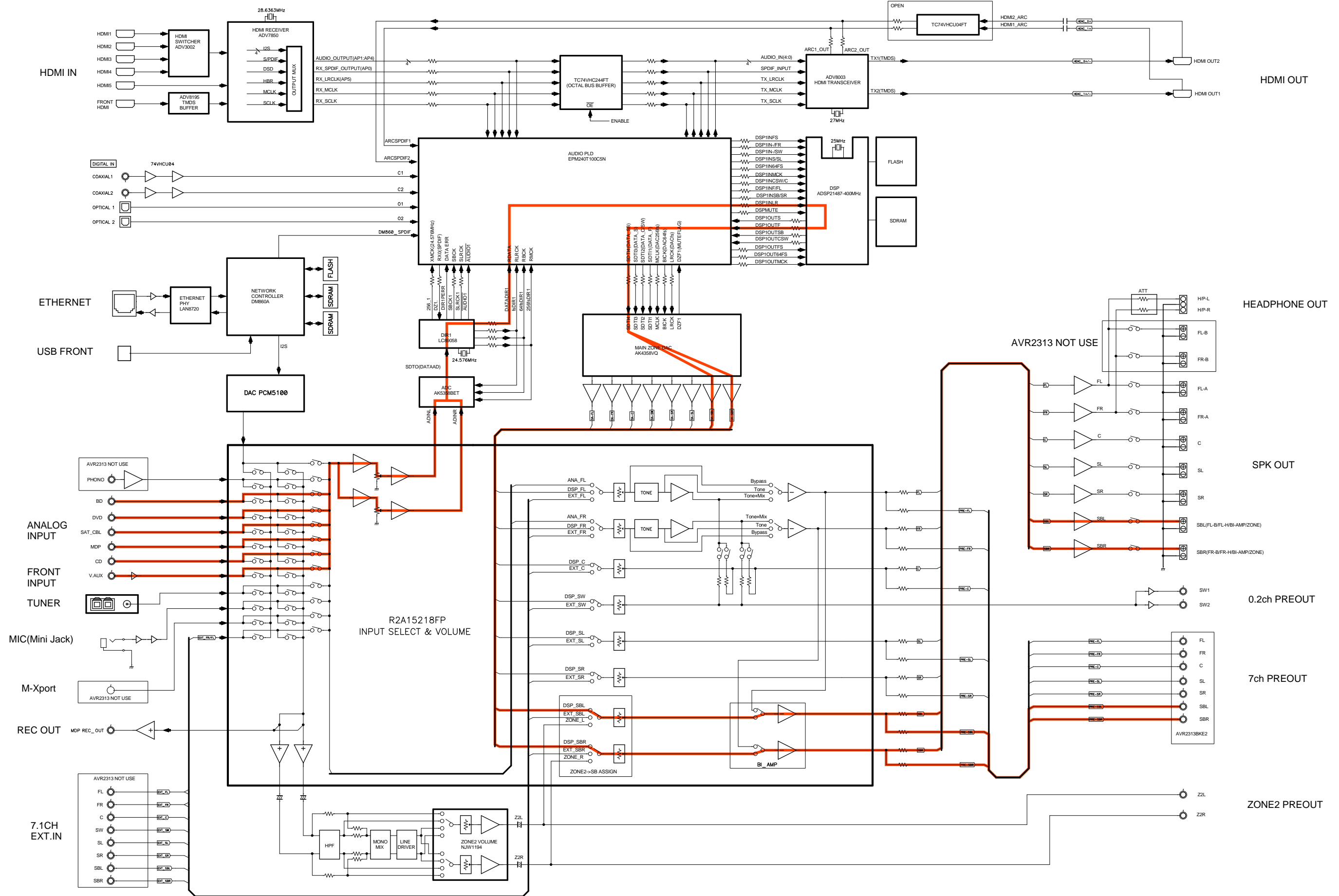
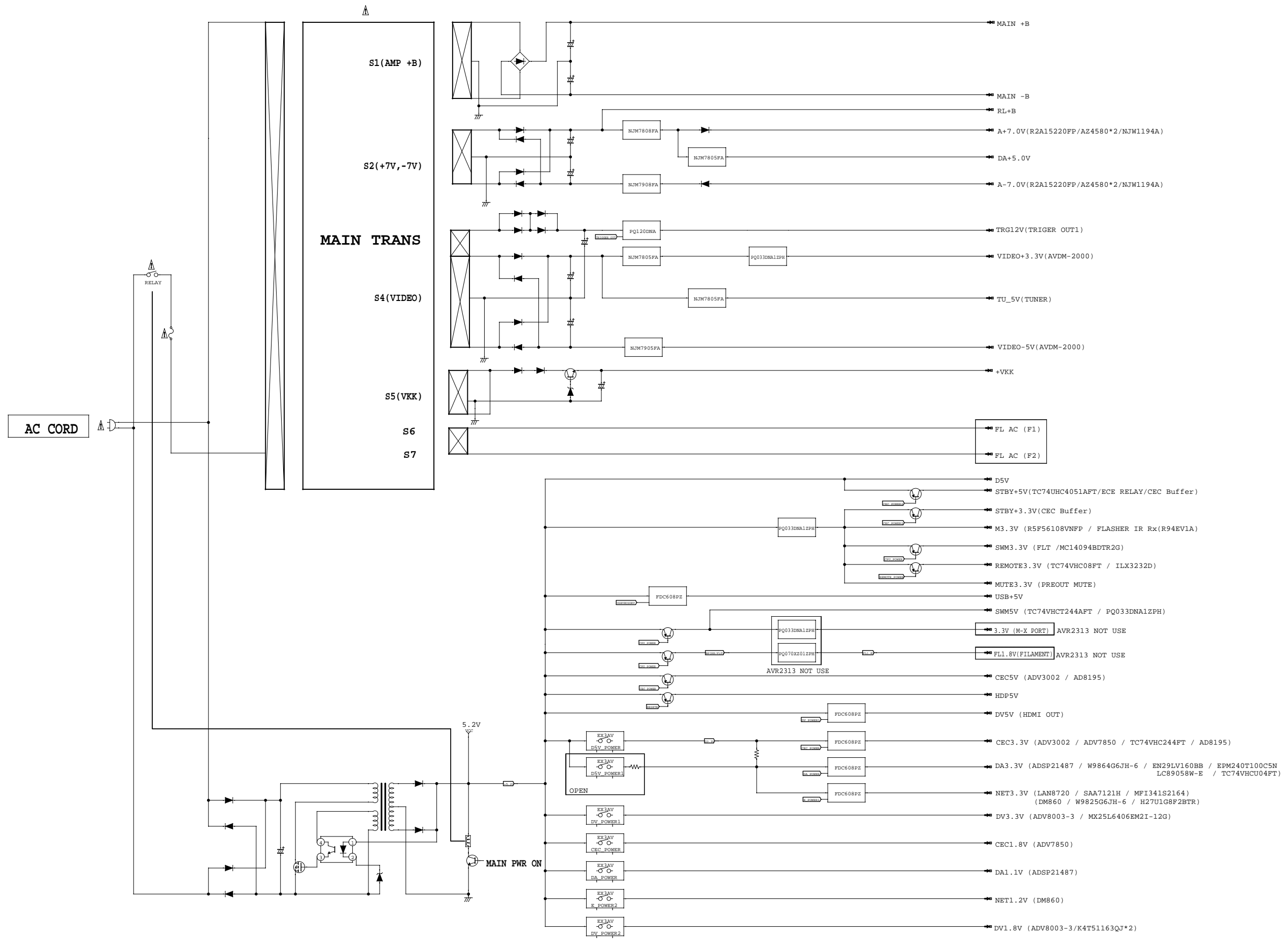


fig.14

AUDIO DIAGRAM



# VCC DIAGRAM





# JIG FOR SERVICING

When you repair the printing board, you can use the following JIG (Extension cable kit). Please order it from DENON Official Service. Distributor in your region if necessary.

**NOTE:** The incorrect connection with in the JIG (EXTENSION UNIT KIT) may cause damage.

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

## • Connection of PCB HDMI JIG

### -Preparation-

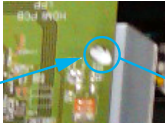
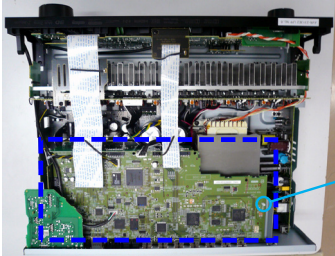
- 8U-110084S : EXTENSION UNIT KIT : 1 Set
- Insulation sheet (Do not supply it) : 1 sheet
- Ground lead (Do not supply it) : 2 pc

### -Procedures-

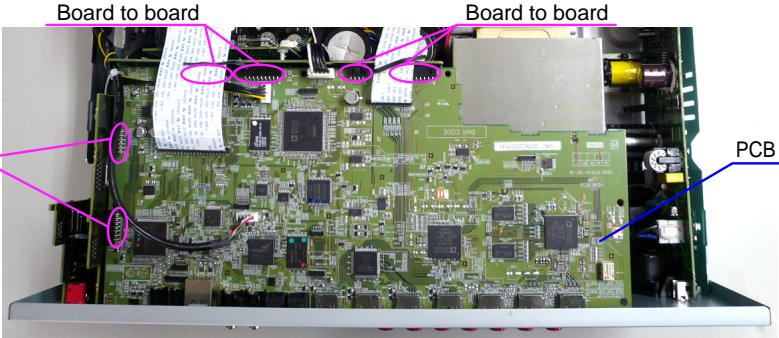
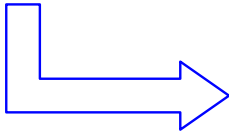
(1) Remove the screws.

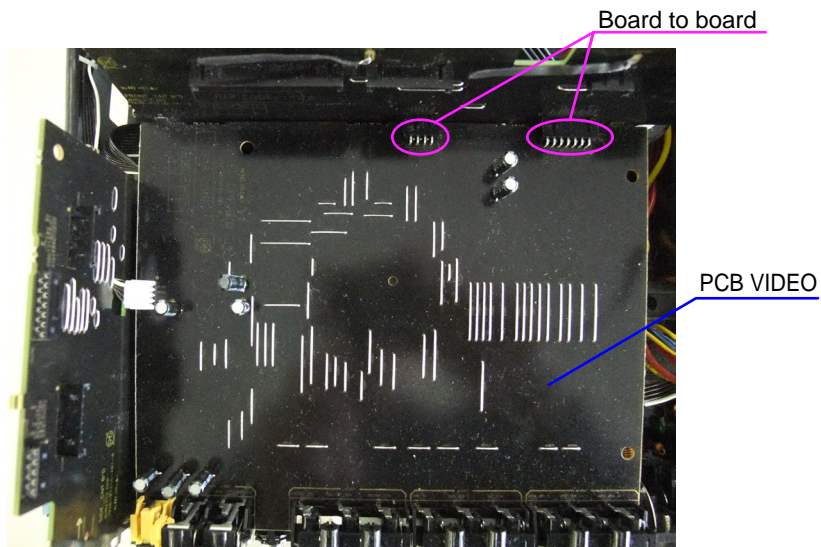


(2) Disconnect the connector board.

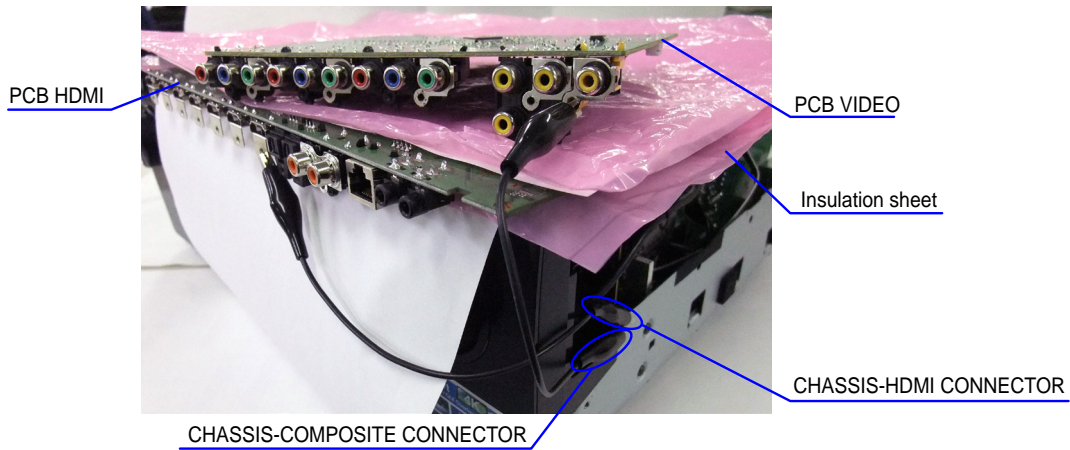


remove



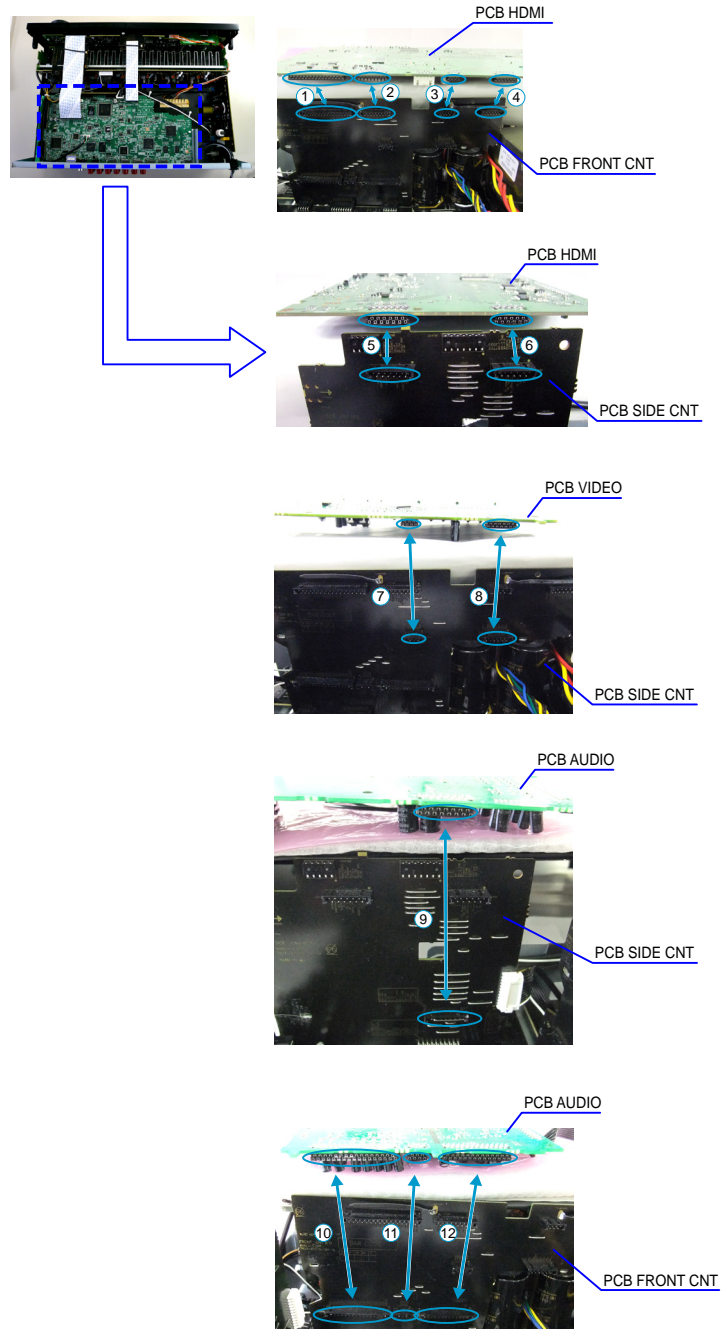


- (3) Detach PCB HDMI from the chassis, and turn it over.  
 Please put an insulation sheet that is larger than PCB HDMI under PCB.  
 ※ Connect the ground point of PCB to the chassis with a ground lead or the like.





(4) Connect the 12 extension jig cables.



**Connection table of Board to Board**

No.	Pin	Ref. No.	PCB		Ref. No.	PCB
①	33pin	CP3403	FRONT CNT	↔	N3403	HDMI
②	17pin	CP3404	FRONT CNT	↔	N3404	HDMI
③	7pin	CP3402	FRONT CNT	↔	N3402	HDMI
④	13pin	CP3401	FRONT CNT	↔	N3401	HDMI
⑤	13pin	CP3407	SIDE CNT	↔	N3407	HDMI
⑥	11pin	CP3406	SIDE CNT	↔	N3406	HDMI
⑦	7pin	CP4614	FRONT CNT	↔	CN4614	VIDEO
⑧	13pin	CP4613	FRONT CNT	↔	CN4613	VIDEO
⑨	15pin	CP4605	SIDE CNT	↔	CN4605	AUDIO
⑩	33pin	CP4617	FRONT CNT	↔	CN4617	AUDIO
⑪	7pin	CP4615	FRONT CNT	↔	CN4615	AUDIO
⑫	27pin	CP4612	FRONT CNT	↔	CN4612	AUDIO

## WHEN THE MICROPROCESSOR IS REPLACED WITH A NEW ONE △

When the U-PRO (Microprocessor) or the Flash ROM is replaced, confirm the following.

PCB Name	Ref. No.	Description	After replaced	Remark
HDMI	U3002	R5F56108VNFP	<b>B</b>	SOFTWARE: Main
HDMI	U2003	EN29LV160BB-70TIP	<b>B</b>	SOFTWARE: DSP ROM
HDMI	U2206	EPM240T100C5N	<b>B</b>	SOFTWARE: AUDIO PLD
HDMI	U1602	MX25L6406EM2I-12G	<b>C</b>	SOFTWARE: GUI ROM

After replacing

**A** : Mask ROM (With software). No need for write-in of software to the microprocessor.

**B** : Flash ROM (With software). Usually, no need for write-in of software. But, when the software was updated, you should write the new software on the microprocessor or flash ROM. Please check the software version.

**C** : Empty Flash ROM (Without software). You should write the software on the microprocessor or flash ROM. Refer to "Update procedure" or "writing procedure", when you write the software.

## PROCEDURE FOR UPGRADING THE VERSION OF THE FIRMWARE

**NOTE:** When the following are replaced, always rewrite with updated firmware using DFW.

- PCB HDMI ASSY
- U1602 (MX25L6406EM2I-12G)
- U2206 (EPM240T100C5N)
- U3002 (R5F56108VNFP)
- U2003 (EN29LV160BB-70TIP)

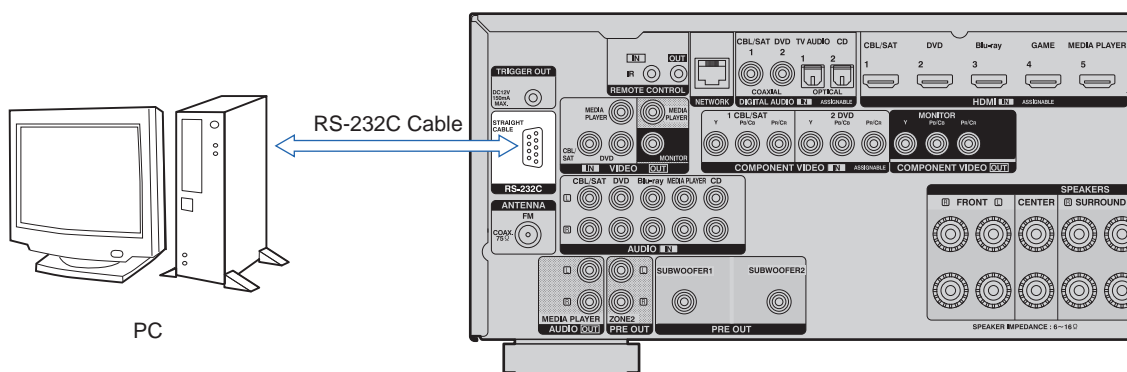
### 1. How to update by DFW

#### 1.1. Preparations before starting the operation

- (1) Personal Computer (Installed "DFW\_0059\_AVR2313\_(Rev.X.X.X).exe".
- (2) RS-232C cable (9P (Male), Straight).

#### 1.2. Connection of AV receiver

- (1) Confirm the power on/off switch of the AV receiver is turning off.
- (2) Connect the RS-232C cable from PC with the "RS232C Terminal of AV receiver".



#### 1.3. Turn on the AV receiver

Operate the following. Turn on the AV receiver.

- (1) Connect the power cable to the AC outlet while simultaneously pushing the "TUNER PRESET CH +", "TUNER PRESET CH -" and "ZONE2/REC SOURCE" button of the front panel.
- (2) Confirm the power indicator is red.

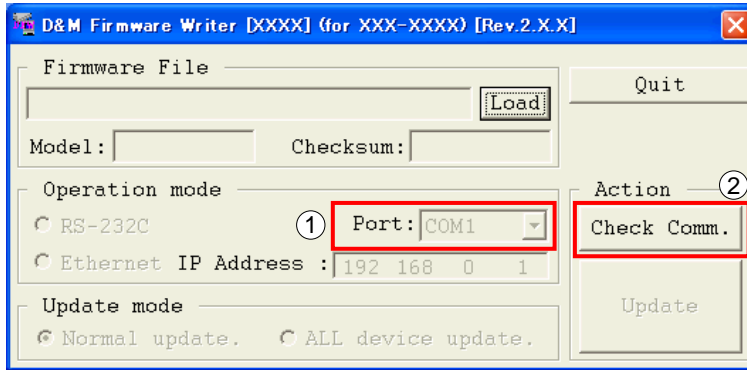
#### 1.4. Run the DFW

Run the "DFW\_0059\_AVR2313\_(Rev.X.X.X).exe" on desktop of PC.



#### 1.5. Communication check

- (1) Select the serial port number of RS-232C in PC.
- (2) Click the "Check Comm." button.



- (3) When connection is good, then you can see the "Communication check OK." message.



- (4) If connection is not good, then you can see the "Communication check NG!" message.

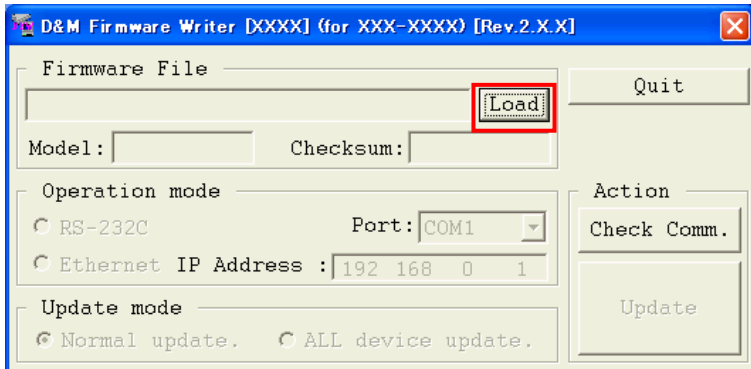


Please confirm the following

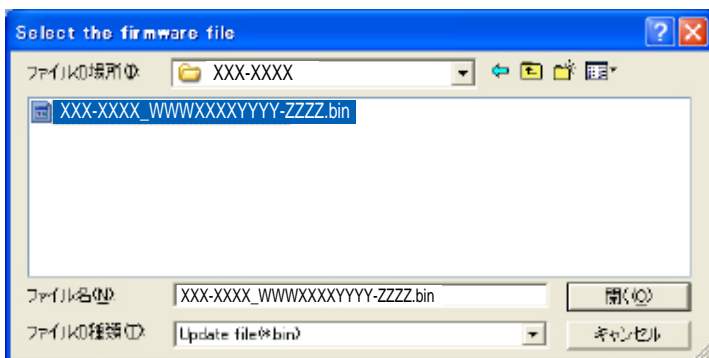
- (a) Check the connection of the AV receiver and PC. (refer to "1.2. Connection of the AV receiver" )
- (b) Check the operation mode of the AV receiver. (refer to "1.3.Turn on the AV receiver")
- (c) Check the selection of the RS-232C port number of PC.

## 1.6. Download the firmware

(1) Click the "Load" button.

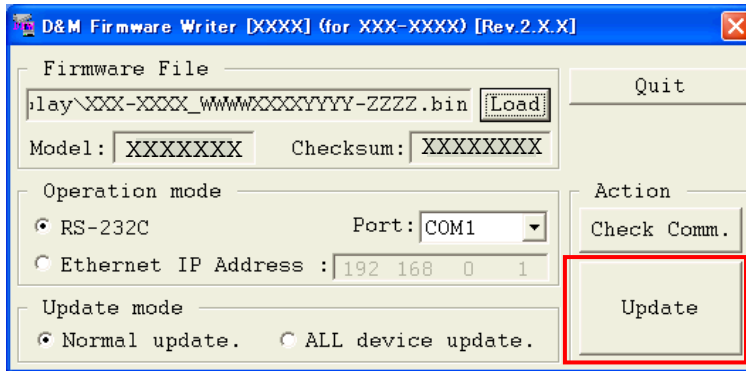


(2) Download the firmware from the specified download source to PC.

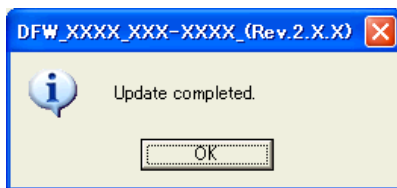


## 1.7. Complete the firmware updating

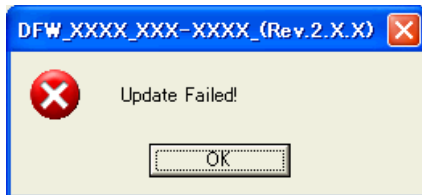
(1) Click the "Update" button.



(2) When writing of the firmware is completed, the power of AV receiver turns on automatically and you can see the "Update completed" message.



(3) If you can't complete the firmware update, please retry the firmware update from "1.3. Turn on the AV receiver".



## 1.8. Notice:

Please keep the following notice for firmware update.

- (a) Keep the PC environment
- (b) Avoid the communication cable from the electrical noise source.  
(e.g. telephone cable, AC line, a fluorescent light)
- (c) Don't remove cable during update.
- (d) Don't turn off the power during update.
- (e) Don't run other PC application during update.
- (f) Stop the resident program on PC (Virus checker and System check utility, etc.)
- (g) Stop the screen saver on PC.
- (h) Stop the power save ability on PC.
- (i) In case of laptop PC, Use the AC adaptor.

## Confirming the firmware's number after upgraded

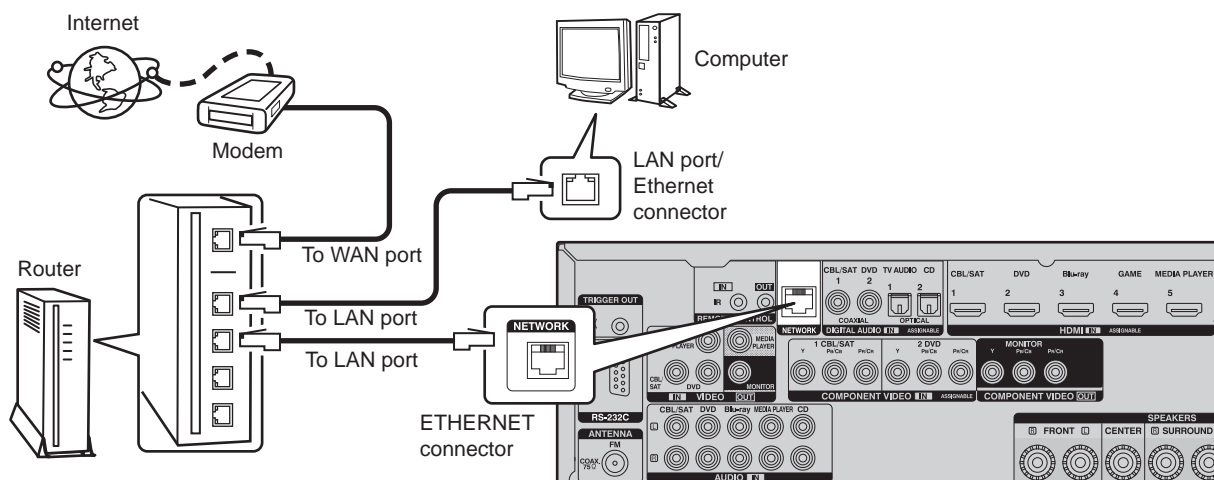
After updating the firmware, check the version. Refer to "1.  $\mu$ com/DSP Version display mode" (24 page).

## 2. How to update by DPMS

You can update the firmware by downloading the latest version from the Internet.

### 2.1. Connecting to the Network

- (1) System requirements
  - Internet Connection by Broadband Circuit
  - Modem
  - Router
  - Ethernet cable (CAT-5 or greater recommended)
- (2) Setting



### 2.2. Checking and updating the firmware

Check if the latest firmware exists. You can also check approximately time required to complete an update.

- (1) Press the "SETUP" button on the remote control to display the GUI menu.
- (2) Use the cursor buttons to select "General" → "Firmware" → "Update" → "Check for Update".
- (3) Press the "ENTER" button.
  - The latest version of the firmware on the website is displayed.
  - If the firmware on the website is latest, proceed to (4).
  - If the latest firmware has been already installed, press the "SETUP" button to close the menu.
- (4) Use the cursor buttons to select "Start", then press the "ENTER" button.
  - During update, the power indicator lights in red and the GUI screen disappears. And an approximately remaining time is indicated on the display.
  - When updating is complete the power indicator lights in green and normal status is resumed.

#### --- Cautions on Firmware Update ---

- In order to update the firmware, you must have the correct system requirements and settings for a broadband Internet connection.
- Do not turn off the power until updating is completed.
- Even with a broadband connection to the Internet, approximately 1 hour is required for the updating procedure to be completed.

Once updating starts, normal operations on the this unit cannot be performed until updating is completed. Also, setting items of the GUI menu of this unit or setting items of the image adjustment may be initialized.

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

### 2.3. About the error code

See the table below for error codes, details of faults, and coping strategies when the firmware is updated through DPMS (Denon Product Management Server).

Error Code	Details of Error code	Display	Coping strategies
01	Log-in to DPMS failed.	Login failed 01	Reset and update again. Carry out the update in an environment that has little network load.
02	Line, etc., is busy when logging into DPMS.	Server is busy 02	Carry out the update in an environment that has little network load.
03	Connection to DPMS failed.	ConnectionFailed 03	Check the network connection. Carry out the update in an environment that has little network load.
04	Firmware file data was requested but error message was received.	ConnectionFailed 04	Check the network connection. Carry out the update in an environment that has little network load.
05	All firmware file data was requested but it timed out.	ConnectionFailed 05	Check the network connection. Carry out the update in an environment that has little network load.
06	Firmware file data was requested but error message was received.	ConnectionFailed 06	Check the network connection. Carry out the update in an environment that has little network load.
07	Firmware file data was requested but it timed out.	ConnectionFailed 07	Check the network connection. Carry out the update in an environment that has little network load.
08	Firmware file data of Main CPU was requested but error message was received.	ConnectionFailed 08	Check the network connection. Carry out the update in an environment that has little network load.
09	Firmware file data of Main CPU was requested but it timed out.	ConnectionFailed 09	Check the network connection. Carry out the update in an environment that has little network load.
0A	Error (NG) message was received when firmware of Main CPU was downloaded.	Download failed 0A	Check the network connection. Carry out the update in an environment that has little network load.
0B	Error (line congestion) message was received when firmware of Main CPU was downloaded.	Download failed 0B	Check the network connection. Carry out the update in an environment that has little network load.
0C	Error (connection failure) message was received when firmware of Main CPU was downloaded.	Download failed 0C	Check the network connection. Carry out the update in an environment that has little network load.
0D	Received Package Version is wrong.	Download failed 0D	Check the network connection. Carry out the update in an environment that has little network load.
0E	Connection to DPMS failed. (can not get NTP)	ConnectionFailed 0E	Check the network connection. Carry out the update in an environment that has little network load.
10	Main CPU failed to receive firmware for rewriting sent from DM860A (when timed out).	Updating failed 10	Turn off and on the power. Updating starts automatically.

Error Code	Details of Error code	Display	Coping strategies
11	Main CPU failed to receive firmware for rewriting sent from DM860A (when an error occurred).	Updating failed 11	Turn off and on the power. Updating starts automatically.
12	There was invalid data in the firmware for rewriting sent from DM860A to Main CPU (when a Check Sum error occurred).	Updating failed 12	Turn off and on the power. Updating starts automatically.
13	The deletion of block data failed before Main CPU was rewritten.	Erase failed 13	Turn off and on the power. Updating starts automatically.
14	The rewriting of block data failed when Main CPU was rewritten.	Updating failed 14	Turn off and on the power. Updating starts automatically.
15	The data verification was invalid after Main CPU was rewritten.	UpdateCheckNG 15	Turn off and on the power. Updating starts automatically.
20	Failure to acquire (Boot Loader Mode) IP address before rewriting DM860A (AutoIP).	ConnectionFailed 20	Check the network connection. Carry out the update in an environment that has little network load.
21	Failure to acquire (Boot Loader Mode) IP address before rewriting DM860A (when timed out).	ConnectionFailed 21	Check the network connection. Carry out the update in an environment that has little network load.
22	Log-in to DPMS failed.	Login failed 22	Reset and update again. Carry out the update in an environment that has little network load.
23	Line, etc., is busy when logging into DPMS.	Server is busy 23	Carry out the update in an environment that has little network load.
24	Connection to DPMS failed.	ConnectionFailed 24	Check the network connection. Carry out the update in an environment that has little network load.
25	Mode change failure of DM860A.	ConnectionFailed 25	Reset and update again.
26	Data acquisition failed (timed out) when firmware of Main CPU was downloaded. Received Package Version is wrong.	Download failed 26	Check the network connection. Carry out the update in an environment that has little network load.
27	Mode change failure of DM860A.	Download failed 27	Reset and update again.
36	Log-in to DPMS failed when Main CPU was rewritten.	Login failed 36	Carry out the update in an environment that has little network load.
37	Line, etc., is busy when logging into DPMS when Main CPU was rewritten.	Server is busy 37	Carry out the update in an environment that has little network load.
38	Connection to DPMS failed when Main CPU was rewritten.	ConnectionFailed 38	Check the network connection. Carry out the update in an environment that has little network load.



Error Code	Details of Error code	Display	Coping strategies
39	Connection to DPMS timed out when Main CPU was rewritten.	ConnectionFailed39	Check the network connection. Carry out the update in an environment that has little network load.
3A	Error (NG) message was received when firmware was downloaded or Main CPU was rewritten.	Download failed 3A	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
3B	Error (line congestion) message received when downloading firmware when Main CPU was rewritten.	Download failed 3B	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
3C	Error (connection failure) message received when downloading firmware when Main CPU was rewritten.	Download failed 3C	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
3D	Failure to acquire (Boot Loader Mode) IP address before rewriting DM860A (AutoIP).	ConnectionFailed3D	Check the network connection. Carry out the update in an environment that has little network load.
3E	Failure to acquire (Boot Loader Mode) IP address before rewriting DM860A (when timed out).	ConnectionFailed3E	Check the network connection. Carry out the update in an environment that has little network load.
50	Log-in to DPMS failed when firmware such as DSP and PLD was rewritten.	Login failed 50	Carry out the update in an environment that has little network load.
51	Line, etc., is busy when the log-in to DPMS when firmware such as DSP and PLD was rewritten.	Server is busy 51	Carry out the update in an environment that has little network load.
52	Connection to DPMS failed when firmware such as DSP and PLD was rewritten.	ConnectionFailed52	Check the network connection. Carry out the update in an environment that has little network load.
54	Error message received regarding firmware data after the log-in to DPMS when firmware such as DSP and PLD was rewritten.	Updating failed 54	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
55	When firmware such as DSP and PLD was rewritten, request was made for firmware data after the log-in to DPMS, but it timed out.	Updating failed 55	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
56	Downloading firmware failed after the log-in to DPMS when firmware such as DSP and PLD was rewritten.	Download failed 56	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
57	Firmware download error received (line congestion) after the log-in to DPMS when firmware such as DSP and PLD was rewritten.	Download failed 57	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
58	Firmware download error received (connection failure) after the log-in to DPMS when firmware such as DSP and PLD was rewritten.	Download failed 58	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
5A	NACK was received when "C" command sent to DSP, PLD etc.	ConnectionFailed5A	Turn off and on the power. Updating starts automatically.
5B	NACK was received when "L" command sent to DSP, PLD etc.	Updating failed 5B	Turn off and on the power. Updating starts automatically.

Error Code	Details of Error code	Display	Coping strategies
5C	DSP, PLD etc. failed to receive firmware for rewriting sent from DM860A (when timed out).	U p d a t i n g f a i l e d 5 C	Turn off and on the power. Updating starts automatically.
5D	DSP, PLD etc. failed to receive firmware for rewriting sent from DM860A (when an error occurred).	U p d a t i n g f a i l e d 5 D	Turn off and on the power. Updating starts automatically.
5E	Data in firmware such as DSP and PLD for rewriting sent from DM860A was invalid (when a Check Sum error occurred).	U p d a t i n g f a i l e d 5 E	Turn off and on the power. Updating starts automatically.
5F	Invalid data in firmware such as DSP and PLD for rewriting sent from DM860A was invalid (invalid data was received).	U p d a t i n g f a i l e d 5 F	Turn off and on the power. Updating starts automatically.
60	NACK was received when "P" command sent to DSP, PLD etc.	U p d a t i n g f a i l e d 6 0	Turn off and on the power. Updating starts automatically.
61	NACK was received when "I" command sent to DSP, PLD etc.	U p d a t e C h e c k N o 6 1	Turn off and on the power. Updating starts automatically.
80	Acquisition of serial flash data failed before serial flash was deleted.	U p d a t i n g f a i l e d 8 0	Turn off and on the power. Updating starts automatically.
81	Deleting data failed before serial flash was rewritten.	U p d a t i n g f a i l e d 8 1	Turn off and on the power. Updating starts automatically.
82	Receiving firmware for rewriting serial flash sent by DM860A failed (when timed out).	U p d a t i n g f a i l e d 8 2	Turn off and on the power. Updating starts automatically.
83	Receiving firmware for rewriting serial flash sent by DM860A failed (when an error).	U p d a t i n g f a i l e d 8 3	Turn off and on the power. Updating starts automatically.
84	Receiving firmware for rewriting serial flash sent by DM860A failed (when a Check Sum error).	U p d a t i n g f a i l e d 8 4	Turn off and on the power. Updating starts automatically.
85	Receiving firmware for rewriting serial flash sent by DM860A failed (when invalid data was received).	U p d a t i n g f a i l e d 8 5	Turn off and on the power. Updating starts automatically.
86	The data verification was invalid after serial flash was rewritten.	U p d a t i n g f a i l e d 8 6	Turn off and on the power. Updating starts automatically.
A0	Acquisition of (Application Mode) IP address failed before DM860A was rewritten (AutoIP).	C o n n e c t i o n F a i l u r e	Check the network connection. Carry out the update in an environment that has little network load.
A1	Acquisition of (Application Mode) IP address failed before DM860A was rewritten (when timed out).	C o n n e c t i o n F a i l u r e	Check the network connection. Carry out the update in an environment that has little network load.
A2	Invalid login via DPMS access was notified when DM860A related firmware was rewritten (Application Mode).	L o g i n f a i l e d A 2	Check the network connection. Carry out the update in an environment that has little network load.

Error Code	Details of Error code	Display	Coping strategies
A3	Line congestion via DPMS access was notified when DM860A related firmware was rewritten (Application Mode).	Server is busy A3	Check the network connection. Carry out the update in an environment that has little network load.
A4	Connection failure via DPMS access was notified when DM860A related firmware was rewritten (Application Mode).	Connection fail A4	Check the network connection. Carry out the update in an environment that has little network load.
A6	Firmware data error message was received after DPMS login when DM860A related firmware was rewritten (Application Mode).	Updating fail A6	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
A7	When DM860A related firmware was rewritten (Application Mode), request was made for firmware data after DPMS login but it timed out.	Updating fail A7	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
AE	Firmware download error message received (when download fails) when DM860A related firmware was rewritten (Boot Loader Mode).	Downloaded fail AE	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
AF	Firmware download error message received (line congestion) when DM860A related firmware was rewritten (Boot Loader Mode).	Downloaded fail AF	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
B0	Firmware download error message received (connection failure) when DM860A related firmware was rewritten (Boot Loader Mode).	Downloaded fail B0	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
B1	Firmware download error message. (Timeout failure)	Downloaded fail B1	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
B2	Error message received when DM860A related firmware was rewritten.	Downloaded fail B2	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
B3	Firmware writing error message. (Timeout failure)	Updating fail B3	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
B4	Mode change failure of DM860A. (Boot Loader Mode)	Updating fail B4	Reset and update again.
B5	Mode change failure of DM860A. (Application Mode)	Updating fail B5	Reset and update again.

## Device display during firmware update

Display of target device during firmware update.

Target device	Display	Error code when an error occurs
Main	Main:***Z***min	08 - 0C 10 - 15 22 - 24 36 - 3E
Audio PLD	APLD:***Z***min	50 - 52 54 - 58 5A - 61
DSP	DSP:***Z***min	50 - 52 54 - 58 5A - 61
GUI Serial Flash	GUI:***Z***min	50 - 52 54 - 58 5A - 61 80 - 86
DM860A Boot Loader	ESBL:***Z***min	A0 - A4 A6 - A7 AE - B5
DM860A Image	EIMG:***Z***min	A0 - A4 A6 - A7 AE - B5
DM860A Image (Emergency Mode)	Update retry	-

## Confirming the firmware's number after upgraded

After updating the firmware, check the version. Refer to "1.  $\mu$ com/DSP Version display mode" (24 page).

### 3. How to update by USB Memory

You can update the firmware by downloading the latest version with USB Memory.

#### 3.1. Connecting to the USB Memory

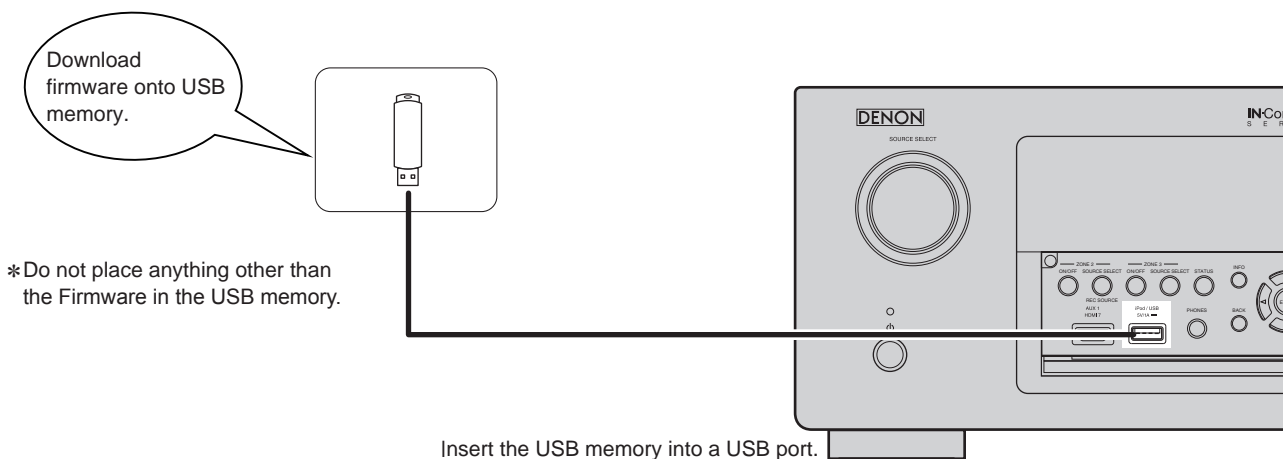
##### (1) Requirements

- USB Memory capacity : FAT16 : 2 GB, FAT32 : 2 TB
- USB memory devices will not work via a USB hub.
- It is not possible to use this unit by connecting the unit's USB port to a PC via a USB cable.
- Do not use an extension cable when connecting a USB memory device.  
This may cause radio interference.

Place the USB update File in an appropriate folder. The folder name should be the Product ID based on the Model name/area.

Model Name	Model Area	Product ID
AVR2313	North America (E3)	000100590100
	Europe (E2)	000100590200
	China (E1C)	000100590500

##### (2) Setting



#### 3.2. Download the firmware

- (1) While pressing the "STATUS" button and the "TUNER PRESET CH -" button at the same time, power on this unit.
- (2) "USB Update Start" appears in the FL Display.
- (3) Press the "ENTER" button on remote control. "UpdateFileCheck" appears in the FL Display and the Update of the Firmware starts.
- (4) During the update, the power indicator lights in red and the GUI screen display disappears.  
The remaining update time appears in the display on the main unit.  
When the update is completed, "Updateing Complete" appears in the FL Display and then this unit returns to the normal state.
- (5) Execute a initialization (Refer to 9 page).

#### --- Cautions on Firmware Update ---

- Do not remove a USB memory until updating is completed.
- Do not turn off the power until updating is completed.  
Approximately 1 hour is required for the updating procedure to be completed.  
Once updating starts, normal operations on the this unit cannot be performed until updating is completed. Also, setting items of the GUI menu of this unit or setting items of the image adjustment may be initialized.  
Note down the settings before updating, and set them again after updating.

### 3.3. About the error code

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

Error Code	Details of Error code	Display	Coping strategies
01	Unable to detect USB.	ConnectionFail101	Disconnect and connect the USB memory.
02	No FirmwareFile in USB.	FilesNotFound02	Make sure that the FirmwareFile is in the USB memory.
03	FirmwareFile in USB for unsupported Model name/area	NotMatchFirm03	Check the supported Model name/area for the FirmwareFile.
04	Failed to obtain entire Firmware information.	ConnectionFail104	Start the USB Update again.
05	TimeOut while obtaining entire Firmware information	ConnectionFail105	Start the USB Update again.
06	Failed to obtain individual Firmware information.	ConnectionFail106	Start the USB Update again.
07	TimeOut while obtaining individual Firmware information	ConnectionFail107	Start the USB Update again.
08	Error notification received while requesting FirmwareInfo.	ConnectionFail108	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
09	TimeOut while obtaining Firmware information	ConnectionFail109	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
0A	Unable to detect USB for FirmwareDownload.	ConnectionFail10A	Disconnect and connect the USB memory.
0B	No FirmwareFile for FirmwareDownload.	FilesNotFound0B	Disconnect and connect the USB memory.
0C	Received value with invalid PackageVersion.	ConnectionFail10C	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
10	No UpdatePacket received from DM860A (TimeOut).	Updating fail110	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
11	Abnormal data in UpdatePacket received from DM860A (FormatError).	Updating fail111	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
12	Abnormal data in UpdatePacket received from DM860A (ChecksumError).	Updating fail112	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
13	BlockErase failed before rewriting Main.	Erase fail113	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
14	BlockWrite failed while rewriting Main.	Updating fail114	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
15	Error in Verify after rewriting Main (ChecksumError).	UpdateCheckNG115	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
20	Unable to detect USB after SBLMode.	ConnectionFail120	Disconnect and connect the USB memory.

Error Code	Details of Error code	Display	Coping strategies
21	No FirmwareFile in USB after SBLMode.	FilesNotFound 21	Disconnect and connect the USB memory.
22	FirmwareFile in USB after SBLMode for unsupported Model name/area	NotMatchFirm 22	Check the supported Model name/area for the FirmwareFile.
23	Failed to obtain entire Firmware information after SBLMode.	ConnectionFail 23	Disconnect and connect the USB memory.
24	TimeOut while obtaining entire Firmware information after SBLMode	ConnectionFail 24	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
25	Failed to transit to SBLMode.	ConnectionFail 25	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
26	TimeOut in Download (writing to SDRAM) for FirmwareDownload	Download fail 26	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
27	Failed to write to EEPROM after SBLMode.	ConnectionFail 27	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
36	Unable to detect USB.	ConnectionFail 36	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the POWER button for five seconds.
37	No FirmwareFile in USB.	FilesNotFound 37	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
38	FirmwareFile in USB for unsupported Model name/area	NotMatchFirm 38	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
39	TimeOut in USBCheck	ConnectionFail 39	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
3A	Unable to detect USB for FirmwareDownload.	ConnectionFail 3A	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
3B	No FirmwareFile for FirmwareDownload.	FilesNotFound 3B	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
3F	Failed to transit to SBLMode.	ConnectionFail 3F	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.
50	Unable to detect USB.	ConnectionFail 50	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (b)" button for five seconds.

Error Code	Details of Error code	Display	Coping strategies
51	No FirmwareFile in USB.	FileNotFound 51	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
52	FirmwareFile in USB for unsupported Model name/area	NotMatchFirm 52	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
54	Error notification received while requesting FirmwareInfo.	UpdatingFail 54	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
55	TimeOut while obtaining Firmware	UpdatingFail 55	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
56	Unable to detect USB for FirmwareDownload.	ConnectionFail 56	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
57	No FirmwareFile for FirmwareDownload.	FileNotFound 57	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5A	Invalid DeviceID in response or no response from Sub for C command.	ConnectionFail 5A	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5B	NACK received in response or no response from Sub for L command.	UpdatingFail 5B	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5C	No UpdatePacket received from DM860A (TimeOut).	UpdatingFail 5C	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5D	Abnormal data in UpdatePacket received from DM860A (FormatError).	UpdatingFail 5D	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5E	Abnormal data in UpdatePacket received from DM860A (ChecksumError).	UpdatingFail 5E	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
5F	Abnormal data in UpdatePacket received from DM860A (DataLength/DataNo).	UpdatingFail 5F	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
60	NACK received in response or no response from Sub for P command.	UpdatingFail 60	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.



Error Code	Details of Error code	Display	Coping strategies
61	Mismatched CheckSum in response or no response from Sub for I command.	UpdateCheckNG 61	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
63	Failed to transit to ApplicationMode.	Updating fail 63	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
64	Failed to transit to BootLoaderMode.	Updating fail 64	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
80	WriteEnableLatchBit not set in Read after issuing WREN command.	Updating fail 80	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
81	BlockErase failed in Read after issuing BE command.	Updating fail 81	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
82	No UpdatePacket received from DM860A (TimeOut).	Updating fail 82	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
83	Abnormal data in UpdatePacket received from DM860A (FormatError).	Updating fail 83	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
84	Abnormal data in UpdatePacket received from DM860A (ChecksumError).	Updating fail 84	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
85	Abnormal data in UpdatePacket received from DM860A (DataLength/DataNo).	Updating fail 85	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
86	Mismatched CheckSum in CheckSum comparison after rewriting.	Updating fail 86	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
A2	Unable to detect USB.	ConnectionFail A2	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
A3	No FirmwareFile in USB.	FirmwareNotFound A3	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
A4	FirmwareFile in USB for unsupported Model name/area	NotMatchFirm A4	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.

Error Code	Details of Error code	Display	Coping strategies
A6	Error notification received while requesting FirmwareInfo.	Updating failed A6	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
A7	TimeOut while obtaining Firmware	Updating failed A7	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
AE	Unable to detect USB for FirmwareDownload.	ConnectionFailed AE	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
AF	No FirmwareFile for FirmwareDownload.	FileNotFound AF	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
B1	TimeOut in Download (writing to SDRAM) for FirmwareDownload	Download failed B1	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
B2	Error notification received after rewriting DM860A Firm.	Updating failed B2	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
B3	Error in FirmwareUpdate (TimeOut).	Updating failed B3	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
B4	Failed to transit to BootLoaderMode.	Updating failed B4	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.
B5	Failed to transit to ApplicationMode.	Updating failed B5	This unit automatically retries several times. Wait until the FL display stops. If the FL display stops at the Error display, press and hold the "Power operation (Ⓟ)" button for five seconds.

### --- Cautions on Firmware Update ---

When an error code as shown above appears in the DISPLAY, check the following:

- Check whether the Firmware downloaded to the USB memory is correct (whether the MODEL name and area of the downloaded Firmware match those for the product, and whether the USB Memory contains data other than the latest Firmware).
- Update after resetting the product.
- Use a different USB memory.

### 3.4. Device display during firmware update

Display of target device during firmware update.

Target device	Display	Error code when an error occurs
Main CPU	Main:***%***min	08 - 0B 10 - 15 20 - 27 36 - 3B 3F
Audio PLD	APLD:***%***min	50 - 52 54 - 58 5A - 64
DSP	DSP:***%***min	50 - 52 54 - 58 5A - 64
GUI Serial Flash	GUI:***%***min	50 - 52 54 - 58 5A 62 - 64 80 - 86
DM860A Boot Loader	ESBL:***%***min	A0 - A4 A6 - A7 AE - B5
DM860A Image	EIMG:***%***min	A0 - A4 A6 - A7 AE - B5
DM860A Image (Emergency Mode)	Update retry	-

### Confirming the firmware's number after upgraded

After updating the firmware, check the version. Refer to "1.  $\mu$ com/DSP Version display mode" (24 page).

# ADJUSTMENT

## Audio Section

### Adjusting Idling Current

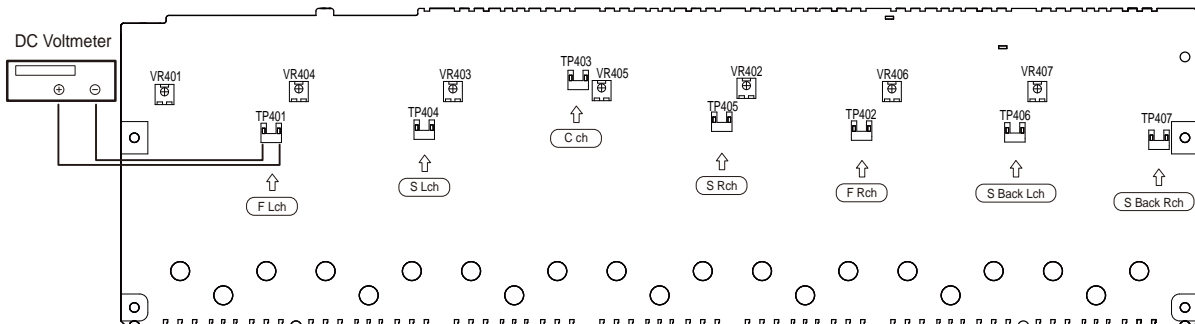
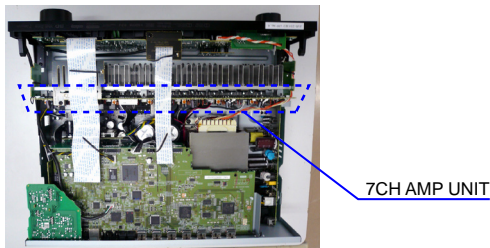
Required measurement equipment: DC Voltmeter

#### 1. Preparation

- (1) Temperature should be at avoid direct blow from an air conditioner or an electric fan and humidity should be moderate, and place the set at normal usage environment.  
15 °C ~ 30 °C (59 °F ~ 86 °F)
- (2) Presetting
  - POWER (Power source switch)      STANDBY
  - SPEAKER (Speaker terminal)      No load  
(Do not connect speaker, dummy resistor, etc.)

#### 2. Adjustment

- (1) Remove the top cover and set VR401, VR402, VR403, VR404, VR405, VR406, VR407 on at fully 7CH AMP UNIT at fully counterclockwise (↺) position.
- (2) Connect DC Voltmeter to test points (FRONT-Lch: TP401, FRONT-Rch: TP402, CENTER ch: TP403, SURROUND-Lch: TP404, SURROUND-Rch: TP405, SURROUND-BACK Lch: TP406, SURROUND-BACK Rch: TP407).
- (3) Connect the power cord to AC Line, and set the power switch to "ON".
- (4) Presetting.
  - MASTER VOLUME                    : "----" counterclockwise (↺ min.)
  - SPEAKER (Speaker terminal)    : No load  
(Do not connect speaker, dummy resistor, etc.)
  - MODE                                : MCH STEREO
  - FUNCTION                         : DVD
- (5) Within 2 minutes after the power on, turn VR401 clockwise (↻) to adjust the TEST POINT voltage to  $6.5\text{mV} \pm 0.5\text{mV DC}$ .
- (6) After 10 minutes from the preset above, turn VR401 to set the voltage to  $8.0\text{mV} \pm 0.5\text{mV DC}$ .
- (7) Adjust the Variable Resistors of each channel in the same way.



# SURROUND MODES AND PARAMETERS

## Surround

This unit is equipped with a digital signal processing circuit that lets you play program sources in the sound mode to achieve the same sense of presence as in a movie theater.

## Sound modes and surround parameters

This table shows the speakers that can be used in each sound mode and the surround parameters adjustable in each sound mode.

### Symbols in the table

- This indicates the audio output channels or surround parameters that can be set.
- ◎ This indicates the audio output channels. The output channels depend on the settings of "Speaker Config."

Sound Mode	Channel output					Surround Parameter			
	Front L/R	Center	Surround L/R	Surround back L/R	Front height L/R	Front wide L/R	Subwoofer	Cinema EQ #2	Loudness Management #3
DIRECT/PURE DIRECT (2 channel)*1	○			◎*5	◎*5	◎*5	◎*4		○
DIRECT/PURE DIRECT (Multi-channel)*1	○	◎					◎		○
DSD DIRECT (2 channel)*1	○			◎*5	◎*5	◎*5	◎*4		○
DSD DIRECT (Multi-channel)*1	○	◎					◎		○
STEREO	○						◎		○
MULTI CH IN	○	◎		◎	◎*6		◎	◎*7	○
DOLBY PRO LOGIC IIz	○	◎			◎		◎		○
DOLBY PRO LOGIC IIx	○	◎		◎			◎	◎*8	○
DOLBY PRO LOGIC II	○	◎		◎			◎	◎*9	○
DOLBY PRO LOGIC	○	◎		◎			◎	◎*9	○
DOLBY PRO LOGIC II A-DSX	○	◎			◎*10	◎*11	◎	◎*9	○
DOLBY PRO LOGIC A-DSX	○	◎			◎*10	◎*11	◎	◎*8	○
DTS NEO:6	○	◎			◎*10	◎*11	◎	◎*8	○
DTS NEO:6 A-DSX	○	◎			◎*10	◎*11	◎	◎*8	○
Audyssey DSX®	○	◎			◎*10	◎*11	◎	◎*7	○
DOLBY DIGITAL	○	◎			◎*6		◎		○
DOLBY DIGITAL Plus	○	◎			◎*6		◎		○
DOLBY TrueHD	○	◎			◎*6		◎		○
DTS SURROUND	○	◎			◎*6		◎		○
DTS 96/24	○	◎			◎*6		◎		○
DTS-HD	○	◎			◎*6		◎		○
DTS Express	○	◎			◎*6		◎		○
MULTI CH STEREO	○	◎		◎*12	◎*13	◎*14	◎		○
ROCK ARENA	○	◎		◎*12	◎*13	◎*14	◎		○
JAZZ CLUB	○	◎		◎*12	◎*13	◎*14	◎		○
MONO MOVIE	○	◎		◎*12	◎*13	◎*14	◎		○
VIDEO GAME	○	◎		◎*12	◎*13	◎*14	◎		○
MATRIX	○	◎		◎*12	◎*13	◎*14	◎		○
VIRTUAL	○	◎		◎*12	◎*13	◎*14	◎		○

\*1 During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.

\*2 This item cannot be selected during DSD (SA-CD) signal playback.

\*3 This item can be selected when a Dolby TrueHD signal is played.

\*4 Only when "Subwoofer Mode" is set to "LFE+Main", sound is output from the subwoofer.

\*5 A signal for each channel contained in an input signal is output as audio.

\*6 Audio is output from the front height speaker when the set sound mode name contains "+PLIIz". For information on how to check the sound mode, see.

\*7 This setting is unavailable when the set sound mode name contains "+PLIIx Music". For information on how to check the sound mode, see.

\*8 This setting is possible when the sound mode is "PLIIx Cinema" or "DTS NEO:6 Cinema".

\*9 This setting is possible when the sound mode is "PLII Cinema" or "Pro Logic".

\*10 Audio is output from the front height speaker when "Assign Mode" in the menu is set to "Front Height" and "Audyssey DSX®" is set to "On".

\*11 Audio is output from the front wide speaker when "Assign Mode" in the menu is set to "Front Wide" and "Audyssey DSX®" is set to "On".

\*12 Audio is output from the surround back speaker when "Assign Mode" in the menu is set to "Surround Back".

\*13 Audio is output from the front height speaker when "Assign Mode" in the menu is set to "Front Height".

\*14 Audio is output from the front wide speaker when "Assign Mode" in the menu is set to "Front Wide".

- \*1 During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.
- \*15 This item can be selected when a Dolby Digital or DTS signal is played.
- \*16 This item can be selected when a Dolby Digital or DTS signal or DVD-Audio is played.
- \*17 This setting is available when the set sound mode name contains "+PLIIz". For information on how to check the sound mode, see.

Sound Mode	Surround Parameter									
	Dynamic Compression *15	Low Frequency Effects *16	Delay Time	Effect Level	Room Size	Height Gain *17	PRO LOGIC II/IIx Music mode only		NEO:6 Music mode only	
							Panorama	Dimension	Center Width	Center Image
DIRECT/PURE DIRECT (2 channel) *1	<input type="radio"/>	<input type="radio"/>								
DIRECT/PURE DIRECT (Multi-channel) *1	<input type="radio"/>	<input type="radio"/>								
DSD DIRECT (2 channel) *1	<input type="radio"/>	<input type="radio"/>								
DSD DIRECT (Multi-channel) *1	<input type="radio"/>	<input type="radio"/>								
STEREO	<input type="radio"/>	<input type="radio"/>								
MULTI CH IN	<input type="radio"/>	<input type="radio"/>								
DOLBY PRO LOGIC IIz	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DOLBY PRO LOGIC IIx	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
DOLBY PRO LOGIC II	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
DOLBY PRO LOGIC	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
DOLBY PRO LOGIC II A-DSX	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
DOLBY PRO LOGIC A-DSX	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
DTS NEO:6	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
DTS NEO:6 A-DSX	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
Audyssey DSX®	<input type="radio"/>	<input type="radio"/>								
DOLBY DIGITAL	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DOLBY DIGITAL Plus	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DOLBY TrueHD	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DTS SURROUND	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DTS 96/24	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DTS-HD	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
DTS Express	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>				
MULTI CH STEREO	<input type="radio"/>	<input type="radio"/>								
ROCK ARENA	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>					
JAZZ CLUB	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>					
MONO MOVIE	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>					
VIDEO GAME	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>					
MATRIX	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
VIRTUAL	<input type="radio"/>	<input type="radio"/>								

- \*1 During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.
- \*5 Only when "Subwoofer Mode" is set to "LFE+Main", sound is output from the subwoofer.
- \*18 This item cannot be set when "Dynamic EQ" is set to "On".
- \*19 This item cannot be set for HD audio exceeding a frequency of 96kHz or during DSD(SA-CD) signal playback.
- \*20 This item cannot be set when "MultEQ@XT" is set to "Off" or "Graphic EQ".
- \*21 This item can be set when the input signal is analog, PCM 48 kHz or 44, 1 kHz.
- \*22 In this sound mode, bass is +6 dB, and treble is +4 dB (Default).

Sound Mode	Subwoofer	Tone *18	Audyssey				Restorer *21
			MultEQ@ XT *19	Dynamic EQ *20	Dynamic Volume *20	Audyssey DSX® *19	
DIRECT/PURE DIRECT (2 channel) *1	<input type="radio"/> *5						
DIRECT/PURE DIRECT (Multi-channel) *1	<input type="radio"/> *5						
DSD DIRECT (2 channel) *1							
DSD DIRECT (Multi-channel) *1							
STEREO		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MULTI CH IN	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC IIx	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC IIx	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC II	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC II A-DSX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY PRO LOGIC A-DSX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS NEO 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS NEO 6 A-DSX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audyssey DSX®	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY DIGITAL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY DIGITAL Plus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DOLBY TrueHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS SURROUND	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS 96/24	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS-HD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS Express	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MULTI CH STEREO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROCK ARENA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
JAZZ CLUB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MONO MOVIE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VIDEO GAME	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MATRIX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VIRTUAL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Types of input signals, and corresponding sound modes**

This table shows the input signal that can be played in each sound mode. Check the audio signal of the input source then select the sound mode.

**Symbols in the table**

- This indicates the default sound mode.
- This indicates the selectable sound mode.

Sound Mode	NOTE	Input signal types and formats															
		ANALOG		PCM		DTS-HD		DTS		DOLBY		DOLBY DIGITAL		Super Audio CD			
		PCM (multi ch)	PCM (2ch)	DTS-HD Master Audio	DTS-HD High Resolution Audio	DTS EXPRESS	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY TrueHD	DOLBY DIGITAL Plus	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL (2ch)	DSD (multi ch)	DSD (2ch)
DTS SURROUND																	
DTS-HD MSTR	*1			●													
DTS-HD HI RES	*1			●													
DTS ES DSCRT6.1	*2*3					●											
DTS ES MTRX6.1	*2*3						●										
DTS SURROUND	*1						○		●								
DTS 96/24	*1								●								
DTS (-HD) + PLIIx CINEMA	*2*4			○	○				○	○							
DTS (-HD) + PLIIx MUSIC	*2*3			○	○				○	○							
DTS (-HD) + PLIz	*5*6			○	○				○	○							
DTS EXPRESS	*1					●											
DTS (-HD) + NEO.6	*2*3			○	○				○	○							
DTS NEO:6 CINEMA	*1	○	○												○	○	
DTS NEO:6 MUSIC	*1	○	○												○	○	
DTS NEO:6 CINEMA A-DSX		○	○												○	○	
DTS NEO:6 MUSIC A-DSX		○	○												○	○	
Audyssey DSX®																	

- \*1 If "Audyssey DSX®" is set to "On", the Audyssey DSX® effect is added to the sound mode marked with \*1.
- \*2 This sound mode can be selected when "Assign Mode" is set to "Surround Back".
- \*3 If "Speaker Config." - "Surr. Back" is set to "None", this sound mode cannot be selected.
- \*4 If "Speaker Config." - "Surr. Back" is set to "1spkr" or "None", this sound mode cannot be selected.
- \*5 If "Speaker Config." - "Front Height" is set to "None", this sound mode cannot be selected.
- \*6 This sound mode can be selected when "Assign Mode" is set to "Front Height".



Sound Mode	NOTE	Input signal types and formats																
		ANALOG		PCM		DTS-HD		DTS			DOLBY		DOLBY DIGITAL			Super Audio CD		
		PCM (multi ch)	PCM (2ch)	DTS-HD Master Audio	DTS-HD High Resolution Audio	DTS EXPRESS	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY TrueHD	DOLBY DIGITAL Plus	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1ch)	DOLBY DIGITAL (2ch)	DSD (multi ch)	DSD (2ch)
DOLBY SURROUND																		
DOLBY TrueHD	*1																	
DOLBY DIGITAL+	*1																	
DOLBY DIGITAL EX	*2*3																	
DOLBY (D+)(HD)+EX	*2*3																	
DOLBY DIGITAL	*1																	
DOLBY (D) (HD) +PLIIx CINEMA	*2*4																	
DOLBY (D) (HD) +PLIIx MUSIC	*2*3																	
DOLBY (D) (HD) +PLIIz	*5																	
DOLBY PRO LOGIC IIx CINEMA	*2*3																	
DOLBY PRO LOGIC IIx MUSIC	*2*3																	
DOLBY PRO LOGIC IIx GAME	*2*3																	
DOLBY PRO LOGIC IIz	*5*6																	
DOLBY PRO LOGIC II CINEMA	*1																	
DOLBY PRO LOGIC II MUSIC	*1																	
DOLBY PRO LOGIC II GAME	*1																	
DOLBY PRO LOGIC	*1																	
DOLBY PRO LOGIC II CINEMA A-DSX																		
DOLBY PRO LOGIC II MUSIC A-DSX																		
DOLBY PRO LOGIC II GAME A-DSX																		
DOLBY PRO LOGIC A-DSX																		
Audyssey DSX®																		

\*1 If "Audyssey DSX®" is set to "On", the Audyssey DSX® effect is added to the sound mode marked with \*1.

\*2 This sound mode can be selected when "Assign Mode" is set to "Surround Back".

\*3 If "Speaker Config." - "Surr. Back" is set to "None", this sound mode cannot be selected.

\*4 If "Speaker Config." - "Surr. Back" is set to "1spkr" or "None", this sound mode cannot be selected.

\*5 If "Speaker Config." - "Front Height" is set to "None", this sound mode cannot be selected.

\*6 This sound mode can be selected when "Assign Mode" is set to "Front Height".

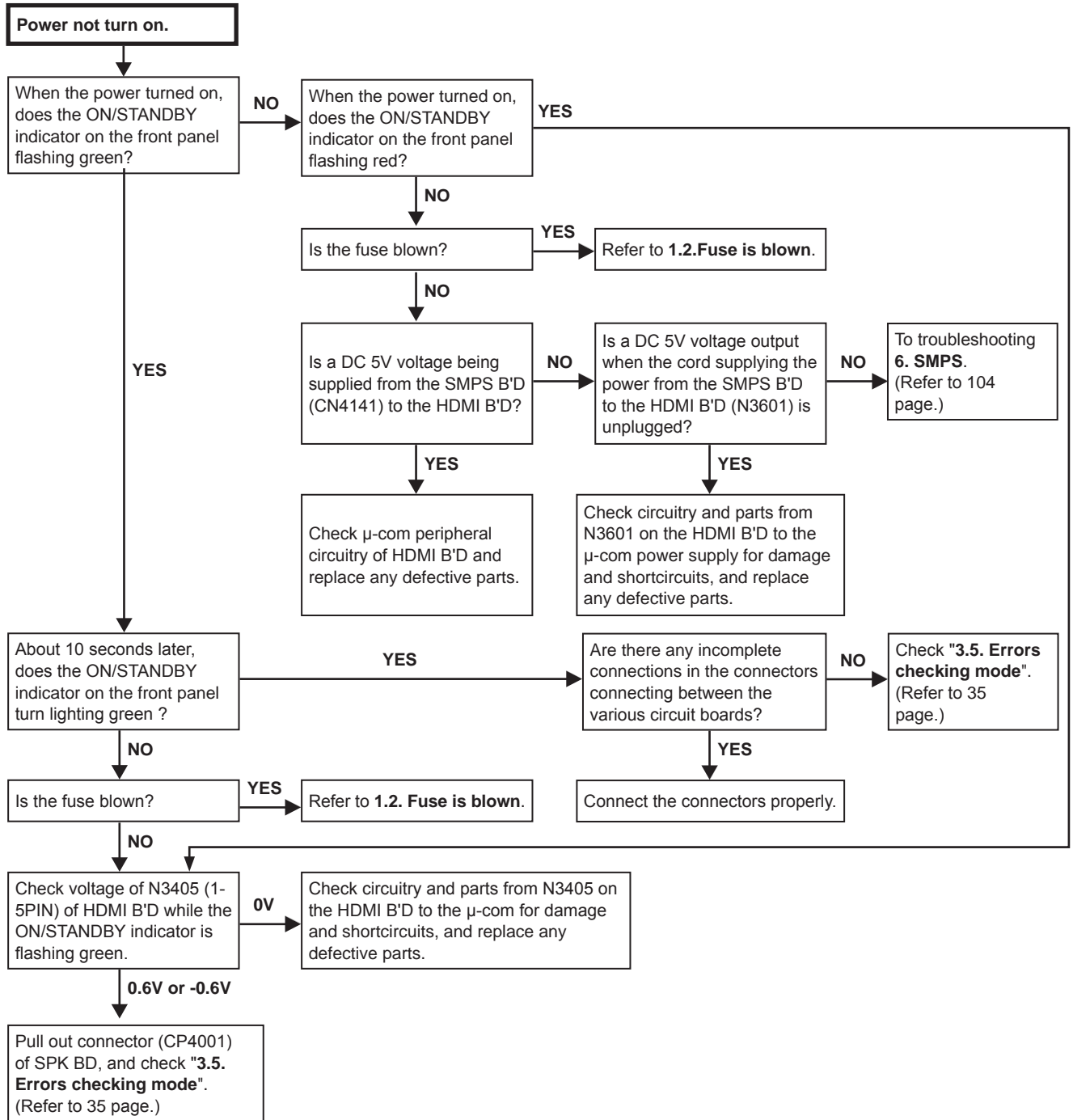
Sound Mode	NOTE	Input signal types and formats																	
		ANALOG		PCM		DTS-HD		DTS		DOLBY		DOLBY DIGITAL		Super Audio CD					
		ANALOG	PCM (multi ch)	PCM (2ch)	DTS-HD Master Audio	DTS-HD High Resolution Audio	DTS EXPRESS	DTS DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY TrueHD	DOLBY DIGITAL Plus	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1ch)	DOLBY DIGITAL (2ch)	DSD (multi ch)	DSD (2ch)
MULTI CH IN																			
MULTI CH IN + PLIIx CINEMA	*1		●																
MULTI CH IN + PLIIx MUSIC	*2*4		○																
MULTI CH IN + PLIIz	*2*3		○																
MULTI CH IN + Dolby EX	*5*6		○																
MULTI CH IN 7.1	*2*3		●																
Audyssey DSX®			○																
DIRECT			○																
DSD DIRECT																			
PURE DIRECT																			
PURE DIRECT																			
DSP SIMULATION																			
MULTI CH STEREO			○																
ROCK ARENA			○																
JAZZ CLUB			○																
MONO MOVIE			○																
VIDEO GAME			○																
MATRIX			○																
VIRTUAL			○																
STEREO			○																
STEREO		●	○																

- \*1 If "Audyssey DSX®" is set to "On", the Audyssey DSX® effect is added to the sound mode marked with \*1.
- \*2 This sound mode can be selected when "Assign Mode" is set to "Surround Back".
- \*3 If "Speaker Config." - "Surr. Back" is set to "None", this sound mode cannot be selected.
- \*4 If "Speaker Config." - "Surr. Back" is set to "1spkr" or "None", this sound mode cannot be selected.
- \*5 If "Speaker Config." - "Front Height" is set to "None", this sound mode cannot be selected.
- \*6 This sound mode can be selected when "Assign Mode" is set to "Front Height".

