

SERVICE MANUAL

MODEL	JP	E3	E2	EK	EA	E1C	E1K	CI
AVR-2312CI		✓						
AVR-2312			✓ [△] ₂		✓ [△] ₂	✓ [△] ₂		

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.

DENON

D&M Holdings Inc.

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SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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

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

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

⊙ Heed the cautions!

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

⊙ Cautions concerning electric shock!

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

⊙ Caution concerning disassembly and assembly!

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

⊙ Use only designated parts!

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

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

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

⊙ Make a safety check after servicing!

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

(Insulation check procedure)

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

CAUTION Concerning important safety parts

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

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

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

NOTE FOR SCHEMATIC DIAGRAM

WARNING:

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

CAUTION:

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

WARNING:

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

NOTICE:

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

ALL CAPACITANCE VALUES ARE EXPRESSED IN MICRO FARAD, UNLESS OTHERWISE INDICATED. P INDICATES MICRO-MICRO FARAD. 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 :

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 Vp-p, 75 Ω

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

Color component video connector

Input/output level and impedance : Y (brightness) signal — 1 Vp-p, 75 Ω

P_B / C_B signal — 0.7 Vp-p, 75 Ω

P_R / C_R signal — 0.7 Vp-p, 75 Ω

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

Tuner section (E3 model)

[FM](Note: μV at 75 Ω, 0 dBf = 1 x 10⁻¹⁵ W)

Receiving Range :

[FM] 87.5 MHz – 107.9 MHz

[AM] 520 kHz – 1710 kHz

Usable Sensitivity :

[FM] 1.2 μV (12.8 dBf)

[AM] 18 μV

50 dB Quieting Sensitivity:

[FM] MONO 2.0 μV (17.3 dBf)

S/N (IHF–A) :

[FM] MONO 72 dB

[AM]

STEREO 67 dB

Total harmonic Distortion :

[FM] MONO 0.3 % (1 kHz)

[AM]

STEREO 0.7 % (1 kHz)

Tuner section (E2,EA,E1C model)

[FM](Note: μV at 75 Ω, 0 dBf = 1 x 10⁻¹⁵ W)

Receiving Range :

[FM] 87.5 MHz – 108.0 MHz

[AM] 522 kHz – 1611 kHz

Usable Sensitivity :

[FM] 1.2 μV (12.8 dBf)

[AM] 18 μV

50 dB Quieting Sensitivity :

[FM] MONO 2.0 μV (17.3 dBf)

STEREO 34.5 μV (42 dBf)

S/N :

[FM] MONO 72 dB (IHF–A weighted, DIRECT mode)

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

Total harmonic Distortion :

[FM] MONO 0.3 % (1 kHz)

STEREO 0.7 % (1 kHz)

General

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

AC 230 V, 50/60 Hz (E2,EA model)

AC 220 V, 50 Hz (E1C model)

Power consumption :

600 W

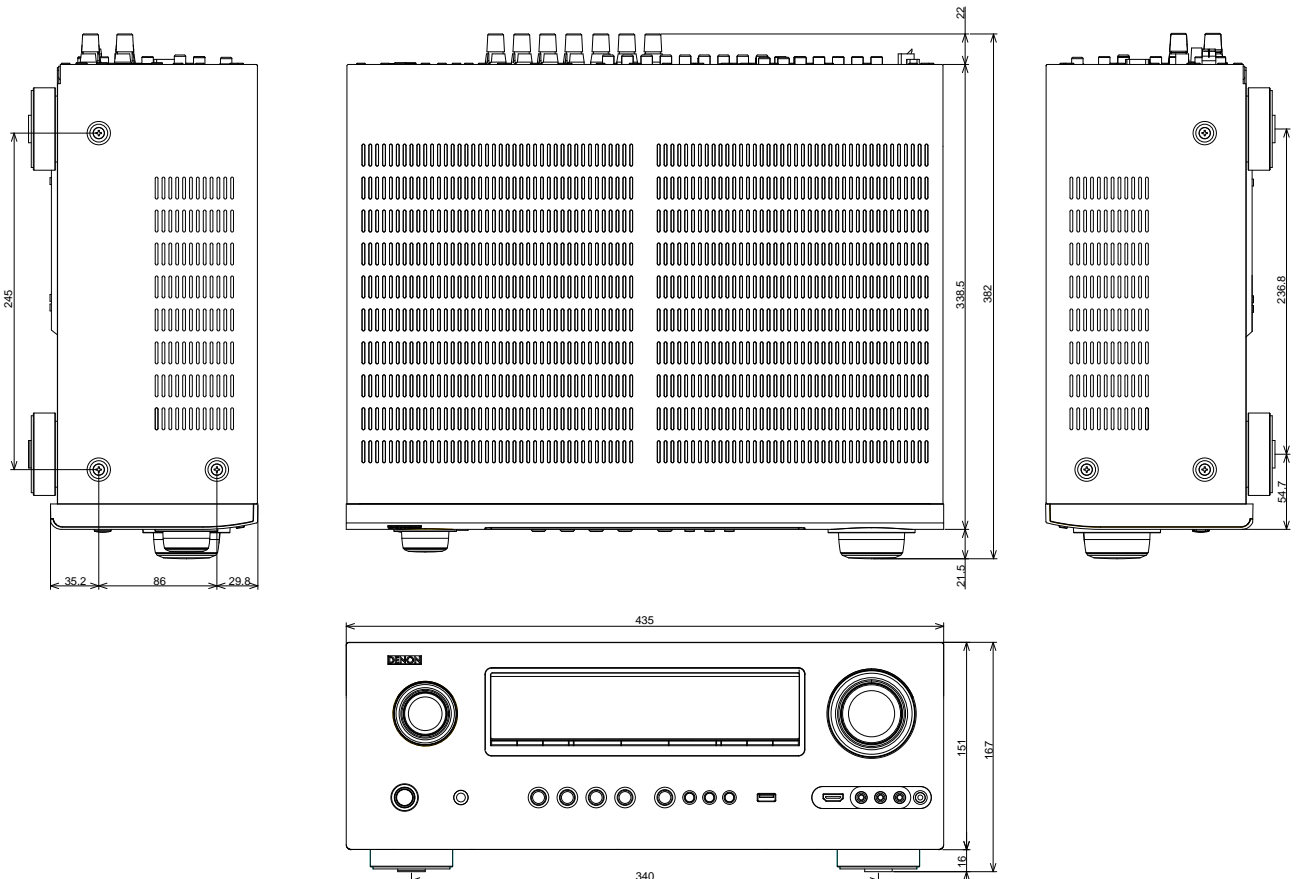
0.1 W (Standby)

2.2 W (CEC standby)

Maximum external dimensions : 435 (W) x 167 (H) x 382 (D)

Weight : 11.0 kg

DIMENSION



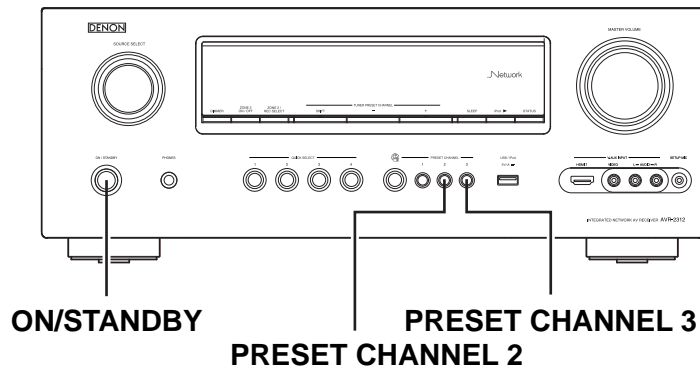
CAUTIONS IN SERVICING

Initializing INTEGRATED NETWORK AV RECEIVER

INTEGRATED NETWORK AV RECEIVER initialization should be performed when the μ com, peripheral parts of μ com, and Digital P.W.B. were replaced.

1. Turn off the power pressing ON/STANDBY button.
2. Press ON/STANDBY button while simultaneously while pressing PRESET CHANNEL 2 and PRESET CHANNEL 3 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.



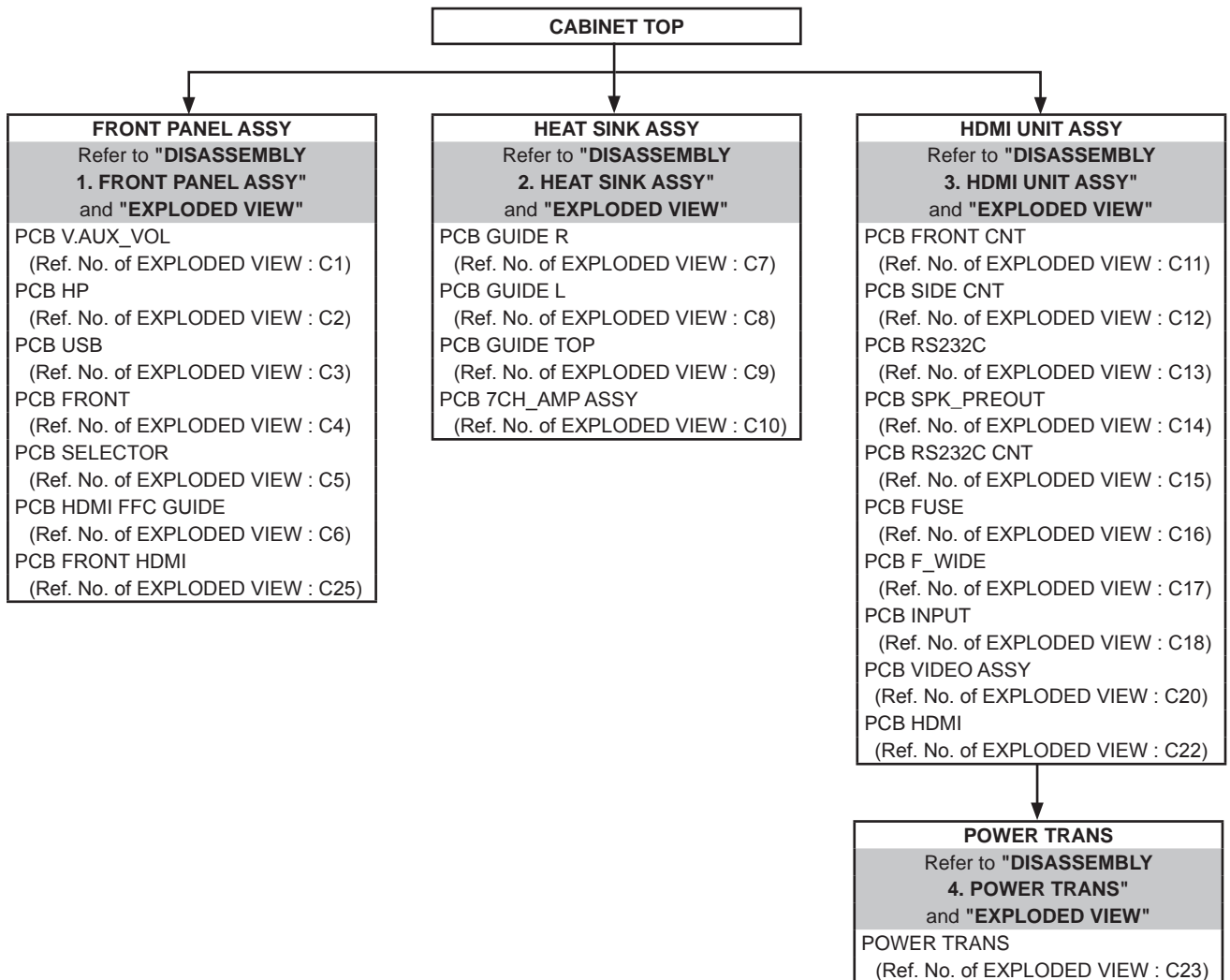
Service Jig

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 59 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.

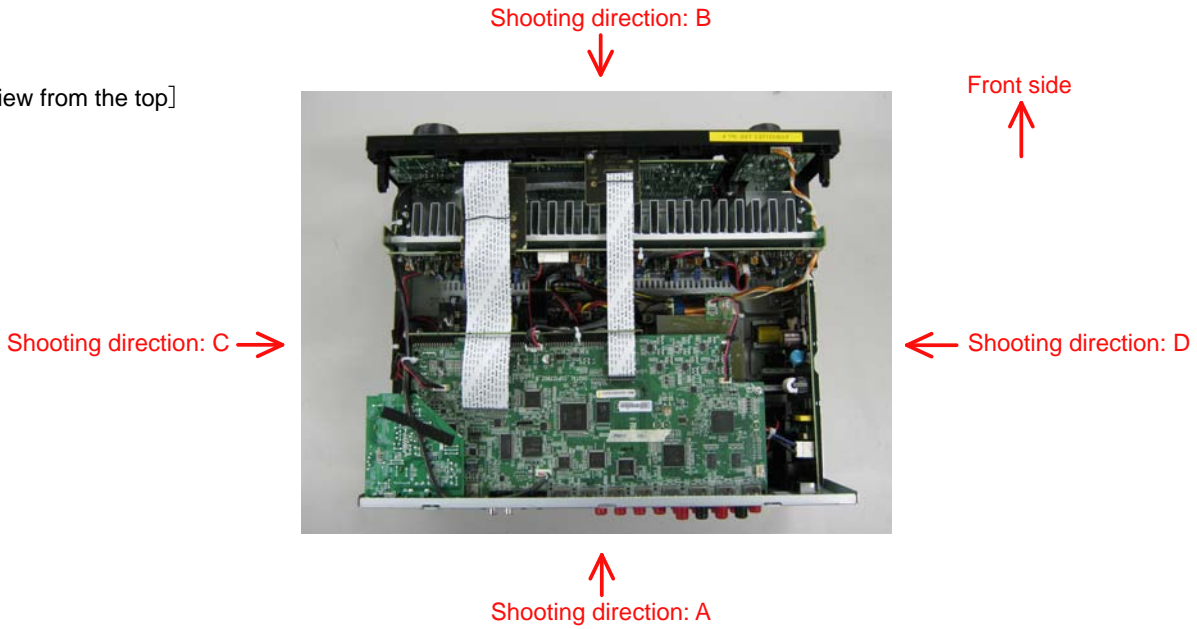


About the photos used for "descriptions of the DISASSEMBLY" section

- 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-2312CIE3 model.

The viewpoint of each photograph (Shooting direction)

[View from the top]



1. FRONT PANEL ASSY

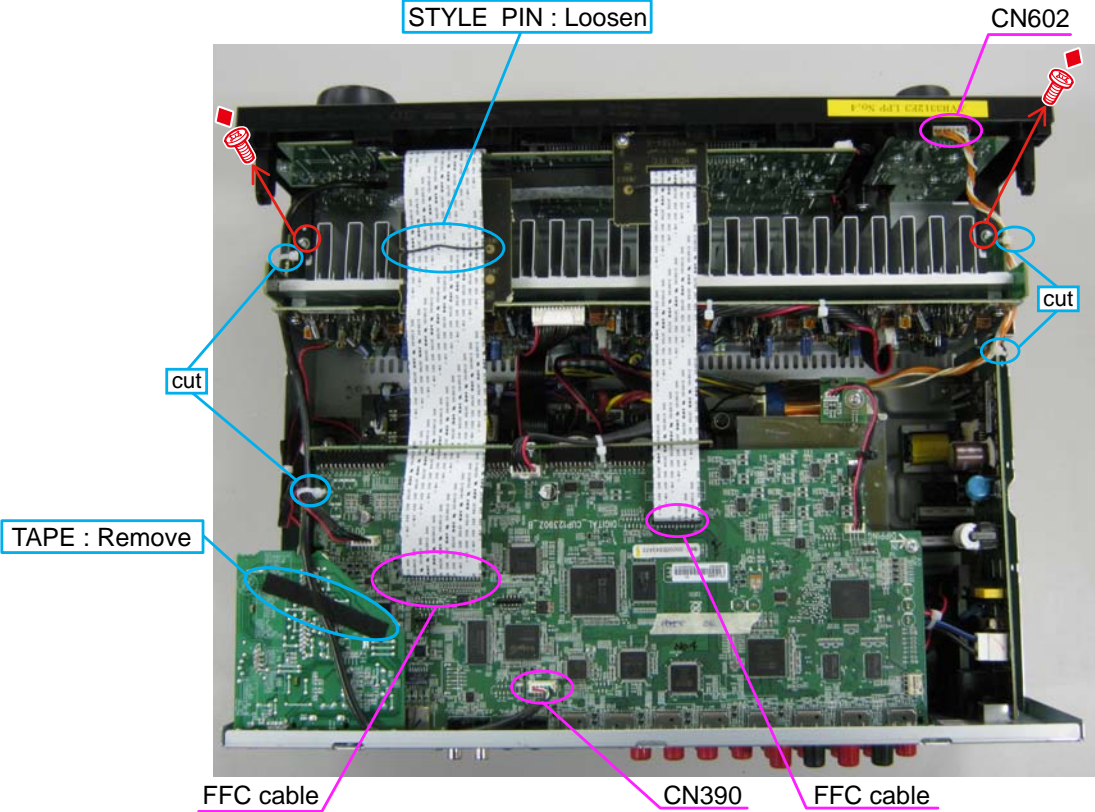
Proceeding : **CABINET TOP** → **FRONT PANEL ASSY**

- (1) Remove the screws.

View from the bottom



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

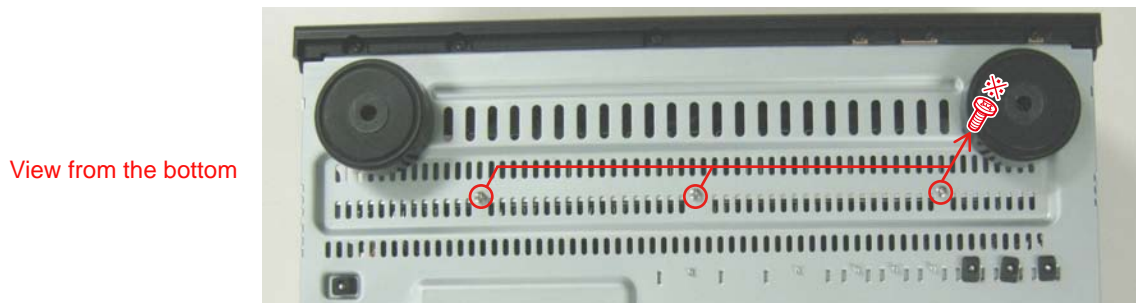


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in FRONT PANEL ASSY.

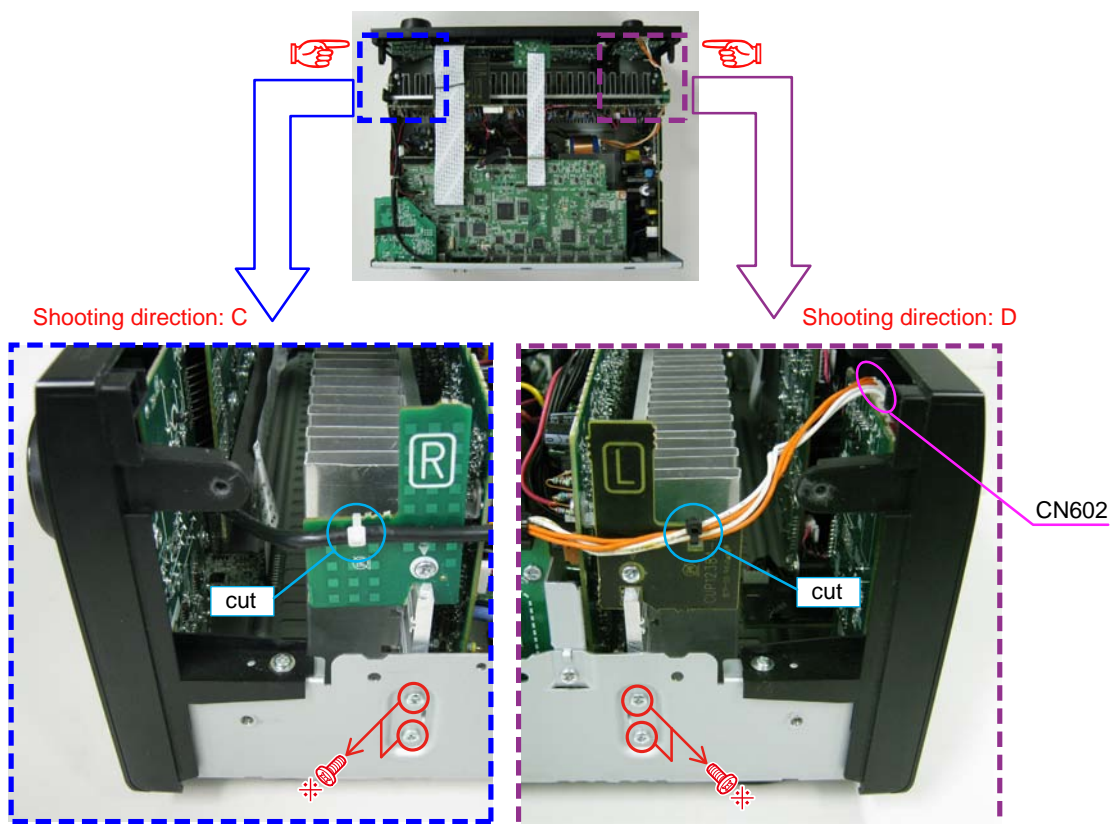
2. HEAT SINK ASSY

Proceeding : **CABINET TOP** → **HEAT SINK ASSY**

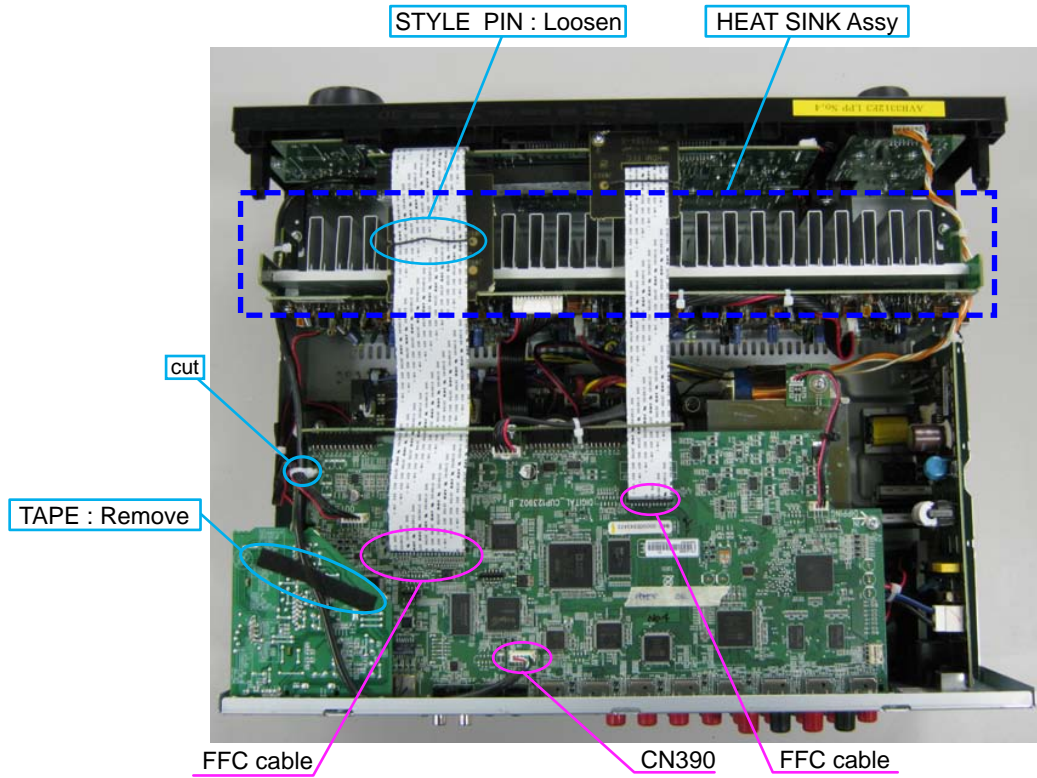
- (1) Remove the screws.



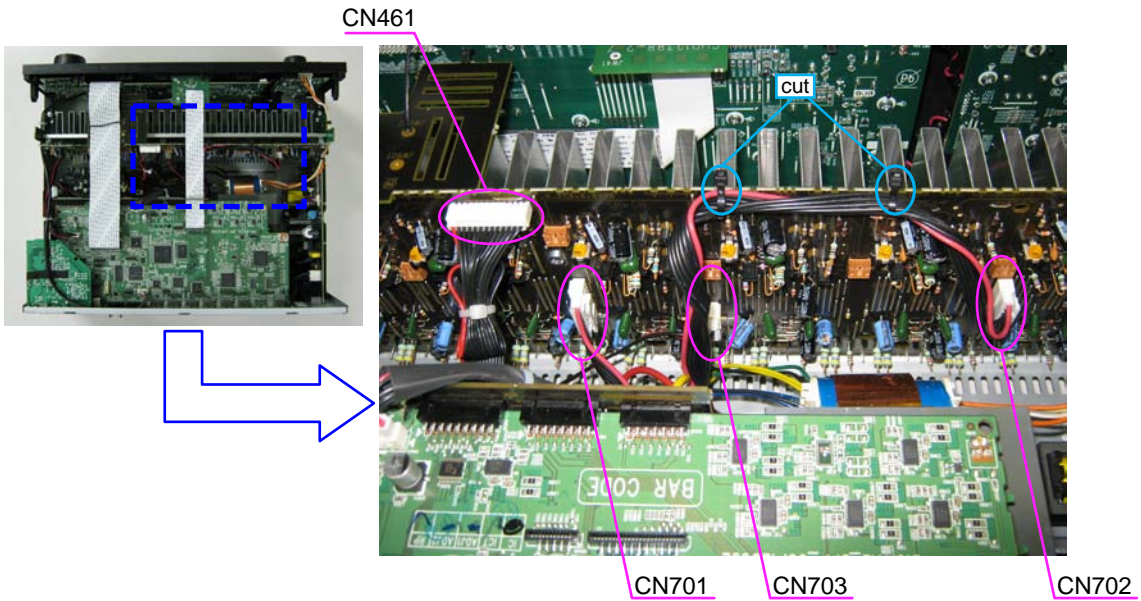
- (2) Cut the wire clamp band, then remove the screws. Disconnect the connector wires.



(3) Cut the wire clamp band, then disconnect the connector wire and FFC cables .



(4) Cut the wire clamp bands, then disconnect the connector wires.

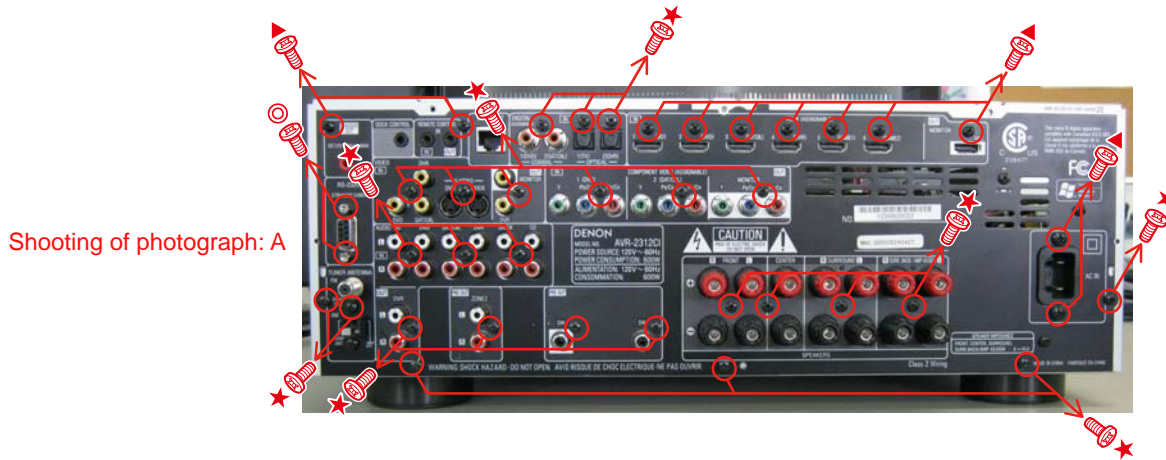


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in HEAT SINK ASSY.

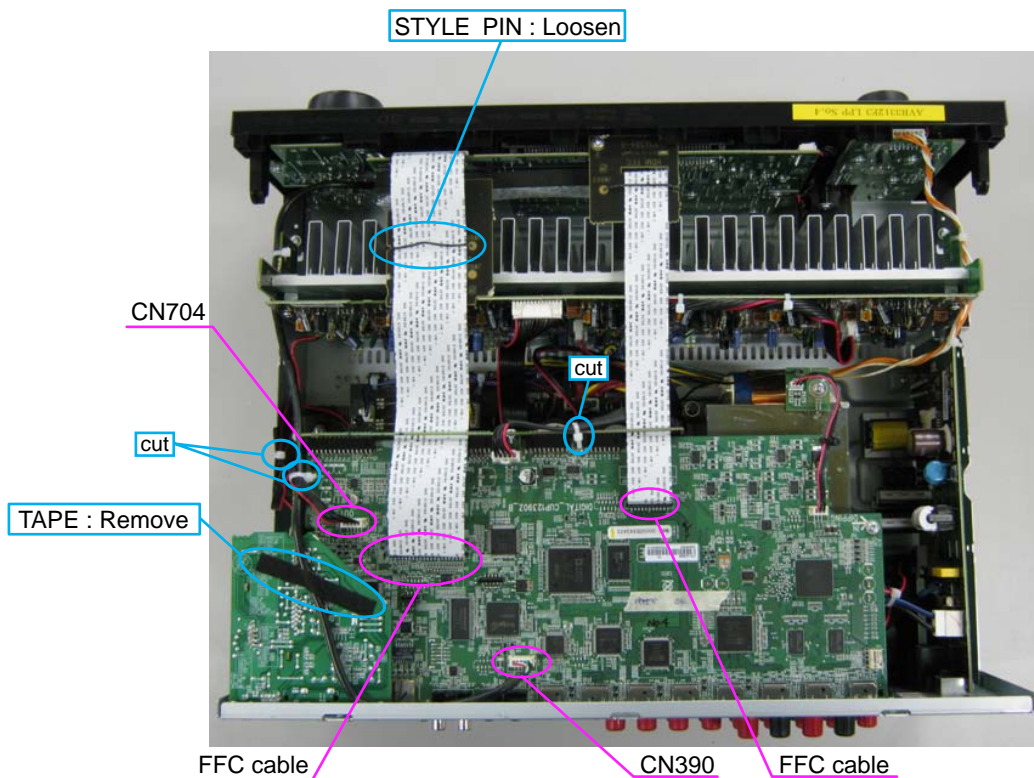
3. HDMI UNIT ASSY

Proceeding : **CABINET TOP** → **HDMI UNIT ASSY**

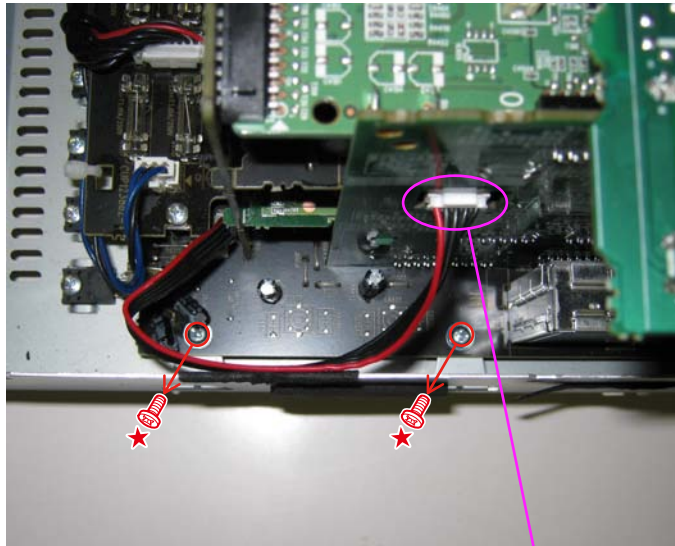
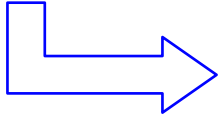
- (1) Remove the screws, then remove the BACK PANEL and the HDMI BRACKET.



- (2) Cut the wire clamp band, then disconnect the connector wires and the FFC cables. Remove the PCB DOCK from the PCB SIDE CNT and PCB RS232C(Board to board).

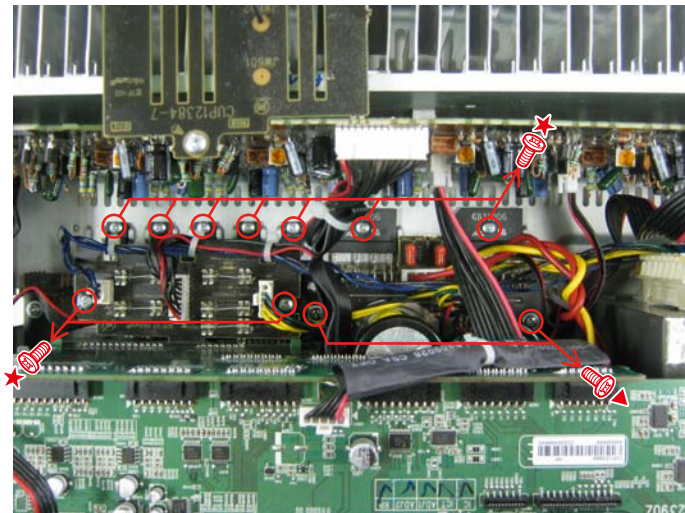
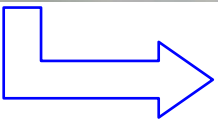
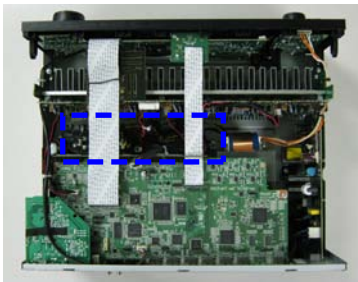


(3) Disconnect the connector wire. Remove the screws.

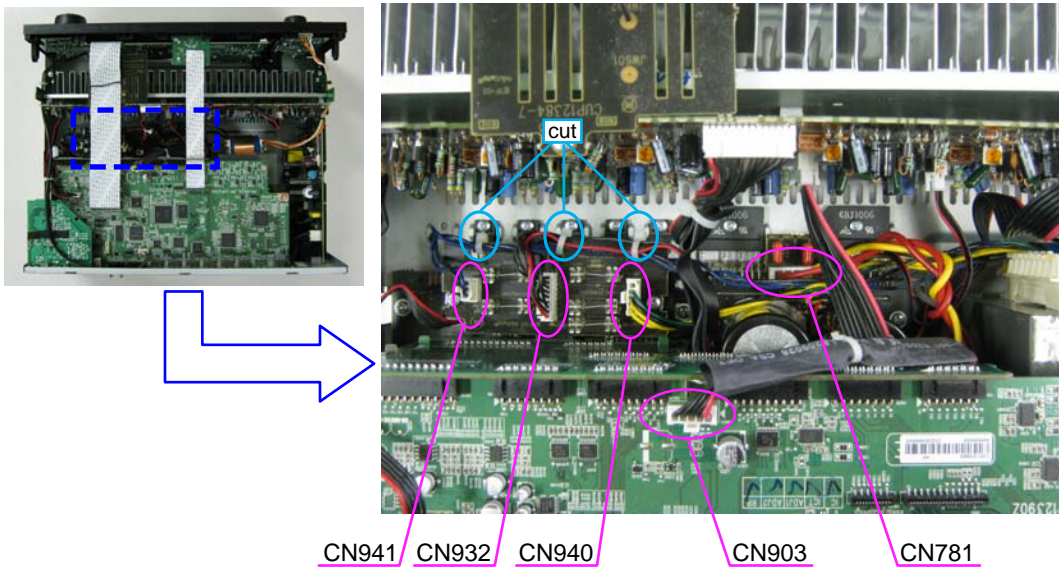


CN931

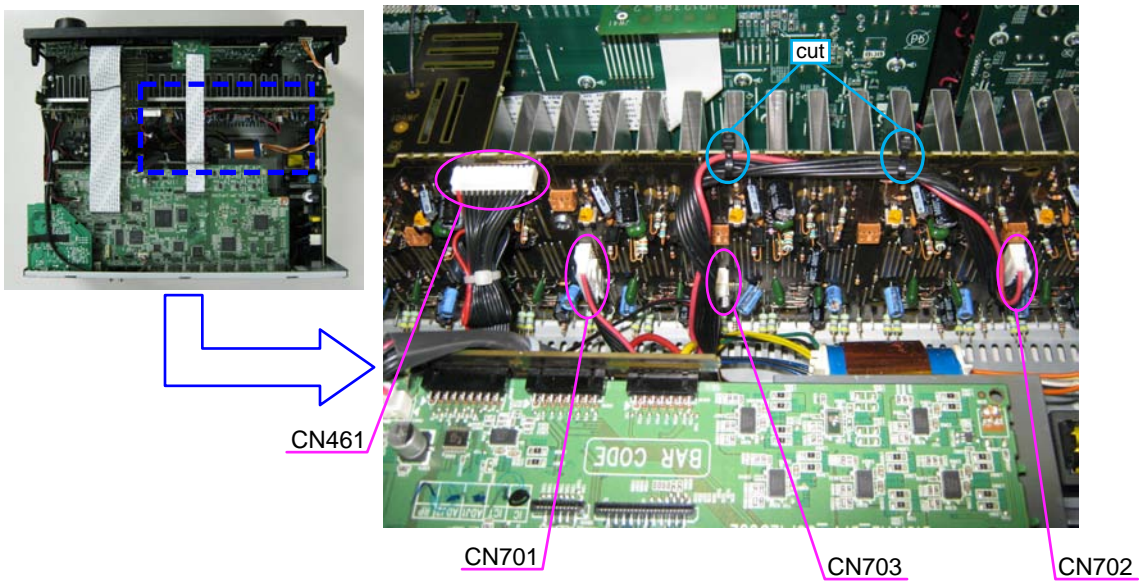
(4) Remove the screws.



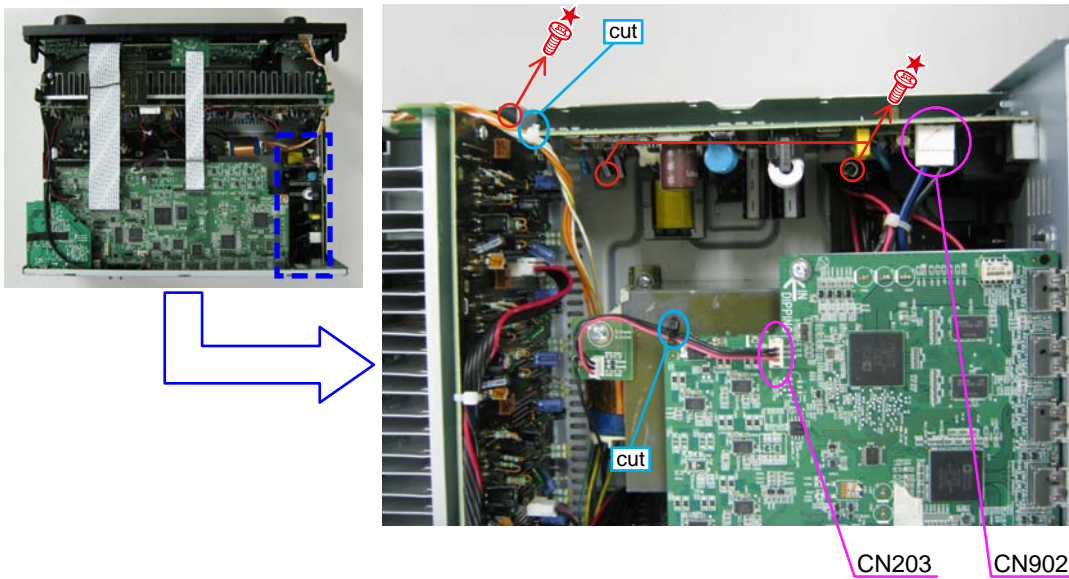
(5) Cut the wire clamp band, then disconnect the connector wires.



(6) Cut the wire clamp band, then disconnect the connector wires.



(7) Cut the wire clamp bands, then disconnect the connector wires, and remove the screws.



(8) Remove the screw.



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

4. TRANS MAIN

Proceeding : **CABINET TOP** → **HDMI UNIT ASSY** → **POWER TRANS**

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

SPECIAL MODE

Special mode setting button

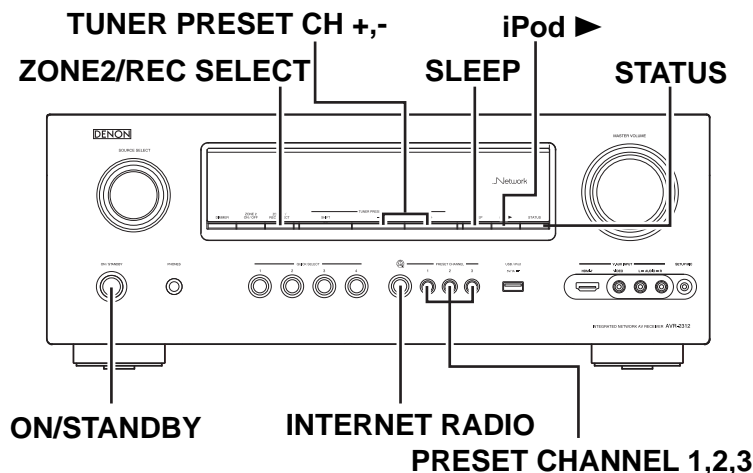
- ※ No.1 - 10, 12 : Press the ON/STANDBY button to turn on the power while pressing both the button A and the button B at the same time.
- ※ No.11 : Press and hold both buttons A and B for over 3 second with the power turned on.

No.	Mode	Button A	Button B	Contents
1	Version display (µcom/DSP Error Display)	iPod ►	STATUS	Firmware versions such as Main or DSP are displayed in the FL manager. Errors are displayed when they occur. (Refer to 17 page)
2	Displaying the protection history mode	SLEEP	STATUS	The protection history is displayed. (Refer to 20 page)
3	Initialization mode (Remove settings for Installer Setup.)	PRESET CHANNEL 2	PRESET CHANNEL 3	Backup data initialization is carried out. (Remove settings for Installer Setup.)
4	Initialization mode (Includes settings for Installer Setup.)	PRESET CHANNEL 1	PRESET CHANNEL 2	Backup data initialization is carried out. (Includes settings for Installer Setup.)
5	Mode for switching tuner frequency step (E2 model Only)	TUNER PRESET CH +	TUNER PRESET CH -	Change tuner frequency step to FM:200kHz/AM:10kHzSTEP
6	Mode for preventing remote control acceptance	PRESET CHANNEL 1	INTERNET RADIO	Operations using the remote control are rejected. (Mode cancellation: Turn off the power and execute the same button operations as when performing setup.)
7	Panel lock mode	PRESET CHANNEL 2	TUNER PRESET CH +	Operations using the main unit panel buttons or the master volume knob are rejected.
8	Panel lock mode (Master volume is not locked.)	PRESET CHANNEL 2	SLEEP	Operations using the main unit panel buttons are rejected.
9	Cancellation of panel lock mode	TUNER PRESET CH -	ZONE2/REC SELECT	Panel lock mode is cancelled.
10	Diagnostic mode	PRESET CHANNEL 1	STATUS	This mode is used for confirming the Video and Audio (signal) paths. (Troubleshooting) The signal paths of the set can be easily confirmed after repair.
11	Remote ID Setup mode	PRESET CHANNEL 1	STATUS	When using multiple DENON AV receivers in the same room, make this setting so that only the desired AV receiver operates.(Refer to 22 page)
12	Installer Setup mode	SHIFT	STATUS	Access the Remote Maintenance mode via the internet.Installer Setup is displayed on GUI/Option Menu. ※ Refer to AVR_RemoteMaintenance_.pdf of SDI.

NOTE:

If " REC " is displayed on the fluorescent display, the set is in the special developer's mode and the RS-232C communications are not possible.

Turn on the power, then press and hold down the "PRESET CHANNEL 2" and " STATUS " buttons for over 3 seconds to turn off "Q" on the display. RS-232C communications are now enabled.



1. μ com/DSP Version display mode

1.1. Operation specifications

μ com/DSP version display mode:

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

Starting up:

Press the "ON/STANDBY" button to turn on the power while pressing the "STATUS" and "iPod ►" 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 OSD.

1.2. Display Order

Error information(Refer to 1.3. Error display) → ① Model destination information → ② Firmware Package Version → ③ Main μ -com/MAIN FBL(1st Boot Loader) Version → ④ Sub μ -com/Sub FBL → ⑤ DSP version → ⑥ Audio PLD → ⑦ GUI SFLASH
 → ⑧ Ethernet(DM860) 1st Boot Loader, Hardware ID → ⑨ Ethernet(DM860) 2nd Boot Loader, Rhapsody Flag
 → ⑩ Ethernet(DM860) IMAGE → ⑪ Ethernet(DM860)MAC ADDRESS information
 → ⑫ MultEQ Pro APP(Displayed when Audyssey Pro is complete)
 → ⑬ MultEQ Pro ICL(Displayed when Audyssey Pro is complete)

① Model destination information :

Upper	A	U	R	2	3	1	2		E	3		:	*	*	*	*	*
Lower	S	/	N	.			*	*	*	*	*	*	*	*	*	*	*

② Firmware Package Version :

Upper		F	i	r	m	.		P	a	c	k	a	g	e			
Lower							V	e	r	.	:	*	*	*	*	*	

③ Main μ -com & MAIN FBL version :

Upper		M	a	i	n					:	*	*	.	*	*	
Lower		M	a	i	n		F	B	L		:	*	*	.	*	*

④ Sub μ -com & Sub FBL :

Upper		S	u	b						:	*	*	.	*	*
Lower		S	u	b		F	B	L		:	*	*	.	*	*

⑤ DSP ROM :

Upper		D	S	P						:	*	*	.	*	*
Lower															

⑥ Audio PLD :

Upper		A	u	d	i	o		P	L	D	:	*	*	.	*	*
Lower																

⑦ GUI SFLASH :

Upper		G	U	I		:	*	*	*	*	*	*	*	*	*	*
Lower																

⑧ Ethernet(DM860) 1st Boot Loader, Hardware ID :

Upper		E	t	h	e	r	n	e	t		F	B	L		
Lower	*	*	*	*	*	*	-	A	A						

⑨ Ethernet(DM860) 2nd Boot Loader, Rhapsody Flag :

Upper		E	t	h	e	r	n	e	t		S	B	L		
Lower	*	*	*	*	*	*	*	*	*	*	*	*	*	-	E

⑩ Ethernet(DM860) IMAGE :

Upper		E	t	h	e	r	n	e	t		I	M	G		
Lower	*	*	*	*	*	*	*	*	*	*	*	*	*		

⑪ Ethernet(DM860)MAC ADDRESS information :

Upper	*	E	t	h	e	r	n	e	t		M	A	C		
Lower		*	*	*	*	*	*	-	*	*	*	*	*	*	

⑫ MultEQ Pro APP :

Upper	*	M	u	l	t	E	Q		F	r	o		A	P	P
Lower	*	*	.	*	*	.	*	*	.	*	*	*	*		

⑬ MultEQ Pro ICL :

Upper	*	M	u	l	t	E	Q		F	r	o		I	C	L
Lower	*	*	.	*	*	.	*	*	.	*	*	*	*		

1.3. Error display

See the following table for each "Error information" display and its explanation (status).

Display order is ①,②,③,④,⑤,⑥,⑦,⑧.

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. (※1)	F I R M E R R O R	<ul style="list-style-type: none"> Please check the destination-resistors (R2060/R2061, HDMI B'D). Please write the firmware of correct destination.
② GUI Version NG	Error occurs in GUI version and Main μ-com version.(※2)	G U I V E R . E R R O R	<ul style="list-style-type: none"> Please check the firmware of correct version.
③ SUB NG	No response from SUB microcomputer.	S U B E R R O R 0 1	<ul style="list-style-type: none"> Please check SUB (IC231) and around circuits.
④ DIR NG	No response from DIR	D I R E R R O R 0 1	<ul style="list-style-type: none"> Please check DIR (IC403/IC404/IC405, HDMI B'D) and around circuits.
⑤ 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"> Please check DSP (IC408, HDMI B'D) and around circuits.
	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	
⑥ IP SCALER NG	An error has occurred in the i/p Scaler (ADV8002)initial settings. The error is a DDR memory Loopback Test error.	I P S C A L E R E R R 0 1	<ul style="list-style-type: none"> Please check ADV8002 (IC151) and around circuits.
⑦ E2PROM NG	Error occurs in E2PROM checksum.(*** is a block address number.)	E 2 P R O M E R R * * *	
⑧ Both DSP / EEPROM OK		(No error display, version display only)	

Status	FL Display
※1, ※2 The written Firmware and product settings (model name, brand name, destination) are compared. If Firmware that is not designed for this product is written, ▲ is displayed in the first column, as shown on the right. △	▲ M a i n : * * * . * *
	▲ S U B : * * * . * *
	▲ D S P : * * * . * *
	▲ A U D I O P L D : * * * . * *
	▲ G U I : * * * * * * * * *

2. Errors checking mode (Displaying the protection history)

2.1. Operation specifications

Error mode (Displaying the protection history):

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

Starting up:

• Common in all the models

Press the "ON/STANDBY" button to turn on the power while pressing the "STATUS" and "SLEEP" buttons. The error (protection history display) mode is set.

Now, press the "STATUS" button to turn on the FL display.

2.2. About the display on the FL display

When the "STATUS" button is pressed after setting 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)

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	:	N	O		P	R	O	T	E	C	T					

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

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	:	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)

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	:	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 protection)

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	:	T	H	E	R	M	A	L	*							

*: A~D

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 above protection history as shown above is displayed, the normal display reappears. (Refer to "PROTECTION DIAGRAM" 23 page.)

2.3. 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 "INTERNET RADIO" button for 3 seconds.

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	#	T	H	E	R	M	A	L		A						



Press the "INTERNET RADIO" button for 3 seconds.

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower						C	L	E	A	R						



The above is displayed and the protection history is cleared.

Upper	P	R	O	T	E	C	T		H	I	S	T	O	R	Y	
Lower	#	N	O		P	R	O	T	E	C	T					

- (2) Initialize. (Refer to "Initializing INTEGRATED NETWORK AV RECEIVER" 6 page.)

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

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/C/D) PROTECTION : Flashes at intervals of 2 seconds (1 second lit, 1 second off)

3. Remote ID Setup mode

3.1. Specifications

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

2.2. Setting the AV receivers

Starting up:

Press and hold both "STATUS" and "PRESET 1" buttons for over 3 second with the power turned on.

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

Upper															
Lower				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 "ON/STANDBY" button.
 (4) Turn on the power using "ON/STANDBY" button.

※ When Remote ID Setup mode is running, operations other than the "QUICK SELECT 1 - 4" buttons or "ON/STANDBY" buttons on the main unit are not received.

2.2. Setting the Remote control unit

- (1) Press and hold both "ZONE/DEVICE (1)" button for at least 3 second.
 The zone mode indicator flashes twice.
 (2) Press the "AMP" button.
 The zone mode indicator flashes twice.
 (3) Press the "1, 2, 3 or 4" button.
 The zone mode indicator flashes twice.

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.

3.5. 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 Analog (signal) Path fig.10	Input Mode : Fixed ANALOG SURROUND mode : DIRECT Amp assign : NORMAL Display: A 0 1 D V D	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [7/PQRS]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③KEY 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 DIGITAL (signal) Path (MAIN) fig.11	Input Mode : Fixed DIGITAL Amp assign : NORMAL Display: A 0 2 D V D	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [8/TUV]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③KEY 8/TUV (Main Zone) Initialization & Amp assign NORMAL& Input Mode Fixed DIGITAL ④DVD (Main Zone)	·Input : Digital / Output : Speakers (Front L/R) ·Input : Digital / Output : Pre OUT(Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
3 DIGITAL (signal) Path (ZONE2) fig.12	Input Mode : Fixed DIGITAL Amp assign : ZONE2 ZONE2 Function : Source Display: A 0 3 D V D	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [9/WXYZ]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③KEY9/WXYZ (Main Zone) Initialization & Amp assign ZONE2 & Input Mode Fixed DIGITAL ④ZONE2 POWER ON ⑤DVD (Main Zone)	·Input : Digital / Output : Speakers (SURR BACK L/R) ·Input : Digital / Output : Pre OUT(ZONE2 L/R) (※ As the input source, you can switch from DVD to other ones.)	AVR2312: Only "NET/USB" corresponds to the input source.
4 DIGITAL (signal) Path (ZONE3) fig.13	Input Mode : Fixed DIGITAL Amp assign : ZONE3 ZONE3 Function : Source Display: A 0 4 D V D	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [0/_*]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③KEY 0/CODE2 (Main Zone) Initialization & Amp assign ZONE3 & Input Mode Fixed DIGITAL ④ZONE3 POWER ON ⑤DVD (Main Zone)	·Input : Digital / Output : Speakers (SURR BACK L/R) ·Input : Digital / Output : Pre OUT(ZONE3 L/R) (※ As the input source, you can switch from DVD to other ones.)	only AVR3312
5 HDMI (signal) Path fig.14	Input Mode : Fixed HDMI Amp assign : NORMAL Display: A 0 5 D V D	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [MOVIE]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③MOVIE Initialization & Amp assign NORMAL & Input Mode Fixed HDMI ④DVD (Main Zone)	·Input : HDMI / Output : Speakers (Front L/R) ·Input : HDMI / Output : Pre OUT(Front 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
10 Amp Assign (signal) Path (Amp Assign : 2CH) fig.19	Amp assign : 2CH SURROUND mode : DIRECT Vol -20dB Display: A 1 0 DVD	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [▶▶]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③▶▶ Initialization &Amp assign 2CH & SURROUND mode : DIRECT & Volume -20dB ④DVD (Main Zone)	·Input : Analog / Output : Speakers (SURR BACK L/R) ·Input : Analog / Output : Pre OUT (Front L/R) (※ As the input source, you can switch from DVD to other ones.)	
11 Amp Assign (signal) Path (Amp Assign : BiAMP) fig.20	Amp assign : BiAMP SURROUND mode : Multi ch STEREO Vol -20dB Display: A 1 1 DVD	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [◀◀]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③◀◀ Initialization & Amp assign BiAMP & SURROUND mode : Multi ch STEREO & Volume -20dB ④DVD (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.)	
12 Amp Assign (signal) Path (Amp Assign : Front-B) fig.20	Amp assign : Front-B SURROUND mode : Multi ch STEREO Vol -20dB Display: A 1 2 DVD	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [▶▶]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③▶▶ Initialization & Amp assign Front-B & SURROUND mode Multi ch STEREO & Volume -20dB ④DVD (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.)	
13 Front Height (signal) Path fig.22	Amp assign : Front Height (As AVR2312) Amp assign : NORMAL (As AVR3312) SURROUND mode : Multi ch STEREO Vol -20dB Surround Parameter-Speaker : F.Height Display: A 1 4 DVD	1.Press [AMP] 2.Press [ZONE SELECT] , Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [+10/MEMORY]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③MEMORY/+10 (Main Zone) As AVR2312 Initialization & Amp assign Front Height & SURROUND mode:Multi ch STEREO & Volume -20dB As AVR3312 Initialization & Amp assign NORMAL & SURROUND mode:Multi ch STEREO & Volume -20dB & Surround Parameter- Speaker : F.Height ④DVD (Main Zone)	·Input : Analog / Output : Speakers (F.HEIGHT L/R) (※ As the input source, you can switch from DVD to other ones.)	AVR2312 and AVR3312, operate differently
14 Front Wide (signal) Path fig.23	Amp assign : NORMAL SURROUND mode : Multi ch STEREO Vol -20dB Surround Parameter-Speaker : F.Wide Display: A 1 5 DVD	1.Press [AMP] 2.Press [ZONE SELECT], Select "ZONE2" 3.Press [ZONE OFF] 4.Press [ZONE SELECT], Select "ZONE3" 5.Press [ZONE OFF] 6.Press [ZONE SELECT], Select "MAIN" 7.Press [SLEEP]	①ZONE2 POWER OFF ②ZONE3 POWER OFF ③SLEEP MODE Initialization &Amp assign NORMAL & SURROUND mode:Multi ch STEREO & Volume -20dB Surround Parameter-Speaker : F.Wide ④DVD (Main Zone)	·Input : Analog / Output : Speakers (F.WIDE L/R) (※ As the input source, you can switch from DVD to other ones.)	only AVR3312

fig.1

AVR3312/2312 VIDEO BLOCK

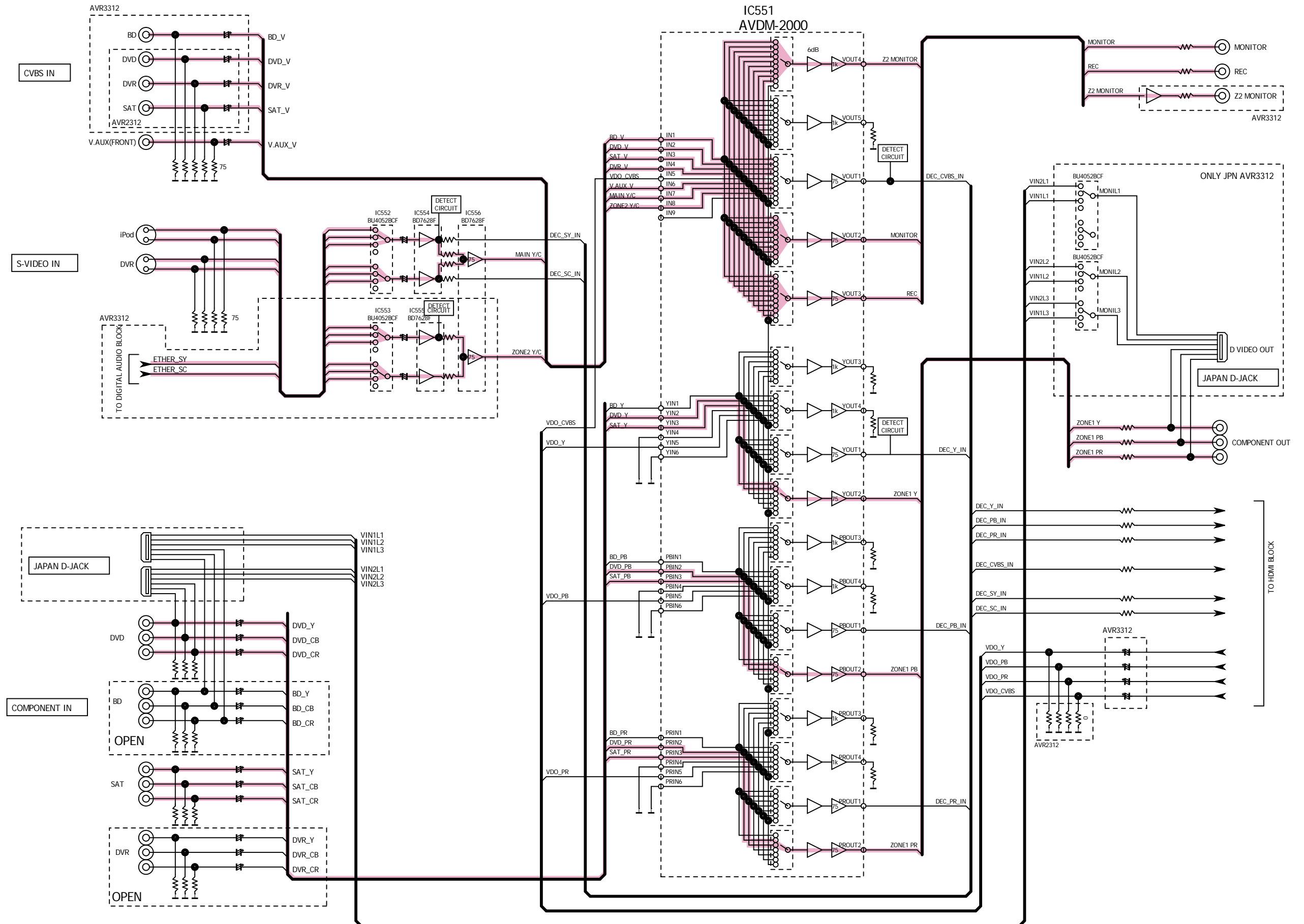


fig.3

AVR3312/2312 HDMI VIDEO BLOCK

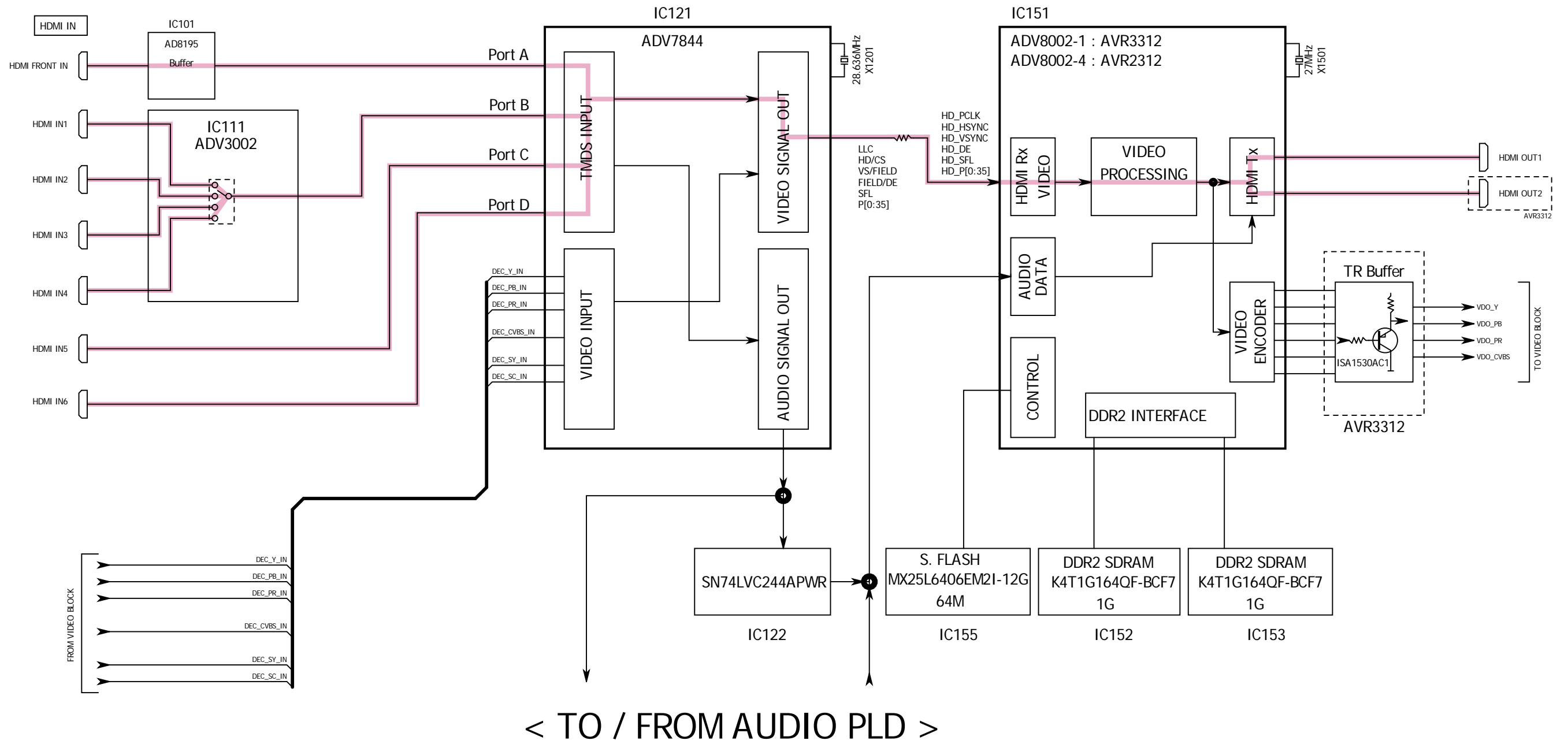


fig.4 (1/2)

AVR3312/2312 VIDEO BLOCK

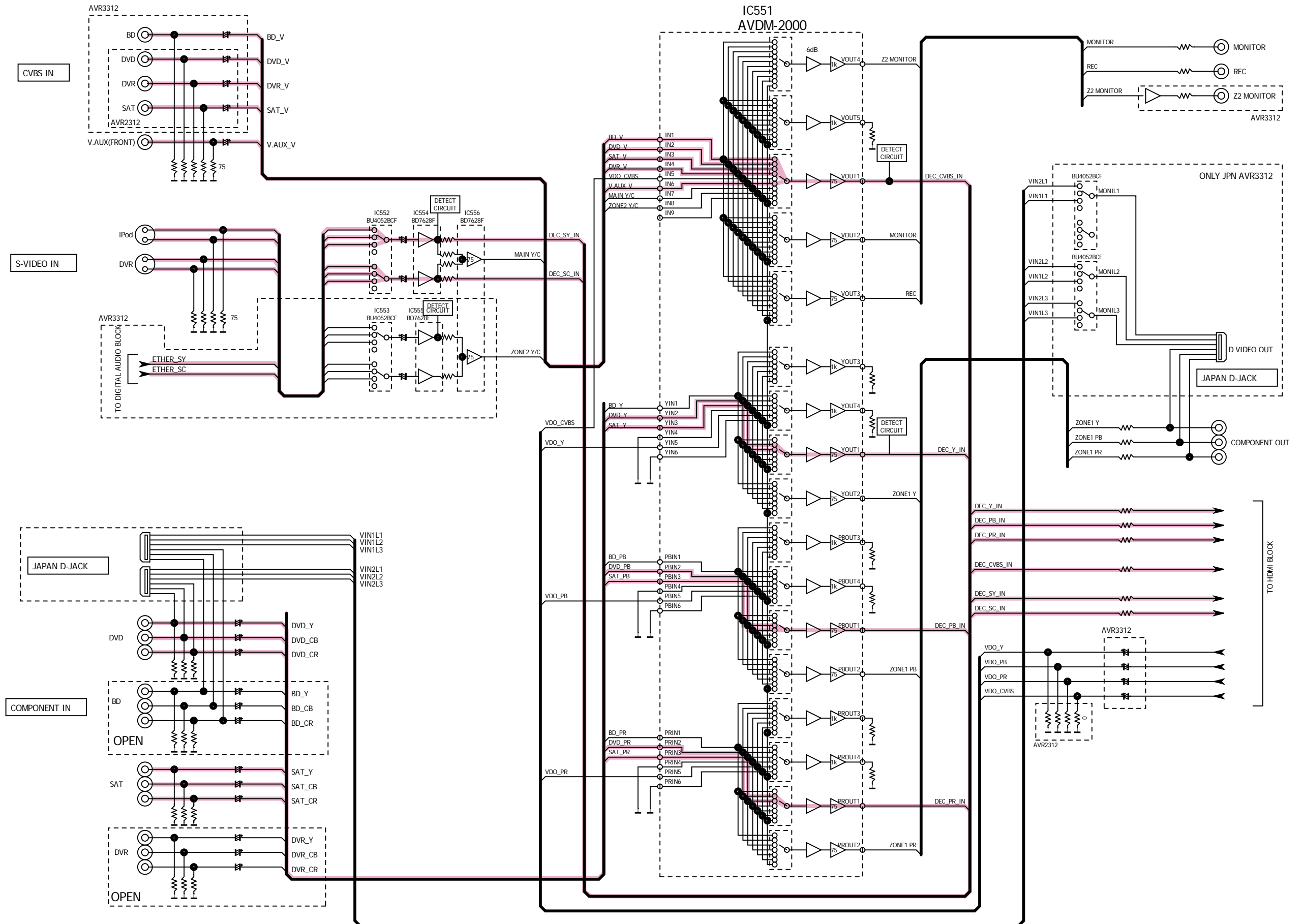


fig.4 (2/2)

AVR3312/2312 HDMI VIDEO BLOCK

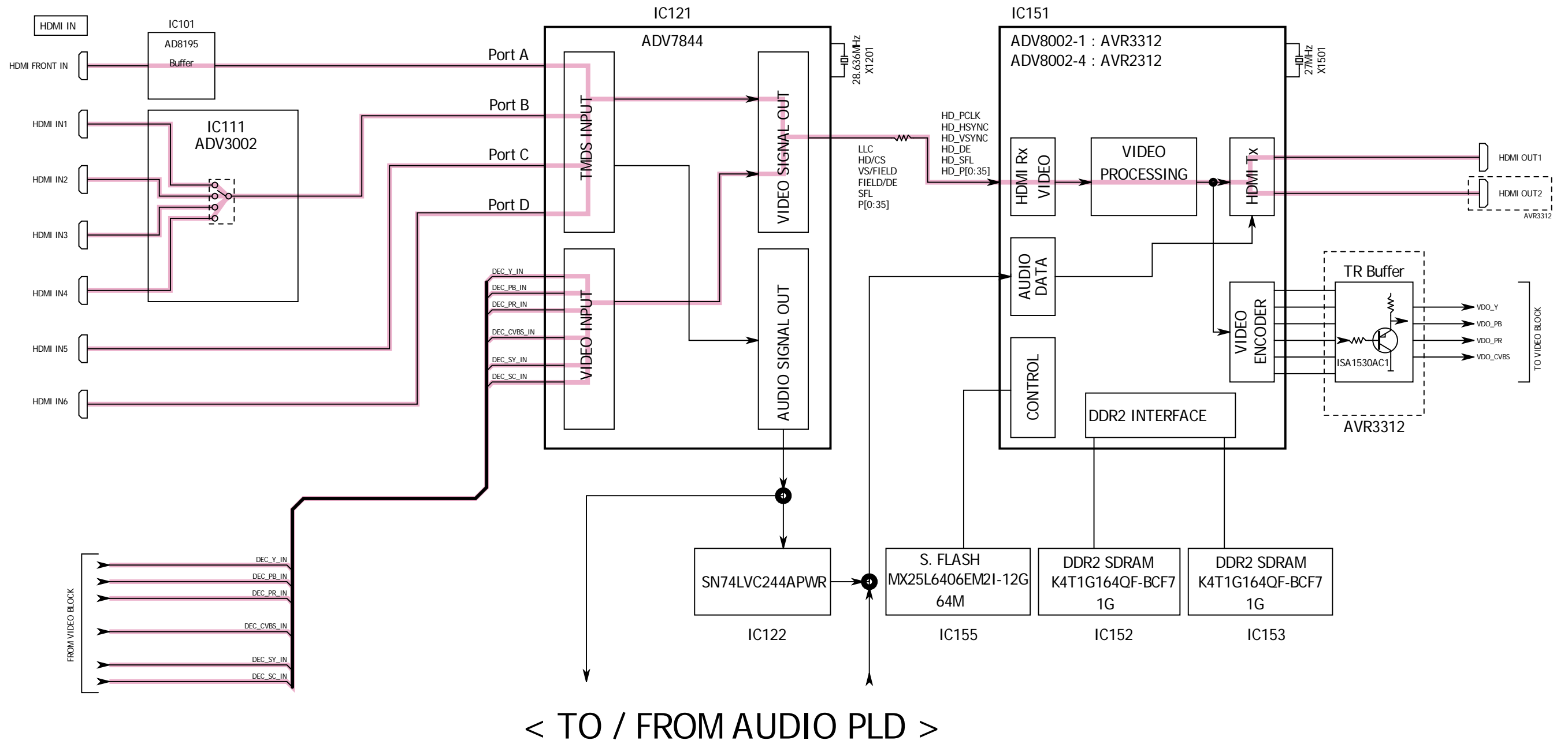


fig.5 (1/2)

