

DENON

For Europe model

SERVICE MANUAL MODEL DVD-1930

Ver. 2

Please refer to the
MODIFICATION NOTICE.

DVD AUDIO-VIDEO / SUPER AUDIO CD 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おります。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

TOKYO, JAPAN
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

Do not stare into beam or view directly with optical instruments, class 3A laser product.

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  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 1MΩ 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 is this service manual. Be sure to replace them with parts with the designated part number.

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

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

注 意 サービス、点検時にはつぎのことにご注意願います。

◎注意事項をお守りください！

サービスのとき特に注意を必要とする個所についてはキャビネット、部品、シャーシなどにラベルや捺印で注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

◎感電に注意！

- (1) このセットは、交流電圧が印加されていますので通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして感電にご注意ください。
- (2) 内部には高電圧の部分がありますので、通電時の取扱には十分ご注意ください。

◎分解、組み立て作業時のご注意！

板金部品の端面の『バリ』は、部品製造時に充分管理しておりますが、板金端面は鋭利となっている箇所がありますので、部品端面に触れたまま指を動かすとまれに怪我をする場合がありますので十分注意して作業して下さい。手の保護のために手袋を着用してください。

◎指定部品の使用！

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に  印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

◎部品の取付けや配線の引きまわしは、元どおりに！

安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにしてください。

◎サービス後は安全点検を！

サービスのために取り外したねじ、部品、配線などが元どおりにになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、外部金属端子部と、電源プラグの刃の間の絶縁チェックをおこなうなど、安全性が確保されていることを確認してください。

(絶縁チェックの方法)

電源コンセントから電源プラグを抜き、アンテナやプラグなどを外し、電源スイッチを入れます。500V 絶縁抵抗計を用いて、電源プラグのそれぞれの端子と外部露出金属部〔アンテナ端子、ヘッドホン端子マイク端子、入力端子など〕との間で、絶縁抵抗値が 1 MΩ 以上であること、この値以下のときはセットの点検修理が必要です。

注 意 安全上重要な部品について

本機に使用している多くの電気部品、および機構部品は安全上、特別な特性を持っています。この特性はほとんどの場合、外観では判別つきにくく、またもとの部品より高い定格(定格電力、耐圧)を持ったものを使用しても安全性が維持されるとは、限りません。安全上の特性を持った部品は、このサービスマニュアルの配線図、部品表につぎのように表示していますので必ず指定されている部品番号のものを使用願います。

- (1) 配線図…マークで表示しています。
- (2) 部品表…マークで表示しています。

指定された部品と異なるものを使用した場合には、感電、火災などの危険を生じる恐れがあります。

SPECIFICATIONS

Item	Conditions	Unit	Nominal	Limit
1. Video Output	75 Ω load	Vpp	1.0	± 0.1
2. Coaxial Digital Out	75 Ω load	mVpp	500	± 50
3. Audio (PCM)				
3-1. Output Level	1 kHz, 0 dB	Vrms	2.0	
3-2. S/N		dB	115	
3-3. Freq. Response				
DVD	fs = 48 kHz, 20 Hz ~ 22 kHz	dB	± 1.0	
CD	fs = 44.1 kHz, 20 Hz ~ 20 kHz	dB	± 1.0	
3-4. THD+N				
DVD	1 kHz, 0 dB	%	0.004	
CD	1 kHz, 0 dB	%	0.004	

Notes:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: AC 200 ~ 240 V, 50 Hz
3. Load Impedance: 100 k Ω load (Audio Output)
4. Room Ambient: 5 °C ~ 40°C

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')
200 to 240 V	$\geq 3 \text{ mm}(d)$ $\geq 6 \text{ mm}(d')$

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

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.

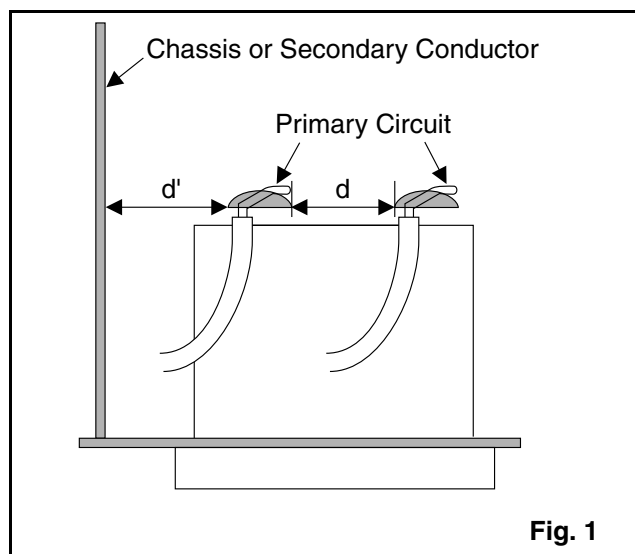


Fig. 1

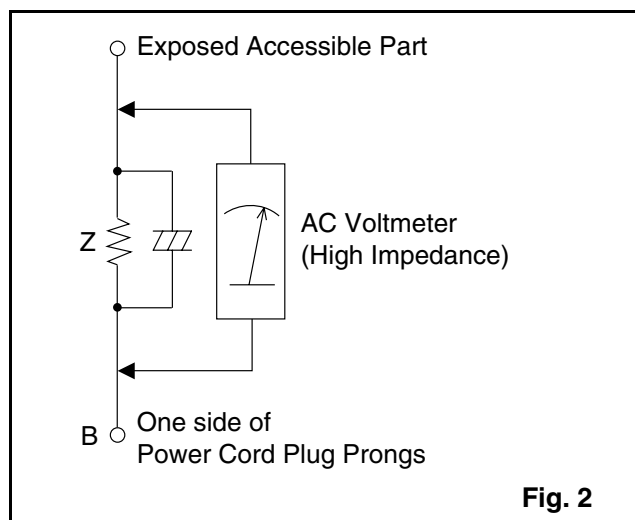


Fig. 2

Table 2: Leakage current ratings for selected areas

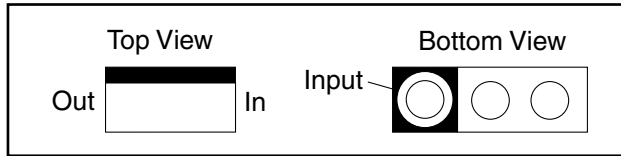
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
200 to 240 V	2k Ω RES. Connected in parallel	$i \leq 0.7 \text{ mA AC Peak}$ $i \leq 2 \text{ mA DC}$	RF or Antenna terminals
	50k Ω RES. Connected in parallel	$i \leq 0.7 \text{ mA AC Peak}$ $i \leq 2 \text{ mA DC}$	A/V Input, Output

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

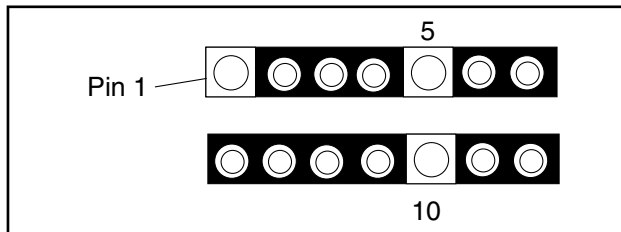
STANDARD NOTES FOR SERVICING

Circuit Board Indications

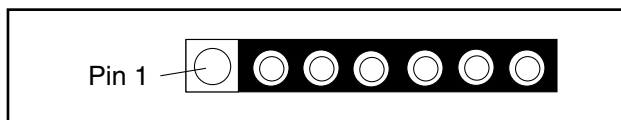
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



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

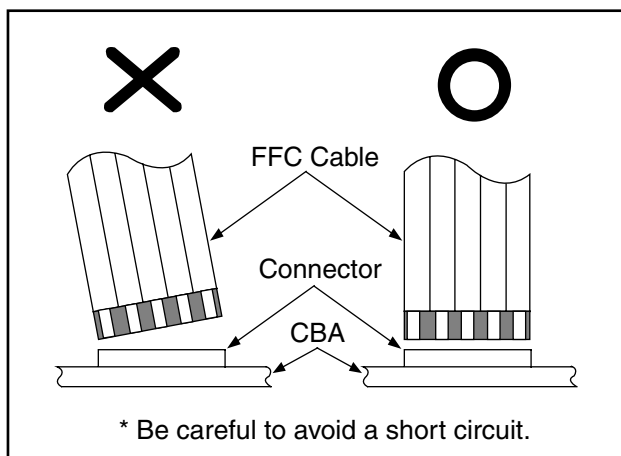


3. The 1st pin of every male connector is indicated as shown.



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)

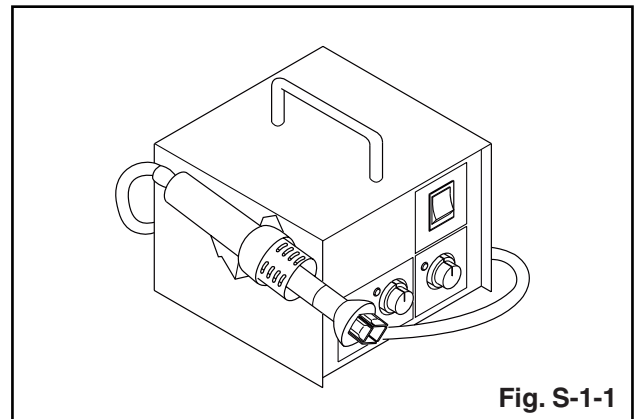


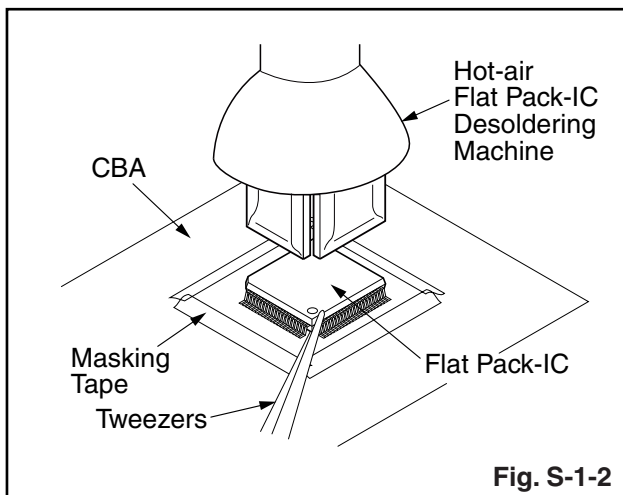
Fig. S-1-1

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:

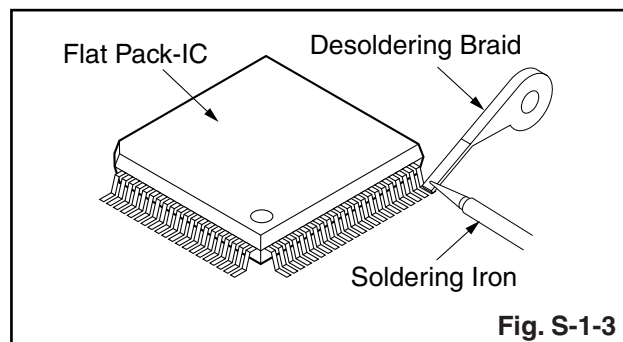
1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape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

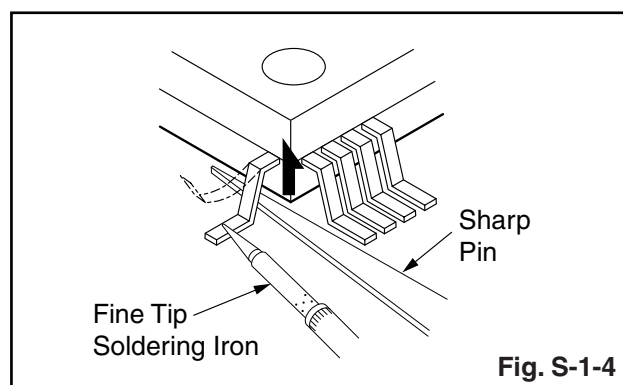


With Soldering Iron:

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)

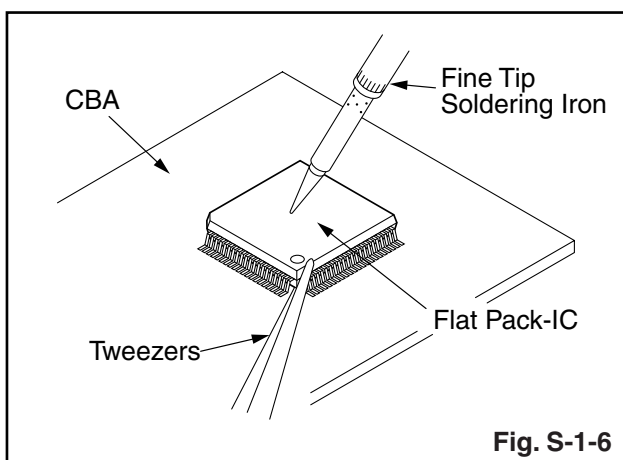
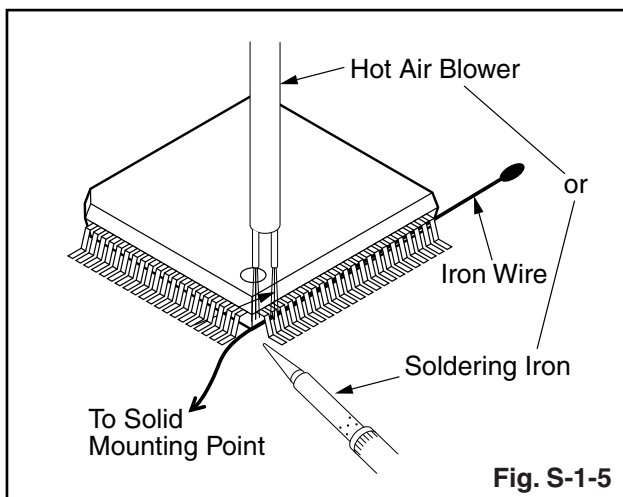


3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

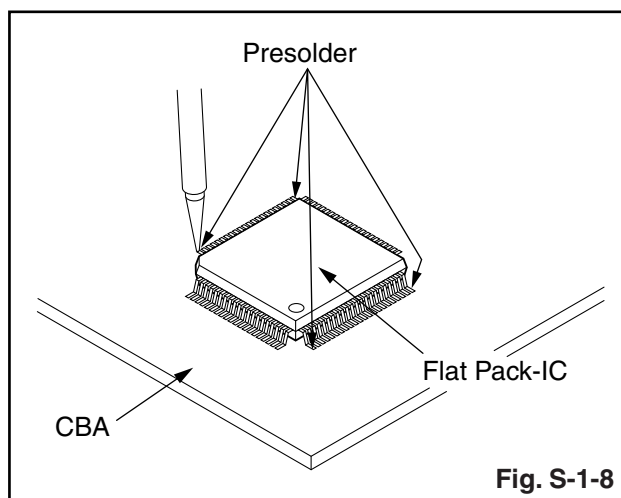
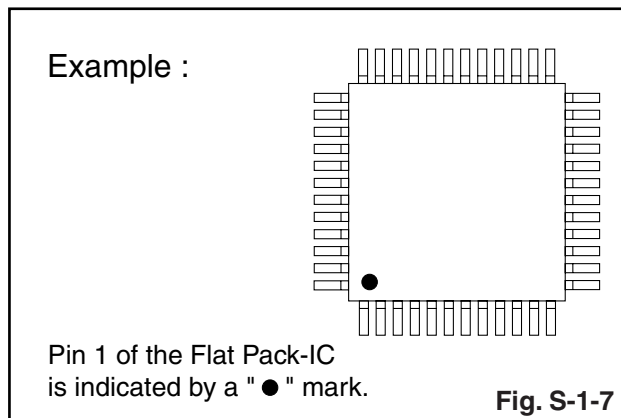
With Iron Wire:

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

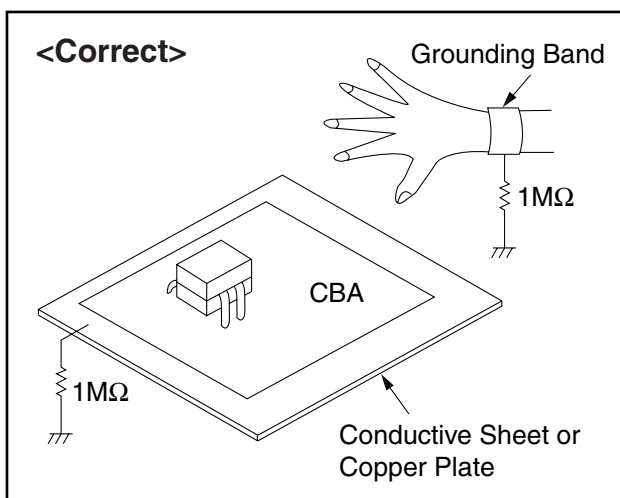
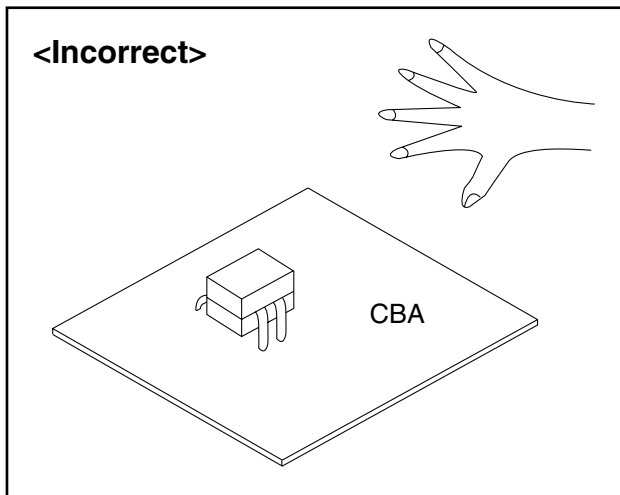
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

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

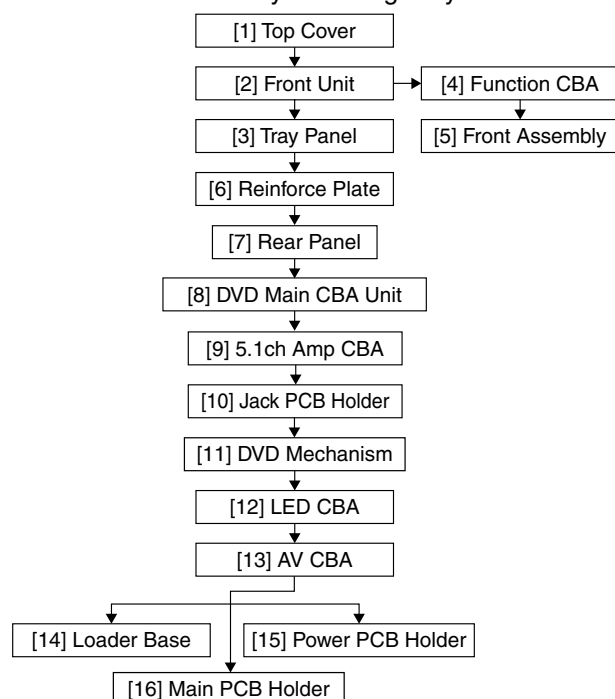
Be sure to place a conductive sheet or copper plate with proper grounding ($1\text{ M}\Omega$) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting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

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[1]	Top Cover	D1	5(S-1)	---
[2]	Front Unit	D2	*4(L-1), *2(L-2), *3(L-3), *CN2001	1
[3]	Tray Panel	D2	*2(L-4)	1
[4]	Function CBA	D3	6(S-2)	---
[5]	Front Assembly	D3	-----	---
[6]	Reinforce Plate	D4	2(S-3)	---
[7]	Rear Panel	D4	9(S-4), (S-5), (S-6)	4
[8]	DVD Main CBA Unit	D5	3(S-7), *CN201, *CN301, *CN401, *CN601, *CNS01	2 4
[9]	5.1ch Amp CBA	D6	(S-8), *2(L-5), *CN7101	---
[10]	Jack PCB Holder	D6	2(S-9)	---
[11]	DVD Mechanism	D5 D7	4(S-10)	2 3

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[12]	LED CBA	D8	*CN2102	---
[13]	AV CBA	D8	4(S-11), (S-12)	---
[14]	Loader Base	D9	4(S-13)	---
[15]	Power PCB Holder	D9	2(S-14)	---
[16]	Main PCB Holder	D9	(S-15)	---

↓ (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.

Screws	Torque
(S-1), (S-2), (S-3), (S-4), (S-5), (S-6), (S-7), (S-8), (S-9), (S-10), (S-11), (S-12), (S-13), (S-14), (S-15)	0.45 ± 0.05 N·m

Reference Notes

1. **CAUTION 1:** Locking Tabs (L-1), (L-2), (L-3) and (L-4) are fragile. Be careful not to break them.
 - 1) Release four Locking Tabs (L-1), then release two Locking Tabs (L-2).
 - 2) Release three Locking Tabs (L-3).
 - 3) Disconnect connector CN2001, then remove the Front Unit.
2. **CAUTION 2:** Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc., during unpacking or repair work. To avoid damage of pickup follow next procedures.
 - 1) Short the three short lands of FPC cable with solder before removing the FFC cable (CN201) from it. If you disconnect the FFC cable (CN201), the laser diode of pickup will be destroyed. (Fig. D5)
 - 2) Disconnect Connectors (CN301), (CN401) and (CN601). Remove three screws (S-7) and lift the DVD Main CBA Unit. (Fig. D5)
3. **CAUTION 3:** When reassembling, confirm the FFC cable (CN201) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D5)
4. **CAUTION 4:** When installing the DVD Main CBA Unit with a screw, hold and press the DVD Main CBA Unit to align the HDMI connector with the connector's hole for HDMI on the Rear Panel.

