

DENON

Ver. 2

Please refer to the
MODIFICATION NOTICE.

SERVICE MANUAL

MODEL	JP	E3	E2	EK	EA	E1	E1K	E1C
AVR-1712		✓						

AV SURROUND 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.

CONTENTS

SAFETY PRECAUTIONS	3
NOTE FOR SCHEMATIC DIAGRAM	4
TECHNICAL SPECIFICATIONS	5
DIMENSION	5
CAUTIONS IN SERVICING	6
Initializing AV SURROUND RECEIVER	6
Service Jig	6
DISASSEMBLY	7
1. FRONT PANEL ASSY	9
2. PCB HDMI	10
3. POWER TRANS MAIN	11
4. PCB AUDIO_VIDEO ASSY	11
5. PCB SMPS/PCB SPK	12
6. PCB REG/PCB REG_CNT	13
7. RADIATOR ASSY	14
SPECIAL MODE	16
Special mode setting button	16
1. μ com/DSP Version display mode	17
2. Errors checking mode (Displaying the protection history)	19
3. Remote ID Setup mode	21
4. DIAGNOSTIC MODE (Video/Audio (signal) path confirmation mode)	23
BLOCK DIAGRAM	25
JIG FOR SERVICING	39
WHEN THE MICROPROCESSOR IS REPLACED WITH A NEW ONE	41
PROCEDURE FOR UPGRADING THE VERSION OF THE FIRMWARE	41
1. How to update by DFW	41
ADJUSTMENT	45
SURROUND MODES AND PARAMETERS	46
TROUBLE SHOOTING	50
1. POWER	50
2. Analog video	51
3. HDMI/DVI	56
4. AUDIO	61
5. SMPS	64
CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK	68
LEVEL DIAGRAM	69
PRINTED WIRING BOARDS	75
7CH AMP	75
SPMS	76
SPK	77
REG	79
FRONT_CNT	79
SIDE_CNT	80
REG_CNT	80
FRONT	81
FUNCTION	82
FUNCTION CNT	82
V.AUX	82
H/P	82
AUDIO_VIDEO	83
HDMI	84

SCHEMATIC DIAGRAMS	86
7CH-AMP UNIT (1/2)	86
7CH-AMP UNIT (2/2)	87
SPK UNIT	88
SMPS UNIT	89
REG UNIT	90
SIDE_CNT UNIT	91
FRONT_CNT UNIT	92
SIRIUS UNIT (AVR-2112CI ONLY)	93
RS232C UNIT (AVR-2112CI ONLY)	93
AUDIO_VIDEO UNIT (1/3)	94
AUDIO_VIDEO UNIT (2/3)	95
AUDIO_VIDEO UNIT (3/3)	96
HDMI UNIT (1/13)	97
HDMI UNIT (2/13)	98
HDMI UNIT (3/13)	99
HDMI UNIT (4/13)	100
HDMI UNIT (5/13)	101
HDMI UNIT (6/13)	102
HDMI UNIT (7/13)	103
HDMI UNIT (8/13)	104
HDMI UNIT (9/13)	105
HDMI UNIT (10/13)	106
HDMI UNIT (11/13)	107
HDMI UNIT (12/13)	108
HDMI UNIT (13/13)	109
FRONT UNIT	110
V.AUX UNIT	110
FUNCTION_CNT UNIT	110
FUNCTION UNIT	110
H/P UNIT	110
WIRING DIAGRAM	111
EXPLODED VIEW	112
PARTS LIST OF EXPLODED VIEW	113
PACKING VIEW	115
PARTS LIST OF PACKING & ACCESSORIES	115
SEMICONDUCTORS	117
1. IC's	117
2. FL DISPLAY	142
PARTS LIST OF P.C.B. UNIT	144
PCB 7CH_AMP ASS'Y	144
PCB SPK ASS'Y	148
PCB REG_CNT ASS'Y	151
PCB FRONT ASS'Y	153
PCB AUDIO_VIDEO ASS'Y	155
PCB HDMI ASS'Y	157

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 :

90 W + 90 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

125 W + 125 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Center :

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

125 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Surround :

90 W + 90 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

125 W + 125 W (6 Ω, 1 kHz with 0.7 % T.H.D.)

Surround back :

90 W + 90 W (8 Ω, 20 Hz – 20 kHz with 0.08 % T.H.D.)

125 W + 125 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

[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 2.8 μV (20.2 dBf)

S/N (IHF-A) :

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

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

Total harmonic Distortion (at 1 kHz) :

[FM] MONO 0.7 %

STEREO 1.0 %

General

Power supply : AC 120 V, 60 Hz

Power consumption :

460 W

0.1 W (Standby)

3 W (CEC standby)

Maximum external dimensions :

435 (W) x 162 (H) x 382 (D) mm

Weight : 10.2 kg

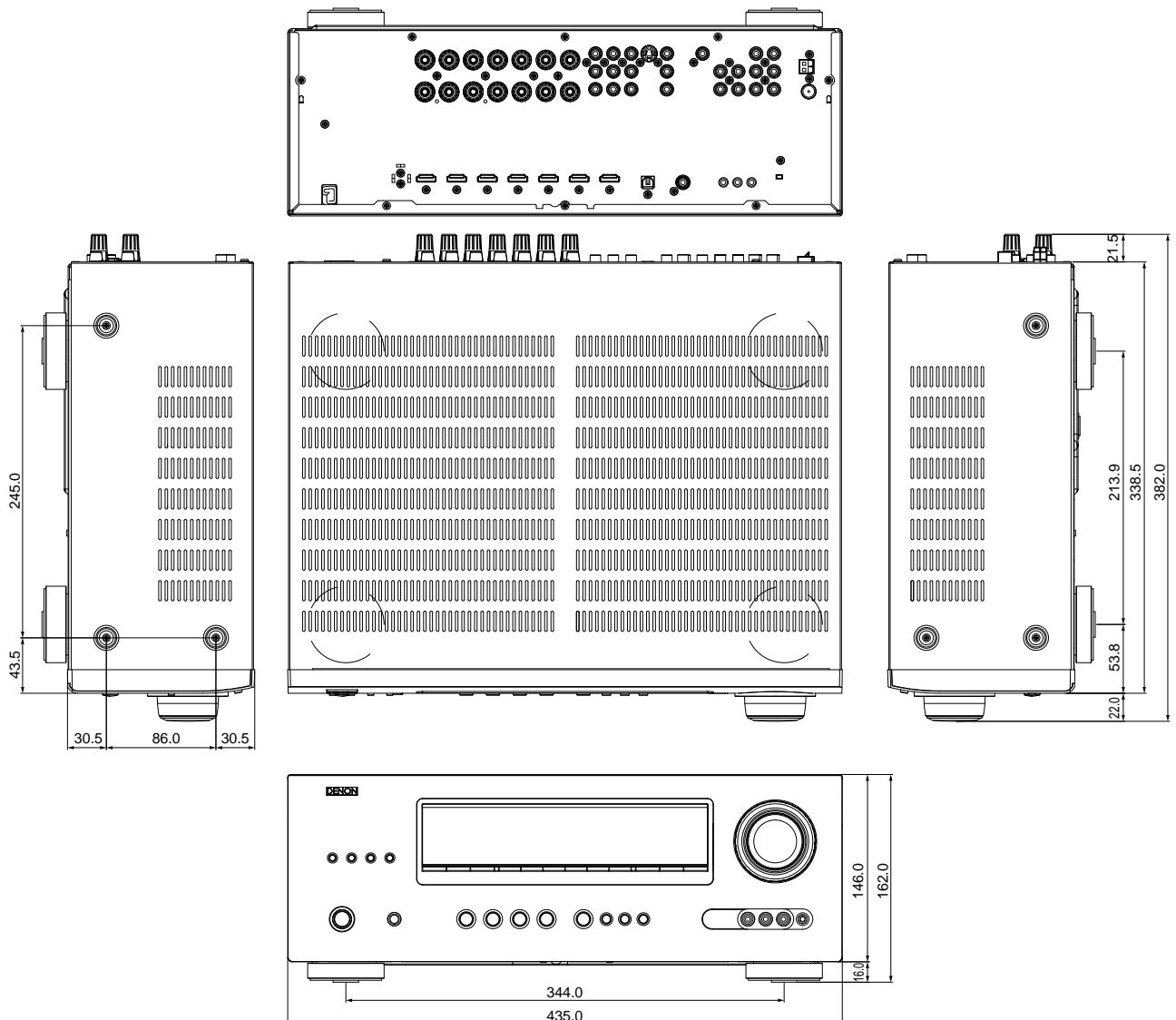
Remote Control Unit (RC-1156)

Batteries : R6/AA Type (two batteries)

Maximum external dimensions : 53 (W) x 224 (H) x 28 (D) mm

Weight : 160 g (including batteries)

DIMENSION



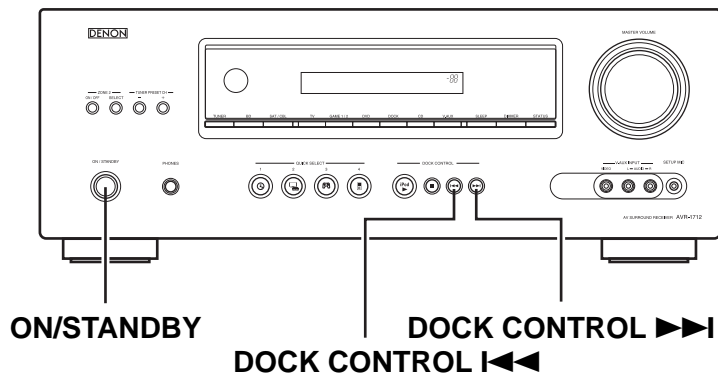
CAUTIONS IN SERVICING

Initializing AV SURROUND RECEIVER

AV SURROUND 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 DOCK CONTROL **I◀◀** and DOCK CONTROL **▶▶I** 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 39 page.)

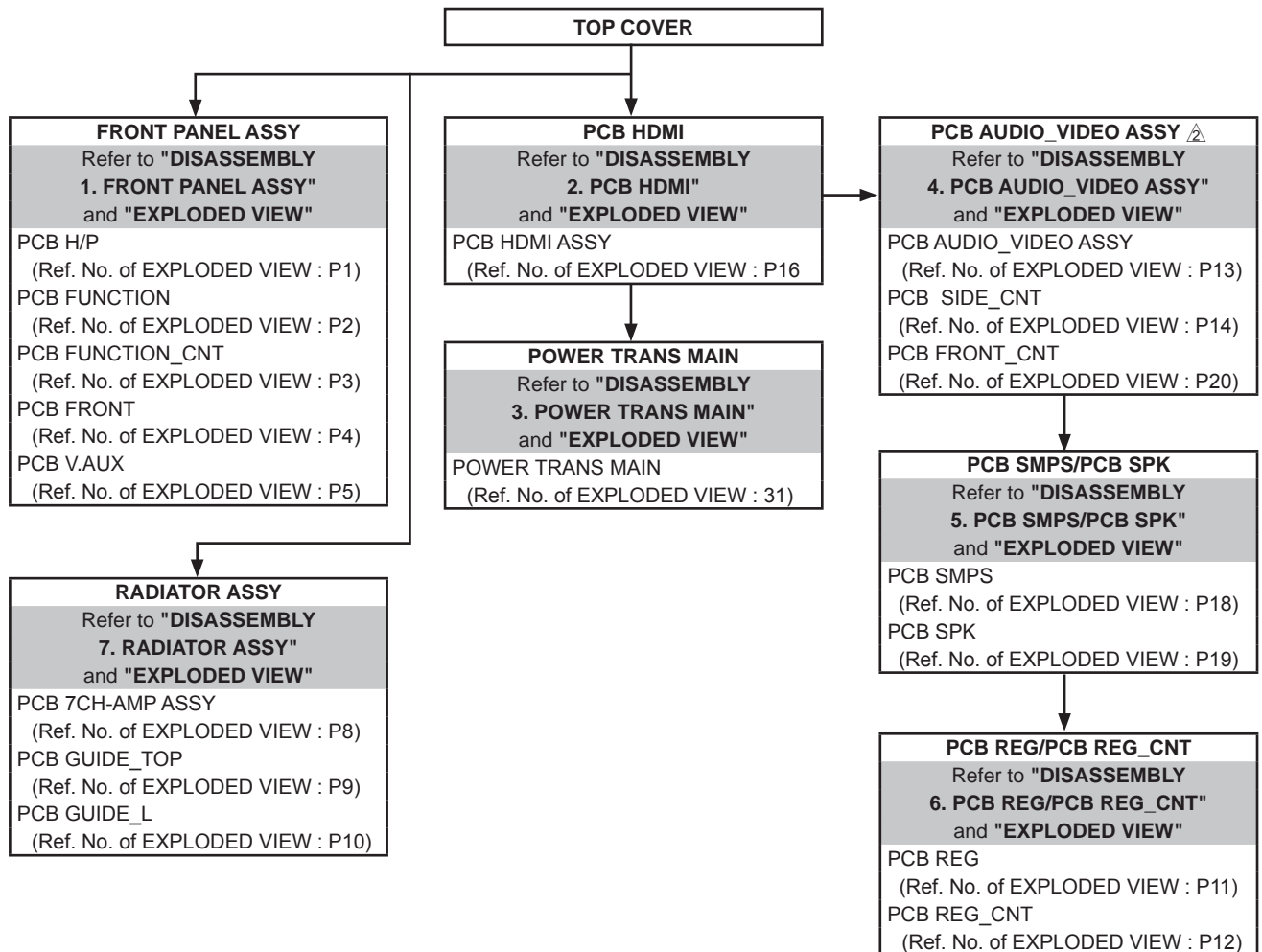
When you update the firmware by DFW, you can use the following JIG (RS232C to internal connector conversion adapter with 4P FFC cable kit).

Please order to DENON Official Service Distributor in your region if necessary.

8U-210100S : WRITING KIT : 1 Set
(Refer to 41 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.

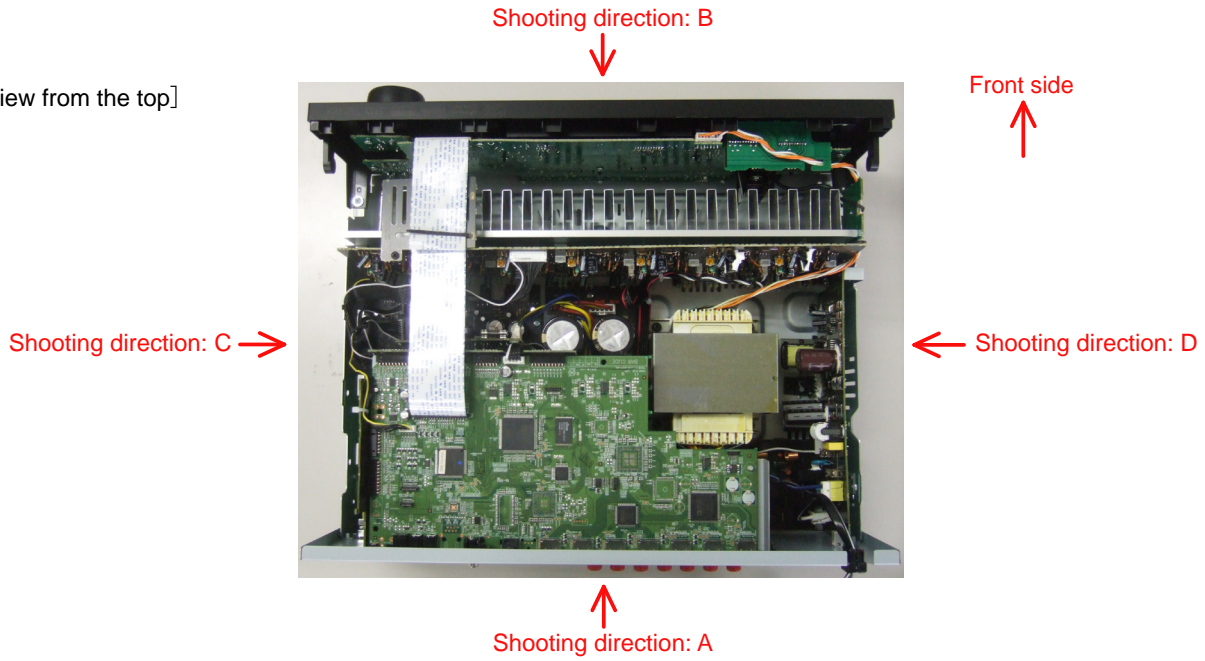


About the photos used for "descriptions of the DISASSEMBLY" section

- 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 viewpoint of each photograph (Shooting direction)

[View from the top]

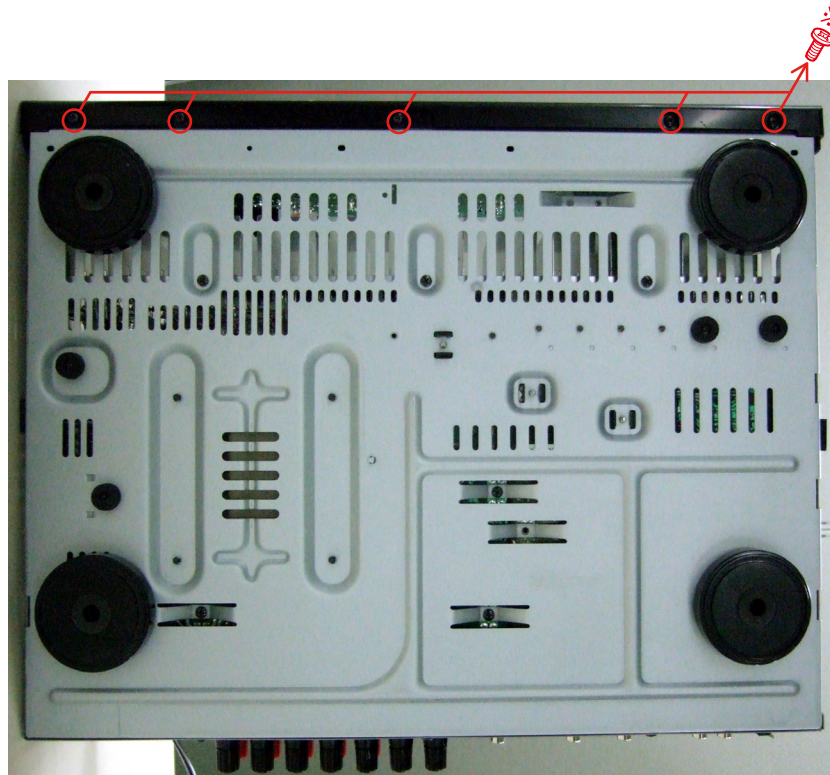


1. FRONT PANEL ASSY

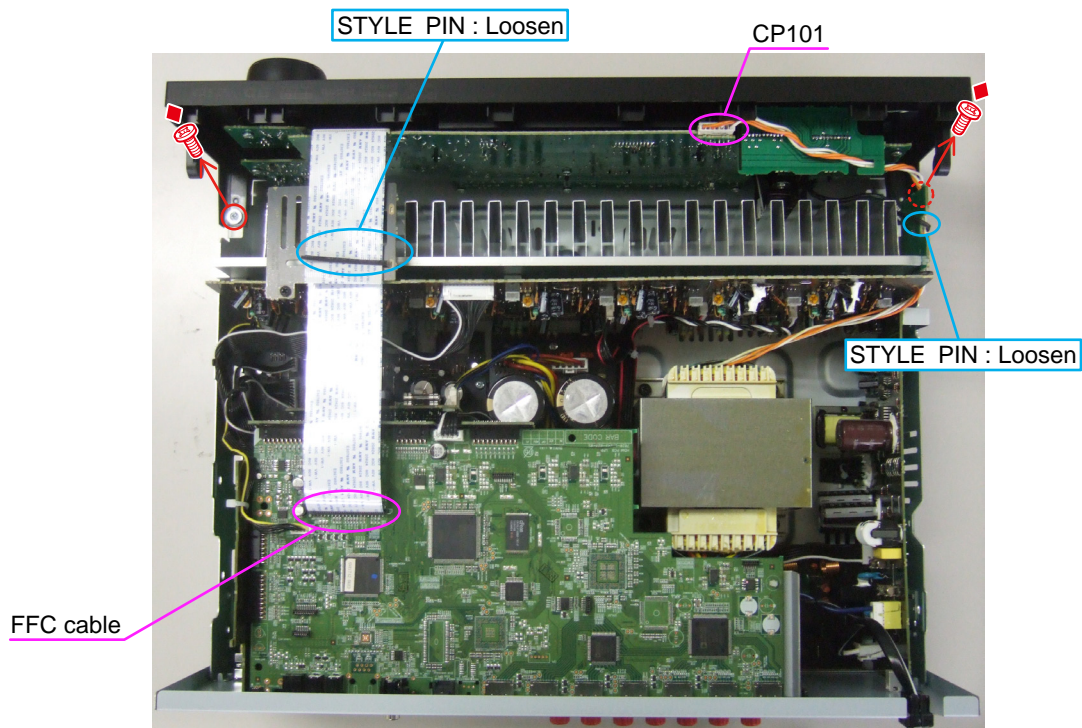
Proceeding : **TOP COVER** → **FRONT PANEL ASSY**

(1) Remove the screws.

View from the bottom



(2) Disconnect the connector wires and FFC cable, then remove the screws.

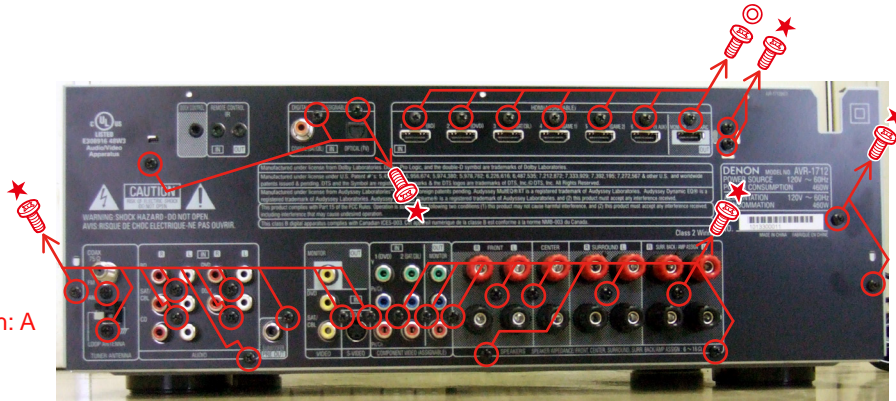


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B included in FRONT PANEL ASSY.

2. PCB HDMI

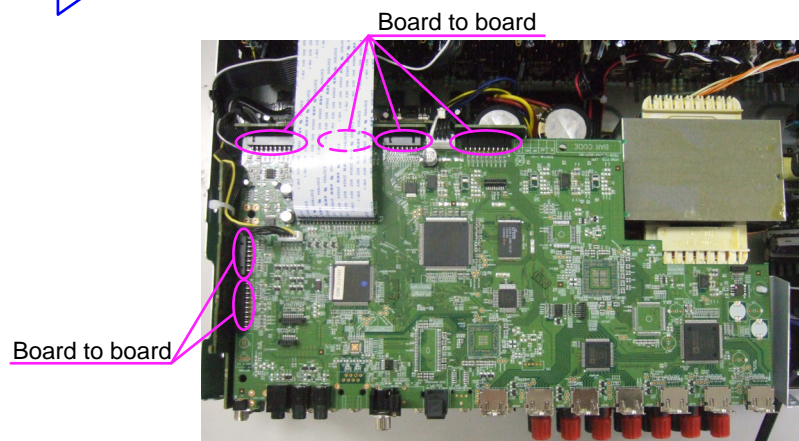
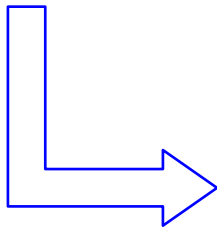
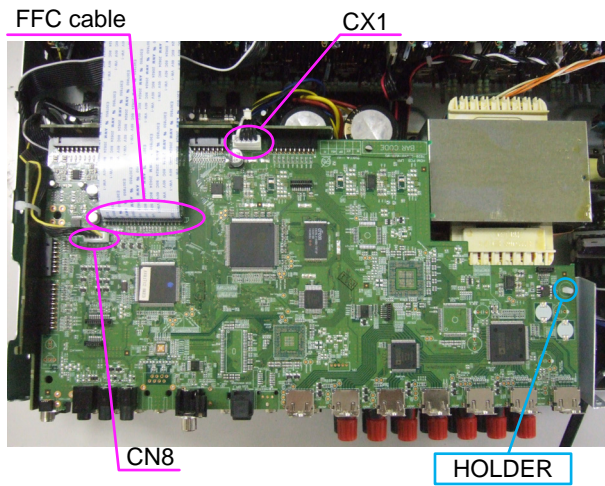
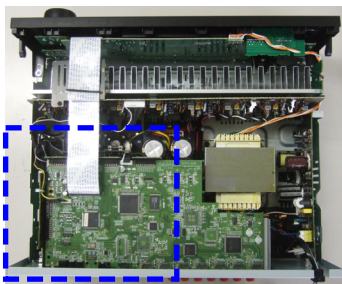
Proceeding : **TOP COVER** → **PCB HDMI**

(1) Remove the screws.



Shooting of photograph: A

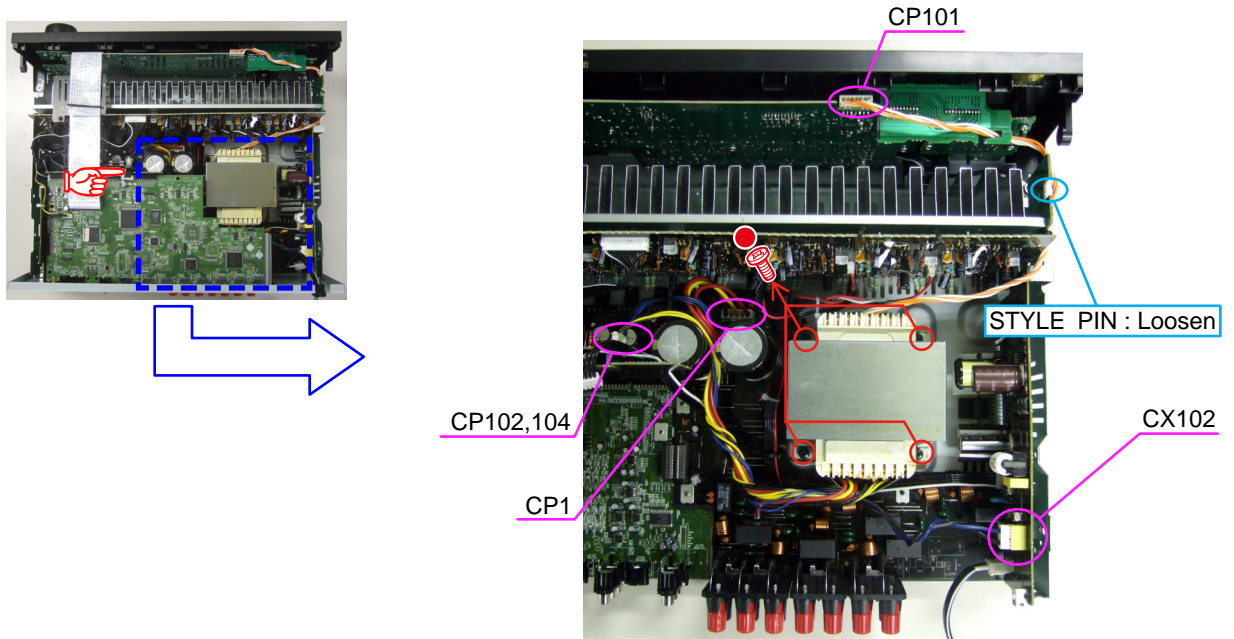
(2) Disconnect the connector wires and FFC cable, then remove the HOLDER. Disconnect the connector board.



3. POWER TRANS MAIN

Proceeding : **TOP COVER** → **PCB HDMI** → **POWER TRANS MAIN**

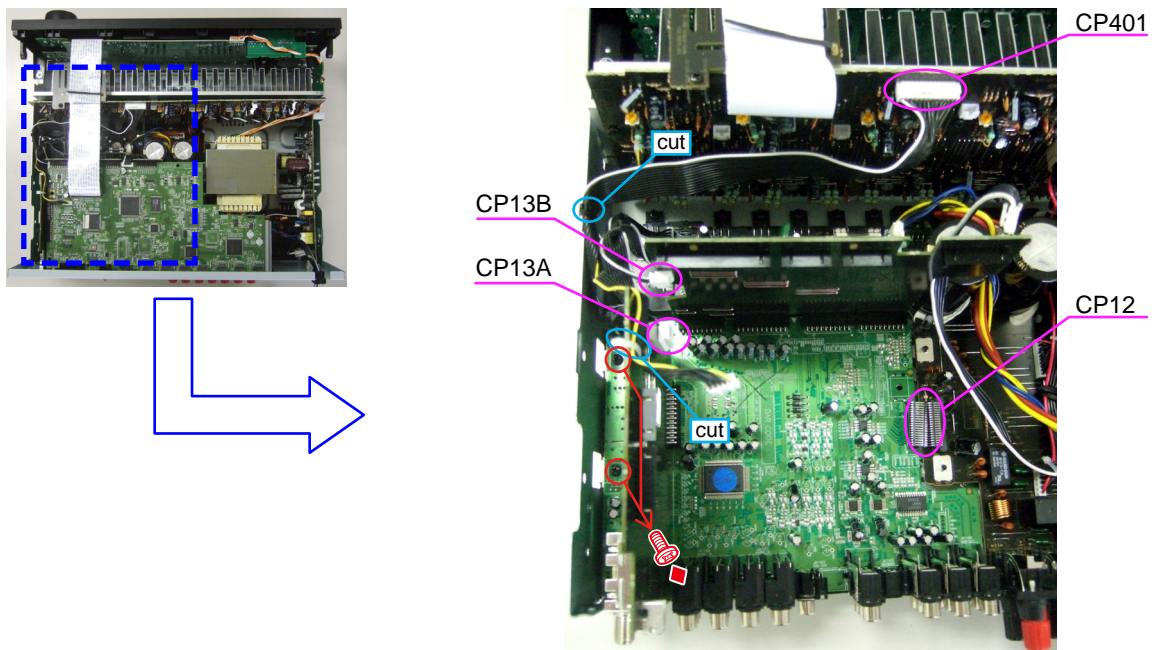
(1) Disconnect the connector wires, then remove the screws.



4. PCB AUDIO_VIDEO ASSY ⚠

Proceeding : **TOP COVER** → **PCB HDMI** → **PCB AUDIO_VIDEO ASSY**

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



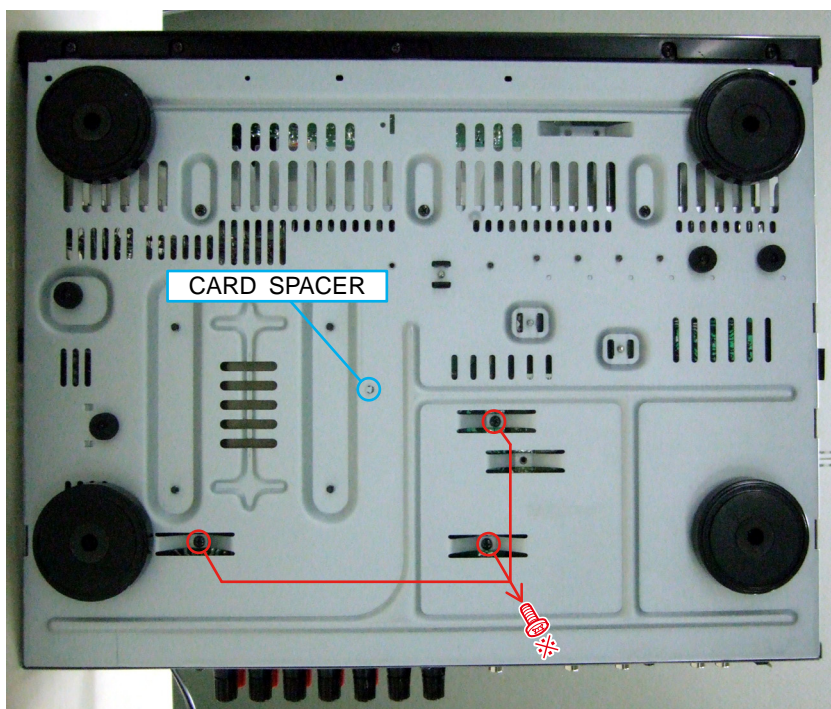
Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B.

5. PCB SMPS/PCB SPK

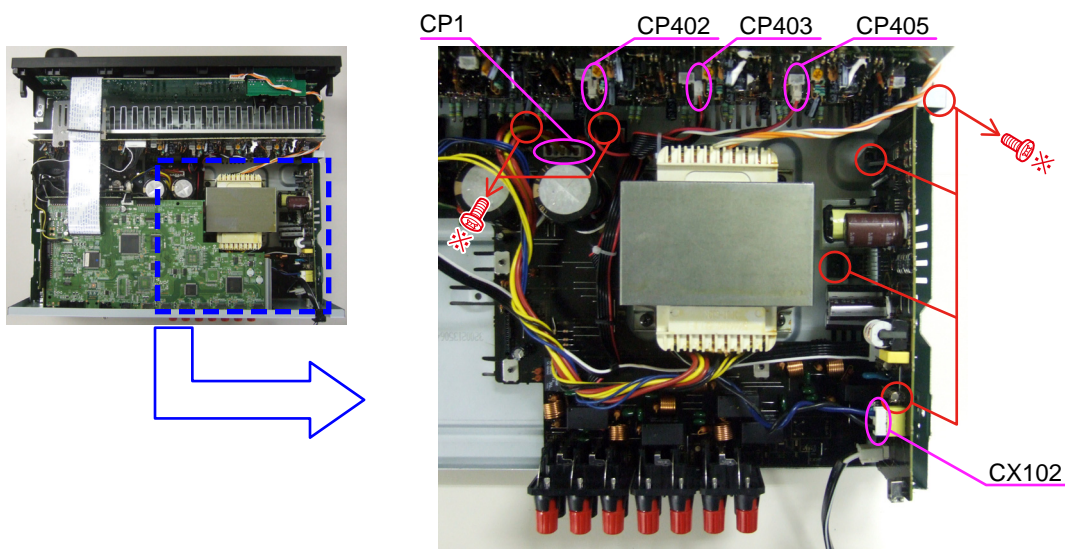
Proceeding : **TOP COVER** → **PCB HDMI** → **PCB AUDIO_VIDEO ASSY**
→ **PCB SMPS/PCB SPK**

(1) Remove the screws and CARD SPACER.

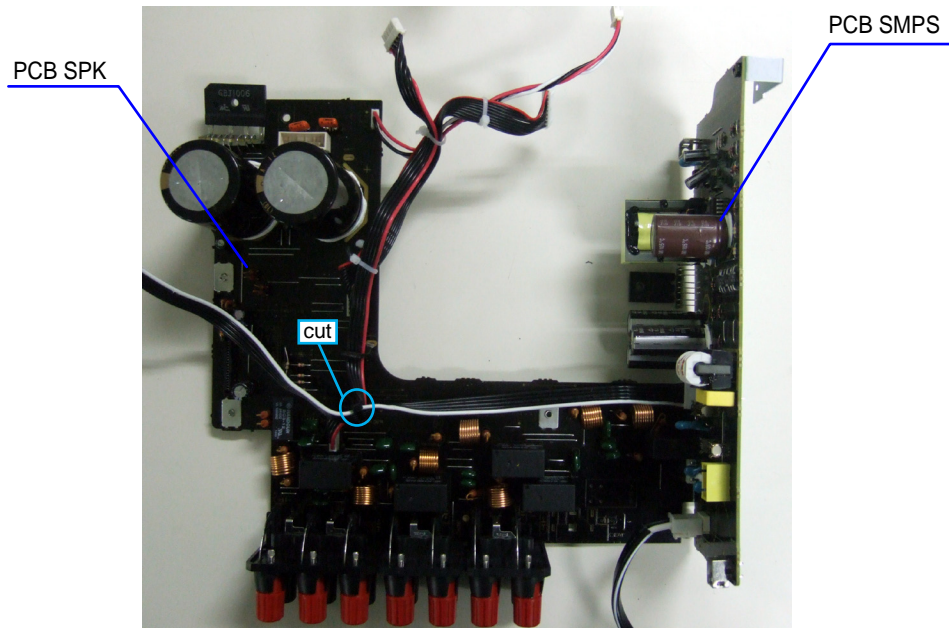
View from the bottom



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



(3) Remove the PCB SMPS/PCB SPK from the CHASSIS, then cut the wire clamp band.

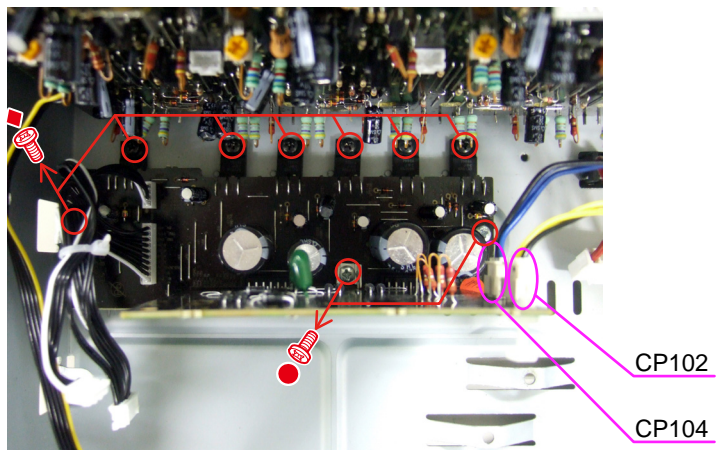
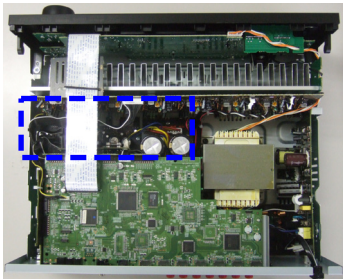


Please refer to "EXPLODED VIEW" for the disassembly method of each P.W.B.

6. PCB REG/PCB REG_CNT

Proceeding : **TOP COVER** → **PCB HDMI** → **PCB AUDIO_VIDEO ASSY**
→ **PCB SMPS/PCB SPK** → **PCB REG/PCB REG_CNT**

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

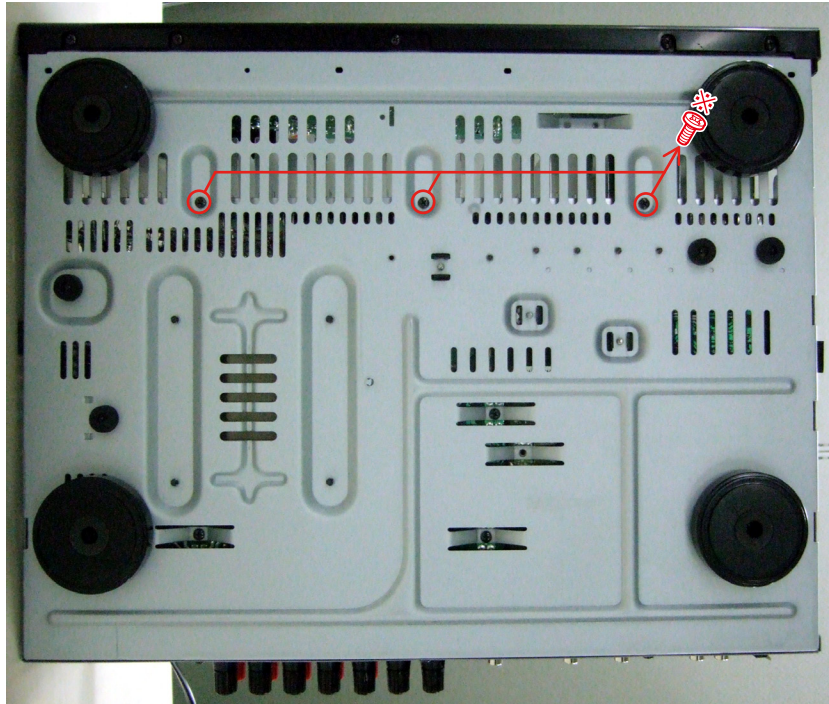


7. RADIATOR ASSY

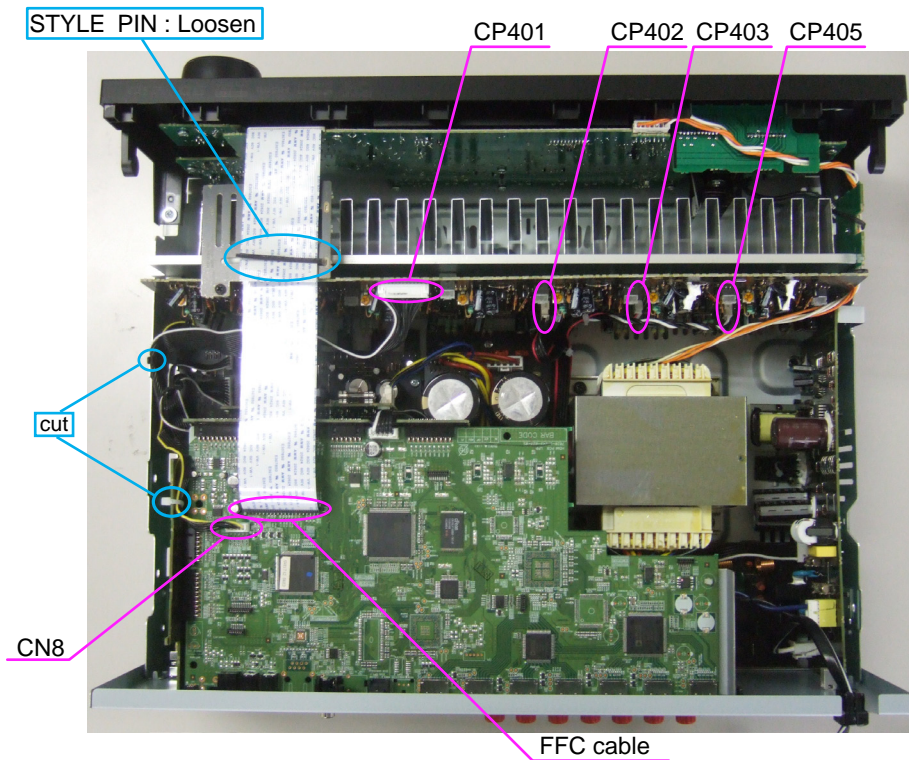
Proceeding : **TOP COVER** → **RADIATOR ASSY**

(1) Remove the screws.

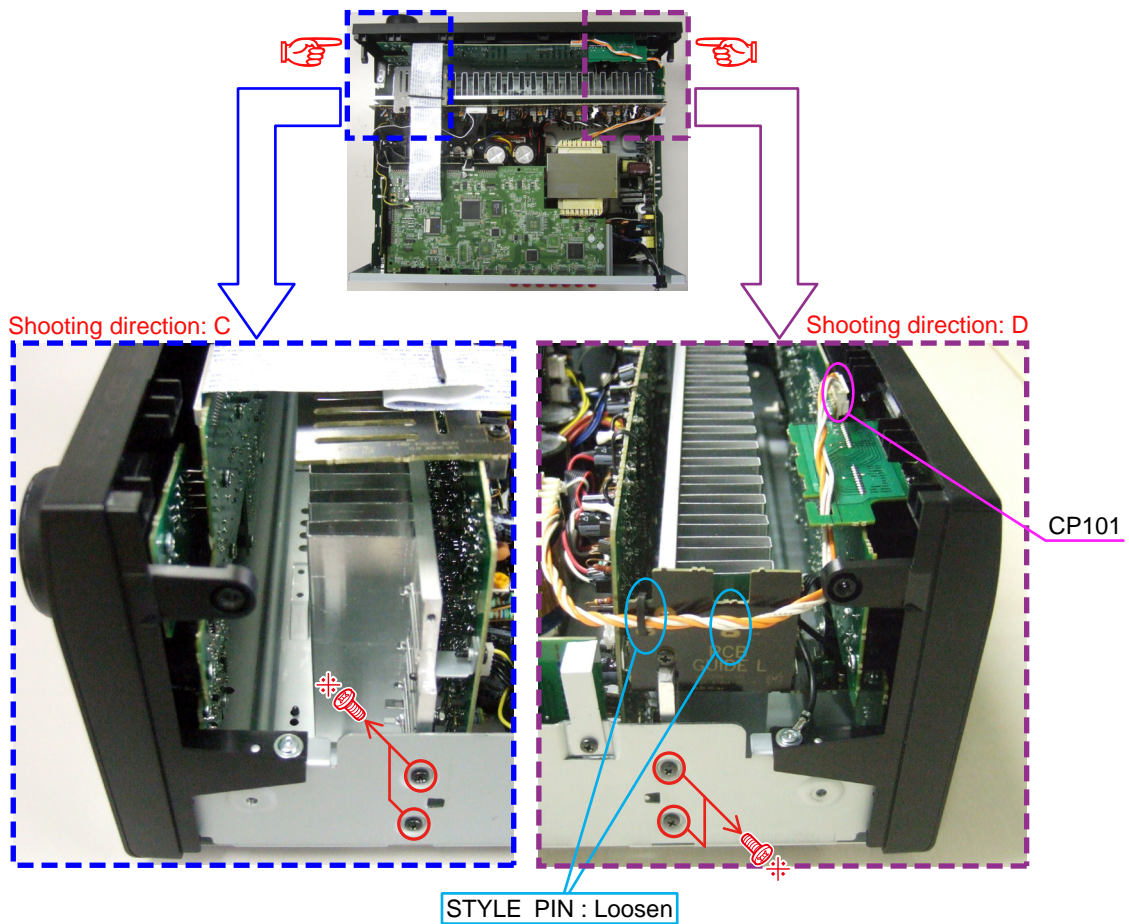
View from the bottom



(2) Disconnect the connector wires and FFC cable.



(3) Remove the screws.



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

SPECIAL MODE

Special mode setting button

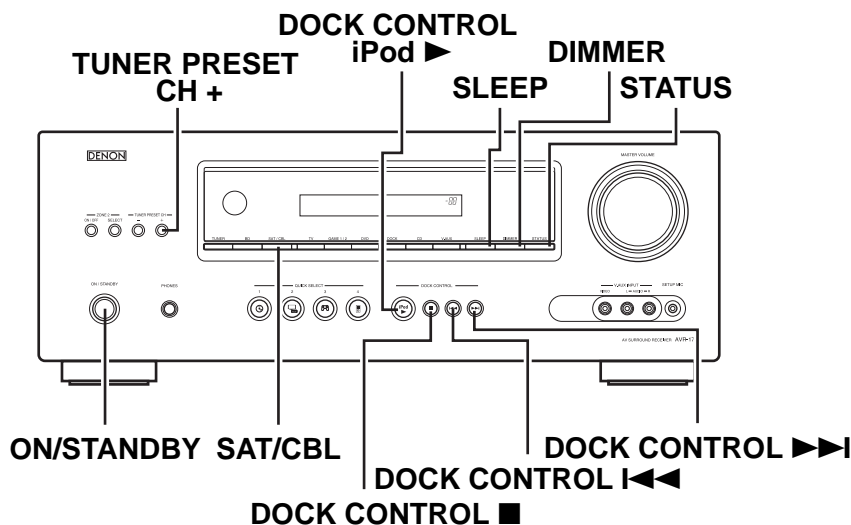
- ※ No.1 - 10, 12 : Press the ON/STANDBY button to turn on the power while pressing both the button A and the button B at the same time.
- ※ No.11 : Turn on the power, then press and hold down the A and B buttons for over 3 seconds.

No.	Mode	Button A	Button B	Contents
1	Version display (μcom/DSP Error Display)	DIMMER	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	STATUS	SLEEP	The protection history is displayed. (Refer to 19 page)
3	User Initialization mode (Installer Setup settings are not initialized.)	DOCK CONTROL I◀◀	DOCK CONTROL ▶▶▶	Backup data initialization is carried out. (Installer Setup settings are not initialized.)
4	Factory Initialization mode (Installer Setup settings are also initialized.)	DOCK CONTROL ■	DOCK CONTROL I◀◀	Backup data initialization is carried out. (Installer Setup settings are also initialized.)
5	Mode for switching tuner frequency step (E2 model Only)	-	-	Change tuner frequency step to FM:200kHz/AM:10kHzSTEP
6	Mode for preventing remote control acceptance	DOCK CONTROL ■	DOCK CONTROL iPod ▶	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	DOCK CONTROL I◀◀	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.)	DOCK CONTROL I◀◀	SLEEP	Operations using the main unit panel buttons are rejected.
9	Cancellation of panel lock mode	DOCK CONTROL I◀◀	SAT/CBL	Panel lock mode is cancelled.
10	Diagnostic mode	DOCK CONTROL ■	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	DOCK CONTROL ■	STATUS	When using multiple DENON AV receivers in the same room, make this setting so that only the desired AV receiver operates.(Refer to 21 page)

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 "DOCK CONTROL I◀◀" and " STATUS " buttons for over 3 seconds to turn off "REC" 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 "DIMMER" buttons. Now, press the "STATUS" button to the display the 2nd item information on the FL Display.

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

1.2. Display Order

Error information(Refer to 1.3. Error display) → ① Model destination information → ② Main μ -com → ③ Main 1st Boot Loader → ④ DSP ROM → ⑤ Audio PLD → ⑥ OSD SFLASH → ⑦ iPod Version

① Model destination information :

FLD	A	U	R	1	7	1	2	E	3										
-----	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--

② Main μ -com :

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

③ Main 1st Boot Loader :

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

④ DSP ROM :

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

⑤ Audio PLD :

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

⑥ OSD SFLASH :

FLD		O	S	D	:	5	2	1	1	*	*	*	*						
-----	--	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--

⑦ iPod Version :

FLD	*	i	P	o	d	D	o	c	k	:	*	*	.	*	*				
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

1.3. Error display

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

Condition	Status	FL Display	Trouble shooting
① Firm Check NG	Compared with the destination setting on the board. This is displayed when the model name or destination information written into the firmware does not match. (※)	F I R M E R R O R	<ul style="list-style-type: none"> • Please check the destination-resistors (R773/R776, HDMI B'D). • Please write the firmware of correct destination.
② 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 (IC21, HDMI B'D) and around circuits.
③ DSP NG	When DSP code boot is performed, the DSP FLAG0 port does not change to "H" even if DSP reset is executed.	D S P E R R O R 0 1	<ul style="list-style-type: none"> • Please check DSP (U8, 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	
④ EEPROM NG	Error occurs in EEPROM checksum.(*** is a block address number.)	E 2 P R O M E R R * * *	
⑤ Both DSP / EEPROM OK		(No error display, version display only)	

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

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)

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

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

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

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

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

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

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

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

Cause: DC output of the power amplifier is abnormal.

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

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

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

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

Cause: The temperature of the heat sink is excessive.

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

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

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

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 "iPod ►" button for 3 seconds.

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

Press the "iPod ►" button for 3 seconds.

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

The above is displayed and the protection history is cleared.

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

- (2) Initialize. (Refer to "Initializing AV SURROUND 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) 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 "DOCK CONTROL ■" buttons for over 3 second with the power turned on.

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

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

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

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

(3) Turn off the power using "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.

