DENON

**Ver. 2**

**Please refer to the MODIFICATION NOTICE.**

# SERVICE MANUAL

| MODEL | JP | E3 | E2 | EK | E2A | E1C | E1K | EUT |
|---|---|---|---|---|---|---|---|---|
| **DVM-1845/745** | | ✓ | | | | | | |

## DVD VIDEO AUTO CHANGER

**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

Denon Brand Company, D&M Holdings Inc.

X0336V.02 DE/CDM 0802

o the customer, make sure you make either (1) a leakage current check or (2) a line to chassis
kage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power
s, the unit is defective.

## ON

and invisible laser radiation when open.
tical instruments.

## need the points listed below during servicing and inspection.

ention when servicing, such as
tc., have cautions indicated on
ed these cautions and the cau-
instructions.

### g electric shock!

ed on this set, so touching inter-
set is energized could cause
o avoid electric shock, by for ex-
transformer and gloves when
nergized, unplugging the power
, etc.

s inside. Handle with extra care

### sassembly and assembly!

when manufacturing parts from
me rare cases be burrs on the
ause injury if fingers are moved
rotect your hands.

### ed parts!

c safety properties (fire resis-
c.). For replacement parts, be
the same properties. In particu-
rts that are marked ⚠ on wiring
ure to use the designated parts.

### parts and arrange the originally!

s use tape, tubes or other insu-
rts are mounted away from the
ds. Care is also taken with the
and clamps are used to keep
igh voltage parts, so be sure to
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をしておりますが、板金端面は鋭利となっている箇所が有りますので、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パー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

サービスのために取り外
りになっているか、また
てしまったところがない
と、電源プラグの刃の間
全性が確保されているこ

（絶縁チェックの方法）
電源コンセントから電源
どを外し、電源スイッチ
いて、電源プラグのそれ
テナ端子、ヘッドホン端
の間で、絶縁抵抗値が 1
ださい。この値以下のと

## 注　意　安全上重

本機に使用している多く
上、特別な特性を持って
外観では判別つきにくく
格電力、耐圧）を持った
るとは、限りません。安
サービスマニュアルの配
ていますので必ず指定さ
います。

(1) 配線図…⚠マークで
(2) 部品表…⚠マークで
指定された
は、感電、
ます。

# SPECIFICATIONS

| Item | Conditions | Unit | Nominal | Limit |
|---|---|---|---|---|
| 1. Video Output | 75 load | Vpp | 1.0 | ± 0.1 |
| 2. Optical Digital Out | | dBm | -18 | |
| 3. Audio (PCM) | | | | |
| 3-1. Output Level | 1 kHz, 0 dB | Vrms | 2.0 | |
| 3-2. S/N | | dB | 120 | |
| 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 120 V, 60 Hz
3. Load Impedance: 100 k load (Audio Output)
4. Room Ambient: 5 ℃ - 40 ℃

# Safety Check after Servicing

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

## 1. Clearance Distance

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

**Table 1: Ratings for selected area**

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

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

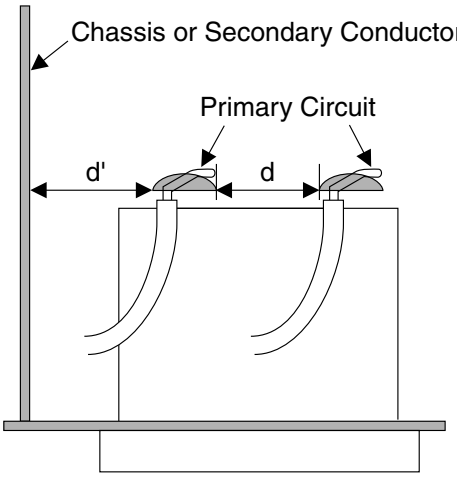



**Fig. 1**

## 2. Leakage Current Test

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

**Measuring Method (Power ON):**

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

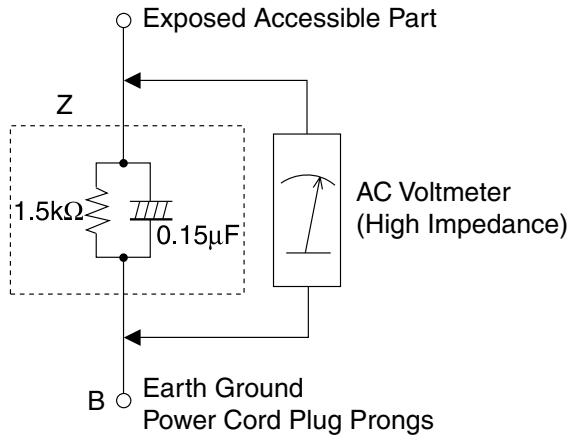



**Fig. 2**

**Table 2: Leakage current ratings for selected areas**

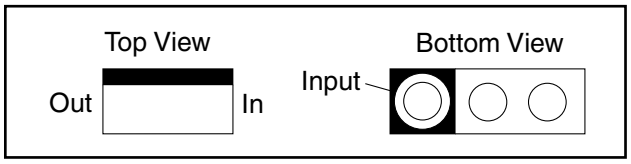
| AC Line Voltage | Load Z | Leakage Current (i) | Earth Ground (B) to: |
|---|---|---|---|
| 120 V | 0.15 μF CAP. & 1.5 kΩ RES. Connected in parallel | i ≤ 0.5 mA Peak | Exposed accessible parts |

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

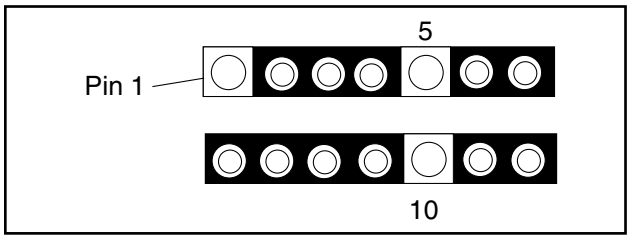
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

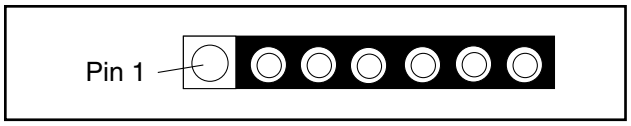
1. The output pin of the 3 pin Regulator ICs is indicated as shown.




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

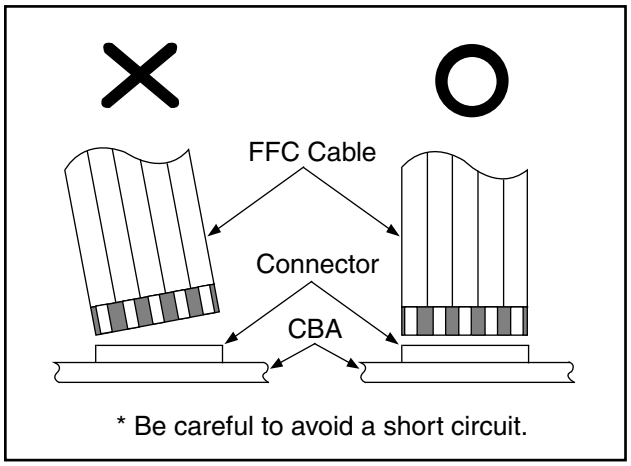



3. The 1st pin of every male connector is indicated as shown.




## Instructions for Connectors

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




* Be careful to avoid a short circuit.

## 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)

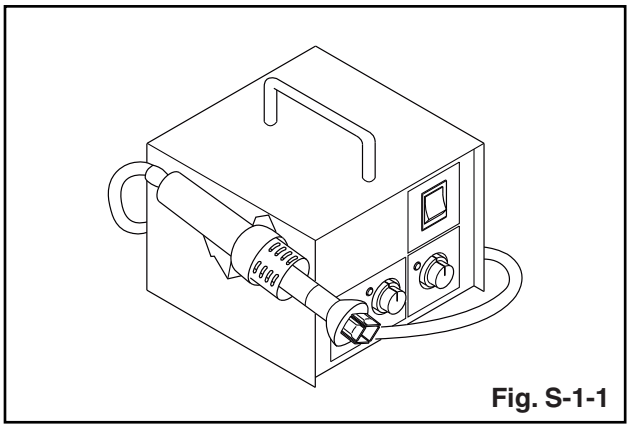


**Fig. S-1-1**

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.

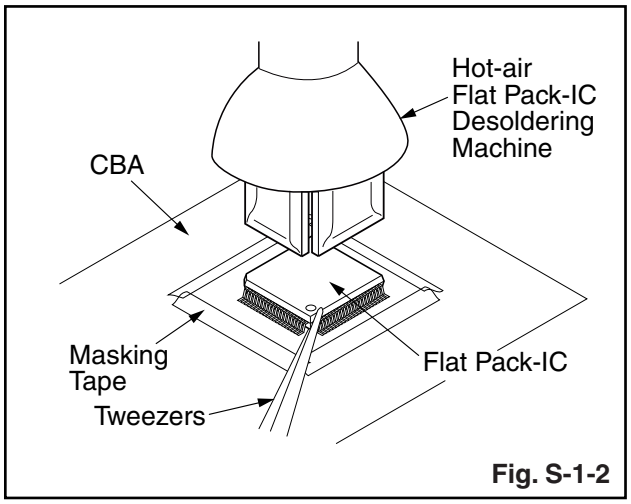



**Fig. S-1-2**

**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)

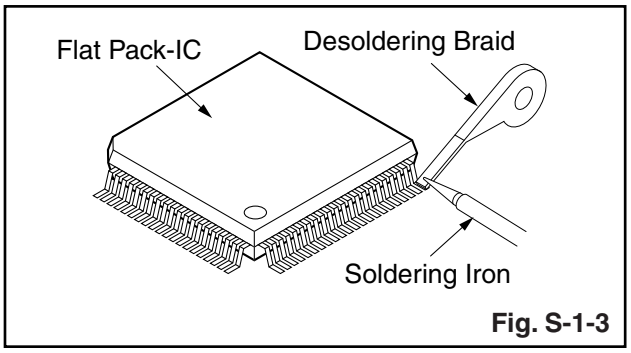



**Fig. S-1-3**

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)

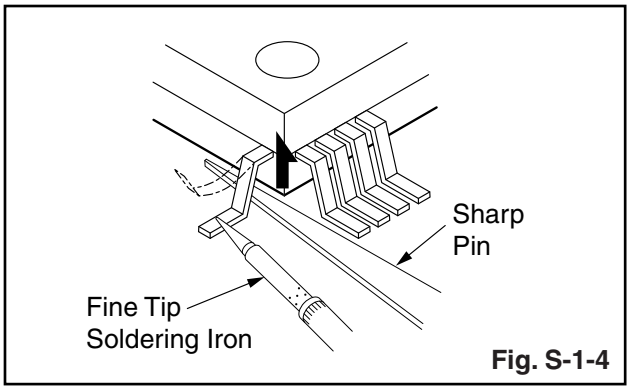



**Fig. S-1-4**

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.

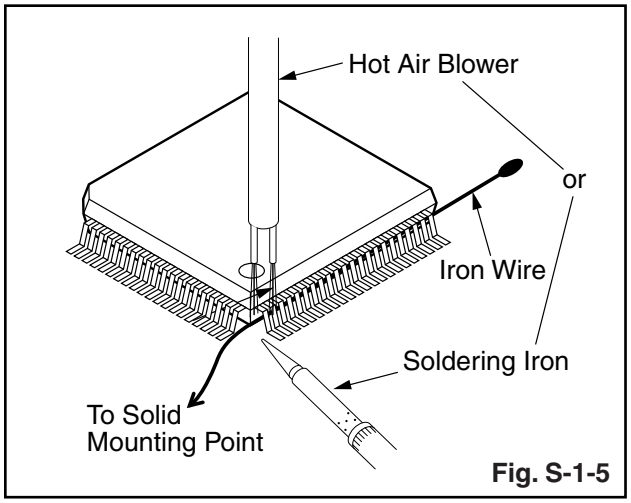



**Fig. S-1-5**

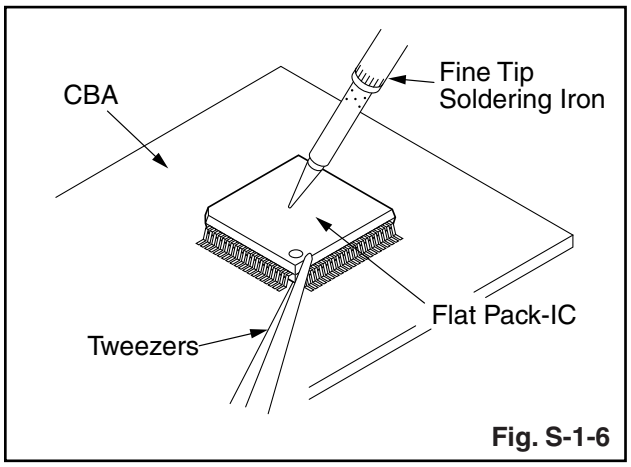



**Fig. S-1-6**

## 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.

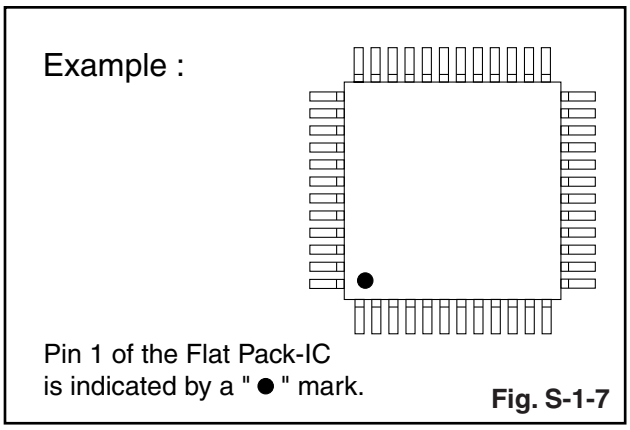



**Fig. S-1-7**

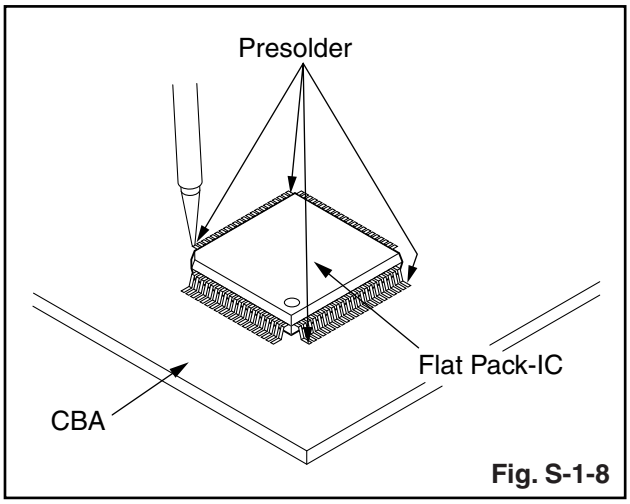



**Fig. S-1-8**

# Instructions for Handling Semi-conductors

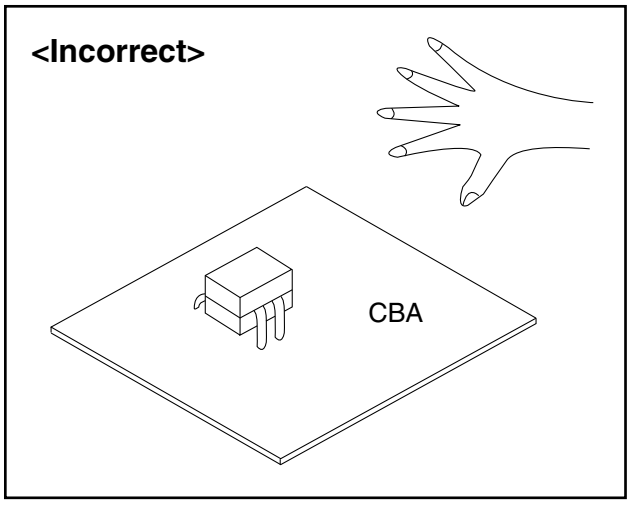
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

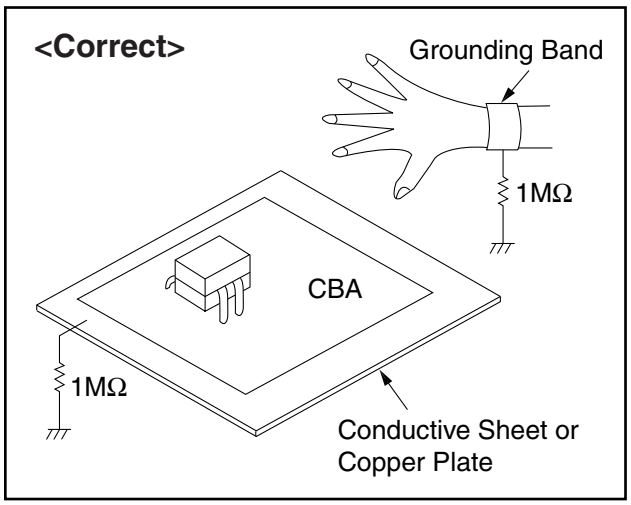
## 1. Ground for Human Body

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.

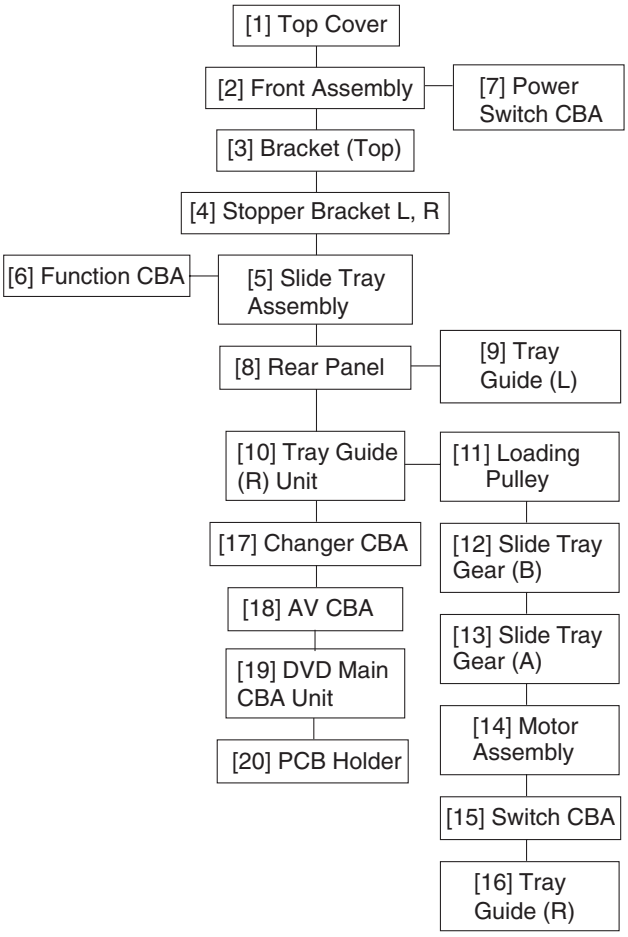


# CABINET DISASSEMBLY INSTRUCTIONS

## 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 | 6(S-1) | - |
| [2] | Front Assembly | D2 | *8(L-1) | 1 |
| [3] | Bracket (Top) | D3 | 2(S-2) | - |
| [4] | Stopper Bracket L, R | D3 | 4(S-3) | - |
| [5] | Slide Tray Assembly | D4 D5 | CN5001, CN5004 | 2 3 4 |
| [6] | Function CBA | D4 | *2(L-2), CN2201 | - |
| [7] | Power Switch CBA | D4 | CN2103, (S-4) | - |
| [8] | Rear Panel | D6 | 4(S-5), 11(S-6), (S-7) | - |
| [9] | Tray Guide (L) | D7 | (S-8) | - |
| [10] | Tray Guide (R) Unit | D7 | 2(S-9), CN3003, CN3004 | - |
| [11] | Loading Pulley | D8 | (S-10), Belt L | - |
| [12] | Slide Tray Gear (B) | D8 | (S-11), *(P-1) | - |
| [13] | Slide Tray Gear (A) | D8 | ---------- | - |
| [14] | Motor Assembly | D8 | (S-12) | - |
| [15] | Switch CBA | D8 | *2(L-4) | - |
| [16] | Tray Guide (R) | D8 | ---------- | - |
| [17] | Changer CBA | D9 | CN3102, CN3301, 2(S-13) | - |
| [18 | AV CBA | D9 | 5(S-14), CN1001, CN1601 | - |
| [19] | DVD Main CBA Unit | D10 | 3(S-15) | - |
| [20] | PCB Holder | D10 | ---------- | - |
| | | ↓ (3) | ↓ (4) | ↓ (5) |

(1) (2)

(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.”

## Reference Notes

**CAUTION 1:** Locking Tabs (L-1) are fragile. Be careful not to break them.

1-1. To release eight Locking Tabs (L-1), first release five Locking Tabs (A), and then three Locking Tabs (B). (Fig. D2)

**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.

2-1. To remove the Chuck Arm, remove the Screw A, two Rotary Tray Washers and Rotary Tray Spring. (Fig. D5)

2-2. Short the three short lands of FPC cable with solder before removing the FFC cable (CN5004 on the Relay CBA). If you disconnect the FFC cable without shorting them, the laser diode of pickup will be destroyed. (Fig. D5)

2-3. Disconnect the Connector (CN5001). Remove the Slide Tray Assembly carefully. (Fig. D5)

**CAUTION 3:** When reassembling, confirm the three short lands of FPC cable is solderd, and connect the FFC cable (CN5004 on the Relay CBA) completely. Then remove the solder from the three short lands of FPC cable. (Fig. D5)

