

SERVICE MANUAL

MODEL	JP	E3	E2	EK	E2A	E1C	E1K	EUT
DVD-3800BDCI		✓						

BLU-RAY DISC/DVD VIDEO PLAYER

注 意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されています。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

• For purposes of improvement, specifications and design are subject to change without notice.

• 本機の仕様は性能改良のため、予告なく変更することがあります。
• 補修用性能部品の保有期間は、製造打切後 8 年です。

• Please use this service manual with referring to the operating instructions without fail.

• 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

• Some illustrations using in this service manual are slightly different from the actual set.

• 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

DENON

Denon Brand Company, D&M Holdings Inc.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make 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 unit is defective.

LASER RADIATION

Caution - Class 1M visible and invisible laser radiation when open.
Do not view directly with optical instruments.

CAUTION Please heed the points listed below during servicing and inspection.

◎ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels or seals. Be sure to heed these cautions and the cautions indicated in the handling instructions.

◎ Caution concerning electric shock!

- (1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

◎ Caution concerning disassembly and assembly!

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

◎ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked $\triangle$ on wiring diagrams and parts lists, be sure to use the designated parts.

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

For safety reasons, some parts use tape, 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 inside and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

◎ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct 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 turn the power switch on. Using a 500V insulation resistance tester, check that the insulation resistance between the terminals of the power plug and the externally exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is $1M\Omega$ or greater. If it is less, the set must be inspected and repaired.

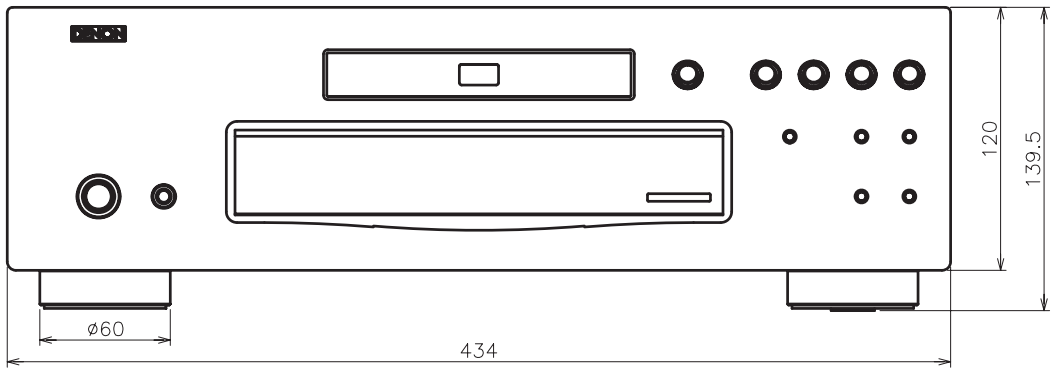
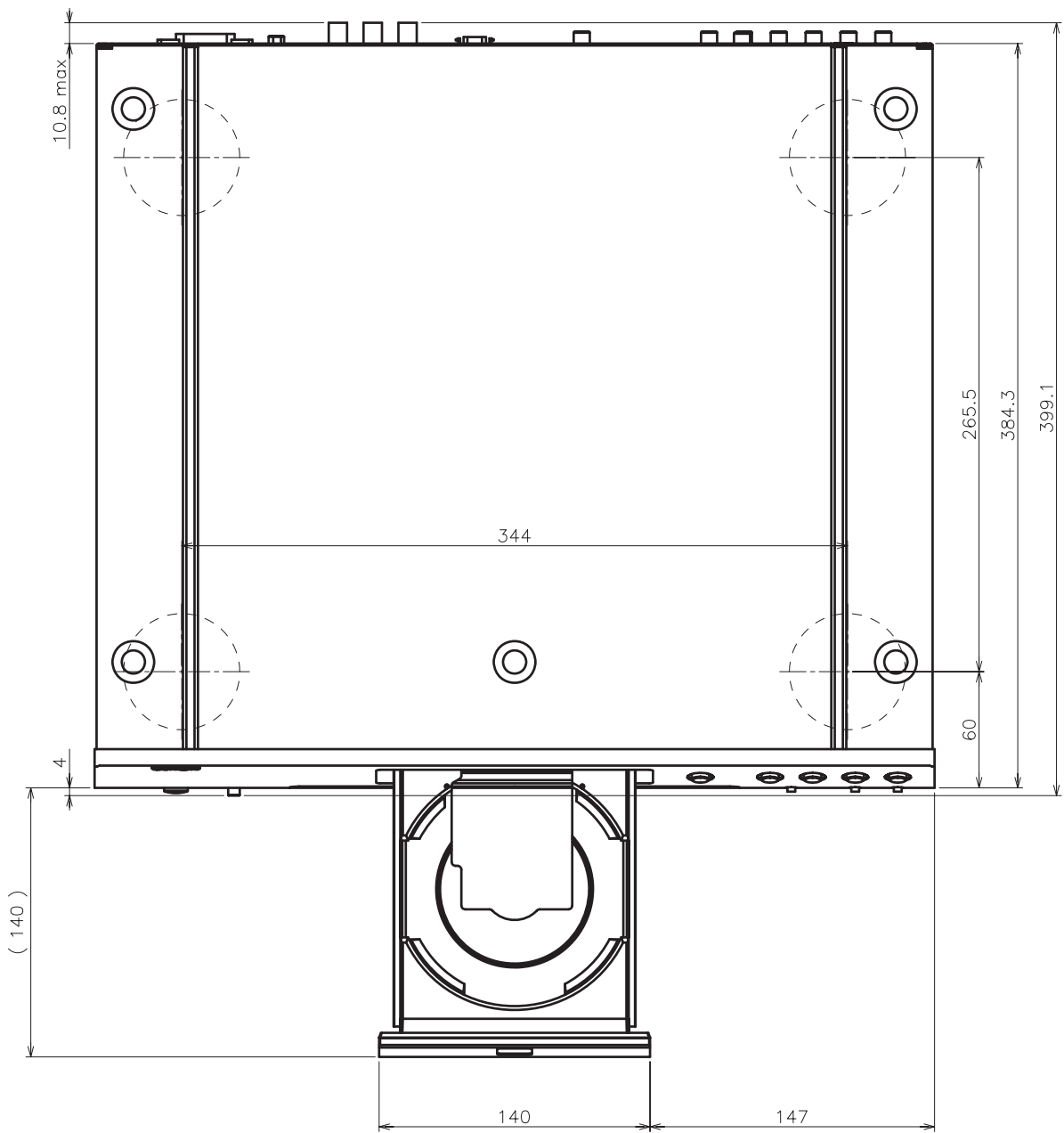
CAUTION Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using 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 parts lists in this service manual. Be sure to replace them with parts with the designated part number.

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

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

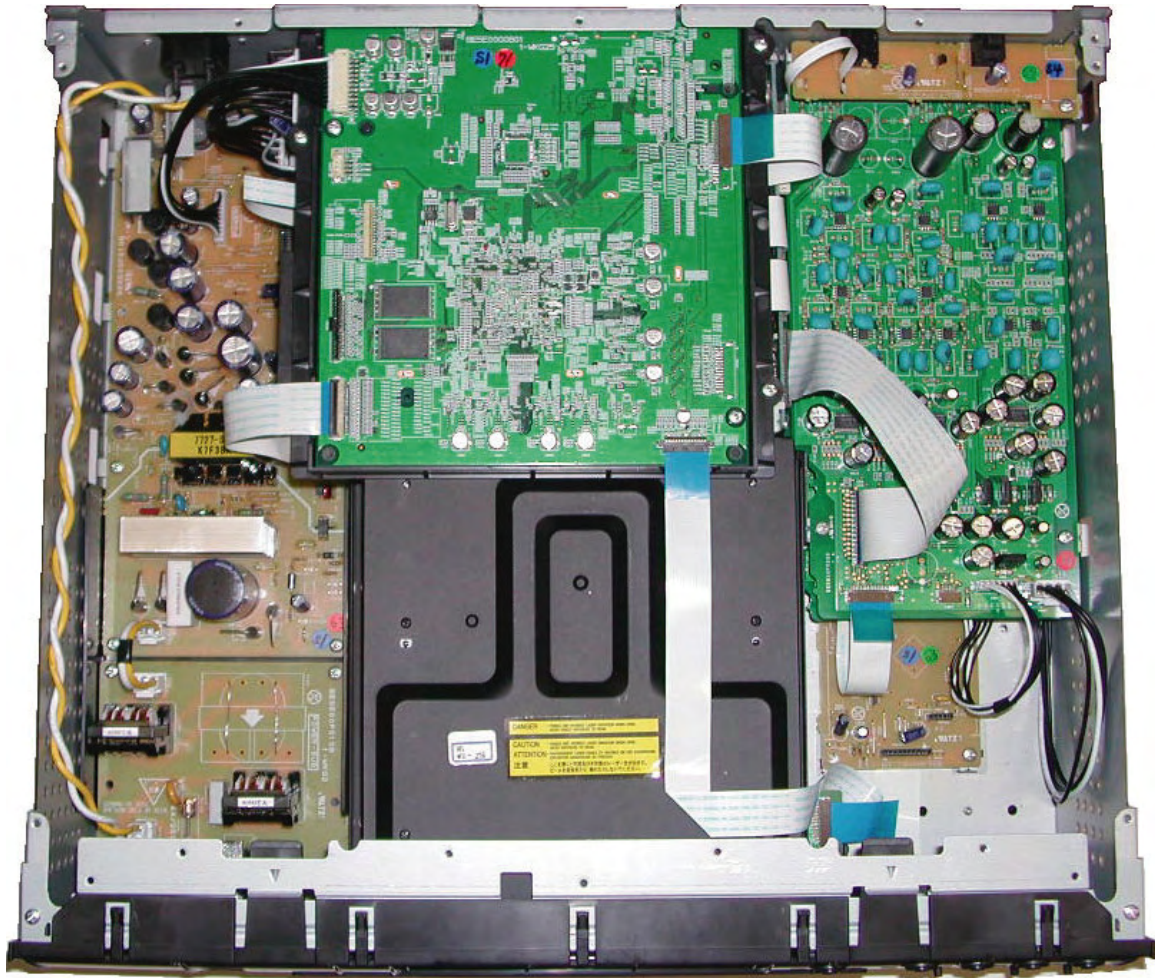
DIMENSION



WIRE ARRANGEMENT

If wire bundles are untied or moved to perform adjustment or parts replacement 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.

Wire arrangement viewed from the top



SPECIFICATIONS

SIGNAL SYSTEM

NTSC color

APPLICABLE DISCS

- (1) BD/DVD-video Discs
1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs, 2-layer 12cm double-sided discs
(1 layer per side)
1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs, 2-layer 8cm double-sided discs
(1 layer per side)
- (2) BD-RE / BD-R (Recorded in BDMV format)
1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs
1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs
- (3) DVD-R
1-layer 12cm single-sided discs, 2-layer 12cm single-sided discs
1-layer 8cm single-sided discs, 2-layer 8cm single-sided discs
- (4) DVD-RW
1-layer 12cm single-sided discs
1-layer 8cm single-sided discs
- (5) Compact discs (audio CD)
12cm discs, 8cm discs
- (6) CD-RW/-R
12cm discs, 8cm discs

APPLICABLE MEMORY CARDS

- (1) SD Memory Card
- (2) SDHC Memory Card
- (3) miniSD Card
- (4) microSD Card

S-VIDEO OUTPUT

Y output level: 1Vp-p (75Ω/ohms)

C output level: 0.286Vp-p

Output connectors: S connector, 1 set

VIDEO OUTPUT

Y output level: 1Vp-p (75Ω/ohms)

Output connectors: Pin jack, 1 set

COMPONENT OUTPUT

Y output level: 1Vp-p (75Ω/ohms)

PB/CB output level: 0.648Vp-p (75Ω/ohms)

PR/CR output level: 0.648Vp-p (75Ω/ohms)

Output connectors: BNC jacks, 1 set/Pin jacks, 1 set

HDMI OUTPUT

Output jack: 19-pin HDMI terminal, 1 set

HDMI ver. 1.3b (Deep Color, Dolby Digital Plus, Dolby TrueHD, DTS-HD)

ANALOG AUDIO OUTPUT

Output level: 2Vrms

2 channel (L, R) output connector: Pin jacks,

Multi channel (FL, FR, C, SL, SR, SBL, SBR, SW): Pin jacks, 1 set

AUDIO OUTPUT PROPERTIES

(1) Frequency response

1 BDs (linear PCM)	: 4Hz to 22kHz (48kHz sampling)
	: 4Hz to 44kHz (96kHz sampling)
	: 4Hz to 88kHz (192kHz sampling)
2 DVDs (linear PCM)	: 4Hz to 22kHz (48kHz sampling)
	: 4Hz to 44kHz (96kHz sampling)
3 CDs	: 4Hz to 20kHz

(2) S/N ratio : 125dB

(3) Total harmonic distortion : 1kHz 0.0008%

(4) Dynamic range : 110dB

DIGITAL AUDIO OUTPUT

Optical digital output: Optical connector, 1 set

Coaxial digital output: Pin jack, 1 set

POWER SUPPLY

AC 120V, 60Hz

POWER CONSUMPTION

68W (Standby: 0.8W)

MAXIMUM EXTERNAL DIMENSIONS

W :434mm (17-2/16")

H :139mm (5-8/16")

D :399mm (15-12/16")

(including protruding parts)

MASS

10.3 kg (22.8 lbs)

REMOTE CONTROL

RC-1090

Infrared pulse type

Supply: DC 3V, 2 R6P/AA batteries

External dimensions:

W :52mm (2-1/16")

H :227mm (8-15/16")

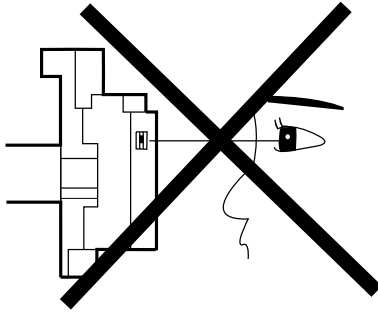
D :30mm (1-3/16")

Mass: 171g (0.4 lbs) (included batteries)

- For purposes of improvement, specifications and design are subject to change without notice.

LASER BEAM SAFETY PRECAUTIONS

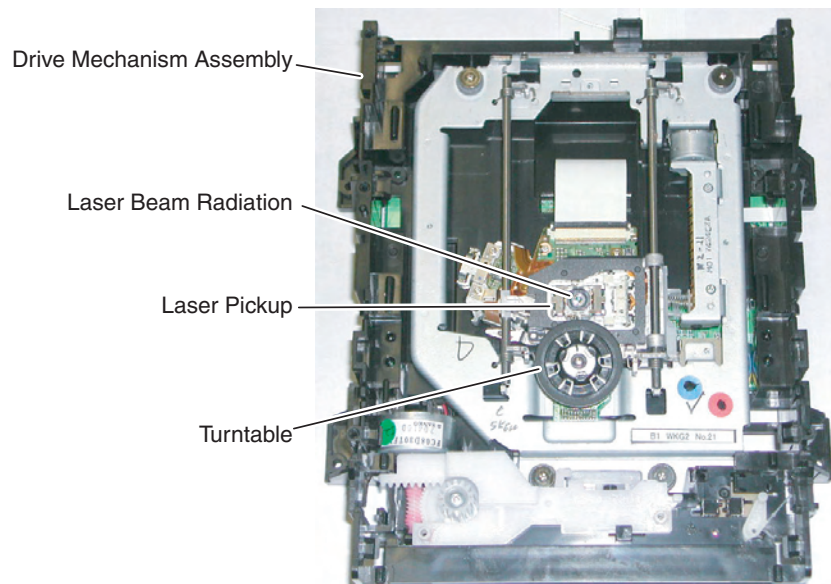
This BD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

Location: Top of BD mechanism.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
120 V	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

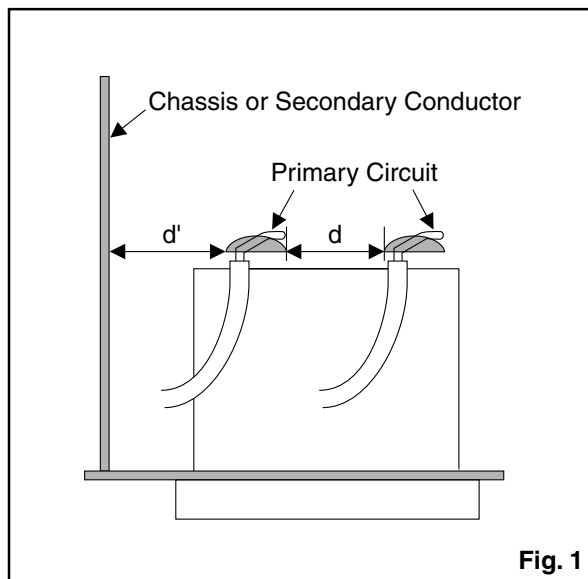


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON):

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

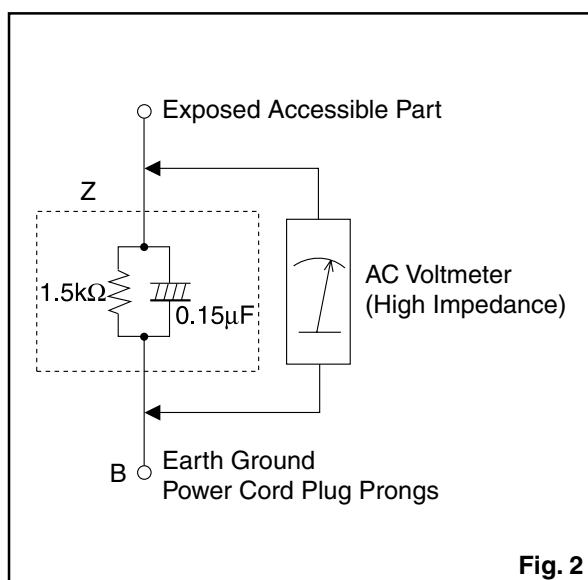


Fig. 2

Table 2: Leakage current ratings for selected areas

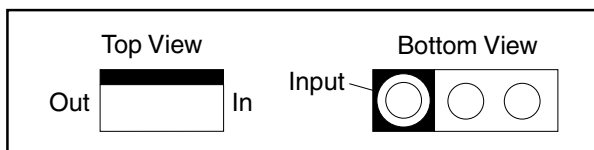
AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
120 V	$0.15 \mu F$ CAP. & $1.5 k\Omega$ RES. Connected in parallel	$i \leq 0.5$ mA Peak	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

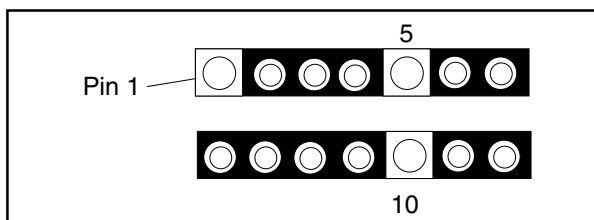
STANDARD NOTES FOR SERVICING

Circuit Board Indications

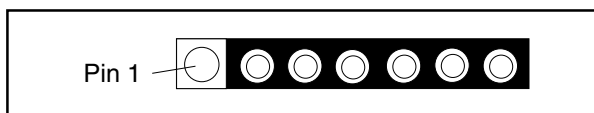
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

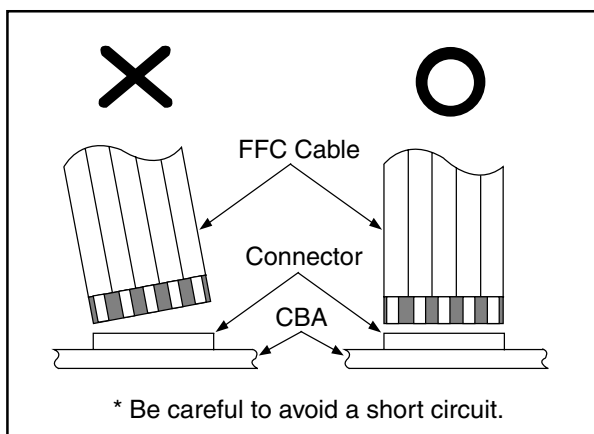


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

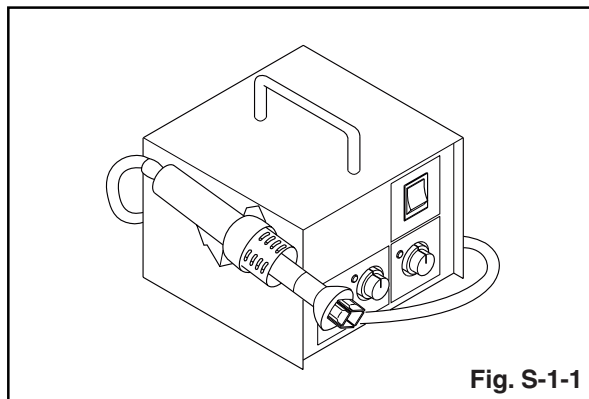


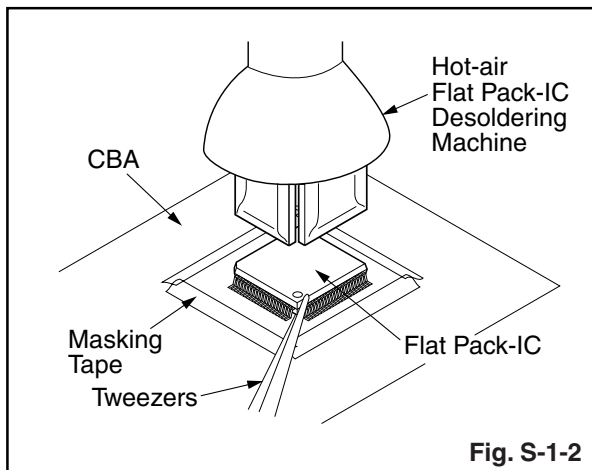
Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

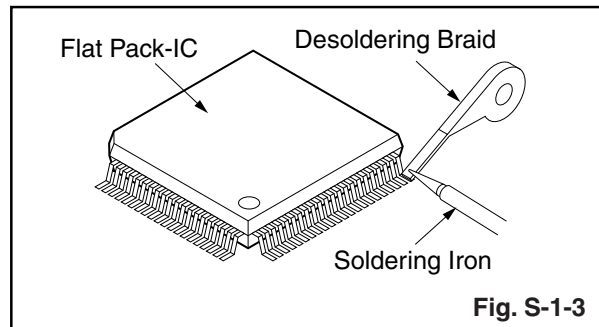
1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

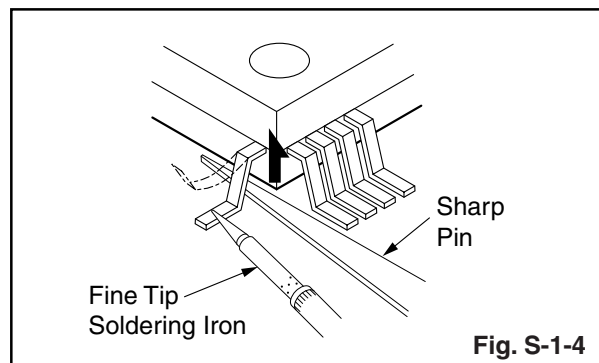


With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

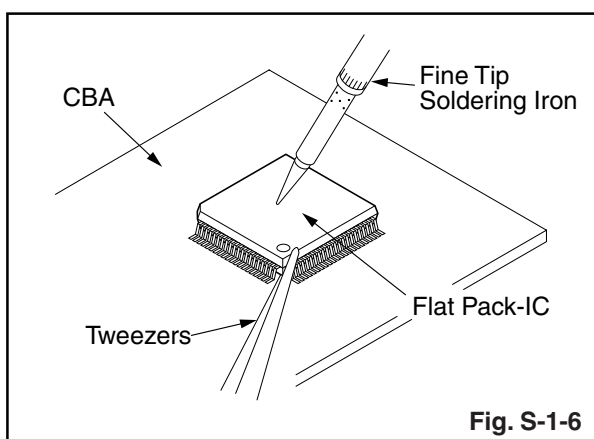
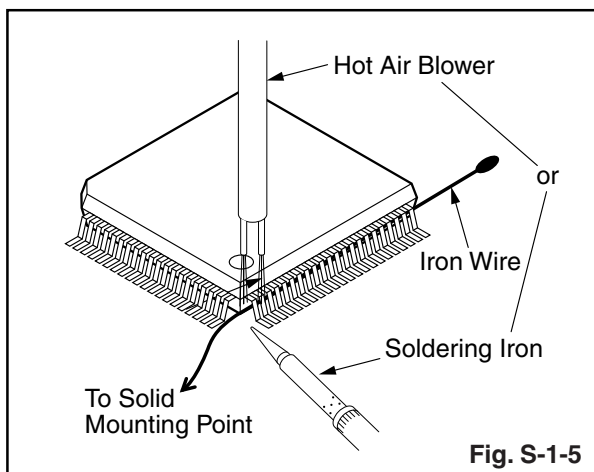


3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

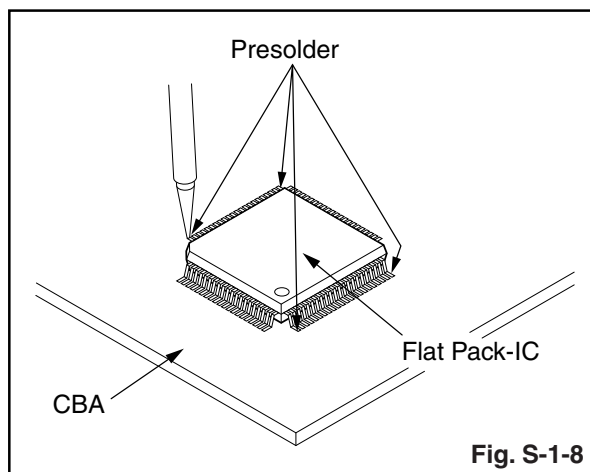
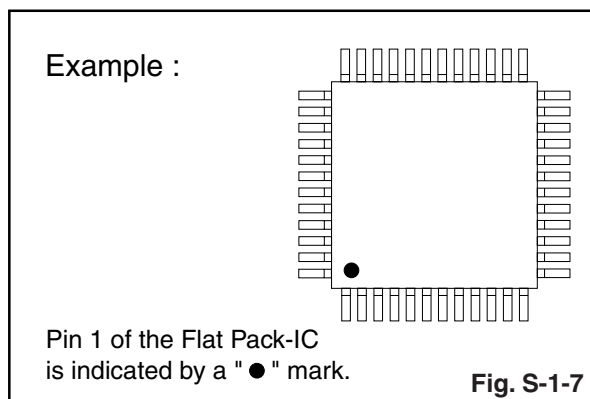
1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



Instructions for Handling Semi-conductors

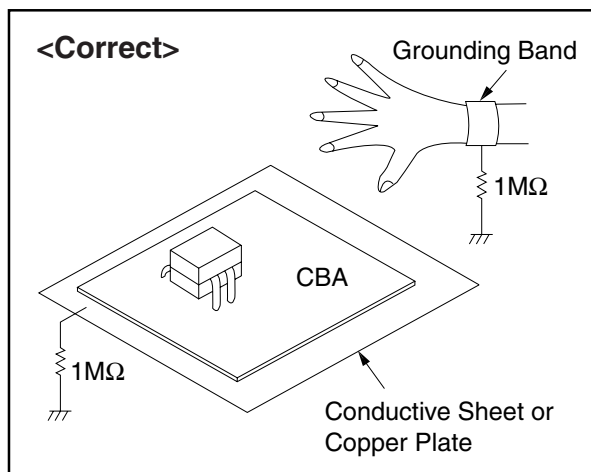
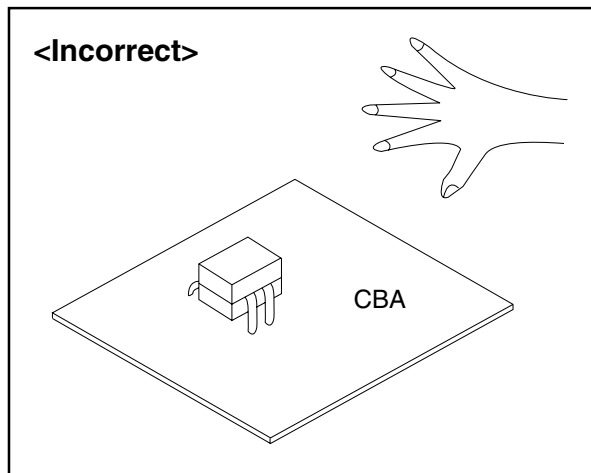
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band ($1\text{ M}\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

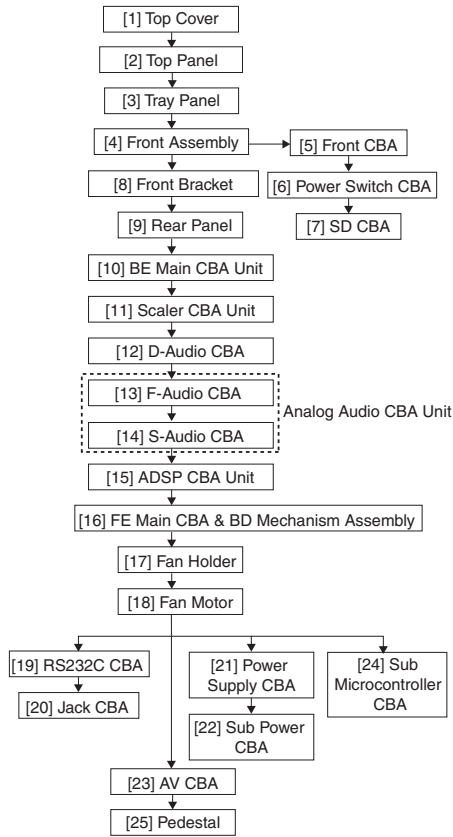
Be sure to place a conductive sheet or copper plate with proper grounding ($1\text{ M}\Omega$) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting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



CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly of Main parts

When replacing the main parts, see the following procedures. For more details, refer to Fig. D1~D10.

	Part	Steps
[10]	BE Main CBA Unit	[1] → [2] → *9(S-14) → [10]
[11]	Scaler CBA Unit	[1] → [2] → [3] → *9(S-14) → [10] → [11]
[12]	D-Audio CBA Unit	[1] → [2] → [9] → [12]
[13]	F-Audio CBA Unit	[1] → [2] → [9] → [12] → [13]
[14]	S-Audio CBA Unit	[1] → [2] → [9] → [12] → [13] → [14]
[15]	ADSP CBA Unit	[1] → [2] → [9] → [10] → [11] → [12] → [13] → [14] → [15]
[16]	FE Main CBA & BD Mechanism Assembly	[1] → [2] → [3] → *9(S-14) → [10] → [16]
[17]	Fan Holder	[1] → [2] → *9(S-14) → [10] → [11] → [17]

[18]	Fan Motor	[1] → [2] → *9(S-14) → [10] → [11] → [17] → [18]
[19]	RS232C CBA	[1] → [2] → [9] → [10] → [11] → [19]
[20]	Jack CBA	[1] → [2] → [9] → [10] → [11] → [19] → [20]
[21]	Power Supply CBA	[1] → [2] → *9(S-14) → [10] → [11] → [17] → [21]
[22]	Sub Power CBA	[1] → [2] → [3] → [4] → [8] → [22]
[23]	AV CBA	[1] → [2] → [3] → [9] → [10] → [11] → [12] → [13] → [14] → [23]
[24]	Sub Microcontroller CBA	[1] → [2] → [12] → [13] → [14] → [24]

*About *9(S-14), remove only (S-14) of Rear Panel.

3. Disassembly Method

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[1]	Top Cover	D1	9(S-1), 2(S-2)	---
[2]	Top Panel	D2	10(S-3)	---
[3]	Tray Panel	D3	*2(L-1)	1
[4]	Front Assembly	D3	2(S-4), 2(S-5), (S-5a), *3(L-2), *CN2001, *CN4002	1
[5]	Front CBA	D4	7(S-6)	---
[6]	Power Switch CBA	D4	2(S-7), Desolder	---
[7]	SD CBA	D4	2(S-8), SD PCB Holder	---
[8]	Front Bracket	D5	2(S-9)	---
[9]	Rear Panel	D5	2(S-10), 2(S-11), 2(S-12), 18(S-13), 4(S-14), 3(S-15), 2(S-16) *CN1001	2
[10]	BE Main CBA Unit	D6	4(S-17), *CN6401, *CN7001, *CN7401, *CX813	2
[11]	Scaler CBA Unit	D6	4(S-18), 3(S-19), 3(S-20), *CX874, *CX875, *CY080, BE Scaler Holder, BE Scaler Sub Holder	---
[12]	D-Audio CBA	D7	2(S-21), *CX877	---

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[13]	F-Audio CBA	D7	3(S-22), *CN061, *CN10, *CX201, *CY281	---
[14]	S-Audio CBA	D7	3(S-23)	---
[15]	ADSP CBA Unit	D7	2(S-24), (S-25), 4(S-26), 2(S-27), *CX876, DSP PCB Holder, Audio PCB Holder	---
[16]	FE Main CBA & BD Mechanism Assembly	D8	4(S-28), *CN2601	---
[17]	Fan Holder	D8	2(S-29), *CN2500	---
[18]	Fan Motor	D8	2(S-30)	---
[19]	RS232C CBA	D9	3(S-31), *CN2551, RS232C Holder	---
[20]	Jack CBA	D9	(S-32), (S-33), *CN2730, BNC PCB Holder	---
[21]	Power Supply CBA	D9	2(S-34), 2(S-35), *CN101, *CN2501	---
[22]	Sub Power CBA	D9	3(S-36), 2(S-37), Power PCB Holder	---
[23]	AV CBA	D9	7(S-38), *CN2503	---
[24]	Sub Microcontro ller CBA	D10	4(S-39)	---
[25]	Pedestal	D10	3(S-40)	---

↓ ↓ ↓ ↓ ↓
(1) (2) (3) (4) (5)

Note:

(1) Identification (location) No. of parts in the figures

(2) Name of the part

(3) Figure Number for reference

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

P = Spring, L = Locking Tab, S = Screw,

CN = Connector

* = Unhook, Unlock, Release, Unplug, or Desolder

e.g. 2(S-2) = two Screws (S-2),

2(L-2) = two Locking Tabs (L-2)

(5) Refer to "Reference Notes."