AVR3312/2312 HDMI VIDEO BLOCK

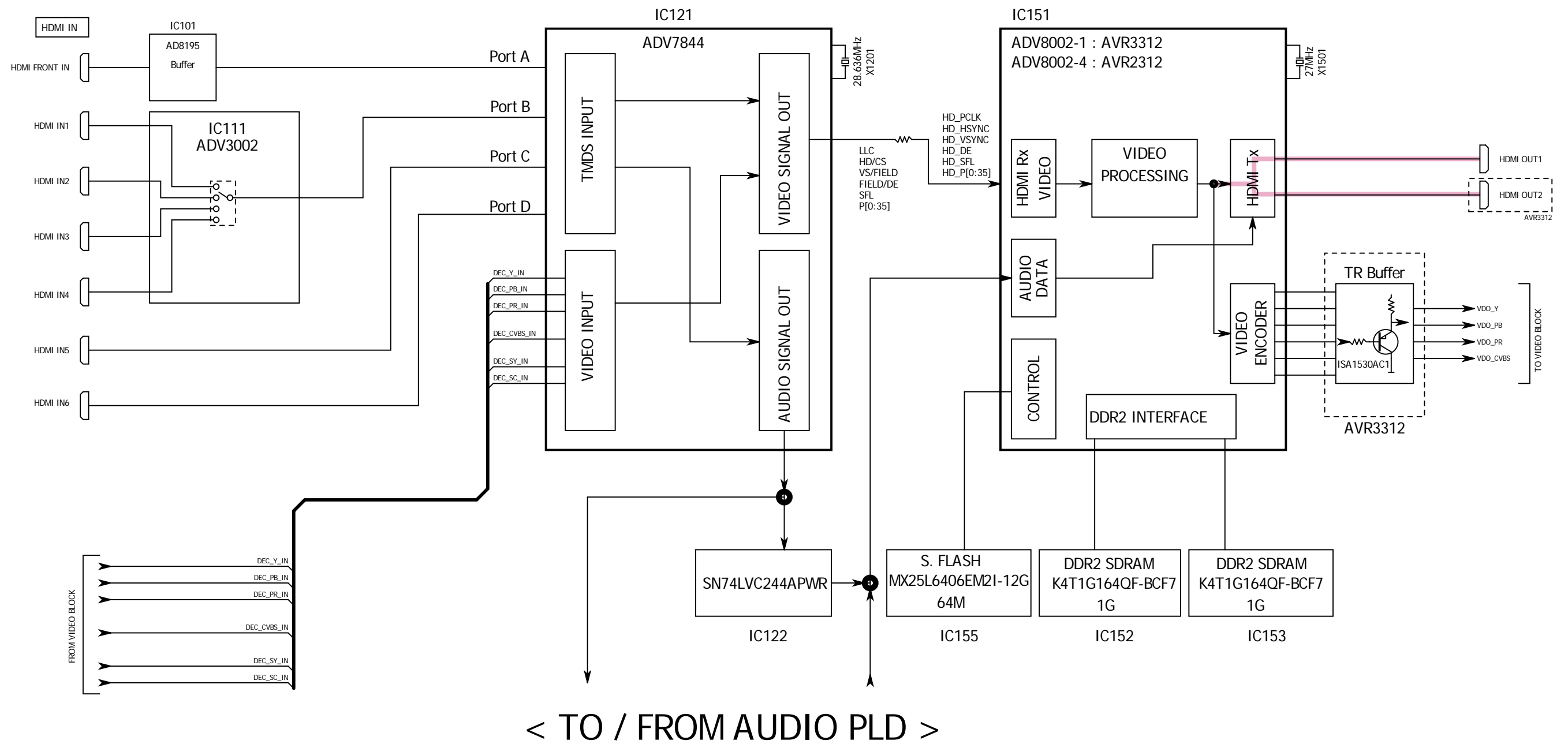


fig.6

AVR3312/2312 HDMI VIDEO BLOCK

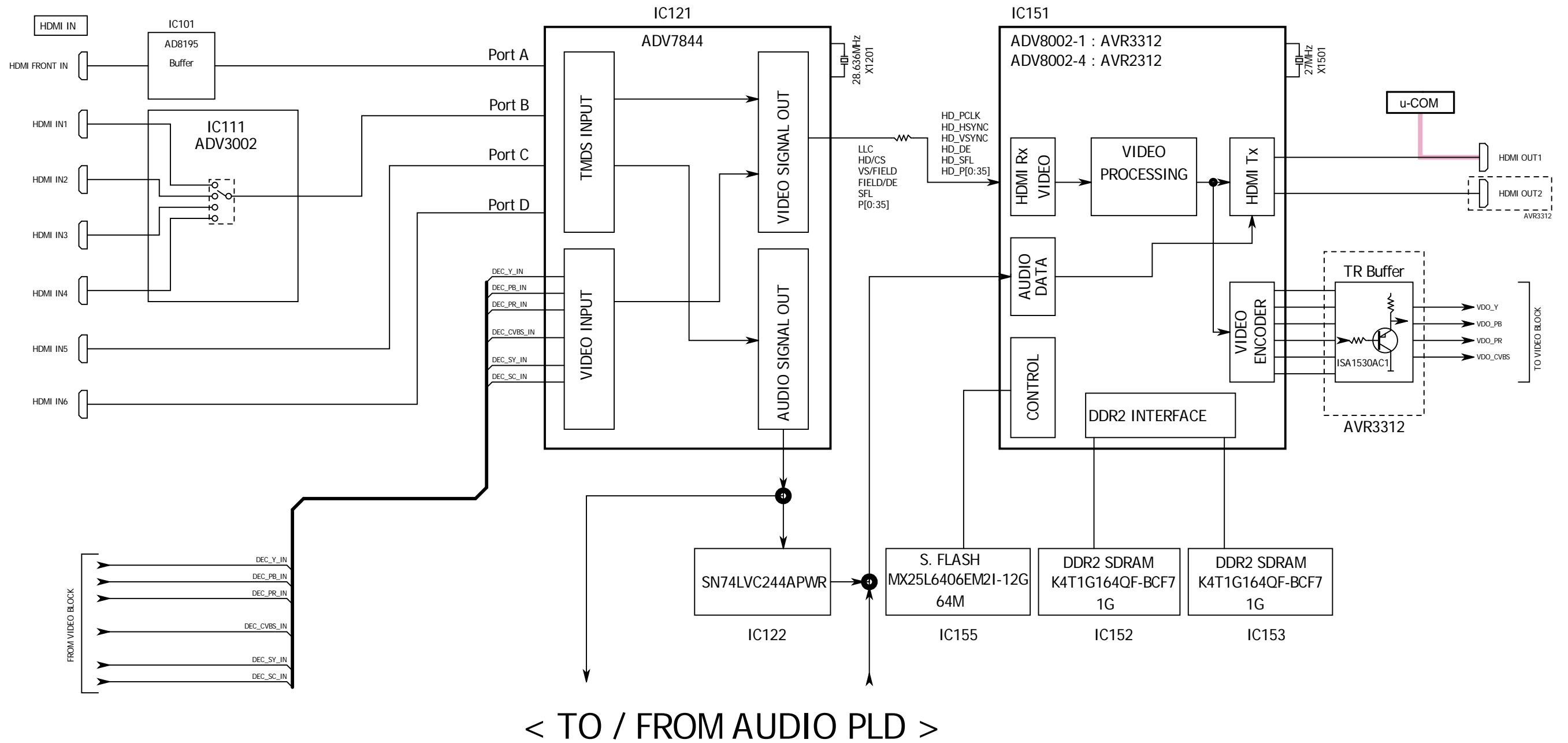


fig.8 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

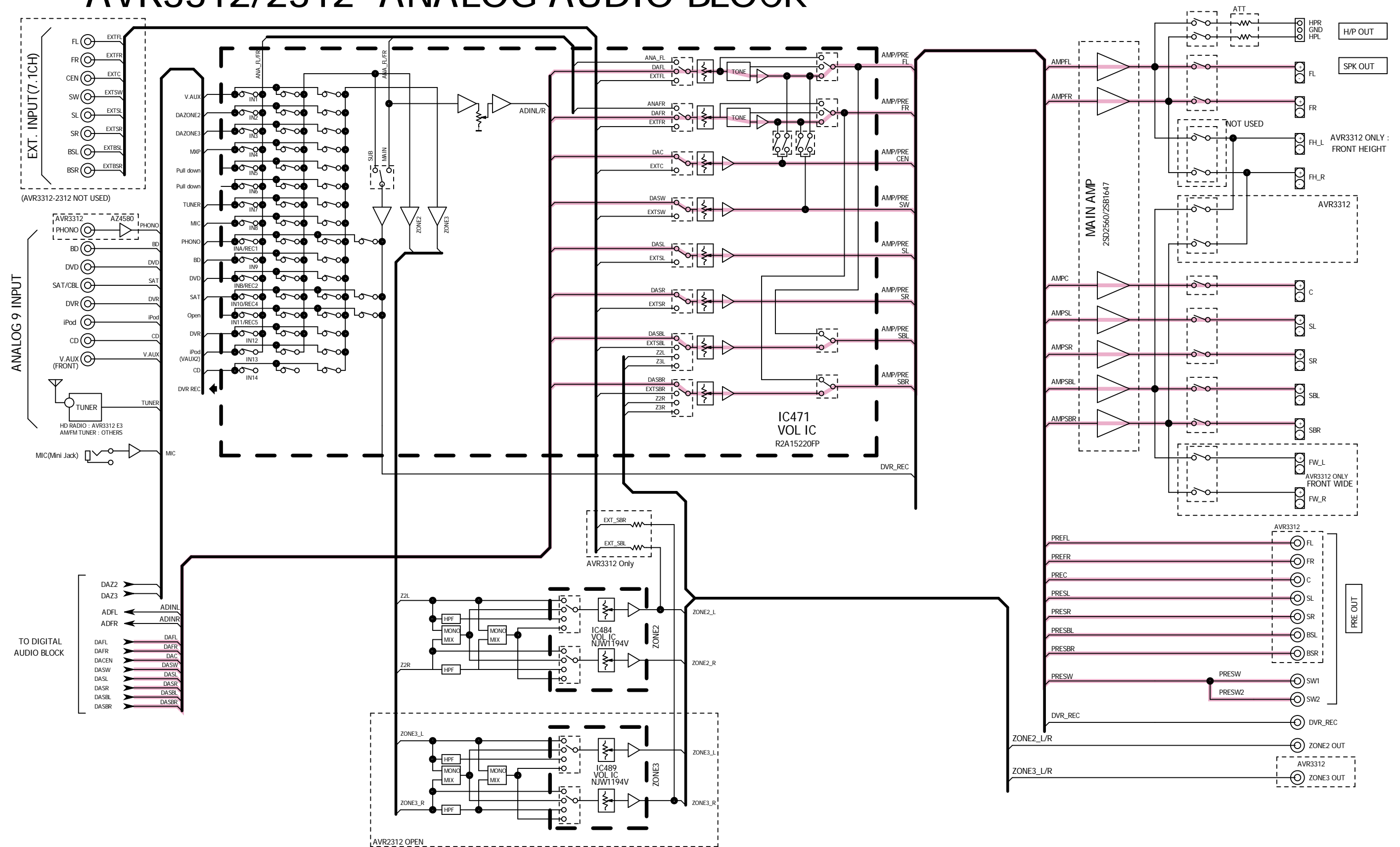


fig.8 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

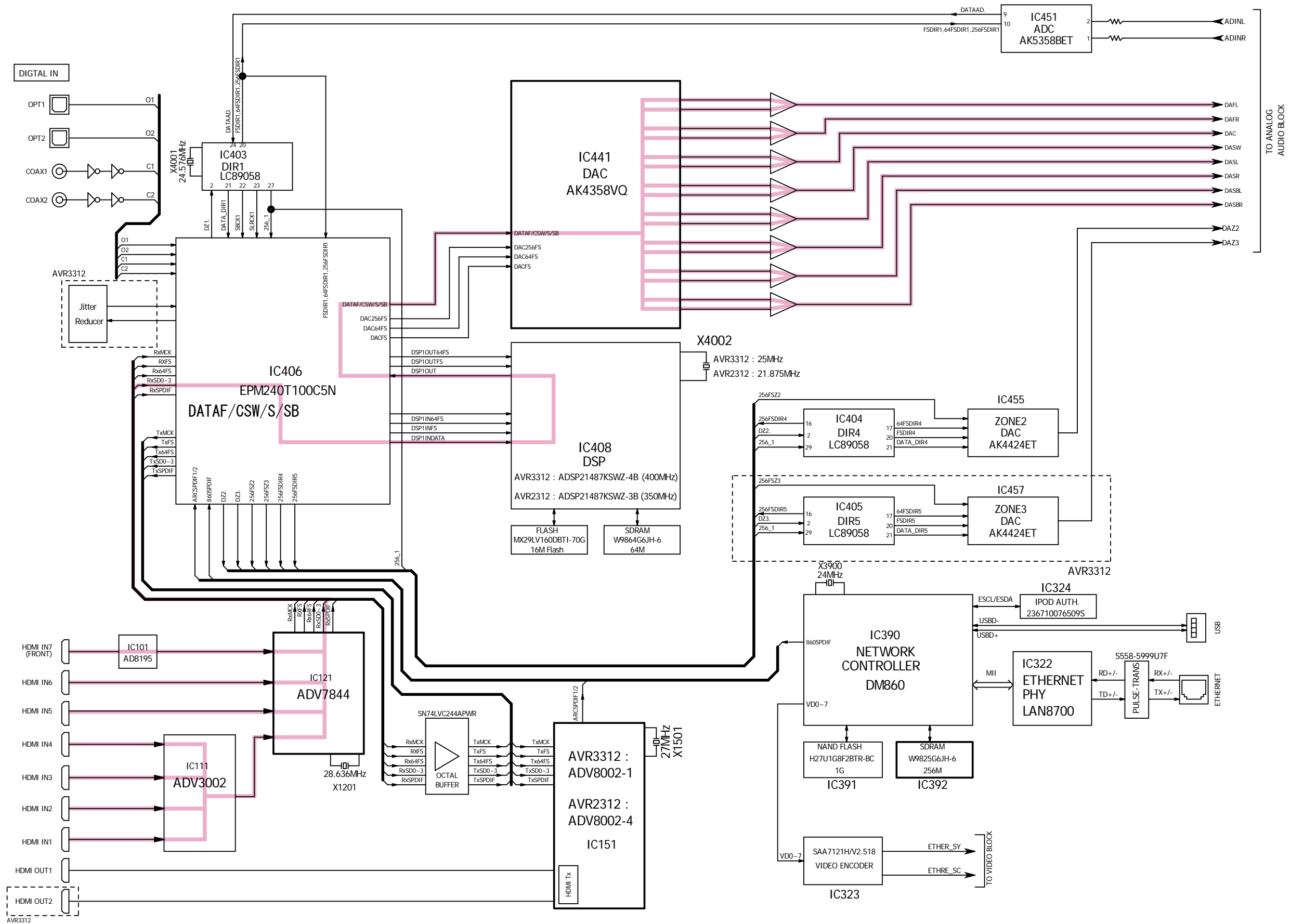


fig.9

AVR3312/2312 DIGITAL AUDIO BLOCK

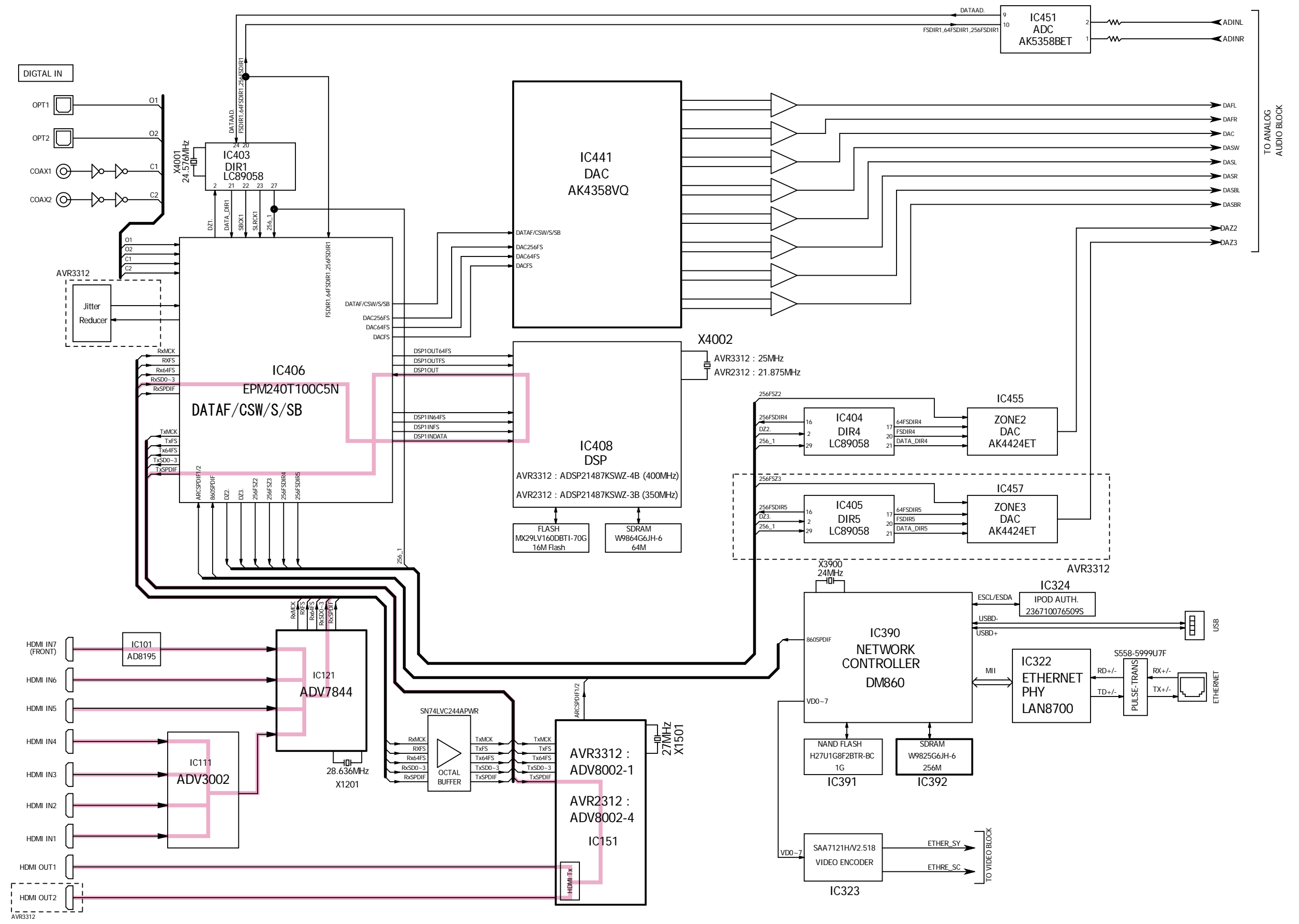


fig.10

AVR3312/2312 ANALOG AUDIO BLOCK

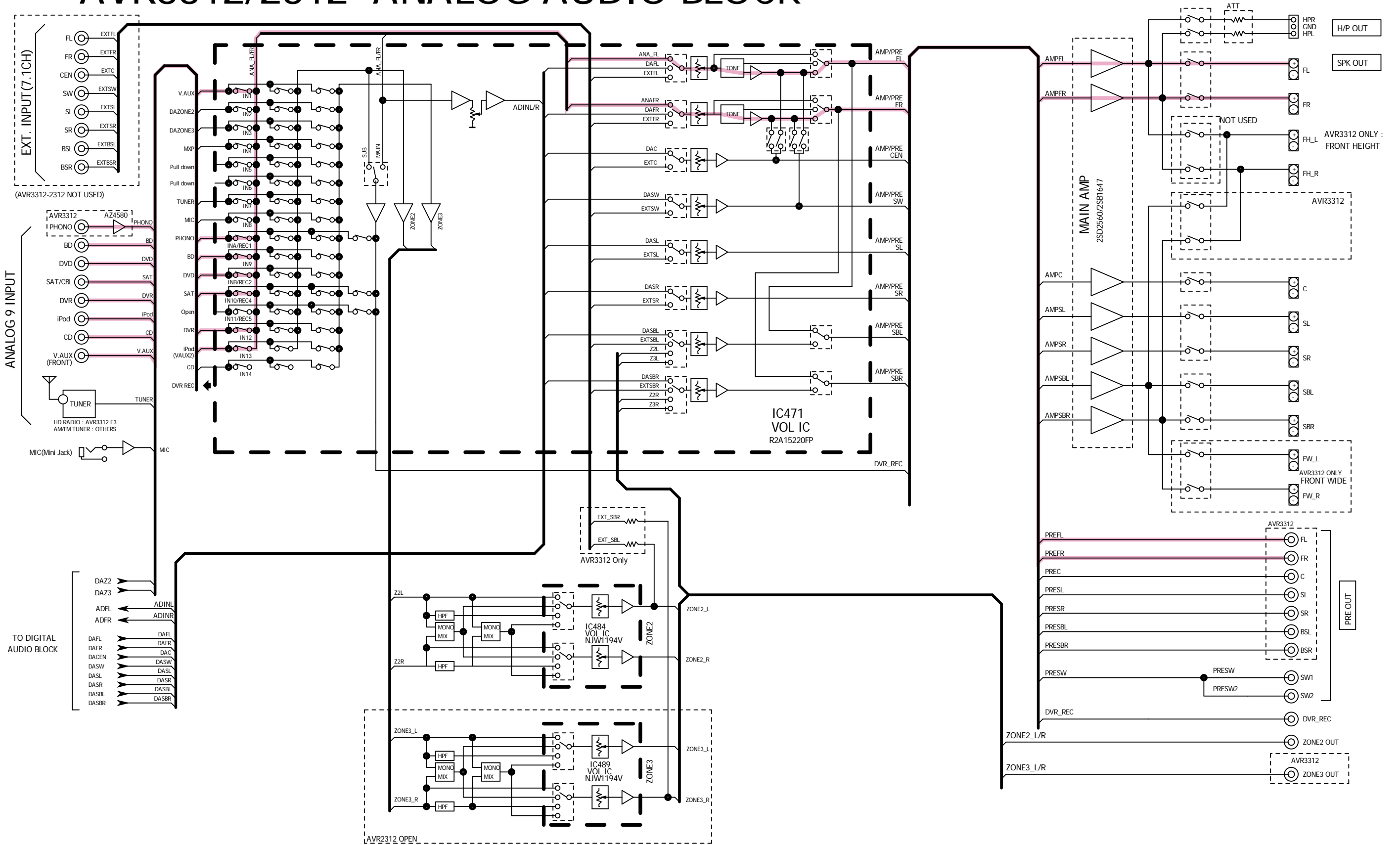


fig.11 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

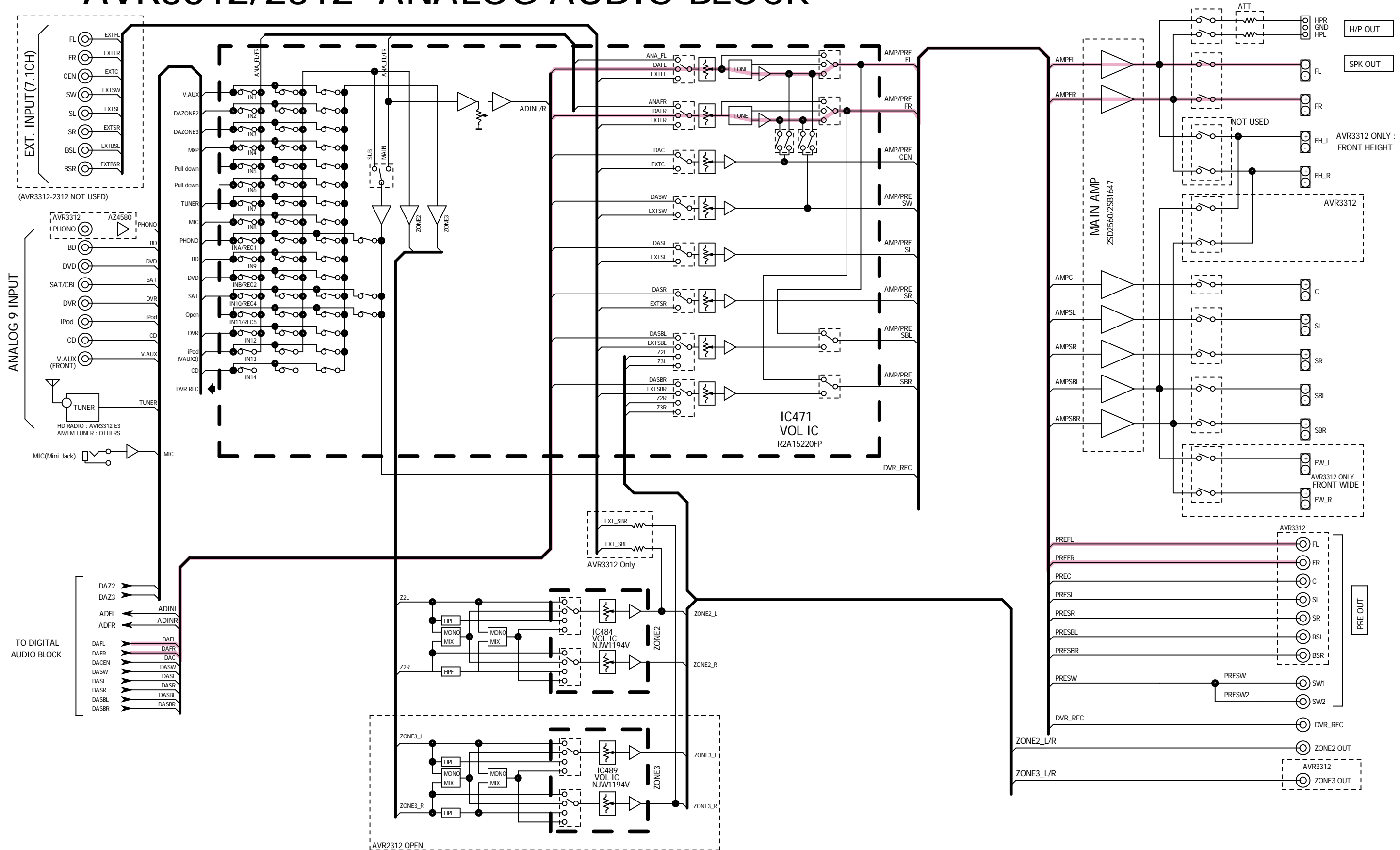


fig.11 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

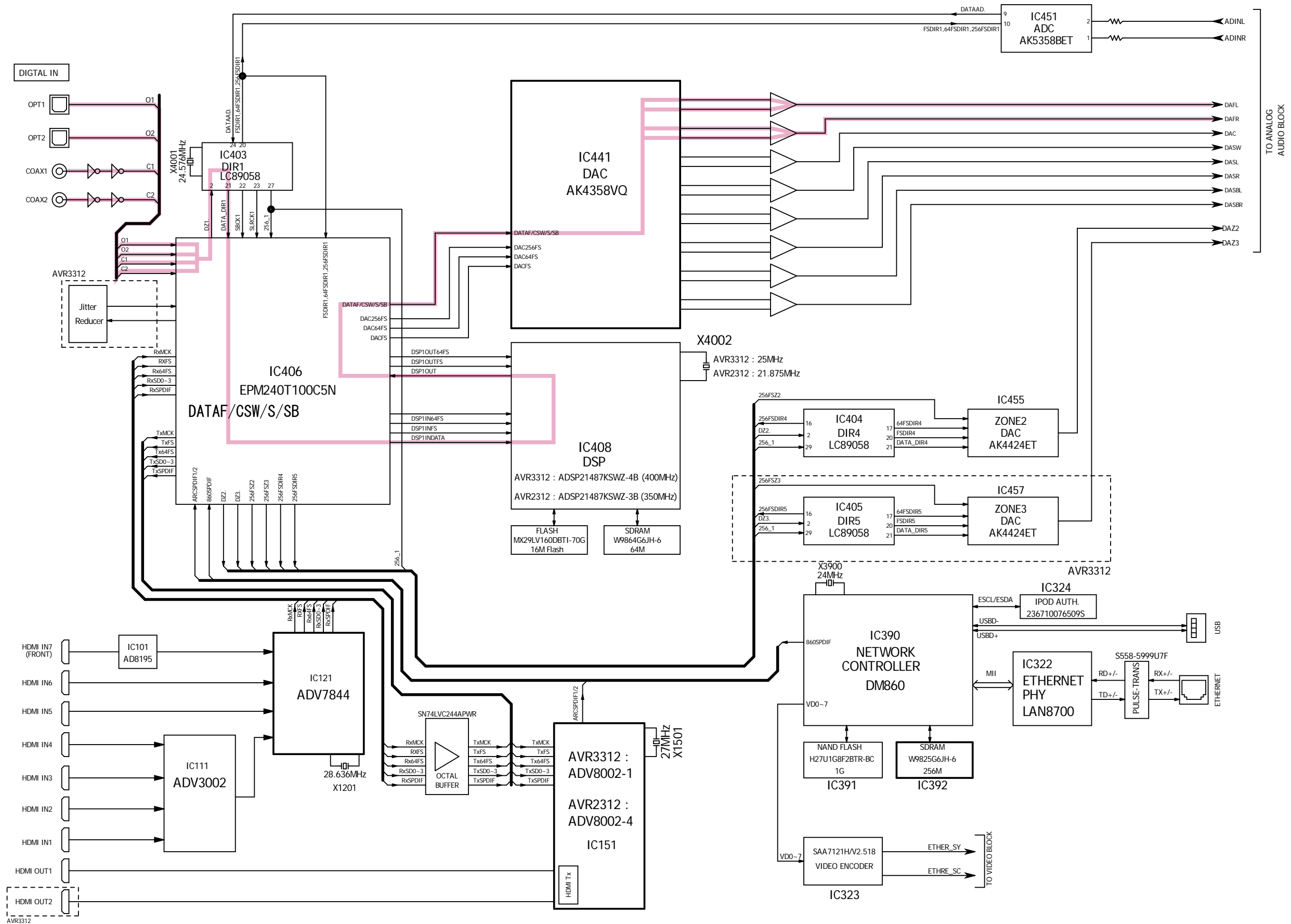


fig.12 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

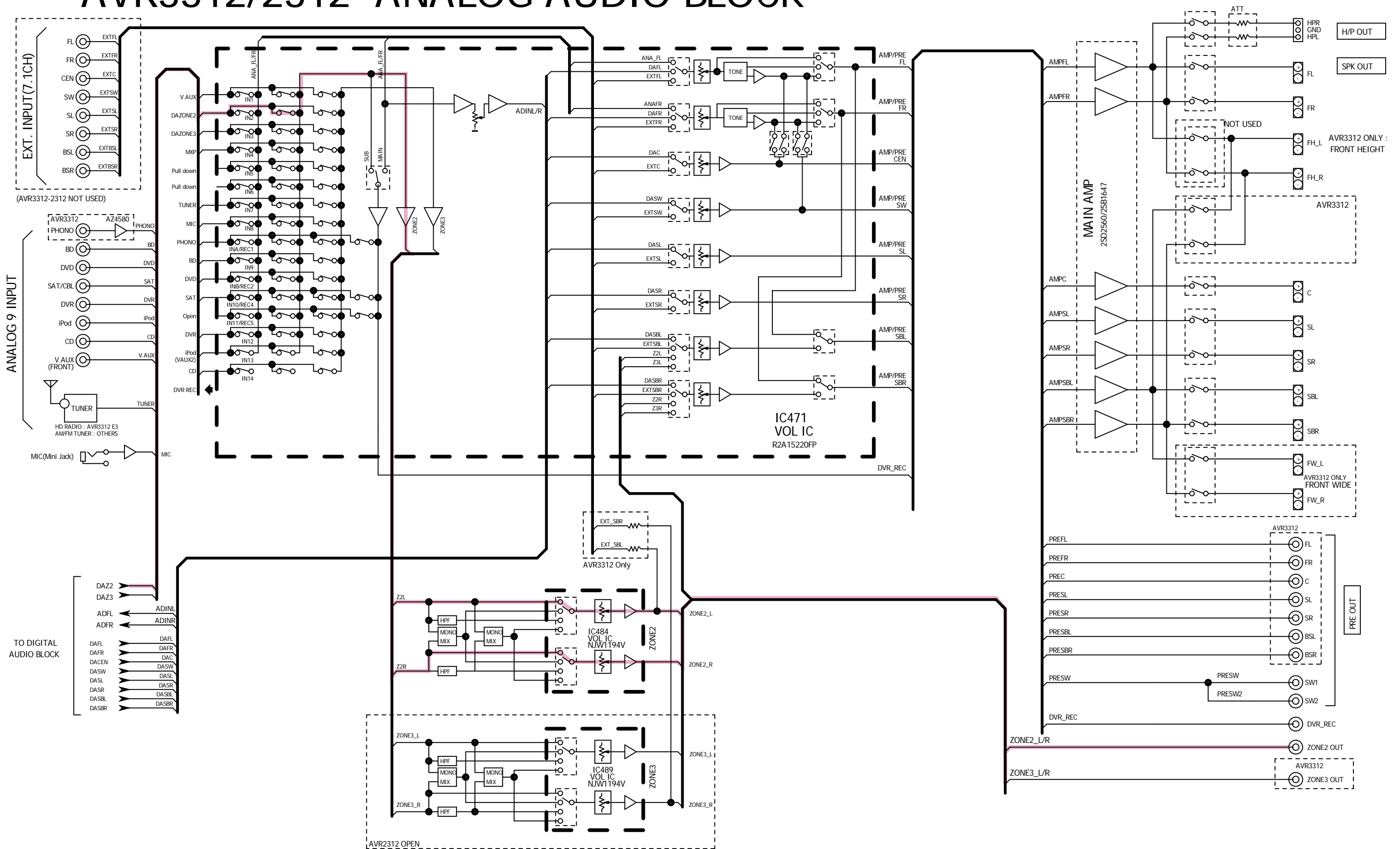


fig.12 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

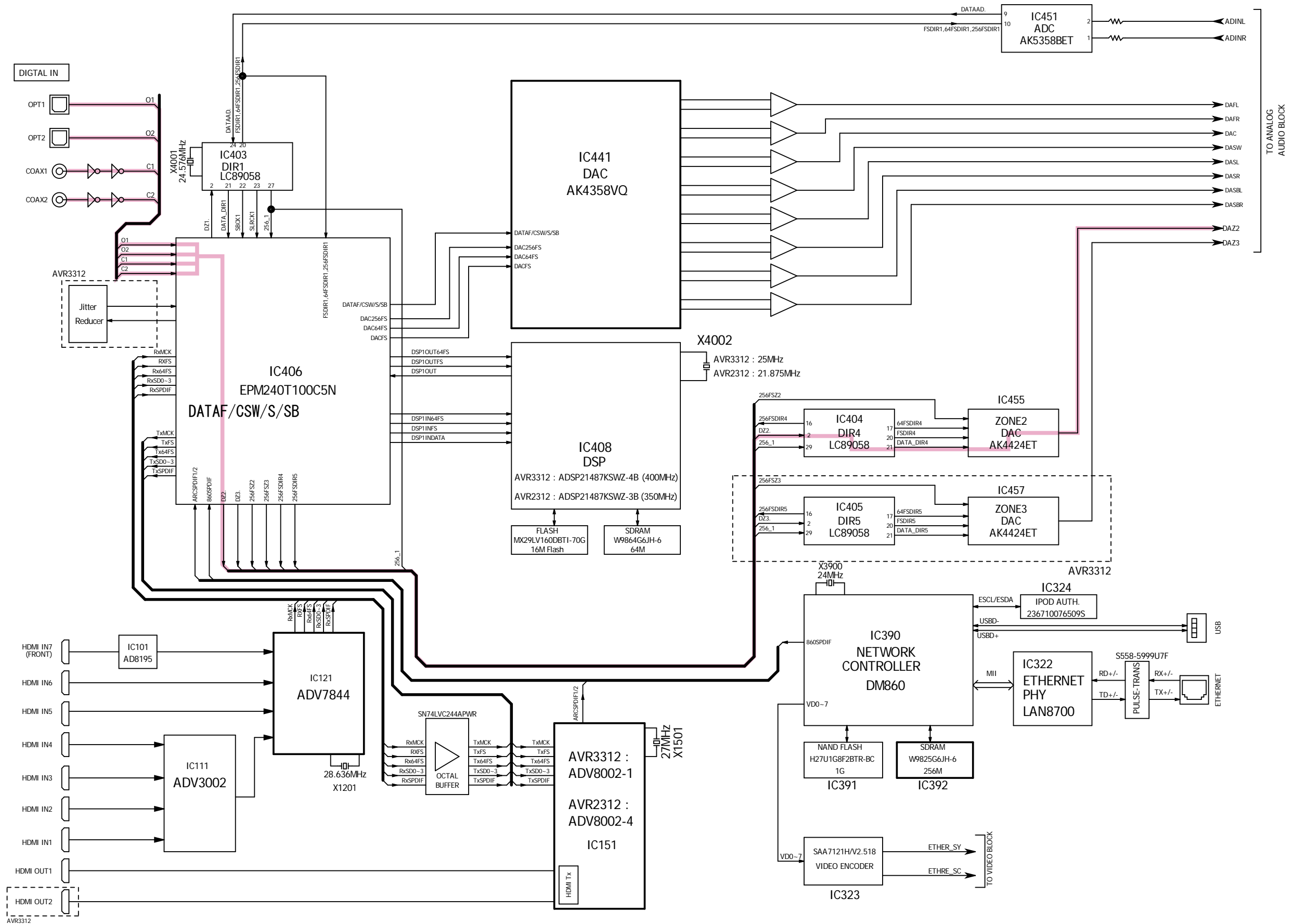


fig.13 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

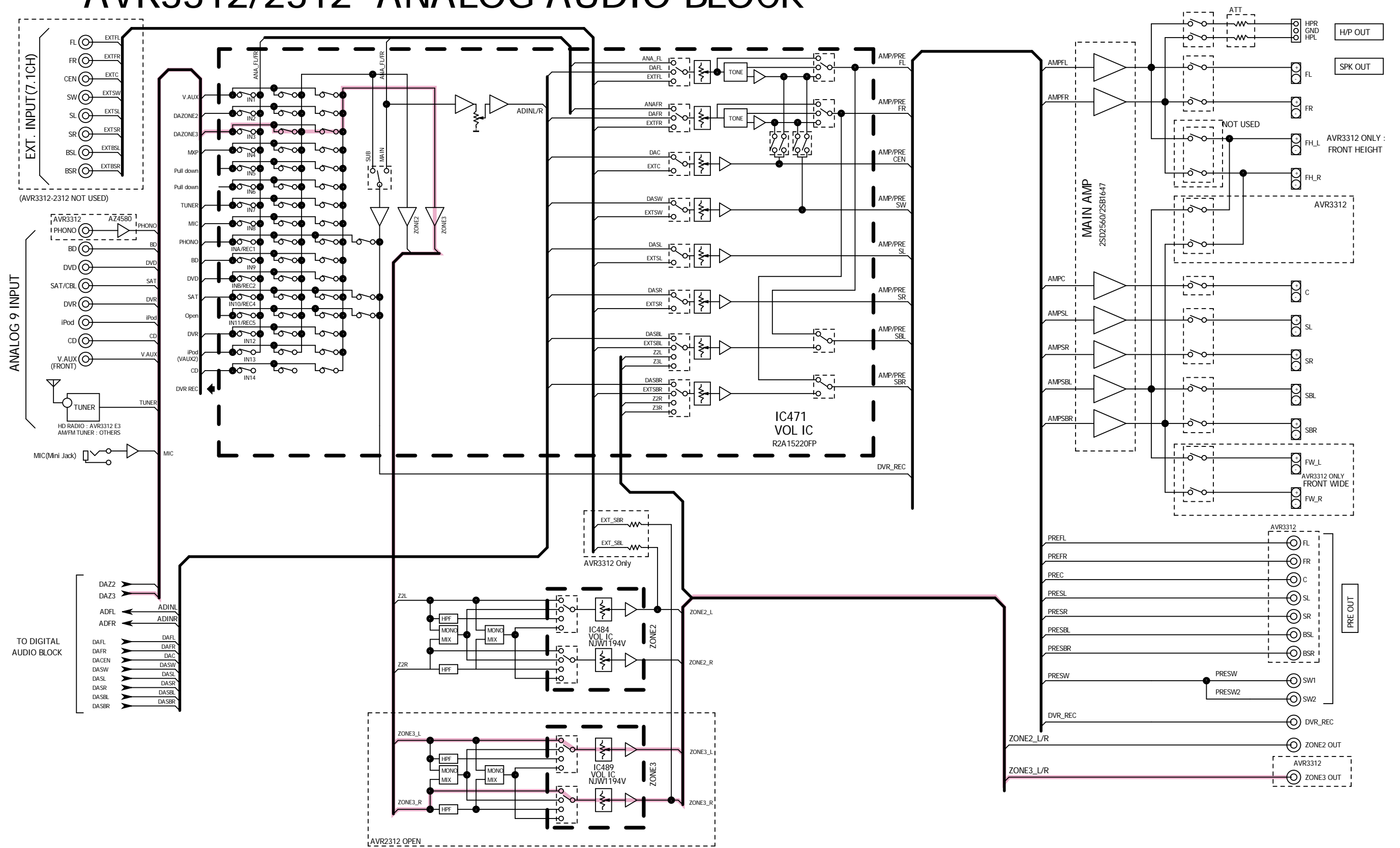


fig.13 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

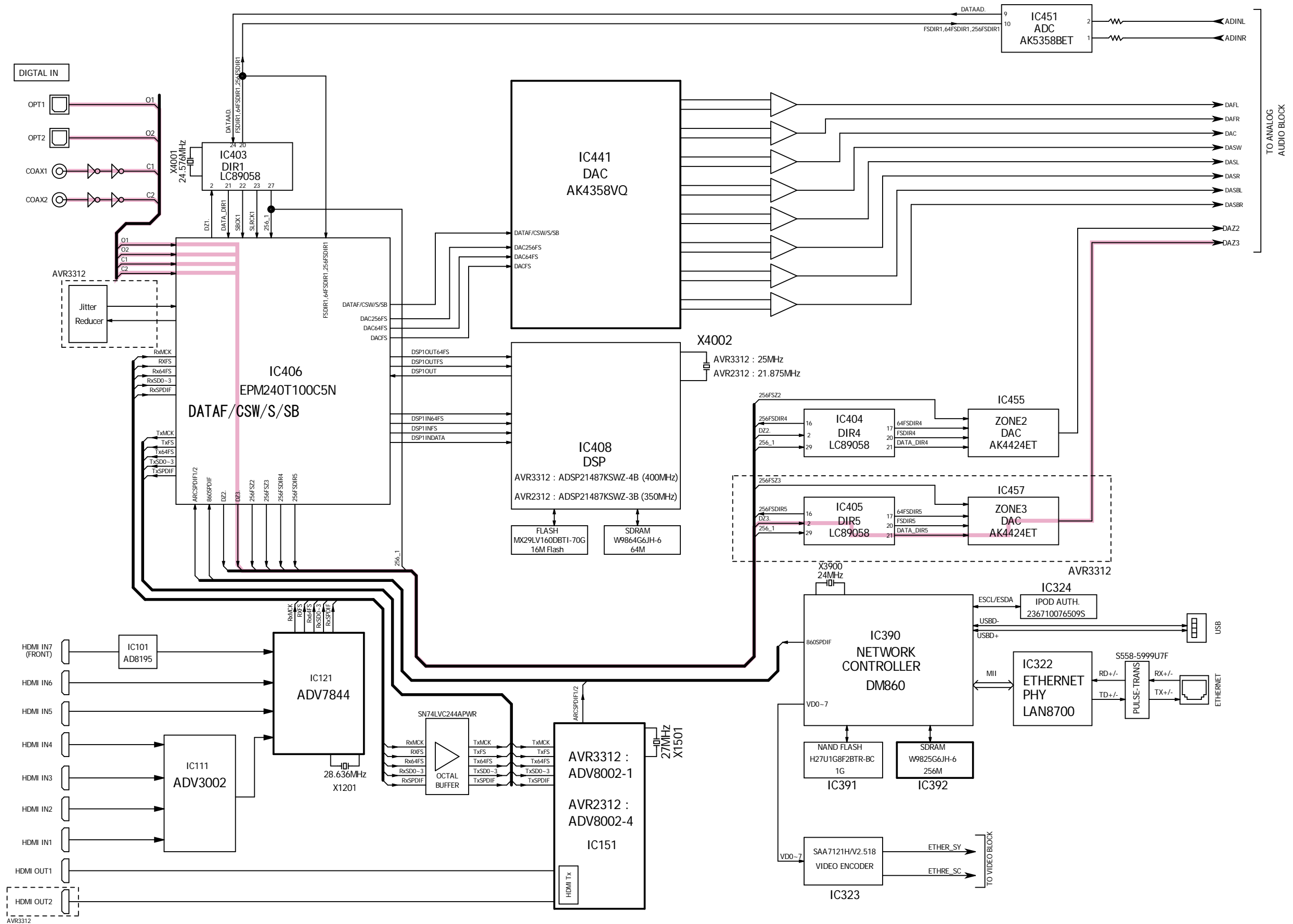


fig.14 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

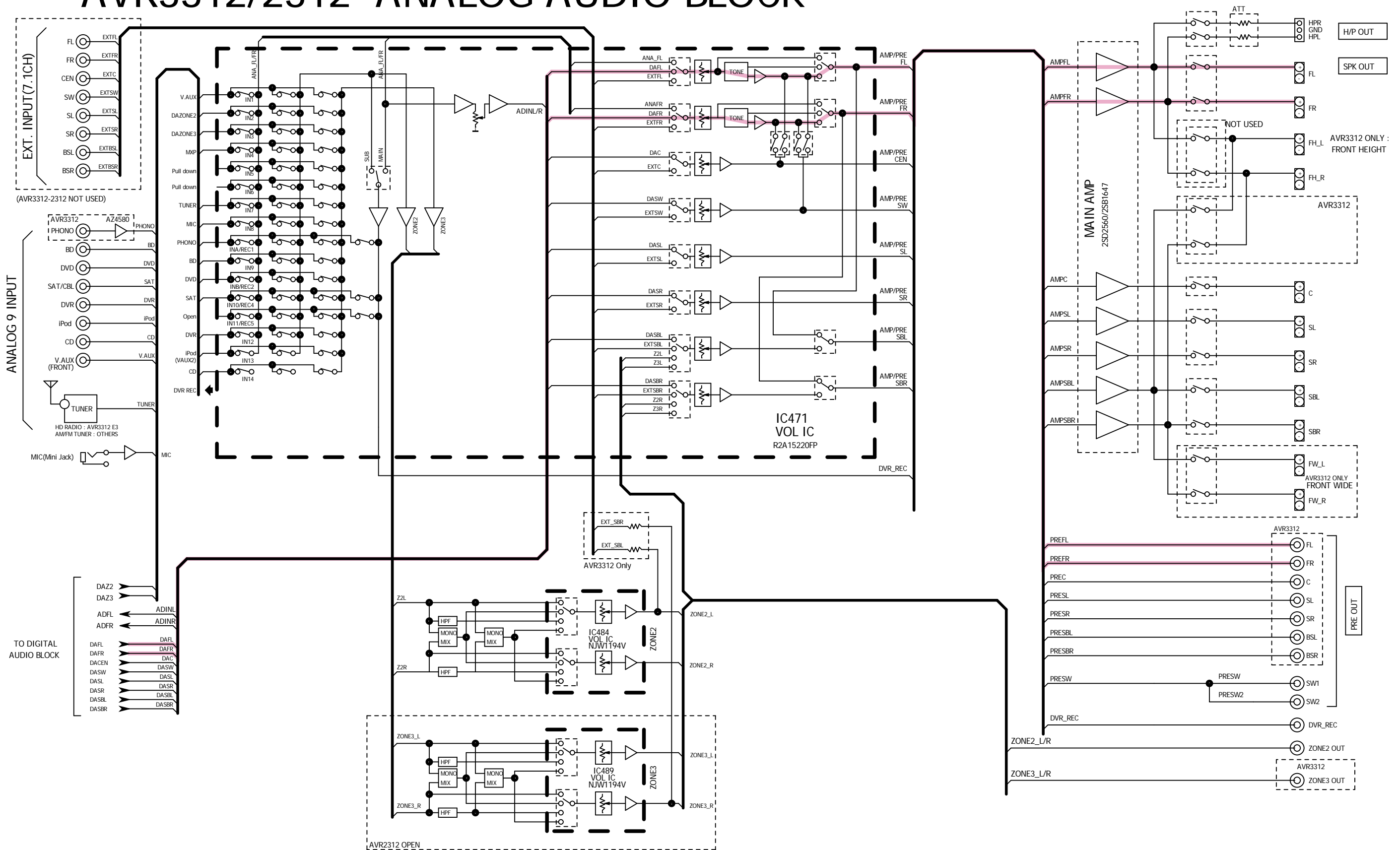


fig.14 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

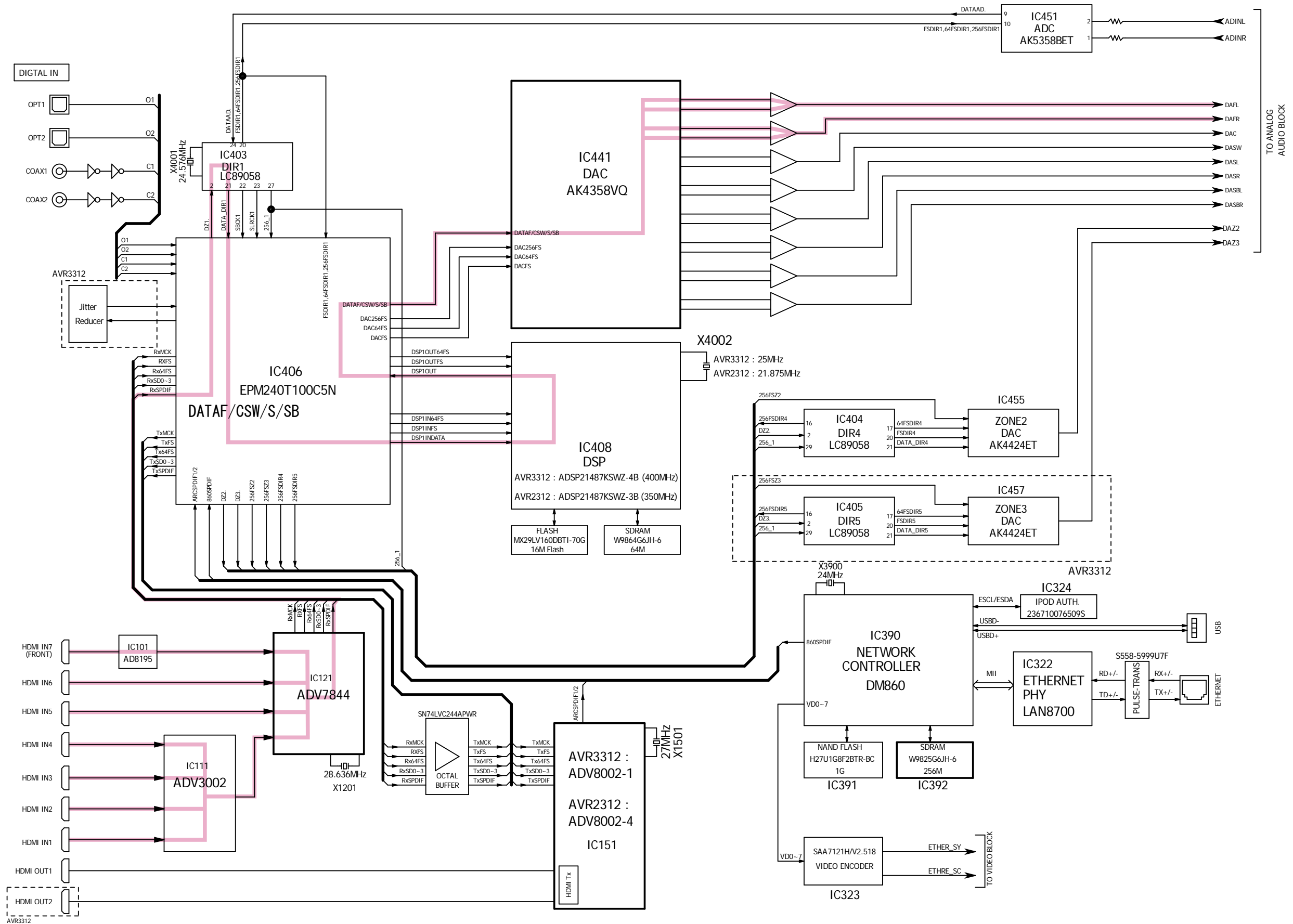


fig.15 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

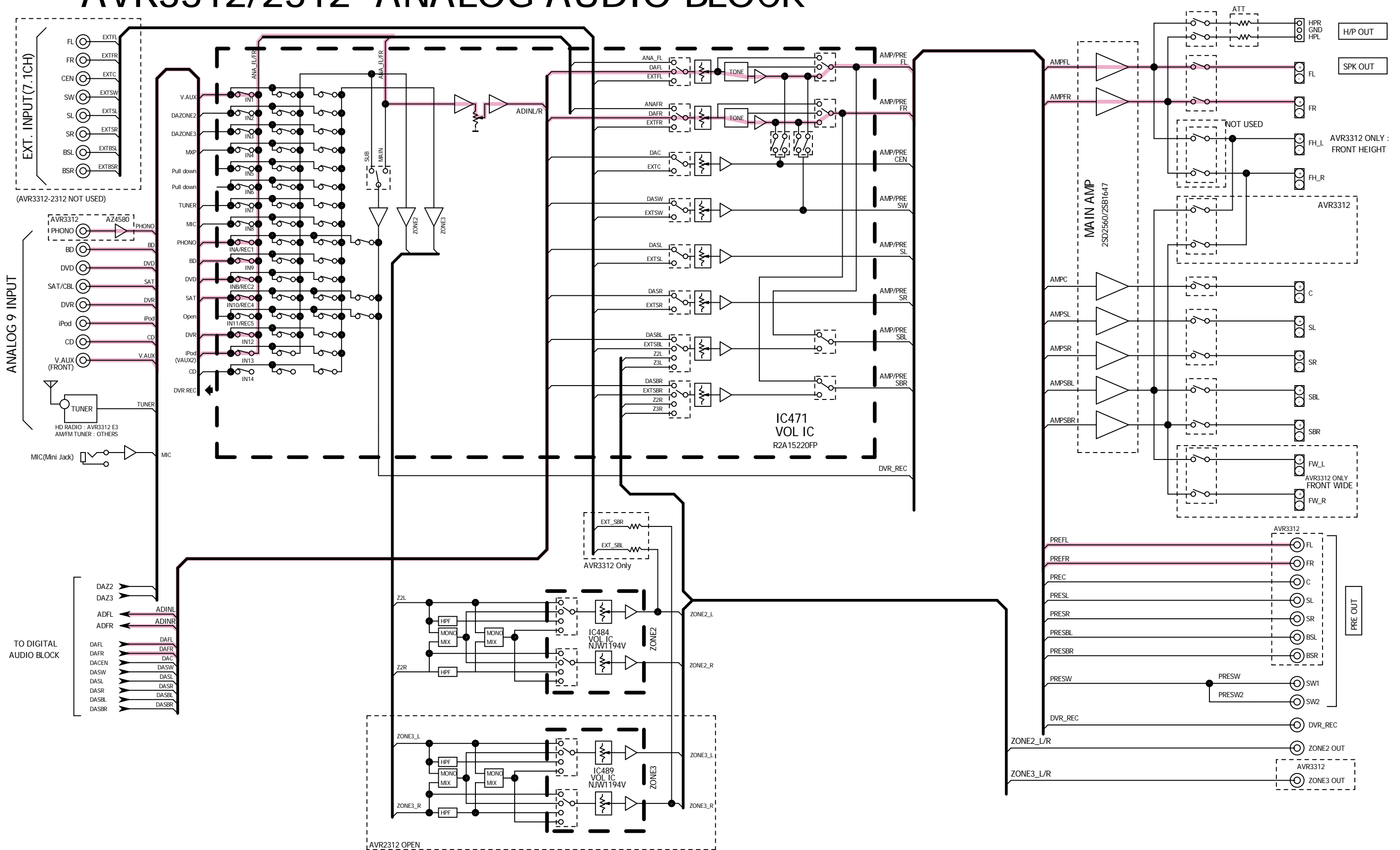


fig.15 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

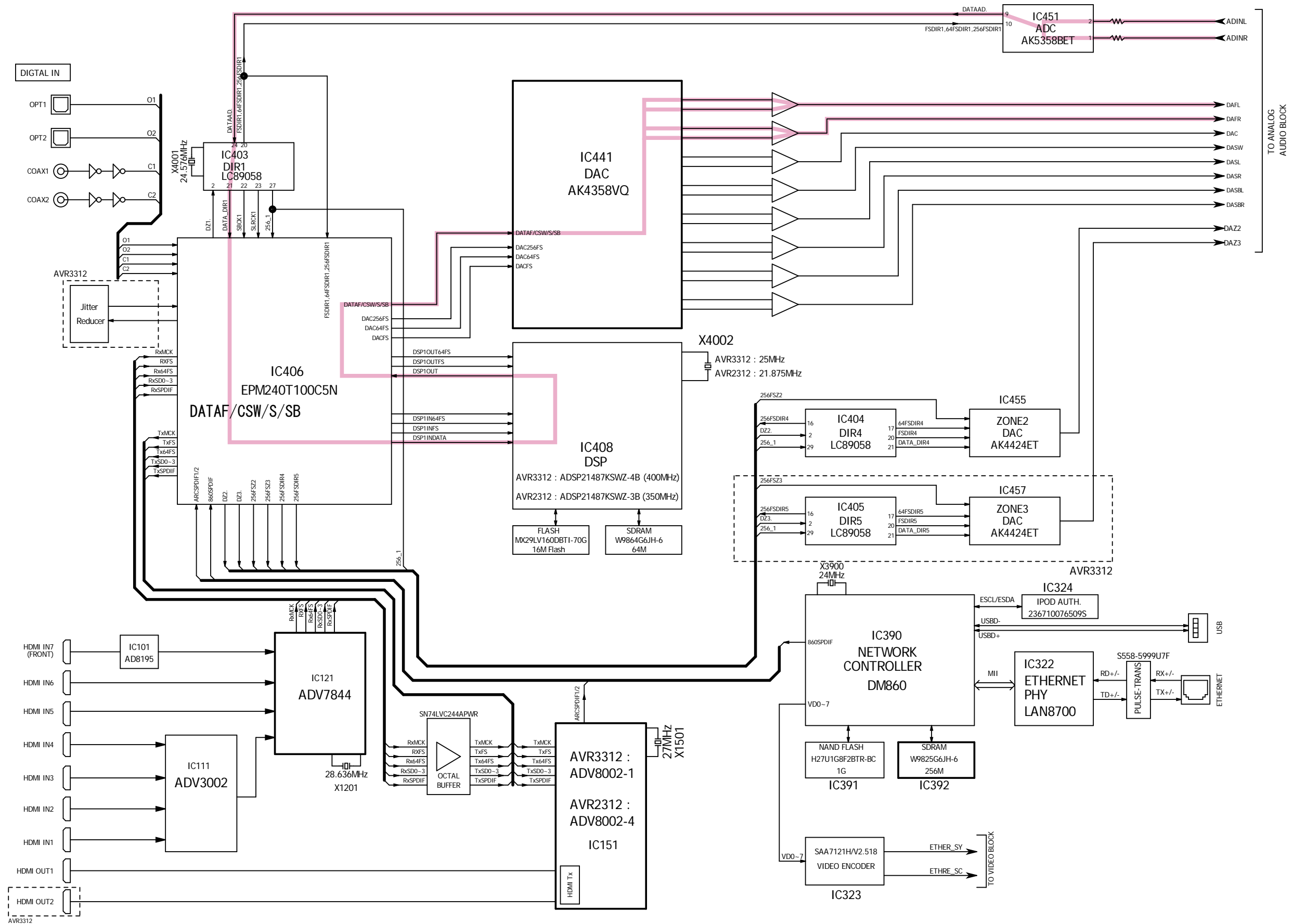


fig.16

AVR3312/2312 ANALOG AUDIO BLOCK

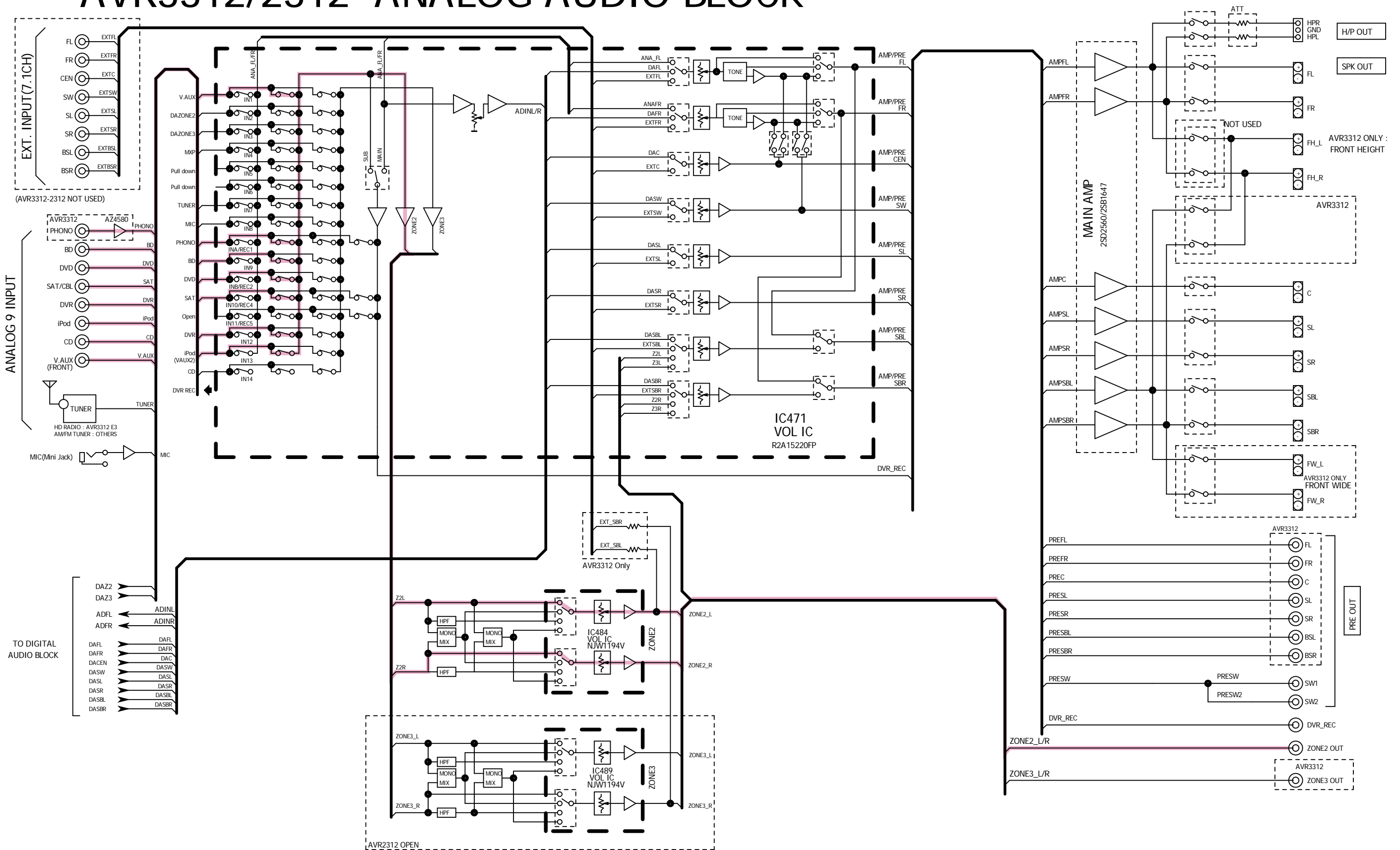


fig.17

AVR3312/2312 ANALOG AUDIO BLOCK

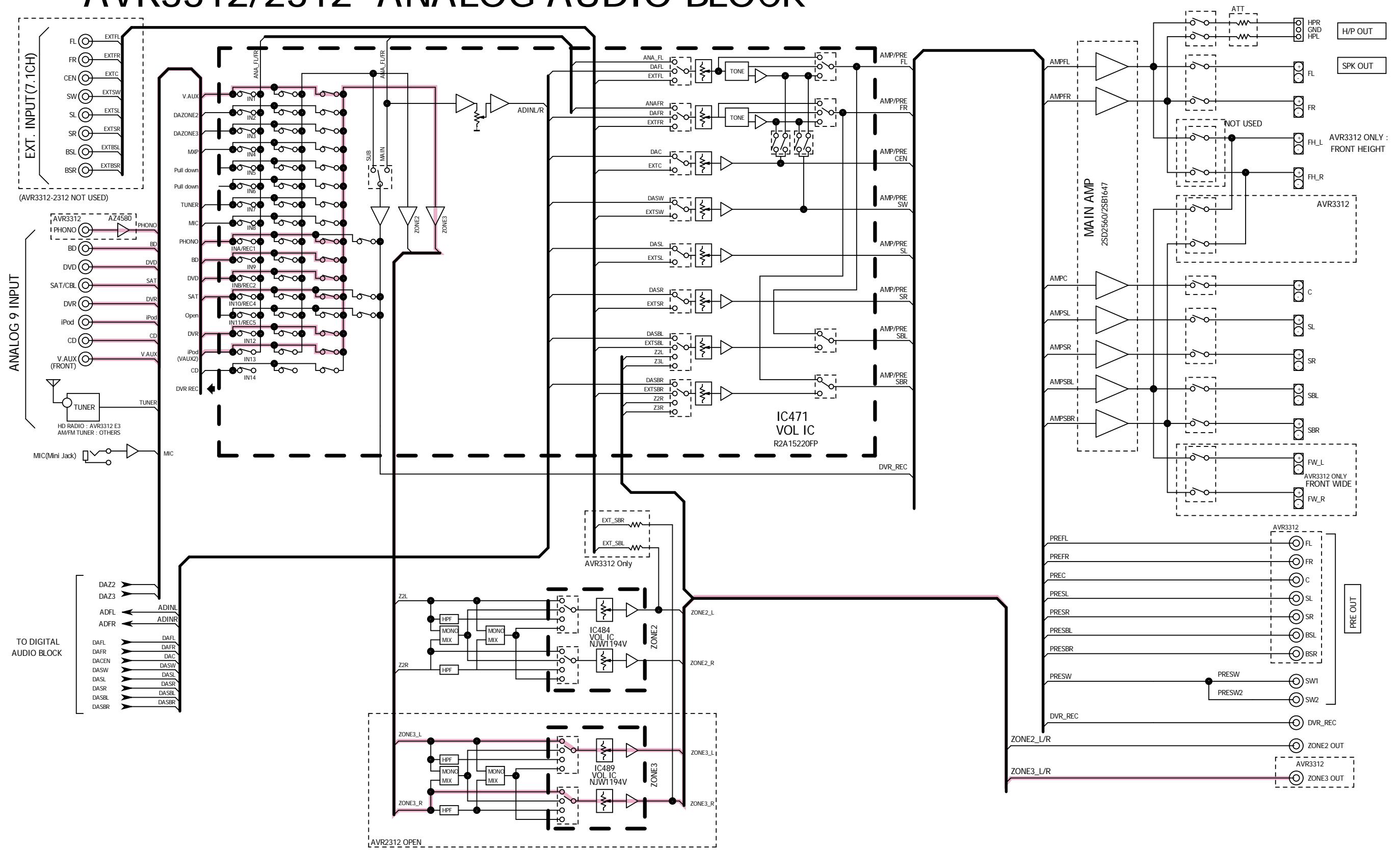


fig.18

AVR3312/2312 ANALOG AUDIO BLOCK

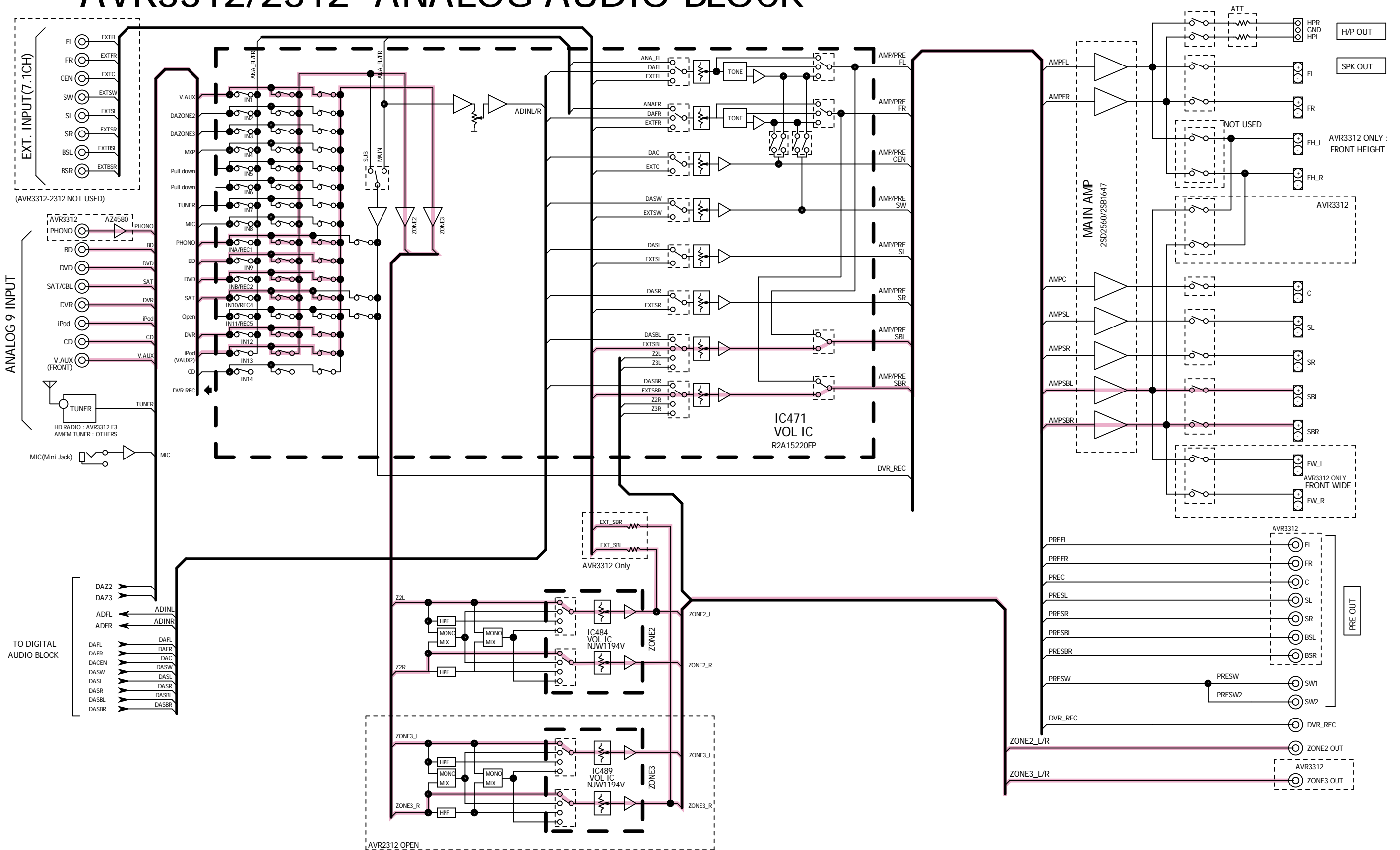


fig.19, 20

AVR3312/2312 ANALOG AUDIO BLOCK

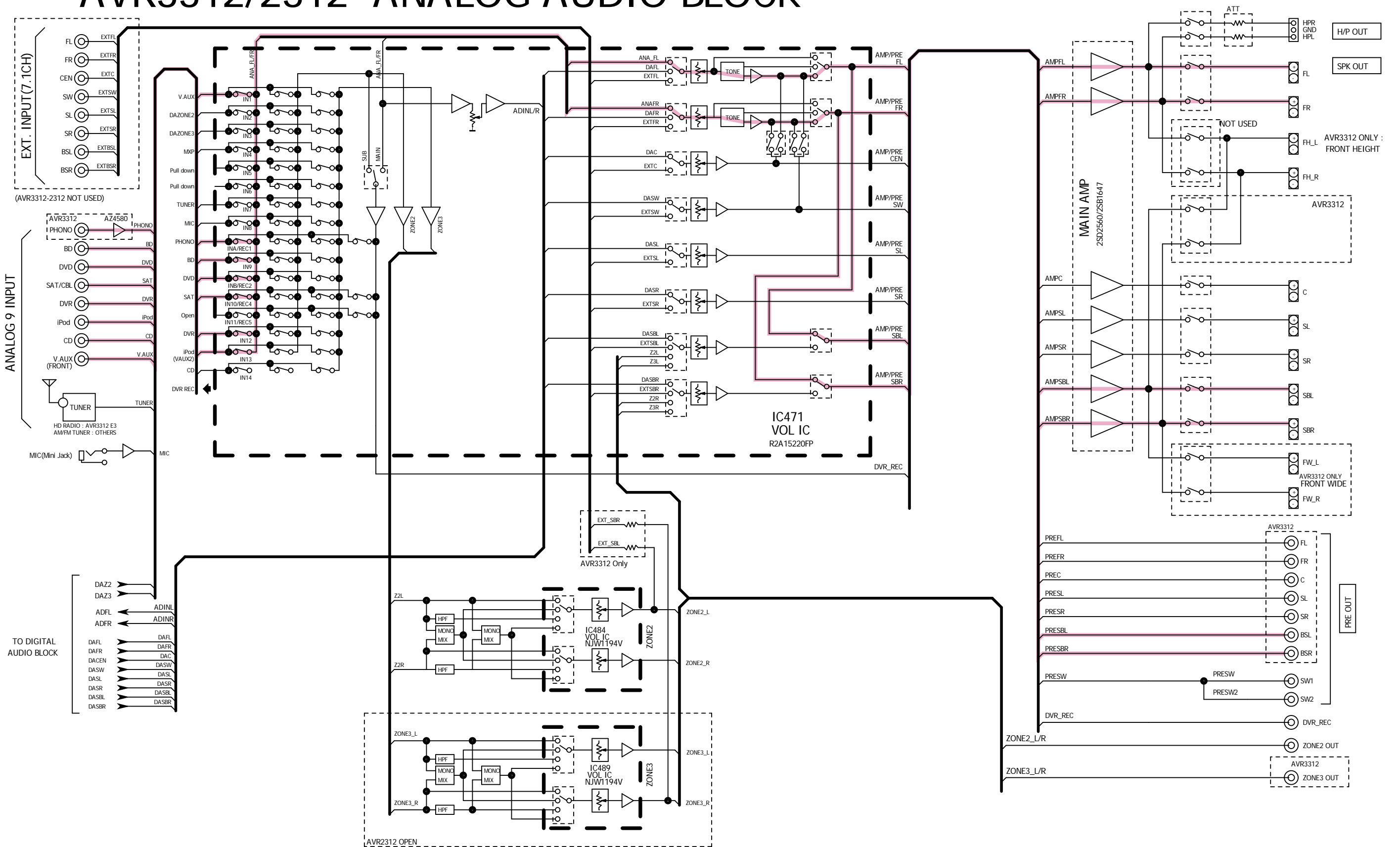


fig.22 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

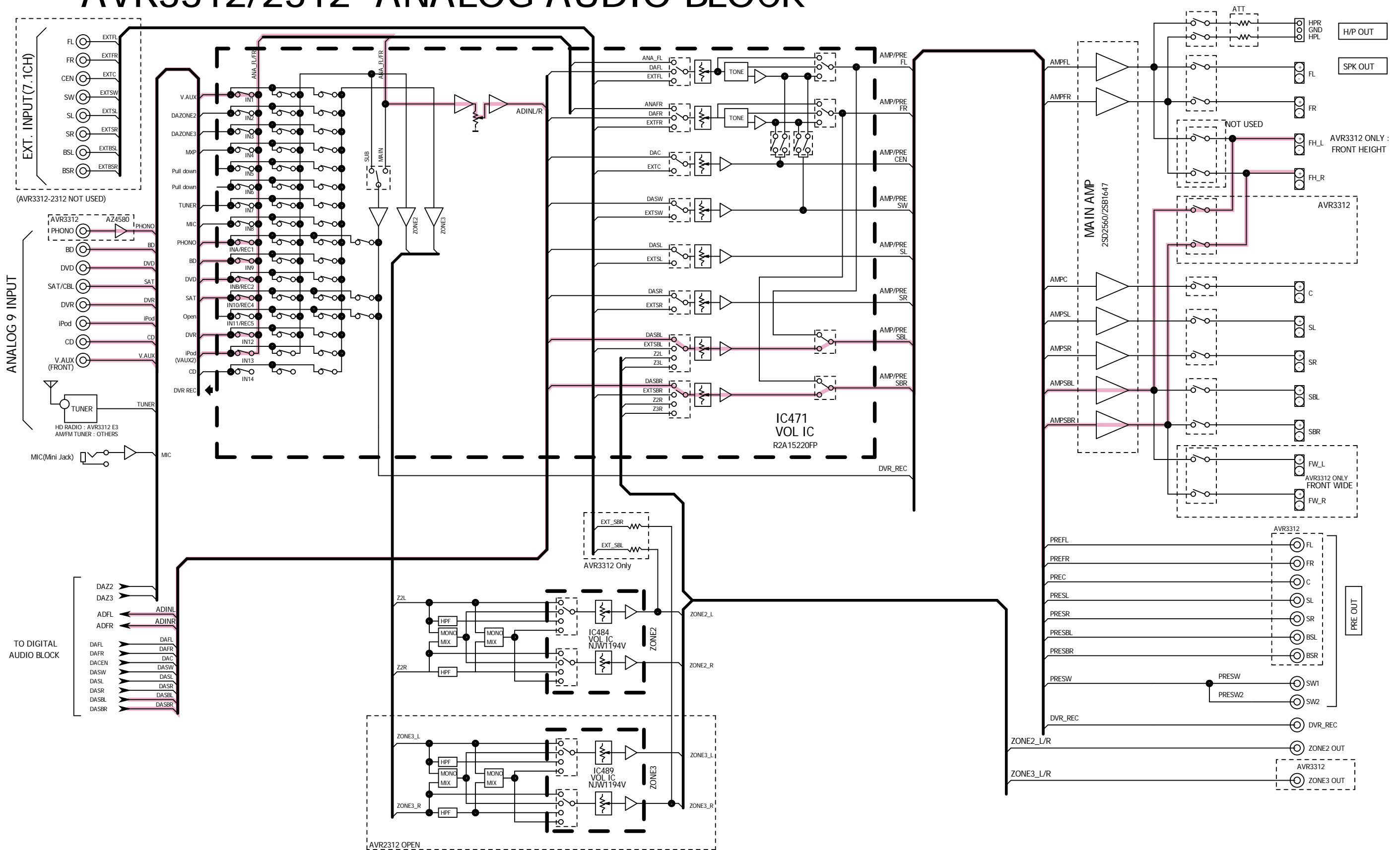


fig.22 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK

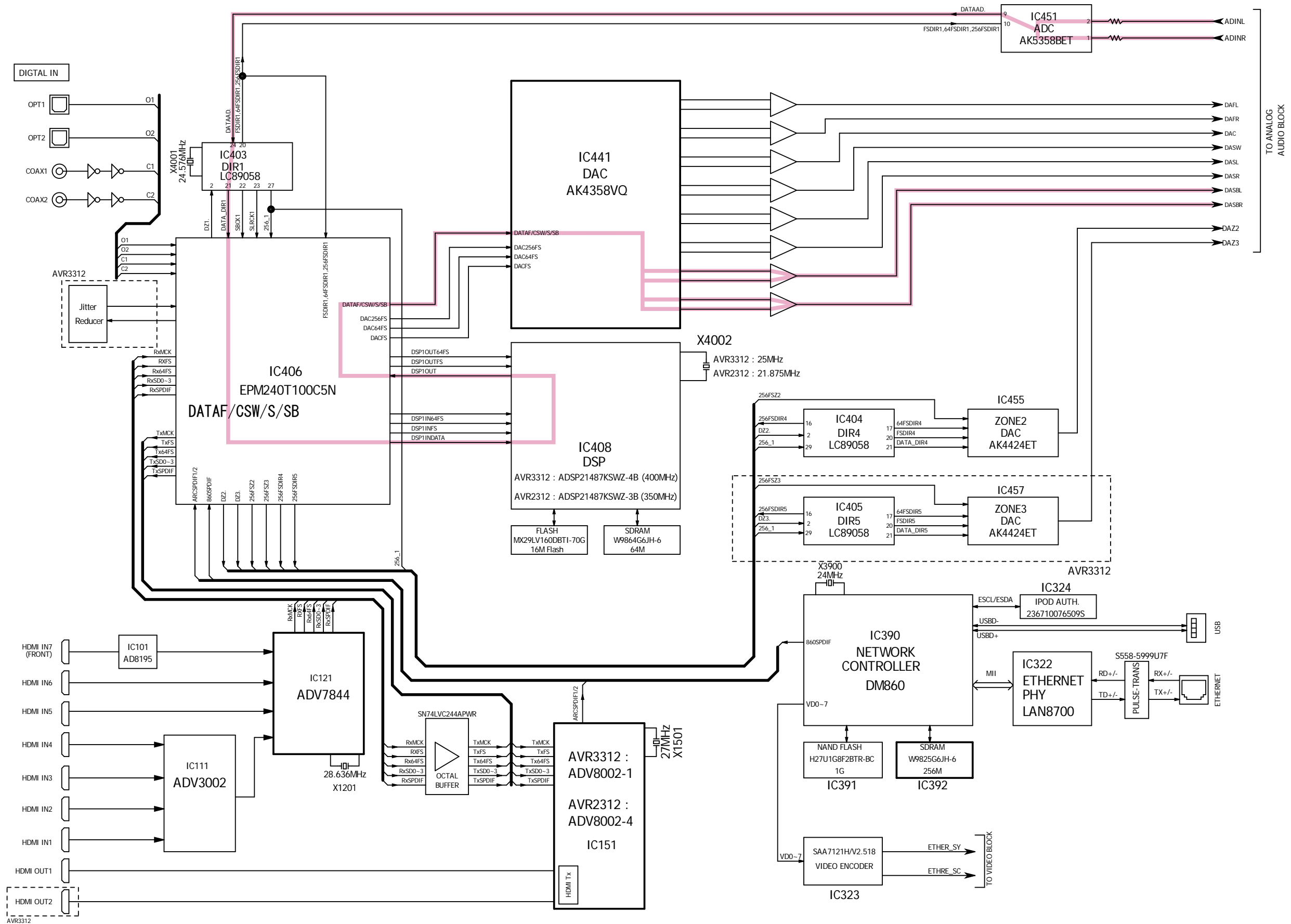


fig.23 (1/2)

AVR3312/2312 ANALOG AUDIO BLOCK

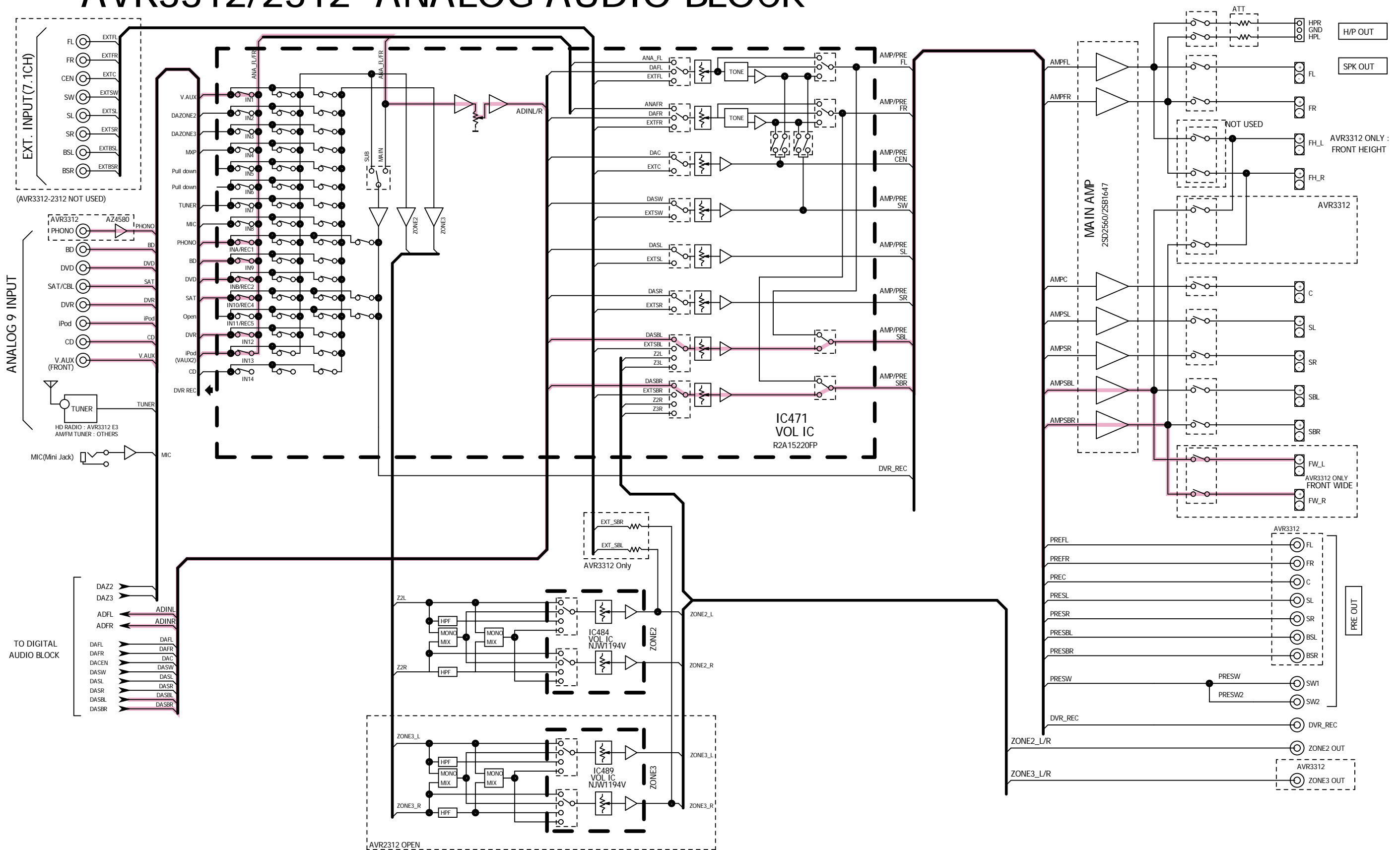
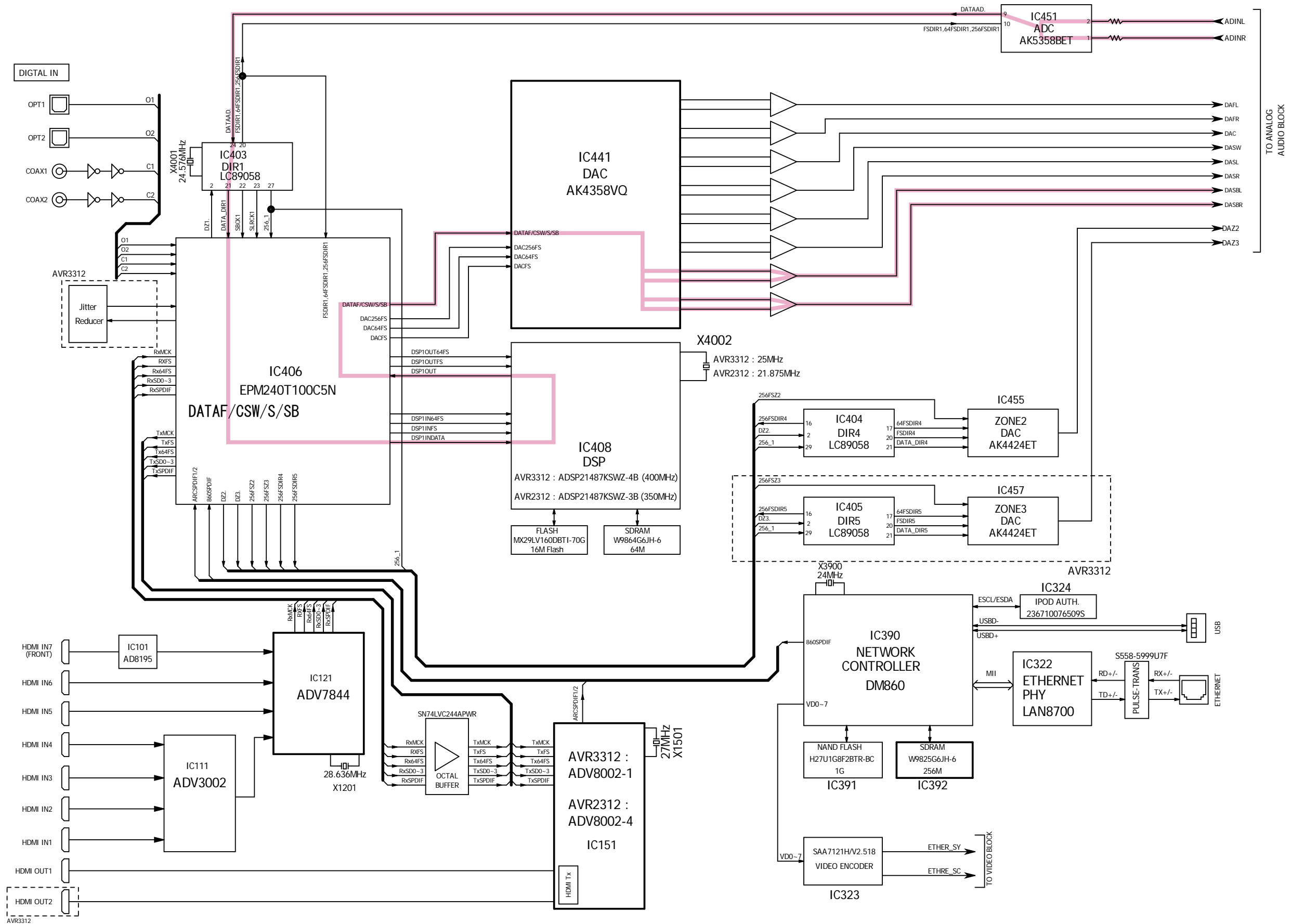
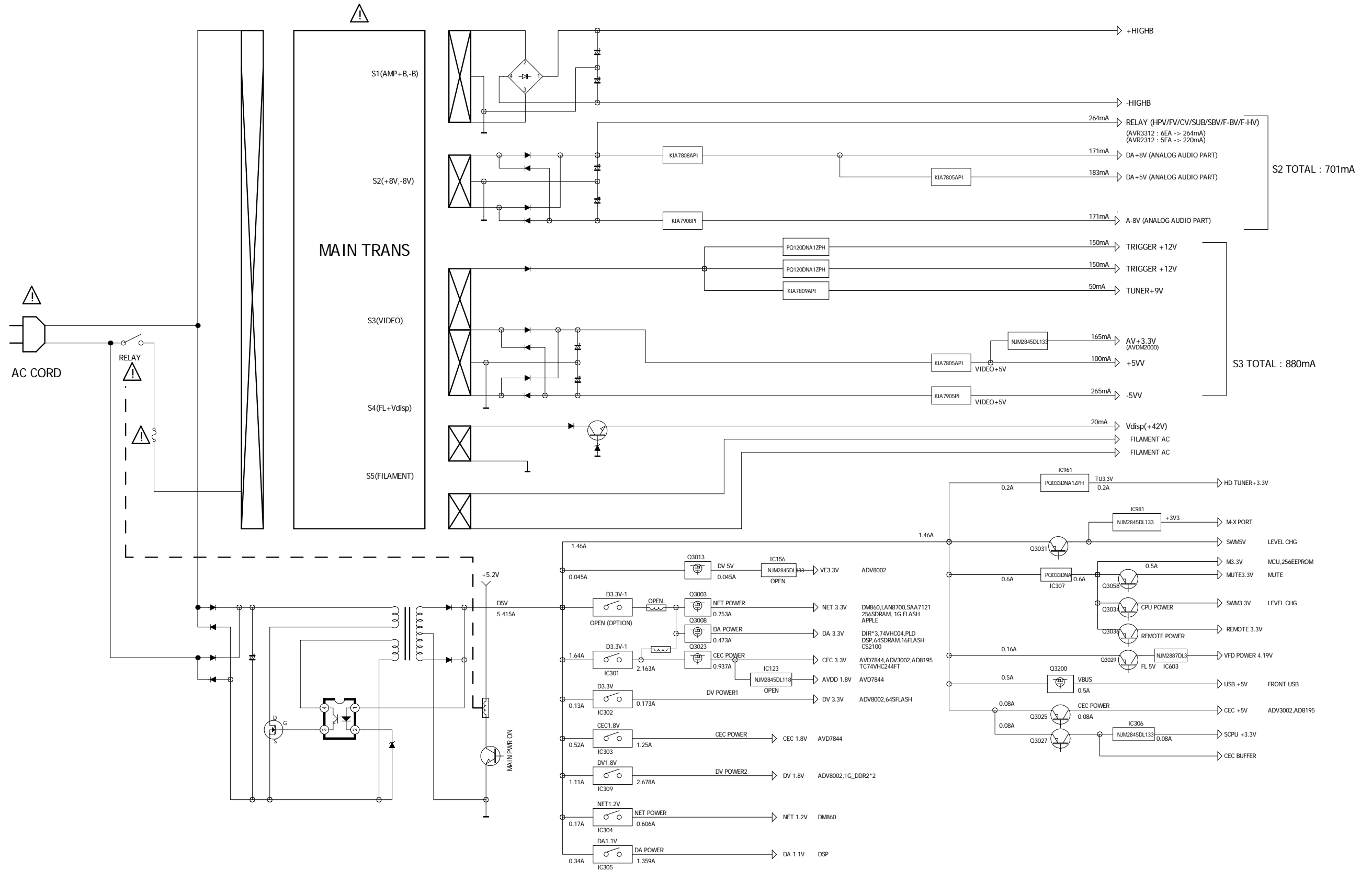


fig.23 (2/2)

AVR3312/2312 DIGITAL AUDIO BLOCK



AVR3312/2312 VCC BLOCK 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

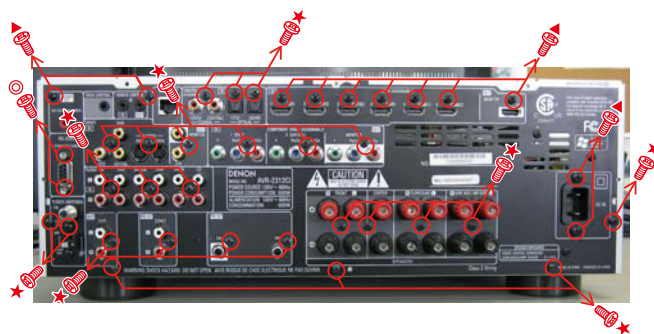
• Connection of PCB HDMI JIG

-Preparation-

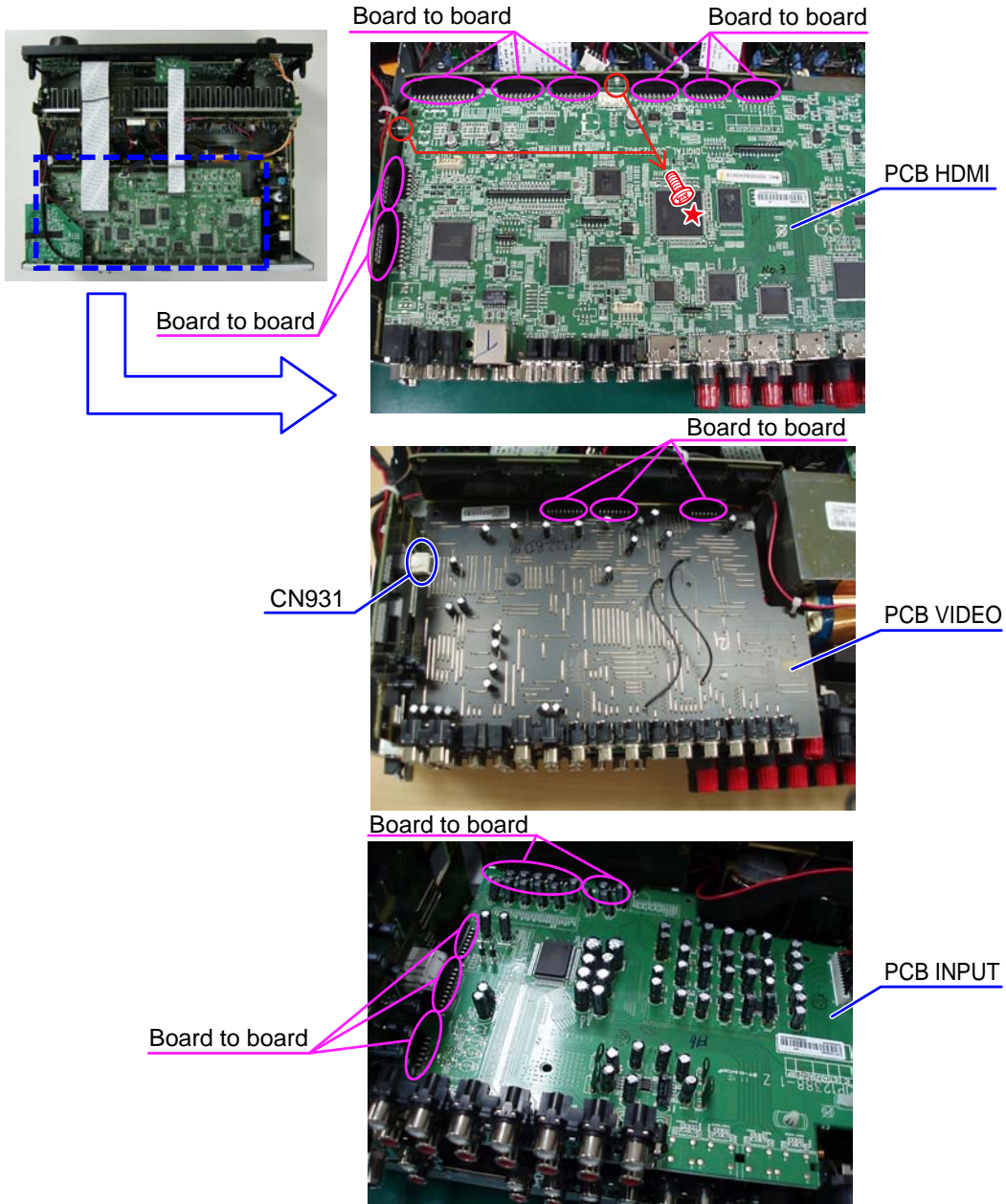
8U-110084S : EXTENSION UNIT KIT : 1 Set
Insulation sheet (Do not supply it) : 3 sheets
Ground lead (Do not supply it) : 3 pcs

-Procedures-

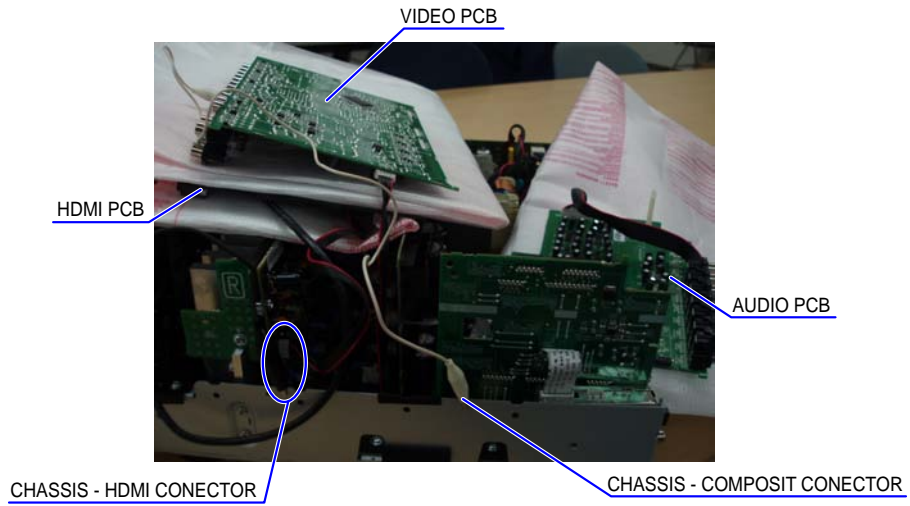
(1) Remove the screws.