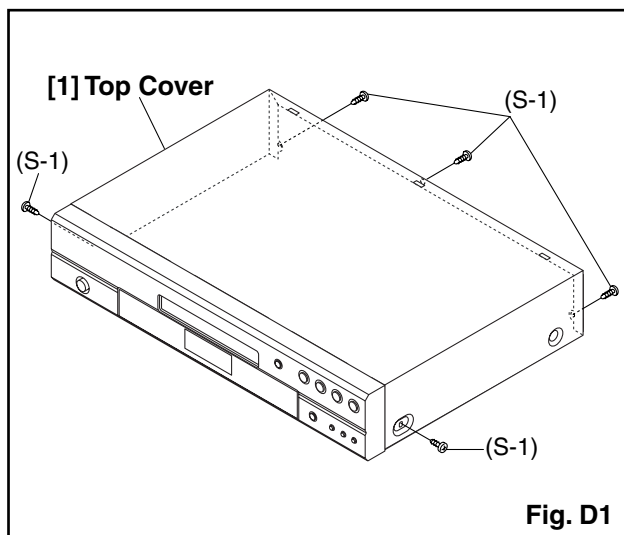


Fig. D1

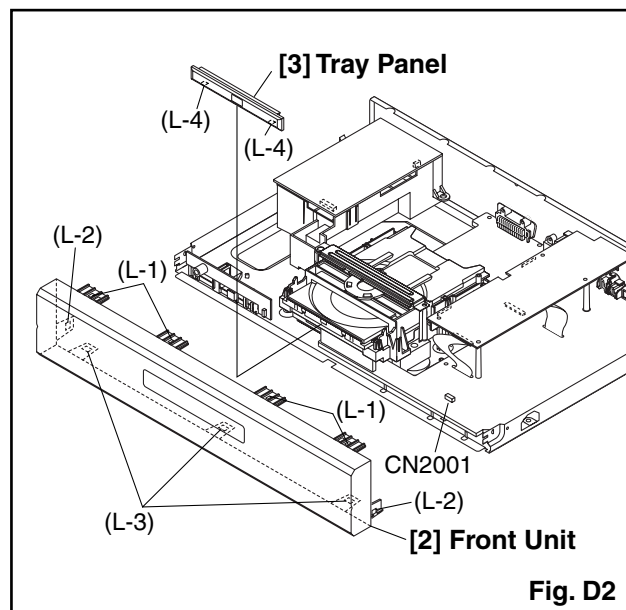


Fig. D2

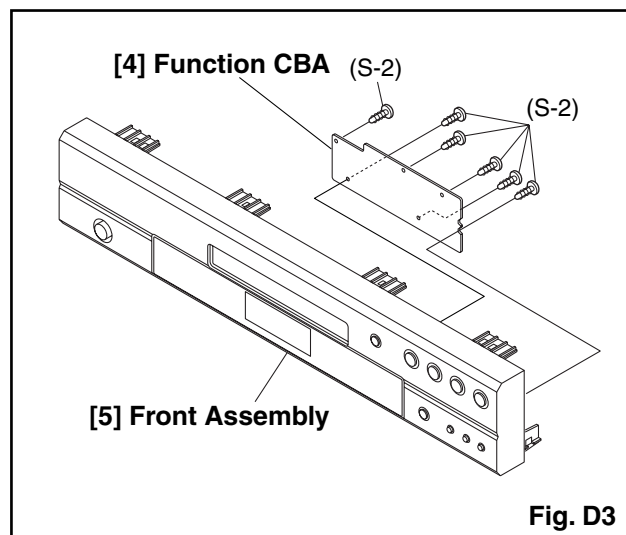


Fig. D3

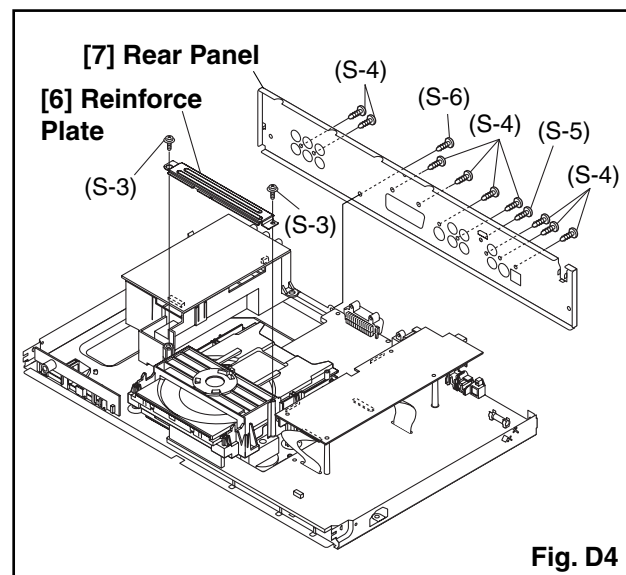
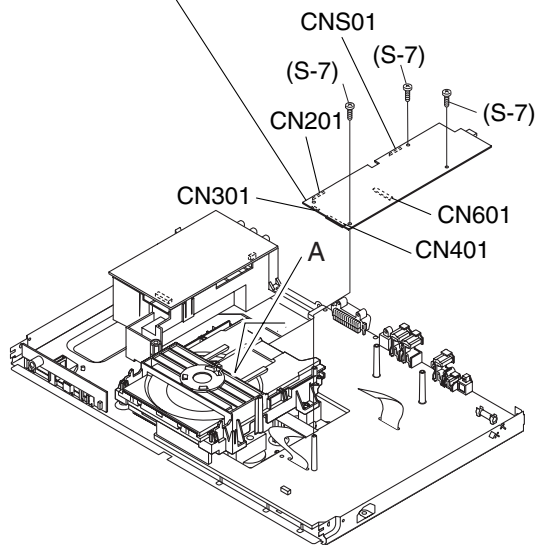
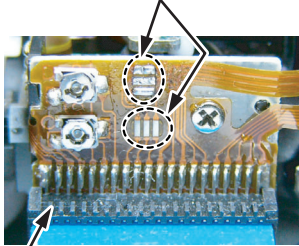


Fig. D4

[8] DVD Main CBA Unit

Short the three short lands by soldering.
(Either of two places.)



FPC Cable View for A

Fig. D5

(S-10)

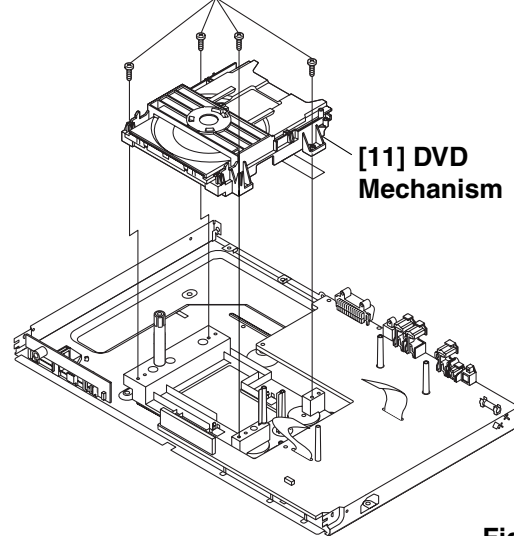


Fig. D7

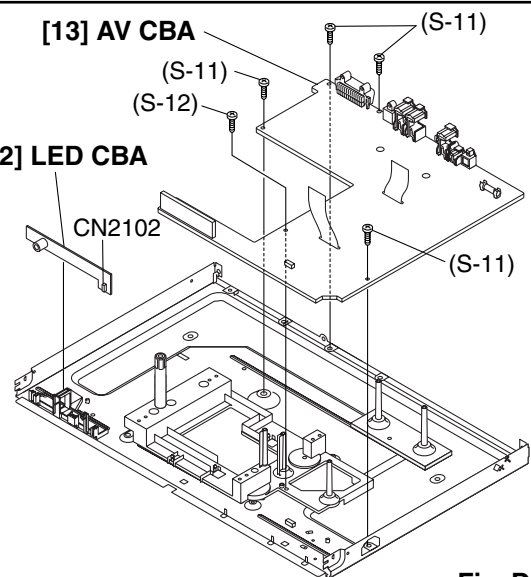
[13] AV CBA**[12] LED CBA**

Fig. D8

(S-8)

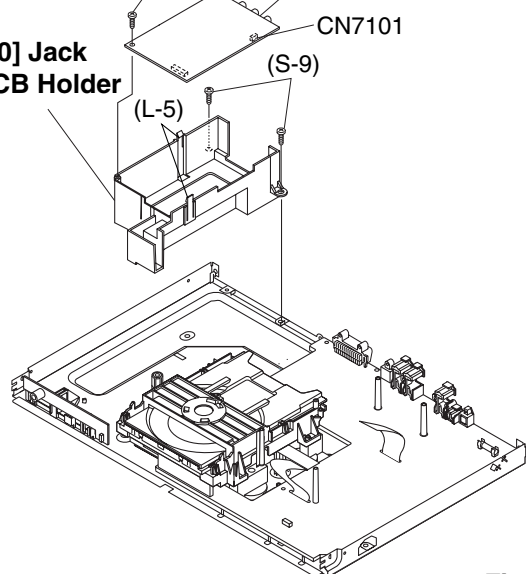
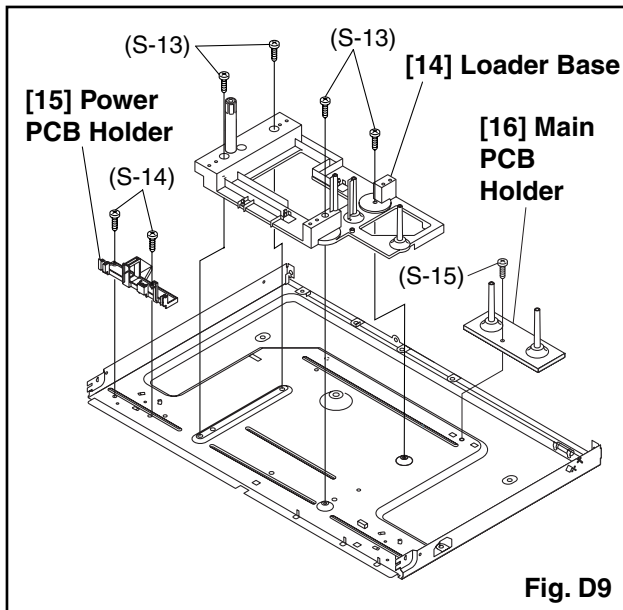
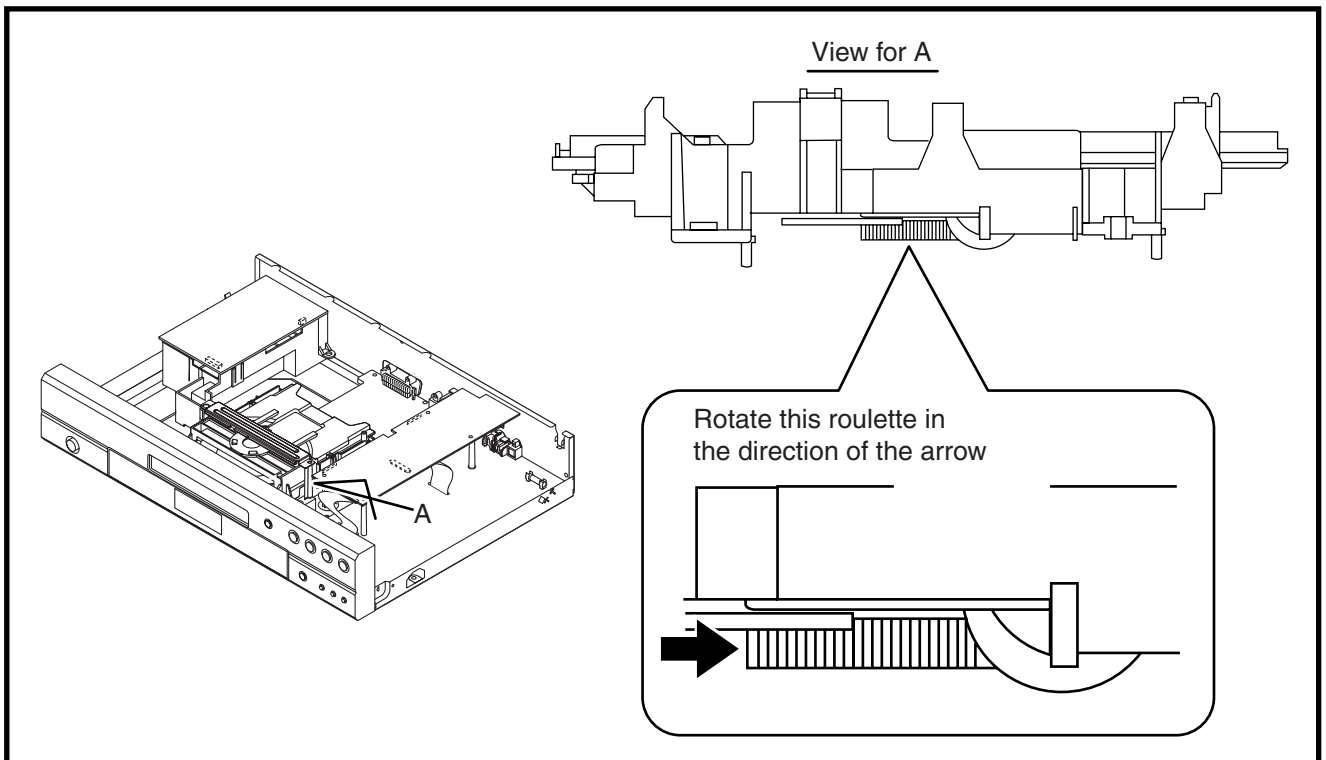
[9] 5.1ch Amp CBA**[10] Jack
PCB Holder**

Fig. D6



3. How to Eject Manually

1. Remove the Top Cover.
2. Rotate the roulette in the direction of the arrow as shown below.



HOW TO INITIALIZE THE DVD PLAYER

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

1. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.

Fig. a appears on the screen.

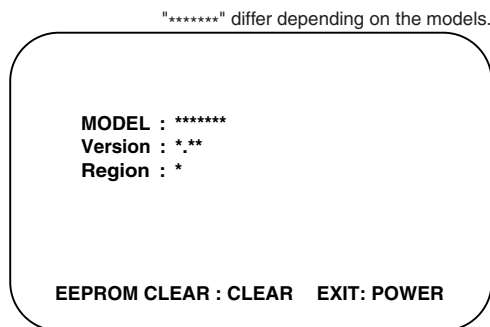


Fig. a

2. Press [CLEAR] button on the remote control unit.

Fig. b appears on the screen.

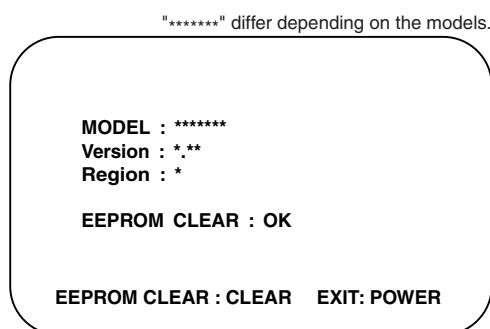


Fig. b

When "OK" appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

3. 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 DVD player into version up mode, press [9], [8], [7], [6], and [SEARCH MODE] 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.

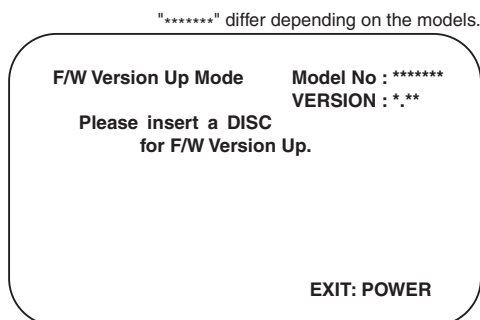


Fig. a Version Up Mode Screen

bE - UP

Fig. b VFD in Version Up Mode

The DVD 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 DVD 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.

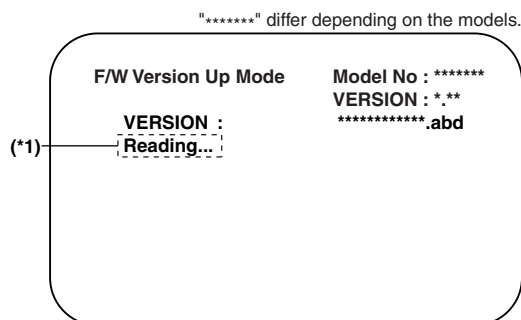


Fig. c Programming Mode Screen

100

Fig. d VFD in Programming Mode (Example)

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

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

5. After programming is finished, the tray opens automatically. Fig. e appears on the screen and the checksum in (*2) of Fig. e appears on the VFD (Fig. f).

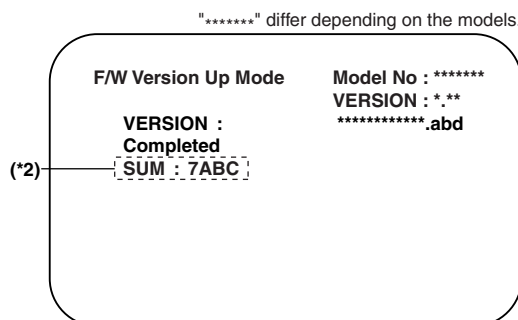


Fig. e Completed Program Mode Screen

7ABC

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

At this time, no button is available.

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

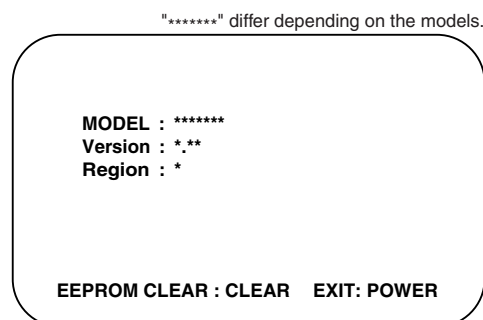


Fig. g

10. Press [CLEAR] button on the remote control unit. Fig. h appears on the screen.

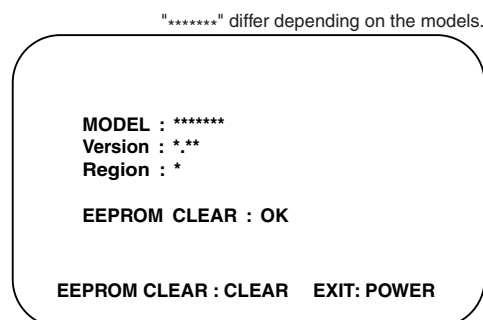


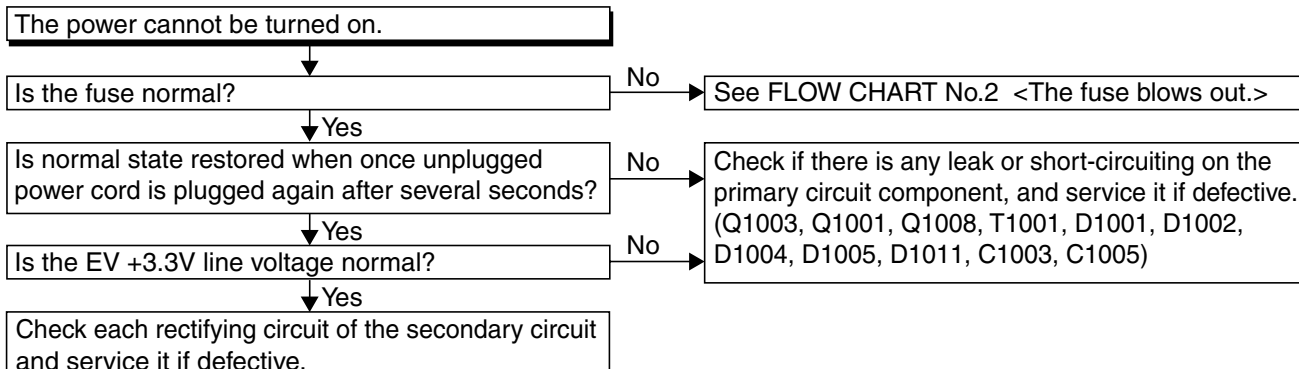
Fig. h

When "OK" appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

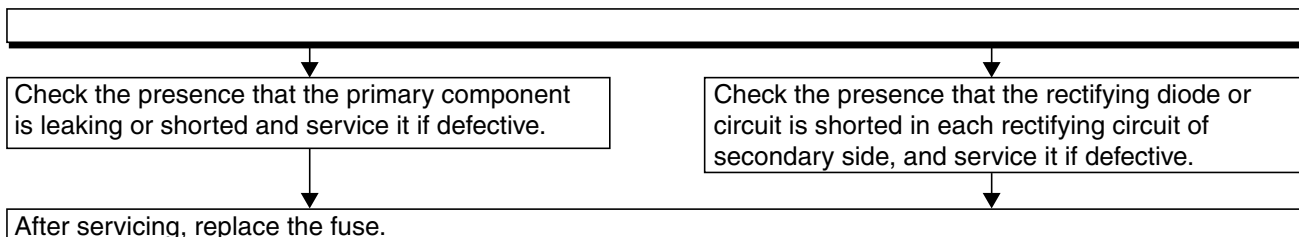
11. To exit this mode, press [POWER OFF] button.

