DENON

For Europe model

Ver. 2

Please refer to the MODIFICATION NOTICE.

SERVICE MANUAL

MODEL DVD-1920

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.

X0257 V.02 DE/CDM 0509

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SPECIFICATIONS

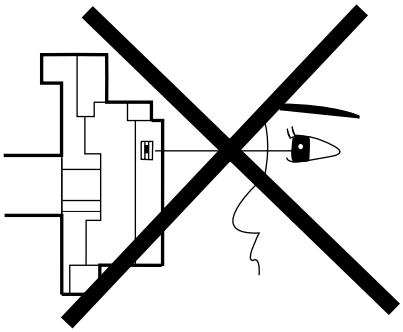
Item	Conditions	Unit	Nominal	Limit	
1. Video Output	75 Ω load	Vpp	1.0	± 0.1	
2. Optical Digital Out		dBm	-18		
3. Audio (PCM)					
3-1. Output Level	1 kHz, 0 dB, 47k Ω load	Vrms	2.0		
3-2. S/N	47k Ω load	dB	115		2
3-3. Freq. Response					
DVD	fs = 48 kHz ± 0.5 dB, 47k Ω load	Hz	20 ~ 22 k		
CD	fs = 44.1 kHz ± 0.5 dB, 47k Ω load	Hz	20 ~ 20 k		
3-4. THD+N					
DVD	1 kHz, 0 dB, 47k Ω load	%	0.004		2
CD	1 kHz, 0 dB, 47k Ω load	%	0.004		

Notes:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: 200 - 240 V, 50 Hz
3. Ambient Temperature: 5 °C - 40 °C

LASER BEAM SAFETY PRECAUTIONS

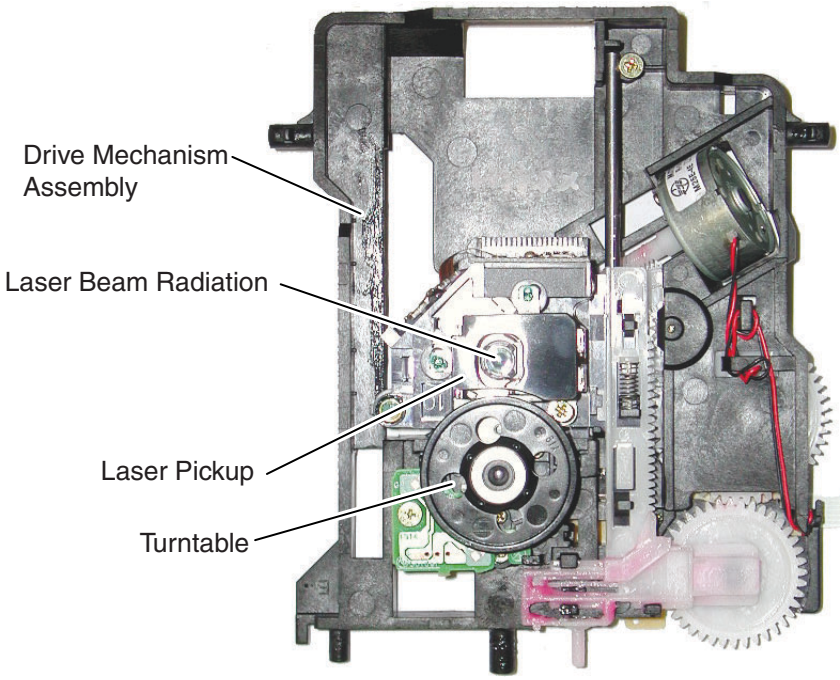
This DVD player uses a pickup that emits a laser beam.



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.



Location: Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced**.**

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1)Wires covered with PVC tubing

2)Double insulated wires

3)High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1)Insulation tape

2)PVC tubing

3)Spacers

4)Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure

1)Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector. (Discard it.)

2)Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

3)Align the lengths of the wires to be connected. Insert the wires fully into the connector.

4)Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

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	≥ 3 mm(d) ≥ 6 mm(d')

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

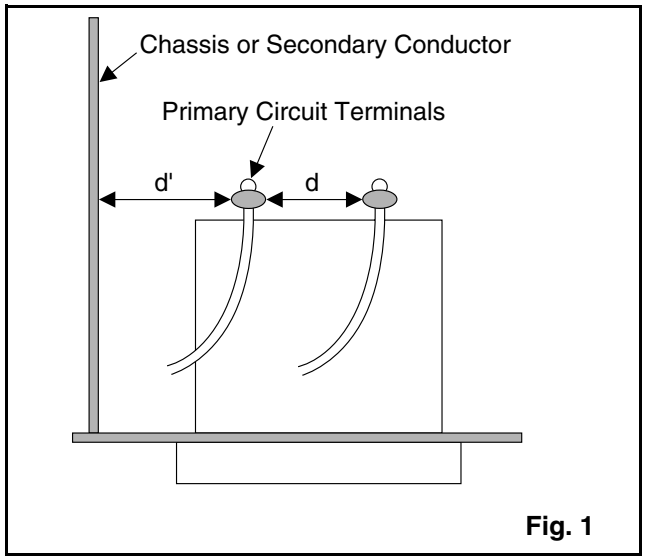


Fig. 1

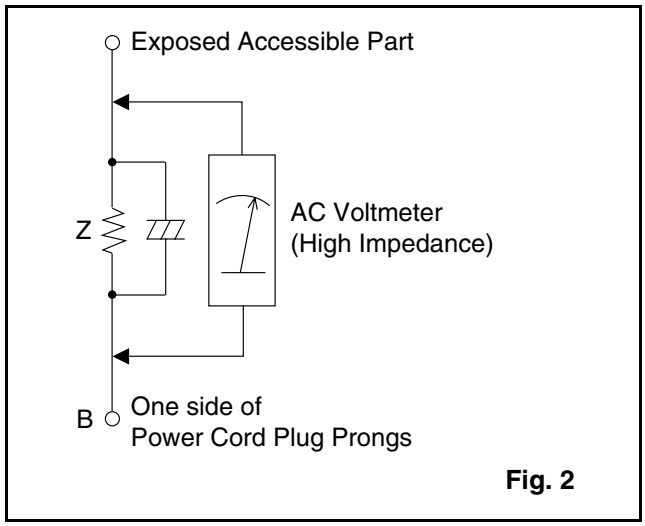


Fig. 2

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.

Table 2: Leakage current ratings for selected areas

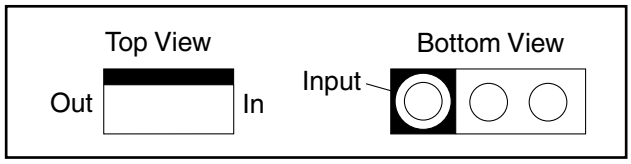
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
200 to 240 V	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
	50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

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

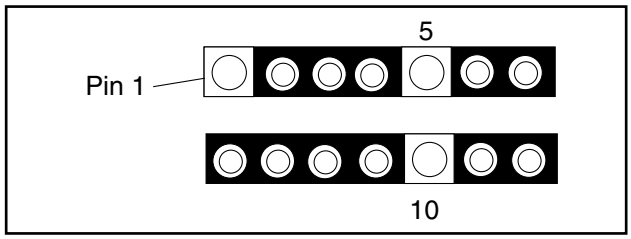
STANDARD NOTES FOR SERVICING

Circuit Board Indications

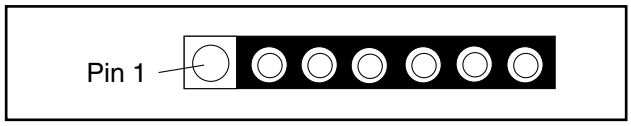
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



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

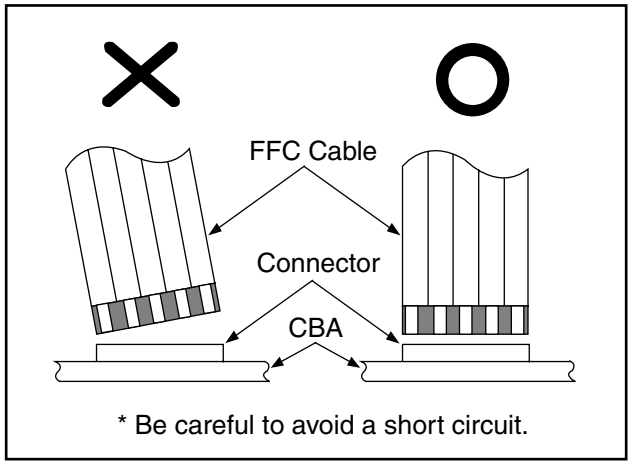


3. The 1st pin of every male connector is indicated as shown.



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)

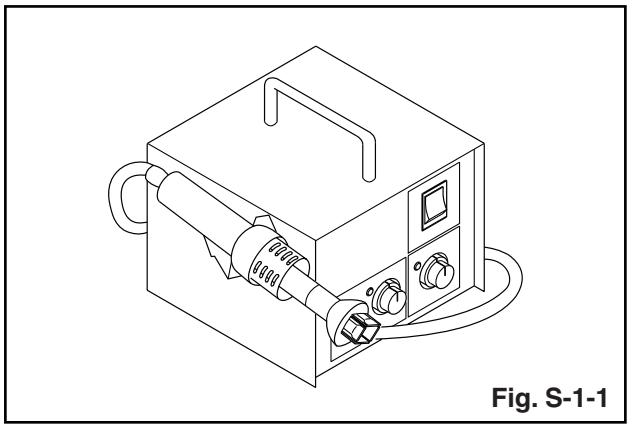


Fig. S-1-1

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.

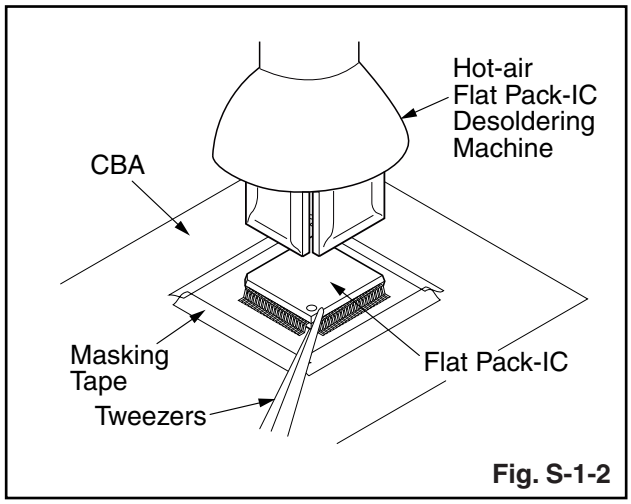


Fig. S-1-2

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)

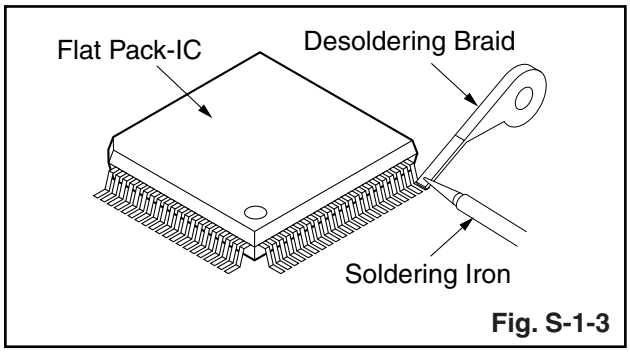


Fig. S-1-3

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)

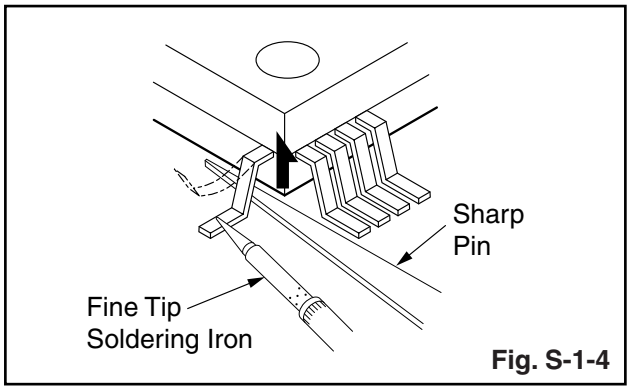


Fig. S-1-4

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.

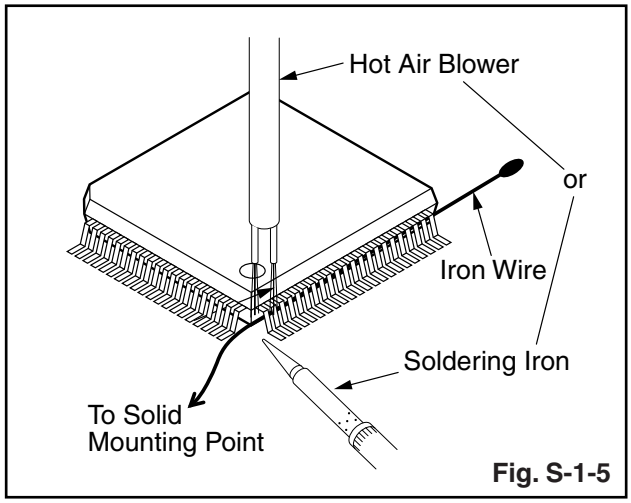


Fig. S-1-5

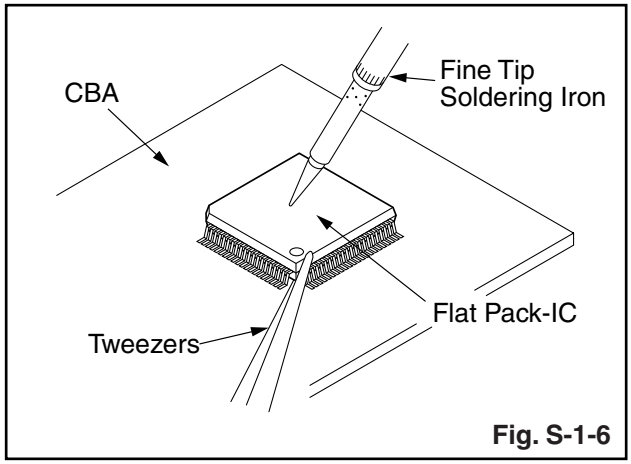


Fig. S-1-6

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.

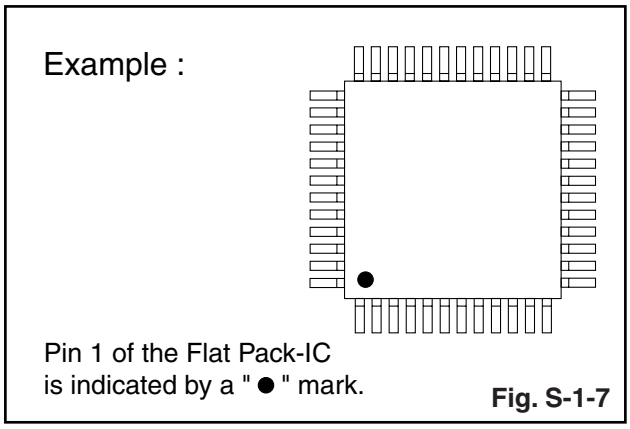


Fig. S-1-7

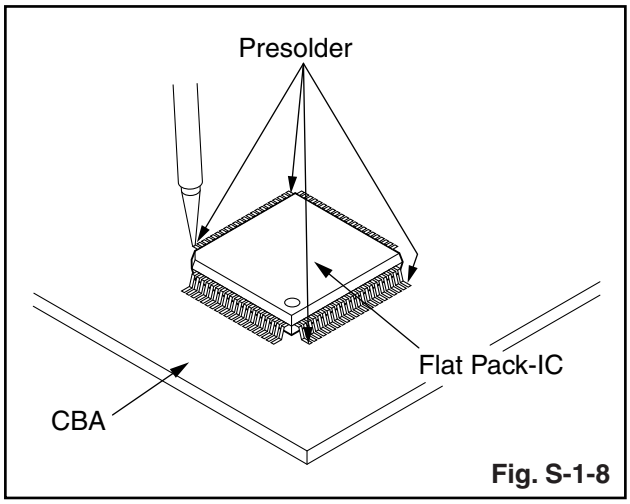


Fig. S-1-8

Instructions for Handling Semi-conductors

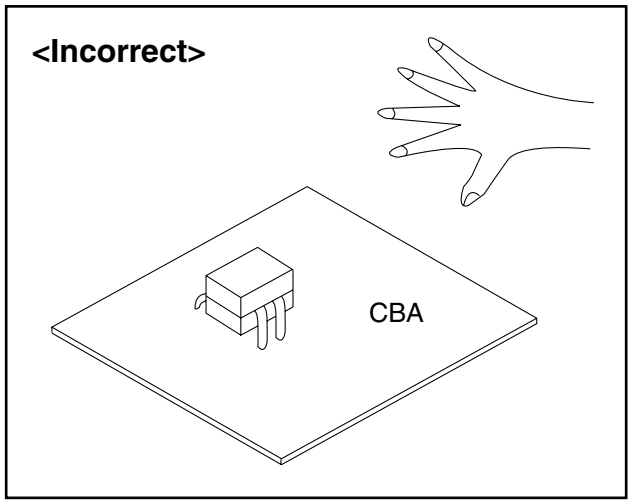
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

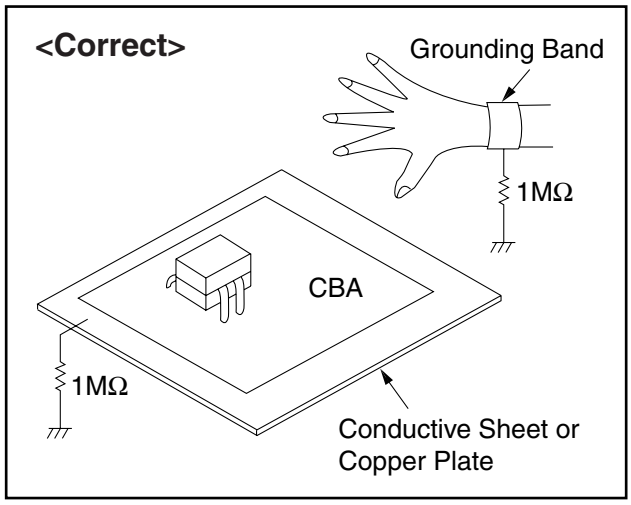
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) 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 MΩ) 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.