**CAUTION 4:** Before reinstalling, turn the Slide Tray Gear (B) fully clockwise. (Fig. D4)

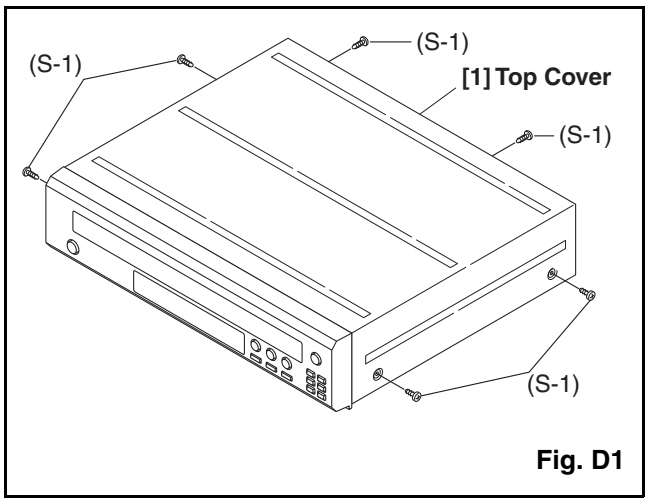


**Fig. D1**

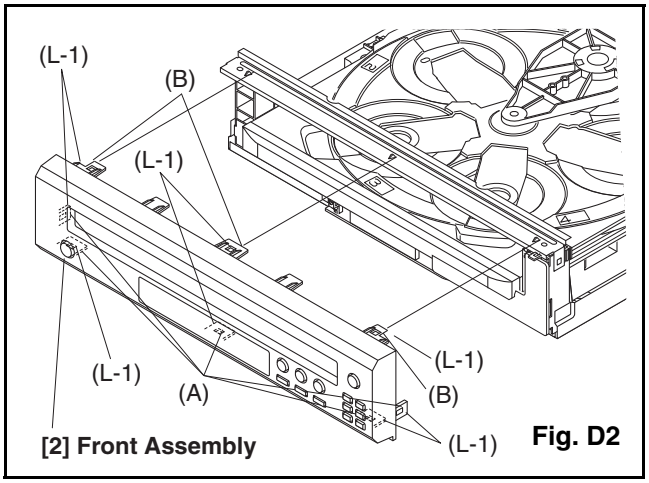


**Fig. D2**

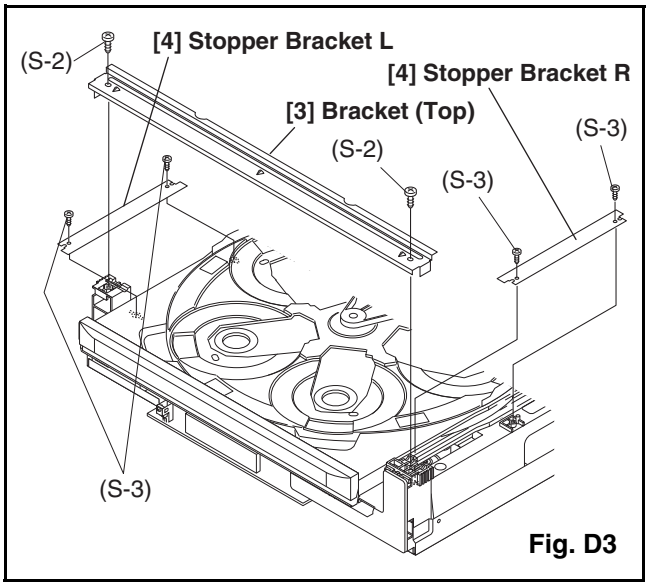


**Fig. D3**

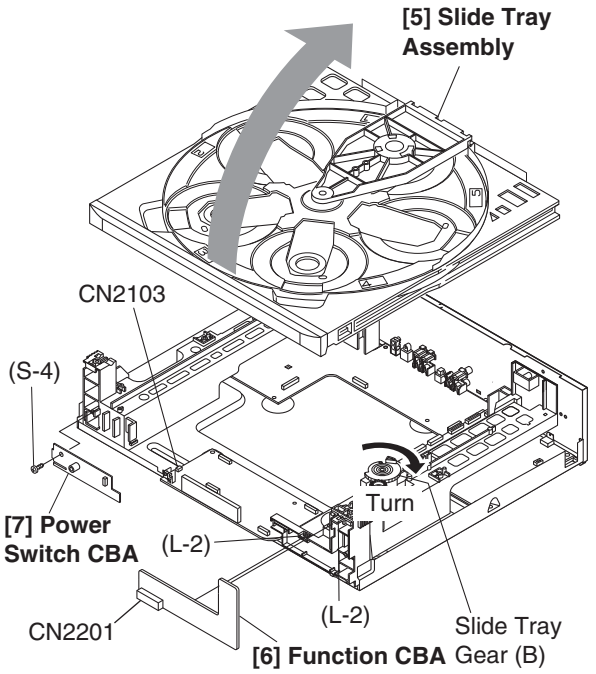
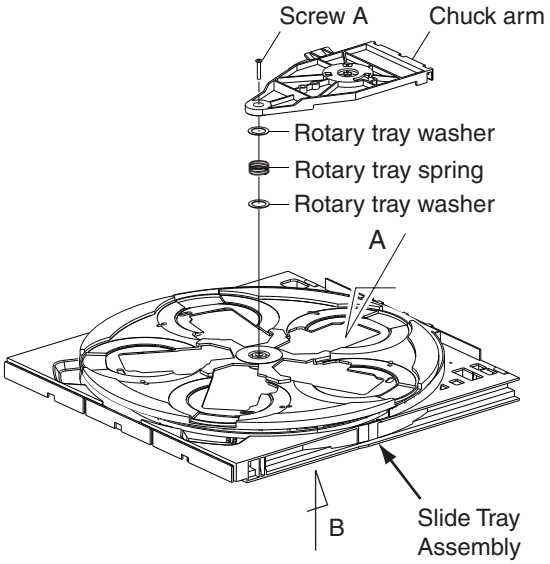
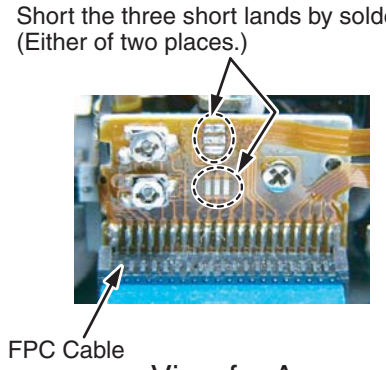
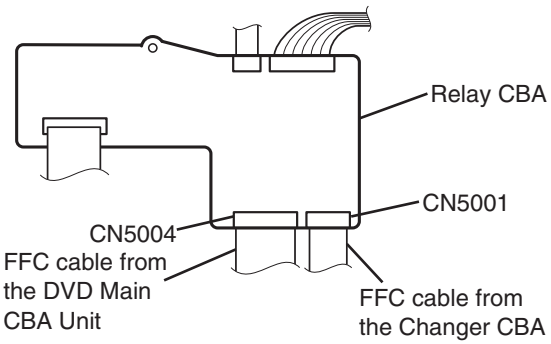



Fig. D4




View for A




View for B (Relay CBA)

Fig. D5

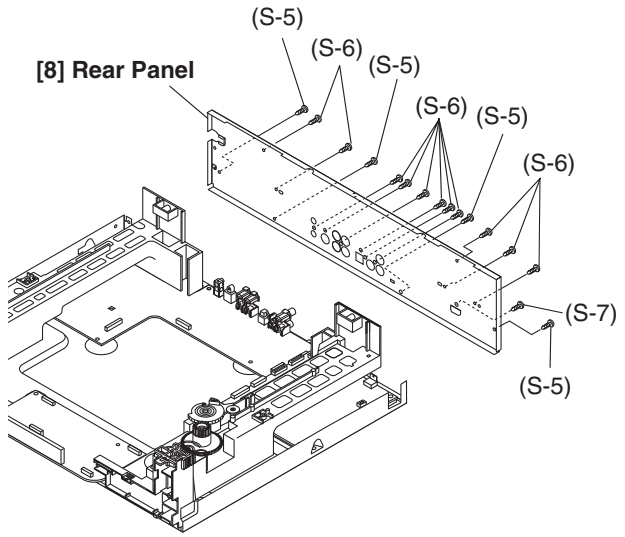



Fig. D6

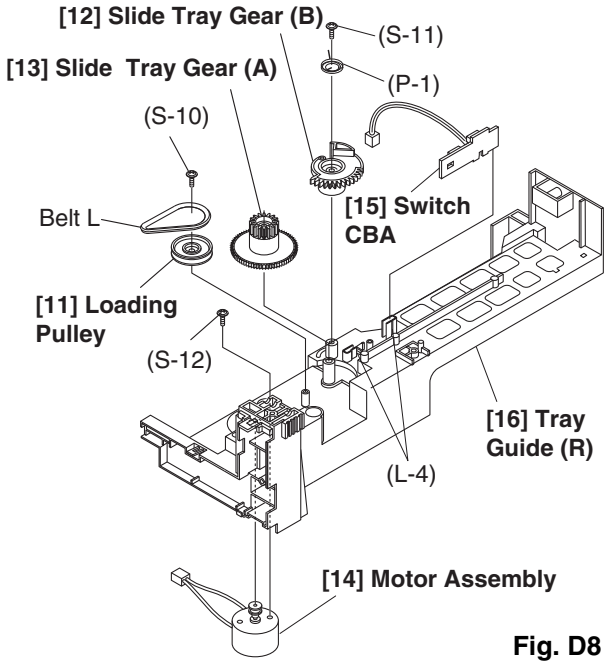



Fig. D8

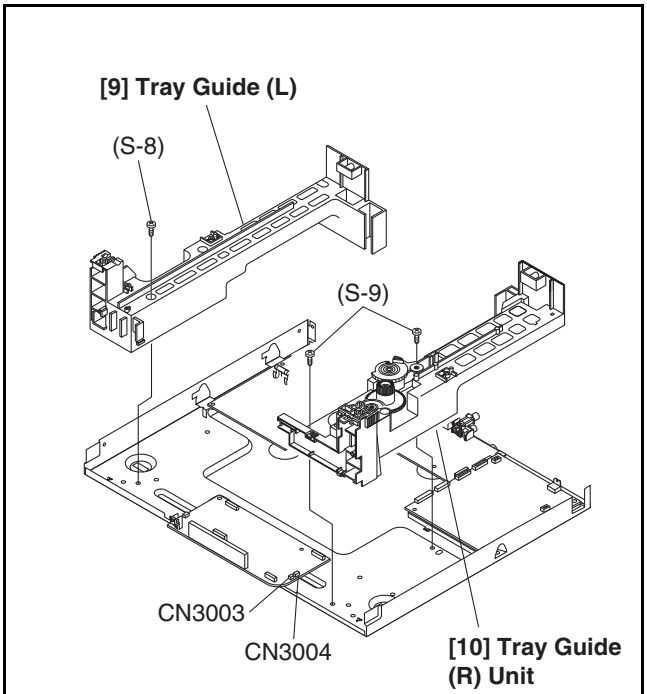



Fig. D7

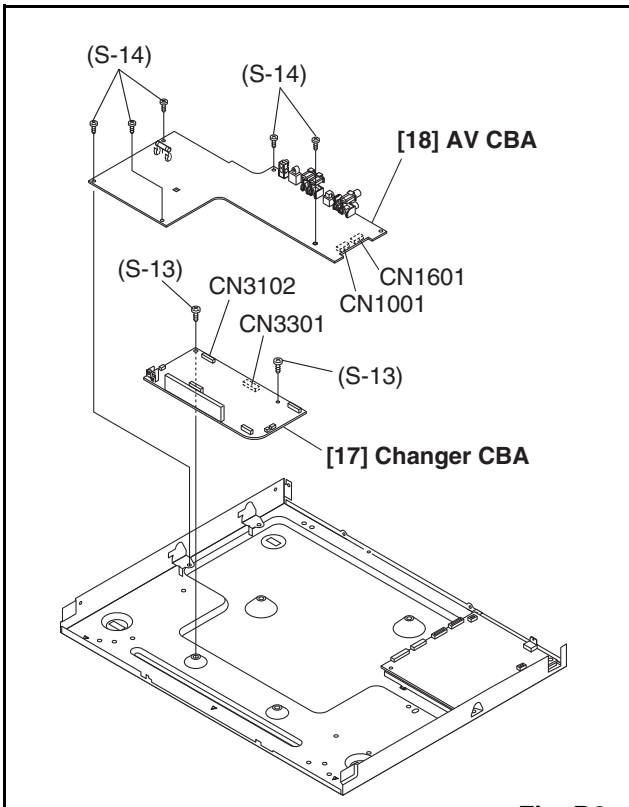



Fig. D9

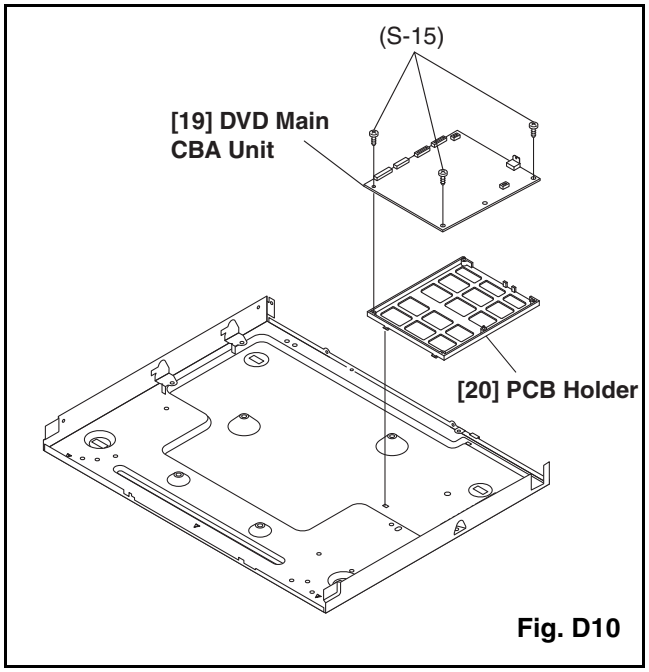
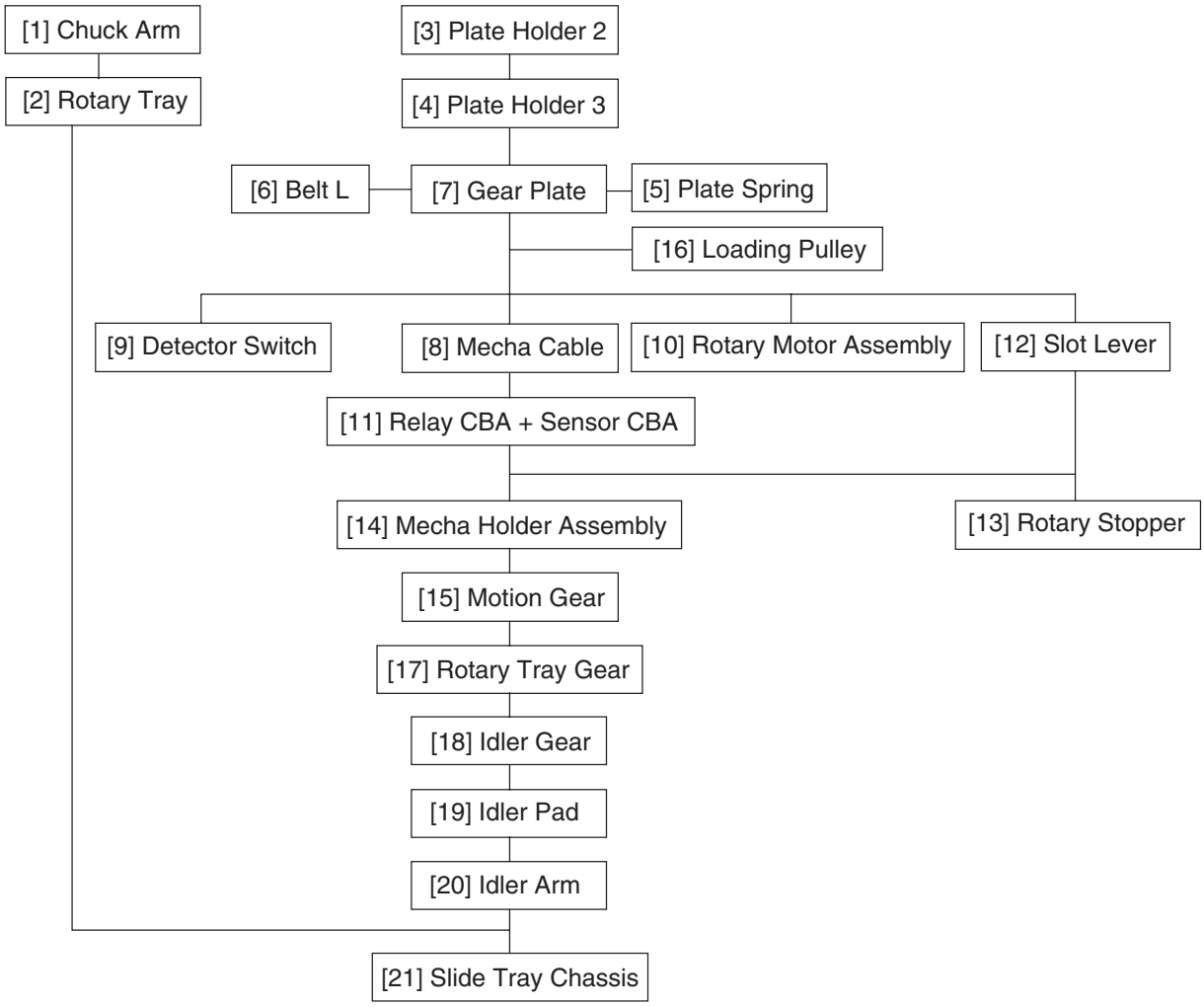



**Fig. D10**

# SLIDE TRAY ASSEMBLY DISASSEMBLY INSTRUCTIONS

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When Reassembly, 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] | Chuck Arm | MD1 | (S-1), 2(W-1), (P-1), Magnet, Yoke, Clamper | - |
| [2] | Rotary Tray | MD2 | ---------- | 1<br>2 |
| [3] | Plate Holder 2 | MD3 | 2(S-2), (S-3) | - |
| [4] | Plate Holder 3 | MD3 | 2(S-4) | - |
| [5] | Plate Spring | MD4 | (S-5) | - |
| [6] | Belt L | MD4 | ---------- | - |
| [7] | Gear Plate | MD4 | 3(S-6), (S-7) | - |
| [8] | Mecha Cable | MD4 | 6(L-1), *CN5002, *CN5101, (S-8) Lead clamper, Desolder | - |
| [9] | Detector Switch | MD4 | Desolder | 3 |
| [10] | Rotary Motor Assembly | MD4 | Desolder | 3 |
| [11] | Relay CBA + Sensor CBA | MD5 | 4(S-9), *CN5003, *CN5005 | 4<br>5 |
| [12] | Slot Lever | MD6 | *(P-2) | 6<br>7 |
| [13] | Rotary Stopper | MD6 | ---------- | 6<br>7 |
| [14] | Mecha Holder Assembly | MD5<br>MD6 | ---------- | 4<br>5<br>8<br>9 |
| [15] | Motion Gear | MD6 | ---------- | 8<br>9 |
| [16] | Loading Pulley | MD7 | (S-10), (W-2) | - |
| [17] | Rotary Tray Gear | MD7 | ---------- | - |
| [18] | Idler Gear | MD7 | *(P-3), (S-11), (W-3), (W-4) | - |
| [19] | Idler Pad | MD7 | ---------- | - |
| [20] | Idler Arm | MD7 | ---------- | - |
| [21] | Slide Tray Chassis | MD7 | ---------- | - |
| ↓ (1) | ↓ (2) | ↓ (3) | ↓ (4) | ↓ (5) |

(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, W=Washer
*=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.”

### Reference Notes

1. Disassembly note
Slide the Rotary Tray slowly in the direction of the front while rotating it.
2. Reassembly note
Align the rails on the Rotary Tray with the slot on the sensor and align pin A with hole A on the Rotary Tray.
3. Reassembly note
Re-solder the leads on the Rotary Motor Assembly or the Detector Switch as shown in Fig. MD4.
4. **CAUTION:** 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:
   a. Short the three short lands of the FPC cable with solder before removing the FFC cable (CN5005). If you disconnect the FFC cable (CN5005) without shorting them, the laser diode of the pickup will be destroyed. (“View for A” in Fig. MD5)
   b. Disconnect the two connectors (CN5003 and CN5005) on the Relay CBA.
5. **CAUTION:** When Reassembly, confirm the FFC cable (CN5005) is connected completely. Then remove the solder from the three short lands of the FPC cable. (“View for A” in Fig. MD5)
6. Disassembly note
Remove the spring (P-2). Then remove the Slot Lever with the Rotary Stopper while turning the Slot Lever in the direction of the arrow as shown in Fig. MD6.
7. Reassembly note
   a. Install the Slot Lever and the Rotary Stopper with spring (P-2) as shown in “Bottom View of the Slide Tray” of Fig. MD6.
   b. Align pin B on the Slot Lever with slot B on the Motion Gear.
8. Disassembly note
The Mecha Holder Assembly and the Motion Gear should be removed together.
9. Reassembly note
The pins, slots or holes on the Mecha Holder Assembly, the Motion Gear and the Slide Tray align as follows:
   - Pin C on the Mecha Holder Assembly with hole B on the Slide Tray Chassis
   - Pin D on the Mecha Holder Assembly with slot C on the Motion Gear
   - Pin E on the Mecha Holder Assembly with cavity A on the Slide Tray Chassis
   - Slot A on the Mecha Holder Assembly with rib A on the Slide Tray Chassis

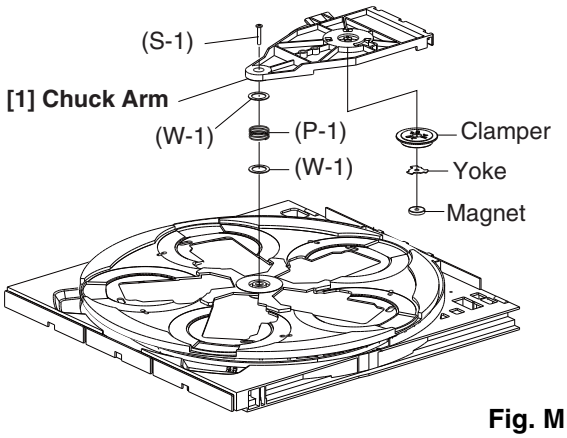



**Fig. MD1**

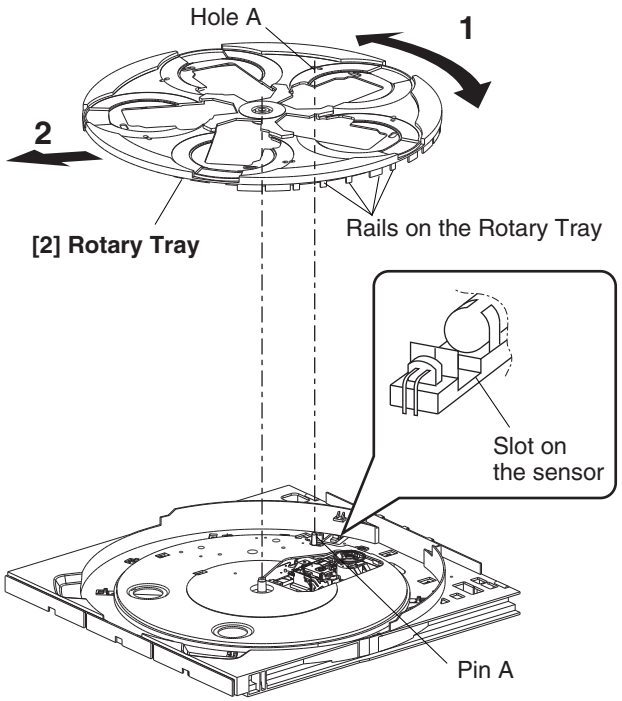



**Fig. MD2**

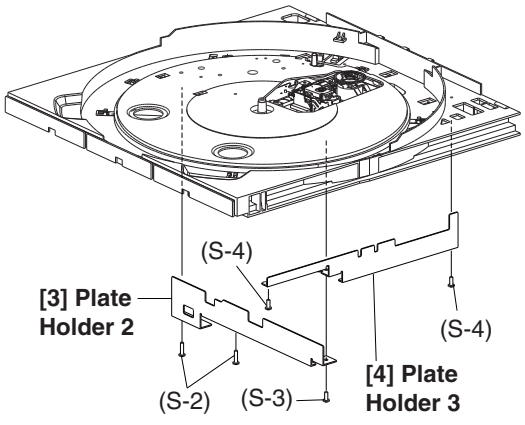
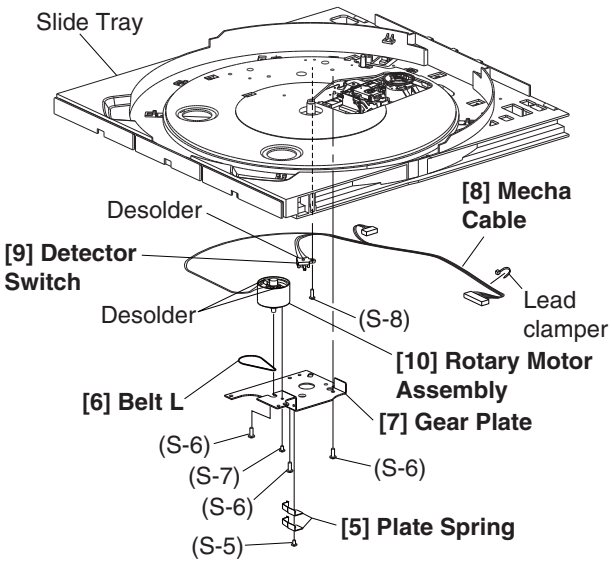
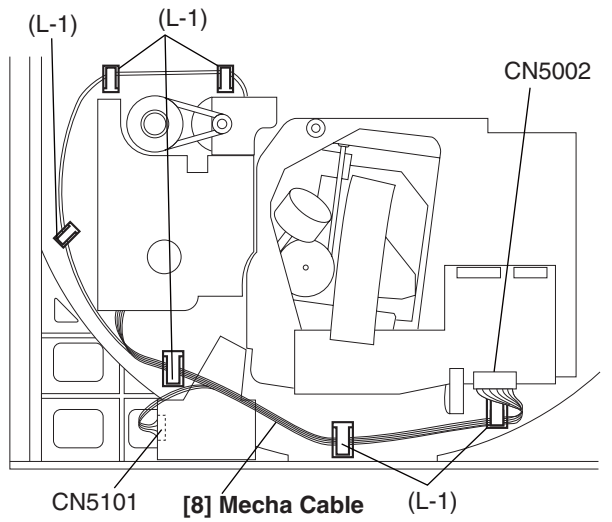



**Fig. MD3**




**Bottom View of the Slide Tray**

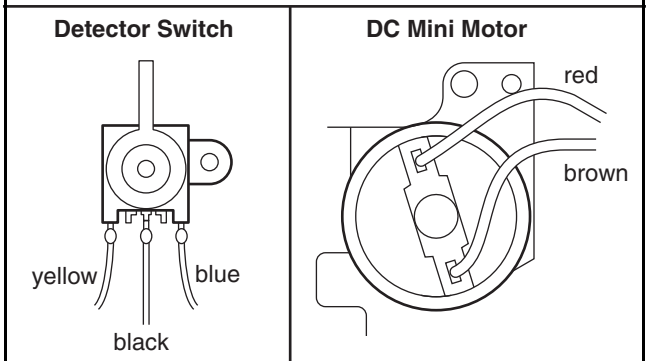
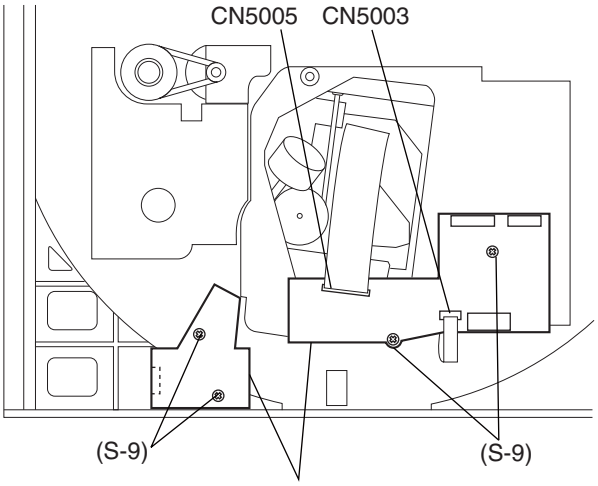
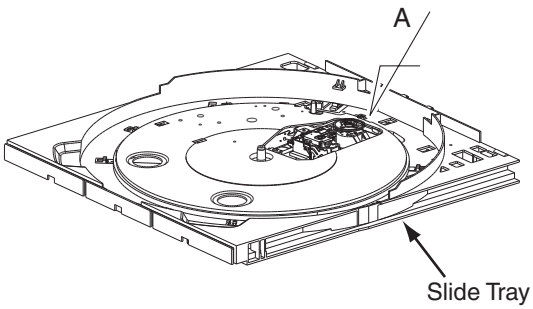



**Fig. MD4**

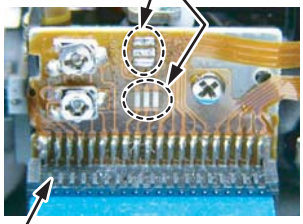



**[11] Relay CBA + Sensor CBA**

**Bottom View of the Slide Tray**

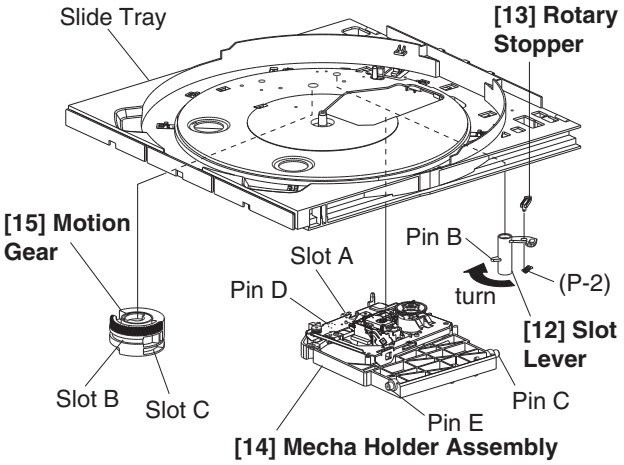


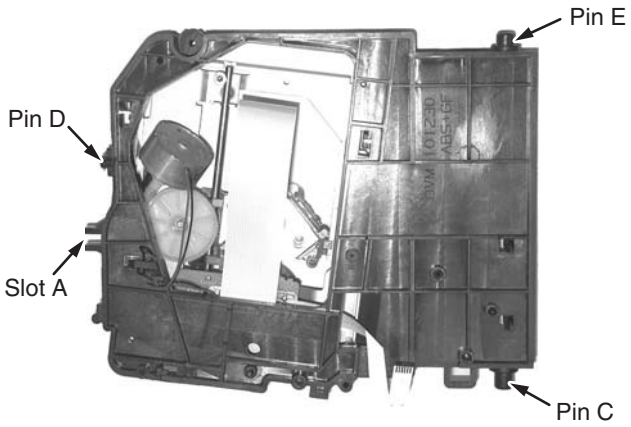

Short the three short lands by soldering.
(Either of two places.)