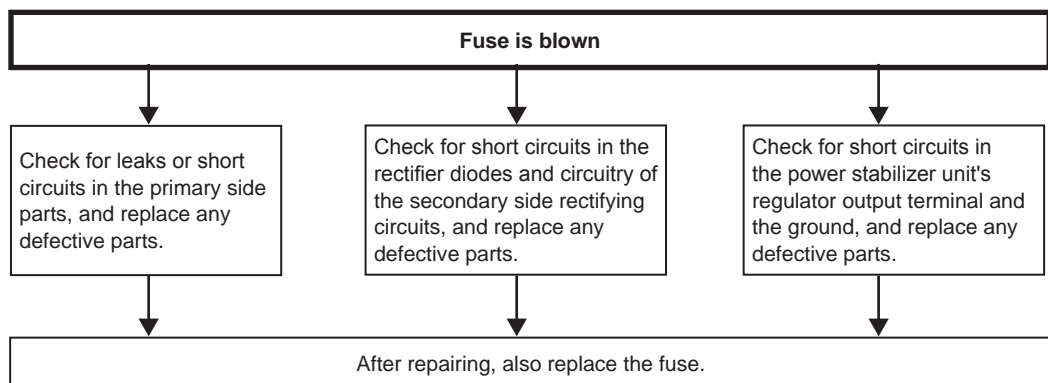
# TROUBLE SHOOTING

## 1. POWER

### 1.1. Power not turn on



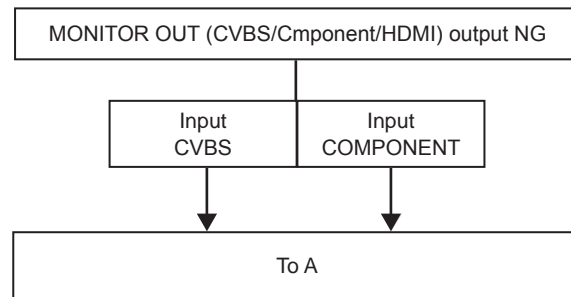
### 1.2. Fuse is blown

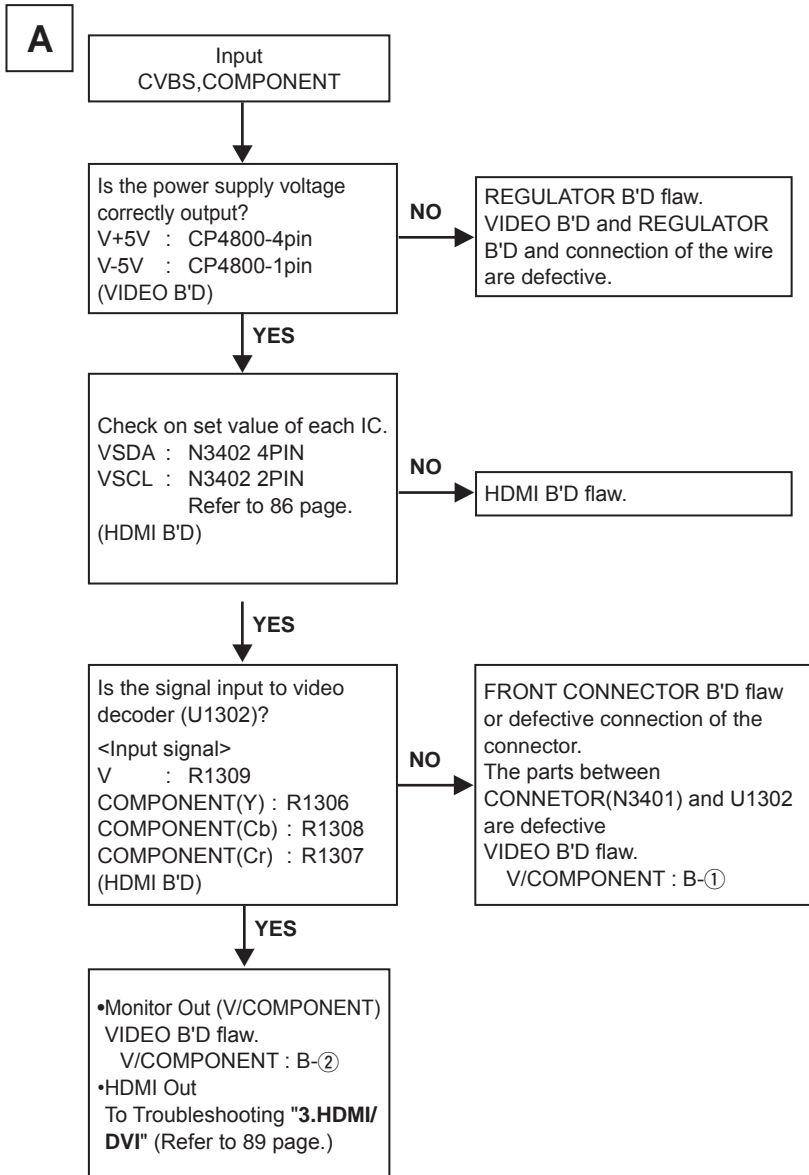


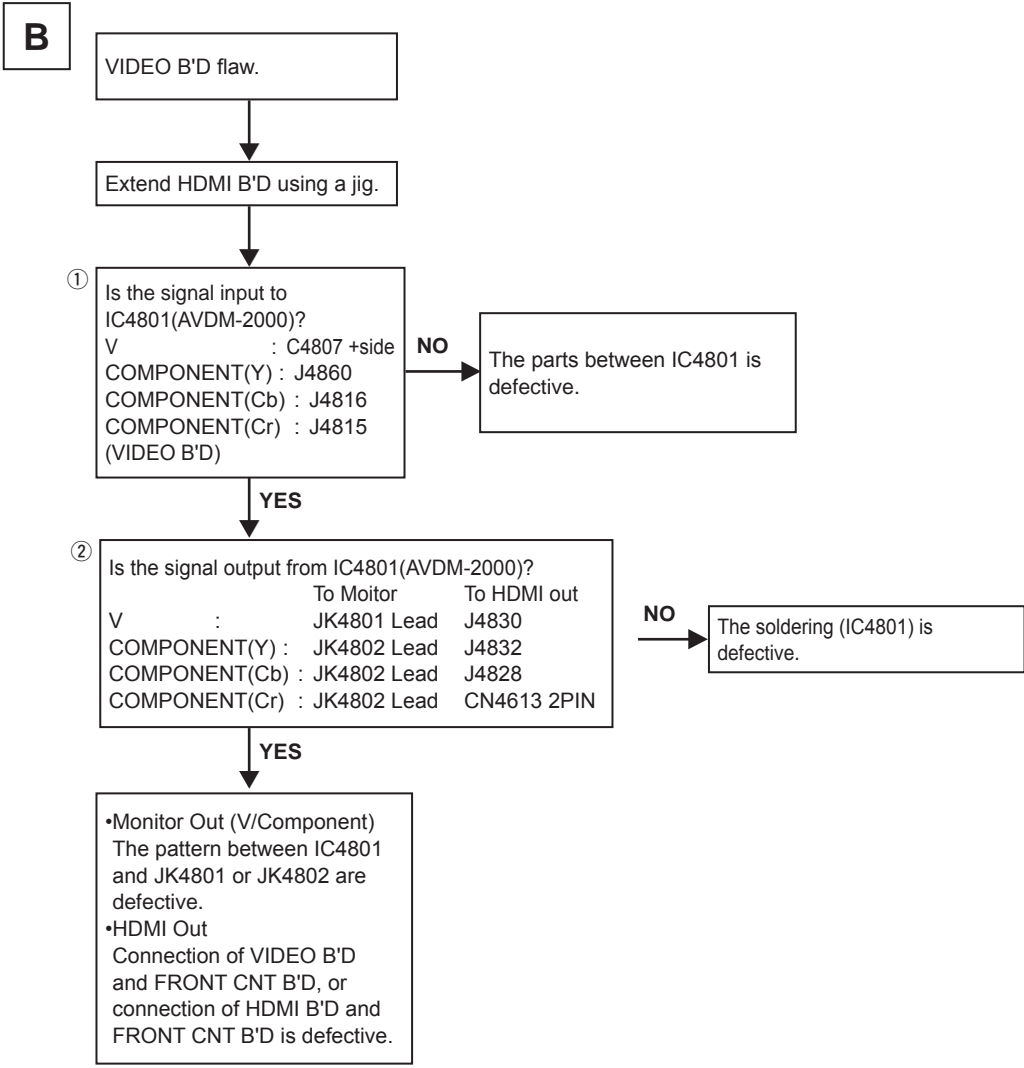
## 2. Analog video

### Perform the operation below beforehand.

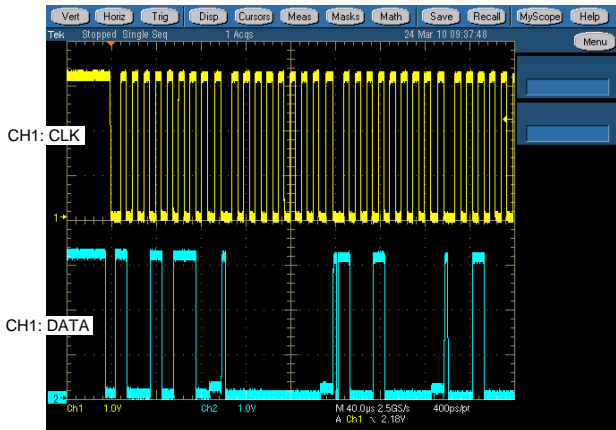
- ※ Check that the connection cable and the Monitor are normal.
- ※ Set VIDEO CONVERSION ON.
- ※ Set COMPONENT signal to 480i.
- ※ Set Function to the following.
  - V : SAT
  - COMPONENT : SAT



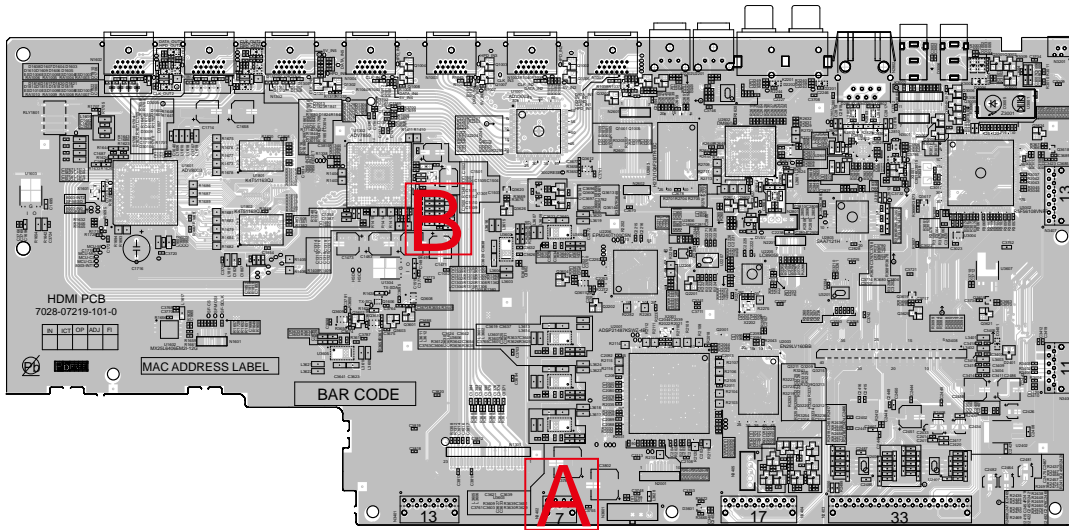




**I2C communication wave form**

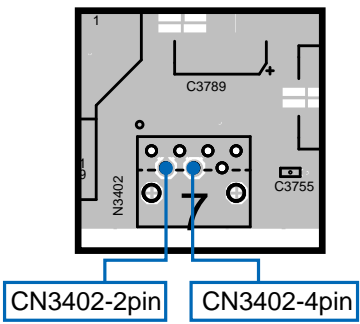


# HDMI test point

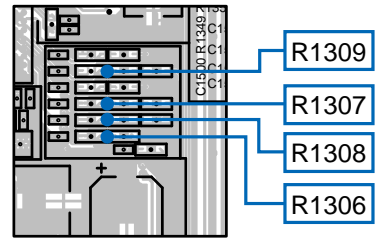


(COMPONENT SIDE)

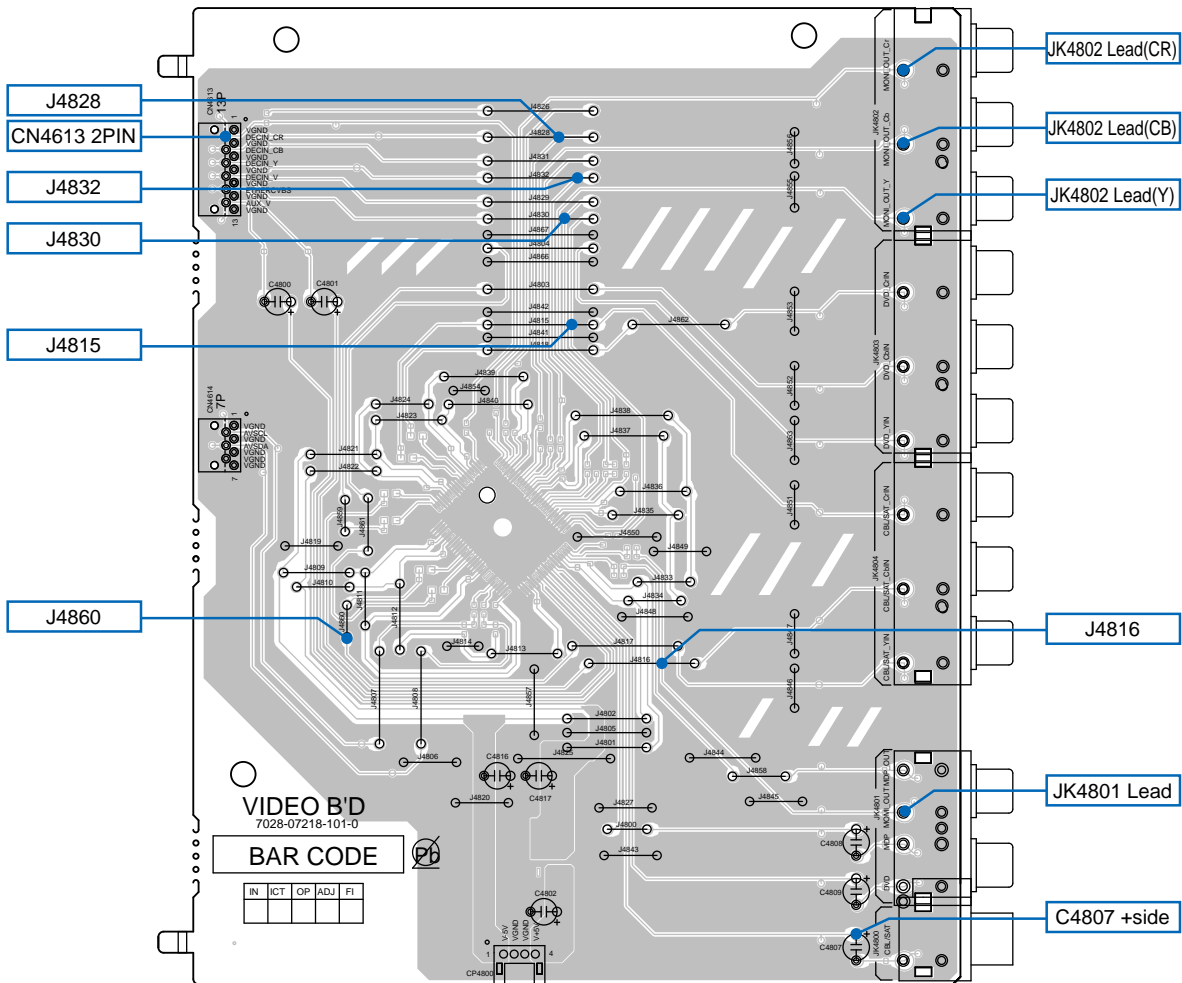
Detail A



Detail B



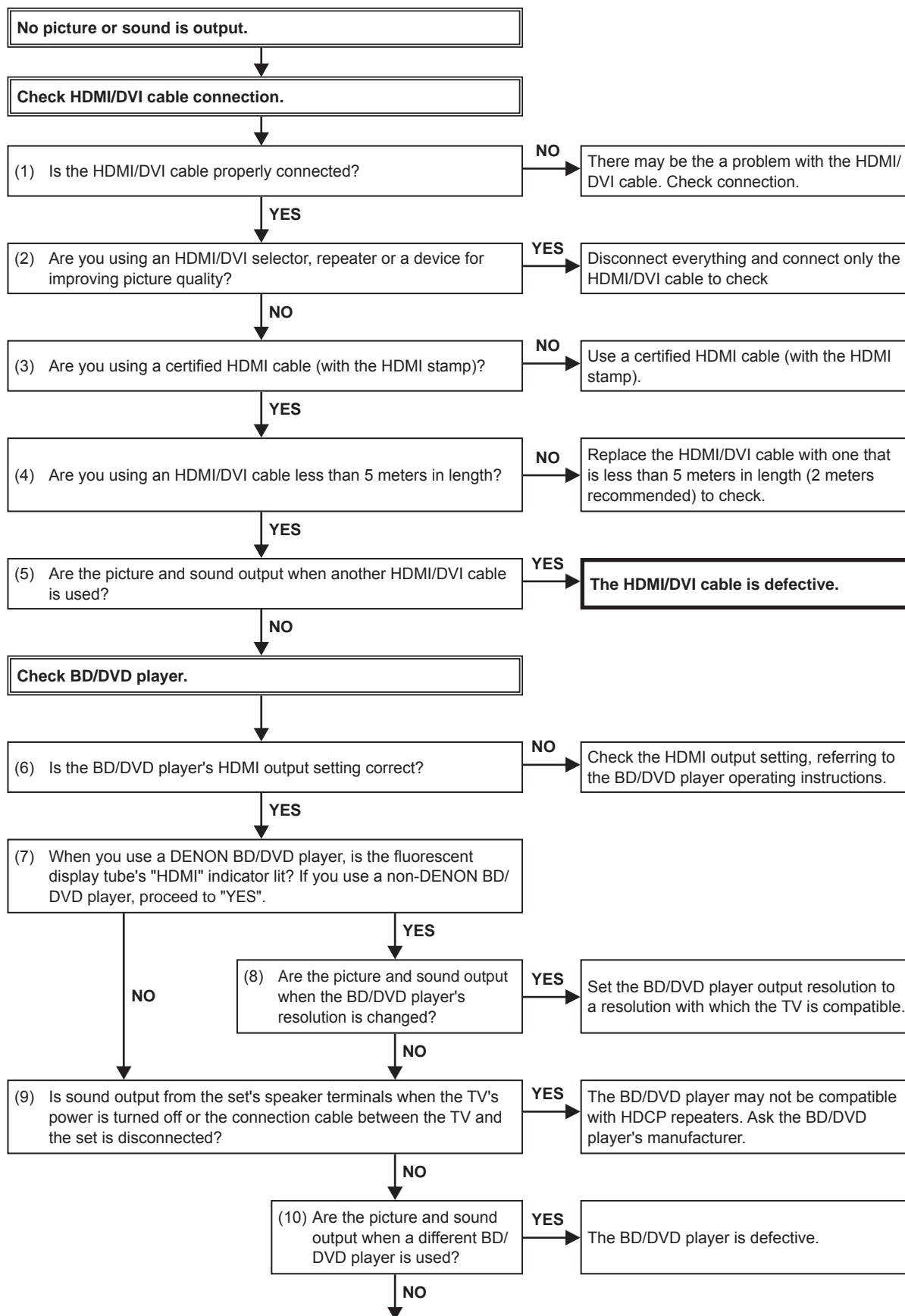
**VIDEO test point**

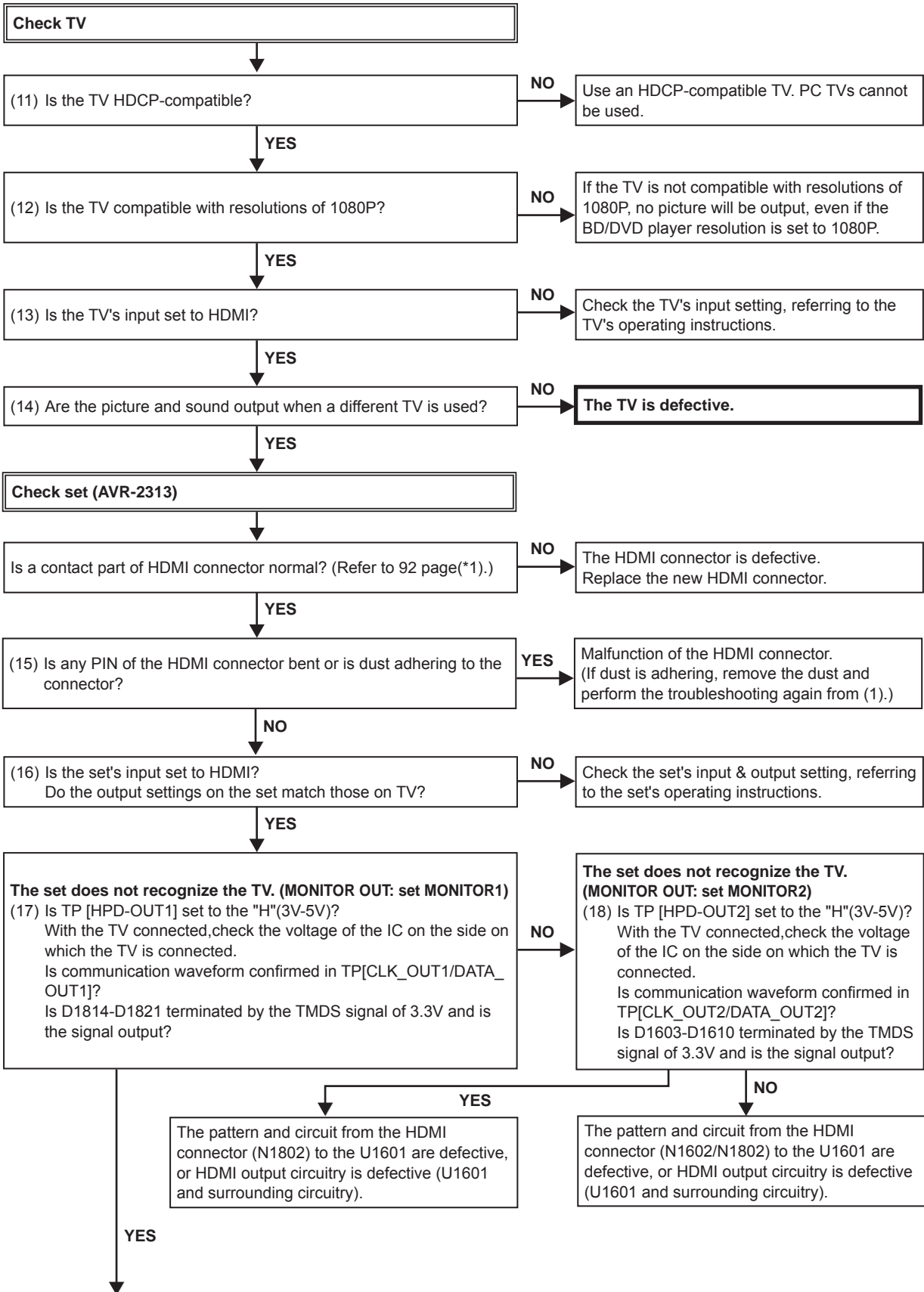


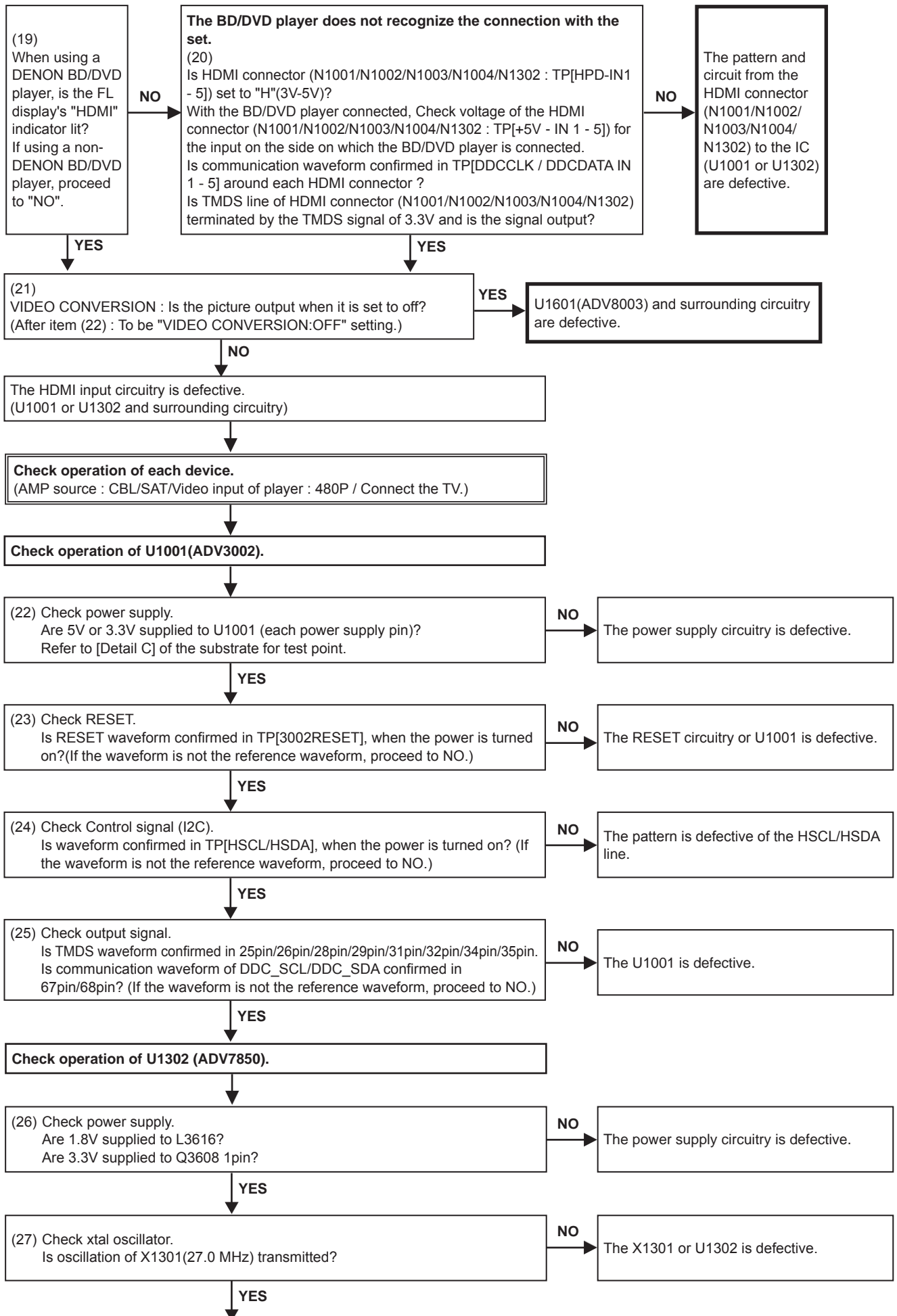


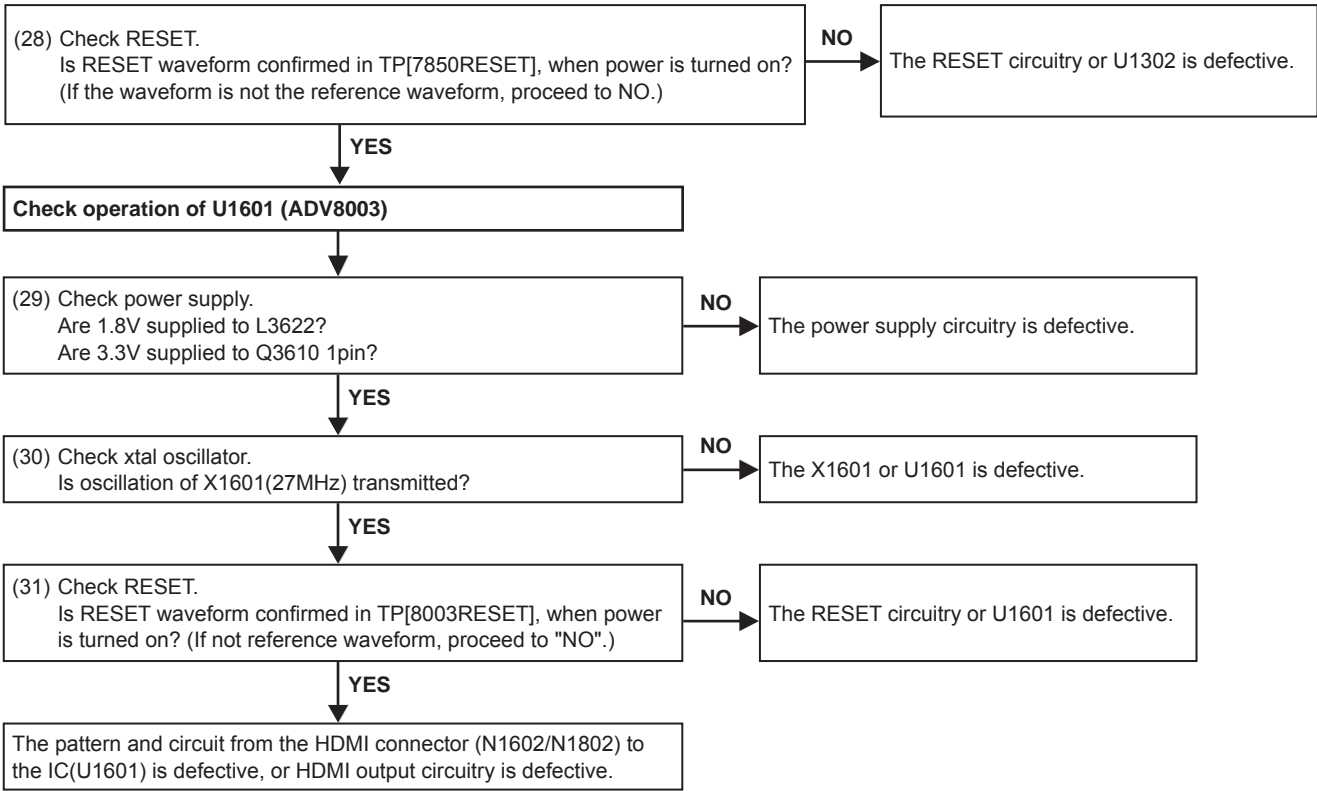
### 3. HDMI/DVI

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

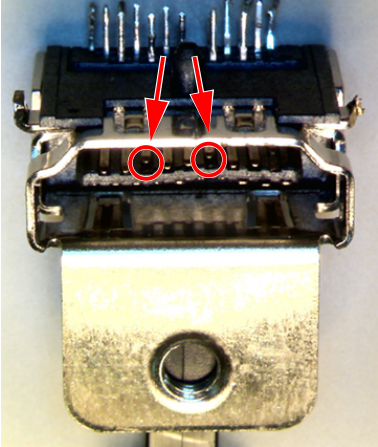




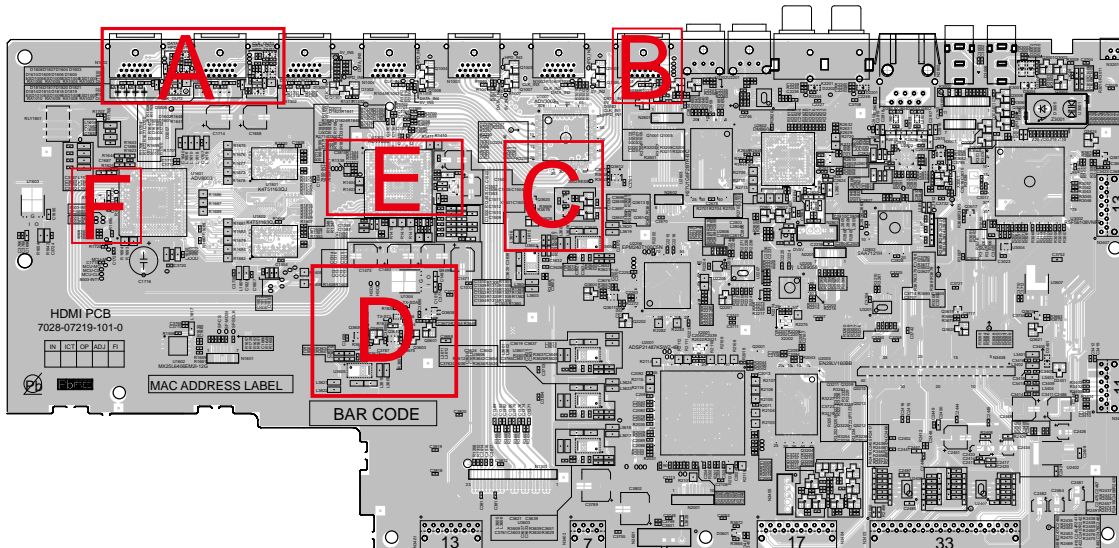




(\*1) Abnormal sample of HDMI connector : The internal terminal has bent.

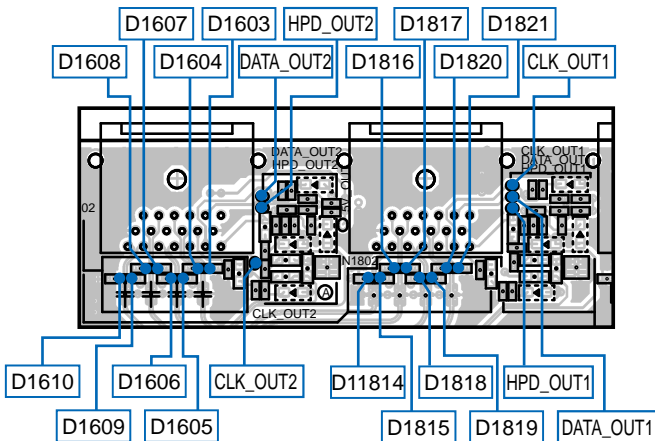


### 3.2. HDMI test point and waveforms

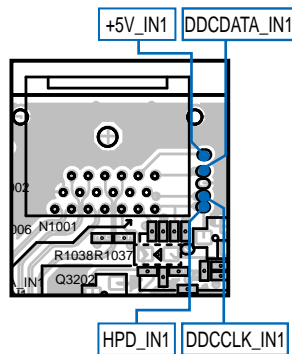


(COMPONENT SIDE)

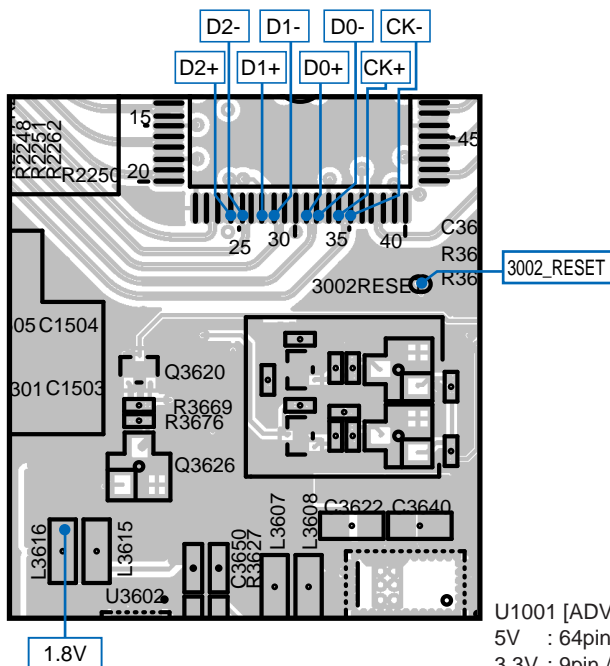
Detail A



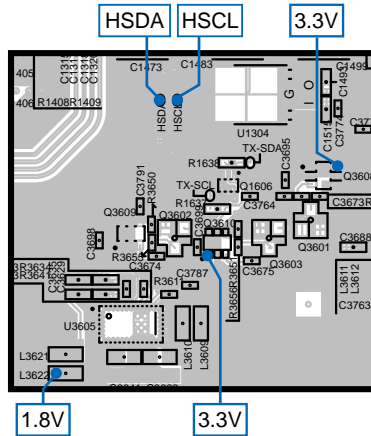
Detail B



Detail C

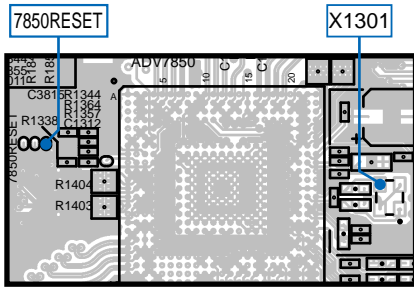


Detail D

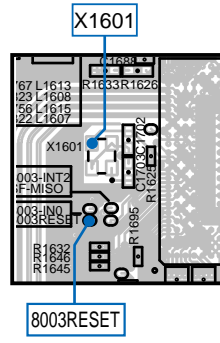


U1001 [ADV3002] Power pin  
 5V : 64pin  
 3.3V : 9pin / 18pin / 33pin / 43pin / 52pin

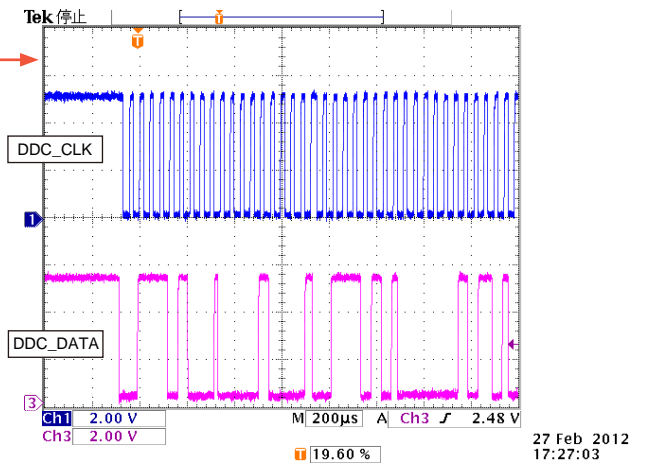
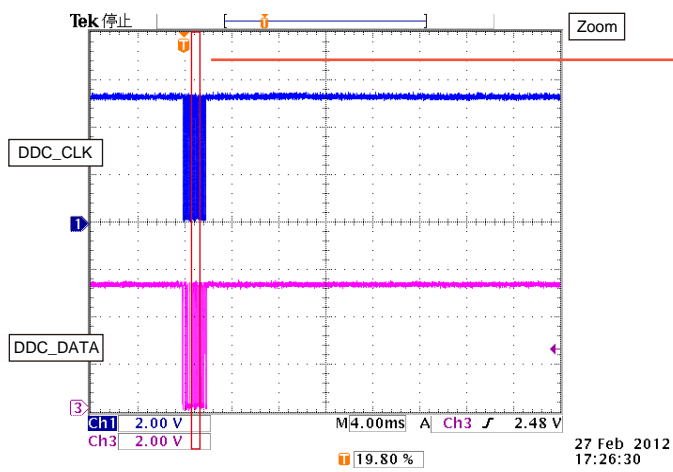
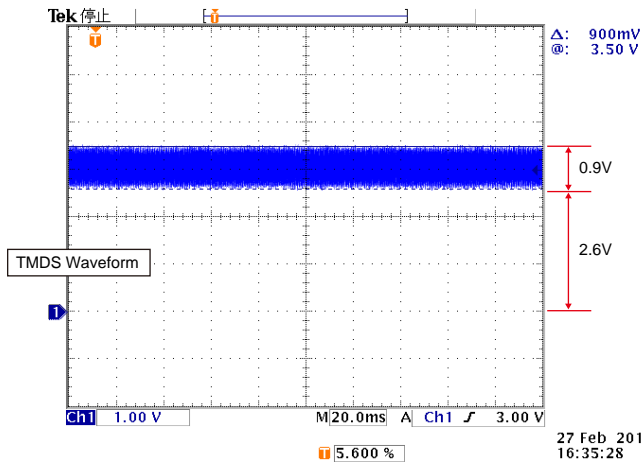
Detail E



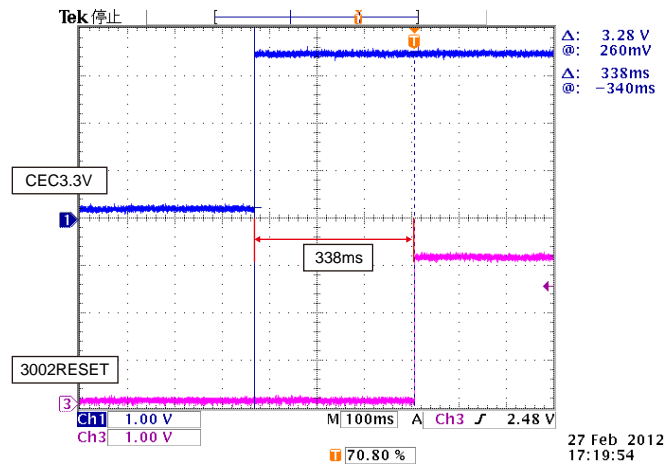
Detail F



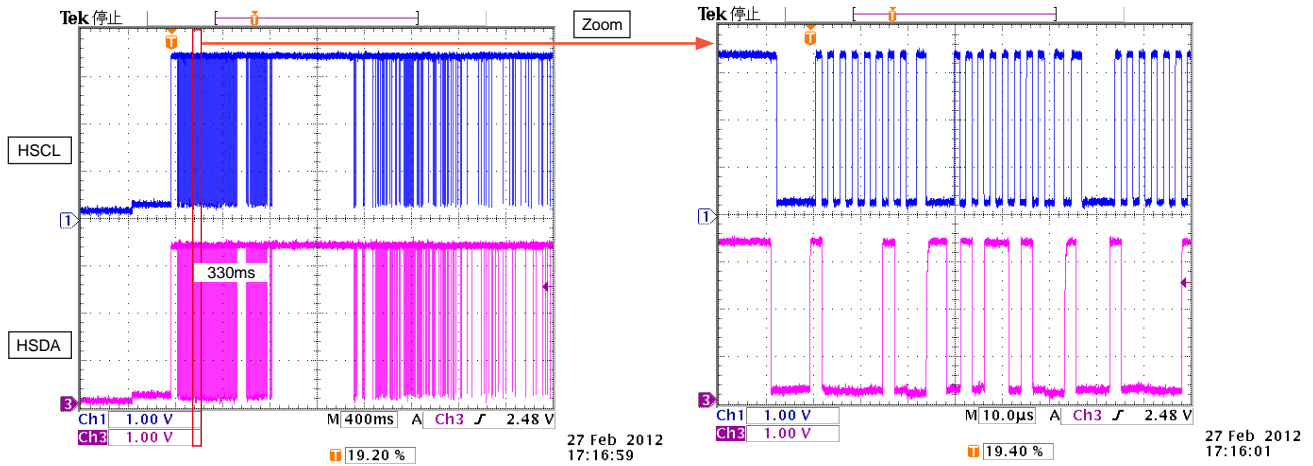
DDC\_CLK/DDC\_DATA/TMDS : Check items HDMI to HDMI (17)/(18)/(20)/(25)



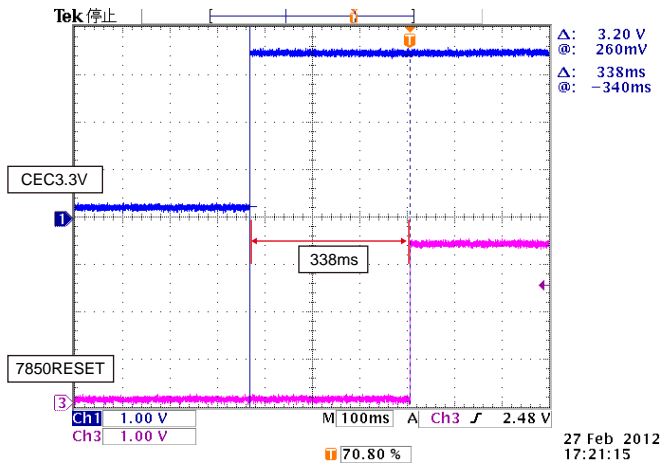
Timing waveform illustration from the start of CEC3.3V to when reset is released : Check items (23)



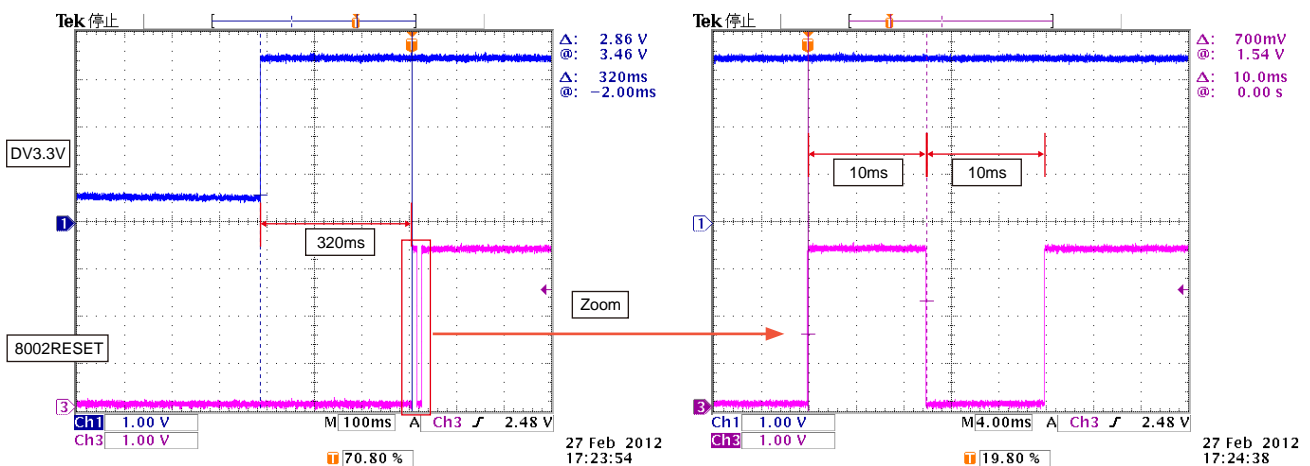
Controlled waveform (I2C), when power is turned on : Check items (24)



Timing waveform illustration from the start of CEC3.3V to when reset is released : Check items (28)



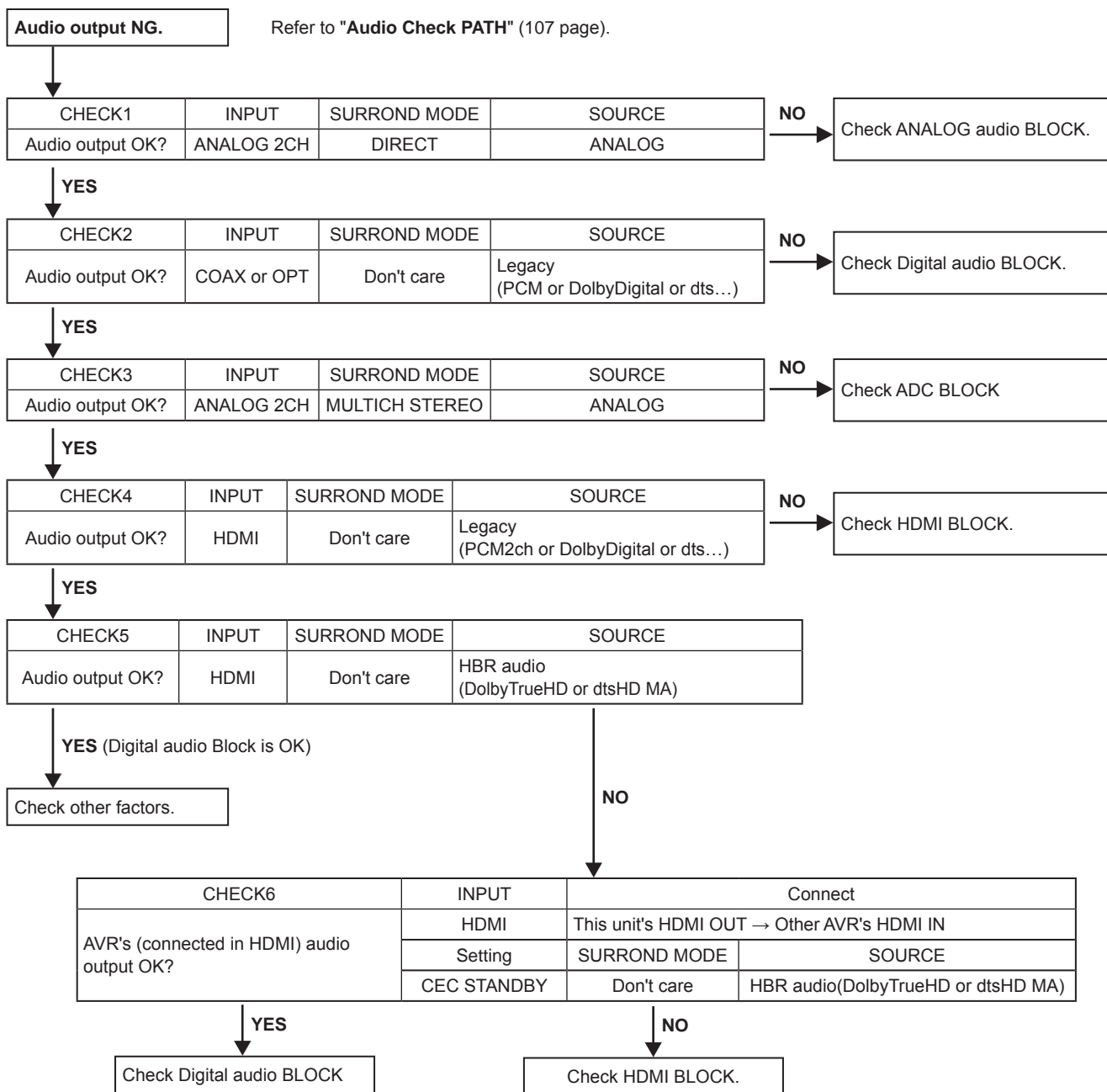
Timing waveform illustration from the start of CEC3.3V to when reset is released : Check items (31)



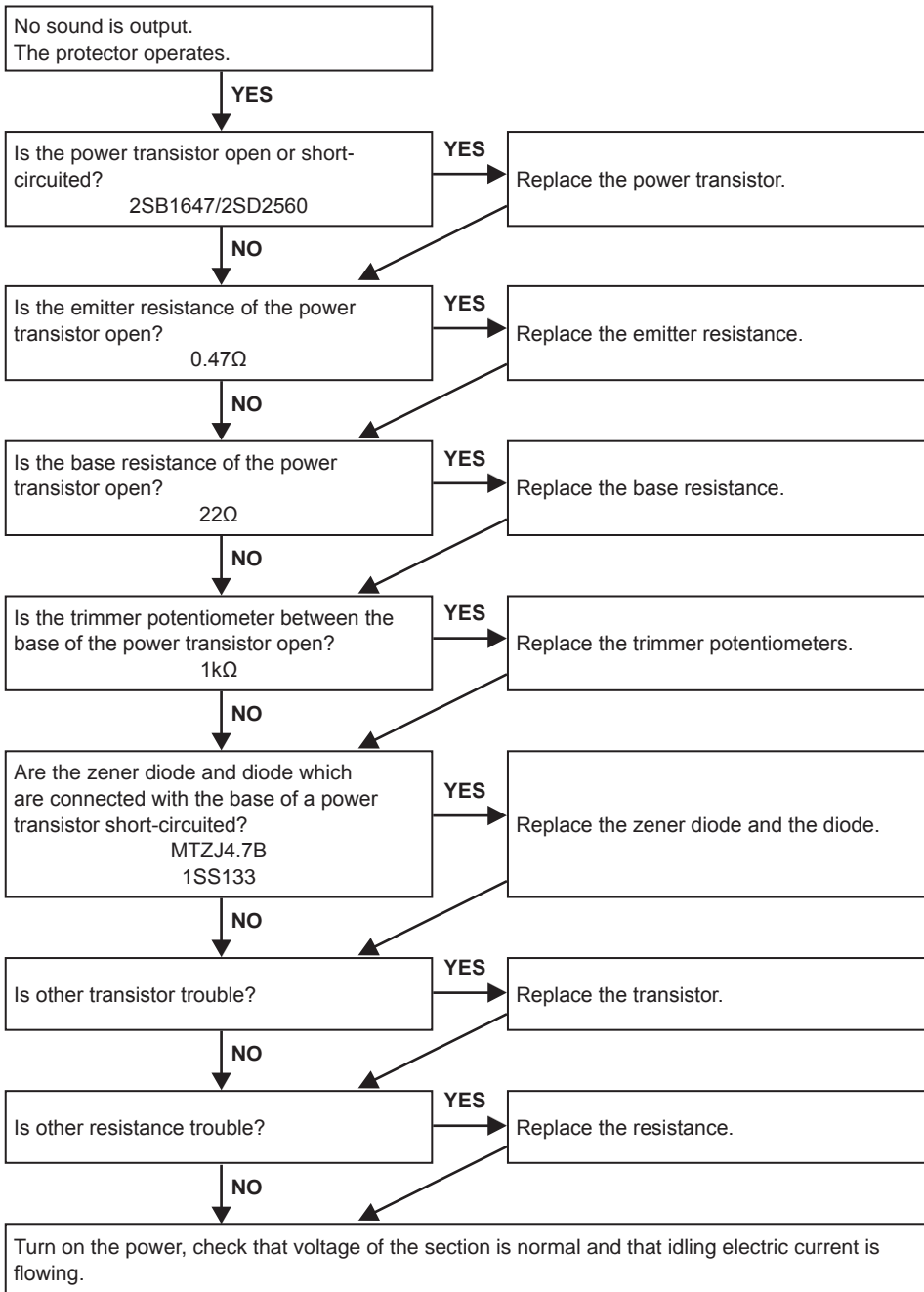


## 4. AUDIO

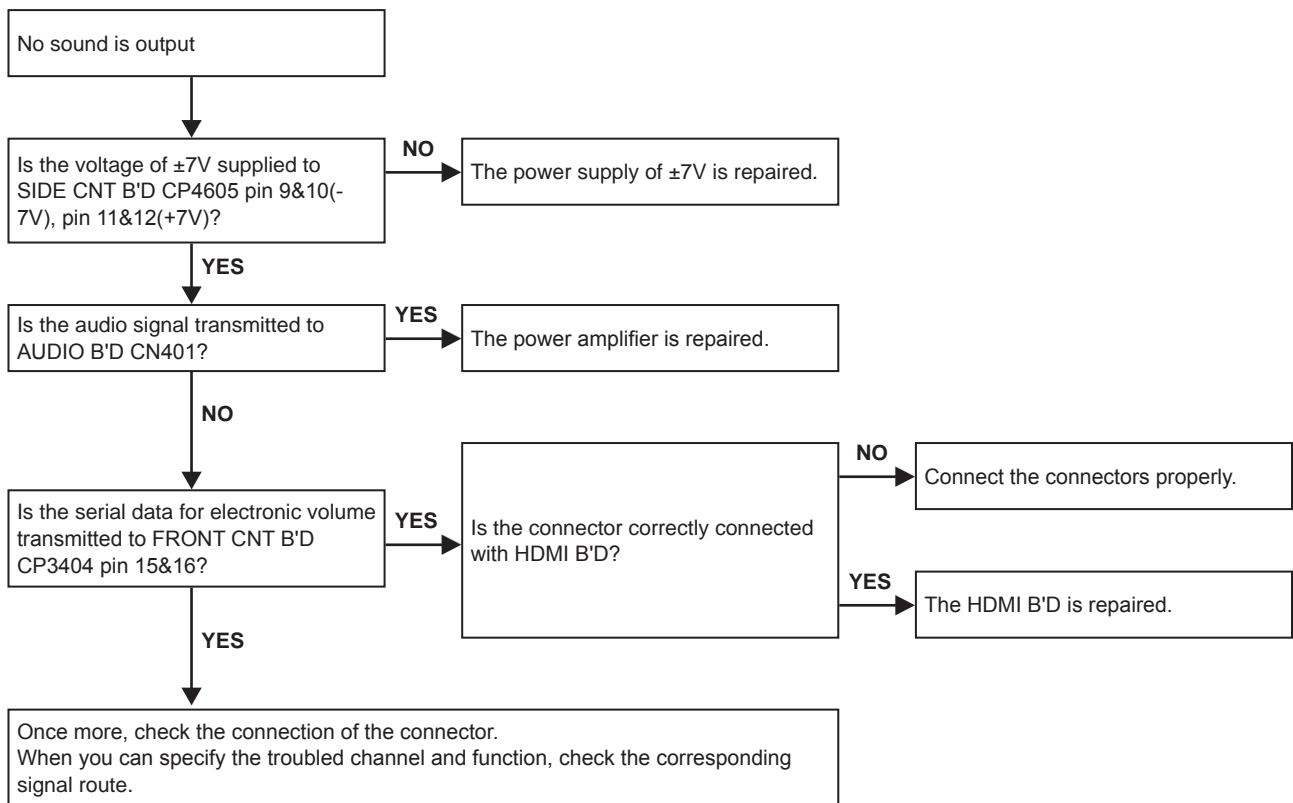
### 4.1. AUDIO CHECK



## 4.2. Power AMP (AMP UNIT)

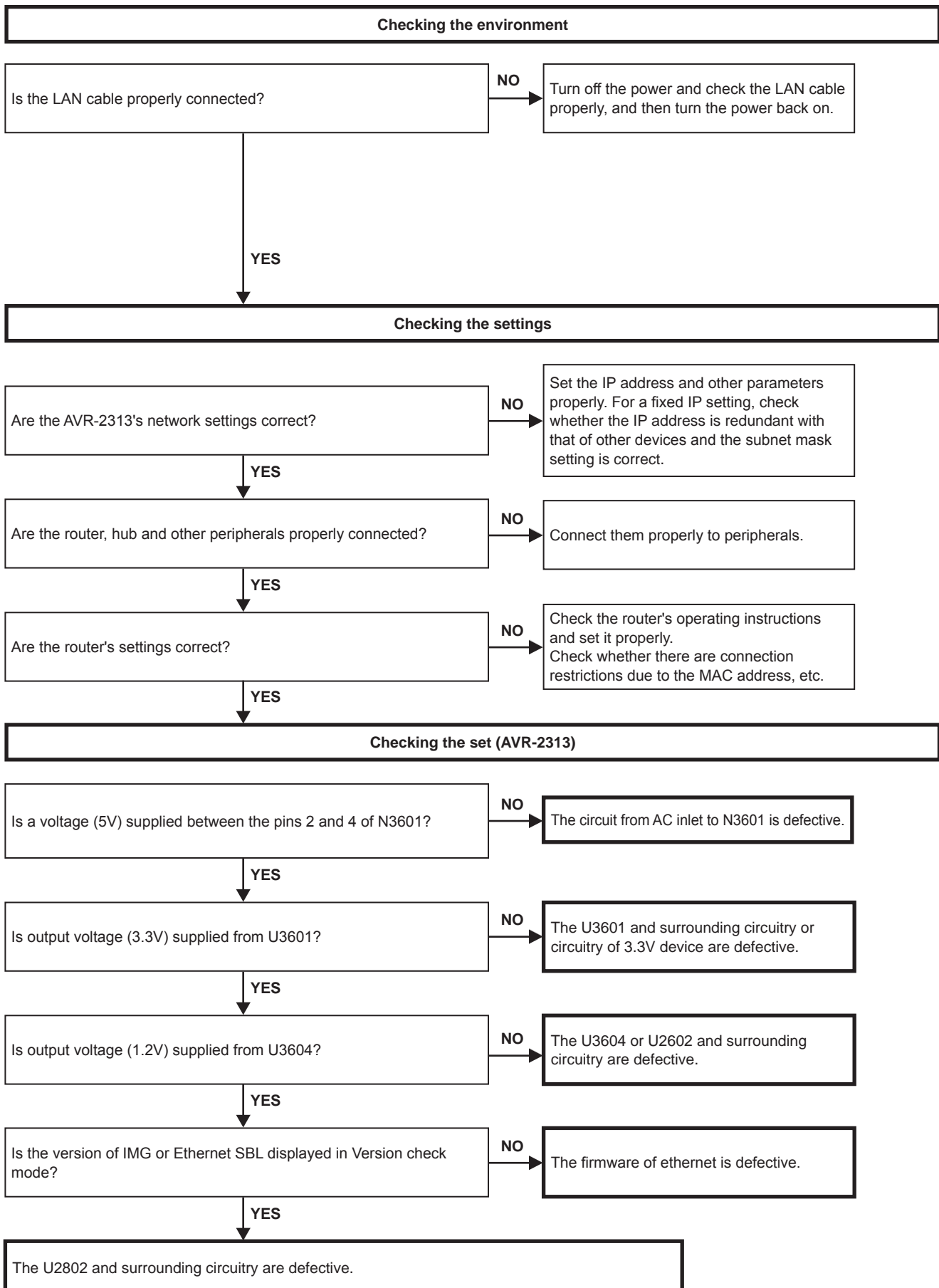


### 4.3. Analog audio

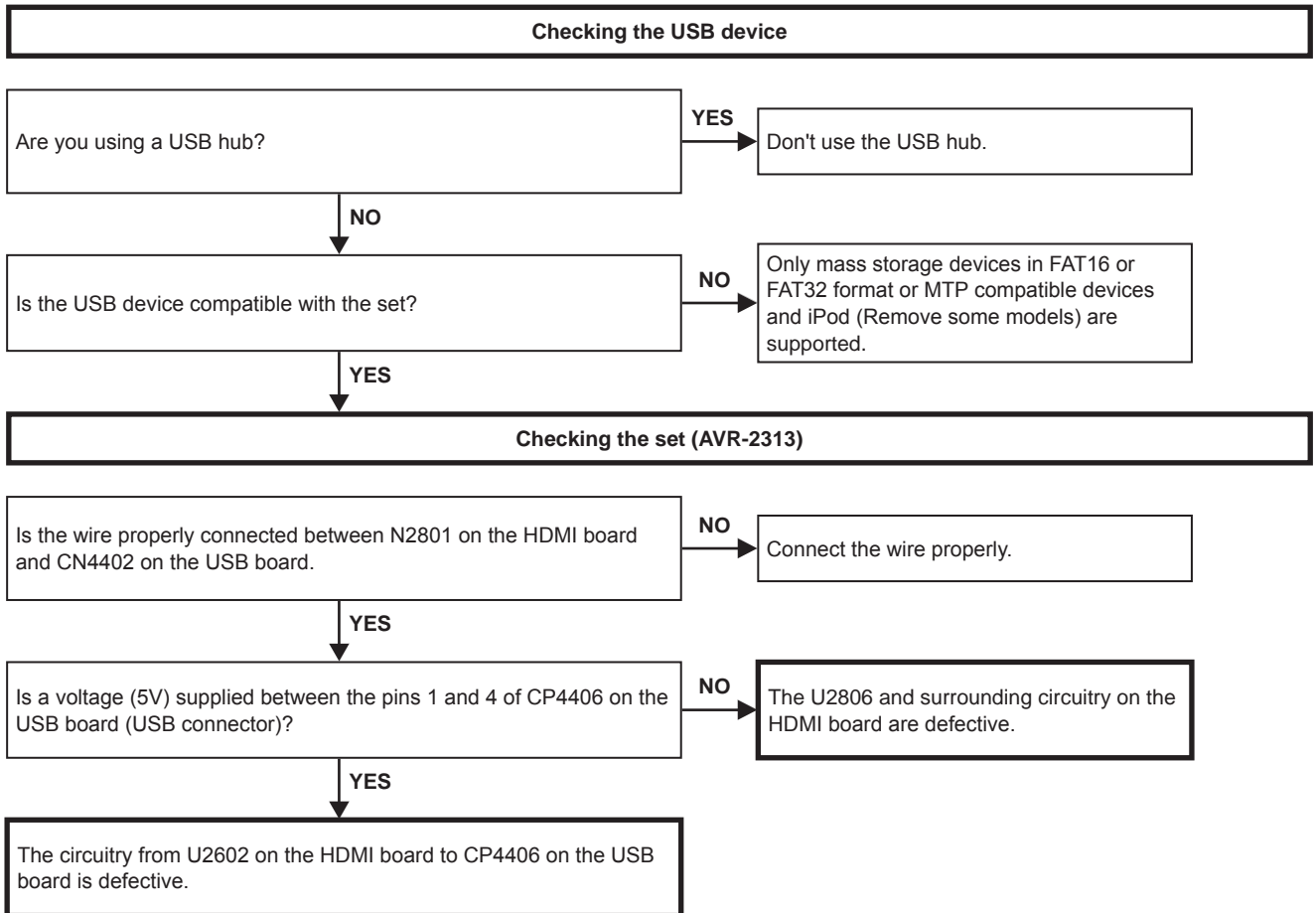


## 5. Network/USB

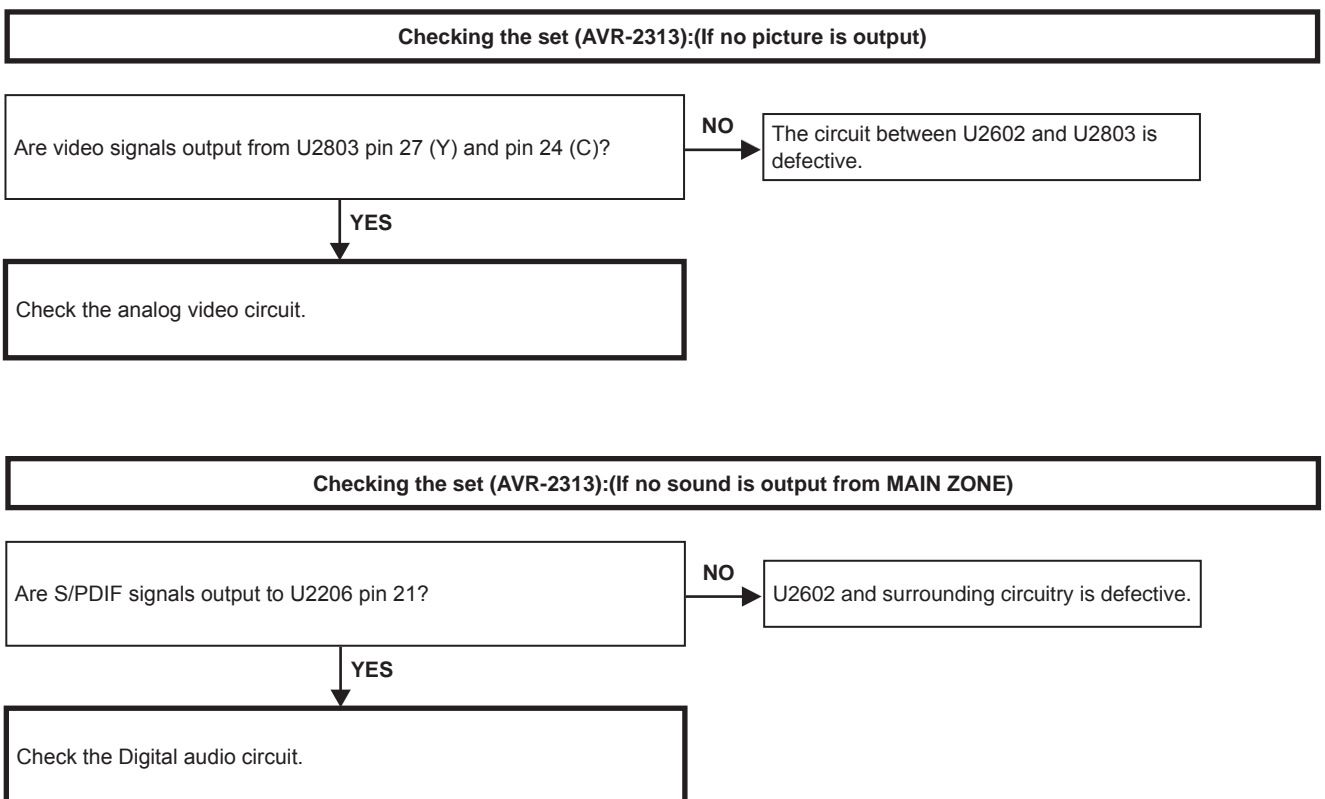
### 5.1. Cannot connect to network



## 5.2. USB device is not recognized



## 5.3. No picture or no sound is output



**Checking the set (AVR-2313):(if no sound is output from ZONE2)**

Are signals input to U2401 pin 12, pin 13, pin 14 and pin 15?

NO

The U2602 and surrounding circuitry are defective.

YES

Are audio signals output from U2401 pin 7 and pin 6?

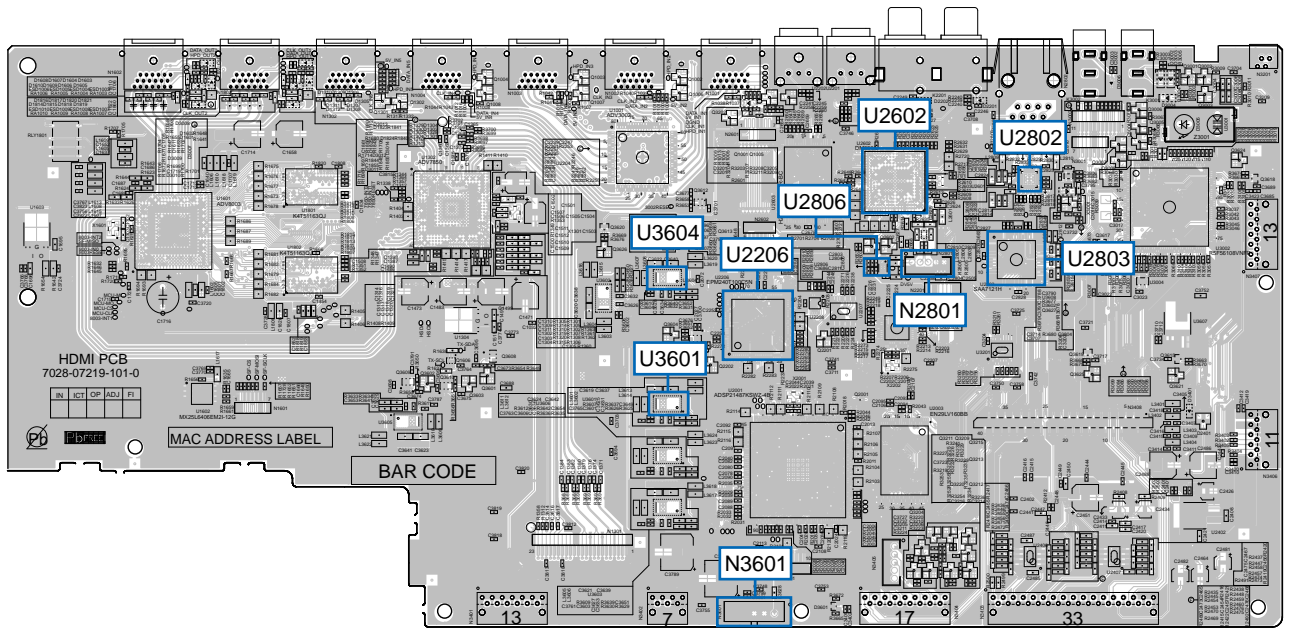
NO

The U2401 and surrounding circuitry are defective.

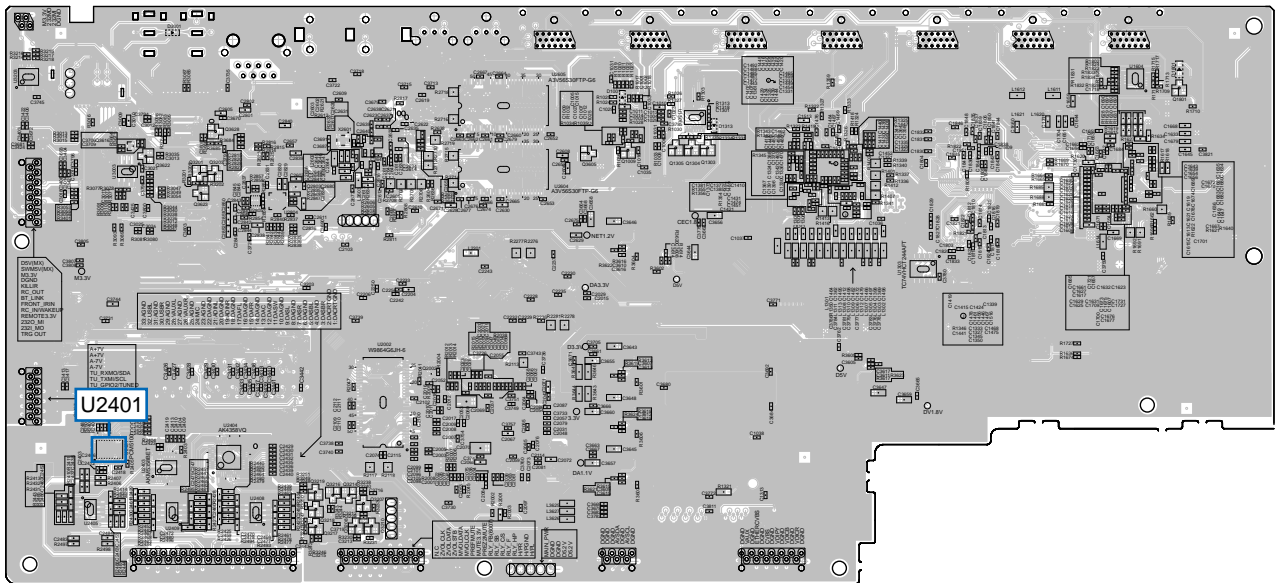
YES

Check "**4.1 AUDIO CHECK**" Procedure.(Refer to 97 page.)