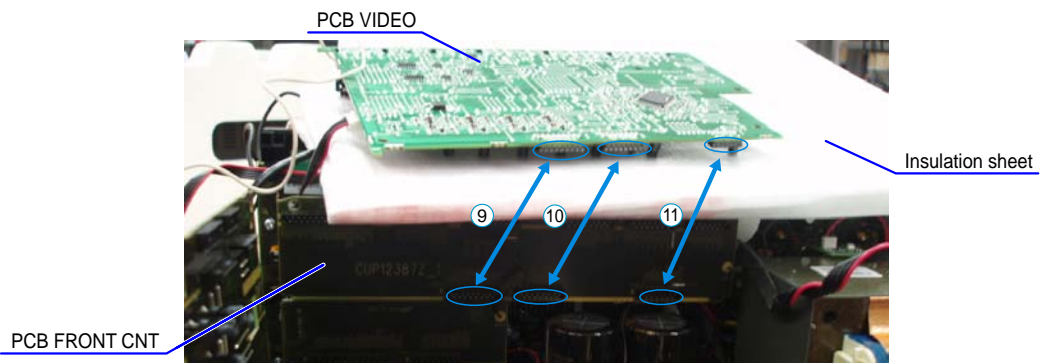
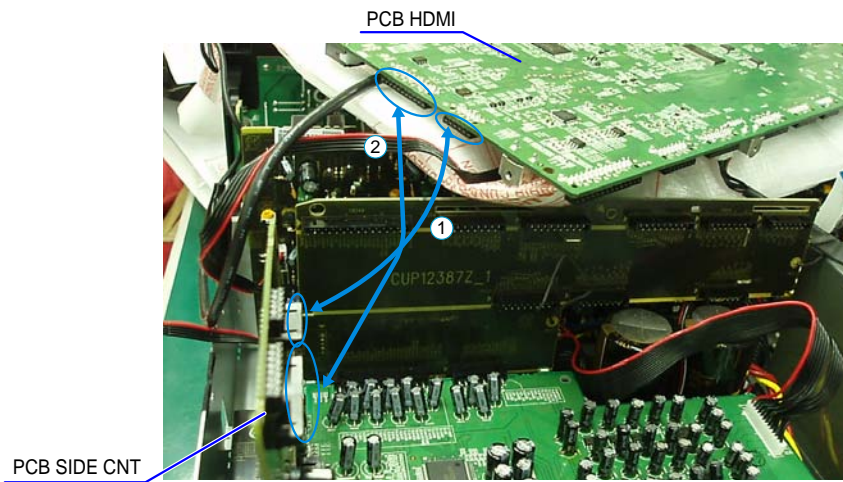
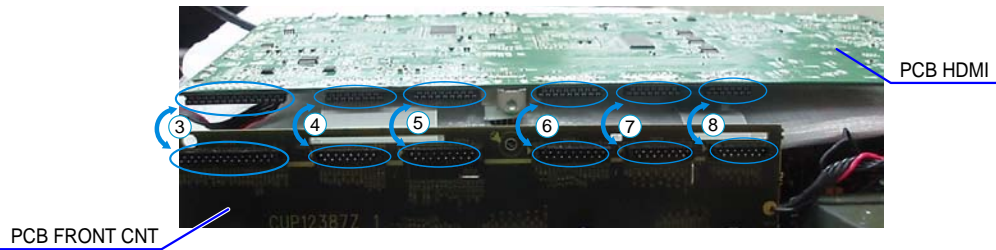
(2) Disconnect the connector board.

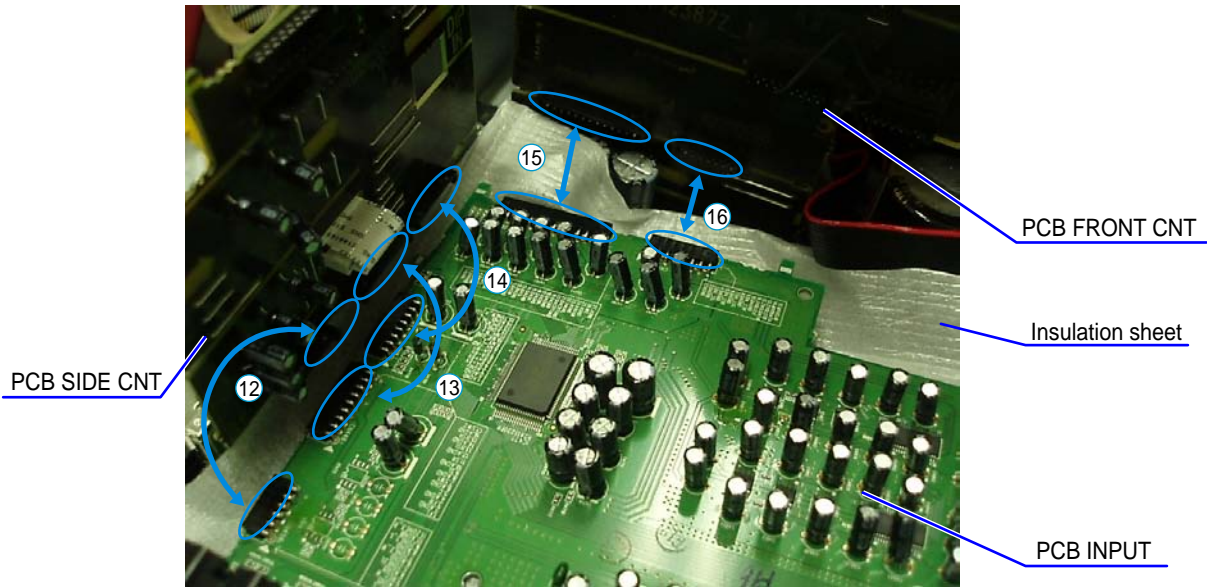


- (3) Detach PCB HDMI from the chassis, and turn it over.
 Please put an insulation sheet that is larger than PCB HDMI under PCB.
 ※ Connect the ground point of PCB to the chassis with a ground lead or the like.



- (4) Connect the six extension jig cables.





Connection table of Board to Board

No.	Pin	Ref. No.	PCB		Ref. No.	PCB
①	11 pin	CN28A	SIDE CNT	↔	CN28B	HDMI
②	21 pin	CN27A	SIDE CNT	↔	CN27B	HDMI
③	27 pin	CN24A	FRONT CNT	↔	CN24B	HDMI
④	15 pin	CN26A	FRONT CNT	↔	CN26B	HDMI
⑤	17 pin	CN25A	FRONT CNT	↔	CN25B	HDMI
⑥	17 pin	CN22A	FRONT CNT	↔	CN22B	HDMI
⑦	15 pin	CN21A	FRONT CNT	↔	CN21B	HDMI
⑧	13 pin	CN23A	FRONT CNT	↔	CN23B	HDMI
⑨	17 pin	CN52A	FRONT CNT	↔	CN52B	AVIDEO
⑩	15 pin	CN51A	FRONT CNT	↔	CN51A	AVIDEO
⑪	13 pin	CN53A	FRONT CNT	↔	CN53A	AVIDEO
⑫	11 pin	CN45A	SIDE CNT	↔	CN45B	INPUT
⑬	17 pin	CN44A	SIDE CNT	↔	CN44B	INPUT
⑭	15 pin	CN41A	SIDE CNT	↔	CN41B	INPUT
⑮	27 pin	CN42A	FRONT CNT	↔	CN42B	INPUT
⑯	15 pin	CN43A	FRONT CNT	↔	CN43B	INPUT

WHEN THE MICROPROCESSOR IS REPLACED WITH A NEW ONE

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

PWB Name	Ref. No.	Description	After replaced	Remark
HDMI	IC201	R5F5630ECDFB	B	SOFTWARE: Main
HDMI	IC231	R5F3650KNFB	B	SOFTWARE: Sub
HDMI	IC410	MX29LV160DBTI-70G	B	SOFTWARE: DSP ROM
HDMI	IC406	EPM240T100C5N	B	SOFTWARE: Audio PLD
HDMI	IC155	MX25L6406EM2I-12G	B	SOFTWARE: Video OSD 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

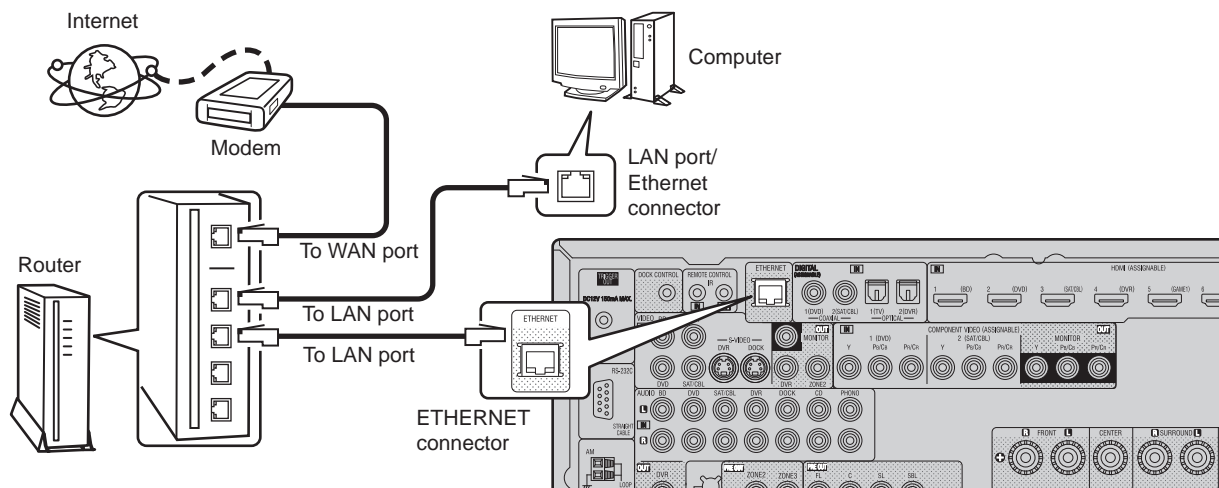
You can update the firmware by downloading the latest version from the Internet.

1.1. Connecting to the Network

(1) System requirements

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

(2) Setting



1.2. 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 MENU button on the remote control to display the GUI menu.
- (2) Use the cursor buttons to select "System Setup" → "Option Setup" → "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 MENU button to close the menu.
- (4) Use the cursor buttons to select "Update", 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.
- (5) Press the MENU button to close the menu.

Error Code	Details of Error code	Display	Coping strategies
0E	Connection to DPMS failed. (can not get NTP)	Connection failed 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 DM860 (when timed out).	Main CPU ***NIN Updating failed 10	Turn off and on the power. Updating starts automatically.
11	Main CPU failed to receive firmware for rewriting sent from DM860 (when an error occurred)	Main CPU ***NIN Updating failed 11	Turn off and on the power. Updating starts automatically.
12	There was invalid data in the firmware for rewriting sent from DM860 to Main CPU (when a Check Sum error occurred).	Main CPU ***NIN Updating failed 12	Turn off and on the power. Updating starts automatically.
13	The deletion of block data failed before Main CPU was rewritten.	Main CPU ***NIN Erase failed 13	Turn off and on the power. Updating starts automatically.
14	The rewriting of block data failed when Main CPU was rewritten.	Main CPU ***NIN Updating failed 14	Turn off and on the power. Updating starts automatically.
15	The data verification was invalid after Main CPU was rewritten.	Main CPU ***NIN Update Check NG 15	Turn off and on the power. Updating starts automatically.
20	Failure to acquire (Boot Loader Mode) IP address before rewriting DM860 (AutoIP).	Connection failed 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 DM860 (when timed out).	Connection failed 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.	Connection failed 24	Check the network connection. Carry out the update in an environment that has little network load.
25	Mode change failure of DM860.	Connection failed 25	Reset and update again.
26	Data acquisition failed (timed out) when firmware of Main CPU was downloaded. Received Package Version is wrong.	Downloaded failed 26	Check the network connection. Carry out the update in an environment that has little network load.
27	Mode change failure of DM860.	Connection failed 27	Reset and update again.
36	Log-in to DPMS ailed when firmware such as Sub CPU, DSP, FPGA, and PLD was rewritten.	Login failed 36	Carry out the update in an environment that has little network load.

Error Code	Details of Error code	Display	Coping strategies
37	Line, etc., is busy when logging into DPMS when firmware such as Sub CPU, DSP, FPGA, and PLD was rewritten.	Server is busy 37	Carry out the update in an environment that has little network load.
38	Connection to DPMS failed when firmware such as Sub CPU, DSP, FPGA, and PLD was rewritten..	Connection fail 38	Check the network connection. Carry out the update in an environment that has little network load.
39	Connection to DPMS timed out when firmware such as Sub CPU, DSP, FPGA, and PLD was rewritten.	Connection fail 39	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 fail 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 firmware was downloaded or Main CPU was rewritten.	Download fail 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 firmware was downloaded or Main CPU was rewritten.	Download fail 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 DM860 (AutoIP).	Connection fail 3D	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 DM860 (when timed out).	Connection fail 3E	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 Sub CPU, DSP and PLD was rewritten.	Sub ***min Login failed 50	Carry out the update in an environment that has little network load.
51	Line, etc., is busy when log-in into DPMS when firmware such as Sub CPU, DSP and PLD was rewritten.	Sub ***min 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 Sub CPU, DSP and PLD was rewritten.	Sub ***min Connection Fail 52	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 Sub CPU, DSP and PLD was rewritten.	Sub ***min Updating fail 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 Sub CPU, DSP and PLD, request was made for firmware data after the log-in to DPMS, but it timed out was rewritten.	Sub ***min Updating fail 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 Sub CPU, DSP and PLD was rewritten.	Sub ***min Download fail 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 rewriting firmware such as Sub CPU, DSP and PLD was rewritten.	Sub ***min Server is busy 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 was received (connection failure) after the log-in to DPMS when firmware such as Sub CPU, DSP and PLD was rewritten.	Sub ***min Connection Fail 58	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.

Error Code	Details of Error code	Display	Coping strategies
5A	NACK was received when "C" command sent to Sub CPU, DSP, PLD etc.	SUB ***** Connection Fail 5A	Turn off and on the power. Updating starts automatically.
5B	NACK was received when "L" command sent to Sub CPU, DSP, PLD etc.	SUB ***** Updating fail 5B	Turn off and on the power. Updating starts automatically.
5C	Sub CPU, DSP, PLD etc. failed to receive firmware for rewriting sent from DM860 (when timed out).	SUB ***** Updating fail 5C	Turn off and on the power. Updating starts automatically.
5D	Sub CPU, DSP, PLD etc. failed to receive firmware for rewriting sent from DM860 (when an error occurred).	SUB ***** Updating fail 5D	Turn off and on the power. Updating starts automatically.
5E	Data in firmware such as Sub CPU, DSP and PLD for rewriting sent from DM860 was invalid (when a Check Sum error occurred).	SUB ***** Updating fail 5E	Turn off and on the power. Updating starts automatically.
5F	Invalid data in firmware such as Sub CPU, DSP and PLD for rewriting sent from DM860 was invalid (invalid data was received).	SUB ***** Updating fail 5F	Turn off and on the power. Updating starts automatically.
60	NACK was received when "P" command sent to Sub CPU, DSP, PLD etc.	SUB ***** Updating fail 60	Turn off and on the power. Updating starts automatically.
61	NACK was received when "I" command sent to Sub CPU, DSP, PLD etc.	SUB ***** Update CheckNG 61	Turn off and on the power. Updating starts automatically.
62	Start of Sub μ -com fail.	SUB ***** Updating fail 62	Turn off and on the power. Updating starts automatically.
80	Acquisition of serial flash data failed before serial flash was deleted.	GPU ***** Updating fail 80	Turn off and on the power. Updating starts automatically.
81	Deleting data failed before serial flash was rewritten.	GPU ***** Updating fail 81	Turn off and on the power. Updating starts automatically.
82	Receiving firmware for rewriting serial flash sent by DM860 failed (when timed out).	GPU ***** Updating fail 82	Turn off and on the power. Updating starts automatically.
83	Receiving firmware for rewriting serial flash sent by DM860 failed (when an error).	GPU ***** Updating fail 83	Turn off and on the power. Updating starts automatically.
84	Receiving firmware for rewriting serial flash sent by DM860 failed (when a Check Sum error).	GPU ***** Updating fail 84	Turn off and on the power. Updating starts automatically.
85	Receiving firmware for rewriting serial flash sent by DM860 failed (when invalid data was received).	GPU ***** Updating fail 85	Turn off and on the power. Updating starts automatically.
86	The data verification was invalid after serial flash was rewritten.	GPU ***** Updating fail 86	Turn off and on the power. Updating starts automatically.

Error Code	Details of Error code	Display	Coping strategies
A0	Acquisition of (Application Mode) IP address failed before rewriting DM860 was rewritten (AutoIP).	Ether IMG ***min ConnectionFailedIA0	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 rewriting DM860 was rewritten (when timed out).	Ether IMG ***min ConnectionFailedIA1	Check the network connection. Carry out the update in an environment that has little network load.
A2	Invalid login via DPMS access was notified DM860 related firmware was rewritten (Application Mode).	Ether IMG ***min Login failed A2	Check the network connection. Carry out the update in an environment that has little network load.
A3	Line congestion via DPMS access was notified DM860 related firmware was rewritten (Application Mode).	Ether IMG ***min Server is busyA3	Check the network connection. Carry out the update in an environment that has little network load.
A4	Connection failure via DPMS access was notified DM860 related firmware was rewritten (Application Mode).	Ether IMG ***min ConnectionFailedIA4	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 DM860 related firmware was rewritten (Application Mode).	Ether IMG ***min 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 DM860 related firmware was rewritten (Application Mode), request was made for firmware data after DPMS login but it timed out.	Ether IMG ***min Updating fail A7	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.
A8	Acquisition of (Boot Loader Mode) IP address failed before rewriting DM860 was rewritten (AutoIP).	Ether IMG ***min ConnectionFailedIA8	Check the network connection. Carry out the update in an environment that has little network load.
A9	Acquisition of (Boot Loader Mode) IP address failed before rewriting DM860 was rewritten (when timed out).	Ether IMG ***min ConnectionFailedIA9	Check the network connection. Carry out the update in an environment that has little network load.
AA	Invalid login via DPMS access failed when DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min Login failed AA	Check the network connection. Carry out the update in an environment that has little network load.
AB	Line congestion via DPMS access when DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min Server is busyAB	Check the network connection. Carry out the update in an environment that has little network load.
AC	Connection failure via DPMS access failed when DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min ConnectionFailedIAC	Check the network connection. Carry out the update in an environment that has little network load.
AE	Firmware download error message received (when download fails) when DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min Download 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 DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min Server is busyAF	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 DM860 related firmware was rewritten (Boot Loader Mode).	Ether IMG ***min ConnectionFailedIB0	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 DM860 related firmware was rewritten	Ether IMG ***min Updating fail B2	Turn off and on the power. Updating starts automatically. Carry out the update in an environment that has little network load.

Device display during firmware update

Target of device when firmware updated.

Target of device	Display	Error cpde																														
Main	<table border="1"> <tr><td>M</td><td>a</td><td>i</td><td>n</td><td></td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>%</td></tr> </table>	M	a	i	n					*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	%	08-0C 10-15 22-24 36-3E		
M	a	i	n					*	*	*	n	i	n																			
U	p	d	a	t	i	n	g				*	*	%																			
Sub	<table border="1"> <tr><td>S</td><td>u</td><td>b</td><td></td><td></td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>%</td></tr> </table>	S	u	b						*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	%	50-52 54-58 5A-62		
S	u	b						*	*	*	n	i	n																			
U	p	d	a	t	i	n	g				*	*	%																			
Audio PLD	<table border="1"> <tr><td>A</td><td>P</td><td>L</td><td>D</td><td></td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>%</td></tr> </table>	A	P	L	D					*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	%	50-52 54-58 5A-62		
A	P	L	D					*	*	*	n	i	n																			
U	p	d	a	t	i	n	g				*	*	%																			
DSP	<table border="1"> <tr><td>D</td><td>S</td><td>P</td><td></td><td></td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>%</td></tr> </table>	D	S	P						*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	%	50-52 54-58 5A-62		
D	S	P						*	*	*	n	i	n																			
U	p	d	a	t	i	n	g				*	*	%																			
GUI Serial Flash	<table border="1"> <tr><td>G</td><td>U</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>%</td></tr> </table>	G	U	I						*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	%	50-52 54-58 5A-62 80-86		
G	U	I						*	*	*	n	i	n																			
U	p	d	a	t	i	n	g				*	*	%																			
DM860 Boot Loader	<table border="1"> <tr><td>E</td><td>t</td><td>H</td><td>e</td><td>r</td><td>S</td><td>B</td><td>L</td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td></td></tr> </table>	E	t	H	e	r	S	B	L		*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	*		A0-A4 A6-A7 AE-B5
E	t	H	e	r	S	B	L		*	*	*	n	i	n																		
U	p	d	a	t	i	n	g				*	*	*																			
DM860 Image	<table border="1"> <tr><td>E</td><td>t</td><td>H</td><td>e</td><td>r</td><td>I</td><td>M</td><td>G</td><td></td><td>*</td><td>*</td><td>*</td><td>n</td><td>i</td><td>n</td></tr> <tr><td>U</td><td>p</td><td>d</td><td>a</td><td>t</td><td>i</td><td>n</td><td>g</td><td></td><td></td><td></td><td>*</td><td>*</td><td>*</td><td></td></tr> </table>	E	t	H	e	r	I	M	G		*	*	*	n	i	n	U	p	d	a	t	i	n	g				*	*	*		A0-A4 A6-A7 AE-B5
E	t	H	e	r	I	M	G		*	*	*	n	i	n																		
U	p	d	a	t	i	n	g				*	*	*																			

ADJUSTMENT

Audio Section

Adjusting Idling Current

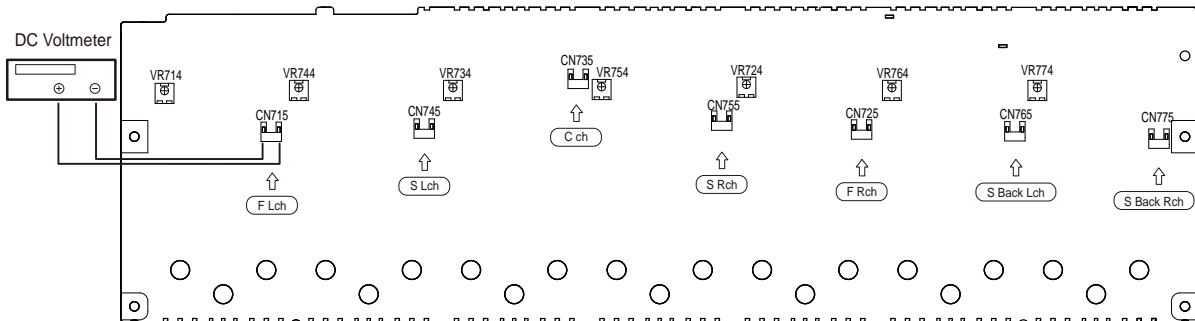
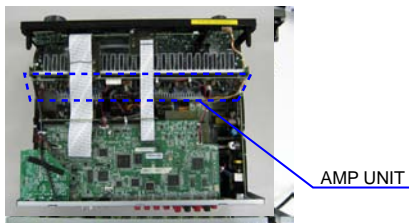
Required measurement equipment: DC Voltmeter

1. Preparation

- (1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 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 top cover and set VR714, VR724, VR734, VR744, VR754, VR764, VR774 on 7CH AMP UNIT at fully counterclockwise (c) position.
- (2) Connect DC Voltmeter to test points (FRONT-Lch: CN715, FRONT-Rch: CN725, CENTER ch: CN735, SURROUND-Lch: CN745, SURROUND-Rch: CN755, SURROUND-BACK Lch: CN765, SURROUND-BACK Rch: CN775).
- (3) Connect power cord to AC Line, and turn power switch "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 VR714 clockwise (x) 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 VR714 to set the voltage to $8\text{mV} \pm 0.5\text{mV DC}$.
- (7) Adjust the Variable Resistors of other channels in the same way.



SURROUND MODES AND PARAMETERS

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

Surround modes and surround parameters

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

Surround mode	Channel output					Surround Parameters								
	Front L/R	Center	Surround L/R	Surround Back L/R	Front Height L/R	Subwoofer	Mode	Cinema EQ. *6	DRC *10	D. COMP *11	LFE *12	Delay Time	Effect Level	Room Size
DIRECT/PURE DIRECT (2channel)*1	○	○	◎	◎	◎	◎	◎		○	○	○			
DIRECT/PURE DIRECT (Multi-channel)*1	○	◎	◎	◎	◎	◎	◎		○	○	○			
STEREO	○	○	○	○	○	○	○		○	○	○			
MULTI CH IN	○	○	○	○	○	○	○	○*7	○	○	○			
DOLBY PRO LOGIC IIz	○	○	○	○	○	○	○	○	○	○	○			
DOLBY PRO LOGIC IIx	○	○	○	○	○	○	○	○	○	○	○			
DOLBY PRO LOGIC II	○	○	○	○	○	○	○	○	○	○	○			
DTS NEO:6	○	○	○	○	○	○	○	○	○	○	○			
DOLBY DIGITAL	○	○	○	○	○	○	○	○	○	○	○			
DOLBY DIGITAL Plus	○	○	○	○	○	○	○	○	○	○	○			
DOLBY TrueHD	○	○	○	○	○	○	○	○	○	○	○			
DTS SURROUND	○	○	○	○	○	○	○	○	○	○	○			
DTS 96/24	○	○	○	○	○	○	○	○	○	○	○			
DTS-HD	○	○	○	○	○	○	○	○	○	○	○			
DTS Express	○	○	○	○	○	○	○	○	○	○	○			
MULTI CH STEREO	○	○	○	○	○	○	○	○	○	○	○			○
ROCK ARENA	○	○	○	○	○	○	○	○	○	○	○			○
JAZZ CLUB	○	○	○	○	○	○	○	○	○	○	○			○
MONO MOVIE	○	○	○	○	○	○	○	○	○	○	○			○
VIDEO GAME	○	○	○	○	○	○	○	○	○	○	○			○
MATRIX	○	○	○	○	○	○	○	○	○	○	○			○
VIRTUAL	○	○	○	○	○	○	○	○	○	○	○			○

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

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

*3 If "Surround Parameters" - "PLIIz Height" is set to "ON", sound is output from the front height speakers.

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

*5 If this surround mode is selected, only the "Height" mode setting is available for "Surround Parameters" - "Mode".

*6 For HD Audio whose sampling frequency of an input signal is more than 96 kHz, this sound parameter cannot be set.

*7 This item cannot be set when "Surround Parameters" - "Surround Back" is set to "PLIIx Music".

*8 This item can be selected when "Surround Parameters" - "Mode" is set to "Cinema".

*9 This item can be selected when "Surround Parameters" - "Mode" is set to "Cinema" or "Pro Logic".

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

*11 This item can be selected when a Dolby Digital or DTS signal is played.

*12 This item can be selected when a Dolby Digital or DTS signal or DVD-Audio is played.

Surround mode	Surround Parameters										Audyssey Settings*18			RESTORE *21
	Height Gain	PLIIz Height *14	AFDM *15	Surround Back	Subwoofer ○*4	PRO LOGIC II/IIx Music mode only			Tone *16	Dynamic EQ® *19	Dynamic Volume® *20			
						Panorama	Dimension	Center Width						
NEO:6 Music mode only		Center Image												
DIRECT/PURE DIRECT (2 channel)*1														
DIRECT/PURE DIRECT (Multi-channel)*1														
STEREO														
MULTI CH IN	○*13	○		○					○	○	○		○	
DOLBY PRO LOGIC IIz	○	○							○	○	○		○	
DOLBY PRO LOGIC IIx		○		○			○	○	○	○	○		○	
DOLBY PRO LOGIC II		○		○			○	○	○	○	○		○	
DTS NEO:6				○					○	○	○		○	
DOLBY DIGITAL	○*13	○		○					○	○	○		○	
DOLBY DIGITAL Plus	○*13	○		○					○	○	○		○	
DOLBY TrueHD	○*13	○		○					○	○	○		○	
DTS SURROUND	○*13	○		○					○	○	○		○	
DTS 96/24	○*13	○		○					○	○	○		○	
DTS-HD	○*13	○		○					○	○	○		○	
DTS Express	○*13	○		○					○	○	○		○	
MULTI CH STEREO		○		○					○	○	○		○	
ROCK ARENA		○		○					○*17	○	○		○	
JAZZ CLUB		○		○					○	○	○		○	
MONO MOVIE		○		○					○	○	○		○	
VIDEO GAME		○		○					○	○	○		○	
MATRIX		○		○					○	○	○		○	
VIRTUAL		○		○					○	○	○		○	

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

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

*13 This item can be selected when "Surround Parameters" - "PLIIz Height" is set to "ON".

*14 If "Speaker Config." - "Front Height" is set to "None", this item cannot be selected.

*15 This item can be selected when a Dolby Digital or DTS signal or DVD-Audio is played.

*16 This item cannot be set when "Dynamic EQ®" is set to "ON".

*17 In this surround mode, bass is +6 dB, and treble is +4 dB. (Default)

*18 For HD Audio whose sampling frequency of an input signal is more than 96 kHz, this sound parameter cannot be set.

*19 This item cannot be set when "MultEQ® XT" is set to "OFF" or "Manual".

*20 This item cannot be set when "Dynamic EQ®" is set to "OFF".

*21 This item can be set when the input signal is analog. PCM 48 kHz or 44.1 kHz.

Types of input signals, and corresponding surround modes

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

Symbols in the table

- This indicates the default surround mode.
- ⊙ This indicates the surround mode that is fixed when "AFDM" is set to "ON".
- This indicates the selectable surround mode.

Surround mode	NOTE	Input signal types and formats														
		ANALOG		PCM		DTS-HD			DTS		DOLBY		DOLBY DIGITAL			
		ANALOG	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 EX(With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5,1/5/4ch/3ch)	DOLBY DIGITAL (2ch)
DTS SURROUND																
DTS-HD MSTR				●												
DTS-HD HI RES				●												
DTS ES DSCRT6.1	*1 *3						●									
DTS ES MTRX6.1	*1 *3						●									
DTS SURROUND							○									
DTS 96/24									●							
DTS (-HD) + PLIIx CINEMA	*2 *3				○				○							
DTS (-HD) + PLIIx MUSIC	*1 *3				○				○							
DTS (-HD) + PLIIz	*4				○				○							
DTS EXPRESS									●							
DTS (-HD) + NEO:6	*1 *3				○				○							○
DTS NEO:6 CINEMA		○														○
DTS NEO:6 MUSIC		○														○
DOLBY SURROUND																
DOLBY TrueHD											●					
DOLBY DIGITAL+																
DOLBY DIGITAL EX	*1 *3															
DOLBY (D+) (HD) + EX	*1 *3										○					
DOLBY DIGITAL																
DOLBY (D) (D+) (HD) +PLIIx CINEMA	*2 *3															
DOLBY (D) (D+) (HD) +PLIIx MUSIC	*1 *3															
DOLBY (D) (D+) (HD) +PLIIz	*4															
DOLBY PRO LOGIC IIx CINEMA	*1 *3															
DOLBY PRO LOGIC IIx MUSIC	*1 *3															
DOLBY PRO LOGIC IIx GAME	*1 *3															
DOLBY PRO LOGIC IIz	*4															
DOLBY PRO LOGIC II CINEMA																
DOLBY PRO LOGIC II MUSIC																
DOLBY PRO LOGIC II GAME																

- *1 If "Speaker Config." - "Surr.Back" is set to "None", this surround mode cannot be selected.
- *2 If "Speaker Config." - "Surr.Back" is set to "1spkr" or "None", this surround mode cannot be selected.
- *3 This surround mode can be selected when "Amp Assign" is set to "NORMAL".
- *4 If "Speaker Config." - "Front Height" is set to "None", this surround mode cannot be selected.

Surround mode	NOTE	Input signal types and formats															
		ANALOG		PCM		DTS-HD			DTS			DOLBY			DOLBY DIGITAL		
		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 (5:1/5:4ch/3ch)	DOLBY DIGITAL (2ch)	
MULTI CH IN																	
MULTI CH IN		●															
MULTI CH IN + PLIIx CINEMA	*2 *3	○															
MULTI CH IN + PLIIx MUSIC	*1 *3	○															
MULTI CH IN + PLIIz	*4	○															
MULTI CH IN + Dolby EX	*1 *3	○															
MULTI CH IN 7.1	*3	●															
DIRECT																	
DIRECT		○															
PURE DIRECT																	
PURE DIRECT		○															
DSP SIMULATION																	
MULTI CH STEREO		○															
ROCK ARENA		○															
JAZZ CLUB		○															
MONO MOVIE		○															
VIDEO GAME		○															
MATRIX		○															
VIRTUAL		○															
VIRTUAL		○															
STEREO		○															
STEREO		●															

*1 If "Speaker Config." – "Surr.Back" is set to "None", this surround mode cannot be selected.

*2 If "Speaker Config." – "Surr.Back" is set to "1spkr" or "None", this surround mode cannot be selected.

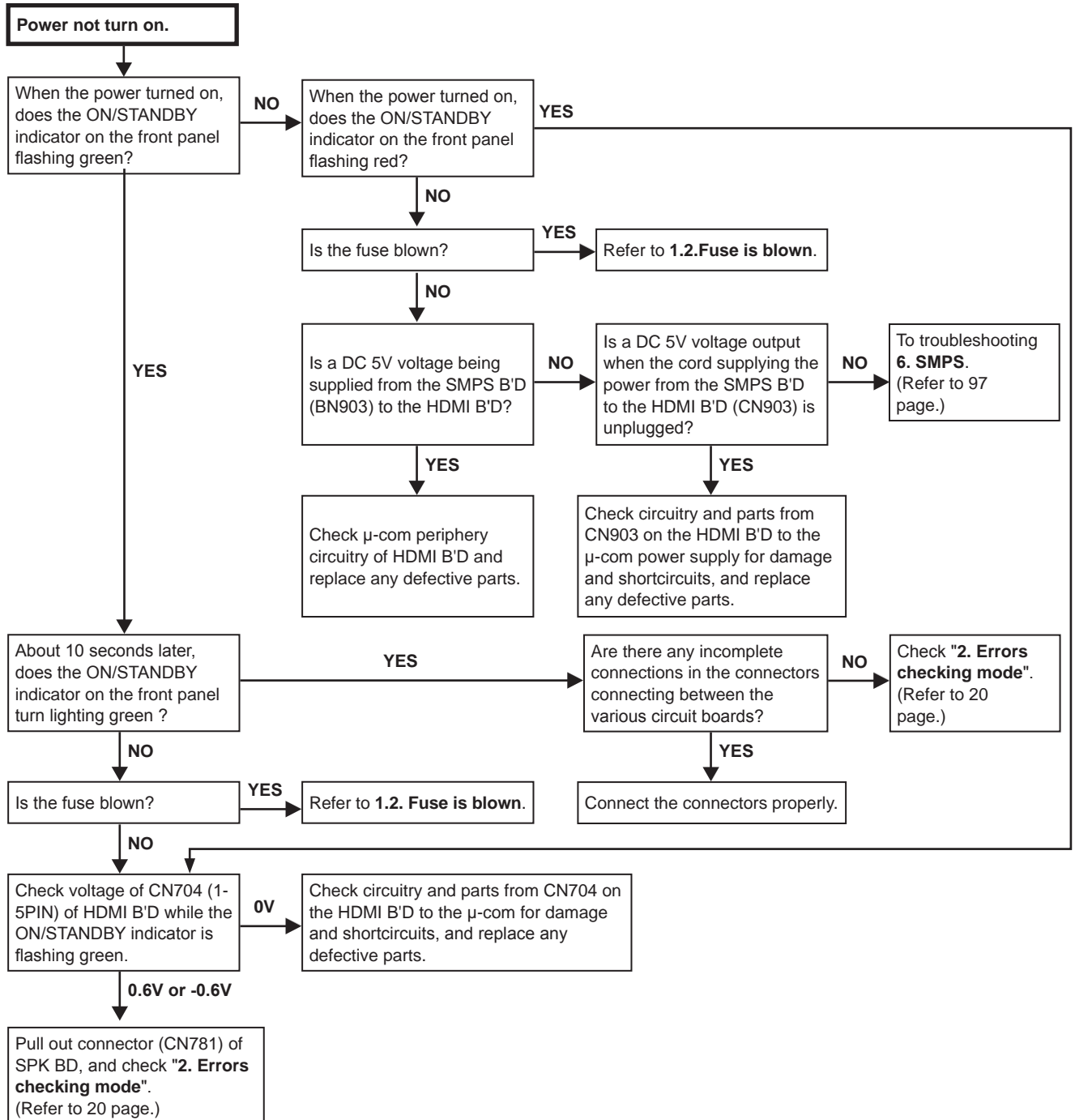
*3 This surround mode can be selected when "Amp Assign" is set to "NORMAL".

*4 If "Speaker Config." – "Front Height" is set to "None", this surround mode cannot be selected.

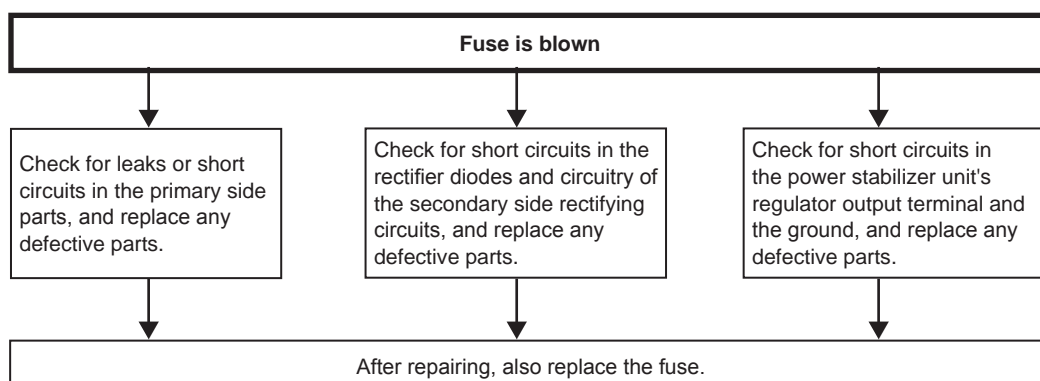
TROUBLE SHOOTING

1. POWER

1.1. Power not turn on



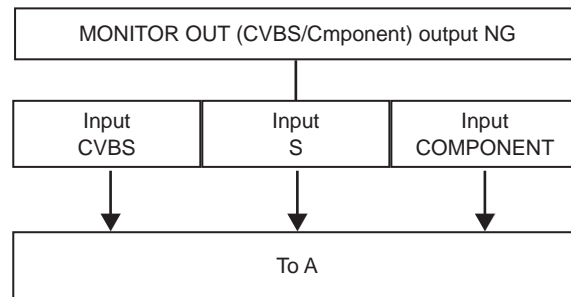
1.2. Fuse is blown

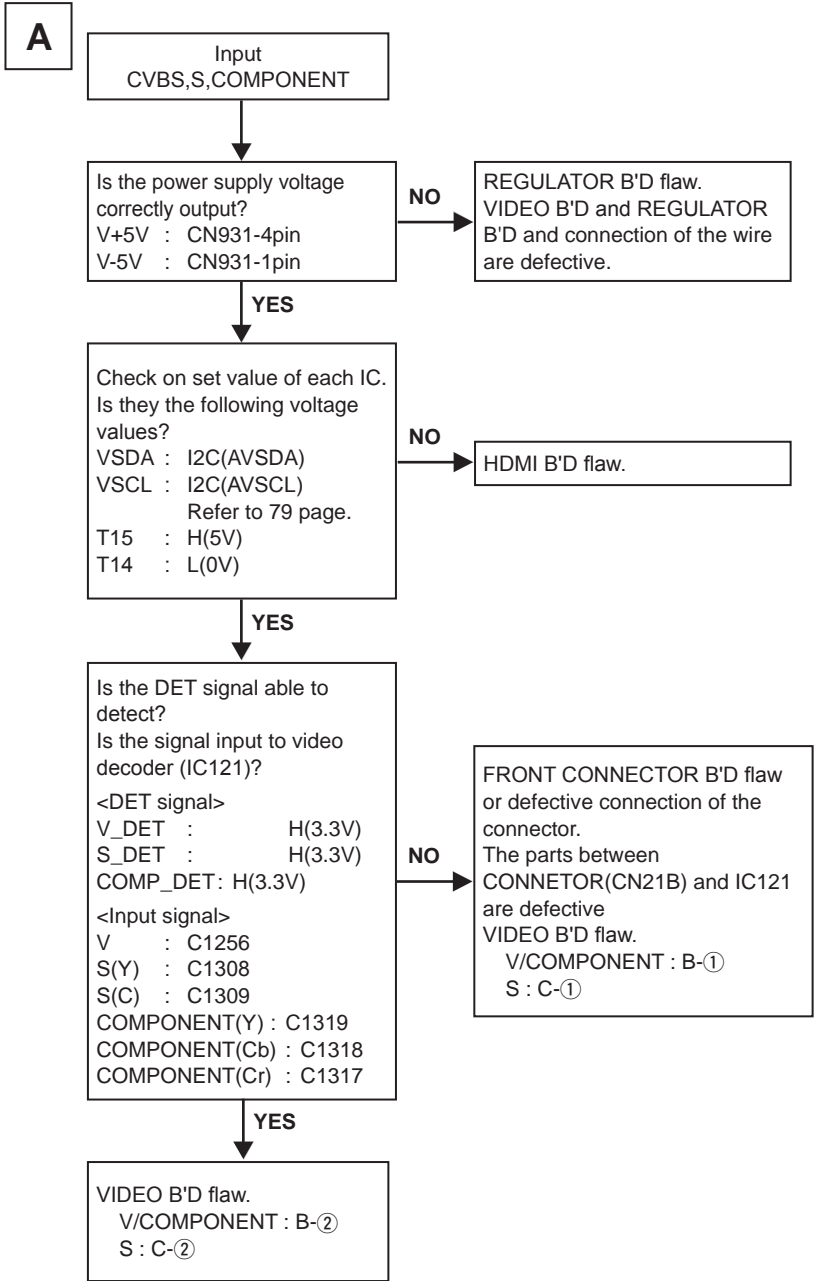


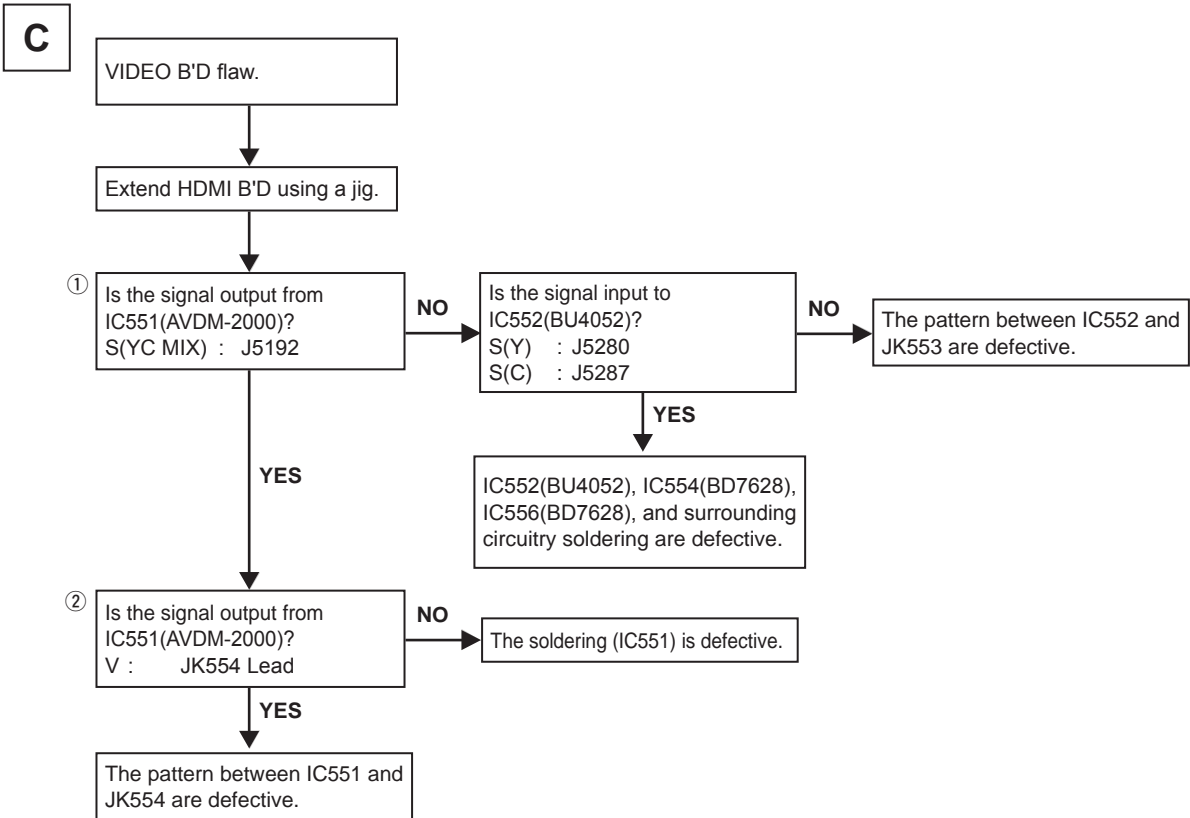
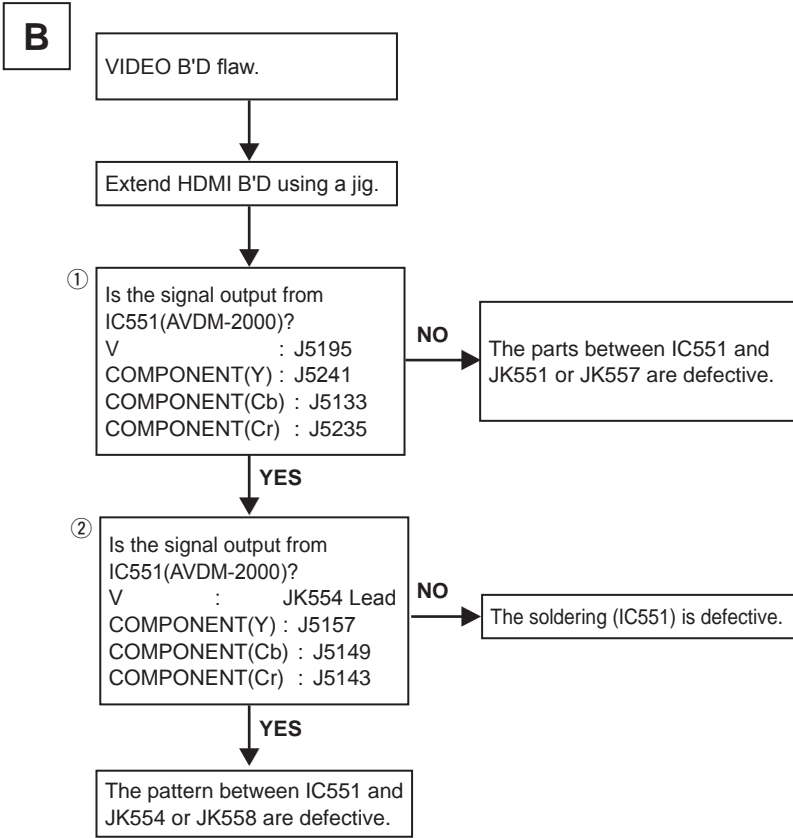
2. Analog video

Perform the operation below beforehand.

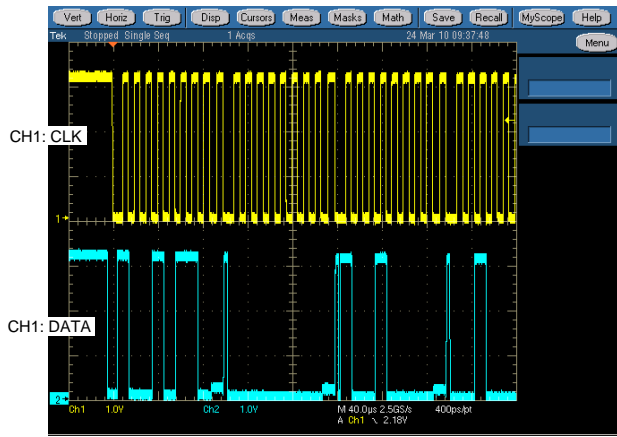
- ※ Check that the connection cable and the Monitor are normal.
- ※ Set VIDEO CONVERT ON.
- ※ Set COMPONENT signal to 480i.
- ※ Set Function to the following.
 - V : SAT
 - S : DVR
 - COMPONENT : SAT



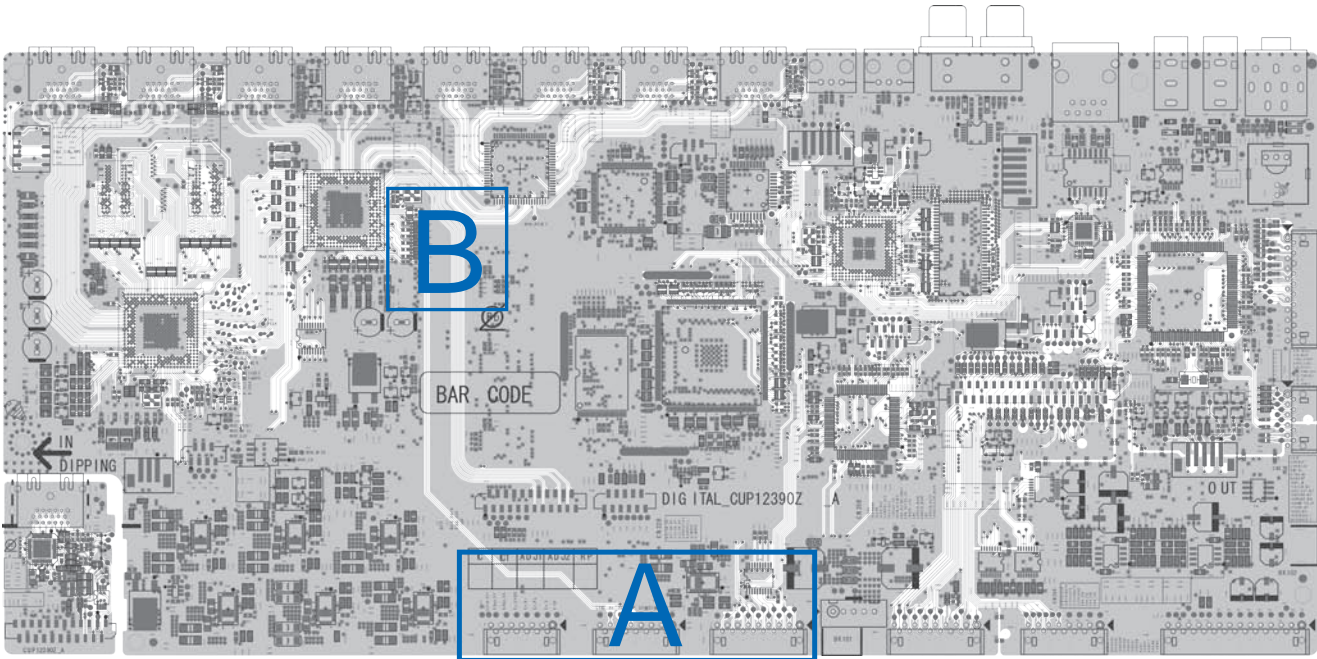




I2C communication wave form

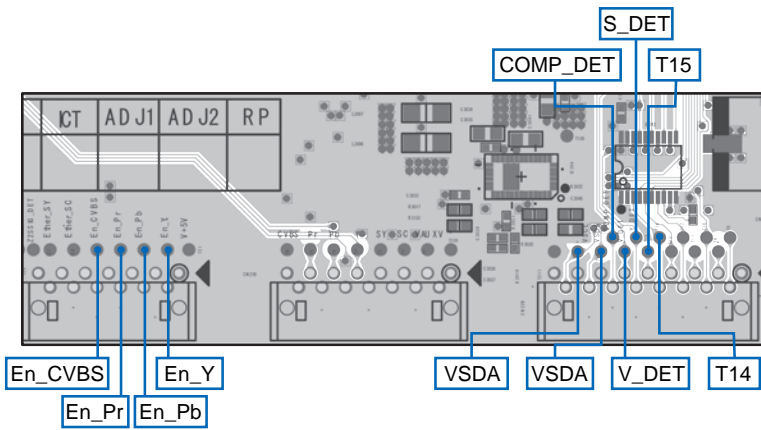


HDMI test point

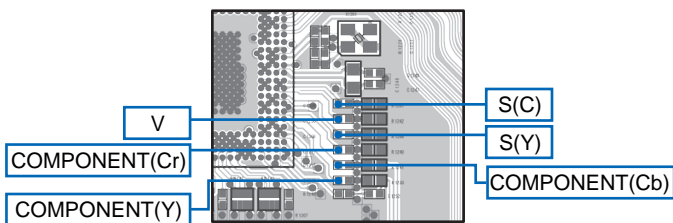


(COMPONENT SIDE)

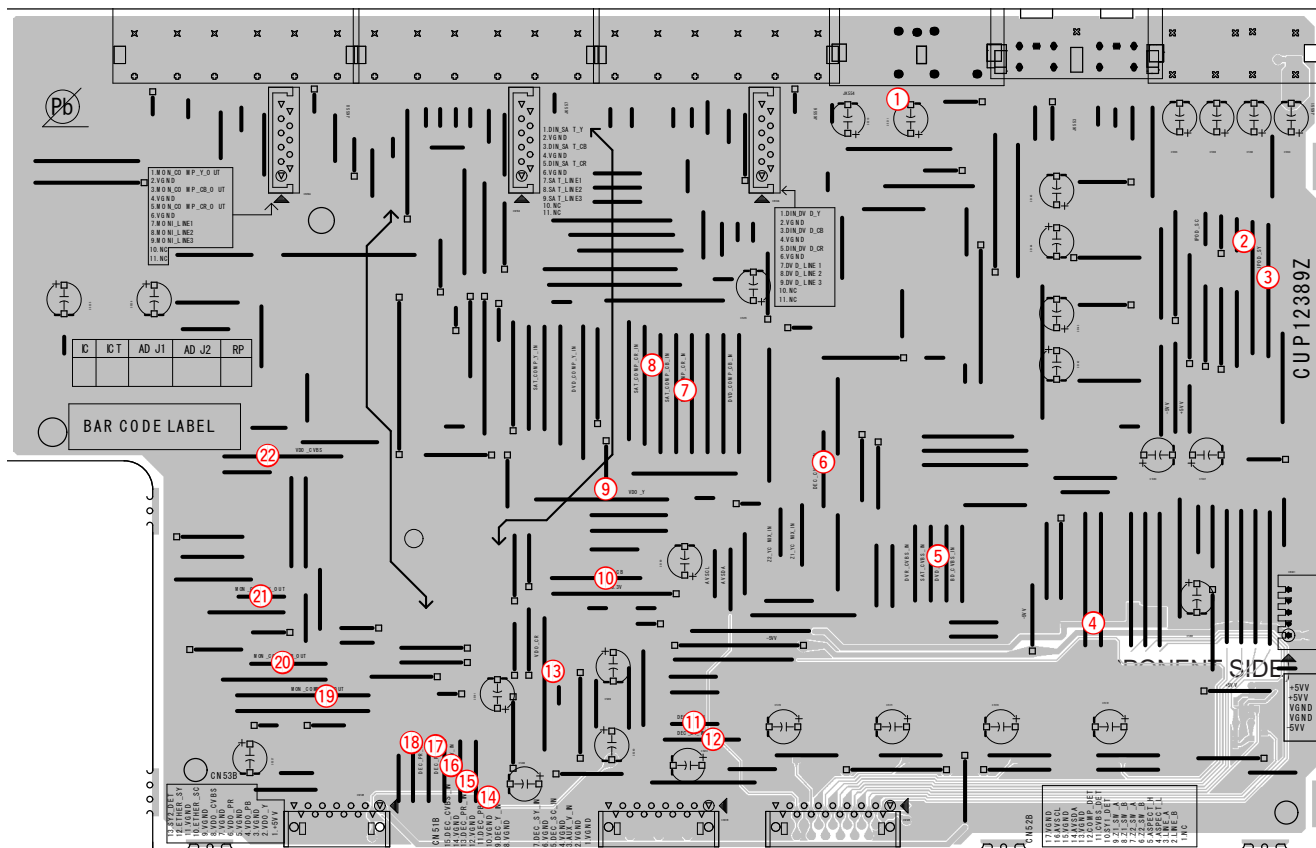
Detail A



Detail B



VIDEO test point

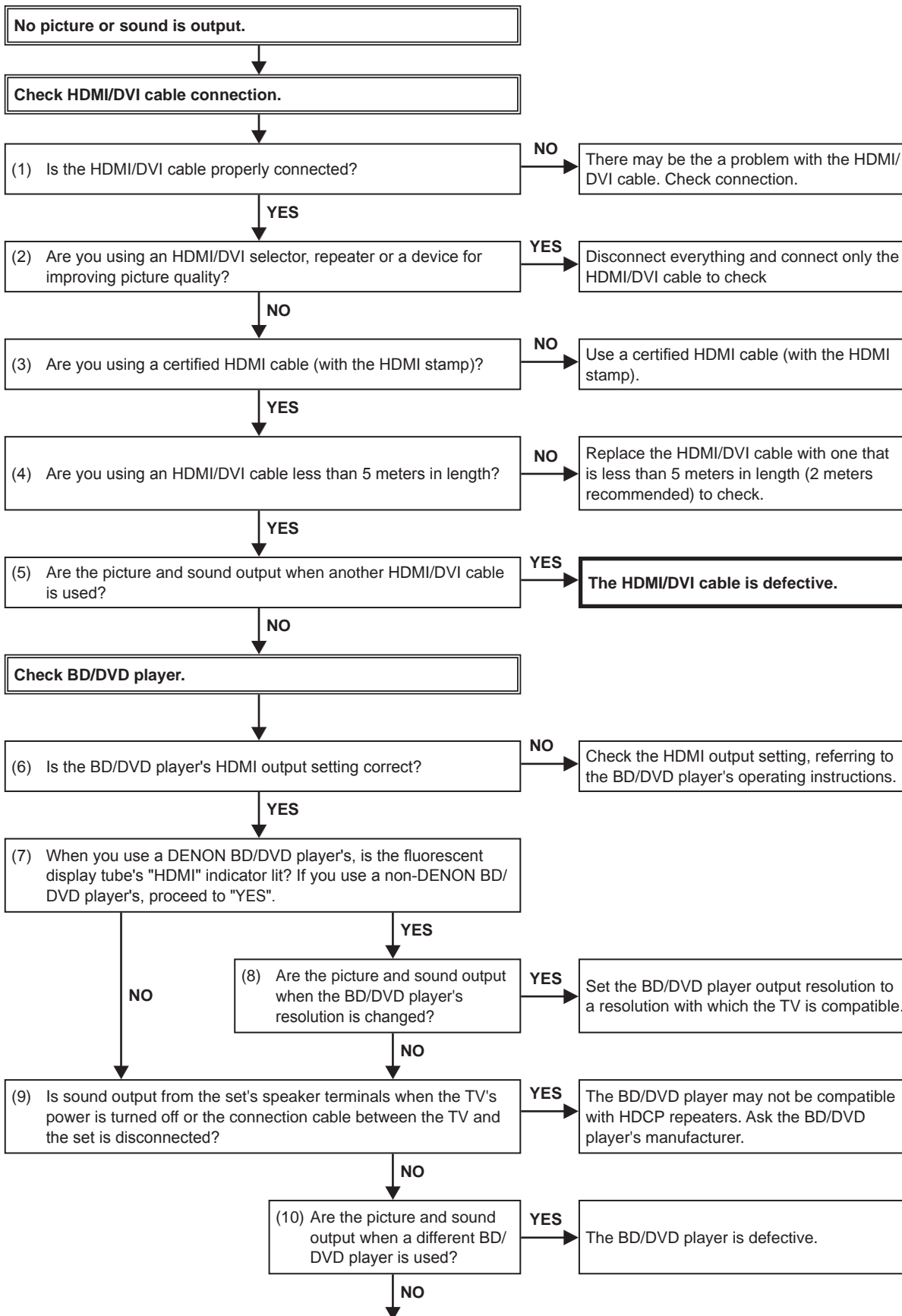


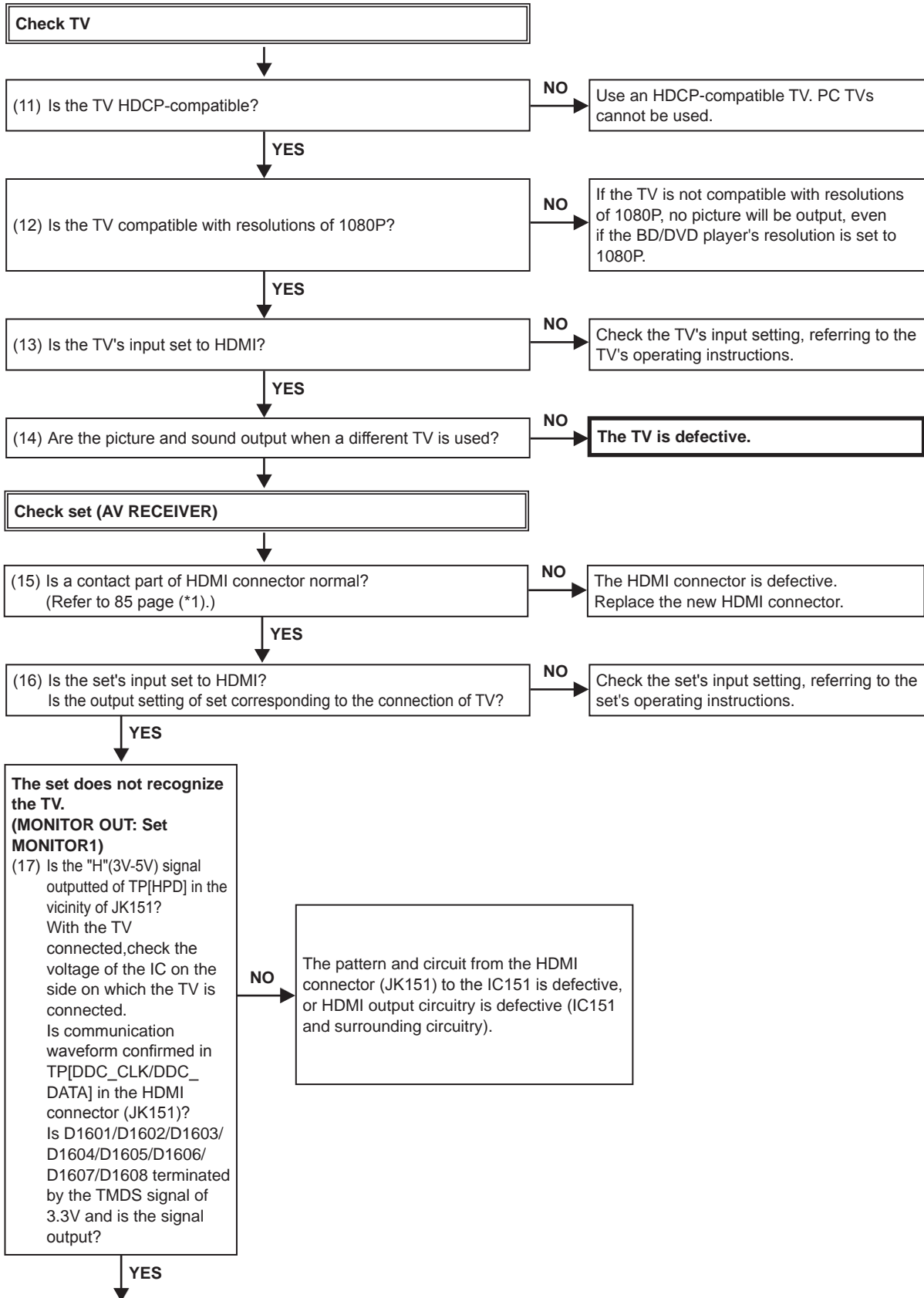
(COMPONENT SIDE)

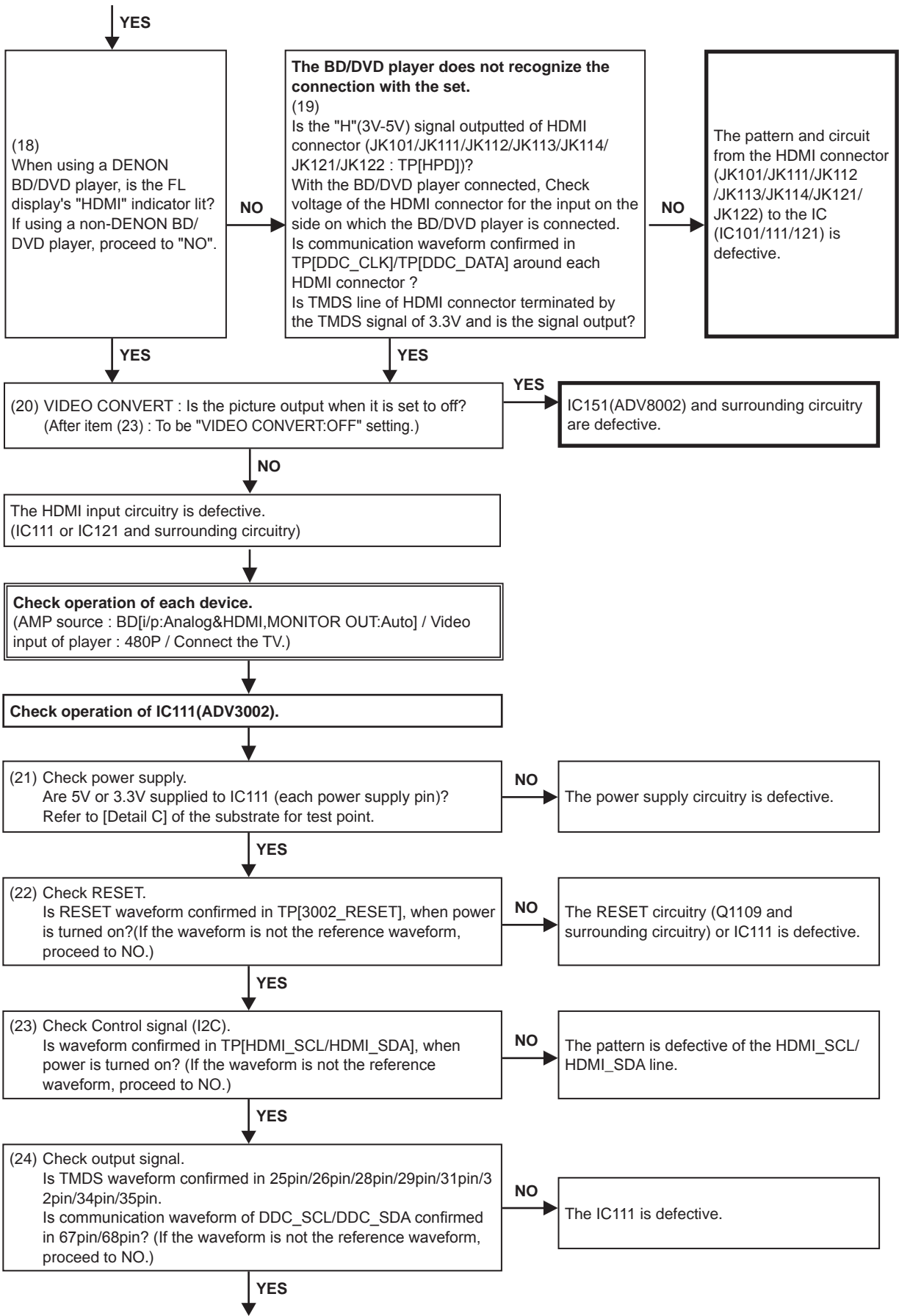
No.	Ref. No.	No.	Ref. No.
1	JK554	12	J5114
2	J5287	13	J5128
3	J5280	14	J5133
4	J5204	15	J5134
5	J5195	16	J5135
6	J5227	17	J5136
7	J5233	18	J5137
8	J5235	19	J5143
9	J5184	20	J5149
10	J5178	21	J5157
11	J5115	22	J5163

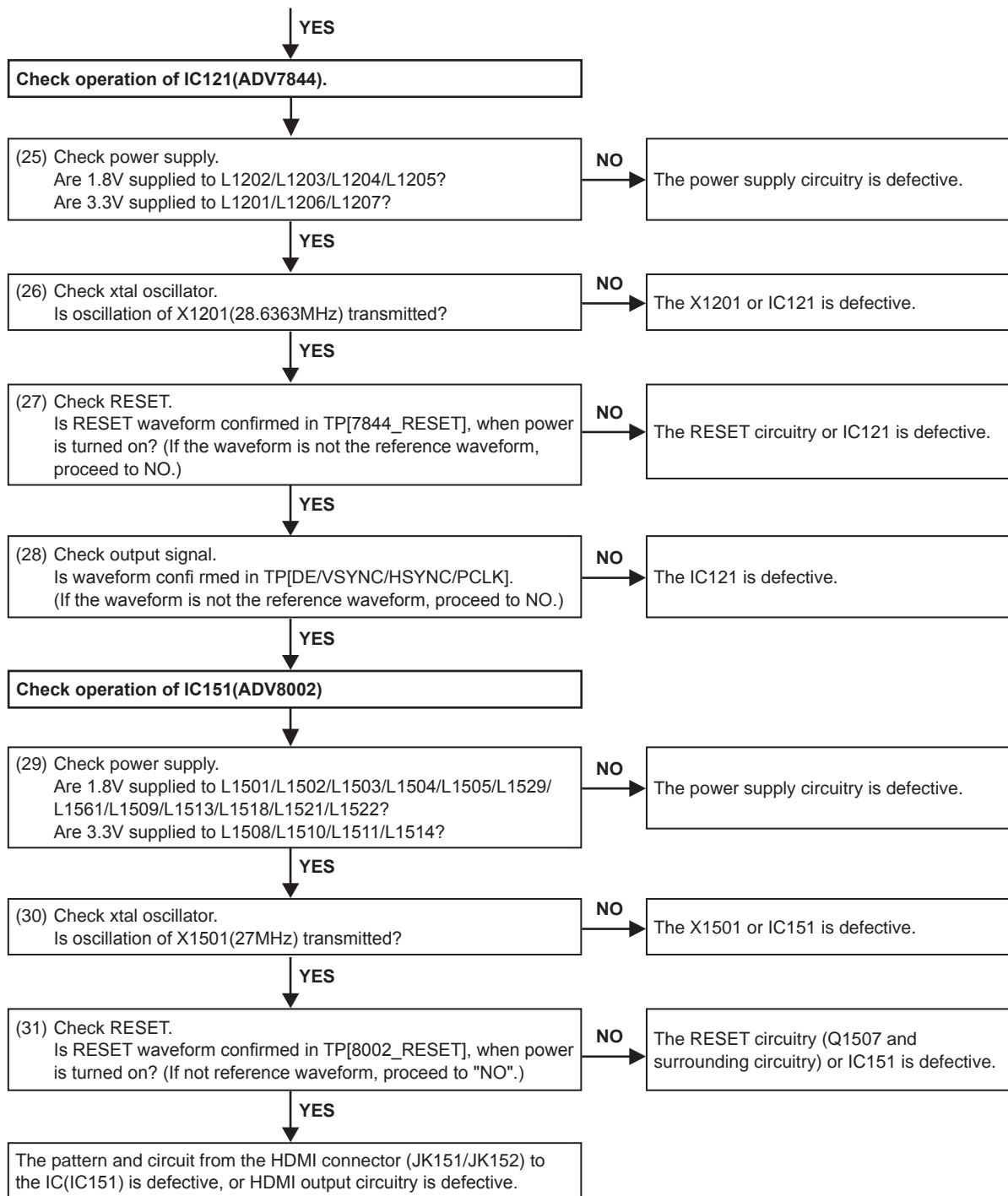
3. HDMI/DVI

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

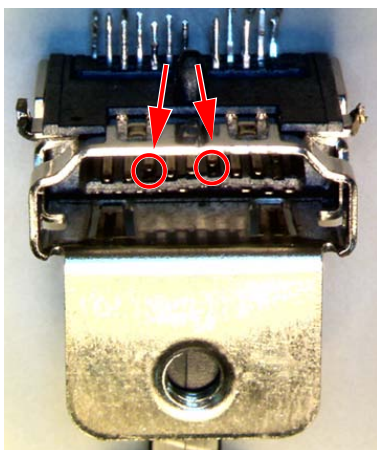




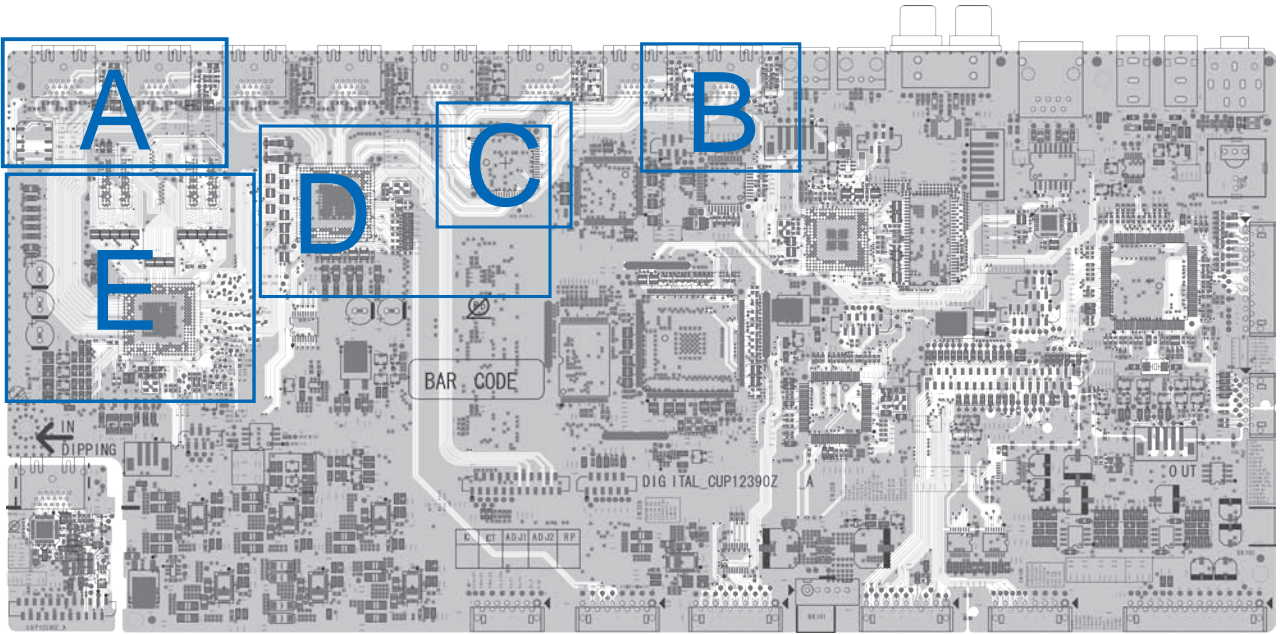




(*1) Abnormal sample of HDMI connector : The internal terminal has bent.