TROUBLESHOOTING

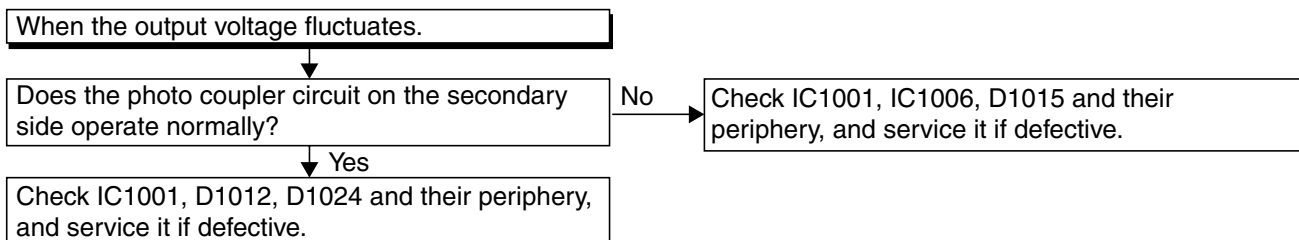
FLOW CHART NO.1



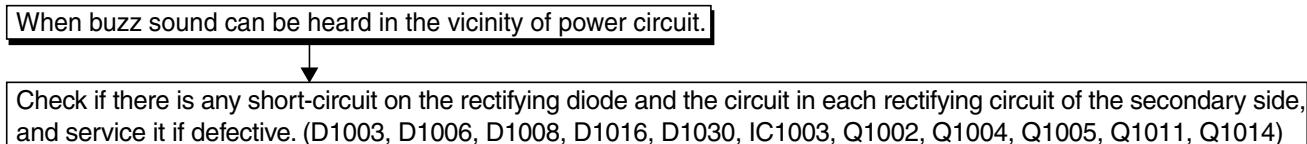
FLOW CHART NO.2



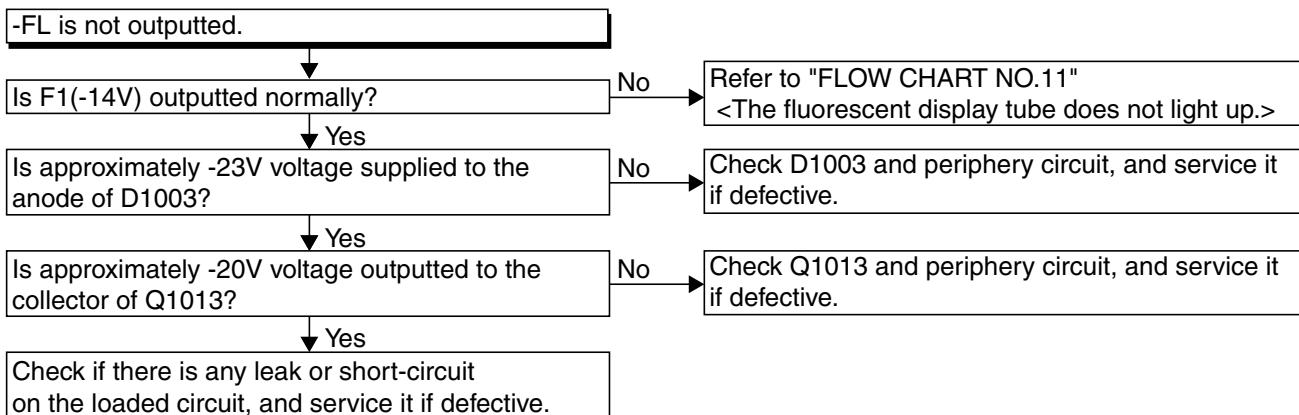
FLOW CHART NO.3



FLOW CHART NO.4



FLOW CHART NO.5



FLOW CHART NO.6

P-ON+11V (EV+11V) is not outputted.

Is 11V voltage supplied to the emitter of Q1002?

No

Check D1030, D1048, C1035, C1048, L1009 and the periphery circuit, and service it if defective.

Yes

Is the voltage of base on Q1002 lower than the voltage of emitter on Q1002 when turning the power on?

No

Check Q1016 and PWRCON line and service it if defective.

Yes

Replace Q1002.

FLOW CHART NO.7

P-ON+5V is not outputted. (EV+11V is outputted normally.)

Is the "H" signal inputted into the base of Q1004?

No

Check R1068 and D1046, and service it if defective.

Yes

Replace Q1004.

FLOW CHART NO.8

P-ON+3.3V is not outputted. (P-ON+11V is outputted normally.)

Is 3.3V voltage supplied to the collector of Q1011?

No

Check D1008, C1007, C1038, L1007 and the periphery circuit, and service it if defective.

Yes

Replace Q1011 or R1066 or R1067.

FLOW CHART NO.9

EV+5V is not outputted.

Is EV+11V outputted normally?

No

Refer to "FLOW CHART NO.6"
<P-ON+11V (EV+11V) is not outputted.>

Yes

Is the "H" signal inputted into the base of Q1014?

No

Check D1047, R1069, R1098 and the periphery circuit, and service it if defective.

Yes

Replace Q1014.

FLOW CHART NO.10

EV+1.2V is not outputted.

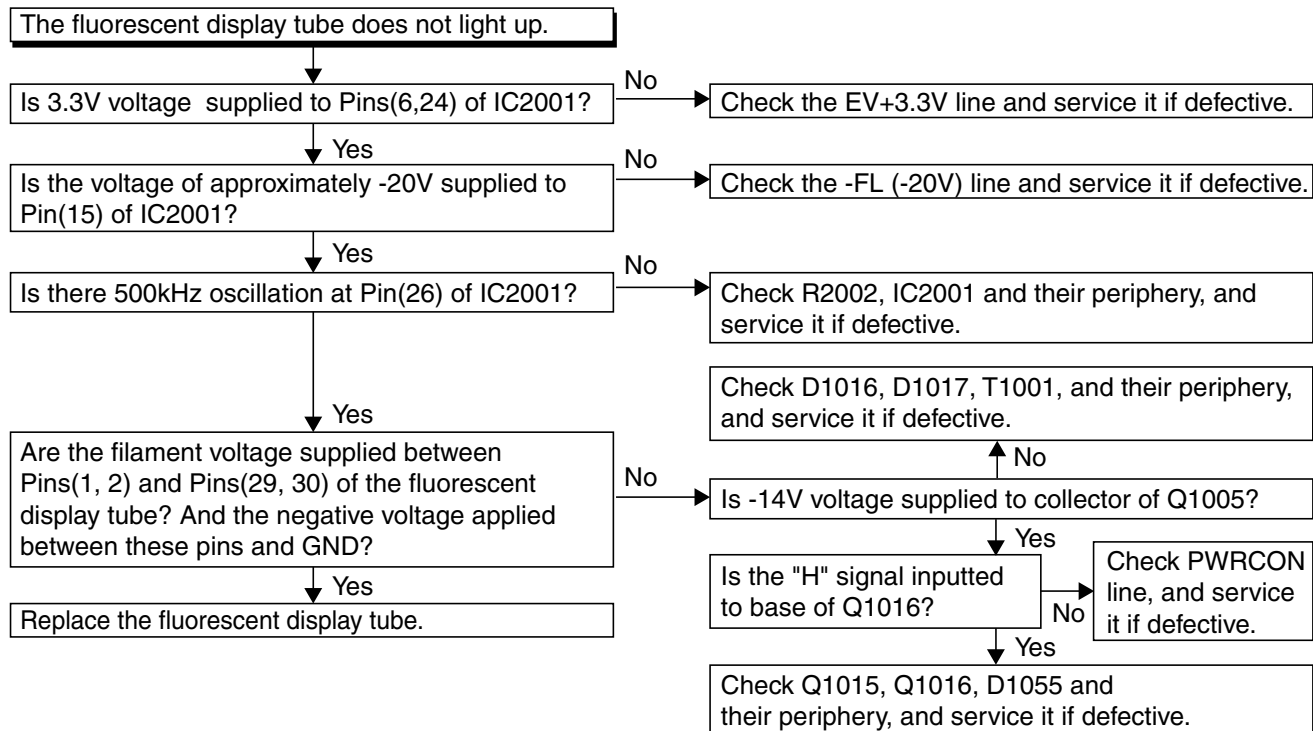
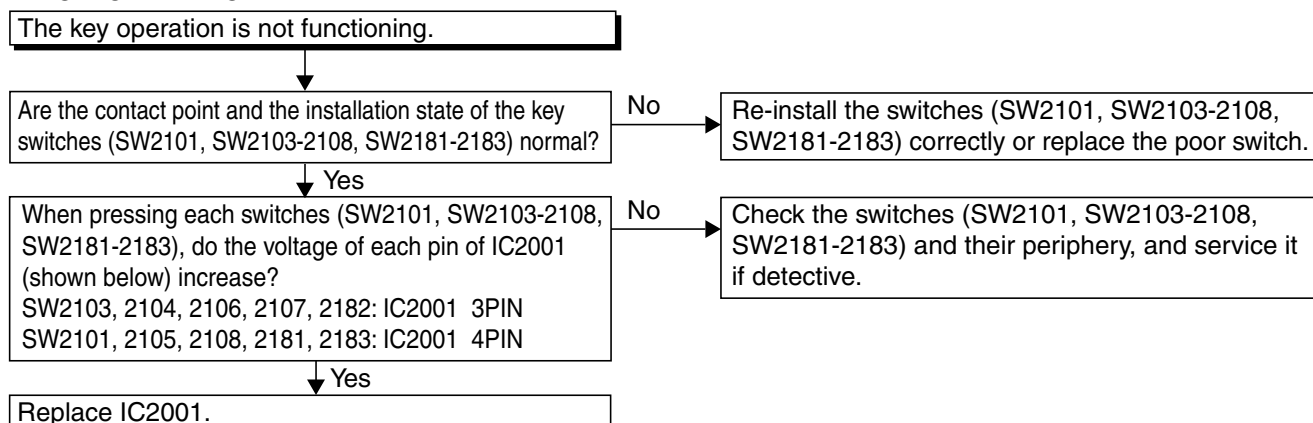
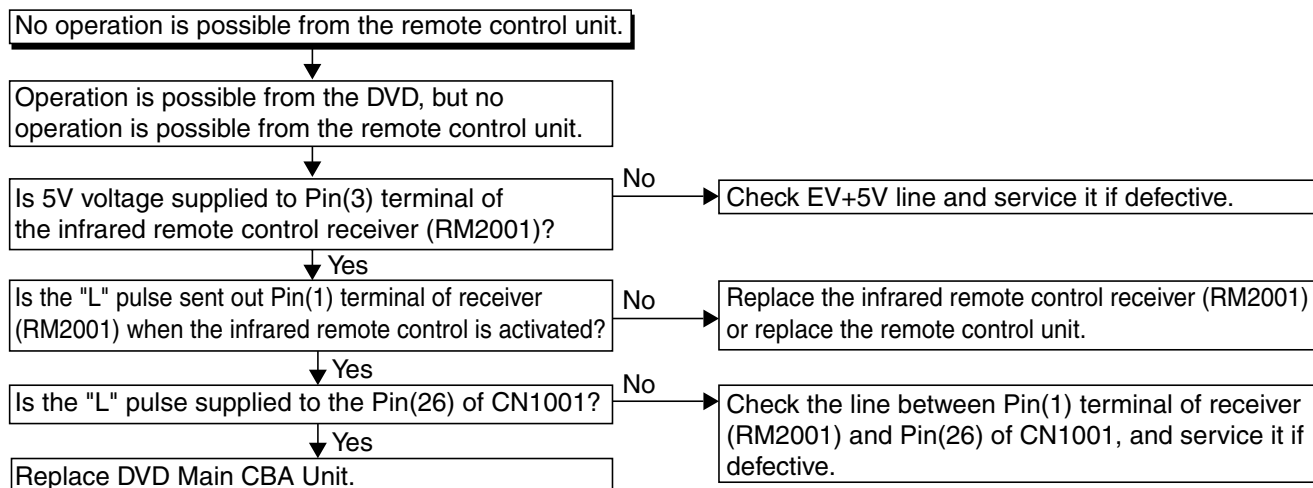
Is 2.5V voltage supplied to Pin(3) of IC1003?

No

Check D1006, C1014 and the periphery circuit, and service it if defective.

Yes

Replace IC1003.

FLOW CHART NO.11**FLOW CHART NO.12****FLOW CHART NO.13**

FLOW CHART NO.14

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

Is the normal control voltage inputted to Pin(4) of IC2001? Refer to "FLOW CHART NO.12" <The key operation is not functioning.>

No

Replace the "OPEN/CLOSE" button (SW2108).

Yes

Refer to "FLOW CHART NO.15" <The disc tray cannot be opened and closed.>

FLOW CHART NO.15

The disc tray cannot be opened and closed.

Replace the DVD Main CBA Unit.

No improvement can be found.

No

Original DVD Main CBA Unit is poor.

Yes

Replace the DVD Mechanism.

FLOW CHART NO.16

[No Disc] indicated. (When the focus error occurs.)

Replace the DVD Main CBA Unit.

No improvement can be found.

No

Original DVD Main CBA Unit is poor.

Yes

Replace the DVD Mechanism.

FLOW CHART NO.17

[No Disc] indicated. (When the focus servo is not functioning.)

Replace the DVD Main CBA Unit.

No improvement can be found.

No

Original DVD Main CBA Unit is poor.

Yes

Replace the DVD Mechanism.

FLOW CHART NO.18

[No Disc] indicated. (When the laser beam does not light up.)

Replace the DVD Main CBA Unit.

No improvement can be found.

No

Original DVD Main CBA Unit is poor.

Yes

Replace the DVD Mechanism.

FLOW CHART NO.19

Both functions of picture and sound do not operate normally.

Replace the DVD Main CBA Unit.

No improvement can be found.

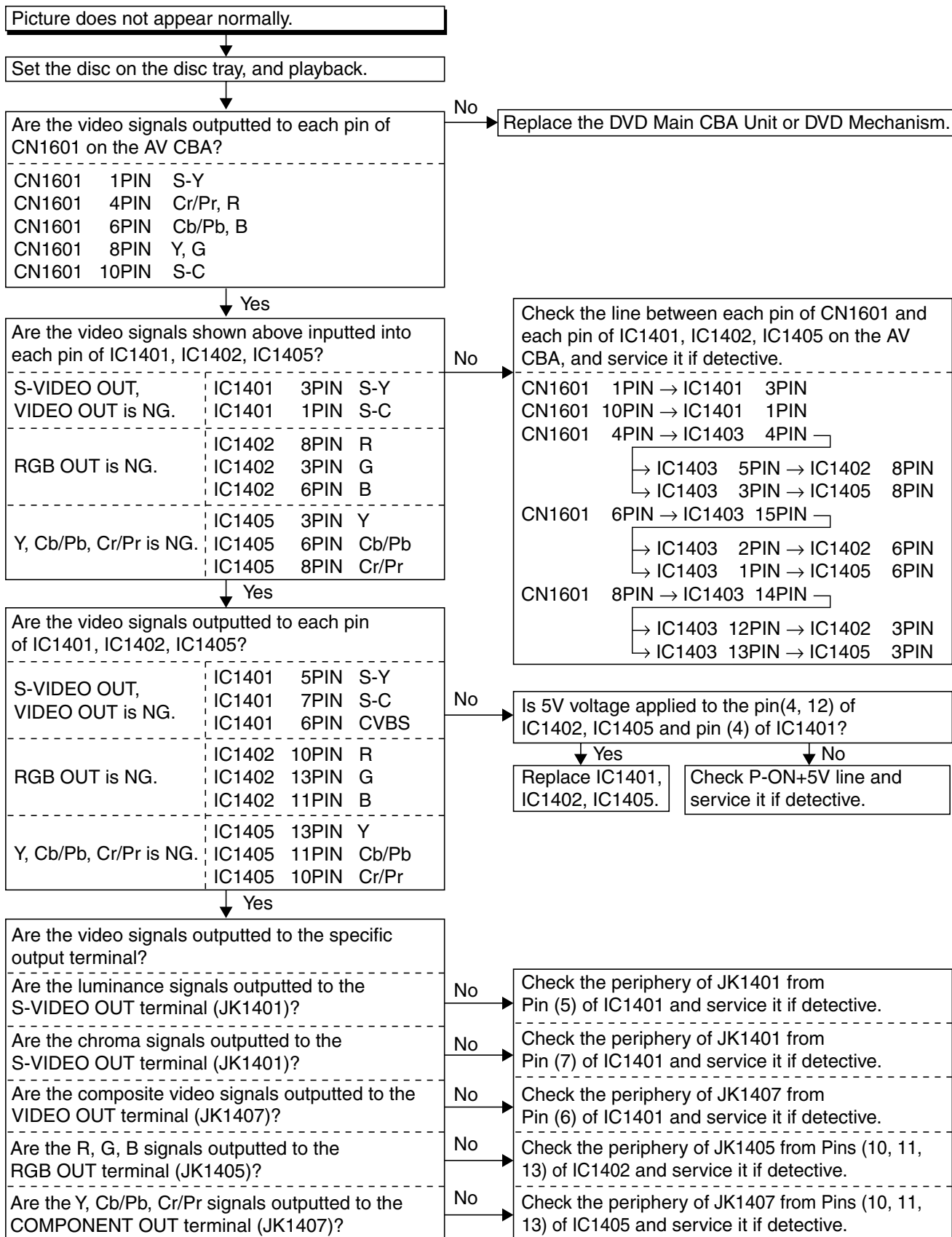
No

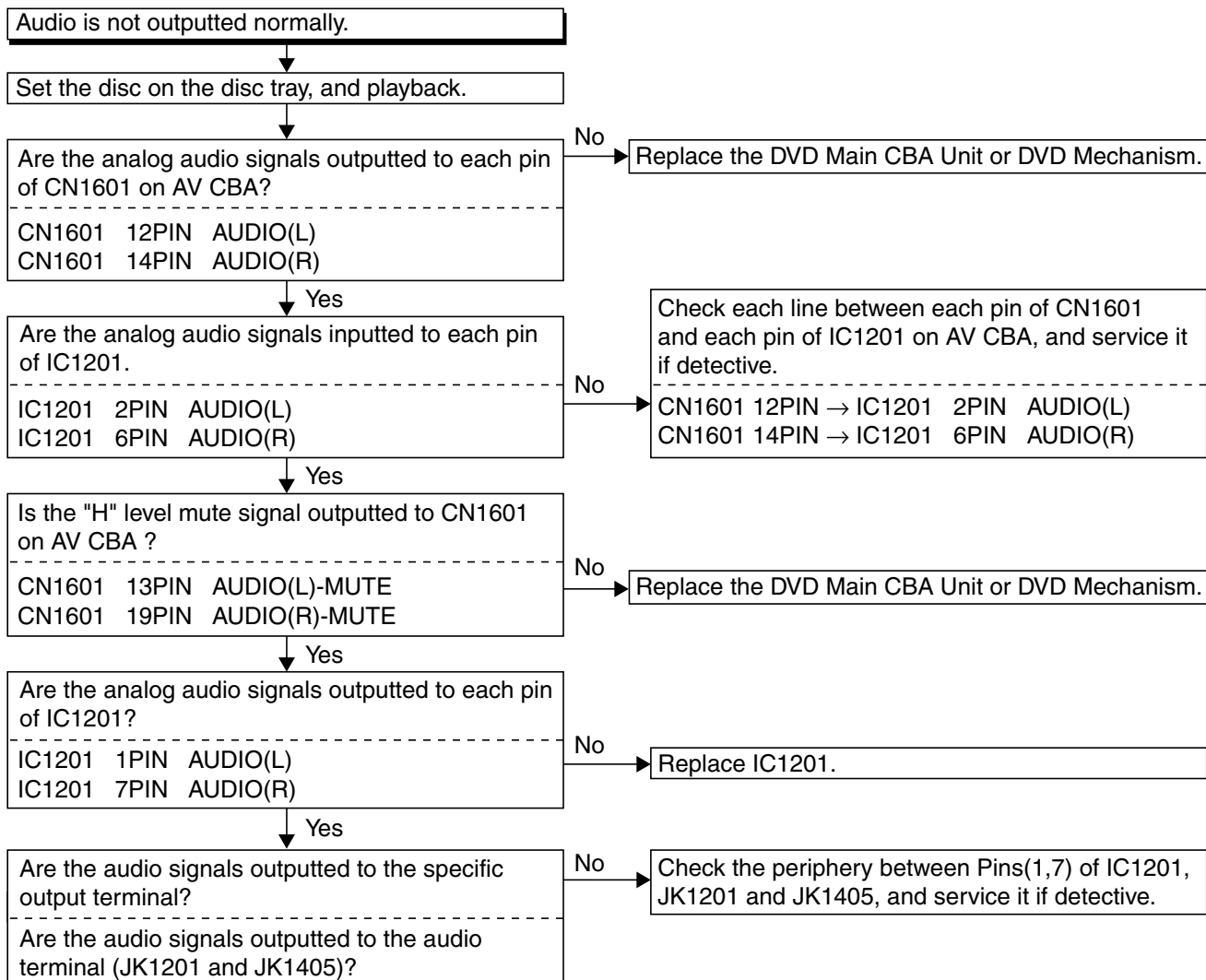
Original DVD Main CBA Unit is poor.