**HDMI test point**

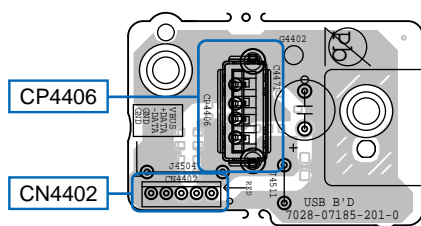


(COMPONENT SIDE)



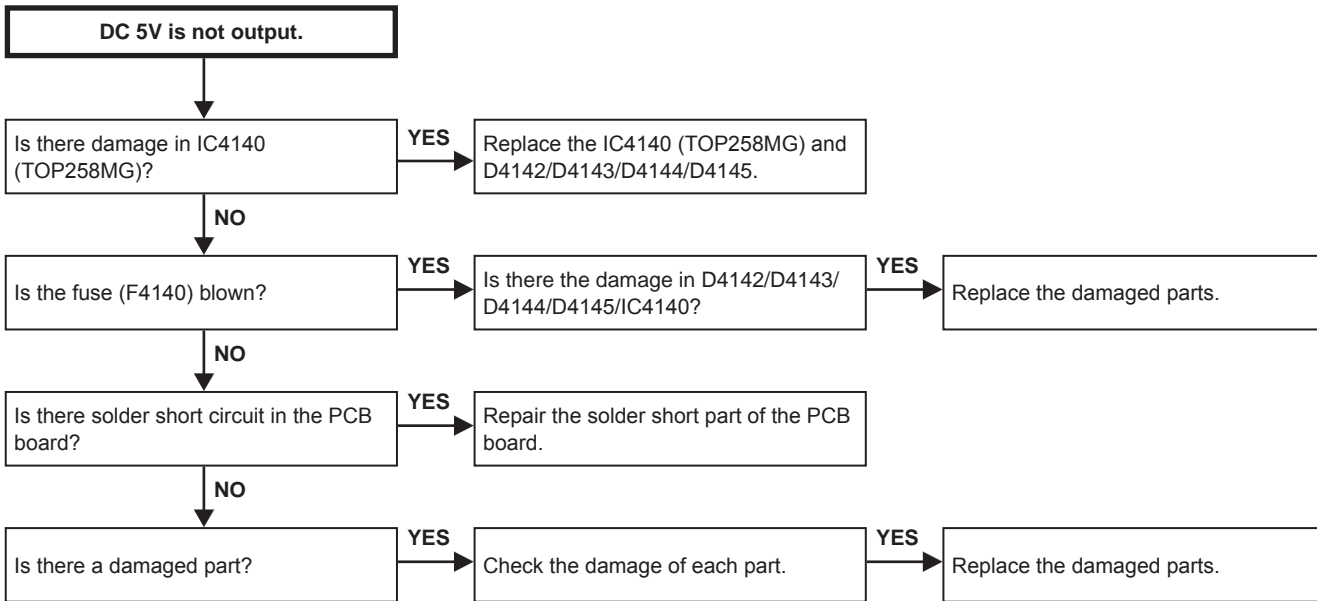
(FOIL SIDE)

**USB test point**



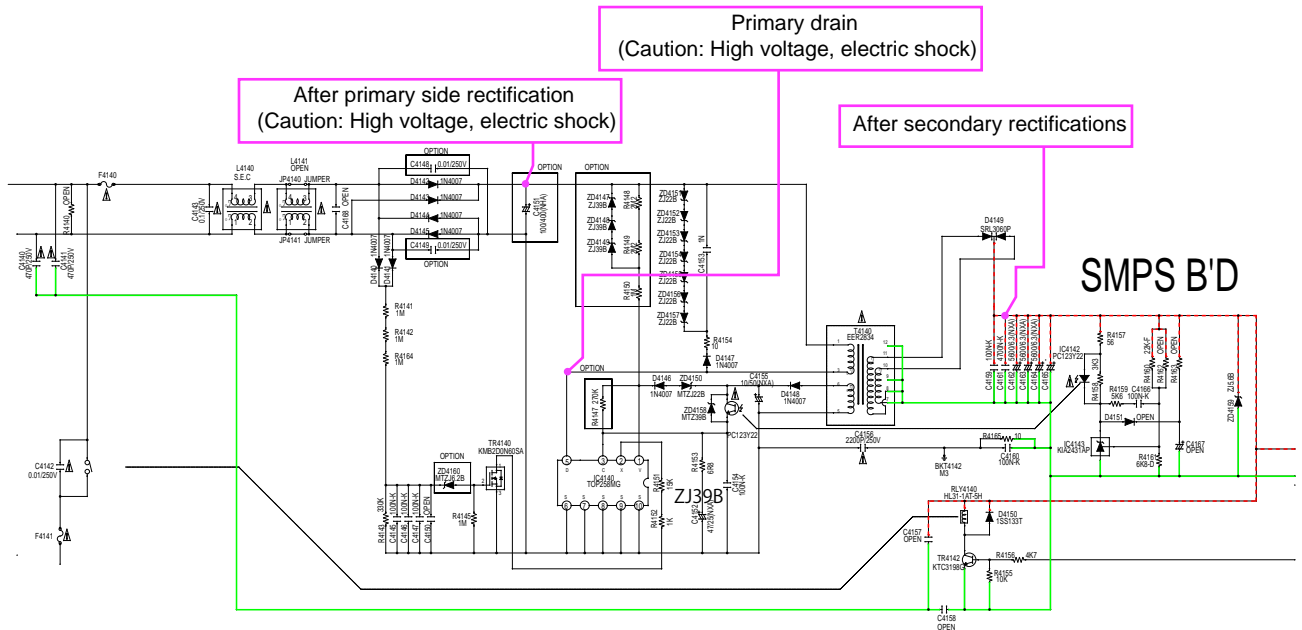
(COMPONENT SIDE)

## 6. SMPS

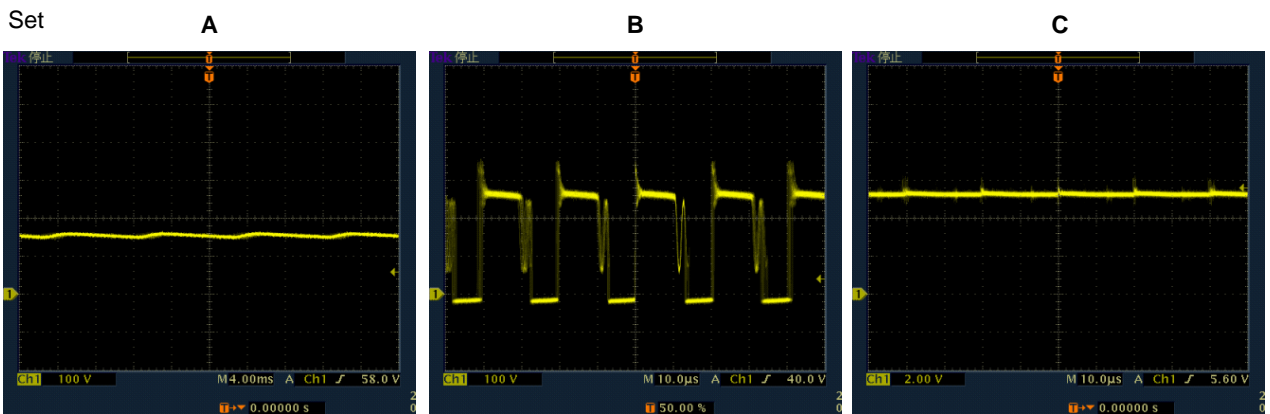
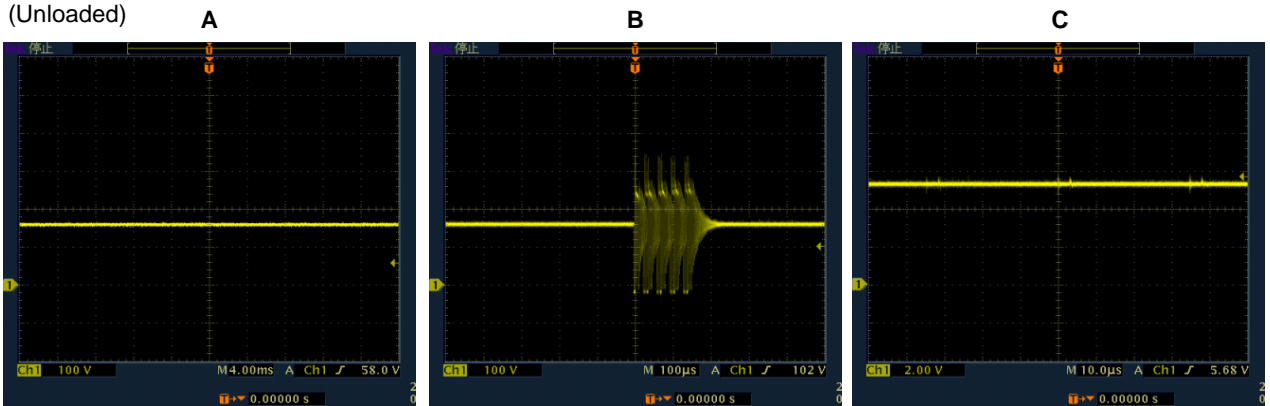




# Operation waveform for each part



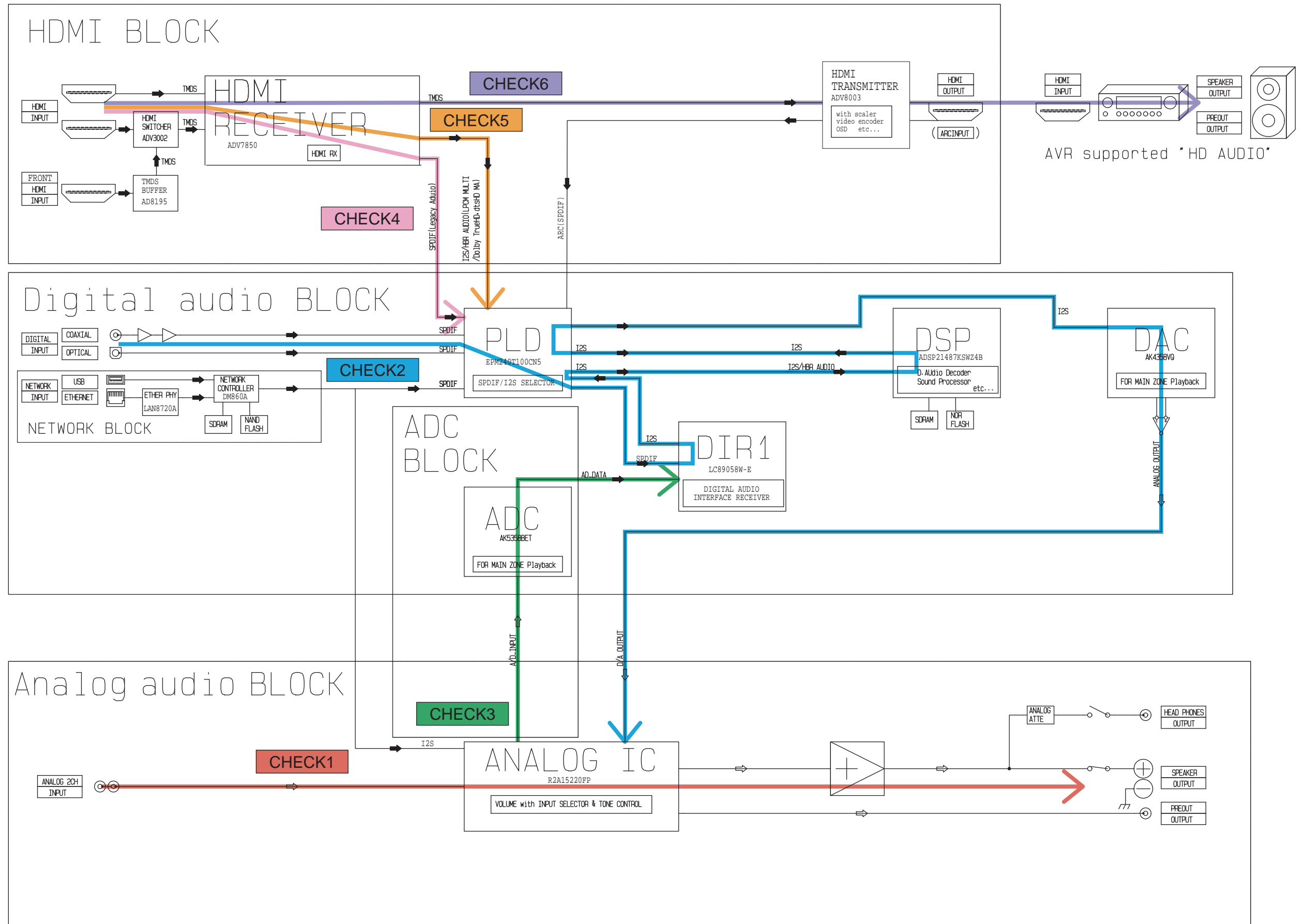
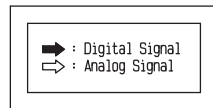
SMPS unit  
(Unloaded)





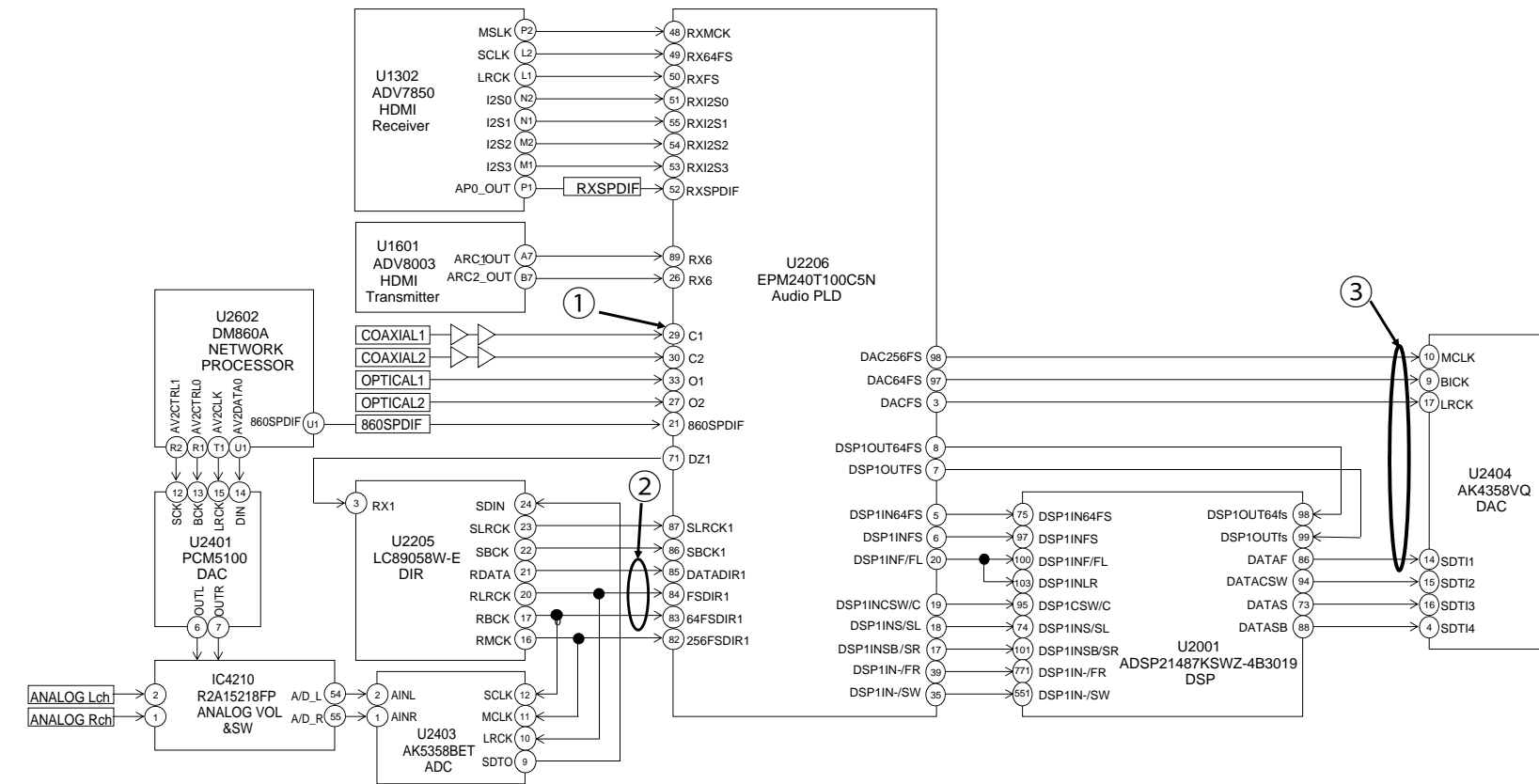
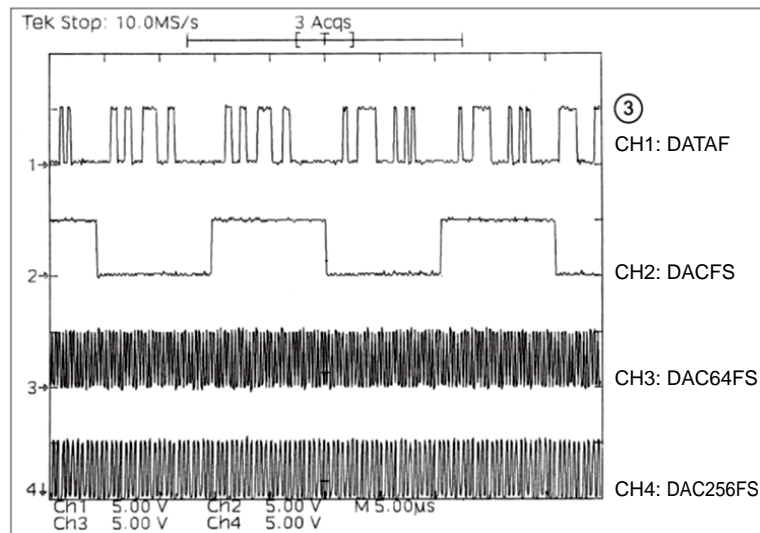
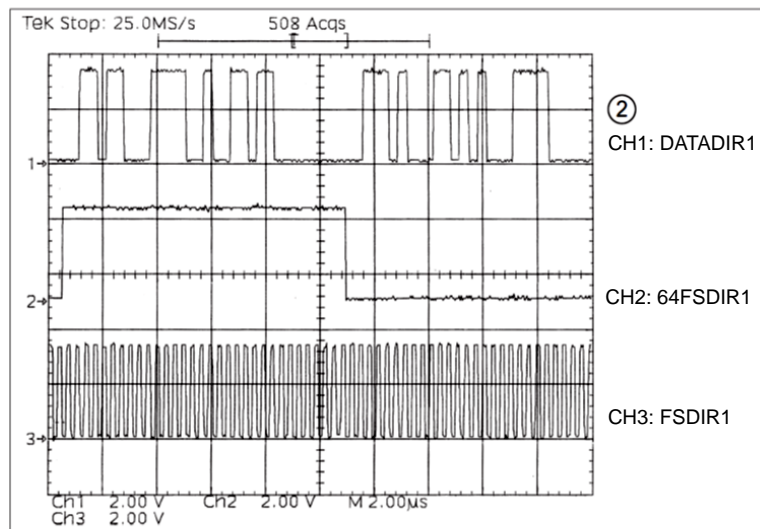
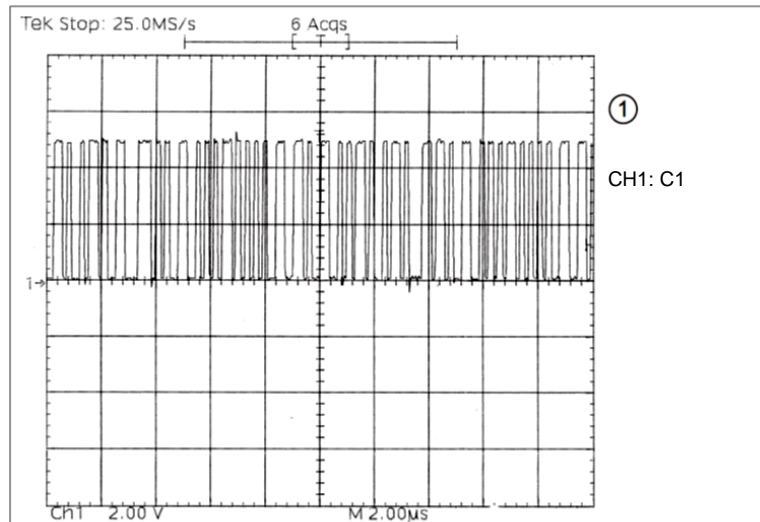
# Audio Check PATH

Refer to troubleshooting "4.1. AUDIO CHECK"(97 page).

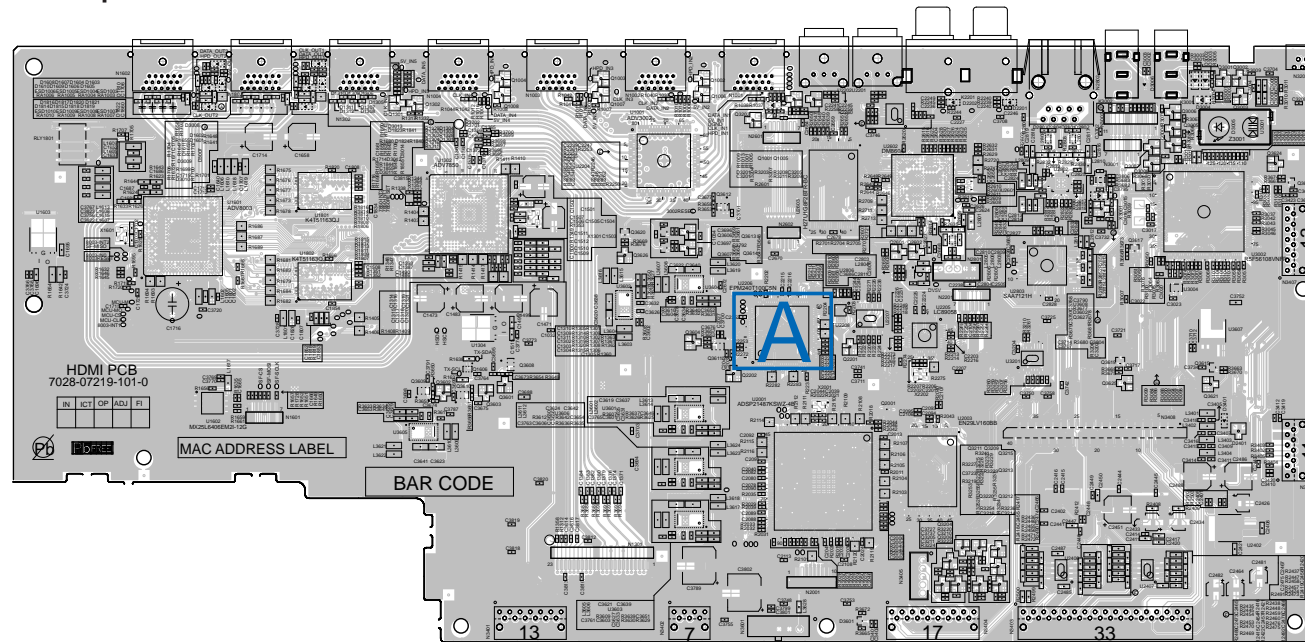


# CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK

## WAVE FORM

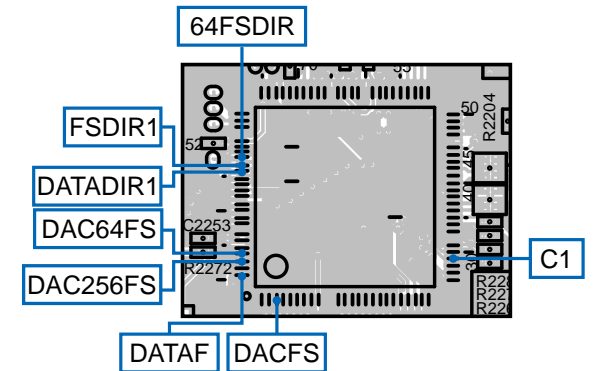


## Test point



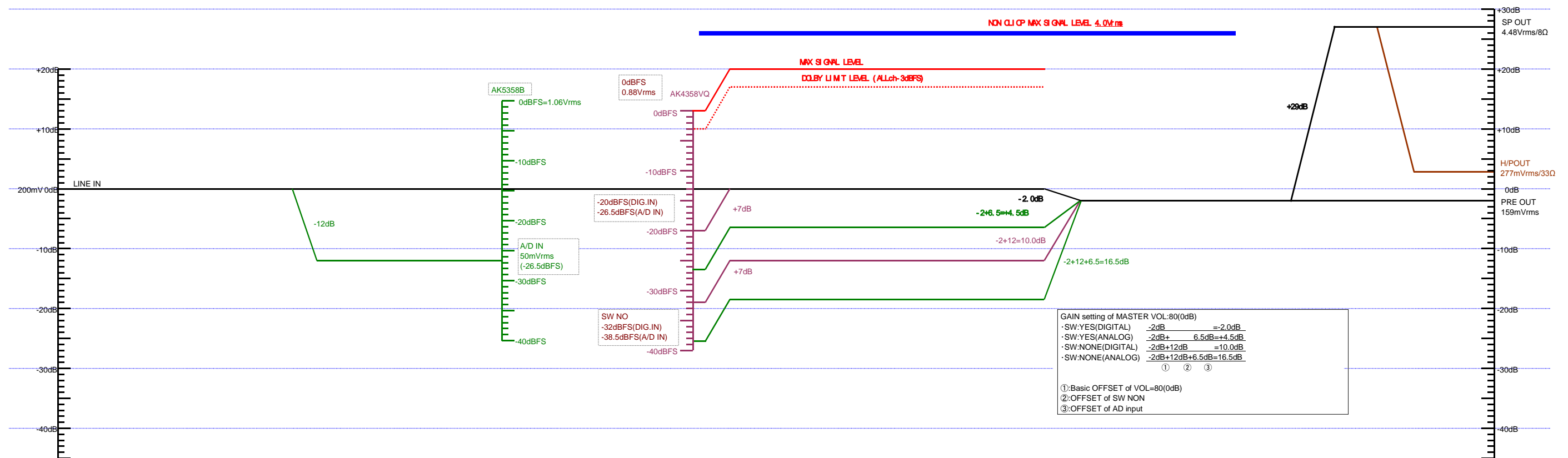
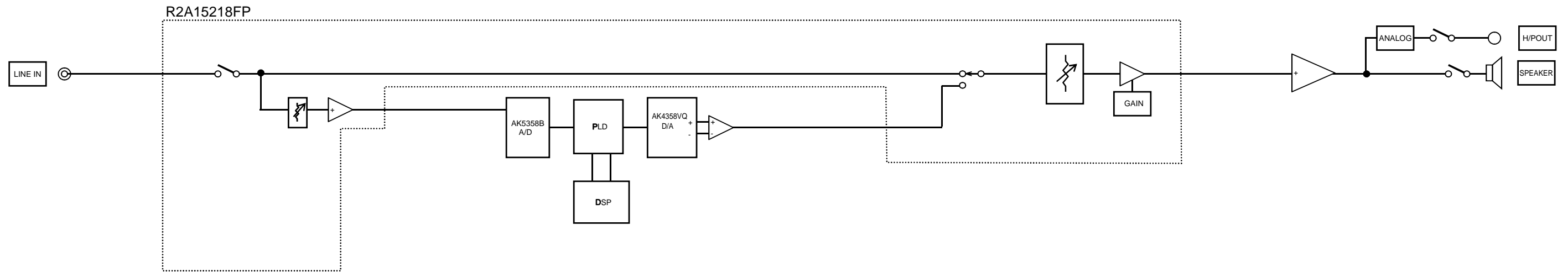
HDMI (COMPONENT SIDE)

## Detail A

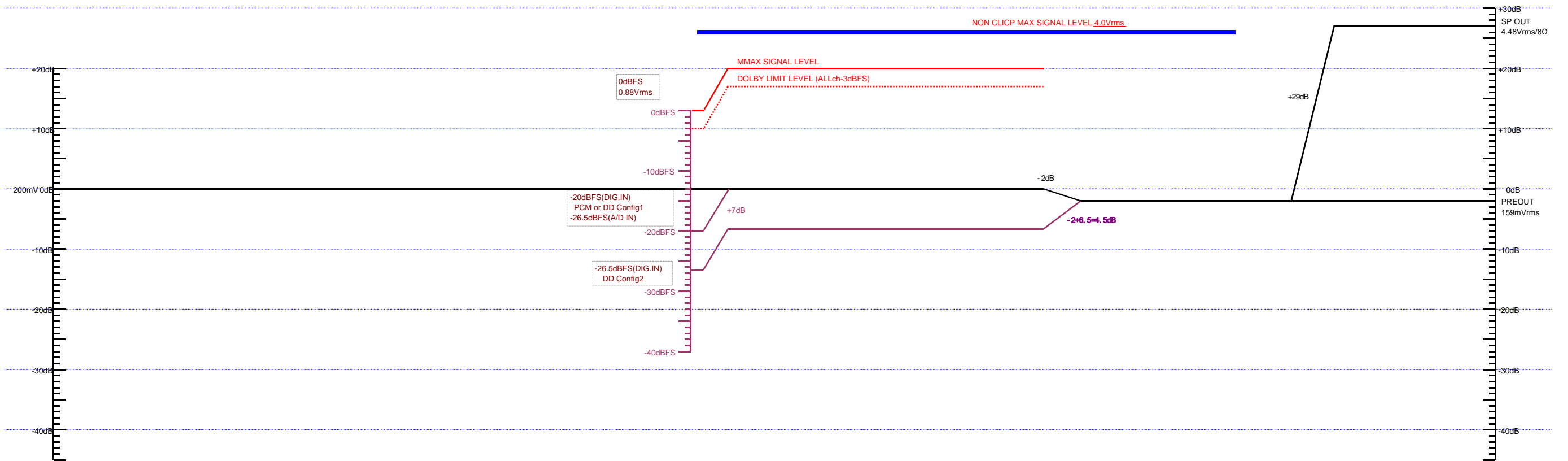
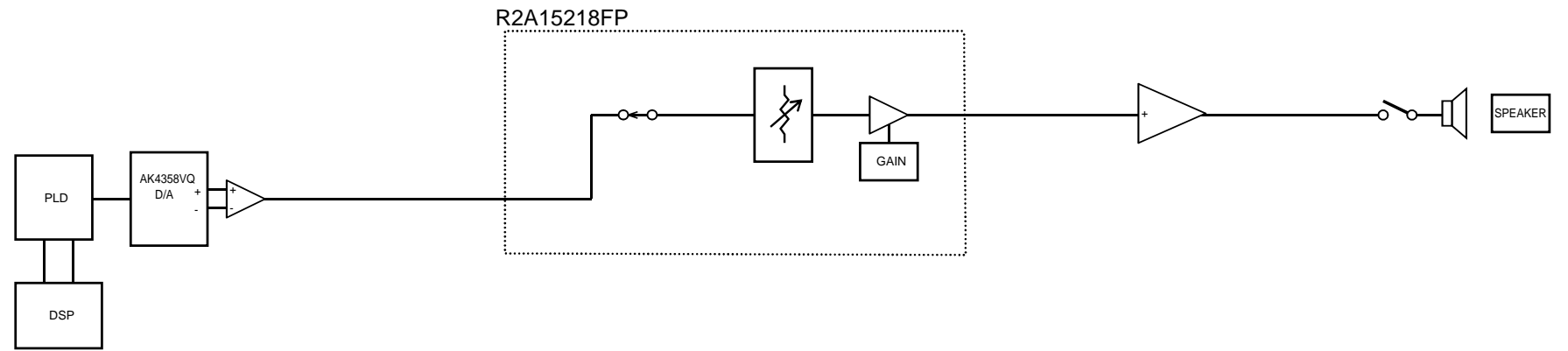


# LEVEL DIAGRAM

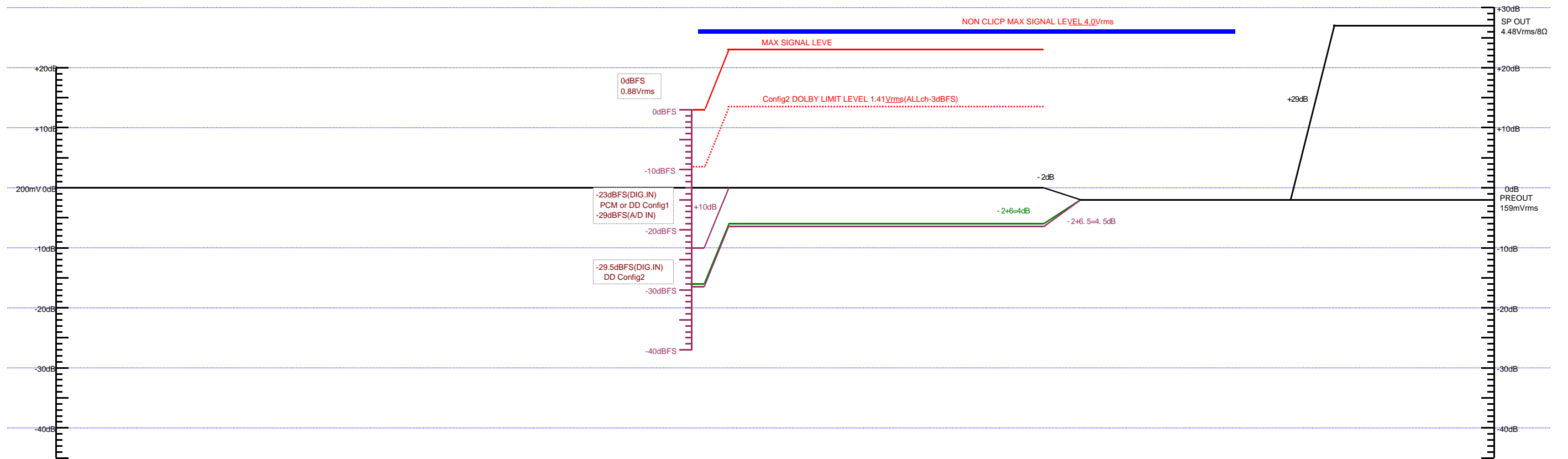
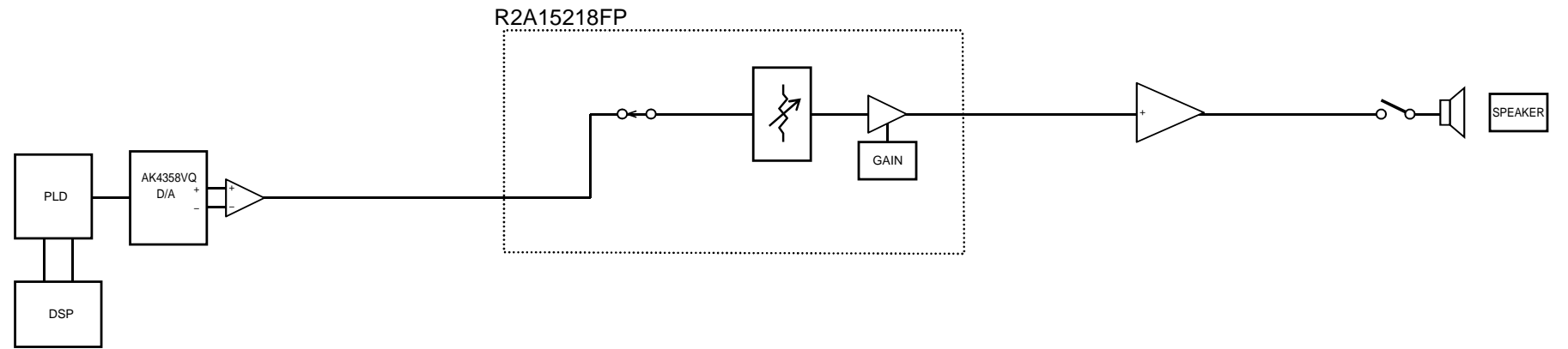
## AVR2313 LEVEL DIAGRAM FRONT ch



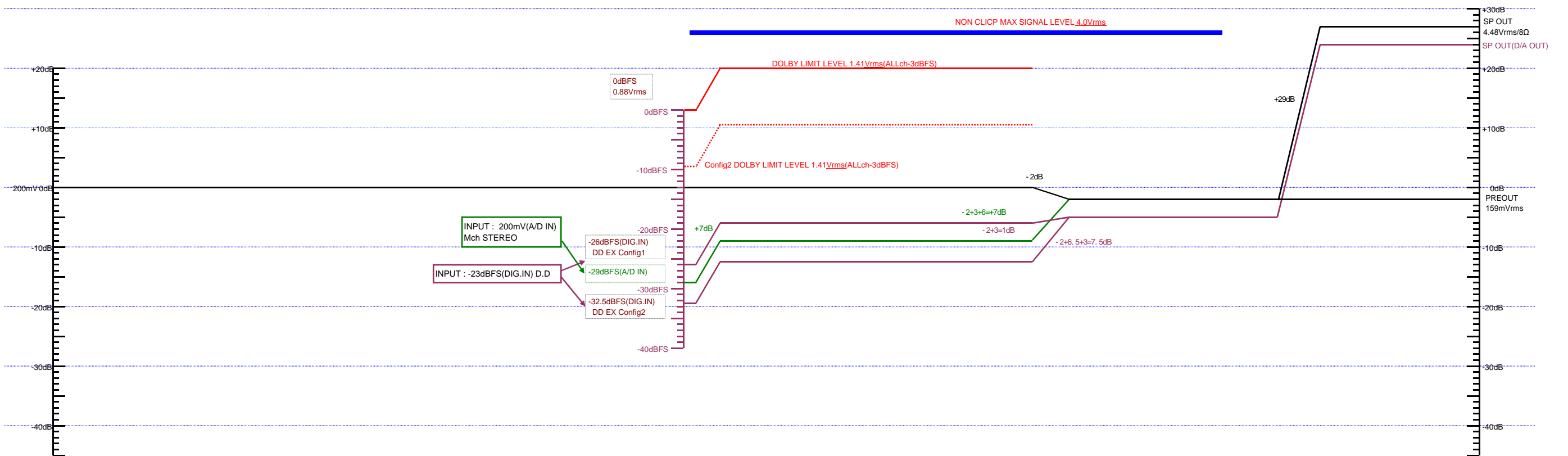
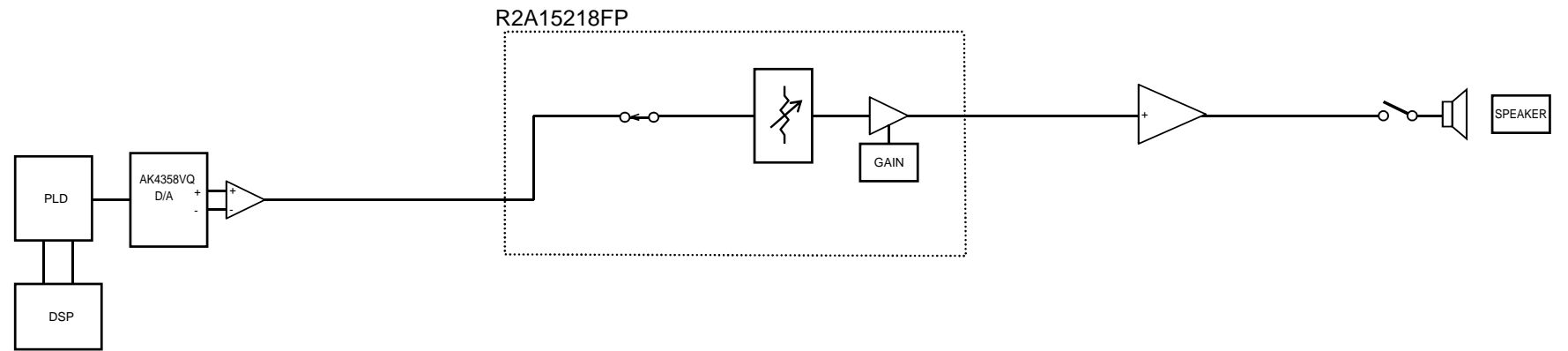
**AVR2313  
LEVEL DIAGRAM  
CENTER ch**



**AVR2313**  
**LEVEL DIAGRAM**  
**SURROUND ch**

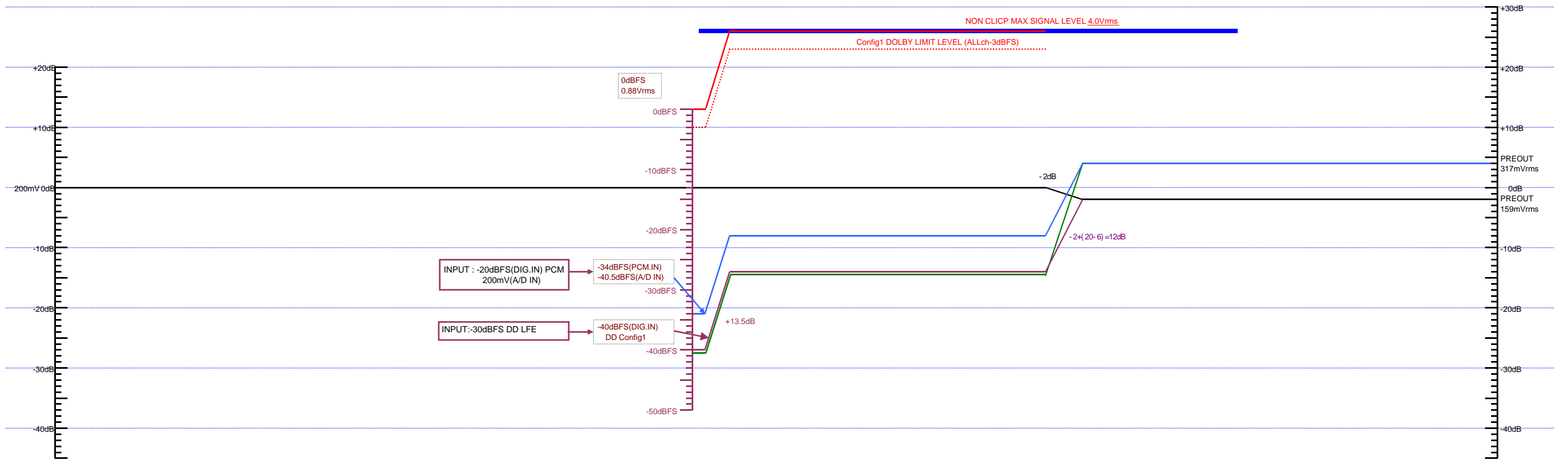
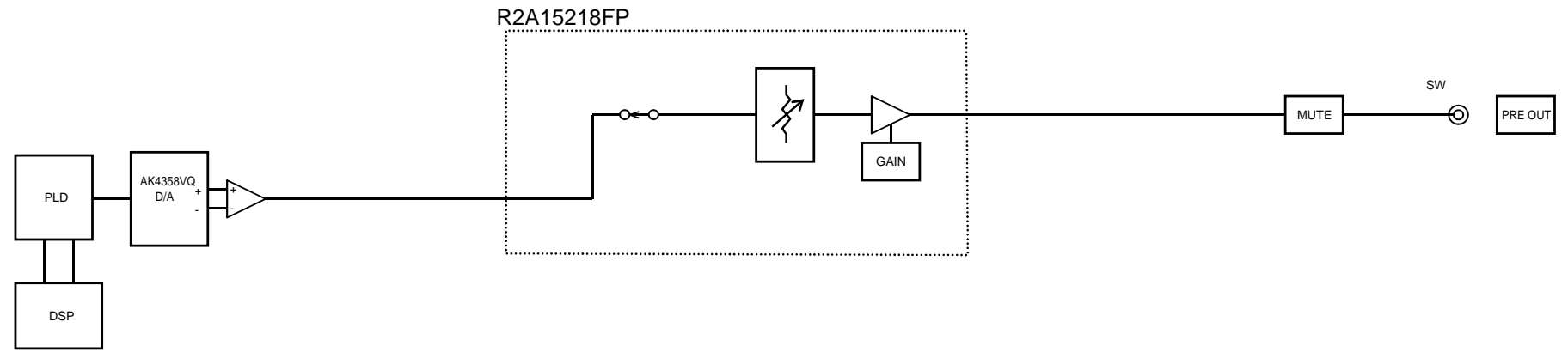


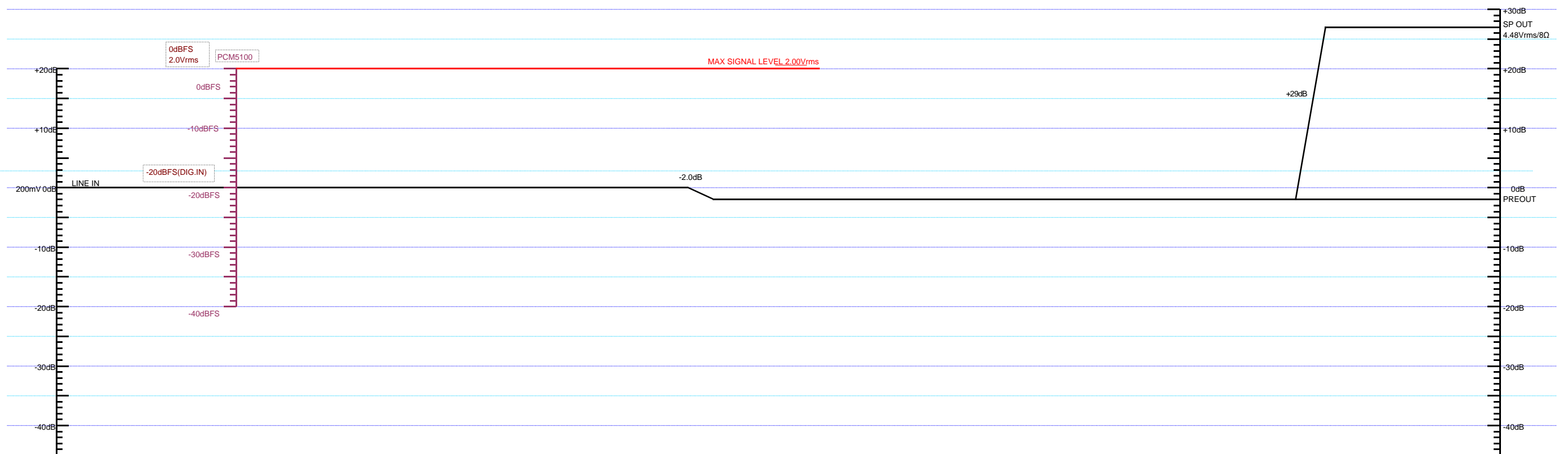
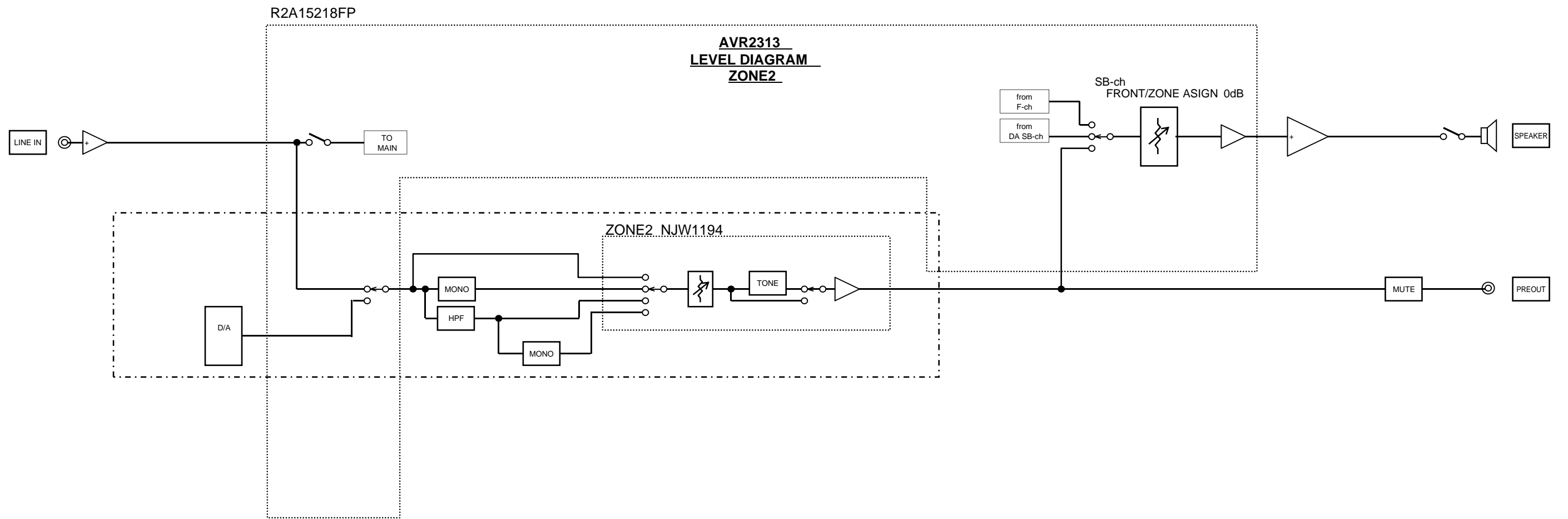
**AVR2313**  
**LEVEL DIAGRAM**  
**SURR.BACK ch**





**AVR2313**  
**LEVEL DIAGRAM**  
**SUBWOOFER ch**





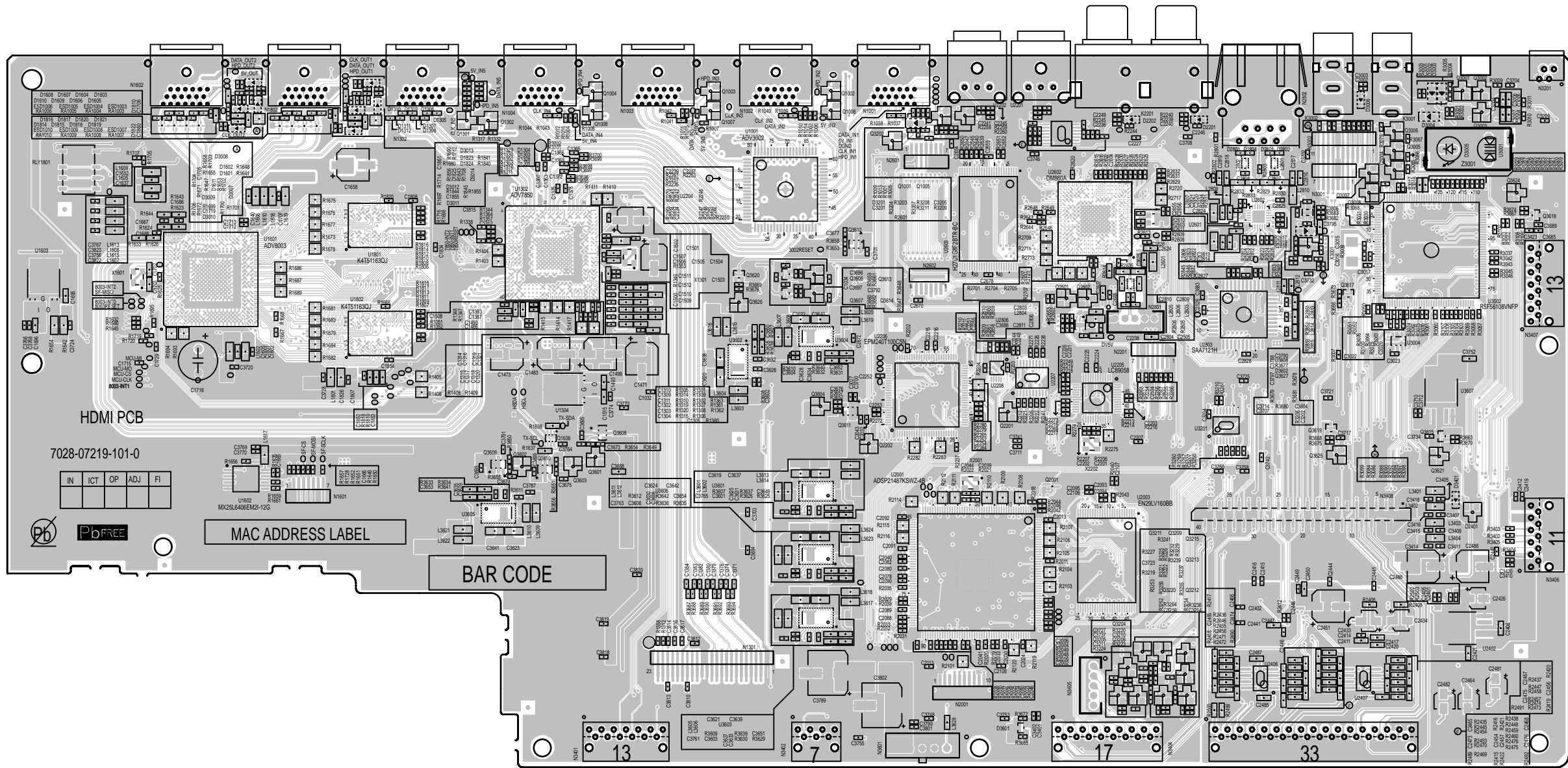
PRINTED WIRING BOARDS



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

HDMI  
(COMPONENT SIDE)

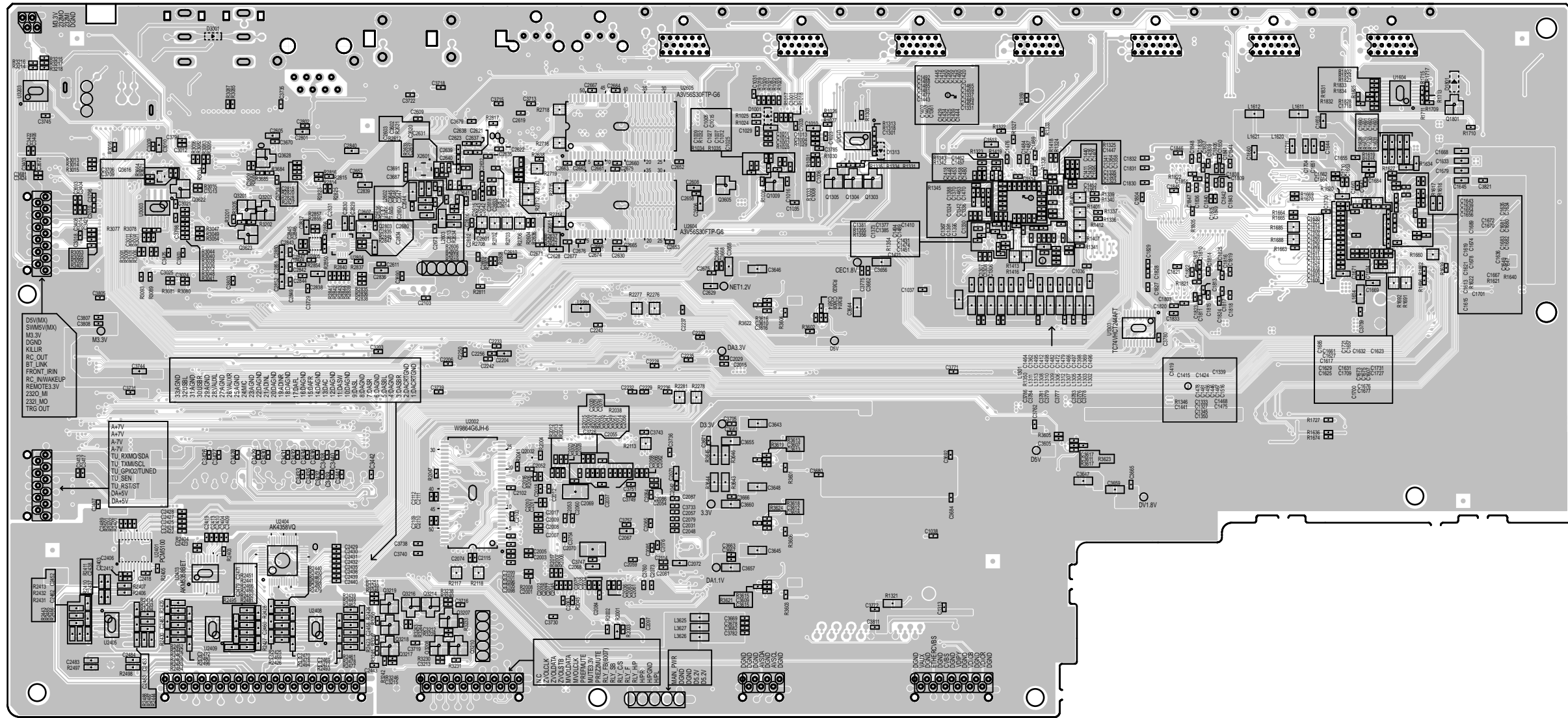
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M



**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

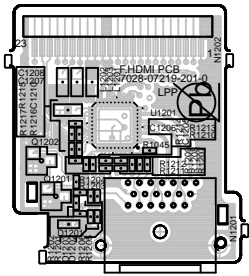
HDMI  
(FOIL SIDE)



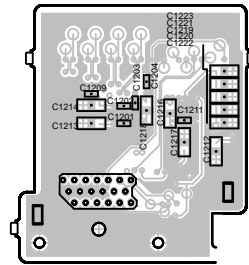
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

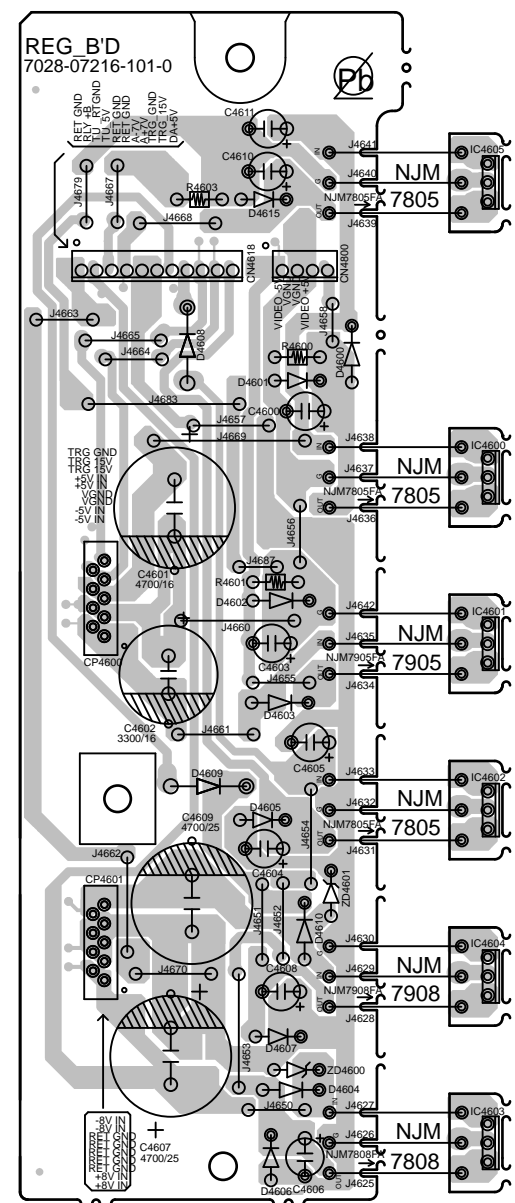
**FRONT HDMI  
(COMPONENT SIDE)**



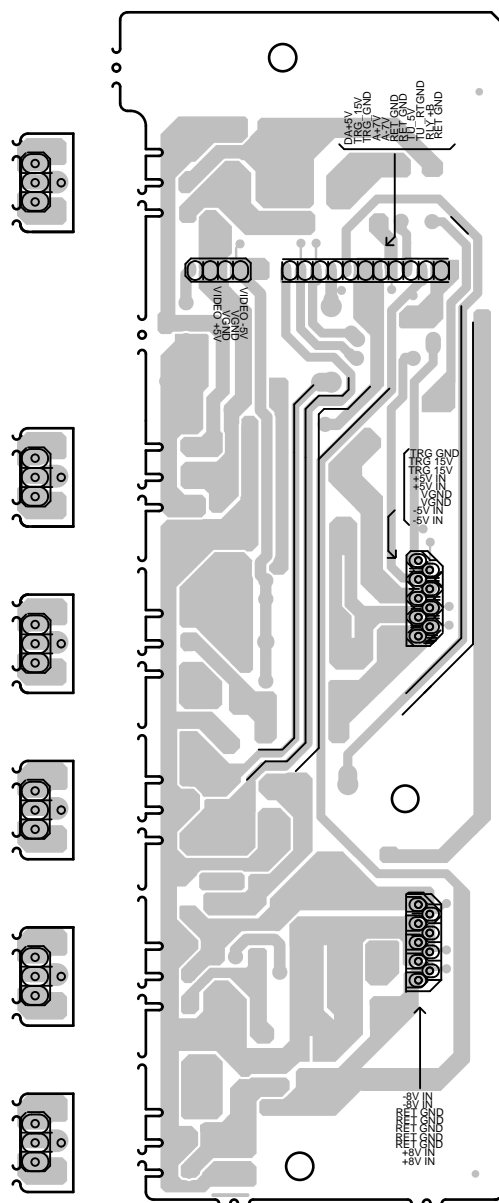
**FRONT HDMI  
(FOIL SIDE)**



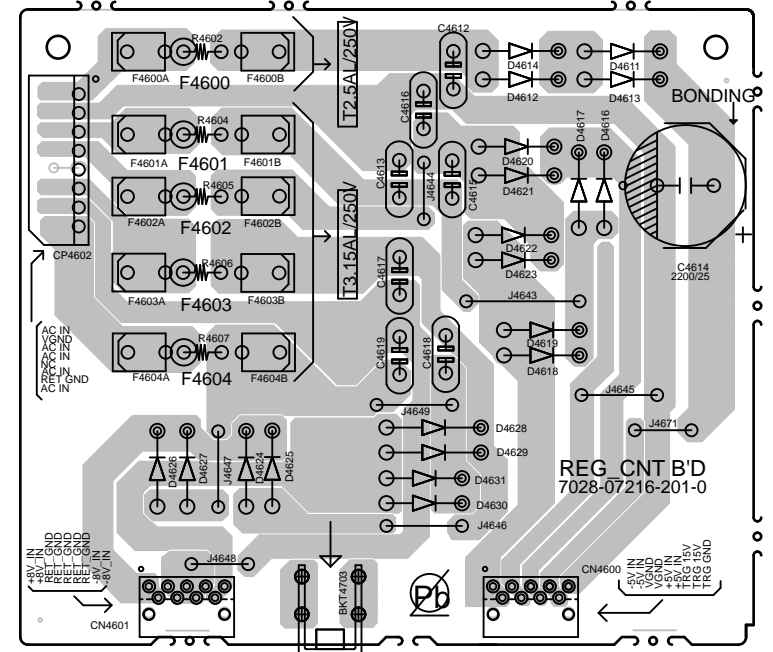
**REG  
(COMPONENT SIDE)**



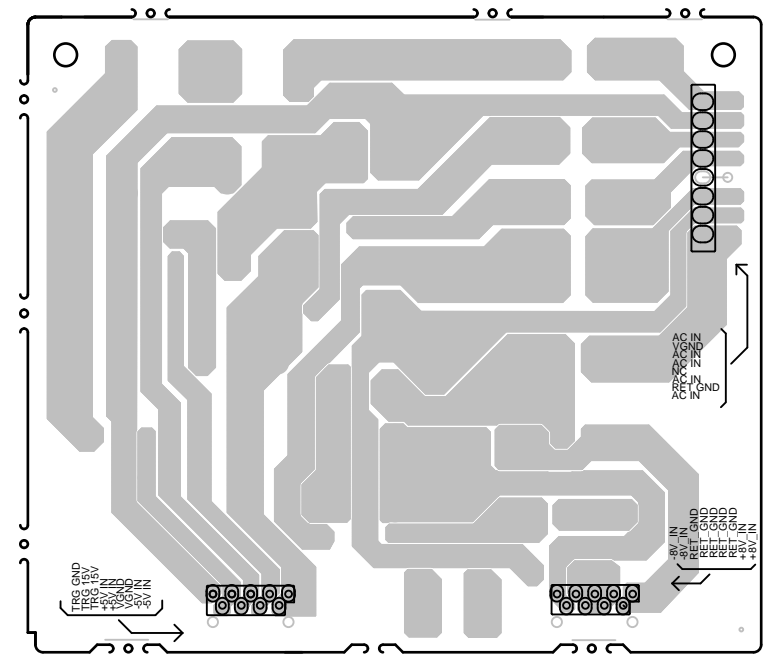
**REG  
(FOIL SIDE)**



**REG CNT  
(COMPONENT SIDE)**



**REG CNT  
(FOIL SIDE)**

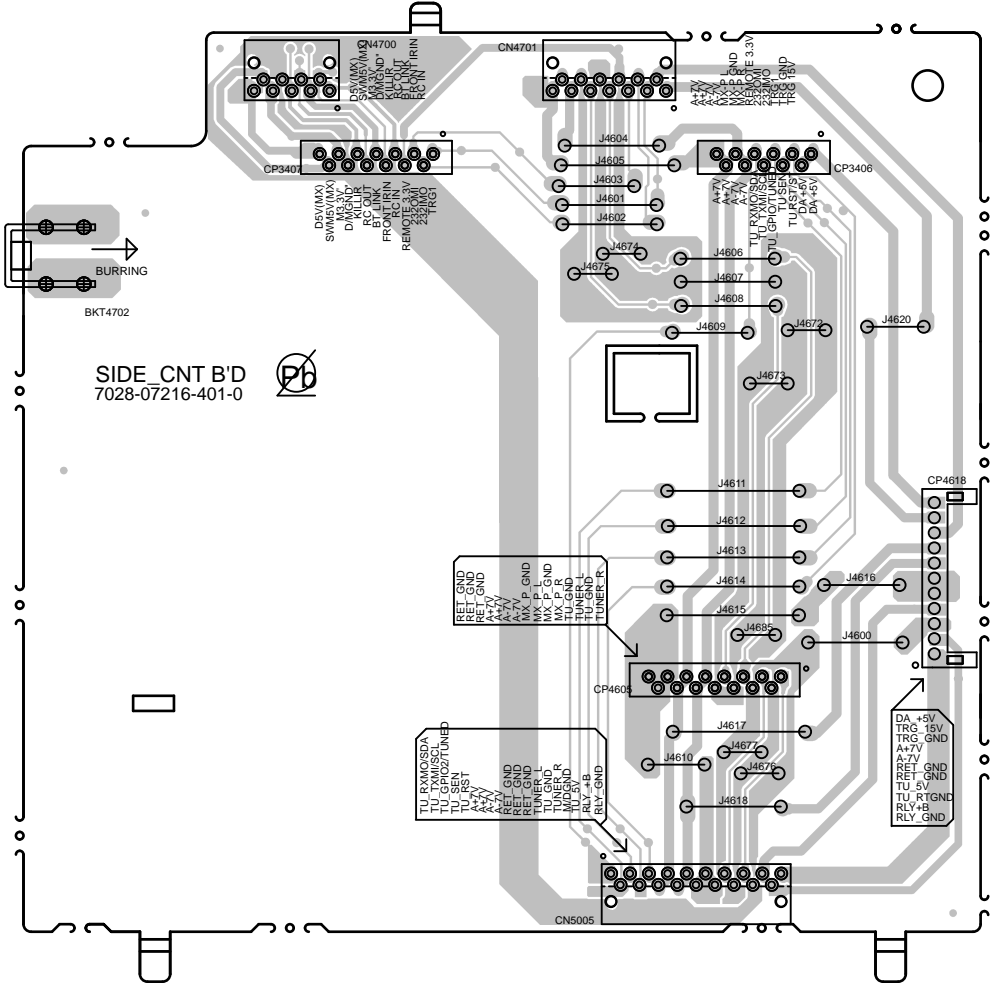


**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

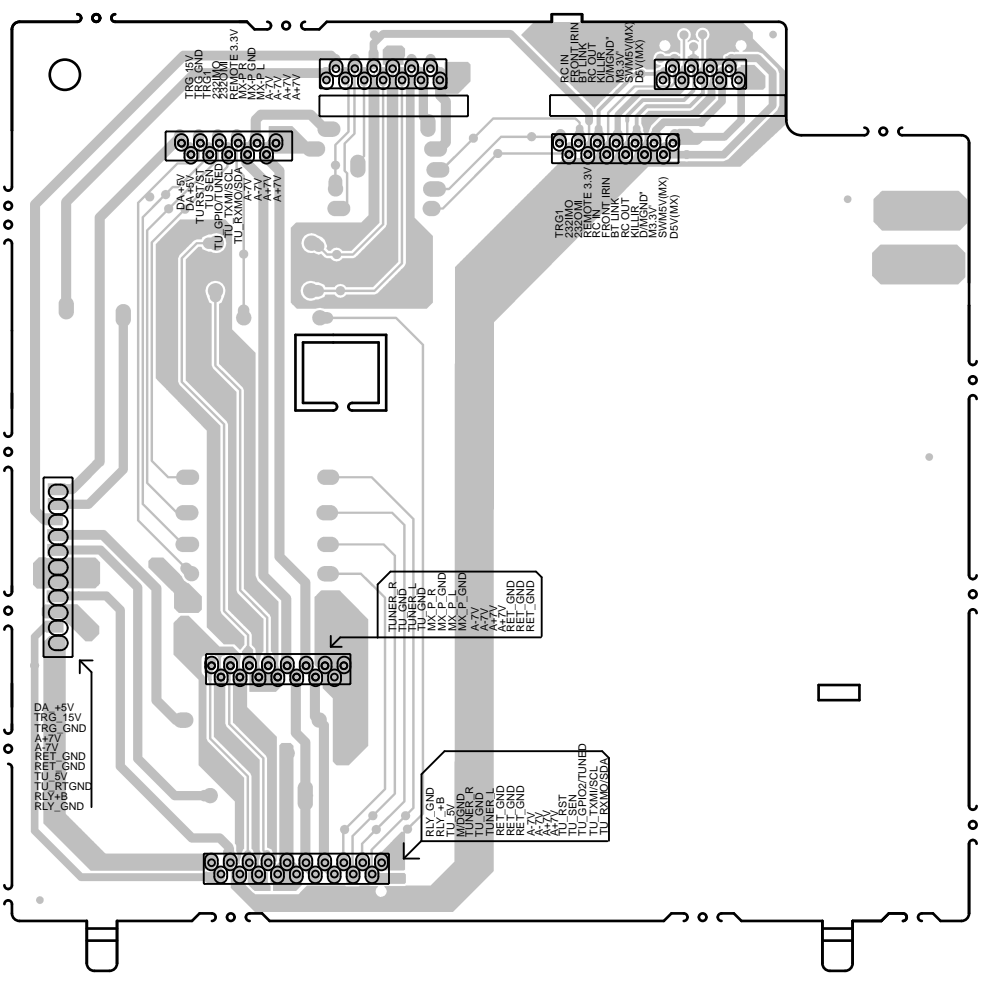
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

A  
B  
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**SIDE CNT  
(COMPONENT SIDE)**



**SIDE CNT  
(FOIL SIDE)**

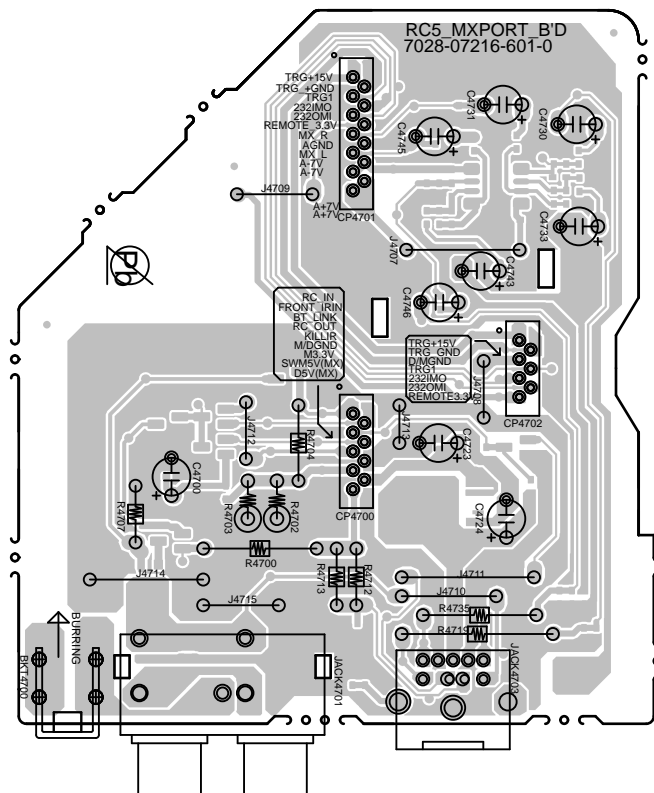


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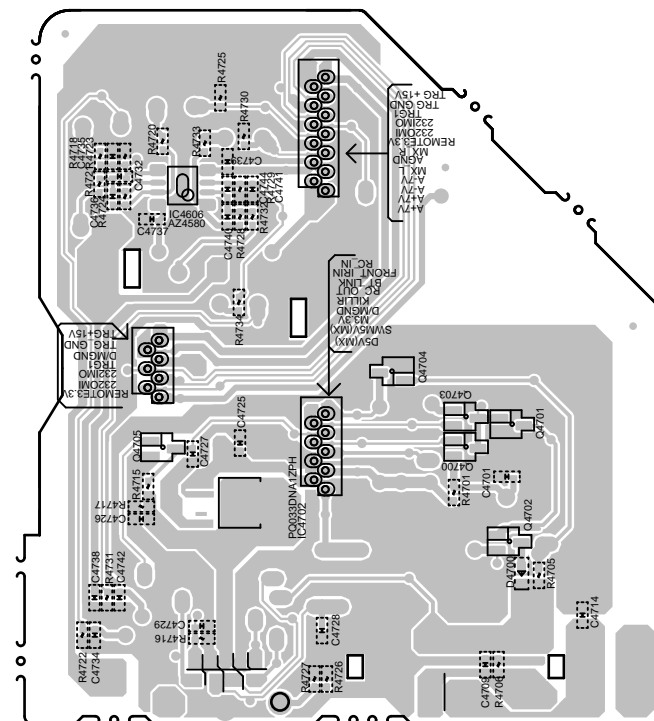
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

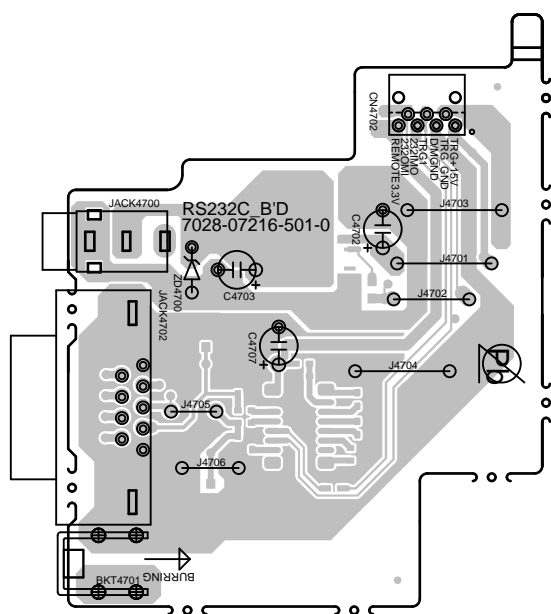
RC5\_MCPORT  
(COMPONENT SIDE)



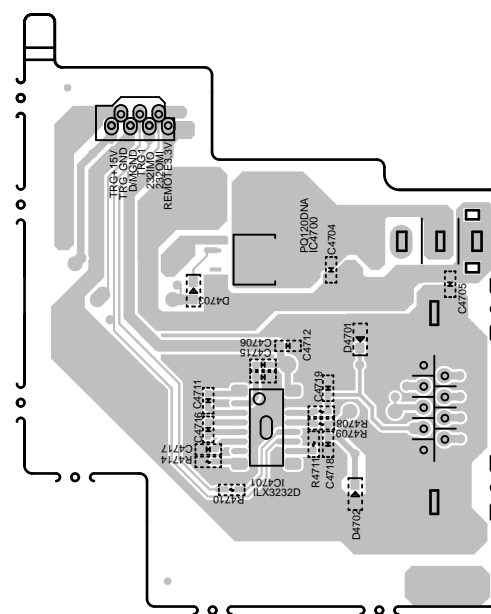
RC5\_MCPORT  
(FOIL SIDE)



RS232C  
(COMPONENT SIDE)



RS232C  
(FOIL SIDE)