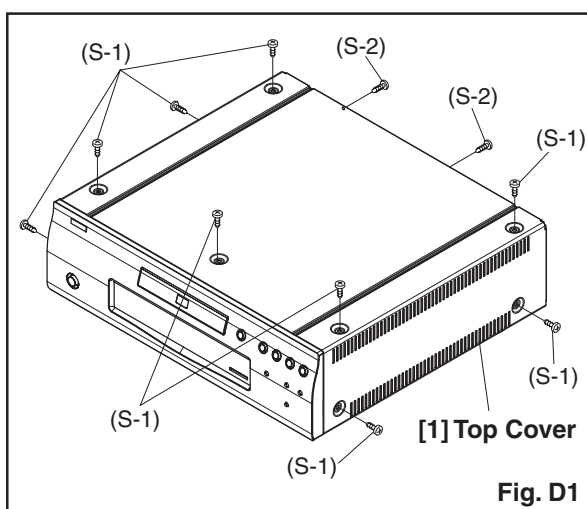
About tightening screws

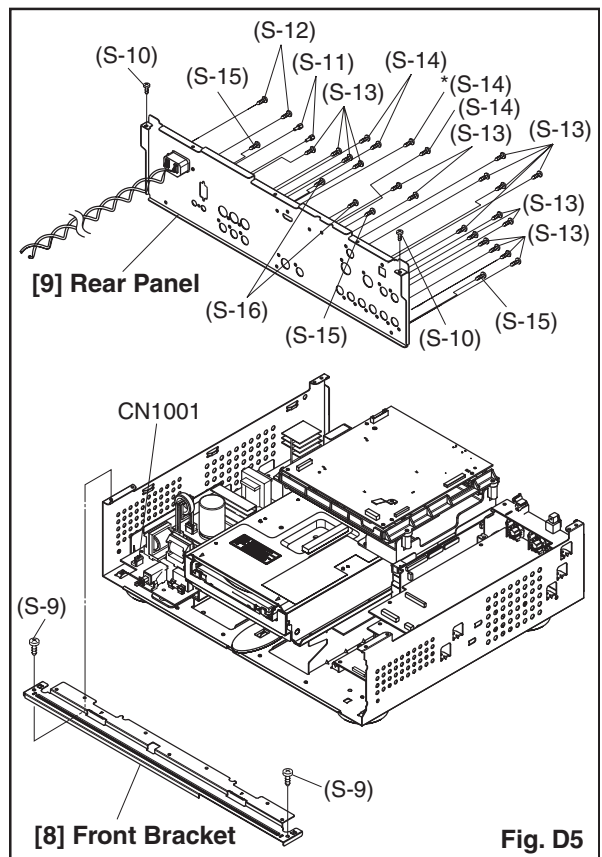
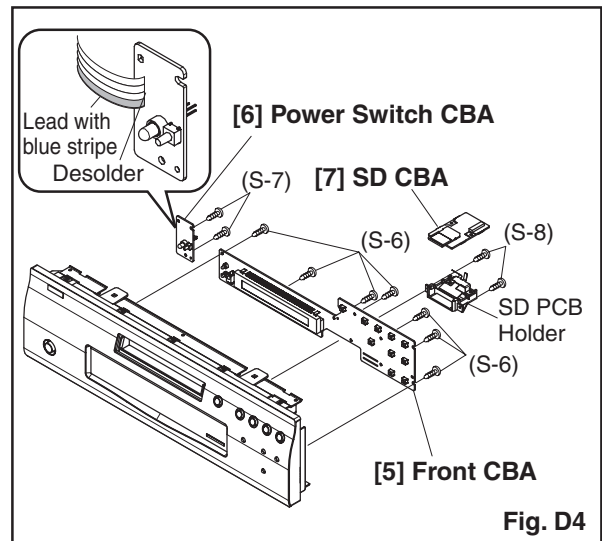
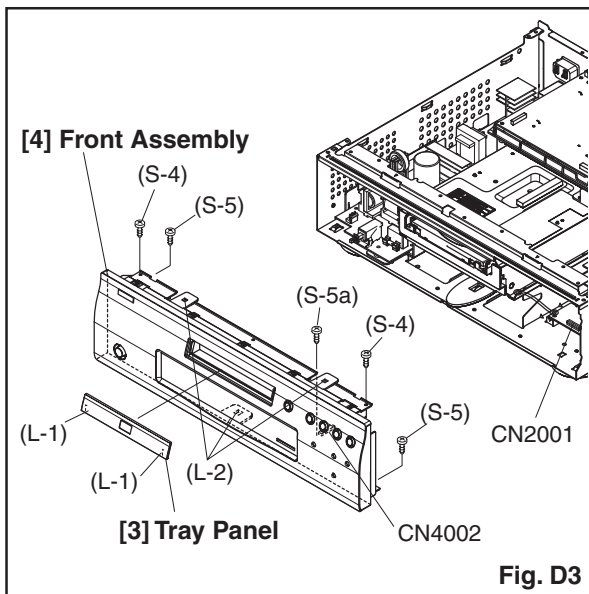
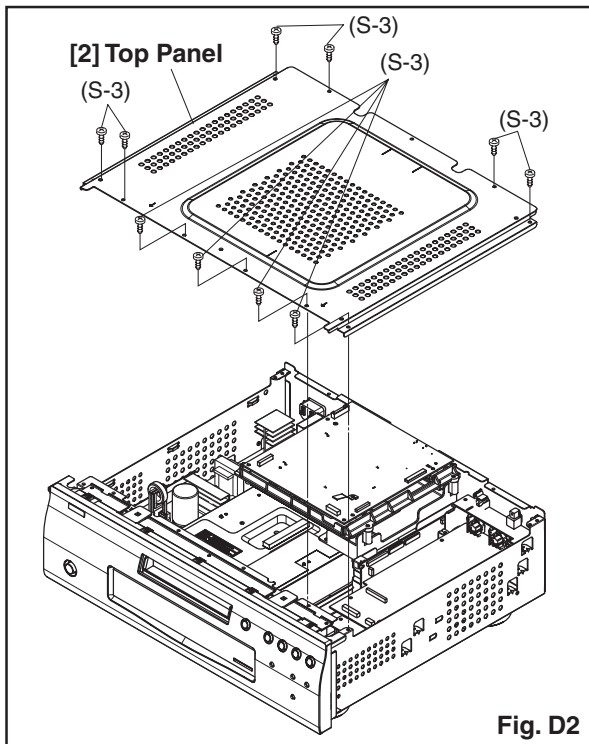
When tightening screws, tighten them with the following torque.

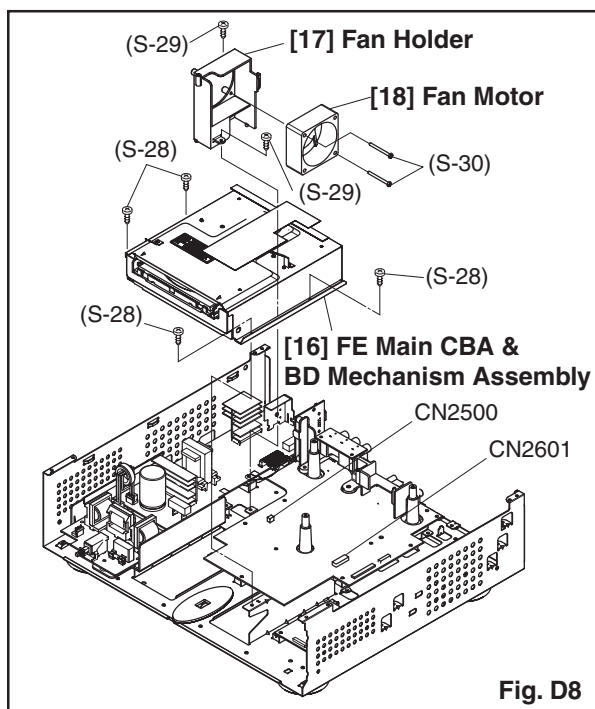
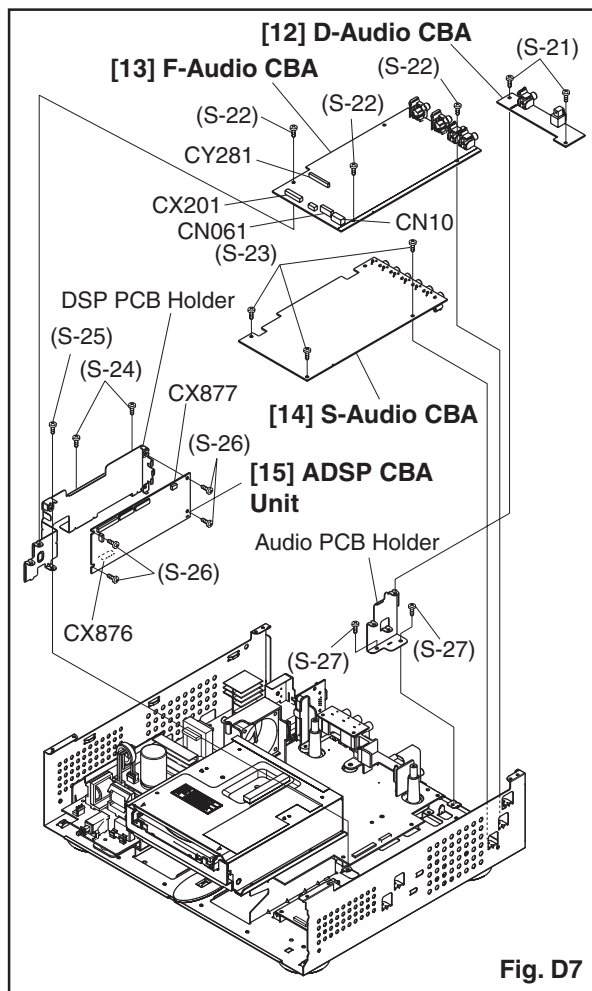
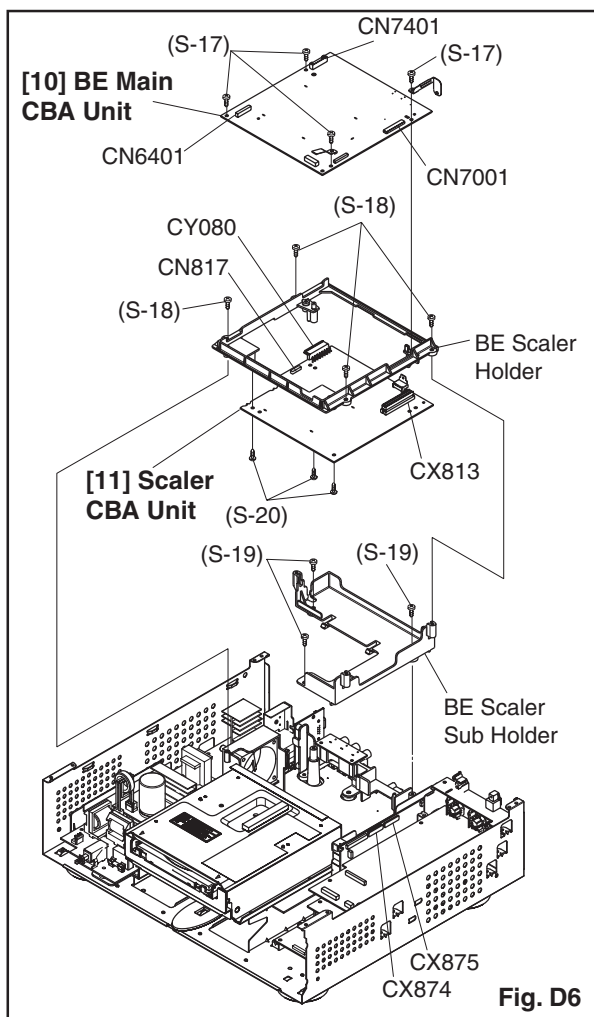
Torque
0.45 ± 0.05 N·m

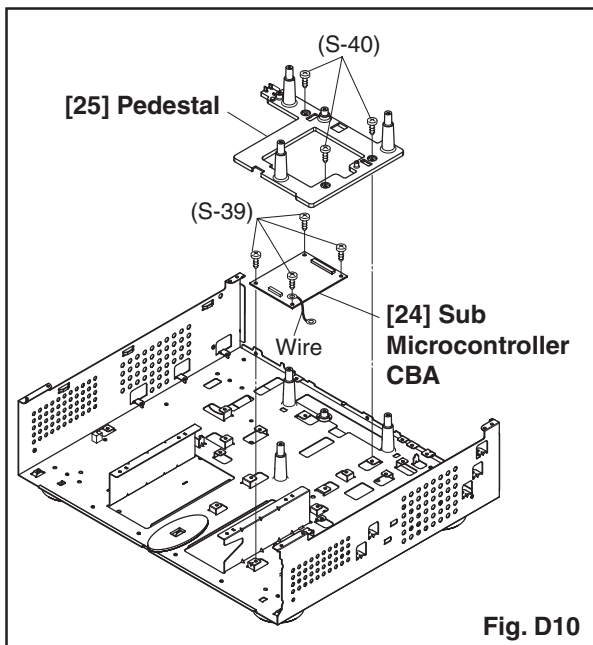
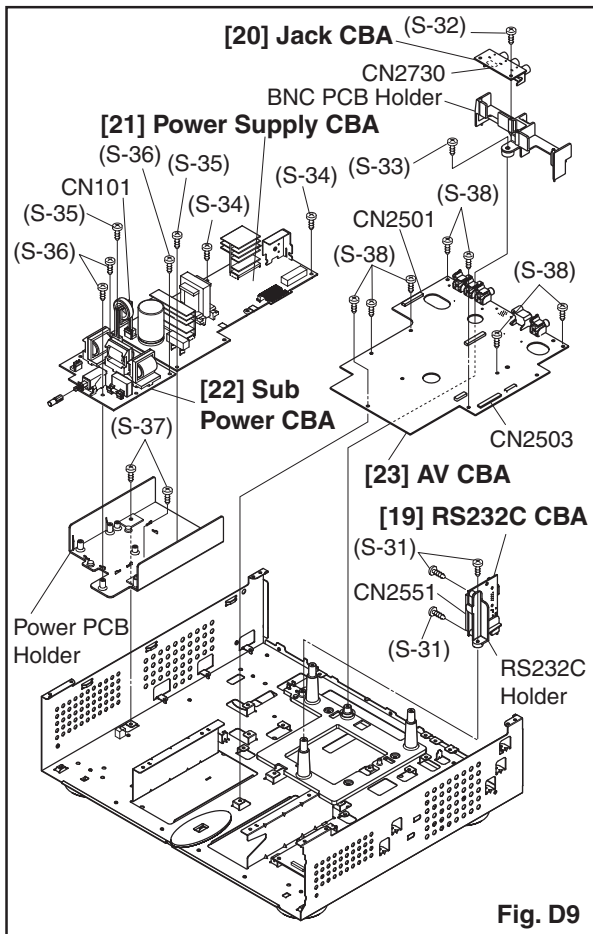
Reference Notes

- CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.
 - Release three Locking Tabs (L-2).
 - Disconnect connectors CN2001, CN4002, then remove the Front Assembly.
- CAUTION 2:** When installing the BE Main CBA Unit with a screw, hold and press the BE Main CBA Unit to align the HDMI connector with the connector's hole for HDMI on the Rear Panel.



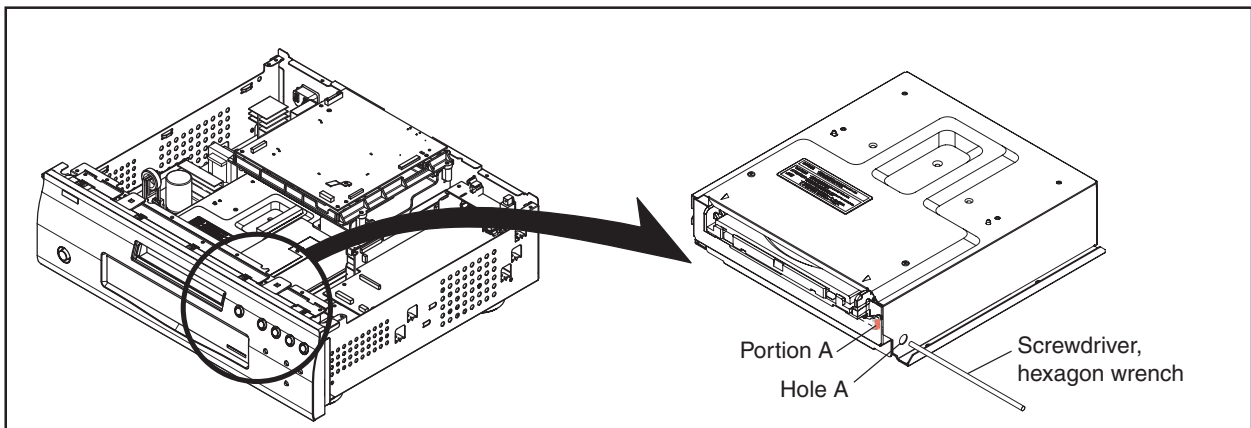






4. How to Eject Manually

1. Remove the Top Cover and the Top Panel.
2. Insert a screwdriver, etc. into the Hole A straightly so that the Portion A is pushed.
3. Pull the tray out manually and remove a disc.



HOW TO INITIALIZE THE BLU-RAY DISC PLAYER

To put the program back at the factory-default, initialize the BD player as the following procedure.

1. Turn the power on by pressing the [POWER] button and the tray will close.
2. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order. Fig. a appears on the screen.

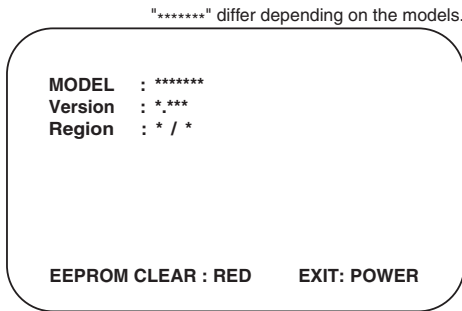


Fig. a

3. Press [RED] button on the remote control unit. Fig. b appears on the screen and Fig. c appears on the VFD.

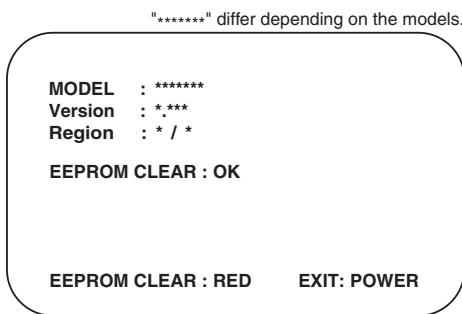


Fig. b



Fig. c

4. To exit this mode, press [POWER OFF] button.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the BD player into version up mode, press [9], [8], [7], [6], and [MENU/POP MENU] buttons on the remote control unit in that order. The tray will open automatically. Fig. a appears on the screen and Fig. b appears on the VFD.

"*****" differs depending on the models.

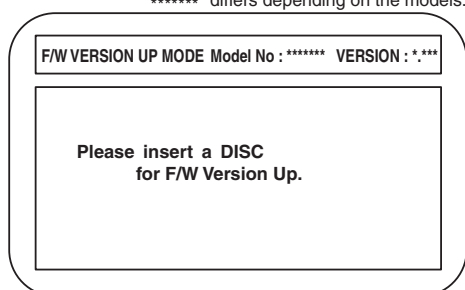


Fig. a Version Up Mode Screen



Fig. b VFD in Version Up Mode

The BD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

3. Load the disc for version up.
4. The BD player enters the F/W version up mode automatically. Fig. c appears on the screen and Fig. d appears on the VFD. If you enter the F/W for different models, "Disc Error" will appear on the screen, then the tray will open automatically.

"*****" differs depending on the models.

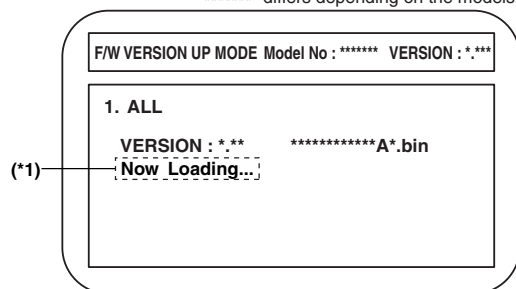


Fig. c Programming Mode Screen (Example)



Fig. d VFD in Programming Mode (Example)

The appearance shown in (*1) of Fig. c is described as follows:

No.	Appearance	State
1	Now Loading...	Loading the disc
2	Reading...	Sending files into the memory. After reading, automatically the tray opens.
3	Remove the disc	Reading has finished. Remove the disc and close the tray.
4	See FL display	Writing new version data, the progress will be displayed as shown in Fig. e.



Fig. e VFD in Version Up Mode

5. After programming is finished, the checksum on the VFD (Fig. f).



Fig. f VFD upon Finishing the Programming Mode (Example)

At this time, no button is available.

6. Unplug the AC cord from the AC outlet. Then plug it again.
7. Turn the power on by pressing the [POWER ON] button and the tray will close.
8. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order. Fig. g appears on the screen.

"*****" differ depending on the models.

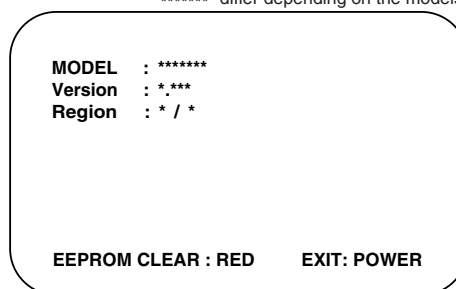


Fig. g

9. Press [STOP] button on the remote control unit.
Fig. h appears on the screen and Fig. i appears on the VFD.

"*****" differ depending on the models.

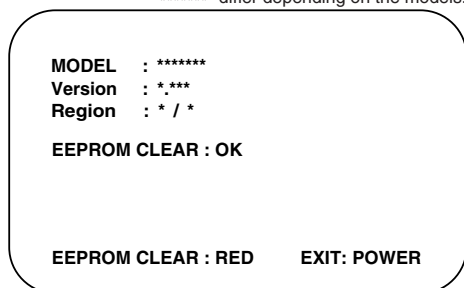


Fig. h



Fig. i

10. To exit this mode, press [POWER OFF] button.

SERVICE MODE

Service Mode

1st level		2nd level		3rd level		Description
1	Mecha test	1	Tray Aging			Aging of tray open/close
		2	TOC Read			TOC reading
		3	Heat Run			Tray close -> TT1 playback -> TT10 playback -> Tray open -> Tray close
2	VFD/LED Test	1	All On			Turning on all VFD
		2	All Off			Turning off all VFD
3	Error Rate					Displaying Error rate, Jitter during playback
4	LD Test	1	LD Power	1	Off	Turning off LD
				2	BD	Turning on BD LD
				3	DVD	Turning on DVD LD
				4	CD	Turning on CD LD
		2	Operating Time			Displaying LD Operation Time (with clear function)
5	Channel Level	1	TEST TONE	1	Center/ Subwoofer/Front LR	
				2	Surround LR/ Surround Back LR	
		2	Front Lch			
		3	Center			
		4	Front Rch			
		5	Surround Rch			
		6	Surround Back Rch			
		7	Surround Back Lch			
		8	Surround Lch			
		9	Sub woofer			
6	RS-232C	1	Parity Setting	1	Even	Setting even parity
				2	Non	Setting non parity
		2	Version Up Mode			Realta Version up with connecting RS-232C
7	SD Card Test					
8	Default Setting					Default setting

Note: If some test are performed continuously, any error will occur.

Entering Service Mode

In power on condition, no discs and tray close, it will be entered into service mode by the following operation using the remote controller. However, it will not be entered when Media Select Item is SD Memory.

Service Mode by using remote controller

Press the following buttons on the remote controller in power on condition, no discs and tray close;

[2]->[5]->[8]->[0]->[CLEAR]

Release from Service Mode

Press the [POWER OFF] button to turn off power.

Screen saver/Auto Power Off in Service Mode

These functions are not performed in Service Mode.

After entering, Fig. j appears on the screen and Fig. k appears on the VFD.

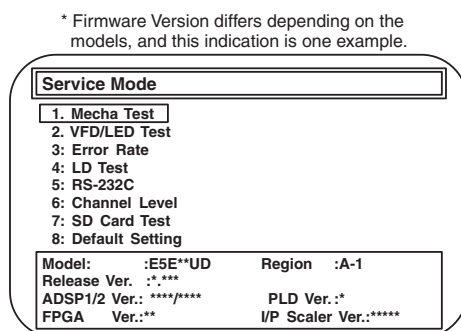


Fig. j Service Mode (Main menu)



Fig. k Service Mode

Available button in service mode

Button	condition
ENTER	Enter the next level
POWER	Turn the power off (when the service mode is completed)
1~8	Enter the selected item (next level)
OTHER	Not available

Note: Press the number key to select items. Or, press the cursor button (up/down) to select items and press [ENTER] button.

INDICATION	DESCRIPTION	REMARK
Model Name	Model Name	E5E***D, etc.
Region	BD region - DVD region	A-1, etc.
Rel. Ver.	Release version	

TRAY LOCK MODE

Tray Lock Mode prevents the tray opening or closing to prevent disc theft in demo mode.

Enter this mode using the following procedure.

1. Confirm that the TV Monitor is connected.
2. With playback stopped, press [SETUP], [TOP MENU], [3], [AUDIO], [0] and [SETUP] buttons on the remote control unit in that order. "Trade On" will appear in the upper right corner on the screen, and on VFD for 2 seconds.

The image shows the text "Trade On" in a pixelated, dot-matrix font, which is the display on the VFD (Vacuum Fluorescent Display) when the Tray Lock Mode is activated.

Fig.a VFD

3. To exit this mode, press [SETUP], [TOP MENU], [3], [AUDIO], [0] and [SETUP] buttons on the remote control unit in that order. "Trade Off" will appear in the upper right corner on the screen, and on VFD for 2 seconds.

The image shows the text "Trade Off" in a pixelated, dot-matrix font, which is the display on the VFD (Vacuum Fluorescent Display) when the Tray Lock Mode is deactivated.

Fig.b VFD

REMOTE LOCK MODE

SETTING MENU:

Remote Lock Off Mode:

This mode receives an input signal from the remote control unit or from the Remote In-Jack on the rear panel.

Remote Lock On Mode:

This mode dose not receive an input signal from the remote control unit or from the Remote In-Jack on the rear panel.

Perform the setting using the following procedure.

1. Press [ON/STANDBY] and [STOP] buttons on the front panel simultaneously for over 3 seconds to set "Remote Lock Mode" and display mode.
2. Press [STILL/PAUSE] button on the remote control unit to set to "On" or "Off". When "Remote Lock On", "Remote Lock On" will appear in the upper right corner on the screen and appears on the VFD.



Fig.a VFD

When "Remote Lock Off", "Remote Lock Off" will appear in the upper right corner on the screen and appears on the VFD.

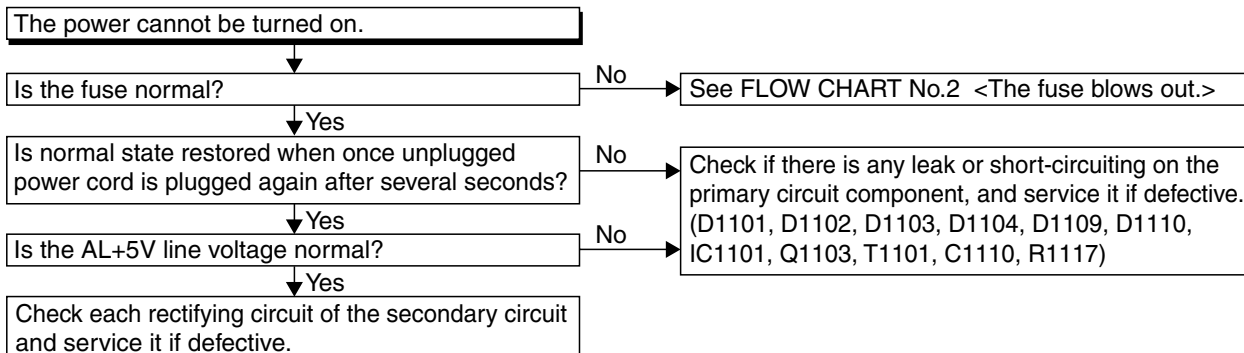


Fig.b VFD

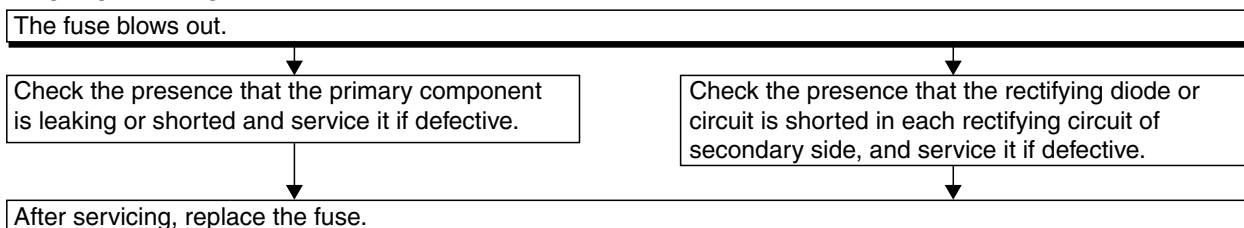
- a. If [STILL/PAUSE] button is not pressed for 5 seconds or any other button is pressed within 5 seconds, the unit will be released from "Remote Lock Mode".
- b. When initializing, set the Remote Lock Mode "off".

TROUBLESHOOTING

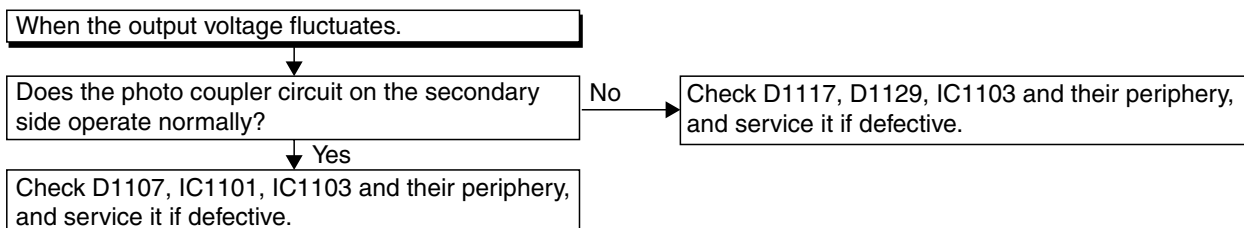
FLOW CHART NO.1



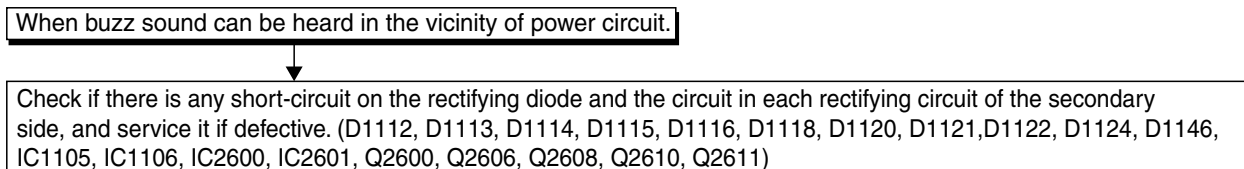
FLOW CHART NO.2



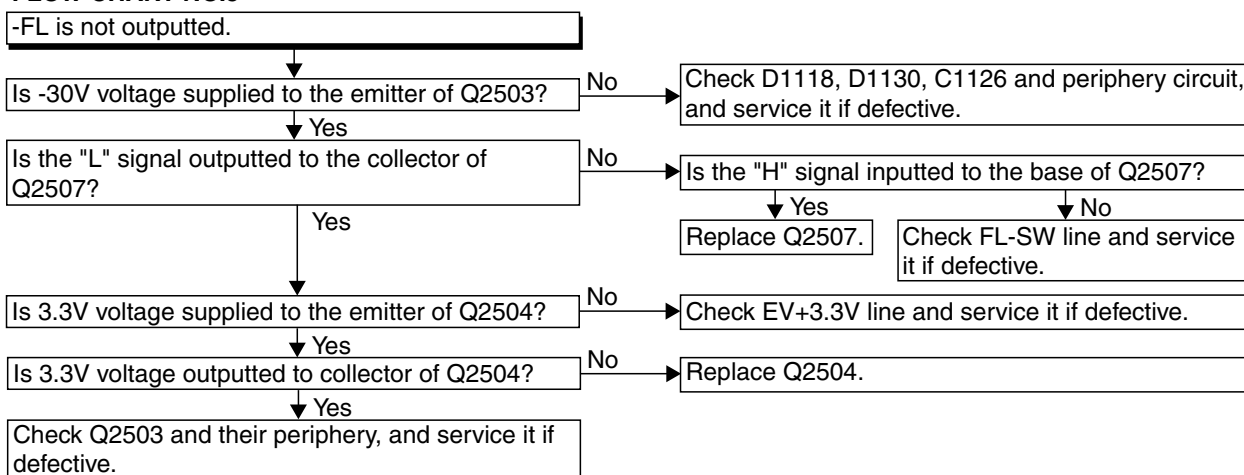
FLOW CHART NO.3



FLOW CHART NO.4



FLOW CHART NO.5



FLOW CHART NO.6

P-ON+5V (1) is not outputted.

Is 5V voltage inputted to the emitter of Q2610?

No

Check D1112, D1113, D1114, D1129, C1125, C1132 and their periphery, and service it if defective.

Yes

Is the voltage of base on Q2610 lower than the voltage of emitter on Q2610 when turning the power on?

No

Check Q2607 and PWSW3 line and service it if defective.

Yes

Replace Q2610.

FLOW CHART NO.7

P-ON+5V (2) is not outputted.

Is 5V voltage inputted to the emitter of Q2606?

No

Check D1112, D1113, D1114, D1129, C1125, C1132 and their periphery, and service it if defective.

Yes

Is the voltage of base on Q2606 lower than the voltage of emitter on Q2606 when turning the power on?

No

Check Q2607 and PWSW3 line and service it if defective.

Yes

Replace Q2606.

FLOW CHART NO.8

P-ON+10.5V is not outputted.

Is 13.5V voltage inputted to the collector of Q2611?

No

Check D1122, D1128, C1124, L1105 and their periphery, and service it if defective.