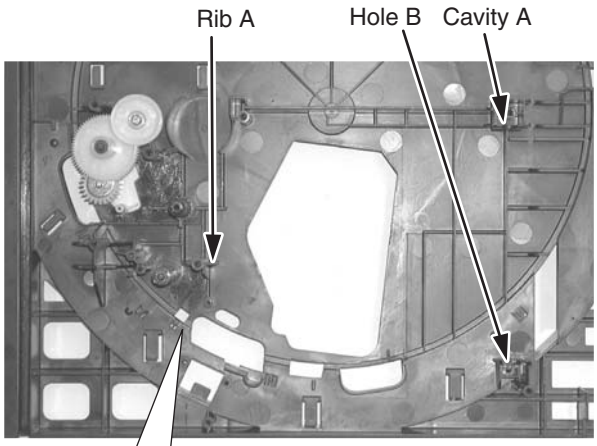

View for A

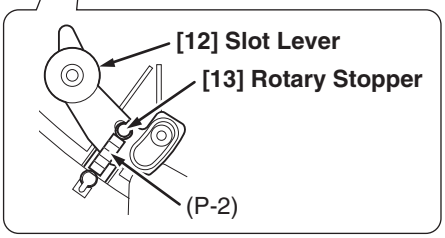
**Fig. MD5**




**Bottom View of the Mecha Holder Assembly**




**Bottom View of the Slide Tray**

**Fig. MD6**

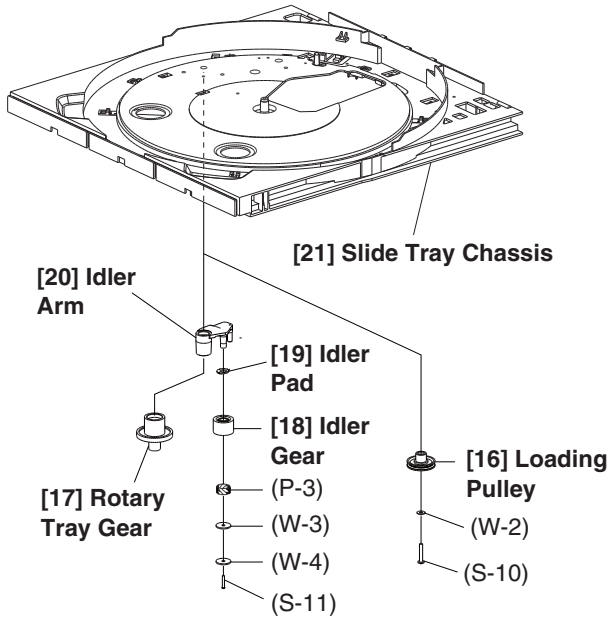

[21] Slide Tray Chassis
[20] Idler Arm
[19] Idler Pad
[18] Idler Gear
[16] Loading Pulley
[17] Rotary Tray Gear
(P-3)
(W-3)
(W-4)
(S-11)
(W-2)
(S-10)

**Fig. MD7**

# 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 shor-circuiting on the primary circuit component, and service it if defective. (Q1031, Q1003, T1001, D1001, D1002, D1004, D1005, D1011, C1003, C1005)
- Yes ↓

Is the CHG +3.3V line voltage normal?
- No → Check if there is any leak or shor-circuiting on the primary circuit component, and service it if defective. (Q1031, Q1003, T1001, D1001, D1002, D1004, D1005, D1011, C1003, C1005)
- Yes ↓

Is each voltage of the secondary side normal?
- No → Check each rectifying circuit of the secondary circuit and service it if defective.
- Yes ↓

When pressing POWER button (SW2101), is the voltage of 0V supplied to pin(42) of IC3001?
- No → Check POWER button (SW2101) and their periphery, and service it if defective.
- Yes ↓

Is the voltage of 3.3V supplied to pin(1) of IC3001?
- No → Check CHG+3.3V line and service it if defective. See FLOW CHART No.2 <The fuse blows out.>
- Yes ↓

Replace IC3001.

**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 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 AV 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, Q1002, Q1004, Q1011, Q1014, Q1020, Q1022)

**FLOW CHART NO.5**

-FL is not outputted.

Is -24V voltage supplied to the anode of D1003?
- No → Check D1003 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.6**

P-ON+10V (EV+10V) is not outputted.

↓

Is 10V voltage supplied to the emitter of Q1002? — No → Check D1030, 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 service it if defective.

↓ Yes

Replace Q1002.

**FLOW CHART NO.7**

P-ON+5V is not outputted. (P-ON+10V 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+10V 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, R1066 and R1067.

**FLOW CHART NO.9**

CHG+5V is not outputted.

↓

Is EV+10V outputted normally? — No → Refer to "FLOW CHART NO.6" <P-ON+10V (EV+10V) is not outputted.>

↓ Yes

Check Q1014, D1047 and the periphery circuit, and service it if defective.

**FLOW CHART NO.10**

EV+1.2V is not outputted.

↓

Is 3.3V voltage supplied to Pin(3) of IC1003? — No → Check D1006, C1014, C1050, L1008, Q1022 and the periphery circuit, and service it if defective.

↓ Yes

Replace IC1003.

**FLOW CHART NO.11**

EV+3.3V is not outputted.

↓

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

↓ Yes

Is the "L" signal inputted to base of Q1012? — No → Is the "L" signal outputted into Pin(9) of IC3001?

↓ Yes

Check Q1012, Q1020, R1050, R1088 and service it if defective.

Is the "L" signal outputted into Pin(9) of IC3001? — Yes → Check the circuit between Pin(9) of IC3001 and base of Q1012 and service it if defective.

Is the "L" signal outputted into Pin(9) of IC3001? — No → Replace IC3001.

**FLOW CHART NO.12**

The fluorescent display tube does not light up.

↓

Is 3.3V voltage supplied to Pin(13) and Pin(43) of IC2001?

No → Check the P-ON+3.3V line and service it if defective.

↓ Yes

Is the voltage of approximately -19V supplied to Pin(30) of IC2001?

No → Check the -FL line and service it if defective.

↓ Yes

Replace the fluorescent display tube or IC2001.

**FLOW CHART NO.13**

The key operation is not functioning.

↓

Are the contact point and the installation state of the key switches (SW2101, 2102, 2203 - 2215) normal?

No → Reinstall the switches (SW2101, 2102, 2203 - 2215) correctly or replace the poor switch.

**Terminal Voltage of Pins (40 - 42) on IC3001**

| VOLTAGE | IC3001 | | |
|---|---|---|---|
| | 42pin | 41pin | 40pin |
| | KEY-1 | KEY-2 | KEY-3 |
| APPROX. 0V | SW2101 POWER | SW2206 SKIP DOWN | SW2211 DISC-3 |
| APPROX. 0.7V | SW2102 HDMI | SW2207 SKIP UP | SW2212 DISC-4 |
| APPROX. 1.3V | SW2203 PLAY | SW2208 DISC CHANGE | SW2213 DISC-2 |
| APPROX. 2.0V | SW2204 PAUSE | SW2209 DISC-5 | SW2214 DISC-1 |
| APPROX. 2.7V | SW2205 STOP | SW2210 SKIP | SW2215 OPEN/CLOSE |
| APPROX. 3.3V | (KEY OFF) | (KEY OFF) | (KEY OFF) |

↓ Yes

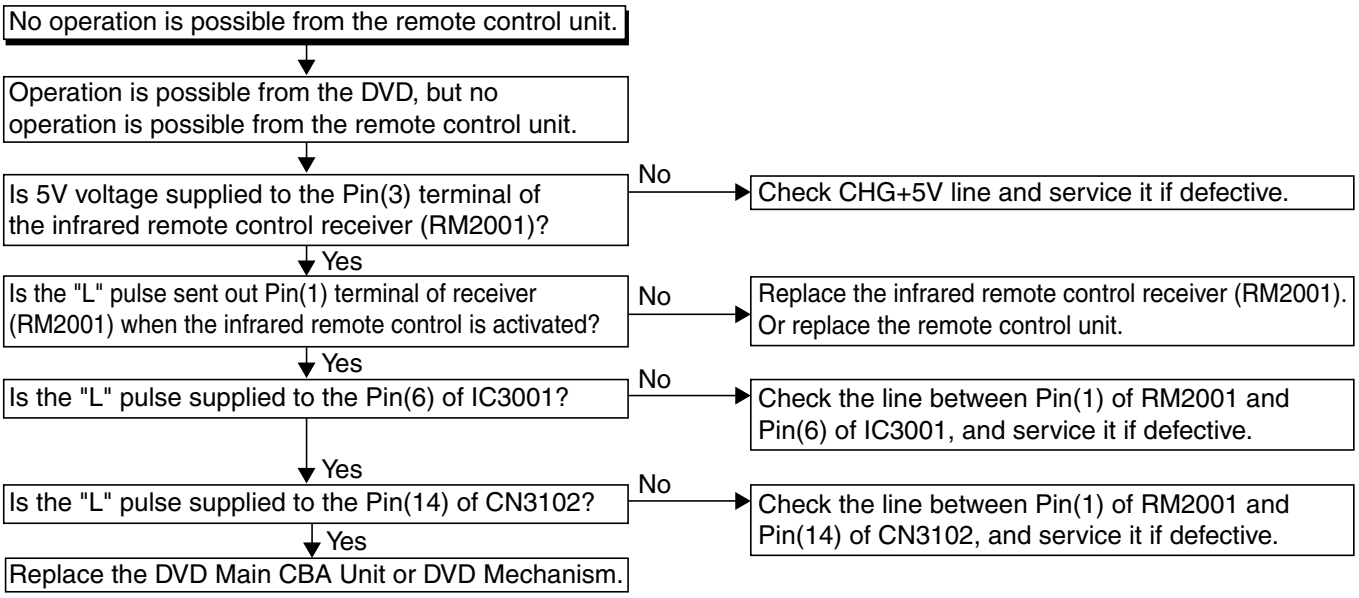
Is the control voltage normally supplied to pins(40, 41, 42) of IC3001?

No → Check the switches (SW2101, 2102, 2203 - 2215) and their periphery, and service it if defective.

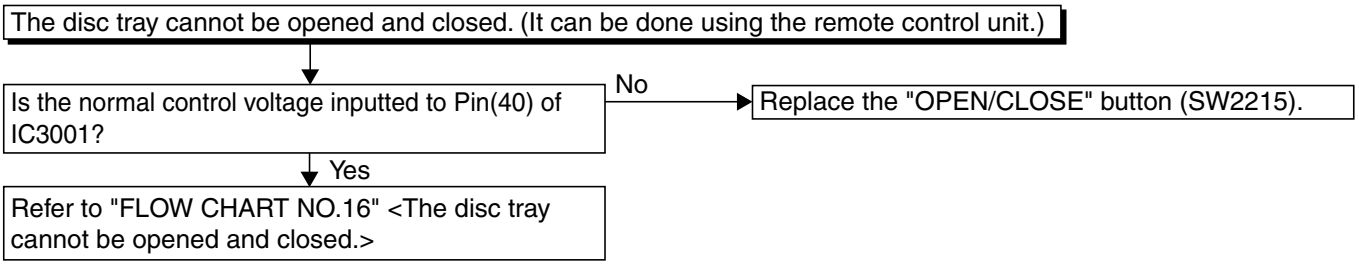
↓ Yes

Replace IC3001.

