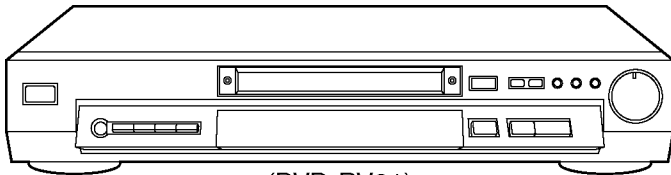
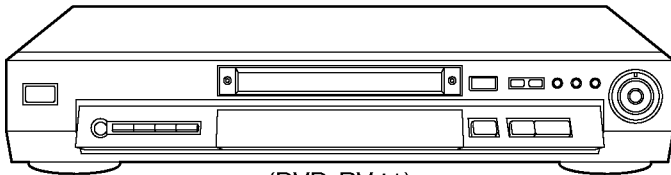


# Service Manual

## DVD Player



(DVD-RV31)



(DVD-RV41)

### DVD-RV31 DVD-RV41

#### Colour

- (S).....Silver Type  
(K).....Black Type (RV31 Only)

#### Area

- E.....Europe  
EB.....Great Britain  
EG.....Germany and Poland, etc.

## Specifications

<b>Power supply:</b>	AC220-240 V, 50 Hz
<b>Power consumption:</b>	14 W
<b>Dimensions:</b>	430 (W) x 247 (D) x 82 (H) mm (excluding protrusions)
<b>Mass:</b>	2.6 kg
<b>Operating temperature range:</b>	+ 5 to + 35 ° C
<b>Operating humidity range:</b>	5-90 % RH (no condensation)
<b>Discs played:</b>	DVD-Video Compact disc (CD-DA, Video CD) CD-R / CD-W (CD-DA, Video CD format discs)
<b>Signal system:</b>	PAL 625 / 50, PAL 525 / 60, NTSC
<b>Video output:</b>	
Output level:	1 Vp-p (75 Ω )
Output connector:	Pin jack (1 system) / AV1 / AV2 (DVD-RV41) AV1 (DVD-RV31)
<b>S video output:</b>	
Y output level:	1 Vp-p (75 Ω )
C output level:	NTSC; 0.286 Vp-p (75 Ω ) PAL; 0.300 Vp-p (75 Ω )
Output connector:	S terminal (1 system) / AV1 (DVD-RV41) AV (DVD-RV31)
<b>RGB video output:</b>	

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

#### Audio output:

Output level:	2 Vrms (1 kHz, 0 dB)
Output connector:	Pin jack / AV1 / AV2 (DVD-RV41) AV1 (DVD-RV31)
Number of connectors:	
2ch:	1 system
5ch discrete output (5.1ch):	1 system (DVD-RV41)
Subwoofer output (0.1ch):	1 system (DVD-RV31)

#### Audio signal output characteristics:

- 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
- S / N ratio:
  - CD audio: 115 dB
- Dynamic range:
  - DVD (linear audio): 102 dB
  - CD audio: 98 dB
- Total harmonic distortion:
  - CD audio: 0.0025 %

#### Digital audio output:

# Panasonic

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Optical digital output: Optical terminal

**Pickup**

Wave length: 658 nm / 790 nm  
Laser power: CLASS 2a / CLASS 1

**NORSK****Pickup**

B ølgelende: 658 nm / 790 nm  
Laser-styrke: Ingen farlig stråling sendes ut  
KLASSE 2a / KLASS E 1

**Power consumption in standby mode:**

approx. 4 W

**Notes:**

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.

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# 1 SAFETY PRECAUTIONS

## 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

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 the chassis, the reading should be between  $1M\Omega$  and  $5.2M\Omega$ .

When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

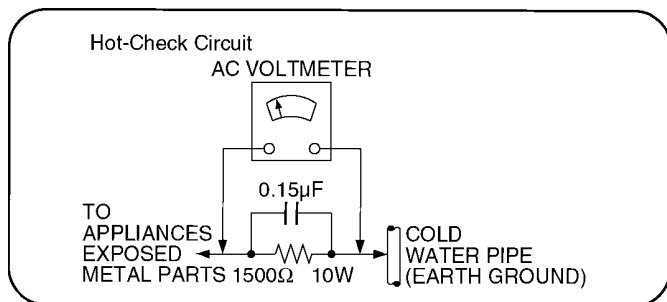


Figure 1

### 1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5k\Omega$ , 10 watts resistor, in parallel with a  $0.15\mu F$  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  $\mu 3st$  not exceed  $1/2$  milliamp. In case a measurement is outside of 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.

## 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 transistors and 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 discharging ESD 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 aluminum 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, aluminum foil or comparable conductive 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 harmless 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 to damage an ES device).

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  $\Delta$  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.

## 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: 780 nm

Maximum output radiation power from pickup: 100  $\mu$  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.

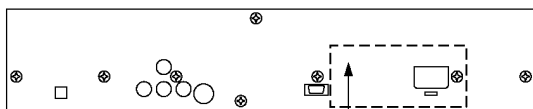
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: 780 nm

Maximale Strahlungsleistung der Lasereinheit: 100  $\mu$  W/VDE

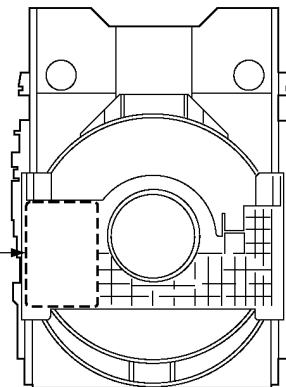
Die Strahlung der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

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



Product complies with DHHS rules 21 CFR Subchapter J in effect at date of manufacture.  
Matsushita Electric Industrial Co., Ltd.  
Kadoma, Osaka, Japan

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. UNNGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	- AVATTAESSA OLET ALTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSTRÄLTYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRakta EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL APNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG, 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	- この製品は、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!

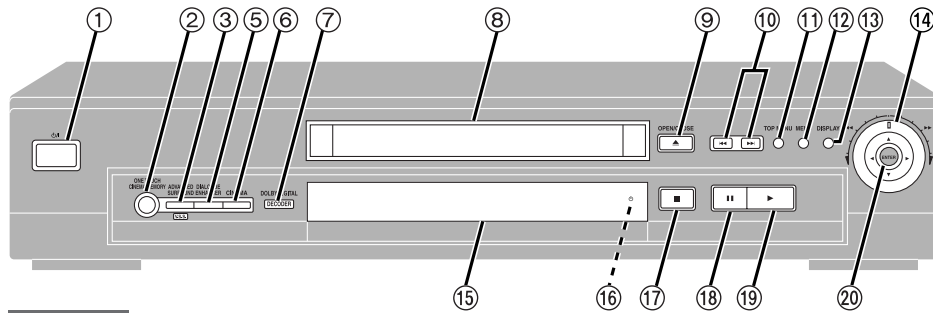
THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

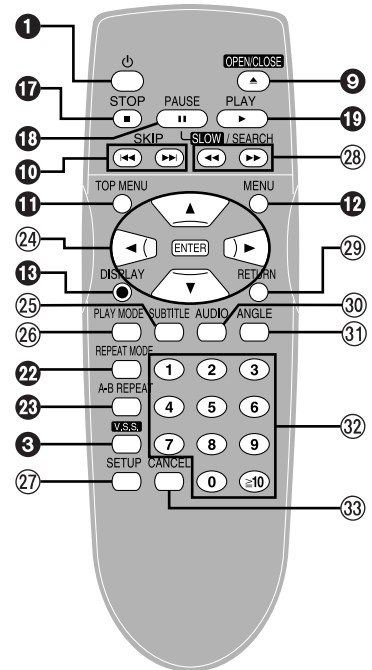
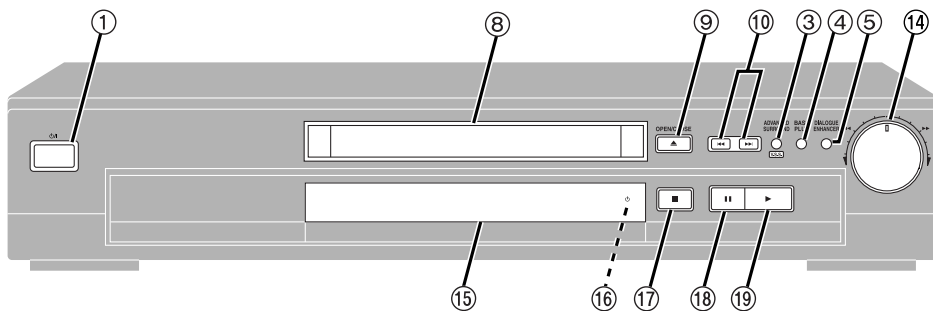
## 4 General Description

### 4.1. Operating instructions

#### DVD-RV41



#### DVD-RV31



### Main unit

- ① **Standby/on switch (⏻/⏻)**  
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.
- ② **DVD-RV41**  
**One touch cinema memory button/indicator (ONE TOUCH CINEMA MEMORY)**
- ③ **Advanced Surround (V.S.S.) button (ADVANCED SURROUND, (V.S.S.))**
- ④ **DVD-RV31**  
**Bass plus button (BASS PLUS)**
- ⑤ **Dialogue Enhancer button (DIALOGUE ENHANCER)**
- ⑥ **DVD-RV41**  
**Cinema button (CINEMA)**
- ⑦ **DVD-RV41**  
**DOLBY DIGITAL indicator (DOLBY DIGITAL, DECODER)**  
Goes out when playing a disc without Dolby Digital.
- ⑧ **Disc tray**
- ⑨ **Disc tray open/close button (▲, OPEN/CLOSE)**
- ⑩ **Skip buttons (◀◀, ▶▶)**
- ⑪ **DVD-RV41**  
**Top menu button (TOP MENU)**
- ⑫ **DVD-RV41**  
**Menu button (MENU)**
- ⑬ **DVD-RV41**  
**Display button (DISPLAY)**
- ⑭ **Shuttle dial (◀◀, ▶▶)**
- ⑮ **Display**

- ⑯ **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.
- ⑰ **Stop button (■)**
- ⑱ **Pause button (⏸)**
- ⑲ **Play button (▶)**
- ⑳ **DVD-RV41**  
**Joystick (▲, ▼, ◀, ▶)/Enter button (ENTER)**

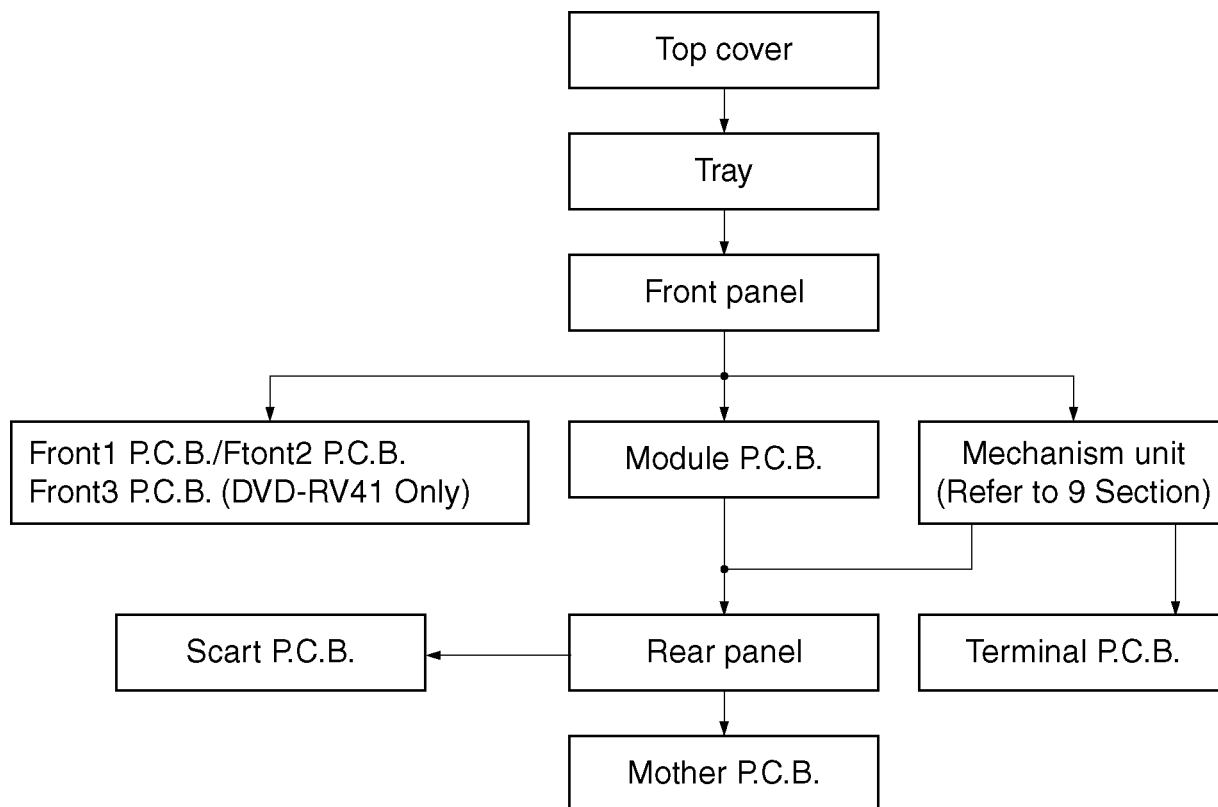
### Remote control

Buttons such as ① function the same as the controls on the unit.