BLOCK DIAGRAM

fig.1

VIDEO BLOCK DIAGRAM

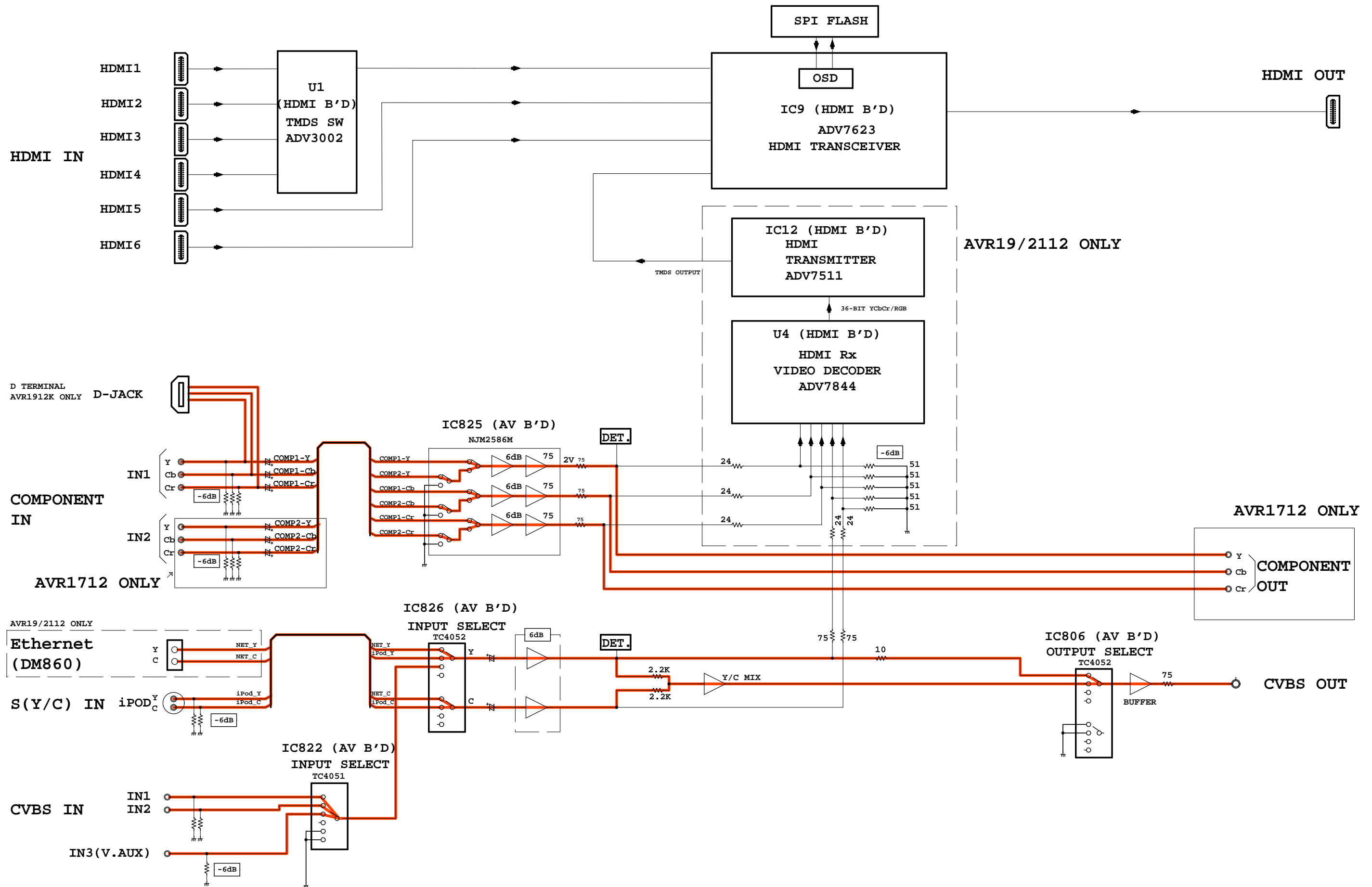


fig.2

VIDEO BLOCK DIAGRAM

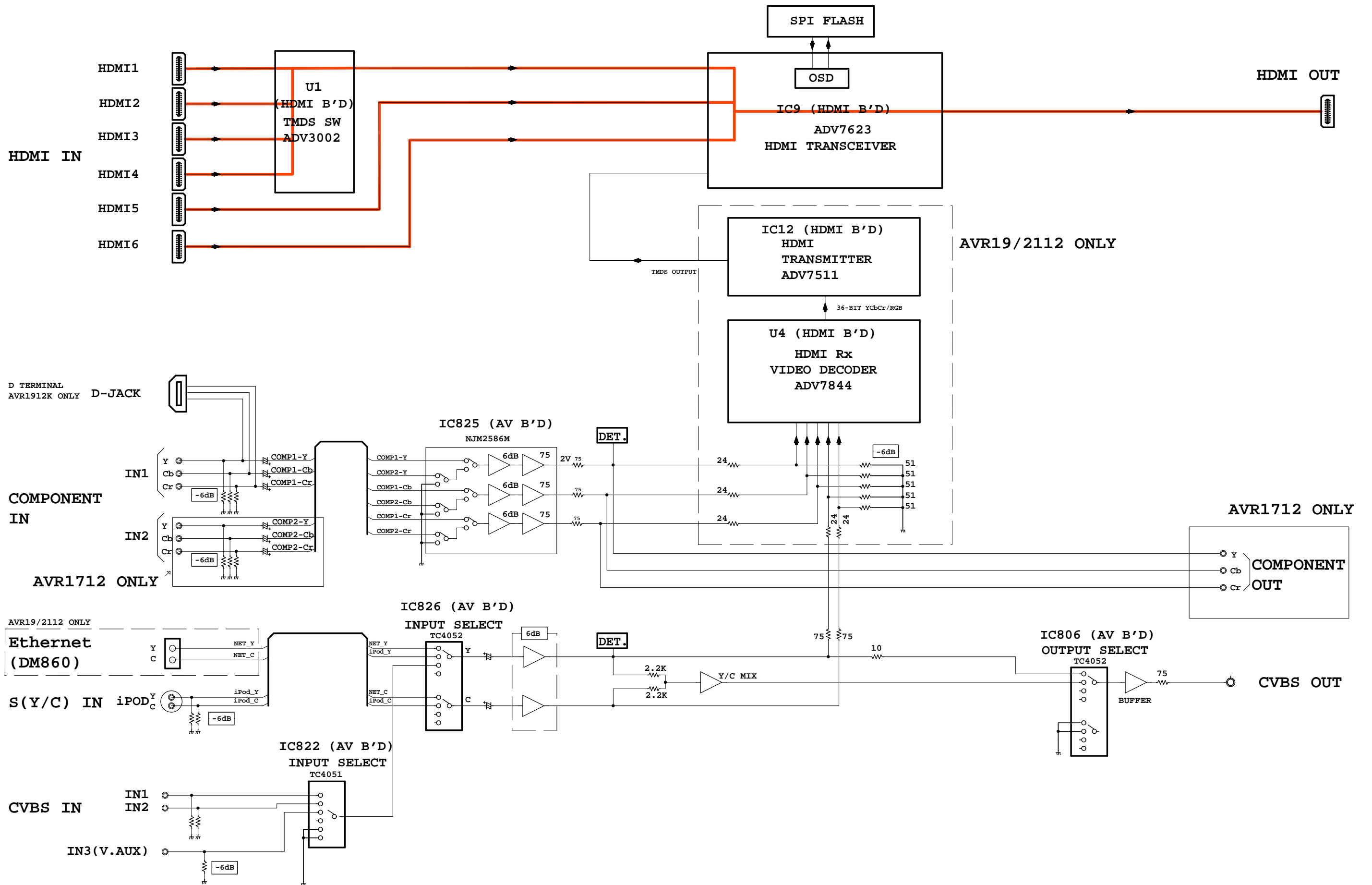


fig.3

VIDEO BLOCK DIAGRAM

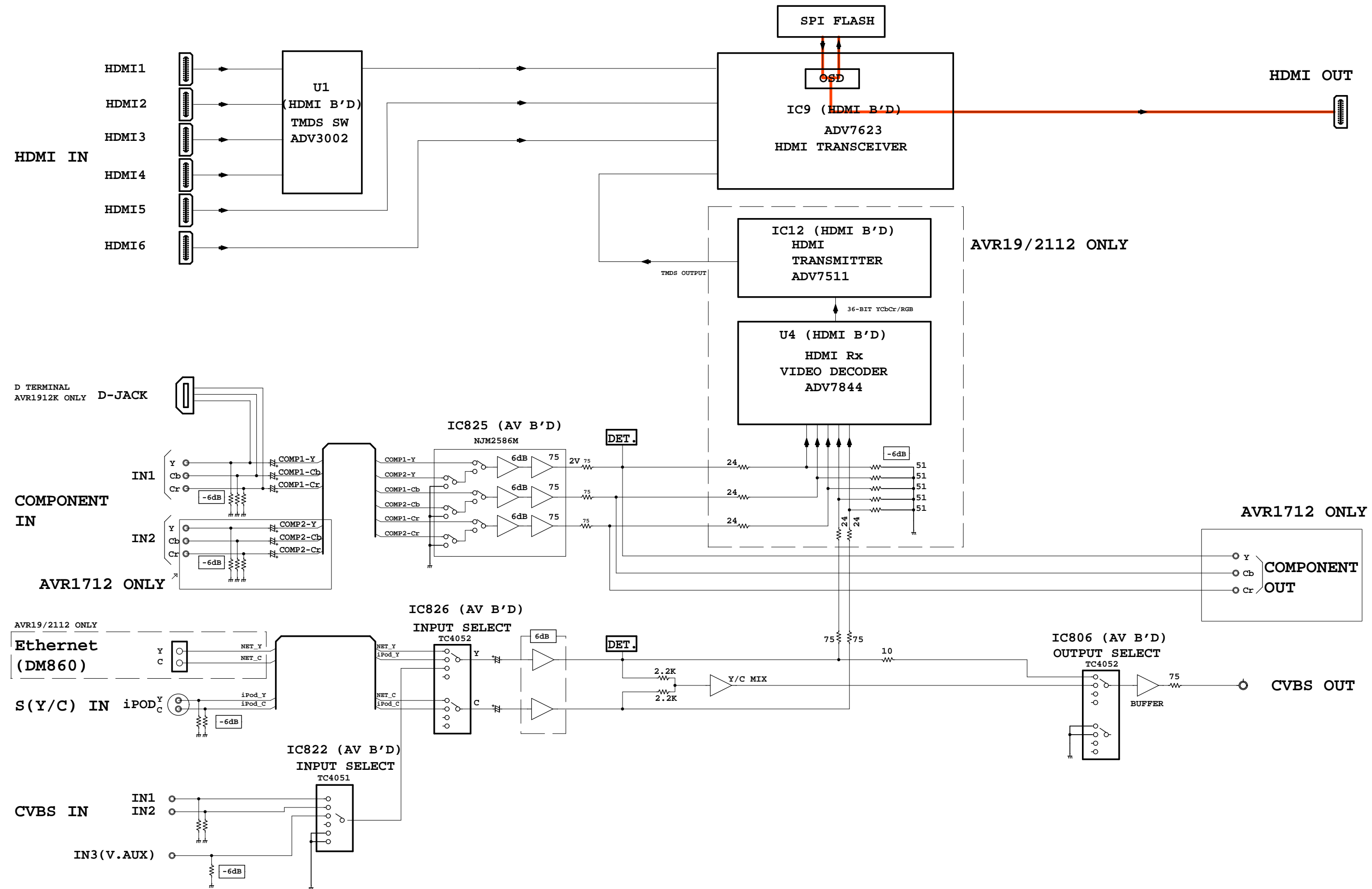


fig.4

VIDEO BLOCK DIAGRAM

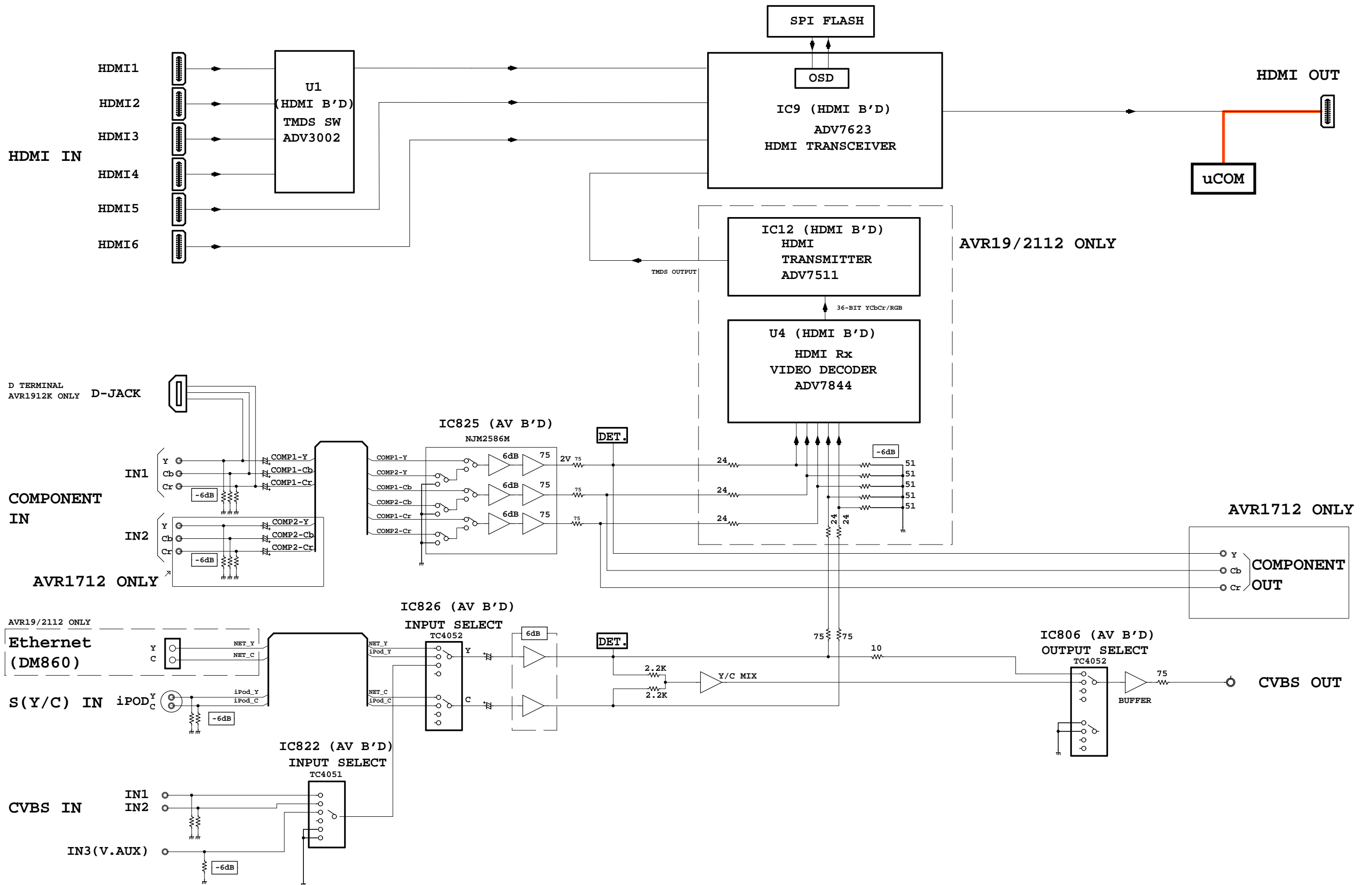


fig.5

AUDIO BLOCK DIAGRAM

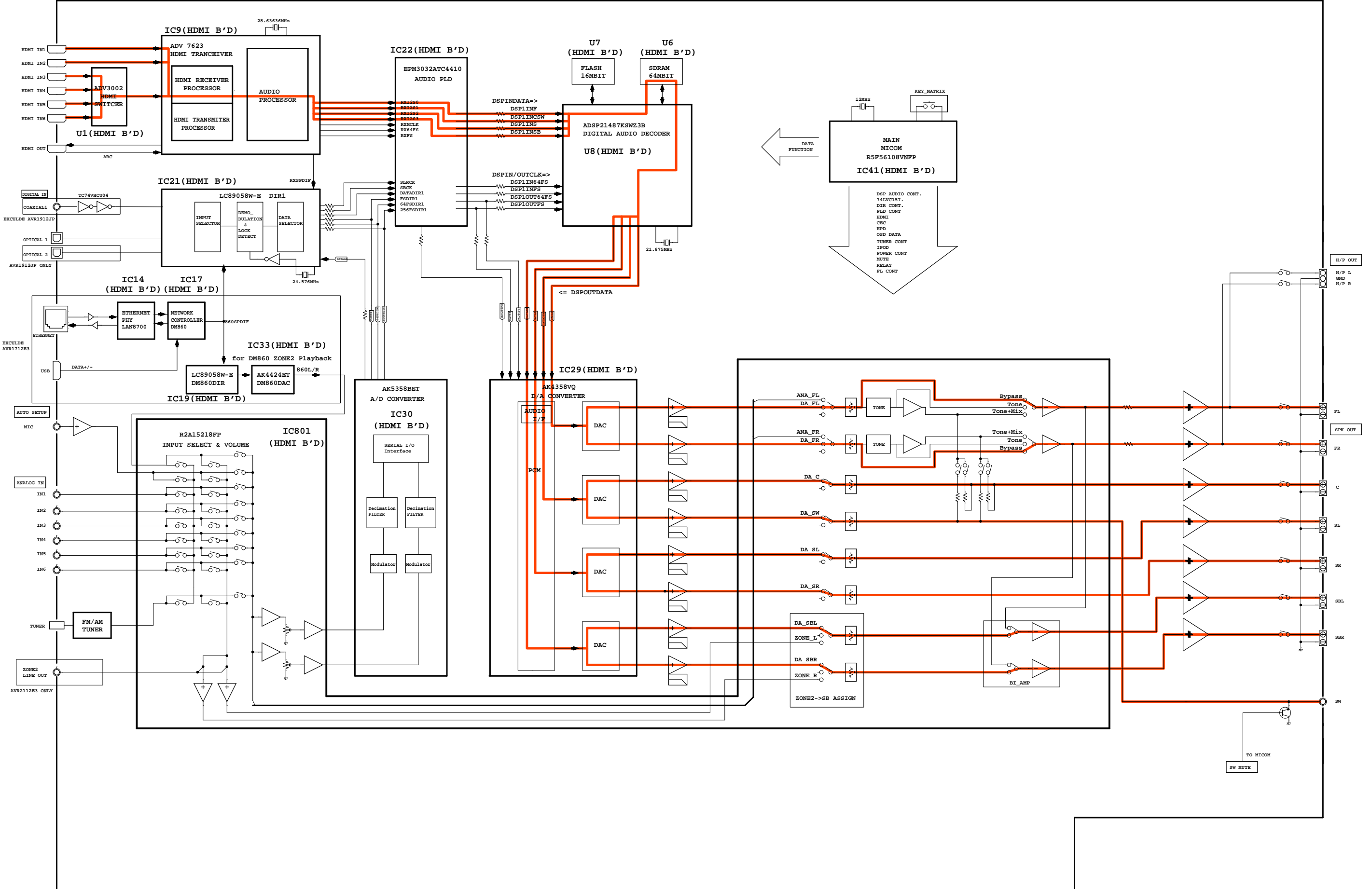


fig.6

AUDIO BLOCK DIAGRAM

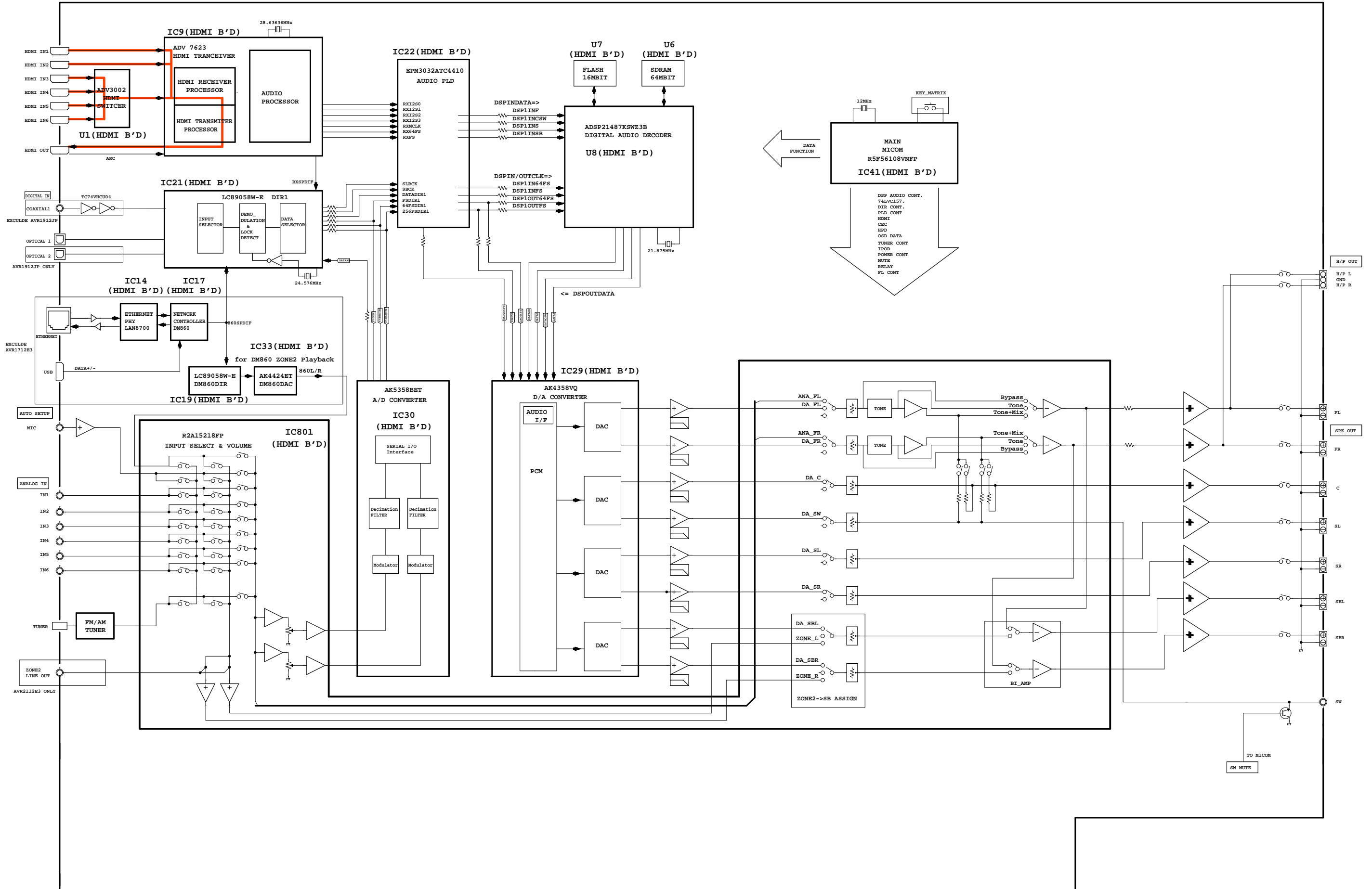


fig.7

AUDIO BLOCK DIAGRAM

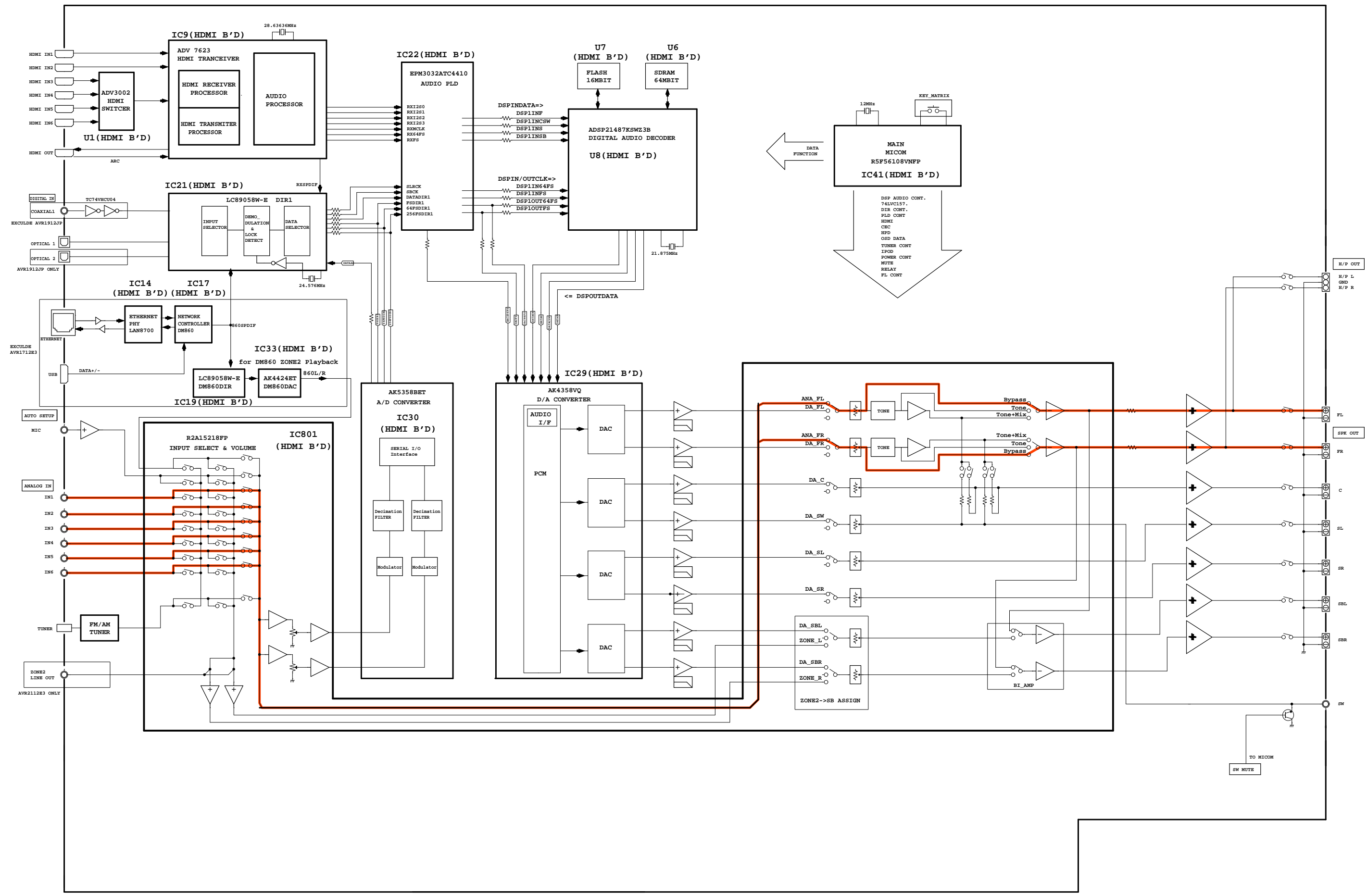


fig.8

AUDIO BLOCK DIAGRAM

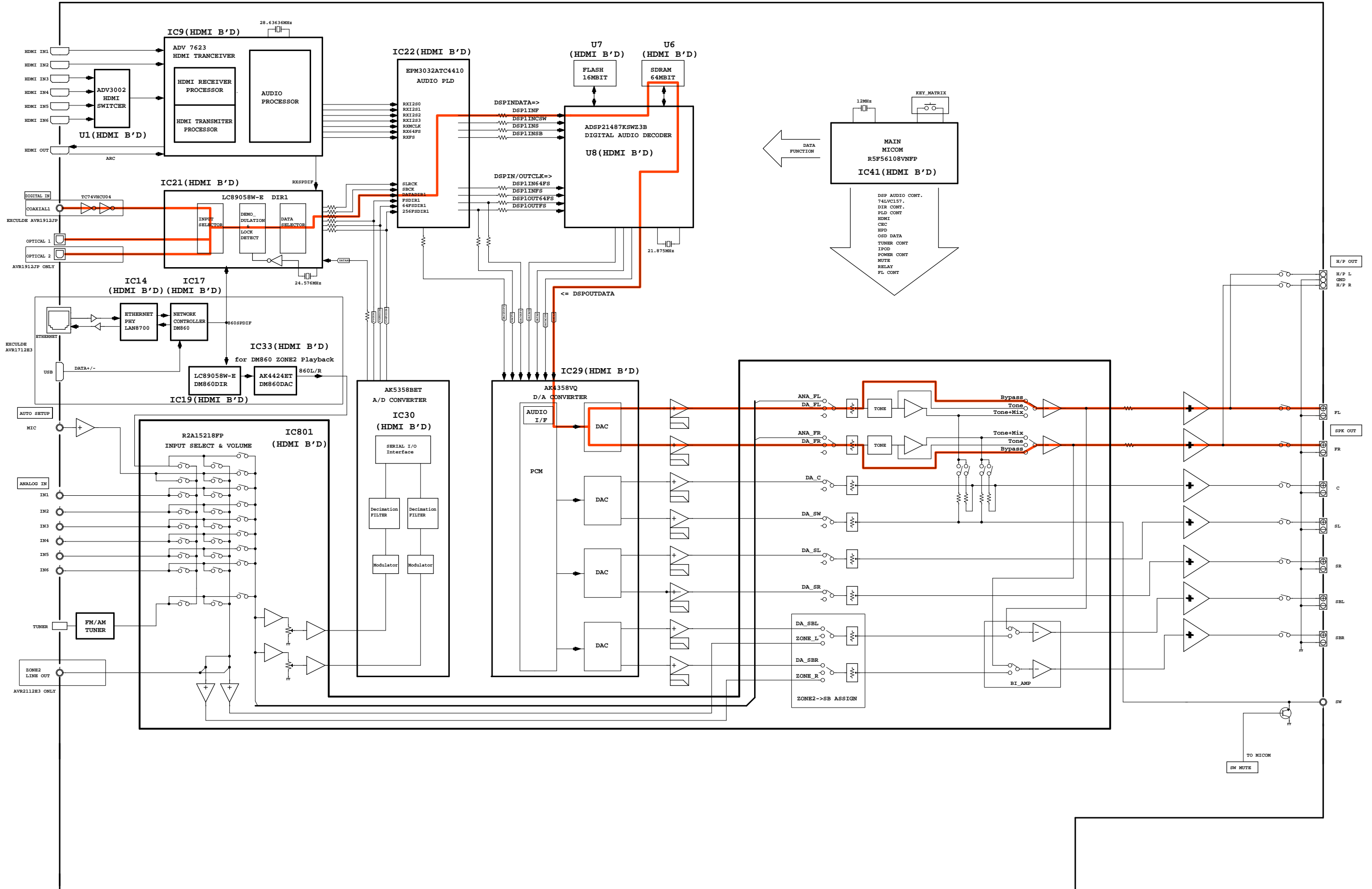


fig.9

AUDIO BLOCK DIAGRAM

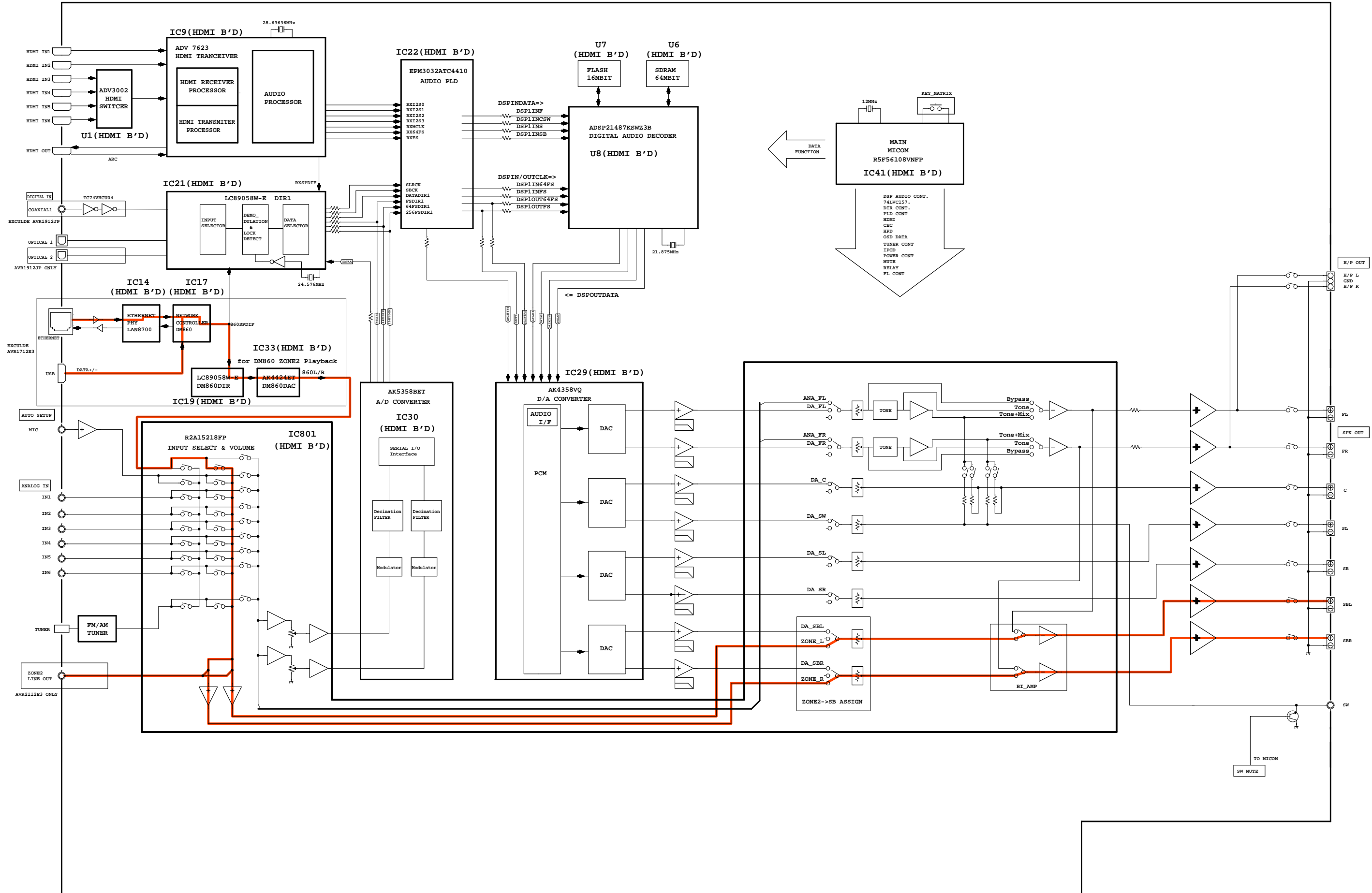


fig.10

AUDIO BLOCK DIAGRAM

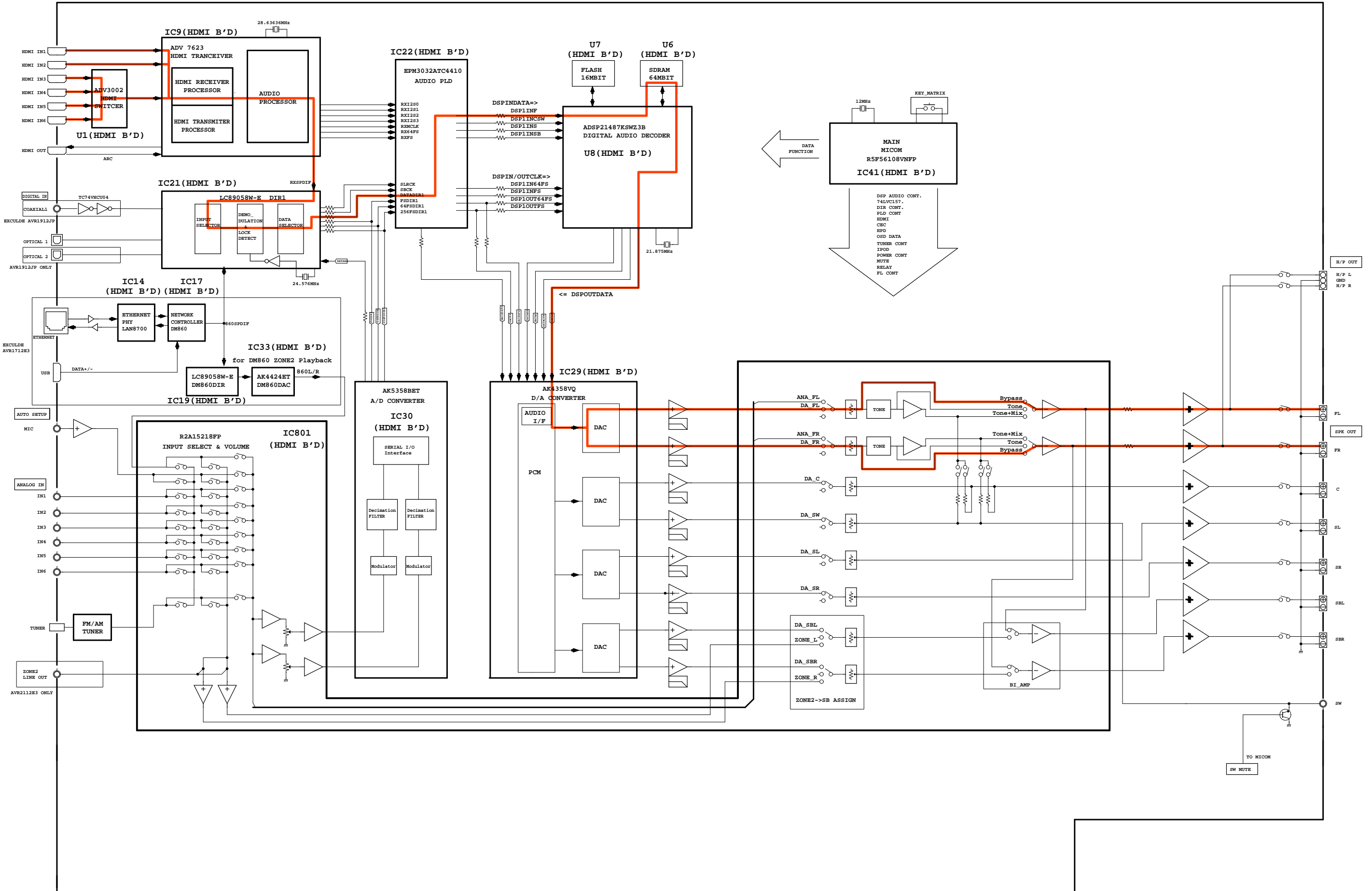


fig.11

AUDIO BLOCK DIAGRAM

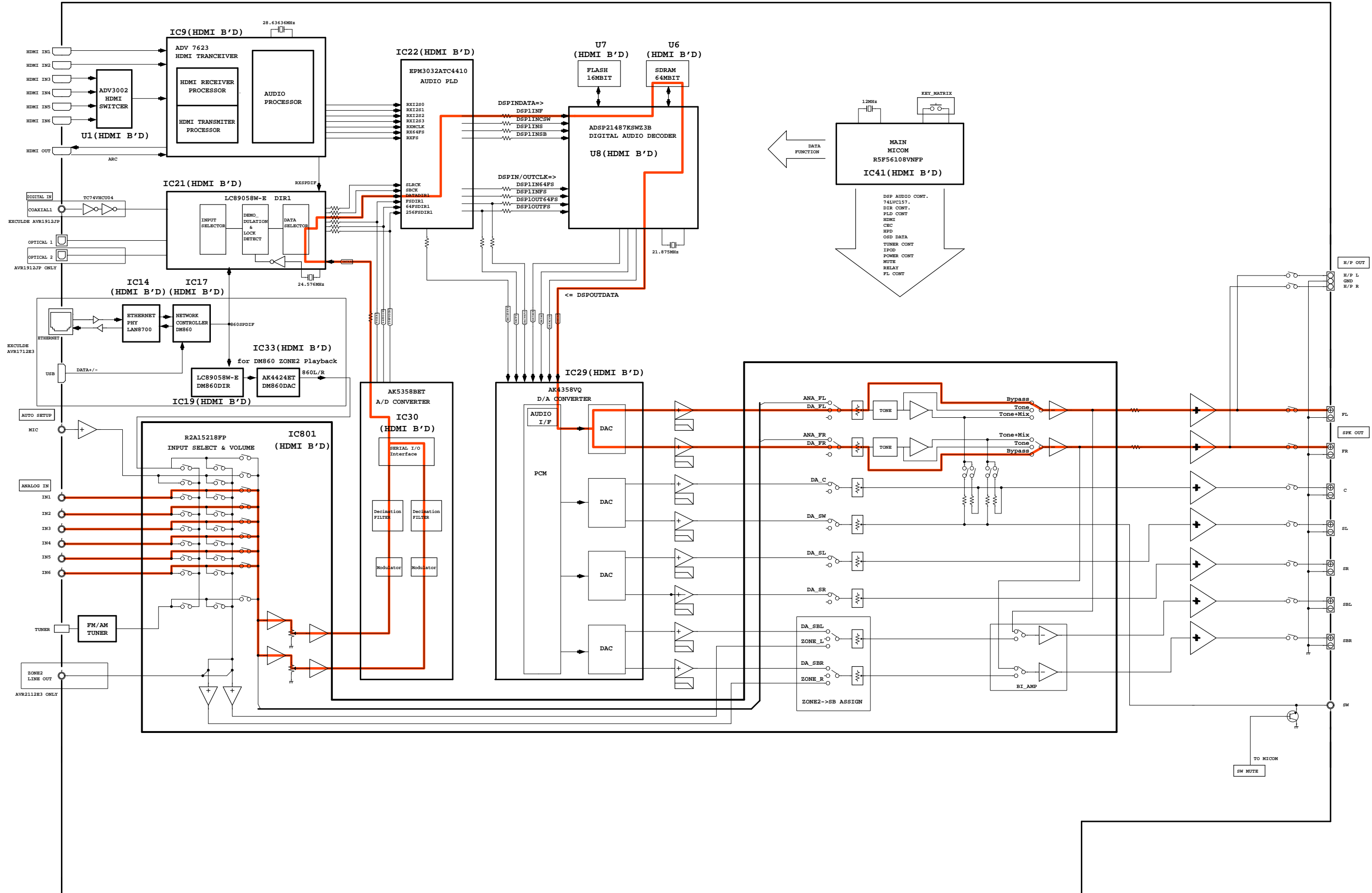


fig.12

AUDIO BLOCK DIAGRAM

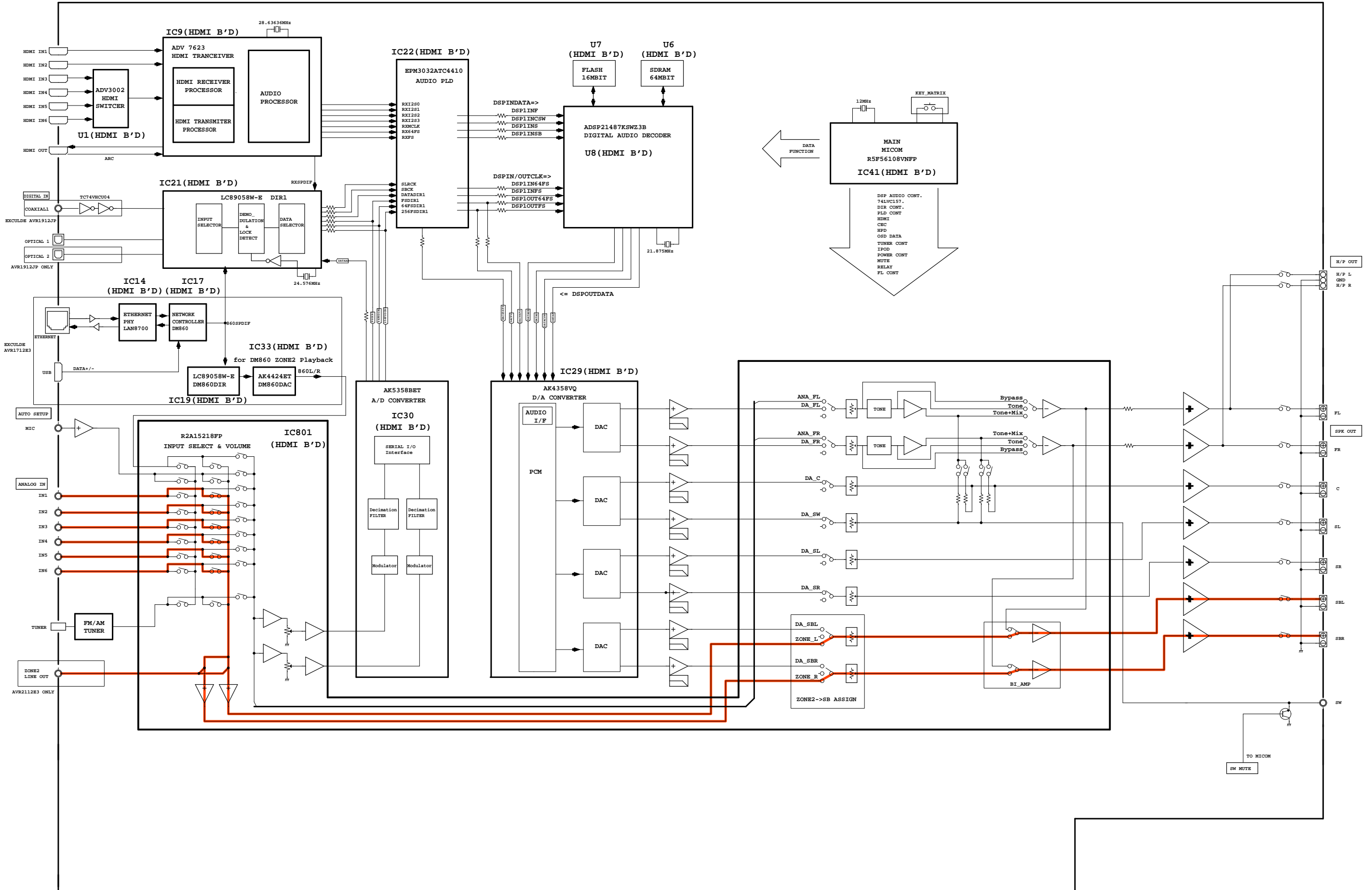
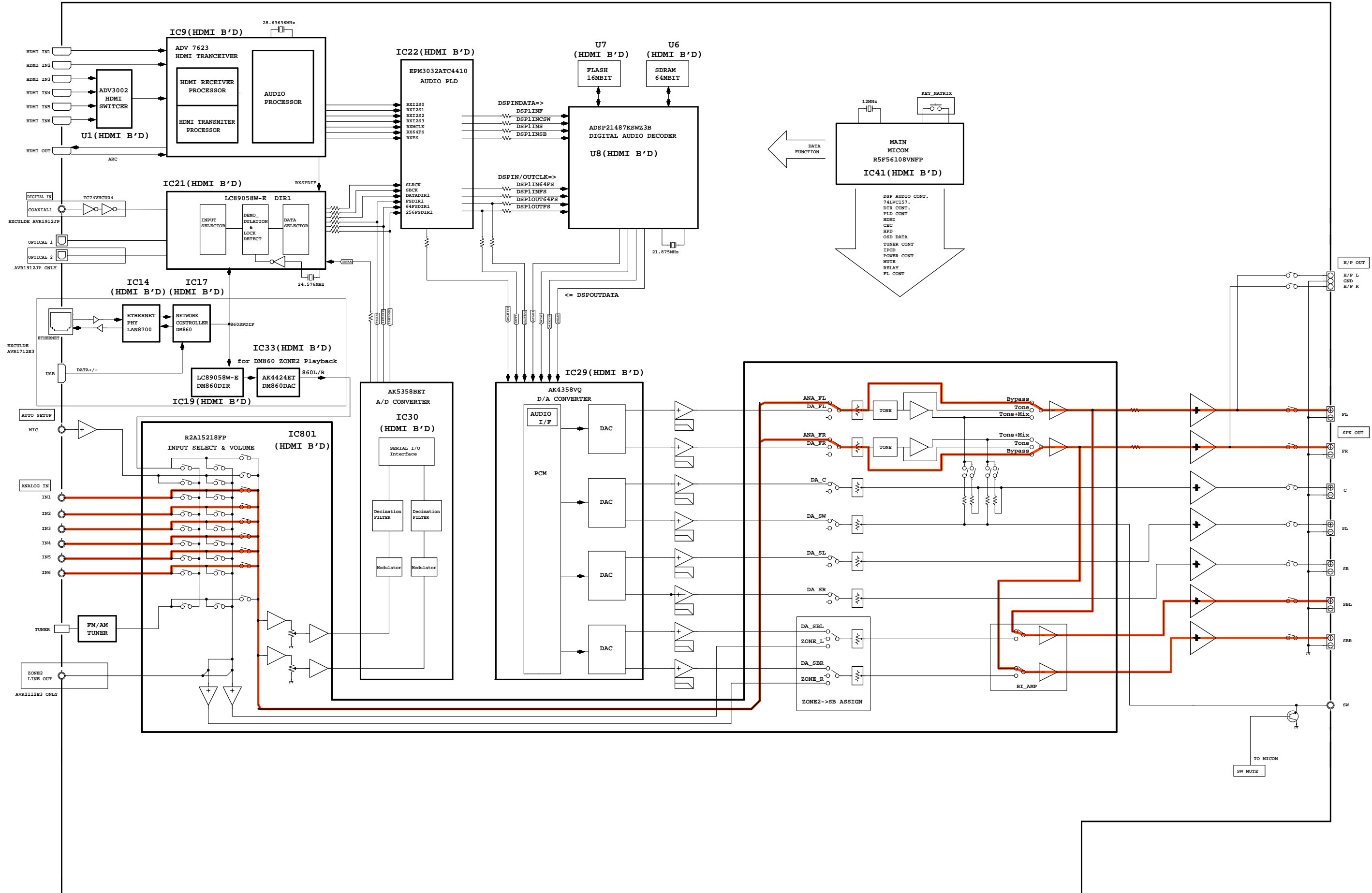
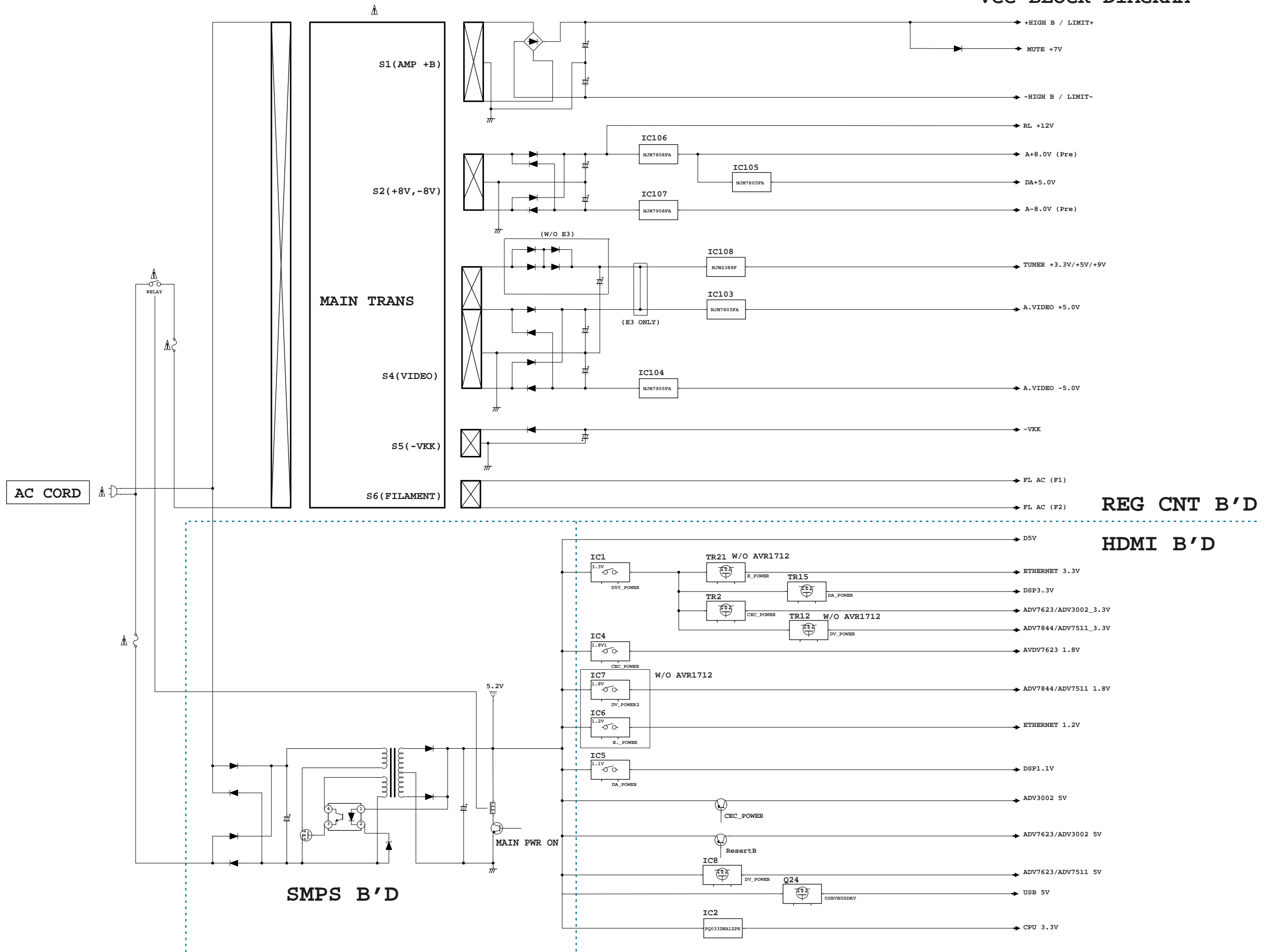


fig.13

AUDIO BLOCK DIAGRAM



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

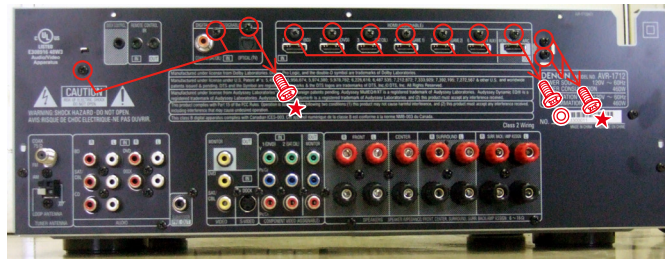
• Connection of PCB HDMI JIG

-Preparation-

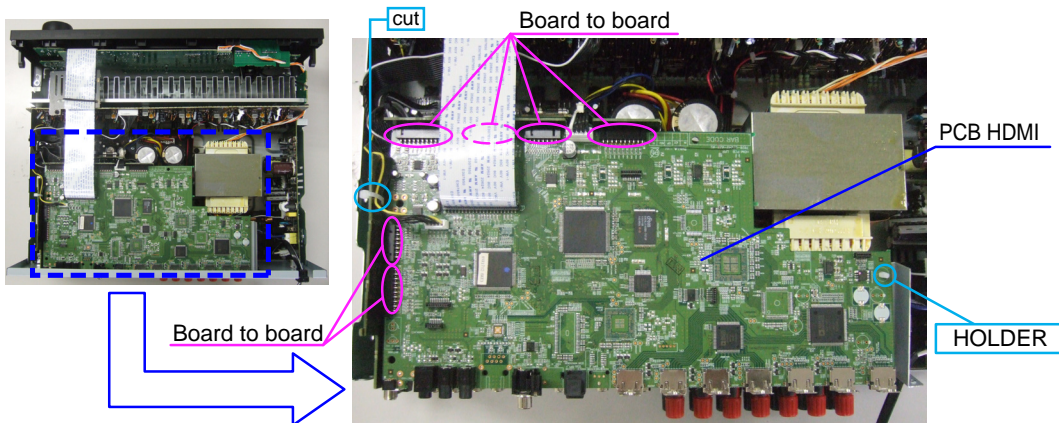
8U-110084S : EXTENSION UNIT KIT : 1 Set
 Insulation sheet (Do not supply it) : 1 sheet
 Ground lead (Do not supply it) : 1 pc

-Procedures-

(1) Remove the screws.

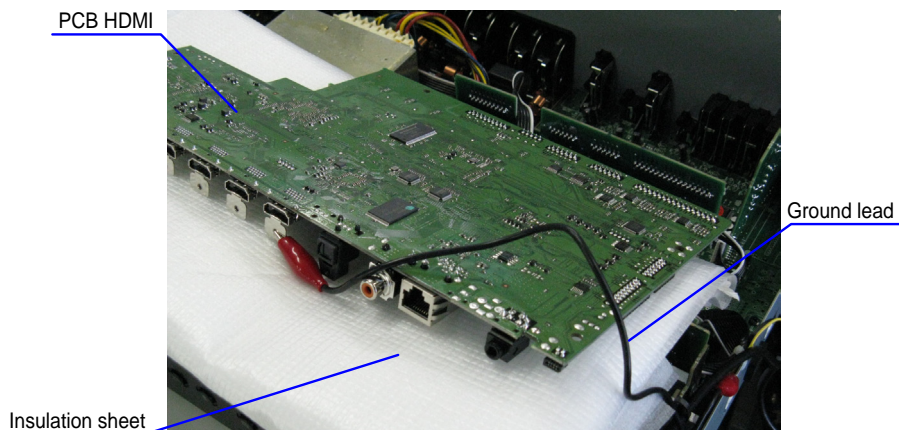


(2) Disconnect the connector board.

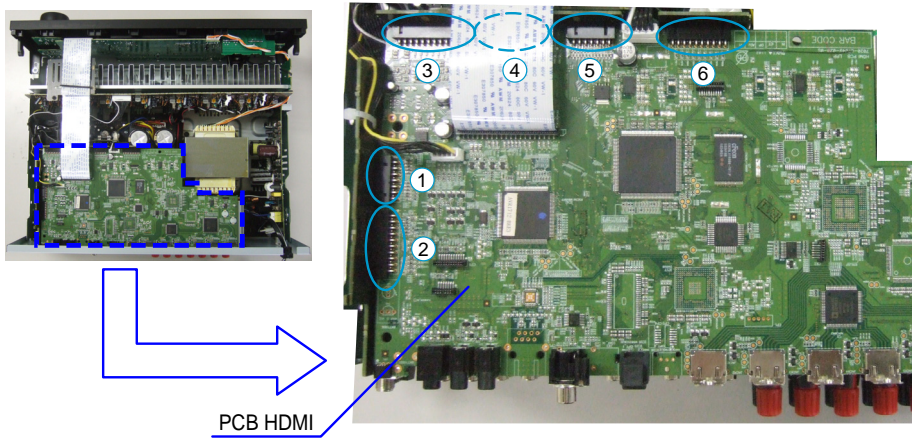


(3) Detach PCB HDMI is detached from the chassis, and turn it over. Please put an insulation sheet that is larger than PCB HDMI under PCB.

※ 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	13 pin	CP3	SIDE CNT	↔	CN3	HDMI
②	19 pin	CP5	SIDE CNT	↔	CN5	HDMI
③	33 pin	CP11	FRONT CNT	↔	CN2	HDMI
④	13 pin	CP10	FRONT CNT	↔	CN6	HDMI
⑤	13 pin	CP9	FRONT CNT	↔	CN7	HDMI
⑥	19 pin	CP8	FRONT CNT	↔	CN4	HDMI

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	IC41	R5F56108VNFP	B	SOFTWARE: Main
HDMI	U7	EN29LV160BB-70TIP	B	SOFTWARE: DSP ROM
HDMI	IC22	EPM3032A-TC44	B	SOFTWARE: AUDIO PLD
HDMI	IC11	MX25L3206EM2I-12G	B	SOFTWARE: 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

NOTE: When the following are replaced, always rewrite with updated firmware using DFW. (Refer to parts list of "PCB HDMI ASSY" (157 page)

- PCB HDMI ASSY
- IC11 (MX25L3206EM2I-12G)
- IC41 (R5F64169DFDFP)
- U7 (EN29LV160BB-70TIP)
- IC22 (EPM3032A-TC44)

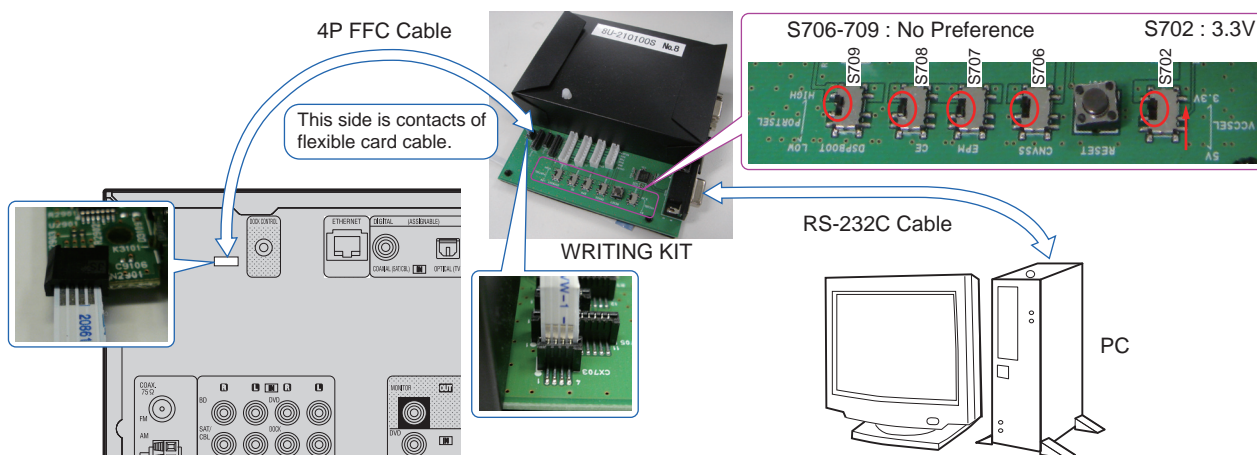
1. How to update by DFW

1.1. Preparations before starting the operation

- (1) Personal Computer (Installed "DFW_0052_AVR1712_(Rev.x.x.x).exe".
- (2) RS-232 cable (9P (Male), Straight).
- (3) 8U-210100S WRITING KIT.

1.2. Connection of AV receiver

- (1) Confirm the power on/off switch of the AV receiver is turning off.
- (2) Connect the update terminal of AV receiver with the "WRITING KIT".
- (3) Connect the RS-232C cable from PC with the "WRITING KIT".



1.3. Turn on the AV receiver

Operate the following. Turn on the AV receiver.

- (1) Connect the power cable to the AC outlet while simultaneously pushing the "SLEEP" button and the "iPod ►" button of the front panel.
- (2) Confirm the power indicator is green and "WRITTING" is displayed in the front panel.

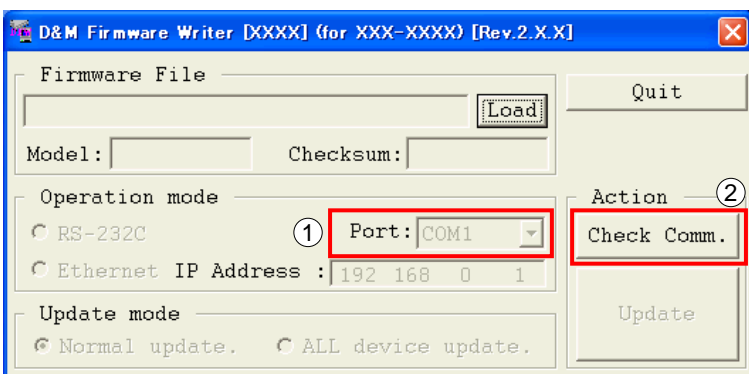
1.4. Run the DFW

Run the "DFW_0052_AVR1712_(Rev.x.x.x).exe" on desktop of PC.



1.5. Communication check

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



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



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

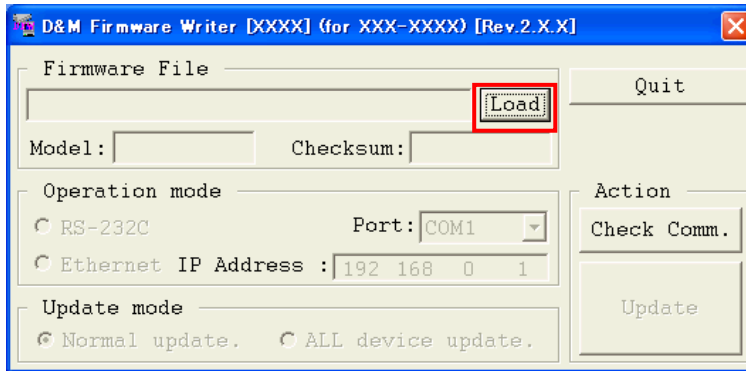


Please confirm the following

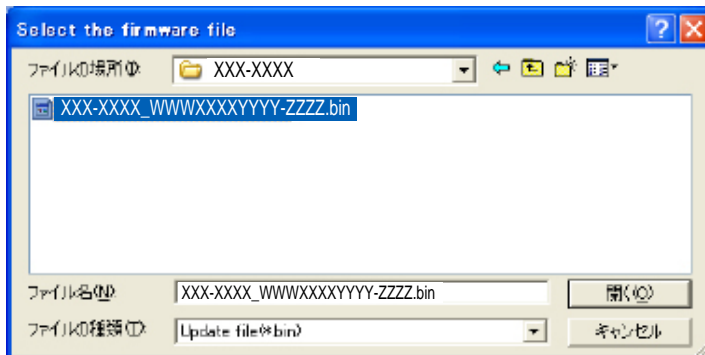
- (a) Check the connection of the AV receiver and PC. (refer to "1.2. Connection of the AV receiver")
- (b) Check the operation mode of the AV receiver. (refer to "1.3.Turn on the AV receiver")
- (c) Check the selection of the RS-232C port number of PC.

1.6. Download the firmware

- (1) Click the "Load" button.

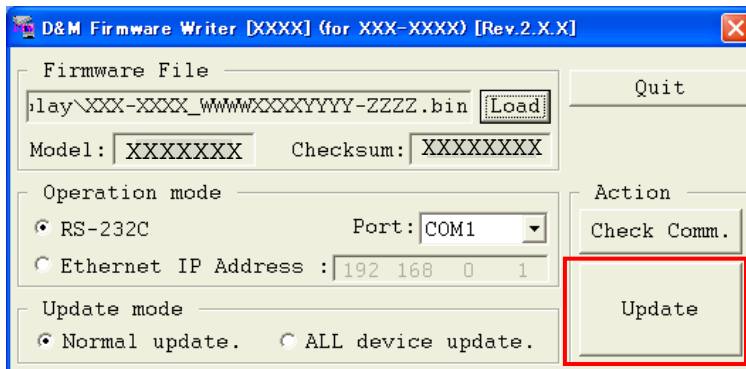


- (2) Download the firmware from the specified download source to PC.

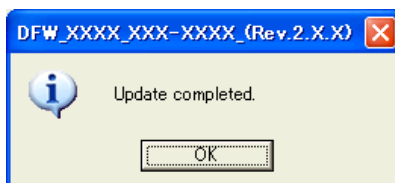


1.7. Complete the firmware updating

- (1) Click the "Update" button.



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



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



1.8. Notice:

Please keep the following notice for firmware update.

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

Confirming the firmware's number after upgraded

After updating the firmware, check the version. Refer to "1. μ com/DSP Version display mode" (17 page).

ADJUSTMENT

Audio Section

Adjusting Idling Current

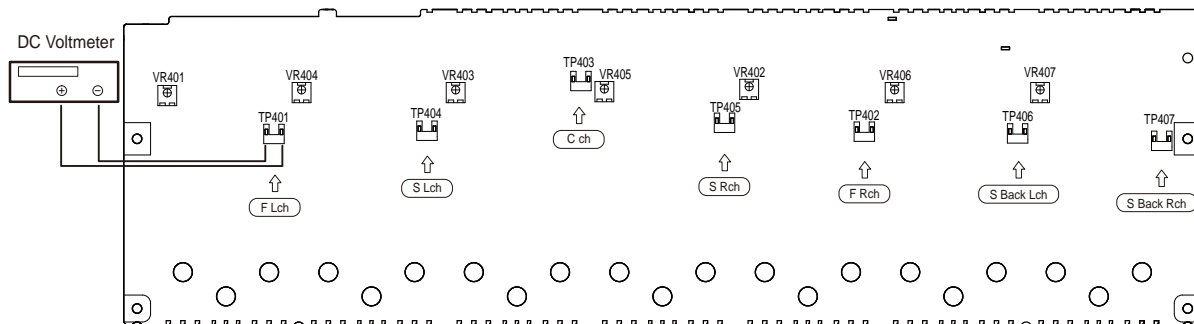
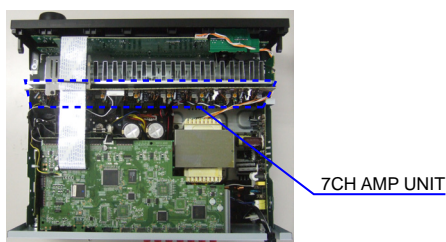
Required measurement equipment: DC Voltmeter

1. Preparation

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

2. Adjustment

- (1) Remove the top cover and set VR401, VR402, VR403, VR404, VR405, VR406, VR407 on at fully 7CH AMP UNIT at fully counterclockwise (\odot) position.
- (2) Connect DC Voltmeter to test points (FRONT-Lch: TP401, FRONT-Rch: TP402, CENTER ch: TP403, SURROUND-Lch: TP404, SURROUND-Rch: TP405, SURROUND-BACK Lch: TP406, SURROUND-BACK Rch: TP407).
- (3) Connect the power cord to AC Line, and set the power switch to "ON".
- (4) Presetting.
MASTER VOLUME : "---" counterclockwise (\odot min.)
SPEAKER (Speaker terminal) : No load
(Do not connect speaker, dummy resistor, etc.)
MODE : MCH STEREO
FUNCTION : DVD
- (5) Within 2 minutes after the power on, turn VR401 clockwise (\odot) to adjust the TEST POINT voltage to $2.0\text{mV} \pm 0.5\text{mV DC}$.
- (6) After 10 minutes from the preset above, turn VR401 to set the voltage to $3.0\text{mV} \pm 0.5\text{mV DC}$.
- (7) Adjust the Variable Resistors of each channel in the same way.



SURROUND MODES AND PARAMETERS

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					Surr.Parameter								
	Front L/R	Center	Surround L/R	Surround Back L/R	Front Height L/R	Subwoofer	Mode	Cinema EQ.	DRC #9	D. Comp #10	LFE #11	Delay Time	Effect Level	Room Size
DIRECT/PURE DIRECT (2channel)*1	○	○	○	⊙*2	○*2	⊙*4			○	○	○			
DIRECT/PURE DIRECT (Multi-channel)*1	○	○	○	○	○	○			○	○	○			
STEREO	○	○	○	○	○	○			○	○	○			
MULTI CH IN	○	○	○	○	○*3	○	○*5	○*6	○	○	○			
DOLBY PRO LOGIC IIz	○	○	○	○	○	○		○*8	○	○	○			
DOLBY PRO LOGIC IIx	○	○	○	○	○	○		○*7	○	○	○			
DOLBY PRO LOGIC II	○	○	○	○	○	○		○*8	○	○	○			
DTS NEO.6	○	○	○	○	○	○		○*6	○	○	○			
DOLBY DIGITAL	○	○	○	○	○*3	○		○*6	○	○	○			
DOLBY DIGITAL Plus	○	○	○	○	○*3	○		○*6	○	○	○			
DOLBY TrueHD	○	○	○	○	○*3	○		○*6	○	○	○			
DTS SURROUND	○	○	○	○	○*3	○		○*6	○	○	○			
DTS 96/24	○	○	○	○	○*3	○		○*6	○	○	○			
DTS-HD	○	○	○	○	○*3	○		○*6	○	○	○			
DTS Express	○	○	○	○	○*3	○		○*6	○	○	○			
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 "Surr.Parameter" – "PLIz 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 "Surr.Parameter" – "Mode".

*6 This item cannot be set when "Surr.Parameter" – "S.Back" is set to "PLIz Music".

*7 This item can be selected when "Surr.Parameter" – "Mode" is set to "Cinema" or "Pro Logic".

*8 This item can be selected when "Surr.Parameter" – "Mode" is set to "Cinema".

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

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

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

Surround mode	Surr. Parameter										Audyssey Settings*17			RESTORER *20
	Height Gain	PLIIz Height *13	AFDM *14	S.Back	Subwoofer ○*4	PRO LOGIC II/IIx Music mode only			Tone *15	MultEQ® XT	Dynamic EQ® *18	Dynamic Volume® *19		
						Panorama	Dimension	C.Width					NEO:6 Music mode only	
DIRECT/PURE DIRECT (2 channel)*1														
DIRECT/PURE DIRECT (Multi-channel)*1														
STEREO														
MULTI CH IN	○*12	○							○	○	○	○	○	○
DOLBY PRO LOGIC IIz	○	○							○	○	○	○	○	○
DOLBY PRO LOGIC IIx				○			○	○	○	○	○	○	○	○
DOLBY PRO LOGIC II				○			○	○	○	○	○	○	○	○
DTS NEO:6				○			○	○	○	○	○	○	○	○
DOLBY DIGITAL	○*12	○		○			○	○	○	○	○	○	○	○
DOLBY DIGITAL Plus	○*12	○		○			○	○	○	○	○	○	○	○
DOLBY TrueHD	○*12	○		○			○	○	○	○	○	○	○	○
DTS SURROUND	○*12	○		○			○	○	○	○	○	○	○	○
DTS 96/24	○*12	○		○			○	○	○	○	○	○	○	○
DTS-HD	○*12	○		○			○	○	○	○	○	○	○	○
DTS Express	○*12	○		○			○	○	○	○	○	○	○	○
MULTI CH STEREO									○*16	○	○	○	○	○
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.

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

*12 This item can be selected when "Surr. Parameter" – "PLIIz Height" is set to "ON".

*13 If "Speaker Config." – "F.Height" is set to "None", this item cannot be selected.

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

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

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

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

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

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

*20 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				
		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)
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+)(HD)+PLIIx CINEMA	*2*3															
DOLBY (D+)(HD)+PLIIx MUSIC	*1*3															
DOLBY (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																
DOLBY PRO LOGIC																

- *1 If "Speaker Config." - "S.Back" is set to "None", this surround mode cannot be selected.
- *2 If "Speaker Config." - "S.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." - "F.Height" is set to "None", this surround mode cannot be selected.

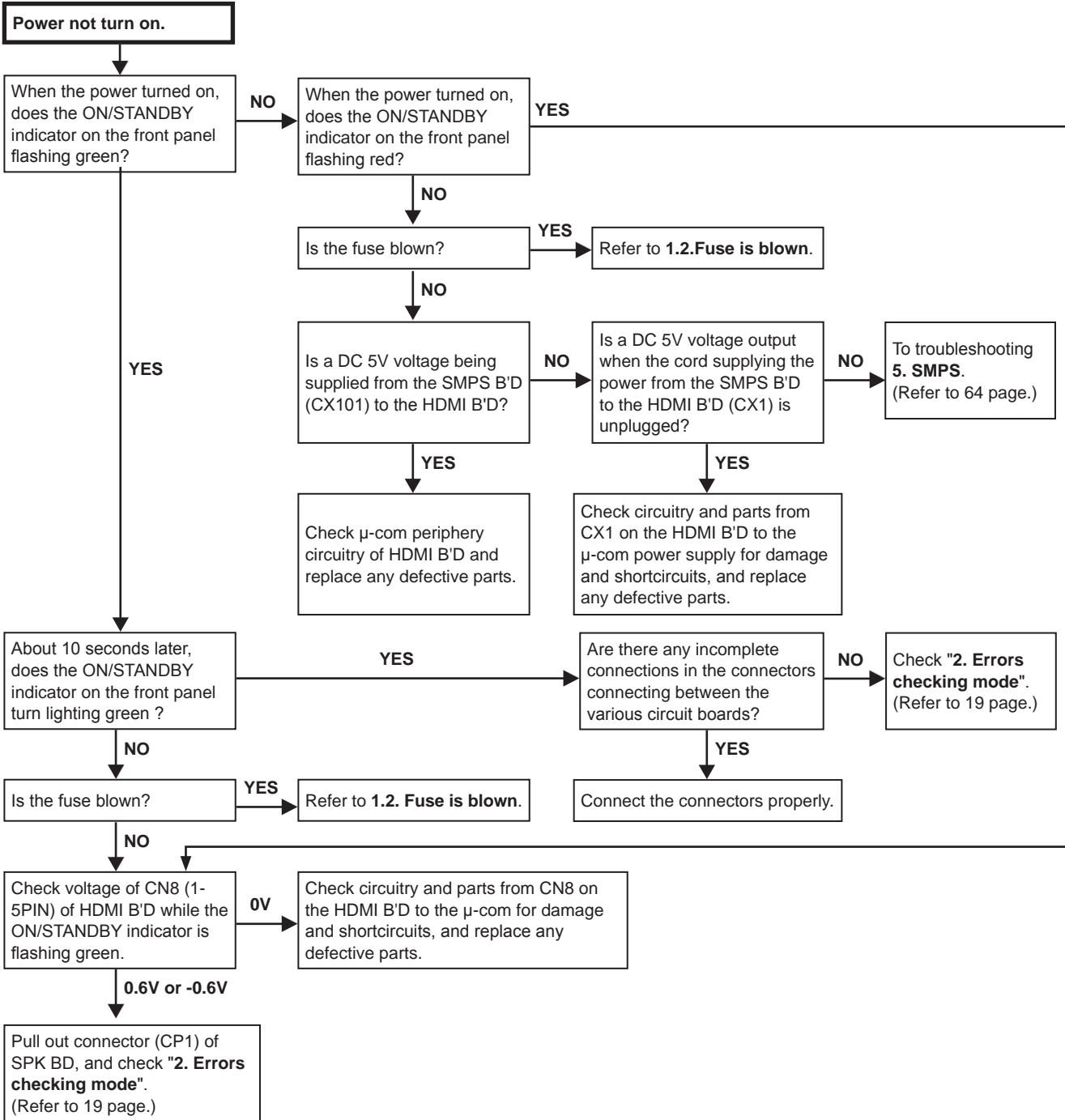
Surround mode	NOTE	Input signal types and formats														
		ANALOG		PCM		DTS-HD		DTS		DOLBY		DOLBY DIGITAL				
		PCM (multi ch)	PCM (2ch)	DTS-HD Master Audio	DTS-HD High Resolution Audio	DTS EXPRESS	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY TrueHD	DOLBY DIGITAL 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 + 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	●	○ (7.1)													
DIRECT																
DIRECT		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
PURE DIRECT		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
DSP SIMULATION																
MULTI CH STEREO		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
ROCK ARENA		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
JAZZ CLUB		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MONO MOVIE		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
VIDEO GAME		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MATRIX		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
VIRTUAL		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
STEREO		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
STEREO		●	●	○	○	○	○	○	○	○	○	○	○	○	○	○

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

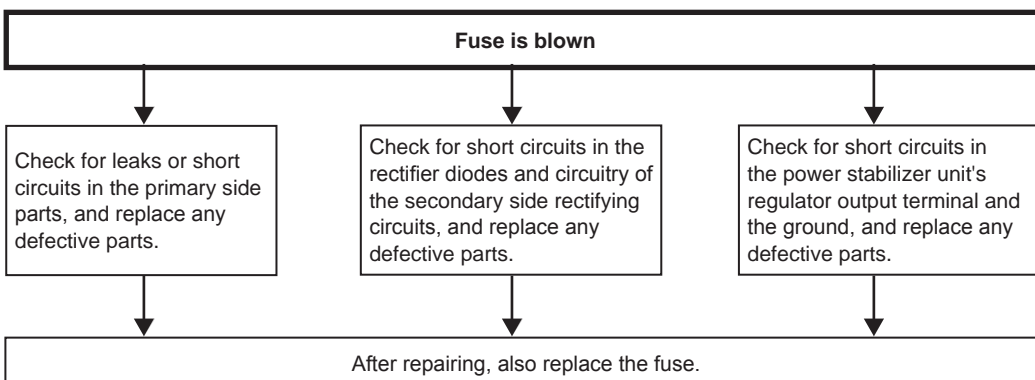
TROUBLE SHOOTING

1. POWER

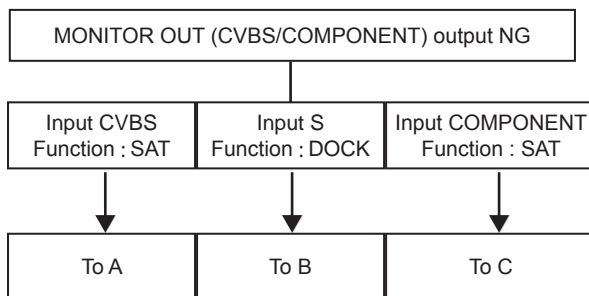
1.1. Power not turn on

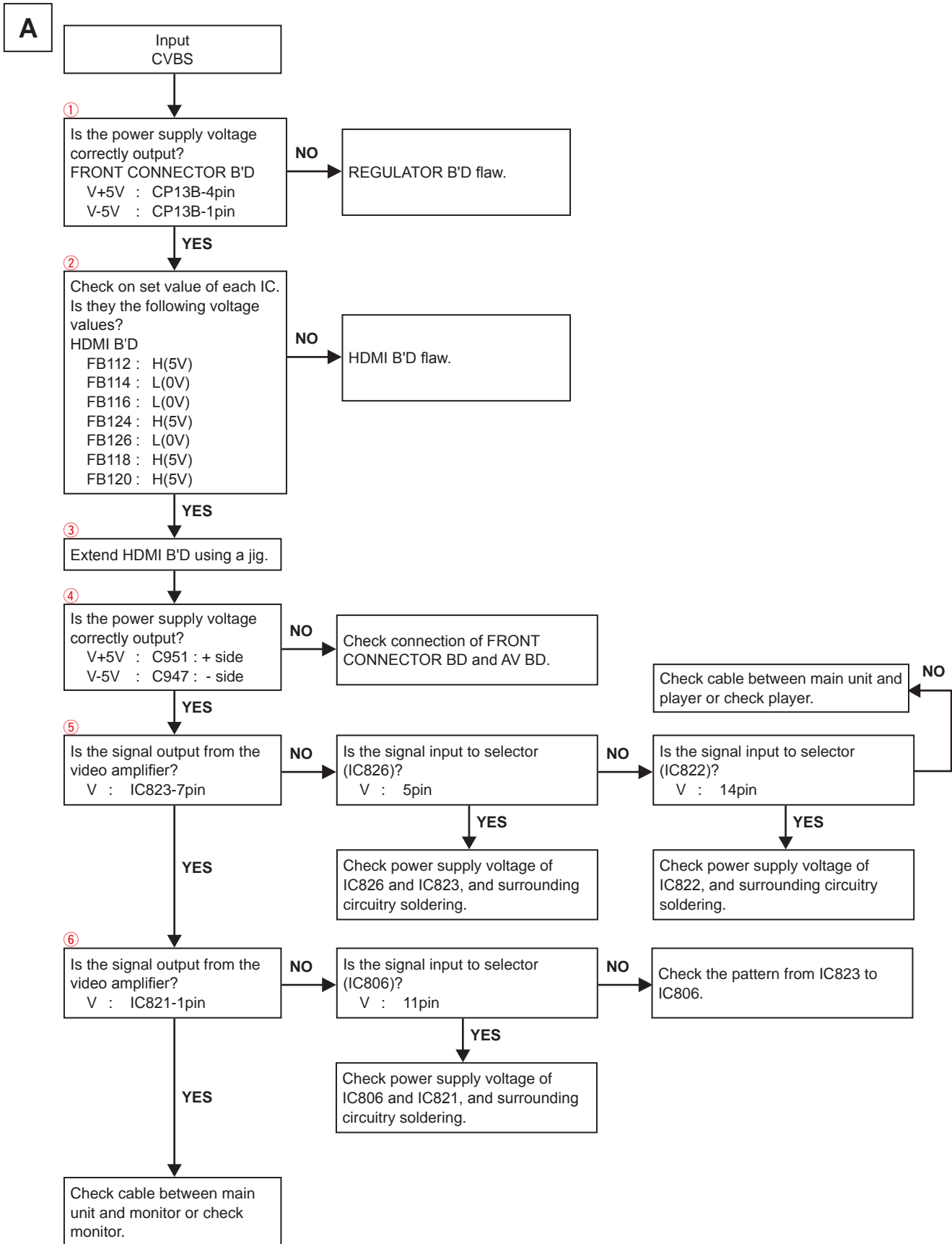


1.2. Fuse is blown

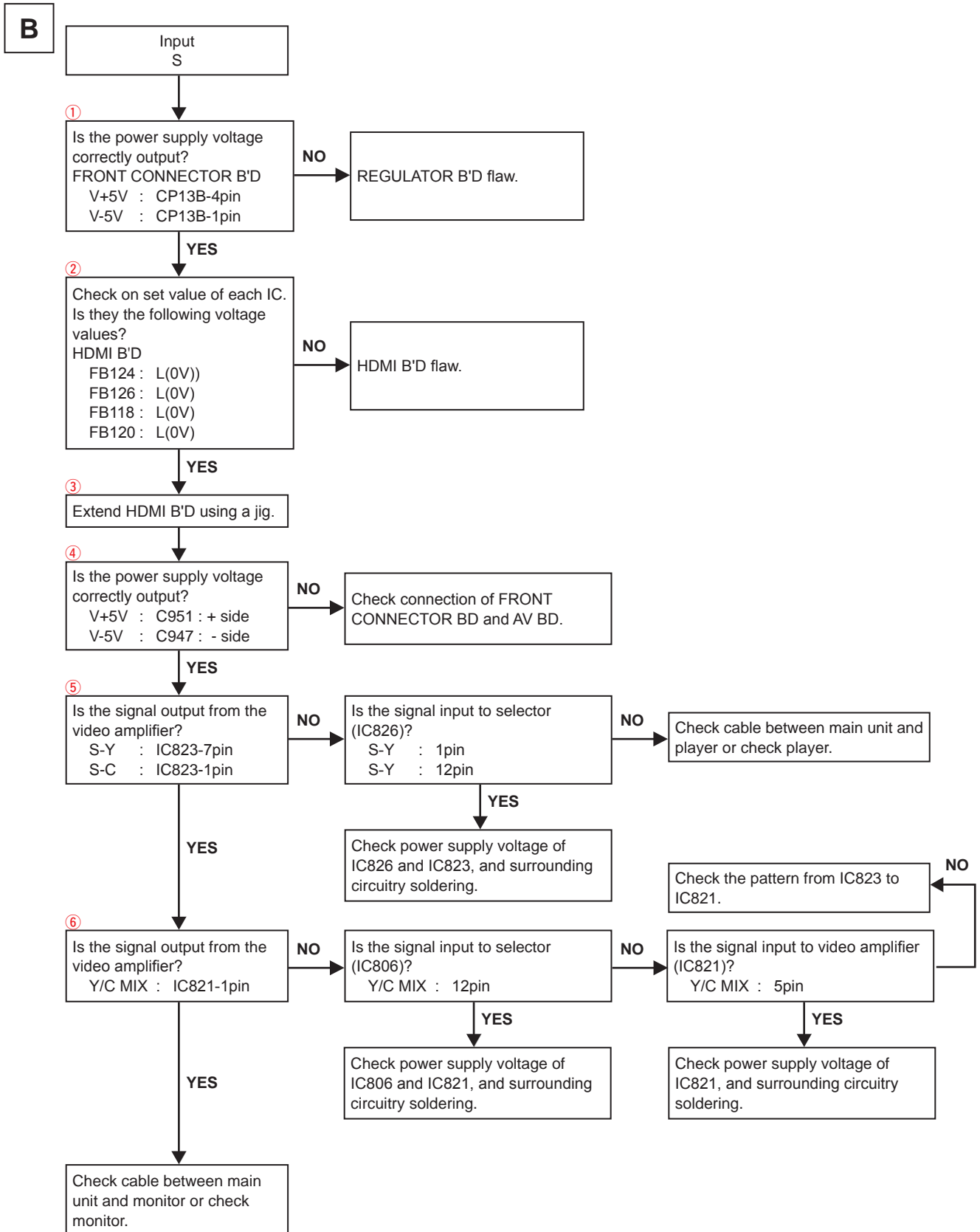


2. Analog video

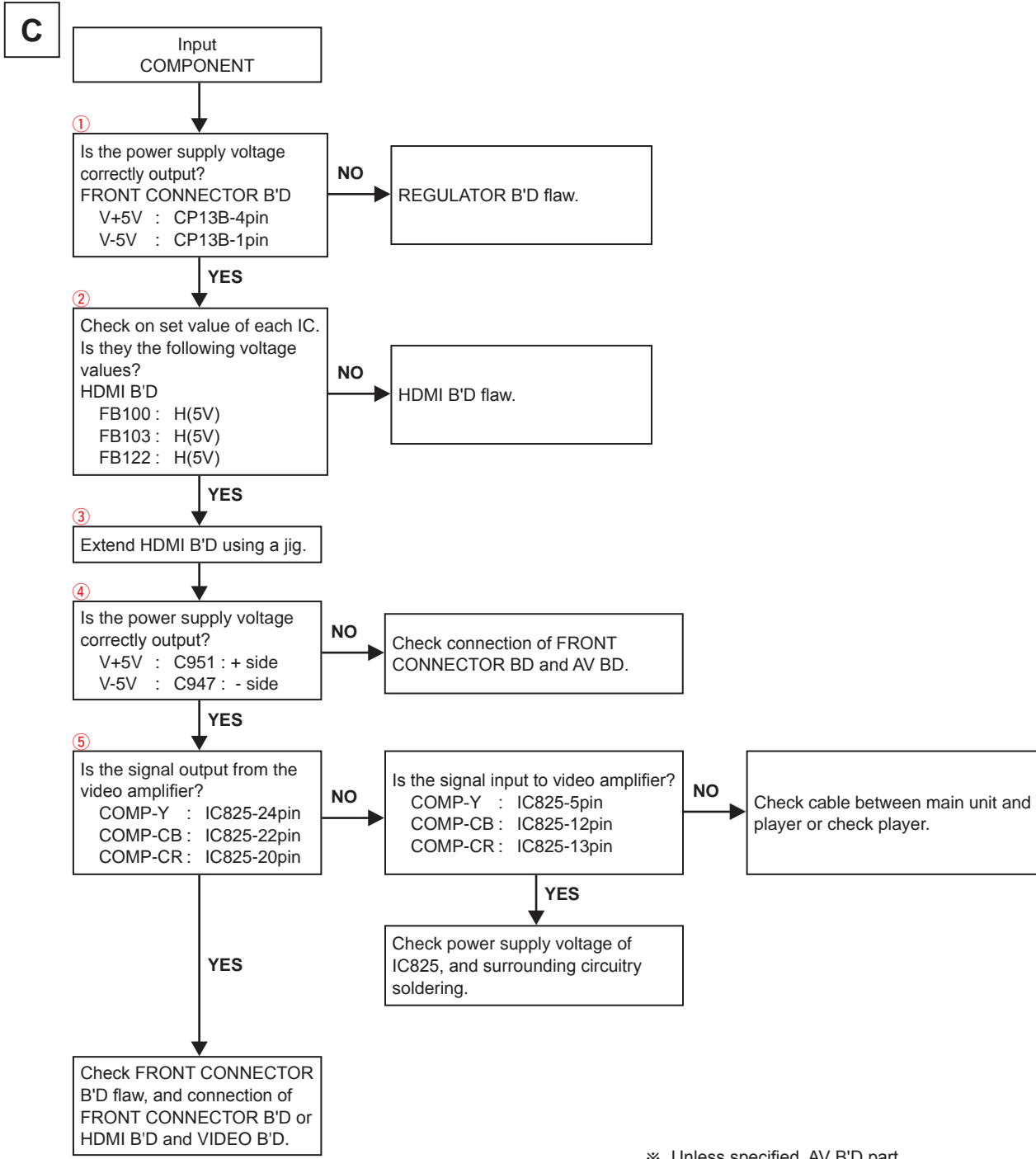




※ Unless specified, AV B'D part.