Yes

Is 11V voltage inputted to the base of Q2611?

No

Is 13.5V voltage inputted to the base of Q2605?

Yes

Replace Q2611.

Yes

Check Q2605, D2601, and their periphery, and service it if defective.

No

Check Q2604, and PWSW3 line, and service it if defective.

FLOW CHART NO.9

P-ON+1.2V is not outputted.

Is 2.5V voltage supplied to Pin(1) of IC2601?

No

Check D1115, C1119 and their periphery circuit, and service it if defective.

Yes

Replace IC2601.

FLOW CHART NO.10

P-ON+3.3V is not outputted.

Is 5V voltage supplied to Pin(1) of IC2600?

No

Check D1112, D1113, D1114, D1129, C1125, C1132 and their periphery circuit, and service it if defective.

Yes

Is "L" signal outputted to the collector of Q2603?

No

Check Q2603 and PWSW3 line and service it if defective.

Yes

Check IC2600, D2600 and their periphery circuit, and service it if defective.

FLOW CHART NO.11

P-ON+15V is not outputted.

Is 14V voltage inputted to the emitter of Q2609?

No

Check D1121, D1127, C1123, L1104 and their periphery, and service it if defective.

Yes

Is the voltage of base on Q2609 lower than the voltage of emitter on Q2609 when turning the power on?

No

Check Q2604 and PWSW3 line and service it if defective.

Yes

Replace Q2609.

FLOW CHART NO.12

P-ON-12V is not outputted.

Is -12V voltage inputted to the emitter of Q2600?

No

Check D1124, D1125, C1121, L1102 and their periphery, and service it if defective.

Yes

Is "L" signal outputted to the collector of Q2601?

No

Is "H" signal inputted to the base of Q2601?

Yes

Replace Q2601.

No

Check PWSW3 line and service it if defective.

Yes

Is 5V voltage inputted to the emitter of Q2602?

No

Check D1112, D1113, D1114, D1129, C1132, C1125 and their periphery, and service it if defective.

Yes

Is 5V voltage outputted to the collector of Q2602?

No

Replace Q2602.

Yes

Check Q2600 and their periphery, and service it if defective.

FLOW CHART NO.13

EV+3.3V(2) is not outputted.
(AL+5V is output normally.)

Is 3.3V voltage inputted to the emitter of Q2613?

No

Check D1145, R1128, R1129, R1130 and their periphery, and service it if defective.

Yes

Is 2.6V voltage inputted to the base of Q2613?

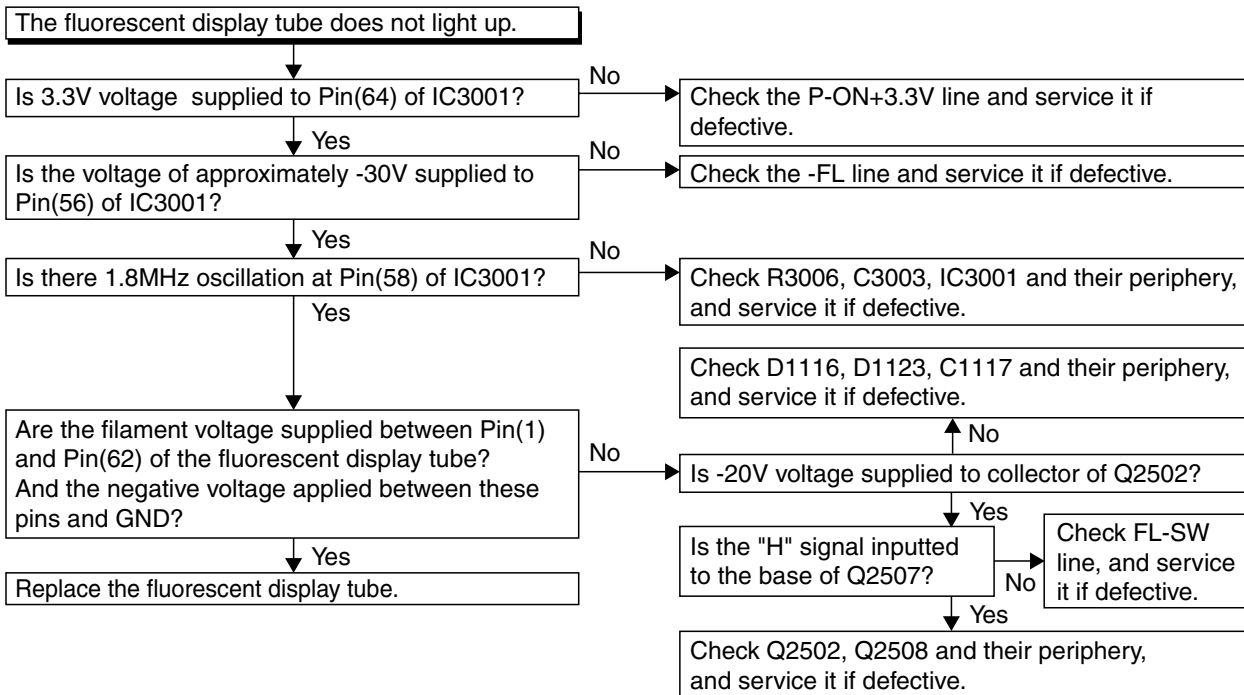
No

Check Q2612 and A33-PW-CONT line, and service it if defective.

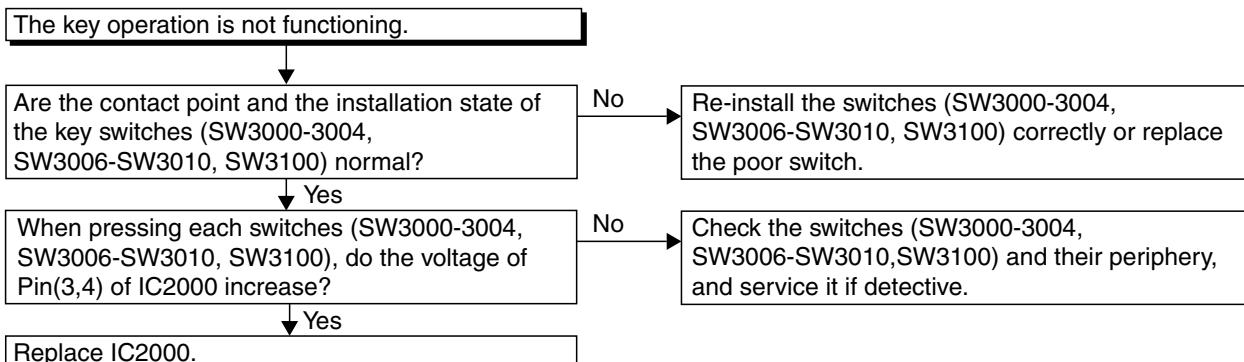
Yes

Replace Q2613.

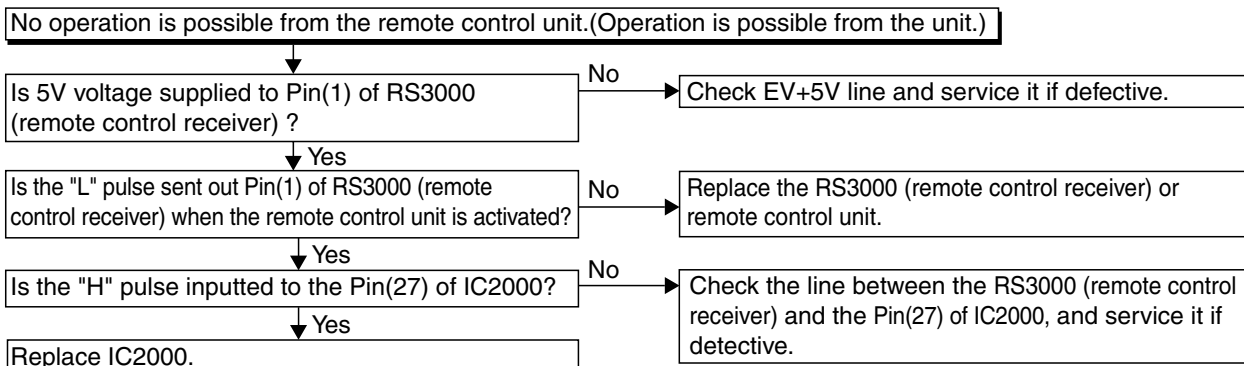
FLOW CHART NO.14



FLOW CHART NO.15

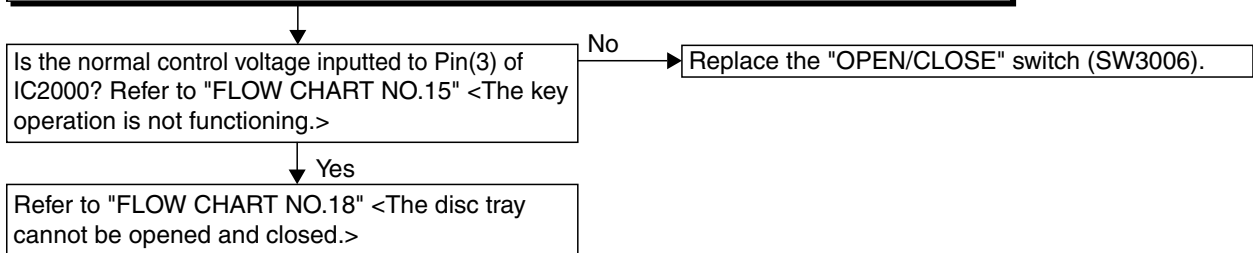


FLOW CHART NO.16



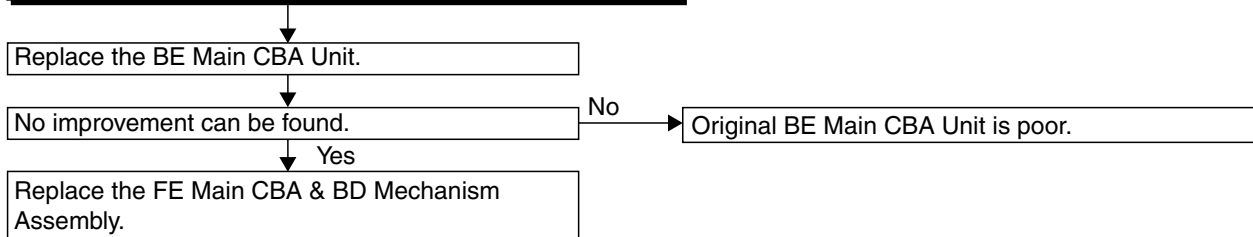
FLOW CHART NO.17

The disc tray cannot be opened and closed. (It can be done using the remote control unit.)



FLOW CHART NO.18

The disc tray cannot be opened and closed.
[No Disc] indicated.
Picture does not appear normally.
Audio is not outputted normally.



FLOW CHART NO.19

Picture does not appear normally.

Set the disc on the disc tray, and playback.

Are the video signals outputted to each pin of CN2301 or CN2304?

CN2304	9PIN	VIDEO-Y(I)
CN2304	7PIN	VIDEO-C
CN2301	1PIN	VIDEO-Y(I/P)
CN2301	3PIN	VIDEO-Pb/Cb
CN2301	5PIN	VIDEO-Pr/Cr

No

Replace the BE Main CBA Unit or FE Main CBA & BD Mechanism Assembly.

Yes

Are the video signals shown above inputted into each pin of IC2302 or IC2303?

IC2303	3PIN	VIDEO-Y(I)
IC2303	1PIN	VIDEO-C
IC2302	1PIN	VIDEO-Y(I/P)
IC2302	3PIN	VIDEO-Pb/Cb
IC2302	5PIN	VIDEO-Pr/Cr

No

Check the line between each pin of CN2301 or CN2304 and each pin of IC2302 or IC2303 on the ,and service it if detective.

CN2304	9PIN → IC2303	3PIN	VIDEO-Y(I)
CN2304	7PIN → IC2303	1PIN	VIDEO-C
CN2301	1PIN → IC2302	1PIN	VIDEO-Y(I/P)
CN2301	3PIN → IC2302	3PIN	VIDEO-Pb/Cb
CN2301	5PIN → IC2302	5PIN	VIDEO-Pr/Cr

Yes

Are the video signals outputted to each pin of IC2302 or IC2303?

IC2302	20PIN	VIDEO-Y(I/P)
IC2302	17PIN	VIDEO-Pb/Cb
IC2302	15PIN	VIDEO-Pr/Cr
IC2303	5PIN	VIDEO-Y(I)
IC2303	6PIN	VIDEO-CVBS
IC2303	7PIN	VIDEO-C

No

Is 5V voltage supplied to the Pin(4,18) of IC2302 and Pin(4) of IC2303?

Yes

Replace IC2302 or IC2303.

No

Check P-ON+5V(2) line and service it if detective.

Yes

Are the video signals outputted to the specific output terminal?

Are the luminance video signals outputted to the S-VIDEO OUT terminal (JK2303)?

No

Check the periphery of S-VIDEO OUT terminal (JK2303) from Pin(5) of IC2303 and service it if detective.

Are the chrominance video signals outputted to the S-VIDEO OUT terminal (JK2303)?

No

Check the periphery of S-VIDEO OUT terminal (JK2303) from Pin(7) of IC2303 and service it if detective.

Are the component video signals outputted to the VIDEO OUT terminal (JK2300, JK2304, JK2305)?

No

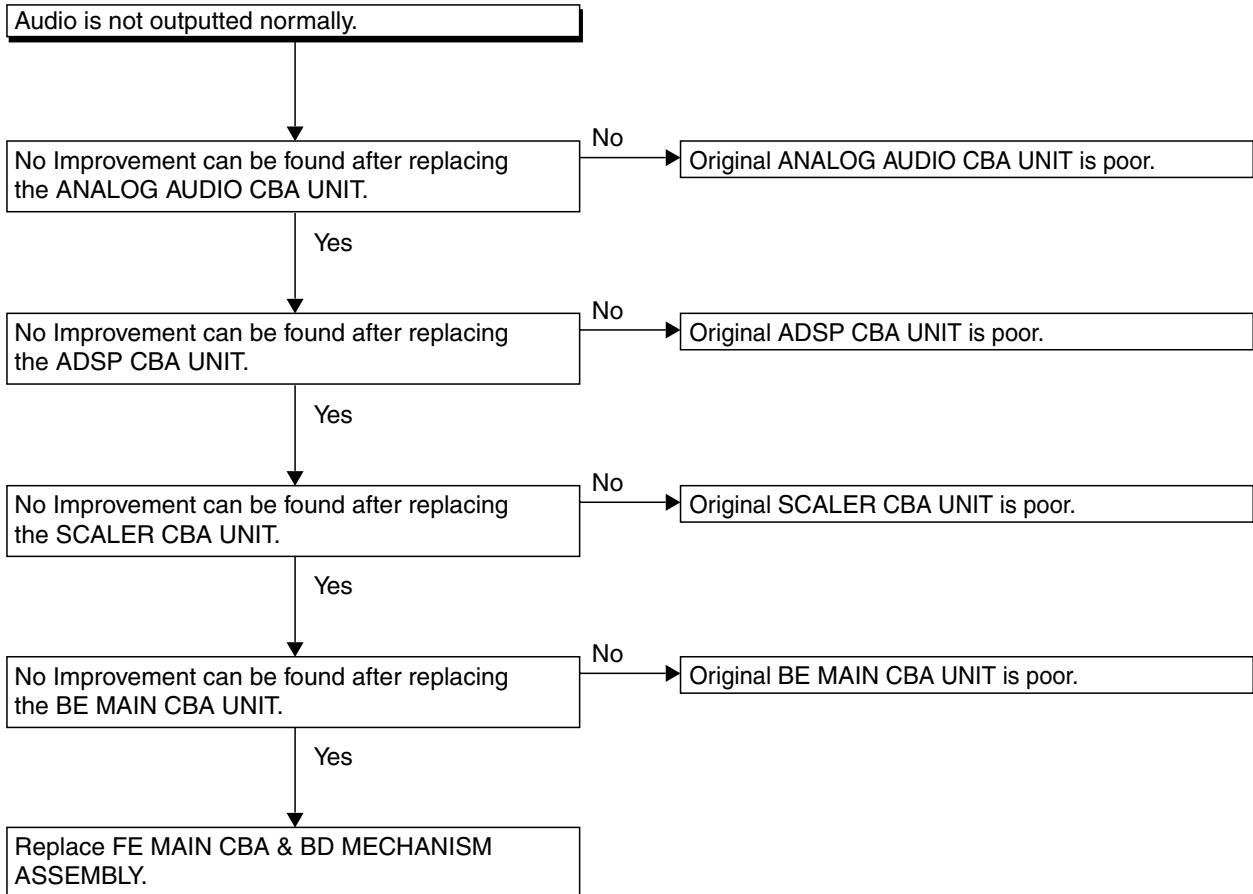
Check the periphery of VIDEO OUT terminal (JK2300, JK2304, JK2305) from Pin(15,17,20) of IC2302 and service it if detective.

Are the composite video signals outputted to the VIDEO OUT terminal (JK2302)?

No

Check the periphery of VIDEO OUT terminal (JK2302) from Pin(6) of IC2303 and service it if detective.

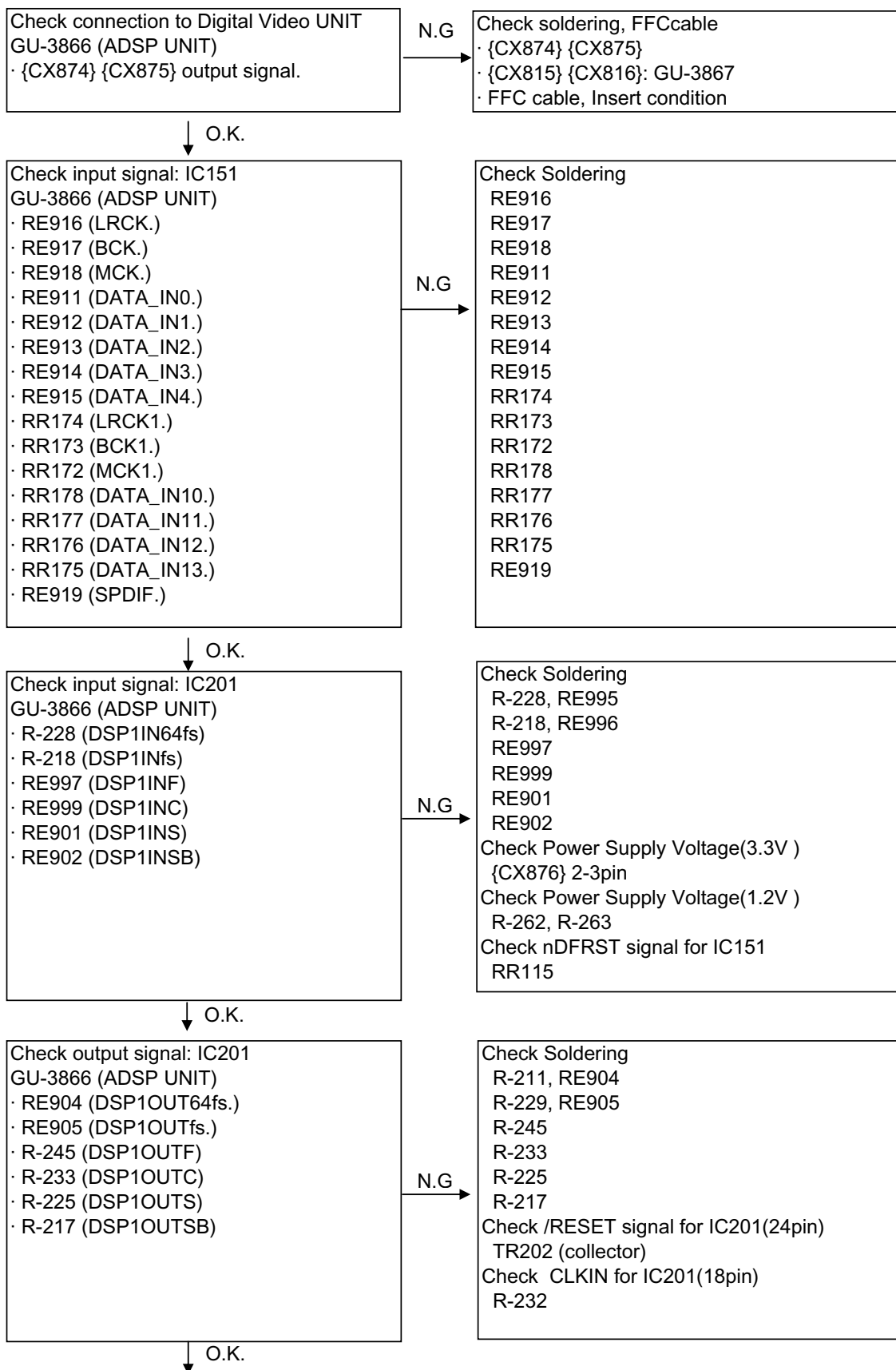
FLOW CHART NO.20

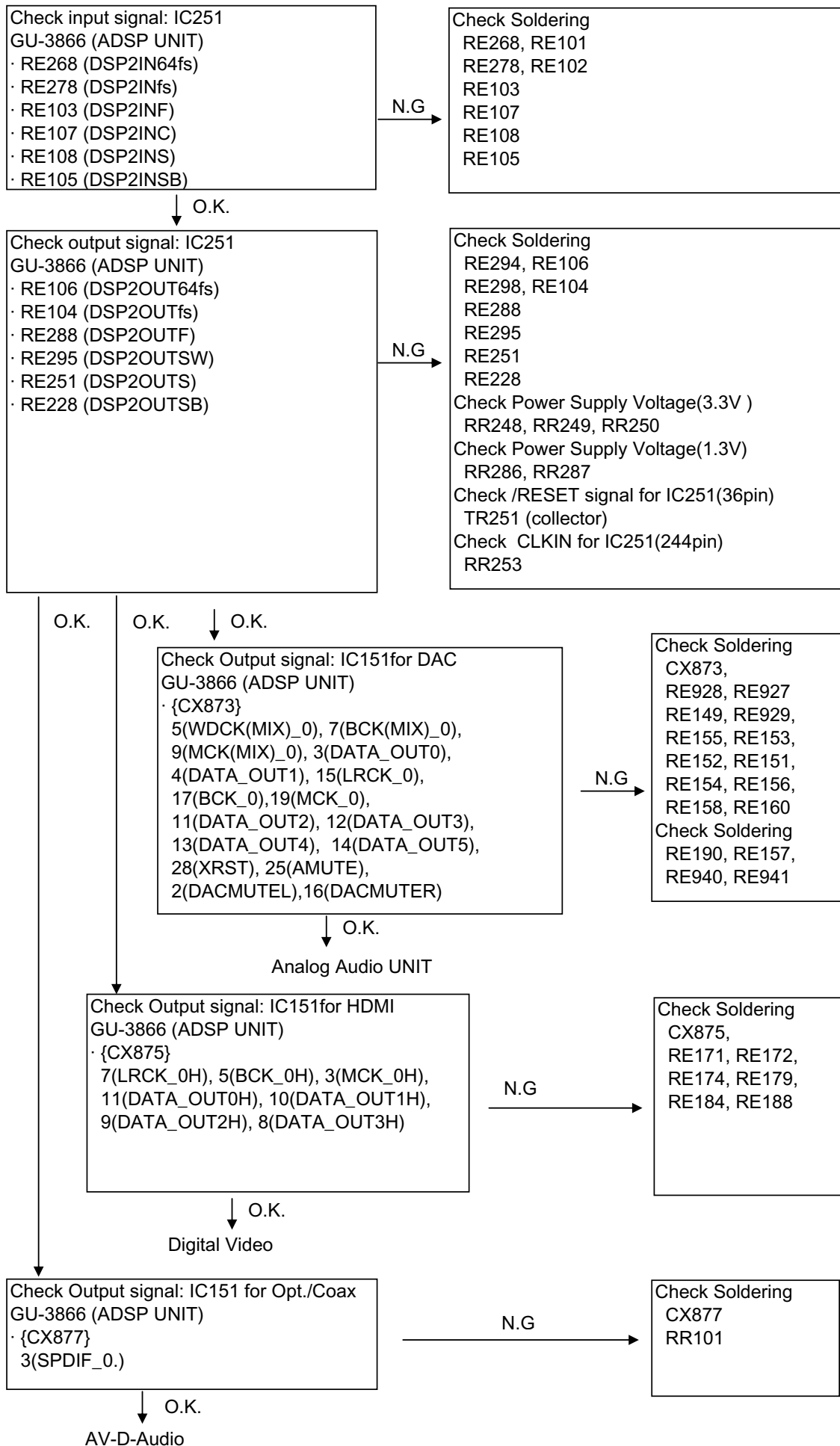


GU-3866 (ADSP UNIT)

Contents: BD (LPCM 8ch)

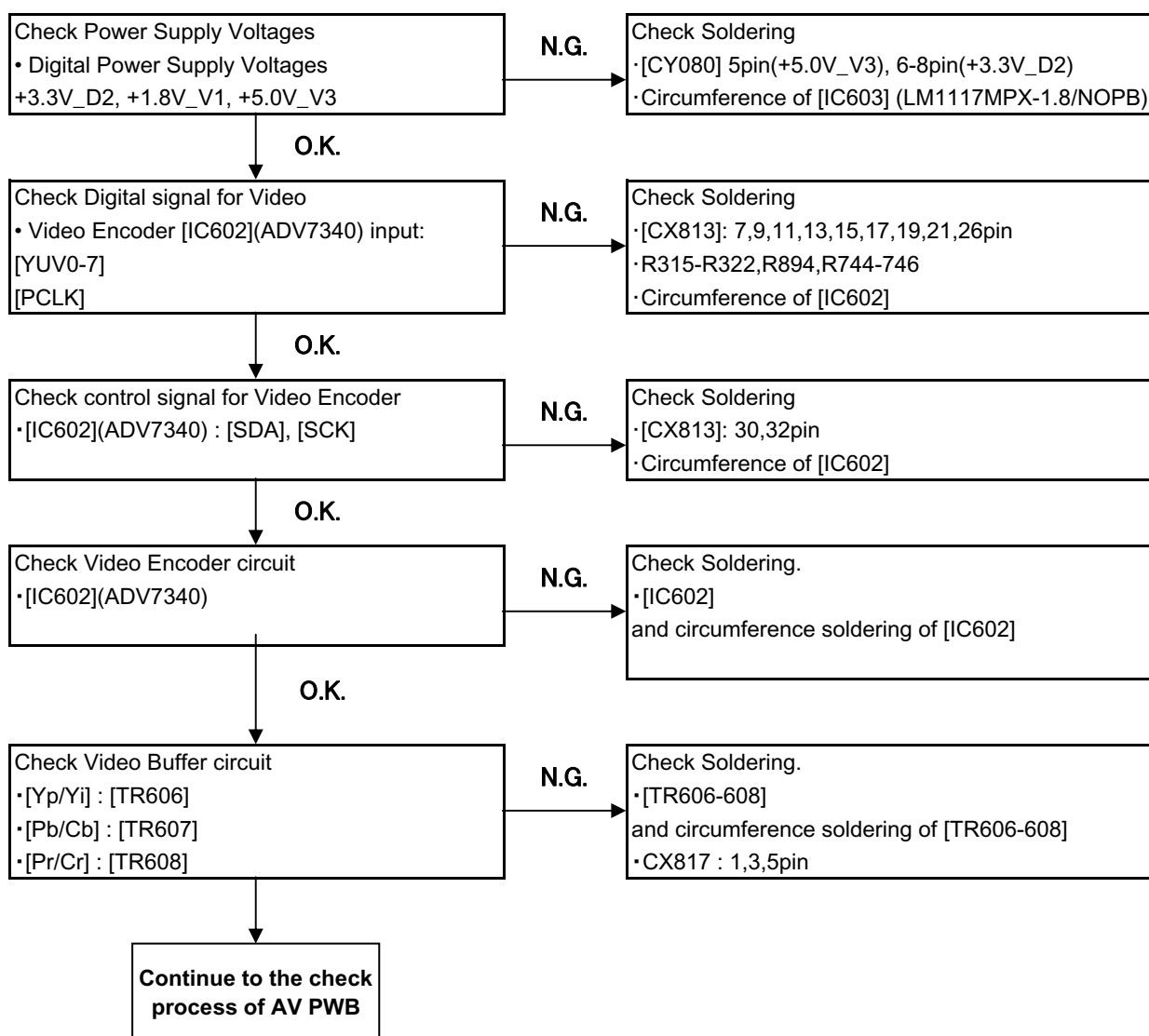
Setup: Multi Channel





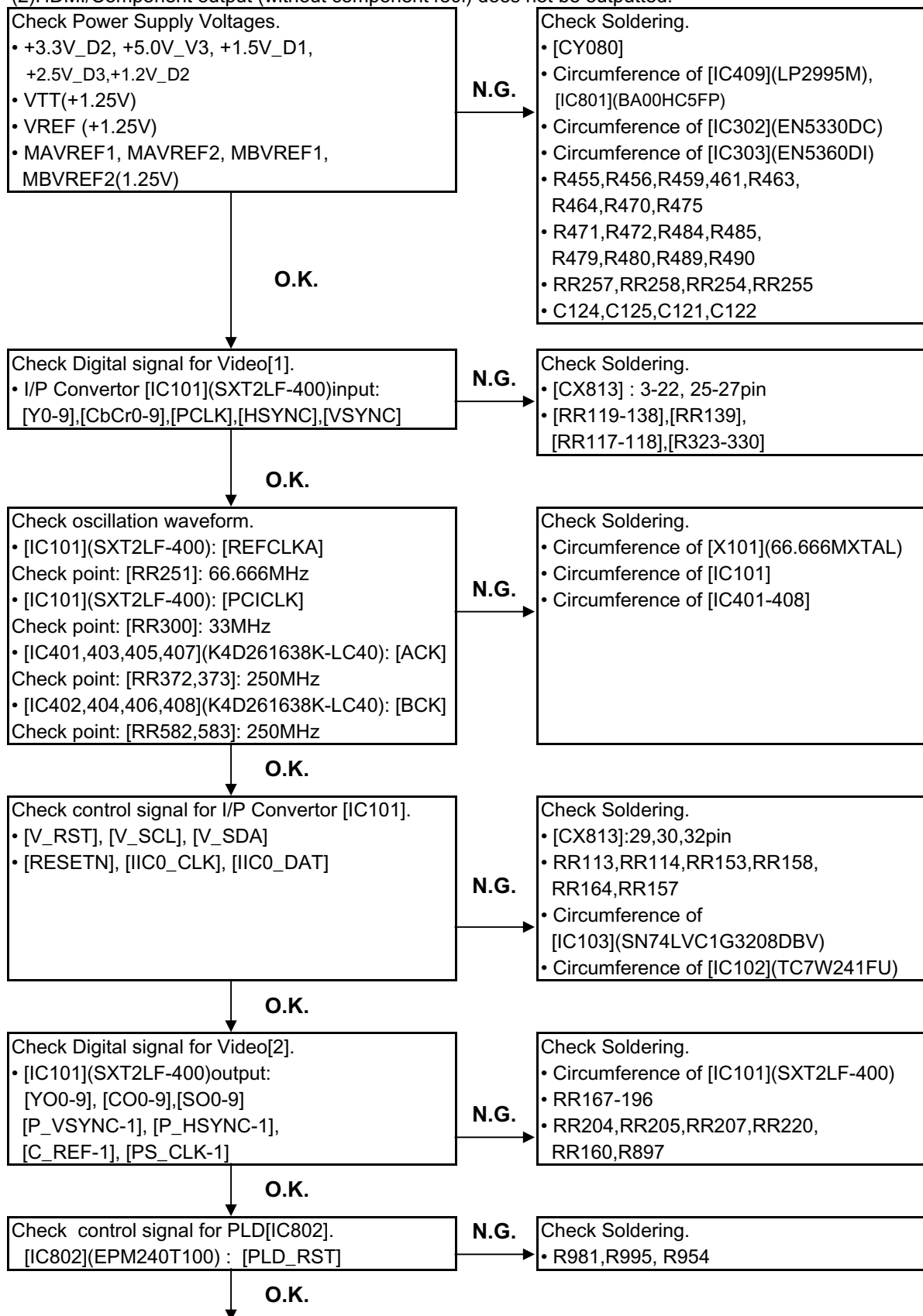
GU-3867(D.VIDEO UNIT)

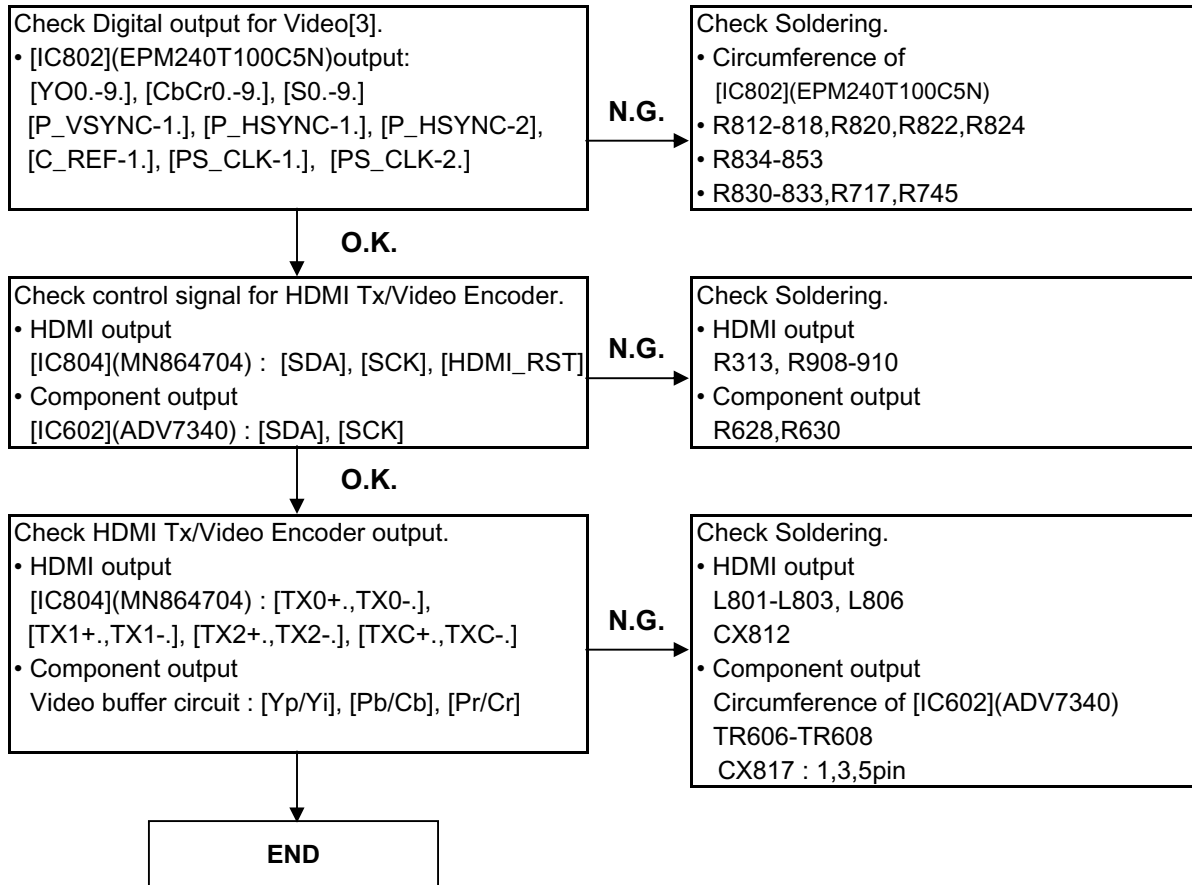
(1) Component480i output [Y, Cb, Cr] does not be outputted.



