Table Of Contents

Table Of Contents

19.1.4 Change of Replacement Parts List

Service Manual

TOP NEXT

ORDER NO.ODSD020632C2

Service Manual

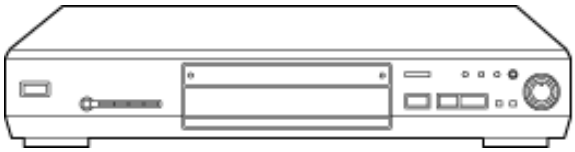
DVD Player

- DVD-RV32E
  DVD-RV32EB
  DVD-RV32EG
  DVD-RV32EE

Colour

(S).....Silver Type

(K).....Black Type



Specifications

Power supply:	AC220-240 V, 50 Hz
Power consumption:	11 W
Dimensions:	430 (W)×256 (D)×74.5 (H) mm (excluding protrusions)
Mass:	2.4 kg
Signal system:	PAL 625/50, PAL 525/60, NTSC
Operating temperature range:	+5 to+35°C
Operating humidity range:	5 to 90% RH (no condensation)
Region number:	Region No.2 (DVD-RV32E/EB/EG) Region No.5 (DVD-RV32EE only)

Playable disctype:

(1) DVD-Video

DVD-R (DVD-Video compatible)

(2) CD-Audio (CD-DA)

(3) Video CD

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

(5) MP3

•Maximum number of tracks and groups recognizable:999 tracks and 99 groups

•Compatible compression rate:between 32 kbps and 320 kbps

Video output:

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

S video output:

Y output level:	1 Vp-p (75Ω)
C output level:	NTSC: 0.286 Vp-p (75Ω) PAL: 0.300 Vp-p (75Ω)
Output terminal:	S terminal/AV
Number of terminals:	1 system

RGB video output:

R output level:	0.7 Vp-p (75Ω)
G output lebel:	0.7 Vp-p (75Ω)
B output level	0.7 Vp-p (75Ω)
Output terminal:	AV1
Number of terminals:	1 system

Audio output:

Output level:	2 Vrms (1 kHz, 0 dB)
Output terminal:	Pin jack/ AV
Number of terminals:	
2CH:	1 system
Subwoofer output (0.1 ch):	1 system

Audio performance:

(1) Frequency response:	
•DVD (linear audio):	4 Hz-22 kHz (48 kHz sampling)
	4 Hz-44 kHz (96 kHz sampling)
•CD audio:	4 Hz-20 kHz
(2) S/N ratio:	
•CD audio:	115 dB
(3) Dynamic range:	
•DVD (linear audio):	97 dB
•CD audio:	97 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 2/CLASS 1

Power consumption in standby mode:

approx. 4 W

Note:

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

⚠ 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

TOP NEXT

1 SAFETY PRECAUTIONS

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

1.1 GENERAL GUIDELINES

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

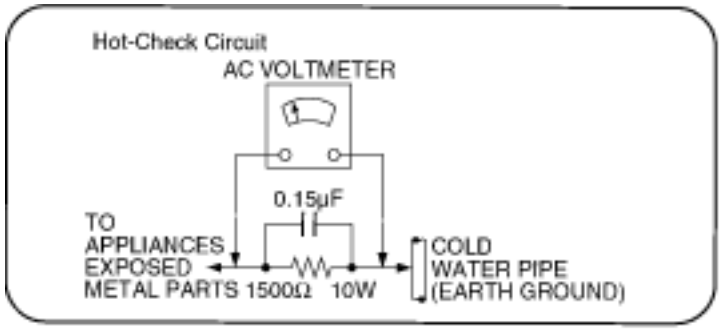
TOP PREVIOUS NEXT

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



TOP PREVIOUS NEXT

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 µ F 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 outsideof the 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.

TOP PREVIOUS NEXT

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

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 dischargingESD wrist 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 comparableconductive material).

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 todamage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. 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.

TOP PREVIOUS NEXT

3 Precaution of Laser Diode

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:

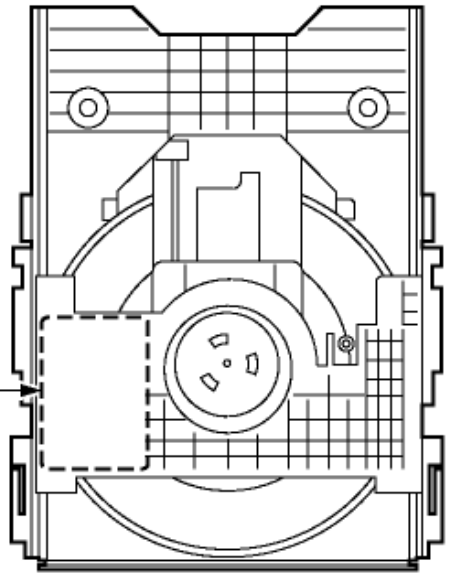
1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

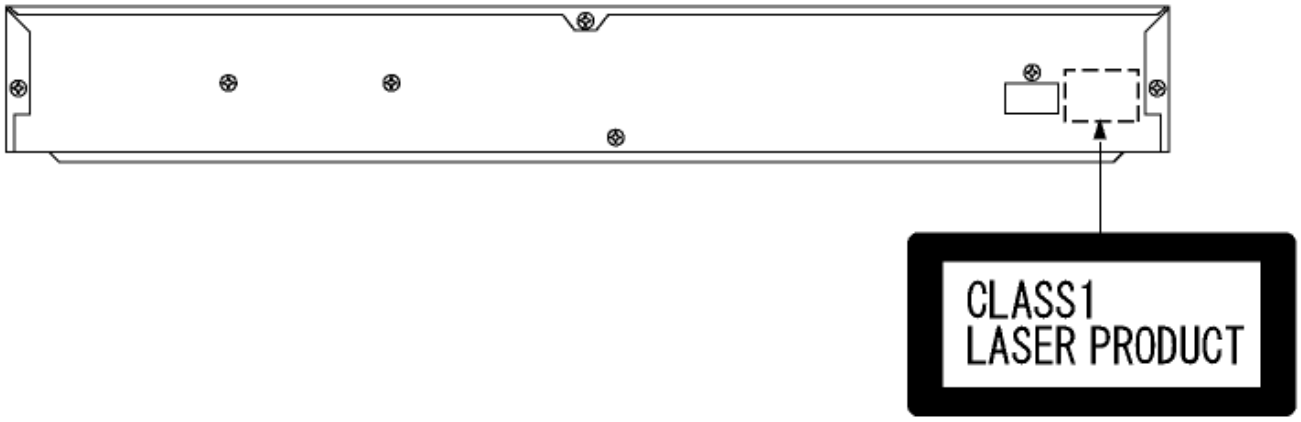
ACHTUNG:

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.

DANGER	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	- AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注 意	- 打开时有可见及不可见激光辐射。避免激光束照射。
注 意	- ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。 RQLS0233





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.

TOP PREVIOUS NEXT

4 General Description

4.1 Operating instructions

5 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

5.1 Grounding for electrostatic breakdown prevention

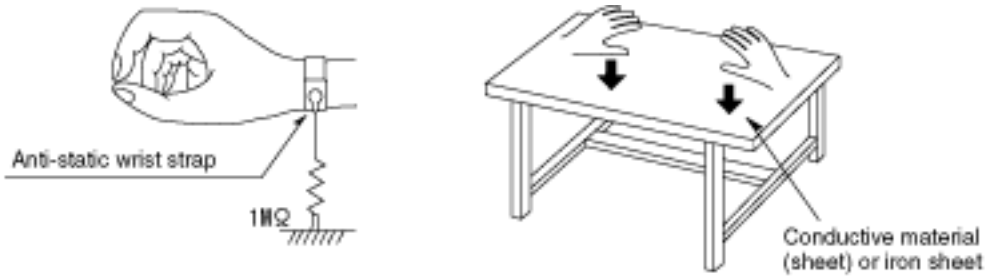
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

5.1.1 Worktable grounding

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

5.1.2 Human body grounding

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



5.1.3 Handling of optical pickup

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 accordingto the 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.

5.2 Handling Precautions for Traverse Unit (Optical Pickup)

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 preventingstatic electricity 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.

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

TOP PREVIOUS NEXT

6.1 Dissasembly Procedure

6.2 Caseing Parts and P.C.B. Positions

6.3 Top Panel

6.4 Tray

6.5 Front Panel

6.6 Mechanism Unit

6.7 Terminal P.C.B.

6.8 Module P.C.B.

6.9 Front-1 P.C.B. and Front-2 P.C.B.

6.10 Rear panel

6.11 Mother P.C.B.

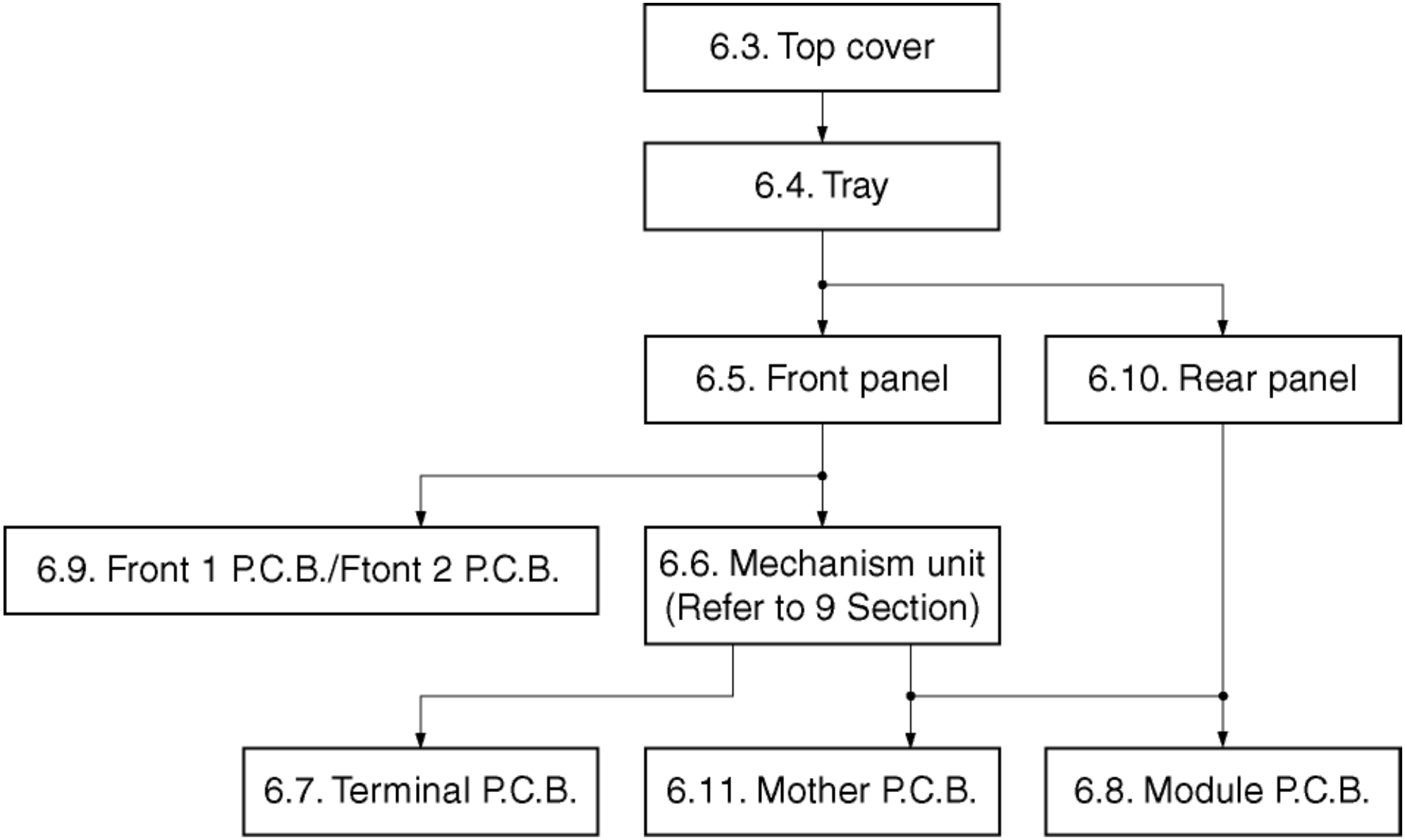
6.12 Servicing Position

6.12.1 Servicing position of the Module P.C.B. and Terminal P.C.B.

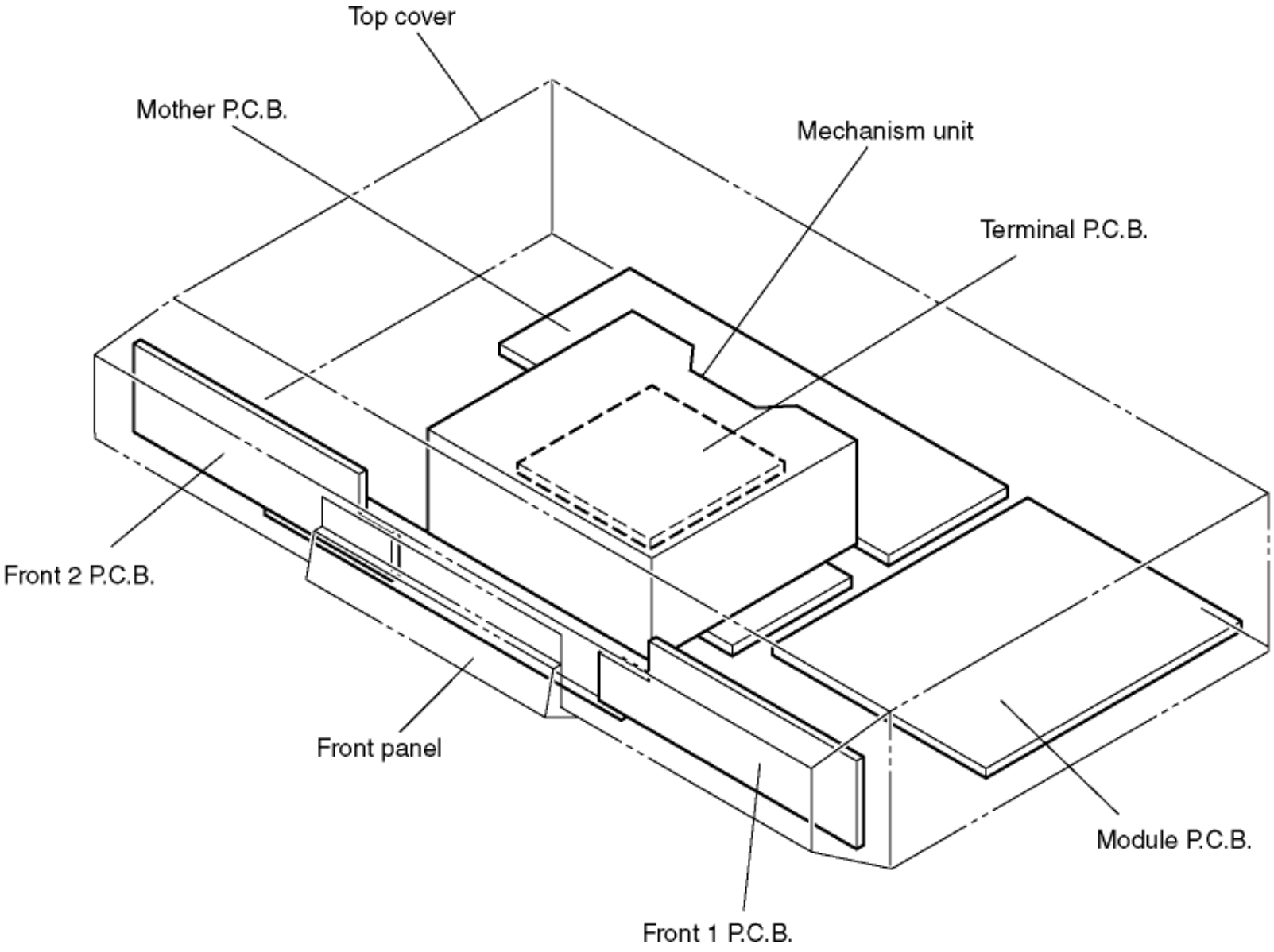
6.12.2 Servicing position of the Mother P.C.B.

TOP PREVIOUS NEXT

6.1 Dissasembly Procedure

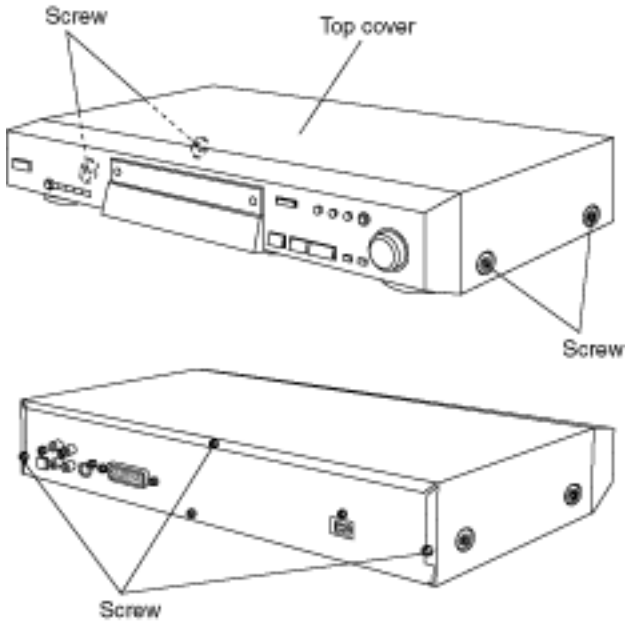


6.2 Caseing Parts and P.C.B. Positions



6.3 Top Panel

1. Unscrew the screws.



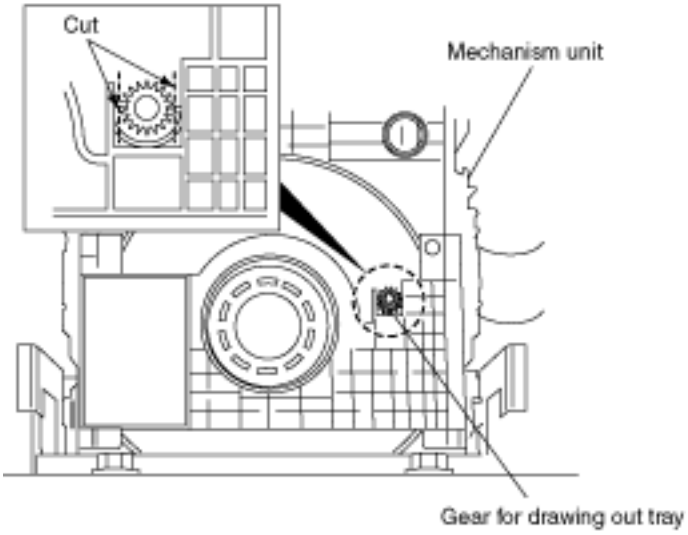
6.4 Tray

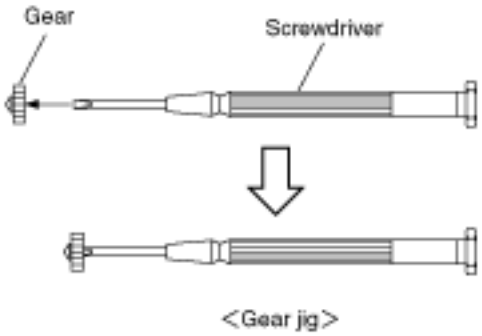
1. Pull the tray out of the mechanism unit. Remove the gear and install it onto a screwdriver to make a gear jig.

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

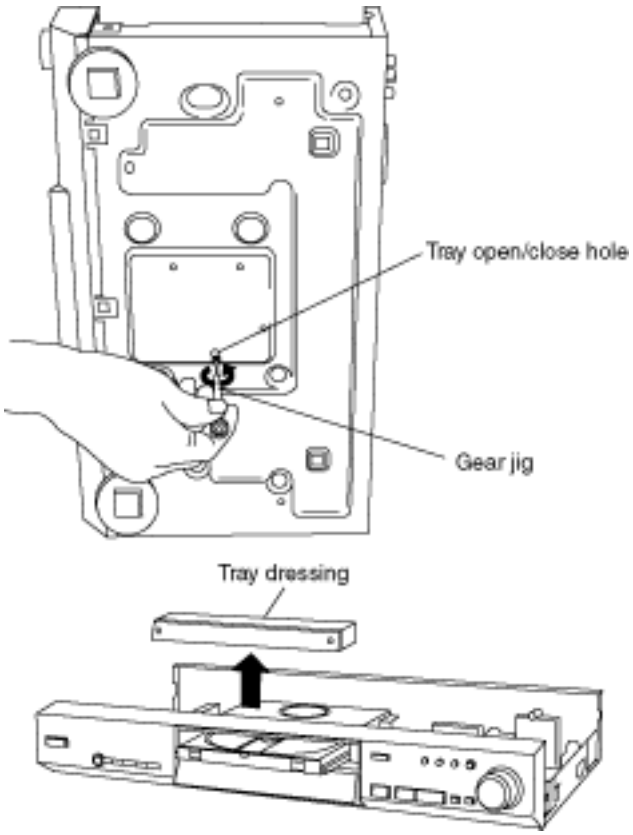
3. Turn the gear jig counterclockwise to open the tray.

4. Remove the tray dressing from the tray section.





<Gear jig>

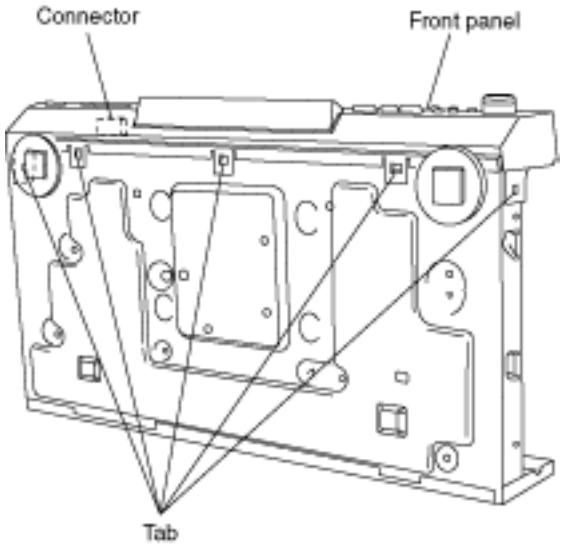


TOP PREVIOUS NEXT

6.5 Front Panel

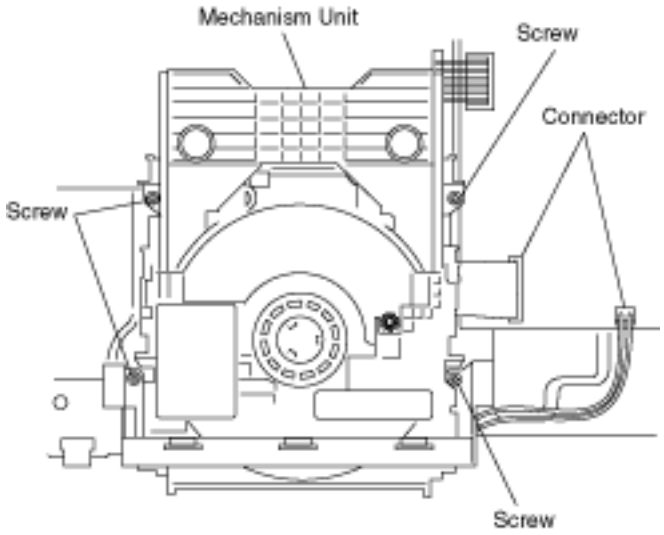
1. Release the tabs.

2. Remove the connectors.



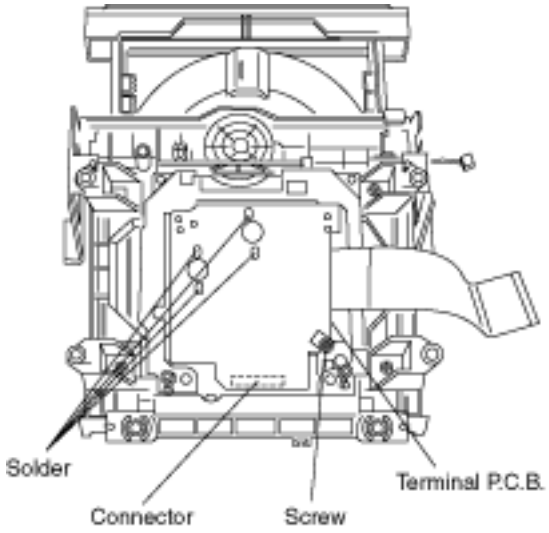
6.6 Mechanism Unit

1. Unscrew the screws.
2. Remove the connectors.
3. Pull out the mechanism unit vertically.



6.7 Terminal P.C.B.

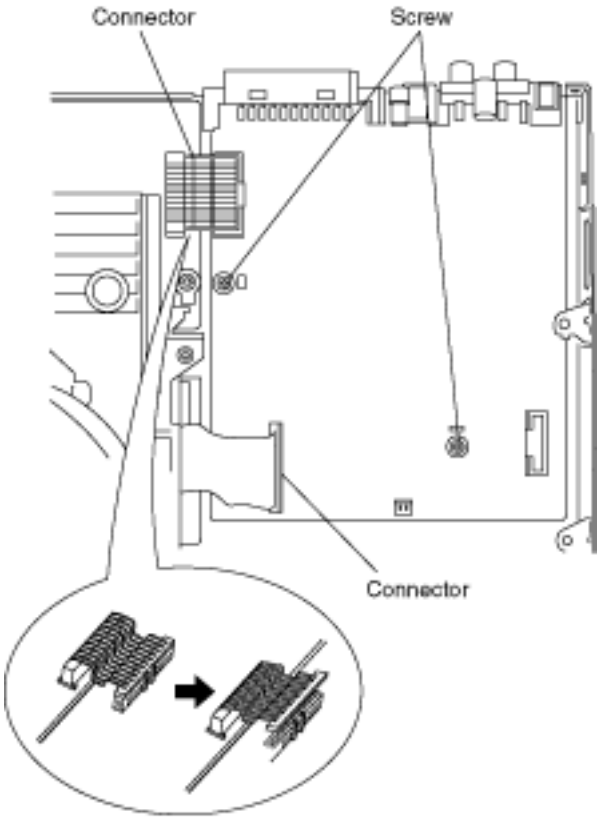
1. Unscrew the screw.
2. Remove the solders.
3. Remove the connector.



<Mechanism unit bottom>

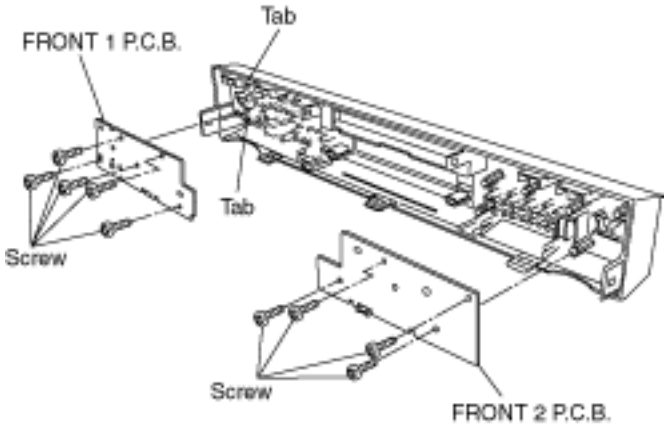
6.8 Module P.C.B.

1. Unscrew the screws.
2. Remove the connectors.
3. Pull out the module PCB vertically.



6.9 Front-1 P.C.B. and Front-2 P.C.B.

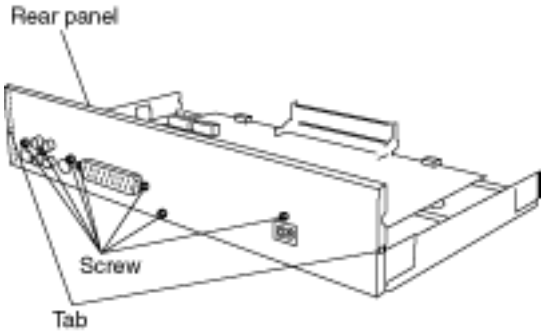
1. Unscrew the screws.
2. Release the tabs.



6.10 Rear panel

TOP PREVIOUS NEXT

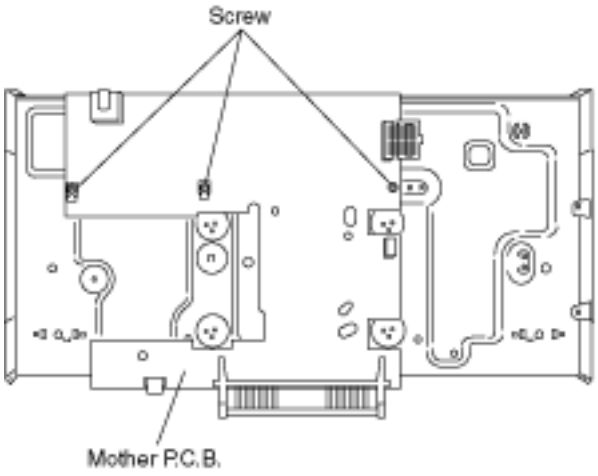
1. Unscrew the screws
2. Release the tabs.



TOP PREVIOUS NEXT

6.11 Mother P.C.B.

1. Unscrew the screws.

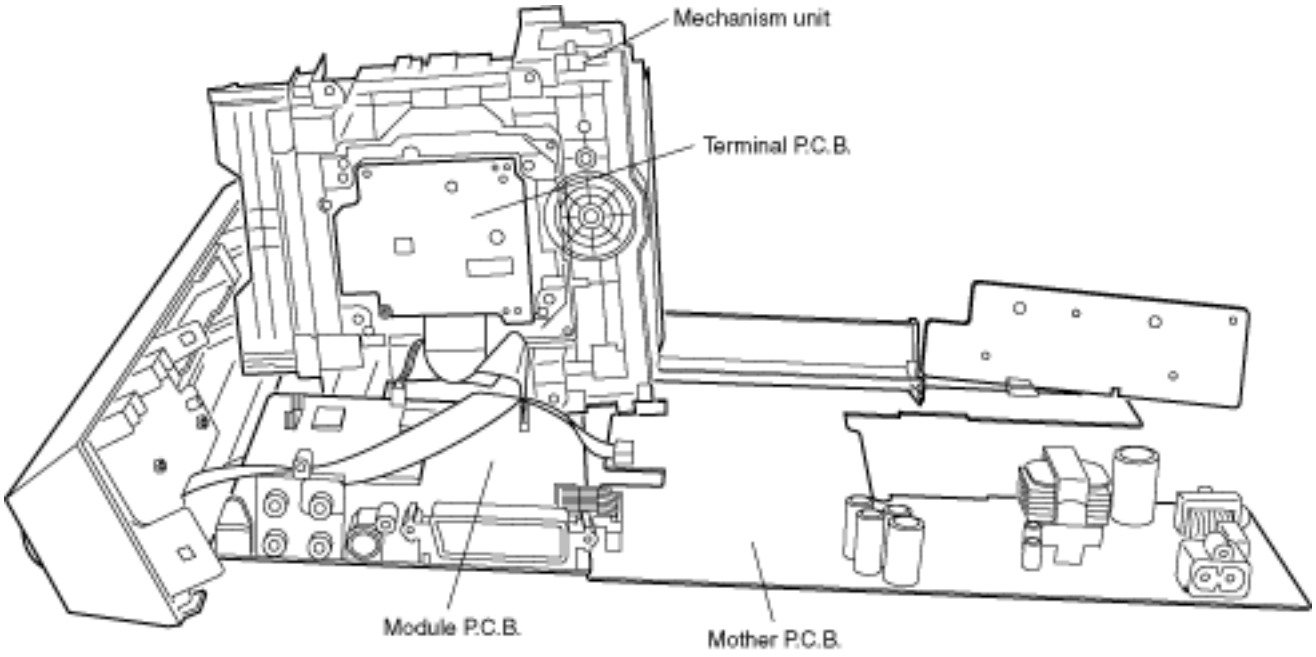


6.12 Servicing Position

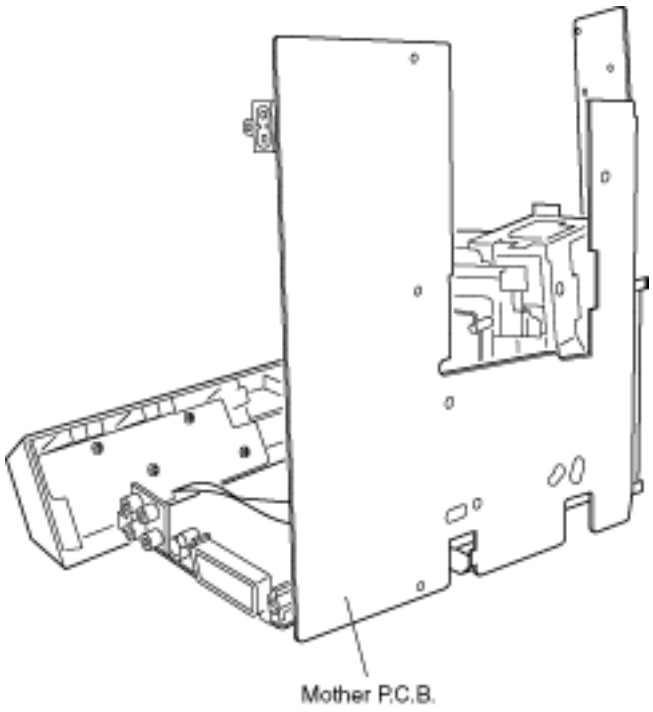
TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

6.12.1 Servicing position of the Module P.C.B. and Terminal P.C.B.



6.12.2 Servicing position of the Mother P.C.B.



7 OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

TOP PREVIOUS NEXT

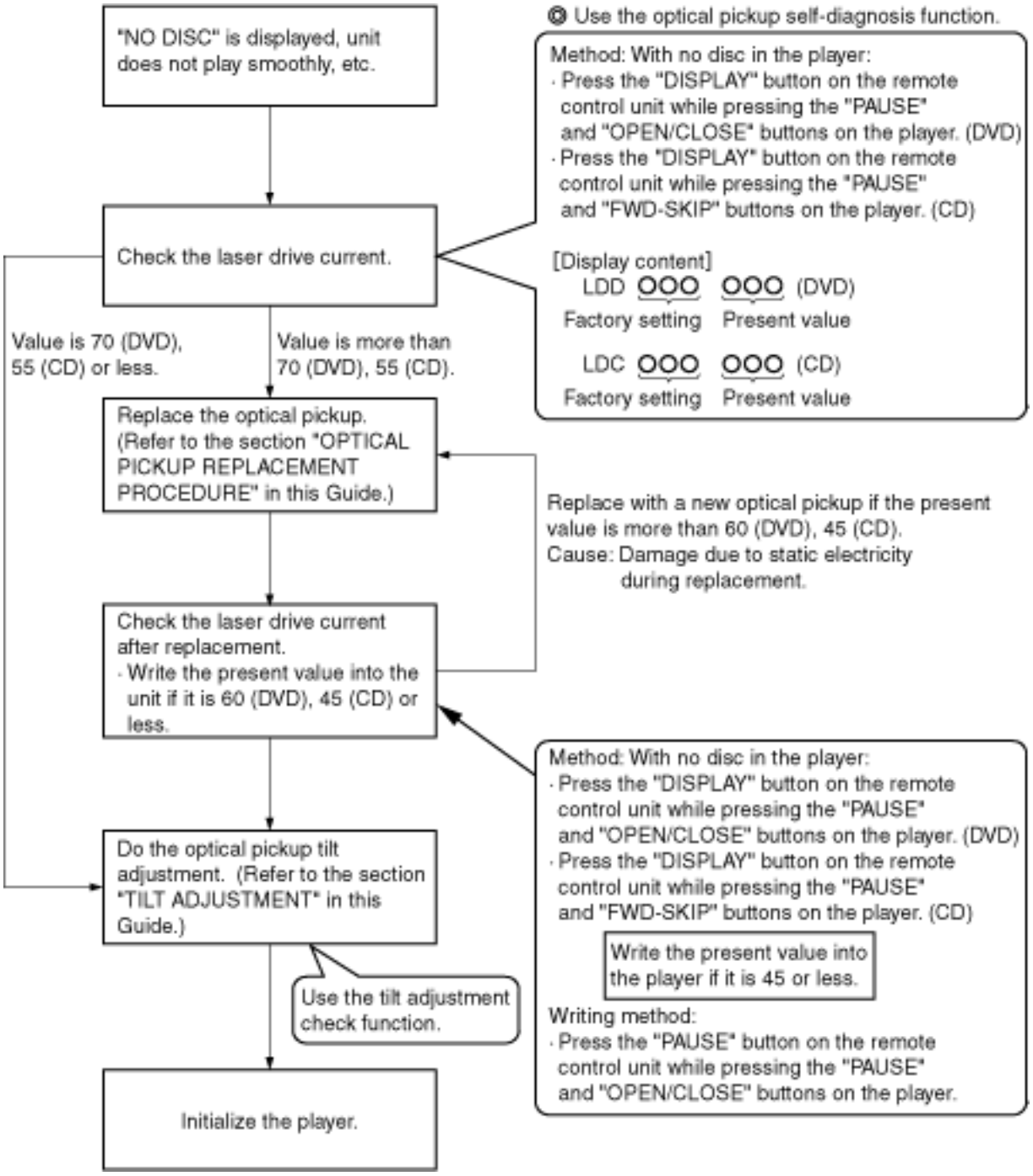
TOP PREVIOUS NEXT

7.1 Self-diagnosis

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 functionbefore replacing 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.)



TOP PREVIOUS NEXT

7.2 Cautions to Be Used Before Replacing the Optical Pickup Unit and Spindle Motor Assembly

Before replacing the optical pickup unit and spindle motor assembly, check the total using hours for each of them. The checking method is as follows:

	Operating state & Key operation	Display
Using hours of CD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyy yyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of DVD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyy xxxx: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of SP motor	Press "PAUSE", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_xxxx xxxx: total hours are displayed by 4-digit figures (unit: 10 hours).
Resetting using hours of CD and DVD lasers (Simultaneous resetting)	Press "STOP", FWD-SKIP" and "5" on the remote control in this order while displaying Timer 1 data.	T1_0000_0000
Resetting using hours of the motor	Press "STOP", FWD-SKIP" and "6" on the remote control in this order while displaying Timer 2 data.	T2_0000

Cautions to be taken when replacing the optical pickup

The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

1. Do not touch the areas around the laser diode and actuator.

2. Do not judge the laser diode with a tester. (The tester will be damaged easily.)

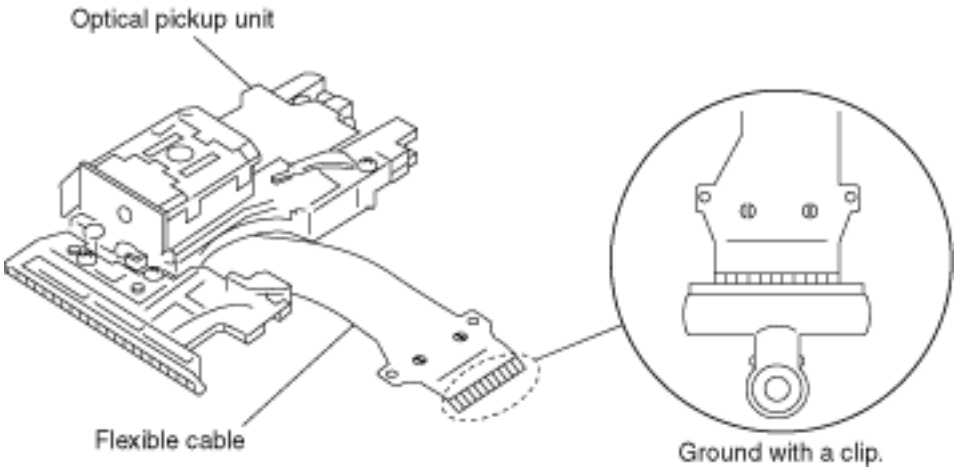
3. It is recommended to use a destaticized soldering iron for short-circuiting or removing the laser diode. (Recommended soldering iron) HAKKO ESD Product

4. Solder the land of the flexible cable in the optical pickup.

Note:

- When using a soldering iron which is not destaticized, short-circuit the terminal face of the flexible case with a clip. After that, short-circuit the land.

- After the repairing work is completed, remove the solder according to the correct procedure shown in this Technical Guide.



TOP PREVIOUS NEXT

8 Self-Diagnosis Function and Service Modes

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

8.1 Service Mode Table 1

TOP PREVIOUS NEXT

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 8.2. 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. Refer to section 10.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to section 10.4. Optical Pickup Tilt Adjustment
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check the IC6302 FLASH ROM program.
	9	Lighting Confirmation Function of Display Tube	
	DISPLAY	Checking the laser drive current	Refer to section 9 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 8.4. Initializing the DVD player.