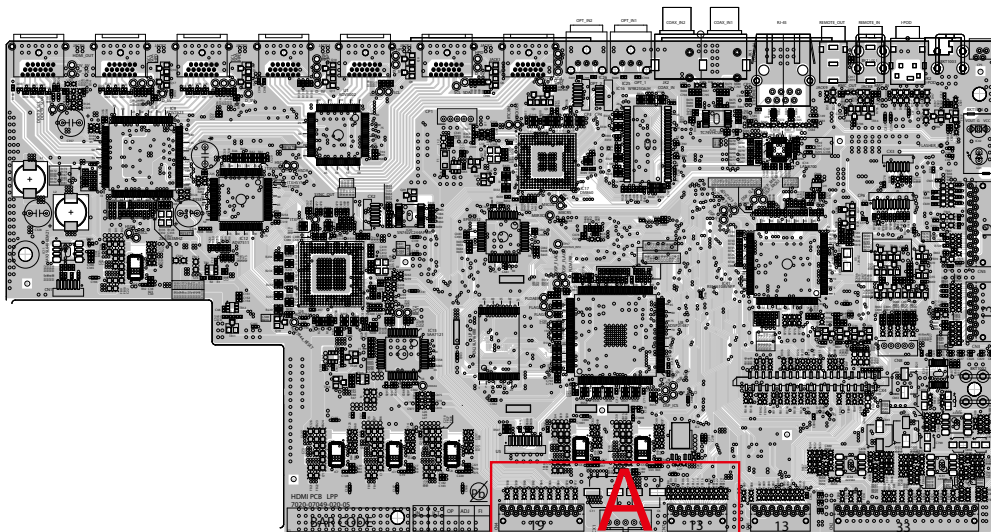


※ Unless specified, AV B'D part.



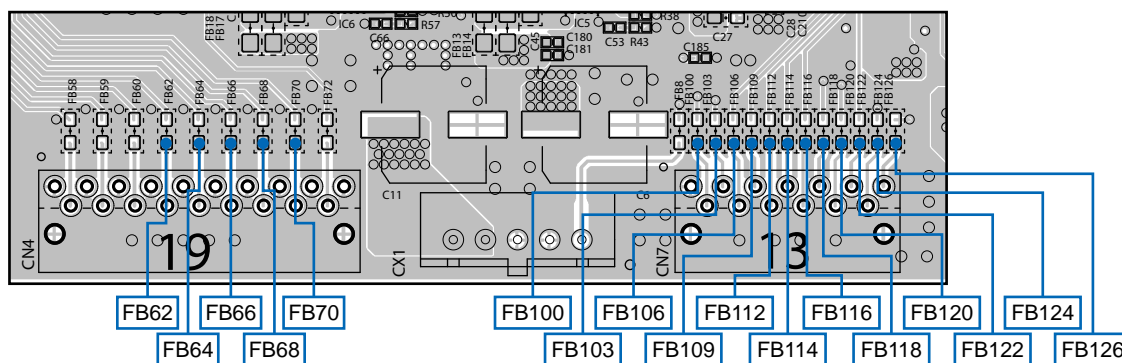
※ Unless specified, AV B'D part.

HDMI test point

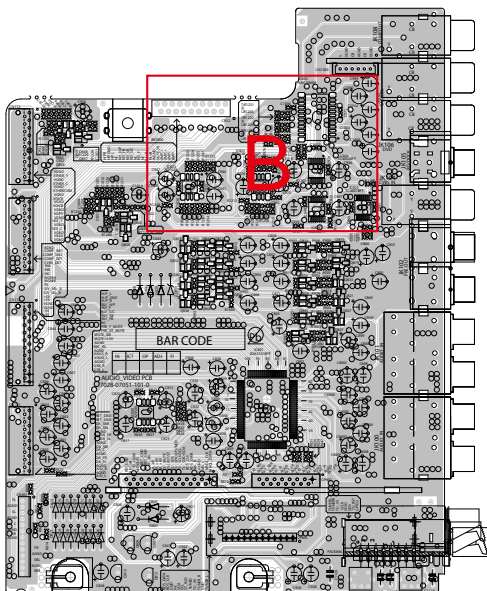


(COMPONENT SIDE)

Detail A

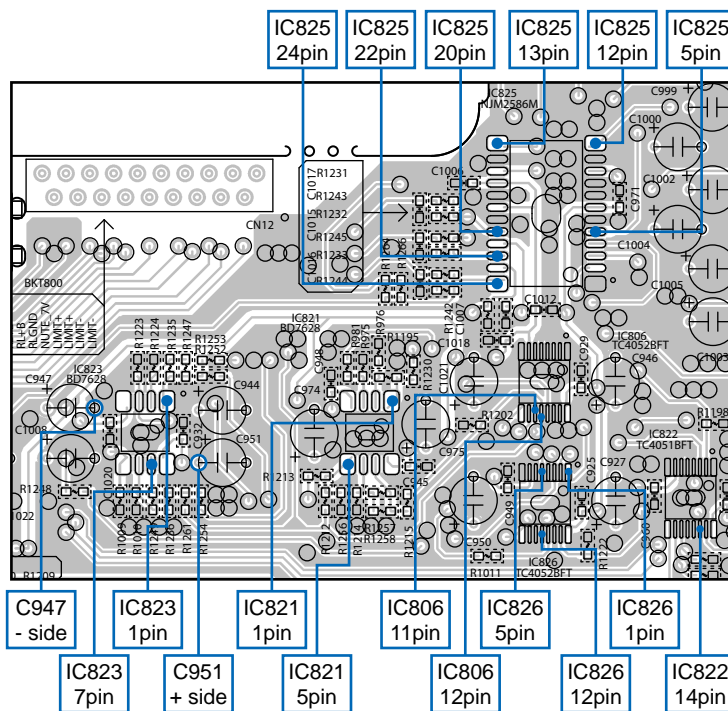


VIDEO test point



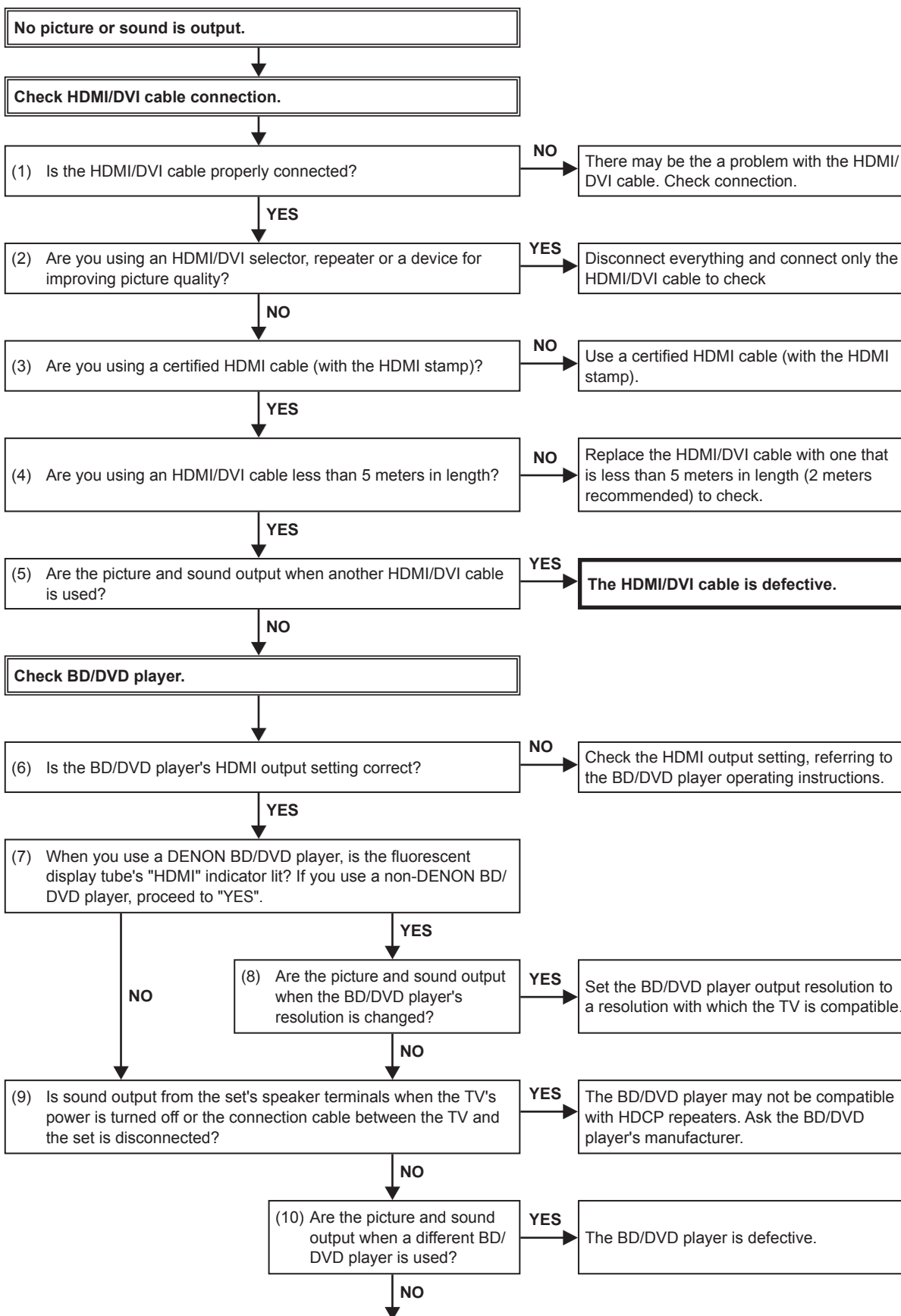
(COMPONENT SIDE)

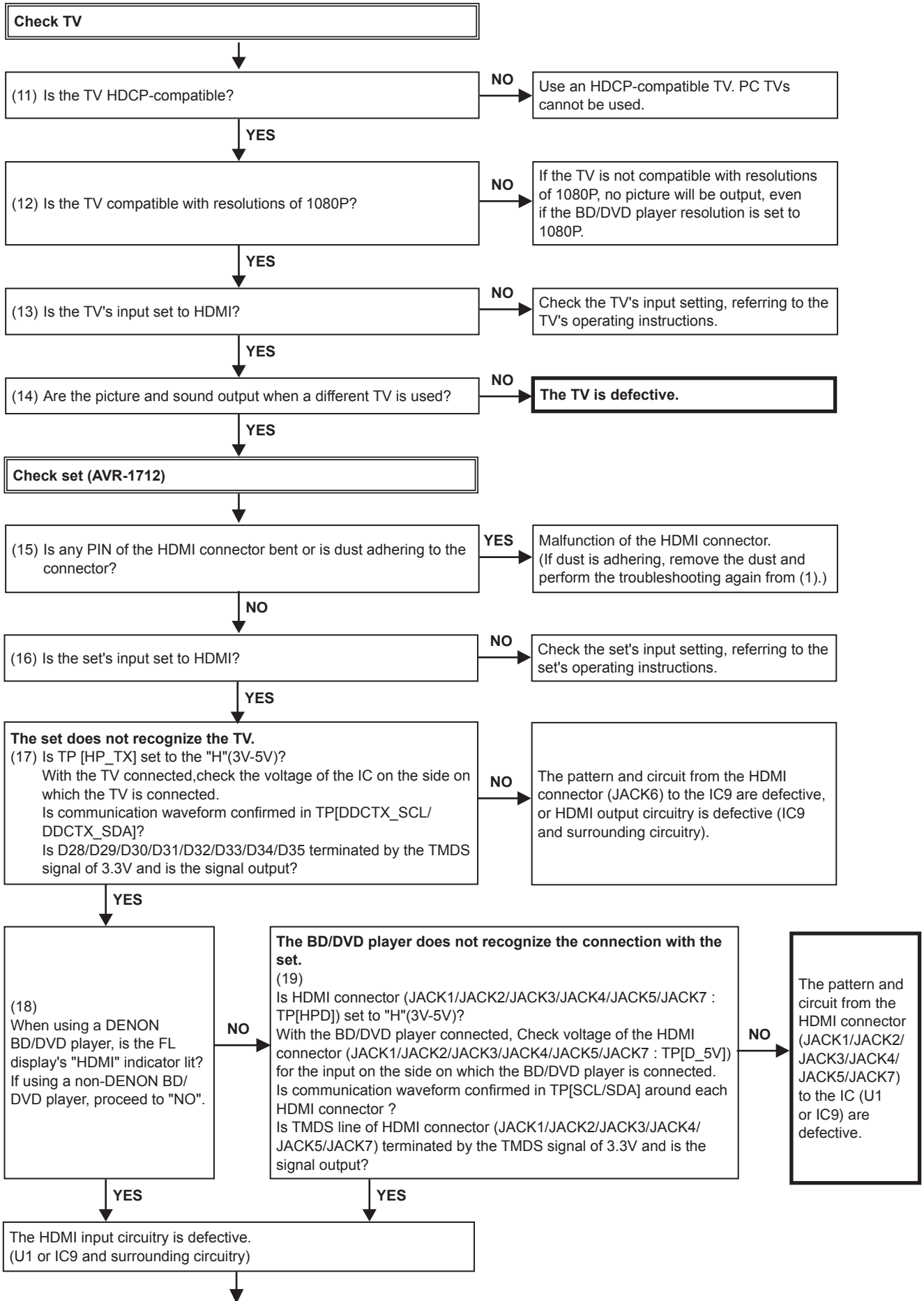
Detail B

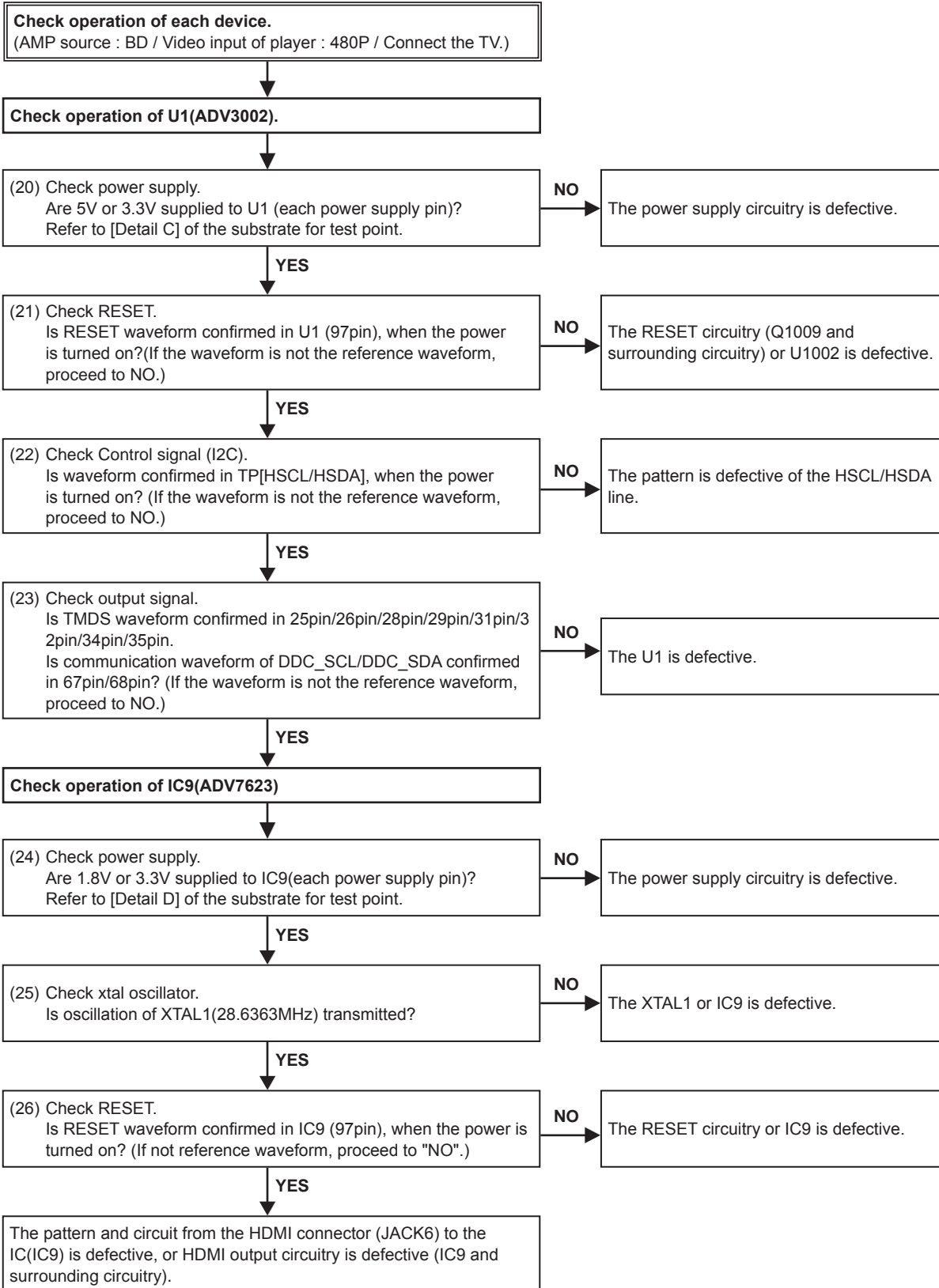


3. HDMI/DVI

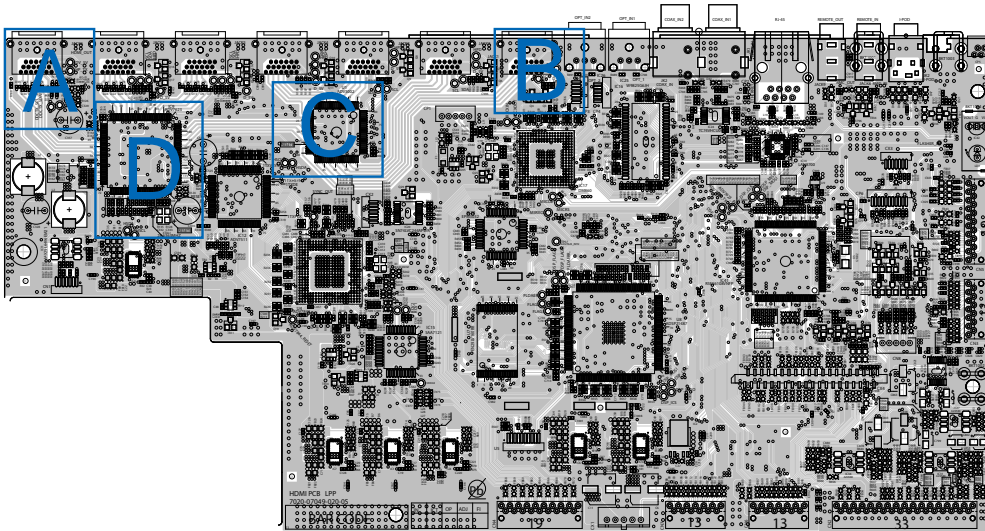
3.1. No picture or sound is output (HDMI to HDMI)





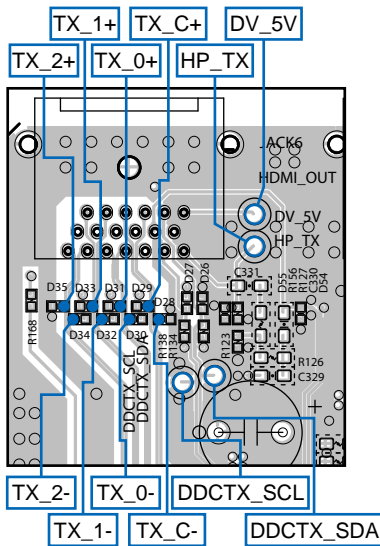


3.2. HDMI test point and waveforms

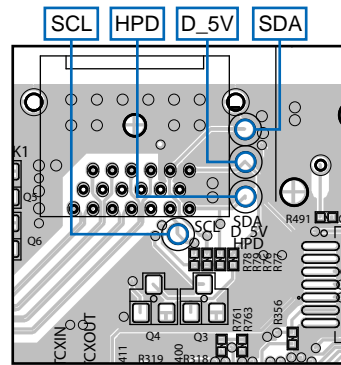


(COMPONENT SIDE)

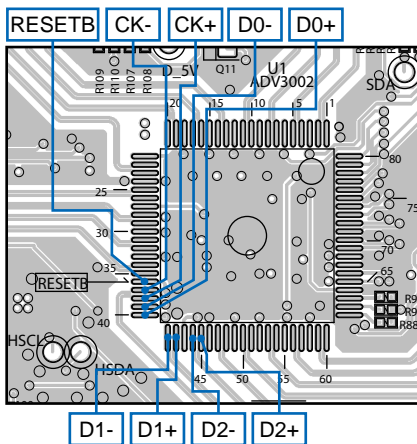
Detail A



Detail B

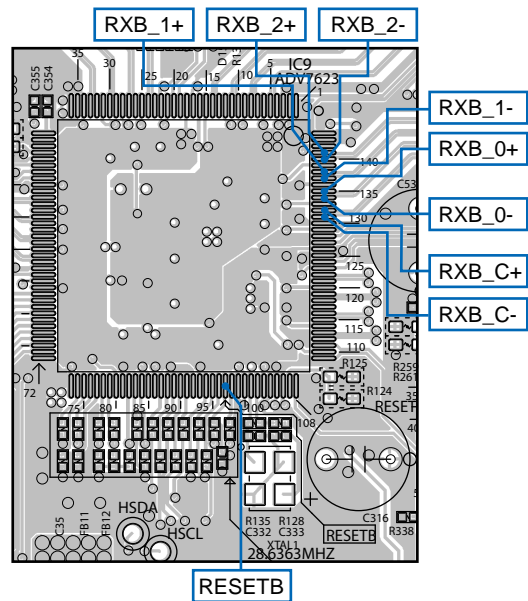


Detail C



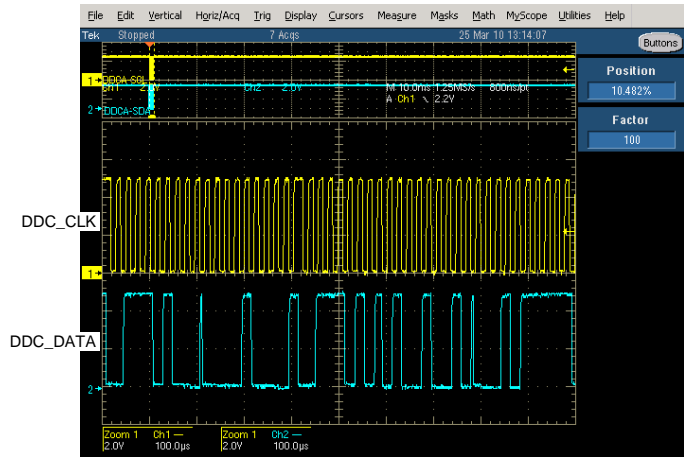
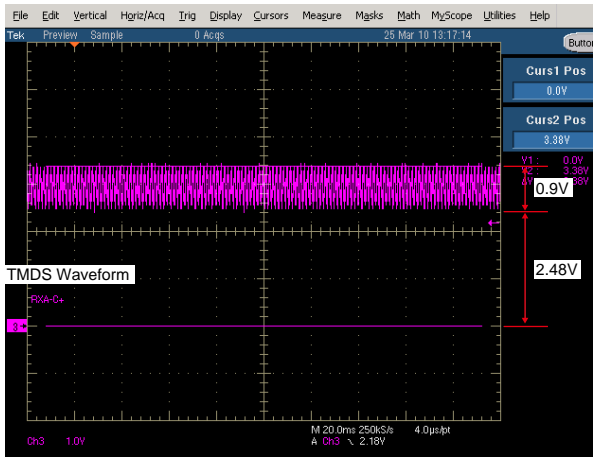
U1 [ADV3002] Power pin
5V : 64pin
3.3V : 9pin / 18pin / 33pin / 43pin / 52pin

Detail D



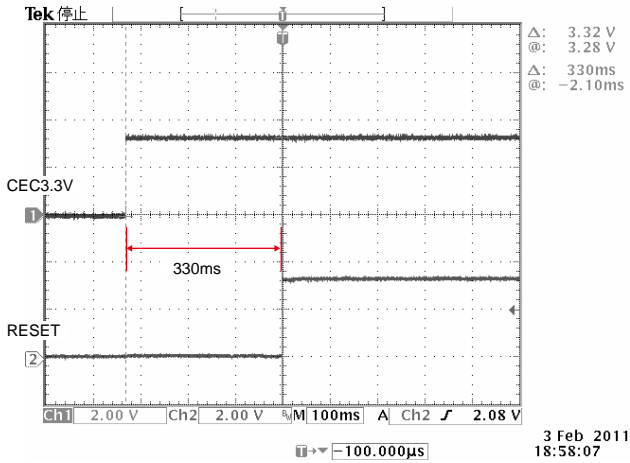
IC9 [ADV7623] Power pin
3.3V : 6pin / 12pin / 25pin / 31pin / 73pin / 86pin / 114pin / 120pin / 133pin / 139pin
1.8V : 2pin / 18pin / 21pin / 34pin / 36pin / 37pin / 45pin / 55pin / 61pin / 81pin / 93pin / 100pin / 103pin / 110pin / 126pin / 129pin

DDC_CLK/DDC_DATA/TMDS : Check items HDMI to HDMI (17)/(19)/(23)

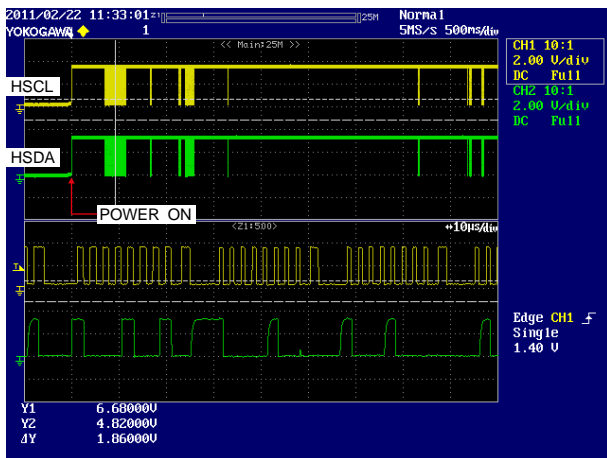


Timing waveform illustration from the start of CEC3.3V to when reset is released :

Check items HDMI to HDMI (21)/(26)

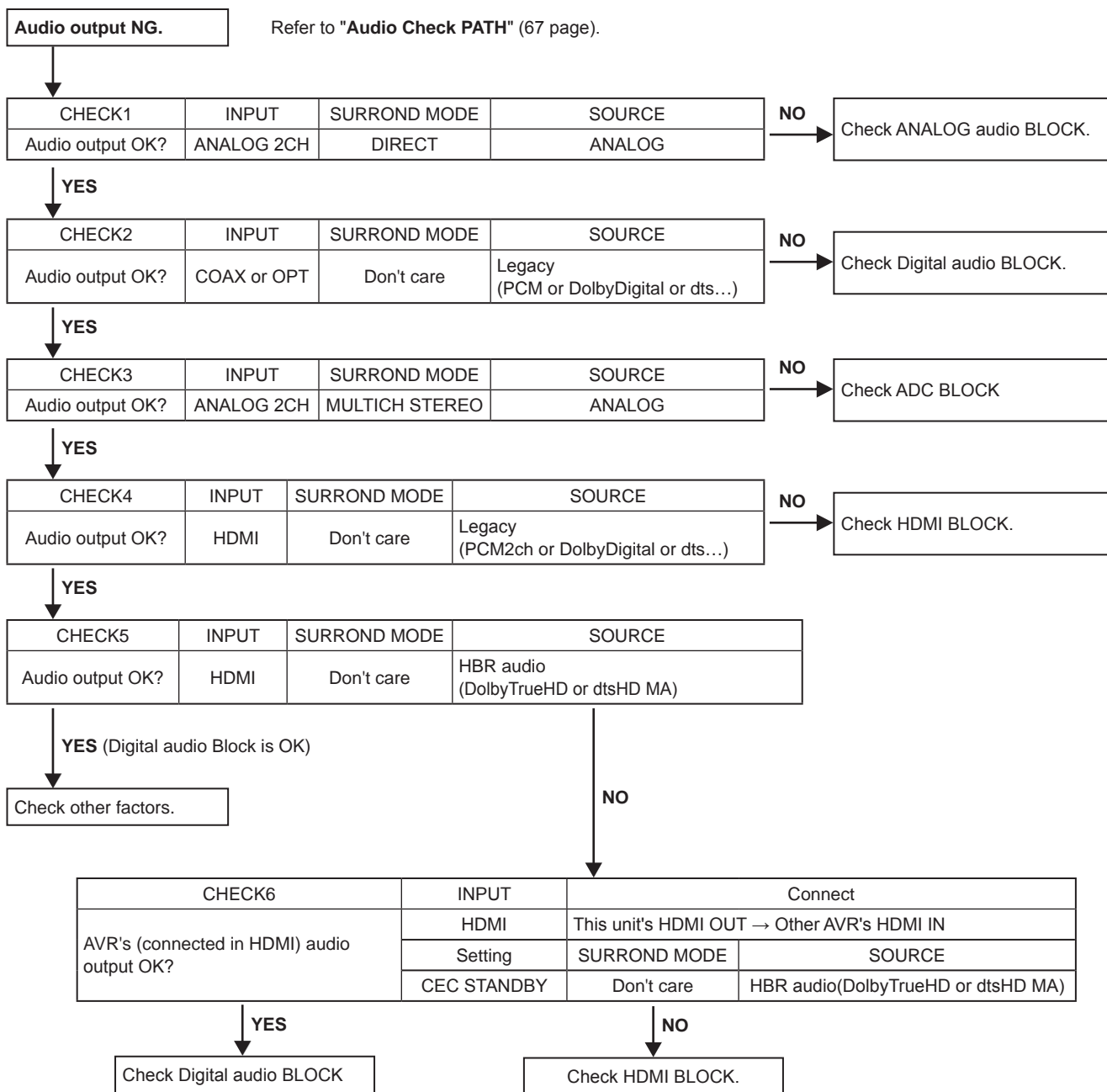


Controlled waveform(I2C), when power is turned on : Check items HDMI to HDMI (22)

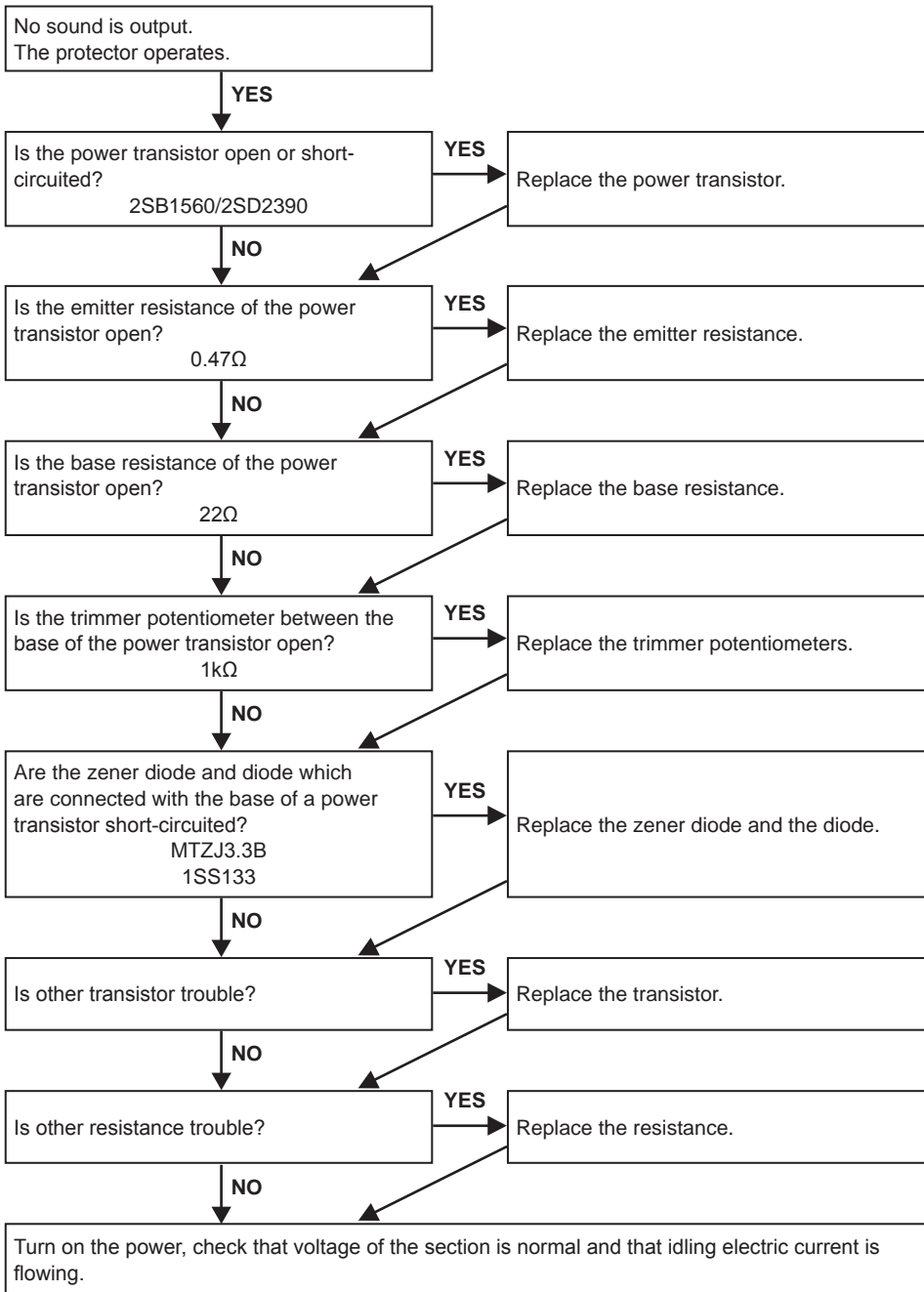


4. AUDIO

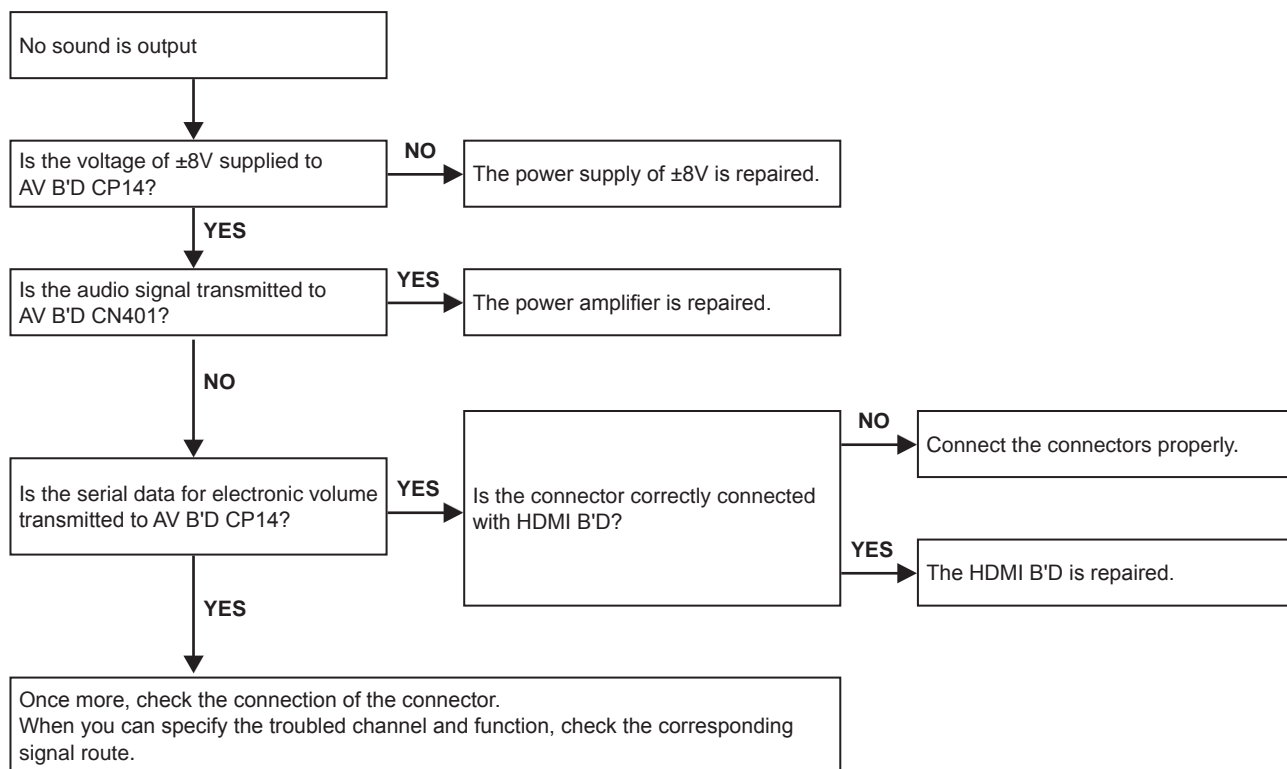
4.1. AUDIO CHECK



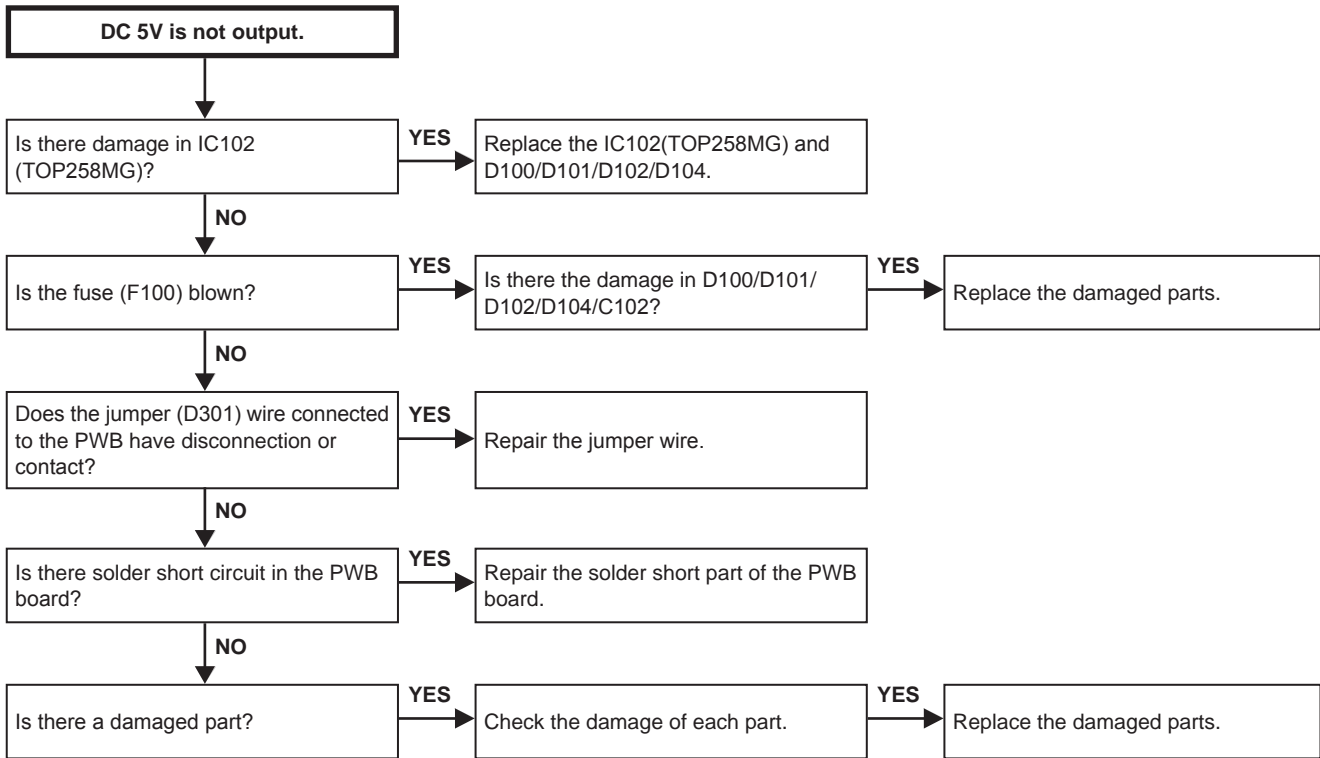
4.2. Power AMP (MAIN UNIT)



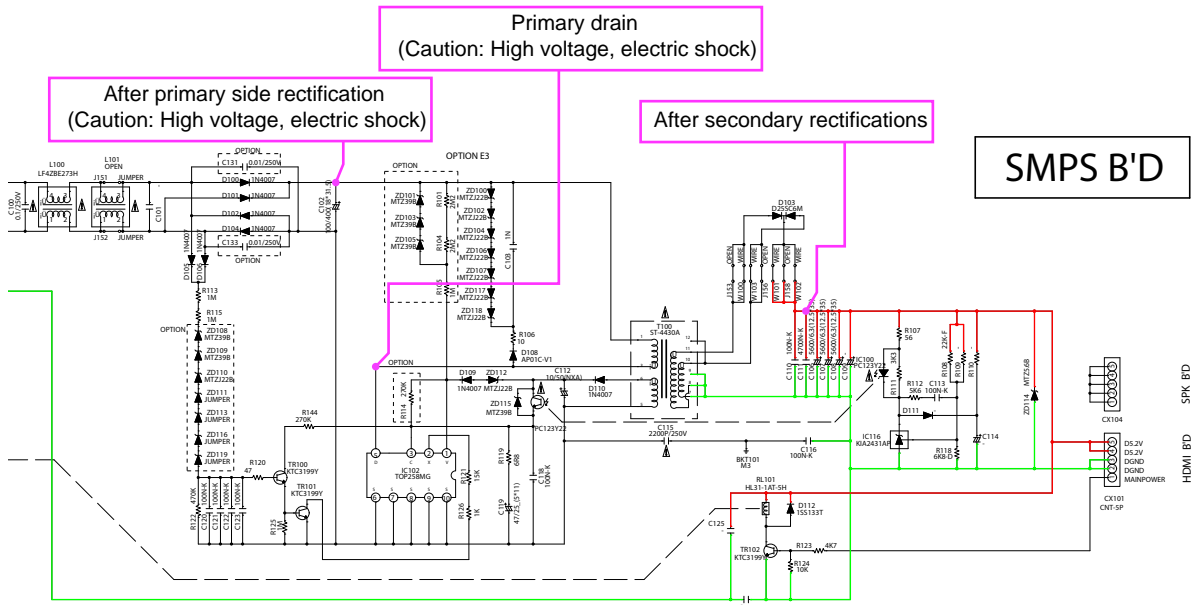
4.3. Analog audio



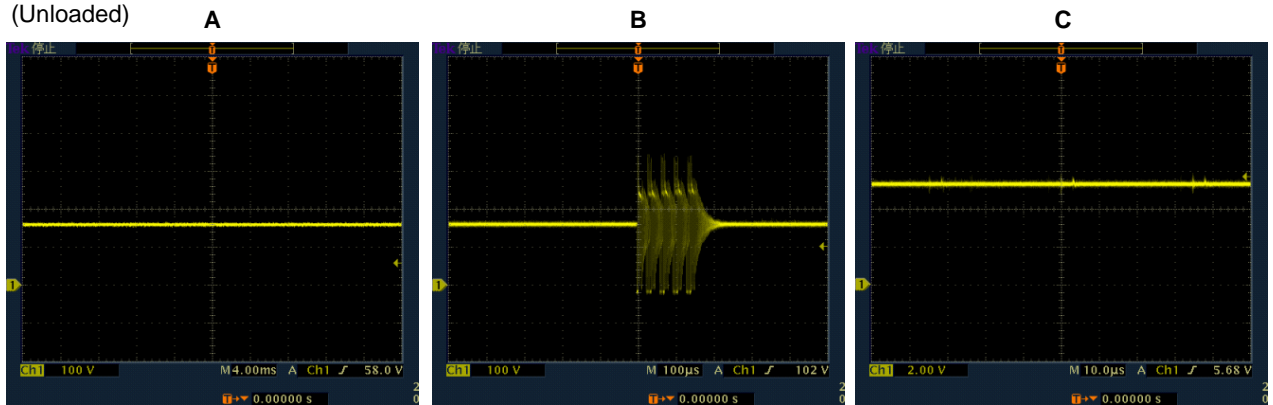
5. SMPS



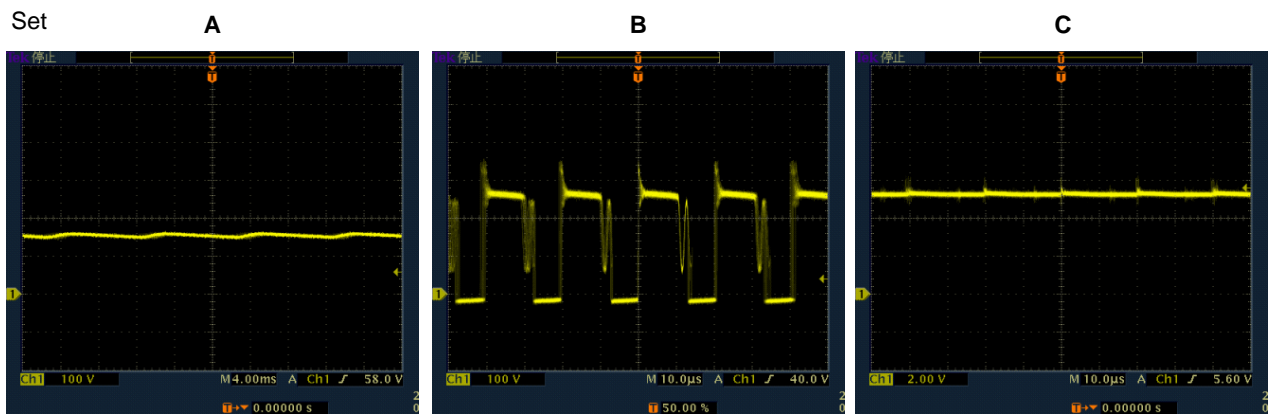
Operation waveform for each part



SMPS unit (Unloaded)

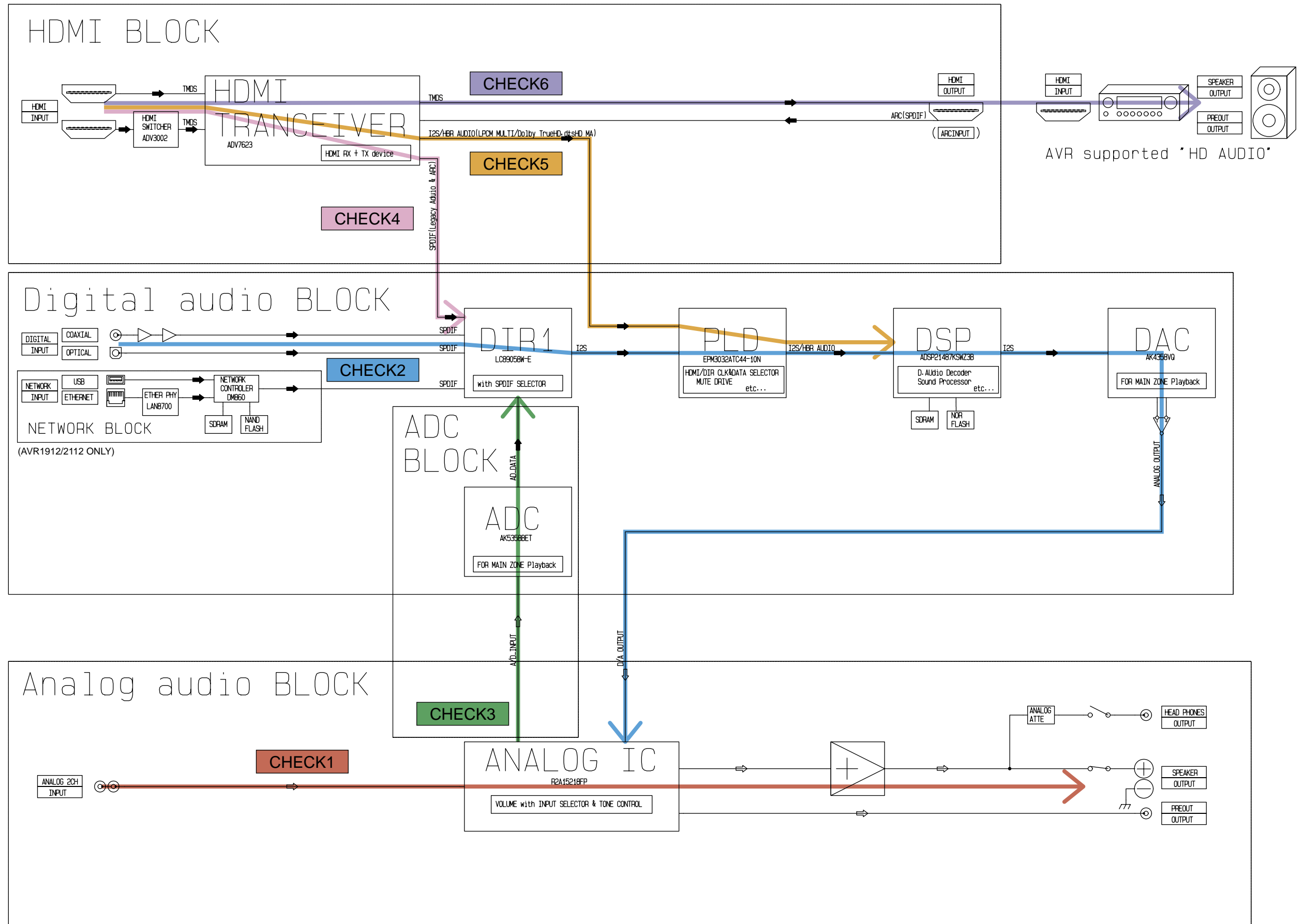
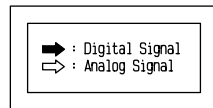


Set



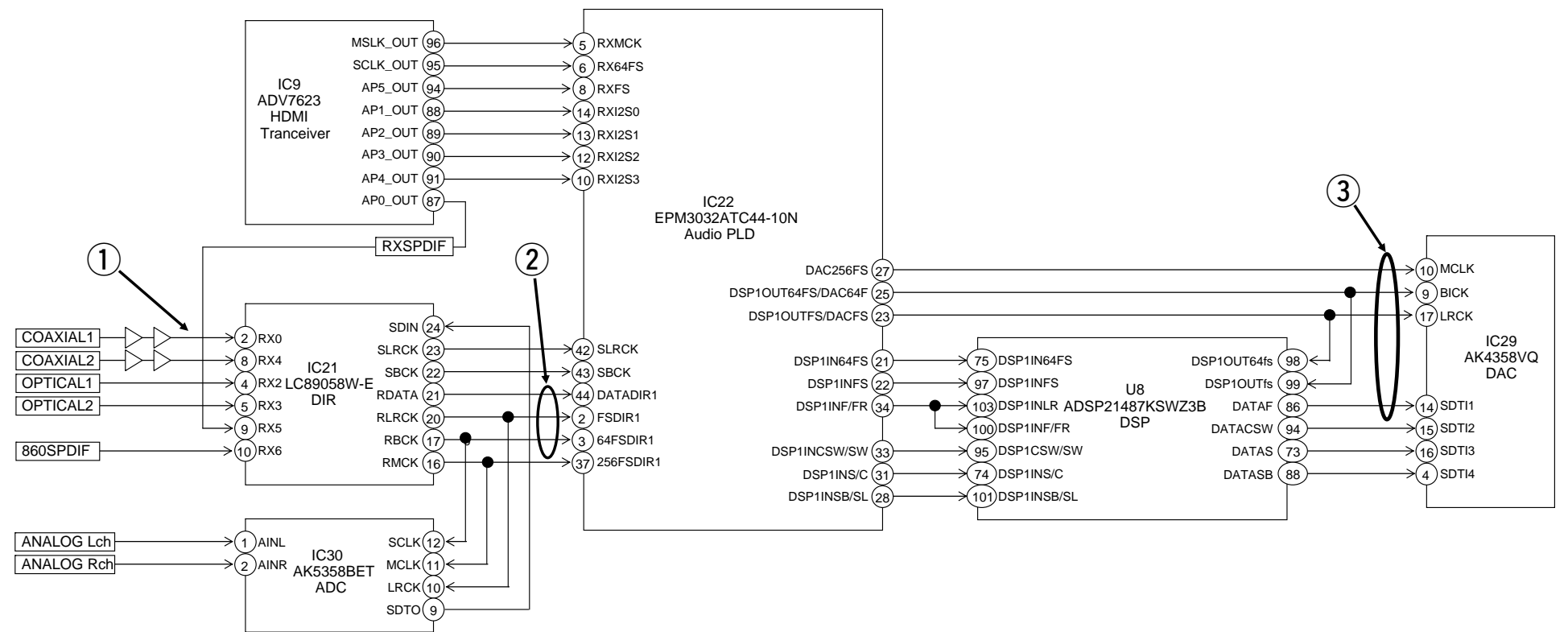
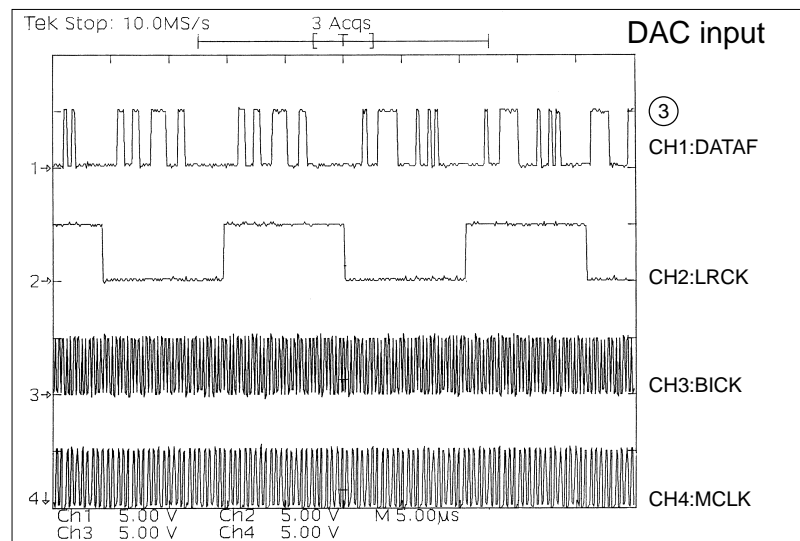
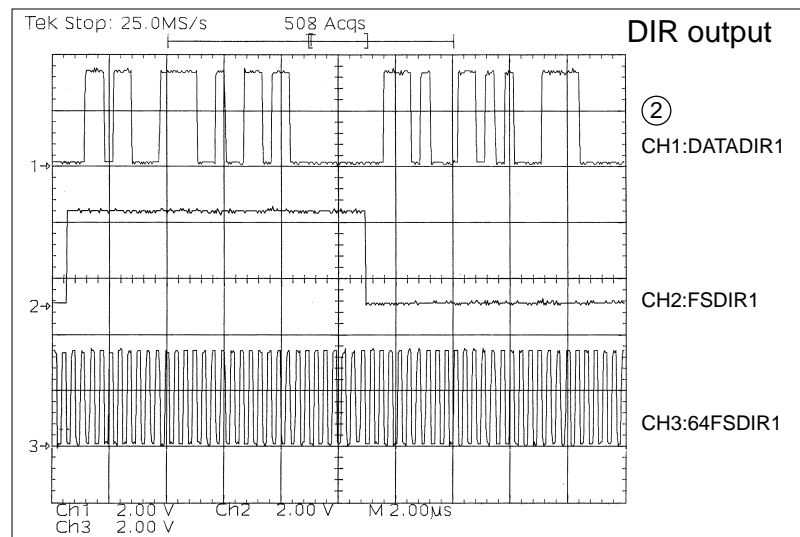
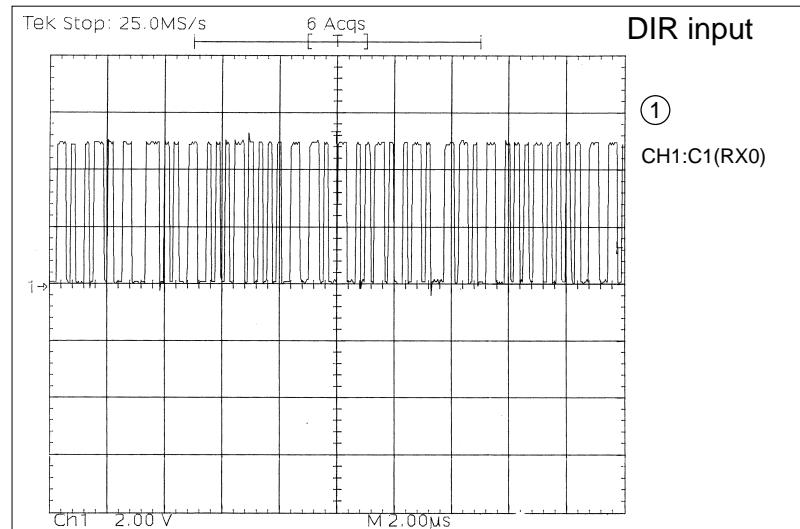
Audio Check PATH

Refer to troubleshooting "4.1. AUDIO CHECK"(61 page).