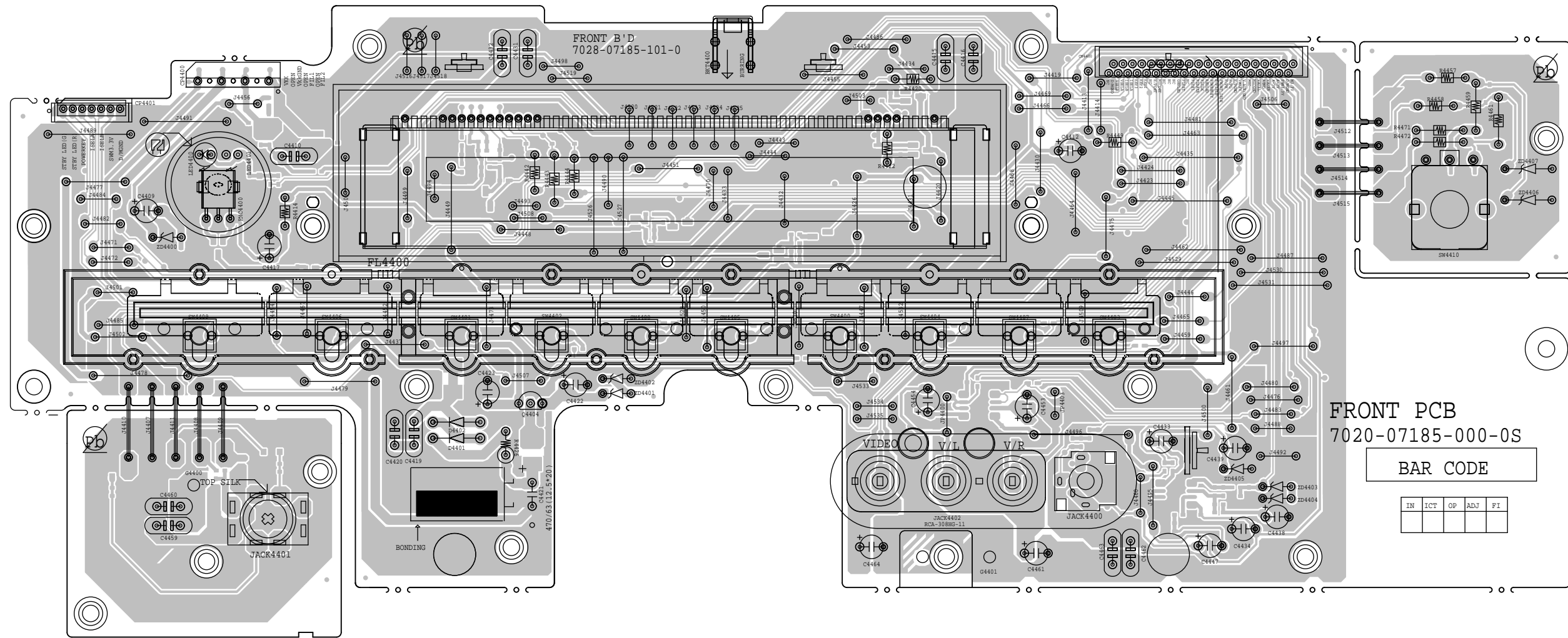


**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

A  
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**FRONT  
(COMPONENT SIDE)**



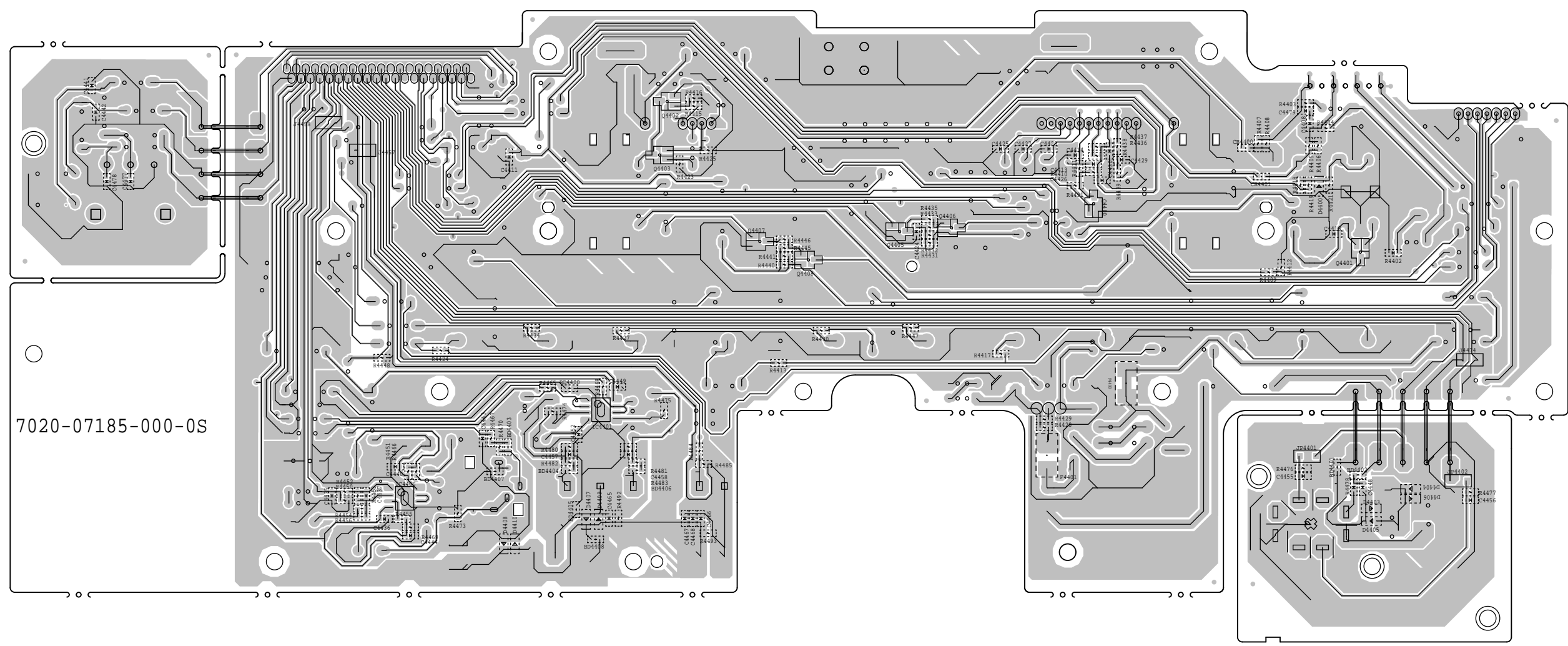
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

**FRONT  
(FOIL SIDE)**



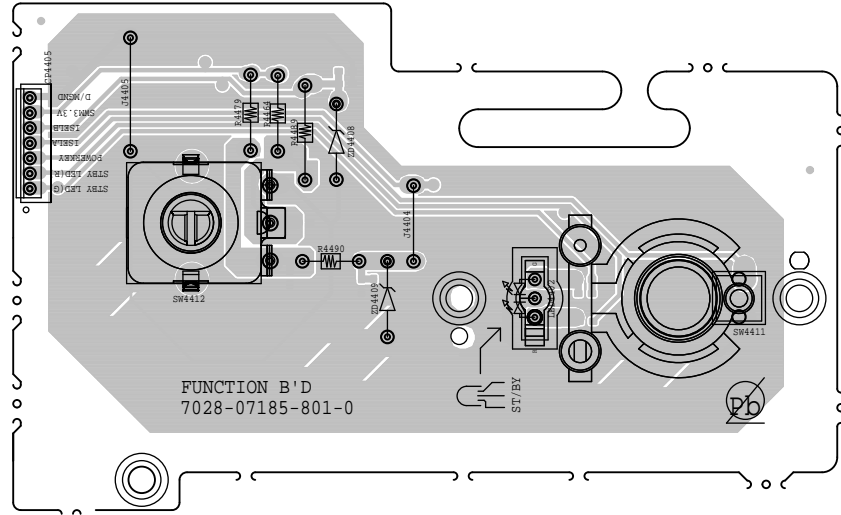
7020-07185-000-0S

A  
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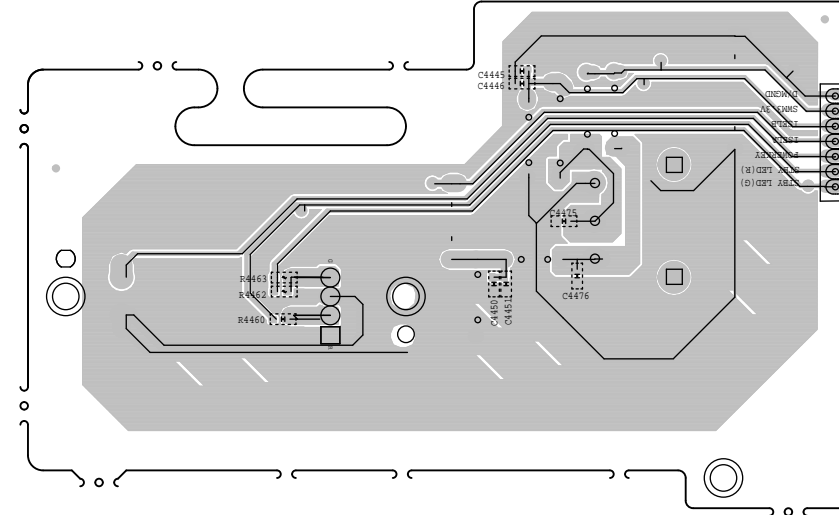
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

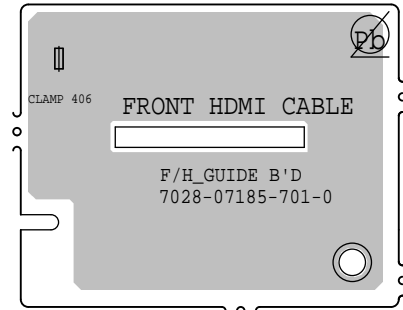
**FUNCTION  
(COMPONENT SIDE)**



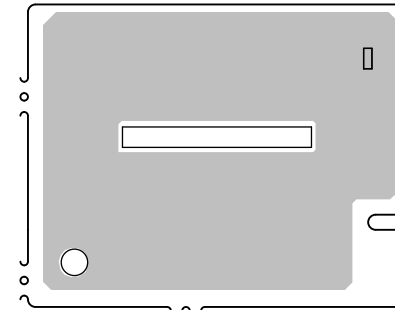
**FUNCTION  
(FOIL SIDE)**



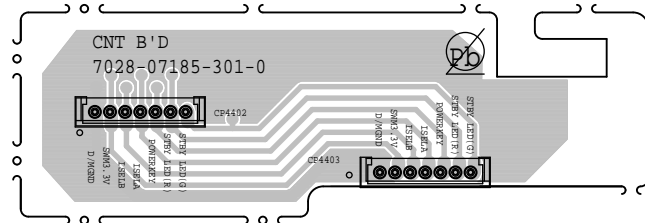
**F/H\_GUIDE  
(COMPONENT SIDE)**



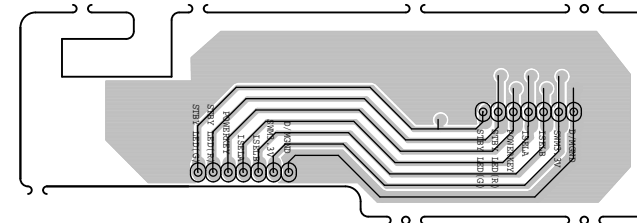
**F/H\_GUIDE  
(FOIL SIDE)**



**CNT  
(COMPONENT SIDE)**



**CNT  
(FOIL SIDE)**

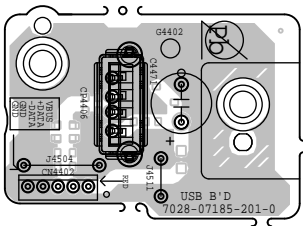


**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

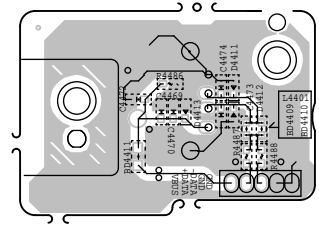
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

A  
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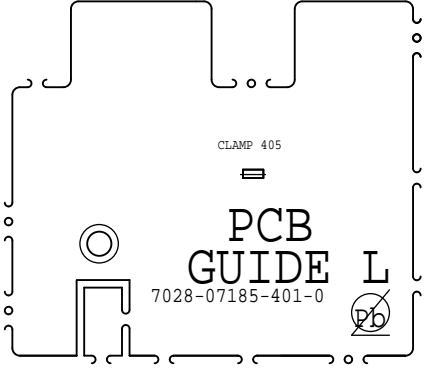
**USB  
(COMPONENT SIDE)**



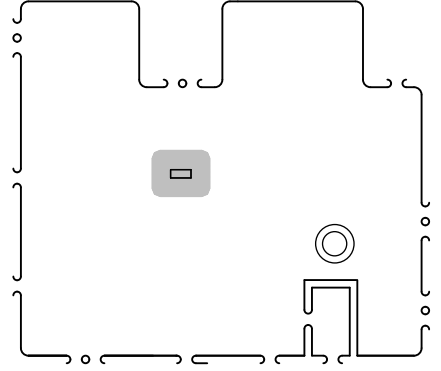
**USB  
(FOIL SIDE)**



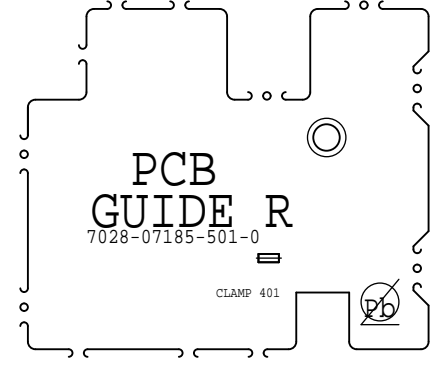
**GUIDE L  
(COMPONENT SIDE)**



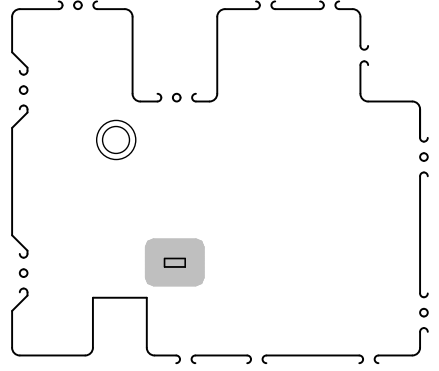
**GUIDE L  
(FOIL SIDE)**



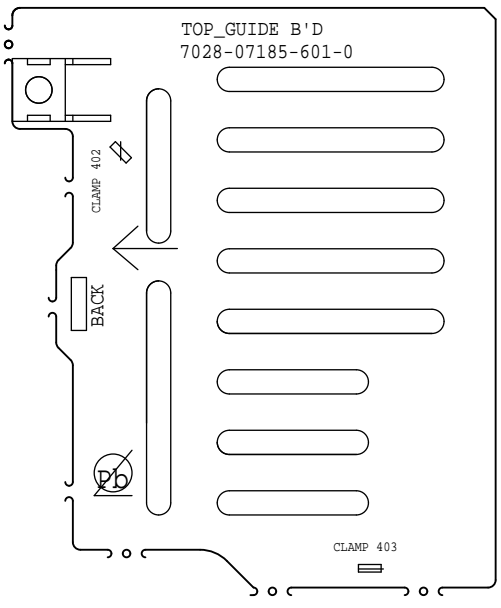
**GUIDE R  
(COMPONENT SIDE)**



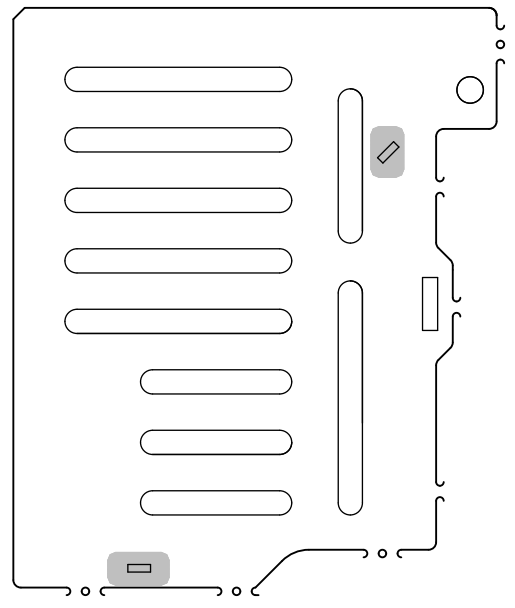
**GUIDE R  
(FOIL SIDE)**



**TOP\_GUIDE  
(COMPONENT SIDE)**



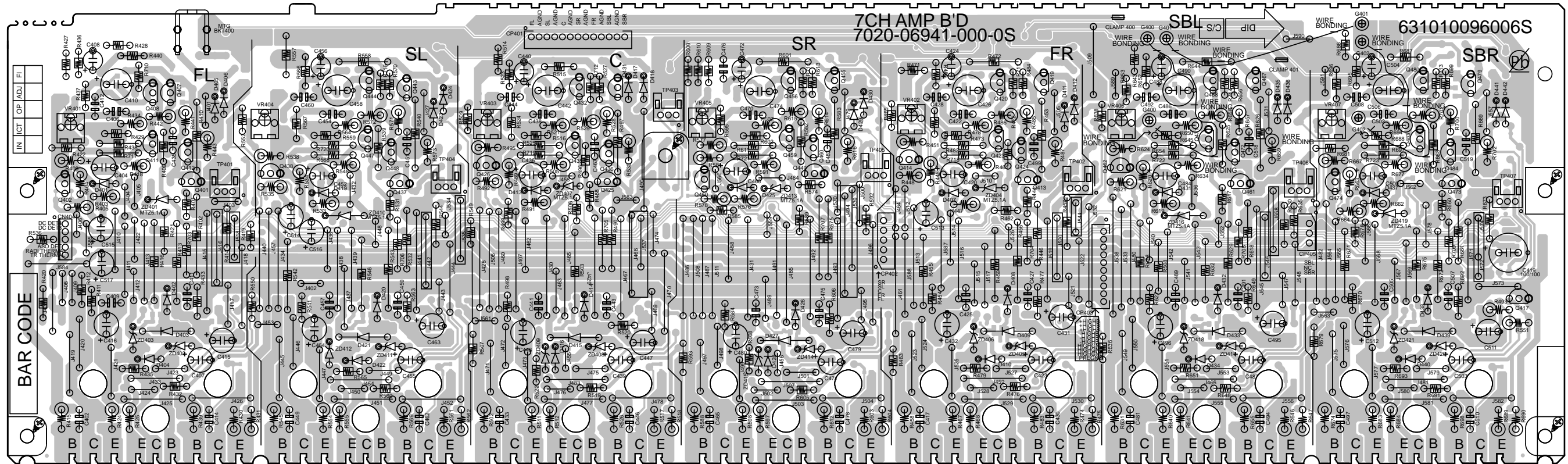
**TOP\_GUIDE  
(FOIL SIDE)**



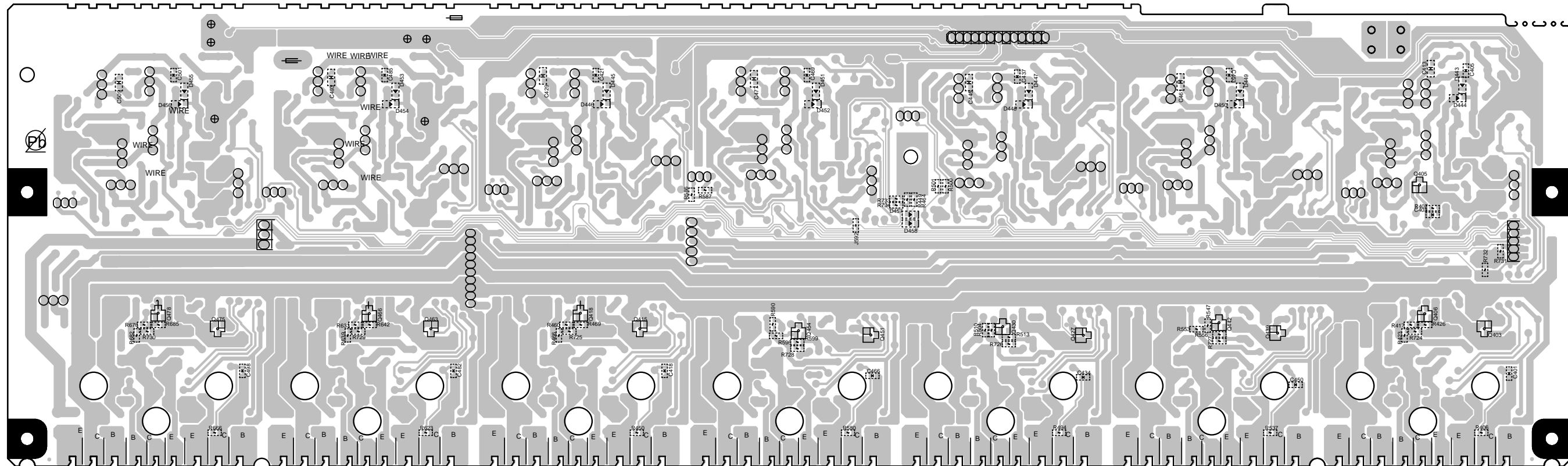
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

**7CH AMP  
(COMPONENT SIDE)**



**7CH AMP  
(FOIL SIDE)**

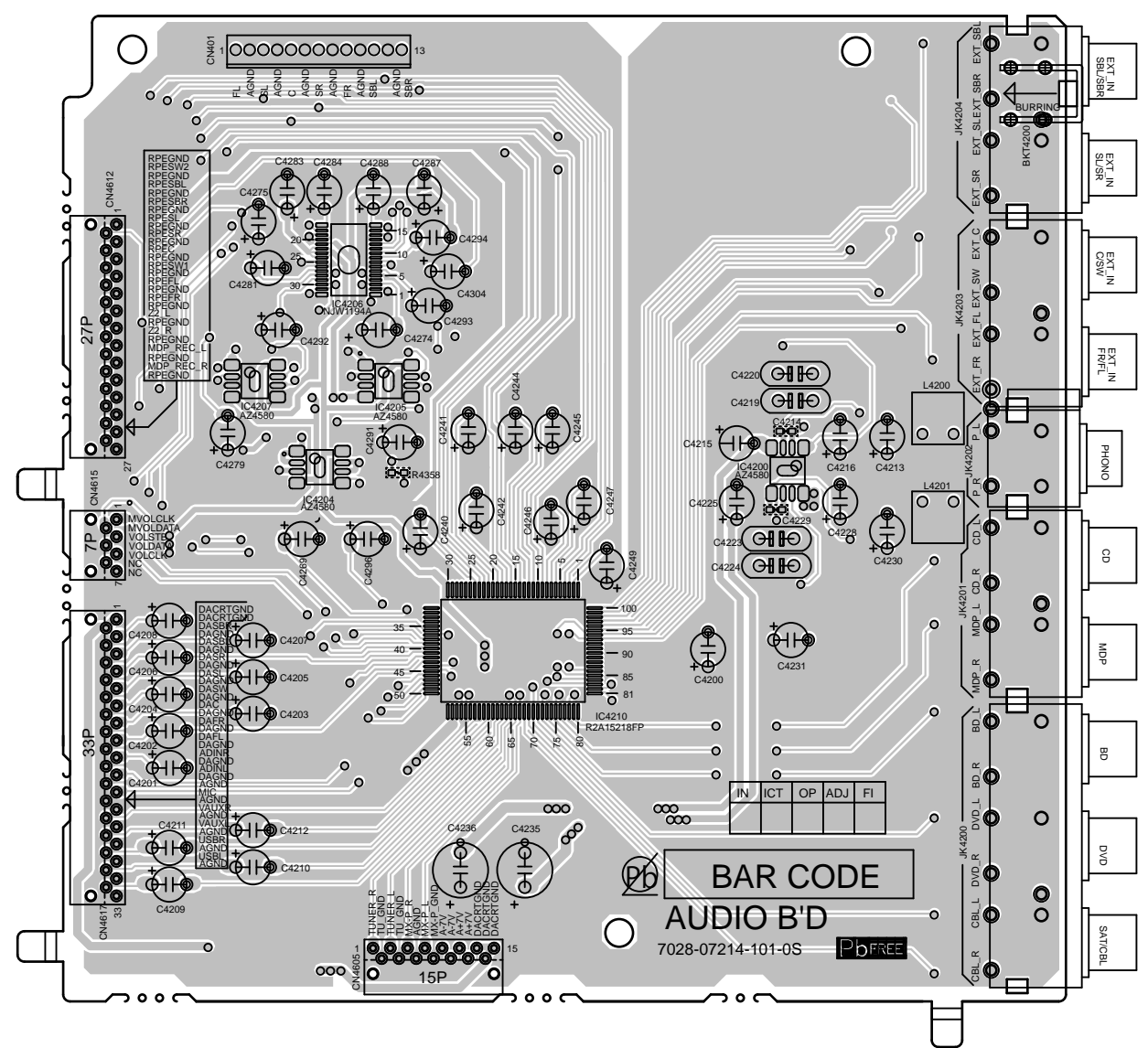


**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

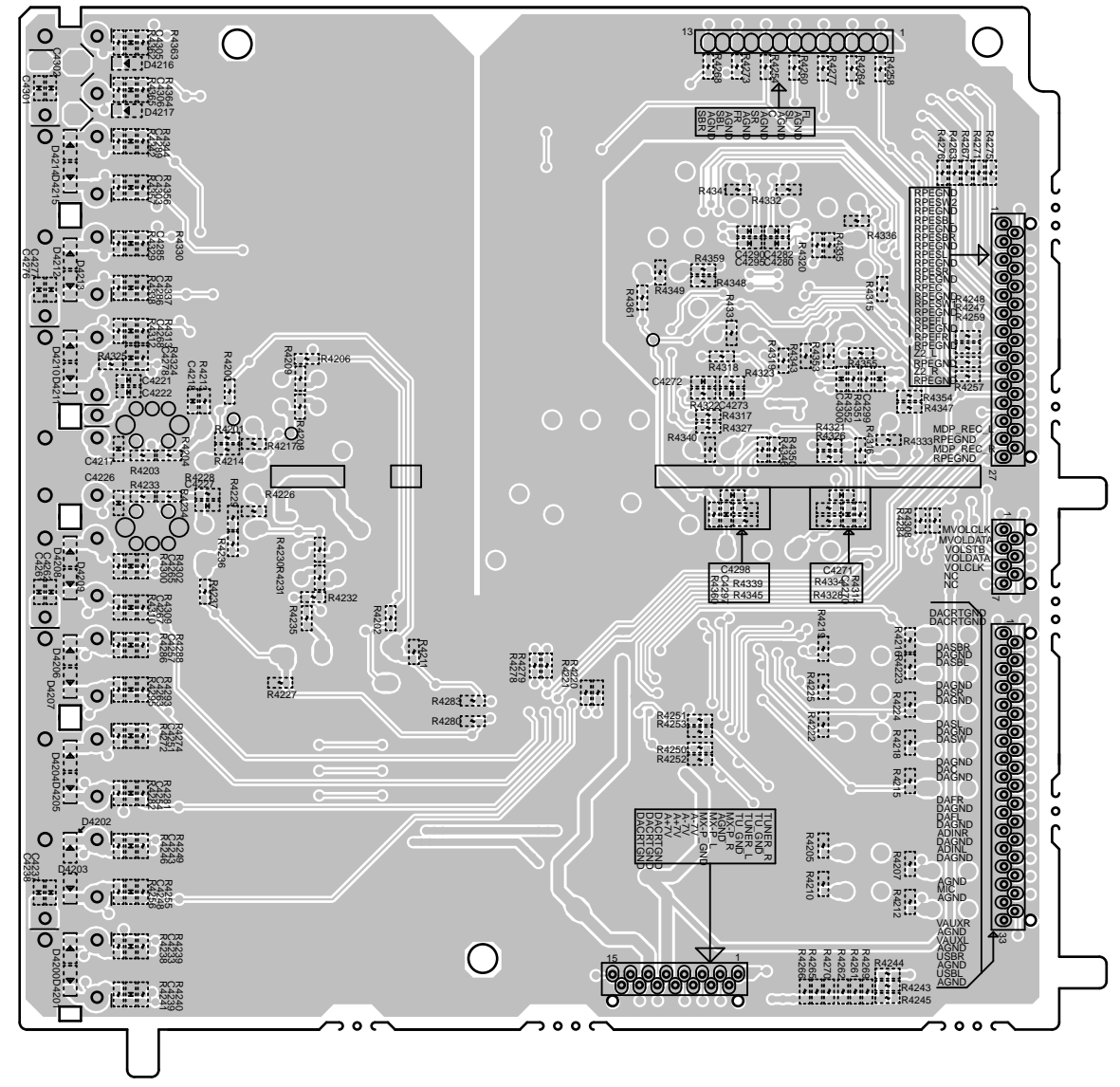
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

A  
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**AUDIO  
(COMPONENT SIDE)**



**AUDIO  
(FOIL SIDE)**

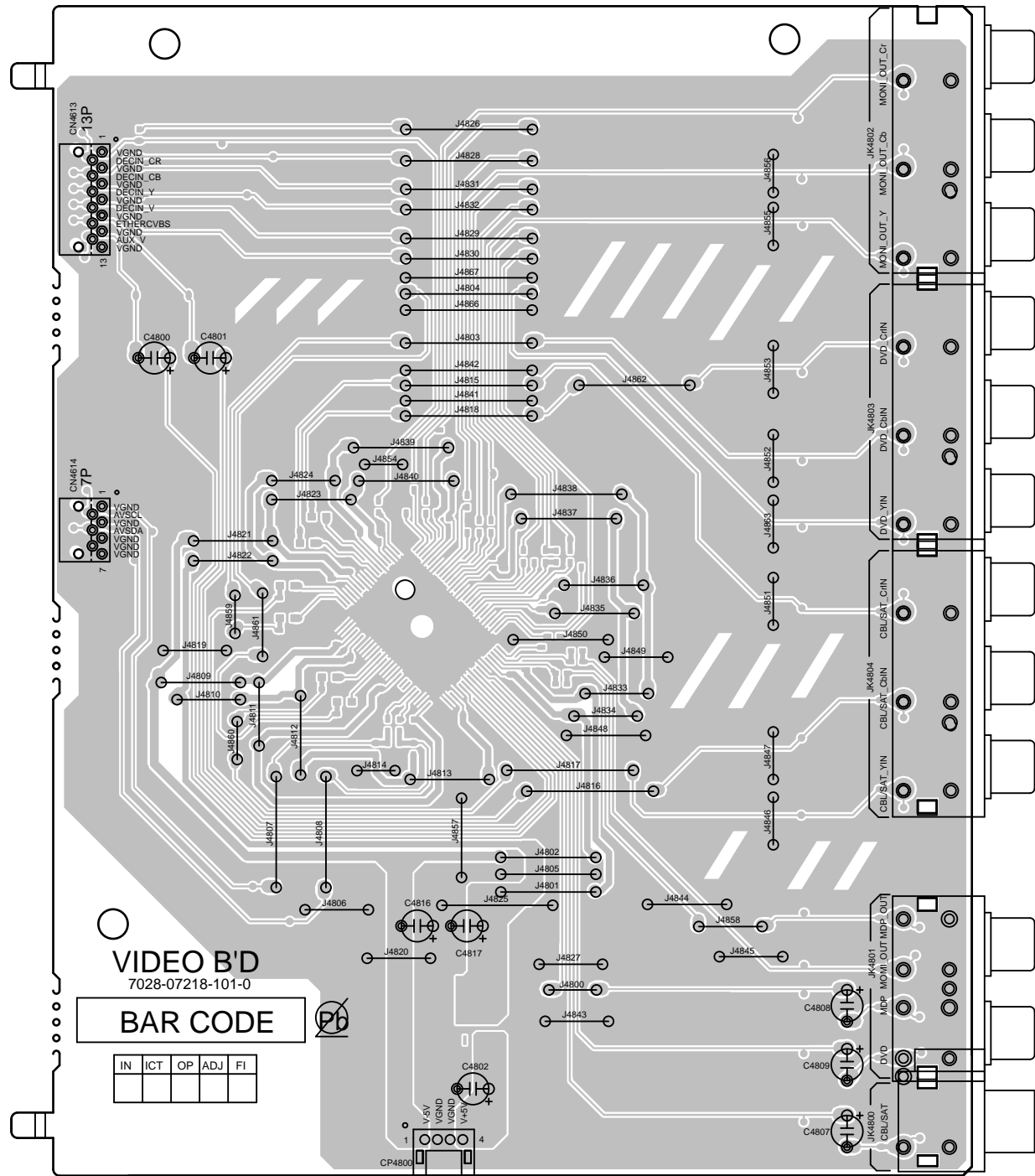


A  
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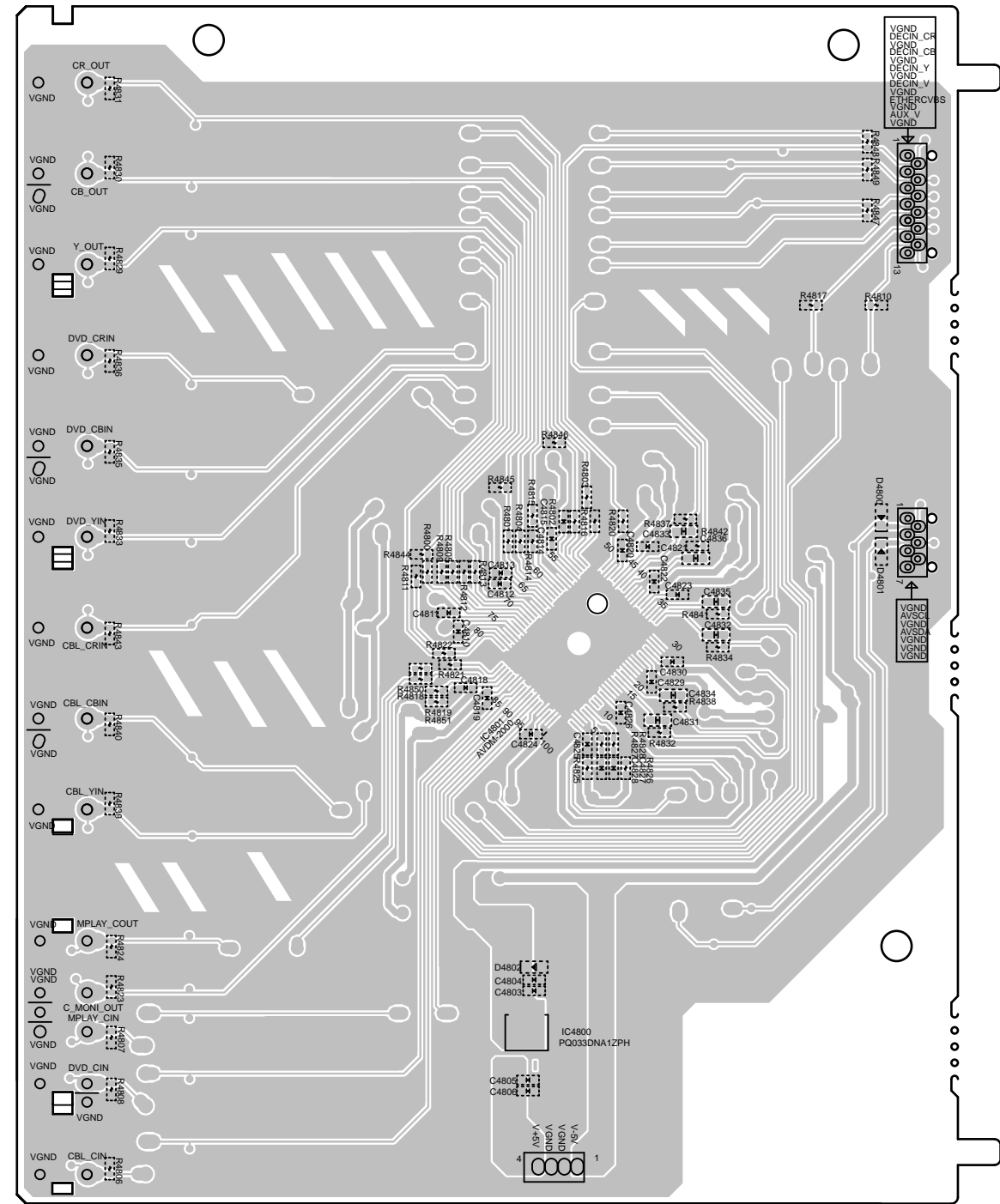
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

**VIDEO  
(COMPONENT SIDE)**



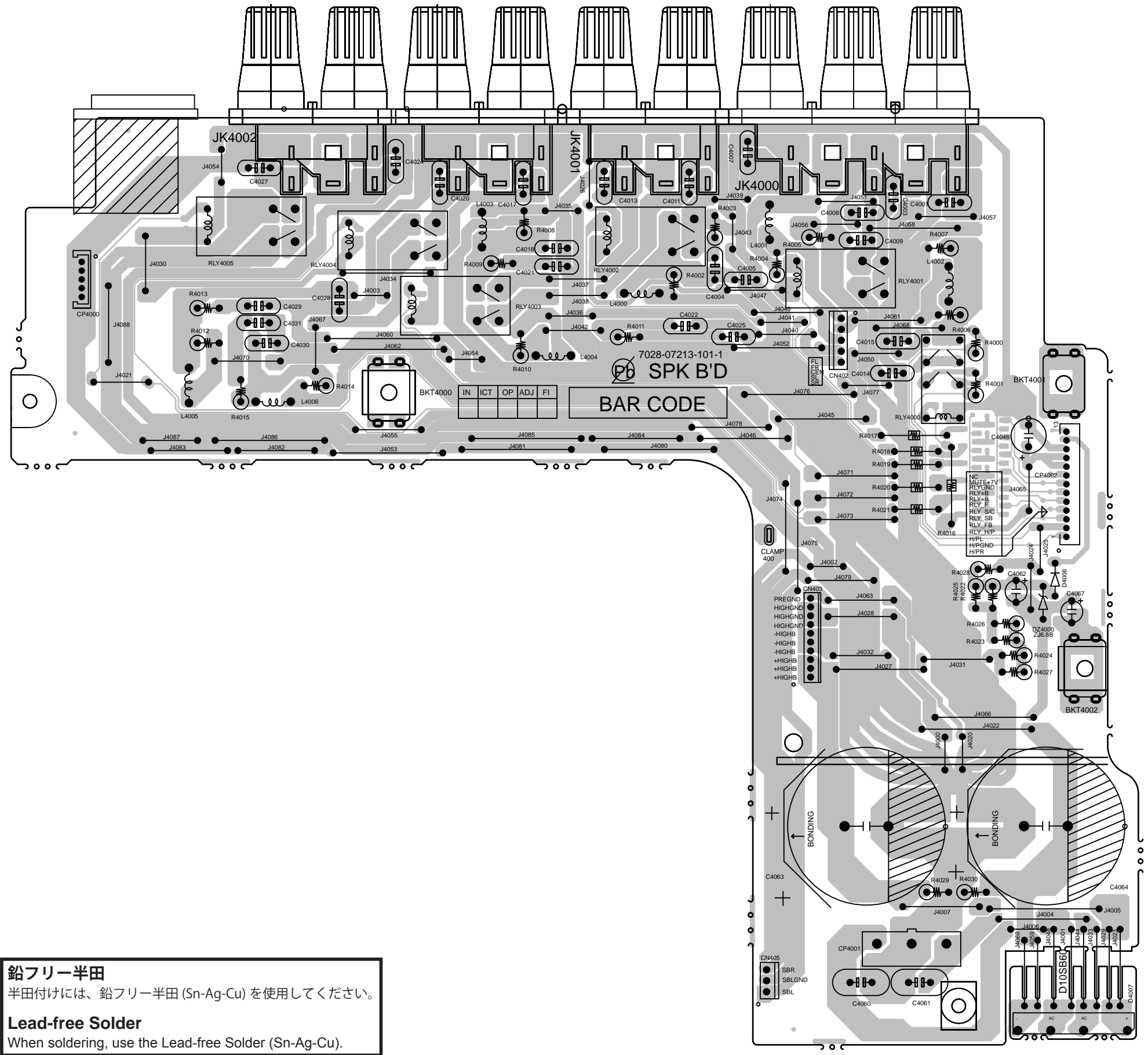
**VIDEO  
(FOIL SIDE)**



A  
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I  
J  
K  
L  
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**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。  
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

SPK  
(COMPONENT SIDE)



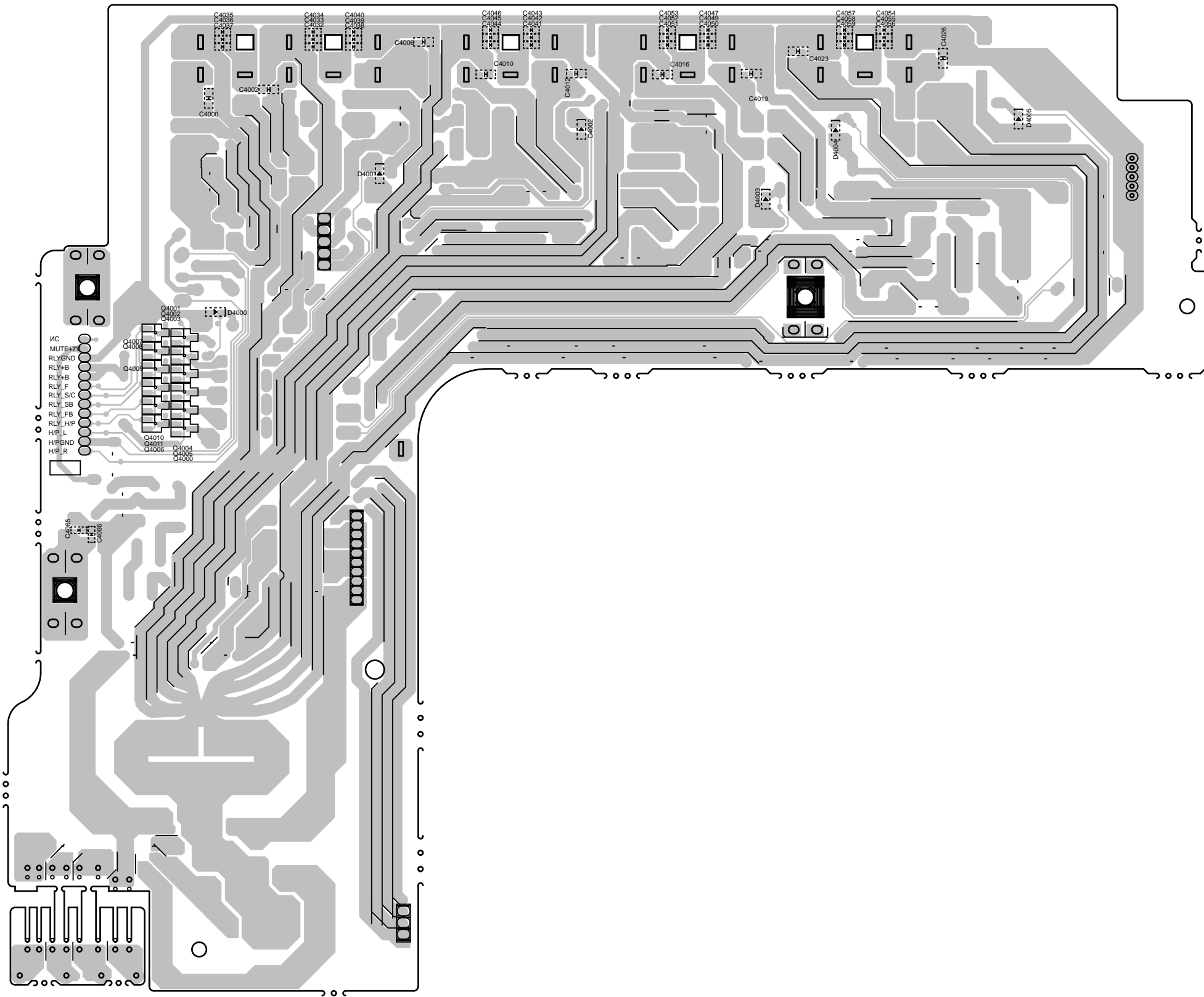
A  
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L  
M

**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

SPK  
(FOIL SIDE)



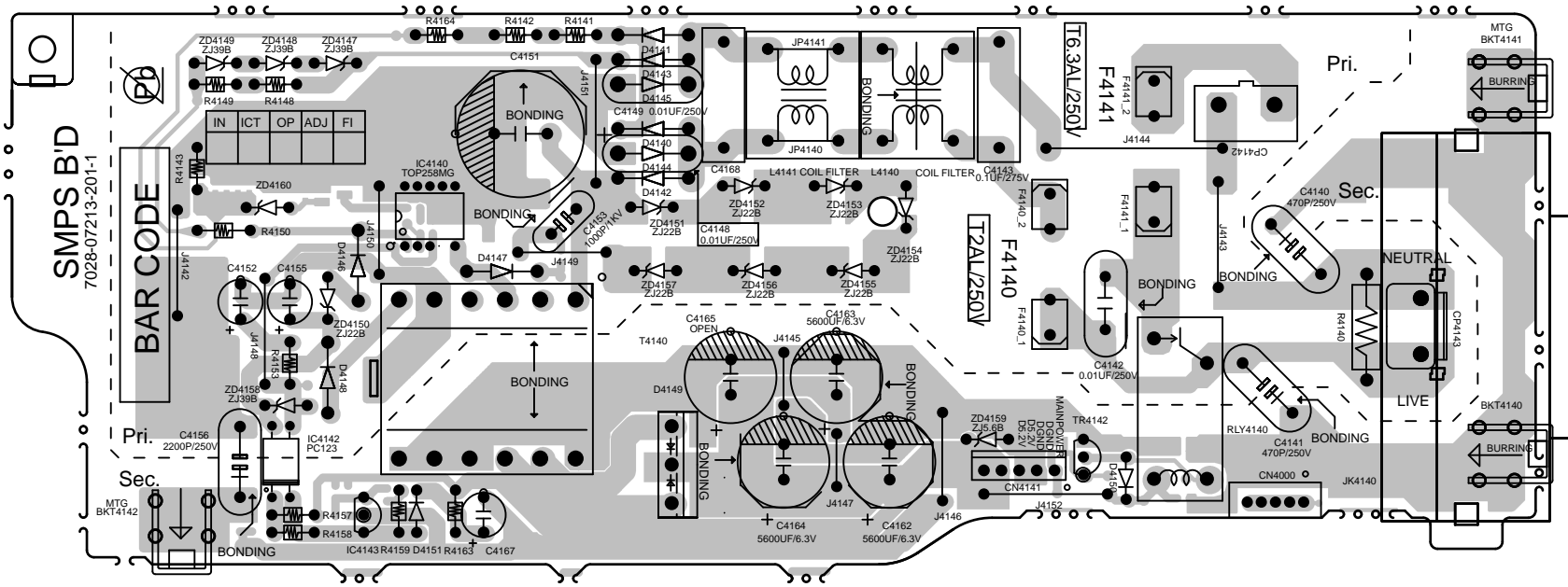
A  
B  
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M

**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

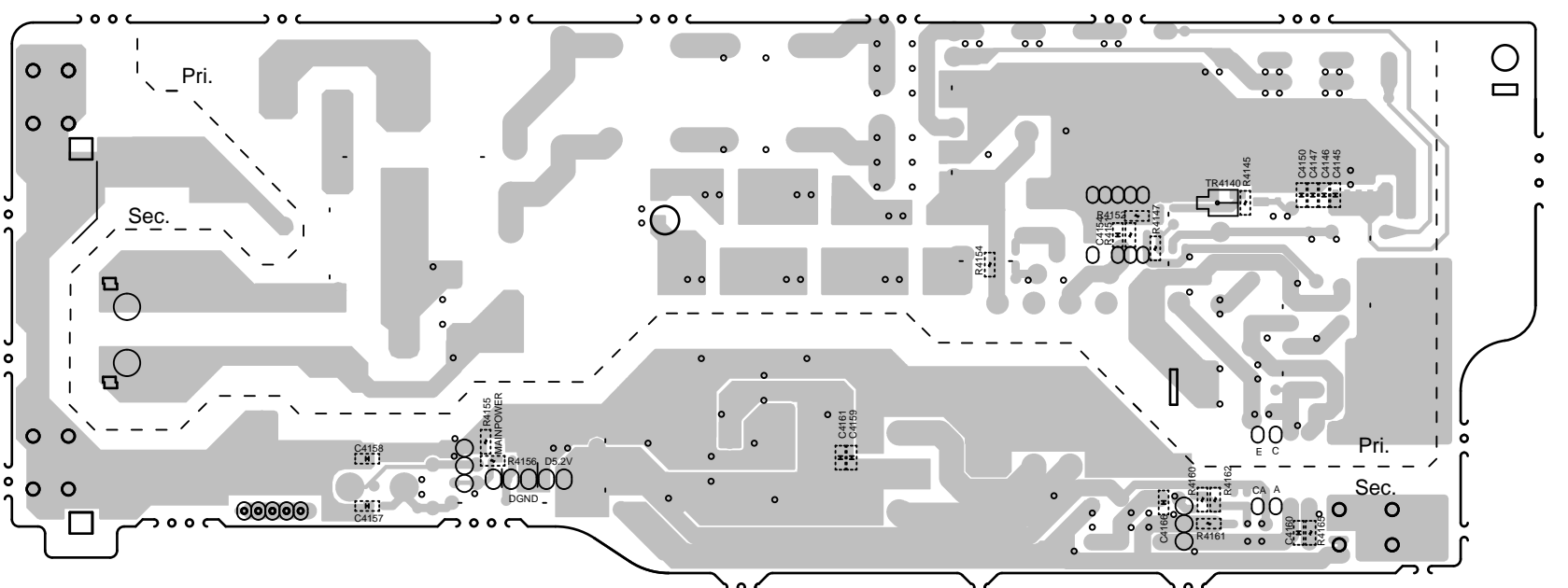
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).



**SMPS  
(COMPONENT SIDE)**



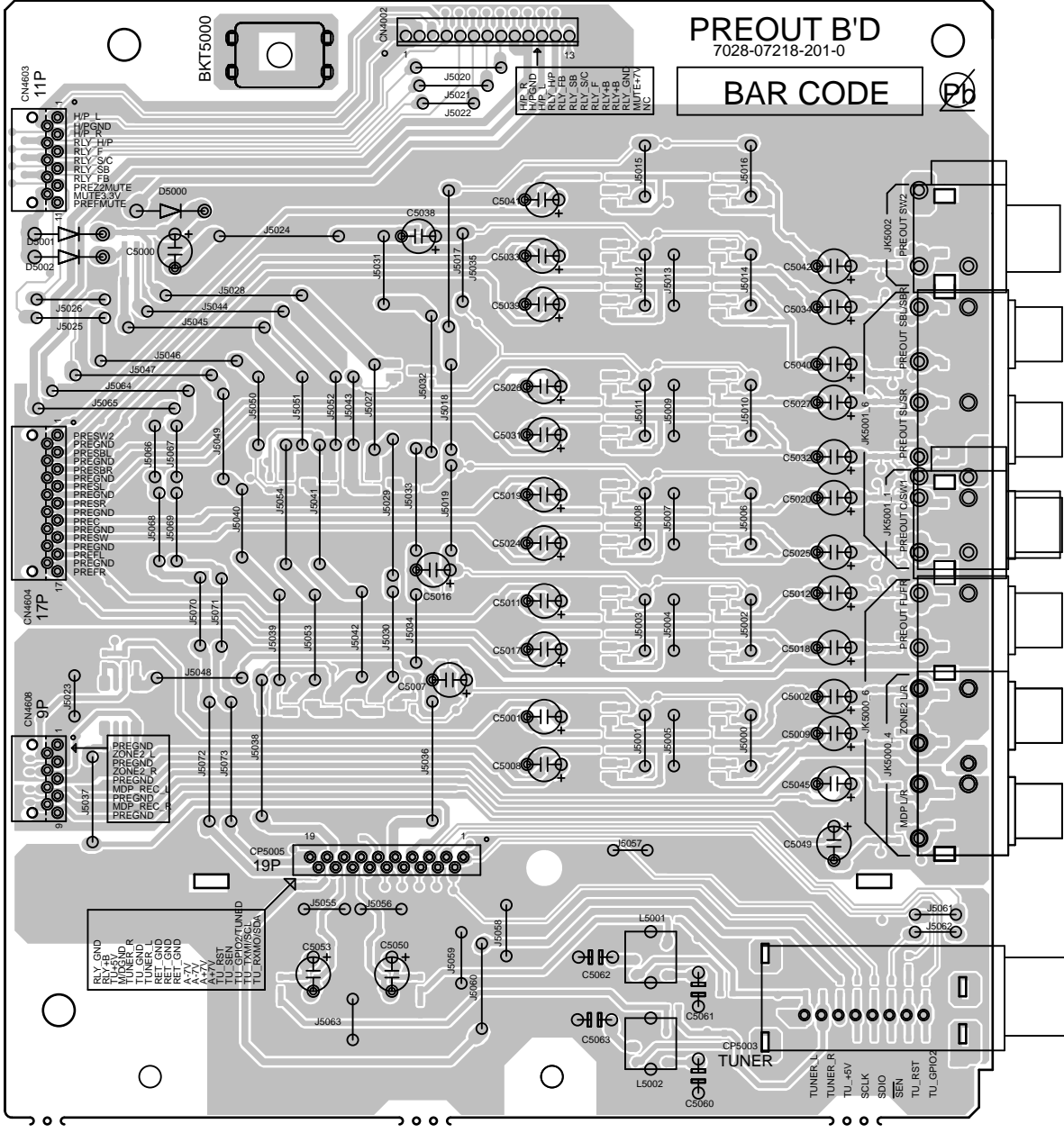
**SMPS  
(FOIL SIDE)**



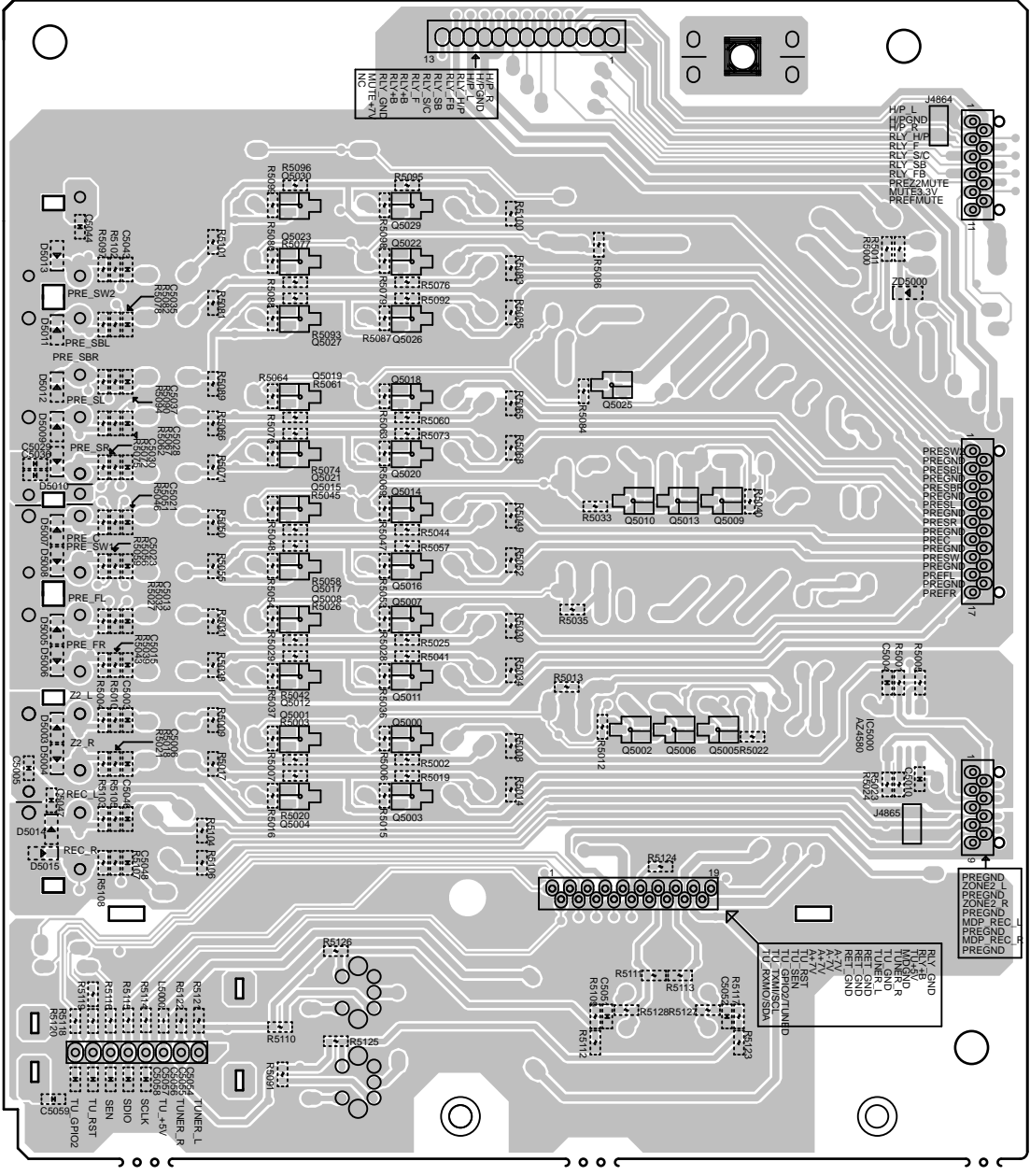
**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

**PREOUT  
(COMPONENT SIDE)**



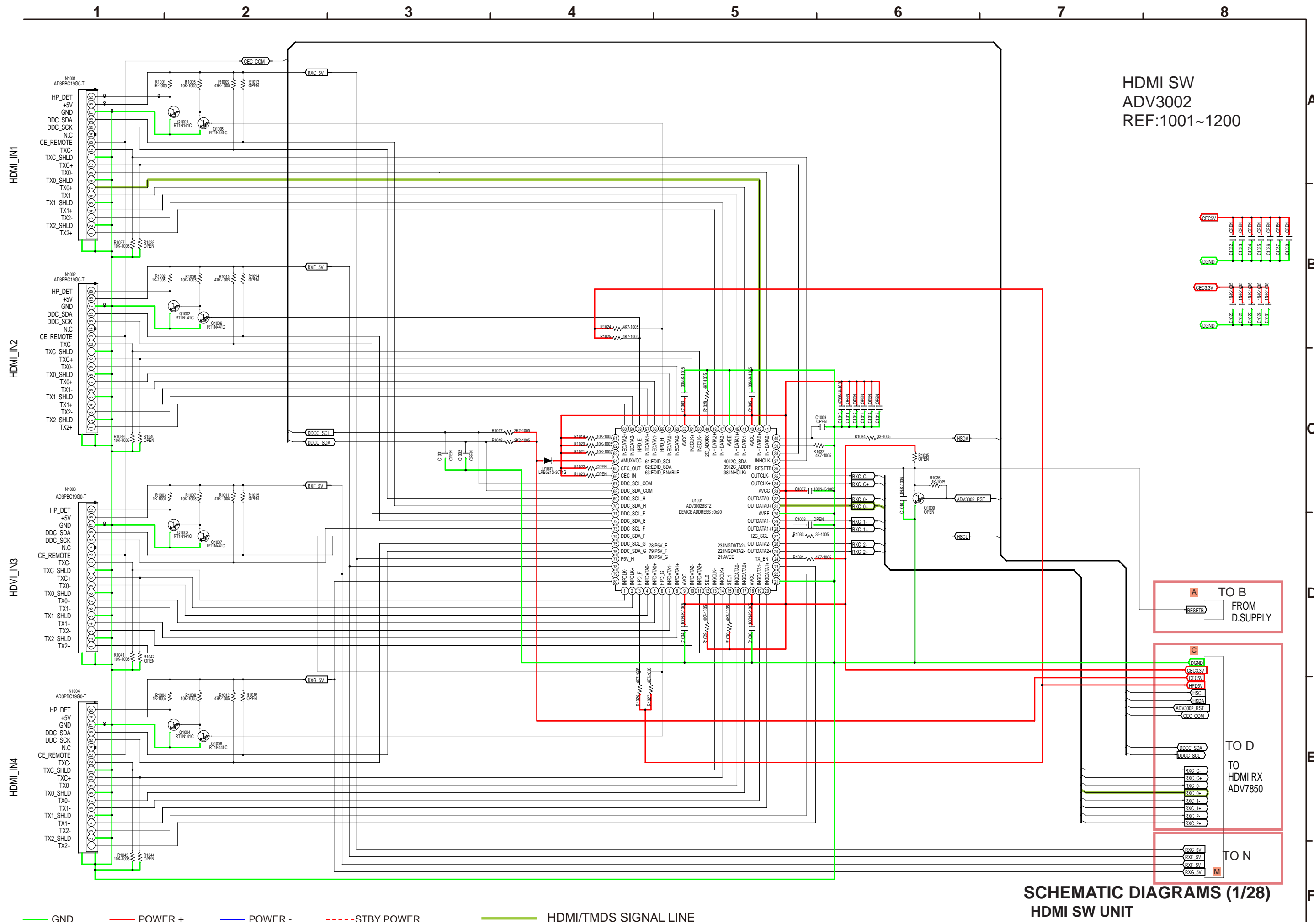
**PREOUT  
(FOIL SIDE)**



A  
B  
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I  
J  
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L  
M

**鉛フリー半田**  
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

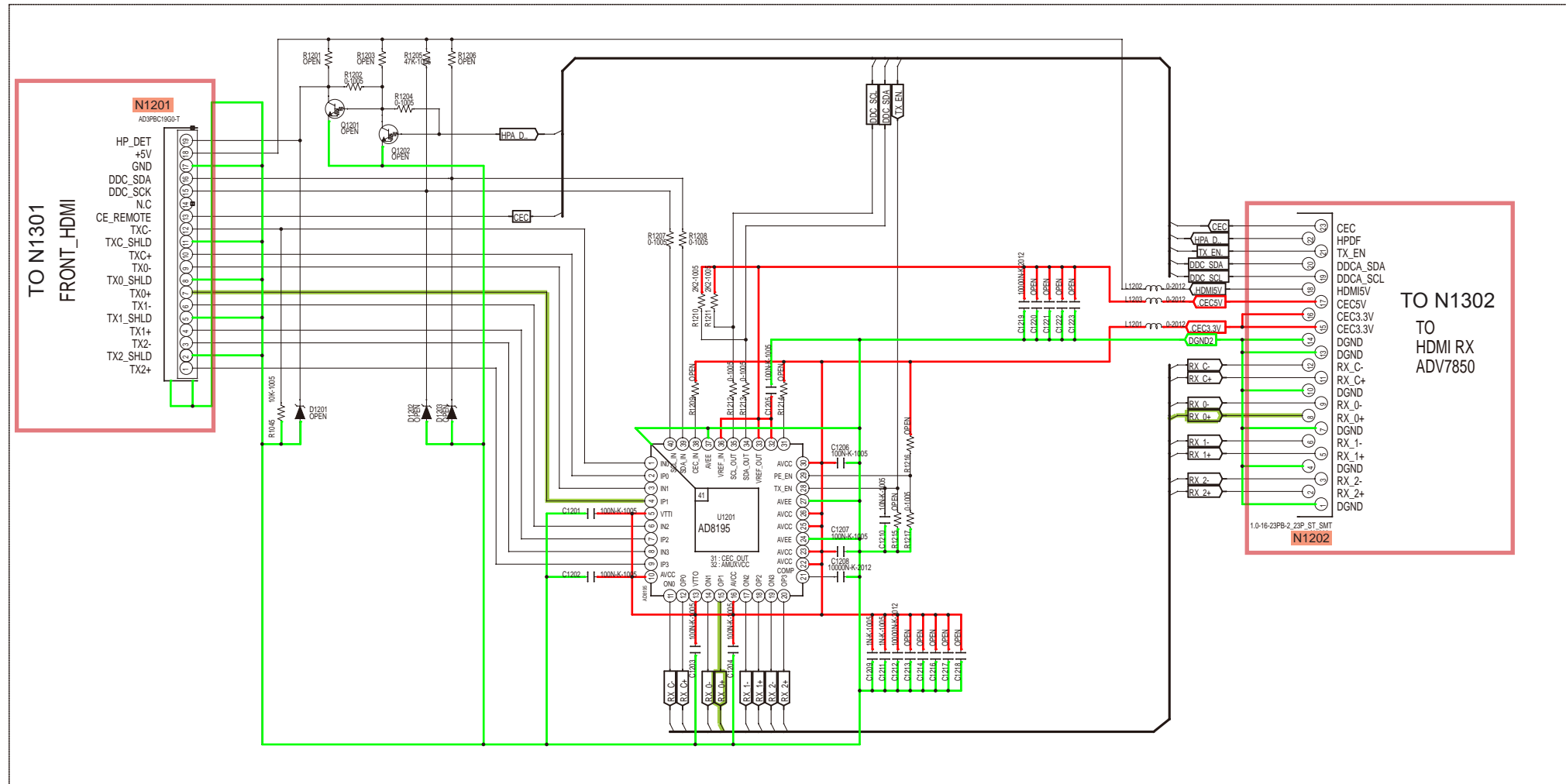
**Lead-free Solder**  
When soldering, use the Lead-free Solder (Sn-Ag-Cu).