TOP PREVIOUS NEXT

8.2 DVD Self Diagnostic Function-Error Code

TOP PREVIOUS NEXT

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	Defect 4
U11	Focus error					
H01	Tray loading error					
H02	Spindle servo error	(Spindle servo, DSC (IC2001) 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					
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
F498	No communication between Front Micro Computer and Main Micro Computer after power on	IC communication is NG FROM(IC3080) and/or Firmware in FROM is NG				
F499	No response from Main Micro Computer when key code is sent from Front Micro Computer to Main Micro Computer	Main Micro Computer hangs up				
F4FF	Force initialize failure (time out)		EEPROM (IC3066)	CPU (IC6001)	FEP (IC5201)	ADSC (IC2001)
F500	DSC error	DSC (IC2001) stops in the occurence of servo error (starup, focus error, etc)	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	ADSC (IC2001)	CPU (IC6001)		

F502	DSC Time out error	Similar disposal as F500	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	ADSC (IC2001)	FEP (IC5201)	EEPROM (IC3066)	
F505	DSC Attention error	Similar disposal as F500	Optical pickup	ADSC (IC2001)	FEP (IC5201)	servo drive
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	FEP (IC5201)	ADSC (IC2001)	ODC (IC2001)
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	ODC (IC2001)	FEP (IC5201)	ADSC (IC2001)	
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	ODC (IC2001)	FEP (IC5201)	ADSC (IC2001)	
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	ODC (IC2001)			
F611	6626 QCODE don’t read Error	Access failure to seek address in CD series	ODC (IC2001)			
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	ODC (IC2001)			
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 (IC3066)	CPPM (*1)	
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
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 (IC3080)	CPU (IC6001)		
F894	EEPROM abnormality		EEPROM (IC3066)	Serial communication on lone		
F895	Language area abnormality	Firm version agreement check for factory preset setting failure prevention	FROM (IC3080)	Jumper (*2)		
F896	No existence model	Firm version agreement check for factory preset setting failure prevention	Jumper (*2)			
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention				
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.

*2: Jumper ... R6012, R6014 and R6016.

TOP PREVIOUS NEXT

8.3 Last Error Code saved during NO PLAY

TOP PREVIOUS NEXT

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

TOP PREVIOUS NEXT

8.4 Service mode table 2

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.	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 the primary power 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_DFA_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 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.

			data in ADSC address DFAh is 6901h.	
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 the primary power 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.	———

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_xyzzz 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	———	Press STOP or OPEN button.
Dealer's lock	In STOP (no disc) mode, press STOP button on the player, and POWER button on the remote control unit.	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.	· "LOCKED" 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. · "UNLOCKED" sign appears when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP (no disc) mode, press PAUSE, FWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INITIALIZED"	
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_1234 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 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_0000	Cancelled automatically 5 seconds later.

TOP PREVIOUS NEXT

8.5 Overview of each function

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

8.5.1 Cumulative operation time display

TOP PREVIOUS NEXT

1. Operation/display

   Key operations are as follows.

   Laser operation time ..... In STOP mode, main unit PAUSE+FWD-SKIP+ remote controller [5]

   Spindle motor operation time ..... In STOP mode, main unit PAUSE+FWD-SKIP+ remote controller [6]

   To reset the timer, perform the following while displaying the time with above key operation.

   Laser operation time ..... In STOP mode, main unit STOP+FWD-SKIP+ remote controller [5]

   Spindle motor operation time ..... In STOP mode, main unit STOP+FWD-SKIP+ remote controller [6]

2. How to utilize

   Reference information in fault diagnosis of laser or spindle motor system

   Review of faulty point in repeated repair

TOP PREVIOUS NEXT

8.5.2 Servo process display

1. Operation/display

   While the player is in STOP mode, perform the specified key operation to display the servo process number on FL.

   When the display does not change from the error indication, press Open/Close key to show the servo process number.

   Key operation: In STOP mode, main unit PAUSE+FWD- SKIP+ remote controller [7]

Number to the left .....Process number when halted
Number to the right .....Process number in progress

8.6 Sales demonstration lock function

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

8.6.1 Setting

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

8.6.2 Cancellation

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

8.7 Handling After Completing Repairs

Use the following procedure after completing repairs.

8.7.1 Method

Confirm that the power is turned on:

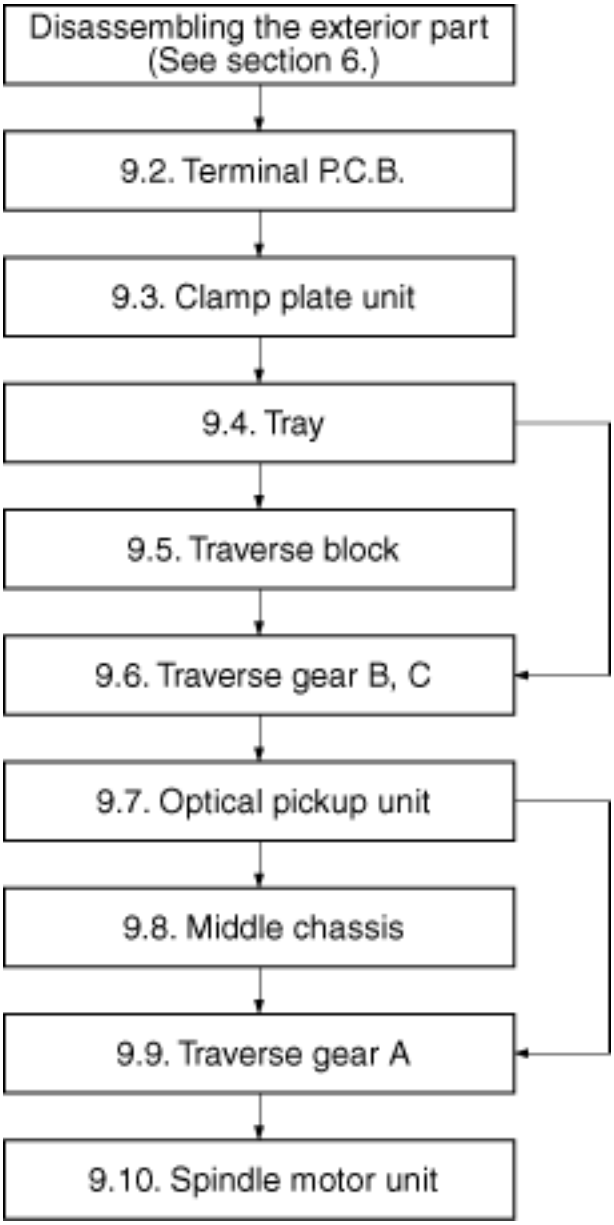
1. Press the "OPEN/CLOSE" button to close the tray.
2. Press the "POWER" button to turn off the power.
3. Disconnect the power plug from the outlet.

8.7.2 Precautions

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

9 ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

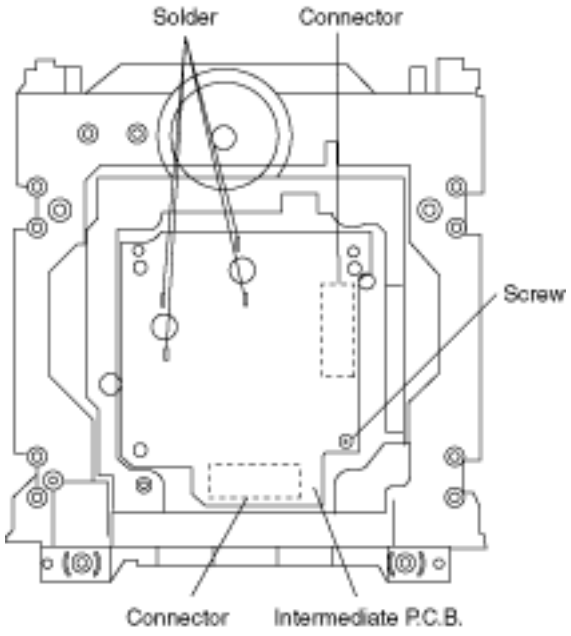
9.1 Disassembly Procedure



9.2 Terminal P.C.B.

TOP PREVIOUS NEXT

1. Unscrew the screws.
2. Remove the solders.
3. Remove the connectors.

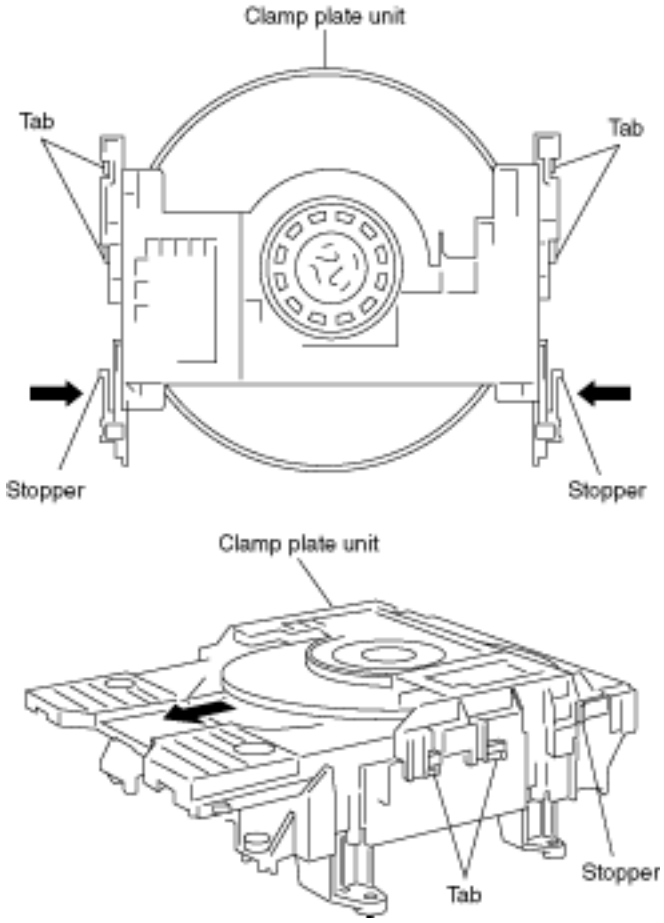


<Mechanism unit bottom>

TOP PREVIOUS NEXT

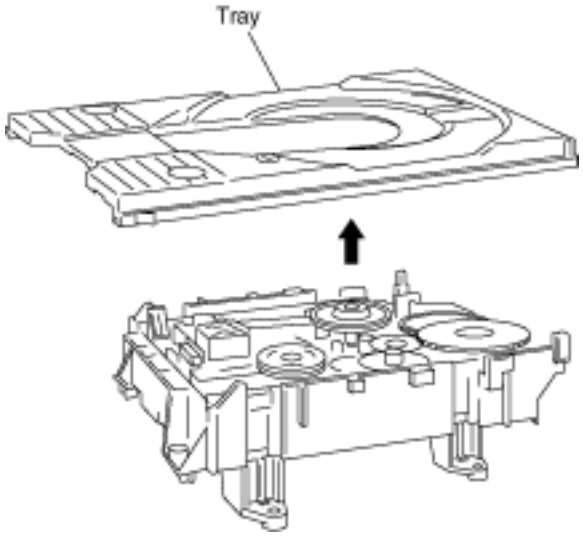
9.3 Clamp Plate Unit

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



9.4 Tray

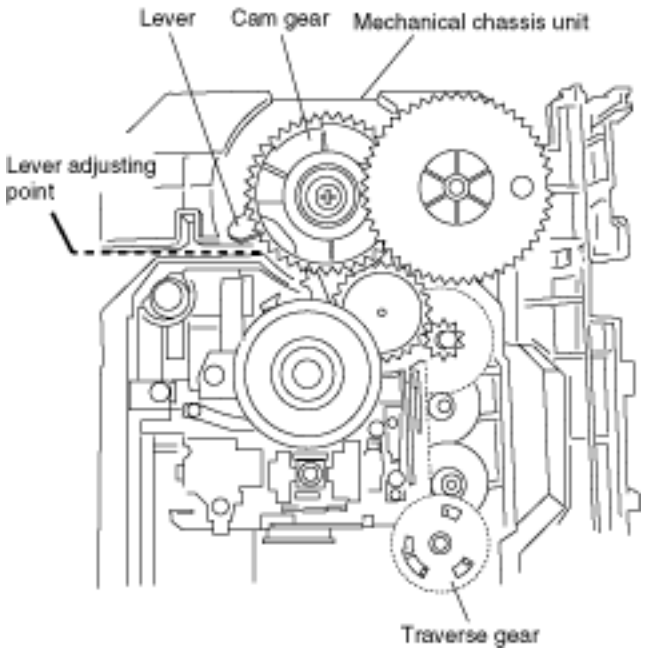
1. Lift the tray.



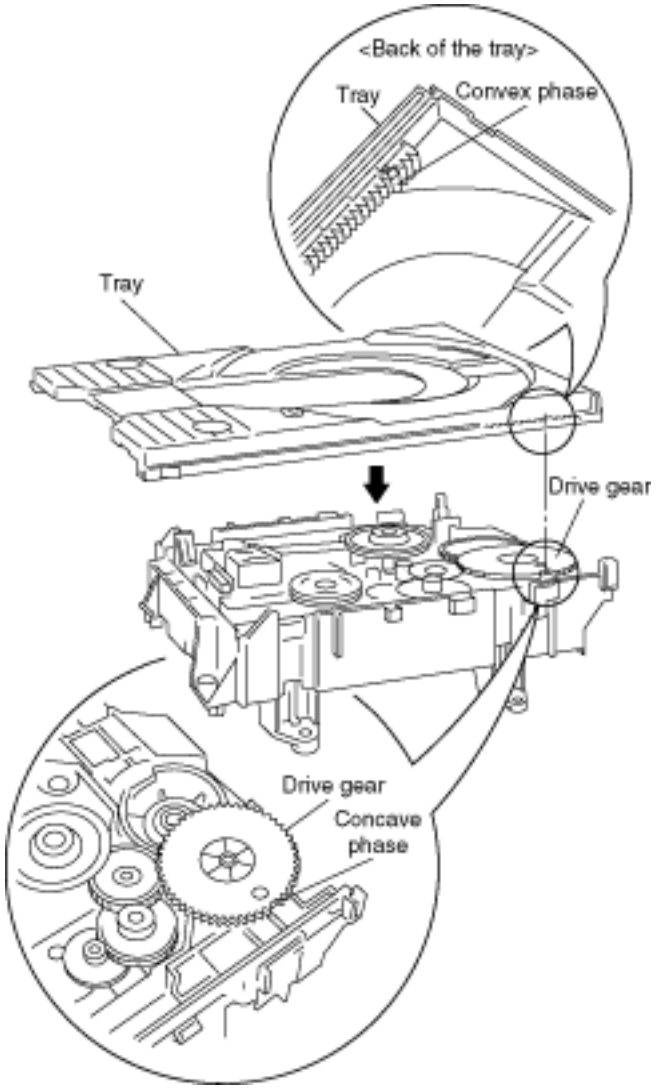
<Precautions in reassembling the tray>

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

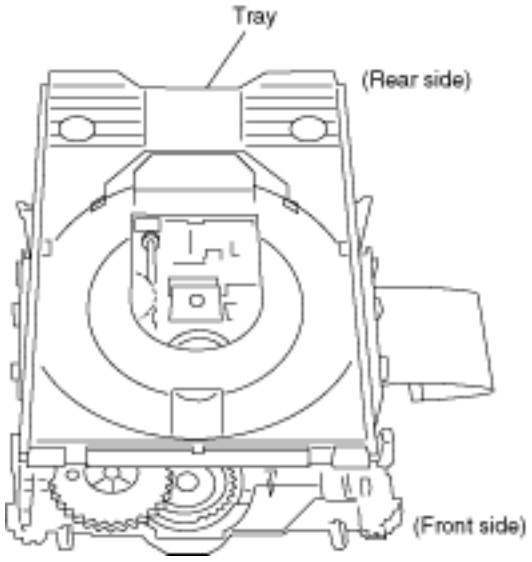
1. Turn traverse gear until cam gear leaver comes to the lever adjusting position at the end of mechanical chassis unit.



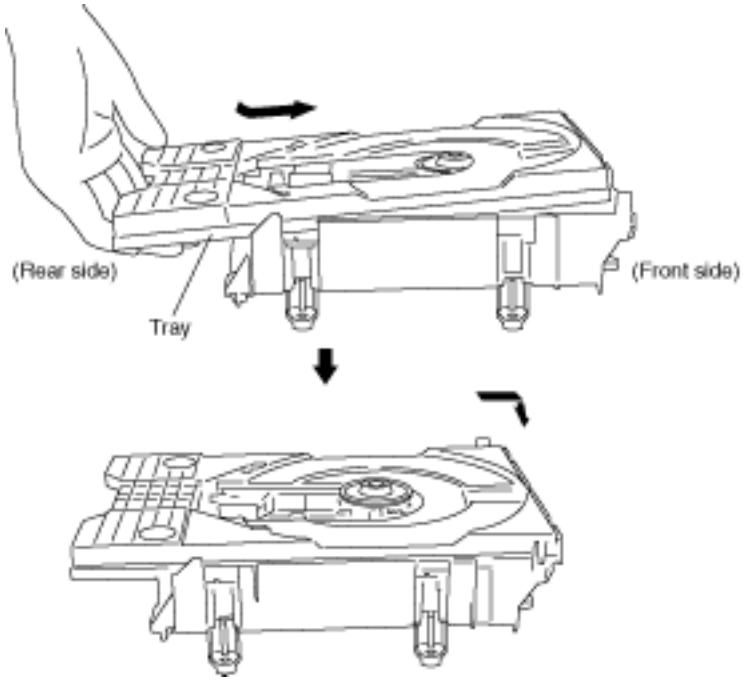
2. Check the position of convex phase on back of the tray, and that of concave phase on drive gear.



A. Place the tray on the unit from rearward.

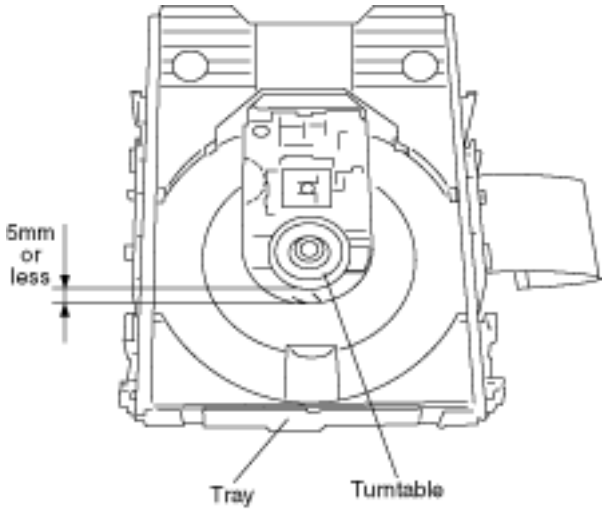


B. Inch the tray frontward until convex phase and concave phase mate.



Caution:

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

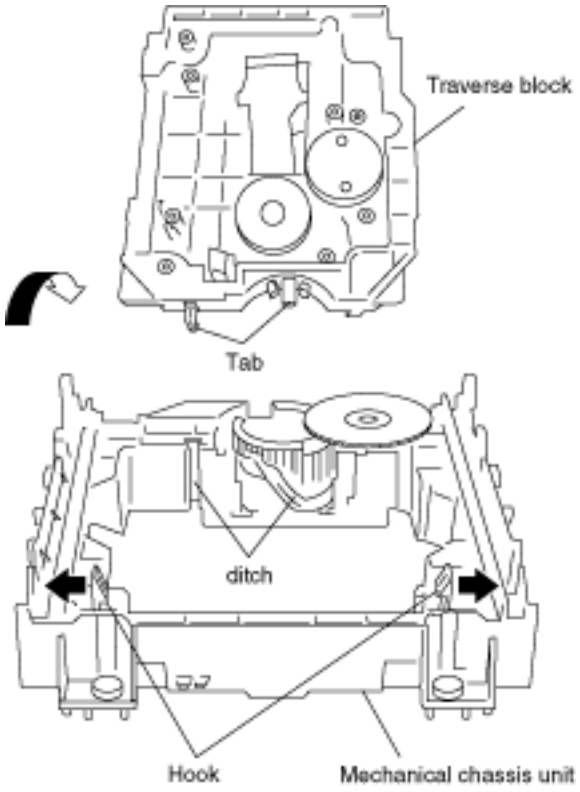


TOP PREVIOUS NEXT

9.5 Traverse Block

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

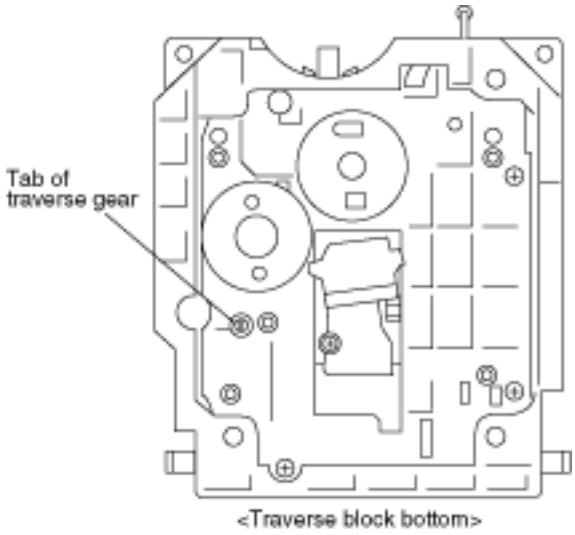
2. Disengage the tabs from the holes of the mechanical chassis unit.



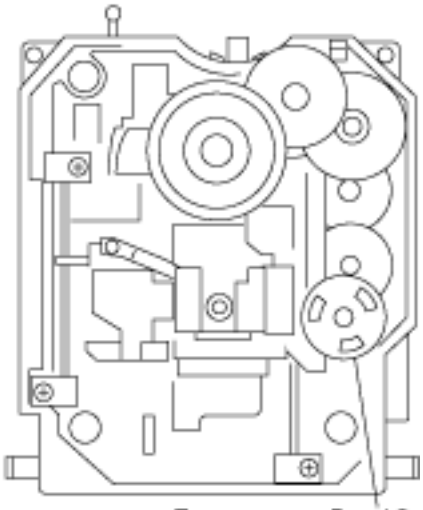
9.6 Traverse Gear

1. Disengage the tabs from the traverse gear.

2. Remove the traverse gears B and C.



<Traverse block bottom>



Traverse gears B and C

<Precautions in reassembling the traverse block>

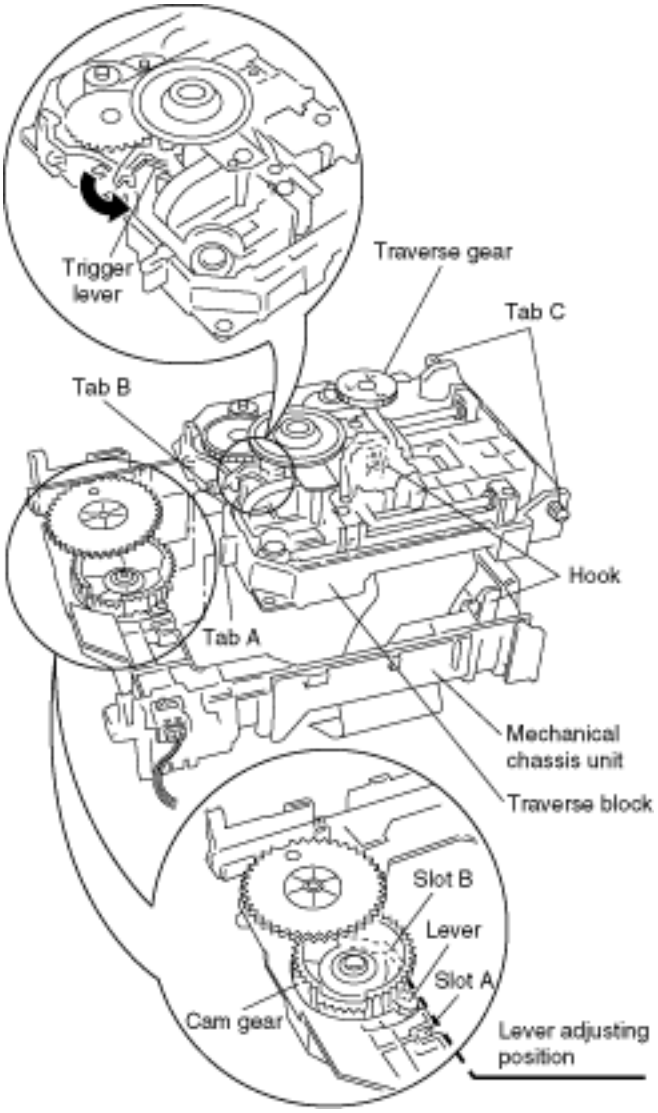
•Take the following precautions when reassembling the traverse block.

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

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

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

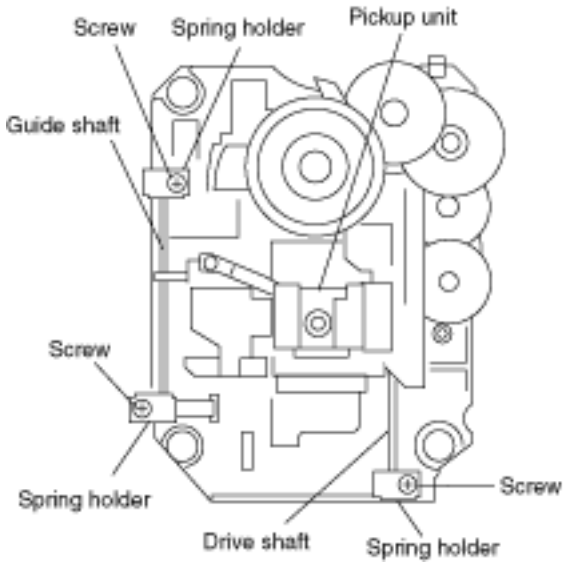
Place tabs C into hooks to mount the traverse block on mechanical chassis unit. (Slot A... Mechanical chassis unit, Slot B... Cam gear)



TOP PREVIOUS NEXT

9.7 Optical Pickup Unit

1. Unscrew the screws.
2. Remove the spring holders and the springs.
3. Pull out the drive shaft and guide shaft.



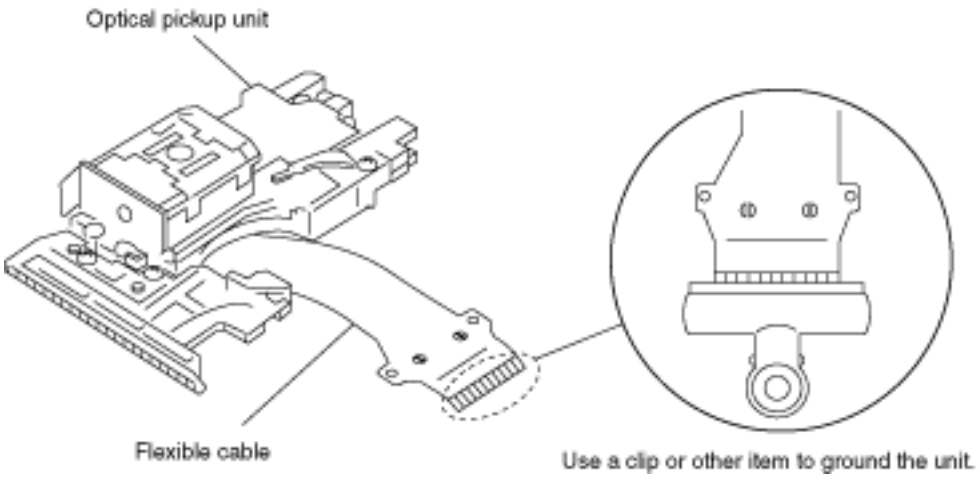
9.7.1 Precautions in optical pickup replacement

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

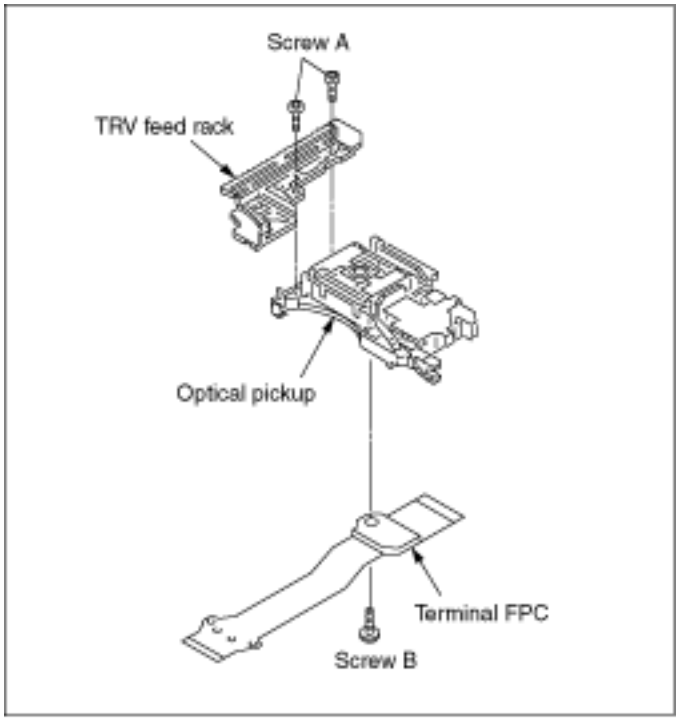
   - When using the soldering iron without anti-static feature, short-circuit the flexible cable terminal with a clip before short-circuiting the land.
   - After intended repair is finished, remove the solder for short-circuit of laser diode in a correct way following the procedures described in this Manual.



9.7.2 Disassembling the Optical Pickup Unit

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



9.7.3 Cautions to Be Taken When Replacing the Optical Pickup

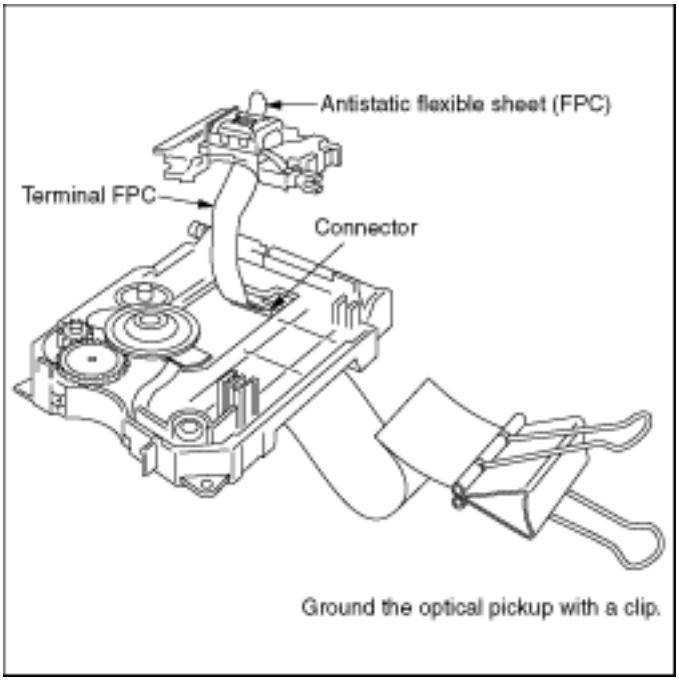
- An antistatic flexible sheet (FPC) is connected with the new optical pickup.

  Replace the optical pickup according to the following procedure.

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

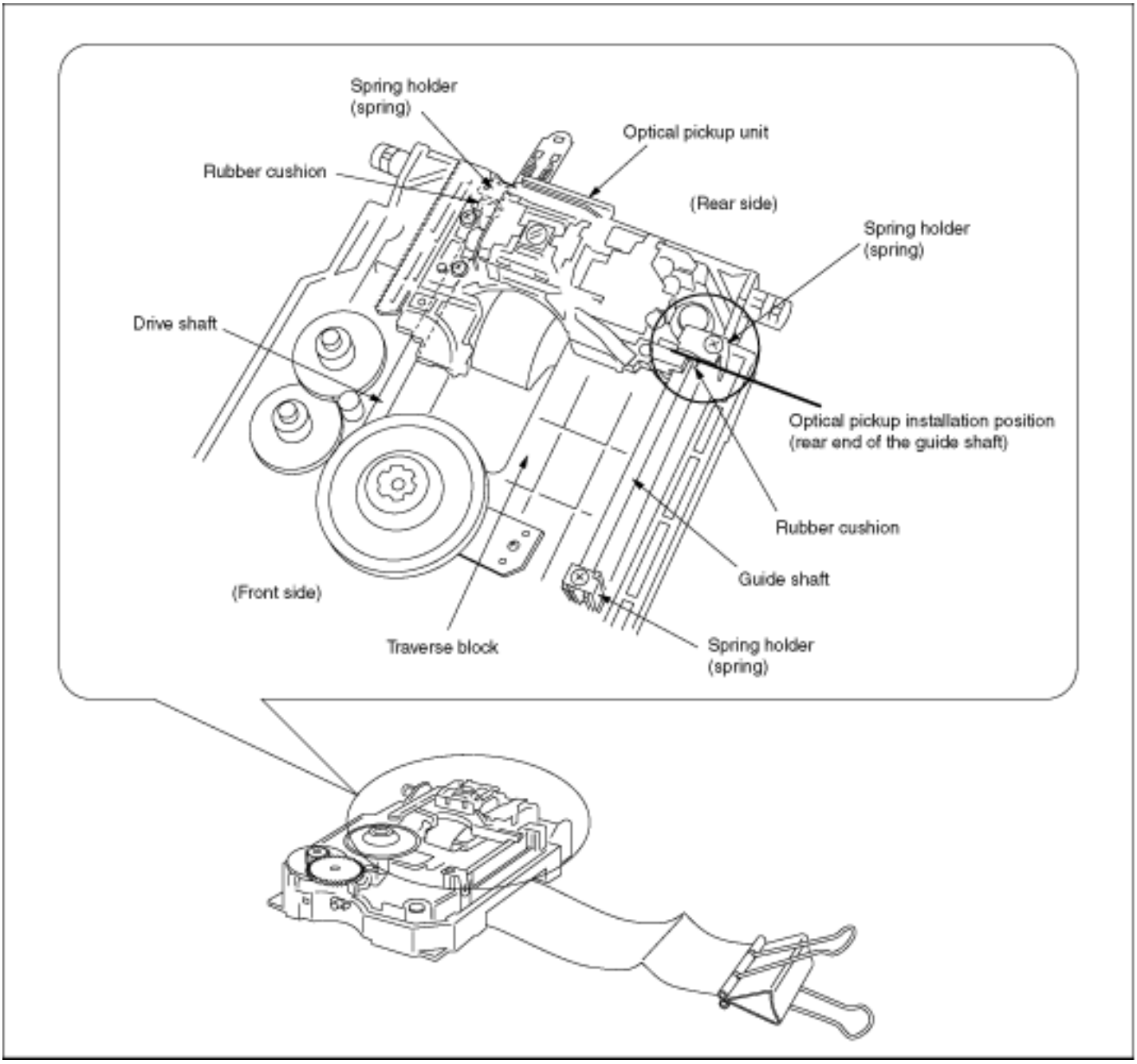
2. Install the Terminal FPC in the connector on the Intermediate P.C.B..

Fig. 2



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

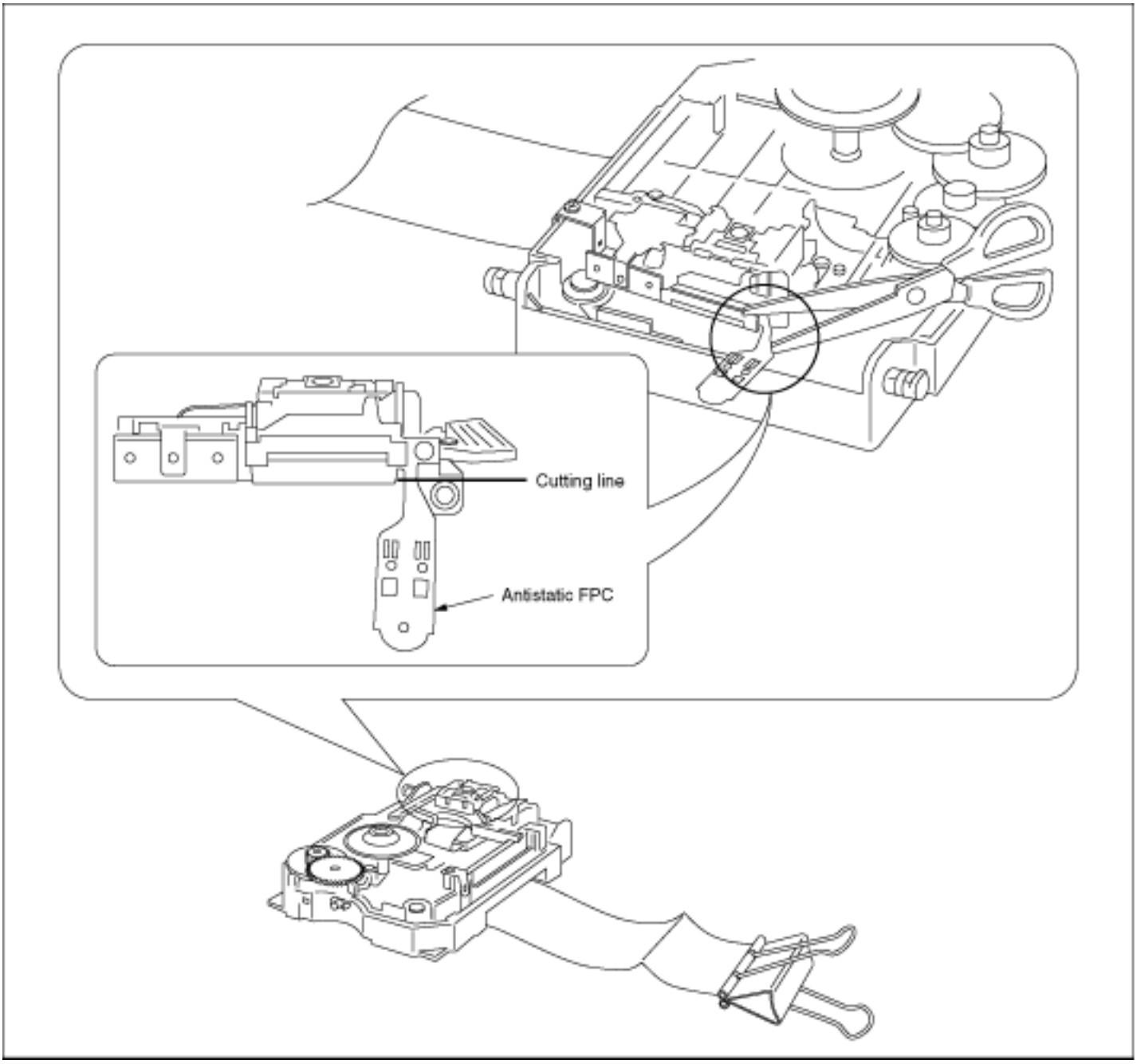
Fig. 3



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.)

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

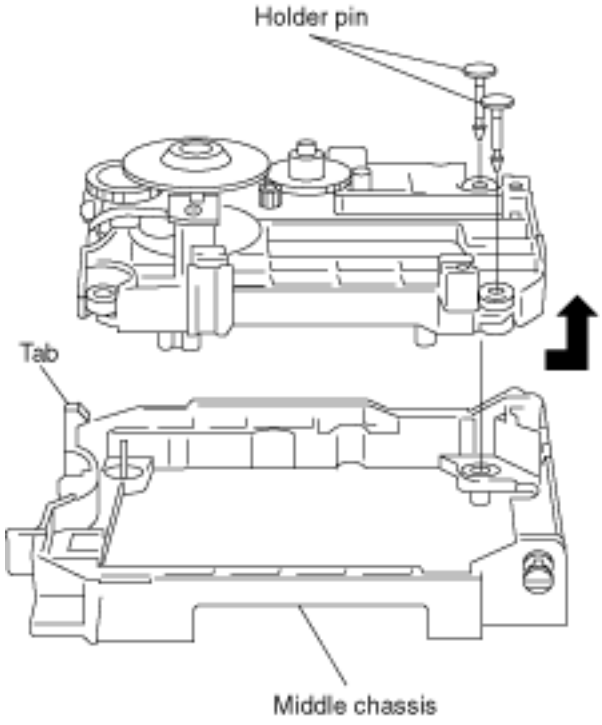
Fig. 4



TOP PREVIOUS NEXT

9.8 Disassembling the Middle Chassis

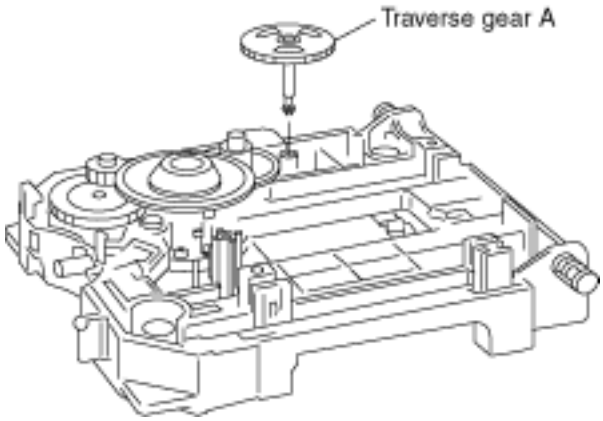
1. Remove the holder pins.
2. Remove the tab.
3. It lifts while pulling it in the direction of the arrow.