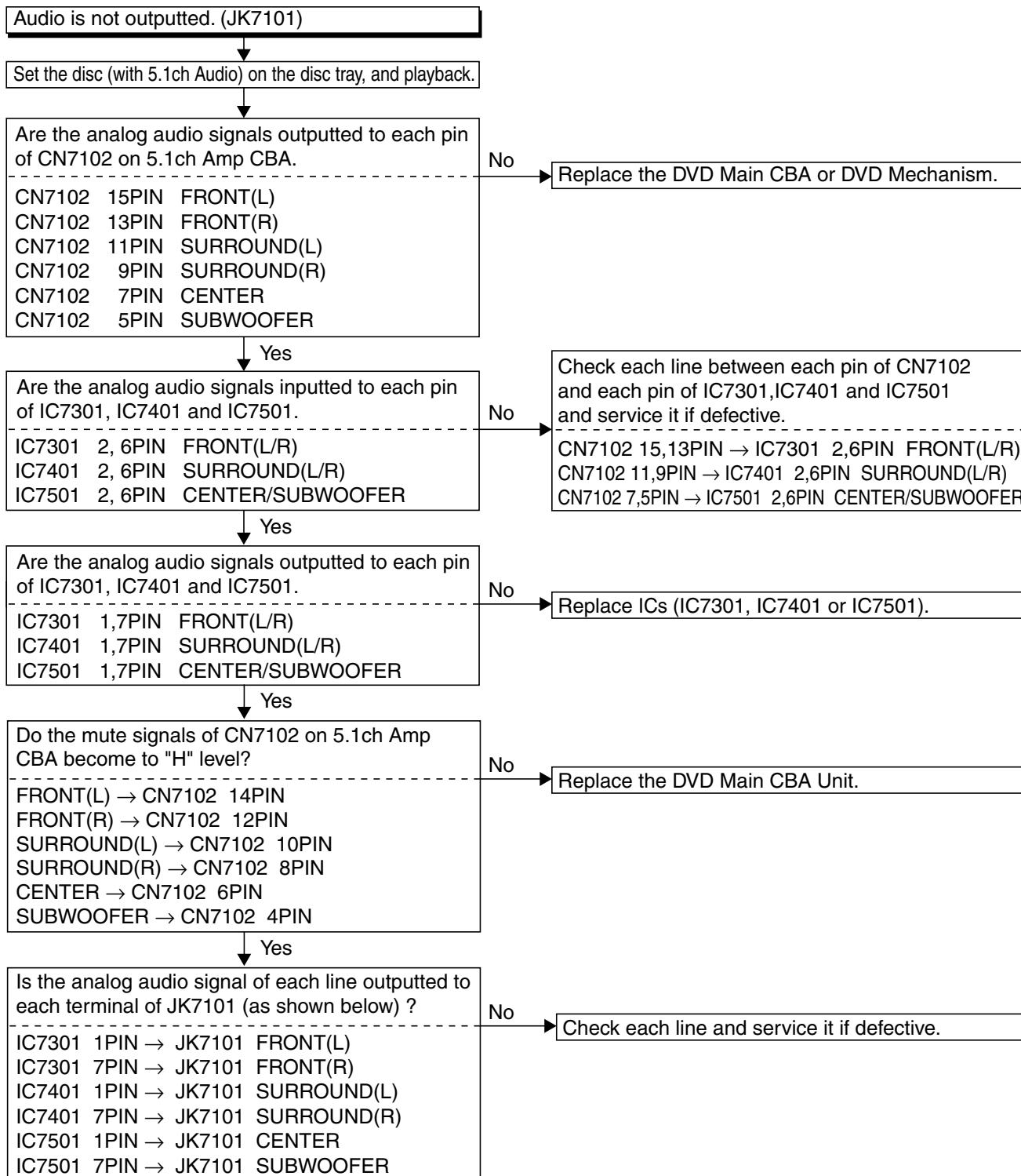
Yes

Replace the DVD Mechanism.

FLOW CHART NO.20



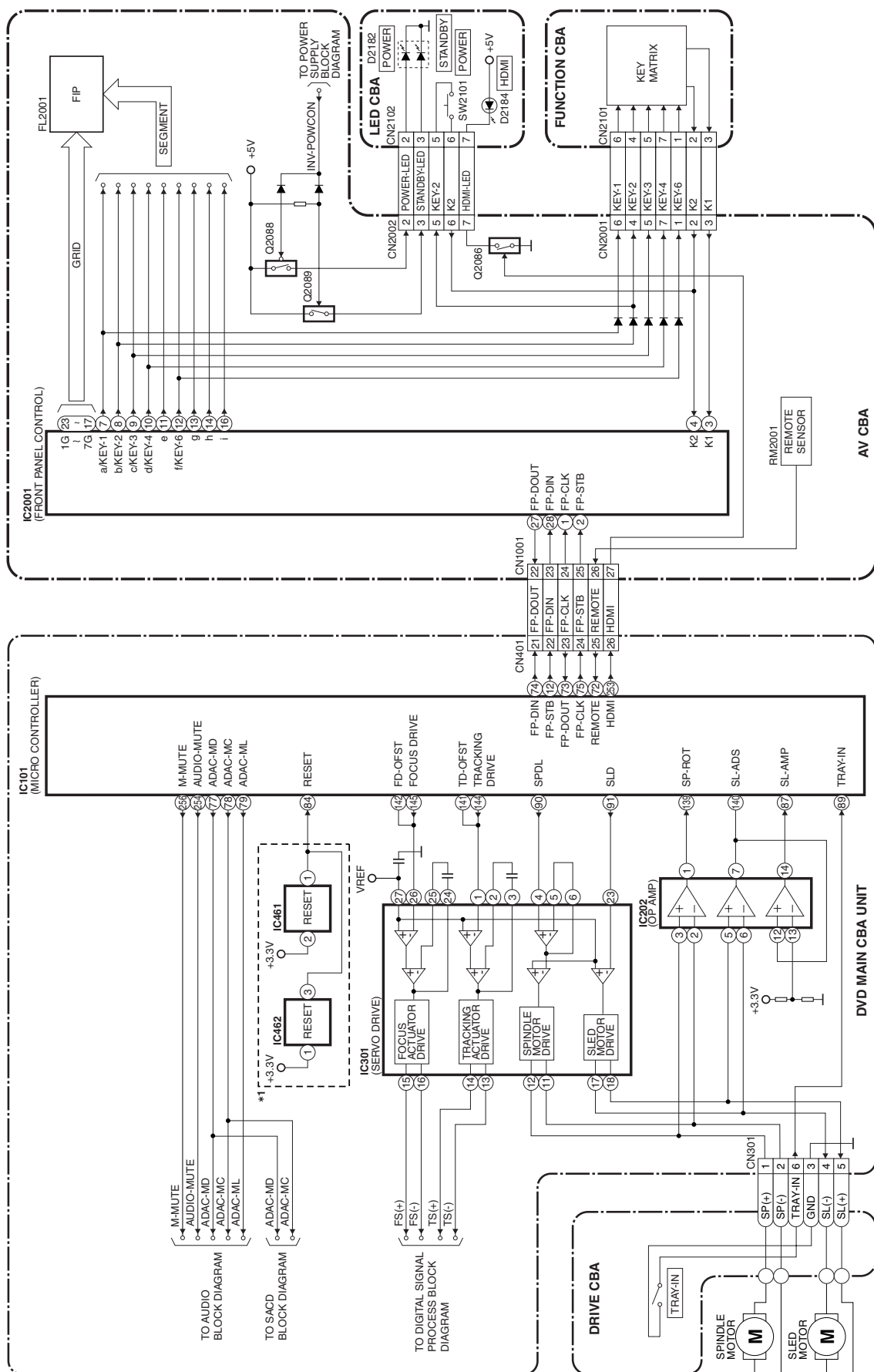
FLOW CHART NO.21

FLOW CHART NO.22

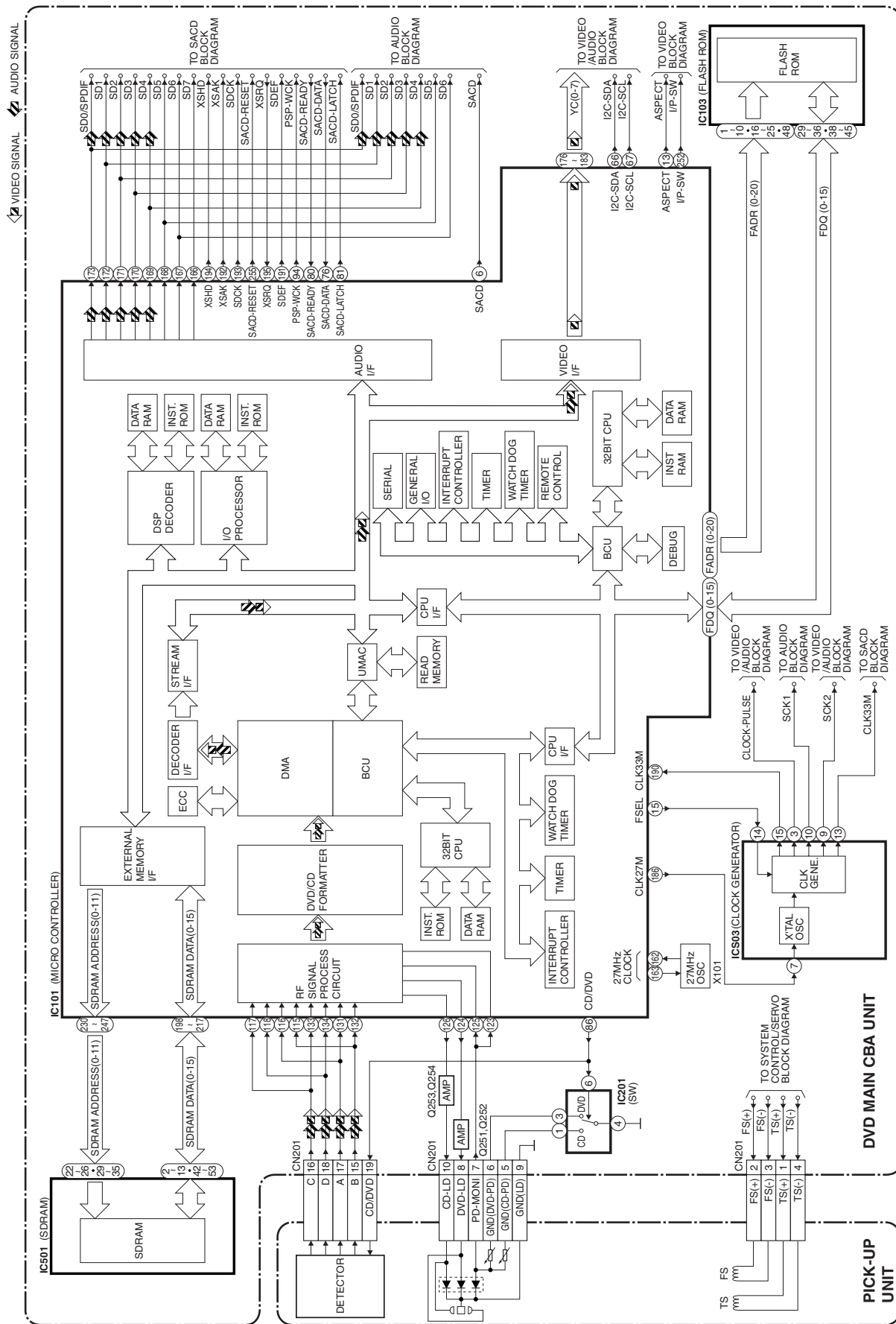
BLOCK DIAGRAMS

System Control / Servo Block Diagram

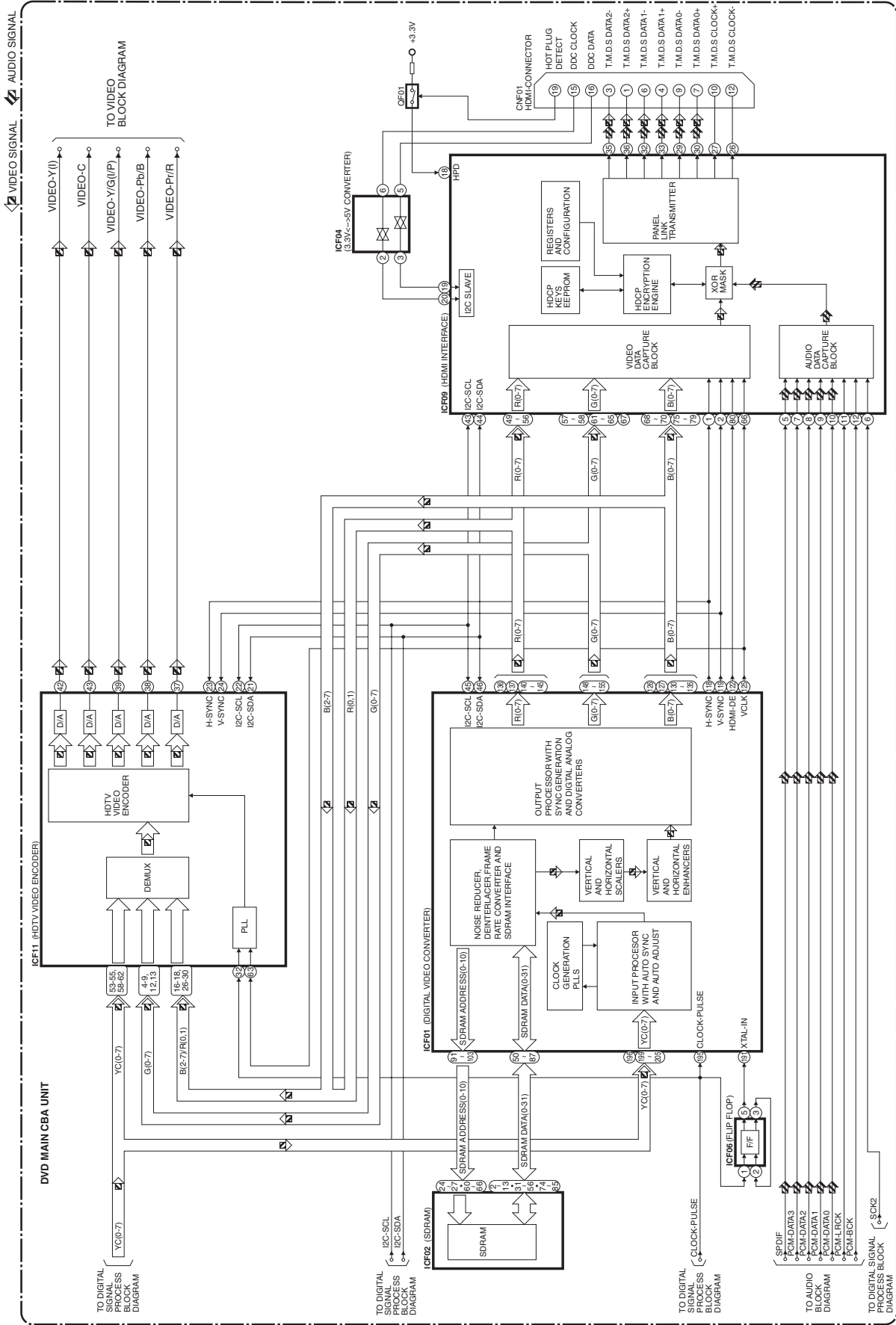
*1 NOTE:
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.