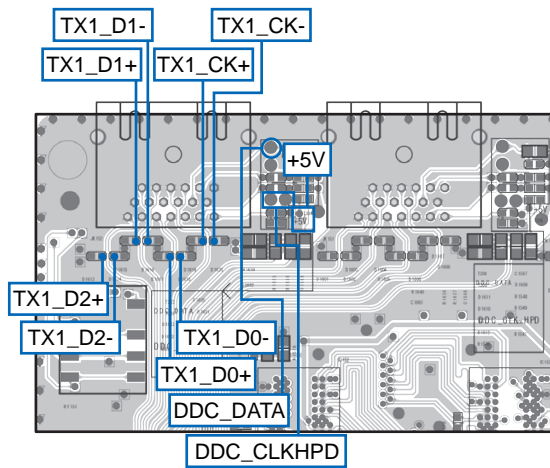


3.2. HDMI test point and waveforms

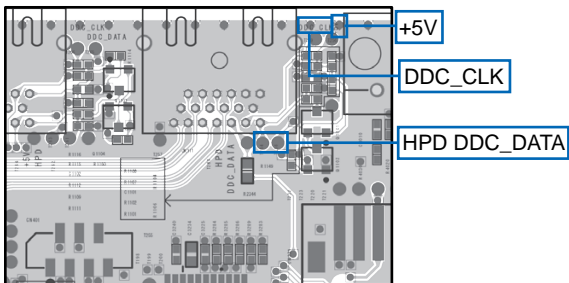


(COMPONENT SIDE)

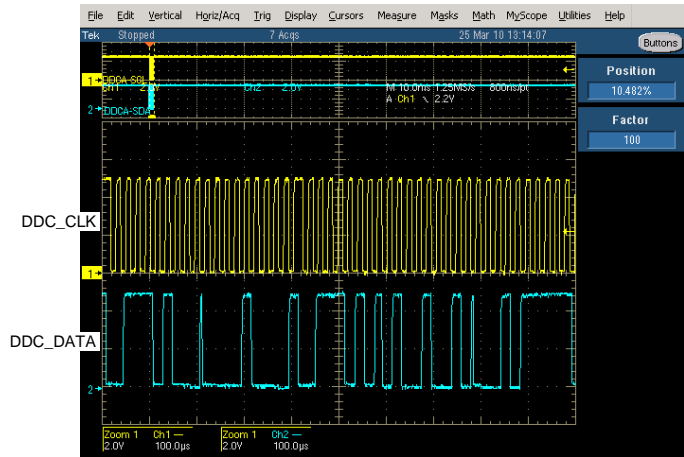
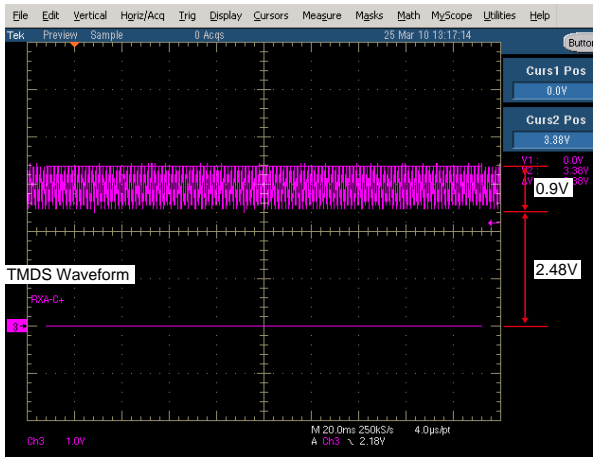
Detail A



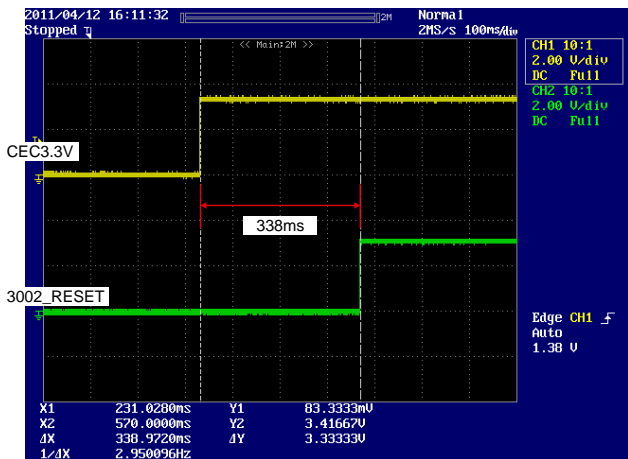
Detail B



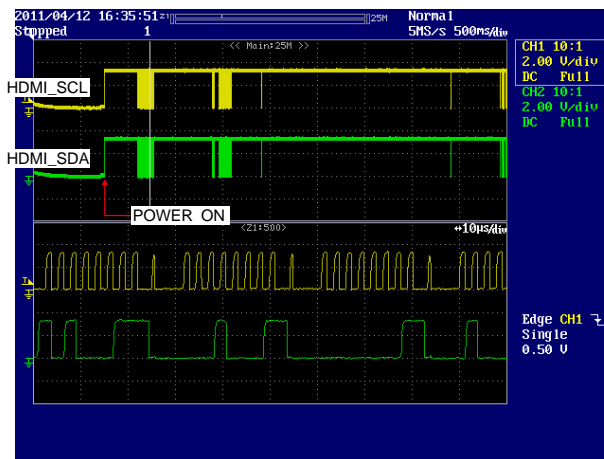
DDC_CLK/DDC_DATA/TMDS : Check items (17)/(19)/(24)/(32)



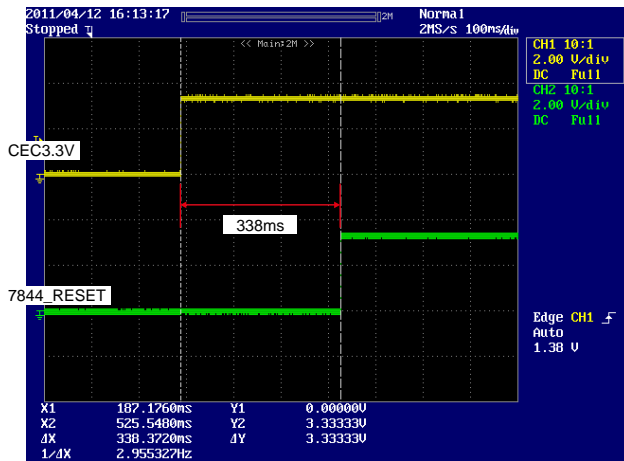
Timing waveform illustration from the start of CEC3.3V to when reset is released : Check items (22)



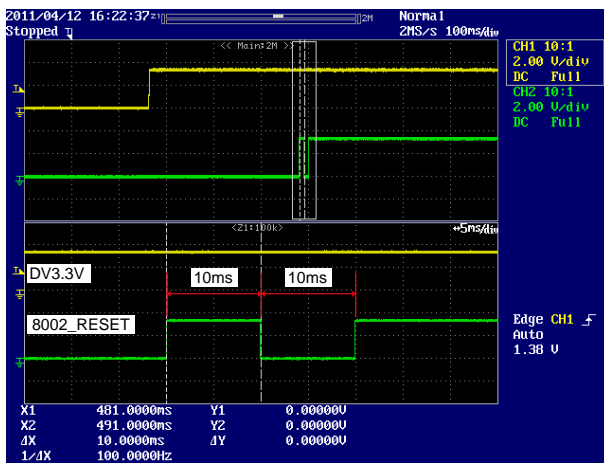
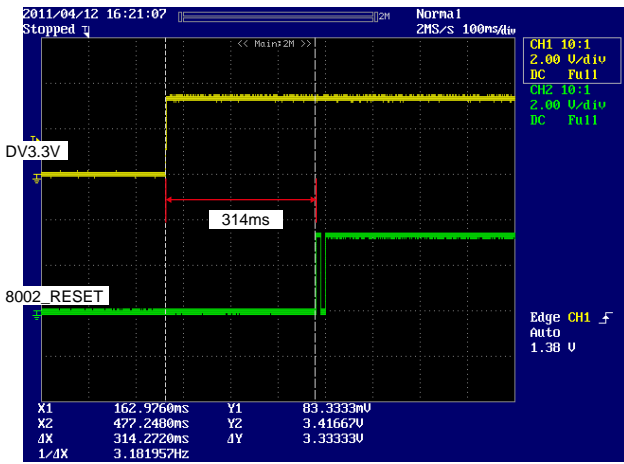
Controlled waveform(I2C), when power is turned on : Check items (23)



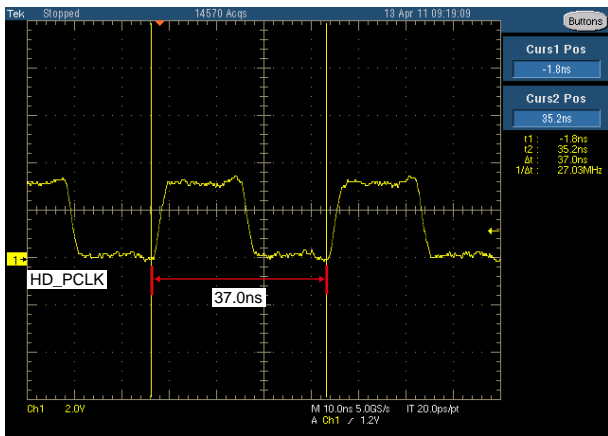
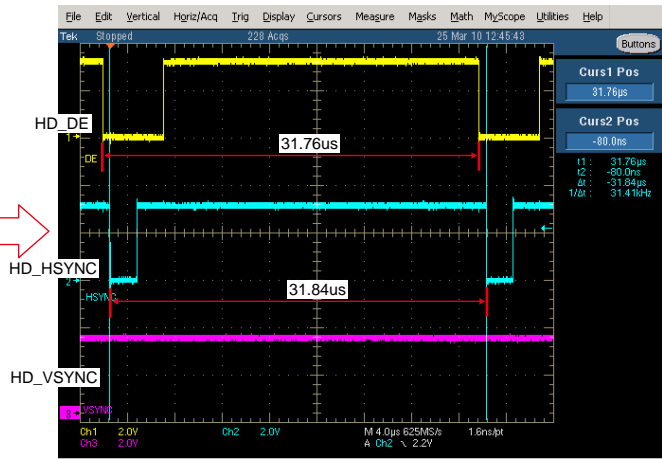
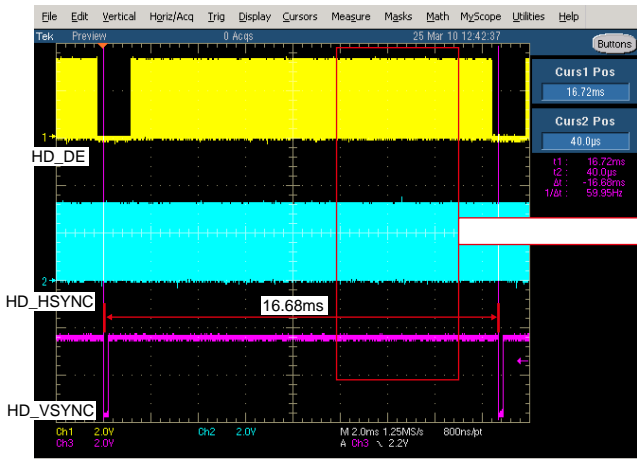
Timing waveform illustration from the start of CEC3.3V to when reset is released : Check items (27)



Timing waveform illustration from the start of DV3.3V to when reset is released : Check items (31)

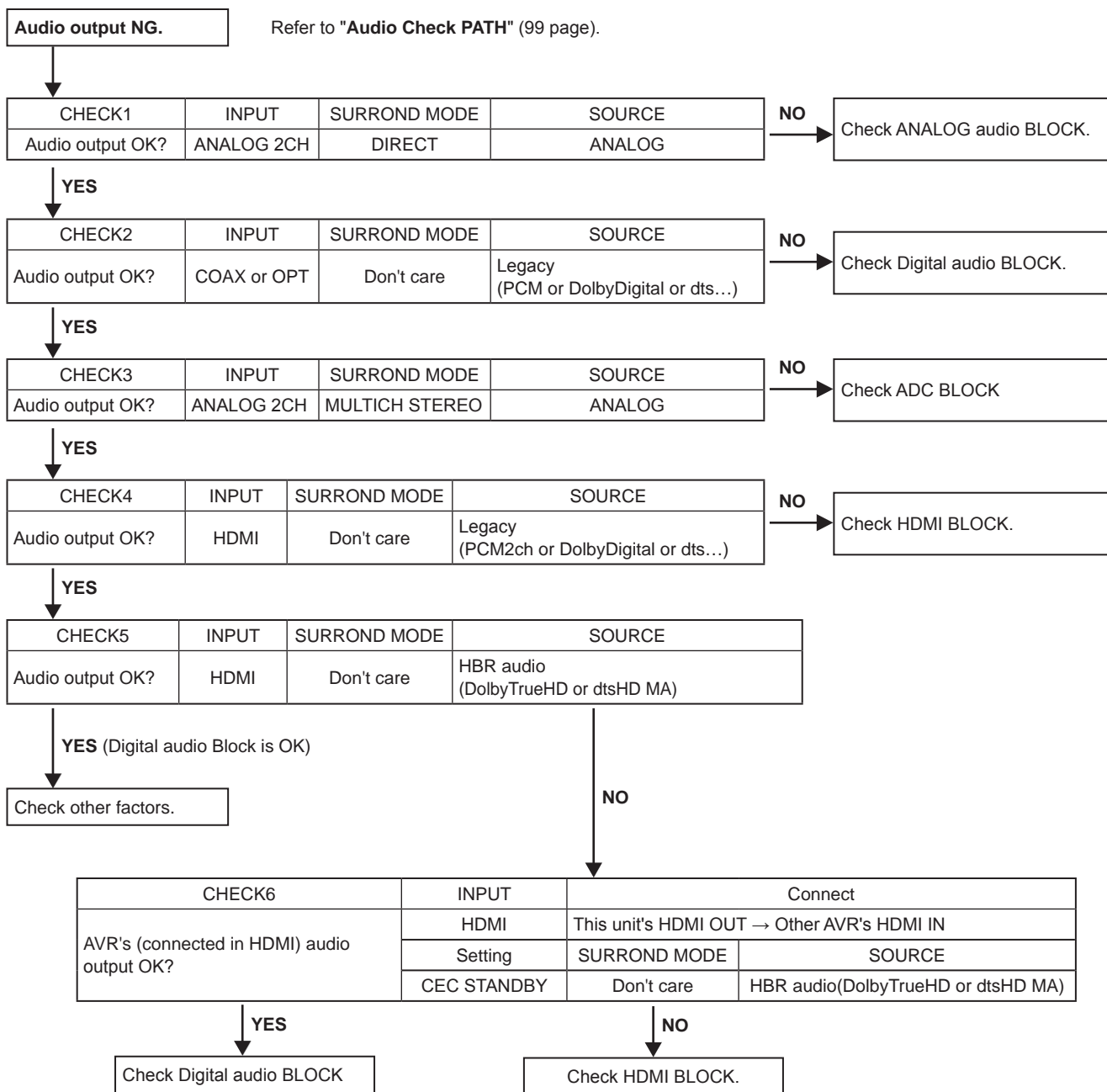


HD_DE/HD_VSYNC/HD_HSYNC/HD_PCLK : Check items (28)

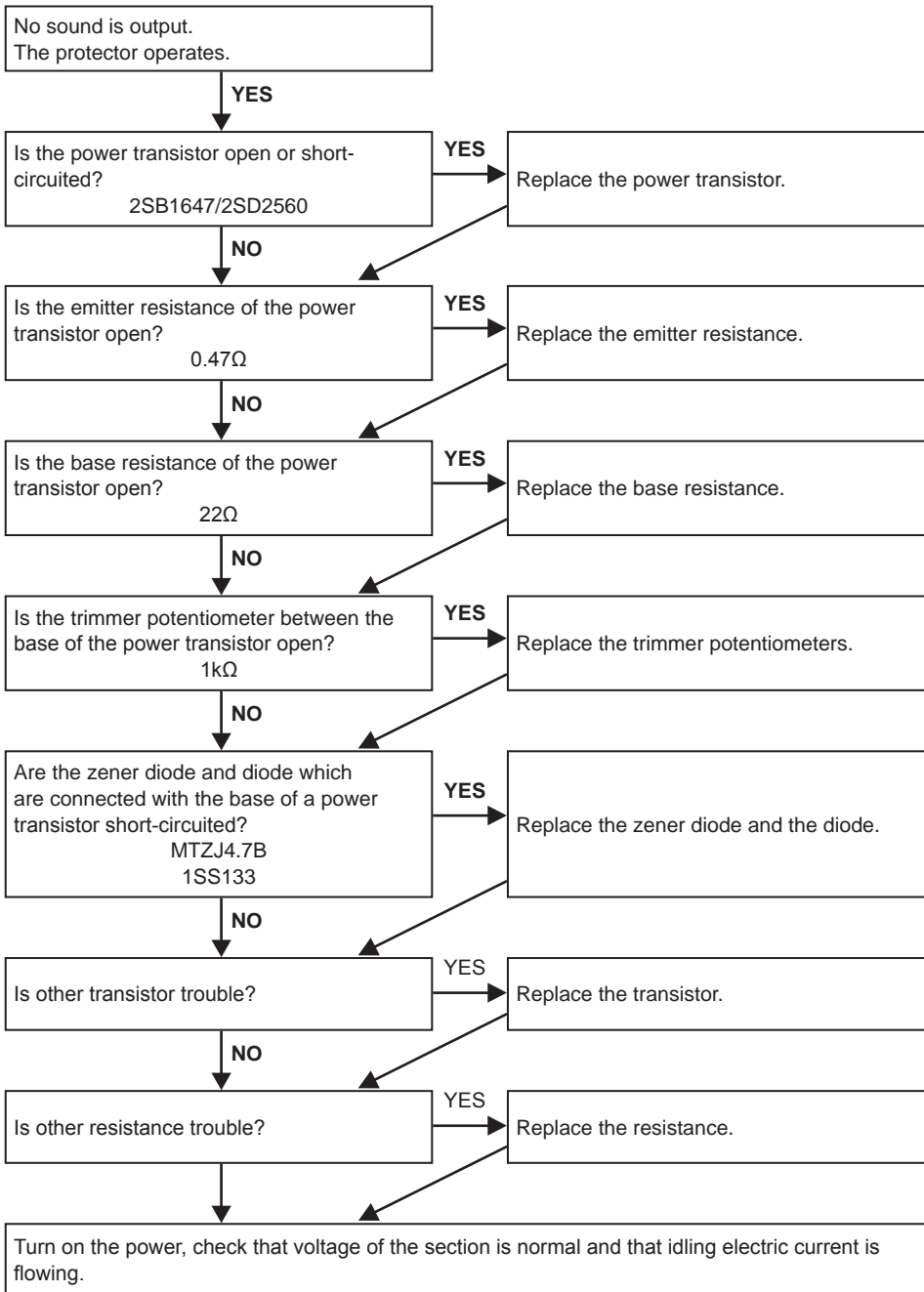


4. AUDIO

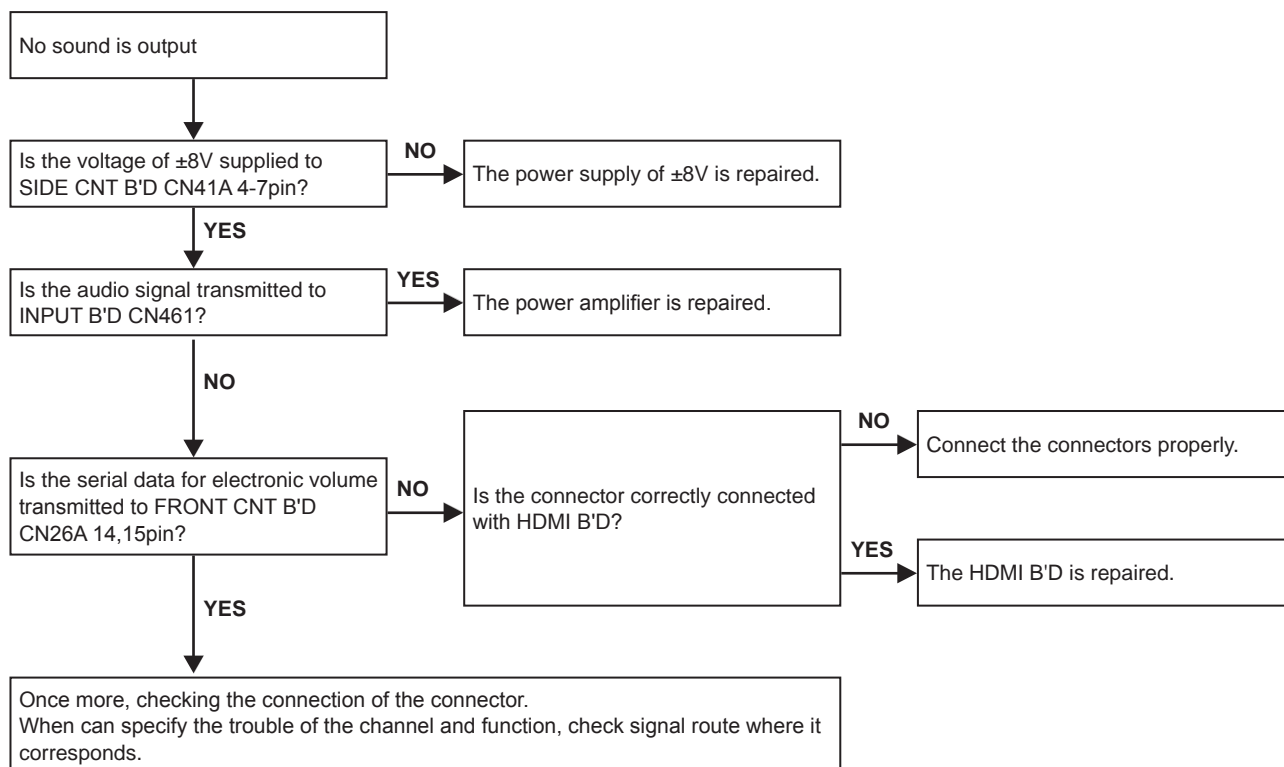
4.1. AUDIO CHECK



4.2. Power AMP (MAIN UNIT)

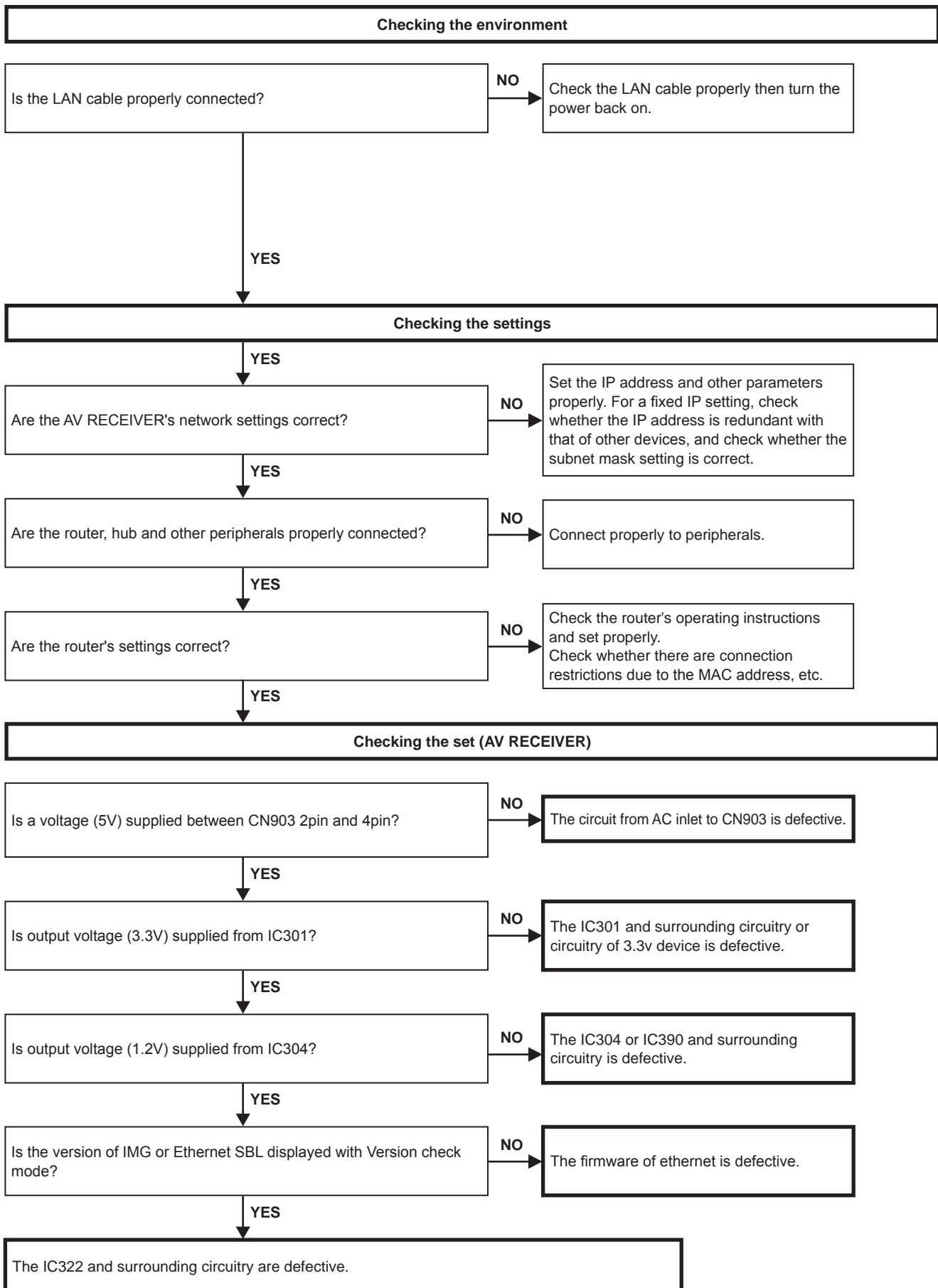


4.3. Analog audio

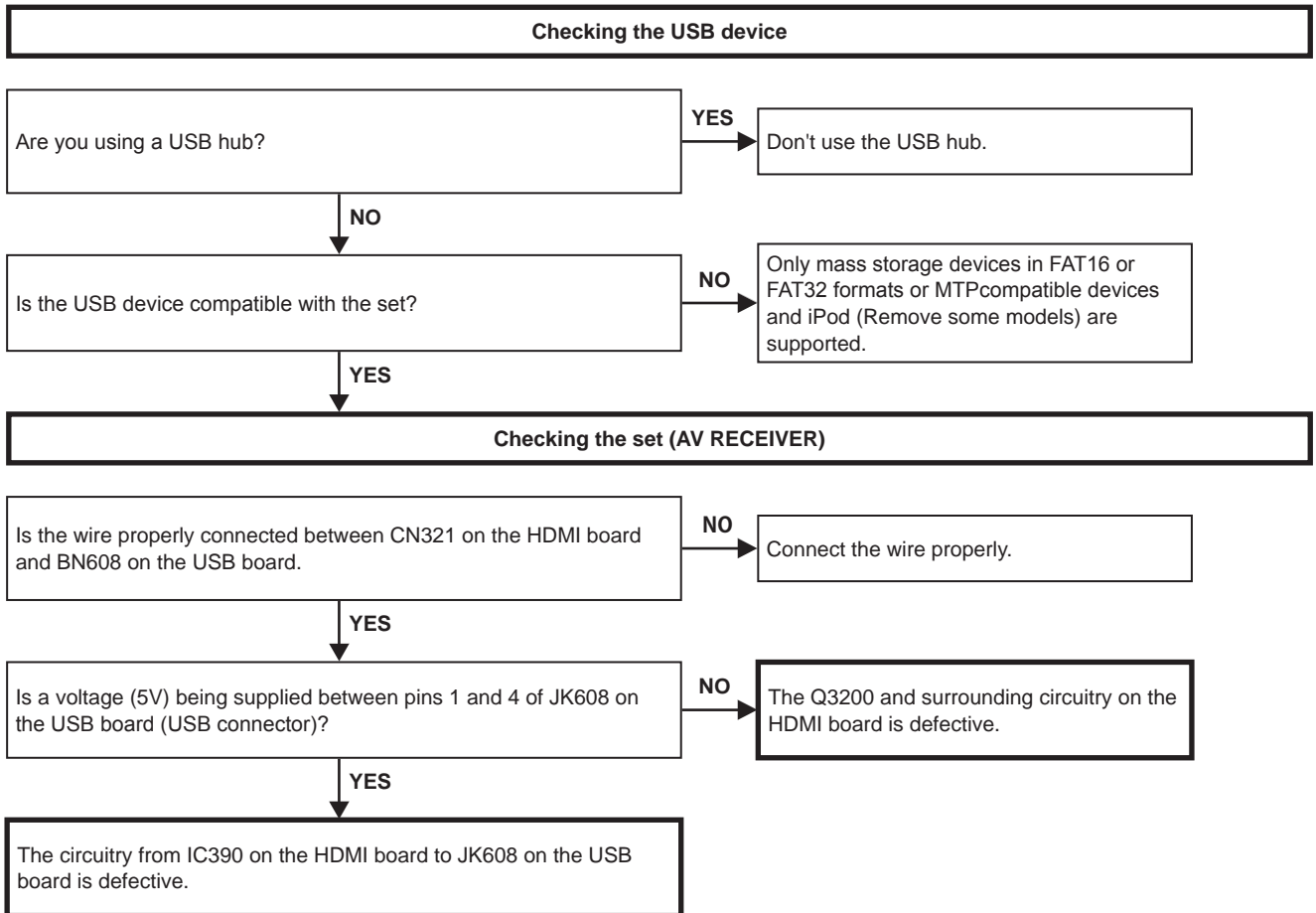


5. Network/USB

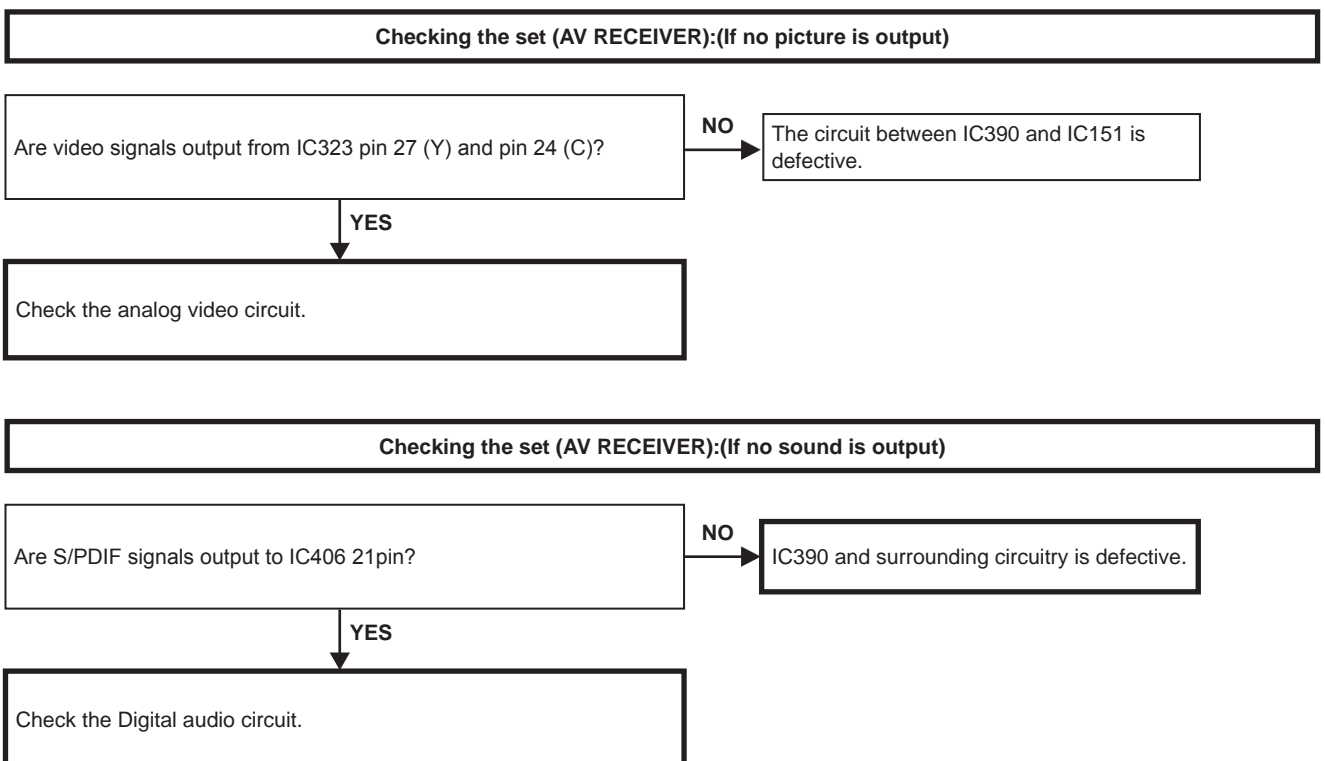
5.1. Cannot connect to network



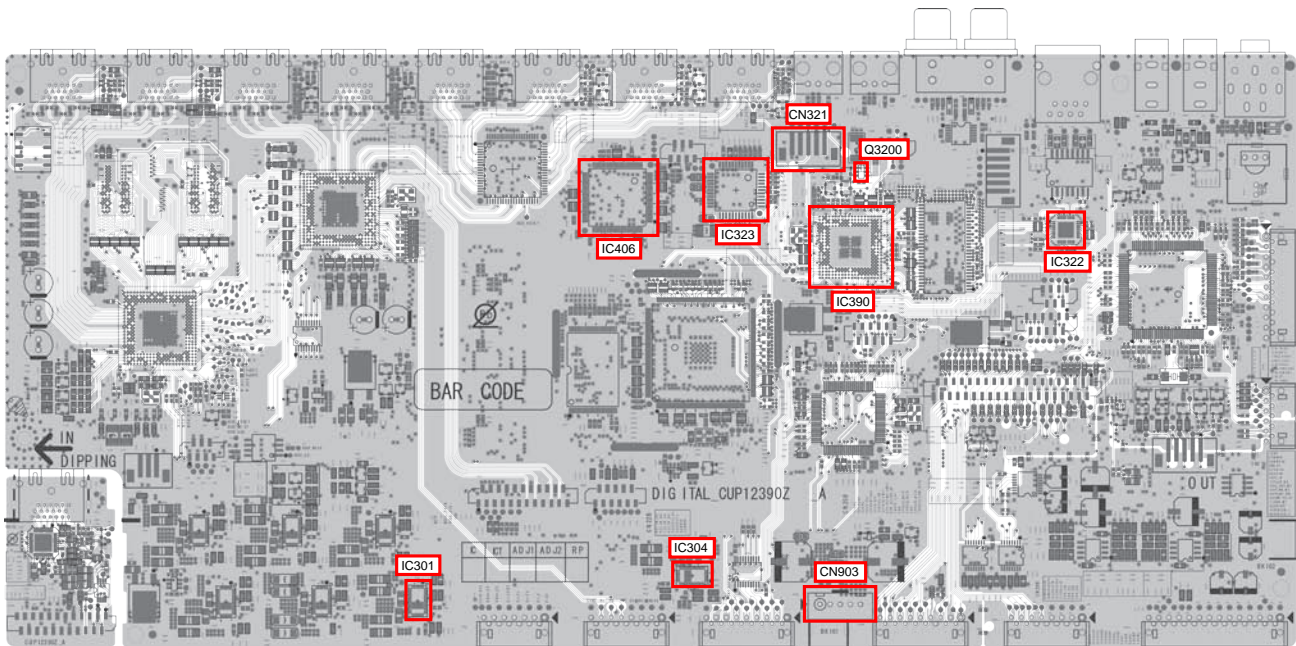
5.2. USB device is not recognized



5.3. No picture or sound is output

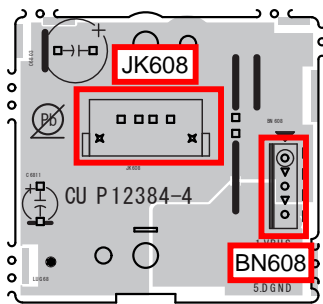


HDMI test point



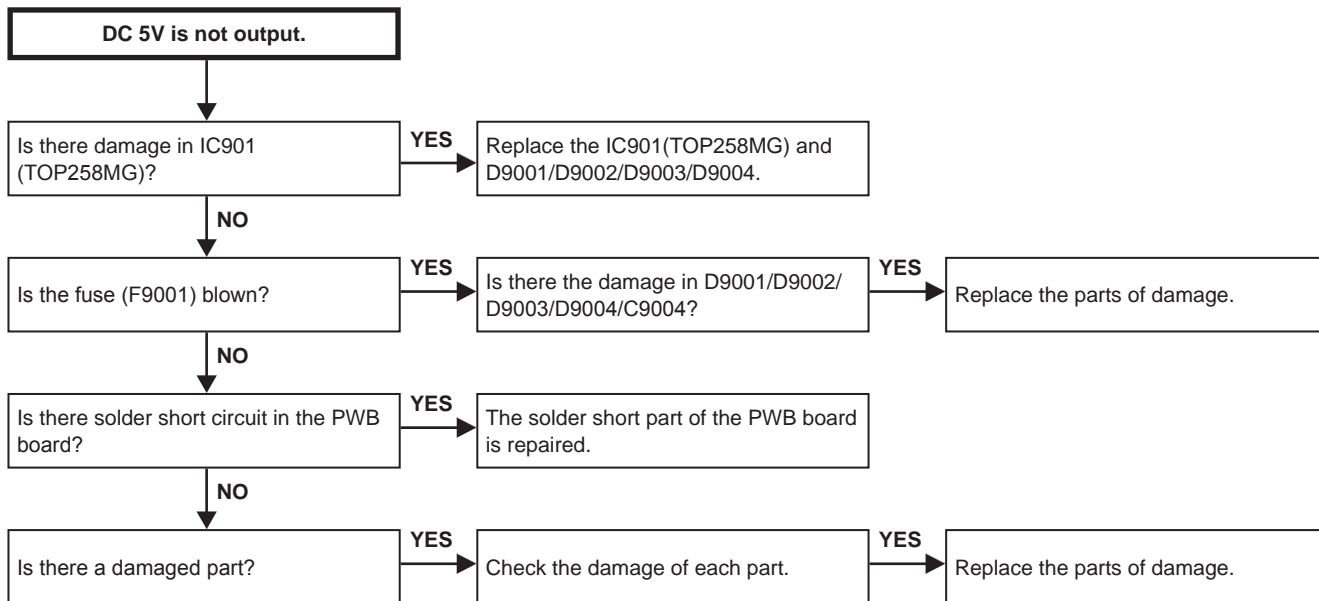
(COMPONENT SIDE)

USB test point

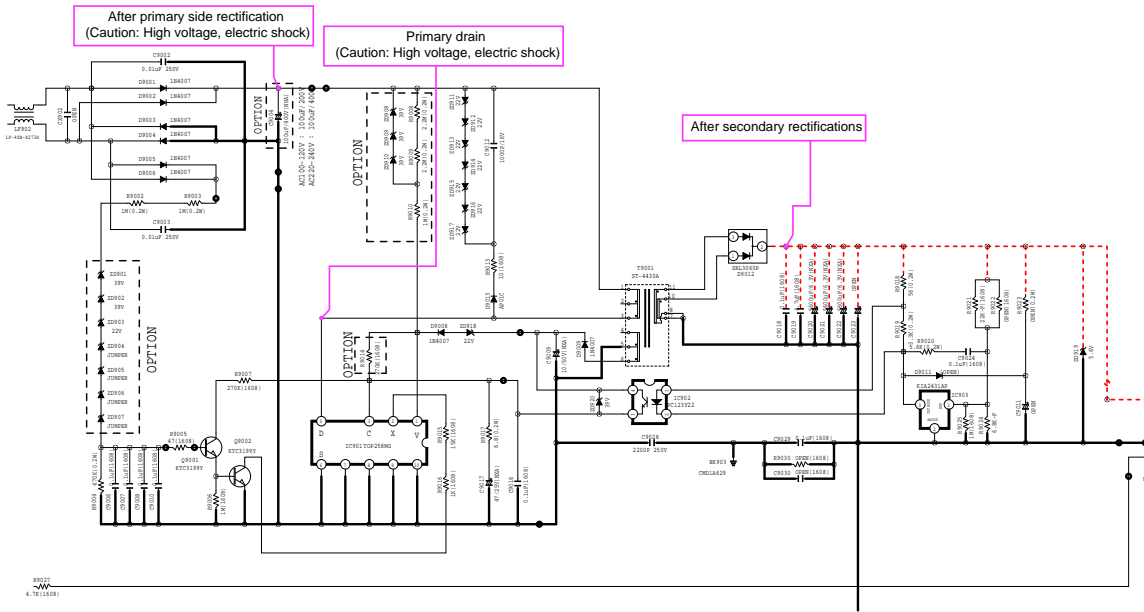


(COMPONENT SIDE)

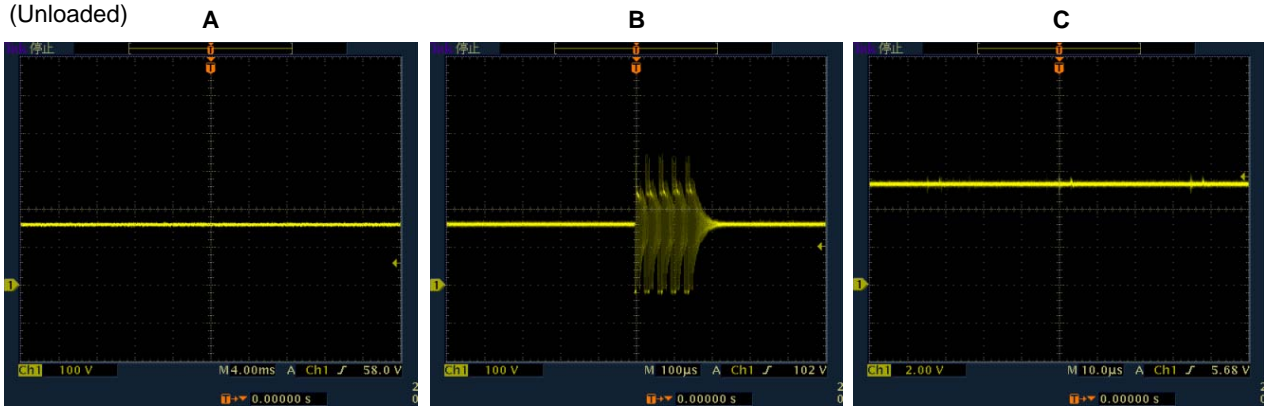
6. SMPS



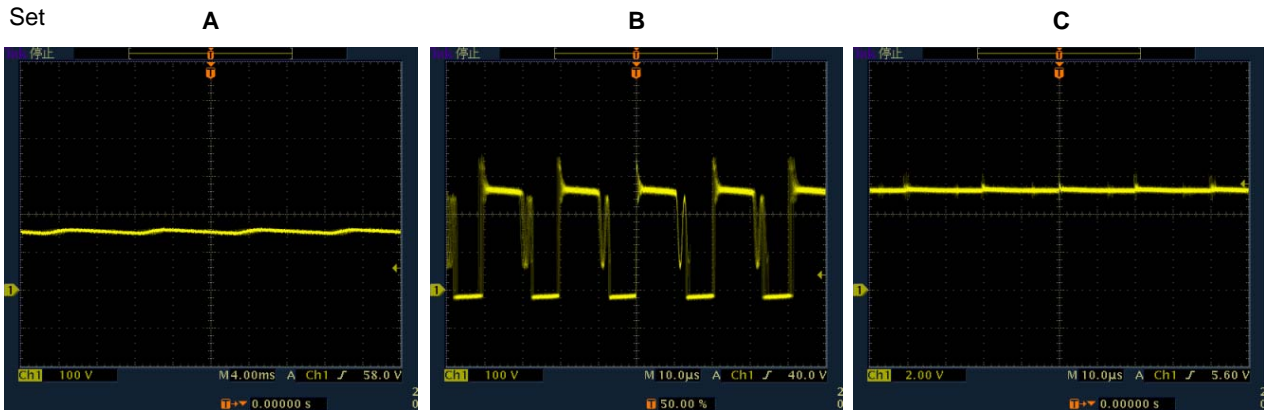
Operation waveform for each part



SMPS unit (Unloaded)

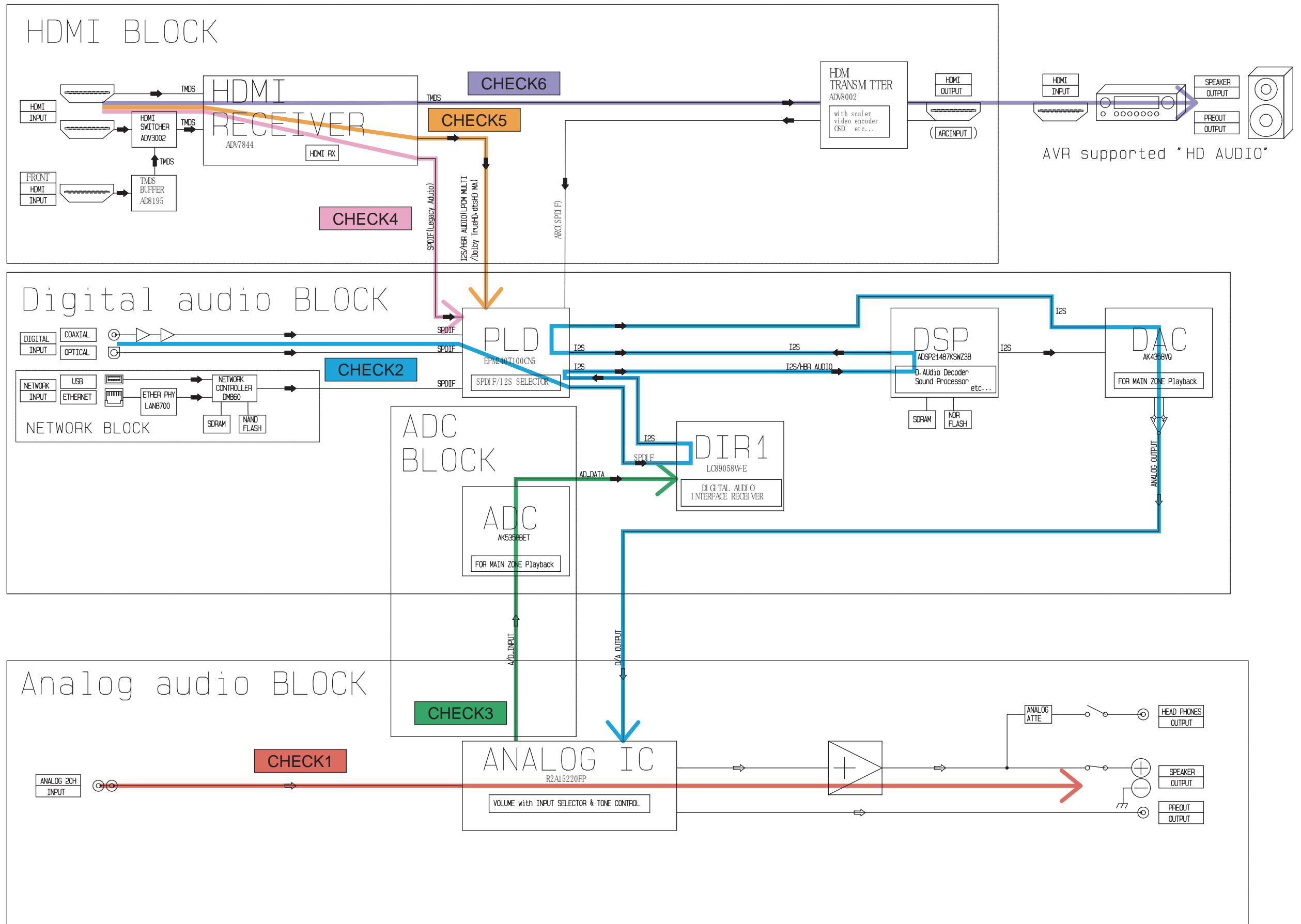
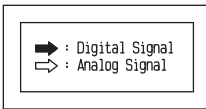


Set



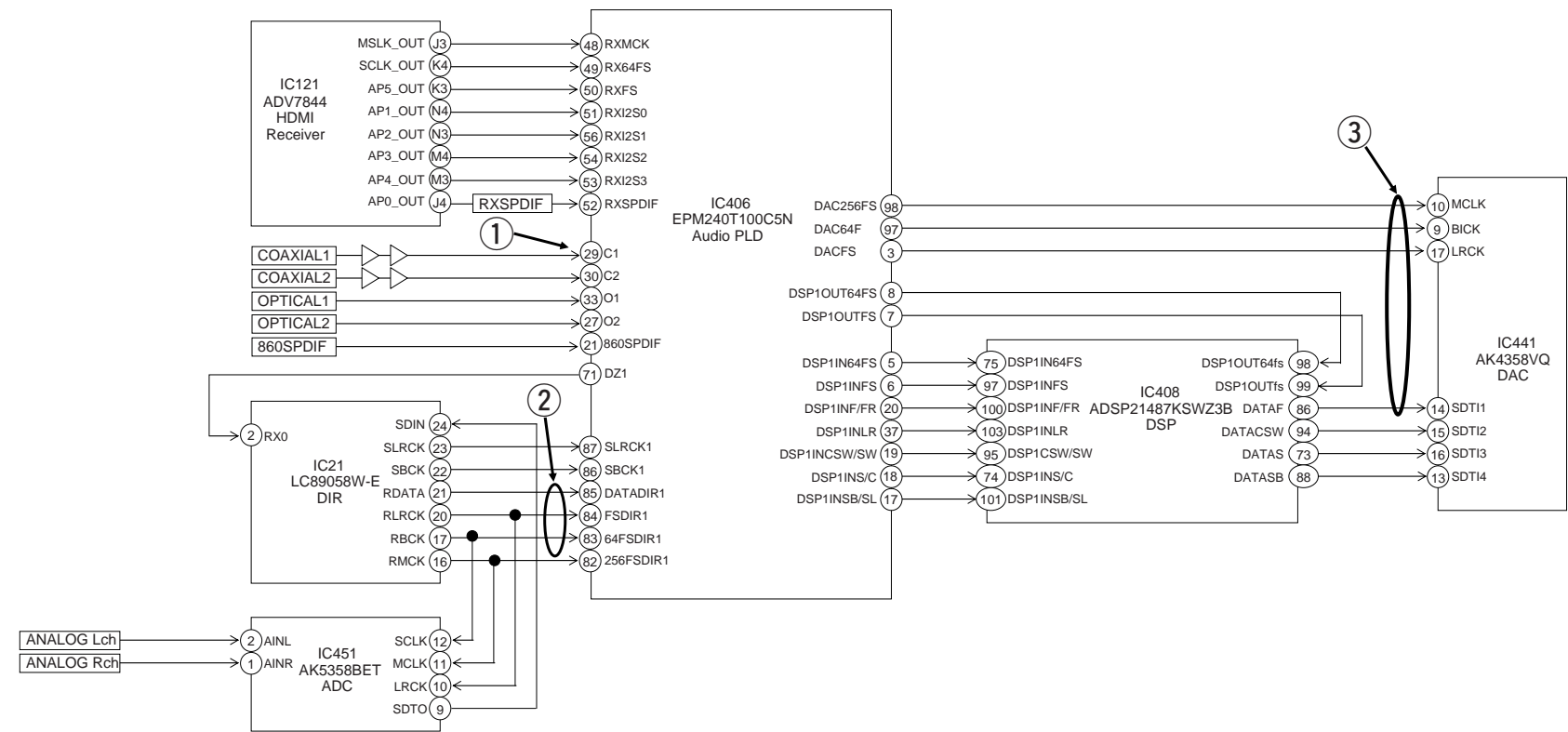
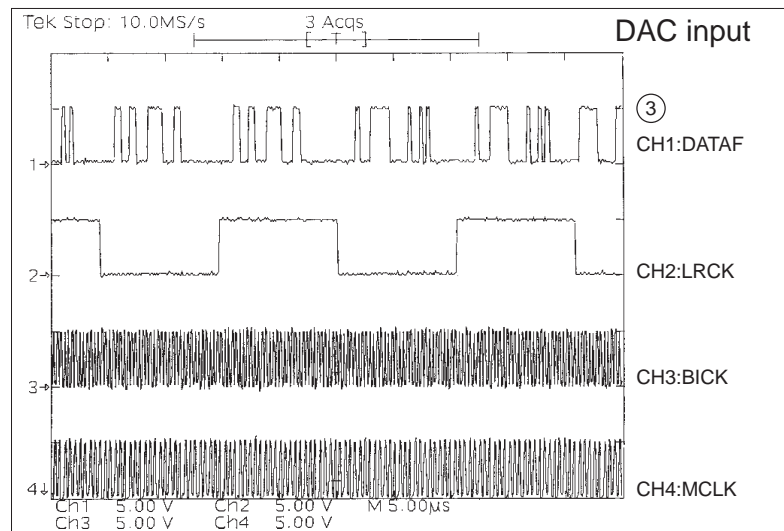
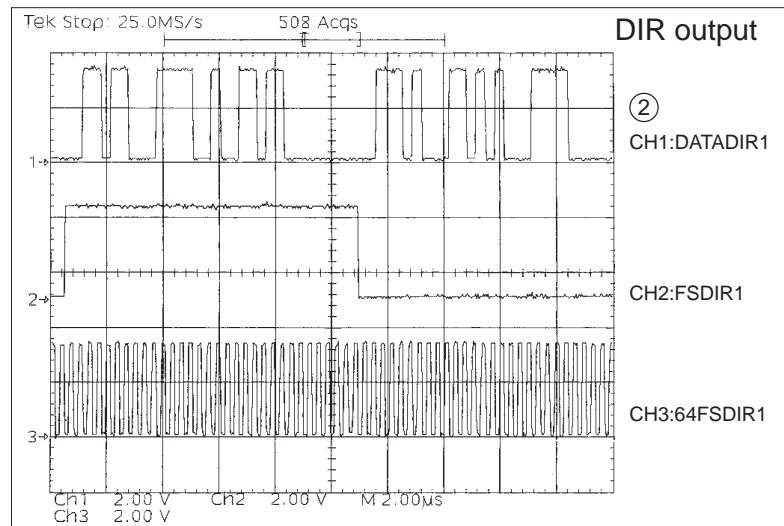
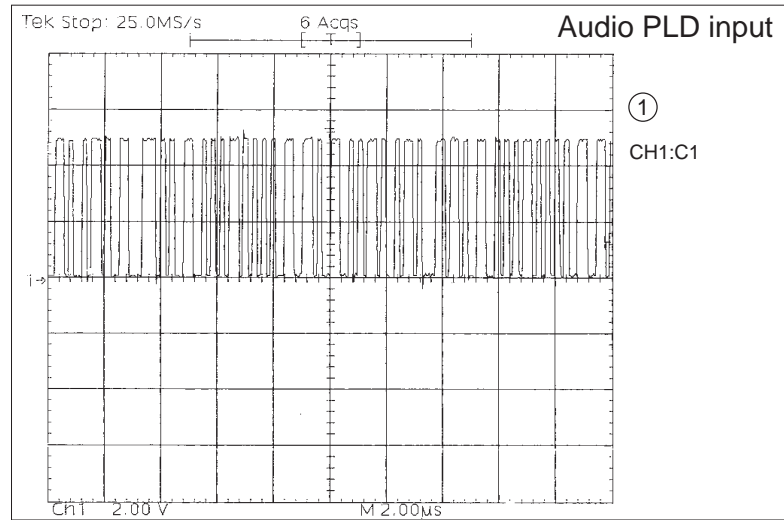
Audio Check PATH

Refer to troubleshooting "4.1. AUDIO CHECK"(91 page).

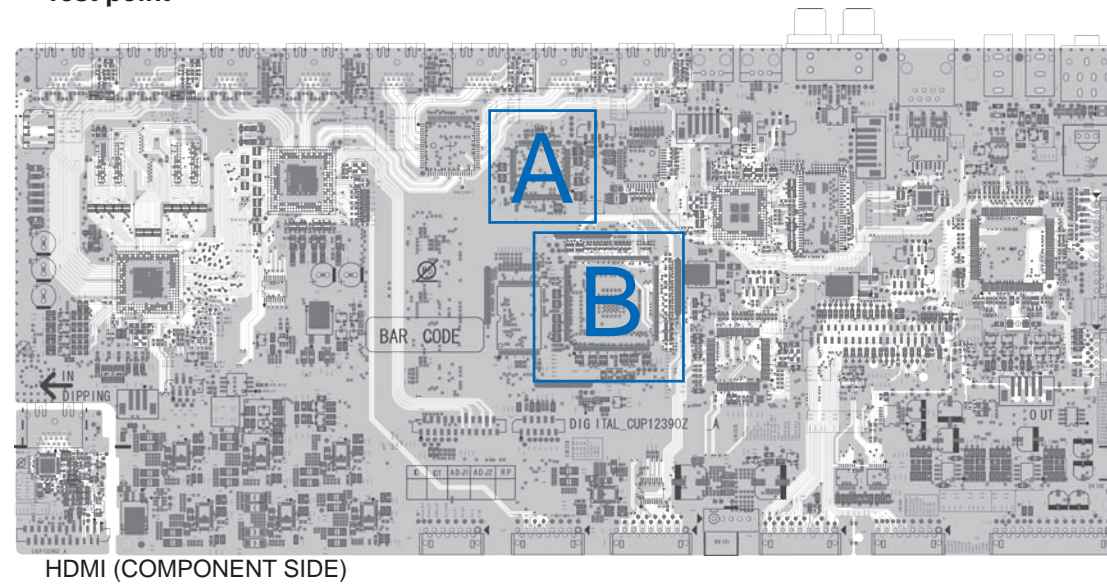


CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK

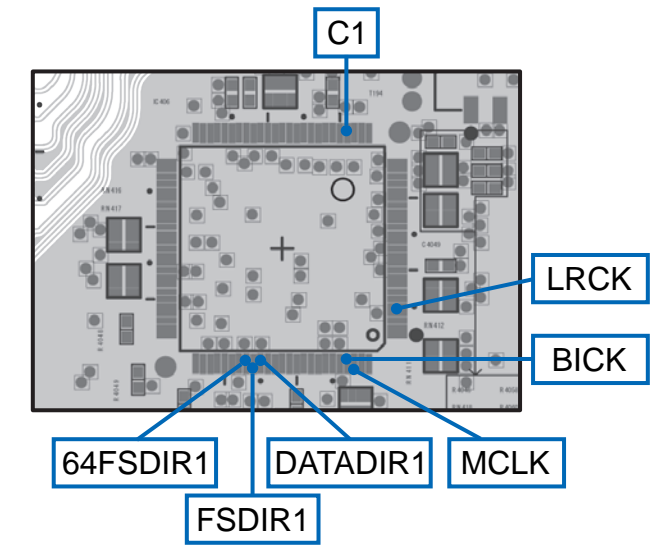
WAVE FORM



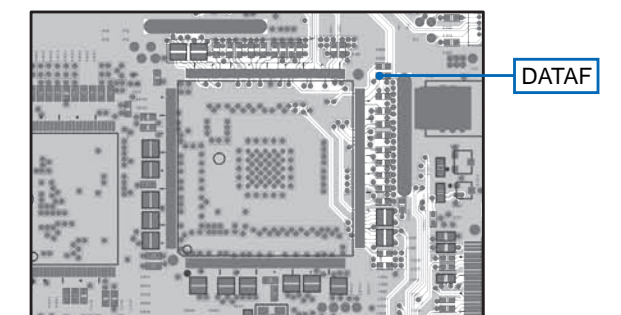
Test point



Detail A

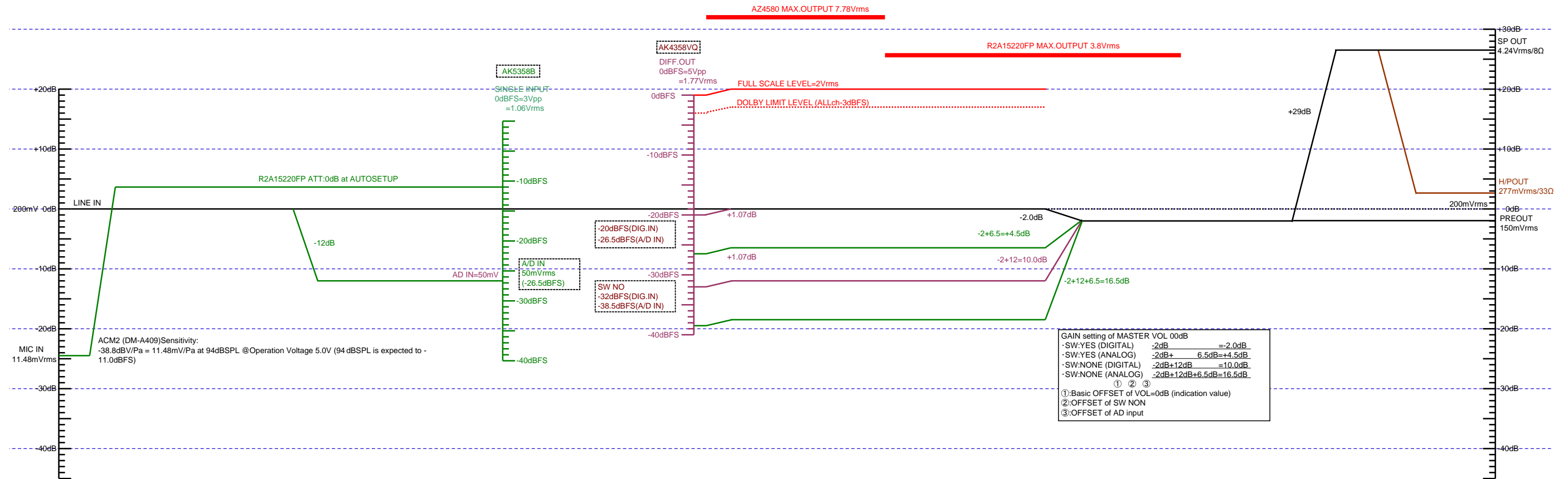
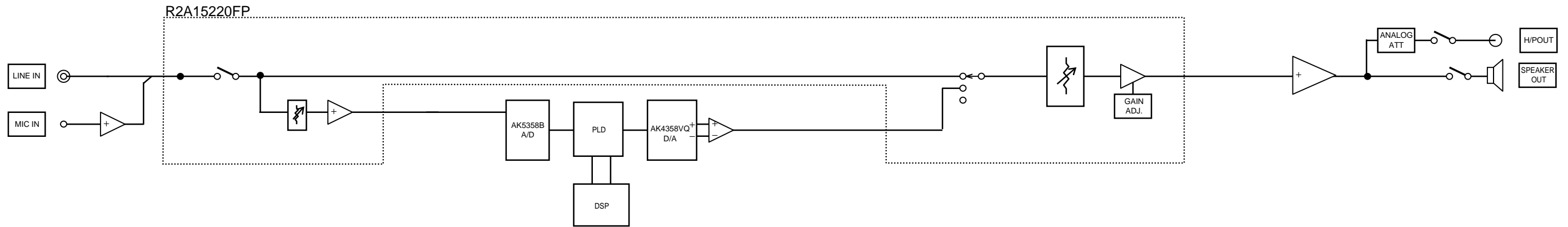


Detail B

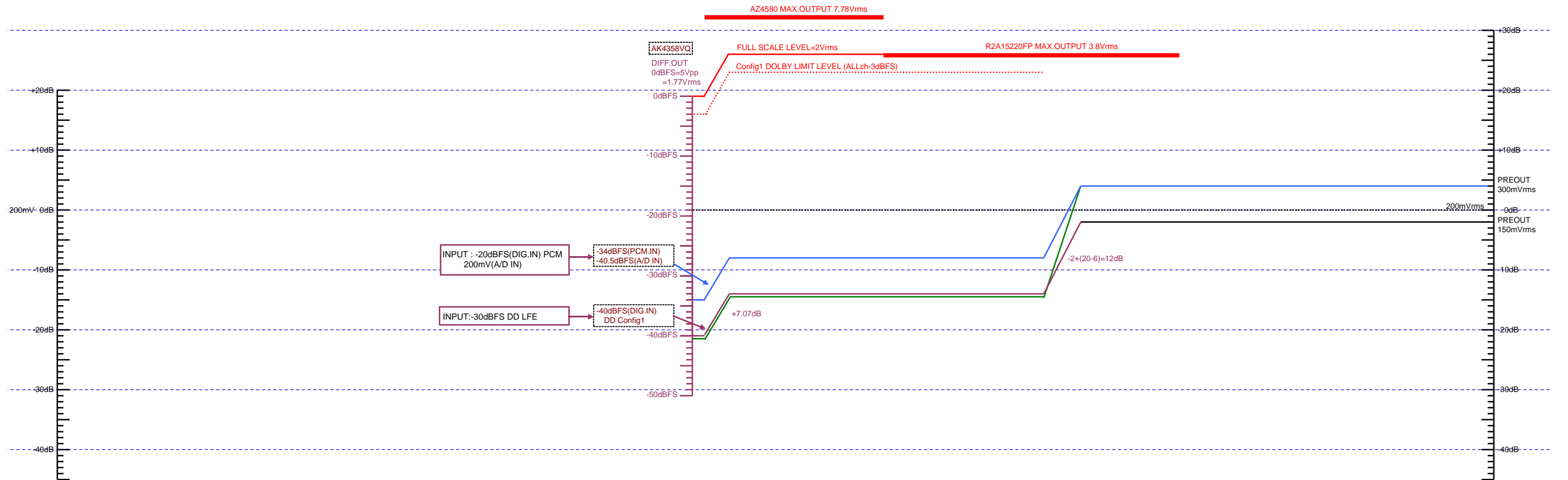
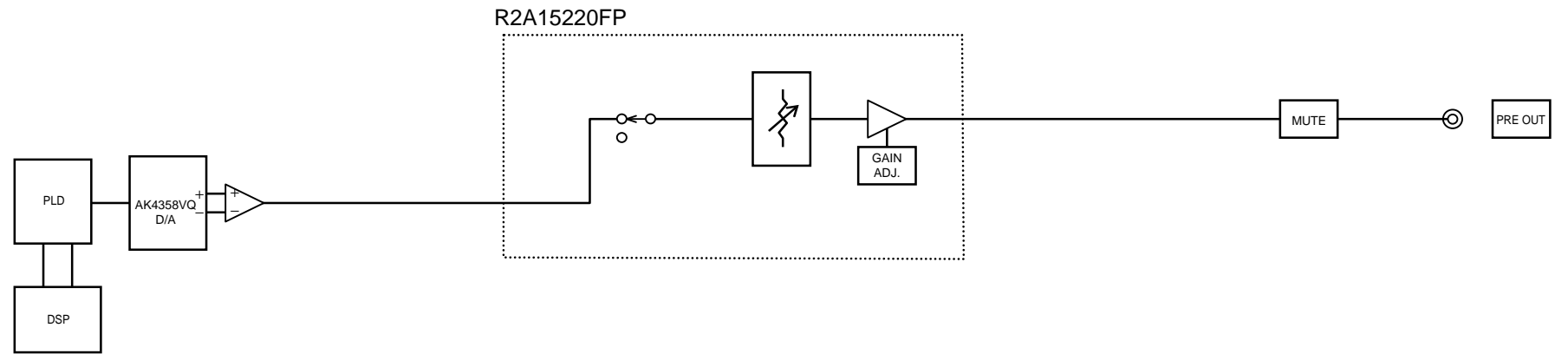


LA LEVEL DIAGRAM

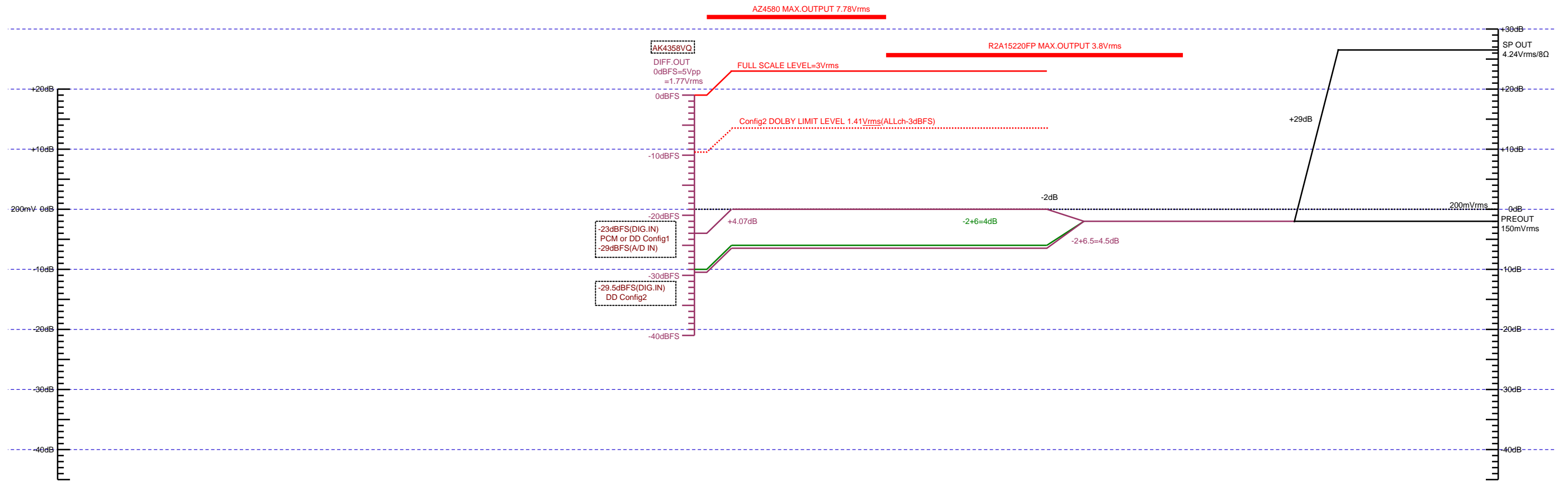
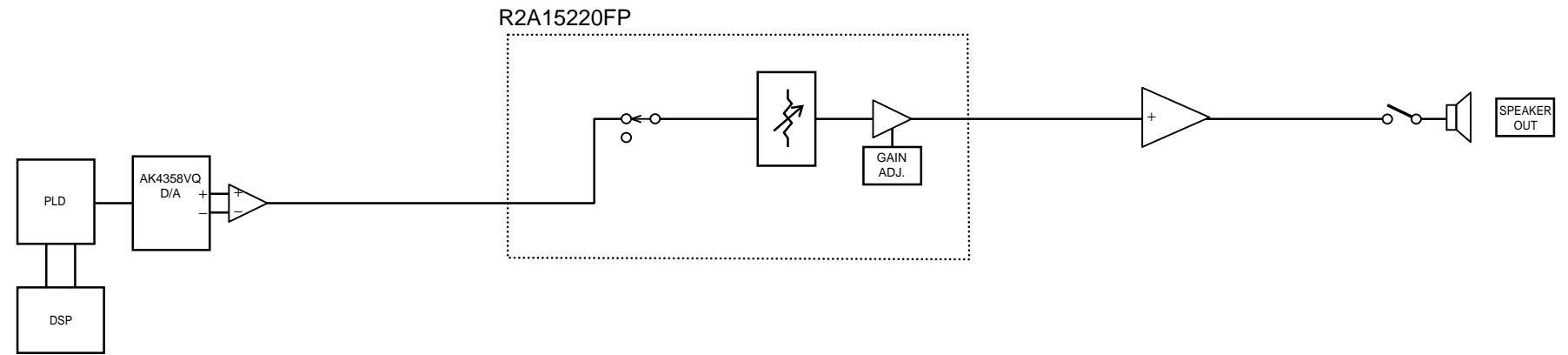
LEVEL DIAGRAM FRONT ch



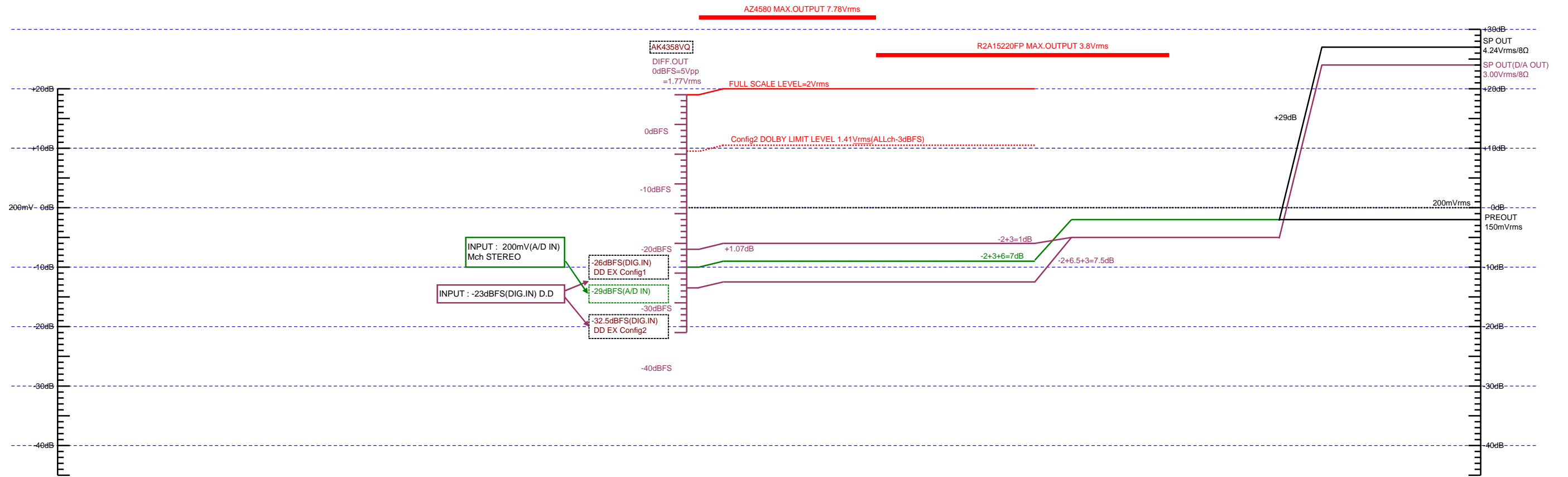
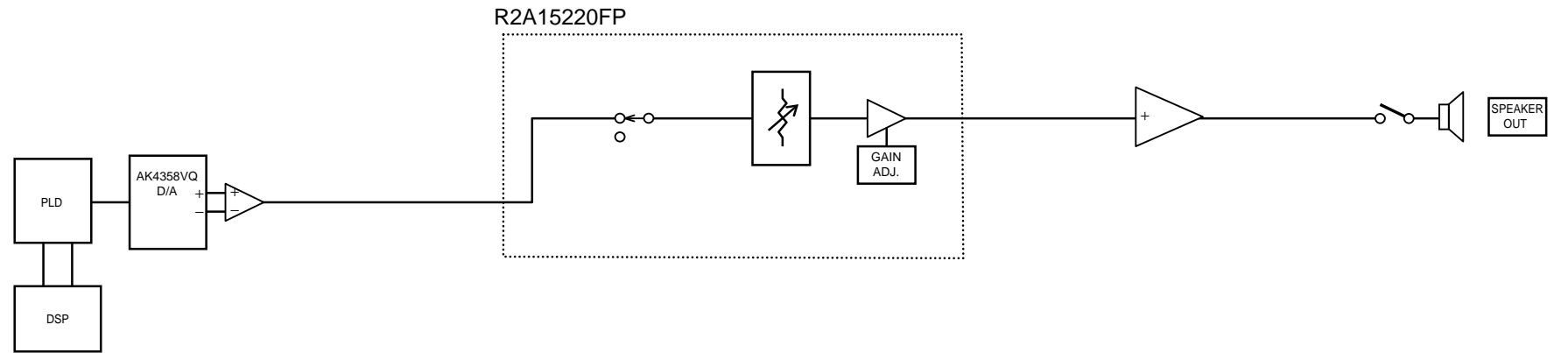
LEVEL DIAGRAM
SUBWOOFER ch

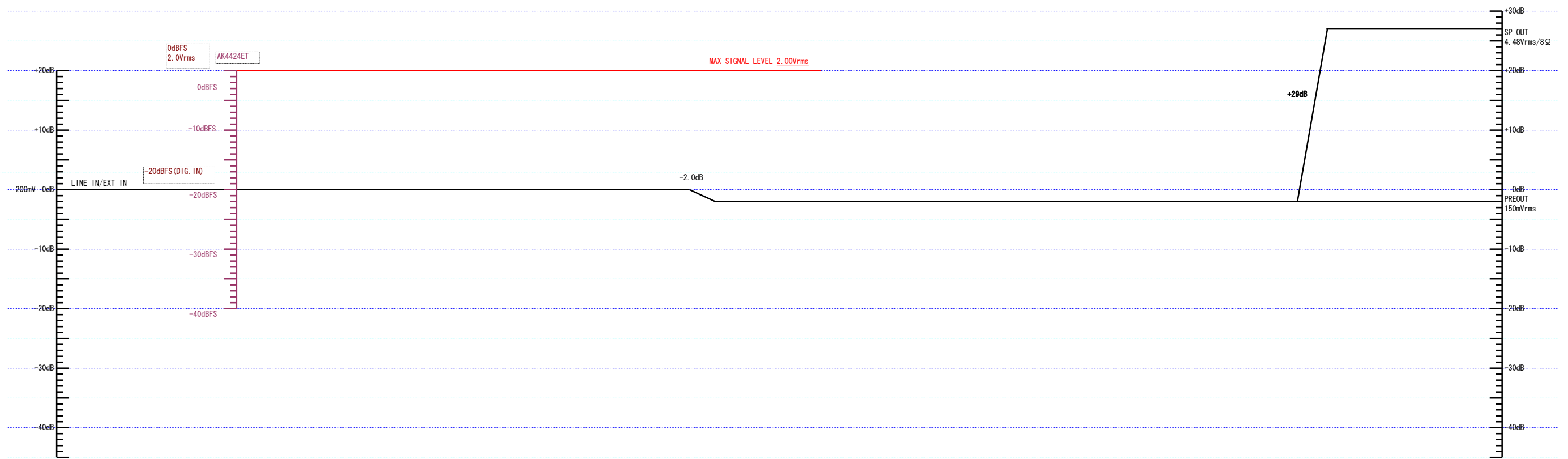
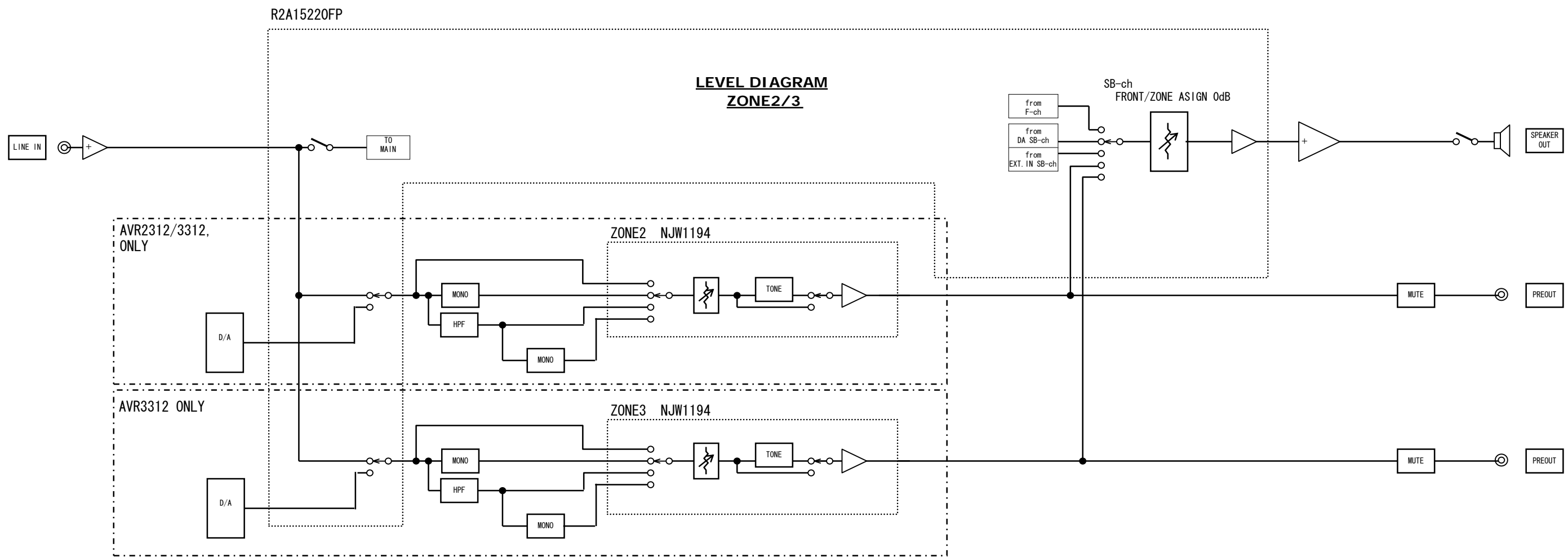


LEVEL DIAGRAM
SURROUND ch



LEVEL DIAGRAM
SURR.BACK ch

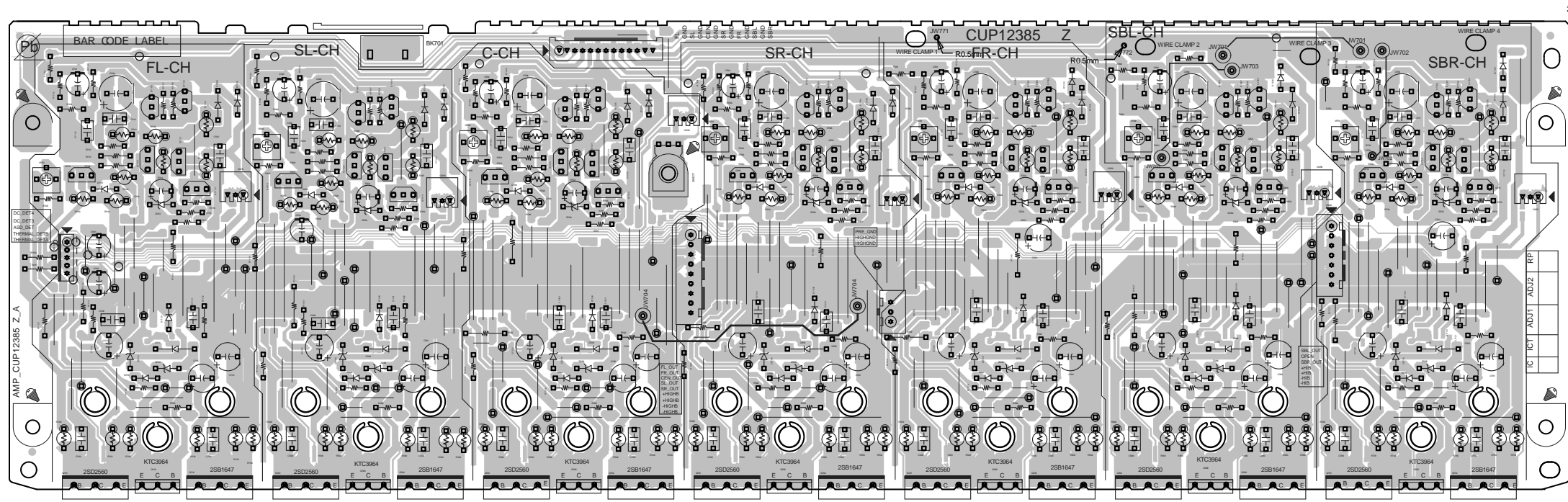




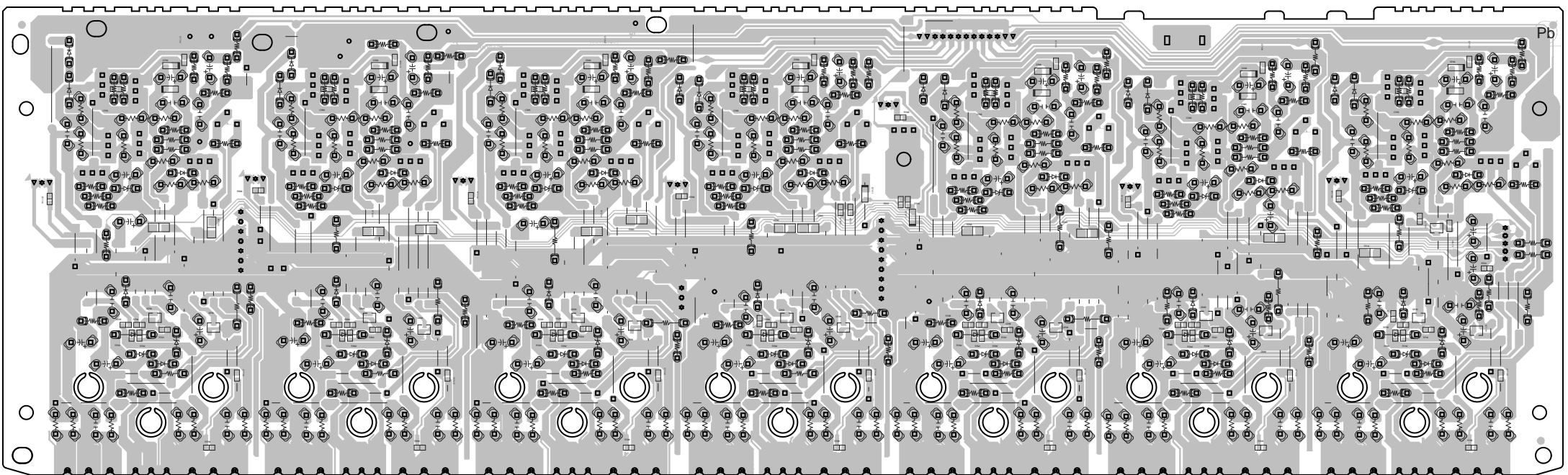
PRINTED WIRING BOARDS

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

7CH AMP (COMPONENT SIDE)



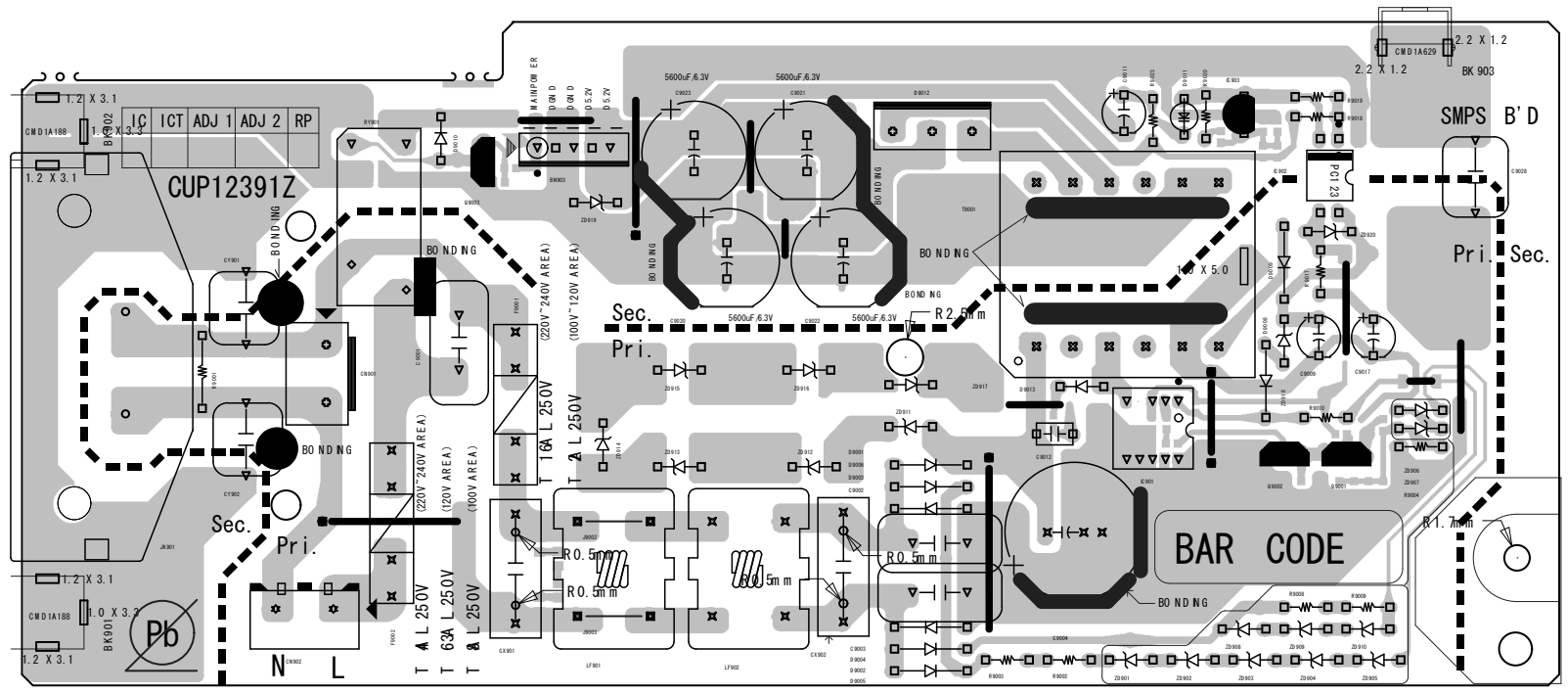
7CH AMP (FOIL SIDE)



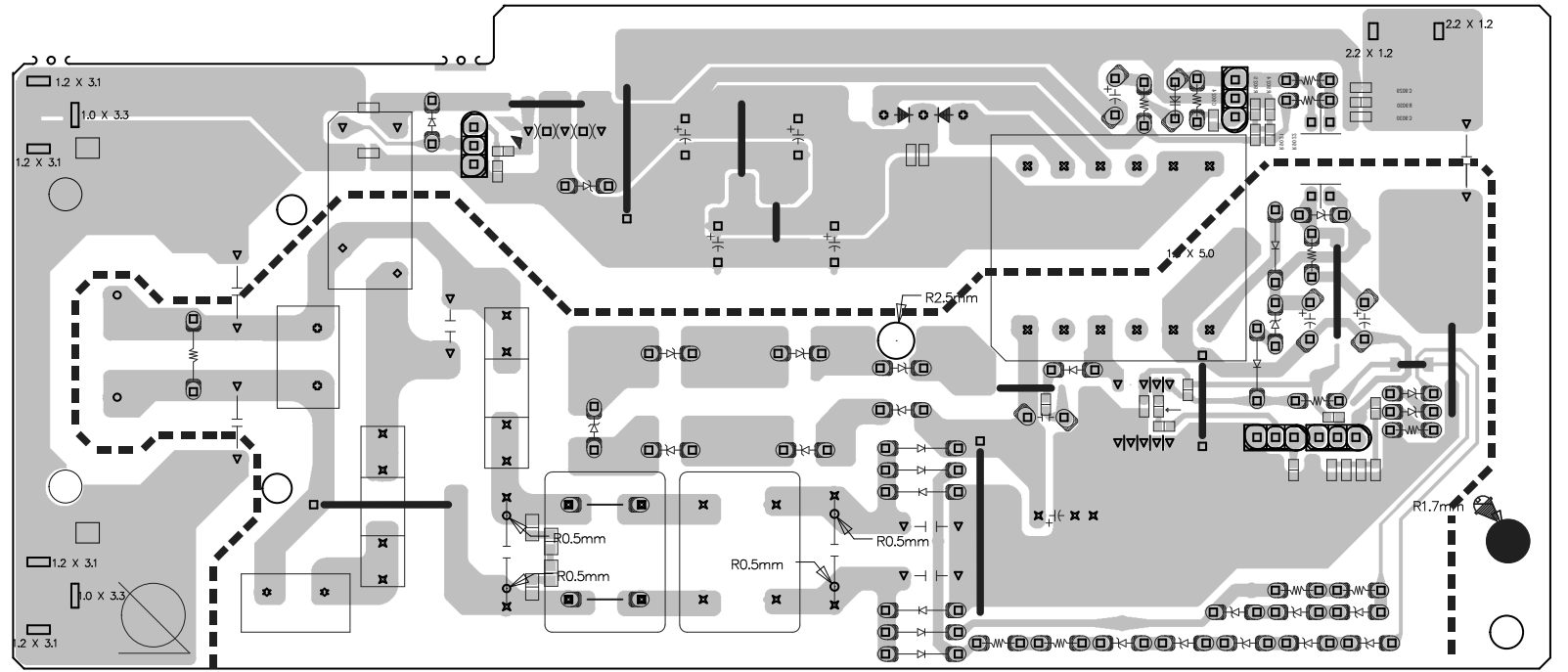
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

SPMS (COMPONENT SIDE)

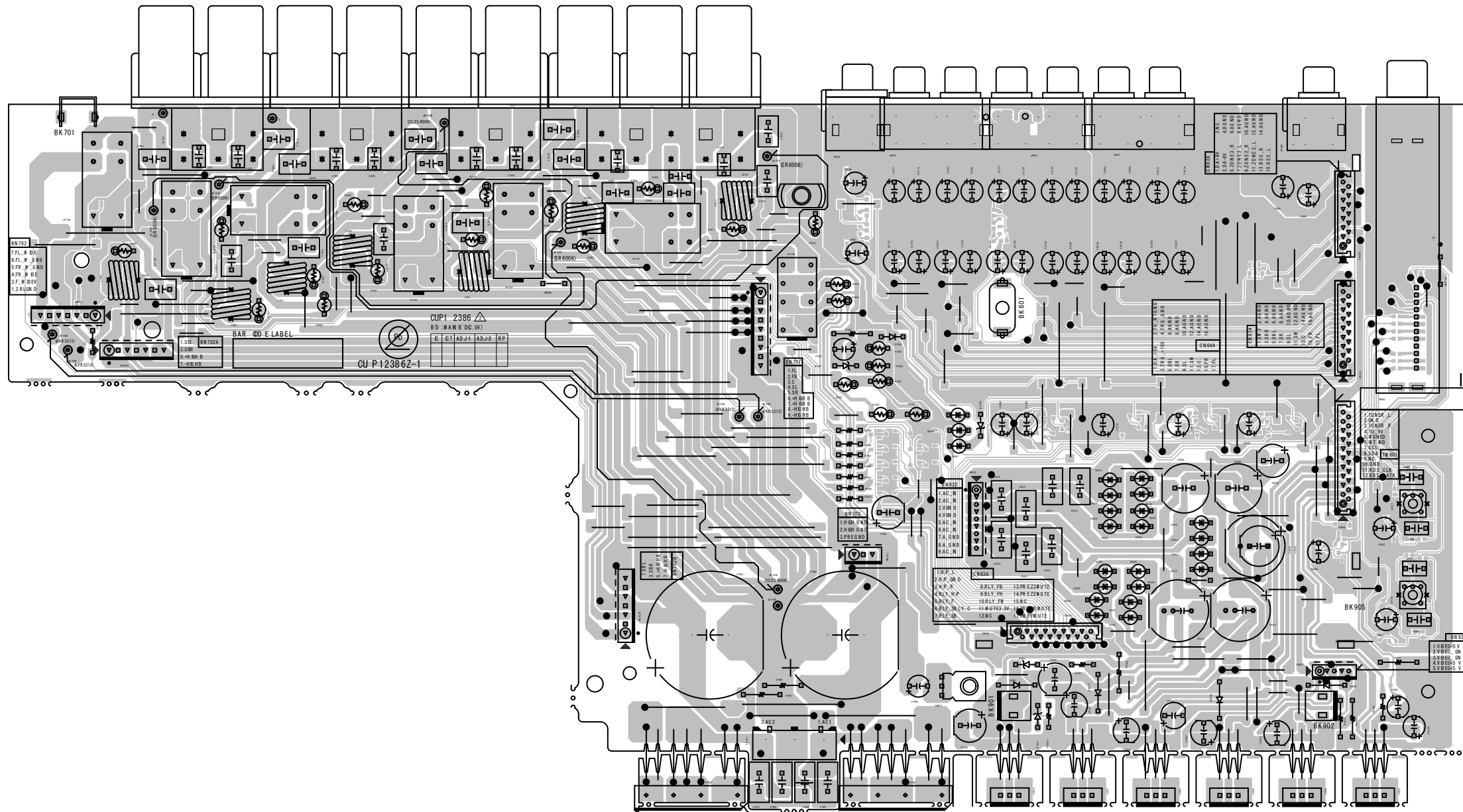


SMPS (FOIL SIDE)



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).