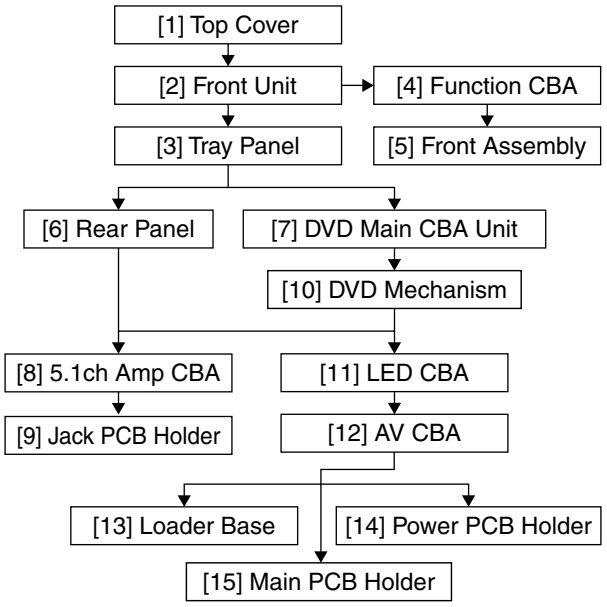




CABINET DISASSEMBLY INSTRUCTIONS

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	*2(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]	Rear Panel	D4	9(S-3), (S-4), (S-5)	---
[7]	DVD Main CBA Unit	D5	2(S-6A), (S-6B), *CN201, *CN301, *CN401, *CN601, *CNS01	2
[8]	5.1ch Amp CBA	D5	(S-6), 2(L-5), *CN7101	---
[9]	Jack PCB Holder	D5	2(S-7)	---
[10]	DVD Mechanism	D5 D6	4(S-8)	2 3
[11]	LED CBA	D7	*CN2102	---
[12]	AV CBA	D7	4(S-9), (S-10)	---
[13]	Loader Base	D8	4(S-11)	---
[14]	Power PCB Holder	D8	2(S-12)	---
[15]	Main PCB Holder	D8	(S-13)	---
		↓ (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-6A), (S-7), (S-8), (S-9), (S-10), (S-11), (S-12), (S-13)	0.45 ± 0.05 N·m
(S-6B)	0.38 ± 0.04 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 two Locking Tabs (L-1), then release two Locking Tabs (L-2).
   2) Release three Locking Tabs (L-3).
   3) Disconnect connector CN2001 and remove the Front Assembly.
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), (CN601) and (CNS01). Remove two screws (S-6A) and (S-6B), 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)

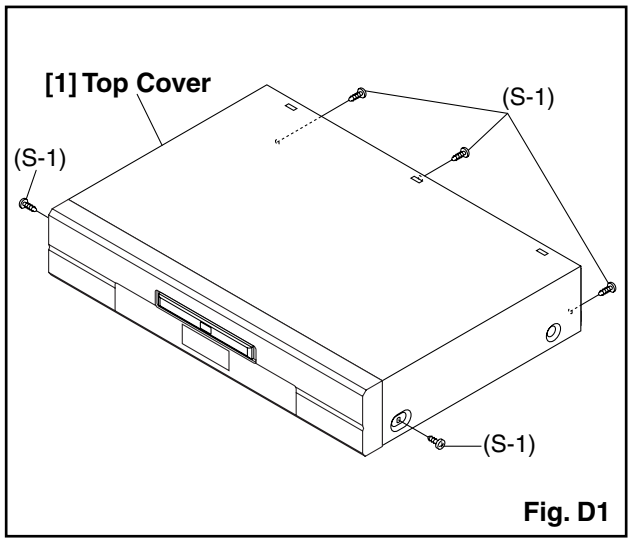


Fig. D1

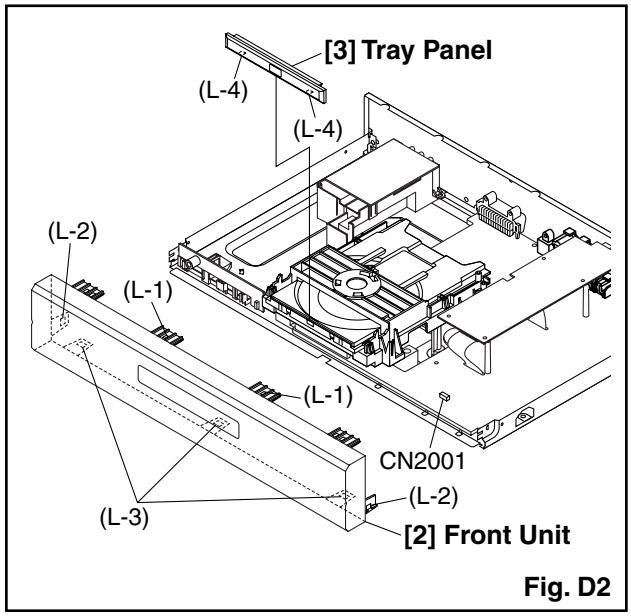


Fig. D2

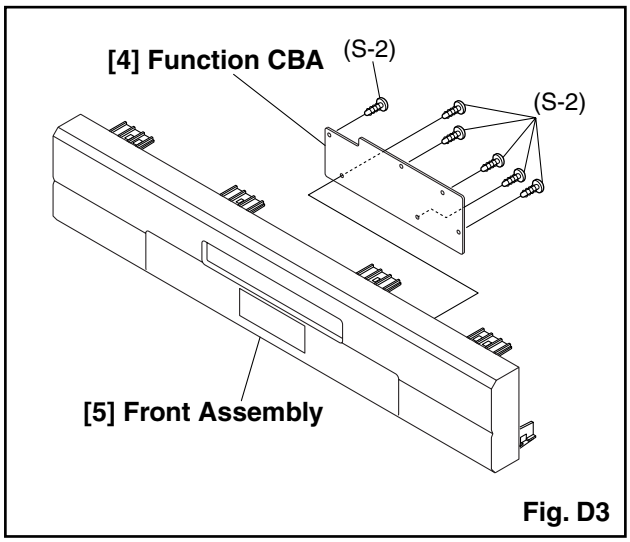


Fig. D3

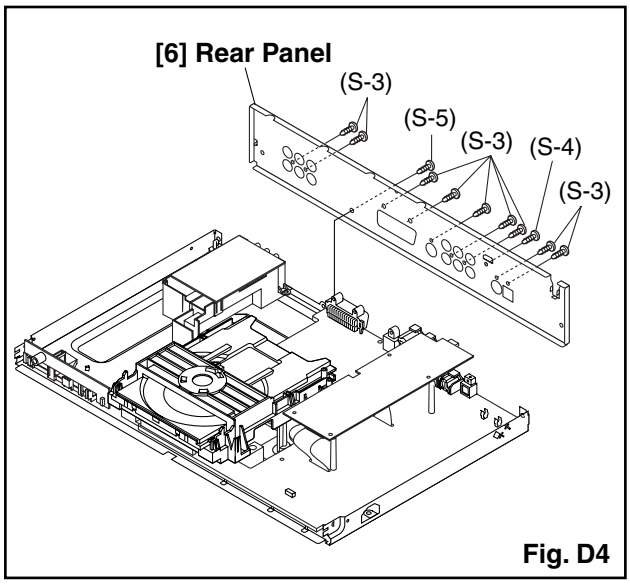


Fig. D4

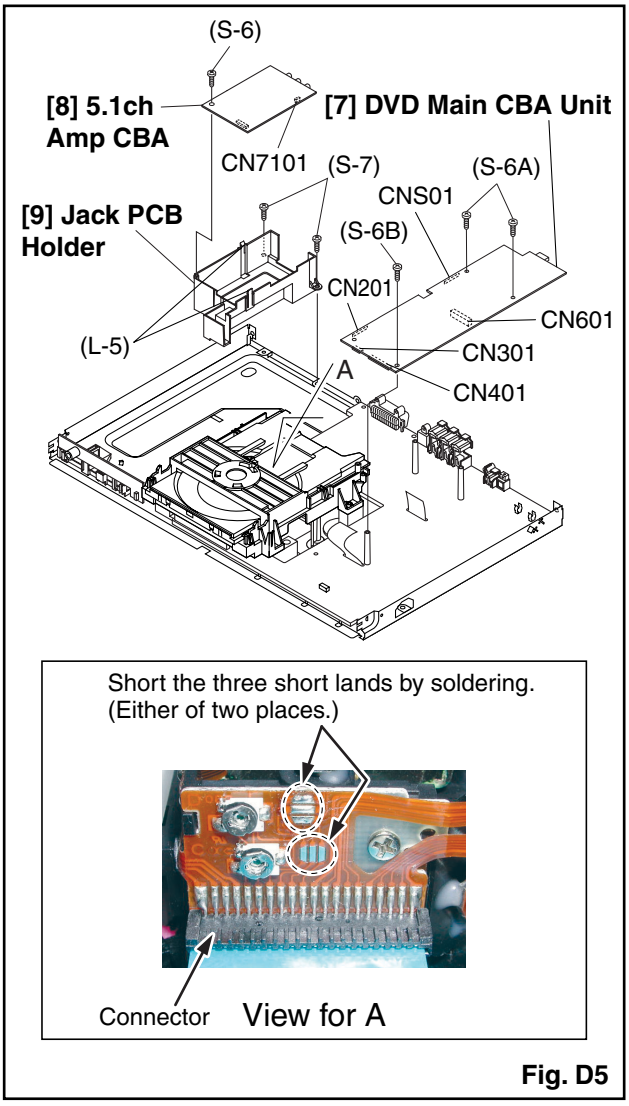


Fig. D5

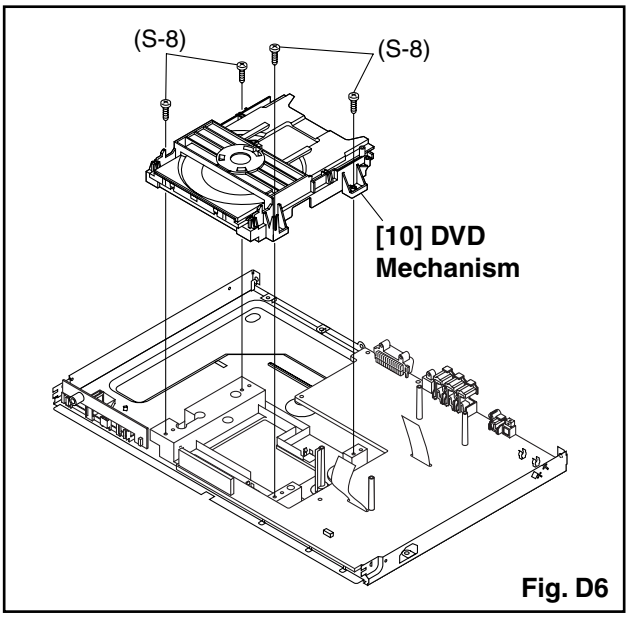


Fig. D6

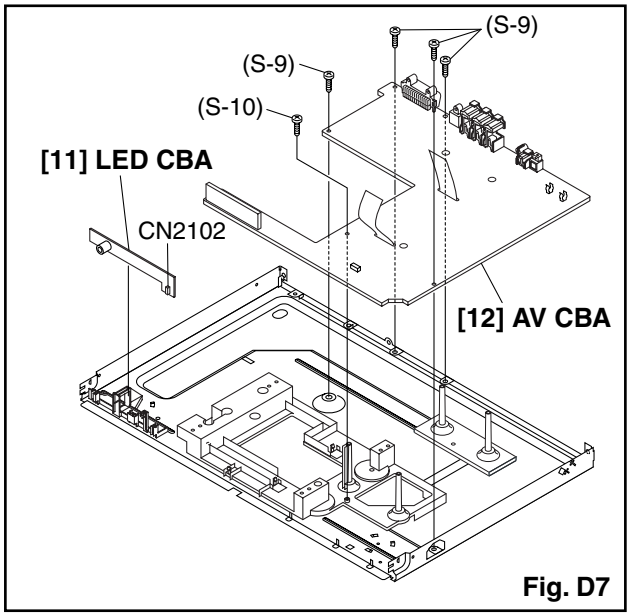


Fig. D7

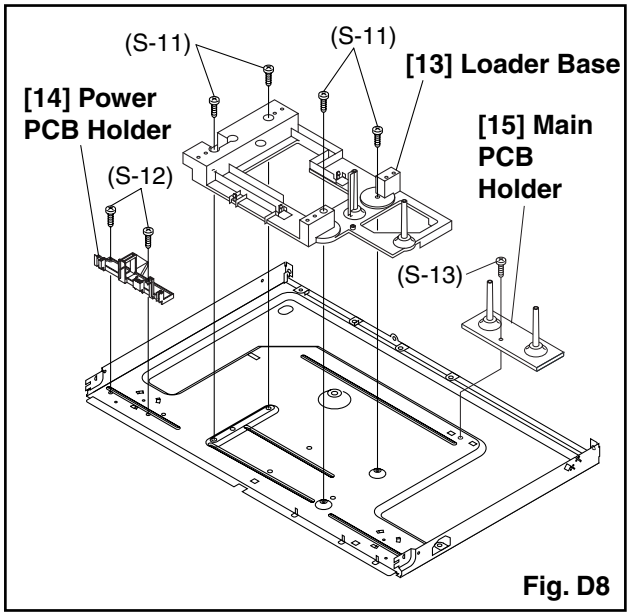
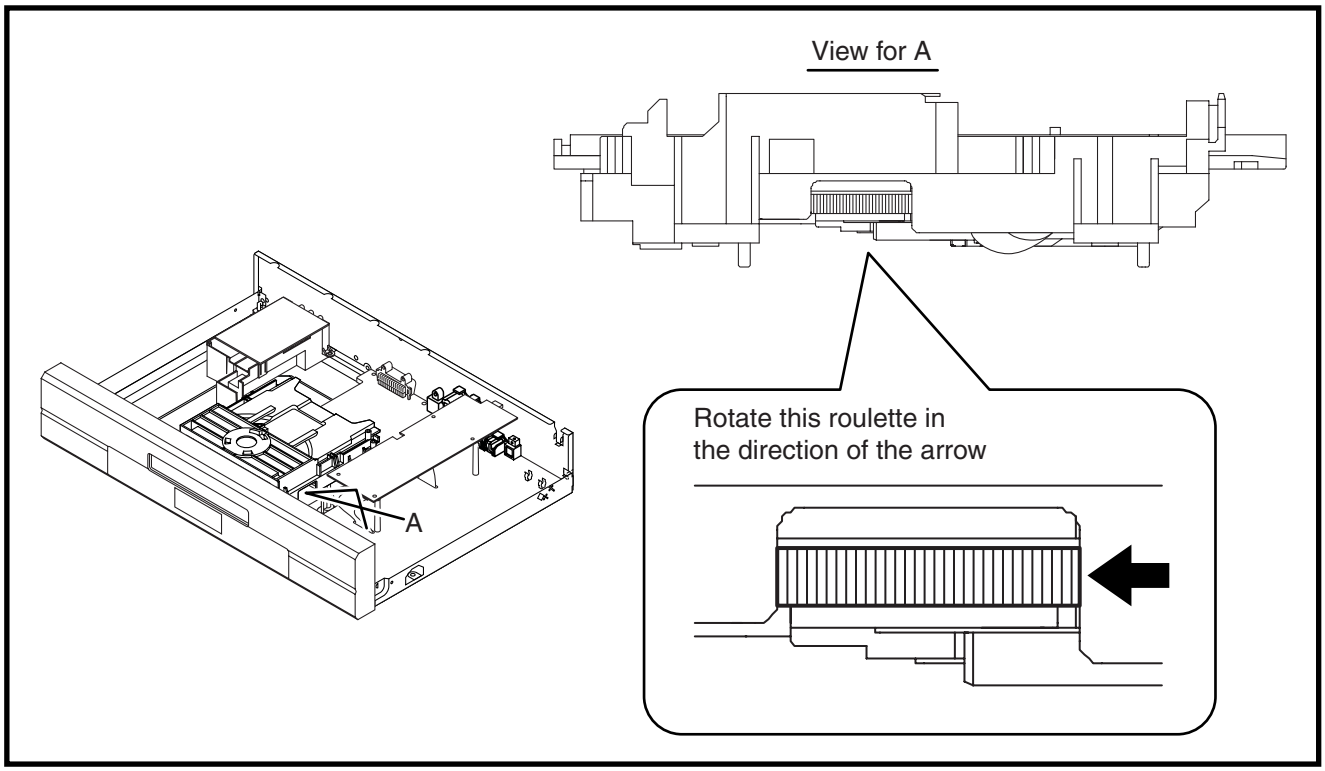


Fig. D8

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.

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

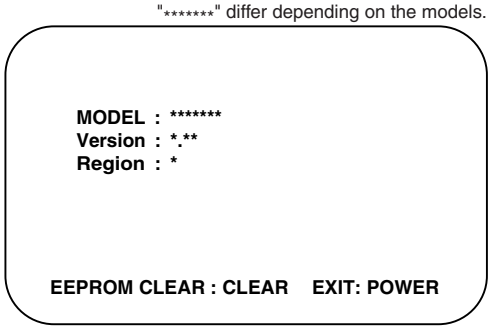


Fig. a

2. Press [CLEAR] button on the remote control unit.
   Fig. b appears on the screen.

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

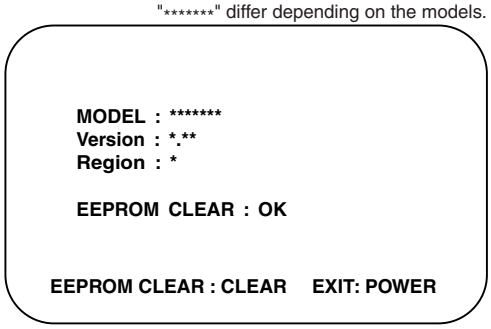


Fig. b

   When “OK” appears on the screen, the factory default will be set.

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.

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

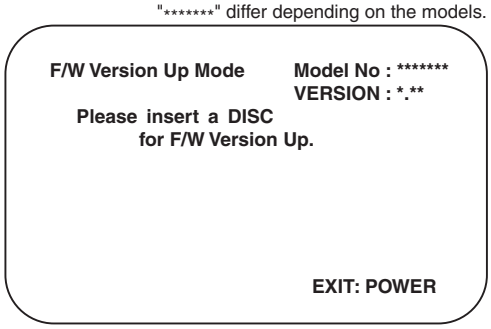


Fig. a Version Up Mode Screen

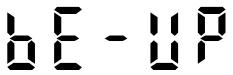


Fig. b VFD in Version Up Mode

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.

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

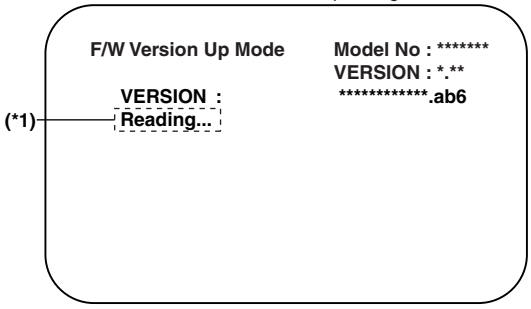


Fig. c Programming Mode Screen

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).

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

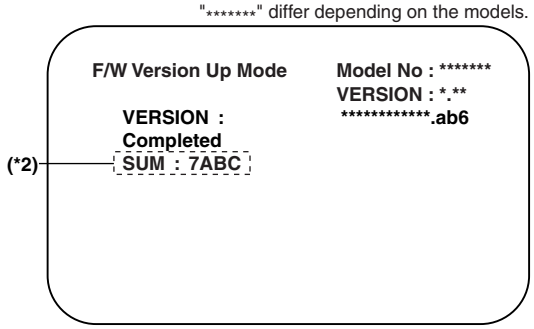


Fig. e Completed Program Mode Screen

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.

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

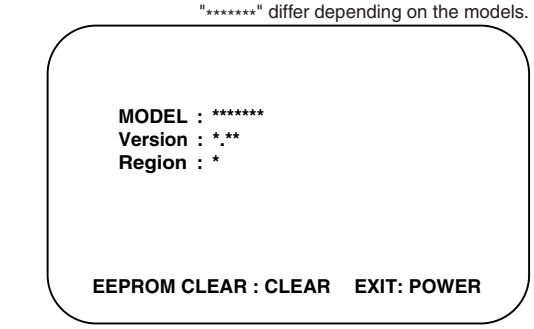


Fig. g

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

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

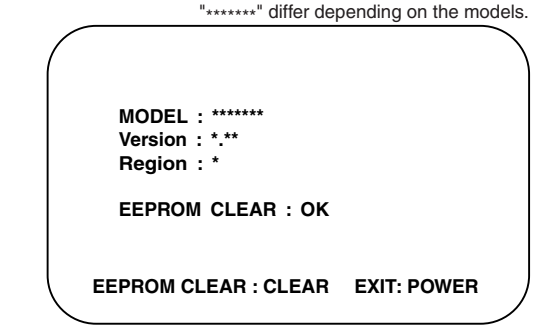


Fig. h

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

The power cannot be turned on.

↓

Is the fuse normal? — No → See FLOW CHART No.2 <The fuse blows out.>

↓ Yes

Is normal state restored when once unplugged power cord is plugged again after several seconds? — No → Check if there is any leak or short-circuiting on the primary circuit component, and service it if defective. (Q1003, Q1008, Q1001, T1001, D1001, D1002, D1004, D1005, D1011, C1003, C1005)

↓ Yes

Is the EV +3.3V line voltage normal? — No → (same as above)

↓ Yes

Check each rectifying circuit of the secondary circuit and service it if defective.

FLOW CHART NO.2

The fuse blows out.

↓

Check the presence that the primary component is leaking or shorted and service it if defective.

Check the presence that the rectifying diode or circuit is shorted in each rectifying circuit of secondary side, and service it if defective.

↓

After servicing, replace the fuse.

FLOW CHART NO.3

When the output voltage fluctuates.

↓

Does the photo coupler circuit on the secondary side operate normally? — No → Check IC1001, IC1006, D1048 and their periphery, and service it if defective.

↓ Yes

Check IC1001, D1012, D1024 and their periphery, and service it if defective.

FLOW CHART NO.4

When buzz sound can be heard in the vicinity of power circuit.

↓

Check if there is any short-circuit on the rectifying diode and the circuit in each rectifying circuit of the secondary side, and service it if defective. (D1003, D1006, D1008, D1016, D1030, IC1004, Q1002, Q1004, Q1005, Q1011, Q1014, Q1020)

FLOW CHART NO.5

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.6

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.7

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 R1067.