9.9 Disassembling the Traverse Gear A

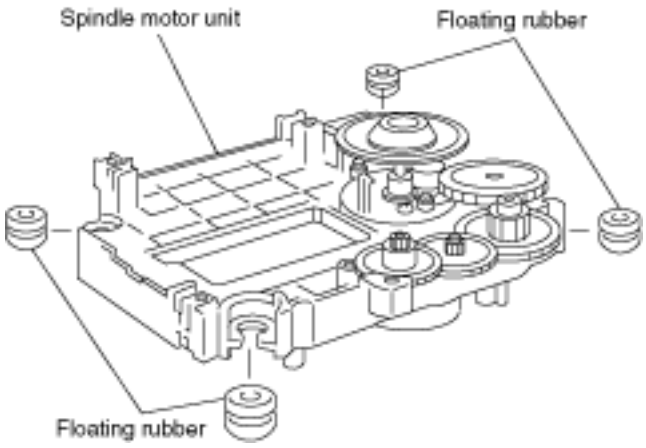
1. Unscrew the screw.

2. Remove the traverse gear A.



9.10 Disassembling the Spindle Motor Unit

1. Remove the floating rubbers.



10 ADJUSTMENT PROCEDURES

TOP PREVIOUS NEXT

10.1 Service Tools and Equipment

10.2 Important points in adjustment

10.2.1 Important points in optical adjustment

10.2.2 Important points in electrical adjustment

10.3 Storing and Handling Test Discs

10.4 Optical adjustment

10.4.1 Optical pickup tilt adjustment

10.4.1.1 Adjustment procedure

10.4.1.2 Important points

10.4.1.3 Check after adjustment

10.4.1.4 Procedure for screw lock

TOP PREVIOUS NEXT

10.1 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.
Others	Screw lock	RZZ0L01
	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

TOP PREVIOUS NEXT

10.2 Important points in adjustment

10.2.1 Important points in optical adjustment

- 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 unnecessary after replacing the traverse unit.

10.2.2 Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

10.3 Storing and Handling Test Discs

- 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.

10.4 Optical adjustment

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10.4.1 Optical pickup tilt adjustment

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.	

10.4.1.1 Adjustment procedure

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.

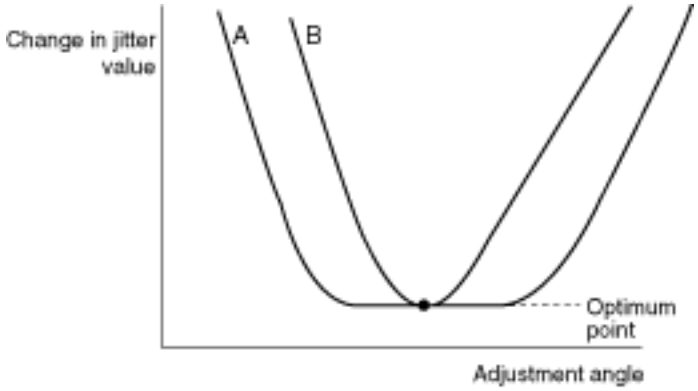
7. Play test disc T43 (outer periphery).

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.

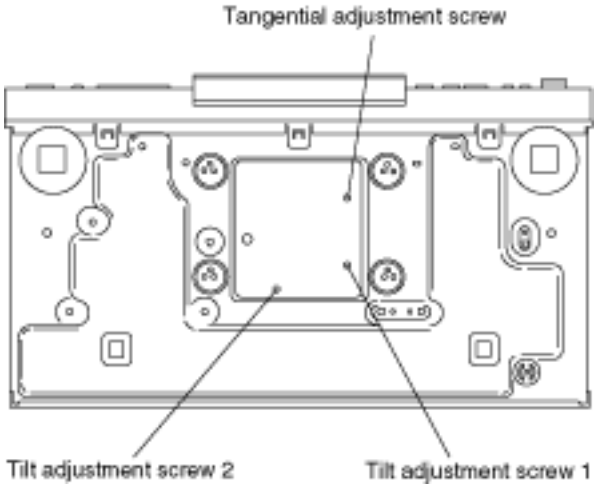
10.4.1.2 Important points

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.

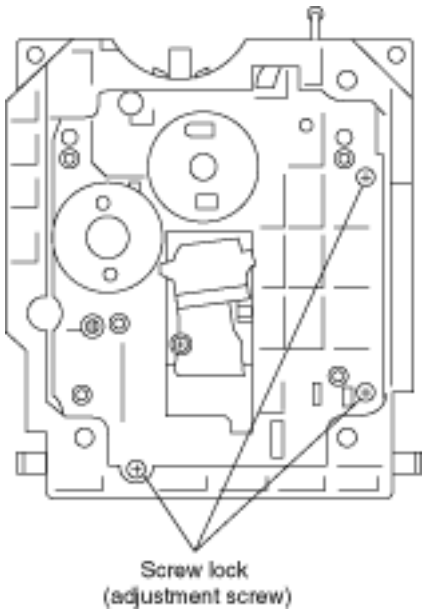


10.4.1.3 Check after adjustment

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.

10.4.1.4 Procedure for screw lock

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.



11 Abbreviations

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	SERVO AMPOUTPUT
	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	SYSTEM CLOCKSELECT
	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	COMPOSITE SYNC 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	DROP OUT
	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	MEMORYSERIAL COMMAND 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 WAVE MOTOR 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	SERIAL PORT 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	SUBCODE Q 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	STREAM DATAVALIDITY
	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	TRACK CROSSSIGNAL
	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 POWER SUPPLYVOLTAGE
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	XH INTERRUPTREQUEST
	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	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

TOP PREVIOUS NEXT

12 Voltage Chart

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

12.1 Mother P.C.B.

12.2 FRONT 2 P.C.B.

13 BLOCK DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

13.1 OVERALL BLOCK DIAGRAM

13.2 POWER BLOCK DIAGRAM

13.3 SERVO BLOCK DIAGRAM

13.4 VIDEO BLOCK DIAGRAM

13.5 AUDIO BLOCK DIAGRAM

14 SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

14.1 INTERCONNECTION SCHEMATIC DIAGRAM

14.2 POWER SECTION (MOTHER P.C.B. (1/2)) SCHEMATIC DIAGRAM

14.3 OPERATION& FL SECTION (MOTHER P.C.B. (2/2)) SCHEMATIC DIAGRAM

14.4 OVERVIEW SECTION (MODULE P.C.B. (1/6)) SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

14.5 AVDEC SECTION (MODULE P.C.B (2/6)) SCHEMATIC DIAGRAM

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

14.6 NODC SECTION (MODULE P.C.B. (3/6)) SCHEMATIC DIAGRAM

14.7 FLASH MEMORY SECTION (MODULE P.C.B. (4/6)) SCHEMATIC DIAGRAM

14.8 AV-INTERFACE SECTION (MODULE P.C.B. (5/6)) SCHEMATIC DIAGRAM

14.9 AUDIO-DAC SECTION (MODULE P.C.B. (6/6)) SCHEMATIC DIAGRAM

14.10 FRONT 1 AND FRONT 2 SCHEMATIC DIAGRAM

14.11 TERMINAL SCHEMATIC DIAGRAM

15 PRINT CIRCUIT BOARD

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

15.1 MOTHER P.C.B.

15.2 MODULE P.C.B.

15.3 TERMINAL P.C.B.

15.4 FRONT 1 P.C.B.

15.5 FRONT 2 P.C.B.

16 EXPLODED VIEWS

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

16.1 Casing Parts& Mechanism Section Exploded View

16.2 Mechanism Section Exploded View

16.3 Packing& Accessories Section Exploded View

17 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 manufactures specified parts shown in the parts list.

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

*ACHTUNG: Die lasereinheit nicht zerlegen. Die lasereinheit darf nur gegen enic vom hersteller spezifizierte einheit ausgetauscht werden.

*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>-<ID>”, marks in Remarks indicate languages of instruction manuals. [<IA>: German/ French/ Italian/ Netherlands/ Portuguess, <IB>:English/ Spanish/ Polish, <IC>: English, <ID>: English/ Russian.]

*[MAVD] marks in Remarks indicate that the parts are supplied by MAVD.

All other parts are supplied by SPC.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKMD0001-K	TOP COVER	1	(K)[MAVD]

1	RKMD0001-S	TOP COVER	1	(S)[MAVD]
2	XTBS3+8JFZ	SCREW	13	
3	VHD1041	SCREW	4	(K)
3	VHD1094	SCREW	4	(S)
4	REPD0002AC	MAIN P.C.B.	1	(RTL)[MAVD]
5	RKA0137-K	FOOT RUBBER	2	
6	XTBS3+8JFZ1	SCREW	2	
7	VKC0295	PCB SUPPORT	1	
8	RKA0117J	LEG	2	[MAVD]
9	RMAD0001	FRONT SUPPORT ANGLE	1	[MAVD]
11	XTB3+10JFZ	SCREW	4	
12	RHD30090	SCREW	2	
14	REZD0001	FLEXIBLE WIRE(50P)	1	[MAVD]
15	REXD0001	2P WIRE CABLE	1	[MAVD]
16	REZD0002	9P CONNECTOR WIRE	1	[MAVD]
17	RGLD0001	LIGHTING PIECE(A)	1	[MAVD]
18	RKWD0001-Q	FL WINDOW	1	[MAVD]
19	RGPD0001-K	FRONT PANEL	1	[MAVD]
19	RGPD0001-S	FRONT PANEL	1	(S)[MAVD]
20	RGUD0001-K	MAIN BUTTON	1	(K)[MAVD]
20	RGUD0001-S	MAIN BUTTON	1	(S)[MAVD]
21	RGRD0001A	REAR PANEL	1	(E)(EB)(EG)[MAVD]
21	RGRD0001A-A	REAR PANEL	1	(EE)[MAVD]
21	RGUD0002-K	FUNCTION BUTTTON	1	(K)[MAVD]
21	RGUD0002-S	FUNCTION BUTTTON	1	(S)[MAVD]
22	VMG1212	RUBBER CUSHON	2	[MAVD]
23	XTBS26+10J	SCREW	9	
24	RGWD0001-K	SHUTTLE KNOB	1	(K)[MAVD]
24	RGWD0001-S	SHUTTLE KNOB	1	(S)[MAVD]
25	RXQ0755-2	SHUTTLE BASE ASS'Y	1	
26	VGB0293	PANASONIC BADGE	1	[MAVD]
27	RGLD0002	LIGHTING PIECE(B)	1	[MAVD]

28	REPD0002AA	FRONT 1 P.C.B.	1	(RTL)[MAVD]
29	REPD0002AB	FRONT 2 P.C.B.	1	(RTL)[MAVD]
30	RGKD0001-K	TRAY TOP	1	(K)[MAVD]
30	RGKD0001-S	TRAY TOP	1	(S)[MAVD]
31	REPD0003A	DECODER P.C.B.	1	(RTL)[MAVD](E)(EB)(EG)
31	REPD0003A-R	DECODER P.C.B.	1	(RTL)[MAVD](EE)
101	RXQ1015A	SPINDLE MOTOR ASS'Y	1	
102	RMR1376-K	MIDDLE CHASSIS	1	
103	RMS0712	FIXED PIN	3	
106	REP3091A-1N	TERMINAL P.C.B.	1	(RTL)
106-1	RMGC0558-K	PCB RUBBER	1	
107	RHD20060	SCREW	1	
108	RMG0545-A	FLOATING RUBBER	4	
112	RDG0499-1	TRAVERSE GEAR(A)	1	
113	RMC0415	ADJUST SPRING HOLDER 1	2	
114	RMC0416	ADJUST SPRING HOLDER 2	1	
116	RMEC0320	ADJUST SPRING	3	
119	RMM0251	TRAVERSE DRIVE RACK	1	
120	RMSC0710	DRIVE SHAFT	1	
121	RMSC0711	GUIDE SHAFT	1	
122	RHD17036	SCREW	2	
123	VHD1224	SCREW	3	
124	RDG0500	TRAVERSE GEAR(B)	1	
125	RDG0501	TRAVERSE GEAR(C)	1	
126	RMEC0319	TRAVERSE GEAR SPRING	1	
128	RGQ0280-K4	TRAY	1	
129	RXQ0748	MECHA CHASSIS ASS'Y	1	
129-1	XTW3+12S	SCREW	1	
129-2	RSH1A049-U	OPEN SWITCH	1	K0F111E00093
130	RME0318	CLAMPER SPRING	1	
131	RMR1317-K	CLAMP PLATE	1	
132	RMR1318-X	FIXTURE	1	

133	RMR1321-X	SPRING HOLDER	1	
134	RXQ0724	CLAMPER ASS'Y	1	
135	RXQ0729	MAGNET HOLDER ASS'Y	1	
138	RAF3022A-1	OPTICAL PICK-UP	1	⚠
139	RJB2308A	INTERFACE FPC	1	
142	RMG0561-T	CUSHION RUBBER	1	
143	RQLS0233	LASER CAUTION LABEL	1	
146	RHD14095	SCREW	1	
A1	N2QAJB000050	REMOTE CONTROL ASS'Y	1	
A1-1	HTR028352001	BATTERY COVER	1	
A2	VJA0788	A/V CORD	1	K1EA06CA0002
A3	RJA0043-1C	AC CORD	1	(E)(EG)(EE)[MAVD] ⚠
A3	RJA0044-3C	AC CORD	1	(EB)[MAVD] ⚠
A4	RPQFD0002	ACCESSORY CASE	1	[MAVD]
A5	RQTD0001-D	OPERATING INSTRUCTIONS	1	(EG)<IA>[MAVD] ⚠
A5	RQTD0002-E	OPERATING INSTRUCTIONS	1	(E) <IB>[MAVD] ⚠
A5	RQTD0003-B	OPERATING INSTRUCTIONS	1	(EB)<IC>[MAVD] ⚠
A5	RQTD0004-R	OPERATING INSTRUCTIONS	1	(EE)<ID>[MAVD] ⚠
C1001	EEUEB2G330E	400V 33U	1	[MAVD]
C1002	F0C2G473A022	100V 0.047U	1	[MAVD]
C1007	F2A1V270A021	35V 27U	1	[MAVD]
C1008	F2A1HR47A150	50V 0.47U	1	[MAVD]
C1009	VCF1JAH103K	63V 0.01U	1	[MAVD]
C1010	VCF2AAF104M	0.1U	1	[MAVD] ⚠
C1012,13	VCK0286E102	1000P	2	F1BAF1020011 ⚠
C1101	F2A1E121A030	25V 120U	1	[MAVD]
C1102	F2A1V470A023	35V 47U	1	[MAVD]
C1103	ECKR2H222KB5	500V 2200P	1	[MAVD]
C1104	F2A1H221A043	50V 220U	1	[MAVD]
C1105	F2A1V470A023	35V 47U	1	[MAVD]
C1106	ECKR1H103ZF5	50V 0.01U	1	

C1107	F2A1E821A037	25V 820U	1	[MAVD]
C1108	F2A1V470A023	35V 47U	1	[MAVD]
C1109	VCF1JAH473K	63V 0.047U	1	[MAVD]
C1111	F2A1V470A023	35V 47U	1	[MAVD]
C1113,14	F2A1H221A043	50V 220U	2	[MAVD]
C1117	F2A1E121A030	25V 120U	1	[MAVD]
C1118	ECJ1VF1E104Z	25V 0.1U	1	
C1119	F2A1V470A023	35V 47U	1	[MAVD]
C2001	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2002	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2003	ECUV1H822KBV	50V 8200P	1	ECJ1VB1H822K
C2004	ECUV1C393KBV	16V 0.039U	1	F1H1C393A065
C2005,06	ECUV1H681KBV	50V 680P	2	ECJ1VB1H681K
C2007,08	ECUV1C473KBV	16V 0.047U	2	ECJ1VB1C473K
C2009	ECUV1H471KBV	50V 470P	1	ECJ1VB1H471K
C2010	ECUV1H101JCV	50V 100P	1	ECJ1VC1H101J
C2011	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2012	ECUV1C333KBV	16V 0.033U	1	ECJ1VB1C333K
C2013	F1H1H332A219	50V 3300P	1	[MAVD]
C2014	ECUV1C473KBV	16V 0.047U	1	ECJ1VB1C473K
C2015	F1H1H332A219	50V 3300P	1	[MAVD]
C2016	ECUV1H152KBV	50V 1500P	1	ECJ1VB1H152K
C2017	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2018	ECUV1H152KBV	50V 1500P	1	ECJ1VB1H152K
C2019	F1H1H332A219	50V 3300P	1	[MAVD]
C2020	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2021	ECUV1C473KBV	16V 0.047U	1	ECJ1VB1C473K
C2022	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2023	ECJ2VB1C474K	350V 0.47U	1	
C2024	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2025	ECUX1H103KBV	50V 0.01U	1	
C2026	ECUM0J225KBN	6.3V 2.2U	1	
C2027	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2028	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K

C2029	ECUV1H101JCV	50V 100P	1	ECJ1VC1H101J
C2030	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2031-36	ECUV1E104ZFV	25V 0.1U	6	F1H1E104A030
C2037	ECUX1H103KBV	50V 0.01U	1	
C2038	ECUV1C333KBV	16V 0.033U	1	ECJ1VB1C333K
C2039	F1H1H332A219	50V 3300P	1	[MAVD]
C2040	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2041	ECEA0JKS101	6.3V 100U	1	
C2042	ECEA0JKS331	6.3V 330U	1	
C2043	ECUV1H102KBV	50V 1000P	1	ECJ1VB1H102K
C2045	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C2049,50	ECUV1H330JCV	50V 33P	2	ECJ1VC1H330J
C2051	ECST1AY106ZR	10V 10U	1	ECST1AY106R
C2053	ECUV1H101JCV	50V 100P	1	ECJ1VC1H101J
C2501	EEVFC0J221P	6.3V 220U	1	
C2502	ECEV1CA101WP	16V 100U	1	
C2503	ECEV1CA220WR	16V 22U	1	
C2504-08	ECUX1C104ZFV	16V 0.1U	5	
C2509	EEVFC1C100R	16V 10U	1	
C2511-13	ECUX1C104ZFV	16V 0.1U	3	
C3000	ECUM1C105ZFN	16V 1U	1	F1J1C105A063
C3001	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3002-09	ECUV1H103ZFV	50V 0.01U	8	
C3010,11	ECUM1C105ZFN	16V 1U	2	F1J1C105A063
C3012	ECUV1H103ZFV	50V 0.01U	1	
C3013	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3015-23	ECUV1H103ZFV	50V 0.01U	9	
C3024	ECUM1C105ZFN	16V 1U	1	F1J1C105A063
C3025	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3028,29	ECUX1H150JCV	50V 15P	2	ECJ1XC1H150J
C3030,31	ECEA0JKS101	6.3V 100U	2	
C3033	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3034,35	ECEA0JKS470	6.3V 47U	2	
C3036	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030

C3038	ECUV1H103ZFV	50V 0.01U	1	
C3066-71	ECUV1H103ZFV	50V 0.01U	6	
C3080	ECUV1H103ZFV	50V 0.01U	1	
C3800-03	ECUV1H470JCV	50V 47P	4	ECJ1VC1H470J
C3804	ECEA1AKS221	10V 220U	1	
C3810-12	ECUV1E104ZFV	25V 0.1U	3	F1H1E104A030
C3814,15	ECEA0JKS470	6.3V 47U	2	
C3822	ECEA0JKS101	6.3V 100U	1	
C3823-30	ECUV1H470JCV	50V 47P	8	ECJ1VC1H470J
C3831,32	ECUV1H101JCV	50V 100P	2	ECJ1VC1H101J
C3833	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3834	ECEA0JKS101	6.3V 100U	1	
C3835	ECEA0JKS470	6.3V 47U	1	
C3836	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3838	ECUV1H102KBV	50V 1000P	1	ECJ1VB1H102K
C3839	ECEA0GKA471Q	4V 470U	1	
C3840,41	ECUV1E104ZFV	25V 0.1U	2	F1H1E104A030
C3842	ECUV1H103ZFV	50V 0.01U	1	
C4200,01	ECA1CAK100XB	16V 10U	2	
C4202	ECEA1CKS100	16V 10U	1	
C4203	ECEA0JKS331	6.3V 330U	1	
C4204	ECEA1CKS100	16V 10U	1	
C4205-08	ECUV1H102KBV	50V 1000P	4	ECJ1VB1H102K
C4211	ECEA1AKS221	10V 220U	1	
C4212,13	ECA1CAK470XB	16V 47U	2	
C4214	ECUV1H333ZFV	50V 0.033U	1	F1H1H333A730[MAVD]
C4215	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C4216	ECEA1CKA470	16V 47U	1	
C4217,18	ECUV1H103ZFV	50V 0.01U	2	
C4219,20	ECEA1CKS100	16V 10U	2	
C4221,22	ECUV1H101JCV	50V 100P	2	ECJ1VC1H101J
C4223	ECEA1CKS100	16V 10U	1	
C4224	ECUV1H103ZFV	50V 0.01U	1	
C4225	ECA1CAK470XB	16V 47U	1	

C4226	ECUV1H103ZFV	50V 0.01U	1	
C4227	ECA1CAK100XB	16V 10U	1	
C5201,02	EEVHB1C100R	16V 10U	2	
C5203,04	ECUX1C104ZFV	16V 0.1U	2	
C5205-08	ECUX1H102JCV	50V 1000P	4	
C5211	EEVHB0J470R	6.3V 47U	1	
C5215	EEVHB0J470R	6.3V 47U	1	
C5221	ECUX1C104ZFV	16V 0.1U	1	
C5223	ECUX1C104ZFV	16V 0.1U	1	
C5224,25	ECUV1C104KBV	16V 0.1U	2	ECJ1VB1C104K
C5231	ECUV1H101JCV	50V 100P	1	ECJ1VC1H101J
C5232,33	ECUX1C104ZFV	16V 0.1U	2	
C5234	ECUV1H222KBV	50V 2200P	1	ECJ1VB1H222K
C5235	ECUV1H391JCV	50V 390P	1	F1H1H391A004
C5236	ECUX1H102JCV	50V 1000P	1	
C5237	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C5238	ECUV1A224KBV	10V 0.22U	1	F1H1A224A001
C5239	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C5240	ECUV1H561JCV	50V 560P	1	ECJ1VC1H561J
C5242	ECUV1H472KBV	50V 4700P	1	ECJ1VB1H472K
C5251	ECUX1C104ZFV	16V 0.1U	1	
C5252	VCS1AS106R	10V 10U	1	
C5253	ERJ3GEYJ472V	1/16W 4.7K	1	
C6001	ECEA0GKS221	4V 220U	1	
C6002	ECEA1HKS100	50V 10U	1	
C6003	ECUV1H103ZFV	50V 0.01U	1	
C6014-16	ECUV1H103ZFV	50V 0.01U	3	
C6021	ECJ1VF1E104Z	25V 0.1U	1	
C6061	ECJ1VF1E104Z	25V 0.1U	1	
C6071	ECJ1VF1E104Z	25V 0.1U	1	
C6072	ECEA0JKS470	6.3V 47U	1	
C6101	ECEA0JKS470	6.3V 47U	1	
D1001	B0EBKT000002	DIODE	1	

D1005	AP01C	DIODE	1	B0HADV000010
D1006	ERA2204V5	DIODE	1	B0AAGP000004 [MAVD]
D1007	ERZVA5Z471	SURGE ABSORBER	1	⚠
D1101	ERA2204V5	DIODE	1	B0AAGP000004 [MAVD]
D1102	B0EAMP000019	DIODE	1	[MAVD]
D1103	ERA2204V5	DIODE	1	B0AAGP000004 [MAVD]
D1104	B0EAME000002	DIODE	1	[MAVD]
D1105	B0EAMR000005	DIODE	1	[MAVD]
D1106	21DQ10FC4	DIODE	1	B0JAML000007
D1107	ERA2204V5	DIODE	1	B0AAGP000004 [MAVD]
D1108	ERA22-02	DIODE	1	B0HAGM000001
D1109	RVD1SS133TA	DIODE	1	B0AACK000004
D1111	MTZJ3R3BTA	DIODE	1	
D2002	MA111-TX	DIODE	1	MA2J11100L
D3002	MA728-TX	DIODE	1	MA2J72800L
D3800	MA111-TX	DIODE	1	MA2J11100L
D4202	MA111-TX	DIODE	1	MA2J11100L
D4203	MAZ4130NLF	DIODE	1	[MAVD]
D4204	MA4056N-L	DIODE	1	
D4205	MA111-TX	DIODE	1	MA2J11100L
D4206,07	MA8036HTX	DIODE	2	MAZ80360HL
D5251	MA728-TX	DIODE	1	MA2J72800L
D6071	MA8039H	DIODE	1	MAZ80390H
D6101	LNJ201LPQJA	LED(RED)	1	
D6102,03	LNJ301MPUJAD	LED(GREEN)	2	
DL6001	A2BB00000098	DISPLAY TUBE	1	
F1001	K5D162BL0007	FUSE	1	[MAVD] ⚠
FP5201	K1MN30B00062	CONNECTOR(30P)	1	
FP5202	K1MN50B00010	CONNECTOR(50P)	1	
IC1001	C0DACZZ00005	IC	1	[MAVD]
IC1102	AN1431T-TA	IC	1	[MAVD]

IC1103	C0CBCHG00003	IC	1	
IC2001	MN677203NP1	IC	1	
IC2002	JVAT7S32FUL	IC	1	C0JBAE000087
IC2003	C3ABKG000057	IC	1	
IC2004	JVAT7S32FUL	IC	1	C0JBAE000087
IC2501	BA5833FM-E2	IC	1	
IC3001	C1AB00001645	IC	1	[MAVD]
IC3003	TC7WU04FU	IC	1	C0JBAB000339
IC3004	PST596JNR	IC	1	C0EBE0000070
IC3006	PQ2TZ15U	IC	1	C0DBZFG00006
IC3007	PQ3DZ13U	IC	1	C0CBCBF00001
IC3066	C3ABPG000062	IC	1	[MAVD]
IC3080	RFKFD001A080	IC	1	(E)(EB)(EG)[MAVD]
IC3080	RFKFD001B080	IC	1	(EE)[MAVD]
IC3801	BA7660FS-E2	IC	1	C9ZB00000282
IC3804	B3RAE0000007	IC	1	[MAVD]
IC4200	C0FBBK000030	IC	1	
IC4201	NJM4558MTE1	IC	1	C0ABBB000109
IC4202	NJM4580ED	IC	1	C0ABBB000123
IC5201	AN8708FHK-V	IC	1	
IC6001	MN101C35DCS	IC	1	[MAVD]
IC6002	PST9327UR	IC	1	C0EBE0000094
IC6101	B3RAD0000037	IC	1	
JK3801	YKF41-5040	JACK,AV	1	[MAVD]
JK3802	VJJ0544	JACK,S-VIDEO OUT	1	K1CB104B0017
JK3803	K2YZ04000017	JACK,AV OUT	1	[MAVD]
K3001	ERJ6GEY0R00V	1/10W 0	1	
K3002	ERJ3GEY0R00V	1/16W 0	1	
K3004	ERJ6GEY0R00V	1/10W 0	1	
K3006,07	ERJ6GEY0R00V	1/10W 0	2	
L1001	ELF15N004A	LINE FILTER	1	⚠
L1002	EXCELDR35V	FILTER	1	

L1101	VLQ0599J221	COIL 220UH	1	G0C221JA0026
L1102,03	VLQ0655K100T	COIL 10UH	2	G0A100H00010
L2002	VLQ0910K100	COIL 10UH	1	G1C100KA0019
L3001-04	ELJFA100KB	COIL	4	
L3800	VLQ0599J220	COIL 22UH	1	G0C220JA0026
L3801-06	G1C220K00013	CHIP COIL	6	
L3807	VLQ0599J220	COIL 22UH	1	G0C220JA0026
L3808,09	VLQEL05T471J	COIL 470UH	2	G0C471JA0003
L3810,11	VLQ0599J220	COIL 22UH	2	G0C220JA0026
L4200	ELJPA220KF	INDUCTOR	1	
L4201,02	VLQ0599J220	COIL 22UH	2	G0C220JA0026
L5201,02	ELJEA100KF	COIL 10UH	2	
L5251	ELJEA100KF	COIL 10UH	1	
L6001	VLQ0599J101	COIL 100UH	1	G0C101JA0026
L6101	VLQEL05T221J	COIL 220UH	1	G0C221JA0003
LB2001,02	JALBK2HS470T	COIL	2	G1CYYYZ00003
LB2003-15	VLP0323A601R	COIL	13	J0JCC0000062
LB2017,18	VLP0323A601R	COIL	2	J0JCC0000062
LB2020-35	VLP0323A601R	COIL	16	J0JCC0000062
LB2036	JALBK2HS470T	COIL	1	G1CYYYZ00003
LB3001	VLP0157-T	COIL	1	J0JCC0000077
LB3800-05	G1CYYYZ00034	COIL	6	[MAVD]
LB3806	VLP0147-T	COIL	1	J0JBC0000041 [MAVD]
LB3807	G1CYYYZ00034	COIL	1	[MAVD]
LB4200,01	VLP0147-T	COIL	2	J0JBC0000041[MAVD]
LB5201	JALBK2HS470T	COIL	1	G1CYYYZ00003
LB5202	VLP0323A601R	COIL	1	J0JCC0000062
LB5203,04	VLP0155-T	COIL	2	J0JCC0000119
LB5205,06	VLP0323A601R	COIL	2	J0JCC0000062
LC1001	EXCELDR35V	FILTER	1	
P1001	K2AA2B000004	AC INLET	1	⚠
P2001	K1MN50A00005	CONNECTOR(50P)	1	

P3001	VJP3917A016G	CONNECTOR(MALE) 16P	1	K1KA16A00131
P3004	TJS1A8780	CONNECTOR(2P)	1	K1KA02A00229
P6001	K1KB06B00033	CONNECTOR(FEMALE) 6P	1	
P6002	VJS3537B009G	CONNECTOR(FEMALE) 9P	1	K1MN09B00023
PC1	RPG5826	PACKING CASE	1	(E-S)(EB)(EG-S)[MAVD]
PC1	RPG5827	PACKING CASE	1	(E-K)(EG-K)[MAVD]
PC1	RPG5828	PACKING CASE	1	(EE-S)[MAVD]
PC1	RPG5980	PACKING CASE	1	(EE-K)[MAVD]
PC2	RPND0001A	CUSHON(L)	1	[MAVD]
PC4	RPND0001B	CUSHON(R)	1	[MAVD]
PP6001	K1KA06B00126	CONNECTOR(MALE) 6P	1	
PS3001	VJS3917A016W	CONNECTOR(FEMALE) 16P	1	K1KB16A00050
PS6004	K1MN09C00001	CONNECTOR(9P)	1	[MAVD]
Q1001	PC123FY2	PHOTO COUPLER	1	B3PAA0000012 ⚠
Q1101	2SD1994A	TRANSISTOR	1	2SD1994AHA
Q3800,01	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q3803	2SB709A	TRANSISTOR	1	2SB0709A
Q3805	2SB709A	TRANSISTOR	1	2SB0709A
Q3806,07	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q3808,09	2SB709A	TRANSISTOR	2	2SB0709A
Q4200,01	2SD1996-STA	TRANSISTOR	2	2SD19960SA
Q4202-07	2SD601A-R	TRANSISTOR	6	2SD0601AR
Q5211	2SB1115-T	TRANSISTOR	1	B1BDBF000004
Q5215	2SB1115-T	TRANSISTOR	1	B1BDBF000004
Q6061	2SD1996-STA	TRANSISTOR	1	2SD19960SA
Q6071	2SD1992A-R	TRANSISTOR	1	
QR3801	UN5213	TRANSISTOR	1	UNR521300L
QR3802	UN5111	TRANSISTOR	1	UNR5111
QR3803	UN5213	TRANSISTOR	1	UNR521300L
QR4200	UN5111	TRANSISTOR	1	UNR5111

QR4203	UN5113	TRANSISTOR	1	UNR5113
QR4205	UN5213	TRANSISTOR	1	UNR521300L
QR4206,07	UN5211	TRANSISTOR	2	UNR5211
QR5251	UN2121-TX	TRANSISTOR	1	UNR212100L
QR6021-23	DTA123JK-T96	TRANSISTOR	3	B1GDCFEM0002
R1001	ERC12UGK225	2M	1	[MAVD] ⚠
R1002	ERG2SJ683	2W 68K	1	
R1003,04	ERDS2FJ474	1/4W 470K	2	
R1007	ERX12SJ1R0	1/2W 1	1	
R1102	ERG12SJ100	1/2W 10	1	
R1104	ERDS2FJ561	1/4W 560	1	
R1105	ERDS1TJ471	1/2W 470	1	
R1106	ERG1SJ100E	1W 10	1	
R1107	ERDS1FJ121	1/2W 120	1	
R1108	ERDS2FJ332	1/4W 3.3K	1	
R1109	ERDS2FJ102	1/4W 1K	1	
R1111	ER0S2CKF3901	1/4W 3K	1	EROS2CKF3901
R1112	ERDS2TJ202T	1/2W 2K	1	[MAVD]
R1113	ER0S2CKF1201	1/4W 1.2K	1	EROS2CKF1201
R1120	ERJ6GEYJ100V	1/10W 10	1	
R1121	ERDS2FJ102	1/4W 1K	1	
R1122	ER0S2CKF1182	1/4W 11K	1	EROS2CKF1182
R2001	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R2002	ERJ3GEYJ822V	1/16W 8.2K	1	D0GB822JA002
R2003	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R2004	ERJ3GEYJ471V	1/16W 470	1	
R2005	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R2006-08	ERJ3GEY0R00V	1/16W 0	3	
R2012	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R2013	ERJ3GEYJ472V	1/16W 4.7K	1	
R2014	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R2015	ERJ3GEYJ472V	1/16W 4.7K	1	
R2017	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002

R2018	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2019	ERJ3GEYJ563V	1/16W 56K	1	
R2020	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2021	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R2022	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2023	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R2024	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2025	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R2026	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2027	ERJ3GEYJ123V	1/16W 12K	1	
R2028	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R2029	ERJ3GEYJ123V	1/16W 12K	1	
R2030	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R2031	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R2032	ERJ3GEYJ102V	1/16W 1K	1	
R2033	ERJ3GEY0R00V	1/16W 0	1	
R2034	ERJ3GEYJ470V	1/16W 47	1	
R2036	ERJ3GEYJ104V	1/16W 100K	1	D0GB104JA002
R2038	ERJ3GEYJ104V	1/16W 100K	1	D0GB104JA002
R2041	ERJ3GEYJ330V	1/16W 33	1	D0GB330JA002
R2044	ERJ3GEYJ105V	1/16W 1M	1	
R2045	ERJ3GEYJ471V	1/16W 470	1	
R2047	ERJ3GEYJ470V	1/16W 47	1	
R2048,49	ERJ3GEYJ330V	1/16W 33	2	D0GB330JA002
R2051	ERJ3GEYJ471V	1/16W 470	1	
R2502,03	ERJ3GEYJ153V	1/16W 15K	2	
R2504,05	ERJ3GEYJ823V	1/16W 82K	2	D0GB823JA002
R2507	ERJ6GEYJ6R8V	1/10W 6.8	1	
R3001	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3002,03	ERJ3GEYJ102V	1/16W 1K	2	
R3004,05	ERJ3GEYJ473V	1/16W 47K	2	D0GB473JA002
R3006	ERJ3GEYJ470V	1/16W 47	1	
R3008	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3009,10	ERJ3GEYJ750	1/16W 75	2	

R3011	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3017,18	ERJ3EKF2002	3W 20K	2	
R3019	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R3020	ERJ3GEYJ303V	1/16W 30K	1	
R3021	ERJ3GEYJ105V	1/16W 1M	1	
R3022	ERJ3GEYJ391V	1/16W 390	1	
R3023	ERJ3GEYJ472V	1/16W 4.7K	1	
R3028,29	ERJ3GEYJ221V	1/16W 220	2	
R3030,31	ERJ3GEYJ470V	1/16W 47	2	
R3041,42	ERJ3GEYJ221V	1/16W 220	2	
R3045	ERJ3GEYJ470V	1/16W 47	1	
R3046	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3047,48	ERJ3GEYJ470V	1/16W 47	2	
R3050	ERJ3GEY0R00V	1/16W 0	1	
R3051,52	ERJ3GEYJ221V	1/16W 220	2	
R3053	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R3055	ERJ3GEYJ820V	1/16W 82	1	
R3056	ERJ3GEYJ101Z	1/16W 100	1	[MAVD]
R3057	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3800-03	ERJ3GEYF681	1/16W 680	4	[MAVD]
R3805	ERJ3GEYJ683V	1/16W 68K	1	D0GB683JA002
R3806	ERJ3GEYJ243V	1/16W 24K	1	D0GB243JA002
R3812	ERJ3GEYJ393V	1/16W 39K	1	D0GB393JA002
R3813	ERJ3EKF2002	3W 20K	1	
R3814	ERJ3GEYJ331V	1/16W 330	1	
R3815	ERJ3GEYJ102V	1/16W 1K	1	
R3816-18	ERJ3GEYF121V	1/16W 120	3	
R3819-21	ERJ3GEYF750V	1/16W 75	3	
R3822	ERJ3GEYJ750	1/16W 75	1	
R3823	ERJ3GEYF750V	1/16W 75	1	
R3824-31	ERJ3GEYF681	1/16W 680	8	[MAVD]
R3836	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3837	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3838,39	ERJ3GEYJ221V	1/16W 220	2	

R3840,41	ERJ3GEYF750V	1/16W 75	2	
R3842	ERDS2FJ471	1/4W 470	1	
R3844	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R3845	ERJ3EKF2002	3W 20K	1	
R3846	ERJ3GEYJ331V	1/16W 330	1	
R3848	ERJ3GEYJ331V	1/16W 330	1	
R3849	ERJ3GEYJ121V	1/16W 120	1	
R3850,51	ERJ3GEYF121V	1/16W 120	2	
R3852	ERJ3GEYF750V	1/16W 75	1	
R3853	ERJ3GEYG123V	1/16W 12K	1	[MAVD]
R3854	ERJ3GEYG183V	1/16W 18K	1	
R3856	ERJ3GEYF750V	1/16W 75	1	
R3861	ERJ3GEYJ221V	1/16W 220	1	
R3862	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3863	ERJ3GEYG103V	1/16W 10K	1	D0GB103GA002
R3864	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3865,66	ERJ3GEYJ221V	1/16W 220	2	
R3867	ERJ3GEYJ750	1/16W 75	1	
R3868,69	ERJ3GEYJ473V	1/16W 47K	2	D0GB473JA002
R3870-72	ERJ3GEYJ272V	1/16W 2.7K	3	
R4200	ERJ3GEYJ242V	1/16W 2.4K	1	
R4201,02	ERJ3GEYJ473V	1/16W 47K	2	D0GB473JA002
R4203	MCR03PZHJ561	1/16W 560	1	
R4205	MCR03PZHJ561	1/16W 560	1	
R4207,08	ERJ3GEYJ683V	1/16W 68K	2	D0GB683JA002
R4209-11	ERJ3GEYJ473V	1/16W 47K	3	D0GB473JA002
R4212	ERJ3GEYJ563V	1/16W 56K	1	
R4213	ERDS2FJ332	1/4W 3.3K	1	
R4214	ERDS2FJ102	1/4W 1K	1	
R4215	ERJ3GEYJ242V	1/16W 2.4K	1	
R4216-19	ERA3YED472V	1/16W 4.7K	4	
R4220	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R4221	ERJ3GEYJ681V	1/16W 680	1	D0GB681JA002
R4223,24	ERJ3GEYJ681V	1/16W 680	2	D0GB681JA002

R4225	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4226	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4227	ERDS2FJ102	1/4W 1K	1	
R4230	ERJ3GEYJ272V	1/16W 2.7K	1	
R4231,32	ERJ3GEYJ681V	1/16W 680	2	D0GB681JA002
R4233-37	ERJ3GEYJ821V	1/16W 820	5	
R5203	ERJ3GEYJ563V	1/16W 56K	1	
R5204	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R5211	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5212	ERJ12YJ270H	1/2W 27	1	
R5213	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R5214	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R5215	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5216	ERJ12YJ270H	1/2W 27	1	
R5217	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R5221,22	ERJ3GEYJ822V	1/16W 8.2K	2	D0GB822JA002
R5232	ERJ3RBD123V	1/16W 12K	1	
R5235	ERJ3GEYJ105V	1/16W 1M	1	
R5236	ERJ3GEY0R00V	1/16W 0	1	
R5252	ERJ3GEYJ102V	1/16W 1K	1	
R6001-05	ERJ3GEYJ103V	1/16W 10K	5	D0GB103JA002
R6006-09	ERJ3GEYJ473V	1/16W 47K	4	D0GB473JA002
R6011	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6013	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6015	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6031	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6033-35	ERJ3GEYJ331V	1/16W 330	3	
R6036-47	ERJ3GEYJ473V	1/16W 47K	12	D0GB473JA002
R6048-50	ERJ3GEYJ221V	1/16W 220	3	
R6061	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6071	ERJ6GEYJ221V	1/10W 220	1	
R6101	ERJ3GEYJ122V	1/16W 1.2K	1	
R6102	ERJ3GEYJ152V	1/16W 1.5K	1	
R6103	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002

R6104	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R6105	ERJ3GEYJ472V	1/16W 4.7K	1	
R6106	ERJ3GEYJ682V	1/16W 6.8K	1	D0GB682JA002
R6161	ERJ3GEYJ122V	1/16W 1.2K	1	
R6162	ERJ3GEYJ152V	1/16W 1.5K	1	
R6171	ERJ3GEYJ122V	1/16W 1.2K	1	
R6172	ERJ3GEYJ152V	1/16W 1.5K	1	
R6176	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R6177	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R6178	ERJ3GEYJ472V	1/16W 4.7K	1	
RA2001	EXBV8V560JV	RESISTOR-RESISTOR	1	
RA2003	EXBV8V560JV	RESISTOR-RESISTOR	1	
RA2501	EXBV8V473JV	RESISTOR-RESISTOR	1	
RA3001	EXBV8V103J	RESISTOR-RESISTOR	1	D0GZ103J0001
RA3002,03	EXBV4V103JV	RESISTOR-RESISTOR	2	
RA3004-06	EXBV8V560JV	RESISTOR-RESISTOR	3	
RA3007	EXBV4V470J	RESISTOR-RESISTOR	1	D1H44702A001
RA3008-10	EXBV8V560JV	RESISTOR-RESISTOR	3	
RA5231	EXBV8V101JV	RESISTOR-RESISTOR	1	
S6101	EVQ11G07K	SWITCH,POWER	1	
S6102	EVQ11G07K	SWITCH,ONE TOUCH	1	
S6103	EVQ11G07K	SWITCH,ADVANCED SURROUND	1	
S6104	EVQ11G07K	SWITCH,BASS PLUS	1	
S6105	EVQ11G07K	SWITCH,CINEMA	1	
S6106	EVQ11G07K	SWITCH,DIALOGUE ENHANCER	1	
S6161	EVQ11G07K	SWITCH,PAUSE	1	
S6162	EVQ11G07K	SWITCH,PLAY	1	
S6163	EVQ11G07K	SWITCH,STOP	1	
S6171	EVQ11G07K	SWITCH,FD-SKIP	1	
S6172	EVQ11G07K	SWITCH,RVS-SKIP	1	
S6173	EVQ11G07K	SWITCH,QUICK REPLAY	1	
S6174	EVQ11G07K	SWITCH,A-B REPEAT	1	
S6175	EVQ11G07K	SWITCH,REPEAT	1	

S6176	EVQ11G07K	SWITCH,RANDOM	1	
S6181	EVQ11G07K	SWITCH,OPEN CLOSE	1	
S6191	ESE24SH7	SWITCH,COUNT	1	
S6192	ESE24SH7	SWITCH,DIRECTION	1	
SW2501	RSH1A048-A	DOUBLE SWITCH	1	
T1001	ETS33KH166AG	TRANSFORMER	1	[MAVD] ⚠
X2001	H2D169500015	CERAMIC RESONATOR	1	
X3001	VSX0961	CRYSTAL OSCILLATOR	1	H0J270500016
X6001	H2B800400007	CERAMIC OSCILLATOR	1	
ZA1101	VJR0978	EARTH ANGLE	1	K9ZZ00000424
ZA1102	VJR0978	EARTH ANGLE	1	K9ZZ00000424
ZA1103	VJR0978	EARTH ANGLE	1	K9ZZ00000424

TOP PREVIOUS NEXT

18 Schematic Diagram for printing with A4

19 Additional Contents

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

19.1 Change of Replacement Parts List

TOP PREVIOUS NEXT

Note:

- All parts that are supplied by S.P.C..