SPK_PREOUT (COMPONENT SIDE)



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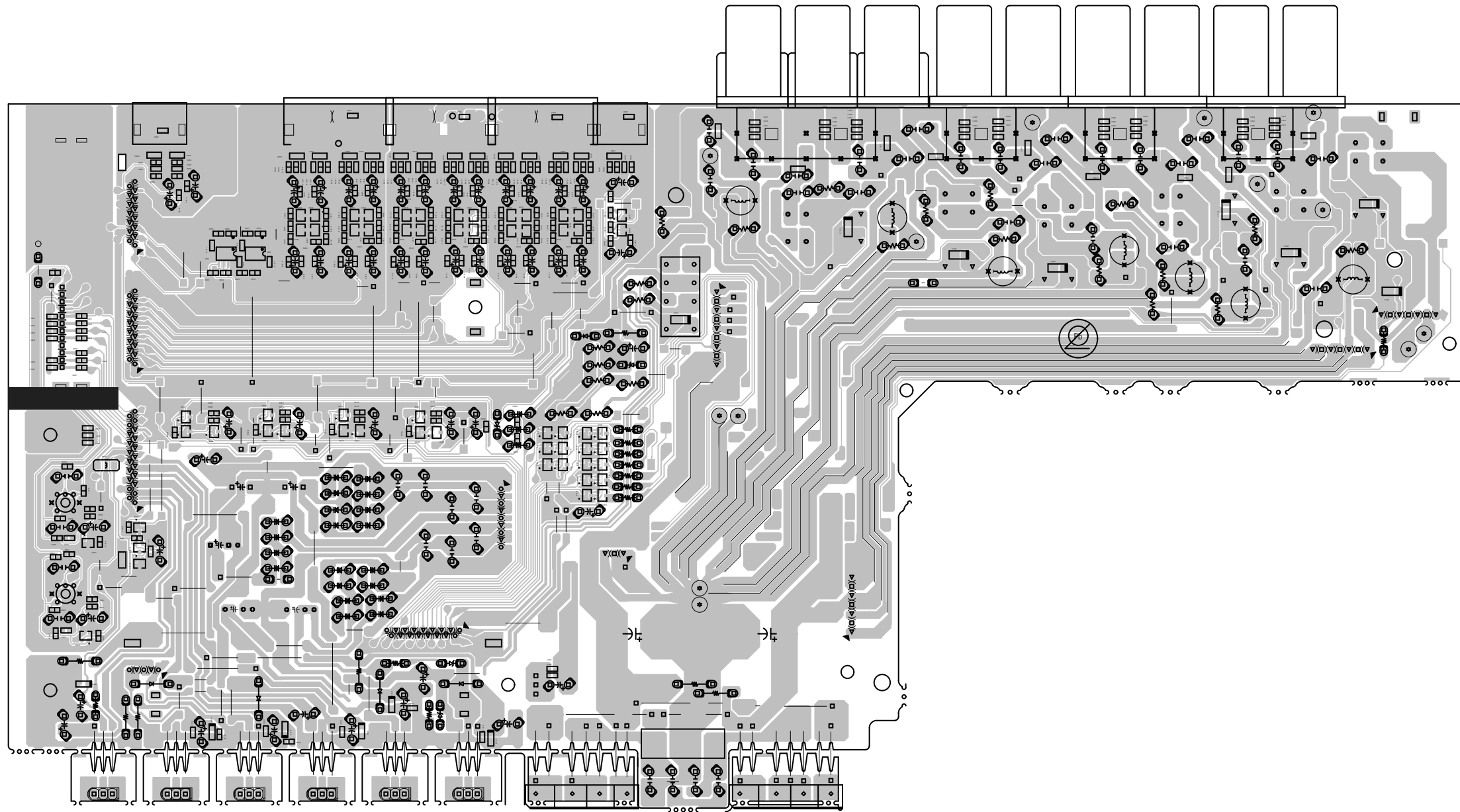
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

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

SPK_PREOUT (FOIL SIDE)

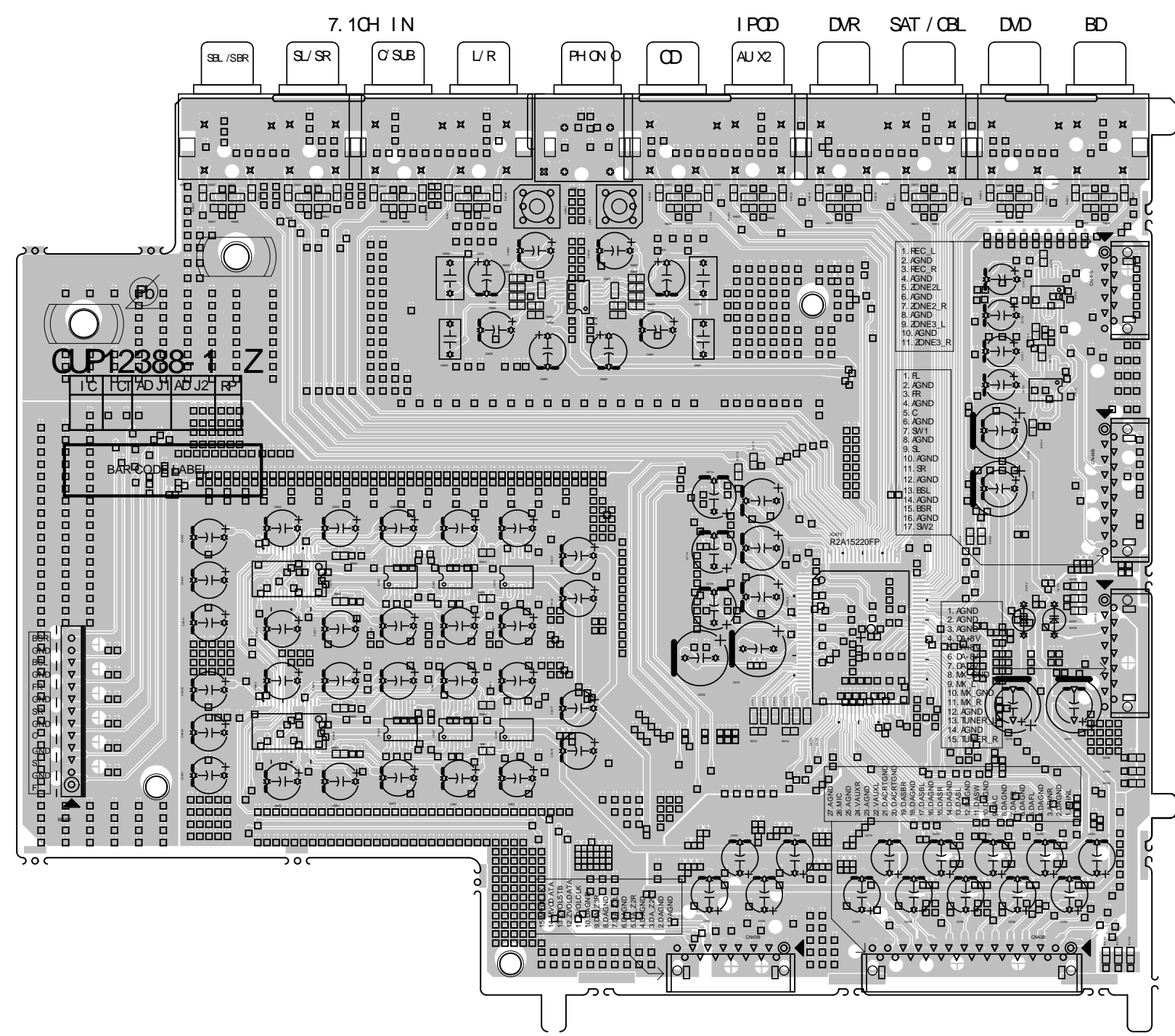
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鉛フリー半田
 半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

INPUT (COMPONENT SIDE)



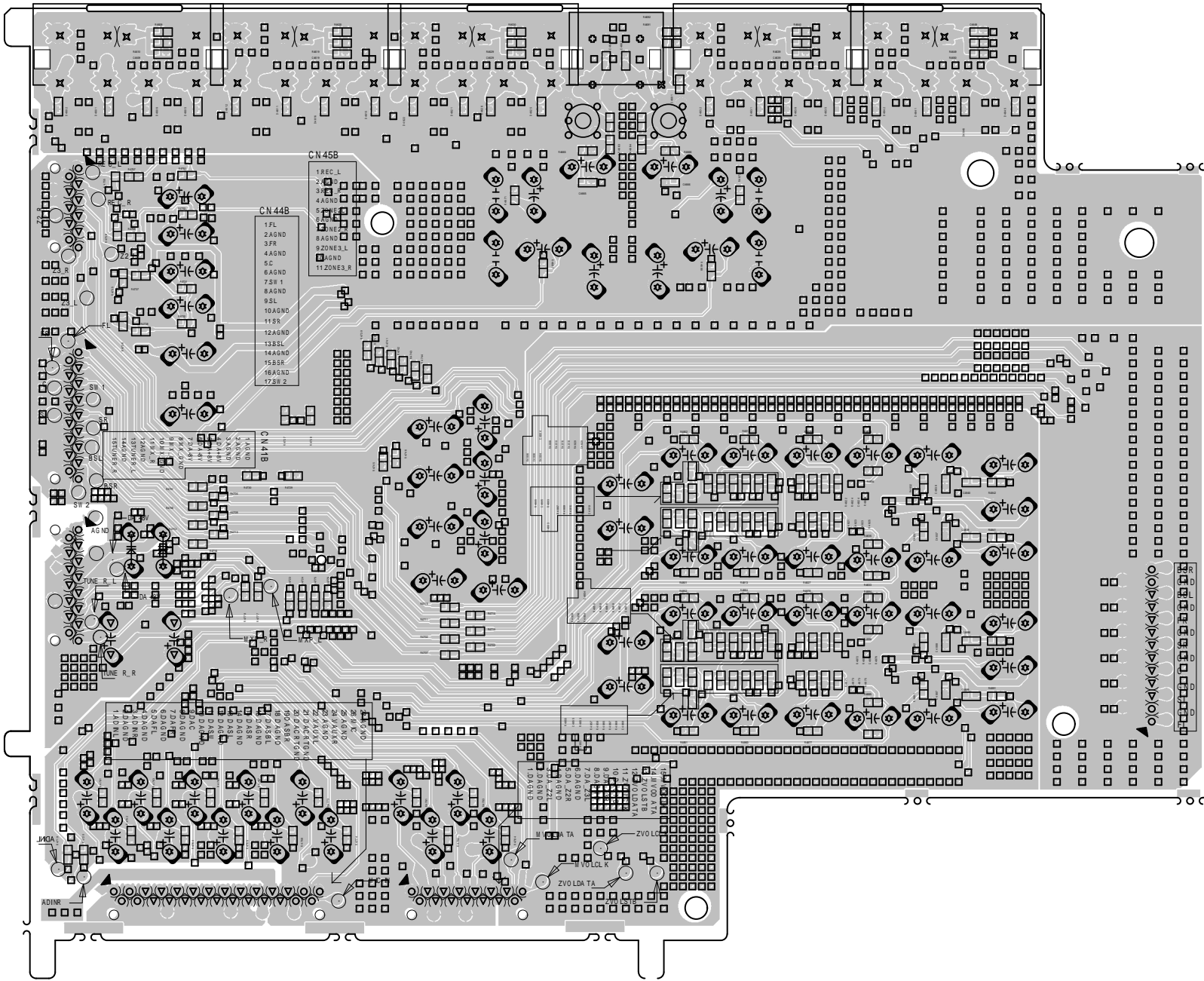
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鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

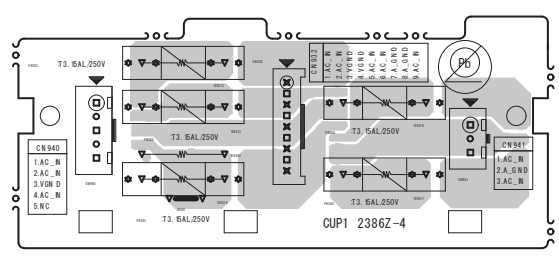
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

INPUT (FOIL SIDE)

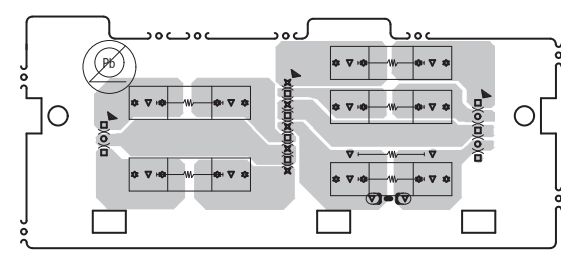


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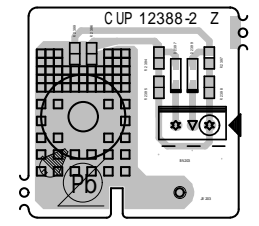
FUSE (COMPONENT SIDE)



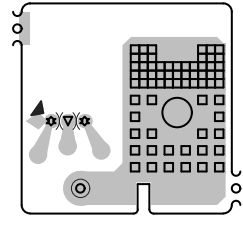
FUSE (FOIL SIDE)



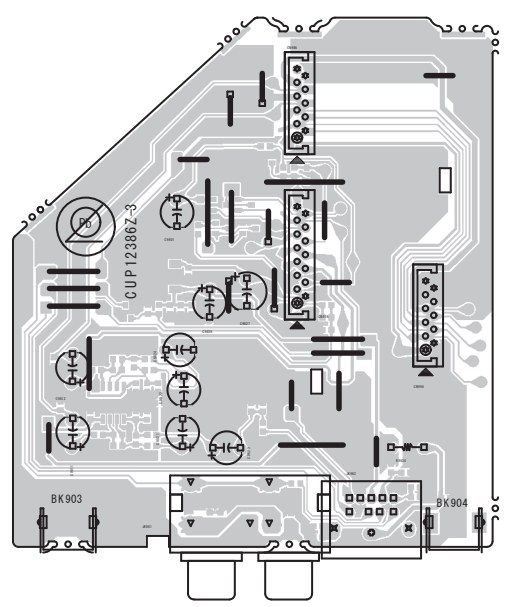
POSISTOR (COMPONENT SIDE)



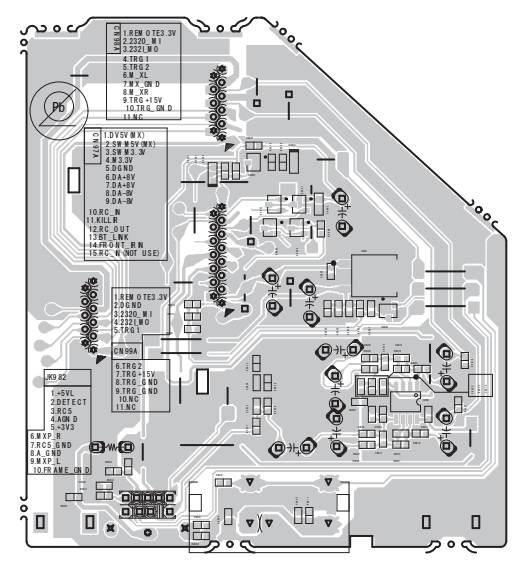
POSISTOR (FOIL SIDE)



RS232C_CNT (COMPONENT SIDE)



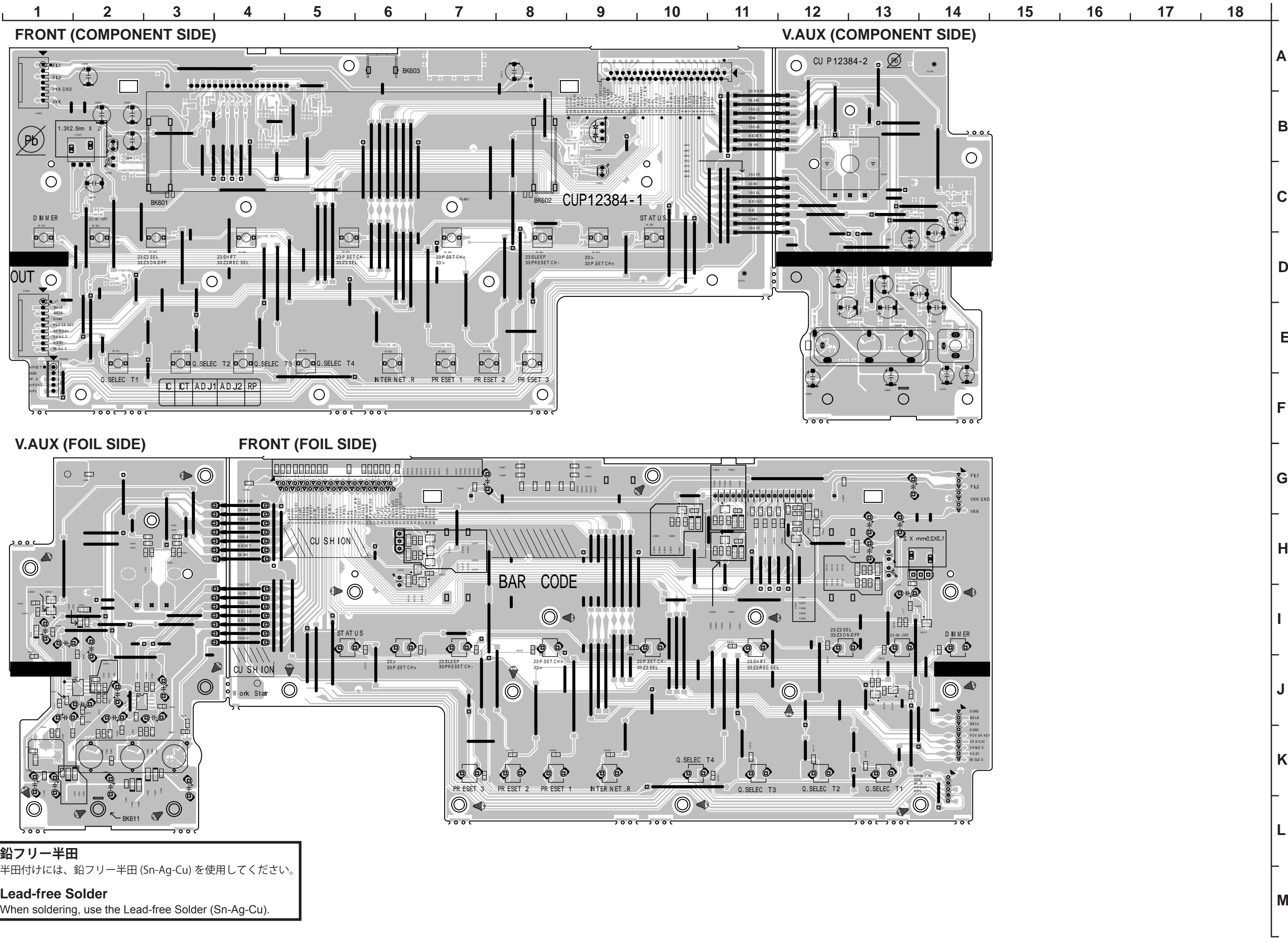
RS232C_CNT (FOIL SIDE)



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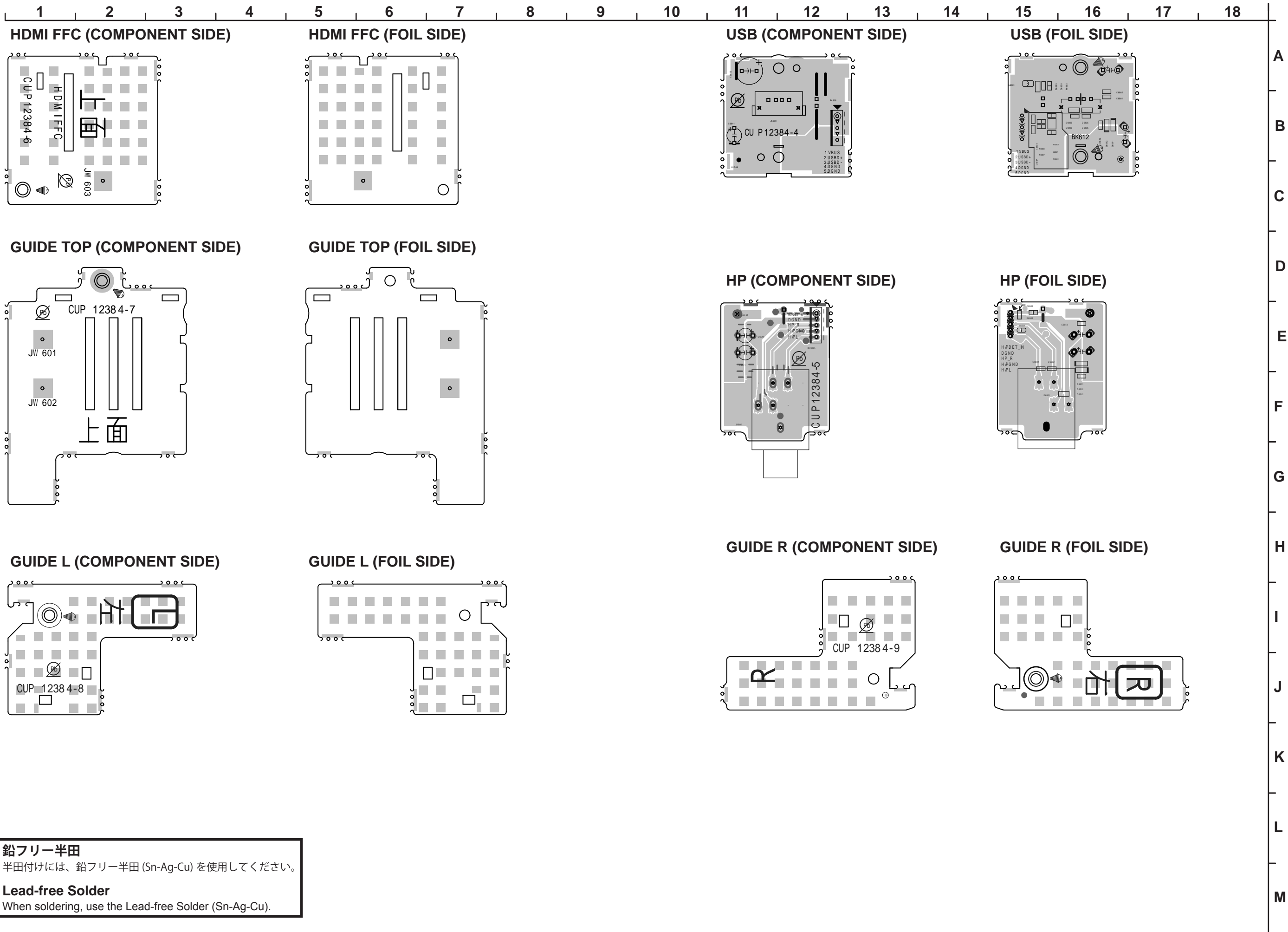
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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



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。

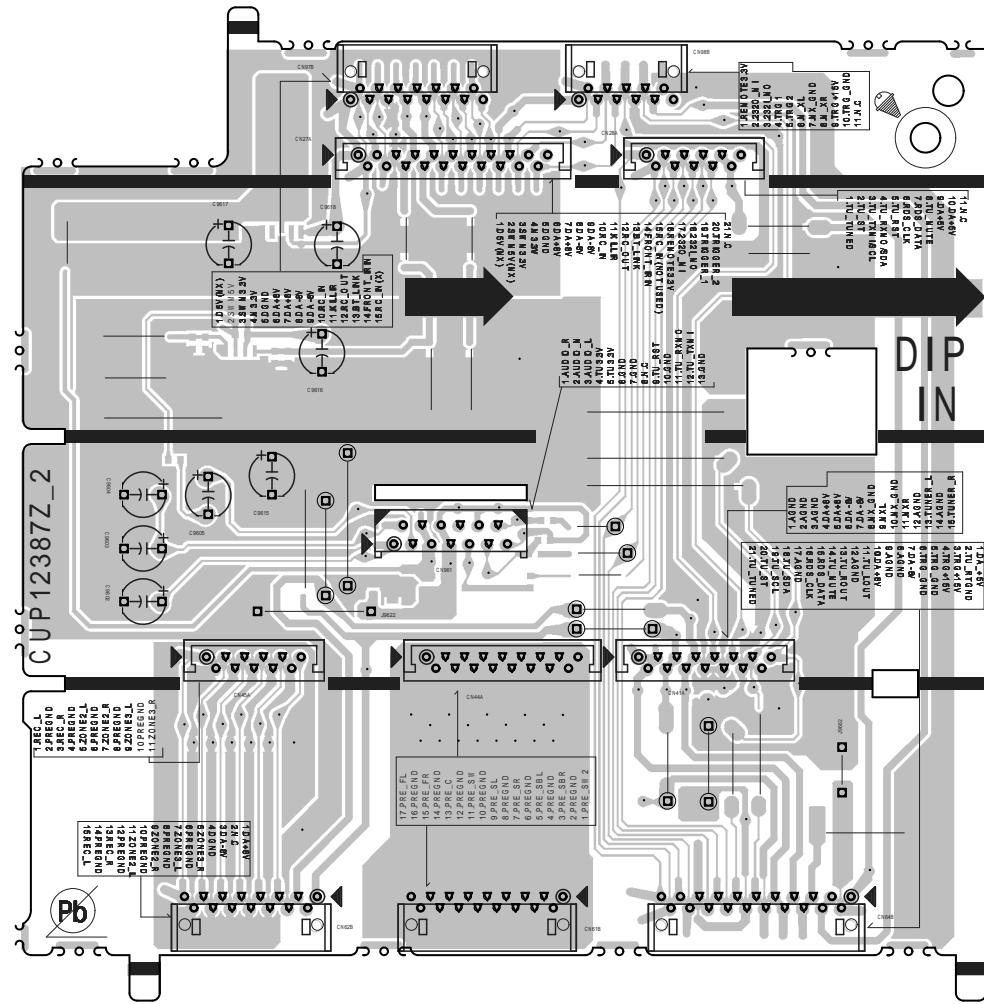
Lead-free Solder
 When soldering, use the Lead-free Solder (Sn-Ag-Cu).



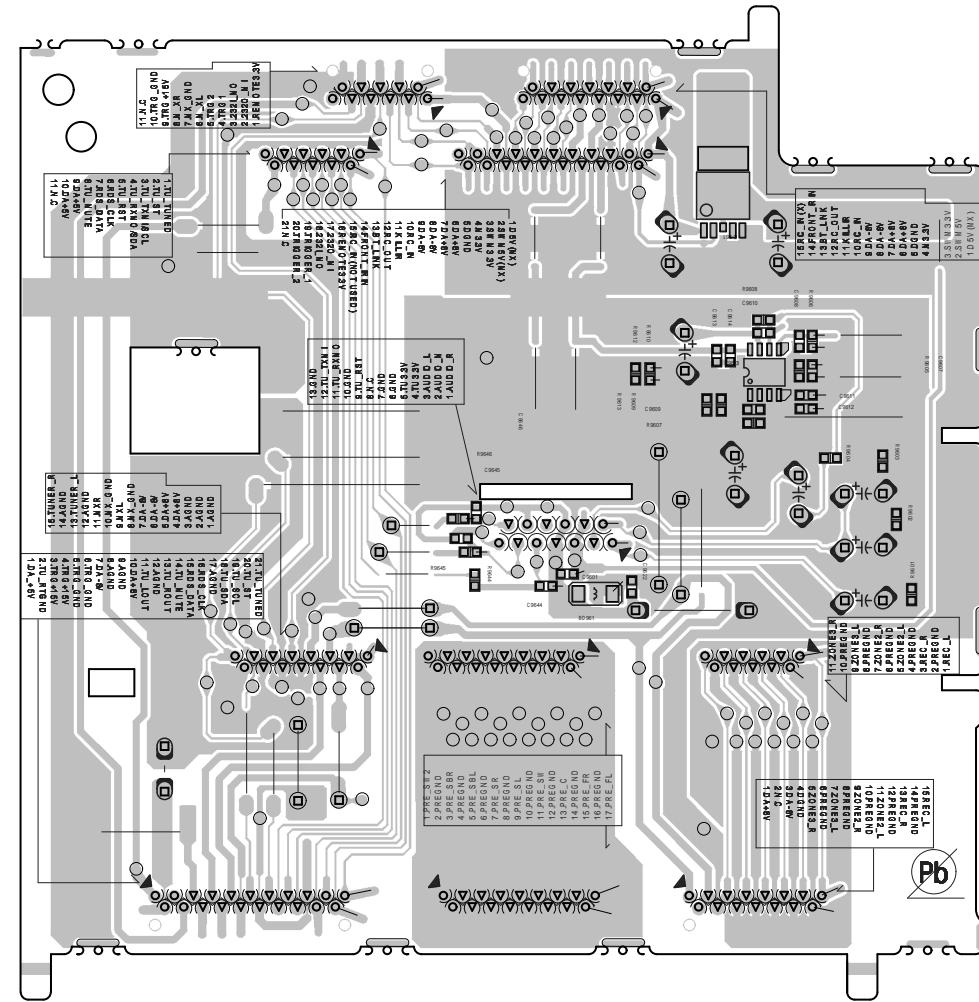
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

SIDE_CNT (COMPONENT SIDE)

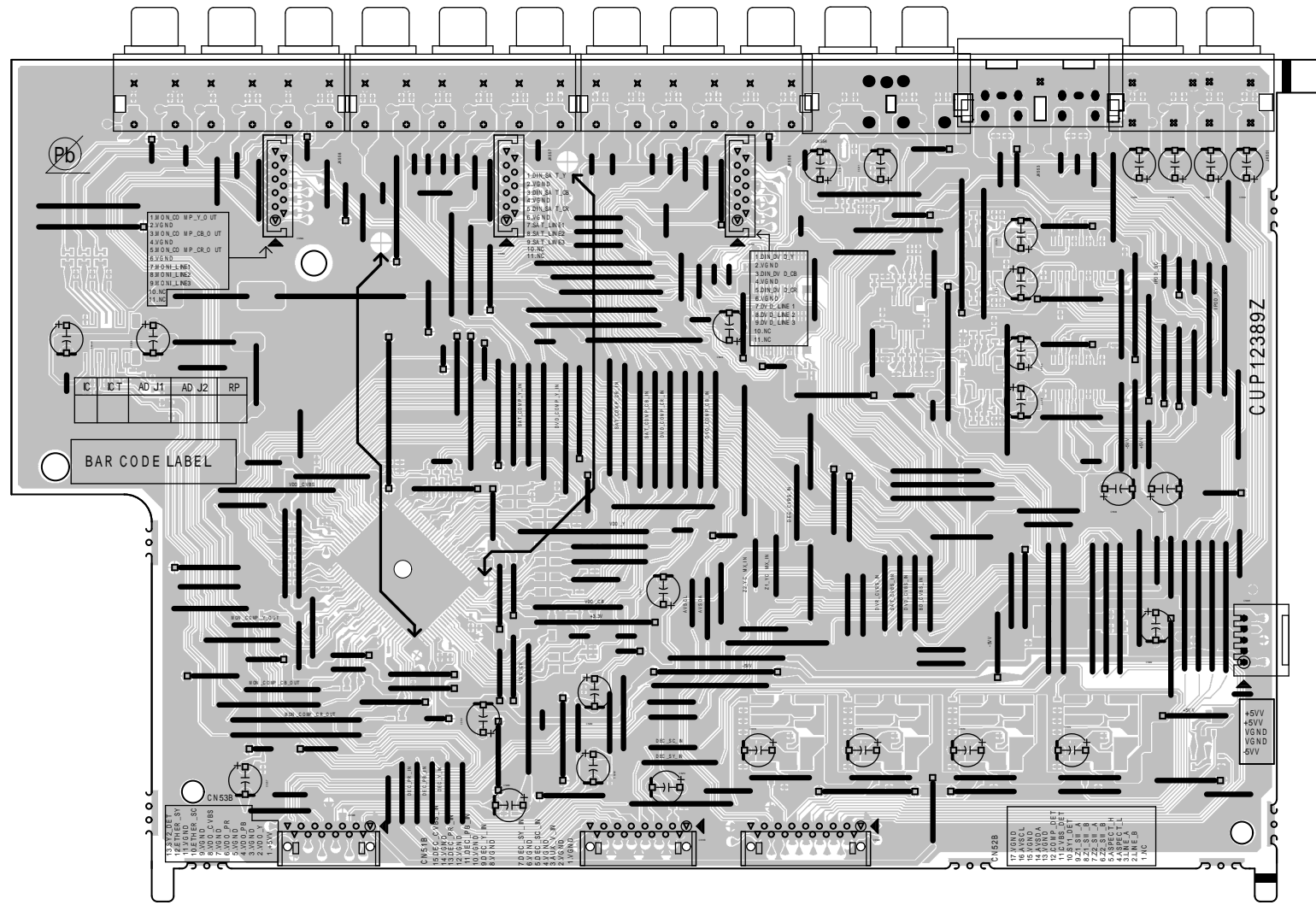


SIDE_CNT (FOIL SIDE)



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

VIDEO (COMPONENT SIDE)



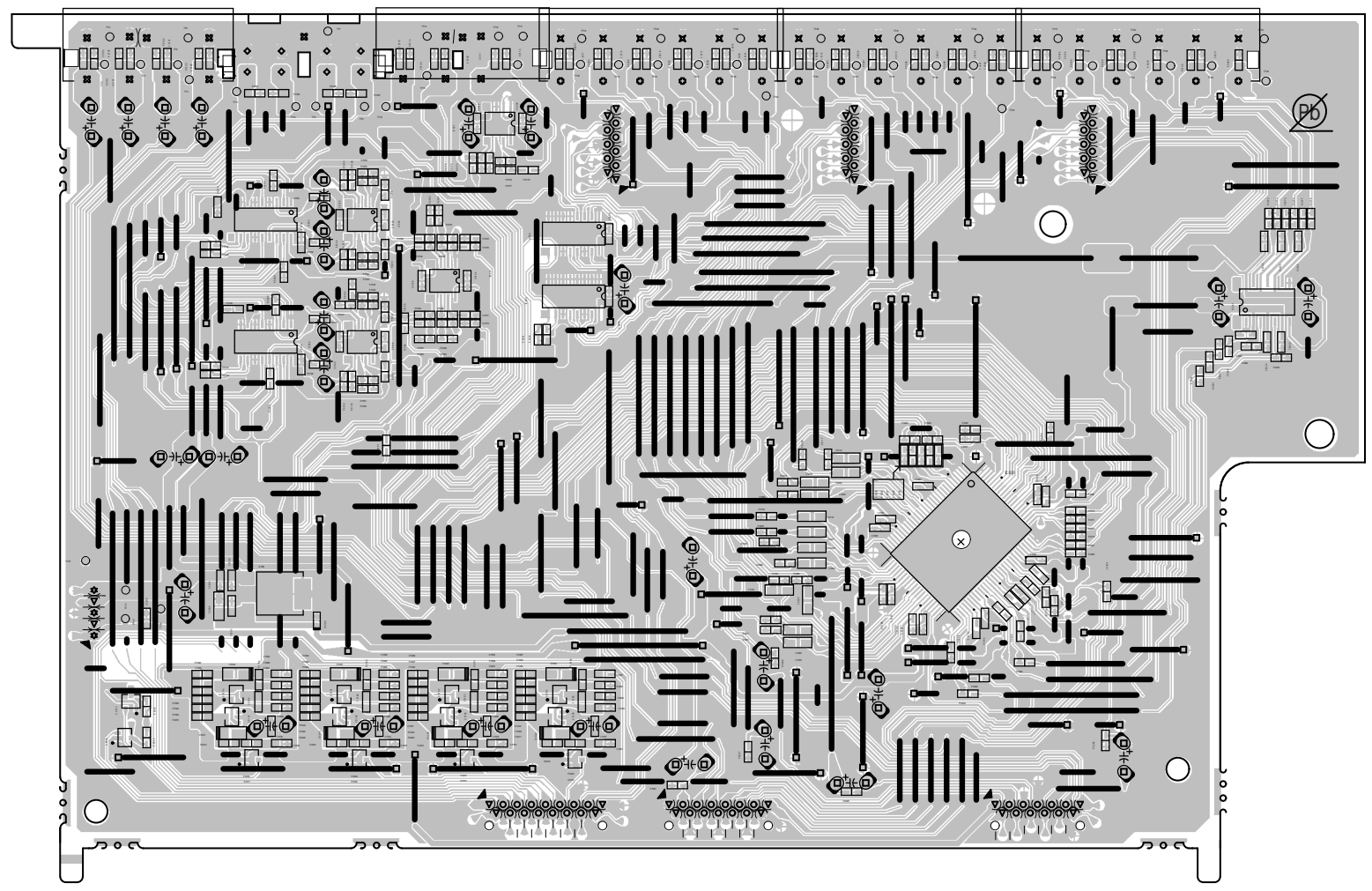
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鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

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

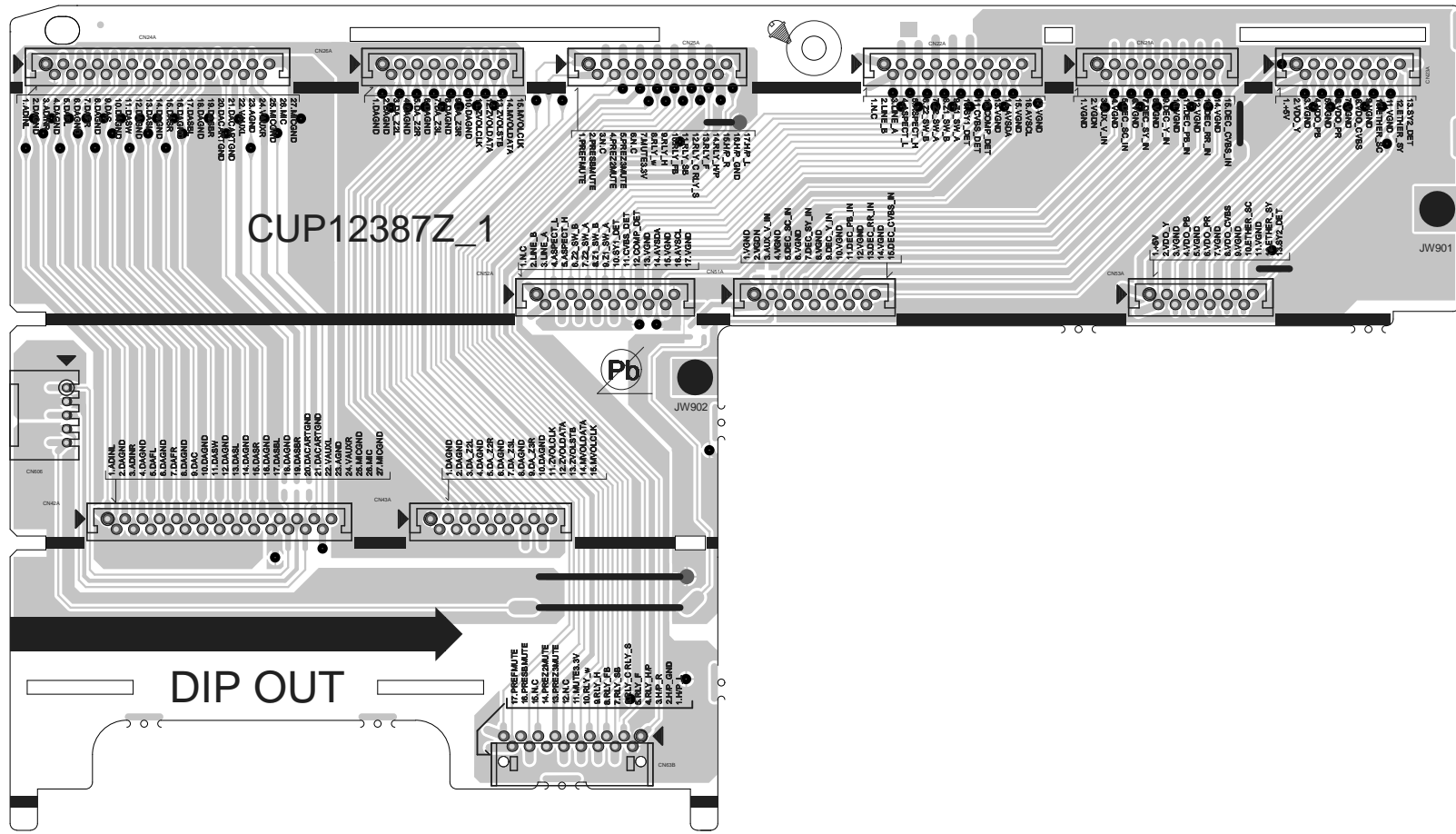
VIDEO (FOIL SIDE)



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

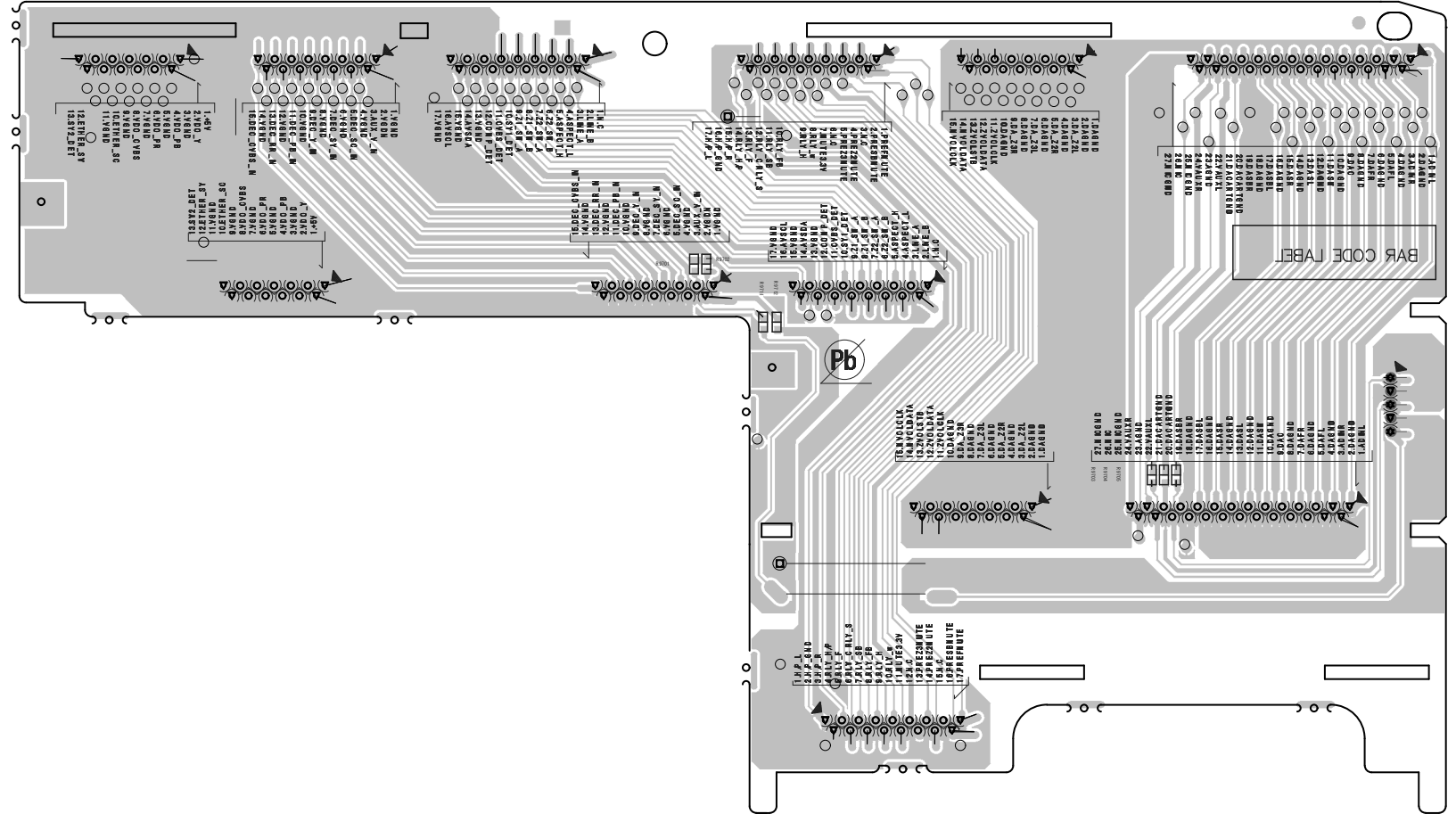
FRONT CNT (COMPONENT SIDE)



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

FRONT CNT (FOIL SIDE)

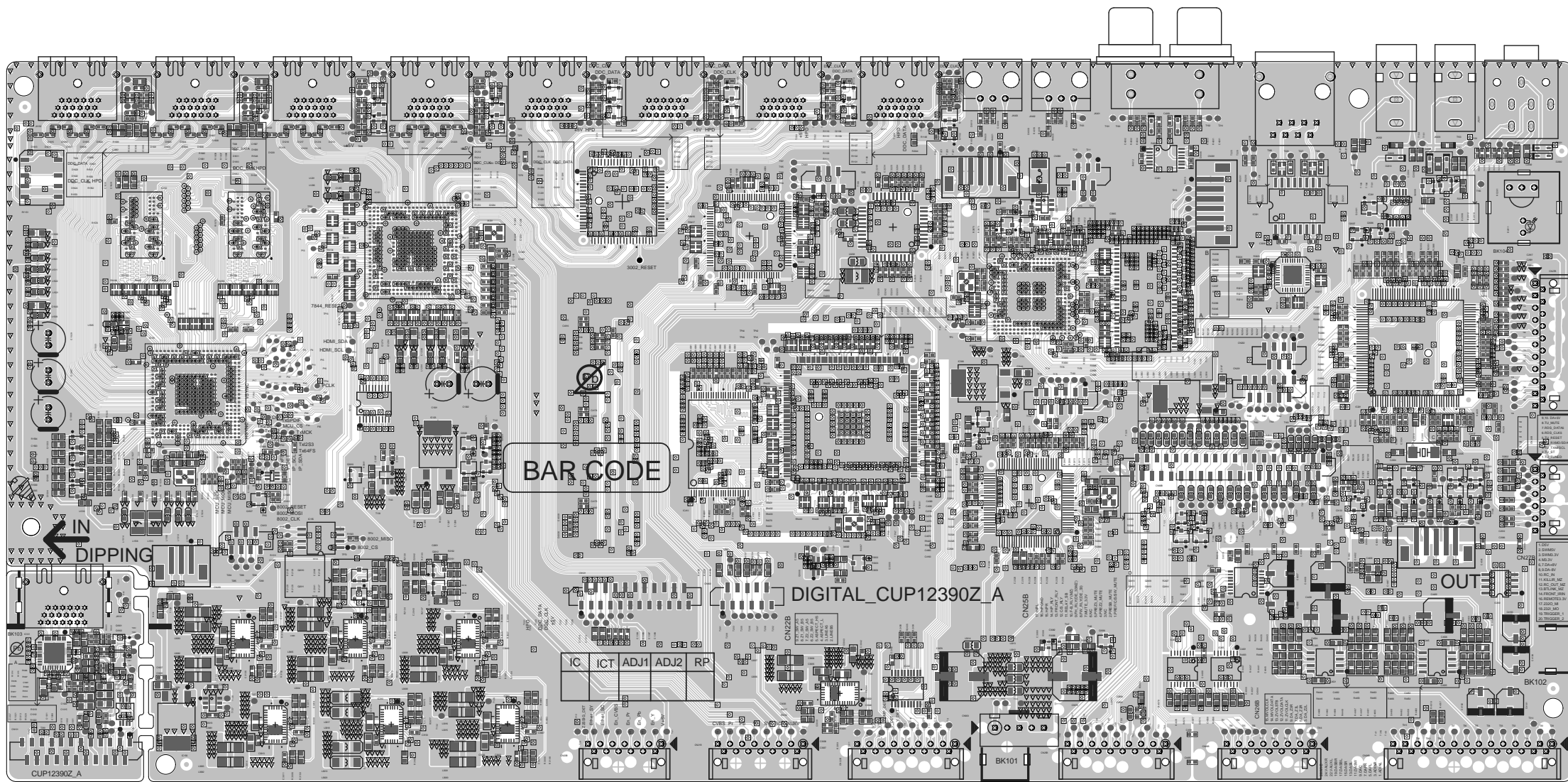


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HDMI (COMPONENT SIDE)

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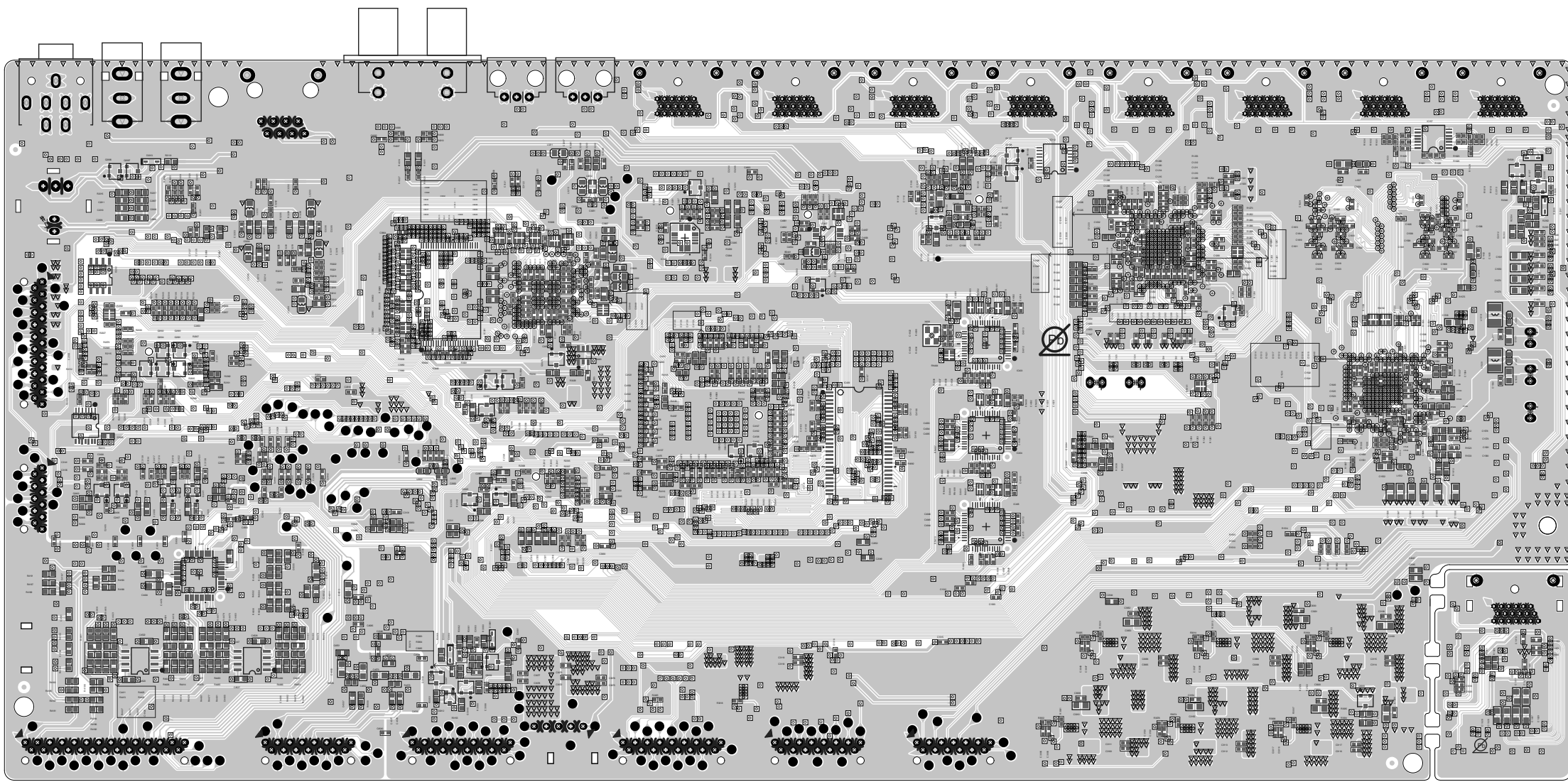


鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

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

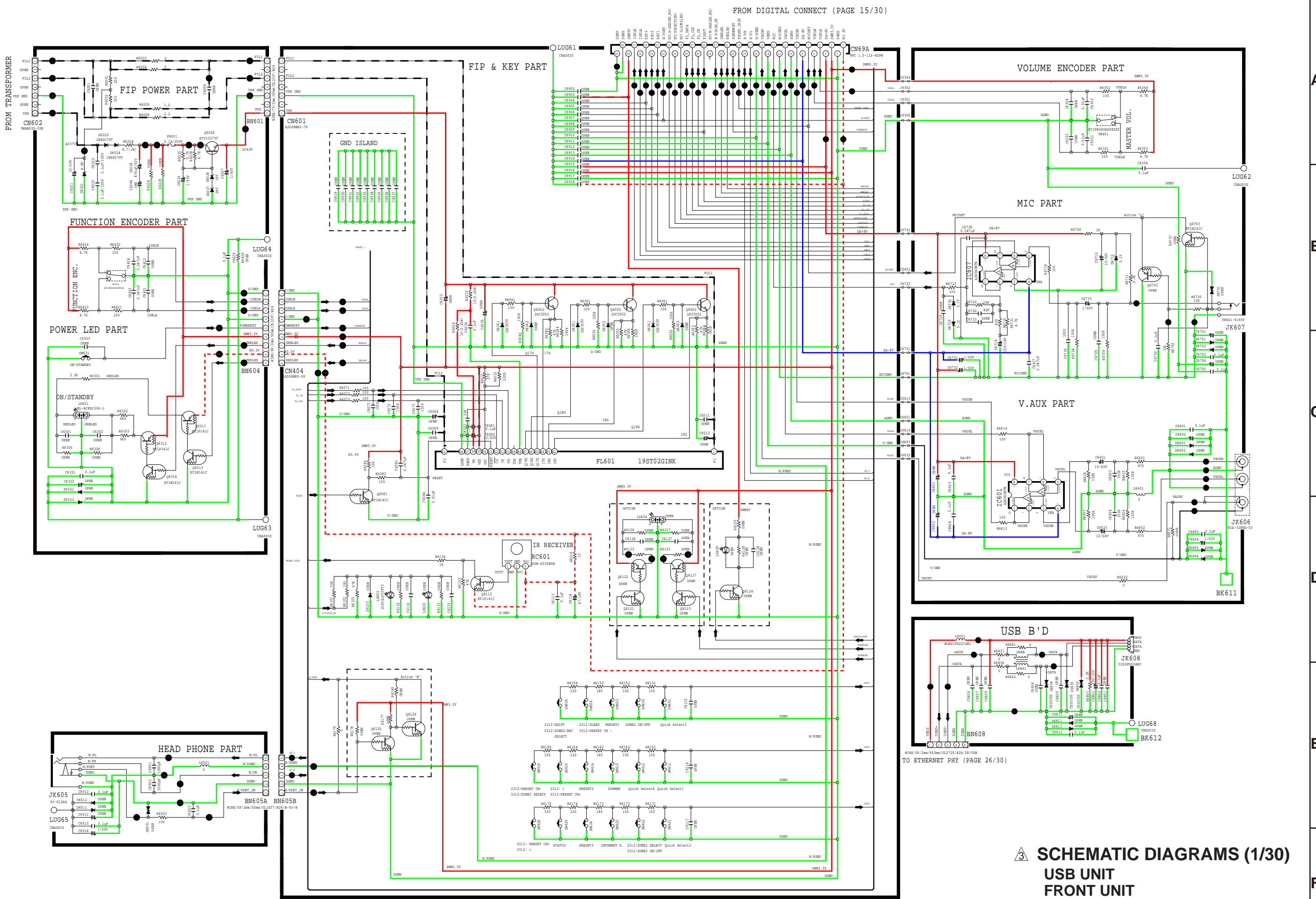
HDMI (FOIL SIDE)



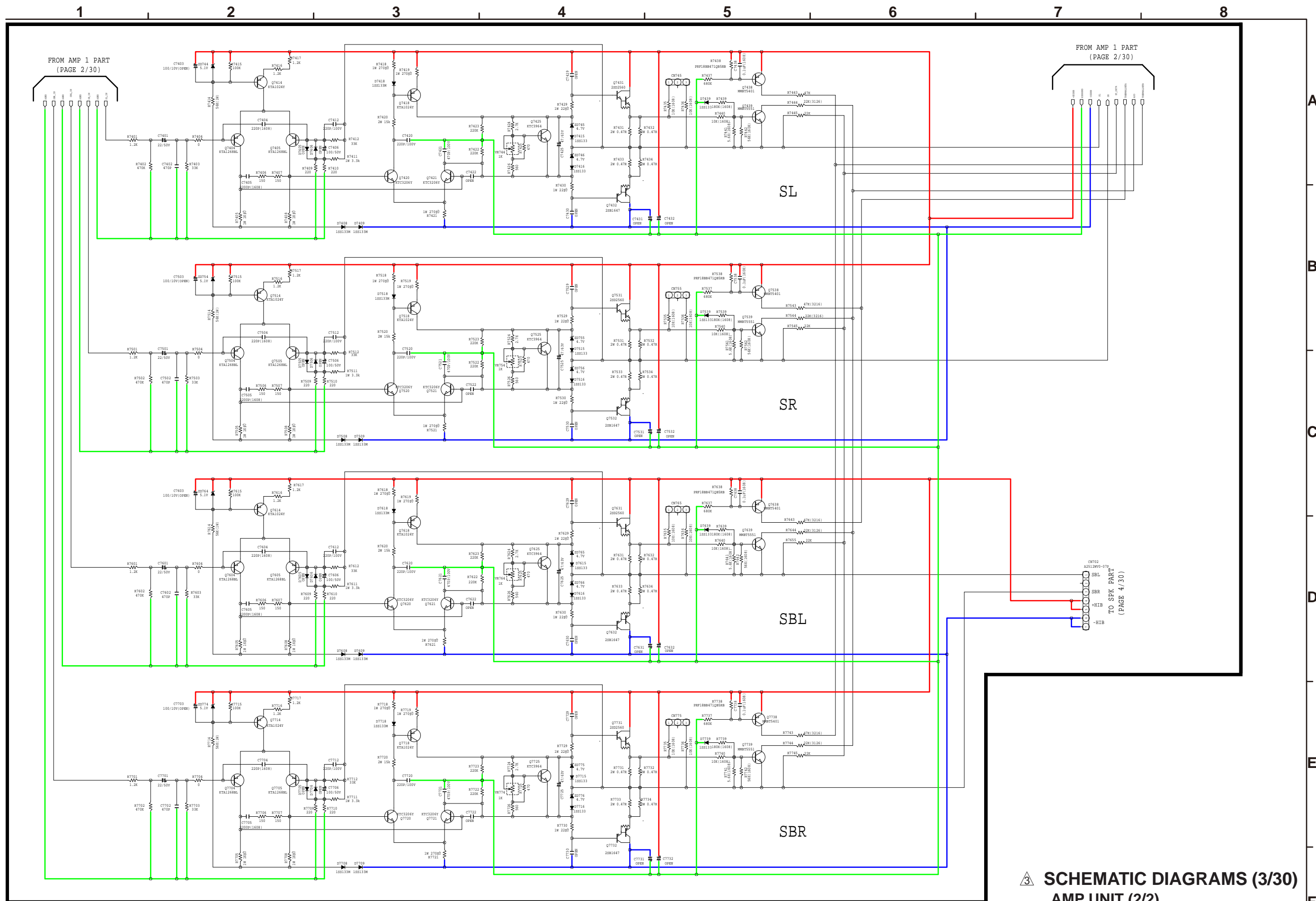
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鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

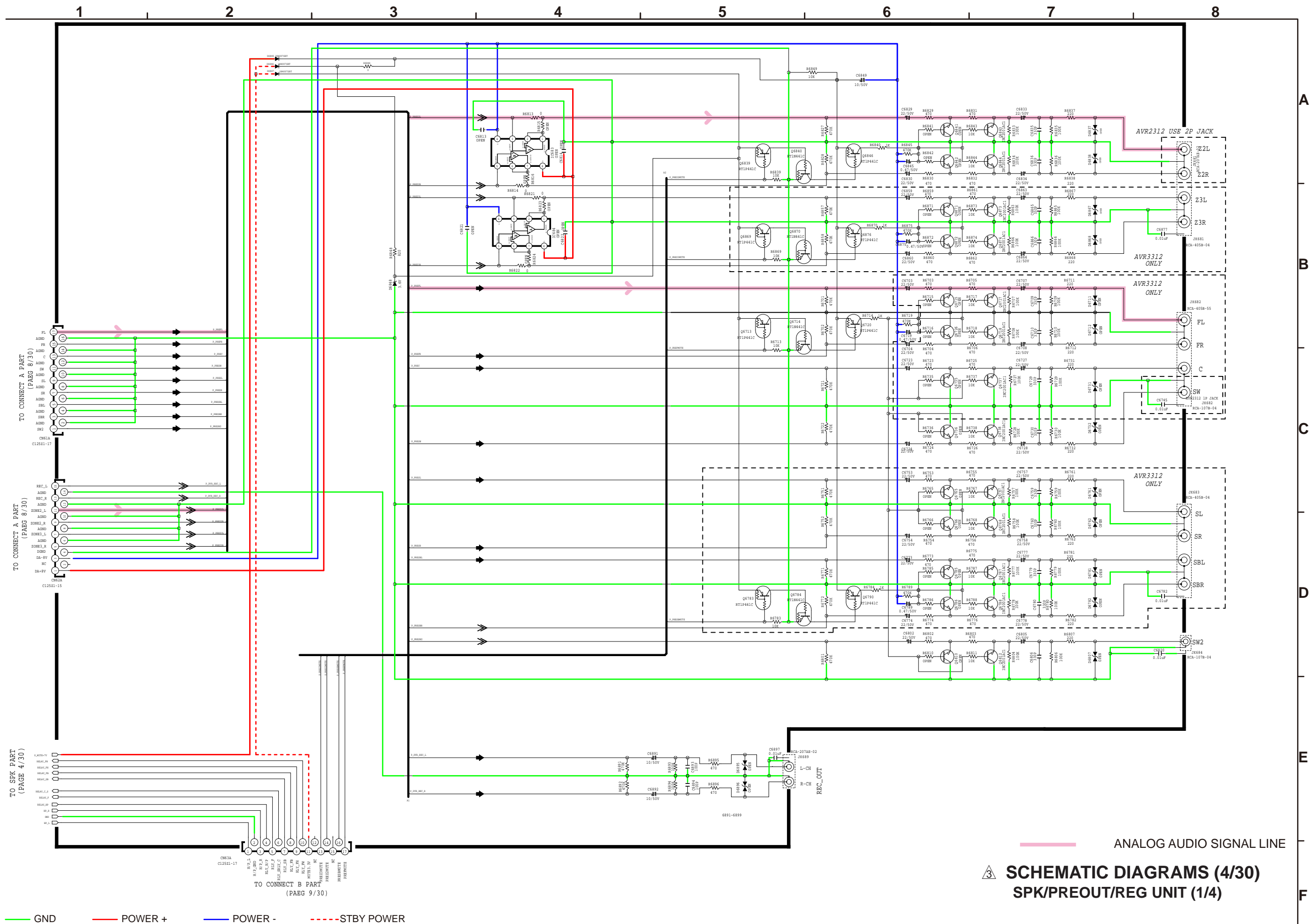
Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

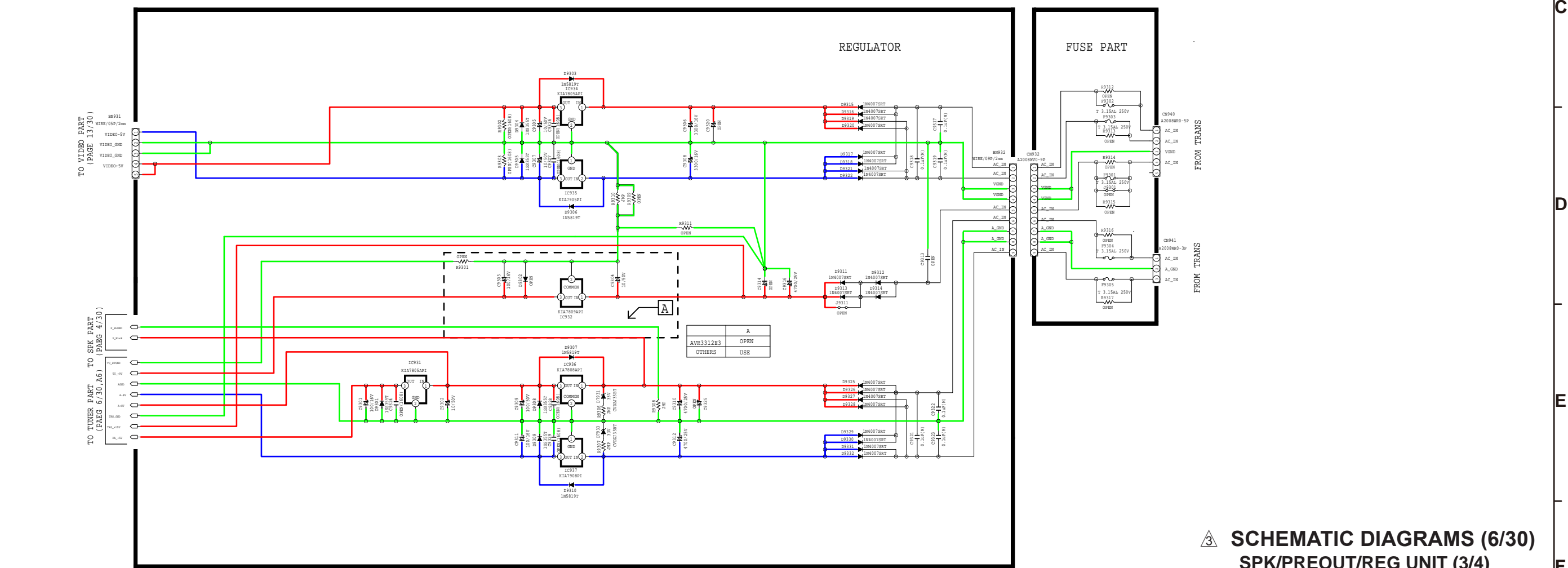
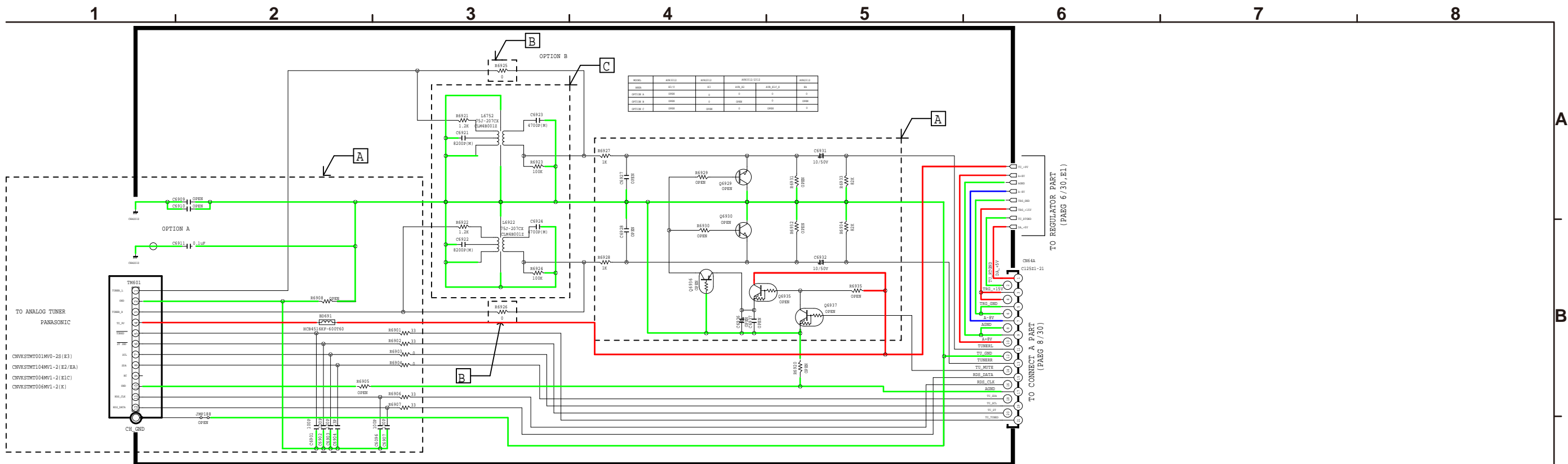


SCHEMATIC DIAGRAMS (1/30)
USB UNIT
FRONT UNIT



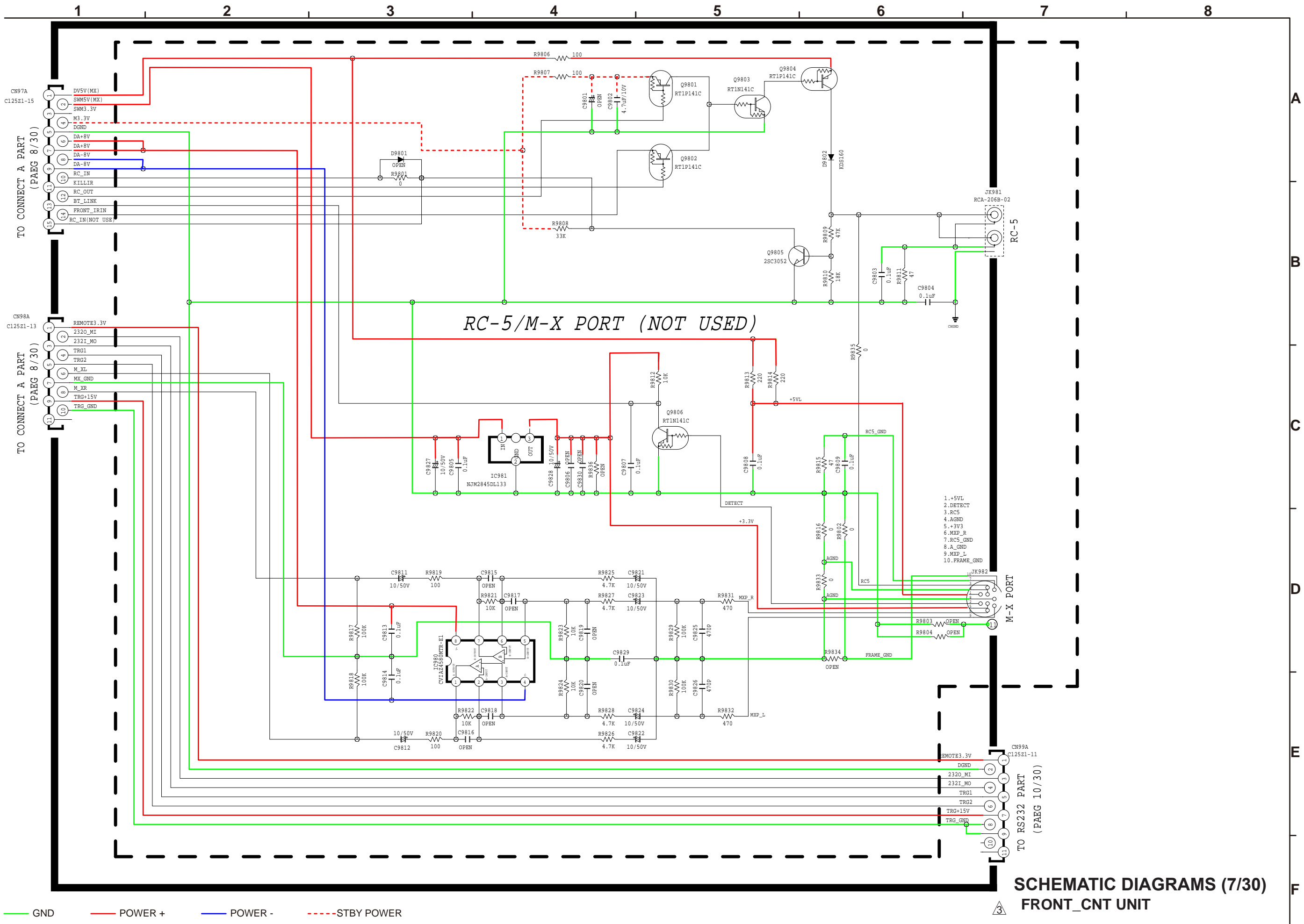
— GND — POWER + — POWER - - - - STBY POWER





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

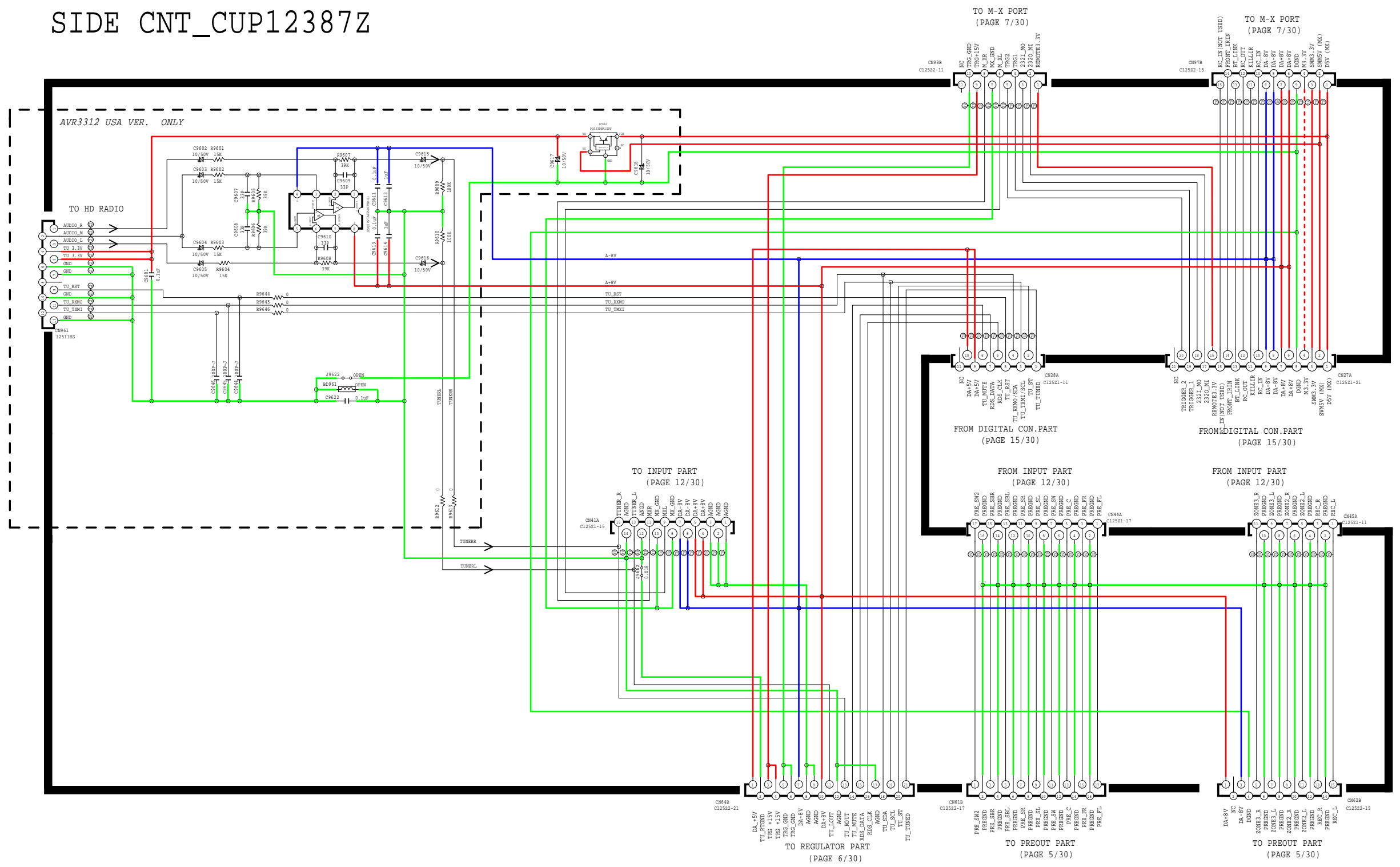
⚠ SCHEMATIC DIAGRAMS (6/30)
SPK/PREOUT/REG UNIT (3/4)



SCHEMATIC DIAGRAMS (7/30)
FRONT_CNT UNIT

SIDE CNT_CUP12387Z

OPTION	E3	OTHERS
AVR3312	HD TUNER	ANALOG TUNER
AVR2312	ANALOG TUNER	ANALOG TUNER



SCHEMATIC DIAGRAMS (8/30)
CNT/RS232C UNIT (1/4)

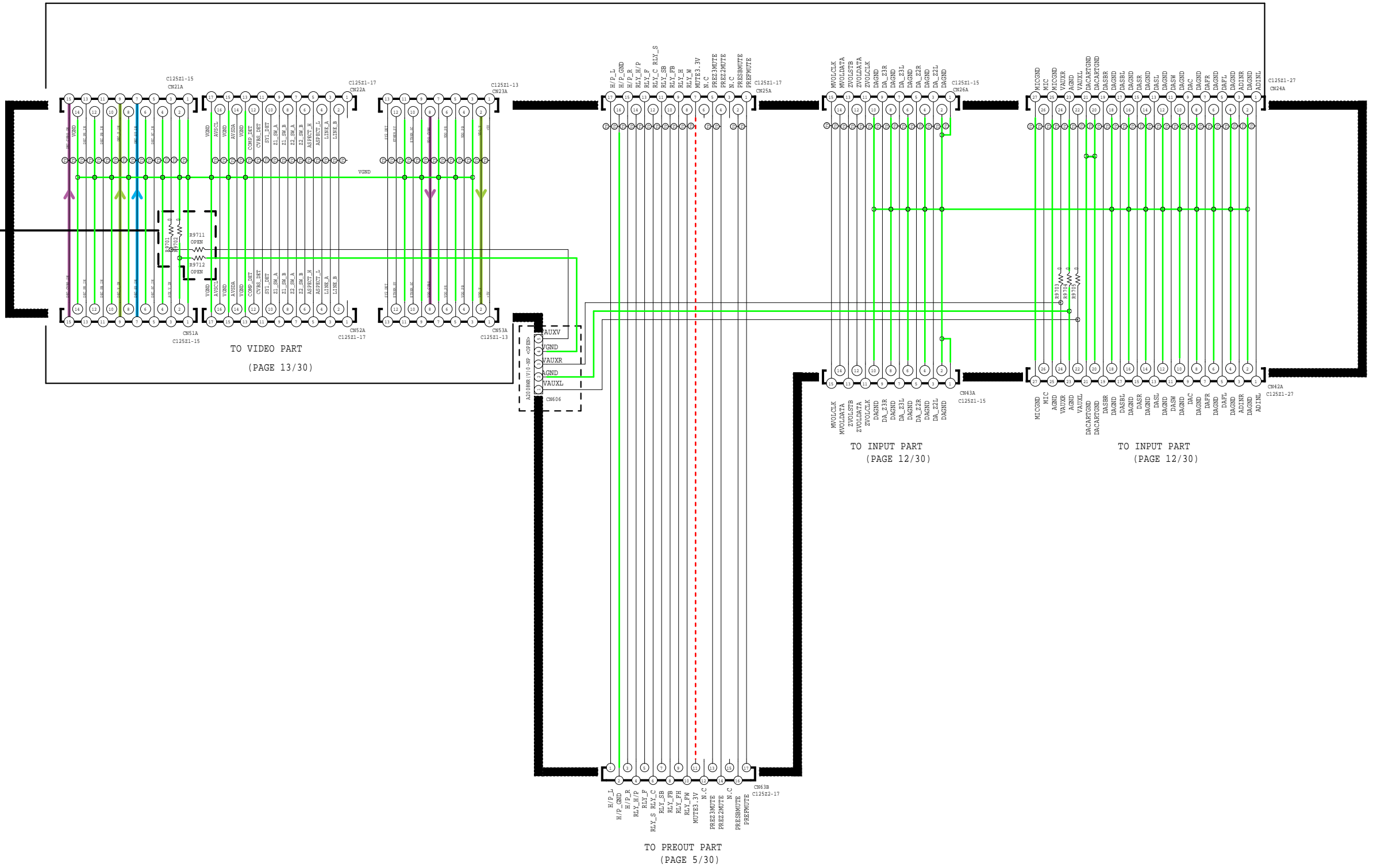
— GND — POWER + — POWER - - - - STBY POWER

FRT CNT_CUP12387Z

FROM/TO DIGITAL CON. PART
(PAGE 15/30)

OPTION TABLE

	CN606	
	NM	MOUNT
R9701	0R	OPEN
R9702	0R	OPEN
R9711	OPEN	0R
R9712	OPEN	0R



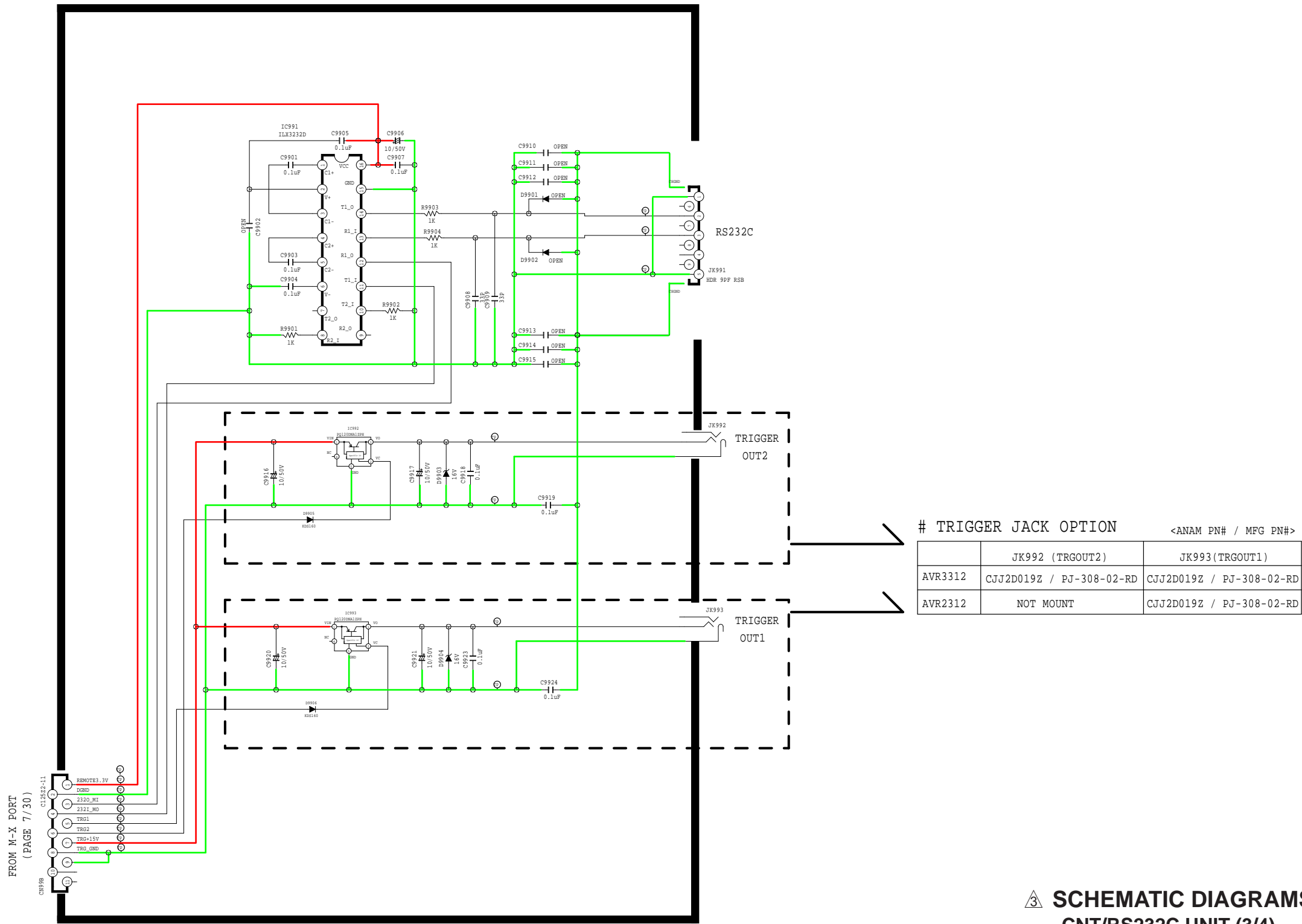
— GND — POWER + — POWER - - - - STBY POWER

— VIDEO SIGNAL LINE
— S(Y) VIDEO SIGNAL LINE
— COMPONENT (Y) SIGNAL LINE

⚠ SCHEMATIC DIAGRAMS (9/30)
CNT/RS232C UNIT (2/4)

RS232-TRIGGER_CUP12387Z

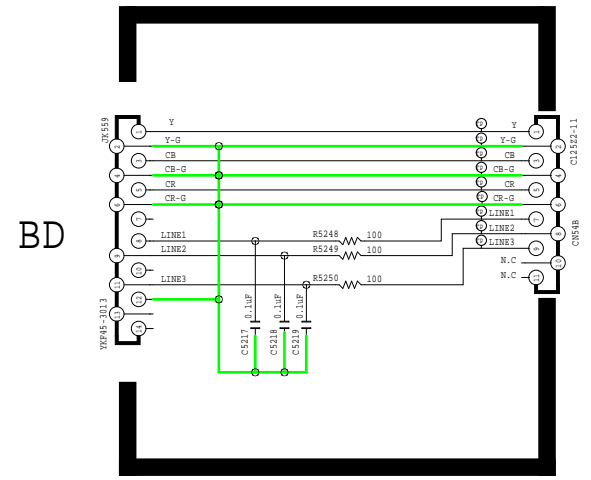
RS232C/TRIGGER



— GND
 — POWER +
 — POWER -
 — STBY POWER

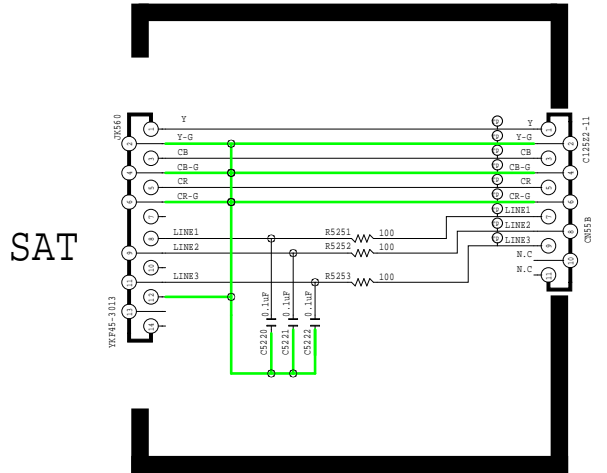
D-TERMINAL_CUP12387Z

D-TERMINAL



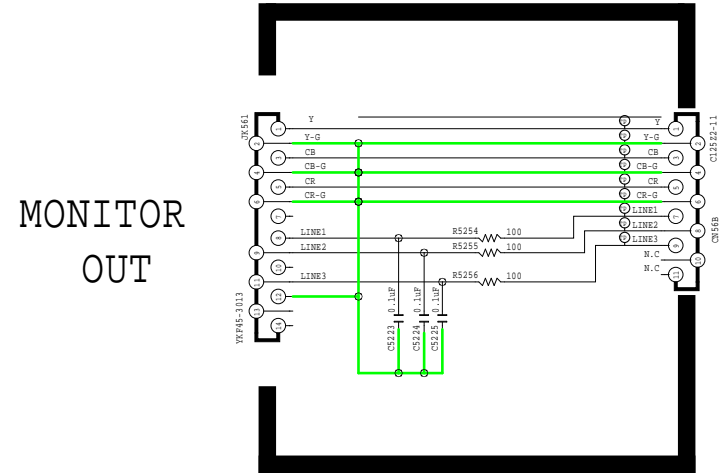
FROM VIDEO PART
(PAGE 13/30)

BD



FROM VIDEO PART
(PAGE 13/30)

SAT



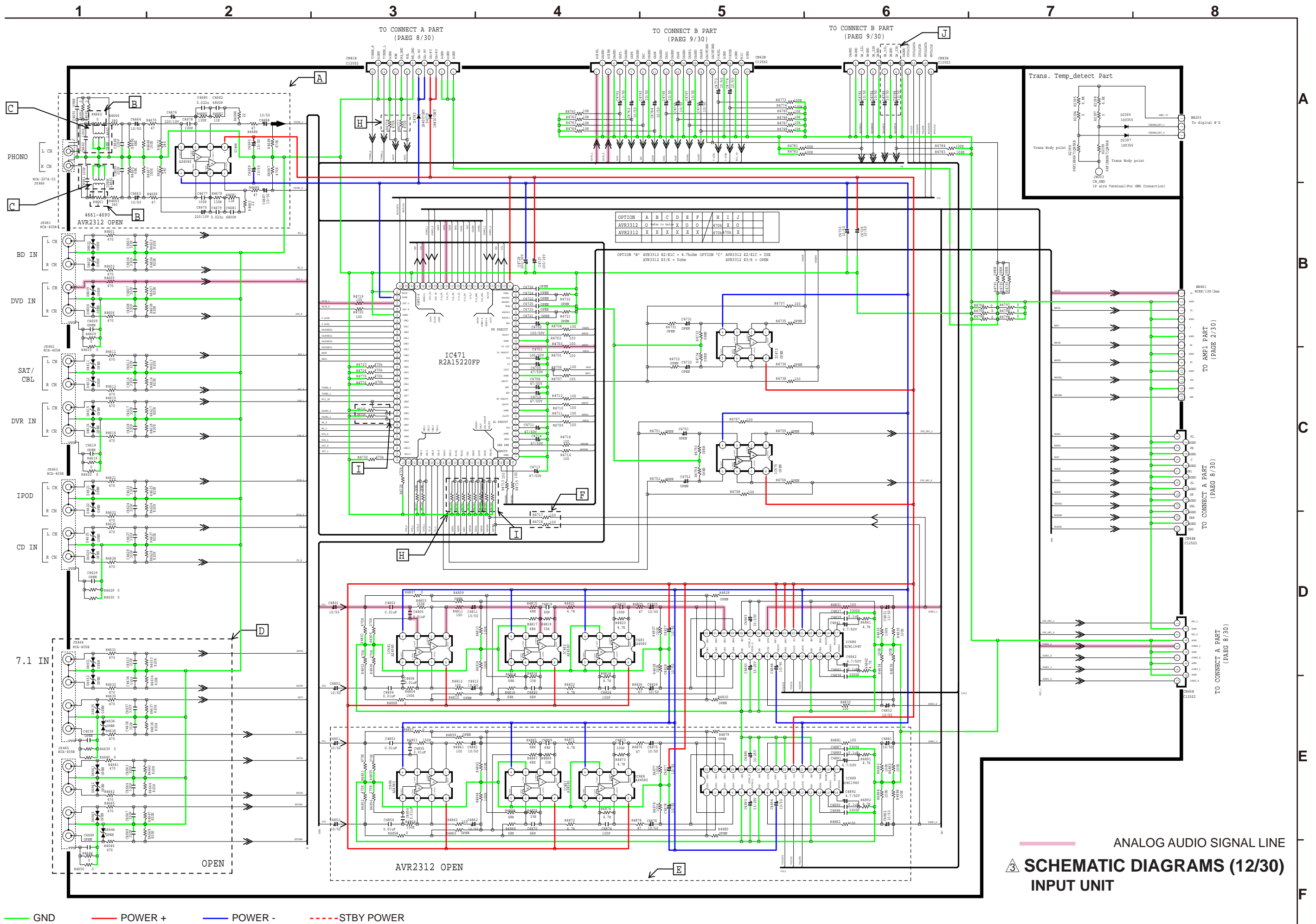
FROM VIDEO PART
(PAGE 13/30)

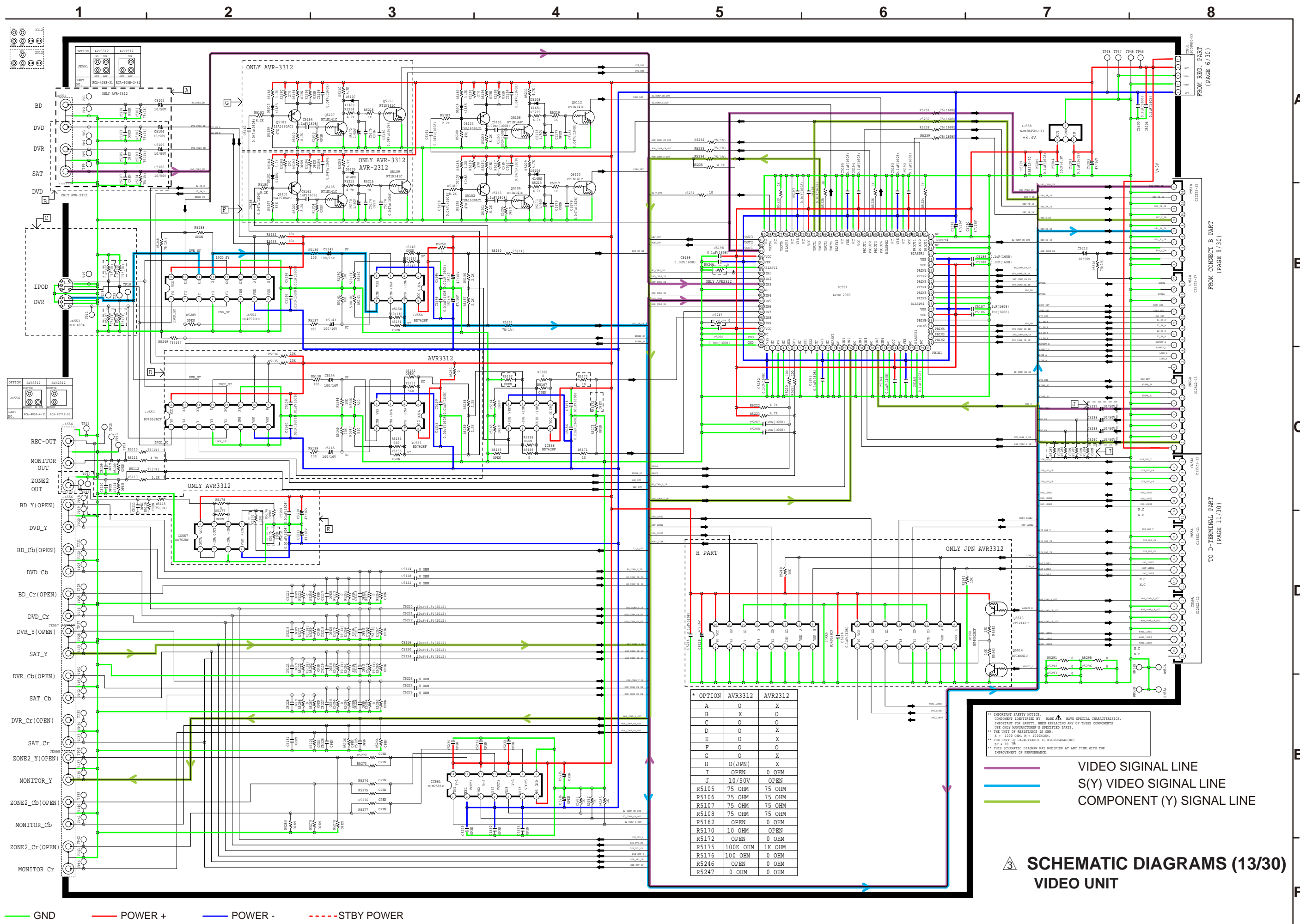
MONITOR
OUT

AVR-2312: NOT USE

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

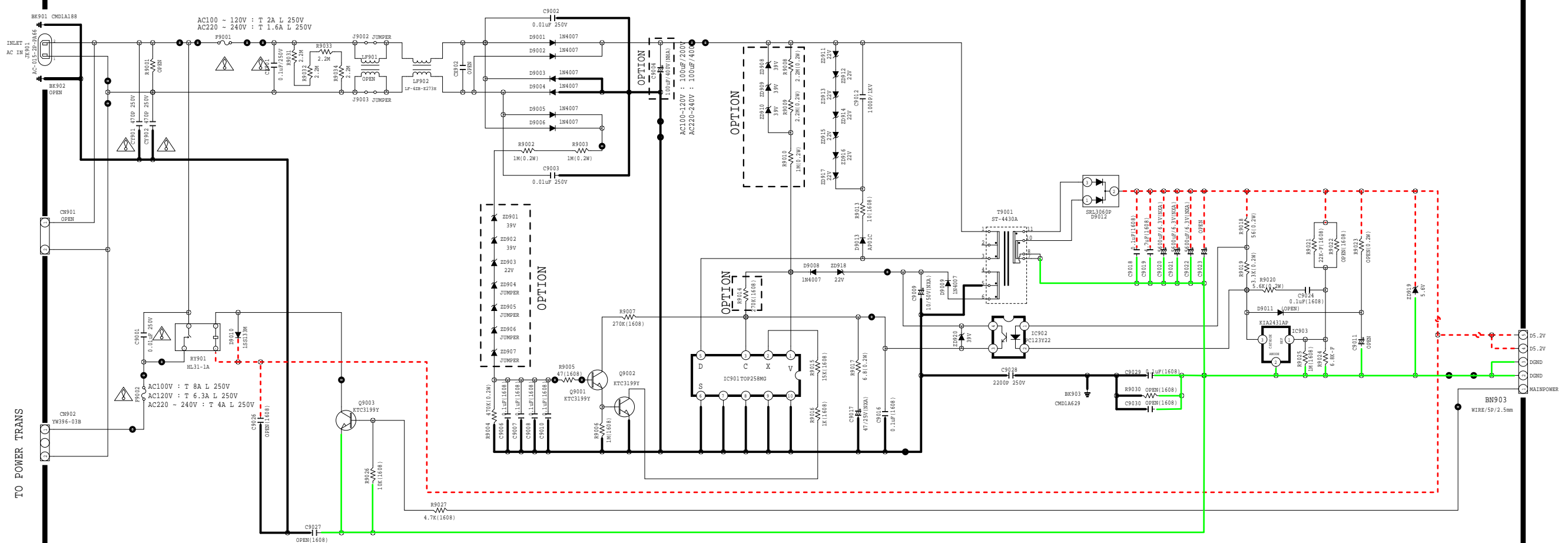
SCHEMATIC DIAGRAMS (11/30)
CNT/RS232C UNIT (4/4)





SMPS B'D

**** IMPORTANT SAFETY NOTICE.**
 COMPONENT IDENTIFIED BY MAY HAVE SPECIAL CHARACTERISTICS.
 IMPORTANT FOR SAFETY, WHEN REPLACING ANY OF THESE COMPONENTS
 USE ONLY MANUFACTURER'S SPECIFIED PARTS.
 ** THE UNIT OF RESISTANCE IS OHM.
 * K = 1000 OHM * M = 10000OHM.
 ** THE UNIT OF CAPACITANCE IS MICROFARAD(UF)
 pF = 10⁻¹²
 ** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
 IMPROVEMENT OF PERFORMANCE.