GU-3867(D.VIDEO UNIT)

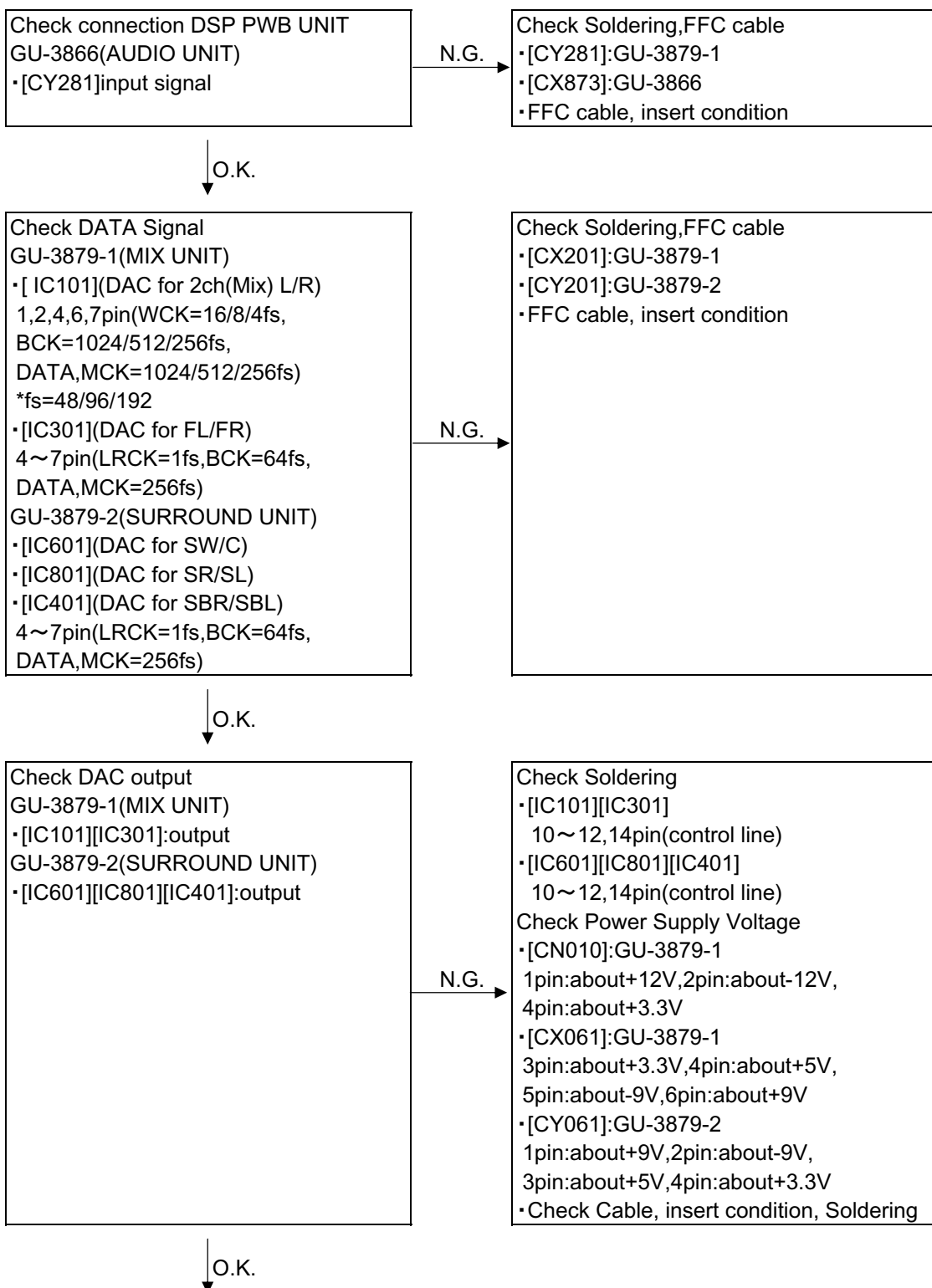
(2)HDMI/Component output (without component480i) does not be outputted.

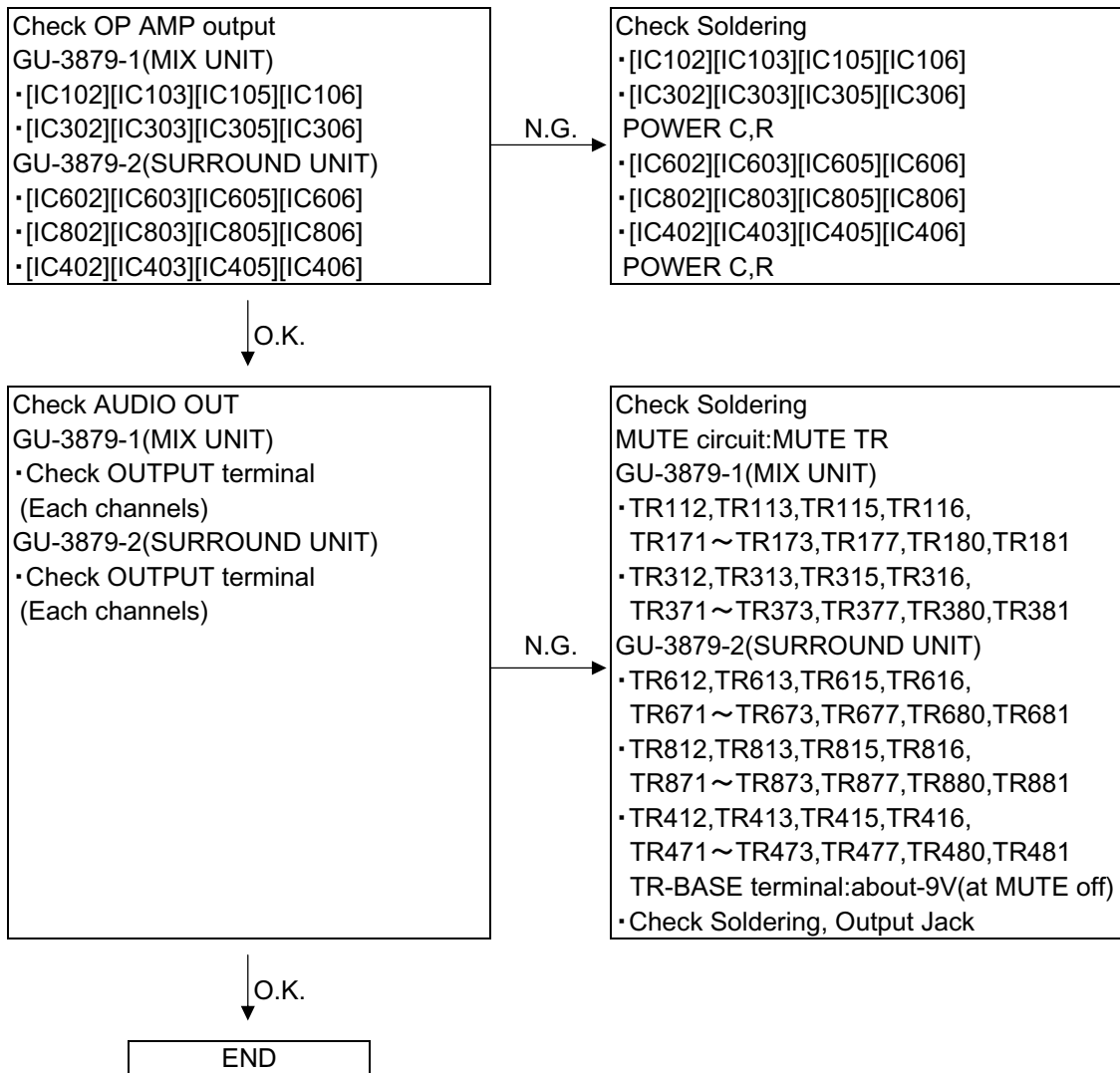




GU-3789(AUDIO UNIT)

○ CD,DVD-VIDEO,BD,SD CARD





BD Mechanism Replacement Guidelines

The guidelines describe how to determine whether a BD Mechanism Assembly is defective or not.
Confirm that the malfunction is eliminated after replacing the defective BD Mechanism Assembly with a new one.

*The BD Mechanism Assembly shall be acceptable when the following test disc can be played successfully;

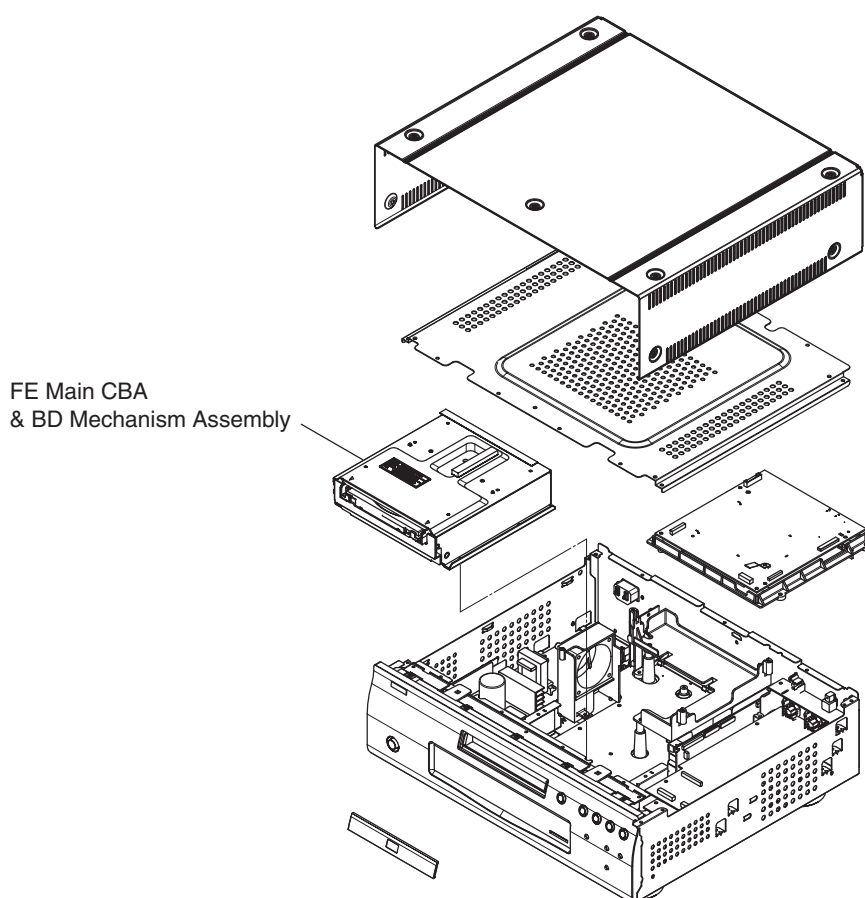
BD-ROM	BLX-201S3(SONY) chp12
BD-R	SBD-8284(ALMEDIO)

*Select [4: LD Test] and select [2: Operating Time] in Service Mode.

If the Operating Time shows 3,000 hours or more, the BD Mechanism Assembly shall be determined that it has reached the end of its life.

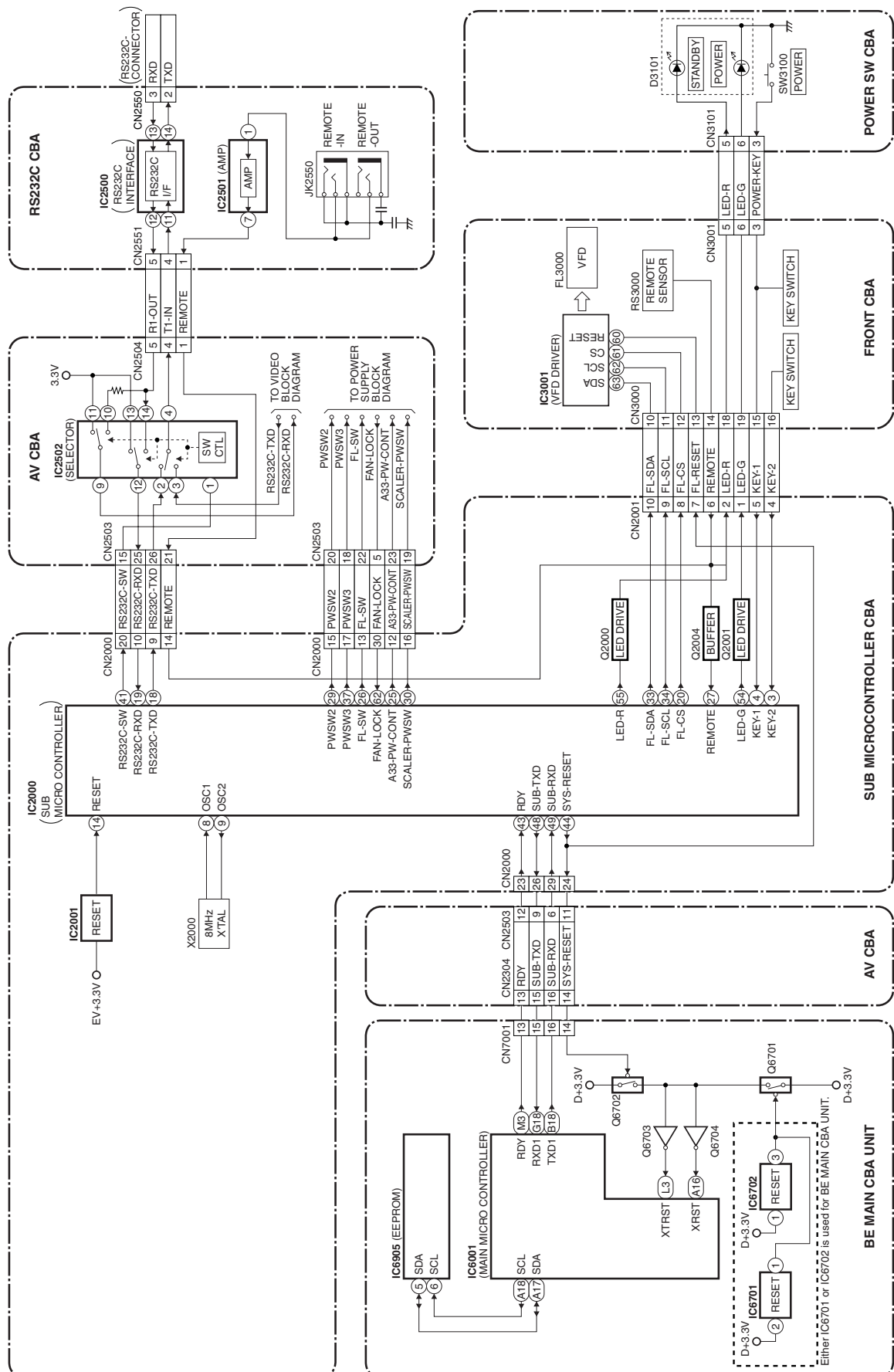
Replacement of FE Main CBA & BD Mechanism Assembly

1. Remove the Top Cover, Top Panel, Tray Panel, and BE Main CBA Unit.
2. Disconnect Connectors and replace the FE Main CBA & BD Mechanism Assembly.
Refer to CABINET DISASSEMBLY INSTRUCTIONS.

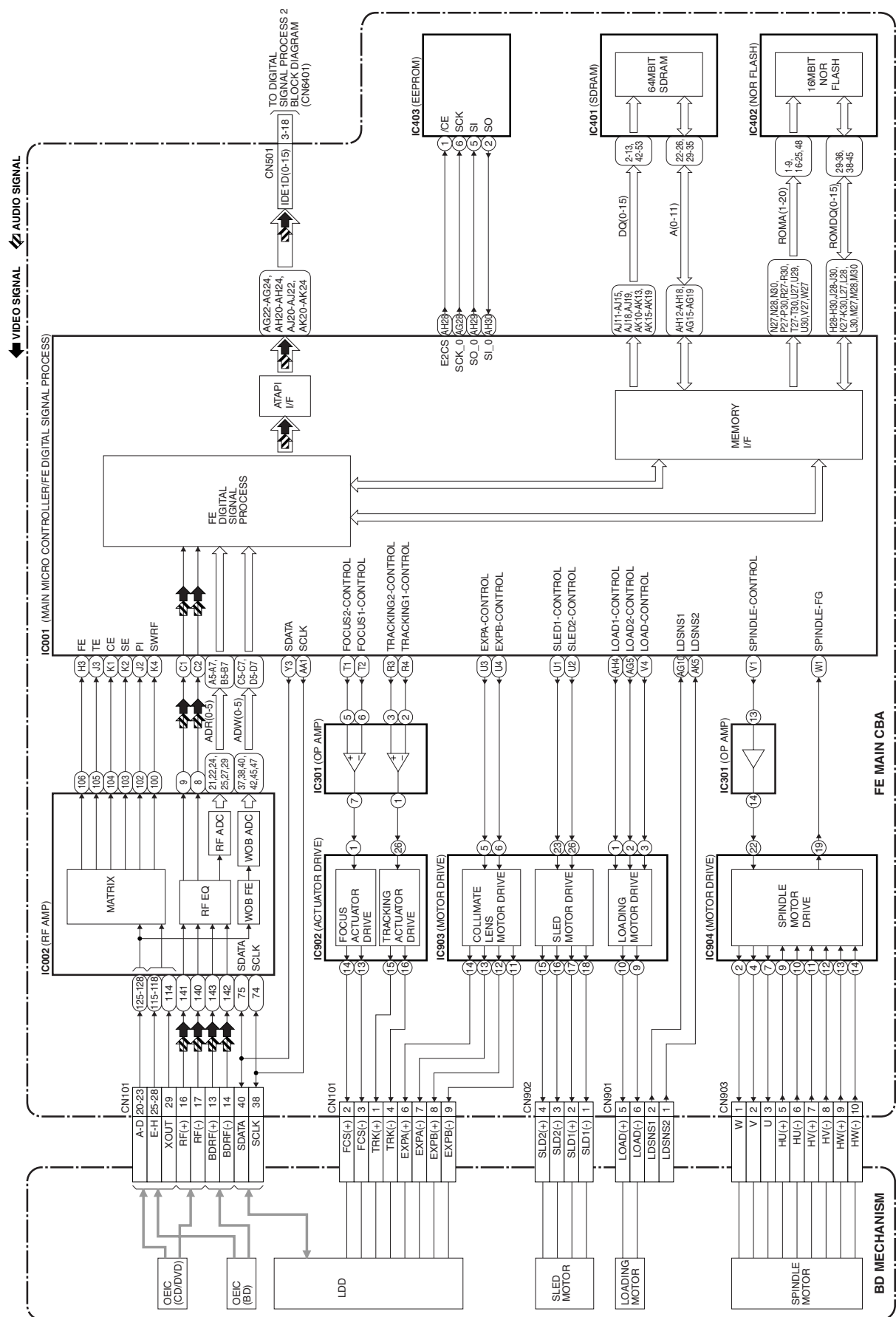


BLOCK DIAGRAMS

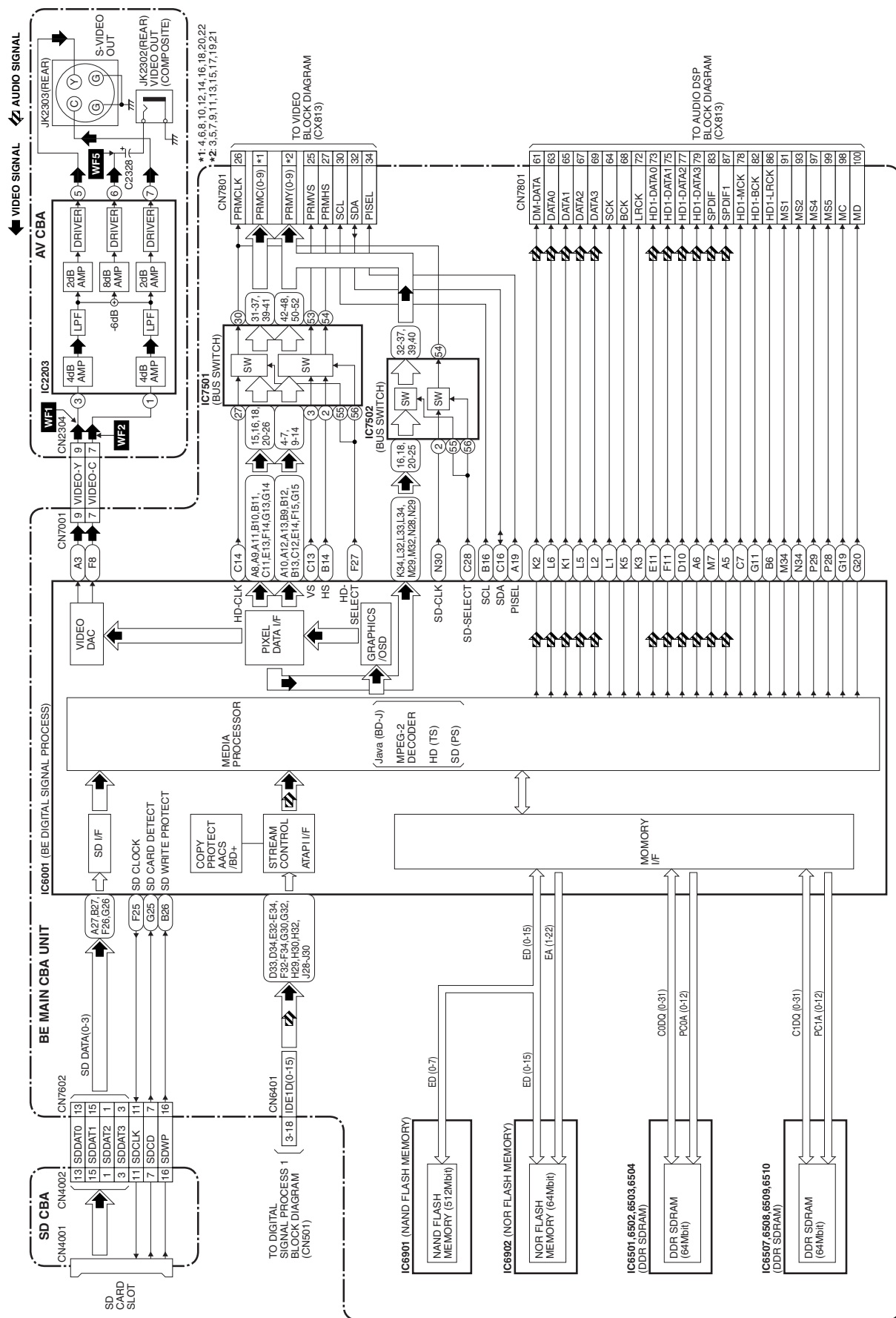
System Control Block Diagram



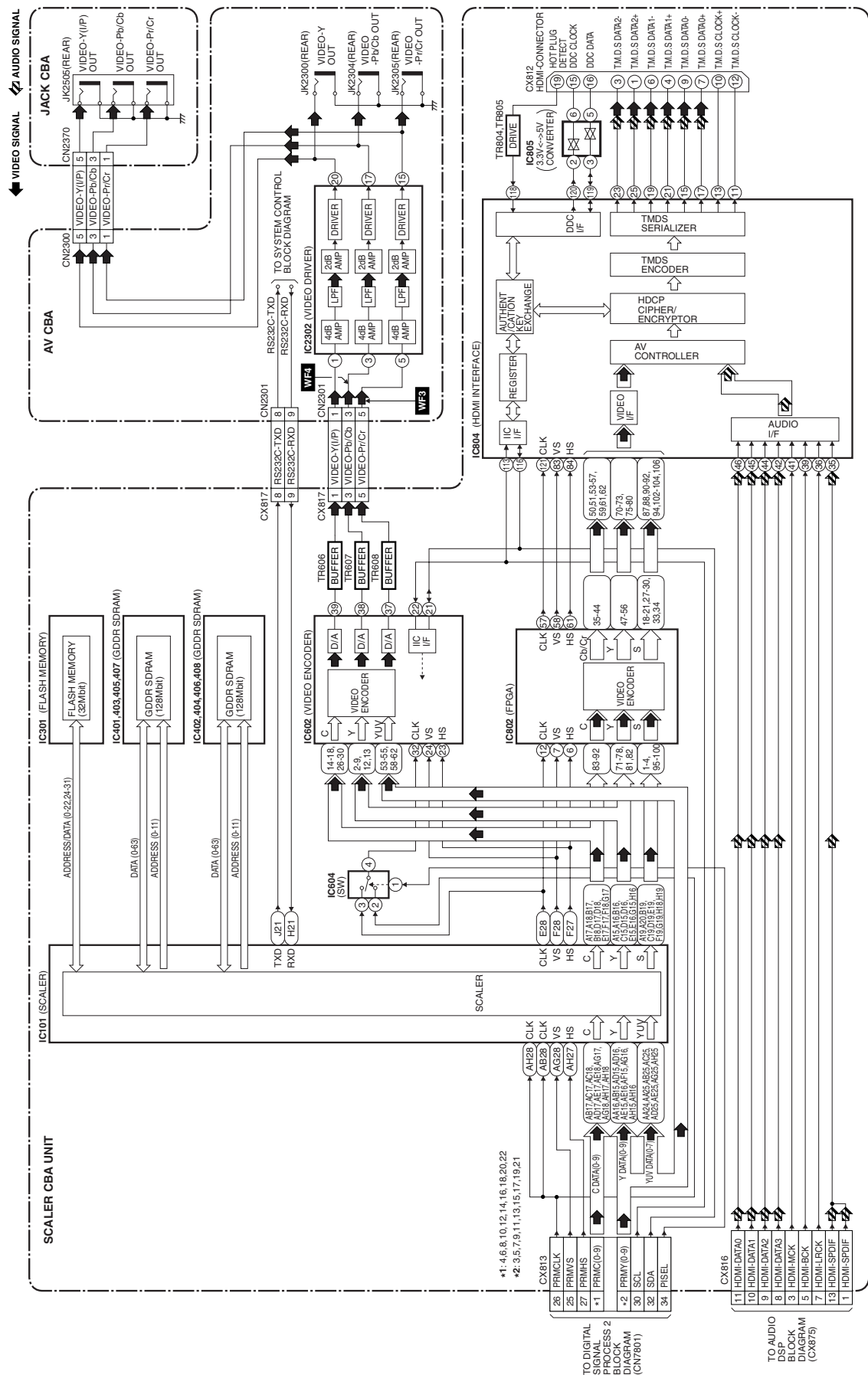
Digital Signal Process 1 Block Diagram



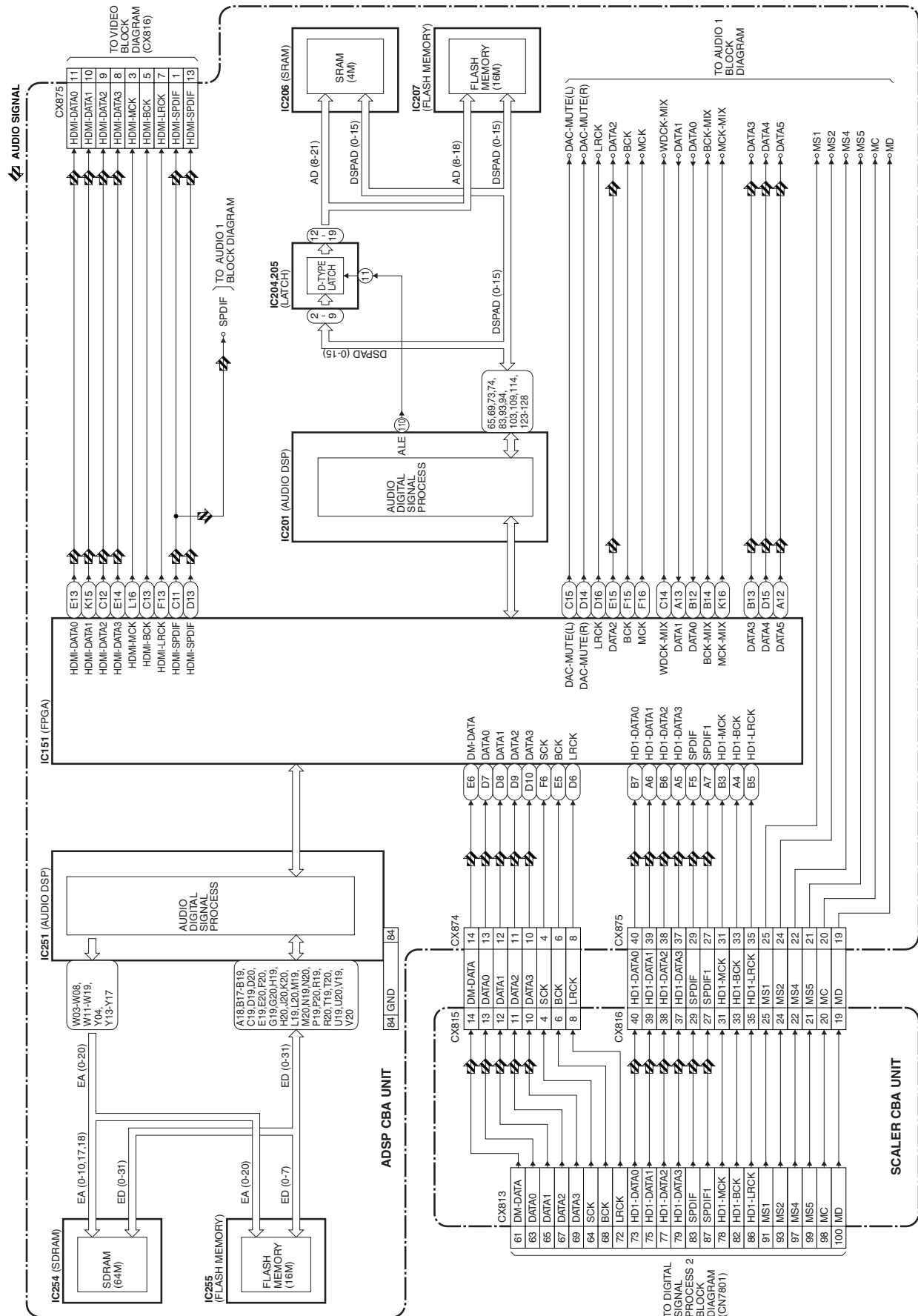
Digital Signal Process 2 Block Diagram



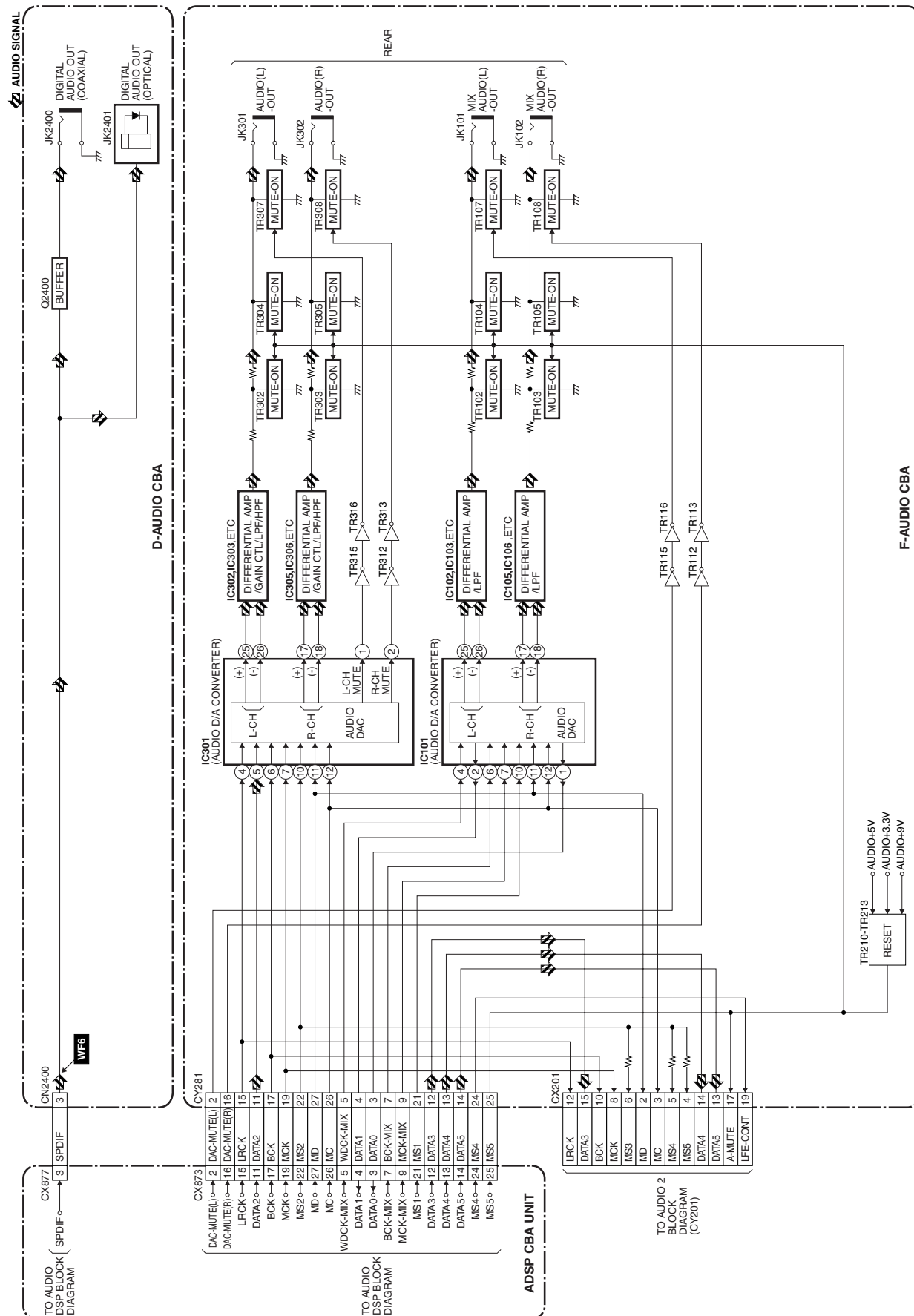
Video Block Diagram



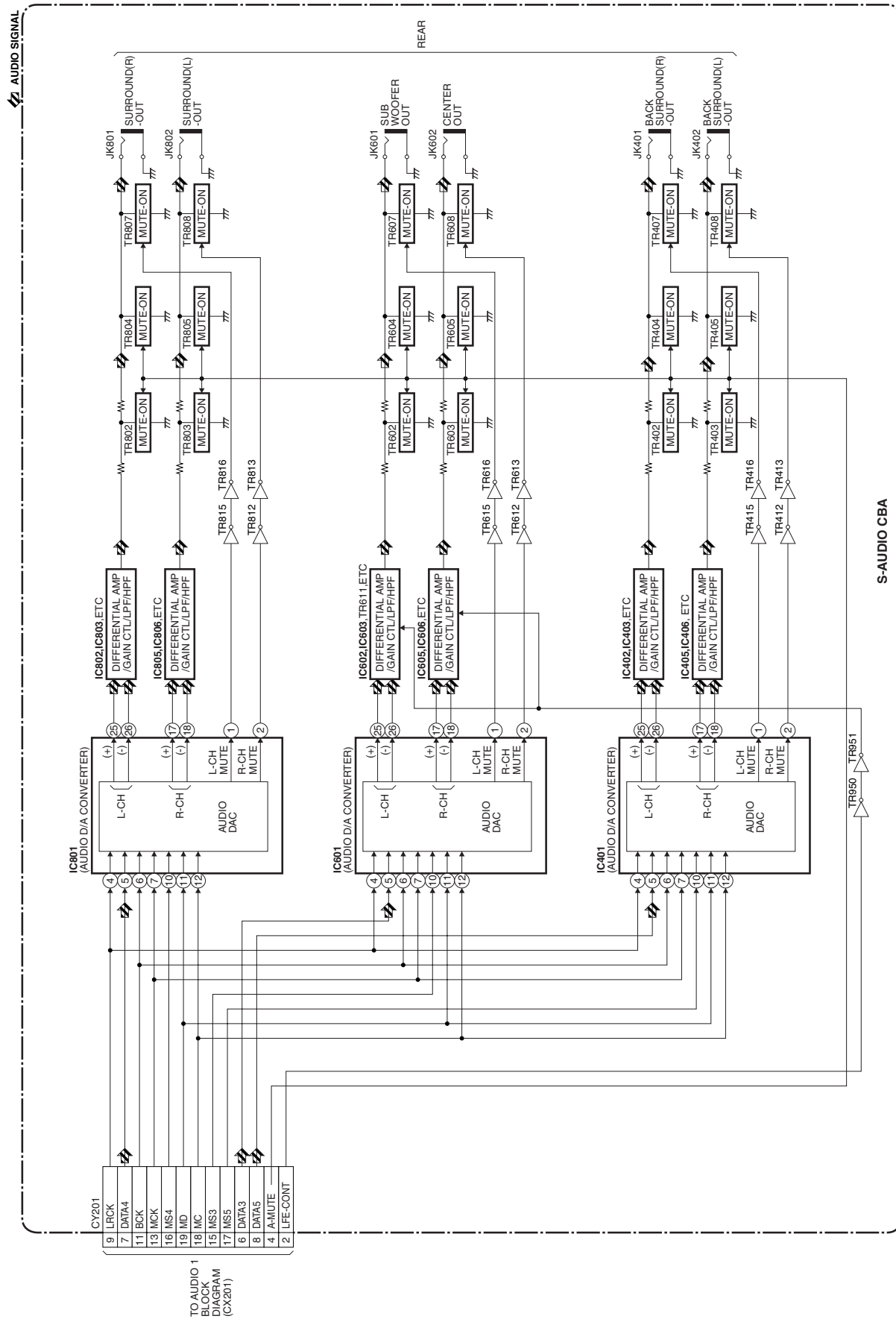
Audio DSP Block Diagram



Audio 1 Block Diagram



Audio 2 Block Diagram



Power Supply Block Diagram

CAUTION!