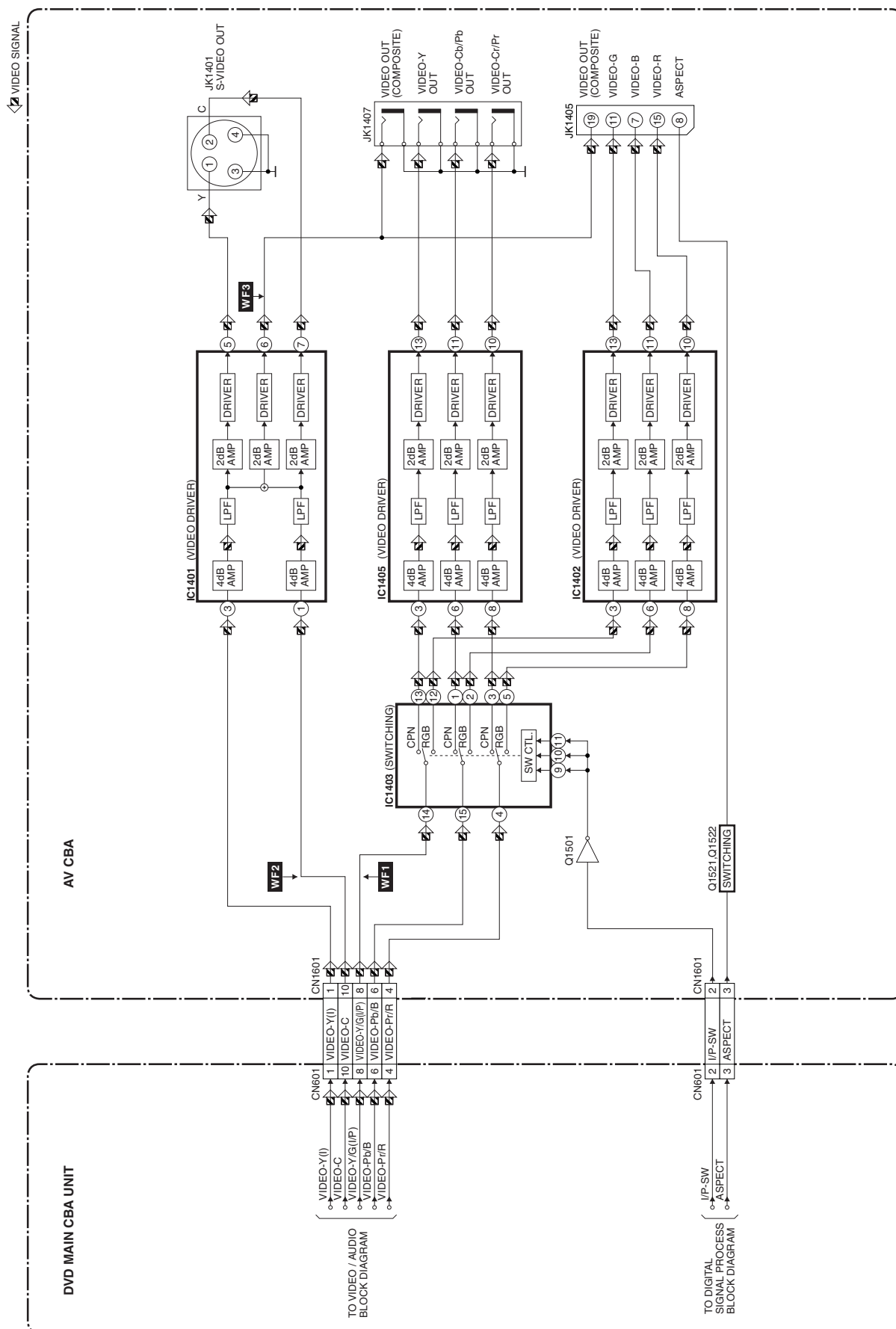
Digital Signal Process Block Diagram



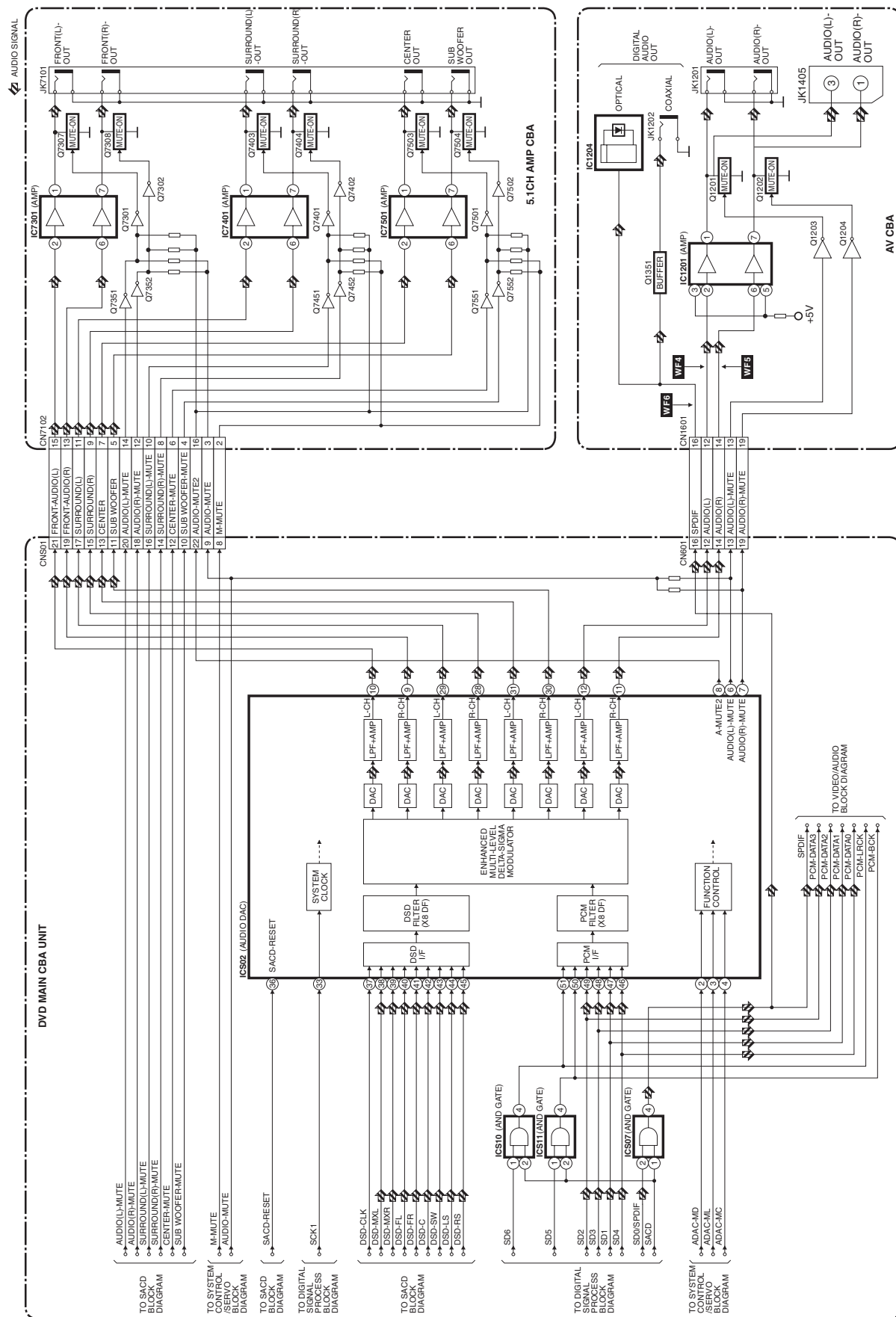
Video / Audio Block Diagram



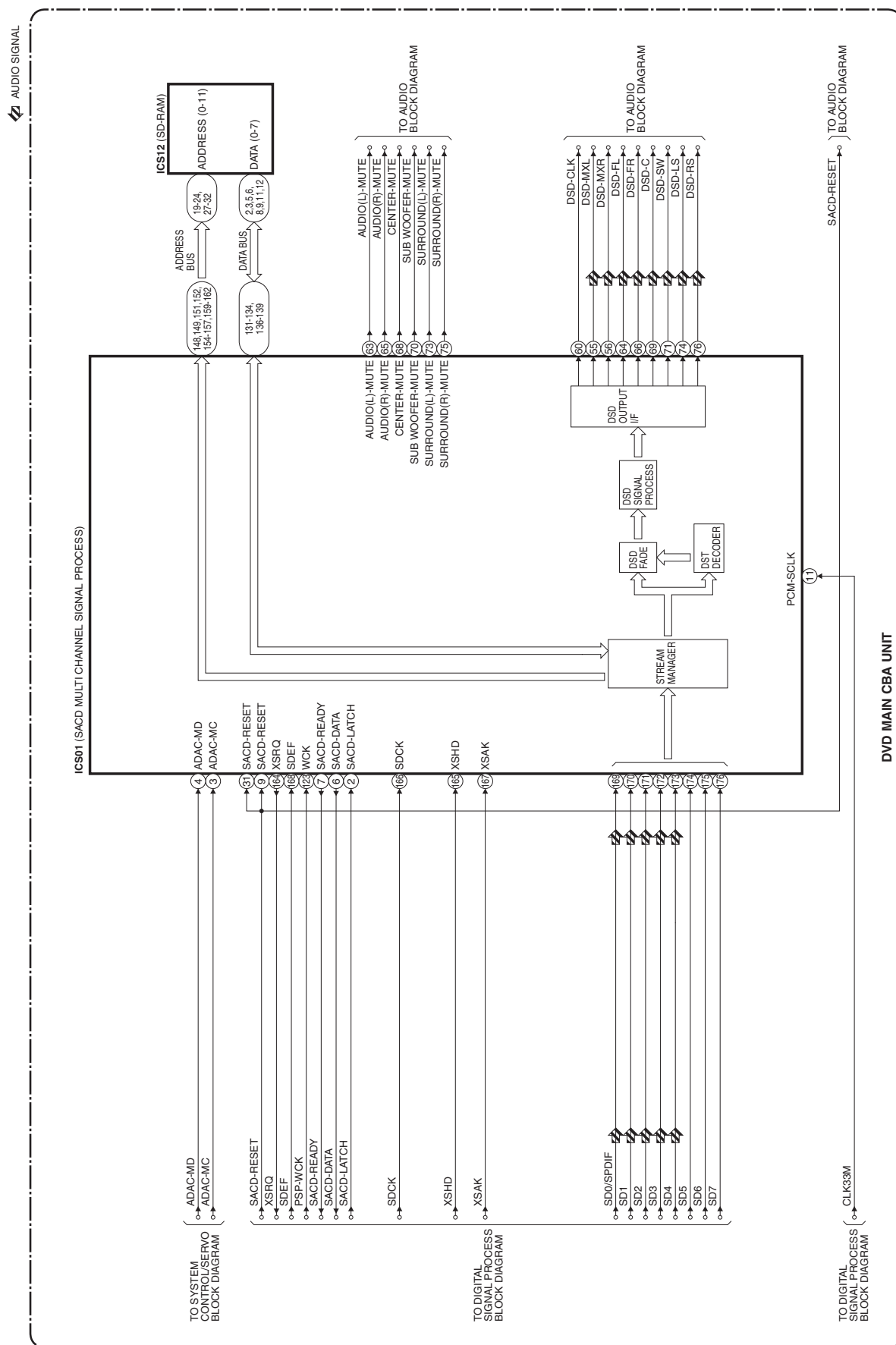
Video Block Diagram



Audio Block Diagram



SACD Block Diagram



Power Supply Block Diagram

CAUTION !

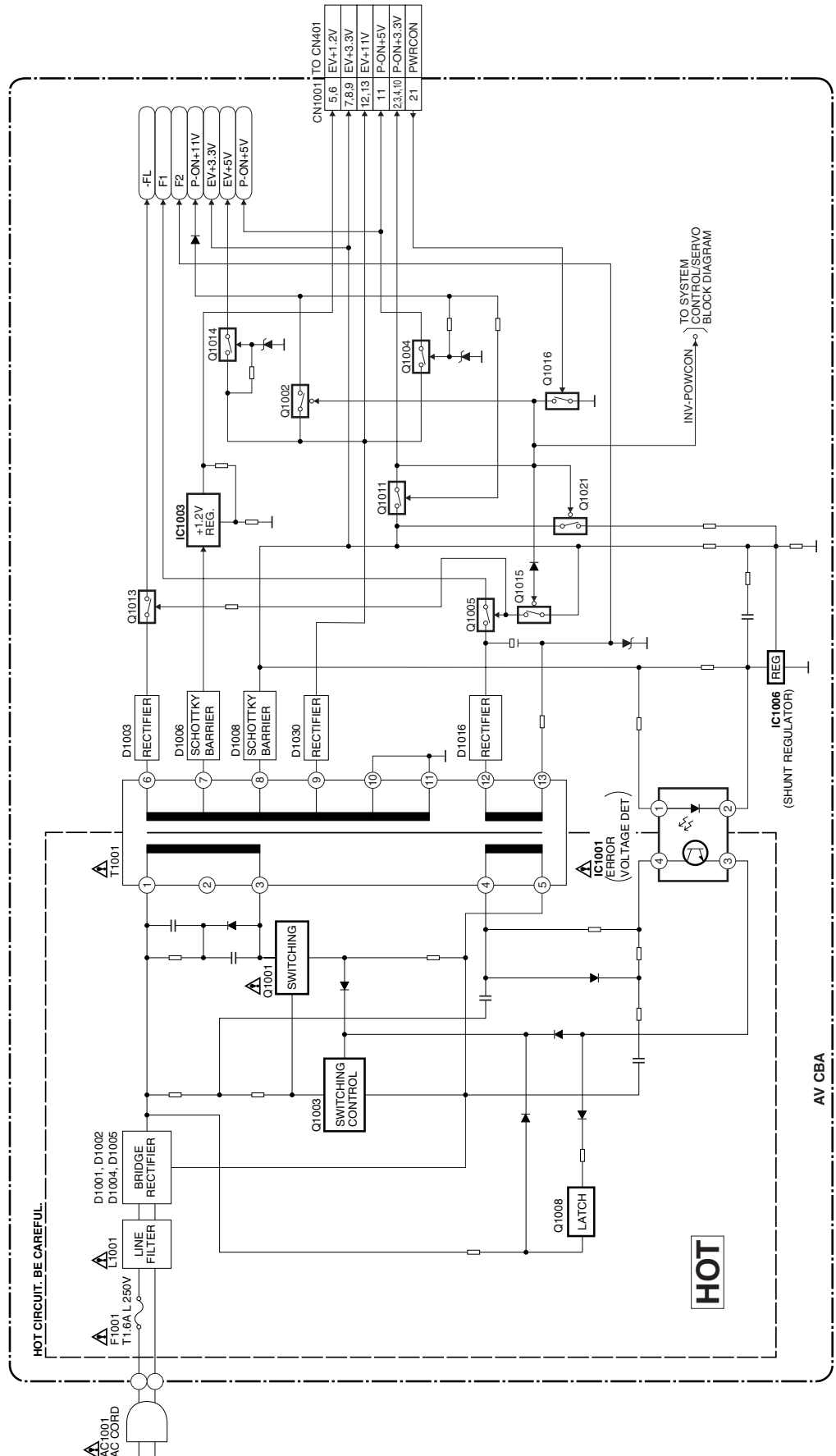
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power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

CAUTION !

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

NOTE:

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



SCHEMATIC DIAGRAMS / CBA'S 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 " $\triangle$ " 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.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

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.

2. CAUTION:

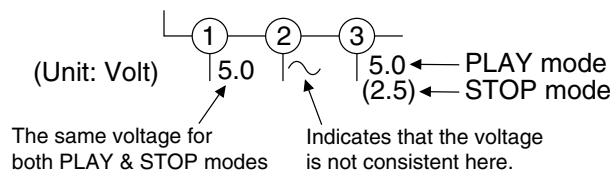
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

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:

1. 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.
2. 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:



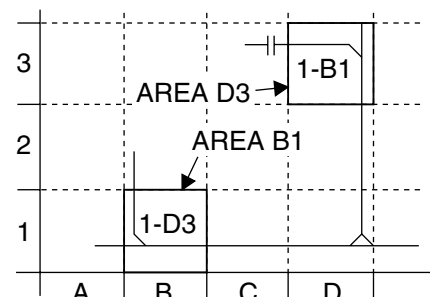
5. How to read converged lines

1-D3

 Distinction Area
 Line Number
 (1 to 3 digits)

Examples:

1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "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.

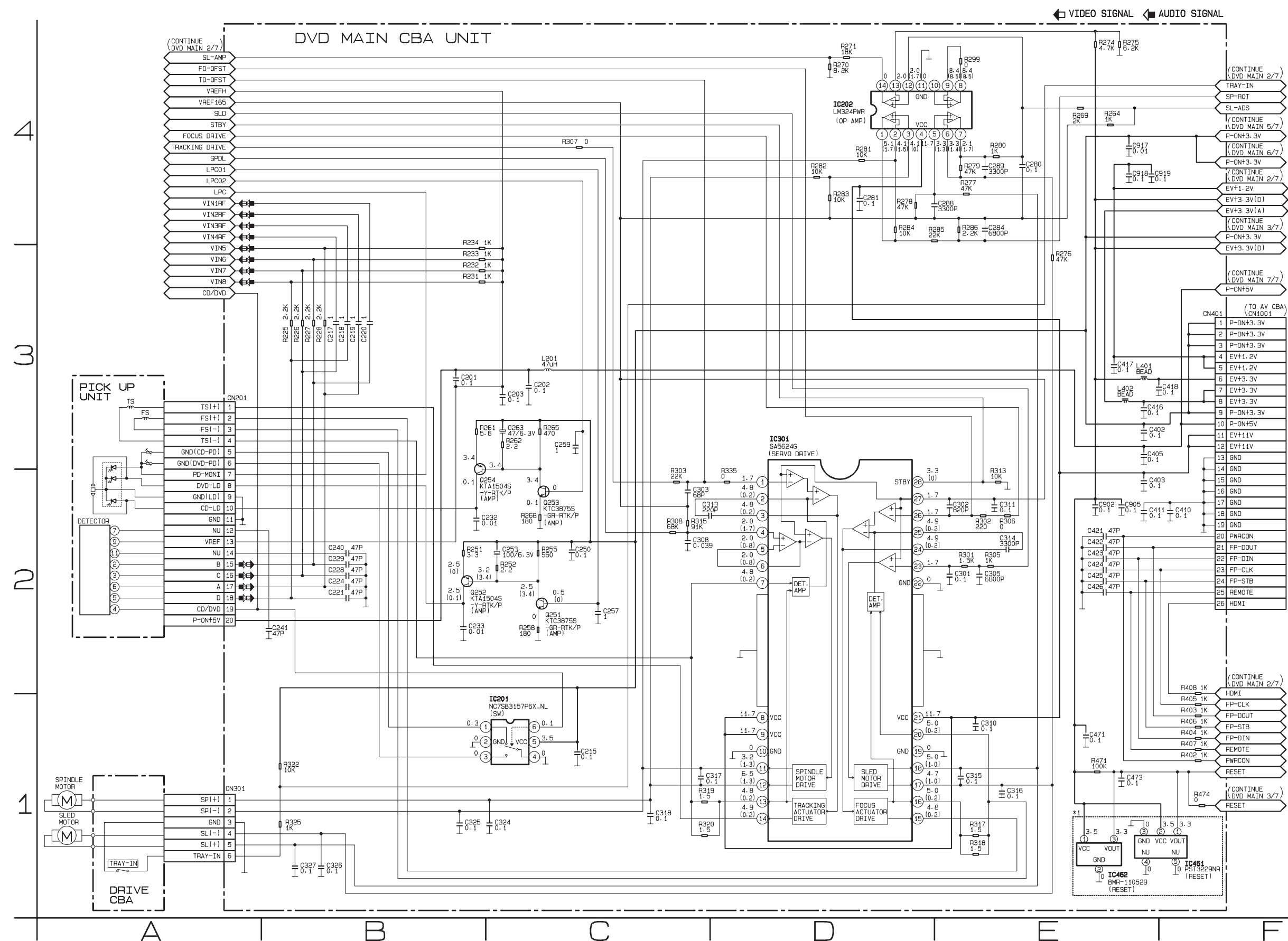
: Used to indicate a test point with no test pin.

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

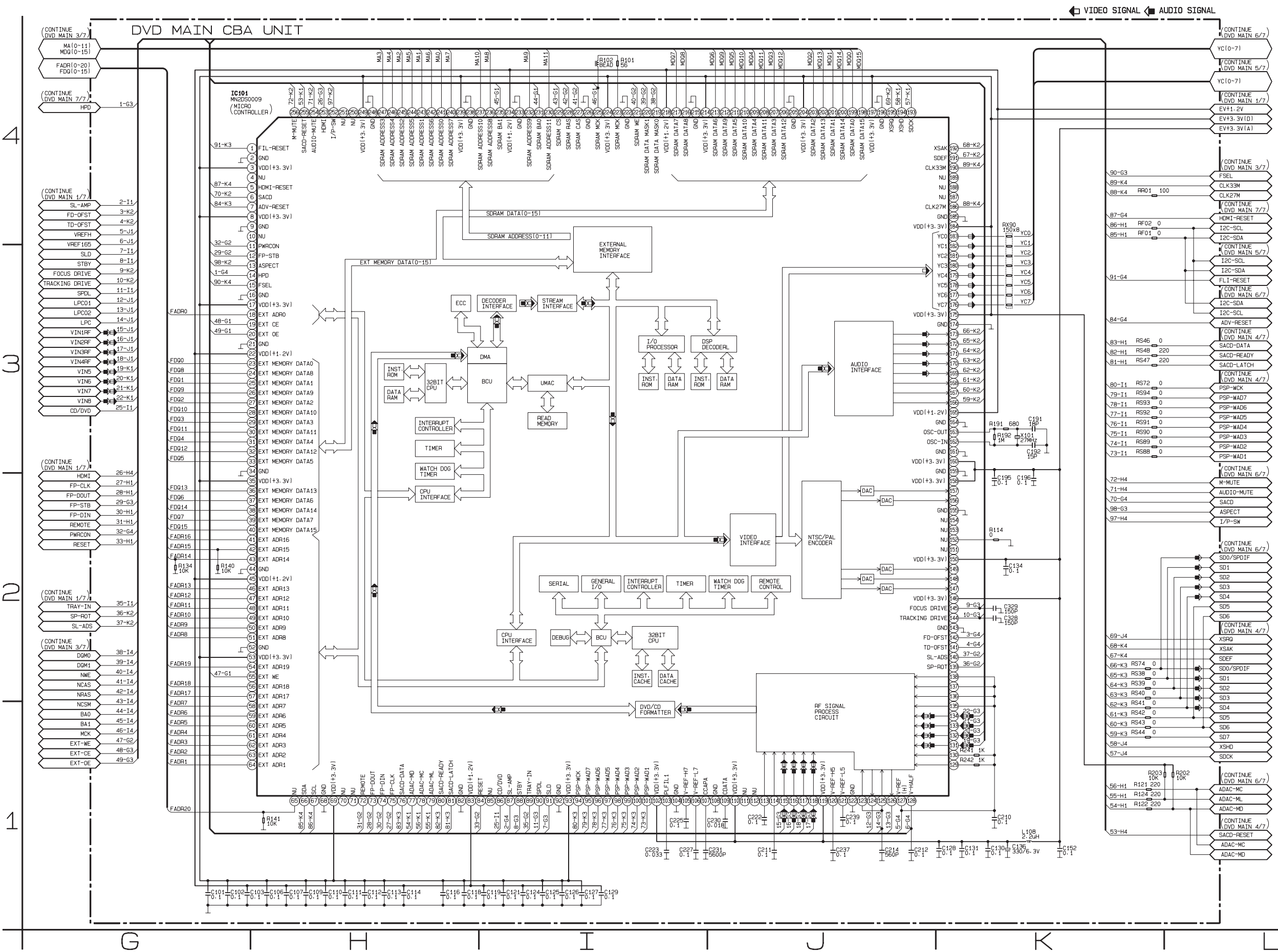
DVD Main 1/7 Schematic Diagram

*1 NOTE:

Either IC461 or IC462 is used for DVD MAIN CBA UNIT.