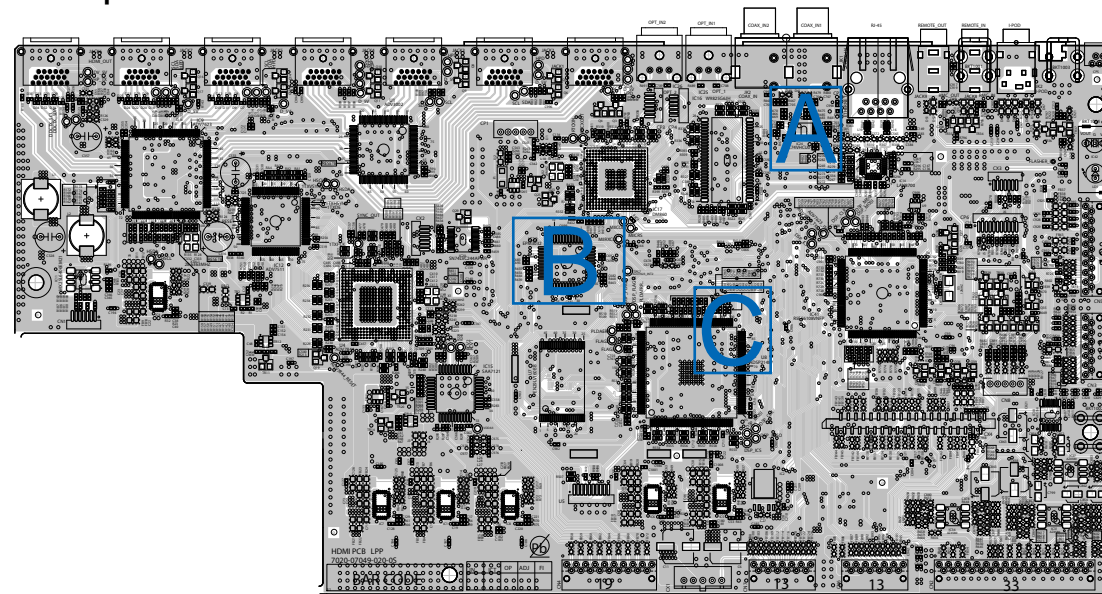


CLOCK FLOW & WAVE FORM IN DIGITAL BLOCK

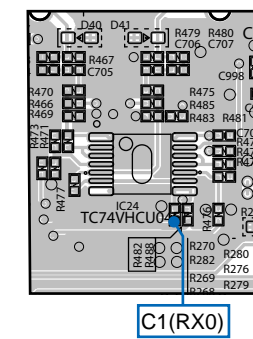
WAVE FORM



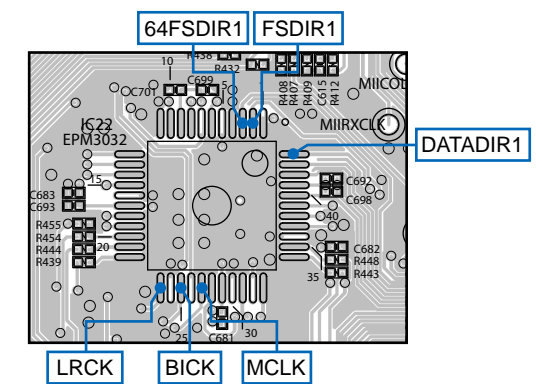
Test point



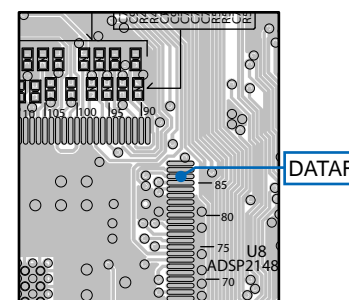
Detail A



Detail B

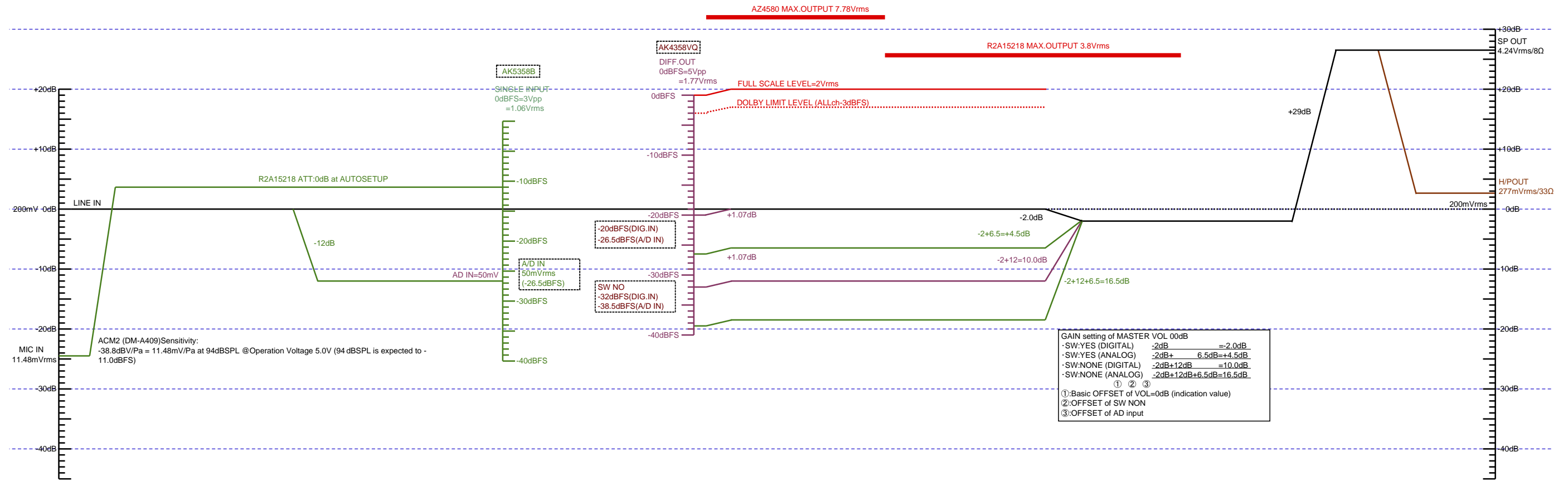
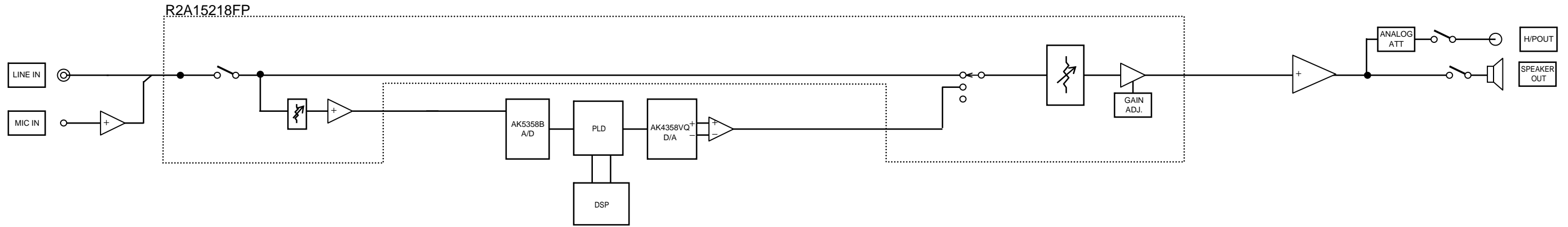


Detail C

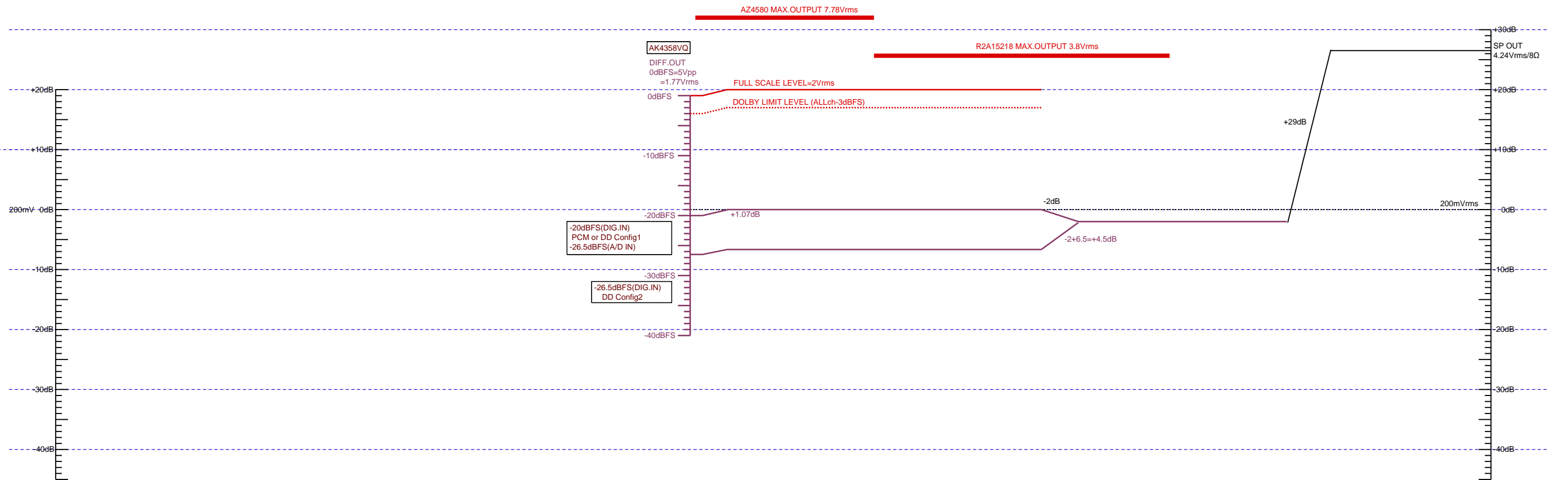
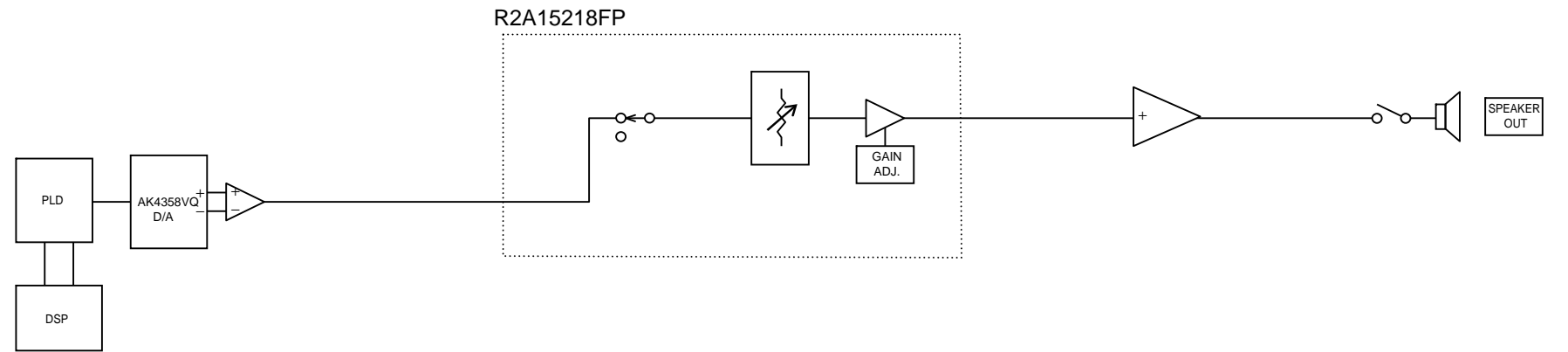


LEVEL DIAGRAM

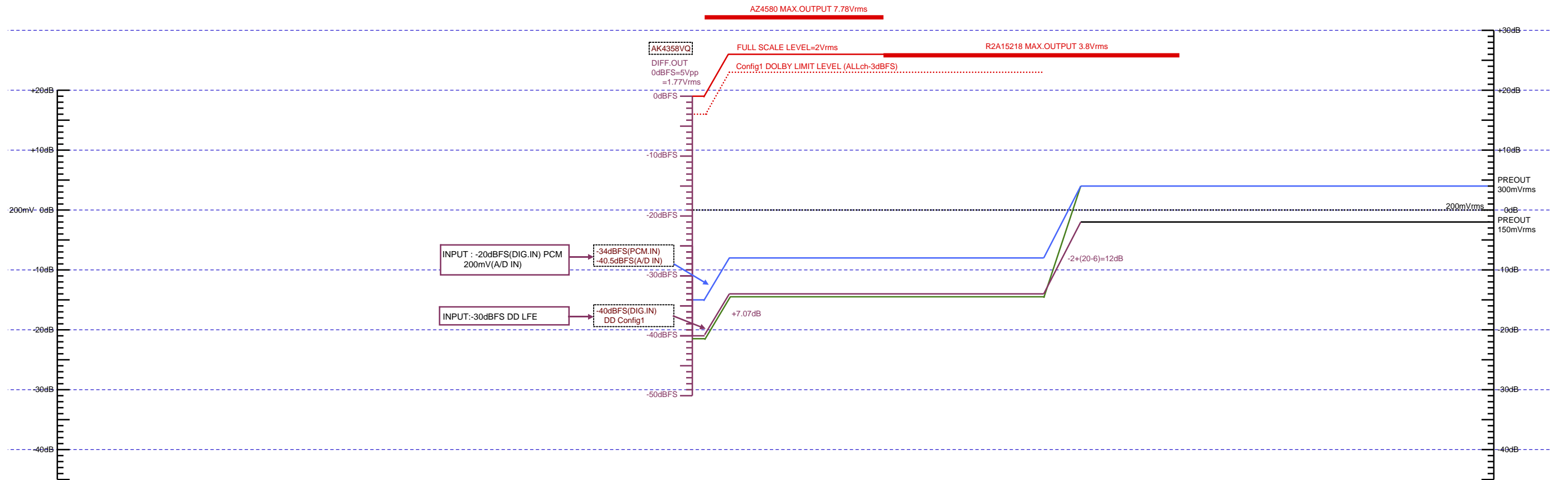
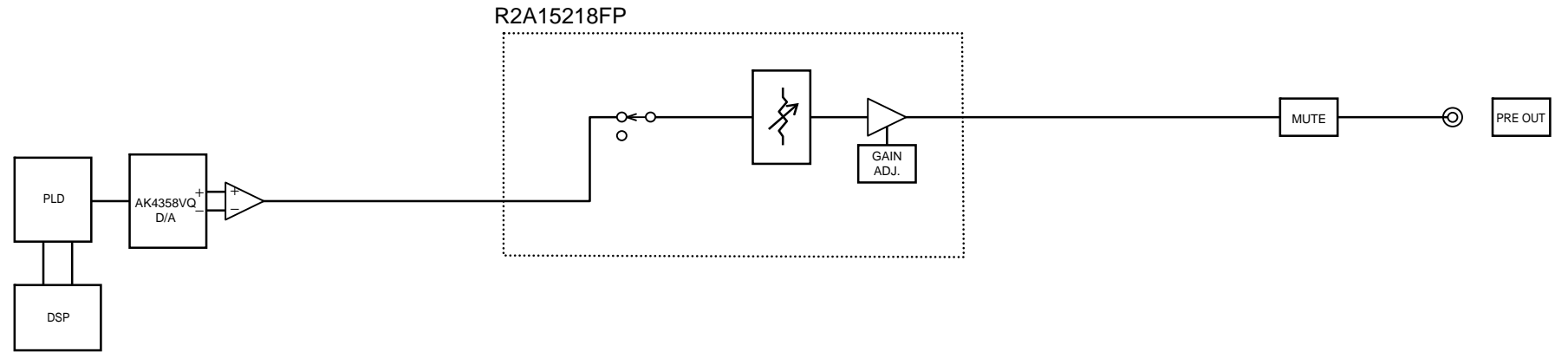
LEVEL DIAGRAM FRONT ch



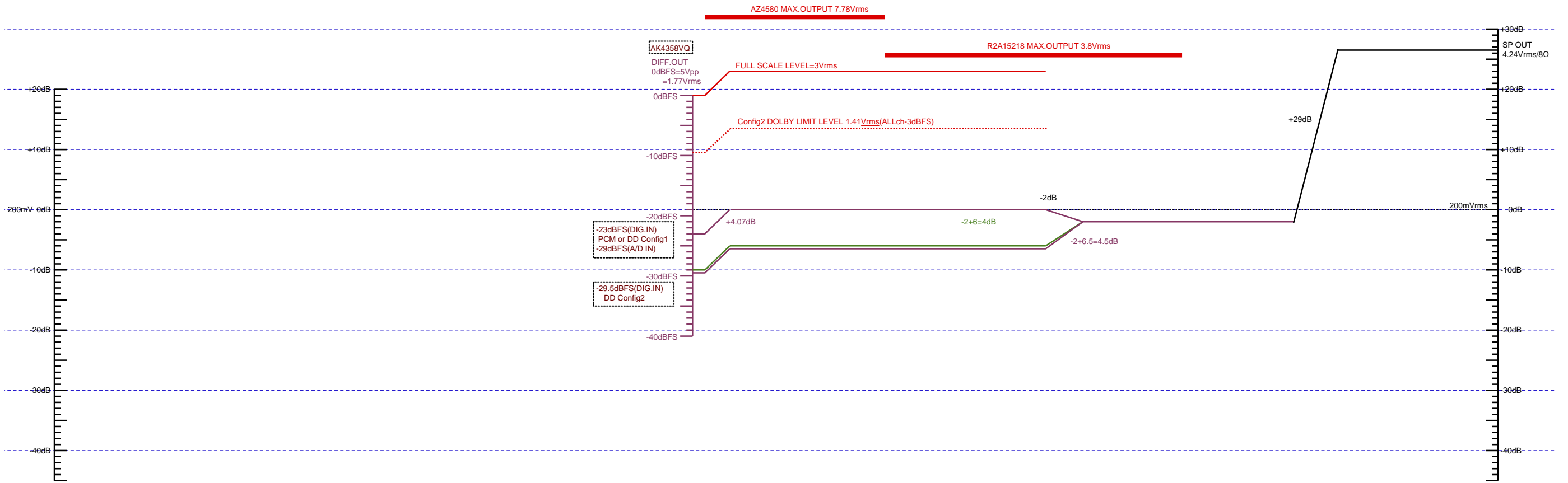
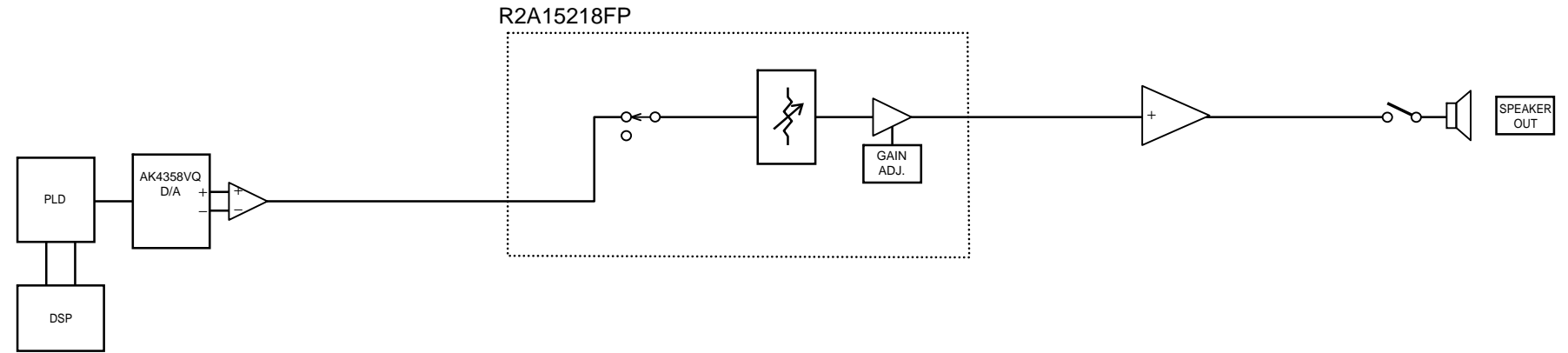
LEVEL DIAGRAM
CENTER ch



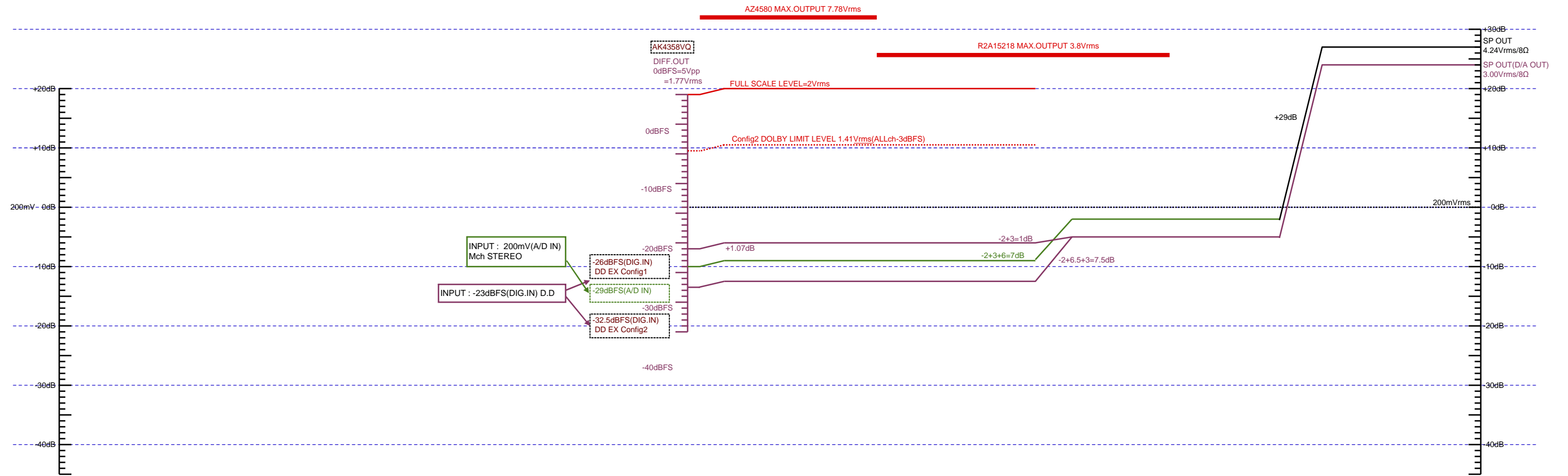
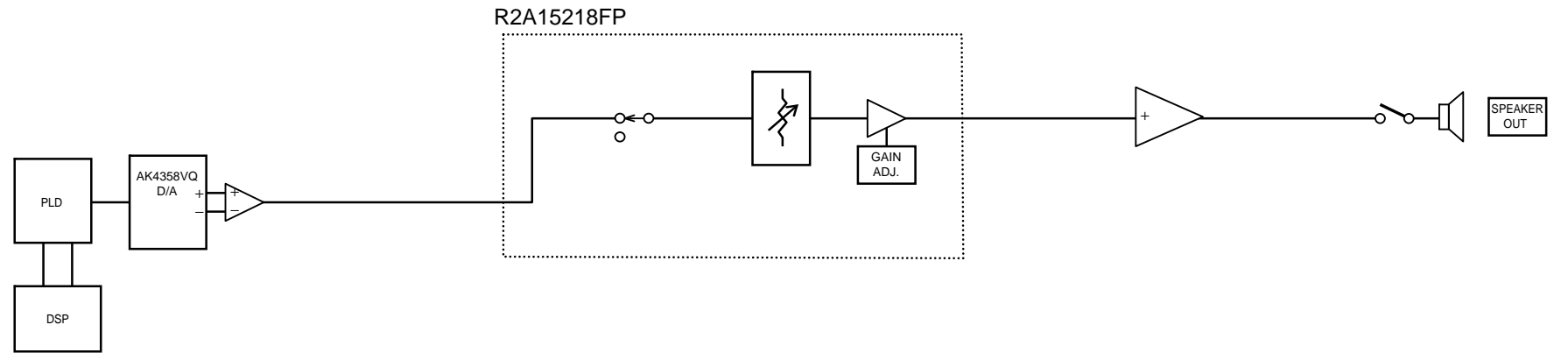
LEVEL DIAGRAM
SUBWOOFER ch



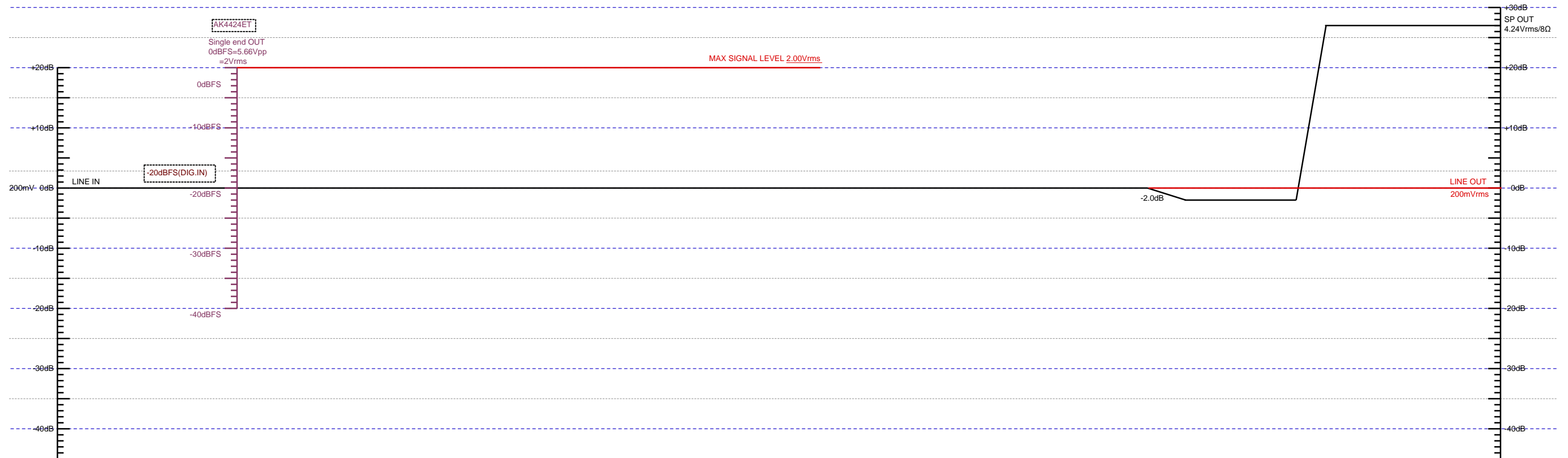
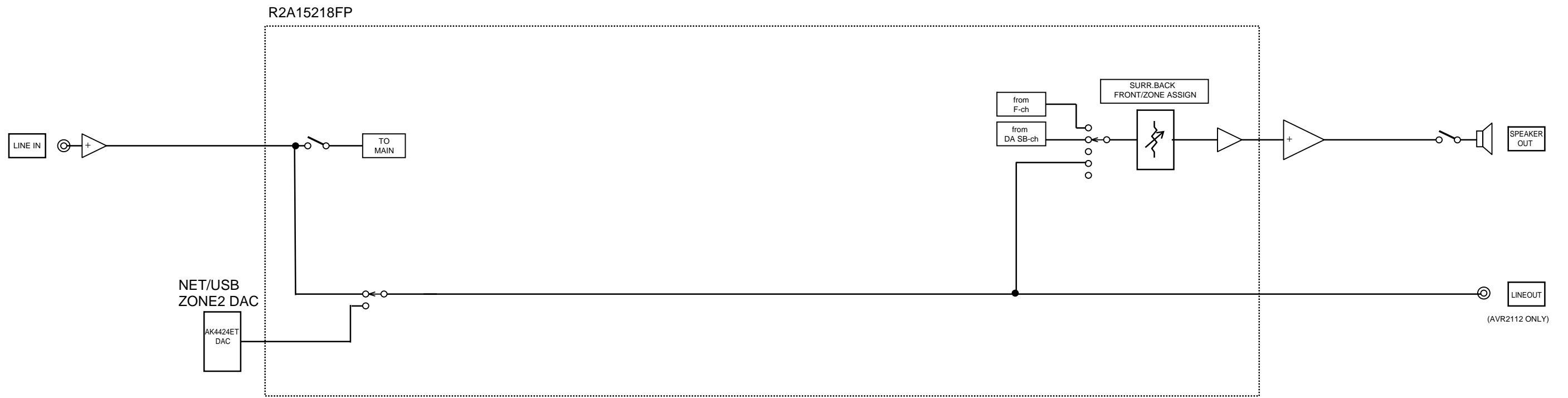
LEVEL DIAGRAM
SURROUND ch



LEVEL DIAGRAM
SURR.BACK ch



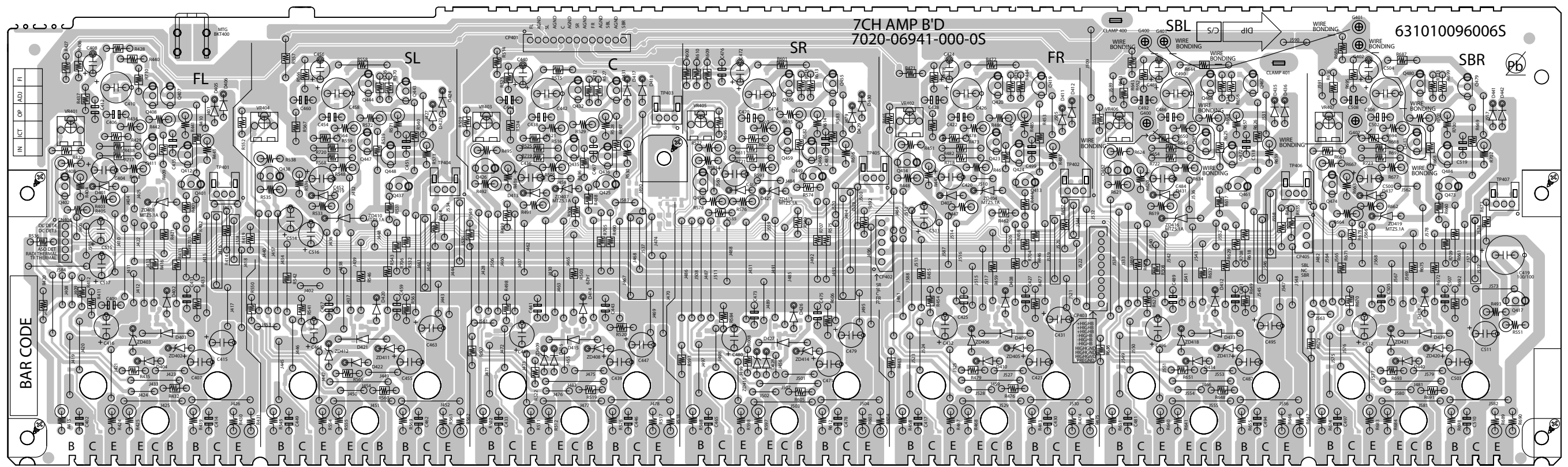
LEVEL DIAGRAM
ZONE2



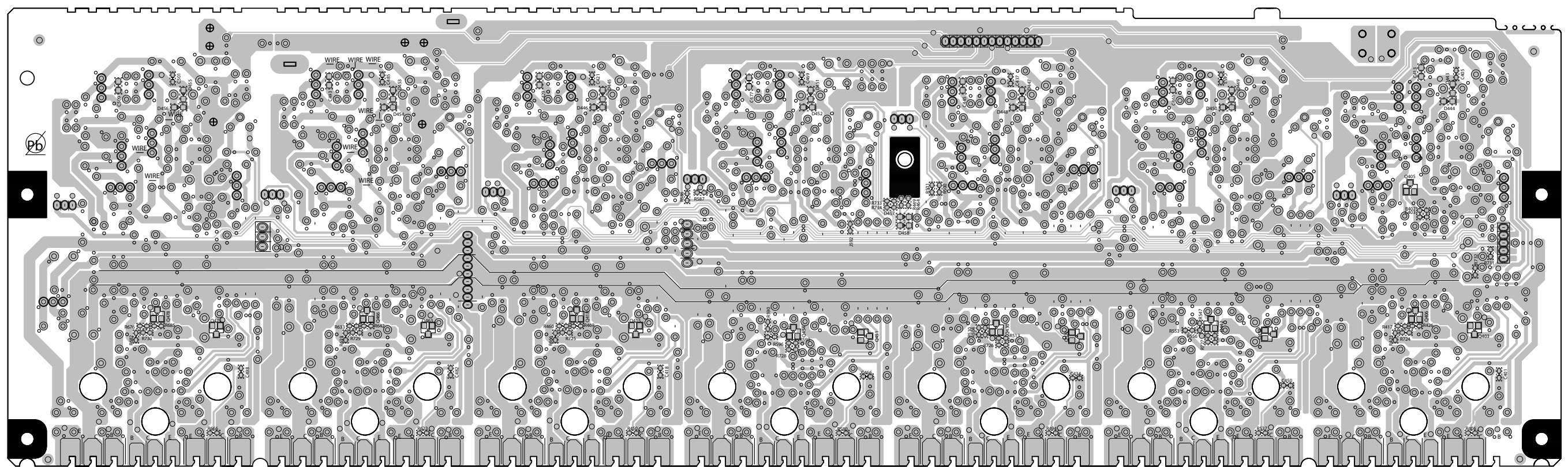
PRINTED WIRING BOARDS

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

7CH AMP
(COMPONENT SIDE)



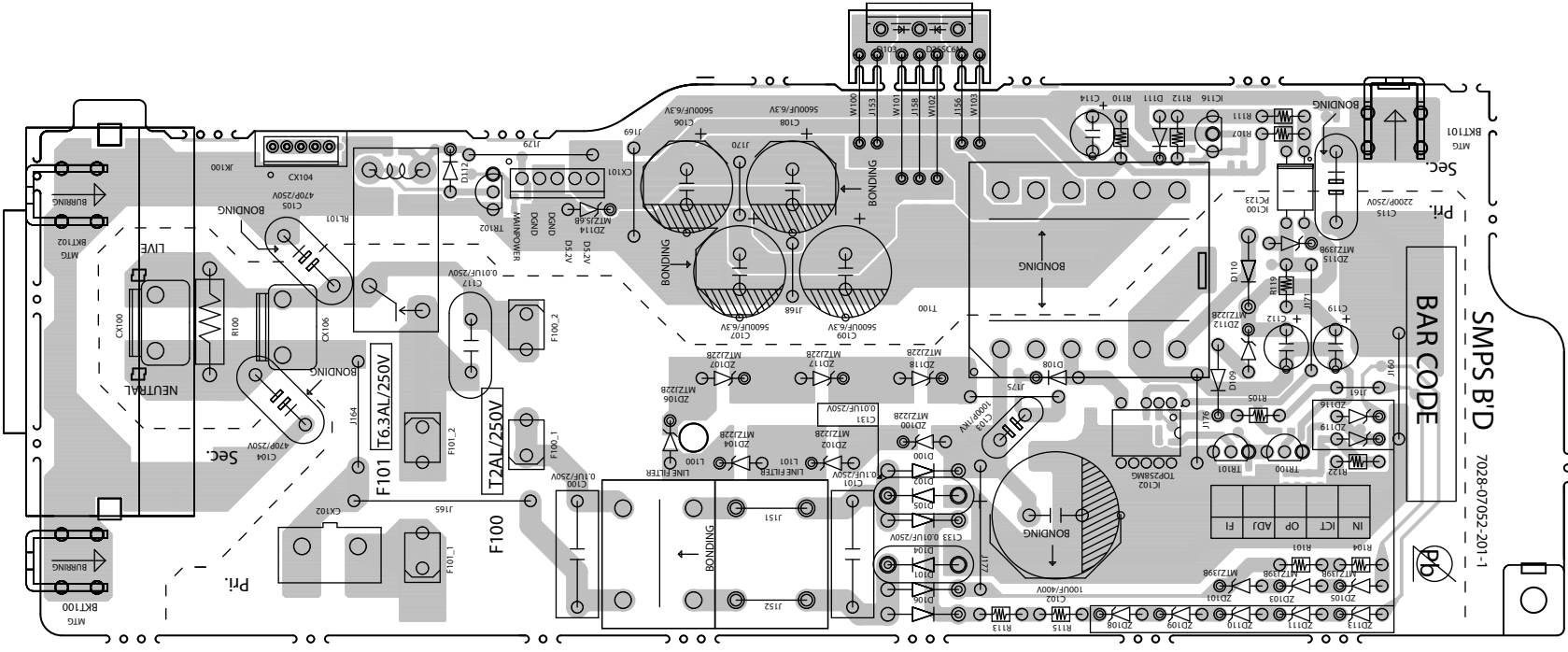
7CH AMP
(FOIL SIDE)



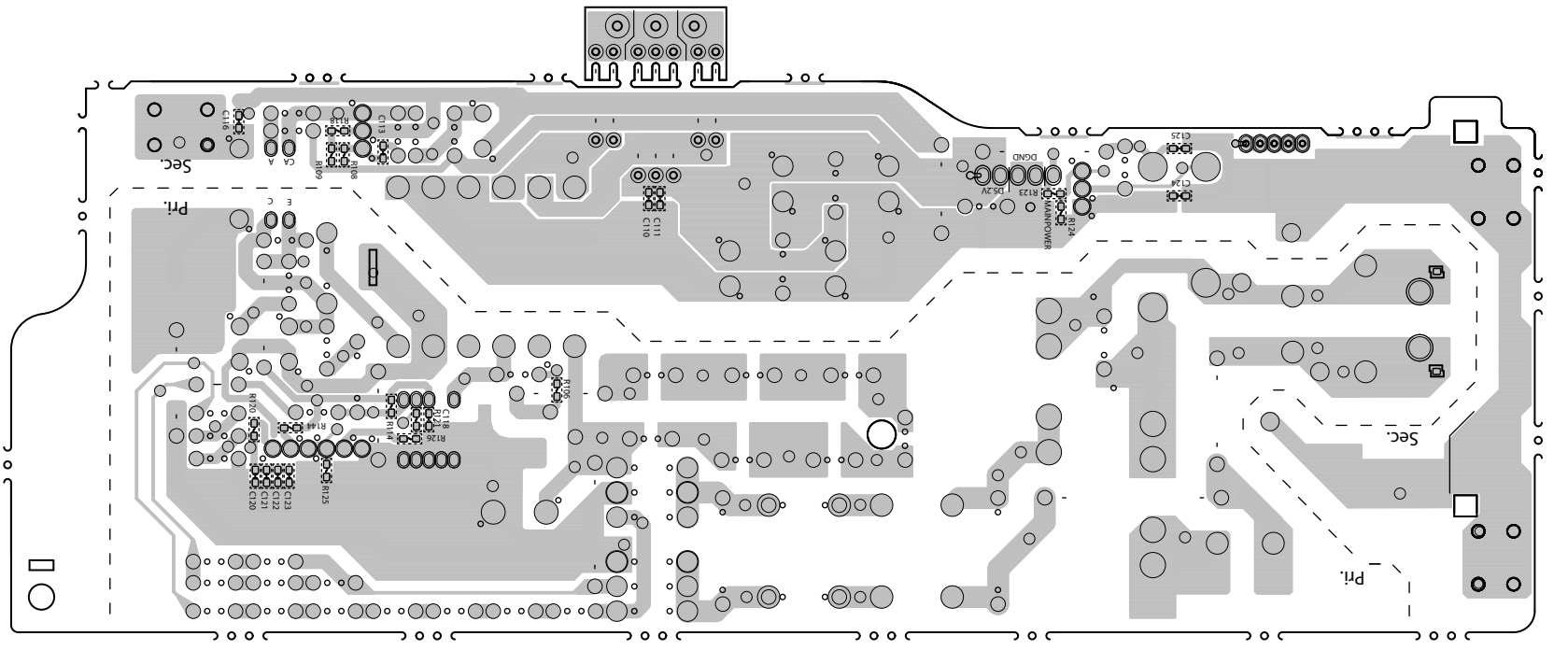
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

**SPMS
(COMPONENT SIDE)**



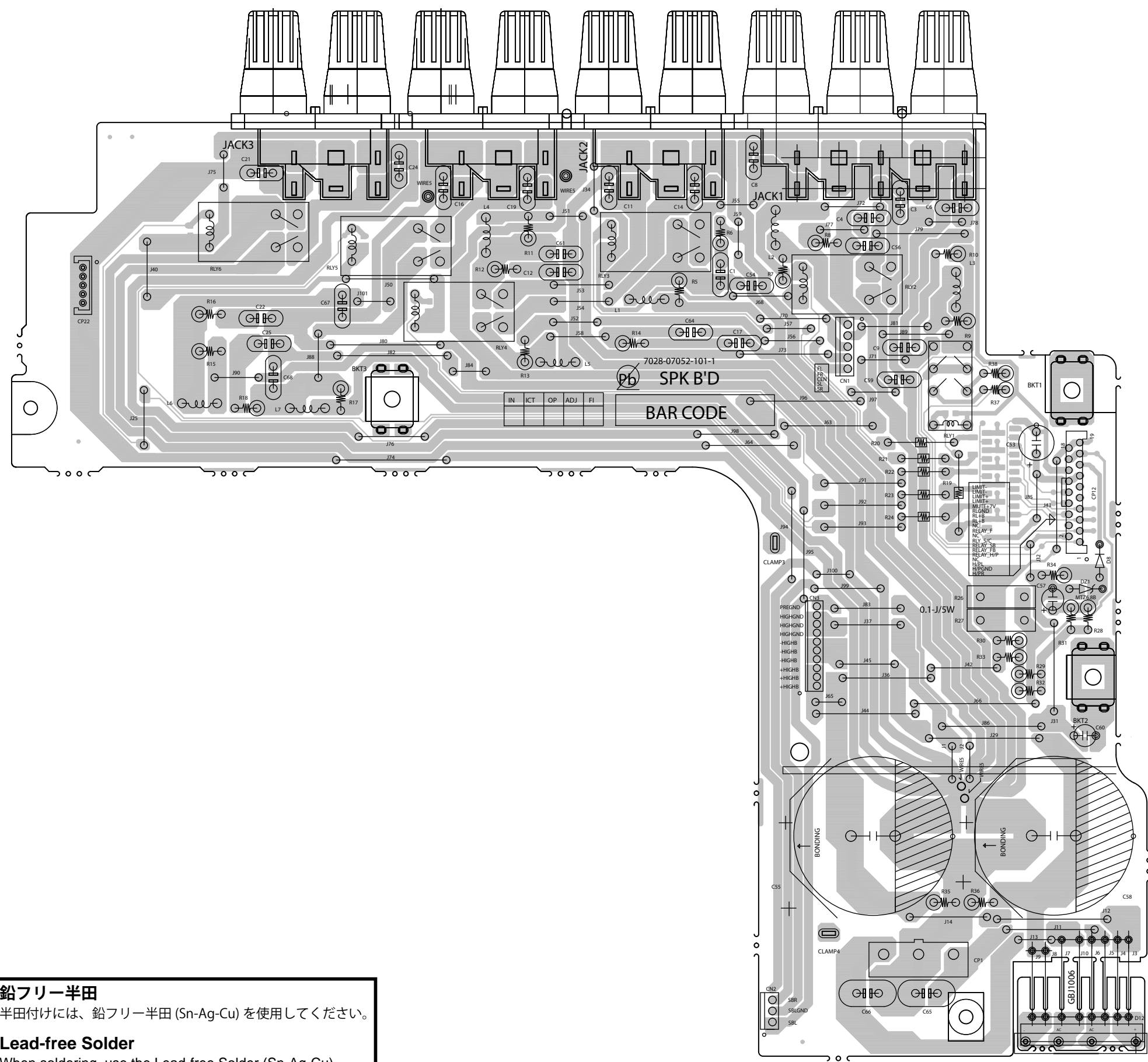
**SMPS
(FOIL SIDE)**



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
(COMPONENT SIDE)



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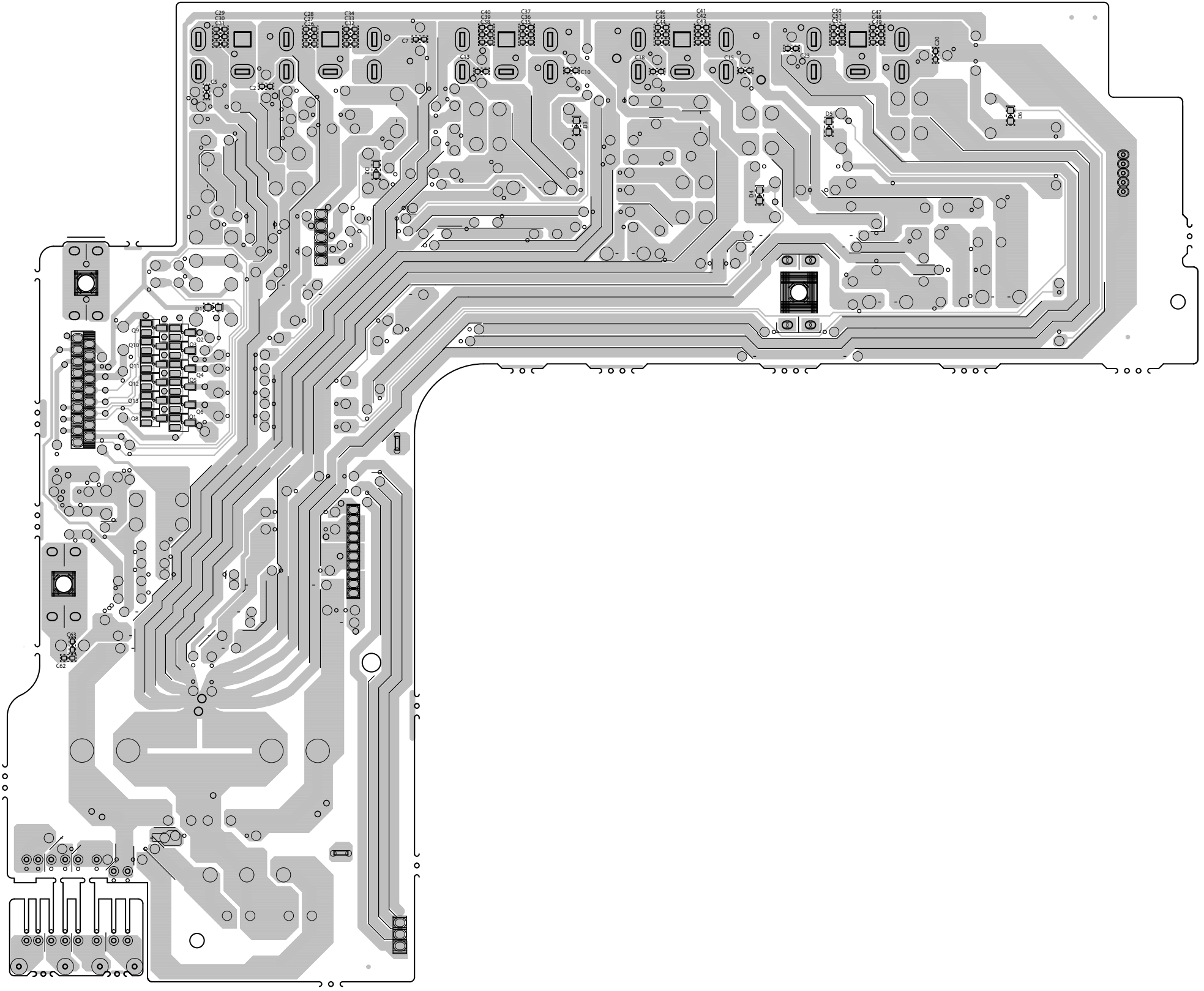
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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
(FOIL SIDE)

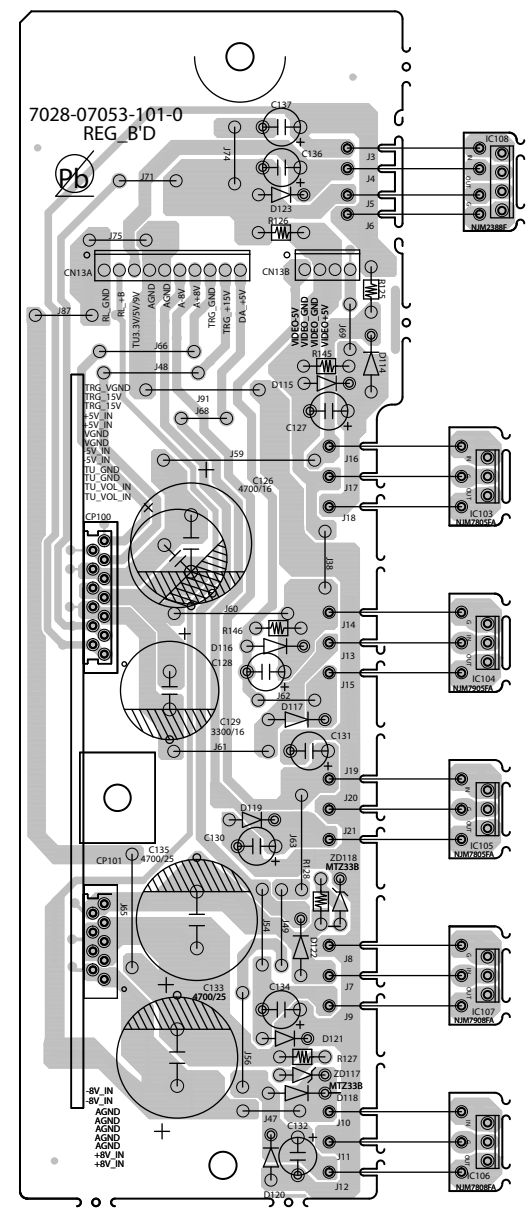
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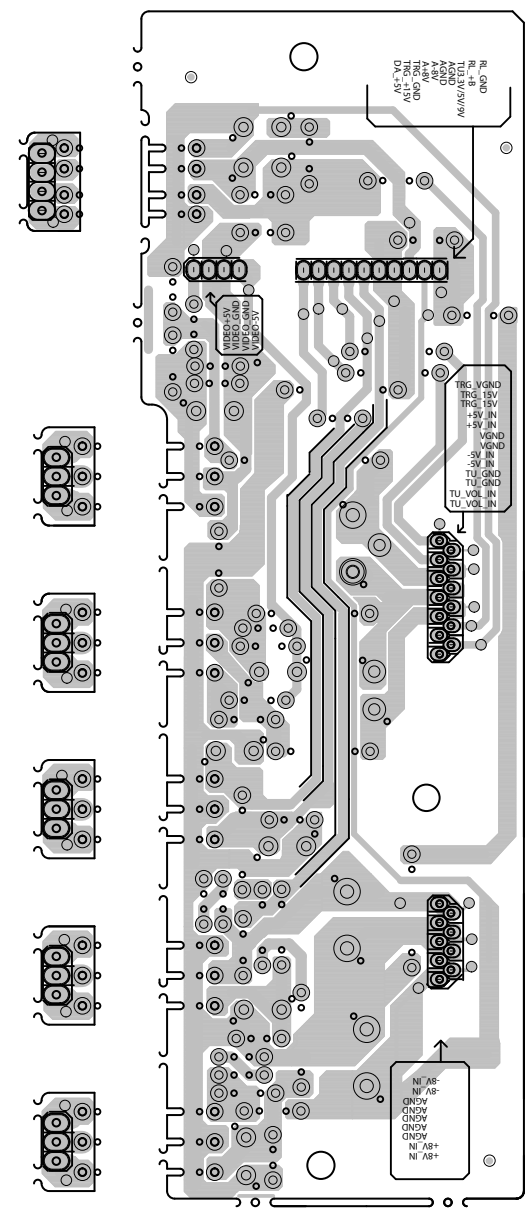
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

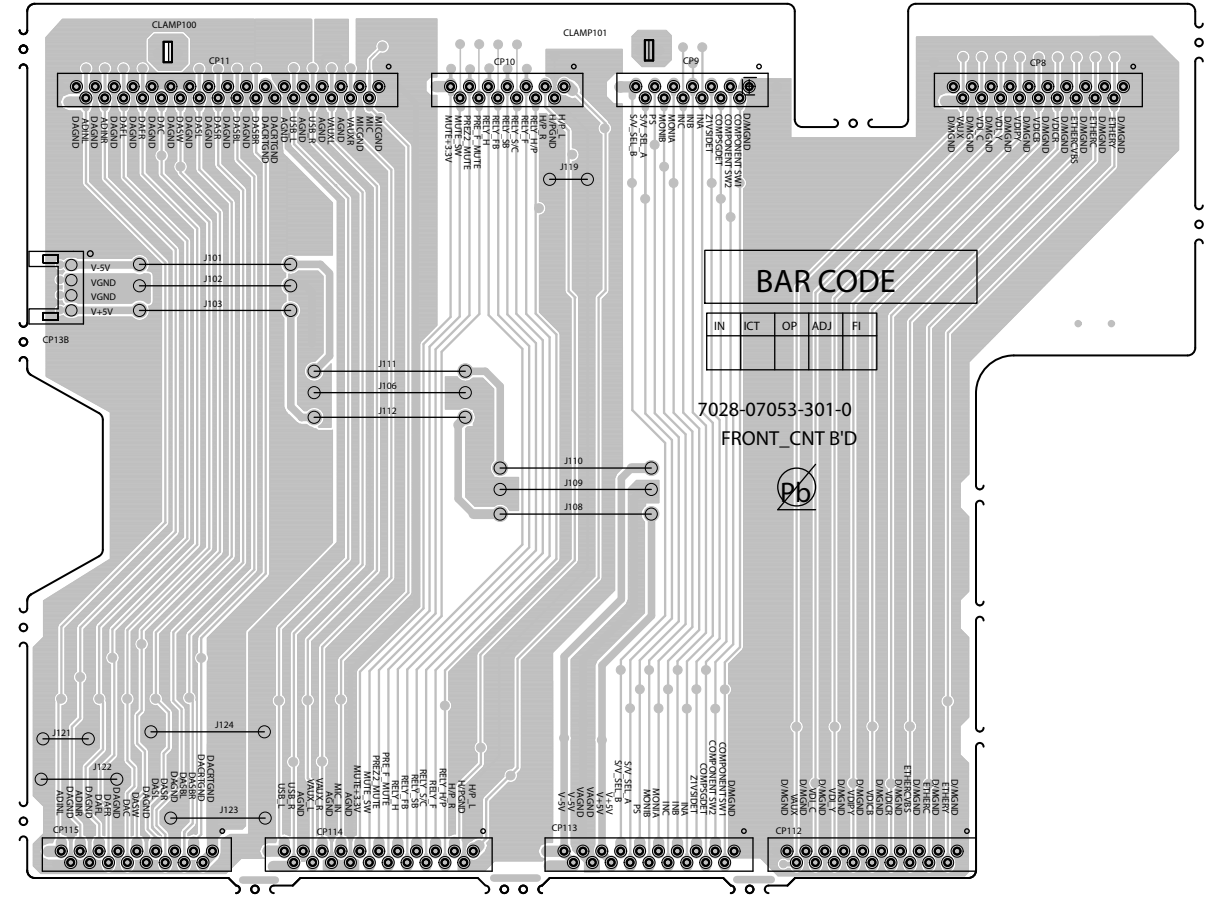
**REG
(COMPONENT SIDE)**



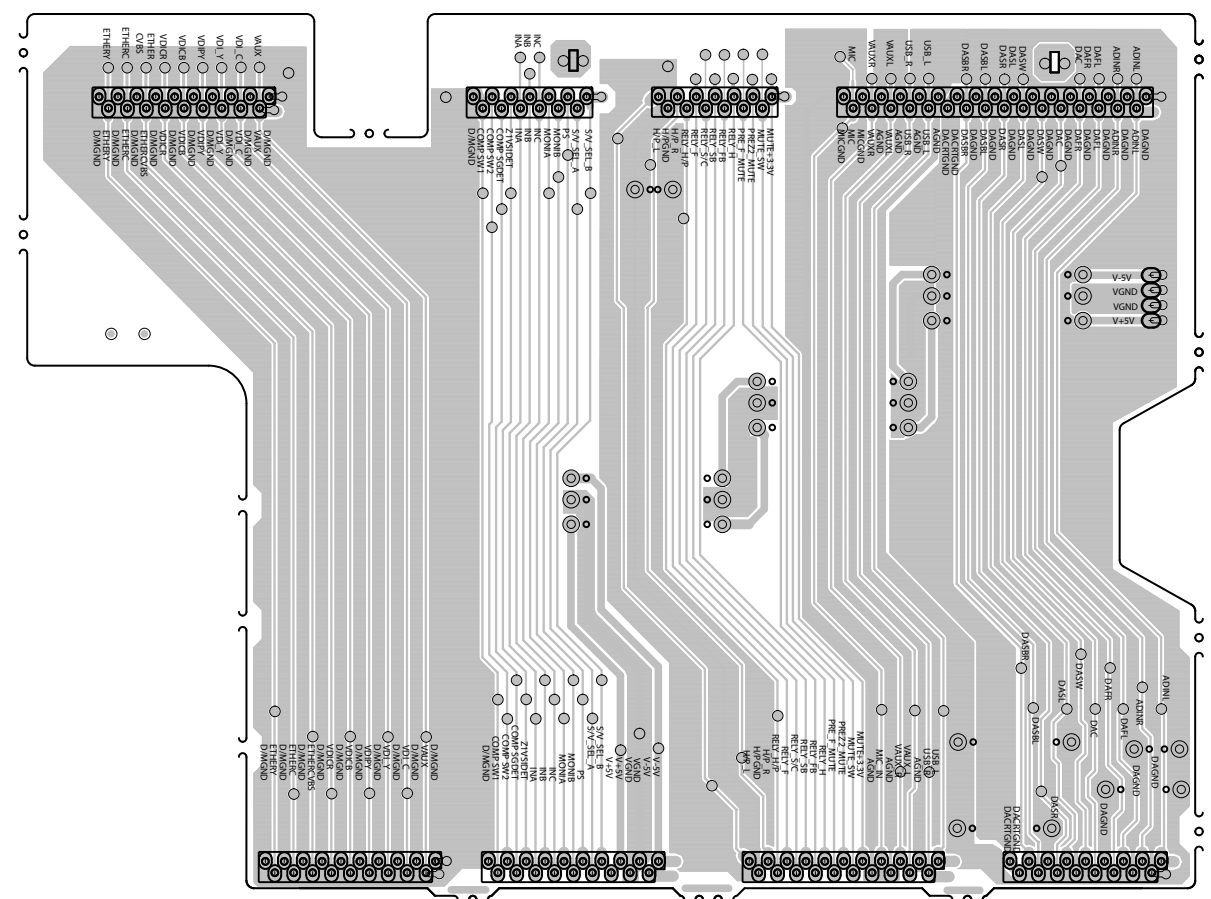
**REG
(FOIL SIDE)**



**FRONT_CNT
(COMPONENT SIDE)**



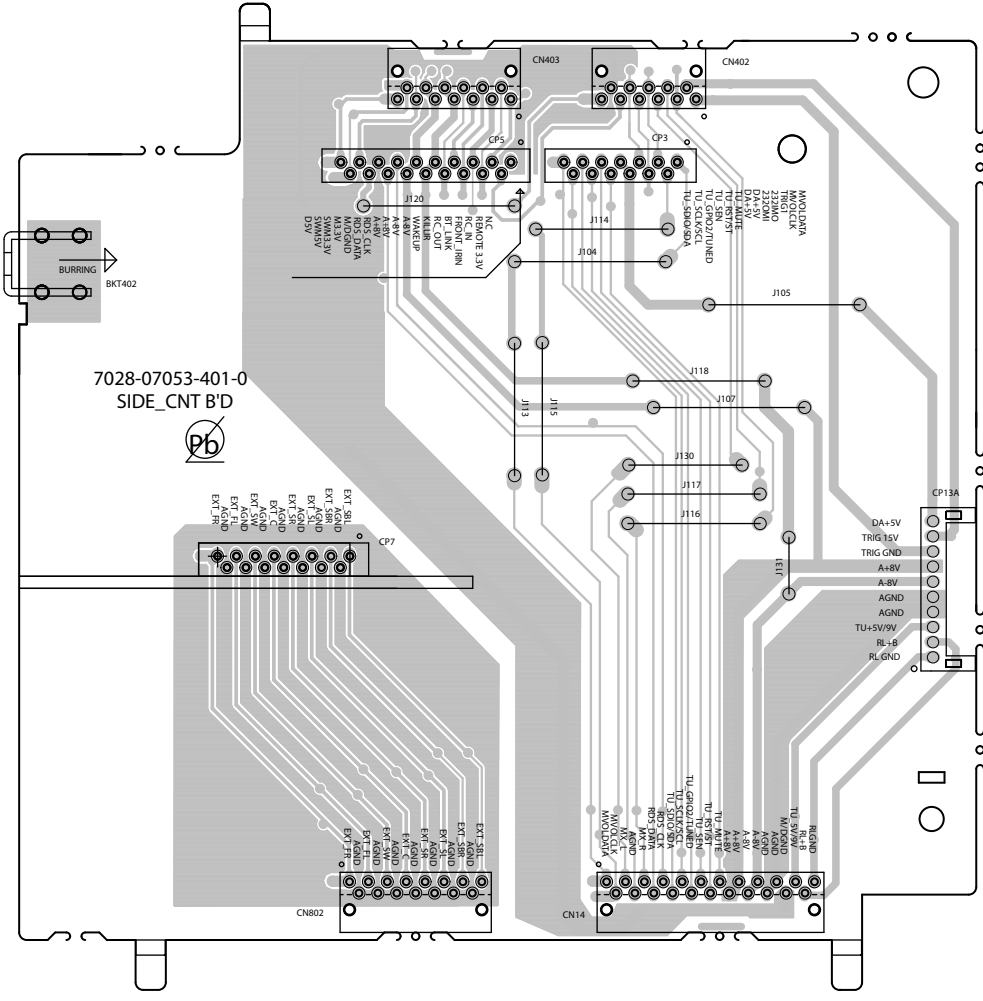
**FRONT_CNT
(FOIL SIDE)**



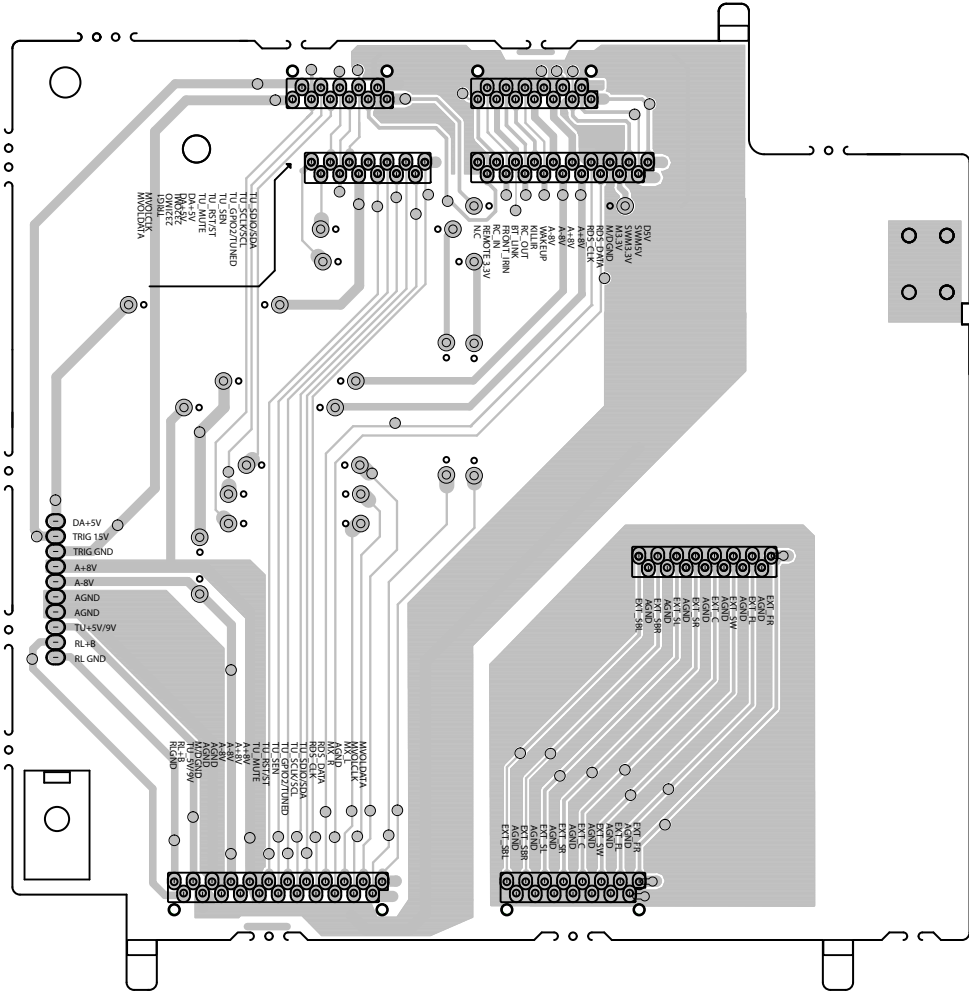
鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

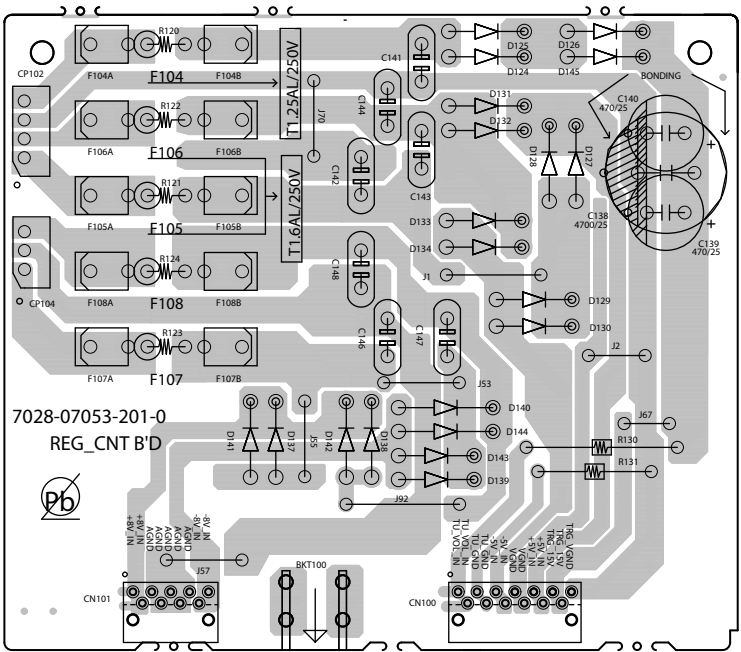
**SIDE_CNT
(COMPONENT SIDE)**



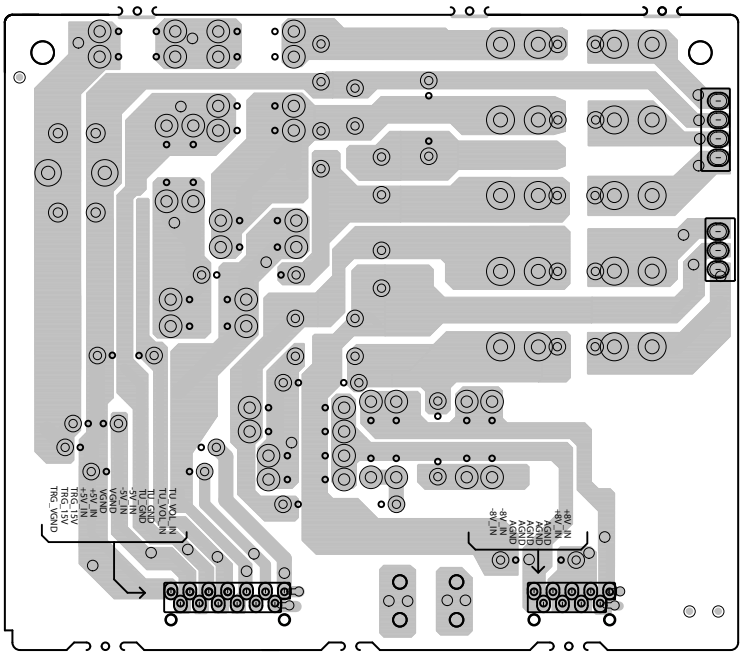
**SIDE_CNT
(FOIL SIDE)**



**REG_CNT
(COMPONENT SIDE)**

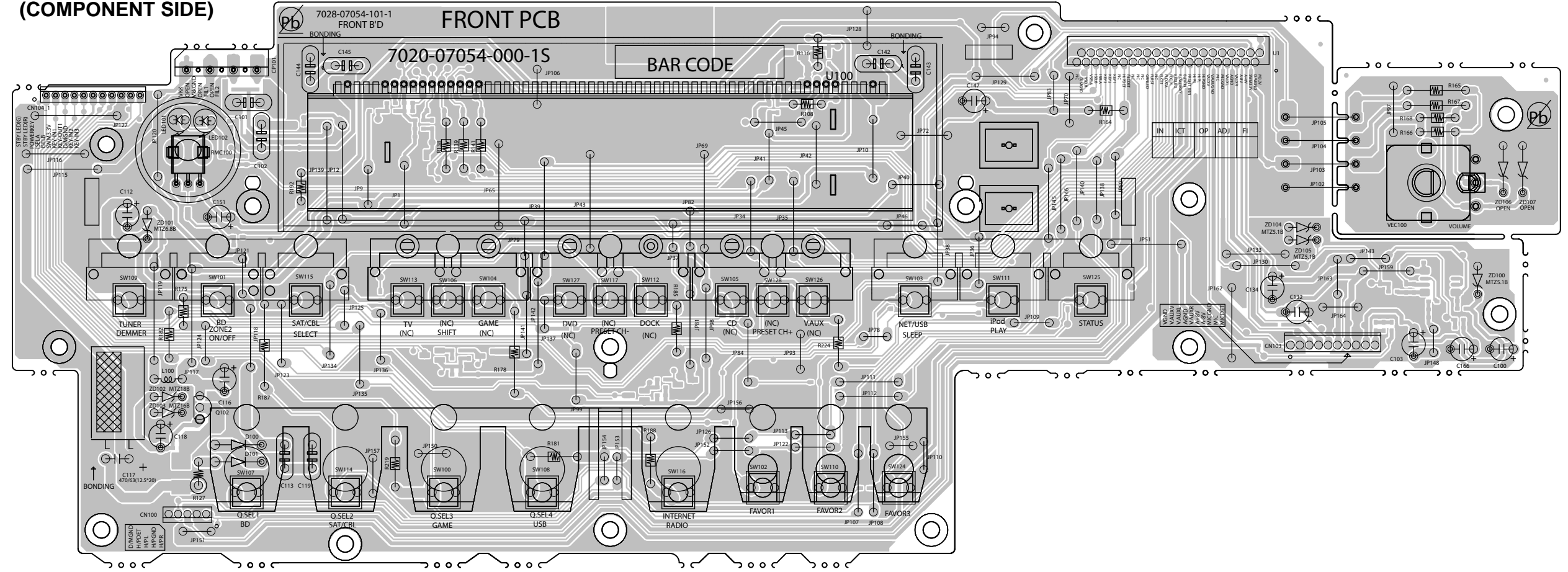


**REG_CNT
(FOIL SIDE)**

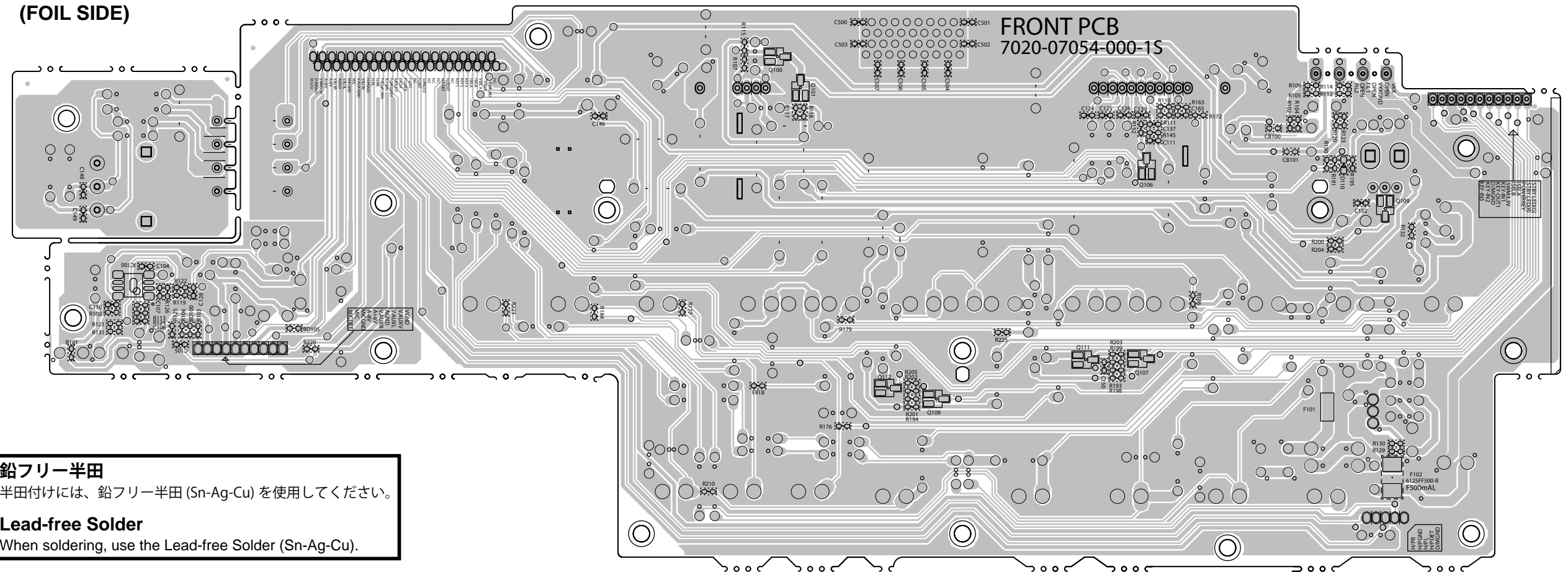


鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。
Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

**FRONT
(COMPONENT SIDE)**

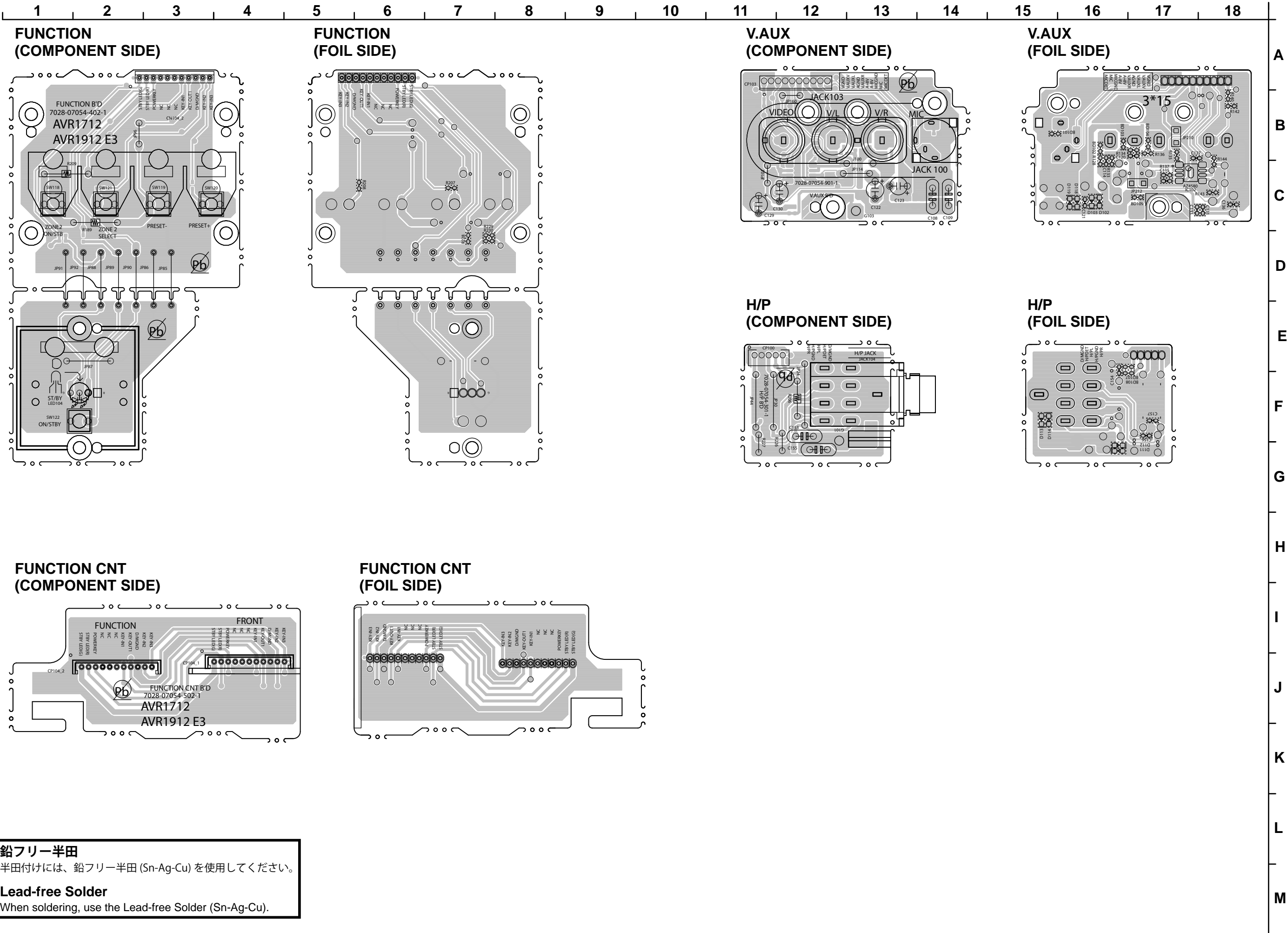


**FRONT
(FOIL SIDE)**



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).