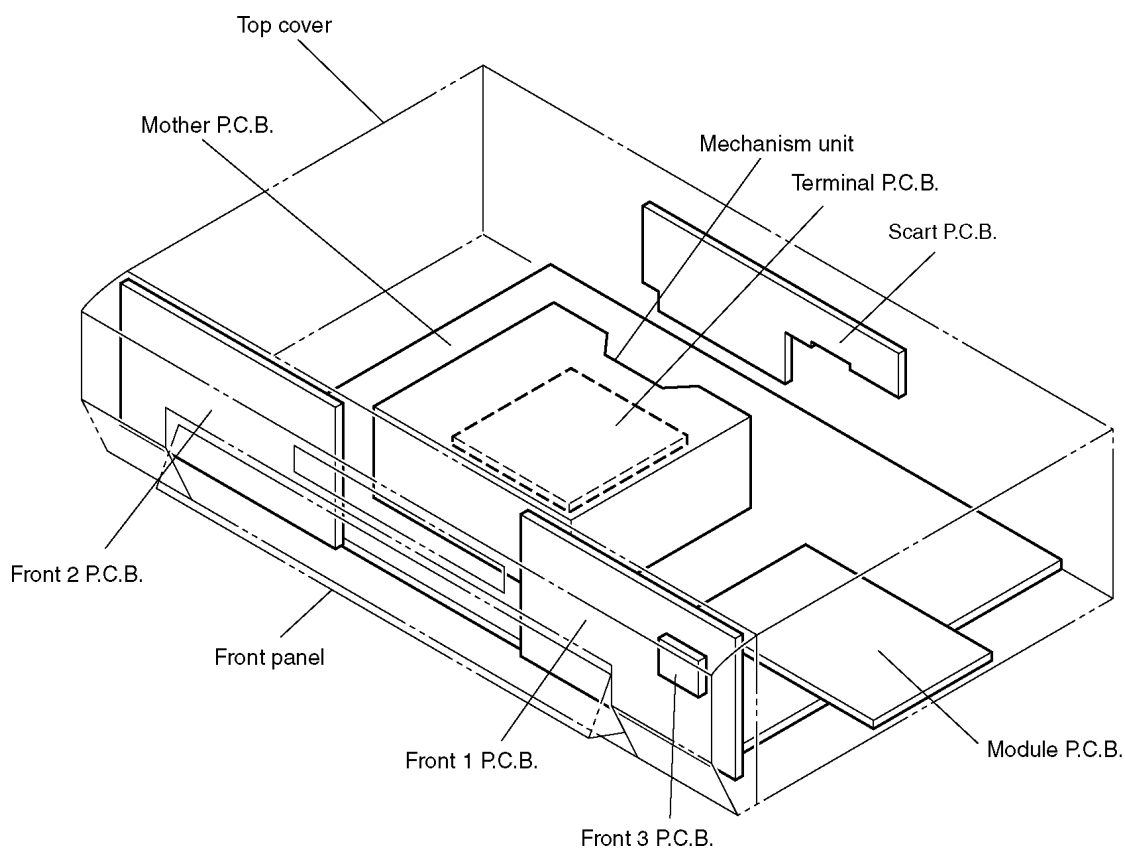
- ⑳ **Cursor buttons (▲, ▼, ◀, ▶)/Enter button (ENTER)**
- ㉑ **Subtitle button (SUBTITLE)**
- ㉒ **Play mode button (PLAY MODE)**
- ㉓ **Setup button (SETUP)**
- ㉔ **Slow/Search buttons (◀◀, ▶▶ SLOW/SEARCH)**
- ㉕ **Return button (RETURN)**
- ㉖ **Audio button (AUDIO)**
- ㉗ **Angle button (ANGLE)**
- ㉘ **Numbered buttons (1-9, 0, ≠10)**
- ㉙ **Cancel button (CANCEL)**

## 5 Disassembling the Casing and Checking P.C.B.s

### 5.1. Dissassembly Procedure

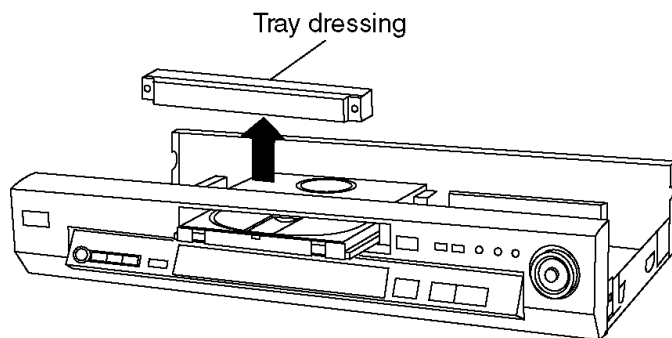
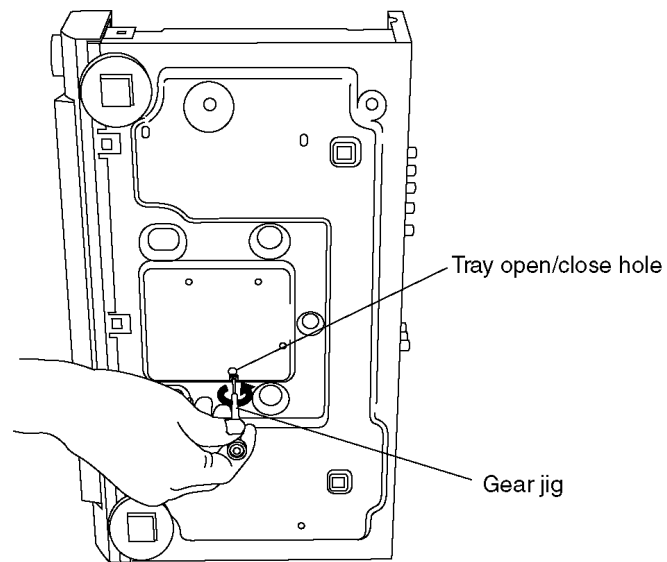
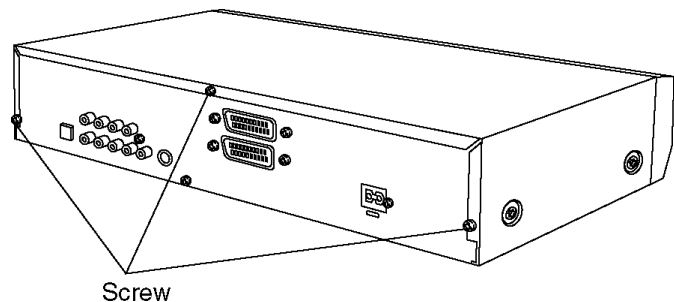
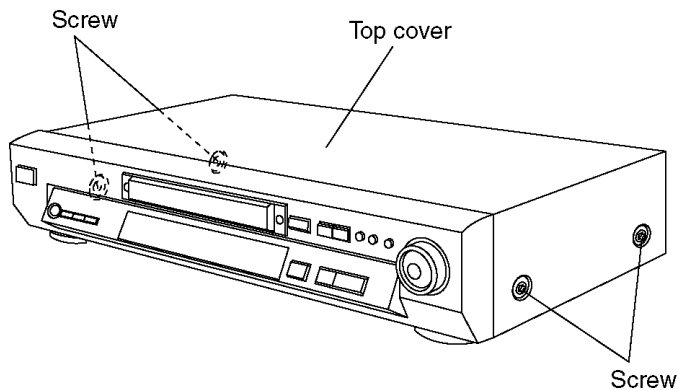


### 5.2. Caseing Parts and P.C.B. Positions



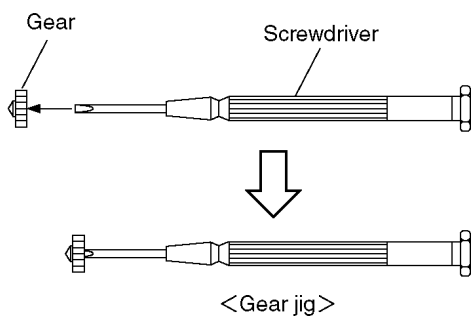
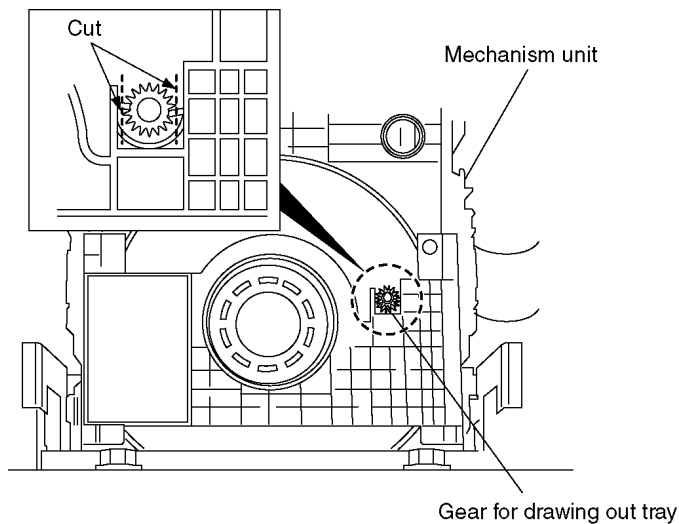
### 5.3. Top Cover

1. Unscrew the screws.



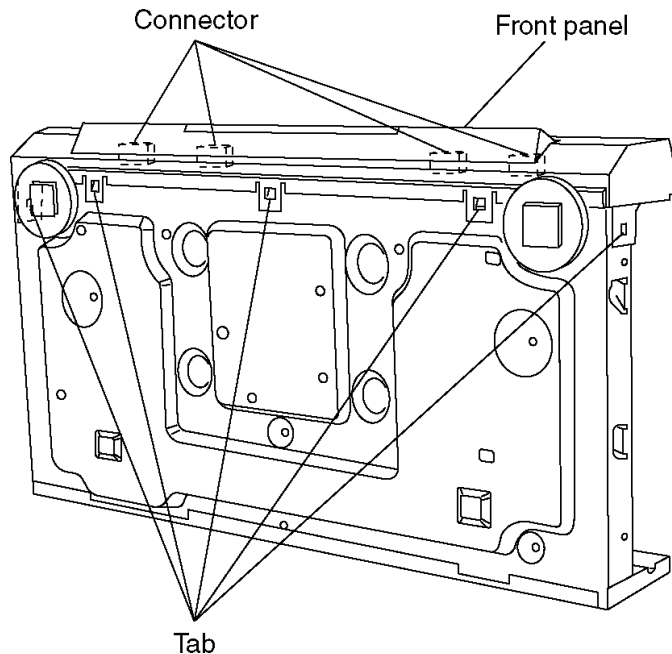
### 5.4. Tray

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.



### 5.5. Front Panel

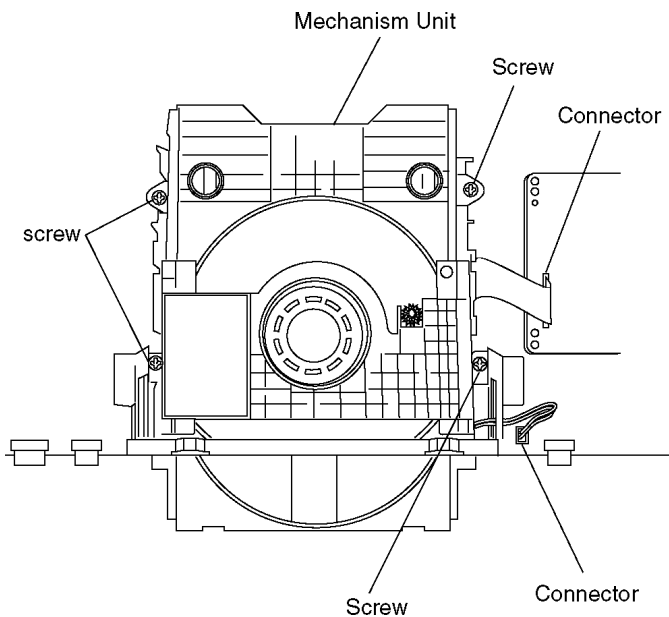
1. Release the tabs.
2. Remove the connectors.