DVD Main 2/7 Schematic Diagram

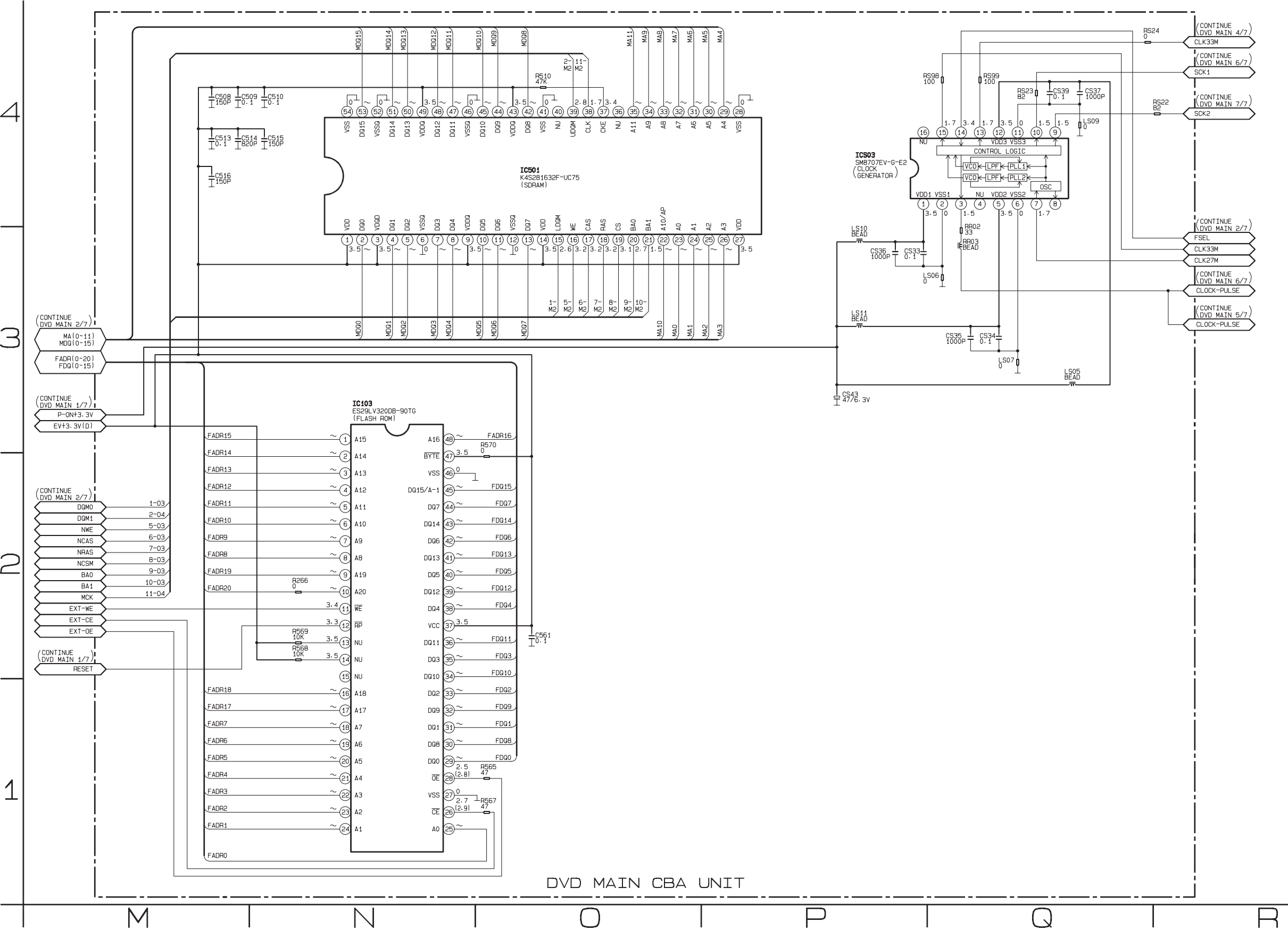


IC101 Voltage Chart

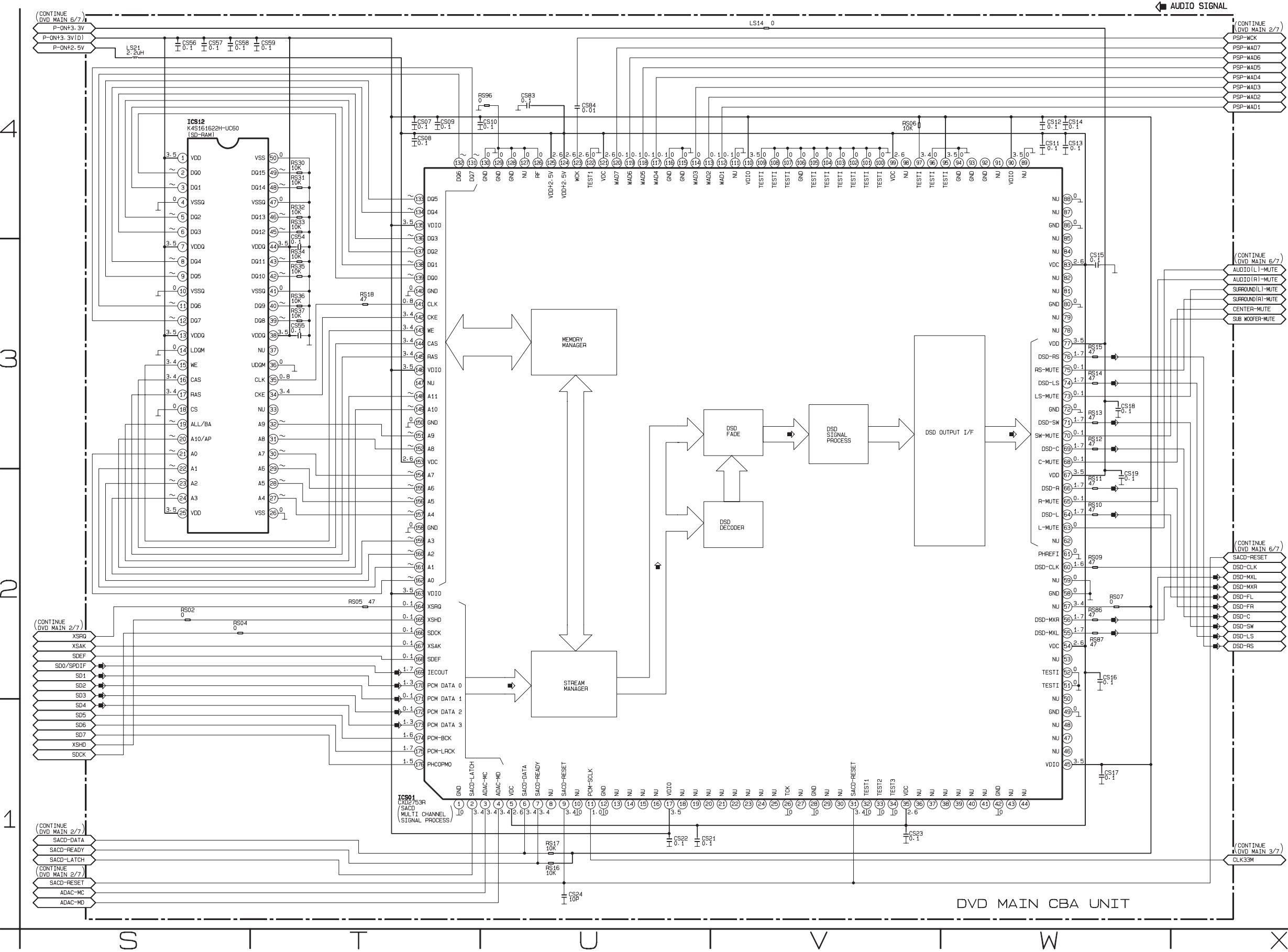
~ : Voltage is not consistent ---- : Not used Unit : Volts

PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP
1	3.4	3.4	33	~	~	65	----	----	97	0.1	0.1	129	2.3	2.3	161	0	0	193	0.1	0.1	225	1.7	1.7
2	0	0	34	0	0	66	3.4	3.4	98	0.1	0.1	130	2.3	2.3	162	1.7	1.7	194	0.1	0.1	226	0	0
3	3.5	3.5	35	3.5	3.5	67	3.4	3.4	99	0.1	0.1	131	2.3	2.3	163	1.7	1.7	195	0.1	0.1	227	3.2	3.2
4	----	----	36	~	~	68	0	0	100	0.1	0.1	132	2.4	2.3	164	0	0	196	0	0	228	3.2	3.2
5	3.4	3.4	37	~	~	69	3.5	3.5	101	0.1	0.1	133	2.4	2.4	165	1.3	1.3	197	3.5	3.5	229	3.1	3.1
6	3.4	3.4	38	~	~	70	----	----	102	3.5	3.5	134	2.4	2.4	166	1.5	1.5	198	~	~	230	~	~
7	3.4	3.4	39	~	~	71	----	----	103	0.9	0.8	135	2.3	2.3	167	1.7	1.7	199	~	~	231	2.7	2.7
8	3.5	3.5	40	~	~	72	3.2	3.2	104	0	0	136	2.3	2.3	168	1.6	1.6	200	~	~	232	0	~
9	0	0	41	~	~	73	3.5	3.5	105	2.4	2.4	137	2.3	2.3	169	1.3	1.3	201	~	~	233	0	0
10	----	----	42	~	~	74	3.4	3.4	106	1.9	1.9	138	2.3	2.3	170	0.1	0.1	202	~	~	234	1.3	1.3
11	3.4	3.4	43	~	~	75	3.4	3.4	107	0.4	0.3	139	2.1	1.7	171	0.1	0.1	203	~	~	235	1.5	1.5
12	2.8	2.8	44	0	0	76	3.4	3.4	108	0	0	140	1.7	1.7	172	1.3	1.3	204	3.5	3.5	236	~	~
13	3.5	3.5	45	1.3	1.3	77	3.4	3.4	109	1.7	1.7	141	1.7	1.7	173	1.7	1.7	205	0	0	237	~	~
14	0	0	46	~	~	78	3.4	3.4	110	3.5	3.5	142	1.7	1.7	174	0	0	206	~	~	238	0	0
15	3.4	3.4	47	~	~	79	3.6	3.4	111	----	----	143	0	0	175	3.5	3.5	207	~	~	239	3.5	3.5
16	0	0	48	~	~	80	3.4	3.4	112	----	----	144	1.7	1.7	176	~	~	208	~	~	240	~	~
17	3.5	3.5	49	~	~	81	3.4	3.4	113	1.9	1.9	145	1.7	1.7	177	~	~	209	~	~	241	~	~
18	~	~	50	~	~	82	0	0	114	1.9	1.9	146	3.5	3.5	178	~	~	210	~	~	242	~	~
19	2.7	2.9	51	~	~	83	1.3	1.3	115	1.7	1.7	147	----	----	179	~	~	211	~	~	243	~	~
20	2.5	2.8	52	0	0	84	3.3	3.3	116	1.7	1.7	148	----	----	180	~	~	212	~	~	244	~	~
21	0	0	53	3.5	3.5	85	----	----	117	1.7	1.7	149	----	----	181	~	~	213	~	~	245	~	~
22	1.3	1.3	54	~	~	86	0.1	0.1	118	1.7	1.7	150	3.5	3.5	182	~	~	214	3.5	3.5	246	~	~
23	~	~	55	3.4	3.4	87	0	0	119	3.5	3.5	151	----	----	183	~	~	215	0	0	247	~	~
24	~	~	56	~	~	88	3.3	0	120	2.0	2.0	152	0	0	184	3.5	3.5	216	~	~	248	0	0
25	~	~	57	~	~	89	3.4	3.5	121	1.5	1.5	153	----	----	185	0	0	217	~	~	249	3.5	3.5
26	~	~	58	~	~	90	2.3	1.8	122	0	0	154	----	----	186	1.5	1.5	218	1.3	1.3	250	----	----
27	~	~	59	~	~	91	1.7	1.8	123	0.3	0.1	155	0	0	187	----	----	219	2.6	2.6	251	----	----
28	~	~	60	~	~	92	0	0	124	0.5	0	156	----	----	188	----	----	220	2.8	2.8	252	3.3	3.3
29	~	~	61	~	~	93	3.5	3.5	125	0.3	0.1	157	----	----	189	----	----	221	3.2	3.2	253	0	0
30	~	~	62	~	~	94	2.6	2.6	126	0	0	158	3.5	3.5	190	1.6	1.6	222	0	0	254	3.5	0.1
31	~	~	63	~	~	95	0.1	0.1	127	2.3	2.3	159	0	0	191	0.1	0.1	223	1.6	1.6	255	3.4	3.4
32	~	~	64	~	~	96	0.1	0.1	128	1.7	1.7	160	3.5	3.5	192	0.1	0.1	224	3.5	3.5	256	3.3	0.8

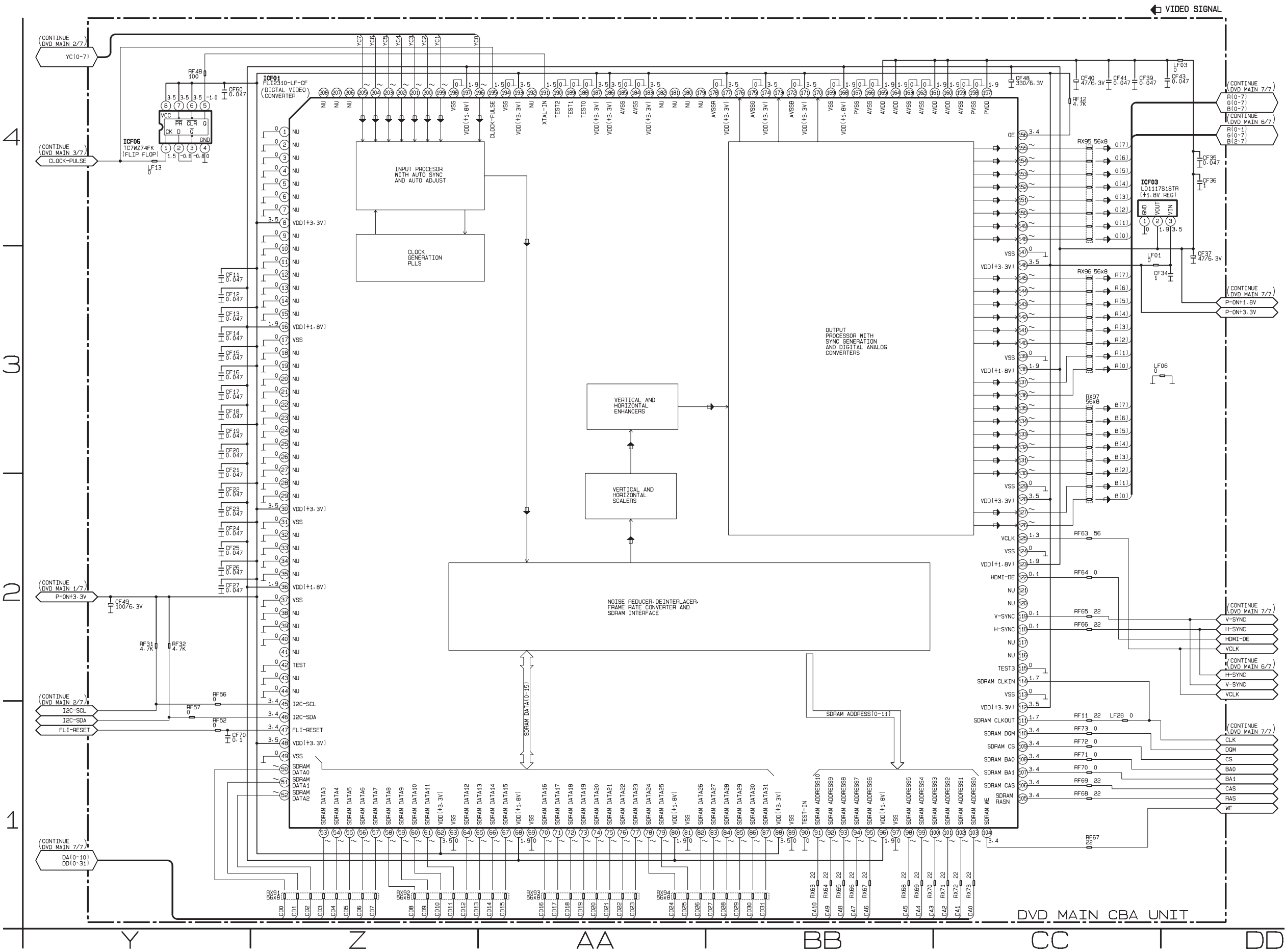
DVD Main 3/7 Schematic Diagram



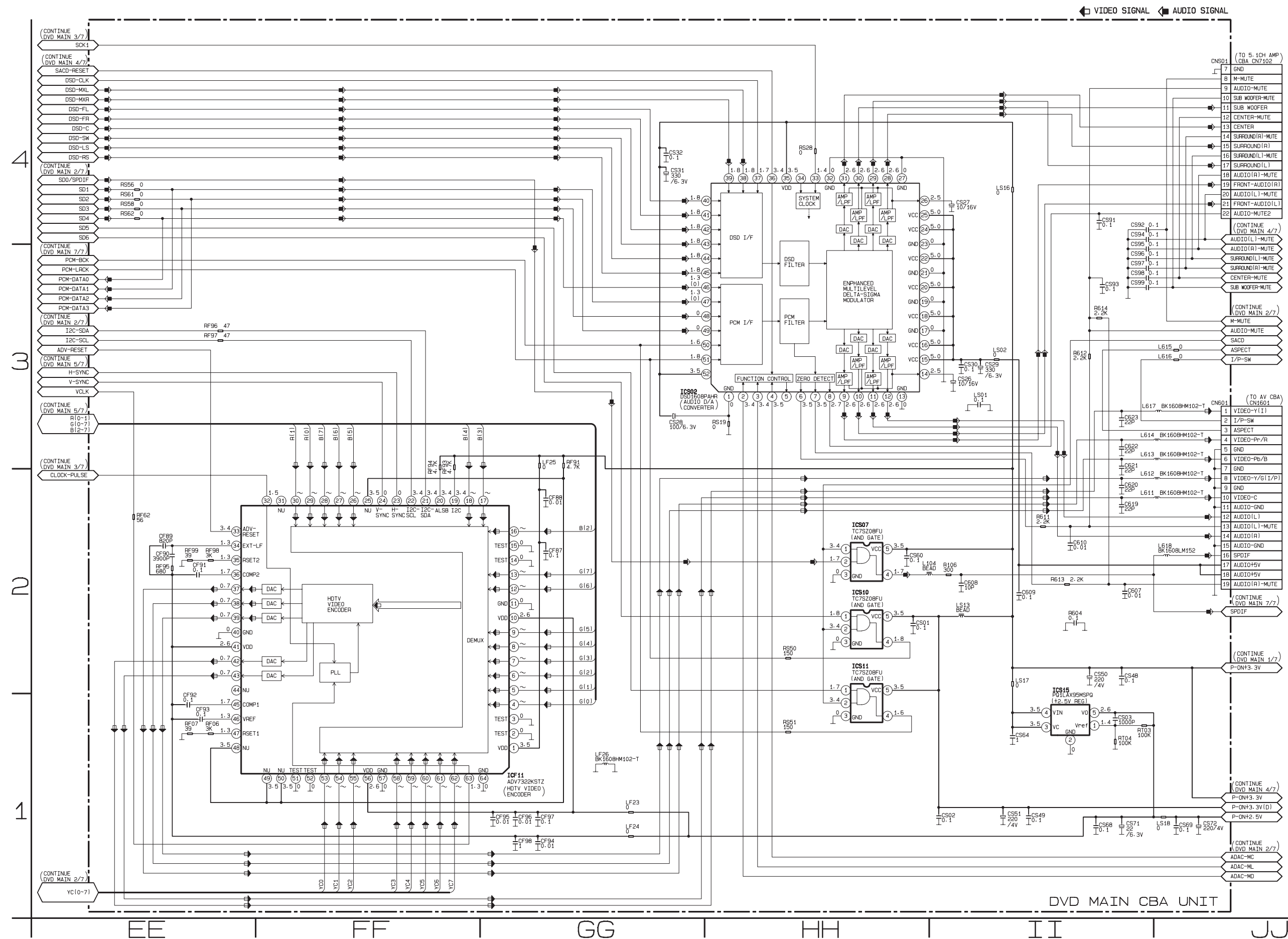
DVD Main 4/7 Schematic Diagram



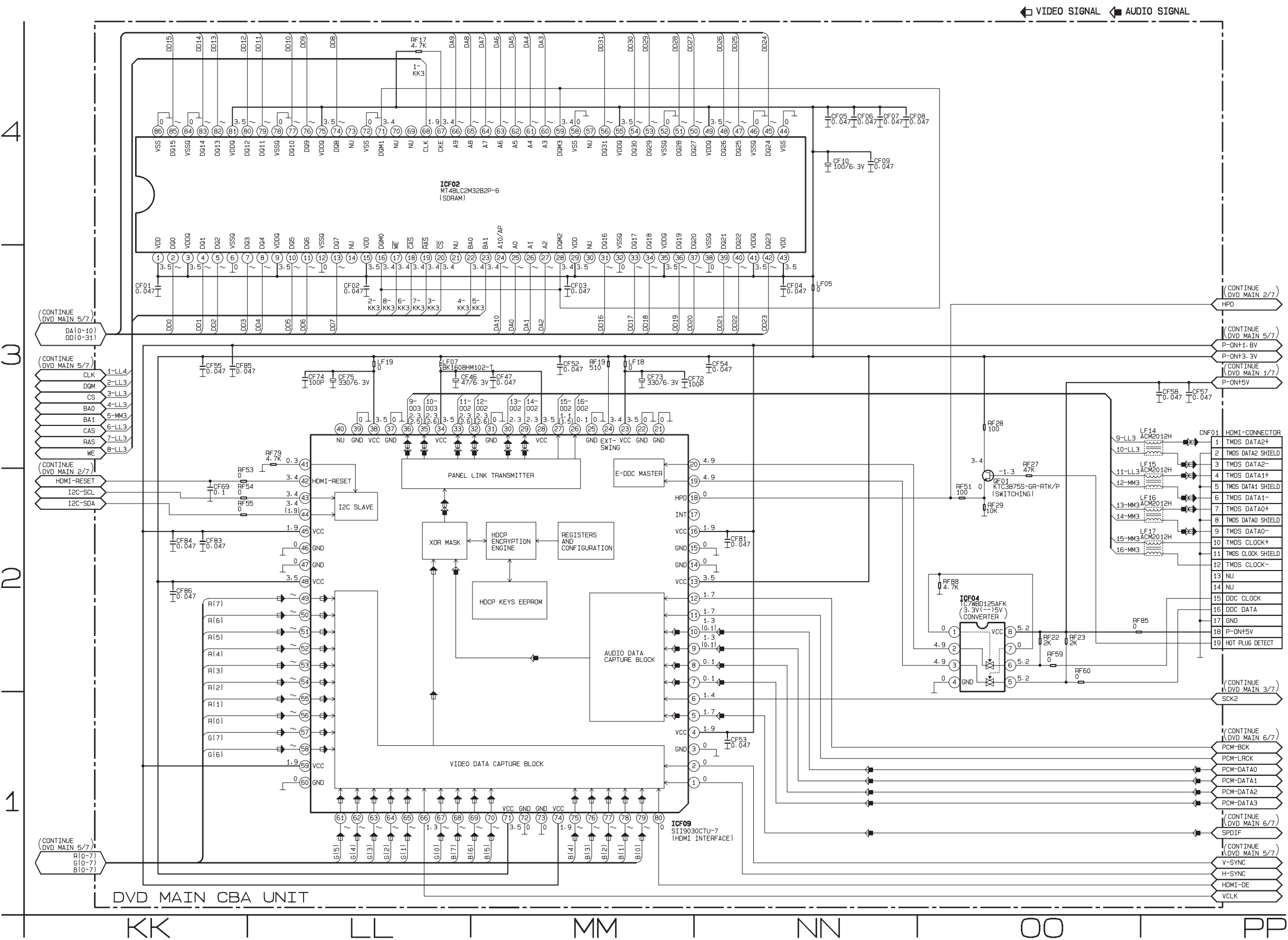
DVD Main 5/7 Schematic Diagram



DVD Main 6/7 Schematic Diagram



DVD Main 7/7 Schematic Diagram



AV 1/3 Schematic Diagram

CAUTION !