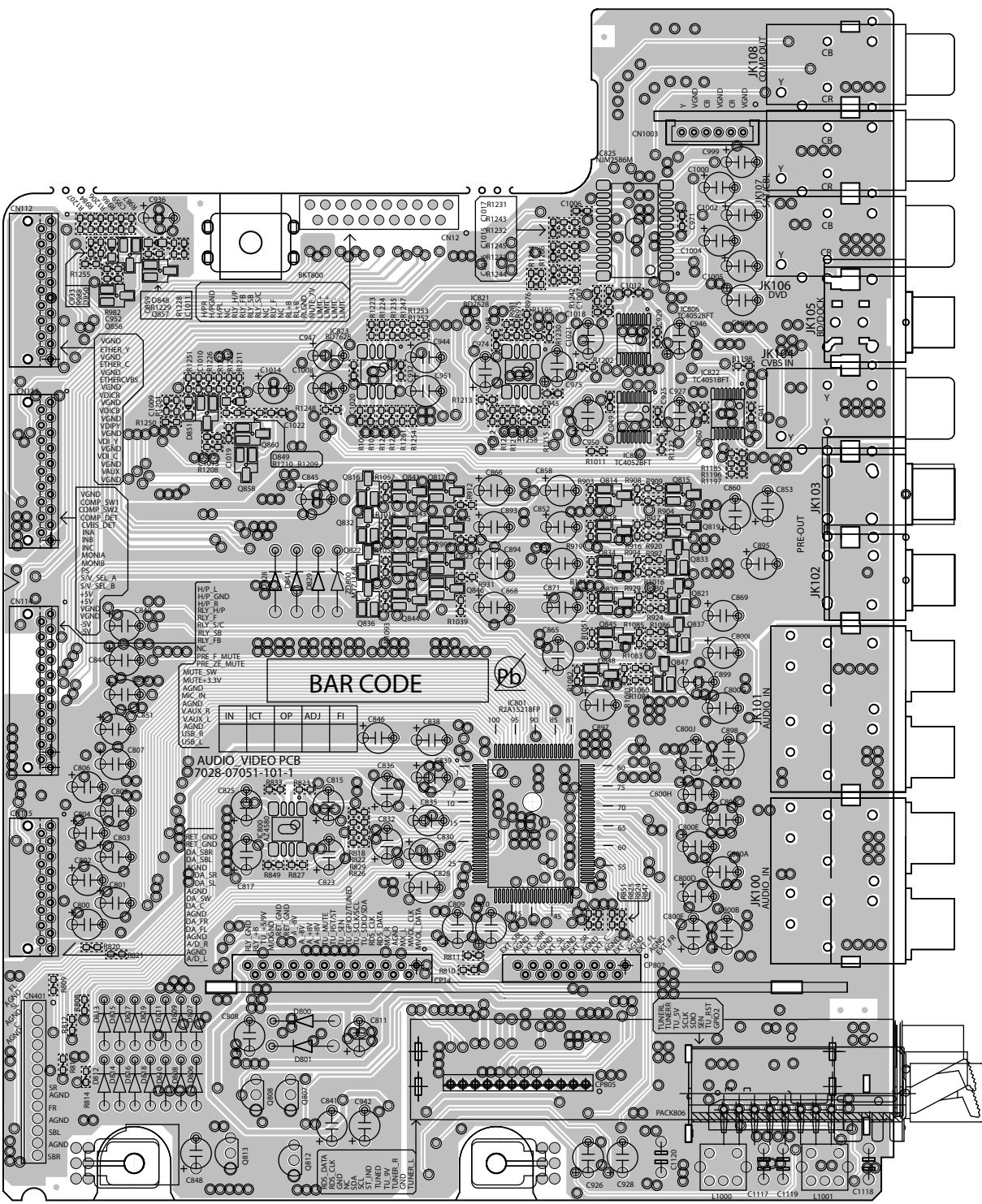


鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

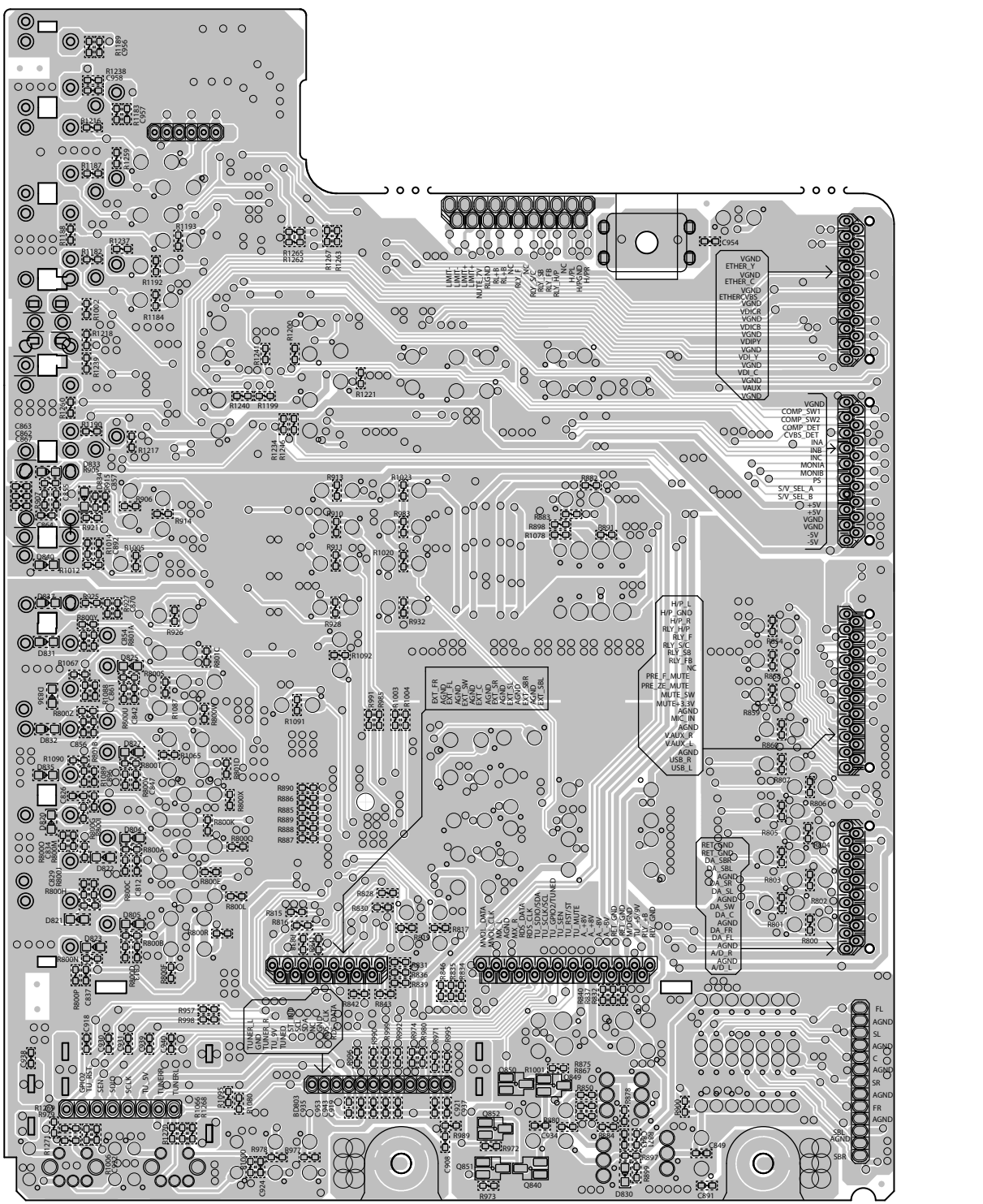
Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

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

AUDIO_VIDEO 
(COMPONENT SIDE)



AUDIO_VIDEO 
(FOIL SIDE)



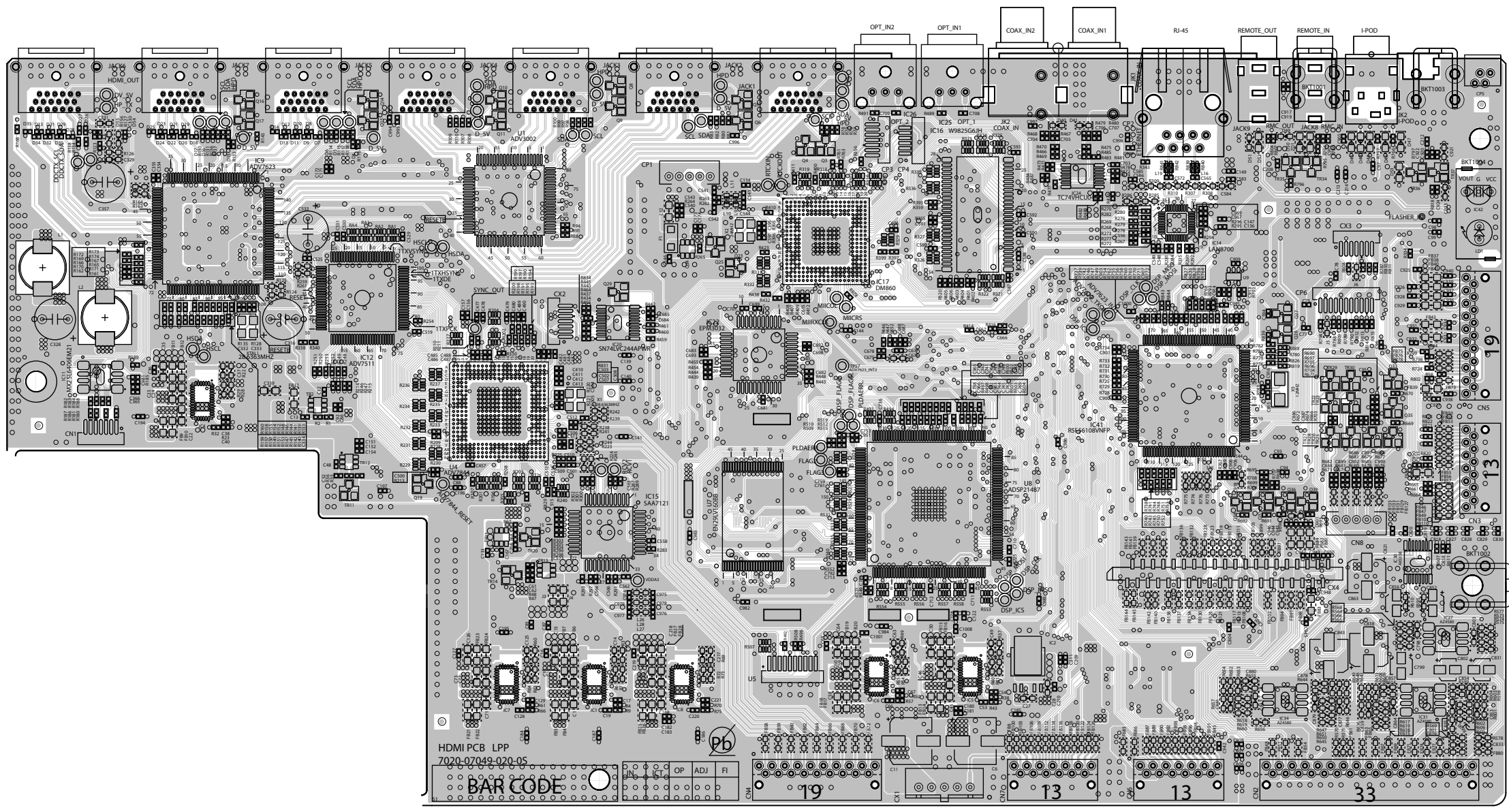
鉛フリー半田
 半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

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

**HDMI
(COMPONENT SIDE)**

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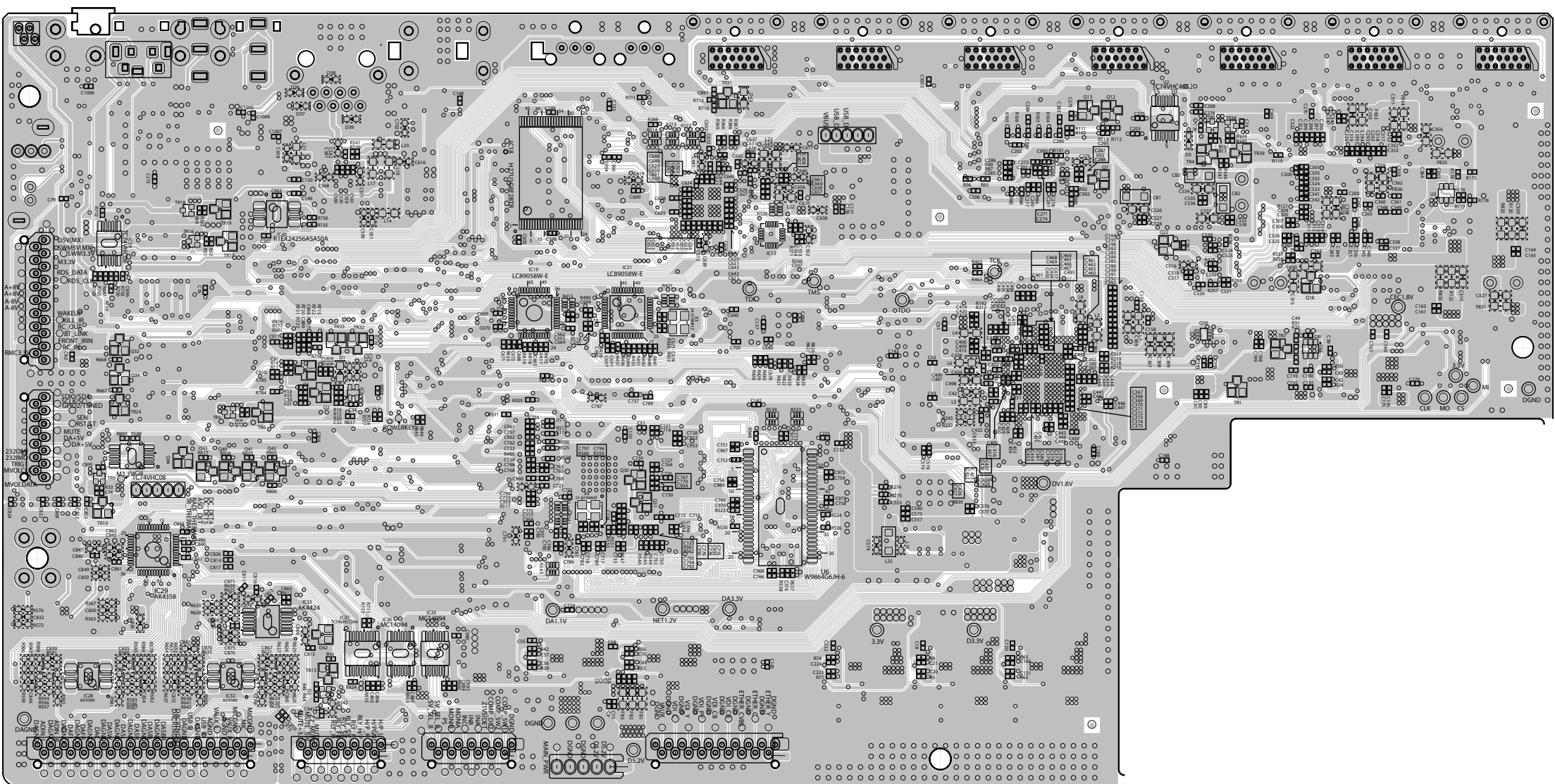


鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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)

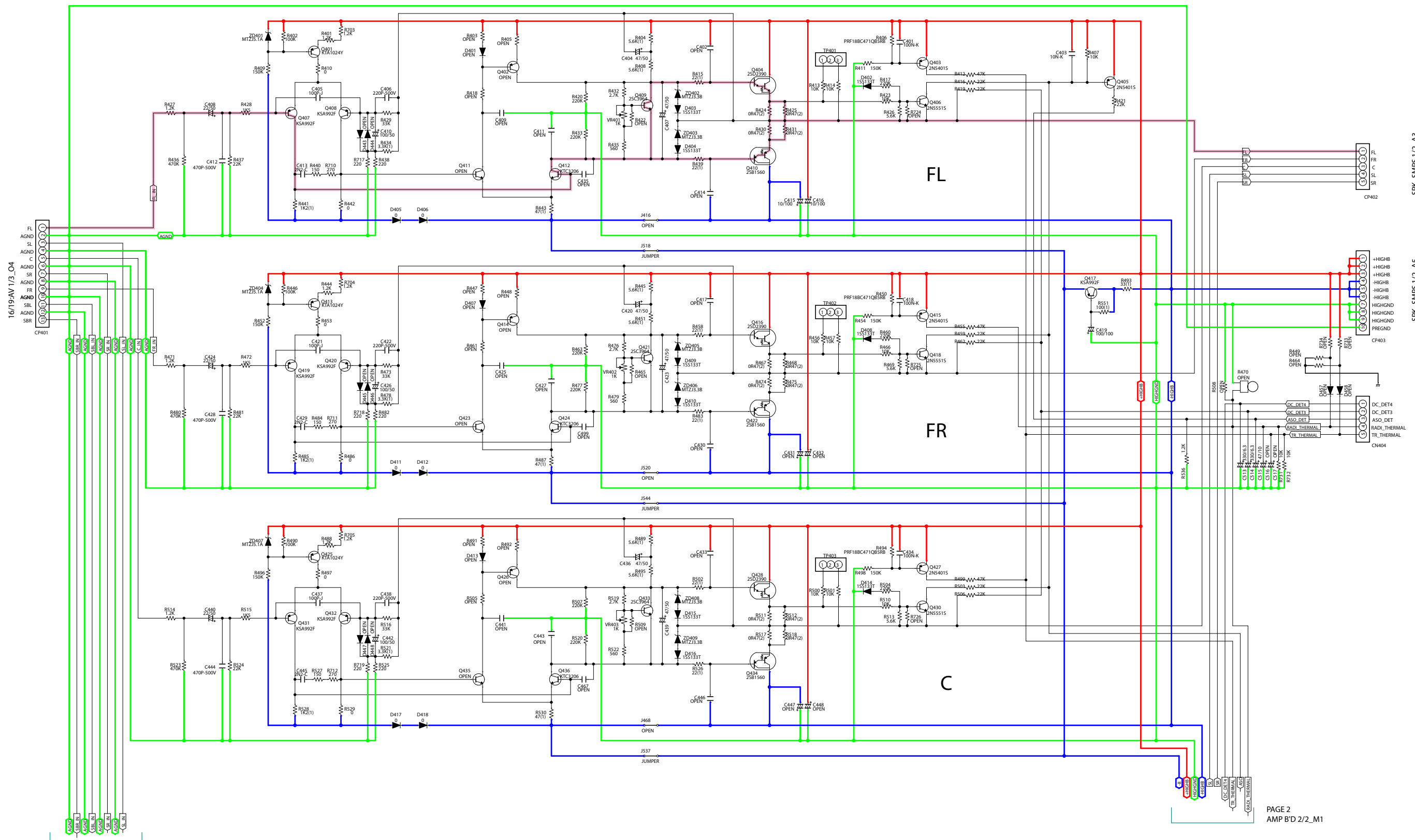


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鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

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

AMP B'D 1/2

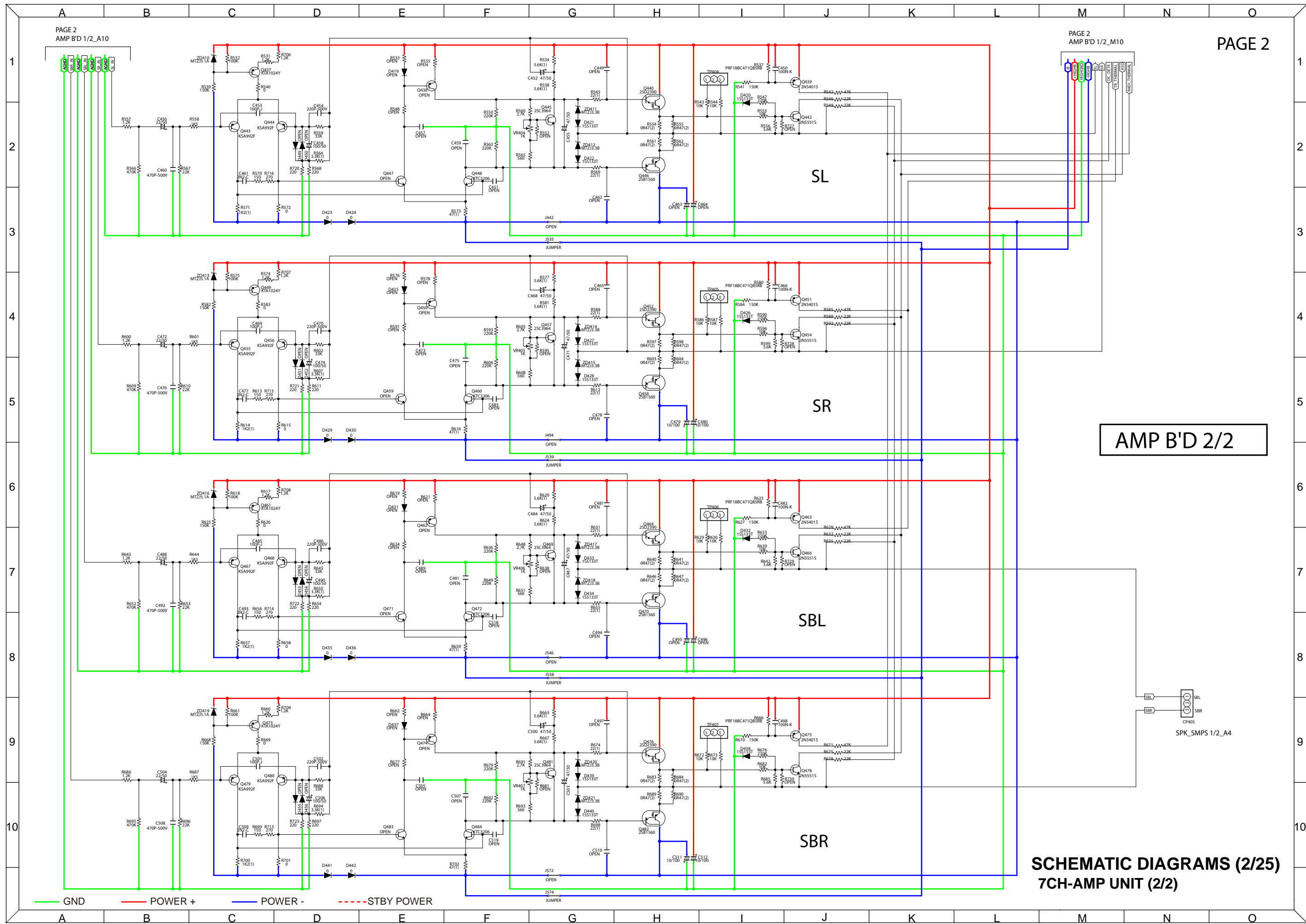


PAGE 2
AMP B'D 2/2_A1

PAGE 2
AMP B'D 2/2_M1

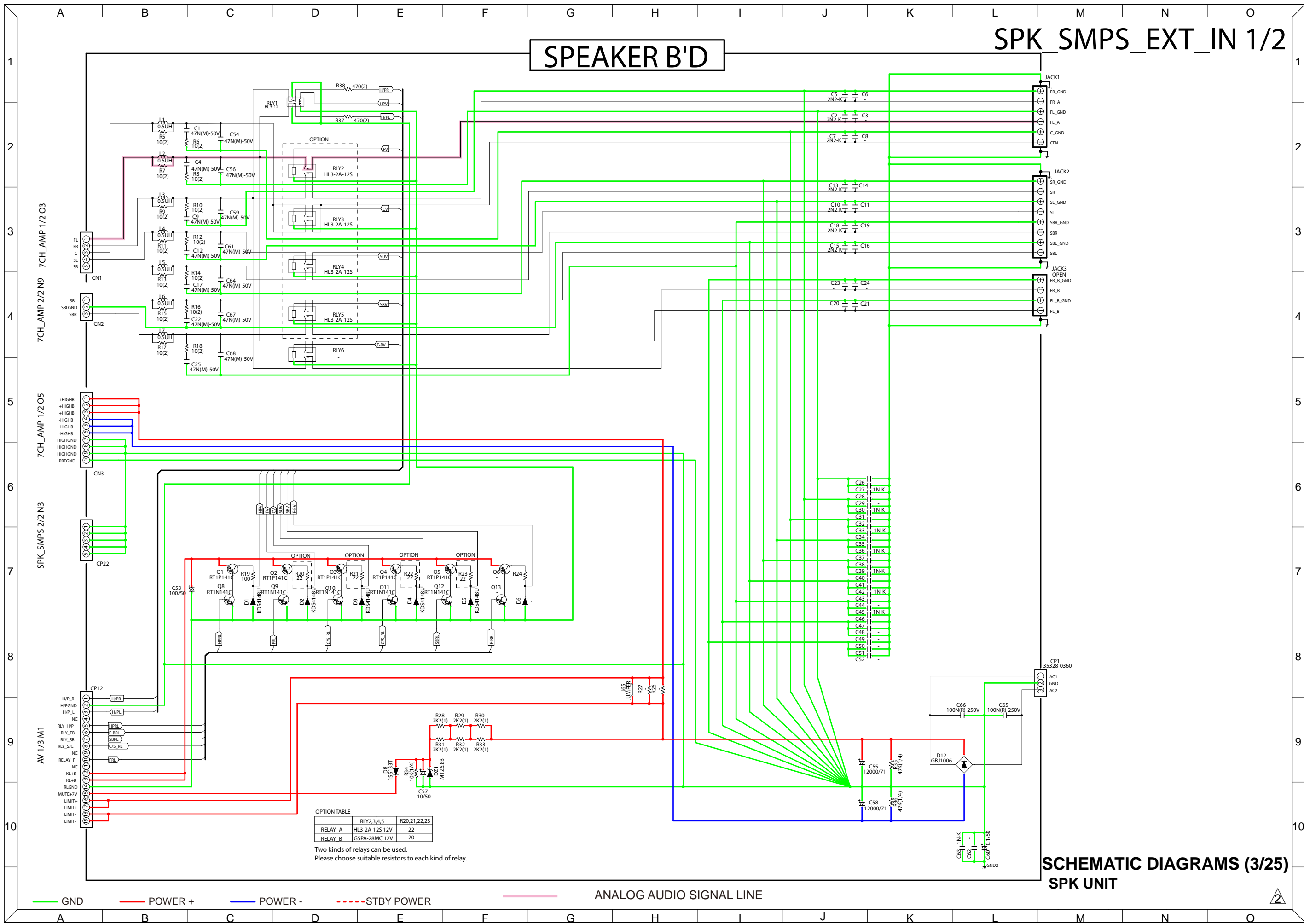
SCHEMATIC DIAGRAMS (1/25) 7CH-AMP UNIT (1/2)

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



AMP B'D 2/2

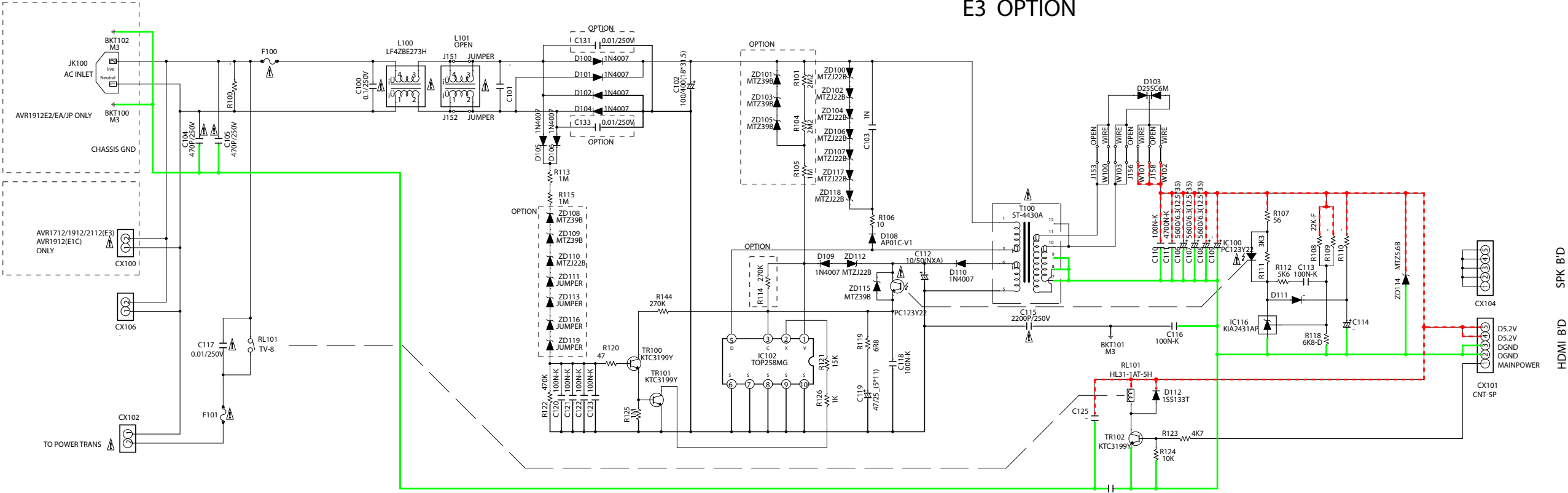
SCHEMATIC DIAGRAMS (2/25)
7CH-AMP UNIT (2/2)



SCHEMATIC DIAGRAMS (3/25)
SPK UNIT

SMPS B'D

E3 OPTION



FUSE OPTION

	E3		JP		E2, E1C, EA	
	F100	F101	F100	F101	F100	F101
AVR1712	2A	6.3A	X	X	X	X
AVR1912	2A	6.3A	2A	6.3A	1.6A	3.15A
AVR2112	2A	6.3A	X	X	X	X

OPTION TABLE

	ZD108	ZD109	ZD110	ZD111	ZD113	ZD116	ZD119	ZD101	ZD103	ZD105	R101	R104	R105	R114	C131	C133
E3	MTZ398	MTZ398	MTZJ22B	JUMPER	JUMPER	JUMPER	JUMPER	MTZJ398	MTZJ398	MTZJ398	2M2 (S)	2M2 (S)	1M (S)	270K	OPEN	OPEN
E2,EA,E1C	1M (S)	1M (S)	MTZJ398	MTZJ398	MTZJ398	MTZJ398	MTZJ398	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	56K	0.01	0.01
JPN	MTZJ398	MTZJ398	JUMPER	JUMPER	JUMPER	JUMPER	JUMPER	MTZJ398	MTZJ398	MTZJ398	2M2 (S)	2M2 (S)	1M (S)	270K	OPEN	OPEN

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

SCHEMATIC DIAGRAMS (4/25)
SMPS UNIT

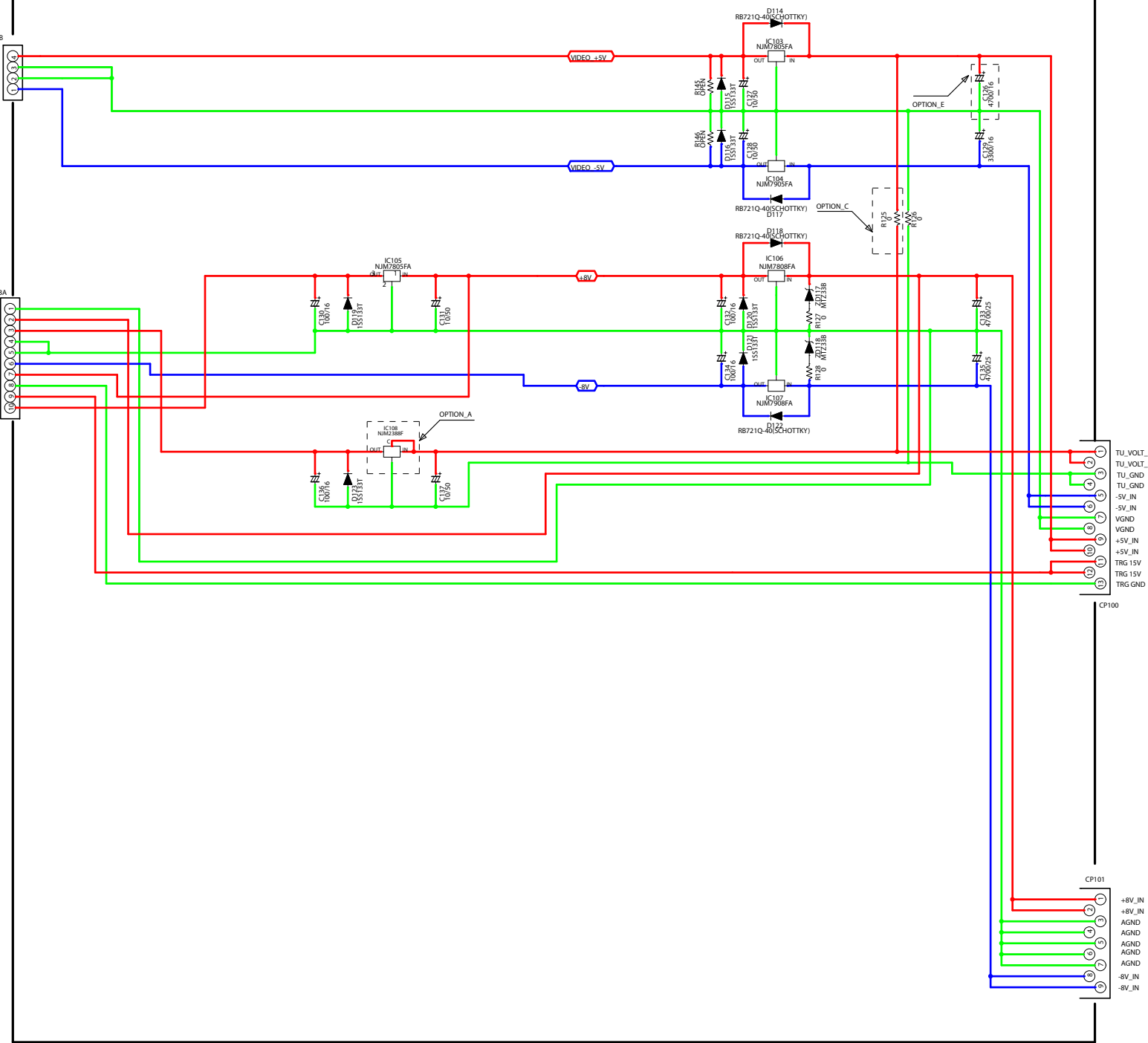
— GND — POWER + — POWER - - - - - STBY POWER

REGULATOR B'D

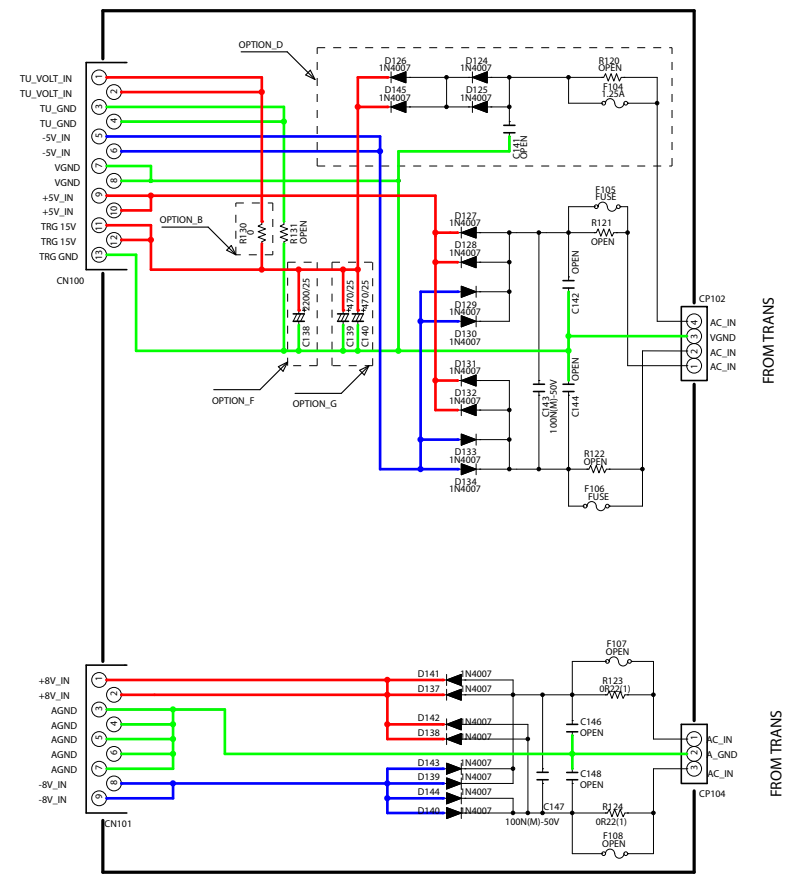
REG_CNT 1/4

(REG_CNT_3/4)
FRONT CONNECTOR

(REG_CNT_2/4)
SIDE CONNECTOR



FUSE	F105,F106
AVR17_19_2112	T1.6AL/250V

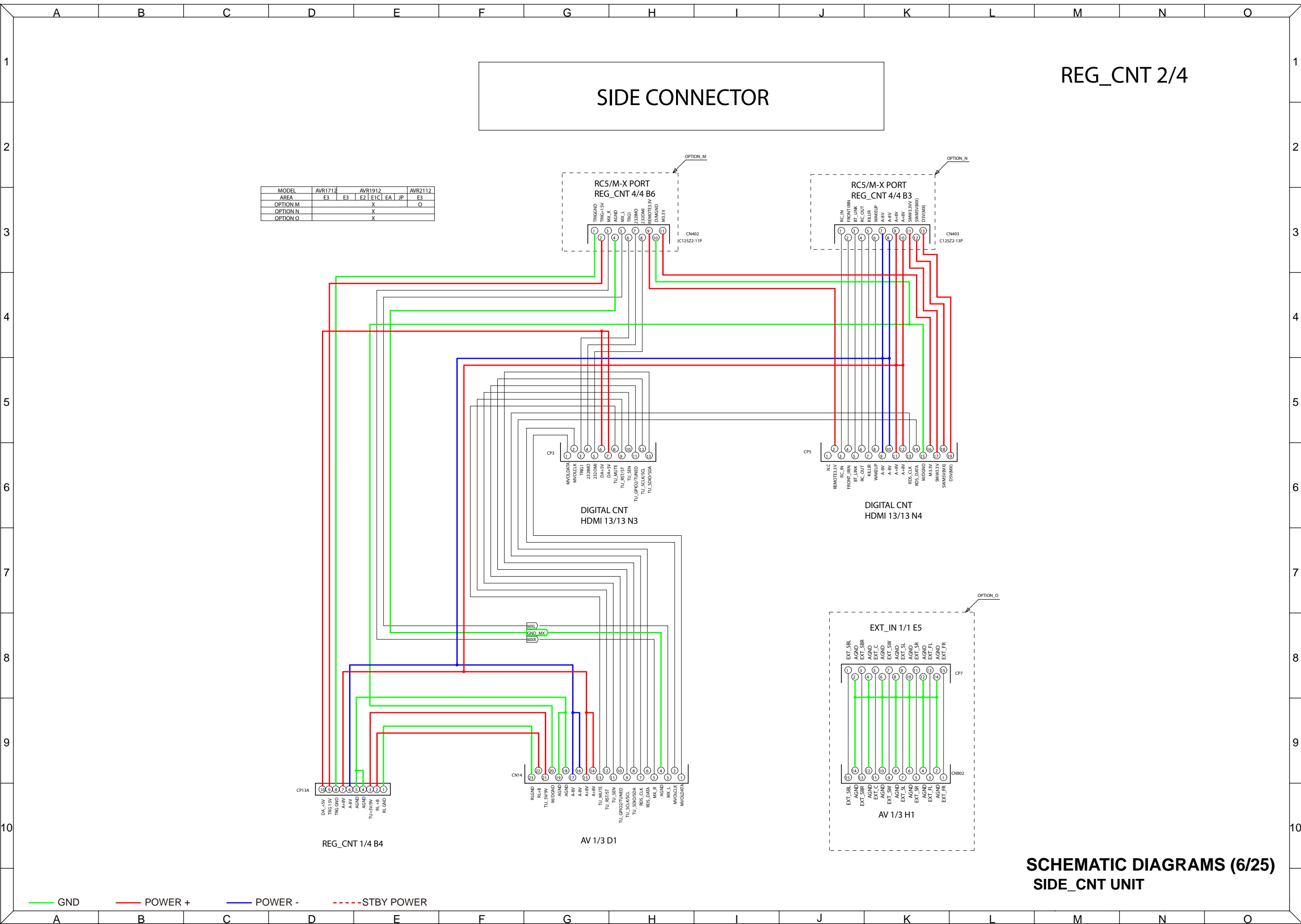


*OPTION TABLE

MODEL	AVR1712/1912/2112	
AREA	E3	E1C/E2/EA/JP
OPTION_A	NJM2388F05	NJM2388F09
OPTION_B	X	O
OPTION_C	O	X
OPTION_D	X	O
OPTION_E	4700/16	3300/16
OPTION_F	X	X
OPTION_G	X	470/25

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

SCHEMATIC DIAGRAMS (5/25) REG UNIT



MODEL	AVR1712	AVR1912	AVR2112
AREA	E3	E3	E3
OPTION M		X	O
OPTION N		X	
OPTION O		X	

SIDE CONNECTOR

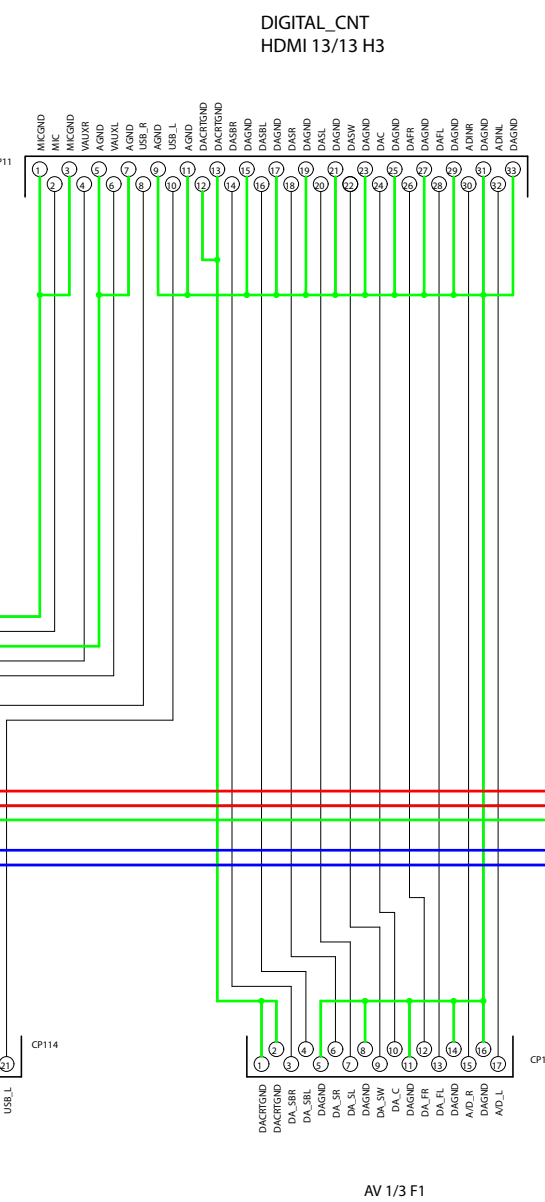
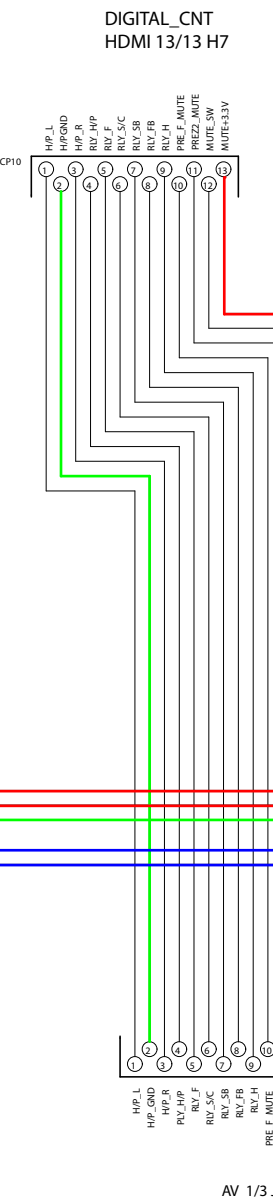
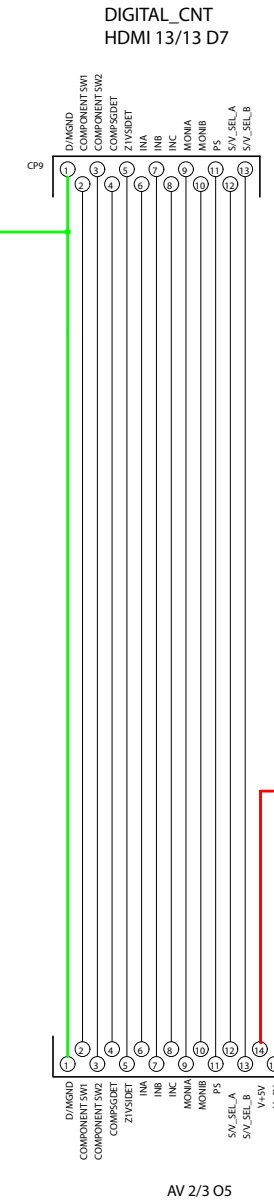
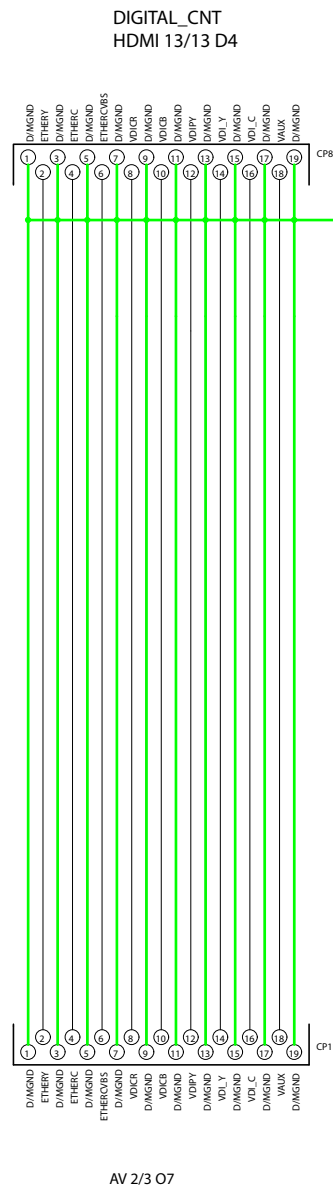
REG_CNT 2/4

SCHEMATIC DIAGRAMS (6/25)
SIDE_CNT UNIT

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

FRONT CONNECTOR

REG_CNT 3/4



← TO HDMI



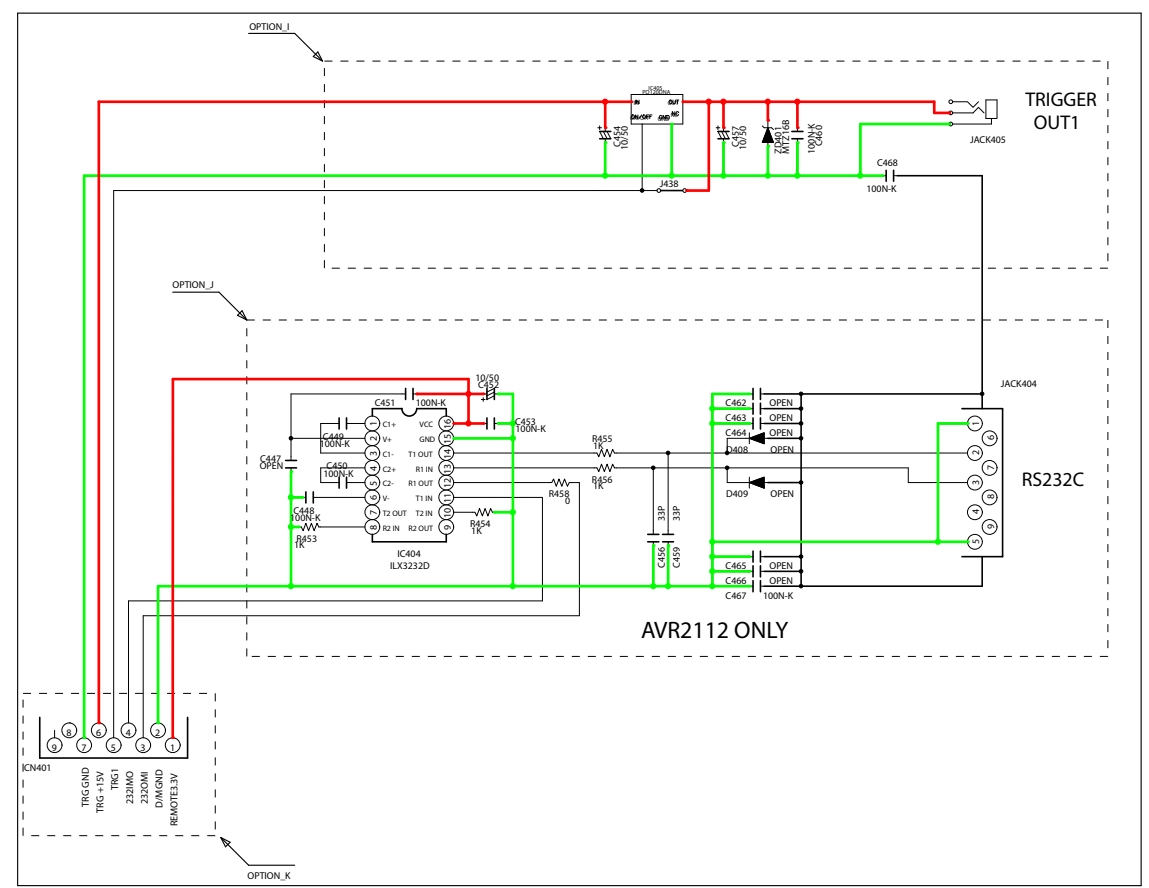
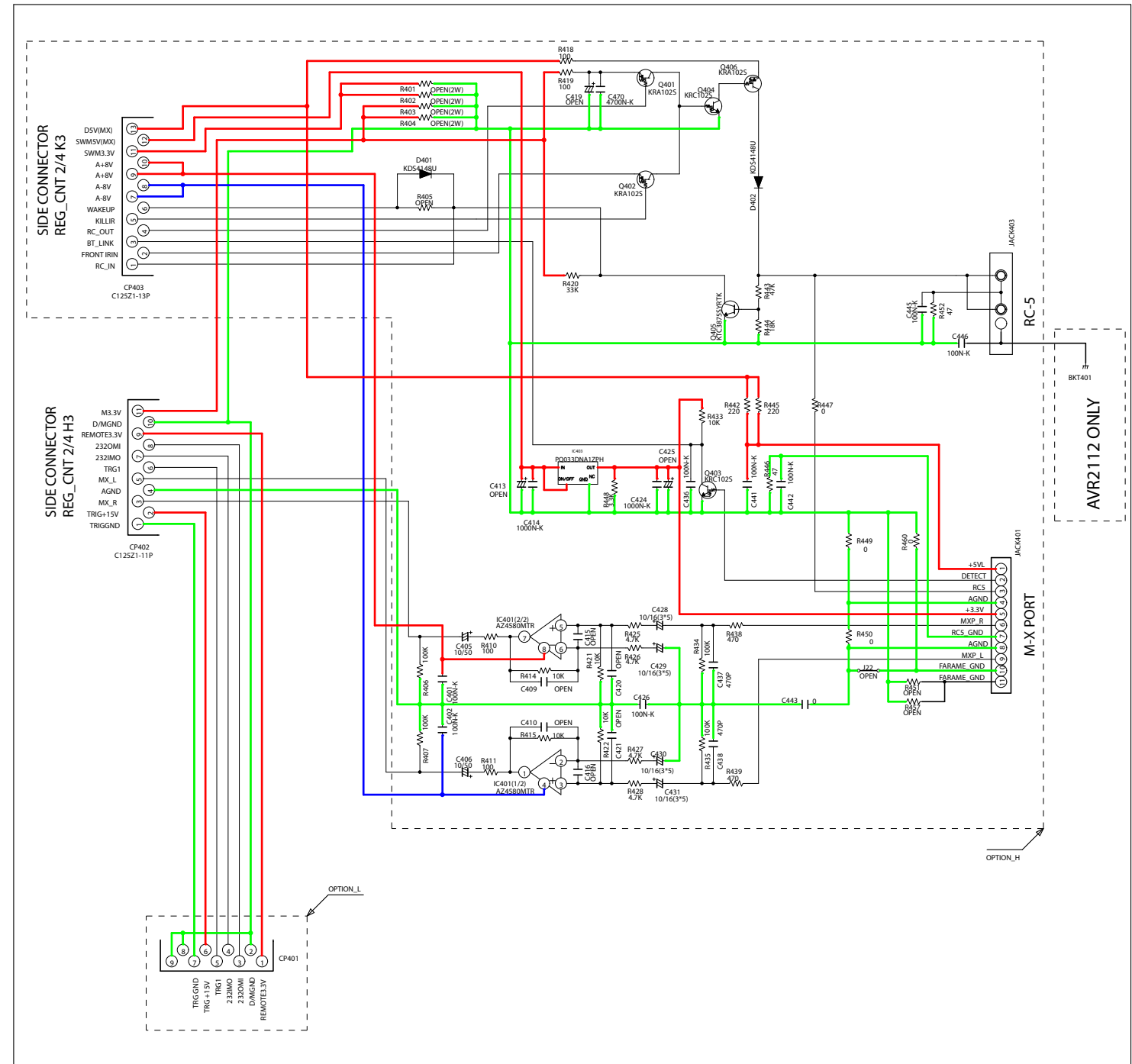
← TO AV B'D



SCHEMATIC DIAGRAMS (7/25)
FRONT_CNT UNIT

RC-5/M-X PORT

RS232/TRIGGER

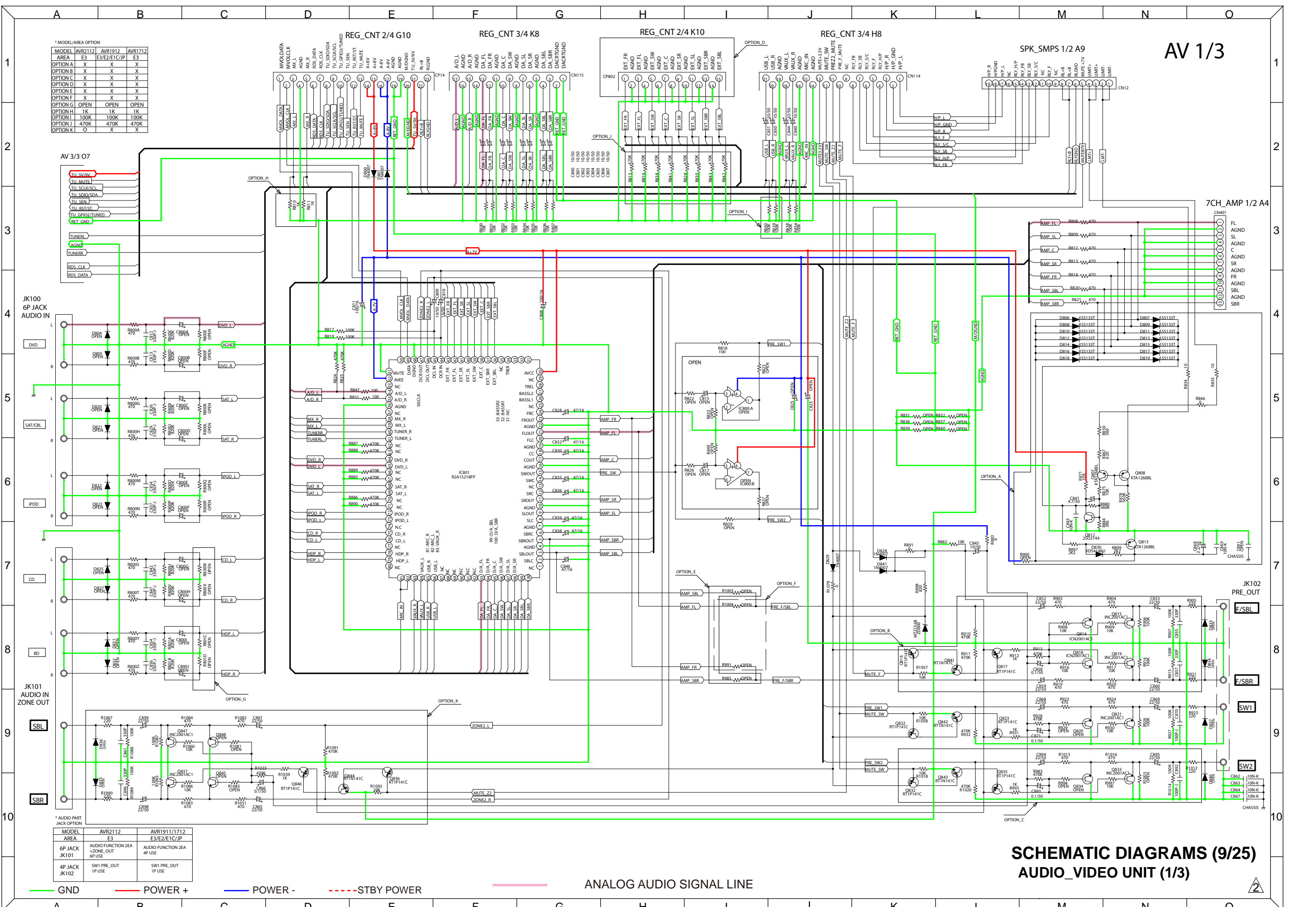


MODEL	AVR1712	AVR1912	AVR2112
AREA	E3	E3	E2 E1C EA JP E3
OPTION H		X	
OPTION I		X	
OPTION J		X	O
OPTION K		X	O
OPTION L		X	O

SCHEMATIC DIAGRAMS (8/25)
SIRIUS UNIT (AVR-2112CI ONLY)
RS232C UNIT (AVR-2112CI ONLY)

* MODEL/AREA OPTION			
MODEL	AVR2112	AVR1912	AVR1712
AREA	E3	E3/E2/E1C/JP	E3
OPTION A	X	X	X
OPTION B	X	X	X
OPTION C	X	X	X
OPTION D	X	X	X
OPTION E	X	X	X
OPTION F	X	X	X
OPTION G	OPEN	OPEN	OPEN
OPTION H	1K	1K	1K
OPTION I	100K	100K	100K
OPTION J	470K	470K	470K
OPTION K	O	X	X