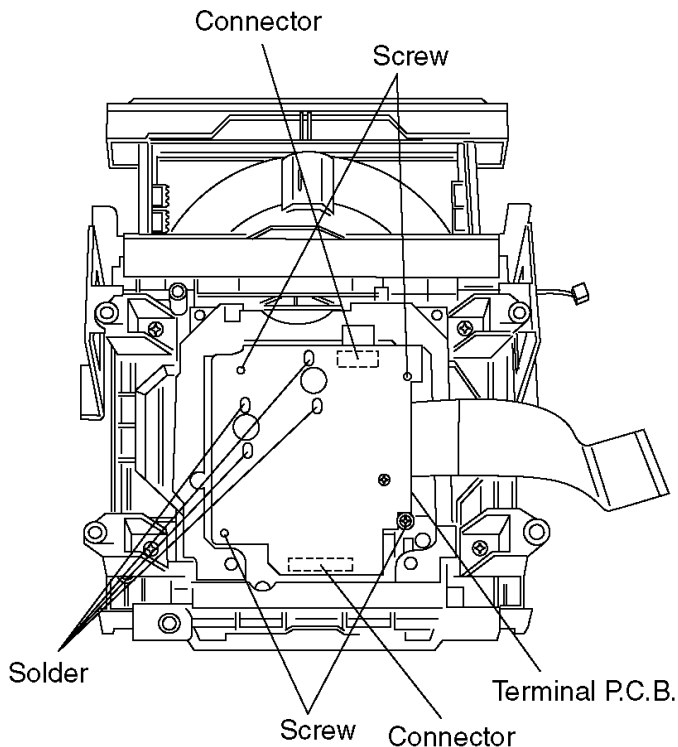
### 5.6. Mechanism Unit

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



### 5.7. Terminal P.C.B.

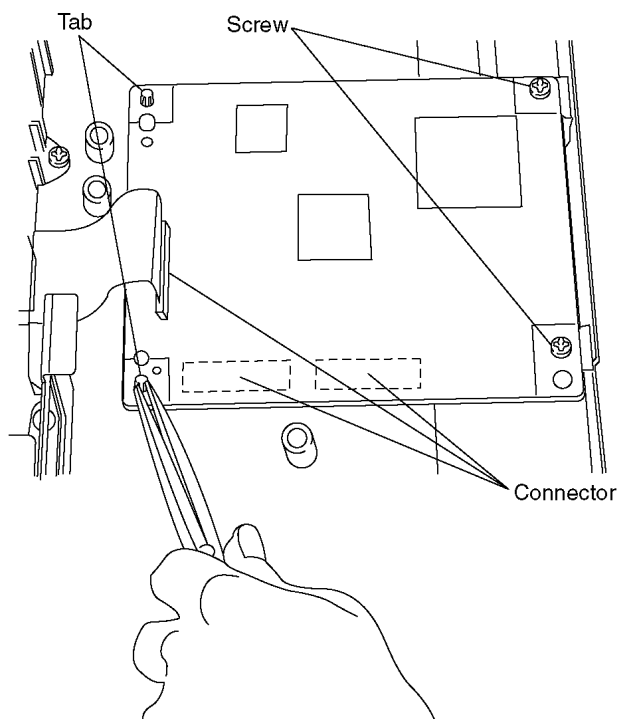
1. Unscrew the screws.
2. Remove the solders.
3. Remove the connectors.



<Mechanism unit bottom>

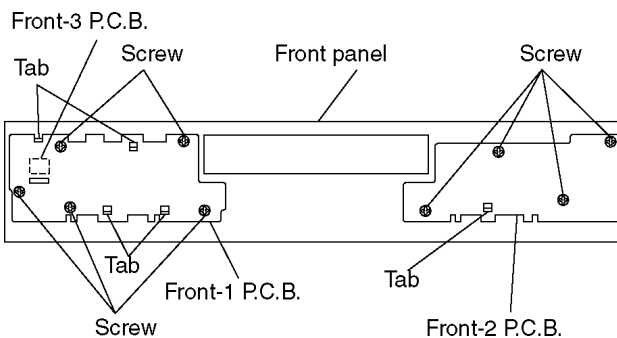
### 5.8. Module P.C.B.

1. Unscrew the screws.
2. Remove the connectors.
3. Press each tab with the nipper to pull out the module PCB vertically.



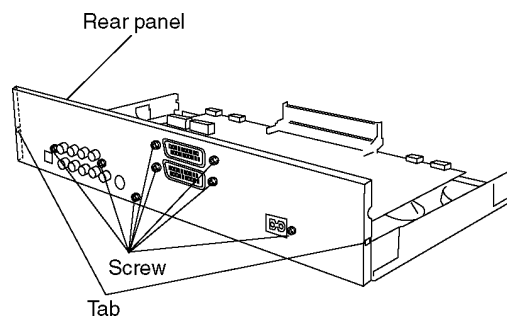
### 5.9. Front-1 P.C.B., Front-2 P.C.B., and Front-3 P.C.B.

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



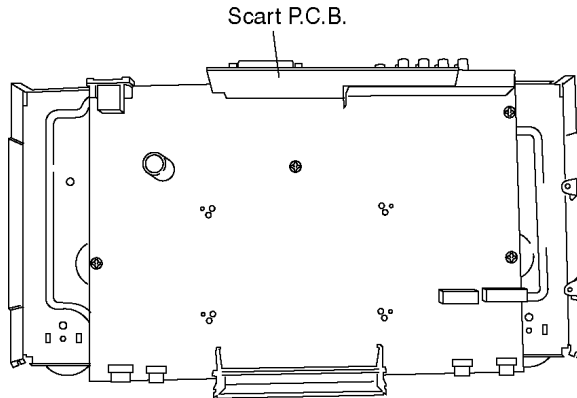
### 5.10. Rear panel

1. Unscrew the screws
2. Release the tabs.



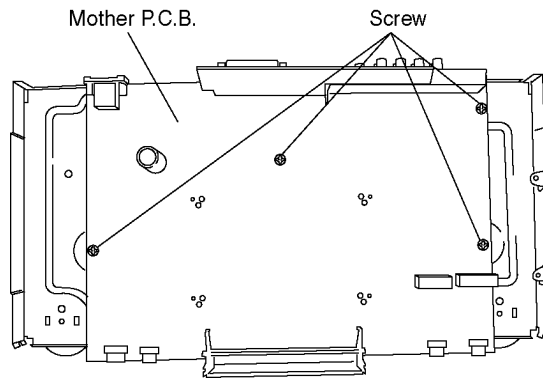
### 5.11. Scart P.C.B.

1. Remove the connector.



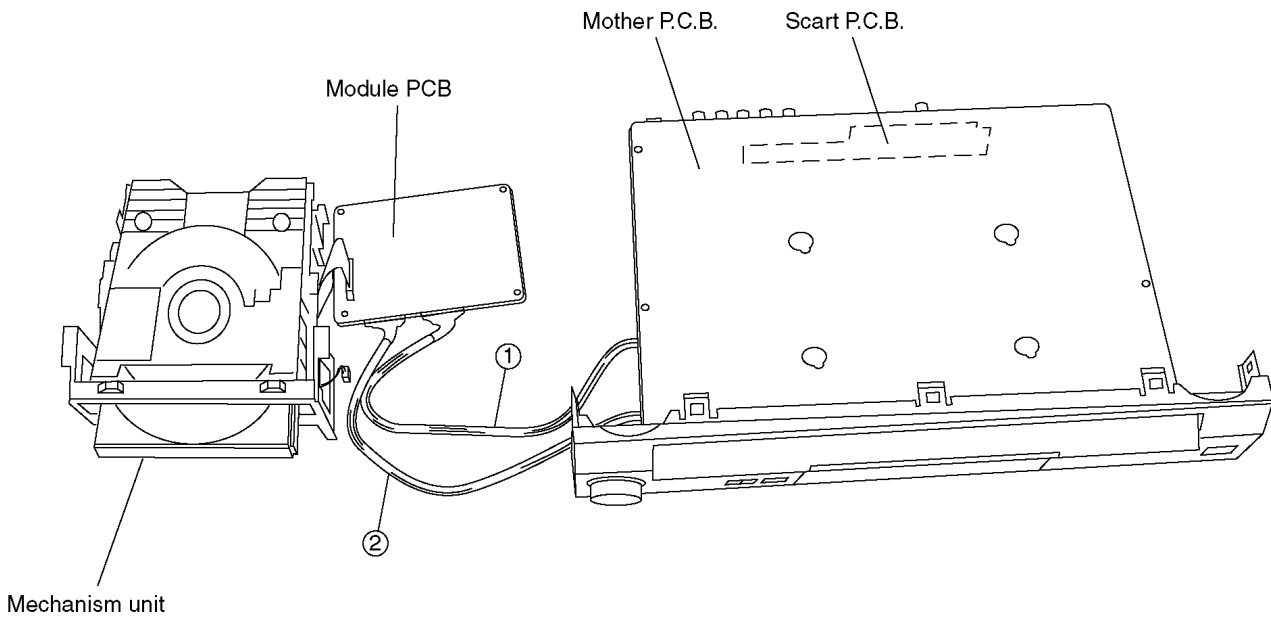
### 5.12. Mother P.C.B.

1. Unscrew the screws.

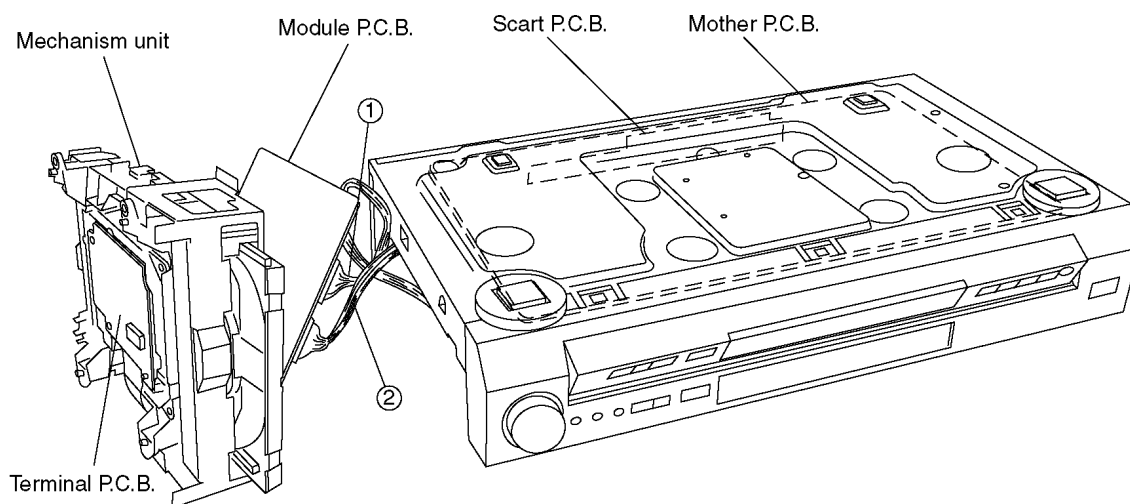


### 5.13. Servicing Position

#### 5.13.1. Servicing position of the Module P.C.B.



### 5.13.2. Servicing position of the Terminal P.C.B.



### 5.13.3. List of the Extention Cables

①	JGS0098	26pins	PS4201(Module PCB)—PP4301(Mother P.C.B.)	For onlyDVD-RV41
①	JGS0116	22pins	PS4201(Module PCB)—PP4301(Mother P.C.B.)	For onlyDVD-RV31
②	JGS0116	22pins	PS3201(Module PCB)—PP3201(Mother P.C.B.)	For onlyDVD-RV41
②	RFKZ0098	18pins	PS3201(Module PCB)—PP3201(Mother P.C.B.)	For onlyDVD-RV31

## 6 PREVENTION OF STATIC ELECTRICITY DISCHARGE

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.

### 6.1. Grounding for electrostatic breakdown prevention

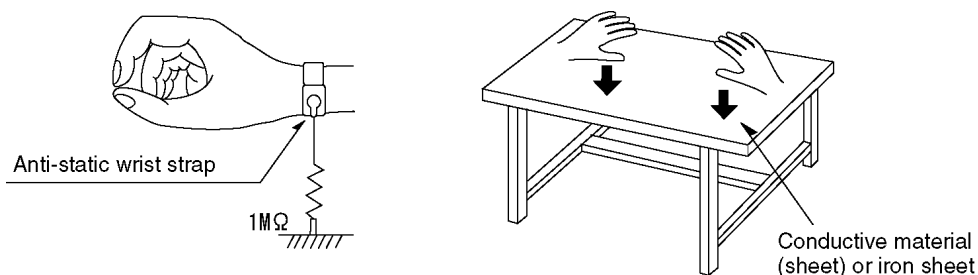
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

#### 6.1.1. Worktable grounding

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

#### 6.1.2. Human body grounding

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



#### 6.1.3. 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 according to 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.

### 6.2. 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 preventing static 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.