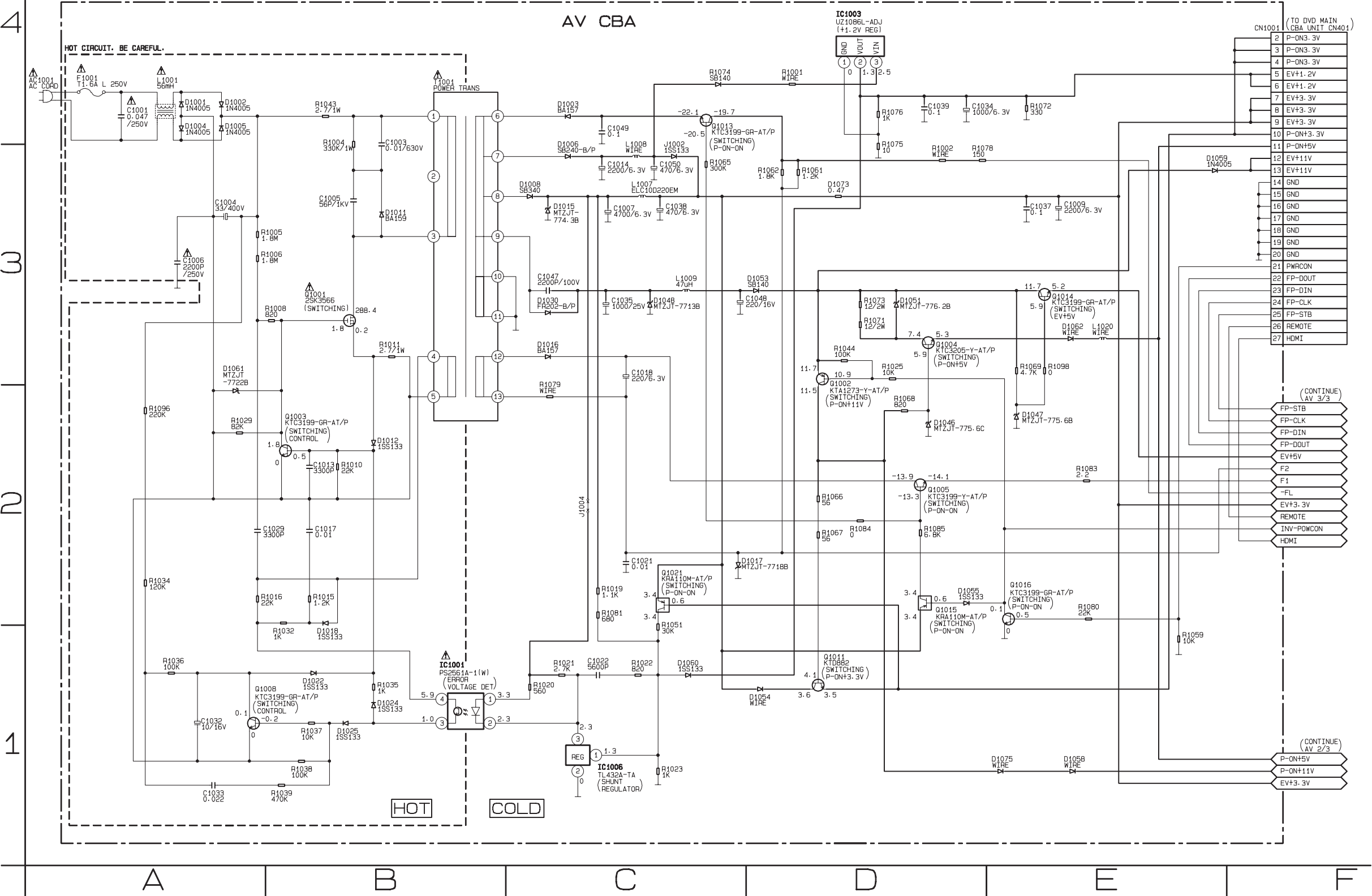
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power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

CAUTION !

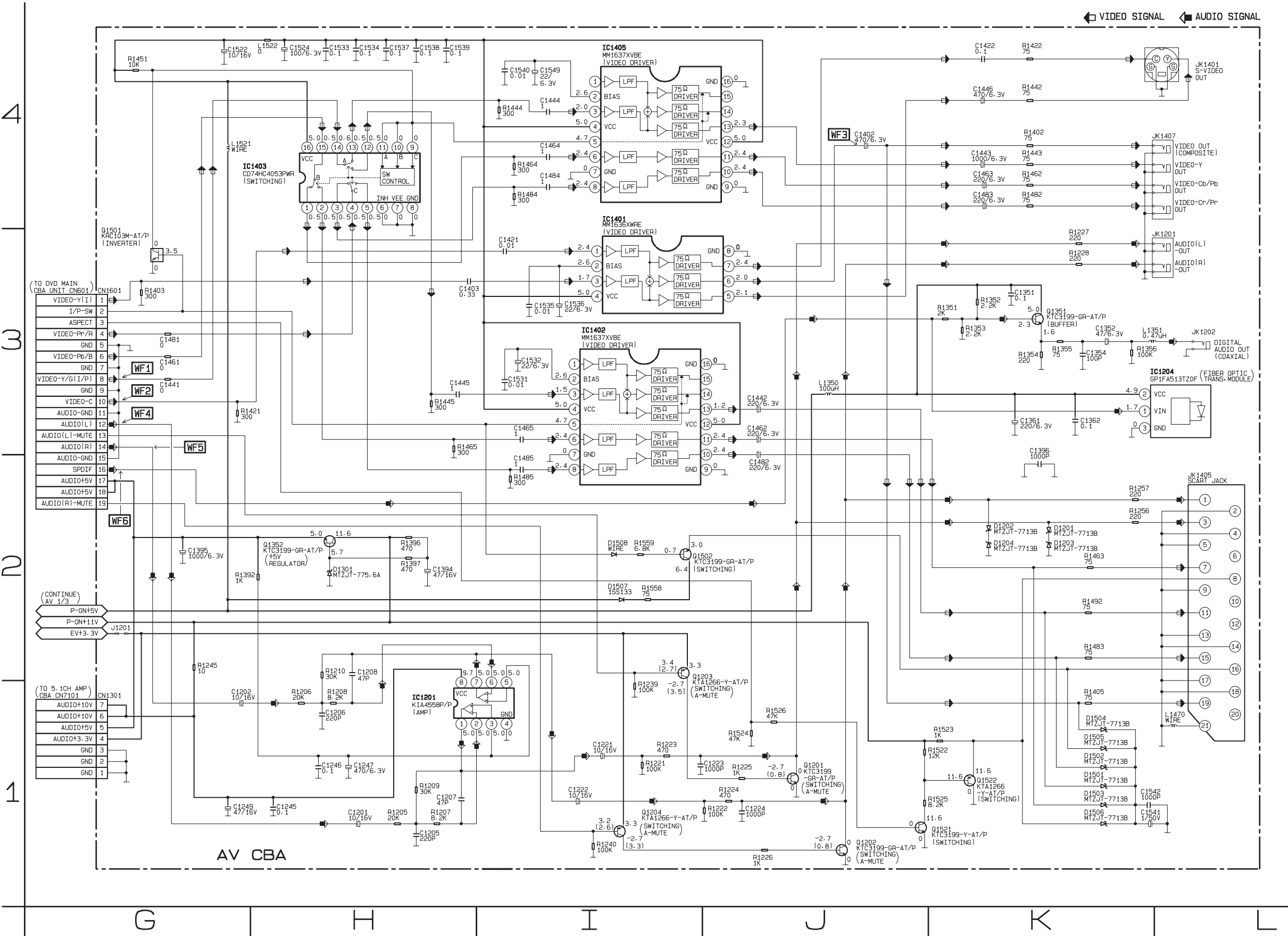
For continued protection against fire hazard,
replace only with the same type fuse.

NOTE:

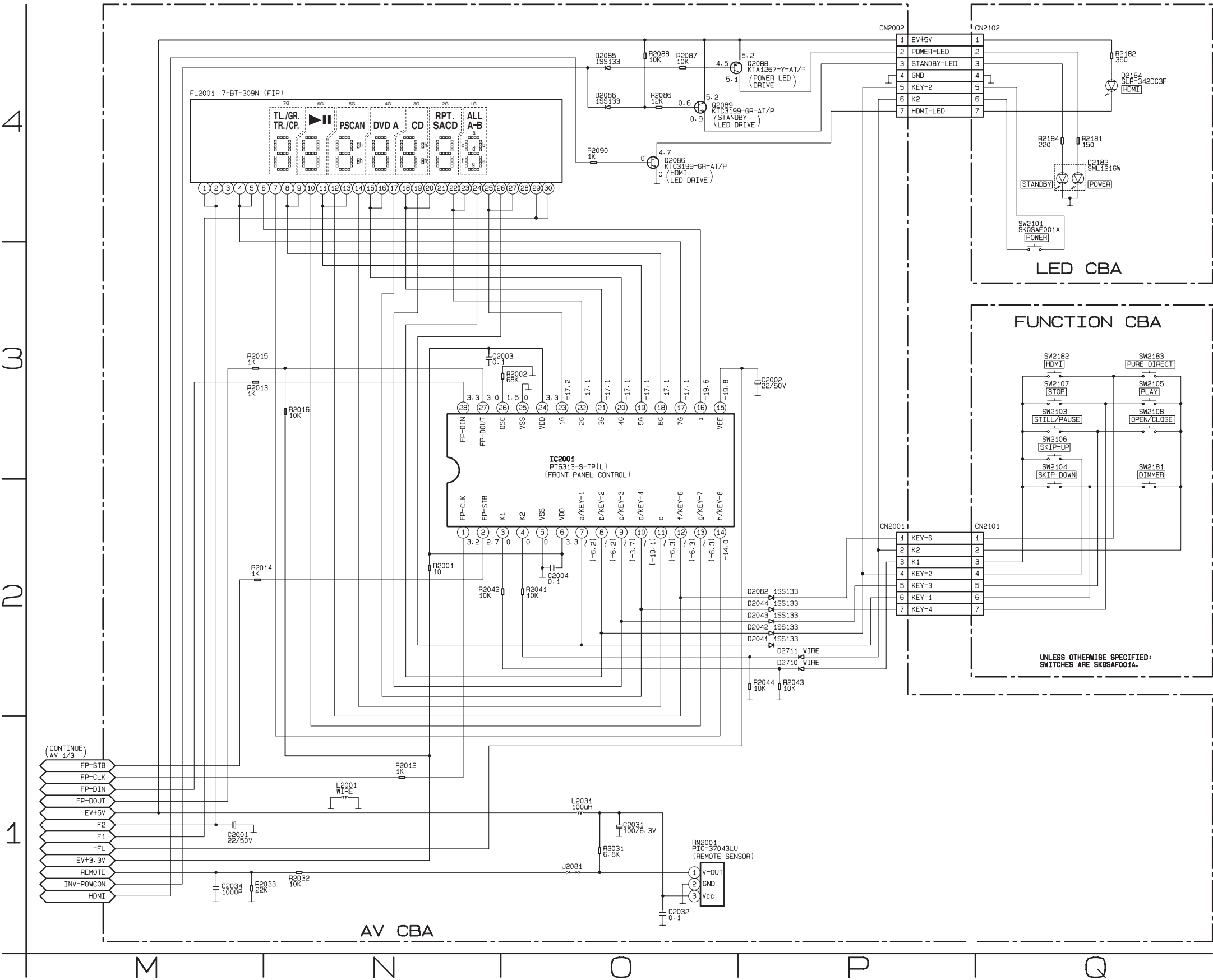
The voltage for parts in hot circuit is measured using
hot GND as a common terminal.



AV 2/3 Schematic Diagram



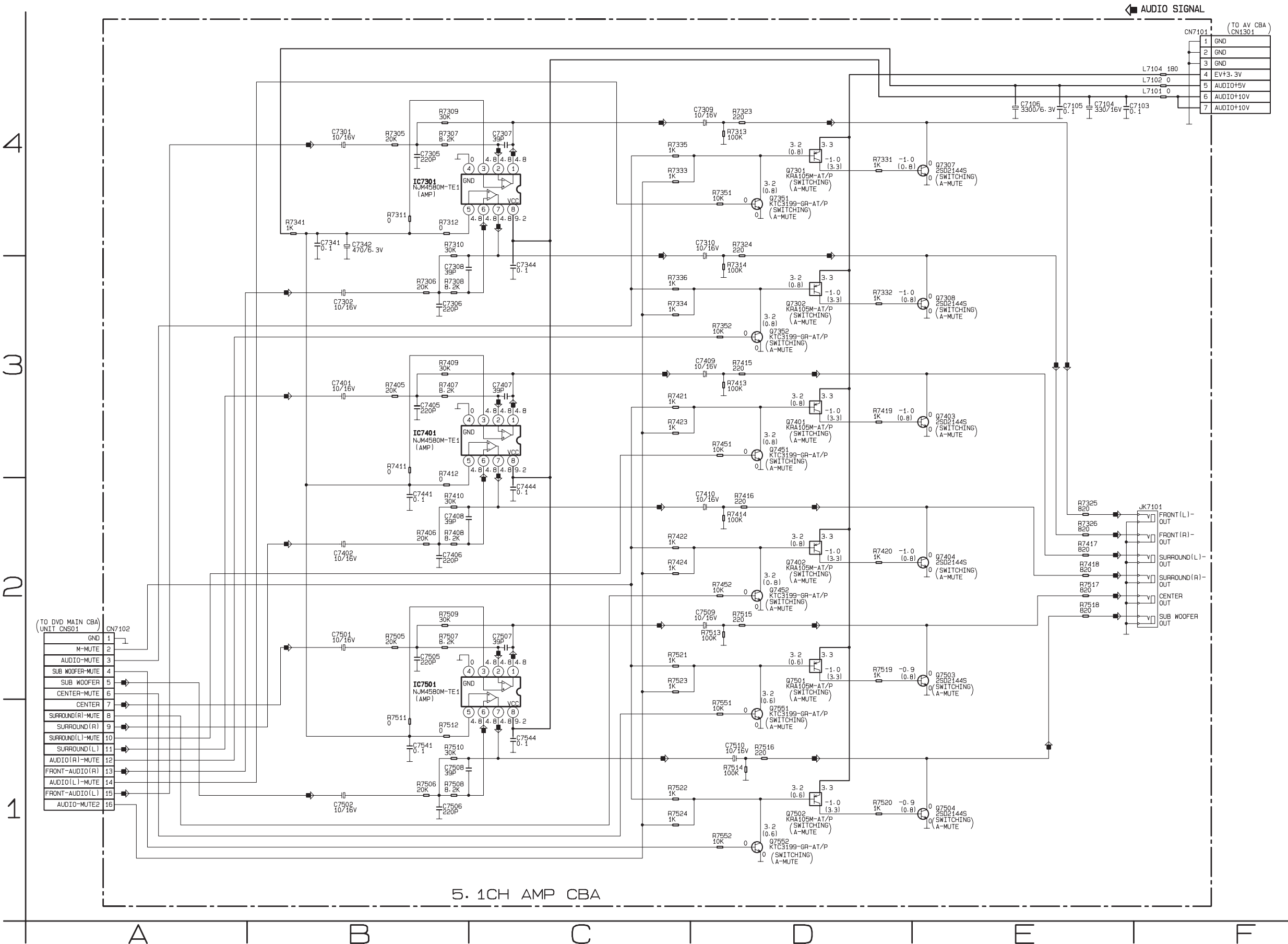
AV 3/3, LED & Function Schematic Diagram



FL2001 MATRIX CHART

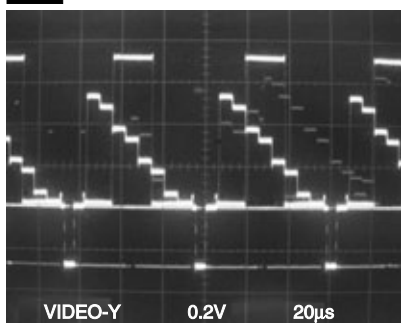
	7G	6G	5G	4G	3G	2G	1G
a	a	a	a	a	a	a	a
b	b	b	b	b	b	b	b
c	c	c	c	c	c	c	c
d	d	d	d	d	d	d	d
e	e	e	e	e	e	e	e
f	f	f	f	f	f	f	f
g	g	g	g	g	g	g	g
h	TL/GR.	▶	h	DVD	h	RPT.	ALL
i	TR./CP.	▬	PSCAN	A	CD	SACD	A-B

5.1ch Amp Schematic Diagram

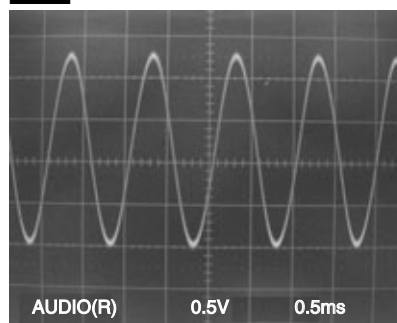


WAVEFORMS

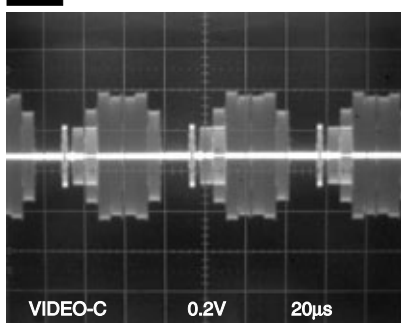
WF1 Pin 8 of CN1601



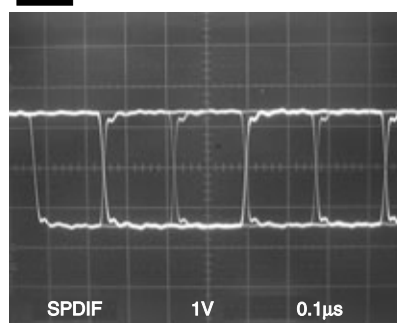
WF5 Pin 14 of CN1601



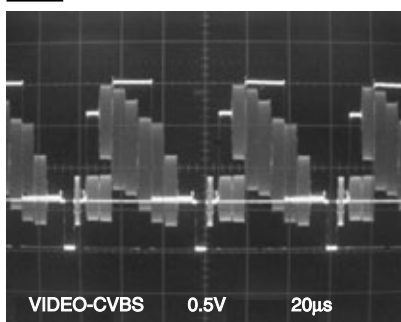
WF2 Pin 10 of CN1601



WF6 Pin 16 of CN1601



WF3 C1402 PLUS LEAD

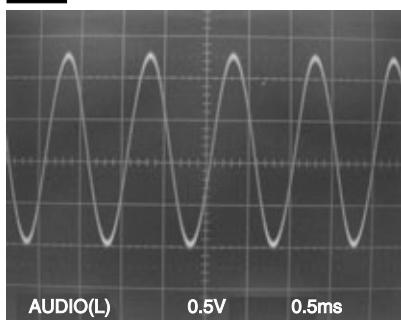


NOTE:

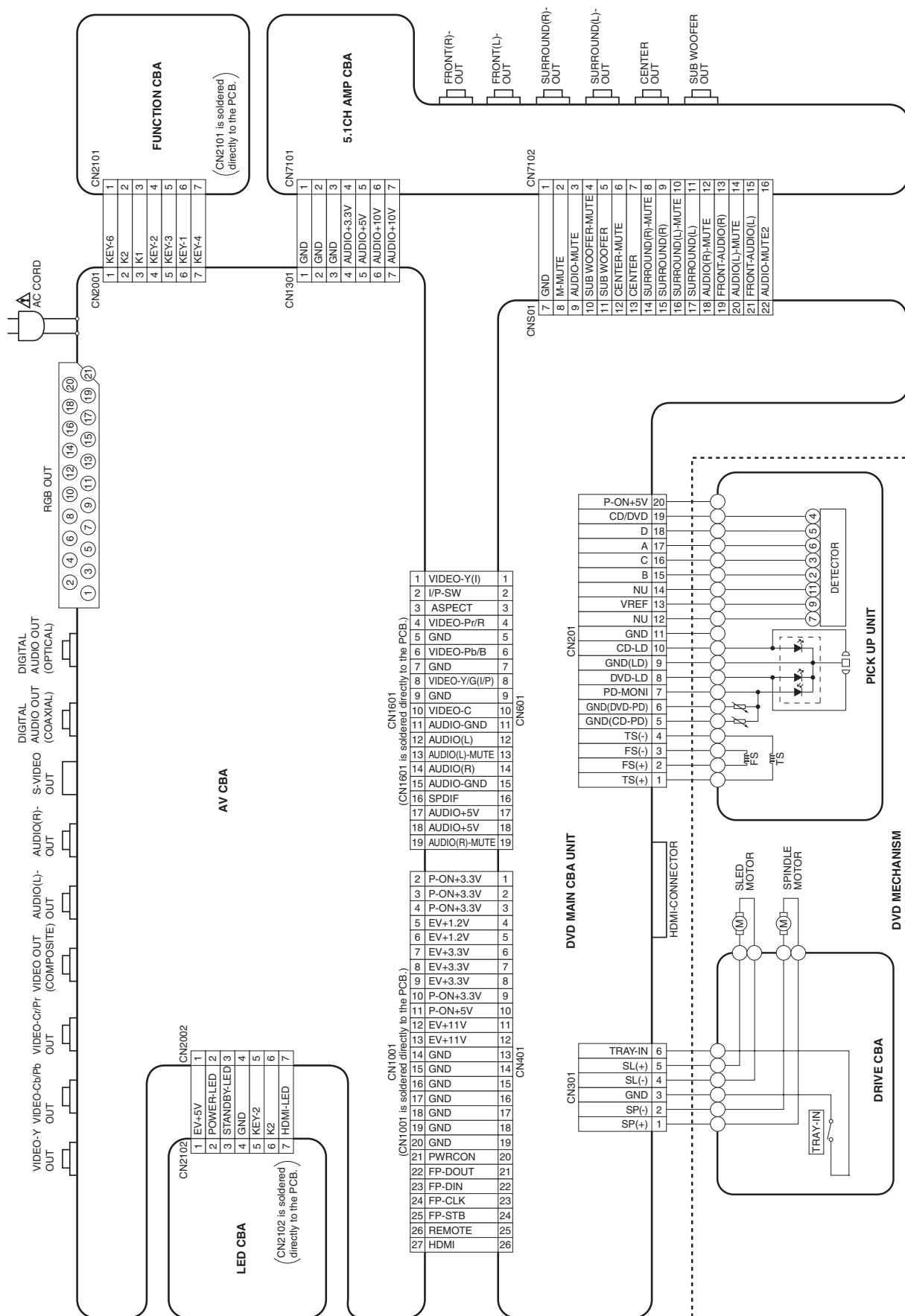
Input

DVD: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)
(WF1~WF6)