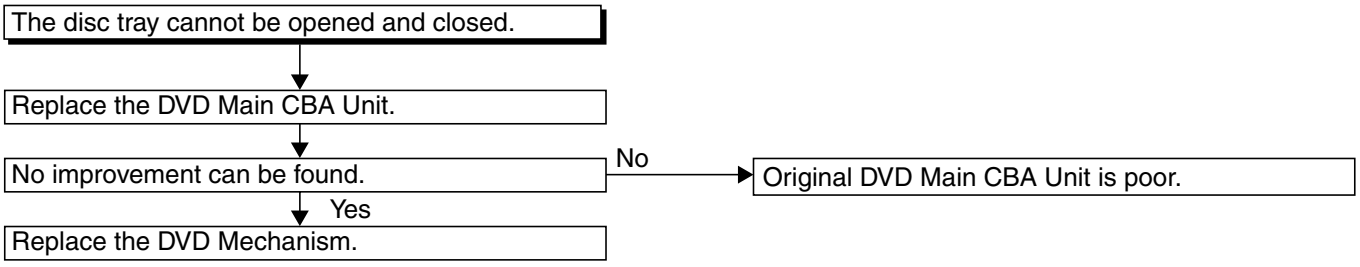
**FLOW CHART NO.14**



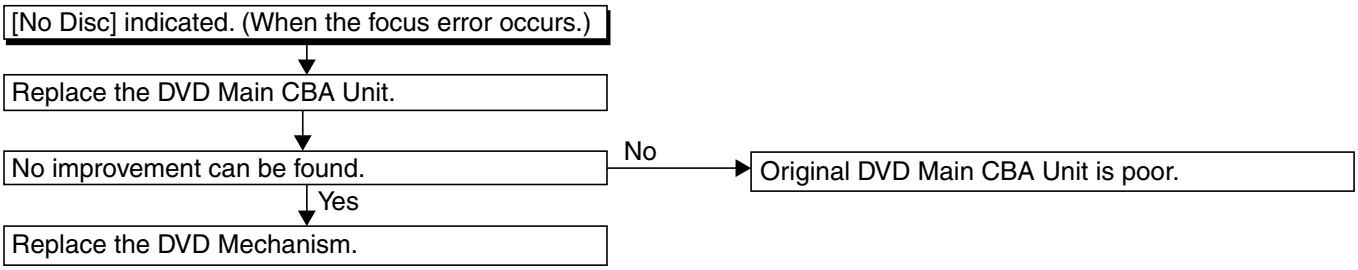

**FLOW CHART NO.15**



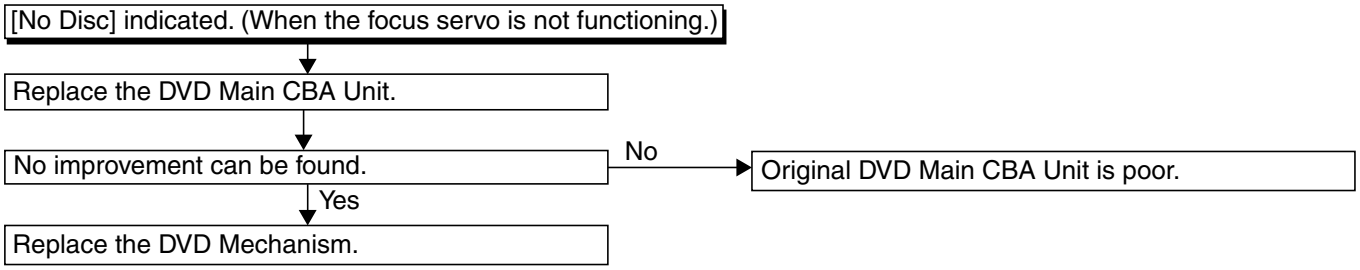

**FLOW CHART NO.16**



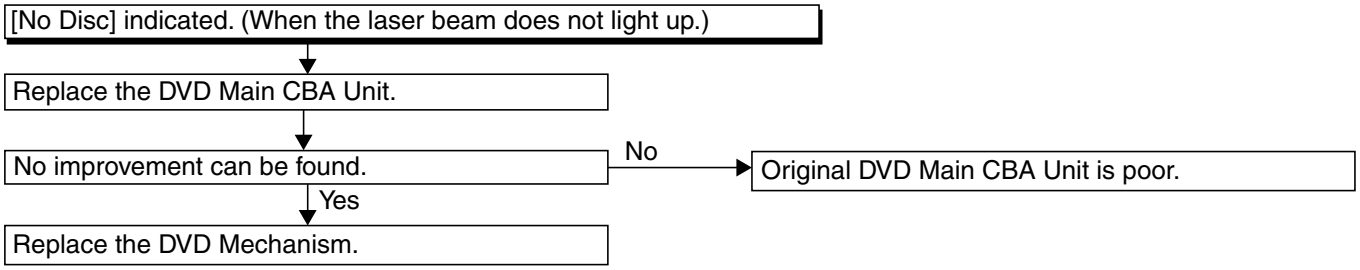

**FLOW CHART NO.17**



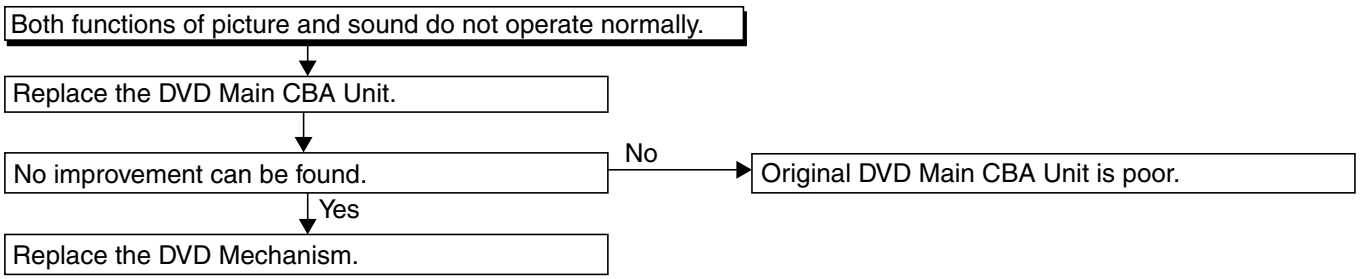
**FLOW CHART NO.18**



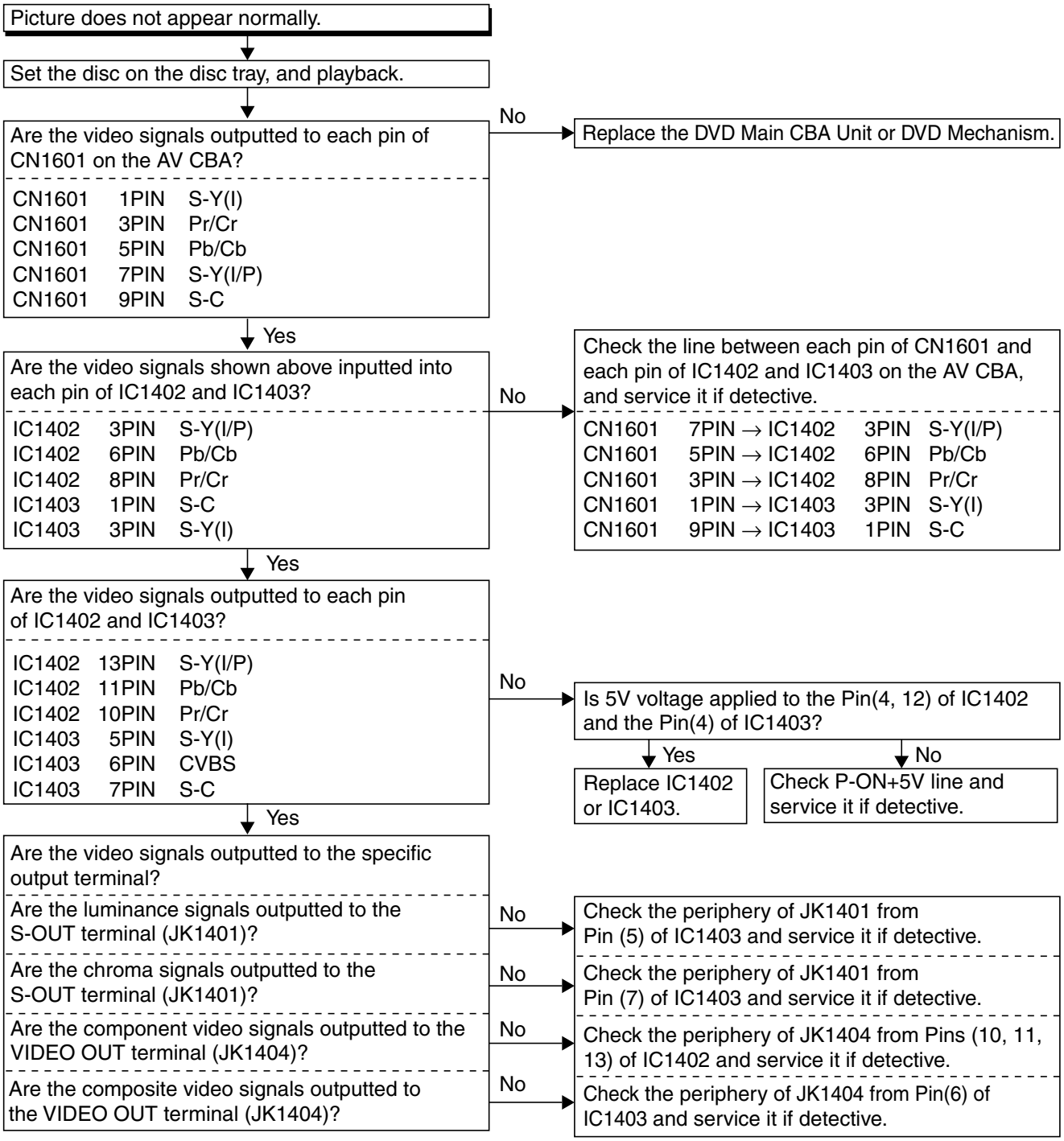

**FLOW CHART NO.19**



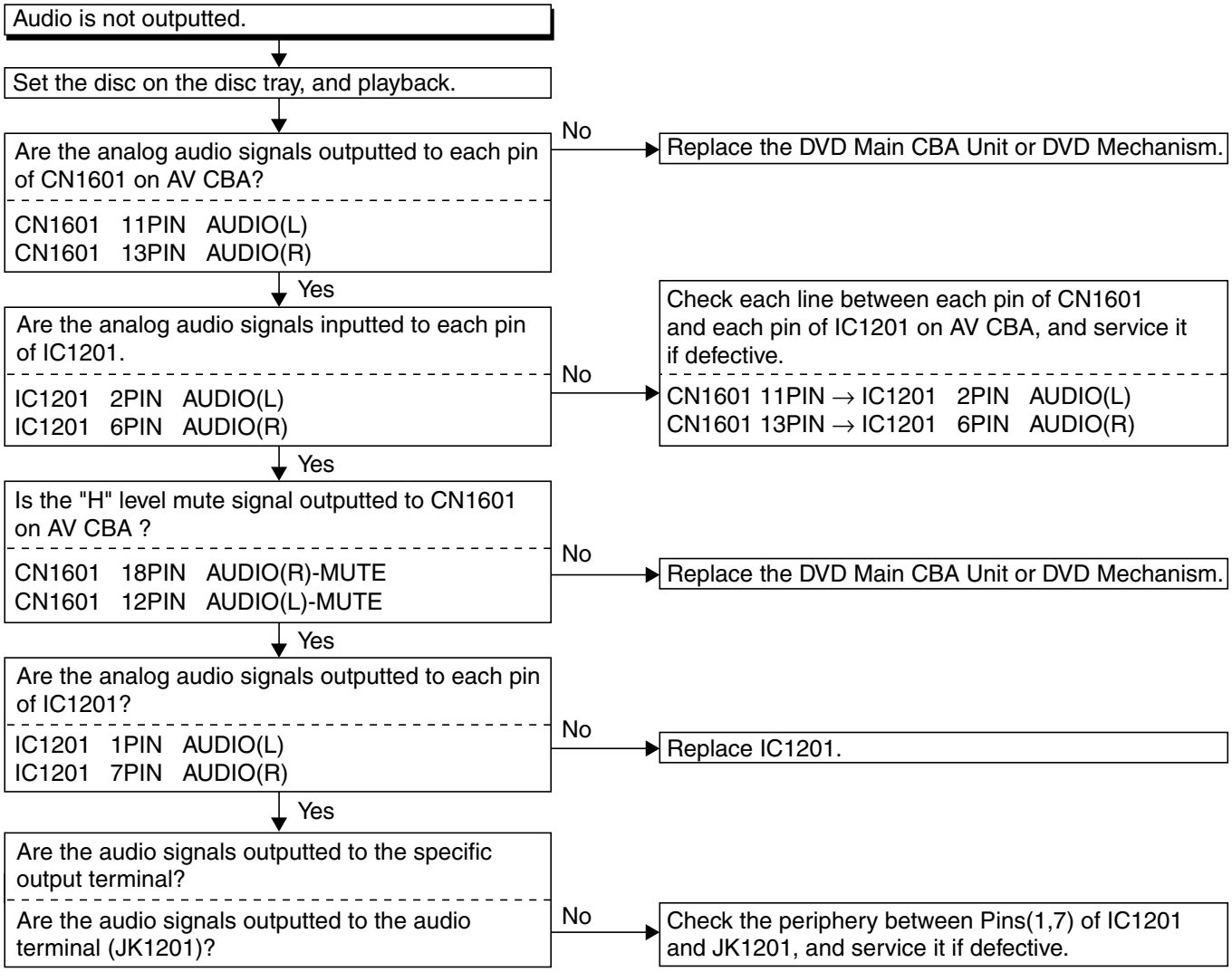

**FLOW CHART NO.20**



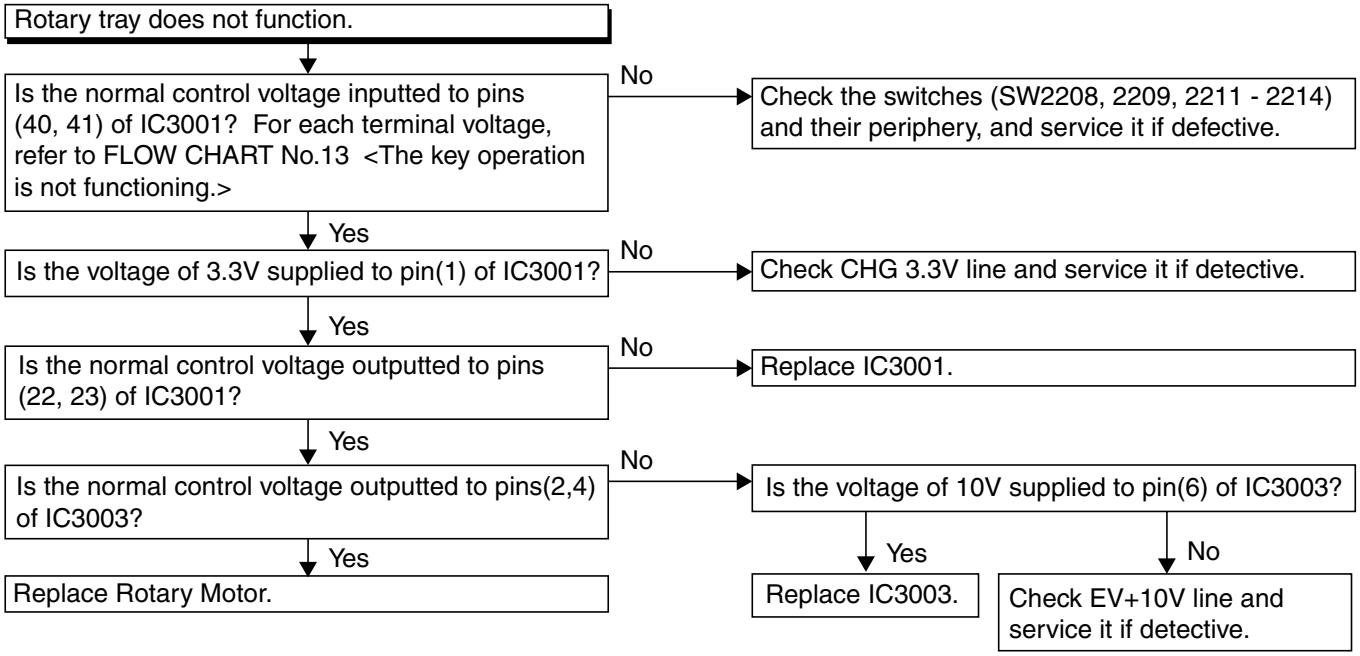
**FLOW CHART NO.21**



**FLOW CHART NO.22**

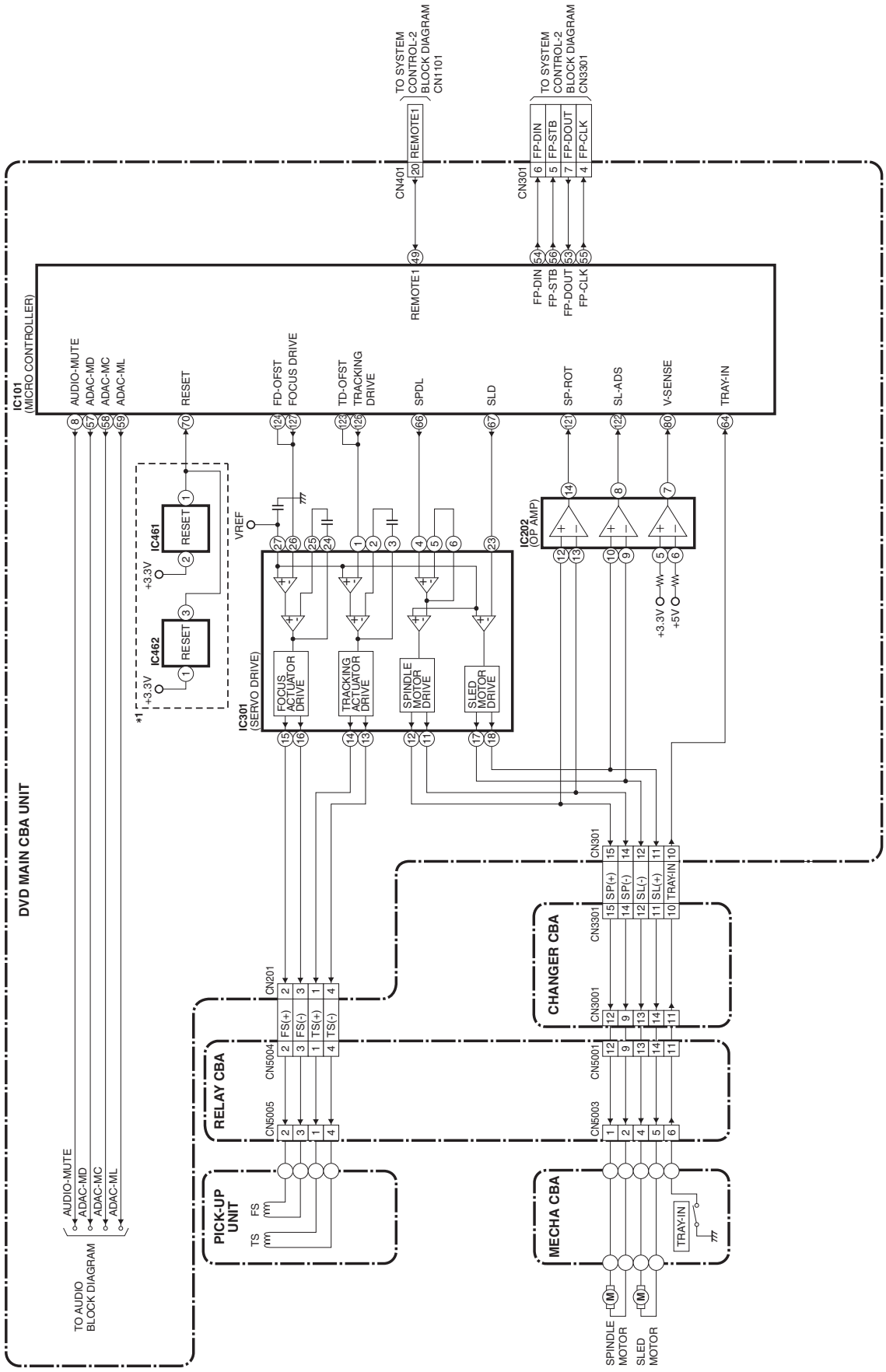


**FLOW CHART NO.23**



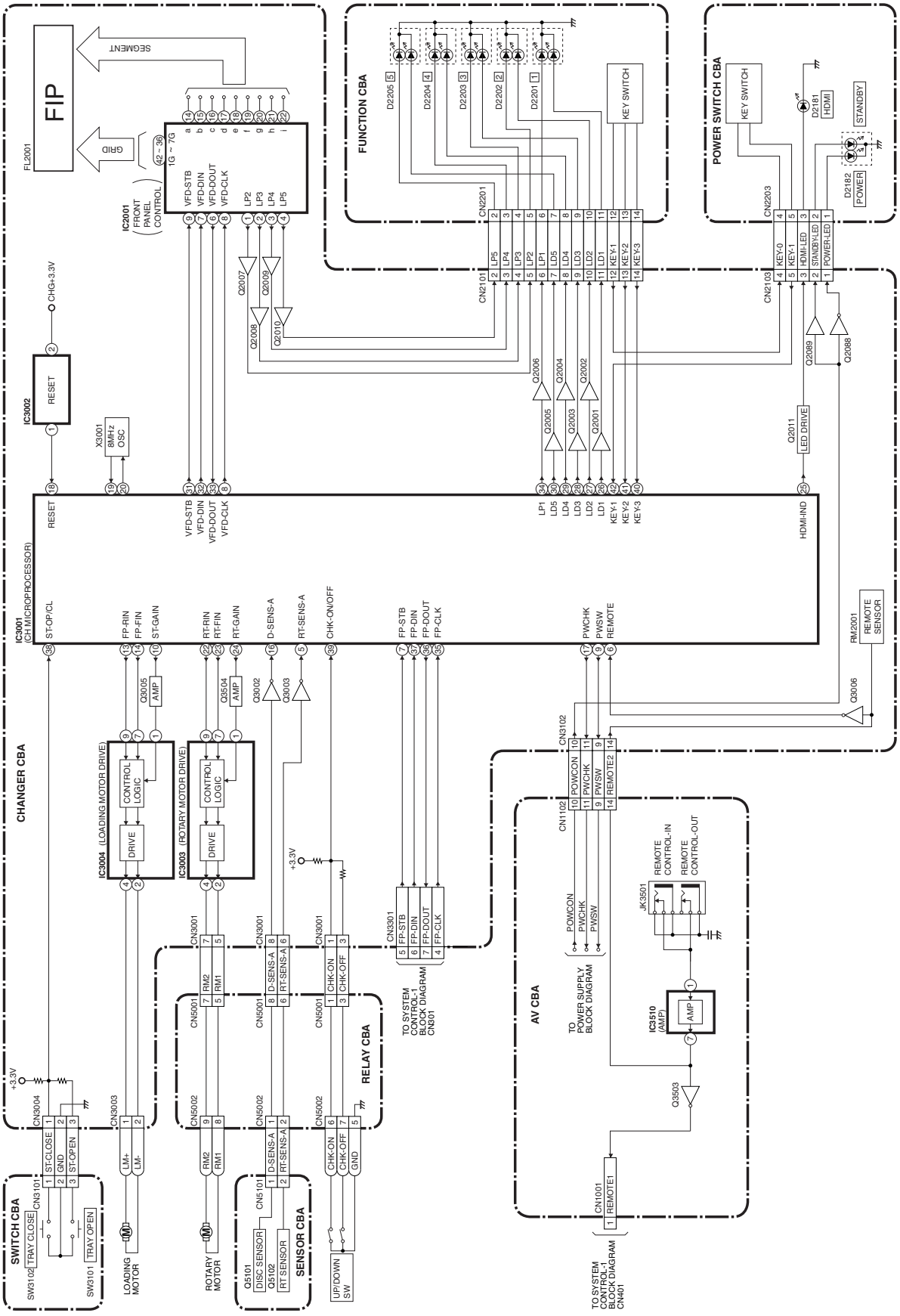
# BLOCK DIAGRAMS

## System Control-1 Block Diagram

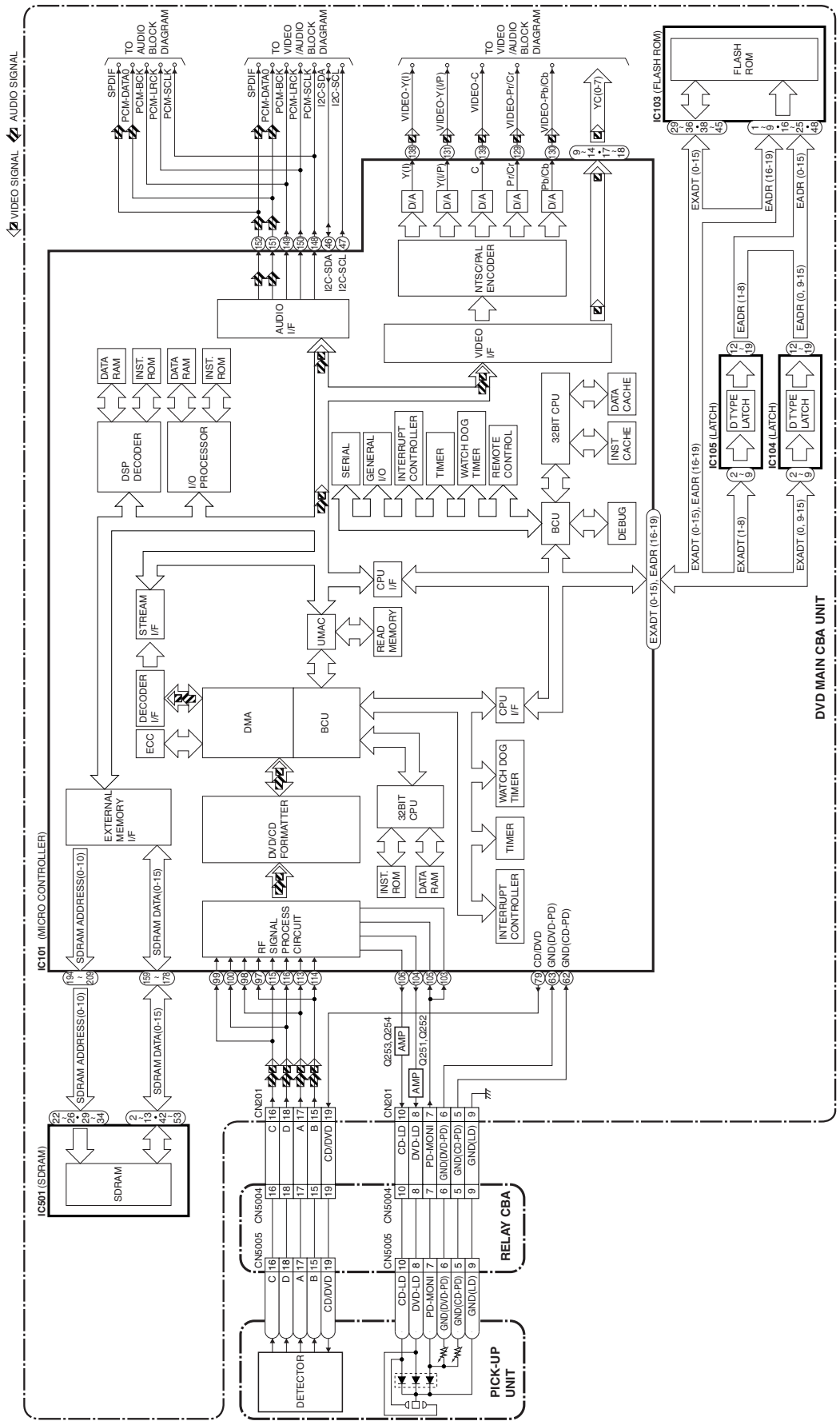



***1 NOTE:**
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.

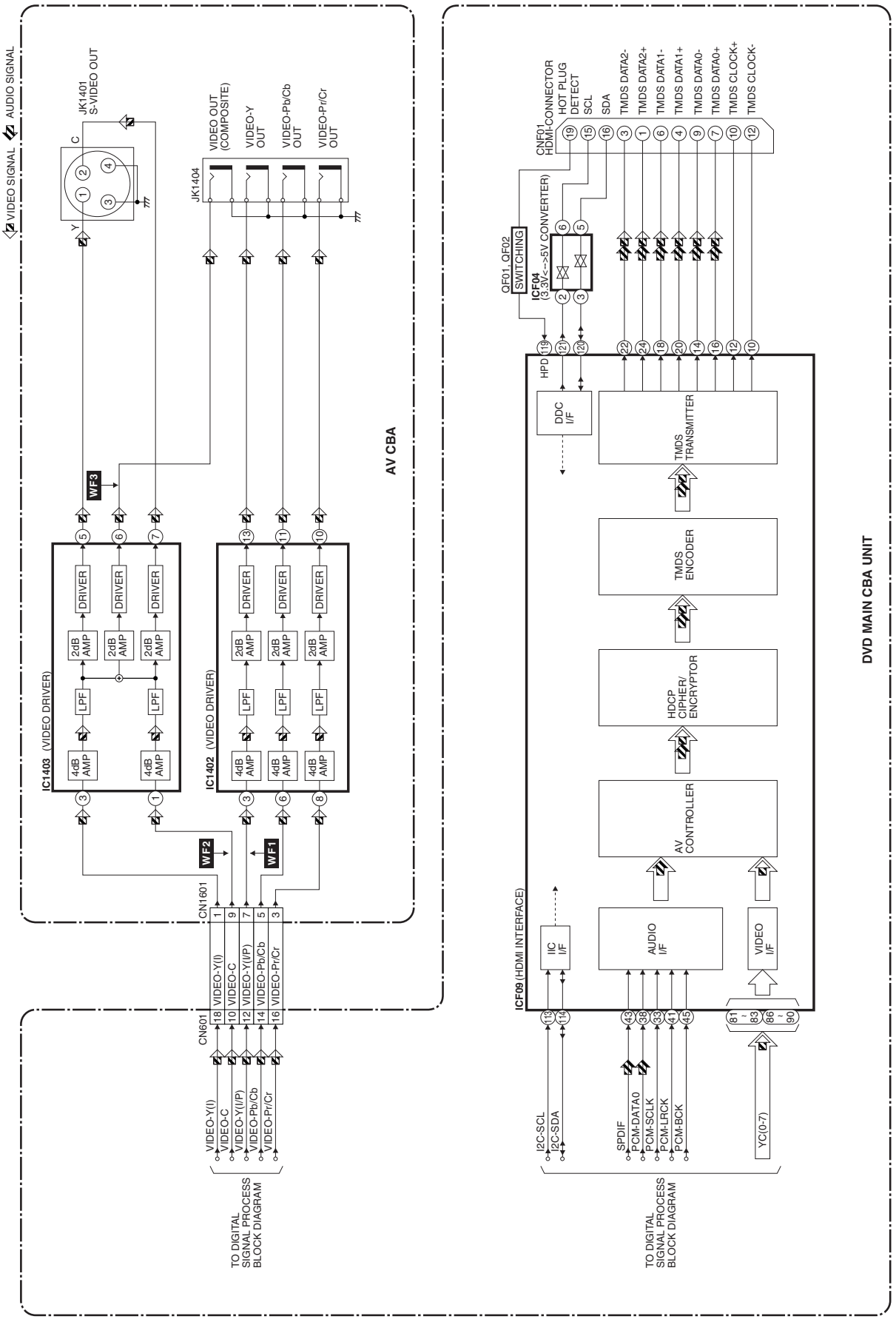
# System Control-2 Block Diagram



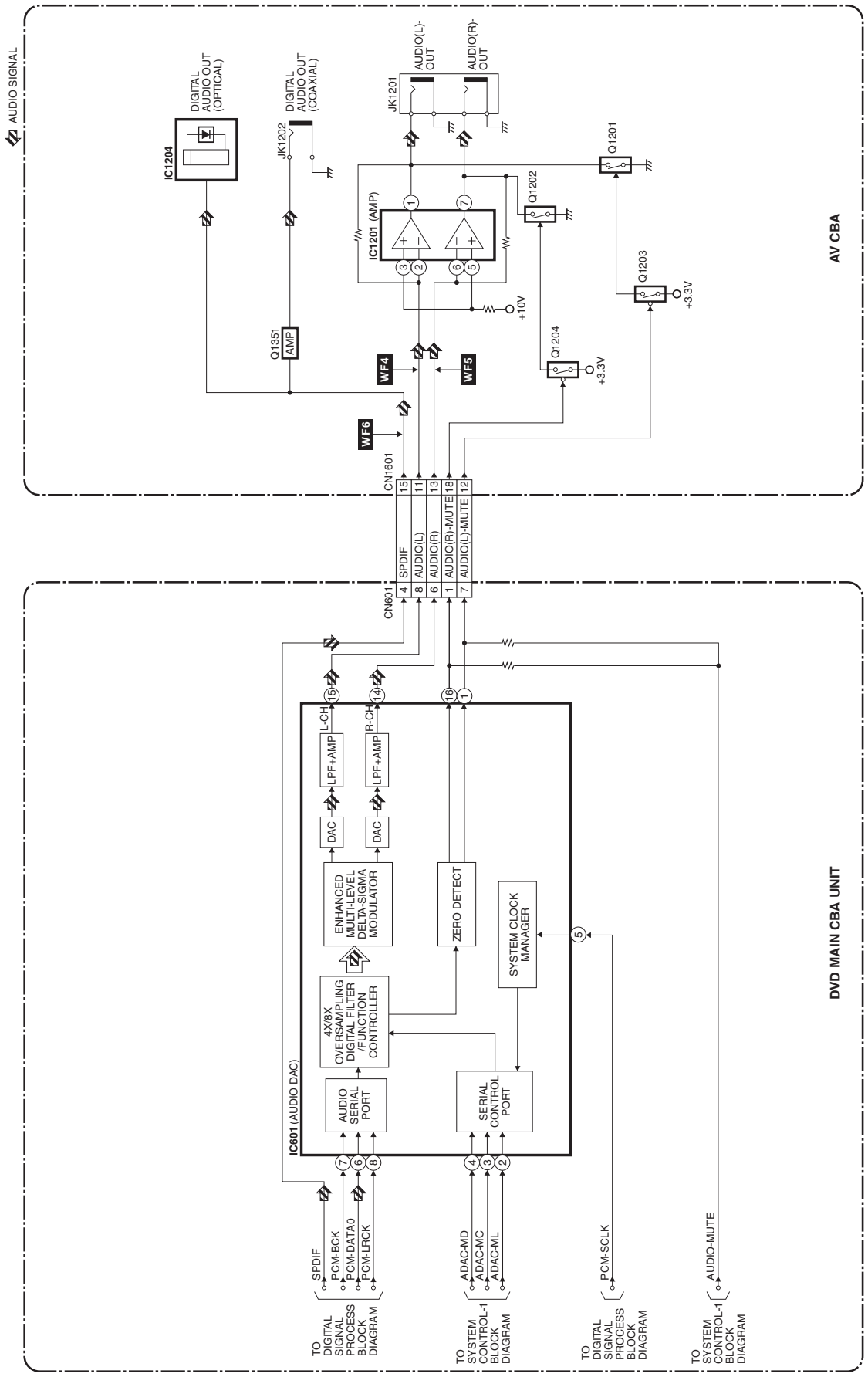
# Digital Signal Process Block Diagram



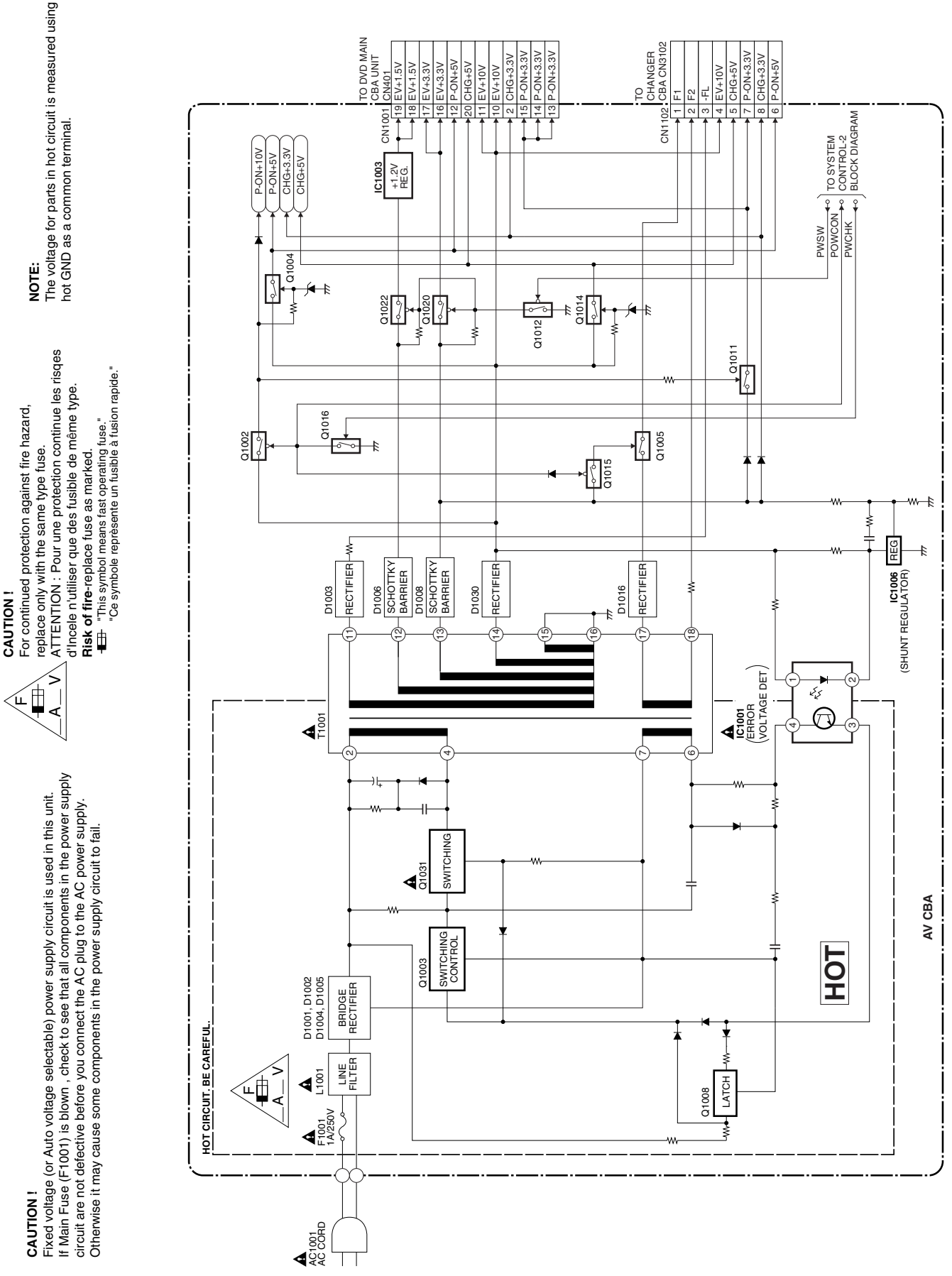
# Video / Audio Block Diagram



# Audio 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.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

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

# SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

## Standard Notes

### WARNING

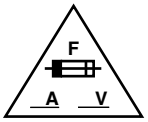
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special 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.

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

### 1. CAUTION:




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

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

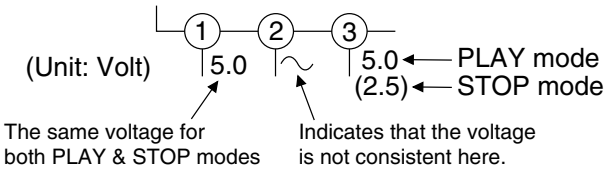
### 2. CAUTION:

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

### 3. Note:

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.

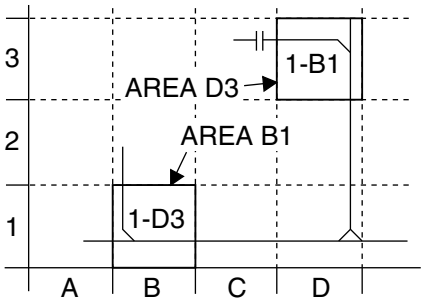
### 4. Voltage indications for PLAY and STOP mode on the schematics are as shown below:




### 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".



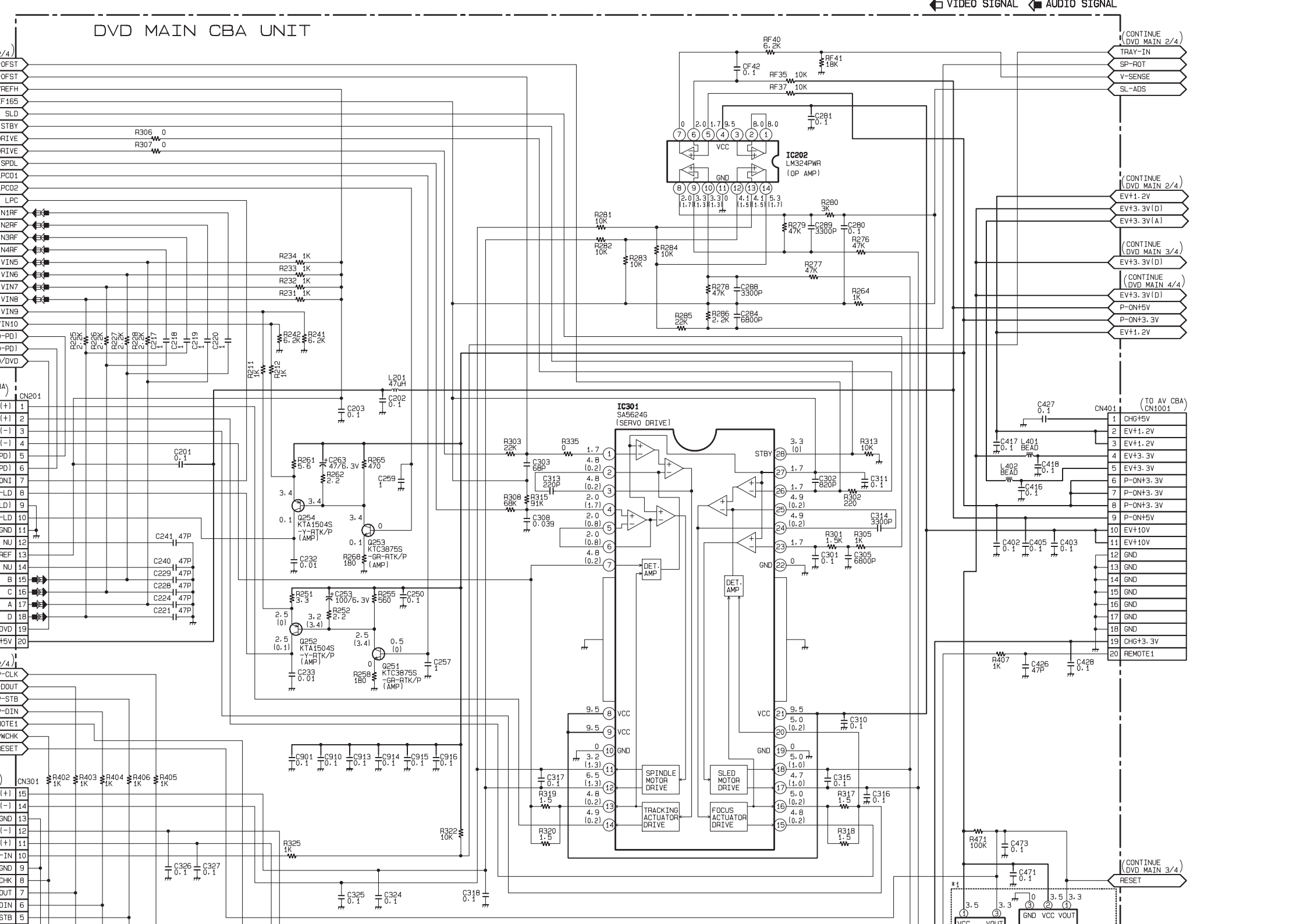

