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Service Manual

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ORDER NO.CHM0306017C0

Service Manual

DVD Player

- DVD-S35EE
  DVD-S35GN
  DVD-S35PL
  DVD-S35PLA
  DVD-S35PX
    - DVD-S35GCS
      DVD-S35GCU
      DVD-S35GC
      DVD-S35GCA
      DVD-S35GD

DL1S Mechanism Series

Colour

(S).....Silver Type

(K).....Black Type (S35EE Only)

Specifications

Power supply:	AC120 V, 60 Hz (DVD-S35PLA only) AC220-240V, 50Hz (DVD-S35EE/GN only) AC110-240V, 50/60Hz (except DVD-S35PLA/EE/GN)
Power consumption:	14 W
Dimensions:	430 (W)×267 (D)×60 (H) mm [1615/ 16”(W) x 108/ 16”(D) x 27/ 16” (H)] (excludingprotrusions)

Mass:	2.1 kg (4.7 lb.)
Signal system:	NTSC (DVD-S35PX only)
	PAL625/50, PAL525/60, NTSC (except DVD-S35PX)
Operating temperature range:	+5 to+35°C (+41 to 95°F)
Operating humidity range:	5 to 90% RH (no condensation)
Region number:	Region No.1 (DVD-S35PX only)
	Region No.2 (DVD-S35GC/GCA)
	Region No.3 (DVD-S35GCS/GCU/GD)
	Region No.4 (DVD-S35GN/PL/PLA)
	Region No.5 (DVD-S35EE only)

Discs played [8 cm (3”) or 12 cm (5”)]:

(1) DVD-RAM (DVD-VR compatible)

(2) DVD-Audio (except DVD-S35PX)

(3) DVD-Video

(4) DVD-R (DVD-Video compatible)

(5) CD-Audio (CD-DA)

(6) Video CD

(7) SVCD (Conforming to IEC62107)

(8) CD-R/CD-RW (CD-DA, Video CD formatted discs)

(9) WMA/MP3

•Maximum number of tracks and groups recognizable:

999 tracks and 99 groups

•Compatible compression rate:

WMA:	between 48 kbps and 192 kbps
MP3:	between 32 kbps and 320 kbps

(10) JPEG

•Exif Ver 2.1 JPEG Baseline files

•Maximum number of pictures and groups recognizable:

3000 pictures and 300 groups

•Picture resolution:

between 320× 240 and 6144× 4096 pixels (sub sampling is 4:2:2 or 4:2:0)

Video output:

Output level:	1 Vp-p (75Ω)
Output terminal:	Pin jack
Number of terminal:	1 system

S video output:

Y output level:	1 Vp-p (75Ω)
C output level:	NTSC; 0.286 Vp-p (75Ω) PAL; 0.300Vp-p (75Ω) (except DVD-S35PX)
Output terminal:	S terminal
Number of terminal:	1 system

Component video output (480P/480I)
(DVD-S35PXonly)
(NTSC:480p/480I,PAL:576I)
(exceptDVD-S35PX)

Y output level:	1 Vp-p (75Ω)
PB output lebel:	0.7 Vp-p (75Ω)
PR output level	0.7 Vp-p (75Ω)
Output terminal:	Pin jack (Y:green, PB :blue, PR :red)
Number of terminal:	1 system

Audio output:

Output level:	2 Vrms (1 kHz, 0 dB)
Output terminal:	Pin jack
Number of terminal	
2 channel:	1 system

Audio performance:

(1)	Frequency response:	
	•DVD (linear audio):	4 Hz-22 kHz (48 kHz sampling)
		4 Hz-44 kHz (96 kHz sampling)
	•DVD-Audio: (exept DVD-S35PX)	4 Hz-88 kHz (192 kHz sampling)
	•CD audio:	4 Hz-20 kHz
(2)	S/N ratio:	
	•CD audio:	115 dB
(3)	Dynamic range:	
	•DVD (linear audio):	100 dB
	•CD audio:	98 dB
(4)	Total harmonic distortion:	
	•CD audio:	0.0025%

Digital audio output:

Optical digital output:	Optical terminal

Pickup

Wave length:	658 nm/790 nm
Laser power:	CLASS Ua/ CLASS I (DVD-S35PX only)
	CLASS 2/ CLASS 1 (except DVD-S35PX)

Power consumption in standby mode:

approx. 2W

Solder:

This model uses lead free solder (PbF).

Note:

Specifications are subject to change without notice.
Mass and dimensions are approximate.

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.
WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

■ **Built-in decoders**
You can play discs with these symbols.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

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1 SAFETY PRECAUTIONS

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TOP PREVIOUS NEXT

1.1 GENERAL GUIDELINES

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1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.

2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.

3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1 LEAKAGE CURRENT COLD CHECK

1.1.2 LEAKAGE CURRENT HOT CHECK (See Figure 1 .)

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1.1.1 LEAKAGE CURRENT COLD CHECK

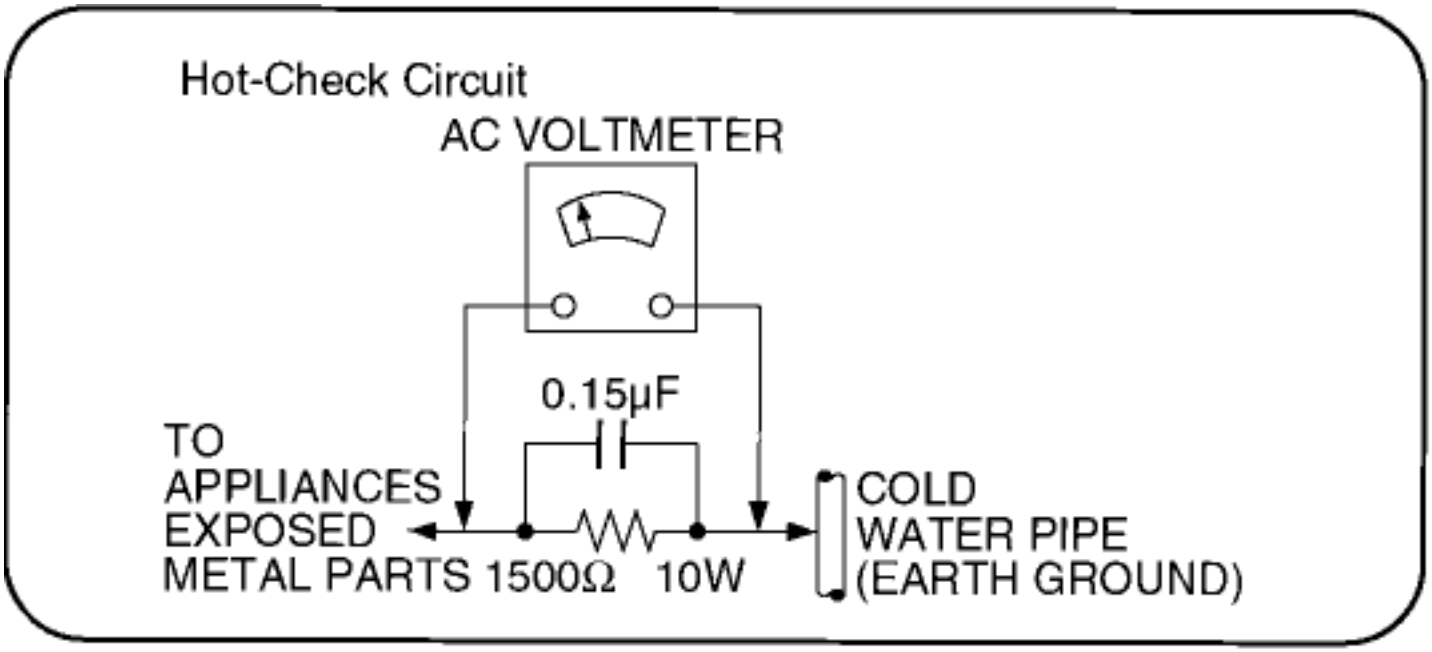
TOP PREVIOUS NEXT

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.

2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to thechassis,the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be

.

Figure 1



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1.1.2 LEAKAGE CURRENT HOT CHECK (See Figure 1 .)

TOP PREVIOUS NEXT

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.

2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15 µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1 .

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.

4. Check each exposed metallic part, and measure the voltage at each point.

5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.

6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current mu3st not exceed 1/2 milliamp. In case a measurement is outsideofthe limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

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2 PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

TOP PREVIOUS NEXT

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsand semiconductor"chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available dischargingESDwrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductivematerial).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamagean ES device).

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3 Precaution of Laser Diode

TOP PREVIOUS NEXT

CAUTION:

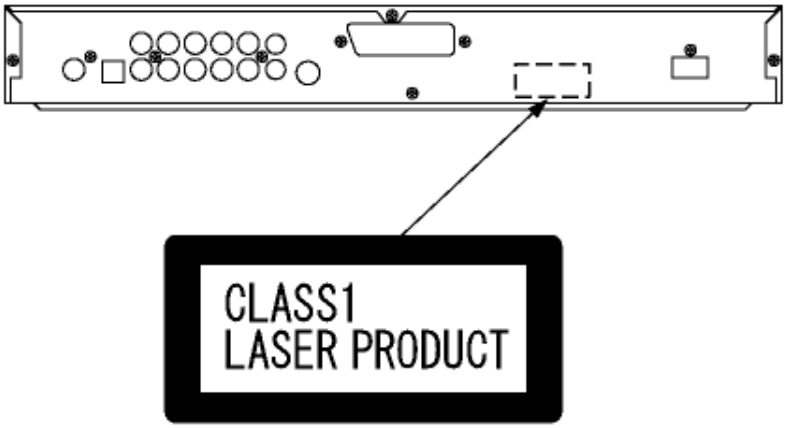
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wave length: 658 nm/790 nm
Maximum output radiation power from pickup: 100 μ W/VDE
Laser radiation from the pickup lens is safety level,but be sure the followings:

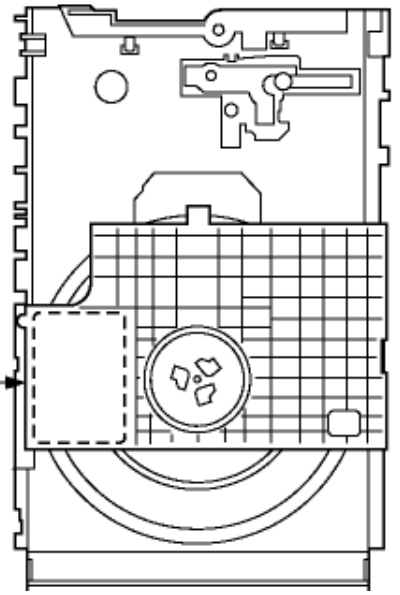
1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Leserstrahlung von der Laserinheit adgestrahit.
Wellenlänge: 658 nm/790 nm
Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE
Die Strahlungan der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.





CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

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4 About lead free solder (PbF)

TOP PREVIOUS NEXT

Caution:

- Pb free solder has a higher melting point than standard solder; Typically thmelting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control,pleaseset it to 700 ± 20°F (370 ± 10°C).

- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

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5 General Description

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5.1 Operating instructions

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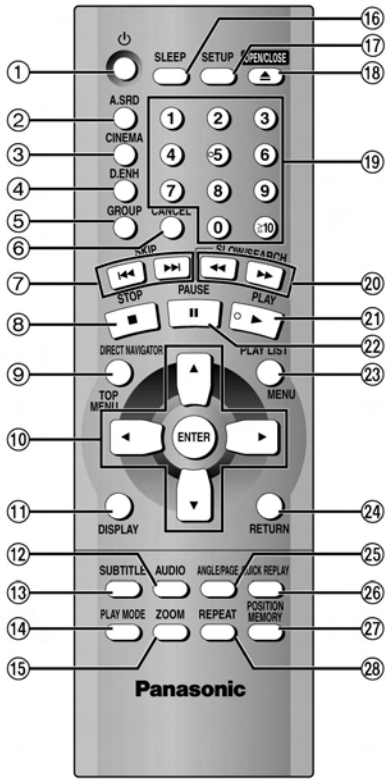
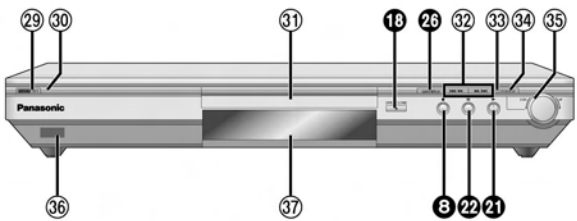




- Controls such as ⑧ function the same as those on the remote control.
- The actual marking of the standby/on switch depends on the area. Illustrations in these operating instructions use the markings shown in the above illustration.

① **Standby/on button (⏻)**
② **Advanced Surround button (A.SRD)**
③ **Cinema button (CINEMA)**
④ **Dialogue Enhancer button (D.ENH)**
⑤ **Group button (GROUP)**
⑥ **Cancel button (CANCEL)**
⑦ **Skip buttons (⏮, ⏭ SKIP)**
⑧ **Stop button (■ STOP)**
⑨ **Top menu, Direct navigator button (TOP MENU, DIRECT NAVIGATOR)**
⑩ **Cursor buttons (▲, ▼, ◄, ►), Enter button (ENTER)**
⑪ **Display button (DISPLAY)**
⑫ **Audio button (AUDIO)**
⑬ **Subtitle button (SUBTITLE)**
⑭ **Play mode button (PLAY MODE)**
⑮ **Zoom button (ZOOM)**
⑯ **Sleep button (SLEEP)**
⑰ **Setup button (SETUP)**
⑱ **Open/Close button (⏏ OPEN/CLOSE)**
⑲ **Numbered buttons (1–9, 0, ≧10)**
⑳ **Slow/Search buttons (◄◄, ►► SLOW/SEARCH)**
㉑ **Play button (► PLAY)**
㉒ **Pause button (❚❚ PAUSE)**
㉓ **Menu, Play list button (MENU, PLAY LIST)**
㉔ **Return button (RETURN)**
㉕ **Angle/page button (ANGLE/PAGE)**
㉖ **Quick replay button (QUICK REPLAY)**
㉗ **Position memory button (POSITION MEMORY)**
㉘ **Repeat button (REPEAT)**
㉙ **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
㉚ **Units sold outside the U.S.A. and Canada**
Standby indicator (⏻)
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
㉛ **Disc tray**
㉜ **Skip/Slow/Search buttons (⏮/◄◄, ►►/⏭)**
㉝ **Zoom indicator**
㉞ **Zoom mode button (ZOOM MODE)**
㉟ **Zoom dial (DOWN, UP)**
㊱ **Remote control signal sensor**
㊲ **Display**

6 PREVENTION OF STATIC ELECTRICITY DISCHARGE

TOP PREVIOUS NEXT

The laser diode in the traverse unit (optical pickup) may brake down due to static electricity of clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

TOP PREVIOUS NEXT

6.1 Grounding for electrostatic breakdown prevention

TOP PREVIOUS NEXT

Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

TOP PREVIOUS NEXT

6.1.1 Worktable grounding

TOP PREVIOUS NEXT

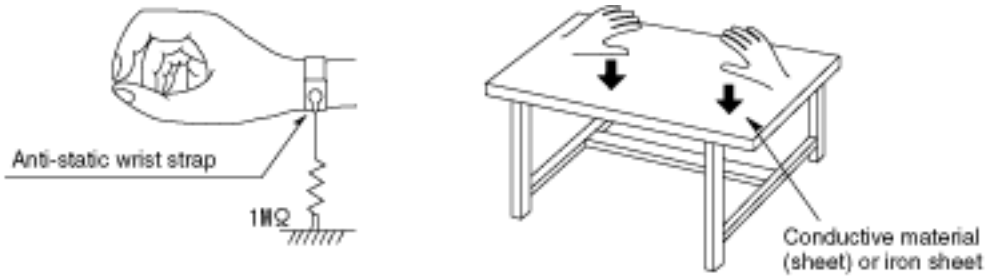
1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

TOP PREVIOUS NEXT

6.1.2 Human body grounding

TOP PREVIOUS NEXT

1. Use the anti-static wrist strap to discharge the static electricity form your body.



TOP PREVIOUS NEXT

6.1.3 Handling of optical pickup

TOP PREVIOUS NEXT

1. To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited. After replacing the parts with new ones, remove the short circuit accordingtothe correct procedure. (See this Technical Guide.)

2. Do not use a tester to check the laser diode for the optical pickup. Failure to do so will damage the laser diode due to the power supply in the tester.

TOP PREVIOUS NEXT

6.2 Handling Precautions for Traverse Unit (Optical Pickup)

TOP PREVIOUS NEXT

1. Do not give a considerable shock to the traverse unit (optical pickup) as it has an extremely high-precise structure.

2. When replacing the optical pickup, install the flexible cable and cut its short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstaticelectricity and install a new unit. Connect the connector as short times as possible.

3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the cable.

4. The half-fixed resistor for laser power adjustment cannot be adjusted. Do not turn the resistor.

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7 Disassembling the Casing and Checking P.C.B.s

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7.1 Dissasembly Procedure

7.2 Casing Parts and P.C.B. Positions

7.3 Top Panel

7.4 Front Panel

7.5 Rear panel

7.6 Power supply P.C.B.

7.7 Main P.C.B. and Mechanism Unit

7.8 Motor P.C.B.

7.9 Operation (L) P.C.B. and Operation (R) P.C.B.

7.10 Service Position

7.10.1 Servicing position of the Main P.C.B. and the Operation P.C.B.

7.10.2 List of the Extension Cables

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7.1 Dissasembly Procedure

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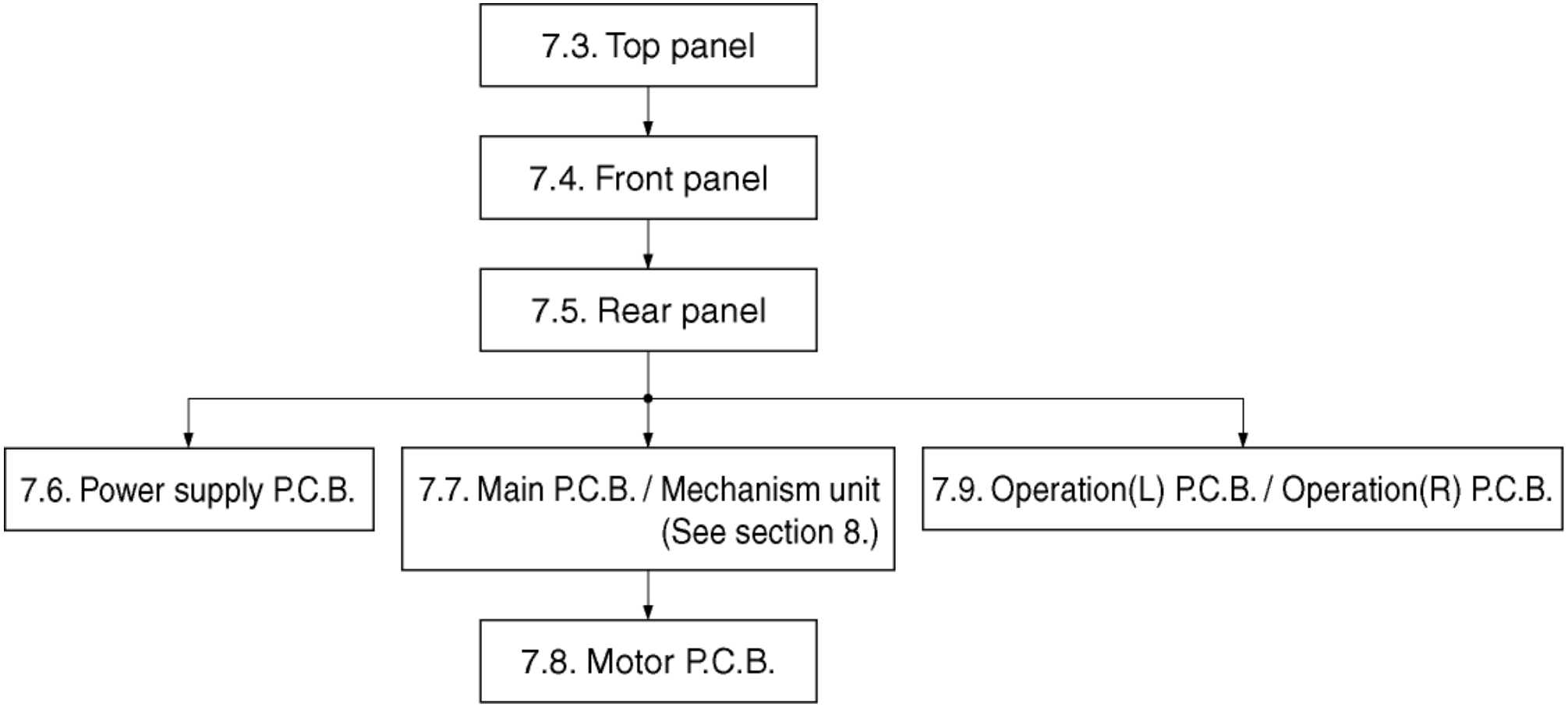

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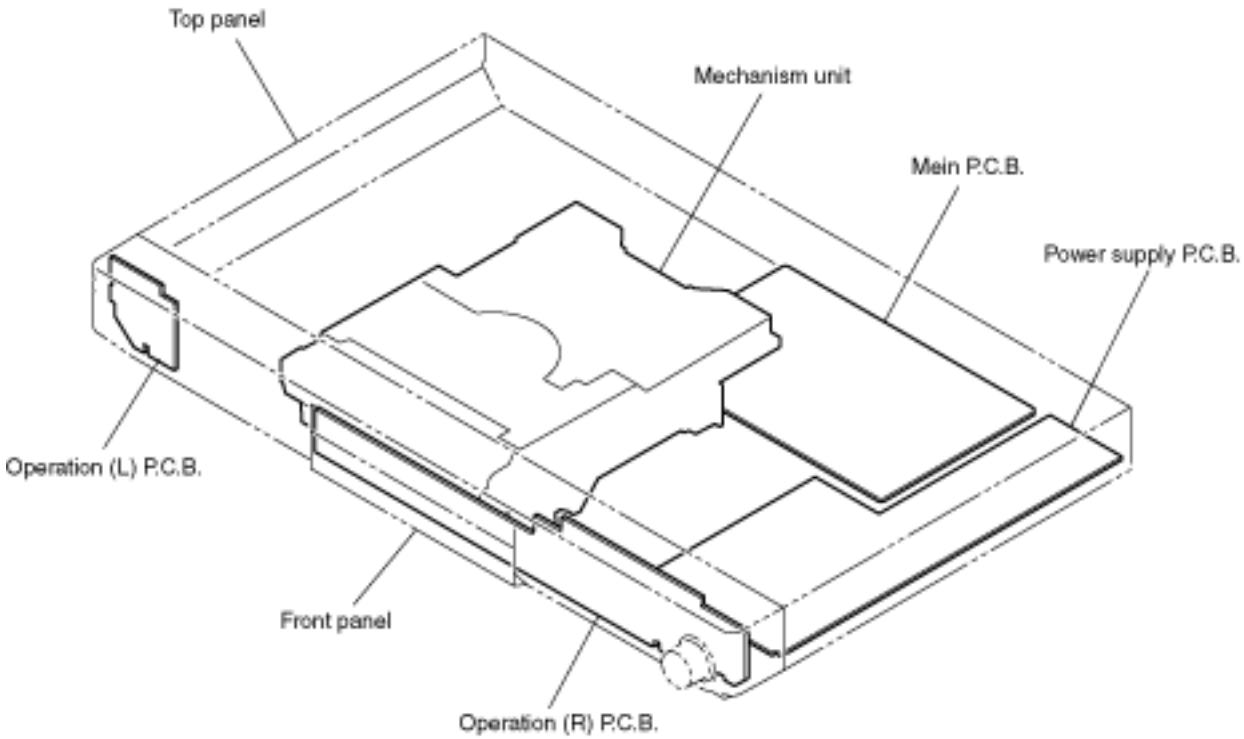
7.2 Casing Parts and P.C.B. Positions

TOP PREVIOUS NEXT

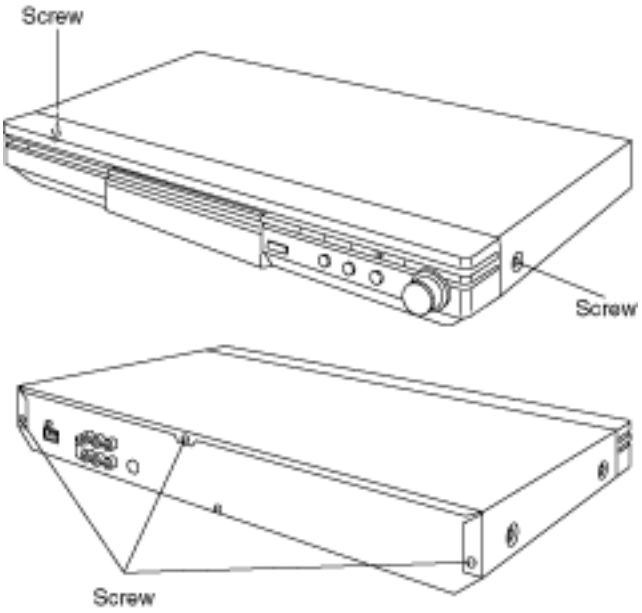


TOP PREVIOUS NEXT

7.3 Top Panel

TOP PREVIOUS NEXT

1. Unscrew the screws.



TOP PREVIOUS NEXT

7.4 Front Panel

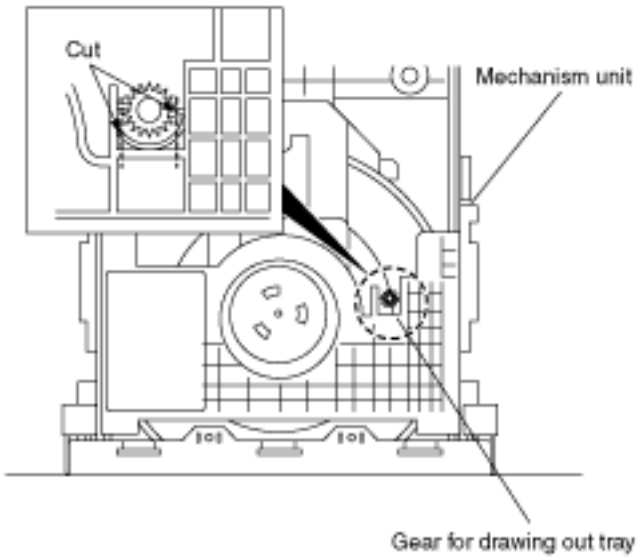
TOP PREVIOUS NEXT

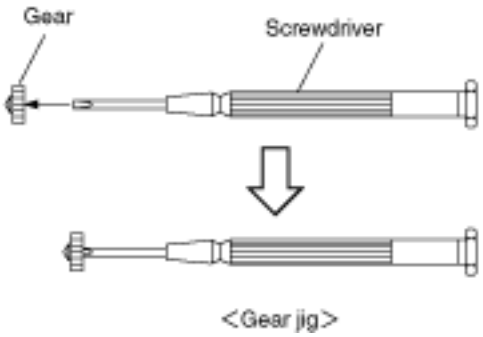
1. Pull the tray out of the mechanism unit. Remove the gear and install it onto a screwdriver to make a gear jig.

2. Insert the gear jig into the tray open/ close hole.

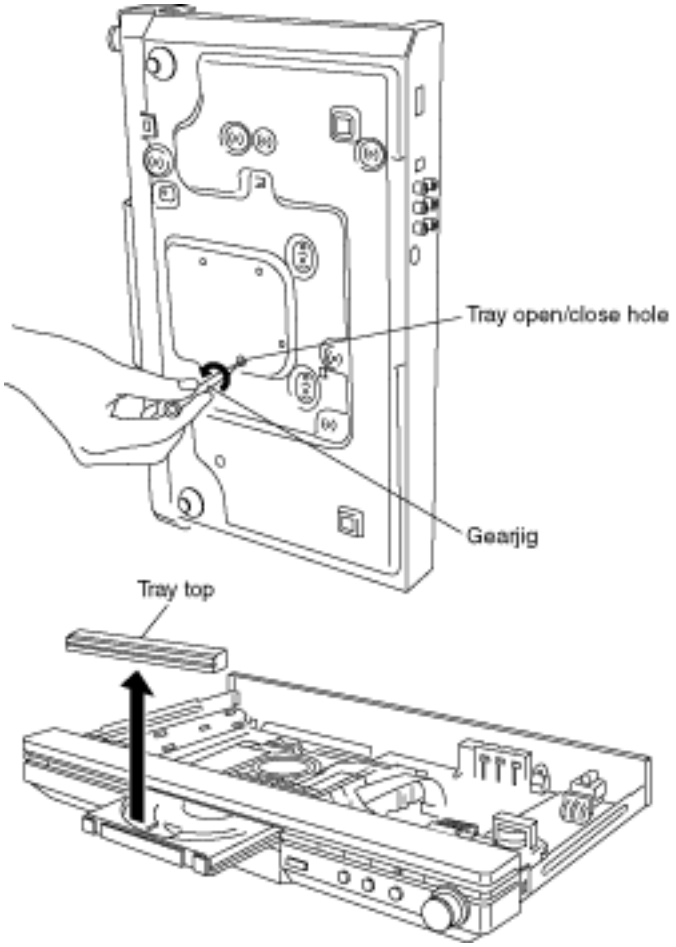
3. Turn the gear jig counterclockwise to open the tray.

4. Remove the tray top from the tray section.



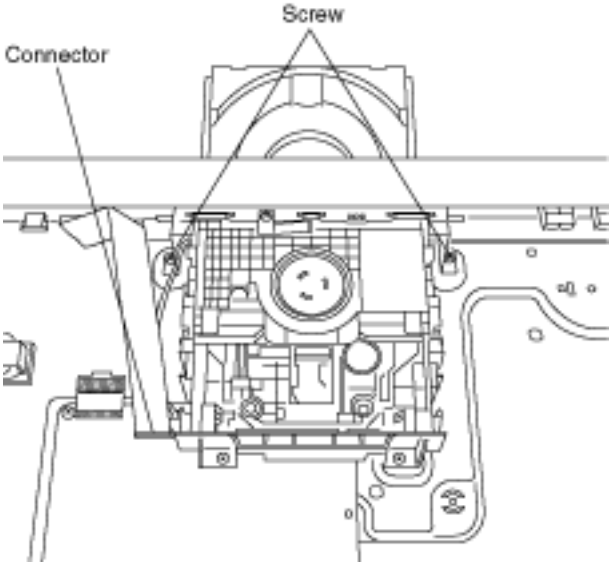


<Gear jig>



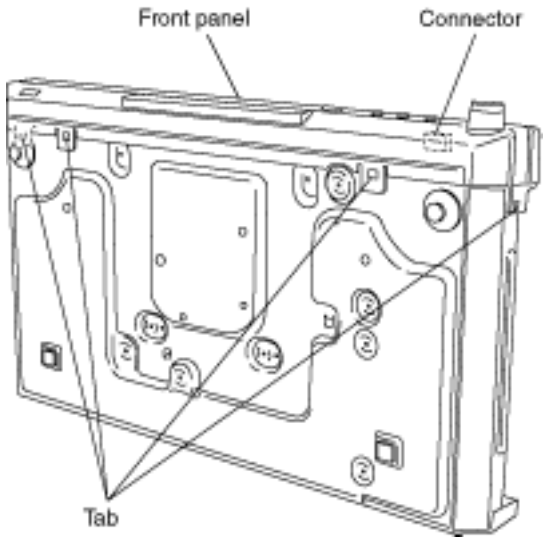
5. Unscrew the screws.

6. Remove the connector.



7. Release the tabs.

8. Remove the connector.

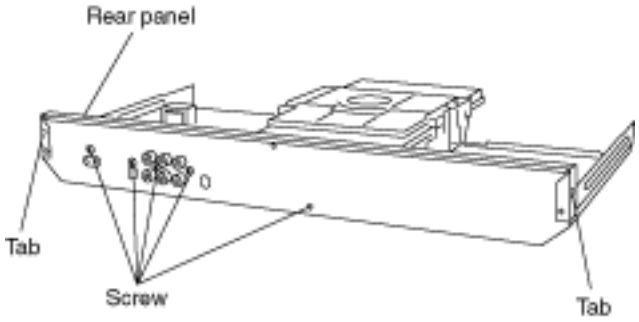


TOP PREVIOUS NEXT

7.5 Rear panel

TOP PREVIOUS NEXT

1. Unscrew the screws.
2. Release the tabs.



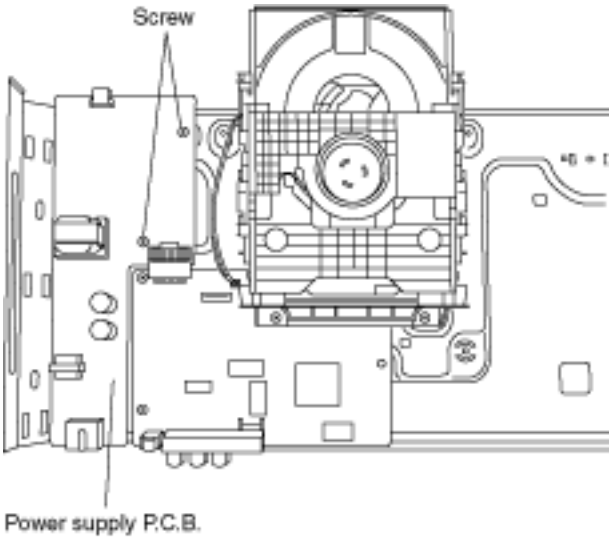
TOP PREVIOUS NEXT

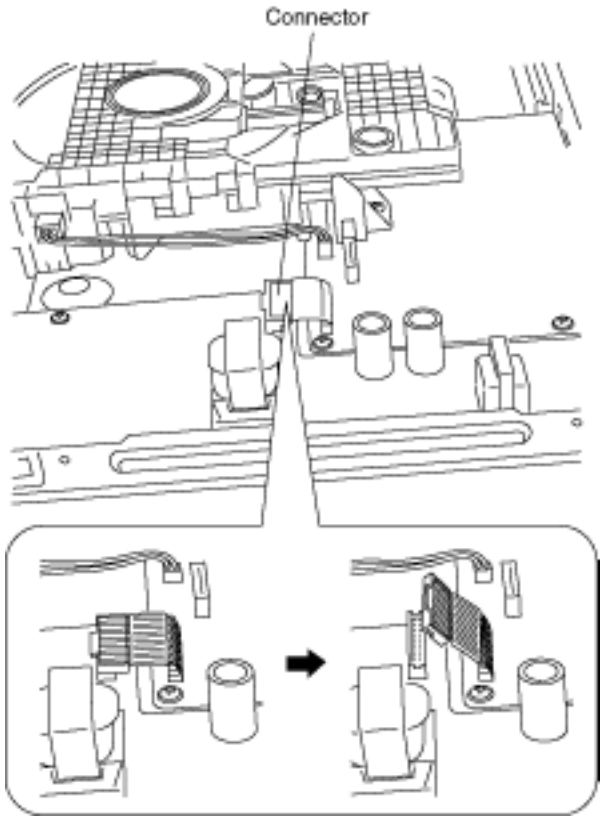
7.6 Power supply P.C.B.

TOP PREVIOUS NEXT

1. Unscrew the screws.

2. Remove the connector.





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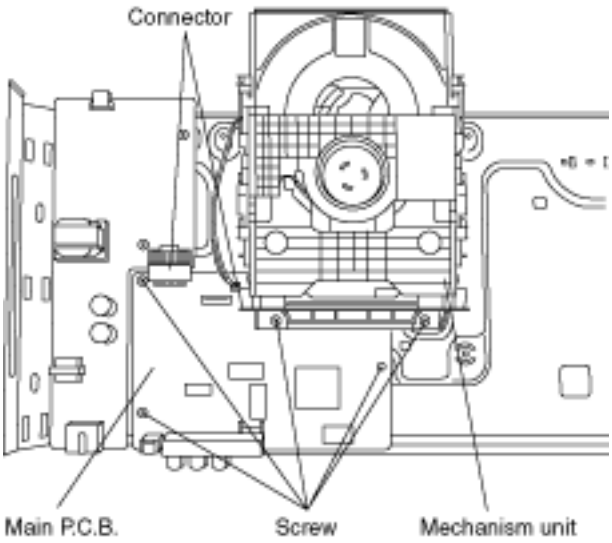
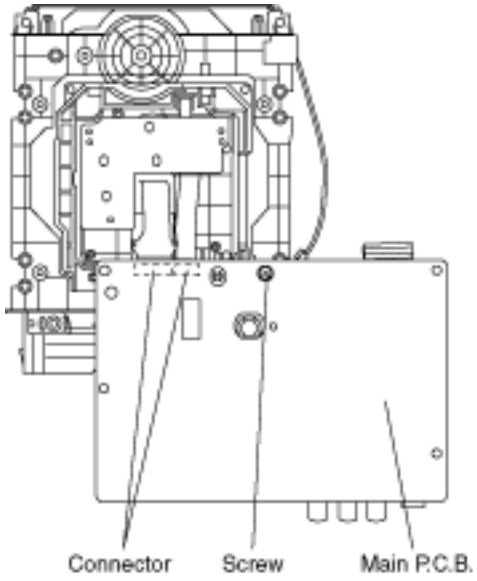
7.7 Main P.C.B. and Mechanism Unit

TOP PREVIOUS NEXT

1. Unscrew the screws.
2. Remove the connectors.
3. Pull out the Main P.C.B. and mechanism unit vertically.



4. Unscrew the screw.
5. Remove the connectors.



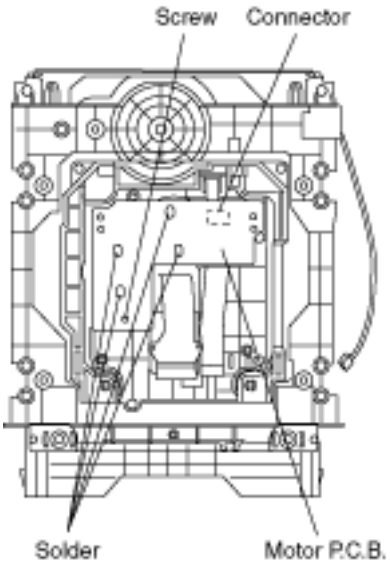
<Mechanism unit bottom>

TOP PREVIOUS NEXT

7.8 Motor P.C.B.

TOP PREVIOUS NEXT

1. Unscrew the screw.
2. Remove the solders.
3. Remove the connector.



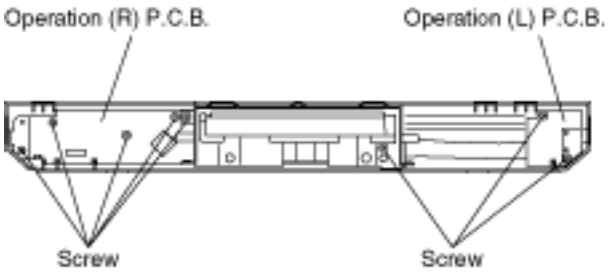
<Mechanism unit bottom>

TOP PREVIOUS NEXT

7.9 Operation (L) P.C.B. and Operation (R) P.C.B.

TOP PREVIOUS NEXT

1. Unscrew the screws.



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7.10 Service Position

TOP PREVIOUS NEXT

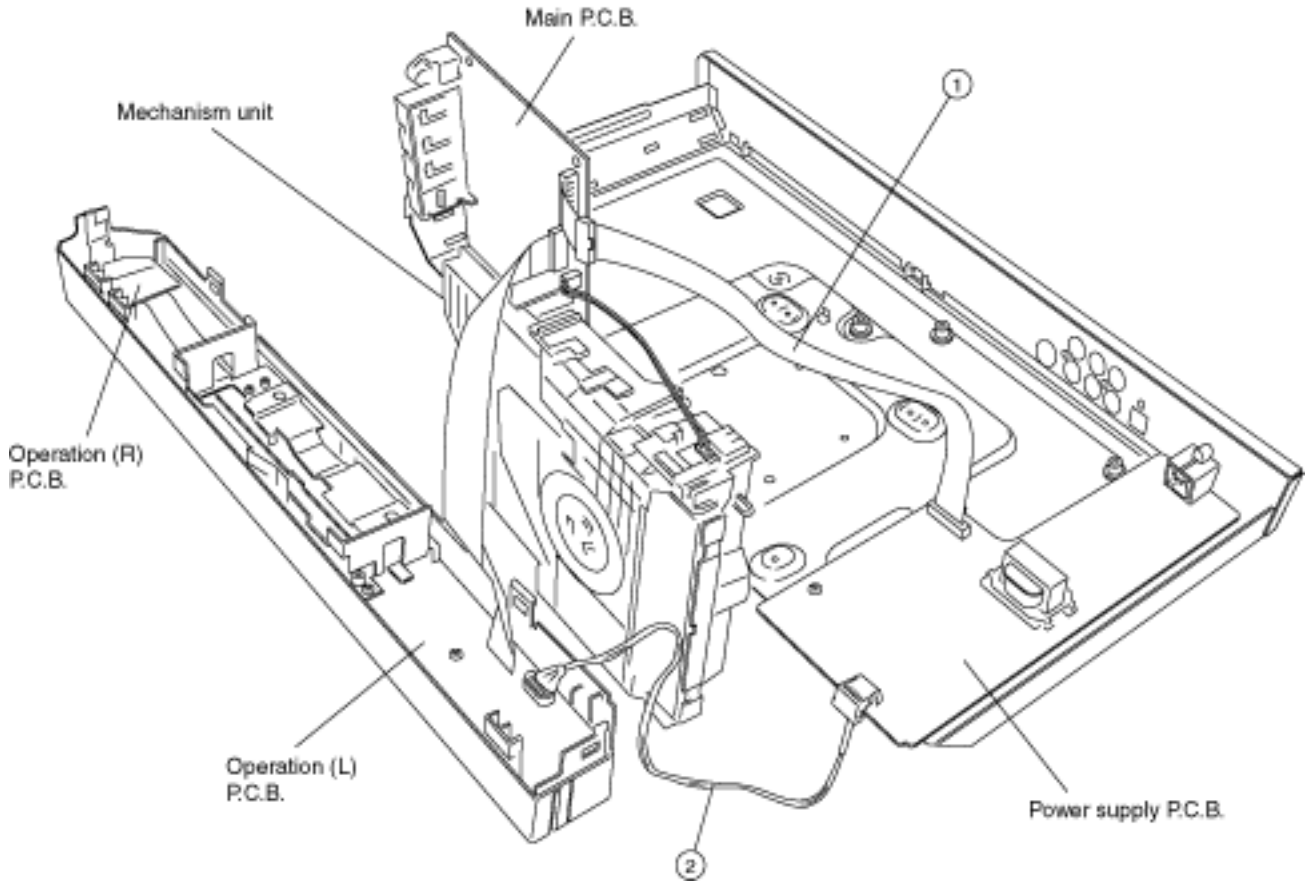
7.10.1 Servicing position of the Main P.C.B. and the Operation P.C.B.

7.10.2 List of the Extension Cables

TOP PREVIOUS NEXT

7.10.1 Servicing position of the Main P.C.B. and the Operation P.C.B.

TOP PREVIOUS NEXT



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7.10.2 List of the Extension Cables

TOP PREVIOUS NEXT

①	RFKZ0152	12pins	PS6251(Main P.C.B.) — PP1101(Power supply P.C.B.)
②	VFK1732	6pins	PS1102(Power supply P.C.B.) — PP6001(Operation (R) P.C.B.)

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8 ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

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8.1 Disassembly Procedure

8.2 Motor P.C.B.

8.3 Clamp Plate Unit

8.4 Tray

8.5 Traverse Block

8.6 Traverse Gear

8.7 Optical Pickup Unit

8.7.1 Precautions in optical pickup replacement

8.7.2 Disassembling the Optical Pickup Unit

8.7.3 Cautions to Be Taken When Replacing the Optical Pickup

8.8 Disassembling the Middle Chassis

8.9 Disassembling the Traverse Gear A/ FG P.C.B.

8.10 Disassembling the Spindle Motor Unit

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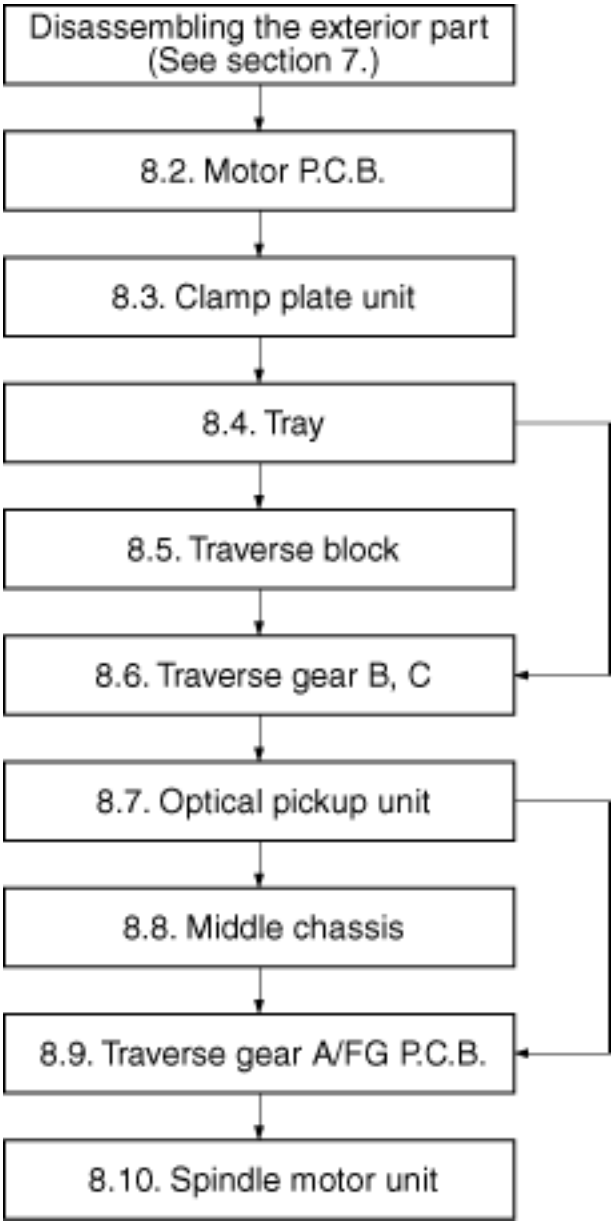
8.1 Disassembly Procedure

TOP PREVIOUS NEXT



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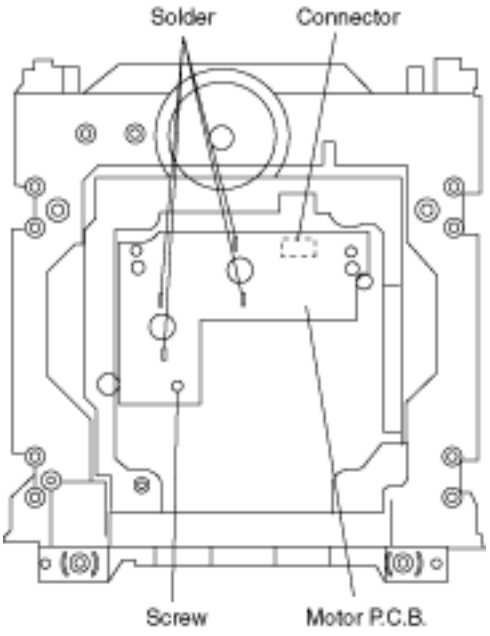
8.2 Motor P.C.B.

TOP PREVIOUS NEXT

1. Unscrew the screw.
2. Remove the solders.
3. Remove the connector.



<Mechanism unit bottom>

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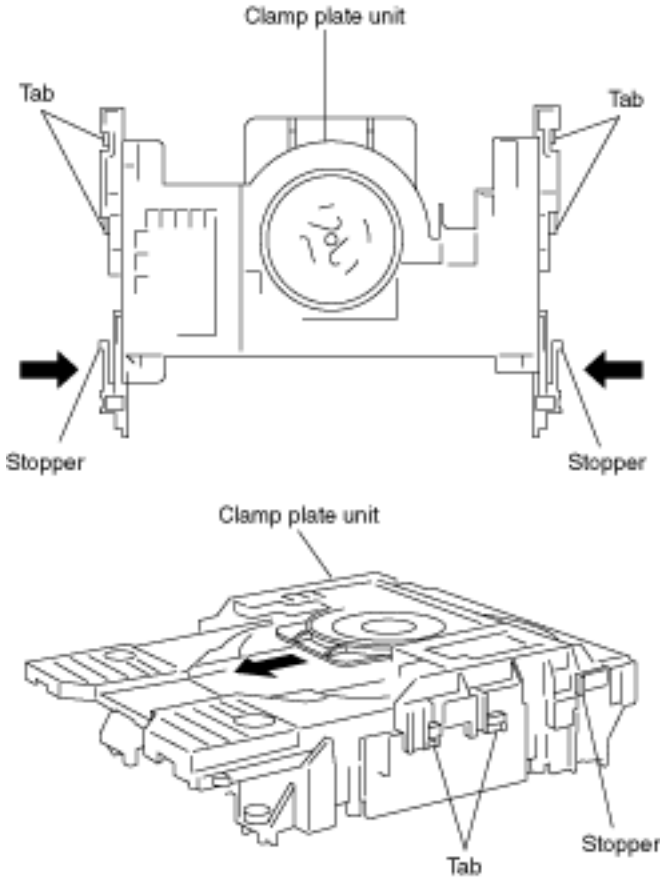
8.3 Clamp Plate Unit

TOP PREVIOUS NEXT

1. Spread the stopper with hand to slide the tabs and remove the clamp plate unit.



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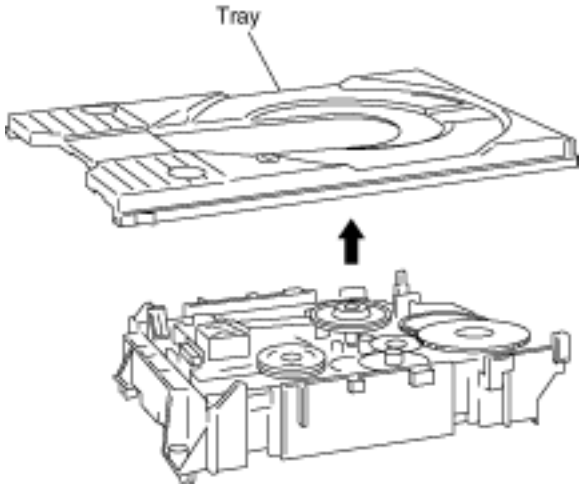
8.4 Tray

TOP PREVIOUS NEXT

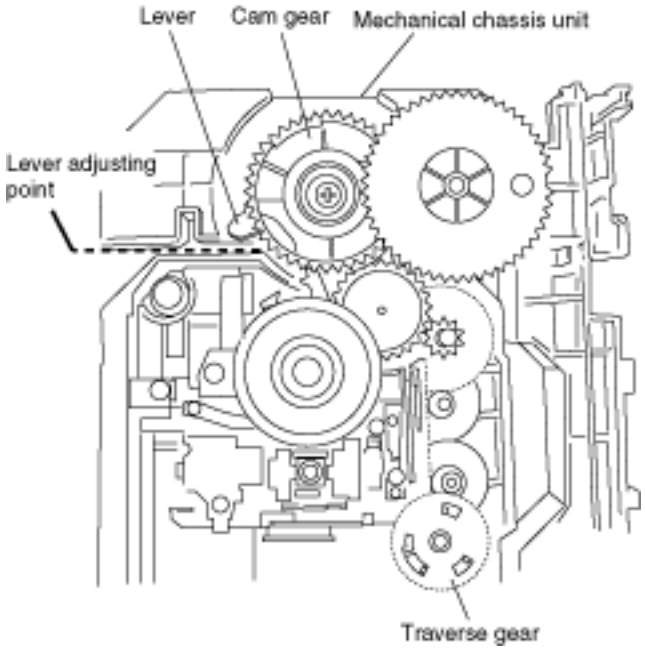
1. Lift the tray.