FLOW CHART NO.8

EV+5V is not outputted.

↓

Is EV+11V outputted normally? — No → Refer to "FLOW CHART NO.5" <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.

△2 **FLOW CHART NO.9**

EV+1.2V is not outputted.

↓

Is 2.5V voltage supplied to Pin(3) of IC1003? — No → Check D1006, L1008, C1014 and the periphery circuit, and service it if defective.

↓ Yes

Replace IC1003.

FLOW CHART NO.10

EV+3.3V is not outputted.

↓

Is 3.3V voltage supplied to the collector of Q1020? — No → Check D1008, C1007, C1038, L1007 and the periphery circuit, and service it if defective.

↓ Yes

Is EV+11V outputted normally? — No → Refer to "FLOW CHART NO.5" <P-ON+11V (EV+11V) is not outputted.>

↓ Yes

Is the "H" signal inputted into the base of Q1020? — No → Check R1050 and the periphery circuit, and service it if defective.

↓ Yes

Replace Q1020.

FLOW CHART NO.11

The fluorescent display tube does not light up.

↓

Is 3.3V voltage supplied to Pins(6,24) of IC2001? — No → Check the EV+3.3V line and service it if defective.

↓ Yes

Is the voltage of approximately -20V supplied to Pin(15) of IC2001? — No → Refer to "FLOW CHART NO.12" <-FL is not outputted.>

↓ Yes

Is there 500kHz oscillation at Pin(26) of IC2001? — No → Check R2002, IC2001 and their periphery, and service it if defective.

↓ Yes

Are the filament voltage supplied between Pins(1, 2) and Pins(29, 30) of the fluorescent display tube? And the negative voltage applied between these pins and GND? — No → Is -15V voltage supplied to collector of Q1005? — No → Check D1016, D1017, T1001, and their periphery, and service it if defective.

↓ Yes

Is the "H" signal inputted to base of Q1016? — No → Check PWRCON line, and service it if defective.

↓ Yes

Check Q1015, Q1016, D1055, and their periphery, and service it if defective.

↓ Yes

Replace the fluorescent display tube.

FLOW CHART NO.12

-FL is not outputted.

Is F1(-15V) outputted normally?
- No → Refer to "FLOW CHART NO.11" <The fluorescent display tube does not light up.>
- Yes ↓

Is approximately -22V voltage supplied to the anode of D1003?
- No → Check D1003 and periphery circuit, and service it if defective.
- Yes ↓

Is approximately -20V voltage outputted to the collector of Q1013?
- No → Check Q1013 and periphery circuit, and service it if defective.
- Yes ↓

Check if there is any leak or short-circuit on the loaded circuit, and service it if defective.

FLOW CHART NO.13

The key operation is not functioning.

Are the contact point and the installation state of the key switches (SW2101, SW2103-2108, SW2181-2183) normal?
- No → Re-install the switches (SW2101, SW2103-2108, SW2181-2183) correctly or replace the poor switch.
- Yes ↓

When pressing each switches (SW2101, SW2103-2108, SW2181-2183), do the voltage of each pin of IC2001 (shown below) increase?
SW2103, 2104, 2106, 2107, 2182: IC2001 3PIN
SW2101, 2105, 2108, 2181, 2183: IC2001 4PIN
- No → Check the switches (SW2101, SW2103-2108, SW2181-2183) and their periphery, and service it if detective.
- Yes ↓

Replace IC2001.

FLOW CHART NO.14

No operation is possible from the remote control unit.

Operation is possible from the DVD, but no operation is possible from the remote control unit.

Is 5V voltage supplied to Pin(3) terminal of the infrared remote control receiver (RM2001)?
- No → Check EV+5V line and service it if defective.
- Yes ↓

Is the "L" pulse sent out Pin(1) terminal of receiver (RM2001) when the infrared remote control is activated?
- No → Replace the infrared remote control receiver (RM2001). Or replace the remote control unit.
- Yes ↓

Is the "L" pulse supplied to the Pin(25) of CN1001?
- No → Check the line between Pin(1) terminal of receiver (RM2001) and Pin(25) of CN1001, and service it if defective.
- Yes ↓

Replace DVD Main CBA.

FLOW CHART NO.15

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.13" <The key operation is not functioning.>

No → Replace the "OPEN/CLOSE" button (SW2108).

↓ Yes

Refer to "FLOW CHART NO.16" <The disc tray cannot be opened and closed.>

FLOW CHART NO.16

The disc tray cannot be opened and closed.

↓

Replace the DVD Main CBA.

↓

No improvement can be found.

No → Original DVD Main CBA is poor.

↓ Yes

Replace the DVD Mechanism.

FLOW CHART NO.17

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

↓

Replace the DVD Main CBA.

↓

No improvement can be found.

No → Original DVD Main CBA is poor.

↓ Yes

Replace the DVD Mechanism.

FLOW CHART NO.18

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

↓

Replace the DVD Main CBA.

↓

No improvement can be found.

No → Original DVD Main CBA is poor.

↓ Yes

Replace the DVD Mechanism.

FLOW CHART NO.19

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

↓

Replace the DVD Main CBA.

↓

No improvement can be found.

No → Original DVD Main CBA is poor.

↓ Yes

Replace the DVD Mechanism.

FLOW CHART NO.20

Both functions of picture and sound do not operate normally.

↓

Replace the DVD Main CBA.

↓

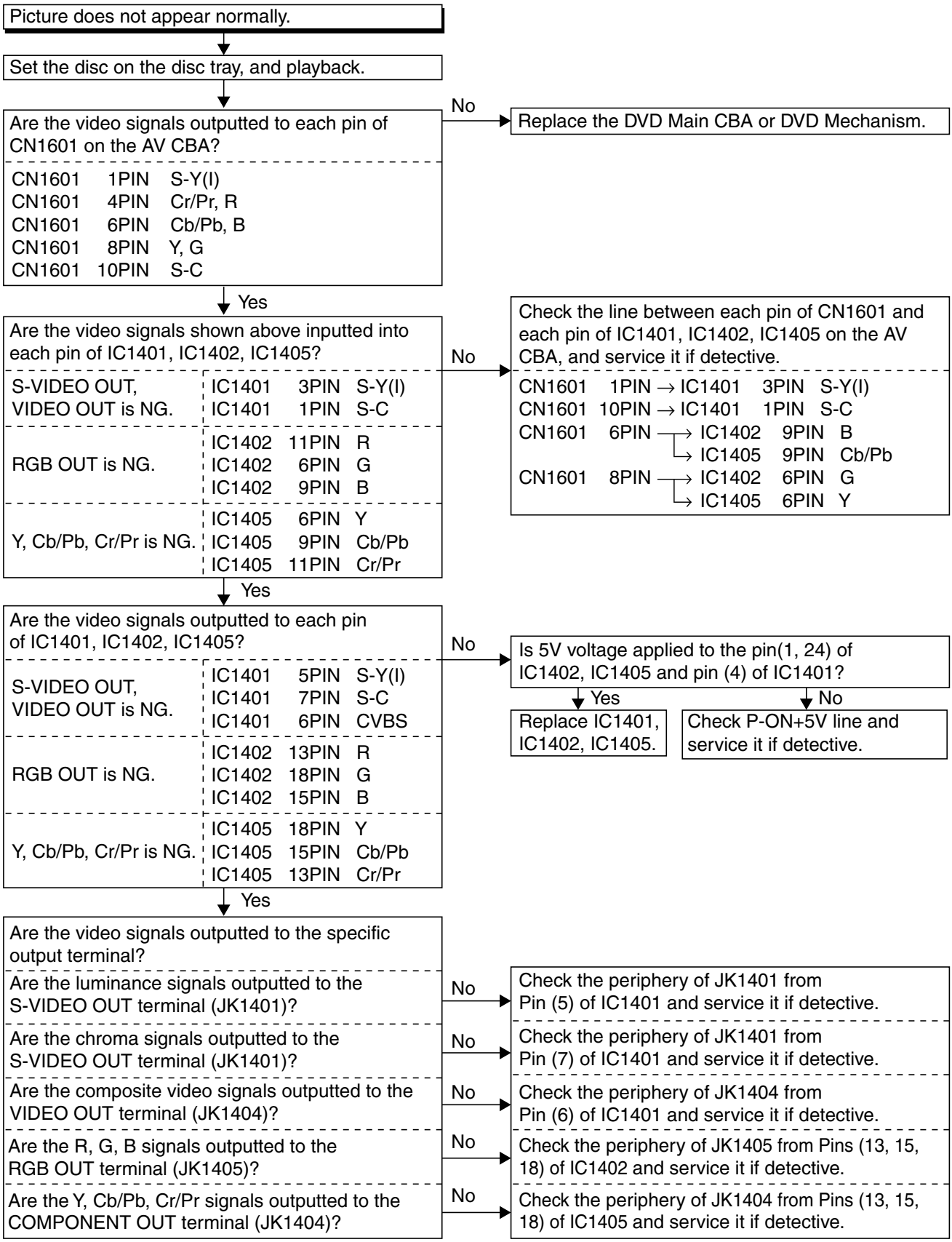
No improvement can be found.

No → Original DVD Main CBA is poor.

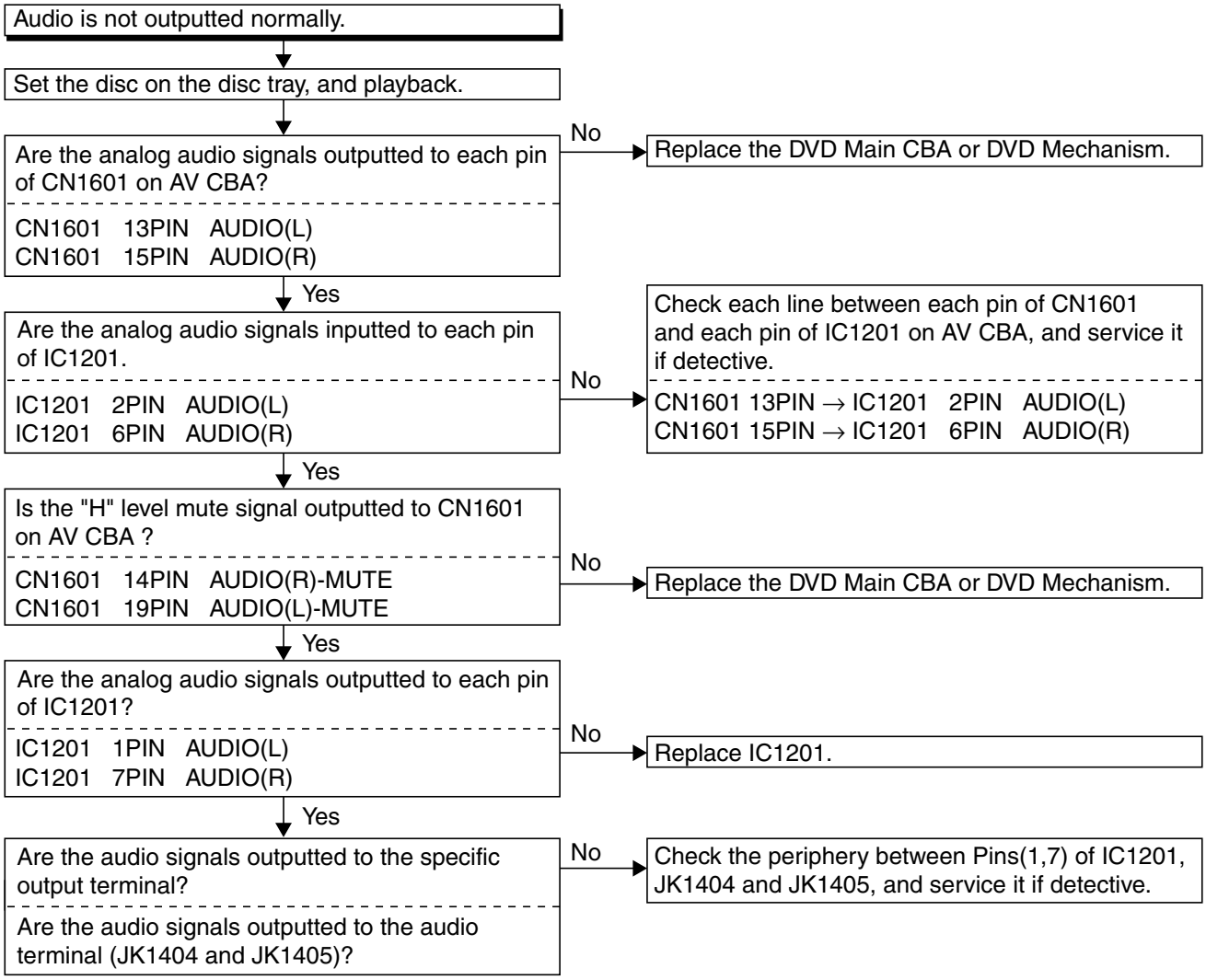
↓ Yes

Replace the DVD Mechanism.