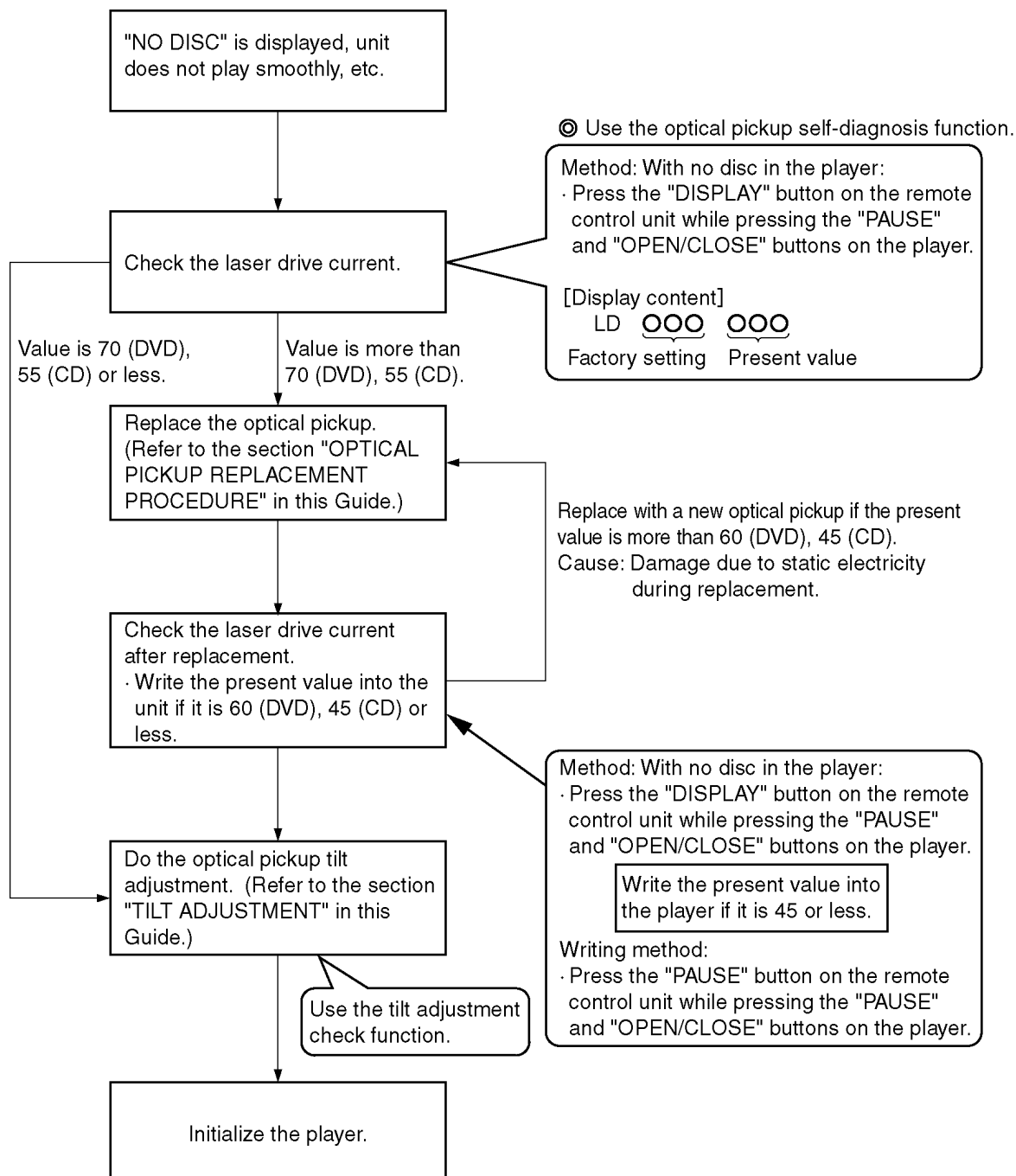
## 7 OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

### 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 function before 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.)



## 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 yyyy: 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 the unit is stopped	T1_0000_0000
Resetting using hours of the motor	Press "STOP", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_0000

### Cautions to be taken when replacing the optical pickup

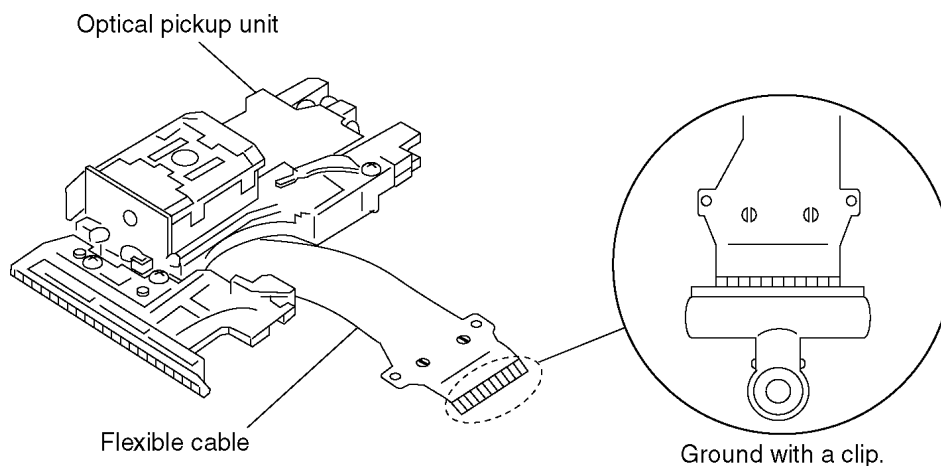
The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

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.



## 8 SELF-DIAGNOSIS FUNCTION AND SERVICE MODES

### 8.1. Self-diagnosis Function and Service Modes

Improving the self-diagnosis function

The self-diagnosis function in our DVD player currently in use is improved as follows:

Our DVD player currently  
in use

UHF error display  
The latest error storage  
function  
n=1

Jitter/read error display

Laser drive current display  
For DVD

Our new DVD

UHF error display  
The latest error storage  
n=20

Jitter/read error display  
Focus drive value display

Laser drive current display  
For DVD/CD

ADSC internal RAM data  
display

Servo process display

Total operation time display  
SP motor  
Laser (DVD/CD)

The storage capacity is increased.

The focus drive current value can be  
displayed.

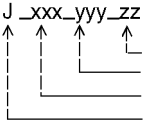
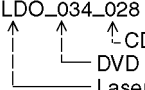
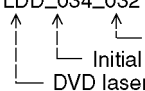


The servo learning value stored in the  
RAM data inside the ADSC (servo  
controller) IC is displayed.

Mainly in the initial starting operation  
period of the player, a number is allotted  
to the servo process of each step, and the  
process of the starting operation can be  
displayed.

The operation times of SP motor and the  
laser (both for the DVD and CD) can be  
displayed.

## 8.2. Service mode table

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 PLAY 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 ** 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 FXX 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 mode, press PAUSE and OPEN buttons on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive current Initial 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 witedh on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP 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 ** 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 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.	_____	Turn off the secondary power.
CD laser drive current measurement	In STOP 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.	_____

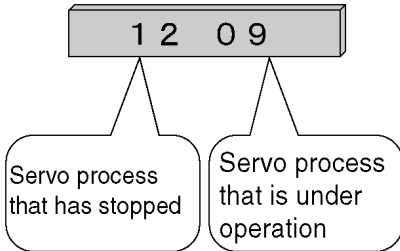


Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP mode, press PAUSE and OPEN buttons on the player, and "7" button on the remote control unit.	Version display	<p>srrr_xyzzz</p> <ul style="list-style-type: none"> <li>↑ System controller release number</li> <li>↑ System controller model number</li> <li>↑ System controller generation</li> <li>↑ Panel controller release number</li> <li>↑ Panel controller model number</li> </ul>	Cancelled automatically 5 seconds later.
Lighting of display tube	In ** mode, press PAUSE and OPEN buttons on the player, and "9" button on the remote control unit.	Lighting of display tube	_____	Press STOP or OPEN button.
Dealer's lock	In STOP 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.	<ul style="list-style-type: none"> <li>· "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.</li> <li>· "UNLOCKED" sign appears when dealer's lock is switched off.</li> </ul>	Repeat the same operation.
Initialization	In STOP mode, press PAUSE, BWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INITIALIZED"	
Region display	In STOP mode, press PAUSE and OPEN buttons on the player, and "6" button on the remote control unit.	Region display	<p>x_yy_zzz</p> <ul style="list-style-type: none"> <li>↑ N: NTSC / 6: PAL60</li> <li>↑ N: noPAL / P: PAL</li> <li>↑ Region No.</li> </ul>	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP 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 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.

### 8.3. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)

All processes that are under operation cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
(START)			
Initial setting Tray control	00	00	Each initial setting
TRV initial movement	01	01	TRV initial movement
Disc detection	02~08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02~08	02	Initial setting in FE system
Focus servo	10~13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14~15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18~1A	19	DBAL/equalizer adjustment
		1A	ID read

## 8.4. Servo Process Display Mode

In starting operation of the player, a number is allotted to each servo process so that the operation of each step can be seen. The relation between the process and the displayed number are as follows:

### Number allotment to the servo process

Process classification	Each processing item	Description	Process number
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to "READY" or PREPARE".)	0~40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50~7F
Restart process	Restart	When a user operates in the "READY" state, each servo is turned on.	80~9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0~BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1~C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4~C6
	(Q code read)	If any Q code is improperly read, reset and retry.	C7~C9
Stop process	Stop	A servo is controlled in response to the user's operation to stop the disc completely.	F0~FF

## 8.5. ADSC Internal Ram Data Display

The servo learning value in the RAM data inside the servo processor ADSC is displayed. The value is useful for the servo operation/disc quality judge including the OPU. The concrete contents are shown below:

### Address

### Contents of display

4B4	Focus gain learning value for DVD-S, DVD-D(L0), CD, and VCD
4BC	Focus gain learning value for DVD-D(L1)
4B6	Focus balance learning value for DVD-S, DVD-D(L0), CD, and VCD
4BE	Focus balance learning value for DVD-D(L1)
4B5	Tracking gain value for DVD-S, DVD-D(L0), CD, and VCD
4BD	Tracking gain value for DVD-D(L1)
TB0	Tracking balance value for DVD-S, DVD-D(L0), CD, VCD
TB1	Tracking balance value for DVD-D(L1)
DBD	DSL offset learning value for DVD-S and DVD-D
DBC	DSL offset learning value for CD and VCD
FC0	Equalizer FC value for DVD-S, DVD-D(L0), CD, and VCD
BT0	Equalizer BOOST value for DVD-S, DVD-D(L0), CD, and VCD
FC1	Equalizer FC value for DVD-D(L1)
BT1	Equalizer BOOST value for DVD-D(L1)

## 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. Service Precautions

### 8.7.1. Recovery after the dvd player is repaired

When an FROM or an EEPROM in and on the module P.C.B. has replaced, carry out the recovery disc processing to optimize the drive.

Playback the disk above to process the recovery automatically,

Recovery disc (Product number: RFKZD5TR001)

Note:

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

When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 8.2 is carried out. Write down the contents of the setting before recovery processing, and reset the player

### 8.7.2. Firmware version-up of the DVD player

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

The version-up disc has also a recovery function so that you don't need use the recovery disc again.

Note:

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

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

The product number of the version-up disc will be noticed when it is supplied.

## 8.8. Handling After Completing Repairs

Use the following procedure after completing repairs.

### 8.8.1. 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.

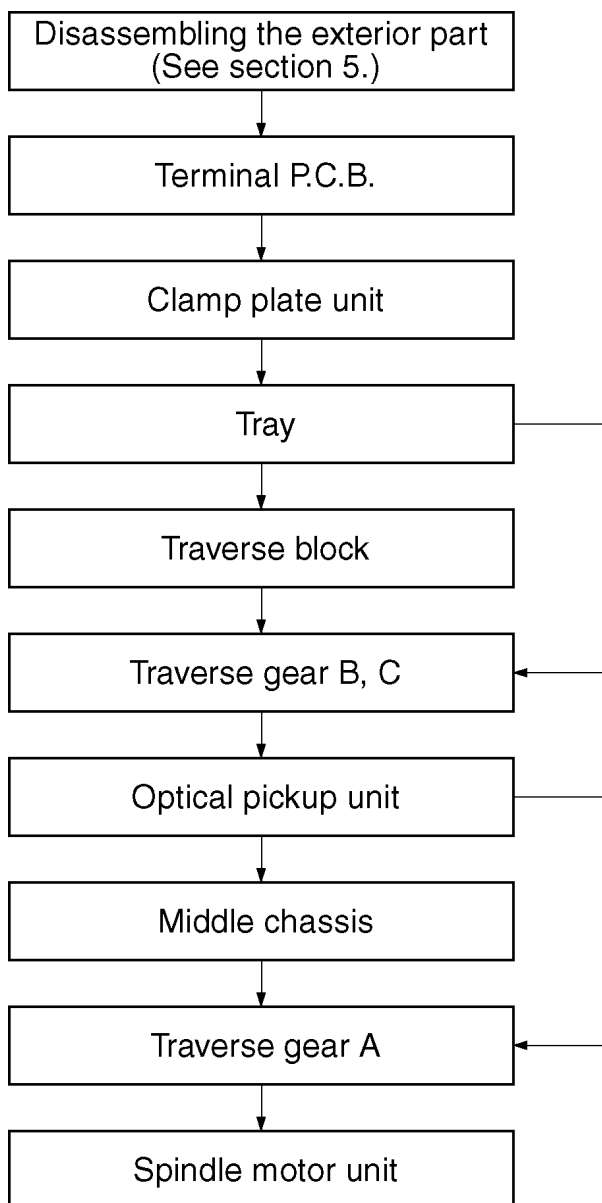
3. Disconnect the power plug from the outlet.