TOP PREVIOUS NEXT

19.1.1 Change of Replacement Parts List

- DVD-RV31A/EU
- DVD-RV31EN/PM/PX
- DVD-RV41A
- DVD-RV46EN

Refer to supplement service manual, order No. ODSD020422S0.

Note:

If the part No. of the component parts in optical pick-up kit changed, part No. of the kit is not changed.

<Old>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17036	SCREW	2	
138	RHD14095	SCREW	1	
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	⚠

<New>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17045	SCREW	2	Change
138	RHD14108	SCREW	1	Change
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	⚠

19.1.2 Change of Replacement Parts List

- DVD-RV21U
- DVD-RV26U
- DVD-RV31/RV41U,CA
- DVD-RV31/RV41E,EB,EG
- DVD-RV31(German Product Model) (E,EB,EG)
- DVD-RV36E/EG
- DVD-RA71E/EB/EG
- DVD-RA71A
- DVD-RP91D
- DVD-H2000D

Refer to supplement service manual, order No. ODSD020422S0.

Note:

If the part No. of the component parts in optical pick-up kit changed, part No. of the kit is not changed.

<Old>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
215	RHD17036	SCREW	2	
238	RHD14095	SCREW	1	
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	⚠

<New>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
215	RHD17045	SCREW	2	Change
238	RHD14108	SCREW	1	Change
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	⚠

TOP PREVIOUS NEXT

19.1.3 Change of Replacement Parts List

TOP PREVIOUS NEXT

- DVD-RV31GD (ODSD010737C3)
- DVD-RP56U/CA (ODSD010734C1)

<Original>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17036	SCREW	2	
138	RHD14095	SCREW	1	

<New>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17045	SCREW	2	Change
138	RHD14108	SCREW	1	Change

TOP PREVIOUS NEXT

19.1.4 Change of Replacement Parts List

- DVD-RV22P (ODSD020318A1)
- DVD-RV27P (ODSD020217A1)
- DVD-RV32P/PC-JAPAN-PRODUCT (ODSD020107C1)
- DVD-RV32P/PC-CHINA-PRODUCT (ODSD020112C1)
- DVD-RV32E/EB/EG/EE (ODSD020632C2)
- DVD-RV32GN/GCS/GC/GD (ODSD020526C3)
- DVD-RV32GCU (CHM020701A3)
- DVD-RV32PL/PX (ODSD020527C3)
- DVD-RA60U (ODSD011157C1)
- DVD-RA61E/EB/EG (ODSD010952C2)
- DVD-RA61EN (ODSD011159C3)
- DVD-RA61A/EU (ODSD011160C8)
- DVD-RP62P/PC (ODSD020421C1)
- DVD-RP82P/PC (ODSD020630C1)
- DVD-RA82E/EB/EG/EE (ODSD020738C2)
- DVD-RP82GCS/GN/PX (ODSD020743C7)

<Original>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
122	RHD17036	SCREW	2	
146	RHD14095	SCREW	1	

<New>

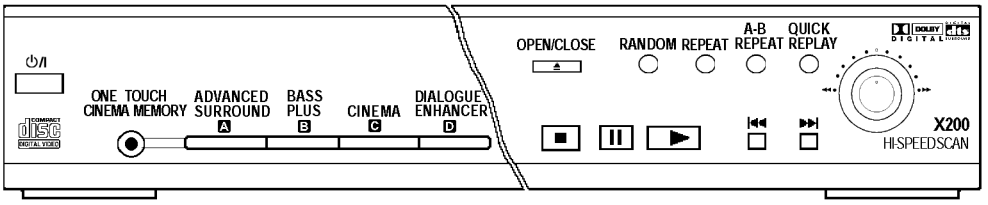
Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
122	RHD17045	SCREW	2	Change
146	RHD14108	SCREW	1	Change

TOP PREVIOUS

FL-Display

Standby indicator ⏻

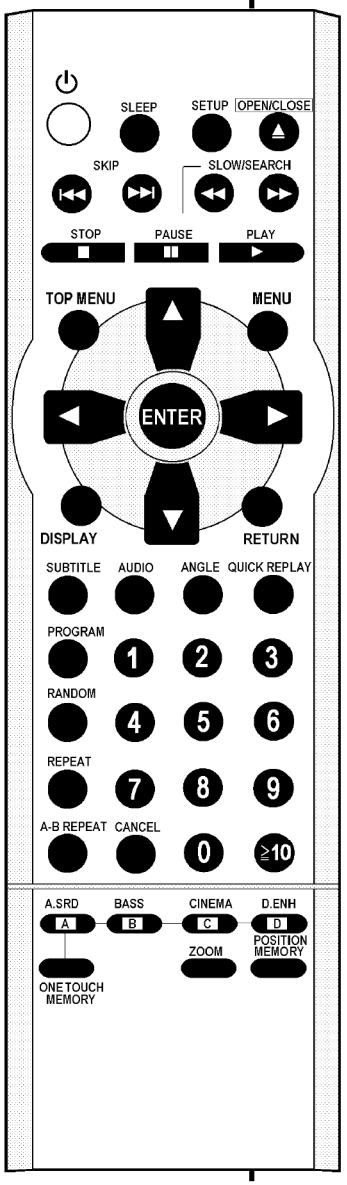
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.



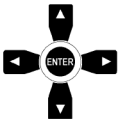
Standby/on switch ⏻/I

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.

All basic functions can be controlled on the DVD-player and with the remote control. Only symbols of the remote control are used in this instruction book. You can change the initial settings with the remote control. These settings are retained in memory until they are changed, even if the unit is turned off.



Functions of the remote control

⏻	Switch the player on and off to standby mode
SLEEP	Player switches off if you set a time
SETUP	Call up the menus of the DVD-player
OPEN/CLOSE ⏏	Open and close the disc tray
SKIP ⏮ ⏭	Skipping chapters or tracks
SLOW/SEARCH ◀◀ ▶▶	Slow-motion play, search fast forward and rewind
STOP ■	Stop play
PAUSE ❚❚	Pause play
PLAY ▶	Start play
TOP MENU	Call up the top menu of a DVD or MP3 menu
MENU	Call up the menu of a DVD or MP3 menu
	Cursor buttons ENTER, to confirm a selection in a menu
DISPLAY	Call up OSD-screens
RETURN	Return from menu to play
SUBTITLE	Language of subtitles
AUDIO	Change audio
ANGLE	Angles during play
QUICK REPLAY	Replay of the last 7 sec. of a movie
PROGRAM	Program play
RANDOM	Random play
REPEAT	Repeat play
A-B REPEAT	Repeat marked sections
CANCEL	Clear settings
0...9 ≥10	Numbered buttons, to enter a 2 digit number ≥10
A.SRD A (ADVANCED SURROUND)	For a surround-like effect
BASS B	If you connected a subwoofer
CINEMA C	Enhances detail in dark scenes
D.ENH D (DIALOGUE ENHANCER)	Increase the volume of the dialogue sound
ONE TOUCH MEMORY	Reselect the settings in A.SRD, BASS, CINEMA, D.ENH
ZOOM	To zoom the picture
POSITION MEMORY	Restart from the memorized position

Ref No.	IC1001									IC1102				IC1103						
MODE	1	2	3	4	5	6	7	8		K	R	A		1	2	3	4	5		
STOP	0	0	11.4	290.6	290.6	-	2.2	0		4.6	2.5	0		9.1	5.2	9.1	-	0		
PLAY	0	0	11.4	290.6	290.6	-	2.2	0		4.6	2.5	0		9.1	5.2	9.1	-	0		

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	0	0	0	0	0	0	-	3.3	1.5	1.7	0	0	0	0	0	3.2	3.2	3.2	3.2	3.2
PLAY	0	0	0	0	0	0	-	3.3	1.5	1.7	0	0	0	0	0	3.2	3.2	3.2	3.2	3.2

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	0	0	0	3.3	-	3.2	-	-	-	-	0	3.3	3.2	3.3	0	3.3	3.3	3.3	3.1	3.1
PLAY	0	0	0	3.3	-	3.2	-	-	-	-	0	3.3	3.2	3.3	0	3.3	3.3	3.3	3.1	3.1

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	3.1	3.1	3.1	3.1	3.1	3.3	-	-	-	2.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6
PLAY	3.1	3.1	3.1	3.1	3.1	3.3	-	-	-	2.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6	-29.6

Ref No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	-29.6	-29.6	-29.6	3.3	-31.6	-29.1	-19.3	-31.6	-26.6	-31.6	-19.1	-17.1	-14.6	-14.6	-14.6	-24.5	-29.4	-29.4	-29.4	-14.7
PLAY	-29.6	-29.6	-29.6	3.3	-31.6	-29.1	-19.3	-31.6	-26.6	-31.6	-19.1	-17.1	-14.6	-14.6	-14.6	-24.5	-29.4	-29.4	-29.4	-14.7

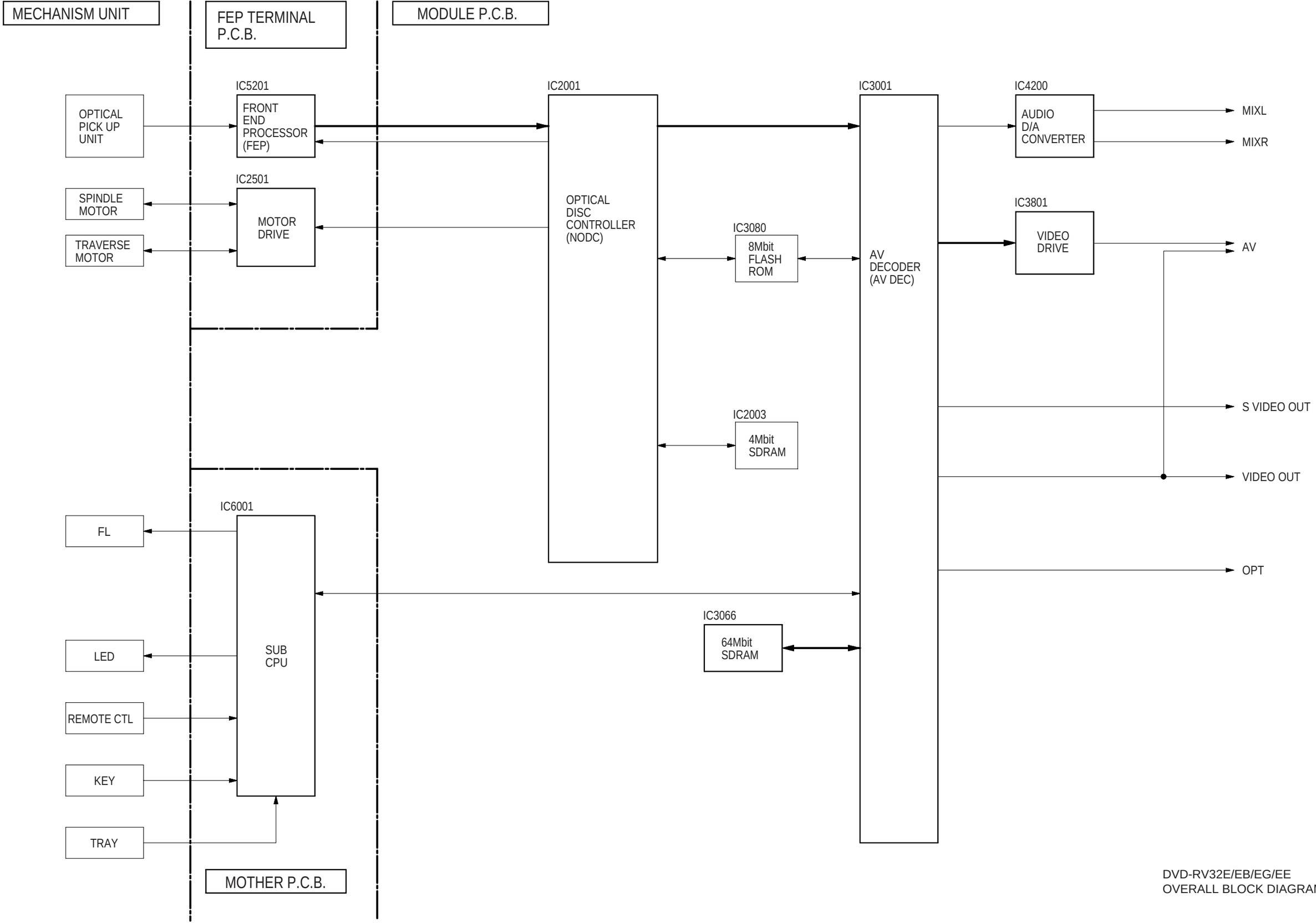
Ref No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	-	-	-	-	-	-	-	0	3.3
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	-	-	-	-	-	-	-	-	-	0	3.3

Ref No.	IC6002			
MODE	1	2	3	4
STOP	-	0	3.2	3.3
PLAY	-	0	3.2	3.3

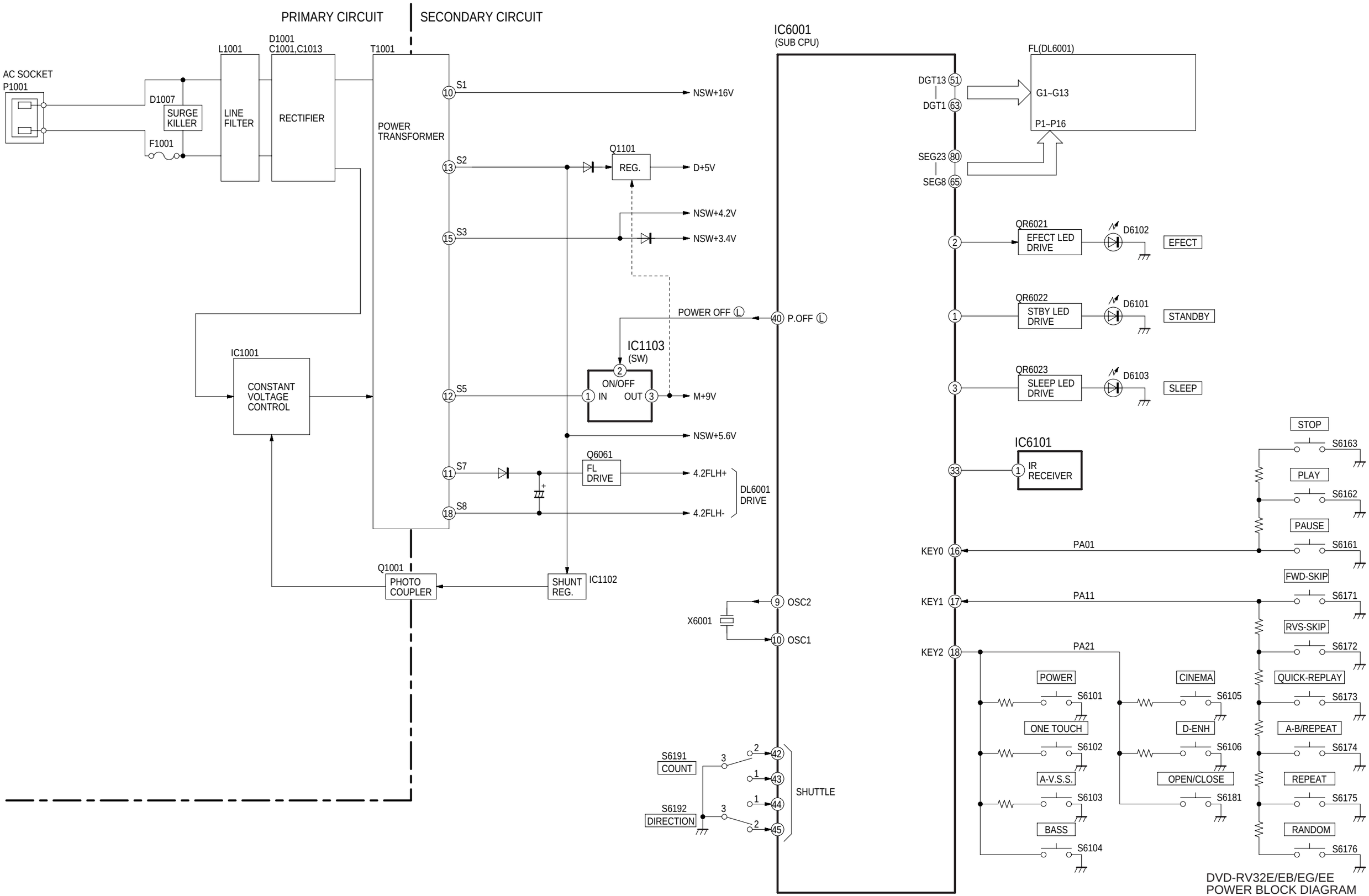
Ref No.	Q1001				Q1101			Q6061			Q6071					
MODE	1	2	3	4	E	C	B	E	C	B	E	C	B			
STOP	6.1	5	0.9	16.3	5.0	5.6	9	0	0	0	3.3	5.6	0			
PLAY	6.1	5	0.9	16.3	5.0	5.6	9	0	0	0	3.3	5.6	0			

Ref No.	QR6021			QR6022			QR6023								
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	3.3	0	0	3.3	0	0	3.3	0	0						
PLAY	3.3	0	0	3.3	0	0	3.3	0	0						

Ref No.	IC6101																			
MODE	1	2	3	4	5															
STOP	3.2	3.3	0	0	0															
PLAY	3.2	3.3	0	0	0															



DVD-RV32E/EB/EG/EE
OVERALL BLOCK DIAGRAM



DVD-RV32E/EB/EG/EE
POWER BLOCK DIAGRAM

OPTICAL PICK UP UNIT

PHOTO DETECTOR

B1 B2 A1 A2 A4 A3 B4 B3

HEAD AMP

LASER DIODE

LASER DIODE

Q5211

LD DRIVE

Q5215

LD DRIVE

LPC AMP

IC5201 (FEP)

VIN7 40
VIN8 41
VIN1 43
VIN2 44
VIN3 45
VIN4 46
VIN5 38
VIN6 39
VIN9 47
VIN10 48

AMP
AMP
EQ
HPF COMP.
EQ
HPF COMP.
EQ
HPF COMP.
EQ
HPF COMP.
DEFFERENTIAL PHASE DET.
DEFFERENTIAL PHASE DET.
AMP
AMP
AMP
AMP
FBAL
TBAL
VREF
VREF

LD 3
LD 2
LD 5
LD 4

RFINP 32
RFINN 33
TESTSG
VREF
DCRF

DPDOFT DET.
LEVEL CONT.
POFLT

MIRROR DET.
LEVEL CONT.
BDO DET.
LEVEL CONT.

SCK 10
SEN 9
STDI0 11
S-IF
REG

PEAK
HOLD
RFENV 36
TE 13
TBAL 7
FE 20
FBAL 6
RSCL
S LINE
BDO 16
OFTR 15
FS 21
ARF 26
NARF 27

ENV DET.
CSAG
DCAGC
AGC CONT.
BDOSL
AGCG
FC CONT.
BOOST CONT.
EQ
VGA
GD CONT.

IC2001 (NODC)

RFENV 35
TE 31
TBAL 4
FE 30
FBAL 1
BDO 17
OFTR 16
FS 32
ARF 47
NARF 49

STDI 21
SEN 18
SCK 20

A
B

DVD-RV32E/EB/EG/EE
SERVO BLOCK DIAGRAM

RF SIGNAL
MOTOR DRIVE SIGNAL
TRACKING ERROR SIGNAL
FOCUS ERROR SIGNAL

IC2001 (NODC)

IC2501
(MOTOR DRIVE)

TRVS IN
TRIN
FOIN
SPDIN
DMV
FROM IC6001-27,28PIN
LDIN
BIAS1
BIAS2
TRIN
VIN1
VIN2
VIN3
OPOUT
LDIN
MUTE2
MUTE3
CH3 MUTE
CH1,2 MUTE
LEVEL SHIFT
VO4+
VO4-
OPIN+
VO3+
VO3-
OPIN-
VO1+
VO1-
VO2+
VO2-
M2502 TRAVERS MOTOR
M2501 SPINDLE MOTOR
IC2511-11,12,13,14
7.2Vp-p(20usec./div.)
OPTICAL PICK UP UNIT
ACTUATOR
TRACKING COIL
FOCUS COIL
ACT T+
ACT T-
ACT F+
ACT F-
TRDM GI02
FODM GI01
IC2003
(4M SDRAM)
DQ0
DQ15
A0
A8
DRAMD
DRAMA
IC3001
(AVDEC)
CNT
CH4 MUTE
LD CNT
MUTE4
TRAY/TRV
TRAY/MUT
TRAY CLOSE
TRAY OPEN
SW2501
FROM P3004-1PIN

DVD-RV32E/EB/EG/EE
SERVO BLOCK DIAGRAM

FEP TERMINAL P.C.B.

MODULE P.C.B.

MAIN SIGNAL

OPTICAL PICK UP UNIT

IC5201
(FEP)
VIN1 43
VIN2 44
VIN3 45
VIN4 46
VIN5 38
VIN6 39
VIN7 40
VIN8 41
VIN9 47
VIN10 48
VREF
VREF
HOLD
RF ENV 36
RFIN P/N
DCRF

IC2001
(NODC)
RF ENV 35
DD0 104
DD7 95
CPUD0 81
CPUD7 74
DATA
NWR 73
NRD 72
ADDRESS
CPU ADR0 70
CPU ADR17 53

IC3001
(AV DECORDER)
DD0 6
DD1 7
DD2 8
DD3 9
DD4 10
DD5 11
DD6 12
DD7 13

IC3080
(8M FLASH ROM)
DQ0 29
DQ15 45
DATA
A1 1
A18 24
ADDRESS
CPUA0 129
CPUA21 183
ADDRESS
FLASH RST(L)
RESET 124
RESET 132
NRE 117
NWEL 128
CPU DATA0 141
CPU DATA15 158
DATA

IC3001-
0.68Vp-p(20usec./div.)
IC3001-
0.64Vp-p(20usec./div.)
IC3001-
6.0Vp-p(20usec./div.)
IC3001-
1.2Vp-p(20usec/div)
IC3001-
0.8Vp-p(20usec/div)

BOUT 25
GOUT 26
ROUT 27
MUTE 42
YOUT 32
COUT 33
CVOUT 34
B
G
R
Y
C
V
QR3803
INV.
Q3807,3809
AMP
Q3806,3808
AMP
Q3800,3803
AMP

IC3801
(VIDEO DRIVE)
INA 2
INB 4
INC 7
MUTE 1
OUTA1 15
OUTA2 14
OUTB1 13
OUTB2 12
OUTC1 10
OUTC2 9

JK3801
AV
JK3802
S VIDEO OUT
JK3803
VIDEO OUT

IC3066
(64M SDRAM)
MEMORY ADDRESS 14bit
SMI ADR0 69
SMI ADR1 68
SMI ADR2 67
SMI ADR3 66
SMI ADR4 58
SMI ADR5 59
SMI ADR6 60
SMI ADR7 61
SMI ADR8 62
SMI ADR9 63
SMI ADR10 70
SMI ADR11 71
SMI ADR12 72
SMI ADR13 73
A0 23
A1 24
A2 25
A3 26
A4 29
A5 30
A6 31
A7 32
A8 33
A9 34
A10 22
A11 35
BA0 20
BA1 21
MEMORY ADDRESS 14bit
MEMORY DATA 16bit
SML DATA0 84
SML DATA1 85
SML DATA2 86
SML DATA3 87
SML DATA4 88
SML DATA5 89
SML DATA6 90
SML DATA7 91
SML DATA8 92
SML DATA9 93
SML DATA10 97
SML DATA11 98
SML DATA12 99
SML DATA13 100
SML DATA14 101
SML DATA15 102
DQ0 2
DQ1 4
DQ2 5
DQ3 7
DQ4 8
DQ5 10
DQ6 11
DQ7 13
DQ8 42
DQ9 44
DQ10 45
DQ11 47
DQ12 48
DQ13 50
DQ14 51
DQ15 53
MEMORY DATA 16bit
XCS 74
XRAS 76
XCAS 77
XWE 78
SMI CLKOUT 95
CLK 38
SMI CLKIN 92

DVD-RV32E/EB/EG/EE
VIDEO BLOCK DIAGRAM

MAIN SIGNAL

IC3001
(AV DECODER)

DAC SCLK 51
DAC LRCK 56
DAC PCM OUT 52
STBDAC 190
SBT1 192
SBO1 191
DAC PCMCLK 55
AUDIO MUTE(H) 189
SWA 57

IC4200
(AUDIO D/A CONVERTER)

BCK 1
LRCK 3
DATA 2
STBDAC 15
SBT1 14
SBO1 13
SCLK 16

AUDIO SERIAL PORT
SERIAL CONTROL PORT
SYSTEM CLOCK MANAGER
OVERSAMPLING DIGITAL FILTER WITH FUNCTION CONTROLLER
SYSTEM CLOCK
ENHANCED MULTI-LEVEL DELTA-SIGMA MODULATOR
ZERO DETECT
DAC
DAC
OUTPUT AMP AND LOW-PASS FILTER
OUTPUT AMP AND LOW-PASS FILTER

MIXL 7
MIXR 8

IC4202
AMP 2 1
IC4202
AMP 6 7

LOUT
ROUT

JK3801
3
1

QR4200
QR4206,QR4207
AUDIO MUTE CIRCUIT

IC4202
MUTE
IC4202
MUTE

IC4201
AMP 1 2
IC4201
AMP 6 7

JK3803
SUB-WOOFER
L
R

IC4203
MUTE
A MUTE

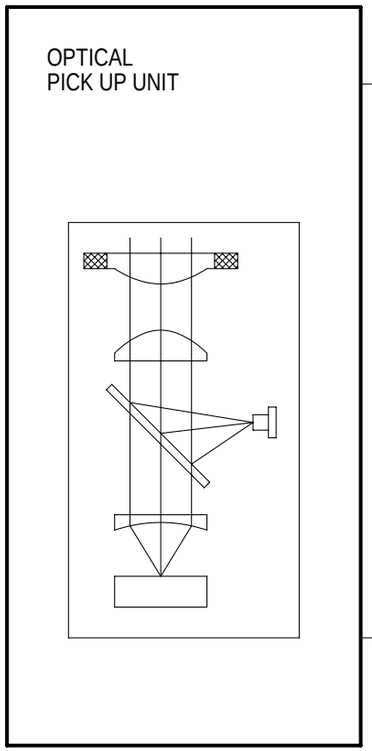
IC4205
MUTE
A MUTE

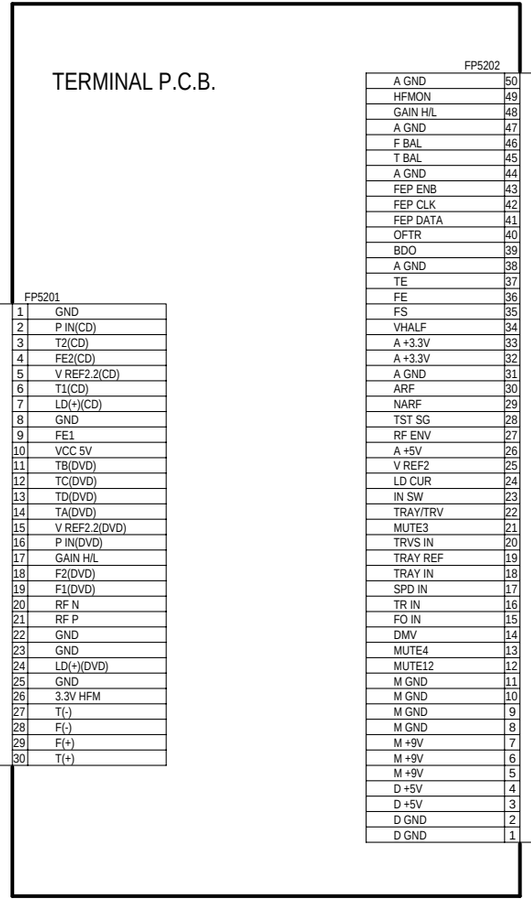
Q3802
AMP

GND
VCC
VIN
DIGITAL AUDIO OUT OPTICAL

FROM PS3001 16Pin
0.1CH SW
Q4206,QR4203
MUTE
A MUTE

DVD-RV32E/EB/EG/EE
AUDIO BLOCK DIAGRAM





FP5201

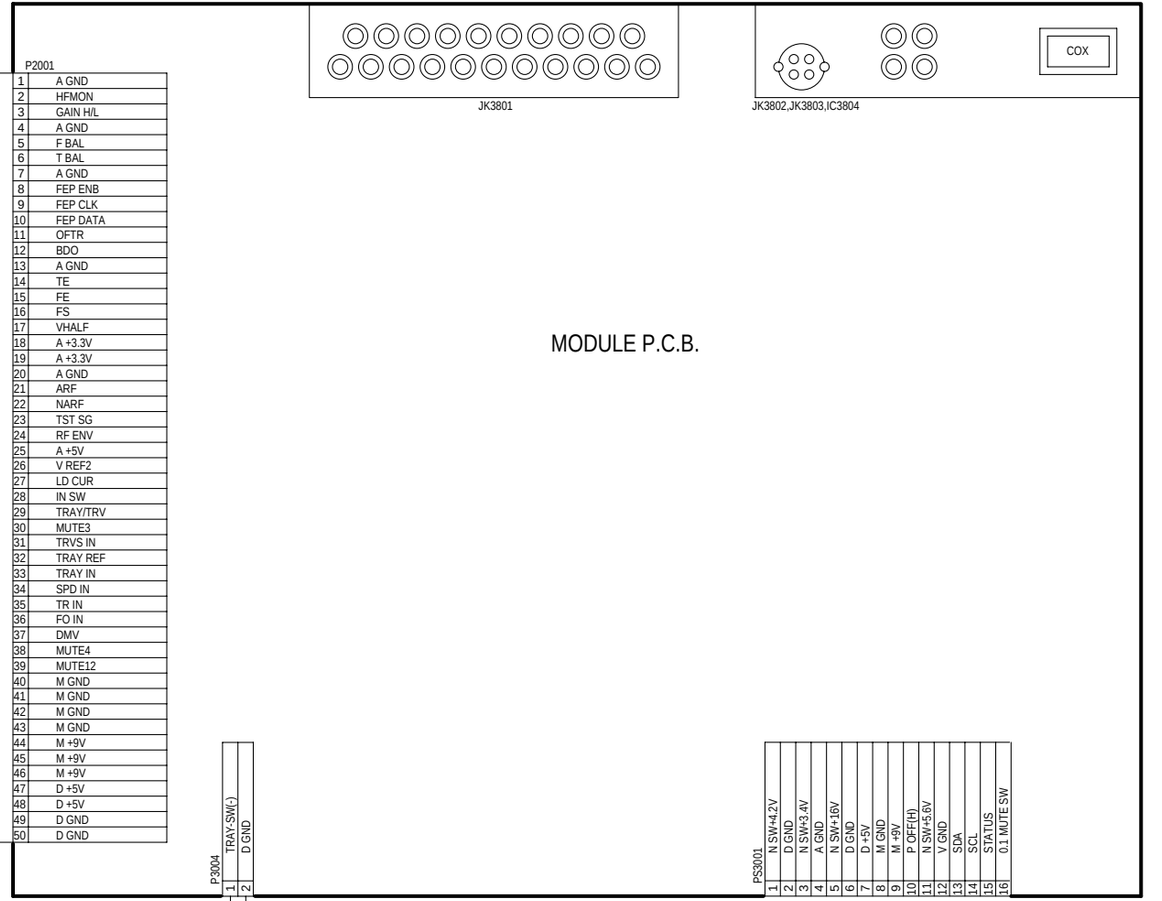
1	GND
2	P IN(CD)
3	T2(CD)
4	FE2(CD)
5	V REF2.2(CD)
6	T1(CD)
7	LD(+)(CD)
8	GND
9	FE1
10	VCC 5V
11	TB(DVD)
12	TC(DVD)
13	TD(DVD)
14	TA(DVD)
15	V REF2.2(DVD)
16	P IN(DVD)
17	GAIN H/L
18	F2(DVD)
19	F1(DVD)
20	RF N
21	RF P
22	GND
23	GND
24	LD(+)(DVD)
25	GND
26	3.3V HFM
27	T(-)
28	F(-)
29	F(+)
30	T(+)

FP5202

A GND	50
HFMON	49
GAIN H/L	48
A GND	47
F BAL	46
T BAL	45
A GND	44
FEP ENB	43
FEP CLK	42
FEP DATA	41
OFTR	40
BDO	39
A GND	38
TE	37
FE	36
FS	35
VHALF	34
A +3.3V	33
A +3.3V	32
A GND	31
ARF	30
NARF	29
TST SG	28
RF ENV	27
A +5V	26
V REF2	25
LD CUR	24
IN SW	23
TRAY/TRV	22
MUTE3	21
TRVS IN	20
TRAY REF	19
TRAY IN	18
SPD IN	17
TR IN	16
FO IN	15
DMV	14
MUTE4	13
MUTE12	12
M GND	11
M GND	10
M GND	9
M GND	8
M +9V	7
M +9V	6
M +9V	5
D +5V	4
D +5V	3
D GND	2
D GND	1

P2001

1	A GND
2	HFMON
3	GAIN H/L
4	A GND
5	F BAL
6	T BAL
7	A GND
8	FEP ENB
9	FEP CLK
10	FEP DATA
11	OFTR
12	BDO
13	A GND
14	TE
15	FE
16	FS
17	VHALF
18	A +3.3V
19	A +3.3V
20	A GND
21	ARF
22	NARF
23	TST SG
24	RF ENV
25	A +5V
26	V REF2
27	LD CUR
28	IN SW
29	TRAY/TRV
30	MUTE3
31	TRVS IN
32	TRAY REF
33	TRAY IN
34	SPD IN
35	TR IN
36	FO IN
37	DMV
38	MUTE4
39	MUTE12
40	M GND
41	M GND
42	M GND
43	M GND
44	M +9V
45	M +9V
46	M +9V
47	D +5V
48	D +5V
49	D GND
50	D GND

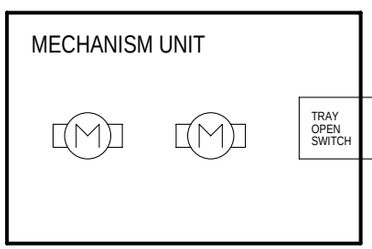


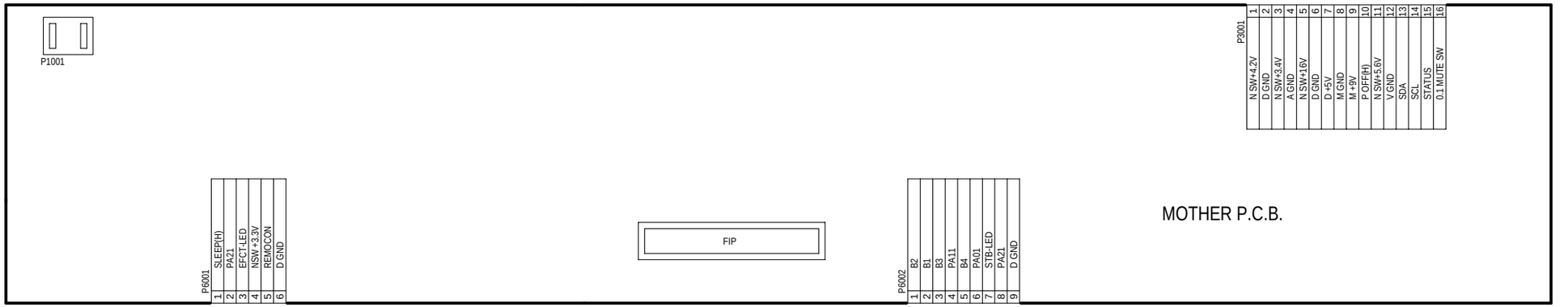
P3004

1	TRAY-SW(-)
2	D GND

PS3001

1	N SW+4.2V
2	D GND
3	N SW+3.4V
4	A GND
5	N SW+16V
6	D GND
7	D +5V
8	M GND
9	M +9V
10	P OFF(H)
11	N SW+5.6V
12	V GND
13	SDA
14	SCL
15	STATUS
16	0.1 MUTE SW



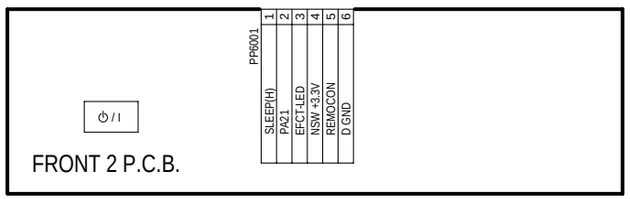


P6001

1	SLEEP(H)
2	PA21
3	EFCT-LED
4	NSW +3.3V
5	REMOCON
6	D GND

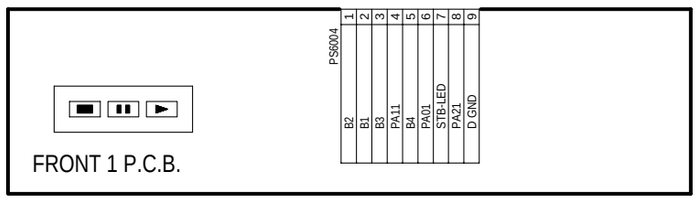
P6002

1	B2
2	B1
3	B3
4	PA11
5	B4
6	PA01
7	STB-LED
8	PA21
9	D GND



PP6001

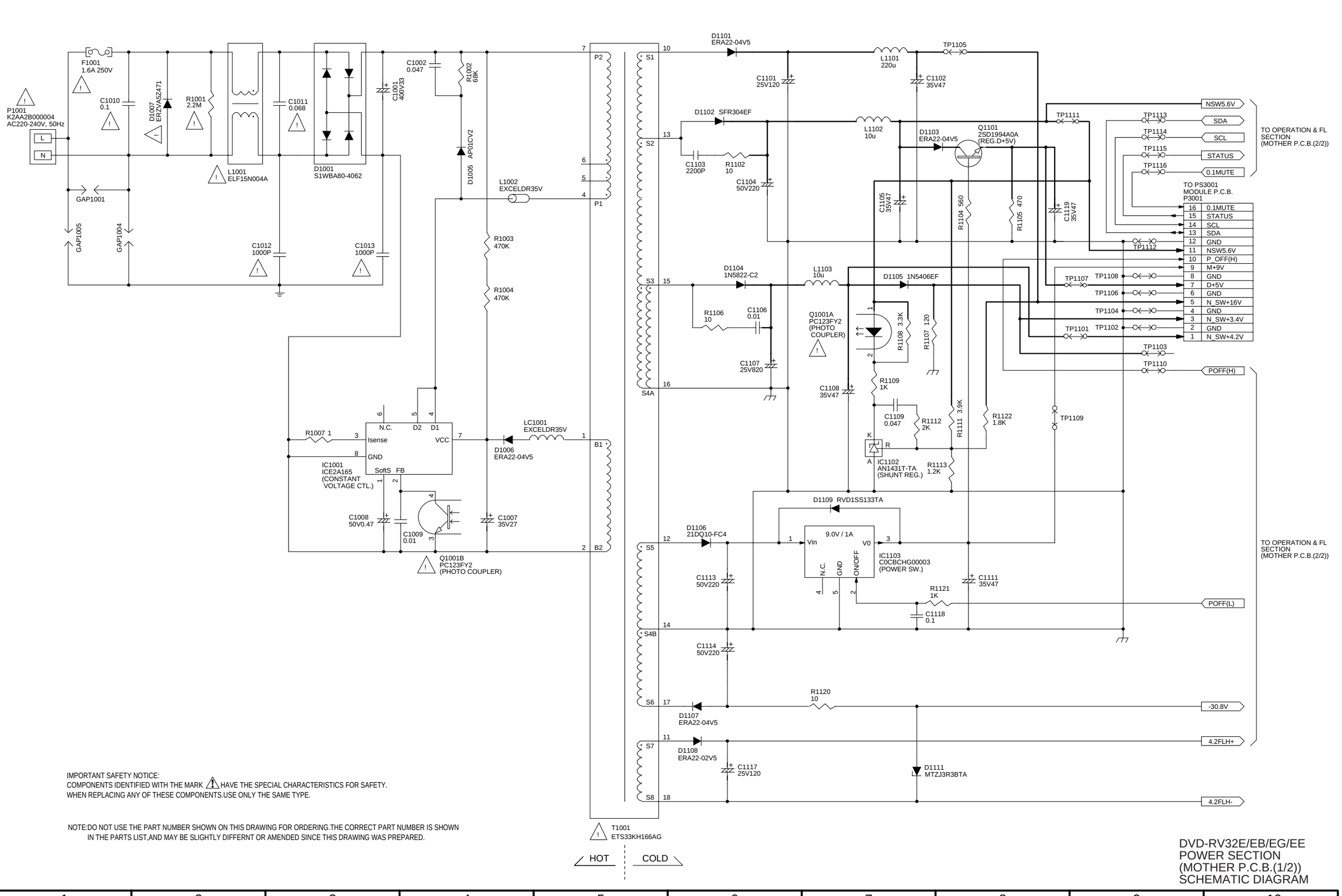
1	SLEEP(H)
2	PA21
3	EFCT-LED
4	NSW +3.3V
5	REMOCON
6	D GND



PS6004

1	B2
2	B1
3	B3
4	PA11
5	B4
6	PA01
7	STB-LED
8	PA21
9	D GND

DVD-RV32E/EB/EG/EE
INTERCONNECTION
SCHEMATIC DIAGRAM



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS.USE ONLY THE SAME TYPE.