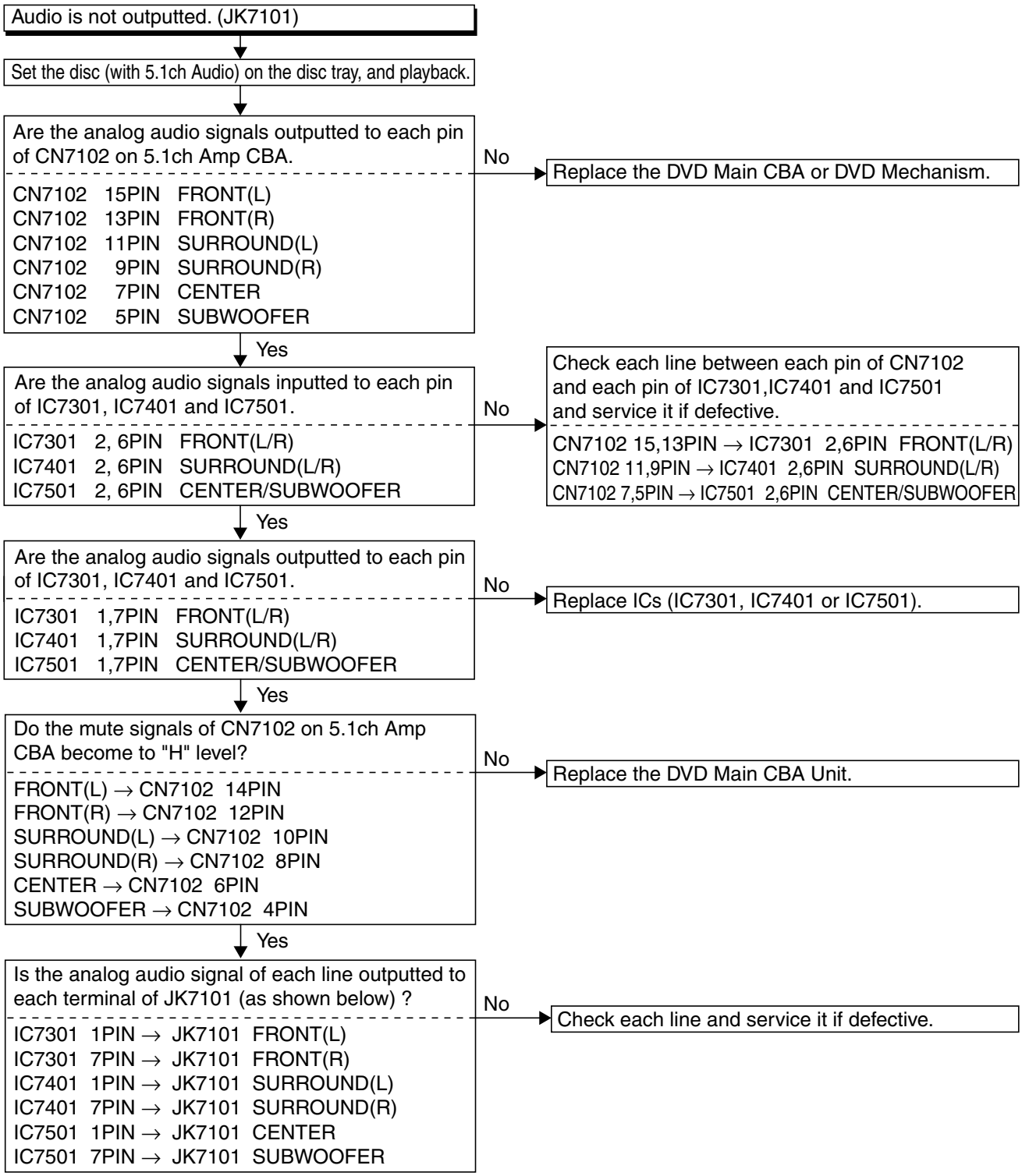
FLOW CHART NO.21



FLOW CHART NO.22

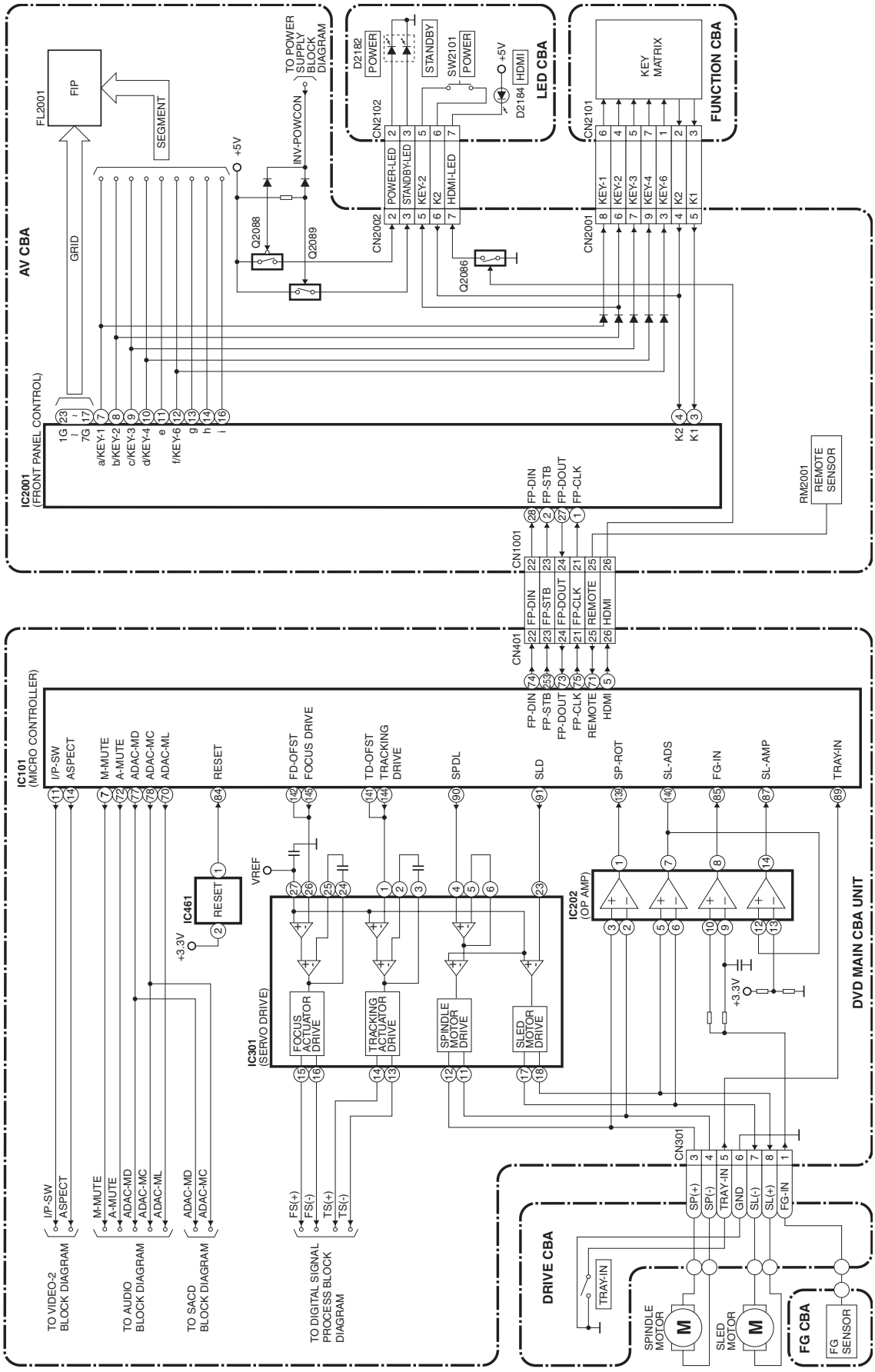


FLOW CHART NO.23

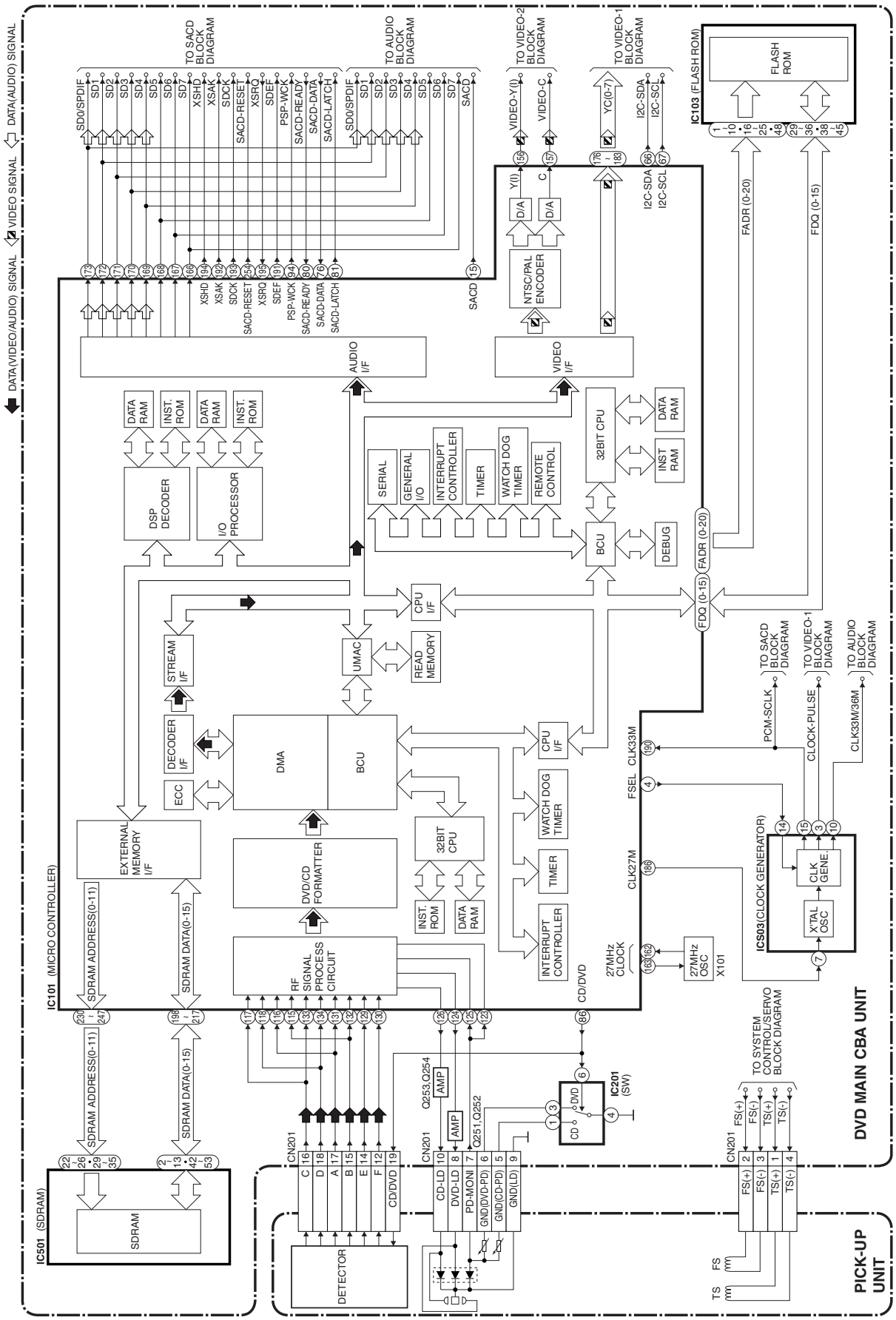


BLOCK DIAGRAMS

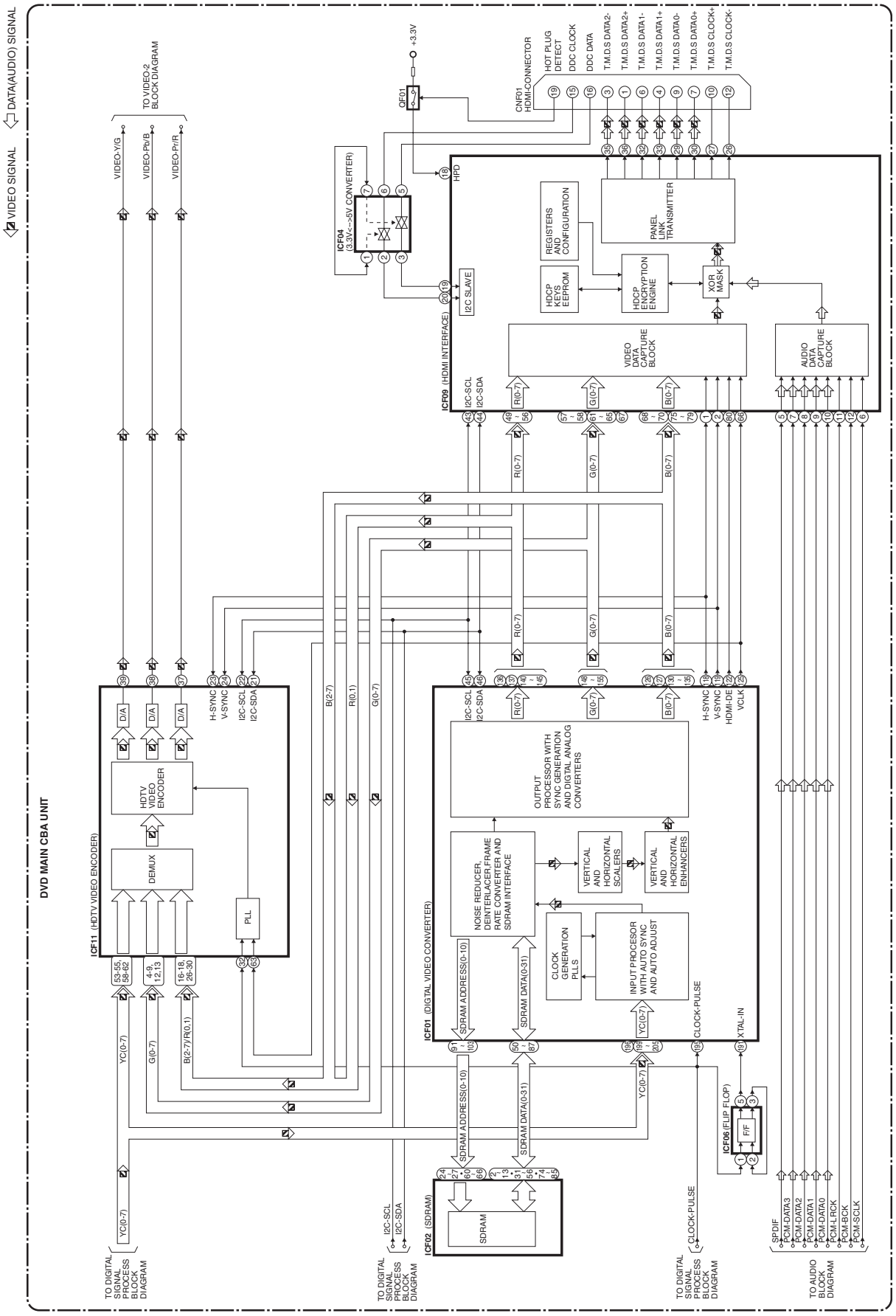
System Control /Servo Block Diagram



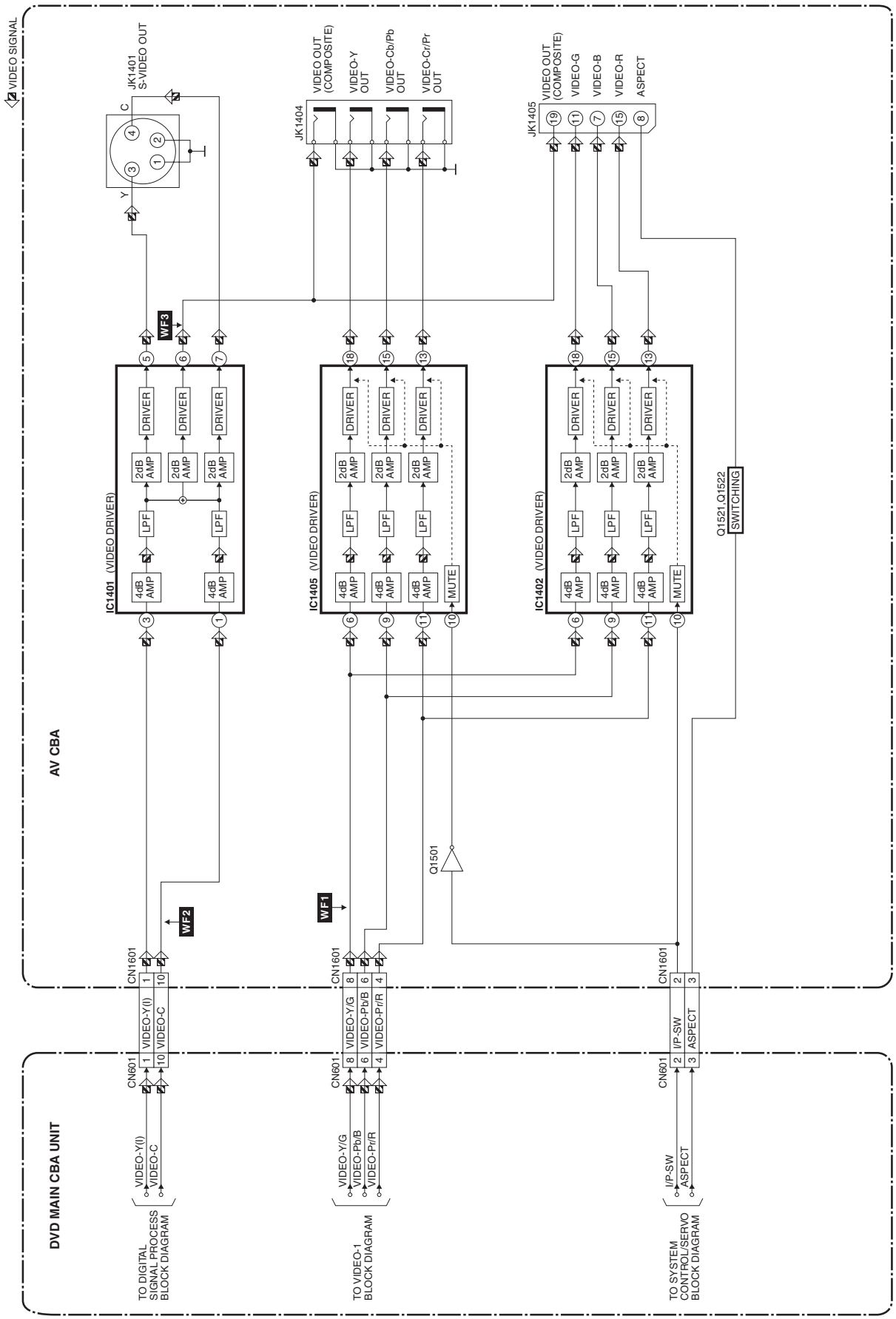
Digital Signal Process Block Diagram



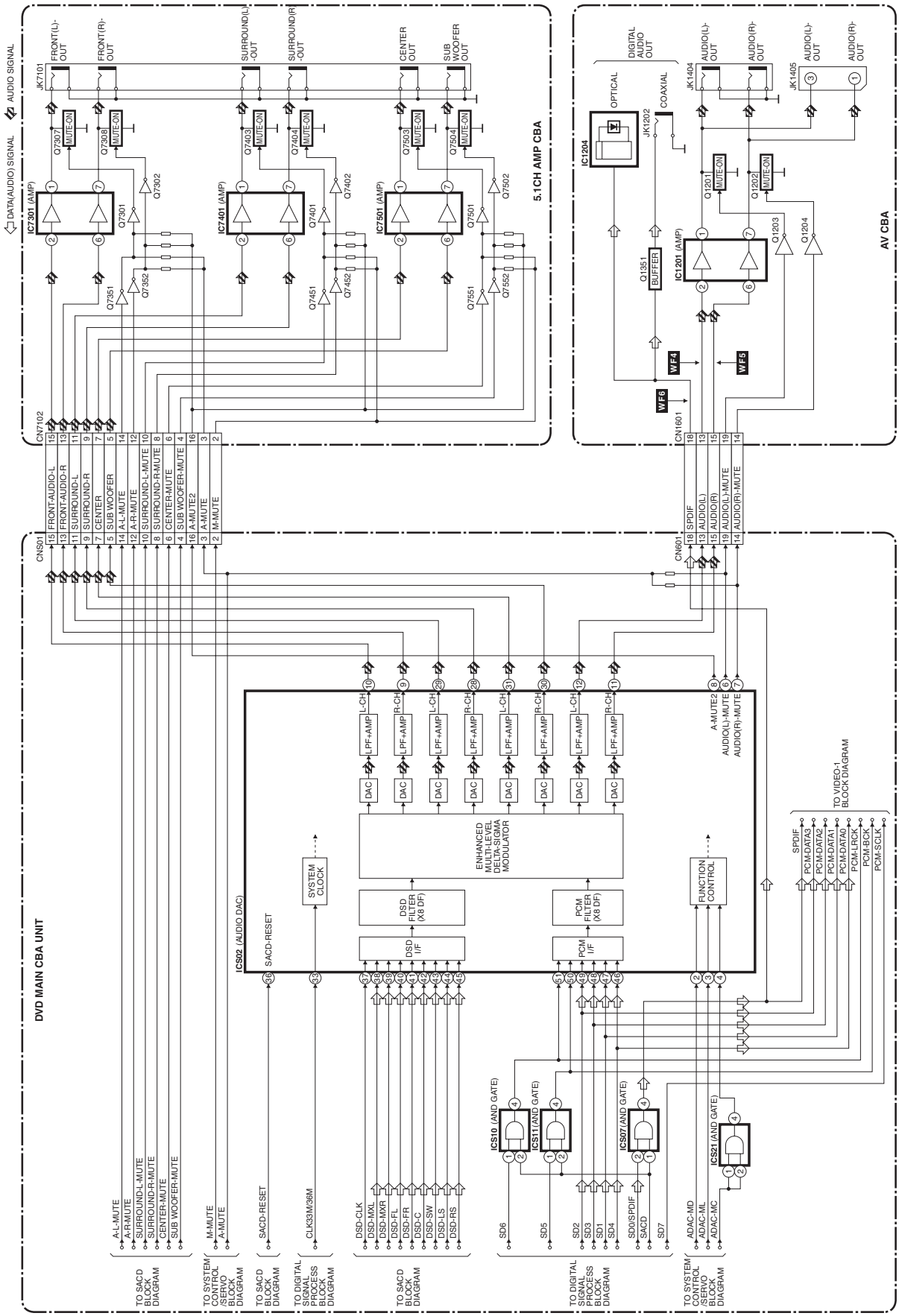
Video-1 Block Diagram



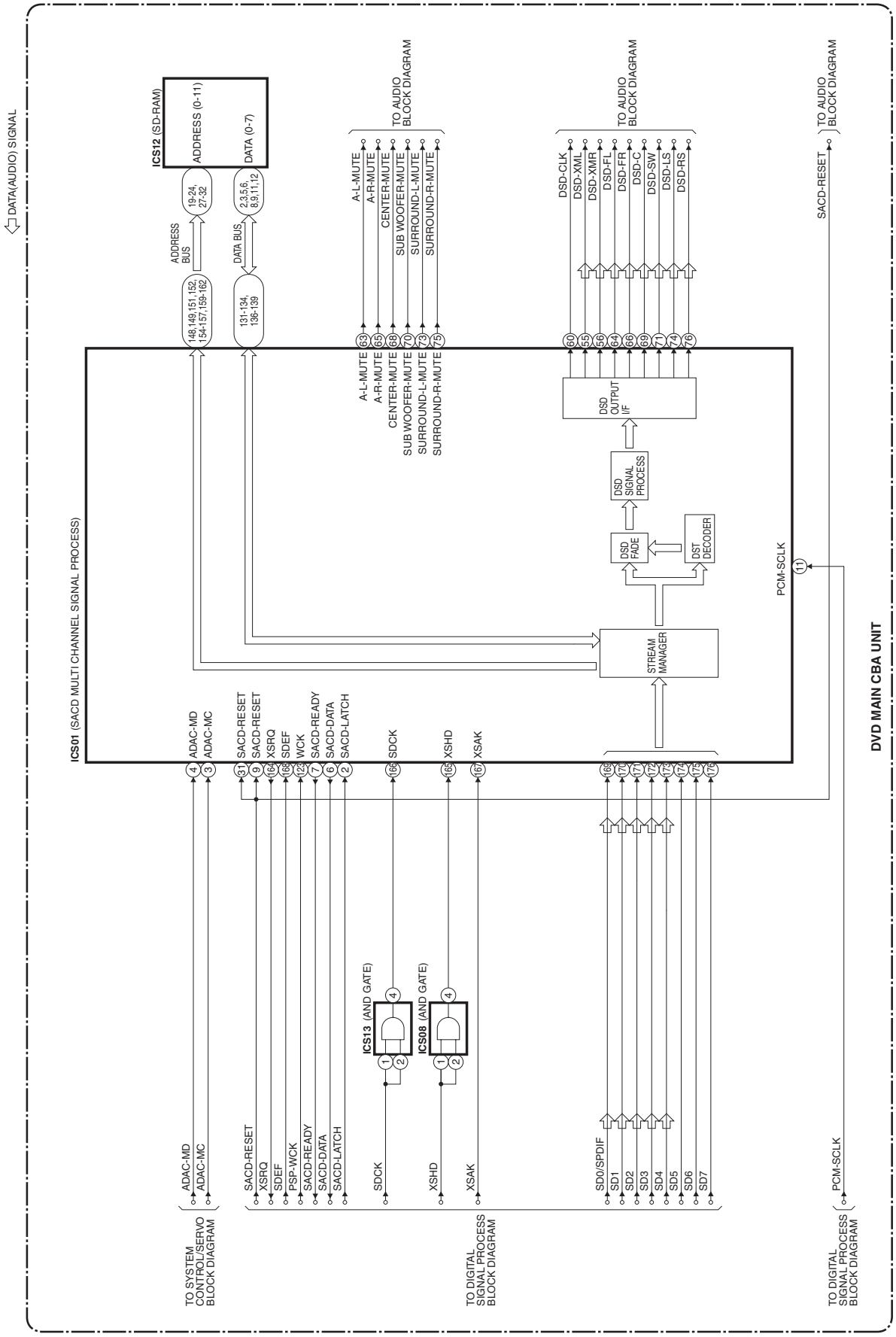
Video-2 Block Diagram



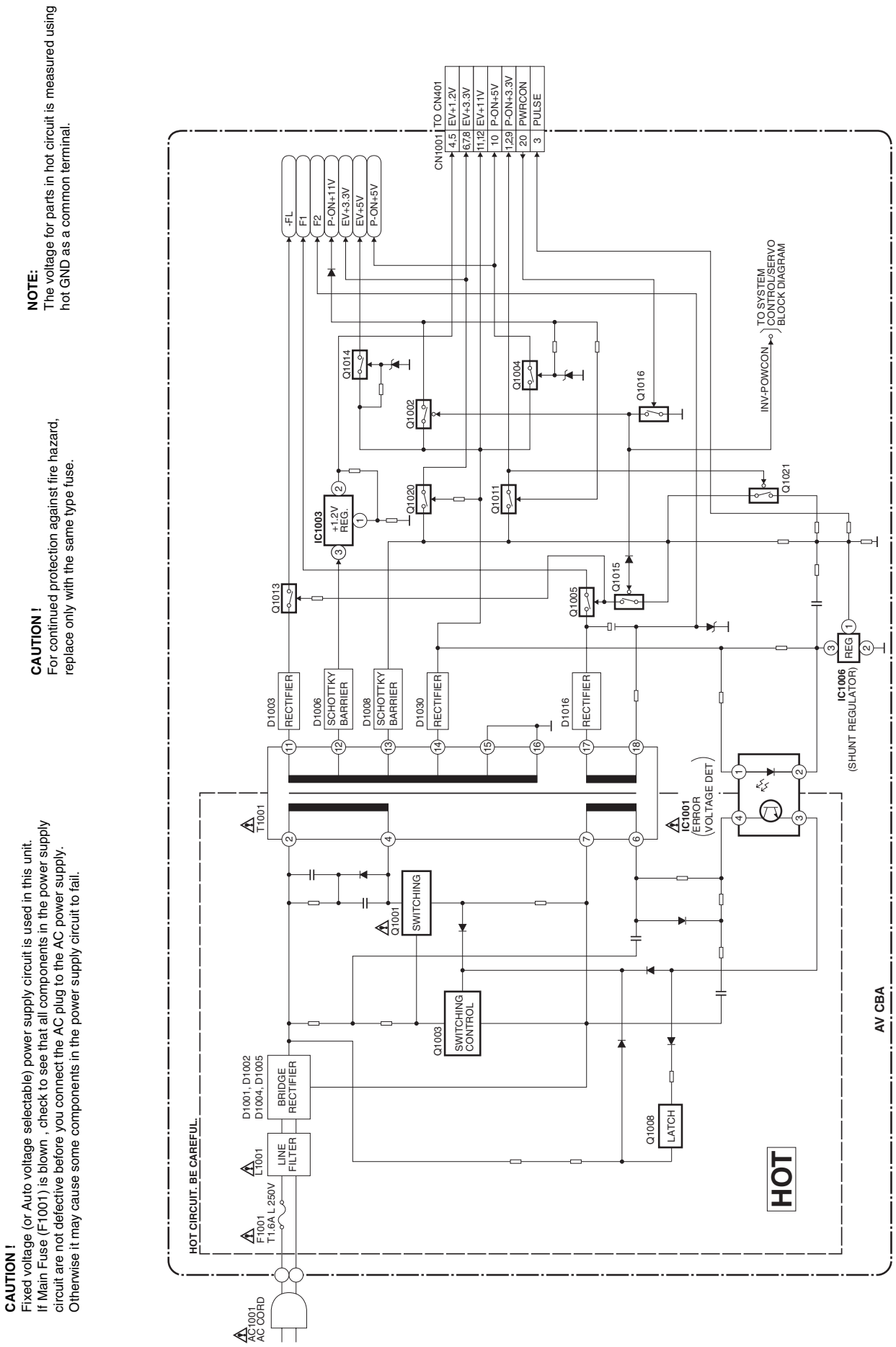
Audio Block Diagram



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 "⚠" 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 ($P = 10^{-6}$ μF).
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.