HDMI SW  
ADV3002  
REF:1001~1200

**SCHEMATIC DIAGRAMS (1/28)**  
**HDMI SW UNIT**

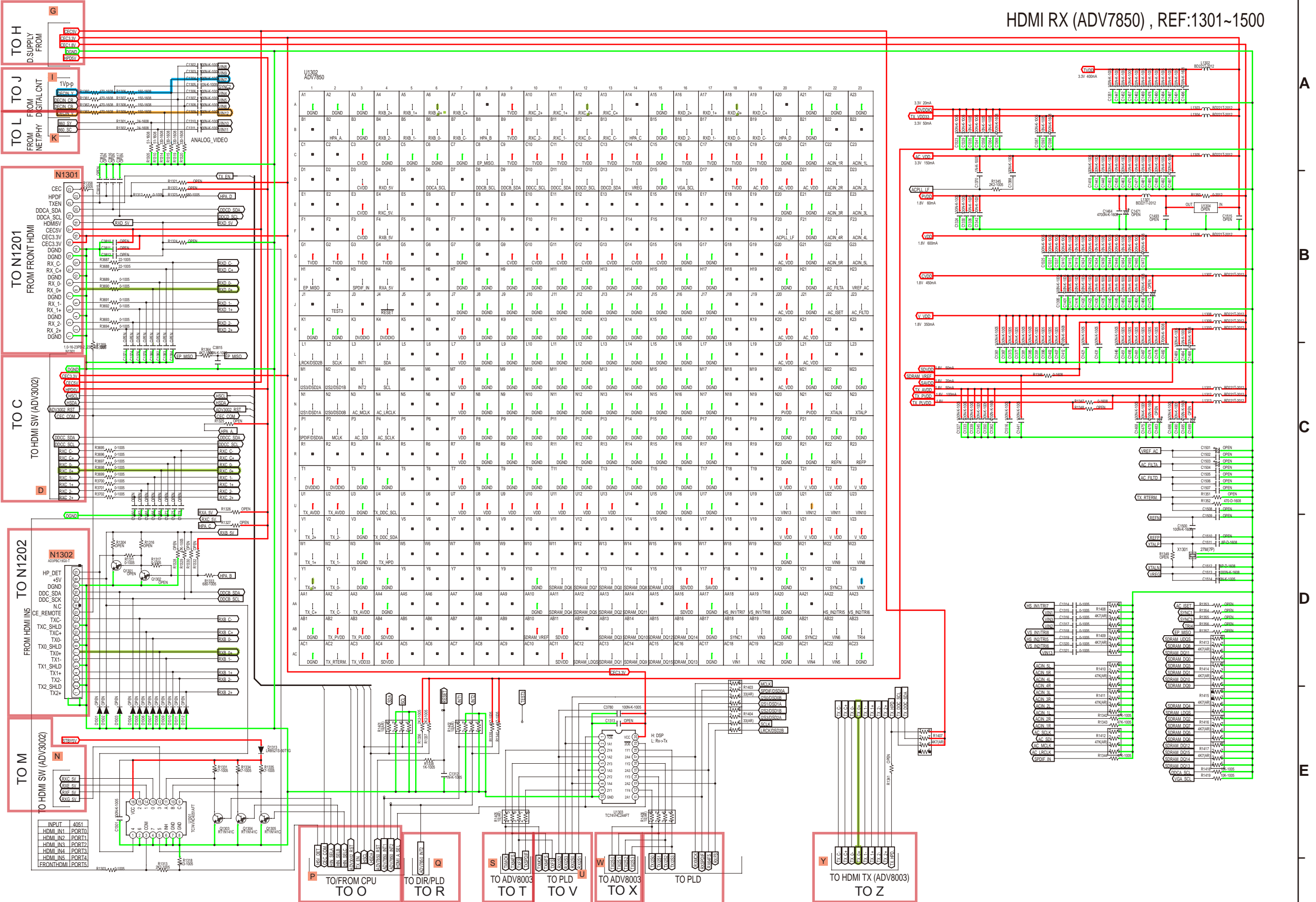
FRONT HDMI  
REF:1201~1300



A  
B  
C  
D  
E  
F

**SCHEMATIC DIAGRAMS (2/28)**  
**FRONT HDMI UNIT**

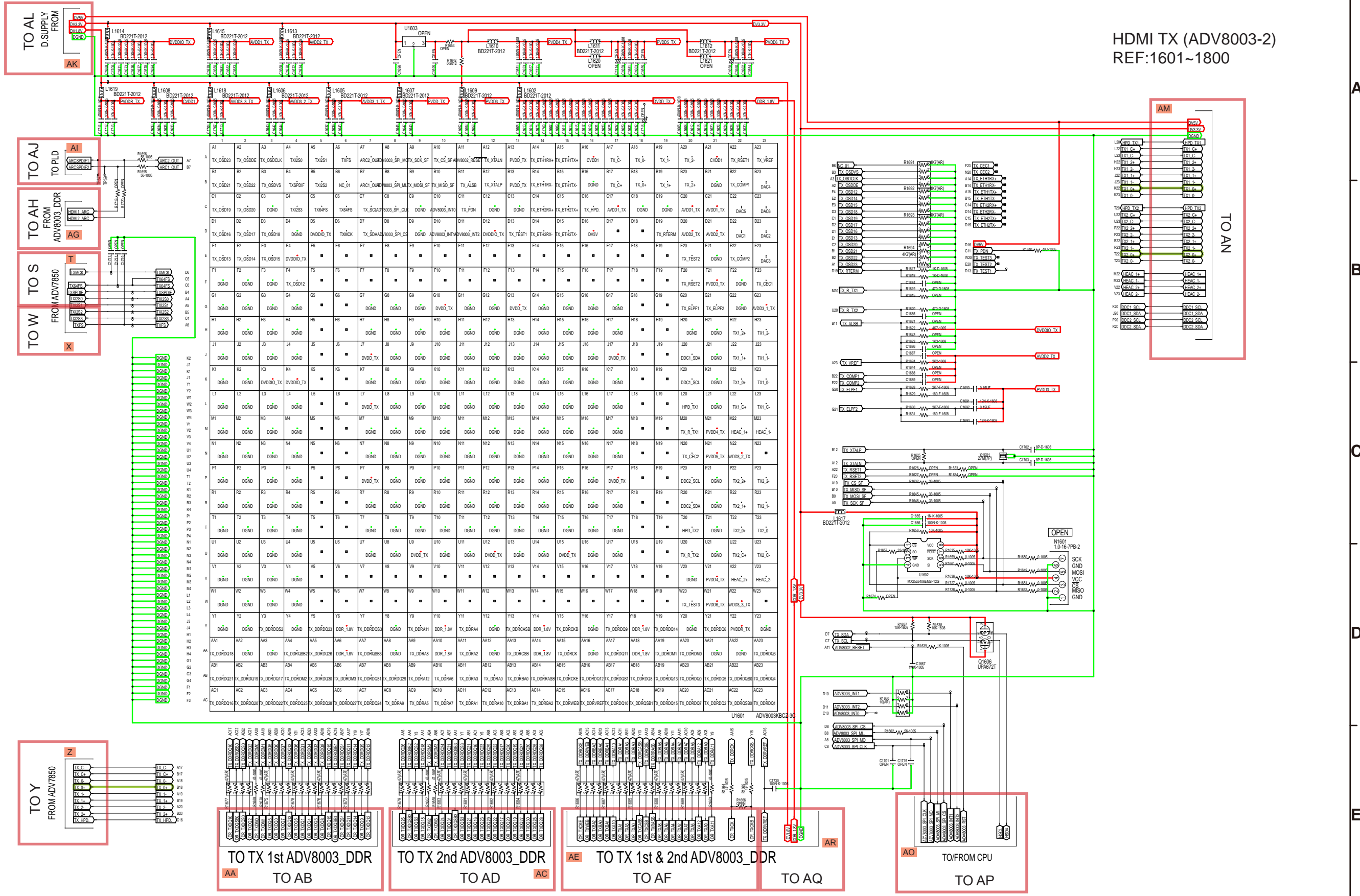
# HDMI RX (ADV7850), REF:1301~1500



**SCHEMATIC DIAGRAMS (3/28)**  
**HDMI RX UNIT**

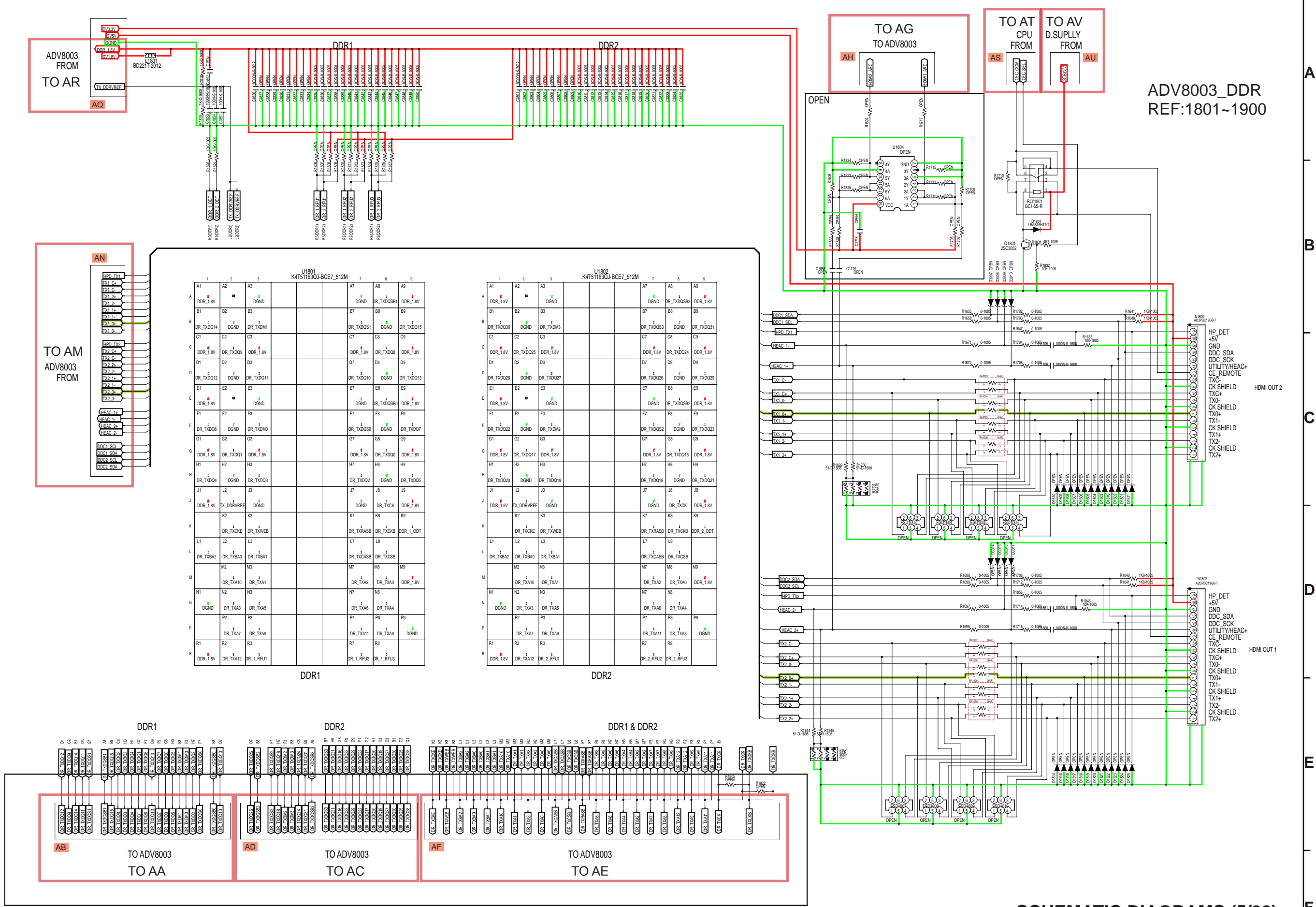
— GND   
 — POWER +   
 — POWER -   
 - - - STBY POWER   
 — COMPONENT(Y) SIGNAL LINE   
 — VIDEO SIGNAL LINE   
 — HDMI/TMDS SIGNAL LINE

HDMI TX (ADV8003-2)  
REF:1601~1800

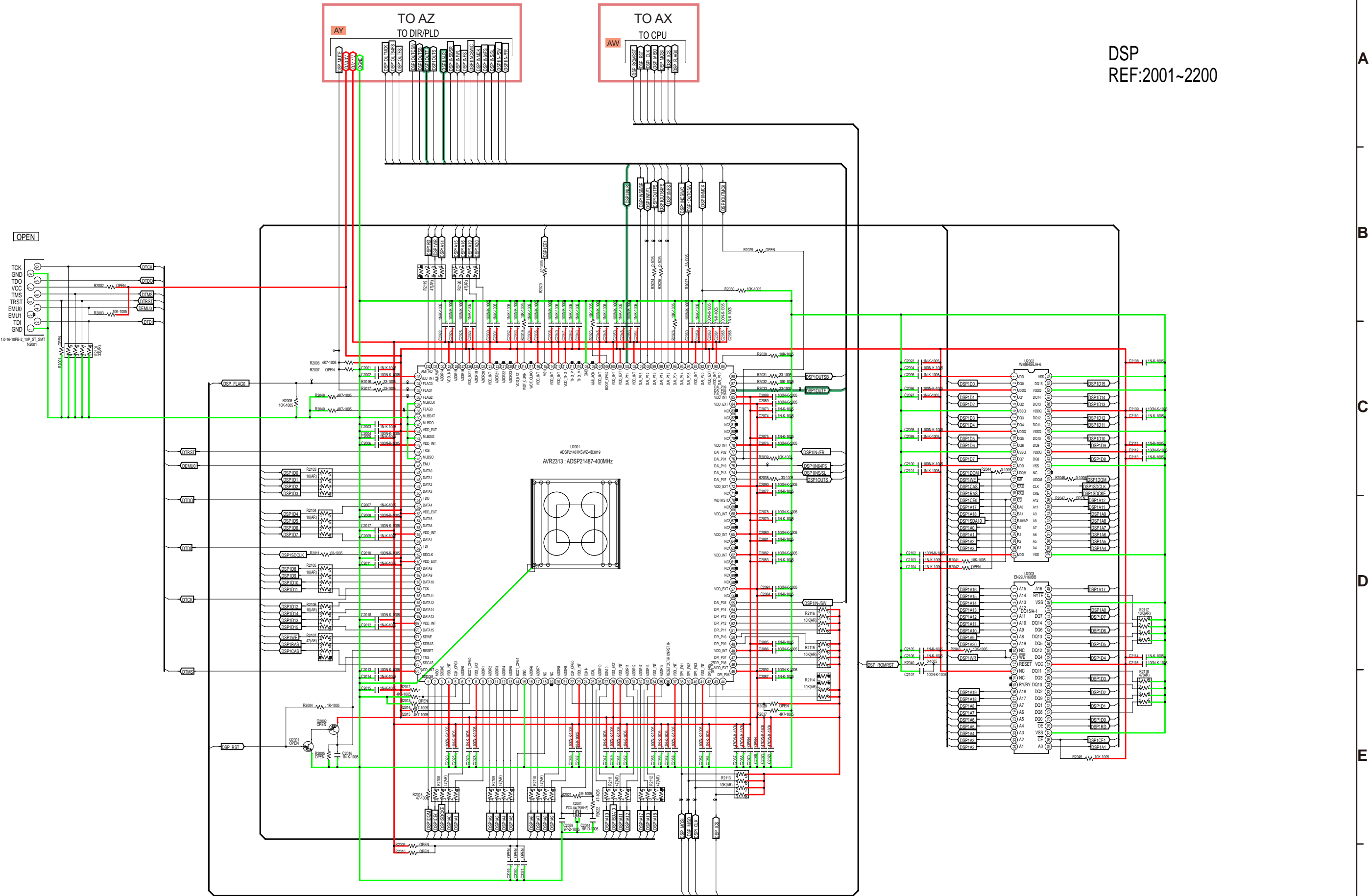


— GND    — POWER +    — POWER -    - - - STBY POWER    — HDMI/TMDS SIGNAL LINE

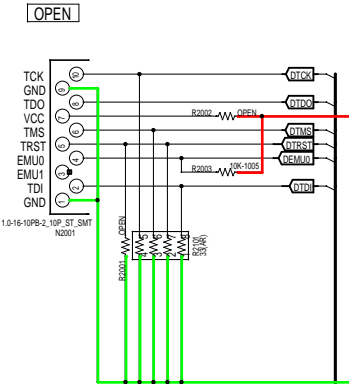
SCHEMATIC DIAGRAMS (4/28)  
HDMI TX UNIT



**SCHEMATIC DIAGRAMS (5/28)**  
**HDMI TX DDR UNIT**



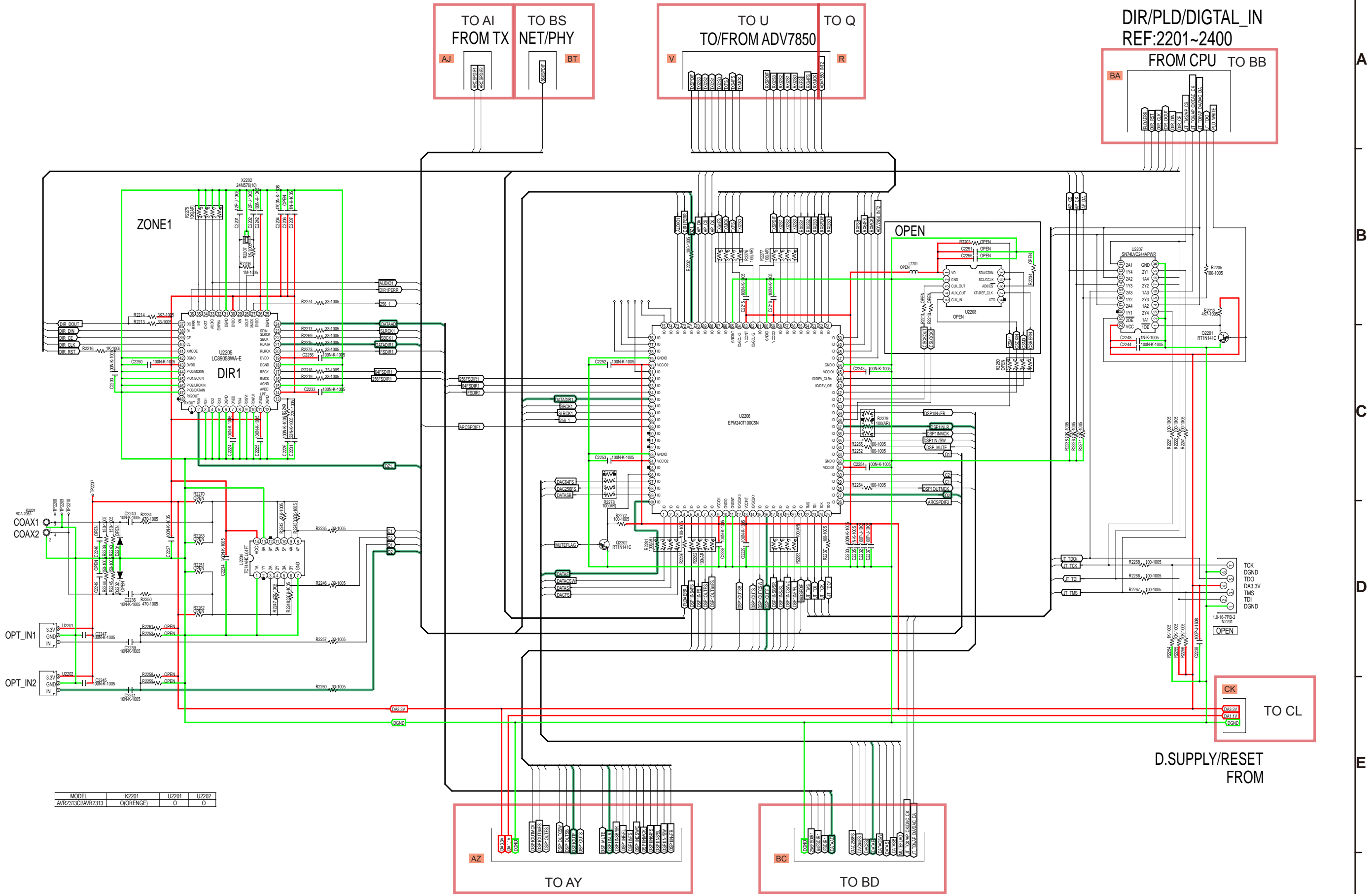
DSP  
REF:2001~2200



— GND    — POWER +    — POWER -    - - - STBY POWER    — DIGITAL AUDIO SIGNAL LINE

**SCHEMATIC DIAGRAMS (6/28)**  
**DSP UNIT**

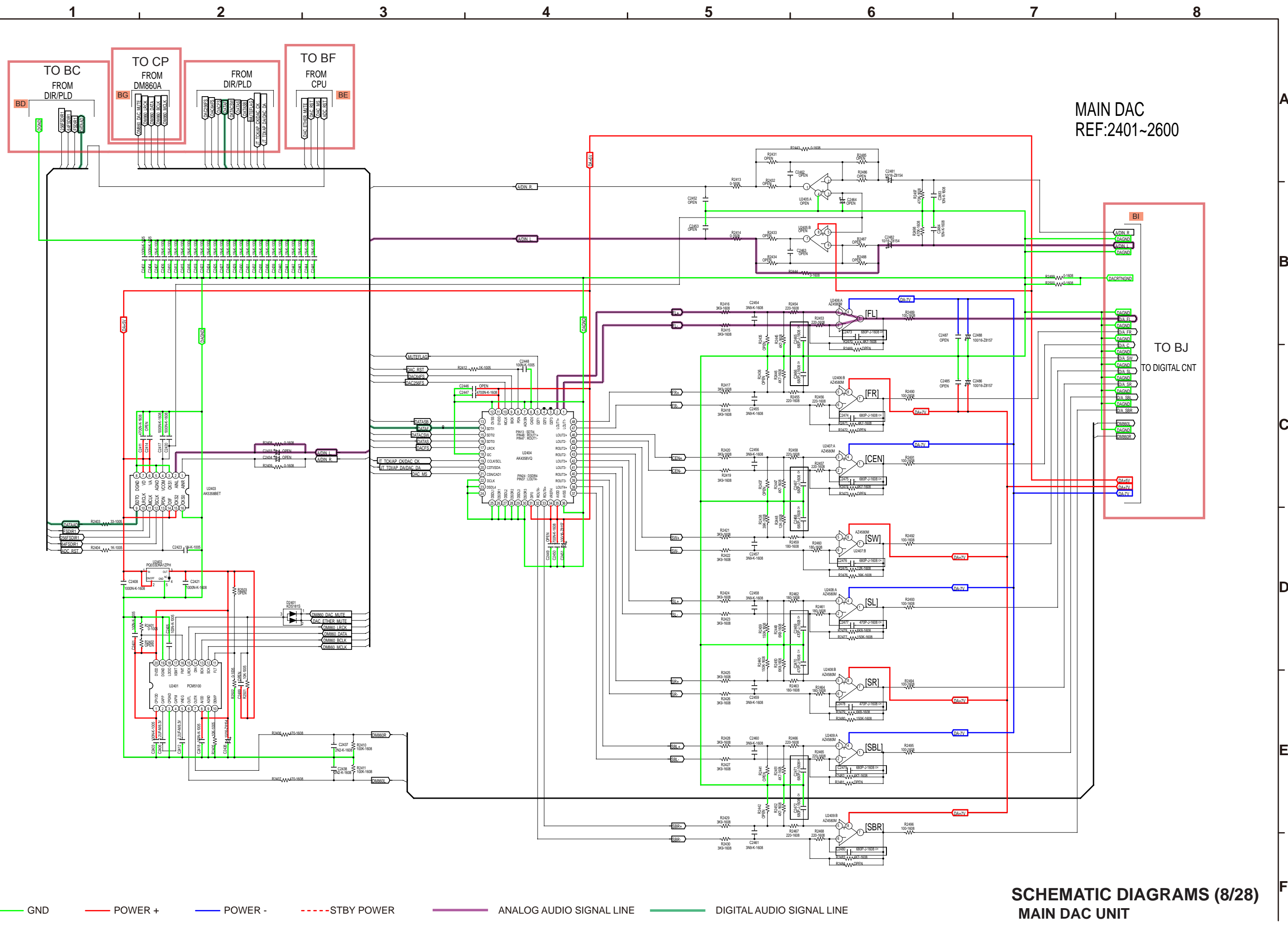


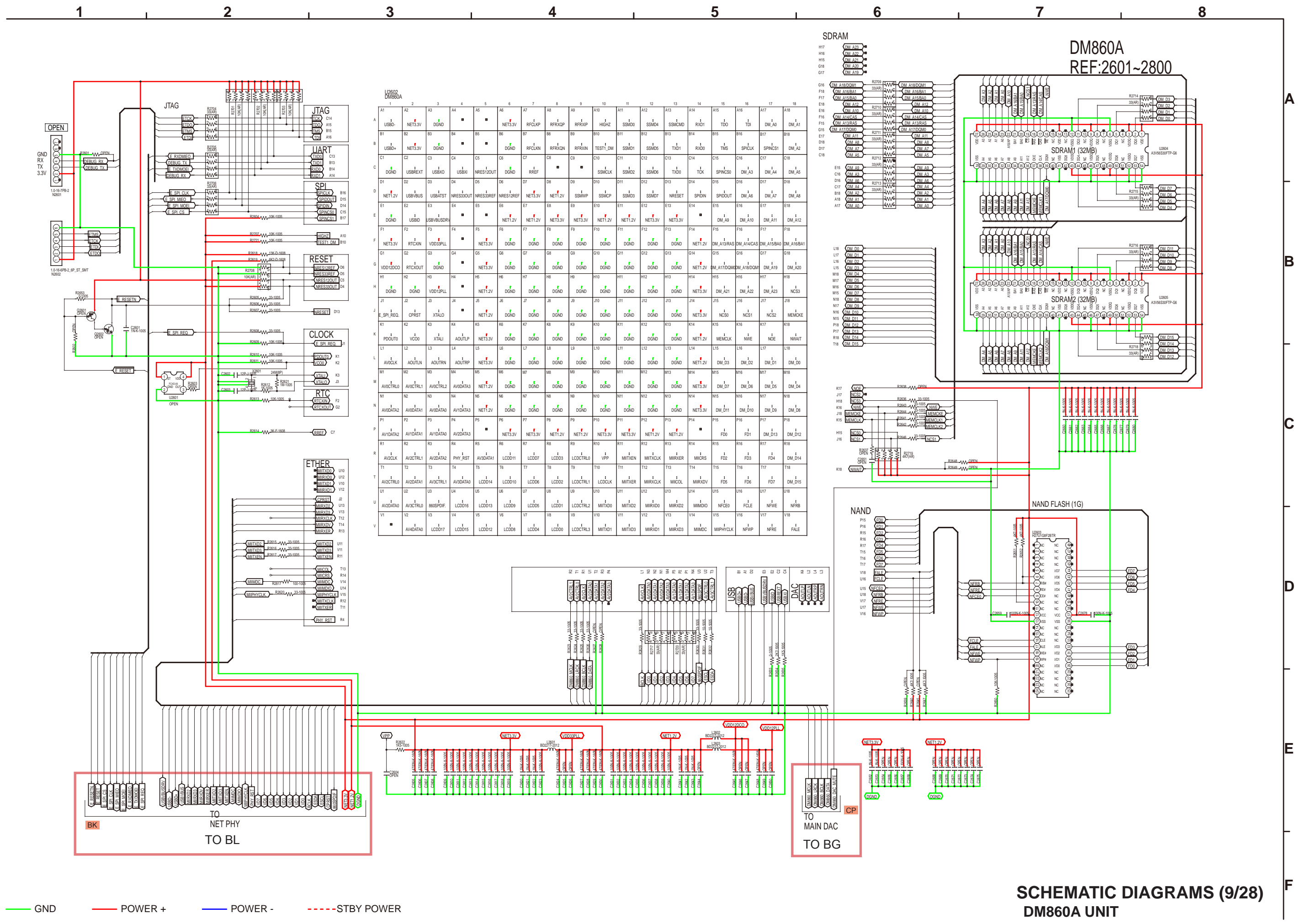


MODEL	K2201	U2201	U2202
AVR2313C/AVR2313	O(ORANGE)	O	O

— GND    
 — POWER +    
 — POWER -    
 — STBY POWER    
 — DIGITAL AUDIO SIGNAL LINE

**SCHEMATIC DIAGRAMS (7/28)**  
DIR/PLD DIGITAL\_IN UNIT





**SCHEMATIC DIAGRAMS (9/28)**  
**DM860A UNIT**

1 2 3 4 5 6 7 8

TO BV  
TO CPU LEVEL CHG  
BU

TO BK  
TO DM860A

NET PHY  
REF:2801~3000

TO BT  
TO DIR/PLD  
BS

TO BR  
FROM D.SUPPLY  
BQ

TO BP  
TO DIGITAL CNT  
BO

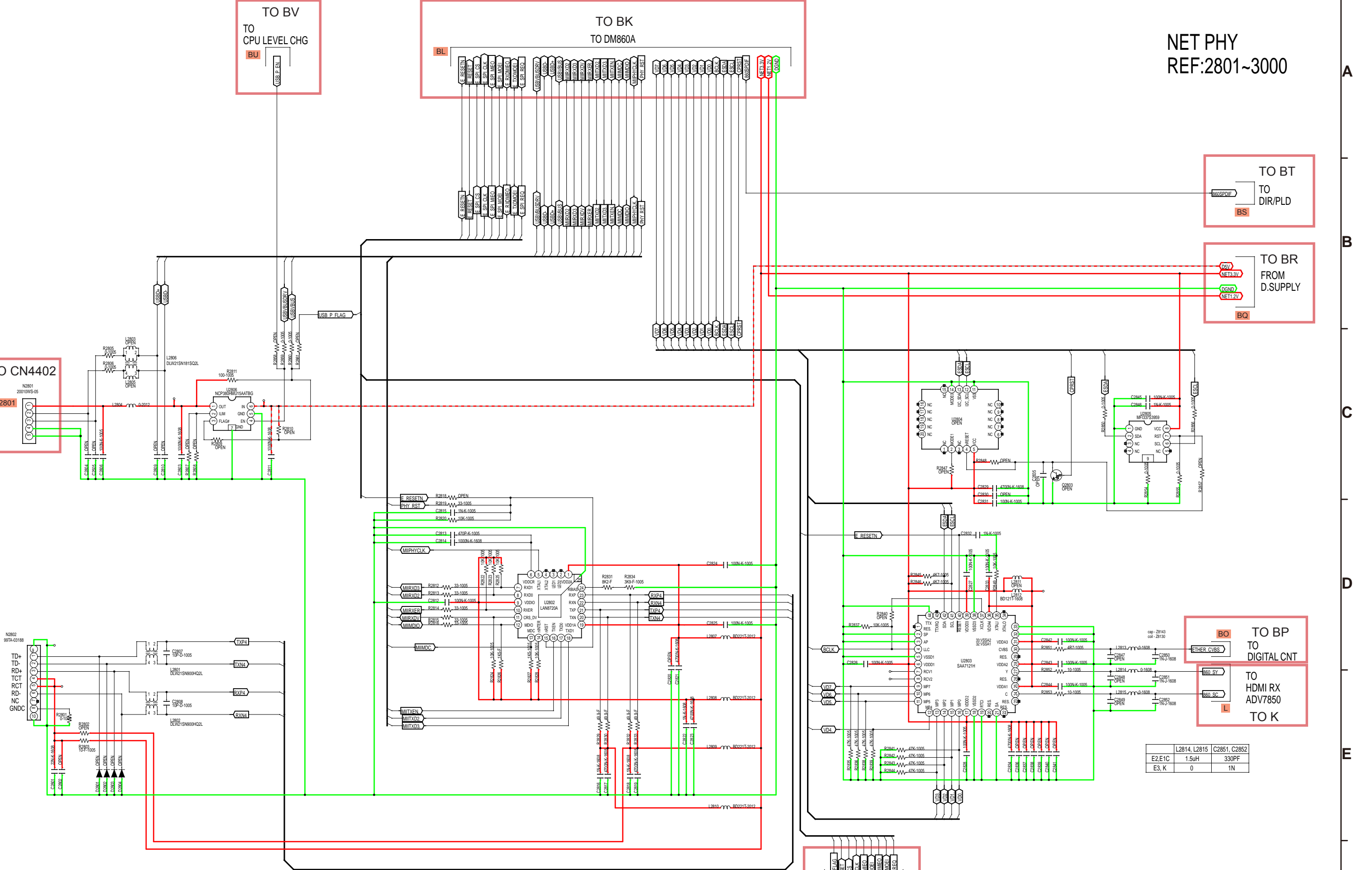
TO HDMI RX  
ADV7850  
L

TO K

	L2814, L2815	C2851, C2852
E2E1C	1.5uH	330PF
E3, K	0	1N

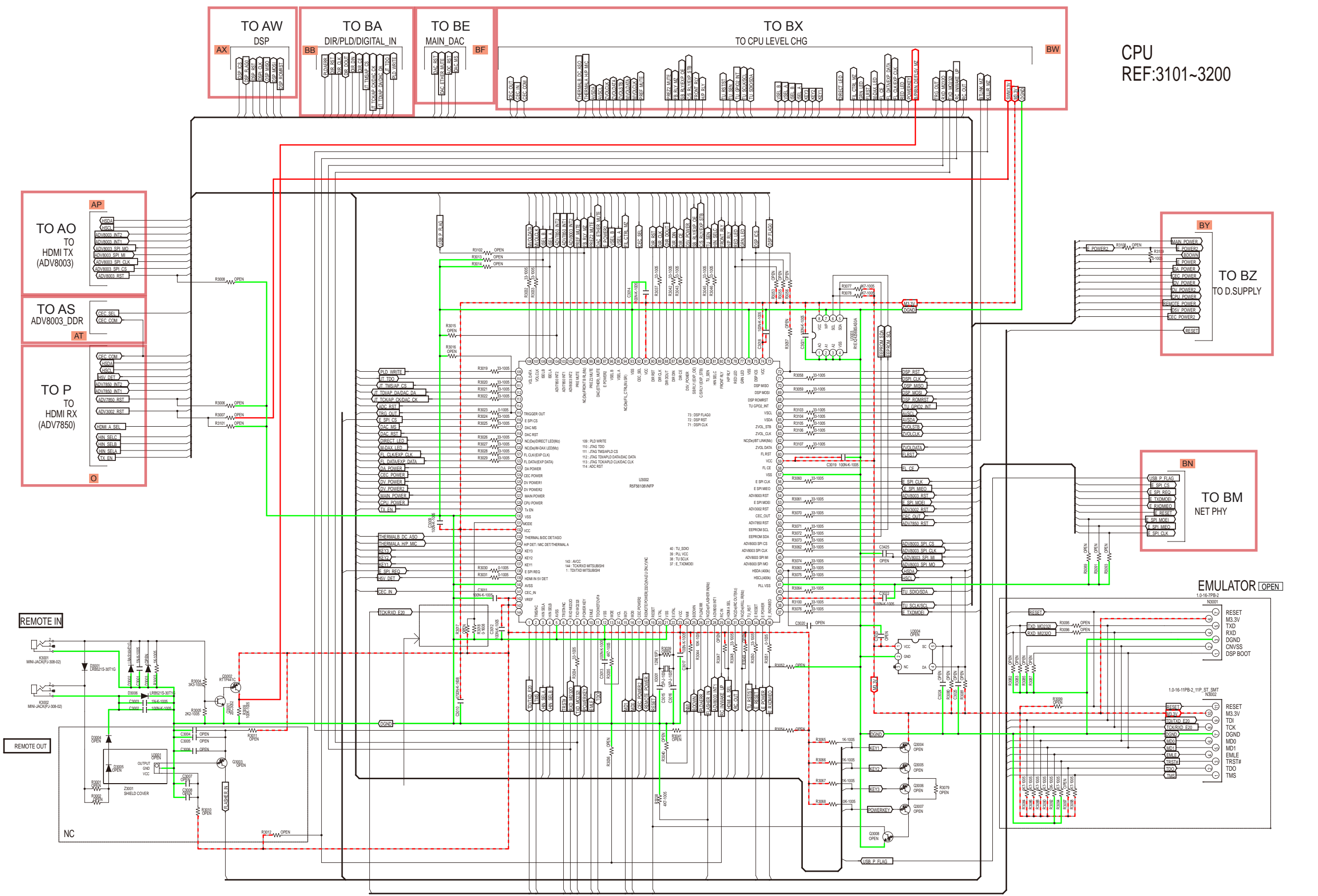
TO CN4402  
N2801

N2802  
997A-03188

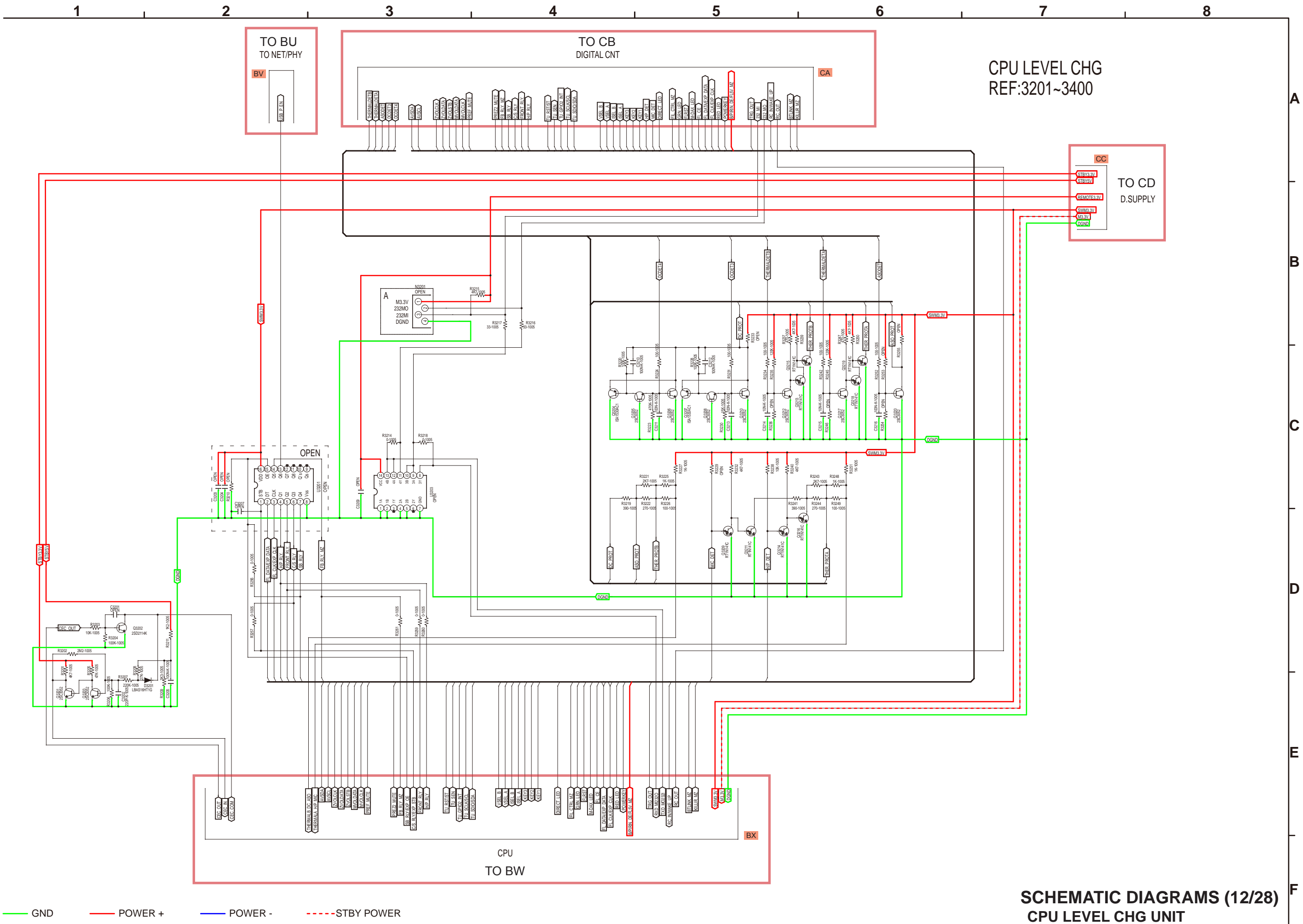


TO CPU  
TO BN  
BM

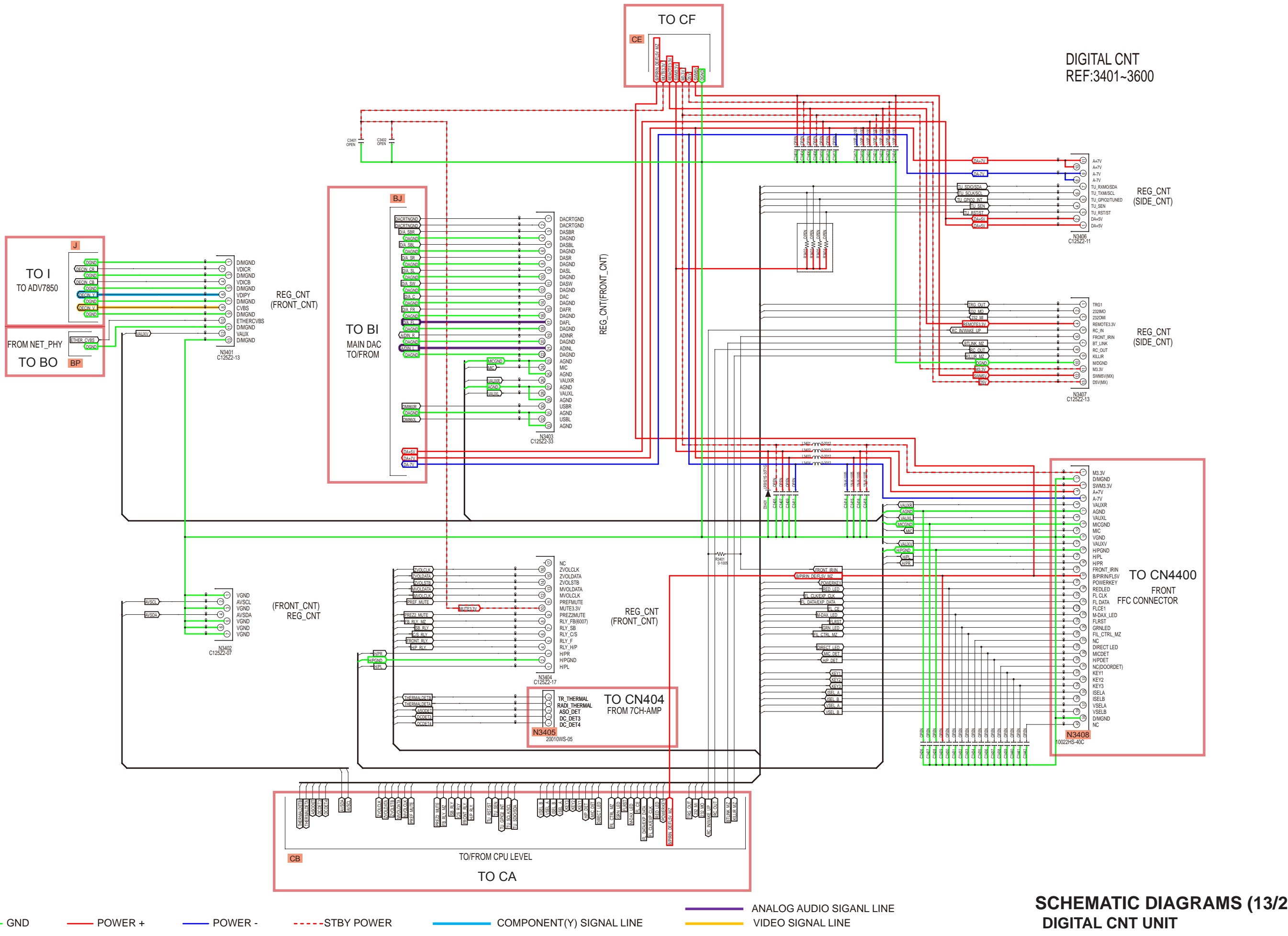
SCHEMATIC DIAGRAMS (10/28)  
NET PHY UNIT



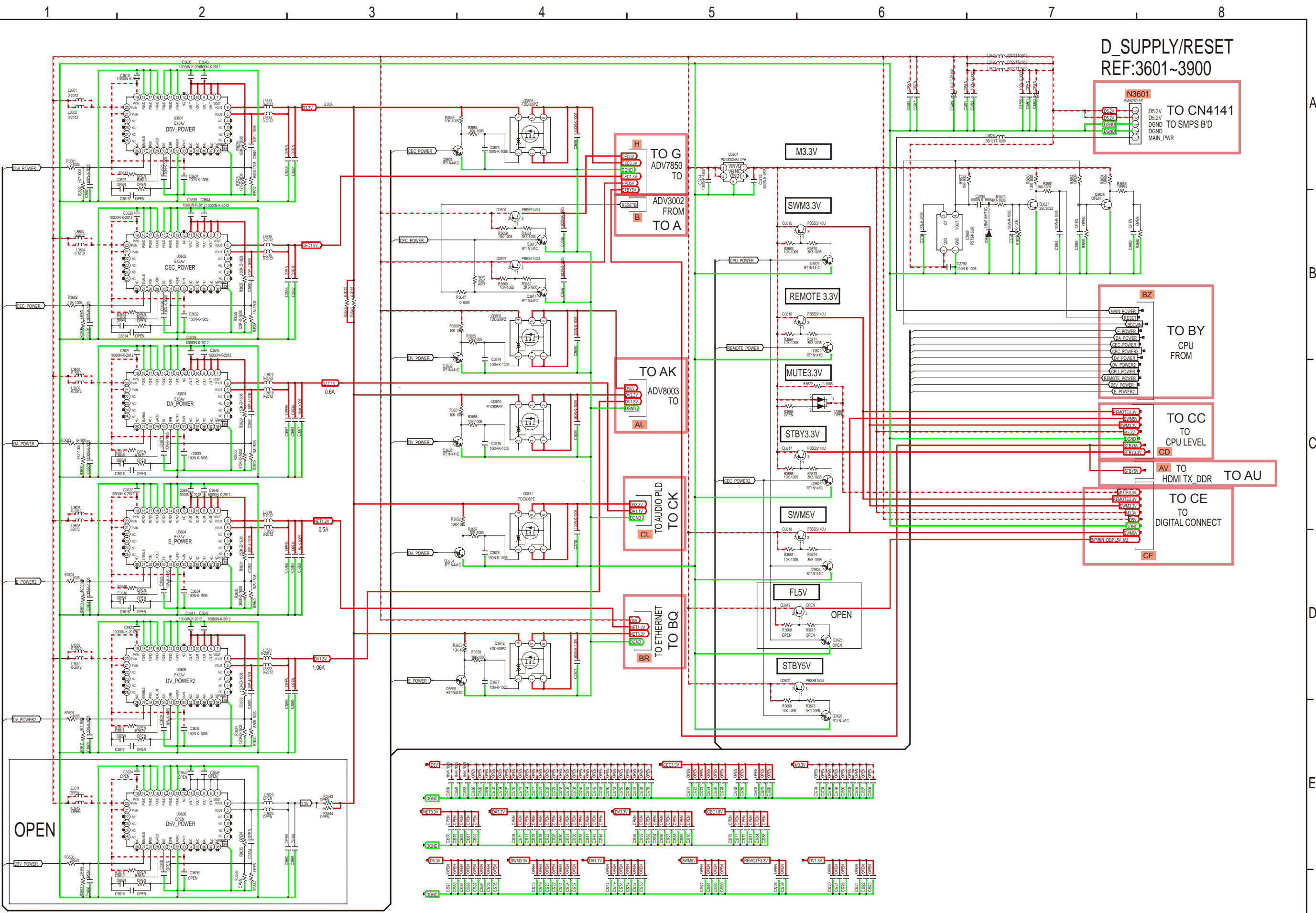
**SCHEMATIC DIAGRAMS (11/28)**  
**CPU UNIT**



**SCHEMATIC DIAGRAMS (12/28)**  
**CPU LEVEL CHG UNIT**



**SCHEMATIC DIAGRAMS (13/28)**  
**DIGITAL CNT UNIT**

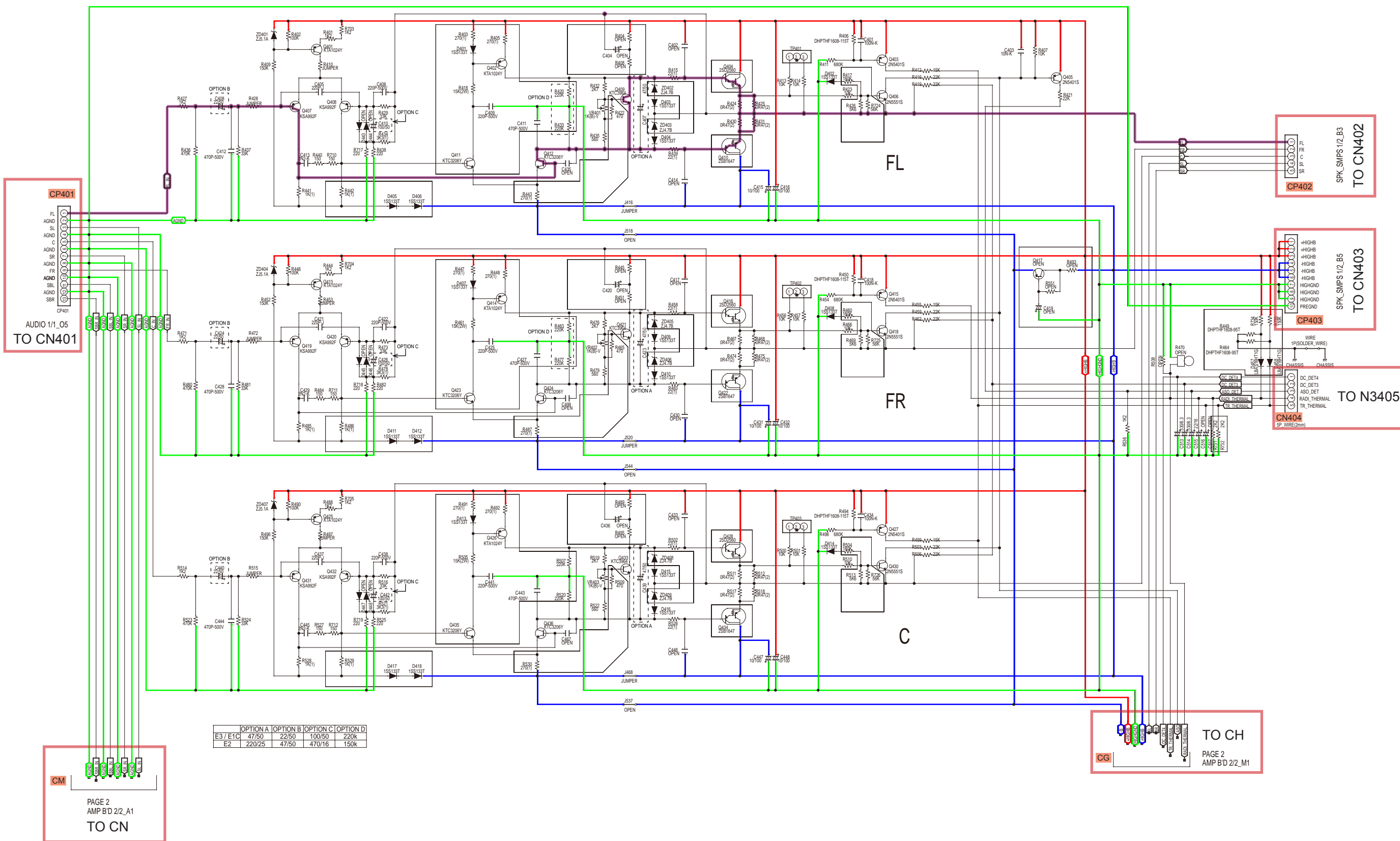


D\_SUPPLY/RESET  
REF:3601~3900

SCHEMATIC DIAGRAMS (14/28)  
D.SUPPLY/RESET UNIT



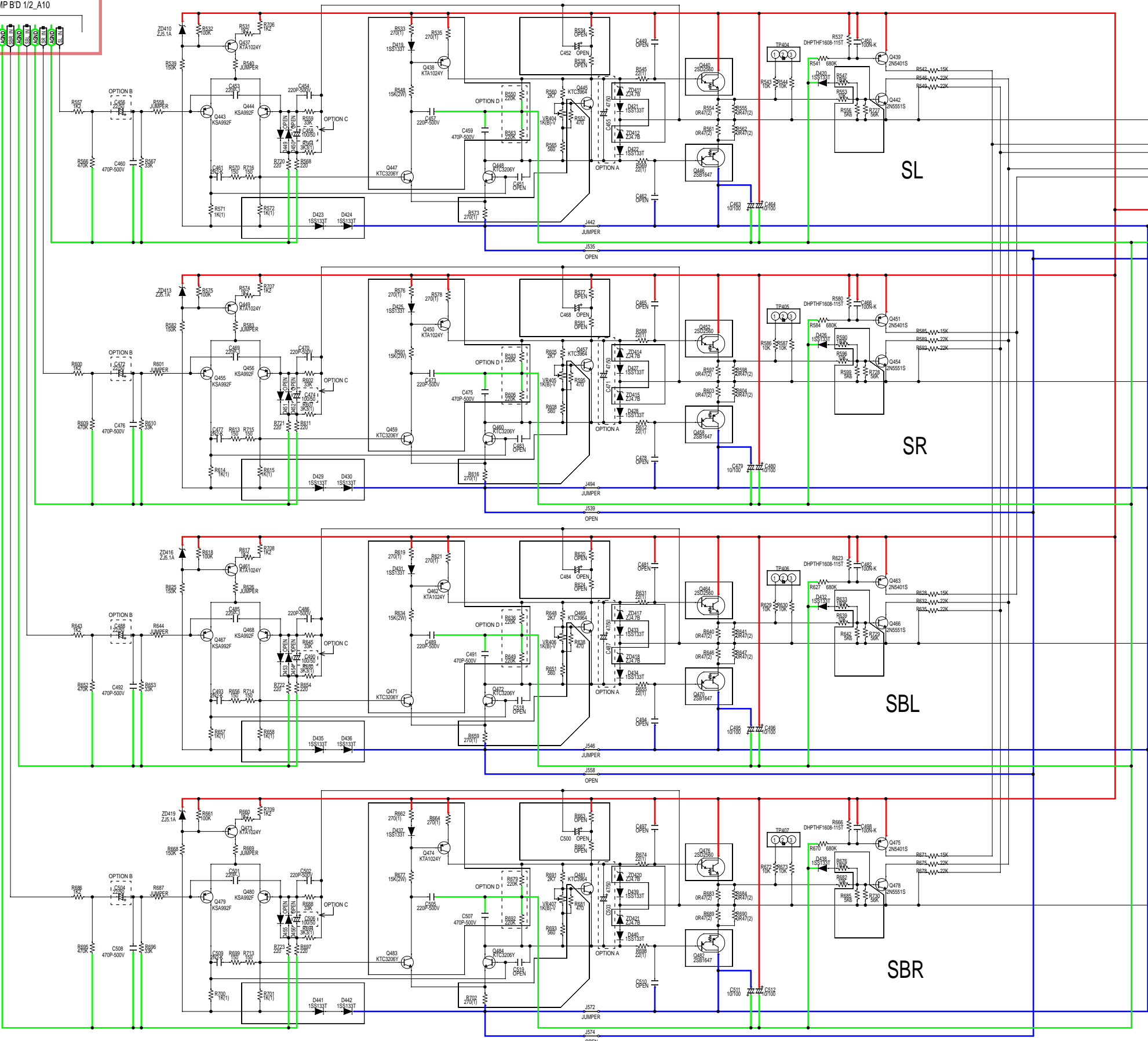
AMP B'D 1/2



— GND    — POWER +    — POWER -    - - - STBY POWER    — ANALOG AUDIO SIGNAL LINE

TO CM  
PAGE 2  
AMP BD 1/2\_A10  
CN

TO CG  
PAGE 2  
AMP BD 1/2\_M10  
CH



AMP B'D 2/2

	OPTION A	OPTION B	OPTION C	OPTION D
E3 / E1C	47/50	22/50	100/50	220k
E2	220/25	47/50	470/16	150k

SBL  
SBR  
CP405  
SPK\_SMPs 1/2\_B4  
TO CN405

— GND    — POWER +    — POWER -    - - - STBY POWER

SCHMATIC DIAGRAMS (16/28)  
7CH-AMP UNIT (2/2)

# SPK\_SMPS 1/2

## SPEAKER B'D

	E3 / E1C	E2
R4002	10(1W)	10(1.5W)
R4004	10(1W)	10(1.5W)
R4006	10(1W)	10(1.5W)
R4008	10(1W)	10(1.5W)
R4010	10(1W)	10(1.5W)
R4012	10(1W)	10(1.5W)
R4014	10(1W)	10(1.5W)

**TO CP402**  
7CH\_AMP BOARD  
7CH\_AMP 1/2 O3

FL FR C SL SR  
CN402  
5P\_WIRE(2.5mm)

**TO CP405**  
7CH\_AMP BOARD  
7CH\_AMP 2/2 N9

SBL SBLGND SBR  
CN405  
3P\_WIRE(2.5mm)

**TO CP403**  
7CH\_AMP BOARD  
7CH\_AMP 1/2 O5

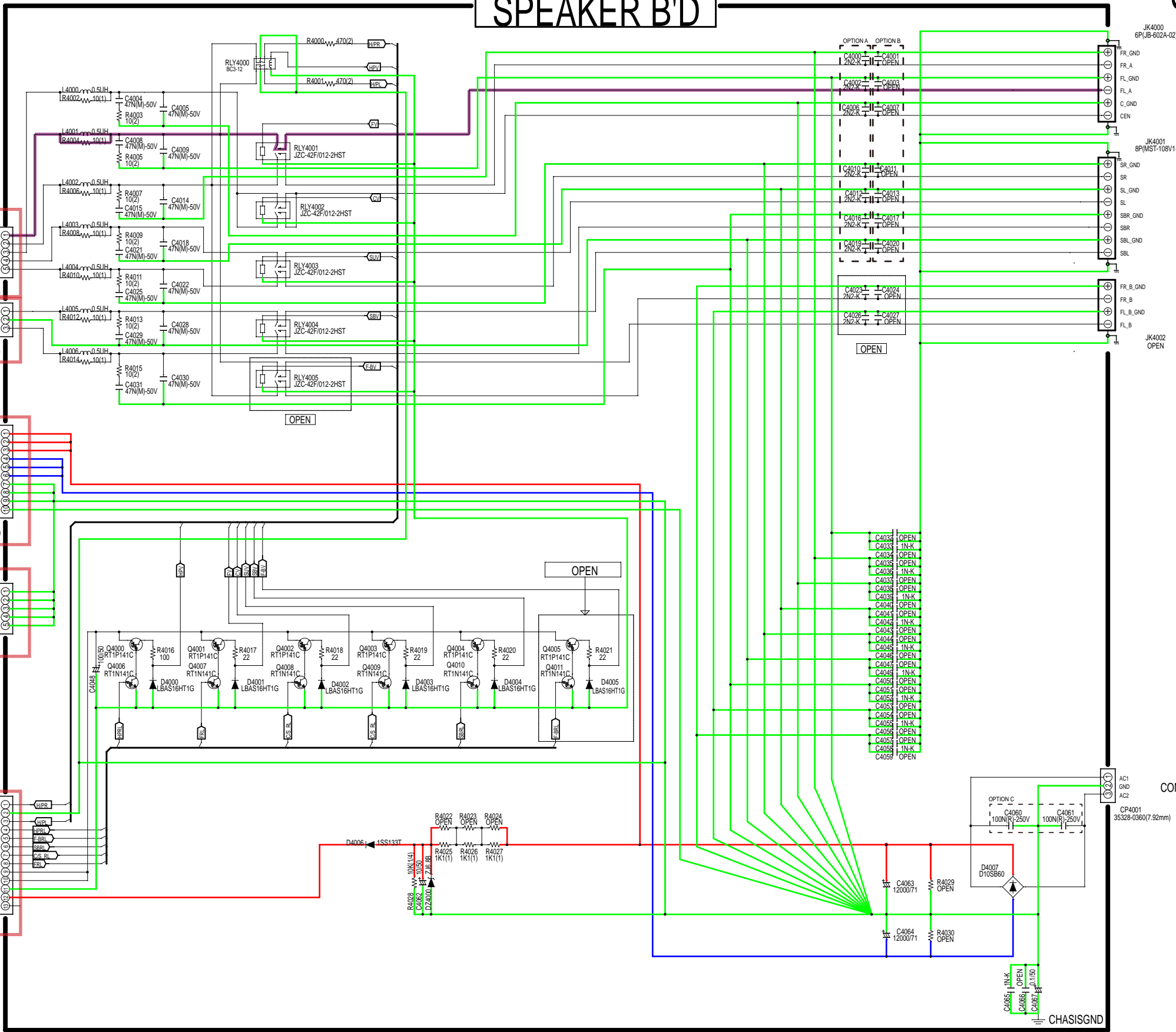
+HIGHB  
+HIGHB  
+HIGHB  
+HIGHB  
+HIGHB  
+HIGHB  
+HIGHB  
HIGHGND  
HIGHGND  
HIGHGND  
PREGND  
CN403  
10P\_WIRE(2mm)

**TO CN4000**  
SMPS BOARD  
SPK\_SMPS 2/2 N5

TUC-POSP  
CP4000

**TO CN4002**  
7.2ch PREOUT BOARD  
VIDEO\_PREOUT\_TU 3/3 C8

HP\_R HPGNL HP\_L  
RLY\_HP RLY\_FB RLY\_SB  
RLY\_SC RLY\_F RLY+B  
RLY+R RLYGND  
MUTE+V NC  
CN4002  
20010WS-11P



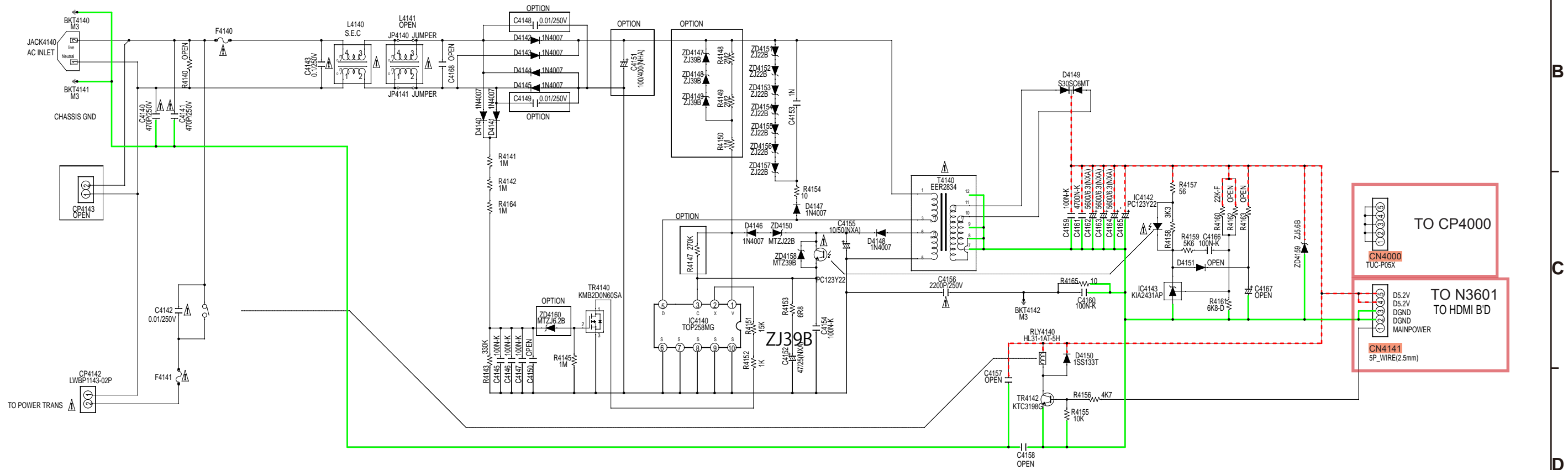
	OPTION A	OPTION B	OPTION C
E3 / E1C	0.01/200	OPEN	0.1/250
E2	OPEN	0.01/100	0.1/100

- C4032 OPEN
- C4033 IN-K
- C4034 OPEN
- C4035 IN-K
- C4037 OPEN
- C4038 OPEN
- C4039 IN-K
- C4040 OPEN
- C4041 OPEN
- C4042 IN-K
- C4043 OPEN
- C4044 IN-K
- C4045 OPEN
- C4046 IN-K
- C4047 OPEN
- C4048 IN-K
- C4049 OPEN
- C4050 IN-K
- C4051 OPEN
- C4052 IN-K
- C4053 OPEN
- C4054 IN-K
- C4055 OPEN
- C4056 IN-K
- C4057 OPEN
- C4058 IN-K
- C4059 OPEN

— GND   
 — POWER +   
 — POWER -   
 - - - STBY POWER   
 — ANALOG AUDIO SIGNAL LINE

**SCHEMATIC DIAGRAMS (17/28)**  
**SPK\_SMPS UNIT (1/2)**

SMPS B'D



FUSE OPTION

	E3		E2, E1C	
	F4140	F4141	F4140	F4141
AVR2313	2A	6.3A	1.6A	3.15A

OPTION TABLE

	ZD4160	ZD4147	ZD4148	ZD4149	R4148	R4149	R4150	R4147	C4148	C4149	C4151
E3	MTZJ6.2B	ZJ39B	ZJ39B	ZJ39B	2M2 (5)	2M2 (5)	1M (5)	270K	OPEN	OPEN	100/200
E2,E1C	MTZJ16B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	56K	0.01	0.01	100/400

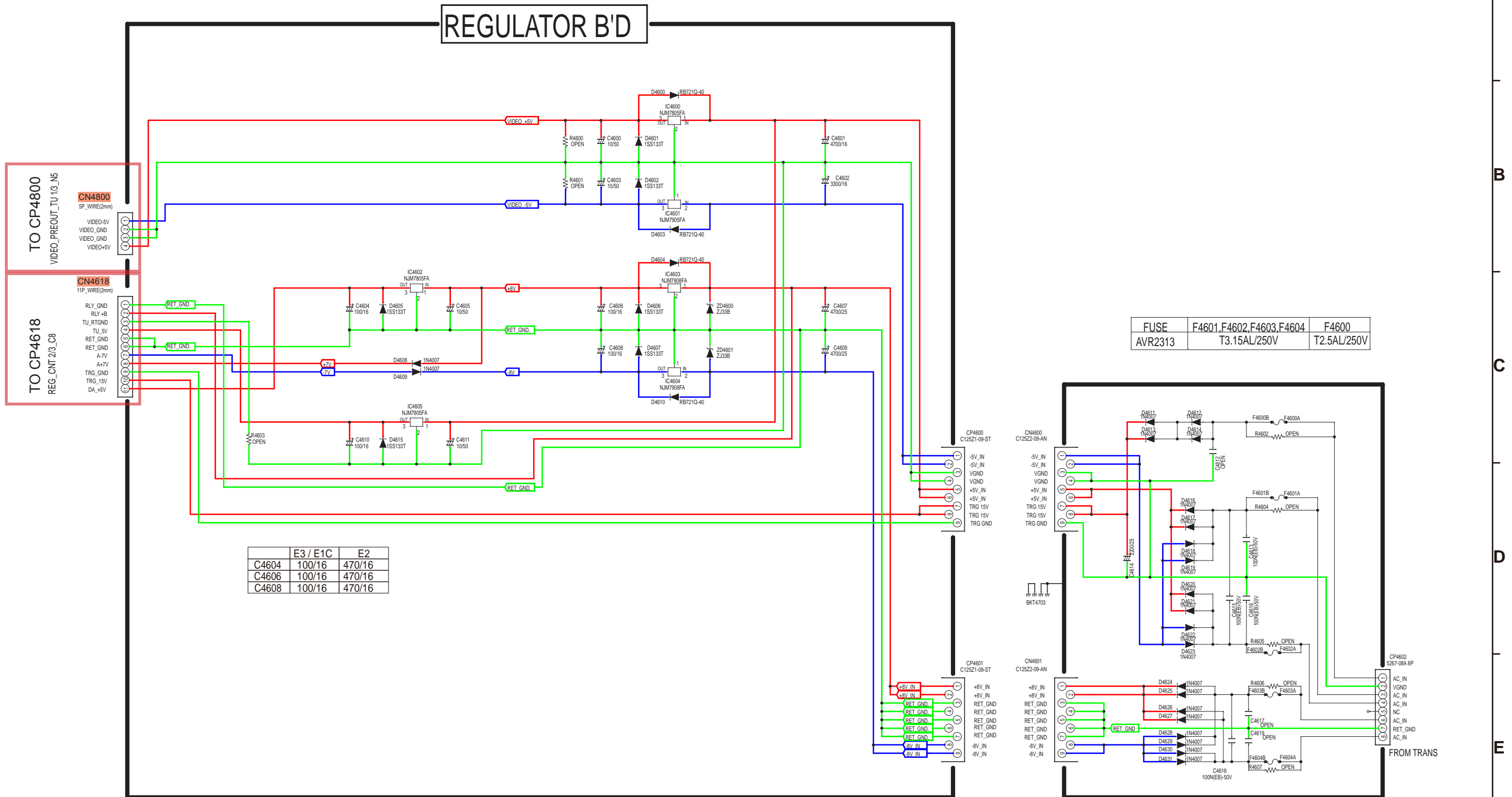
	E3/E1C	E2
T4140 SHIELD CASE	X	O

⚠ INDICATES SAFETY CRITICAL COMPONENTS. TO REDUCE THE RISK OF ELECTRIC SHOCK, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHALL BE CARRIED OUT ( EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT ) BEFORE THE APPLIANCE RETURNED TO THE CUSTOMER.

— GND    — POWER +    — POWER -    - - - - STBY POWER

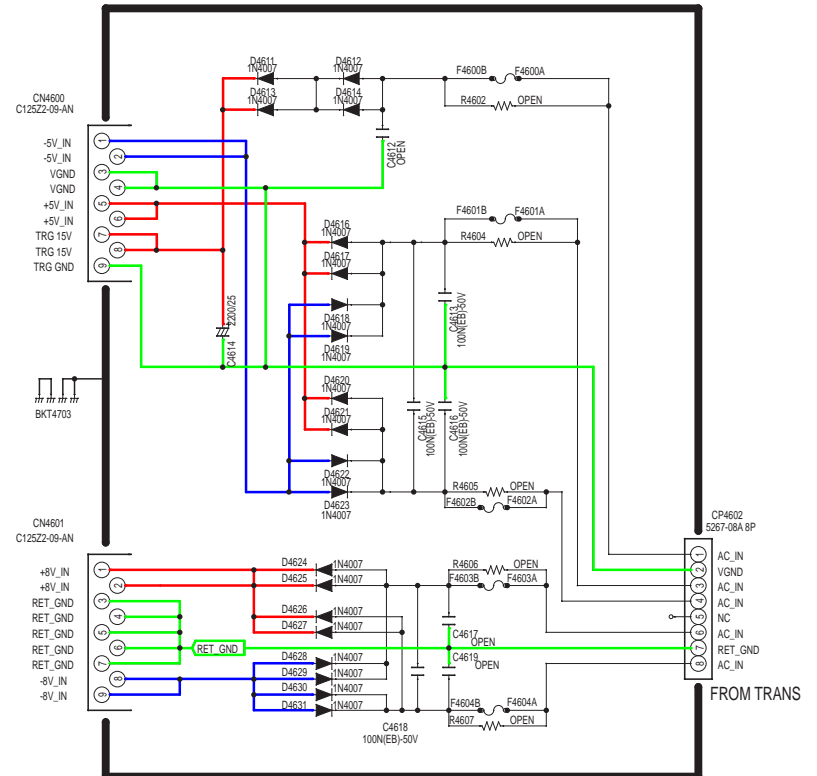
# REG\_CNT\_RS232\_RC-5 1/4

## REGULATOR B'D



FUSE	F4601, F4602, F4603, F4604	F4600
AVR2313	T3.15AL/250V	T2.5AL/250V

	E3 / E1C	E2
C4604	100/16	470/16
C4606	100/16	470/16
C4608	100/16	470/16

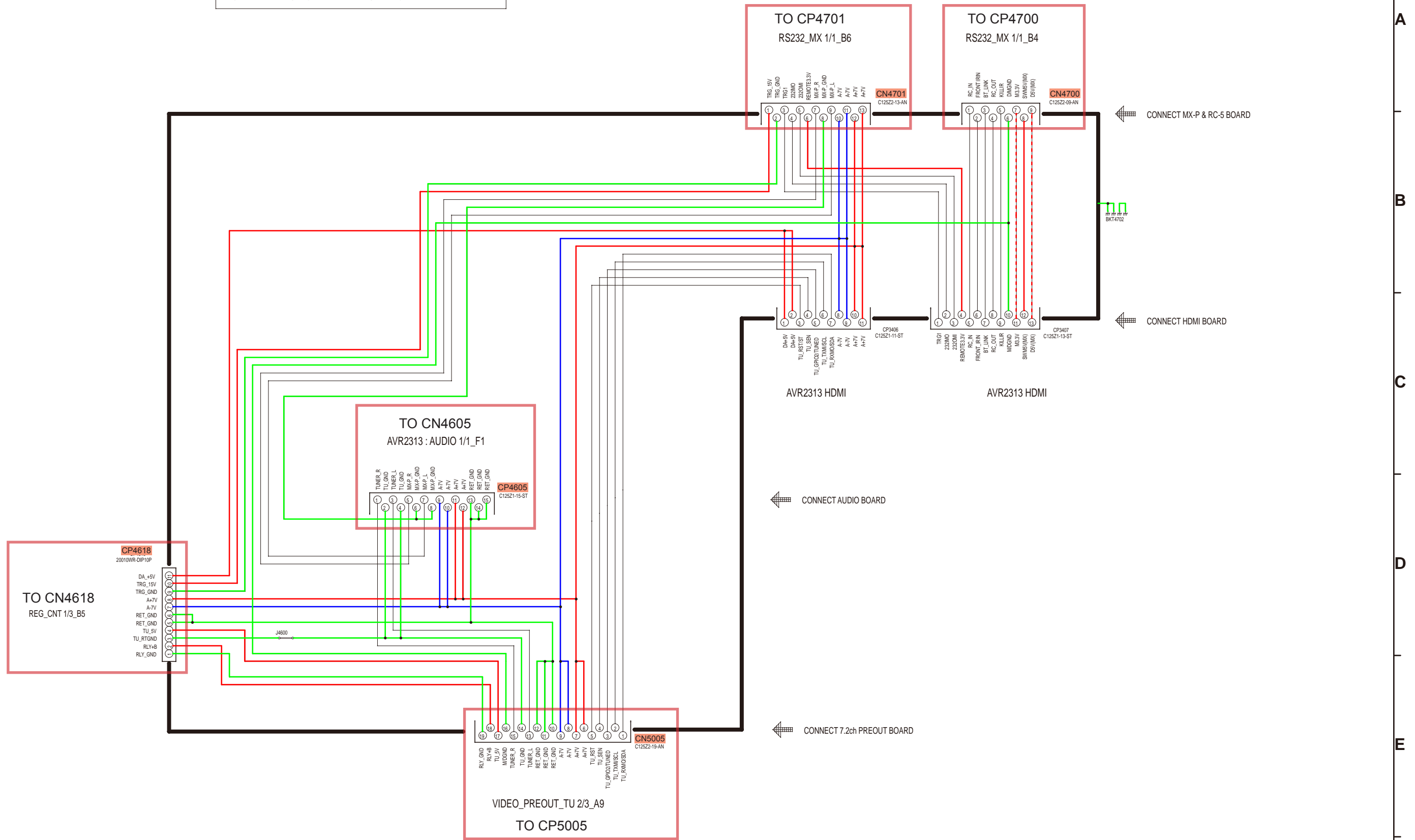


— GND     
 — POWER +     
 — POWER -     
 — STBY POWER

**SCHEMATIC DIAGRAMS (19/28)**  
**REG\_CNT\_RS232\_RC-5 UNIT (1/4)**

SIDE CONNECTOR

REG\_CNT\_RS232\_RC-5 2/4



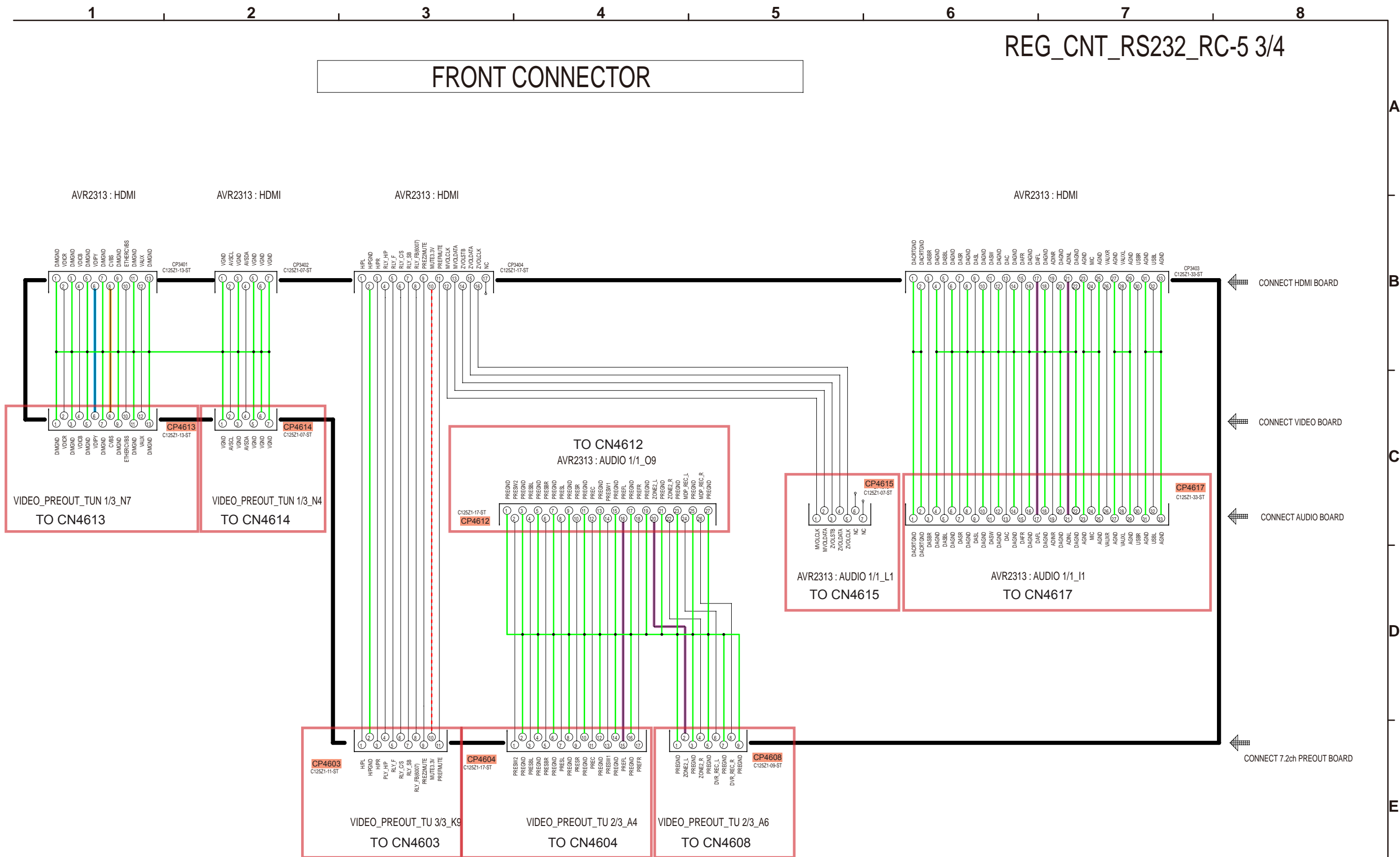
A  
B  
C  
D  
E  
F

— GND    — POWER +    — POWER -    - - - STBY POWER

**SCHEMATIC DIAGRAMS (20/28)**  
REG\_CNT\_RS232\_RC-5 UNIT (2/4)

# FRONT CONNECTOR

REG\_CNT\_RS232\_RC-5 3/4

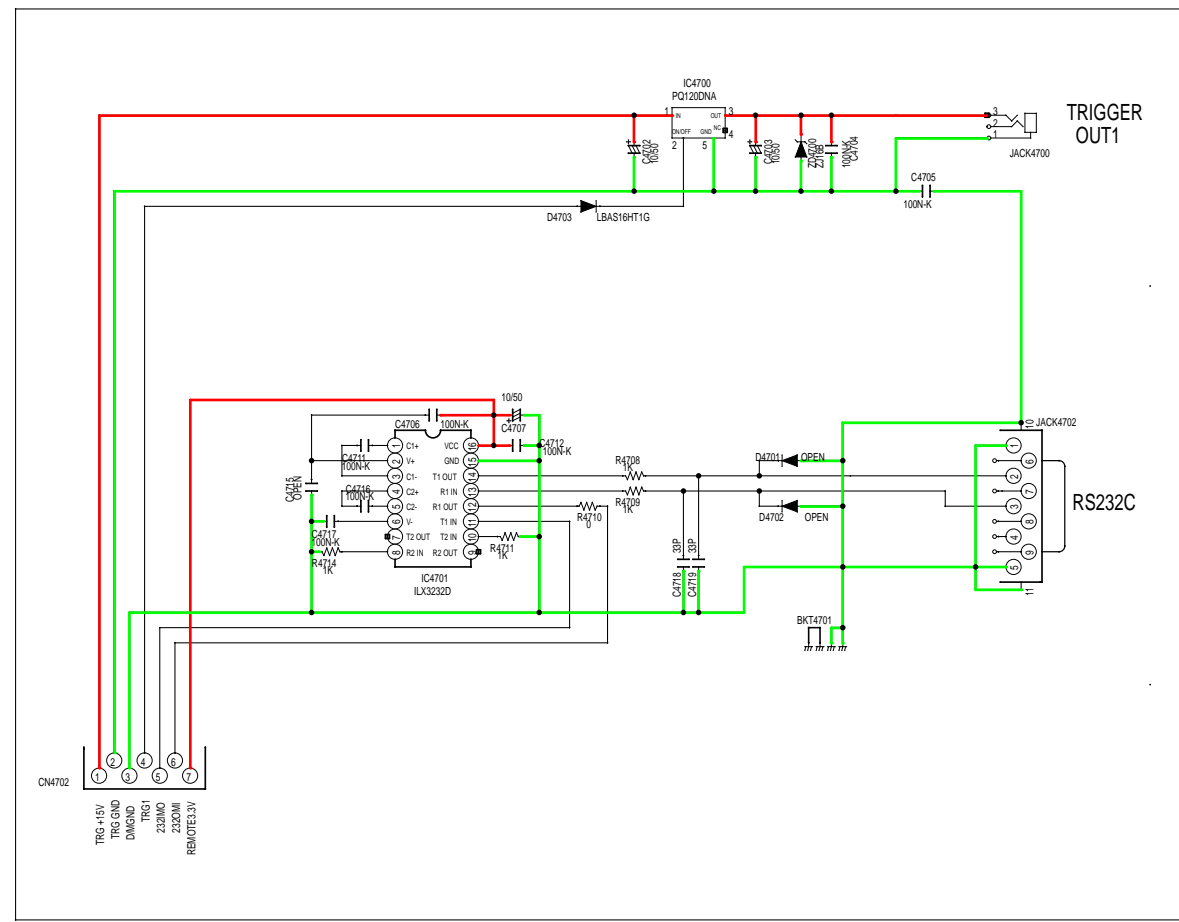
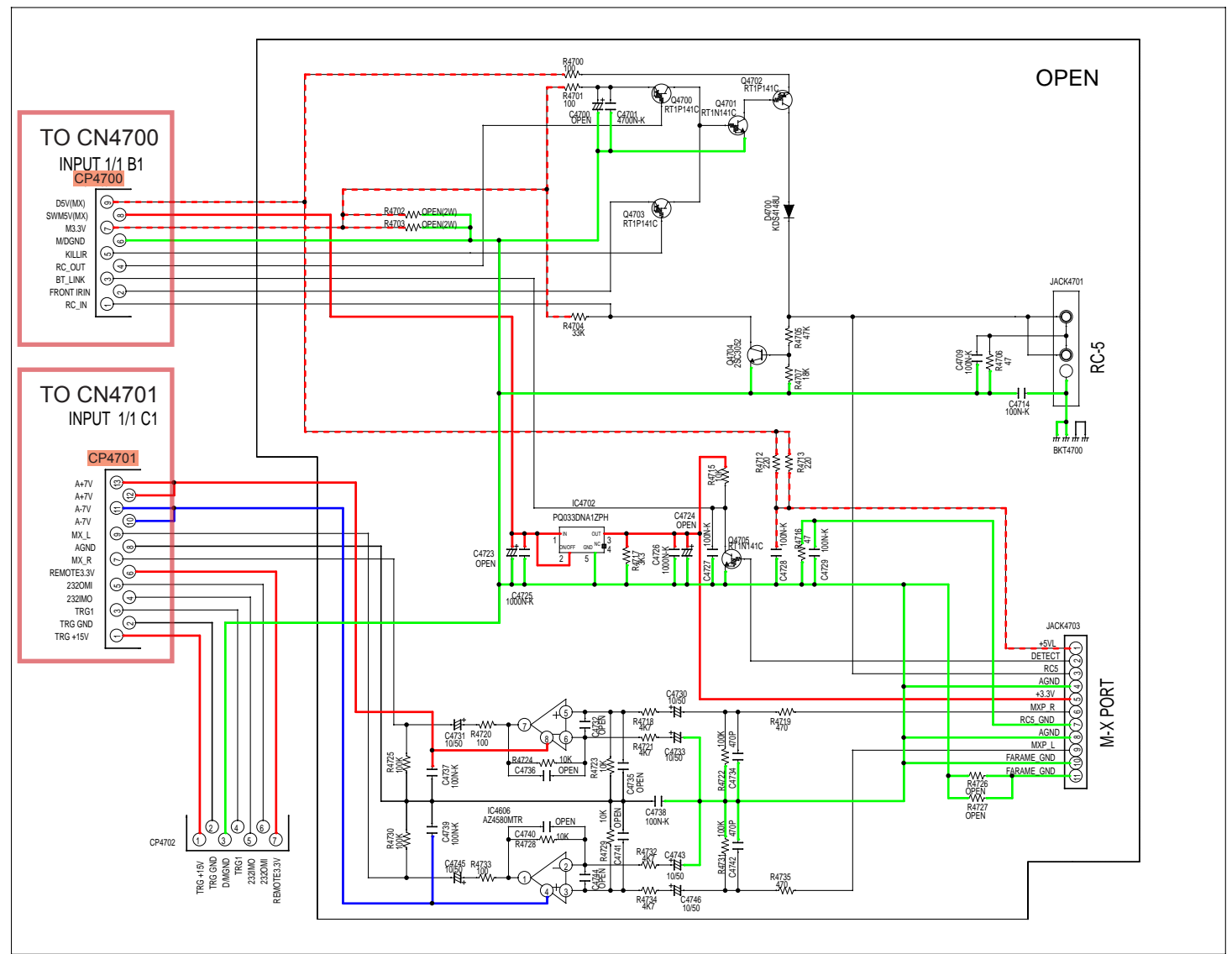