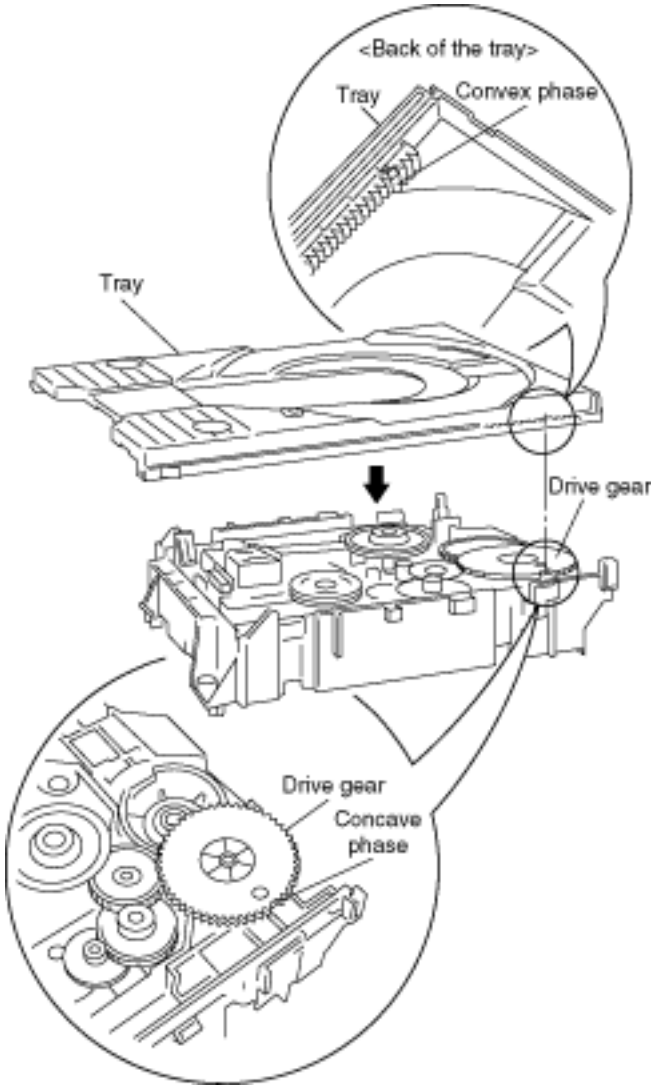
<Precautions in reassembling the tray>

•Reassemble the tray so that it is in the backmost position.

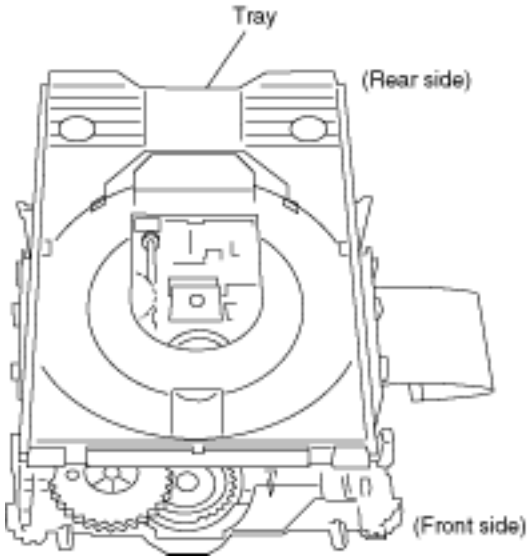
1. Turn traverse gear until cam gear leaver comes to the lever adjusting position at the end of mechanical chassis unit.



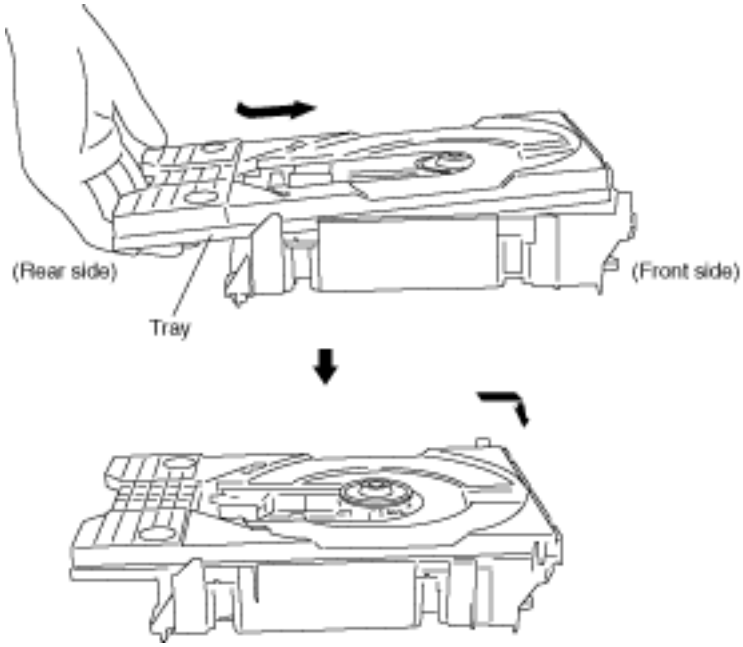
2. Check the position of convex phase on back of the tray, and that of concave phase on drive gear.



A. Place the tray on the unit from rearward.

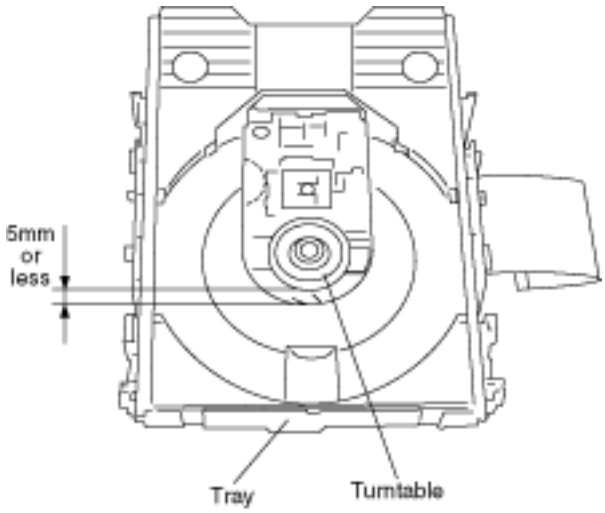


B. Inch the tray frontward until convex phase and concave phase mate.



Caution:

Make sure to mate convex phase and concave phase properly, so that the gap between turntable and tray becomes 5mm or less.



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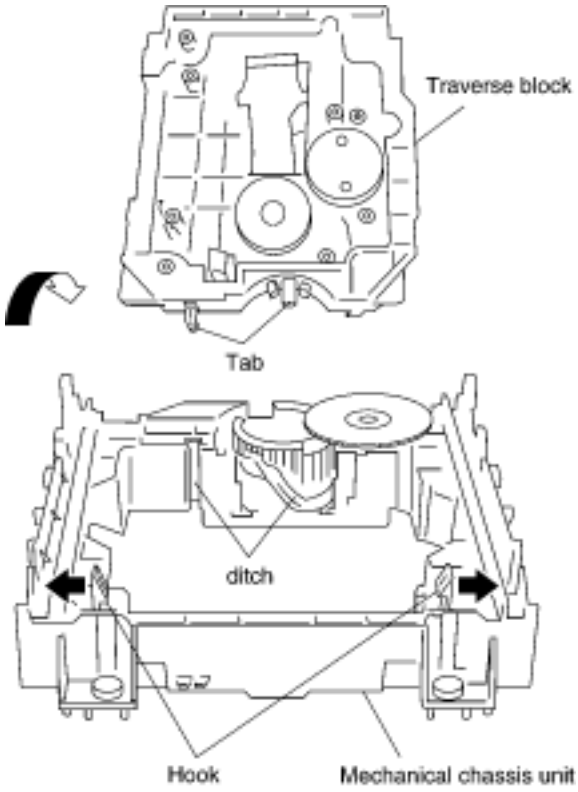
8.5 Traverse Block

TOP PREVIOUS NEXT

1. Lift the traverse block while spreading the hook of the mechanical chassis unit.

2. Disengage the tabs from the holes of the mechanical chassis unit.



<Precautions in reassembling the traverse block>

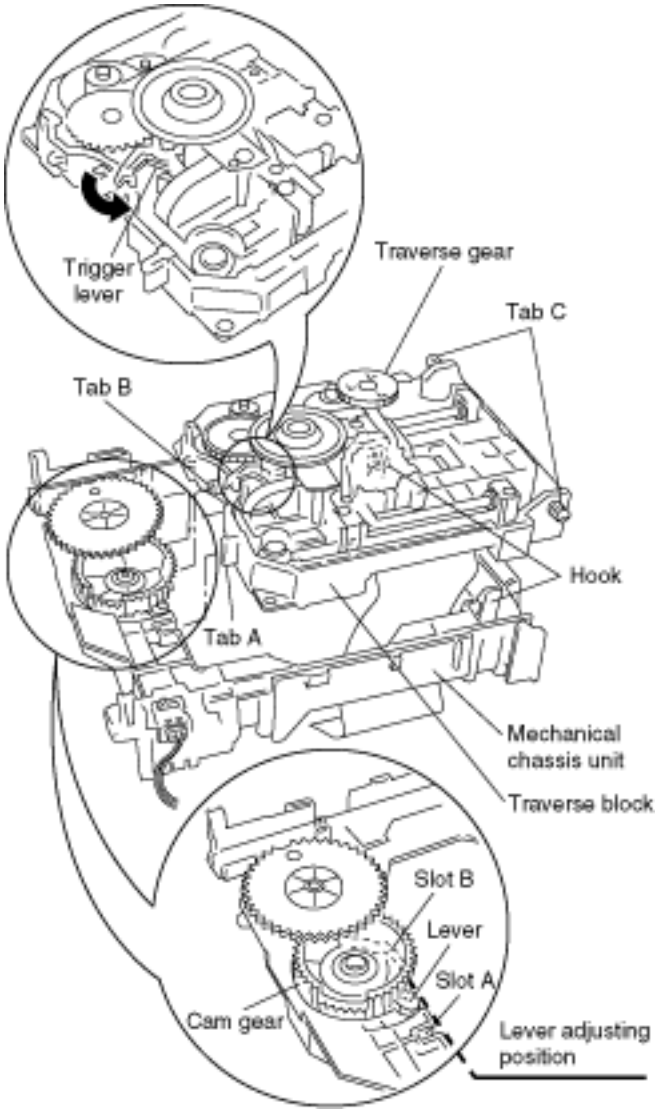
•Take the following precautions when reassembling the traverse block.

1. Turn traverse gear on the traverse block to let trigger lever turn rightward. (Front view)

2. Bring cam gear lever to the lever adjusting position at the end of mechanical chassis unit.

3. Put tabs A and B into slots A and B respectively.

   Place tabs C into hooks to mount the traverse block on mechanical chassis unit. (Slot A... Mechanical chassis unit, Slot B... Cam gear)



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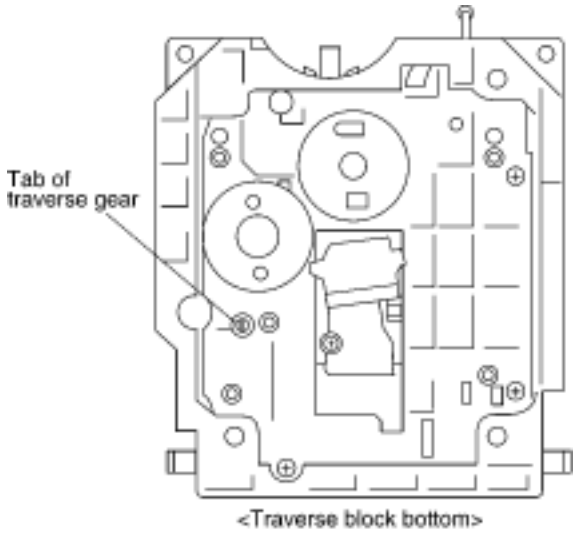
8.6 Traverse Gear

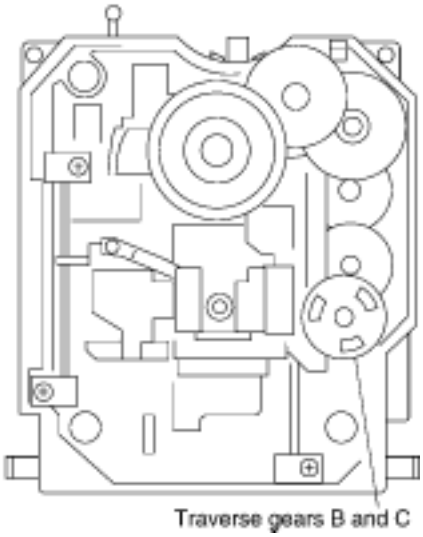
TOP PREVIOUS NEXT

1. Disengage the tabs from the traverse gear.

2. Remove the traverse gears B and C.



<Traverse block bottom>



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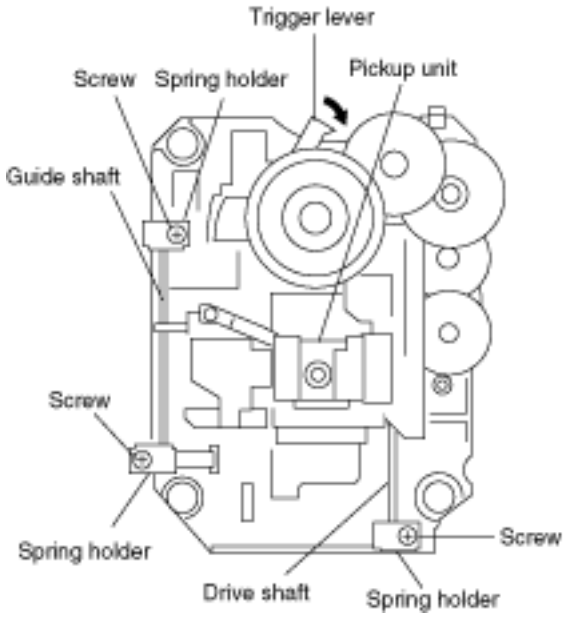
8.7 Optical Pickup Unit

TOP PREVIOUS NEXT

1. Make the right turn the trigger lever.
2. Unscrew the screws.
3. Remove the spring holders and the springs.
4. Pull out the drive shaft and guide shaft.



8.7.1 Precautions in optical pickup replacement

8.7.2 Disassembling the Optical Pickup Unit

8.7.3 Cautions to Be Taken When Replacing the Optical Pickup

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8.7.1 Precautions in optical pickup replacement

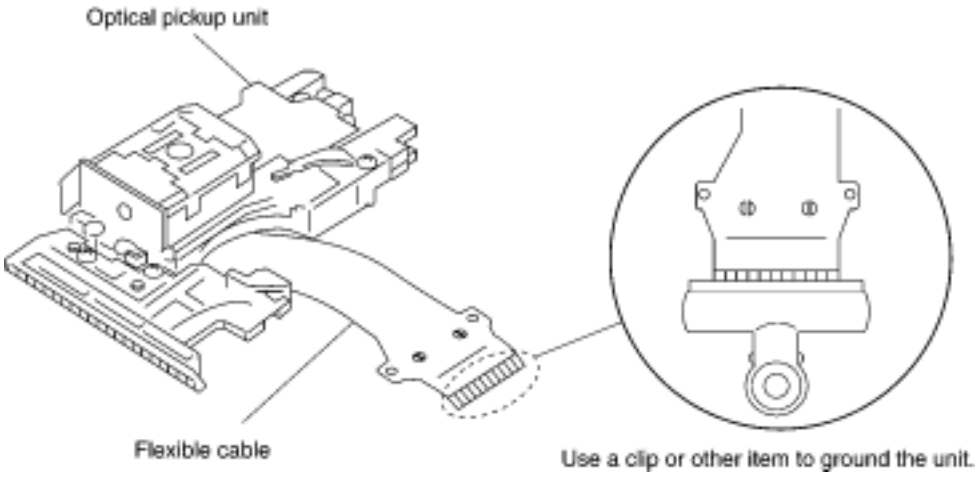
TOP PREVIOUS NEXT

The optical pickup can be damaged by static electricity from you body. Be sure to take static electricity countermeasures when working around the optical pickup. (Refer to the related page in this Manual about the countermeasures.)

1. Do not touch laser diode, actuator and their peripheries.
2. Do not use tester to check laser diode. (Laser diode can be damaged easily.)
3. The use of soldering iron with anti-static feature is recommended when providing short-circuit to laser diode or when removing it.
4. Solder the land on flexible cable of optical pickup unit.

   Caution

   - When using the soldering iron without anti-static feature, short-circuit the flexible cable terminal with a clip before short-circuiting the land.
   - After intended repair is finished, remove the solder for short-circuit of laser diode in a correct way following the procedures described in this Manual.



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8.7.2 Disassembling the Optical Pickup Unit

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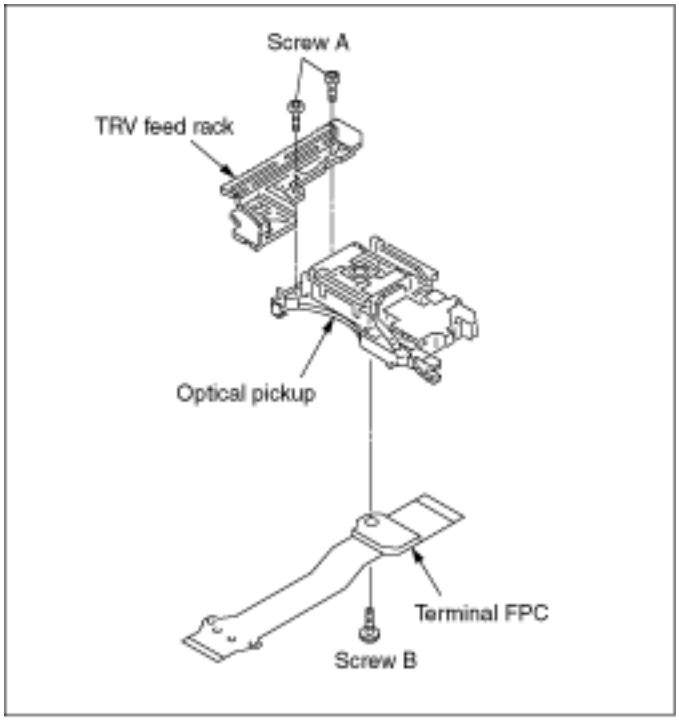
1. Remove the 2 screws A and remove the TRV feed rack.
2. Remove the screw B and remove the Terminal FPC.
3. Remove the optical pickup.

Fig. 1



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8.7.3 Cautions to Be Taken When Replacing the Optical Pickup

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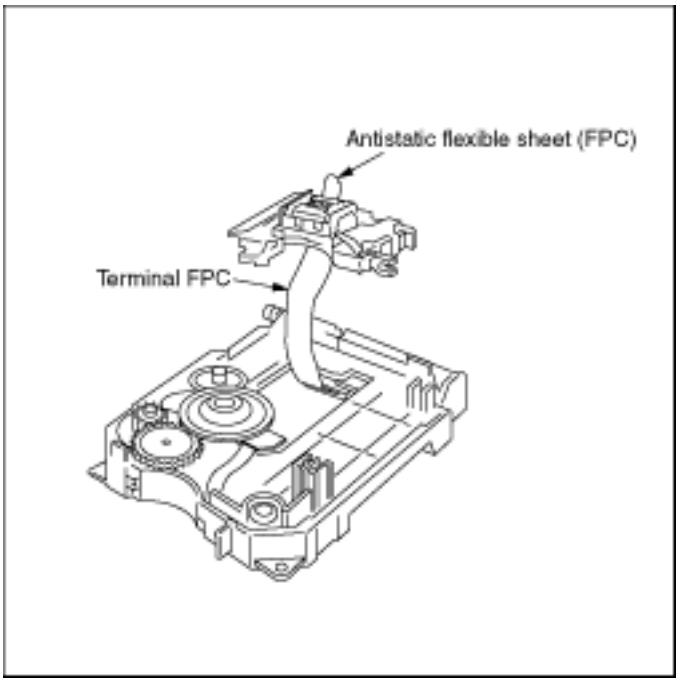
- An antistatic flexible sheet (FPC) is connected with the new optical pickup.

  Replace the optical pickup according to the following procedure.

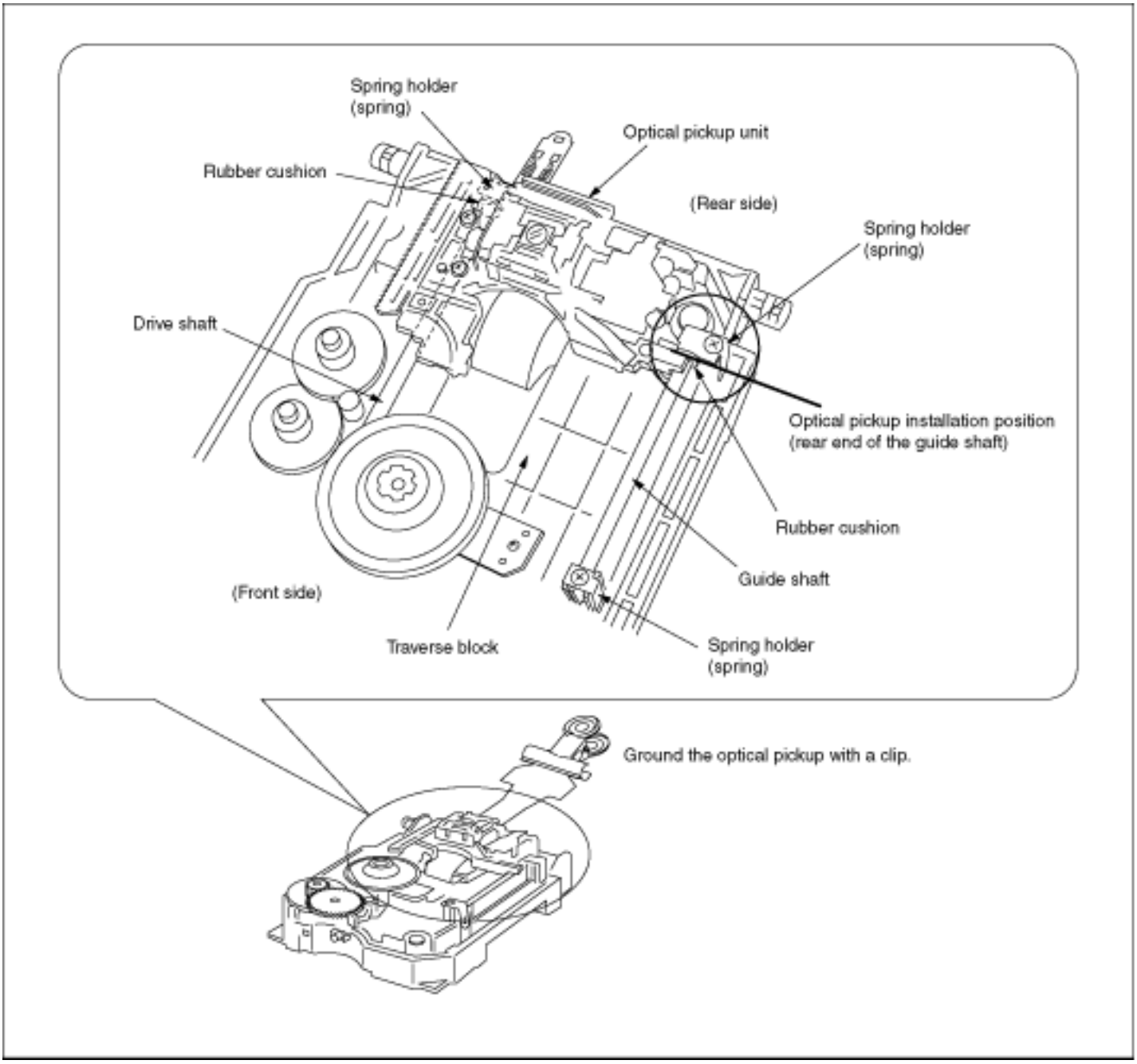
1. Install the Terminal FPC, TRV feed rack on the optical pickup. (See Fig. 1)

Fig. 2



2. Install the optical pickup unit, spring, drive shaft, guide shaft, rubber cushion, and spring holder on the traverse block.

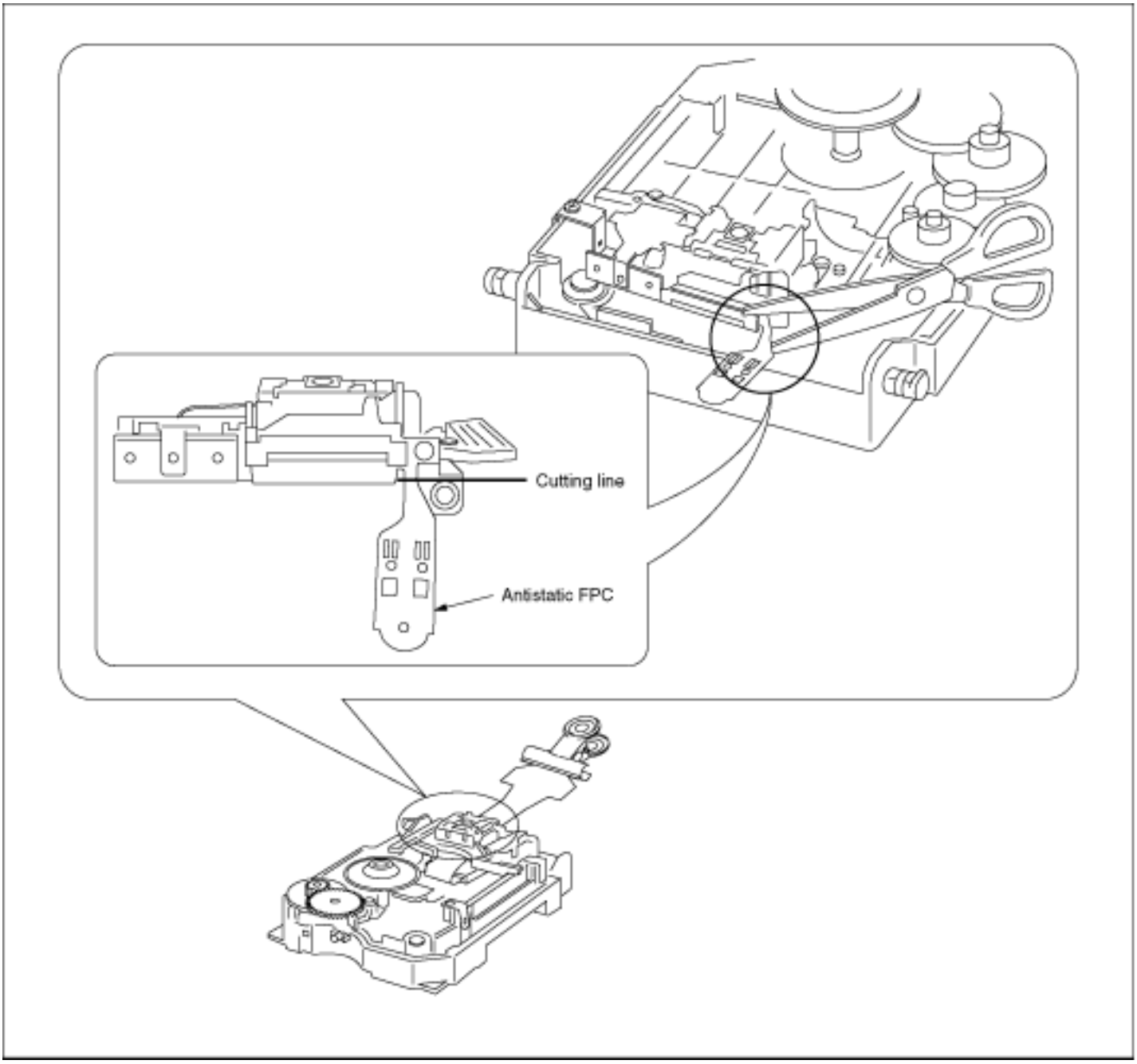
Fig. 3



Cautions to be taken when assembling the unit: Install the pickup unit so that it is located at the rear end of the guide shaft.

3. Cut the antistatic flexible sheet for the optical pickup unit.

Fig. 4



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8.8 Disassembling the Middle Chassis

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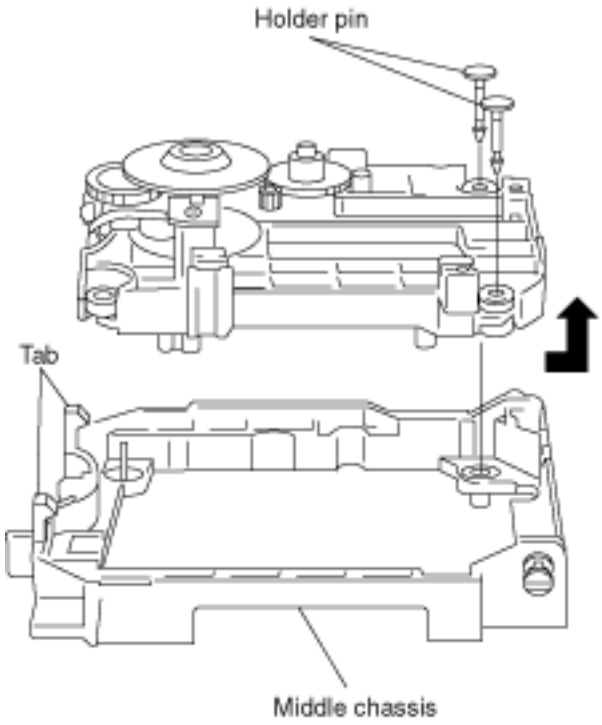
1. Remove the holder pins.
2. Remove the tabs.
3. It lifts while pulling it in the direction of the arrow.



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8.9 Disassembling the Traverse Gear A/ FG P.C.B.

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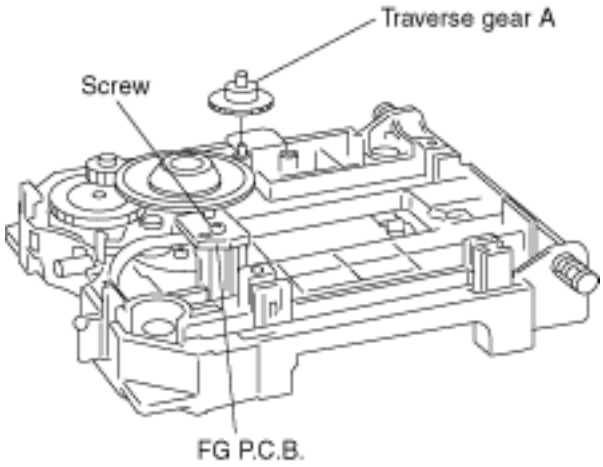
1. Unscrew the screw.
2. Remove the traverse gear A.



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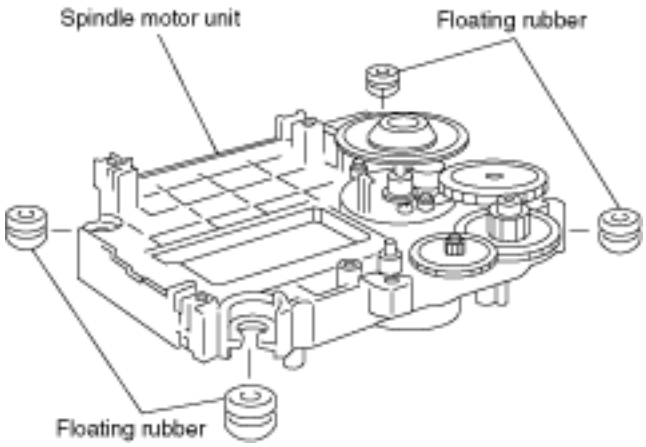
8.10 Disassembling the Spindle Motor Unit

TOP PREVIOUS NEXT

1. Remove the floating rubbers.



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9 Self-Diagnosis Function and Service Modes

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9.1 Optical Pickup Breakdown Diagnosis

9.2 Service Mode Table 1

9.3 DVD Self Diagnostic Function-Error Code

9.4 Last Error Code saved during NO PLAY

9.5 Service mode table 2

9.6 Sales demonstration lock function

9.6.1 Setting

9.6.2 Cancellation

9.7 Handling After Completing Repairs

9.7.1 Method

9.7.2 Precautions

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9.1 Optical Pickup Breakdown Diagnosis

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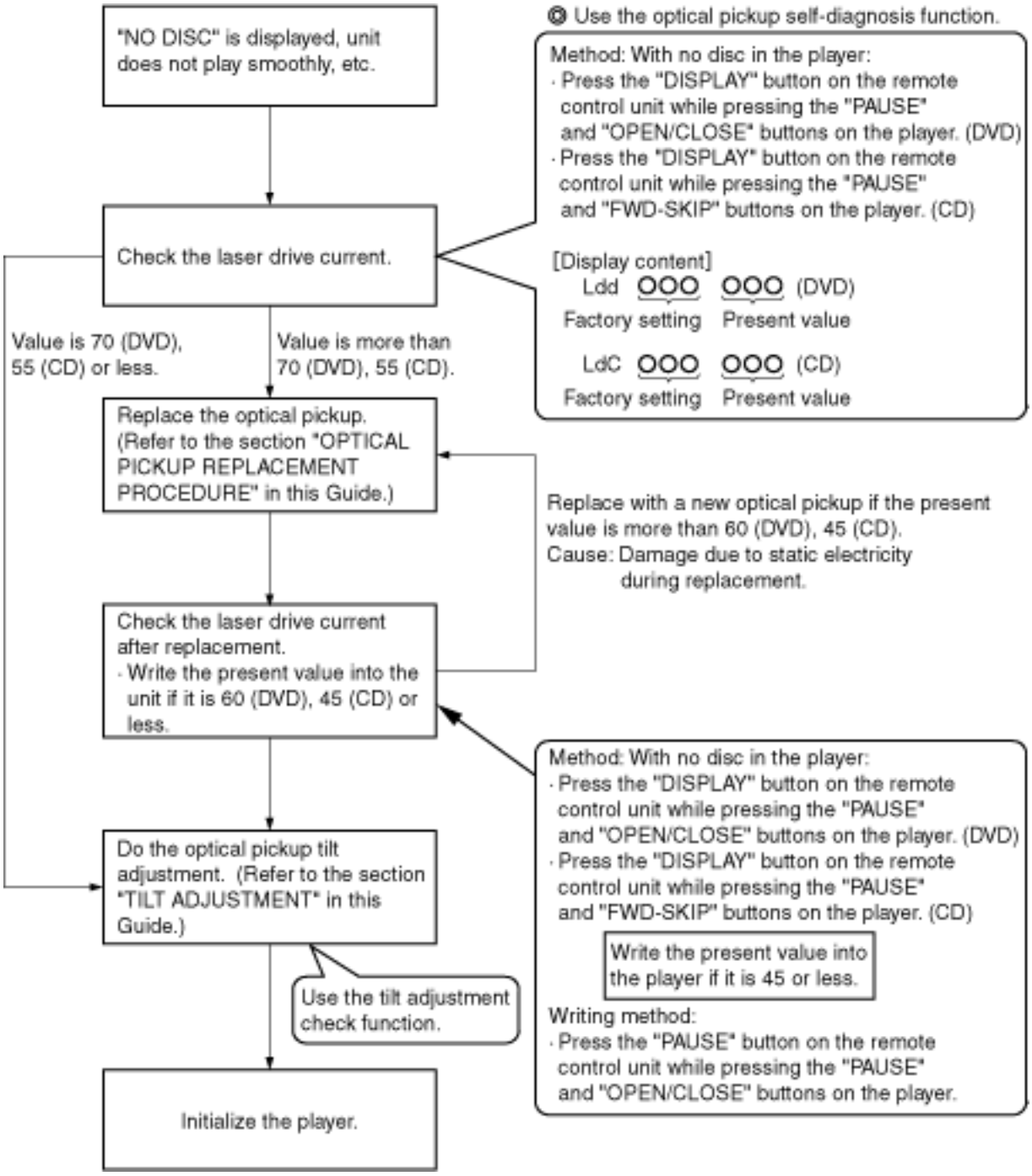
The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.Be sure to use the self-diagnosis functionbeforereplacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)



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9.2 Service Mode Table 1

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The service modes can be activated by pressing various button combination on the player and remote control unit.

Player buttons	Remote control unit buttons	Application	Note
PAUSE + OPEN/CLOSE	0	Displaying the UHF display F_ _ _	Refer to section 9.3. Self-Diagnosis Function (UHF Display).
	5	Jitter check, tilt adjustment *Display shows J_xxx_yyy_zz "yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focusdrive value. Referto section 11.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to section 11.4. Optical Pickup Tilt Adjustment
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check the IC6301 FLASH ROM program.
	9	Lighting Confirmation Function of Display Tube	
	DISPLAY	Checking the laser drive current	Refer to section 8 Optical Pickup Replacement Procedure.
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	
PAUSE SKIP/ SEARCH<< OPEN/CLOSE		Initializing the DVD player (restoring factory preset settings)	Refer to section 9.5. Initializing the DVD player.

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9.3 DVD Self Diagnostic Function-Error Code

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Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defect 4
	U, H error					
U11	Focus error					
H01	Tray loading error					
H02	Spindle servo error	(Spindle servo, DV1 (IC3001) SP motor, CLV servo error)				
H03	Traverse servo error					
H04	Tracking servo error					
H05	Seek error					
H06	Power error	Cannot switch off the power because of the panel and system computer communication error				
H07	Spindle motor drive error		Spindle motor ass'y			
	DSC related					
F500	DSC error	DV1 (IC3001) stops in the occurence of servo error (starup, focus error, etc)	Optical pickup	DV1 (IC3001)	DV1 (IC3001)	servo drive
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	DV1 (IC3001)	DV1 (IC3001)		
F502	DSC Time out error	Similar disposal as F500	Optical pickup	DV1 (IC3001)	DV1 (IC3001)	servo drive
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	DV1 (IC3001)	DV1 (IC3001)	EEPROM (IC6351)	
F505	DSC Attention error	Similar disposal as F500	Optical pickup	DV1 (IC3001)	DV1 (IC3001)	servo drive

F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	DV1 (IC3001)	DV1 (IC3001)	DV1 (IC3001)
	ODC related					
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	DV1 (IC3001)	DV1 (IC3001)	DV1 (IC3001)	
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	DV1 (IC3001)	DV1 (IC3001)	DV1 (IC3001)	
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable				
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc				
F610	ODC abnormality	No permission for command execution	DV1 (IC3001)			
F611	6626 QCODE don’t read Error	Access failure to seek address in CD series	DV1 (IC3001)			
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	DV1 (IC3001)			
F630	No reply to KEY DET enquiry	(for internal use only)				
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)	DISC	CPPM (*1)		
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM (IC6351)	CPPM (*1)	
	Disc code					
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
	HIC Error					
F4FF	Force initialize failure (time out)		EEPROM (IC6351)	DV1 (IC3001)	DV1 (IC3001)	DV1 (IC3001)
	Micro computer error					
F700	MBX overflow	When replying message to disc manager				
F701	Message command does not end	Next message is sent before replying to disc manager				

F702	Message command changes	Message is changed before it is sent as a reply to disc manager				
F880	Task number is not appropriate	Message coming from a non-existing task				
F890	Sending message when message is being sent to AV task	Sending message to AV task				
F891	Message couldn't be sent to AV task	Begin sending message to AV task				
F893	FROM falsification		FROM (IC6301)	DV1 (IC3001)		
F894	EEPROM abnormality		EEPROM (IC6351)	Serial communication on lone		
F895	Language area abnormality	Firm version agreement check for factory preset setting failure prevention	FROM (IC6301)			
F896	No existence model	Firm version agreement check for factory preset setting failure prevention				
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention				
F898	Disagreement of hardware and software	Unsuitable combination of AV DECORDER, SDRAM and FLASH ROM (firmware)				
F8A0	Message command is not appropriate	Begin sending message to AV task				

Note:

An error code will be canceled if a power supply is turned OFF.

*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

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9.4 Last Error Code saved during NO PLAY

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Error code	Error Content	System computer	Setting task	System computer internal error code
F0BF	6) Cannot playback because physical layer is not recoginizable	PCND_NOPLAY PHYSICAL 0x50	DriveManager	0xDOBF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Adio/VR	PCND_NOPLAY VIDEO 0x70	DiscManager	0xDOC0
F0C1	9) DVD: Prohibited by the restricted region code	PCND_NOPLAY RCD 0x80	DiscManager	0xDOC1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY PAL 0x90	DiscManager	0xDOC2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY PTL 0xA0	DiscManager	0xDOC3
F0C4	C) VCD: Prohibited because it is in PHOTO CD fromat	PCND_NOPLAY PHOTO CD 0xB0	DiscManager	0xDOC4
F0C5	VCD/CD: Prohibited because it is CDROM without CD-DA	PCND_NOPLAY CDROM 0xC0	DiscManager	0xDOC5

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9.5 Service mode table 2

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Pressing various button combinations on the player and remote control unit can activate the service modes.

Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "5" button on the remote control unit.	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J _xxx_yyy_zz Focus drive value Read error counter Jitter rate Jitter check mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN button.
Error code check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: -> nn UXX Error code = 0 x DBXX is expressed: -> nn HXX Error code = 0 x DXXX is expressed: -> nn FXXX Error code = 0 x 0000 is expressed: -> nn F--- * "nn" denotes the serial number of history. * "xx" denotes the error code.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive currentInitial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LdO_034_028 CD laser current measurement DVD laser current measurement Laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is witched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and DISPLAY button on the remote control unit.	DVD laser drive current measurement ·DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	Ldd_034_032 Measured current Initial current stored in EEPROM DVD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and RETURN button on the remote control unit.	ADSC internal RAM data check ·ADSC internal RAM data is read out and displayed. Change the address with CLEAR key operation to show the data for 11 addresses.	A_OFA_6901 RAM data for specified address Address ADSC internal RAM data check mode The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP or OPEN button.
Servo process display	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the	Servo process display The servo process from STOP to ACCESS is displayed.		Pull out the AC cord.

Servo process display	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "7" button on the remote control unit.	Servo process display The servo process from STOP to ACCESS is displayed.		Pull out the AC cord.
CD laser drive current measurement	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and DISPLAY button on the remote control unit.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	LdC_028_026 Measured current Initial current stored in EEPROM CD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "7" button on the remote control unit.	Version display	srrr_xxyzzz System controller release number System controller model number System controller generation Panel controller release number Panel controller model number	Cancelled automatically 5 seconds later.
Lighting of display tube	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "9" button on the remote control unit.	Lighitng of display tube		Repeat the same operation.
Dealer's lock	In STOP (no disc) mode, press STOP button on the player, and POWER button on the remote control unit for 1 second or longer.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	· "LOCK" sign appears when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on. · "UNLOCK" sign appears when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP (no disc) mode, press PAUSE, BWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INIT"	
Region display	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "6" button on the remote control unit.	Region display	x_y-y_zzz Panel controller jumper information N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 check Laser operation timer Operation time is measured separately for DVD laser and CD laser.	t1_1234_5678 Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	t1_0000_0000	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "6" button on the remote control unit.	Timer 2 check Spindle motor operation timer	t2_12345 Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP and FWD-SKIP buttons on the player and "6" button on the remote control unit.	Timer 2 reset Spindle motor operation timer	t2_00000	Cancelled automatically 5 seconds later.

TOP PREVIOUS NEXT

9.6 Sales demonstration lock function

TOP PREVIOUS NEXT

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCK" is displayed on the unit, and ordinary operation is disabled.

TOP PREVIOUS NEXT

9.6.1 Setting

TOP PREVIOUS NEXT

The sales demonstration lock is set by simultaneously pressing STOP button on the player and POWER button on the remote control unit for 1 second or longer.

TOP PREVIOUS NEXT

9.6.2 Cancellation

TOP PREVIOUS NEXT

The lock can be cancelled by the same procedure as used in setting. ("UNLOCK" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

TOP PREVIOUS NEXT

9.7 Handling After Completing Repairs

TOP PREVIOUS NEXT

Use the following procedure after completing repairs.

TOP PREVIOUS NEXT

9.7.1 Method

TOP PREVIOUS NEXT

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.
2. Press the "POWER" button to turn off the power.
3. Disconnect the power plug from the outlet.

TOP PREVIOUS NEXT

9.7.2 Precautions

TOP PREVIOUS NEXT

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

TOP PREVIOUS NEXT

10 Servicw Precautions

TOP PREVIOUS NEXT

10.1 Recovery after the dvd player is repaired

10.2 Firmware version-up of the DVD player

TOP PREVIOUS NEXT

10.1 Recovery after the dvd player is repaired

TOP PREVIOUS NEXT

- When FROM or module P.C.B. is replaced, carry out the recovery processing to optimize the drive.

  Playback the recovery disk to process the recovery automatically.

- Recovery disc (Product number: RFKZD03R004)

- Performing recovery

  1. Load the recovery disc RFKZD03R004 on to the player and run it.

  2. Recovery is performed automatically. When it is finished, a message appears on the screen.

  3. Remove the recovery disc.

  4. Turn off the power.

Note:

This unit requires no initialization process carried out after the traditional DVD players were repaired.

When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 9.5. is carried out. Write down the contents of the setting before recovery processing,and resetthe player.

TOP PREVIOUS NEXT

10.2 Firmware version-up of the DVD player

TOP PREVIOUS NEXT

- The firmware of the DVD player may be renewed to improve the quality including operationability and playerbility to the substandard discs.processing to optimize the drive.

  The recovery disc has also firmware version-up.

- After version-up, recovery processing is executed automatically.

- Part number of the recovery disc for version-up will be noticed when it is supplied.

- Updating firmware

  1. Load the recovery disc that is supplied to the player and run it.

  2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.

  3. Using remote controller´s cursor key, select whether version updating is to be done or not. (Selection of Yes/No)

  4. a. If Yes is selected, version updating is performed.

     b. If No is selected, only recovery is performed.

  5. a. When updating is finished, remove the disc according to the message appearing on the screen.

     b. Remove the disc according to the message appearing on the screen.

  6. Turn off the power.

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FROM and carry out the version-up again.

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11 ADJUSTMENT PROCEDURES

TOP PREVIOUS NEXT

11.1 Service Tools and Equipment

11.2 Important points in adjustment

11.2.1 Important points in optical adjustment

11.2.2 Important points in electrical adjustment

11.3 Storing and Handling Test Discs

11.4 Optical adjustment

11.4.1 Optical pickup tilt adjustment

11.4.1.1 Adjustment procedure

11.4.1.2 Important points

11.4.1.3 Check after adjustment

11.4.1.4 Procedure for screw lock

TOP PREVIOUS NEXT

11.1 Service Tools and Equipment

TOP PREVIOUS NEXT

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	Available on sales route.
Inspection	Extension cable (main P.C.B. to power supply P.C.B.)	RFKZ0152
	Extension cable (power supply P.C.B. to operation (R) P.C. B.)	VFK1732
Others	Grease 1	RFKXGAK152
	Grease 2	RFKXPG641
	Oil (1)	RFKXGA1280
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R004

TOP PREVIOUS NEXT

11.2 Important points in adjustment

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

11.2.1 Important points in optical adjustment

TOP PREVIOUS NEXT

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts (such as rail)

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment isgenerally unnecessaryafter replacing the traverse unit.

TOP PREVIOUS NEXT

11.2.2 Important points in electrical adjustment

TOP PREVIOUS NEXT

- Follow the adjustment procedures described in this Manual.

TOP PREVIOUS NEXT

11.3 Storing and Handling Test Discs

TOP PREVIOUS NEXT

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.

2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.

3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.

4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

TOP PREVIOUS NEXT

11.4 Optical adjustment

TOP PREVIOUS NEXT

11.4.1 Optical pickup tilt adjustment

11.4.1.1 Adjustment procedure

11.4.1.2 Important points

11.4.1.3 Check after adjustment

11.4.1.4 Procedure for screw lock

TOP PREVIOUS NEXT

11.4.1 Optical pickup tilt adjustment

TOP PREVIOUS NEXT

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T43 (outer periphery) play	DVDR-S15 or DVDT-S01
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

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11.4.1.1 Adjustment procedure

TOP PREVIOUS NEXT

1. While pressing PAUSE and OPEN/CLOSE buttons on the main unit, press "5" on the remote control unit.

2. Confirm that "J_xxx_yyy_zz" is shown on the front display.

   For your information:

   "yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

   Note:

   Jitter value appears on the front display.

3. Play test disc T01 (inner periphery).

4. Adjust tangential adjustment screw so that the jitter value is minimized.

5. Play test disc T43 (outer periphery).

6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.

7. Play test disc T43 (outer periphery).

8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.