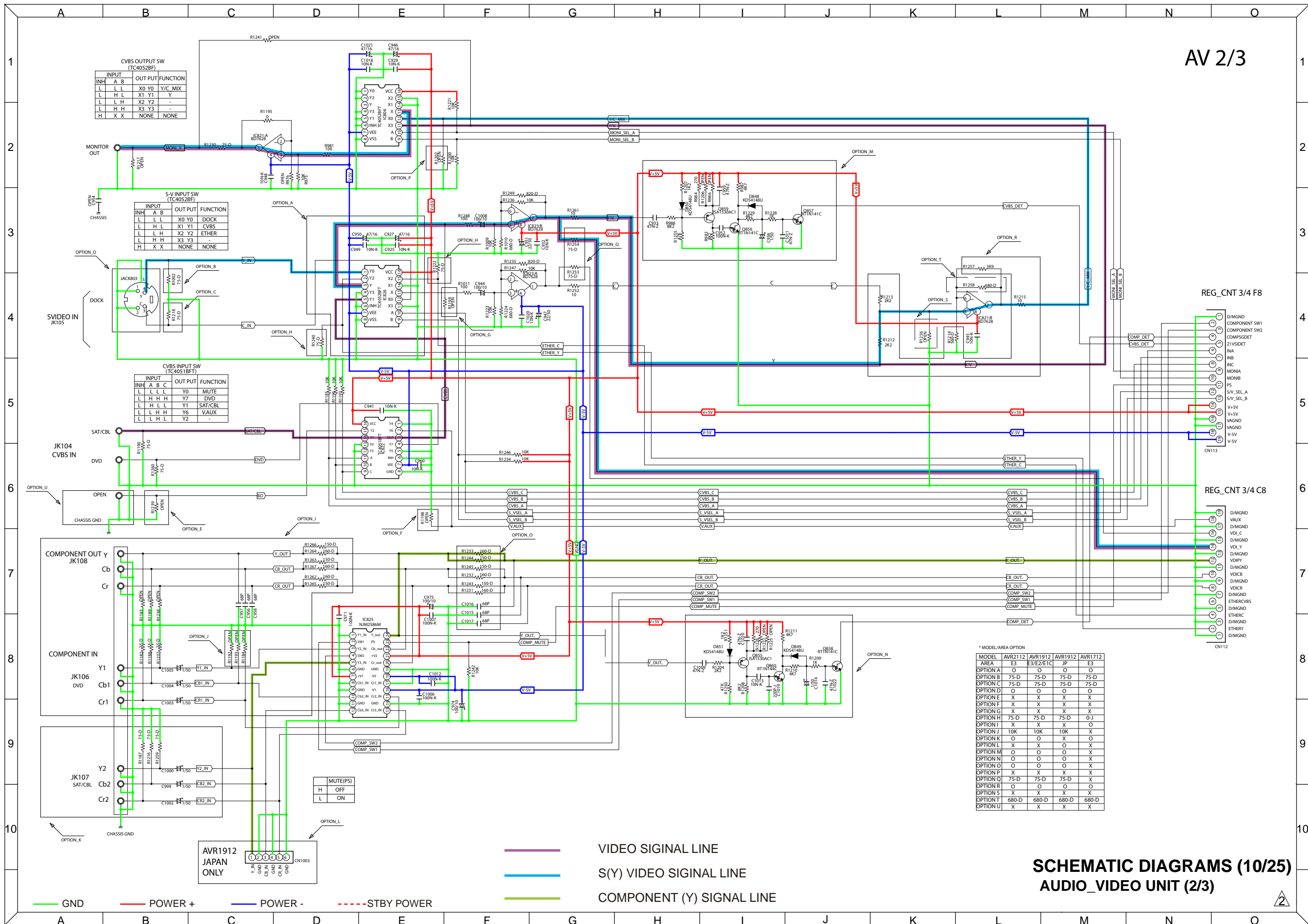
AV 1/3



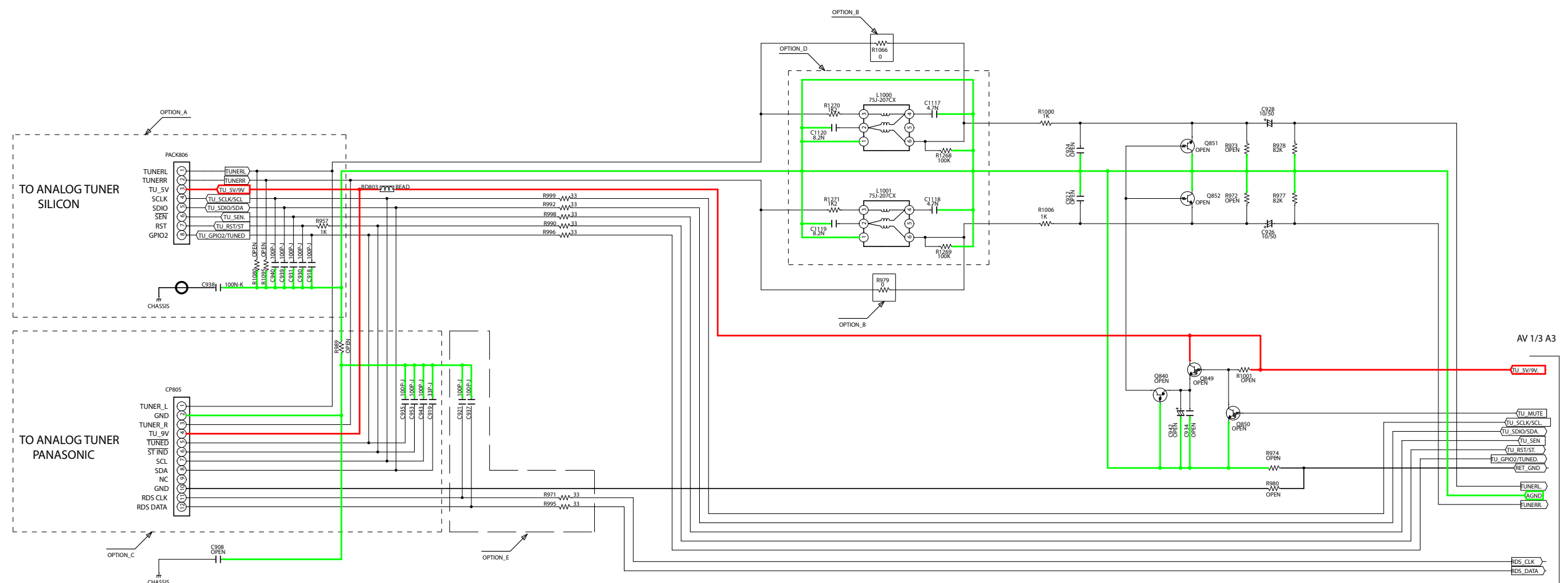
* AUDIO PART JACK OPTION		
MODEL	AVR2112	AVR1911/1712
AREA	E3	E3/E2/E1C/JP
6P JACK JK101	AUDIO FUNCTION 2EA +ZONE_OUT 6P USE	AUDIO FUNCTION 2EA 4P USE
4P JACK JK102	SW1 PRE_OUT 1P USE	SW1 PRE_OUT 1P USE

SCHEMATIC DIAGRAMS (9/25)
AUDIO_VIDEO UNIT (1/3)

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



SCHEMATIC DIAGRAMS (10/25)
AUDIO_VIDEO UNIT (2/3)

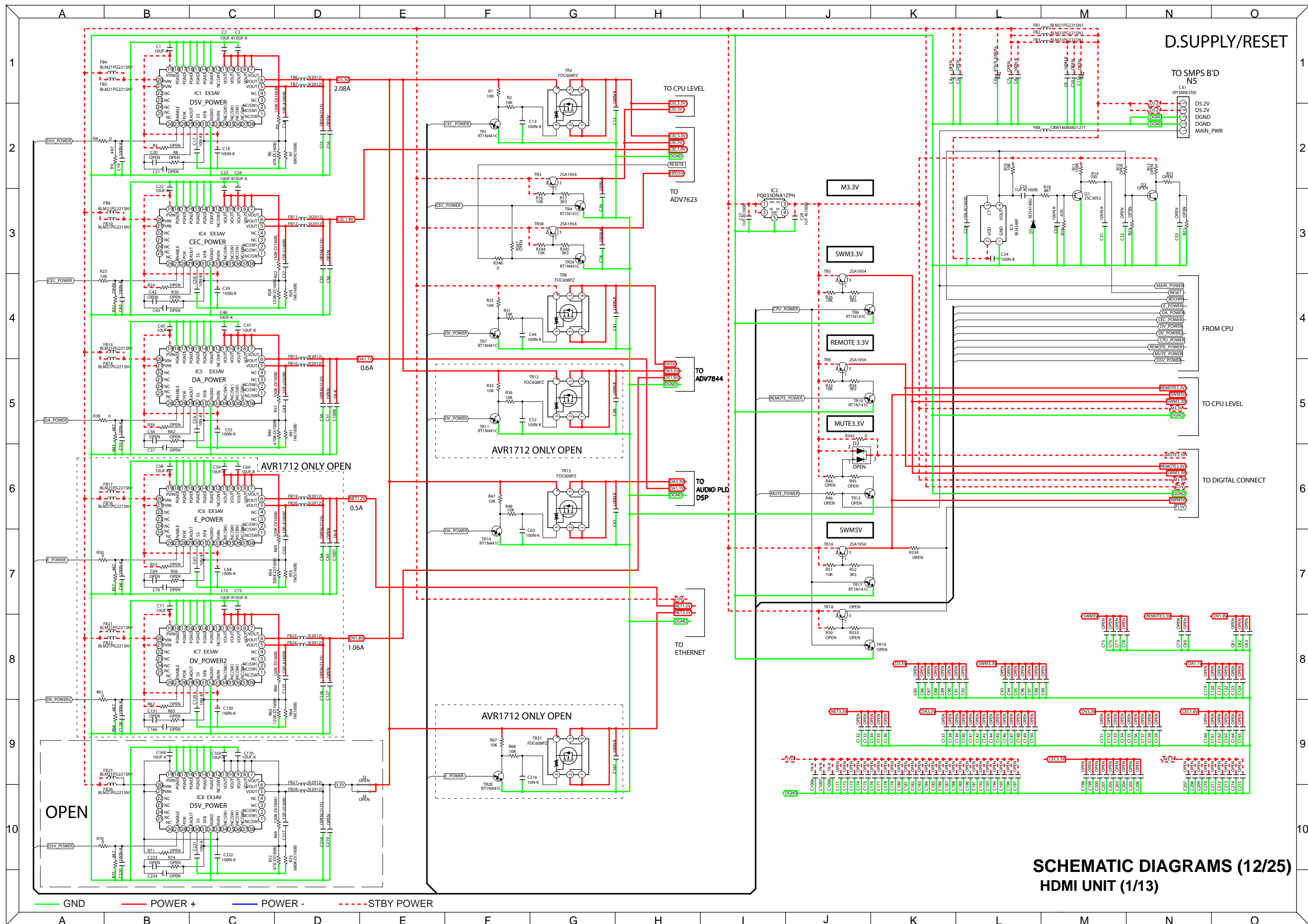


MODEL	AVR1712	AVR1912		AVR2112
AREA	E3	E3	E2/EA	E1C/JP
OPTION A	O	X	X	O
OPTION B	O	X	O	O
OPTION C	X	O	O	X
OPTION D	X	O	X	X
OPTION E	X	O	X	X

SCHEMATIC DIAGRAMS (11/25)
AUDIO_VIDEO UNIT (3/3)

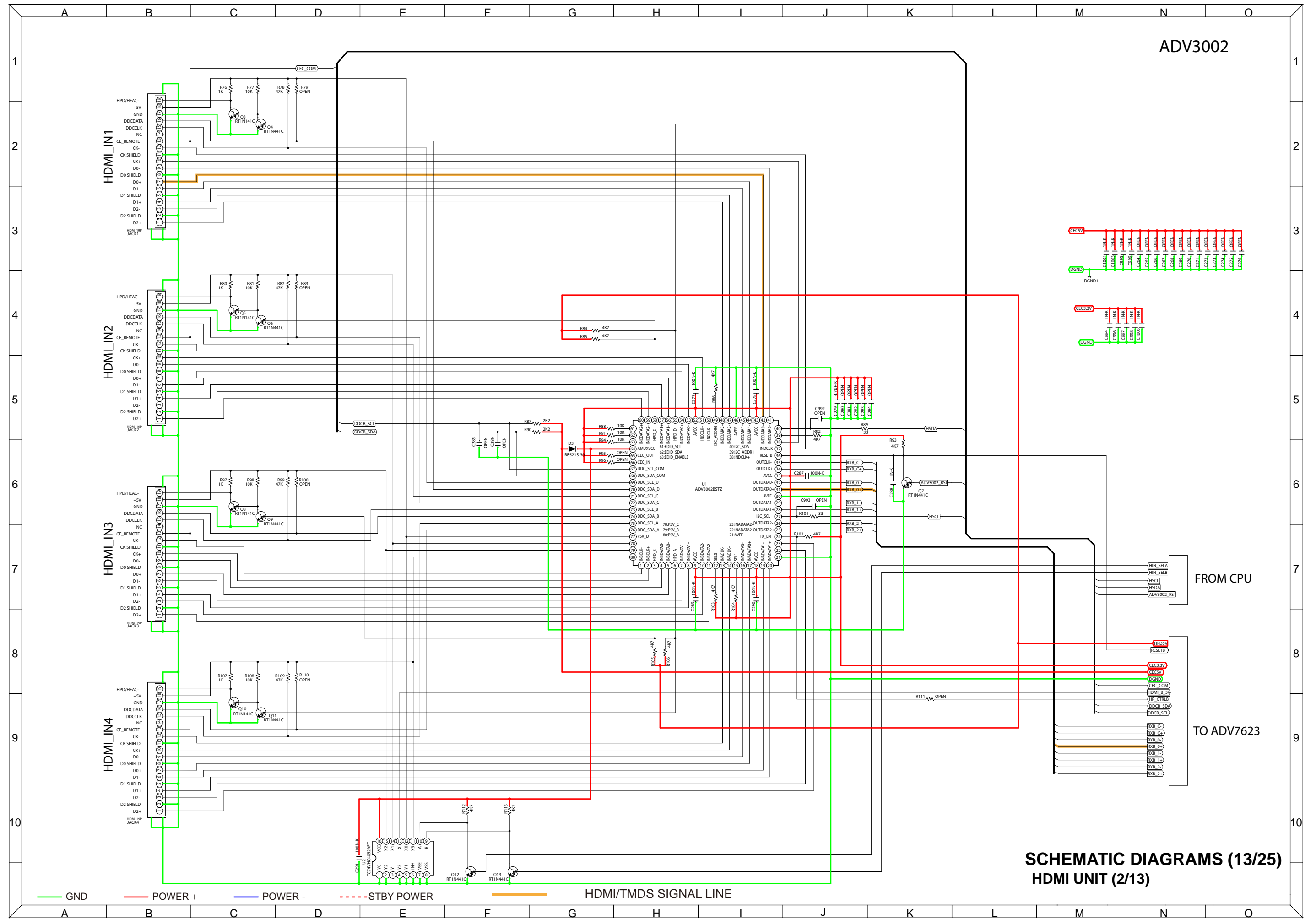
— GND — POWER + — POWER - - - - STBY POWER



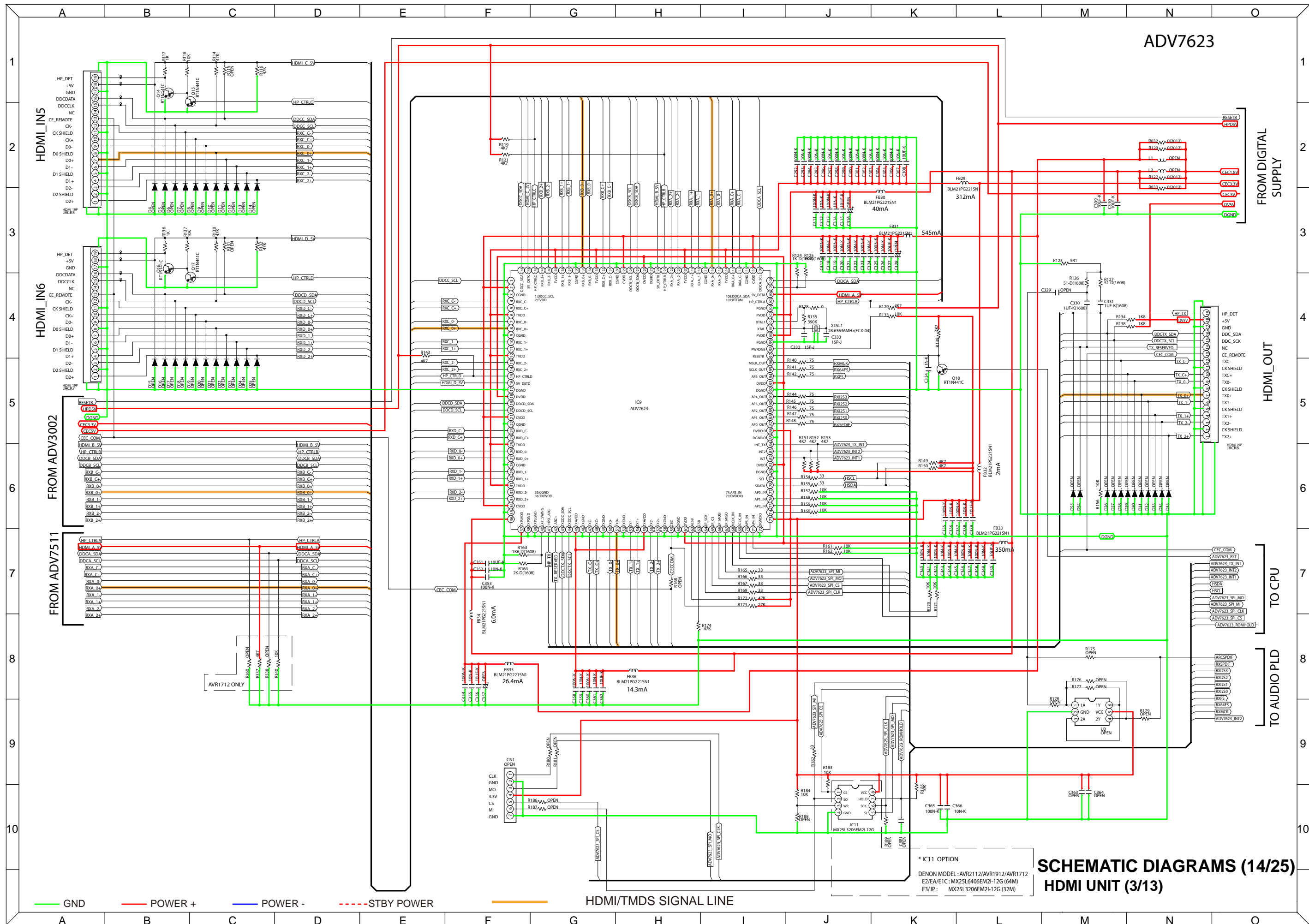


SCHEMATIC DIAGRAMS (12/25)
HDMI UNIT (1/13)

ADV3002



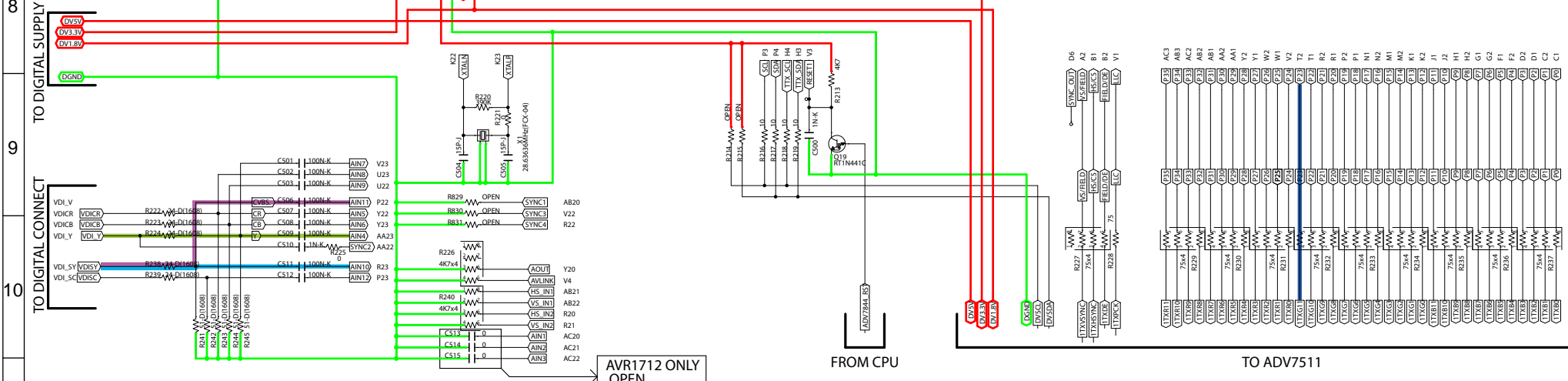
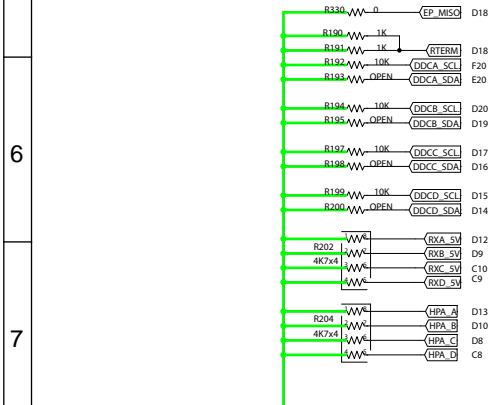
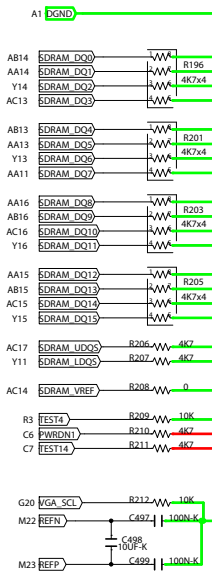
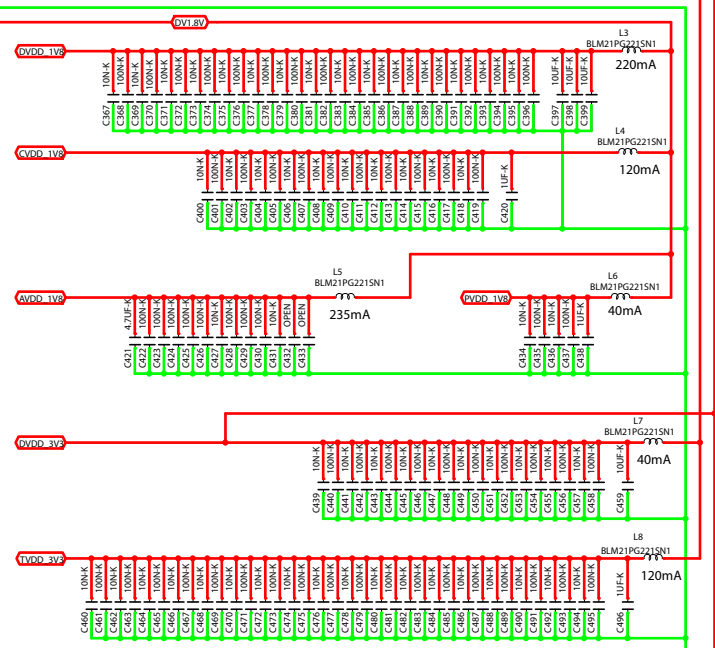
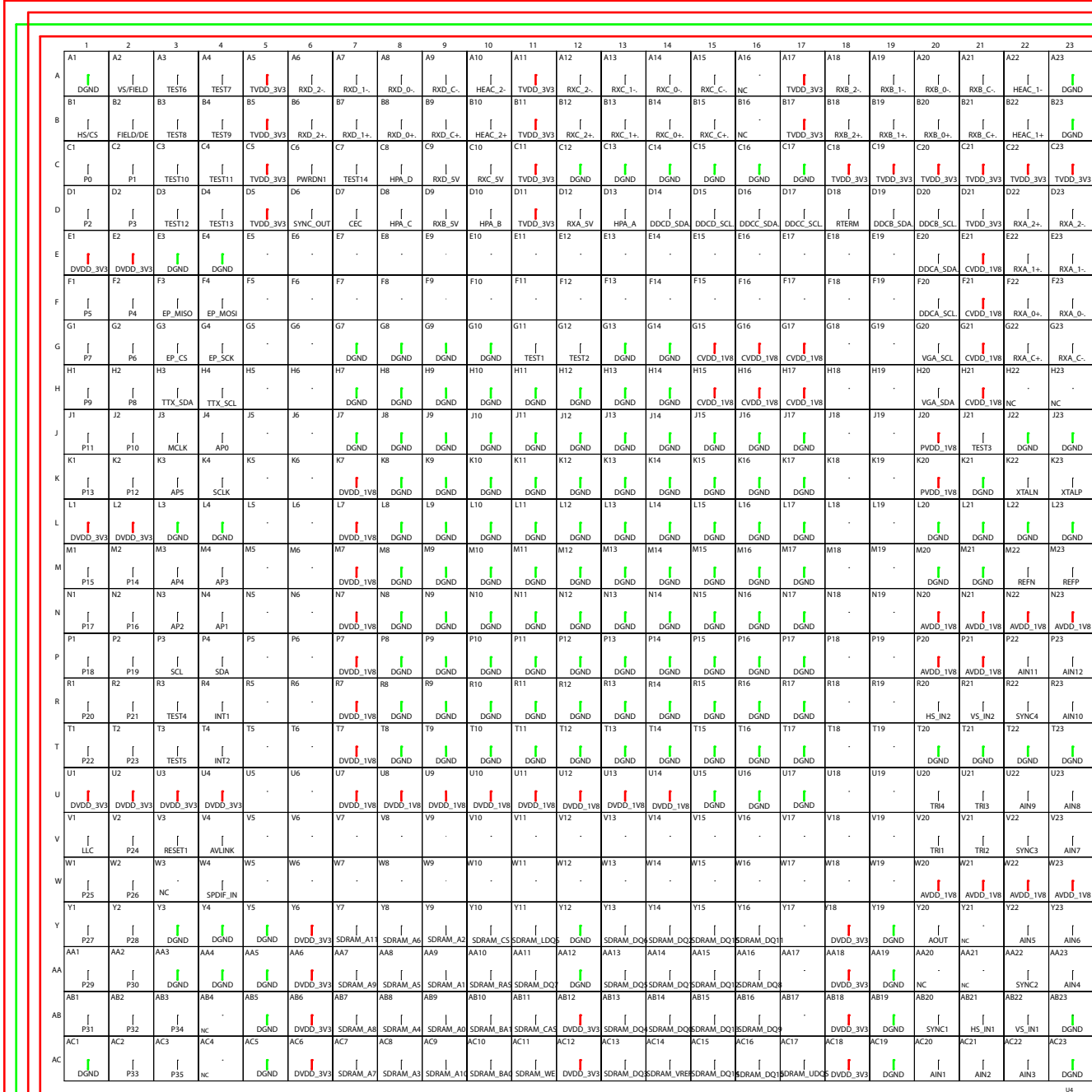
SCHEMATIC DIAGRAMS (13/25)
HDMI UNIT (2/13)



SCHEMATIC DIAGRAMS (14/25)
HDMI UNIT (3/13)

ADV7844

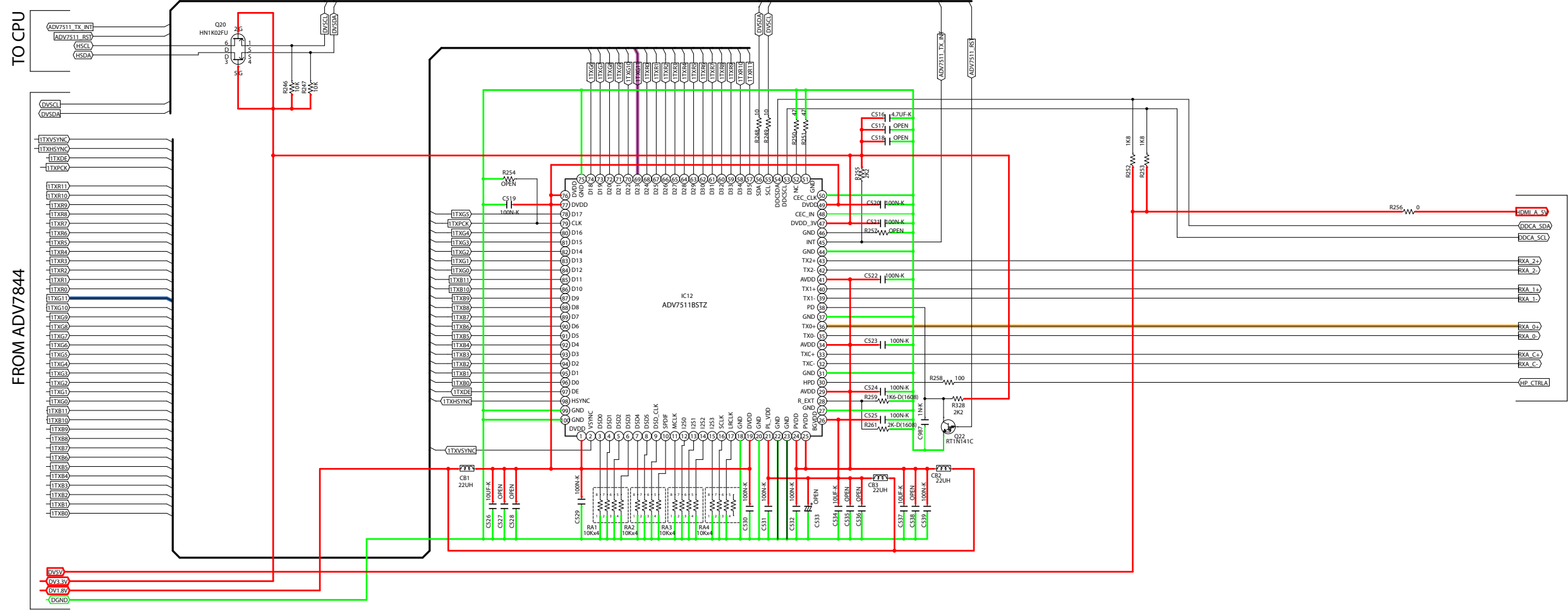
AVR1712 ONLY ALL OPEN



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

SCHEMATIC DIAGRAMS (15/25) HDMI UNIT (4/13)

AVR1712 ONLY ALL OPEN



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

— DIGITAL VIDEO SIGNAL LINE
— HDMI/TMDS SIGNAL LINE

SCHEMATIC DIAGRAMS (16/25)
HDMI UNIT (5/13)

AVR1712 ONLY ALL OPEN

NET/PHY

TO DM860

TO AUDIO PLD

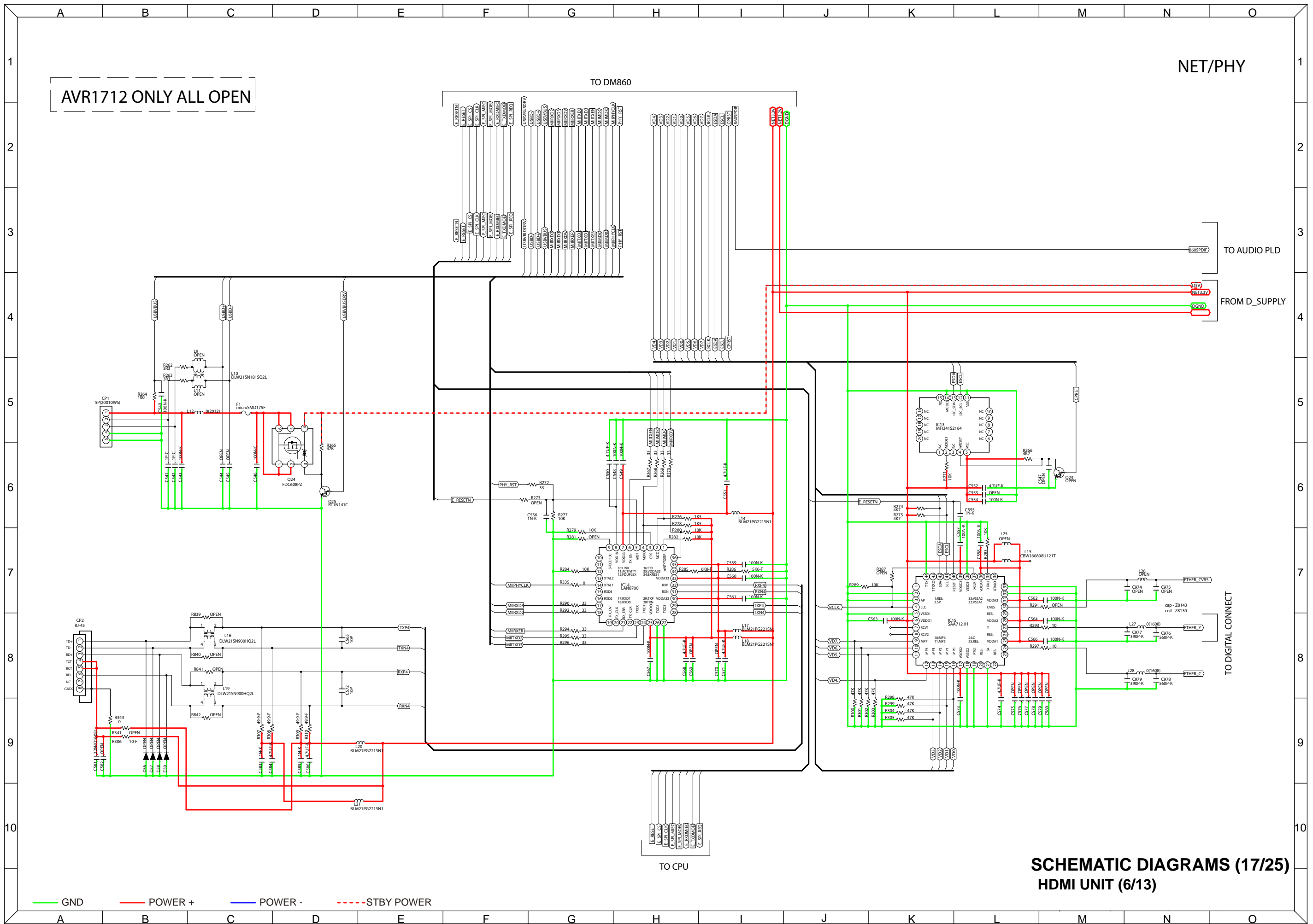
FROM D_SUPPLY

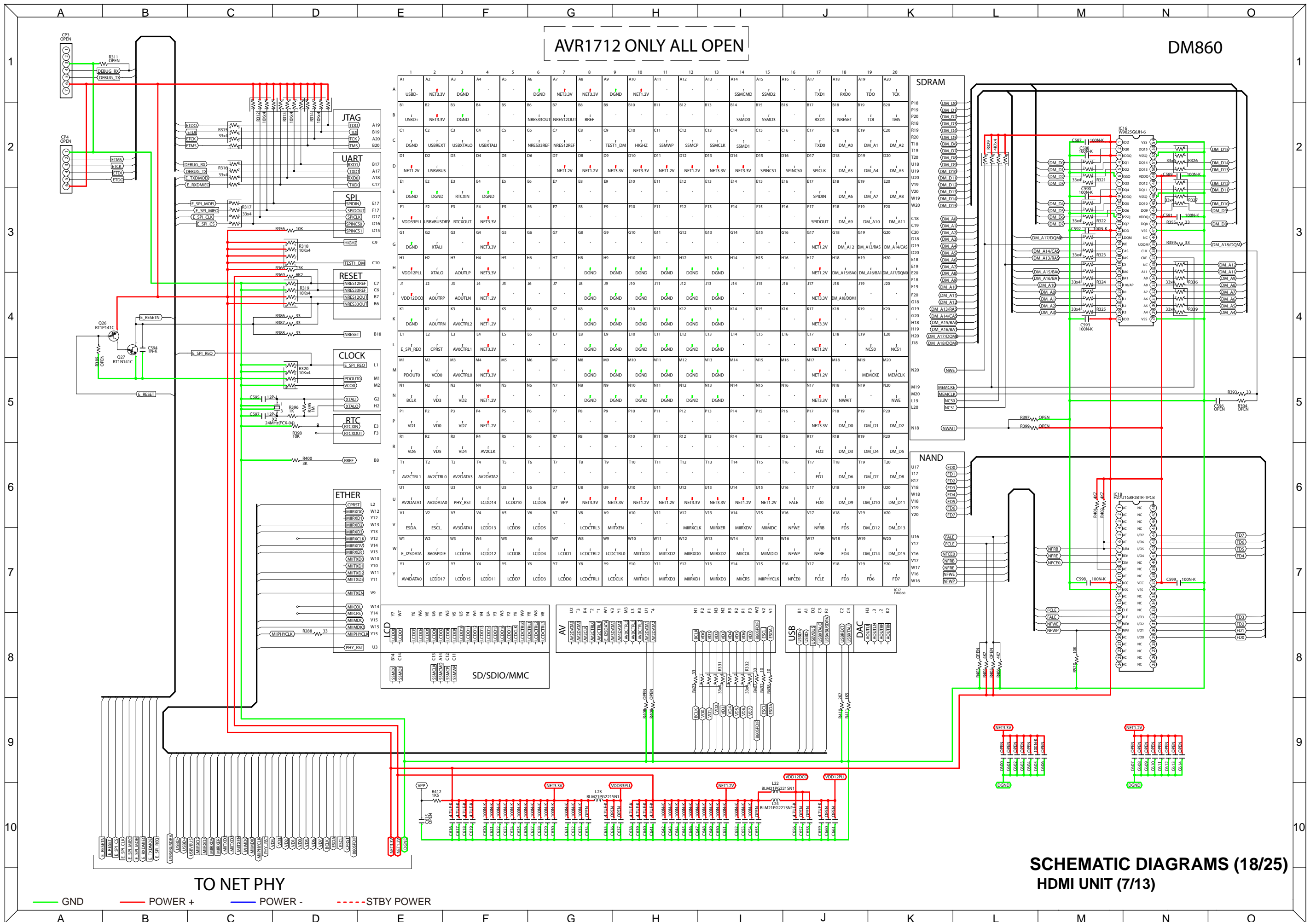
TO DIGITAL CONNECT

TO CPU

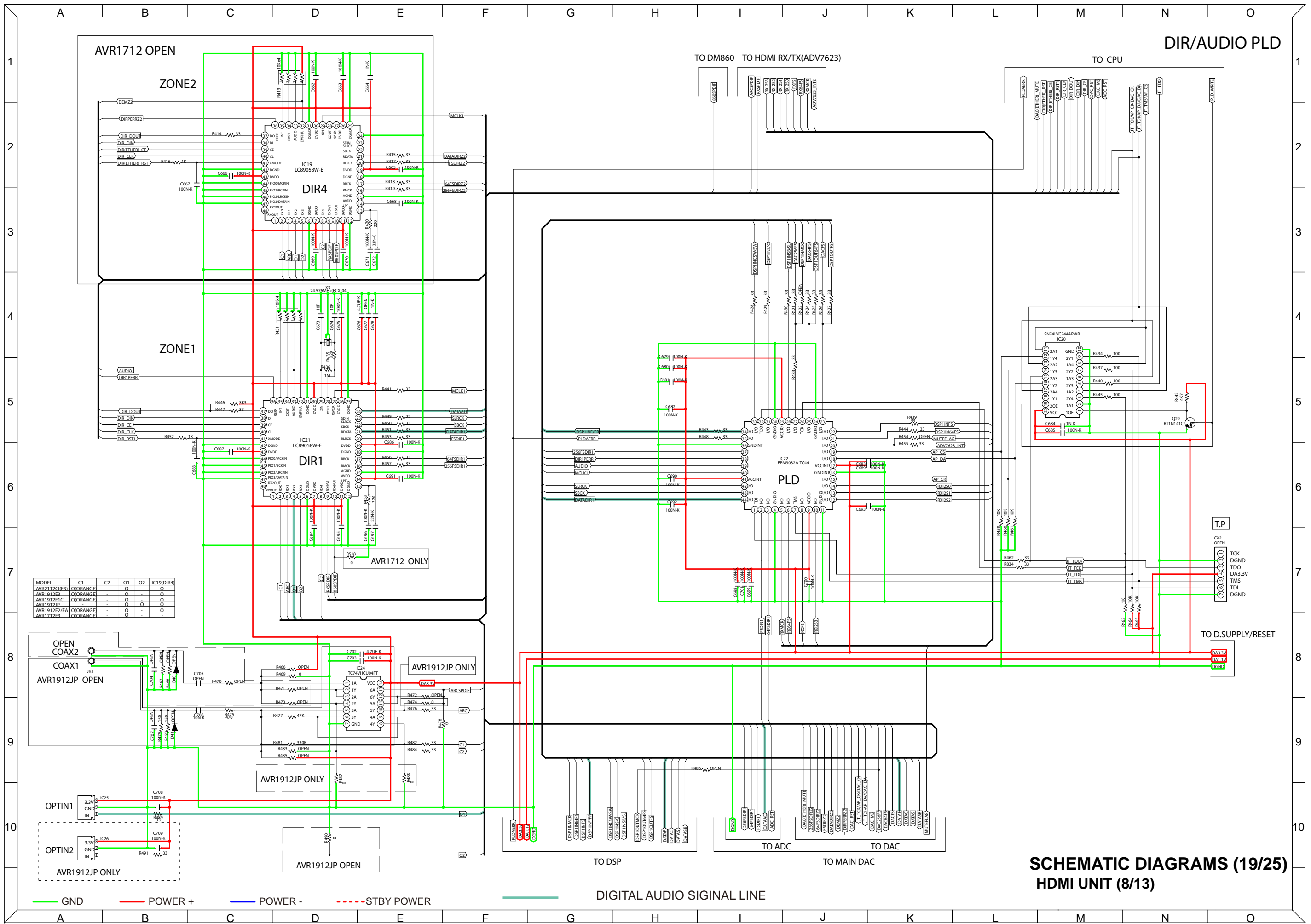
SCHEMATIC DIAGRAMS (17/25)
HDMI UNIT (6/13)

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



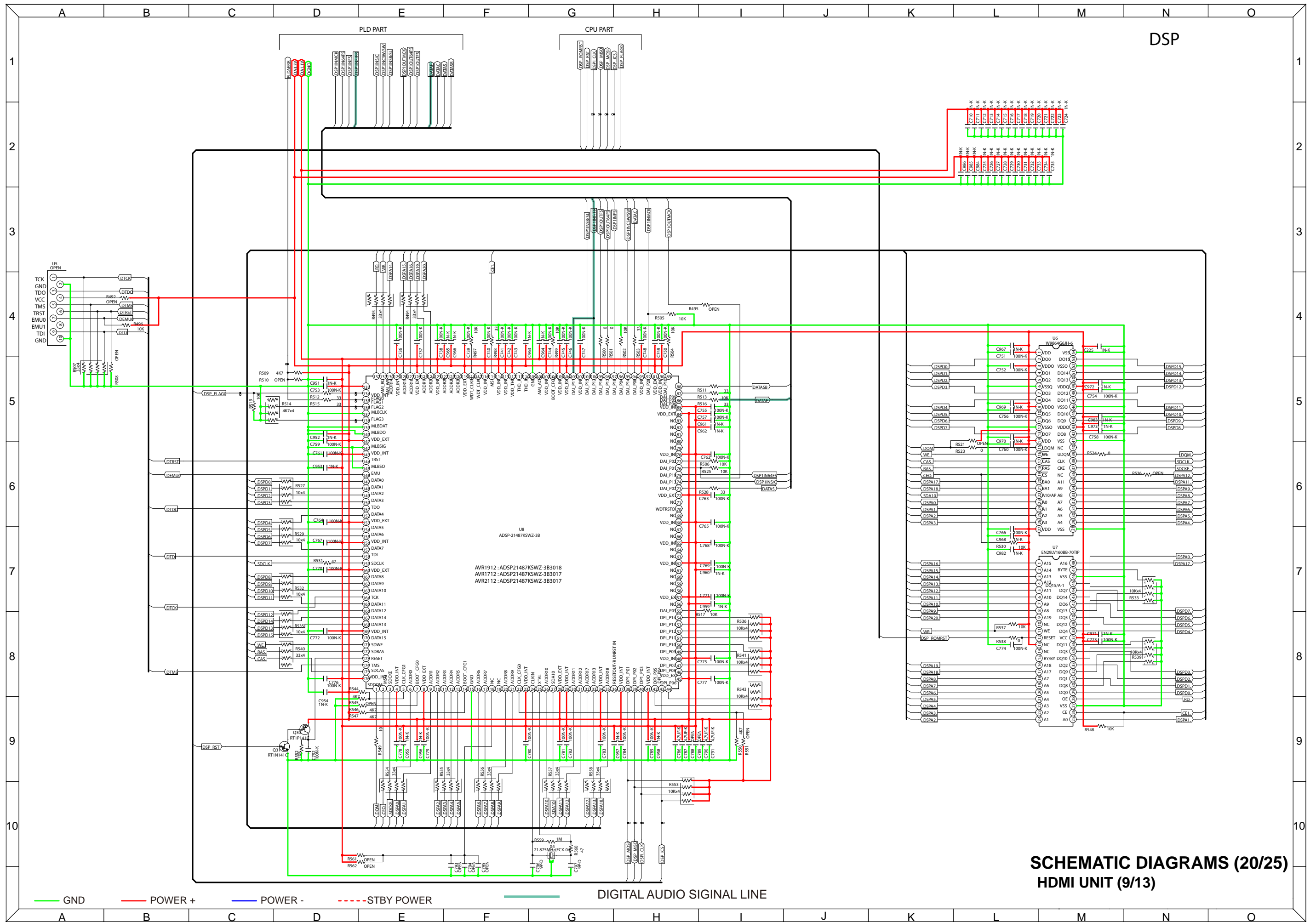


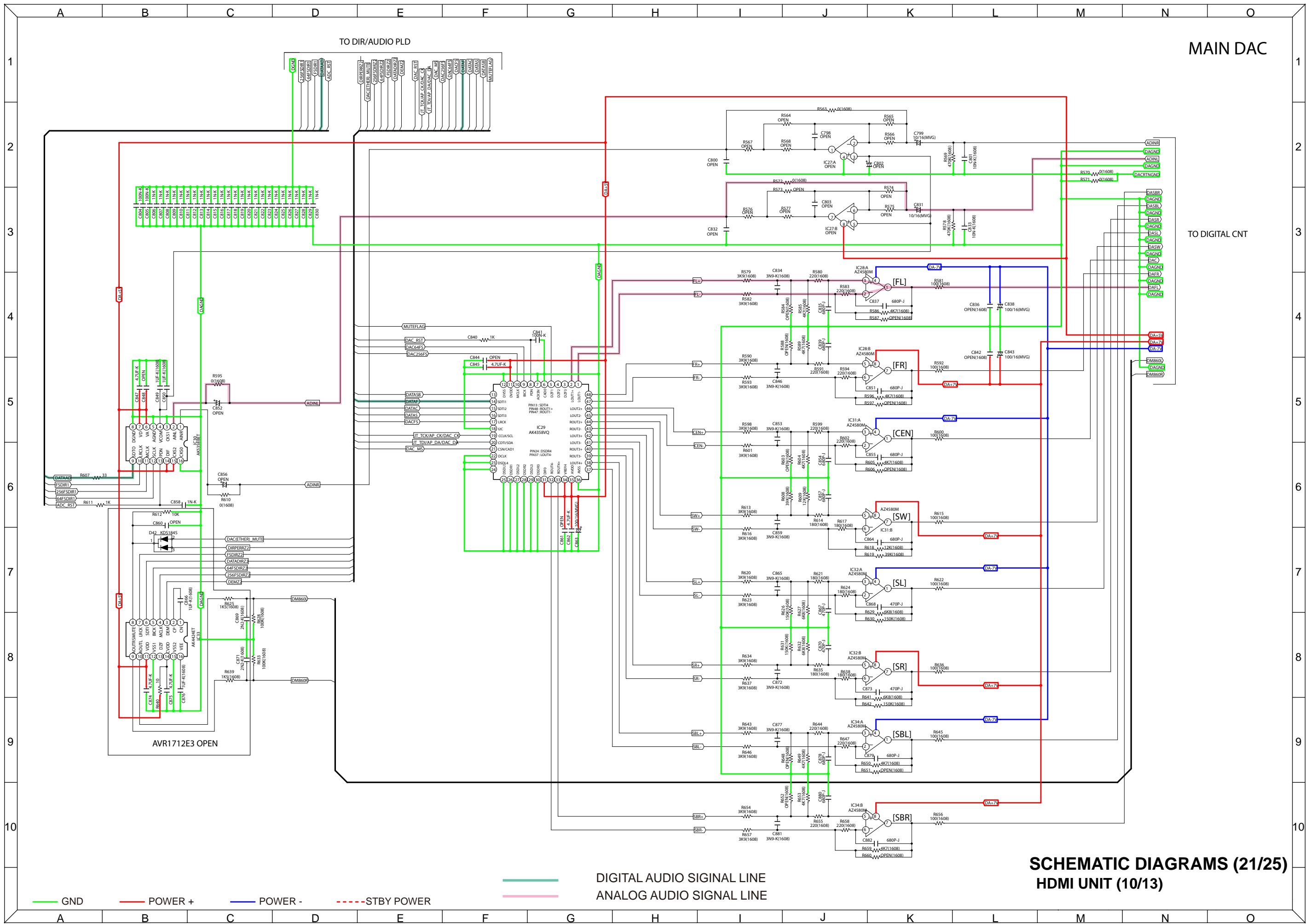
SCHEMATIC DIAGRAMS (18/25)
HDMI UNIT (7/13)



MODEL	C1	C2	O1	O2	IC19(DIR4)
AVR2112C(E)31	O(ORANGE)	-	O	-	O
AVR1912E1	O(ORANGE)	-	O	-	O
AVR1912E1C	O(ORANGE)	-	O	-	O
AVR1912JP	-	-	-	-	-
AVR1912E2/EA	O(ORANGE)	-	O	-	O
AVR1712E1	O(ORANGE)	-	O	-	O

SCHEMATIC DIAGRAMS (19/25)
HDMI UNIT (8/13)

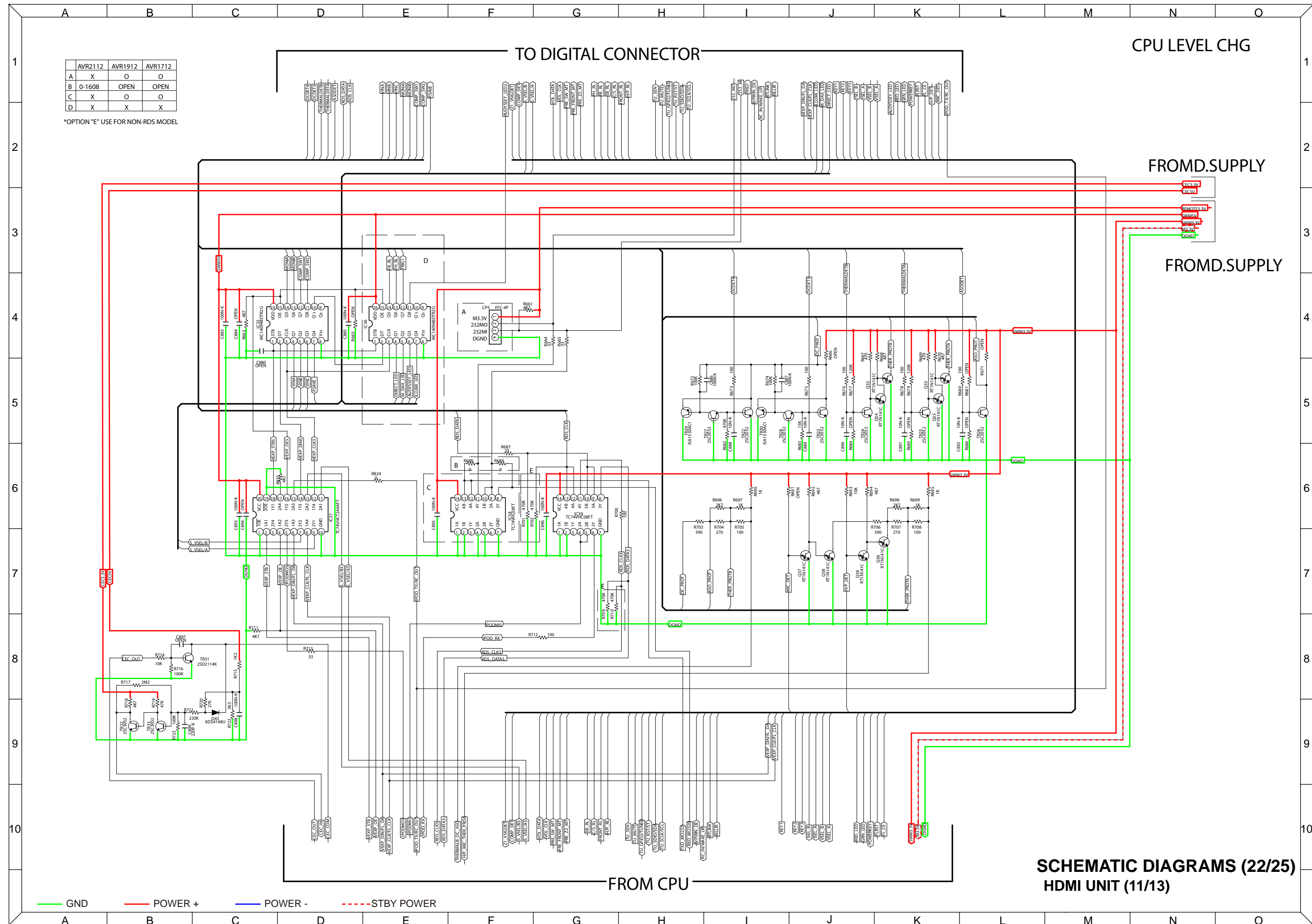




SCHEMATIC DIAGRAMS (21/25)
HDMI UNIT (10/13)

	AVR2112	AVR1912	AVR1712
A	X	O	O
B	0-1608	OPEN	OPEN
C	X	O	O
D	X	X	X

*OPTION "E" USE FOR NON-RDS MODEL



CPU LEVEL CHG

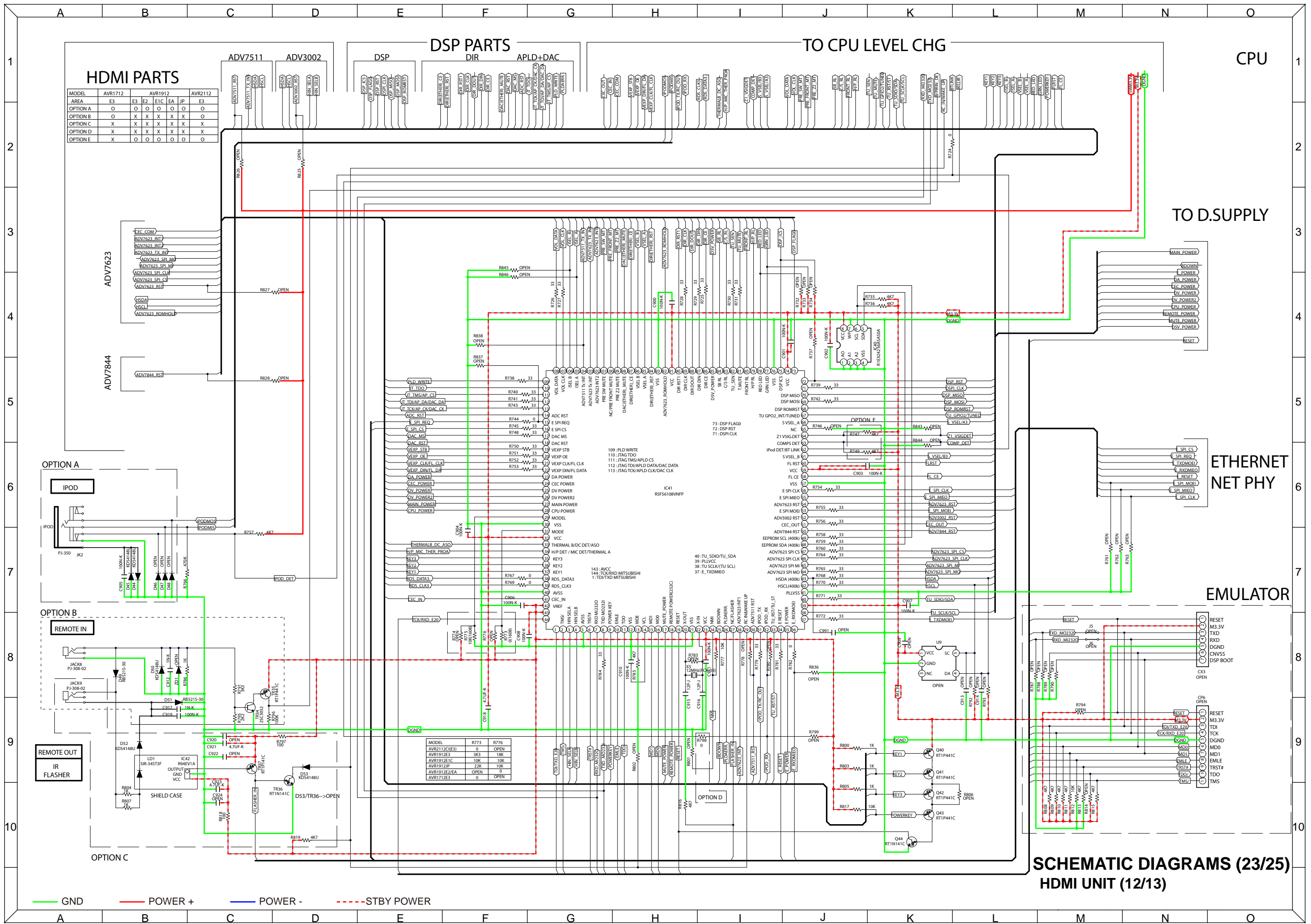
FROMD.SUPPLY

FROMD.SUPPLY

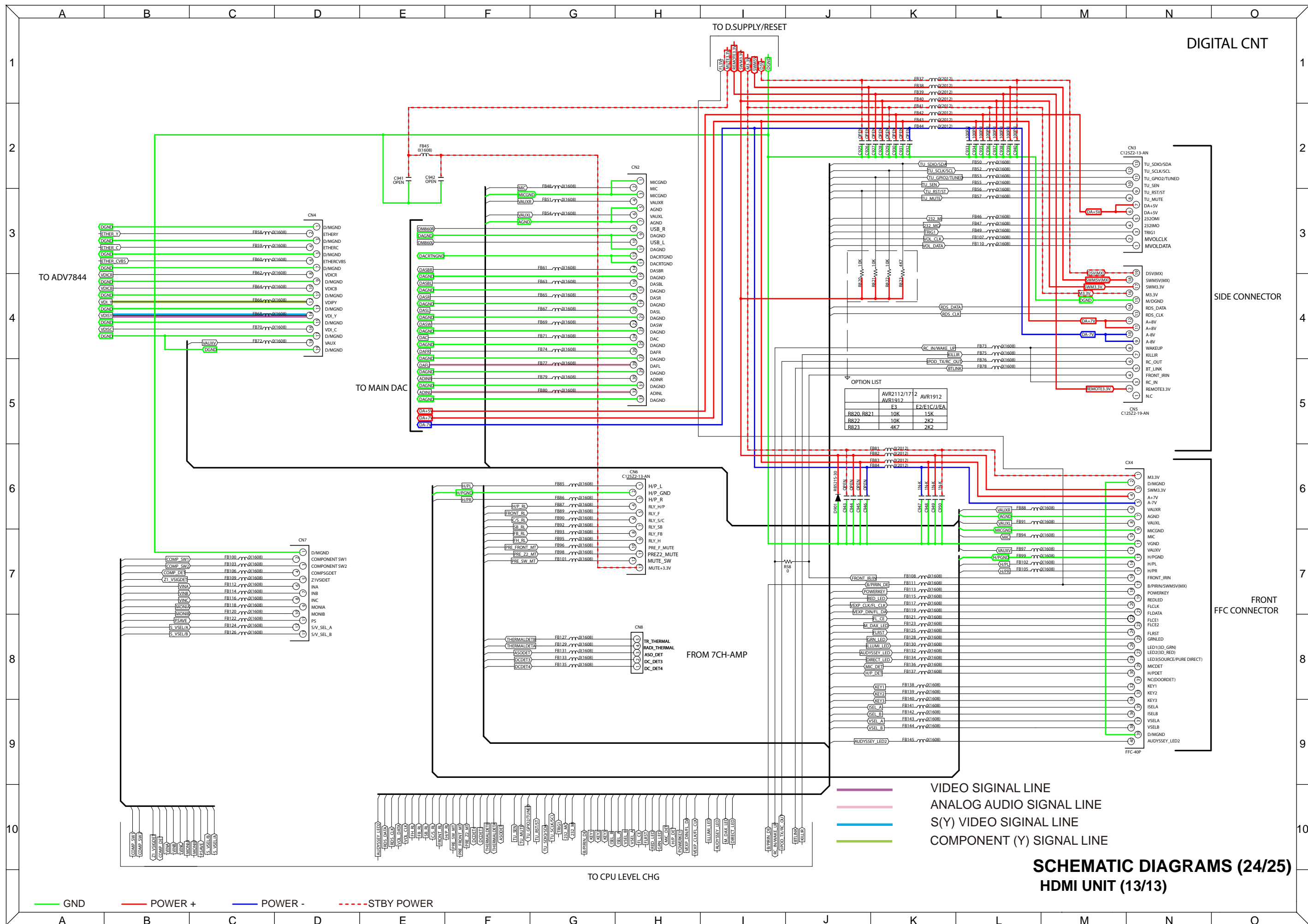
FROM CPU

SCHEMATIC DIAGRAMS (22/25)
HDMI UNIT (11/13)

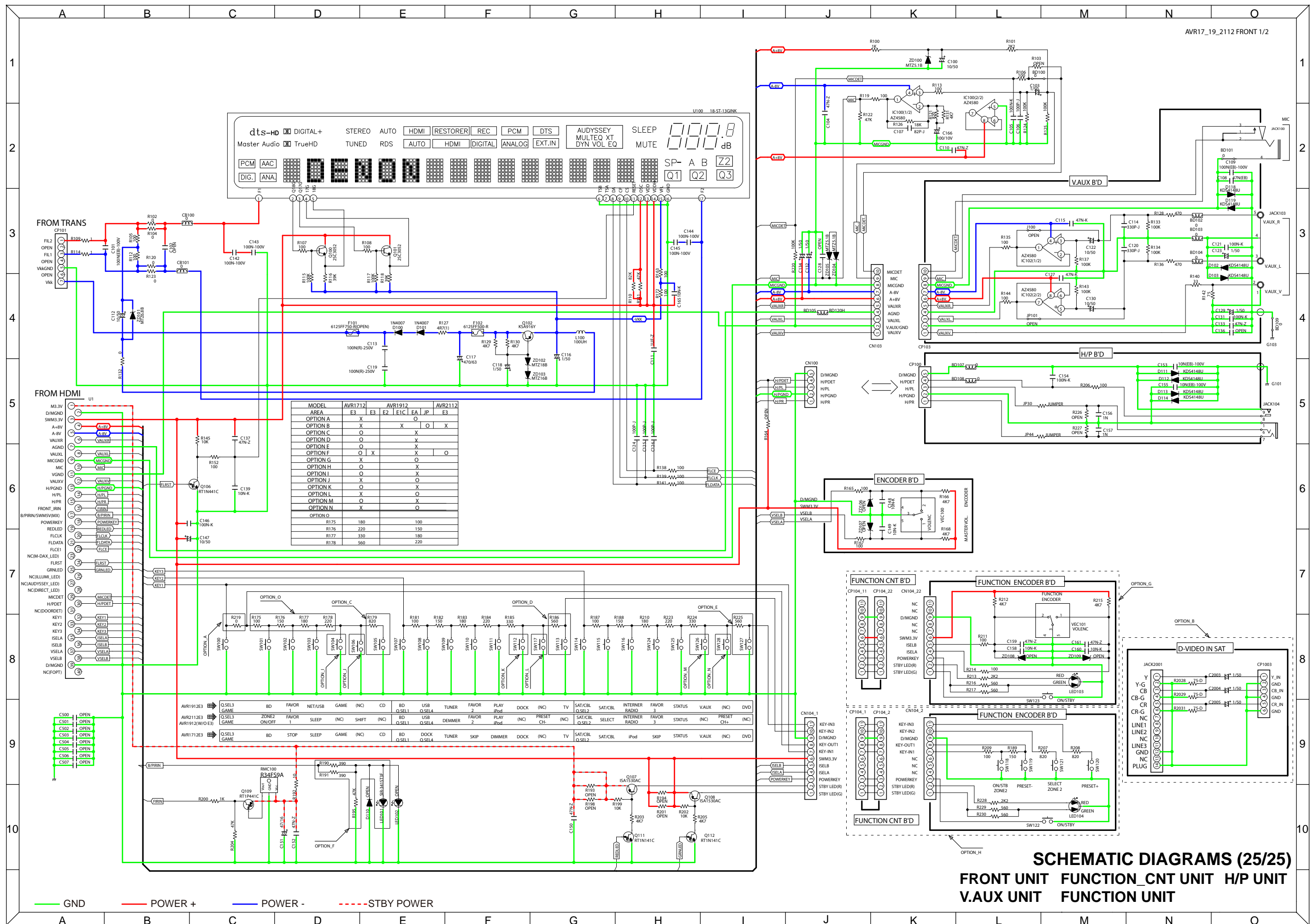
— GND — POWER + — POWER - - - - STBY POWER



SCHEMATIC DIAGRAMS (23/25)
HDMI UNIT (12/13)

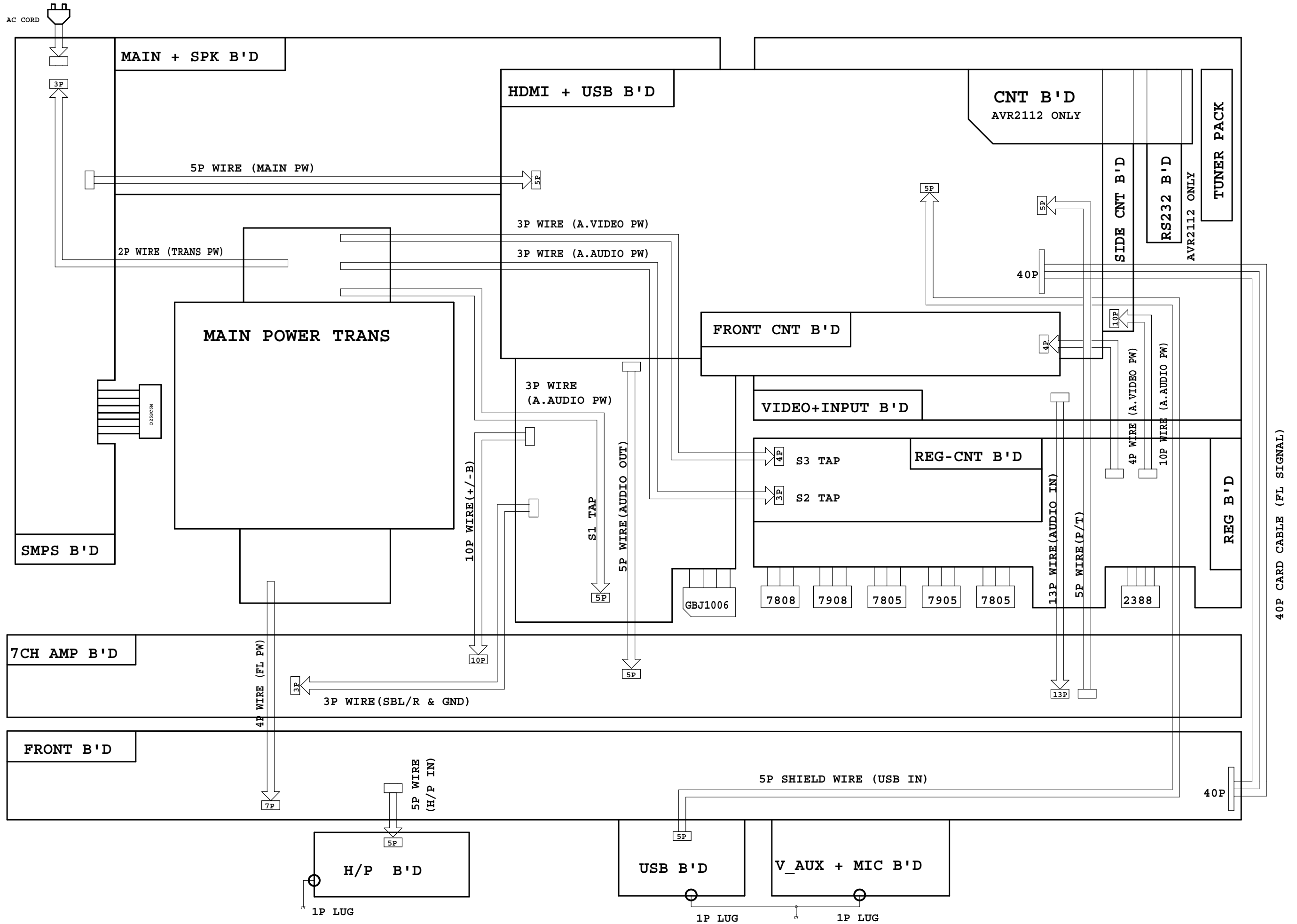


SCHEMATIC DIAGRAMS (24/25)
HDMI UNIT (13/13)

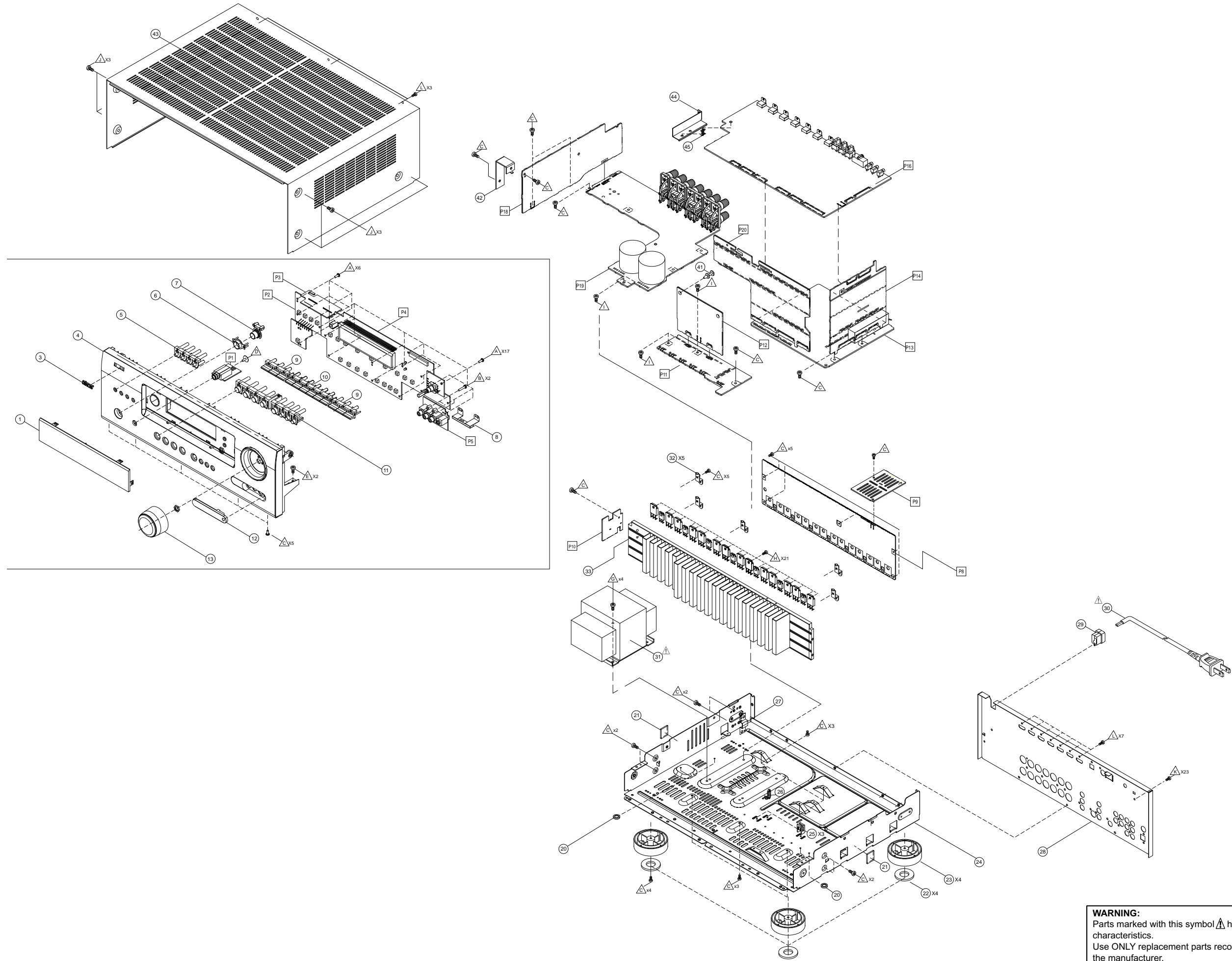



SCHEMATIC DIAGRAMS (25/25)
FRONT UNIT FUNCTION_CNT UNIT H/P UNIT
V.AUX UNIT FUNCTION UNIT

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.