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
POWER SECTION
(MOTHER P.C.B.(1/2))
SCHEMATIC DIAGRAM

FROM POWR SEC.

4.2FLH+
4.2FLH-
-30.8V
NSW5.6V
0.1MUTE
SDA
STATUS
SCL
POFF(L)
POFF(H)

TO POWER SECTION
(MOTHER P.C.B.(1/2))

L6001 100U

C6071 0.1
R6071 220
D6071 MAZ80390HL
Q6071 2SD1992ARA (REG.NSW+3.3V)
C6072 6V47
R6003 10K
R6001 10K
R6002 10K
C6015 0.01
C6014 0.01
C6016 0.01

DL6001
A2BB00000098

R6036 47K
R6037 47K
R6038 47K
R6039 47K
R6040 47K
R6041 47K
R6042 47K
R6043 47K

C6061 0.1
Q6061 2SD19960SA (FL DRIVE)
R6061 10K

C6002 50V10

QR6022 B1GDCFEM0002 (STBY-LED DRIVE)
R6035 330

TO PS6004
FRONT 1 P.C.B.
P6002

DGND	9
PA21	8
STBY-LED	7
PA01	6
B4	5
PA11	4
B3	3
B1	2
B2	1

ST-BY

R6033 330
QR6021 B1GDCFEM0002 (EFCT-LED DRIVE)
R6034 330
QR6023 B1GDCFEM0002 (SLEEP(H) OUT)
R6031 10K

TO PP6001
FRONT 2 P.C.B.
P6001

DGND	6
REMOCON	5
NSW+3.3V	4
EFCT-LED	3
PA21	2
SLEEP(H)	1

X6001 H2B800400007
C6001 4V220
C6003 0.01

IC6001
MN101C35DCS
(SUB CPU)

P00/STB-LED
P01
P02
CMD
STAT
DSPCLK
P06
VDD
OSC2
OSC1
VSS
XI
XO
MMOD
VREF-
KEY0
KEY1
KEY2
PA3
PA4
PA5
PA6
PA7
REF+
NFLOFF

R6004 10K
R6005 10K
R6011 10K
R6012
R6014
R6016
R6013 10K
R6015 10K

IC6002
C0EBE0000094
(RST.)
VCC
VOUT
NC
GND
C6021 0.1

R6006 47K
R6007 47K
R6008 47K
R6009 47K

R6048 220
R6049 220
R6050 220

NP-MUTE

R6044 47K
R6045 47K
R6046 47K
R6047 47K

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
OPERATION & FL SECTION
(MOTHER P.C.B.(2/2))
SCHEMATIC DIAGRAM

NOTE:THIS SCHEMATIC DIAGRAM SHOWS THE DESTINATION OF EACH SECTION OF MODULE P.C.B.

NODC SECTION

AVDEC SECTION

AV - INTERFACE SECTION

AUDIO DAC SECTION

FLASH MEMORY SECTION

PARA_STR
STVALID
STENABLE
DD[0-7]
NHFMON
TRAYMUTE
TRAYDRV
TRAYREF
TRAY/TRV
IN-SW

P3004
1 TRAY SW-
2 DGND
TO OPEN SWITCH

PARA_STR
PARA_VALID
PARA_REQ
DD[0-7]
NHFMON
TRAYMUTE
TRAYDRV
TRAYREF
TRAY/TRV
TRAY-SW+

NINT
NRST
CPUD[0-7]
CPUA[0-17]
WAIT
NWR
NRD
NCS

NINT
NRST
CPUD[0-15]
CPUA[0-21]
WAIT
NWR
/EMI_OE
/EMI_FLASH_CS
/CS_NODC
/FLASH_RESET(L)

M+9V MGND
A+5V
D+5V D+3.3V
DGND GND

NSW+4.2V
NSW+3.4V
D+3.3V
DGND
V_GND

VOUT
YOUT
COUT
R
G
B
RGB&YC(H)
WIDE(HI)
BLAN(H)
S/PDIF

VOUT
YOUT
COUT
R
G
B
RGB&YC(H)
WIDE(HI)
BLAN(H)
S/PDIF
LAUD_CINCH
LAUD
RAUD
RAUD_CINCH
CH0.1
NSW+12V
SW+5V
A_GND
D+5V
V_GND
DGND

0.1CH
RAUD_CINCH
ROUT
LOUT
LAUD_CINCH
A_MUTE(H)
NSW+12V
SW+5V

A_MUTE(H)
MDI
MC
ML
SCLK
BCLK
SDATA
LRCLK
0.1CH_SW
POFF(L)
STATUS
SCL
SDA

MDI
MC
ML
SCLK
BCLK
SDATA
LRCLK
0.1CH_SW
POFF(L)
POFF(H)
NSW+16V
NSW+5.6V
D+3.3V
A_GND
DGND

K3001
K3007
K3006
K3004

GND
DGND
A_GND
V_GND
M_GND

CPUD[0-15]
CPUA[1-21]
EMI_R_/W
/EMI_OE
/EMI_FLASH_CS
/FLASH_RESET(L)
D+3.3V
DGND

TO P3001 MOTHER P.C.B. PS3001

1	NSW+4.2V
2	DGND
3	NSW+3.4V
4	A_GND
5	NSW+16V
6	DGND
7	D+5V
8	M_GND
9	M+9V
10	POFF(H)
11	NSW+5.6V
12	V_GND
13	SDA
14	SCL
15	STATUS
16	0.1MUTE-SW

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
OVERVIEW SECTION
(MODULE P.C.B.(1/6))
SCHEMATIC DIAGRAM

F E D C B A

1 2 3 4 5 6 7 8 9 10

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.

TO OPEN SWITCH
P3004
TRAY-SW- 1
DGND 2

A_Mute (H)
ML
STATUS
SDA
TRAY/TRV
SCL
PARA_VALID
MDI
MC
TRAYMUTE
PARA_REQ
PARA_STR
TRAY-SW+
NHFMON
TRAYDRV
DD[0-7]
TRAYREF
B
G
R
V_GND
YOUT
COUT
VOUT
WIDE(HI)
BLAN(H)
RGB&YC(H)
D+3.3V
SDATA
BCLK
LRCLK
S/PDIF
NSW+4.2V
NSW+3.4V
POFF(L)

IC3001
STI5519EVB
(AVDEC)

IC3066
C3ABPG000062
(64Mbit SDRAM)

IC3004
C0EBE0000070
(RESET)

IC3003
C0JBAZ000529

IC3006
PQ2TZ15U
(REG.D+2.5V)

IC3007
PQ3DZ13U
(REG.D+3.3V)

CPUA[0-21]
CPUD[0-15]
/CS_NODC
/EMI_FLASH_CS
WAIT
NWR
/FLASH_RESET(L)
/EMI_OE
NRST
NINT
TCK
TDI
TDO
TMS
TRST
/RESET
CLK
CKE
UDQM
K-MODE

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
AVDEC SECTION
(MODULE P.C.B.(2/6))
SCHEMATIC DIAGRAM

F E D C B A

1 2 3 4 5 6 7 8 9 10

:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.

MAIN SIGNAL PATH

TO FP5202
TERMINAL P.C.B.
P2001

DGND	50
DGND	49
D+5V	48
D+5V	47
M+9V	46
M+9V	45
M+9V	44
MGND	43
MGND	42
MGND	41
MGND	40
MUTE12	39
MUTE4	38
DMV	37
FOIN	36
TRIN	35
SPDIN	34
TRAYIN	33
TRAYREF	32
TRVSIN	31
MUTE3	30
TRAY/TRV	29
IN-SW	28
LDCUR	27
VREF2	26
A+5V	25
RFENV	24
TSTSG	23
NARF	22
ARF	21
AGND	20
A+3.3V	19
A+3.3V	18
VHALF	17
FS	16
FE	15
TE	14
AGND	13
BD0	12
OFTR	11
FEPDATA	10
FEPCLK	9
FEPENB	8
AGND	7
TBAL	6
FBAL	5
AGND	4
GAINH/L	3
HFMON	2
AGND	1

LB2003-LB2015,LB2017,LB2018,
LB2020-LB2035:J0JCC0000062

IC2003
C3ABKG000057
(4M SDRAM)

IC2001
MN677203NP1
(NODC)

IC2004
C0JBAE000087

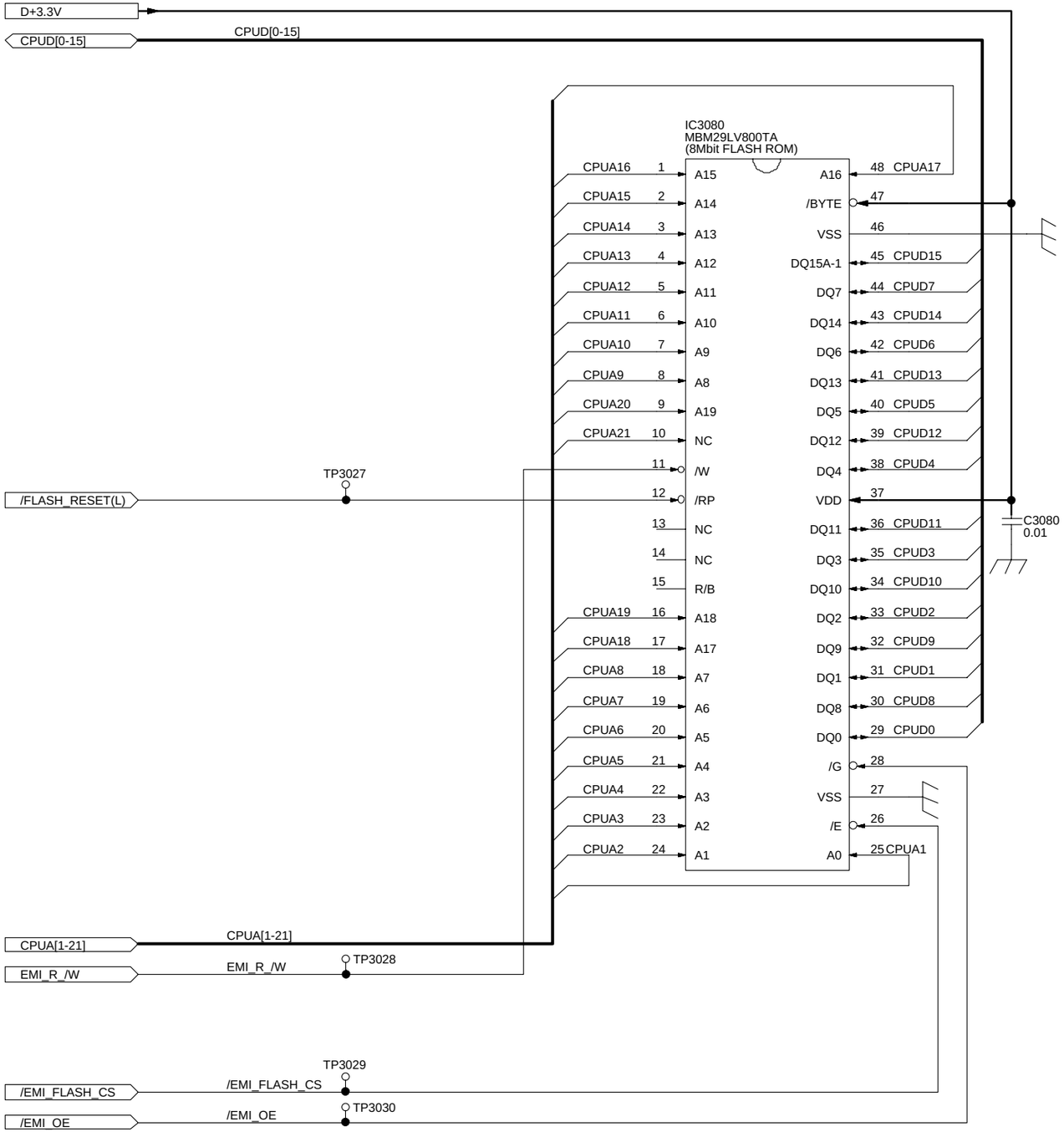
IC2002
C0JBAE000087

(Shield connected to GND)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
NODC SECTION
(MODULE P.C.B.(3/6))
SCHEMATIC DIAGRAM

:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.



NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
FLASH MEMORY SECTION
(MODULE P.C.B.(4/6))
SCHEMATIC DIAGRAM

:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

SW+5V
NSW+12V
YOUT
VOUT
COUT
R
G
B
LAUD
LAUD_CINCH
RAUD
RAUD_CINCH
WIDE(HI)
BLAN(H)
RGB&YC(H)
CH0.1
S/PDIF
D+5V

L3801 22u
L3803 22u
L3802 22u
L3804 22u
L3805 22u
L3806 22u
L3807 22u
L3810 22u
L3811 22u
L3800 22u

R3800 680
R3824 680
R3802 680
R3825 680
R3826 680
R3830 680
R3801 680
R3827 680
R3803 680
R3828 680
R3829 680
R3831 680

C3800 47P
C3823 47P
C3802 47P
C3824 47P
C3825 47P
C3829 47P
C3801 47P
C3826 47P
C3803 47P
C3827 47P
C3828 47P
C3830 47P

R3861 220
C3838 1000P

TP3801
C3815 6V47
C3812 0.1

C3822 6V100
C3841 0.1
C3814 6V47
C3804 6V220
C3810 0.1
C3834 6V100
C3836 0.1
C3833 0.1
C3840 0.1
C3811 0.1
C3835 6V47
C3839 4V/470
C3831 100P
C3832 100P
C3842 0.01
C3865 220
C3866 220

R3862 10K
R3814 330
R3812 39K
R3813 20K
R3817 120
R3816 120
R3856 75
R3819 75
R3815 1K
R3870 2.7K
R3871 2.7K
R3872 2.7K
R3820 75
R3821 75
R3823 75
R3867 75
R3822 75
R3842 470
R3868 47K
R3869 47K
R3838 220
R3839 220
R3840 75
R3841 75

IC3801
C9ZB00000282
(VIDEO OUT)
1 MUTE
2 INA
3 GND
4 INB
5 GND
6 NC
7 INC
8 GND
16 VCC
15 OUTA1
14 OUTA2
13 OUTB1
12 OUTB2
11 NC
10 OUTC1
9 OUTC2

Q3803 2SB709A0L (AMP)
Q3800 2SD601ATX (AMP)

JK3801 YKF41-5040 AV 21PIN
LB3800 VLP0145-T
LB3801 VLP0145-T
LB3802 VLP0145-T
LB3803 VLP0145-T

QR3803 UN5213-TX (MUTE)
Q3805 2SB709A0L (WIDE)
D3800 MA111-TX
R3836 10K
R3837 22K
R3863 10K
Q3801 2SD601ATX (WIDE)
R3864 22K
R3853 12K
R3854 18K

QR3801 UN5213-TX (INV.)
QR3802 UN5111-TX (INV.)

LB3804 VLP0145-T
JK3802 S-VIDEO OUT
LB3805 VLP0145-T
C Y Shield GND
K1CB104B0017

JK3803 K2YZ04000017 A/V OUT
R L SUB-WOOFER VIDEO OUT
LB3806 VLP0147-T
LB3807 VLP0145-T

R3846 330
Q3808 2SB709A0L (AMP)
R3805 68K
Q3806 2SD601ATX (AMP)
R3844 47K
R3850 120
R3818 120

R3848 330
Q3809 2SB709A0L (AMP)
R3806 24K
Q3807 2SD601ATX (AMP)
R3845 20K
R3851 120
R3852 75
R3849 120

IC3804
B3RAE0000007
3 Vin
2 Vcc
1 GND
DIGITAL AUDIO OUT OPTICAL

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
AV-INTERFACE SECTION
(MODULE P.C.B.(5/6))
SCHEMATIC DIAGRAM

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

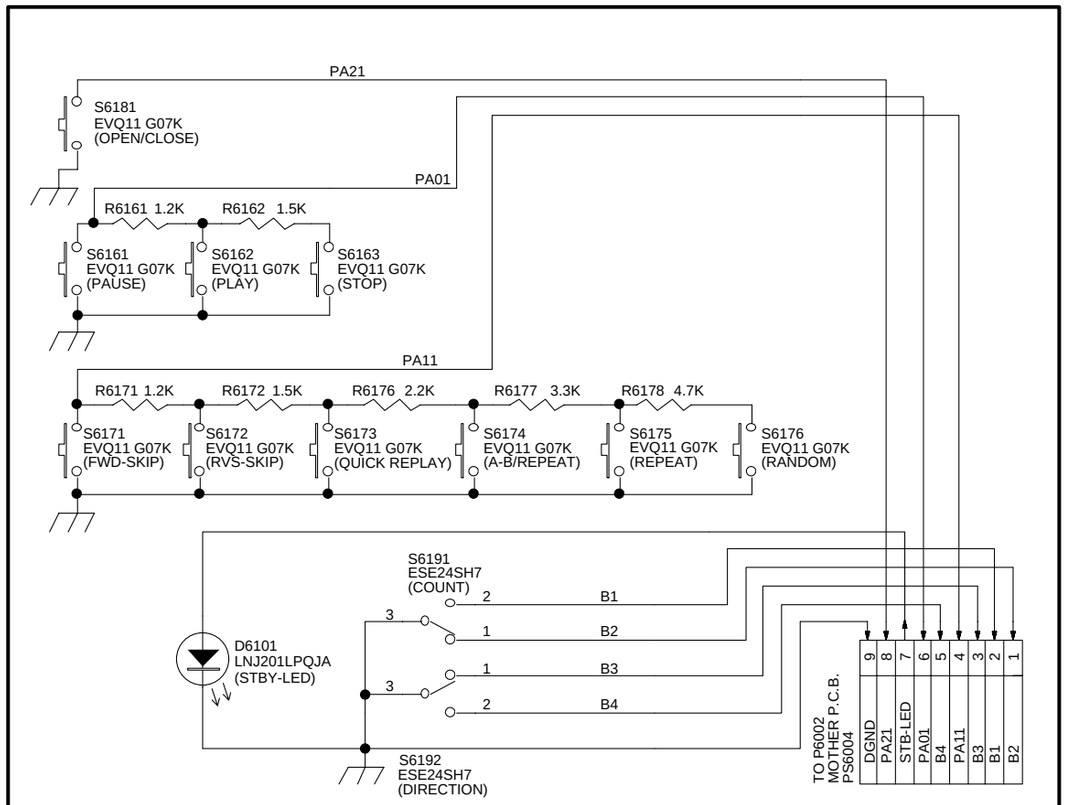
:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.

MAIN SIGNAL PATH

MDI
MC
ML
SCLK
TP4206
Shield connected to A_GND
BCLK
SDATA
LRCLK
TP4207
TP4208
D+3.3V
L4200 22U/185MA
C4202 16V10
C4205 1000P
C4206 1000P
C4203 6,3V330
C4200 16V10
IC4200 C0FBBK000030 (AUDIO DAC)
SCK ML MC MDI ZEROL ZEROR VCOM AGND
BCK DATA LRCK DGND VDD VCC VoutL VoutR
LB4200 VLP0147-T
LB4201 VLP0147-T
L4201 22U
R4227 1K
QR4200 UN5111-TX (AUDIO MUTE)
QR4207 UNR521100L (AUDIO MUTE)
R4226 2.2K
QR4206 UNR521100L (INV.)
A_MUTE(H)
R4223 680
R4202 47K
R4232 680
Q4204 2SD601ATX (MUTE)
R4235 820
Q4205 2SD601ATX (MUTE)
R4236 820
LAUD_CINCH
LOUT
C4212 16V47
R4209 47K
R4211 47K
C4214 0.033
IC4201 C0ABBB000109 (AUDIO AMP)
OUT1 VDD IN1- OUT2 IN1+ IN2- VSS IN2+
R4212 56K
R4210 47K
C4215 0.1
C4224 0.01
C4225 16V47
R4225 47K
R4221 680
0.1CH
R4220 22K
C4223 16V10
R4208 68K
D4205 MA111-TX
QR4203 UNR511300L (MUTE)
Q4206 2SD601ATX (MUTE)
R4237 820
C4213 16V47
R4224 680
R4230 2.7K
0.1CH_SW
RAUD_CINCH
ROUT
R4201 47K
R4231 680
R4234 820
R4233 820
Q4202 2SD601ATX (MUTE)
Q4203 2SD601ATX (MUTE)
R4207 68K
R4215 2.4K
R4200 2.4K
R4218 4.7K
C4222 100P
R4219 4.7K
C4207 1000P
R4216 4.7K
C4221 100P
R4217 4.7K
C4208 1000P
IC4202 C0ABBB000124 (AUDIO AMP)
OUT1 VDD IN1- OUT2 IN1+ IN2- VSS IN2+
R4213 3.3K
L4202 22u
C4204 16V10
C4226 0.01
R4203 560
R4205 560
C4201 16V10
C4227 16V10
D4206 MAZ80360HL
D4207 MAZ80360HL
TP4202
NSW+12V
TP4203
NSW+16V
R4214 1K
Q4200 2SD1996-STA (REG.NSW+12V)
C4217 0.01
C4219 16V10
C4216 16V47
D4203 MA4130N-LTA
TP4201
SW+5V
TP4205
NSW+5.6V
POFF(L)
POFF(H)
TP4204
C4218 0.01
Q4201 2SD1996-STA (POWER CTL.)
Q4207 2SD601ATX (POWER CTL.)
D4204 MAZ4056NLF
D4202 MA111-TX
C4211 10V220
C4220 16V10
QR4205 UN5213-TX (INV.)

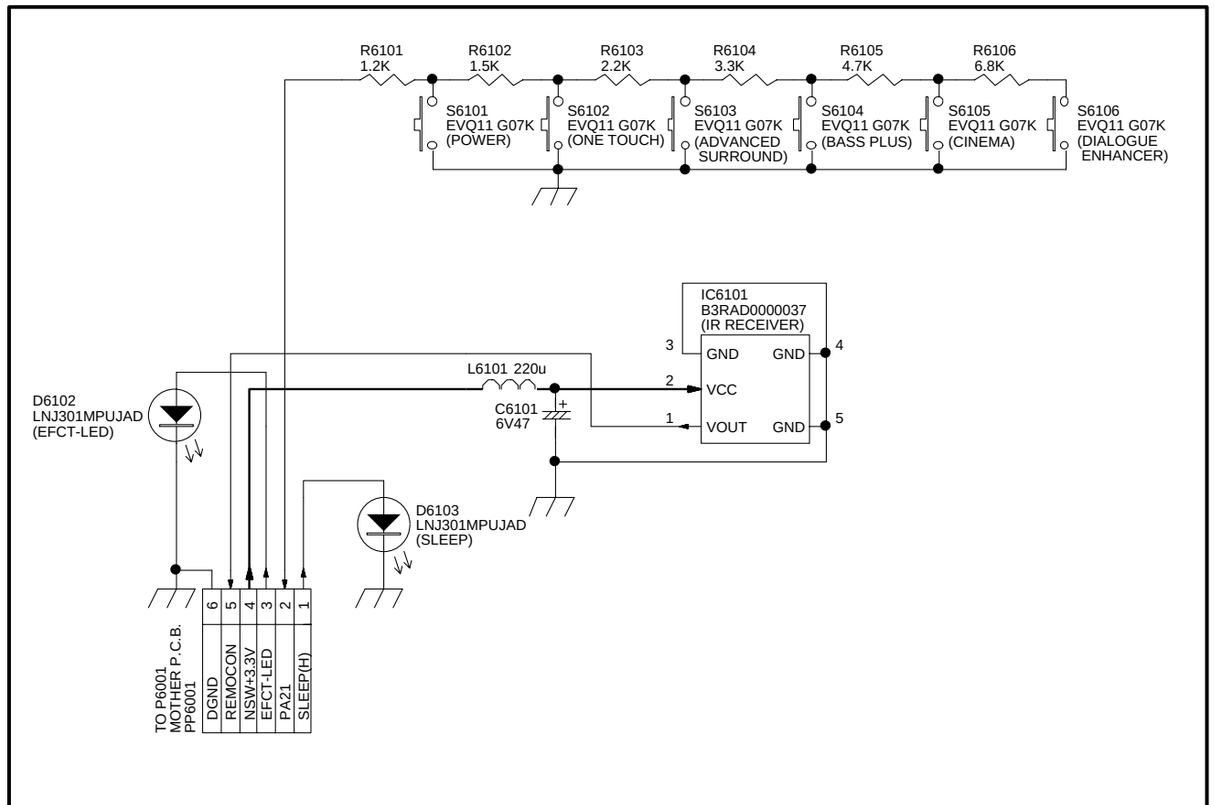
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
AUDIO-DAC SECTION
(MODULE P.C.B.(6/6))
SCHEMATIC DIAGRAM



FRONT 1 P.C.B.

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



FRONT 2 P.C.B.

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
FRONT 1 AND FRONT 2
SCHEMATIC DIAGRAM

MAIN SIGNAL PATH

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IC2501
COGBG0000020
(BA5823FM-E2)
or COGBG0000033
(BA5833FM-E2)
(MOTOR DRIVE)

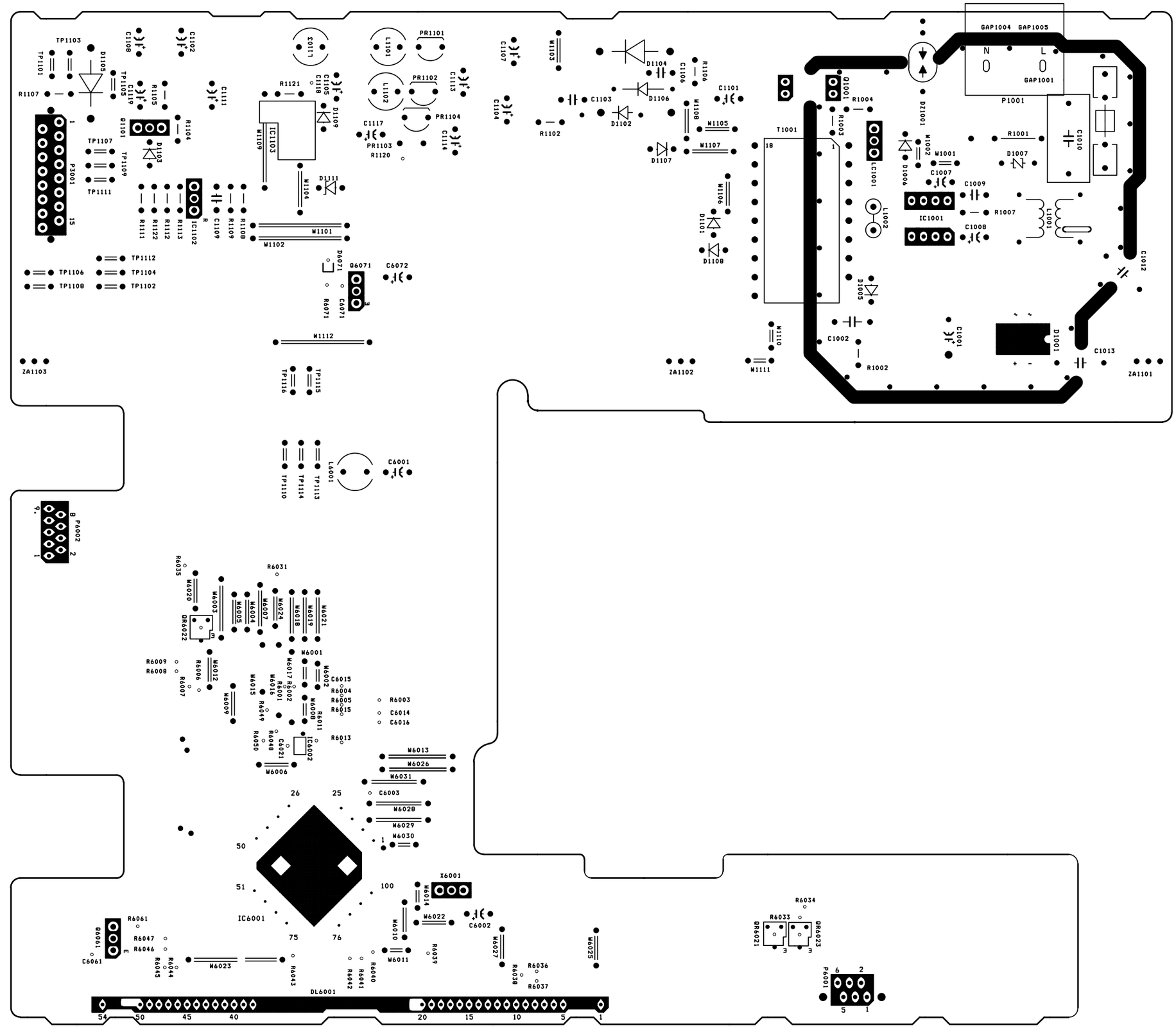
TO P2001
MODULE P.C.B.
(NODC)
FP5202

TO
OPTICAL PICKUP UNIT
FP5201

IC5201
AN8708FHK
(FEP)

DVD-RV32E/EB/EG/EE
TERMINAL
SCHEMATIC DIAGRAM

MOTHER P.C.B.

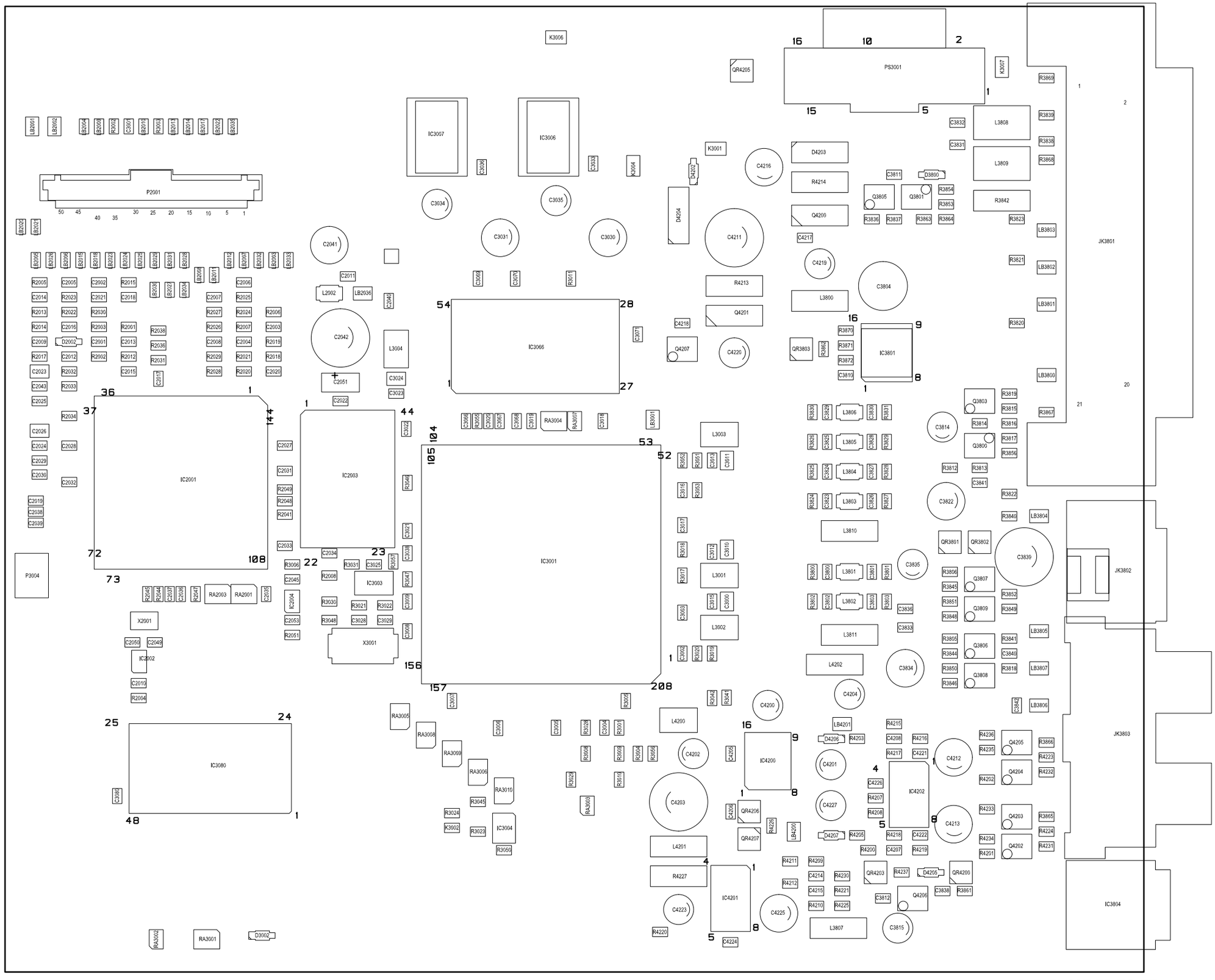


MOTHER P.C.B.	
Transistor	
Q1001	F-5
Q1101	F-1
Q6061	A-1
Q6071	E-3
Transistor - resistor	
QR6021	A-5
QR6022	C-2
QR6023	A-5
Integrated Circuit	
IC1001	E-6
IC1102	E-2
IC1103	F-2
IC6001	A-2
IC6002	B-2
Test Point	
TP1101	F-1
TP1102	E-1
TP1103	F-1
TP1104	E-1
TP1105	F-1
TP1106	E-1
TP1107	F-1
TP1108	E-1
TP1109	F-1
TP1110	D-2
TP1111	E-1
TP1112	E-1
TP1113	D-2
TP1114	D-2
TP1115	D-2
TP1116	D-2
Connector	
P1001	F-6
P3001	F-1
P6001	A-5
P6002	D-1

ADDRESS INFORMATION

DVD-RV32E/EB/EG/EE
MOTHER P.C.B. REPD0002AC

MODULE P.C.B.