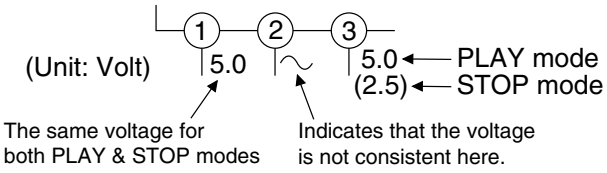
2. CAUTION:

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.

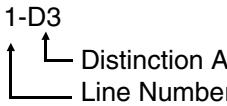
3. Note:

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.

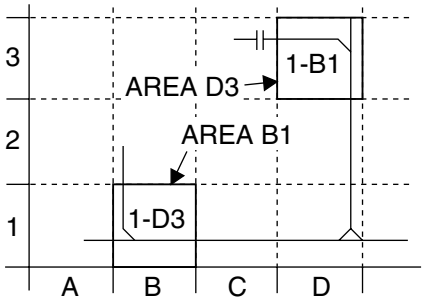
4. Voltage indications for PLAY and STOP mode on the schematics are as shown below:



5. How to read converged lines



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

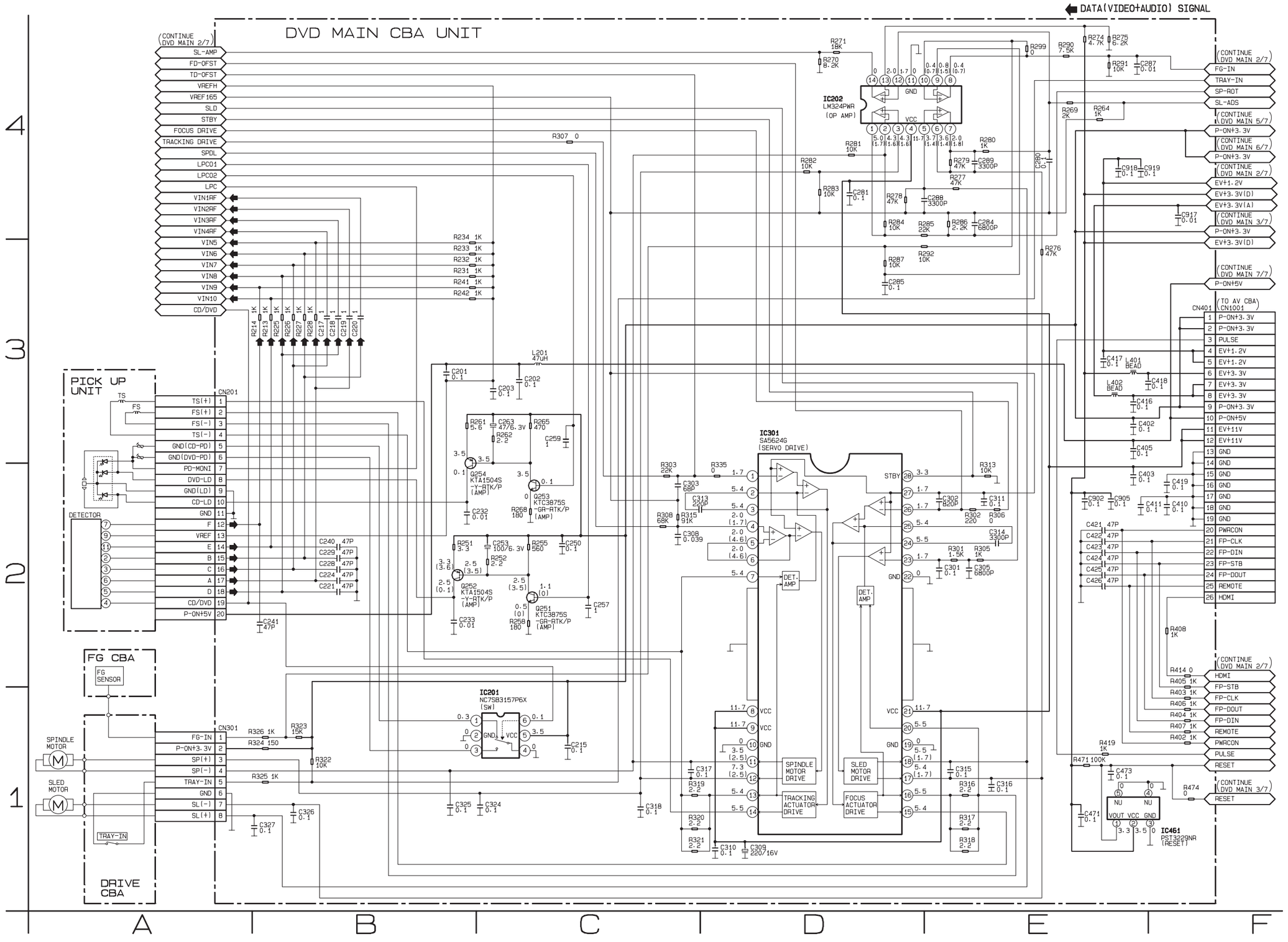
: Indicates a test point with a jumper wire across a hole in the PCB.

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

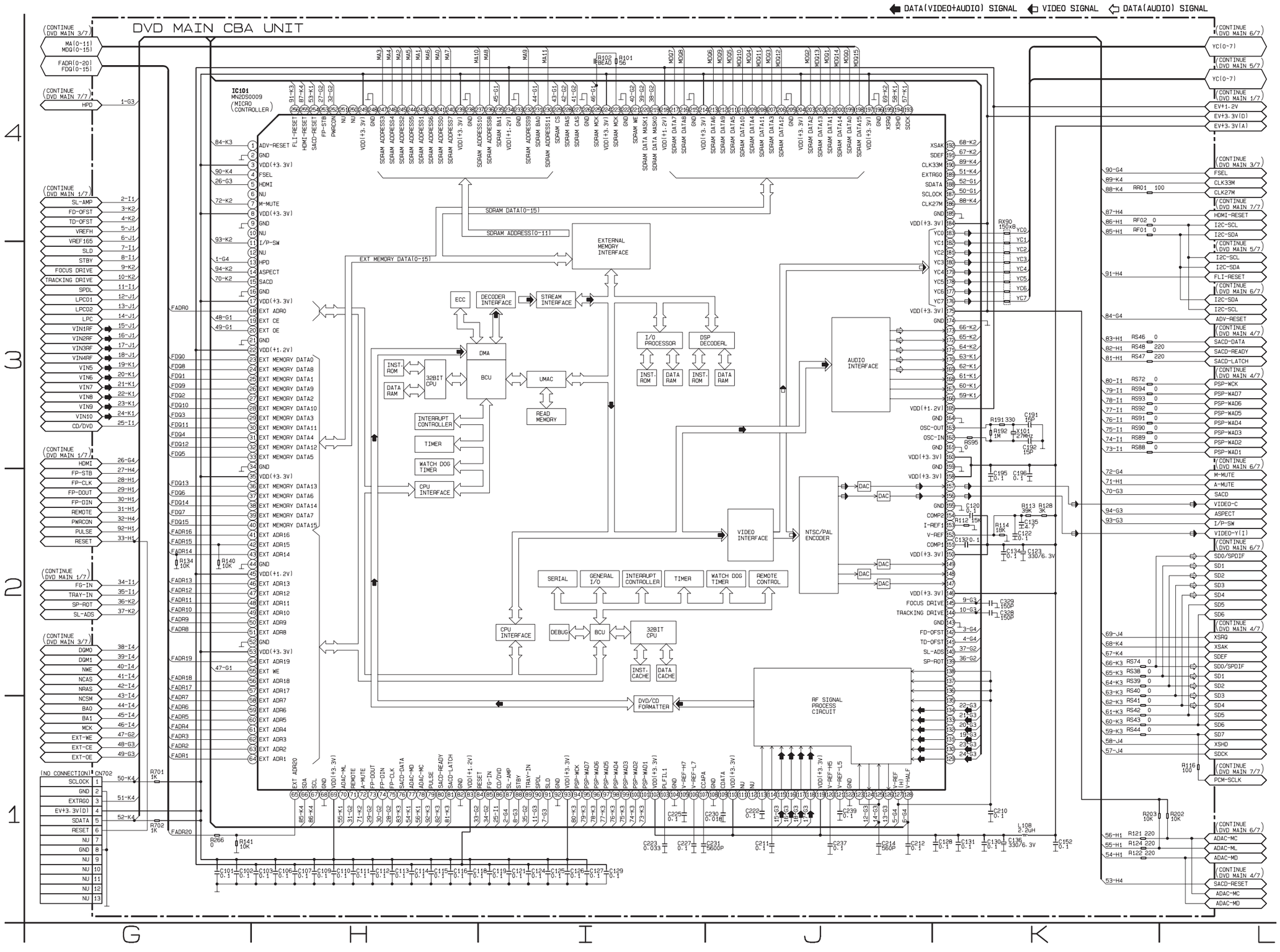
: Used to indicate a test point with no test pin.

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

DVD Main 1/7 Schematic Diagram



DVD Main 2/7 Schematic Diagram

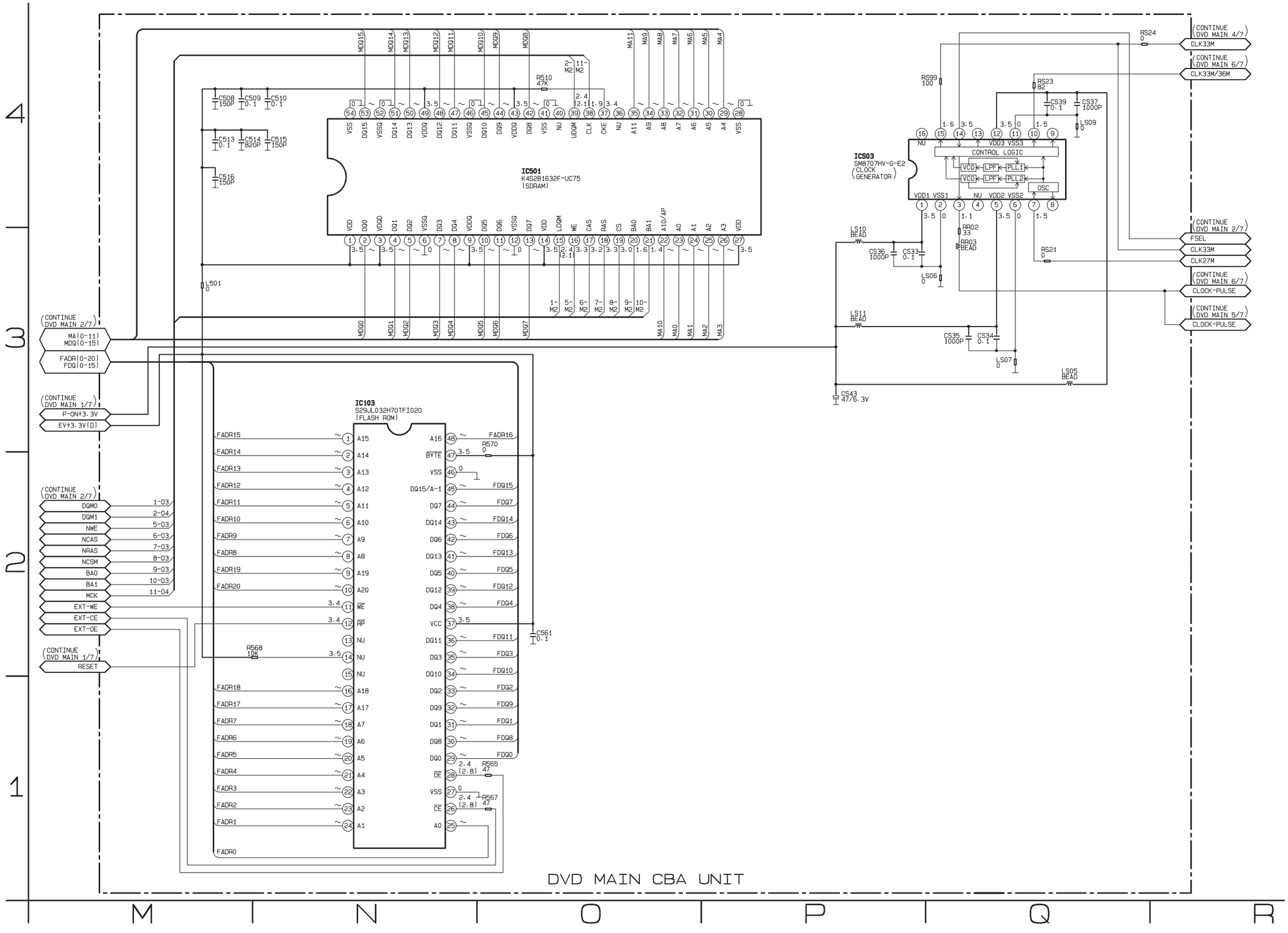


IC101 Voltage Chart

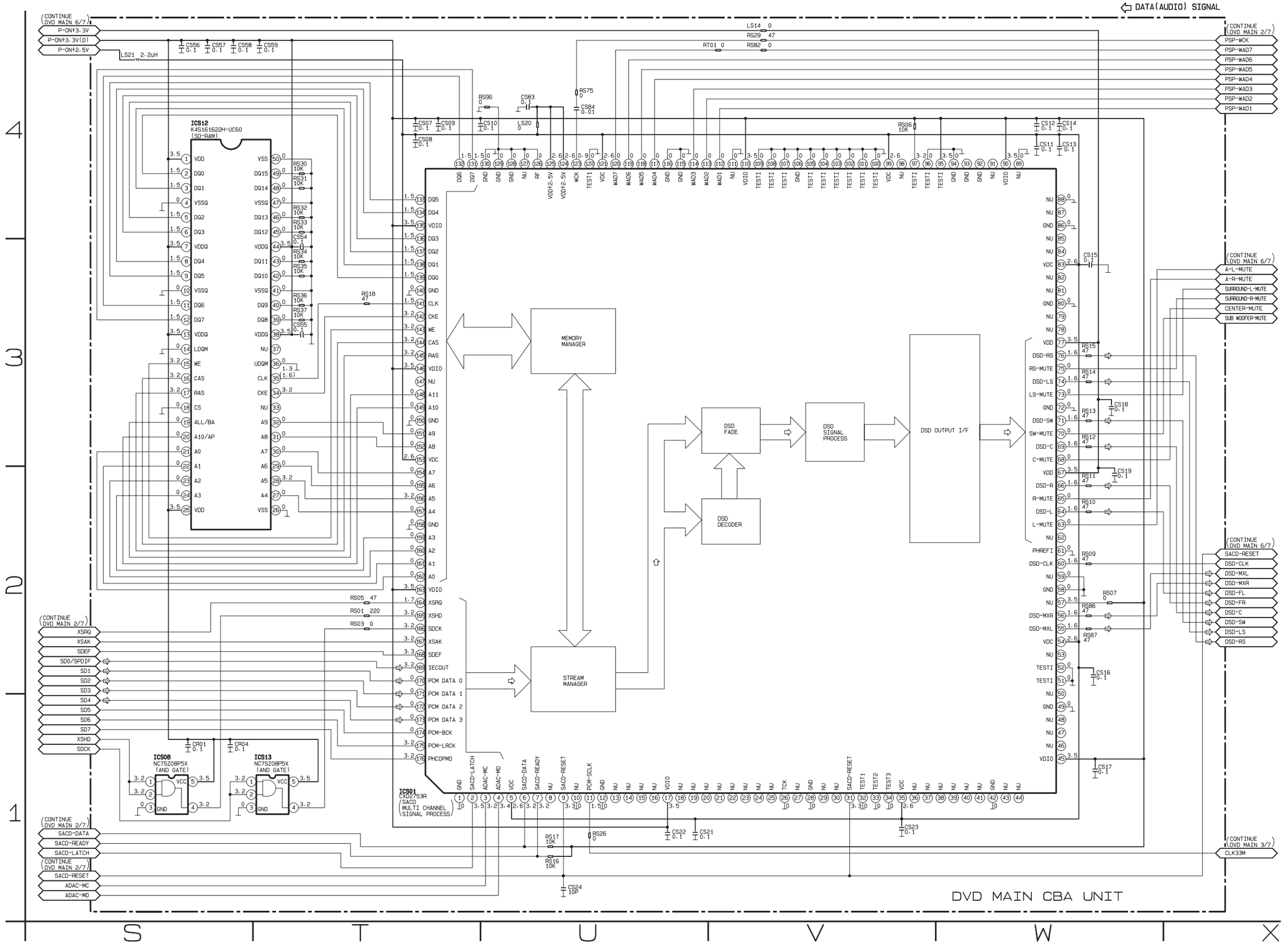
~ : Voltage is not consistent ----- : Not used Unit : Volts