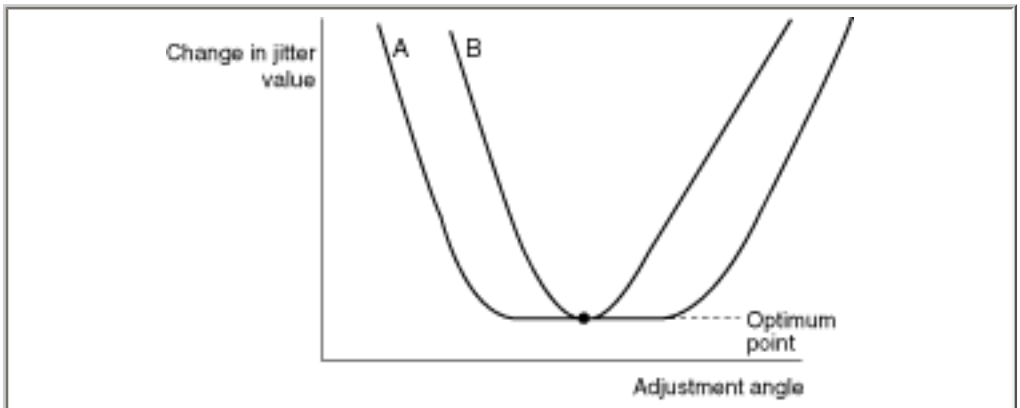
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

TOP PREVIOUS NEXT

11.4.1.2 Important points

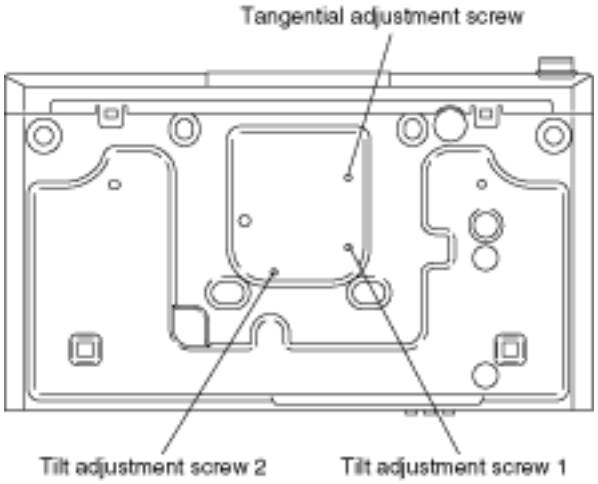
TOP PREVIOUS NEXT

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.



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11.4.1.3 Check after adjustment

TOP PREVIOUS NEXT

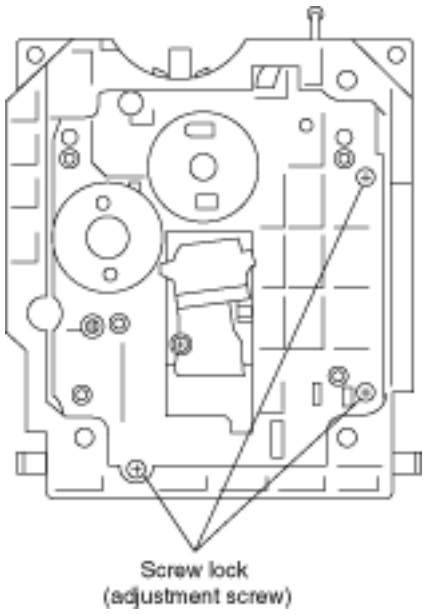
Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

TOP PREVIOUS NEXT

11.4.1.4 Procedure for screw lock

TOP PREVIOUS NEXT

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



TOP PREVIOUS NEXT

12 Abbreviations

TOP PREVIOUS NEXT

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVOAMPOUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEMCLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITESYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT

D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROPOUT
	DOUT0~UP	DATAOUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING)CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK

M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORYSERIALCOMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK	CHANNEL PLL CLOCK
	PLLOK	PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVEMOTOR DRIVEA
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECTCLOCK
	SEN	SERIALPORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK

	SQCX	SUBCODEQ DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAMDATAVALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACKCROSSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWERSUPPLYVOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER

X	X	X´ TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XHINTERRUPTREQUEST
	XI	X´ TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X´ TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	XV-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

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13 VOLTAGE CHART

TOP PREVIOUS NEXT

Note:

- Indicated voltage values are the atandard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on theinternalimpedance of the DC circuit tester.

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13.1 POWER SUPPLY P.C.B.

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

Ref No.	IC1021								IC1101			IC1151					
MODE	1	2	3	4	5	6	7	8	1	2	3	1	2	3	4	5	
STOP	-44.9	-46.0	-46.0	-41.3	350	-	-46.0	-46.0	3.2	2.5	0	0	3.3	9.8	9.0	12.3	
PLAY	-45.0	-45.8	-45.8	-40.6	1032	-	-44.5	-45.7	3.3	2.5	0	0	3.3	9.8	9.0	10.8	

Ref No.	Q1051				Q1116			Q1125			Q1127			Q1128		
MODE	1	2	3	4	1	2	3	1	2	3	1	2	3	1	2	3
STOP	5.2	4.1	-40.6	-34.9	5.1	5.1	0.1	2.2	1.6	1.4	1.0	1.4	1.6	1.0	1.6	1.6
PLAY	5.2	4.1	-40.6	-34.3	5.1	5.0	0.1	2.2	1.6	1.4	0.9	1.4	1.6	0.9	1.6	1.6

Ref No.	Q1155			Q1191		
MODE	1	2	3	1	2	3
STOP	14.3	9.2	14.3	3.3	5.1	4.0
PLAY	13.0	9.1	13.0	3.3	5.1	4.0

Ref No.	QR1115			QR1156		
MODE	1	2	3	1	2	3
STOP	0	0	3.3	0	14.3	0
PLAY	0	0	3.3	0	13.0	0

13.2 MAIN P.C.B.

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.6	1.6	1.6	2.0	2.0	1.6	0	5.0	0	0	2.9	0	2.9	2.9	4.3	4.3	3.8	3.8	0	3.3
PLAY	1.6	1.6	0	2.3	2.3	2.2	0	5.0	3.2	0	3.0	2.8	2.8	2.9	4.3	4.3	5.8	2.8	0	3.3
Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27	28												
STOP	9.2	9.1	1.6	1.6	1.6	1.6	0	3.3												
PLAY	9.1	9.0	1.8	1.6	1.6	1.6	3.2	3.3												
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.2	-	-	0	-	-	3.2	-	-	-	0	-	-	3.2	1.5	0	0	3.2	1.7	0.3
PLAY	3.2	2.5	2.6	0	2.8	2.6	3.2	2.3	2.5	2.2	0	2.7	2.8	3.2	1.5	0	0	3.2	0	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	-	-	3.2	0	-	-	-	-	3.2	0	-	-	3.2	-	-	-	-	-	-	-
PLAY	0	3.2	3.2	0	0	0	3.2	3.2	3.2	0	0	0	3.2	0	0	0	3.2	0	0	0
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	-	3.2	0	-	-	1.8	0	0	0	0	0	0	3.2	3.2	3.2	3.2	0	0	2.8	3.2
PLAY	3.2	3.2	0	0	0.3	2.6	0	0	3.2	0	0	0	3.2	3.2	3.2	3.2	0	0	2.8	3.2
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0.5	2.9	2.7	1.0	3.2	1.0	1.5	3.2	0	1.6	2.1	1.6	0	3.2	0	3.2	0	3.2	3.2	0
PLAY	0.8	2.9	2.7	1.0	3.2	3.1	1.5	3.2	0	1.6	1.6	1.6	3.2	0	3.2	3.2	0	0	3.2	0
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.2	0	3.2	0	0	0	0	0	0	0	3.2	1.6	0	0	0	0	0	1.5	0	0
PLAY	3.2	0	3.2	0	0	0	0	0	0	0	3.2	1.6	0	0	0	0	0	1.5	0	0
Ref No.	IC3001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	0	0	3.2	0.8	0	0.7	1.4	1.9	2.4	1.7	1.1	1.9	1.7	1.7	0.1	1.0	3.2	0	1.8
PLAY	0	0	0	3.2	0.8	0	0.7	1.4	1.9	2.4	1.8	1.1	1.9	1.9	1.7	0.1	1.0	3.2	0	1.8
Ref No.	IC3001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	1.8	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	0.6	1.2	0	0.2	2.2	1.6	0	-	1.6
PLAY	1.8	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	0	0.3	0	0.3	2.2	1.6	0	-	1.6
Ref No.	IC3001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	1.6	1.6	-	-	-	2.2	-	2.2	-	1.6	0	1.6	-	-	-	-	-	-	0	-
PLAY	1.6	1.6	-	-	-	2.4	-	1.6	-	1.6	0	1.6	-	-	-	-	-	-	0	-
Ref No.	IC3001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
STOP	-	-	-	-	-	-	0	-	0	-	3.2	-	-	-	-	-	0	-	-	-
PLAY	-	-	-	-	-	-	0	-	0	-	3.2	-	-	-	-	-	0	-	-	-
Ref No.	IC3001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
STOP	-	3.2	0	-	-	1.5	-	-	3.2	-	-	-	-	0	3.2	-	-	0	-	-
PLAY	-	3.2	0	-	-	1.5	-	-	3.2	-	-	-	-	0	3.2	-	-	0	-	-
Ref No.	IC3001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
STOP	-	3.2	-	-	-	0	-	-	3.2	-	-	-	1.5	-	-	-	-	3.2	-	-
PLAY	-	3.2	-	-	-	0	-	-	3.2	-	-	-	1.5	-	-	-	-	3.2	-	-
Ref No.	IC3001																			
MODE	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
STOP	-	1.5	-	-	-	3.2	-	-	-	0	-	-	3.2	-	-	0	-	-	-	3.2
PLAY	-	1.5	-	-	-	3.2	-	-	-	0	-	-	3.2	-	-	0	-	-	-	3.2
Ref No.	IC3001																			
MODE	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256				
STOP	0	-	-	1.5	0	-	-	-	-	3.2	-	-	-	-	-	-				
PLAY	0	-	-	1.5	0	-	-	-	-	3.2	-	-	-	-	-	-				
Ref No.	IC3051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.2	-	3.2	-	-	0	-	-	3.2	-	-	0	-	-	3.2	1.6	3.0	2.9	3.1	2.8
PLAY	3.2	2.7	3.2	2.5	2.5	0	2.6	3.0	3.2	2.5	2.5	0	2.5	-	3.2	2.3	3.1	3.1	3.1	3.0
Ref No.	IC3051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	-	1.5	1.6	-	-	-	-	1.6	3.2	-	-	0	-	-	3.2	-	-	0	-	-
PLAY	-	1.6	1.6	0	0	0	0.2	2.3	3.2	-	2.7	0	2.5	2.5	3.2	2.6	3.0	0	2.5	2.5
Ref No.	IC3051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.2	-	3.2	0	-	0	-	-	3.2	-	-	0	-	-	3.2	-	-	0	1.6	-
PLAY	3.2	2.5	3.2	0	2.6	0	2.2	2.2	3.2	2.2	2.7	0	2.0	2.0	3.2	2.6	-	0	2.0	1.6
Ref No.	IC3051																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	-	-	-	-	-	-	3.2	1.7	-	-	1.6	0	-	-	3.2	-	-	0	-	-
PLAY	1.6	1.6	1.6	0	0	0	3.2	1.7	-	-	2.3	0	-	2.8	3.2	2.4	2.4	0	2.5	2.8
Ref No.	IC3051																			
MODE	81	82	83	84	85	86														
STOP	3.2	-	-	0	-	0														
PLAY	3.2	2.2	2.2	0	2.7	0														

Ref No.	IC3501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.9	2.2	4.9	0	0	1.7	2.5	0	1.8	0	0	1.6	0	2.2	4.9	2.2	0	2.2	2.2	0
PLAY	4.9	2.2	4.9	0	0	1.8	2.4	0	2.1	0	0	1.8	0	2.2	4.9	2.2	0	2.2	2.2	0

Ref No.	IC3501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34						
STOP	2.2	2.2	0	1.6	1.5	0	1.7	1.6	0	1.7	1.5	0	2.2	4.9						
PLAY	2.2	2.2	0	2.0	1.9	0	2.0	1.9	0	1.9	1.9	0	2.2	4.9						

Ref No.	IC4201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	1.6	0	1.6	0	3.2	5.0	2.5	2.5	0	2.5	0	0	3.2	2.9	3.2	1.5				
PLAY	1.6	0.8	1.6	0	3.2	5.0	2.5	2.5	0	2.5	3.2	0	3.2	2.8	3.2	1.4				

Ref No.	IC4311									IC4491				IC6201						
MODE	1	2	3	4	5	6	7	8		1	2	3		1	2	3	4	5		
STOP	0	2.5	2.5	-9.3	2.5	0	2.6	14.3		1.6	5.0	0		0	0	0	3.3	3.3		
PLAY	0	2.5	2.5	-9.1	2.5	2.5	2.5	13.0		1.6	5.0	0		0	0	0	3.2	3.2		

Ref No.	IC6251																			
MODE	1	2	3	4	5															
STOP	1.2	0	5.0	5.0	3.3															
PLAY	1.2	0	5.0	5.0	3.2															

Ref No.	IC6301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.3	1.2	1.2	1.1	1.3	1.1	1.3	1.6	0	0	3.2	3.2	0	3.2	0.2	0.9	0.9	1.1	1.5	1.4
PLAY	1.2	1.6	1.3	1.1	1.6	1.7	1.3	0	0	0	3.2	3.2	0	3.2	0.2	0.3	0.4	1.3	1.6	1.3

Ref No.	IC6301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.1	1.7	2.0	1.9	3.2	0	0	3.2	3.2	0	0	3.2	0	0	0	0	3.2	0	0	3.2
PLAY	1.4	1.6	1.8	1.8	2.0	1.7	0	1.8	1.8	0	0	1.0	1.8	1.5	1.7	1.5	3.2	1.3	1.1	1.2

Ref No.	IC6301								IC6351											
MODE	41	42	43	44	45	46	47	48		2	3	4	5	6	7	8				
STOP	3.2	0	0	3.2	3.2	0	3.2	0		0	0	0	3.3	3.3	0	3.3				
PLAY	1.2	1.6	1.6	1.4	1.5	0	3.2	1.1		0	0	0	3.2	3.2	0	3.2				

Ref No.	IC6561																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	3.2	0	1.6	1.3	3.2	0	0	1.4	1.4	1.3	0	3.2	1.5	3.2	1.4	3.2				
PLAY	3.2	0	1.6	1.3	3.2	0	0	1.4	1.4	1.3	0	3.2	1.4	3.2	1.4	3.2				

Ref No.	Q4402				Q4411				Q4421				Q5111				Q5122			
MODE	1	2	3		1	2	3		1	2	3		1	2	3		1	2	3	
STOP	0	0	0		0	0	0.7		0	0	0.7		5.0	0	5.0		5.0	0	5.0	
PLAY	0	2.7	0		0	0	-4.5		0	0	-4.5		4.0	2.2	3.3		5.0	0	5.0	

Ref No.	QR3521				QR4401				QR4403											
MODE	1	2	3		1	2	3		1	2	3	4	5	6						
STOP	0	0.1	3.3		0	0	3.2		0	0	0	2.1	0	0						
PLAY	0	0	3.2		0	2.7	0		0.1	0	0.1	-4.5	0	0						

13.3 OPERATION P.C.B.

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

Ref No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	3.3	-23.7	-23.7	-25.5	-20.0	-25.5	-22.6	-25.5	-19.7	-25.9	-19.9	-20.0
PLAY	-23.3	-23.3	-23.3	-23.3	-23.3	-23.3	-23.3	-23.3	3.3	-23.3	-23.3	-19.3	-10.8	-25.1	-22.1	-25.0	-7.9	-25.3	-11.0	-11.0

Ref No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	-19.9	-17.0	-19.9	-22.8	-20.0	-22.8	3.3	-14.1	-25.7	3.3	3.3	-0.1	3.3	3.0	3.3	1.0	2.7	2.9	3.3	3.3
PLAY	-19.5	-16.7	-11.0	-19.5	-22.3	-19.5	3.3	-13.8	-19.5	3.3	3.3	-0.1	3.3	3.0	3.3	1.0	2.7	2.9	3.3	3.3

Ref No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	1.6	1.6	3.3	0	3.3	3.3	3.3	3.3	0	0.4	0	0	0	3.3	3.3	3.3	0	1.6	1.9	3.3
PLAY	1.6	1.6	3.3	0	3.3	3.3	3.3	3.3	0	0.4	0	0	0	3.3	3.3	3.3	0	1.6	1.9	3.3

Ref No.	IC6001				IC6011					IC6101										
MODE	61	62	63	64	1	2	3	4		1	2	3								
STOP	3.3	3.2	3.3	3.3	3.3	3.3	0	0		3.3	0	3.3								
PLAY	3.3	3.2	3.3	3.3	3.3	3.3	0	0		3.2	0	3.3								

Ref No.	Q6091				QR6081															
MODE	1	2	3		1	2	3													
STOP	-21.8	-21.7	-21.1		3.3	0	3.3													
PLAY	-21.3	-21.2	-20.5		3.3	0	3.3													

14 BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

14.1 OVERALL BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MECHANISM UNIT

MAIN P.C.B.

OPTICAL PICK UP UNIT

SPINDLE MOTOR

TRAVERSE MOTOR

IC2501

MOTOR DRIVE

IC3001

AV DECODER (DV1)

IC4201

AUDIO D/A CONVERTER

MIXL

MIXR

DIGITAL AUDIO OUT (OPTICAL)

IC6301

16Mbit FLASH ROM

OPERATION (R) P.C.B.

IC6001

FL

LED

TRAY

KEY

OPERATION CPU

REMOTE CTL

OPERATION (L) P.C.B.

IC6351

16Kbit EEP ROM

IC3051

64Mbit SDRAM

IC6561

CLK

IC3501

VIDEO DRIVER

S-VIDEO OUT

VIDEO OUT

Y

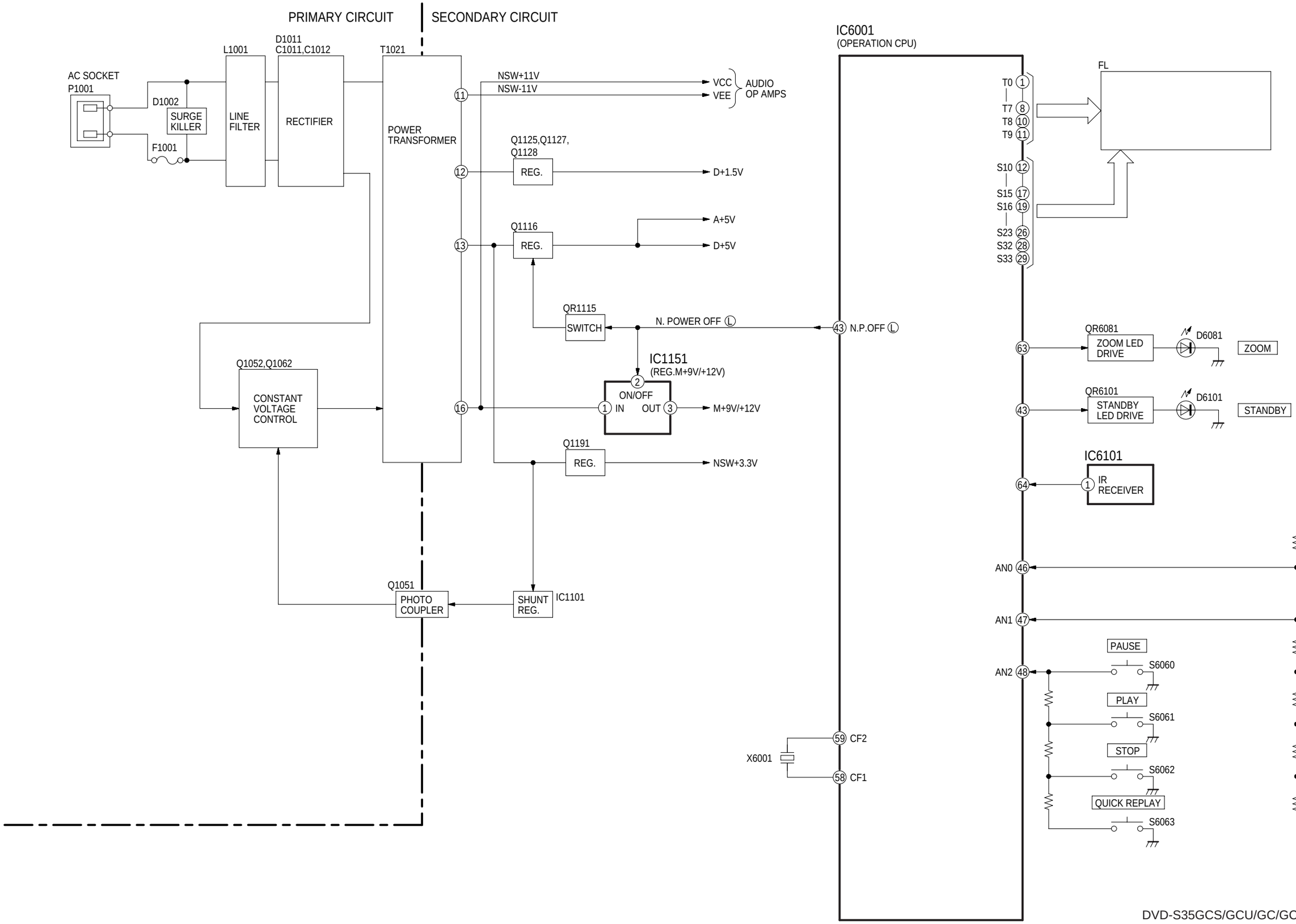
P_B

P_R

14.2 POWER SUPPLY BLOCK DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PX/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

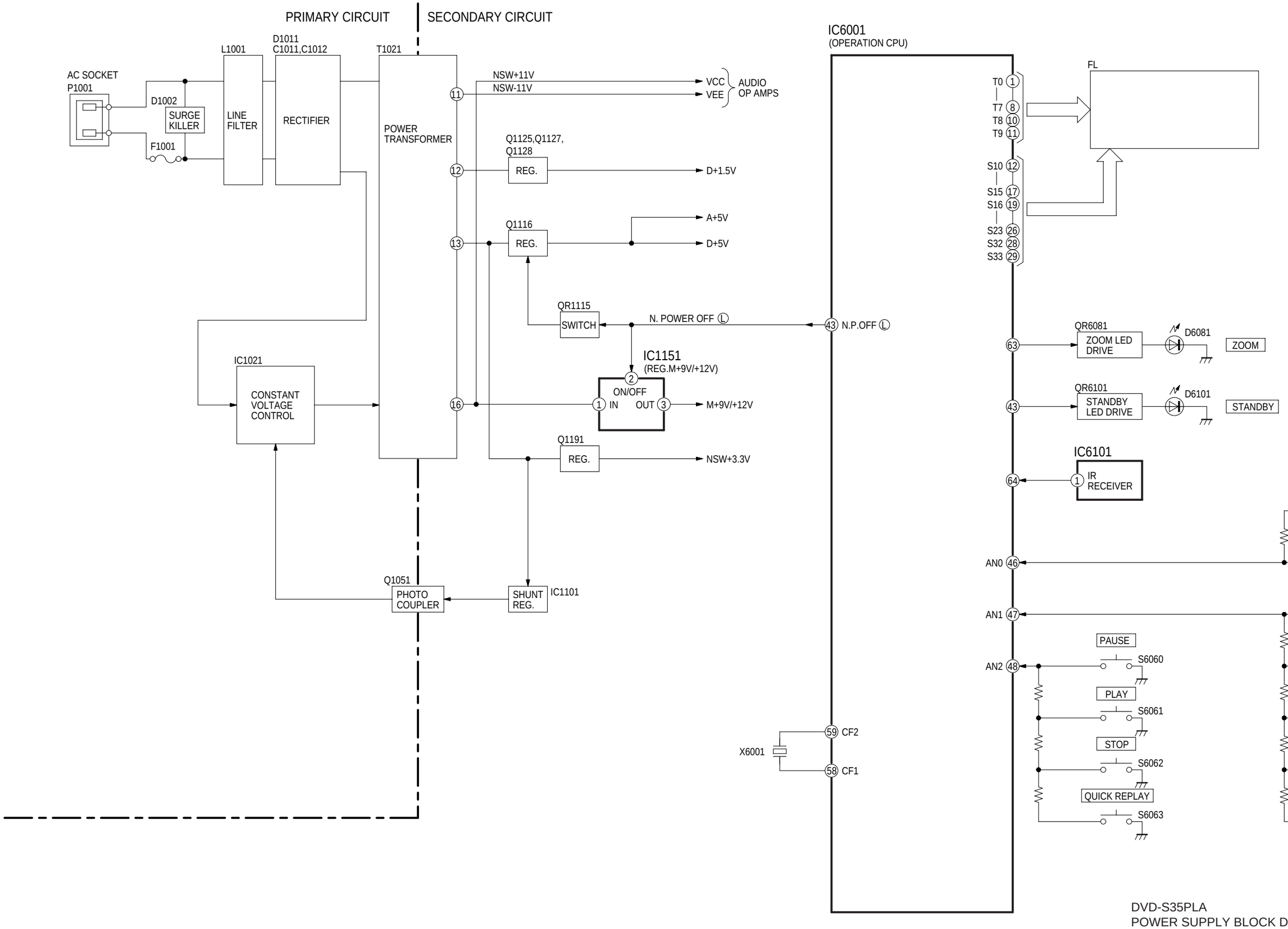


DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PX
POWER SUPPLY BLOCK DIAGRAM

14.3 POWER SUPPLY BLOCK DIAGRAM (DVD-S35PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT



DVD-S35PLA
POWER SUPPLY BLOCK DIAGRAM

14.4 SERVO BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

RF SIGNAL
MOTOR DRIVE SIGNAL
TRACKING ERROR SIGNAL
FOCUS ERROR SIGNAL

OPTICAL PICK UP UNIT
PHOTO DETECTOR
B1 B2 A1 A2 A4 A3 B4 B3
HEAD AMP
LASER DIODE
LASER DIODE
Q5111, Q5221
LD DRIVE
Q5121, Q5122
LD DRIVE

IC3001 (DV1)
VIN5 122
VIN6 123
VIN7 124
VIN8 125
VIN1 126
VIN2 127
VIN3 128
VIN4 129
VIN9 130
VIN10 131
133
132
135
134
RFINN 120
RFINP 121

IC2501
(MOTOR DRIVE)
70 TRSDRV
150 TRDRV
152 FODRV
71 SPDRV
148 AD0
74 MUTE3
78 MUTE12
FROM IC6001-41,42PIN
26 TRIN
2 VIN1
3 VIN2
23 VIN3
6 OPOUT
24 LDIN
27 CH3 MUTE
9 CH1,2 MUTE
BIAS1
BIAS2

LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
VO4+ 15
VO4- 16
OPIN+ 4
VO3+ 17
VO3- 18
OPIN- 5
VO1+ 14
VO1- 13
VO2+ 12
VO2- 11
M2602 TRAVERS MOTOR
M2601 SPINDLE MOTOR

IC2511-11,12,13,14
1.2Vp-p(0.5usec./div.)

OPTICAL PICK UP UNIT
ACTUATOR
FOCUS COIL
TRACKING COIL
ACT T+
ACT T-
ACT F+
ACT F-

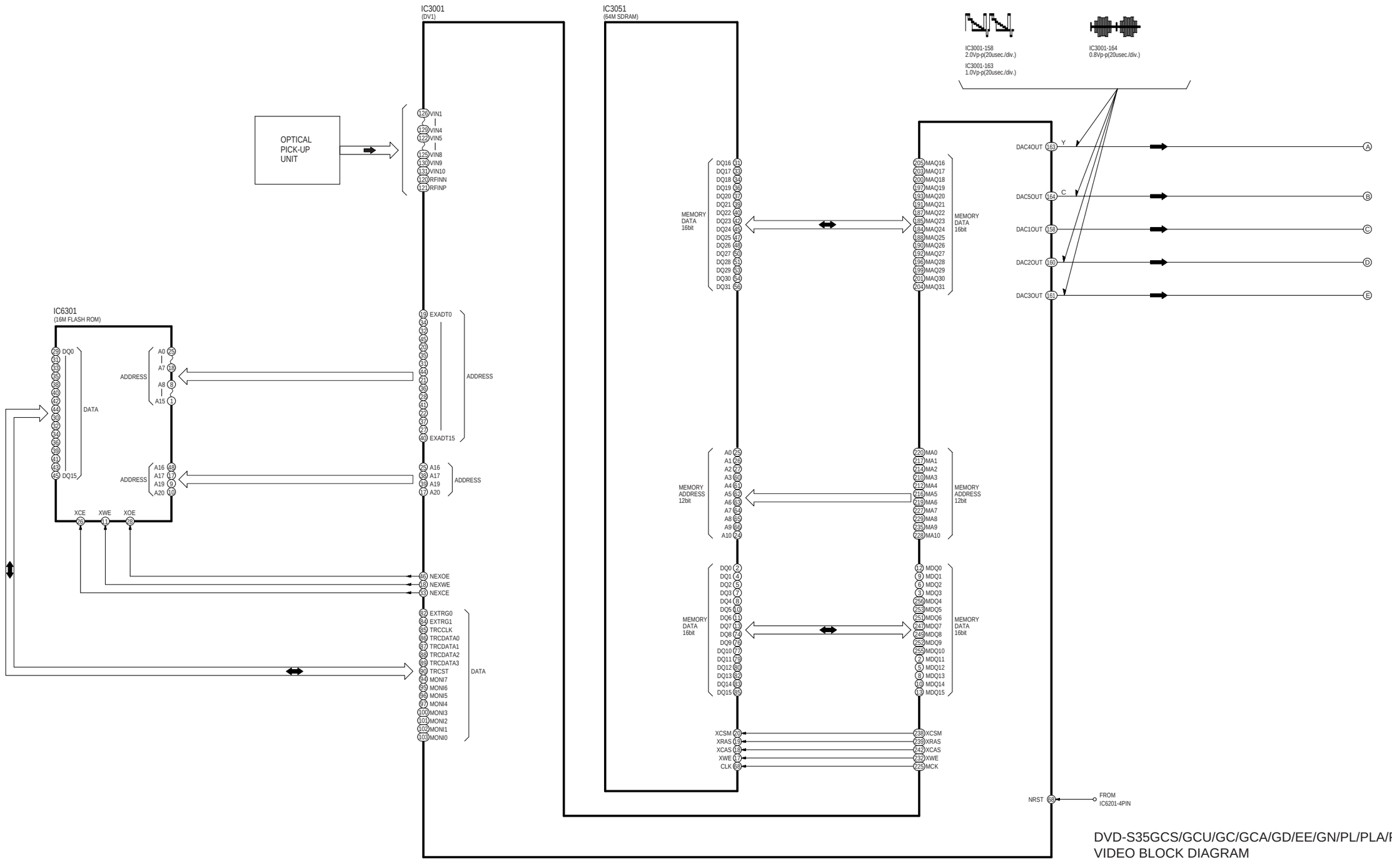
IC6001
(OPERATION CPU)
CNT
LD CNT 28
CH4 MUTE
MUTE4 20
TRAY/TRV 40
TRAY/MUT 39
TRAY CLOSE 56
SW2501
FROM MECHA UNIT
TRAY OPEN 65

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
SERVO BLOCK DIAGRAM

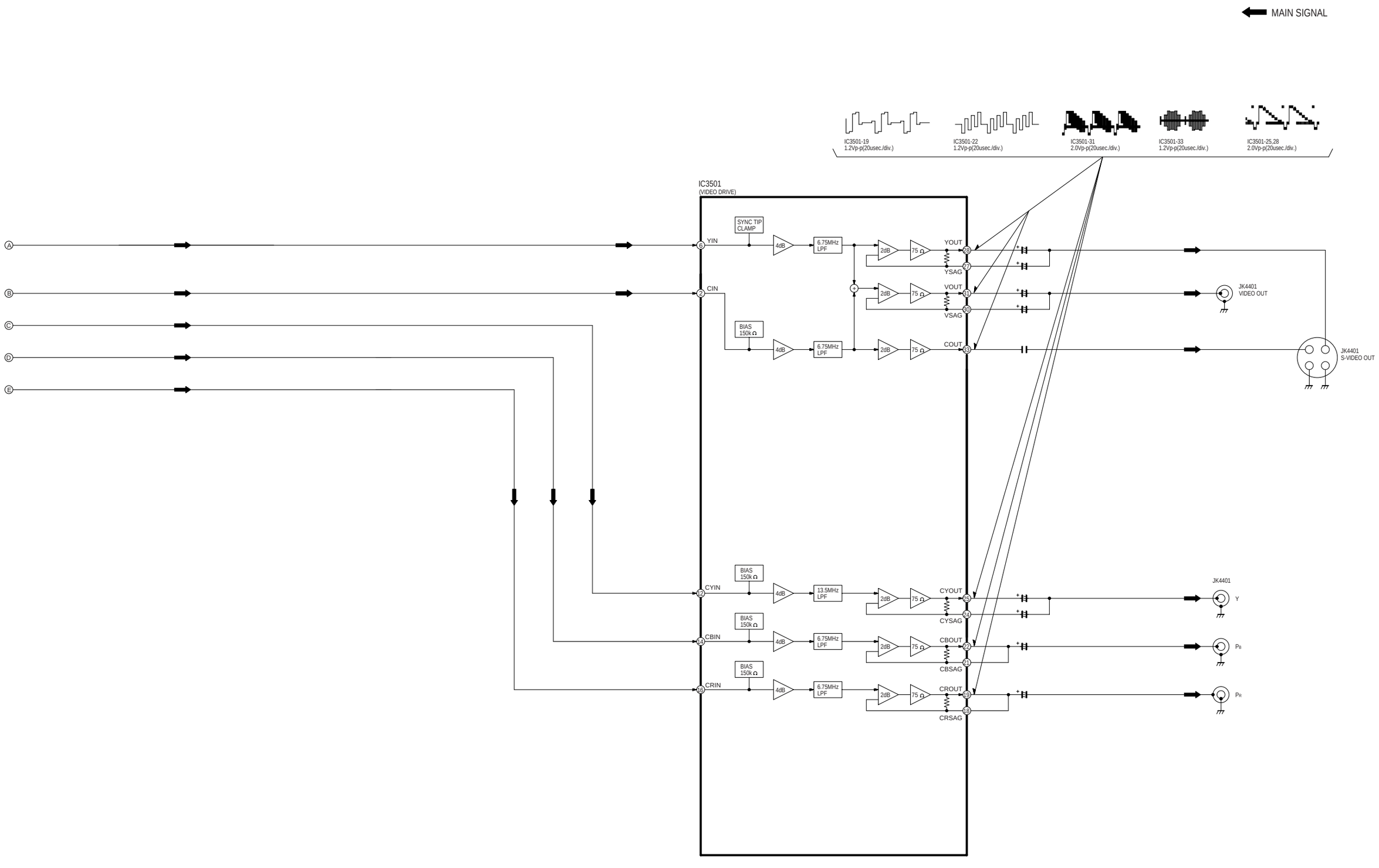
14.5 VIDEO BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
VIDEO BLOCK DIAGRAM



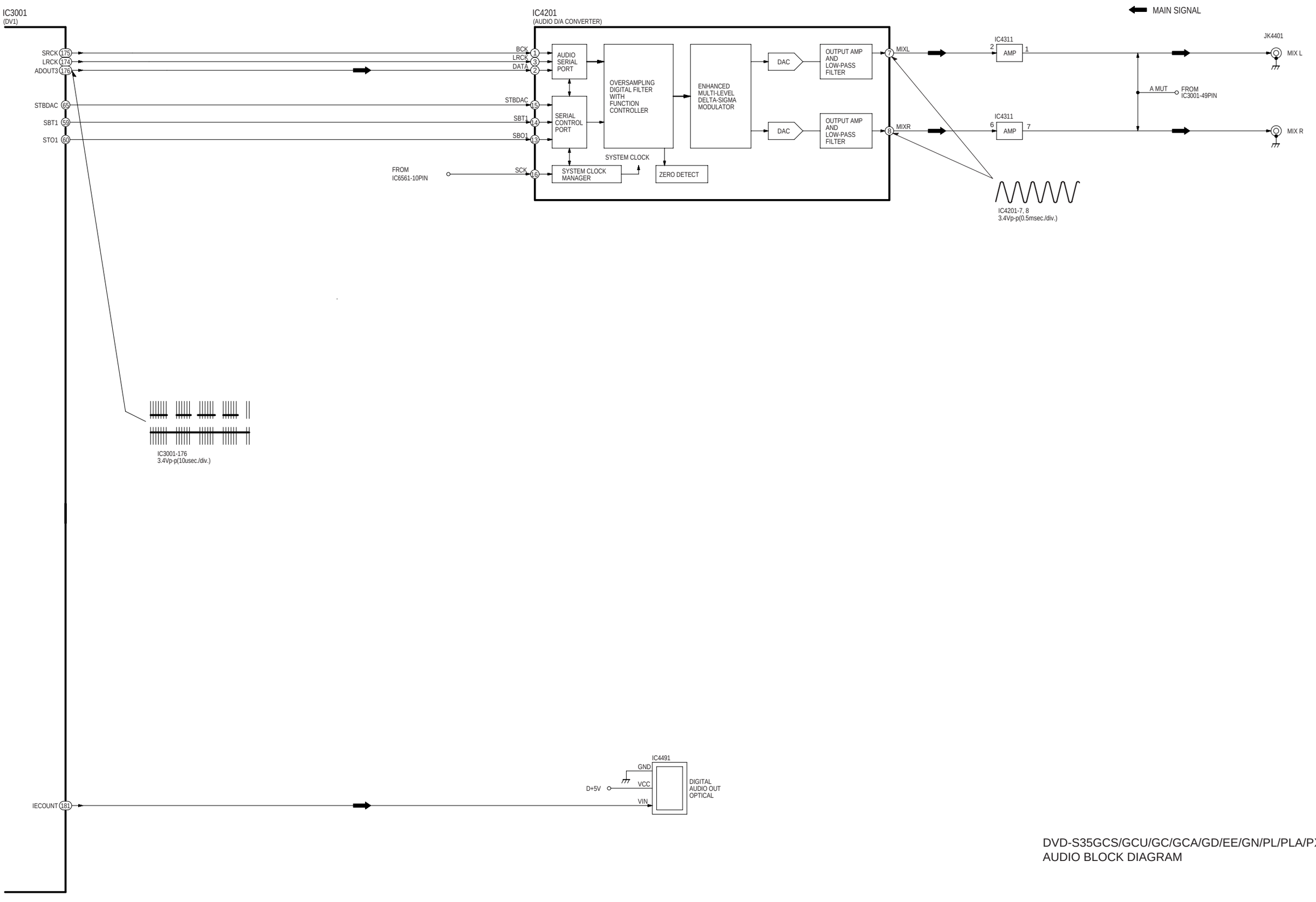
DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
VIDEO BLOCK DIAGRAM

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
VIDEO BLOCK DIAGRAM

14.6 AUDIO BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
AUDIO BLOCK DIAGRAM

15 INTERCONNECTION SCHEMATIC DIAGRAM& SCHEMATIC DIAGRAM NOTES

TOP PREVIOUS NEXT

15.1 INTERCONNECTION SCHEMATIC DIAGRAM

15.2 SCHEMATIC DIAGRAM NOTES

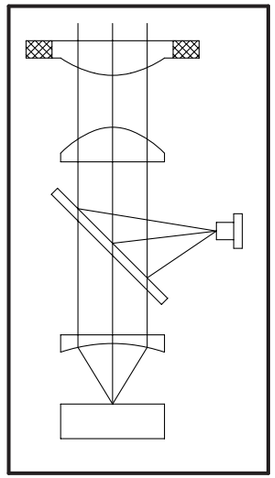
TOP PREVIOUS NEXT

15.1 INTERCONNECTION SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

OPTICAL PICK UP UNIT



FP5101

30	T+
29	F+
28	F-
27	T-
26	3.3VHFM
25	GND
24	LD+(DVD)
23	GND
22	GND
21	RFP
20	RFN
19	F1(DVD)
18	F2(DVD)
17	GAINH/L
16	PIN(DVD)
15	VREF2.2(DVD)
14	TA(DVD)
13	TD(DVD)
12	TC(DVD)
11	TB(DVD)
10	VCC5V
9	FE1
8	GND
7	LD+(CD)
6	T1(CD)
5	VREF2.2(CD)
4	FE2(CD)
3	T2(CD)
2	PIN(CD)
1	GND

JK4401

OPT

MAIN P.C.B.

P1001

POWER SUPPLY P.C.B.

PS6251

M9V-CTL	12
M+9V	11
MGND	10
D+5V	9
DGND	8
D+1.5V	7
DGND	6
A+5V	5
AGND	4
NSW+11V	3
ADGND	2
NSW-11V	1

PP1101

12	M9/12V-CTL
11	M+9/12V
10	MGND
9	D+5V
8	DGND
7	D+1.5V
6	DGND
5	A+5V
4	AGND
3	NSW+11V
2	ADGND
1	NSW-11V

MECHANISM UNIT

TRAY OPEN SWITCH

P2511

1	TRAY-SW
2	DGND

FP2501

1	FG1
2	FG3
3	TRV-SW
4	GND(FG2)
5	SPD-MOTOR-
6	SPD-MOTOR+
7	TRV-MOTOR-
8	TRV-MOTOR+

FG UNIT

FP3501

1	DGND
2	WIDE
3	TRAY-CLOSE
4	TRAY-OPEN
5	NP-MUTE
6	TRAYDRV
7	TRAY/TRV-SW
8	TRAY-MUTE
9	DSPCLK
10	DGND
11	STAT
12	CMD
13	OFFMUTE

PS1102

1	FLH-
2	FLH+
3	FL-24.5V
4	NPOFF L
5	DGND
6	NSW+3.3V

FP6003

13	DGND
12	WIDE
11	TRAY-CLOSE
10	TRAY-OPEN
9	NP-MUTE
8	TRAYDRV
7	TRAY/TRV-SW
6	TRAY-MUTE
5	DSPCLK
4	DGND
3	STAT
2	CMD
1	OFFMUTE

PP6001

6	FLH-
5	FLH+
4	FL-24.5V
3	NPOFF L
2	DGND
1	NSW+3.3V

FP2602

4	FG1
3	FG2
2	FG2
1	FG3

OPERATION(L)P.C.B.

OPERATION(R)P.C.B.

FP2601

FG1	8
FG3	7
TRV-SW	6
GND(FG2)	5
SPD-MOTOR-	4
SPD-MOTOR+	3
TRV-MOTOR-	2
TRV-MOTOR+	1

FC6101

STBYLED	1
NSW+3.3V	2
POWER-SW	3
REMOCON	4
DGND	5

FC6002

1	STBYLED
2	NSW+3.3V
3	POWER-SW
4	REMOCON
5	DGND

⏻/I

MOTOR P.C.B.

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
INTERCONNECTION SCHEMATIC DIAGRAM

15.2 SCHEMATIC DIAGRAM NOTES

TOP PREVIOUS NEXT

This schematic diagram may be modified at any time with the development of new technology.

Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purpose of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture´s specified parts showninthepartslist.

Important safety notice:

There are special components used in this equipment which are important for safety.

These parts are marked by ⚠ in the schematic diagrams. It is essential that these critical parts should be replaced with manufacturer’s specified parts to prevent shock, fire, or other hazards. Do not modify the original designwithoutpermission of manufacturer.

Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

TOP PREVIOUS NEXT

16 SCHEMATIC DIAGRAM

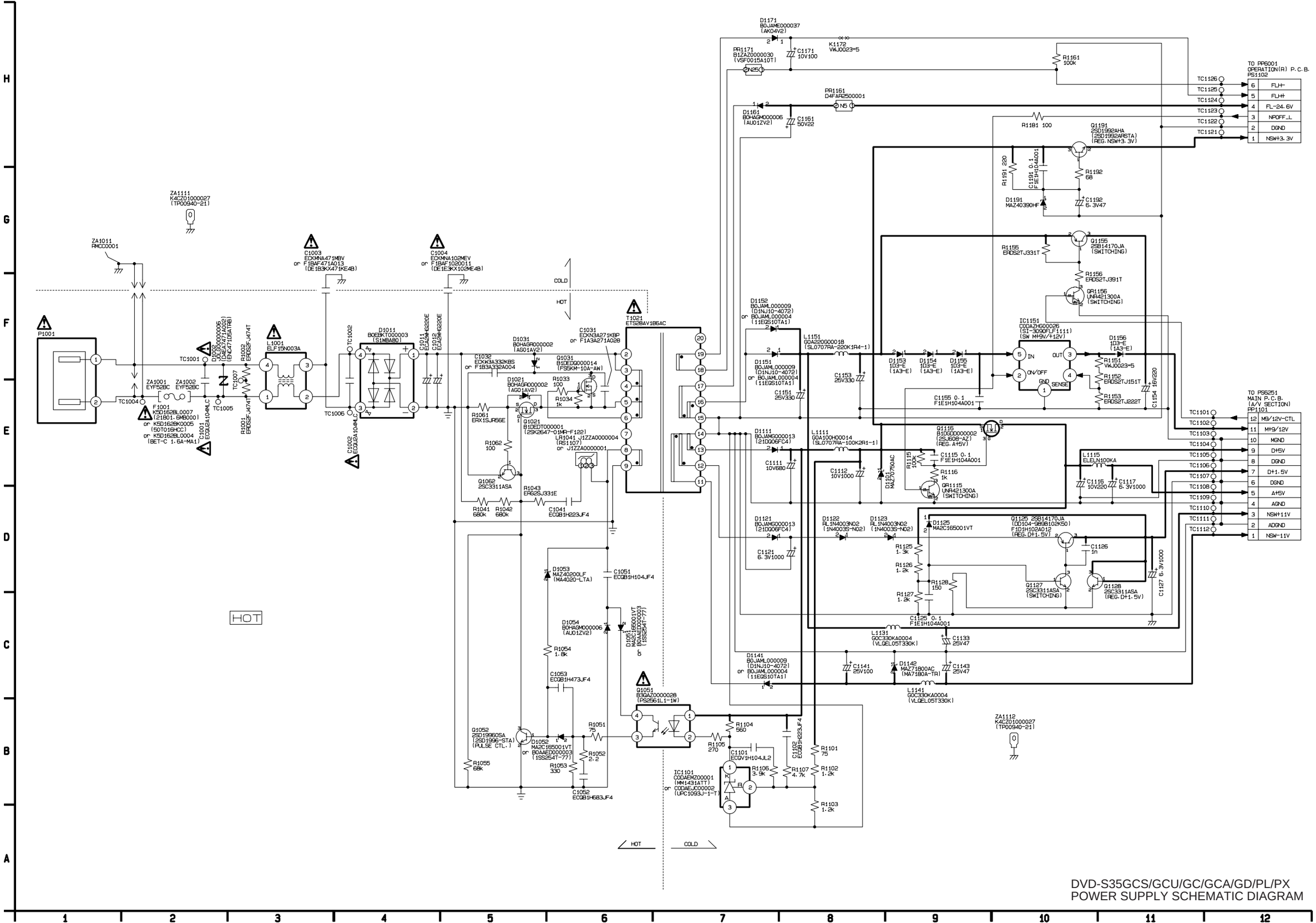
TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

16.1 POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/PL/PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

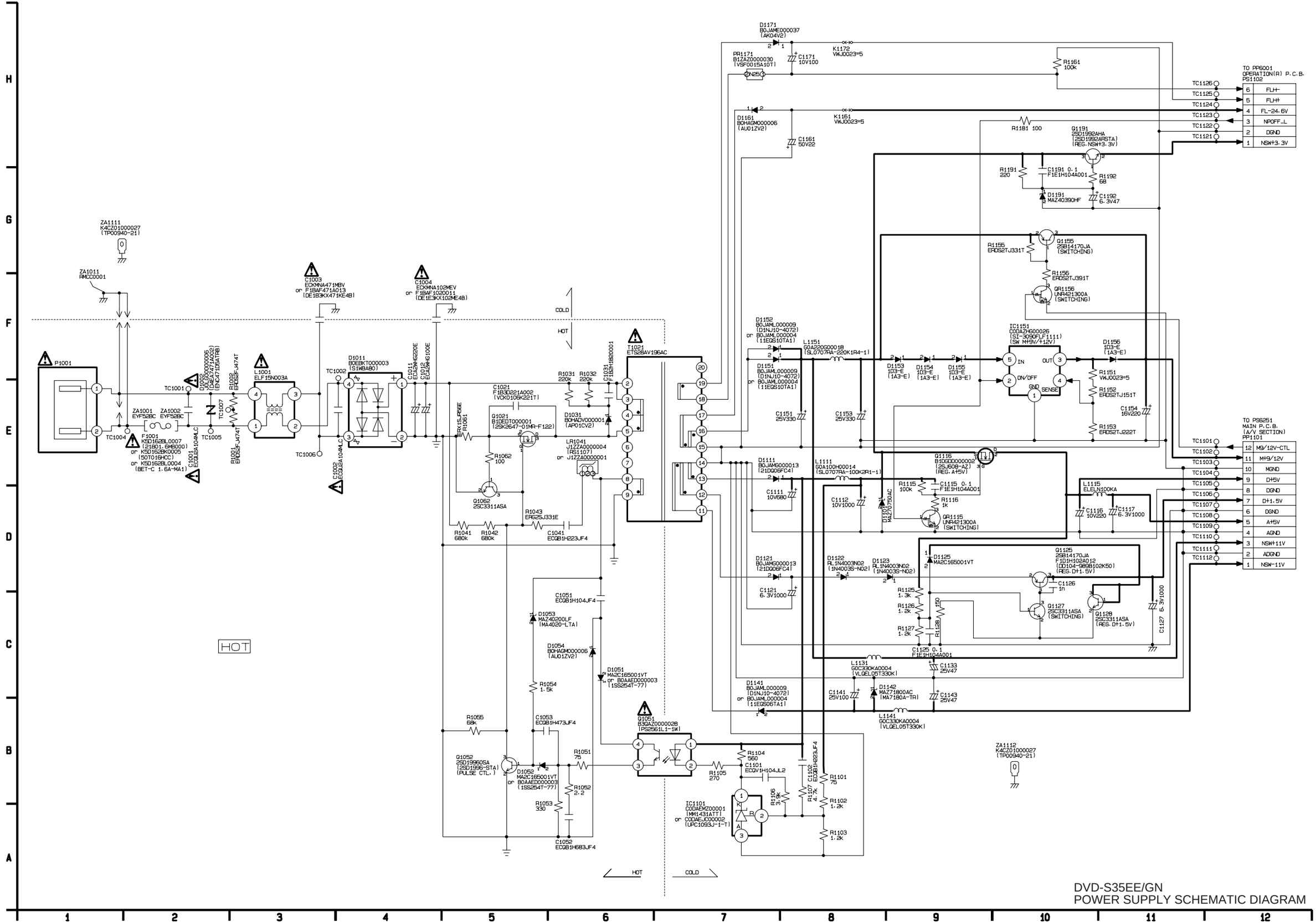


DVD-S35GCS/GCU/GC/GCA/GD/PL/PX
POWER SUPPLY SCHEMATIC DIAGRAM

16.2 POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35EE/GN)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

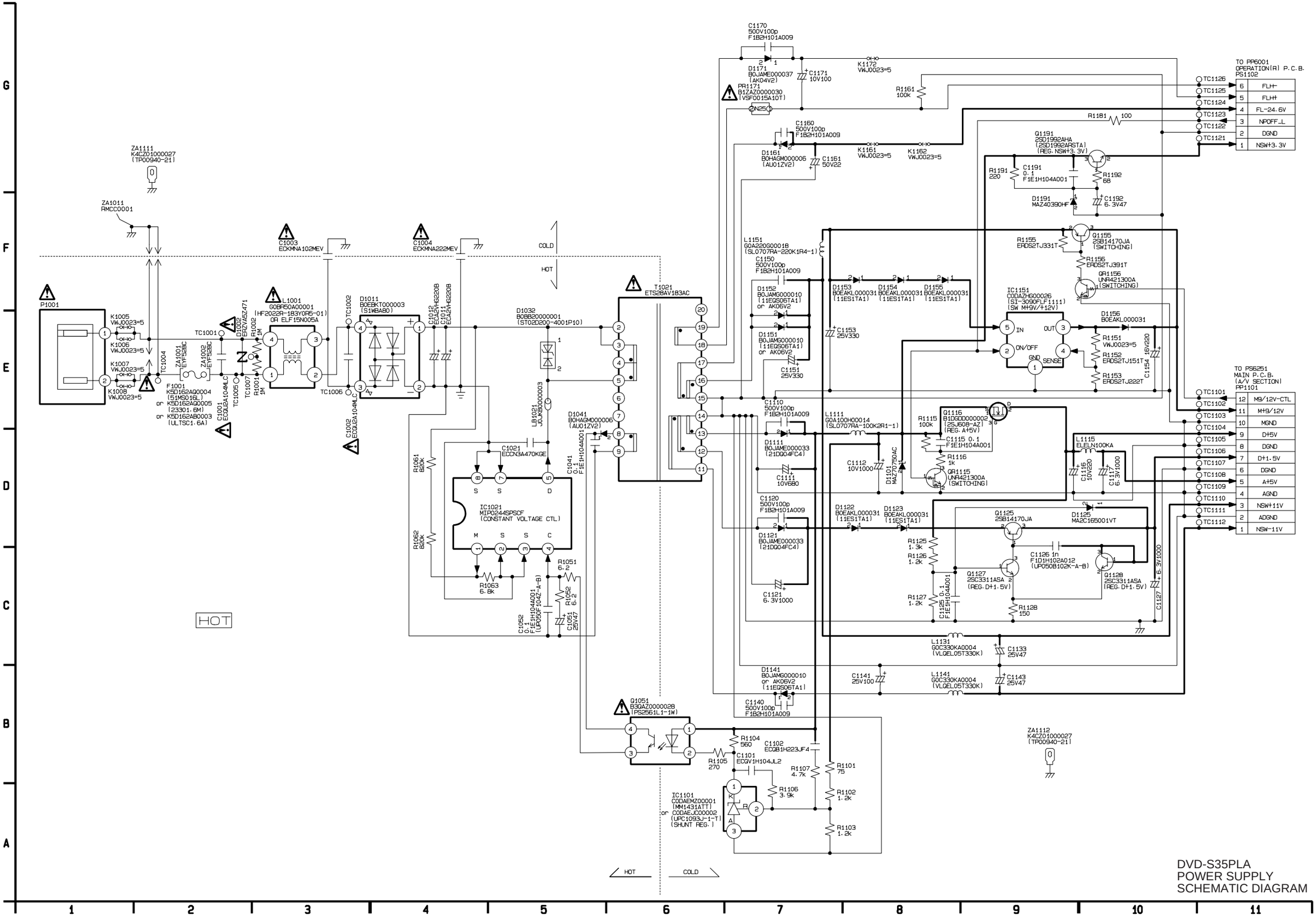


DVD-S35EE/GN
POWER SUPPLY SCHEMATIC DIAGRAM

16.3 POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35PLA)

TOP PREVIOUS NEXT

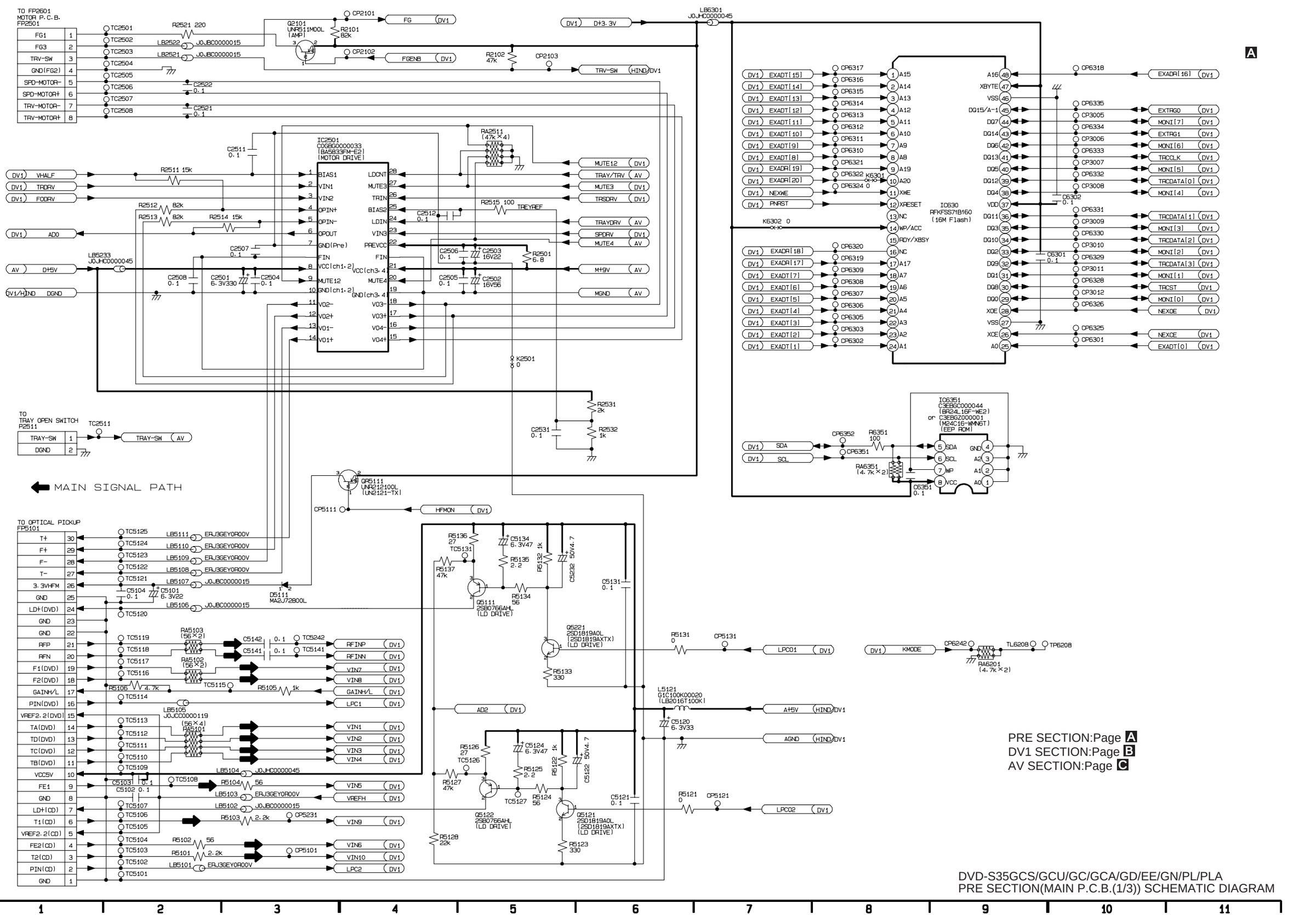
TOP PREVIOUS NEXT


P1001
ZA1111
K4CZ01000027
(TP00940-21)
ZA1011
RMCC0001
K1005
VWJ0023=5
K1006
VWJ0023=5
K1007
VWJ0023=5
K1008
VWJ0023=5
TC1001
TC1004
ZA1001
EYF52BC
ZA1002
EYF52BC
F1001
K5D162AQ0004
(51MS016L)
or K5D162AQ0005
(23301.6M)
or K5D162AB0003
(ULTSC1.6A)
C1001
ECQU2A104MLC
D1002
ERZV14Z471
R1002
1M
TC1005
TC1007
R1001
1M
L1001
G0BR50A00001
(HF2022R-183Y0R5-01)
OR ELF15N005A
C1003
ECKMNA102MEV
C1004
ECKMNA222MEV
COLD
HOT
TC1002
TC1006
C1002
ECQU2A104MLC
D1011
B0EBKT000003
(S1WBA80)
C1012
ECA2VHG220B
C1011
ECA2VHG220B
D1032
B0BB20000001
(ST02D200-4001P10)
T1021
ETS28AV183AC
LB1021
J0JKB0000003
D1041
B0HAGM000006
(AU012V2)
C1041
F1E1H104A001
C1021
ECCN3A470KGE
IC1021
MIP0244SPSCF
(CONSTANT VOLTAGE CTL)
R1061
820k
R1062
820k
R1063
6.8k
R1051
6.2
R1052
6.2
C1052
0.1
F1E1H104A001
(UP050F104Z-A-B)
C1051
25V47
HOT
C1170
500V100p
F1B2H101A009
D1171
B0JAME000037
(AK04V2)
C1171
10V100
PR1171
B1ZAZ0000030
(VSF0015A10T)
CN251
K1172
VWJ0023=5
R1161
100k
C1160
500V100p
F1B2H101A009
D1161
B0HAGM000006
(AU012V2)
C1161
50V22
K1161
VWJ0023=5
K1162
VWJ0023=5
R1181
100
Q1191
2SD1992AHA
(2SD1992ARSTA)
(REG. NSW+3.3V)
R1191
220
C1191
0.1
F1E1H104A001
R1192
68
D1191
MAZ40390HF
C1192
6.3V47
L1151
G0A220G00018
(SL0707RA-220K1R4-1)
C1150
500V100p
F1B2H101A009
D1152
B0JAMG000010
(11EQS06TA1)
or AK06V2
D1151
B0JAMG000010
(11EQS06TA1)
or AK06V2
C1151
25V330
D1153
B0EAKL000031
(11ES1TA1)
D1154
B0EAKL000031
(11ES1TA1)
D1155
B0EAKL000031
(11ES1TA1)
C1153
25V330
R1155
ERDS2TJ331T
R1156
ERDS2TJ391T
Q1155
2SB1417OJA
(SWITCHING)
QR1156
UNR421300A
(SWITCHING)
IC1151
C0DAZHG00026
(SI-3090FLF1111)
(SW M+9V/+12V)
IN
ON/OFF
GND
OUT
SENSE
D1156
B0EAKL000031
R1151
VWJ0023=5
R1152
ERDS2TJ151T
R1153
ERDS2TJ222T
C1154
16V220
C1110
500V100p
F1B2H101A009
D1111
B0JAME000033
(21DQ04FC4)
C1111
10V680
L1111
G0A100H00014
(SLO707RA-100K2R1-1)
C1112
10V1000
D1101
MAZ2075OAC
R1115
100k
Q1116
B1DGDD000002
(2SJ608-AZ)
(REG. A+5V)
C1115 0.1
F1E1H104A001
R1116
1k
QR1115
UNR421300A
(SWITCHING)
L1115
ELELN100KA
C1116
10V220
C1117
6.3V1000
C1120
500V100p
F1B2H101A009
D1121
B0JAME000033
(21DQ04FC4)
C1121
6.3V1000
D1122
B0EAKL000031
(11ES1TA1)
D1123
B0EAKL000031
(11ES1TA1)
Q1125
2SB1417OJA
D1125
MA2C165001VT
R1125
1.3k
R1126
1.2k
R1127
1.2k
C1125 0.1
F1E1H104A001
Q1127
2SC3311ASA
(REG. D+1.5V)
C1126 1n
F1D1H102A012
(UP050B102K-A-B)
Q1128
2SC3311ASA
(REG. D+1.5V)
R1128
150
C1127
6.3V1000
L1131
G0C330KA0004
(VLQEL05T330K)
C1133
25V47
D1141
B0JAMG000010
or AK06V2
(11EQS06TA1)
C1141
25V100
L1141
G0C330KA0004
(VLQEL05T330K)
C1143
25V47
C1140
500V100p
F1B2H101A009
Q1051
B3QAZ0000028
(PS2561L1-1W)
R1104
560
C1102
ECQB1H223JF4
R1105
270
C1101
ECQV1H104JL2
R1107
4.7k
R1106
3.9k
R1101
75
R1102
1.2k
R1103
1.2k
IC1101
C0DAEMZ00001
(MM1431ATT)
or C0DAEJC00002
(UPC1093J-1-T)
(SHUNT REG.)
ZA1112
K4CZ01000027
(TP00940-21)
TO PP6001
OPERATION(A) P.C.B.
PS1102
TC1126
TC1125
TC1124
TC1123
TC1122
TC1121
6 FLH-
5 FLH+
4 FL-24.6V
3 NPOFF_L
2 DGND
1 NSW+3.3V
TO PS6251
MAIN P.C.B.
(A/V SECTION)
PP1101
TC1101
TC1102
TC1103
TC1104
TC1105
TC1106
TC1107
TC1108
TC1109
TC1110
TC1111
TC1112
12 M9/12V-CTL
11 M+9/12V
10 MGND
9 D+5V
8 DGND
7 D+1.5V
6 DGND
5 A+5V
4 AGND
3 NSW+11V
2 ADGND
1 NSW-11V
HOT
COLD
DVD-S35PLA
POWER SUPPLY
SCHEMATIC DIAGRAM

16.4 PRE SECTION (MAIN P.C.B. (1/3)) SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


TO FP2601
MOTOR P.C.B.
FP2501
FG1
FG3
TRV-SW
GND(FG2)
SPD-MOTOR-
SPD-MOTOR+
TRV-MOTOR-
TRV-MOTOR+
R2521 220
LB2522 J0JBC0000015
LB2521 J0JBC0000015
Q2101 UNR511M00L (AMP)
R2101 82k
CP2101
FG DV1
CP2102
FGENB DV1
R2102 47k
CP2103
TRV-SW (HIND) DV1
DV1 D+3.3V
LB6301 J0JHC0000045
C2522 0.1
C2521 0.1
IC2501 C0GBG0000033 (BA5833FM-E2) (MOTOR DRIVE)
BIAS1
VIN1
VIN2
OPIN+
OPIN-
OPOUT
GND(Pre)
FIN
VCC(ch1,2)
MUTE12
GND(ch1,2)
VO2-
VO2+
VO1-
VO1+
LDCNT
MUTE3
TRIN
BIAS2
LDIN
VIN3
PREVCC
FIN
VCC(ch3,4)
MUTE4
GND(ch3,4)
VO3-
VO3+
VO4-
VO4+
C2511 0.1
RA2511 (47k×4)
DV1 VHALF
DV1 TRDRV
DV1 FODRV
R2511 15k
R2512 82k
R2513 82k
R2514 15k
DV1 ADO
C2507 0.1
AV DH5V
LB5233 J0JHC0000045
DV1/HIND DGND
C2508 0.1
C2501 6.3V330
C2504 0.1
C2512 0.1
R2515 100
TREVREF
C2506 0.1
C2503 16V22
R2501 6.8
C2505 0.1
C2502 16V56
MUTE12 DV1
TRAY/TRV AV
MUTE3 DV1
TRSDRV DV1
TRAYDRV AV
SPDRV DV1
MUTE4 AV
MH9V AV
MGND AV
K2501 0
R2531 2k
R2532 1k
C2531 0.1
TO TRAY OPEN SWITCH P2511
TRAY-SW
DGND
TC2511
TRAY-SW AV
MAIN SIGNAL PATH
TO OPTICAL PICKUP FP5101
T+
F+
F-
T-
3.3VHFM
GND
LD+(DVD)
LD+(CD)
T1(CD)
T2(CD)
PIN(CD)
VREF2.2(CD)
FE2(CD)
VREF2.2(DVD)
FE1
TA(DVD)
TD(DVD)
TC(DVD)
TB(DVD)
VCC5V
QR5111 UNR212100L (UN2121-TX)
CP5111
HFMON DV1
D5111 MA2J72800L
C5104 0.1
C5101 6.3V22
LB5111 ERJ3GEY0R00V
LB5110 ERJ3GEY0R00V
LB5109 ERJ3GEY0R00V
LB5108 ERJ3GEY0R00V
LB5107 J0JBC0000015
LB5106 J0JBC0000015
RA5103 (56×2)
RA5102 (56×2)
RA5101 (56×4)
C5142 0.1
C5141 0.1
R5105 4.7k
R5106 1k
LB5105 J0JCC0000119
LB5104 J0JHC0000045
R5104 56
LB5103 ERJ3GEY0R00V
C5103 0.1
C5102 0.1
LB5102 J0JBC0000015
R5103 2.2k
CP5231
R5102 56
R5101 2.2k
CP5101
LB5101 ERJ3GEY0R00V
RFINP DV1
RFINN DV1
VIN7 DV1
VIN8 DV1
GAINH/L DV1
LPC1 DV1
VIN1 DV1
VIN2 DV1
VIN3 DV1
VIN4 DV1
VIN5 DV1
VREFH DV1
VIN9 DV1
VIN6 DV1
VIN10 DV1
LPC2 DV1
R5136 27
TC5131
R5137 47k
C5134 6.3V47
R5135 2.2
R5132 1k
C5232 50V4.7
R5134 56
Q5111 2SB0766AHL (LD DRIVE)
C5131 0.1
Q5221 2SD1819A0L (2SD1819AXTX) (LD DRIVE)
R5131 0
CP5131
LPC01 DV1
R5133 330
AD2 DV1
L5121 G1C100K00020 (LB2016T100K)
A+5V (HIND) DV1
C5120 6.3V33
AGND (HIND) DV1
R5126 27
TC5126
R5127 47k
C5124 6.3V47
R5125 2.2
R5122 1k
C5122 50V4.7
R5124 56
TC5127
Q5122 2SB0766AHL (LD DRIVE)
C5121 0.1
Q5121 2SD1819A0L (2SD1819AXTX) (LD DRIVE)
R5121 0
CP5121
LPC02 DV1
R5128 22k
R5123 330
DV1 KMODE
CP6242
TL6208
TP6208
RA6201 (4.7k×2)
IC6301 C0EBG0000044 (BR24L16F-WE2) or C3EBGZ000001 (M24C16-WMN6T) (EEP ROM)
CP6352
R6351 100
CP6351
DV1 SDA
DV1 SCL
RA6351 (4.7k×2)
C6351 0.1
SDA
SCL
WP
VCC
GND
A2
A1
A0
IC6302 RFKFSS71B160 (16M Flash)
A15
A14
A13
A12
A11
A10
A9
A8
A19
A20
XWE
XRESET
NC
WP/ACC
RDY/XBSY
A17
A7
A6
A5
A4
A3
A2
A1
A16
XBYTE
VSS
DQ15/A-1
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VDD
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
XOE
XCE
A0
K6317
K6316
K6315
K6314
K6313
K6312
K6311
K6310
K6321
K6322
K6324 0
K6320
K6319
K6309
K6308
K6307
K6306
K6305
K6303
K6302
K6304 0
K6302 0
C6302 0.1
C6301 0.1
CP6317
CP6316
CP6315
CP6314
CP6313
CP6312
CP6311
CP6310
CP6321
CP6322
CP6324 0
CP6320
CP6319
CP6309
CP6308
CP6307
CP6306
CP6305
CP6303
CP6302
CP6318
CP6335
CP3005
CP6334
CP3006
CP6333
CP3007
CP6332
CP3008
CP6331
CP3009
CP6330
CP3010
CP6329
CP3011
CP6328
CP3012
CP6326
CP6325
CP6301
EXADR[16] DV1
EXTRG0 DV1
MONI[7] DV1
EXTRG1 DV1
MONI[6] DV1
TRCCLK DV1
MONI[5] DV1
TRCDATA[0] DV1
MONI[4] DV1
TRCDATA[1] DV1
MONI[3] DV1
TRCDATA[2] DV1
MONI[2] DV1
TRCDATA[3] DV1
MONI[1] DV1
TRCST DV1
MONI[0] DV1
NEXCE DV1
NEXCE DV1
EXADT[0] DV1
DV1 EXADT[15]
DV1 EXADT[14]
DV1 EXADT[13]
DV1 EXADT[12]
DV1 EXADT[11]
DV1 EXADT[10]
DV1 EXADT[9]
DV1 EXADT[8]
DV1 EXADR[19]
DV1 EXADR[20]
DV1 NEXWE
DV1 PNRST
DV1 EXADR[18]
DV1 EXADR[17]
DV1 EXADT[7]
DV1 EXADT[6]
DV1 EXADT[5]
DV1 EXADT[4]
DV1 EXADT[3]
DV1 EXADT[2]
DV1 EXADT[1]
A
PRE SECTION:Page A
DV1 SECTION:Page B
AV SECTION:Page C
DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
PRE SECTION(MAIN P.C.B.(1/3)) SCHEMATIC DIAGRAM

16.5 DV1 SECTION (MAIN P.C.B. (2/3)) SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

B

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

PRE SECTION:Page A
DV1 SECTION:Page B
AV SECTION:Page C

IC3051
C3ABPJ000048:(S35PL/PLA)
C3ABPJ000052:(S35GCS/GCU/GC/GCA/GD/EE/GN)
or C3ABPJ000017 or C3ABPJ000039 or C3ABPJ000018
(MT48LC2M32B2TG-6)(HY57V643220CT-55)(K4S643232E-TC50)
(64M SDRAM)

IC3001
MN2DS0002AP1

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
DV1 SECTION(MAIN P.C.B.(2/3)) SCHEMATIC DIAGRAM

16.6 AUDIO/VIDEO SECTION (MAIN P.C.B. (3/3)) SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

PRE SECTION:Page A
DV1 SECTION:Page B
AV SECTION:Page C

TO FP6003
OPERATION(A) P.C.B.
FP3501

DGND 1
WIDE 2
TRAY-CLOSE 3
TRAY-OPEN 4
NP-MUTE 5
TRAYDRV 6
TRAY/TRV-SW 7
TRAY-MUTE 8
DSPCLK 9
DGND 10
STAT 11
CMD 12
OFFMUTE 13

TC3516 LB3514 J0JBC0000015
TC3515 LB3513 J0JBC0000015 TRV-SW PRE
TC3514 LB3512 J0JBC0000015 TRAY-SW PRE
TC3513
TC3512 LB3511 J0JBC0000015 TRAYDRV PRE
TC3510 LB3509 J0JBC0000015 TRAY/TRV PRE
TC3509 LB3508 J0JBC0000015 MUTE4 PRE
TC3508 LB3507 ERJ3GEYJ101V DSPCLK_DV1 DV1
TC3507
TC3506 LB3506 ERJ3GEYJ101V STATUS_DV1 DV1
TC3505 LB3505 ERJ3GEYJ101V CMD DV1

TO PP1101
POWER SUPPLY P.C.B.
PS6251

MSV-CTL 12
M+9V 11
MGND 10
D+5V 9
DGND 8
D+1.5V 7
DGND 6
A+5V 5
AGND 4
NSW+11V 3
ADGND 2
NSW-11V 1

TC6250 LB6251 J0JCC0000119 MSV-CTL DV1
TC6251 FL6251 F1J1E1040022 M+9V PRE
TC6252 MGND PRE
TC6253 FL6252 F1H0J105001B D+5V PRE
TC6254 DGND PRE
TC6255 FL6253 F1H0J105001B D+1.5V DV1
TC6256 DGND DV1
TC6257 FL5254 F1H0J105001B A+5V PRE/DV1
TC6258 AGND PRE/DV1
TC6259
TC6260

IC6251
C0CB0BE00003
(PQ1M335M2SP)
IN OUT
ADJ GND
D+3.3V PRE/DV1
C6251 0.1
C6253 10n
C6252 1

L3501 22u
ELESN220KA
C3501 6.3V220

IC3501
C9ZB00000431
(MM1568BJBE)
(VIDEO DRIVE)

DV1 C → C3504 10n
DV1 Y → C3505 0.1
C3533 10n
DV1 Y/PY/G → C3506 1/0.1
DV1 CB/PB/B → C3507 1
DV1 CR/PR/R → C3508 1
C3502 10n
C3517 6.3V22

1 VCC1
2 CIN
3 MUTE1
4 VIN
5 YC-MIX
6 YIN
7 BIAS
8 GND1
9 NC
10 GND1
11 NC
12 CYIN
13 CLP
14 CbIN
15 MUTE2
16 Cr-IN
17 GND2
34 VCC2
33 COUT
32 GND2
31 VOUT
30 VSAG
29 GND2
28 YOUT
27 YSAG
26 GND2
25 CYOUT
24 CYSAG
23 GND2
22 CbOUT
21 CbSAG
20 GND2
19 Cr-OUT
18 Cr-SAG

C3534 10n
C3503 10n
C3531 10n
C3509 6.3V1000
C3510 10V100
C3511 6.3V1000
C3512 10V100
C3513 6.3V1000
C3514 10V100
C3515 6.3V330
C3516 6.3V330

R3521 2.2k
R3522 10k
QR3521 UNR221200L (SWITCHING)

IC4201
C0FBBK000035
(PCM1752K/2BGR)
(AUDIO DAC)

DV1 SRCK
DV1 DMIXOUT
DV1 LRCK
CP4201
CP4211
CP4202
C4209 0.1
C4202 25V47
L4211 G1C220KA0038 (LB2016T220K)
LB4200 J0JBC0000015
L4301 ELESN391KA
C4201 6.3V1000
C4206 25V220
C4208 0.1

1 BCK
2 DATA
3 LRCK
4 DGND
5 VDD
6 VCC
7 VOUTL
8 VOUTR
16 SCK
15 ML
14 MC
13 MDI
12 ZEROL
11 ZEROR
10 VCOM
9 AGND

R4202 10k
R4201 47
CP4205 STBDAC DV1
CP4204 SBT1 DV1
CP4203 SBO1 DV1

R4313 15k D0HB153ZA002
C4312 82p
IC4311 C0ABBB000118 (NJM4565M-T1)
C4411 25V47
R4412 1k
R4411 47k
R4421 47k
R4422 1k
C4421 25V47
R4323 15k D0HB153ZA002
C4322 82p
MIXL
R4312 7.5K D0HB752ZA002
C4305 0.1
MIXR
R4322 7.5K D0HB752ZA002

Q4411 2SD0601AHL (MUTE)
Q4421 2SD0601AHL (MUTE)
R4414 220
C4412 1n
R4413 820
R4423 820
C4422 1n
R4424 220
TC4411
TC4410
TC4409
C4401 0.1
C4402 0.1
C4409 0.1

C3541 0.1
C3542 0.1
C3543 0.1
C3544 0.1
C4403 0.1
C4404 0.1

ZA3001 RMCC0001
ZA3002 RMCC0001

JK4401
K2YZ07000001
(YKC22-0643N)

R3533 75 LB3533 J0JBC0000015 TC4418
R3532 75 LB3532 J0JBC0000015 TC4417
TC4416
R3534 75 LB3534 J0JBC0000186 TC4415
R3531 75 LB3531 J0JBC0000015 TC4414
R3535 75 LB3535 J0JBC0000015 TC4413
R3536 75 LB3536 J0JBC0000015 TC4412

10 Y
9 VOUT
8 V_GND
7 PB
6 PR
5 V_GND
4 MIX_L
3 MIX_R
2 A_GND
1

IC4491
K7AABB000001
(JFJ3000-010020)
(OPT OUT)
1 Vin
2 VCC
3 GND

DV1 AUDIODIGITAL
TC4401
TC4402
C4491 6.3V47 F2A0J470A179

L6561 G1C220KA0038 (LB2016T220K)
C6561 10V100

IC6561
C1DB00000980
(BU2363FV-E2)
/C1DB00000918
(SM8706CV-G-E2)
CLK

LB6561 J0JBC0000015
C6563 0.1
C6568 15p
TP6561 54MHz
LB6562 J0JCC0000167
DV1 CLK54M/(27M)
L6562 G1C220KA0038 (LB2016T220K)
C6562 10V100
C6564 0.1
X6501 H0H369500001 (AC368642DF) (36.864MHz)
C6565 15p
C6566 15p
R6562 390

1 VDD1
2 VSS1
3 CLK54
4 CLK27
5 VDD2
6 VSS2
7 XTI
8 XTO
16 CE
15 CLK33
14 FSEL
13 CLK16
12 VDD3
11 VSS3
10 768fs
9 384fs

R6563 10k
LB6564 J0JCC0000077
R6565 47
TP6564 16.9MHz
LB6566 J0JBC0000015
C6567 0.1
R6566 47
TP6563 33.8MHz
R6564 10
CLK33M DV1
CLKSEL DV1
TP6565 EXTCLK
R6567 0
EXTCLK DV1

K4902 0
TL4901
C4301 25V220
C4302 25V220
K4913 0
TL4902
IC4311 C0ABBB000118 (NJM4565M-T1)
R4403 3.3k
QR4403 XN0431100L (BUFFER)
TL4301
C4308 25V0.1
R4302 22k
R4402 10k
TL4302
Q4402 2SD0601AHL (INV.)
QR4401 UNR221100L (INV.)
R4303 2.2k
R4401 2.2k
R4301 2.2k
DV1 AMUT
N_POWER-MUTE

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
AV SECTION(MAIN P.C.B.(3/3)) SCHEMATIC DIAGRAM

H G F E D C B A
1 2 3 4 5 6 7 8 9 10 11 12

16.7 PRE SECTION (MAIN P.C.B. (1/3)) SCHEMATIC DIAGRAM (DVD-S35PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

TO FP2601
MOTOR P.C.B.
FP2501

FG1	1
FG3	2
TRV-SW	3
GND(FG2)	4
SPD-MOTOR-	5
SPD-MOTOR+	6
TRV-MOTOR-	7
TRV-MOTOR+	8

TO
TRAY OPEN SWITCH
P2511

TRAY-SW	1
DGND	2

TO
OPTICAL PICKUP
FP5101

T+	30
F+	29
F-	28
T-	27
3.3V-HFM	26
GND	25
LD+(DVD)	24
GND	23
GND	22
RFP	21
RFN	20
F1(DVD)	19
F2(DVD)	18
GAIN-H/L	17
PIN(DVD)	16
VREF2.2(DVD)	15
TA(DVD)	14
TD(DVD)	13
TC(DVD)	12
TB(DVD)	11
VCC5V	10
FE1	9
GND	8
LD+(CD)	7
T1(CD)	6
VREF2.2(CD)	5
FE2(CD)	4
T2(CD)	3
PIN(CD)	2
GND	1

MAIN SIGNAL PATH

PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F

DVD-S35PX
PRE SECTION
(MAIN P.C.B.(1/3))
SCHEMATIC DIAGRAM

16.8 DV1 SECTION (MAIN P.C.B. (2/3)) SCHEMATIC DIAGRAM (DVD-S31PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F

IC3051
C3ABPJ000048
(K4S643232F-TC60)
or C3ABPJ000017 or C3ABPJ000039 or C3ABPJ000018
(MT48LC2M32B2TG-6)(HY57V643220CT-55)(K4S643232E-TC60)
(64M SDRAM)

IC3001
MN2DS0002AP1

DVD-S35PX
DV1 SECTION
(MAIN P.C.B.(2/3))
SCHEMATIC DIAGRAM

16.9 AUDIO/VIDEO SECTION (MAIN P.C.B. (3/3)) SCHEMATIC DIAGRAM (DVD-S35PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F

TO FP6003
OPERATION(R) P.C.B.
FP3501

DGND	1
WIDE	2
TRAY-CLOSE	3
TRAY-OPEN	4
NP-MUTE	5
TRAYDRV	6
TRAY/TRV-SW	7
TRAY-MUTE	8
DSPCLK	9
DGND	10
STAT	11
CMD	12
OFFMUTE	13

TC3516 LB3514 JOJBC0000015
TC3515 LB3513 JOJBC0000015 TRV-SW PRE
TC3514 LB3512 JOJBC0000015 TRAY-SW PRE
TC3513
TC3512 LB3511 JOJBC0000015 TRAYDRV PRE
TC3510 LB3509 JOJBC0000015 TRAY/TRV PRE
TC3509 LB3508 JOJBC0000015 MUTE4 PRE
TC3508 LB3507 ERJ3GEYJ101V DSPCLK_DV1 DV1
TC3507
TC3506 LB3506 ERJ3GEYJ101V STATUS_DV1 DV1
TC3505 LB3505 ERJ3GEYJ101V CMD DV1

TO PP1101
POWER SUPPLY P.C.B.
PS6251

M9V-CTL	12
M+9V	11
MGND	10
D+5V	9
DGND	8
D+1.5V	7
DGND	6
A+5V	5
AGND	4
NSW+11V	3
ADGND	2
NSW-11V	1

TC6250 LB6251 JOJCC0000119 M9V-CTL DV1
TC6251 FL6251 F1J1E1040022 M+9V PRE
TC6252 MGND PRE
TC6253
TC6254 FL6252 F1HOJ1050018 D+5V PRE
TC6255 FL6253 F1HOJ1050018 DGND PRE
TC6256 FL5254 F1HOJ1050018 D+1.5V DV1
TC6257 DGND DV1
TC6258 A+5V PRE/DV1
TC6259 AGND PRE/DV1
TC6260

IC6251
C0CBCBE00003
(PQ1M33M2SP)
C6251 0.1
C6252 1
C6253 10n
D+3.3V PRE/DV1

L3501 22u
ELESN220KA
C3501 6.3V220

IC3501
C9ZB00000431
(MM1568BJBE)
(VIDEO DRIVE)

VCC1	1	34	VCC2
CIN	2	33	COUT
MUTE1	3	32	GND2
VIN	4	31	VOUT
YC-MIX	5	30	VSAG
YIN	6	29	GND2
BIAS	7	28	YOUT
GND1	8	27	YSAG
NC	9	26	GND2
GND1	10	25	CYOUT
NC	11	24	CYSAG
CYIN	12	23	GND2
CLP	13	22	CbOUT
CbIN	14	21	CbSAG
MUTE2	15	20	GND2
CrIN	16	19	CrOUT
GND2	17	18	CrSAG

C3502 10n
C3503 10n
C3534 10n
C3531 10n
C3504 10n
C3505 0.1
C3533 10n
C3517 6.3V22
C3506 1/0.1
C3507 1
C3508 1
C3509 6.3V1000
C3510 10V100
C3511 6.3V1000
C3512 10V100
C3513 6.3V1000
C3514 10V100
C3515 6.3V330
C3516 6.3V330
DV1 C
DV1 Y
DV1 Y/PY/G
DV1 CB/PB/B
DV1 CR/PR/R

R3521 2.2k
R3522 10k
QR3521 UNR221200L

IC4201
C0FBBK000035
(PCM1752KDBQR)
(AUDIO DAC)

BCK	1	16	SCK
DATA	2	15	ML
LRCK	3	14	MC
DGND	4	13	MDI
VDD	5	12	ZEROL
VCC	6	11	ZEROR
VOUTL	7	10	VCOM
VOUTR	8	9	AGND

DV1 SRCK CP4201
DV1 DMIXOUT CP4211
DV1 LRCK CP4202
L4211 G1C220KA0038 (LB2016T220K)
C4209 0.1
C4202 25V47
LB4200 JOJBC0000015
L4301 ELESN391KA
C4201 6.3V 1000
C4206 25V220
C4208 0.1
R4202 10k
R4201 47
CP4205 STBDAC DV1
CP4204 SBT1 DV1
CP4203 SBD1 DV1

MIXL
R4312 7.5K D0HB7522A002
MIXR
R4322 7.5K D0HB7522A002
C4305 0.1
R4313 15k D0HB1532A002
R4323 15k D0HB1532A002
C4312 82p
C4322 82p
IC4311 C0ABBB000118 (NJM4565M-T1)
C4411 25V47
C4421 25V47
R4412 1k
R4422 1k
R4411 47k
R4421 47k
Q4411 2SD0601AHL (MUTE)
Q4421 2SD0601AHL (MUTE)
R4413 820
R4423 820
R4414 220
R4424 220
C4412 1n
C4422 1n

ZA3001 RMCC0001
ZA3002 RMCC0001
JK4401 K2YZ07000001 (YKC22-0643N)
R3533 75
R3532 75
R3534 75
R3531 75
R3535 75
R3536 75
LB3533 JOJBC0000015
LB3532 JOJBC0000015
LB3534 JOJCC0000186
LB3531 JOJBC0000015
LB3535 JOJBC0000015
LB3536 JOJBC0000015
TC4418
TC4417
TC4416
TC4415
TC4414
TC4413
TC4412
TC4411
TC4410
TC4409
C4401 0.1
C4402 0.1
C4403 0.1
C4404 0.1
C3541 0.1
C3542 0.1
C3543 0.1
C3544 0.1
Y/S
C/S
Y
VOUT
V_GND
PB
PR
V_GND
MIX_L
MIX_R
A_GND

IC4491
K7AABB000001
(JFJ3000-0100020)
(OPT OUT)
DV1 AUDIODIGITAL
TC4401
TC4402
C4491 6.3V47 F2A0J470A179
C4409 0.1
Vin
VCC
GND

L6561 G1C220KA0038 (LB2016T220K)
C6561 10V100
LB6561 JOJBC0000015
C6563 0.1
IC6561
C1DB00000980
(SM8706CV-G-E2)
(CLK)

VDD1	1	16	CE
VSS1	2	15	CLK33
CLK54	3	14	FSEL
CLK27	4	13	CLK16
VDD2	5	12	VDD3
VSS2	6	11	VSS3
XTI	7	10	768fs
XTO	8	9	384fs

TP6561 54MHz
C6568 15p
DV1 CLK54M/(27M)
LB6562 JOJCC0000167
L6562 G1C220KA0038 (LB2015T220K)
C6562 10V100
C6564 0.1
X6501 H0H368600001 (AC368642DF) (36.864MHz)
C6565 15p
C6566 15p
R6562 390
R6563 10k
LB6564 JOJCC0000077
R6565 47
TP6564
LB6565 JOJBC0000015
C6557 0.1
R6566 47
R6564 10
TP6563 33.8MHz
CLK33M DV1
CLKSEL DV1
TP6565 EXTCLK
R6567 0
EXTCLK DV1

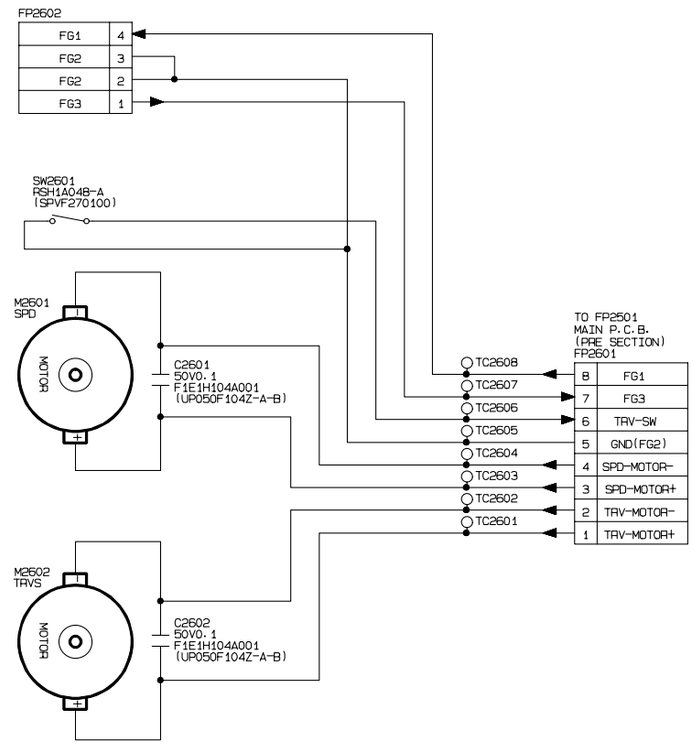
K4902 0
K4913 0
TL4901
TL4902
C4301 25V220
C4302 25V220
IC4311 C0ABBB000118 (NJM4565M-T1)
TL4302
R4402 10k
Q4402 2SD0601AHL (INV.)
DV1 AMUT
QR4403 XN0431100L (BUFFER)
QR4401 UNR221100L (INV.)
TL4301
R4302 22k
C4308 25V0.1
R4403 3.3k
R4401 2.2k
R4301 2.2k
R4303 2.2k
N_POWER-MUTE

DVD-S35PX
AV SECTION
(MAIN P.C.B.(3/3))
SCHEMATIC DIAGRAM

16.10 MOTOR SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

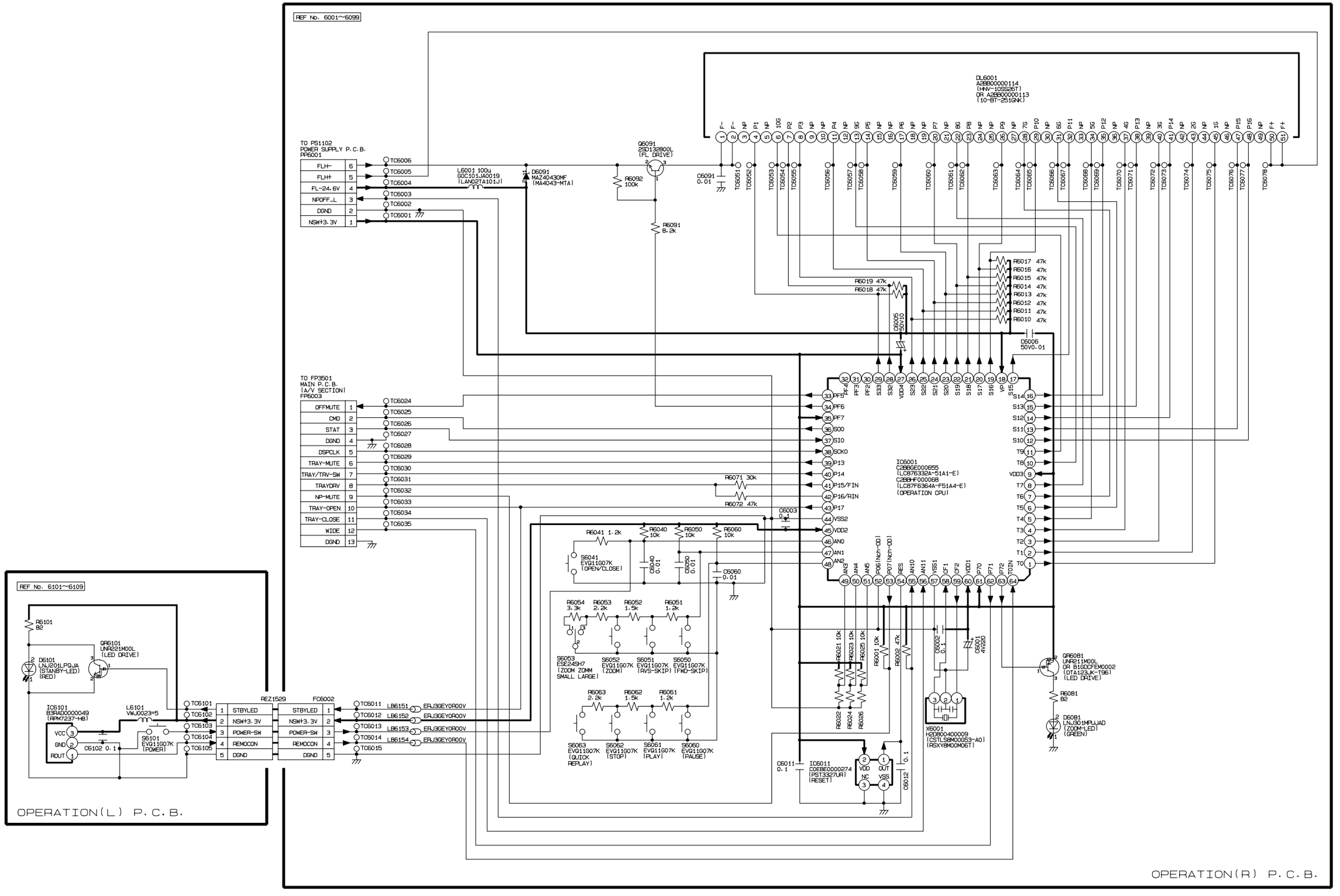
TOP PREVIOUS NEXT


FP2602
FG1 4
FG2 3
FG2 2
FG3 1
SW2601
RSH1A04B-A
(SPVF270100)
M2601
SPD
MOTOR
C2601
50V0.1
F1E1H104A001
(UP050F104Z-A-B)
TO FP2501
MAIN P.C.B.
(PRE SECTION)
FP2601
TC2608
TC2607
TC2606
TC2605
TC2604
TC2603
TC2602
TC2601
8 FG1
7 FG3
6 TRV-SW
5 GND(FG2)
4 SPD-MOTOR-
3 SPD-MOTOR+
2 TRV-MOTOR-
1 TRV-MOTOR+
M2602
TRVS
MOTOR
C2602
50V0.1
F1E1H104A001
(UP050F104Z-A-B)

16.11 OPERATION SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
OPERATION SCHEMATIC DIAGRAM

17 PRINT CIRCUIT BOARD

TOP PREVIOUS NEXT

17.1 POWER SUPPLY P.C.B. (DVD-S35GCS/GCU/GC/GCA/GD/PL/PX)

17.2 POWER SUPPLY P..B. (DVD-S35EE/GN)

17.3 POWER SUPPLY P.C.B. (DVD-S35PLA)

17.4 MAIN P.C.B. (1/2) (COMPONENT SIDE) (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

17.5 MAIN P.C.B. (2/2) (FOIL SIDE) (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

17.6 MAIN P.C.B. ADDRESS INFORMATION

17.7 MAIN P.C.B. (1/2) (COMPONENT SIDE) (DVD-S35PX)

17.8 MAIN P.C.B. (2/2) (FOIL SIDE) (DVD-S35PX)

17.9 MOTOR P.C.B.

17.10 OPERATION P.C.B.

TOP PREVIOUS NEXT

17.1 POWER SUPPLY P.C.B. (DVD-S35GCS/GCU/GC/GCA/GD/PL/PX)

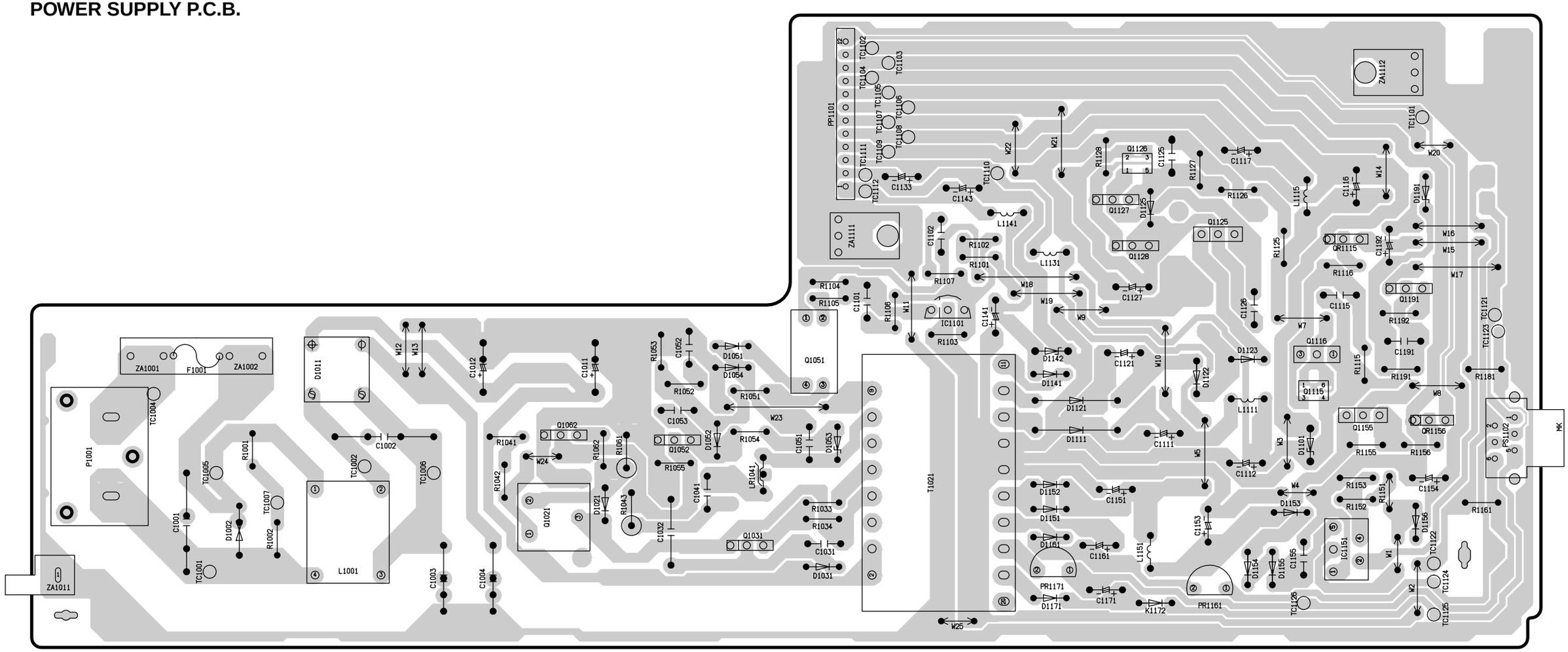
TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

POWER SUPPLY P.C.B.