— GND   
 — POWER +   
 — POWER -   
 - - - STBY POWER   
 — ANALOG AUDIO SIGNAL LINE   
 — VIDEO SIGNAL LINE   
 — COMPONENT(Y) SIGNAL LINE

**SCHEMATIC DIAGRAMS (21/28)**  
REG\_CNT\_RS232\_RC-5 UNIT (3/4)

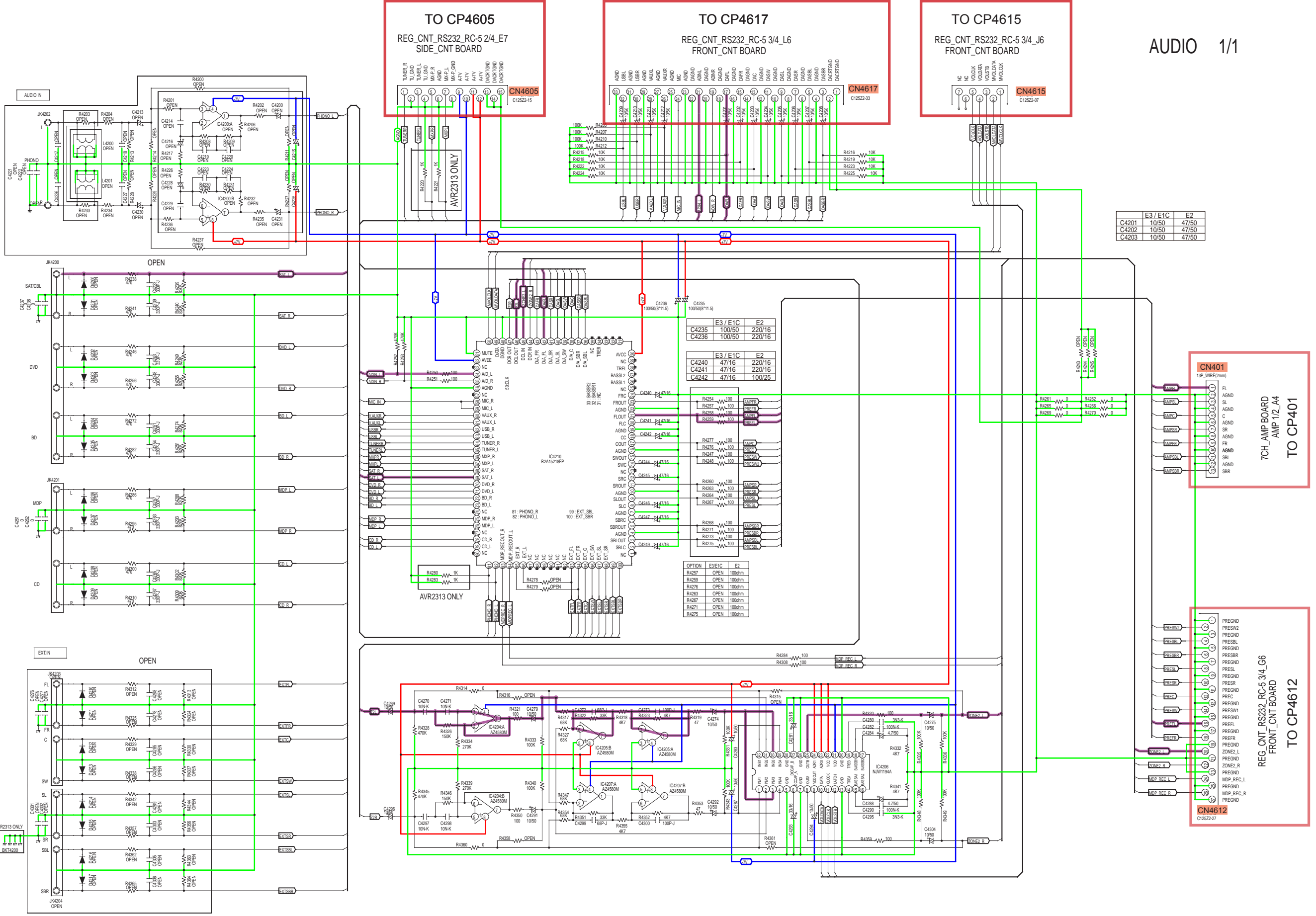
RC-5 / M-X PRAT

RS232 / TRI PART



— GND    — POWER +    — POWER -    - - - STBY POWER





	E3 / E1C	E2
C4201	10/50	47/50
C4202	10/50	47/50
C4203	10/50	47/50

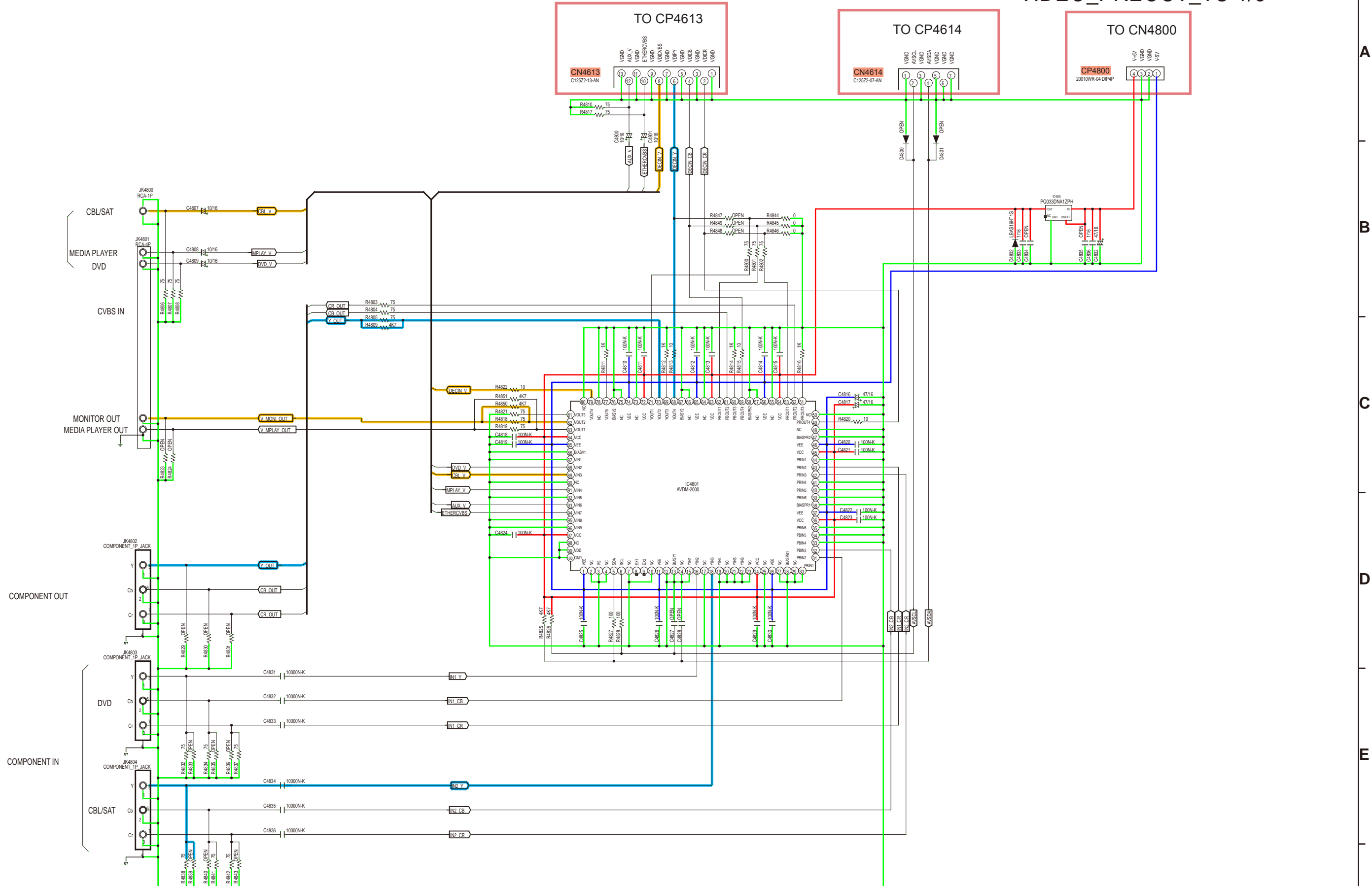
	E3 / E1C	E2
C4235	100/50	220/16
C4236	100/50	220/16

	E3 / E1C	E2
C4240	47/16	220/16
C4241	47/16	220/16
C4242	47/16	100/25

OPTION	E3/E1C	E2
R4257	OPEN	100ohm
R4259	OPEN	100ohm
R4276	OPEN	100ohm
R4283	OPEN	100ohm
R4287	OPEN	100ohm
R4271	OPEN	100ohm
R4275	OPEN	100ohm

**SCHEMATIC DIAGRAMS (23/28)**  
AUDIO UNIT

VIDEO\_PREOUT\_TU 1/3



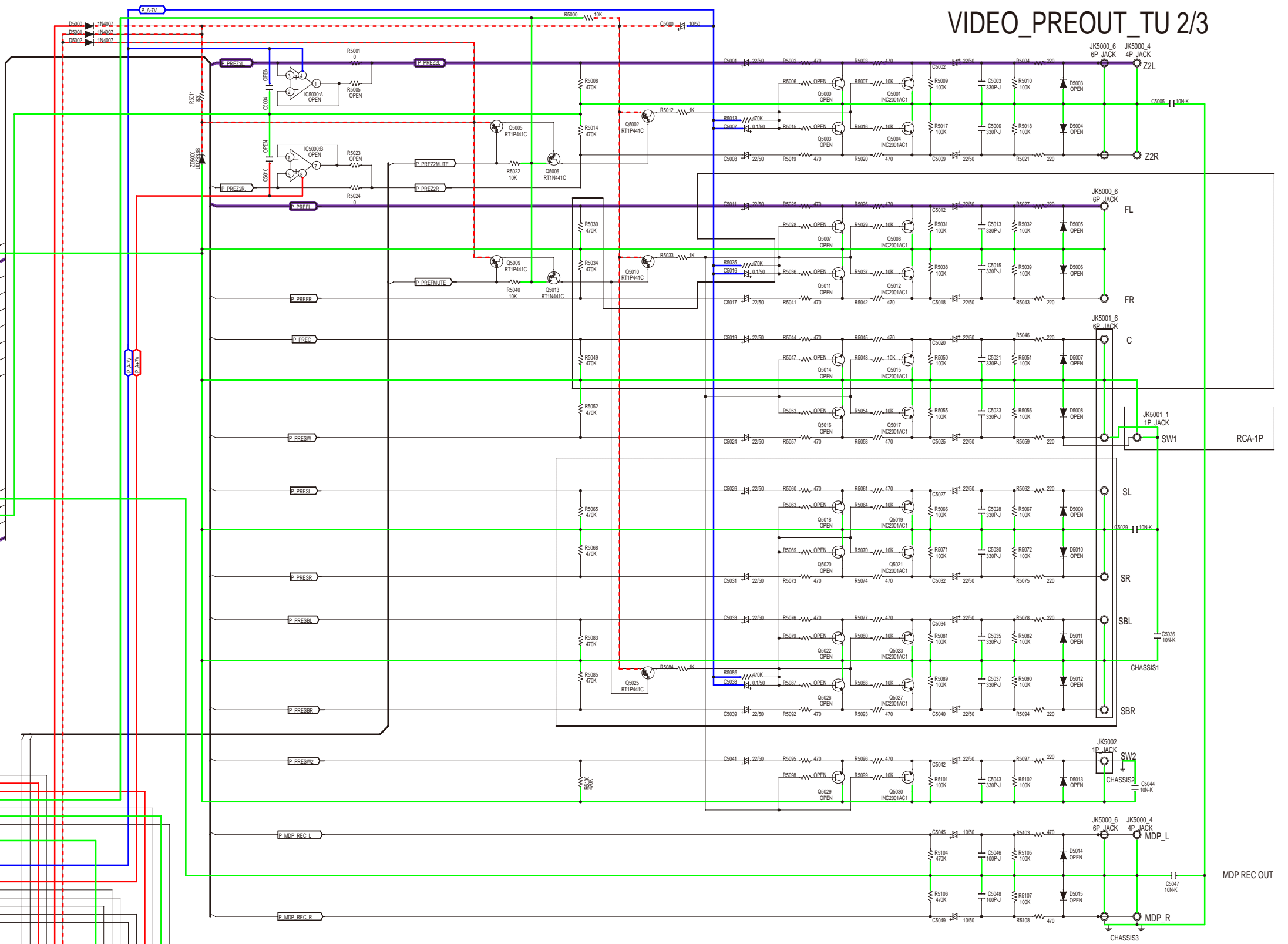
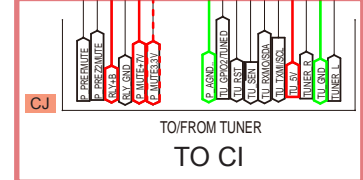
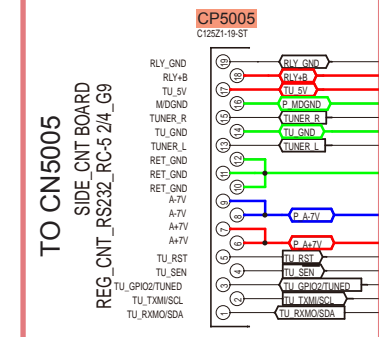
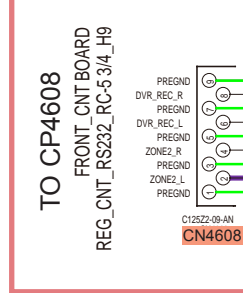
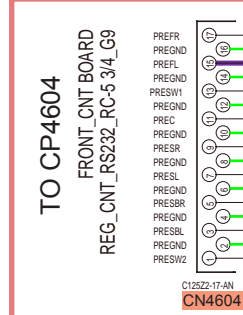
A  
B  
C  
D  
E  
F

— GND   
 — POWER +   
 — POWER -   
 — VIDEO SIGNAL LINE   
 — COMPONENT(Y) SIGNAL LINE   
 - - - STBY POWER

**SCHEMATIC DIAGRAMS (24/28)**  
VIDEO\_PREOUT\_TU UNIT (1/3)

1 2 3 4 5 6 7 8

# VIDEO\_PREOUT\_TU 2/3



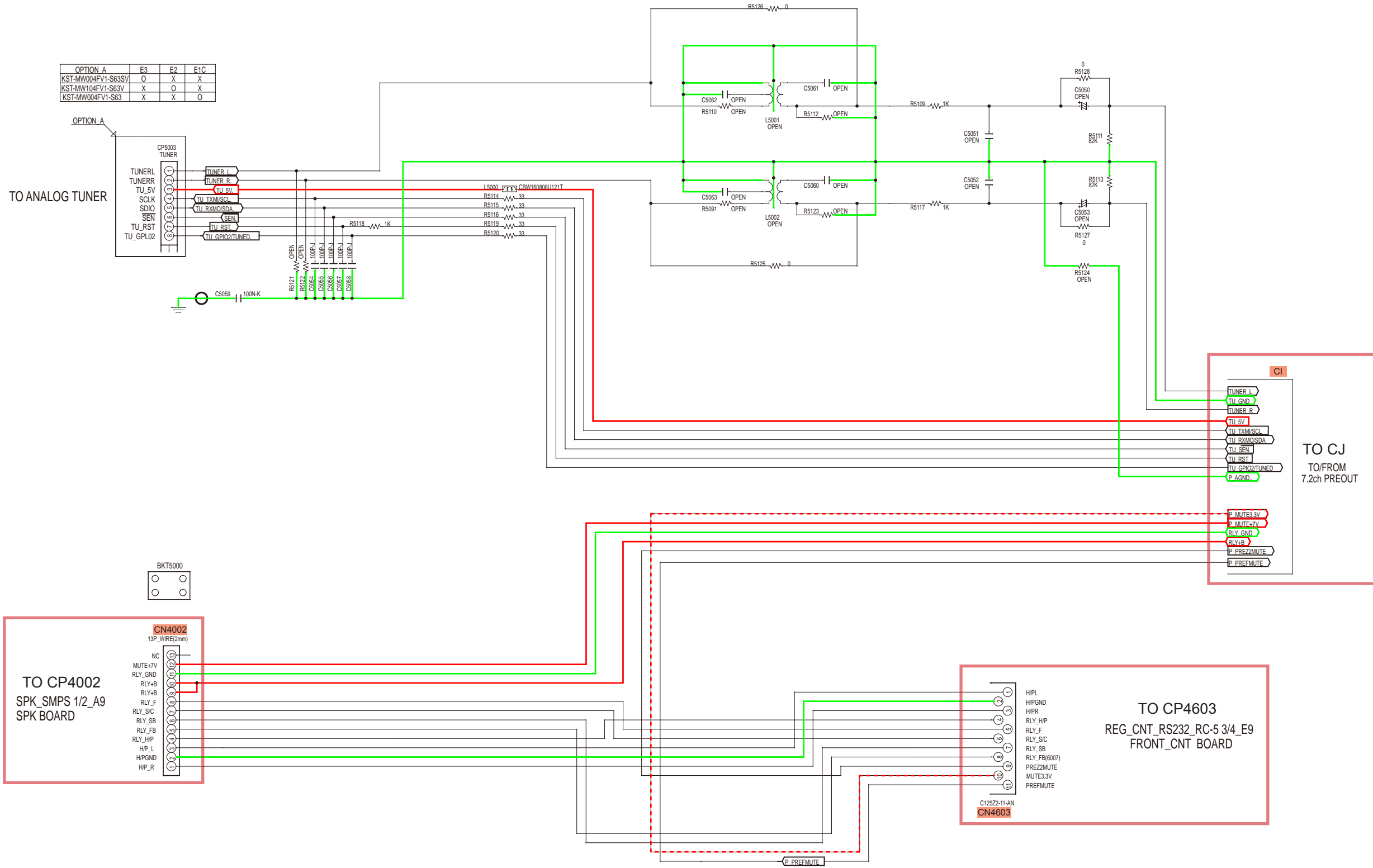
— GND    
 — POWER +    
 — POWER -    
 — ANALOG AUDIO SIGNAL LINE    
 - - - - - STBY POWER

**SCHEMATIC DIAGRAMS (25/28)**  
**VIDEO\_PREOUT\_TU UNIT (2/3)**

VIDEO\_PREOUT\_TU 3/3

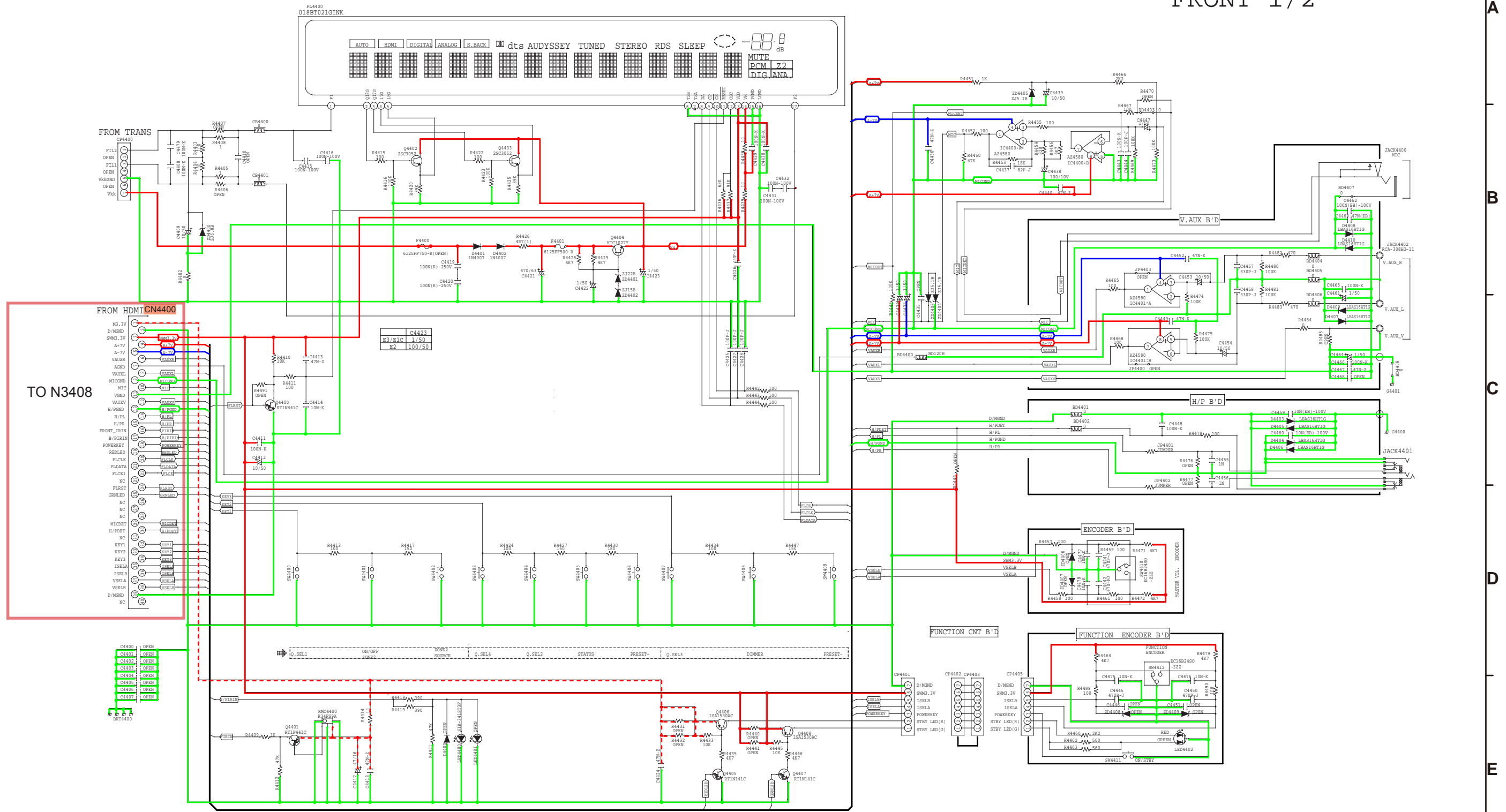
A  
B  
C  
D  
E  
F

OPTION A	E3	E2	E1C
KST-MW004FV1-S63SV	O	X	X
KST-MW104FV1-S63V	X	O	X
KST-MW004FV1-S63	X	X	O



**SCHEMATIC DIAGRAMS (26/28)**  
**VIDEO\_PREOUT\_TU UNIT (3/3)**

FRONT 1/2



— GND   
 — POWER +   
 — POWER -   
 — STBY POWER

**SCHEMATIC DIAGRAMS (27/28)**  
**FRONT UNIT (1/2)**

A

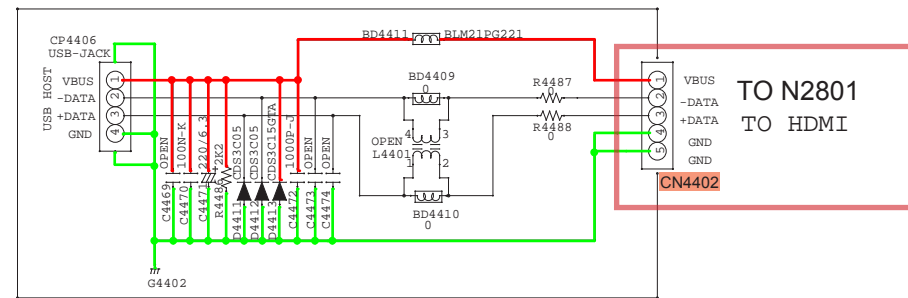
B

C

D

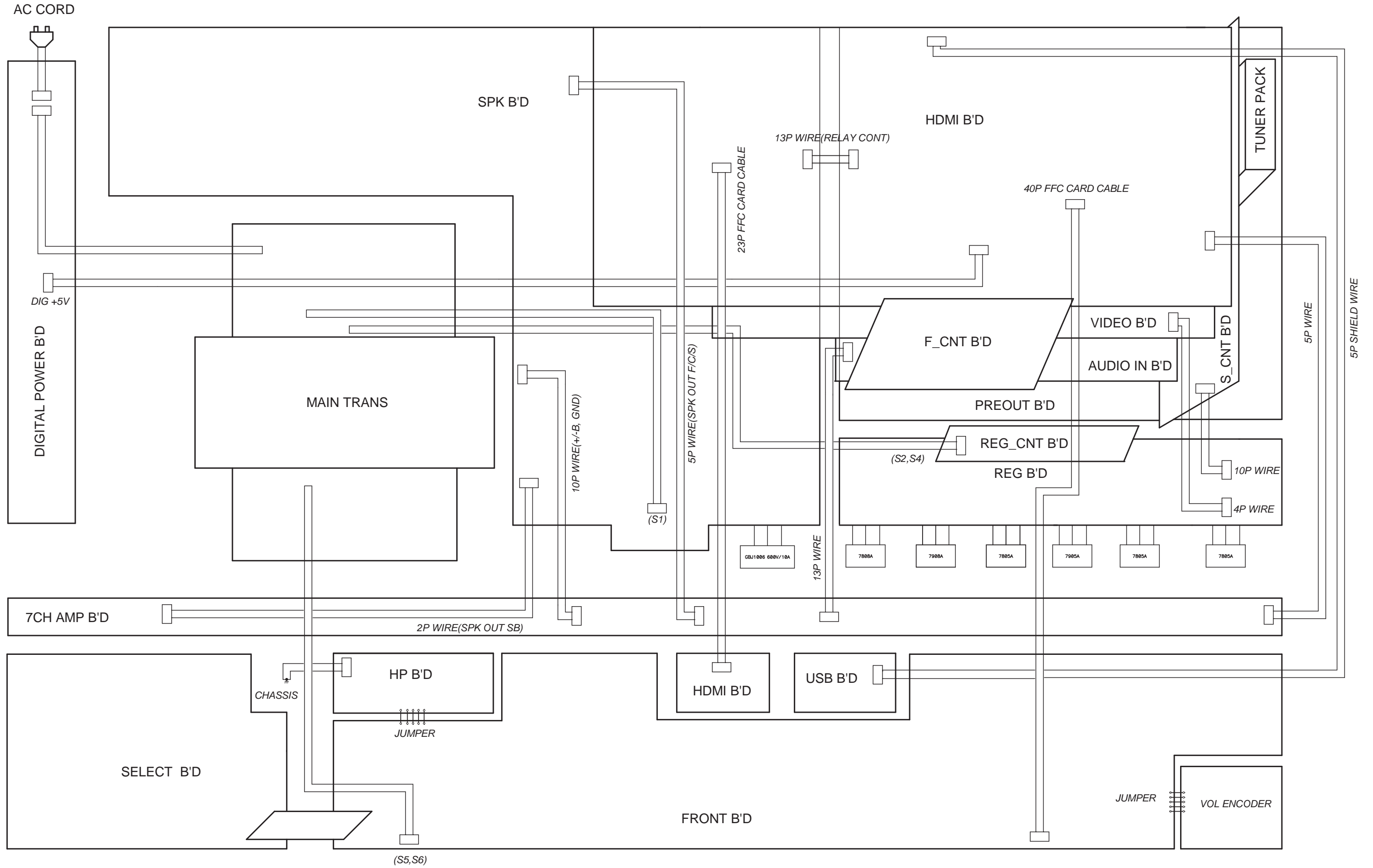
E

F

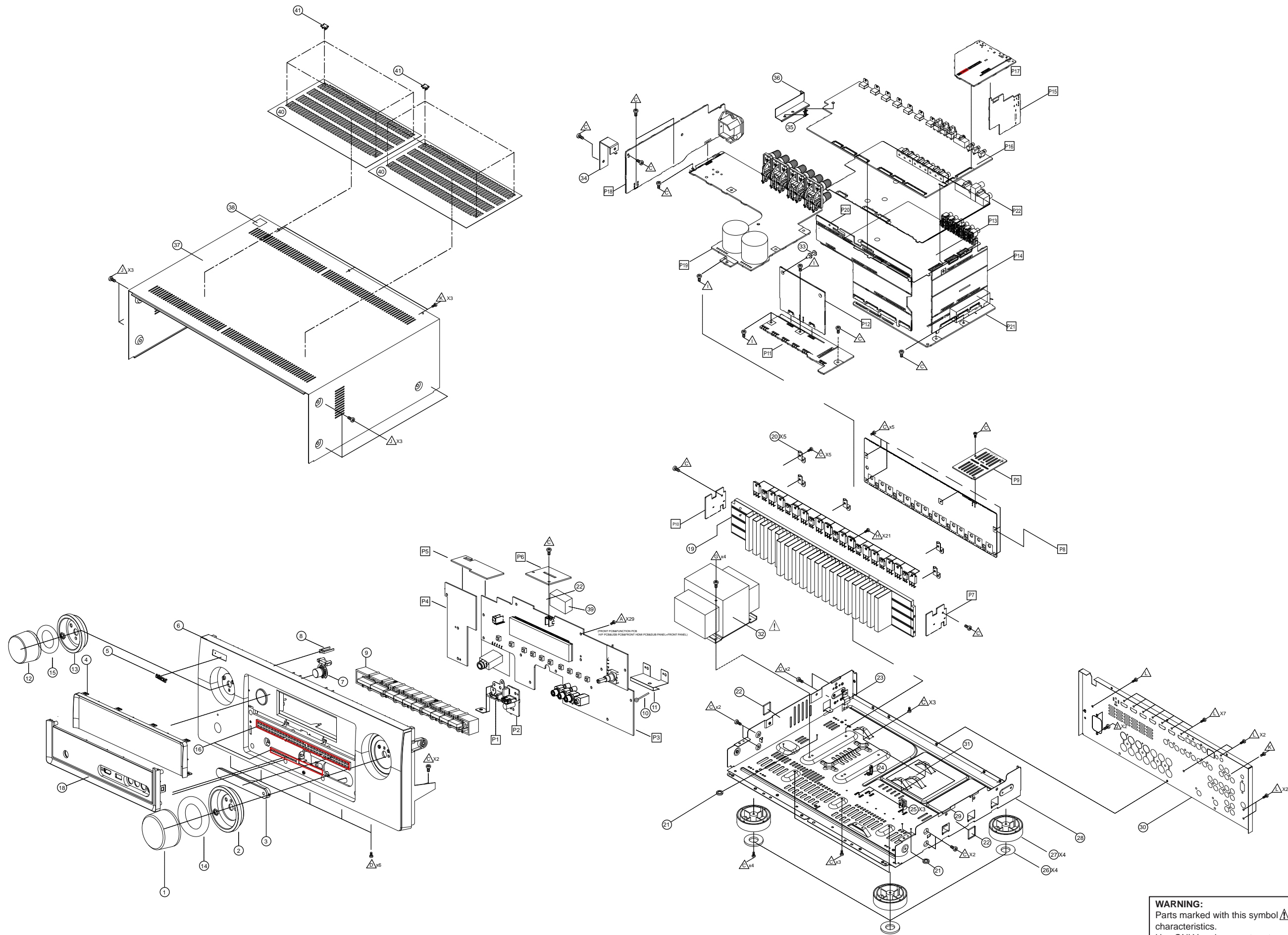


— GND    — POWER +    — POWER -    - - - STBY POWER

# WIRING DIAGRAM



# EXPLODED VIEW



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



# PARTS LIST OF EXPLODED VIEW

\*Parts indicated by "nsp" on this table cannot be supplied.

\*PCB ASS'Y indicated by "nsp" on this table cannot be supplied. When repairing the PCB ASS'Y, check the board parts list and order replacement parts.

\*Parts indicated by the "★" mark are not illustrated in the exploded view.

\*The parts listed below are only for maintenance. Therefore they might differ from the parts used in the unit in appearances or dimensions.

NOTE: The symbols in the column "Remarks" indicate the following destinations.

E3 : U.S.A. & Canada model

E2 : Europe model

E1C : China model

BK : Black model

SP : Premium Silver model

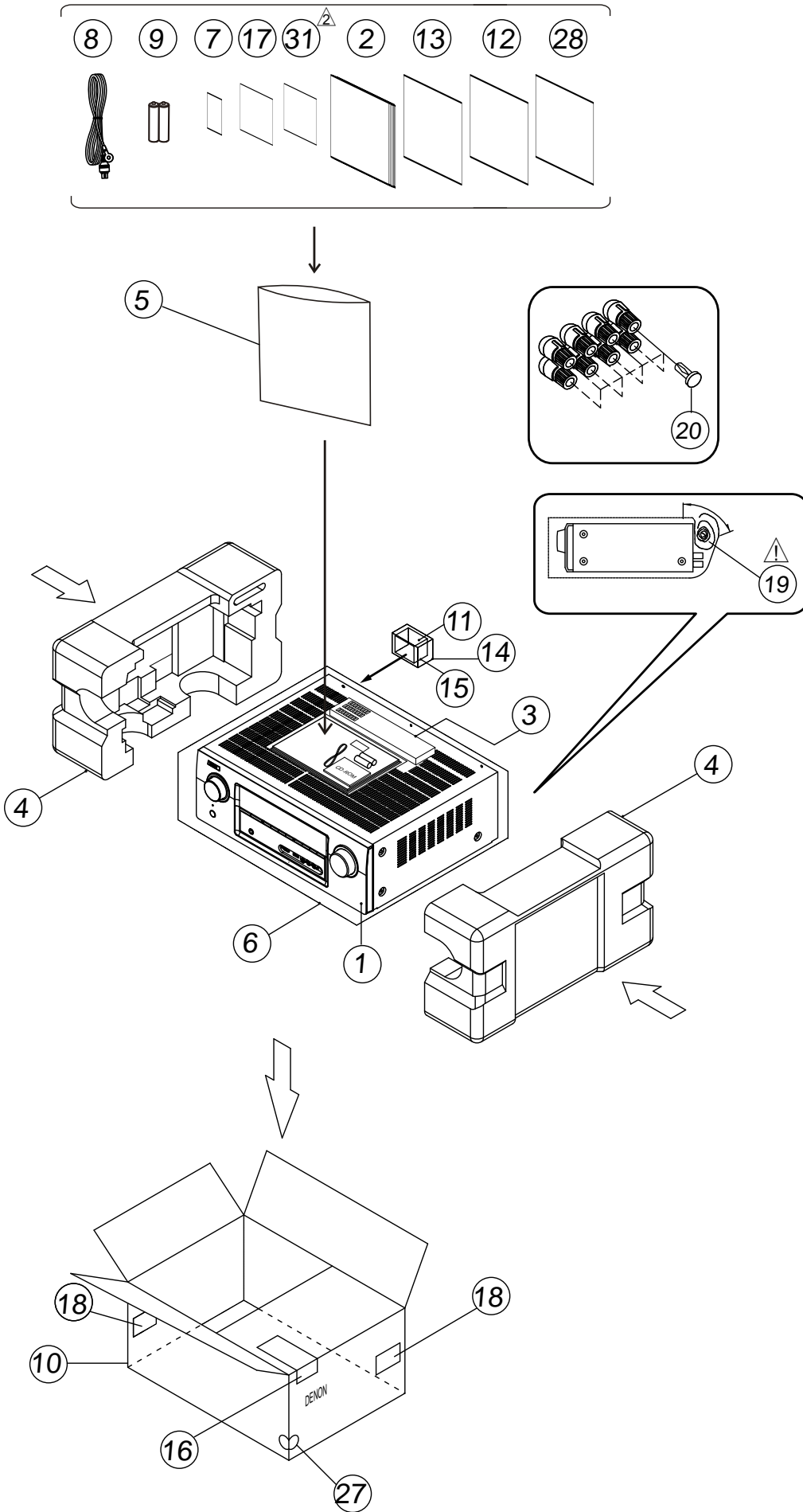
NOT FIXED : Update will be next version

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New	
P8	nsp	7CH_AMP PCB ASSY	E3	7025HK1113010	1	*
P8	nsp	7CH_AMP PCB ASSY	E2	7025HK1113020	1	*
P8	nsp	7CH_AMP PCB ASSY	E1C	7025HK1113030	1	*
P18A	nsp	SPK PCB ASSY	E3	7025HK1113011	1	*
P18A	nsp	SPK PCB ASSY	E2	7025HK1113021	1	*
P18A	nsp	SPK PCB ASSY	E1C	7025HK1113031	1	*
P18	-	PCB SMPS		-		
P19	-	PCB SPK		-		
P12A	nsp	REG_CNT PCB ASSY	E3	7025HK1113012	1	*
P12A	nsp	REG_CNT PCB ASSY	E2	7025HK1113022	1	*
P12A	nsp	REG_CNT PCB ASSY	E1C	7025HK1113032	1	*
P11	-	PCB REG		-		
P12	-	PCB REG_CNT		-		
P14	-	PCB SIDE_CNT		-		
P15	-	PCB RS232		-		
P17	-	PCB RC5_MXPORT		-		
P20	-	PCB FRONT_CNT		-		
P3A	nsp	FRONT PCB ASSY	E3	7025HK1113013	1	*
P3A	nsp	FRONT PCB ASSY	E2	7025HK1113023	1	*
P3A	nsp	FRONT PCB ASSY	E1C	7025HK1113033	1	*
P2	-	PCB USB		-		
P3	-	FRONT PCB ASSY		-		
P4	-	PCB FUNCTION		-		
P5	-	PCB CNT		-		
P6	-	PCB FRONT HDMI_GUIDE		-		
P7	-	PCB GUIDE_R		-		
P9	-	PCB TOP_GUIDE		-		
P10	-	PCB GUIDE_L		-		
P13	nsp	AUDIO PCB ASSY	E3	7025HK1113014	1	*
P13	nsp	AUDIO PCB ASSY	E2	7025HK1113024	1	*
P13	nsp	AUDIO PCB ASSY	E1C	7025HK1113034	1	*
P21A	nsp	VPT PCB ASSY	E3	7025HK1113015	1	*
P21A	nsp	VPT PCB ASSY	E2	7025HK1113025	1	*
P21A	nsp	VPT PCB ASSY	E1C	7025HK1113035	1	*
P21	-	PCB PREOUT		-		
P22	-	PCB VIDEO		-		

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	P16A	8U6391002600D	HDMI PCB ASSY	E3	7025HK1113016	1	*
	P16A	8U6391003500D	HDMI PCB ASSY	E2	7025HK1113026	1	*
	P16A	8U6391005100D	HDMI PCB ASSY	E1C	7025HK1113036	1	*
	P1	-	PCB F HDMI		-		
	P16	-	PCB HDMI		-		
	1	963412100860D	KNOB,VOLUME	BK	5080212661000S	1	*
	1	963412100870D	KNOB,VOLUME	SP	5087212661100S	1	*
	2	963424100310D	KNOB,RING VOLUME	BK	5080212681000S	1	*
	2	963424100320D	KNOB,RING VOLUME	SP	5087212681100S	1	*
	3	963419100470D	COVER RCA		4310215591000S	1	
	4	963416100760D	WINDOW,DISPLAY		5077213333020S	1	*
	5	42151002100AD	BADGE (BK)		5630210761000S	1	
	6	963402102340D	PANEL,FRONT	E3	3067215561010S	1	*
	6	963402102350D	PANEL,FRONT	E2	3067215561120S	1	*
	6	963402102360D	PANEL,FRONT	E1C	3067215561210S	1	*
	7	963411101800D	BUTTON-ASSY	BK	5098212361100SZ	1	
	7	963411101790D	BUTTON-ASSY	SP	5097212368100SZ	1	
	8	963481100240D	LENS		3710211283000S	1	
	9	963411101780D	BUTTON 10KEY		5090215001000S	1	
	10	nsp	CLAMP WIRE(MTG)		4330210189000S	1	
	11	nsp	PLATE AUX		4470212486000S	1	
	12	963412100880D	KNOB,FUNCTION	BK	5080212651000S	1	*
	12	963412100890D	KNOB,FUNCTION	SP	5087212651100S	1	*
	13	963424100330D	KNOB,RING FUNCTION	BK	5080212671000S	1	*
	13	963424100340D	KNOB,RING FUNCTION	SP	5087212671100S	1	*
	14	963451101190D	SHEET,RING VOLUME		1210211959000S	1	*
	15	963451101200D	SHEET,RING FUNCTION		1210211949000S	1	*
	16	nsp	TAPE,DOUBLE		A710000270000S		
	18	963443100510D	PANEL SUB		3067215571000S	1	
	19	nsp	HEAT SINK		2120212048000S	1	
	20	nsp	BRACKET HEAT SINK		4010056906010S	5	
	21	nsp	CUSHION SCREW		4050213025000S	3	
	22	nsp	CUSHION SIDE		4050213095000S	2	
	23	nsp	SIDE BRACKET		4010210686000S	1	
	24	nsp	SUPPORTER P.C.		4070210192000S	1	
	25	nsp	SUPPORTER P.C.		4070001601010S	3	
	26	00D9630214607	CUSHION FOOT		4050211295000S	4	
	27	963407100200D	FOOT		4000210261000S	4	
	28	nsp	CHASSIS,MAIN		3200213506800S	1	
	29	nsp	TAPE,ACETATE CLOTH		1220210059010S	1	
	30	nsp	CHASSIS,BACK	E3	3207214256000S	1	*
	30	nsp	CHASSIS,BACK	E2	3207214256100S	1	*
	30	nsp	CHASSIS,BACK	E1C	3207214256110S	1	*
	31	nsp	LABEL,LICENSE		5507000009670S	1	*
⚠	32	963101101600S	POWER TRANS	E3	8200960660810S	1	*
⚠	32	963101101610S	POWER TRANS	E2	8200960660820S	1	*
⚠	32	963101101620S	POWER TRANS	E1C	8200960660830S	1	*
	33	nsp	SPACER CARD		4300210062000S	1	
	34	nsp	SMPS BRACKET		401021488600DS	1	
	35	nsp	SUPPORTER(4.8mm)		4070211653000S	1	
	36	nsp	BRACKET HDMI		4010215226000S	1	
	37	963403100020S	CABINET TOP	BK	3007211916000S	1	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
37	963403100480S	CABINET TOP	SP	3007211916010S	1	
38	544510081006M	LABEL HOT-SURFACE	E3	5507000003730S	1	
39	nsp	CUSHION,FRONT FFC		4050214335000S	1	*
40	943419100250D	COVER SAFETY BLACK	BKE2	4310215731000S	2	
40	943419100260D	COVER SAFETY CLEAR	SPE1C	4310215731100S	2	
41	45451000500AM	HOLDER COVER	BKE2	4310215741000S	8	
41	45451000501AM	HOLDER COVER	SPE1C	4310215741100S	8	
★ 42	nsp	CLAMP CABLE		4330040343010S	5	
★ 43	963219003340S	TR 2SC KTC3964/TO126S-BULK (MAIN HEAT SINK TR-2)	Q409,Q421,Q433,Q445,Q457,Q469,Q481	J502396400010S	1	
★ 44	00D9630235301	TR 2SD2560Y	Q404,Q416,Q428,Q440,Q452,Q464,Q476	J5032560Y0170S	1	
★ 45	00D9630235204	TR 2SB1647Y	Q410,Q422,Q434,Q446,Q458,Q470,Q482	J5011647Y0170S	1	
<b>SCREWS</b>						
A	nsp	SCREW +2S 3X8 B-TYPE(DA CHENG) ZNW/BH		B020030081B10S	29	
C	nsp	SCREW (+2S 3*8(ROUND BK/BH)		B020230083B10S	46	
D	nsp	SCREW+2+S 3X6(ROUND)BK/BH		B020230063B10S	6	
G	nsp	SCREW(+3S 4*10 P+S-WASHER(ROUND) BK/BH)		B028940101B11S	4	
I	nsp	SCREW (+2S 3*17 B-TYPE ZNW/BH)		B020030171B10S	3	
J	nsp	SCREW (+2S 4*8 B-TYPE(DOT) BK/BH)	E3,E2	1500040083B10S	8	
J	nsp	SCREW (+2S 4*8 B-TYPE(DOT) BK/BH)	SP	1500040083B10S	2	
J	nsp	SCREW (+2S 4*8 B-TYPE(DOT) NI/BH)	SP	1500040084B10S	6	
K	nsp	SCREW+2S 3X10 B-TYPE(DOT)(DA CHENG) BK/BH	E3	B020030103B11D	31	
K	nsp	SCREW+2S 3X10 B-TYPE(DOT)(DA CHENG) BK/BH	E2,E1C	B020030103B11D	33	
L	nsp	SCREW (+3S 3*6 DOT BK/BH)		B020930063B10S	12	
H	nsp	SCREW+2S 3X14 P(Φ6)+S-WASHER ZNY/HH		B018230141H11D	21	
<b>SCREWS</b>						
★ 101	963606501580S	CABLE,FLAT CARD 1.0MM 40P		N711402412490S	1	*
★ 102	963606501590S	CABLE,FLAT CARD 1.0MM 23P		N711232912490S	1	*

# PACKING VIEW



# PARTS LIST OF PACKING & ACCESSORIES

\*Parts indicated by "nsp" on this table cannot be supplied.

\*Parts indicated by the "★" mark are not illustrated in the exploded view.

\*The parts listed below are only for maintenance. Therefore they might differ from the parts used in the unit in appearances or dimensions.

NOTE: The symbols in the column "Remarks" indicate the following destinations.

E3 : U.S.A. & Canada model

E2 : Europe model

E1C : China model

BK : Black model

SP : Premium Silver model

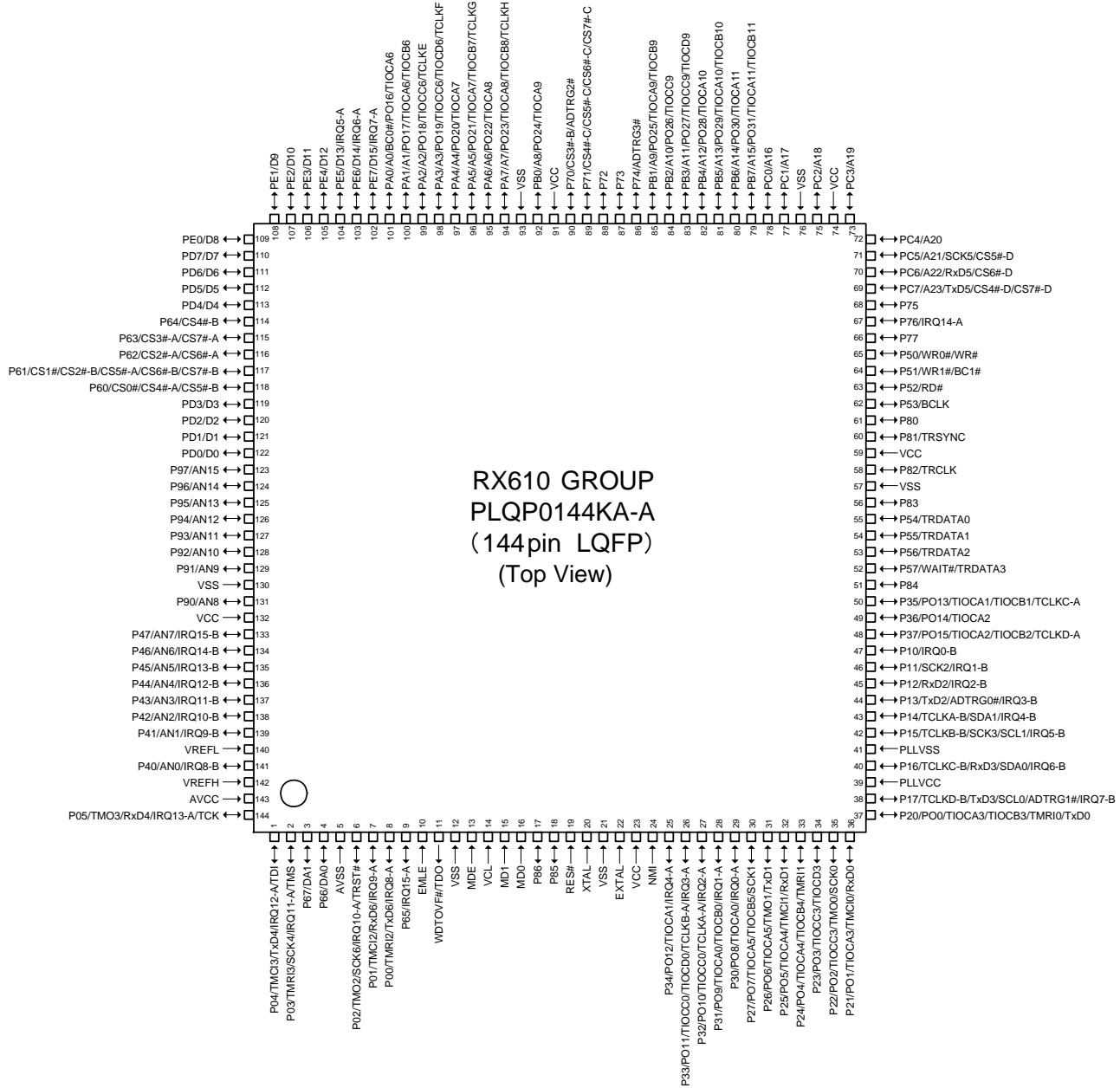
Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
1	-	SET		-		
2	54111077400AD	INSTRUCTION MANUAL,Quick Manual	E3	5707000007030S	1	*
2	54111077500AD	INSTRUCTION MANUAL,Quick Manual	E2	5707000007040S	1	*
2	54111077600AD	INSTRUCTION MANUAL,Quick Manual	E1C	5707000007050S	1	*
3	30701010400AD	REMOCON	RC-1167	8300116700010S	1	
4	963533101200D	CUSHION,SNOW		6230213224000S	1	*
5	nsp	POLY BAG		6330000240000S	1	
6	nsp	PE SHEET		6327040059000S	1	
7	nsp	CARD PASS	E1C	5777000000020S	1	
8	963116100080S	ANTENNA WIRE (FM)		E605010140010S	1	
9	nsp	BATTERY DRY		G670001R50240S	2	
10	963531102530D	BOX,GIFT	E3	6007212160000S	1	*
10	963531102540D	BOX,GIFT	E2	6007212160010S	1	*
10	963531102550D	BOX,GIFT	E1C	6007212160020S	1	*
12	nsp	CARD S.S LIST		577700162001GS	1	
13	nsp	WARRANTY CARD	E3	5727000003004S	1	
14	nsp	POLY BAG ACCESSORY		6330210222000S	1	
15	32401000800AD	SETUP MIC	ACM1HB	M040000310080S	1	
16	nsp	WARRANTY CARD	E1C	5727000000400S	1	
17	35201008100AD	DISK CD MANUAL	E3	6517000000850S	1	*
17	35201008300AD	DISK CD MANUAL	E1C	6517000000870S	1	*
17	35201008200AD	INST. MANUAL(E2 CD-ROM) Disc1	E2	6517000000860S	1	*
31	35201018000AD	INST. MANUAL(E2 CD-ROM) Disc2	E2	6517000001080S	1	*
18	nsp	SHIPPING LABEL		5500000007770S	1	
△	19	90M-ZC000470R	AC CORD	E3	L068125130010S	1
△	19	90M-ZC000600R	CORD ASSY	E2	L068250160020S	1
△	19	963611004880S	AC CORD	E1C	L068250100050S	1
	20	nsp	BUSHING TERMINAL	E2,E1C	2410040353010S	1
	27	nsp	COLOR LABEL	E1C	5507020170680S	2
	28	nsp	SAFETY INSTRUCTION	E3	5227000002460S	1
	28	nsp	SAFETY INSTRUCTION	E2	5227000007650S	1
	28	nsp	SAFETY INSTRUCTION	E1C	5227000007690S	1
	★ 29	nsp	LABEL		5507000008720S	1
	★ 30	nsp	LABEL		5507000009210S	3

# SEMICONDUCTORS

Only major semiconductors are shown. General semiconductors etc. are omitted from list.  
The semiconductors which have a detailed drawing in a schematic diagram are omitted from list.

## 1. IC's

### R5F56108VNFP (HDMI : U3002)



### R5F56108VNFP Terminal Functions

Pin	Pin Name	Symbol	I/O	Pull up/down	LvCnv	STBY	STOP	CEC STBY	Function
1	P04/IRQ12-A/TMCI3/TxD4/TDI	NC	I	M3VPu	-	I	I	I	NC
2	P03/IRQ11-A/TMRI3/SCK4/TMS	NC	I	M3VPu	-	I	I	I	NC
3	P67/DA1	HIN SELA	O	-	-	L	L	L	TC74VHC4051AFT control pin. (Control the detection of HDMI 5V INPUT for CEC STANDBY.)
4	P66/DA0	HIN SELB	O	-	-	L	L	L	TC74VHC4051AFT control pin. (Control the detection of HDMI 5V INPUT for CEC STANDBY.)
5	AVSS	AVSS	-	-	-	-	-	-	GND

Pin	Pin Name	Symbol	I/O	Pull up/ down	LvCnv	STBY	STOP	CEC STBY	Function
6	P02/IRQ10-A/TMO2/ SCK6/TRST#	NC	I	Pd	-	I	I	I	NC
7	P01/IRQ9-A/TMC12/ RxD6	RXD MI232O	I	M3VPu	-	I	I	I	Data received from the external pin(AMX)/Use for firmware upgrading by DFW.
8	P00/IRQ8-A/TMRI2/ TxD6	TXD MO232I	O	-	-	L	L	L	Data transfer to external pin(AMX)/Use for firmware upgrading by DFW.
9	P65/IRQ15-A	POWER KEY	I	M3VPu	-	I	I	I	POWER KEY (Waiting Mode cancel, interrupt port)
10	EMLE	NC	I	Pd	-	-	-	-	NC
11	WDTOVF#/TDO	NC	O/O	-	-	-	-	-	NC
12	VSS	VSS	I	-	-	-	-	-	GND
13	MDE	MDE	I	Pd	-	-	-	-	NC
14	VCL	VCL	I	-	-	-	-	-	Smoothing capacitor connection pin
15	MD1	MD1	I	M3VPu	-	-	-	-	NC
16	MD0	MD0	I	M3VPu	-	-	-	-	NC
17	P86	(CEC POWER2)	O	-	-	L	L	H	Reserve (CEC POWER2 control)
18	P85	REMOTE POWER(232C)	O	-	-	L	L	L	232C POWER SUPPLY (REMOTE 3.3V) control pin.(ON: H)
19	RES#	RESET	I	-	-	-	-	-	Reset input (reset: L)
20	XTAL	XTAL	I	-	-	-	-	-	Clock input
21	VSS	VSS	-	-	-	-	-	-	GND
22	EXTAL	EXTAL	-	-	-	-	-	-	Clock output
23	VCC	VCC	-	-	-	-	-	-	+3.3V
24	NMI	NMI	I	M3VPu	-	-	-	-	NC
25	P34/IRQ4-A/PO12/ TIOCA1	BDOWN	I	-	-	I	I	I	Power failure detection pin(Power failure:L)
26	P33/IRQ3-A/PO11/ TIOCC0/TIOCD0/ TCLKB-A	PLDAERR	I	-	-	L	L	L	PLD ERROR detection pin
27	P32/IRQ2-A/PO10/ TIOCC0/TCLKA-A	NC	O	-	-	L	O	L	Unused
28	P31/IRQ1-A/PO9/ TIOCA0/TIOCB0	ADV8003 INT1	I	-	-	I	I	I	HDMI transmitter / OSD (ADV8003) INT1 Input pin
29	P30/IRQ0-A/PO8/ TIOCA0	RC IN	I	-	-	I	I	I	Remote control signal input pin
30	P27/PO7/TIOCA5/ TIOCB5/SCK1	HDMI A SEL	O	-	-	L	L	L	TC74VHCT244AFT control pin. (Control the HDMI Audio input. H : DSP signal path / L : HDMI Rx -> Tx )
31	P26/PO6/TIOCA5/ TMO1/TxD1	NC	O	-	-	L	L	L	Unused
32	P25/PO5/TIOCA4/ TMC11/RxD1	NC	O	-	-	L	L	L	Unused
33	P24/PO4/TIOCA4/ TIOCB4/TMRI1	TU RST	O	SW3VPu	-	L	L	L	TUNER RESET pin (E3 model)
34	P23/PO3/TIOCC3/ TIOCD3	E RESET	O	N3VPu	-	L	L	L	ETHERNET RESET control pin (DM860)
35	P22/PO2/TIOCC3/ TMO0/SCK0	E POWER	O	-/-	-	L	L	L	ETHERNET POWER SUPPLY (NET3.3V) control pin.(ON:H)
36	P21/PO1/TIOCA3/ TMC10/RxD0	E_RXDMIEO	I	-/-	-	I	I	I	ETHERNET communication control pin (DM860)
37	P20/PO0/TIOCA3/ TIOCB3/TMRI0/TxD0	E_TXDMOEI	O	-/-	-	L	L	L	ETHERNET communication control pin (DM860)
38	P17/IRQ7-B/ TCLKD-B/TxD3/ SCL0/ADTRG1#	TU SCLK	O	-	-	L	L	L	TUNER control pin
39	PLLVCC	PLLVCC	-	-	-	-	-	-	+3.3V
40	P16/IRQ6-B/ TCLKC-B/RxD3/ SDA0	TU SDIO	I_O	-	-	L	L	L	TUNER control pin
41	PLLVSS	PLLVSS	-	-	-	-	-	-	GND
42	P15/IRQ5-B/ TCLKB-B/SCK3/ SCL1	HSCL (400k)	O	CEC3VPu	-	L	L	L	VIDEO I2C Control for - HDMI SW (ADV3002) / HDMI RX , A to H Decoder (ADV7850) / HDMI ip Scaler , TX (ADV8003)
43	P14/IRQ4-B/ TCLKA-B/SDA1	HSDA (400k)	I_O	CEC3VPu	-	L	L	L	VIDEO I2C Control for - HDMI SW (ADV3002) / HDMI RX , A to H Decoder (ADV7850) / HDMI ip Scaler , TX (ADV8003)
44	P13/IRQ3-B/TxD2/ ADTRG0#	ADV8003 SPI MO	O	-	-	L	L	L	OSD control pin (ADV8002 or ADV8003)

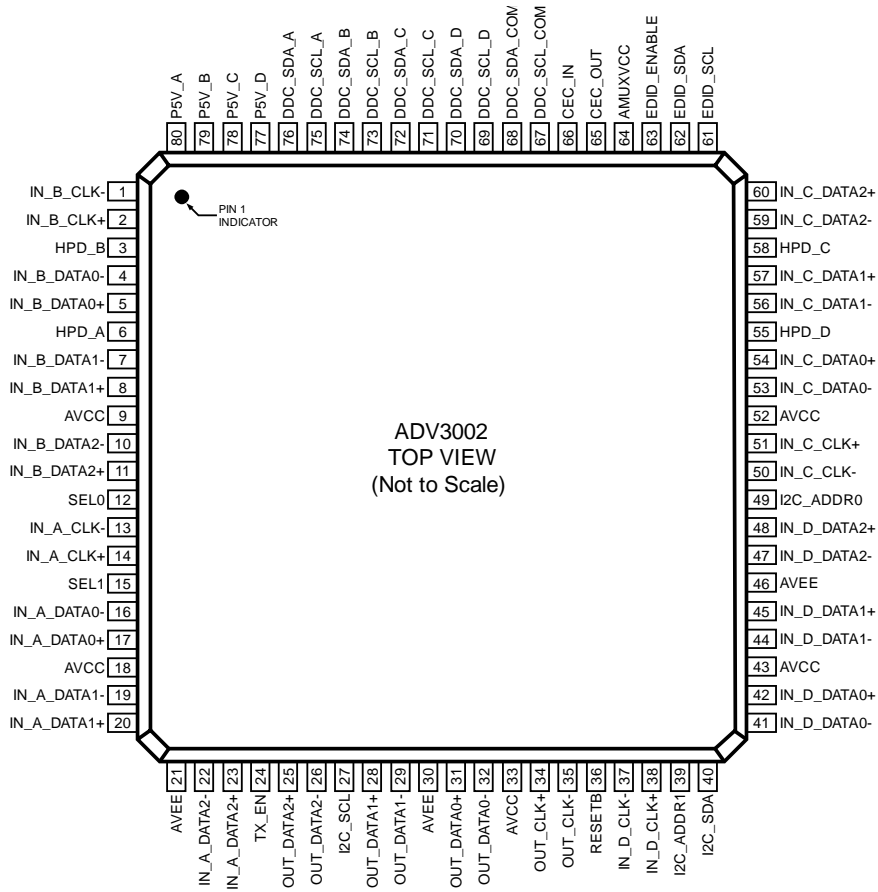
Pin	Pin Name	Symbol	I/O	Pull up/ down	LvCnv	STBY	STOP	CEC STBY	Function
45	P12/IRQ2-B/RxD2	ADV8003 SPI MI	I	-	-	L	L	L	OSD control pin (ADV8002 or ADV8003)
46	P11/IRQ1-B/SCK2	ADV8003 SPI CLK	O	-	-	L	L	L	OSD control pin (ADV8002 or ADV8003)
47	P10/IRQ0-B	ADV8003 SPI CS	O	-	-	L	L	L	OSD control pin (ADV8002 or ADV8003)
48	P37/PO15/TIOCA2/ TIOCB2/TCLKD-A	EEPROM SDA	I_O	M3VPu	-	I	I	I	EEPROM control pin
49	P36/PO14/TIOCA2	EEPROM SCL	O	M3VPu	-	I	I	I	EEPROM control pin
50	P35/PO13/TIOCA1/ TIOCB1/TCLKC-A	ADV7850 RST	O	-	-	L	L	L	HDMI RX , A to H Decoder (ADV7850) RESET control pin
51	P84	CEC_OUT	O	-	-	L	L	-	CEC-D signal output pin
52	P57/WAIT#/ TRDATA3	ADV3002 RST	O	SW3VPu	-	L	L	L	HDMI switcher RESET control pin (ADV3002)
53	P56/TRDATA2	E SPI MOEI	O	N3VPu	-	L	L	L	ETHERNET communication control pin (DM860)
54	P55/TRDATA1	ADV8003 RST	O	SW3VPu	-	L	L	L	HDMI Tx/ip Scaler/OSD RESET control pin (ADV8003)
55	P54/TRDATA0	E SPI MIEO	I	N3VPu	-	I	L	I	ETHERNET communication control pin (DM860)
56	P83	E SPI CLK	O	N3VPu	-	L	L	L	ETHERNET communication control pin (DM860)
57	VSS	VSS	-	-	-	-	-	-	GND
58	P82/TRCLK	FL CE	O	-	-	L	L	L	VFD control pin
59	VCC	VCC	-	-	-	-	-	-	+3.3V
60	P81/TRSYNC	FL RST	O	-	-	L	L	L	VFD control pin
61	P80	ZVOL DATA	O	-	-	L	L	L	ZONE VOLUME control pin (NJW1194)
62	BCLK/P53	NC	I	-	-	I	I	I	NC
63	P52/RD#	ZVOL CLK	O	-	-	L	L	L	ZONE VOLUME control pin (NJW1194)
64	P51/WR1#/BC1#	ZVOL STB	O	-	-	L	L	L	ZONE VOLUME control pin (NJW1194)
65	P50/WR0#/WR#	V SDA	O	-	-	L	L	L	A-VIDEO switcher control pin (AVDM-2000)
66	P77	V SCL	O	-	-	L	L	L	A-VIDEO switcher control pin (AVDM-2000)
67	P76/IRQ14-A	TU GPO2_INT	I	-	-	L	L	L	TUNER GPIO2 input pin
68	P75	DSP ROMRST	O	-	-	I	I	I	Memory reset for DSP (Reset : L)
69	PC7/A23/CS4#-D/ CS7#-D/TxD5	DSP MOSI	O	DA3VPu	-	L	L	L	DSP control pin (ADSP21487KSWZ-3B)
70	PC6/A22/CS6#-D/ RxD5	DSP MISO	I	DA3VPu	-	L	L	L	DSP control pin (ADSP21487KSWZ-3B)
71	PC5/A21/CS5#-D/ SCK5	DSPI CLK	O	DA3VPu	-	L	L	L	DSP control pin (ADSP21487KSWZ-3B)
72	PC4/A20	DSP RST	O	-	-	L	L	L	DSP(ADSP21487KSWZ-3B) reset output pin (Reset : L)
73	PC3/A19	DSP FLAG0	I	Pd	-	L	L	L	DSP control pin (ADSP21487KSWZ-3B)
74	VCC	VCC	-	-	-	-	-	-	+3.3V
75	PC2/A18	DSP ICS	O	DA3VPu	-	L	L	L	DSP control pin (ADSP21487KSWZ-3B)
76	VSS	VSS	-	-	-	-	-	-	GND
77	PC1/A17	GRN LED	O	-	-	L	L	L	POWER LED control pin(ON:H)
78	PC0/A16	RED LED	O	-	-	L	L	H	POWER/STANDBY LED control pin (ON:H)
79	PB7/A15/PO31/ TIOCA11/TIOCB11	H/P RLY	O	-	-	L	L	L	HEADPHONE RLY control pin
80	PB6/A14/PO30/ TIOCA11	FRONT RLY	O	-	-	L	L	L	FRONT Ch RELAY control pin
81	PB5/A13/PO29/ TIOCA10/TIOCB10	HIN SELC	O	-	-	L	L	L	TC74VHC4051AFT control pin. (Control the detection of HDMI 5V INPUT for CEC STANDBY. )
82	PB4/A12/PO28/ TIOCA10	TU_SEN	O	-	-	L	L	L	TUNER control pin
83	PB3/A11/PO27/ TIOCC9/TIOCD9	C/S RLY	O	-	-	L	L	L	CENTER/SURROUND Ch RELAY control pin
84	PB2/A10/PO26/ TIOCC9	SB RLY	O	-	-	L	L	L	SURROUND-BACK Ch RELAY control pin
85	PB1/A9/PO25/ TIOCA9/TIOCB9	D5V POWER	O	-	-	L	L	L	DIGITAL POWER SUPPLY (D3.3V) control pin (ON:H)
86	P74/ADTRG3#	DIR CE	O	-	-	L	L	L	DIR control pin (LC89058W-E)
87	P73	DIR DIN	O	-	-	L	L	L	DIR control pin (LC89058W-E)
88	P72	DIR DOUT	I	DA3VPu	-	I	I	I	DIR control pin (LC89058W-E)



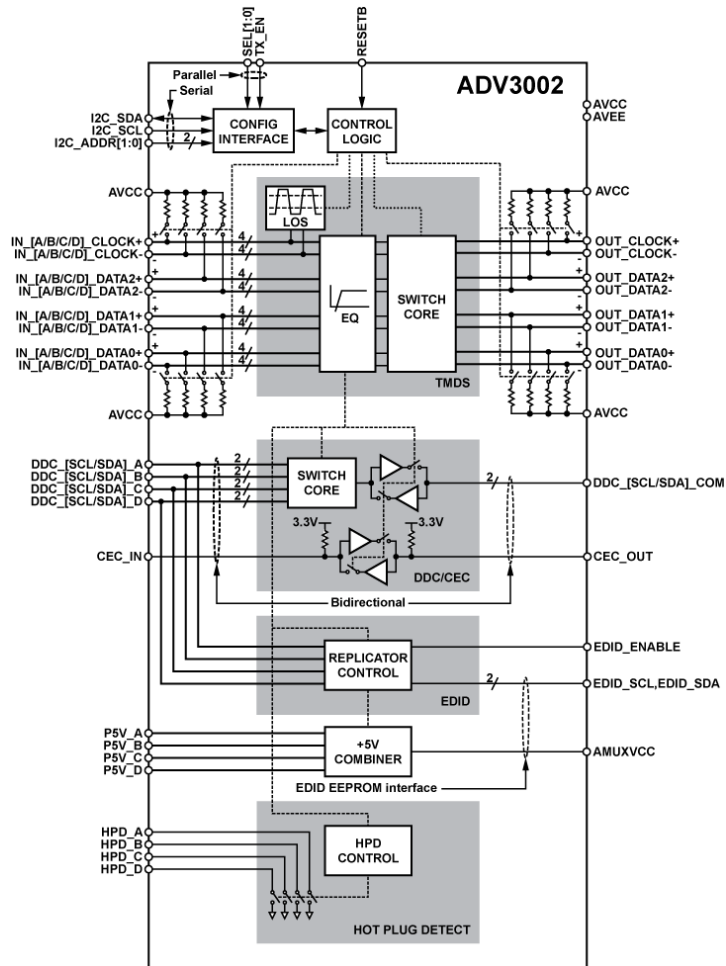
Pin	Pin Name	Symbol	I/O	Pull up/ down	LvCnv	STBY	STOP	CEC STBY	Function
89	P71/CS4#-C/ CS5#-C/CS6#-C/ CS7#-C	DIR CLK	O	-	-	L	L	L	DIR control pin (LC89058W-E)
90	P70/CS3#-B/ ADTRG2#	DIR RST	O	-	-	L	L	L	DIR RESET pin (LC89058W-E)
91	VCC	VCC	-	-	-	-	-	-	+3.3V
92	PB0/A8/PO24/ TIOCA9	CEC SEL	O	-	-	L	L	L	CEC output LINE switching
93	VSS	VSS	-	-	-	-	-	-	GND
94	PA7/A7/PO23/ TIOCA8/TIOCB8/ TCLKH	NC	O/O	-/-	-	L	L	L	Unused
95	PA6/A6/PO22/ TIOCA8	VSEL A	I	-	-	I	I	I	Master Volume rotation detection pin(Rotary encoder)
96	PA5/A5/PO21/ TIOCA7/TIOCB7/ TCLKG	VSEL B	I	-	-	I	I	I	Master Volume rotation detection pin(Rotary encoder)
97	PA4/A4/PO20/ TIOCA7	E POWER 2 (Reserve)	O	-/-	-	L	L	L	Unused
98	PA3/A3/PO19/ TIOCC6/TIOCD6/ TCLKF	DAC(ETHER) MUTE	O	-	-	L	L	L	DAC (ETHER) MUTE control pin (PCM5100 for DM860)
99	PA2/A2/PO18/ TIOCC6/TCLKE	PRE Z2 MUTE	O	-	-	L	L	L	Z2 PRE OUT MUTE control pin
100	PA1/A1/PO17/ TIOCA6/TIOCB6	NC	O	-	-	L	L	L	Unused
101	PA0/A0/BC0#/PO16/ TIOCA6	PRE MUTE	O	-	-	L	L	L	Sub Woofer PRE OUT MUTE control pin
102	PE7/IRQ7-A/D15	ADV8003 INT2	I	-	-	I	I	I	HDMI TX1.0SD INT2 input pin (ADV8003)
103	PE6/IRQ6-A/D14	ADV7850 INT1	I	-	-	I	I	I	HDMI RX INT1 input pin (ADV7850)
104	PE5/IRQ5-A/D13	ADV7850 INT2	I	-	-	L	L	L	HDMI RX INT2 input pin (ADV7850)
105	PE4/D12	ISEL A	I/O	-	-	I/L	I/L	I/L	Input Selector rotation detection pin(Rotary encoder)
106	PE3/D11	ISEL B	I/O	-	-	I/L	I/L	I/L	Input Selector rotation detection pin(Rotary encoder)
107	PE2/D10	VOL CLK	O	-	-	L	L	L	FUNCTION / VOLUME control pin (R2A15218)
108	PE1/D9	VOL DATA	O	-	-	L	L	L	FUNCTION / VOLUME control pin (R2A15218)
109	PE0/D8	PLD WRITE	O	-	-	L	L	L	A.PLD /JTAG switching control pin
110	PD7/D7	JTAG TDO	I	-	-	L	L	L	A.PLD rewriting control pin (JTAG)
111	PD6/D6	JTAG TMS/APLD CS	O/O	-	-	L	L	L	A.PLD rewriting & control pin
112	PD5/D5	JTAG TDI/APLD DATA/DAC DATA	O/O	-	-	L	L	L	A.PLD rewriting & control /DAC control pin
113	PD4/D4	JTAG TCK/APLD CLK/DAC CLK	O/O	-	-	L	L	L	A.PLD rewriting & control /DAC control pin
114	P64/CS4#-B	ADC RST	O	-	-	L	L	L	A/D converter control pin (AK5358B)
115	P63/CS3#-A/CS7#-A	NC	O	-	-	L	L	L	Unused
116	P62/CS2#-A/CS6#-A	E SPI CS	O	N3VPu	-	L	L	L	ETHERNET communication control pin(DM860)
117	P61/CS1#/CS2#-B/ CS5#-A/CS6#-B/ CS7#-B	DAC MS	O	-	-	L	L	L	D/A converter control pin (AK4358VQ)
118	P60/CS0#/CS4#-A/ CS5#-B	DAC RST	O	-	-	L	L	L	D/A converter control pin (AK4358VQ)
119	PD3/D3	NC	O	-	-	L	L	L	Unused
120	PD2/D2	NC	O	-	-	L	L	L	Unused
121	PD1/D1	FL CLK	O	-	-	L	L	L	VFD control pin
122	PD0/D0	FL DATA	O	-	-	L	L	L	VFD control pin
123	P97/AN15	DA POWER	O	-	-	L	L	L	DIGITAL AUDIO POWER SUPPLY (DA3.3V & DA1.2V) control pin.(ON:H)
124	P96/AN14	CEC POWER	O	-	-	L	L	H	HDMI CEC POWER SUPPLY (CEC5V & CEC3.3V & CEC1.8V) control pin. (ON:H)
125	P95/AN13	DV POWER1	O	-	-	L	L	※	Digital VIDEO POWER SUPPLY (DV5V & DV3.3V) control pin. *CEC STANDBY : MODE1=H , MODE2=L , MODE3=L

Pin	Pin Name	Symbol	I/O	Pull up/ down	LvCnv	STBY	STOP	CEC STBY	Function
126	P94/AN12	DV POWER2	O	-	-	L	L	※	Digital VIDEO POWER SUPPLY (DV1.8V) control pin. *CEC STANDBY : MODE1=H , MODE2=L , MODE3=L
127	P93/AN11	MAIN POWER	O	-	-	L	L	L	MAIN POWER control pin
128	P92/AN10	CPU POWER	O	-	-	L	L	L	CPU INTERFACE POWER SUPPLY (SWM3.3V & SWM5V) control pin (POWER ON: H , CEC ON STANDBY: H)
129	P91/AN9	TX EN	O	-	-	L	L	L	Front HDMI INPUT (AD8195) control pin
130	VSS	VSS	-	-	-	-	-	-	GND
131	P90/AN8	MODE	I	-	-	I	I	I	Destination detection pin
132	VCC	VCC	-	-	-	-	-	-	+3.3V
133	P47/IRQ15-B/AN7	THERMAL B/DC DET/ASO	I	-	-	I	I	I	ASO PROTECT / DC PROTECT / HEAT PROTECT-B detection pin
134	P46/IRQ14-B/AN6	H/P DET / MIC DET/THERMAL A	I	-	-	I	I	I	MIC detection / Headphone detection / HEAT PROTECT-A detection pin
135	P45/IRQ13-B/AN5	KEY3	I	SW3VPu	-	I	I	I	Button input 3
136	P44/IRQ12-B/AN4	KEY2	I	SW3VPu	-	I	I	I	Button input 2
137	P43/IRQ11-B/AN3	KEY1	I	SW3VPu	-	I	I	I	Button input 1
138	P42/IRQ10-B/AN2	E SPI REQ	I	Pd	-	I	L	I	ETHERNET communication control pin(DM860)
139	P41/IRQ9-B/AN1	HDMI IN 5V SET	I	-	-	I	I	I	HDMI INPUT 5V (for EDID / HOT PLUG) detection pin
140	AVSS	AVSS	-	-	-	-	-	-	GND
141	P40/IRQ8-B/AN0	CEC_IN	I	SW3VPu	-	I	I	I	CEC-D signal input pin
142	VREF	VREF	-	-	-	-	-	-	Reference voltage (+3.3V) input pin for A/D port
143	AVCC	AVCC	-	-	-	-	-	-	+3.3V
144	P05/IRQ13-A/TMO3/RxD4/TCK	NC	I	M3VPu	-	I	I	I	NC

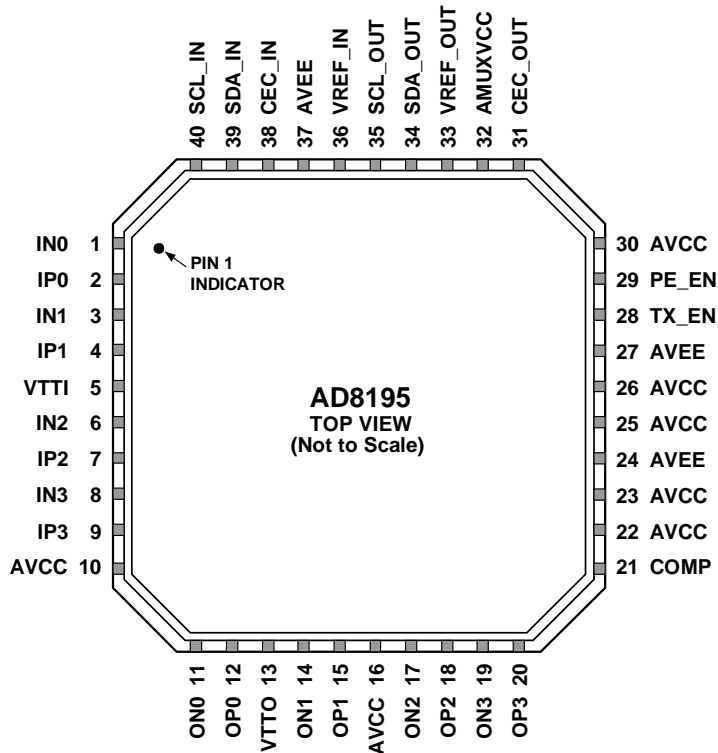
# ADV3002BSTZ (HDMI : U1001)



## ADV3002BSTZ Block diagram



## AD8195ACPZ (HDMI : U1201)



### NOTES

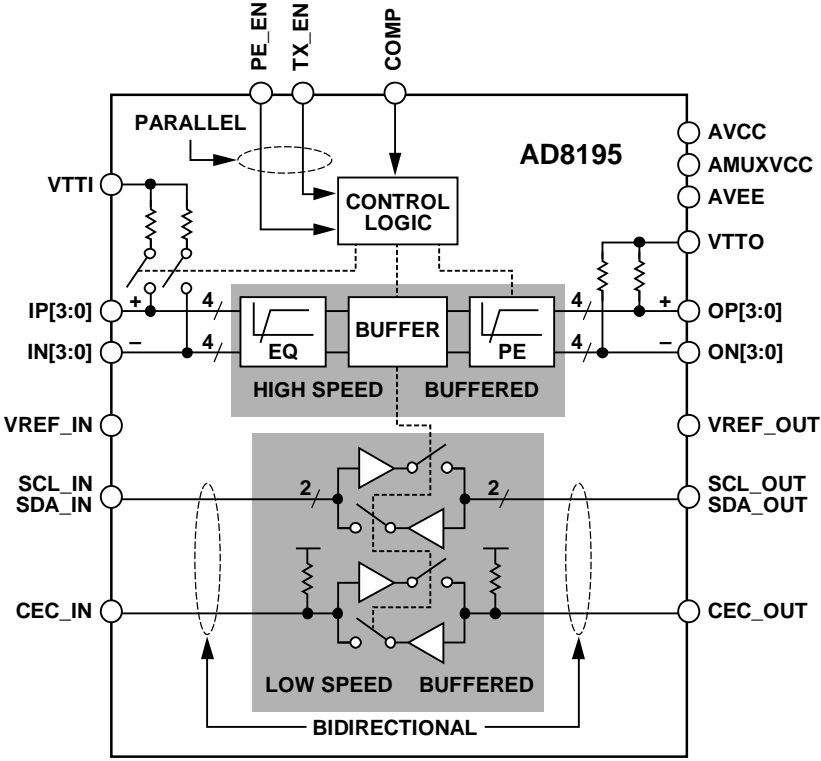
1. THE AD8195 LFCSP HAS AN EXPOSED PAD ON THE UNDERSIDE OF THE PACKAGE THAT AIDS IN HEAT DISSIPATION. THE PAD MUST BE ELECTRICALLY CONNECTED TO THE AVEE SUPPLY PLANE IN ORDER TO MEET THERMAL SPECIFICATIONS.