### 8.8.2. Precautions

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

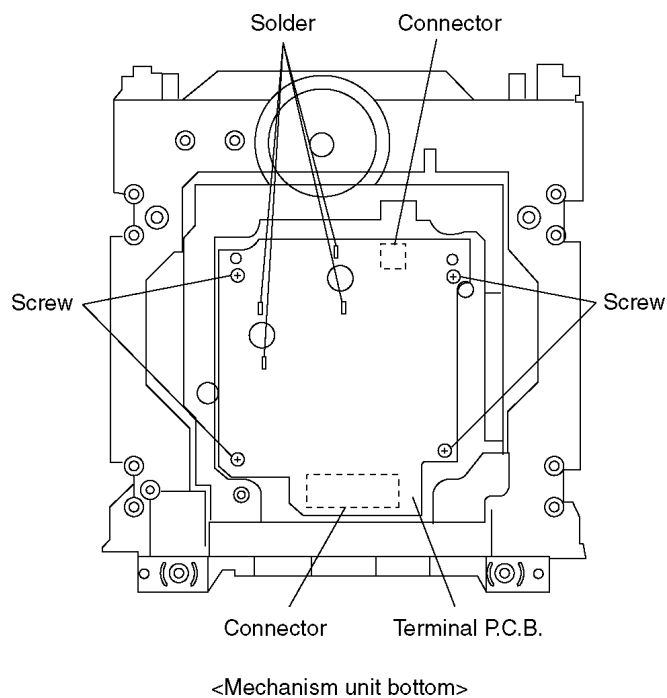
## 9 ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

### 9.1. Disassembly Procedure



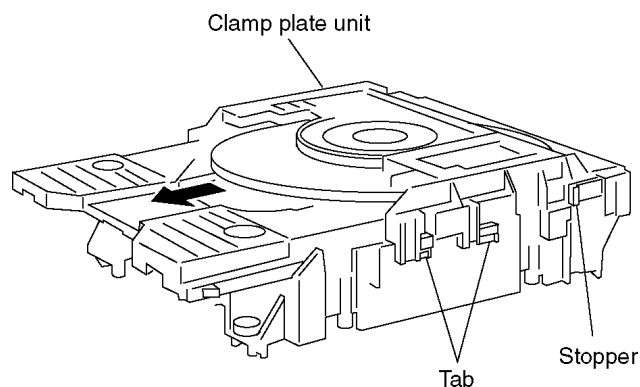
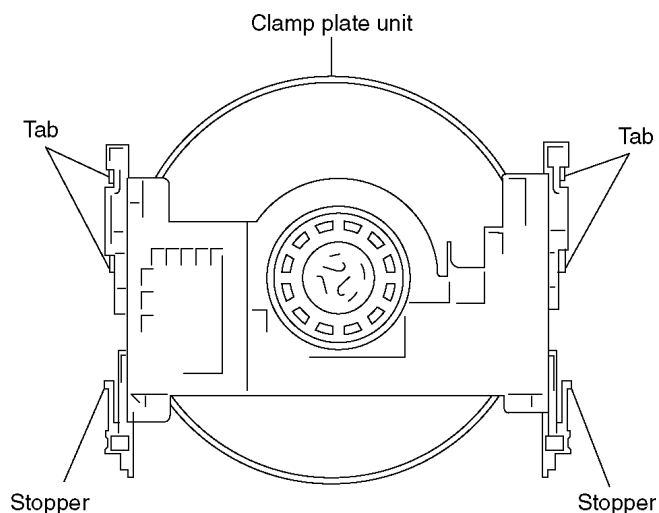
### 9.2. Terminal P.C.B.

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



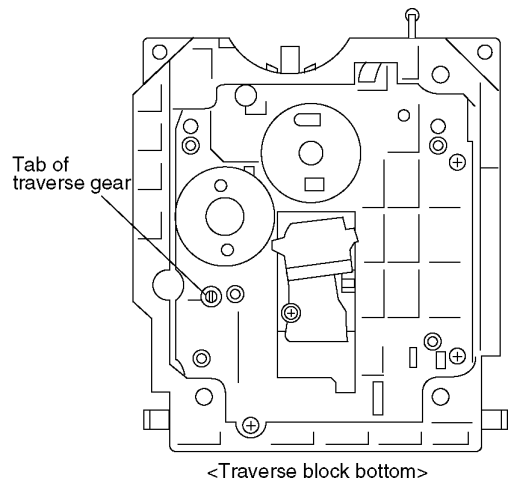
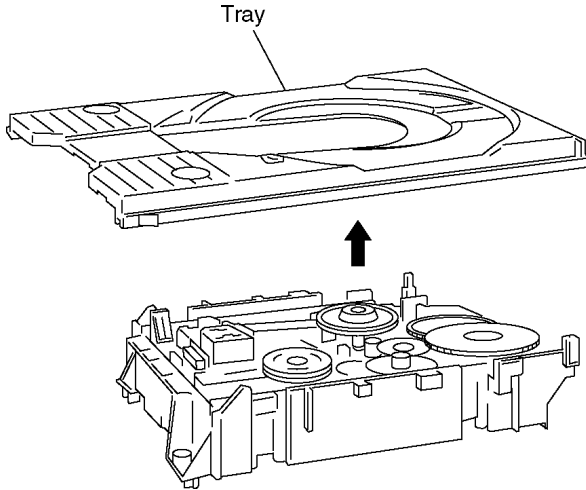
### 9.3. Clamp Plate Unit

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



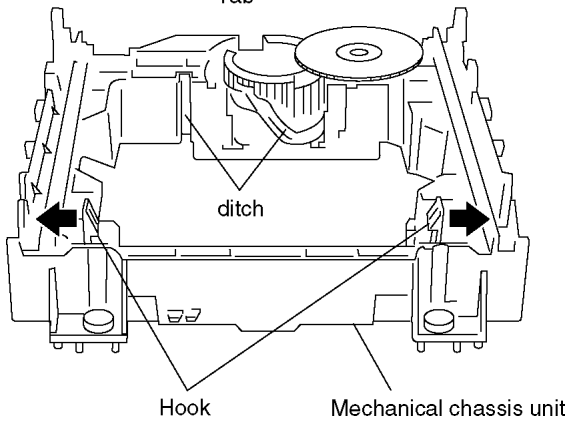
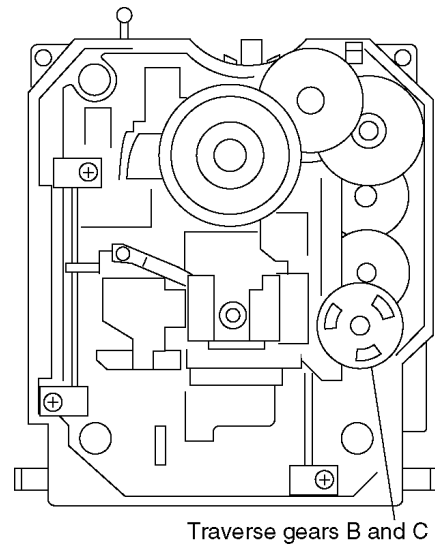
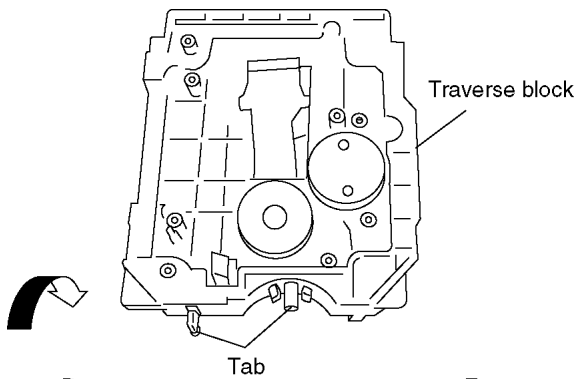
### 9.4. Tray

1. Lift the tray.



### 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.

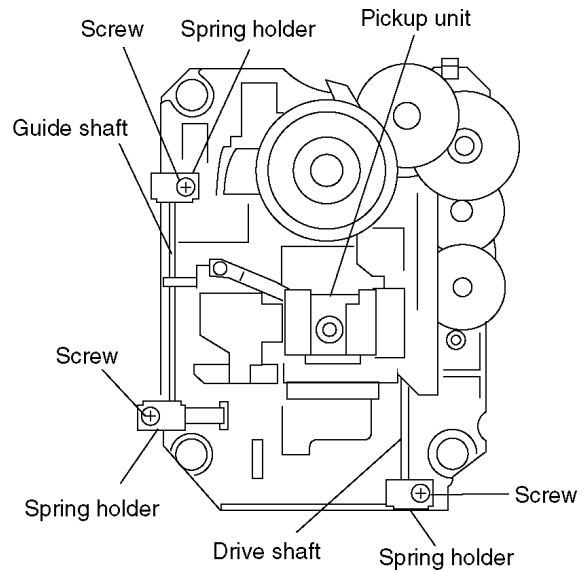


### 9.6. Traverse Gear

1. Disengage the tabs from the traverse gear.
2. Remove the traverse gears B and C.

### 9.7. Optical Pickup Unit

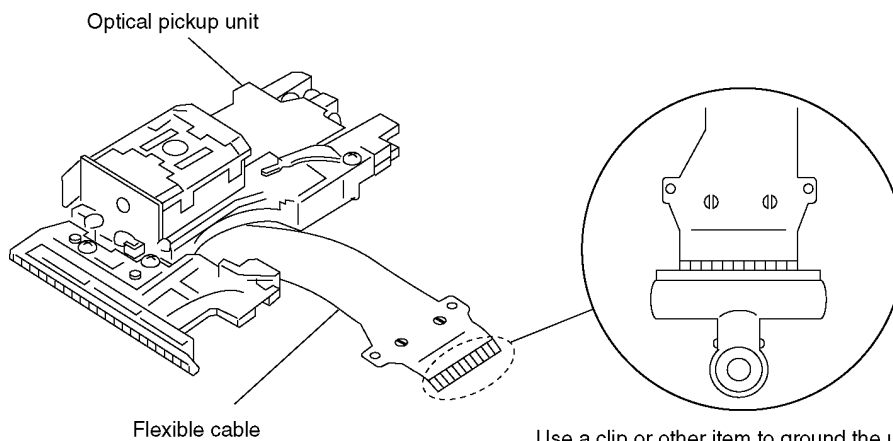
1. Unscrew the screws.
2. Remove the spring holders and the springs.
3. Pull out the drive shaft and guide shaft.



### 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.)



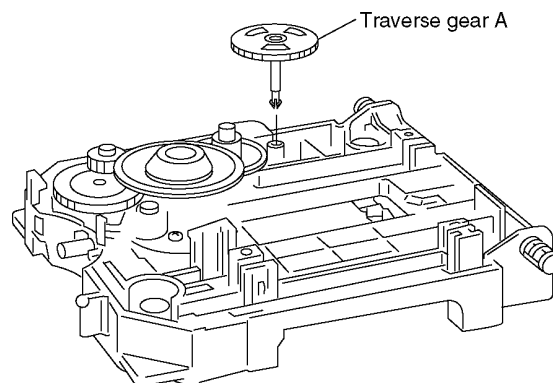
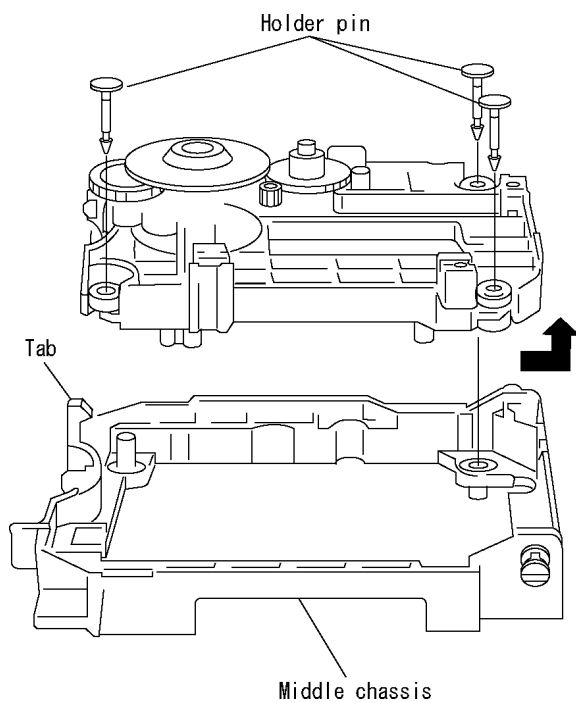
3. The use of soldering iron with anti-static feature is recommended when providing short-circuit to laser diode or when removing it.
4. Solder the land on flexible cable of optical pickup unit.