### 6. Test Point Information

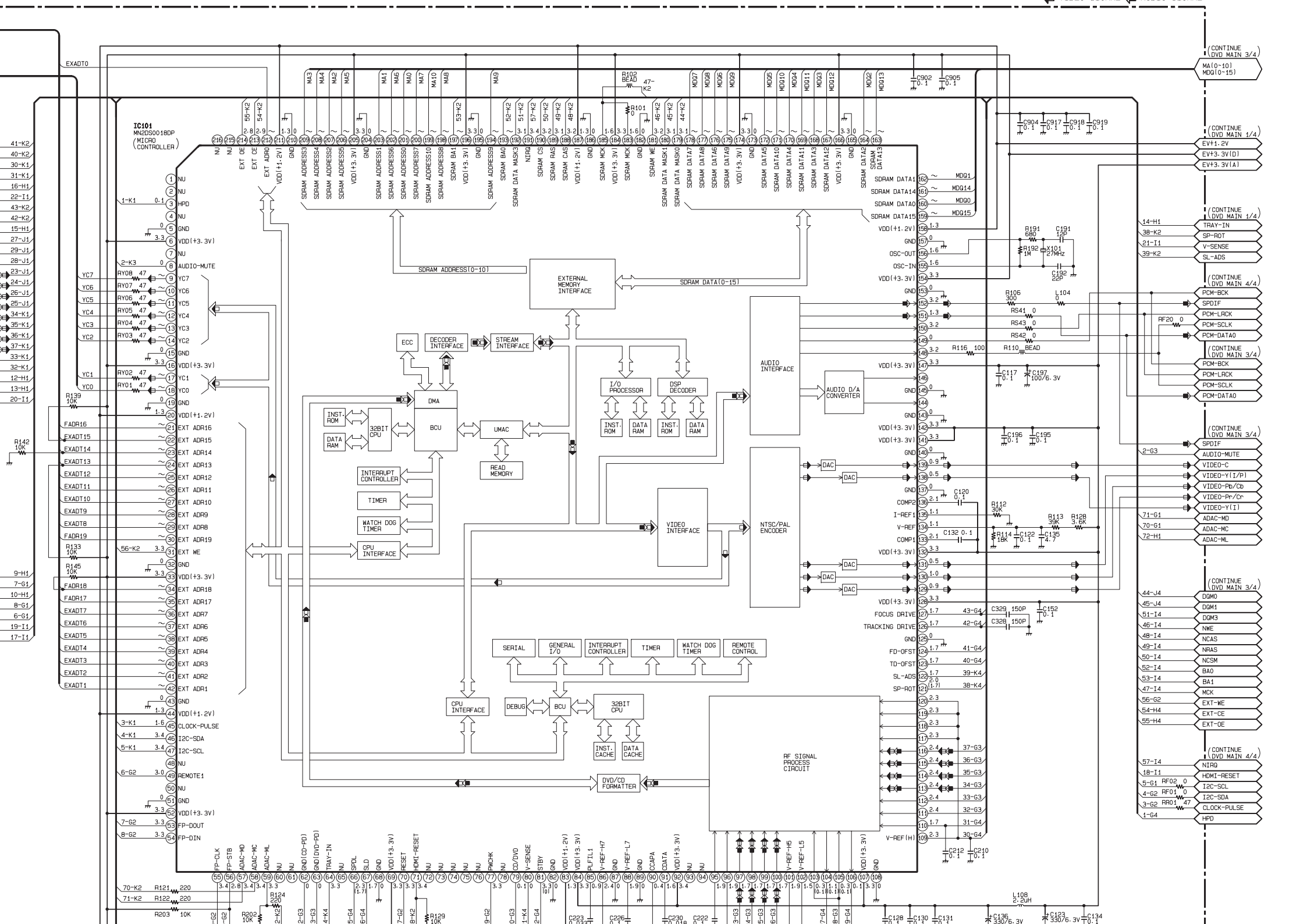
 : Indicates a test point with a jumper wire across a hole in the PCB.

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

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

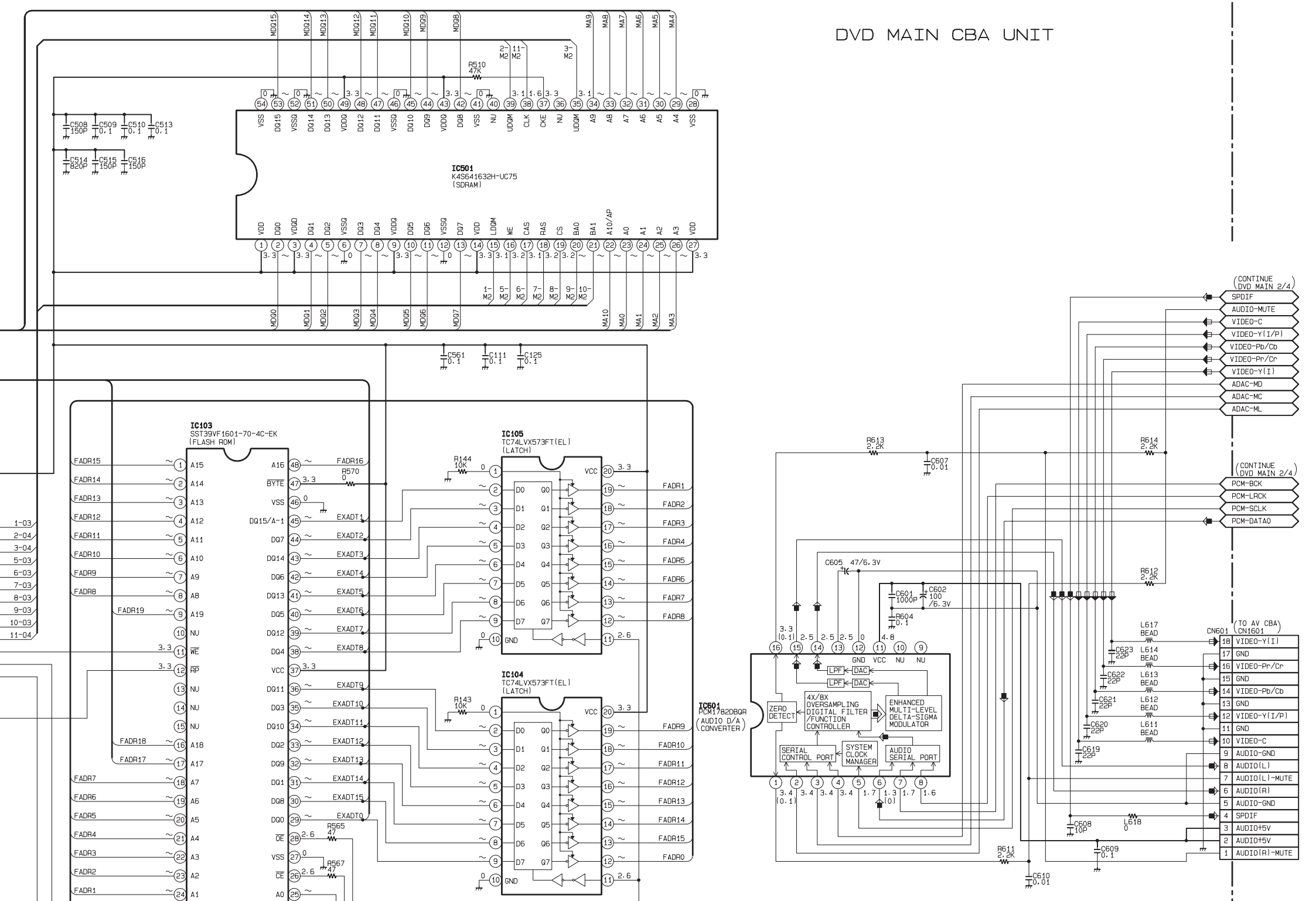
 : Used to indicate a test point with a test pin.


VIDEO SIGNAL
AUDIO SIGNAL
DVD MAIN CBA UNIT
IC202
LM324PWR
(OP AMP)
IC301
SA5624G
(SERVO DRIVE)
SPINDLE MOTOR DRIVE
SLED MOTOR DRIVE
TRACKING ACTUATOR DRIVE
FOCUS ACTUATOR DRIVE
DET. AMP
(CONTINUE DVD MAIN 2/4)
TRAY-IN
SP-ROT
V-SENSE
SL-ADS
(CONTINUE DVD MAIN 2/4)
EV+1.2V
EV+3.3V(D)
EV+3.3V(A)
(CONTINUE DVD MAIN 3/4)
EV+3.3V(D)
(CONTINUE DVD MAIN 4/4)
EV+3.3V(D)
P-ON+5V
P-ON+3.3V
EV+1.2V
(TO AV CBA CN1001)
CN401
1 CHG+5V
2 EV+1.2V
3 EV+1.2V
4 EV+3.3V
5 EV+3.3V
6 P-ON+3.3V
7 P-ON+3.3V
8 P-ON+3.3V
9 P-ON+5V
10 EV+10V
11 EV+10V
12 GND
13 GND
14 GND
15 GND
16 GND
17 GND
18 GND
19 CHG+3.3V
20 REMOTE1
(CONTINUE DVD MAIN 3/4)
RESET
CN201
CN301
Q254 KTA1504S -Y-RTK/P (AMP)
Q253 KTC3875S -GR-RTK/P (AMP)
Q252 KTA1504S -Y-RTK/P (AMP)
Q251 KTC3875S -GR-RTK/P (AMP)


IC101
MN2DS0018DP
(MICRO CONTROLLER)
EXTERNAL MEMORY INTERFACE
SDRAM ADDRESS(0-10)
SDRAM DATA(0-15)
ECC
DECODER INTERFACE
STREAM INTERFACE
DMA
BCU
32BIT CPU
INST. ROM
DATA RAM
UMAC
READ MEMORY
INTERRUPT CONTROLLER
TIMER
WATCH DOG TIMER
CPU INTERFACE
I/O PROCESSOR
DSP DECODER
AUDIO INTERFACE
AUDIO D/A CONVERTER
VIDEO INTERFACE
NTSC/PAL ENCODER
DAC
SERIAL
GENERAL I/O
REMOTE CONTROL
DEBUG
INST. CACHE
DATA CACHE
DVD/CD FORMATTER
RF SIGNAL PROCESS CIRCUIT
(CONTINUE DVD MAIN 3/4)
(CONTINUE DVD MAIN 1/4)
(CONTINUE DVD MAIN 4/4)
MA(0-10)
MDQ(0-15)
EV+1.2V
EV+3.3V(D)
EV+3.3V(A)
TRAY-IN
SP-ROT
V-SENSE
SL-ADS
PCM-BCK
SPDIF
PCM-LRCK
PCM-SCLK
PCM-DATA0
AUDIO-MUTE
VIDEO-C
VIDEO-Y(I/P)
VIDEO-Pb/Cb
VIDEO-Pr/Cr
VIDEO-Y(I)
ADAC-MD
ADAC-MC
ADAC-ML
DQM0
DQM1
DQM3
NWE
NCAS
NRAS
NCSM
BA0
BA1
MCK
EXT-WE
EXT-CE
EXT-OE
NIRQ
HDMI-RESET
I2C-SCL
I2C-SDA
CLOCK-PULSE
HPD