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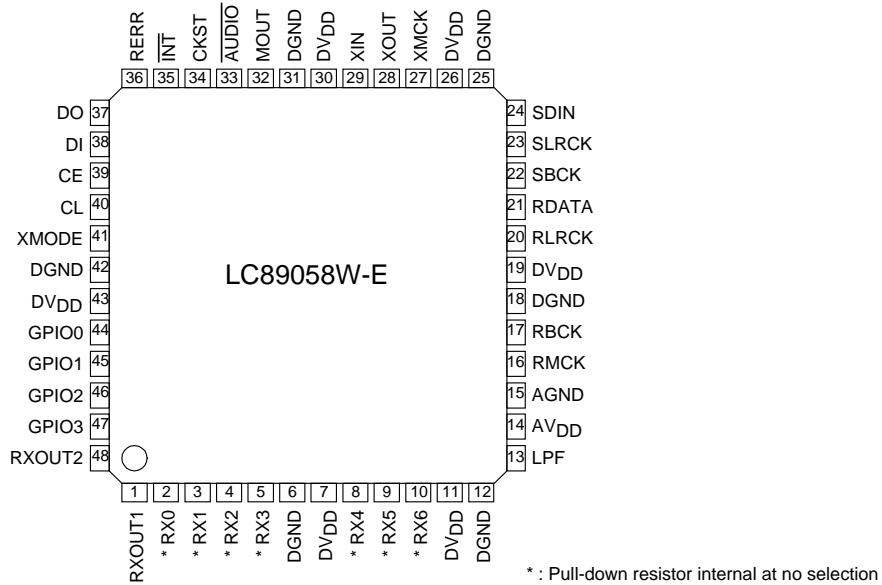
## AD8195ACPZ Termini Function

Pin No.	Mnemonic	Type <sup>1</sup>	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	VTTO	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 $\mu$ F 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



## LC89058W-E (HDMI : U2205)



### Pin Functions

Pin No.	Name	I/O	Function
1	RXOUT1	O	RX0-6 input S/PDIF through output pin 1
2	RX0	I <sub>s</sub> (pd)	5V withstand voltage TTL input level compatible S/PDIF input pin (connected to GND when RX1 is set)
3	RX1	I(pd)	Co-axial compatible S/PDIF input pin (supported demodulation sampling frequency of up to 96kHz)
4	RX2	I <sub>s</sub> (pd)	5V withstand voltage TTL input level compatible S/PDIF input pin (connected to GND when RX1 is set)
5	RX3	I <sub>s</sub> (pd)	5V withstand voltage TTL input level compatible S/PDIF input pin
6	DGND		Digital GND
7	DV <sub>DD</sub>		Digital power supply (3.3V)
8	RX4	I <sub>s</sub> (pd)	5V tolerable TTL input level compatible S/PDIF input pin
9	RX5	I <sub>s</sub> (pd)	5V tolerable TTL input level compatible S/PDIF input pin
10	RX6	I <sub>s</sub> (pd)	5V tolerable TTL input level compatible S/PDIF input pin
11	DV <sub>DD</sub>		Digital power supply (3.3V)
12	DGND		Digital GND
13	LPF	O	PLL loop filter connection pin
14	AV <sub>DD</sub>		Analog power supply (3.3V)
15	AGND		Analog GND
16	RMCK	O	R system clock output pin (VCO, 512fs, XIN)
17	RBCK	O/I	R system bit clock I/O pin (64fs)
18	DGND		Digital GND
19	DV <sub>DD</sub>		Digital power supply (3.3V)
20	RLRCK	O/I	R system LR clock I/O pin (fs)
21	RDATA	O	Serial audio data output pin
22	SBCK	O	S system bit clock output pin (16fs, 32fs, 64fs, 128fs)
23	SLRCK	O	S system LR clock output pin (fs/4, fs/2, fs, 2fs)
24	SDIN	I <sub>s</sub>	External serial audio data input pin

Pin No.	Name	I/O	Function
25	DGND		Digital GND
26	DVDD		Digital power supply (3.3V)
27	XMCK	O	Oscillation amplifier clock output pin
28	XOUT	O	Output pin connected to the resonator
29	XIN	I	External clock input pin, connected to the resonator (12.288MHz/24.576MHz)
30	DVDD		Digital power supply
31	DGND		Digital GND
32	MOUT	I/O	Emphasis information    Input fs monitor output    Chip address setting input pin
33	AUDIO	I/O	Channel status bit 1 output    Chip address setting input pin
34	CKST	I/O	Clock switching transition period signal output    Master/slave setting input pin
35	INT	I/O	Microcontroller interrupt signal output    Pins44-48 I/O setting input pin
36	RERR	O	PLL lock error, data error flag output pin
37	DO	O	CCB microcontroller I/F, read data output pin (3-state)
38	DI	I <sub>s</sub>	CCB microcontroller I/F, write data input pin
39	CE	I <sub>s</sub>	CCB microcontroller I/F, chip enable input pin
40	CL	I <sub>s</sub>	CCB microcontroller I/F, clock input pin
41	XMODE	I <sub>s</sub>	System reset input pin
42	DGND		Digital GND
43	DVDD		Digital power supply (3.3V)
44	GPIO0	O/I	General-purpose I/O pin    Selector input pin (output referred to RDATA pin)
45	GPIO1	O/I	General-purpose I/O pin    Selector input pin (output referred to RLRCK pin)
46	GPIO2	O/I	General-purpose I/O pin    Selector input pin (output referred to RBCK pin)
47	GPIO3	O/I	General-purpose I/O pin    Selector input pin (output referred to RMCK pin)
48	RXOUT2	O	RX0-6 input S/PDIF through output pin 2

\* Input voltage: I= -0.3 to 3.6V, I<sub>5</sub> = -0.3 to 5.5V

\* Output voltage: O= -0.3 to 3.6V

\* Pins 2, 4, 5, 8, 9, 10, 24, 38, 39, 40, and 41 have an internal pull-down resistor (pd).

Their level is fixed when they are unselected.

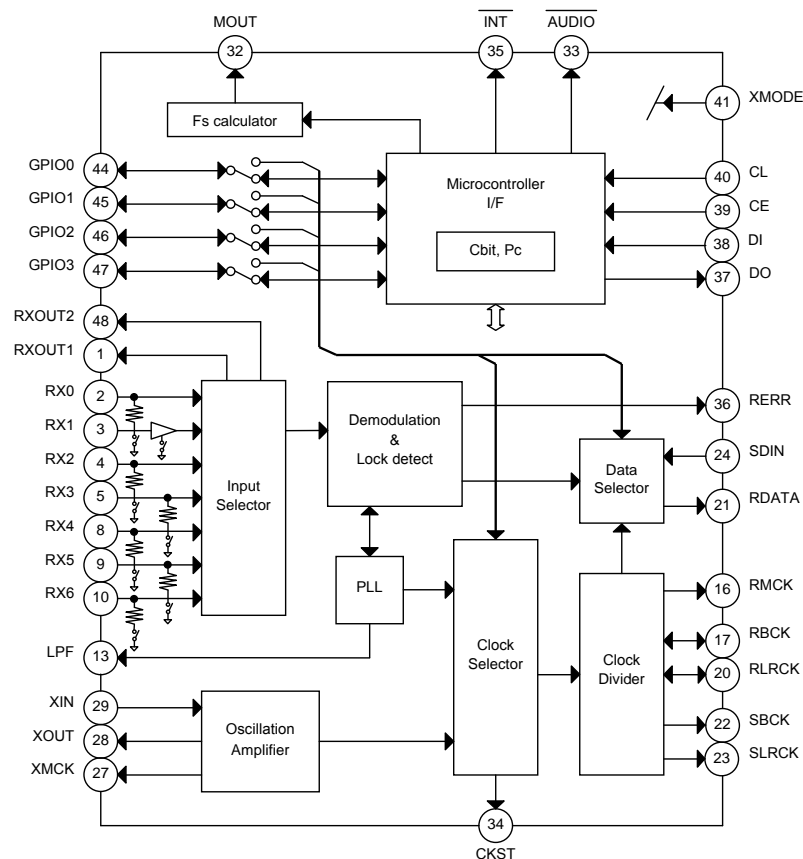
\* Pins 32 and 33 are input pins for chip address setting when pin 41 is held at the low level.

\* Pin 34 serves as the input pin for designating as the master or slave when pin 41 is held at the low level.

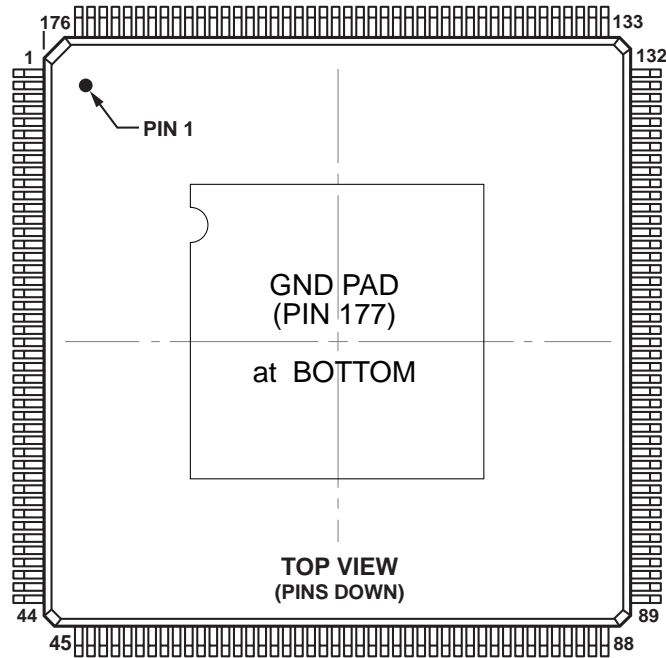
\* Pin 35 serves as the input pin for configuring the I/O of pins 44 to 47 when pin 41 is held at the low level.

\* The DVDD and AVDD pins must be held at the same level and turned on and off at the same timing to preclude Latch-up conditions.

### LC89058W-E Block diagram



# ADSP21487KSWZ4B (HDMI : U2001)



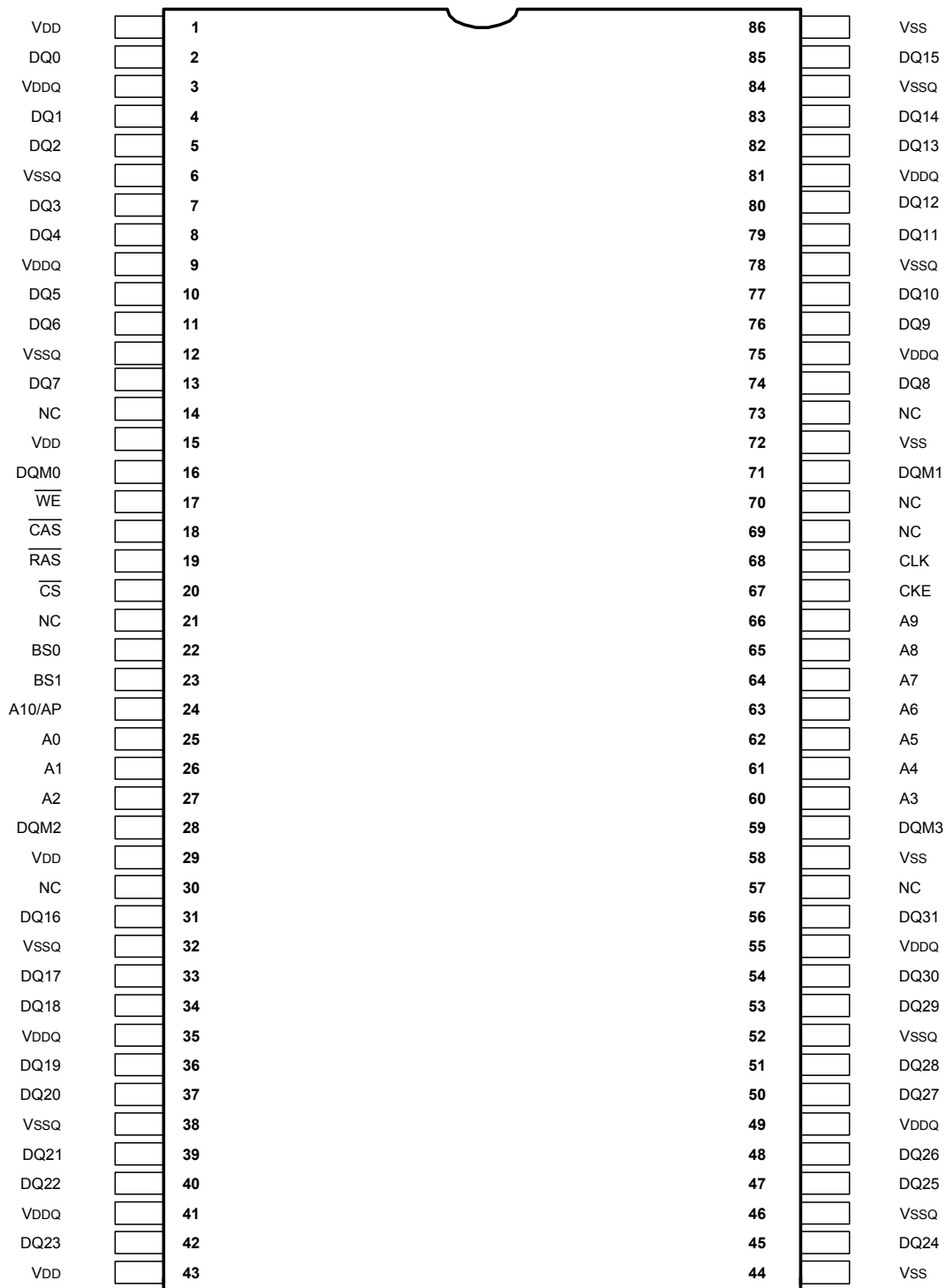
## ADSP21487KSWZ3B Terminal Function

Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.
SDDQM	1	V <sub>DD_EXT</sub>	45	DAI_P10	89	V <sub>DD_INT</sub>	133
MS0	2	DPI_P08	46	V <sub>DD_INT</sub>	90	FLAG0	134
SDCKE	3	DPI_P07	47	V <sub>DD_EXT</sub>	91	FLAG1	135
V <sub>DD_INT</sub>	4	V <sub>DD_INT</sub>	48	DAI_P20	92	FLAG2	136
CLK_CFG1	5	DPI_P09	49	V <sub>DD_INT</sub>	93	NC	137
ADDR0	6	DPI_P10	50	DAI_P08	94	FLAG3	138
BOOT_CFG0	7	DPI_P11	51	DAI_P14	95	NC	139
V <sub>DD_EXT</sub>	8	DPI_P12	52	DAI_P04	96	NC	140
ADDR1	9	DPI_P13	53	DAI_P18	97	V <sub>DD_EXT</sub>	141
ADDR2	10	DPI_P14	54	DAI_P17	98	NC	142
ADDR3	11	DAI_P03	55	DAI_P16	99	V <sub>DD_INT</sub>	143
ADDR4	12	NC	56	DAI_P12	100	TRST	144
ADDR5	13	V <sub>DD_EXT</sub>	57	DAI_P15	101	NC	145
BOOT_CFG1	14	NC	58	V <sub>DD_INT</sub>	102	EMU	146
GND	15	NC	59	DAI_P11	103	DATA0	147
ADDR6	16	NC	60	V <sub>DD_EXT</sub>	104	DATA1	148
ADDR7	17	NC	61	V <sub>DD_INT</sub>	105	DATA2	149
NC	18	V <sub>DD_INT</sub>	62	BOOT_CFG2	106	DATA3	150
NC	19	NC	63	V <sub>DD_INT</sub>	107	TDO	151
ADDR8	20	NC	64	AMI_ACK	108	DATA4	152
ADDR9	21	V <sub>DD_INT</sub>	65	GND	109	V <sub>DD_EXT</sub>	153
CLK_CFG0	22	NC	66	THD_M	110	DATA5	154
V <sub>DD_INT</sub>	23	NC	67	THD_P	111	DATA6	155
CLKIN	24	V <sub>DD_INT</sub>	68	V <sub>DD_THD</sub>	112	V <sub>DD_INT</sub>	156
XTAL	25	NC	69	V <sub>DD_INT</sub>	113	DATA7	157
ADDR10	26	WDRSTO	70	V <sub>DD_INT</sub>	114	TDI	158
SDA10	27	NC	71	MST	115	SDCLK	159
V <sub>DD_EXT</sub>	28	V <sub>DD_EXT</sub>	72	V <sub>DD_INT</sub>	116	V <sub>DD_EXT</sub>	160
V <sub>DD_INT</sub>	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 <sub>DD_EXT</sub>	119	DATA10	163
ADDR17	32	DAI_P01	76	ADDR23	120	TCK	164
ADDR13	33	DAI_P02	77	ADDR22	121	DATA11	165
V <sub>DD_INT</sub>	34	V <sub>DD_INT</sub>	78	ADDR21	122	DATA12	166
ADDR18	35	NC	79	V <sub>DD_INT</sub>	123	DATA14	167
RESETOUT/RUNRSTIN	36	NC	80	ADDR20	124	DATA13	168
V <sub>DD_INT</sub>	37	NC	81	ADDR19	125	V <sub>DD_INT</sub>	169
DPI_P01	38	NC	82	V <sub>DD_EXT</sub>	126	DATA15	170
DPI_P02	39	NC	83	ADDR16	127	SDWE	171
DPI_P03	40	V <sub>DD_EXT</sub>	84	ADDR15	128	SDRAS	172
V <sub>DD_INT</sub>	41	V <sub>DD_INT</sub>	85	V <sub>DD_INT</sub>	129	RESET	173
DPI_P05	42	DAI_P06	86	ADDR14	130	TMS	174
DPI_P04	43	DAI_P05	87	AMI_WR	131	SDCAS	175
DPI_P06	44	DAI_P09	88	AMI_RD	132	V <sub>DD_INT</sub>	176
						GND	177*

\* at BOTTOM



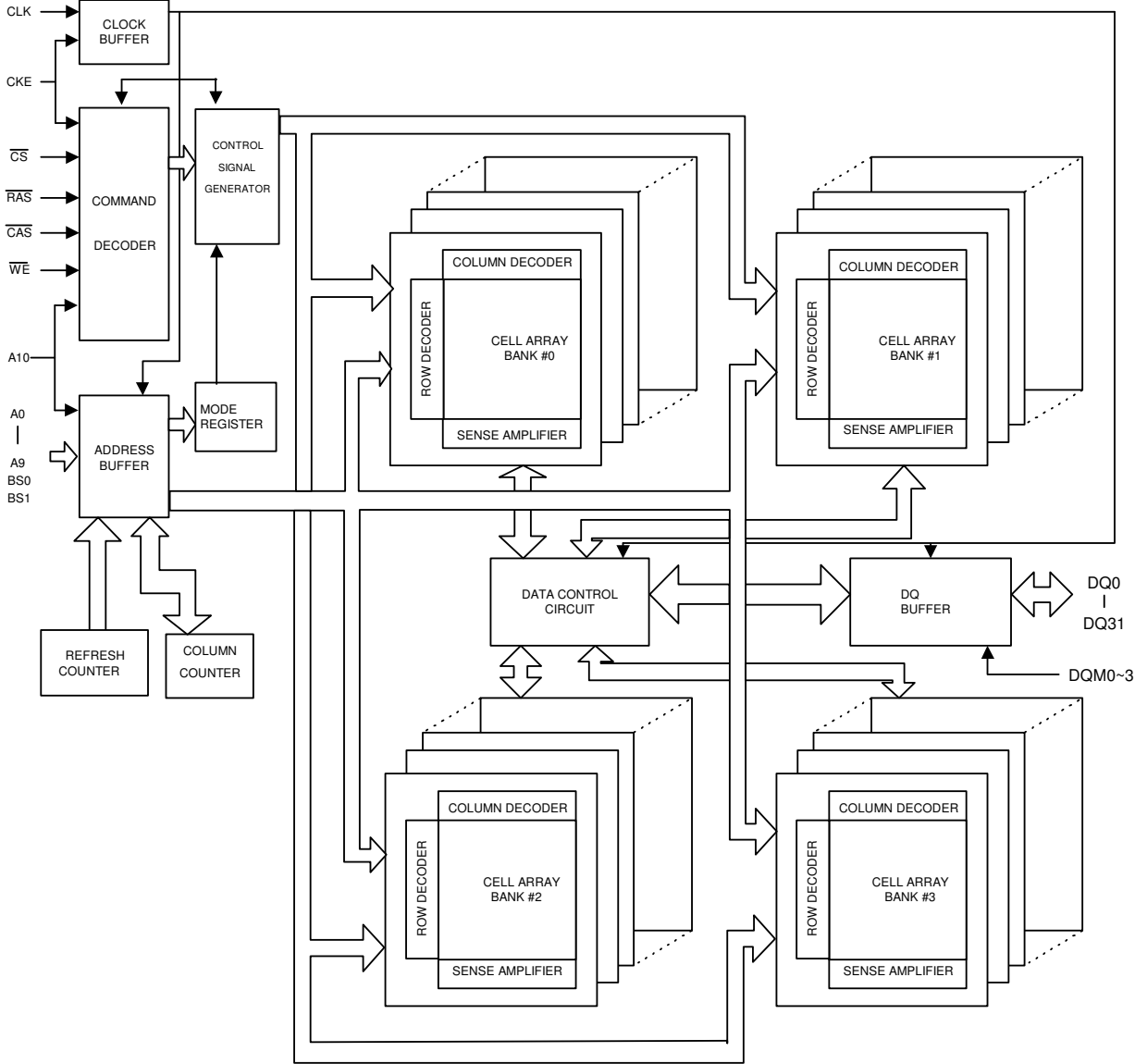
**W9864G6JH-6 (HDMI : U2002)**



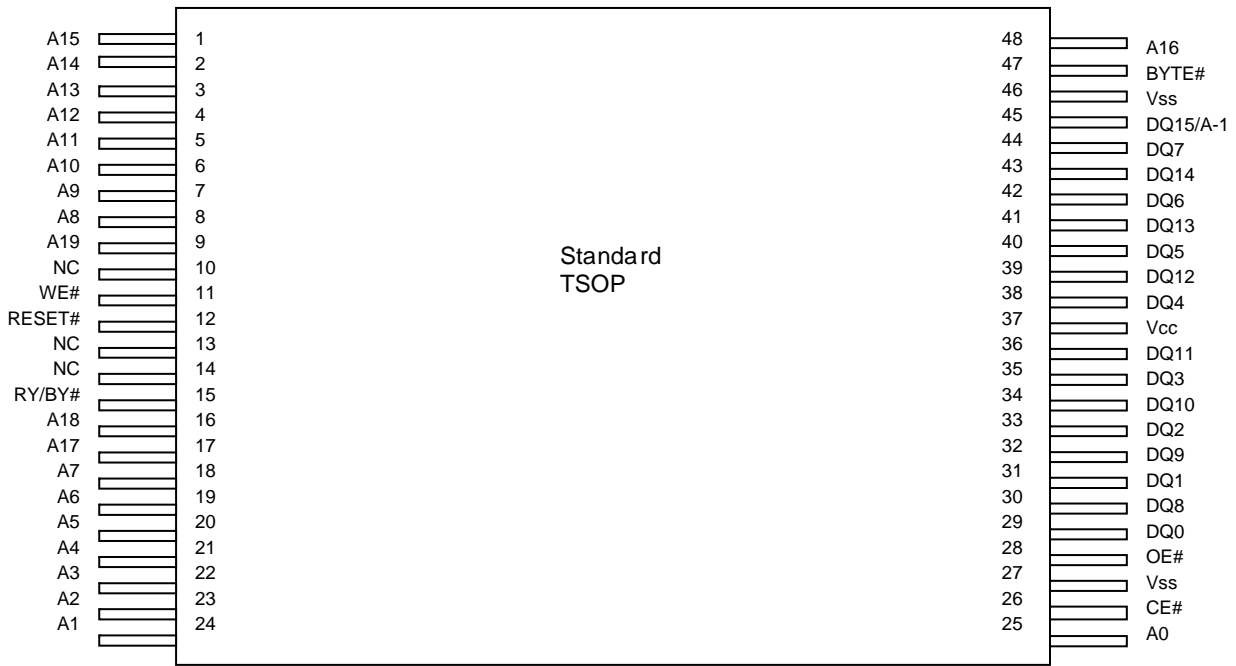
## W9864G6JH-6 Pin description

PIN NUMBER	PIN NAME	FUNCTION	DESCRIPTION
24, 25, 26, 27, 60, 61, 62, 63, 64, 65, 66	A0–A10	Address	Multiplexed pins for row and column address. Row address: A0–A10. Column address: A0–A7. A10 is sampled during a precharge command to determine if all banks are to be precharged or bank selected by BS0, BS1.
22, 23	BS0, BS1	Bank Select	Select bank to activate during row address latch time, or bank to read/write during address latch time.
2, 4, 5, 7, 8, 10, 11, 13, 31, 33, 34, 36, 37, 39, 40, 42, 45, 47, 48, 50, 51, 53, 54, 56, 74, 76, 77, 79, 80, 82, 83, 85	DQ0–DQ31	Data Input/ Output	Multiplexed pins for data output and input.
20	$\overline{\text{CS}}$	Chip Select	Disable or enable the command decoder. When command decoder is disabled, new command is ignored and previous operation continues.
19	$\overline{\text{RAS}}$	Row Address Strobe	Command input. When sampled at the rising edge of the clock $\overline{\text{RAS}}$ , $\overline{\text{CAS}}$ and $\overline{\text{WE}}$ define the operation to be executed.
18	$\overline{\text{CAS}}$	Column Address Strobe	Referred to $\overline{\text{RAS}}$
17	$\overline{\text{WE}}$	Write Enable	Referred to $\overline{\text{RAS}}$
16, 28, 59, 71	DQM0–DQM3	Input/Output Mask	The output buffer is placed at Hi-Z (with latency of 2) when DQM is sampled high in read cycle. In write cycle, sampling DQM high will block the write operation with zero latency.
68	CLK	Clock Inputs	System clock used to sample inputs on the rising edge of clock.
67	CKE	Clock Enable	CKE controls the clock activation and deactivation. When CKE is low, Power Down mode, Suspend mode, or Self Refresh mode is entered.
1, 15, 29, 43	VDD	Power	Power for input buffers and logic circuit inside DRAM.
44, 58, 72, 86	VSS	Ground	Ground for input buffers and logic circuit inside DRAM.
3, 9, 35, 41, 49, 55, 75, 81	VDDQ	Power for I/O Buffer	Separated power from VDD, to improve DQ noise immunity.
6, 12, 32, 38, 46, 52, 78, 84	VSSQ	Ground for I/O Buffer	Separated ground from VSS, to improve DQ noise immunity.
14, 21, 30, 57, 69, 70, 73	NC	No Connection	No connection.

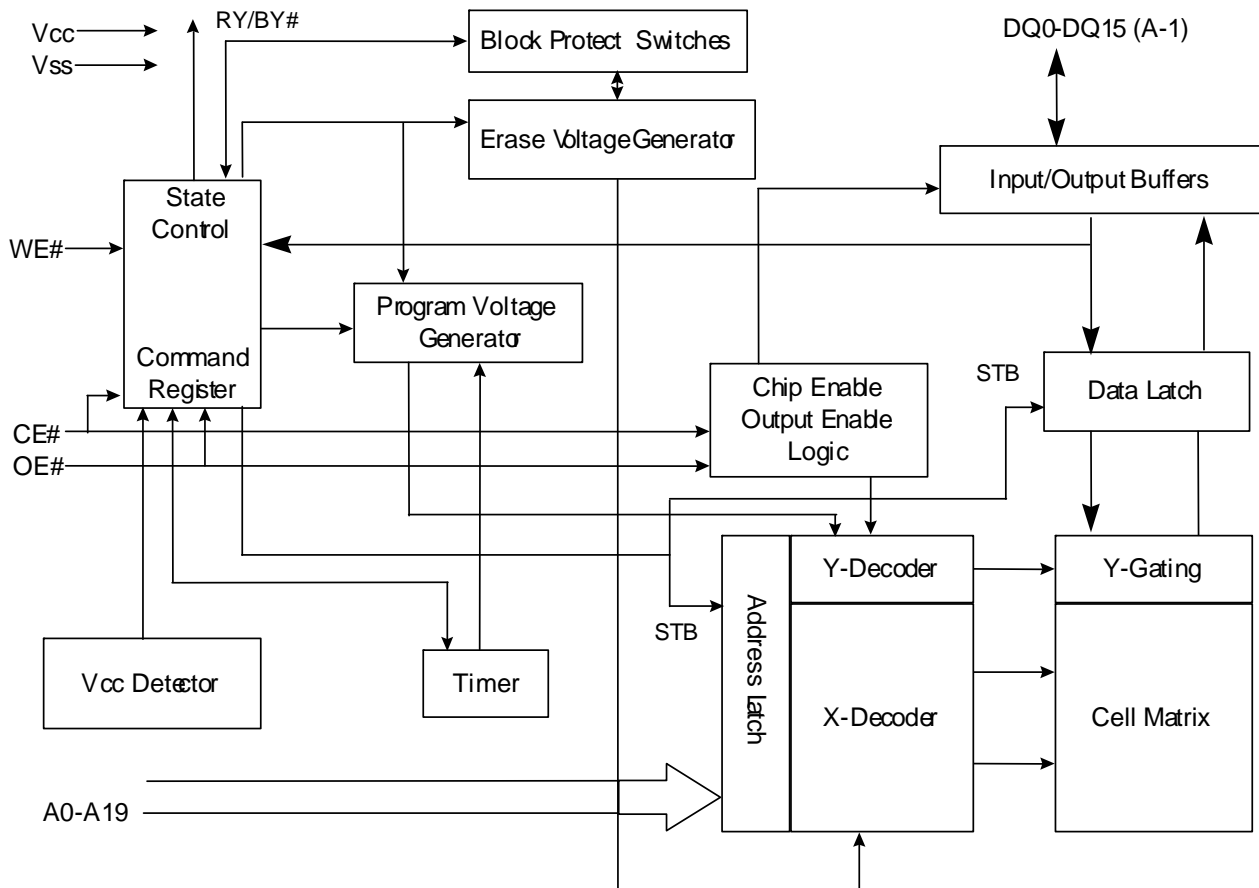
**W9864G6JH-6 Block diagram**



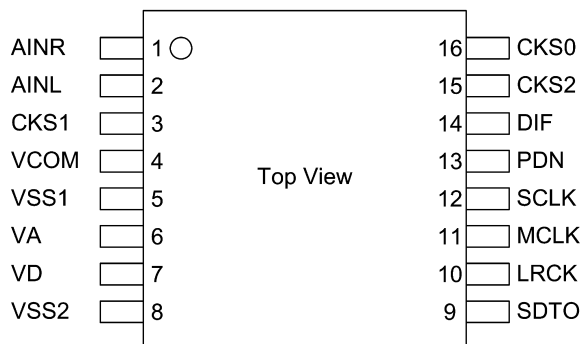
# EN29LV160BB-70TIP (HDMI : U2003)



## EN29LV160BB-70TIP Block Diagram



### AK5358BET (HDMI : U2403)



### AK5358BET Pin Function

No.	Pin Name	I/O	Function
1	AINR	I	Rch Analog Input Pin
2	AINL	I	Lch Analog Input Pin
3	CKS1	I	Mode Select 1 Pin
4	VCOM	O	Common Voltage Output Pin, VA/2 Bias voltage of ADC input.
5	VSS1	-	Ground Pin
6	VA	-	Analog Power Supply Pin, 4.5 ~ 5.5V
7	VD	-	Digital Power Supply Pin, 2.7 ~ 5.5V
8	VSS2	-	Ground Pin
9	SDTO	O	Audio Serial Data Output Pin “L” Output at Power-down mode.
10	LRCK	I/O	Output Channel Clock Pin “L” Output in Master Mode at Power-down mode.
11	MCLK	I	Master Clock Input Pin
12	SCLK	I/O	Audio Serial Data Clock Pin “L” Output in Master Mode at Power-down mode.
13	PDN	I	Power Down Mode & Reset Pin “H”: Power up, “L”: Power down & Reset
14	DIF	I	Audio Interface Format Pin “H”: 24bit I <sup>2</sup> S Compatible, “L”: 24bit MSB justified
15	CKS2	I	Mode Select 2 Pin
16	CKS0	I	Mode Select 0 Pin

PCM5100 (HDMI:U2401)

PCM510X (top view)

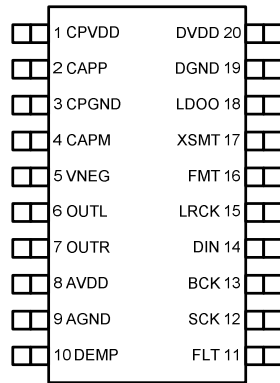


Table 2. TERMINAL FUNCTIONS, PCM510x

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 <sup>(1)</sup> : 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 <sup>2</sup> 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

(1) Failsafe LVCMOS Schmitt trigger input

PCM5100 Block Diagram

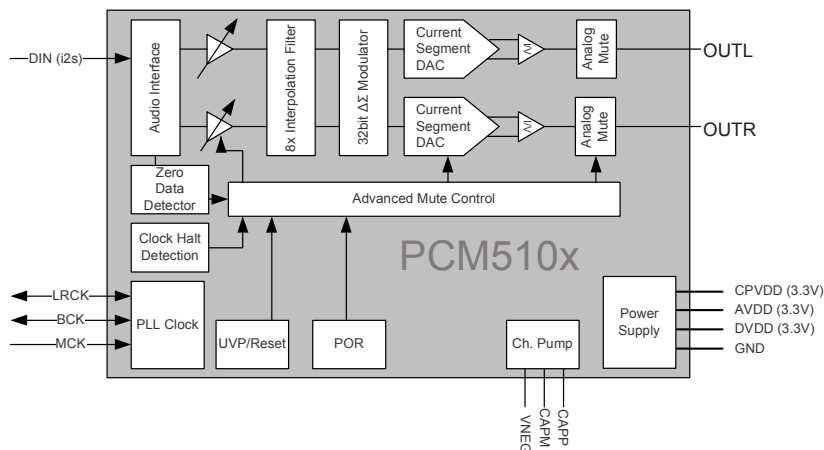
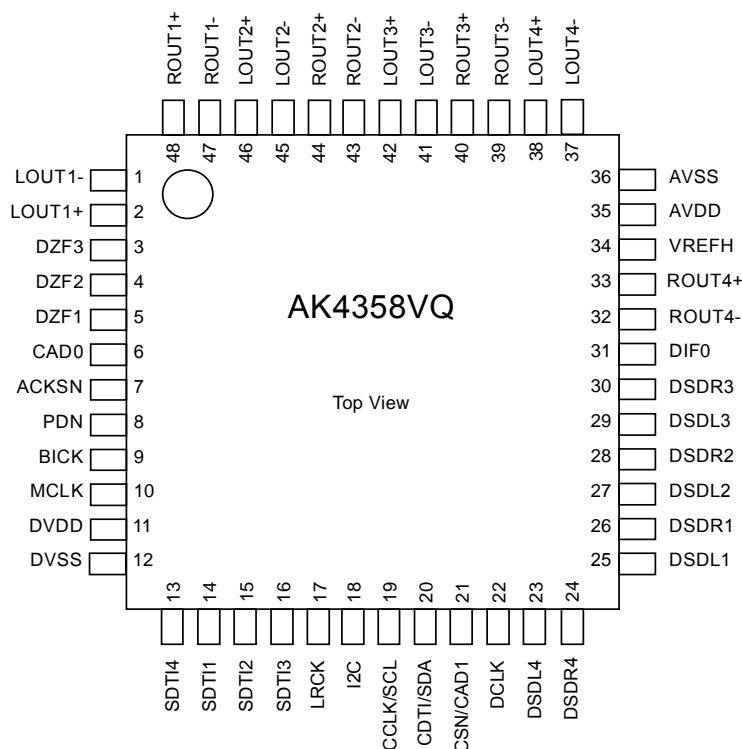


Figure 1. PCM510x Functional Block Diagram

## AK4358VQ (HDMI : U2404)



### AK4358VQ Pin Function

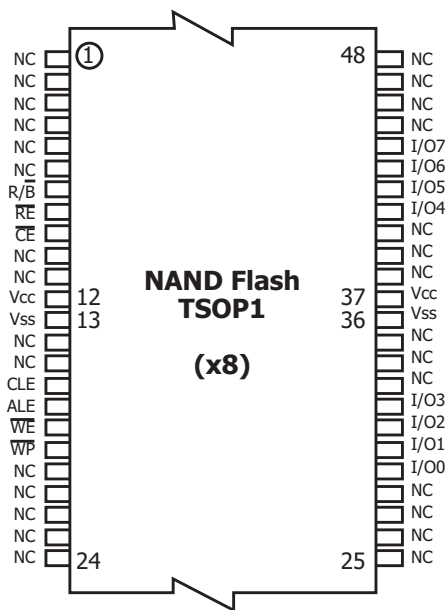
No.	Pin Name	I/O	Function
1	LOUT1-	O	DAC1 Lch Negative Analog Output Pin
2	LOUT1+	O	DAC1 Lch Positive Analog Output Pin
3	DZF3	O	Zero Input Detect 3 Pin
4	DZF2	O	Zero Input Detect 2 Pin
5	DZF1	O	Zero Input Detect 1 Pin
6	CAD0	I	Chip Address 0 Pin
7	ACKSN	I	Auto Setting Mode Disable Pin (Pull-down Pin) “L”: Auto Setting Mode, “H”: Manual Setting Mode
8	PDN	I	Power-Down Mode Pin When at “L”, the AK4358 is in the power-down mode and is held in reset. The AK4358 should always be reset upon power-up.
9	BICK	I	Audio Serial Data Clock Pin
10	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
11	DVDD	-	Digital Power Supply Pin, +4.75~+5.25V
12	DVSS	-	Digital Ground Pin
13	SDTI4	I	DAC4 Audio Serial Data Input Pin
14	SDTI1	I	DAC1 Audio Serial Data Input Pin
15	SDTI2	I	DAC2 Audio Serial Data Input Pin
16	SDTI3	I	DAC3 Audio Serial Data Input Pin
17	LRCK	I	L/R Clock Pin
18	I2C	I	Control Mode Select Pin “L”: 3-wire Serial, “H”: I <sup>2</sup> C Bus
19	CCLK/SCL	I	Control Data Clock Pin I2C = “L”: CCLK (3-wire Serial), I2C = “H”: SCL (I <sup>2</sup> C Bus)
20	CDTI/SDA	I/O	Control Data Input Pin I2C = “L”: CDTI (3-wire Serial), I2C = “H”: SDA (I <sup>2</sup> C Bus)
21	CSN/CAD1	I	Chip Select Pin I2C = “L”: CSN (3-wire Serial), I2C = “H”: CAD1 (I <sup>2</sup> C Bus)
22	DCLK	I	DSD Clock Pin
23	DSDL4	I	DAC4 DSD Lch Data Input Pin
24	DSDR4	I	DAC4 DSD Rch Data Input Pin
25	DSDL1	I	DAC1 DSD Lch Data Input Pin
26	DSDR1	I	DAC1 DSD Rch Data Input Pin
27	DSDL2	I	DAC2DSD Lch Data Input Pin
28	DSDR2	I	DAC2 DSD Rch Data Input Pin

29	DSDL3	I	DAC3 DSD Lch Data Input Pin
30	DSDR3	I	DAC3 DSD Rch Data Input Pin
31	DIF0	I	Audio Data Interface Format 0 Pin
32	ROUT4-	O	DAC4 Rch Negative Analog Output Pin
33	ROUT4+	O	DAC4 Rch Positive Analog Output Pin
34	VREFH	I	Positive Voltage Reference Input Pin
35	AVDD	-	Analog Power Supply Pin, +4.75~+5.25V
36	AVSS	-	Analog Ground Pin
37	LOUT4-	O	DAC4 Lch Negative Analog Output Pin
38	LOUT4+	O	DAC4 Lch Positive Analog Output Pin
39	ROUT3-	O	DAC3 Rch Negative Analog Output Pin
40	ROUT3+	O	DAC3 Rch Positive Analog Output Pin
41	LOUT3-	O	DAC3 Lch Negative Analog Output Pin
42	LOUT3+	O	DAC3 Lch Positive Analog Output Pin
43	ROUT2-	O	DAC2 Rch Negative Analog Output Pin
44	ROUT2+	O	DAC2 Rch Positive Analog Output Pin
45	LOUT2-	O	DAC2 Lch Negative Analog Output Pin
46	LOUT2+	O	DAC2 Lch Positive Analog Output Pin
47	ROUT1-	O	DAC1 Rch Negative Analog Output Pin
48	ROUT1+	O	DAC1 Rch Positive Analog Output Pin

Note: All input pins except pull-down pin should not be left floating.



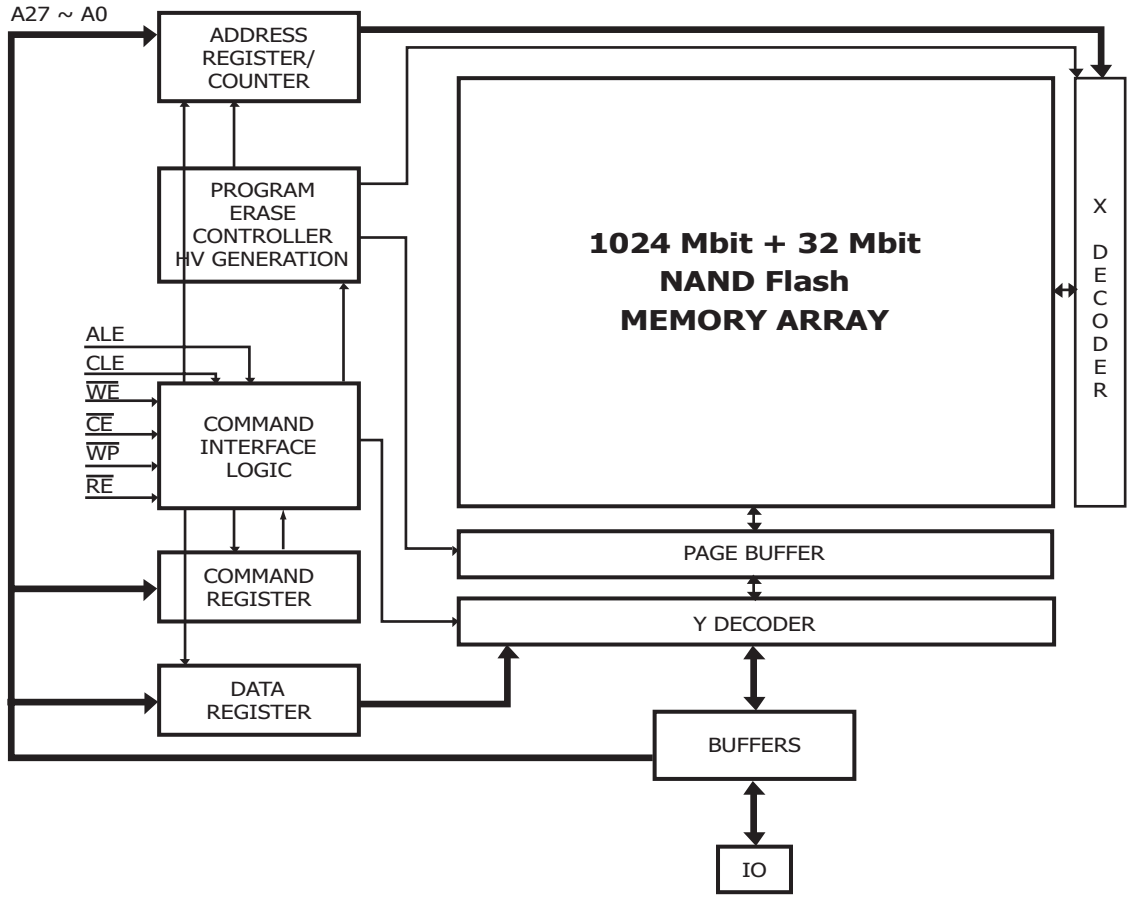
## H27U1G8F2BTR-BC (HDMI : U2603)



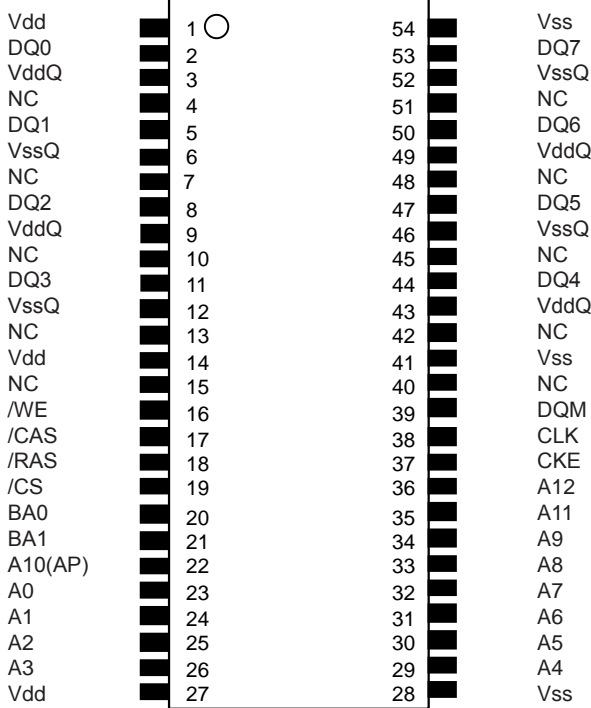
### H27U1G8F2BTR-BC Pin Function

Pin Name	Description
I00 ~ I07	<b>DATA INPUTS/OUTPUTS</b> The IO pins allow to input command, address and data and to output data during read / program operations. The inputs are latched on the rising edge of Write Enable (WE). The I/O buffer float to High-Z when the device is deselected or the outputs are disabled.
CLE	<b>COMMAND LATCH ENABLE</b> This input activates the latching of the IO inputs inside the Command Register on the Rising edge of Write Enable (WE).
ALE	<b>ADDRESS LATCH ENABLE</b> This input activates the latching of the IO inputs inside the Address Register on the Rising edge of Write Enable (WE).
$\overline{CE}$	<b>CHIP ENABLE</b> This input controls the selection of the device.
$\overline{WE}$	<b>WRITE ENABLE</b> This input acts as clock to latch Command, Address and Data. The IO inputs are latched on the rise edge of WE.
$\overline{RE}$	<b>READ ENABLE</b> The RE input is the serial data-out control, and when active drives the data onto the I/O bus. Data is valid tREA after the falling edge of RE which also increments the internal column address counter by one.
$\overline{WP}$	<b>WRITE PROTECT</b> The WP pin, when Low, provides an Hardware protection against undesired modify (program / erase) operations.
R/B	<b>READY BUSY</b> The Ready/Busy output is an Open Drain pin that signals the state of the memory.
Vcc	<b>SUPPLY VOLTAGE</b> The Vcc supplies the power for all the operations (Read, Write, Erase).
Vss	GROUND
NC	NO CONNECTION

**H27U1G8F2BTR-BC Block Diagram**



**A3V56S30FTP-G6 (HDMI:U2604,2605)**

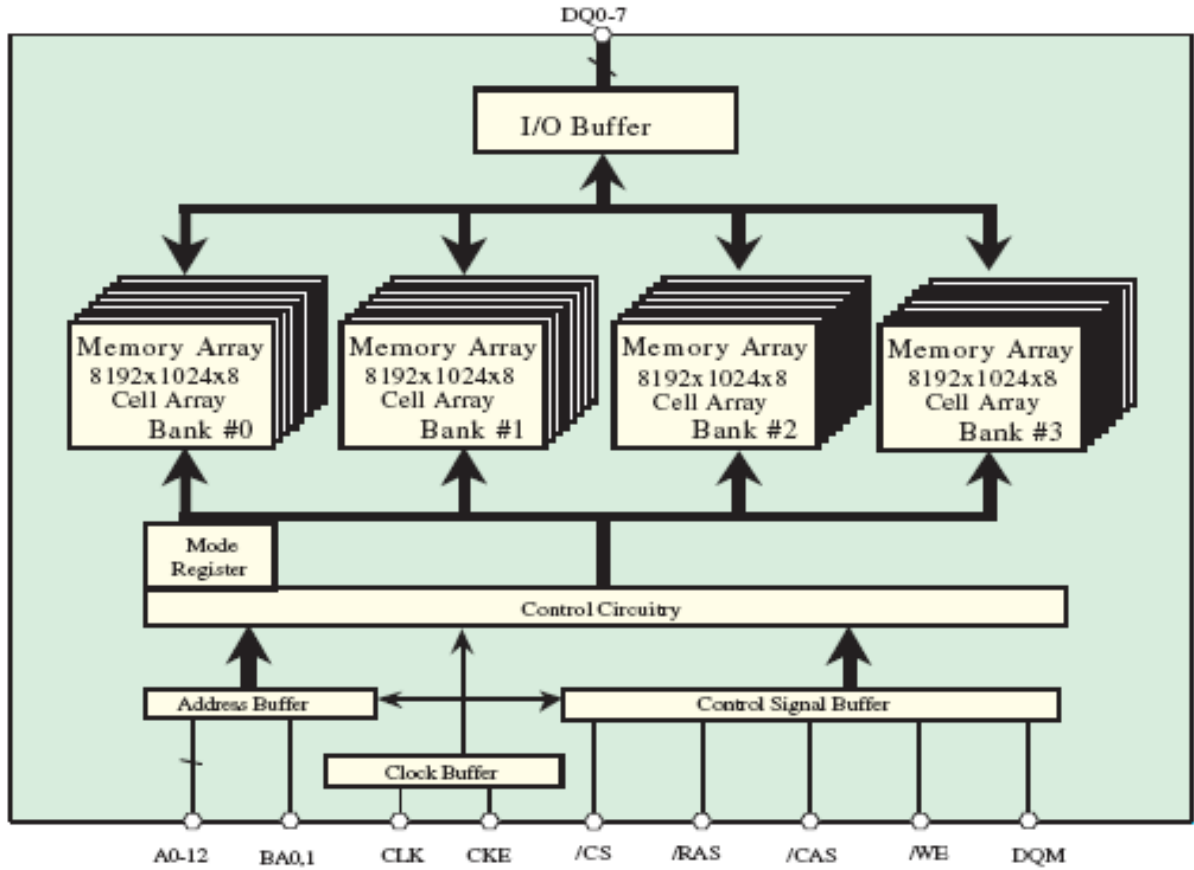


## A3V56S30FTP-G6 Pin Function

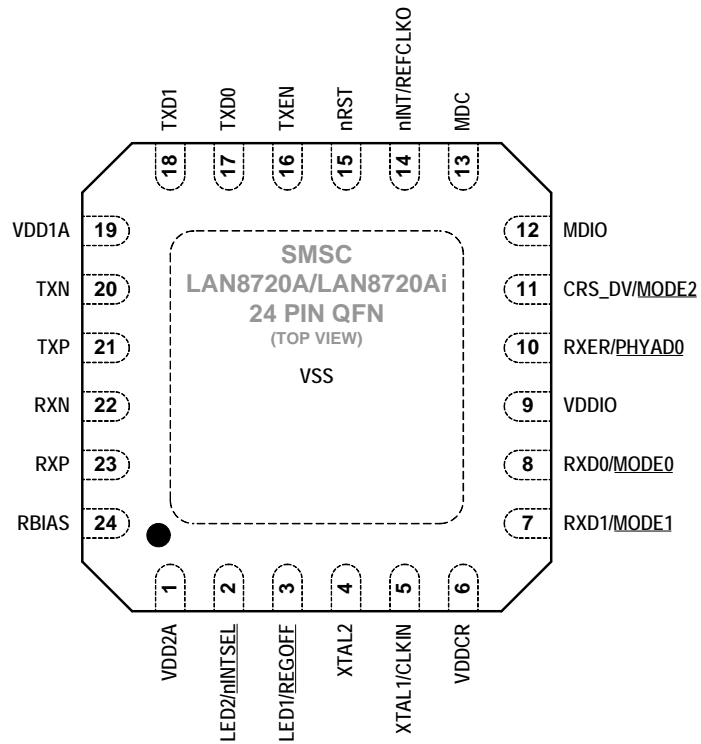
### Pin Descriptions

SYMBOL	TYPE	DESCRIPTION
CLK	Input	Clock: CLK is driven by the system clock. All SDRAM input signals are sampled on the positive edge of CLK. CLK also increments the internal burst counter and controls the output registers.
CKE	Input	Clock Enable: CKE activates (HIGH) and deactivates (LOW) the CLK signal. Deactivating the clock provides PRECHARGE POWER-DOWN and SELF REFRESH operation (all banks idle), ACTIVE POWER-DOWN (row active in any bank), or CLOCK SUSPEND operation (burst / access in progress). CKE is synchronous except after the device enters self refresh mode, where CKE becomes asynchronous until after exiting the same mode. The input buffers, including CLK, are disabled during self refresh mode, providing low standby power. CKE may be tied HIGH.
/CS	Input	Chip Select: /CS enables (registered LOW) and disables (registered HIGH) the command decoder. All commands are masked when /CS is registered HIGH. /CS provides for external bank selection on systems with multiple banks. /CS is considered part of the command code.
/CAS, /RAS, /WE	Input	Command Inputs: /CAS, /RAS, and /WE (along with /CS) define the command being entered.
DQM, DQML, DQMU,	Input	Input / Output Mask: DQM is sampled HIGH and is an input mask signal for write accesses and an output disable signal for read accesses. Input data is masked during a WRITE cycle. The output buffers are placed in a High-Z state (two-clock latency) when during a READ cycle. DQM corresponds to DQ0–DQ7 (A3V56S30FTP). DQML corresponds to DQ0–DQ7, DQMU corresponds to DQ8–DQ15 (A3V56S40FTP).
BA0, BA1	Input	Bank Address Input(s): BA0 and BA1 define to which bank the ACTIVE, READ, WRITE or PRECHARGE command is being applied.
A0–A12	Input	A0-12 specify the Row / Column Address in conjunction with BA0,1. The Row Address is specified by A0-12. The Column Address is specified by A0-9(x8) and A0-8(x16). A10 is also used to indicate precharge option. When A10 is high at a read / write command, an auto precharge is performed. When A10 is high at a precharge command, all banks are precharged.
DQ0–DQ15	I/O	Data Input / Output: Data bus.
NC	–	Internally Not Connected: These could be left unconnected, but it is recommended they be connected or Vss.
VddQ	Supply	Data Output Power: Provide isolated power to output buffers for improved noise immunity.
VssQ	Supply	Data Output Ground: Provide isolated ground to output buffers for improved noise immunity.
Vdd	Supply	Power for the input buffers and core logic.
Vss	Supply	Ground for the input buffers and core logic.

### A3V56S30FTP-G6 Block Diagram



### LAN8720A (HDMI:U2802)



# LAN8720A Pin Function

Table 2.8 24-QFN Package Pin Assignments

PIN NUM	PIN NAME	PIN NUM	PIN NAME
1	VDD2A	13	MDC
2	LED2/ <u>nINTSEL</u>	14	nINT/REFCLKO
3	LED1/ <u>REGOFF</u>	15	nRST
4	XTAL2	16	TXEN
5	XTAL1/CLKIN	17	TXD0
6	VDDCR	18	TXD1
7	RXD1/ <u>MODE1</u>	19	VDD1A
8	RXD0/ <u>MODE0</u>	20	TXN
9	VDDIO	21	TXP
10	RXER/ <u>PHYAD0</u>	22	RXN
11	CRS_DV/ <u>MODE2</u>	23	RXP
12	MDIO	24	RBIAS

# LAN8720A Block Diagram

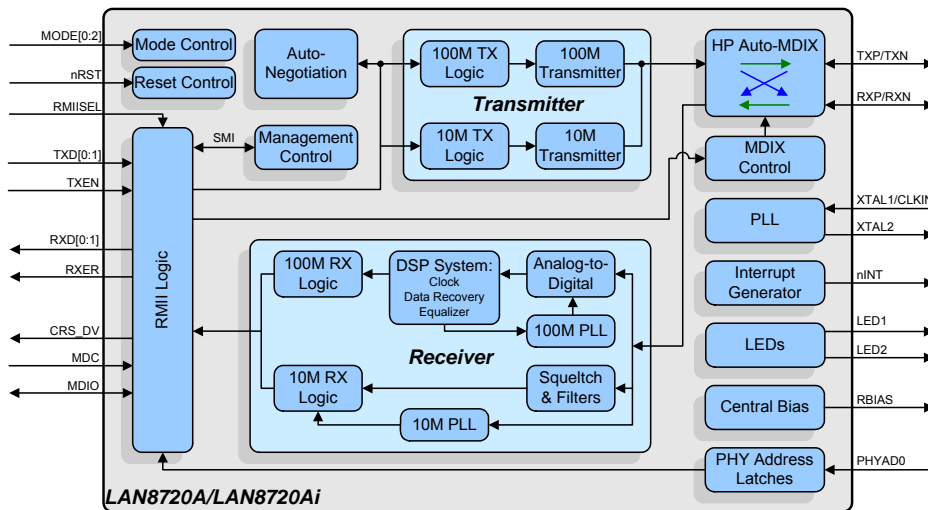
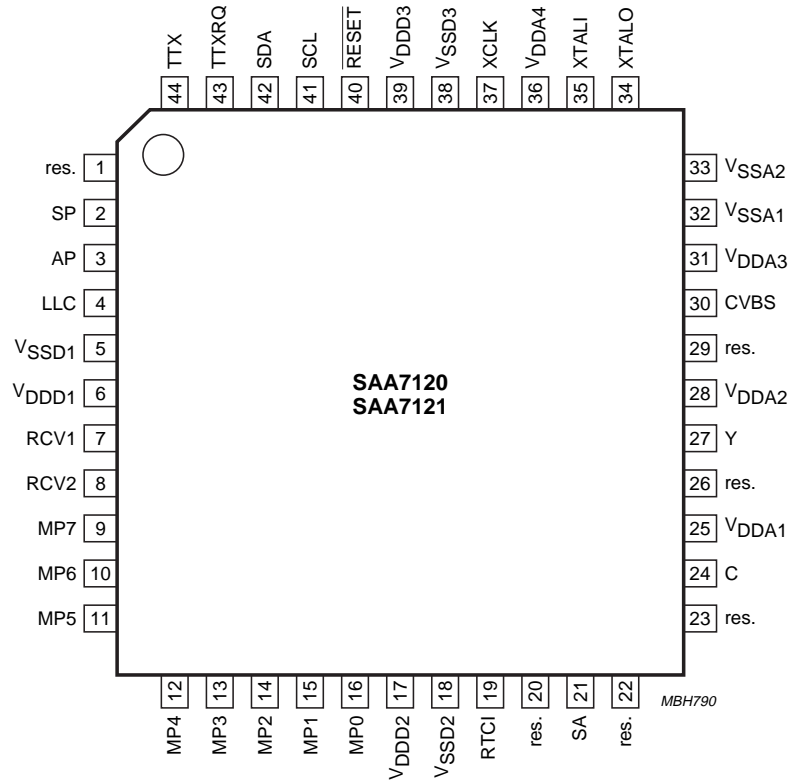
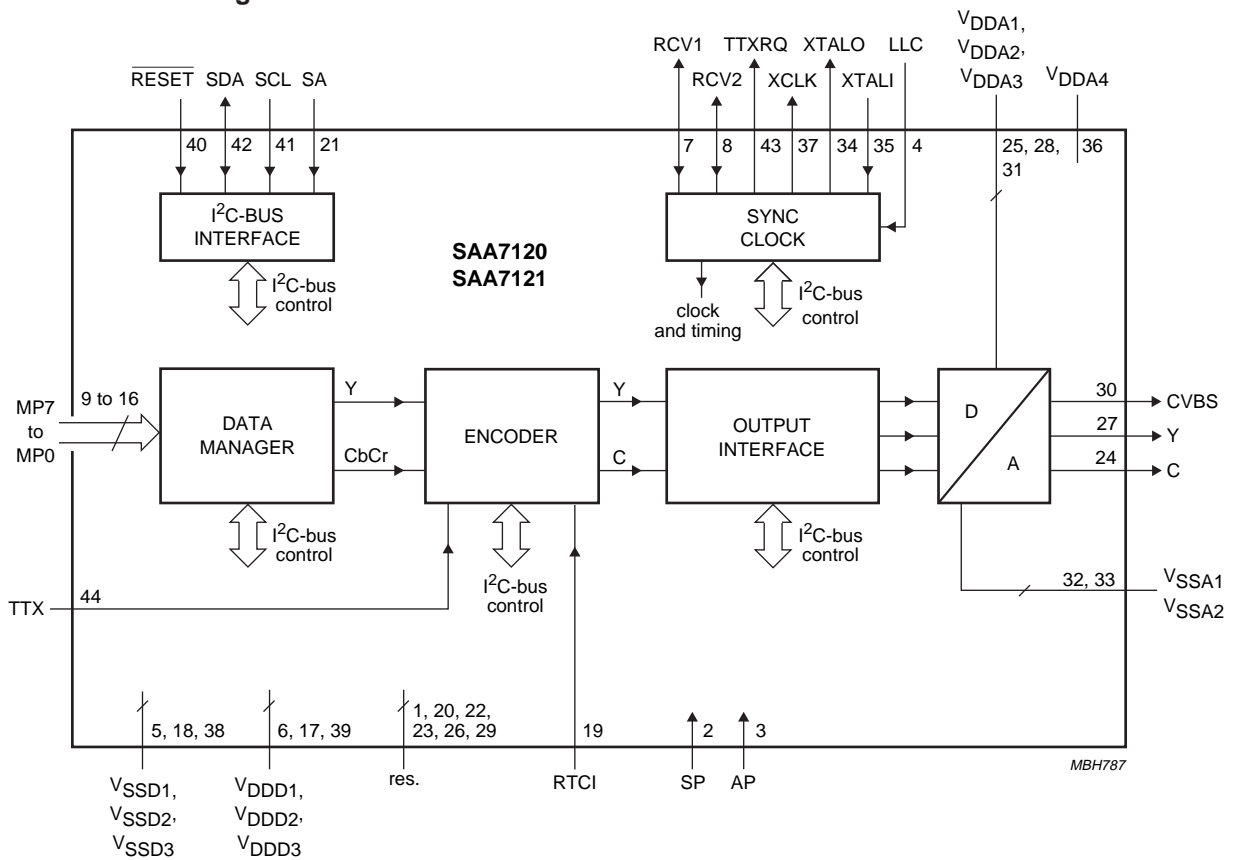


Figure 1.2 Architectural Overview

# SAA7121H (HDMI : U2803)



## SAA7121H Block Diagram

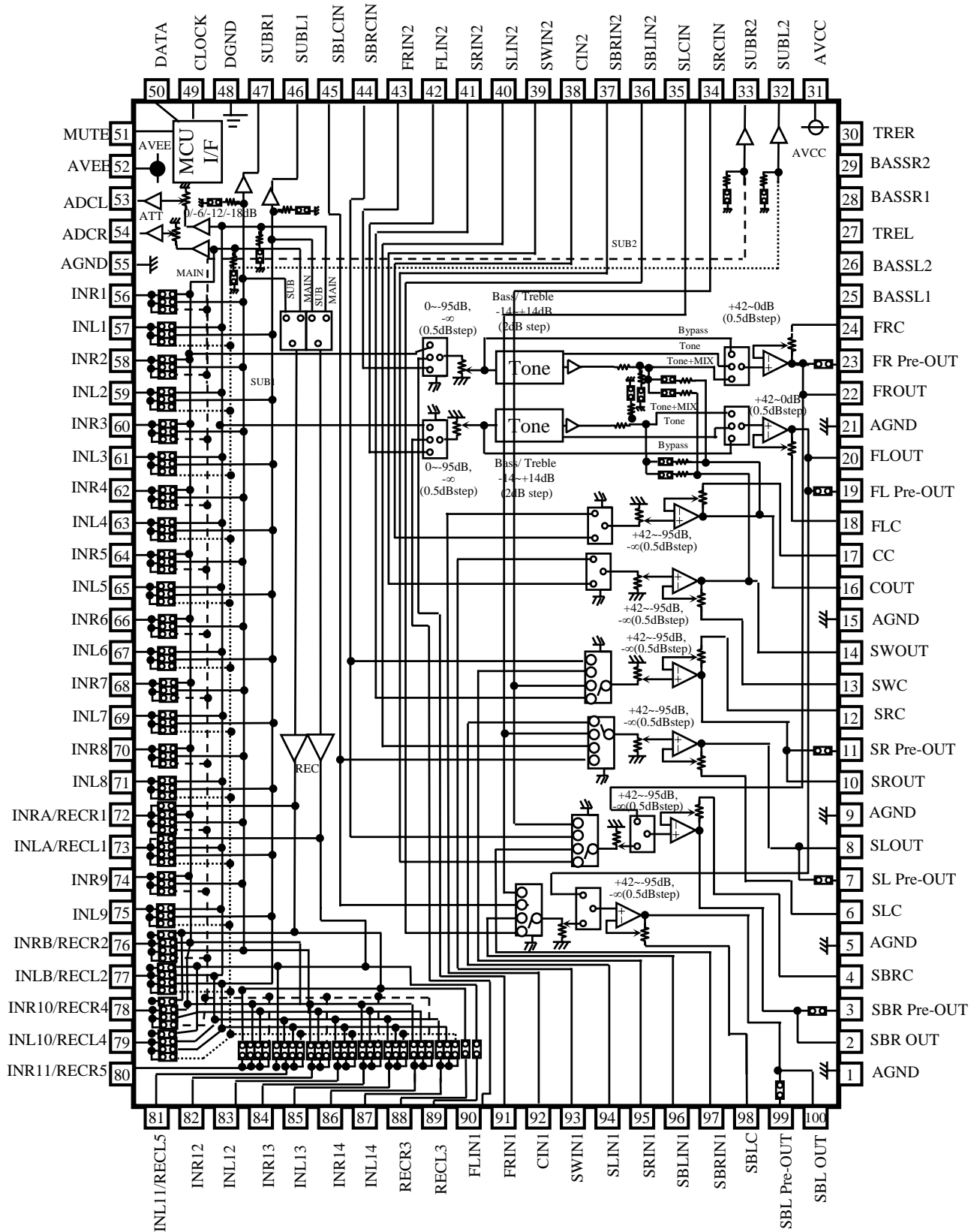


## SAA7121H Pin Description

SYMBOL	PIN	I/O	DESCRIPTION
res.	1	–	reserved
SP	2	I	test pin; connected to digital ground for normal operation
AP	3	I	test pin; connected to digital ground for normal operation
LLC	4	I	line-locked clock; this is the 27 MHz master clock for the encoder
V <sub>SSD1</sub>	5	I	digital ground 1
V <sub>DDD1</sub>	6	I	digital supply voltage 1
RCV1	7	I/O	raster control 1 for video port; this pin receives/provides a VS/FS/FSEQ signal
RCV2	8	I/O	raster control 2 for video port; this pin provides an HS pulse of programmable length or receives an HS pulse
MP7	9	I	MPEG port; it is an input for "CCIR 656" style multiplexed Cb Y, Cr data
MP6	10	I	
MP5	11	I	
MP4	12	I	
MP3	13	I	
MP2	14	I	
MP1	15	I	
MP0	16	I	
V <sub>DDD2</sub>	17	I	digital supply voltage 2
V <sub>SSD2</sub>	18	I	digital ground 2
RTCI	19	I	Real Time Control input; if the LLC clock is provided by an SAA7111 or SAA7151B, RTCI should be connected to pin RTCO of the decoder to improve the signal quality
res.	20	–	reserved
SA	21	I	the I <sup>2</sup> C-bus slave address select input pin; LOW: slave address = 88H, HIGH = 8CH
res.	22	–	reserved
res.	23	–	reserved
C	24	O	analog output of the chrominance signal
V <sub>DDA1</sub>	25	I	analog supply voltage 1 for the C DAC
res.	26	–	reserved
Y	27	O	analog output of VBS signal
V <sub>DDA2</sub>	28	I	analog supply voltage 2 for the Y DAC
res.	29	–	reserved
CVBS	30	O	analog output of the CVBS signal
V <sub>DDA3</sub>	31	I	analog supply voltage 3 for the CVBS DAC
V <sub>SSA1</sub>	32	I	analog ground 1 for the DACs
V <sub>SSA2</sub>	33	I	analog ground 2 for the oscillator and reference voltage
XTALO	34	O	crystal oscillator output (to crystal)
XTALI	35	I	crystal oscillator input (from crystal); if the oscillator is not used, this pin should be connected to ground
V <sub>DDA4</sub>	36	I	analog supply voltage 4 for the oscillator and reference voltage
XCLK	37	O	clock output of the crystal oscillator