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



CAUTION !

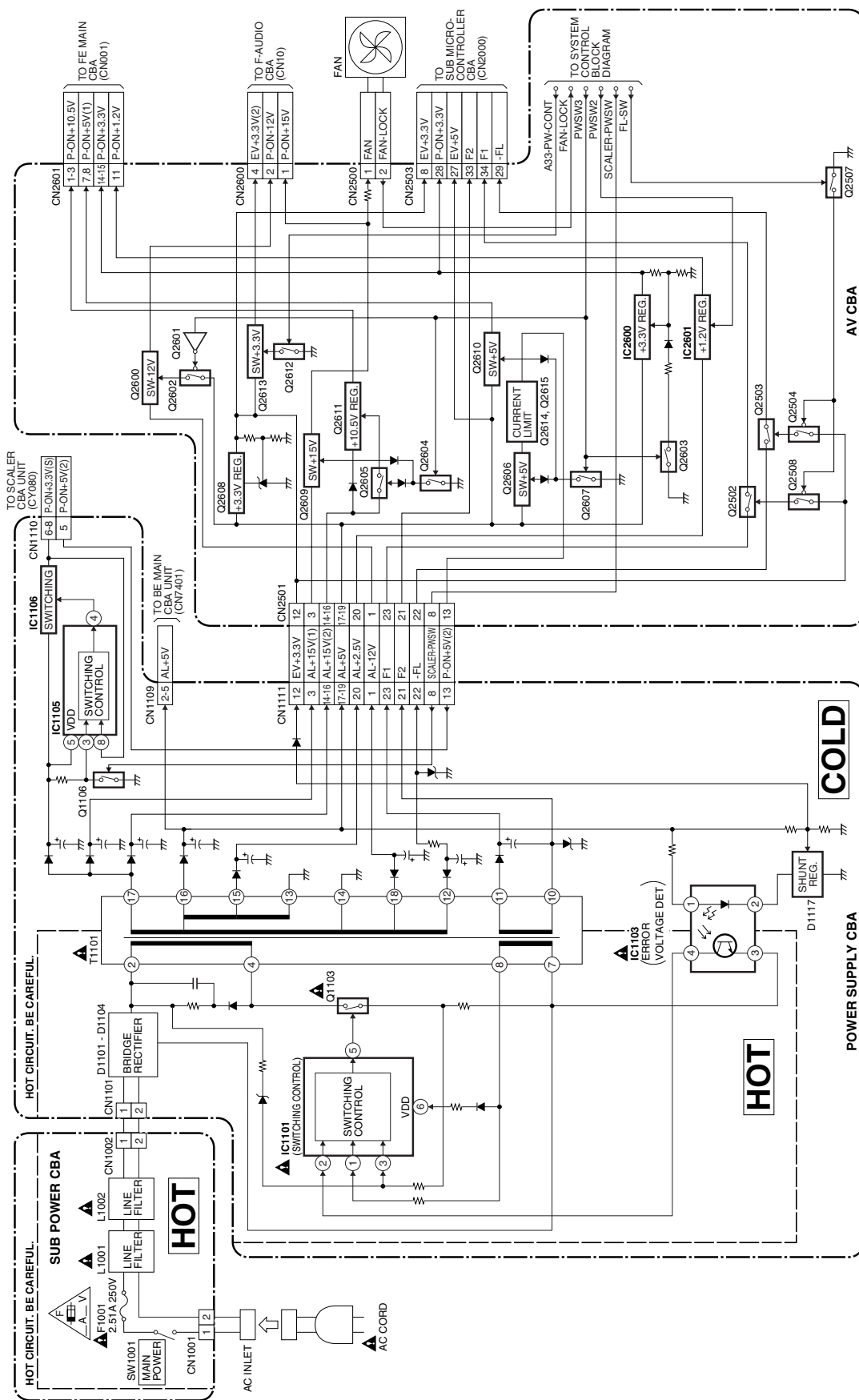
For continued protection against fire hazard, replacement only with the same type fuse.

ATTENTION : Pour une protection continue les risques d'Incele n'utiliser que des fusibles de même type.

Risk of fire-replace fuse as marked.

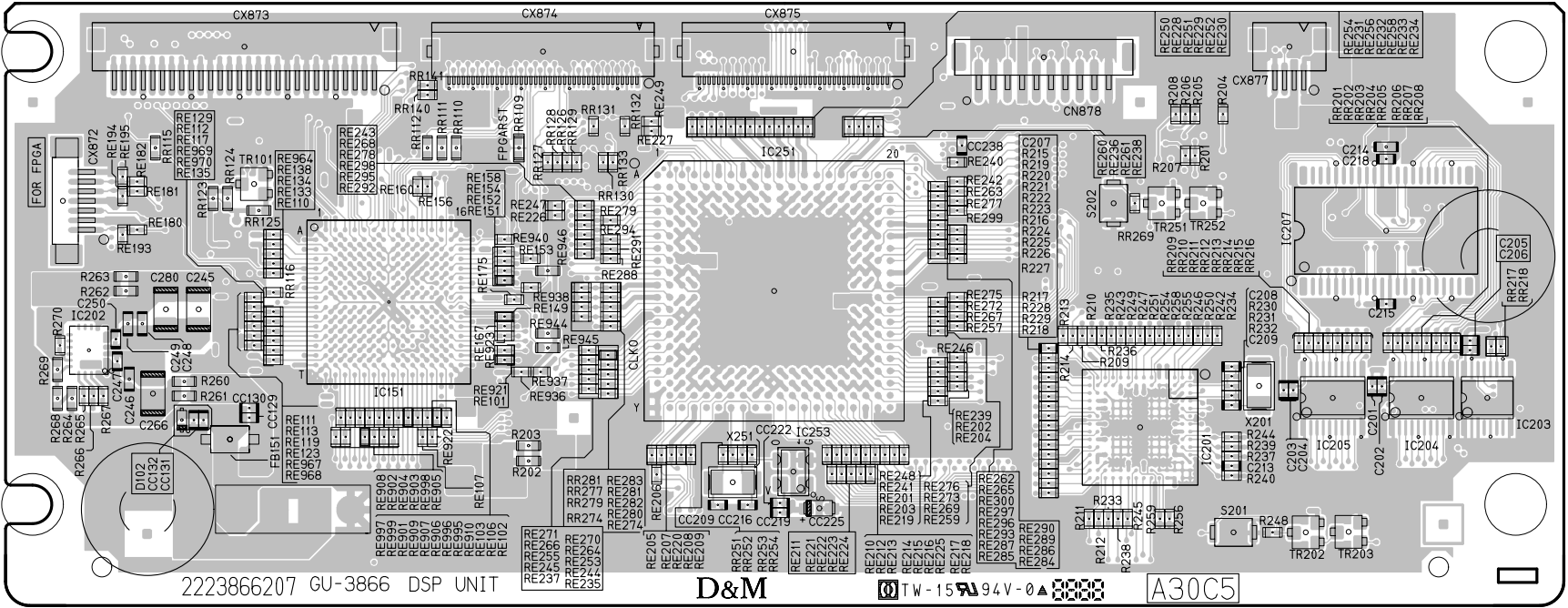
NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

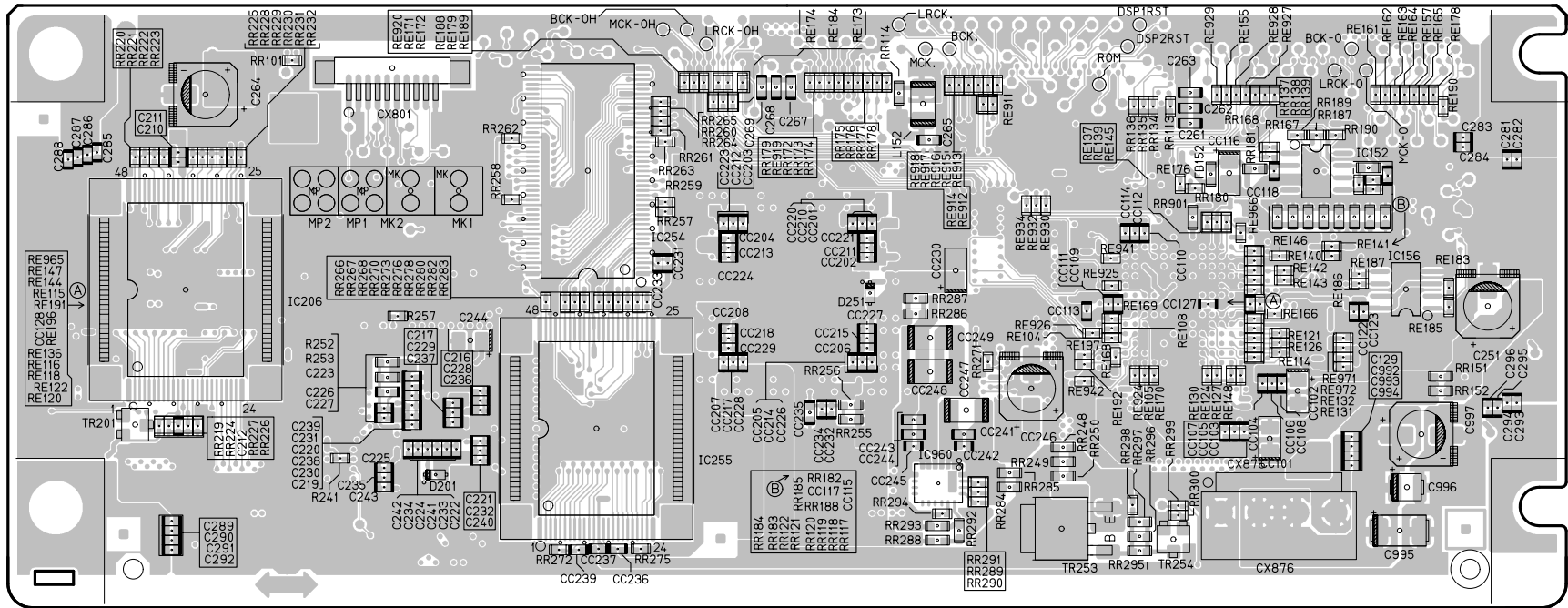


PRINTED WIRING BOARDS

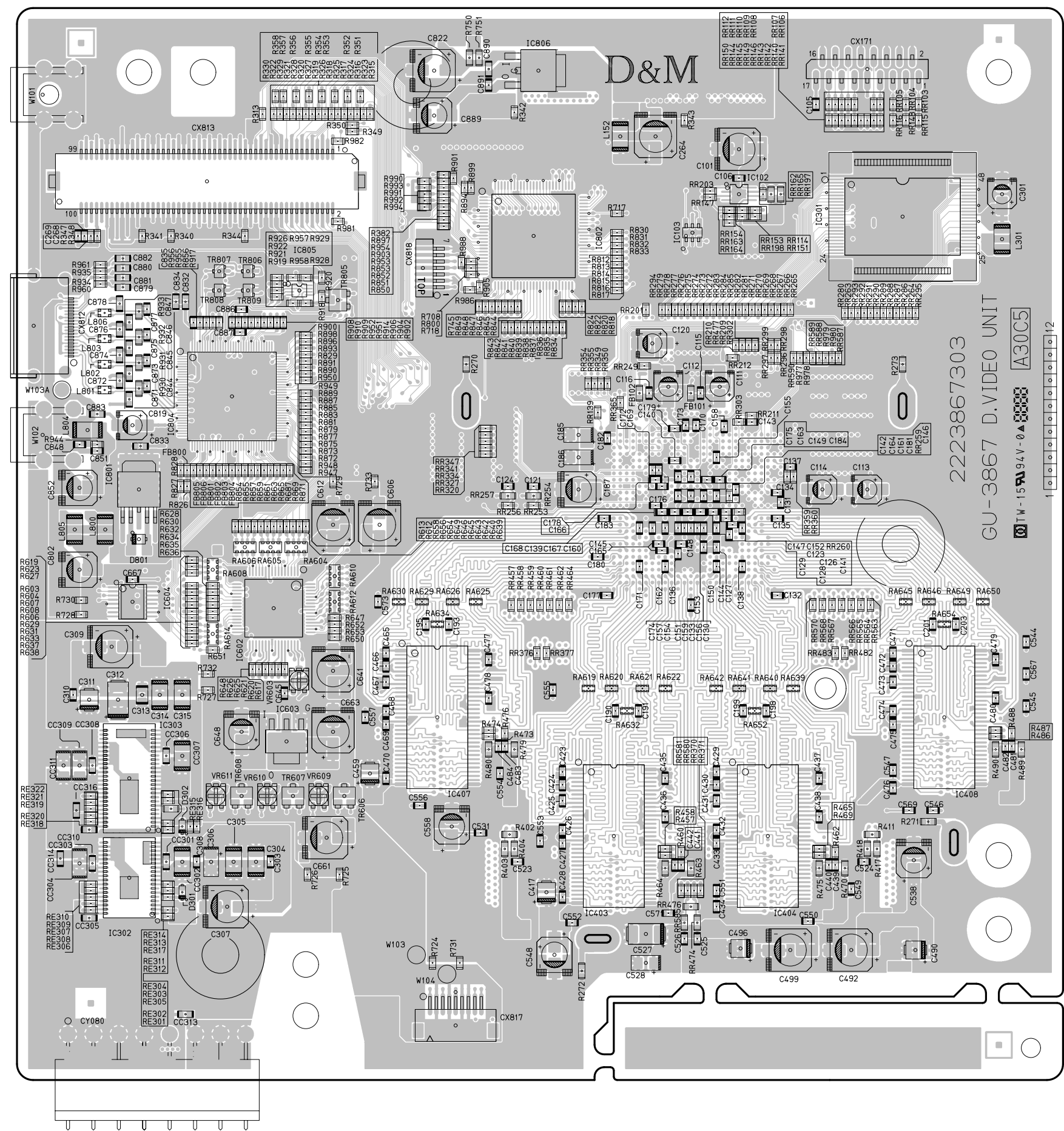
GU-3866 DSP P.W.B. UNIT



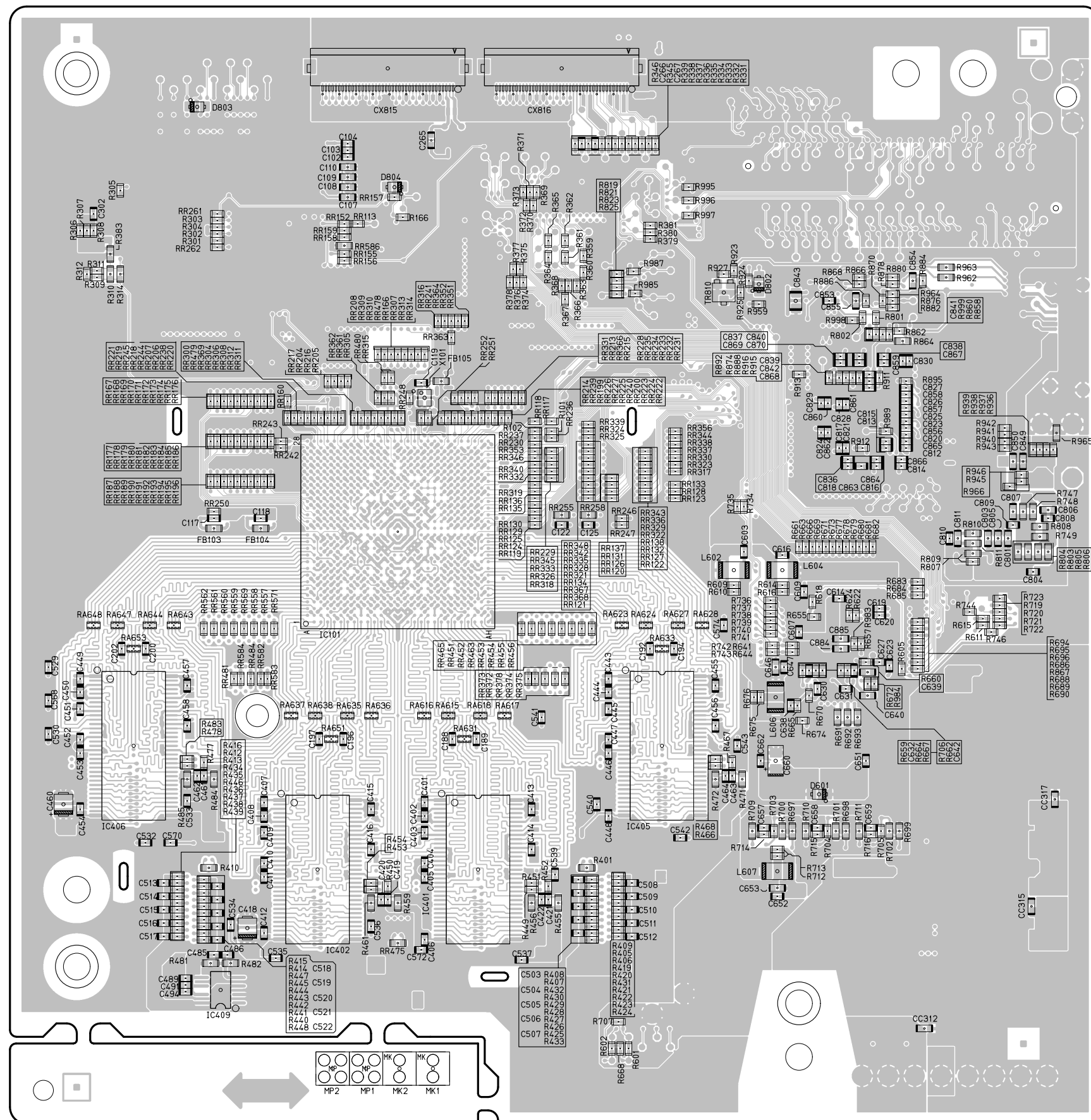
COMPONENT SIDE

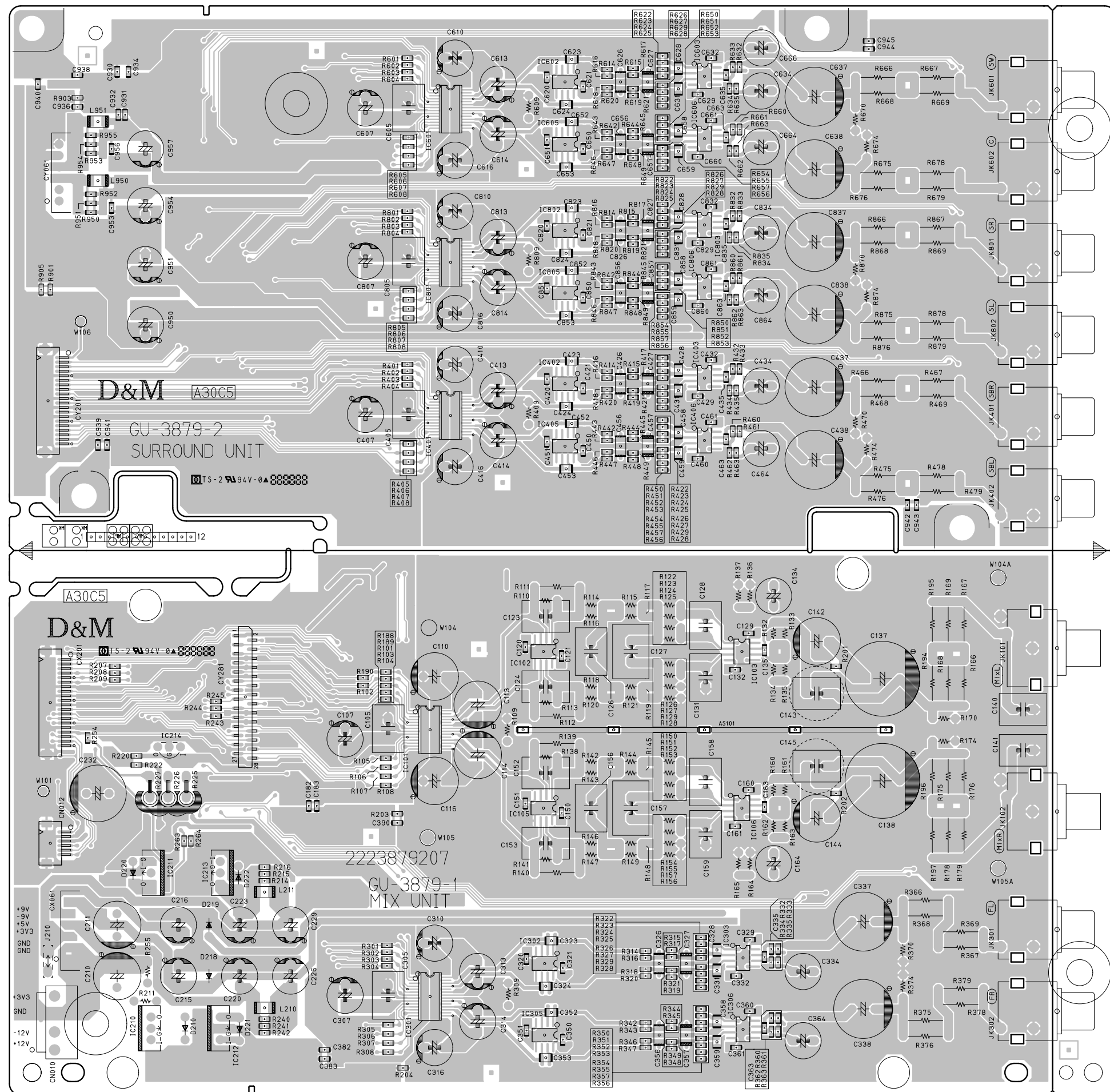


FOIL SIDE

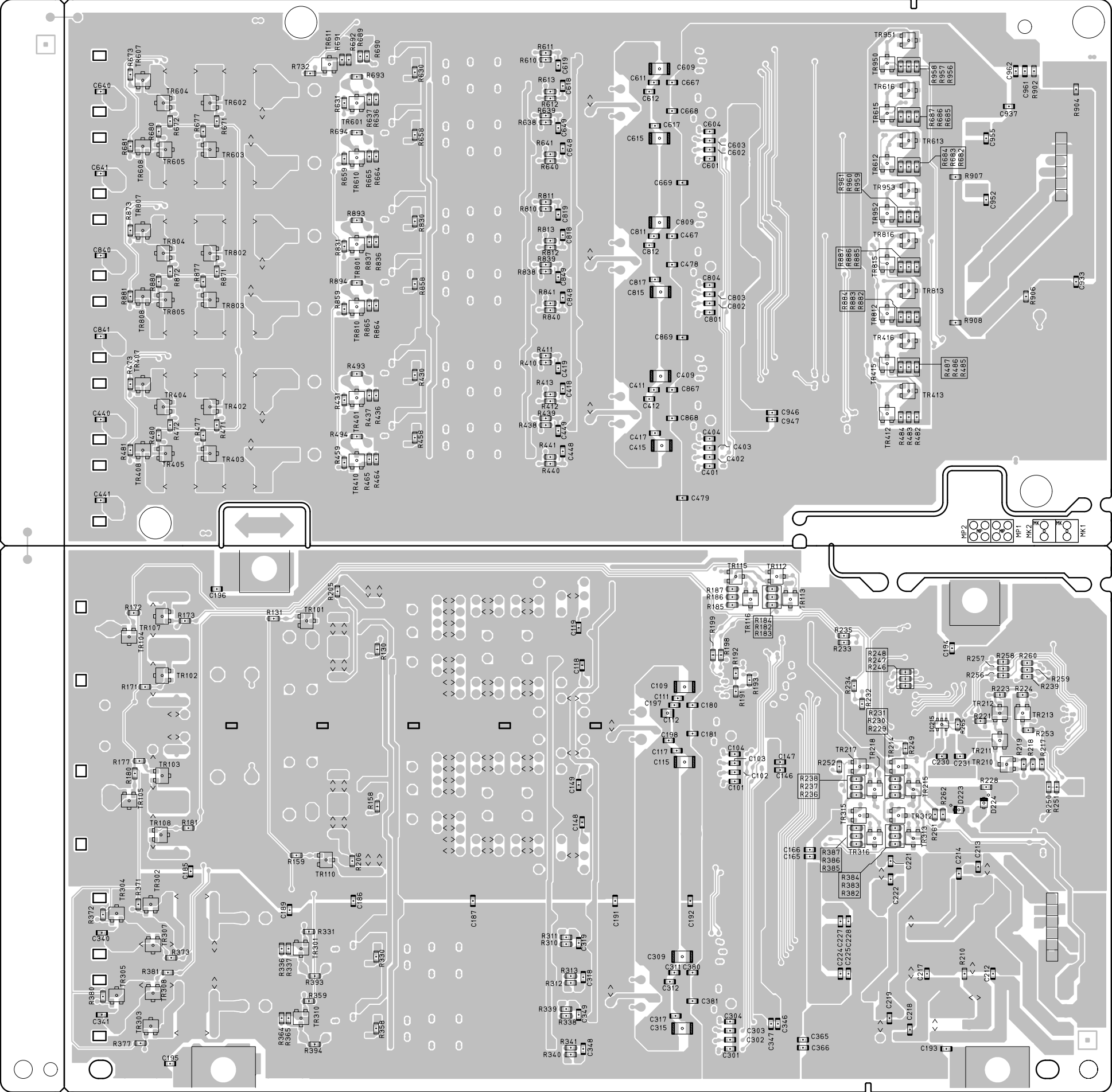


COMPONENT SIDE

**FOIL SIDE**

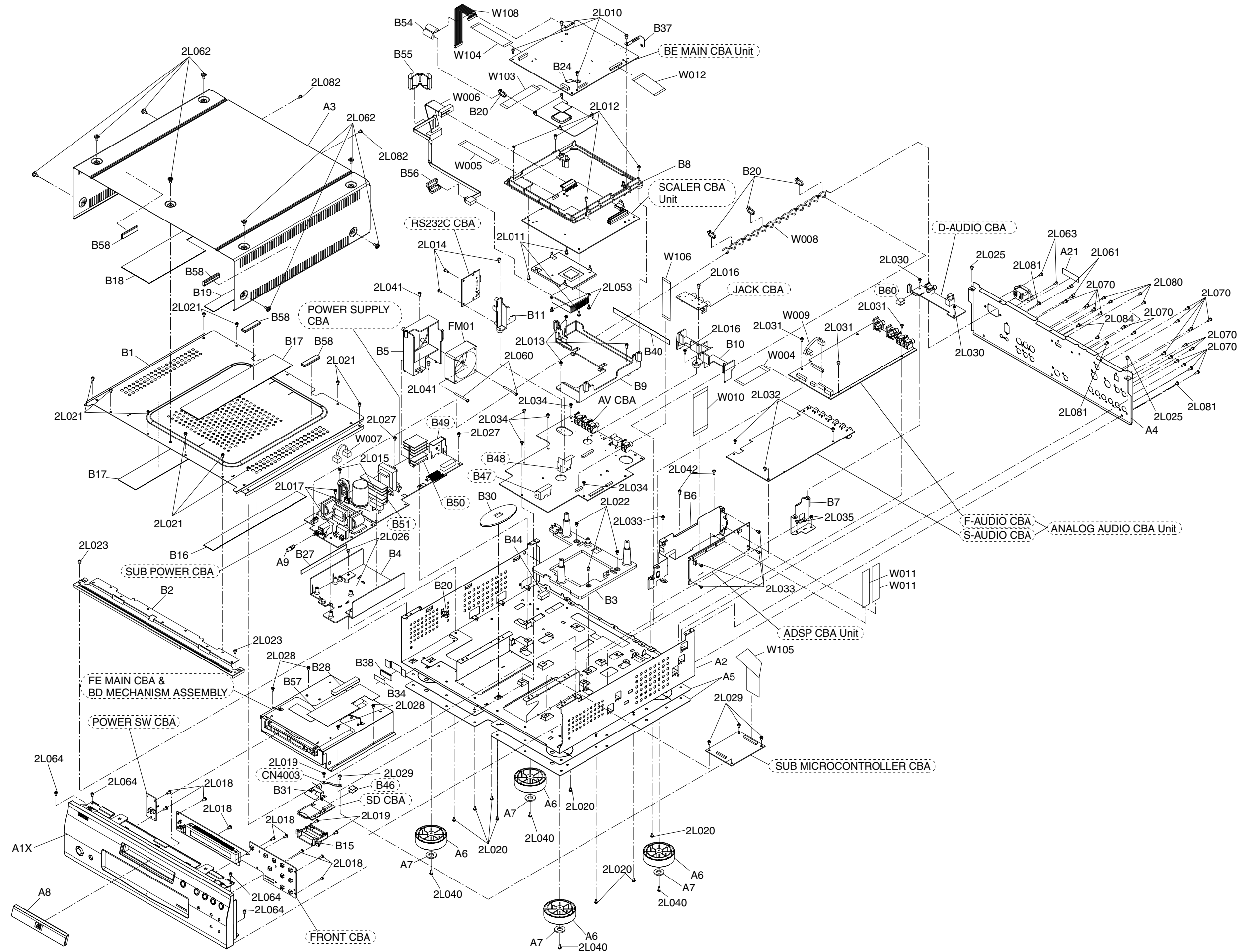


COMPONENT SIDE



FOIL SIDE

EXPLODED VIEW



PARTS LIST OF EXPLODED VIEW

* 本表に "nsp" と記載されている部品は供給できません。

* Parts for which "nsp" is indicated on this table cannot be supplied.