POWER SUPPLY P.C.B.			
Transistors		**Integrated Circuits**	
Q1021	B-4	IC1101	C-6
Q1031	A-5	IC1151	A-8
Q1051	B-5	**Connectors**	
Q1052	B-4	P1001	B-1
Q1062	B-4	PS1102	B-9
Q1116	B-8		
Q1125	C-7		
Q1127	C-7		
Q1128	C-7		
Q1155	B-8		
Q1191	C-8		
Transistors-resistors			
QR1115	C-8		
QR1156	B-9		

ADDRESS INFORMATION



DVD-S35GCS/GCU/GC/GCA/GD/PL/PX
POWER SUPPLY P.C.B.(REP3560A-C)

17.2 POWER SUPPLY P..B. (DVD-S35EE/GN)

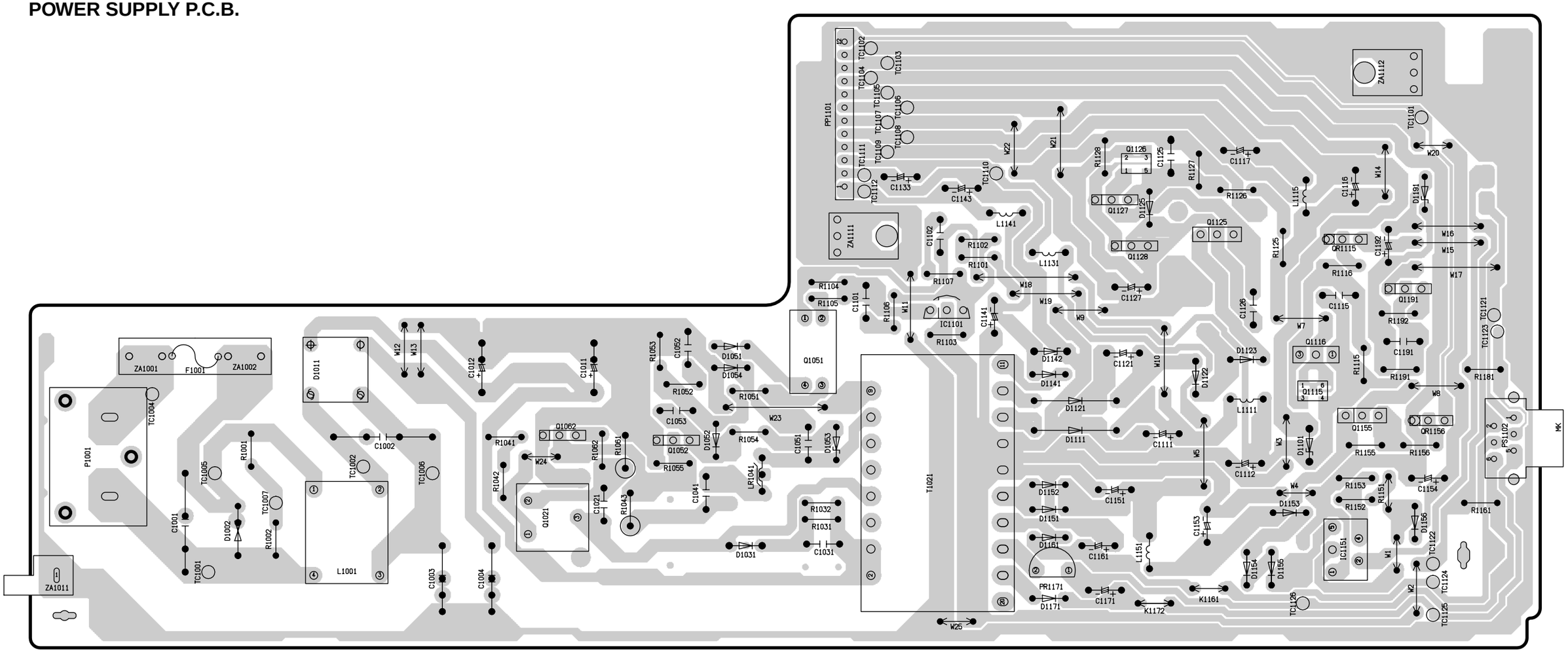
TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

POWER SUPPLY P.C.B.

POWER SUPPLY P.C.B.			
Transistors		**Integrated Circuits**	
Q1021	B-4	IC1101	C-6
Q1051	B-5	IC1151	A-8
Q1052	B-4	**Connectors**	
Q1062	B-4	P1001	B-1
Q1116	B-8	PS1102	B-9
Q1125	C-7		
Q1127	C-7		
Q1128	C-7		
Q1155	B-8		
Q1191	C-8		
Transistors-resistors			
QR1115	C-8		
QR1156	B-9		

ADDRESS INFORMATION



DVD-S35EE/GN
POWER SUPPLY P.C.B.(REP3560B-C)

17.3 POWER SUPPLY P.C.B. (DVD-S35PLA)

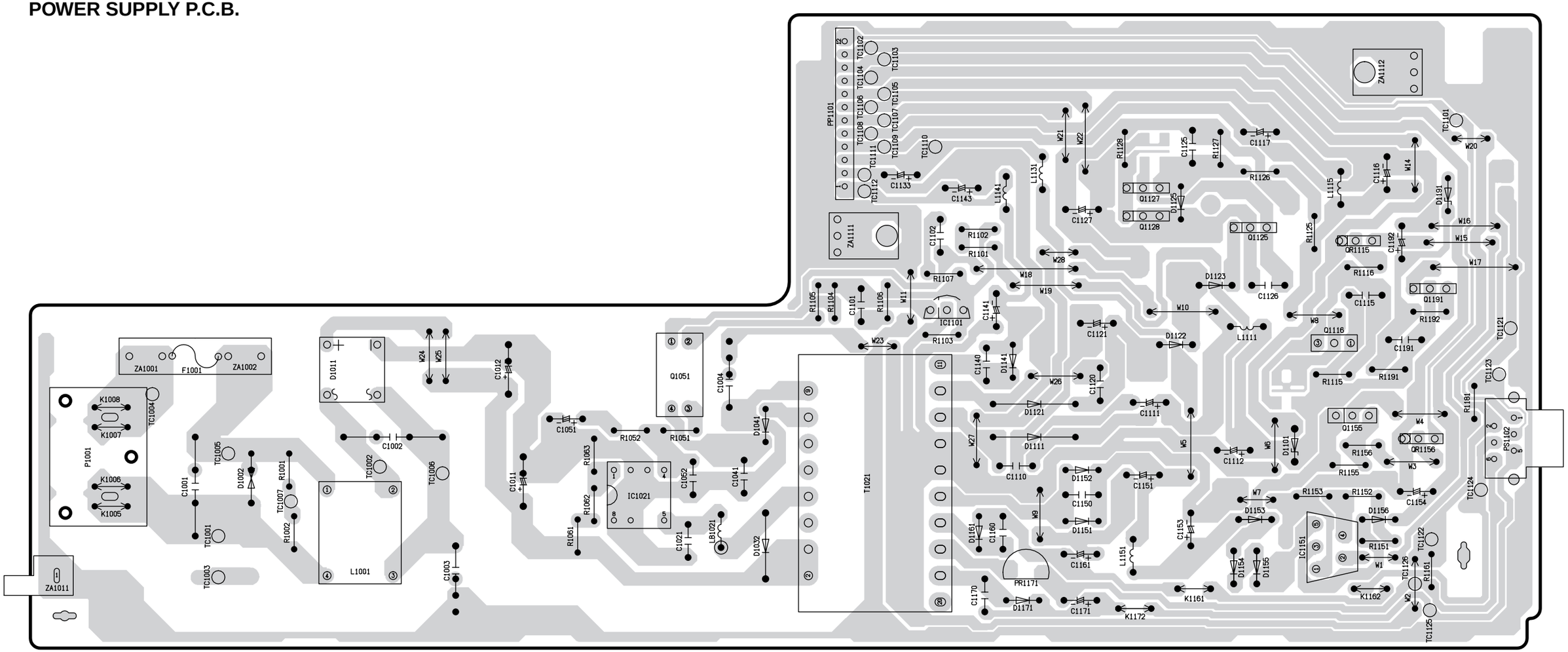
TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

POWER SUPPLY P.C.B.

POWER SUPPLY P.C.B.			
Transistors		**Integrated Circuits**	
Q1051	B-4	IC1021	B-4
Q1116	B-8	IC1101	C-6
Q1125	C-8	IC1151	A-8
Q1127	C-7	**Connectors**	
Q1128	C-7	P1001	B-1
Q1155	B-8	PP1101	D-5
Q1191	C-9	PS1102	B-9
Transistors-resistors			
QR1115	C-8		
QR1156	B-8		

ADDRESS INFORMATION



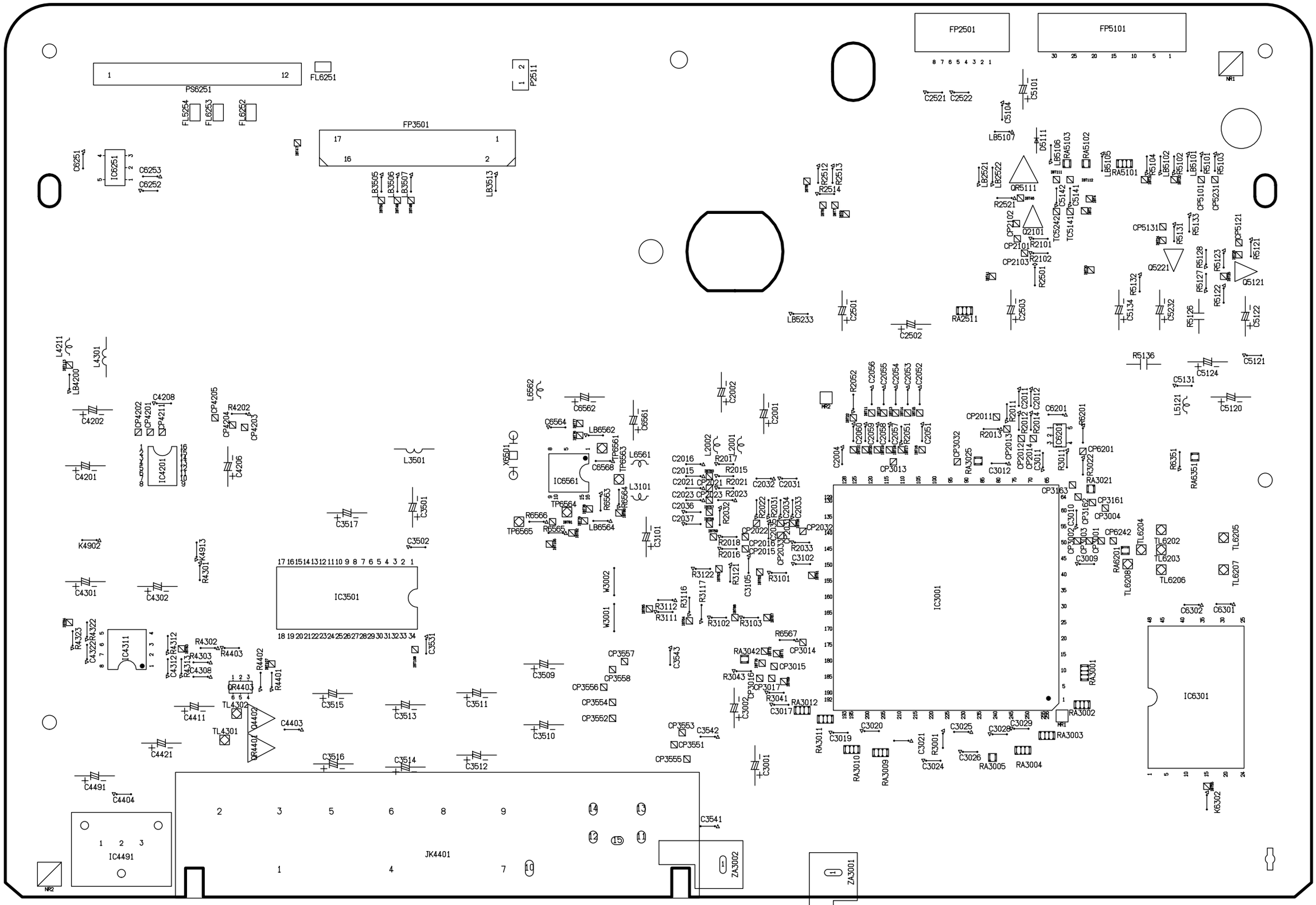
DVD-S35PLA
POWER SUPPLY P.C.B.(REP3504C-1C)

17.4 MAIN P.C.B. (1/2) (COMPONENT SIDE) (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MAIN P.C.B. (1/2)



(COMPONENT SIDE)

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
MAIN P.C.B.(1/2)(REP3580F-C:GCS/GCU/GC/GCA/GD/EE/GN,REP3580D-C:PL/PLA)

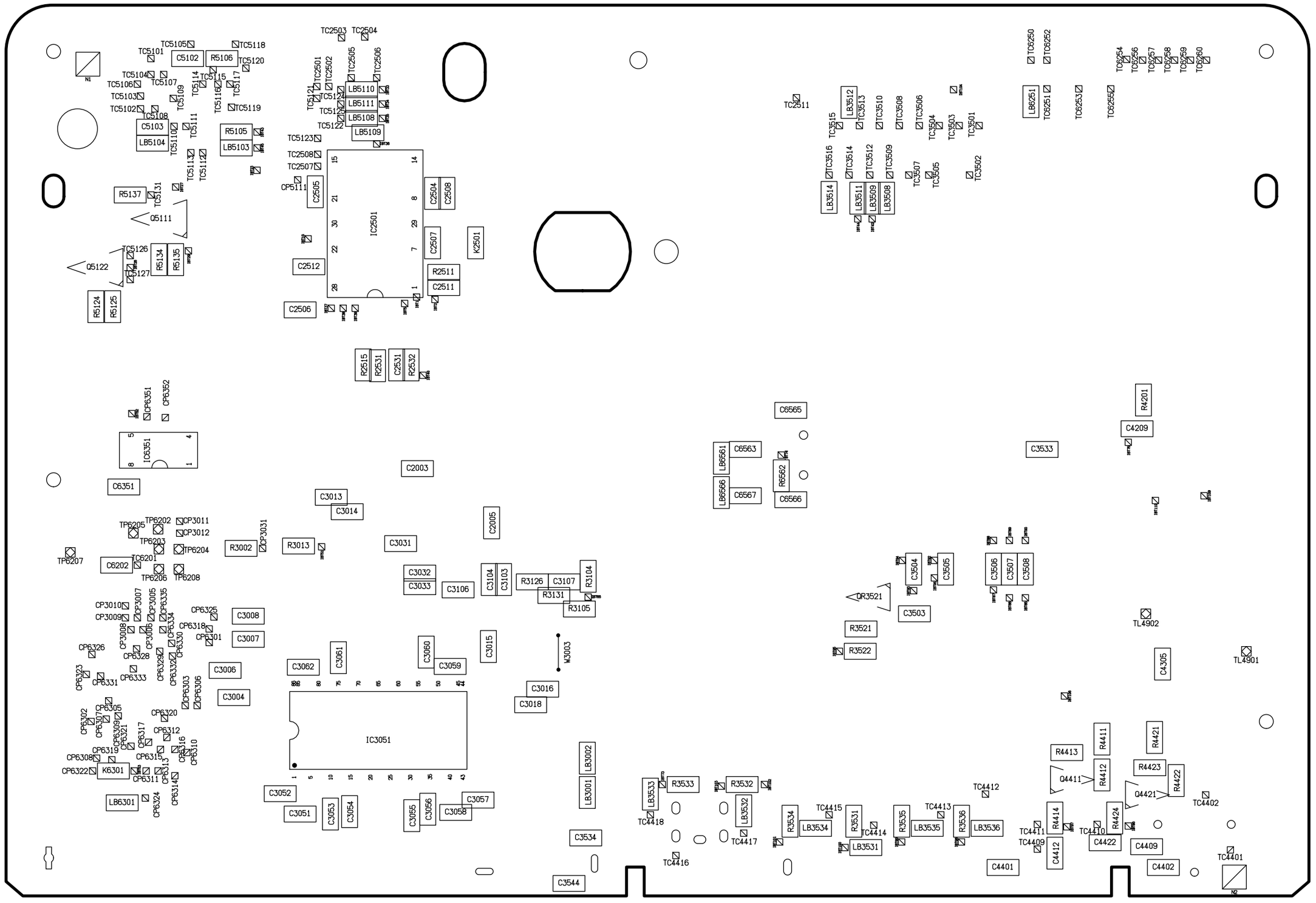
17.5 MAIN P.C.B. (2/2) (FOIL SIDE) (DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MAIN P.C.B. (2/2)

* IC6351 is not supplied in the form of an individual part.
When replacing, be sure to replace the main p.c.b.
and not IC6351 singly.



(FOIL SIDE)

DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
MAIN P.C.B.(2/2)(REP3580F-C:GCS/GCU/GC/GCA/GD/EE/GN,REP3580D-C:PL/PLA)

F E D C B A

1 2 3 4 5 6 7 8 9

17.6 MAIN P.C.B. ADDRESS INFORMATION

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MAIN P.C.B.(DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA)

Transistors		
Q2101	E-7	C
Q4402	B-2	C
Q4411	A-7	F
Q4421	A-8	F
Q5111	E-2	F
Q5121	E-8	C
Q5122	E-1	F
Q5221	E-8	C
Transistor-resistors		
QR3521	C-6	F
QR4401	B-2	C
QR4403	B-2	C
QR5111	E-7	C
Integrated Circuits		
IC2501	E-3	F
IC3001	C-6	C
IC3051	B-3	F
IC3501	C-3	C
IC4201	C-2	C
IC4311	B-2	C
IC4491	A-1	C
IC6201	D-7	C
IC6251	E-1	C
IC6301	B-8	C
IC6351	C-2	F
IC6561	C-4	C
Test Points		
CP2011	D-7	C
CP2012	D-7	C
CP2013	D-7	C
CP2014	D-7	C
CP2015	C-5	C
CP2016	C-5	C
CP2021	C-5	C
CP2022	C-5	C
CP2023	C-5	C
CP2031	C-5	C
CP2032	C-6	C
CP2033	C-5	C
CP2101	E-7	C
CP2102	E-7	C
CP2103	E-7	C
CP3001	C-7	C
CP3002	C-7	C
CP3003	C-7	C
CP3004	C-7	C
CP3005	B-2	F
CP3006	B-2	F
CP3007	B-2	F
CP3008	B-2	F
CP3009	B-2	F
CP3010	C-2	F
CP3011	C-2	F
CP3012	C-2	F
CP3013	C-6	C
CP3014	B-6	C
CP3015	B-5	C
CP3016	B-5	C
CP3017	B-5	C
CP3031	C-2	F
CP3032	C-6	C
CP3161	C-7	C
CP3162	C-7	C
CP3163	C-7	C
CP3551	B-5	C
CP3552	B-4	C
CP3553	B-5	C
CP3554	B-4	C
CP3555	B-5	C
CP3556	B-4	C
CP3557	B-4	C
CP3558	B-4	C
CP4201	D-2	C
CP4202	D-2	C
CP4203	D-2	C
CP4204	D-2	C
CP4205	D-2	C
CP4211	D-2	C
CP5101	E-8	C
CP5111	E-3	F
CP5121	E-8	C
CP5131	E-8	C
CP5231	E-8	C
CP6201	C-7	C
CP6242	C-7	C
CP6301	B-2	F
CP6302	B-1	F
CP6303	B-2	F
CP6305	B-1	F
CP6306	B-2	F
CP6307	B-1	F
CP6308	B-1	F
CP6309	B-1	F
CP6310	B-2	F
CP6311	B-2	F
CP6312	B-2	F
CP6313	B-2	F
CP6314	B-2	F
CP6315	B-2	F
CP6316	B-2	F
CP6317	B-2	F
CP6318	B-2	F
CP6319	B-1	F
CP6320	B-2	F
CP6321	B-2	F
CP6322	B-1	F
CP6323	B-1	F
CP6324	A-2	F
CP6325	B-2	F
CP6326	B-1	F
CP6328	B-2	F
CP6329	B-2	F
CP6330	B-2	F
CP6331	B-1	F
CP6332	B-2	F
CP6333	B-2	F
CP6334	B-2	F
CP6335	B-2	F
CP6351	D-2	F
CP6352	D-2	F
TL4301	B-2	C
TL4302	B-2	C
TL4901	B-8	F
TL4902	B-8	F
TL6202	C-8	C
TL6203	C-8	C
TL6204	C-8	C
TL6205	C-8	C
TL6206	C-8	C
TL6207	C-8	C
TL6208	C-7	C
TP6202	C-2	F
TP6203	C-2	F
TP6204	C-2	F
TP6205	C-2	F
TP6206	C-2	F
TP6207	C-1	F
TP6208	C-2	F
TP6561	C-4	C
TP6563	C-4	C
TP6564	C-4	C
TP6565	C-4	C
Connectors		
FP2501	F-6	C
FP3501	E-3	C
FP5101	F-7	C
JK4401	A-3	C
P2511	F-4	C
PS6251	F-2	C

ADDRESS INFORMATION
C COMPONENT SIDE
F FOIL SIDE

MAIN P.C.B.(DVD-S35PX)

Transistors		
Q2101	E-7	C
Q4402	B-2	C
Q4411	A-7	F
Q4421	A-8	F
Q5111	E-2	F
Q5121	E-8	C
Q5122	E-1	F
Q5221	E-8	C
Transistor-resistors		
QR3521	C-6	F
QR4401	B-2	C
QR4403	B-2	C
QR5111	E-7	C
Integrated Circuits		
IC2501	E-3	F
IC3001	C-6	C
IC3051	B-3	F
IC3501	C-3	C
IC4201	C-2	C
IC4311	B-2	C
IC4491	A-2	C
IC6201	C-7	C
IC6251	E-1	C
IC6301	B-8	C
IC6351	C-2	F
IC6561	C-4	C
Test Points		
CP2011	D-7	C
CP2012	D-7	C
CP2013	D-7	C
CP2014	D-7	C
CP2015	C-5	C
CP2016	C-5	C
CP2021	C-5	C
CP2022	C-5	C
CP2023	C-5	C
CP2031	C-5	C
CP2032	C-5	C
CP2033	C-5	C
CP2101	E-7	C
CP2102	E-7	C
CP2103	E-7	C
CP3001	C-7	C
CP3002	C-7	C
CP3003	C-7	C
CP3004	C-7	C
CP3005	D-6	C
CP3006	D-6	C
CP3007	D-6	C
CP3008	D-6	C
CP3009	D-6	C
CP3010	D-6	C
CP3011	D-6	C
CP3012	D-6	C
CP3013	D-6	C
CP3014	C-5	C
CP3015	B-5	C
CP3016	B-5	C
CP3017	B-5	C
CP3031	C-2	F
CP3032	D-6	C
CP3161	D-7	C
CP3162	D-7	C
CP3163	D-7	C
CP3551	C-4	C
CP3552	C-3	C
CP3553	C-4	C
CP3554	C-3	C
CP3555	C-4	C
CP3556	C-3	C
CP3557	C-4	C
CP3558	C-3	C
CP4201	D-2	C
CP4202	D-2	C
CP4203	D-2	C
CP4204	D-2	C
CP4205	D-2	C
CP4211	D-2	C
CP5101	E-8	C
CP5111	E-7	C
CP5121	E-8	C
CP5131	E-8	C
CP5231	E-8	C
CP6201	D-7	C
CP6211	C-8	C
CP6212	C-8	C
CP6213	C-8	C
CP6214	C-8	C
CP6217	C-8	C
CP6218	C-8	C
CP6219	C-8	C
CP6242	B-8	C
CP6301	A-1	F
CP6302	A-2	F
CP6303	A-2	F
CP6305	A-2	F
CP6306	A-2	F
CP6307	A-2	F
CP6308	A-2	F
CP6309	A-2	F
CP6310	A-2	F
CP6311	A-2	F
CP6312	A-2	F
CP6313	A-2	F
CP6314	A-2	F
CP6315	A-2	F
CP6316	A-2	F
CP6317	A-2	F
CP6318	C-2	F
CP6319	A-2	F
CP6320	A-2	F
CP6321	B-2	F
CP6322	B-2	F
CP6323	B-2	F
CP6324	A-2	F
CP6325	A-1	F
CP6326	B-2	F
CP6327	A-2	F
CP6328	A-2	F
CP6329	A-2	F
CP6330	A-2	F
CP6331	A-2	F
CP6332	A-2	F
CP6333	A-2	F
CP6334	A-2	F
CP6335	A-1	F
CP6336	A-1	F
CP6337	A-1	F
CP6338	A-1	F
CP6339	A-1	F
CP6340	A-1	F
CP6341	A-1	F
CP6342	A-1	F
CP6343	A-2	F
CP6344	A-2	F
CP6351	C-2	F
CP6352	C-2	F
TL4301	B-2	C
TL4302	B-2	C
TL4901	B-8	F
TL4902	B-8	F
TL6201	B-8	C
TL6202	B-8	C
TL6203	B-8	C
TL6204	B-8	C
TL6205	B-8	C
TL6206	B-8	C
TL6207	B-8	C
TL6208	B-8	C
TP6201	C-1	F
TP6202	B-1	F
TP6203	B-1	F
TP6204	B-1	F
TP6205	D-2	F
TP6206	D-2	F
TP6207	B-5	F
TP6208	B-1	F
TP6561	D-4	C
TP6563	C-4	C
TP6564	C-4	C
TP6565	D-2	C
Connectors		
FP2501	F-7	C
FP3501	E-3	C
FP5101	F-7	C
JK4401	A-3	C
P2511	F-4	C
PS6251	F-2	C

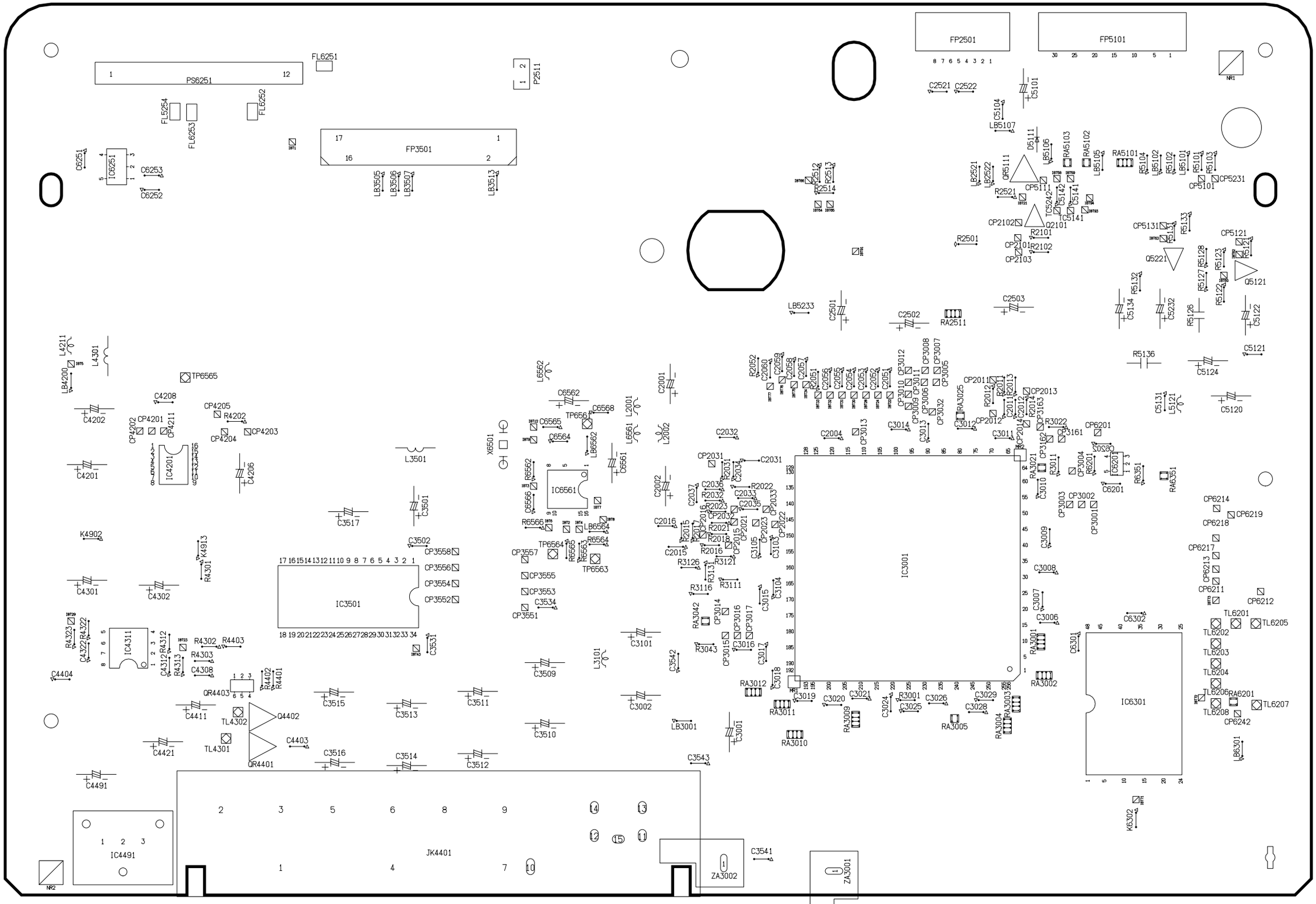
ADDRESS INFORMATION
C COMPONENT SIDE
F FOIL SIDE

17.7 MAIN P.C.B. (1/2) (COMPONENT SIDE) (DVD-S35PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MAIN P.C.B. (1/2)



(COMPONENT SIDE)

DVD-S35PX
MAIN P.C.B.(1/2)(REP3579E-C)

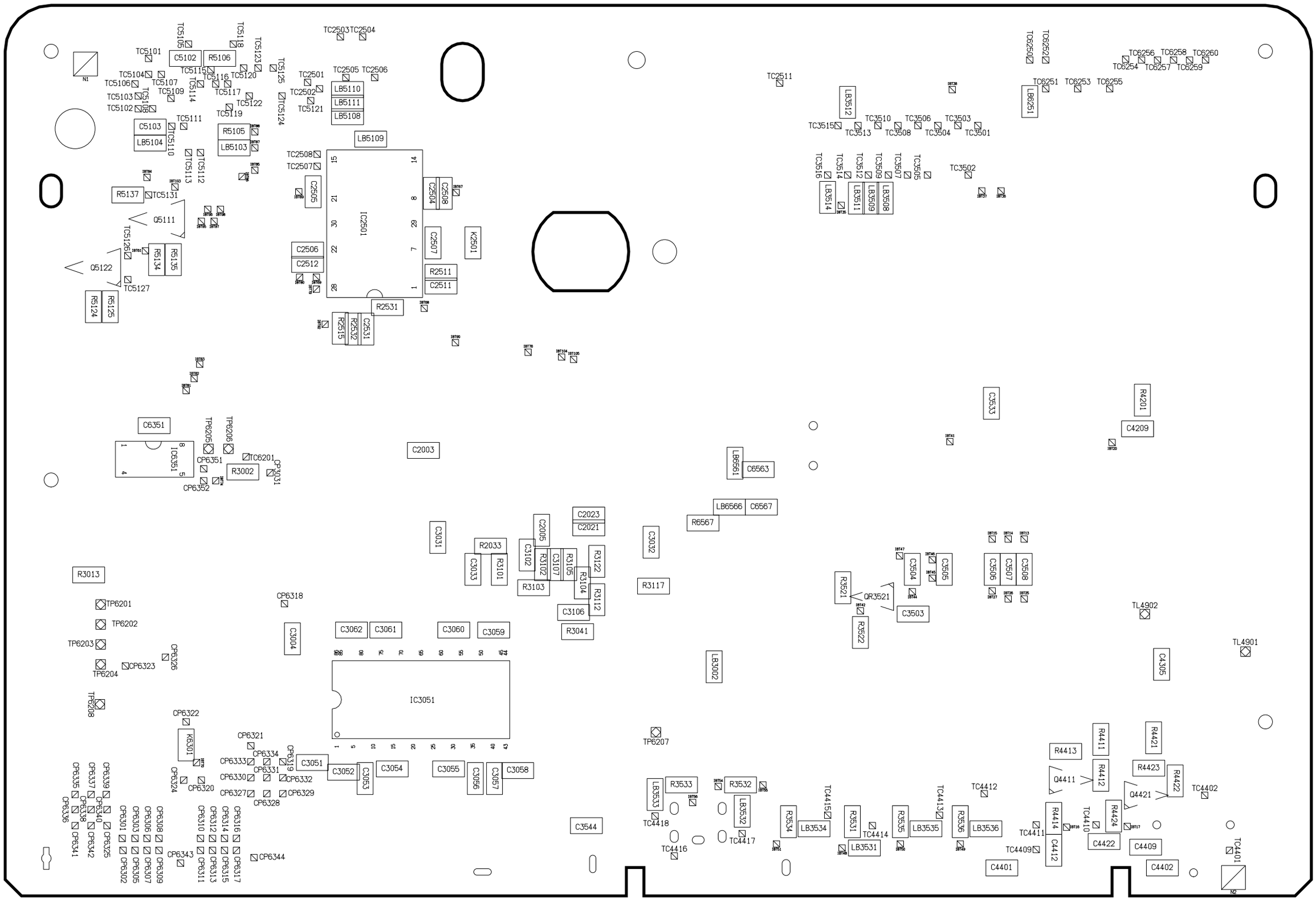
17.8 MAIN P.C.B. (2/2) (FOIL SIDE) (DVD-S35PX)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MAIN P.C.B. (2/2)

* IC6351 is not supplied in the form of an individual part.
When replacing, be sure to replace the main p.c.b.
and not IC6351 singly.



(FOIL SIDE)

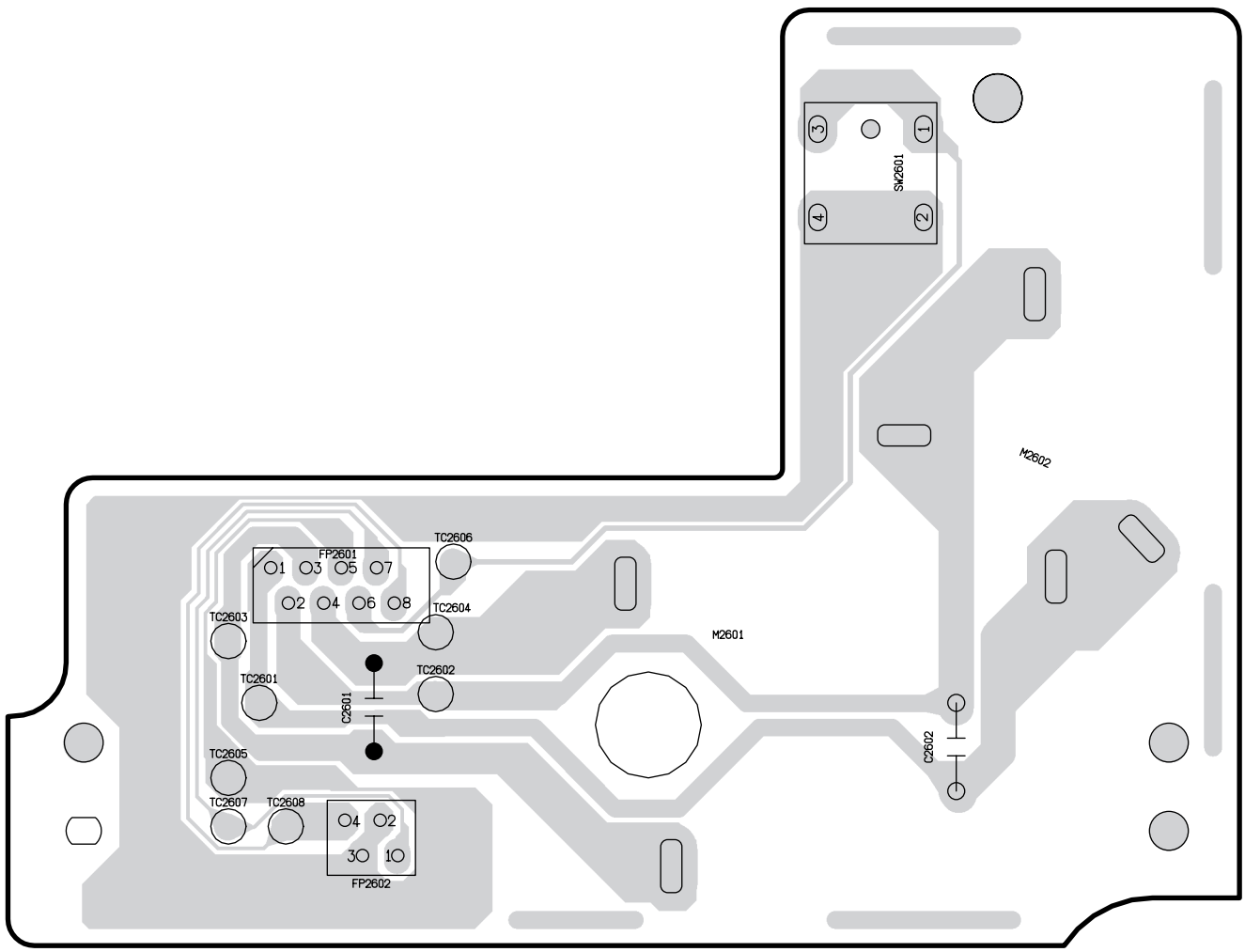
DVD-S35PX
MAIN P.C.B.(2/2)(REP3579E-C)

17.9 MOTOR P.C.B.

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

MOTOR P.C.B.



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
MOTOR P.C.B.(REP3501A-C)

17.10 OPERATION P.C.B.

TOP PREVIOUS NEXT

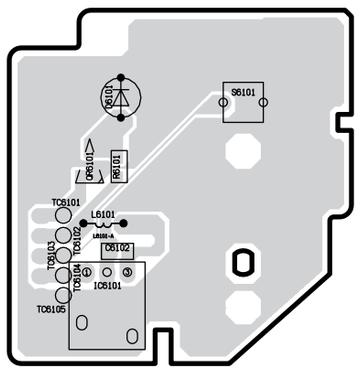
TOP PREVIOUS NEXT

OPERATION P.C.B.			
Transistors		**Connectors**	
Q6091	A-8	FC6002	A-9
Transistors-resistors		FP6003	A-3
QR6081	B-2	PP6001	A-2
QR6101	C-8		
Integrated Circuits			
IC6001	A-4		
IC6011	A-3		
IC6101	B-8		

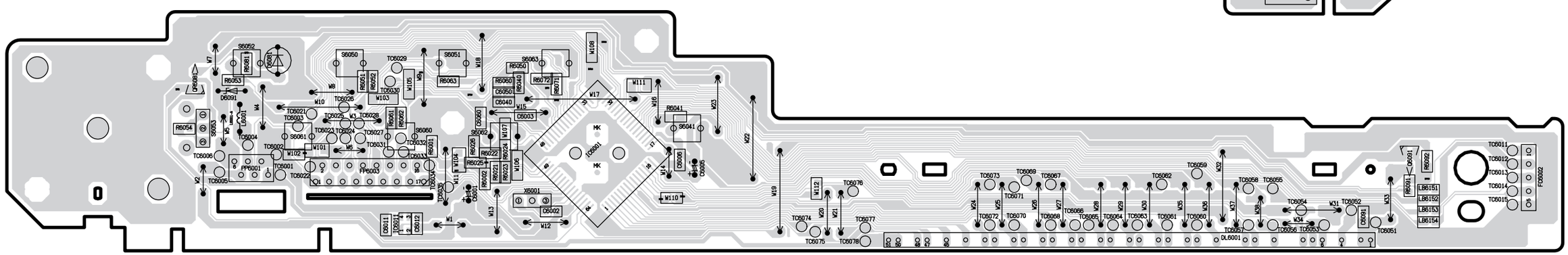
ADDRESS INFORMATION

OPERATION P.C.B.

OPERATION (L) P.C.B.



OPERATION (R) P.C.B.



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
OPERATION P.C.B.(REP3503A-C:GCS/GCU/GD,REP3503G-C:GC/GCA,
REP3503J-C:EE,REP3503F-C:GN,REP3503H-C:PL/PLA,REP3503N-C:PX)

18 EXPLODED VIEWS

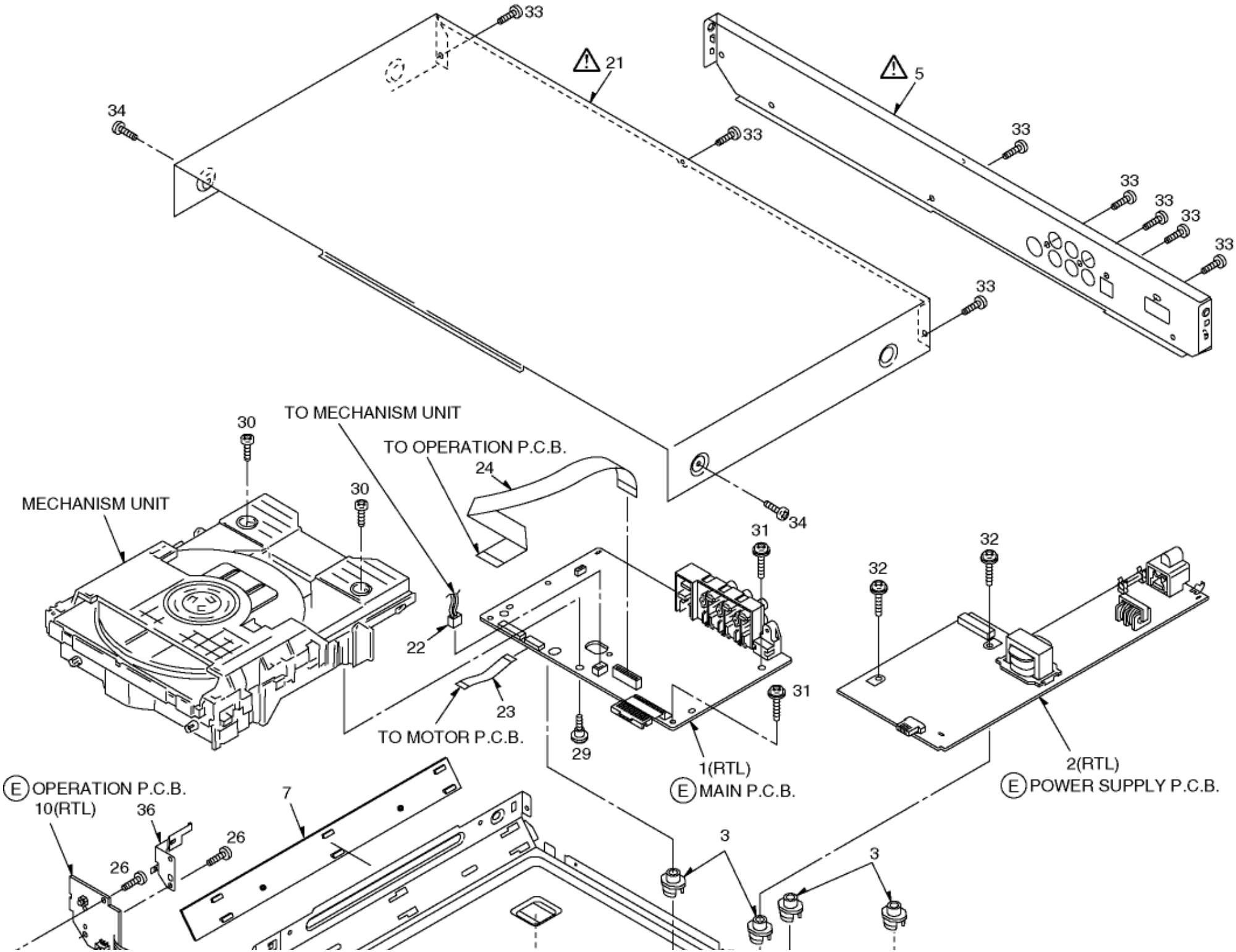
TOP PREVIOUS NEXT

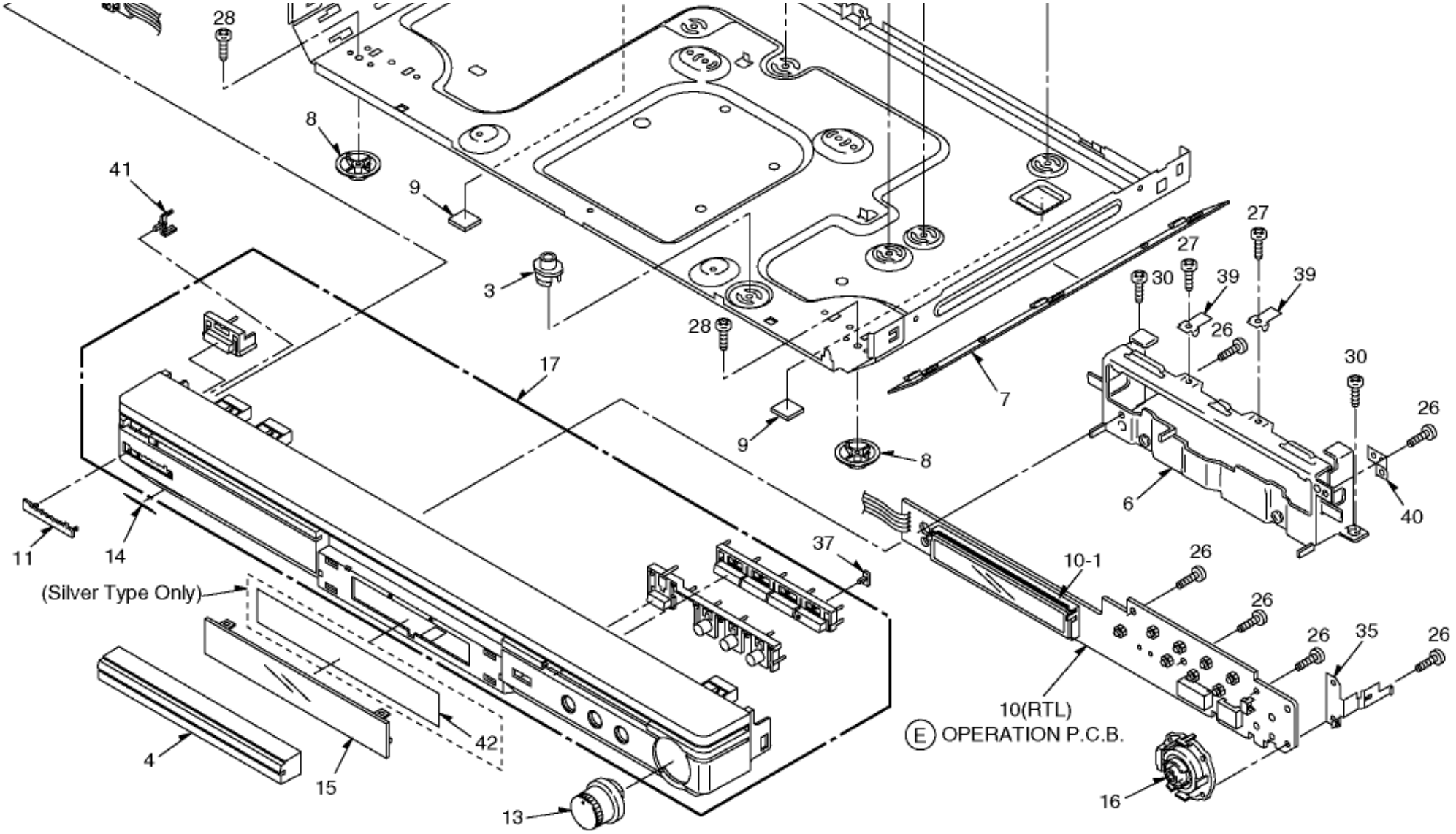
TOP PREVIOUS NEXT

18.1 Casing Parts& Mechanism Section Exploded View

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

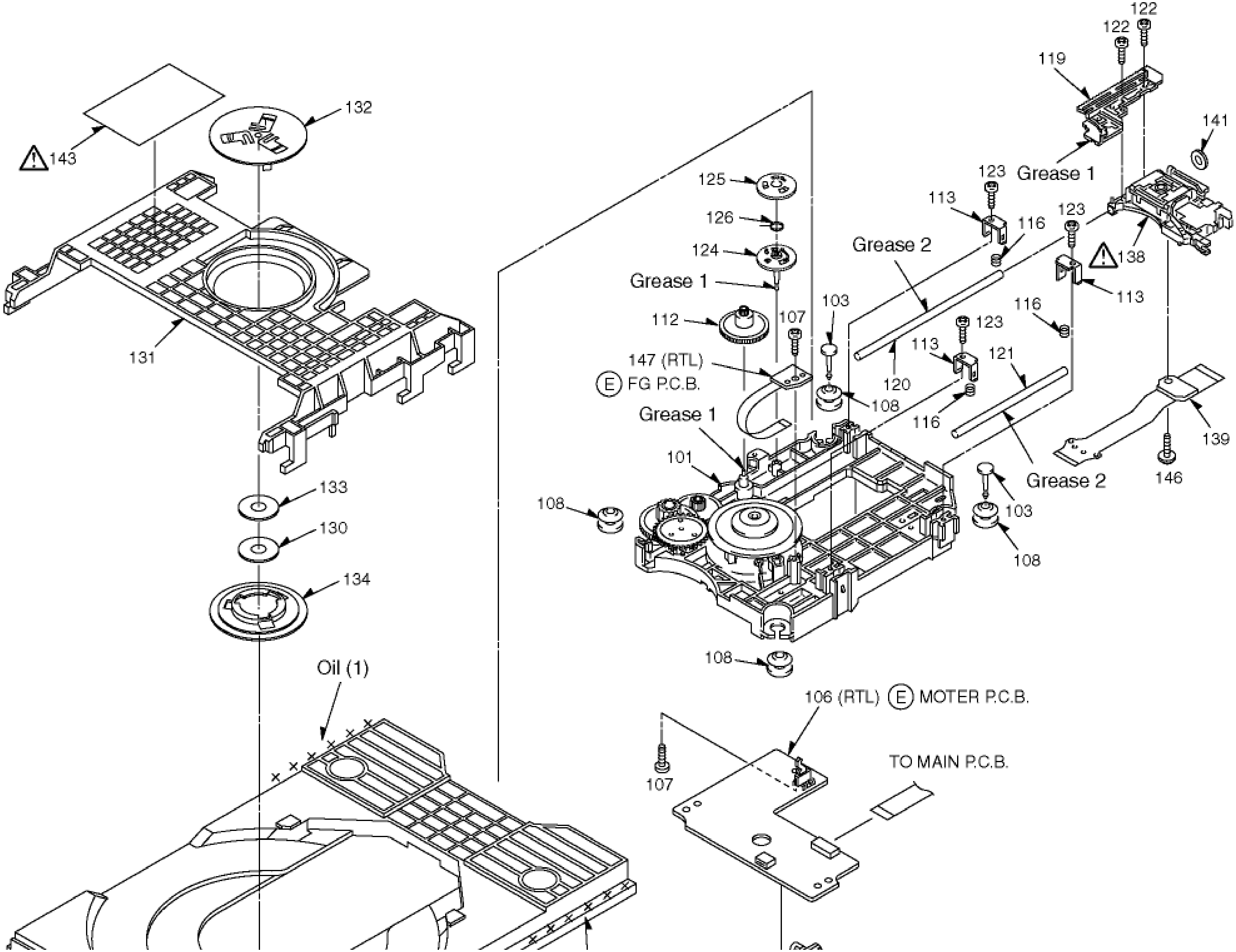

33
21
5
34
33
33
33
33
33
33
33
30
TO MECHANISM UNIT
TO OPERATION P.C.B.
24
MECHANISM UNIT
30
34
31
32
32
22
31
23
TO MOTOR P.C.B.
29
1(RTL)
E MAIN P.C.B.
2(RTL)
E POWER SUPPLY P.C.B.
E OPERATION P.C.B.
10(RTL)
36
7
26
26
3
3