#### 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.

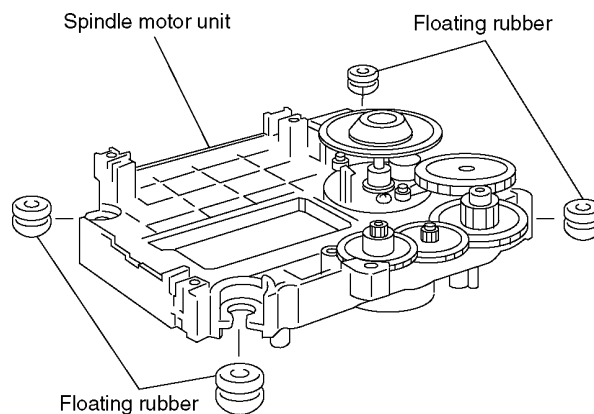
### 9.8. Disassembling the Middle Chassis

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



### 9.10. Disassembling the Spindle Motor Unit

1. Remove the floating rubbers.



### 9.9. Disassembling the Traverse Gear A

1. Remove the traverse gear A.

## 10 ADJUSTMENT PROCEDURES

### 10.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	JGS0098 (DVD-RV41 only)
	Extension cable (module P.C.B. to mother P.C.B.)	RFKZ0098(DVD-RV31 only)
	Extension cable (module P.C.B. to mother P.C.B.)	JGS0116
Others	Screw lock	RZZ0L01
	Grease	RFKXGAK152
	Oil	RFKXGA1280, JZS0648
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc

### 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 is generally 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

### 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.

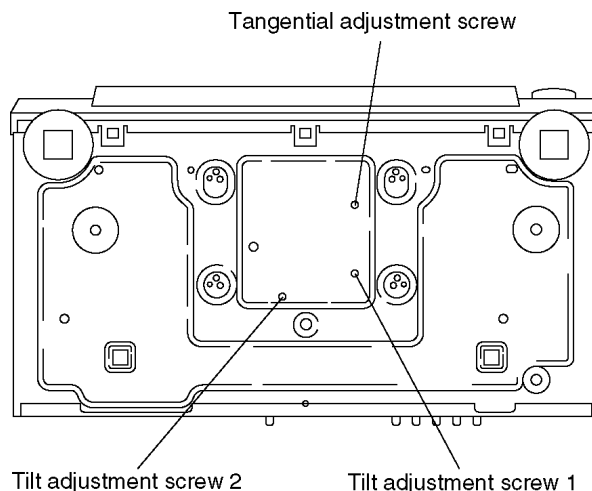
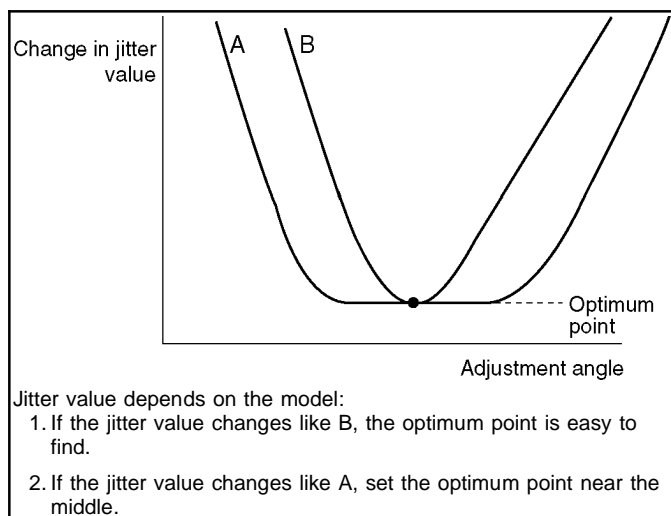
##### Note:

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.

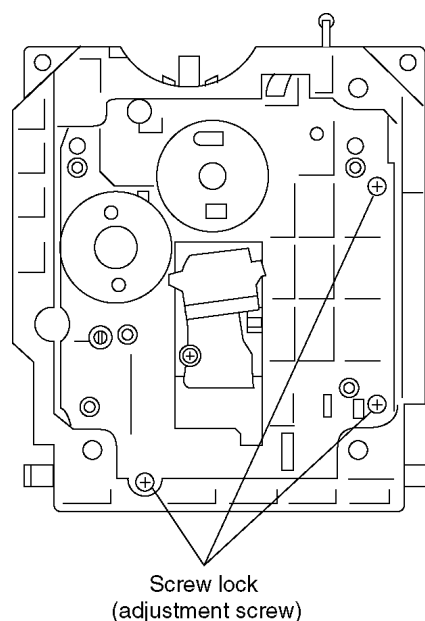


#### 10.4.1.3. Check after adjustment

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 Electrical Confirmation

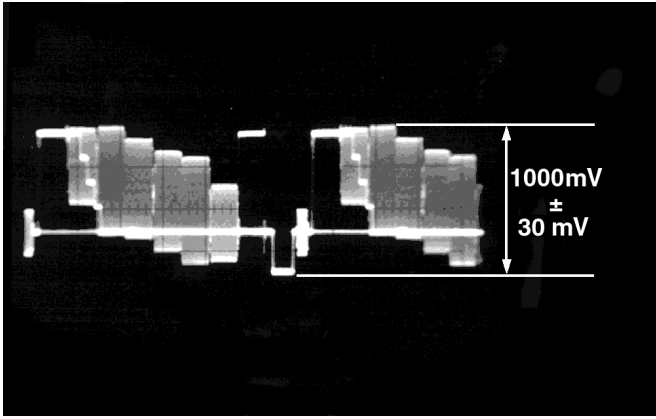
## 11.1. Video Output (Luminance Signal) Confirmation

Do this confirmation after replacing a P.C.B.

Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY (Title 46):DVDT-S15 PLAY (Title 12):DVDT-S01	DVDT-S15 or DVDT-S01
Measuring equipment, tools	Confirmation value	
Screwdriver, Oscilloscope 200mV/div, 10µsec/div	1000mVp-p±30mV	

Purpose: To maintain video signal output compatibility.

1. Connect the oscilloscope to the video output terminal and terminate at 75 ohms.
2. Confirm that the luminance signal (Y+S) level is 1000 mVp-p±30 mV.



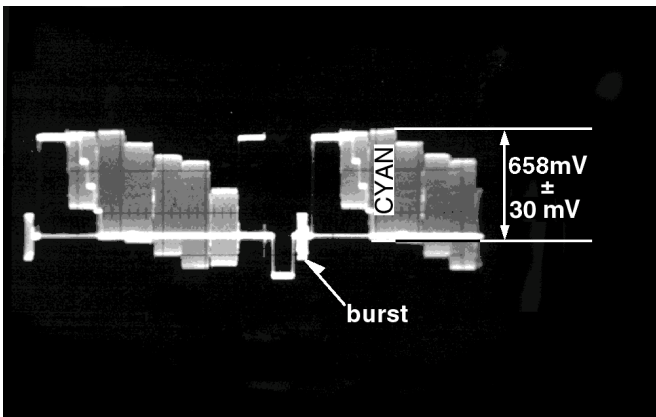
## 11.2. Video Output (Chrominance Signal) Confirmation

Do this confirmation after replacing a P.C.B.

Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY (Title 46):DVDT-S15 PLAY (Title 12):DVDT-S01	DVDT-S15 or DVDT-S01
Measuring equipment, tools	Confirmation value	
Screwdriver, Oscilloscope 200mV/div, 10µsec/div	658mVp-p±30mV	

Purpose: To maintain video signal output compatibility.

1. Connect the oscilloscope to the video output terminal and terminate at 75 ohms.
2. Confirm that the chrominance signal (C) level is 658 mVp-p±30 mV.



## 12 Abbreviations

INITIAL/LOGO	ABBREVIATIONS
A	A0~UP ACLK AD0~UP ADATA ALE AMUTE AREQ ARF ASI ASO ASYN
	ADDRESS AUDIO CLOCK AUDIO PES PACKET DATA ADDRESS BUS AUDIO PES PACKET DATA ADDRESS LATCH ENABLE AUDIO MUTE AUDIO PES PACKET REQUEST AUDIO RF SERVO AMP INVERTED INPUT SERVOAMPOUTPUT AUDIO WORD DISTINCTION SYNC
B	BCK BCKIN BDO BLKCK BOTTOM BYP BYTCK
	BIT CLOCK (PCM) BIT CLOCK INPUT BLACK DROP OUT SUB CODE BLOCK CLOCK CAP. FOR BOTTOM HOLD BYPATH BYTE CLOCK
C	CAV CBDO CD CDSCK CDSRDATA CDRF CDV CHNDATA CKSL CLV COFTR CPA CPCS CPDT CPUADR CPUADT CPUIRQ CPRD CPWR CS CSYNIN CSYNOUT
	CONSTANT ANGULAR VELOCITY CAP. BLACK DROP OUT COMPACT DISC CD SERIAL DATA CLOCK CD SERIAL DATA CD RF (EFM) SIGNAL COMPACT DISC-VIDEO CHANNEL DATA SYSTEMCLOCKSELECT CONSTANT LINEAR VELOCITY CAP. OFF TRACK CPU ADDRESS CPU CHIP SELECT CPU DATA CPU ADDRESS LATCH CPU ADDRESS DATA BUS CPU INTERRUPT REQUEST CPU READ ENABLE CPU WRITE ENABLE CHIPSELECT COMPOSITESYNC IN COMPOSITE SYNC OUT
D	DACCK DEEMP DEMPH DIG0~UP DIN DMSRCK DMUTE DO DOUT0~UP DRF DRPOUT DREQ DRESP DSC DSLFB DVD
	D/A CONVERTER CLOCK DEEMPHASIS BIT ON/OFF DEEMPHASIS SWITCHING FL DIGIT OUTPUT DATA INPUT DM SERIAL DATA READ CLOCK DIGITAL MUTE CONTROL DROPOUT DATAOUTPUT DATA SLICE RF (BIAS) DROP OUT SIGNAL DATA REQUEST DATA RESPONSE DIGITAL SERVO CONTROLLER DATA SLICE LOOP FILTER DIGITAL VIDEO DISC

INITIAL/LOGO	ABBREVIATIONS
E	EC ECR  ENCSEL ETMCLK ETSCLK
	ERROR TORQUE CONTROL ERROR TORQUE CONTROL REFERENCE ENCODER SELECT EXTERNAL M CLOCK (81MHz/40.5MHz) EXTERNAL S CLOCK (54MHz)
F	FBAL FCLK FE FFI FEO FG FSC FSCK
	FOCUS BALANCE FRAME CLOCK FOCUS ERROR FOCUS ERROR AMP INVERTED INPUT FOCUS ERROR AMP OUTPUT FREQUENCY GENERATOR FREQUENCY SUB CARRIER FS (384 OVER SAMPLING)CLOCK
G	GND
	COMMON GROUNDING (EARTH)
H	HA0~UP HD0~UP HINT HRXW
	HOST ADDRESS HOST DATA HOST INTERRUPT HOST READ/WRITE
I	IECOUT IPFRAG IREF ISEL
	IEC958 FORMAT DATA OUTPUT INTERPOLATION FLAG I (CURRENT) REFERENCE INTERFACE MODE SELECT
L	LDON LPC LRCK
	LASER DIODE CONTROL LASER POWER CONTROL L CH/R CH DISTINCTION CLOCK
M	MA0~UP MCK MCKI MCLK MDATA MDQ0~UP MDQM MLD MPEG
	MEMORY ADDRESS MEMORY CLOCK MEMORY CLOCK INPUT MEMORY SERIAL COMMAND CLOCK MEMORY SERIAL COMMAND DATA MEMORY DATA INPUT/OUTPUT MEMORY DATA I/O MASK MEMORYSERIALCOMMAND LOAD MOVING PICTURE EXPERTS GROUP
O	ODC OFTR OSCI OSCO OSD
	OPTICAL DISC CONTROLLER OFF TRACKING OSCILLATOR INPUT OSCILLATOR OUTPUT ON SCREEN DISPLAY
P	P1~UP PCD PCK PDVD PEAK PLLCLK PLLOK PWMCTL PWMDA PWMOA, B
	PORT CD TRACKING PHASE DIFFERENCE PLL CLOCK DVD TRACKING PHASE DIFFERENCE CAP. FOR PEAK HOLD CHANNEL PLL CLOCK PLL LOCK PWM OUTPUT CONTROL PULSE WAVEMOTOR DRIVEA PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO	ABBREVIATIONS
R	RE RFENV RFO RS RSEL RST RSV
S	SBI0, 1 SBO0 SBT0, 1 SCK SCKR SCL SCLK SDA SEG0~UP SELCLK SEN SIN1, 2 SOUT1, 2 SPDI SPDO SPEN SPRCLK SPWCLK SQCK SQCX SRDATA SRMADR SRMDT0~7 SS STAT STCLK STD0~UP STENABLE STSEL STVALID SUBC SBCK SUBQ SYSCLK
T	TE TIBAL TID TIN TIP TIS TPSN TPSO TPSP TRCRS TRON TRSON
	READ ENABLE RF ENVELOPE RF PHASE DIFFERENCE OUTPUT (CD-ROM) REGISTER SELECT RF POLARITY SELECT RESET RESERVE SERIAL DATA INPUT SERIAL DATA OUTPUT SERIAL CLOCK SERIAL DATA CLOCK AUDIO SERIAL CLOCK RECEIVER SERIAL CLOCK SERIAL CLOCK SERIAL DATA FL SEGMENT OUTPUT SELECTCLOCK SERIALPORT ENABLE SERIAL DATA IN SERIAL DATA OUT SERIAL PORT DATA INPUT SERIAL PORT DATA OUTPUT SERIAL PORT R/W ENABLE SERIAL PORT READ CLOCK SERIAL PORT WRITE CLOCK SUB CODE Q CLOCK SUBCODEQ DATA READ CLOCK SERIAL DATA SRAM ADDRESS BUS SRAM DATA BUS 0~7 START/STOP STATUS STREAM DATA CLOCK STREAM DATA STREAM DATA INPUT ENABLE STREAM DATA POLARITY SELECT STREAMDATAVALIDITY SUB CODE SERIAL SUB CODE CLOCK SUB CODE Q DATA SYSTEM CLOCK TRACKING ERROR BALANCE CONTROL BALANCE OUTPUT 1 BALANCE INPUT BALANCE INPUT BALANCE OUTPUT 2 OP AMP INPUT OP AMP OUTPUT OP AMP INVERTED INPUT TRACKCROSSIGNAL TRACKING ON TRAVERSE SERVO ON