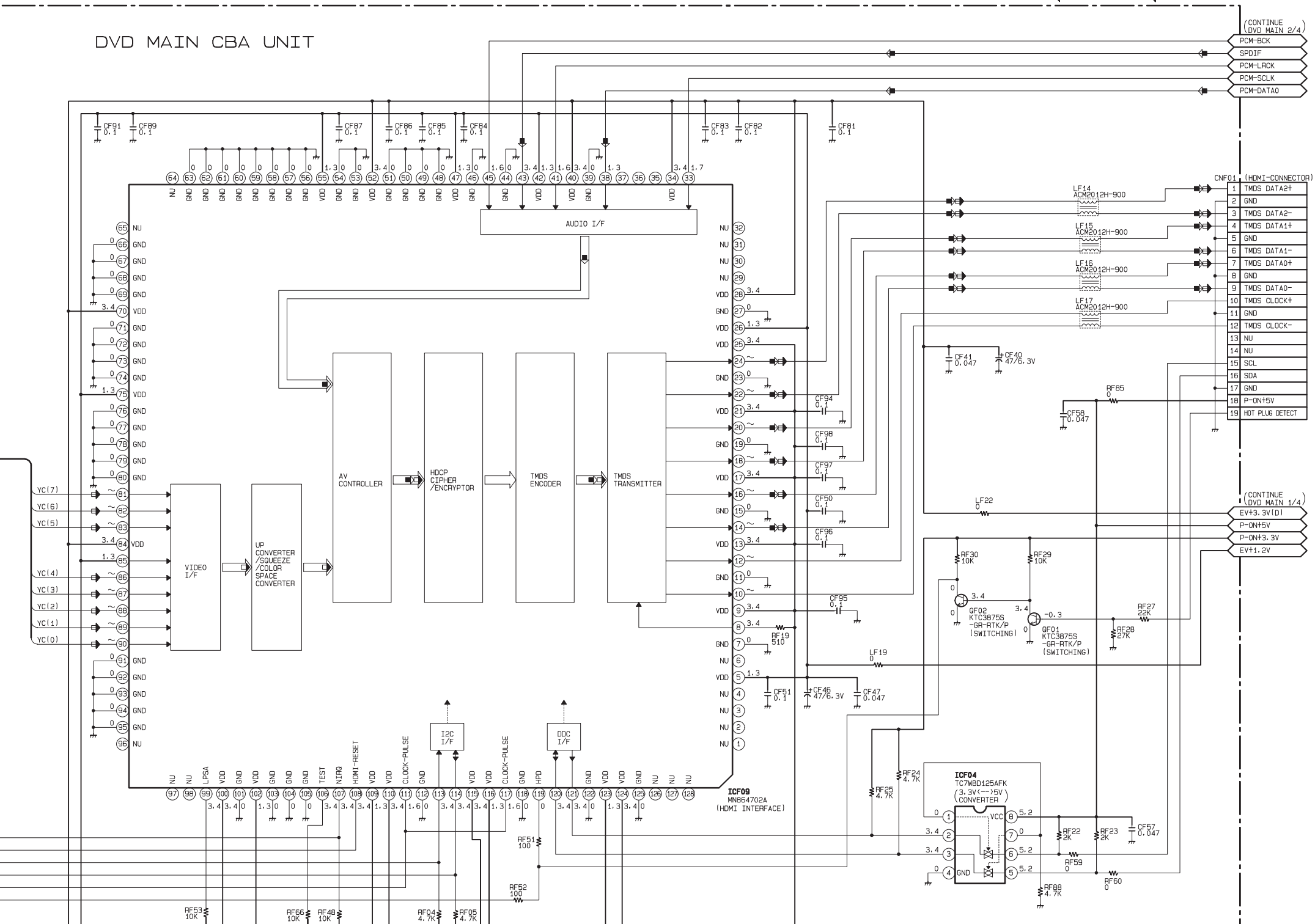
VIDEO SIGNAL AUDIO SIGNAL

# DVD MAIN CBA UNIT



VIDEO SIGNAL  AUDIO SIGNAL

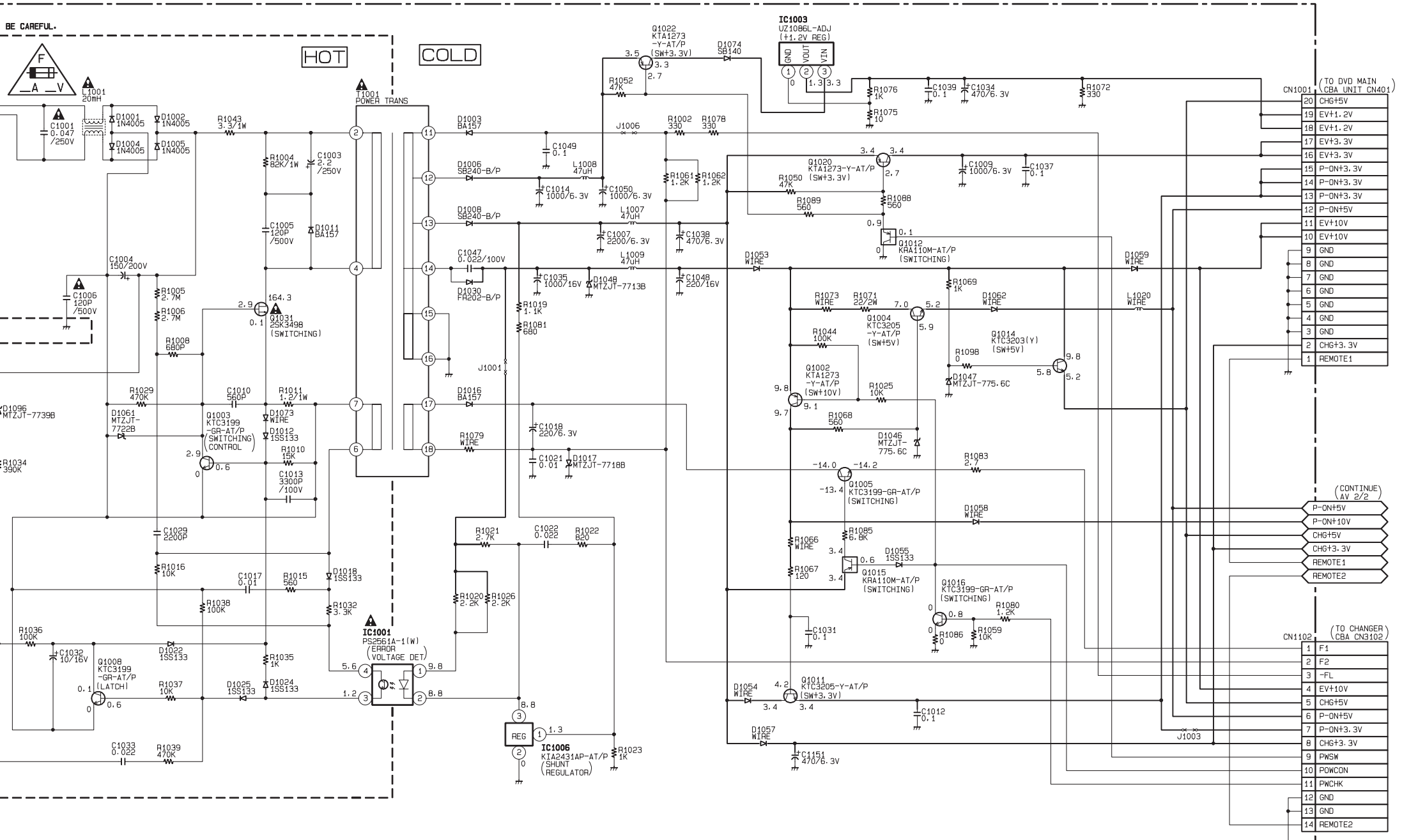
# DVD MAIN CBA UNIT



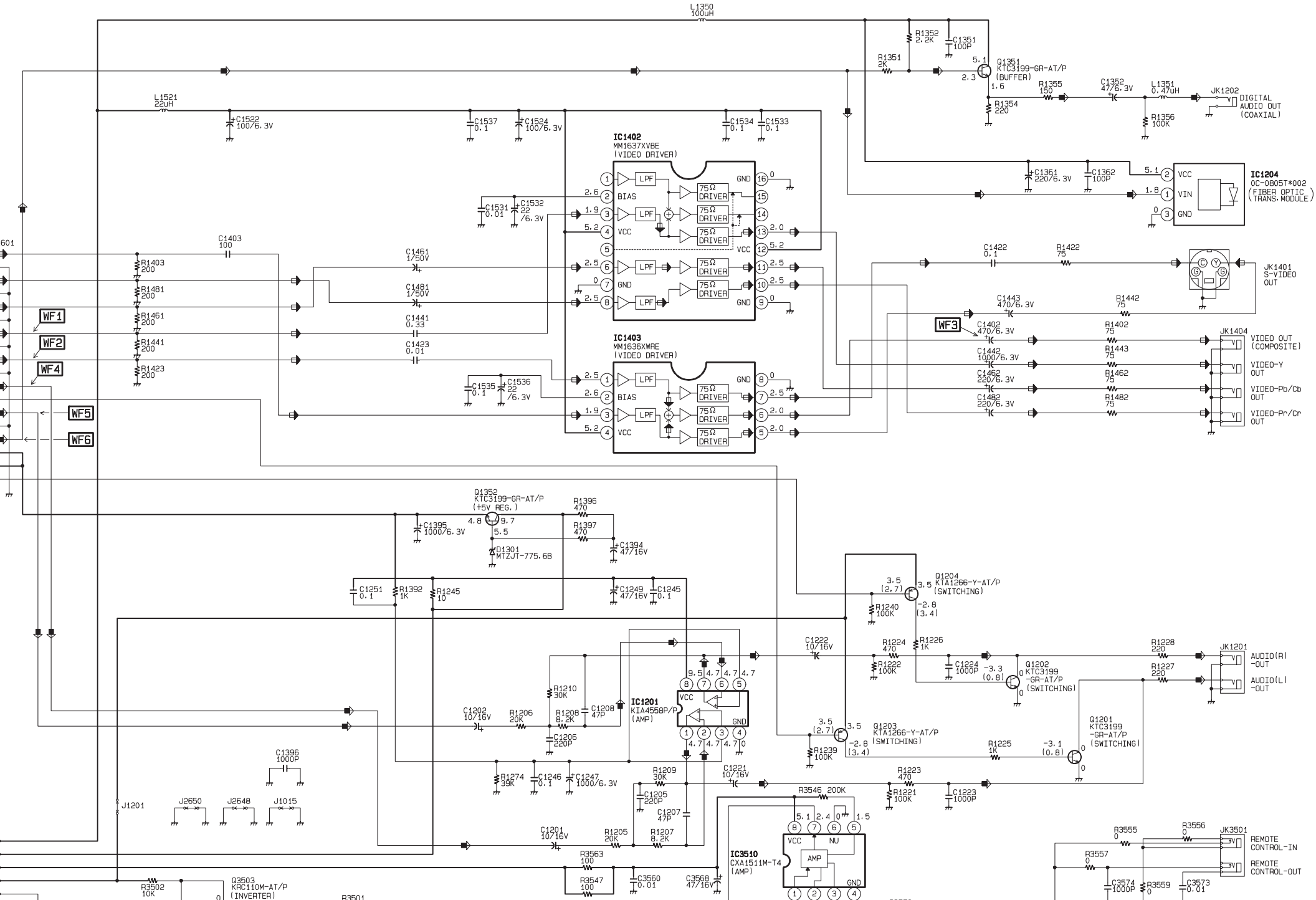
tage (or Auto voltage selectable) power supply circuit is used in this unit.
use (F1001) is blown , check to see that all components in the power supply
e not defective before you connect the AC plug to the AC power supply.
e it may cause some components in the power supply circuit to fail.

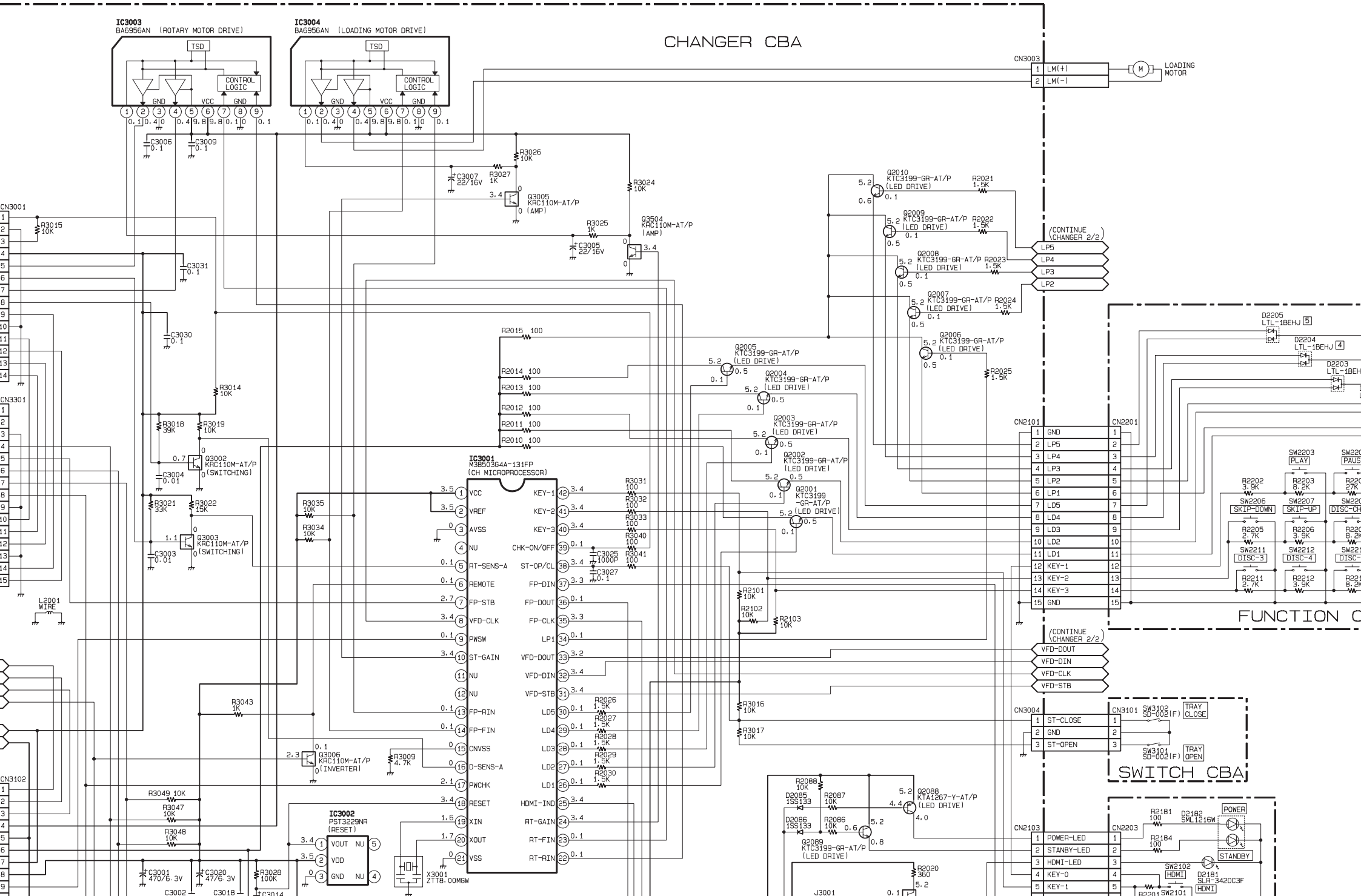
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques
d'Incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

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



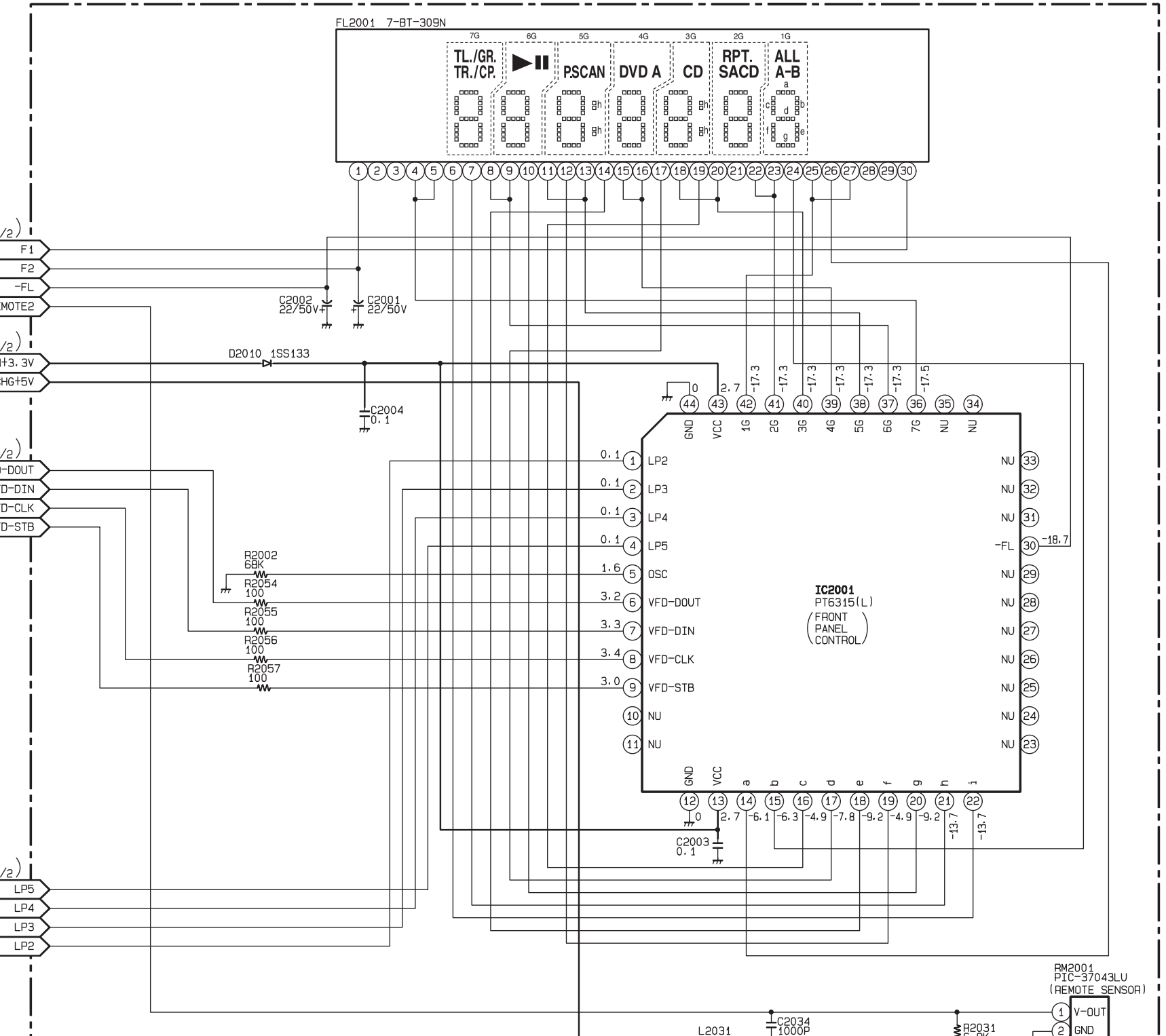
# AV CBA

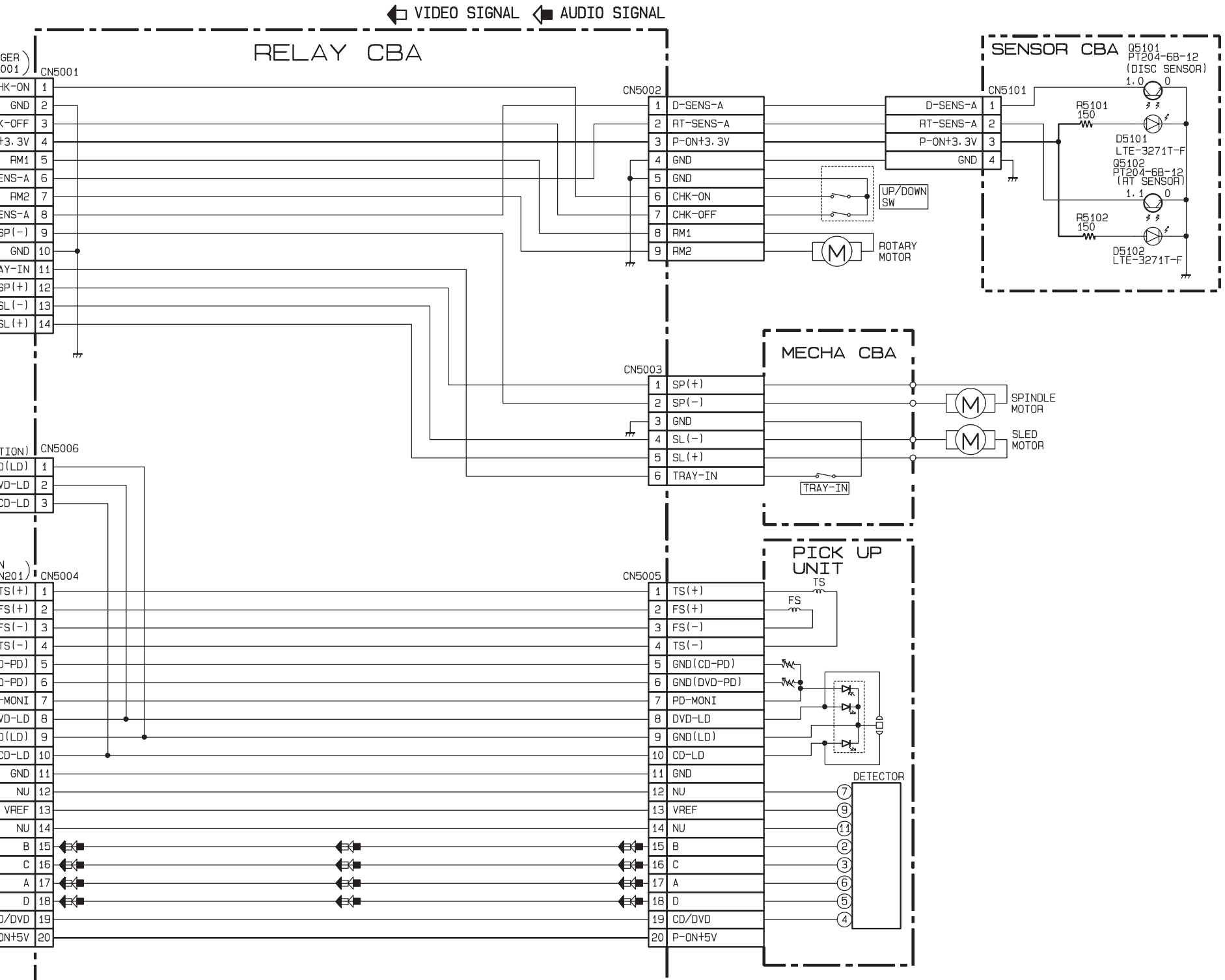

L1350 100UH
L1521 22uH
C1522 100/6.3V
C1537 0.1
C1524 100/6.3V
C1534 0.1
C1533 0.1
IC1402 MM1637XVBE (VIDEO DRIVER)
IC1403 MM1636XWRE (VIDEO DRIVER)
LPF
BIAS
VCC
GND
75Ω DRIVER
C1531 0.01
C1532 22 /6.3V
C1535 0.1
C1536 22 /6.3V
C1403 100
C1461 1/50V
C1481 1/50V
C1441 0.33
C1423 0.01
R1403 200
R1481 200
R1461 200
R1441 200
R1423 200
WF1
WF2
WF4
WF5
WF6
R1352 2.2K
C1351 100P
R1351 2K
Q1351 KTC3199-GR-AT/P (BUFFER)
R1354 220
R1355 150
C1352 47/6.3V
L1351 0.47uH
R1356 100K
JK1202 DIGITAL AUDIO OUT (COAXIAL)
C1361 220/6.3V
C1362 100P
IC1204 OC-0805T*002 (FIBER OPTIC TRANS. MODULE)
VCC
VIN
GND
C1422 0.1
R1422 75
JK1401 S-VIDEO OUT
C1443 470/6.3V
R1442 75
WF3
C1402 470/6.3V
C1442 1000/6.3V
C1462 220/6.3V
C1482 220/6.3V
R1402 75
R1443 75
R1462 75
R1482 75
JK1404 VIDEO OUT (COMPOSITE)
VIDEO-Y OUT
VIDEO-Pb/Cb OUT
VIDEO-Pr/Cr OUT
Q1352 KTC3199-GR-AT/P (+5V REG.)
R1396 470
R1397 470
C1395 1000/6.3V
C1394 47/16V
D1301 MTZJT-775.6B
C1251 0.1
R1392 1K
R1245 10
C1249 47/16V
C1245 0.1
Q1204 KTA1266-Y-AT/P (SWITCHING)
R1240 100K
C1222 10/16V
R1224 470
R1226 1K
R1222 100K
C1224 1000P
Q1202 KTC3199 -GR-AT/P (SWITCHING)
R1228 220
R1227 220
JK1201 AUDIO(R) -OUT
AUDIO(L) -OUT
IC1201 KIA4558P/P (AMP)
R1210 30K
C1208 47P
C1202 10/16V
R1206 20K
R1208 8.2K
C1206 220P
Q1203 KTA1266-Y-AT/P (SWITCHING)
R1239 100K
Q1201 KTC3199 -GR-AT/P (SWITCHING)
R1225 1K
C1396 1000P
R1274 39K
C1246 0.1
C1247 1000/6.3V
R1209 30K
C1205 220P
C1207 47P
C1221 10/16V
R1223 470
R1221 100K
C1223 1000P
R3546 200K
J1201
J2650
J2648
J1015
C1201 10/16V
R1205 20K
R1207 8.2K
R3563 100
R3547 100
C3560 0.01
C3568 47/16V
IC3510 CXA1511M-T4 (AMP)
NU
AMP
R3502 10K
Q3503 KRC110M-AT/P (INVERTER)
R3555 0
R3556 0
JK3501 REMOTE CONTROL-IN
REMOTE CONTROL-OUT
R3557 0
C3574 1000P
R3559 0
C3573 0.01


CHANGER CBA
IC3003
BA6956AN (ROTARY MOTOR DRIVE)
IC3004
BA6956AN (LOADING MOTOR DRIVE)
TSD
CONTROL LOGIC
GND
VCC
GND
CN3003
LM(+)
LM(-)
LOADING MOTOR
CN3001
CN3301
CN3102
R3015 10K
R3014 10K
R3018 39K
R3019 10K
R3021 33K
R3022 15K
R3043 1K
R3049 10K
R3047 10K
R3048 10K
R3028 100K
C3031 0.1
C3030 0.1
C3004 0.01
C3003 0.01
C3001 470/6.3V
C3020 47/6.3V
C3002
C3018
C3014
L2001 WIRE
Q3002 KRC110M-AT/P (SWITCHING)
Q3003 KRC110M-AT/P (SWITCHING)
Q3006 KRC110M-AT/P (INVERTER)
R3009 4.7K
R3035 10K
R3034 10K
R3026 10K
R3027 1K
C3007 22/16V
Q3005 KRC110M-AT/P (AMP)
R3025 1K
C3005 22/16V
Q3504 KRC110M-AT/P (AMP)
R3024 10K
IC3001
M38503G4A-131FP
(CH MICROPROCESSOR)
VCC
VREF
AVSS
NU
RT-SENS-A
REMOTE
FP-STB
VFD-CLK
PWSW
ST-GAIN
FP-RIN
FP-FIN
CNVSS
D-SENS-A
PWCHK
RESET
XIN
XOUT
VSS
KEY-1
KEY-2
KEY-3
CHK-ON/OFF
ST-OP/CL
FP-DIN
FP-DOUT
FP-CLK
LP1
VFD-DOUT
VFD-DIN
VFD-STB
LD5
LD4
LD3
LD2
LD1
HDMI-IND
RT-GAIN
RT-FIN
RT-RIN
R2015 100
R2014 100
R2013 100
R2012 100
R2011 100
R2010 100
R3031 100
R3032 100
R3033 100
R3040 100
R3041 100
C3025 1000P
C3027 0.1
R2026 1.5K
R2027 1.5K
R2028 1.5K
R2029 1.5K
R2030 1.5K
IC3002
PST3229NR
(RESET)
VOUT
VDD
GND
X3001
2TT8.00MGW
Q2010 KTC3199-GR-AT/P (LED DRIVE)
Q2009 KTC3199-GR-AT/P (LED DRIVE)
Q2008 KTC3199-GR-AT/P (LED DRIVE)
Q2007 KTC3199-GR-AT/P (LED DRIVE)
Q2006 KTC3199-GR-AT/P (LED DRIVE)
Q2005 KTC3199-GR-AT/P (LED DRIVE)
Q2004 KTC3199-GR-AT/P (LED DRIVE)
Q2003 KTC3199-GR-AT/P (LED DRIVE)
Q2002 KTC3199-GR-AT/P (LED DRIVE)
Q2001 KTC3199-GR-AT/P (LED DRIVE)
R2021 1.5K
R2022 1.5K
R2023 1.5K
R2024 1.5K
R2025 1.5K
(CONTINUE CHANGER 2/2)
LP5
LP4
LP3
LP2
CN2101
CN2201
GND
LP5
LP4
LP3
LP2
LP1
LD5
LD4
LD3
LD2
LD1
KEY-1
KEY-2
KEY-3
GND
D2205 LTL-1BEHJ 5
D2204 LTL-1BEHJ 4
D2203 LTL-1BEH
SW2203 PLAY
SW2206 SKIP-DOWN
SW2207 SKIP-UP
SW2211 DISC-3
SW2212 DISC-4
R2202 3.9K
R2203 8.2K
R2205 2.7K
R2206 3.9K
R2211 2.7K
R2212 3.9K
FUNCTION C
R2101 10K
R2102 10K
R2103 10K
R3016 10K
R3017 10K
(CONTINUE CHANGER 2/2)
VFD-DOUT
VFD-DIN
VFD-CLK
VFD-STB
CN3004
ST-CLOSE
GND
ST-OPEN
CN3101
SW3102 SD-002(F)
SW3101 SD-002(F)
TRAY CLOSE
TRAY OPEN
SWITCH CBA
R2088 10K
D2085 1SS133
R2087 10K
Q2088 KTA1267-Y-AT/P (LED DRIVE)
D2086 1SS133
R2086 10K
Q2089 KTC3199-GR-AT/P (LED DRIVE)
R2020 360
J3001
CN2103
CN2203
POWER-LED
STANBY-LED
HDMI-LED
KEY-0
KEY-1
R2181 100
D2182 SML1216W
POWER
R2184 100
STANDBY
SW2102 HDMI
D2181 SLA-342DC3F
HDMI
R2201
SW2101