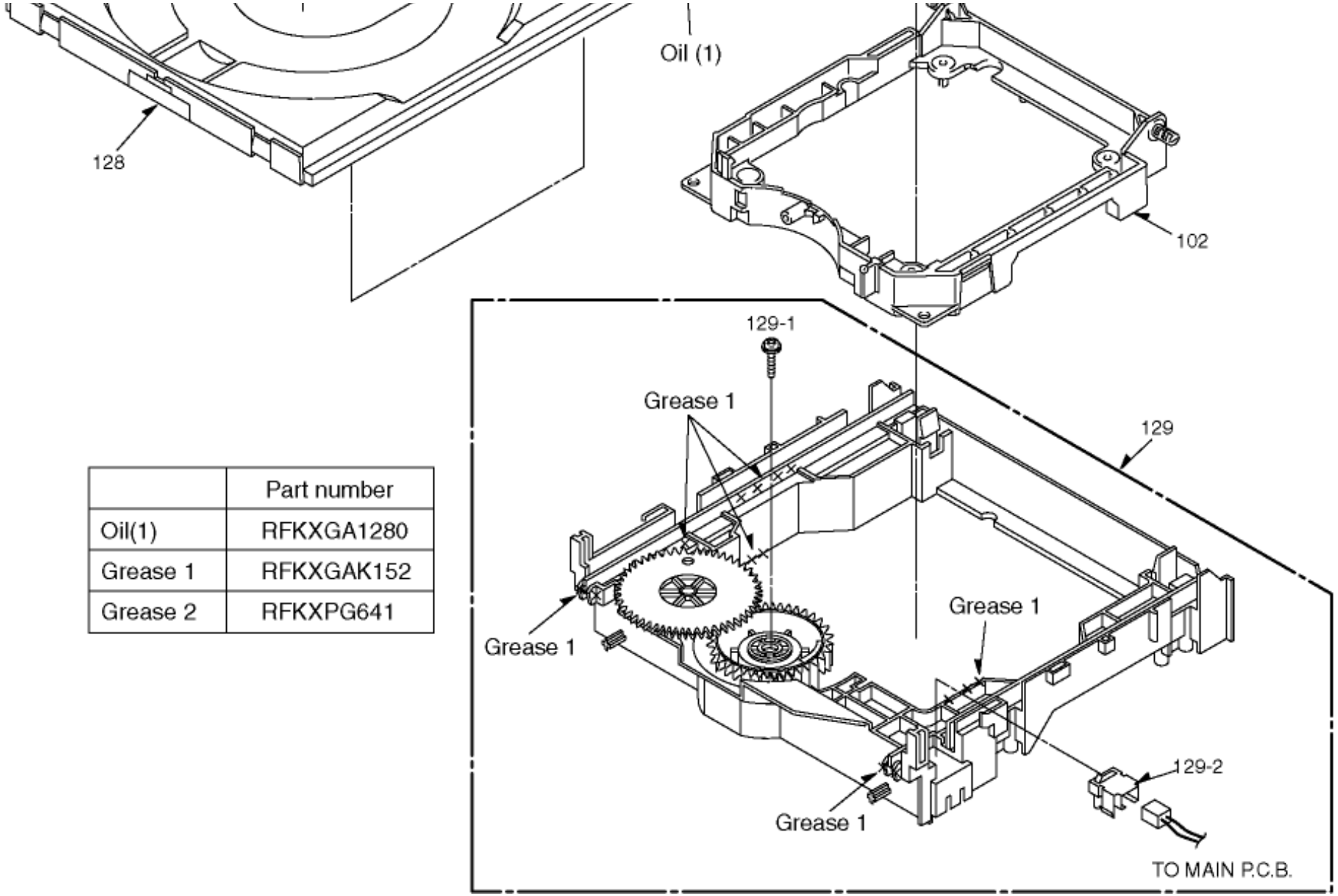

28
8
41
9
3
28
17
9
8
7
27
27
30
39
39
26
30
26
6
40
11
14
(Silver Type Only)
37
10-1
26
26
26
35
26
10(RTL)
E OPERATION P.C.B.
4
15
42
13
16

18.2 Mechanism Section Exploded View

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


122
122
119
132
141
143
Grease 1
125
123
113
126
116
123
124
Grease 2
138
Grease 1
113
103
107
116
112
123
147 (RTL)
113
121
E FG P.C.B.
120
108
116
Grease 1
139
101
Grease 2
146
131
108
103
133
108
130
134
108
Oil (1)
106 (RTL) E MOTER P.C.B.
TO MAIN P.C.B.
107

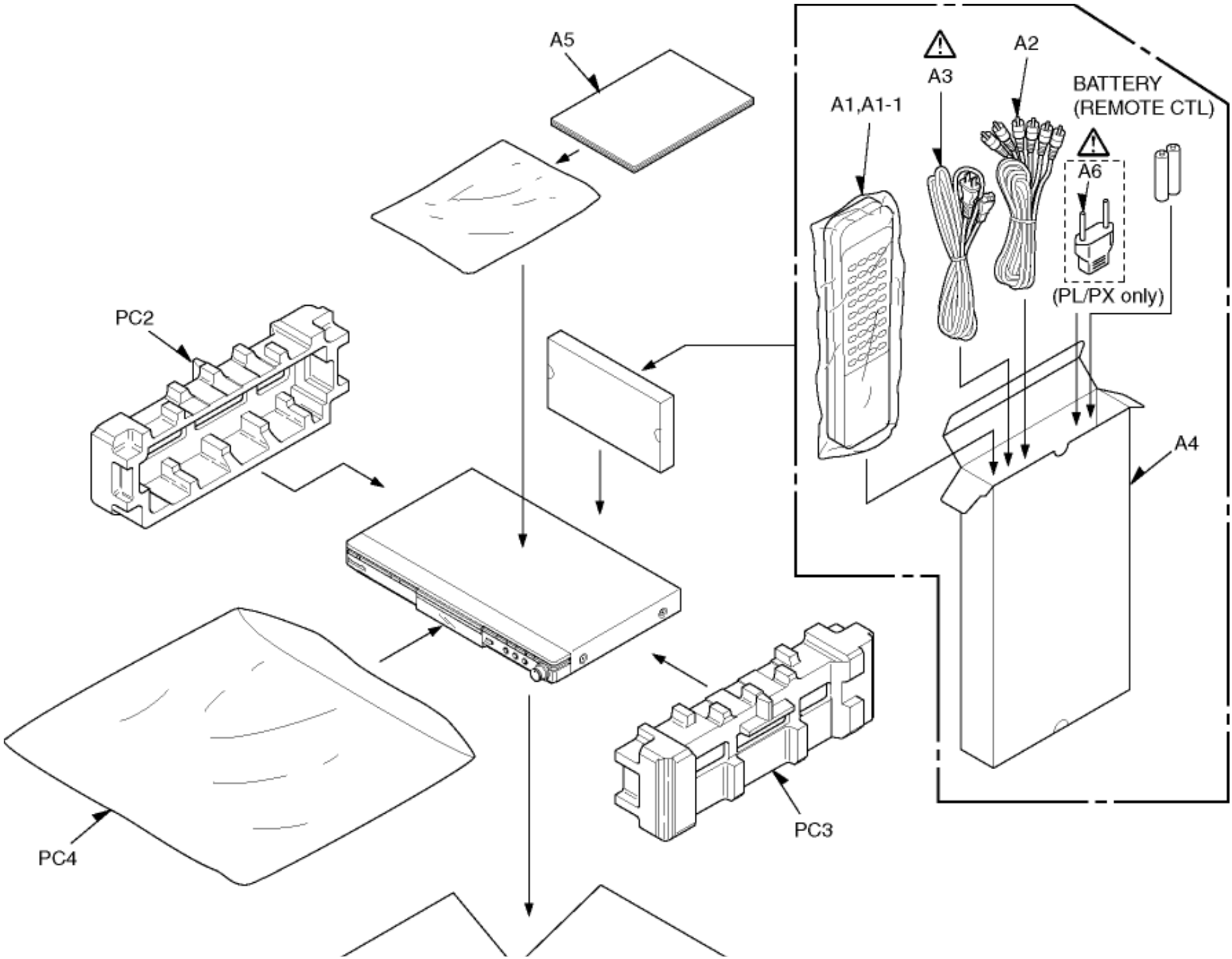


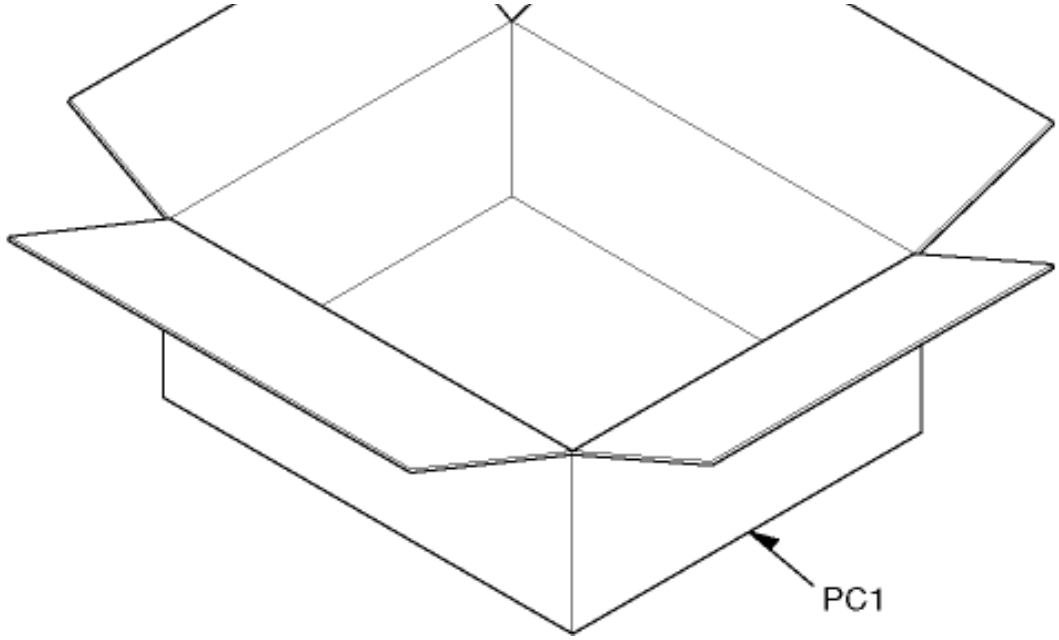
	Part number
Oil(1)	RFKXGA1280
Grease 1	RFKXGAK152
Grease 2	RFKXPG641

18.3 Packing& Accessories Section Exploded View

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


A5
A1,A1-1
A3
A2
BATTERY
(REMOTE CTL)
A6
(PL/PX only)
PC2
A4
PC4
PC3


PC1

19 REPLACEMENT PARTS LIST

TOP PREVIOUS NEXT

Notes:

*Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture’s specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*“<IA> - <IF>”, marks in Remarks indicate languages of instruction manuals. [<IA>: English, <IB>: English, <IC>: Spanish, Portuguese, <ID>:Chinese, <IE>:Korean, <IF>: Arabic.]

*All parts are supplied by S.P.C..

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	REP3579E-C	MAIN P.C.B.	1	PX
1	REP3580D-C	MAIN P.C.B.	1	PLA,PL
1	REP3580F-C	MAIN P.C.B.	1	GN,EE,GD,GCA,GC,GCU,GCS
2	REP3504C-1C	POWER SUPPLY P.C.B.	1	(RTL)PLA
2	REP3560A-C	POWER SUPPLY P.C.B.	1	(RTL)PX,PL,GD,GCA,GC,GCU,GCS

2	REP3560B-C	POWER SUPPLY P.C.B.	1	(RTL)EE,GN
3	CMR0001-J	PCB SUPPORT	5	
4	RGKC0010-KJ	TRAY TOP	1	(K)
4	RGKC0010-SJ	TRAY TOP	1	(S)
5	RGRC0008A-D	REAR PANEL	1	EE ⚠
5	RGRC0008A-F	REAR PANEL	1	GCS ⚠
5	RGRC0008A-G	REAR PANEL	1	GCU ⚠
5	RGRC0008A-H	REAR PANEL	1	GN ⚠
5	RGRC0008A-I	REAR PANEL	1	PL ⚠
5	RGRC0008A-J	REAR PANEL	1	PX ⚠
5	RGRC0008A-K	REAR PANEL	1	GC ⚠
5	RGRC0008A-L	REAR PANEL	1	GD ⚠
5	RGRC0008A-M	REAR PANEL	1	PLA ⚠
5	RGRC0008A-N	REAR PANEL	1	GCA ⚠
6	RMAC0005	FRONT ANGLE	1	
7	RGKC0009-KJ	DECORATION PLATE	2	(K)
7	RGKC0009-SJ	DRCORATION PLATE	2	(S)
8	RKA0132-K	FOOT	2	
9	RKA0137-K	FOOT RUBBER	2	
10	REP3503A-C	OPERATION P.C.B.	1	(RTL)GD,GCU,GCS
10	REP3503F-C	OPERATION P.C.B.	1	(RTL)GN
10	REP3503G-C	OPERATION P.C.B.	1	(RTL)GCA,GC
10	REP3503H-C	OPERATION P.C.B.	1	(RTL)PLA,PL
10	REP3503J-C	OPERATION P.C.B.	1	(RTL)EE
10	REP3503N-C	OPERATION P.C.B.	1	(RTL)PX
10-1	RMNC0002	FL HOLDER	1	
11	RGBC0002	PANASONIC BADGE	1	
13	RGWC0004-KJ	SHUTTLE KNOB	1	(K)
13	RGWC0004-SJ	SHUTTLE KNOB	1	(S)
14	RKW0652-K	REMOTE CONTROL WINDOW	1	(K)
14	RKW0652-S	REMOTE CONTROL WINDOW	1	(S)
15	RKWC0004-J	FL WINDOW	1	

16	RXQC0001	SHUTTLE BASE ASS'Y	1	
17	RYPC0011-AK	FRONT PANEL	1	EE-K
17	RYPC0011-DS	FRONT PANEL	1	PX,PLA,PL
17	RYPC0011-ES	FRONT PANEL	1	GN,EE-S,GD,GCA,GC,GCU,GCS
21	RKMC0001-K	TOP PANEL	1	(K) ⚠
21	RKMC0001-S	TOP PANEL	1	(S) ⚠
22	REX1155	CONNECTOR CABLE(2P)	1	
23	REZ1528	FFC(8P)	1	
24	REZ1530	FFC(13P)	1	
26	XTBS26+10J	SCREW	8	
27	XTB3+4F	SCREW	2	
28	XTV3+6G	SCREW	2	
29	RHDC0002	SCREW	1	
30	RHD30102	SCREW	4	
32	RHDC0003	SCREW	5	
33	VHD0690	SCREW	8	
34	VHD1041	SCREW	2	(K)
34	VHD1094	SCREW	2	(S)
35	RMCC0008	EARTH PLATE(A)	1	
36	RMCC0009	EARTH PLATE(B)	1	
37	RGLC0002-J	LIGHTING PIECE(A)	1	
39	RMCC0018	EARTH PLATE(G)	2	
40	RMCC0015	EARTH PLATE(D)	1	
41	RGLC0003-J	LIGHTING PIECE(B)	1	
42	RGQC0003-J	FILTER	1	(S)
101	RXQ1016A	SPINDLE MOTOR ASS'Y	1	
102	RMR1323-K	MIDDLE CHASSIS	1	
103	RMS0712	FIXED PIN	2	
106	REP3501A-C	MOTOR P.C.B.	1	(RTL)
107	XTN2+6G	SCREW	2	
108	RMG0545-A1	FLOATING RUBBER	4	
112	RDGC0499-J	TRAVERSE GEAR(A)	1	

113	RMC0415	ADJUST SPRING HOLDER(1)	3	
116	RMEC0320	ADJUST SPRING	3	
119	RMM0251	TRAVERSE DRIVE RACK	1	
120	RMSC0710	GUIDE SHAFT(1)	1	
121	RMSC0711	GUIDE SHAFT(2)	1	
122	RHD17045	SCREW	2	
123	VHD1224-C	SCREW	3	
124	RDG0500	TRAVERSE GEAR(B)	1	
125	RDG0501	TRAVERSE GEAR(C)	1	
126	RMEC0319	TRAVERSE GEAR SPRING	1	
128	RGQ0280-K5	TRAY	1	
129	RXQ0727-5	MECHA CHASSIS ASS'Y	1	
129-1	XTW3+12S	SCREW	1	
129-2	RSH1A049-U	OPEN SWITCH	1	K0F111E00093
130	JSMC0048	MAGNET	1	
131	RMR1445-K	CLAMP PLATE	1	
132	RMR1447-X	MAGNET HOLDER	1	
133	XWG6FFY	WASHER	1	
134	RMR1446-X	CLAMPER	1	
138	RAF3023A-1	OPTICAL PICK-UP	1	⚠
139	RJB2308A-1	INTERFACE FPC	1	
141	RMG0561-T	CUSHION RUBBER	1	
143	RQLCA0141	LASER CAUTION LABEL	1	
146	RHD14095	SCREW	1	
147	REP3081A	FG P.C.B.	1	(RTL)
A1	EUR7621020	REMOTE CONTROL ASS'Y	1	
A1-1	UR76EC2102B	BATTERY COVER	1	
A2	JAC3315N	AV CORD	1	
A3	RJA0019-2X	AC CORD	1	EE,PX,GCA,GC,GCU,GCS ⚠
A3	RJA0035-2X	AC CORD	1	GN ⚠
A3	RJA0065-2D	AC CORD	1	PLA ⚠

A3	RJA0078-1X	AC CORD	1	GD ⚠
A3	VJA0667	AC CORD	1	K2CA2DA00013 PL ⚠
A4	RPQCF0006	ACCESSORY BOX	1	
A5	RQT6933-1P	OPERATING INSTRUCTIONS	1	<IA>EE,PX,GCA,GC,GCU,GCS
A5	RQT6933-P	OPERATING INSTRUCTIONS	1	<IB>GN
A5	RQT6935-M	OPERATING INSTRUCTIONS	1	<IC>PLA,PL
A5	RQT6936-K	OPERATING INSTRUCTIONS	1	<ID>GCU,GCS
A5	RQT6937-Z	OPERATING INSTRUCTIONS	1	<IE>GD
A5	RQT6938-A	OPERATING INSTRUCTIONS	1	<IF>GCA,GC
A6	VJP2974	POWER PLUG ADAPTOR	1	K2DA42E00001 PX ⚠
A6	VJP3085	POWER PLUG ADAPTOR	1	K2DR42E00001 PL ⚠
C1001,02	F0CAF104A024	0.1U	2	⚠
C1003	ECKMNA102MEV	0.01U	1	PLA ⚠
C1003	VCK0286B471	CERAMIC CAPACITOR	1	F1BAF471A013 EXCEPT(PLA)AREA ⚠
C1004	ECKMNA222MEV	0.022U	1	PLA ⚠
C1004	VCK0286E102	CERAMIC CAPACITOR	1	F1BAF1020011 EXCEPT(PLA)AREA ⚠
C1011	ECA2VHG220	350V 22U	1	PLA
C1011	ECA2WHG220	450V 22U	1	EXCEPT(PLA)AREA
C1012	ECA2VHG220	350V 22U	1	PLA
C1012	ECA2WHG100	450V 10U	1	EE,GN
C1012	ECA2WHG220	450V 22U	1	PX,PL,GD,GCA,GC,GCU,GCS
C1021	ECCD3A470JGE	1000V 47P	1	PLA
C1021	F1B3D221A002	2000V 220P	1	GN,EE
C1031	ECKD2H182KB5	500V 1800P	1	F1B2H1820001 GN,EE
C1031	ECKN3A271KBP	CERAMIC CAPACITOR	1	PX,PL,GD,GCA,GC,GCU,GCS
C1032	ECKW3A332KBS	CERAMIC CAPACITOR	1	PX,PL,GD,GCA,GC,GCU,GCS
C1041	ECQB1H223JF4	50V 0.022U	1	EXCEPT(PLA)AREA
C1041	F1E1H104A001	50V 0.1U	1	PLA
C1051	ECQB1H104JF4	50V 0.1U	1	EXCEPT(PLA)AREA
C1051	F2A1E470A002	25V 47U	1	PLA
C1052	ECQB1H683JF4	50V 0.068U	1	EXCEPT(PLA)AREA
C1052	F1E1H104A001	50V 0.1U	1	PLA

C1053	ECQB1H473JF4	50V 0.047U	1	EXCEPT(PLA)AREA
C1101	ECQV1H104JL2	50V 0.1U	1	
C1102	ECQB1H223JF4	50V 0.022U	1	
C1110	ECKD2H101KB5	500V 100P	1	PLA
C1111	F2A1A6810017	10V 680U	1	
C1112	F2A1A102A206	10V 1000U	1	
C1115	F1E1H104A001	50V 0.1U	1	
C1116	ECA1AM221	10V 220U	1	
C1117	F2A0J102A247	6.3V 1000U	1	
C1120	ECKD2H101KB5	500V 100P	1	PLA
C1121	F2A0J1020045	6.3V 1000U	1	
C1125	F1E1H104A001	50V 0.1U	1	
C1126	F1D1H102A012	50V 1000P	1	
C1127	F2A0J102A247	6.3V 1000U	1	
C1133	F2A1E470A205	25V 47U	1	
C1140	ECKD2H101KB5	500V 100P	1	PLA
C1141	EEUFC1E101S	25V 100U	1	
C1143	F2A1E470A205	25V 47U	1	
C1150	ECKD2H101KB5	500V 100P	1	PLA
C1151	EEUFC1E331	25V 330U	1	
C1153	ECA1EM331	25V 330U	1	
C1154	ECA1CM221	16V 220U	1	
C1155	F1E1H104A001	50V 0.1U	1	PX,PL,GD,GCA,GC,GCU,GCS
C1160	ECKD2H101KB5	500V 100P	1	PLA
C1161	F2A1H2200032	50V 22U	1	
C1170	ECKD2H101KB5	500V 100P	1	PLA
C1171	F2A1A1010072	10V 100U	1	
C1191	F1E1H104A001	50V 0.1U	1	
C1192	ECEA0JKA470	6.3V 47U	1	
C2001,02	EEUFC0J101B	6.3V 100U	2	
C2003	ECJ1VF1C104Z	16V 0.1U	1	
C2004	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA
C2005	ECJ1VF1C104Z	16V 0.1U	1	
C2011,12	ECJ1VB1C104K	16V 0.1U	2	

C2015	ECJ1XC1H102J	50V 1000P	1	
C2016	ECJ1XC1H821J	50V 820P	1	
C2021	ECJ1VB1H472K	50V 4700P	1	
C2023	ECJ1XC1H102J	50V 1000P	1	
C2031	ECJ1VF1A105Z	10V 1U	1	EXCEPT(GN)AREA
C2032	ECJ1VF1A105Z	10V 1U	1	
C2033	ECJ1VB0J105K	6.3V 1U	1	
C2034	ECUV1C153KBV	16V 0.015U	1	ECJ1VB1C153K
C2035	ECJ1VC1H221J	50V 220P	1	
C2036	ECJ1VB1C104K	16V 0.1U	1	
C2037	ECJ1XB1C103K	16V 0.01U	1	
C2051	F1H1C333A091	16V 0.033U	1	
C2052	ECJ1VC1H330J	50V 33P	1	
C2053	ECJ1VF1C104Z	16V 0.1U	1	
C2054	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA
C2055	ECJ1VF1C104Z	16V 0.1U	1	
C2056	ECJ1XB1C103K	16V 0.01U	1	
C2057	ECUX1H181JCV	50V 180P	1	ECJ1XC1H181J
C2058	ECJ1VB1C183K	16V 0.018U	1	
C2059	ECJ1VB1H562K	50V 5600P	1	
C2060	ECJ1VB1C104K	16V 0.1U	1	
C2501	F2A0J3310037	6.3V 330U	1	
C2502	EEUFC1C560	16V 56U	1	
C2503	ECEA1CKA220	16V 22U	1	
C2504-08	ECJ1VF1C104Z	16V 0.1U	5	
C2511,12	ECJ1VF1C104Z	16V 0.1U	2	
C2521	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA
C2522	ECJ1VF1C104Z	16V 0.1U	1	
C2531	ECJ1VF1C104Z	16V 0.1U	1	
C2601,02	F1E1H104A001	50V 0.1U	2	
C3001,02	F2A0J3310037	6.3V 330U	2	
C3004	ECJ1VF1C104Z	16V 0.1U	1	
C3006-08	ECJ1VF1C104Z	16V 0.1U	3	
C3009	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA

C3010	ECJ1VF1C104Z	16V 0.1U	1	
C3011	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA
C3012-18	ECJ1VF1C104Z	16V 0.1U	7	
C3019	ERJ3GEYJ331V	1/16W 330U	1	
C3020,21	ECJ1VF1C104Z	16V 0.1U	2	
C3024-26	ECJ1VF1C104Z	16V 0.1U	3	
C3028,29	ECJ1VF1C104Z	16V 0.1U	2	
C3031-33	ECJ1VF1C104Z	16V 0.1U	3	
C3051	ECJ1VB0J105K	6.3V 1U	1	
C3052	ECJ1VF1C104Z	16V 0.1U	1	
C3053	ECJ1VB0J105K	6.3V 1U	1	
C3054	ECJ1VF1C104Z	16V 0.1U	1	
C3055	ECJ1VB0J105K	6.3V 1U	1	
C3056	ECJ1VF1C104Z	16V 0.1U	1	
C3057	ECJ1VB0J105K	6.3V 1U	1	
C3058	ECJ1VF1C104Z	16V 0.1U	1	
C3059	ECJ1VB0J105K	6.3V 1U	1	
C3060	ECJ1VF1C104Z	16V 0.1U	1	
C3061	ECJ1VB0J105K	6.3V 1U	1	
C3062	ECJ1VF1C104Z	16V 0.1U	1	
C3101	ECA0JM331	6.3V 330U	1	
C3102-04	ECJ1VF1C104Z	16V 0.1U	3	
C3105,06	ECJ1VB0J105K	6.3V 1U	2	
C3107	ECJ1VF1C104Z	16V 0.1U	1	
C3501	F2A0J221A245	6.3V 220U	1	
C3502,03	ECJ1XF1H103Z	50V 0.01U	2	
C3504	ECJ1XB1H103K	50V 0.01U	1	
C3505,06	ECJ1VB1C104K	16V 0.1U	2	
C3507,08	ECJ1VB0J105K	6.3V 1U	2	
C3509	F2A0J102A247	6.3V 1000U	1	
C3510	F2A1A101A206	10V 100U	1	
C3511	F2A0J102A247	6.3V 1000U	1	
C3512	F2A1A101A206	10V 100U	1	
C3513	F2A0J102A247	6.3V 1000U	1	

C3514	F2A1A101A206	10V 100U	1	
C3515,16	ECA0JM331	6.3V 330U	2	
C3517	ECEA0JKS220	6.3V 22U	1	
C3531	ECJ1XB1H103K	50V 0.01U	1	
C3533,34	ECJ1XF1H103Z	50V 0.01U	2	
C3541-44	ECJ1VF1C104Z	16V 0.1U	4	
C4201	F2A0J102A247	6.3V 1000U	1	
C4202	F2A1E470A205	25V 47U	1	
C4206	F2A1E221A205	25V 220U	1	
C4208,09	ECJ1VF1C104Z	16V 0.1U	2	
C4301,02	F2A1E221A205	25V 220U	2	
C4305	ECJ1VF1C104Z	16V 0.1U	1	
C4308	ECJ1XF1E104Z	25V 0.1U	1	
C4312	ECJ1VC1H820G	50V 82P	1	
C4322	ECJ1VC1H820G	50V 82P	1	
C4401-04	ECJ1VF1C104Z	16V 0.1U	4	
C4409	ECJ1VF1C104Z	16V 0.1U	1	
C4411	F2A1E470A205	25V 47U	1	
C4412	ECJ1XC1H102J	50V 1000P	1	
C4421	F2A1E470A205	25V 47U	1	
C4422	ECJ1XC1H102J	50V 1000P	1	
C4491	F2A0J470A179	6.3V 47U	1	
C5101	ECEA0JKS220	6.3V 22U	1	
C5102-04	ECJ1VF1C104Z	16V 0.1U	3	
C5120	ECEA0JKA330	6.3V 33U	1	
C5121	ECJ1VF1C104Z	16V 0.1U	1	
C5122	ECEA1HKA4R7	50V 4.7U	1	
C5124	ECEA0JKA470	6.3V 47U	1	
C5131	ECJ1VF1C104Z	16V 0.1U	1	
C5134	ECEA0JKA470	6.3V 47U	1	
C5141,42	ECJ1VB1C104K	16V 0.1U	2	
C5232	ECEA1HKA4R7	50V 4.7U	1	
C6001	ECEA0GKS221	4V 220U	1	
C6002,03	ECJ1XF1C104Z	16V 0.1U	2	

C6005	ECEA1HKS100	50V 10U	1	
C6006	ECJ1XF1H103Z	50V 0.01U	1	
C6011,12	ECJ1XF1C104Z	16V 0.1U	2	
C6040	ECJ1XF1H103Z	50V 0.01U	1	
C6050	ECJ1XF1H103Z	50V 0.01U	1	
C6060	ECJ1XF1H103Z	50V 0.01U	1	
C6091	ECJ1XF1H103Z	50V 0.01U	1	
C6102	ECJ1XF1C104Z	16V 0.1U	1	
C6201	ECJ1VF1C104Z	16V 0.1U	1	
C6202	ECJ1VC1H101J	50V 100P	1	
C6251	ECJ1VB1C104K	16V 0.1U	1	
C6252	ECJ1VB0J105K	6.3V 1U	1	
C6253	ECJ1XB1C103K	16V 0.01U	1	
C6301	ECJ1VF1C104Z	16V 0.1U	1	
C6302	ECJ1VF1C104Z	16V 0.1U	1	EXCEPT(GN)AREA
C6351	ECJ1VF1C104Z	16V 0.1U	1	
C6561,62	F2A1A101A206	10V 100U	2	
C6563,64	ECJ1VF1C104Z	16V 0.1U	2	
C6565,66	ECJ1XC1H150J	50V 15P	2	
C6567	ECJ1VF1C104Z	16V 0.1U	1	
C6568	ECJ1XC1H150J	50V 15P	1	
D1002	ENC471D5A	DIODE	1	J0LG00000008 EXCEPT(PLA)AREA
D1002	ERZVA5Z471	DIODE	1	PLA
D1011	B0EBKT000003	DIODE	1	
D1021	VSD0002	DIODE	1	B0HAGR000005 PX,PL,GD,GCA,GC,GCU,GCS
D1031	AP01C	DIODE	1	B0HADV000010 GN,EE
D1031	VSD0002	DIODE	1	B0HAGR000005 PX,PL,GD,GCA,GC,GCU,GCS
D1032	B0BB20000001	DIODE	1	PLA
D1041	B0HAGM000006	DIODE	1	PLA
D1051,52	MA2C165001VT	DIODE	2	EXCEPT(PLA)AREA
D1053	MAZ40270LF	DIODE	1	EXCEPT(PLA)AREA
D1054	B0HAGM000006	DIODE	1	EXCEPT(PLA)AREA
D1101	MA7075A	DIODE	1	

D1111	21DQ06FC4	DIODE	1	B0JAMG000013 EXCEPT(PLA)AREA
D1111	B0JAME000033	DIODE	1	PLA
D1121	21DQ06FC4	DIODE	1	B0JAMG000013 EXCEPT(PLA)AREA
D1121	B0JAME000033	DIODE	1	PLA
D1122	B0EAKL000031	DIODE	1	GN,EE,PLA
D1122	RL1N4003N02	DIODE	1	B0AAMM000009 PX,PL,GD,GCA,GC,GCU,GCS
D1123	B0EAKL000031	DIODE	1	GN,EE,PLA
D1123	RL1N4003N02	DIODE	1	B0AAMM000009 PX,PL,GD,GCA,GC,GCU,GCS
D1125	MA2C165001VT	DIODE	1	
D1141	11EQS10TA1	DIODE	1	B0JAML000004 GN,EE
D1141	B0JAMG000010	DIODE	1	PLA
D1141	B0JAML000009	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1142	MA7180A-TR	DIODE	1	MAZ71800AC EXCEPT(PLA)AREA
D1151	11EQS10TA1	DIODE	1	B0JAML000004 GN,EE
D1151	B0JAMG000010	DIODE	1	PLA
D1151	B0JAML000009	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1152	11EQS10TA1	DIODE	1	B0JAML000004 GN,EE
D1152	B0JAMG000010	DIODE	1	PLA
D1152	B0JAML000009	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1153	B0EAKL000031	DIODE	1	GN,EE,PLA
D1153	B0EAKM000086	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1154	B0EAKL000031	DIODE	1	GN,EE,PLA
D1154	B0EAKM000086	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1155	B0EAKL000031	DIODE	1	GN,EE,PLA
D1155	B0EAKM000086	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1156	B0EAKL000031	DIODE	1	GN,EE,PLA
D1156	B0EAKM000086	DIODE	1	PX,PL,GD,GCA,GC,GCU,GCS
D1161	B0HAGM000006	DIODE	1	
D1171	B0JAME000037	DIODE	1	
D1191	MAZ40390HF	DIODE	1	
D5111	MA2J72800L	DIODE	1	
D6081	LNJ301MPUJAD	LED(ZOOM)	1	
D6091	MA4043M	DIODE	1	MAZ40430M
D6101	LNJ201LPQJA	LED	1	

DL6001	A2BB00000114	DISPLAY TUBE	1	
F1001	K5D162AQ0004	FUSE	1	PLA ⚠
F1001	K5D162BK0005	FUSE	1	EXCEPT(PLA)AREA ⚠
FC6002	REZ1529	FLAT CABLE	1	
FL5254	F1H0J1050018	FILTER	1	
FL6251	F1J1E1040022	FILTER	1	
FL6252,53	F1H0J1050018	FILTER	2	
FP2501	K1MN08B00066	CONNECTOR(8P)	1	
FP2601	K1MN08B00013	CONNECTOR(8P)	1	
FP2602	K1MN04B00022	CONNECTOR(4P)	1	
FP3501	K1MN13A00013	CONNECTOR(13P)	1	
FP5101	K1MN30B00025	CONNECTOR(30P)	1	
FP6003	K1MN13C00001	CONNECTOR(13P)	1	
IC1021	MIP0244SPSCF	IC	1	PLA
IC1101	C0DAEMZ00001	IC	1	
IC1151	C0DAZHG00026	IC	1	
IC2501	C0GBG0000033	IC	1	
IC3001	MN2DS0002AP1	IC	1	
IC3051	C3ABPJ000048	IC	1	
IC3501	C9ZB00000431	IC	1	
IC4201	C0FBBK000035	IC	1	
IC4311	C0ABBB000118	IC	1	
IC4491	K7AABB000001	IC	1	
IC6001	C2BBGE000655	IC	1	
IC6011	C0EBE0000274	IC	1	
IC6101	B3RAD0000049	IC	1	
IC6201	C0EBE0000070	IC	1	
IC6251	C0CBCBE00003	IC	1	
IC6301	RFKFSS71B160	IC	1	

IC6351	REP3579E-C	MAIN P.C.B.		PX
IC6351	REP3580D-C	MAIN P.C.B.		PLA,PL
IC6351	REP3580F-C	MAIN P.C.B.		GN,EE,GD,GCA,GC,GCU,GCS
IC6561	C1DB00000582	IC	1	EXCEPT(PX)AREA
IC6561	C1DB00000980	IC	1	PX
JK4401	K2YZ07000001	JACK,	1	
K2501	ERJ3GEY0R00V	1/16W 0	1	
K4902	ERJ3GEY0R00V	1/16W 0	1	EXCEPT(GN)AREA
K4913	ERJ3GEY0R00V	1/16W 0	1	
K6301,02	ERJ3GEY0R00V	1/16W 0	2	EXCEPT(GN)AREA
L1001	ELF15N003A	NOISE FILTER	1	EXCEPT(PLA)AREA
L1001	G0BR50A00001	NOISE FILTER	1	PLA
L1111	G0A100H00014	COIL 10UH	1	
L1115	ELELN100KA	COIL 10UH	1	
L1131	VLQEL05S330K	COIL 33UH	1	
L1141	VLQEL05S330K	COIL 33UH	1	
L1151	G0A220G00018	COIL 22UH	1	
L2001,02	G1C100K00020	COIL 10UH	2	
L3101	G1C100K00020	COIL 10UH	1	
L3501	ELESE220KA	COIL 22UH	1	
L4211	G1C220KA0038	COIL 22UH	1	
L4301	ELESE391KA	COIL 390UH	1	
L5121	G1C100K00020	COIL 10UH	1	
L6001	G0C101JA0019	COIL 100UH	1	
L6561,62	G1C220KA0038	COIL 22UH	2	
LB1021	J0JKB0000003	COIL	1	PLA
LB2521,22	J0JBC0000015	COIL	2	
LB3001,02	J0JHC0000045	COIL	2	
LB3505-07	ERJ3GEYJ101	1/16W 100	3	D0GB101JA002
LB3508,09	J0JBC0000015	COIL	2	
LB3511-14	J0JBC0000015	COIL	4	

LB3531-33	J0JBC0000015	COIL	3	
LB3534	J0JCC0000186	COIL	1	
LB3535,36	J0JBC0000015	COIL	2	
LB4200	J0JBC0000015	COIL	1	
LB5101	ERJ3GEY0R00V	1/16W 0	1	
LB5102	J0JBC0000015	COIL	1	
LB5103	ERJ3GEY0R00V	1/16W 0	1	
LB5104	J0JHC0000045	COIL	1	
LB5105	J0JCC0000119	COIL	1	
LB5106,07	J0JBC0000015	COIL	2	
LB5108-11	ERJ3GEY0R00V	1/16W 0	4	
LB5233	J0JHC0000045	COIL	1	
LB6151-54	ERJ3GEY0R00V	1/16W 0	4	
LB6251	J0JCC0000119	COIL	1	
LB6301	J0JHC0000045	COIL	1	
LB6561	J0JBC0000015	COIL	1	
LB6562	J0JCC0000167	COIL	1	
LB6564	J0JCC0000077	COIL	1	
LB6566	J0JBC0000015	COIL	1	
LR1041	J1ZZA0000001	COIL	1	EXCEPT(PLA)AREA
P1001	K2AA2B000004	AC INLET	1	EXCEPT(PLA)AREA ⚠
P1001	K2AB2B000002	AC INLET	1	PLA ⚠
P2511	K1KA02A00010	CONNECTOR(2P)	1	
PC1	RPGC0098	PACKING CASE	1	GCS
PC1	RPGC0099	PACKING CASE	1	GCU
PC1	RPGC0100	PACKING CASE	1	GD
PC1	RPGC0101	PACKING CASE	1	GC
PC1	RPGC0102	PACKING CASE	1	GN
PC1	RPGC0103	PACKING CASE	1	PX
PC1	RPGC0104	PACKING CASE	1	PL
PC1	RPGC0105	PACKING CASE	1	EE-S

PC1	RPGC0106	PACKING CASE	1	EE-K
PC1	RPGC0135	PACKING CASE	1	PLA
PC1	RPGC0136	PACKING CASE	1	GCA
PC2	RPNC0020A-J	CUSHION(L)	1	
PC3	RPNC0020B-J	CUSHION(R)	1	
PC4	VPF0293-L	POLYETHYLENE BAG	1	
PP1101	K1KB12A00064	CONNECTOR(12P)	1	
PP6001	K1KA06B00126	CONNECTOR(6P)	1	
PR1161	VSF0015A025	IC PROTECTOR	1	PX,PL,GD,GCA,GC,GCU,GCS ⚠
PR1171	B1ZAZ0000030	IC PROTECTOR	1	⚠
PS1102	K1KB06B00033	CONNECTOR(FEMALE) 6P	1	
PS6203	K1MN10A00030	CONNECTOR(FEMALE)10P	1	
PS6251	TJS5A8670	CONNECTOR(FEMALE)12P	1	K1KA12A00153
Q1021	B1DEDT000001	TRANSISTOR	1	EXCEPT(PLA)AREA
Q1031	B1DEDQ000014	TRANSISTOR	1	PX,PL,GD,GCA,GC,GCU,GCS
Q1051	B3QAZ0000028	TRANSISTOR	1	
Q1052	2SD1996-S	TRANSISTOR	1	2SD19960SA EXCEPT(PLA)AREA
Q1062	2SC3311AS	TRANSISTOR	1	EXCEPT(PLA)AREA
Q1116	B1DGDD000002	TRANSISTOR	1	
Q1125	2SB14170JA	TRANSISTOR	1	
Q1127,28	2SC3311AS	TRANSISTOR	2	
Q1155	2SB14170JA	TRANSISTOR	1	
Q1191	2SD1992AHA	TRANSISTOR	1	
Q2101	UNR511M00L	TRANSISTOR	1	
Q4402	2SD0601ARL	TRANSISTOR	1	
Q4411	2SD0601ARL	TRANSISTOR	1	
Q4421	2SD0601ARL	TRANSISTOR	1	
Q5111	2SB766A-R	TRANSISTOR	1	
Q5121	2SD1819A0L	TRANSISTOR	1	
Q5122	2SB766A-R	TRANSISTOR	1	

Q5221	2SD1819A0L	TRANSISTOR	1	
Q6091	2SD132800L	TRANSISTOR	1	
QR1115	UN4213	TRANSISTOR	1	UNR4213
QR1156	UN4213	TRANSISTOR	1	UNR4213
QR3521	UN2212	TRANSISTOR	1	UNR2212
QR4401	UN2211	TRANSISTOR	1	UNR2211 EXCEPT(GN)AREA
QR4401	UNR221100L	TRANSISTOR	1	GN
QR4403	XN0431100L	TRANSISTOR	1	
QR5111	UNR212100L	TRANSISTOR	1	
QR6081	UNR211M00L	TRANSISTOR	1	
QR6101	UNR221M00L	TRANSISTOR	1	
R1001	ERDS2FJ105	1/4W 1M	1	PLA
R1001	ERDS2FJ474	1/4W 470K	1	EXCEPT(PLA)AREA
R1002	ERDS2FJ105	1/4W 1M	1	PLA
R1002	ERDS2FJ474	1/4W 470K	1	EXCEPT(PLA)AREA
R1031,32	ERDS2FJ224	1/4W 220K	2	GN,EE
R1033	ERDS2FJ101	1/4W 100	1	PX,PL,GD,GCA,GC,GCU,GCS
R1034	ERDS2FJ102	1/4W 1K	1	PX,PL,GD,GCA,GC,GCU,GCS
R1041,42	ERDS2FJ684	1/4W 680K	2	EXCEPT(PLA)AREA
R1043	ERG2SJ331E	2W 330	1	EXCEPT(PLA)AREA
R1051	ERDS2FJ750	1/4W 75	1	EXCEPT(PLA)AREA
R1051	ERDS2TJ6R2	1/4W 6.2	1	PLA
R1052	ERDS2FJ2R2	1/4W 2.2	1	EXCEPT(PLA)AREA
R1052	ERDS2TJ6R2	1/4W 6.2	1	PLA
R1053	ERDS2FJ331	1/4W 330	1	EXCEPT(PLA)AREA
R1054	ER0S2CKG1501	1/4W 1.5K	1	EROS2CKG1501 EE
R1054	ER0S2CKG1801	1/4W 1.8K	1	PX,PL,GD,GCA,GC,GCU,GCS
R1054	ER0S2TKG1501	1/4W 1.5K	1	GN
R1055	ERDS2FJ683	1/4W 68K	1	EXCEPT(PLA)AREA
R1061	ERDS2TJ205	1/4W 2M	1	PLA
R1061	ERX1SJR56E	1W 56	1	EXCEPT(PLA)AREA
R1062	ERDS2FJ101	1/4W 100	1	EXCEPT(PLA)AREA
R1062	ERDS2TJ205	1/4W 2M	1	PLA

R1063	ERDS2TJ682	1/4W 6.8K	1	PLA
R1101	ERDS2FJ750	1/4W 75	1	
R1102	ER0S2CKF1201	1/4W 1.2K	1	EROS2CKF1201 EXCEPT(GN)AREA
R1102	ER0S2THF1201	1/4W 1.2K	1	GN
R1103	ER0S2CKF1201	1/4W 1.2K	1	EROS2CKF1201 EXCEPT(GN)AREA
R1103	ER0S2THF1201	1/4W 1.2K	1	GN
R1104	ERDS2FJ561	1/4W 560	1	
R1105	ERDS2FJ271	1/4W 270	1	
R1106	ERDS2TJ392	1/4W 3.9K	1	
R1107	ERDS2FJ472	1/4W 4.7K	1	
R1115	ERDS2FJ104	1/4W 100K	1	
R1116	ERDS2FJ102	1/4W 1K	1	
R1125	ER0S2CKF1301	1/4W 1.3K	1	EXCEPT(GN)AREA
R1125	ER0S2THF1301	1/4W 1.3K	1	GN
R1126	ER0S2CKF1201	1/4W 1.2K	1	EROS2CKF1201 EXCEPT(GN)AREA
R1126	ER0S2THF1201	1/4W 1.2K	1	GN
R1127	ER0S2CKF1201	1/4W 1.2K	1	EROS2CKF1201 EXCEPT(GN)AREA
R1127	ER0S2THF1201	1/4W 1.2K	1	GN
R1128	ERDS2FJ151	1/4W 150	1	
R1152	ERDS2FJ151	1/4W 150	1	
R1153	ERDS2FJ222	1/4W 2.2K	1	
R1155	ERDS2FJ331	1/4W 330	1	
R1156	ERDS2FJ391	1/4W 390	1	
R1161	ERDS2FJ104	1/4W 100K	1	
R1181	ERDS2FJ101	1/4W 100	1	
R1191	ERDS2FJ221	1/4W 220	1	
R1192	ERDS2FJ680	1/4W 68	1	
R2011	ERJ3GEY0R00V	1/16W 0	1	EXCEPT(GN)AREA
R2012	ERJ3GEYJ752V	1/16W 7.5K	1	
R2013	ERJ3GEY0R00V	1/16W 0	1	
R2014	ERJ3GEYJ752V	1/16W 7.5K	1	
R2015	ERJ3GEY0R00V	1/16W 0	1	
R2016	ERJ3GEYJ822V	1/16W 8.2K	1	D0GB822JA002
R2017	ERJ3GEY0R00V	1/16W 0	1	

R2018	ERJ3GEYJ822V	1/16W 8.2K	1	D0GB822JA002
R2021	ERJ3GEYD153V	1/16W 15K	1	D0HB153ZA002
R2022	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R2023	ERJ3GEYD153V	1/16W 15K	1	D0HB153ZA002
R2031	ERJ3GEYJ683V	1/16W 68K	1	D0GB683JA002
R2032	ERJ3GEYJ102V	1/16W 1K	1	
R2033	ERJ3RBD153	1/16W 15K	1	
R2051	ERJ3RBD392	1/16W 3.9K	1	
R2052	ERJ3GEY0R00V	1/16W 0	1	
R2101	ERJ3GEYJ823V	1/16W 82K	1	D0GB823JA002
R2102	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R2501	ERJ6GEYJ6R8V	1/10W 6.8	1	
R2511	ERJ3GEYD153V	1/16W 15K	1	D0HB153ZA002
R2512,13	ERJ3GEYJ823V	1/16W 82K	2	D0GB823JA002
R2514	ERJ3GEYD153V	1/16W 15K	1	D0HB153ZA002
R2515	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002
R2521	ERJ3GEYJ221V	1/16W 220	1	
R2531	ERJ3GEYJ202V	1/16W 2K	1	
R2532	ERJ3GEYJ102V	1/16W 1K	1	
R3001	J0JCC0000119	COIL	1	
R3002	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3011	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3013	ERJ3GEY0R00V	1/16W 0	1	
R3022	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3041	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002
R3043	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002
R3101	ERJ3RBD153	1/16W 15K	1	
R3102	ERJ3RBD272	1/16W 2.7K	1	
R3103	ERJ3RBD203V	1/16W 20K	1	
R3104	ERJ3RBD222V	1/16W 2.2K	1	
R3105	D0GB152ZA008	1/16W 1.5K	1	
R3111	ERJ3RED620V	1/16W 62	1	
R3112	ERJ3RED150V	1/16W 15	1	
R3116	ERJ3RED620V	1/16W 62	1	