* 本表に "nsp" と記載されている基板 ASS'Y は供給できません。基板 ASS'Y の修理の際には基板部品表を確認のうえ、交換部品を発注してください。

* P.W.B. ASS'Y for which "nsp" is indicated on this table cannot be supplied. When repairing the P.W.B. ASS'Y, check the board parts table and order replacement parts.

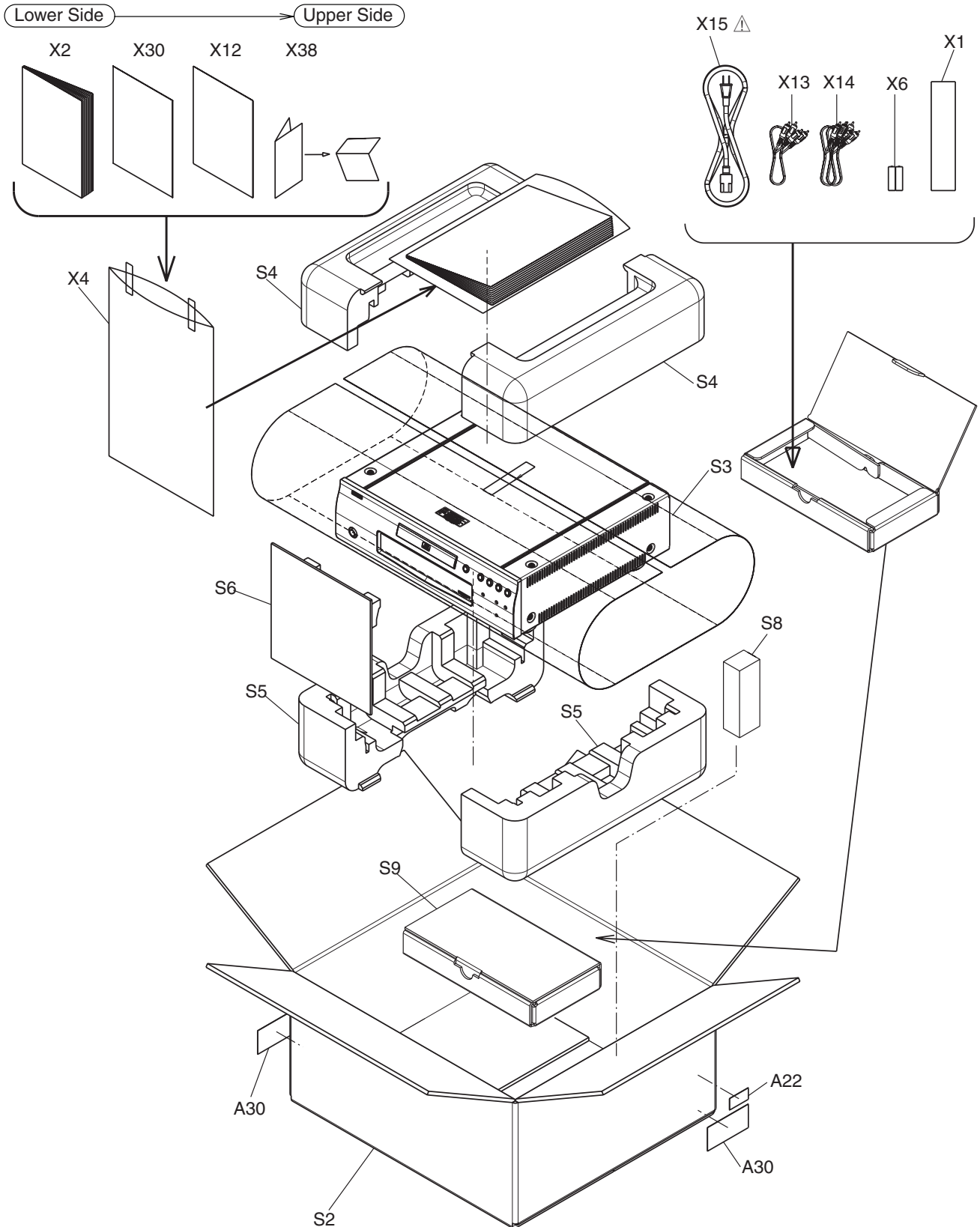
* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

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

	Ref. No.	Part No.	Part Name	Remark		Q'ty	New
		00DGU-3867	SCALER CBA UNIT		UPCBPPBDMH01	1	*
		00DGU-3879	ANALOG AUDIO CBA UNIT		UPCB000DMH02	1	*
		-	F-AUDIO CBA		-		
		-	S-AUDIO CBA		-		
		00DGU-3866	ADSP CBA UNIT		UPCB000DMH03	1	*
		9H2304000120S	FE MAIN CBA & BD MECHANISM ASSEMBLY		N77D2AUN	1	*
		9H2189000130D	BE MAIN CBA UNIT		1VSA17046	1	*
		9H2189000140D	AV ASSEMBLY		1VSA17250	1	*
		-	AV CBA		-		
		-	SUB MICROCONTROLLER CBA		-		
		-	RS232C CBA		-		
		-	D-AUDIO CBA		-		
		-	JACK CBA		-		
		9H2189000150D	POWER SUPPLY CBA		1VSA17145	1	*
		9H2189000160D	SUB POWER CBA		1VSA17144	1	*
		9H2189000170D	FRONT ASSEMBLY		1VSA17127	1	*
		-	FRONT CBA		-		
		-	POWER SW CBA		-		
		9H2189000180D	SD CBA		1VSA17125	1	*
	A1X	9H2402000010D	FRONT ASSEMBLY E5E00UD		1VM121399F	1	*
	A2	nsp	CHASSIS E5E00UD		1VM020691R	1	*
	A3	00D9H26000946	TOP COVER E5E00UD		1VM020690	1	*
	A4	9H2406000020D	REAR PANEL E5E00UD		1VM223213H	1	*
	A5	nsp	BOTTOM PANEL E5E00UD		1VM223212	2	*
	A6	00D9H26000929	DENON FOOT E5E00UD		1VM426219	4	
	A7	00D9H26000930	FOOT RUBBER(DENON) E5E00UD		1VM426239	4	
	A8	00D9H26000948	TRAY PANEL ASSEMBLY(BLACK) E5E00UD		1VM223619D	1	*
	A9	9H2411000030D	POWER BUTTON MINI ASSEMBLY(BLACK) E5E00UD		1VM426439	1	*
	A21	nsp	LABEL SERIAL NO. E57E0UD		-	1	*
	B1	nsp	TOP PANEL E5E00UD		1VM223211G	1	*
	B2	nsp	FRONT BRACKET E5E00UD		1VM324206	1	*
	B3	nsp	PDESTAL E5E00UD		1VM121240	1	*
	B4	nsp	POWER PCB HOLDER E5E00UD		1VM223219F	1	*
	B5	nsp	FAN HOLDER E5E00UD		1VM223222	1	*
	B6	nsp	DSP PCB HOLDER E5E00UD		1VM223214	1	*
	B7	nsp	AUDIO PCB HOLDER E5E00UD		1VM324207	1	*
	B8	nsp	BE SCALER HOLDER E5E00UD		1VM121241	1	*
	B9	nsp	BE SCALER SUB HOLDER E5E00UD		1VM121242E	1	*
	B10	nsp	BNC PCB HOLDER E5E00UD		1VM223220	1	*
	B11	nsp	RS232 PCB HOLDER E5E00UD		1VM324210	1	*
	B15	nsp	SD PCB HOLDER E5E00UD		1VM324231	1	*
	B16	nsp	NEOPRENE SPONGE(250X25X1) E5E00UD		1VM427819	1	*
	B17	nsp	NEOPRENE SPONGE(250X50X1) E5E00UD		1VM427821	2	*
	B18	nsp	NEOPRENE SPONGE(250X25+150X50) E5E00UD		1VM427822	1	*
	B19	nsp	NEOPRENE SPONGE(250X25X1) E5E00UD		1VM427819	1	*
	B20	nsp	LEAD CLAMPER 100MM		1790356	5	*
	B24	nsp	MACHA EARTH PLATE R E9H10UD		1VM425524	1	*
	B27	nsp	NEOPRENE SPONGE(8X120) E5E00UD		1VM427440	1	*

	Ref. No.	Part No.	Part Name	Remark		Q'ty	New
	B28	nsp	NEOPRENE SPONGE(10X65) E5E00UD		1VM427439	1	*
	B30	nsp	BASS RUBBER E5E00UD		1VM427420	1	*
	B31	nsp	SD EARTH PLATE E5E00UD		1VM224376	1	*
	B34	nsp	DOUBLE SIDE TAPE E5E10UD		1VM427670	1	*
	B37	nsp	BE EARTH PLATE E5E00UD		1VM325917	1	*
	B38	nsp	CORE FERRITE FSRC253120RT000T		XL03012MR001	1	*
	B40	nsp	TAPE HIMELON(10X150) E5E00UD		1VM427421	1	*
	B44	nsp	RUBBER CUSHION(10X20X7) E5E00UD		1VM428001	1	*
	B54	nsp	CORE SLEEVE ZCAT2017-0930		XL06021TE001	1	*
	B55	nsp	CORE SLEEVE ZCAT2436-1330A		XL06036TE001	1	*
	B56	nsp	CORE SLEEVE ZCAT2017-0930		XL06021TE001	1	*
	B57	nsp	INSULATION SHEET(HI LOADER) E5E02JD		1VM326517	1	*
	B58	nsp	GASKET E5E00UD		1VM428428	4	*
	FM01	9H2685000040S	MOTOR DC FAN 2D65BK100100		MMEZR12XNR01	1	
SCREWS							
	2L010	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	4	
	2L011	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	3	
	2L012	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	4	
	2L013	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	3	
	2L014	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	3	
	2L015	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	2	
	2L016	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	2	
	2L017	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	3	
	2L018	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	9	
	2L019	nsp	SCREW P-TIGHT M3X8 BIND HEAD+		GBJP3080	3	
	2L020	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	8	
	2L021	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	10	
	2L022	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	3	
	2L023	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L025	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L026	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L027	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L028	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	4	
	2L029	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	4	
	2L030	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L031	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	3	
	2L032	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	3	
	2L033	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	5	
	2L034	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	5	
	2L035	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L040	nsp	SCREW S-TIGHT M3X8 BIND HEAD+		GBJS3080	4	
	2L041	nsp	SCREW S-TIGHT M3X8 BIND HEAD+		GBJS3080	2	
	2L042	nsp	SCREW S-TIGHT M3X8 BIND HEAD+		GBJS3080	2	
	2L053	nsp	SCREW S-TIGHT M3X6 BIND HEAD+		GBJS3060	2	
	2L060	nsp	P-TIGHT SCREW M3X34 E9400UD		1VM420034A	2	
	2L061	nsp	HEXAGON SPACER E6AE0UD		1VM424730	2	
	2L062	nsp	TOP COVER SCREW S-TIGHT SCREW M4X8		1VM425652	9	
	2L063	nsp	SCREW S-TIGHT M3X8 DISH HEAD+		GDHS3080	2	
	2L064	nsp	SCREW S-TIGHT M3X8 DISH HEAD+		GDHS3080	4	
	2L070	nsp	SCREW B-TIGHT M3X8 BIND HEAD+		GBHB3080	14	
	2L080	nsp	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI		GBHC3050	4	
	2L081	nsp	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI		GBHC3050	3	
	2L082	nsp	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI		GBHC3050	2	
	2L084	nsp	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI		GBHC3050	2	

PACKING VIEW



PARTS LIST OF PACKING & ACCESSORIES

* 本表に "nsp" と記載されている部品は供給できません。

* Parts for which "nsp" is indicated on this table cannot be supplied.

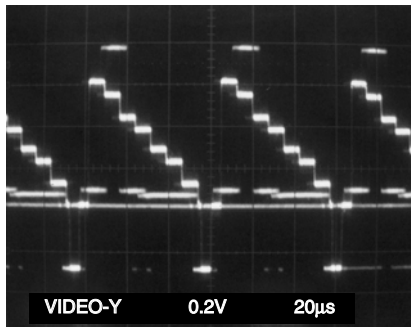
* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

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

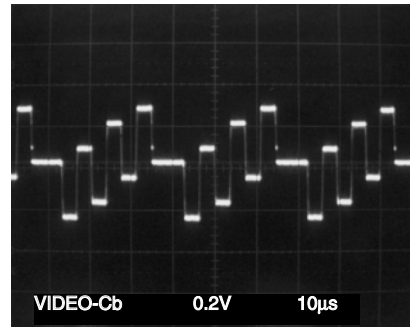
	Ref. No.	Part No.	Part Name	Remark		Q'ty	New
	A22	nsp	BAR CODE LABEL E5E00UD		-	1	
	A30	nsp	CONTROL LABEL E5E00UD		-	2	
	S2	9H2531000060D	GIFT BOX CARTON E5E00UD		1VM325082	1	*
	S3	00D9H26000933	WRAPPING SHEET(MIRROR MAT) E5E00UD		1VM426159	1	*
	S4	9H2533000070D	TOP SIDE PAD E5E00UD		1VM121379	2	*
	S5	00D9H26000935	BOTTOM SIDE PAD E5E00UD		1VM121380	2	*
	S6	00D9H26000936	FRONT PAD E5E00UD		1VM325022	1	*
	S8	00D9H26000938	REAR PAD E5E01UD		1VM427521	1	*
	S9	nsp	ACCESSORY BOX(HI-END) E5E02JD		1VM326425	1	*
	X1	00D9H26000950	REMOTE CONTROL UNIT NA843UD		NA843UD	1	*
	X2	9H2541000090D	OWNERS MANUAL E5E00UD		1VMN24353	1	*
	X4	nsp	ACCESSORY BAG E5795ED		0VM416059	1	*
	X6	nsp	DRY BATTERY R6P/2S		XB0M451T0001	2	*
	X6	nsp	DRY BATTERY R6UW/2S		XB0M311MS001	2	*
	X6	nsp	DRY BATTERY ES-GR6M-C		XB0M571GLP01	2	*
	X12	nsp	SERVICE CENTER SHEET E8700UD		1VM425536	1	
	X13	9H2605000100S	AV CORD (AUDIO) 1500/BLACK/AUDIO		WPZ0152HT001	1	
	X14	9H2605000110S	AV CORD (VIDEO) 1500/BLACK/VIDEO		WPZ0152HT002	1	
△	X15	00D9H26000952	AC CORD W/O A GND WIRE UL/CSA/202/NO/BLACK		WAV0202LTE01	1	*
	X30	nsp	ADDENDUM SHEET E5E00UD		1VMN25276	1	*
	X38	nsp	WARRANTY SHEET E6E80UD		1VM323952	1	

WAVEFORMS

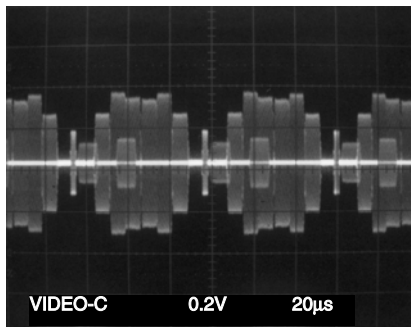
WF1 Pin 9 of CN2304



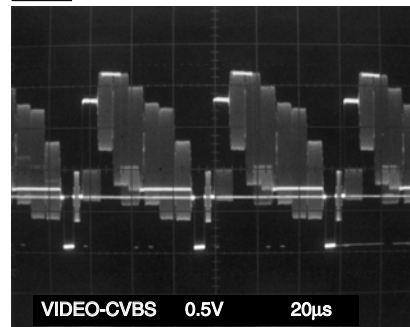
WF4 Pin 3 of CN2301



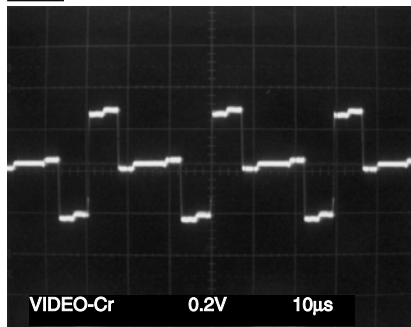
WF2 Pin 7 of CN2304



WF5 C2328 PLUS LEAD



WF3 Pin 5 of CN2301



WF6 Pin 3 of CN2400



NOTE:

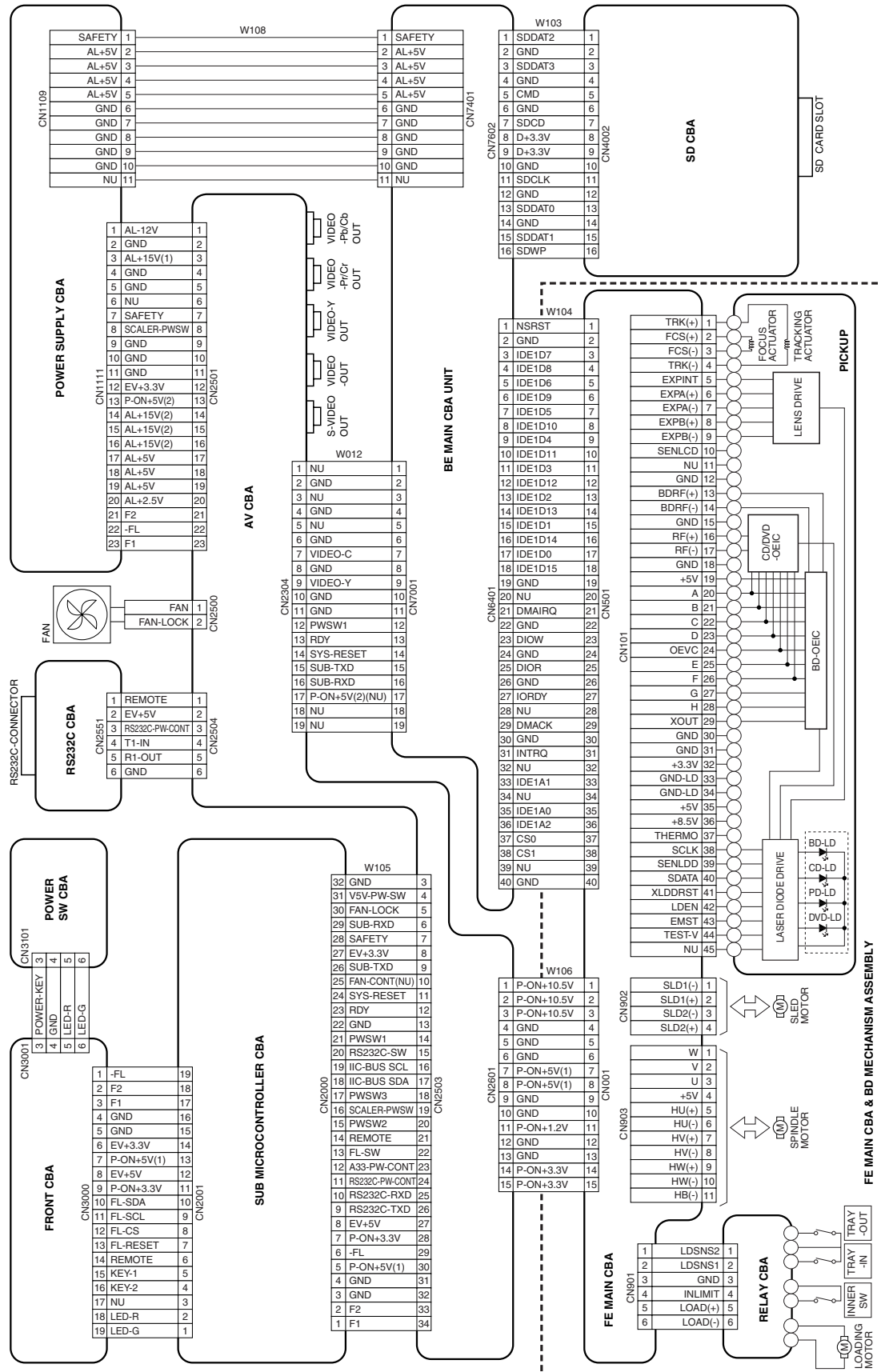
Input Signal (DVD)

VIDEO: 75% COLOR BAR

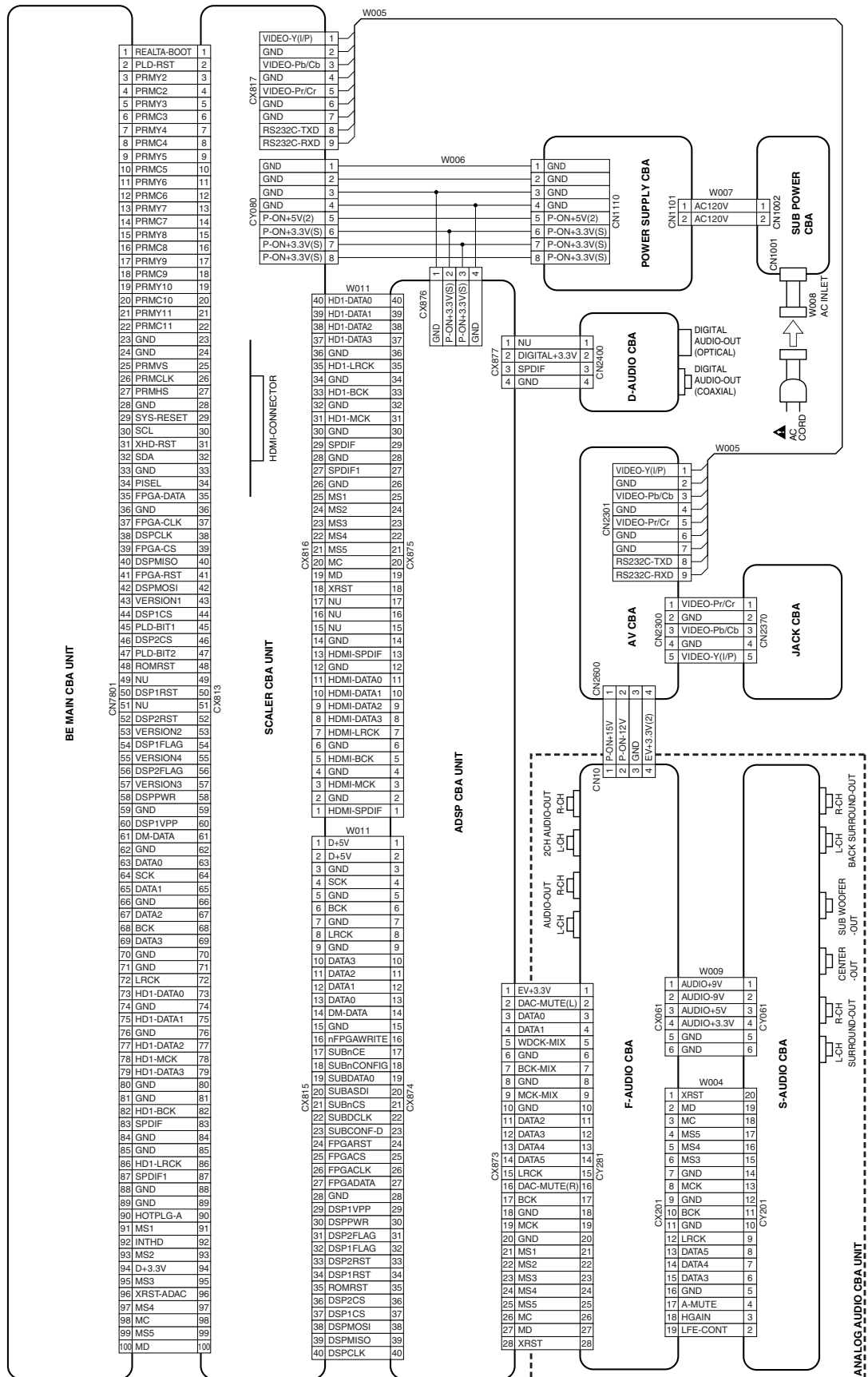
AUDIO: 1KHz, 0dB

WIRING DIAGRAM

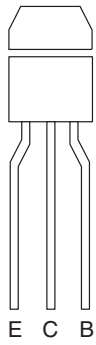
Wiring 1/2 Diagram



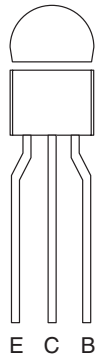
Wiring 2/2 Diagram



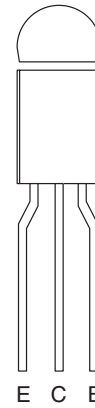
LEAD IDENTIFICATIONS



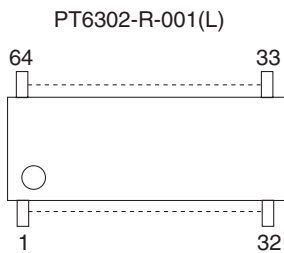
2SA1980M Y
2SA1980MG-AT
KRC103M-AT/P
KTA1267-(GR,Y)-AT/P
KTA1273-Y-AT/P
KTC102M-AT/P
KTC3203-Y-AT/P
KTC3205-Y-AT/P
KTC3199-GR-AT/P
RN1202
RN1203(TE4 F T)
SRC1202M-AT
SRC1203MAT



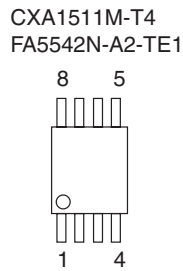
2SA950-Y(TE2 F T)
2SA966-Y(TE6 F M)
2SA1015-(GR,Y)(TE2 F T)
2SA1981Y-AT
2SC1815-GR(TE2 F T)
2SC2120-Y(TE2 F T)
2SC5343MG-AT
2SC5344 Y
KTA1271-Y-AT/P



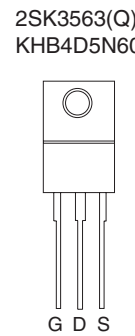
STB1277LY-AT



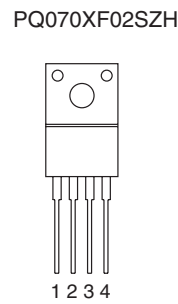
PT6302-R-001(L)



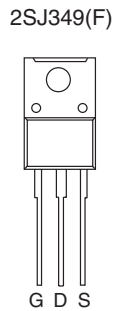
CXA1511M-T4
FA5542N-A2-TE1



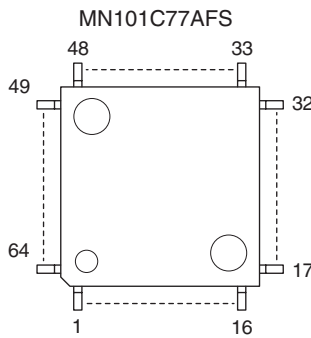
2SK3563(Q)
KHB4D5N60F-U/PMC



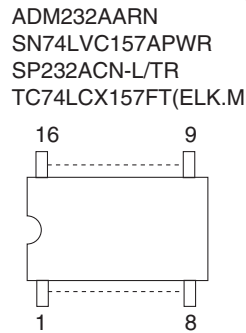
PQ070XF02SZH



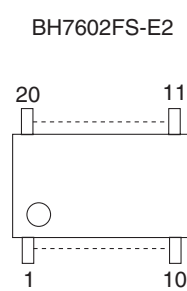
2SJ349(F)



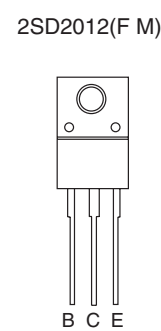
MN101C77AFS



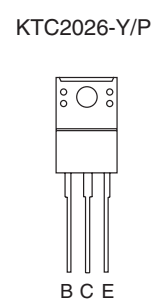
ADM232AARN
SN74LVC157APWR
SP232ACN-L/TR
TC74LCX157FT(ELK.M)



BH7602FS-E2



2SD2012(F M)

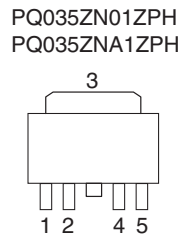


KTC2026-Y/P

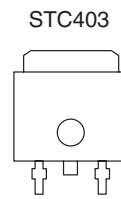
EL817C
LTV817MCF



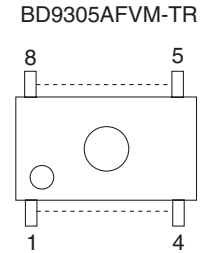
1: Anode
2: Cathode
3: Emitter
4: Collector



PQ035ZN01ZPH
PQ035ZNA1ZPH

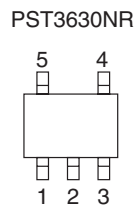
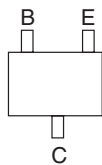


STC403

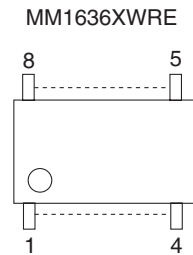


BD9305AFVM-TR

2SA1530A-T112-1Z
2SA1980SFY
2SC2412K
2SC3928A-T112-1Z
2SC5343SFG
KTA1504S-Y-RTK/P
KTC3875S-(GR,Y)-RTK/P



PST3630NR



MM1636XWRE

Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
G: Gate
D: Drain
S: Source

SCHEMATIC DIAGRAMS AND TEST POINTS

Standard Notes

WARNING

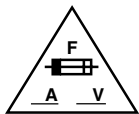
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark “▲” in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6} \mu F$).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.



This symbol means fast operating fuse.
Ce symbole représente un fusible à fusion rapide.

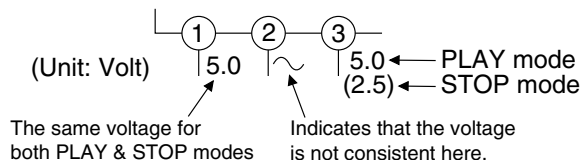
2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

- Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
- To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications for PLAY and STOP mode on the schematics are as shown below:

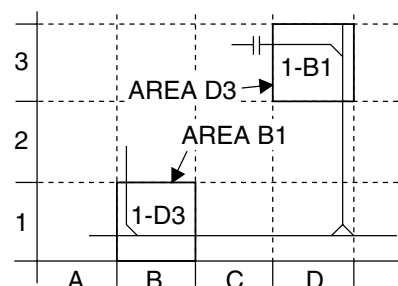


5. How to read converged lines

1-D3
↑
Distinction Area
Line Number
(1 to 3 digits)

Examples:

- "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
- "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

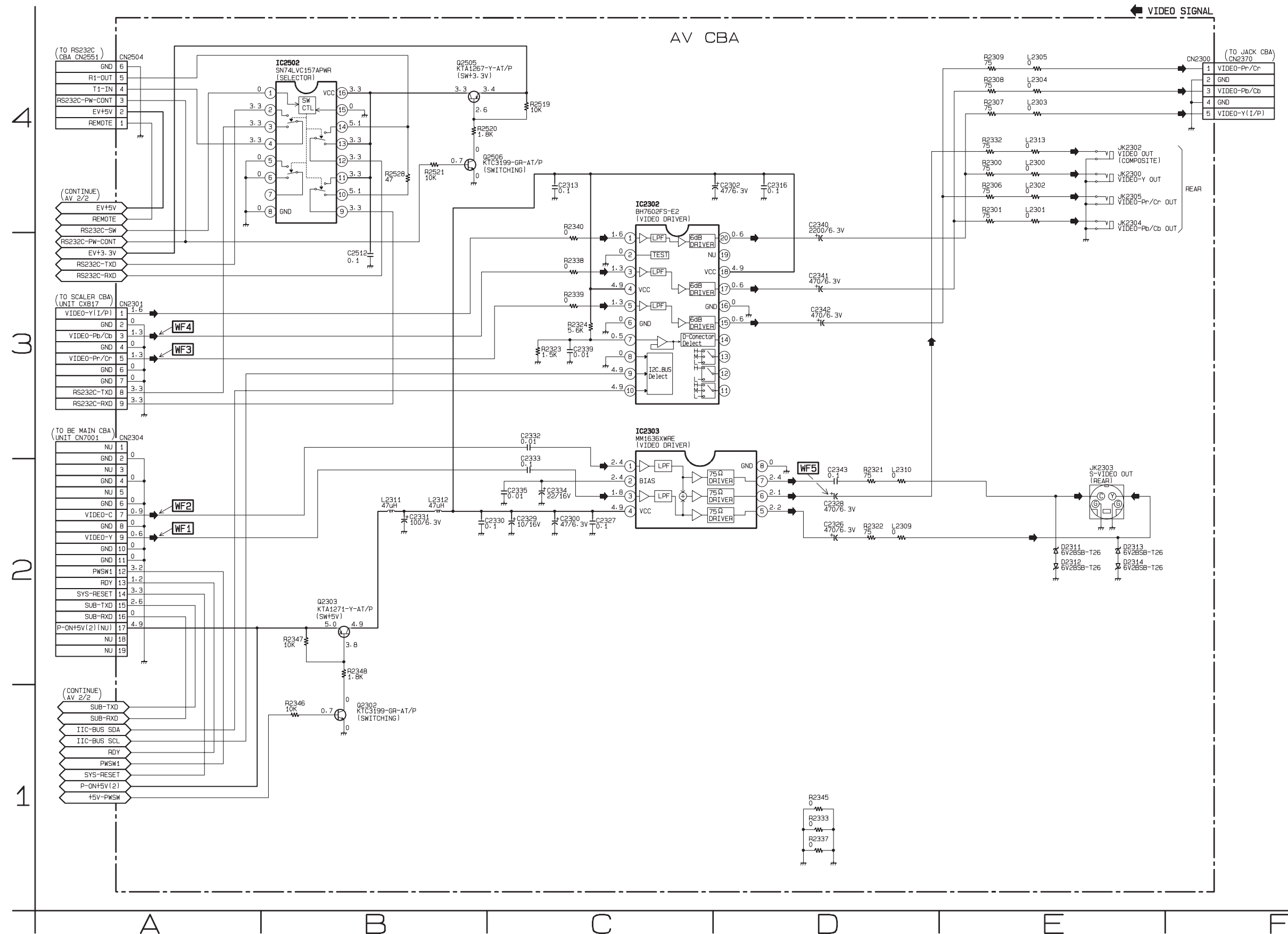
⊕ : Indicates a test point with a jumper wire across a hole in the PCB.

□→ : Used to indicate a test point with a component lead on foil side.