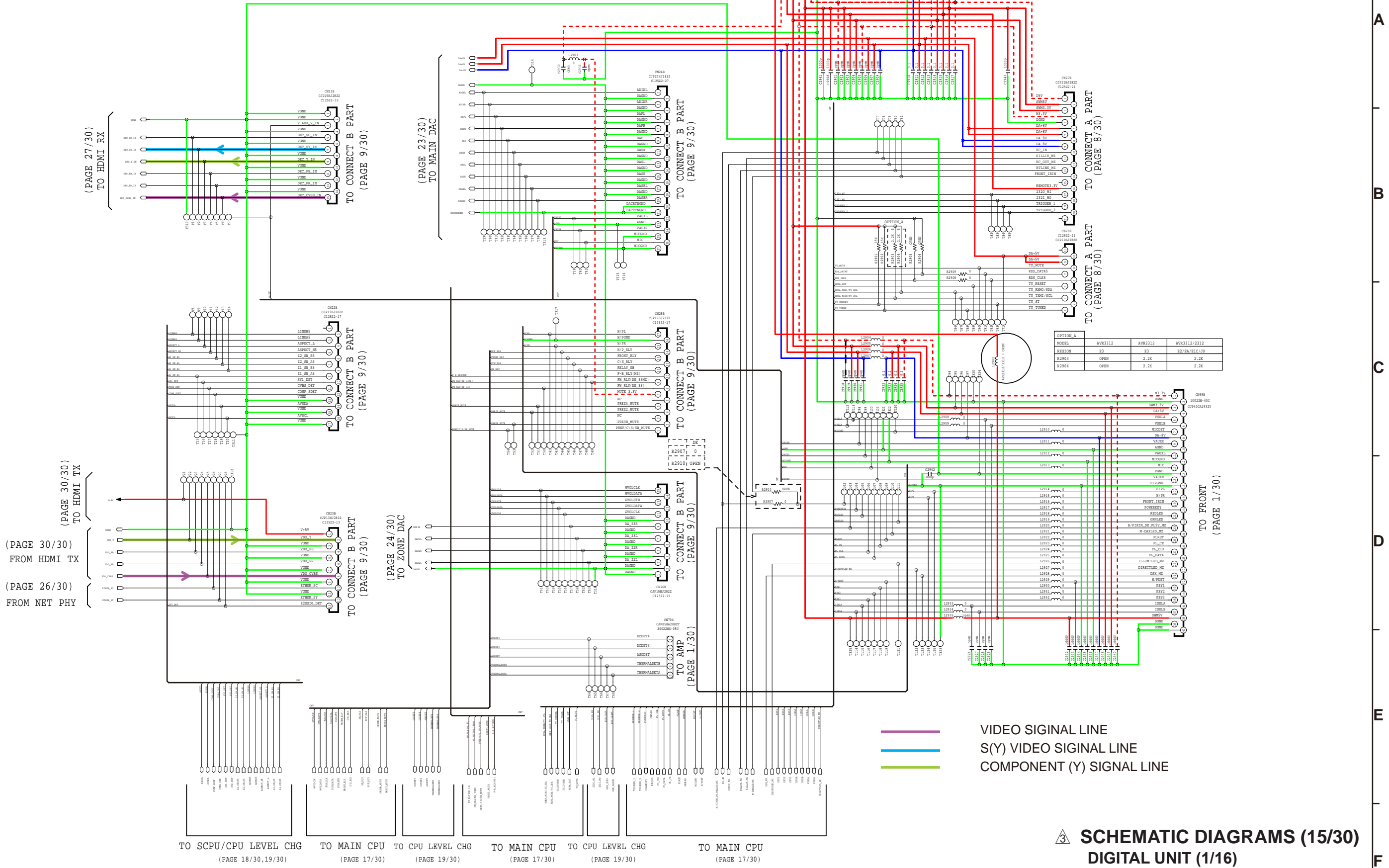
OPTION

	ZD901	ZD902	ZD903	ZD904	ZD905	ZD906	ZD907	ZD908	ZD909	ZD910	R9008	R9009	R9010	R9014
120V	ZJ39B	ZJ39B	ZJ22B	JUMPER	JUMPER	JUMPER	JUMPER	ZJ39B	ZJ39B	ZJ39B	2M2(0.2W)	2M2(0.2W)	1M(0.2W)	270K
220~230V	1M(0.2W)	1M(0.2W)	ZJ39B	ZJ39B	ZJ39B	ZJ39B	ZJ39B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	56K
100V	ZJ39B	ZJ39B	JUMPER	JUMPER	JUMPER	JUMPER	JUMPER	ZJ39B	ZJ39B	ZJ39B	2M2(0.2W)	2M2(0.2W)	1M(0.2W)	270K

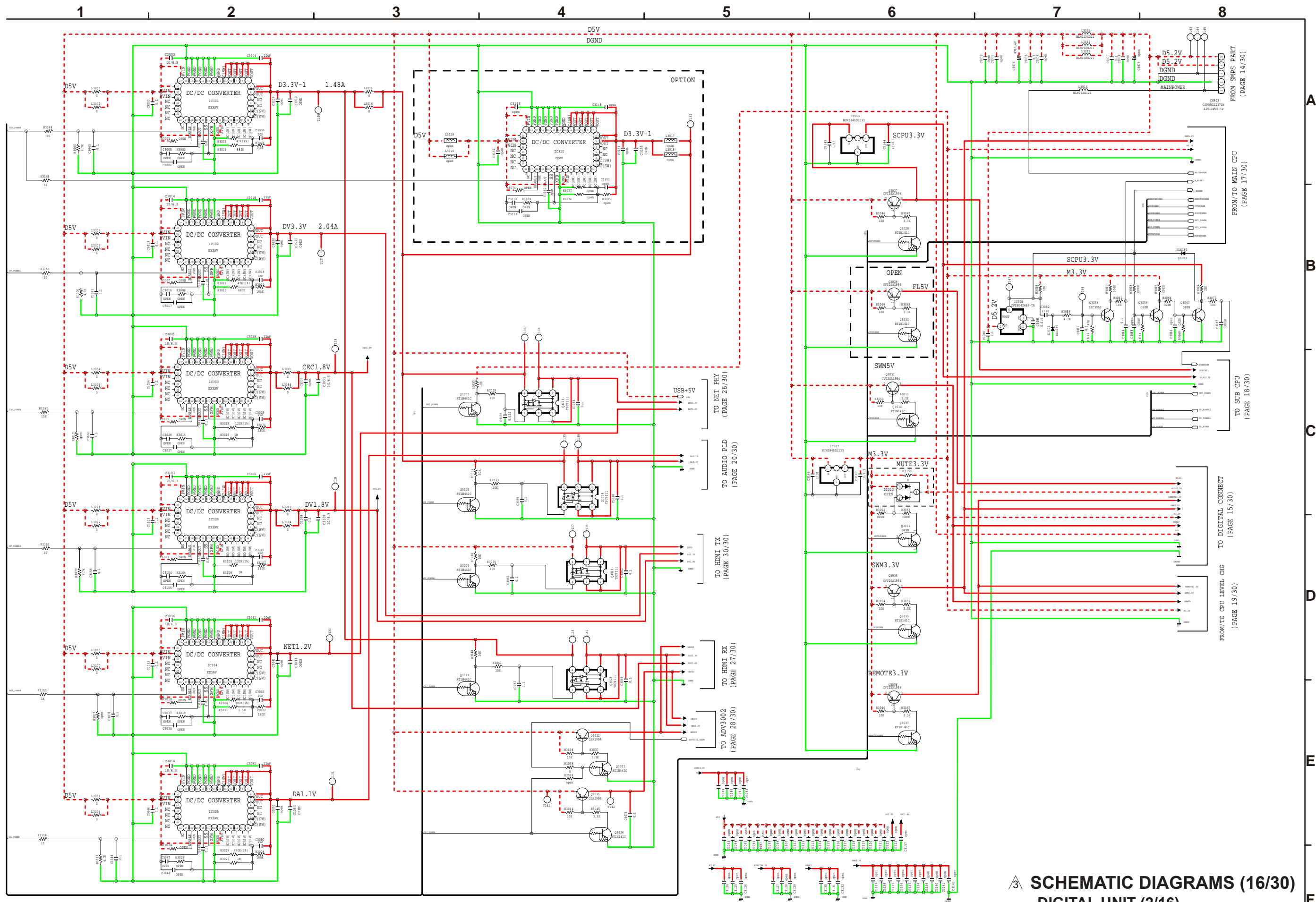
TO DIGITAL SUPPLY_POWER
(PAGE 16/30)

SCHEMATIC DIAGRAMS (14/30)
SMPS UNIT

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

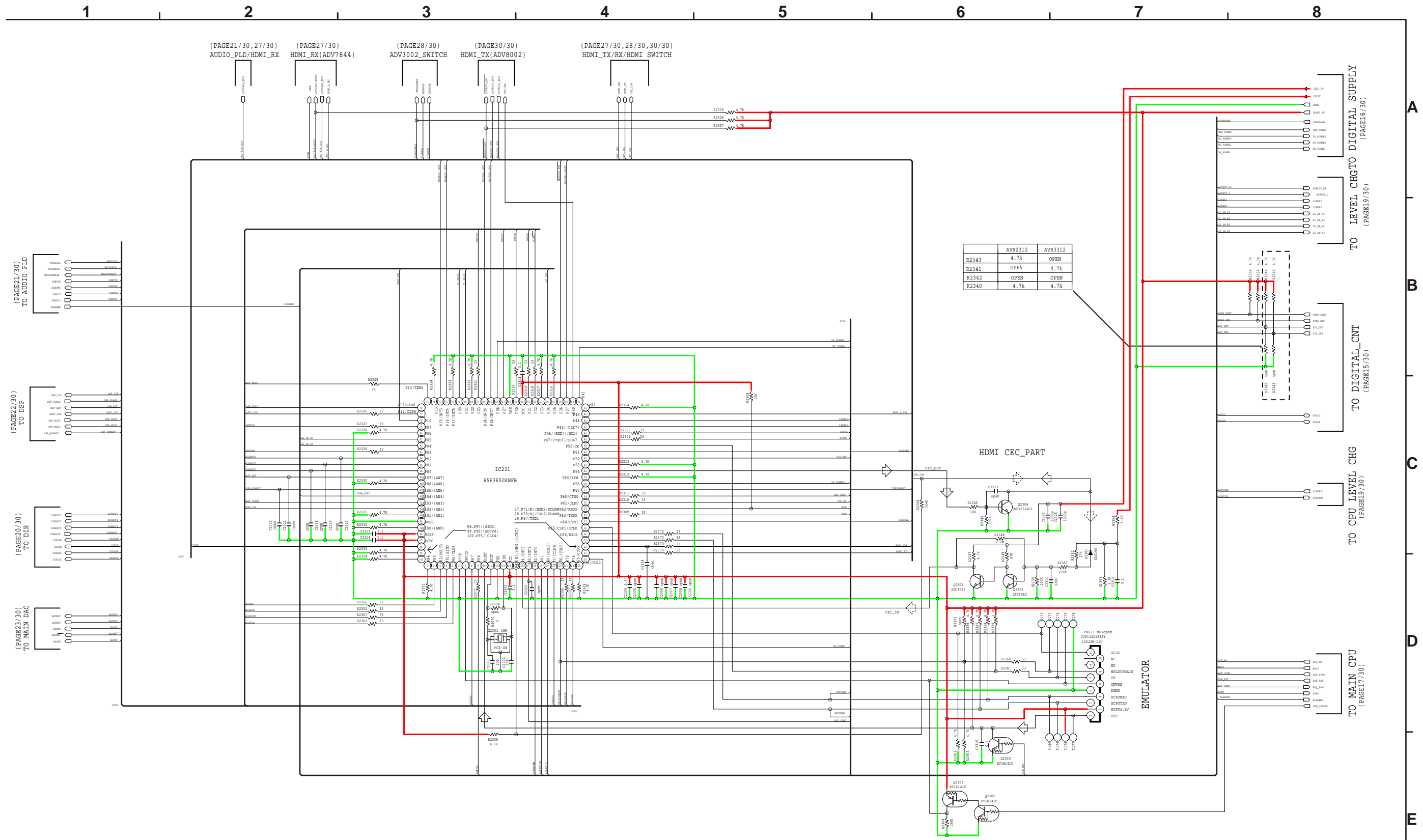


SCHEMATIC DIAGRAMS (15/30)
DIGITAL UNIT (1/16)



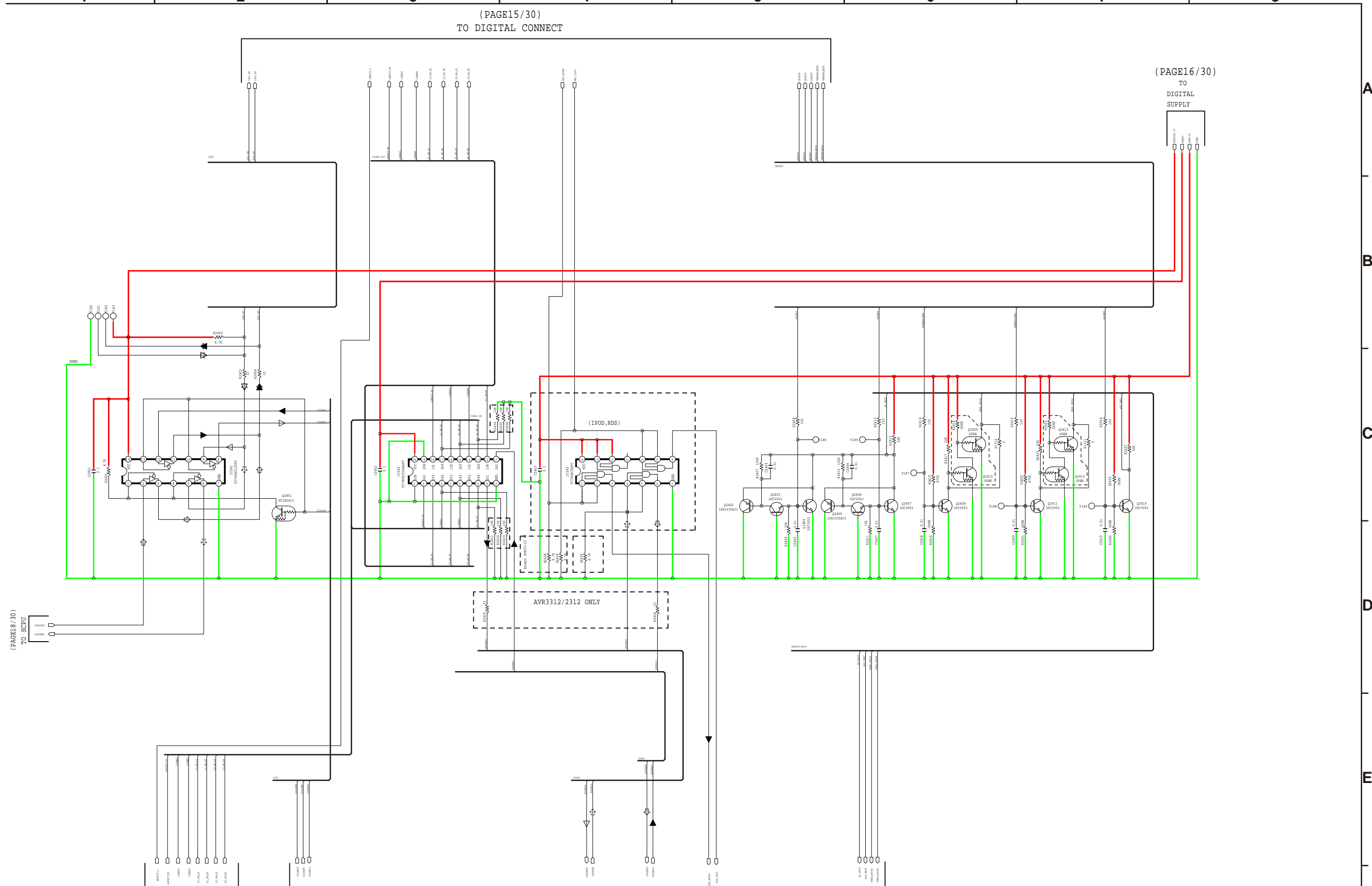
— GND
 — POWER +
 — POWER -
 — STBY POWER

SCHEMATIC DIAGRAMS (16/30)
DIGITAL UNIT (2/16)



3 SCHEMATIC DIAGRAMS (18/30)
DIGITAL UNIT (4/16)

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



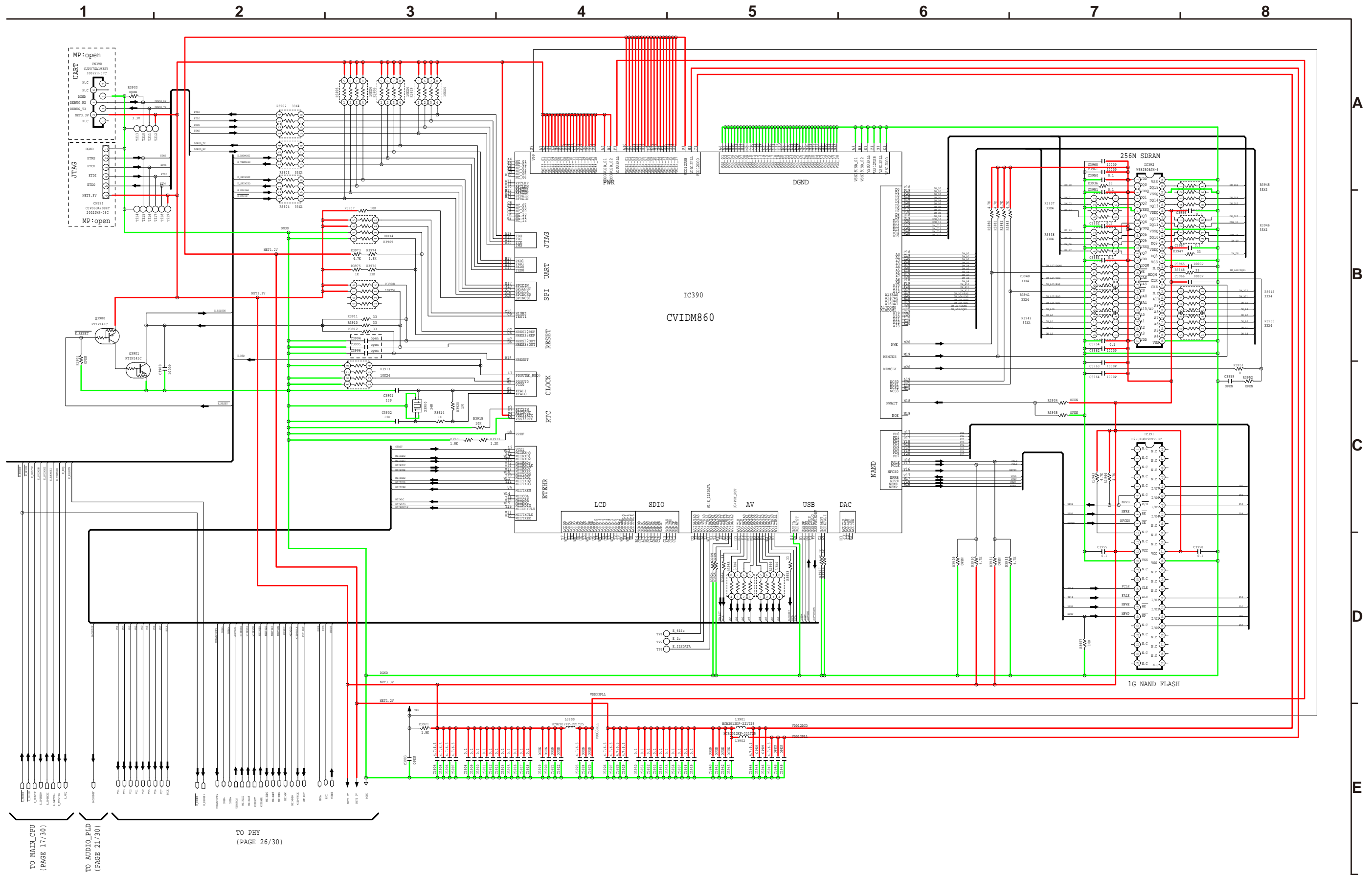
(PAGE18/30)
TO SCPU

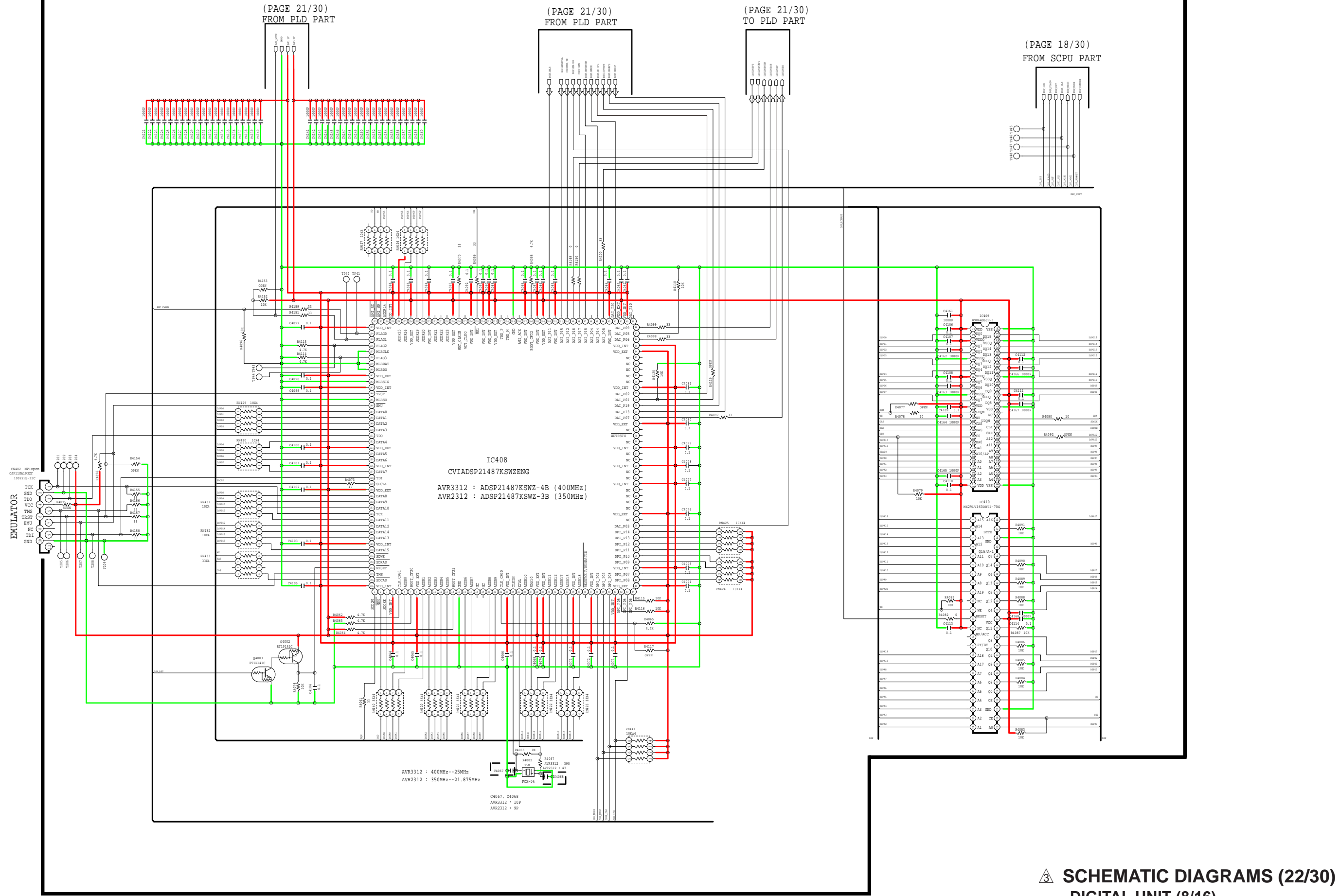
TO SCPU
(PAGE18/30)

TO MAIN CPU
(PAGE17/30)

SCHEMATIC DIAGRAMS (19/30)
DIGITAL UNIT (5/16)

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





— GND
 — POWER +
 — POWER -
 — STBY POWER

SCHEMATIC DIAGRAMS (22/30)
DIGITAL UNIT (8/16)

(PAGE 21/30)
TO AUDIO PLD

(PAGE 18/30)
TO SUB CPU

1 2 3 4 5 6 7 8

A

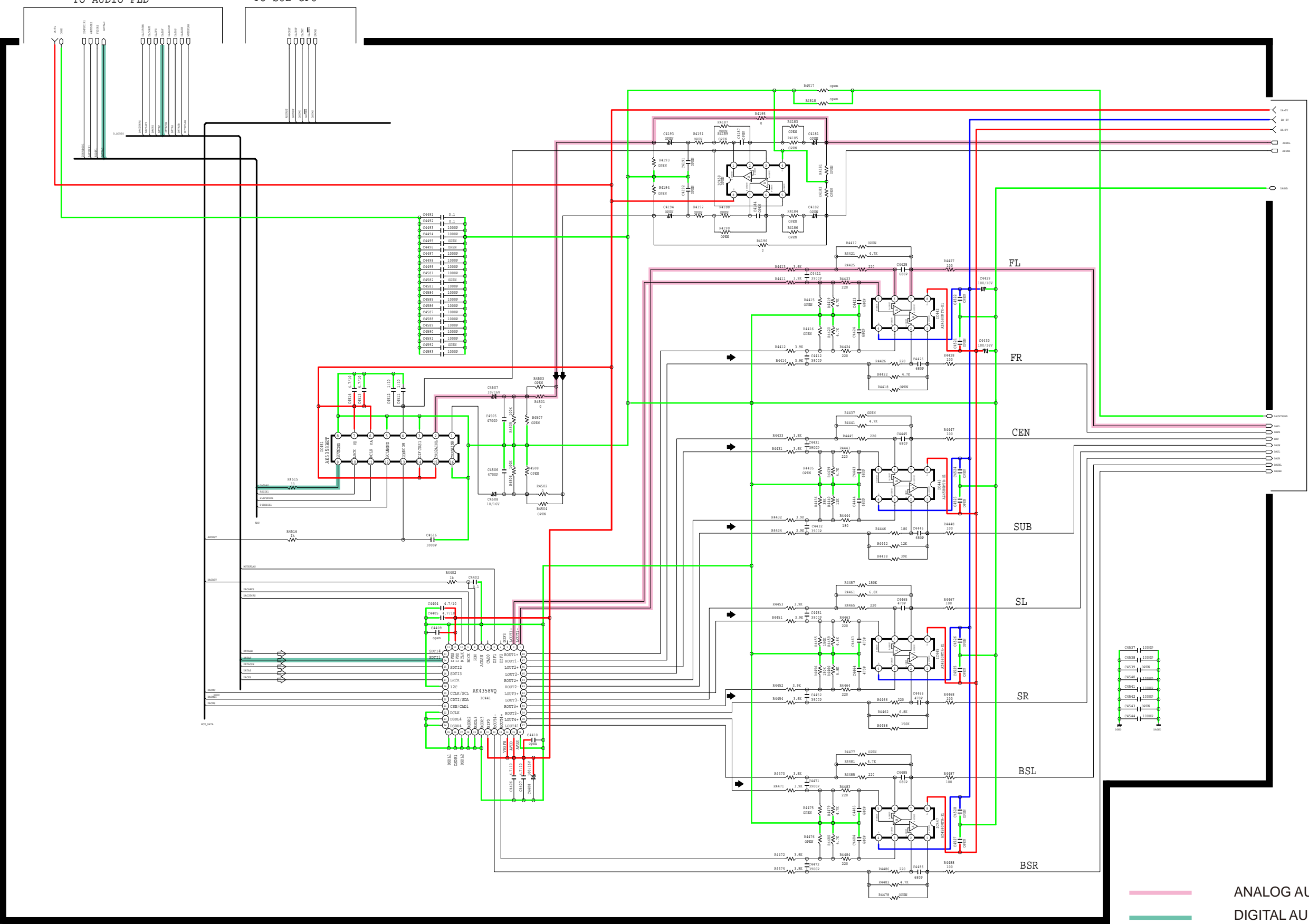
B

C

D

E

F

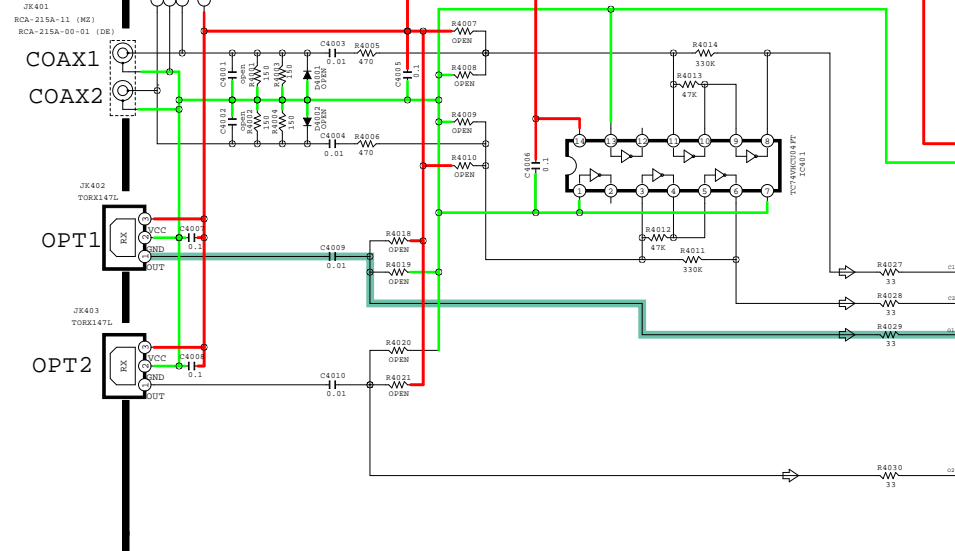
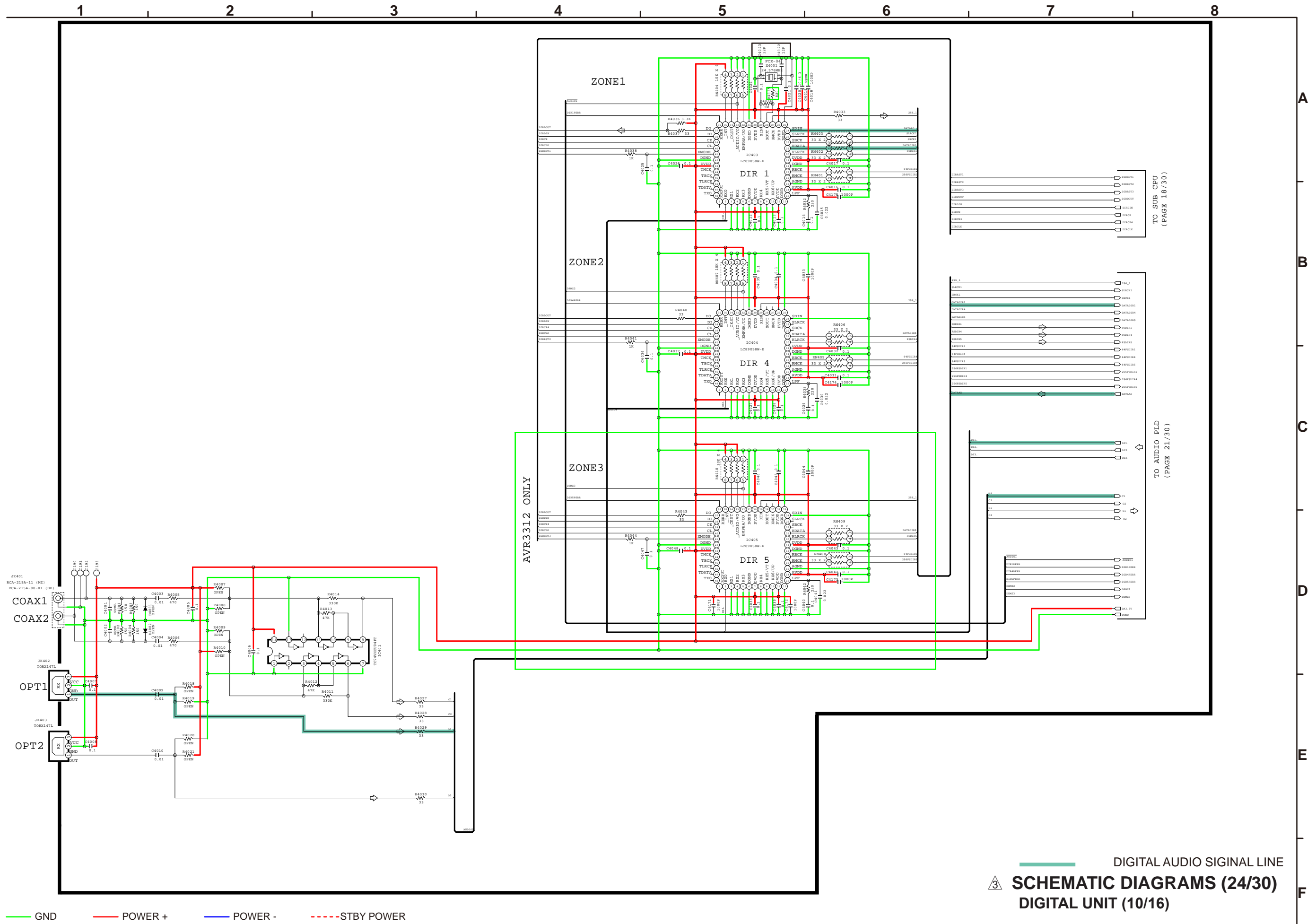


TO DIGITAL CONNECT
(PAGE 15/30)

ANALOG AUDIO SIGNAL LINE
 DIGITAL AUDIO SIGNAL LINE

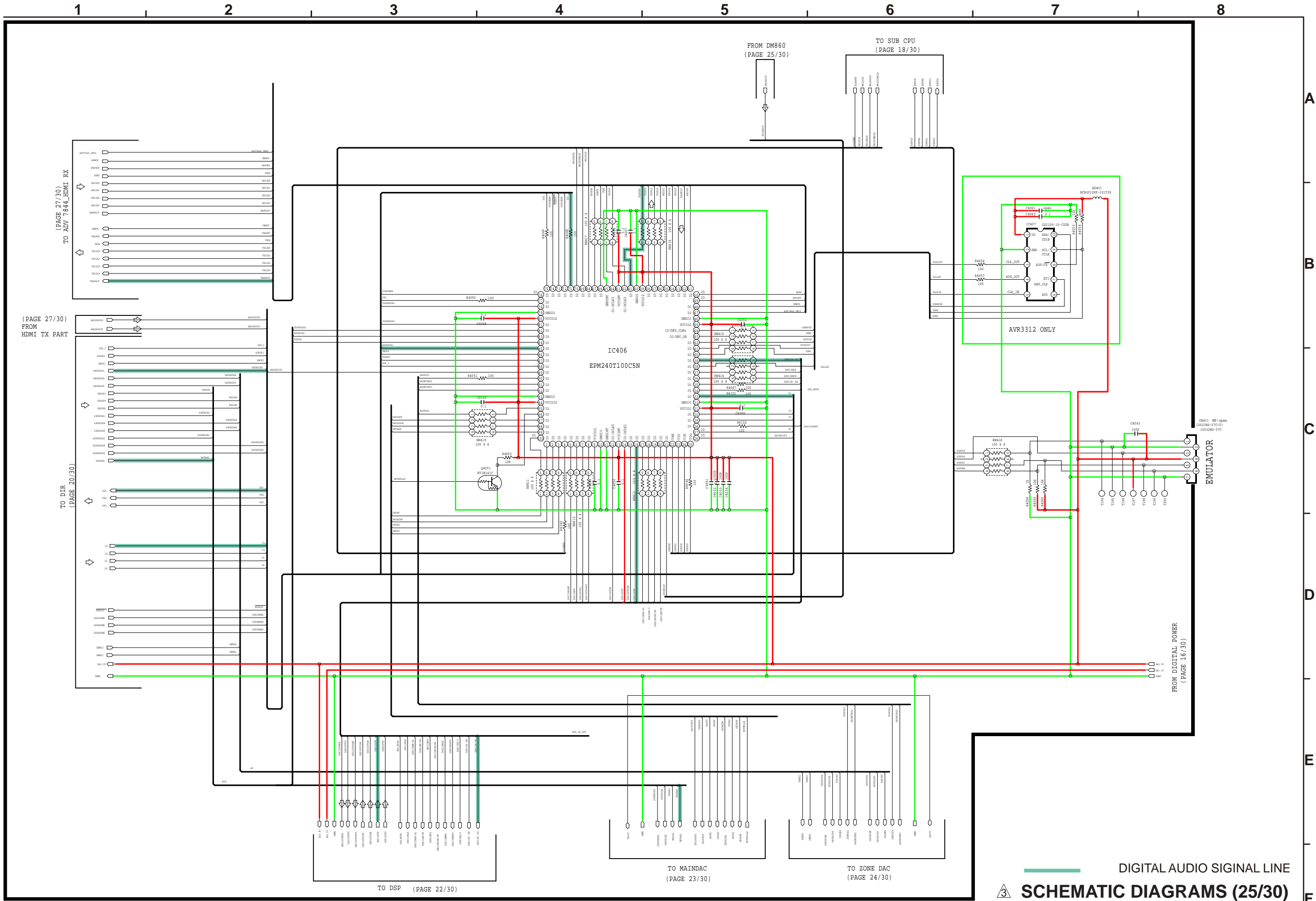
SCHEMATIC DIAGRAMS (23/30)
 DIGITAL UNIT (9/16)

GND POWER + POWER - STBY POWER

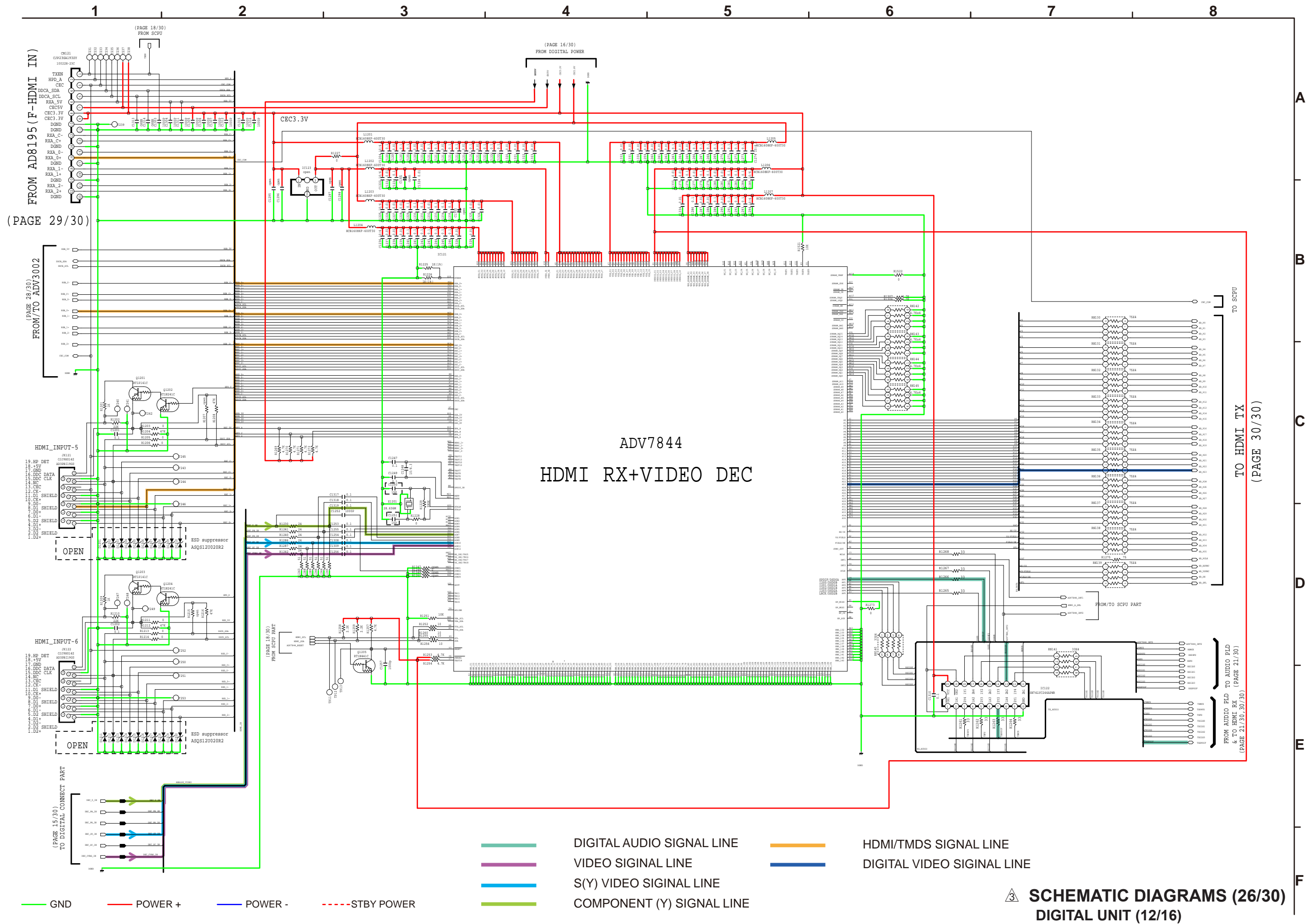


AVR3312 ONLY

— GND
— POWER +
— POWER -
— STBY POWER
— DIGITAL AUDIO SIGNAL LINE
SCHEMATIC DIAGRAMS (24/30)
DIGITAL UNIT (10/16)



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



ADV7844
HDMI RX+VIDEO DEC

(PAGE 29/30)
FROM AD8195 (F-HDMI IN)

(PAGE 16/30)
FROM DIGITAL POWER

CEC3.3V

(PAGE 28/30)
FROM/TO ADV3002

HDMI_INPUT-5
HDMI_INPUT-6

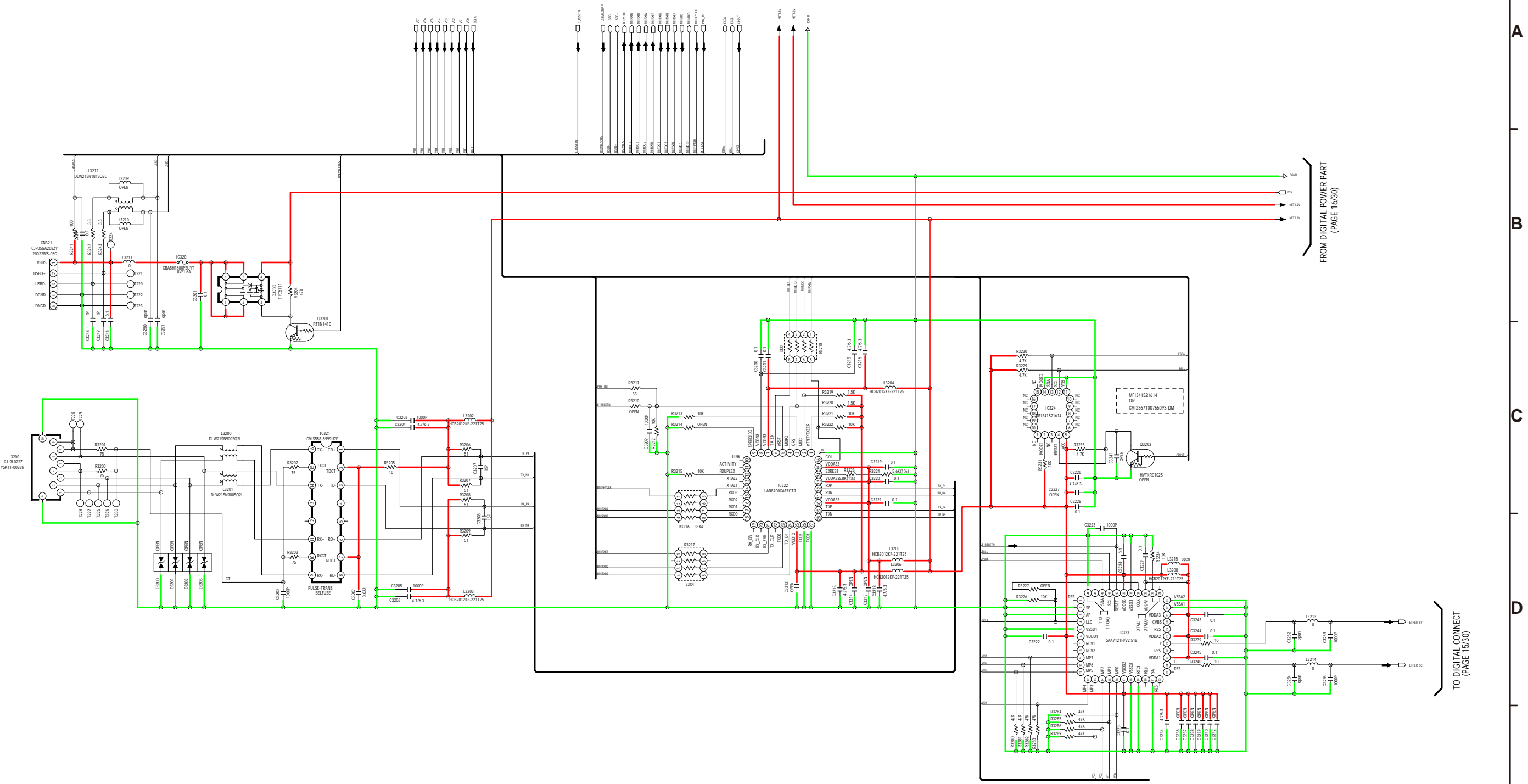
TO SCPU
TO HDMI TX
(PAGE 30/30)

FROM AUDIO P/LD
& TO HDMI RX
(PAGE 21/30, 30/30)

(PAGE 15/30)
TO DIGITAL CONNECT PART

- DIGITAL AUDIO SIGNAL LINE
- HDMI/TMDs SIGNAL LINE
- VIDEO SIGNAL LINE
- DIGITAL VIDEO SIGNAL LINE
- S(Y) VIDEO SIGNAL LINE
- COMPONENT (Y) SIGNAL LINE
- GND
- POWER +
- POWER -
- - - STBY POWER

(PAGE 25/30)
TO DM860_NETWORK

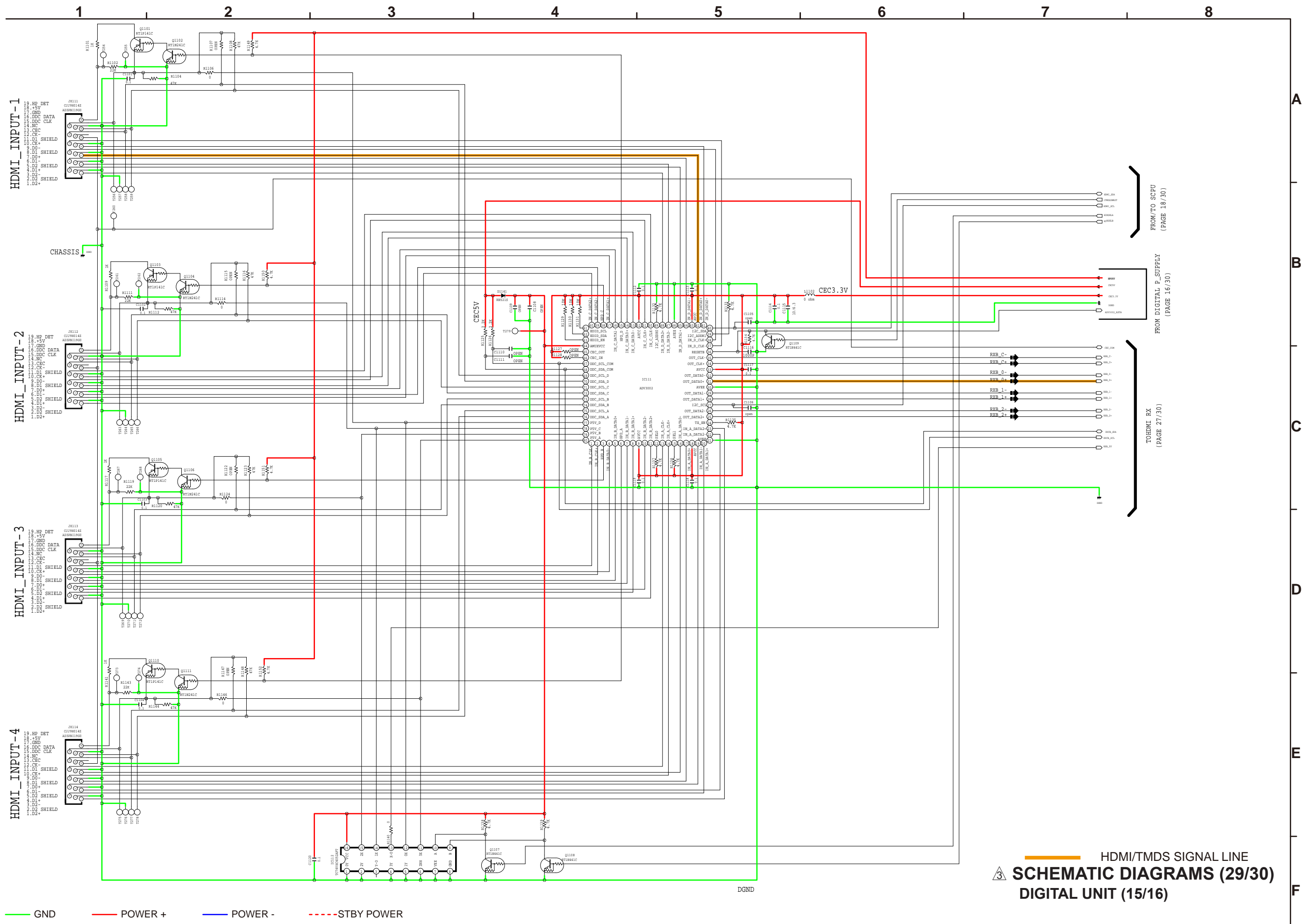


FROM DIGITAL POWER PART
(PAGE 16/30)

TO DIGITAL CONNECT
(PAGE 15/30)

3 SCHEMATIC DIAGRAMS (27/30)
DIGITAL UNIT (13/16)

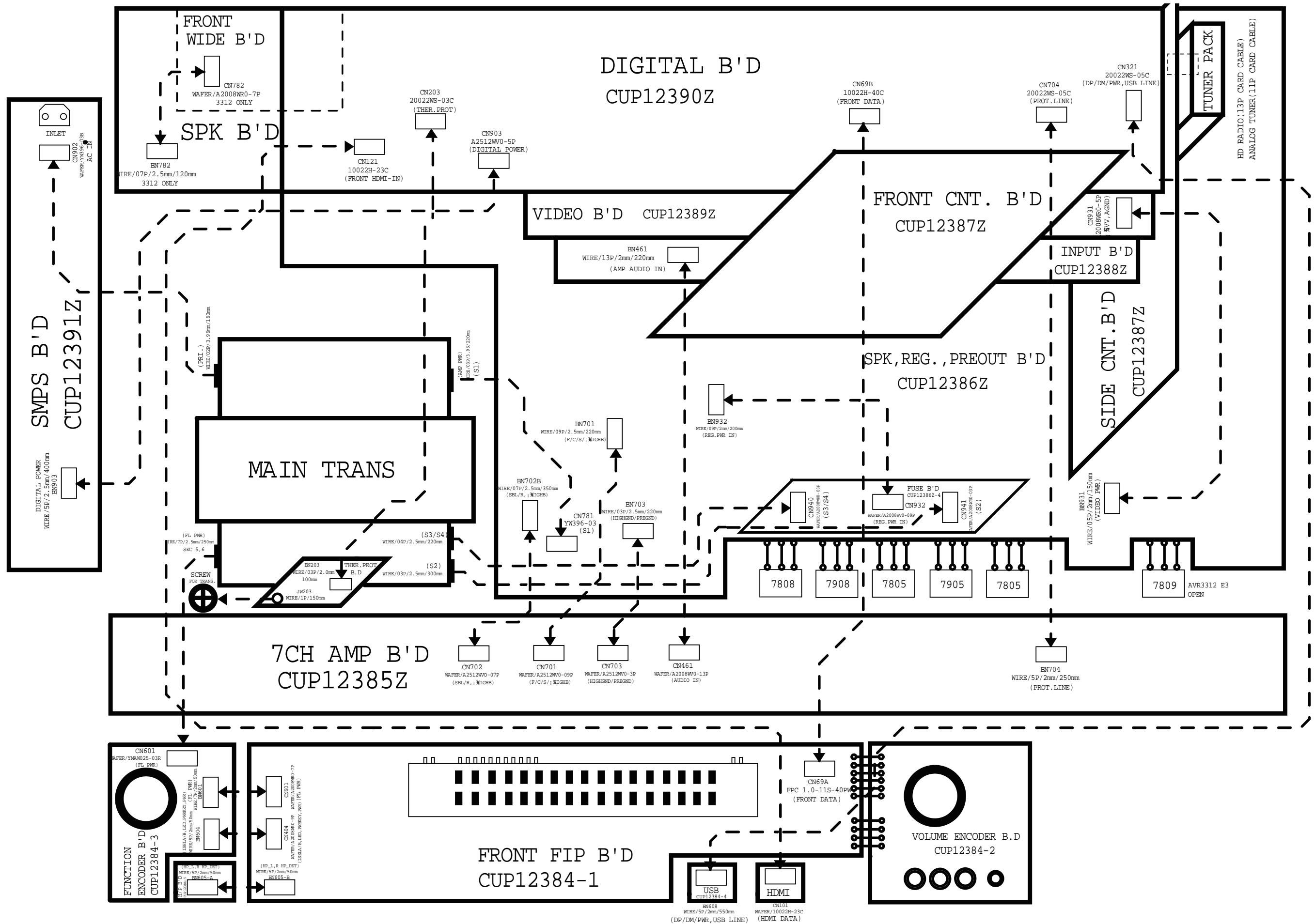
— GND — POWER + — POWER - - - - STBY POWER



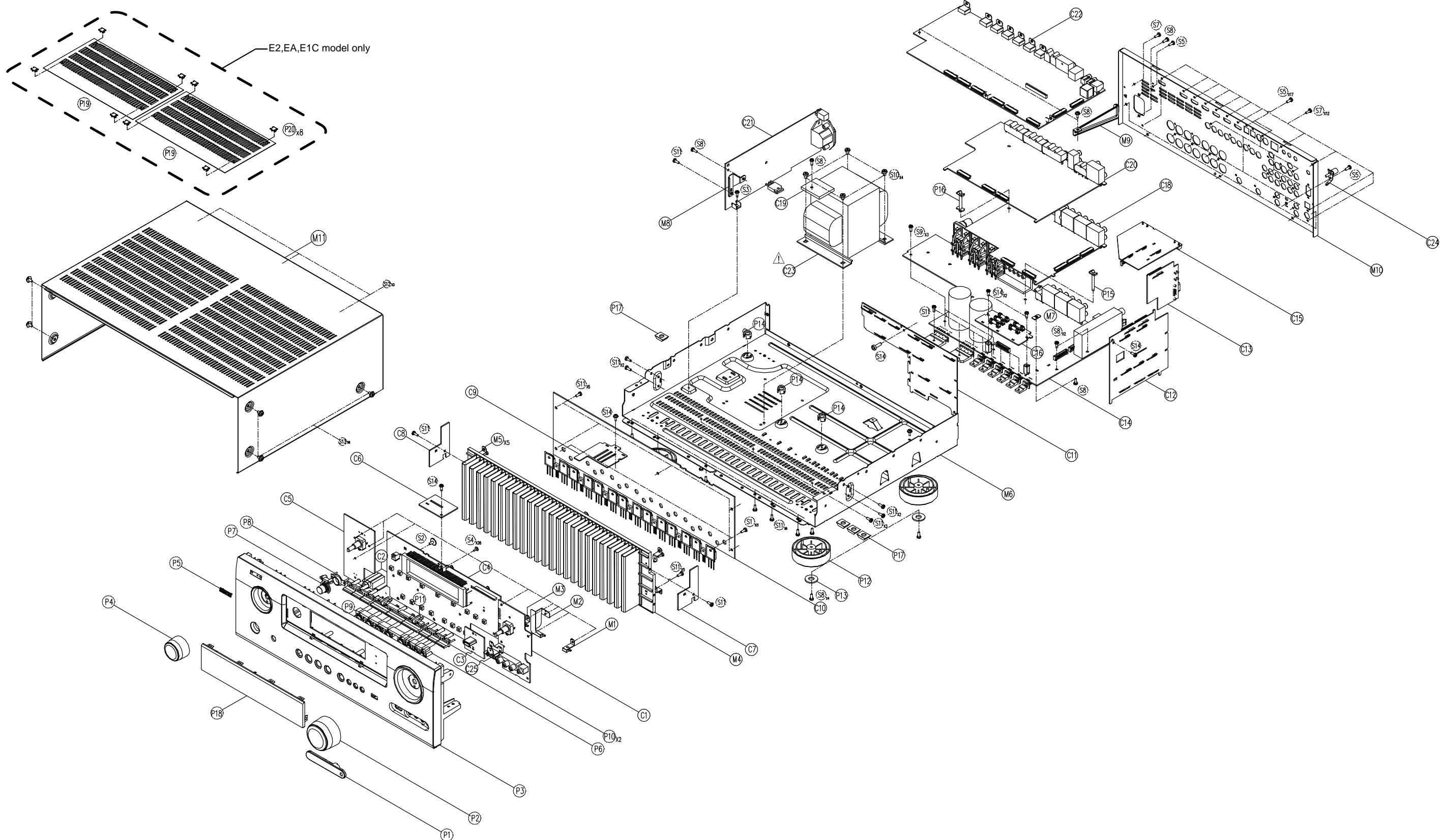
— GND
 — POWER +
 — POWER -
 — STBY POWER


— HDMI/TMDS SIGNAL LINE
SCHEMATIC DIAGRAMS (29/30)
DIGITAL UNIT (15/16)

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.

*P.W.B. ASS'Y indicated by "nsp" on this table cannot be supplied. When repairing the P.W.B. 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

EA : Australia model

E1C : China model

BK : Black model

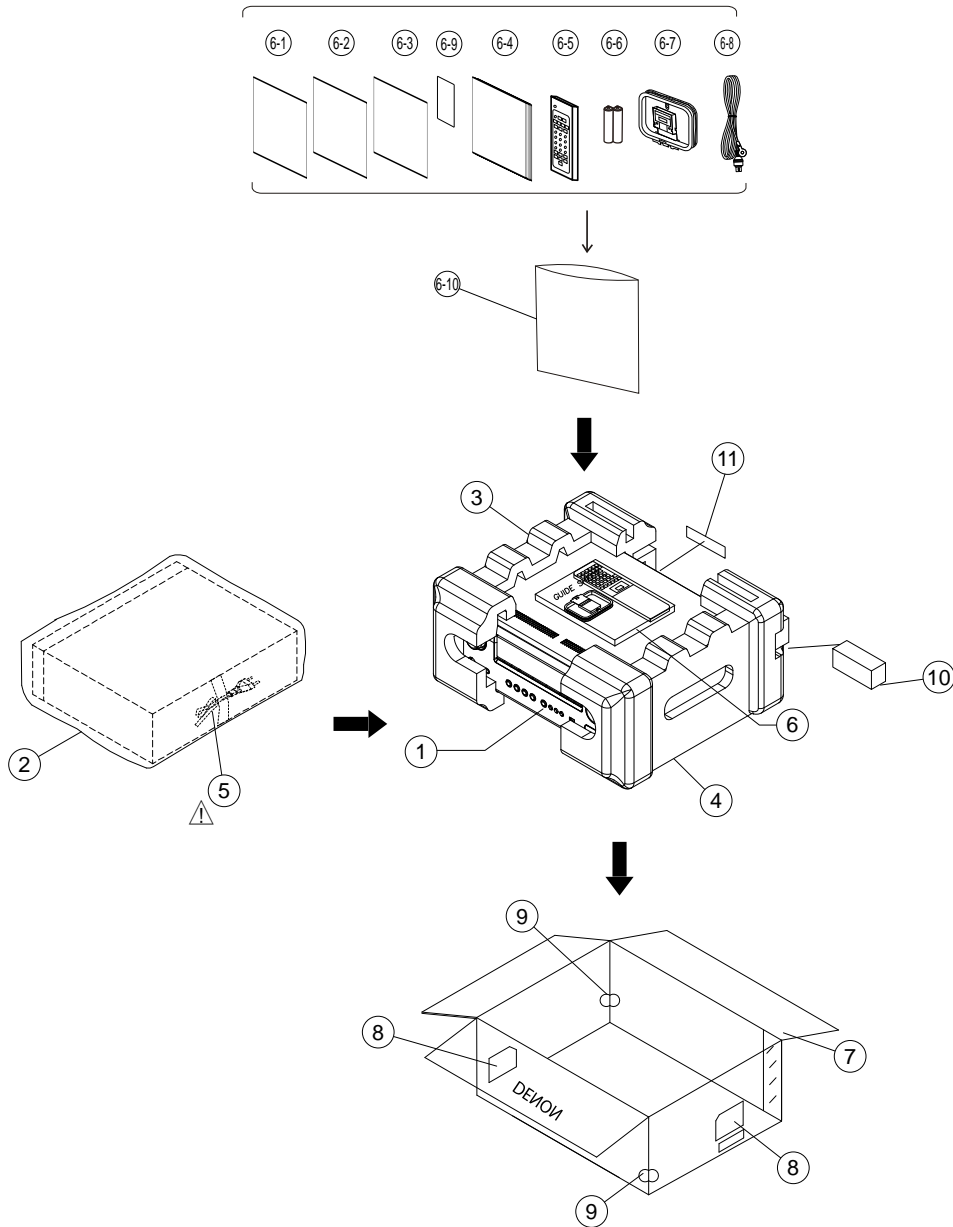
SP : Premium Silver model

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
1	nsp	PCB FRONT ASSY	E3,E2,EA	COP12384B	1	*
1	nsp	PCB FRONT ASSY	E1C	COP12384D	1	*
C1	-	PCB V.AUX_VOL		-		
C2	-	PCB HP		-		
C3	-	PCB USB		-		
C4	-	PCB FRONT		-		
C5	-	PCB SELECTOR		-		
C6	-	PCB HDMI FFC GUIDE		-		
C7	-	PCB GUIDE R		-		
C8	-	PCB GUIDE L		-		
C9	-	PCB GUIDE TOP		-		
C10	-	PCB 7CH_AMP ASSY	E3,E2,EA	COP12385G	1	
C10	-	PCB 7CH_AMP ASSY	E1C	COP12385I	1	
2	nsp	PCB CNT ASSY	E3,E2,EA	COP12387G	1	*
2	nsp	PCB CNT ASSY	E1C	COP12387I	1	*
C11	-	PCB FRONT CNT		-		
C12	-	PCB SIDE CNT		-		
C13	-	PCB RS232C		-		
3	nsp	PCB MAIN ASSY	E3	COP12386G	1	*
3	nsp	PCB MAIN ASSY	E2,EA	COP12386H	1	*
3	nsp	PCB MAIN ASSY	E1C	COP12386I	1	*
C14	-	PCB SPK_PREOUT		-		
C15	-	PCB RS232C CNT		-		
C16	-	PCB FUSE		-		
4	nsp	PCB INPUT ASSY	E3,E2,EA	COP12388G	1	*
4	nsp	PCB INPUT ASSY	E1C	COP12388I	1	*
C18	-	PCB INPUT		-		
C19	-	PCB POSISTOR		-		
C20	nsp	PCB VIDEO ASSY	E3,E2,EA	COP12389G	1	*
C20	nsp	PCB VIDEO ASSY	E1C	COP12389I	1	*
C21	nsp	PCB SMPS ASSY	E3	COP12391B	1	*
C21	nsp	PCB SMPS ASSY	E2,EA	COP12391C	1	*
C21	nsp	PCB SMPS ASSY	E1C	COP12391D	1	*

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	5	8U6331007600D	PCB HDMI ASSY	E3	COP12390G	1	*
	5	8U6331007700D	PCB HDMI ASSY	E2,EA	COP12390H	1	*
	5	8U6331010900D	PCB HDMI ASSY	E1C	COP12390I	1	*
	C22	-	PCB HDMI		-		
	C25	-	PCB FRONT HDMI		-		
△	C23	943101012410S	TRANS POWER(EI96 X 65)	E3	CLT5V059ZU	1	*
△	C23	943101012420S	TRANS POWER(EI96 X 65)	E2,EA	CLT5V059ZE	1	*
△	C23	943101100210S	TRANS POWER(EI96 X 65)	E1C	CLT5V059ZH	1	*
	P1	943419100300D	RCA COVER	BK	CGR1A517B28	1	*
	P1	943419100310D	COVER, RCA	SP	CGR1A517G45	1	*
	P2	943412009840D	VOLUME KNOB	BK	CBN1A249	1	
	P2	943412009850D	VOLUME KNOB	SP	CBN1A249C73	1	
	P3	943402101790D	FRONT PANEL	BKE3	CGW1A511RHZB28	1	*
	P3	943402101830D	FRONT PANEL	E2,EA	CGW1A511RHYB28	1	*
	P3	943402101840D	FRONT PANEL	E1C	CGW1A511RGUG45	1	*
	P4	943412100650D	KNOB, SELECT	BK	CBN1A254	1	*
	P4	943412100640D	KNOB, SELECT	SP	CBN1A254C73	1	*
	P5	00D9630362109	DENON BADGE(BLACK049)		CGB1A140U	1	
	P6	943411101430D	BUTTON 3KEY ASSY	BK	CBT1A1157ZA	1	*
	P6	943411101480D	BUTTON, 3KEY ASSY	SP	CBT1A1157G45Z	1	*
	P7	943411009860D	BUTTON STANDBY ASS'Y		CBT1A1141ZA	1	
	P8	00D9630137807	STANDBY LENS		CGL1A289	1	
	P9	943411101440D	BUTTON 5KEY ASS'Y	BK	CBT1A1156ZA	1	*
	P9	943411101490D	BUTTON, 5KEY ASS'Y	SP	CBT1A1156G45Z	1	*
	P10	00D9630365002	WIN 3KEY BUTTON	BK	CBT1A1140B28	2	
	P10	00D9630365301	WIN 3KEY BUTTON	SP	CBT1A1140G45	2	
	P11	943411101450D	BUTTON WIN 3KEY B	BK	CBT1A1160B28	1	*
	P11	943411101720D	BUTTON , WIN 3KEY B	SP	CBT1A1160G45	1	*
	P12	943416009700D	FOOT		CKL2A093	4	*
	P13	00D9430202902	FOOT CUSHION		CHG2A289	4	
	P14	nsp	HOLDER PCB		CHE170	5	
	P15	nsp	SUPPORT PCB		CRE1A102	1	
	P16	nsp	SUPPORT PCB 31		CRE1A073	1	
	P17	nsp	RUBBER		CHG1A113	4	
	P18	943416100590D	WINDOW FL		CGU1A459Y	1	*
	P19	943419100250D	CGX1A492Z SHEET TOP AVR1612BK	BKE2,BKEA	CGX1A492Z	2	
	P19	943419100260D	CGX1A492Y SHEET TOP AVR1612SP	E1C	CGX1A492Y	2	
	P20	45451000500AM	STOPPER TOP BL	BKE2,BKEA	CMH1A306Z	8	
	P20	45451000501AM	STOPPER TOP SG	E1C	CMH1A306Y	8	
	M1	nsp	EARTH AUX		CMC1A421	1	*
	M2	nsp	EARTH HDMI		CMC1A423	1	*
	M3	nsp	EARTH USB		CMC1A420	1	*
	M4	nsp	HEAT SINK		CMY1A372	1	*
	M5	nsp	BRACKET AMP PCB		CMD1A796	5	*
	M6	nsp	BOTTOM CHASSIS		CUA1A330	1	*
	M7	nsp	PLATE MAIN PCB		CMC1A424	1	*
	M8	nsp	SMPS BRACKET		CMD1A790	1	*
	M9	nsp	BRACKET PCB HDMI		CMD1A791	1	*

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
M10	nsp	PANEL REAR	E3	CKF1A448Z	1	*
M10	nsp	PANEL REAR	E2,EA	CKF1A448Y	1	*
M10	nsp	PANEL REAR	E1C	CKF1A448X	1	*
M11	00M07BW257010	CABINET TOP	BK	CKC2A155K117	1	
M11	943403002040M	TOP CABINET	SP	CKC2A155D11	1	
★ M14	nsp	CLAMPER		CHR301	10	
★ M15	nsp	CUSHION EVA		CHG1A518	1	
★ M16	nsp	LABEL HOT		CQB1A906Z	1	
★ M17	nsp	TAPE HEMELON	10mm	CHS1A032	1	
★ M18	nsp	TAPE HEMELON	10mm	CHS1A032	1	
SCREWS						
S1	nsp	SCREW , SPECIAL		CHD3A012R	21	
S2	nsp	SCREW		CTWS3+10GR	1	
S3	nsp	SCREW		CTB3+6JR	1	
S4	nsp	SCREW		CTB3+10JR	24	
S5	nsp	SCREW		CTBD3+8JFZR	14	
S6	nsp	SCREW		CTWD4+8FFZR		
S7	nsp	SCREW		CTBD3+6FFZR	13	
S8	nsp	SCREW		CTW3+8JR	11	
S9	nsp	SCREW		CTW3+12JR	3	
S10	nsp	SCREW , SPECIAL		CHD1A023R	4	
S11	nsp	SCREW		CTB3+8JR	26	
S12	nsp	SCREW		CTBD3+8JFZR	3	
S13	nsp	SCREW		CTBD4+8JFZR	6	
S14	nsp	SCREW		CTB3+6FR	6	
★ S15	nsp	SCREW		CTB3+8JFZR	5	
WIRES						
★ M12	943606501250S	CARD CABLE (1mm, 23P, 450mm, B)		CWC4F2A23A450B10	1	
★ M13	943606501240S	CARD CABLE (1mm, 40P, 250mm, B)		CWC4F2A40A250B08	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 packing 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

EA : Australia model

E1C : China model

BK : Black model

SP : Premium Silver model

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	1	-	set			1	
	2	nsp	POLY BAG		CPP1A081X	1	
	3	943533100960D	SNOW PAD L		CPS1A905	1	*
	4	943533100950D	SNOW CUSHION R		CPS1A906	1	*
	5	90M-ZC000310R	POWER CORD	E3	CJA2A070Z	1	
	5	90M-ZC000320R	CORD , POWER, EUR,10A,250V	E2	CJA2B054Z	1	
	5	90M-ZC000430R	CORD , POWER	EA	HJA2S084Z	1	
	5	90M-ZC000650R	CORD , POWER, 10A,125V	E1C	CJA2N075Z	1	

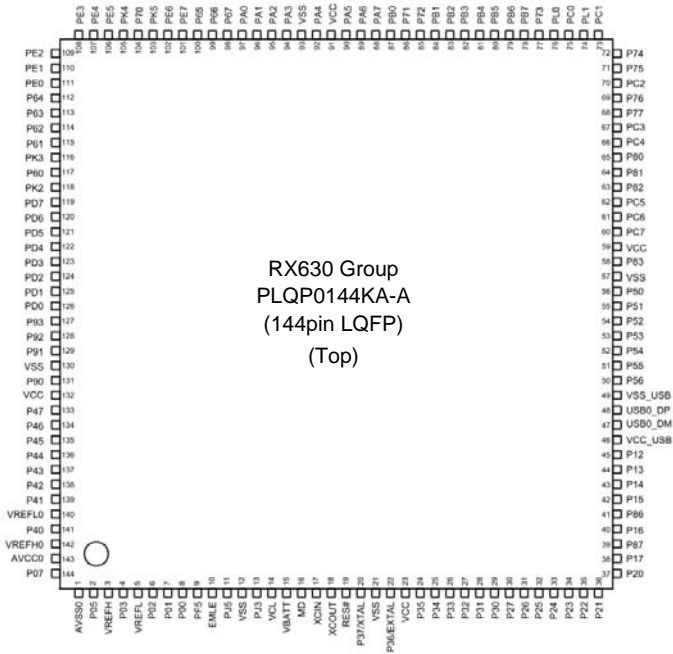
Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
6		INSTRUCTION MANUAL ASS'Y		-	1	
6-1	352010042009D	MANUAL CD ASS'Y		CFT1A041ZA	1	*
6-1	352010043002D	MANUAL, CD ASS'Y	E2,EA	CFT1A042ZA	1	*
6-1	352010051003D	MANUAL, CD ASS'Y	E1C	CFT1A043ZA	1	*
6-2	nsp	WARRANTY CARD	E3	CQE1A224Q	1	
6-2	nsp	CARD, WARRANTY	E1C	CQE1A473Y	1	
6-3	nsp	S.S LIST		CQE1A226P	1	
6-4	542110062003D	MANUAL GUIDE	E3	CQX1A1621Z	1	*
6-4	542110063006D	MANUAL GUIDE	E2,EA	CQX1A1622Z	1	*
6-4	542110069004D	MANUAL GUIDE	E1C	CQX1A1623Z	1	*
6-5	307010087002D	REMOCON ASS'Y(RC-1156)		CARTAVR2312	1	*
6-6	nsp	BATTERY (AAA)		CABR6PPB	2	
6-7	90M-ZA000260R	AM LOOP ANT (9.5uH, 5T)		CSA1A032Z	1	
6-8	90M-ZA000230R	FM 1 POLANT (UL)		CSA1A019Z	1	
6-9	nsp	CARD FOR CHINA INDENTIFICATION	E1C	CQE1A450Z	1	
6-10	nsp	POLY BAG(MANUAL)		CPB1A197Z	1	
7	943531101840D	OUT CARTON BOX	BKE3	CPG1A948Z	1	*
7	943531101880D	OUT CARTON BOX	BKE2	CPG1A948Y	1	*
7	943531101890D	OUT CARTON BOX	SPE1C	CPG1A948X	1	*
8	nsp	CONTROL LABEL		CQB1A993Z	1	
9	nsp	COLOR LABEL	SPE1C	CQB1A676	2	
10	324010001003D	DM-A409EM		CJXAVR1612A	1	
11	nsp	LICENSE LABEL		CQB1A1058Z	1	
★ 12	nsp	PE SHEET		CPE1D001	1	
★ 13	nsp	LABEL BAR CODE(SET)		CQB1A978	1	
★ 14	nsp	RIBON BAR CODE		CQS1A001	1	
★ 15	nsp	LABEL BAR CODE(MANUAL)		CQB1A971	1	

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

R5F5630ECDFB (DIGITAL : IC201)



RX630 Group
PLQP0144KA-A
(144pin LQFP)
(Top)

R5F5630ECDFB Terminal Functions

Pin	Pin Name	Symbol	Tolerant	I/O	Pu/Pd	LvCnv	STBY	stop	Function
1	AVSS0	AVSS0		-			-	-	GND
2	P05/IRQ13-B	VSEL A		I	SW3VPu		I	I	Master Volume rotation detection input(ENCODOR) ※operate as VSEL B
3	VREFH	VREFH		-			-	-	Connect the power supply pin
4	P03/IRQ11-C	VSEL B		I	SW3VPu		I	I	Master Volume rotation detection input(ENCODOR) ※operate as VSEL A
5	VREFL	VREFL		-			-	-	GND
6	P02/IRQ10-B/ AN020/SCK6-B	ADV8002 INTO(OSD CORE)		I			O/L	O/L	ADV8002 INT output
7	P01/RXD6-B/ IRQ9-C/AN019	RDS DATA(E2)		I		5->3	I	I	RDS control(E2 model)
8	P00/TXD6-B/ IRQ8-C/AN018	RDS CLK(E2)		I		5->3	I	I	RDS control(E2 model)(Interrupt detection))
9	PF5/IRQ4-E	BDOWN		I			I	I	Power failure detection
10	EMLE	EMLE		I	Pd		-	-	E20 Emulator control signal (H:OK,L:NG(CPU unit only : the pull-down is necessary))
11	PJ5	I SEL A		I	SW3VPu		I	I	Input Selector rotation detection input(ENCODOR)
12	VSS	VSS		-			-	-	GND
13	PJ3	I SEL B		I	SW3VPu		I	I	Input Selector rotation detection input(ENCODOR)
14	VCL	VCL		-			-	-	Connect to VSS through C of 0.1μF
15	VBATT	VBATT		-			-	-	Connect the power supply pin
16	MD/FINED	MD		I	M3VPu		-	-	Usual(SingleChip mode):MD="H"/ MITSUBISHI writer rewrite:"L"(from external jig)
17	XCIN	XCIN		-			-	-	GND
18	XCOU/PH6(input only)	XCOU		-			-	-	Open
19	RES#	RESET		I	M3VPu		-	-	
20	XTAL/P37	XTAL		-			-	-	Crystal departure pendulum connection pin
21	VSS	VSS		-			-	-	GND
22	EXTAL/P36	EXTAL		-			-	-	Crystal departure pendulum connection pin