R3117	ERJ3RED130	1/16W 13	1	PX,PLA,PL
R3117	ERJ3RED150V	1/16W 15	1	GN,EE,GD,GCA,GC,GCU,GCS
R3121	ERJ3RBD101	1/16W 100	1	ERJ3RBD101V
R3122	ERJ3RED160V	1/16W 16	1	
R3126	ERJ3RED560V	1/16W 56	1	
R3131	ERJ3RED560V	1/16W 56	1	
R3521	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R3522	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3531	ERJ3GEYF750	1/16W 75	1	
R3532	ERJ3GEYJ750	1/16W 75	1	
R3533,34	ERJ3GEYF750	1/16W 75	2	
R3535,36	ERJ3GEYJ750	1/16W 75	2	
R4201	ERJ3GEYJ470V	1/16W 47	1	
R4202	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R4301	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4302	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R4303	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4312	D0HB752ZA002	1/16W 7.5K	1	
R4313	D0HB153ZA002	1/16W 15K	1	
R4322	D0HB752ZA002	1/16W 7.5K	1	
R4323	D0HB153ZA002	1/16W 15K	1	
R4401	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4402	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R4403	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R4411	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4412	ERJ3GEYJ102V	1/16W 1K	1	
R4413	ERJ3GEYJ821V	1/16W 820	1	
R4414	ERJ3GEYJ221V	1/16W 220	1	
R4421	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4422	ERJ3GEYJ102V	1/16W 1K	1	
R4423	ERJ3GEYJ821V	1/16W 820	1	
R4424	ERJ3GEYJ221V	1/16W 220	1	
R5101	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R5102	ERJ3GEYJ560V	1/16W 56	1	

R5103	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R5104	ERJ3GEYJ560V	1/16W 56	1	
R5105	ERJ3GEYJ102V	1/16W 1K	1	
R5106	ERJ3GEYJ472V	1/16W 4.7K	1	
R5121	ERJ3GEY0R00V	1/16W 0	1	
R5122	ERJ3GEYJ102V	1/16W 1K	1	
R5123	ERJ3GEYJ331V	1/16W 330U	1	
R5124	ERJ3GEYJ560V	1/16W 56	1	
R5125	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5126	ERJ12YJ270H	1/2W 27	1	EXCEPT(GN)AREA
R5127	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R5128	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R5131	ERJ3GEY0R00V	1/16W 0	1	
R5132	ERJ3GEYJ102V	1/16W 1K	1	
R5133	ERJ3GEYJ331V	1/16W 330U	1	
R5134	ERJ3GEYJ560V	1/16W 56	1	
R5135	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5136	ERJ12YJ270H	1/2W 27	1	
R5137	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R6001	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6002	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R6021	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6022	ERJ3GEY0R00V	1/16W 0	1	
R6023	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6024	ERJ3GEYJ122	1/16W 1.2K	1	GN,PX,GD,GCA,GC,GCU,GCS
R6024	ERJ3GEYJ272V	1/16W 2.7K	1	EE,PLA,PL
R6025	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6026	ERJ3GEY0R00V	1/16W 0	1	PX,PLA,PL
R6026	ERJ3GEYD153V	1/16W 15K	1	D0HB153ZA002 GCA,GC
R6026	ERJ3GEYJ272V	1/16W 2.7K	1	EE
R6026	ERJ3GEYJ472V	1/16W 4.7K	1	GN
R6026	ERJ3GEYJ822V	1/16W 8.2K	1	D0GB822JA002 GD,GCU,GCS
R6040	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6041	ERJ3GEYJ122	1/16W 1.2K	1	

R6050	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6051	ERJ3GEYJ122	1/16W 1.2K	1	
R6052	ERJ3GEYJ152V	1/16W 1.5K	1	
R6053	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R6054	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R6060	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6061	ERJ3GEYJ122	1/16W 1.2K	1	
R6062	ERJ3GEYJ152V	1/16W 1.5K	1	
R6063	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R6071	ERJ3GEYJ303V	1/16W 30K	1	
R6072	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R6081	ERJ3GEYJ820V	1/16W 82	1	
R6091	ERJ3GEYJ822V	1/16W 8.2K	1	D0GB822JA002
R6092	ERJ3GEYJ104	1/16W 100K	1	
R6101	ERJ3GEYJ820V	1/16W 82	1	
R6201	ERJ3GEYJ472V	1/16W 4.7K	1	
R6351	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002
R6562	ERJ3RBD391	1/16W 390	1	ERJ3RBD391V
R6563	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6564	ERJ3GEYJ100	1/16W 10	1	
R6565,66	ERJ3GEYJ470V	1/16W 47	2	
R6567	ERJ3GEY0R00V	1/16W 0	1	
RA2511	EXB28V473JX	RESISTOR-RESISTOR	1	
RA3001-04	EXB28V820JX	RESISTOR-RESISTOR	4	
RA3005	EXB24V220J	RESISTOR-RESISTOR	1	
RA3009-12	EXB28V820JX	RESISTOR-RESISTOR	4	
RA3021	EXB24V103JX	RESISTOR-RESISTOR	1	
RA3025	EXB24V102JX	RESISTOR-RESISTOR	1	
RA3042	EXB24V101JX	RESISTOR-RESISTOR	1	
RA5101	EXB28V560J	RESISTOR-RESISTOR	1	
RA5102,03	EXB24V560JX	RESISTOR-RESISTOR	2	
RA6201	EXB24V472JX	RESISTOR-RESISTOR	1	
RA6351	EXB24V472JX	RESISTOR-RESISTOR	1	

S6041	EVQ11G07K	SWITCH(OPEN/CLOSE)	1	
S6050	EVQ11G07K	SWITCH(FWD-SKIP)	1	
S6051	EVQ11G07K	SWITCH(RVS-SKIP)	1	
S6052	EVQ11G07K	SWITCH(ZOOM)	1	
S6053	ESE24SH7	SWITCH(Z.SMALL-LARGE)	1	
S6060	EVQ11G07K	SWITCH(PAUSE)	1	
S6061	EVQ11G07K	SWITCH(PLAY)	1	
S6062	EVQ11G07K	SWITCH(STOP)	1	
S6063	EVQ11G07K	SWITCH(QUICK REPLAY)	1	
S6101	EVQ11G07K	SWITCH(POWER)	1	
SW2601	RSH1A048-A	DOUBLE SWITCH	1	
T1021	ETS28AV183AC	TRANSFORMER	1	PLA ⚠
T1021	ETS28AV196AC	TRANSFORMER	1	GN,EE ⚠
T1021	ETS28AV1B6AC	TRANSFORMER	1	PX,PL,GD,GCA,GC,GCU,GCS ⚠
W101	ERJ6GEY0R00V	1/10W 0	1	
W102	ERJ3GEY0R00V	1/16W 0	1	
W103	D0GZR00J0001	1/8W 0	1	
W104	ERJ6GEY0R00V	1/10W 0	1	
W105,06	D0GZR00J0001	1/8W 0	2	
W107	ERJ3GEY0R00V	1/16W 0	1	
W108	D0GZR00J0001	1/8W 0	1	
W110	ERJ3GEY0R00V	1/16W 0	1	
W111	ERJ6GEY0R00V	1/10W 0	1	
W112	ERJ3GEY0R00V	1/16W 0	1	
W3001,02	ERJ14Y0R00	1/4W 0	2	EXCEPT(PX)AREA
W3003	ERJ12Y0R00U	1/2W 0	1	EXCEPT(PX)AREA
X6001	H2D800400009	CERAMIC OSCILLATOR	1	
X6501	H0H368600001	CRYSTAL OSCILLATOR	1	
ZA1001,02	EYF52BC	FUSE HOLDER	2	
ZA1011	RMCC0001	EARTH SPRING	1	

ZA1111,12	K4CZ01000027	TERMINAL	2	
ZA3002	RMCC0001	EARTH SPRING	1	

TOP PREVIOUS NEXT

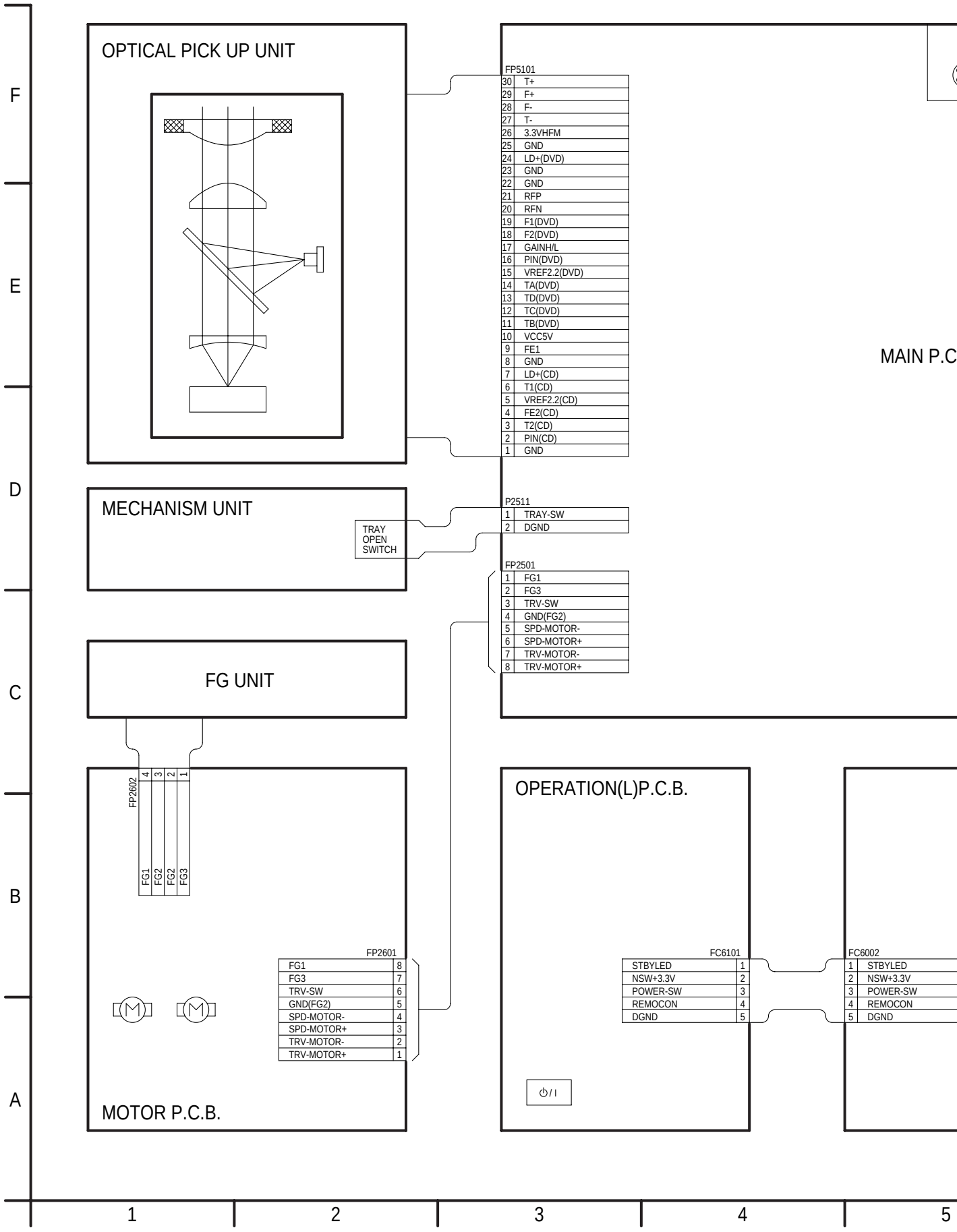
20 Schematic Diagram for printing with A4 size

TOP PREVIOUS

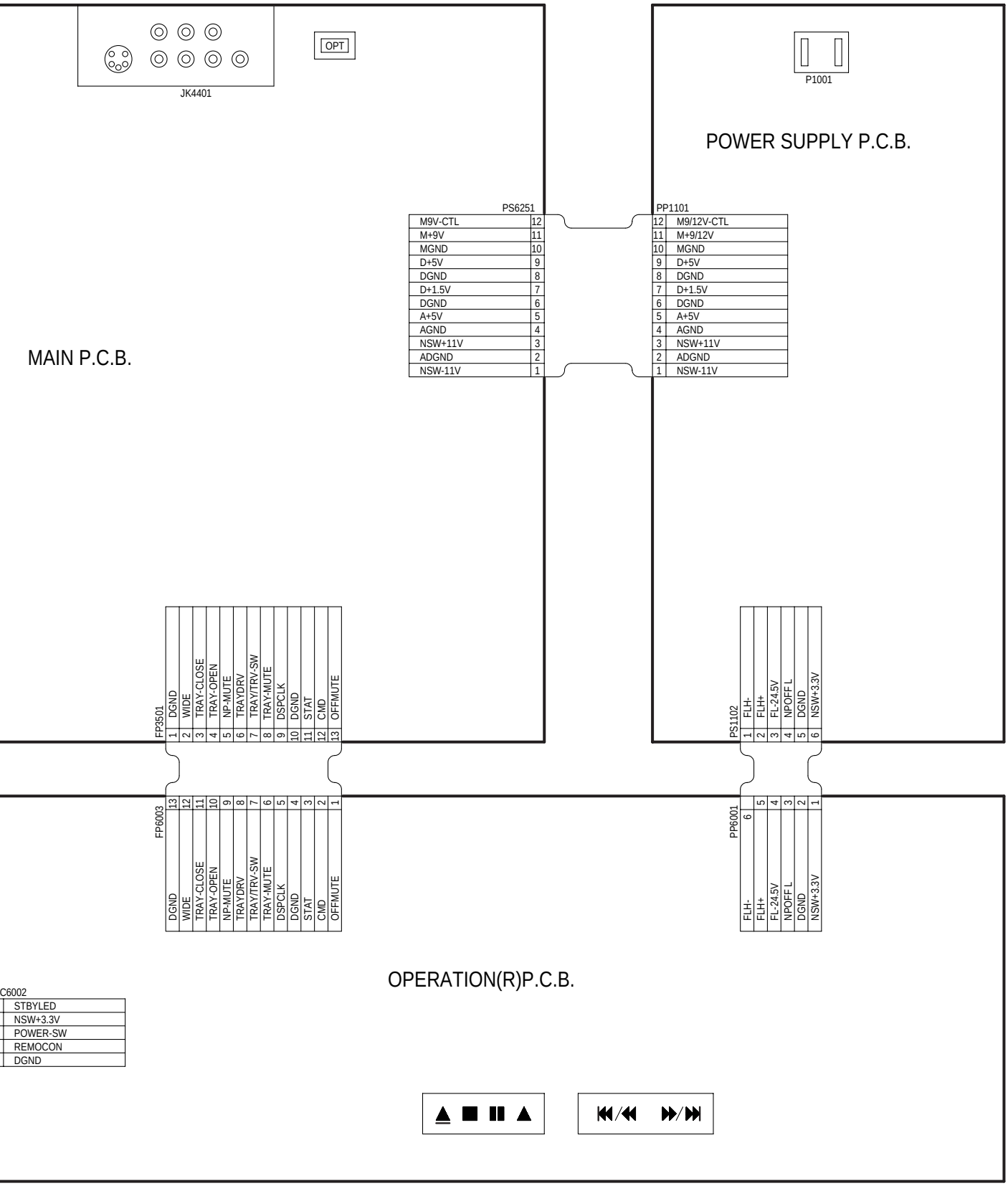
TOP PREVIOUS

15 INTERCONNECTION SCHEMATIC DIAGRAM & SCHEMATIC D

15.1. INTERCONNECTION SCHEMATIC DIAGRAM



MATIC DIAGRAM NOTES



DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
INTERCONNECTION SCHEMATIC DIAGRAM

5 | 6 | 7 | 8 | 9

15.2. SCHEMATIC DIAGRAM NOTES

This schematic diagram may be modified at any time with the development of new technology.

Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purpose of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture´s specified parts shown in theparts list.

Important safety notice:

There are special components used in this equipment which are important for safety.

These parts are marked by ⚠ in the schematic diagrams. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

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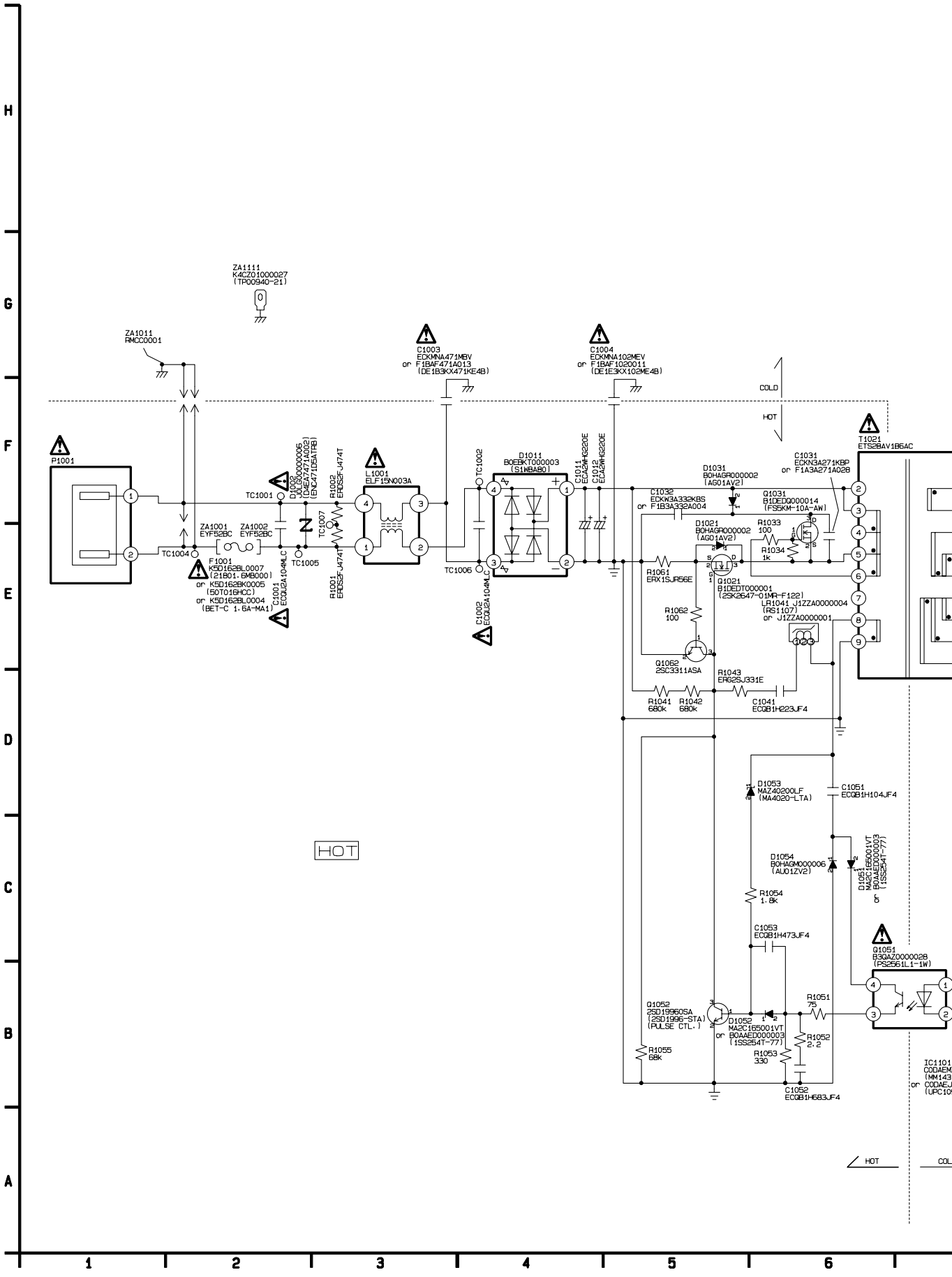
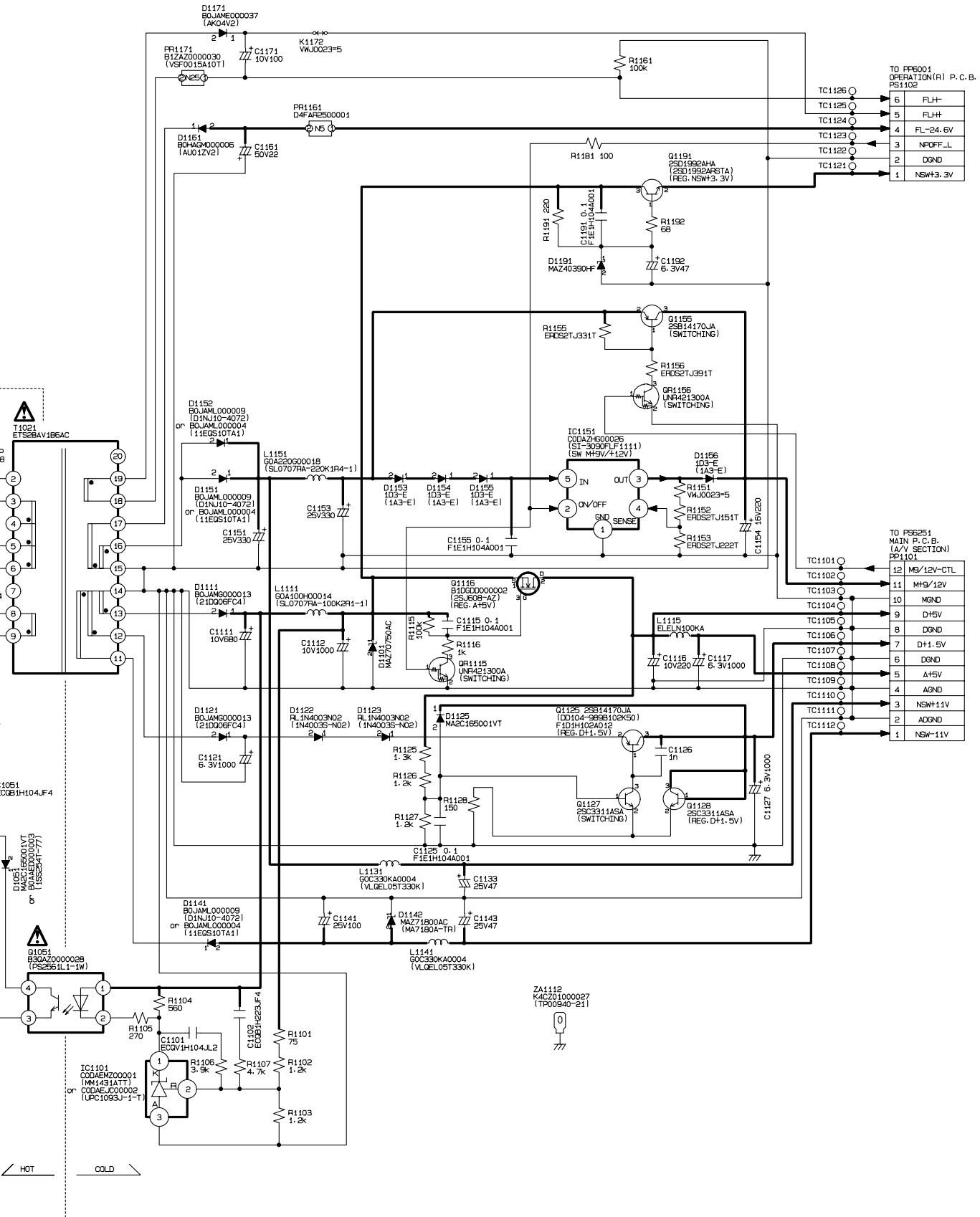
16 SCHEMATIC DIAGRAM

16.1. POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/GC/GCA/GD/P

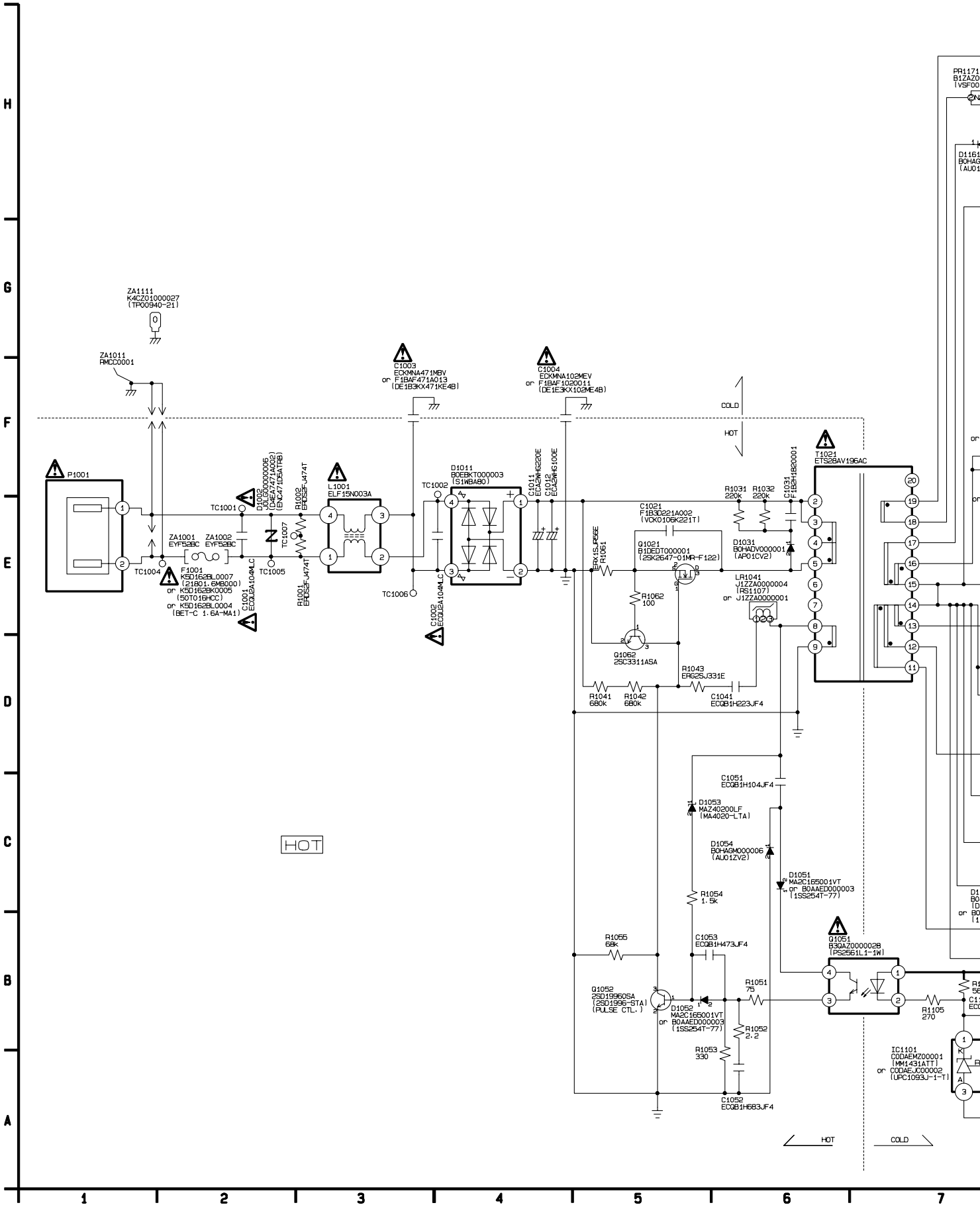


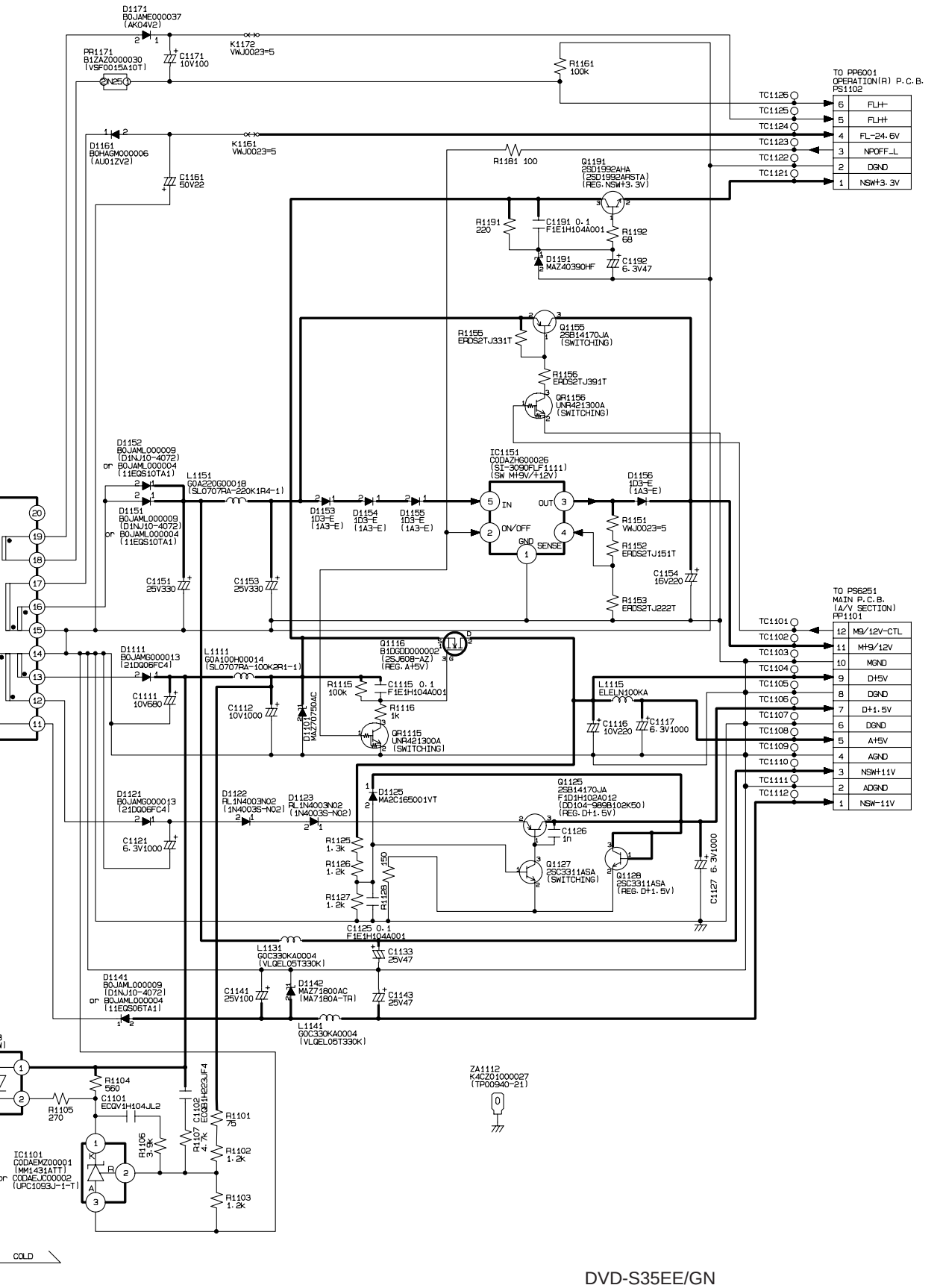
CA/GD/PL/PX)



DVD-S35GCS/GCU/GC/GCA/GD/PL/PX
POWER SUPPLY SCHEMATIC DIAGRAM

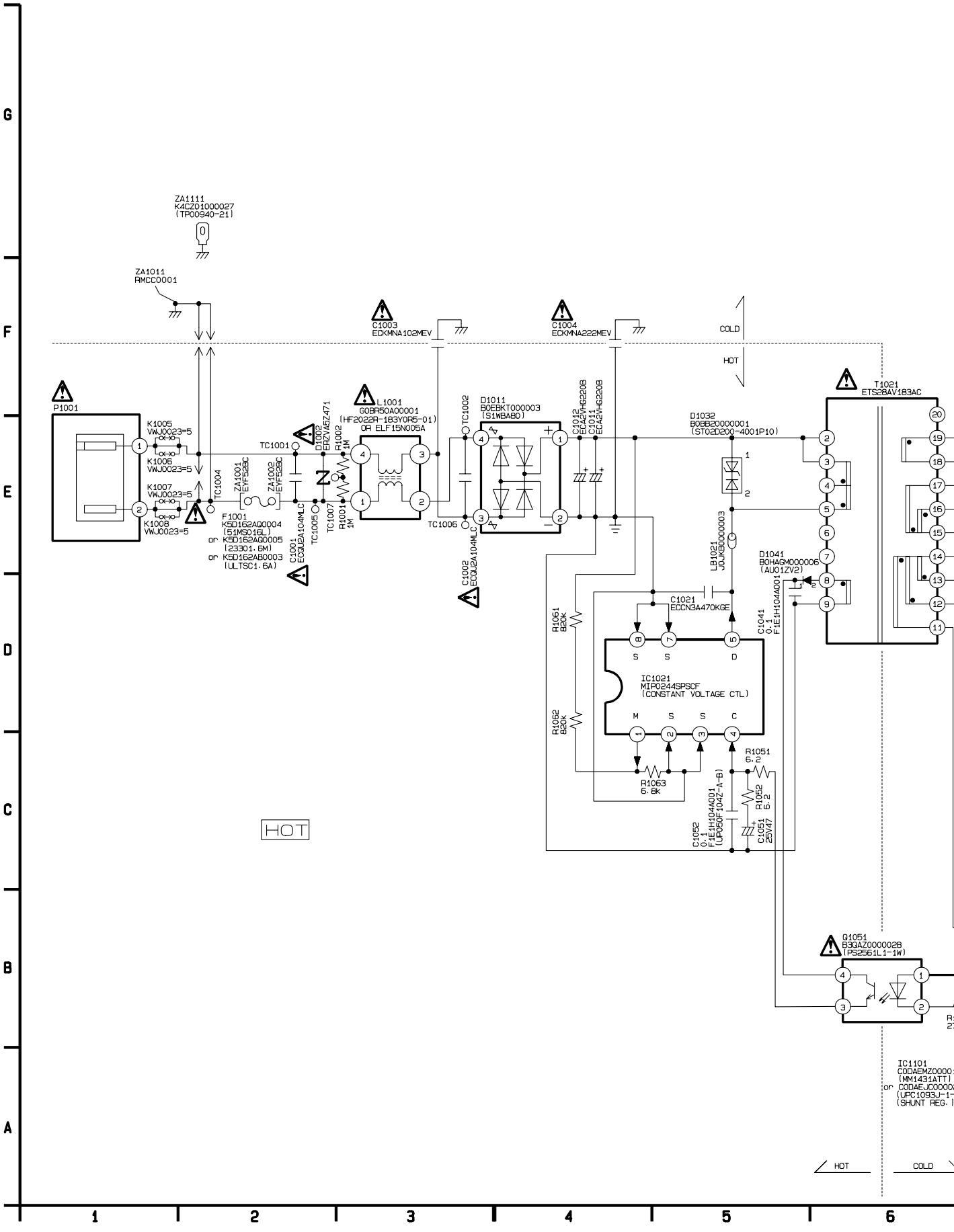
16.2. POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35EE/GN)

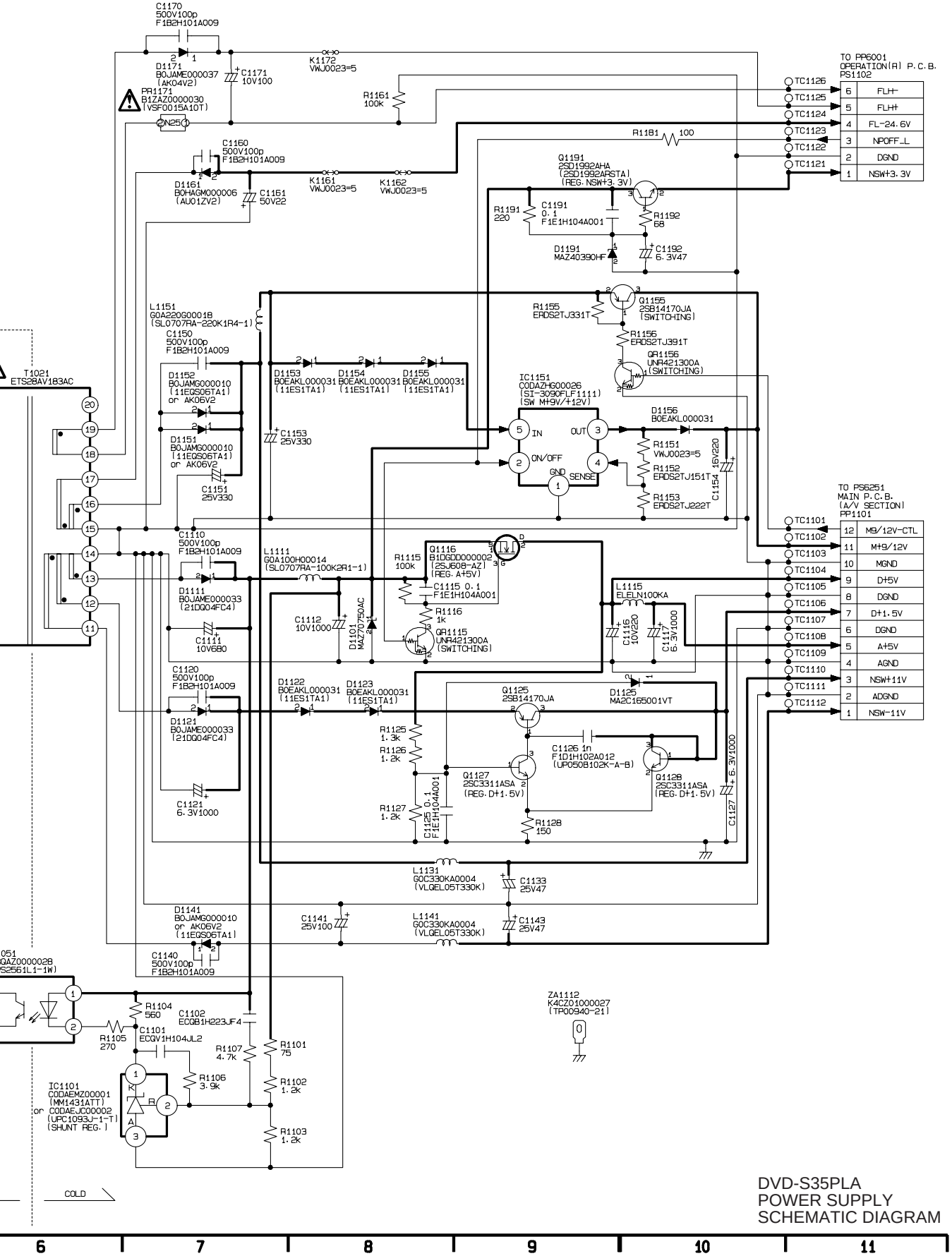




DVD-S35EE/GN
POWER SUPPLY SCHEMATIC DIAGRAM

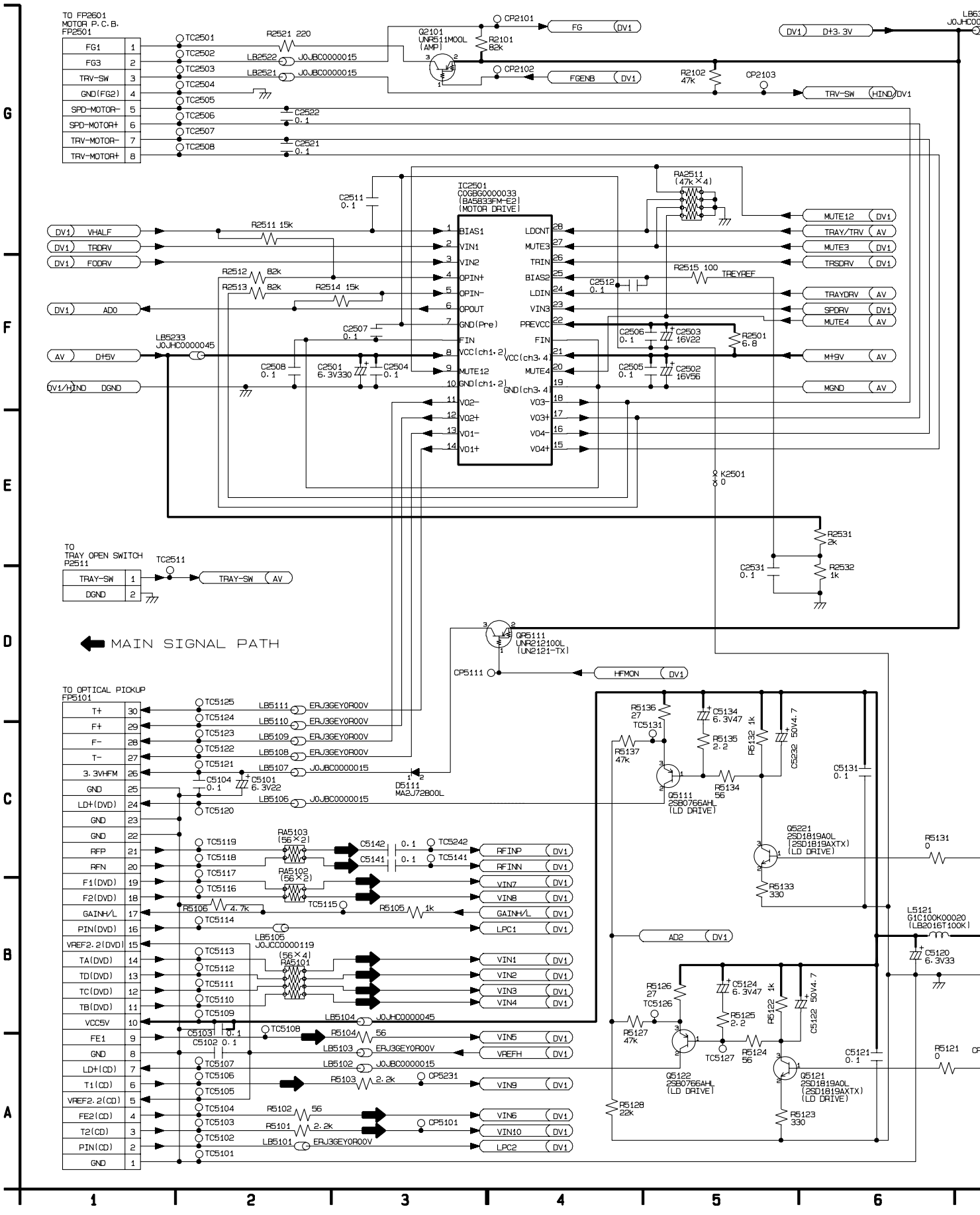
16.3. POWER SUPPLY SCHEMATIC DIAGRAM (DVD-S35PLA)