INITIAL/LOGO	ABBREVIATIONS
V	VBLANK VCC VCDCONT VDD VFB VREF VSS
W	WAIT WDCK WEH WSR
X	X XALE XAREQ XCDROM XCS XCSYNC XDS XHSYNCO XHINT XI XINT XMW XO XRE XSRMCE XSRMOE XSRMWE XVCS XVDS XVSYNCO
	V BLANKING COLLECTOR POWER SUPPLY VOLTAGE VIDEO CD CONTROL (TRACKING BALANCE) DRAIN POWER SUPPLY VOLTAGE VIDEO FEED BACK VOLTAGE REFERENCE SOURCE POWERSUPPLYVOLTAGE BUS CYCLE WAIT WORD CLOCK WRITE ENABLE HIGH WORD SELECT RECEIVER X' TAL X ADDRESS LATCH ENABLE X AUDIO DATA REQUEST X CD ROM CHIP SELECT X CHIP SELECT X COMPOSITE SYNC X DATA STROBE X HORIZONTAL SYNC OUTPUT XHINTERRUPTREQUEST X' TAL OSCILLATOR INPUT X INTERRUPT X MEMORY WRITE ENABLE X' TAL OSCILLATOR OUTPUT X READ ENABLE X SRAM CHIP ENABLE X SRAM OUTPUT ENABLE X SRAM WRITE ENABLE XV-DEC CHIPSELECT X V-DEC CONTROL BUS STROBE X VERTICAL SYNC OUTPUT

# 13 Voltage Chart

## 13.1. Module P.C.B.

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.6	1.6	1.7	3.3	1.6	1.7	0	1.6	1.6	1.5	1.5	1.5	1.6	3.3	1.7	2.1	0	2.2	1.5	0
PLAY	2.1	1.6	1.7	1.3	1.6	1.7	0	1.6	1.6	1.5	1.5	1.6	3.3	1.7	2.1	1.1	2.2	1.5	0	
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0.9	0.9	1.9	1.7	1.5	0	3.3	1.7	0	0	1.7	0	1.7	1.6	0	1.7	1.7	3.3	1.7	1.7
PLAY	1.8	0.9	1.9	1.7	1.5	0	3.3	1.7	0	0	1.7	0	1.7	1.6	0	1.7	1.7	3.3	1.7	1.7
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	1.7	1.6	1.3	0	3.3	3.3	1.5	0	0	1.7	1.7	0	0	0	0	0	2.5	3.3	0
PLAY	0	0	1.6	1.0	0	3.3	0	1.5	0	0	1.7	2.3	0	0	3.3	3.3	0	2.5	3.3	0
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	3.3	0	0	0	0	0	3.3	1.7	3.3	2.5	0	0	0	0	3.3	1.6	1.6	1.7	1.7	1.7
PLAY	0	0	3.3	0	0	0	0	1.7	3.3	1.4	0	0	0	0	3.3	1.6	1.6	1.7	1.7	1.7
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0	3.3	3.3	3.3	3.3	3.3	3.3	2.8	3.3	3.3	0	0	0	0	0	2.5	2.4	1.8	1.6	1.6
PLAY	0	3.3	3.3	3.0	3.3	3.3	3.3	2.8	3.3	3.3	0	0	0	0	0	2.5	2.4	1.8	2.2	0.9
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.3	0.1	1.4	0.1	0	1.2	0	1.2	3.3	1.2	3.3	3.3	3.3	1.8	0	0	0	0	0	0
PLAY	3.3	0.1	1.4	0.1	0	0	0.5	1.2	3.3	1.5	3.3	3.0	3.3	1.8	0	0	0	0	0	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	0	0	3.3	3.3	0	3.3	3.1	3.3	1.5	3.3	3.3	0	3.3	0	1.8	2.0
PLAY	0	0	0	0	0	0	2.4	3.3	0	3.3	2.4	3.3	1.5	3.3	2.3	2.0	2.4	2.2	1.8	2.0
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	3.3	0	0	0	0	0	3.3	3.3	3.3	3.3	0	3.3	3.1	3.1	3.0	3.1	0	3.1	3.0
PLAY	2.4	2.2	3.1	0	3.3	3.3	3.3	3.3	3.3	0.4	0	0	3.3	0	0.1	0.1	0	0	0	0.7
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	3.0	3.0	1.8	3.0	3.1	3.0	3.1	0	0.2	0	1.7	3.3	3.3	3.3	3.3	0	3.3	0	1.8	0
PLAY	1.2	1.1	1.8	1.2	1.2	0.8	0.8	0	0.7	0	3.3	3.3	3.3	3.3	1.9	1.7	1.7	1.7	1.8	1.8
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.3	0	3.3	0	1.7	0	1.8	1.6	1.7	1.7	3.3	0	0	0	0	0	0	3.3	1.6	3.3
PLAY	1.8	1.7	1.8	0	1.7	0	1.8	1.6	1.7	3.3	0	0	0	0	0	0	0	3.3	1.6	3.3
Ref No.	IC3001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	0	0	1.8	1.8	0	0	1.8	3.3	1.6	3.3	3.3	0	0	0	1.0	1.0	2.4	0.6	3.3
PLAY	0	0	0	1.8	1.8	0	0	1.8	0	3.3	3.3	0	0	0	1.0	1.0	0.6	2.4	0.6	0
Ref No.	IC3001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	0.6	0.6	2.4	0.4	0	0.6	0.6	2.4	0.4	3.3	1.3	1.3	2.2	0.3	0	0	0	0	0	0
PLAY	0.6	0.6	2.4	0.4	3.3	1.3	1.3	2.4	0.4	0	1.3	2.2	0.5	0	0	0	0	3.3	3.0	0
Ref No.	IC3001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	0	0	3.3	3.1	0	1.8	0.9	0.5	0.5	0.5	0	3.3	0.1	0	3.3	3.3	0	3.1	3.1	3.3
PLAY	1.8	1.2	1.2	0.1	1.2	0.1	2.1	1.2	2.2	0	0	2.4	1.4	1.2	0.4	3.3	0	2.3	2.1	3.3
Ref No.	IC3001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
STOP	2.8	2.9	0	2.8	3.0	3.3	3.3	3.0	0	0	3.2	3.3	2.9	1.8	2.9	0	2.9	2.9	3.3	3.1
PLAY	3.3	2.9	0	0	3.0	2.6	3.3	2.5	2.5	0	2.6	2.5	3.3	2.6	1.8	2.4	0	2.6	2.8	0
Ref No.	IC3001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
STOP	3.0	0	1.7	3.3	1.7	0	3.3	1.8	2.8	3.3	3.3	2.8	3.3	0	3.3	3.3	3.3	3.3	3.1	0
PLAY	2.6	0	0	1.7	3.3	0	3.3	1.8	0	0	0	2.2	0	0	0	3.3	3.3	3.3	3.3	0
Ref No.	IC3001																			
MODE	201	202	203	204	205	206	207	208												
STOP	0.1	1.8	1.4	0	3.3	0	1.2	0												
PLAY	0.1	1.8	1.4	0	3.3	0	1.2	0												
Ref No.	IC3051																			
MODE	1	2	3	4	5															
STOP	2.6	2.6	1.8	0	0															
PLAY	2.6	2.6	1.8	0	0															
Ref No.	IC3061																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.3	3.1	2.9	0	2.9	3.0	3.3	3.1	2.9	0	2.9	3.0	3.3	2.8	3.3	3.3	3.3	3.1	1.4	0
PLAY	3.3	2.5	2.5	0	2.6	2.5	3.3	2.5	2.5	0	2.5	2.5	3.3	2.8	3.3	3.3	3.3	3.1	1.4	0
Ref No.	IC3061																			
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	1.2	3.3	0	1.1	1.2	1.4	1.2	0	0	0	3.3	1.7	2.8	0	3.3	3.1	2.9
PLAY	0	0	0	1.5	3.3	0	1.1	1.5	1.4	1.2	0	0	0	3.3	1.7	2.1	0	3.3	2.5	2.5
Ref No.	IC3061										IC3091									
MODE	41	42	43	44	45	46	47	48	49	50			1	2	3	4	5	6		
STOP	0	2.9	2.9	3.3	3.1	2.8	0	2.8	3.0	0			5.0	0	5.0	1.3	0	3.3		
PLAY	0	2.5	2.5	3.3	2.7	2.8	0	2.8	2.1	0			5.0	0	5.0	1.3	0	3.3		