Pin	Pin Name	Symbol	Tolerant	I/O	Pu/Pd	LvCnv	STBY	stop	Function
23	VCC	VCC		-			-	-	Power supply pin
24	P35(input only)/NMI	NC		I	Pd		I	I	NC
25	TRST#-A/P34/ IRQ4-C/SCK6-A/ SCK0-B	TRST#	o	I	Pd		I	I	E20 Emulator control signal/Usual:"Hi-z"
26	P33/TIOCD0-B/ RXD6-A/RXD0-B/ IRQ3-DS	PLDAERR	o	I			O/L	O/L	PLD ERROR detection(Output of A PLD)
27	P32/TIOCC0/ TXD6-A/TXD0-B/ IRQ2-DS	NC	o	O/I			O/L/I	O/L/I	NC
28	TMS-A/P31/ IRQ1-DS	TMS	o	I	M3VPu		I	I	E20 Emulator control signal/Usual:"Hi-z"
29	TDI-A/P30/RXD1-B/ IRQ0-DS	TDI/RXD MITSUBISHI/ NC(NORMRAL)	o	I/I	M3VPu		I	I	E20 Emulator control signal/MITSUBISHI writer rewrite/ Usual:"Hi-z"
30	TCK-A/FINEC-A/ P27/SCK1-B	TCK	o	I	M3VPu		I	I	E20 Emulator control signal/Usual:"Hi-z"
31	TDO-A/P26/TXD1-B	TDO/TXD MITSUBISHI/ NC(NORMRAL)	o	O/O/I	M3VPu		I	I	E20 Emulator control signal/MITSUBISHI writer rewrite/ Usual:"Hi-z"
32	P25/TIOCA4-B/ RXD3-B/SSCL3-B	HDRADIO MIHO(AVR- 2312CIE3)/TU SCL(ANA TU)	o	I/O	-/SW3VPu		O/L	O/L	HDRADIO/TUNER KST-MT control
33	P24/TIOCB4-B/ SCK3-B/	HDRADIO RST(AVR- 2312CIE3)	o	O			O/L	O/L	HDRADIO control pin
34	P23/TIOCD3-B/ TXD3-B/SSDA3-B	HDRADIO MOHI(AVR- 2312CIE3)/ TU SDA(ANA TU)	o	O	-/SW3VPu		O/L	O/L	HDRADIO/TUNER KST-MT control
35	P22/TIOCC3-B/ SCK0-A	NC	o	O			O/L	O/L	NC
36	P21/TIOCA3-B/ RXD0-A/IRQ9-B	E_RXDMIEO	o	I			I	O/L	ETHER communication control pin(UART)
37	P20/TIOCB3-B/ TXD0-A/IRQ8-B	E_TXDMOEI	o	O			O/L	O/L	ETHER communication control pin(UART)
38	P17/TIOCB0-A/ TXD3-A/IRQ7-A/ SCK1-A	RC IN	o	I			I	I	RemoteControl signal input_CPU Wakeup(STANDBY:WAKEUP P(Interrupt))
39	P87/TIOCA2-B	NC		O			O/L	O/L	NC
40	P16/TIOCB1-A/ TXD1-A/RXD3-A/ IRQ6-A	TXD MO232I	o	O			O/L	O/L	Date forwarding pin to external(AMX)/MITSUBISHI writer rewrite
41	P86/TIOCA0-B	232C CONTROL(SUB LOG MODE)		O			O/L	O/L	SUB LOG MODE:for 232C route switch control
42	P15/TIOCB2-A/ RXD1-A/IRQ5-A/ SCK3-A	RXD MI232O	o	I			I	O/L	Date reception pin from external(AMX)/MITSUBISHI writer rewrite
43	P14/TIOCB5-A/ IRQ4-A	NC	o	O			O/L	O/L	NC
44	P13/TIOCA5-B/ TXD2-A/IRQ3-B	NC	o	O			O/L	O/L	NC
45	P12/RXD2-A/ IRQ2-B	THERMAL B	o	I			I	I	PROTECTION detection pin(THERMAL A)
46	VCC_USB	VCC		-			-	-	Connect the power supply pin
47	USB0_DM	NC		-			-	-	NC(Open)
48	USB0_DP	NC		-			-	-	NC(Open)
49	VSS_USB	VSS		-			-	-	GND
50	P56/TIOCA1-B	THERMAL A		I			I	I	PROTECTION detection pin(THERMAL B)
51	TRDATA3-A/P55/ IRQ10-A	E RESET	o	O			O/L	O/L	ETHERNET RESET communication control pin
52	TRDATA2-A/P54	E SPI REQ	o	I	Pd		O/L	O/L	ETHERNET communication control pin
53	P53	E SPI CS	o	O	N3VPu		O/L	O/L	ETHERNET communication control pin
54	P52/RXD2-B	E SPI MIEO	o	I	N3VPu		O/L	O/L	ETHERNET communication control pin

Pin	Pin Name	Symbol	Tolerant	I/O	Pu/Pd	LvCnv	STBY	stop	Function
55	P51/SCK2-B	E SPI CLK	○	O	N3VPu		O/L	O/L	ETHERNET communication control pin
56	P50/TXD2-B	E SPI MOEI	○	O	N3VPu		O/L	O/L	ETHERNET communication control pin
57	VSS	VSS		-			-	-	GND
58	TRCLK-A/P83	ADV8002 SPI CS		O			O/L	O/L	GUI control pin(ADV8002)
59	VCC	VCC		-			-	-	Power supply pin
60	PC7/TIOCB6/TXD8/ IRQ14-B	ADV8002 SPI MO/PC7	○	O/I			O/L	O/L	GUI control pin(ADV8002)/ MITSUBISHI writer rewrite:"L"(from external)
61	PC6/TIOCA6/RXD8/ IRQ13-A	ADV8002 SPI MI	○	I			O/L	O/L	GUI control pin(ADV8002)
62	PC5/TIOCD6/SCK8	ADV8002 SPI CLK	○	O			O/L	O/L	GUI control pin(ADV8002)
63	TRSYNC#-A/P82/ TXD10/SSDA10	EEPROM SDA (400k)		I/O			O/L	I	Pin for EEPROM control pin
64	TRDATA1-A/P81/ RXD10/SSCL10	EEPROM SCL (400k)		O			O/L	I	Pin for EEPROM control pin
65	TRDATA0-A/P80/ SCK10	NC		O			O/L	O/L	NC
66	PC4/TIOCC6/ SCK5-B	TU TUNED(ANA TU)	○	I	SW3VPu		O/L	O/L	TUNER KST-MT control
67	PC3/TXD5-B	TU STEREO(ANA TU)	○	I	SW3VPu		O/L	O/L	TUNER KST-MT control
68	P77/TXD11	MOSI		O			O/L	O/L	MAIN-SUB CPU communication control output pin
69	P76/RXD11	SOMI		I			I	O/L	MAIN-SUB CPU communication control output pin
70	PC2/RXD5-B	RST SUB	○	O			O/L	O/L	MAIN-SUB CPU communication control output pin
71	P75/SCK11	CLK MO		O			O/L	O/L	MAIN-SUB CPU communication control output pin
72	P74	ACK SIMO		O			O/L	O/L	MAIN-SUB CPU communication control output pin
73	PC1/IRQ12-C/ SCK5-C	SUB UPDATE	○	O			O/L	O/L	SUB UPDATE mode control (DPMS/DENON WRITTER) Usual:L SUB rewrite mode:H(SUB reset)
74	PL1	SUB CPU POWER		O			O/L	O/L	SUB CPU POWER ON/OFF switch(H:ON)
75	PC0/IRQ14-C	REQ SOMI	○	I			I	O/L	MAIN-SUB CPU communication control output pin
76	PL0	NC		O			O/L	O/L	NC
77	P73	GRN LED		O			O/L	O/L	POWER LED control pin(ON:H)
78	PB7/TIOCB5-B/ TXD9-A	RED LED	○	O			O/L	O/L	POWER/STANDBY LED control pin(ON:H)
79	PB6/TIOCA5-A/ RXD9-A	H/P RL	○	O			I	I	HEADPHONE RELAY control
80	PB5/TIOCB4-A/ SCK9-A	FRONT RL	○	O			O/L	O/L	RELAY control
81	PB4/TIOCA4-A	C/S RL	○	O			O/L	O/L	RELAY control
82	PB3/TIOCD3-A/ SCK4-A/SCK6-C	SB RL	○	O			O/L	O/L	RELAY control
83	PB2/TIOCC3-A	T.MUTE	○	O			O/L	O/L	ANALOG TUNER MUTE/HDRADIO MUTE control (MUTE:L)
84	PB1/TIOCB3-A/ TXD4-A/TXD6-C/ IRQ4-DS	NC	○	O/I			O/L	O/L	NC
85	P72	NC		O			O/L	O/L	NC
86	P71	NC		O			O/L	O/L	NC
87	PB0/TIOCA3-A/ RXD4-A/RXD6-C/ IRQ12-A	NC	○	O			O/L	O/L	NC
88	PA7/TIOCB2-B	NC	○	O			O/L	O/L	NC
89	PA6/TIOCA2-A	NC(AVR-2312)/ TRIGGER 2(AVR-2312)	○	O			O/L	O/L	TRIGGER OUT control pin
90	PA5/TIOCB1-B	TRIGGER 1	○	O			O/L	O/L	TRIGGER OUT control pin
91	VCC	VCC		-			-	-	Power supply pin
92	PA4/TIOCA1-A/ TXD5-A/IRQ5-DS	iPod TXD	○	O		3->5	O/L	O/L	iPod Dock communication control pin
93	VSS	VSS		-			-	-	GND
94	PA3/TIOCD0-A/ RXD5-A/IRQ6-DS	iPod RXD	○	I/O		5->3	O/L	O/L	iPod Dock communication control pin
95	PA2/RXD5-C	NC(AVR-2312)/ FW RL(AVR-2312)	○	O			O/L	O/L	RELAY control
96	PA1/TIOCB0-B/ IRQ11-A/SCK5-A	iPod DET	○	I/O	SW3VPu		O/L	O/L	MINI JACK for connect iPod DOCK detection pin(connection:H)

Pin	Pin Name	Symbol	Tolerant	I/O	Pu/Pd	LvCnv	STBY	stop	Function
97	PA0/TIOCA0-A	NC	o	O			O/L	O/L	NC
98	P67/IRQ15-C	NC(AVR-2312)/ FH RL(AVR-2312)		O			O/L	O/L	RELAY control
99	P66	PRE Z2 MUTE		O			O/L	O/L	PRE OUT MUTE control
100	P65	PRE SB MUTE		O			O/L	O/L	PRE OUT MUTE control
101	PE7/TIOCB11/ IRQ7-C/AN5	PRE F/C/S/SW		O			O/L	O/L	PRE OUT MUTE control
102	PE6/TIOCA11/ IRQ6-C/AN4	NC(AVR-2312)/ PRE Z3 MUTE(AVR-2312)		O			O/L	O/L	PRE OUT MUTE control
103	PK5/TXD4-B	NC		O			O/L	O/L	NC
104	P70/SCK4-B	NC		O			O/L	O/L	NC
105	PK4/RXD4-B	NC		O			O/L	O/L	NC
106	PE5/TIOCB10/ IRQ5-C/AN3	NC		O			O/L	O/L	NC
107	PE4/TIOCA10/AN2	VOL CLK		O			O/L	O/L	FUNCTION/VOLUME control(R2A15220)
108	PE3/TIOCB9/AN1	VOL DATA		O			O/L	O/L	FUNCTION/VOLUME control(R2A15220)
109	PE2/TIOCA9/ RXD12/IRQ7-DS/ AN0	NC		O			O/L	O/L	NC
110	PE1/TIOCD9/ TXD12/ANEX1	NC		O			O/L	O/L	NC
111	PE0/TIOCC9/ ANEX0/SCK12	NC		O			O/L	O/L	NC
112	P64	ZVOL STB		O			O/L	O/L	ZONE VOL (NJW1194) control
113	P63	ZVOL DATA		O			O/L	O/L	ZONE VOL (NJW1194) control
114	P62	ZVOL CLK		O			O/L	O/L	ZONE VOL (NJW1194) control
115	P61	THERMAL C		I			I	I	PROTECTION detection pin(THERMAL C)
116	PK3/RXD9-B	NC		O			O/L	O/L	NC
117	P60/SCK9-B	NC		O			O/L	O/L	NC
118	PK2/TXD9-B	NC		O			O/L	O/L	NC
119	PD7/IRQ7-D/AN7	FL RST		O			O/L	O/L	FL display control pin
120	PD6/IRQ6-D/AN6	FL CE		O			O/L	O/L	Pin for FL display control
121	PD5/IRQ5-D/AN013	FL CLK		O			O/L	O/L	Pin for FL display control
122	PD4/IRQ4-D/AN012	FL DATA		O			O/L	O/L	Pin for FL display control
123	PD3/TIOCB8/ IRQ3-C/AN011	ASO DET		I			I	I	PROTECTION detection pin(ASO)
124	PD2/TIOCA8/ IRQ2-C/AN010	DC DET		I			I	I	PROTECTION detection pin(DC DET)
125	PD1/TIOCB7/ IRQ1-C/AN009	ETHER POWER		O			O/L	O/L	ETHER POWER control pin
126	PD0/TIOCA7/ IRQ0-C/AN008	D5V POWER		O			O/L	O/L	Digital 5V power supply control pin (D5V→3.3V,1.8V,1.2V)
127	P93/AN017	MAIN POWER		O			O/L	O/L	MAIN POWER control pin
128	P92/RXD7/AN016	CPU POWER		O			O/L	O/L	Control pin for MAIN CPU POWER (POWER ON:H) STANDBY(CEC ON):H)
129	P91/AN015/SCK7	(MUTE POWER)		O			L	L	Reserve(power supply control pin for PRE MUTE TR)
130	VSS	VSS		-			-	-	GND
131	P90/TXD7/AN014	REMOTE POWER(232C)		O			O/L	O/L	Pin for 232C POWER control(ON:H)
132	VCC	VCC		-			-	-	Power supply pin
133	P47/IRQ15-DS/ AN007	MIC DET		I			I	O/L	Pin for MIC detection pin(At detection:H)
134	P46/IRQ14-DS/ AN006	H/P DET		I			I	O/L	Pin for Headphone detection pin(At detection:H)
135	P45/IRQ13-DS/ AN005	KEY3		I	M3VPu		I	I	KEY input 3(STANDBY:Interrupt setting)
136	P44/IRQ12-DS/ AN004	KEY2		I	M3VPu		I	I	KEY input 2(STANDBY:Interrupt setting)
137	P43/IRQ11-DS/ AN003	KEY1		I	M3VPu		I	I	KEY input 1(STANDBY:Interrupt setting)
138	P42/IRQ10-DS/ AN002	(MODEL)		I			I	I	Not use (MODEL Switch input)

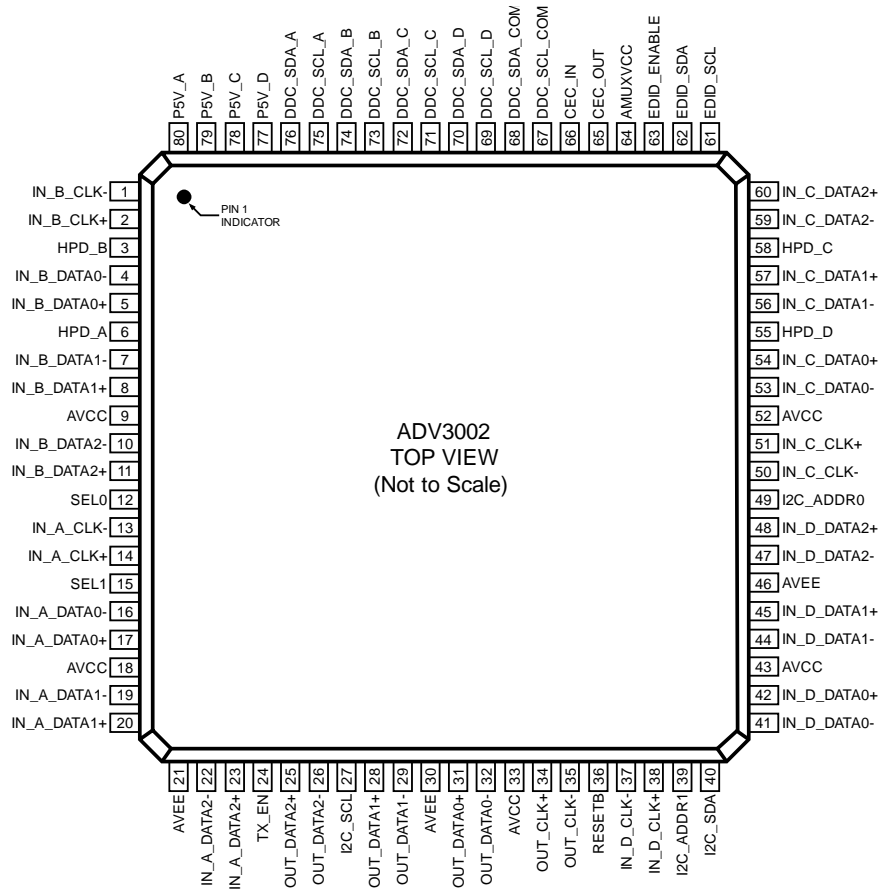
Pin	Pin Name	Symbol	Tolerant	I/O	Pu/Pd	LvCnv	STBY	stop	Function
139	P41/IRQ9-DS/ AN001	MODE		I			I	I	Region switch input
140	VREFL0	VREFL0		-			-	-	GND
141	P40/IRQ8-DS/ AN000	THERMAL D		I			I	I	PROTECTION detection pin(THERMAL D)
142	VREFH0	VREFH0		-			-	-	Standard power supply input
143	AVCC0	AVCC0		-			-	-	Analog power supply
144	P07/IRQ15-B	POWER KEY	o	I	M3VPu		I	I	POWER KEY(WAIT MODE release,Interrupt port)

R5F3650KNFB Terminal Functions

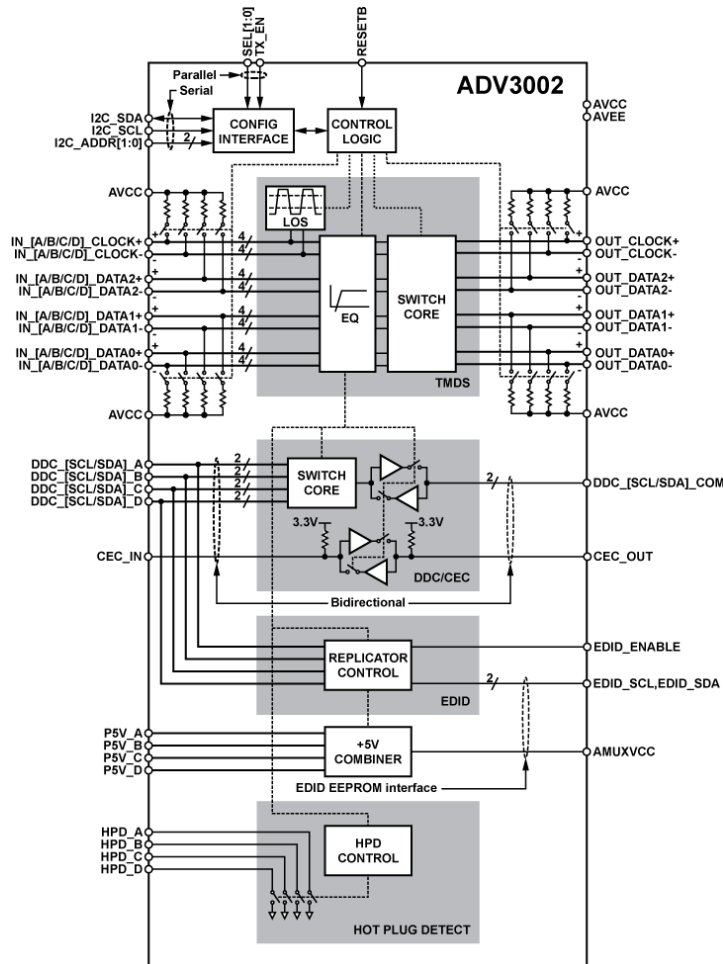
Pin	Pin Name	Symbol	I/O	Type	Pu/Pd (Ext.)	CEC STBY	P.OFF	Function
1	P94	NC	I	-	Pd	-	Z	NC
2	P93	DIR CE	O	C	-	O/L	Z	DIR control pin (LC89058W-VF4A)
3	P92/SOUT3	DIR DIN	O	C	-	O/L	Z	DIR control pin (LC89058W-VF4A)
4	P91/SIN3	DIR DOUT	I	-	DA3.3Pu	-	Z	DIR control pin (LC89058W-VF4A)
5	P90/CLK3	DIR CLK	O	C	-	O/L	Z	DIR control pin (LC89058W-VF4A)
6	BYTE	BYTE	-	-	-	-	-	GND(Ext. data bus bit width switching, 16bit : L)
7	CNVCS	CNVSS	-	-	Pd	-	-	Single-chip/Micro-processor mode switching (Normal single-chip : L, Rewrite boot program start : H input set)
8	P87	ADC RST	O	C	-	O/L	Z	AD control pin(
9	P86	DIR CE4	O	C	-	O/L	Z	DIR control pin (LC89058W-VF4A)
10	RESET	SUBRESET	I	-	SCPU3VPu	-	Z	Reset input
11	XOUT	X1	O	-	-	-	-	Oscillator connection
12	VSS	VSS	-	-	-	-	-	GND
13	XIN	X2	I	-	-	-	-	Oscillator connection
14	VCC	VCC	-	-	-	-	-	+3.3V
15	P85(N)/(NMI)/(CEC)	(CEC_IN)	I	-	Pd	-	-	NC
16	P84/INT2	CEC_IN	I	-	SCPU3VPu	-	Z	CEC-D signal input pin
17	P83/INT1	ACK SIMO	I	-	-	-	Z	MAIN-SUB ucom communication control input pin MAIN ucom Hack from the main "L" Return)
18	P82/INT0	SUB BDOWN	I	-	-	-	Z	Power failure detect(Power failure:L)
19	P81	ASPECT_H	O	C	-	O/H	Z	ASPECT select (JP only)
20	P80/(RXD5)	ASPECT_L	O	C	-	O/H	Z	ASPECT select (JP only)
21	P77/(CLK5)	SUB TDO	I	-	-	O/L	Z	PLD rewriting control (JTAG)
22	P76/(TXD5)	A PLD CS "/D/M"	O	C	-	-	O/L	A PLD control pin/ DENON WRITTER/ MITSUBISHI rewritten for determining (DW :L)
23	P75	A PLD DATA	O	C	-	O/L	Z	A PLD control pin
24	P74	A PLD CLK	O	C	-	O/L	Z	A PLD control pin
25	P73/CTS2	NC	I	-	Pd	-	Z	NC
26	P72/CLK2	DA POWER	O	C	-	-	Z	DIGITAL power (DA3.3V,DA1.1V) ON/OFF control (H: ON)
27	P71(N)/RXD2/SCLMM	HSCL(400k)	I/O	N	CEC3VPu	O/L	O/L	VIDEO I2C- ADV8002/ADV7844/ADV3002
28	P70(N)/TXD2/SDAMM	HSDA(400k)	I/O	N	CEC3VPu	O/L	O/L	VIDEO I2C- ADV8002/ADV7844/ADV3002
29	P67/TXD1	TXD	O	C	SCPU3VPu	-	Z	Data transmission output to external
30	P66/RXD1	RXD	I	-	SCPU3VPu	-	Z	Data reception input from the external
31	P65/CLK1/SCLK	SCLK	I	-	Pd	-	Z	Emulator communication pin
32	P64/CTS1	HIN SELA	O	C	-	O/L	Z	For HDMI 4/5/6/F selection(TC4052)
33	P63/TXD0	SOMI	O	C	-	-	Z	MAIN-SUB ucom communication control pin
34	P62/RXD0	SIMO	I	-	-	-	Z	MAIN-SUB ucom communication control pin
35	P61/CLK0	CLK SIMO	I	-	-	-	Z	MAIN-SUB ucom communication control pin
36	P60/CTS0	REQ SOMI	O	C	-	-	Z	MAIN-SUB ucom communication control pin
37	P57	ADV3002 RST	O	C	SCPU3VPu	-	Z	HDMI SWITCHER ADV3002 Reset pin
38	P56	DV POWER2	O	C	-	-	Z	DIGITAL.VIDEO power control pin (DV1.8V)
39	P55/EPM	EPM	I	-	Pd	-	Z	Rewrite boot program start:L input set
40	P54	CEC_OUT	O	C	-	-	Z	CEC-D signal output pin
41	P53	NC	I	-	Pd	I	Z	NC
42	P52	Z2SSIG.DET(De_33)	I	-	SCPU3VPu	I	Z	ZONE2 S signal presence detection input (Connected: H)
43	P51	HIN SELB	O	C	-	O/L	Z	For HDMI 4/5/6/F selection(TC4052)
44	P50/CE	CE	O/I	C	SCPU3VPu	-	Z	Rewrite boot program start:H input set
45	P47/(TXD7)/SDA7	VSDA	I/O	C	DV3VPu	-	O/L	VIDEO SELECT IC(ADVM2000)
46	P46/(RXD7)/SCL7	VSCL	I/O	C	DV3VPu	-	O/L	VIDEO SELECT IC(ADVM2000)
47	P45/(CLK7)	LINE A	O	C	-	O/L	Z	
48	P44	LINE B	O	C	-	O/L	Z	LINE B select (JP only)
49	P43	HDMI A.SEL	O	C	-	O/L	Z	HDMI AUDIO switch (H : DSP course, L : HDMI Rx→Tx through) (TC74VHC244)
50	P42	NC	I	-	Pd	I	Z	NC
51	P41	CEC POWER	O	C	-	O/H	Z	Power ON (CEC5V,CEC3.3V,CEC1.8V) for CEC STANDBY
52	P40	CEC SEL(33)	I	-	Pd	-	Z	CEC output LINE switching (AVR-2312 only)
53	P37	ADV7844 RST	O	C	SCPU3VPu	-	Z	Reset for HDMI(ADV7844)
54	P36	ADV8002 RST	O	C	SCPU3VPu	-	Z	Reset for HDMI(ADV8002)
55	P35	NC	I	-	Pd	-	Z	NC
56	P34	Z1 SSIGDET	I	-	SCPU3VPu	-	Z	S signal presence detection input (Connected: H)
57	P33	NC	I	-	Pd	-	Z	NC
58	P32	DAC MDI	O	C	-	O/L	Z	DAC control pin(ASK4358)
59	P31	DAC MC	O	C	-	O/L	Z	DAC control pin(ASK4358)
60	VCC	VCC	-	-	-	-	-	+3.3V

Pin	Pin Name	Symbol	I/O	Type	Pu/Pd (Ext.)	CEC STBY	P.OFF	Function
61	P30	DAC MS	O	C	-	O/L	Z	DAC control pin(ASK4358)
62	VSS	VSS	-	-	-	-	-	GND
63	P27	DAC RST	O	C	-	O/L	Z	DAC control pin(ASK4358)
64	P26	DV POWER	O	C	-	MODE1=O/H MODE2=O/L	Z	DIGITAL VIDEO power control pin (DV5V,DV3.3V)
65	P25/INT7	ADV7844 INT1	I	-	-	-	Z	HDMI RECEIVER(ADV7844)INT output
66	P24/INT6	ADV7844 INT2	I	-	-	-	Z	HDMI RECEIVER(ADV7844)INT output
67	P23	SUB TMS	O	C	DA3.3Pu	-	Z	PLD rewriting control (JTAG)
68	P22	NC	I	-	Pd	-	Z	NC
69	P21	VINA	O	C	-	O/L	Z	Image input switch (INPUT select)
70	P20	VINB	O	C	-	O/L	Z	Image input switch (INPUT select)
71	P17/INT5	NC	I	-	Pd	-	Z	NC
72	P16/INT4	ADV8002 INT1(Tx)	I	-	-	-	Z	HDMI RECEIVER(ADV8002)INT output
73	P15/INT3	ADV8002 INT2(Rx)	I	-	-	-	Z	HDMI RECEIVER(ADV8002)INT output
74	P14	NC	I	-	Pd	-	Z	NC
75	P13/TXD6	DSP MOSI	O	C	DA3VPu	O/L	Z	DSP control pin
76	P12/RXD6	DSP MISO	I	-	DA3VPu	-	Z	DSP control pin
77	P11/CLK6	DSPICLK	O	C	DA3VPu	O/L	Z	DSP control pin
78	P10	Z1VSIG.DET	I	-	SCPU3VPu	-	Z	VIDEO IN signal presence detection input(Signal input:H)
79	P07	SUB TDI	O	C	DA3.3Pu	O/L	Z	PLD rewriting control (JTAG)
80	P06	NC	I	-	Pd	-	Z	NC
81	P05	Z2 INB(De_33)	O	C	-	O/L	Z	ZONE2 image input switch (INPUT select)
82	P04	Z2 INA(De_33)	O	C	-	O/L	Z	ZONE2 image input switch (INPUT select)
83	P03	SUB TCK	O	C	Pd	-	Z	PLD rewriting control (JTAG)
84	P02	DIR RST3(De_33)	O	C	-	O/L	O/L	DIR control pin (LC89058W-VF4A)
85	P01	DIR RST2(De_33)	O	C	-	O/L	O/L	DIR control pin (LC89058W-VF4A)
86	P00	DIR RST1	O	C	-	O/L	O/L	DIR control pin (LC89058W-VF4A)
87	P107/(AN7)	DSP RST	O	C	-	O/L	Z	DSP reset output pin (Reset:L)
88	P106/(AN6)	NC	I	-	Pd	-	Z	NC
89	P105/(AN5)	DSP ROMRST	O	C	-	O/L	Z	Memory reset for DSP(Reset:L)
90	P104/(AN4)	COMPS DET	I	-	SCPU3VPu	-	Z	COMPONENT IN signal presence detection input
91	P103/(AN3)	DSP FLAG0	I	-	Pd	-	Z	DSP control pin
92	P102/(AN2)	DSPICS	O	C	DA3VPu	O/L	Z	DSP control pin
93	P101/(AN1)	NC	I	-	Pd	-	Z	NC
94	AVSS	AVSS	-	-	-	-	-	AD GND
95	P100/(AN0)	NC	I	-	Pd	-	Z	NC
96	VREF	VREF	-	-	-	-	-	AD standard +3.3V
97	AVCC	AVCC	-	-	-	-	-	AD +3.3V
98	P97/(SIN4)	Tx EN	O	C	-	-	Z	AD8195 ENABLE pin for Front HDMI control
99	P96/(SOUT4)	NC	I	-	Pd	-	Z	NC
100	P95/(CLK4)	NC	I	-	Pd	-	Z	NC

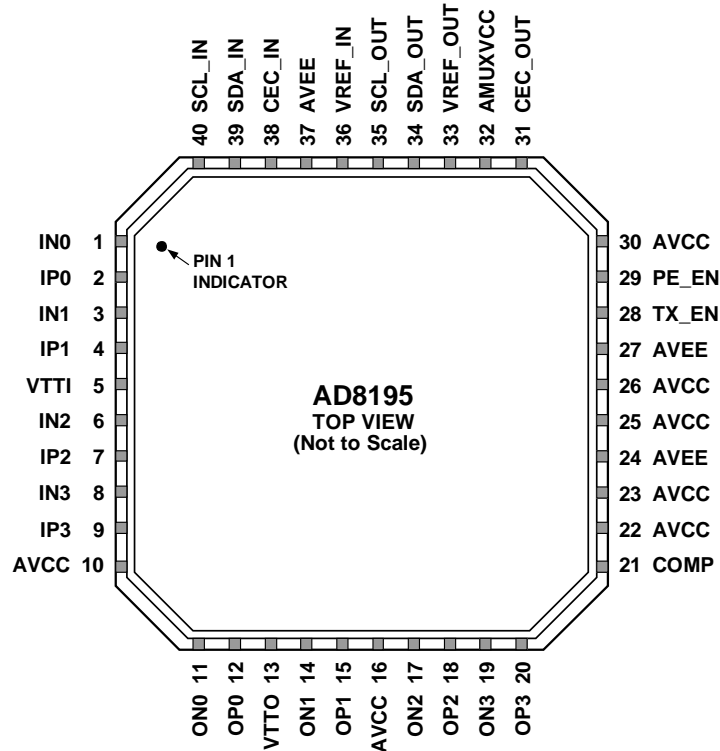
ADV3002BSTZ (HDMI : IC111)



ADV3002BSTZ Block diagram



AD8195ACPZ (HDMI : IC101)



NOTES

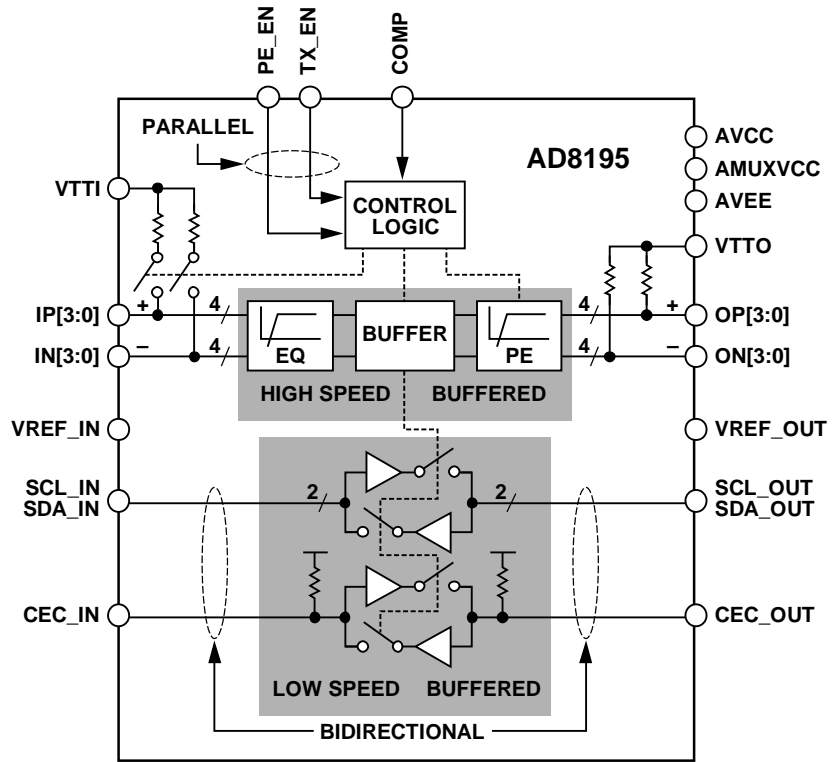
1. THE AD8195 LFCSP HAS AN EXPOSED PAD ON THE UNDERSIDE OF THE PACKAGE THAT AIDS IN HEAT DISSIPATION. THE PAD MUST BE ELECTRICALLY CONNECTED TO THE AVEE SUPPLY PLANE IN ORDER TO MEET THERMAL SPECIFICATIONS.

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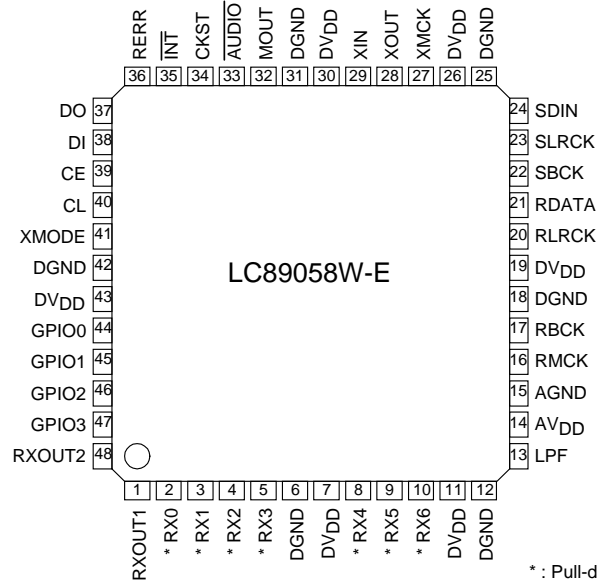
AD8195ACPZ Terminal Function

Pin No.	Mnemonic	Type ¹	Description
1	IN0	HS I	High Speed Input Complement.
2	IP0	HS I	High Speed Input.
3	IN1	HS I	High Speed Input Complement.
4	IP1	HS I	High Speed Input.
5	VTTI	Power	Input Termination Supply. Nominally connected to AVCC.
6	IN2	HS I	High Speed Input Complement.
7	IP2	HS I	High Speed Input.
8	IN3	HS I	High Speed Input Complement.
9	IP3	HS I	High Speed Input.
10, 16, 22, 23, 25, 26, 30	AVCC	Power	Positive Analog Supply. 3.3 V nominal.
11	ON0	HS O	High Speed Output Complement.
12	OP0	HS O	High Speed Output.
13	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 μ 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 : IC403,IC404,IC405)



* : Pull-down resistor internal at no selection

Pin Functions

Pin No.	Name	I/O	Function
1	RXOUT1	O	RX0-6 input S/PDIF through output pin 1
2	RX0	I _s (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 _s (pd)	5V withstand voltage TTL input level compatible S/PDIF input pin (connected to GND when RX1 is set)
5	RX3	I _s (pd)	5V withstand voltage TTL input level compatible S/PDIF input pin
6	DGND		Digital GND
7	DV _{DD}		Digital power supply (3.3V)
8	RX4	I _s (pd)	5V tolerable TTL input level compatible S/PDIF input pin
9	RX5	I _s (pd)	5V tolerable TTL input level compatible S/PDIF input pin
10	RX6	I _s (pd)	5V tolerable TTL input level compatible S/PDIF input pin
11	DV _{DD}		Digital power supply (3.3V)
12	DGND		Digital GND
13	LPF	O	PLL loop filter connection pin
14	AV _{DD}		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 _{DD}		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 _s	External serial audio data input pin

Pin No.	Name	I/O	Function
25	DGND		Digital GND
26	DV _{DD}		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	DV _{DD}		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 _S	CCB microcontroller I/F, write data input pin
39	CE	I _S	CCB microcontroller I/F, chip enable input pin
40	CL	I _S	CCB microcontroller I/F, clock input pin
41	XMODE	I _S	System reset input pin
42	DGND		Digital GND
43	DV _{DD}		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_S = -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.

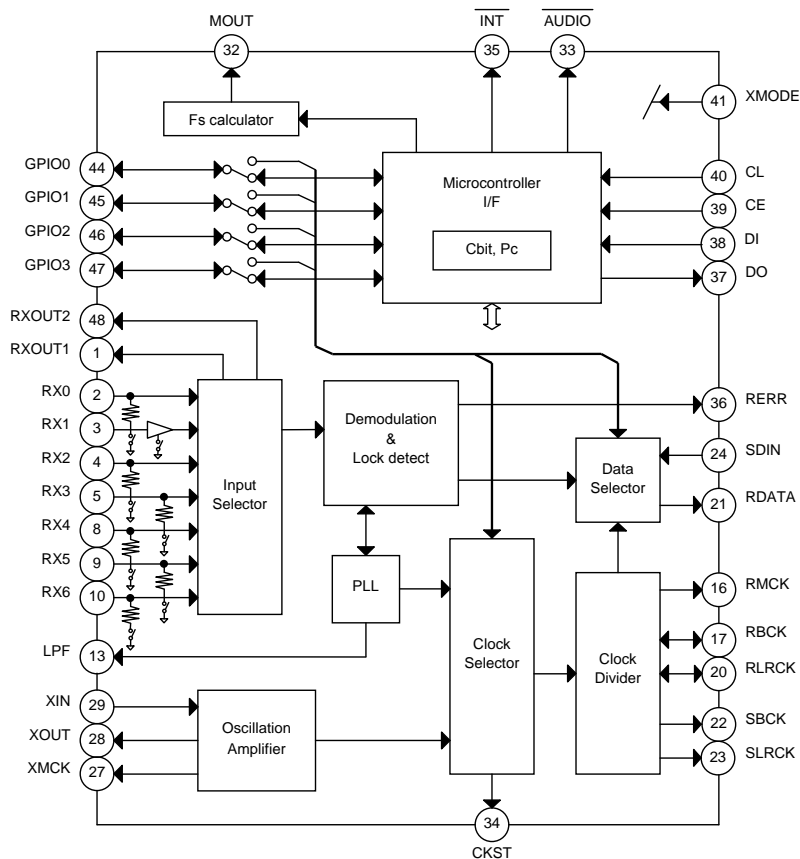
* Pins 32 and 33 are input pins for chip address setting when pin 41 is held at the low level.

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

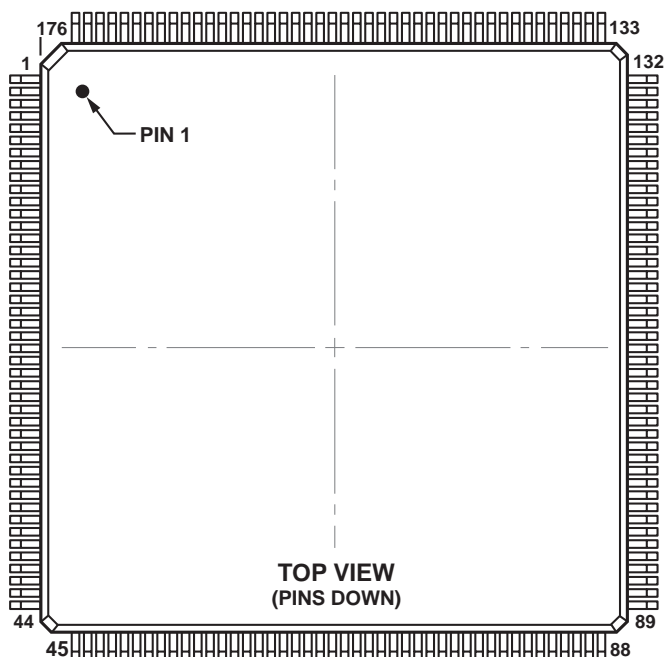
* Pin 35 serves as the input pin for configuring the I/O of pins 44 to 47 when pin 41 is held at the low level.

* The DV_{DD} and AV_{DD} 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



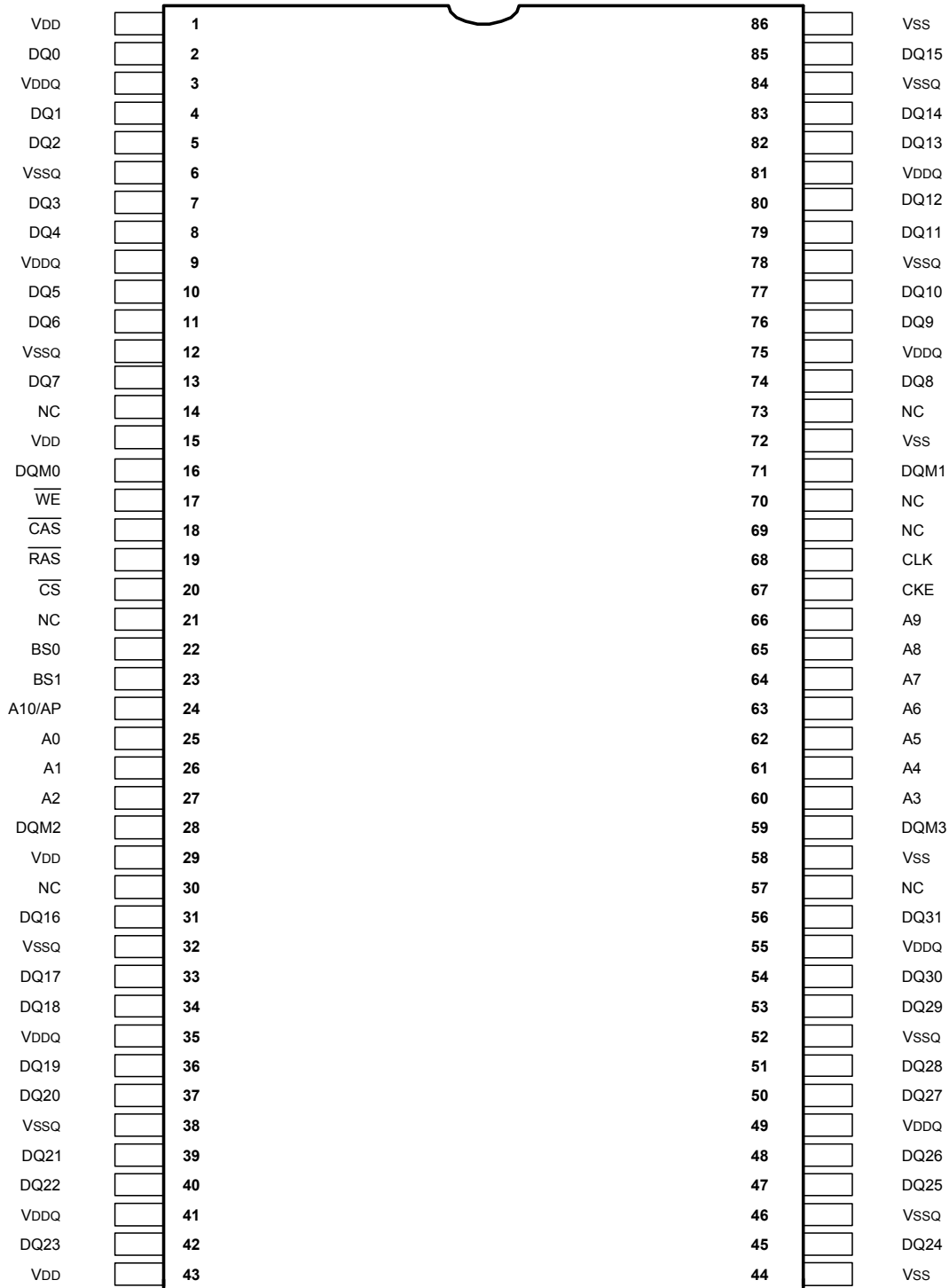
ADSP21487KSWZ-4B (HDMI : IC408)



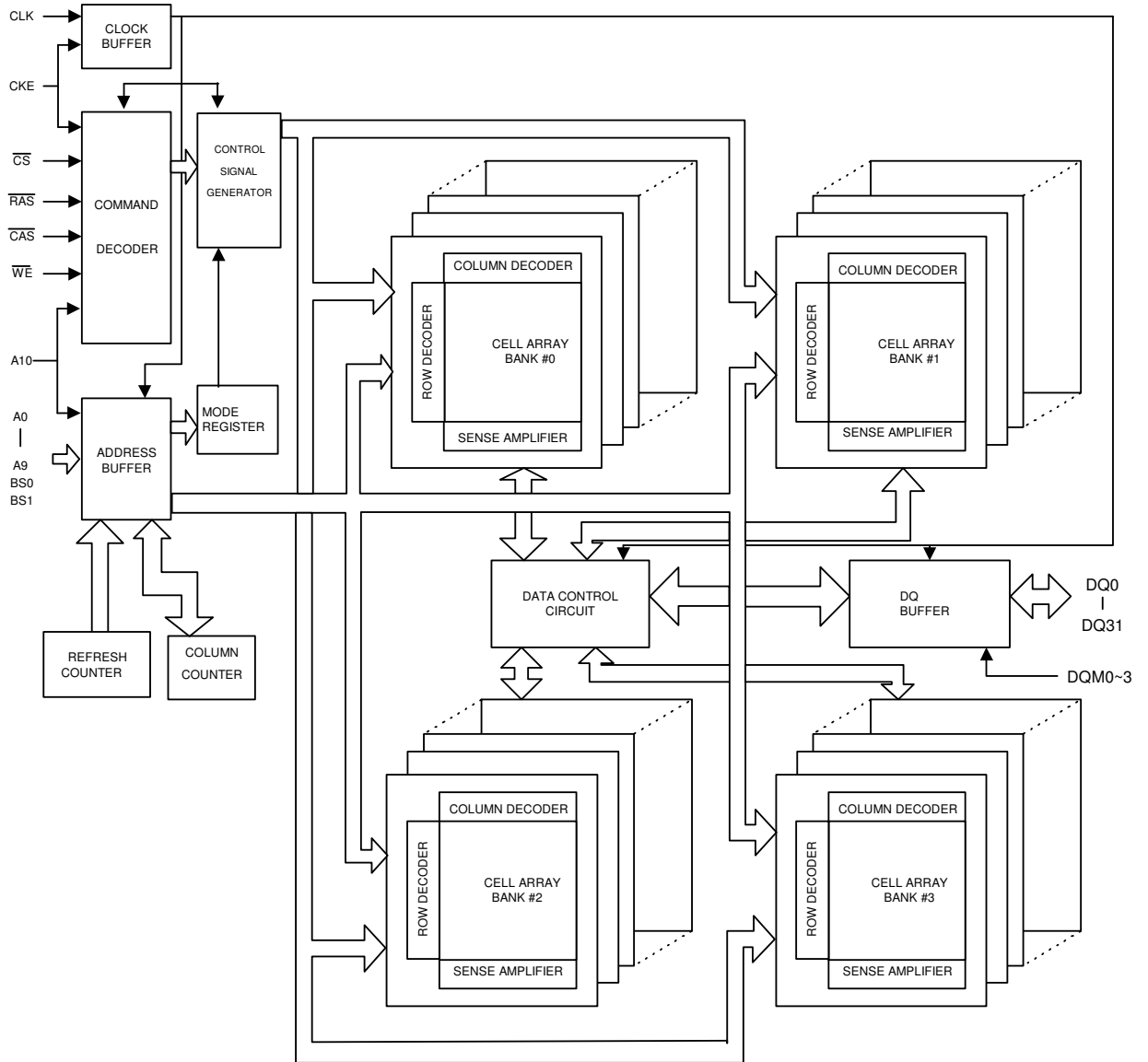
ADSP21487KSWZ Terminal Function

Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.
SDDQM	1	V _{DD_EXT}	45	DAI_P10	89	V _{DD_INT}	133
MS0	2	DPI_P08	46	V _{DD_INT}	90	FLAG0	134
SDCKE	3	DPI_P07	47	V _{DD_EXT}	91	FLAG1	135
V _{DD_INT}	4	V _{DD_INT}	48	DAI_P20	92	FLAG2	136
CLK_CFG1	5	DPI_P09	49	V _{DD_INT}	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 _{DD_EXT}	8	DPI_P12	52	DAI_P04	96	NC	140
ADDR1	9	DPI_P13	53	DAI_P18	97	V _{DD_EXT}	141
ADDR2	10	DPI_P14	54	DAI_P17	98	NC	142
ADDR3	11	DAI_P03	55	DAI_P16	99	V _{DD_INT}	143
ADDR4	12	NC	56	DAI_P12	100	TRST	144
ADDR5	13	V _{DD_EXT}	57	DAI_P15	101	NC	145
BOOT_CFG1	14	NC	58	V _{DD_INT}	102	EMU	146
GND	15	NC	59	DAI_P11	103	DATA0	147
ADDR6	16	NC	60	V _{DD_EXT}	104	DATA1	148
ADDR7	17	NC	61	V _{DD_INT}	105	DATA2	149
NC	18	V _{DD_INT}	62	BOOT_CFG2	106	DATA3	150
NC	19	NC	63	V _{DD_INT}	107	TDO	151
ADDR8	20	NC	64	AMI_ACK	108	DATA4	152
ADDR9	21	V _{DD_INT}	65	GND	109	V _{DD_EXT}	153
CLK_CFG0	22	NC	66	THD_M	110	DATA5	154
V _{DD_INT}	23	NC	67	THD_P	111	DATA6	155
CLKIN	24	V _{DD_INT}	68	V _{DD_THD}	112	V _{DD_INT}	156
XTAL	25	NC	69	V _{DD_INT}	113	DATA7	157
ADDR10	26	WDRSTO	70	V _{DD_INT}	114	TDI	158
SDA10	27	NC	71	MS1	115	SDCLK	159
V _{DD_EXT}	28	V _{DD_EXT}	72	V _{DD_INT}	116	V _{DD_EXT}	160
V _{DD_INT}	29	DAI_P07	73	WDT_CLKO	117	DATA8	161
ADDR11	30	DAI_P13	74	WDT_CLKIN	118	DATA9	162
ADDR12	31	DAI_P19	75	V _{DD_EXT}	119	DATA10	163
ADDR17	32	DAI_P01	76	ADDR23	120	TCK	164
ADDR13	33	DAI_P02	77	ADDR22	121	DATA11	165
V _{DD_INT}	34	V _{DD_INT}	78	ADDR21	122	DATA12	166
ADDR18	35	NC	79	V _{DD_INT}	123	DATA14	167
RESETOUT/RUNRSTIN	36	NC	80	ADDR20	124	DATA13	168
V _{DD_INT}	37	NC	81	ADDR19	125	V _{DD_INT}	169
DPI_P01	38	NC	82	V _{DD_EXT}	126	DATA15	170
DPI_P02	39	NC	83	ADDR16	127	SDWE	171
DPI_P03	40	V _{DD_EXT}	84	ADDR15	128	SDRAS	172
V _{DD_INT}	41	V _{DD_INT}	85	ADDR14	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 _{DD_INT}	176
						GND	177*

W9864G6JH-6 (HDMI : IC409)



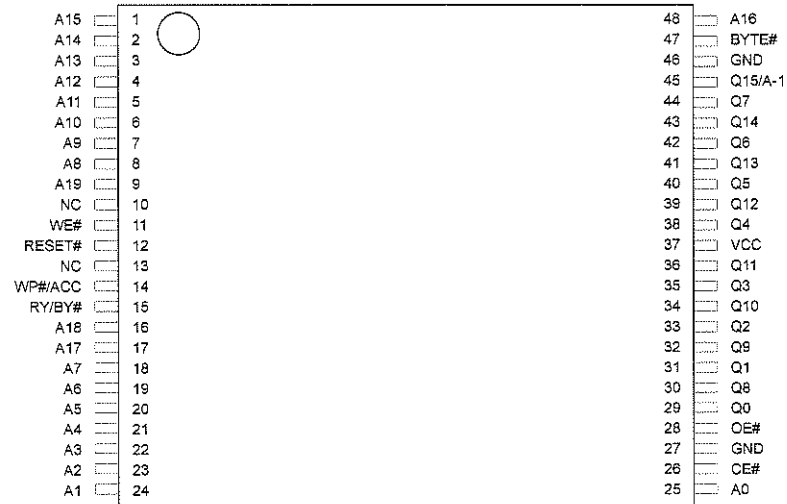
W9864G6JH-6 Block diagram



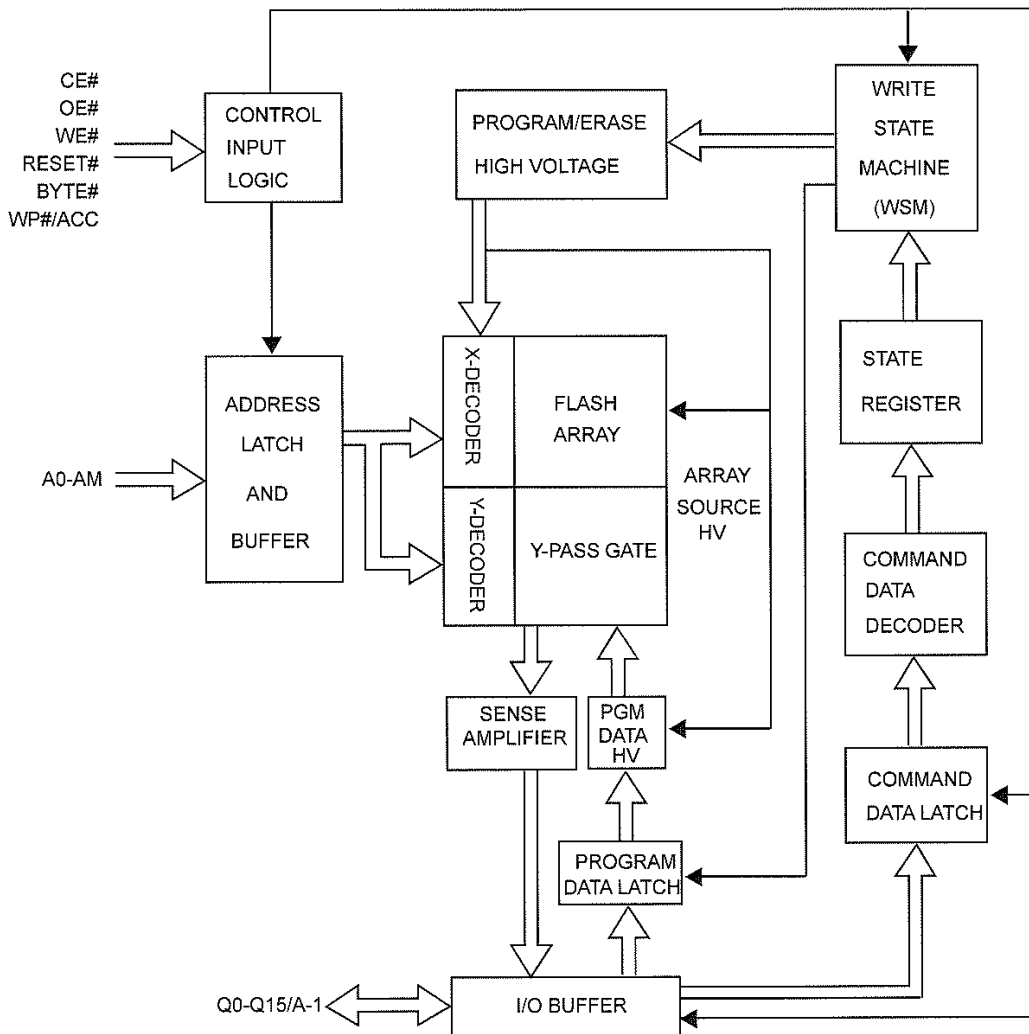
W9864G6JH-6 Pin description

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.

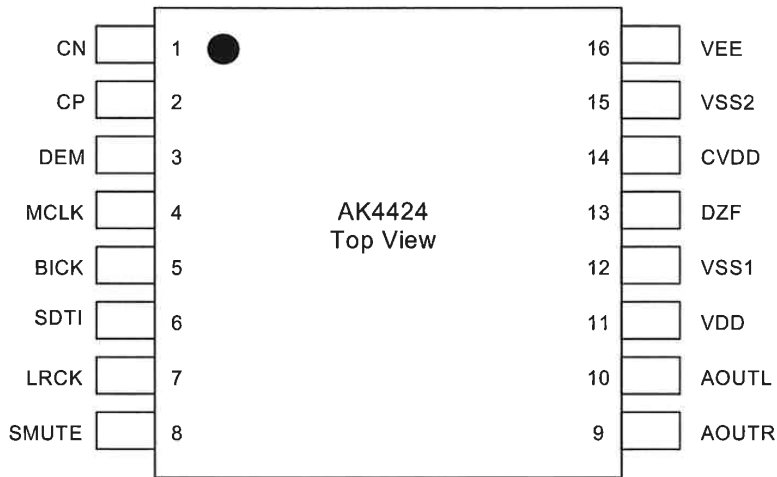
MX29LV160DBTI-70G (HDMI : IC410)



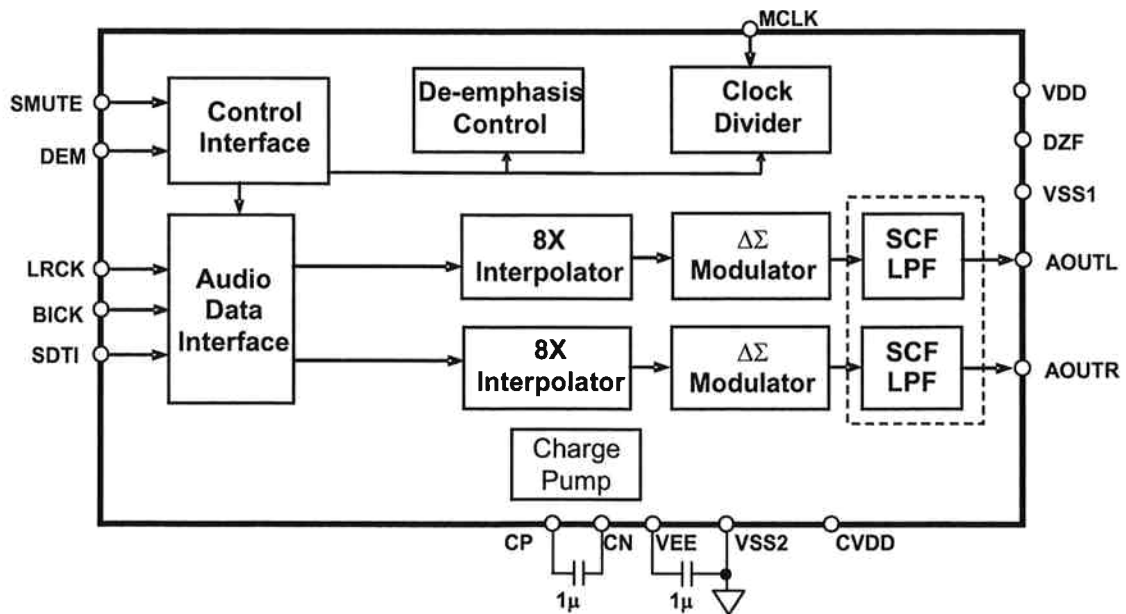
MX29LV160DBTI-70G Block Diagram



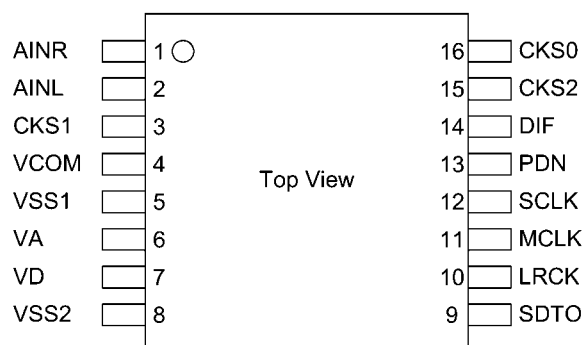
AK4424ET (HDMI : IC455,IC457)



AK4424ET Block Diagram



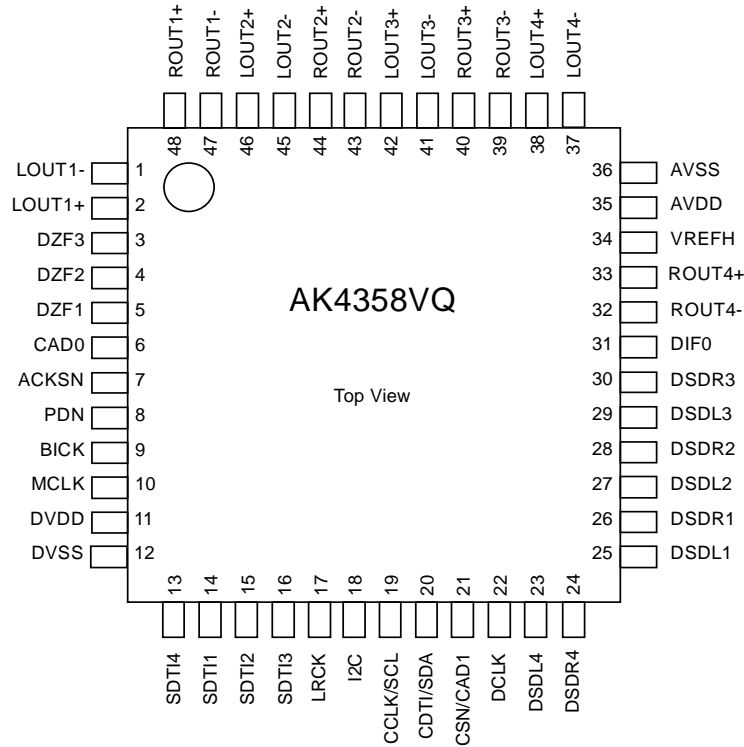
AK5358BET (HDMI : IC451)



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 ² S Compatible, “L”: 24bit MSB justified
15	CKS2	I	Mode Select 2 Pin
16	CKS0	I	Mode Select 0 Pin

AK4358VQ (HDMI : IC441)



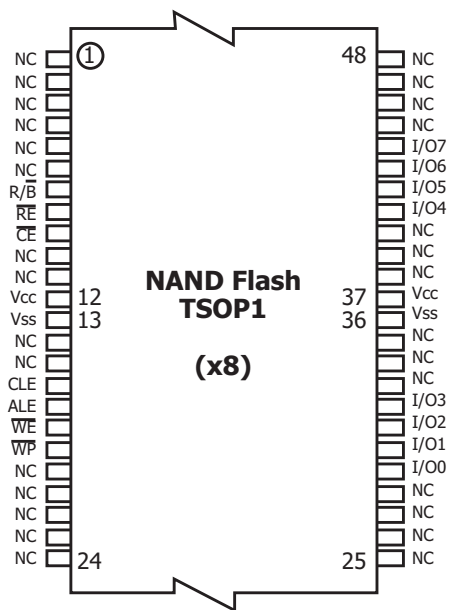
AK4358VQ Pin Function

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 ² C Bus
19	CCLK/SCL	I	Control Data Clock Pin I2C = “L”: CCLK (3-wire Serial), I2C = “H”: SCL (I ² C Bus)
20	CDTI/SDA	I/O	Control Data Input Pin I2C = “L”: CDTI (3-wire Serial), I2C = “H”: SDA (I ² C Bus)
21	CSN/CAD1	I	Chip Select Pin I2C = “L”: CSN (3-wire Serial), I2C = “H”: CAD1 (I ² 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.

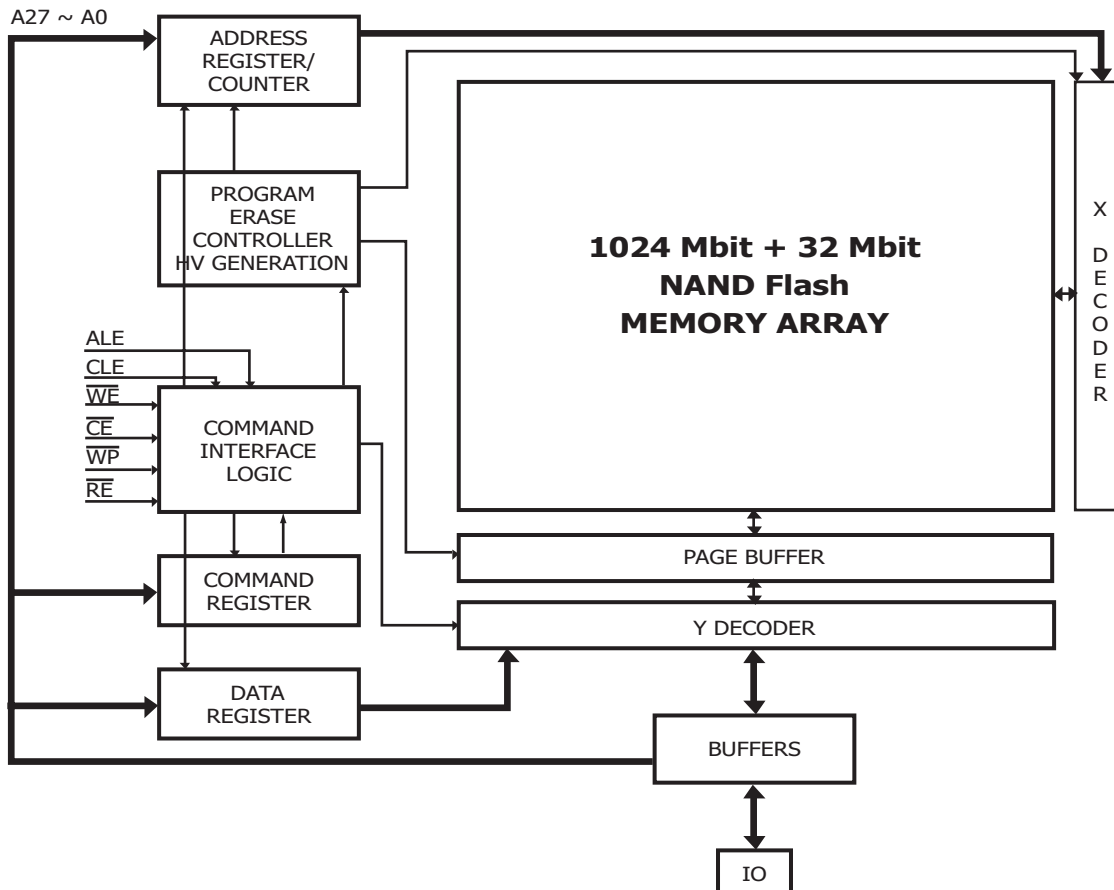
H27U1G8F2BTR-BC (HDMI : IC 391)



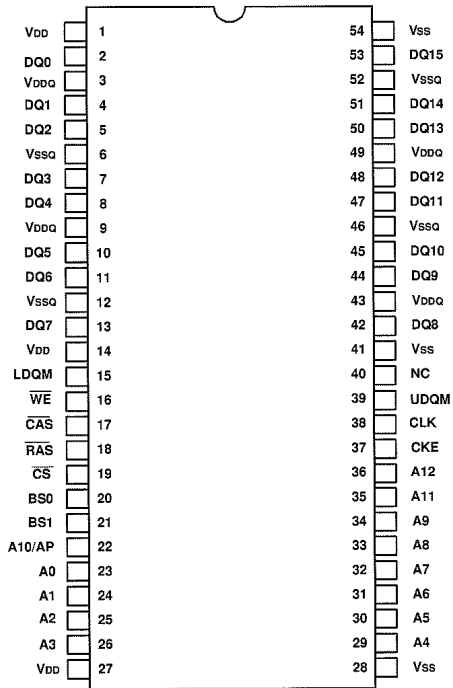
H27U1G8F2BTR-BC Pin Function

Pin Name	Description
I00 ~ I07	DATA INPUTS/OUTPUTS 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	COMMAND LATCH ENABLE This input activates the latching of the IO inputs inside the Command Register on the Rising edge of Write Enable (WE).
ALE	ADDRESS LATCH ENABLE This input activates the latching of the IO inputs inside the Address Register on the Rising edge of Write Enable (WE).
\overline{CE}	CHIP ENABLE This input controls the selection of the device.
\overline{WE}	WRITE ENABLE This input acts as clock to latch Command, Address and Data. The IO inputs are latched on the rise edge of WE.
\overline{RE}	READ ENABLE 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}	WRITE PROTECT The WP pin, when Low, provides an Hardware protection against undesired modify (program / erase) operations.
R/B	READY BUSY The Ready/Busy output is an Open Drain pin that signals the state of the memory.
Vcc	SUPPLY VOLTAGE The Vcc supplies the power for all the operations (Read, Write, Erase).
Vss	GROUND
NC	NO CONNECTION

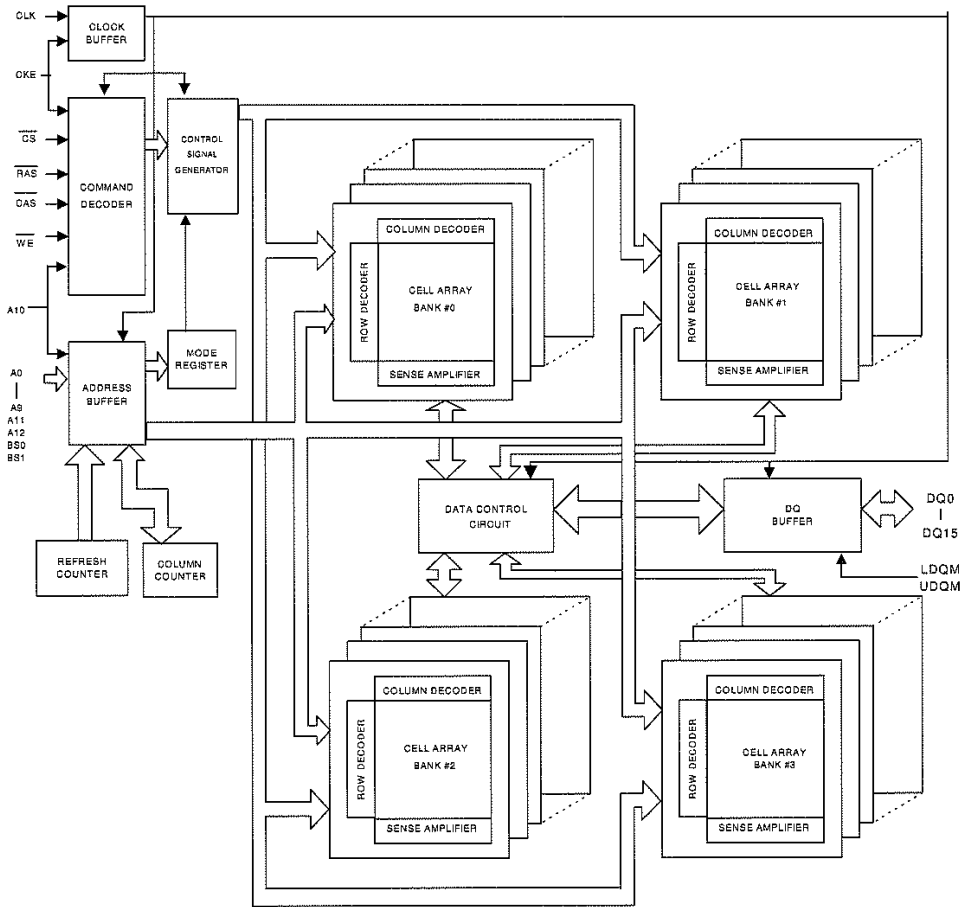
H27U1G8F2BTR-BC Block Diagram



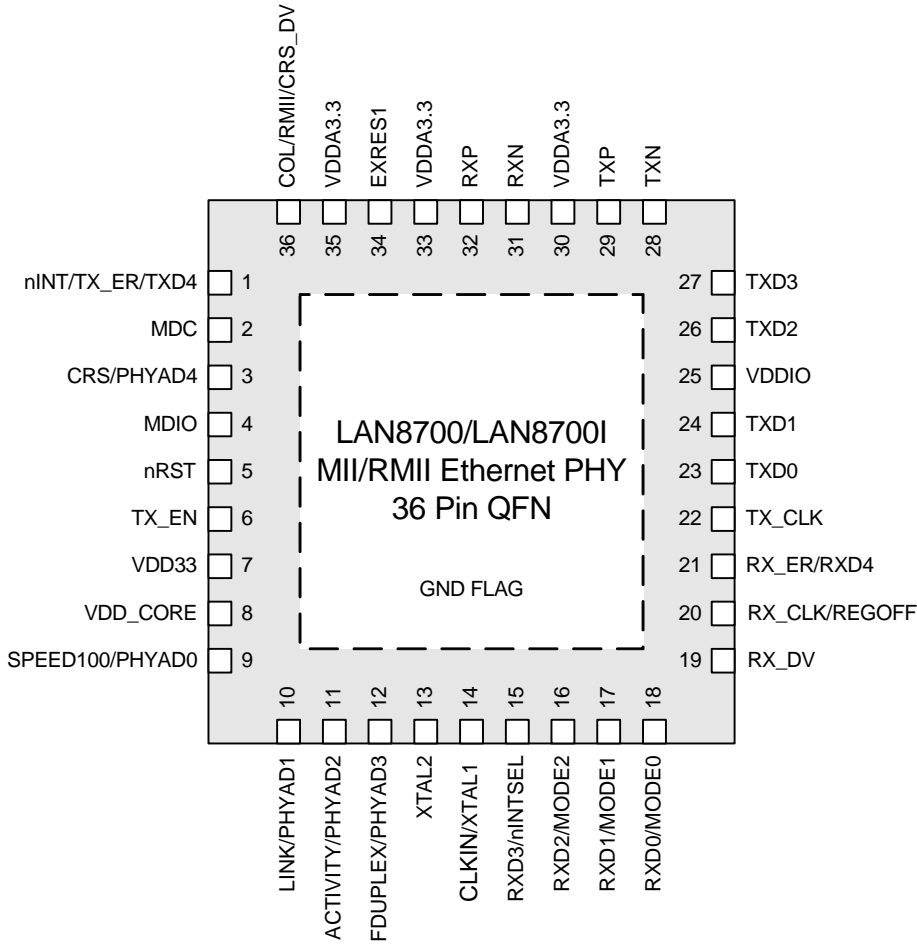
W9825G6JH-6 (HDMI : IC392)



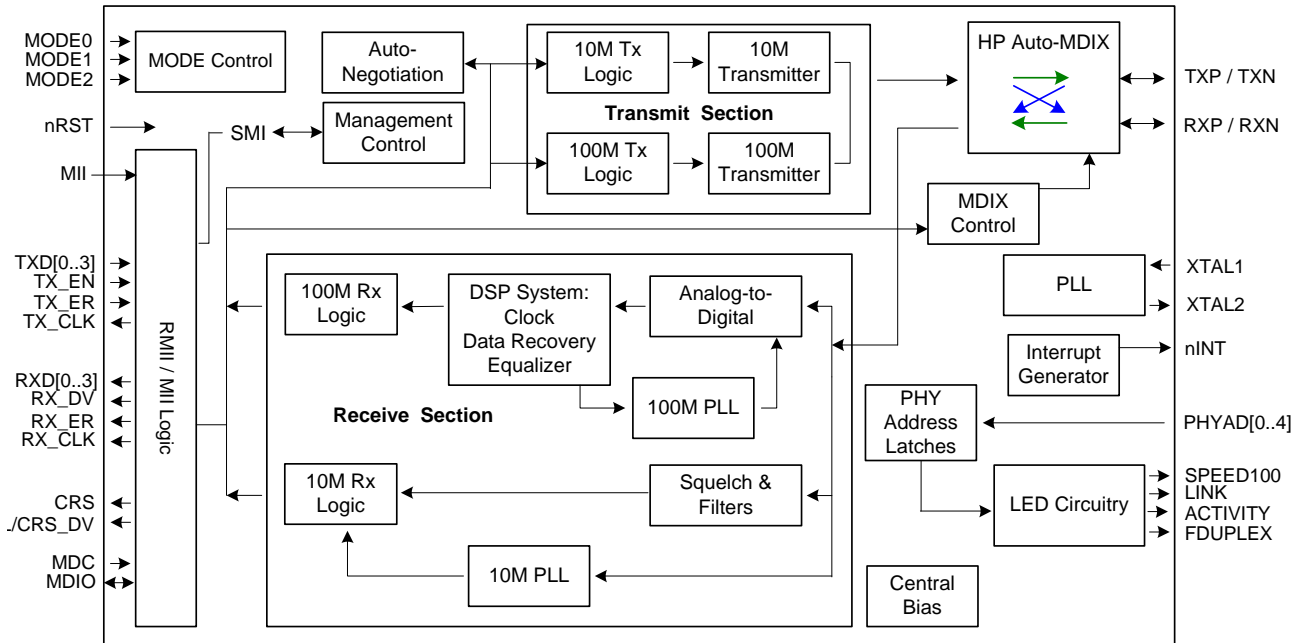
W9825G6JH-6 Pin Function



LAN8700 (HDMI : IC322)



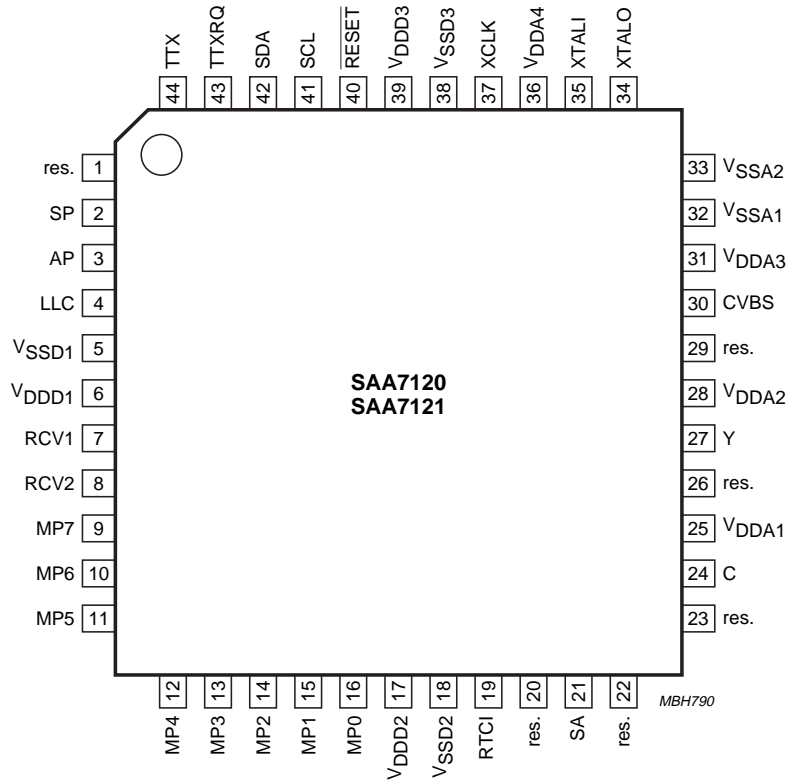
LAN8700 Block Diagram



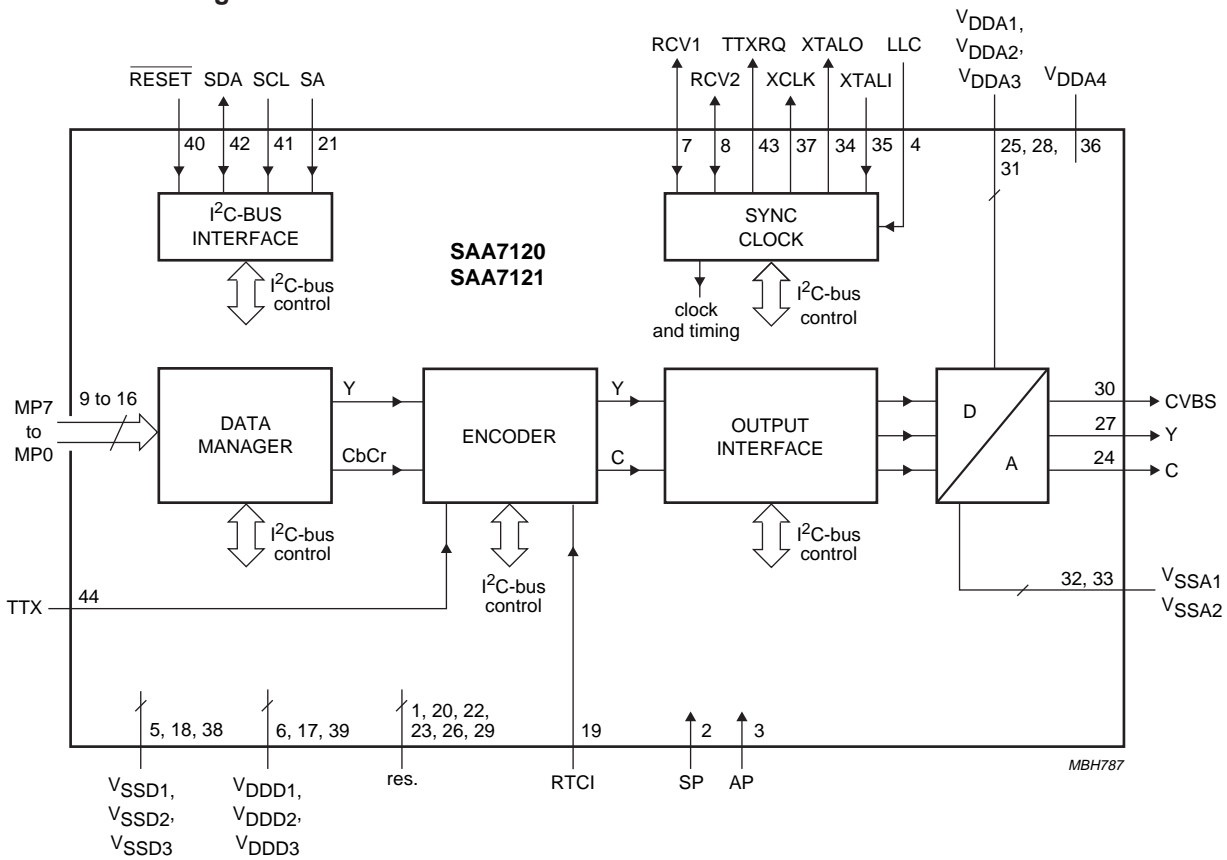
LAN8700 Pin Description

PIN NO.	PIN NAME	PIN NO.	PIN NAME
1	nINT/TX_ER/TXD4	19	RX_DV
2	MDC	20	RX_CLK/REGOFF
3	CRS/PHYAD4	21	RX_ER/RXD4
4	MDIO	22	TXCLK
5	nRST	23	TXD0
6	TX_EN	24	TXD1
7	VDD33	25	VDDIO
8	VDD_CORE	26	TXD2
9	SPEED100/PHYAD0	27	TXD3
10	LINK/PHYAD1	28	TXN
11	ACTIVITY/PHYAD2	29	TXP
12	FDUPLEX/PHYAD3	30	VDDA3.3
13	XTAL2	31	RXN
14	CLKIN/XTAL1	32	RXP
15	RXD3/nINTSEL	33	VDDA3.3
16	RXD2/MODE2	34	EXRES1
17	RXD1/MODE1	35	VDDA3.3
18	RXD0/MODE0	36	COL/RMII/CRS_DV

SAA7121 (HDMI : IC323)