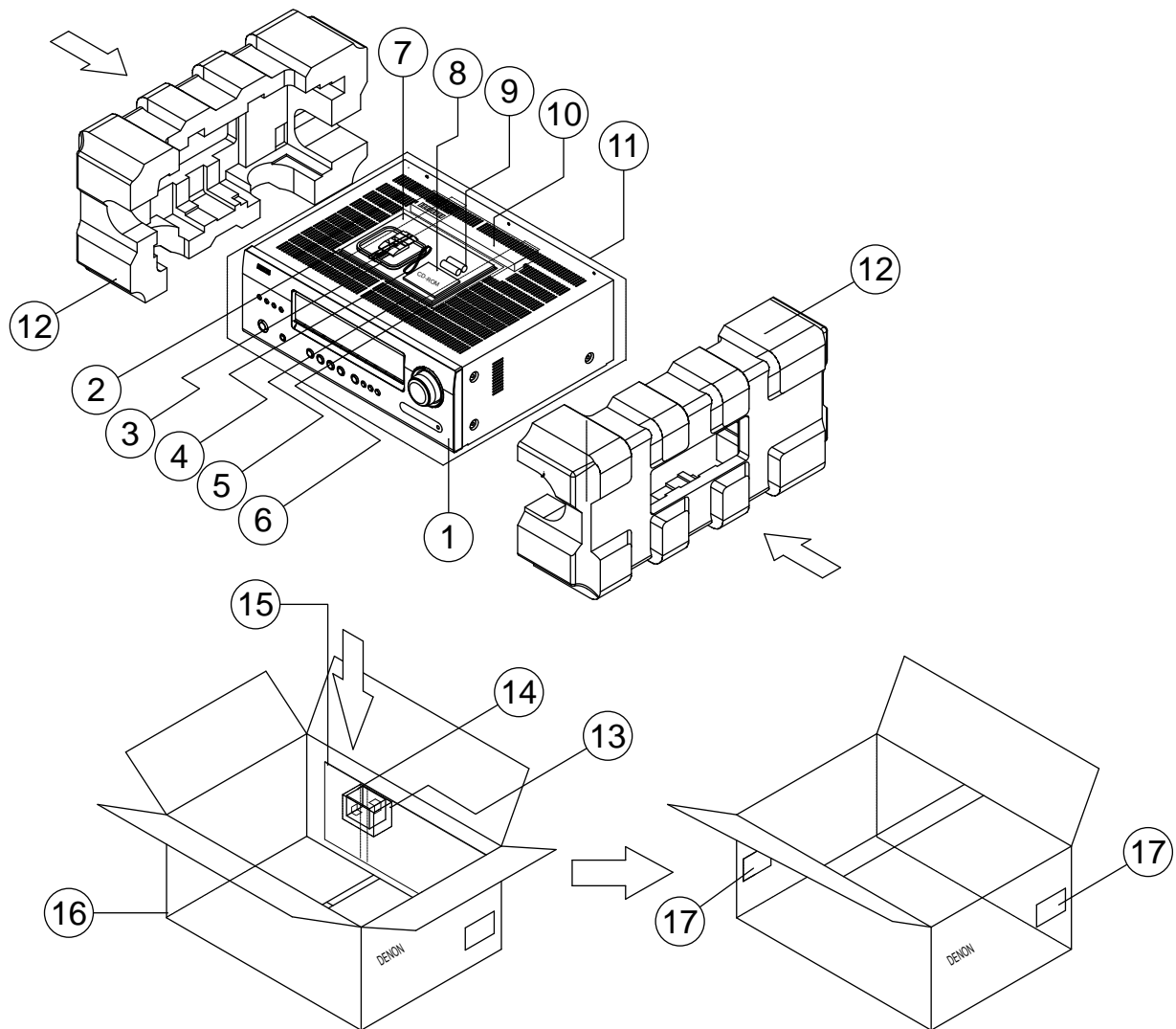
*Parts indicated by the "★" mark are not illustrated in the exploded view.

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

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New	
P4A	nsp	PCB FRONT ASSY		7025HK1016013	1	*
P1	-	PCB H/P		-		
P2	-	PCB FUNCTION		-		
P3	-	PCB FUNCTION CNT		-		
P4	-	PCB FRONT		-		
P5	-	PCB V.AUX		-		
P9	-	PCB GUIDE TOP		-		
P10	-	PCB GUIDE L		-		
P8	nsp	PCB 7CH_AMP ASSY		7025HK1016010	1	*
P19A	nsp	PCB SPK ASSY		7025HK1016011	1	*
P19	-	PCB SPK		-		
P18	-	PCB SMPS		-		
P12A	nsp	PCB REG_CNT ASSY		7025HK1016012	1	*
P11	-	PCB REG		-		
P12	-	PCB REG_CNT		-		
P14	-	PCB SIDE_CNT		-		
P20	-	PCB FRONT_CNT		-		
P13	nsp	PCB AUDIO_VIDEO ASSY		7025HK1016014	1	*
P16	963633100020S	PCB HDMI ASSY		7025HK1016015	1	*
1	963416013470D	WINDOW DISPLAY		5077213153010S	1	*
3	00D9630362109	BADGE DENON		5630210028300S	1	
4	963402013370D	PANEL FRONT		3067215191100S	1	*
5	963411002810S	BUTTON 4KEY		5097213731000S	1	
6	00D9630137807	LENS STANDBY		3710210503000S	1	
7	963411002820S	BUTTON-ASSY STANDBY(KD)		5098212361000SZ	1	
8	nsp	PLATE EARTH USB		4470212106000S	1	
9	00D9630365002	BUTTON WIN 3KEY		5097213371000S	2	
10	00D9630365404	BUTTON WIN 6KEY		5097213361000S	1	
11	963411101460D	BUTTON 8KEY		5097214661010S	1	*
12	963419100040D	COVER RCA		4317215141010S	1	
13	963412000560D	KNOB VOLUME(KD)		5080211751000SZ	1	
20	nsp	CUSHION SCREW		4050213025000S	4	
21	nsp	CUSHION SIDE		4050213095000S	2	
22	00D9630214607	CUSHION FOOT		4050211295000S	4	
23	963407100030D	FOOT		4000210641000S	4	
24	nsp	CHASSIS MAIN		3200213506403S	1	
25	nsp	SUPPORTER PCB		4070001601010S	3	
26	nsp	SUPPORTER P.C.		4070210192000S	1	
27	nsp	BRACKET SIDE		4010210686000S	1	
28	nsp	CHASSIS BACK		3207213806700S	1	
29	nsp	STOPPER CORD AC		4380210002000S	1	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
△	30	00D9630292205	CORD ASSY		L068125100020S	1
△	31	963101100020S	POWER TRANS MAIN		8200960611030S	1
	32	nsp	BRACKET H SINK		4010056906010S	5
	33	nsp	HEAT SINK MAIN		2120211988000S	1
	★ 34	00D9960018706	TR 2SB1560-Y	Q410,Q422,Q434,Q446, Q458,Q470,Q482	J5011560Y0000S	7
	★ 35	00D9630280107	TR 2SC3964	Q409,Q421,Q433,Q445, Q457,Q469,Q481	J502396400000S	7
	★ 36	00D9960018706	TR 2SD2390-Y	Q404,Q416,Q428,Q440, Q452,Q464,Q476	J5032390Y0000S	7
	41	nsp	SPACER CARD		4300210062000S	1
	42	nsp	BRACKET SMPS		4010214886000S	1
	43	963403100020S	CABINET TOP		3007211916000S	1
	44	nsp	BRACKET HDMI		4010215226000S	1
	45	nsp	SUPPORTER PCB		4070211653000S	1
	★ 50	963606010490S	CABLE,FLAT CARD 1.0MM		N711402912480S	1
	★ 51	nsp	SHEET SILICON		1210211619000S	1
	★ 52	nsp	CLAMP CABLE		4330040343010S	7
SCREWS						
	A	nsp	SCREW +2S 3X8 B-TYPE(DA CHENG) ZNW/BH		B020030081B10D	22
	B	nsp	SCREW +2S 3X15 B-TYPE ZNW/BH		B020030151B10S	2
	C	nsp	SCREW +2S 3X8(ROUND)(DA CHENG) BK/BH		B020230083B10D	47
	D	nsp	SCREW +2S 3X8 ZnY WASHER PI12		1500001456010S	1
	E	nsp	SCREW +2S 3X8 PI9.5 B-TYPE ZNW		1500001206010S	2
	G	nsp	SCREW +3S 4X10 P+S-WASHER(ROUND)BK/BH		B028940101B11S	4
	H	nsp	SCREW +2S 3X14 P(Φ6)+S-WASHER ZNY/HH		B018230141H11S	21
	I	nsp	SCREW +2S 3X17 B-TYPE(DA CHENG) BK/BH		B020030171B10D	3
	J	nsp	SCREW +2S 4X8 B-TYPE(DOT)(DACHENG) BK/BH		1500040083B10D	6
	K	nsp	SCREW +2S 3X10 B-TYPE(DOT)(DA CHENG) BK/BH		B020030103B11D	28
	L	nsp	SCREW +3S 3X6(DOT)CBTS(S)-B		B020930063B10S	10

PACKING VIEW



PARTS LIST OF PACKING & ACCESSORIES

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

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

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

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
1	-	SET	-		
2	nsp	POLY BAG	6330000240000S	1	
3	90M-ZA000260R	ANTENNA LOOP WIRE 9.5UH	E601016000010S	1	
3	963116100070S	or ANTENNA LOOP WIRE 9.5UH	E601019000010S	1	*
4	00D9600187308	ANTENNA WIRE (FM)	E605010070001S	1	
4	963116100080S	or ANTENNA WIRE (FM)	E605010140010S	1	*
5	nsp	CARD S.S LIST	577700162001GS	1	
6	nsp	WARRANTY CARD	5727000003003S	1	
7	541110720009D	GETTING STARTED	5707000005390S	1	*
8	352010050000D	CD-ROM OWNER'S MANUAL	6517000000110S	1	*

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	9	nsp	BATTERY DRY (AA)		G670001R50230S	2	
	10	307010087002D	REMOTE CONTROL(RC-1156)		8300115600010S	1	
	11	nsp	PE SHEET		6327040059000S	1	
	12	963533013490D	CUSHION SNOW L/R		6230212954000S	1	
	13	nsp	POLY BAG ACCESSORY		6330210222000S	1	
	14	324010001003D	MIC CONDENSER		M040000310040S	1	
	15	963537100020D	PAD BOX BACK		6240210730000S	1	
	16	963531013520D	BOX GIFT		6007211860060S	1	*
	17	nsp	LABEL DENON CONTROL		5507000007000S	1	
	★ 18	nsp	LABEL HOT-SURFACE		5507000003730S	1	

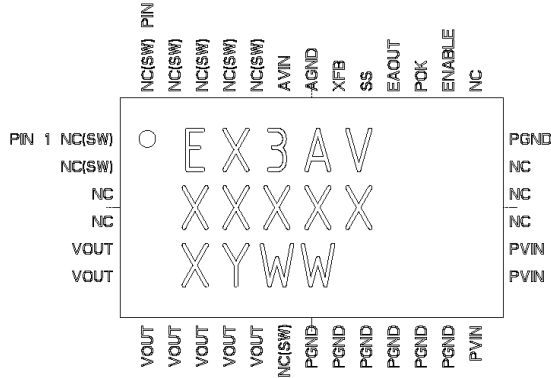
△

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

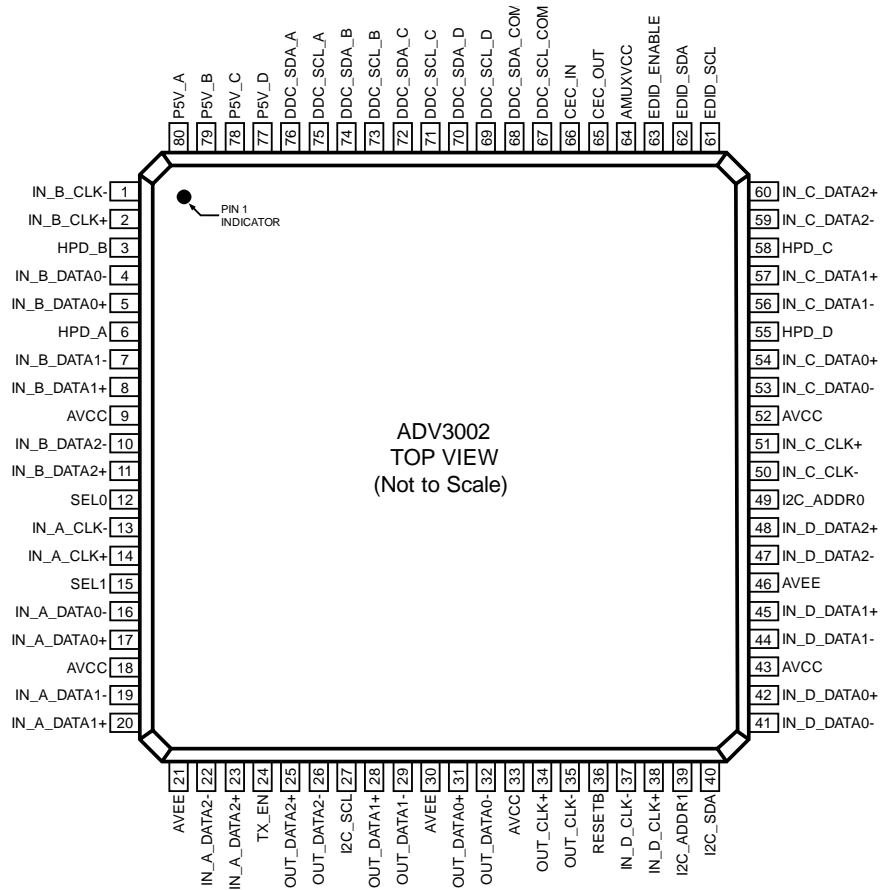
EX3AV (HDMI : IC1,4,5)



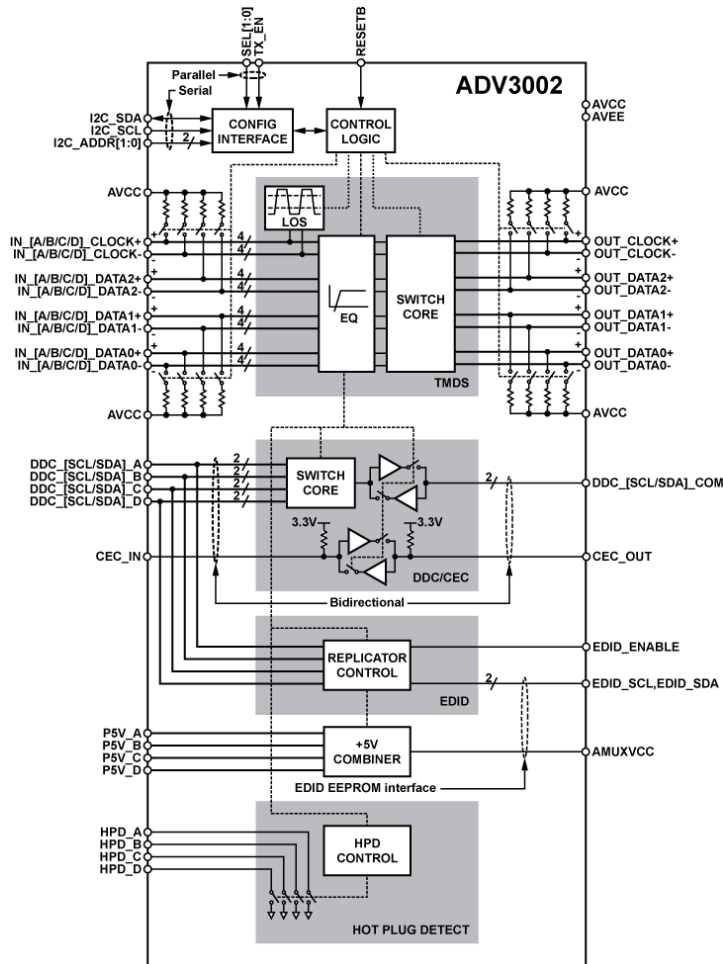
EX3AV Terminal Functions

PIN	NAME	FUNCTION
1-2, 12, 26, 34-38	NC(SW)	NO CONNECT – These pins are internally connected to the common switching node of the internal MOSFETs. They are not to be electrically connected to any external signal, ground, or voltage. Failure to follow this guideline may result in damage to the device.
3-4, 22-25	NC	NO CONNECT – These pins may be internally connected. Do not connect them to each other or to any other electrical signal. Failure to follow this guideline may result in device damage.
5-11	VOUT	Regulated converter output. Connect these pins to the load, and place output capacitor from these pins and PGND pins 13-15
13-18	PGND	Input/Output power ground. Connect these pins to the ground electrode of the Input and output filter capacitors. See VOUT and PVIN pin descriptions for more details.
19-21	PVIN	Input power supply. Connect to input power supply. Decouple with input capacitor to PGND pins 16-18.
27	ENABLE	Input Enable. Applying logic high enables the output and initiates a soft-start. Applying a logic low disables the output.
28	POK	Power OK is an open drain transistor for power system state indication. POK will be logic high when VOUT is with -10% to +20% of VOUT nominal.
29	EAOUT	Optional Error Amplifier output. Allows for customization of the control loop response.
30	SS	Soft-Start node. The soft-start capacitor is connected between this pin and AGND. The value of this capacitor determines the startup time.
31	XFB	External Feedback Input. The feedback loop is closed through this pin. A voltage divider at VOUT is used to set the output voltage. The mid point of the divider is connected to XFB. A phase lead capacitor from this pin to VOUT is also required to stabilize the loop.
32	AGND	Analog Ground. This is the Ground return for the controller. Needs to be connected to a quiet ground.
33	AVIN	Input power supply for the controller. Needs to be connected to input voltage at a quiet point.

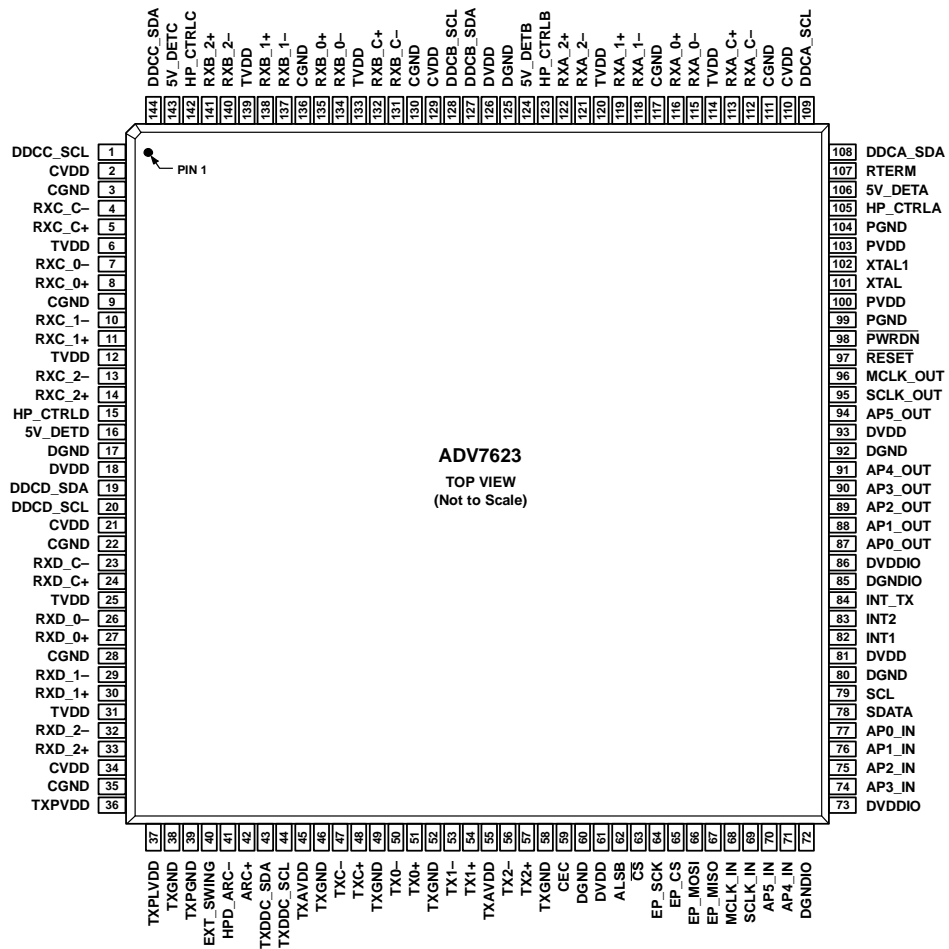
ADV3002BSTZ (HDMI : U1)



ADV3002BSTZ Block diagram



ADV7623 (HDMI : IC9)



Pin Function Descriptions

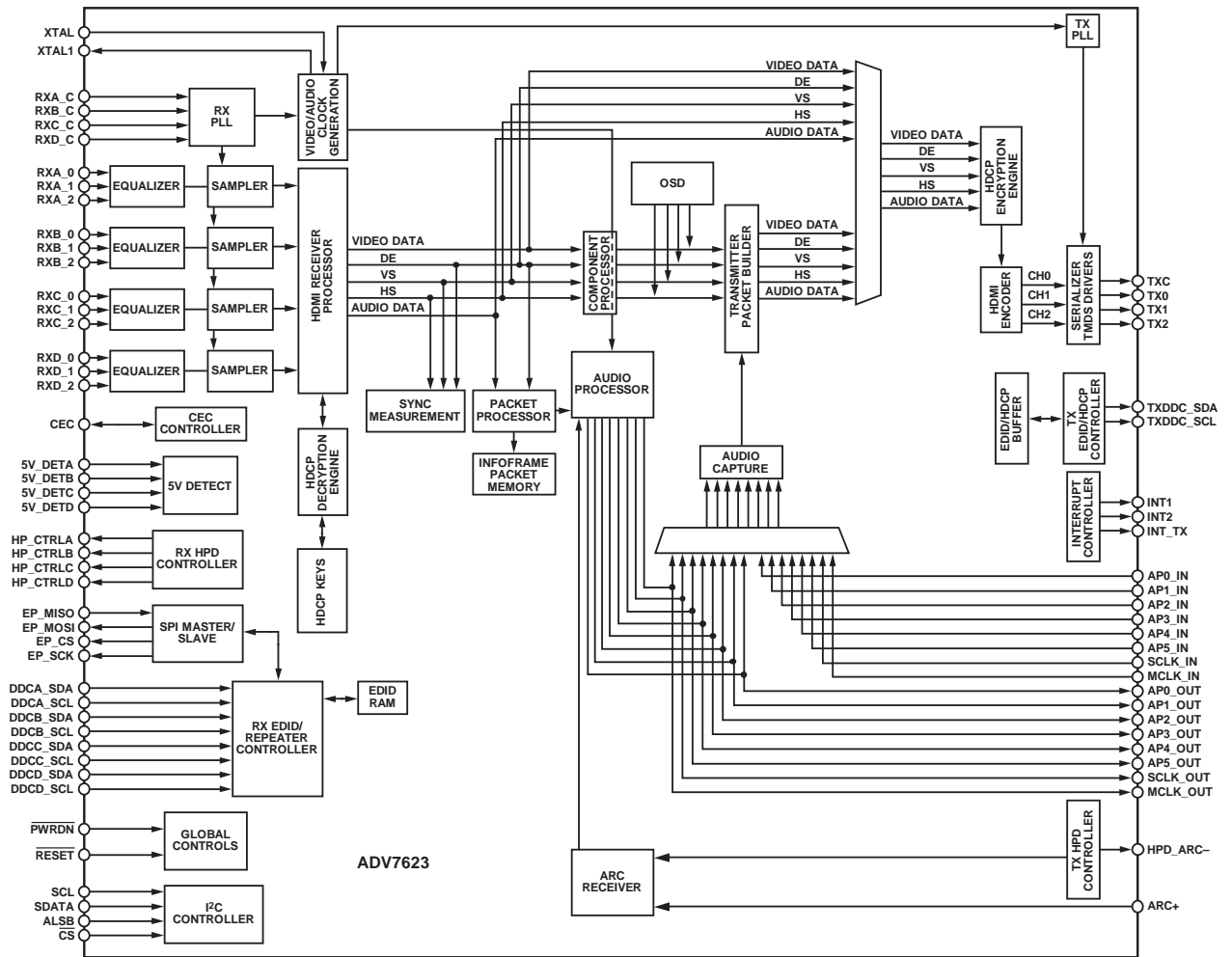
Pin No.	Mnemonic	Type	Description
1	DDCC_SCL	Digital input	HDCP Slave Serial Clock Port C. DDCC_SCL is a 3.3 V input that is 5 V tolerant.
2	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
3	CGND	Ground	TVDD and CVDD Ground.
4	RXC_C-	HDMI input	Digital Input Clock Complement of Port C in the HDMI Interface.
5	RXC_C+	HDMI input	Digital Input Clock True of Port C in the HDMI Interface.
6	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
7	RXC_0-	HDMI input	Digital Input Channel 0 Complement of Port C in the HDMI Interface.
8	RXC_0+	HDMI input	Digital Input Channel 0 True of Port C in the HDMI Interface.
9	CGND	Ground	TVDD and CVDD Ground.
10	RXC_1-	HDMI input	Digital Input Channel 1 Complement of Port C in the HDMI Interface.
11	RXC_1+	HDMI input	Digital Input Channel 1 True of Port C in the HDMI Interface.
12	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).

Pin No.	Mnemonic	Type	Description
13	RXC_2-	HDMI input	Digital Input Channel 2 Complement of Port C in the HDMI Interface.
14	RXC_2+	HDMI input	Digital Input Channel 2 True of Port C in the HDMI Interface.
15	HP_CTRLD	Digital output	Hot Plug Detect for Port D.
16	5V_DETD	Digital input	5 V Detect Pin for Port D in the HDMI Interface.
17	DGND	Ground	DVDD Ground.
18	DVDD	Power	Digital Supply Voltage (1.8 V).
19	DDCD_SDA	Digital I/O	HDCP Slave Serial Data Port D. DDCD_SDA is a 3.3 V input/output that is 5 V tolerant.
20	DDCD_SCL	Digital input	HDCP Slave Serial Clock Port D. DDCD_SCL is a 3.3 V input that is 5 V tolerant.
21	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
22	CGND	Ground	TVDD and CVDD Ground.
23	RXD_C-	HDMI input	Digital Input Clock Complement of Port D in the HDMI Interface.
24	RXD_C+	HDMI input	Digital Input Clock True of Port D in the HDMI Interface.
25	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
26	RXD_0-	HDMI input	Digital Input Channel 0 Complement of Port D in the HDMI Interface.
27	RXD_0+	HDMI input	Digital Input Channel 0 True of Port D in the HDMI Interface.
28	CGND	Ground	TVDD and CVDD Ground.
29	RXD_1-	HDMI input	Digital Input Channel 1 Complement of Port D in the HDMI Interface.
30	RXD_1+	HDMI input	Digital Input Channel 1 True of Port D in the HDMI Interface.
31	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
32	RXD_2-	HDMI input	Digital Input Channel 2 Complement of Input D in the HDMI Interface.
33	RXD_2+	HDMI input	Digital Input Channel 2 True of Port D in the HDMI Interface.
34	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
35	CGND	Ground	TVDD and CVDD Ground.
36	TXPVDD	Power	1.8 V Power Supply for Digital and I/O Power Supply. This pin supplies power to the digital logic and I/Os. It should be filtered and as quiet as possible.
37	TXPLVDD	Power	1.8 V Power Supply.
38	TXGND	Ground	TXPVDD Ground.
39	TXPGND	Ground	TXPLVDD Ground.
40	EXT_SWING	Analog input	This pin sets the internal reference currents. Place an 887 Ω resistor (1% tolerance) between this pin and ground.
41	HPD_ARC-	Analog input	Hot Plug Detect Signal. This pin indicates to the interface whether the receiver is connected. It supports 1.8 V to 5 V CMOS logic levels.
42	ARC+	Analog input	Audio Return Channel Input (5 V Tolerant).
43	TXDDC_SDA	Digital I/O	Serial Port Data I/O to Receiver. This pin serves as the master to the DDC bus. It supports a 5 V CMOS logic level.
44	TXDDC_SCL	Digital output	Serial Port Data Clock to Receiver. This pin serves as the master clock for the DDC bus. It supports a 5 V CMOS logic level.
45	TXAVDD	Power	1.8 V Power Supply for TMDS Outputs.
46	TXGND	Ground	TXAVDD Ground.
47	TXC-	HDMI output	Differential Clock Output. Differential clock output at the TMDS clock rate; supports TMDS logic level.
48	TXC+	HDMI output	Differential Clock Output. Differential clock output at the TMDS clock rate; supports TMDS logic level.
49	TXGND	Ground	TXAVDD Ground.
50	TX0-	HDMI output	Differential Output Channel 0 Complement. Differential output of the red data at 10x the pixel clock rate; supports TMDS logic level.
51	TX0+	HDMI output	Differential Output Channel 0 True. Differential output of the red data at 10x the pixel clock rate; supports TMDS logic level.
52	TXGND	Ground	TXAVDD Ground.
53	TX1-	HDMI output	Differential Output Channel 1 Complement. Differential output of the red data at 10x the pixel clock rate; supports TMDS logic level.
54	TX1+	HDMI output	Differential Output Channel 1 True. Differential output of the red data at 10x the pixel clock rate; supports TMDS logic level.
55	TXAVDD	Power	1.8 V Power Supply for TMDS Outputs.

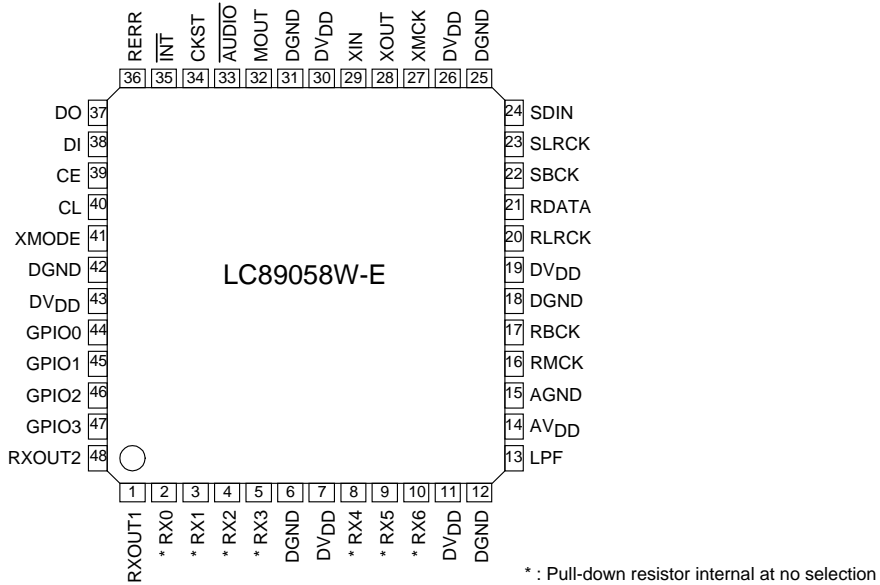
Pin No.	Mnemonic	Type	Description
13	RXC_2-	HDMI input	Digital Input Channel 2 Complement of Port C in the HDMI Interface.
14	RXC_2+	HDMI input	Digital Input Channel 2 True of Port C in the HDMI Interface.
15	HP_CTRLD	Digital output	Hot Plug Detect for Port D.
16	5V_DETD	Digital input	5 V Detect Pin for Port D in the HDMI Interface.
17	DGND	Ground	DVDD Ground.
18	DVDD	Power	Digital Supply Voltage (1.8 V).
19	DDCD_SDA	Digital I/O	HDCP Slave Serial Data Port D. DDCD_SDA is a 3.3 V input/output that is 5 V tolerant.
20	DDCD_SCL	Digital input	HDCP Slave Serial Clock Port D. DDCD_SCL is a 3.3 V input that is 5 V tolerant.
21	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
22	CGND	Ground	TVDD and CVDD Ground.
23	RXD_C-	HDMI input	Digital Input Clock Complement of Port D in the HDMI Interface.
24	RXD_C+	HDMI input	Digital Input Clock True of Port D in the HDMI Interface.
25	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
26	RXD_0-	HDMI input	Digital Input Channel 0 Complement of Port D in the HDMI Interface.
27	RXD_0+	HDMI input	Digital Input Channel 0 True of Port D in the HDMI Interface.
28	CGND	Ground	TVDD and CVDD Ground.
29	RXD_1-	HDMI input	Digital Input Channel 1 Complement of Port D in the HDMI Interface.
30	RXD_1+	HDMI input	Digital Input Channel 1 True of Port D in the HDMI Interface.
31	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
32	RXD_2-	HDMI input	Digital Input Channel 2 Complement of Port D in the HDMI Interface.
33	RXD_2+	HDMI input	Digital Input Channel 2 True of Port D in the HDMI Interface.
34	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
35	CGND	Ground	TVDD and CVDD Ground.
36	TXPVDD	Power	1.8 V Power Supply for Digital and I/O Power Supply. This pin supplies power to the digital logic and I/Os. It should be filtered and as quiet as possible.
37	TXPLVDD	Power	1.8 V Power Supply.
38	TXGND	Ground	TXPVDD Ground.
39	TXPGND	Ground	TXPLVDD Ground.
40	EXT_SWING	Analog input	This pin sets the internal reference currents. Place an 887 Ω resistor (1% tolerance) between this pin and ground.
41	HPD_ARC-	Analog input	Hot Plug Detect Signal. This pin indicates to the interface whether the receiver is connected. It supports 1.8 V to 5 V CMOS logic levels.
42	ARC+	Analog input	Audio Return Channel Input (5 V Tolerant).
43	TXDDC_SDA	Digital I/O	Serial Port Data I/O to Receiver. This pin serves as the master to the DDC bus. It supports a 5 V CMOS logic level.
44	TXDDC_SCL	Digital output	Serial Port Data Clock to Receiver. This pin serves as the master clock for the DDC bus. It supports a 5 V CMOS logic level.
45	TXAVDD	Power	1.8 V Power Supply for TMDS Outputs.
46	TXGND	Ground	TXAVDD Ground.
47	TXC-	HDMI output	Differential Clock Output. Differential clock output at the TMDS clock rate; supports TMDS logic level.
48	TXC+	HDMI output	Differential Clock Output. Differential clock output at the TMDS clock rate; supports TMDS logic level.
49	TXGND	Ground	TXAVDD Ground.
50	TX0-	HDMI output	Differential Output Channel 0 Complement. Differential output of the red data at 10 \times the pixel clock rate; supports TMDS logic level.
51	TX0+	HDMI output	Differential Output Channel 0 True. Differential output of the red data at 10 \times the pixel clock rate; supports TMDS logic level.
52	TXGND	Ground	TXAVDD Ground.
53	TX1-	HDMI output	Differential Output Channel 1 Complement. Differential output of the red data at 10 \times the pixel clock rate; supports TMDS logic level.
54	TX1+	HDMI output	Differential Output Channel 1 True. Differential output of the red data at 10 \times the pixel clock rate; supports TMDS logic level.
55	TXAVDD	Power	1.8 V Power Supply for TMDS Outputs.

Pin No.	Mnemonic	Type	Description
99	PGND	Ground	PVDD Ground.
100	PVDD	Power	PLL Supply Voltage (1.8 V).
101	XTAL	Miscellaneous analog	Input pin for 28.63636 MHz crystal or an external 1.8 V 28.63636 MHz clock oscillator source to clock the ADV7623.
102	XTAL1	Miscellaneous analog	Crystal Output Pin. This pin should be left floating if a clock oscillator is used.
103	PVDD	Power	PLL Supply Voltage (1.8 V).
104	PGND	Ground	PVDD Ground.
105	HP_CTRLA	Digital output	Hot Plug Detect for Port A.
106	5V_DETA	Digital input	5 V Detect Pin for Port A in the HDMI Interface.
107	RTERM	Miscellaneous analog	This pin sets the internal termination resistance. A 500 Ω resistor between this pin and ground should be used.
108	DDCA_SDA	Digital I/O	HDCP Slave Serial Data Port A. DDCA_SDA is a 3.3 V input/output that is 5 V tolerant.
109	DDCA_SCL	Digital input	HDCP Slave Serial Clock Port A. DDCA_SCL is a 3.3 V input that is 5 V tolerant.
110	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
111	CGND	Ground	TVDD and CVDD Ground.
112	RXA_C-	HDMI input	Digital Input Clock Complement of Port A in the HDMI Interface.
113	RXA_C+	HDMI input	Digital Input Clock True of Port A in the HDMI Interface.
114	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
115	RXA_0-	HDMI input	Digital Input Channel 0 Complement of Port A in the HDMI Interface.
116	RXA_0+	HDMI input	Digital Input Channel 0 True of Port A in the HDMI Interface.
117	CGND	Ground	TVDD and CVDD Ground.
118	RXA_1-	HDMI input	Digital Input Channel 1 Complement of Port A in the HDMI Interface.
119	RXA_1+	HDMI input	Digital Input Channel 1 True of Port A in the HDMI Interface.
120	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
121	RXA_2-	HDMI input	Digital Input Channel 2 Complement of Port A in the HDMI Interface.
122	RXA_2+	HDMI input	Digital Input Channel 2 True of Port A in the HDMI Interface.
123	HP_CTRLB	Digital output	Hot Plug Detect for Port B.
124	5V_DETB	Digital input	5 V Detect Pin for Port B in the HDMI Interface.
125	DGND	Ground	DVDD Ground.
126	DVDD	Power	Digital Supply Voltage (1.8 V).
127	DDCB_SDA	Digital I/O	HDCP Slave Serial Data Port B. DDCB_SDA is a 3.3 V input/output that is 5 V tolerant.
128	DDCB_SCL	Digital input	HDCP Slave Serial Clock Port B. DDCB_SCL is a 3.3 V input that is 5 V tolerant.
129	CVDD	Power	Receiver Comparator Supply Voltage (1.8 V).
130	CGND	Ground	TVDD and CVDD Ground.
131	RXB_C-	HDMI input	Digital Input Clock Complement of Port B in the HDMI Interface.
132	RXB_C+	HDMI input	Digital Input Clock True of Port B in the HDMI Interface.
133	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
134	RXB_0-	HDMI input	Digital Input Channel 0 Complement of Port B in the HDMI Interface.
135	RXB_0+	HDMI input	Digital Input Channel 0 True of Port B in the HDMI Interface.
136	CGND	Ground	TVDD and CVDD Ground.
137	RXB_1-	HDMI input	Digital Input Channel 1 Complement of Port B in the HDMI Interface.
138	RXB_1+	HDMI input	Digital Input Channel 1 True of Port B in the HDMI Interface.
139	TVDD	Power	Receiver Terminator Supply Voltage (3.3 V).
140	RXB_2-	HDMI input	Digital Input Channel 2 Complement of Port B in the HDMI Interface.
141	RXB_2+	HDMI input	Digital Input Channel 2 True of Port B in the HDMI Interface.
142	HP_CTRLC	Digital output	Hot Plug Detect for Port C.
143	5V_DETC	Digital input	5 V Detect Pin for Port C in the HDMI Interface.
144	DDCC_SDA	Digital I/O	HDCP Slave Serial Data Port C. DDCC_SDA is a 3.3 V input/output that is 5 V tolerant.

ADV7623 Block diagram



LC89058W-E (HDMI : IC21)



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	DVDD		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	DVDD		Digital power supply (3.3V)
12	DGND		Digital GND
13	LPF	O	PLL loop filter connection pin
14	AVDD		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	DVDD		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	DVDD		Digital power supply (3.3V)
27	XMCK	O	Oscillation amplifier clock output pin
28	XOUT	O	Output pin connected to the resonator
29	XIN	I	External clock input pin, connected to the resonator (12.288MHz/24.576MHz)
30	DVDD		Digital power supply
31	DGND		Digital GND
32	MOUT	I/O	Emphasis information Input fs monitor output Chip address setting input pin
33	AUDIO	I/O	Channel status bit 1 output Chip address setting input pin
34	CKST	I/O	Clock switching transition period signal output Master/slave setting input pin
35	INT	I/O	Microcontroller interrupt signal output Pins44-48 I/O setting input pin
36	RERR	O	PLL lock error, data error flag output pin
37	DO	O	CCB microcontroller I/F, read data output pin (3-state)
38	DI	I _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	DVDD		Digital power supply (3.3V)
44	GPIO0	O/I	General-purpose I/O pin Selector input pin (output referred to RDATA pin)
45	GPIO1	O/I	General-purpose I/O pin Selector input pin (output referred to RLRCK pin)
46	GPIO2	O/I	General-purpose I/O pin Selector input pin (output referred to RBCK pin)
47	GPIO3	O/I	General-purpose I/O pin Selector input pin (output referred to RMCK pin)
48	RXOUT2	O	RX0-6 input S/PDIF through output pin 2

* Input voltage: I= -0.3 to 3.6V, I₅ = -0.3 to 5.5V

* Output voltage: O= -0.3 to 3.6V

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

Their level is fixed when they are unselected.

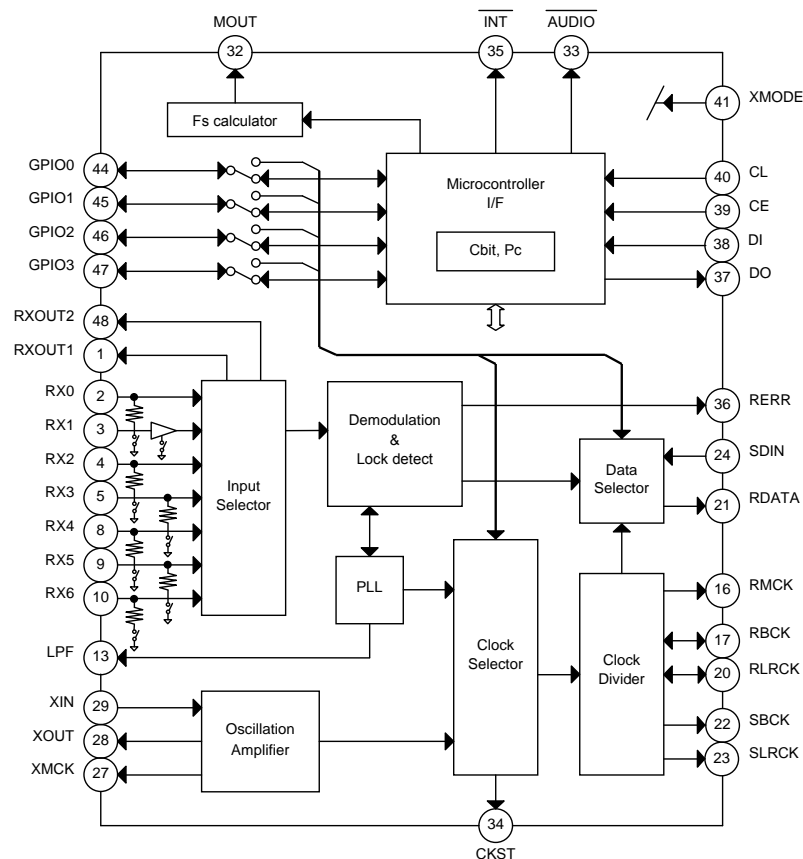
* Pins 32 and 33 are input pins for chip address setting when pin 41 is held at the low level.

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

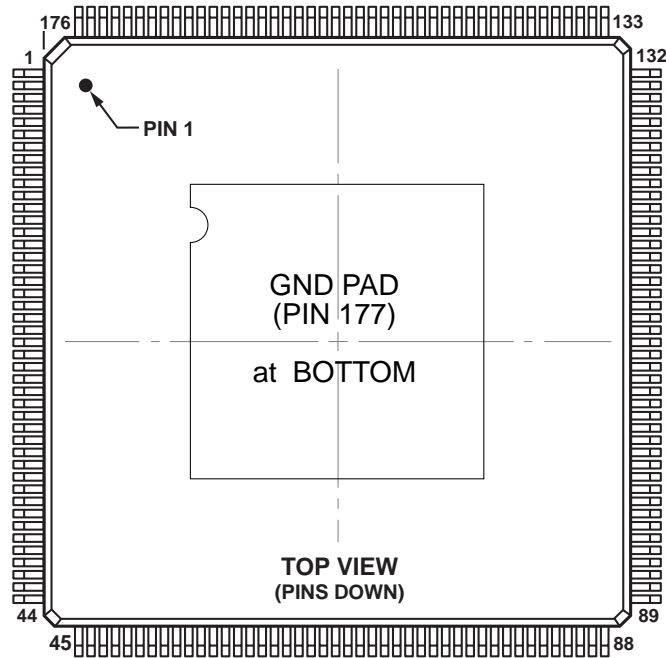
* Pin 35 serves as the input pin for configuring the I/O of pins 44 to 47 when pin 41 is held at the low level.

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

LC89058W-E Block diagram



ADSP21487KSWZ3B (HDMI : U8)

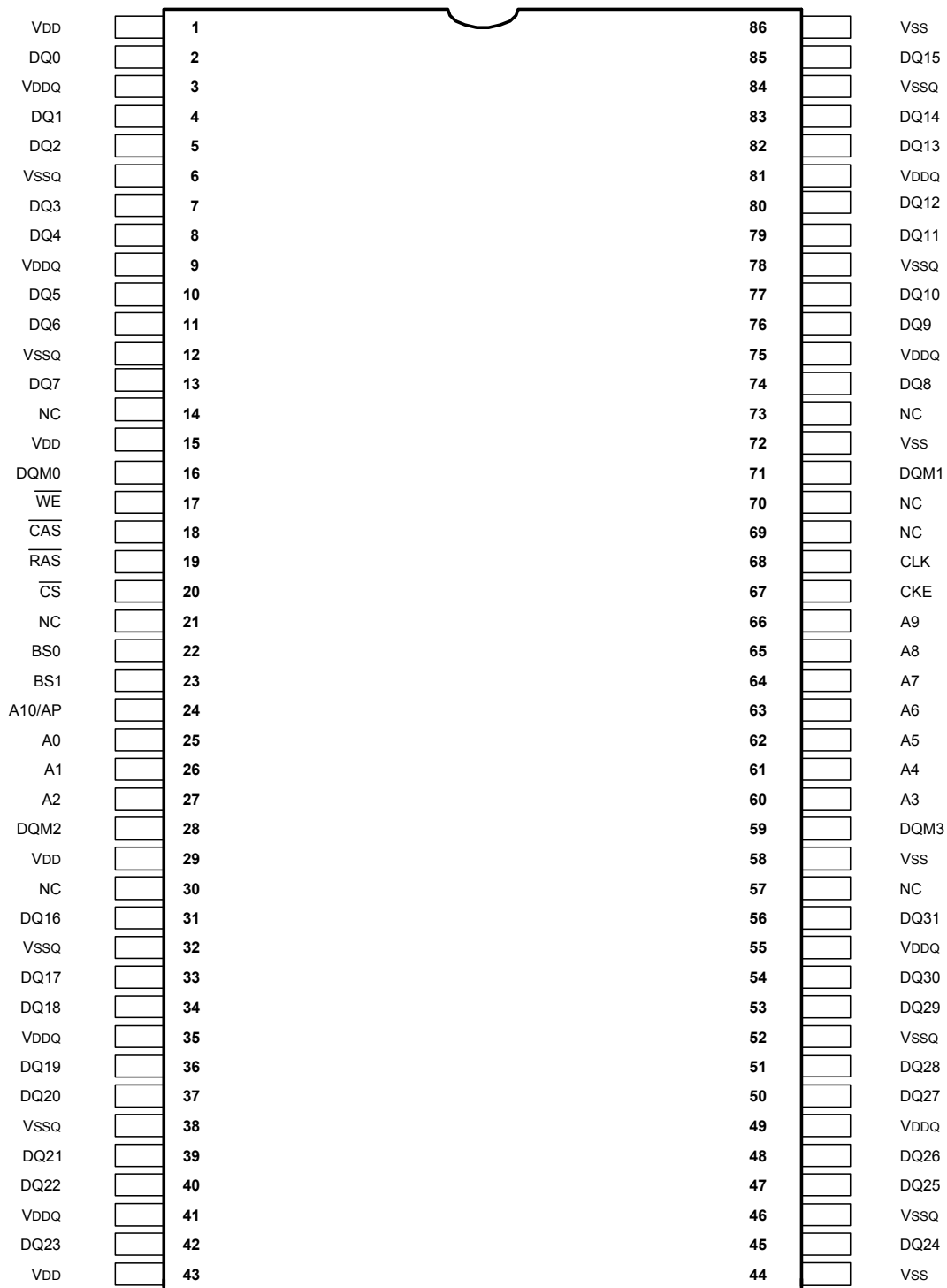


ADSP21487KSWZ3B Terminal Function

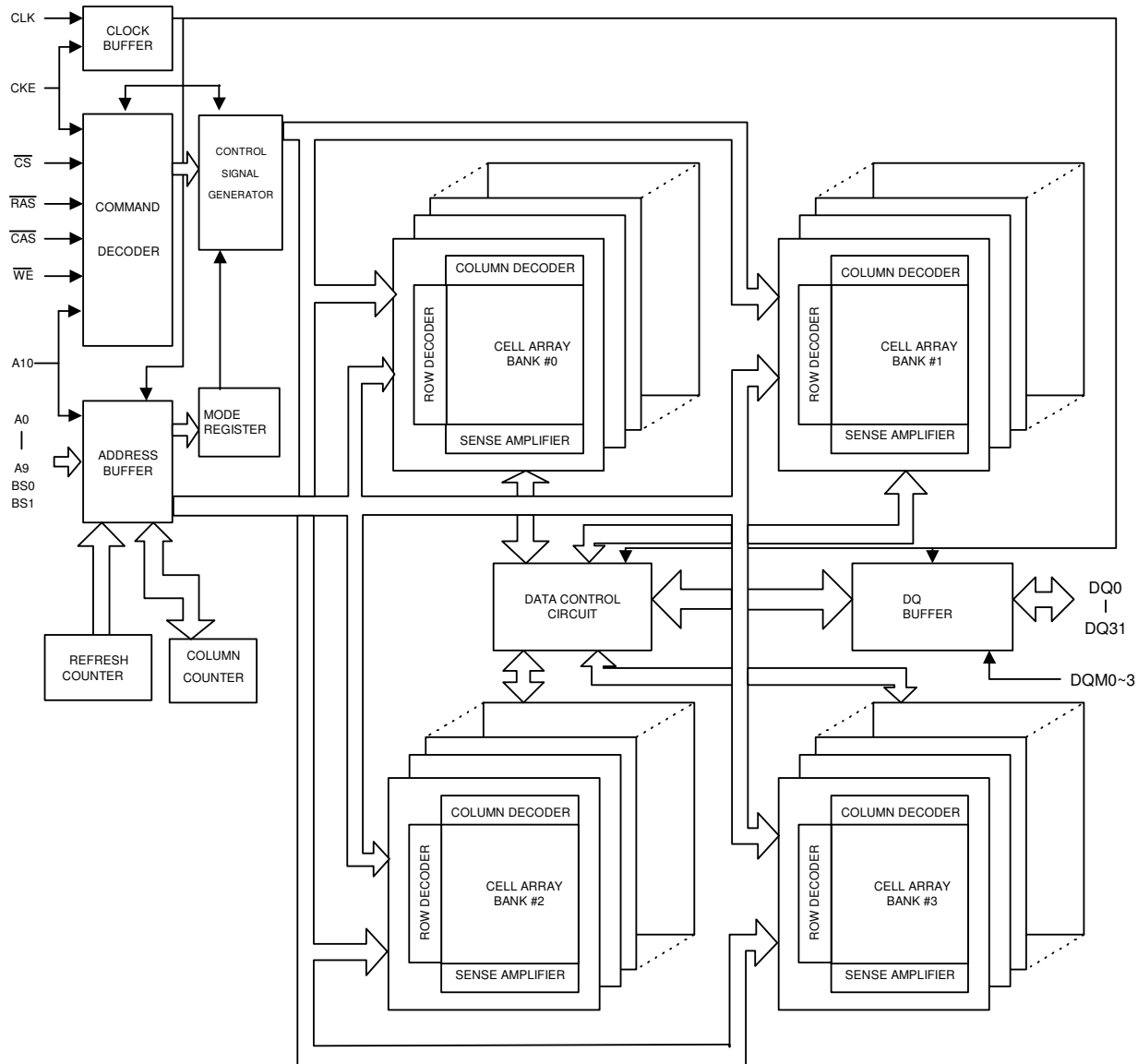
Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.
SDDQM	1	V _{DD_EXT}	45	DAI_P10	89	V _{DD_INT}	133
MS0	2	DPI_P08	46	V _{DD_INT}	90	FLAG0	134
SDCKE	3	DPI_P07	47	V _{DD_EXT}	91	FLAG1	135
V _{DD_INT}	4	V _{DD_INT}	48	DAI_P20	92	FLAG2	136
CLK_CFG1	5	DPI_P09	49	V _{DD_INT}	93	NC	137
ADDR0	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	MST	115	SDCLK	159
V _{DD_EXT}	28	V _{DD_EXT}	72	V _{DD_INT}	116	V _{DD_EXT}	160
V _{DD_INT}	29	DAI_P07	73	WDT_CLKO	117	DATA8	161
ADDR11	30	DAI_P13	74	WDT_CLKIN	118	DATA9	162
ADDR12	31	DAI_P19	75	V _{DD_EXT}	119	DATA10	163
ADDR17	32	DAI_P01	76	ADDR23	120	TCK	164
ADDR13	33	DAI_P02	77	ADDR22	121	DATA11	165
V _{DD_INT}	34	V _{DD_INT}	78	ADDR21	122	DATA12	166
ADDR18	35	NC	79	V _{DD_INT}	123	DATA14	167
RESETOUT/RUNRSTIN	36	NC	80	ADDR20	124	DATA13	168
V _{DD_INT}	37	NC	81	ADDR19	125	V _{DD_INT}	169
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	V _{DD_INT}	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*

* at BOTTOM

W9864G6JH-6 (HDMI : U6)



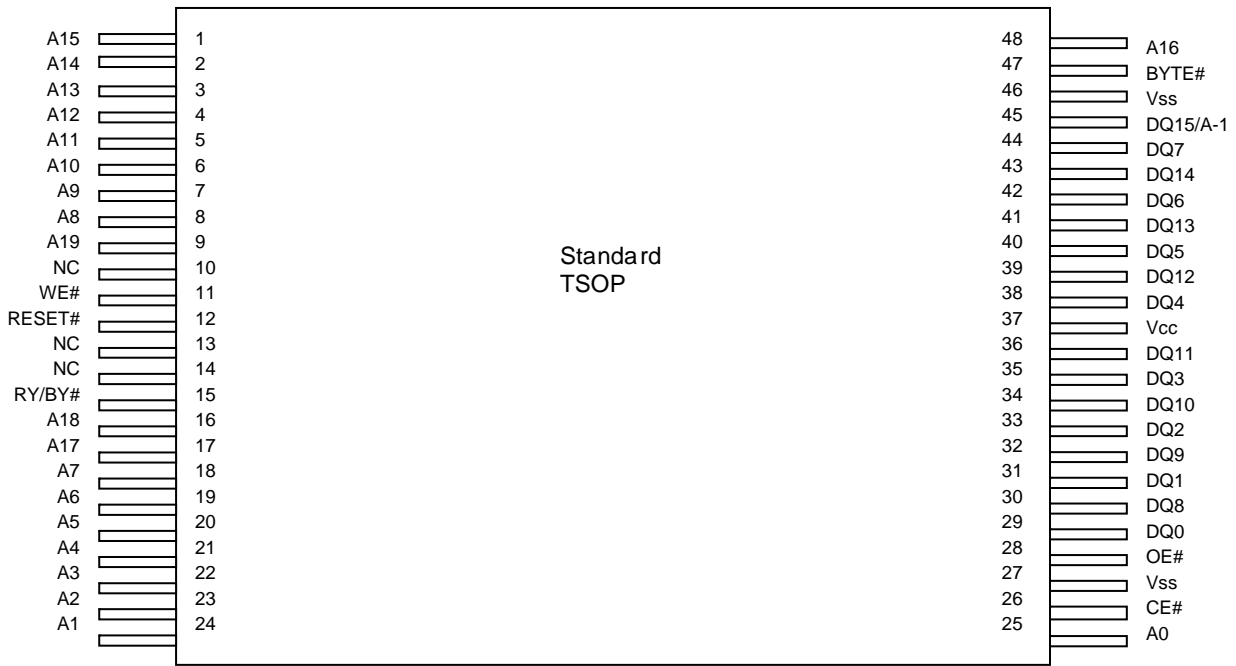
W9864G6JH-6 Block diagram



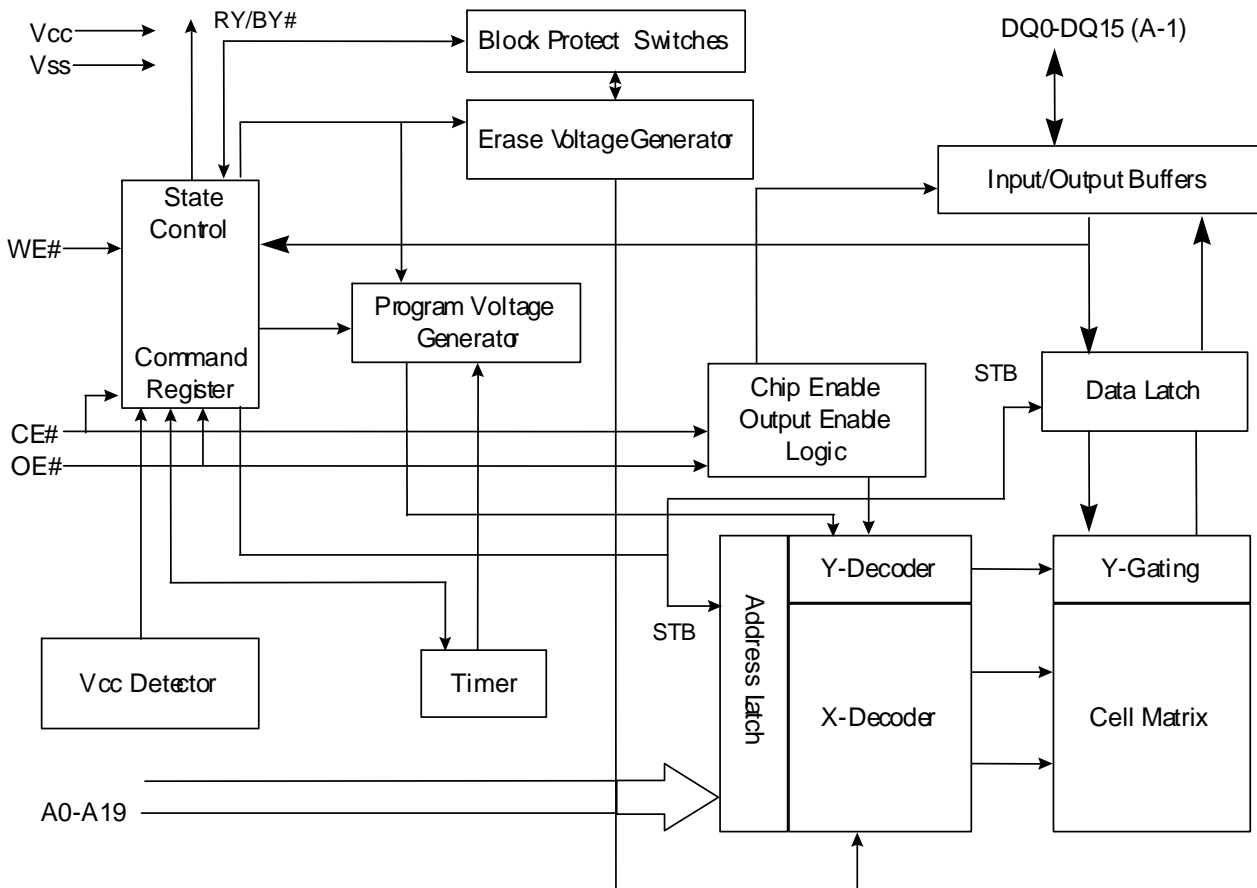
W9864G6JH-6 Pin description

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.