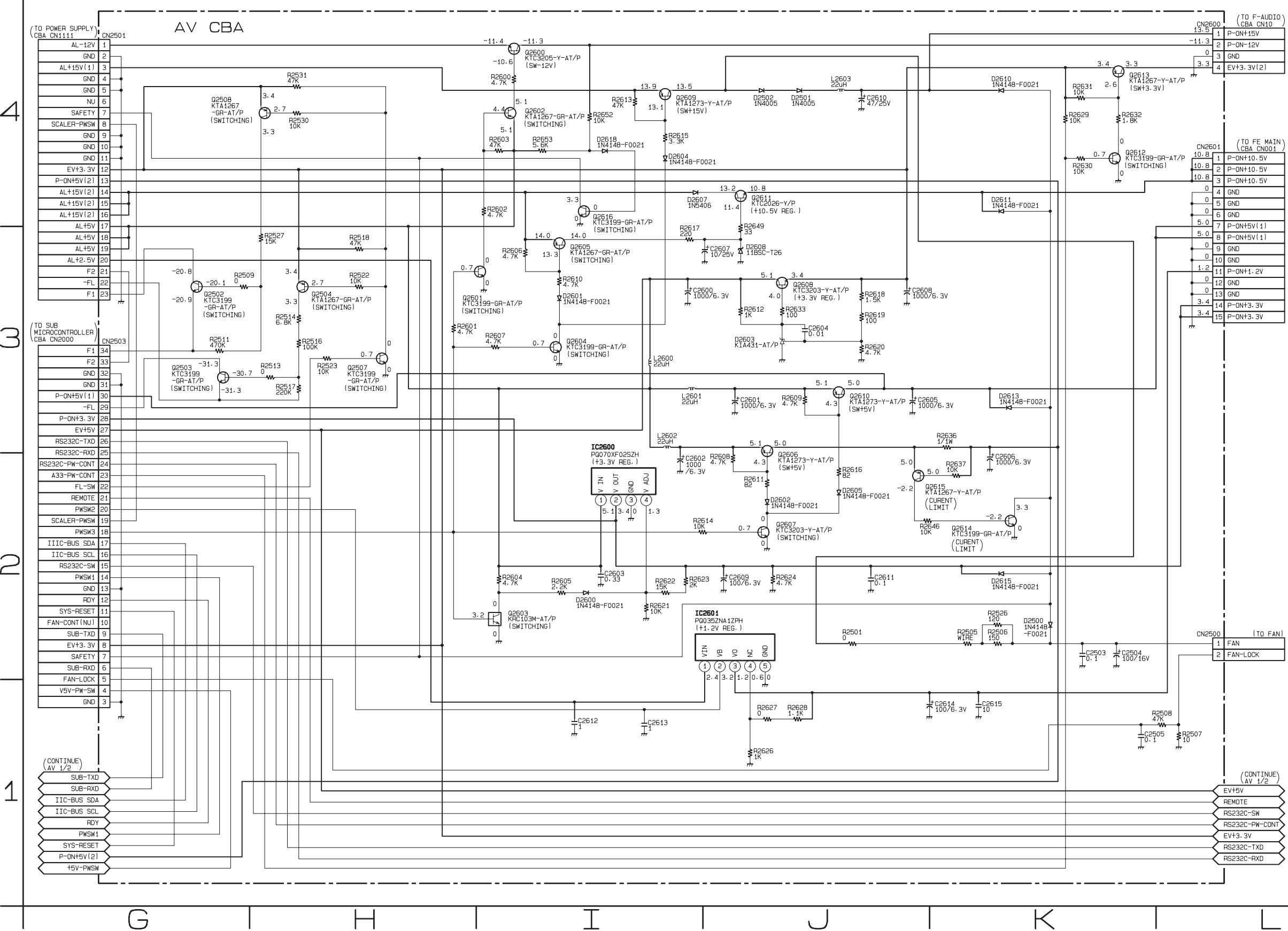
⊘ : Used to indicate a test point with no test pin.

● : Used to indicate a test point with a test pin.

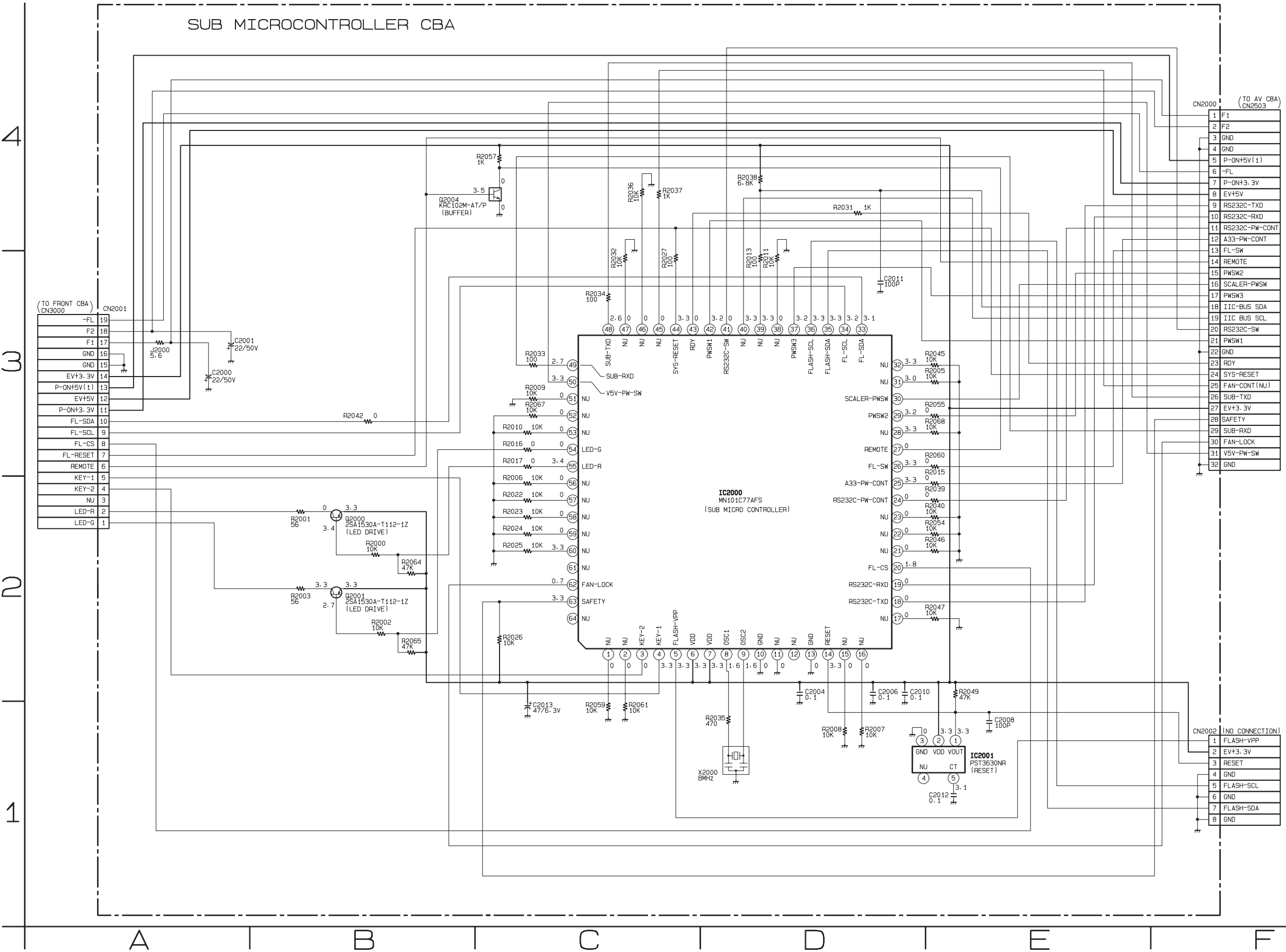
AV 1/2 Schematic Diagram



AV 2/2 Schematic Diagram



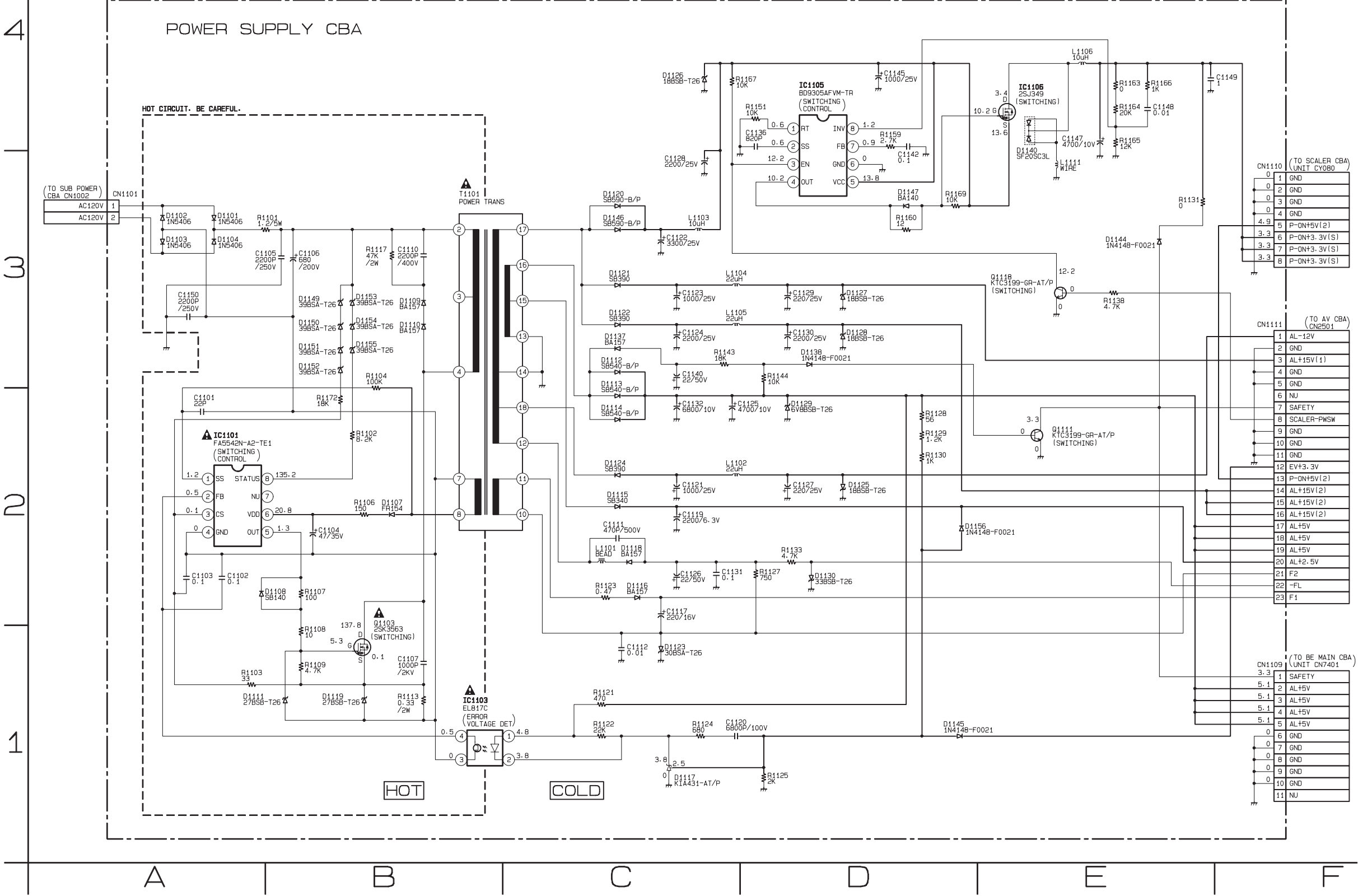
Sub Microcontroller Schematic Diagram



Power Supply Schematic Diagram

NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.



3



a1	a2	a3	a4	a5
b1	b2	b3	b4	b5
c1	c2	c3	c4	c5
d1	d2	d3	d4	d5
e1	e2	e3	e4	e5
f1	f2	f3	f4	f5
g1	g2	g3	g4	g5

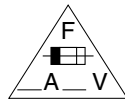
(2G~14G)

69

Sub Power Schematic Diagram

CAUTION !

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



CAUTION !

For continued protection against fire hazard,
replace only with the same type fuse.

ATTENTION : Pour une protection continue les risques d'Incele n'utiliser que des fusible de même type.

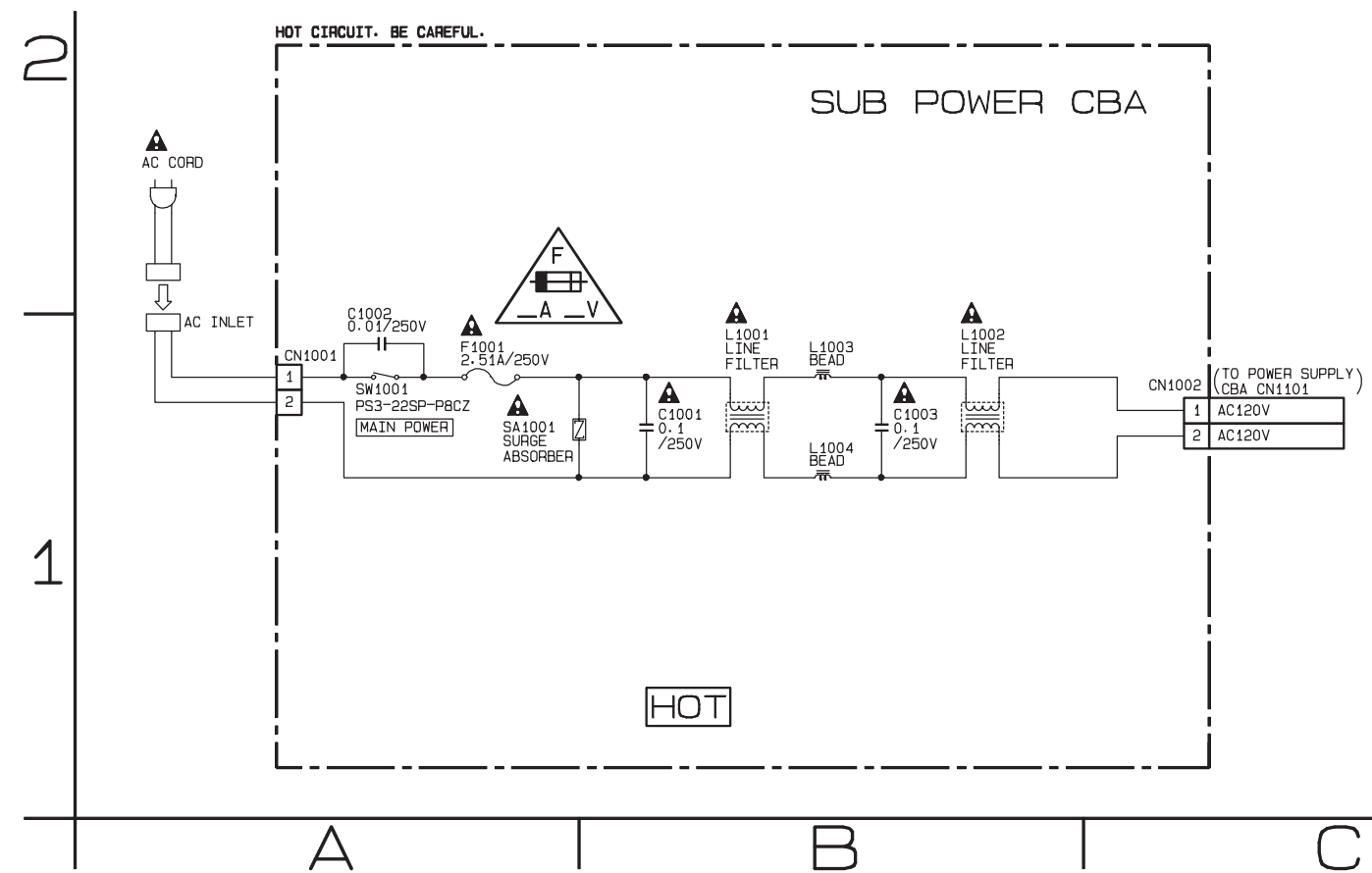
Risk of fire-replace fuse as marked.

 "This symbol means fast operating fuse."

"Ce symbole représente un fusible à fusion rapide."

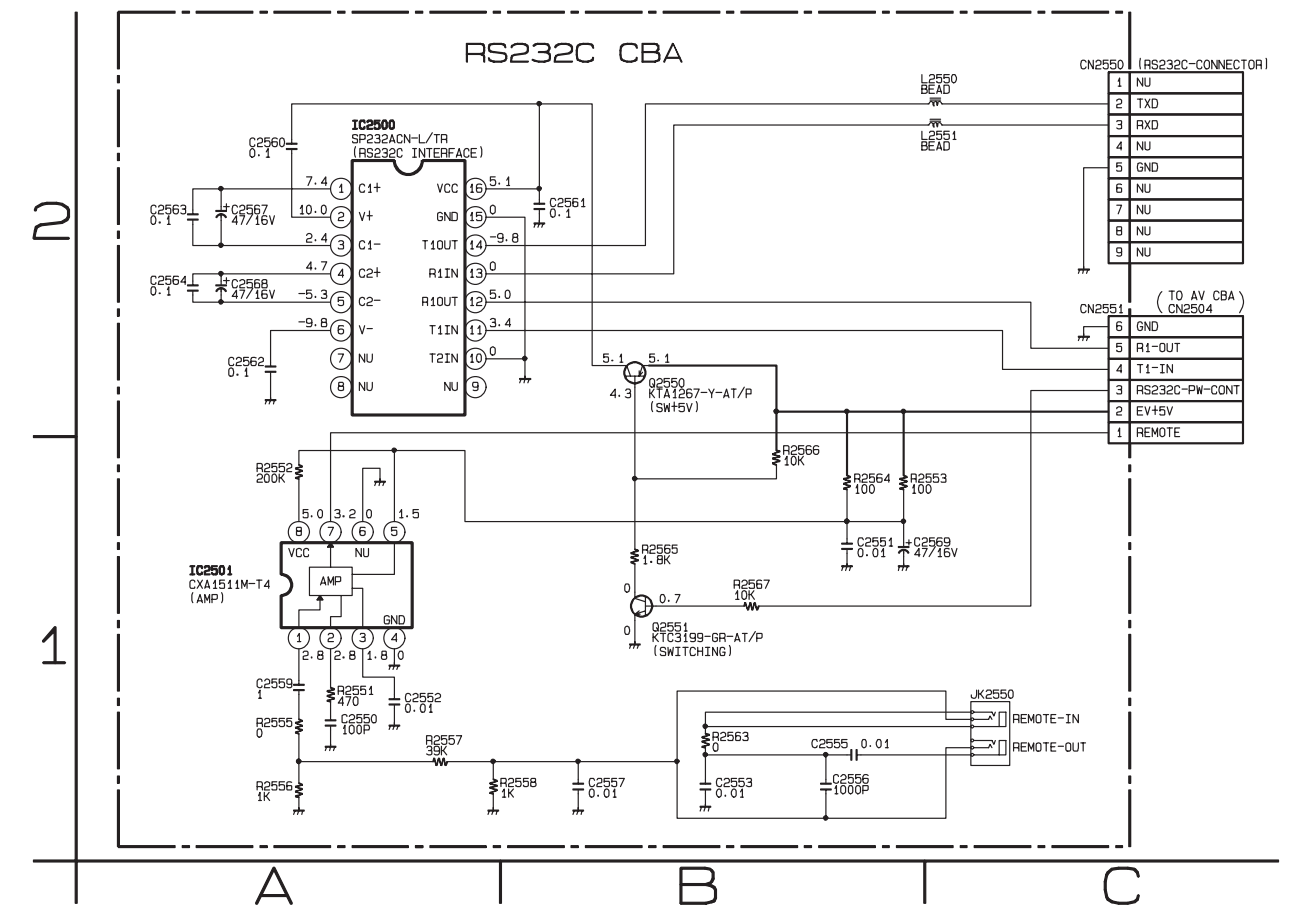
NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.



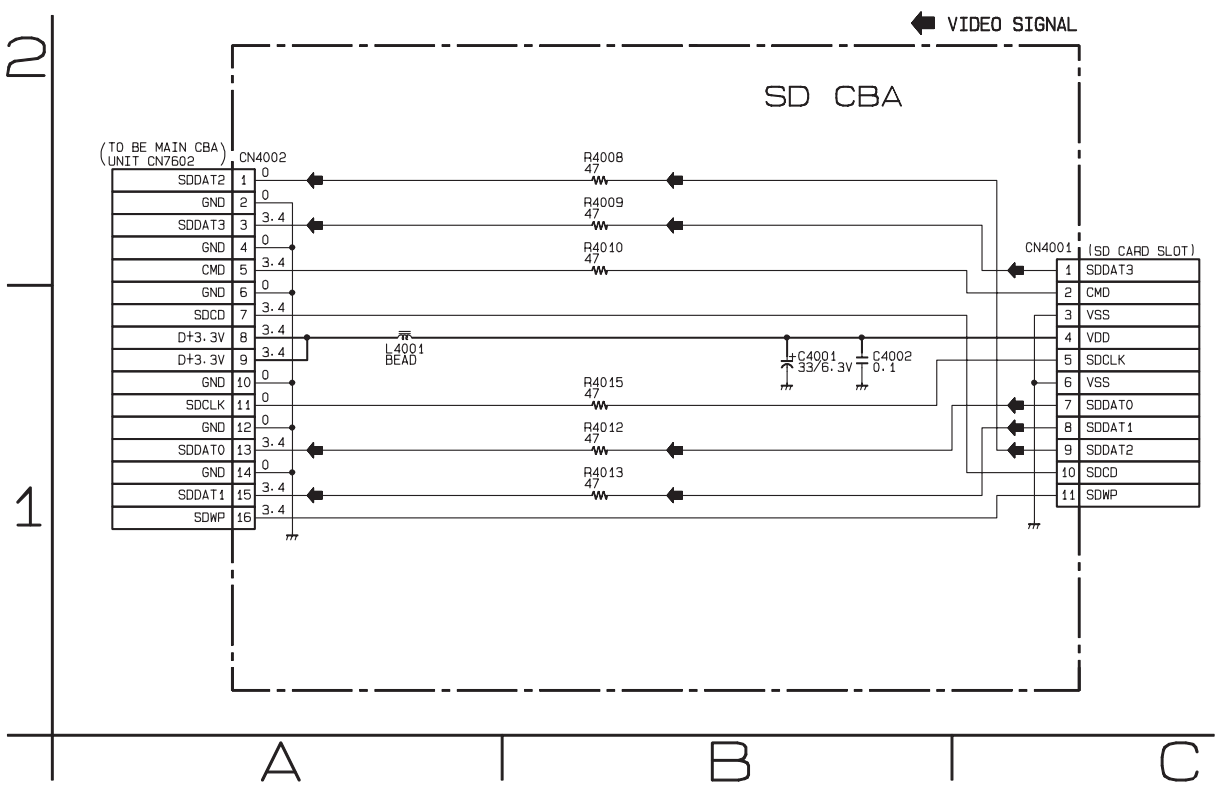
E5E00SCSP

RS232C Schematic Diagram



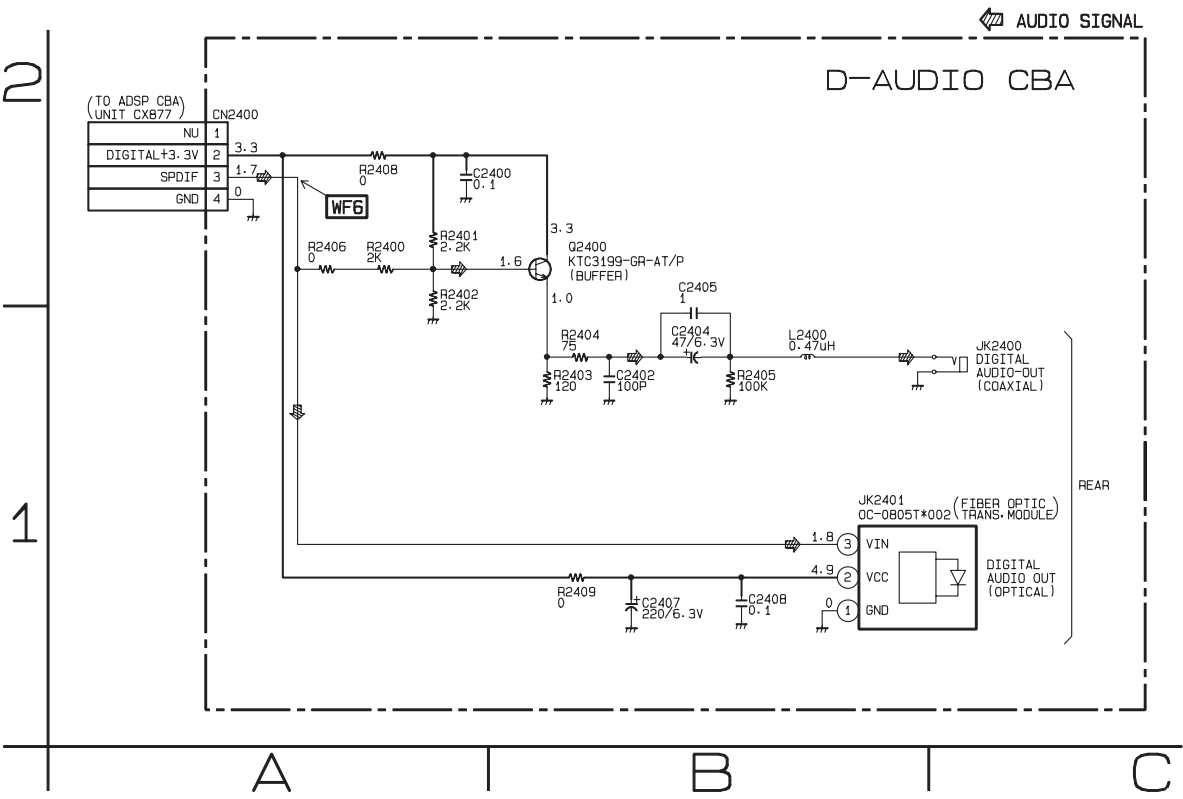
E5E00SCRS

SD Schematic Diagram



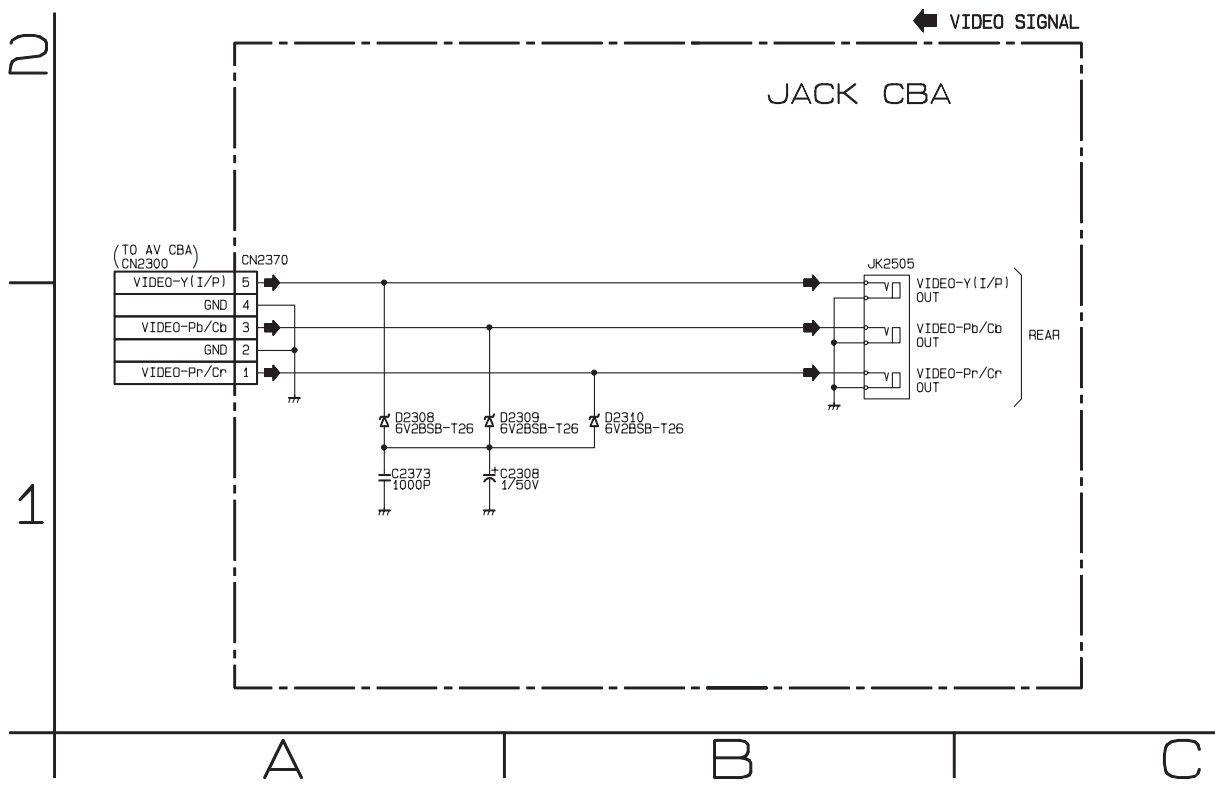
E5E00SCSD

D-Audio Schematic Diagram



E5E00SCDA

Jack Schematic Diagram



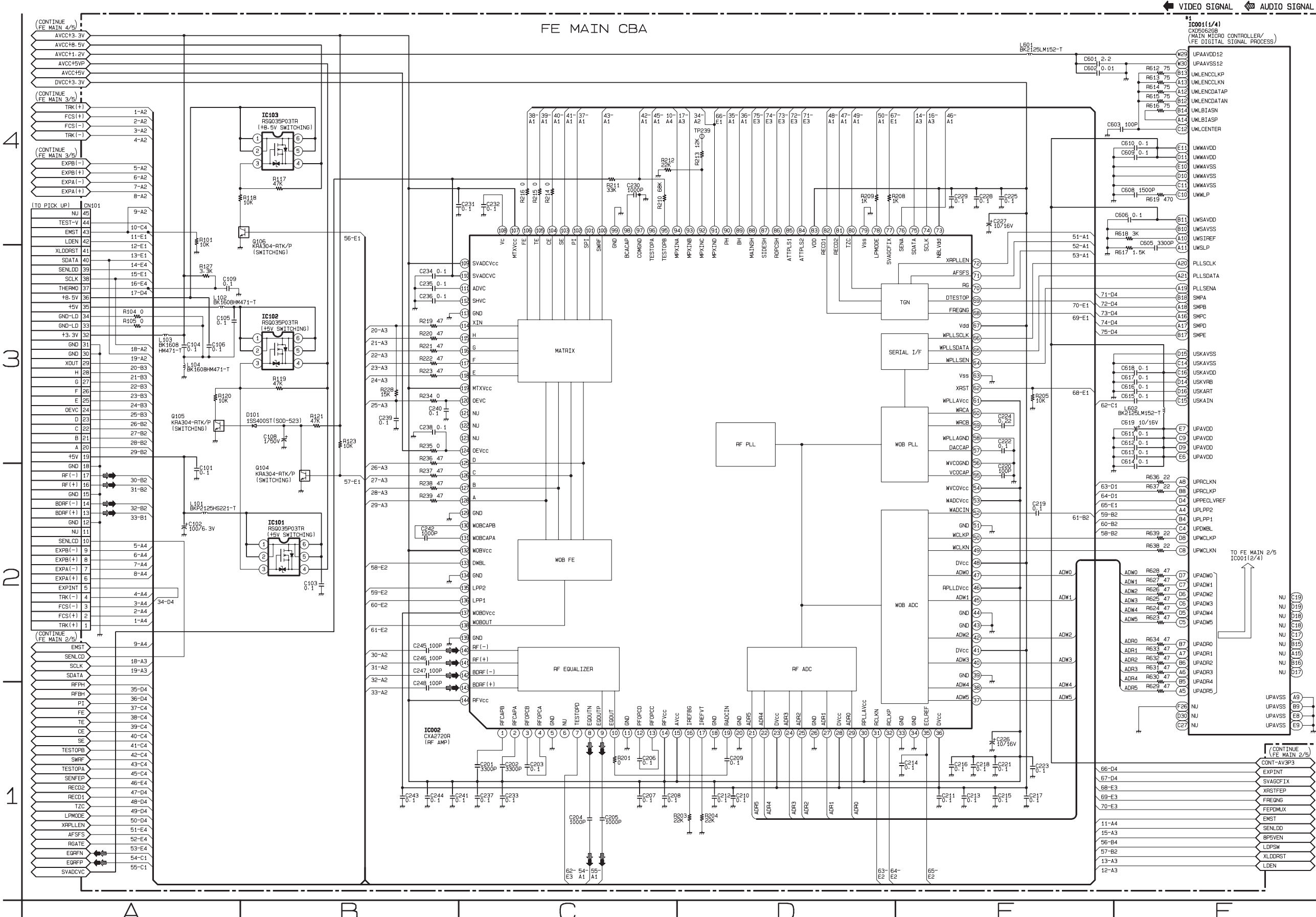
E5E00SCJ

FE Main 1/5 Schematic Diagram

***1 NOTE:**

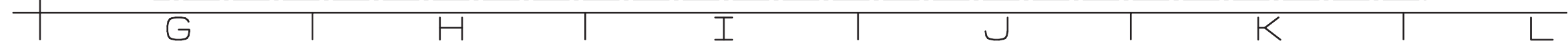
The order of pins shown in this diagram is different from that of actual IC001.

IC001 is divided into four and shown as IC001 (1/4) ~ IC001 (4/4) in this FE Main Schematic Diagram Section.