## FL2001 MATRIX CHART

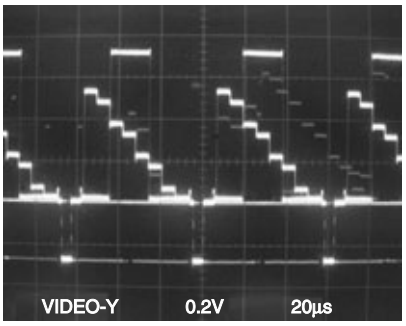
| | 7G | 6G | 5G | 4G | 3G |
|---|---|---|---|---|---|
| a | a | a | a | a | a |
| b | b | b | b | b | b |
| c | c | c | c | c | c |
| d | d | d | d | d | d |
| e | e | e | e | e | e |
| f | f | f | f | f | f |
| g | g | g | g | g | g |
| h | TL./GR. | ▶ | h | DVD | h |
| i | TR./CP. | ▮▮ | P.SCAN | A | C |



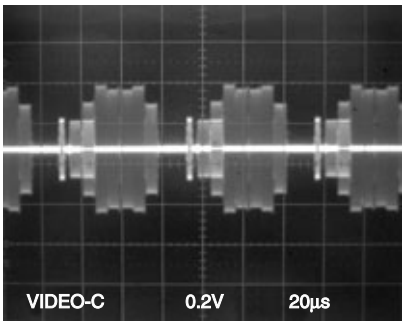

VIDEO SIGNAL
AUDIO SIGNAL
RELAY CBA
CN5001
CN5002
CN5003
CN5004
CN5005
CN5006
D-SENS-A
RT-SENS-A
P-ON+3.3V
GND
CHK-ON
CHK-OFF
RM1
RM2
SP(+)
SP(-)
SL(-)
SL(+)
TRAY-IN
TS(+)
FS(+)
FS(-)
TS(-)
GND(CD-PD)
GND(DVD-PD)
PD-MONI
DVD-LD
GND(LD)
CD-LD
NU
VREF
B
C
A
D
CD/DVD
P-ON+5V
SENSOR CBA
Q5101
PT204-6B-12
(DISC SENSOR)
R5101
150
D5101
LTE-3271T-F
Q5102
PT204-6B-12
(RT SENSOR)
R5102
150
D5102
LTE-3271T-F
UP/DOWN
SW
ROTARY
MOTOR
MECHA CBA
SPINDLE
MOTOR
SLED
MOTOR
TRAY-IN
PICK UP
UNIT
TS
FS
DETECTOR

# WAVEFORMS

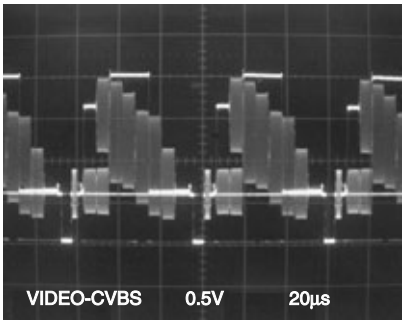
**WF1** Pin 7 of CN1601



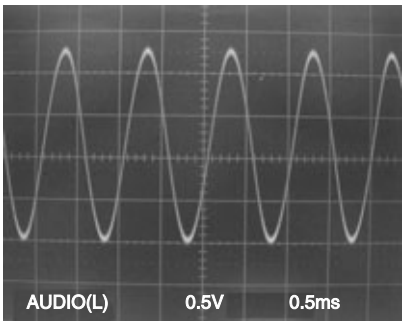

**WF2** Pin 9 of CN1601



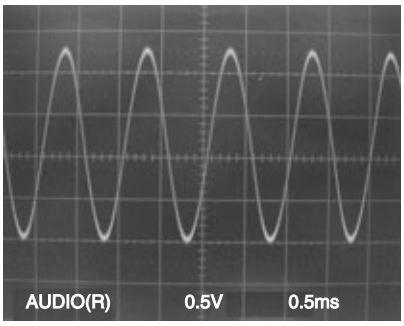

**WF3** C1402 PLUS LEAD



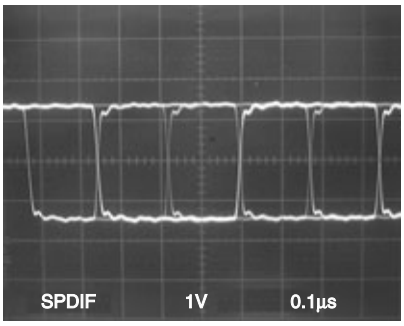

**WF4** Pin 11 of CN1601




**WF5** Pin 13 of CN1601




**WF6** Pin 15 of CN1601

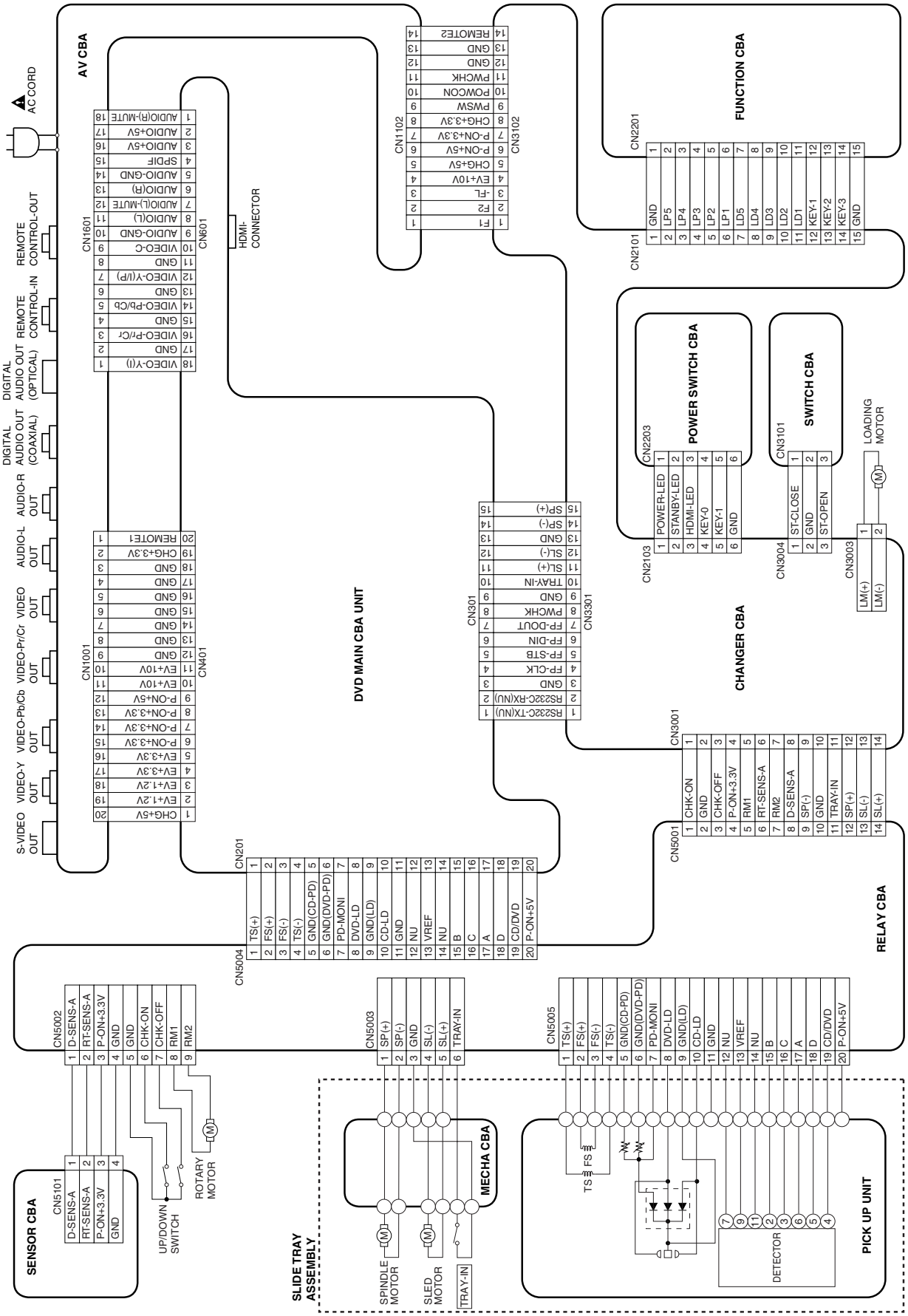



**NOTE:**

Measuring Disc
DVD: DVDT-S01
CD : TCD-784

Input Signal
VIDEO: 75% NTSC COLOR BAR
AUDIO: 1KHz, 0dB

# WIRING DIAGRAM



# 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.

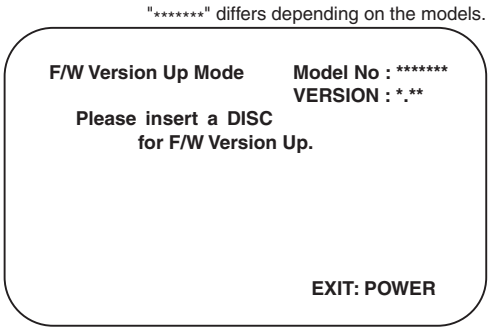



Fig. a Version Up Mode Screen

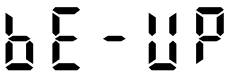



Fig. b VFD in Version Up Mode

   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.

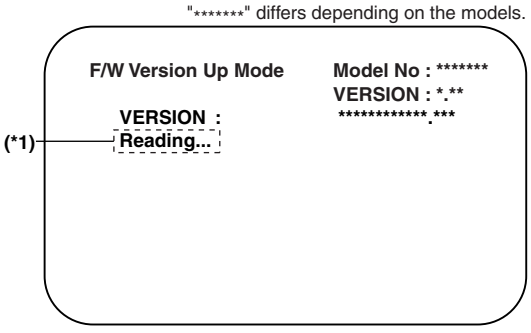



Fig. c Programming Mode Screen


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).

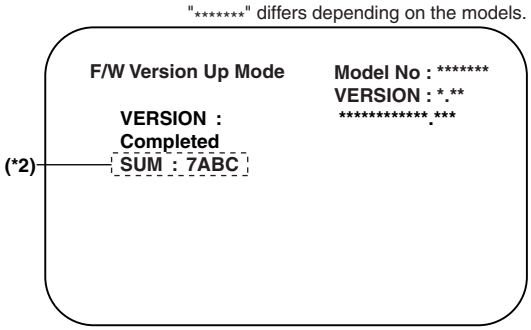



Fig. e Completed Program Mode Screen


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 [ON/STANDBY] 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.

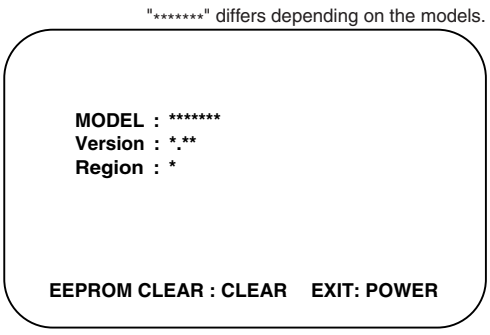



Fig. g

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

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

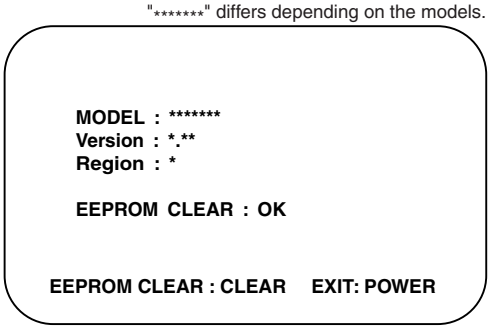



Fig. h

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 [ON/STANDBY] button.

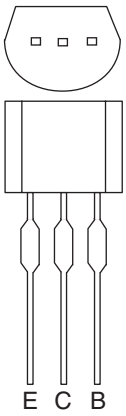
# TRAY LOCK MODE

Tray Lock Mode is defeated a tray-open/close to prevent a case of disc theft in demo mode.

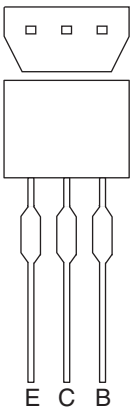
Enter this mode as the following procedure.

1. Confirm that the TV Monitor is connected.
2. With playback stopped, press [SETUP], [TOP MENU], [3], [AUDIO], [0] and [SETUP] buttons on the remote control unit in that order. "TRAY LOCK ON" will appear at upper right on the screen.
3. To exit this mode, press [SETUP], [TOP MENU], [3], [AUDIO], [0] and [SETUP] buttons on the remote control unit in that order. "TRAY LOCK OFF" will appear at upper right on the screen.

# LEAD IDENTIFICATIONS

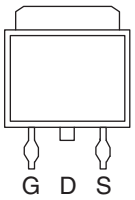



2SC1815-GR(TE2 F T)
2SA966-Y(TE6 F M)
2SA1015-Y(TE2 F T)
KTA1266-Y-AT/P
KTC3203(Y)

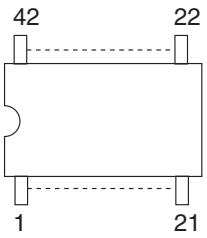



KTC3205-Y-AT/P
KTA1273-Y-AT/P
KRA110M-AT/P
KRC110M-AT/P
KTA1267-Y-AT/P
KTC3199-GR-AT/P

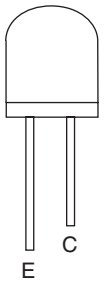
2SK3498



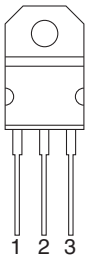

M38503G4A-131FP




PT204-6B-12

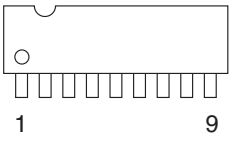



LD1117V
UZ1086L-ADJ

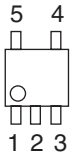



1: Vin
2: Vo
3: GND

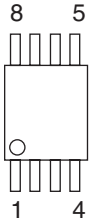
BA6956AN



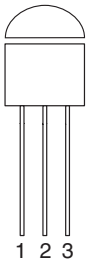

PST3229NR




KIA4558P/P
RC4580IP
UTC4558
CXA1511M-T4
MM1636XWRE

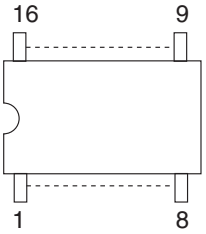



KIA2431AP-AT/P

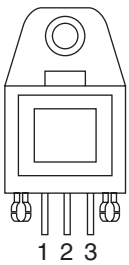



1: R
2: A
3: K

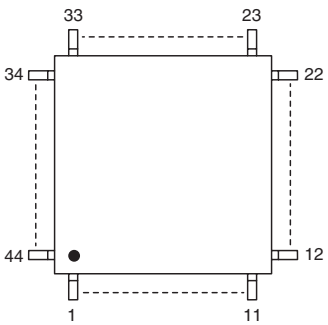
ADM232AARN
SP232ACN/TR
MM1637XVBE



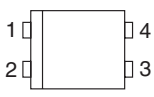

0C-0805T*002




PT6315(L)




EL817(B,C)
LTV-817C-F
PS2561A-1(W)

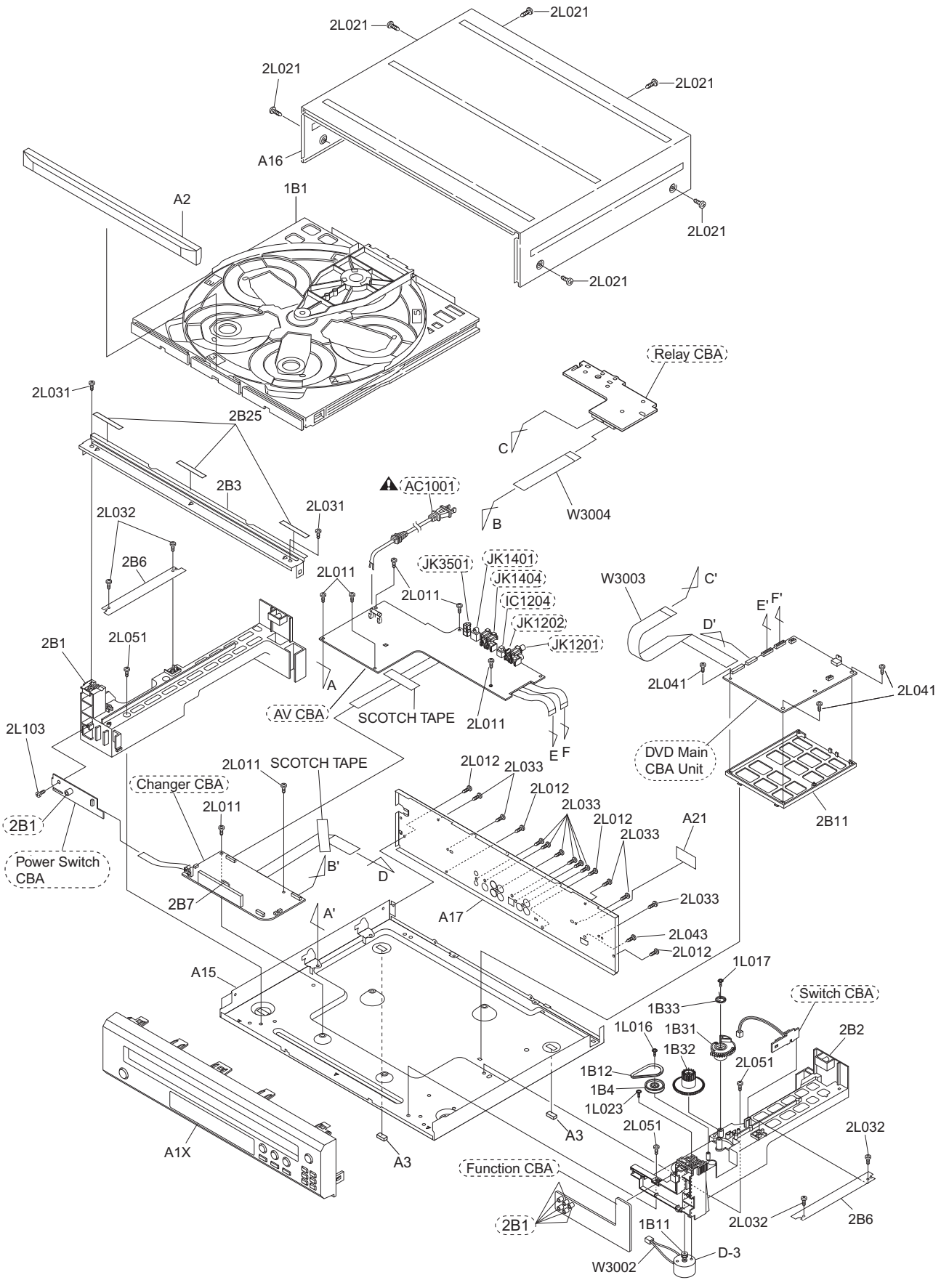



1: Anode
2: Cathode
3: Emitter
4: Collector

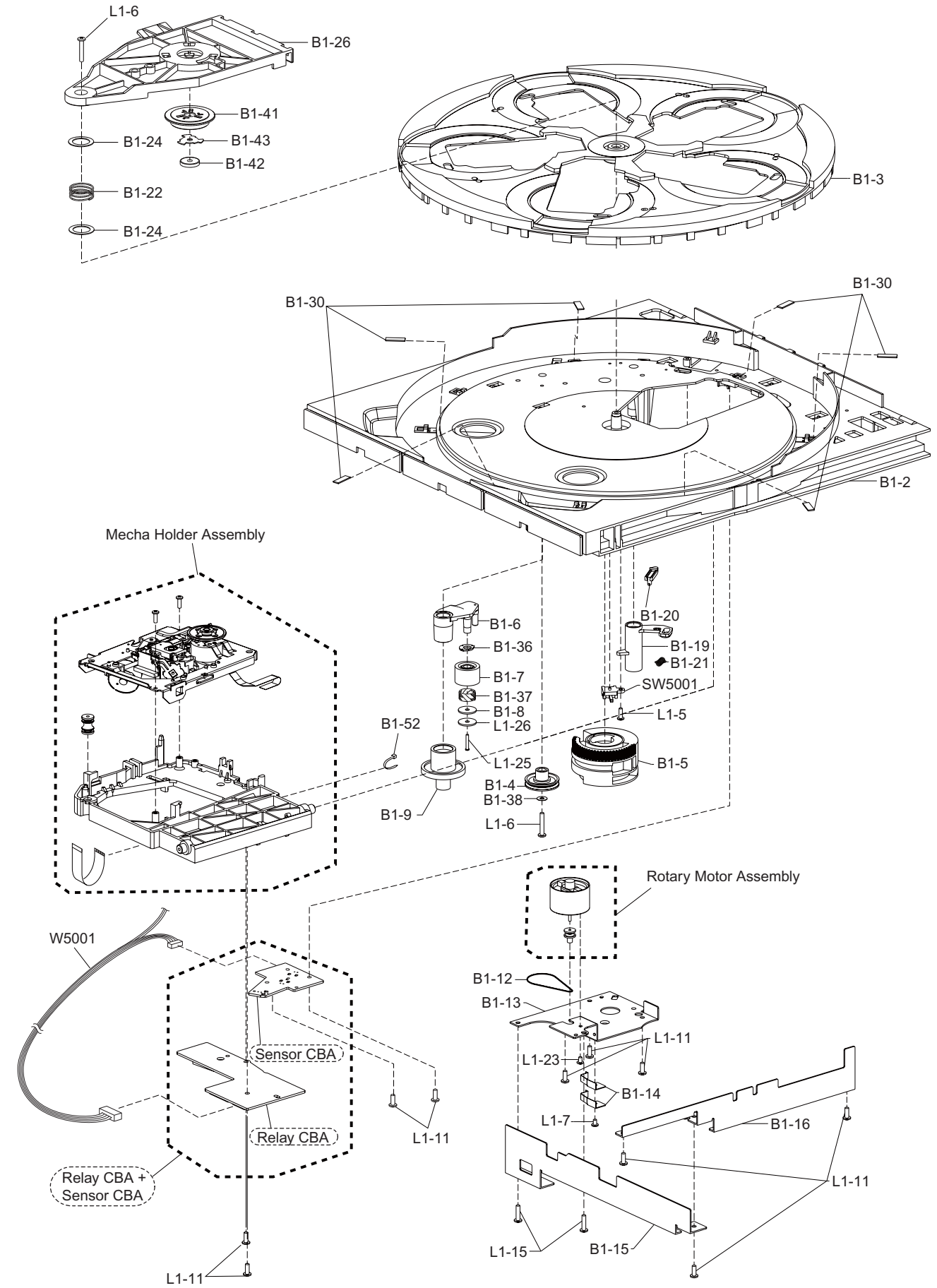
**Note:**
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
1 VCC
2 GND
3 OUT

# EXPLODED VIEWS

## Cabinet 1



## Cabinet 2


L1-6
B1-26
B1-41
B1-24
B1-43
B1-42
B1-22
B1-24
B1-3
B1-30
B1-30
B1-2
Mecha Holder Assembly
B1-6
B1-36
B1-7
B1-37
B1-8
L1-26
B1-52
L1-25
B1-4
B1-38
L1-6
B1-9
B1-20
B1-19
B1-21
SW5001
L1-5
B1-5
Rotary Motor Assembly
W5001
Sensor CBA
Relay CBA
L1-11
Relay CBA +
Sensor CBA
L1-11
B1-12
B1-13
L1-11
L1-23
B1-14
L1-7
B1-16
L1-11
L1-15
B1-15

# PARTS LIST OF EXPLODED VIEW (CABINET1)

＊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。
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＊ 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.