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	0	129	2.3	2.3	161	0	0	193	3.2	3.2	225	1.9	1.9
2	0	0	34	0	0	66	3.4	3.4	98	0	0	130	2.3	2.3	162	1.7	1.7	194	3.2	3.2	226	0	0
3	3.5	3.5	35	3.5	3.5	67	3.4	3.4	99	0	0	131	2.3	2.3	163	1.7	1.7	195	1.7	1.7	227	3.2	3.2
4	3.5	3.5	36	~	~	68	0	0	100	0	0	132	2.4	2.3	164	0	0	196	0	0	228	3.3	3.3
5	0	0	37	~	~	69	3.5	3.5	101	0	0	133	2.4	2.4	165	1.3	1.3	197	3.5	3.5	229	3.0	3.0
6	-----	-----	38	~	~	70	3.6	3.4	102	3.5	3.5	134	2.4	2.4	166	3.2	3.2	198	~	~	230	~	~
7	3.3	0.8	39	~	~	71	3.2	3.2	103	0.9	0.8	135	2.3	2.3	167	3.2	3.2	199	~	~	231	1.6	1.6
8	3.5	3.5	40	~	~	72	3.5	0.1	104	0	0	136	2.3	2.3	168	0	0	200	~	~	232	~	~
9	0	0	41	~	~	73	3.5	3.5	105	2.4	2.4	137	2.3	2.3	169	0	0	201	~	~	233	0	0
10	-----	-----	42	~	~	74	3.4	3.4	106	1.9	1.9	138	2.3	2.3	170	0	0	202	~	~	234	1.3	1.3
11	3.3	3.3	43	~	~	75	3.4	3.4	107	0.4	0.3	139	2.1	1.7	171	0	0	203	~	~	235	1.4	1.4
12	-----	-----	44	0	0	76	3.2	3.2	108	0	0	140	1.7	1.7	172	0	0	204	3.5	3.5	236	~	~
13	0.1	0.1	45	1.3	1.3	77	3.5	3.5	109	1.7	1.7	141	1.7	1.7	173	3.2	3.2	205	0	0	237	~	~
14	1.0	0.1	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	2.2	2.2	111	-----	-----	143	0	0	175	3.5	3.5	207	~	~	239	3.5	3.5
16	0	0	48	~	~	80	3.2	3.2	112	-----	-----	144	1.7	1.7	176	1.3	1.3	208	~	~	240	~	~
17	3.5	3.5	49	~	~	81	3.5	3.5	113	1.9	1.9	145	1.7	1.7	177	1.3	1.3	209	~	~	241	~	~
18	~	~	50	~	~	82	0	0	114	1.9	1.9	146	3.5	3.5	178	1.3	1.3	210	~	~	242	~	~
19	2.4	2.8	51	~	~	83	1.3	1.3	115	1.7	1.7	147	-----	-----	179	1.5	1.5	211	~	~	243	~	~
20	2.4	2.8	52	0	0	84	3.3	3.3	116	1.7	1.7	148	-----	-----	180	1.0	1.0	212	~	~	244	~	~
21	0	0	53	3.5	3.5	85	1.4	2.7	117	1.7	1.7	149	-----	-----	181	1.0	1.0	213	~	~	245	~	~
22	1.3	1.3	54	~	~	86	0.1	0.1	118	1.7	1.7	150	3.5	3.5	182	1.0	1.0	214	3.5	3.5	246	~	~
23	~	~	55	3.4	3.4	87	0	0	119	3.5	3.5	151	2.2	2.2	183	1.0	1.0	215	0	0	247	~	~
24	~	~	56	~	~	88	3.4	0	120	2.0	2.0	152	1.4	1.3	184	3.5	3.5	216	~	~	248	0	0
25	~	~	57	~	~	89	3.4	3.5	121	1.5	1.5	153	1.4	1.3	185	0	0	217	~	~	249	3.5	3.5
26	~	~	58	~	~	90	2.3	1.8	122	0	0	154	2.2	2.2	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	3.3	3.3	219	2.4	2.1	251	-----	-----
28	~	~	60	~	~	92	0	0	124	1.1	0	156	0.6	0.6	188	3.3	3.3	220	2.4	2.1	252	3.4	3.4
29	~	~	61	~	~	93	3.5	3.5	125	0.3	0.1	157	0.9	0.9	189	0	0	221	3.3	3.3	253	2.8	2.8
30	~	~	62	~	~	94	0	0	126	0.1	0.1	158	3.5	3.5	190	1.6	1.6	222	0	0	254	3.3	3.3
31	~	~	63	~	~	95	0	0	127	2.3	2.3	159	0	0	191	3.3	3.3	223	1.6	1.6	255	3.4	3.4
32	~	~	64	~	~	96	0	0	128	1.7	1.7	160	3.5	3.5	192	3.2	3.2	224	3.5	3.5	256	3.4	3.4

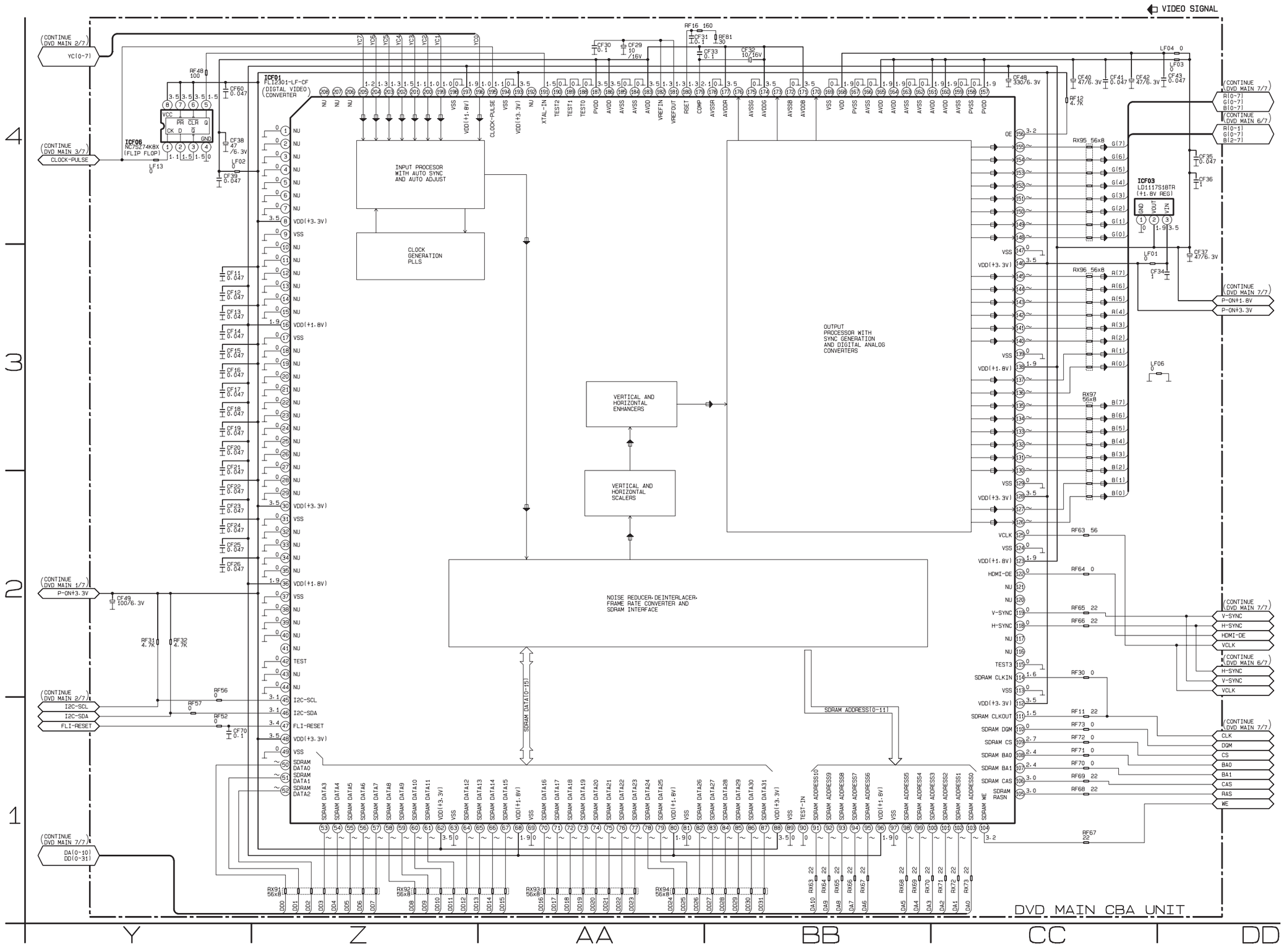
DVD Main 3/7 Schematic Diagram



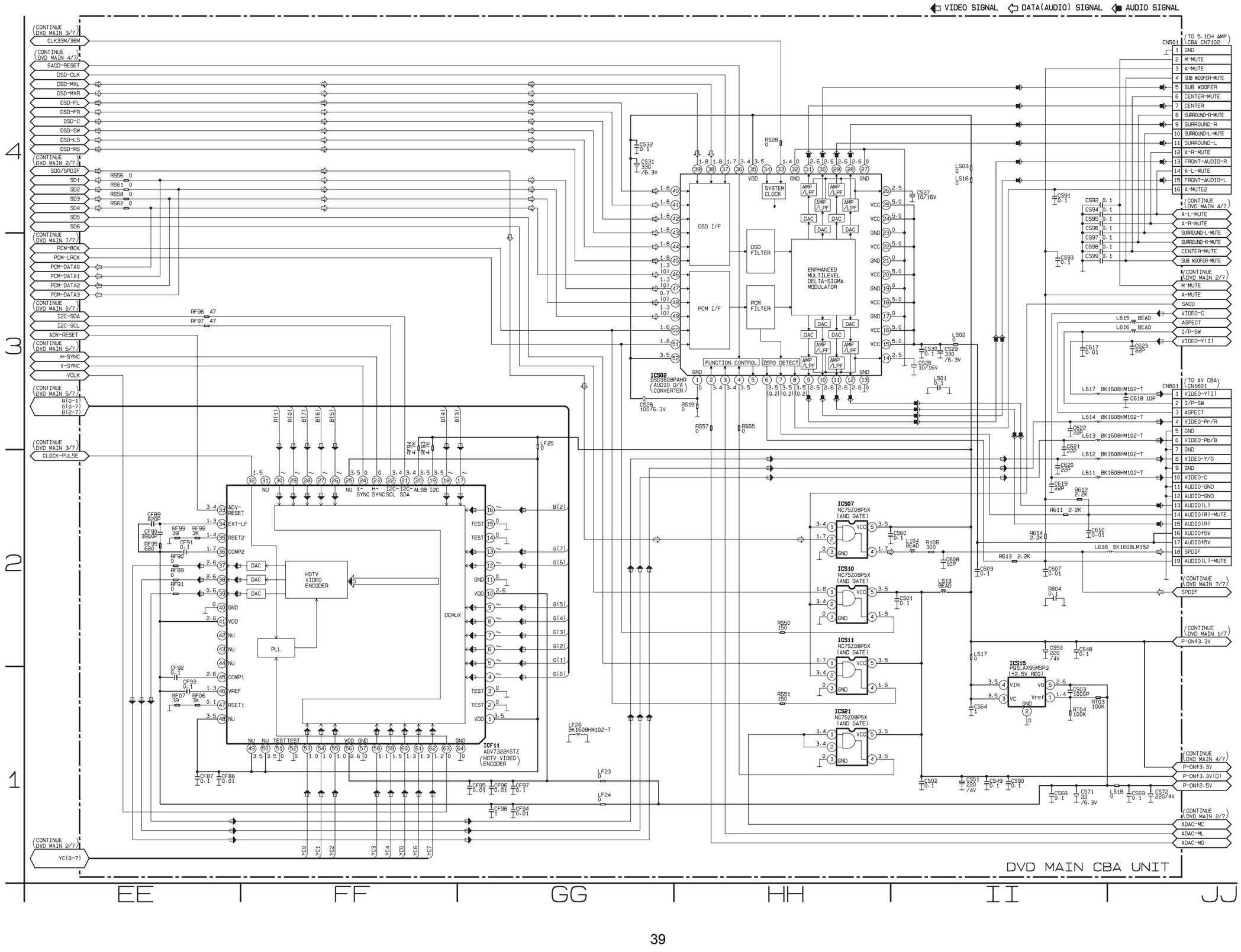
DVD Main 4/7 Schematic Diagram



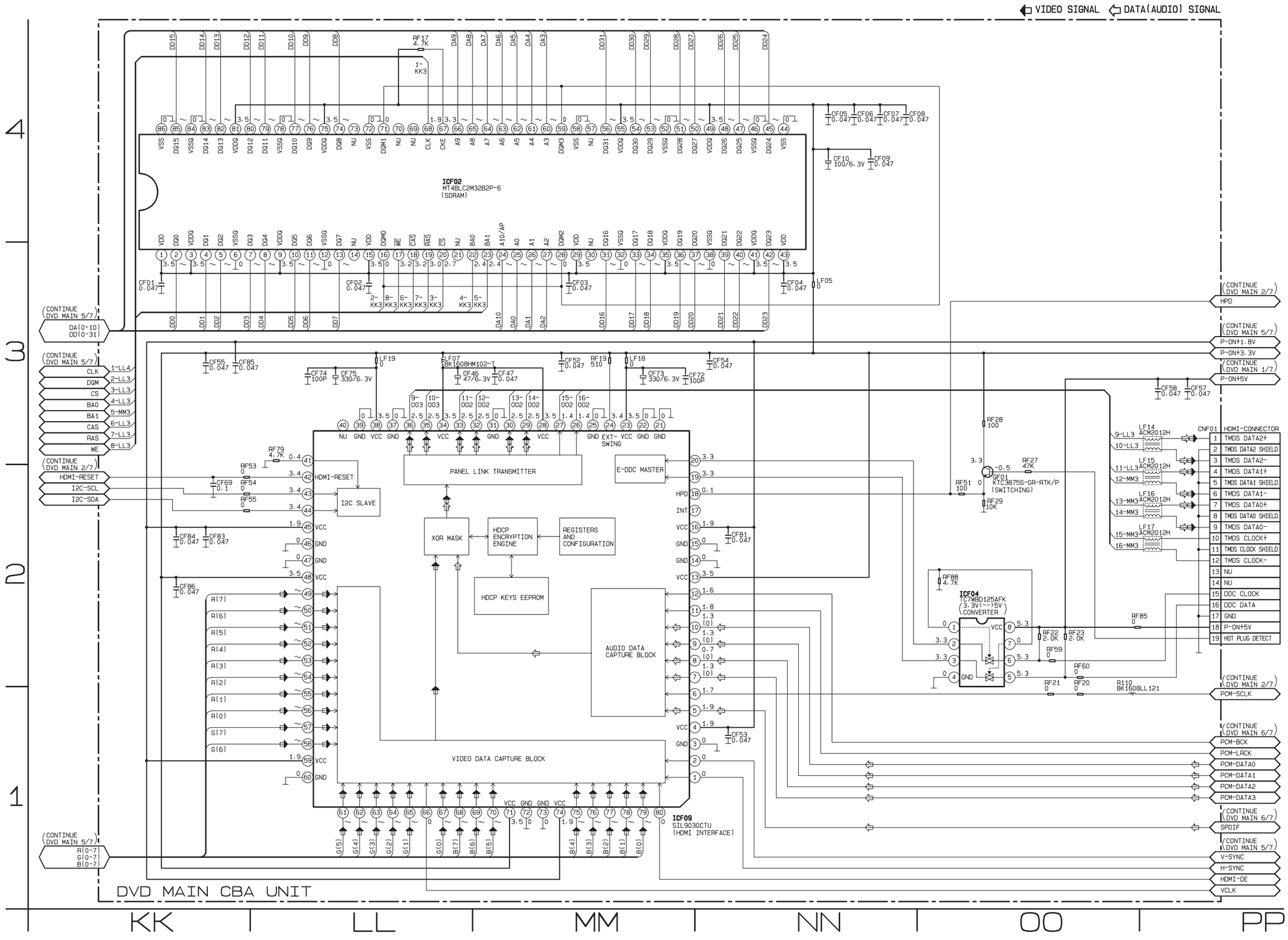
DVD Main 5/7 Schematic Diagram



DVD Main 6/7 Schematic Diagram



DVD Main 7/7 Schematic Diagram

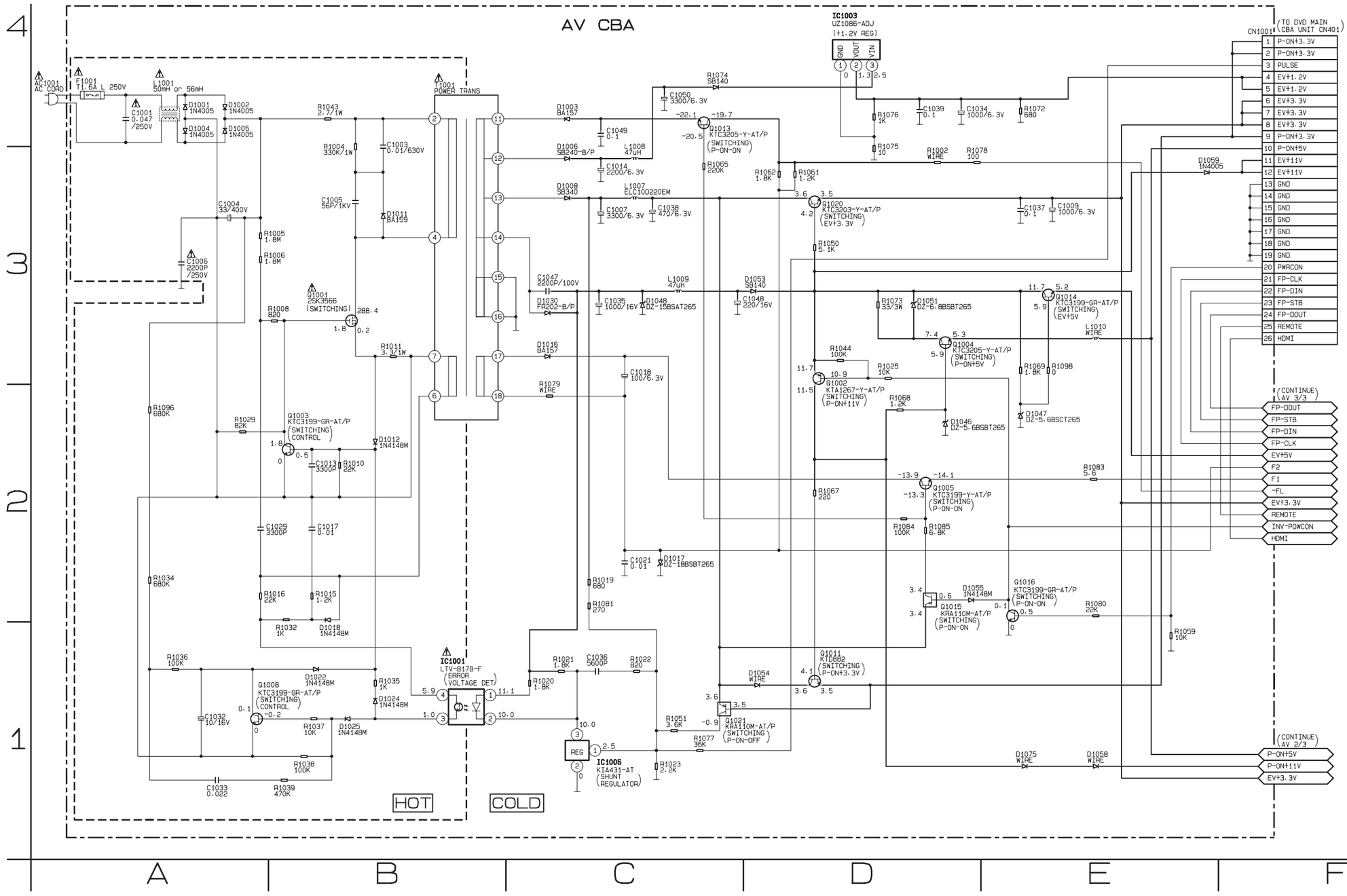


AV 1/3 Schematic Diagram

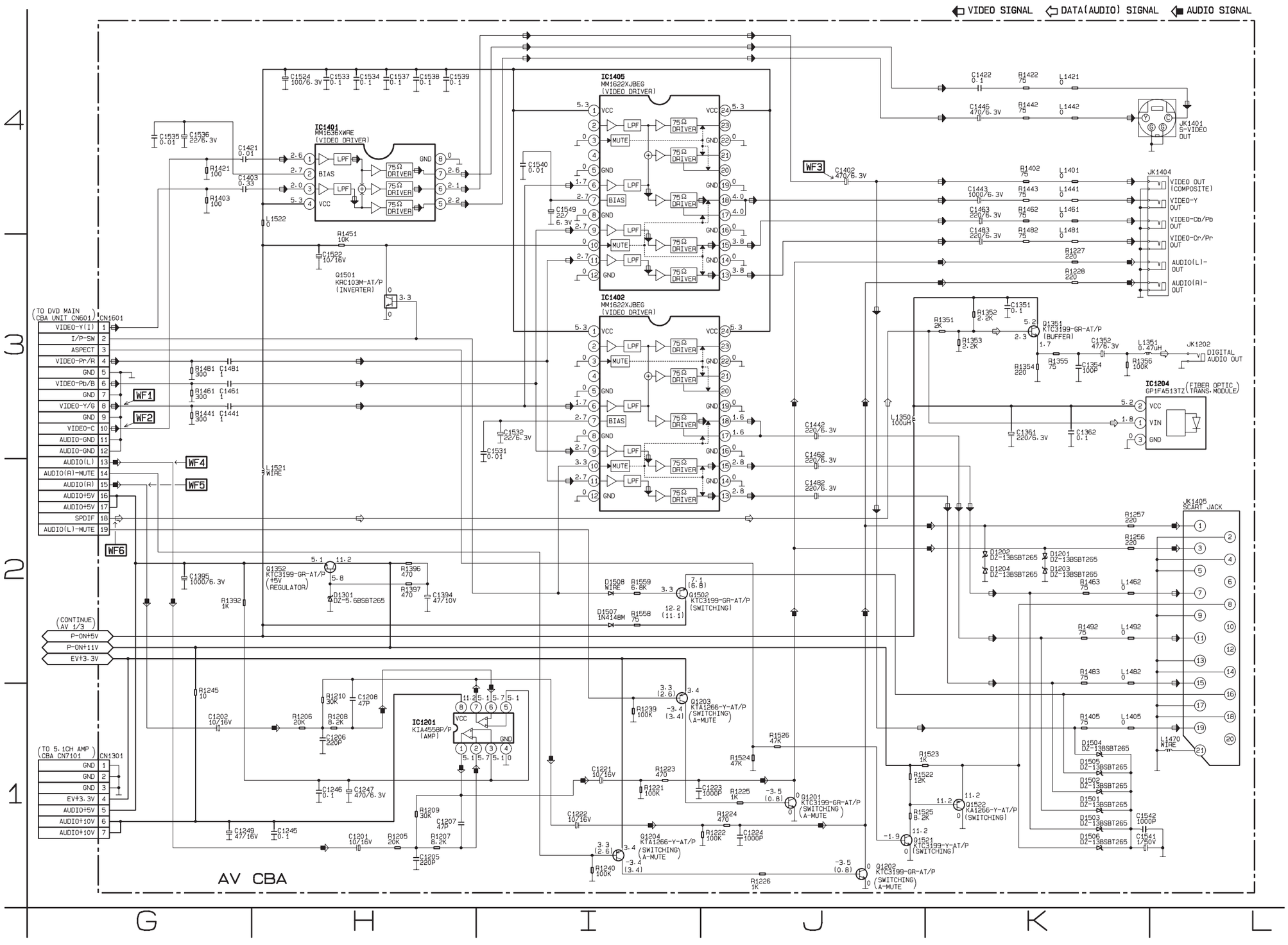
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components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