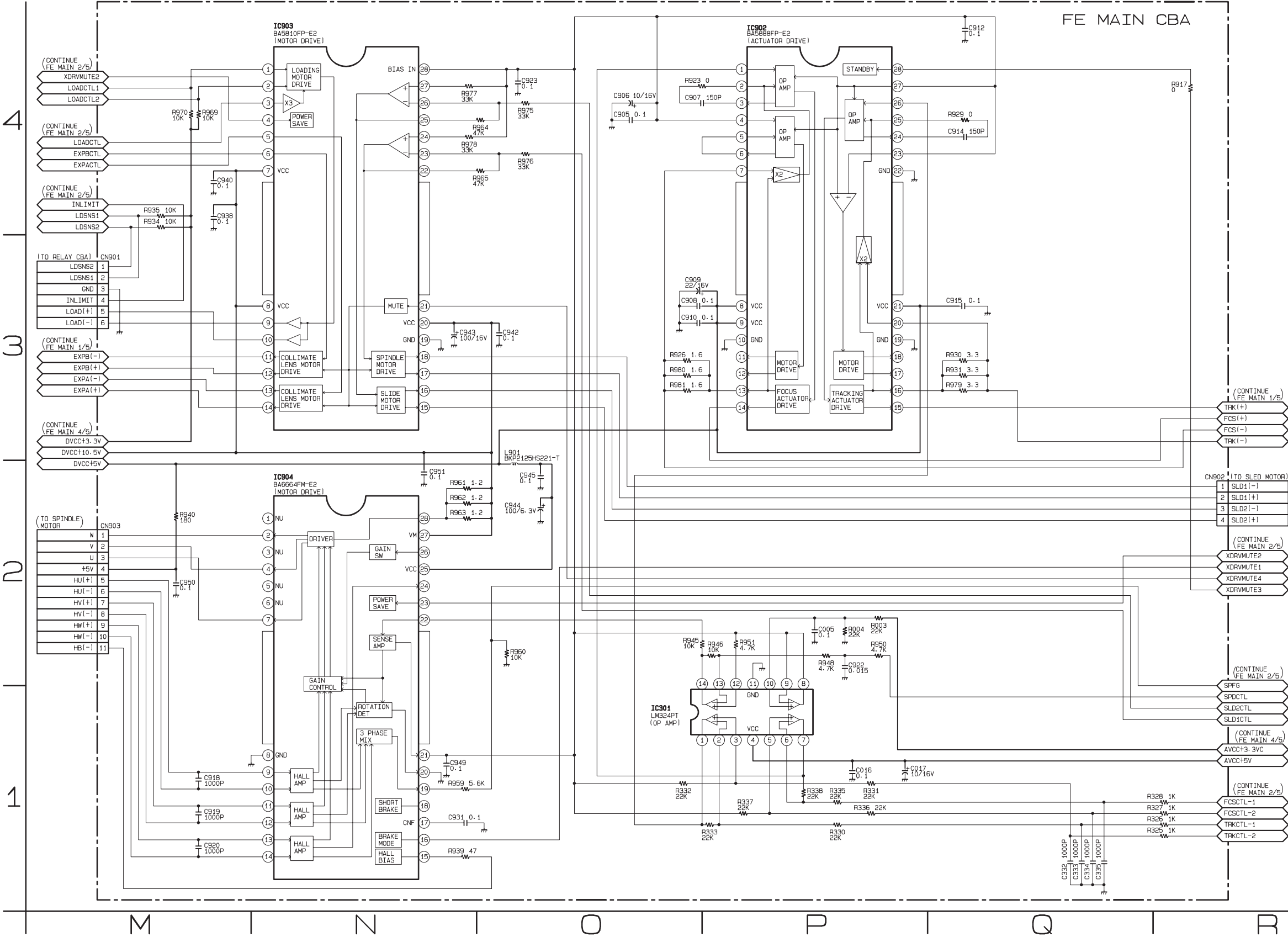


4
3
2
1

IC001 is divided into four and shown as IC001 (1/4) ~ IC001 (4/4) in this FE Main Schematic Diagram Section.



FE Main 3/5 Schematic Diagram



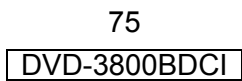
4

The order of pins shown in this diagram is different from that of actual IC001.

3

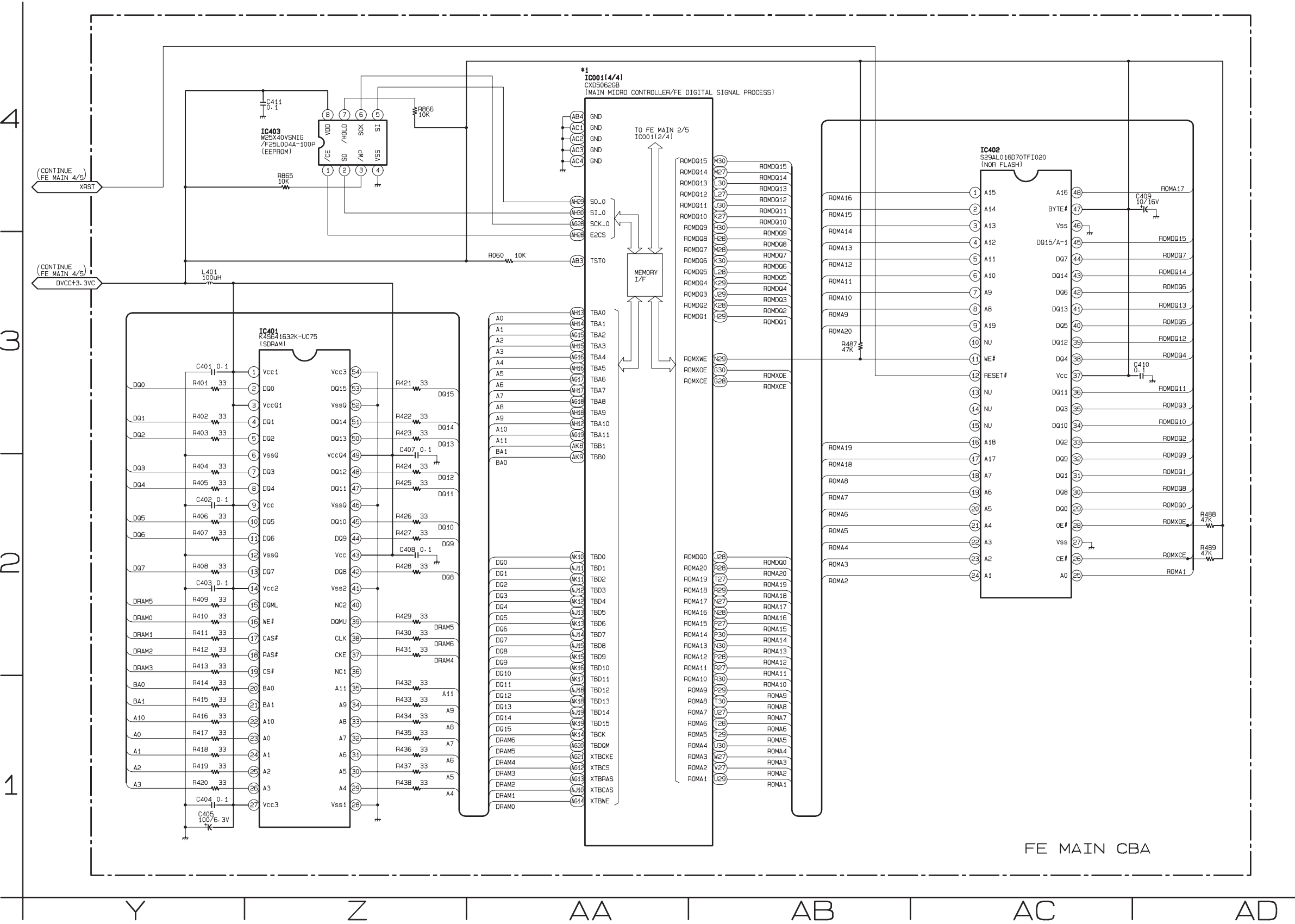
2

1



FE Main 5/5 Schematic Diagram

*1 NOTE:
The order of pins shown in this diagram is different from that of actual IC001.
IC001 is divided into four and shown as IC001 (1/4) ~ IC001 (4/4) in this FE Main Schematic Diagram Section.

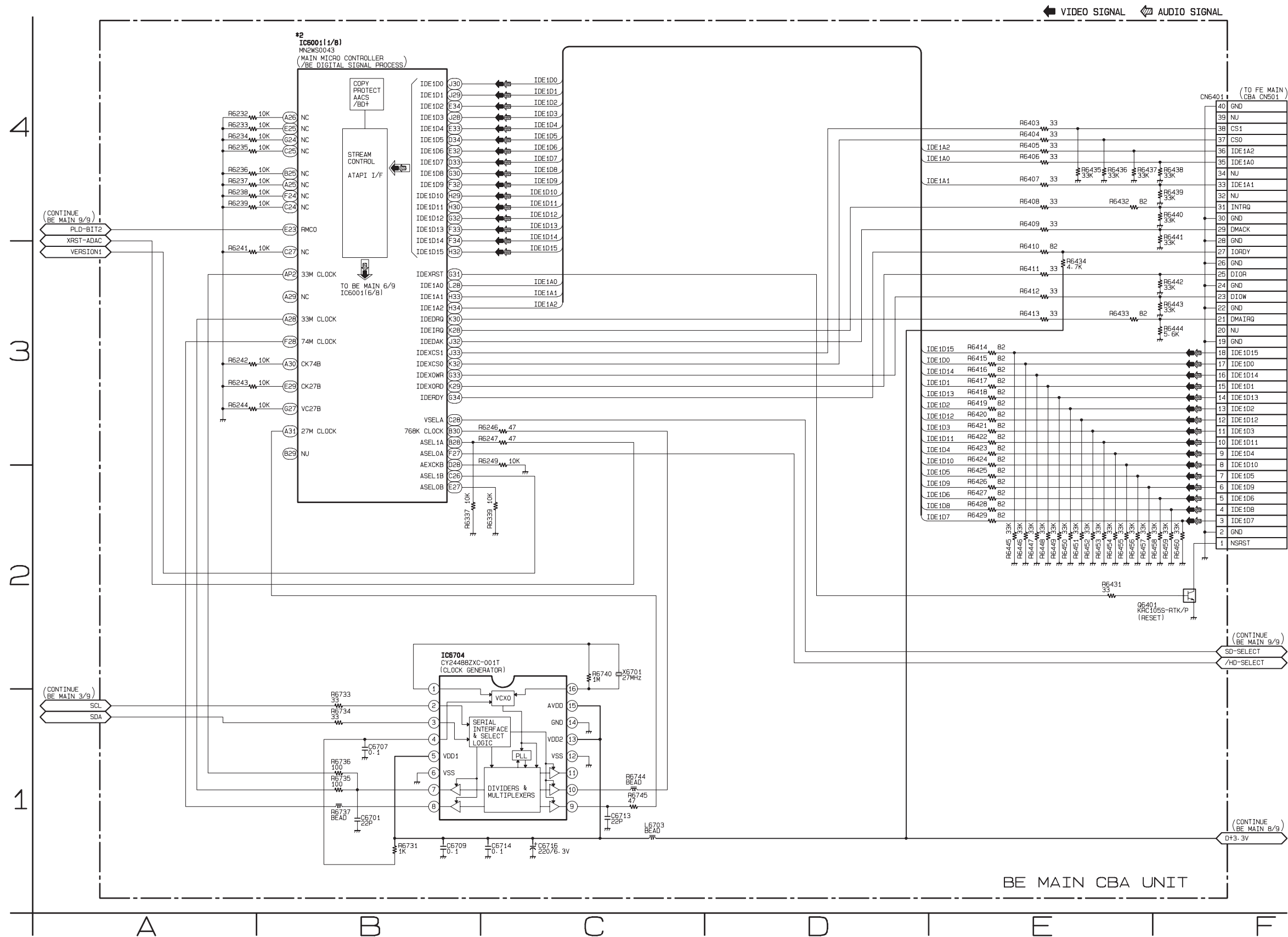


BE Main 1/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

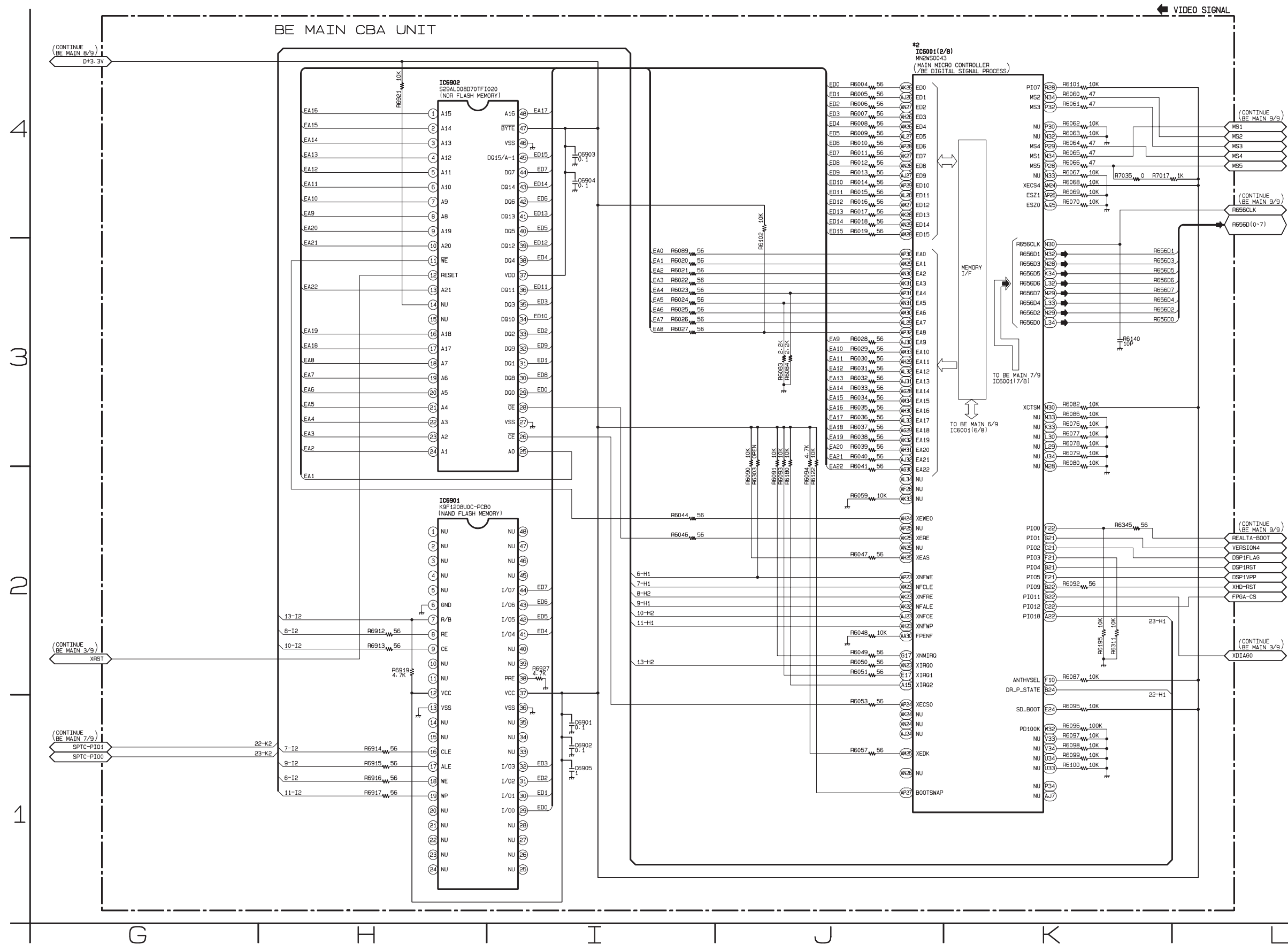


BE Main 2/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

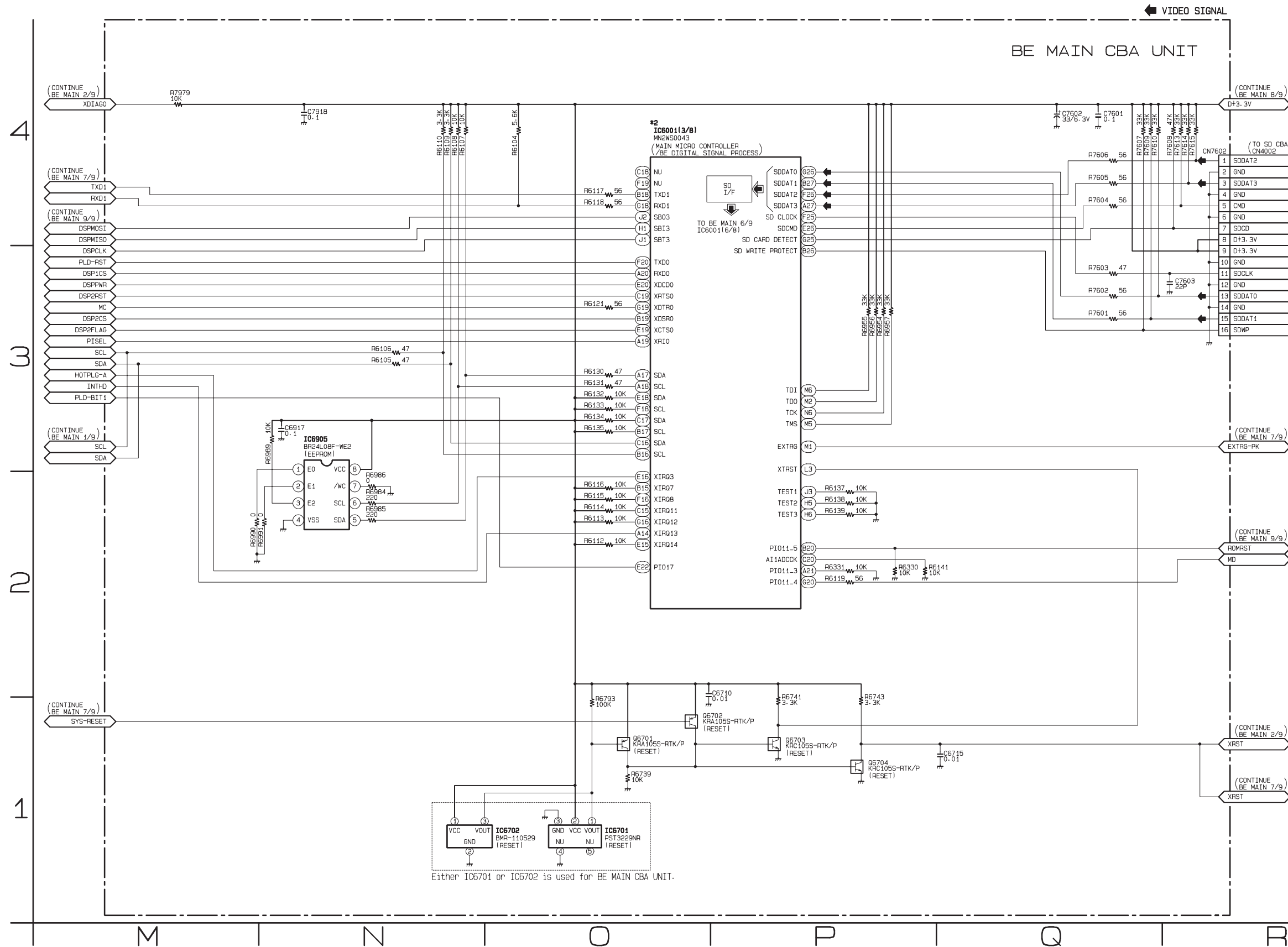


BE Main 3/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

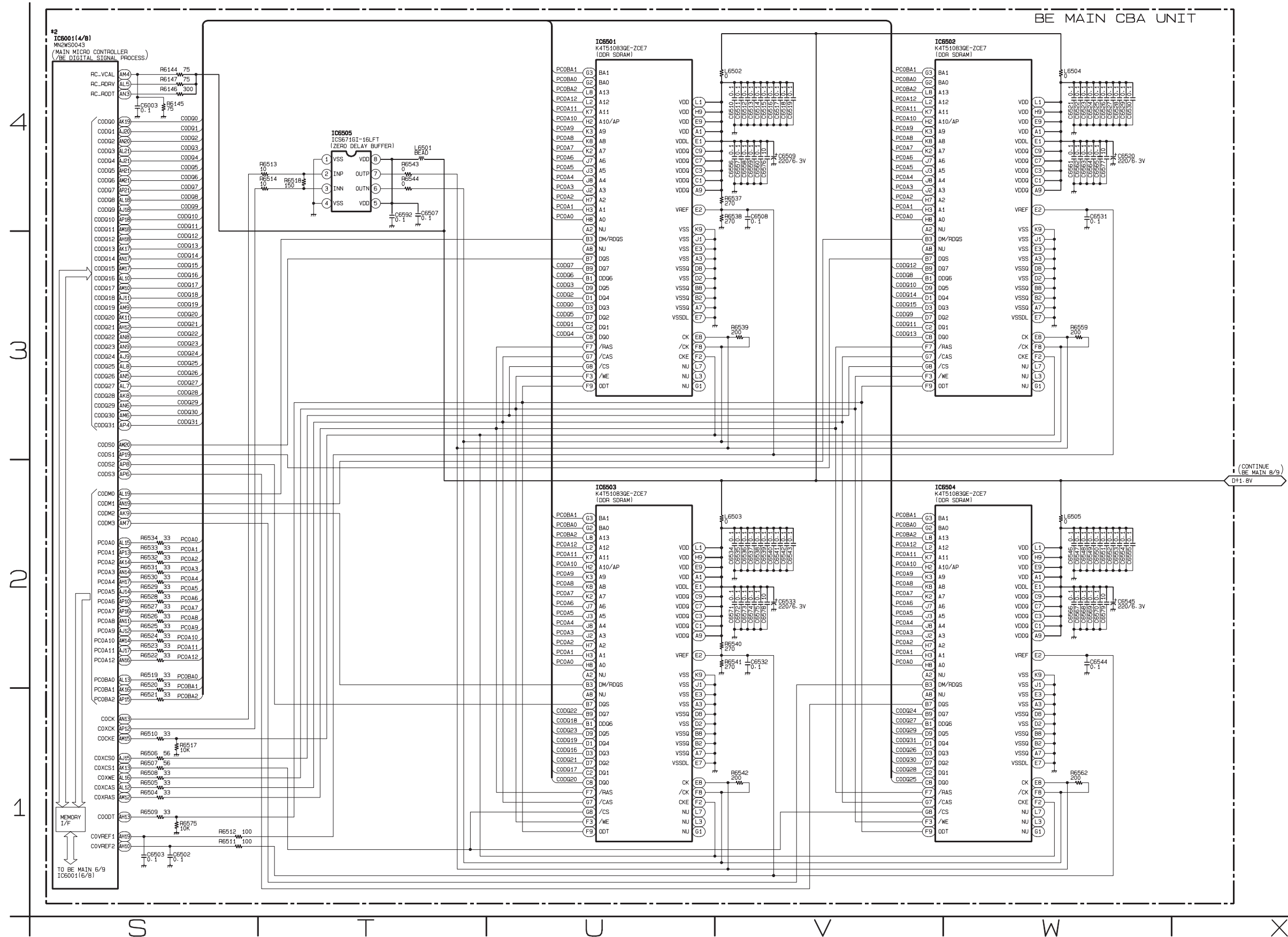


BE Main 4/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

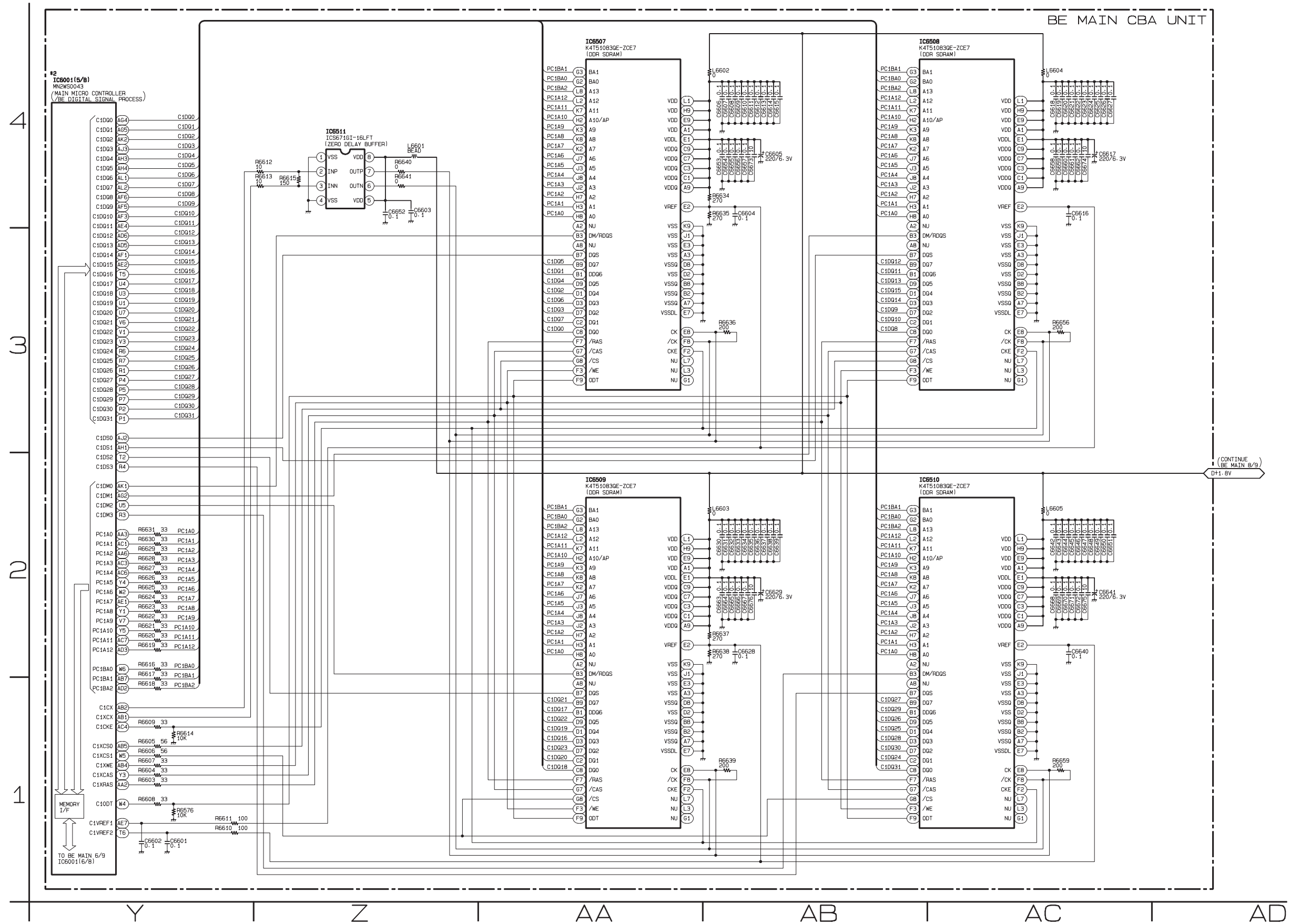


BE Main 5/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

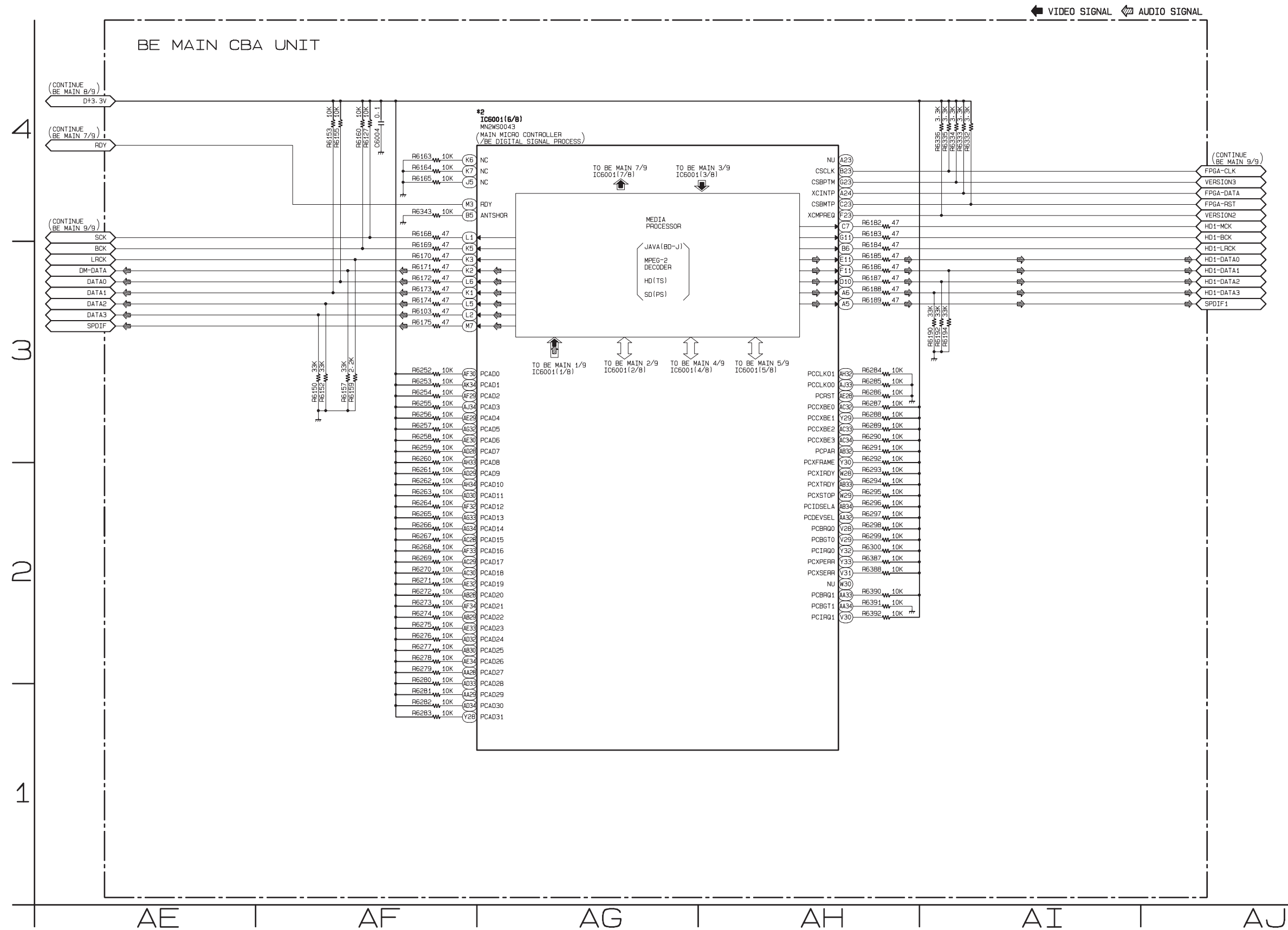


BE Main 6/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.

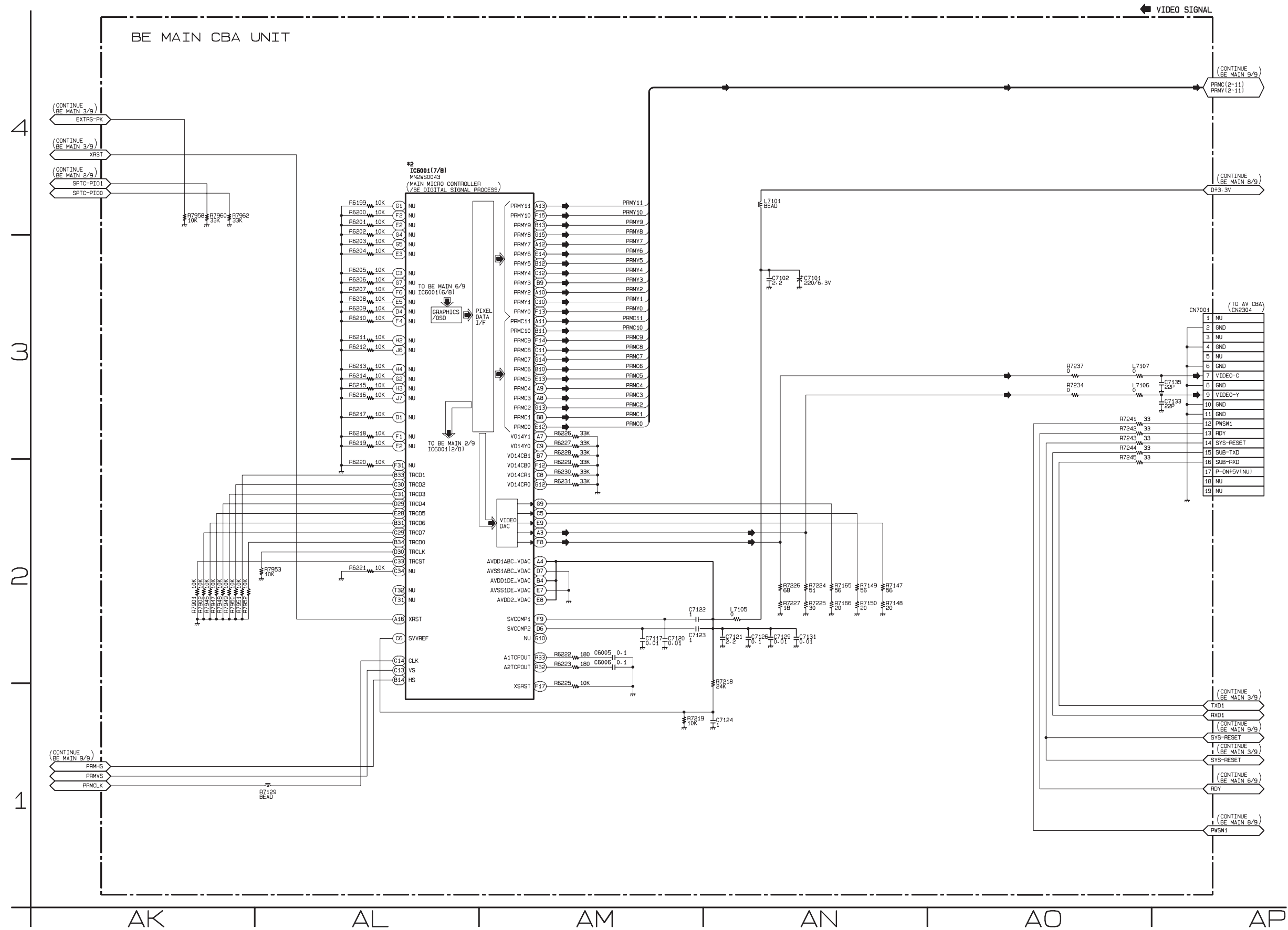


BE Main 7/9 Schematic Diagram

***2 NOTE:**

The order of pins shown in this diagram is different from that of actual IC6001.

IC6001 is divided into eight and shown as IC6001 (1/8) ~ IC6001 (8/8) in this BE Main Schematic Diagram Section.



4

The order of pins shown in this diagram is different from that of actual IC6001.

3



BE Main 9/9 Schematic Diagram