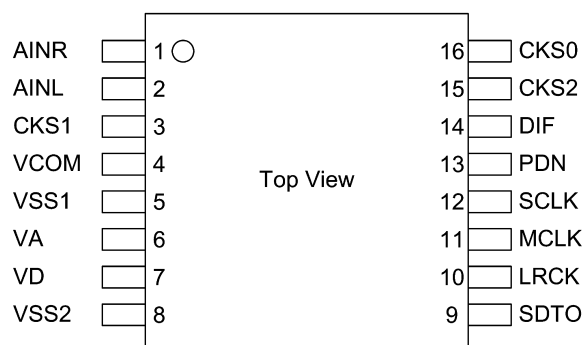
EN29LV160BB-70TIP (HDMI : U7)



EN29LV160BB-70TIP Block Diagram



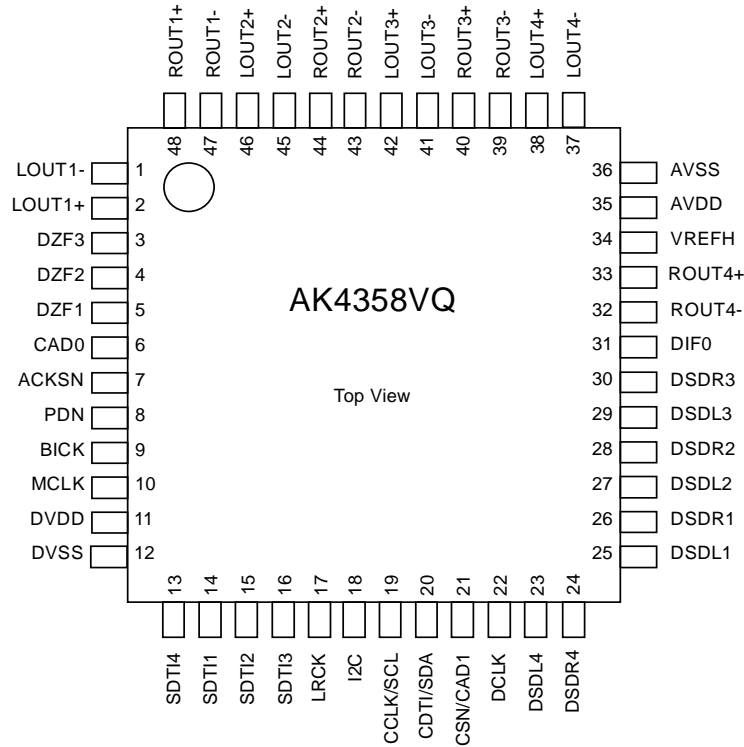
AK5358BET (HDMI : IC30)



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 : IC29)



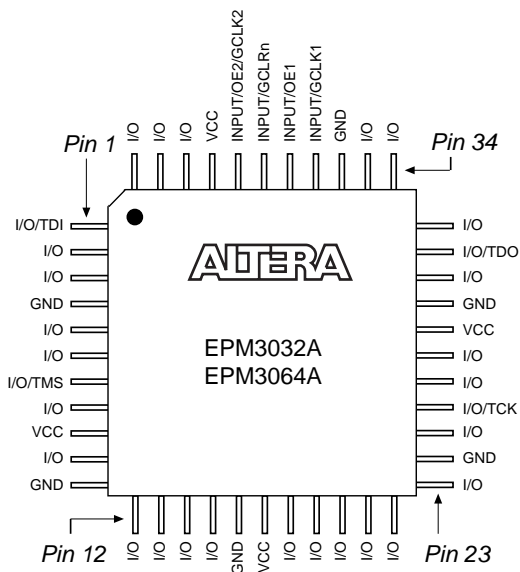
AK4358VQ Pin Function

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

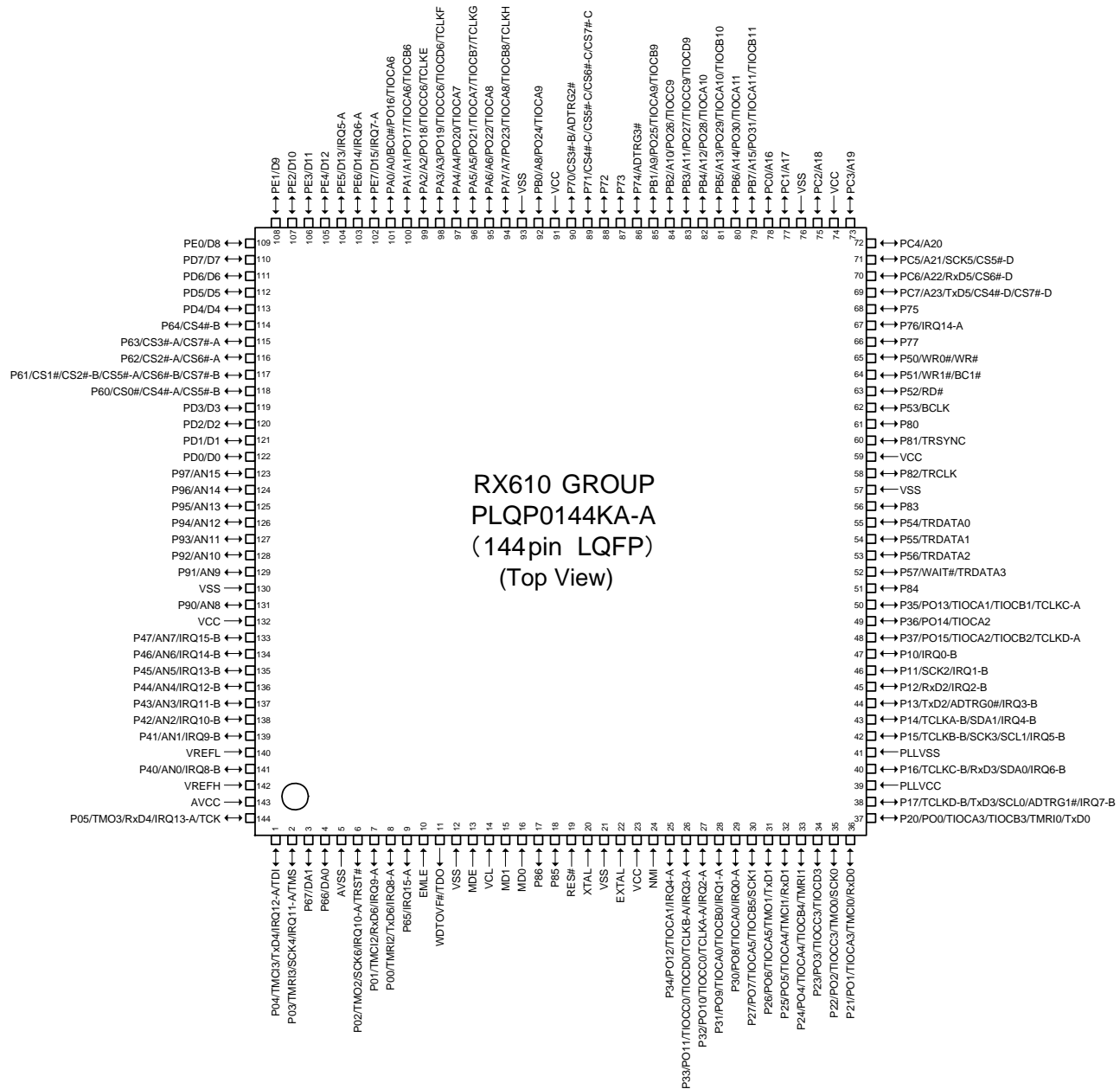
29	DSDL3	I	DAC3 DSD Lch Data Input Pin
30	DSDR3	I	DAC3 DSD Rch Data Input Pin
31	DIF0	I	Audio Data Interface Format 0 Pin
32	ROUT4-	O	DAC4 Rch Negative Analog Output Pin
33	ROUT4+	O	DAC4 Rch Positive Analog Output Pin
34	VREFH	I	Positive Voltage Reference Input Pin
35	AVDD	-	Analog Power Supply Pin, +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.

EPM3032A (HDMI : IC 22)



R5F56108VNFP (HDMI : IC41)



R5F56108VNFP Terminal Functions

Pin	Pin Name	Symbol	I/O	Pull up/down	LvCnv	STBY	CEC STBY	Function
1	P04/IRQ12-A/TMCI3/TxD4/TDI	NC	I	M3VPu	-	I	I	NC
2	P03/IRQ11-A/TMR13/SCK4/TMS	NC	I	M3VPu	-	I	I	NC
3	P67/DA1	HIN SELA	O	-	-	L	L	For HDMI 4/5/6/F selection(TC4052)
4	P66/DA0	HIN SELB	O	-	-	L	L	For HDMI 4/5/6/F selection(TC4052)
5	AVSS	AVSS	-	-	-	-	-	GND
6	P02/IRQ10-A/TMO2/SCK6/TRST#	NC	I	Pd	-	I	I	NC
7	P01/IRQ9-A/TMCI2/RxD6	RXD MI2320	I	M3VPu	-	I	I	Data received from the external pin(AMX) /MITSUBISHI writer rewrite
8	P00/IRQ8-A/TMR12/TxD6	TXD MO2321	O	-	-	L	L	Data transfer to external pin(AMX) /MITSUBISHI writer rewrite
9	P65/IRQ15-A	POWER KEY	I	M3VPu	-	I	I	POWER KEY (WAIT MODE cancel, interrupt port)
10	EMLE	EMLE	I	Pd	-	-	-	Emulator communication pin
11	WDTOVF#/TDO	TDO/WDTOVF#	O/O	-	-	-	-	Emulator communication pin
12	VSS	VSS	I	-	-	-	-	GND
13	MDE	MDE	I	Pd	-	-	-	NC

Pin	Pin Name	Symbol	I/O	Pull up/down	LvCnv	STBY	CEC STBY	Function
14	VCL	VCL	I	-	-	-	-	Smoothing capacitor connection pin
15	MD1	MD1	I	M3VPu	-	-	-	NC
16	MD0	MD0	I	M3VPu	-	-	-	NC
17	P86	(MUTE POWER)	O	-	-	L	L	Reserve (PRE MUTE control)
18	P85	REMOTE POWER(232C)	O	-	-	L	L	232C POWER control pin(ON: H)
19	RES#	RESET	I	-	-	-	-	Reset input (reset: L)
20	XTAL	XTAL	I	-	-	-	-	Clock input
21	VSS	VSS	-	-	-	-	-	GND
22	EXTAL	EXTAL	-	-	-	-	-	Clock output
23	VCC	VCC	-	-	-	-	-	+3.3V
24	NMI	NMI	I	M3VPu	-	-	-	NC
25	P34/IRQ4-A/PO12/TIOCA1	BDOWN	I	-	-	I	I	Power failure detection pin(Power failure:L)
26	P33/IRQ3-A/PO11/TIOCC0/TIOCD0/TCLKB-A	PLDAERR	I	-	-	L	L	PLD ERROR detection pin
27	P32/IRQ2-A/PO10/TIOCC0/TCLKA-A	NC	O	-	-	L	L	NC
28	P31/IRQ1-A/PO9/TIOCA0/TIOCB0	ADV7623 INT1	I	-	-	I	I	HDMI transmitter /receiver / OSD (ADV7623) INT1 output pin
29	P30/IRQ0-A/PO8/TIOCA0	RC IN	I	-	-	I	I	Remote control signal input pin
30	P27/PO7/TIOCA5/TIOCB5/SCK1	ADV7511 RST/NC(AVR1712)	O/O	SW3VPu/-	-	L/L	H/L	HDMI transmitter RESET control pin (ADV7511) / NC (AVR1712)
31	P26/PO6/TIOCA5/TMO1/TxD1	iPod TXD	O	-	3→5	L	L	IPOD communication control pin
32	P25/PO5/TIOCA4/TMC11/RxD1	iPod RXD	I	-	5→3	L	L	IPOD communication control pin
33	P24/PO4/TIOCA4/TIOCB4/TMR1	TU RST/(TU STEREO)	O/I	SW3VPu	-	L/L	L/L	TUNER RESET pin (E3 model) / TUNER ST control pin (E2,EA,E1C,JP models)
34	P23/PO3/TIOCC3/TIOCD3	E RESET/NC(AVR1712)	O/O	-/-	-	L/L	L/L	ETHERNET RESET control pin (DM860) / NC (AVR1712)
35	P22/PO2/TIOCC3/TMO0/SCK0	E POWER/NC(AVR1712)	O/O	-/-	-	L/L	L/L	ETHERNET POWER control pin (DM860) / NC (AVR1712)
36	P21/PO1/TIOCA3/TMC10/RxD0	E_RXDMIO/NC(AVR1712)	O/O	-/-	-	L/L	L/L	ETHERNET communication control pin (DM860) / NC (AVR1712)
37	P20/PO0/TIOCA3/TIOCB3/TMR10/TxD0	E_TXDMOEI/NC(AVR1712)	O/O	-/-	-	L/L	L/L	ETHERNET communication control pin (DM860) / NC (AVR1712)
38	P17/IRQ7-B/TCLKD-B/TxD3/SCL0/ADTRG1#	TU SCLK/TU SCL	O/O	SW3VPu	-	L/L	L/L	TUNER control pin
39	PLLVCC	PLLVCC	-	-	-	-	-	+3.3V
40	P16/IRQ6-B/TCLKC-B/RxD3/SDA0	TU SDIO/TU SDA	O/I_O	SW3VPu	-	L/L	L/L	TUNER control pin
41	PLLVSS	PLLVSS	-	-	-	-	-	GND
42	P15/IRQ5-B/TCLKB-B/SCK3/SCL1	HSCL (400k)	O	CEC3VPu	-	L	L	VIDEO I2C- HDMI TX,RX,OSD(ADV7623) /HDMI_TX(ADV7511)/HDMI SW(ADV3002) /A to H decoder(ADV7844)
43	P14/IRQ4-B/TCLKA-B/SDA1	HSDA (400k)	I_O	CEC3VPu	-	L	L	VIDEO I2C- HDMI TX,RX,OSD(ADV7623) /HDMI_TX(ADV7511)/HDMI SW(ADV3002) /A to H decoder(ADV7844)
44	P13/IRQ3-B/TxD2/ADTRG0#	ADV7623 SPI MO	O	-	-	L	L	OSD control pin (ADV7623)
45	P12/IRQ2-B/RxD2	ADV7623 SPI MI	I	-	-	L	L	OSD control pin (ADV7623)
46	P11/IRQ1-B/SCK2	ADV7623 SPI CLK	O	-	-	L	L	OSD control pin (ADV7623)
47	P10/IRQ0-B	ADV7623 SPI CS	O	-	-	L	L	OSD control pin (ADV7623)
48	P37/PO15/TIOCA2/TIOCB2/TCLKD-A	EEPROM SDA	I_O	M3VPu	-	I	I	EEPROM control pin
49	P36/PO14/TIOCA2	EEPROM SCL	O	M3VPu	-	I	I	EEPROM control pin
50	P35/PO13/TIOCA1/TIOCB1/TCLKC-A	ADV7844 RST/NC(AVR1712)	O/O	SW3VPu/-	-	L/L	H/L	HDMI decoder RESET control pin (ADV7844) / NC (AVR1712)
51	P84	CEC_OUT	O	-	-	L	-	CEC-D signal input pin
52	P57/WAIT#/TRDATA3	ADV3002 RST	O	SW3VPu	-	L	L	HDMI switcher RESET control pin (ADV3002)
53	P56/TRDATA2	E SPI MOEI/NC(AVR1712)	O/O	N3VPu/-	-	L/L	L/L	ETHERNET communication control pin (DM860) / NC (AVR1712)
54	P55/TRDATA1	ADV7623 RST	O	SW3VPu	-	L	L	HDMI Tx/Rx/OSD RESET control pin (ADV7623)
55	P54/TRDATA0	E SPI MIEO/NC(AVR1712)	I/O	N3VPu/-	-	L/L	L/L	ETHERNET communication control pin (DM860) / NC (AVR1712)
56	P83	E SPI CLK/NC(AVR1712)	O/O	N3VPu/-	-	L/L	L/L	ETHERNET communication control pin (DM860) / NC (AVR1712)

Pin	Pin Name	Symbol	I/O	Pull up/ down	LvCnv	STBY	CEC STBY	Function
57	VSS	VSS	-	-	-	-	-	GND
58	P82/TRCLK	FL CE	O	-	-	L	L	FL control order pin
59	VCC	VCC	-	-	-	-	-	+3.3V
60	P81/TRSYNC	FL RST	O	-	-	L	L	FL control order pin
61	P80	S VSEL B	O	-	-	L	L	S VIDEO switcher control pin (TC4052)
62	BCLK/P53	iPod DET	I	SW3VPu	-	L	L	MINI JACK connection detection pin for DOCK connection(Connection:H)
63	P52/RD#	COMPS DET/NC(AVR1712)	I/O	SW3VPu/-	-	L/L	L/L	COMPONENT IN signal presence detection pin / NC (AVR1712)
64	P51/WR1#/BC1#	Z1 VSIG.DET/NC(AVR1712)	I/O	SW3VPu/-	-	L/L	L/L	VIDEO IN signal presence detection pin (input:H) / NC (AVR1712)
65	P50/WR0#/WR#	NC	O	-	-	L	L	NC
66	P77	S VSEL A	O	-	-	L	L	S VIDEO switcher control pin (TC4052)
67	P76/IRQ14-A	TU GPO2_INT/(TUNED)	I	SW3VPu	-	L/L	L/L	TUNER GPIO2 input pin (E3 model) /TUNER TUNED input pin (E2,EA,E1C,JP models)
68	P75	DSP ROMRST	O	-	-	L	L	Memory reset for DSP (Reset : L)
69	PC7/A23/CS4#-D/CS7#-D/ TxD5	DSP MOSI	O	DA3VPu	-	L	L	DSP control pin (ADSP21487KSWZ-3B)
70	PC6/A22/CS6#-D/RxD5	DSP MISO	I	DA3VPu	-	L	L	DSP control pin (ADSP21487KSWZ-3B)
71	PC5/A21/CS5#-D/SCK5	DSPI CLK	O	DA3VPu	-	L	L	DSP control pin (ADSP21487KSWZ-3B)
72	PC4/A20	DSP RST	O	-	-	L	L	DSP(ADSP21487KSWZ-3B) reset output pin (Reset : L)
73	PC3/A19	DSP FLAG0	I	Pd	-	L	L	DSP control pin (ADSP21487KSWZ-3B)
74	VCC	VCC	-	-	-	-	-	+3.3V
75	PC2/A18	DSP ICS	O	DA3VPu	-	L	L	DSP control pin (ADSP21487KSWZ-3B)
76	VSS	VSS	-	-	-	-	-	GND
77	PC1/A17	GRN LED	O	-	-	L	L	POWER LED control pin(ON:H)
78	PC0/A16	RED LED	O	-	-	L	L	POWER/STANDBY LED control pin (ON:H)
79	PB7/A15/PO31/TIOCA11/ TIOCB11	H/P RL	O	-	-	L	L	HEADPHONE RLY control pin
80	PB6/A14/PO30/TIOCA11	FRONT RL	O	-	-	L	L	LRELAY control pin
81	PB5/A13/PO29/TIOCA10/ TIOCB10	T.MUTE	O	-	-	L	L	TUNER MUTE control pin(MUTE:L)
82	PB4/A12/PO28/TIOCA10	TU_SEN (E3 Model)/ NC(E2,EA,E1C,JP Model)	O/O	-	-	L/L	L/L	TUNER control pin (E3 Model) / NC(E2,EA,E1C,JP Model)
83	PB3/A11/PO27/TIOCC9/ TIOCD9	C/S RL	O	-	-	L	L	LRELAY control pin
84	PB2/A10/PO26/TIOCC9	SB RL	O	-	-	L	L	LRELAY control pin
85	PB1/A9/PO25/TIOCA9/ TIOCB9	D5V POWER	O	-	-	L	H	Digital 5V power supply control pin
86	P74/ADTRG3#	DIR CE	O	-	-	L	L	DIR control pin (LC89058W-E)
87	P73	DIR DIN	O	-	-	L	L	DIR control pin (LC89058W-E)
88	P72	DIR DOUT	I	DA3VPu	-	I	I	DIR control pin (LC89058W-E)
89	P71/CS4#-C/CS5#-C/ CS6#-C/CS7#-C	DIR CLK	O	-	-	L	L	DIR control pin (LC89058W-E)
90	P70/CS3#-B/ADTRG2#	DIR RST1	O	-	-	L	L	DIR control pin (LC89058W-E)
91	VCC	VCC	-	-	-	-	-	+3.3V
92	PB0/A8/PO24/TIOCA9	7623 ROM HOLD	O	-	-	L	L	SPI FLASH ROM HOLD control pin (ADV7623)
93	VSS	VSS	-	-	-	-	-	GND
94	PA7/A7/PO23/TIOCA8/ TIOCB8/TCLKH	DIR(ETHER) RST/NC(AVR1712)	O/O	-/-	-	L/L	L/L	DIR (ETHER) RESET control pin (LC89058W) /NC (AVR1712)
95	PA6/A6/PO22/TIOCA8	VSEL A	I	-	-	I	I	Master Volume rotation detection pin(Rotary encoder)
96	PA5/A5/PO21/TIOCA7/ TIOCB7/TCLKG	VSEL B	I	-	-	I	I	Master Volume rotation detection pin(Rotary encoder)
97	PA4/A4/PO20/TIOCA7	DIR(ETHER) CE/NC(AVR1712)	O/O	-/-	-	L/L	L/L	DIR (ETHER) CE control pin (LC89058W) / NC (AVR1712)
98	PA3/A3/PO19/TIOCC6/ TIOCD6/TCLKF	DAC(ETHER) MUTE/ NC(AVR1712)	O/O	-/-	-	L/L	L/L	DAC (ETHER) MUTE control pin (AK4424ET) / NC (AVR1712)
99	PA2/A2/PO18/TIOCC6/ TCLKE	PRE Z2 MUTE	O	-	-	L	L	PRE OUT MUTE control pin / NC (AVR1712)
100	PA1/A1/PO17/TIOCA6/ TIOCB6	NC	O	-	-	L	L	NC
101	PA0/A0/BC0#/PO16/ TIOCA6	PRE SW MUTE	O	-	-	L	L	PRE OUT MUTE control pin / NC (AVR1712)
102	PE7/IRQ7-A/D15	ADV7623 INT2	I	-	-	I	I	HDMI RECEIVER INT2 output pin (ADV7623)
103	PE6/IRQ6-A/D14	ADV7623 Tx INT	I	-	-	I	I	HDMI signal detection pin (ADV7623)
104	PE5/IRQ5-A/D13	ADV7511 Tx INT/NC(AVR1712)	O/O	-/-	-	L/L	L/L	HDMI signal detection pin (ADV7511) / NC (AVR1712)
105	PE4/D12	ISEL A(AVR1912E2,AVR2112)/ NC(AVR1912E3,AVR1712)	I/O	SW3Pu/-	-	L/L	L/L	Input Selector rotation detection pin(Rotary encoder) / NC (AVR1712/AVR1912E3)

Pin	Pin Name	Symbol	I/O	Pull up/down	LvCnv	STBY	CEC STBY	Function
106	PE3/D11	ISEL B(AVR1912E2,AVR2112)/ NC(AVR1912E3,AVR1712)	I/O	SW3Pu/-	-	L/L	L/L	Input Selector rotation detection pin(Rotary encoder) / NC (AVR1712/AVR1912E3)
107	PE2/D10	VOL CLK	O	-	-	L	L	FUNCTION/VOLUME control pin(R2A15218)
108	PE1/D9	VOL DATA	O	-	-	L	L	FUNCTION/VOLUME control (R2A15218)
109	PE0/D8	PLD WRITE	O	-	-	L	L	A.PLD /JTAG switching control pin
110	PD7/D7	JTAG TDO	I	-	-	L	L	A.PLD rewriting control pin(JTAG)
111	PD6/D6	JTAG TMS/APLD CS	O	-	-	L	L	A.PLD rewriting & control pin
112	PD5/D5	JTAG TDI/APLD DATA/DAC DATA	O	-	-	L	L	A.PLD rewriting & control /DAC control pin
113	PD4/D4	JTAG TCK/APLD CLK/DAC CLK	O	-	-	L	L	A.PLD rewriting & control /DAC control pin
114	P64/CS4#-B	ADC RST	O	-	-	L	L	A/D converter control pin(AK5358B)
115	P63/CS3#-A/CS7#-A	E SPI REQ/NC(AVR1712)	I/O	Pd/-	-	L	L	ETHERNET communication control pin(DM860) / NC (AVR1712)
116	P62/CS2#-A/CS6#-A	E SPI CS/NC(AVR1712)	O/O	N3VPu/-	-	L	L	ETHERNET communication control pin(DM860) / NC (AVR1712)
117	P61/CS1#/CS2#-B/ CS5#-A/CS6#-B/CS7#-B	DAC MS	O	-	-	L	L	A/D converter control pin(AK4358VQ)
118	P60/CS0#/CS4#-A/ CS5#-B	DAC RST	O	-	-	L	L	A/D converter control pin(AK4358VQ)
119	PD3/D3	VEXP STB	O	-	3→5	L	L	VIDEO expander control pin(MC14094BD)
120	PD2/D2	VEXP OE	O	Pd	3→5	L	L	VIDEO expander control pin(MC14094BD)
121	PD1/D1	VEXP CLK/FL CLK	O	-	3→5/-	L	L	VIDEO expander control (MC14094BD) & FL control pin
122	PD0/D0	VEXP DIN/FL DATA	O	-	3→5/-	L	L	VIDEO expander control (MC14094BD) & FL control pin
123	P97/AN15	DA POWER	O	-	-	L	L	Digital power supply (DA3.3V & DA1.2V) control pin (ON:H)
124	P96/AN14	CEC POWER	O	-	-	L	H	CEC power supply (CEC5V & CEC3.3V & CEC1.8V) control pin for CEC STANDBY.
125	P95/AN13	DV POWER	O	-	-	L	*	Digital (VIDEO) power supply (DV5V & DV3.3V) control pin. *CEC STANDBY:MODE1=H, MODE2=L
126	P94/AN12	DV POWER2/NC(AVR1712)	O/O	-/-	-	L/L	*L	Digital (VIDEO) power supply (DV1.8V) control pin. *CEC STANDBY:MODE1=H, MODE2=L / NC (AVR1712)
127	P93/AN11	MAIN POWER	O	-	-	L	L	MAIN POWER control pin
128	P92/AN10	CPU POWER	O	-	-	L	L	MAIN CPU POWER pin (POWER ON: H CEC ON = STANDBY: H)
129	P91/AN9	MODEL	I	-	-	I	I	MODEL switch input pin (No assign)
130	VSS	VSS	-	-	-	-	-	GND
131	P90/AN8	MODE	I	-	-	I	I	Destination detection pin
132	VCC	VCC	-	-	-	-	-	+3.3V
133	P47/IRQ15-B/AN7	THERMAL B/DC DET/ASO	I	-	-	I	I	ASO PROTECT / DC PROTECT / HEAT PROTECT-B detection pin
134	P46/IRQ14-B/AN6	H/P DET / MIC DET/THERMAL A	I	-	-	I	I	MIC detection / Headphone detection / HEAT PROTECT-A detection pin
135	P45/IRQ13-B/AN5	KEY3	I	SW3VPu	-	I	I	Button input 3
136	P44/IRQ12-B/AN4	KEY2	I	SW3VPu	-	I	I	Button input 2
137	P43/IRQ11-B/AN3	KEY1	I	SW3VPu	-	I	I	Button input 1
138	P42/IRQ10-B/AN2	RDS DATA(EU) /NC(KST-MW MODEL)	I/I	-	5→3	I/I	I/I	NC / RDS control (E2 Model)
139	P41/IRQ9-B/AN1	RDS CLK(EU) /NC(KST-MW MODEL)	I/I	-	5→3	I/I	I/I	NC / RDS control (E2 Model)
140	AVSS	AVSS	-	-	-	-	-	GND
141	P40/IRQ8-B/AN0	CEC_IN	I	SW3VPu	-	I	I	CEC-D signal input pin
142	VREF	VREF	-	-	-	-	-	Reference voltage (+3.3V) input pin for A/D port
143	AVCC	AVCC	-	-	-	-	-	+3.3V
144	P05/IRQ13-A/TMO3/ RxD4/TCK	NC	I	M3VPu	-	I	I	NC

MC14094BDTR2G (HDMI : IC35)

PIN ASSIGNMENT

STROBE	1 ●	16	V _{DD}
DATA	2	15	OUTPUT ENABLE
CLOCK	3	14	Q5
Q1	4	13	Q6
Q2	5	12	Q7
Q3	6	11	Q8
Q4	7	10	Q's
V _{SS}	8	9	Q _S

TRUTH TABLE

Clock	Output Enable	Strobe	Data	Parallel Outputs		Serial Outputs	
				Q1	Q _N	Q _S *	Q's
	0	X	X	Z	Z	Q7	No Chg.
	0	X	X	Z	Z	No Chg.	Q7
	1	0	X	No Chg.	No Chg.	Q7	No Chg.
	1	1	0	0	Q _N -1	Q7	No Chg.
	1	1	1	1	Q _N -1	Q7	No Chg.
	1	1	1	No Chg.	No Chg.	No Chg.	Q7

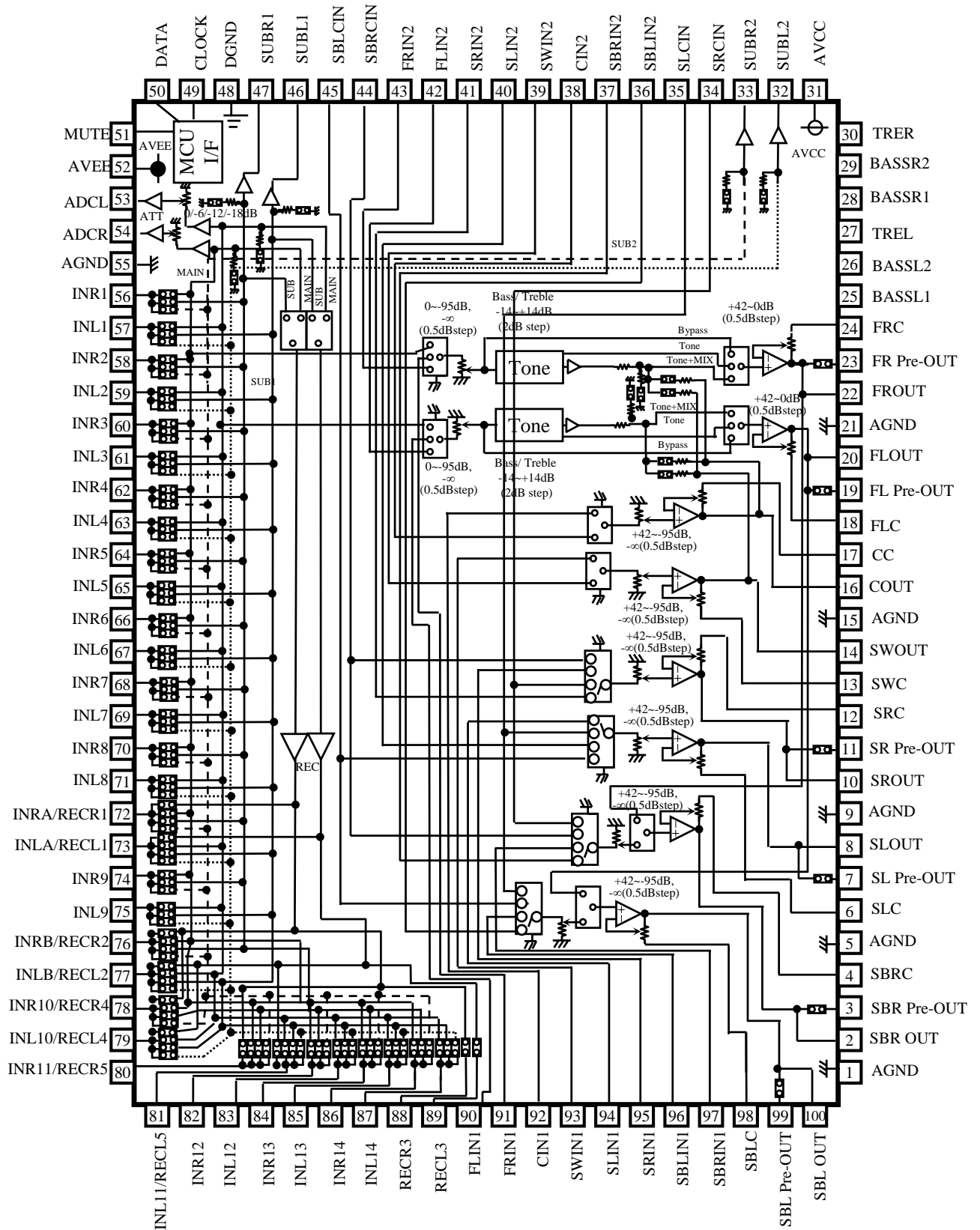
Z = High Impedance X = Don't Care

* At the positive clock edge, information in the 7th shift register stage is transferred to Q8 and Q_S.

MC14094BDTR2G Terminal Function

Device	Pin	Pin Name	Symbol	I/O	Function
HDMI:IC35	4	EXP1 (Q1)	VINA	O	CVBS input select control pin (TC4051)
	5	EXP2 (Q2)	VINB	O	CVBS input select control pin (TC4051)
	6	EXP3 (Q3)	VINC	O	CVBS input select control pin (TC4051)
	7	EXP4 (Q4)	P.SAVE	O	COMPONENT output MUTE control pin (NJM2586)
	11	EXP5 (Q8)	COMP SW2	O	VIDEO SELECT IC(NJW2586)
	12	EXP6 (Q7)	COMP SW1	O	VIDEO SELECT IC(NJW2586)
	13	EXP7 (Q6)	MONIB	O	CVBS monitor output signal control pin(TC4052)
	14	EXP8 (Q5)	MONIA	O	CVBS monitor output signal control pin(TC4052)

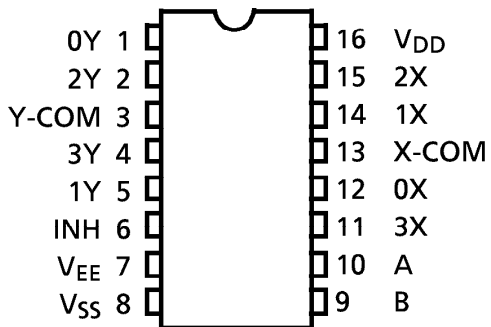
R2A15218FP (AV : IC801)



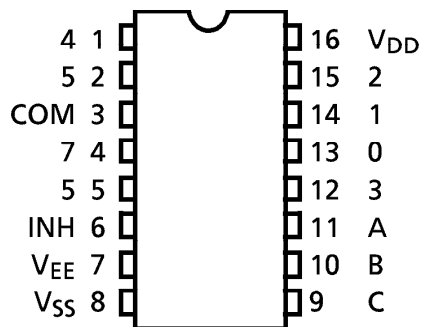
R2A15218FP Pin Function

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

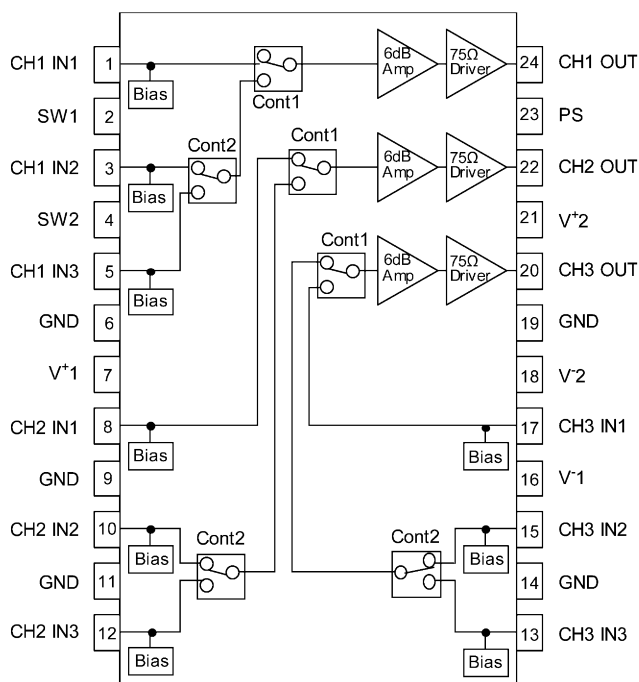
TC4052BFT (AV : IC806,826)



TC4051BFT (AV : IC822)



NJM2586AM (AV : IC825)



ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	17G	18G
D0	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	S1	PCM
D1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	3d	AAC
D2	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	2d	S2
D3	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	3e	EQ
D4	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	2e	VOL
D5	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	3c	DYN
D6	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2c	XT
D7	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3g	MULTEQ
D8	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	2g	AUDYSSEY
D9	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	3f	X
D10	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	2f	I
D11	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	3b	PL
D12	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	2b	DD (PL)
D13	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3a	+
D14	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	2a	MASTER
D15	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	Dp	RDS
D16	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	dB	AUTO
D17	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	1d	TUNED
D18	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	1e	STEREO
D19	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	1c	Neo:6
D20	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1g	HD
D21	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	1f	dBs
D22	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	1b	-
D23	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	1a	-
D24	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	SP-	-
D25	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	A	-
D26	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	B	-
D27	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	Z2	-
D28	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	Q1	-
D29	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	Q2	-
D30	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	Q3	-
D31	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	-	-
D32	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	-	-
D33	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	-	DIG.
D34	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	-	ANA.
AD1	-	-	-	-	-	-	AUTO	-	HDMI	METAL	-	ANALOG	-	-	-	MUTE	-	DDIGITAL
AD2	-	-	-	-	-	-	HDMI	-	RSTR	REC	-	SBACK	-	-	-	SLEEP	-	DDTrueHD

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.

PCB 7CH_AMP ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
Q401	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q403	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q405	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q406	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q407,408	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q412	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q413	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q415	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q417	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q418	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q419,420	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q424	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q425	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q427	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q430	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q431,432	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q436	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q437	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q439	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q442	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q443,444	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q448	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q449	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q451	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q454	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q455,456	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q460	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q461	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q463	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q466	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q467,468	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q472	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
Q473	00D2710314903	TR 2SA KTA1024Y		J5001024Y0050S	
Q475	00D2710318909	TR 2SA 2N5401S		J520254010010S	
Q478	00D2730479909	TR 2SC 2N5551S		J522255510010S	
Q479,480	00D9600196205	TR 2SA KSA992F		J5000992F0050S	
Q484	00D2730471907	TR 2SC KTC3206Y		J5023206Y0050S	
D402-404	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D408-410	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D414-416	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D420-422	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D426-428	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D432-434	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D438-440	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
ZD401	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD402,403	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD404	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD405,406	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD407	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD408,409	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD410	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD411,412	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD413	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD414,415	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD416	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	
ZD417,418	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
ZD419	00D2760643983	D,ZENER MTZJ5.1A		K06005R134520S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
ZD420,421	00D9630047502	D,ZENER MTZJ3.3B		K06003R344520S	
RESISTORS GROUP					
R404	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R406	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R408	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R415	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R424,425	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R430,431	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R434	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R439	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R441	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R443	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R445	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R450	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R451	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R458	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R467,468	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R474,475	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R478	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R483	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R485	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R487	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R489	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R493	00D9630337908	R,METAL 33-J,1W	FLAME RETARDANT	C060033065050S	
R494	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R495	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R502	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R511,512	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R517,518	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R521	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R526	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R528	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R530	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R534	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R537	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R538	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R545	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R551	00D9639005639	R,METAL FILM 100-J,1W	FLAME RETARDANT	C060010165060S	
R554,555	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R561,562	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R564	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R569	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R571	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R573	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R577	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R580	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R581	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R588	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R597,598	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R603,604	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R607	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R612	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R614	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R616	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R620	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R623	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S	
R624	nsp	R,FIXED 1WJ-5.6K		N113135656220S	
R631	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R640,641	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R646,647	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S	
R650	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S	
R655	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S	
R657	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S	
R659	nsp	R,METAL FILM 47-J,1W		C060047065060S	
R663	nsp	R,FIXED 1WJ-5.6K		N113135656220S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
R666	963252004160S	POSISTOR 18BC471QB5RB		F320184710050S		
R667	nsp	R,FIXED 1WJ-5.6K		N113135656220S		
R674	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S		
R683,684	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S		
R689,690	00D9630345903	R,FIXED 2WJ-0.47	FLAME RETARDANT	N113136647820S		
R694	nsp	R,METAL FILM 3.3K-J,1W		C060033265050S		
R698	963125012630S	R,METAL FILM 22-J,1W	FLAME RETARDANT	C060022065050S		
R700	nsp	R,METAL FILM 1.2K-J,1W		C060012265050S		
R702	nsp	R,METAL FILM 47-J,1W		C060047065060S		
VR401-407	963161012400S	VR,SEMI CARBON EVN-DCAA03B 1KB		C541102315000S		
CAPACITORS GROUP						
C401	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C403	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S		
C404	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C405	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C406	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C407	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C408	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C410	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C412	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C413	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C415,416	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C418	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C419	00D9630324005	C,ELECT 100UF-M/100V		D04010108C240S		
C420	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C421	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C422	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C423	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C424	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C426	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C428	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C429	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C434	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C436	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C437	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C438	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C439	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C440	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C442	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C444	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C445	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C450	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C452	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C453	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C454	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C455	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C456	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C458	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C460	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C461	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C466	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C468	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C469	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C470	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C471	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C472	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C474	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C476	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C477	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C479,480	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C482	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C484	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C485	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C486	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C487	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C488	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C490	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C492	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C493	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C498	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C500	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C501	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
C502	nsp	C,CERAMIC SL220PF-J/500V		D00022106D051S		
C503	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C504	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C506	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C508	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C509	nsp	C,CERAMIC X7R2200PF-K/50V		D011222777200S		
C511,512	00D9630234302	C,ELECT 10UF-M/100V		D04010008C050S		
C513,514	00D9630338402	C,ELECT 330UF-M/6.3V		D040331081050S		
C515	00D9630324607	C,ELECT 47UF-M/10V (Pb Free)		D040470082060S		
OTHERS PARTS GROUP						
BKT400	nsp	BRACKET 0.8t/SCREW		4010210196100S		
CN404	nsp	CN.WIRE 240MM/5P		L025241052620S		
CP401	nsp	CN.WAFER 13P STRAIGHT		L101200101310S		
CP402	nsp	CN.WAFER 5P 5267-05A		L102526700500S		
CP403	nsp	CN.WAFER 10P STRAIGHT		L101200101010S		
CP405	nsp	CN.WAFER 3P 5267-03A		L102526700300S		
G400	nsp	CN.WIRE 60MM/1P		L025600012040S		
G402	nsp	CN.WIRE 60MM/1P		L025600012040S		
J538	nsp	CN.WIRE 1P		L045061000050S		
TP401-407	nsp	CN.WAFER 3P		L101200100320S		

PCB SPK ASS'Y

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
SEMICONDUCTORS GROUP							
△	IC100	963239010480S	IC PC123X2YFZ (DIP4P SHARP)		K614123000010S		
△	IC102	231010091708S	IC TOP258MG		G200258000010S		
	IC116	212050010508S	IC KIA2431AP		J126243118010S		
	Q1-5	943215500020S	TR 2SA RT1P141C		CVTRT1P141C		
	Q8-12	943216500020S	TR 2SC RT1N141C		CVTRT1N141C		
	D1-5	00D9630355401	D,SWITCHING KDS4148U		K005041480030S		
	D8	00D2760401905	D,SWITCHING 1SS133T		K000013300520S		
	D12	00D9600262304	D,RECTIFIER BRIDGE		K047100600010S		
	D100-102	00D9630328409	D,SWITCHING 1N4007		K000400700010S		
	D103	943209500030S	D,SCHOTTKY SRL3060P		K120306005510S		*
	D104-106	00D9630328409	D,SWITCHING 1N4007		K000400700010S		
	D108	963209010430S	D,FAST RECOVERY AP01C-V1 52RE-AX		K050000015000S		
	D109,110	00D9630328409	D,SWITCHING 1N4007		K000400700010S		
	D112	00D2760401905	D,SWITCHING 1SS133T		K000013300520S		
	ZD100	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD101	00D2760762958	D,ZENER MTZJ39B		K06039R044520S		
	ZD102	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD103	00D2760762958	D,ZENER MTZJ39B		K06039R044520S		
	ZD104	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD105	00D2760762958	D,ZENER MTZJ39B		K06039R044520S		
	ZD106,107	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD108,109	00D2760762958	D,ZENER MTZJ39B		K06039R044520S		
	ZD110	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD112	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	ZD114	00D9600095607	D,ZENER MTZJ5.6B		K06005R644520S		
	ZD115	00D2760762958	D,ZENER MTZJ39B		K06039R044520S		
	ZD117,118	963202010440S	D,ZENER MTZJ22B		K06022R044520S		
	DZ1	00D9600095801	D,ZENER MTZJ6.8B		K06006R844520S		
RESISTORS GROUP							
	R5-18	963125010100S	R,METAL FILM 10-J 2W		C060010066050S		
	R28-33	00D9630310404	R,METAL FILM 2.2K-J,1W		C060022265050S		
	R34	nsp	R,METAL FILM 10K-J,1/4W		C060103063050S		
	R35,36	nsp	R,METAL FILM 47K-J,1/4W		C060047363050S		
	R37,38	963125010110S	R,METAL FILM 470-J,2W		C060047166060S		
CAPACITORS GROUP							
	C1	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C2	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C4	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C5	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C7	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C9	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C10	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C12	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C13	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C15	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C17	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C18	nsp	C,CERAMIC 2200PF-K/50V		D011222777160S		
	C22	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C25	nsp	C,FILM MI-0.047UF-J/50V		D020473167050S		
	C27	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
	C30	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
	C33	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
	C36	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
	C39	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
	C42	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> NOTE : Two kinds of relays can be used. Please choose suitable resistors to each kind of relay. </div>					
① .RELAY_A					
RLY2-5	963682003410S	RELAY HL3-2A-12S 12V 5A		G680120503020S	
R20-23	nsp	R,CARBON FILM//22-J,1/5W-52RE-AX		C00002206P520S	
② .RELAY_B					
RLY2-5	963682002440S	RELAY G5PA-28MC 12V		G680120502050S	
R20-23	nsp	R,CARBON FILM//20-J,1/5W-52RE-AX		C00002006P520S	
△ T100	963102100020S	TRANS,SWITCHING EER2834		E060283405520S	
TR100	00D9630255802	TR 2SC KTC3199Y		J5023199Y0010S	
TR101	00D9630255802	TR 2SC KTC3199Y		J5023199Y0010S	
TR102	00D9630255802	TR 2SC KTC3199Y		J5023199Y0010S	
W100-103	nsp	CN.WIRE 40MM/1P		L025400012440S	
	nsp	HOLDER,FUSE CLIP	F100_1	G645000050010S	
	nsp	HOLDER,FUSE CLIP	F100_2	G645000050010S	
	nsp	HOLDER,FUSE CLIP	F101_1	G645000050010S	
	nsp	HOLDER,FUSE CLIP	F101_2	G645000050010S	
	nsp	CLAMP CABLE		4330040343010S	

PCB REG_CNT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC103	00D2630553006	IC NJM7805FA		J126780500130S	
IC104	00D2630554005	IC NJM7905FA		J126790500020S	
IC105	00D2630553006	IC NJM7805FA		J126780500130S	
IC106	00D2630810008	IC NJM7808FA		J126780800030S	
IC107	00D2630503001	IC NJM7908FA		J126790800020S	
IC108	963239003420S	IC NJM2388F05		J126238800050S	
D114	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D115,116	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D117,118	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D119-121	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D122	00D9630236504	D,SCHOTTKY RB721Q-40		K120072140010S	
D123	00D2760401905	D,SWITCHING 1SS133T		K000013300520S	
D127-134	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D137-144	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
ZD117,118	00D9600096004	D,ZENER MTZJ33B		K06033R044520S	
RESISTORS GROUP					
R123,124	nsp	R,METAL 0.22-J,1W-R		C060R22065050S	
CAPACITORS GROUP					
C126	963134011290S	C,ELECT 4700UF-M/16V		D040472083020S	
C127,128	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C129	00D9630217002	C,ELECT 3300UF-M/16V		D040332083010S	
C130	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C131	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C132	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C133	90M-OA000500R	C,ELECT 4700UF-M/25V(MHA)		D040472084240S	
C134	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C135	90M-OA000500R	C,ELECT 4700UF-M/25V(MHA)		D040472084240S	
C136	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C137	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C143	nsp	C,FILM 0.1UF-J/50V		D020104167050S	
C147	nsp	C,FILM 0.1UF-J/50V		D020104167050S	
OTHERS PARTS GROUP					
BKT100	nsp	BRACKET SCREW		4010210196000S	
BKT402	nsp	BRACKET 0.8t/SCREW		4010210196100S	
CLAMP101	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CN13A	nsp	CN.WIRE 120MM/10P		L025121102620S	
CN13B	nsp	CN.WIRE 120MM/4P.		L025121042620S	
CN14	nsp	CN.WAFER 23P C125Z2-23		L109012522310S	
CN100	nsp	CN.WAFER 13P C125Z2-13		L109012521310S	
CN101	nsp	CN,WAFER 9P C125Z2-09		L109012520910S	
CP3	nsp	CN,WAFER 13P C125Z1-13		L109012511310S	
CP5	nsp	CN,WAFER 19P C125Z1-19		L109012511910S	
CP8	nsp	CN,WAFER 19P C125Z1-19		L109012511910S	
CP9,10	nsp	CN,WAFER 13P C125Z1-13		L109012511310S	
CP11	nsp	CN.WAFER 33P C125Z1-33		L109012513310S	
CP13A	nsp	CN.WAFER 10P 20010WR-10A00		L101200101020S	
CP13B	nsp	CN.WAFER 4P 20010WR-04		L101200100420S	
CP100	nsp	CN,WAFER 13P C125Z1-13		L109012511310S	
CP101	nsp	CN.WAFER 9P C125Z1-09		L109012510910S	
CP102	nsp	CN.WAFER 4P 5267-04A		L102526700400S	
CP104	nsp	CN.WAFER 3P 5267-03A		L102526700300S	
CP112,113	nsp	CN,WAFER 19P C125Z1-19		L109012511910S	
CP114	nsp	CN,WAFER 21P C125Z1-21		L109012512110S	

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	CP115	nsp	CN,WAFER 17P C125Z1-17		L109012511710S		
	△ F105	963652010500S	FUSE T1.6A/250V		N751501601160S		
	△ F106	963652010500S	FUSE T1.6A/250V		N751501601160S		
	F105A	nsp	HOLDER,FUSE CLIP		G645000050010S		
	F105B	nsp	HOLDER,FUSE CLIP		G645000050010S		
	F106A	nsp	HOLDER,FUSE CLIP		G645000050010S		
	F106B	nsp	HOLDER,FUSE CLIP		G645000050010S		

PCB FRONT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC100	00D2631289900	IC AZ4580M		J121458000020S	
IC102	00D2631289900	IC AZ4580M		J121458000020S	
Q100,101	943214500020S	TR 2SC 2SC3052		CVT2SC3052	
Q102	00D9600133103	TR 2SA KSA916Y		J5000916Y0050S	
Q106	943216500050S	TR 2SC RT1N441C		CVTRT1N441C	
Q107,108	963212500030S	TR 2SA ISA1530AC1		J520015301210S	
Q109	943215500030S	TR 2SA RT1P441C		CVTRT1P441C	
Q111,112	943216500020S	TR 2SC RT1N141C		CVTRT1N141C	
D100,101	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D102,103	00D9630355401	D,SWITCHING KDS4148U		K005041480030S	
D111-114	00D9630355401	D,SWITCHING KDS4148U		K005041480030S	
D118,119	00D9630355401	D,SWITCHING KDS4148U		K005041480030S	
ZD100	00D9600095500	D,ZENER MTZJ5.1B		K06005R144520S	
ZD101	00D9600095801	D,ZENER MTZJ6.8B		K06006R844520S	
ZD102	00D9630046202	D,ZENER MTZJ18B		K06018R044520S	
ZD103	00D2760665903	D,ZENER MTZJ16B		K06016R044520S	
ZD104,105	00D9600095500	D,ZENER MTZJ5.1B		K06005R144520S	
LED101	963262010460S	LED SIR-341ST3F 3PI		K505341300010S	
LED104	00D9630366108	LED BL-BEG204-L 5PI		K500052004010S	
RESISTORS GROUP					
R127	00D9639006272	R,FIXED RSD-R1-1WJ-4.7		N113135647920S	
CAPACITORS GROUP					
C100	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C101	nsp	C,FILM 0.1UF-J/100V		D02010406C060S	
C103	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C104	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C105	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C106	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C107	nsp	C,CERAMIC COG82PF-J/50V		D010820167160S	
C108	nsp	C,FILM 0.047UF-J/100V		D02047306C060S	
C109	nsp	C,FILM 0.1UF-J/100V		D02010406C060S	
C110	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C111	nsp	C,CERAMIC 1UF-Z/50V		D011105597160S	
C112	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C113	nsp	C,FILM 0.1UF-K/250V		D02010407H080S	
C114	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C115	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C116	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C117	nsp	C,ELECT 470UF-M/63V		D040471088010S	
C118	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C119	nsp	C,FILM 0.1UF-K/250V		D02010407H080S	
C120	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C121	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C122	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C123	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C124-126	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C127	nsp	C,CERAMIC0.047UF-K/25V		D011473774161S	
C129	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C130	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C131	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C132	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C133	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C134	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C137	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C139	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S	
C142-145	nsp	C,FILM 0.1UF-J/100V		D02010406C060S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C146	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C147	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C148,149	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S	
C150	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C151	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C152	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C153	nsp	C,FILM ST-0.01UF-J/100V		D02010306C060S	
C154	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C155	nsp	C,FILM ST-0.01UF-J/100V		D02010306C060S	
C156,157	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S	
C165	nsp	C,CERAMIC0.01UF-K/50V		D011103777160S	
C166	00D9630293709	C,ELECT 100UF-M/10V		D040101082070S	
OTHERS PARTS GROUP					
BD100-104	nsp	R,CHIP 0-J, 1/16W		C20000006M160S	
BD105	nsp	COIL,BEAD CBW160808U121T		D340160811210S	
BD107-109	nsp	R,CHIP 0-J, 1/16W		C20000006M160S	
CB100,101	nsp	R,CHIP 0-J, 1/16W		C20000006M160S	
CLAMP111	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CLAMP113,114	nsp	CLAMP WIRE(SOLDER)		4330000120000S	
CN100	nsp	CN.WIRE 80MM/5P		L025800052620S	
CN103	nsp	CN.WIRE 40MM/10P		L025400102620S	
CN104_1	nsp	CN.WAFER 11P		L101100031110S	
CN104_2	nsp	CN.WAFER 11P		L101100031110S	
CP100	nsp	CN.WAFER 5P 20010-05		L101200100510S	
CP101	nsp	CN.WAFER 5268-07A 7P		L102526800700S	
CP104_1	nsp	CN.WAFER 11P		L101100041110S	
CP104_2	nsp	CN.WAFER 11P		L101100041110S	
△ F102	963652500020S	FUSE 6125FF500-R 500mA		G657612505030S	
G101	nsp	CN.WIRE 100MM/1P		8410101012240S	
JACK100	00D9630367802	JACK,D3.5 EARPHONE		G401PJ354H40YS	
JACK103	00D9630146403	TER,RCA 3PIN		G606308HG110YS	
JACK104	963643013700S	JACK,D6.5 PHONE		G402PJ612AG1YS	
L100	nsp	COIL INDUCTOR 100UH		D330101001020S	
RMC100	963262010290S	MODULE,REMOCON R34FS9A		E940349003810S	
SW100-105	00D9630095305	SW,TACT SKHV10910D01		G180040500010S	
SW107-116	00D9630095305	SW,TACT SKHV10910D01		G180040500010S	
SW118-121	963662100100S	SW,TACT THVV501BAA/KHV-901A		G180501000010S	*
SW122	00D9630095305	SW,TACT SKHV10910D01		G180040500010S	
SW124-127	00D9630095305	SW,TACT SKHV10910D01		G180040500010S	
VEC100	00D9630387408	SW,ENCODER EC16B24SO		G121162400070S	
U1	nsp	CN.FPC 1.0MM 1.0-11S-40PW 40P		L130100114050S	
U100	963172010470S	DISPLAY,FLT 18-ST-13GINK		K530180130010S	
JP210	nsp	R,CHIP 0-J,1/8W		C200000061300S	
JP212	nsp	R,CHIP 0-J,1/8W		C200000061300S	
	nsp	HOLDER FLT		4320200026000S	

PCB AUDIO_VIDEO ASS'Y 

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC801	963239000650S	IC R2A15218FP		J084152180010S	
IC806	963233100020S	IC TC4052BFT		J040405205510S	
IC821	232810005504S	IC BD7628F-E2		J127762800010S	
IC822	00D2623445901	IC TC4051BFT		J040405105510S	
IC823	232810005504S	IC BD7628F-E2		J127762800010S	
IC825	963239003470S	IC NJM2586AM		J171258600010S	
IC826	963233100020S	IC TC4052BFT		J040405205510S	
Q821	943214500030S	TR 2SC INC2001AC1		CVTINC2001AC1	
Q822,823	943215500020S	TR 2SA RT1P141C		CVTRT1P141C	
Q842	943216500020S	TR 2SC RT1N141C		CVTRT1N141C	
D800,801	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D828,829	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D841	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
ZD800	00D2760760905	D,ZENER MTZJ3.6B-0.5W/5MA		K06003R644520S	
CAPACITORS GROUP					
C800-807	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C808	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C809,810	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C811	00D9630333203	C,ELECT 100UF-M/16V		D040101083090S	
C812,813	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C826	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C828	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C829	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C830	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C832	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C834	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C835,836	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C837	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C838,839	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C840	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C842	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C844,845	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C846	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C847	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C850,851	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C854	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C856	nsp	C,CERAMIC 330PF-J/50V		D010331167160S	
C862-864	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C867	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C868,869	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C870	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C871	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C918	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C925	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C926	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C927	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C928	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S	
C929	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C930,931	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C932	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C938	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S	
C939,940	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C941	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C944	00D9630293709	C,ELECT 100UF-M/10V		D040101082070S	
C945	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C946	nsp	C,ELECT 47UF-M/16V		D040470083080S	
C947	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S	
C948,949	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S	
C950	nsp	C,ELECT 47UF-M/16V		D040470083080S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C951	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C956-958	nsp	C,CERAMIC 68PF-J/50V		D010680167160S		
C960	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S		
C971	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C974,975	00D9630293709	C,ELECT 100UF-M/10V		D040101082070S		
C999,1000	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S		
C1002-1005	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S		
C1006,1007	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C1008	00D9630293709	C,ELECT 100UF-M/10V		D040101082070S		
C1012	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C1018	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S		
C1020	nsp	C,CERAMIC 0.01UF-K/50V		D010103777160S		
C1021	nsp	C,ELECT 47UF-M/16V		D040470083080S		
OTHERS PARTS GROUP						
BD803	nsp	COIL,BEAD CBW160808U121T		D340160811210S		
CN12	nsp	CN.FPC 19P TWG-P19P-A1		L131019000010S		
CN112,113	nsp	CN.WAFER 19P C125Z2-19		L109012521910S		
CN114	nsp	CN.WAFER 21P C125Z2-21		L109012522110S		
CN115	nsp	CN.WAFER 17P C125Z2-17		L109012521710S		
CN401	nsp	CN.WIRE 290MM/13P		L025291132620S		
CP14	nsp	CN.WAFER 23P C125Z1-23		L109012512310S		
JK100	963643010330S	TER,RCA 6PIN		G603615A0700YS		
JK101	963643010320S	TER,RCA 4PIN		G603615A0207YS		
JK102	00D9630146005	TER,RCA 1PIN		G600107A0000YS		
JK104	963643010350S	TER,RCA 3PIN		G606305B1400YS		
JK105	963643010310S	TER,RCA 1PIN		G600000020020S		
JK106-108	963643010340S	TER,RCA 3PIN		G606305B0200YS		
PACK806	963183012380S	TUNER, FM/AM KST-MW004MV1-S63SV		E903004100031S		

PCB HDMI ASS'Y

NOTE: When the following are replaced, always rewrite with updated firmware using DFW.
(Refer to "PROCEDURE FOR UPGRADING THE VERSION OF THE FIRMWARE" (41 page).)

- PCB HDMI ASSY
- IC11 (MX25L3206EM2I-12G)
- IC41 (R5F64169DFDFP)
- U7 (EN29LV160BB-70TIP)
- IC22 (EPM3032A-TC44)

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
SEMICONDUCTORS GROUP					
IC1	nsp	IC EX3AV	NOTE : When update Firmware, please confirm a last version in SDI. Use the service board after updating it.	J048030030010S	
IC2	231310009508S	IC PQ033DNA1ZPH		J126033010010S	
IC3	234810015507S	IC BU4248F		J126424800010S	
IC4,5	nsp	IC EX3AV		J048030030010S	
IC9	943236012460S	IC ADV7623		CVIADV7623BSTZ	
IC11	963248100780S	IC, MEMORY FLASH (MX25L3206EM2I-12G)		8952171200010	*
IC20	963239002150S	IC SN74LVC244APWR		J040742440230S	
IC21	236810062608S	IC LC89058W-E		J046890580020S	
IC22	943236100020S	IC EPM3032A-TC44		CVIANAM1570AV	
IC24	00D2623077900	IC TC74VHCU04FT	J040740405580S		
IC25	00D9630237503	MODULE JSR1165-C	E100116500040S		
IC28	00D2631289900	IC AZ4580M	J121458000020S		
IC29	236810073509S	IC AK4358VQ-L	J042435800010S		
IC30	236810086505S	IC AK5358BET-E2	J043535805520S		
IC31,32	00D2631289900	IC AZ4580M	J121458000020S		
IC34	00D2631289900	IC AZ4580M	J121458000020S		
IC35	234810014504S	IC MC14094BDTR2G	J040140940020S		
IC37	00D2623437906	IC TC74VHCT244AFT	J040742445540S		
IC38,39	00D2623444902	IC TC74VHC08FT	J040740800280S		
IC40	246810026500S	IC R1EX24256ASAS0A	J000242565550S		
IC41	963243100690S	IC,CPU MICRO PROCESS (R5F56108VNFP)	8952171200020	*	
U1	236810057606S	IC LOGIC ADV3002BSTZ	J040300205510S		
U2	234810018506S	IC LOGIC TC74VHC4052AFT	J040744052080S		
U6	943246012690S	IC MEMORY-RAM(W9864G6JH-6)	CVIW9864G6JH-6		
U7	963248100790S	IC MEMORY FLASH (EN29LV160BB70TIP)	8952171200030	*	
U8	nsp	IC ANALOG ADSP21487KSWZ-3B3017	J080214875520S		
Q1	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q3	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q4	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q5	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q6,7	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q8	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q9	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q10	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q11-13	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q14	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q15	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q16	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q17,18	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
Q29	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q30	943215500020S	TR 2SA RT1P141C	CVTRT1P141C		
Q31-39	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
Q40-43	943215500030S	TR 2SA RT1P441C	CVTRT1P441C		
Q44	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
TR1	943214500020S	TR 2SC 2SC3052	CVT2SC3052		
TR2	963219004200S	CHIP FDC608PZ P-CH	J543608000010S		
TR3	00D2710326904	TR 2SA 2SA1954	J520195405510S		
TR4	943216500020S	TR 2SC RT1N141C	CVTRT1N141C		
TR5	00D2710326904	TR 2SA 2SA1954	J520195405510S		

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
TR6	943216500020S	TR 2SC RT1N141C			
TR7	943214500020S	TR 2SC 2SC3052			
TR8	963219004200S	CHIP FDC608PZ P-CH			
TR9	00D2710326904	TR 2SA 2SA1954			
TR10	943216500020S	TR 2SC RT1N141C			
TR14	943214500020S	TR 2SC 2SC3052			
TR15	963219004200S	CHIP FDC608PZ P-CH			
TR16	00D2710326904	TR 2SA 2SA1954			
TR17	943216500020S	TR 2SC RT1N141C			
TR22-28	943214500020S	TR 2SC 2SC3052			
TR29,30	963212500030S	TR 2SA ISA1530AC1			
TR31	963219002180S	TR 2SD2114KT146W			
TR32-34	943214500020S	TR 2SC 2SC3052			
TR35	943215500030S	TR 2SA RT1P441C			
TR38	00D2710326904	TR 2SA 2SA1954			
TR39	943214500020S	TR 2SC 2SC3052			
D1	00D9630355401	D,SWITCHING KDS4148U			
D3	00D9630328603	D,SCHOTTKY RB521S-30			
D43-45	00D9630355401	D,SWITCHING KDS4148U			
D49	00D9630328603	D,SCHOTTKY RB521S-30			
D50	00D9630355401	D,SWITCHING KDS4148U			
D51	00D9630328603	D,SCHOTTKY RB521S-30			
D901	00D9630328603	D,SCHOTTKY RB521S-30			
CAPACITORS GROUP					
C1-3	nsp	C,CERAMIC 10UF-K/16V			
C6	00D9630325402	C,ELECT 470UF-MVG/6.3V			
C8,9	nsp	C,CERAMIC 0.1UF-K/50V			
C12,13	nsp	C,CERAMIC 0.1UF-K/50V			
C14	nsp	C,CERAMIC 10PF-J/50V			
C17	nsp	C,CERAMIC 0.01UF-K/50V			
C18,19	nsp	C,CERAMIC 0.1UF-K/50V			
C22-24	nsp	C,CERAMIC 10UF-K/16V			
C25	nsp	C,CERAMIC 1UF-K/10V			
C26	nsp	C,CERAMIC 0.1UF-K/50V			
C27,28	nsp	C,CERAMIC 1UF-K/10V			
C29	nsp	C,CERAMIC X7R0.015UF-K/50V			
C30,31	nsp	C,CERAMIC 0.1UF-K/50V			
C34	nsp	C,CERAMIC 0.1UF-K/50V			
C37	nsp	C,CERAMIC 15PF-J/50V			
C38	nsp	C,CERAMIC 0.01UF-K/50V			
C39-41	nsp	C,CERAMIC 0.1UF-K/50V			
C44	nsp	C,CERAMIC 0.1UF-K/50V			
C45-47	nsp	C,CERAMIC 10UF-K/16V			
C49	nsp	C,CERAMIC 15PF-J/50V			
C53	nsp	C,CERAMIC 0.1UF-K/50V			
C54	nsp	C,CERAMIC 0.01UF-K/50V			
C55	nsp	C,CERAMIC 0.1UF-K/50V			
C61,62	nsp	C,CERAMIC 0.1UF-K/50V			
C74	nsp	C,CERAMIC 0.1UF-K/50V			
C225	nsp	C,CERAMIC 1000PF-K/50V			
C277,278	nsp	C,CERAMIC 0.1UF-K/50V			
C279	nsp	C,CERAMIC 4.7UF-K/6.3V			
C287	nsp	C,CERAMIC 0.1UF-K/50V			
C288	nsp	C,CERAMIC 1000PF-K/50V			
C289-292	nsp	C,CERAMIC 0.1UF-K/50V			
C293	nsp	C,CERAMIC 0.01UF-K/50V			
C294	nsp	C,CERAMIC 0.1UF-K/50V			
C295	nsp	C,CERAMIC 0.01UF-K/50V			
C296	nsp	C,CERAMIC 0.1UF-K/50V			
C297	nsp	C,CERAMIC 0.01UF-K/50V			
C298	nsp	C,CERAMIC 0.1UF-K/50V			
C299	nsp	C,CERAMIC 0.01UF-K/50V			
C300	nsp	C,CERAMIC 0.1UF-K/50V			
C301	nsp	C,CERAMIC 0.01UF-K/50V			

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C302	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C303	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C304	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C305	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C306	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C307	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C308-310	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C311	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C312	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C313	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C314	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C315	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C317	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C318	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C319	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C320	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C321	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C322	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C323	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C324	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C325	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C326	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C327	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C330,331	nsp	C,CERAMIC 1UF-K/10V			D011105772161S	
C332,333	nsp	C,CERAMIC 15PF-J/50V			D011150167101S	
C334	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C335	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C336	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C337	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C338	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C339	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C340	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C341	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C342	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C343	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C344	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C345	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C346	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C347	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C348	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C349	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C350,351	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C352	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C353,354	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C355	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C356	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C358	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C359	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C360	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C361	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C362	nsp	C,CERAMIC 10UF-K/16V			D011106573200S	
C365	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C366	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C673,674	nsp	C,CERAMIC 10PF-D/50V			D011100117101S	
C675	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C676	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C678	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C679-683	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C684	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	
C685-696	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C697	nsp	C,CERAMIC 0.022UF-K/25V			D011223174101S	
C698-701	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C702	nsp	C,CERAMIC 4.7UF-K/6.3V			D011475571160S	
C703	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C706	nsp	C,CERAMIC 0.01UF-K/50V			D011103177101S	
C708	nsp	C,CERAMIC 0.1UF-K/50V			D011104177101S	
C710-735	nsp	C,CERAMIC 1000PF-K/50V			D011102177101S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
CN8	nsp	CN.WAFER 5P 20010-05		L101200100510S		
CP5	nsp	CN.FPC 4P 1.0-9-4PW		L130100090450S		
CX1	nsp	CN.WAFER 5P SMW250-5P		L102050010040S		
CX4	nsp	CN.FPC 40P 10022HS-40C		L130100220400S		
FB1	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB2	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB3	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB4	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB5	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB6,7	nsp	R,CHIP THICK 0-J,1/10W		C200000060200S		
FB8	nsp	COIL,BEAD CBW160808U121T		D340160811210S		
FB9	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB11,12	nsp	R,CHIP THICK 0-J,1/10W		C200000060200S		
FB13	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB14	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB10	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB15,16	nsp	R,CHIP THICK 0-J,1/10W		C200000060200S		
FB29	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB30	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB31	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB32	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB33	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB34	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB35	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB36	nsp	COIL,BEAD BLM21PG221SN1		D340201212210S		
FB37-44	nsp	R,CHIP THICK 0-J,1/10W		C200000060200S		
FB45-80	nsp	R,CHIP 0-J, 1/16W		C20000006M160S		
FB81-84	nsp	R,CHIP THICK 0-J,1/10W		C200000060200S		
FB85-103	nsp	R,CHIP 0-J, 1/16W		C20000006M160S		
FB105-145	nsp	R,CHIP 0-J, 1/16W		C20000006M160S		
JACK1-7	963643100120S	HDMI CONNECTOR 19P		L109100190160S		
JACK8,9	00D9630244703	JACK,D3.5 EARPHONE		G40130802000YS		
JK1	963643003580S	TER,RCA 1PIN		G600107C0020YS		
JK2	00D9630294601	JACK,D3.5 EARPHONE		G40100350000YS		
X3	141810046500S	CRYSTAL CHIP FCX-04(24.576MHz)		E80524R576080S		
X4	943141100020S	CRYSTAL CHIP FCX-04(21.875MHz)		COX21875I070SR		
X5	00D3991038900	CRYSTAL CHIP FCX-03(12MHz)		E805120000020S		
XTAL1	141810044504S	CRYSTAL CHIP FCX-04(28.63636MHz)		E80528R636380S		