| Ref. No. | nsp | Part No. | Part Name | Remark | | Q'ty | New | |
|---|---|---|---|---|---|---|---|---|
| | | 00D 9H2 6000 879 | DVD MAIN CBA UNIT | | N7CDFKUP | 1 | * | |
| | | 00D 9H2 6000 880 | CHG CBA | | 1VSA15498 | 1 | * | |
| | | | CHANGER CBA | | - | | | |
| | | | AV CBA | | - | | | |
| | | | FUNCTION CBA | | - | | | |
| | | | POWER SWITCH CBA | | - | | | |
| | | | SWITCH CBA | | - | | | |
| A1X | | 00D 9H2 6000 985 | FRONT ASSEMBLY | for DVM1845 | 1VM222960C | 1 | * | 2 |
| A1X | | 00D 9H2 6000 986 | FRONT ASSEMBLY | for DVM745 | 1VM222979B | 1 | * | 2 |
| A2 | | 00D 9H2 6000 862 | TRAY PANEL ASSEMBLY | | 1VM425417 | 1 | * | |
| A3 | | 00D 9H2 6000 323 | FOOT | | 0VM406940A | 2 | | |
| A15 | | 00D 9H2 6000 801 | CHASSIS | | 0VM101293H | 1 | | |
| A16 | | 00D 9H2 6000 734 | TOP COVER | | 0VM203048C | 1 | | |
| A17 | | 00D 9H2 6000 987 | REAR PANEL | for DVM1845 | 1VM222914C | 1 | * | 2 |
| A17 | | 00D 9H2 6000 988 | REAR PANEL | for DVM745 | 1VM222958B | 1 | * | 2 |
| A21 | | - | LABEL SERIAL NO. | | - | 1 | | |
| 1B1 | | 00D 9H2 6000 803 | SLIDE TRAY ASSEMBLY | | N79F0KVC | 1 | * | |
| | | | MECHANICAL PARTS (B1-2~W5001) | | | | | |
| | | | ROTARY MOTOR ASSEMBLY | | | | | |
| | | | MECHA HOLDER ASSEMBLY | | | | | |
| | | | RELAY CBA + SENSOR CBA | | | | | |
| 1B4 | | 00D 9H2 6000 328 | LOADING PULLEY | | 0VM304636 | 1 | | |
| 1B11 | | 00D 9H2 6000 329 | MOTOR PULLEY | | 21P7048 | 1 | | |
| 1B12 | | 00D 9H2 6000 330 | BELT L | | 0RM400160 | 1 | | |
| 1B31 | | 00D 9H2 6000 331 | SLIDE TRAY GEAR(B) | | 0VM304632 | 1 | | |
| 1B32 | | 00D 9H2 6000 332 | SLIDE TRAY GEAR(A) | | 0VM304631 | 1 | | |
| 1B33 | | 00D 9H2 6000 333 | TRAY GUIDE SPRING | | 0VM412360 | 1 | | |
| 2B1 | | 00D 9H2 6000 804 | TRAY GUIDE(L) | | 0VM000136N | 1 | | |
| 2B2 | | 00D 9H2 6000 805 | TRAY GUIDE(R) | | 0VM000137R | 1 | | |
| 2B3 | | 00D 9H2 6000 336 | BRACKET(TOP) | | 0VM203160 | 1 | | |
| 2B6 | | 00D 9H2 6000 337 | STOPPER BRACKET | | 0VM411941 | 2 | | |
| 2B7 | | 00D 9H2 6000 806 | HOLDER F.I.P. 2 | | 0VM407372D | 1 | | |
| 2B11 | | 00D 9H2 6000 416 | MAIN PCB HOLDER | | 1VM323464 | 1 | | |
| 2B25 | | - | RUBBER SHEET | | 0VM415921 | 3 | | |
| D-3 | | 00D 9H2 6000 715 | DC MINI MOTORS M31E-1(R-14 7448) | | 0VM412937A | 7 | | |
| W3002 | | 00D 9H2 6000 429 | MOTOR CABLE MOTOR CABLE | | GBHC3050 | 4 | | |
| W3003 | | 00D 9H2 6000 808 | WIRE ASSEMBLY MAIN TO RELAY FFC20P 250MM 20PIN | | GBHC3050 | 6 | | |
| W3004 | | 00D 9H2 6000 809 | WIRE ASSEMBLY CONT TO RELAY FFC14P 320MM 14PIN | | GBJP3080 | 2 | | |
| **SCREWS** | | | | | | | | |
| 1L016 | | 00D 9H2 6000 351 | SCREW TAP TIGHT WASHER+ P-TIGHT | | GBJP3080 | 4 | | |
| 1L017 | | 00D 9H2 6000 352 | SCREW P-TIGHT 3X12 WASHER HEAD+ | | GBHB3080 | 14 | | |
| 1L023 | | 00D 9H2 6000 353 | SCREW SEMS M2.6X4 PAN HEAD+ | | GBJP3060 | 3 | | |
| 2L011 | | - | SCREW C-TIGHT M3X6 | | GBHC3050 | 1 | | |

| | Ref. No. | nsp | Part No. | Part Name | Remark | | Q'ty | New |
|---|---|---|---|---|---|---|---|---|
| | 2L012 | | - | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI | | 0VM413320A | 2 | |
| | 2L021 | | - | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI | | GBJP3080 | 1 | |
| | 2L031 | | - | SCREW P-TIGHT M3X8 BIND HEAD+ | | MMDZB4EMM003 | 1 | |
| | 2L032 | | - | SCREW P-TIGHT M3X8 BIND HEAD+ | | WX1E8620-902 | 1 | |
| | 2L033 | | - | SCREW B-TIGHT M3X8 BIND HEAD+ | | WX1E8700-003 | 1 | |
| | 2L041 | | - | SCREW P-TIGHT M3X6 BIND HEAD+ | | WX1E8700-009 | 1 | |
| | 2L043 | | - | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI | | GCJP3080 | 1 | |
| | 2L051 | | - | SCREW S-TIGHT 3X8 | | GCJP3120 | 1 | |
| | 2L103 | | - | SCREW P-TIGHT M3X8 BIND HEAD+ | | CPJ39040 | 1 | |

# PARTS LIST OF EXPLODED VIEW OF SLIDE MECHANISM UNIT (CABINET2)

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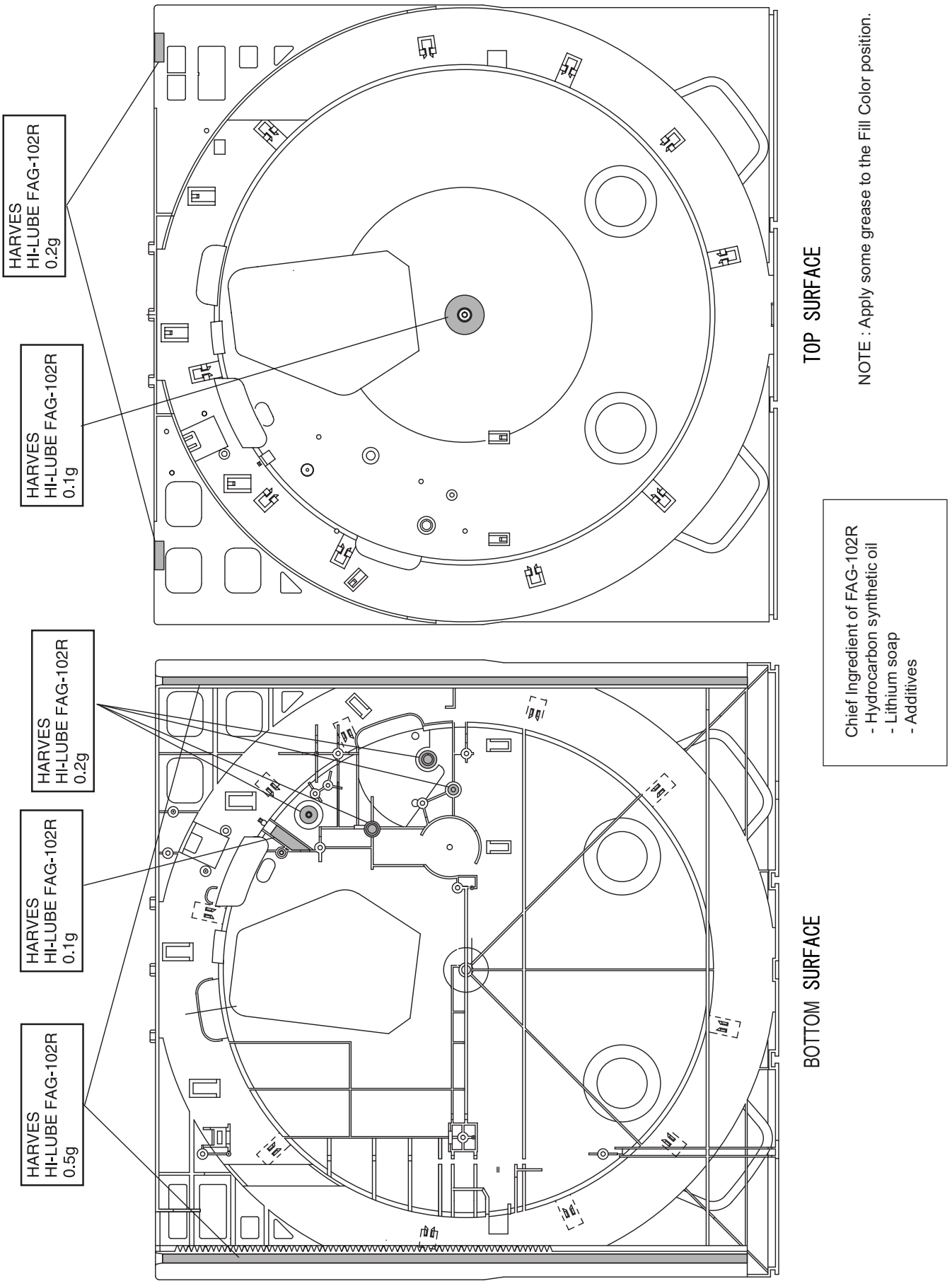
＊ Part indicated with the mark “nsp” are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

| | Ref. No. | nsp | Part No. | Part Name | Remark | | Q'ty | New |
|---|---|---|---|---|---|---|---|---|
| | | | 00D9H26000855 | ROTARY MOTOR ASSEMBLY | | 1VSA15769 | 1 | |
| | | | 00D9H26000852 | MECHA HOLDER ASSEMBLY | | 1VSA15023 | 1 | |
| | | | 00D9H26000853 | RELAY CBA + SENSOR CBA (Electrical Parts) | | 1VSA15375 | 1 | |
| | | | | RELAY CBA | | - | | |
| | | | | SENSOR CBA | | - | | |
| | B1-2 | | 00D9H26000816 | SLIDE TRAY N79F0KVC | | 0VM000164M | 1 | |
| | B1-3 | | 00D9H26000817 | ROTARY TRAY N79F0FVC | | 0VM000165J | 1 | |
| | B1-4 | | 00D9H26000328 | LOADING PULLEY | | 0VM304636 | 1 | |
| | B1-5 | | 00D9H26000818 | MOTION GEAR | | 0VM203026 | 1 | |
| | B1-6 | | 00D9H26000819 | IDLER ARM | | 0VM304637 | 1 | |
| | B1-7 | | 00D9H26000820 | IDLER GEAR | | 0VM304638 | 1 | |
| | B1-8 | | 00D9H26000821 | WASHER | | 0RM401740 | 1 | |
| | B1-9 | | 00D9H26000822 | ROTARY TRAY GEAR | | 0VM304635 | 1 | |
| | B1-12 | | 00D9H26000330 | BELT L | | 0RM400160 | 1 | |
| | B1-13 | | 00D9H26000823 | GEAR PLATE | | 0VM304639 | 1 | |
| | B1-14 | | 00D9H26000824 | PLATE SPRING(B) | | 0VM412343B | 1 | |
| | B1-15 | | 00D9H26000825 | PLATE HOLDER 2 | | 0VM305255 | 1 | |
| | B1-16 | | 00D9H26000826 | PLATE HOLDER 3 | | 0VM305243 | 1 | |
| | B1-19 | | 00D9H26000827 | STOP LEVER | | 0VM304633 | 1 | |
| | B1-20 | | 00D9H26000828 | ROTARY STOPPER | | 0VM304634B | 1 | |
| | B1-21 | | 00D9H26000829 | STOPPER SPRING | | 0VM411642A | 1 | |
| | B1-22 | | 00D9H26000830 | ROTARY TRAY SPRING | | 0VM411643B | 1 | |
| | B1-24 | | 00D9H26000831 | ROTARY TRAY WASHER B | | 0VM411646 | 1 | |
| | B1-26 | | 00D9H26000832 | CHUCK ARM | | 0VM203407K | 1 | |
| | B1-30 | | 00D9H26000833 | SLIDER | | 0VM412308A | 6 | |
| | B1-36 | | 00D9H26000835 | IDLER PAD | | 0VM411644A | 1 | |
| | B1-37 | | 00D9H26000836 | SPRING | | 0RM401741 | 1 | |
| | B1-38 | | 00D9H26000837 | WASHER | | 0RM401755 | 1 | |
| | B1-41 | | 00D9H26000838 | CLAMPER | | 0VM202842 | 1 | |
| | B1-42 | | 00D9H26000839 | MAGNET | | 0VM409759 | 1 | |
| | B1-43 | | 00D9H26000840 | YOKE | | 0VM411036 | 1 | |
| | B1-52 | | 00D9H26000841 | LEAD CLAMPER GT-80M | | XF00080HL001 | 1 | |
| | SW5001 | | 00D9H26000850 | DETECTOR SWITCH SSCF210300 | | SSC0102AL001 | 1 | |
| | W5001 | | 00D9H26000851 | MECHA CABLE MECHA CABLE | | WX1E7960-919 | 1 | |
| **SCREWS** | | | | | | | | |
| | L1-5 | | 00D9H26000842 | SCREW P-TIGHT M2.6X8 BIND HEAD+ | | GBJP9080 | 1 | |
| | L1-6 | | 00D9H26000843 | SCREW P-TIGHT 3X18 WASHER HEAD+ | | GCJP3180 | 2 | |
| | L1-7 | | 00D9H26000844 | SCREW B-TIGHT M2.6X4 BIND+ | | GBJB9040 | 1 | |
| | L1-11 | | 00D9H26000845 | SCREW P-TIGHT M3X8 BIND HEAD+ | | GBJP3080 | 10 | |
| | L1-15 | | 00D9H26000846 | SCREW P-TIGHT 3X12 WASHER HEAD+ | | GCJP3120 | 2 | |
| | L1-23 | | 00D9H26000847 | SCREW SEMS M2.6X4 PAN HEAD+ | | CPJ39040 | 1 | |
| | L1-25 | | 00D9H26000848 | SCREW B-TIGHT WASHER HEAD M2X12 WASHER HEAD+ | | GCJB2120 | 1 | |
| | L1-26 | | 00D9H26000849 | WASHER 14X3.2XT1 | | WPJ3141 | 1 | |

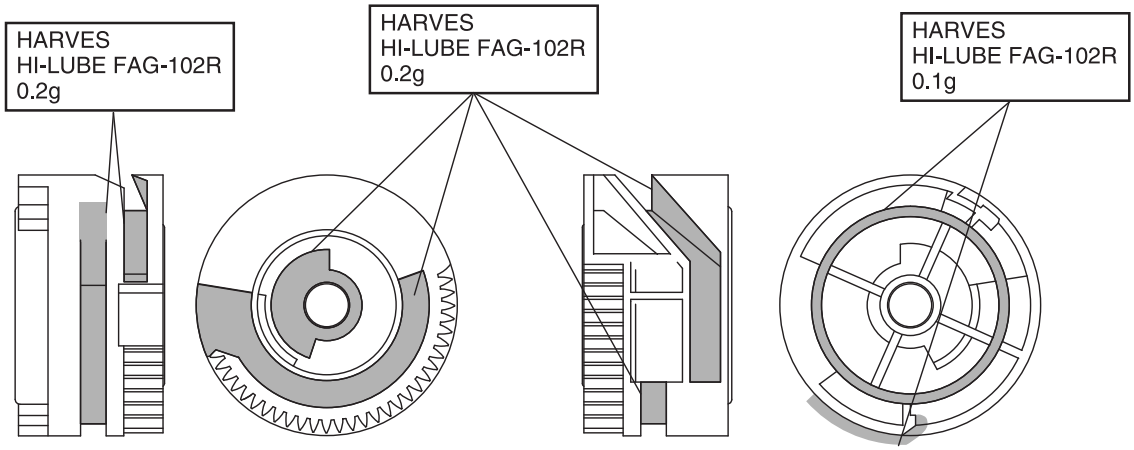
POINTS OF GREASING

1. SLIDE TRAY

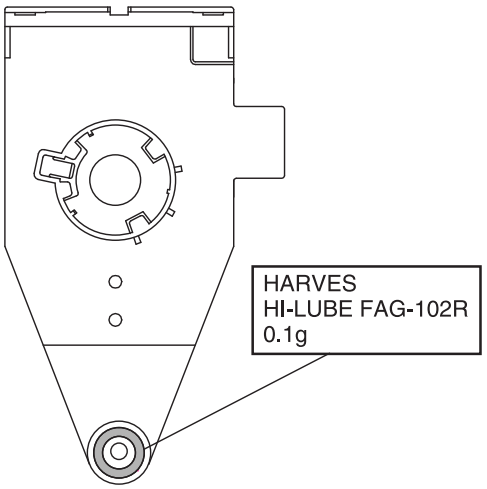


# POINTS OF GREASING(2/2)

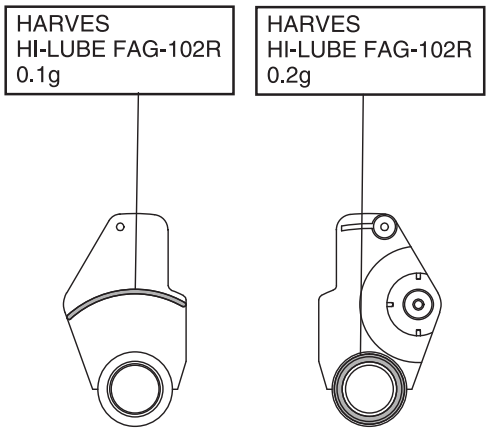
## 2. MOTION GEAR



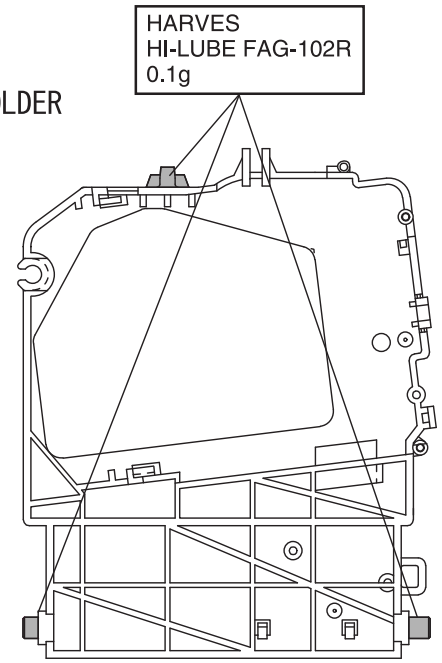

## 3. CHUCK ARM




## 4. IDLER ARM



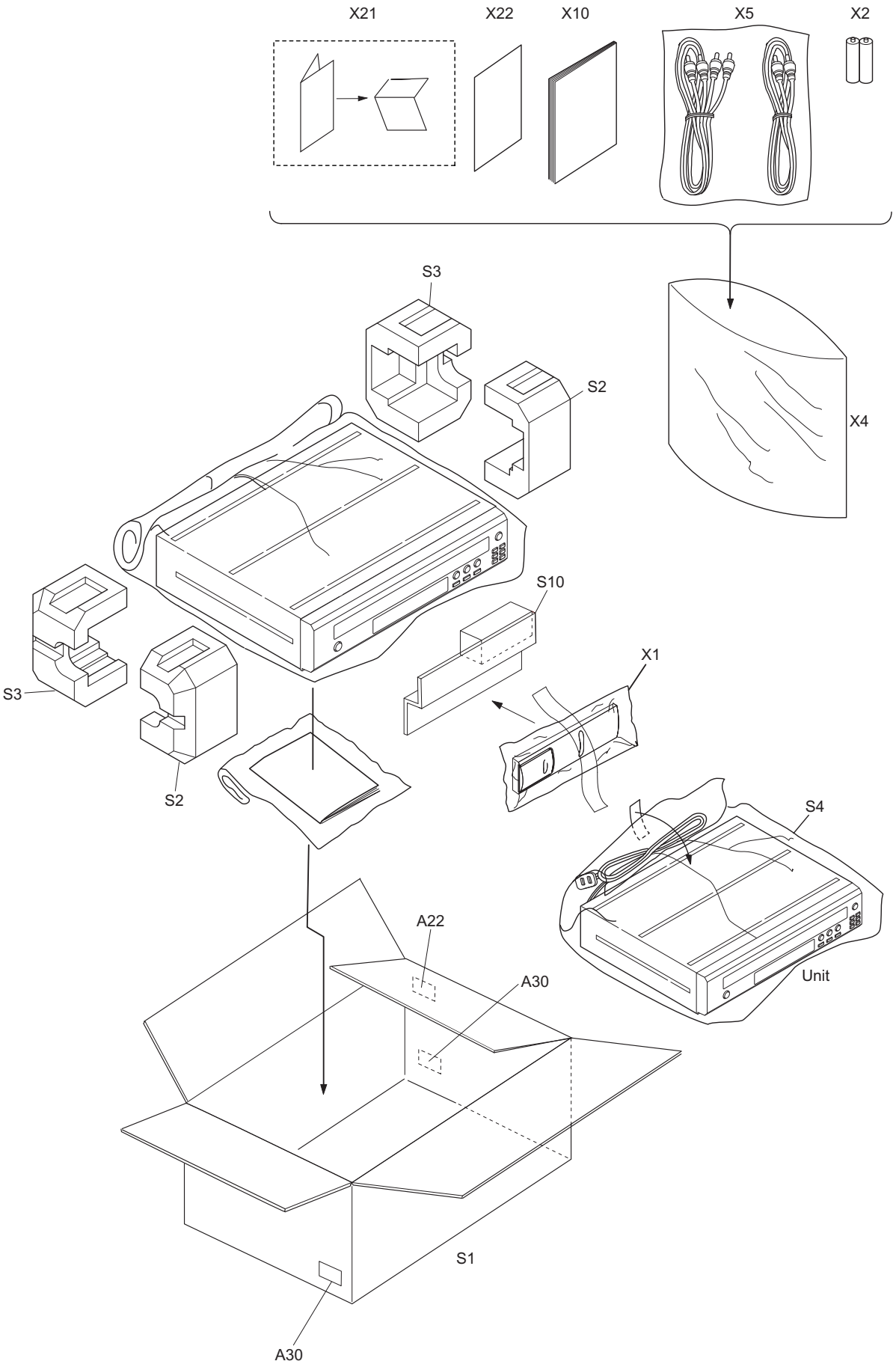

## 5. MECHA HOLDER




NOTE : Apply some grease to the Fill Color position.

Chief Ingredient of FAG-102R
- Hydrocarbon synthetic oil
- Lithium soap
- Additives

## Packing



# 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.

| | Ref. No. | nsp | Part No. | Part Name | Remark | | Q'ty | New | |
|---|---|---|---|---|---|---|---|---|---|
| | A22 | | - | BARCODE LABEL | | - | 1 | | |
| | A30 | | - | CONTROL LABEL | | - | 2 | | |
| | S1 | | 00D 9H2 6000 875 | GIFT BOX CARTON | for DVM1845 | 1VM323794 | 1 | * | |
| | S1 | | 00D 9H2 6000 876 | GIFT BOX CARTON | for DVM745 | 1VM323803 | 1 | * | |
| | S2 | | 00D 9H2 6000 317 | FRONT PAD | | 0VM101008A | 2 | | |
| | S3 | | 00D 9H2 6000 736 | REAR PAD | | 0VM101007A | 2 | | |
| | S4 | | 00D 9H2 6000 688 | SET BAG | | 0DM400731D | 1 | | |
| | S10 | | 00D 9H2 6000 811 | TRAY PAD | | 1VM425290 | 1 | | |
| | X1 | | 00D 9H2 6000 718 | REMOTE CONTROL UNIT | | NA841UD | 1 | | |
| | X2 | | - | DRY BATTERY R6UW/2S | | XB0M311MS001 | 2 | | |
| | X2 | | - | DRY BATTERY ES-GR6M-C | | XB0M571GLP01 | 2 | | |
| | X2 | | - | DRY BATTERY R6P/2S | | XB0M451T0001 | 2 | | |
| | X4 | | 00D 9H2 6000 513 | ACCESSORY BAG | | 0VM416059 | 1 | | |
| | X5 | | 00D 9H2 6000 226 | AV CORD WPZ0102TM015 | | WPZ0102TM015 | 1 | | |
| | X5 | | 00D 9H2 6000 243 | AV CORD RCA(M*2)TO RCA(M*2) | | WPZ0102LTE01 | 1 | | |
| | X10 | | 00D 9H2 6000 989 | OWNERS MANUAL | for DVM1845 | 1VMN23562A | 1 | * | △2 |
| | X10 | | 00D 9H2 6000 990 | OWNERS MANUAL E8735UD | for DVM745 | 1VMN23651A | 1 | * | △2 |
| | X21 | | - | WARRANTY SHEET | | 1VM323507 | 1 | | |
| | X22 | | - | SERVICE CENTER SHEET | | 1VM425536 | 1 | | |