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

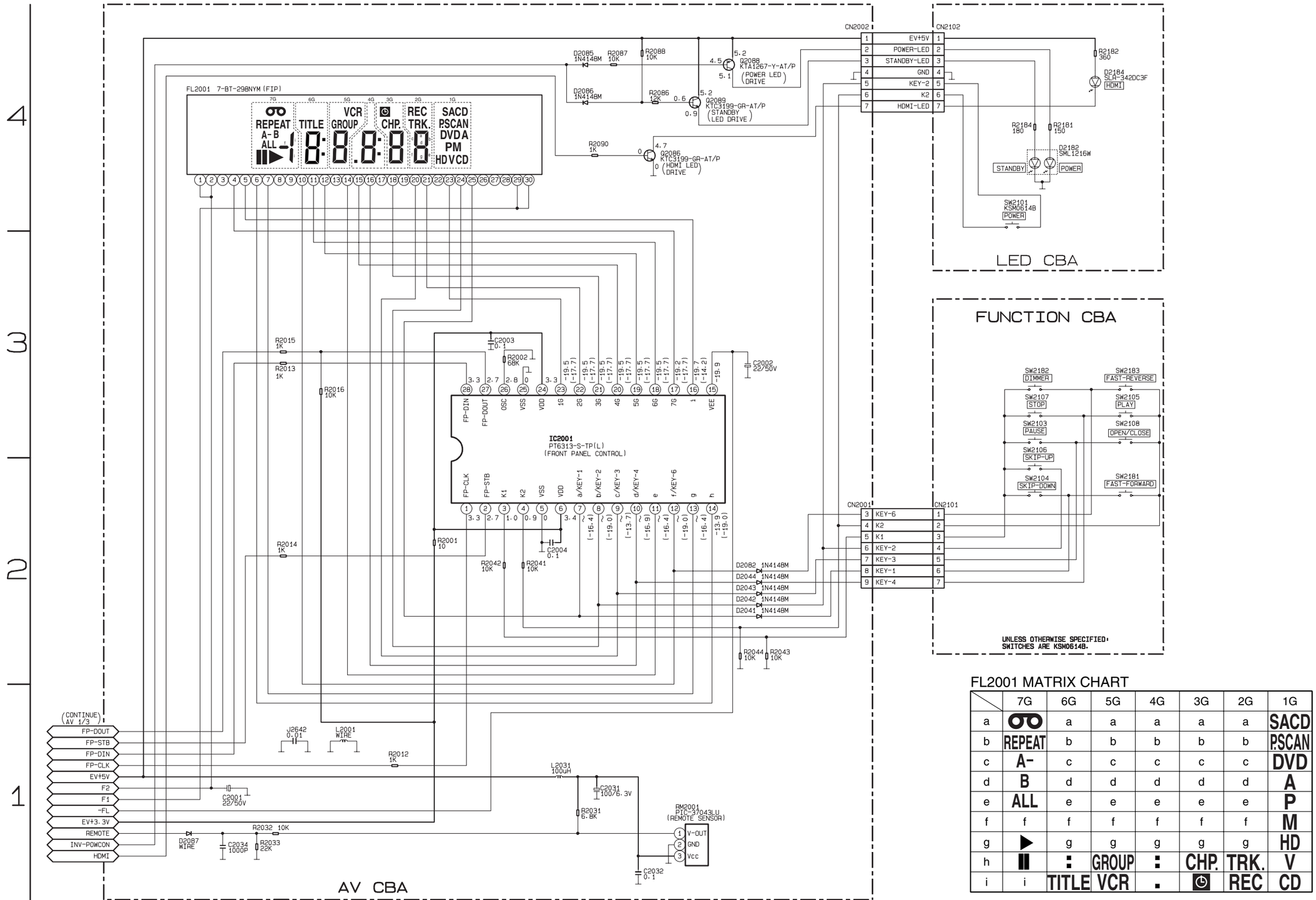
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



AV 2/3 Schematic Diagram



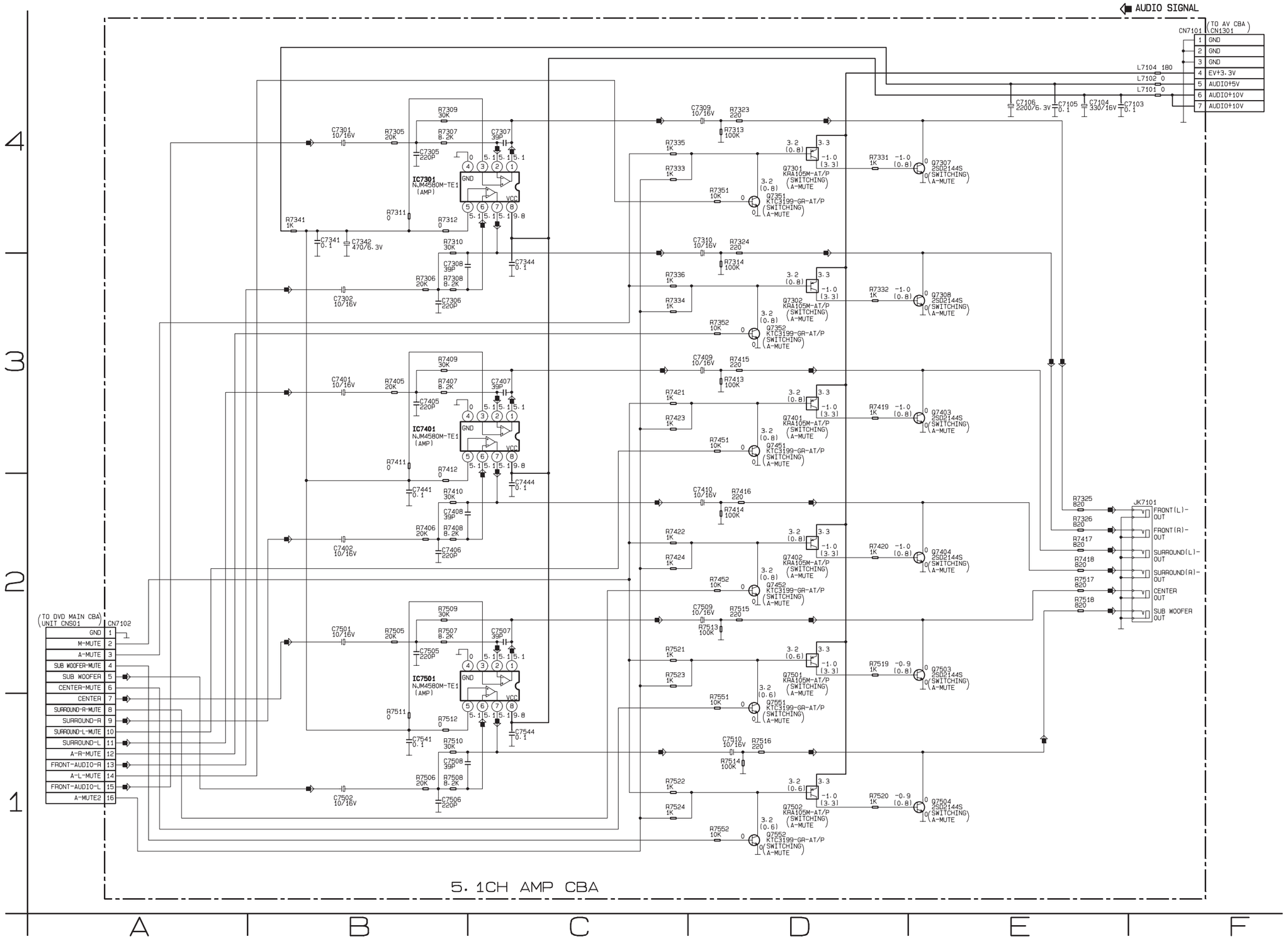
AV 3/3, Function & LED Schematic Diagram



FL2001 MATRIX CHART

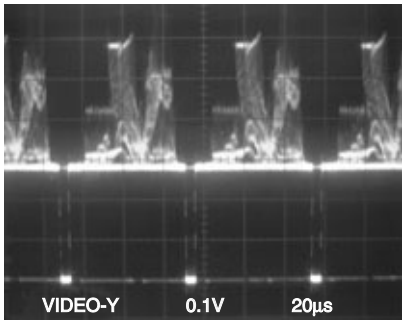
	7G	6G	5G	4G	3G	2G	1G
a	∞	a	a	a	a	a	SACD
b	REPEAT	b	b	b	b	b	P.SCAN
c	A-	c	c	c	c	c	DVD
d	B	d	d	d	d	d	A
e	ALL	e	e	e	e	e	P
f	f	f	f	f	f	f	M
g	▶	g	g	g	g	g	HD
h	▮▮	:	GROUP	:	CHP.	TRK.	V
i	i	TITLE	VCR	.	◷	REC	CD

5.1ch Amp Schematic Diagram

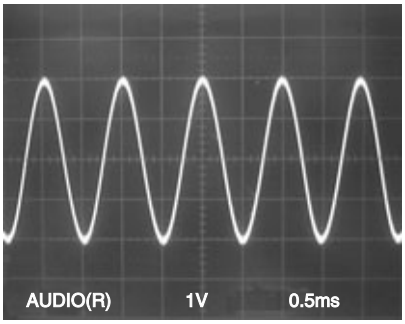


WAVEFORMS

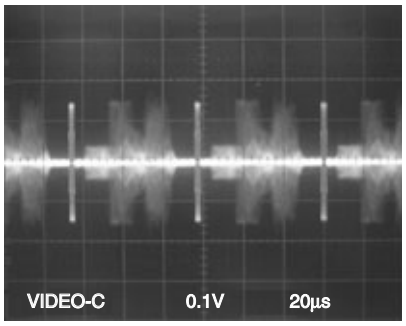
WF1 Pin 8 of CN1601



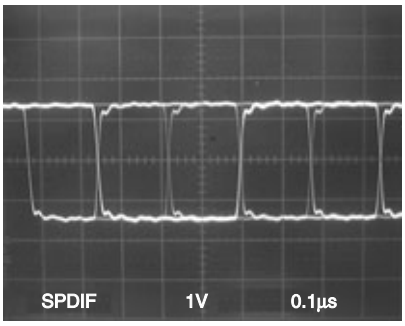
WF5 Pin 15 of CN1601



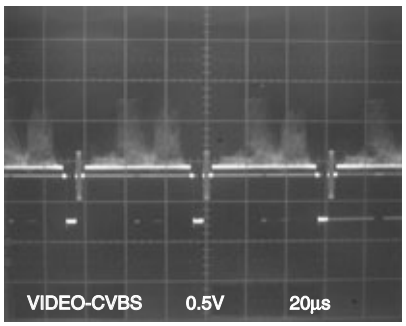
WF2 Pin 10 of CN1601



WF6 Pin 18 of CN1601

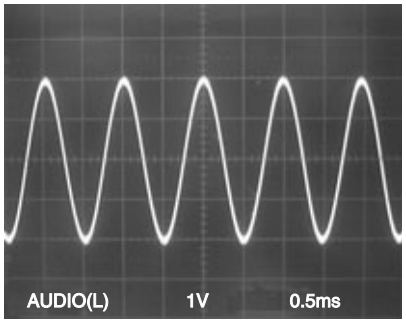


WF3 C1402 PLUS LEAD

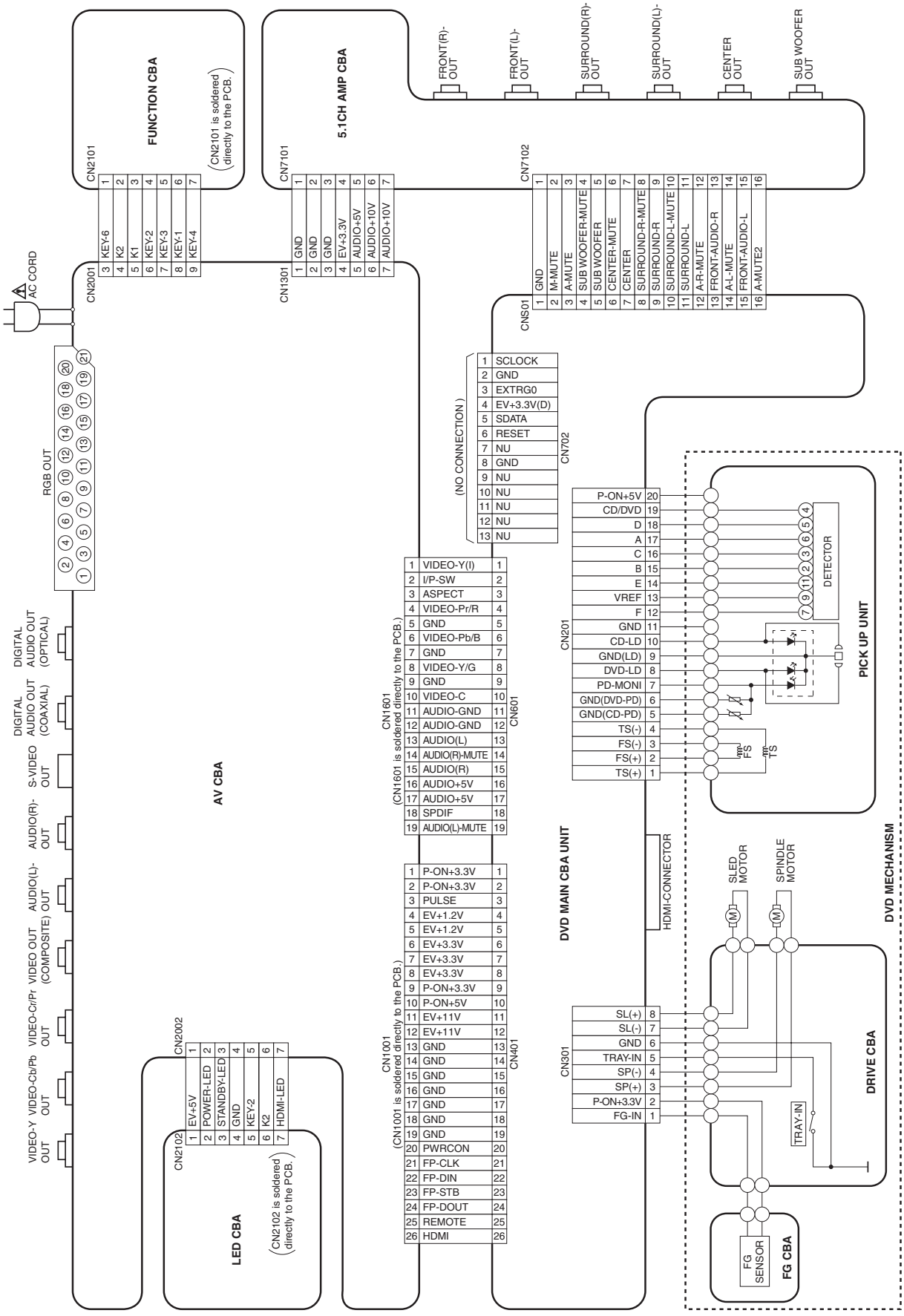


NOTE:
Input
CD: 1kHz PLAY
(WF4~WF6)
DVD: POWER ON (STOP) MODE
(WF1~WF3)

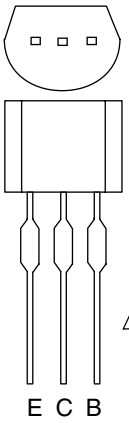
WF4 Pin 13 of CN1601



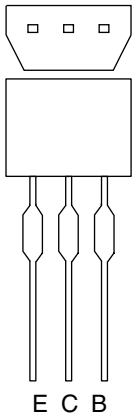
WIRING DIAGRAM



LEAD IDENTIFICATIONS

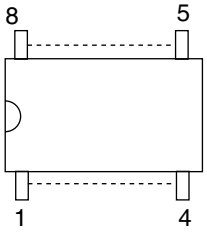


2SA1015-Y(TE2 F T)
2SA1015-Y(TPE2)
2SC2120-Y(TE2 F T)
2SC2120-Y(TPE2)
2SC2236-Y-TPE6 C
KTA1266(Y)
KTA1266-Y-AT/P
KTC3203(Y)
KTC3203-Y-AT/P
KTC3205(Y)
KTC3205-Y-AT/P
△2 BA1F4M-T
KRC103M
KRC103M-AT/P

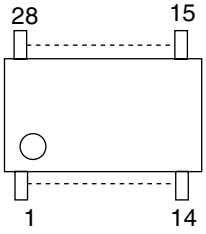


2SC1815-GR(TE2 F T)
2SC1815-GR(TPE2)
2SC1815-Y(TE2 F T)
2SC1815-Y(TPE2)
KTA1267(Y)
KTA1267Y-AT/P
KTC3199(GR,Y)
KTC3199-(GR,Y)-AT/P
BN1L3Z(P)
KRA105M-AT/P
KRA110M-AT/P
KRA110M

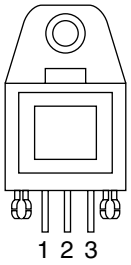
NJM4580M-TE1
RC4580IP
MM1636XWRE
KIA4558P/P
UTC4558



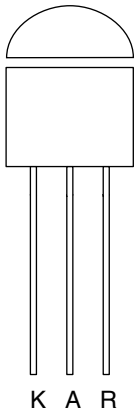
PT6313-S-TP(L)
SC16313G



GP1FA513TZ



FAN431AZXA
KIA431-AT

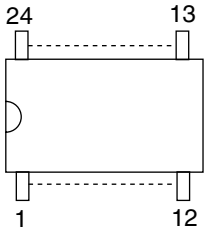


1: R
2: A
3: K

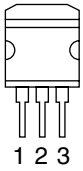
EL817B
EL817C
LTV-817B-F
LTV-817C-F
PS2561A-1(W)