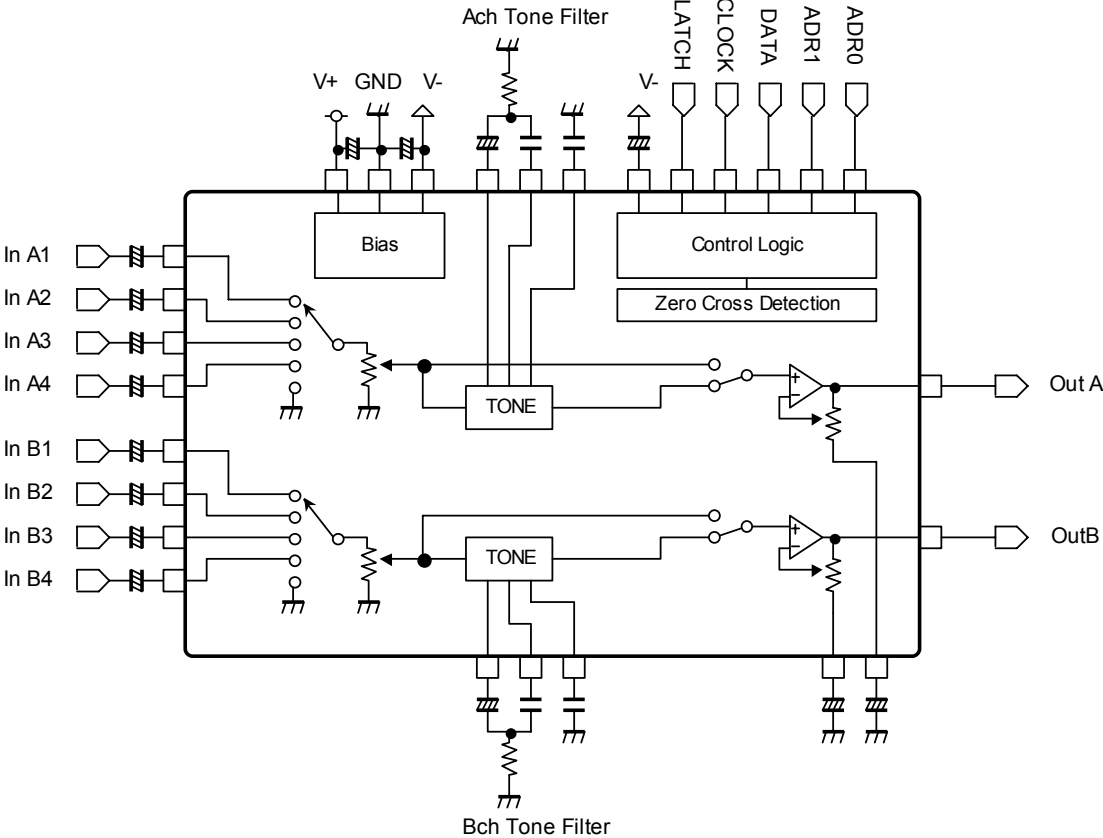
# R2A15218FP (INPUT : IC4210)



## R2A15218FP Pin Function

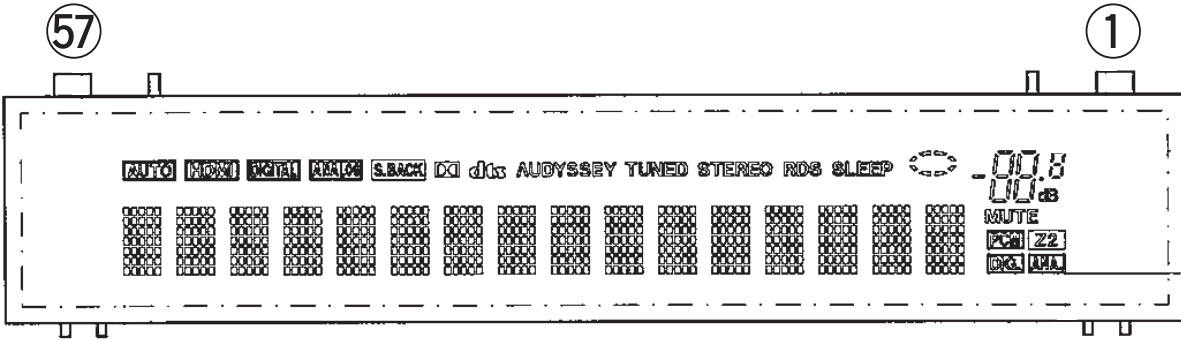
PIN No.	Name	Function
22,20, 16,14, 10, 8, 2, 100	FROUT,FLOUT, COUT,SWOUT, SROUT, SLOUT, SBROUT,SBLOUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
23,19, 11, 7, 3, 99	FR Pre-out,FL Pre-out, SR Pre-out, SL Pre-out, SBR Pre-out,SBL Pre-out	Pre-output pin of FL/FR/SL/SR/SBL/SBR channel
24,18, 17,13, 12, 6, 4, 98	FRC,FLC, CC,SWC, SRC,SLC, SBRC,SBLC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
1,5,9,15, 21,55,98	AGND	Analog ground of internal circuit
27,30	TREL, TRER	Frequency characteristic setting pin of L/R channel tone control (Treble)
25,26, 28,29	BASSL1,BASSL2 BASSR1,BASSR2	Frequency characteristic setting pin of L/R channel tone control (Bass)
31	AVCC	Positive power supply to internal circuit
43,42, 41,40, 39,38, 37,36	FRIN2, FLIN2, SRN2,SLIN2, SWIN2,CIN2, SBRIN2,SBLIN2	Multi Input pin of L/R/C/SW/SL/SR/SBL/SBR channel (Multi IN 1/2)
90,91, 92,93, 94,95, 96,97	FLIN1, FRIN1, CIN1,SWIN1, SLIN1,SRIN1, SBLIN1,SBRIN1	
48	DGND	Digital ground of internal circuit
49	DATA	Input pin of control data
50	CLOCK	Input pin of control clock
52	AVEE	Negative power supply to internal circuit
57,59,61,63, 65,67,69,71, 75,83,85,87	INL1,INL2, INL3,INL4, INL5,INL6,INL7,INL8, INL9,INL12,INL13,INL14	Input pin of L/R channel (Input Selector)
56,58,60,62, 64,66,68,70, 74,82,84,86	INR1,INR2, INR3,INR4, INR5,INR6,INR7,INR8, INR9,INR12,INR13,INR14	
51	MUTE	Outside Mute Control PIN
44,45 34,35	SBRCIN,SBLCIN SRCIN,SLCIN	3 <sup>rd</sup> Multi Input pin for SBL/SBR/SL/SR channel Volume that is able to swap SBR/SBL with SR/SL
46,47 33,32	SUBL1,SUBR1 SUBL2,SUBR2	Output pin for L/R channel SUB1/SUB2 Output
53,54	ADCL, ADCR	Output pin for L/R channel ADC
88,89	RECR3,RECL3	Output pin for L/R channel REC Output
72,73, 76,77, 78,79 80,81	INRA/RECR1,INLA/RECL1, INRB/RECR2,INLB/RECL2, INR10/RECR4,INL10/RECL4, INR11/RECR5,INL11/RECL5	Input pin of L/R channel (Input Selector)/ Output pin for L/R channel REC Output

NJW1194A (AUDIO : IC4206)



## 2. FL DISPLAY

### FLD (018BT021GINK) (FRONT : FL4400)



### PIN CONNECTION

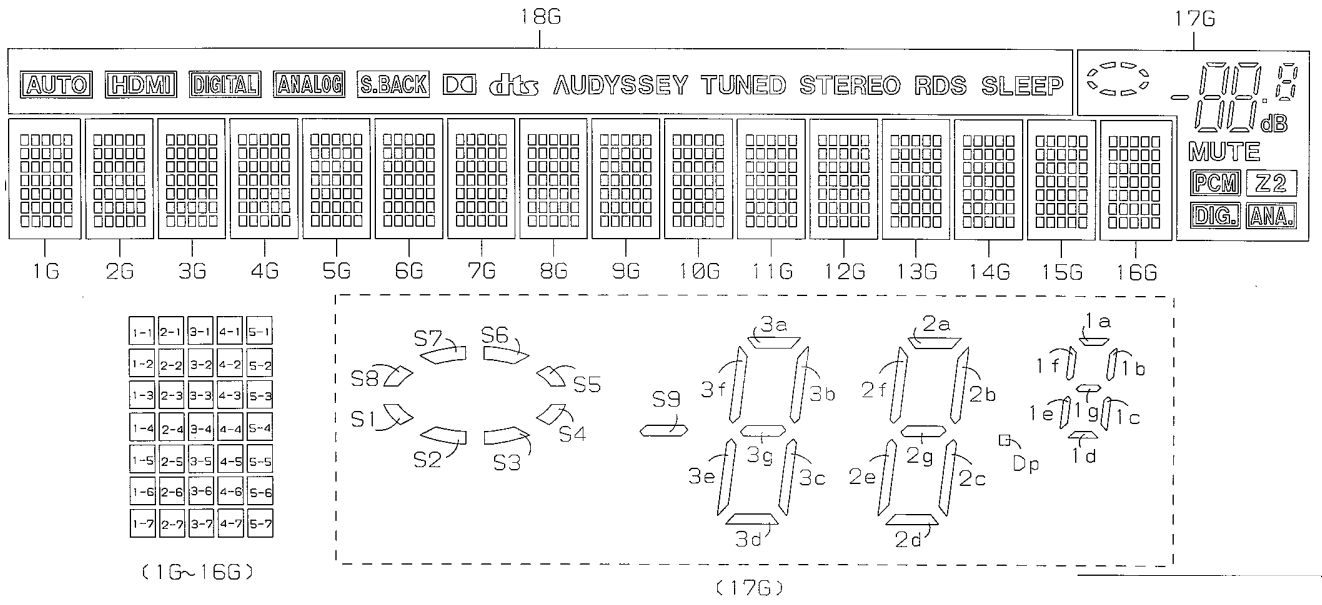
PIN CONNECTION

PIN NO.	5	5	5	5	5
	7	6	5	4	3
	2	1			
CONNECTION	F	N	N	N	P
					G
					V
					H

PIN NO.	5	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	8	7	7	7	8	8	8	8	8		
	0	9	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1				
CONNECTION	V	D	S	S	C	C	-	T	T	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	7	7	7	8	8	8	8	8
	D	I	C	T	I	S	P	A	B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1	1	1	1	1

- NOTE
- 1) F1, F2 --- Filament
  - 2) NP ----- No pin
  - 3) DL ----- Datum Line
  - 4) NX ----- No extend pin
  - 5) LGND ----- Logic GND pin
  - 6) PGND ----- Power GND pin
  - 7) VH ----- High Voltage Supply pin
  - 8) VDD ----- Logic Voltage Supply pin
  - 9) CP ----- Shift Register Clock
  - 10) DA ----- Serial Data Input
  - 11) ISA, B --- Test pin
  - 12) CS ----- Chip Select Input pin
  - 13) RESET --- Reset Input
  - 14) OSC ----- Pin for self-oscillation
  - 15) Solder composition is Sn-3Ag-0.5Cu.
  - 16) 17G, 18G ----- Grid
  - 17) Q17G, Q18G ----- Driver Output Port.
  - 18) Field of vision is a minimum of 21.8° from the lower side.

# GRID ASSIGNMENT



**ANODE CONNECTION**

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	17G	18G
																	(AD3)	(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	DC
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	dB
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	AUDYSBY
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	-

# PARTS LIST OF PCB UNIT

\*Parts indicated by "nsp" on this table cannot be supplied.

\*The parts listed below are only for maintenance. Therefore they might differ from the parts used in the unit in appearances or dimensions.

NOTE: The symbols in the column "Remarks" indicate the following destinations.

E3 : U.S.A. & Canada model

E2 : Europe model

E1C : China model

## 7CH\_AMP PCB UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
Q401,402	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q403	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q405	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q406	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q407,408	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q411,412	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q413,414	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q415	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q418	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q419,420	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q423,424	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q425,426	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q427	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q430	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q431,432	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q435,436	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q437,438	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q439	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q442	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q443,444	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q447,448	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q449,450	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q451	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q454	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q455,456	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q459,460	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q461,462	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q463	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q466	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q467,468	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q471,472	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q473,474	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q475	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q478	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q479,480	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q483,484	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
D401-442	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D457,458	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
ZD401	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S	
ZD402,403	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S	
ZD404	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S	
ZD405,406	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S	
ZD407	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
ZD408,409	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S		
ZD410	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S		
ZD411,412	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S		
ZD413	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S		
ZD414,415	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S		
ZD416	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S		
ZD417,418	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S		
ZD419	963202500300D	D,ZENER ZJ5.1A-0.5W		K06005R134522S		
ZD420,421	963202500410S	D,ZENER ZJ4.7B-0.5W		K06004R744522S		
<b>RESISTORS GROUP</b>						
R403	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R405	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R406	963252100150S	POSISTOR,I9DHPH1608 471P 115T SMD PTC THERMISTOR		F320471001150S		
R410	nsp	JUMPER (0.6/52MM)		L045084006040S		
R415	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R418	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S		
R420	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R420	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R424,425	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R428	nsp	JUMPER (0.6/52MM)		L045084006040S		
R430,431	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R433	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R433	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R434	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S		
R439	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R441,442	nsp	R,METAL FILM 1K-J,1W		C060010265050S		
R443	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R447,448	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R449	963252100160S	POSISTOR DHPH1608 471P 95T		F320471000950S		
R450	963252100150S	POSISTOR,I9DHPH1608 471P 115T SMD PTC THERMISTOR		F320471001150S		
R453	nsp	JUMPER (0.6/52MM)		L045084006040S		
R458	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R461	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S		
R463	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R463	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R464	963252100160S	POSISTOR DHPH1608 471P 95T		F320471000950S		
R467,468	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R472	nsp	JUMPER (0.6/52MM)		L045084006040S		
R474,475	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R477	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R477	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R483	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R485,486	nsp	R,METAL FILM 1K-J,1W		C060010265050S		



Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R487	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R491,492	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R494	963252100150S	POSISTOR,I9DHPTHF1608 471P 115T SMD PTC THERMISTOR		F320471001150S	
R497	nsp	JUMPER (0.6/52MM)		L045084006040S	
R502	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S	
R505	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S	
R511,512	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R515	nsp	JUMPER (0.6/52MM)		L045084006040S	
R517,518	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R521	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R526	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S	
R528,529	nsp	R,METAL FILM 1K-J,1W		C060010265050S	
R530	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R533	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R535	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R537	963252100150S	POSISTOR,I9DHPTHF1608 471P 115T SMD PTC THERMISTOR		F320471001150S	
R540	nsp	JUMPER (0.6/52MM)		L045084006040S	
R545	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S	
R550	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S	
R550	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S	
R554,555	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R558	nsp	JUMPER (0.6/52MM)		L045084006040S	
R561,562	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R563	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S	
R563	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S	
R564	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R569	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S	
R571,572	nsp	R,METAL FILM 1K-J,1W		C060010265050S	
R573	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R576	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R578	nsp	R,METAL FILM 270-J,1W		C060027165060S	
R580	963252100150S	POSISTOR,I9DHPTHF1608 471P 115T SMD PTC THERMISTOR		F320471001150S	
R583	nsp	JUMPER (0.6/52MM)		L045084006040S	
R588	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S	
R591	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S	
R593	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S	
R593	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S	
R597,598	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R601	nsp	JUMPER (0.6/52MM)		L045084006040S	
R603,604	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S	
R606	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S	
R606	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S	
R607	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
R612	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R614,615	nsp	R,METAL FILM 1K-J,1W		C060010265050S		
R616	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R619	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R621	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R623	963252100150S	POSISTOR,I9DHPPTHF1608 471P 115T SMD PTC THERMISTOR		F320471001150S		
R626	nsp	JUMPER (0.6/52MM)		L045084006040S		
R631	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R634	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S		
R636	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R636	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R640,641	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R644	nsp	JUMPER (0.6/52MM)		L045084006040S		
R646,647	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R649	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R649	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R650	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S		
R655	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R657,658	nsp	R,METAL FILM 1K-J,1W		C060010265050S		
R659	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R662	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R664	nsp	R,METAL FILM 270-J,1W		C060027165060S		
R666	963252100150S	POSISTOR,I9DHPPTHF1608 471P 115T SMD PTC THERMISTOR		F320471001150S		
R669	nsp	JUMPER (0.6/52MM)		L045084006040S		
R674	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R677	963125010690S	R,METAL FILM 15K-J,2W		C060015366050S		
R679	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R679	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R683,684	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R687	nsp	JUMPER (0.6/52MM)		L045084006040S		
R689,690	00D9630345903	R,FIXED 2WJ-0.47	FLAMERETARDANT	N113136647820S		
R692	nsp	R,CARBON FILM,I9220K-J,1/5W- 52RE-AX	E3	C00002246P520S		
R692	nsp	R,CARBON FILM,I9150K-J,1/5W- 52RE-AX	E2,E1C	C00001546P520S		
R694	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S		
R698	963125012630S	R,METAL FILM 22-J,1W	FLAMERETARDANT	C060022065050S		
R700,701	nsp	R,METAL FILM 1K-J,1W		C060010265050S		
R702	nsp	R,METAL FILM 270-J,1W		C060027165060S		
VR401-407	963161012400S	VR,SEMI CARBON EVN-DCAA03B 1KB		C541102315000S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>CAPACITORS GROUP</b>					
C401	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C403	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C405	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C406	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C407	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S	
C407	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S	
C408	00D2544573994	C,ELECT 22UF-M/50V	E3	D040220087330S	
C408	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S	
C409	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C410	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S	
C410	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C411,412	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S	
C413	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S	
C415,416	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S	
C418	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C421	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C422	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C423	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S	
C423	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S	
C424	00D2544573994	C,ELECT 22UF-M/50V	E3	D040220087330S	
C424	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S	
C425	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C426	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S	
C426	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C427,428	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S	
C429	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S	
C431,432	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S	
C434	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C437	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C438	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C439	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S	
C439	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S	
C440	00D2544573994	C,ELECT 22UF-M/50V	E3	D040220087330S	
C440	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S	
C441	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C442	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S	
C442	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C443,444	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S	
C445	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S	
C447,448	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S	
C450	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C453	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C454	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C455	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S	
C455	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S	
C456	00D9630224503	C,ELECT 22UF-M/50V	E3	D040220087060S	
C456	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S	
C457	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S	
C458	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S	
C458	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C459,460	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S	
C461	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C463,464	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C466	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C469	nsp	C,CERAMIC 220PF-J/50V		D010221167160S		
C470	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C471	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S		
C471	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S		
C472	00D9630224503	C,ELECT 22UF-M/50V	E3	D040220087060S		
C472	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S		
C473	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C474	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S		
C474	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S		
C475,476	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C477	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C479,480	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C482	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C485	nsp	C,CERAMIC 220PF-J/50V		D010221167160S		
C486	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C487	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S		
C487	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S		
C488	00D9630224503	C,ELECT 22UF-M/50V	E3	D040220087060S		
C488	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S		
C489	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C490	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S		
C490	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S		
C491,492	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C493	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C495,496	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C498	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C501	nsp	C,CERAMIC 220PF-J/50V		D010221167160S		
C502	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C503	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E3	D040470087070S		
C503	963134501660S	C,ELECT GE 85C 220UF-M/25V	E2,E1C	D040221084060S		
C504	00D9630224503	C,ELECT 22UF-M/50V	E3	D040220087060S		
C504	963134501910S	C,ELECT GE 85C 47UF-M/50V	E2,E1C	D040470087140S		
C505	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C506	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S		
C506	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S		
C507,508	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C509	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C511,512	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C513,514	00D9630338402	C,ELECT 330UF-M/6.3V		D040331081050S		
C515	00D2544538913	C,ELECT 22UF-M/16V		D040220083070S		
<b>OTHERS PARTS GROUP</b>						
BKT400	nsp	BRACKET 0.8t/SCREW		4010210196100S		
CN404	nsp	CN,WIRE 2MM,I9CN,WIRE 2MM		L002241050090S		
CP401	nsp	CN.WAFER 13P STRAIGHT		L101200101310S		
CP402	nsp	CN.WAFER 5P 5267-05A		L102526700500S		
CP403	nsp	CN.WAFER 10P STRAIGHT		L101200101010S		
CP405	nsp	CN.WAFER 3P 5267-03A		L102526700300S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
G400-402	nsp	CN,WIRE 1P		L000600010050S	
TP401-407	nsp	CN.WAFER 3P		L101200100320S	
	nsp	RING,TER WIRE,I9210MM/1P		8410211010020S	

## SPK\_SMPS PCB UNIT ASS'Y

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
<b>SEMICONDUCTORS GROUP</b>							
△	IC4140	231010091708S	IC,LINEAR POWER TOP258MG SDIP10		J122258001010S		
△	IC4142	00D2623047008	IC PC123X2YFZ (DIP4P SHARP)		K614123000010S		
	IC4143	212050010508S	IC KIA2431AP		J126243118010S		
	Q4000-4004	943215500020S	TR 2SA RT1P141C		J520101411210S		
	Q4006-4010	943216500020S	TR 2SC RT1N141C		J522101411210S		
	D4000-4004	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S		
	D4006	00D2760401905	D,SWITCHING 1SS133T		K000013300520S		
	D4007	963203500300D	D,RECTIFIER BRIDGE DIODE		K047100600220S		
	D4140-4148	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S		
	D4149	963204500210D	D,SCHOTTKY S30SC6MT 60V 30A		K120300600010S		
	D4150	00D2760401905	D,SWITCHING 1SS133T		K000013300520S		
	ZD4147-4149	963202500370D	D,ZENER ZJ39B-0.5W/5MA-52MM	E3	K06039R044522S		
	ZD4150-4157	963202500350D	D,ZENER ZJ22B-0.5W		K06022R044522S		
	ZD4158	963202500370D	D,ZENER ZJ39B-0.5W/5MA-52MM		K06039R044522S		
	ZD4159	963202500320D	D,ZENER ZJ5.6B-0.5W/5MA-52MM		K06005R644522S		
	ZD4160	00D9600095704	ZENER DIODE MTZJ6.2B-0.5W	E3	K06006R244520S		
	ZD4160	00D2760665903	ZENER DIODE MTZJ16B-0.5W	E2,E1C	K06016R044520S		
	TR4140	963222500150D	SEMI,FET CHIP KMB2D0N60SA		J543206005510S		
	TR4142	963213500170D	SEMI,TR/GE NPN 2SC KTC3198G		J5023198G0000S		
<b>RESISTORS GROUP</b>							
	R4000,4001	963125010110S	R,METAL FILM 470-J,2W		C060047166060S		
	R4002	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4002	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4003	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4004	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4004	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4005	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4006	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4006	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4007	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4008	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4008	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4009	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4010	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4010	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4011	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4012	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4012	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4013	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4014	nsp	R,METAL FILM 10-J,1W	E3	C060010065050S		
	R4014	nsp	R,METAL FILM 10-J,Axial	E2,E1C	C00001006P520S		
	R4015	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R4025-4027	963125500070D	R,METAL FILM 100PPM 1.1K-J		C060011265050S		
	R4028	nsp	R,METAL FILM 10K-J,1/4W		C060103063050S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R4147	nsp	270K-J,1/16W-1608	E3	C20002746M160S	
R4147	nsp	56K-J,1/16W-1608	E2,E1C	C20005636M160S	
R4148,4149	nsp	2.2M-J,1/5W-52RE-AX	E3	C00002256P520S	
R4150	nsp	1M-J,1/5W-52RE-AX	E3	C00001056P520S	
<b>CAPACITORS GROUP</b>					
C4000	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4001	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4002	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4003	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4004	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4006	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4007	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4008	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4010	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4011	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4012	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4013	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4015	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4016	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4017	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4019	nsp	C,CERAMIC CHIP HIK,I9X7R 0.01UF-K/200V-2012REEL	E3	D01110317G200S	
C4020	nsp	C,FILM P.PROPYLENE // ST-0.01UF- J/100V-5RE MANUAL	E2,E1C	D02110306C050S	
C4021	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4025	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4029	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4031	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S	
C4033	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4036	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4039	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4042	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4045	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4048	00D2544574922	C,ELECT 100UF-M/50V		D040101087060S	
C4049	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4052	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4060,4061	nsp	C,FILM 0.1UF-K/250V	E3	D02010407H080S	
C4060,4061	nsp	C,FILM P.PROPYLENE	E2,E1C	D02110406C050S	
C4062	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4063,4064	963134010180S	C,ELECT 12000UF-M/71V		D040123089550S	
C4065	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	C4067	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S		
△	C4140,4141	963134011730S	C,CERAMIC DE1B3KX471KB4BL01		D00847127H010S		
△	C4142	963132011940S	C,CERAMIC DE2F3KY103MB3BM02		D008103589010S		
△	C4143	nsp	C,FILM 0.1UF-K/275V		D02110407H010S		
	C4145-4147	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
△	C4148,4149	963132011940S	C,CERAMIC DE2F3KY103MB3BM02	E2,E1C	D008103589010S		
	C4151	943134501590S	C,ELECT GE 105C 100UF-M/200V		D04110108G000S		
	C4151	963134010200S	C,ELECT 100UF-M/400V	E2,E1C	D04110108K000S		
	C4152	963134010210S	C,ELECT 47UF-M/25V		D041470084050S		
	C4153	963132010120S	C,CERAMIC DEHR33A102KB2B		D00810207Q010S		
	C4154	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
	C4155	963134010190S	C,ELECT 10UF-M/50V		D041100087050S		
△	C4156	963132011930S	C,CERAMIC DE1E3KX222MB4BL01		D00822248H010S		
	C4159,4160	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
	C4161	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S		
	C4162-4164	963134010220S	C,ELECT5600UF-M/6.3V		D041562081001S		
	C4166	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
<b>OTHERS PARTS GROUP</b>							
	BKT4000-4002	nsp	BRACKET t1.0+Sn plating /PCB MTG		4010214876000S		
	BKT4141	nsp	BRACKET 0.8/SCREW		4010210196100S		
	BKT4142	nsp	BRACKET SCREW		4010210196000S		
	CLAMP400	nsp	CLAMP WIRE(SOLDER)		4330000120000S		
	CN402	nsp	CN,WIRE 230MM/5P 5264-05		L000231050050S		
	CN403	nsp	CN,WIRE 2MM 170MM/10P 20010HS-10		L002171100050S		
	CN405	nsp	CN,WIRE,I9CN,WIRE		L000161030050S		
	CN4141	nsp	CN,WIRE 370MM/5P		L000371050010S		
	CP4001	nsp	CN.WAFER 7.92MM 35328-0360		L108353280360S		
	CP4002	nsp	CN.WAFER 13P STRAIGHT		L101200101310S		
	CP4142	nsp	CN.WAFER 7.92MM LWBP1143-02P		L108011430210S		
	DZ4000	963202500330D	D,ZENER ZJ6.8B-0.5W		K06006R844522S		
△	F4140	963652010510S	FUSE T2A/250V	E3	N751502001160S		
△	F4140	963652010500S	FUSE 1.6A/250V	E2,E1C	N751501601160S		
△	F4141	963652010520S	FUSE T6.3A/250V	E3	N751506301160S		
△	F4141	963652010910S	FUSE T3.15A/250V	E2,E1C	N751503151160S		
	JK4000	963643010360S	TER, BOARD 6P JB-602A-02		G613602A0200YS		
	JK4001	963646001690S	TER, BOARD 8P MST-108V1		G614108V1010MS		
△	JK4140	963641011240S	SOCKET,POWER AC (INLET JACK)		G4300152P0001S		
	JP4140,4141	nsp	JUMPER (0.6/52MM)		L045084006040S		
	L4000-4006	nsp	SP-2507 1.0 PI*2UEW TURNS		D330900001330S		
△	L4140	963111100420D	COIL,LINE FILTER SQ2014 27mH		D320201405510S		
	RLY4000	00D9630218409	RELAY BC3-12 24V 2A		G680240202030S		
	RLY4001-4004	963682100280D	RELAY JZC-42F/012-2HST		G680060103010S		
△	RLY4140	963682100290D	RELAY JZC-36FD/005-HLT		G680060103030S		



	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
△	T4140	963102100020S	TRANS,SWITCHING EER2834	E2,E1C	E060283405520S		
		nsp	HOLDER,FUSE CLIP	F4140_1,F4140_2	G645000050010S		
		nsp	HOLDER,FUSE CLIP	F4141_1,F4141_2	G645000050010S		
		nsp	SHIELD//AVR3310CIBKEU(DENON) SPT 0.3T /CASE	E2,E1C	3070210596000S		

## REG\_CNT PCB UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
IC4600	00D2630553006	IC NJM7805FA		J126780500130S	
IC4601	00D2630554005	IC NJM7905FA		J126790500020S	
IC4602	00D2630553006	IC NJM7805FA		J126780500130S	
IC4603	00D2630810008	IC NJM7808FA		J126780800030S	
IC4604	00D2630503001	IC NJM7908FA		J126790800020S	
IC4605	00D2630553006	IC NJM7805FA		J126780500130S	
IC4700	00D2631286903	IC PQ120DNA1ZPH 12V 1A		J126120010010S	
IC4701	236810090504S	IC ILX3232D		J046323200020S	
D4600	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D4601,4602	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D4603,4604	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D4605-4607	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D4608,4609	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S	
D4610	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D4611-4614	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S	
D4615	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D4616-4631	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S	
D4703	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
ZD4600,4601	963202500360D	D,ZENER ZJ33B-0.5W/5MA-52MM		K06033R044522S	
ZD4700	963202500400S	D,ZENER,ZJ16B-0.5W/5MA-52MM		K06016R044522S	
<b>CAPACITORS GROUP</b>					
C4600	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4601	963134011290S	C,ELECT 4700UF-M/16V		D040472083020S	
C4602	00D9630217002	C,ELECT 3300UF-M/16V		D040332083010S	
C4603	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4604	00D9630333203	C,ELECT 100UF-M/16V	E3	D040101083090S	
C4604	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C4605	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4606	00D9630333203	C,ELECT 100UF-M/16V	E3	D040101083090S	
C4606	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C4607	90M-OA000500R	C,ELECT 4700UF-M/25V(MHA)		D040472084240S	
C4608	00D9630333203	C,ELECT 100UF-M/16V	E3	D040101083090S	
C4608	963134001860S	C,ELECT 470UF-M/16V	E2,E1C	D040471083080S	
C4609	90M-OA000500R	C,ELECT 4700UF-M/25V(MHA)		D040472084240S	
C4610	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C4611	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4613	nsp	C,FILM 0.1UF-J/50V		D020104167050S	
C4614	963134010700S	C,ELECT 2200UF-M/25V		D040222084030S	
C4615,4616	nsp	C,FILM 0.1UF-J/50V		D020104167050S	
C4618	nsp	C,FILM 0.1UF-J/50V		D020104167050S	
C4702,4703	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4704-4706	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4707	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4711,4712	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4716,4717	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4718,4719	nsp	C,CERAMIC 33PF-J/50V		D010330167160S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>OTHERS PARTS GROUP</b>					
BKT4700	nsp	BRACKET 0.8t/SCREW		4010210196100S	
BKT4703	nsp	BRACKET SCREW		4010210196000S	
CLAMP460,461	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CN4600,4601	nsp	CN,WAFER,I9C125Z2-09 9P BtoB SOCKET(FEMALE) P=1.25MM		L109012520920S	
CN4618	nsp	CN,WIRE 2MM,I9CN,WIRE 2MM		L002800112620S	
CN4700	nsp	CN,WAFER,I9C125Z2-09 9P BtoB SOCKET(FEMALE) P=1.25MM		L109012520920S	
CN4701	nsp	CN,WAFER,I9C125Z2-13 13P BtoB SOCKET(FEMALE) P=1.25MM		L109012521320S	
CN4702	nsp	CN,WAFER,I9C125Z2-07 7P BtoB SOCKET(FEMALE) P=1.25MM		L109012520720S	
CN4800	nsp	CN,WIRE 2MM,I9CN,WIRE 2MM		L002181040090S	
CN5005	nsp	CN,WAFER,I9C125Z2-19 19P BtoB SOCKET(FEMALE) P=1.25MM		L109012521920S	
CP3401	nsp	CN,WAFER C125Z1-13 13P		L109012511320S	
CP3402	nsp	CN,WAFER C125Z1-07 7P		L109012510720S	
CP3403	nsp	CN.WAFER ,I9C125Z1-33 33P BtoB HEADER(MALE) P=1.25MM		L109012513320S	
CP3404	nsp	CN,WAFER C125Z1-17 17P		L109012511720S	
CP3406	nsp	CN,WAFER C125Z1-11 11P		L109012511120S	
CP3407	nsp	CN,WAFER C125Z1-13 13P		L109012511320S	
CP4600,4601	nsp	CN,WAFER C125Z1-09 9P		L109012510920S	
CP4602	nsp	CN.WAFER 2.5MM 8P		L102526808010S	
CP4603	nsp	CN,WAFER C125Z1-11 11P		L109012511120S	
CP4604	nsp	CN,WAFER C125Z1-17 17P		L109012511720S	
CP4605	nsp	CN,WAFER C125Z1-15 15P		L109012511520S	
CP4608	nsp	CN,WAFER C125Z1-09 9P		L109012510920S	
CP4612	nsp	CN,WAFER,I9C125Z1-27 27P BtoB HEADER(MALE) P=1.25MM		L109012512720S	
CP4613	nsp	CN,WAFER C125Z1-13 13P		L109012511320S	
CP4614,4615	nsp	CN,WAFER C125Z1-07 7P		L109012510720S	
CP4617	nsp	CN.WAFER ,I9C125Z1-33 33P BtoB HEADER(MALE) P=1.25MM		L109012513320S	
CP4618	nsp	CN.WAFER 11P		L101200101120S	
CP4700	nsp	CN,WAFER C125Z1-09 9P		L109012510920S	
CP4701	nsp	CN,WAFER C125Z1-13 13P		L109012511320S	
CP4702	nsp	CN,WAFER C125Z1-07 7P		L109012510720S	
⚠ F4600	963652500220S	FUSE GLASS TUBE 20MM,I9T2.5A/250V-IVBSUCPCcUR S506		N751502501160S	*
⚠ F4601-4604	963652010910S	FUSE T3.15A/250V		N751503151160S	
JACK4700	00D9630325606	JACK,D3.5 EARPHONE		G40130802001YS	
JACK4702	00D2051305008	CN.WAFER 9P		L103090090030S	

## FRONT PCB UNIT ASS'Y

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
<b>SEMICONDUCTORS GROUP</b>							
	IC4400,4401	00D2631289900	IC AZ4580M		J121458000020S		
	Q4400	943216500050S	TR 2SC RT1N441C		J522104411210S		
	Q4401	943215500030S	TR 2SA RT1P441C		J520104411210S		
	Q4402,4403	943214500020S	TR 2SC 2SC3052		J522305200050S		
	Q4404	00D9630226705	TR KTC1027Y		J5021027Y0020S		
	Q4405	943216500020S	TR 2SC RT1N141C		J522101411210S		
	Q4406	963212500030S	TR 2SA ISA1530AC1		J520015301210S		
	Q4407	943216500020S	TR 2SC RT1N141C		J522101411210S		
	Q4408	963212500030S	TR 2SA ISA1530AC1		J520015301210S		
	D4401,4402	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S		
	D4403-4410	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S		
	D4411,4412	963209003510S	D,ESD CDS3C05HDMI1		K067030500010S		
	D4413	963209500020S	D,ESD CDS3C15GTA		K067031500010S		
	ZD4400	963202500330D	D,ZENER ZJ6.8B-0.5W		K06006R844522S		
	ZD4401	963202500350D	D,ZENER ZJ22B-0.5W		K06022R044522S		
	ZD4402	963202500340D	D,ZENER ZJ15B-0.5W		K06015R044522S		
	ZD4403-4405	963202500310D	D,ZENER ZJ5.1B-0.5W		K06005R144522S		
	LED4400	963262010460S	LED SIR-341ST3F 3PI		K505341300010S		
	LED4402	963263100620D	LED,ROUND BL-BUBGJ201G-L		K500032501150S		
	FL4400	943172100150S	DISPLAY,FLT 018BT021GINK		K530180210010S		
<b>CAPACITORS GROUP</b>							
	R4426	00D9639006272	R,FIXED RSD-R1-1WJ-4.7		N113135647920S		
<b>CAPACITORS GROUP</b>							
	C4408	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
	C4409	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
	C4411	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
	C4412	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
	C4413	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S		
	C4414	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S		
	C4415,4416	nsp	C,FILM 0.1UF-J/100V		D02010406C060S		
	C4417	nsp	C,ELECT 47UF-M/16V		D040470083080S		
	C4418	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S		
	C4419,4420	nsp	C,FILM 0.1UF-K/250V		D02010407H080S		
	C4421	00D9630157900	C,ELECT 470UF-M/63V		D040471088010S		
	C4422	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S		
	C4423	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)	E3	D040010087150S		
	C4423	00D9609009937	C,ELECT 100UF-M/50V	E2,E1C	D040101087060S		
	C4424	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S		
	C4425	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
	C4426	nsp	C,CERAMIC 1UF-Z/50V		D011105597160S		
	C4427,4428	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
	C4429,4430	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C4431,4432	nsp	C,FILM 0.1UF-J/100V		D02010406C060S	
C4433,4434	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C4436	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C4437	nsp	C,CERAMIC COG82PF-J/50V		D010820167160S	
C4438	00D9630293709	C,ELECT 100UF-M/10V		D040101082070S	
C4439	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4440	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C4441,4442	nsp	C,CERAMIC 470PF-J/50V		D010471167160S	
C4443	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4444	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C4445	nsp	C,CERAMIC 470PF-J/50V		D010471167160S	
C4447	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C4448	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4449	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C4450	nsp	C,CERAMIC 470PF-J/50V		D010471167160S	
C4452	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C4453,4454	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4455,4456	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C4457,4458	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4459,4460	nsp	C,FILM ST-0.01UF-J/100V		D02010306C060S	
C4461	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C4462	nsp	C,FILM 0.1UF-J/100V		D02010406C060S	
C4463	nsp	C,FILM 0.047UF-J/100V		D02047306C060S	
C4464	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C4465,4466	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4467	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C4470	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4471	nsp	C,ELECT 220UF-M/6.3V		D040221081070S	
C4472	nsp	C,CERAMIC 0.001UF-J/50V		D010102167160S	
C4475-4478	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S	
C4479	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
<b>OTHERS PARTS GROUP</b>					
BD4400	nsp	COIL,BEAD CBW160808U121T		D340160811210S	
BD4401-4410	nsp	CHIP RES. 0-J 1/16W-1608REEL		C20000006M160S	
BD4411	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
BKT4400	nsp	BRACKET 0.8t/SCREW		4010210196100S	
CB4400,4401	nsp	CHIP RES. 0-J 1/16W-1608REEL		C20000006M160S	
CLAMP401	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CLAMP403	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CLAMP405,406	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CN4400	nsp	CN.FPC 1.0MM 1.0-11S-40PW 40P		L130100114050S	
CN4402	nsp	CN,WIRE 2MM,I9610MM/5P		L002611050010S	
CP4400	nsp	CN.WAFER 5268-07A 7P		L102526800700S	
CP4401	nsp	CN.WAFER 7P		L101100030710S	
CP4402,4403	nsp	CN.WAFER 7P		L101100040710S	
CP4405	nsp	CN.WAFER 7P		L101100030710S	

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	CP4406	963643101610D	CN,PLUG CONTACT USB		G480040000180S		
	△ F4401	963652500020S	FUSE 6125FF500-R 500mA		G657612505030S		
	G4400	nsp	RING,TER WIRE,I9150MM/1P 6054-BS=CKM9919T BK1617#22		8410151010190S		
					8410161010120S		
	JACK4400	00D9630367802	JACK,D3.5 EARPHONE		G401PJ354H40YS		
	JACK4401	963643101600D	JACK,D6.5 PHONE (YUQIU)		G402PJ621HA0YS		
	JACK4402	963643101640D	TER,RCA 3PIN RCA-308H-11		G606308H1100YS		
	JP4401,4402	nsp	R,CHIP 0-J,1/8W		C200000061300S		
	RMC4400	963262010290S	MODULE,REMOCON R34FS9A		E940349003810S		
	SW4400-4409	00D9630095305	SW,TACT SKHV10910D01		G180040500010S		
	SW4410	00D9630387408	SW,ENCODER EC16B24SO		G121162400070S		
	SW4411	00D9630095305	SW,TACT SKHV10910D01		G180040500010S		
	SW4412	00D9630387408	SW,ENCODER EC16B24SO		G121162400070S		

## AUDIO PCB UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
IC4204,4205	00D2631289900	IC AZ4580M		J121458000020S	
IC4206	00D2623727904	IC NJW1194A		J084119400010S	
IC4207	00D2631289900	IC AZ4580M		J121458000020S	
IC4210	963239000650S	IC R2A15218FP		J084152180010S	
<b>RESISTORS GROUP</b>					
R4257	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
R4259	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
R4263	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
R4267	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
R4271	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
R4275,4276	nsp	CHIP RES. 100-J 1/16W-1608REEL	E2,E1C	C20001016M160S	
<b>CAPACITORS GROUP</b>					
C4201-4203	00D2544573981	C,ELECT 10UF-M/50V	E3	D040100087070S	
C4201-4203	00D2544574919	C,ELECT 47UF-M/50V (Pb Free)	E2,E1C	D040470087070S	
C4204-4212	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4233	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4235,4236	00D2544574922	C,ELECT 100UF-M/50V	E3	D040101087060S	
C4235,4236	963134501890S	C,ELECT GE 85C 220UF-M/16V	E2,E1C	D040221083090S	
C4237,4238	nsp	CHIP RES. 0-J 1/16W-1608REEL		C20000006M160S	
C4239	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4240,4241	nsp	C,ELECT 47UF-M/16V	E3	D040470083080S	
C4240,4241	963134501890S	C,ELECT GE 85C 220UF-M/16V	E2,E1C	D040221083090S	
C4242	nsp	C,ELECT 47UF-M/16V	E3	D040470083080S	
C4242	963134501900S	C,ELECT GE 85C 100UF-M/25V	E2,E1C	D040101084210S	
C4243	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4244-4247	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C4248	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4249	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C4251	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4254	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4257	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4261,4262	nsp	CHIP RES. 0-J 1/16W-1608REEL		C20000006M160S	
C4263	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4265	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4267	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C4269	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4270,4271	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C4272	nsp	C,CERAMIC 68PF-J/50V		D010680167160S	
C4273	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C4274,4275	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4279	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4280	nsp	C,CERAMIC 3300PF-K/50V		D011332777160S	
C4281	nsp	ELECT. CAP. 33UF-M/16V -5RE SY		D040330083050S	
C4282	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4283	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C4284	00D9639006476	C,ELECT 4.7UF-M/50V		D0404R7087250S	
C4287	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C4288	00D9639006476	C,ELECT 4.7UF-M/50V		D0404R7087250S		
C4290	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C4291,4292	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
C4293	nsp	ELECT. CAP. 33UF-M/16V -5RE SY		D040330083050S		
C4294	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
C4295	nsp	C,CERAMIC 3300PF-K/50V		D011332777160S		
C4296	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
C4297,4298	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S		
C4299	nsp	C,CERAMIC 68PF-J/50V		D010680167160S		
C4300	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C4304	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S		
<b>OTHERS PARTS GROUP</b>						
BKT4200	nsp	BRACKET 0.8t/SCREW		4010210196100S		
CN401	nsp	CN,WIRE 2MM,I9CN,WIRE 2MM		L002171132620S		
CN4605	nsp	CN,WAFER,I9C125Z2-15 15P BtoB SOCKET(FEMALE) P=1.25MM		L109012521520S		
CN4612	nsp	CN,WAFER,I9C125Z2-27 27P BtoB SOCKET(FEMALE) P=1.25MM		L109012522720S		
CN4615	nsp	CN,WAFER,I9C125Z2-07 7P BtoB SOCKET(FEMALE) P=1.25MM		L109012520720S		
CN4617	nsp	CN.WAFER ,I9C125Z2-33 33P BtoB SOCKET(FEMALE) P=1.25MM		L109012523320S		
JK4200	963646007620M	RCA-603B-05 NI(WWW,RRR)GND=0		G603603B0500YS		
JK4201	00D9630132103	TER,RCA 4PIN RCA-405B-04		G602405B0400YS		



## VPT PCB UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
IC4800	231310009508S	IC PQ033DNA1ZPH		J126033010010S	
IC4801	235810046603S	IC AVDM2000(NJW1327)		J171132700010S	
D4802	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
D5000-5002	963201500160D	D,SWITCHING 1N4007 52REEL		K000400700220S	
Q5001	943214500030S	TR 2SC INC2001AC1		J522020011210S	
Q5002	943215500030S	TR 2SA RT1P441C		J520104411210S	
Q5004	943214500030S	TR 2SC INC2001AC1		J522020011210S	
Q5005	943215500030S	TR 2SA RT1P441C		J520104411210S	
Q5006	943216500050S	TR 2SC RT1N441C		J522104411210S	
Q5008	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5009,5010	943215500030S	TR 2SA RT1P441C		J520104411210S	
Q5012	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5013	943216500050S	TR 2SC RT1N441C		J522104411210S	
Q5015	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5017	943214500030S	TR 2SC INC2001AC1		J522020011210S	
Q5019	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5021	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5023	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5025	943215500030S	TR 2SA RT1P441C	E2,E1C	J520104411210S	
Q5027	943214500030S	TR 2SC INC2001AC1	E2,E1C	J522020011210S	
Q5030	943214500030S	TR 2SC INC2001AC1		J522020011210S	
ZD5000	00D9630295503	ZENER DIODE 0.2W 3.6V (UMD2 TYPE)		K06603R64P400S	
<b>RESISTORS GROUP</b>					
R5025,5026	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5027	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5029	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5030	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5031,5032	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5034	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5037	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5038,5039	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5041,5042	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5044,5045	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5043	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5046	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5048	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5049	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5050,5051	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5060,5061	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5062	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5064	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5065	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5066,5067	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5068	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5070	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R5071,5072	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5073,5074	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5075	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5076,5077	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5078	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
R5080	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5081,5082	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5083	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5084	nsp	1K-J,1/16W-1608	E2,E1C	C20001026M160S	
R5085,5086	nsp	470K-J,1/16W-1608	E2,E1C	C20004746M160S	
R5088	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E2,E1C	C20001036M160S	
R5089,5090	nsp	100K-J,1/16W-1608	E2,E1C	C20001046M160S	
R5092,5093	nsp	470-J,1/16W-1608	E2,E1C	C20004716M160S	
R5094	nsp	220-J,1/16W-1608	E2,E1C	C20002216M160S	
<b>CAPACITORS GROUP</b>					
C4800,4801	963134002740S	C,ELECT 10UF-M/16V		D040100083100S	
C4802	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C4803	nsp	C,CERAMIC 1UF-K/16V		D011105173161S	
C4806	nsp	C,CERAMIC 1UF-K/16V		D011105173161S	
C4807-4809	963134002740S	C,ELECT 10UF-M/16V		D040100083100S	
C4810-4815	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4816,4817	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C4818-4826	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4829,4830	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C4831-4836	nsp	C,CERAMIC 10UF-K/16V		D011106573200S	
C5000	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C5001,5002	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C5003	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C5005	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C5006	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C5007	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C5008,5009	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C5011,5012	00D9630224503	C,ELECT 22UF-M/50V	E2,E1C	D040220087060S	
C5013	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5015	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5016	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C5017-5020	00D9630224503	C,ELECT 22UF-M/50V	E2,E1C	D040220087060S	
C5021	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5023	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C5024,5025	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C5026,5027	00D9630224503	C,ELECT 22UF-M/50V	E2,E1C	D040220087060S	
C5029	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C5030	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5031-5034	00D9630224503	C,ELECT 22UF-M/50V	E2,E1C	D040220087060S	
C5035	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5036	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C5037	nsp	C,CERAMIC 330PF-J/50V	E2,E1C	D010331167160S	
C5038	nsp	C,CERAMIC 0.1UF-K/50V	E2,E1C	D011104577160S	
C5039,5040	00D9630224503	C,ELECT 22UF-M/50V	E2,E1C	D040220087060S	
C5041,5042	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C5043	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C5044	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C5045	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C5046	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C5047	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C5048	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C5049	00D2544573981	C,ELECT 10UF-M/50V		D040100087070S	
C5054-5058	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C5059	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
<b>OTHERS PARTS GROUP</b>					
CN4002	nsp	CN,WIRE 2MM,I950MM/13P 20010HS-13=CKM2002HV-13 WH1007#26 TAPE		L002500130040S	
CN4603	nsp	CN,WAFER,I9C125Z2-11 11P BtoB SOCKET(FEMALE) P=1.25MM		L109012521120S	
CN4604	nsp	CN,WAFER,I9C125Z2-17 17P BtoB SOCKET(FEMALE) P=1.25MM		L109012521720S	
CN4608	nsp	CN,WAFER,I9C125Z2-09 9P BtoB SOCKET(FEMALE) P=1.25MM		L109012520920S	
CN4613	nsp	CN,WAFER,I9C125Z2-13 13P BtoB SOCKET(FEMALE) P=1.25MM		L109012521320S	
CN4614	nsp	CN,WAFER,I9C125Z2-07 7P BtoB SOCKET(FEMALE) P=1.25MM		L109012520720S	
CP4800	nsp	CN.WAFER 4P 20010WR-04		L101200100420S	
CP5003	943183100200S	TUNER,FM,I9KST-MW004FV1-S63SV 4GANG+FM ONLY+50US		E900004010030S	
CP5003	943183100210S	TUNER,FM,I9KST-MW104FV1-S63V	E2	E900104011630S	
CP5003	943183100220S	TUNER,FM,I9KST-MW004FV1-S63	E1C	E900004010630S	
CP5005	nsp	CN,WAFER,I9C125Z1-19 19P BtoB HEADER(MALE) P=1.25MM		L109012511920S	
JK4800	963643005090S	TERMINAL RCA 1PIN		G600107AY000YS	
JK4801	963643003460S	TER,RCA 4PIN		G602405BE310YS	
JK4802-4804	963643101630D	TER,RCA 3PIN RCA-303B1-08		G606303B1080YS	
JK5000_4	00D9630132103	TER,RCA 4PIN RCA-405B-04		G602405B0400YS	
JK5000_6	963646007620M	RCA-603B-05 NI(WWW,RRR)GND=0	E2,E1C	G603603B0500YS	
JK5001_1	00D9630146005	TER,RCA 1PIN		G600107A0000YS	
JK5001_6	963643101820S	RCA-603B-96(WHWHWH,BKRDRD)	E2,E1C	G603603B9600YS	*
JK5002	00D9630146005	TER,RCA 1PIN		G600107A0000YS	
L5000	nsp	COIL,BEAD CBW160808U121T		D340160811210S	

## HDMI PCB UNIT ASS'Y

**NOTE:** When replacing the U3002 or U1602, use the U3002(963243101030D) or U1602(963248100710S).  
When the following are replaced, always rewrite with updated firmware using DFW.  
(Refer to "PROCEDURE FOR UPGRADING THE VERSION OF THE FIRMWARE" (58 page).)

- HDMI PCB UNIT ASS'Y
- U1602 (MX25L6406EM2I-12G)
- U2206 (EPM240T100C5N)
- U3002 (R5F56108VNFP)
- U2003 (MX29LV160DBTI-70G)⚠

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
U1001	236810057606S	IC LOGIC ADV3002BSTZ		J040300205510S	
U1201	nsp	IC,LOGIC AD8195		J040819505510S	
U1301	943239100760S	IC,LOGIC TC74VHC4051AFT TOSHIBA		J040744051360S	
U1302	963236101220D	IC,LOGIC ADV7850 HDMI 1.4A		J040785005510S	*
U1303	00D2623436907	IC,LOGIC TC74VHC244FT		J040742445530S	
U1601	963236101310S	IC,LOGIC-ENCODER,I9ADV8003-2 BGA425 ADV8003KBCZ-3C DUAL HDMI TX		J045800302010S	*
U1602	963248100710S	IC MEMORY FLASH (MX25L6406EM2I-12G)		J005256401210S	
U1801,1802	nsp	IC,MEMORY-RAM K4T51163QJ-BCE7		J001451163370S	*
U2001	nsp	IC,ANALOG,I9ADSP21487KSWZ-4B3016 SHARC PROCESSOR LQFP176		J080214875560S	
U2002	943246012690S	IC MEMORY-RAM(W9864G6JH-6)		J001986466010S	
U2003	963248101700S	MX29LV160DBTI-70G		8952400000240	* ⚠
U2201,2202	00D9630237503	MODULE JSR1165-C		E100116500040S	
U2204	00D2623077900	IC TC74VHCU04FT		J040740405580S	
U2205	236810062608S	IC LC89058W-E		J046890580020S	
U2206	963243101020S	IC,PAL/PLD,I9EPM240T100C5N TQFP100		8952231300040	*
U2207	963239002150S	IC SN74LVC244APWR		J040742440230S	
U2401	943239100690S	IC,LOGIC-D/A CONVER PCM5100		J042510005510S	
U2402	231310009508S	IC PQ033DNA1ZPH	<b>NOTE :</b> When update Firmware, please confirm a last version in SDI. Use the service board after updating it.	J126033010010S	
U2403	236810086505S	IC AK5358BET-E2		J043535805520S	
U2404	236810073509S	IC AK4358VQ-L		J042435800010S	
U2406-2409	00D2631289900	IC AZ4580M		J121458000020S	
U2602	23681011260AS	IC,ANALOG DM860A NETWORKED		J080860A05510S	
U2603	nsp	IC MEMORY FLASH (H27U1G8F2BTR)		J005270820020S	
U2604,2605	963246100740D	IC, MEMORY-RAM A3V56S30FTP-G6		J001030563060S	
U2802	nsp	IC,LINEAR-DRIVER LAN8720A		J127872005510S	
U2803	00D2623711004	IC LOGIC SAA7121H		J045712100010S	
U2805	nsp	IC,LOGIC-DECODER MFI337S3959		J044337395910S	
U2806	nsp	IC,LINEAR-DRIVER NCP380HMU		J127380150010S	
U3002	963243101030D	IC CPU MICRO PROCESS (R5F56108VNFP)		8952231300010	*
U3003	943239100720S	IC,MEMORY-EEPROM R1EX24256BSAS0A		J000242565570S	
U3601-3605	nsp	IC EX3AV		J048030030010S	
U3607	231310009508S	IC PQ033DNA1ZPH		J126033010010S	
U3608	943239100730S	IC,LINEAR-RESET PST8448UR		J125844800010S	
Q1001-1004	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q1005-1008	943216500050S	TR 2SC RT1N441C		J522104411210S	
Q1303-1305	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q1606	963223500020D	SEMI,FET CHIP UPA672T-T1-A SC-70		J543672001010S	
Q1801	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q2201,2202	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3001	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3002	943215500030S	TR 2SA RT1P441C		J520104411210S	
Q3201	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3202	963219002180S	TR 2SD2114KT146W		J5232114K0010S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
Q3203	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3204	963212500030S	TR 2SA ISA1530AC1		J520015301210S	
Q3205,3206	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3207	963212500030S	TR 2SA ISA1530AC1		J520015301210S	
Q3208	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3209	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3210	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3211	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3212	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3213-3216	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3217	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3218,3219	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3220	943214500020S	TR 2SC 2SC3052		J522305200050S	
Q3601-3605	943216500050S	TR 2SC RT1N441C		J522104411210S	
Q3606,3607	963211500160D	SEMI,CHIP TR/PNP 2SB PBSS5140U		J521051401010S	
Q3608-3612	963219004200S	CHIP FDC608PZ P-CH		J543608000010S	
Q3613	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3614	943216500050S	TR 2SC RT1N441C		J522104411210S	
Q3615-3618	963211500160D	SEMI,CHIP TR/PNP 2SB PBSS5140U		J521051401010S	
Q3620	963211500160D	SEMI,CHIP TR/PNP 2SB PBSS5140U		J521051401010S	
Q3621-3624	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3626	943216500020S	TR 2SC RT1N141C		J522101411210S	
Q3627	943214500020S	TR 2SC 2SC3052		J522305200050S	
D1001	963204500220D	D,SCHOTTKY CHIP LRB521S-30T1G		K125521305230S	
D1313	963204500220D	D,SCHOTTKY CHIP LRB521S-30T1G		K125521305230S	
D1801	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
D2401	00D2760739907	D,SWITCHING CHIP KDS181S(B)-THICK		K005018100040S	
D3001	963204500220D	D,SCHOTTKY CHIP LRB521S-30T1G		K125521305230S	
D3002	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
D3006	963204500220D	D,SCHOTTKY CHIP LRB521S-30T1G		K125521305230S	
D3201	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
D3401	963204500220D	D,SCHOTTKY CHIP LRB521S-30T1G		K125521305230S	
D3602	963201500170D	D,SWITCHING CHIP LBAS16HT1G FAST		K005041480230S	
<b>RESISTORS GROUP</b>					
R1001-1004	nsp	CHIP RES. 1KJ 1/16W1005REEL		C20001026M101S	
R1005-1008	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1009-1012	nsp	CHIP RES. 47KJ 1/16W1005REEL		C20004736M101S	
R1017,1018	nsp	CHIP RES. 2.2K-J 1/16W-1005REEL		C20002226M101S	
R1019-1021	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1024-1032	nsp	R,CHIP THICK 4.7K-J,1/16W		C20004726M101S	
R1033,1034	nsp	R,CHIP 33-J, 1/16W		C20003306M101S	
R1036	nsp	CHIP RES. 1KJ 1/16W1005REEL		C20001026M101S	
R1037	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1039	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1041	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1043	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1045	nsp	R,CHIP 10K-J,1/16W		C20001036M111S	
R1202	nsp	R,CHIP 0-J,1/16W		C20000006M101S	
R1204	nsp	R,CHIP 0-J,1/16W		C20000006M101S	
R1205	nsp	CHIP RES. 47KJ 1/16W1005REEL		C20004736M101S	
R1207,1208	nsp	R,CHIP 0-J,1/16W		C20000006M101S	
R1210,1211	nsp	CHIP RES. 2.2K-J 1/16W-1005REEL		C20002226M101S	
R1352	nsp	R,CHIP THICK,19470-D,1/16W-1608REEL		C20004711M160S	
R1617,1618	nsp	R,CHIP THICK 1K-D,1/16W-1608REEL		C20001021M160S	
R1619,1620	nsp	R,CHIP THICK,19470-D,1/16W-1608REEL		C20004711M160S	
R1628	nsp	R,CHIP THICK,192.7K-F,1/16W-1608REEL		C20002724M161S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
R1629	nsp	R,CHIP THICK,19180-F,1/16W-1608REEL		C20001814M160S		
R1630	nsp	R,CHIP THICK,192.7K-F,1/16W-1608REEL		C20002724M161S		
R1631	nsp	R,CHIP THICK,19180-F,1/16W-1608REEL		C20001814M160S		
R1699,1700	nsp	R,CHIP THICK 51-D,1/16W-1608REEL		C20005101M160S		
R1818,1819	nsp	R,CHIP THICK 1K-D,1/16W-1608REEL		C20001021M160S		
R1844,1845	nsp	R,CHIP THICK 51-D,1/16W-1608REEL		C20005101M160S		
R3017	nsp	CHIP RES. 0-J 1/16W-1608REEL	E2	C20000006M160S		
R3017	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E1C	C20001036M160S		
R3018	nsp	CHIP RES. 0-J 1/16W-1608REEL	E3	C20000006M160S		
R3018	nsp	CHIP RES. 10K-J 1/16W-1608REEL	E1C	C20001036M160S		
R3625	nsp	R,CHIP 150K-D,1/16W-1608REEL		C20001541M160S		
R3626	nsp	R,CHIP THICK 47K-D,1/16W-1608REEL		C20004731M160S		
R3627	nsp	R,CHIP 150K-D,1/16W-1608REEL		C20001541M160S		
R3628	nsp	R,CHIP THICK 120K-D,1/16W-1608REEL		C20001241M160S		
R3629	nsp	R,CHIP 150K-D,1/16W-1608REEL		C20001541M160S		
R3630	nsp	R,CHIP THICK,19470K-D,1/16W-1608REEL		C20004741M160S		
R3631	nsp	R,CHIP 150K-D,1/16W-1608REEL		C20001541M160S		
R3632	nsp	R,CHIP THICK 300K-D,1/16W-1608REEL		C20003041M160S		
R3633	nsp	R,CHIP 150K-D,1/16W-1608REEL		C20001541M160S		
R3634	nsp	R,CHIP THICK 120K-D,1/16W-1608REEL		C20001241M160S		
<b>CAPACITORS GROUP</b>						
C1003-1007	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1010	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S		
C1016	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1023	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1025	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1027	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1029	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1031	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1201-1207	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1208	nsp	C,CERAMIC 10UF-K/16V		D011106573200S		
C1209	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1210	nsp	CER. CAP. X7R)0.01UF-K/50V-1005REEL		D011103777101S		
C1211	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1212	nsp	C,CERAMIC 10UF-K/16V		D011106573200S		
C1219	nsp	C,CERAMIC 10UF-K/16V		D011106573200S		
C1301-1304	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1305	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1306-1311	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1312	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S		
C1314-1321	nsp	R,CHIP 0-J,1/16W		C20000006M101S		
C1323-1325	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1327	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1329-1331	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1333	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1335,1336	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		
C1337	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1339	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1341	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1342	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		
C1345	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		
C1350	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		
C1351	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1358	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		
C1361	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S		
C1362	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S		
C1364	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C1367	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1369	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1370	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C1373	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1377	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1381	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1385	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1387,1388	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1391	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1393	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1395	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1396	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1398	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1401	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1402	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1407	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1410	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1411	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1412	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1415	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1416	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1418	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1419	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1420,1421	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1424	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1425	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1429	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1430	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1431	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1434,1435	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1439,1440	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1441	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1443,1444	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1445	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1446,1447	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1448	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1449	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1450,1451	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1452,1453	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1454-1461	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1462,1463	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1464	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1465	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1466	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1467	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1468,1469	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1470	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1472	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1474,1475	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1476	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1477,1478	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1479	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1480	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1481	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1482	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C1484	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1485	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	
C1486-1489	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C1490	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL		D011103174101S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C1491	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1492	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1494	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1495-1498	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1500	nsp	C,CERAMIC 0.1UF-K/50V			D011104577160S	
C1511,1512	nsp	C,CERAMIC 8PF-D/50V			D010080117160S	
C1513	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C1514	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1516	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1605,1606	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1607-1609	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1610	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1611-1613	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1614,1615	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1616-1620	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1621	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1622,1623	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1624	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1625	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1626-1632	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1633	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1634	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1635	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1636	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1637	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1639	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1640	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1642	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1643,1644	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1645	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1647	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1649	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1651,1652	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1653,1654	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1656,1657	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1659,1660	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1661,1662	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1663,1664	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1665	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C1666	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1667	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C1668,1669	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1670,1671	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1672	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1673,1674	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1675	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1676	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1677	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1678	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1679	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1680	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1681,1682	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1683	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1690	nsp	C,CERAMIC 0.15uF-K/10V-1608REEL			D011154172160S	
C1691	nsp	C,CERAMIC 0.012uF-K/50V-1608REEL			D011123177161S	
C1692	nsp	C,CERAMIC 0.15uF-K/10V-1608REEL			D011154172160S	
C1693	nsp	C,CERAMIC 0.012uF-K/50V-1608REEL			D011123177161S	
C1694	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1700	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	



Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C1702,1703	nsp	C,CERAMIC 8PF-D/50V			D010080117160S	
C1704	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1705,1706	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C1707	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1709	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1710	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1711	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C1712	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1713	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C1721	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1730	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1801	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C1810-1825	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1826	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C1835-1851	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1853	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C1854	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C1860,1861	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C2001	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2002	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2003	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2004	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2005	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2006	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2007	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2008	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2009	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2010	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2011,2012	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2013	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2014-2016	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2017,2018	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2022	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2023,2024	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2025	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2026	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2027	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2028	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2029	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2030	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2031,2032	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2033	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2034	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2035,2036	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2037	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2038	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2039	nsp	C,CERAMIC 9PF-D/50V			D011090117101S	
C2040	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2041	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2042,2043	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2044	nsp	C,CERAMIC 9PF-D/50V			D011090117101S	
C2045	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2046	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2047,2048	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2049-2051	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2052	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2053	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2054,2055	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2056	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C2057	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2058	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2059	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2060	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2061	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2062,2063	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2064	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2065	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2066	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2067,2068	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2071,2072	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2073-2075	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2076	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2077	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2078	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2079	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2080	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2081	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2082	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2083-2085	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2086	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2087	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2088-2092	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2093	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2094	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2095	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2096	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2097	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2098	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2099	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2100	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2101	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2102	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2103-2106	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2107	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2108	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2109	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2110,2111	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2112	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2113,2114	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2115	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2201,2202	nsp	C,CERAMIC 12PF-J/50V			D011120167101S	
C2203	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2204	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2207	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2215,2216	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2224-2230	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2231	nsp	C,CERAMIC 0.022UF-K/25V-1005REEL			D011223174101S	
C2232	nsp	C,CERAMIC 100PF-J/50V			D011101167101S	
C2233,2234	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2235	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2236	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C2237	nsp	C,CERAMIC 100PF-J/50V			D011101167101S	
C2238	nsp	C,CERAMIC 100PF-J/50V			D010101167160S	
C2239-2241	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C2242-2245	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2247	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2248	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2250	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C2252-2254	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2256	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2401-2405	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2406	nsp	C,CERAMIC 2.2UF-M/6.3V-1005REEL		D011225581100S	
C2407	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2408	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	
C2409,2410	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2411	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2412	nsp	C,CERAMIC 2.2UF-M/6.3V-1005REEL		D011225581100S	
C2413	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2415,2416	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2417	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	
C2418	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2419	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2420,2421	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	
C2422-2425	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2426	00D9630338606	C,ELECT 10UF-MVG/16V		D050100083470S	
C2427-2432	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2435,2436	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2437,2438	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S	
C2439-2445	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2447	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2448	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2450	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2451	963134000450S	C,ELECT 100UF-MVG/16V		D050101083660S	
C2454-2461	nsp	C,CERAMIC X7R3900PF-K/50V		D011392777160S	
C2465-2468	nsp	C,CERAMIC 680pF-J 50V		D010681167160S	
C2469,2470	nsp	C,CERAMIC 470PF-J/50V		D010471167160S	
C2471-2476	nsp	C,CERAMIC 680pF-J 50V		D010681167160S	
C2477,2478	nsp	C,CERAMIC 470PF-J/50V		D010471167160S	
C2479,2480	nsp	C,CERAMIC 680pF-J 50V		D010681167160S	
C2481,2482	00D9630338606	C,ELECT 10UF-MVG/16V		D050100083470S	
C2483,2484	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S	
C2486	963134000450S	C,ELECT 100UF-MVG/16V		D050101083660S	
C2488	963134000450S	C,ELECT 100UF-MVG/16V		D050101083660S	
C2601	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2602,2603	nsp	C,CERAMIC 12PF-J/50V		D011120167101S	
C2605-2608	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2609-2619	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2620-2622	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2623	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2624	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2627-2630	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2631-2640	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2641-2643	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2645	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2648	nsp	C,CERAMIC 4.7UF-K/6.3V		D011475571160S	
C2652,2653	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2657	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2659	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2660-2667	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2676,2677	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2678	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2679,2680	nsp	C,CERAMIC 1000PF-K/50V		D011102177101S	
C2801	nsp	C,CERAMIC 0.022UF-K/25V		D011223777160S	
C2803	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	
C2806	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C2807,2808	nsp	C,CERAMIC 10PF-D/50V		D011100117101S	
C2811	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C2812	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2813	nsp	C,CERAMIC 470PF-K/50V			D011471177101S	
C2814	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C2815	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2816	nsp	C,CERAMIC 1000PF-K/50V			D011102777160S	
C2817	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2818	nsp	C,CERAMIC 1000PF-K/50V			D011102777160S	
C2819	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2821	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2822	nsp	C,CERAMIC 1000PF-K/50V			D011102777160S	
C2823	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2824-2828	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2829	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2831	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2832	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2833	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2834	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C2842-2845	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C2846	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C2850	nsp	C,CERAMIC 0.001UF-J/50V			D010102167160S	
C2851,2852	nsp	C,CERAMIC 0.001UF-J/50V	E3		D010102167160S	
C2851,2852	nsp	C,CERAMIC 330PF-K/50V	E2,E1C		D010331167160S	
C3001	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3002	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3003	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3009	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3010	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C3011-3014	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3015,3016	nsp	C,CERAMIC 12PF-J/50V			D011120167101S	
C3017-3019	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3021,3022	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3202	nsp	C,CERAMIC 220PF-K/50V			D011221177101S	
C3205	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3210-3213	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3214,3215	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C3216	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3414-3416	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3417	nsp	C,CERAMIC 100PF-J/50V			D011101167101S	
C3418	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3419-3424	nsp	C,CERAMIC 100PF-J/50V			D011101167101S	
C3601-3605	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3619-3623	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C3625-3629	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C3631-3635	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3637-3641	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C3643-3647	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C3649,3650	nsp	C,CERAMIC 10PF-J/50V			D010100167161S	
C3651-3653	nsp	C,CERAMIC 15PF-J/50V			D010150167160S	
C3667-3669	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3673-3676	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3677	nsp	CER. CAP. X7R)0.01UFK/25V1005REEL			D011103174101S	
C3678	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3682	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C3695-3701	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3744	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C3752	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C3780	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C3788	nsp	C,CERAMIC CHIP HIK,(I9X7R)15000PF-K/16V-1005REEL			D011153773100S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C3789	00D9630325402	C,ELECT 470UF-MVG/6.3V		D050471081200S	
C3790	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C3792	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C3795	nsp	C,CERAMIC 1UF-K/10V		D011105772161S	
C3797	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C3799	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C3802	963134501220S	C,ELECT 470UF-MVG/6.3V (RV0)	E2,E1C	D050471081330S	
C3804	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
C3815	nsp	C,CERAMIC 0.1UF-K/50V		D011104177101S	
<b>OTHERS PARTS GROUP</b>					
K2201	00D9630217905	TER,RCA 2PIN		G601206A0200YS	
K3001,3002	00D9630244703	JACK,D3.5 EARPHONE		G40130802000YS	
L1201-1203	nsp	R,THICK 0-J,1/10W		C200000060201S	
L1301-1313	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L1602	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L1605-1615	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L1617-1619	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L1801	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L2601-2603	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L2801,2802	nsp	COIL,CHIP DLW21SN900HQ2L		D311201219000S	
L2804	nsp	R,THICK 0-J,1/10W		C200000060201S	
L2806	nsp	COIL,CHIP DLW21SN181SQ2L		D311201211810S	
L2807-2810	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L2812	nsp	COIL,BEAD CBW160808U121T		D340160811210S	
L2813	nsp	CHIP RES. 0-J 1/16W-1608REEL		C20000006M160S	
L2814,2815	nsp	CHIP RES. 0-J 1/16W-1608REEL	E3	C20000006M160S	
L2814,2815	nsp	LQM18PN1R5MFRL 1.5UH SMD(1608)	E2,E1C	D311160811520S	
L3401-3404	nsp	R,THICK 0-J,1/10W		C200000060201S	
L3601-3610	nsp	R,THICK 0-J,1/10W		C200000060201S	
L3613-3622	nsp	R,THICK 0-J,1/10W		C200000060201S	
L3625-3627	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S	
L3628	nsp	COIL,BEAD CBW160808U121T		D340160811210S	
N1001-1004	963612504750D	CN.WAFER AD3PBC19G0-T		L109100190190S	
N1201	963612504750D	CN.WAFER AD3PBC19G0-T		L109100190190S	
N1202	nsp	CN.FPC 23P		L130100162330S	
N1301	nsp	CN.FPC 23P		L130100162330S	
N1302	963612504750D	CN.WAFER AD3PBC19G0-T		L109100190190S	
N1601	nsp	CN.FPC 7P 1.0-16-7PB-2		L130100160730S	
N1602	963612504750D	CN.WAFER AD3PBC19G0-T		L109100190190S	
N1802	963612504750D	CN.WAFER AD3PBC19G0-T		L109100190190S	
N2001	nsp	CN. FPC 1.0MM 1.0-16-10PB-2 10P		L130100161030S	
N2201	nsp	CN.FPC 7P 1.0-16-7PB-2		L130100160730S	
N2601	nsp	CN.FPC 7P 1.0-16-7PB-2		L130100160730S	
N2602	nsp	CN.FPC 6P 1.0-16-6PB-2		L130100160630S	
N2801	nsp	CN.WAFER 5P 20010-05		L101200100510S	
N2802	963643100130S	JACK,MODULAR RJ45		G4060RJ450120S	
N3001	nsp	CN.FPC 7P 1.0-16-7PB-2		L130100160730S	
N3002	nsp	CN.FPC 11P		L130100161130S	
N3401	nsp	CN,WAFER,I9C125Z2-13 13P BtoB SOCKET(FEMALE) P=1.25MM		L109012521320S	
N3402	nsp	CN,WAFER,I9C125Z2-07 7P BtoB SOCKET(FEMALE) P=1.25MM		L109012520720S	
N3403	nsp	CN.WAFER ,I9C125Z2-33 33P BtoB SOCKET(FEMALE) P=1.25MM		L109012523320S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
N3404	nsp	CN,WAFER,I9C125Z2-17 17P BtoB SOCKET(FEMALE) P=1.25MM		L109012521720S	
N3405	nsp	CN.WAFER 5P 20010-05		L101200100510S	
N3406	nsp	CN,WAFER,I9C125Z2-11 11P BtoB SOCKET(FEMALE) P=1.25MM		L109012521120S	
N3407	nsp	CN,WAFER,I9C125Z2-13 13P BtoB SOCKET(FEMALE) P=1.25MM		L109012521320S	
N3408	nsp	CN.FPC 40P 10022HS-40C		L130100220400S	
N3601	nsp	CN.WAFER 5P SMW250-5P		L102050010040S	
RA1003-1010	nsp	R,NETWORK A-TYPE 0-J*2 1/16W		C180000022100S	
RLY1801	943682100250S	RELAY,I9BC1-5S-R DC5V SMT SINGLE- SIDE STABLE RELAY		G680050202020S	
X1301	141810045507S	CRYSTAL CHIP FCX-04(27MHz)		E80527R000080S	
X1601	141810045507S	CRYSTAL CHIP FCX-04(27MHz)		E80527R000080S	
X2001	141810050509S	CRYSTAL CHIP,I9FCX-04(25MHz) CL=7PF SMD3225 RIVER		E80525R000080S	
X2202	141810046500S	CRYSTAL CHIP FCX-04(24.576MHz)		E80524R576080S	
X2601	141810049509S	CRYSTAL CHIP FCX-04(24MHz)		E80524R000080S	
X3001	00D3991038900	CRYSTAL CHIP FCX-03(12MHz)		E805120000020S	
	nsp	BRACKET HDMI FRONT		4010215496000S	