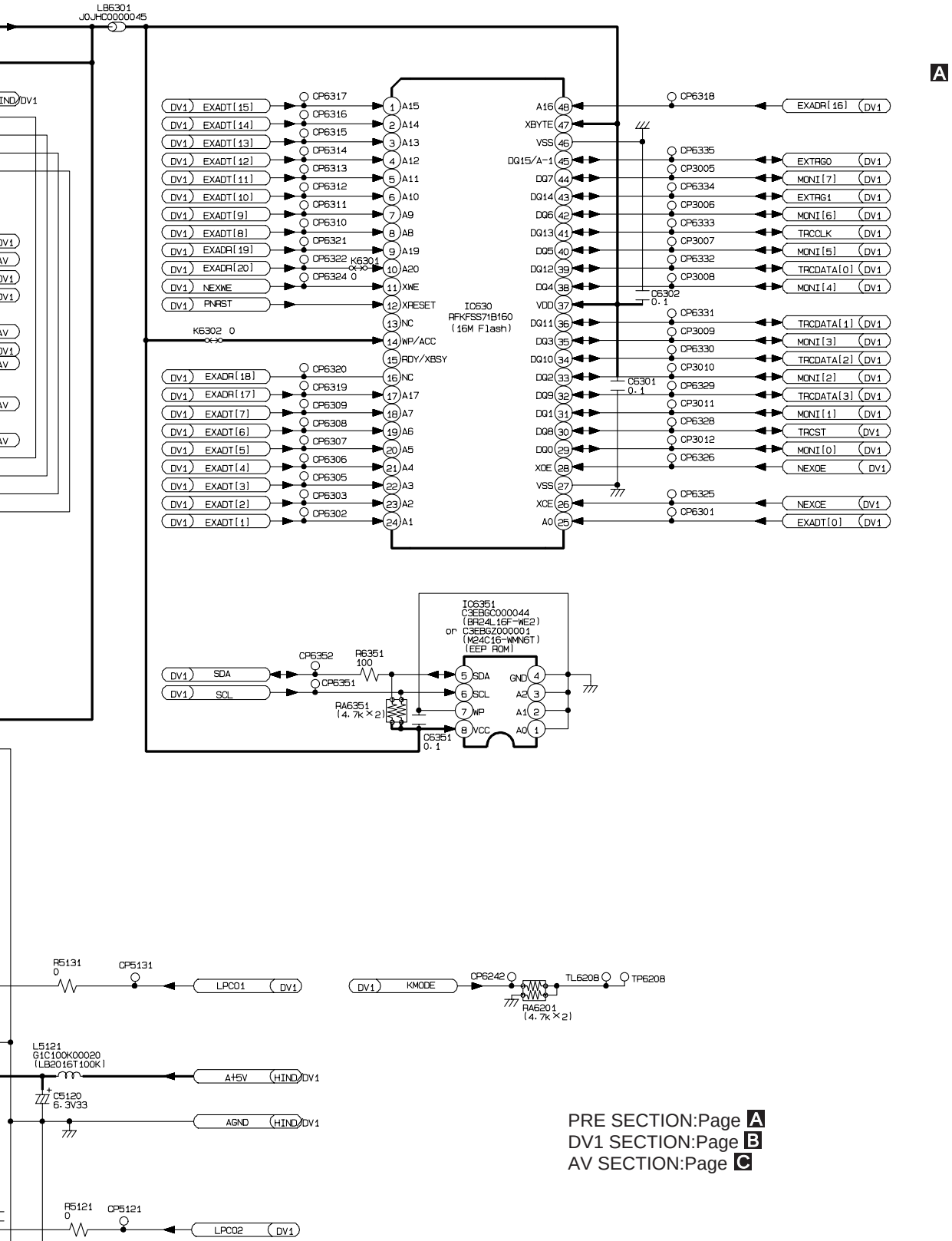




DVD-S35PLA
POWER SUPPLY
SCHEMATIC DIAGRAM

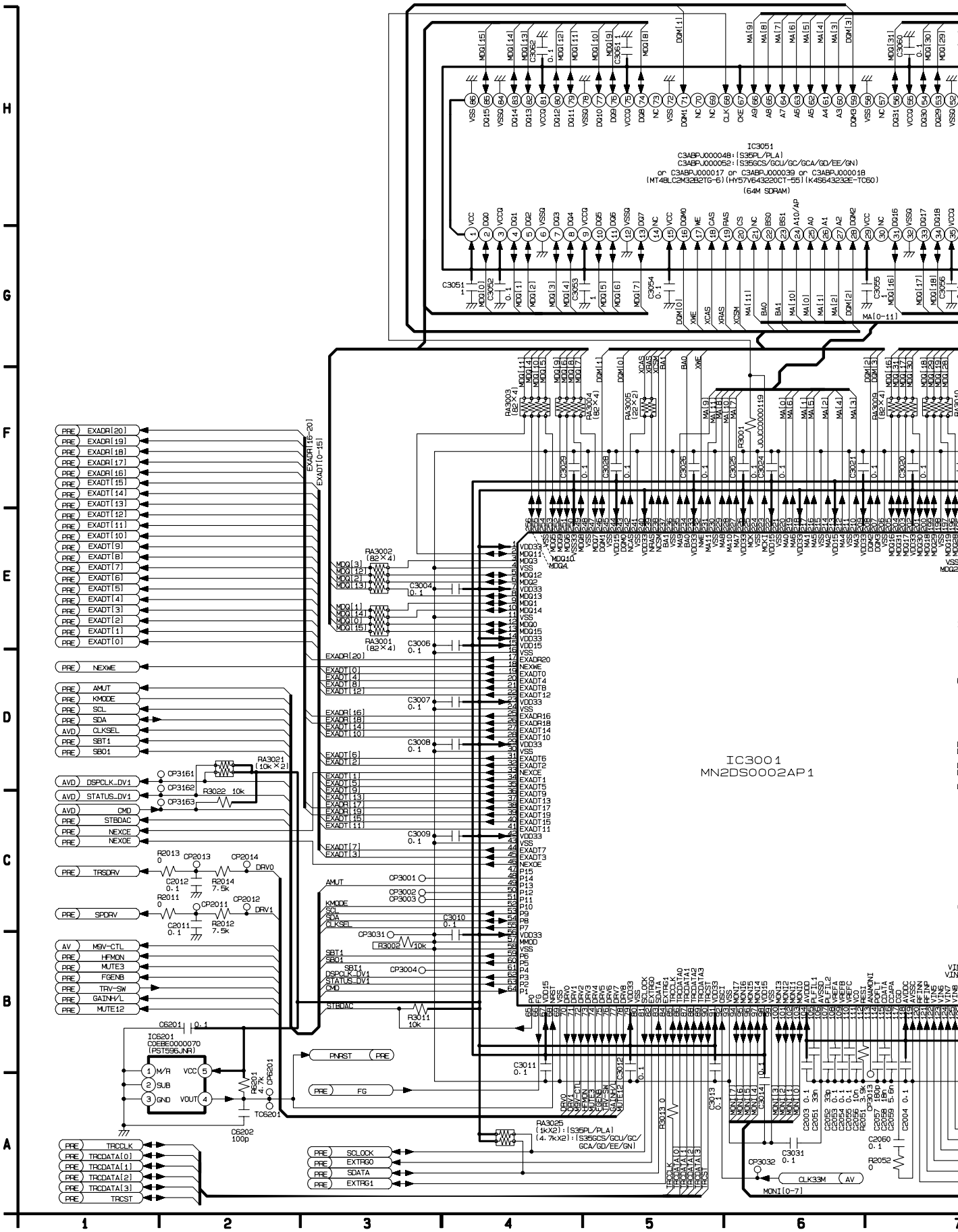
16.4. PRE SECTION (MAIN P.C.B. (1/3)) SCHEMATIC DIAGRAM (DVD-S35GCS/GCU/G

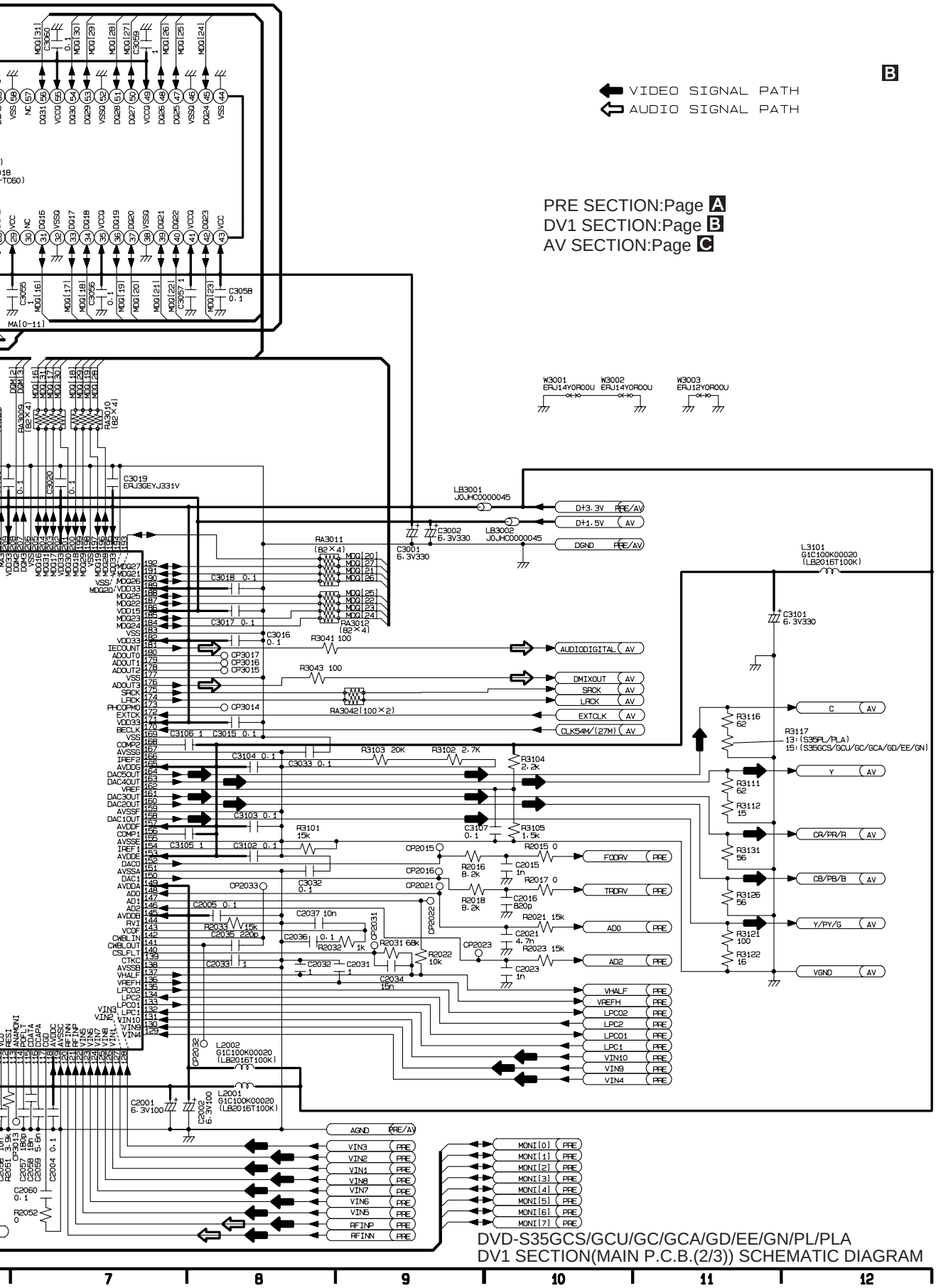




PRE SECTION:Page A
DV1 SECTION:Page B
AV SECTION:Page C

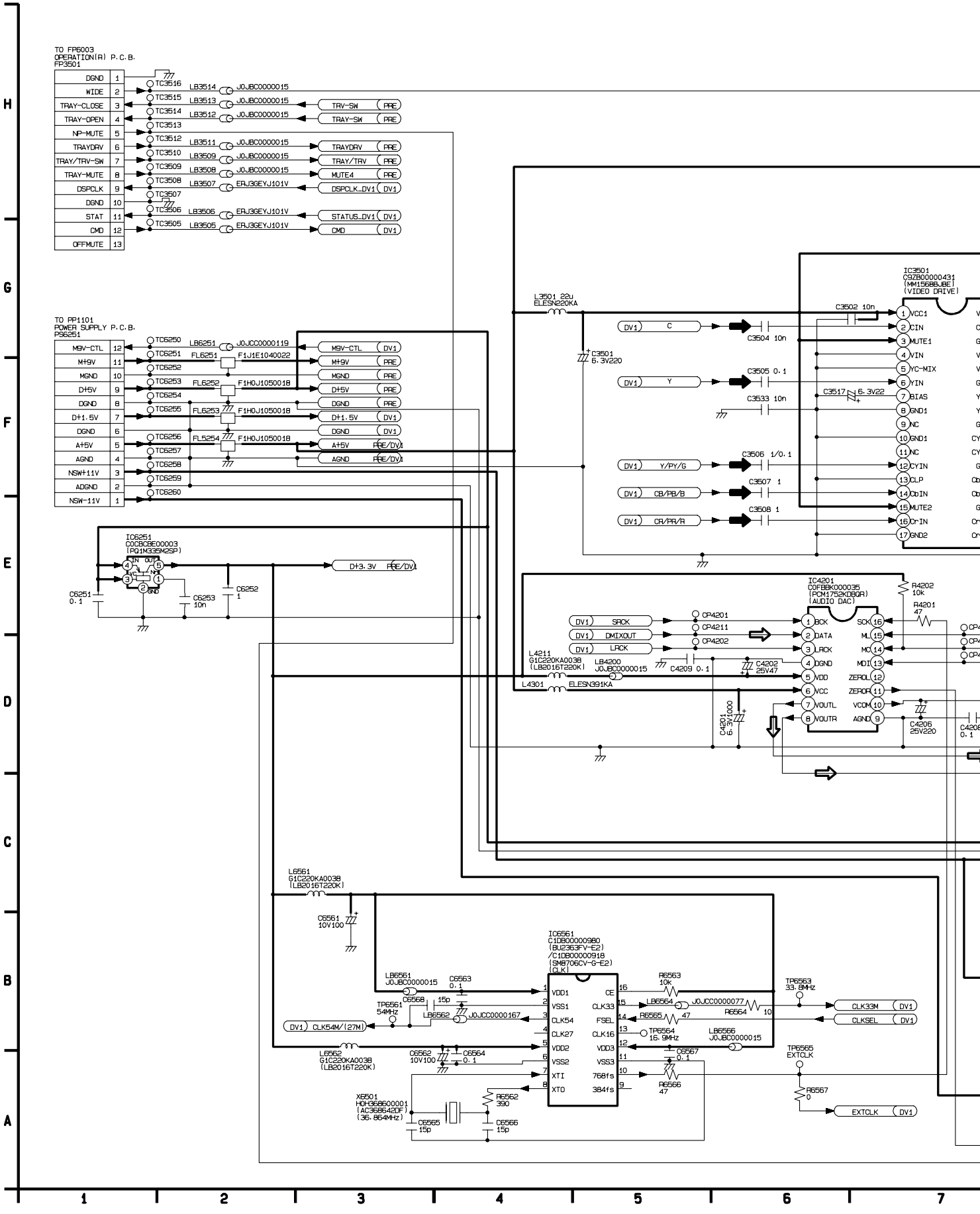
16.5. DV1 SECTION (MAIN P.C.B. (2/3)) SCHEMATIC DIAGRAM (DVD-S35GCS/GC

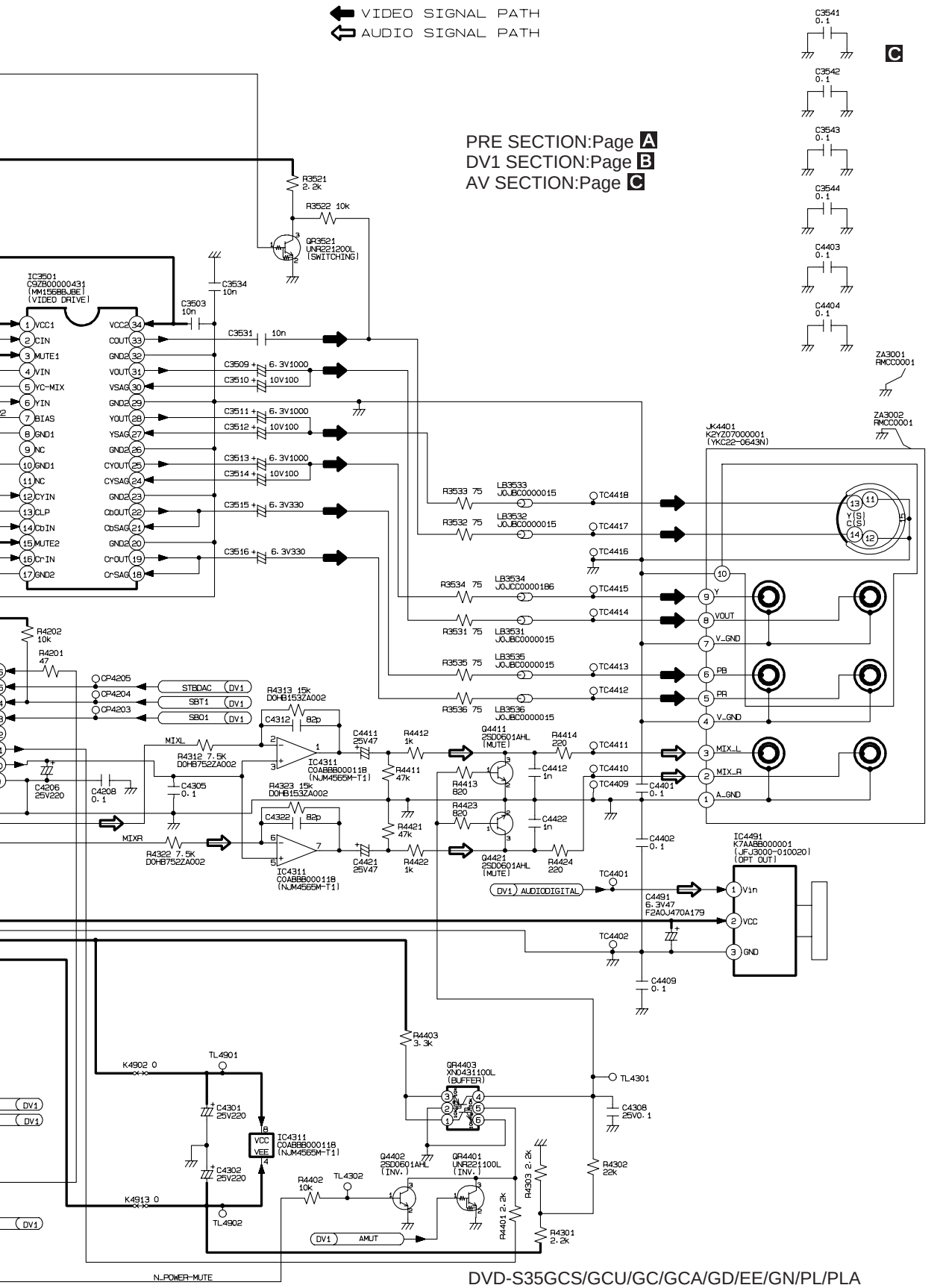




DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
DV1 SECTION(MAIN P.C.B.(2/3)) SCHEMATIC DIAGRAM

16.6. AUDIO/VIDEO SECTION (MAIN P.C.B. (3/3)) SCHEMATIC DIAGRAM (DVD-S35G

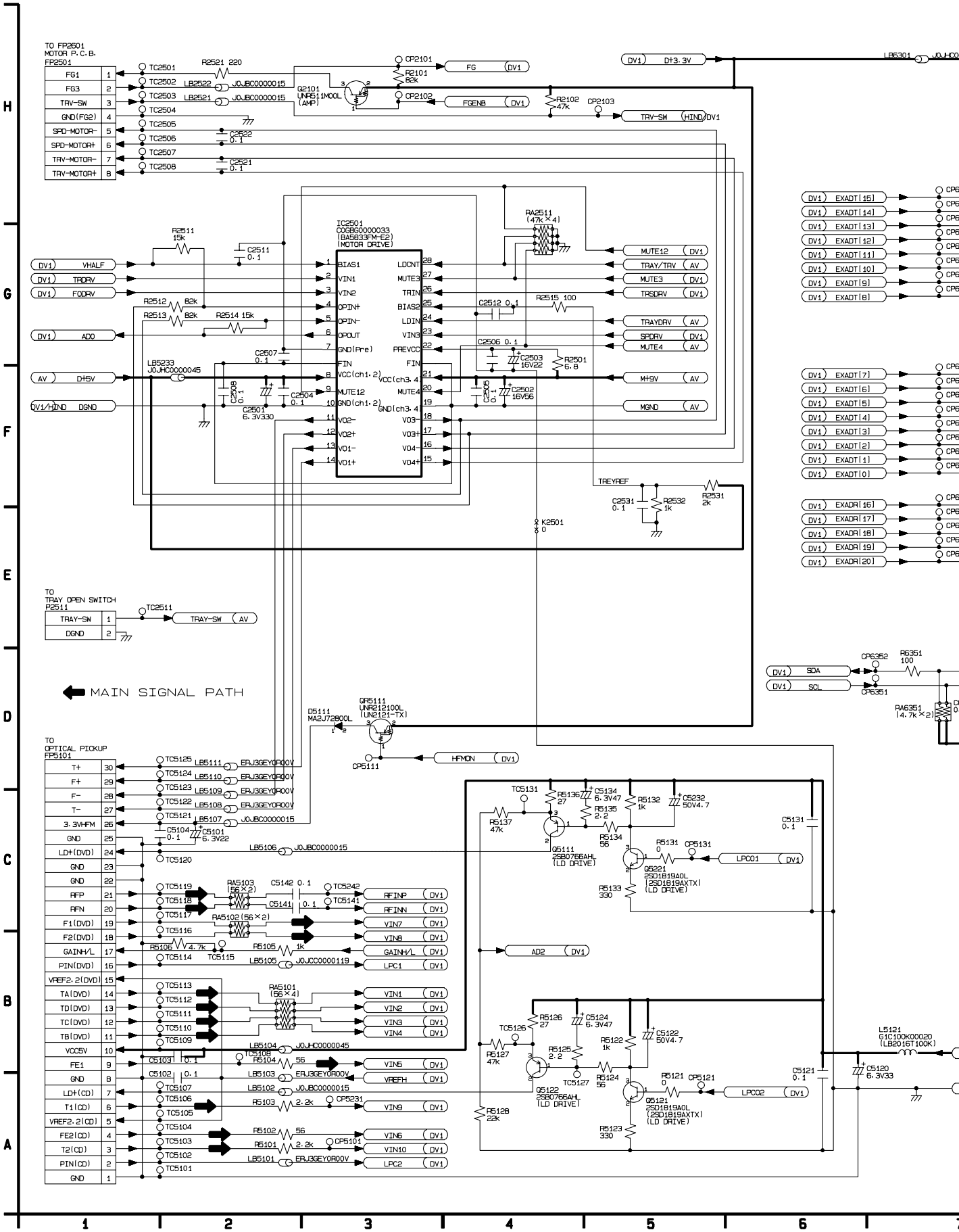


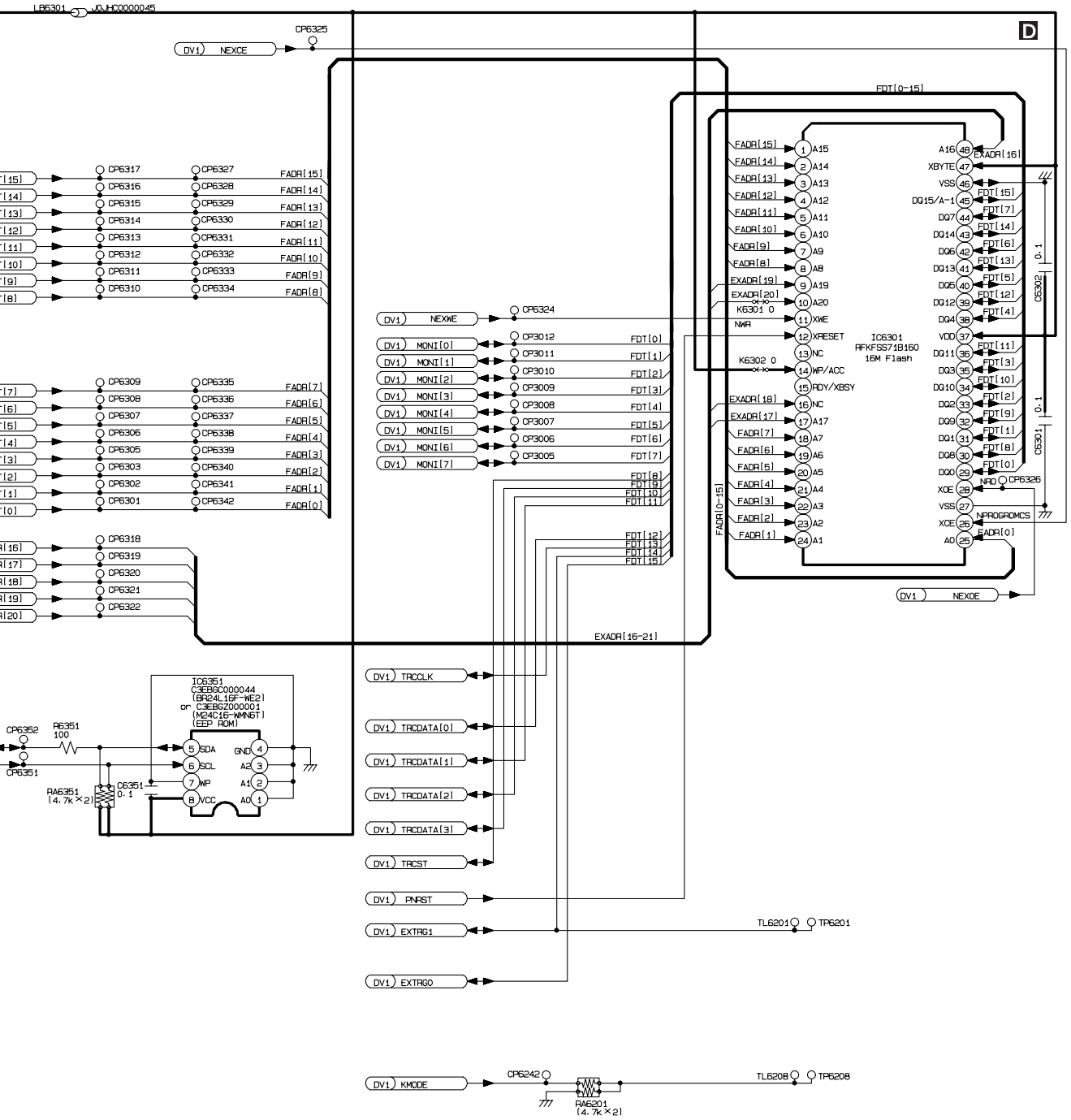


DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA
AV SECTION(MAIN P.C.B.(3/3)) SCHEMATIC DIAGRAM

7 8 9 10 11 12

16.7. PRE SECTION (MAIN P.C.B. (1/3)) SCHEMATIC DIAGRAM (DVD-S35PX)



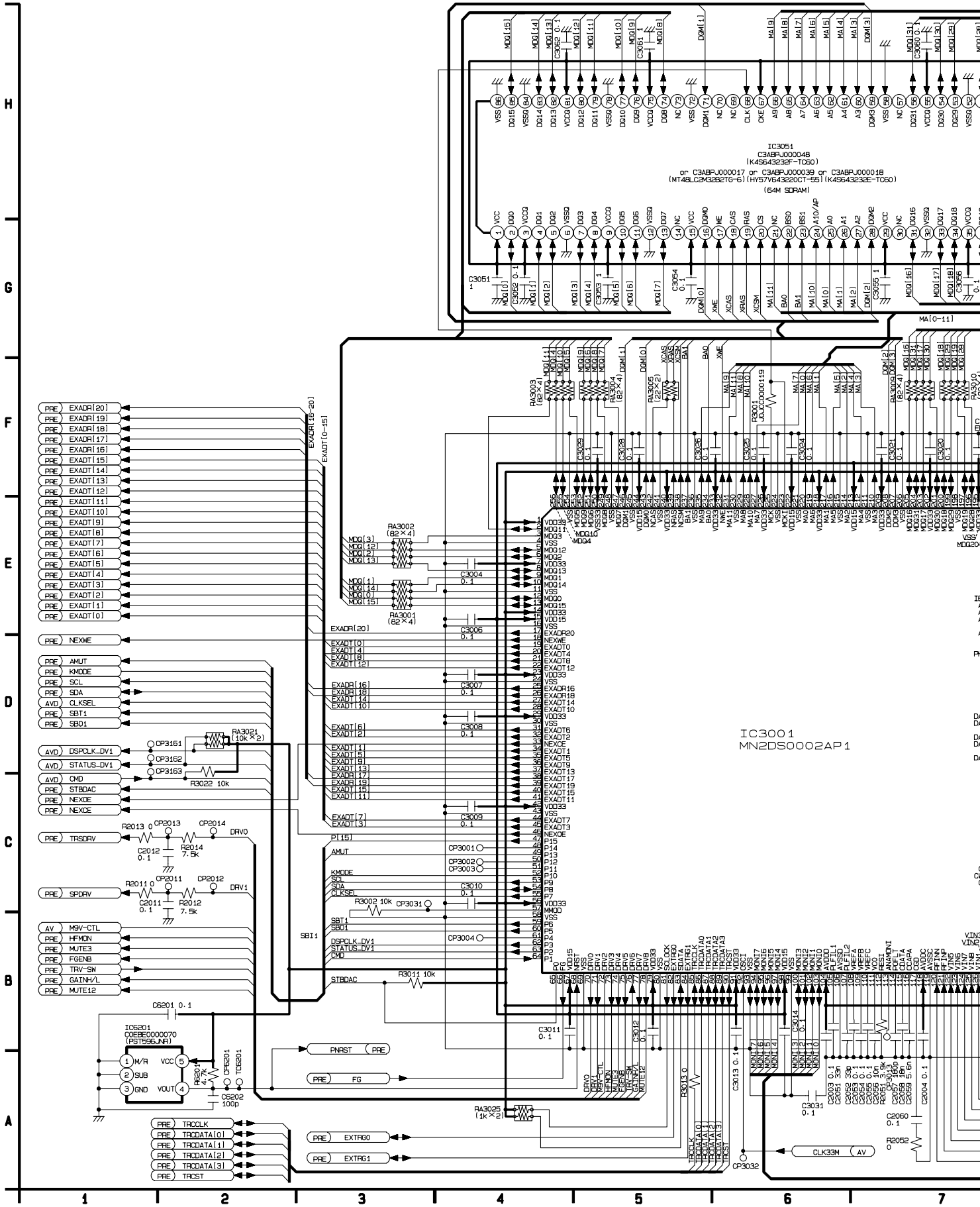


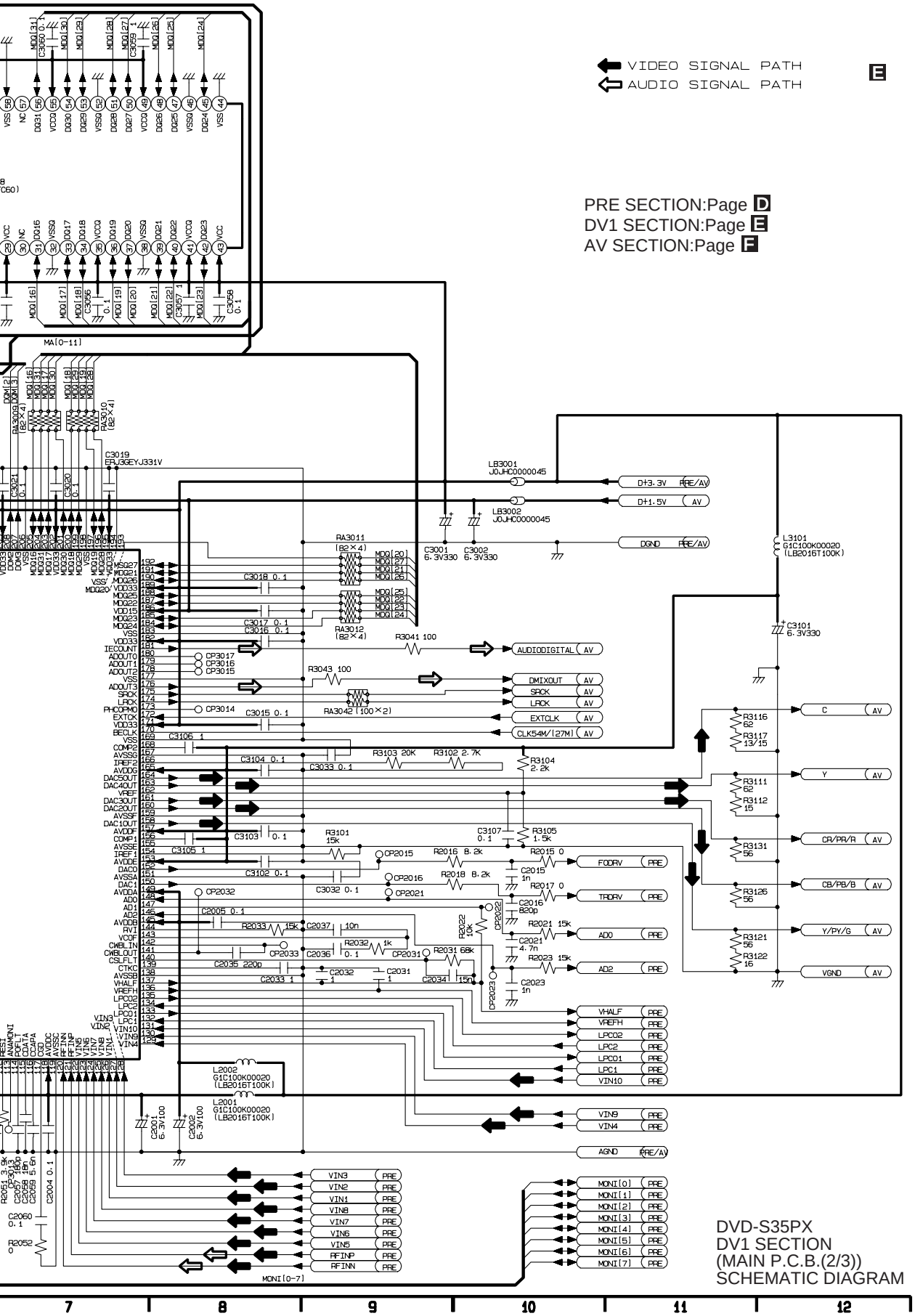
PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F

DVD-S35PX
PRE SECTION
(MAIN P.C.B.(1/3))
SCHEMATIC DIAGRAM

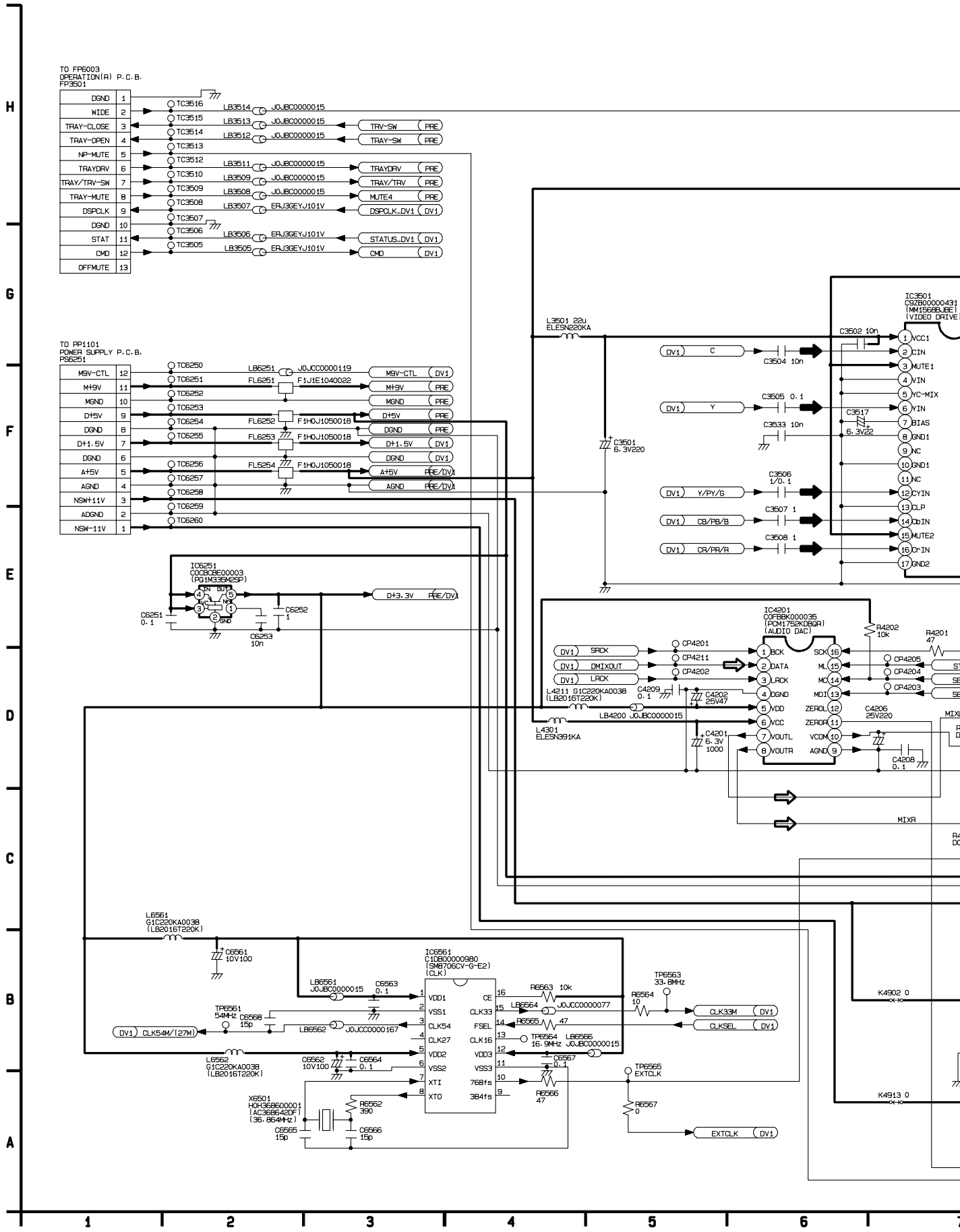
7 8 9 10 11 12

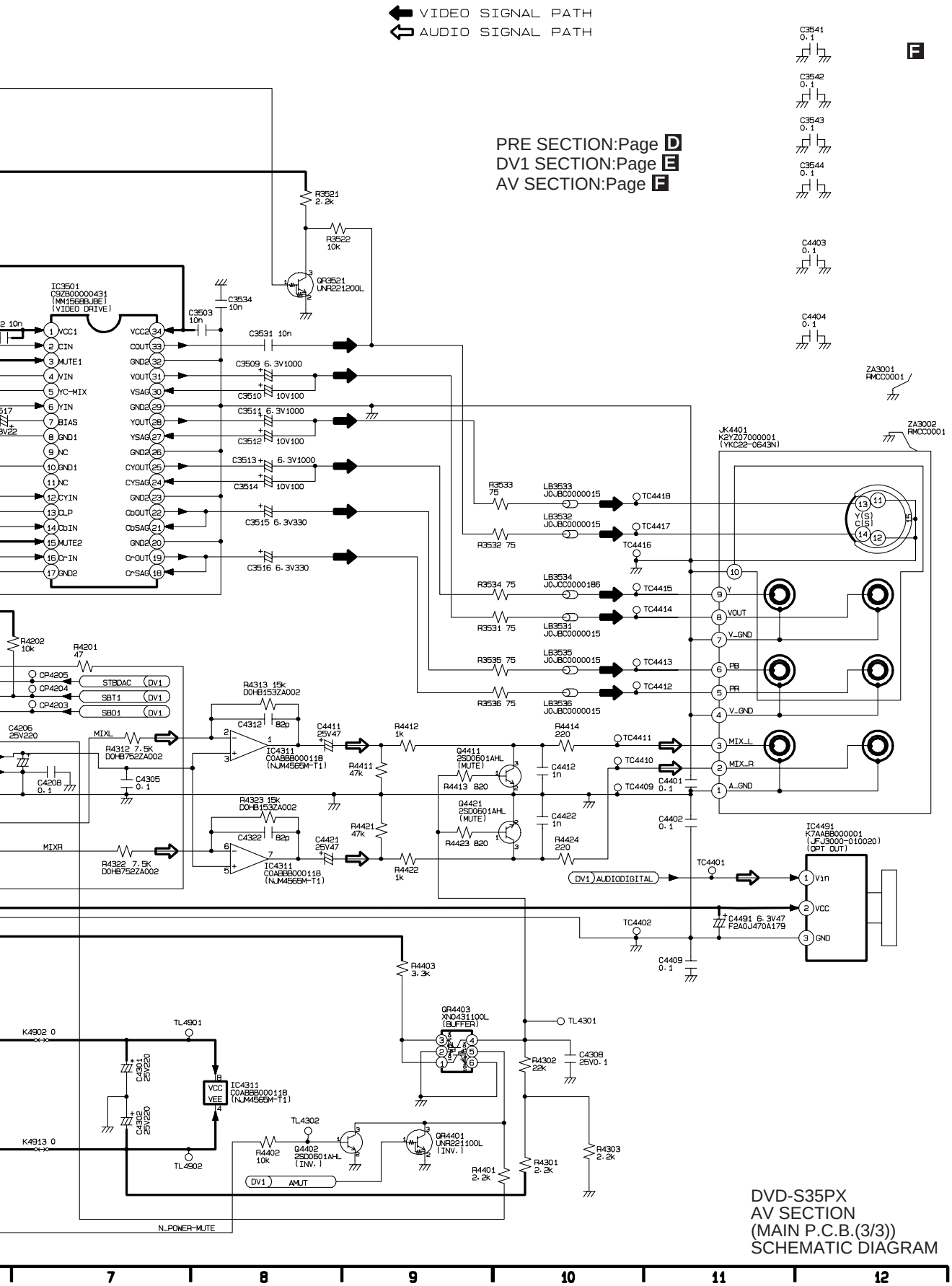
16.8. DV1 SECTION (MAIN P.C.B. (2/3)) SCHEMATIC DIAGRAM (DVD-S31PX)



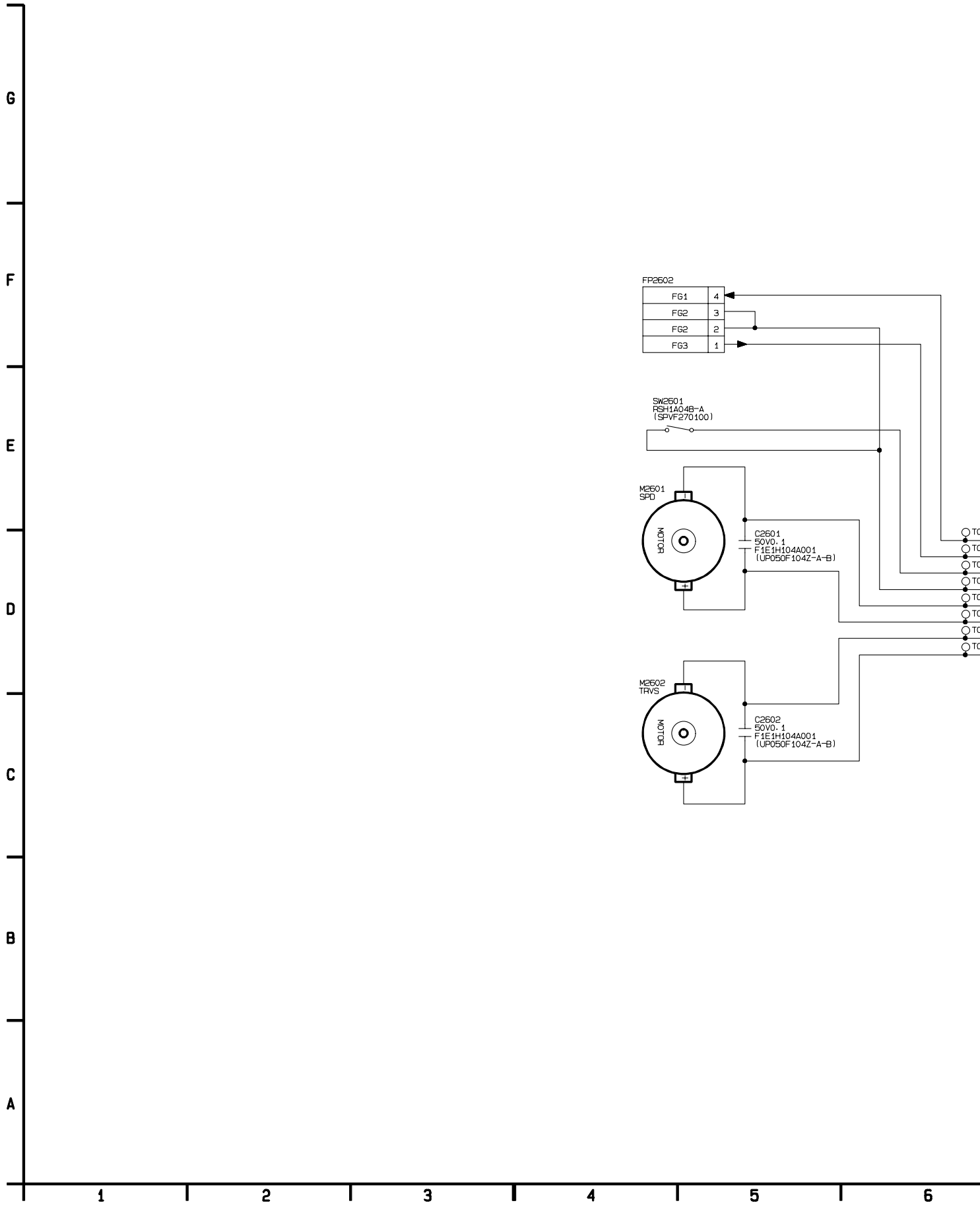

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
E
PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F
DVD-S35PX
DV1 SECTION
(MAIN P.C.B.(2/3))
SCHEMATIC DIAGRAM

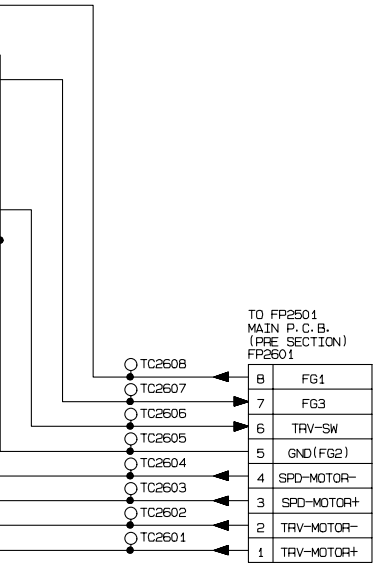
16.9. AUDIO/VIDEO SECTION (MAIN P.C.B. (3/3)) SCHEMATIC DIAGRAM (DVD-S3



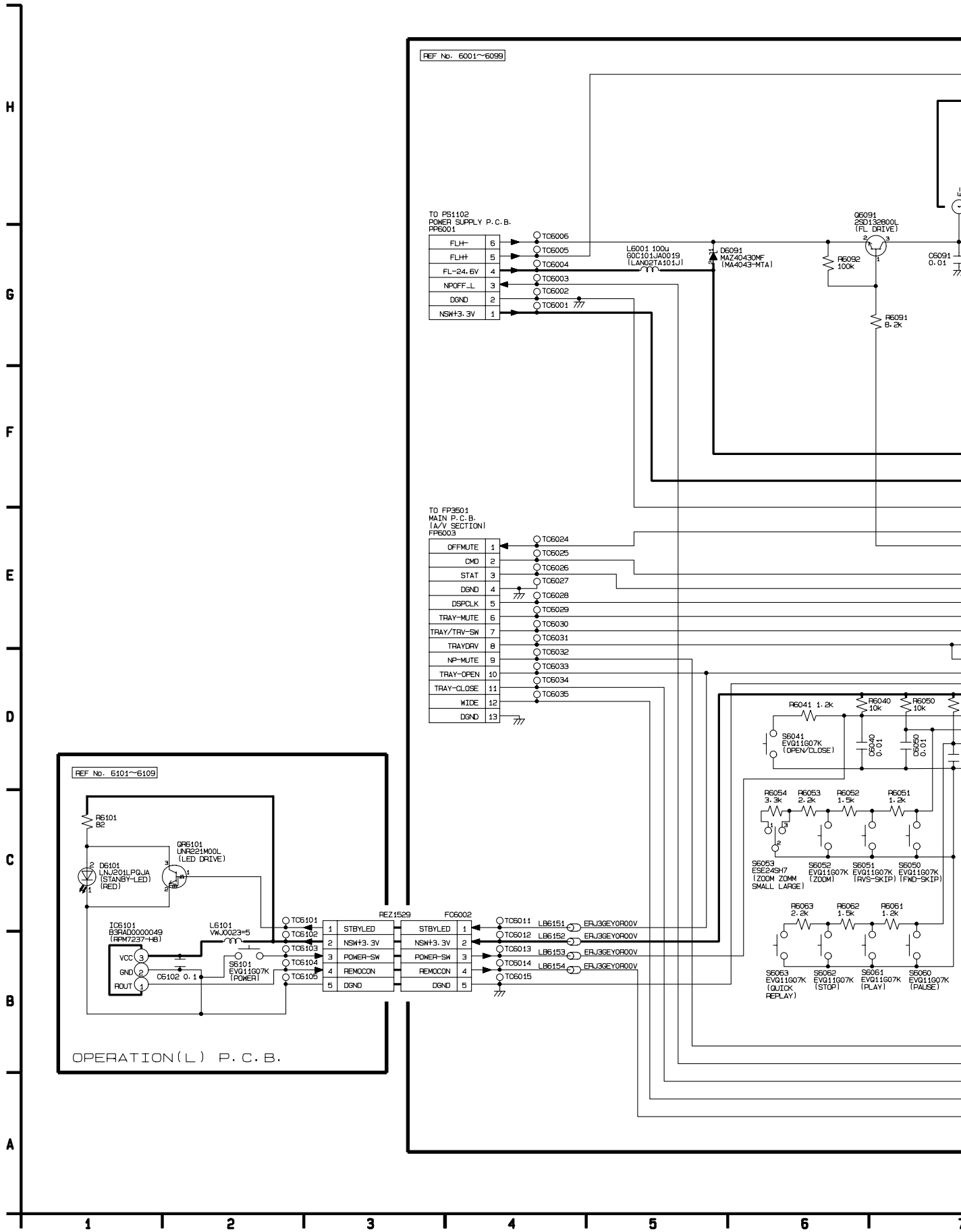

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
PRE SECTION:Page D
DV1 SECTION:Page E
AV SECTION:Page F
F
IC3501
C9ZB00000431
(MM1568BJBE)
(VIDEO DRIVE)
VCC1
CIN
MUTE1
VIN
YC-MIX
YIN
BIAS
GND1
NC
GND1
NC
CYIN
CLP
CbIN
MUTE2
CrIN
GND2
VCC2
COUT
GND2
VOUT
VSAG
GND2
YOUT
YSAG
GND2
CYOUT
CYSAG
GND2
CbOUT
CbSAG
GND2
CrOUT
CrSAG
R3521 2.2k
R3522 10k
QR3521 UNR221200L
C3534 10n
C3503 10n
C3531 10n
C3509 6.3V1000
C3510 10V100
C3511 6.3V1000
C3512 10V100
C3513 6.3V1000
C3514 10V100
C3515 6.3V330
C3516 6.3V330
C3541 0.1
C3542 0.1
C3543 0.1
C3544 0.1
C4403 0.1
C4404 0.1
ZA3001 RMCC0001
ZA3002 RMCC0001
JK4401 K2YZ07000001 (YKC22-0643N)
R3533 75
R3532 75
R3534 75
R3531 75
R3535 75
R3536 75
LB3533 J0JBC0000015
LB3532 J0JBC0000015
LB3534 J0JCC0000186
LB3531 J0JBC0000015
LB3535 J0JBC0000015
LB3536 J0JBC0000015
TC4418
TC4417
TC4416
TC4415
TC4414
TC4413
TC4412
TC4411
TC4410
TC4409
TC4401
TC4402
Y(S)
C(S)
VOUT
V_GND
PB
PR
V_GND
MIX_L
MIX_R
A_GND
R4202 10k
R4201 47
CP4205 STBDAC DV1
CP4204 SBT1 DV1
CP4203 SBO1 DV1
C4206 25V220
MIXL
R4312 7.5K D0HB752ZA002
C4208 0.1
C4305 0.1
MIXR
R4322 7.5K D0HB752ZA002
R4313 15k D0HB153ZA002
C4312 82p
C4311 25V47
IC4311 C0ABBB000118 (NJM4565M-T1)
R4411 47k
R4412 1k
R4323 15k D0HB153ZA002
C4322 82p
C4321 25V47
IC4311 C0ABBB000118 (NJM4565M-T1)
R4421 47k
R4422 1k
Q4411 2SD0601AHL (MUTE)
R4413 820
Q4421 2SD0601AHL (MUTE)
R4423 820
R4414 220
C4412 1n
C4422 1n
R4424 220
C4401 0.1
C4402 0.1
C4409 0.1
IC4491 K7AABB000001 (JFJ3000-010020) (OPT OUT)
Vin
VCC
GND
C4491 6.3V47 F2A0J470A179
DV1 AUDIODIGITAL
R4403 3.3k
QR4403 XN0431100L (BUFFER)
TL4301
R4302 22k
C4308 25V0.1
K4902 0
TL4901
C4301 25V220
IC4311 C0ABBB000118 (NJM4565M-T1)
C4302 25V220
K4913 0
TL4902
TL4302
R4402 10k
Q4402 2SD0601AHL (INV.)
QR4401 UNR221100L (INV.)
R4401 2.2k
R4301 2.2k
R4303 2.2k
DV1 AMUT
N_POWER-MUTE
DVD-S35PX
AV SECTION
(MAIN P.C.B.(3/3))
SCHEMATIC DIAGRAM
7
8
9
10
11
12

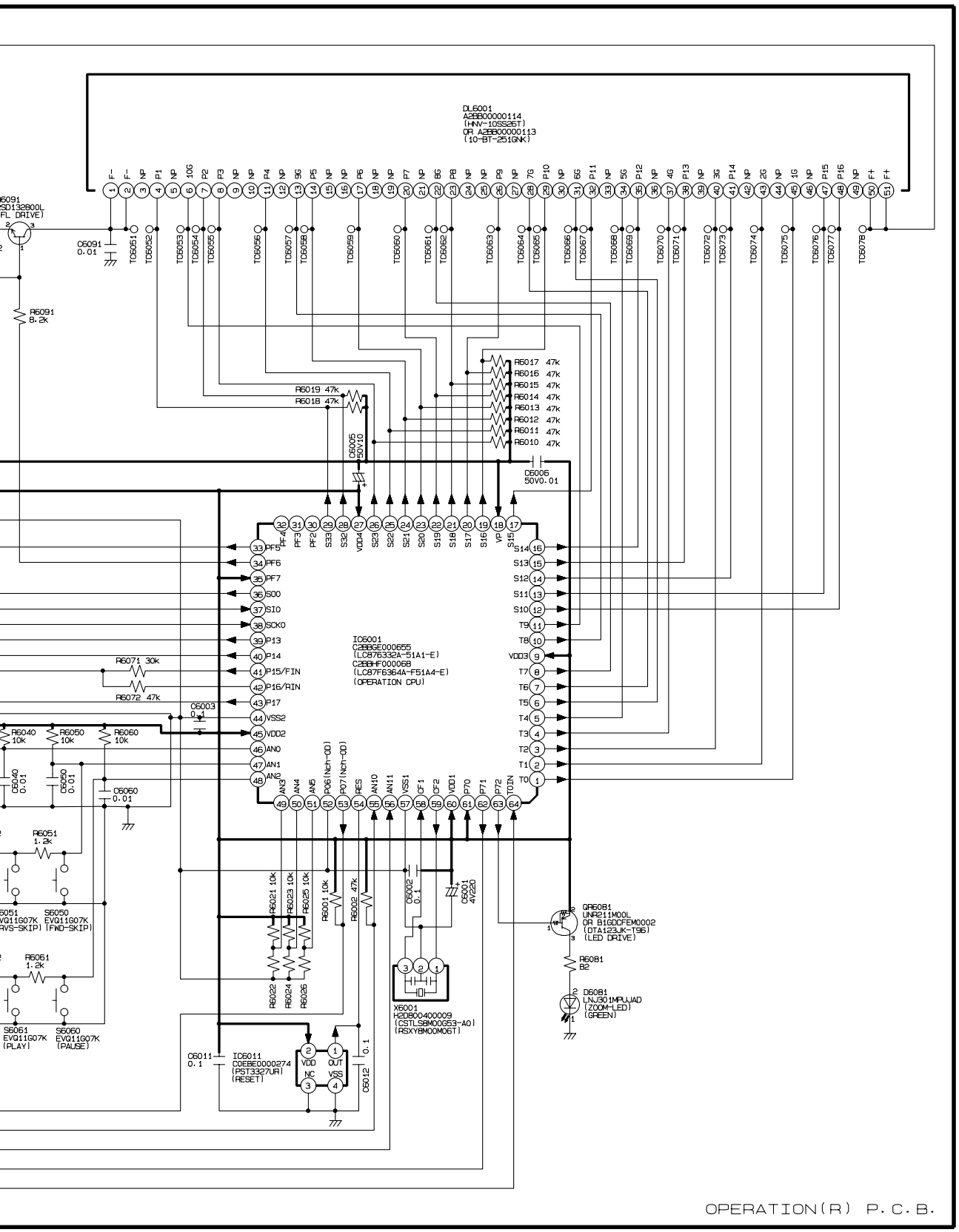
16.10. MOTOR SCHEMATIC DIAGRAM




TO FP2501
MAIN P.C.B.
(PRE SECTION)
FP2601
TC2608
TC2607
TC2606
TC2605
TC2604
TC2603
TC2602
TC2601
8 FG1
7 FG3
6 TRV-SW
5 GND(FG2)
4 SPD-MOTOR-
3 SPD-MOTOR+
2 TRV-MOTOR-
1 TRV-MOTOR+

16.11. OPERATION SCHEMATIC DIAGRAM





DVD-S35GCS/GCU/GC/GCA/GD/EE/GN/PL/PLA/PX
OPERATION SCHEMATIC DIAGRAM

7 8 9 10 11 12