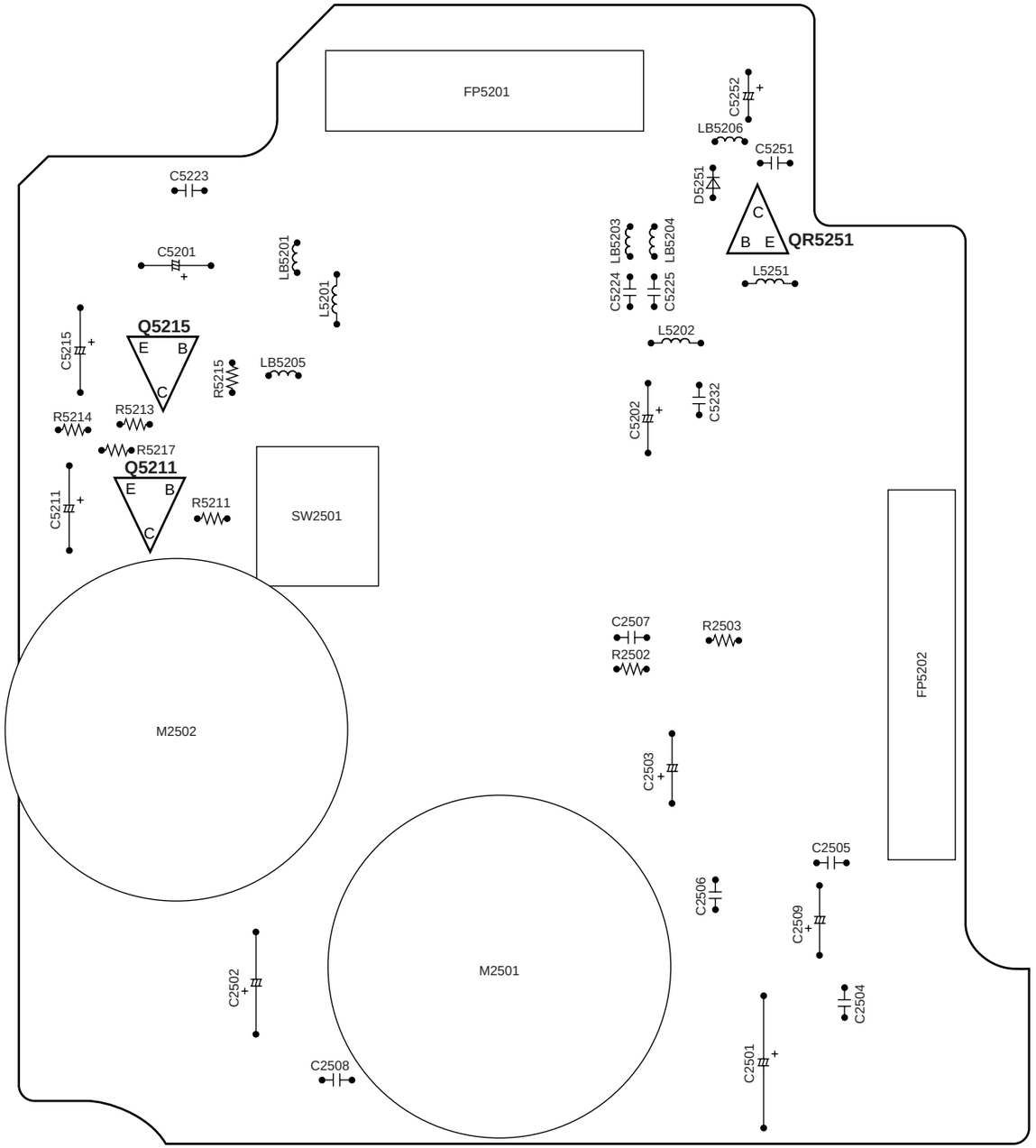


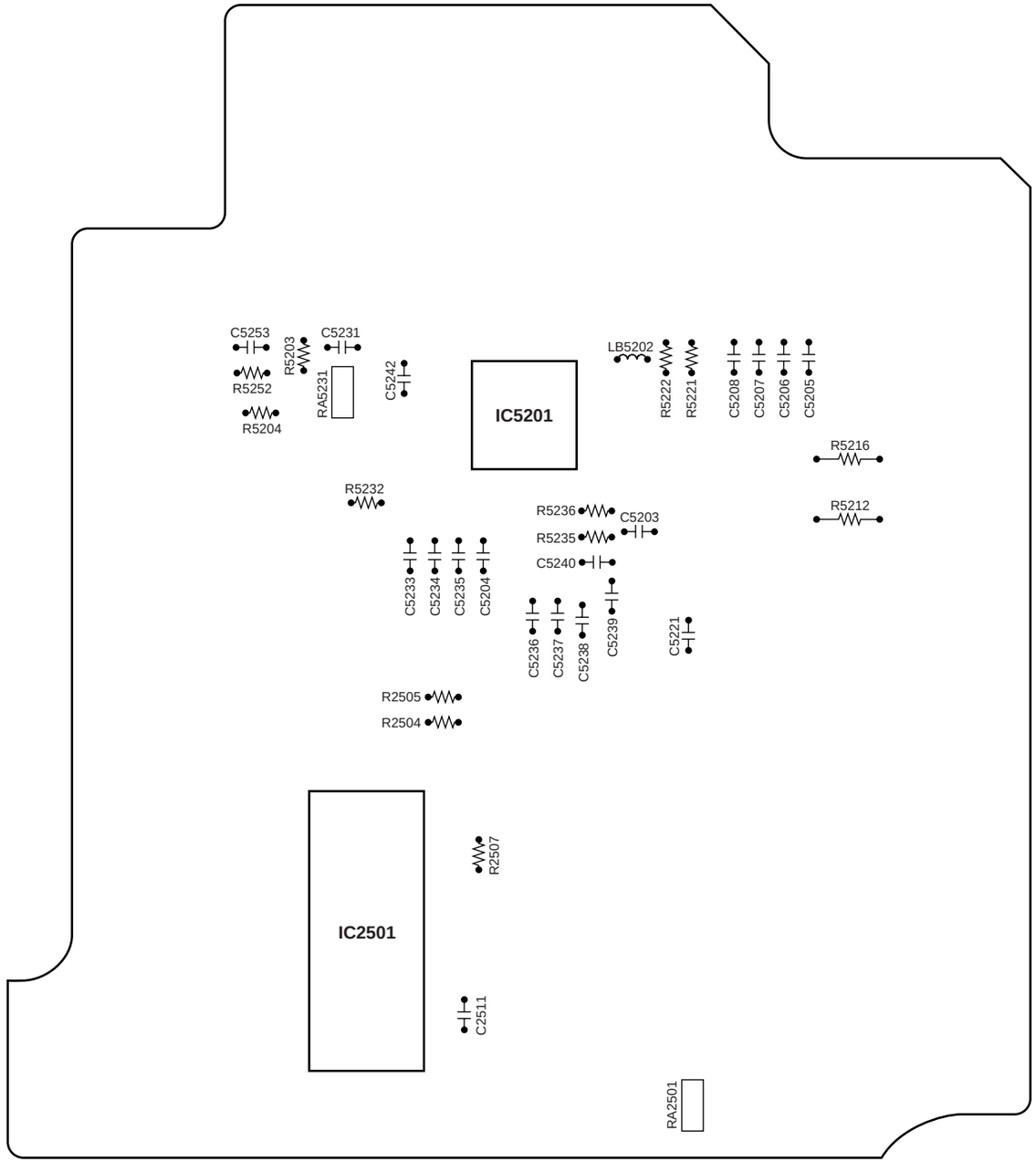
MODULE P.C.B.	
Transistor	
Q3800	D-6
Q3801	E-6
Q3803	D-6
Q3805	E-6
Q3806	C-6
Q3807	C-6
Q3808	C-6
Q3809	C-6
Q4200	E-5
Q4201	E-5
Q4202	A-7
Q4203	B-7
Q4204	B-7
Q4205	B-7
Q4206	A-6
Q4207	D-5
Transistor - resistor	
QR3801	C-6
QR3802	C-6
QR3803	D-5
QR4200	A-6
QR4203	A-6
QR4205	F-5
QR4206	B-5
QR4207	B-5
Integrated Circuit	
IC2001	D-2
IC2002	C-2
IC2003	D-3
IC2004	C-2
IC3001	C-4
IC3003	C-3
IC3004	B-4
IC3006	F-4
IC3007	F-3
IC3066	D-4
IC3080	B-2
IC3801	D-6
IC3804	A-7
IC4200	B-5
IC4201	A-5
IC4202	B-6
Connector	
P2001	E-2
P3004	C-1
PS3001	F-6

ADDRESS INFORMATION

DVD-RV32E/EB/EG/EE
MODULE P.C.B. REPD0003A

TERMINAL P.C.B.



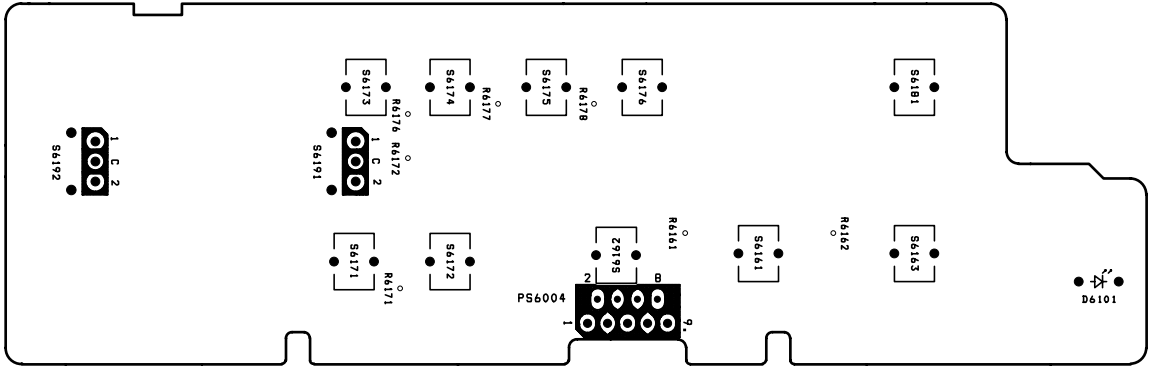


(COMPONENT SIDE)

(FOIL SIDE)

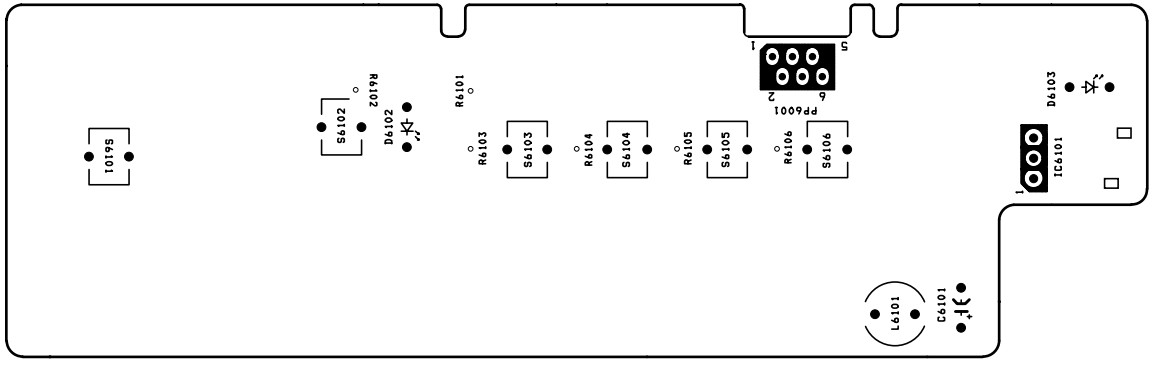
DVD-RV32E/EB/EG/EE
TERMINAL P.C.B. REP3091A-1N

FRONT 1 P.C.B.



DVD-RV32E/EB/EG/EE
FRONT 1 P.C.B. REPD0002AA

FRONT 2 P.C.B.

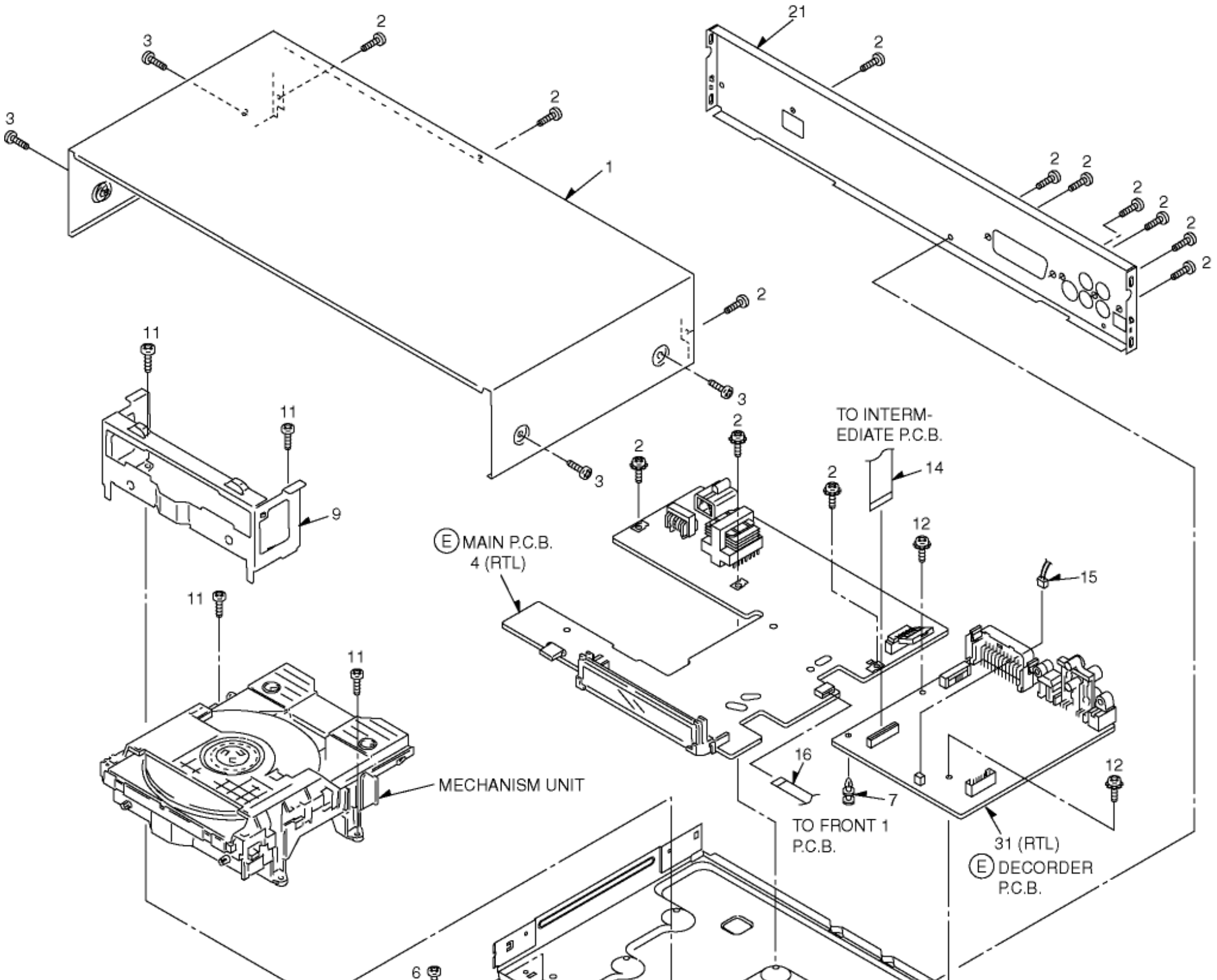


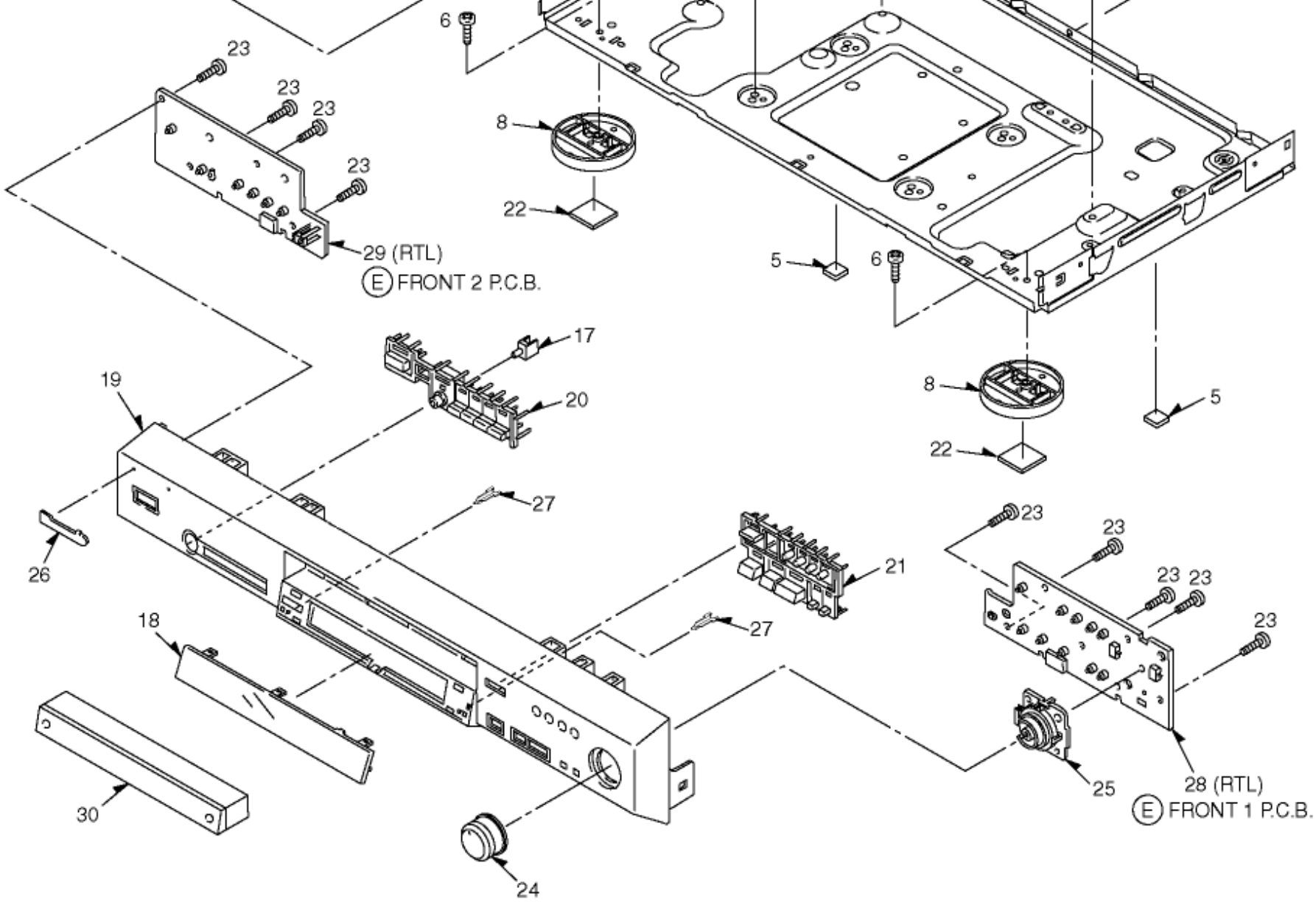
DVD-RV32E/EB/EG/EE
FRONT 2 P.C.B. REPD0002AB

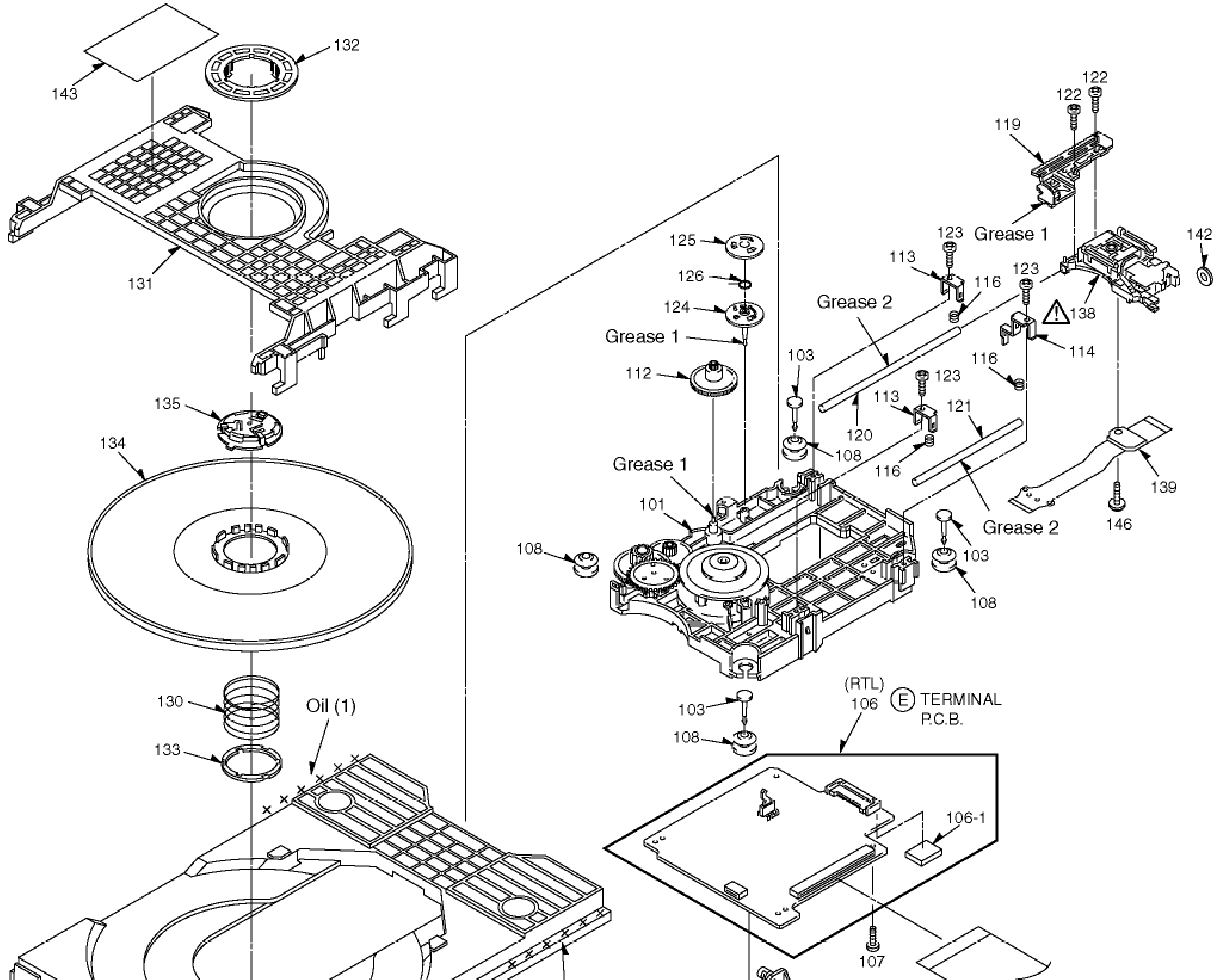
B

A

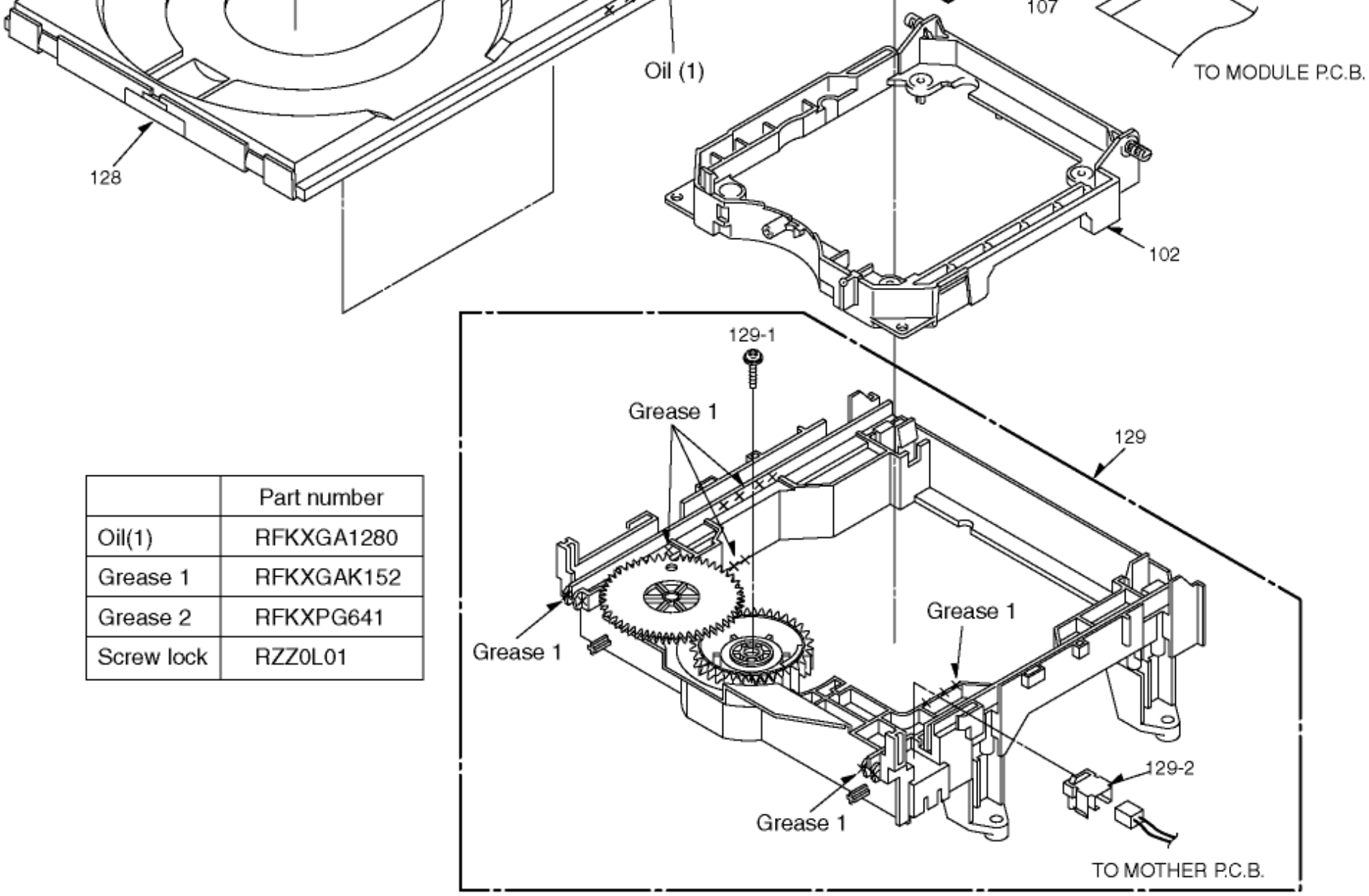
1 2 3 4


1
2
3
9
11
12
14
15
16
21
31 (RTL)
4 (RTL)
6
7
MECHANISM UNIT
TO INTERM-
EDIATE P.C.B.
TO FRONT 1
P.C.B.
Ⓔ MAIN P.C.B.
Ⓔ DECORDER
P.C.B.

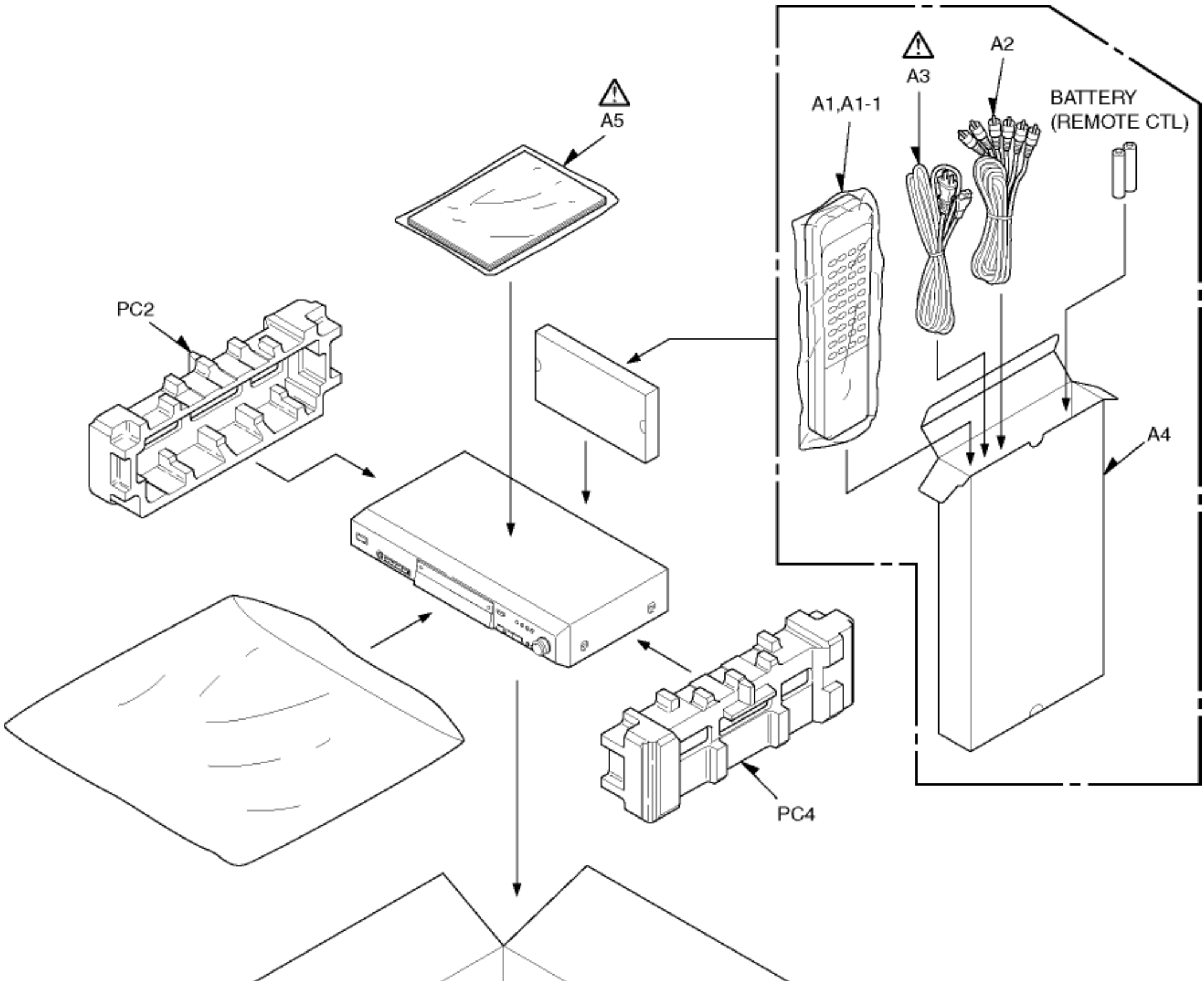

6
23
23
23
23
8
22
29 (RTL)
E FRONT 2 P.C.B.
5
6
17
20
19
8
5
22
27
26
21
23
23
23 23
23
18
27
25
28 (RTL)
E FRONT 1 P.C.B.
30
24

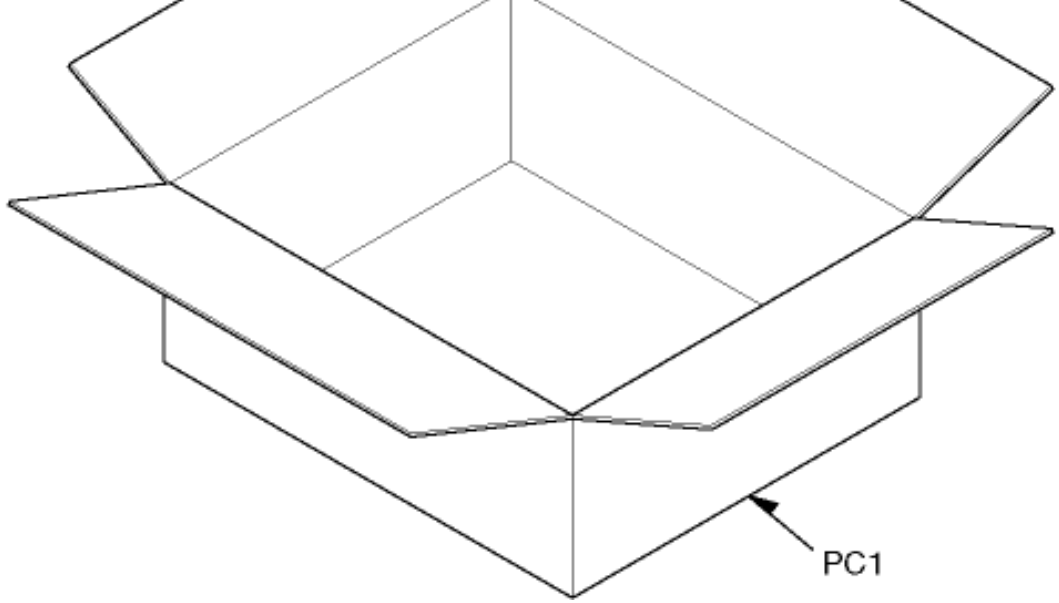


143
132
131
122
122
119
Grease 1
123
142
125
126
124
Grease 1
113
116
123
138
Grease 2
114
103
112
116
123
113
121
120
108
116
135
134
Grease 1
101
139
Grease 2
146
108
103
108
103
108
130
Oil (1)
(RTL)
106
E TERMINAL
P.C.B.
133
106-1
107



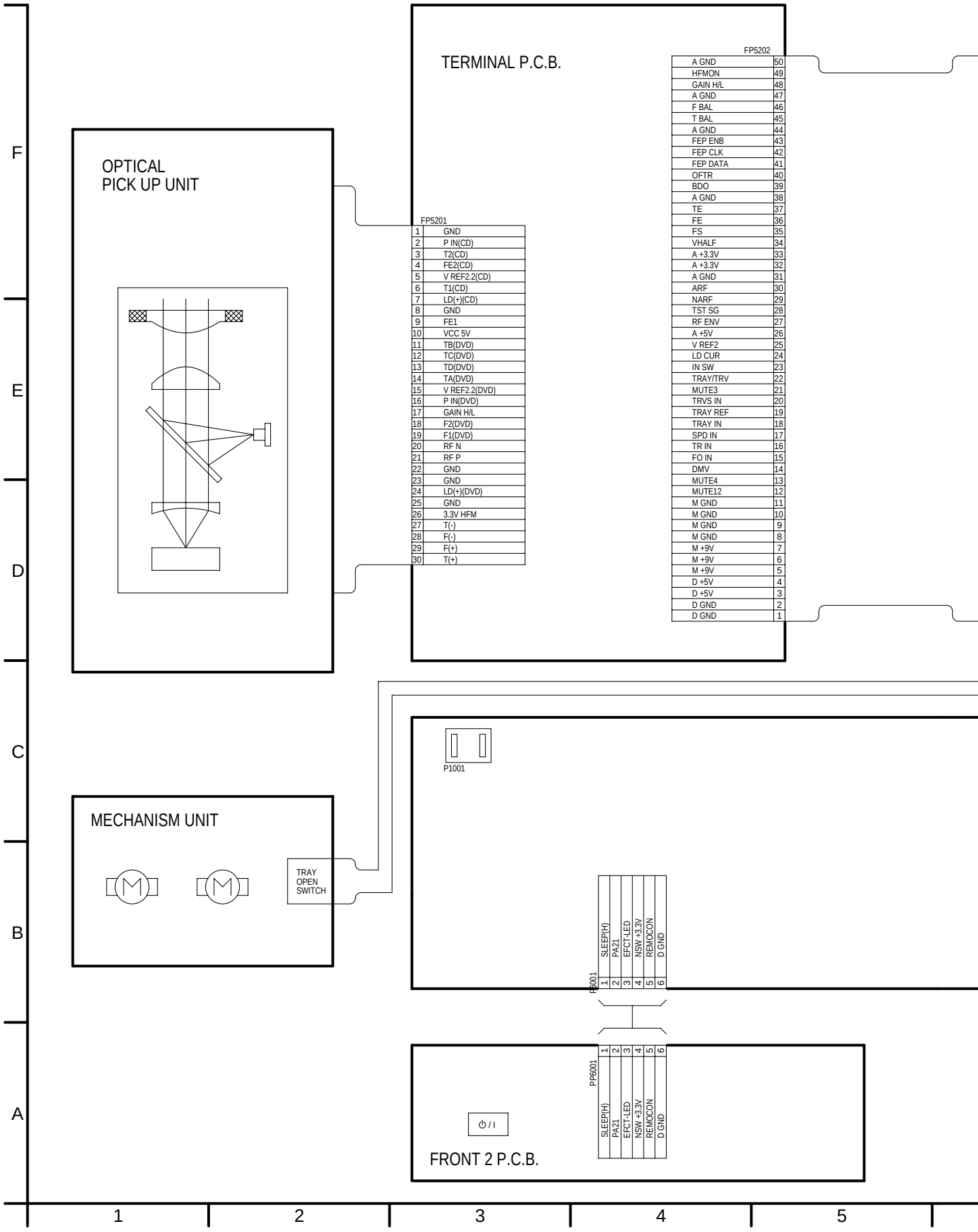
	Part number
Oil(1)	RFKXGA1280
Grease 1	RFKXGAK152
Grease 2	RFKXPG641
Screw lock	RZZ0L01

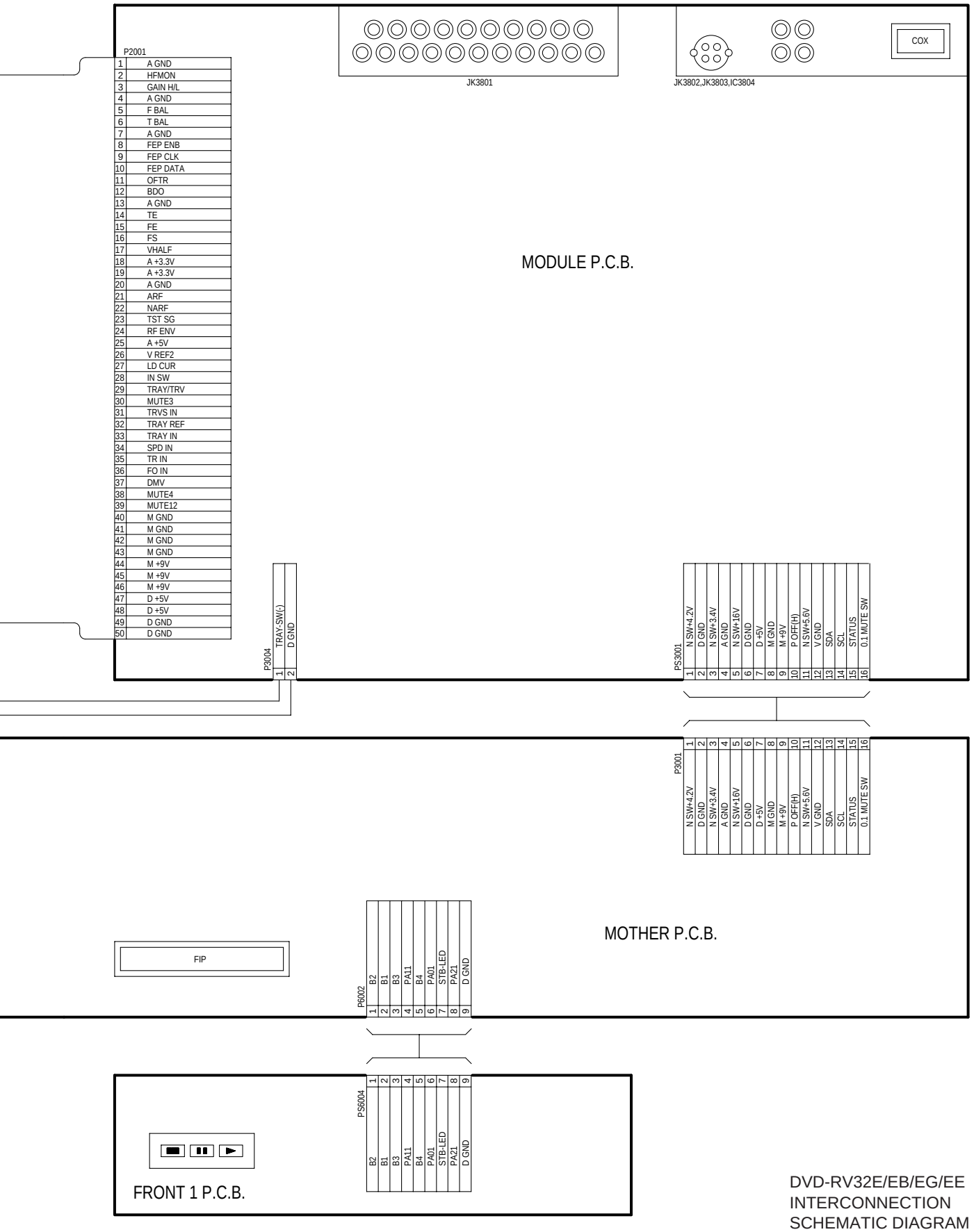

A5
A1,A1-1
A3
A2
BATTERY
(REMOTE CTL)
PC2
A4
PC4


PC1

14 SCHEMATIC DIAGRAM

14.1. INTERCONNECTION SCHEMATIC DIAGRAM

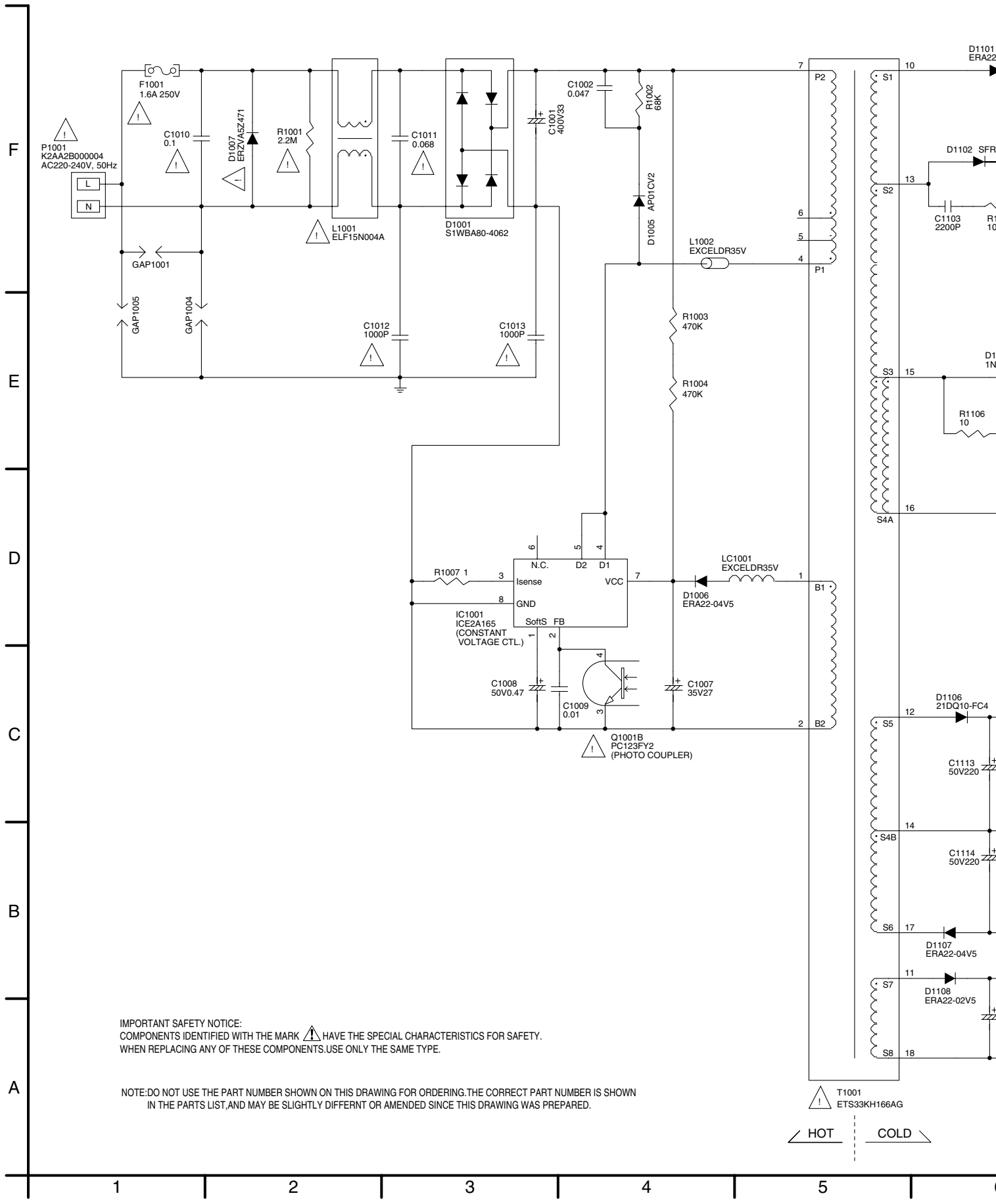




DVD-RV32E/EB/EG/EE
INTERCONNECTION
SCHEMATIC DIAGRAM

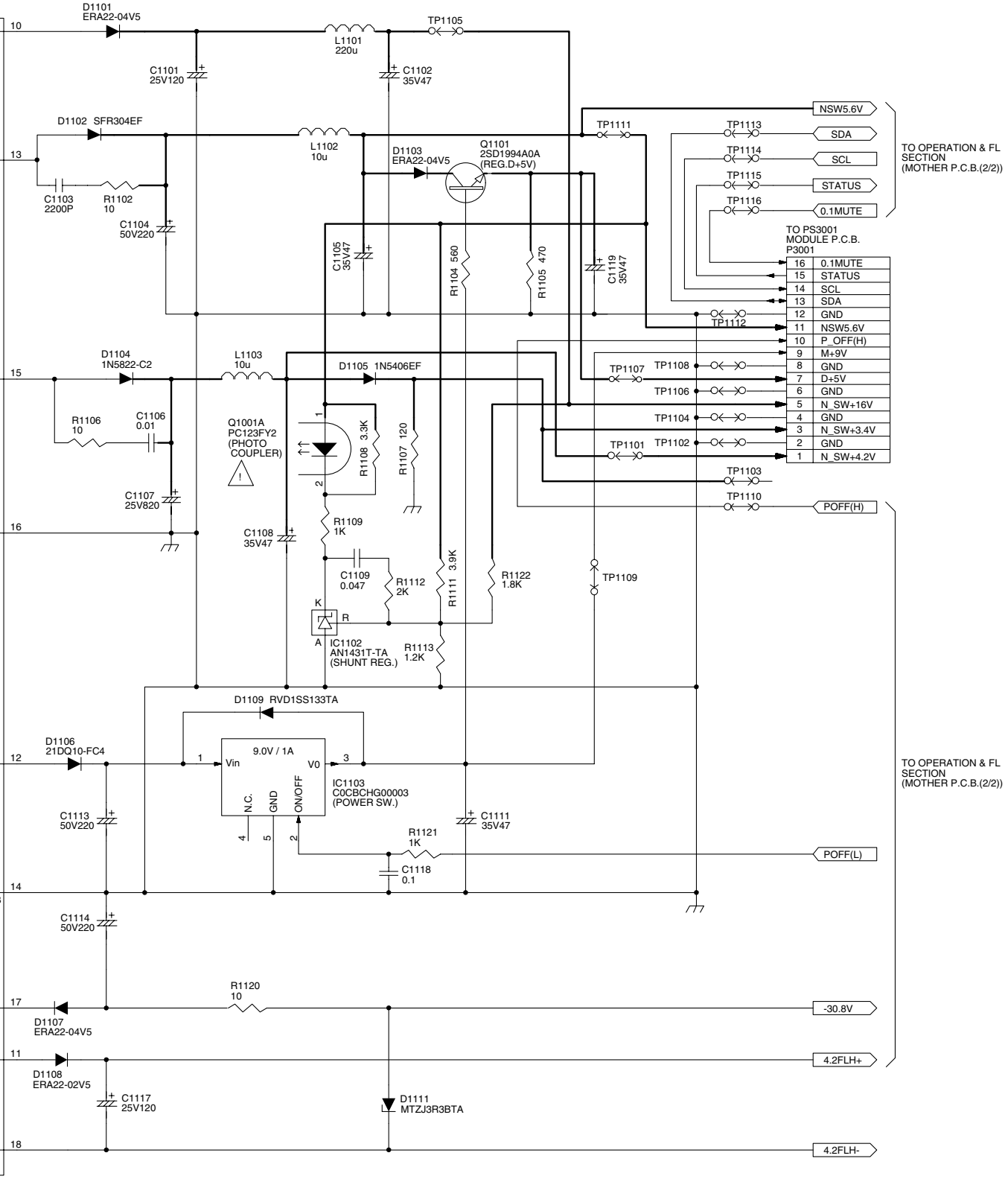
6 7 8 9 10

14.2. POWER SECTION (MOTHER P.C.B. (1/2)) SCHEMATIC DIAGRAM



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS.USE ONLY THE SAME TYPE.