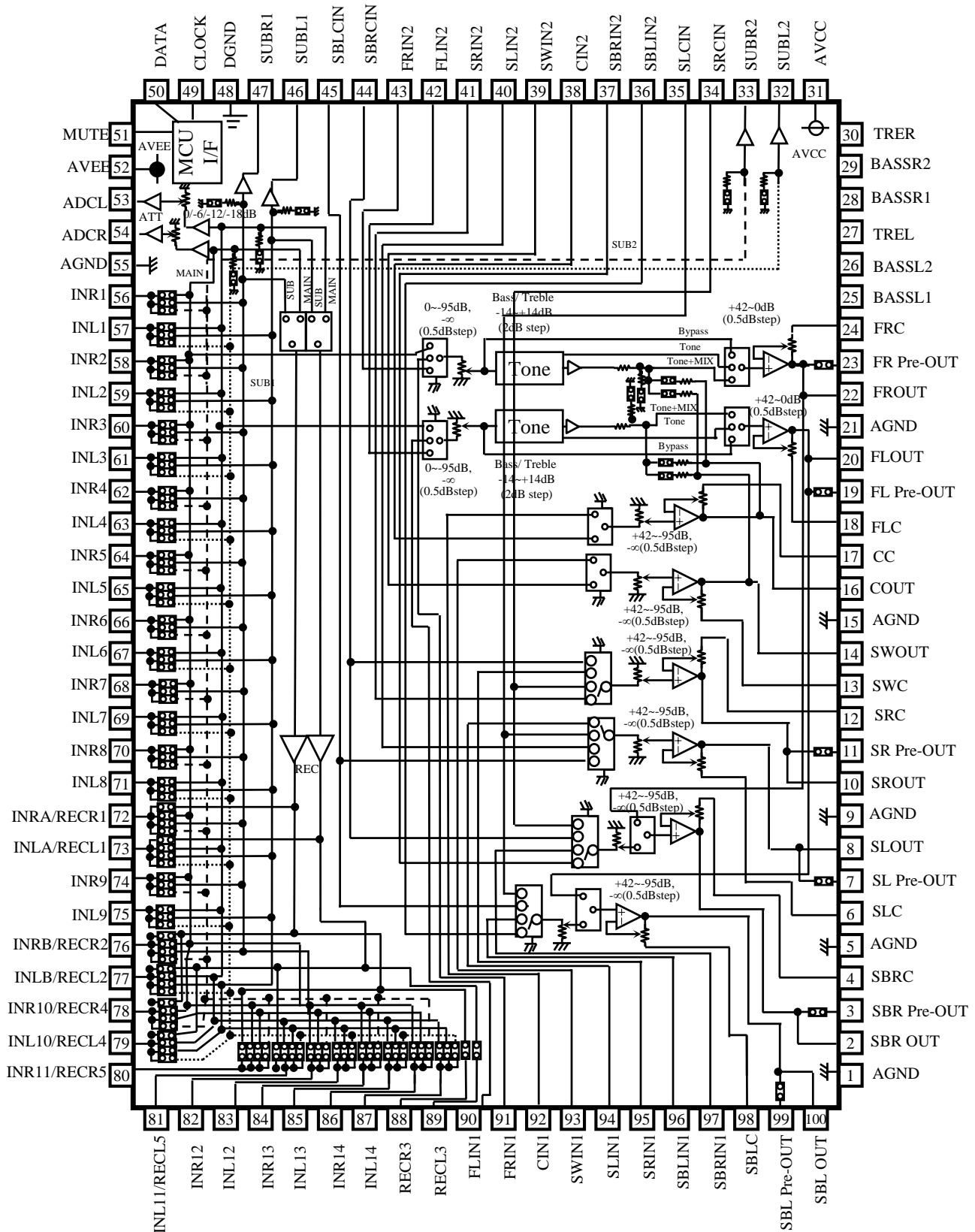
SAA7121 Block Diagram



SAA7121 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 _{SSD1}	5	I	digital ground 1
V _{DD1}	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 _{DD2}	17	I	digital supply voltage 2
V _{SS2}	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 ² 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 _{DDA1}	25	I	analog supply voltage 1 for the C DAC
res.	26	–	reserved
Y	27	O	analog output of VBS signal
V _{DDA2}	28	I	analog supply voltage 2 for the Y DAC
res.	29	–	reserved
CVBS	30	O	analog output of the CVBS signal
V _{DDA3}	31	I	analog supply voltage 3 for the CVBS DAC
V _{SSA1}	32	I	analog ground 1 for the DACs
V _{SSA2}	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 _{DDA4}	36	I	analog supply voltage 4 for the oscillator and reference voltage
XCLK	37	O	clock output of the crystal oscillator

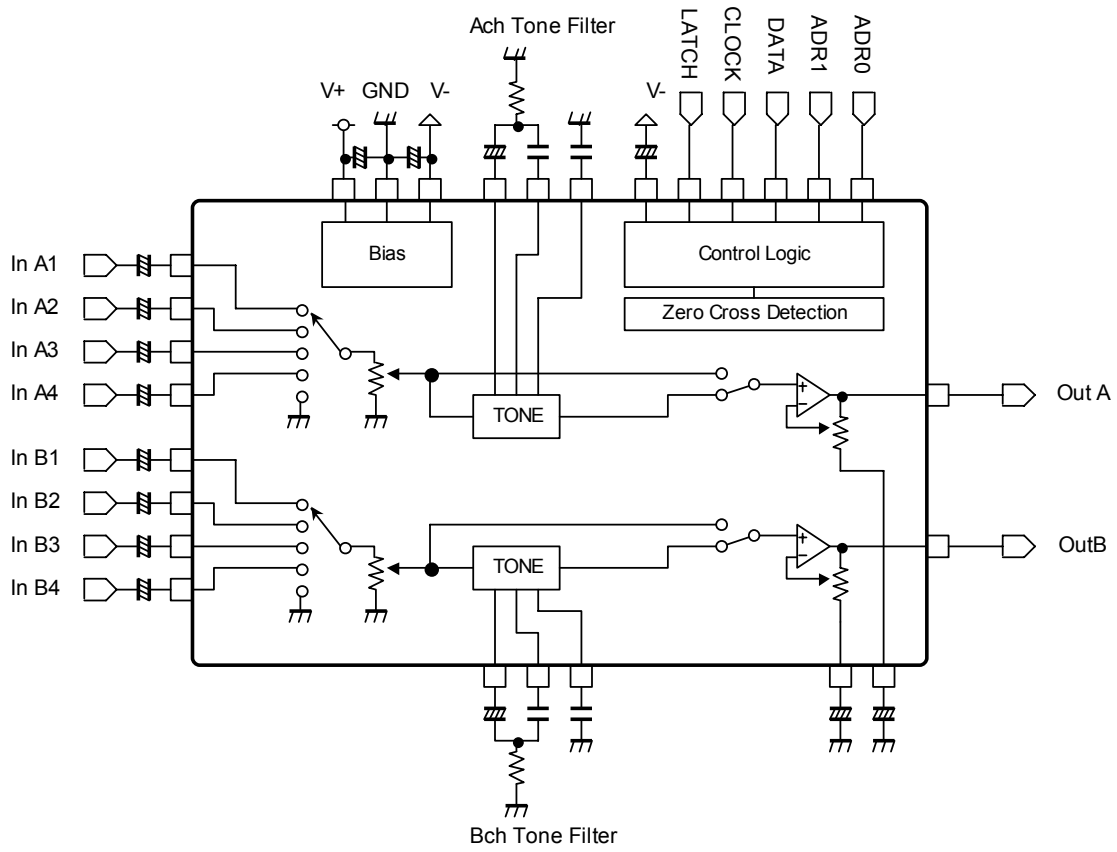
R2A15220FP (AUDIO : IC471)



R2A15220FP Pin Function

PIN No.	Name	Function
22,20, 16,14, 10, 8, 2, 100	FR0UT,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 rd 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 : IC484,IC489)



ANODE CONNECTION

	1G~16G	17G	18G	19G
D0A	1-1A	-	-	-
D1A	2-1A	-	-	-
D2A	3-1A	-	-	-
D3A	4-1A	-	-	-
D4A	5-1A	-	-	-
D5A	1-2A	-	-	-
D6A	2-2A	-	-	-
D7A	3-2A	-	-	-
D8A	4-2A	-	-	-
D9A	5-2A	-	-	-
D10A	1-3A	-	-	-
D11A	2-3A	-	-	dB
D12A	3-3A	-	-	Dp
D13A	4-3A	-	-	3d
D14A	5-3A	-	-	3e
D15A	1-4A	-	-	3c
D16A	2-4A	-	-	3g
D17A	3-4A	-	-	3f
D18A	4-4A	-	-	3b
D19A	5-4A	-	-	3a
D20A	1-5A	-	-	2d
D21A	2-5A	-	-	2e
D22A	3-5A	-	-	2c
D23A	4-5A	-	-	2g
D24A	5-5A	-	-	2f
D25A	1-6A	-	-	2b
D26A	2-6A	-	-	2a
D27A	3-6A	-	-	1d
D28A	4-6A	Z	-	1e
D29A	5-6A	X	-	1c
D30A	1-7A	II	-	1g
D31A	2-7A	PL	-	1f
D32A	3-7A	+	-	1b
D33A	4-7A	ES	-	1a
D34A	5-7A	HD	-	S2

	1G~16G	17G	18G	19G
D0B	1-1B	REC	-	-
D1B	2-1B	RDS	-	-
D2B	3-1B	AUTO	-	-
D3B	4-1B	TUNED	-	-
D4B	5-1B	DD	-	-
D5B	1-2B	DDD	-	-
D6B	2-2B	DD TrueHD	-	-
D7B	3-2B	96/24	-	-
D8B	4-2B	Express	-	-
D9B	5-2B	Neo:6	-	-
D10B	1-3B	STEREO	-	-
D11B	2-3B	MASTER	-	-
D12B	3-3B	-HD	-	MUTE
D13B	4-3B	dts	ATTENDEE	S
D14B	5-3B	TAG	ORGANIZER	Q3
D15B	1-4B	MP3	PARTY	Q2
D16B	2-4B	WMA	EQ	Q1
D17B	3-4B	AAC	VOL	W
D18B	4-4B	PCM	DYN	2
D19B	5-4B	DSD	XT	1
D20B	1-5B	ANA	MULTEQ	M
D21B	2-5B	DIG	AUDYSSEY	H
D22B	3-5B	HDCD	S1	SW3
D23B	4-5B	EXT2	SLEEP	SW2
D24B	5-5B	EXT1	RSTR	SW
D25B	1-6B	LFE	ANA	FR
D26B	2-6B	FR	DIG	C
D27B	3-6B	C	HDMI	FL
D28B	4-6B	FL	AUTO	SR
D29B	5-6B	SR	Z4	B
D30B	1-7B	S	Z3	A
D31B	2-7B	SL	Z2	SL
D32B	3-7B	SBR	AL24	SBR
D33B	4-7B	SB	DLINK	SB
D34B	5-7B	SBL	HDMI	SBL

PARTS LIST OF P.C.B. 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



EA : Australia model

E1C : China model

BK : Black model

SP : Premium Silver model

PCB INPUT ASSY

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SEMICONDUCTORS GROUP							
	IC471	235810045600S	IC, R2A15220FP		CVIR2A15220FP		
	IC481	00D2631289900	IC AZ4580MTR-E1		CVIAZ4580MTR-E1		
	IC482,483	00D2631289900	IC AZ4580MTR-E1		CVIAZ4580MTR-E1		
	IC484	00D2623727904	I.C, NJW1194V		CVINJW1194V		
	D2397	943209001080S	DIODE 1SS355T		CVD1SS355T		
	D2399	943209001080S	DIODE 1SS355T		CVD1SS355T		
	D4779,4780	943203003150S	DIODE 1N4007T		CVD1N4007SRT		
RESISTORS GROUP							
	 R2396	252310006537S	PTC THEMISTORS, CHIP(85°C)		CRTPRF18BE471QB5RB		
	 R2399	252310006537S	PTC THEMISTORS, CHIP(85°C)		CRTPRF18BE471QB5RB		
CAPACITORS GROUP							
	C4603	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4604	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4607	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4608	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4613	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4614	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4617	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4618	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4623	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4624	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4627	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4628	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA		
	C4701,4702	00MOA10705020	ELECT CAP 100UF 50V		CCEA1HH101T		
	C4705,4706	00D9430148708	ELECT CAP 47UF 50V		CCEA1HH470T		
	C4710,4711	00D9430148708	ELECT CAP 47UF 50V		CCEA1HH470T		
	C4713,4714	00D9430148708	ELECT CAP 47UF 50V		CCEA1HH470T		
	C4727,4728	00D9430062101	ELECT CAP 100UF 16V	E3,E1C	CCEA1CH101T		
	C4727,4728	943134500060S	CAP , ELECT(50V/100uF)	E2,EA	CCEA1HH101T		
	C4729,4730	00D9430175108	ELECT CAP 10UF 50V	E3,E1C	CCEA1HH100T		
	C4729,4730	943134500070S	CAP , ELECT(100V/10uF)	E2,EA	CCEA2AH100T		
	C4761,4762	00D9430175108	ELECT CAP 10UF 50V	E3,E1C	CCEA1HH100T		
	C4761,4762	943134500070S	CAP , ELECT(100V/10uF)	E2,EA	CCEA2AH100T		
	C4763-4768	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4773,4774	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4781,4782	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4801,4802	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4803-4806	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC		
	C4811,4812	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C48194820	nsp	CAP, CHIP(1608, 50V/68pF)		CCUS1H680JA		
	C4823,4824	nsp	CHIP CAP 100PF 50V J		CCUS1H101JA		
	C4825-4828	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4831,4832	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T		
	C4837,4838	nsp	CAP, CHIP(1608, 50V/3300pF)		CCUS1H332KC		
	C4839,4840	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C48414842	943134010610S	ELECT CAP 4.7UF 50V		CCEA1HH4R7T		
	C4843	943134501580S	CAP , ELECT(25V/33uF)		CCEA1EH330T		*

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C4844	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C4845	943134501580S	CAP , ELECT(25V/33uF)		CCEA1EH330T	*
OTHERS PARTS GROUP					
BN203	nsp	WIRE ASS'Y (3P,2.0MM,100MM,UL1569#26,105)		CWB7B003100LC	
BN461	nsp	WIRE ASS'Y LOCKING (13P,2.0MM,220MM,UL1007#26)		CWB1B013220HC	
CN41B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN42B	nsp	PIN SOCKET (27P,1.25mm,ANGLE, B-TO-B)		CJP27HJ282Z	
CN43B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN44B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN45B	nsp	PIN SOCKET (11P,1.25mm,ANGLE, B-TO-B)		CJP11HJ282Z	
JK461-463	643010076005S	JACK, 4P(W/R,W/R),SEPA-GND, SILVER		CJJ4P048Z	
JW203	nsp	WIRE ASS'Y RING (1P,150MM,BLK,UL1569#22,CKM-T)		CWE6702150ST	

PCB FRONT ASSY

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

E3 : U.S.A. & Canada model E2 : Europe model
 EA : Australia model E1C : China model
 BK : Black model SP : Premium Silver model

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC601	00D2631289900	IC AZ4580MTR-E1		CVIAZ4580MTR-E1	
IC607	00D2631289900	IC AZ4580MTR-E1		CVIAZ4580MTR-E1	
Q6026	943219006820S	TR KTC1027Y		CVTKTC1027YT	
Q6042	943214500020S	TR 2SC3052		CVT2SC3052	
Q6052	943214500020S	TR 2SC3052		CVT2SC3052	
Q6062	943214500020S	TR 2SC3052		CVT2SC3052	
Q6081	943216500020S	TR RT1N141C		CVTRT1N141C	
Q6112	943215500020S	TR RT1P141C		CVTRT1P141C	
Q6311,6312	943215500020S	TR RT1P141C		CVTRT1P141C	
Q6313,6314	943216500020S	TR RT1N141C		CVTRT1N141C	
Q6703	943216500020S	TR RT1N141C		CVTRT1N141C	
D6021	90M-HD302360R	DIODE ZJ6.8BT		CVDZJ6.8BT	
D6023,6024	00D9630328409	DIODE , RECTIFIER, AXIAL		CVD1N4007ST	
D6026	943202007690S	DIODE , ZENER 18V		CVDZJ18BT	
D6027	00D9430087209	ZENER DIODE ZJ24B 1/2W		CVDZJ24BT	
D6041	943209001080S	DIODE 1SS355T		CVD1SS355T	
D6051	943209001080S	DIODE 1SS355T		CVD1SS355T	
D6061	943209001080S	DIODE 1SS355T		CVD1SS355T	
D6712	00D2760694903	DIODE , ZENER (CHIP,5.1V)		HVDUDZS5.1BSR	
D6729,6730	00D2760694903	DIODE , ZENER (CHIP,5.1V)		HVDUDZS5.1BSR	
D6803	963209003510S	DIODE , RELIABLE ESD PROTECTION		CVDCDS3C05HDMI1	
D6835,6836	963209003510S	DIODE , RELIABLE ESD PROTECTION		CVDCDS3C05HDMI1	
RESISTORS GROUP					
△ R6024	943124500040S	RES,M- OXIDEFILM(1W/4.7ohm)		CRG1SANJ4R7RT	
VR601	943671010330S	ENCODER VR		CSR2A055Z	
VR604	943671010330S	ENCODER VR		CSR2A055Z	
CAPACITORS GROUP					
C6021	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C6022,6023	00MOF15104040	CAP,METAL- FILM(100V/0.1uF)		CCME2A104JXT	
C6024	943134501530S	CAP , ELECT(63V/470uF)		CCEA1JH471	*
C6025	943134010530S	ELECT CAP 1UF 50V C		CCEA1HH1R0T	
C6027	943134010530S	ELECT CAP 1UF 50V C		CCEA1HH1R0T	
C6031	nsp	CAP, CHIP(1608, 50V/30pF)		CCUS1H300JA	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C6034	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6044	nsp	COPPER WIRE		C3A206	
C6071-6073	nsp	CHIP CAP 100PF 50V J		CCUS1H101JA	
C6081	nsp	CHIP CAP 0.1UF/50V/2012		CCUC1H104KC	
C6082	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C6083	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C6084	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C6113	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6114	963134010980S	ELECT CAP 47UF 16V		CCEA1CH470T	
C6321	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6351,6352	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C6356	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6417	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C6423,6424	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C6425	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6501,6502	nsp	CHIP CAP 1000PF 50VK		CCUS1H102KC	
C6503	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6512,6513	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6514	943134501540S	CAP , ELECT(50V/1uF)-S		CCEA1HKS1R0T	*
C6523	943134501550S	CAP , ELECT(50V/10uF)-S		CCEA1HKS100T	*
C6601	943134501550S	CAP , ELECT(50V/10uF)-S		CCEA1HKS100T	*
C6603,6604	nsp	CHIP CAP 330PF 50V J		CCUS1H331JA	
C6623,6624	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6691	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6693	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6694	943134501540S	CAP , ELECT(50V/1uF)-S		CCEA1HKS1R0T	*
C6702	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6712	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C6719	00D9430062101	ELECT CAP 100UF 16V		CCEA1CH101T	
C6720	nsp	CAP, CHIP(1608, 50V/82pF)		CCUS1H820JA	
C6726	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C6731,6732	943134010530S	ELECT CAP 1UF 50V C		CCEA1HH1R0T	
C6733	943134501540S	CAP , ELECT(50V/1uF)-S		CCEA1HKS1R0T	*
C6735	nsp	CHIP CAP 100PF 50V J		CCUS1H101JA	
C6753	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6755	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6802	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C6803	00D9430173003	CAP , ELECT(10V/220uF)-S		CCEA1AKS221T	
C6812	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
OTHERS PARTS GROUP					
BK601,602	nsp	FIP BRACKET		CMD1A572	
BK603	nsp	PCB BRACKET		CMD1A569	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
BN601	nsp	WIRE ASS'Y LOCKING (7P,2.0MM,050MM, UL1007#24)		CWB1C007050HC	
BN604	nsp	WIRE ASS'Y LOCKING (9P,2.0MM,050MM, UL1007#24)		CWB1C009050HC	
BN605A	nsp	WIRE ASS'Y B'D to B'D (5P,2.0MM,050MM, UL1007#24)		CWB1C005050CC	
BN608	nsp	WIRE ASS'Y (5P,2.0MM, 550MM,UL2725#24/#28, 1P+2C)USB		CWB8A005550LC	
CN404	nsp	LOCK-WAFER/ANGLE/2MM PITCH/9PIN		CJP09GJ288ZY	
CN601	nsp	LOCK-WAFER/ANGLE/2MM PITCH/7PIN		CJP07GJ288ZY	
CN602	nsp	WAFER,YMAW025 (2.5mm,ANGLE)		CJP07GB03ZY	
CN69A	nsp	WAFER, FFC, 40P, 1mm, ANGLE(DIP)		CJP40GB284ZN	
△ F6001	943652000620S	FUSE(0.1A 372SERIES/TR5)		CBA2D0100A3EYT	*
FL601	943172100110S	V.F.D (19-ST-02GINAK)		CFL19ST02GINAK	
JK605	943643010130S	JACK PHONES(6.35mm)		CJJ2E020Z	
JK606	90M-YT004310R	JACK BOARD(3P)		CJJ4S041Z	
JK607	943643100160S	JACK, MONO, 3.5mm		CJJ1D001Z	
JK608	943643100150S	JACK , USB STRAIGHT(BLACK)		CJJ9X006Z	
JW602,603	nsp	WIRE ASS'Y (1P, 80MM,BLK,#22)		CWE5202080A	
L6001	nsp	FERRITE CHIP BEAD(2012/220ohm)		CLZBLM21PG221SN1	
L6501	nsp	RES,CHIP(0OHM,5%,1608)		CRJ10DJ0R0T	
L6601	nsp	RES,CHIP(0OHM,5%,1608)		CRJ10DJ0R0T	
LD601	943176010090S	LED BLBJEGJ204L		CVDBLBJEGJ204L	
LD602	963262010460S	LED SIR-341ST3F		CVDSIR341ST3FT0	
RC601	943262010290S	REMOCON SENSOR		CRVKSM603TH5B	
SW601-605	90M-SP001400R	TACT SW EVQ22505R		CST1A023ZT	
SW611-616	90M-SP001400R	TACT SW EVQ22505R		CST1A023ZT	
SW621-626	90M-SP001400R	TACT SW EVQ22505R		CST1A023ZT	
SW631	90M-SP001400R	TACT SW EVQ22505R		CST1A023ZT	

PCB 7CH AMP ASSY

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

E3 : U.S.A. & Canada model
EA : Australia model
BK : Black model

E2 : Europe model
E1C : China model
SP : Premium Silver model

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
Q7001	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7104,7105	00D2710301903	TR KTA1268BLATP		CVTKTA1268BLATPA	
Q7114	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7118	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7120,7121	00D2730471907	T.R , KTC3206Y		HVTKTC3206YAT	
Q7125	963219003340S	T.R , BIAS KTC3964		CVTKTC3964	
Q7131	00D9630235301	T.R Power, 2SD2560		HVT2SD2560	
Q7132	00D9630235204	T.R Power, 2SB1647		HVT2SB1647	
Q7138	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7139	943214500040S	High Voltage NPN Transistors(SOT-23)		CVTMMBT5551	
Q7204,7205	00D2710301903	TR KTA1268BLATP		CVTKTA1268BLATPA	
Q7214	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7218	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7220,7221	00D2730471907	T.R , KTC3206Y		HVTKTC3206YAT	
Q7225	963219003340S	T.R , BIAS KTC3964		CVTKTC3964	
Q7231	00D9630235301	T.R Power, 2SD2560		HVT2SD2560	
Q7232	00D9630235204	T.R Power, 2SB1647		HVT2SB1647	
Q7238	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7239	943214500040S	High Voltage NPN Transistors(SOT-23)		CVTMMBT5551	
Q7304,7305	00D2710301903	TR KTA1268BLATP		CVTKTA1268BLATPA	
Q7314	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7318	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7320,7321	00D2730471907	T.R , KTC3206Y		HVTKTC3206YAT	
Q7325	963219003340S	T.R , BIAS KTC3964		CVTKTC3964	
Q7331	00D9630235301	T.R Power, 2SD2560		HVT2SD2560	
Q7332	00D9630235204	T.R Power, 2SB1647		HVT2SB1647	
Q7338	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7339	943214500040S	High Voltage NPN Transistors(SOT-23)		CVTMMBT5551	
Q7404,7405	00D2710301903	TR KTA1268BLATP		CVTKTA1268BLATPA	
Q7414	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7418	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7420,7421	00D2730471907	T.R , KTC3206Y		HVTKTC3206YAT	
Q7425	963219003340S	T.R , BIAS KTC3964		CVTKTC3964	
Q7431	00D9630235301	T.R Power, 2SD2560		HVT2SD2560	
Q7432	00D9630235204	T.R Power, 2SB1647		HVT2SB1647	
Q7438	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7439	943214500040S	High Voltage NPN Transistors(SOT-23)		CVTMMBT5551	
Q7504,7505	00D2710301903	TR KTA1268BLATP		CVTKTA1268BLATPA	
Q7514	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7518	00D2710314903	T.R , KTA1024Y		HVTKTA1024YT	
Q7520,7521	00D2730471907	T.R , KTC3206Y		HVTKTC3206YAT	
Q7525	963219003340S	T.R , BIAS KTC3964		CVTKTC3964	
Q7531	00D9630235301	T.R Power, 2SD2560		HVT2SD2560	
Q7532	00D9630235204	T.R Power, 2SB1647		HVT2SB1647	
Q7538	943212500020S	High Voltage PNP Transistors(SOT-23)		CVTMMBT5401	
Q7539	943214500040S	High Voltage NPN Transistors(SOT-23)		CVTMMBT5551	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
Q7604,7605	00D2710301903	TR KTA1268BLATP			
Q7614	00D2710314903	T.R , KTA1024Y			
Q7618	00D2710314903	T.R , KTA1024Y			
Q7620,7621	00D2730471907	T.R , KTC3206Y			
Q7625	963219003340S	T.R , BIAS KTC3964			
Q7631	00D9630235301	T.R Power, 2SD2560			
Q7632	00D9630235204	T.R Power, 2SB1647			
Q7638	943212500020S	High Voltage PNP Transistors(SOT-23)			
Q7639	943214500040S	High Voltage NPN Transistors(SOT-23)			
Q7704,7705	00D2710301903	TR KTA1268BLATP			
Q7714	00D2710314903	T.R , KTA1024Y			
Q7718	00D2710314903	T.R , KTA1024Y			
Q7720,7721	00D2730471907	T.R , KTC3206Y			
Q7725	963219003340S	T.R , BIAS KTC3964			
Q7731	00D9630235301	T.R Power, 2SD2560			
Q7732	00D9630235204	T.R Power, 2SB1647			
Q7738	943212500020S	High Voltage PNP Transistors(SOT-23)			
Q7739	943214500040S	High Voltage NPN Transistors(SOT-23)			
D7011,7012	943209001080S	DIODE 1SS355T			
D7108,7109	00D9430182609	DIODE 1SS133MT			
D7115,7116	00D9430182609	DIODE 1SS133MT			
D7118	00D9430182609	DIODE 1SS133MT			
D7139	00D9430182609	DIODE 1SS133MT			
D7208,7209	00D9430182609	DIODE 1SS133MT			
D7215,7216	00D9430182609	DIODE 1SS133MT			
D7218	00D9430182609	DIODE 1SS133MT			
D7239	00D9430182609	DIODE 1SS133MT			
D7308,7309	00D9430182609	DIODE 1SS133MT			
D7315,7316	00D9430182609	DIODE 1SS133MT			
D7318	00D9430182609	DIODE 1SS133MT			
D7339	00D9430182609	DIODE 1SS133MT			
D7408,7409	00D9430182609	DIODE 1SS133MT			
D7415,7416	00D9430182609	DIODE 1SS133MT			
D7418	00D9430182609	DIODE 1SS133MT			
D7439	00D9430182609	DIODE 1SS133MT			
D7508,7509	00D9430182609	DIODE 1SS133MT			
D7515,7516	00D9430182609	DIODE 1SS133MT			
D7518	00D9430182609	DIODE 1SS133MT			
D7539	00D9430182609	DIODE 1SS133MT			
D7608,7609	00D9430182609	DIODE 1SS133MT			
D7615,7616	00D9430182609	DIODE 1SS133MT			
D7618	00D9430182609	DIODE 1SS133MT			
D7639	00D9430182609	DIODE 1SS133MT			
D7708,7709	00D9430182609	DIODE 1SS133MT			
D7715,7716	00D9430182609	DIODE 1SS133MT			
D7718	00D9430182609	DIODE 1SS133MT			
D7739	00D9430182609	DIODE 1SS133MT			
ZD714	943202010080S	DIODE ZJ5.1B			
ZD715,716	90M-HD302440R	DIODE ZJ4.7B			
ZD724	943202010080S	DIODE ZJ5.1B			
ZD725,726	90M-HD302440R	DIODE ZJ4.7B			
ZD734	943202010080S	DIODE ZJ5.1B			
ZD735,736	90M-HD302440R	DIODE ZJ4.7B			
ZD744	943202010080S	DIODE ZJ5.1B			
ZD745,746	90M-HD302440R	DIODE ZJ4.7B			
ZD754	943202010080S	DIODE ZJ5.1B			
ZD755,756	90M-HD302440R	DIODE ZJ4.7B			
ZD764	943202010080S	DIODE ZJ5.1B			
ZD765,766	90M-HD302440R	DIODE ZJ4.7B			
ZD774	943202010080S	DIODE ZJ5.1B			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
ZD775,776	90M-HD302440R	DIODE ZJ4.7B		CVDZJ4.7BT	
RESISTORS GROUP					
△ R7012	252310006520S	PTC THEMISTORS, CHIP(95°C)		CRTPRF18BD471QB5RB	
△ R7014	252310006520S	PTC THEMISTORS, CHIP(95°C)		CRTPRF18BD471QB5RB	
R7105	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7108	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7111	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7114	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7118,7119	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7120	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7121	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7129,7130	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7131-7134	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7138	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7205	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7208	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7211	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7214	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7218,7219	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7220	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7221	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7230	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7231-7234	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7238	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7279	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7305	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7308	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7311	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7314	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7318,7319	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R7320	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7321	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7329,7330	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7331-7334	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7338	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7405	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7408	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7411	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7414	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7418,7419	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7420	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7421	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7429,7430	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7431-7434	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7438	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7505	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7508	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7511	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7514	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R75187519	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7520	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7521	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7529,7530	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7531-7534	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7538	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7605	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7608	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7611	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7614	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7618,7619	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R7620	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7621	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7629,7630	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7631-7634	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7638	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
R7705	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7708	nsp	RES, M-OXIDE FILM(1W/1Kohm)		CRG1SANJ102RT	
R7711	nsp	RES, M-OXIDE FILM(1W/3.3Kohm)		CRG1SANJ332RT	
R7714	nsp	RES, M-OXIDE FILM(1W/56Kohm)		CRG1SANJ563RT	
R7718,7719	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7720	nsp	RES, M-OXIDE FILM(2W/15Kohm)		CRG2SANJ153RT	
R7721	nsp	RES, M-OXIDE FILM(1W/270ohm)		CRG1SANJ271RT	
R7729,7730	943124500240S	RES, M-OXIDE FILM(1W/22ohm)	FLAMERETARDANT	CRG1SANJ220RT	*
R7731-7734	943124500050S	RES,M- OXIDEFILM(2W/0.47ohm)	FLAMERETARDANT	CRG2SANJR47RT	
△ R7738	252310006506S	PTC THEMISTORS, CHIP(115°C)		CRTPRF18BB471QB5RB	
VR714	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR724	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR734	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR744	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR754	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR764	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
VR774	963161012400S	RES ,SEMI FIXED(1K/ B-CURVE) ANGLE		CVN1RE102B01T	
CAPACITORS GROUP					
C7001	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C7011,7012	943134501570S	CAP , ELECT(10V/330uF)		CCEA1AH331T	*
C7013	00D9630324607	CAP , ELECT(10V/47uF)		CCEA1AH470T	
C7101	943134010590S	ELECT CAP 22UF 50V		CCEA1HH220T	
C7102	nsp	CERAMIC CAP 470PF 50V KB		CCKT1H471KB	
C7104	nsp	CHIP CAP 220PF 50V		CCUS1H221JA	
C7105	nsp	CAP, CHIP(1608, 50V/2200pF)		CCUS1H222KC	
C7106	00MOA10705020	ELECT CAP 100UF 50V		CCEA1HH101T	
C7112	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7120	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7121	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG		CCME2A471JR11T	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C7125	00D9430148708	ELECT CAP 47UF 50V	E3,E1C		
C7125	943134500080S	ELECT CAP 47UF 63V	E2,EA		
C7131,7132	943134500070S	CAP , ELECT(100V/10uF)			
C7138	nsp	CHIP CAP 0.1UF 50V K			
C7201	943134010590S	ELECT CAP 22UF 50V			
C7202	nsp	CERAMIC CAP 470PF 50V KB			
C7204	nsp	CHIP CAP 220PF 50V			
C7205	nsp	CAP, CHIP(1608, 50V/2200pF)			
C7206	00MOA10705020	ELECT CAP 100UF 50V			
C7212	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7220	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7221	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG			
C7225	00D9430148708	ELECT CAP 47UF 50V	E3,E1C		
C7225	943134500080S	ELECT CAP 47UF 63V	E2,EA		
C7231,7232	943134500070S	CAP , ELECT(100V/10uF)	E3,E1C		
C7238	nsp	CHIP CAP 0.1UF 50V K			
C7301	943134010590S	ELECT CAP 22UF 50V			
C7302	nsp	CERAMIC CAP 470PF 50V KB			
C7304	nsp	CHIP CAP 220PF 50V			
C7305	nsp	CAP, CHIP(1608, 50V/2200pF)			
C7306	00MOA10705020	ELECT CAP 100UF 50V			
C7312	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7320	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7321	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG			
C7325	00D9430148708	ELECT CAP 47UF 50V	E3,E1C		
C7325	943134500080S	ELECT CAP 47UF 63V	E2,EA		
C7331,7332	943134500070S	CAP , ELECT(100V/10uF)	E3,E1C		
C7338	nsp	CHIP CAP 0.1UF 50V K			
C7401	943134010590S	ELECT CAP 22UF 50V			
C7402	nsp	CERAMIC CAP 470PF 50V KB			
C7404	nsp	CHIP CAP 220PF 50V			
C7405	nsp	CAP, CHIP(1608, 50V/2200pF)			
C7406	00MOA10705020	ELECT CAP 100UF 50V			
C7412	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7420	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7421	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG			
C7425	00D9430148708	ELECT CAP 47UF 50V	E3,E1C		
C7425	943134500080S	ELECT CAP 47UF 63V	E2,EA		
C7431,7432	943134500070S	CAP , ELECT(100V/10uF)	E3,E1C		
C7438	nsp	CHIP CAP 0.1UF 50V K			
C7501	943134010590S	ELECT CAP 22UF 50V			
C7502	nsp	CERAMIC CAP 470PF 50V KB			
C7504	nsp	CHIP CAP 220PF 50V			
C7505	nsp	CAP, CHIP(1608, 50V/2200pF)			
C7506	00MOA10705020	ELECT CAP 100UF 50V			
C7512	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7520	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG			
C7521	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG			
C7525	00D9430148708	ELECT CAP 47UF 50V	E3,E1C		
C7525	943134500080S	ELECT CAP 47UF 63V	E2,EA		
C7531,7532	943134500070S	CAP , ELECT(100V/10uF)			
C7538	nsp	CHIP CAP 0.1UF 50V K			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C7601	943134010590S	ELECT CAP 22UF 50V		CCEA1HH220T	
C7602	nsp	CERAMIC CAP 470PF 50V KB		CCKT1H471KB	
C7604	nsp	CHIP CAP 220PF 50V		CCUS1H221JA	
C7605	nsp	CAP, CHIP(1608, 50V/2200pF)		CCUS1H222KC	
C7606	00MOA10705020	ELECT CAP 100UF 50V		CCEA1HH101T	
C7612	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7620	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7621	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG		CCME2A471JR11T	
C7625	00D9430148708	ELECT CAP 47UF 50V	E3,E1C	CCEA1HH470T	
C7625	943134500080S	ELECT CAP 47UF 63V	E2,EA	CCEA1JH470T	
C7631,7632	943134500070S	CAP , ELECT(100V/10uF)	E3,E1C	CCEA2AH100TS	
C7638	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C7701	943134010590S	ELECT CAP 22UF 50V		CCEA1HH220T	
C7702	nsp	CERAMIC CAP 470PF 50V KB		CCKT1H471KB	
C7704	nsp	CHIP CAP 220PF 50V		CCUS1H221JA	
C7705	nsp	CAP, CHIP(1608, 50V/2200pF)		CCUS1H222KC	
C7706	00MOA10705020	ELECT CAP 100UF 50V		CCEA1HH101T	
C7712	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7720	nsp	CAP, PE-FILM(100V/220pF/J) SEORYONG		CCME2A221JR11T	
C7721	nsp	CAP, PE-FILM(100V/470pF/J) SEORYONG		CCME2A471JR11T	
C7725	00D9430148708	ELECT CAP 47UF 50V	E3,E1C	CCEA1HH470T	
C7725	943134500080S	ELECT CAP 47UF 63V	E2,EA	CCEA1JH470T	
C7731,7732	943134500070S	CAP , ELECT(100V/10uF)		CCEA2AH100TS	
C7738	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
OTHERS PARTS GROUP					
BK701	nsp	PCB BRACKET		CMD1A569	
BN704	nsp	WIRE ASS'Y (5P,2.0MM,250MM,UL1007#26)		CWB1B005250LC	
CN461	nsp	LOCK-WAFER/ STRAIGHT/2MM PITCH/13PIN		CJP13GI288ZY	
CN701	nsp	LOCK-WAFER/ STRAIGHT/2.5MM PITCH/9PIN		CJP09GI289ZY	
CN702	nsp	LOCK-WAFER/ STRAIGHT/2.5MM PITCH/7PIN		CJP07GI289ZY	
CN703	nsp	LOCK-WAFER/ STRAIGHT/2.5MM PITCH/3PIN		CJP03GI289ZY	
CN715	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN725	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN735	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN745	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN755	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN765	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
CN775	nsp	WAFER (3PIN, AN, 2MM, JWT)		CJP03GB48ZW	
GND71	nsp	EARTH PALTE		HJT1A025	

PCB MAIN ASSY

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

E3 : U.S.A. & Canada model E2 : Europe model
 EA : Australia model E1C : China model
 BK : Black model SP : Premium Silver model

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC931	00D2631100005	I.C.REGULATOR(+5V,T0220IS)		HVIKIA7805API	
IC932	00MHC3890999F	IC KIA7809API		HVIKIA7809API	
IC934	00D2631100005	I.C.REGULATOR(+5V,T0220IS)		HVIKIA7805API	
IC935	00D2631099006	REGULATOR IC KIA7905PI		CVIKIA7905PI	
IC936	00D2631100050	I.C.REGULATOR(+8V,T0220IS)		HVIKIA7808API	
IC937	00D2631251006	I.C.REGULATOR(-8V,T0220IS)		CVIKIA7908PI	
Q6713	943215500030S	T.R,RT1P441C(47K-47K)		CVTRT1P441C	
Q6714	943216500050S	T.R,RT1N441C(47K-47K)		CVTRT1N441C	
Q6720	943215500030S	T.R,RT1P441C(47K-47K)		CVTRT1P441C	
Q6738	943214500030S	T.R , MUTE INC2001AC1		CVTINC2001AC1	
Q6812	943214500030S	T.R , MUTE INC2001AC1		CVTINC2001AC1	
Q6839	943215500030S	T.R,RT1P441C(47K-47K)		CVTRT1P441C	
Q6840	943216500050S	T.R,RT1N441C(47K-47K)		CVTRT1N441C	
Q6843,6844	943214500030S	T.R , MUTE INC2001AC1		CVTINC2001AC1	
Q6846	943215500030S	T.R,RT1P441C(47K-47K)		CVTRT1P441C	
Q7932	943216500020S	TR RT1N141C		CVTRT1N141C	
Q7933	943215500020S	TR RT1P141C		CVTRT1P141C	
Q7934	943216500020S	TR RT1N141C		CVTRT1N141C	
Q7935	943215500020S	TR RT1P141C		CVTRT1P141C	
Q7936	943216500020S	TR RT1N141C		CVTRT1N141C	
Q7937	943215500020S	TR RT1P141C		CVTRT1P141C	
Q7938	943216500020S	TR RT1N141C		CVTRT1N141C	
Q7939	943215500020S	TR RT1P141C		CVTRT1P141C	
Q7940	943216500020S	TR RT1N141C		CVTRT1N141C	
Q7941	943215500020S	TR RT1P141C		CVTRT1P141C	
D6845-6847	943203003150S	DIODE 1N4007T		CVD1N4007SRT	
D6848	00D2760760905	DIODE , ZENER 3.6V		CVDZJ3.6BT	
D7901,7902	90M-HE200390R	DIODE , BRIDGE(10A/600V)		HVDGBJ1006	
D7927	00D9430196306	DIODE ZJ7.5B		CVDZJ7.5BT	
D7928	00D9430182609	DIODE 1SS133MT		CVD1SS133MT	
D7931	00D2760762932	DIODE , ZENER 33V		CVDZJ33BT	
D7932	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D7933	00D2760762932	DIODE , ZENER 33V		CVDZJ33BT	
D7934	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D7936	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D7938	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D7940	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D9301	943209001080S	DIODE 1SS355T		CVD1SS355T	
D9303	90M-HD201850R	SCHOTTKY DIODE 1N5819		HVD1N5819T	
D9304,9305	943209001080S	DIODE 1SS355T		CVD1SS355T	
D9306,9307	90M-HD201850R	SCHOTTKY DIODE 1N5819		HVD1N5819T	
D9308,9309	943209001080S	DIODE 1SS355T		CVD1SS355T	
D9310	90M-HD201850R	SCHOTTKY DIODE 1N5819		HVD1N5819T	
D9311-9322	943203003150S	DIODE 1N4007T		CVD1N4007SRT	
D9325-9332	943203003150S	DIODE 1N4007T		CVD1N4007SRT	
RESISTORS GROUP					
R7801	nsp	RES,M-OXIDEFILM(1W/10ohm)		CRG1SANJ100RT	
R7802	nsp	RES, M-OXIDE FILM(2W/10ohm)		CRG2SANJ100RT	
R7809,7810	nsp	RES,M-OXIDEFILM(2W/470ohm)		CRG2SANJ471RT	
R7811	nsp	RES,M-OXIDEFILM(1W/10ohm)		CRG1SANJ100RT	
R7812	nsp	RES, M-OXIDE FILM(2W/10ohm)		CRG2SANJ100RT	
R7821	nsp	RES,M-OXIDEFILM(1W/10ohm)		CRG1SANJ100RT	
R7822	nsp	RES, M-OXIDE FILM(2W/10ohm)		CRG2SANJ100RT	
R7831	nsp	RES,M-OXIDEFILM(1W/10ohm)		CRG1SANJ100RT	
R7832	nsp	RES, M-OXIDE FILM(2W/10ohm)		CRG2SANJ100RT	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
R7841	nsp	RES,M-OXIDEFILM(1W/10ohm)			
R7842	nsp	RES, M-OXIDE FILM(2W/10ohm)			
R7851	nsp	RES,M-OXIDEFILM(1W/10ohm)			
R7852	nsp	RES, M-OXIDE FILM(2W/10ohm)			
R7861	nsp	RES,M-OXIDEFILM(1W/10ohm)			
R7862	nsp	RES, M-OXIDE FILM(2W/10ohm)			
R7921-7926	nsp	RES,M-OXIDEFILM(1W/2.2Kohm)			
CAPACITORS GROUP					
C6096	nsp	CHIP CAP 100PF 50V J			
C6719	00D9609010023	CAP , ELECT(50V/0.47uF)			
C6724	943134010590S	ELECT CAP 22UF 50V			
C6728	943134010590S	ELECT CAP 22UF 50V			
C6730	nsp	CHIP CAP 330PF 50V J			
C6745	nsp	CHIP CAP 0.01UF 50V K			
C6802	943134010590S	ELECT CAP 22UF 50V			
C6805	943134010590S	ELECT CAP 22UF 50V			
C6806	nsp	CHIP CAP 330PF 50V J			
C6820	nsp	CHIP CAP 0.01UF 50V K			
C6829,6830	943134010590S	ELECT CAP 22UF 50V			
C6833,6834	943134010590S	ELECT CAP 22UF 50V			
C6835,6836	nsp	CHIP CAP 330PF 50V J			
C6845	00D9609010023	CAP , ELECT(50V/0.47uF)			
C6849	00D9430175108	ELECT CAP 10UF 50V			
C6891,6892	00D9430175108	ELECT CAP 10UF 50V			
C6893,6894	nsp	CHIP CAP 100PF 50V J			
C6897	nsp	CHIP CAP 0.01UF 50V K			
C6901-6903	nsp	CHIP CAP 100PF 50V J			
C6904	nsp	CAP, CHIP(1608, 50V/33pF)			
C6907	nsp	CHIP CAP 100PF 50V J			
C6911	nsp	CHIP CAP 0.1UF 50V K			
C6921,6922	nsp	CAP , MYLAR	E2,EA		
C6923,6924	nsp	CAP , MYLAR	E2,EA		
C6931,6932	00D9430175108	ELECT CAP 10UF 50V			
C7802	nsp	MYLAR CAP 0.047UF 50V			
C7806	nsp	CHIP CAP 1000PF 50VK			
C7812	nsp	MYLAR CAP 0.047UF 50V			
C7816	nsp	CHIP CAP 1000PF 50VK			
C7822	nsp	MYLAR CAP 0.047UF 50V			
C7826	nsp	CHIP CAP 1000PF 50VK			
C7832	nsp	MYLAR CAP 0.047UF 50V			
C7836	nsp	CHIP CAP 1000PF 50VK			
C7842	HVDMTZJ5.6BT	MYLAR CAP 0.047UF 50V			
C7846	nsp	CHIP CAP 1000PF 50VK			
C7852	nsp	MYLAR CAP 0.047UF 50V			
C7856	nsp	CHIP CAP 1000PF 50VK			
C7862	nsp	MYLAR CAP 0.047UF 50V			
C7866	nsp	CHIP CAP 1000PF 50VK			
C7893-7899	nsp	CAP, CHIP(2012,250V/0.01uF)			
C7901,7902	nsp	METALLIZED CAP 0.1UF 250V J			
C7903	nsp	CHIP CAP 1000PF 50VK			
C7905	943134010470S	ELECT CAP 0.1UF 50V			
C7907,7908	963134010180S	CAP , ELECT(71V/1200uF)			
C7927	00D9430175108	ELECT CAP 10UF 50V			
C7931	00MOA10705020	ELECT CAP 100UF 50V			
C9301	943134501560S	CAP , ELECT(16V/100uF)-S			*
C9302	943134501550S	CAP , ELECT(50V/10uF)-S			*
C9303	00D9430062101	ELECT CAP 100UF 16V			
C9304	00D9430175108	ELECT CAP 10UF 50V			
C9305	943134501550S	CAP , ELECT(50V/10uF)-S			*
C9306	943134010600S	ELECT CAP 3300UF 16V			
C9307	943134501550S	CAP , ELECT(50V/10uF)-S			*
C9308	943134010600S	ELECT CAP 3300UF 16V			
C9309	00MOA10705020	ELECT CAP 100UF 50V	E3,E1C		
C9309	00MOA10705020	ELECT CAP 100UF 50V	E2,EA		
C9310	943134010620S	ELECT CAP 4700UF 25V			
C9311	943134501560S	CAP , ELECT(16V/100uF)-S			*

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C9312	943134010620S	ELECT CAP 4700UF 25V		CCEA1EH472E	
C9316	943134010620S	ELECT CAP 4700UF 25V		CCEA1EH472E	
C9317-9319	nsp	MYLAR CAP 0.1UF 50V J		HCQI1H104JZT	
C9321-9323	nsp	MYLAR CAP 0.1UF 50V J		HCQI1H104JZT	
OTHERS PARTS GROUP					
BD691	nsp	CHIP FERRITE BEAD(60ohm 4516)		CLZ9Z014Z	
BK601	nsp	PLATE , MAIN PCB		CMC2A424	
BK701	nsp	PCB BRACKET		CMD1A569	
BK901,902	nsp	BRACKET, PCB(FUSE)		CMD1A730	
BK903,904	nsp	PCB BRACKET		CMD1A569	
BN701	nsp	WIRE ASS'Y LOCKING (9P,2.5MM,220MM,UL1569#20,105)		CWB7E0092203D	
BN702B	nsp	WIRE ASS'Y LOCKING (7P,2.5MM,350MM,UL1569#20,105)		CWB7E0073503D	
BN703	nsp	WIRE ASS'Y LOCKING (3P,2.5MM,220MM,UL1569#24,105)		CWB7C0032203D	
BN931	nsp	WIRE ASS'Y LOCKING (5P,2.0MM,150MM,UL1007#26)		CWB1B005150HC	
BN932	nsp	WIRE ASS'Y LOCKING (9P,2.0MM,200MM,UL1007#26)		CWB1B009200HC	
CN61A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)		CJP17GI281Z	
CN62A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)		CJP15GI281Z	
CN63A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)		CJP17GI281Z	
CN64A	nsp	PIN HEADER (21P,1.25mm,STRAIGHT,B-TO-B)		CJP21GI281Z	
CN781	nsp	WAFER, YW396-NNAB(7.92mm)		CJP03GA89ZY	
CN932	nsp	LOCK-WAFER/STRAIGHT/2MM PITCH/9PIN		CJP09GI288ZY	
CN940	nsp	LOCK-WAFER/STRAIGHT/2.5MM PITCH/5PIN		CJP05GI289ZY	
CN941	nsp	LOCK-WAFER/STRAIGHT/2.5MM PITCH/3PIN		CJP03GI289ZY	
CN97A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)		CJP15GI281Z	
CN98A,99A	nsp	PIN HEADER (11P,1.25mm,STRAIGHT,B-TO-B)		CJP11GI281Z	
F9301-9305	nsp	FUSE HOLDER		KJCF5S	
GND71	nsp	EARTH PALTE		HJT1A025	
JK681	943643010150S	JACK NOSPCC2PW/R		CJJ4N034U	
JK682	943643010160S	JACK NOSPCC1PBLACK		CJJ4M046U	
JK684	943643010160S	JACK NOSPCC1PBLACK		CJJ4M046U	
JK689	943643010150S	JACK NOSPCC2PW/R		CJJ4N034U	
JK781	943646010240S	JACK NOSPCC6PRRR/BBB		CJJ5R008U	
JK782	943643101050S	JACK, SPK 8P (JB-801A-CU-02)		CJJ5Q007U	*
JW703A	nsp	WIRE ASS'Y (1P,200MM,BLK,UL1015#20,CKM-T)		CWE7102200TT	
L6752	943115010270S	MPX COIL(FM19KHzFILTER)	E2,EA	CLM4B001Z	
L6922	943115010270S	MPX COIL(FM19KHzFILTER)	E2,EA	CLM4B001Z	
L7801	943115010260S	SPEAKER COIL (0.5UH)		CLEY0R5KAK	
L7811	943115010260S	SPEAKER COIL (0.5UH)		CLEY0R5KAK	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
L7821	943115010260S	SPEAKER COIL (0.5UH)			
L7831	943115010260S	SPEAKER COIL (0.5UH)			
L7841	943115010260S	SPEAKER COIL (0.5UH)			
L7851	943115010260S	SPEAKER COIL (0.5UH)			
L7861	943115010260S	SPEAKER COIL (0.5UH)			
RY781-784	682010023006S	RELAY 12V 2C1P			
RY788	943682000810S	RELAY 12V 2C2P			
TM601	963183010730S	MODULE, TUNER(USA,F-TYPE FM ANT)	E3		
TM601	183010013007S	MODULE, TUNER(USA,F-TYPE FM ANT)	E2,EA		
TM601	183010014000S	MODULE, TUNER(USA,F-TYPE FM ANT)	E1C		

PCB CNT ASSY

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Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC991	963239008800S	I.C, RS232 DRIVER(3.3V)			
IC993	00D2631286903	I.C , REGULATOR (12V)			
D9904	00D2760665903	DIODE , ZENER 16V			
D9906	00D2760794900	DIODE, ULTRA-HIGH SPEED			
RESISTORS GROUP					
R9701-9705	nsp	RES,CHIP(00HM,5%,1608)			
CAPACITORS GROUP					
C9901	nsp	CHIP CAP 0.1UF 50V K			
C9903-9905	nsp	CHIP CAP 0.1UF 50V K			
C9906	00D9430175108	ELECT CAP 10UF 50V			
C9907	nsp	CHIP CAP 0.1UF 50V K			
C9908	nsp	CAP, CHIP(1608, 50V/33pF)			
C9909	nsp	CAP, CHIP(1608, 50V/33pF)			
C9920,9921	00D9430175108	ELECT CAP 10UF 50V			
C9923,9924	nsp	CHIP CAP 0.1UF 50V K			
OTHERS PARTS GROUP					
CN21A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)			
CN22A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)			
CN23A	nsp	PIN HEADER (13P,1.25mm,STRAIGHT,B-TO-B)			
CN24A	nsp	PIN HEADER (27P,1.25mm,STRAIGHT,B-TO-B)			
CN25A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)			
CN26A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)			
CN27A	nsp	PIN HEADER (21P,1.25mm,STRAIGHT,B-TO-B)			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
CN28A	nsp	PIN HEADER (11P,1.25mm,STRAIGHT,B-TO-B)		CJP11GI281Z	
CN41A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)		CJP15GI281Z	
CN42A	nsp	PIN HEADER (27P,1.25mm,STRAIGHT,B-TO-B)		CJP27GI281Z	
CN43A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)		CJP15GI281Z	
CN44A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)		CJP17GI281Z	
CN45A	nsp	PIN HEADER (11P,1.25mm,STRAIGHT,B-TO-B)		CJP11GI281Z	
CN51A	nsp	PIN HEADER (15P,1.25mm,STRAIGHT,B-TO-B)		CJP15GI281Z	
CN52A	nsp	PIN HEADER (17P,1.25mm,STRAIGHT,B-TO-B)		CJP17GI281Z	
CN53A	nsp	PIN HEADER (13P,1.25mm,STRAIGHT,B-TO-B)		CJP13GI281Z	
CN61B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN62B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN63B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN64B	nsp	PIN SOCKET (21P,1.25mm,ANGLE, B-TO-B)		CJP21HJ282Z	
CN97B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN98B,99B	nsp	PIN SOCKET (11P,1.25mm,ANGLE, B-TO-B)		CJP11HJ282Z	
JK991	943646100420S	JACK, D-SUB 9P (HDR-9PF-RSB)		CJJ9W001Z	
JK993	643010086019S	JACK, STEREO (RED MOLD)		CJJ2D019Z	
JW901,902	nsp	WIRE ASS'Y (1P, 80MM,BLK,#22)		CWE5202080A	

PCB VIDEO ASSY

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

E3 : U.S.A. & Canada model E2 : Europe model
 EA : Australia model E1C : China model
 BK : Black model SP : Premium Silver model

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC551	235810046603S	IC, AVDM2000		CVIAVDM2000	
IC552	00D2622012908	IC, BU4052BCF		CVIBU4052BCF	
IC554	232810005504S	IC, BD7628F		CVIBD7628F	
IC556	232810005504S	IC, BD7628F		CVIBD7628F	
IC558	943239010400S	REGULATOR IC NJM2845DL133		CVINJM2845DL133	
D5101,5102	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D5104-5106	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D5108	90M-HZ200190R	DIODE, SWITCHING, SMD TYPE		HVDRLS4148SR	
D5109	00D2760718902	DIODE, SCHOTTKY, 30V		CVDRB521S-30	
Q5101,5102	963212500030S	T.R , ISA1530AC1		CVTISA1530AC1	
Q5104	963212500030S	T.R , ISA1530AC1		CVTISA1530AC1	
Q5105,5106	943216500020S	TR RT1N141C		CVTRT1N141C	
Q5108	963216500060S	T.R,RT1N144C(10K-47K)		CVTRT1N144C	
Q5109,5110	943216500020S	TR RT1N141C		CVTRT1N141C	
Q5112	943216500020S	TR RT1N141C		CVTRT1N141C	
RESISTORS GROUP					
R5102-5108	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5110	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5112	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5118	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5120	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5122	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R51425143	nsp	RES, CHIP(1608/1%/510ohm)		CRJ10DF5100T	
R5149,5150	nsp	RES, CHIP(1608/1%/560ohm)		CRJ10DF5600T	
R51605161	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R52325234	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R52485249	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5269-5271	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
R5301	nsp	CHIP RES1%75OHM		CRJ10DF75R0T	
CAPACITORS GROUP					
C5104	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C5106	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C5108	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C5114	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
C5116	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C5118	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
C5120	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C5122	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
C5124	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C5134	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5136	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5142,5143	00D9430062101	ELECT CAP 100UF 16V		CCEA1CH101T	
C5146	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5147	963134010980S	ELECT CAP 47UF 16V		CCEA1CH470T	
C5148	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5149	963134010980S	ELECT CAP 47UF 16V		CCEA1CH470T	
C5154	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5155	nsp	CHIP CAP 220PF 50V		CCUS1H221JA	
C5156	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C51585159	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C5161	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C5162,5163	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C5165	nsp	CHIP CAP 0.01UF 50V K		CCUS1H103KC	
C5166,5167	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C5169	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C5170,5171	943134010530S	ELECT CAP 1UF 50V C		CCEA1HH1R0T	
C5173	943134010530S	ELECT CAP 1UF 50V C		CCEA1HH1R0T	
C5178,5179	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C5181	nsp	CAP, CHIP(1608, 50V/0.047uF)		CCUS1H473KC	
C51825189	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C51905191	963134010980S	ELECT CAP 47UF 16V		CCEA1CH470T	
C5192-5201	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C5202	963134010980S	ELECT CAP 47UF 16V		CCEA1CH470T	
C5203	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C5204	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C5205,5206	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC	
C5213	00D9430175108	ELECT CAP 10UF 50V		CCEA1HH100T	
C52205222	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C5223-5225	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
OTHERS PARTS GROUP					
BN51A	nsp	WIRE ASS'Y (1P,100MM,BLK,UL1007#24,CKM-T)		CWE4202100AT	
BN53A	nsp	WIRE ASS'Y (1P,100MM,BLK,UL1007#24,CKM-T)		CWE4202100AT	
CN51B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN52B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN53B	nsp	PIN SOCKET (13P,1.25mm,ANGLE, B-TO-B)		CJP13HJ282Z	
CN931	nsp	LOCK-WAFER/ANGLE/2MM PITCH/5PIN		CJP05GJ288ZY	
JK551	943643101130S	JACK, 3P(YL),SEPA-GND, SILVER		CJJ4P076Z	*
JK553	943643101080S	JACK, S-VIDEO (DIN-409A X 2)		CJJ9N001Z	*
JK554	943643101140S	JACK, 2P(YL),SEPA-GND, SILVER		CJJ4N095Z	*
JK556-558	943643101100S	JACK, 3P (RCA-303D-00-08)		CJJ4S050Z	*

PCB HDMI ASS'Y

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E3 : U.S.A. & Canada model E2 : Europe model
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Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC101	nsp	I.C, HDMI BUFFER			
IC111	236810057606S	I.C , HDMI MUX			
IC112	234810018506S	I.C , ANALOG MUX/DeMUX			
IC121	nsp	I.C, HDMI RX/Decoder(BGA-425P)			
IC122	963239002150S	I.C , OCTAL BUFFER/DRIVER			
IC151	nsp	I.C , VSP(ADV8002-4)			
IC152,153	nsp	I.C , DDR2 SDRAM(1G,800MHZ,FBGA)			
IC155	943248100720D	I.C , OSD SERIAL FLASH (MX25L6406EM21-12G)	E3,E2,EA		*
IC155	943248100870S	I.C , OSD SERIAL FLASH (MX25L6406EM21-12G)	E1C		*
IC156	943239010400S	I.C, REGULATOR(1.8V/TO-252)			
IC201	943243100650D	I.C , MAIN MCU (R5F5630ECDFB)			*
IC202	246810026500S	I.C EEPROM(256K, 32-kword x 8 bit)			
IC231	943243100660D	I.C , SUB MCU (R5F3650KNFB)			*
IC241	00D2623448908	I.C , 3STATE QUAD BUFFER			
IC242	00D2623437906	I.C , OCTAL BUS BUFFER			
IC243	00D2623444902	IC TC74VHC08FT			
IC301-305	nsp	IC EX3AV			
IC306,307	943239010400S	REGULATOR IC NJM2845DL133			
IC308	234810015507S	I.C, VOLTAGE DETECTOR(4.8V)			
IC309	nsp	IC EX3AV			
IC320	943652500030S	POLY SWITCH (1.6A, 8V)			
IC321	103810002508S	Pulse-Trans(HIGH SPEED LAN MAGNETICS)			
IC322	nsp	I.C, ETHERNET PHY			
IC323	00D2623711004	I.C, VIDEO ENCODER			
IC324	nsp	I.C , IPOD AUTHENTICATION CHIP FROM MARANTZ			
IC390	nsp	Network Media processor			
IC391	nsp	I.C ,NETWORK NAND FLASH (NAND01GW3B2CN6E)	E3		
IC391	nsp	I.C ,NETWORK NAND FLASH (NAND01GW3B2CN6E)	E2		
IC391	nsp	I.C ,NETWORK NAND FLASH (NAND01GW3B2CN6E)	E1C		
IC391	nsp	I.C ,NETWORK NAND FLASH (NAND01GW3B2CN6E)	EA		
IC392	246810063608S	I.C , 256M SDRAM			
IC401	00D2623077900	I.C , HEX INVERTER			
IC403,404	236810062608S	I.C , DIR			
IC406	943236101010S	I.C , PLD (EPM240T100C5N)			*
IC408	nsp	I.C , DSP (ADSP21487KSWZ-3B)			
IC409	943246012690S	I.C , 64M SDRAM			
IC410	943248100770D	I.C , DSP ROM (MX29LV160DBTI-70G)			*
IC441	236810073509S	I.C , DAC(8CH 192kHz 24-Bit)			
IC442,443	00D2631289900	IC AZ4580MTR-E1			
IC445	00D2631289900	IC AZ4580MTR-E1			
IC447	00D2631289900	IC AZ4580MTR-E1			
IC451	236810086505S	I.C , ADC(96kHz 24-Bit)			
IC455	236810070500S	I.C , DAC(2CH 192kHz 24-Bit)			
Q1001	943215500020S	TR RT1P141C			
Q1002	943216500040S	TR RT1N241C			
Q1101	943215500020S	TR RT1P141C			
Q1102	943216500040S	TR RT1N241C			
Q1103	943215500020S	TR RT1P141C			
Q1104	943216500040S	TR RT1N241C			

NOTE :
 When update Firmware,
 please confirm a last
 version in SDI.
 Use the service board
 after updating it.

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C1266-1273	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1274	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1275	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1276	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1277	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1278,1279	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1280,1281	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1282-1284	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1285	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1286	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1287,1288	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1289	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1290	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1291-1293	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1294	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1303-1307	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C1308-1310	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1311,1312	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C1315,1316	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C1317-1319	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1320-1326	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1328-1334	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1501	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1502	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1504	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1505,1506	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1507	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1508	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1509	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1510	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1511	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1512,1513	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1514	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1515	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1516,1517	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1518	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1519-1528	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1530	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1531	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1532	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1533	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1534,1535	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1536-1538	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1539	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1540	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1541	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1542	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1543	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1544	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1545,1546	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1547	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1548	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1549	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1550	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1551	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1552	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1553	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1554	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1555	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1556	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1557	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1558	nsp	CHIP CAP 10UF 6.3V		CCUC0J106KC	
C1559,1560	nsp	CAP, CHIP(1608, 50V/7pF)		CCUS1H070DA	
C1562	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1567,1568	nsp	CAP, CHIP(1005, 25V/0.01uF)		CCUI1E103KC	
C1577	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C1578	nsp	CAP, CHIP(1608, 16V/0.15uF)		CCUS1C154KC	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C1579	nsp	CAP, CHIP(1005, 25V/0.012uF)			
C1580	nsp	CAP, CHIP(1608, 16V/0.15uF)			
C1581	nsp	CAP, CHIP(1005, 25V/0.012uF)			
C1582,1583	nsp	CAP, CHIP(1005, 50V/2200pF)			
C1588	nsp	CHIP CAP 1UF 10V			
C1590,1591	nsp	CHIP CAP 0.1UF 16V			
C1594-1625	nsp	CHIP CAP 0.1UF 16V			
C1626	nsp	CHIP CAP 1UF 10V			
C1627	nsp	CHIP CAP 0.1UF 16V			
C1628	nsp	CAP, CHIP(1005, 50V/1000pF)			
C1629	nsp	CHIP CAP 1UF 10V			
C1630,1631	nsp	CHIP CAP 0.1UF 16V			
C1632,1633	nsp	CHIP CAP 10UF 6.3V			
C1634	nsp	CHIP CAP 0.1UF 16V			
C1635	nsp	CHIP CAP 10UF 6.3V			
C1637	nsp	CHIP CAP 0.1UF 16V			
C1640	nsp	CHIP CAP 0.1UF 16V			
C1641	nsp	CHIP CAP 10UF 6.3V			
C1643-1648	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1649	nsp	CHIP CAP 0.1UF 16V			
C1650,1651	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1652	nsp	CHIP CAP 0.1UF 16V			
C1653	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1654	nsp	CHIP CAP 0.1UF 16V			
C1655,1656	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1657	nsp	CHIP CAP 0.1UF 16V			
C1658	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1659	nsp	CHIP CAP 0.1UF 16V			
C1660	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1662	nsp	CHIP CAP 1UF 10V			
C1665	nsp	CHIP CAP 10UF 6.3V			
C1670	nsp	CHIP CAP 10UF 6.3V			
C1671	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1672	nsp	CHIP CAP 0.1UF 16V			
C1673	nsp	CHIP CAP 10UF 6.3V			
C1674	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C1675	nsp	CHIP CAP 0.1UF 16V			
C2001	nsp	CHIP CAP 0.1UF 16V			
C2002	nsp	CHIP CAP 0.1UF 50V K			
C2003	nsp	CHIP CAP 1000PF 50VK			
C2004	nsp	CHIP CAP 0.1UF 50V K			
C2005	nsp	CHIP CAP 1000PF 50VK			
C2012-2015	nsp	CHIP CAP 0.1UF 16V			
C2018	nsp	CHIP CAP 0.1UF 16V			
C2024,2025	nsp	CAP, CHIP(1608, 50V/12pF)			
C2026	nsp	CHIP CAP 0.1UF 16V			
C2029-2032	nsp	CHIP CAP 0.1UF 16V			
C2037	nsp	CHIP CAP 0.1UF 16V			
C2039	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C2042,2043	nsp	CHIP CAP 0.01UF 50V K			
C2044-2053	nsp	CHIP CAP 1000PF 50VK			
C2301,2302	nsp	CAP, CHIP(1608, 50V/10pF)			
C2303	nsp	CHIP CAP 0.1UF 50V K			
C2304	nsp	CAP, CHIP(1608, 10V/0.47uF)			
C2310	nsp	CHIP CAP 0.1UF 50V K			
C2311	nsp	CHIP CAP 220PF 50V			
C2312	nsp	CHIP CAP 0.1UF 50V K			
C2314-2316	nsp	CHIP CAP 0.1UF 50V K			
C2325,2326	nsp	CAP, CHIP(1005, 50V/1000pF)			
C2401,2402	nsp	CHIP CAP 0.1UF 16V			
C2403	nsp	CHIP CAP 0.1UF 50V K			
C2404-2407	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C2408-2410	nsp	CHIP CAP 0.01UF 50V K			
C2908	nsp	CAP, CHIP(1005, 50V/1000pF)			
C2910-2917	nsp	CHIP CAP 0.1UF 16V			
C2922-2925	nsp	CHIP CAP 0.1UF 16V			
C2932-2943	nsp	CAP, CHIP(1005, 50V/1000pF)			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C3000	nsp	CHIP CAP 0.1UF 16V			
C3002	nsp	CHIP CAP 0.1UF 16V			
C3003	nsp	CHIP CAP 10UF 6.3V			
C3004	nsp	CAP,CHIP(2012,10V/22uF)			
C3007	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3008	nsp	CAP, CHIP(1608, 50V/10pF)			
C3011	nsp	CHIP CAP 0.1UF 16V			
C3013	nsp	CHIP CAP 0.1UF 16V			
C3014	nsp	CHIP CAP 10UF 6.3V			
C3015	nsp	CAP,CHIP(2012,10V/22uF)			
C3018	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3019	nsp	CAP, CHIP(1608, 50V/10pF)			
C3022	nsp	CHIP CAP 0.1UF 16V			
C3024	nsp	CHIP CAP 0.1UF 16V			
C3025	nsp	CHIP CAP 10UF 6.3V			
C3028	nsp	CAP,CHIP(2012,10V/22uF)			
C3029	nsp	CHIP CAP 15PF 50V			
C3031	nsp	CHIP CAP 10UF 6.3V			
C3032	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3033	nsp	CHIP CAP 0.1UF 16V			
C3035	nsp	CHIP CAP 0.1UF 16V			
C3036	nsp	CHIP CAP 10UF 6.3V			
C3039	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3040	nsp	CHIP CAP 15PF 50V			
C3041	nsp	CAP,CHIP(2012,10V/22uF)			
C3044	nsp	CHIP CAP 0.1UF 16V			
C3046	nsp	CHIP CAP 0.1UF 16V			
C3049	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3050	nsp	CHIP CAP 15PF 50V			
C3051	nsp	CAP,CHIP(2012,10V/22uF)			
C3054	nsp	CHIP CAP 10UF 6.3V			
C3055	nsp	CAP, CHIP(1005, 25V/0.022uF)			
C3056	nsp	CHIP CAP 0.1UF 16V			
C3059-3062	nsp	CHIP CAP 0.1UF 16V			
C3067,3068	nsp	CHIP CAP 0.1UF 16V			
C3071	nsp	CHIP CAP 0.1UF 16V			
C3074	943134500030S	CAP, SMD ELECT(16V/470uF)			
C3075	nsp	CHIP CAP 0.1UF 16V			
C3077	nsp	CHIP CAP 0.1UF 16V			
C3079	943134500030S	CAP, SMD ELECT(16V/470uF/MANLEX RV, 10X10)	E2,EA		
C3080	nsp	CHIP CAP 0.1UF 16V			
C3081	nsp	CHIP CAP 0.015UF 25V			
C3082	nsp	CHIP CAP 1UF 10V			
C3083,3084	nsp	CHIP CAP 0.1UF 16V			
C3087	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3102	nsp	CHIP CAP 0.1UF 16V			
C3103	nsp	CHIP CAP 10UF 6.3V			
C3106	nsp	CAP,CHIP(2012,10V/22uF)			
C3107	nsp	CHIP CAP 15PF 50V			
C3108	nsp	CHIP CAP 0.1UF 16V			
C3109	nsp	CHIP CAP 10UF 6.3V			
C3110	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C3144	nsp	CHIP CAP 10UF 6.3V			
C3145,3146	nsp	CHIP CAP 1UF 10V			
C3147	nsp	CHIP CAP 10UF 6.3V			
C3156	nsp	CHIP CAP 0.1UF 16V			
C3200	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3201	nsp	CHIP CAP 0.1UF 16V			
C3202	nsp	CAP, CHIP(1005, 25V/0.022uF)			
C3203	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3204	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3205	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3206	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3207,3208	nsp	CAP, CHIP(1005, 50V/15pF)			
C3209	nsp	CAP, CHIP(1005, 50V/1000pF)			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C3210,3211	nsp	CHIP CAP 0.1UF 16V			
C3213	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3215,3216	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3218	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3219-3222	nsp	CHIP CAP 0.1UF 16V			
C3223	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3224,3225	nsp	CHIP CAP 0.1UF 16V			
C3226	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3228,3229	nsp	CHIP CAP 0.1UF 16V			
C3234	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3243-3247	nsp	CHIP CAP 0.1UF 16V			
C3248,3249	nsp	CAP, CHIP(1005, 50V/1pF)			
C3253	nsp	CHIP CAP 1000PF 50VK			
C3255	nsp	CHIP CAP 1000PF 50VK			
C3900	nsp	CAP, CHIP(1005, 50V/1000pF)			
C3901,3902	nsp	CAP, CHIP(1005, 50V/12pF)			
C3904-3907	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3908-3918	nsp	CHIP CAP 0.1UF 16V			
C3923	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3926-3929	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3930-3939	nsp	CHIP CAP 0.1UF 16V			
C3944	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3947	nsp	CAP, CHIP(1608,6.3V/4.7uF)			
C3950-3958	nsp	CHIP CAP 0.1UF 16V			
C3960-3966	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4003,4004	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C4005-4008	nsp	CHIP CAP 0.1UF 16V			
C4009,4010	nsp	CAP, CHIP(1005, 25V/0.01uF)			
C4012-4014	nsp	CHIP CAP 0.1UF 16V			
C4015	nsp	CHIP CAP 0.022UF 50VK			
C4016,4017	nsp	CHIP CAP 0.1UF 16V			
C4018	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4020	nsp	CHIP CAP 10UF 6.3V			
C4021	nsp	CHIP CAP 0.1UF 16V			
C4022,4023	nsp	CAP, CHIP(1005, 50V/12pF)			
C4024-4029	nsp	CHIP CAP 0.1UF 16V			
C4030	nsp	CHIP CAP 0.022UF 50VK			
C4031,4032	nsp	CHIP CAP 0.1UF 16V			
C4033	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4034-4037	nsp	CHIP CAP 0.1UF 16V			
C4049-4051	nsp	CHIP CAP 0.1UF 16V			
C4052	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4053,4054	nsp	CAP, CHIP(1005, 50V/100pF)			
C4055-4060	nsp	CHIP CAP 0.1UF 16V			
C4063	nsp	CAP, CHIP(1005, 50V/100pF)			
C4064-4066	nsp	CHIP CAP 0.1UF 16V			
C4067,4068	nsp	CAP, CHIP(1608, 50V/9pF)			
C4069-4114	nsp	CHIP CAP 0.1UF 16V			
C4121-4168	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4174,4175	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4402	nsp	CHIP CAP 0.1UF 16V			
C4404-4407	nsp	CAP, CHIP(2012, 10V/4.7uF)			
C4408	943134500040S	CAP, CHIP ELECT(16V/100uF)			
C4411,4412	nsp	CHIP CAP 3900PF 50V K			
C4423-4426	nsp	CAP, CHIP(1608, 50V/680pF)			
C4429,4430	943134500040S	CAP, CHIP ELECT(16V/100uF)			
C4431,4432	nsp	CHIP CAP 3900PF 50V K			
C4443-4446	nsp	CAP, CHIP(1608, 50V/680pF)			
C4451,4452	nsp	CHIP CAP 3900PF 50V K			
C4463-4466	nsp	CAP, CHIP(1608, 50V/470pF)			
C4471,4472	nsp	CHIP CAP 3900PF 50V K			
C4483-4486	nsp	CAP, CHIP(1608, 50V/680pF)			
C4491,4492	nsp	CHIP CAP 0.1UF 16V			
C4493,4494	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4497-4499	nsp	CAP, CHIP(1005, 50V/1000pF)			
C4505,4506	nsp	CHIP CAP 4700PF 50V			
C4507,4508	943134500050S	CAP, CHIP ELECT(16V/10uF)			

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C4511,4512	nsp	CHIP CAP 1UF 10V		CCUS1A105KC	
C4513,4514	nsp	CAP, CHIP(2012, 10V/4.7uF)		CCUC1A475ZF	
C4516	nsp	CHIP CAP 1000PF 50VK		CCUS1H102KC	
C4537,4538	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C4540-4542	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C4544	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C4551	nsp	CHIP CAP 1UF 10V		CCUS1A105KC	
C4552,4553	nsp	CAP, CHIP(2012, 10V/4.7uF)		CCUC1A475ZF	
C4554	nsp	CHIP CAP 1UF 10V		CCUS1A105KC	
C4557,4558	nsp	CAP, CHIP(1608, 50V/2200pF)		CCUS1H222KC	
C4560	nsp	CHIP CAP 0.1UF 16V		CCUI1C104KC	
C4581	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C4583-4591	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
C4593	nsp	CAP, CHIP(1005, 50V/1000pF)		CCUI1H102KC	
OTHERS PARTS GROUP					
BK101,102	nsp	PCB BRACKET		CMD1A569	
BK103	nsp	EARTH , HDMI		CMC1A422	
CN101	nsp	WAFER CARD CABLE 23P, 1.0MM		CJP23GA193ZY	
CN121	nsp	WAFER CARD CABLE 23P, 1.0MM		CJP23GA193ZY	
CN203	nsp	WAFER , SMD (2MM PITCH)-3P		CJP03GA208ZY	
CN21B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN22B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN23B	nsp	PIN SOCKET (13P,1.25mm,ANGLE, B-TO-B)		CJP13HJ282Z	
CN24B	nsp	PIN SOCKET (27P,1.25mm,ANGLE, B-TO-B)		CJP27HJ282Z	
CN25B	nsp	PIN SOCKET (17P,1.25mm,ANGLE, B-TO-B) P		CJP17HJ282Z	
CN26B	nsp	PIN SOCKET (15P,1.25mm,ANGLE, B-TO-B)		CJP15HJ282Z	
CN27B	nsp	PIN SOCKET (21P,1.25mm,ANGLE, B-TO-B)		CJP21HJ282Z	
CN28B	nsp	PIN SOCKET (11P,1.25mm,ANGLE, B-TO-B)		CJP11HJ282Z	
CN321	nsp	WAFER SMD(2MMPITCH)		CJP05GA208ZY	
CN69B	nsp	WAFER, FFC, 40P, 1mm(SMD)		CJP40GA193ZY	
CN704	nsp	WAFER SMD(2MMPITCH)		CJP05GA208ZY	
CN903	nsp	LOCK-WAFER/STRAIGHT/2.5MM PITCH/5PIN		CJP05GI289ZY	
J3200	943646100430S	JACK, RJ-45		CJJ9L022Z	*
JK101	943643100040S	JACK,HDMI(KSI-TWI,W/FLANGE)		CJJ9H014Z	
JK111-114	943643100040S	JACK,HDMI(KSI-TWI,W/FLANGE)		CJJ9H014Z	
JK121,122	943643100040S	JACK,HDMI(KSI-TWI,W/FLANGE)		CJJ9H014Z	
JK152	943643100040S	JACK,HDMI(KSI-TWI,W/FLANGE)		CJJ9H014Z	
JK201	943643010220S	JACK 3.5PIHORIZONTALWITHOUTRING		CJJ2E033Z	
JK202,203	643010086002S	JACK, STEREO (BLK MOLD)		CJJ2D008Z	
JK401	943643101110S	JACK, 2P O (RCA-215A-00-01)		CJJ4N068Y	
JK402,403	262010004005S	MODULE , OPTICAL (RX,3.3V)		HJSTORX147L	
L1001,1002	nsp	RES,CHIP(0OHM,5%,1608)		CRJ10DJ0R0T	
L1102	nsp	RES,CHIP(0OHM,5%,1608)		CRJ10DJ0R0T	
L1201-1207	nsp	CHIP FERRITE BEAD(60ohm 1608)		CLZ9R005Z	
L1501-1512	nsp	CHIP FERRITE BEAD(60ohm 1608)		CLZ9R005Z	
L1513	nsp	COIL , CHIP(22uH, 3225)		CLQ10E220KRX	
L1514,1515	nsp	CHIP FERRITE BEAD(60ohm 1608)		CLZ9R005Z	
L1517	nsp	CHIP FERRITE BEAD(60ohm 1608)		CLZ9R005Z	
L1518	nsp	COIL , CHIP(22uH, 3225)		CLQ10E220KRX	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
L1521,1522	nsp	CHIP FERRITE BEAD(60ohm 1608)		CLZ9R005Z	
L2903-2934	nsp	RES,CHIP(0OHM,5%,1608)		CRJ10DJ0R0T	
L3000-3009	nsp	RES, CHIP(3216/5%/0ohm)		CRJ14CJ0R0T	
L3011-3013	nsp	FERRITE CHIP BEAD(2012/220ohm)		CLZBLM21PG221SN1	
L3014	nsp	FERRITE CHIP BEAD(2012/120ohm)		CLZBLM21AG121SN1	
L3015,3016	nsp	RES, CHIP(3216/5%/0ohm)		CRJ14CJ0R0T	
L3081-3086	nsp	RES, CHIP(3216/5%/0ohm)		CRJ14CJ0R0T	
L3200,3201	nsp	COIL, CHOKE CHIP(2012/90R)		CLZ9Z128Z	
L3202-3206	nsp	FERRITE CHIP BEAD(2012/220ohm)		CLZ9R006Z	
L3208	nsp	FERRITE CHIP BEAD(2012/220ohm)		CLZ9R006Z	
L3211	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
L3212	nsp	COIL, CHOKE CHIP(2012/180R)		CLZ9Z127Z	
L3213,3214	nsp	RES, CHIP(2012/5%/0ohm)		CRJ18AJ0R0T	
L3900-3902	nsp	FERRITE CHIP BEAD(2012/220ohm)		CLZ9R006Z	
X1201	141810044504S	CRYSTAL, SMD, 28.6363MHz		COX286363I120SR	
X1501	141810045507S	CRYSTAL, SMD, 27MHz		COX27000I330SR	
X2001	00D3991038900	CRYSTAL, SMD, 12MHz		COX12000I100SR	
X2301	141810048506S	CRYSTAL, SMD, 16MHz		COX16000I100SR	
X3900	141810049509S	CRYSTAL, SMD, 24MHz		COX24000I120SR	
X4001	141810046500S	CRYSTAL, SMD, 24.576MHz		COX24576I100SR	
X4002	943141100020S	CRYSTAL, SMD, 21.875MHz		COX21875I070SR	

PCB SMPS ASSY

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

E3 : U.S.A. & Canada model
EA : Australia model
BK : Black model

E2 : Europe model
E1C : China model
SP : Premium Silver model

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SEMICONDUCTORS GROUP							
⚠	IC901	231010091708S	I.C , OFF-LINE POWER SWITCH		CVITOP258MG		
⚠	IC902	963239010480S	I.C , PHOTOCOUPLER		CVIPC123Y22FZ0F		
	IC903	212050010508S	I.C , SHUNT REGULATOR(TO-92)		CVIKIA2431AP		
	Q9001-9003	00MHT30001000	TR KTC3199Y		HVTKTC3199YT		
	D9001-9006	00D9630328409	DIODE , RECTIFIER, AXIAL		CVD1N4007ST		
	D9008,9009	00D9630328409	DIODE , RECTIFIER, AXIAL		CVD1N4007ST		
	D9010	00D9430182609	DIODE 1SS133MT		CVD1SS133MT		
	D9012	943209500030S	DIODE , LOW FORWARD SCHOTTKY RECTIFIER		CVDSRL3060P		
	D9013	963209010430S	DIODE , RECTIFIER		CVDAP01CT		
RESISTORS GROUP							
	R9021	nsp	RES, CHIP(1608/1%/22Kohm)		CRJ10DF2202T		
	R9024	nsp	RES, CHIP(1608/1%/6.8Kohm)		CRJ10DF6801T		
	R9031-9034	943121500030S	RES, CHIP(2012/5%/2.2Mohm)		CRJ18AJ225T		
CAPACITORS GROUP							
	C9001-9003	963132011940S	CAP, CERAMIC(X1/Y2,0.01uF,AC250V)		CCKDKY103MFM		
	C9004	943134501590S	CAP , ELECT(200V/100uF)105, 16X20	E3	CCET200NHA101ES		
	C9004	963134010200S	CAP, ELECT(400V/100uF)105,18X31.5	E2,EA,E1C	CCET400NHA101ES		
	C9006-9008	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C9009	00D9430175108	CAP , ELECT(50V/10uF)		CCEA1HNXA100TS		
	C9010	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C9012	963132010120S	CAP, CERAMIC(DC1KV/1000pF)		CCKDDEH102KCM		
	C9016	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C9017	00MOA47602520	CAP, ELECT(25V/47uF)		CCEA1ENXA470TS		
	C9018	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
	C9019	nsp	CAP, CHIP(1608,6.3V/4.7uF)		CCUS0J475KC		
	C9020-9022	963134010220S	CAP , ELECT(6.3V/5600uF)		CCEA0JNXA562ES		
	C9024	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
⚠	C9028	963132011930S	CAP, CERAMIC(X1/Y1,2200P,AC250V)		CCKDKX222MEM		
	C9029	nsp	CHIP CAP 0.1UF 50V K		CCUS1H104KC		
OTHERS PARTS GROUP							
	BK901	nsp	PCB BRACKET		CMD1A188		
	BK903	nsp	BRACKET , PCB		CMD1A629		
	BN903	nsp	WIRE ASSY LOCKING (5P,2.5MM,400MM,UL1569#22,105)		CWB7D0054003D001		
	CN902	nsp	WAFER 2PIN		CJP02GA89ZY		
⚠	CX901	943139500020S	CAP , POLYPROPYLENE FILM (0.1uF/275VAC)		CCQF2E104KZE-T		
⚠	CY901,902	963134011730S	CAP, CERAMIC(X1/Y1,470P,AC250V)		CCKDKX471KBM		
⚠	F9001	963652010510S	FUSE(S506 Series, 250V,2A)		CBA2C2000TLEC		
⚠	F9002	652010025056S	FUSE(S506 Series, 250V,6.3A)		CBA2C6300TLEC		
⚠	F9301-9305	963652010910S	FUSE(S506 Series, 250V,3.15A)		CBA2C3150TLEC		
	JK901	963641011240S	RECEPTACLE, (10A/AC250V)		CJJ8A015ZM		
⚠	LF902	963111010230S	LINE FILTER, 27uH		CLZ9Z126Z		

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
⚠	RY901	963682010370S	RELAY, POWER(DC5V, 1C1P)		CSL1C006ZE		
⚠	T9001	963102010240S	TRANS, SWITCHING(ST-4430A)		CLT9Z067ZE		
	ZD901,902	00D2760762958	DIODE , ZENER 39V		CVDZJ39BT		
	ZD901,902	nsp	RES, CARBON(1/5W,1Mohm,J)	E2,EA,E1C	CRD20TJ105T		
	ZD903	963202010440S	DIODE , ZENER 22V	E3	CVDZJ22BT		
	ZD903	00D2760762958	DIODE , ZENER 39V	E2,EA,E1C	CVDZJ39BT		
	ZD904-907	nsp	COPPER WIRE	E3	C3A206		
	ZD904-907	00D2760762958	DIODE , ZENER 39V	E2,EA,E1C	CVDZJ39BT		
	ZD908-910	00D2760762958	DIODE , ZENER 39V		CVDZJ39BT		
	ZD911-918	963202010440S	DIODE , ZENER 22V		CVDZJ22BT		
	ZD919	00D9600095607	DIODE , ZENER 5.6V		CVDZJ5.6BT		
	ZD920	00D2760762958	DIODE , ZENER 39V		CVDZJ39BT		
		nsp	FUSE HOLDER	F9001-9002	KJCF5S		