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

MM1622XJBEG

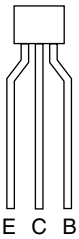


△2 UZ1086-ADJ
LD1086V

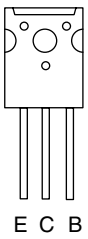


1: GND
2: Vout
3: Vin

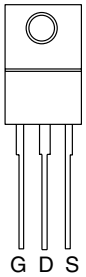
2SD2144S



KTD882



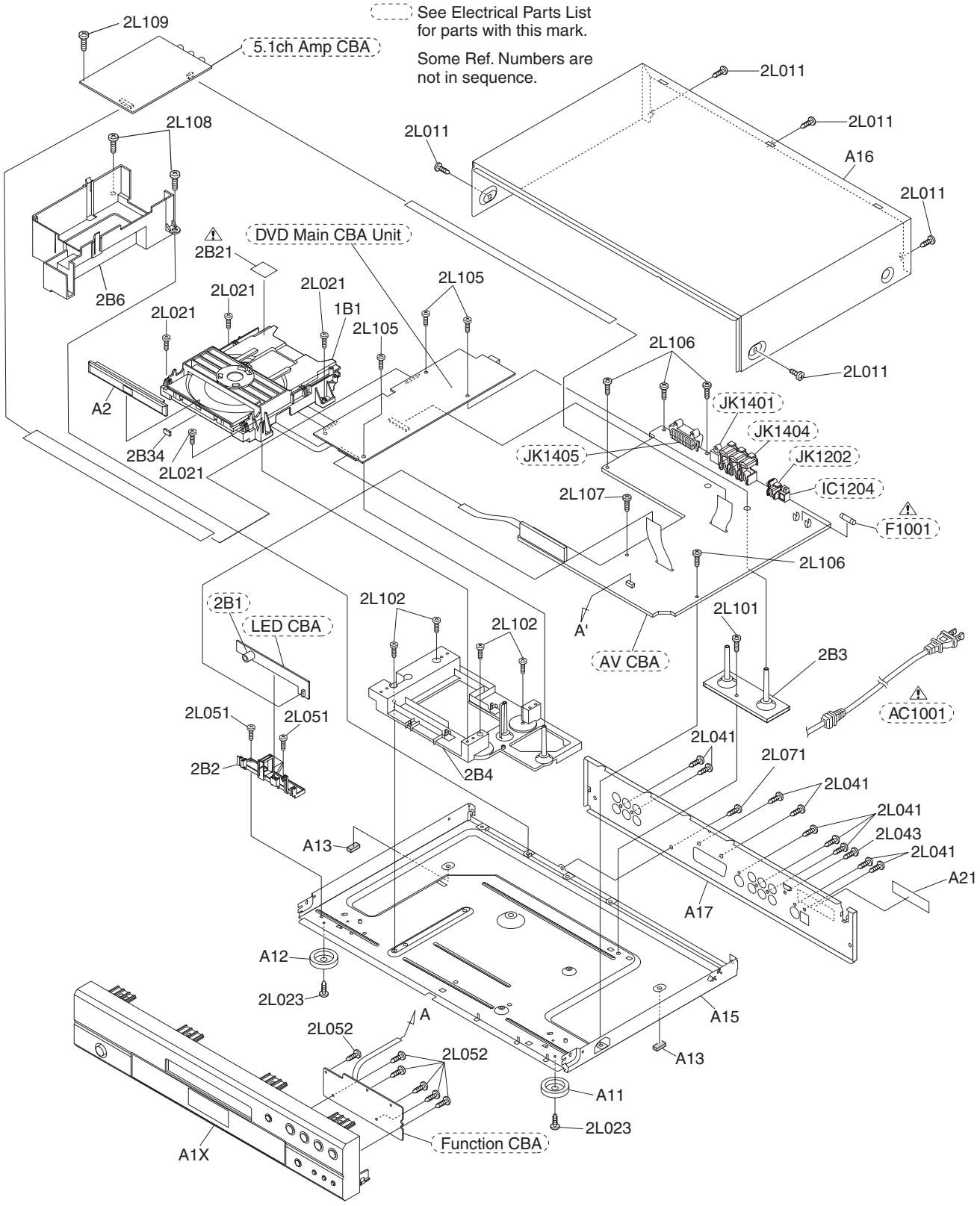
2SK3566



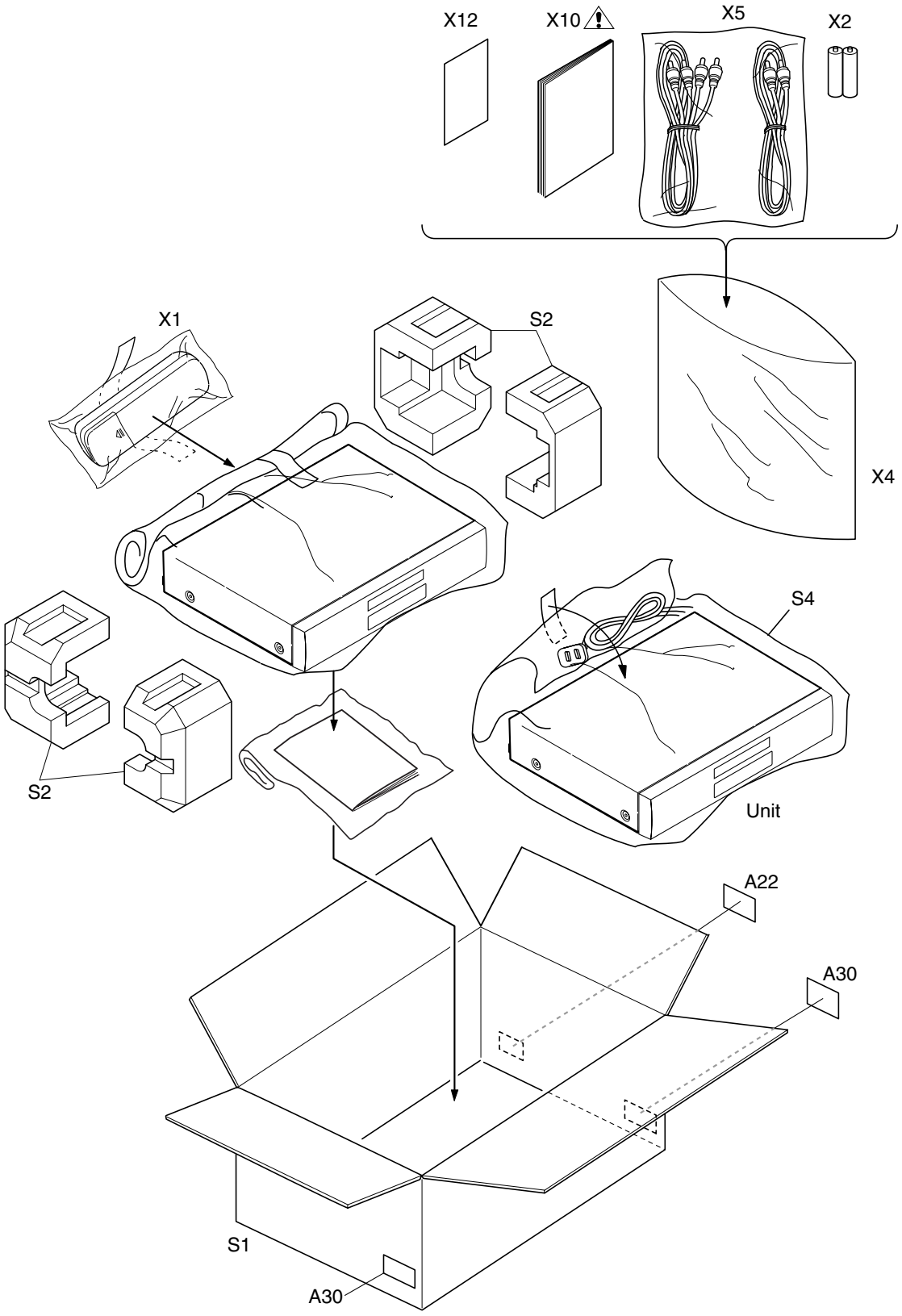
Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
G: Gate
D: Drain
S: Source

EXPLODED VIEWS

Cabinet



Packing



PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Comparison Chart of Models and Marks

Model	Mark
DVD1920BKE2	A
DVD1920SRE2	B

	Ref. No.	Mark	Description	Funai Parts No.	DENON Parts No.	Qty	New
MECHANICAL PARTS							
	A1X	A	FRONT ASSEMBLY	1VM220756	00D 9H2 6000 665	1	*
	A1X	B	FRONT ASSEMBLY	1VM220757	00D 9H2 6000 666	1	*
	A2	A	TRAY PANEL ASSEMBLY	1VM422186	00D 9H2 6000 645	1	
	A2	B	TRAY PANEL ASSEMBLY	1VM422188	00D 9H2 6000 646	1	
	A11		INSULATOR ASSEMBLY (R)	1VM420732	00D 9H2 6000 566	1	
	A12		INSULATOR ASSEMBLY (L)	1VM420733	00D 9H2 6000 567	1	
	A13		FOOT	0VM406940A	00D 9H2 6000 323	2	
	A15		CHASSIS	1VM120073	00D 9H2 6000 611	1	
	A16	A	TOP COVER(BLACK)	1VM120074	00D 9H2 6000 612	1	
	A16	B	TOP COVER(SILVER)	1VM320865	00D 9H2 6000 613	1	
	A17		REAR PANEL	1VM221061	00D 9H2 6000 661	1	*
	A21		LABEL SERIAL NO.	----------	----------		
	A22	A	BAR CODE LABEL	----------	----------		
	A22	B	BAR CODE LABEL	----------	----------		
	A30	A	CONTROL LABEL	----------	----------		
	A30	B	CONTROL LABEL	----------	----------		
	1B1		DVD MECHA	N79F1JVM	00D 9H2 6000 649	1	
	2B2		POWER PCB HOLDER	0VM306801D	----------		
	2B3		MAIN PCB HOLDER	1VM320650	----------		
	2B4		LOADER BASE	0VM101367E	00D 9H2 6000 616	1	
	2B6		JACK PCB HOLDER	0VM101376	----------		
⚠	2B21		LASER CAUTION LABEL	----------	----------		
	2B34		CUSHION SPACER	1VM422273	----------		
	2L011	A	SCREW C-TIGHT M3X5 BIND HEAD +	GBKC3050	00D 9H2 6000 257	5	
	2L011	B	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050	00D 9H2 6000 301	5	
	2L021		SCREW P-TIGHT 3X12 BIND HEAD+	GBMP3120	00D 9H2 6000 517	4	
	2L023		SCREW C-TIGHT M3X6 BIND HEAD	GBMC3060	00D 9H2 6000 303	2	
	2L041		SCREW B-TIGHT M3X8 BIND HEAD +	GBKB3080	00D 9H2 6000 304	9	
	2L043		SCREW C-TIGHT M3X5 BIND HEAD +	GBKC3050	00D 9H2 6000 257	1	
	2L051		C-TITE SCREW M3*8 BIND	GBMC3080	00D 9H2 6000 518	2	
	2L052		P-TIGHT SCREW 3X8 BIND +	GBMP3080	00D 9H2 6000 240	6	
	2L071		SCREW C-TIGHT M3X5 BIND HEAD +	GBKC3050	00D 9H2 6000 301	1	
	2L101		SCREW C-TIGHT M3X6 BIND HEAD	GBMC3060	00D 9H2 6000 303	1	
	2L102		SCREW C-TIGHT M3X6 BIND HEAD	GBMC3060	00D 9H2 6000 303	4	
	2L105		P-TIGHT SCREW 3X8 BIND +	GBMP3080	00D 9H2 6000 240	3	
	2L106		SCREW C-TIGHT M3X6 BIND HEAD	GBMC3060	00D 9H2 6000 303	4	
	2L107		P-TIGHT SCREW 3X8 BIND +	GBMP3080	00D 9H2 6000 240	1	
	2L108		SCREW C-TIGHT M3X6 BIND HEAD	GBMC3060	00D 9H2 6000 303	2	
	2L109		P-TIGHT SCREW 3X8 BIND +	GBMP3080	00D 9H2 6000 240	1	
	S1	A	GIFT BOX CARTON	1VM321352	00D 9H2 6000 667	1	*
	S1	B	GIFT BOX CARTON	1VM321353	00D 9H2 6000 668	1	*
	S2		STYROFOAM	0VM101298B	00D 9H2 6000 619	1	
	S4		SET BAG	0DM400731A	00D 9H2 6000 620	1	
	X1		REMOTE CONTROL UNIT	NA834UD	00D 9H2 6000 653	1	

	Ref. No.	Mark	Description	Funai Parts No.	DENON Parts No.	Qty	New
	X2		DRY BATTERY R6P/2S	XB0M451T0001	----------	2	
	X2		DRY BATTERY ES-GR6M-C	XB0M571GLP01	----------	2	
	X4		ACCESSORY BAG E5795ED	0VM416059	----------	1	
	X5		AV CORD TSCKA-Y/RW100	WPZ0102TM015	00D 9H2 6000 226	1	
	X5		AV CORD RCA(M*2)TO RCA(M*2)	WPZ0102LTE01	----------	1	
	X5		AV CORD DC2FN020001	WPZ0102CAB01	----------	1	
⚠	X10		OWNERS MANUAL	1VMN20959	00D 9H2 6000 669	1	*
	X12		SERVICE CENTER SHEET	1VM422133	----------	1	
ELECTRICAL PARTS							
			DVD MAIN CBA UNIT	N79D3JEP	00D 9H2 6000 670	1	*
			AV ASSEMBLY Consists of the following:	1VSA12232	00D 9H2 6000 664	1	*
			AV CBA	----------	----------		
			FUNCTION CBA	----------	----------		
			LED CBA	----------	----------		
			5.1ch Amp CBA	1VSA12380	00D 9H2 6000 673	1	*

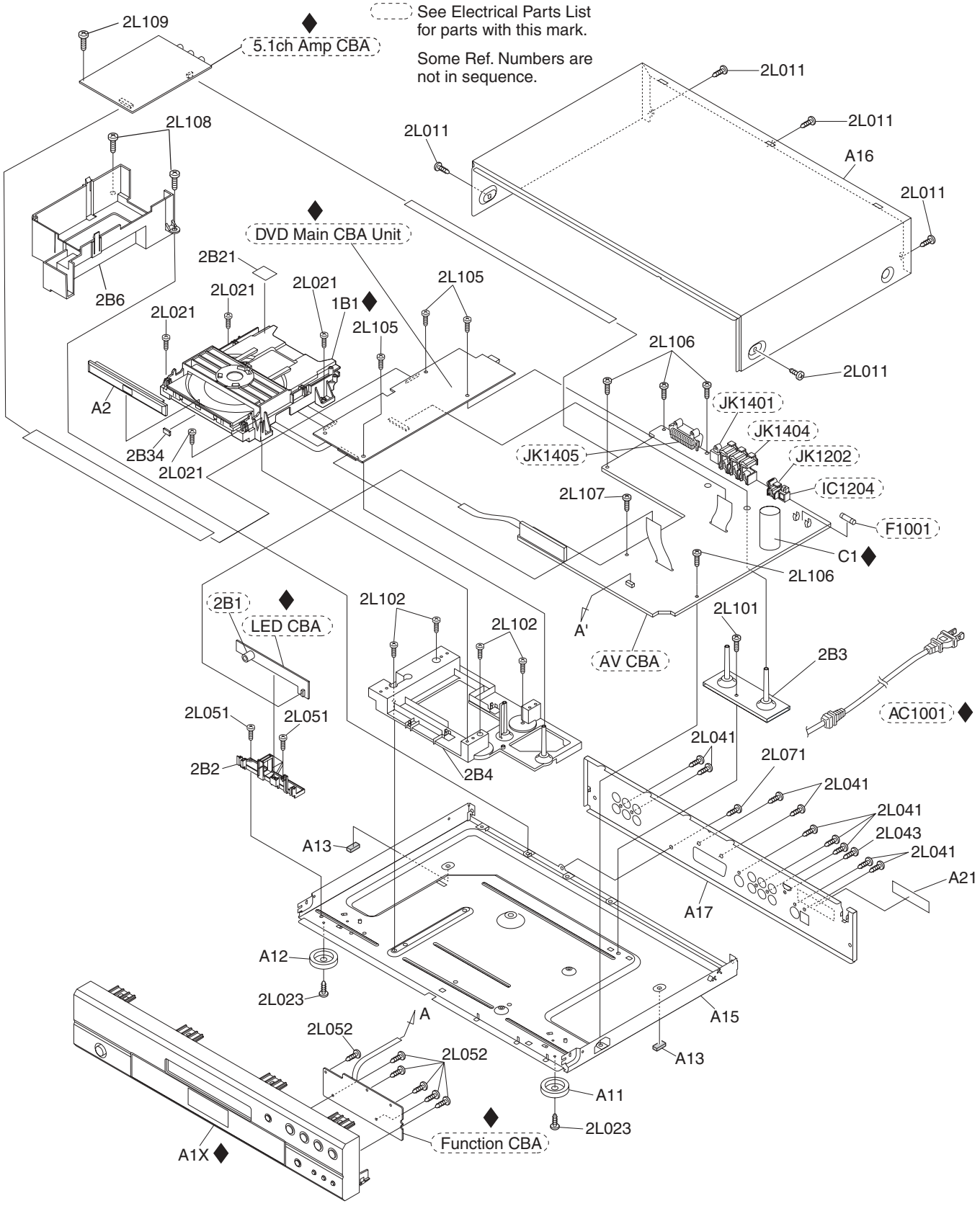
DOCUMENTS FOR WEEE

Details of Recycle parts for DVD-1920 model

✳ You have to remove the parts that marked “WEEE Mark ◆ " when the recycling processing. (Europe model only)

Ref. No.	WEEE Mark	Description	Material	Qty
	◆	DVD MAIN CBA UNIT	Complex	1
	◆	AV ASSEMBLY	Complex	1
		AV CBA		
		FUNCTION CBA		
		LED CBA		
	◆	5.1ch Amp CBA	Complex	1
A1X	◆	FRONT ASSEMBLY		1
		FRONT COVER	Alminium	1
		PANEL FRONT	PS	1
		MODE BUTTON	PS	1
		POWER BUTTON	ABS+AL	1
		LED LENS	PMMA	1
		LED LENS(DV)	PMMA	1
		EARTH PLATE	SUS	2
		EARTH PLATE(TOP)	SUS	2
		BRAND BADGE	ABS	1
A2		TRAY PANEL ASSEMBLY	PS	1
A11		INSULATOR ASSEMBLY (RÅj	PS+URETHANE	1
A12		INSULATOR ASSEMBLY (L)	PS+URETHANE	1
A13		FOOT	URETHANE	2
A15		CHASSIS	SECC	1
A16		TOP COVER	SECC+PAINT	1
A17		REAR PANEL	SECC	1
1B1	◆	DVD MECHA	Complex	1
2B2		POWER PCB HOLDER	PS	1
2B3		MAIN PCB HOLDER	PS	1
2B4		LOADER BASE	PS	1
2B6		JACK PCB HOLDER	PS	1
2B34		CUSHION SPACER	URETHANE	1
AC1001		AC CORD	Complex	1
C1	◆	ELECTROLYTIC CAPACITOR	Complex	1
SCREWS				
2L011		SCREW C-TIGHT M3X5 BIND HEAD +	STEEL	5
2L021		SCREW P-TIGHT 3X12 BIND HEAD+	STEEL	4
2L023		SCREW C-TIGHT M3X6 BIND HEAD	STEEL	2
2L041		SCREW B-TIGHT M3X8 BIND HEAD +	STEEL	9
2L043		SCREW C-TIGHT M3X5 BIND HEAD +	STEEL	1
2L051		C-TITE SCREW M3*8 BIND	STEEL	2
2L052		P-TIGHT SCREW 3X8 BIND +	STEEL	6
2L071		SCREW C-TIGHT M3X5 BIND HEAD +	STEEL	1
2L101		SCREW C-TIGHT M3X6 BIND HEAD	STEEL	1
2L102		SCREW C-TIGHT M3X6 BIND HEAD	STEEL	4
2L105		P-TIGHT SCREW 3X8 BIND +	STEEL	3
2L106		SCREW C-TIGHT M3X6 BIND HEAD	STEEL	4
2L107		P-TIGHT SCREW 3X8 BIND +	STEEL	1
2L108		SCREW C-TIGHT M3X6 BIND HEAD	STEEL	2
2L109		P-TIGHT SCREW 3X8 BIND +	STEEL	1

Exploded view



You have to remove the parts that marked "WEEE mark ♦" when the recycling processing. (Europe model only)