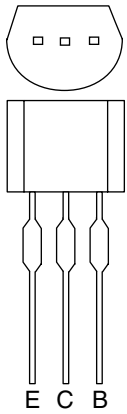
WF4 Pin 12 of CN1601



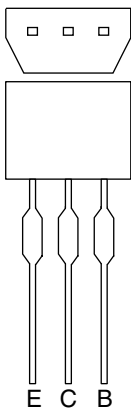
WIRING DIAGRAM



LEAD IDENTIFICATIONS

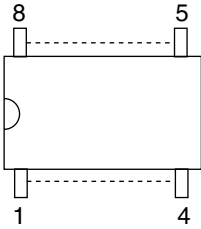


2SA1015-Y(TE2 F T)
2SA966-Y(TE6 F M)
KTA1266-Y-AT/P
KTA1273-Y-AT/P
KRC103M-AT/P
KTC3205-Y-AT/P

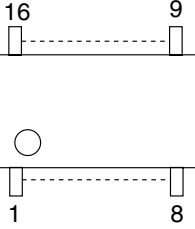


2SC1815-(GR,Y)(TE2 F T)
KTA1267-Y-AT/P
KTC3199-(GR,Y)-AT/P
KRA105M-AT/P
KRA110M-AT/P

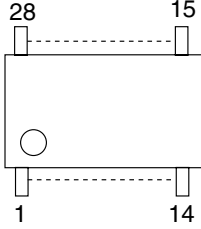
KIA4558P/P
UTC4558
MM1636XWRE
NJM4580M-TE1



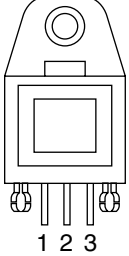
MM1637XVBE



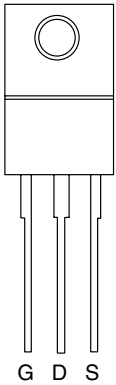
PT6313-S-TP(L)
SC16313G



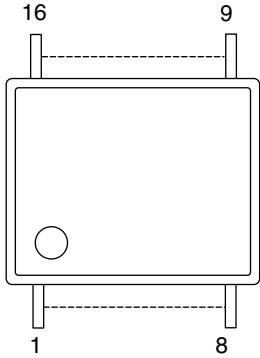
GP1FA513TZ0F



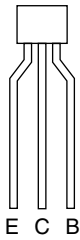
2SK3566



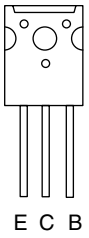
CD74HC4053PWR
MM74HC4053MTCX
TC74LVX4053FT(EL)



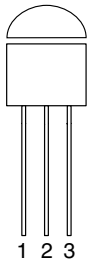
2SD2144S



KTD882

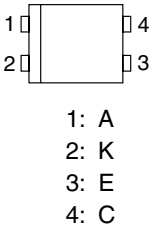


KIA2431AP-AT/P
TL432A-TA



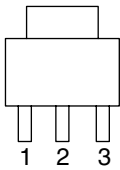
1: R
2: A
3: K

EL817B
EL817C
LTV-817C-F
PS2561A-1(W)



1: A
2: K
3: E
4: C

LD1117V
UZ1086L-ADJ



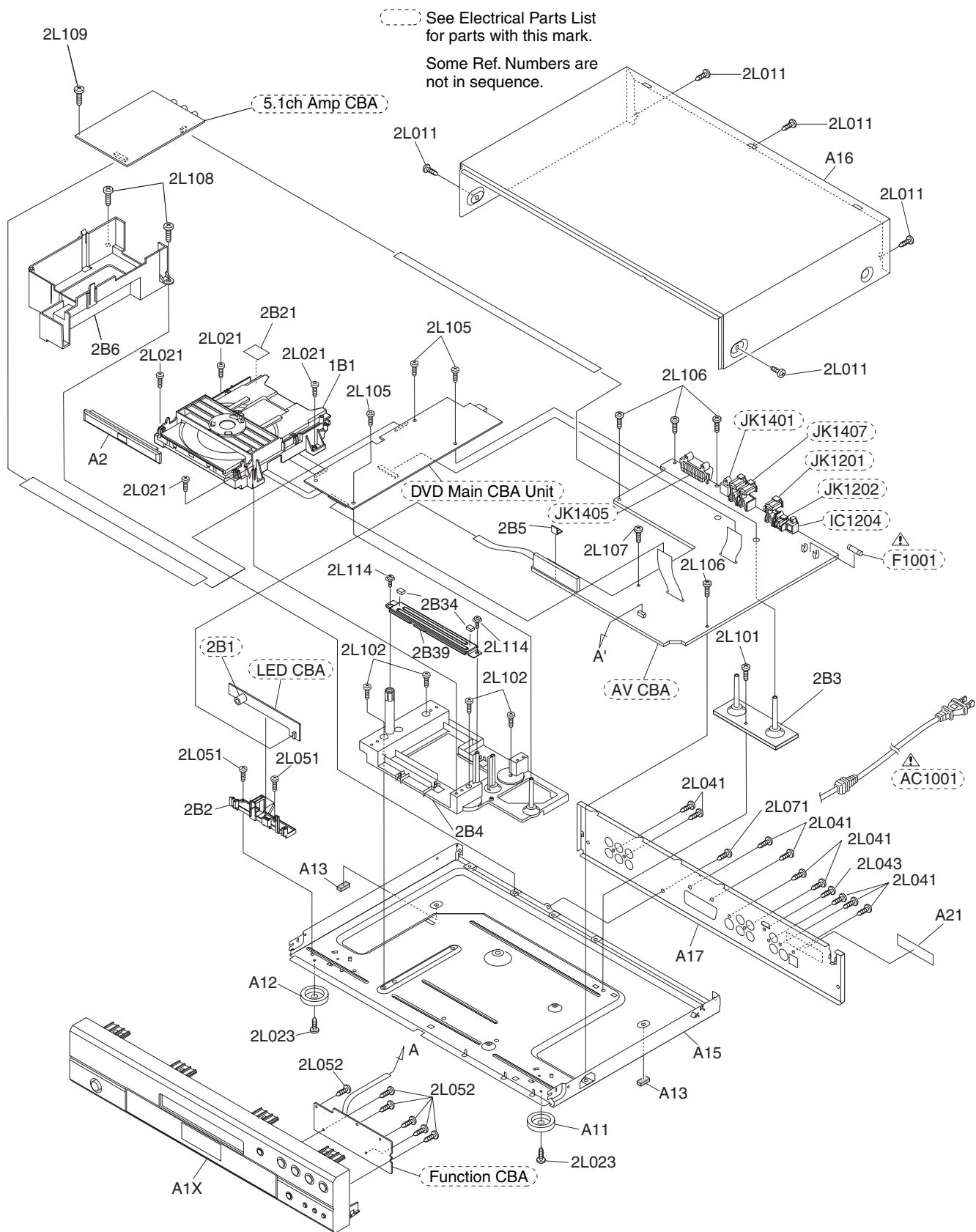
1: GND
2: Vout
3: Vin

Note:

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

EXPLODED VIEWS

Cabinet



DVD-1930 PARTS LIST OF EXPLODED VIEW

* 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.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

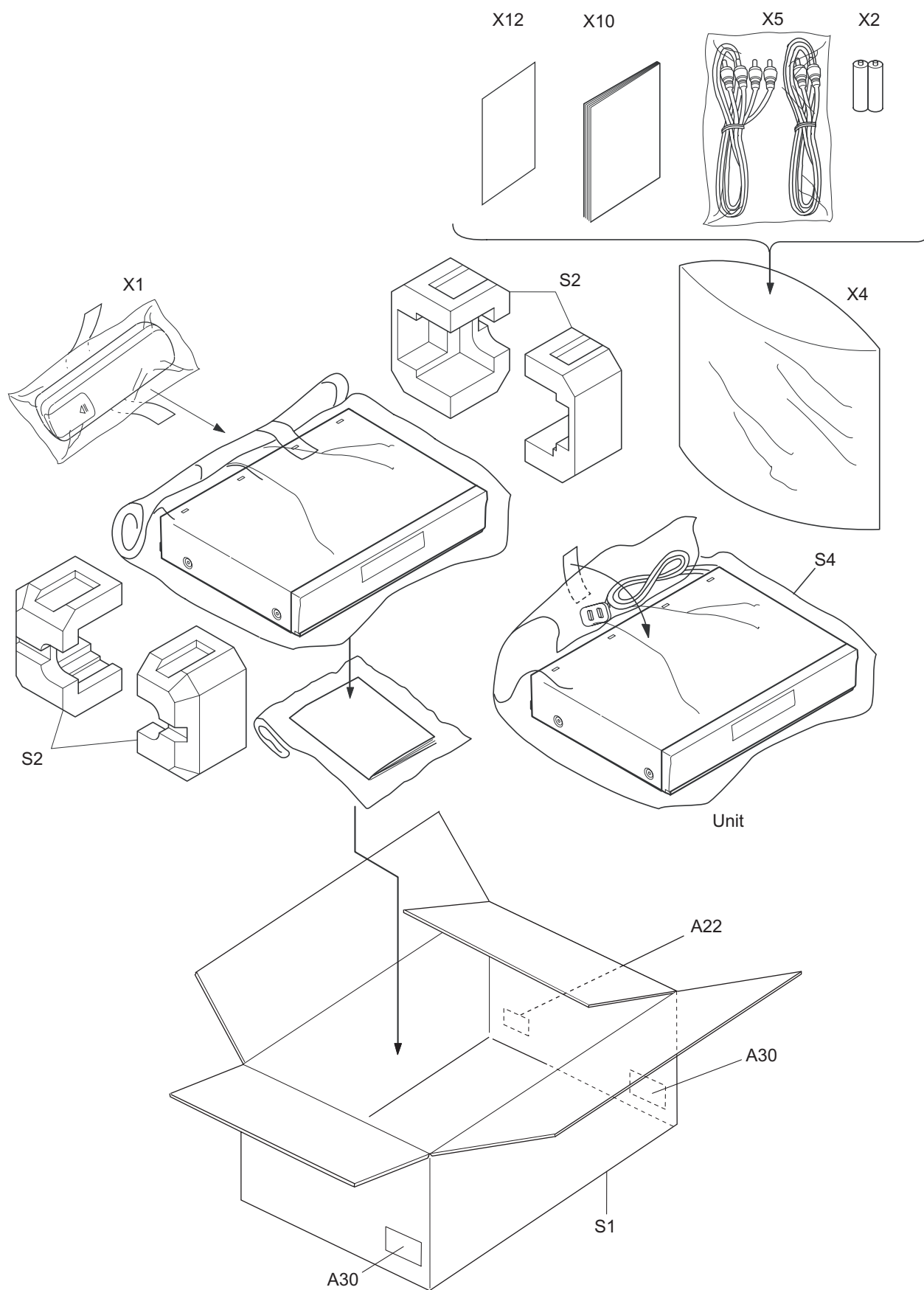
Note: The symbols in the column "Remarks" indicate the following destinations.

BK : DVD1930BKE2 model

SR : DVD1930SRE2 model

Ref. No.	nsp	Part No.	Part Name	Remark		Q'ty	New
		00D 9H2 6000 784	DVD MAIN CBA UNIT	N79D5KEP		1	*
		00D 9H2 6000 767	5.1CH CBA	1VSA13235		1	
		00D 9H2 6000 785	AV ASSEMBLY	1VSA15110		1	*
			AV CBA	-			
			FUNCTION CBA	-			
			LED CBA	-			
A1X		00D 9H2 6000 777	FRONT ASSEMBLY	1VM222723	for BK	1	*
A1X		00D 9H2 6000 778	FRONT ASSEMBLY	1VM222724	for SR	1	*
A2		00D 9H2 6000 645	TRAY PANEL ASSEMBLY	1VM422186	for BK	1	
A2		00D 9H2 6000 646	TRAY PANEL ASSEMBLY	1VM422188	for SR	1	
A11		00D 9H2 6000 566	INSULATOR ASSEMBLY (R)	1VM420732		1	
A12		00D 9H2 6000 567	INSULATOR ASSEMBLY (L)	1VM420733		1	
A13		00D 9H2 6000 323	FOOT	0VM406940A		2	
A15		00D 9H2 6000 611	CHASSIS	1VM120073		1	
A16		00D 9H2 6000 680	TOP COVER(BLACK)	1VM120074C	for BK	1	
A16		00D 9H2 6000 613	TOP COVER(SILVER)	1VM320865	for SR	1	
A17		00D 9H2 6000 779	REAR PANEL	1VM222501		1	*
A21			LABEL SERIAL NO.	-		1	
1B1		00D 9H2 6000 755	DVD MECHA E7 (D)	N79D0KVM		1	
2B2		-	POWER PCB HOLDER	0VM306801E		1	
2B3		00D 9H2 6000 756	MAIN PCB HOLDER	1VM320650		1	
2B4		00D 9H2 6000 780	LOADER BASE	0VM101367G		1	*
2B5		-	FIP SUPPORT ASSEMBLY	1VM424564		1	
2B6		00D 9H2 6000 757	JACK PCB HOLDER	0VM101376E		1	
2B21		-	LASER CAUTION LABEL	-		1	
2B34		00D 9H2 6000 769	CUSHION SPACER	1VM422273		2	
2B39		00D 9H2 6000 770	REINFORCE PLATE	1VM321919		1	
SCREWS							
2L011		-	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050	for BK	5	
2L011		-	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050	for SR	5	
2L021		-	SCREW P-TIGHT M3*12 BIND+	GBJP3120		4	
2L023		-	SCREW C-TIGHT M3X6 BIND HEAD+	GBJC3060		2	
2L041		-	SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080		9	
2L043		-	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050		1	
2L051		-	SCREW C-TIGHT M3X8 BIND HEAD+	GBJC3080		2	
2L052		-	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080		6	
2L071		-	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050		1	
2L101		-	SCREW C-TIGHT M3X6 BIND HEAD+	GBJC3060		1	
2L102		-	SCREW C-TIGHT M3X6 BIND HEAD+	GBJC3060		4	
2L105		-	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080		3	
2L106		-	SCREW C-TIGHT M3X6 BIND HEAD+	GBJC3060		4	
2L107		-	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080		1	
2L108		-	SCREW C-TIGHT M3X6 BIND HEAD+	GBJC3060		2	
2L109		-	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080		1	
2L114		-	SCREW TAP TIGHT WASHER+ P-TIGHT	GCJP3080		2	

Packing



DVD-1930 PARTS LIST OF PACKING & ACCESSORIES

* 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.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

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

BK : DVD1930BKE2 model

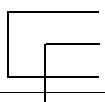
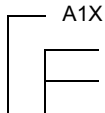
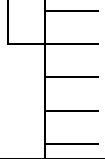
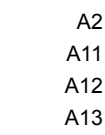
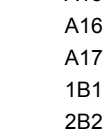
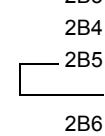
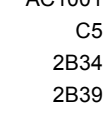
SR : DVD1930SRE2 model

	Ref. No.	nsp	Part No.	Part Name	Remark		Q'ty	New
	A22			BAR CODE LABEL	-	for BK	1	
	A22			BAR CODE LABEL	-	for SR	1	
	A30			CONTROL LABEL	-	for BK	2	
	A30			CONTROL LABEL	-	for SR	2	
	S1		00D 9H2 6000 781	GIFT BOX CARTON	1VM323343	for BK	1	*
	S1		00D 9H2 6000 782	GIFT BOX CARTON	1VM323344	for SR	1	*
	S2		00D 9H2 6000 619	STYROFOAM	0VM101298B		1	
	S4		00D 9H2 6000 693	SET BAG	0DM400731D		1	
	X1		00D 9H2 6000 653	REMOTE CONTROL UNIT	NA834UD		1	
	X2		-	DRY BATTERY R6UW/2S	XB0M311MS001		2	
	X2		-	DRY BATTERY ES-GR6M-C	XB0M571GLP01		2	
	X2		-	DRY BATTERY R6P/2S	XB0M451T0001		2	
	X4		-	ACCESSORY BAG	0VM416059		1	
	X5		00D 9H2 6000 226	AV CORD WPZ0102TM015	WPZ0102TM015		1	
	X5		00D 9H2 6000 762	AV CORD RCA(M*2)TO RCA(M*2)	WPZ0102LTE01		1	
	X10		00D 9H2 6000 783	OWNERS MANUAL	1VMN23183		1	*
	X12		-	SERVICE CENTER SHEET	1VM423684		1	

DOCUMENTS FOR WEEE

Details of Recycle parts

※ You have to remove the parts that marked "WEEE Mark ◆" when the recycling processing.

Ref. No.	WEEE Mark	Part Name	Material	Q'ty
	◆	DVD MAIN CBA UNIT	Complex	1
	◆	5.1CH CBA	Complex	1
	◆	AV ASSEMBLY		
	◆	AV CBA	Complex	1
	◆	FUNCTION CBA	Complex	1
	◆	LED CBA	Complex	1
		FRONT ASSEMBLY		
		FRONT PANEL	PS	1
		FRONT COVER	AL	1
		EARTH PLATE (TOP)	STEEL	2
		EARTH PLATE	STEEL	2
		MODE BUTTON	PS	1
		DISPLAY WINDOW	PMMA	1
	◆	POWER BUTTON	ABS+AL	1
		LED LENS	PMMA	1
		BRAND BADGE	AL	1
		TRAY PANEL ASSEMBLY	PS	1
		INSULATOR ASSEMBLY (R)	PS+URETHANE	1
		INSULATOR ASSEMBLY (L)	PS+URETHANE	1
		FOOT	URETHANE	2
		CHASSIS	STEEL	1
		TOP COVER	STEEL+PAINT	1
		REAR PANEL	STEEL	1
	◆	DVD MECHA E7 HDMI (F2)	Complex	1
		POWER PCB HOLDER	PS	1
		MAIN PCB HOLDER	PS	1
		LOADER BASE	PS	1
		FIP SUPPORT ASSEMBLY		1
		FIP SUPPORT	PS	1
		JACK PCB HOLDER	PS	1
	◆	AC CORD	Complex	1
	◆	ELECTROLYTIC CAPACITOR	Complex	1
		CUSHION SPACER	URETHANE	2
		REINFORCE PLATE E6A60UD	STEEL	1
SCREWS				
2L011		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	STEEL	5
2L011		SCREW C-TIGHT M3X5 BIND HEAD +	STEEL	5
2L021		SCREW P-TIGHT M3*12 BIND+	STEEL	4
2L023		SCREW C-TIGHT M3X6 BIND HEAD+	STEEL	2
2L041		SCREW B-TIGHT M3X8 BIND HEAD+	STEEL	9
2L043		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	STEEL	1
2L051		SCREW C-TIGHT M3X8 BIND HEAD+	STEEL	2
2L052		SCREW P-TIGHT M3X8 BIND HEAD+	STEEL	6
2L071		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	STEEL	1
2L101		SCREW C-TIGHT M3X6 BIND HEAD+	STEEL	1
2L102		SCREW C-TIGHT M3X6 BIND HEAD+	STEEL	4
2L105		SCREW P-TIGHT M3X8 BIND HEAD+	STEEL	3
2L106		SCREW C-TIGHT M3X6 BIND HEAD+	STEEL	4
2L107		SCREW P-TIGHT M3X8 BIND HEAD+	STEEL	1
2L108		SCREW C-TIGHT M3X6 BIND HEAD+	STEEL	2
2L109		SCREW P-TIGHT M3X8 BIND HEAD+	STEEL	1
2L114		SCREW TAP TIGHT WASHER+ P-TIGHT	STEEL	2

Exploded view

Cabinet