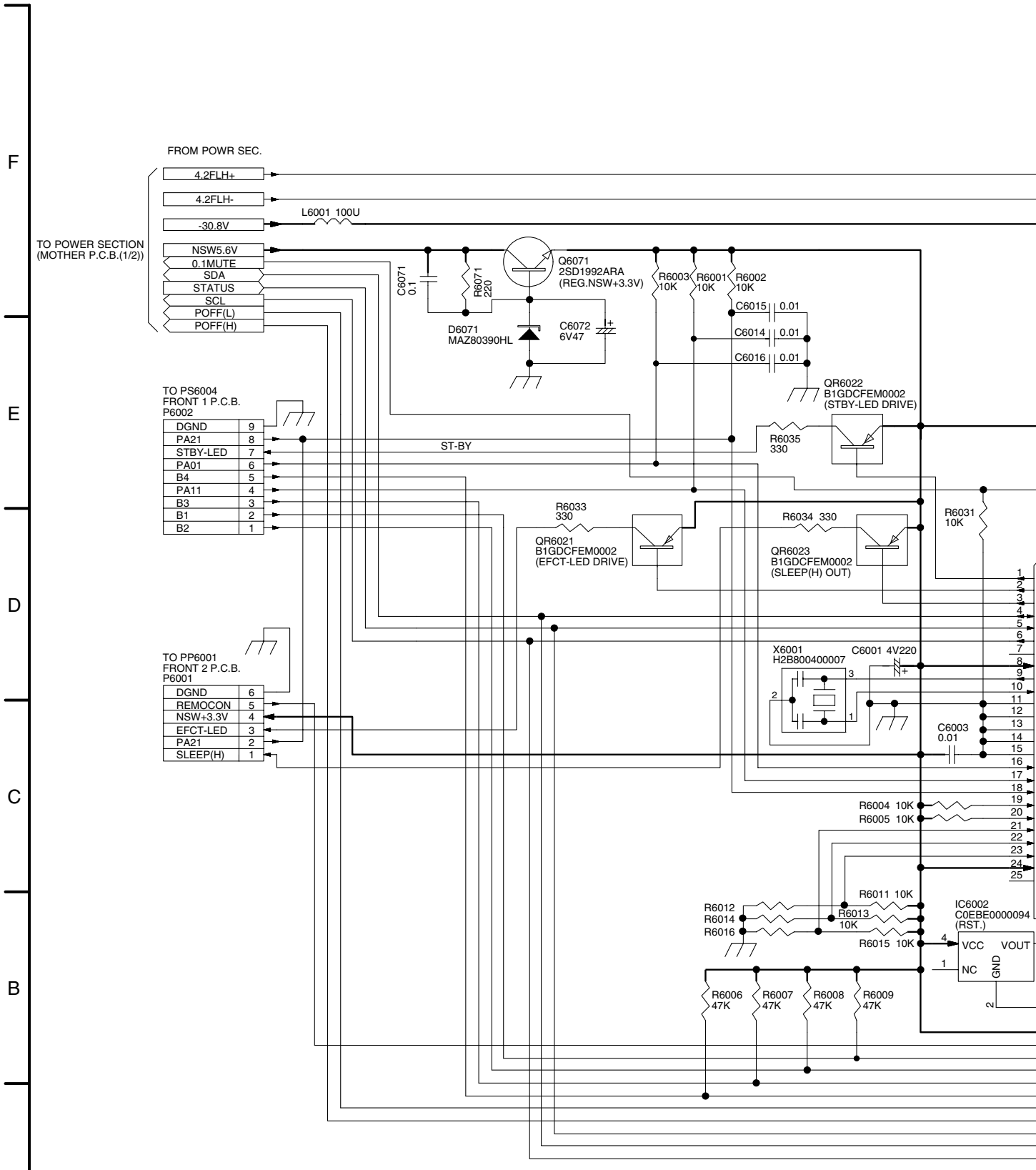
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



DVD-RV32E/EB/EG/EE
POWER SECTION
(MOTHER P.C.B.(1/2))
SCHEMATIC DIAGRAM

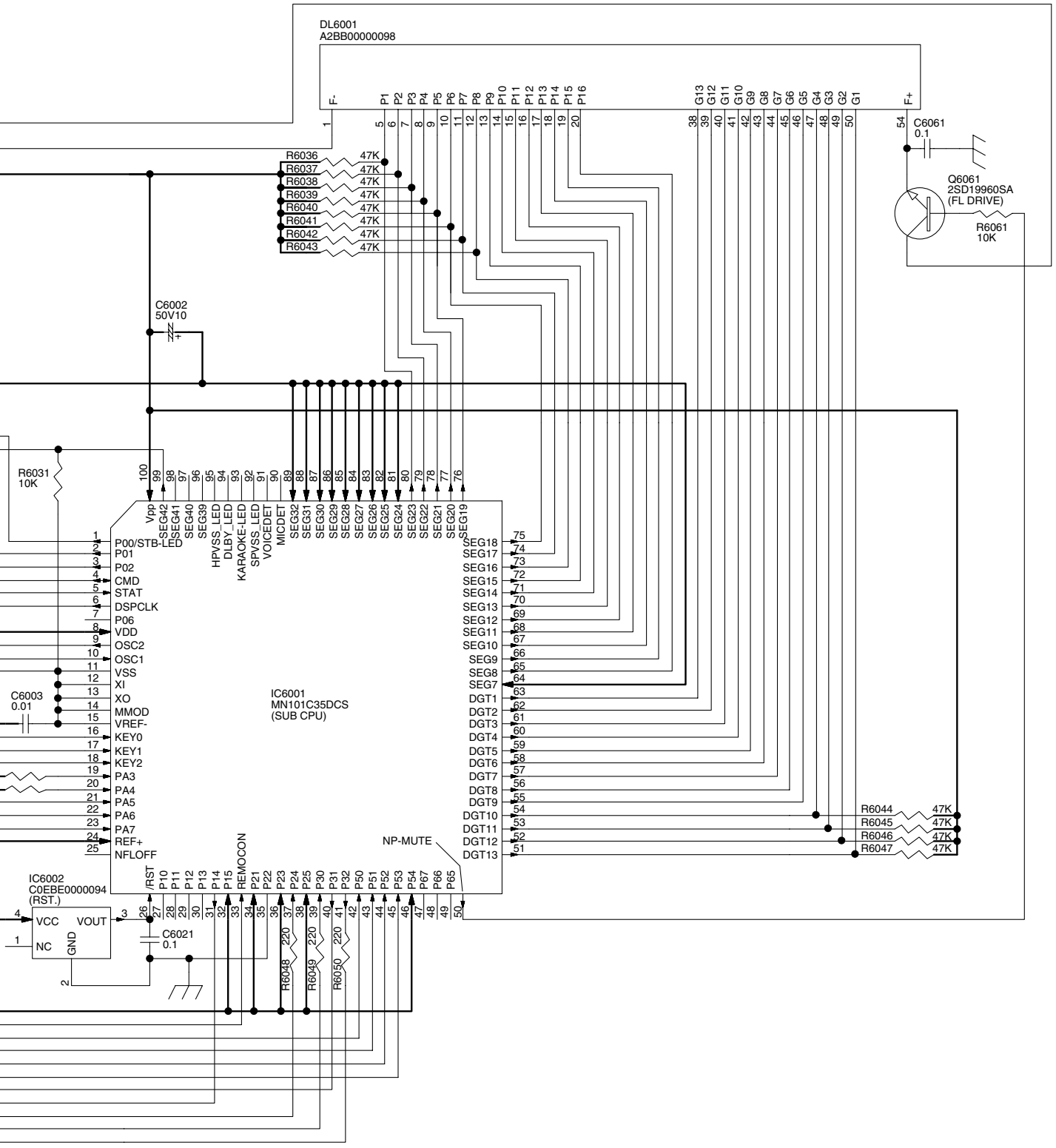
6 7 8 9 10

14.3. OPERATION & FL SECTION (MOTHER P.C.B. (2/2)) SCHEMATIC DIAGRAM



NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

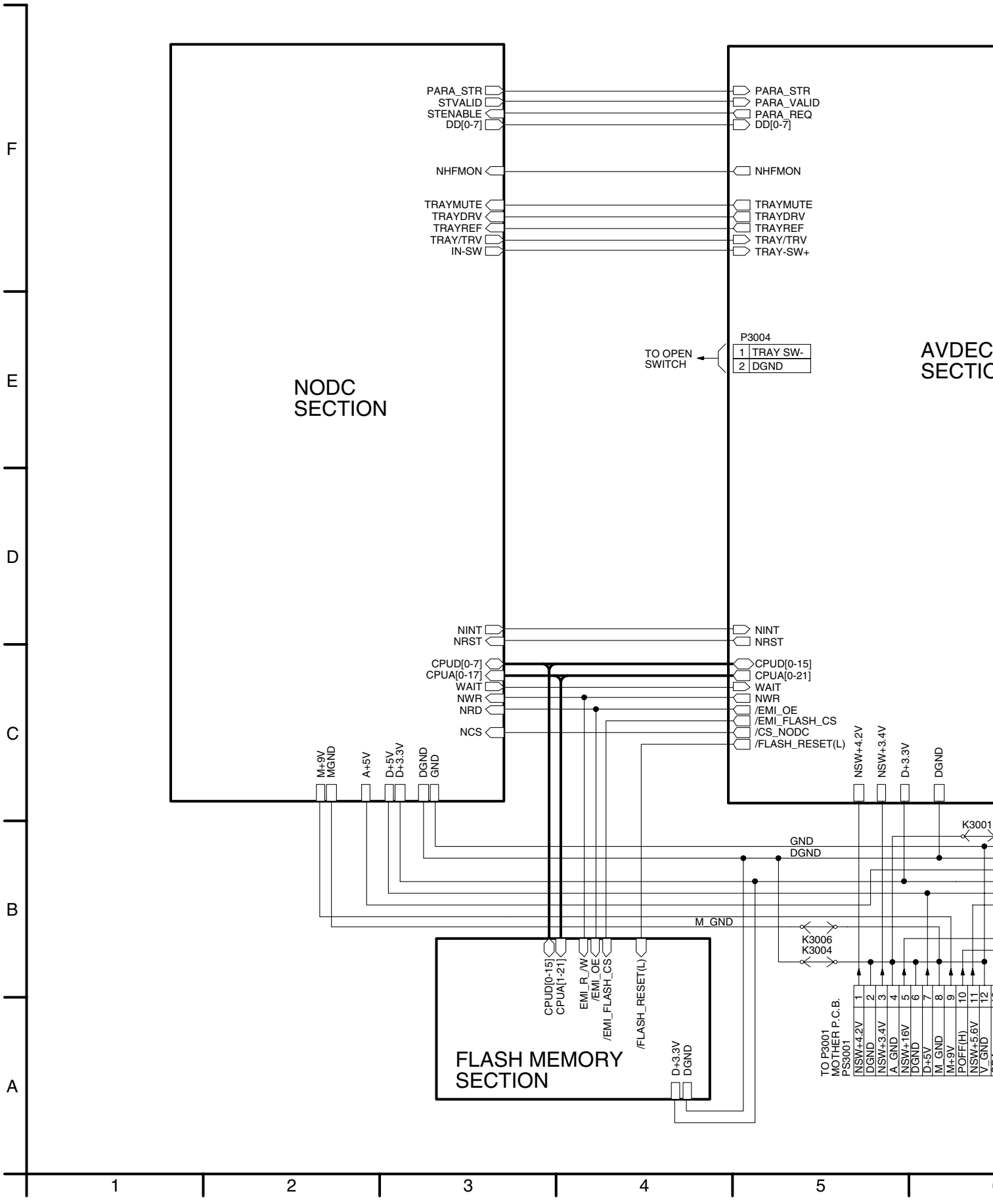
AGRAM



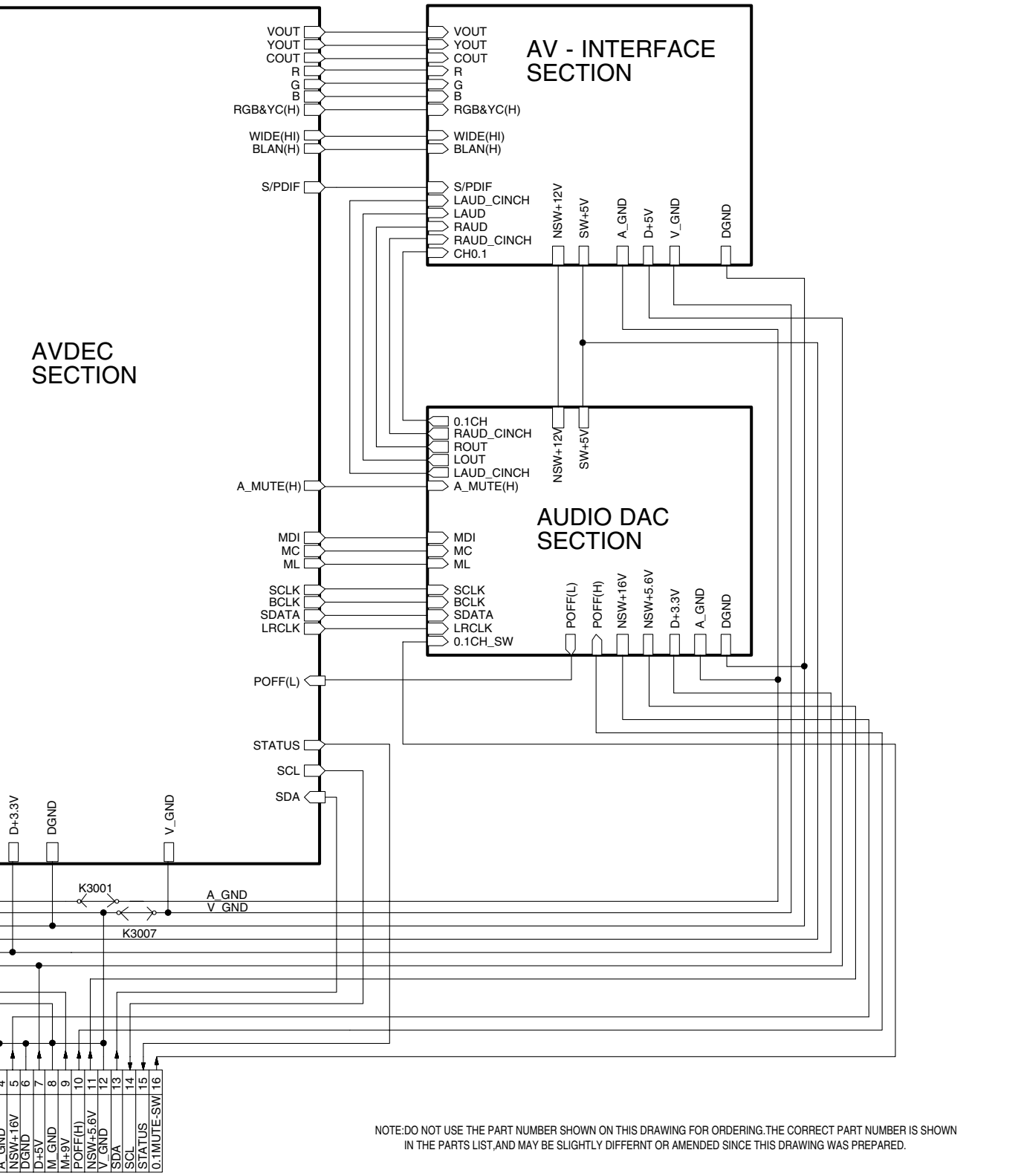
DVD-RV32E/EB/EG/EE
OPERATION & FL SECTION
(MOTHER P.C.B.(2/2))
SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

14.4. OVERVIEW SECTION (MODULE P.C.B. (1/6)) SCHEMATIC DIAGRAM



NOTE:THIS SCHEMATIC DIAGRAM SHOWS THE DESTINATION OF EACH SECTION OF MODULE P.C.B.

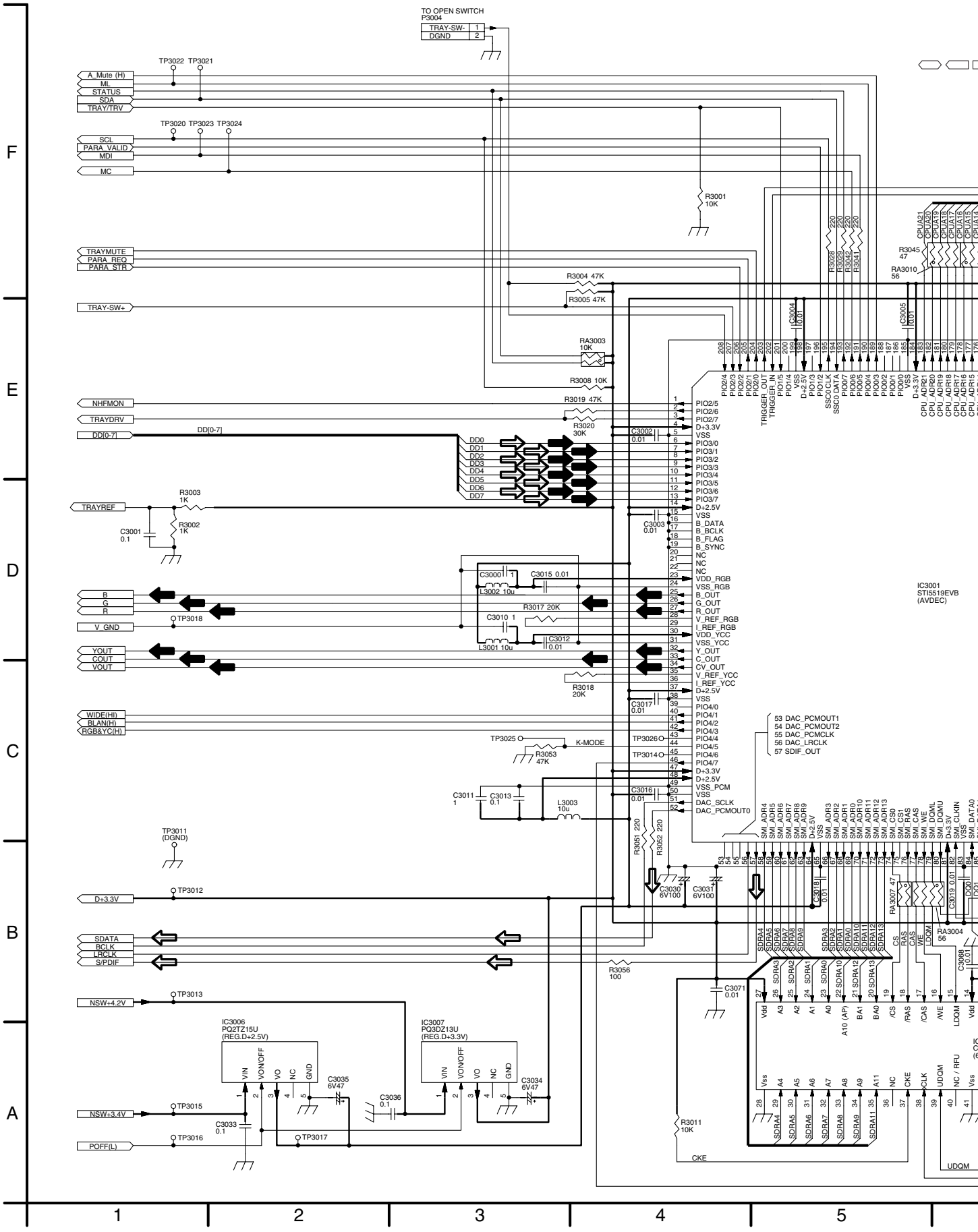


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
OVERVIEW SECTION
(MODULE P.C.B.(1/6))
SCHEMATIC DIAGRAM

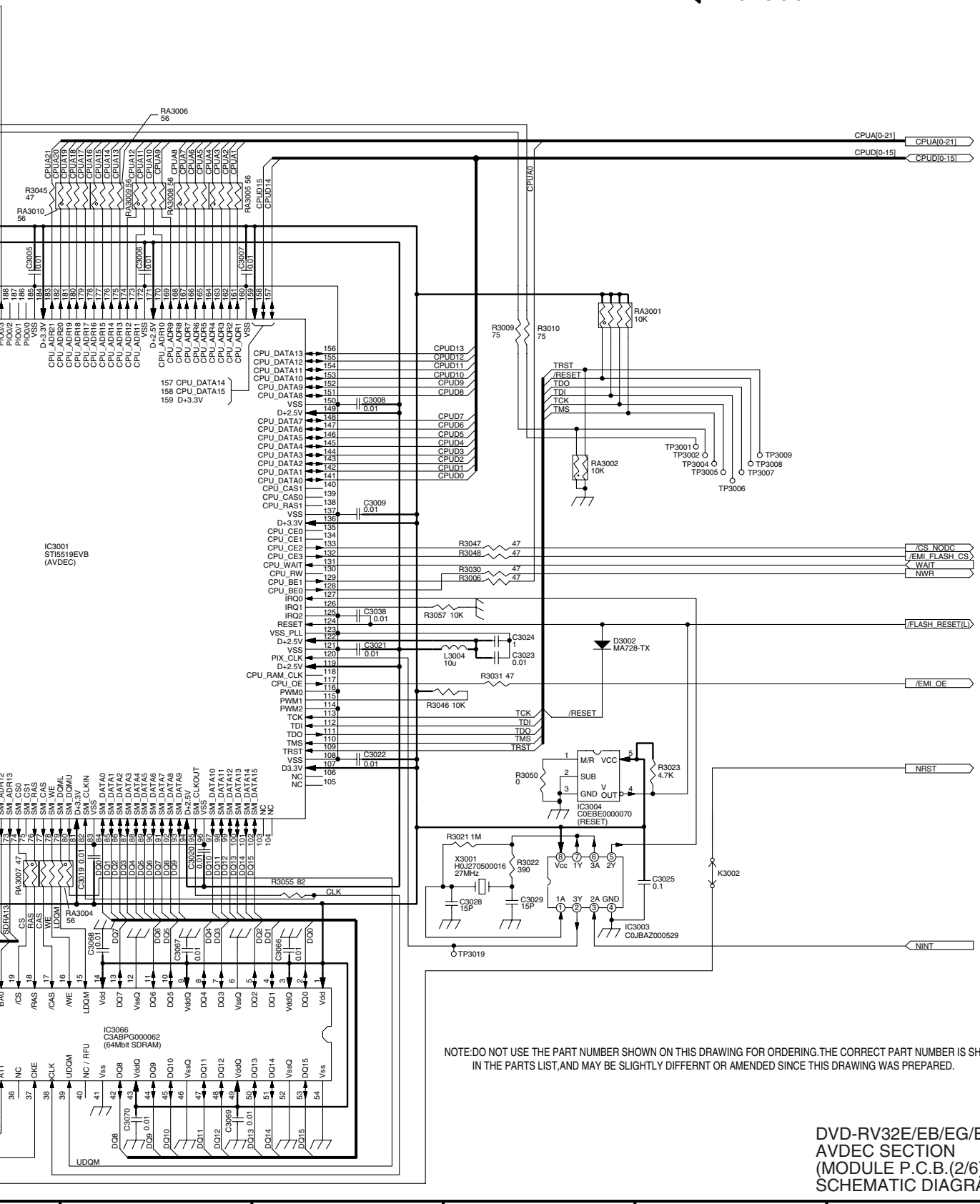
6 7 8 9 10

14.5. AVDEC SECTION (MODULE P.C.B (2/6)) SCHEMATIC DIAGRAM



VIDEO SIGNAL PATH
AUDIO SIGNAL PATH

:REFER TO OVERVIEW SECTION SCHEMATIC DIAGRAM FOR THE DESTINATION OF THESE MARKS.

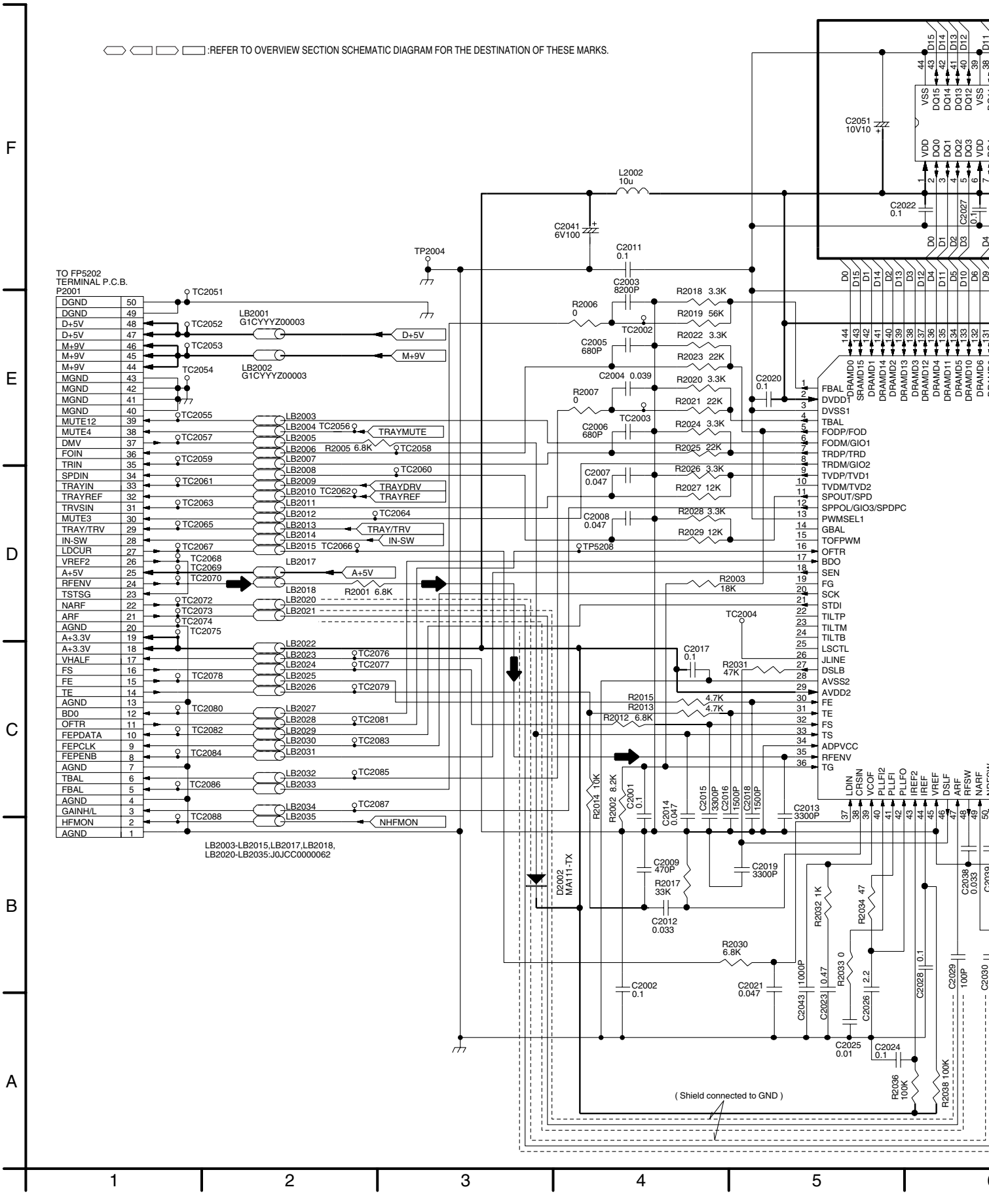


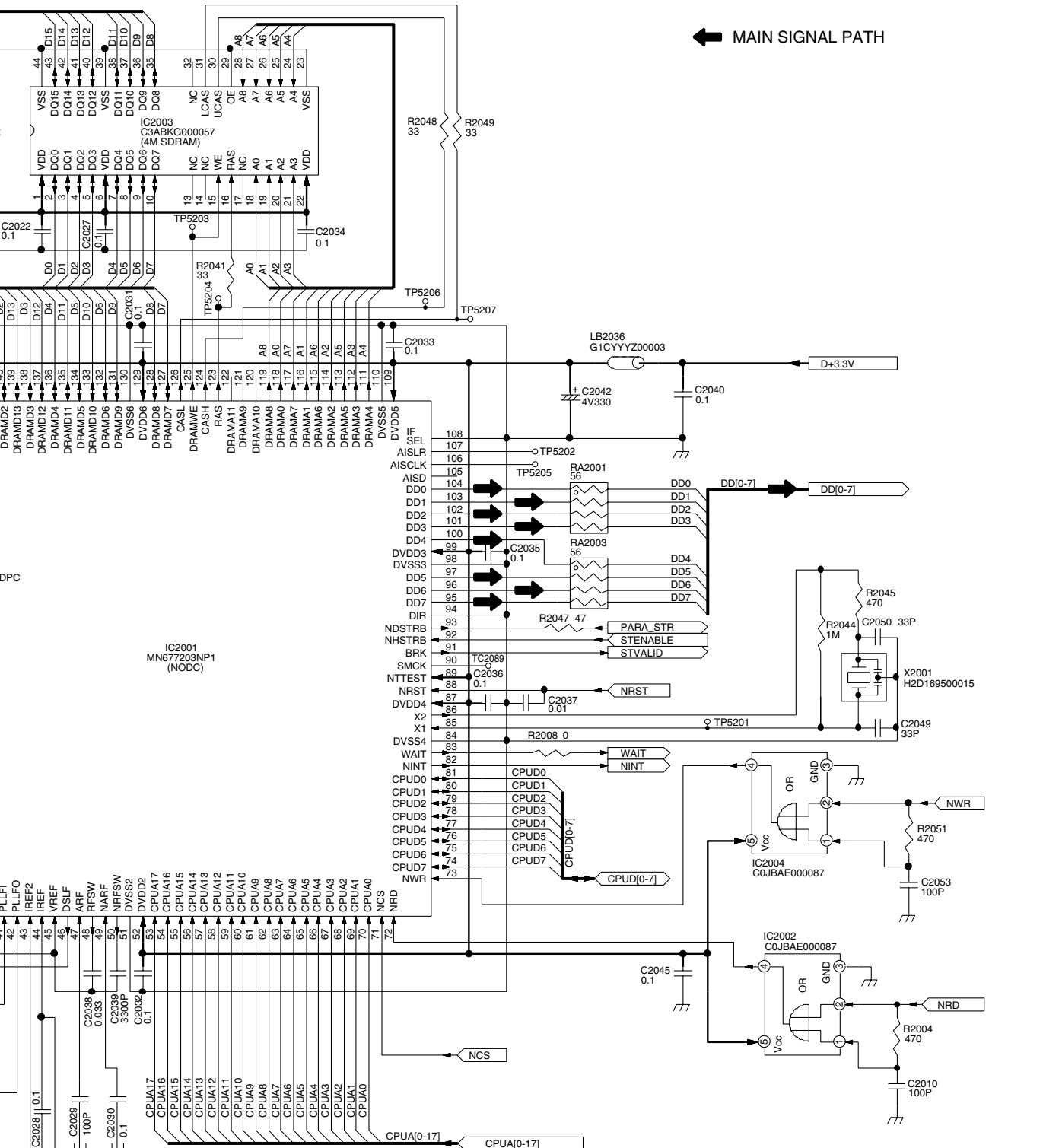
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
AVDEC SECTION
(MODULE P.C.B.(2/6))
SCHEMATIC DIAGRAM

6 7 8 9 10

14.6. NODC SECTION (MODULE P.C.B. (3/6)) SCHEMATIC DIAGRAM



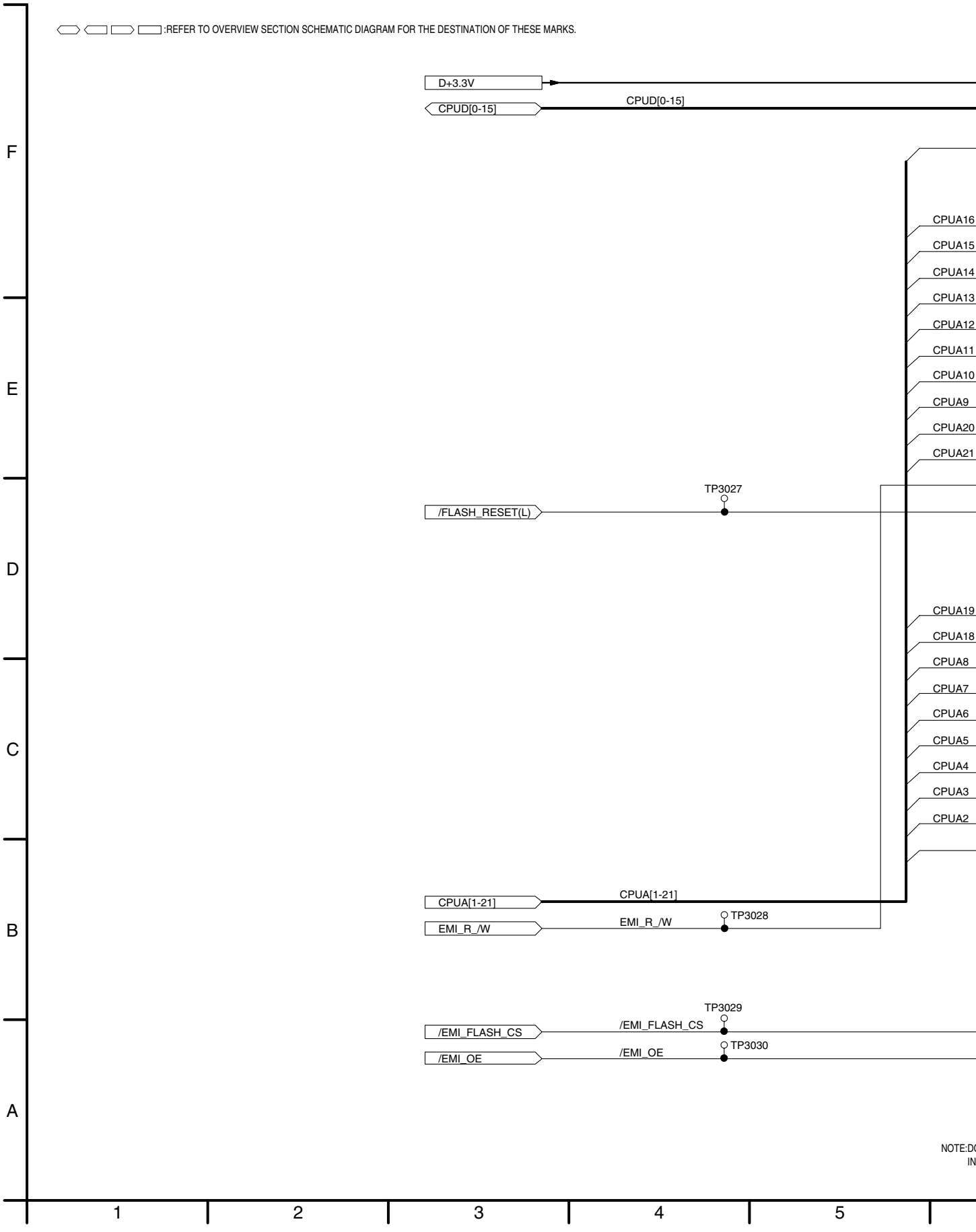


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

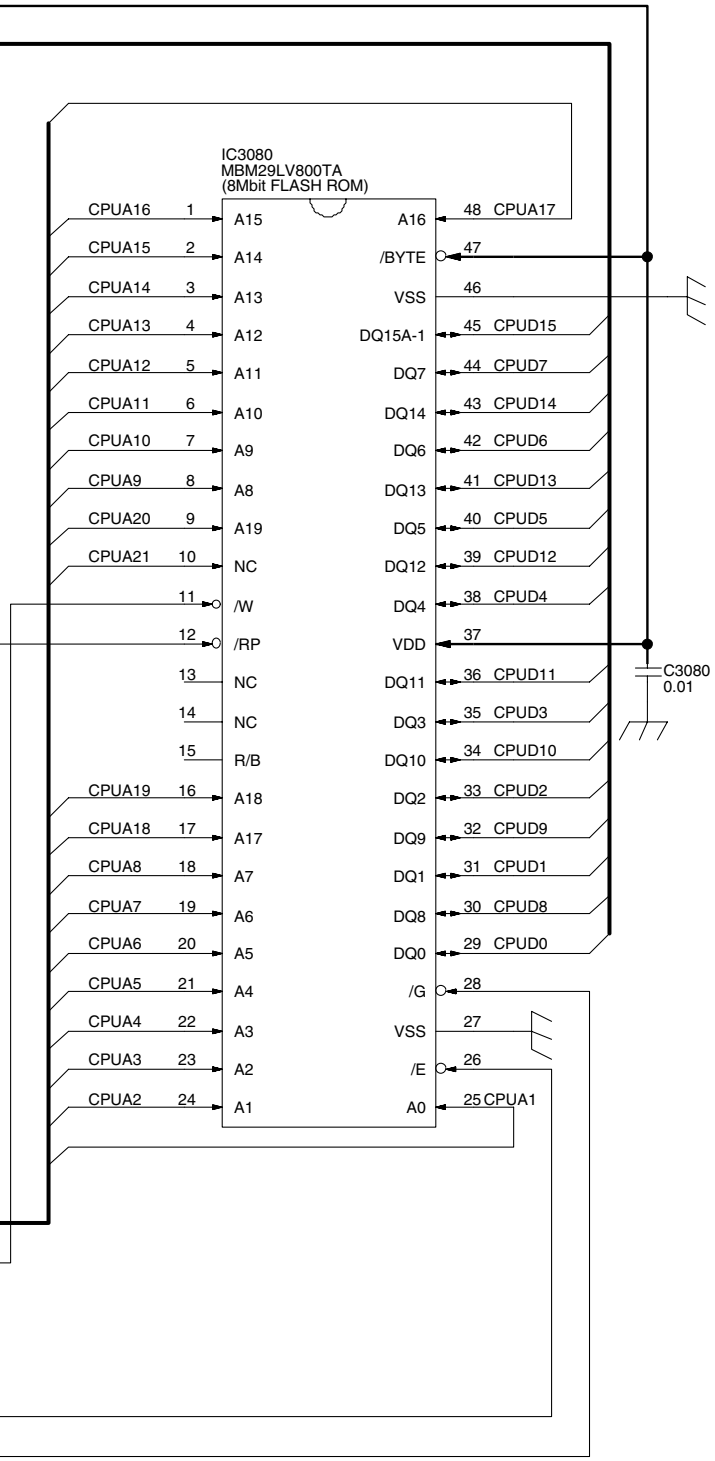
DVD-RV32E/EB/EG/EE
NODC SECTION
(MODULE P.C.B.(3/6))
SCHEMATIC DIAGRAM

6 7 8 9 10

14.7. FLASH MEMORY SECTION (MODULE P.C.B. (4/6)) SCHEMATIC DIAGRAM



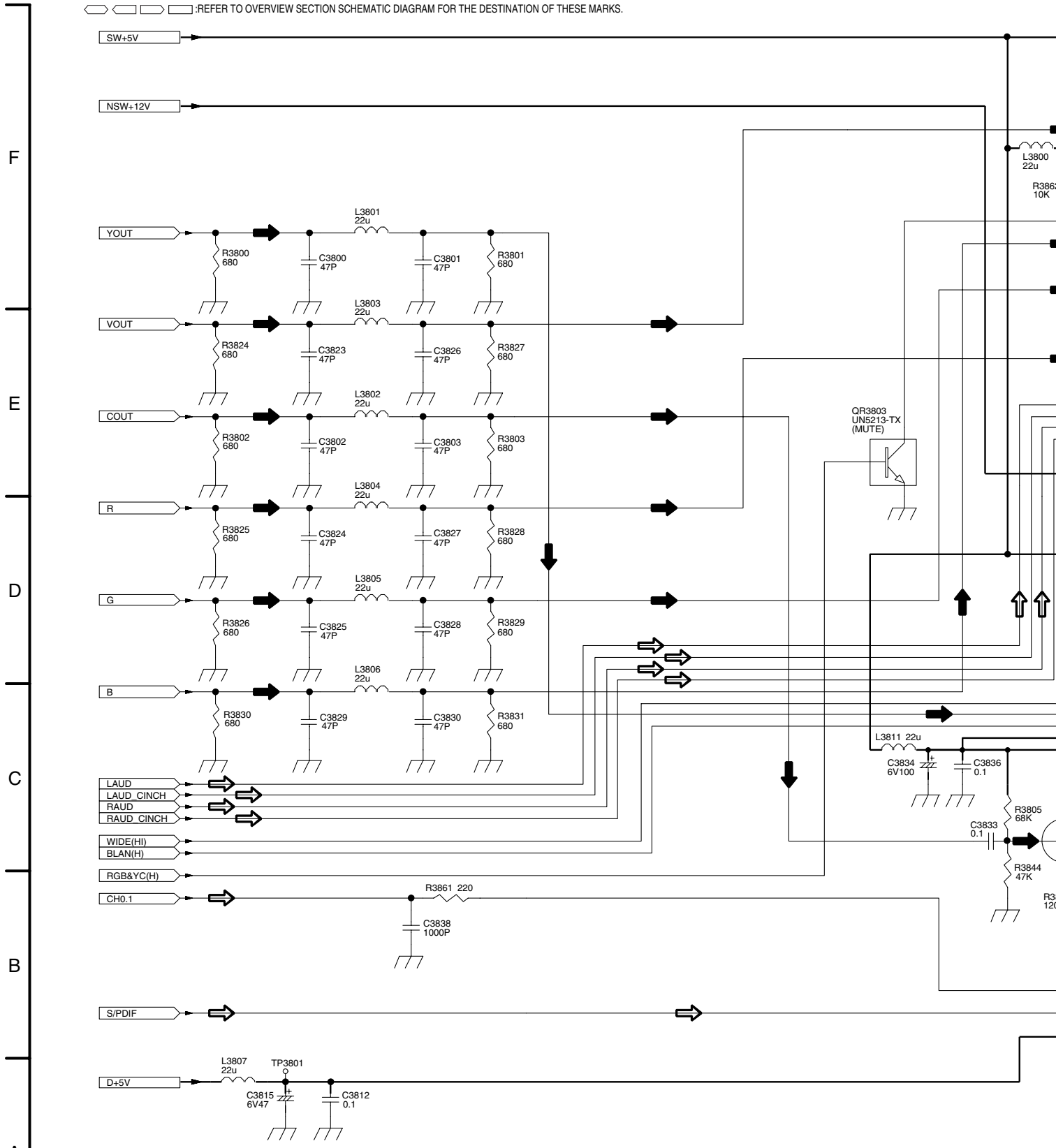
AGRAM

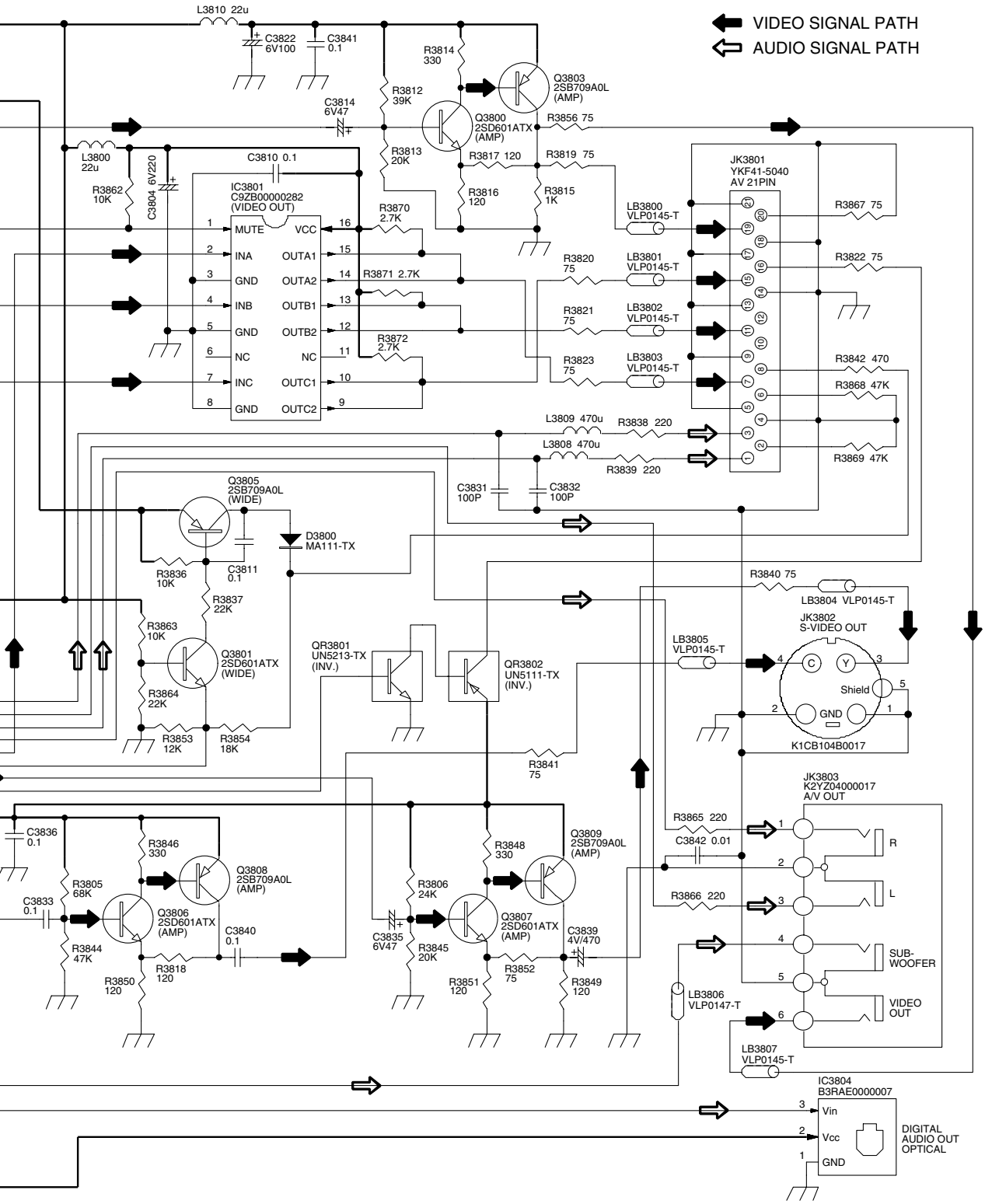


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
FLASH MEMORY SECTION
(MODULE P.C.B.(4/6))
SCHEMATIC DIAGRAM

14.8. AV-INTERFACE SECTION (MODULE P.C.B. (5/6)) SCHEMATIC DIAGRAM



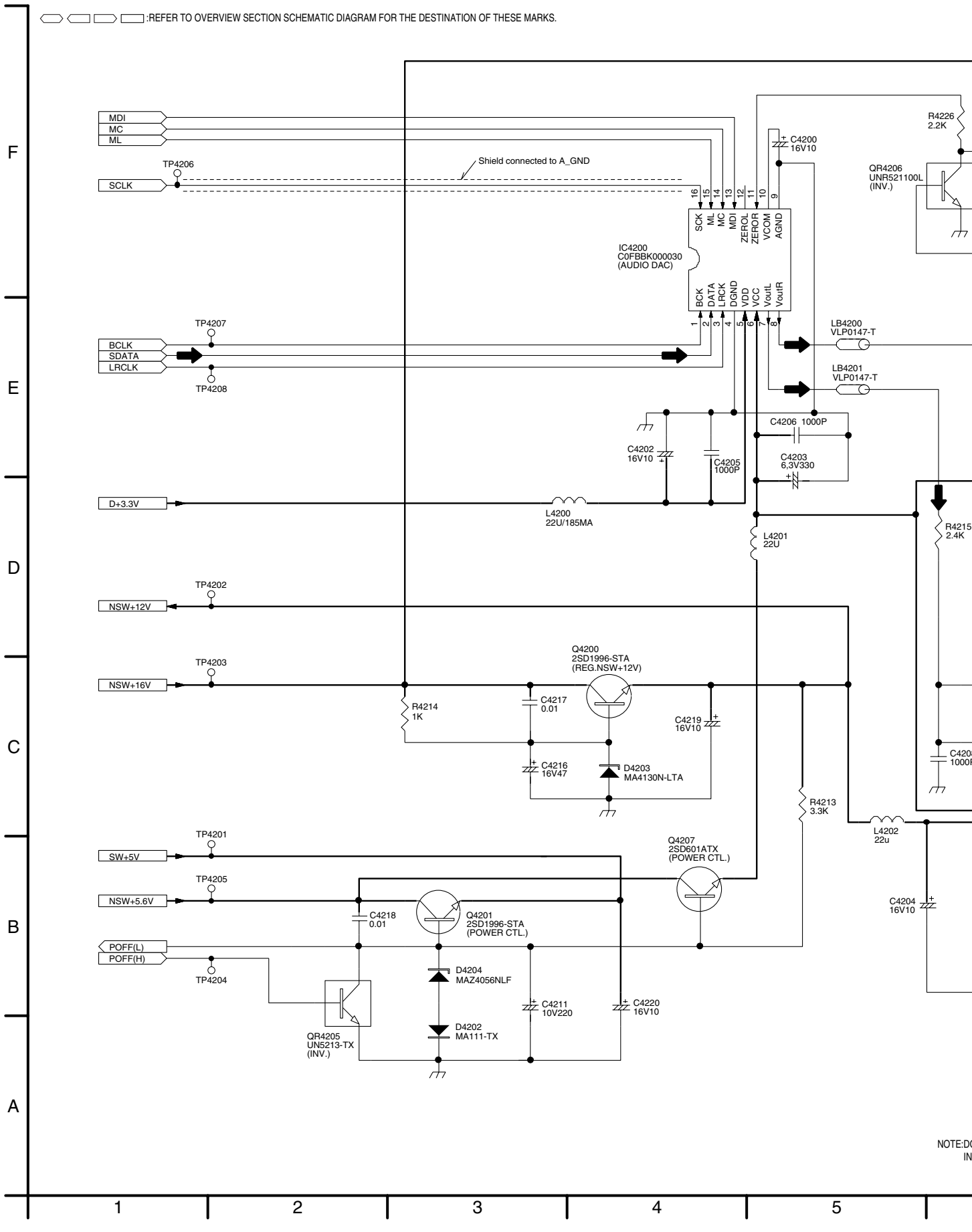


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

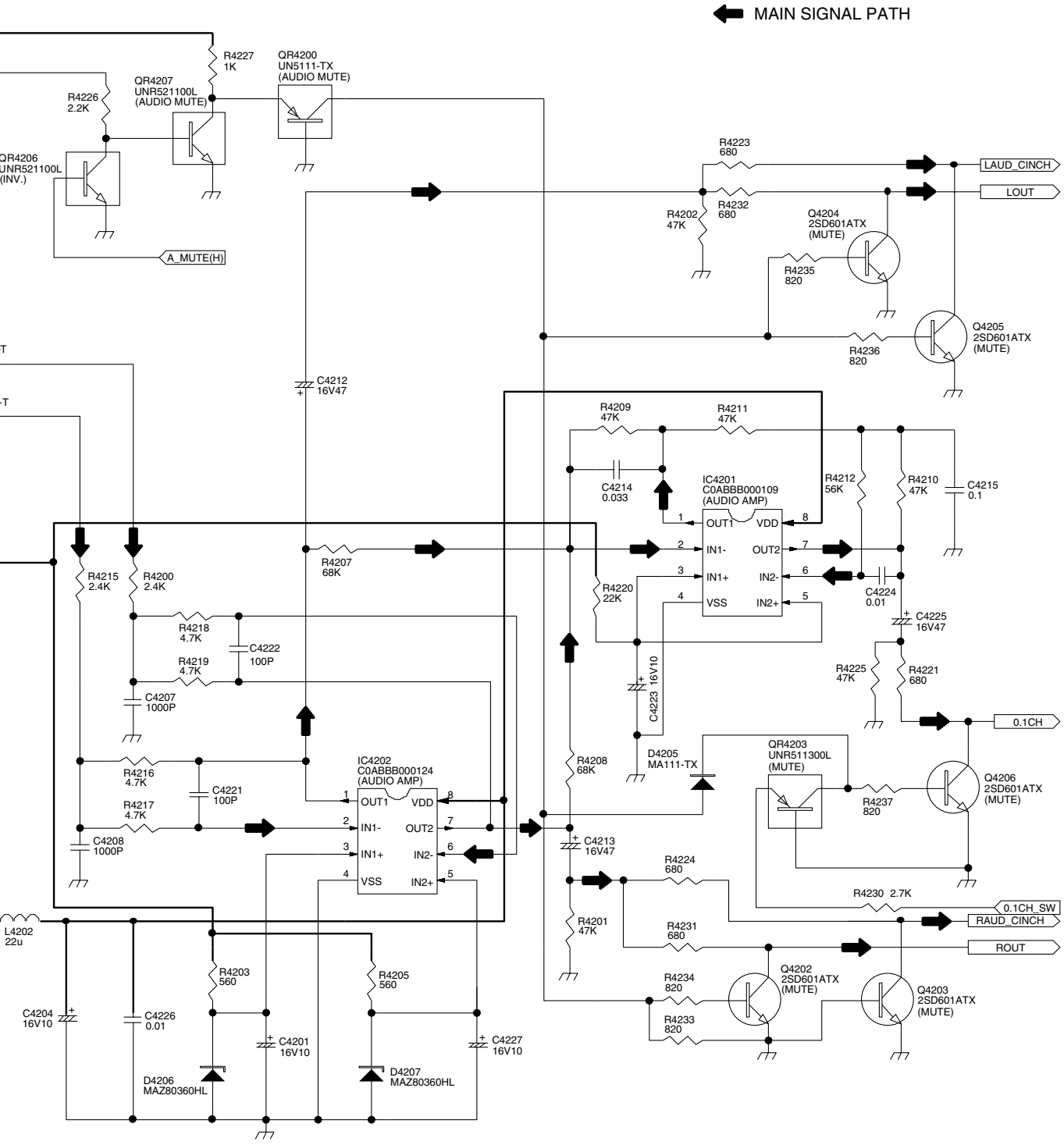
DVD-RV32E/EB/EG/EE
AV-INTERFACE SECTION
(MODULE P.C.B.(5/6))
SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

14.9. AUDIO-DAC SECTION (MODULE P.C.B. (6/6)) SCHEMATIC DIAGRAM



M

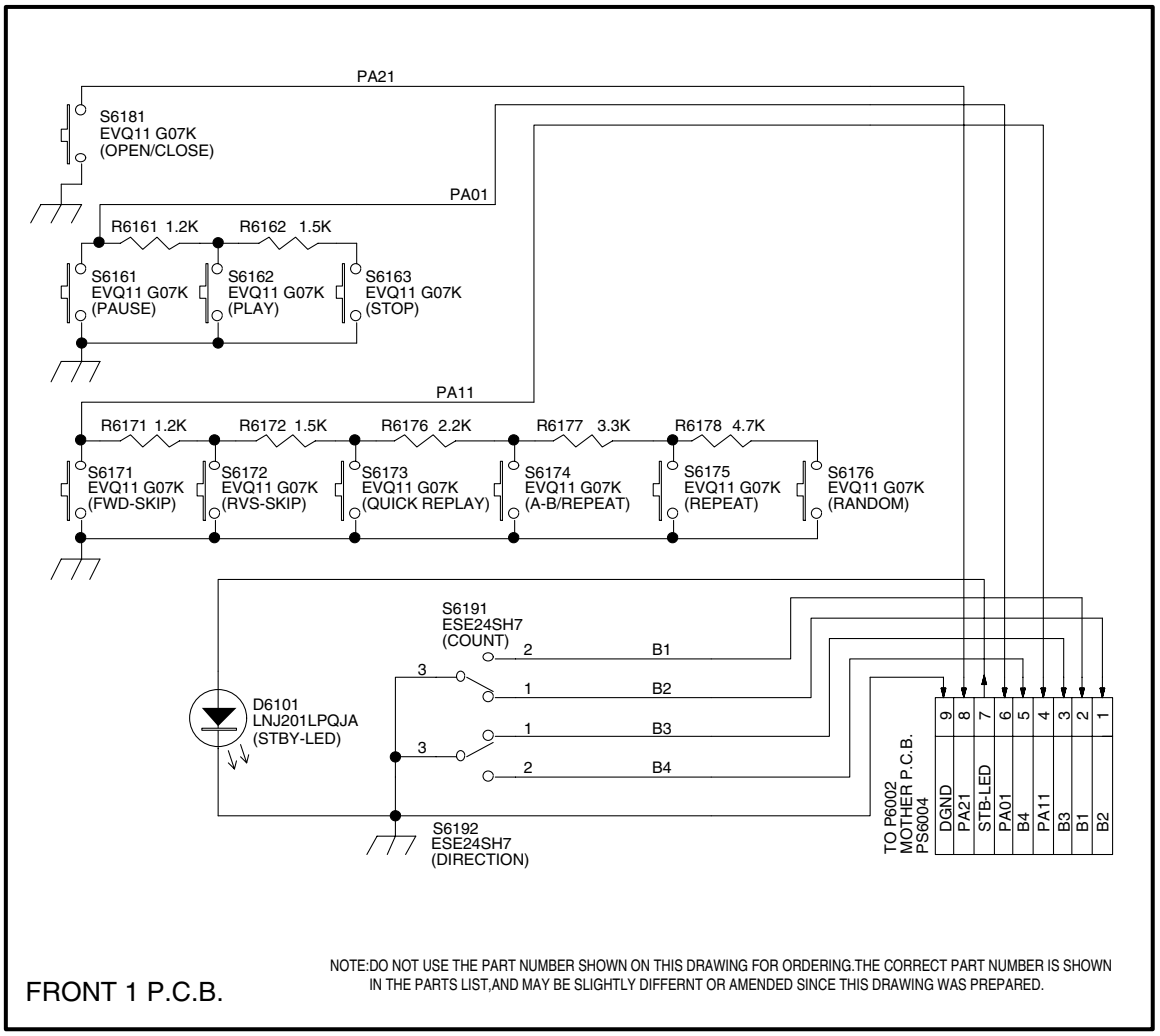


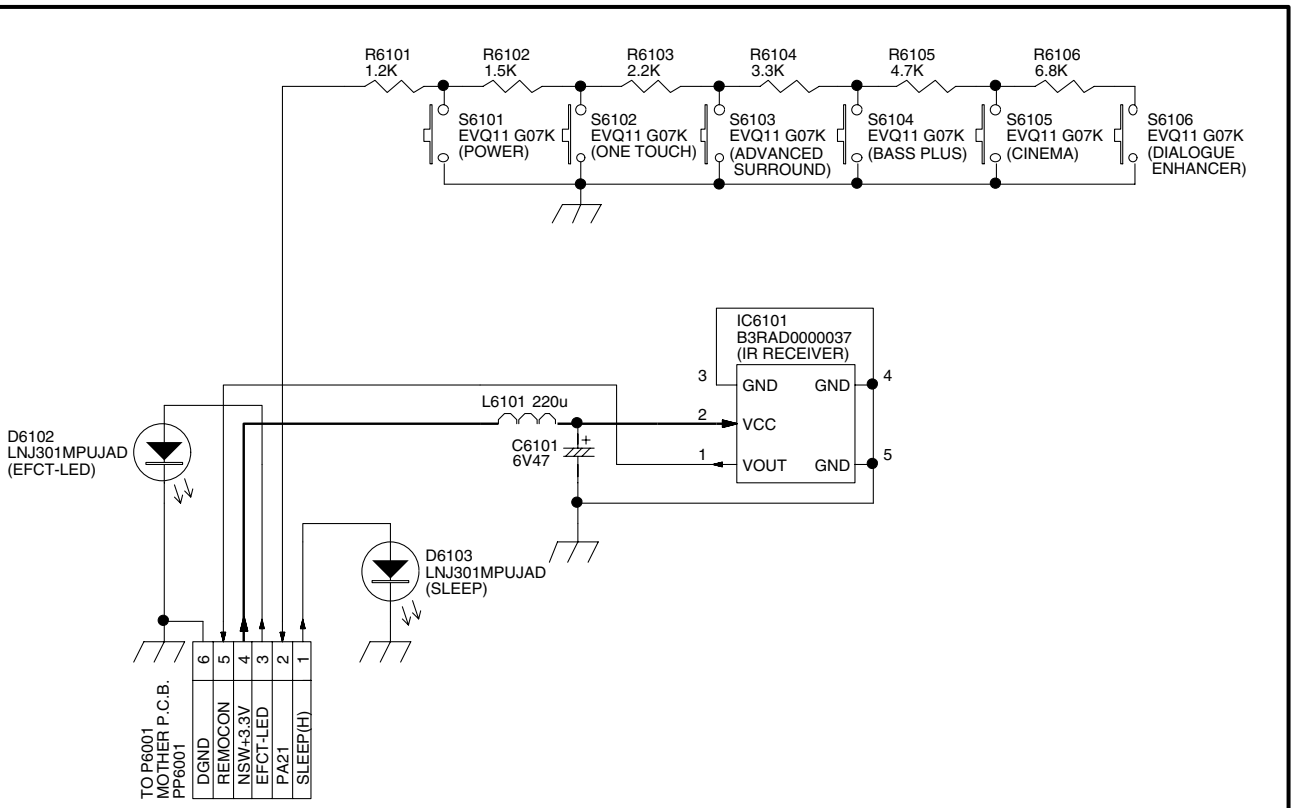
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
AUDIO-DAC SECTION
(MODULE P.C.B.(6/6))
SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

14.10. FRONT 1 AND FRONT 2 SCHEMATIC DIAGRAM



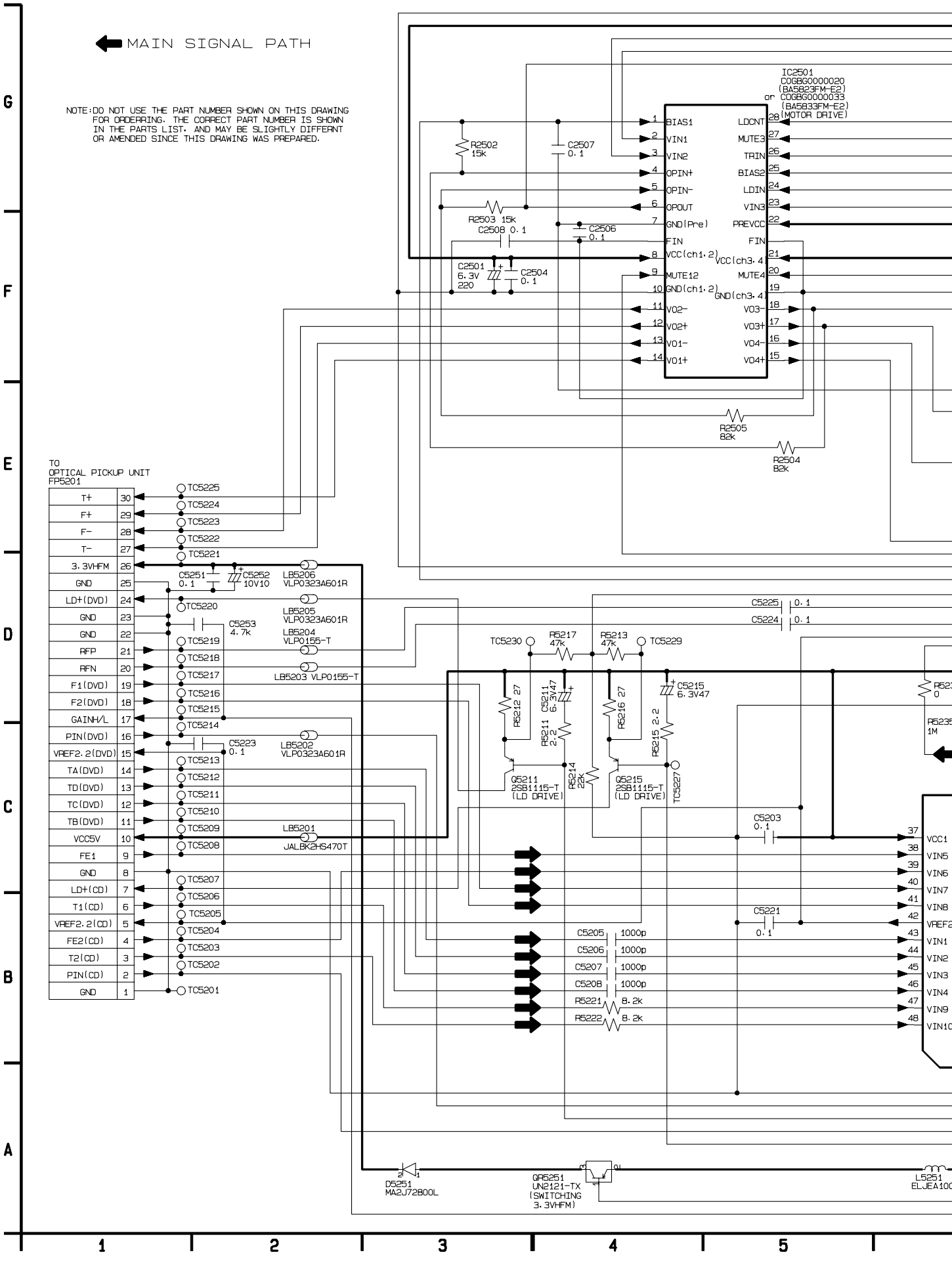


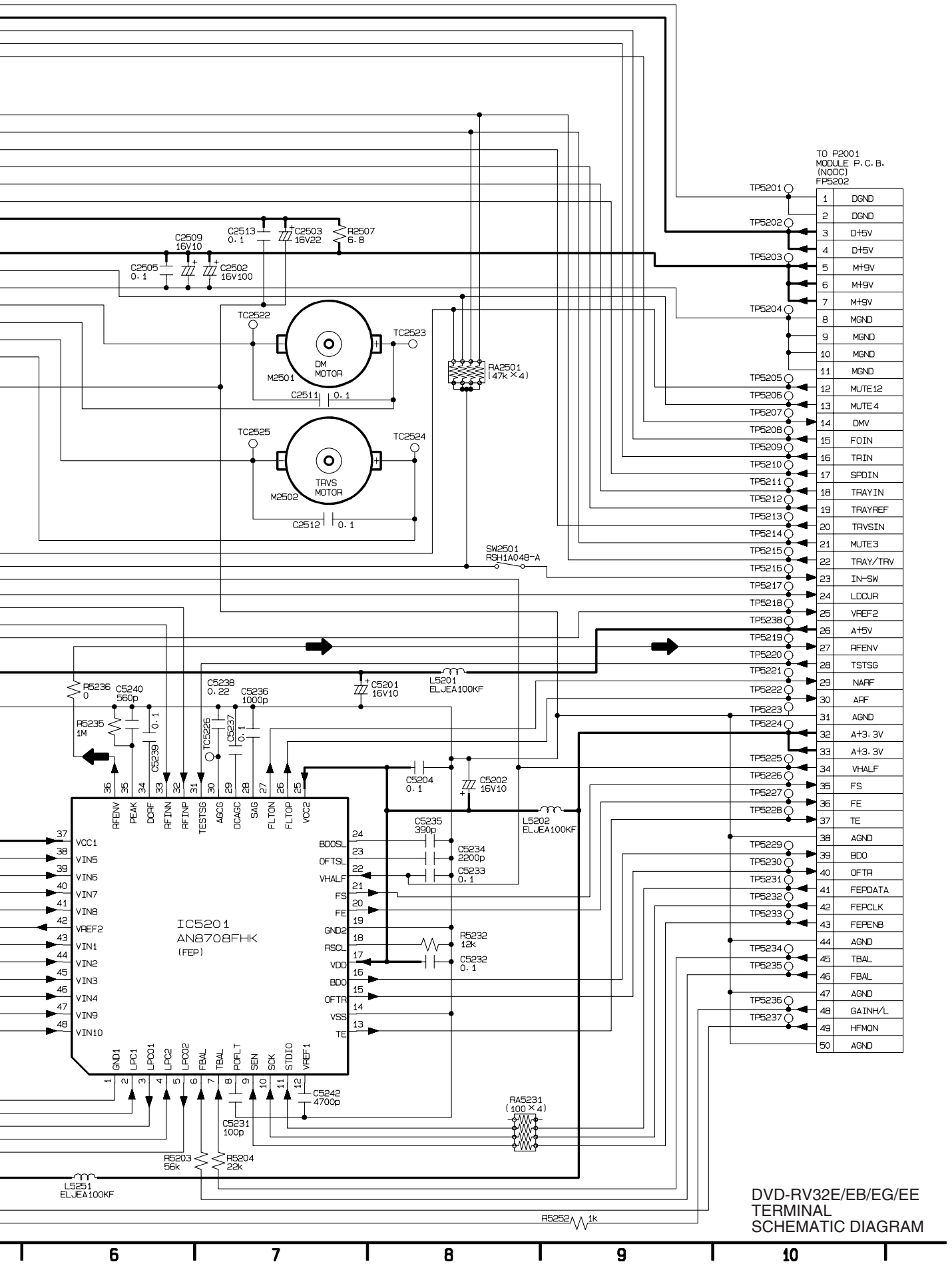
FRONT 2 P.C.B.

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-RV32E/EB/EG/EE
FRONT 1 AND FRONT 2
SCHEMATIC DIAGRAM

14.11. TERMINAL SCHEMATIC DIAGRAM




TO P2001
MODULE P.C.B.
(NODC)
FP5202
1 DGND
2 DGND
3 D+5V
4 D+5V
5 M+9V
6 M+9V
7 M+9V
8 MGND
9 MGND
10 MGND
11 MGND
12 MUTE12
13 MUTE4
14 DMV
15 FOIN
16 TRIN
17 SPDIN
18 TRAYIN
19 TRAYREF
20 TRVSIN
21 MUTE3
22 TRAY/TRV
23 IN-SW
24 LDCUR
25 VREF2
26 A+5V
27 RFENV
28 TSTSG
29 NARF
30 ARF
31 AGND
32 A+3.3V
33 A+3.3V
34 VHALF
35 FS
36 FE
37 TE
38 AGND
39 BDO
40 OFTR
41 FEPDATA
42 FEPCLK
43 FEPENB
44 AGND
45 TBAL
46 FBAL
47 AGND
48 GAINH/L
49 HFMON
50 AGND
TP5201
TP5202
TP5203
TP5204
TP5205
TP5206
TP5207
TP5208
TP5209
TP5210
TP5211
TP5212
TP5213
TP5214
TP5215
TP5216
TP5217
TP5218
TP5219
TP5220
TP5221
TP5222
TP5223
TP5224
TP5225
TP5226
TP5227
TP5228
TP5229
TP5230
TP5231
TP5232
TP5233
TP5234
TP5235
TP5236
TP5237
TP5238
C2509 16V10
C2513 0.1
C2503 16V22
R2507 6.8
C2505 0.1
C2502 16V100
TC2522
TC2523
DM MOTOR
M2501
C2511 0.1
RA2501 (47k×4)
TC2525
TC2524
TRVS MOTOR
M2502
C2512 0.1
SW2501
RSH1A048-A
R5236 0
C5240 560p
R5235 1M
C5239 0.1
C5238 0.22
C5236 1000p
TC5226
C5237 0.1
C5201 16V10
L5201 ELJEA100KF
C5204 0.1
C5202 16V10
L5202 ELJEA100KF
C5235 390p
C5234 2200p
C5233 0.1
R5232 12k
C5232 0.1
IC5201
AN8708FHK
(FEP)
RFENV PEAK DCRF RFINN RFINP TESTSG AGCG DCAGC SAG FLTON FLTOP VCC2
GND1 LPC1 LPCO1 LPC2 LPCO2 FBAL TBAL PDFLT SEN SCK STDIO VREF1
VCC1 VIN5 VIN6 VIN7 VIN8 VREF2 VIN1 VIN2 VIN3 VIN4 VIN9 VIN10
BDOSL OFTSL VHALF FS FE GND2 RSCL VDD BDO OFTR VSS TE
C5242 4700p
C5231 100p
RA5231 (100×4)
R5203 56k
R5204 22k
L5251 ELJEA100KF
R5252 1k
DVD-RV32E/EB/EG/EE
TERMINAL
SCHEMATIC DIAGRAM
6
7
8
9
10

Parts Change Nortice

2003.2.14

2003.2.17

DSD0302701P8

Parts Change Notice

- DVD-RV32E
  DVD-RV32EB
  DVD-RV32EG
  DVD-RV32EE

Please revise the original parts list in the Service Manual to conform to the change(s) shown herein.
If new part numbers are shown, be sure to use then ordering parts.

File this Parts Change Notice with your copy of the Service Manual.

Panasonic®

1 Parts Change Notice written PDF

TOP

DSD0302702P8

Parts Change Notice

- DVD-RV32E
  DVD-RV32EB
  DVD-RV32EG
  DVD-RV32EE

Please revise the original parts list in the Service Manual to conform to the change(s) shown herein.
If new part numbers are shown, be sure to use then ordering parts.

File this Parts Change Notice with your copy of the Service Manual.

Panasonic®

1 Parts Change Notice written PDF

TOP

Order No.DSD0302701P8

Parts Change Notice

Model No.: **DVD-RV32E/EB/EG/EE (OrderNo.ODSD020632C2)**

Effective From: First Production

Subject : Correction of Parts

Please revise the original parts list in the Service Manual to confirm to the change(s) shown herein.
If new part numbers are shown, be sure to use them when ordering parts.

Reason for Change
*The circled item indicates the reason. If no marking, see the Notes in the bottom column.

1.Improve performance	
2.Change of material or dimension	
3.To meet approved specification	
4.Standardization	
5.Addition	
6.Deletion	
⑦Correction	
8.Other	

Interchangeability Code

	Parts	Set Production	
A	Original	Early	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
	New	Late	
B	Original	Early	Original parts may be used in early production set only. New parts may be used in early or late production set. Use original parts where possible, then stock new parts.
	New	Late	
C	Original	Early	New parts only may be used in early or late production set. Stock new parts.
	New	Late	
D	Original	Early	Original parts may be used in early production set only. New parts may be used in late production set only. Stock both original and new parts.
	New	Late	
Ⓔ	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part name & Descriptions	Remarks
14	REXD0001	REZD0001	FLEXIBLE WIRE (50P)	[MAVD]
15	REZD0001	REXD0001	2P WIRE CABLE	[MAVD]
101	RXQ0745B	RXQ1015A	SPINDLE MOTOR ASS'Y	
119	RMM0234	RMM0251	TRAVERSE DRIVE RACK	
D1102	SFR304EF	B0EAMP000019	DIODE	[MAVD]
D1104	1N5822-C2	B0EAME000002	DIODE	[MAVD]
D1105	1N5406EF	B0EAMR000005	DIODE	[MAVD]
IC1001	ICE2A165	C0DACZZ00005	IC	[MAVD]
IC3001	STI5519EVB	C1AB00001645	IC	[MAVD]

⚠ 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

Order No.DSD0302702P8

Parts Change Notice

Model No.: **DVD-RV32E/EB/EG/EE (OrderNo.ODSD020632C2)**

Effective From: First Production

Subject : Addition of Parts and Correction of Descriptions

Please revise the original parts list in the Service Manual to confirm to the change(s) shown herein.
If new part numbers are shown, be sure to use them when ordering parts.

Reason for Change *The circled item indicates the reason. If no marking, see the Notes in the bottom column.	
1.Improve performance	Ref.No.31（For EE MODEL）
2.Change of material or dimension	
3.To meet approved specification	
4.Standardization	
⑤Addition	
6.Deletion	
⑦Correction	
8.Other	

Interchangeability Code

	Parts	Set Production	
A	Original →	Early	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
	New →	Late	
B	Original →	Early	Original parts may be used in early production set only. New parts may be used in early or late production set. Use original parts where possible, then stock new parts.
	New →	Late	
C	Original →	Early	New parts only may be used in early or late production set. Stock new parts.
	New →	Late	
D	Original →	Early	Original parts may be used in early production set only. New parts may be used in late production set only. Stock both original and new parts.
	New →	Late	
Ⓔ	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part name & Descriptions	Remarks
31	REPD0003A		DECODER P.C.B.	(RTL)[MAVD]**(E)(EB)(EG)**
31	NIL	REPD0003A-R	DECODER P.C.B.	(RTL)[MAVD](EE)
112	RDG0499-1		TRAVERSE GEAR (A)	~~[**MAVD**]~~
C1001	EEUEB2G330E		**400V 33U**	[MAVD]
C1101	F2A1E121A030		**25V 120U**	[MAVD]
C1104	F2A1H221A043		**50V 220U**	[MAVD]
C1107	F2A1E821A037		**25V 820U**	[MAVD]
C1113,14	F2A1H221A043		**50V 220U**	[MAVD]
C1117	F2A1E121A030		**25V 120U**	[MAVD]

⚠ 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