Ref No.	IC4211																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
STOP	3.3	3.3	0	0	0	0	0	4.9	2.4	2.5	2.4	2.5	2.4	0	2.1	0	0	5.0	0	0	
PLAY	3.3	3.3	0	0	0	0	0	4.9	2.4	2.5	2.4	2.5	2.4	0	2.1	0	0	5.0	0	0	
Ref No.	IC4211																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36					
STOP	0	5.0	0	5.0	0	5.0	0	5.0	0	0	-	-	3.2	3.3	3.3	3.3					
PLAY	0	5.0	0	5.0	0	5.0	0	5.0	0	0	-	-	3.2	3.3	3.3	3.3					
Ref No.	IC6201																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
STOP	3.3	3.0	3.3	3.2	3.3	3.3	3.3	3.0	3.3	3.3	3.3	3.3	2.4	3.0	3.0	2.8	3.3	1.5	0	0	
PLAY	3.3	2.0	3.3	3.2	3.3	3.3	3.3	1.5	3.3	3.3	3.3	3.3	0.7	2.0	2.4	2.4	3.3	1.5	0	0	
Ref No.	IC6201																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
STOP	3.3	3.3	1.6	1.6	3.3	3.0	2.8	2.9	2.7	2.6	2.6	2.6	2.5	3.3	0.4	0.4	0.4	0.4	0.5	2.4	
PLAY	3.3	3.3	1.6	1.6	3.3	2.2	2.0	2.4	2.1	1.7	1.9	1.5	1.5	3.3	2.4	1.6	2.5	2.7	1.4	1.5	
Ref No.	IC6201																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
STOP	2.8	3.3	0.5	3.3	3.3	3.3	3.3	0	0	3.3	0.1	3.3	3.3	2.0	0	3.3	3.3	0	0	3.3	
PLAY	2.3	1.1	0.5	3.3	3.3	3.3	3.3	0	0	2.8	1.0	2.5	3.3	2.0	0	3.3	3.3	0	0	3.3	
Ref No.	IC6201																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
STOP	0	0	0	3.3	3.3	3.3	3.3	3.3	0	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	3.3	
PLAY	0	0	0	0	3.3	3.3	3.3	3.3	0	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	0	0.1	
Ref No.	IC6201																				
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	1.3	0.7	0.6	0.5	1.0	1.1	0.6	1.2	0	0.6	2.0	1.2	0.8	2.0	2.1	1.7	2.3	
PLAY	3.3	3.3	3.3	2.4	2.2	2.6	2.3	2.5	2.5	2.6	2.4	0	2.2	2.4	2.5	2.5	2.6	2.4	2.7	2.7	
Ref No.	IC6251										IC6301										
MODE	1	2	3	4	5	6	7			1	2	3	4	5							
STOP	3.3	0	0	1.9	5.1	0	5.1			0	0	0	3.3	3.3							
PLAY	3.3	0	0	1.9	5.1	0	5.1			0	0	0	3.3	3.3							
Ref No.	IC6302																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
STOP	2.6	2.9	2.5	2.8	2.7	2.5	2.6	2.6	0	0	3.3	3.3	0	0	0	2.8	2.6	2.7	2.9		
PLAY	1.3	2.9	2.5	1.5	2.4	1.5	1.4	1.9	0	0	3.3	3.3	3.3	0	0	0	2.4	1.3	1.6	2.4	
Ref No.	IC6302																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
STOP	2.8	3.0	1.8	1.7	1.4	0.9	0	1.2	0	1.3	1.5	0.6	0.9	0.6	0.6	0.3	3.3	1.0	0.3	0.6	
PLAY	2.0	2.2	2.6	2.1	2.3	2.4	0	2.4	2.4	2.2	2.2	2.4	2.6	2.6	2.3	3.3	3.3	-	2.5	2.5	
Ref No.	IC6302										IC6303										
MODE	41	42	43	44	45	46	47	48			1	2	3	4	5	6	7	8			
STOP	1.1	1.5	1.1	1.7	1.1	0	3.3	2.4			0	0	0	0	3.3	3.3	0	3.3			
PLAY	2.4	2.6	2.7	2.6	2.7	0	3.3	1.5			0	0	0	0	3.3	3.3	0	3.3			
Ref No.	IC6501																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
STOP	3.3	0	1.6	1.5	3.3	0	1.6	1.6	1.6	1.5	0	0	1.5	0	0	0					
PLAY	3.3	0	1.6	1.5	3.3	0	-	-	1.6	1.5	0	3.2	1.5	1.8	1.4	3.2					
Ref No.	IC7001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
STOP	3.3	3.3	0	3.3	3.3	3.3	3.3	0	0	2.5	3.3	0	3.3	3.3	3.3	3.3	0	0	0	0.6	
PLAY	0	3.3	2.0	3.3	3.3	0	3.3	0	1.9	2.5	2.5	0	3.3	2.2	3.3	3.3	1.8	0	0	2.0	
Ref No.	IC7001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
STOP	3.3	3.3	3.3	3.3	0	3.3	0	0	0	3.3	0	3.3	0	0	0	2.5	2.4	2.6	0	2.9	
PLAY	3.3	3.3	3.3	3.3	1.0	3.3	3.2	0	0	3.3	0	3.3	0	0	0	2.5	1.5	0	0	0	
Ref No.	IC7001																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
STOP	2.5	2.9	2.8	2.5	2.6	2.6	3.3	3.3	0	0	0	0	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	
PLAY	0	0	2.4	2.5	1.5	1.4	1.9	1.7	1.3	2.4	2.0	2.2	2.4	2.0	2.3	0	1.2	3.3	3.3	2.4	
Ref No.	IC7001																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
STOP	3.3	3.3	3.3	0	0	2.5	0	3.0	3.0	3.0	0	3.0	3.0	3.0	1.7	3.3	0	3.3	0	0	
PLAY	0	2.6	0	0	0	2.5	0	2.5	0.8	2.1	0	1.6	1.7	1.6	1.7	3.3	0	3.3	0	0	
Ref No.	IC7001																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
STOP	3.3	0	0	0	3.3	2.5	0	0	0	0	0	3.3	0	3.3	1.7	3.3	3.3	0	0	1.5	
PLAY	0	0	1.4	1.9	0	3.3	3.3	0	0	1.5	0	3.3	1.4	3.3	3.3	3.3	3.3	0	3.0	1.5	
Ref No.	IC7001																				
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
STOP	1.7	3.3	0	3.3	3.3	0	0	0	2.5	0	1.6	1.7	1.7	1.7	1.7	3.3	3.3	3.3	0	0	
PLAY	3.3	3.3	0	3.3	3.3	0	0	0	1.4	0	0.1	0.2	1.7	1.7	1.7	3.3	3.3	3.3	0	0	
Ref No.	IC7001																				
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	
STOP	0	0	0	3.3	2.5	3.3	0	3.3	3.3	3.3	1.7	3.3	3.3	0	3.3	0	0	3.3	3.3	0	
PLAY	0	0	0	3.3	2.5	3.3	0	0.4	0.4	3.3	1.7	3.3	3.3	0	0.5	0.5	0.4	3.3	0.5	0.5	
Ref No.	IC7001																				
MODE	141	142	143	144																	
STOP	1.7	0	3.3	3.3																	
PLAY	0.5	0.5	3.3	0.6																	
Ref No.	QR6301																				
MODE	E	C	B																		
STOP	0	3.3	0																		
PLAY	0	3.3	0																		

## 13.2. Mother P.C.B.

Ref No.	IC1101			IC1125					IC1151											
MODE	K	R	A		1	2	3	4	5		1	2	3	4	5					
STOP	2.5	0	2.5		3.8	3.1	2.6	1.2	0		10.0	3.1	9.0	0	0					
PLAY	2.9	2.5	0		3.8	4.9	2.6	1.2	0		9.6	3.1	9.0	9.0	0					
Ref No.	IC3501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.1	5.0	2.8	0	2.4	5.0	0	5.0	2.7	0	2.7	5.0	2.0	2.2	2.0	2.2	0	1.5	1.5	1.8
PLAY	2.1	5.0	2.8	0	2.8	5.0	0	5.0	2.7	0	2.7	5.0	2.0	2.2	2.0	2.2	0	2.1	2.1	1.8
Ref No.	IC3501					IC4301														
MODE	21	22	23	24	25						1	2	3	4	5	6	7	8		
STOP	0	1.5	1.5	0	2.1						0	0	0	-10.2	0	0	0	10.0		
PLAY	0	2.0	2.1	0	0						0	0	0	-10.2	0	0	0	10.0		
Ref No.	IC4302								IC4303											
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.6	0	0	0	9.0		0	0	0	-8.6	0	0	0	9.0			
PLAY	0	0	0	-8.6	0	0	0	9.0		0	0	0	-8.6	0	0	0	9.0			
Ref No.	IC4304								IC4403											
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.6	0	0	0	9.0		0	0	0	-10.1	0	0	0	10.0			
PLAY	0	0	0	-8.6	0	0	0	9.0		0	0	0	-10.1	0	0	0	10.0			
Ref No.	IC4404								IC4405											
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.6	0	0	0	9.0		0	0	0	-8.6	0	0	0	9.0			
PLAY	0	0	0	-8.6	0	0	0	9.0		0	0	0	-8.6	0	0	0	9.0			
Ref No.	IC4901																			
MODE	1	2	3	4	5															
STOP	11.8	2.8	9.1	0	0															
PLAY	11.8	2.8	9.1	0	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	3.3	3.3	3.3	1.0	2.7	3.0	0	3.5	1.6	1.6	0	0	3.3	0	0	3.3	3.3	3.3	3.3	3.3
PLAY	3.3	3.3	3.3	1.0	2.7	3.0	0	3.5	1.6	1.6	0	0	3.3	0	0	3.3	3.3	3.3	3.3	3.3
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	0.4	0.4	0	3.3	0	3.3	1.6	1.6	3.2	3.3	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	0	3.1
PLAY	0.4	0.4	0	3.3	0	3.3	1.6	1.6	3.2	3.3	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	0	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	0	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.1	-28.0	-28.0	-28.0	-28.0	-27.7	-27.7	-27.7	-27.7	-27.7	
PLAY	0	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.1	3.1	-28.0	-28.0	-28.0	-28.0	-27.7	-27.7	-27.7	-27.7	-27.7	
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	-27.7	-27.7	-27.9	-27.2	-24.5	-30.0	-27.2	-30.3	-24.5	-24.5	-21.8	-24.9	-22.3	-24.9	-27.5	-27.5	-30.2	-24.9	-19.6	
PLAY	-27.7	-27.7	-27.9	-19.3	-19.8	-30.3	-30.3	-30.3	-6.5	-21.7	-11.4	-22.2	-22.4	-19.8	-9.5	-27.8	-27.8	-11.2	-19.9	
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	0	0	3.3	0	0	0	0	0	-1.2	-30.5
PLAY	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	3.3	3.3	0	0	0	0	-1.2	-30.5
Ref No.	IC6002				IC6003				IC6004				IC6005							
MODE	1	2	3	4		1	2	3		1	2	3	4	5		1	2	3	4	5
STOP	0	0	3.3	3.3		5.1	0	5.1		2.8	2.8	0	4.3	5.1		2.5	2.5	0	3.8	5.1
PLAY	0	0	3.3	3.3		5.1	0	5.1		2.8	2.8	0	4.3	5.1		2.5	2.5	0	3.8	5.1
Ref No.	Q1021			Q1051				Q1052			Q1061			Q1062						
MODE	E	C	B		1	2	3	4		E	C	B		E	C	B		E	C	B
STOP	0	26.7	0		5.2	4.0	1.1	11.4		0	-0.1	0.2		0	0	0.6		0.1	9.8	0
PLAY	0	26.7	0		5.2	4.0	1.1	10.1		0	-0.1	0.2		0	0	0.6		0.1	9.8	0
Ref No.	Q1063			Q1115																
MODE	E	C	B		S	D	G													
STOP	0	-0.1	-0.3		5.1	5.1	0													
PLAY	0	-0.1	-0.3		0	0	4.9													
Ref No.	Q3522			Q4302			Q4410			Q4413			Q4414							
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
STOP	0.7	4.9	1.4		0	2.8	0		0	0	0.7		0	0	-2.1		0	0	0.7	
PLAY	0.7	4.9	1.4		0	0	0		0	0	-4.8		0	0	-4.8		0	0	-4.8	
Ref No.	Q4415			Q4416			Q4417			Q4418			Q4419							
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
STOP	0	0	-4.8		0	0	-4.8		0	0	-4.8		0	0	-4.8		0	0	0.7	
PLAY	0	0	-4.8		0	0	-4.8		0	0	-4.8		0	0	-4.8		0	0	-4.8	
Ref No.	Q4309			Q4310			Q4311			Q4901			Q4911							
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
STOP	0	0	0.6		0	0	0.6		0	0	0.6		9.1	9.0	8.4		9.3	-9.3	-8.6	
PLAY	0	0	0.6		0	0	0.6		0	0	0.6		9.1	9.0	8.4		9.3	-9.3	-8.6	
Ref No.	Q4912			Q4913																
MODE	E	C	B		E	C	B													
STOP	9.3	-9.3	-8.6		9.3	-9.3	-8.6													
PLAY	9.3	-9.3	-8.6		9.3	-9.3	-8.6													

Ref No.	QR1115			QR3521			QR3522			QR3571			QR3572		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	3.1	0	0	3.2	0	0	3.2	0	0	3.2	0	0	3.1	0
PLAY	5.1	5.1	0	0	3.2	0	0	3.2	0	0	3.2	0	0	3.1	0
Ref No.	QR4301			QR4302			QR4304			QR4305			QR4306		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	3.3	0	0	0.1	2.7	2.7	0	2.6	0	1.4	0	1.4	1.0	0
PLAY	0	2.8	0	0	0.1	2.8	0	-4.6	0	0	1.4	0	1.4	1.0	0
Ref No.	QR4911			QR4912			QR6021								
MODE	E	C	B	E	C	B	E	C	B						
STOP	5.1	5.1	0	0	1.4	0	3.3	0	3.3						
PLAY	5.1	5.1	0	0	1.4	0	3.3	0	3.3						

### 13.3. Terminal P.C.B.

Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.6	1.6	1.6	2.0	2.0	1.6	0	5.0	0	0	2.9	2.9	2.9	2.9	4.3	4.3	3.8	3.8	0	3.2
PLAY	1.6	1.6	1.6	1.4	2.3	0	0	5.0	3.3	0	2.9	2.9	2.9	2.9	4.3	4.3	5.9	2.5	0	3.2
Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27	28												
STOP	9.0	9.0	1.8	1.6	1.6	1.6	0	3.2												
PLAY	9.0	9.0	1.8	1.6	1.6	1.6	3.3	3.2												
Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	4.6	0	4.6	1.6	1.6	1.7	3.3	2.7	3.3	1.8	1.6	0	3.3	0	3.3	0.5	0	1.6
PLAY	0	0.5	3.3	0	4.6	1.6	1.6	1.4	3.3	2.7	3.3	1.8	1.6	0	0	0	3.3	0.5	0	1.6
Ref No.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.6	1.6	1.6	1.6	3.3	1.8	1.8	1.0	1.7	0.6	0	2.2	2.2	0	1.6	1.6	5.0	2.2	2.2	2.3
PLAY	2.1	1.6	1.6	1.6	3.3	1.8	1.8	1.0	1.7	1.4	0	2.2	2.2	0.6	2.0	0.9	5.0	2.2	2.2	2.3
Ref No.	IC5201																			
MODE	41	42	43	44	45	46	47	48												
STOP	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2												
PLAY	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2												
Ref No.	Q5211			Q5215			QR5251													
MODE	E	C	B	E	C	B	E	C	B											
STOP	5.0	2.2	4.6	5.0	1.2	4.6	3.3	0.1	3.3											
PLAY	4.0	0.9	3.3	5.0	1.2	4.6	3.3	3.3	0.1											

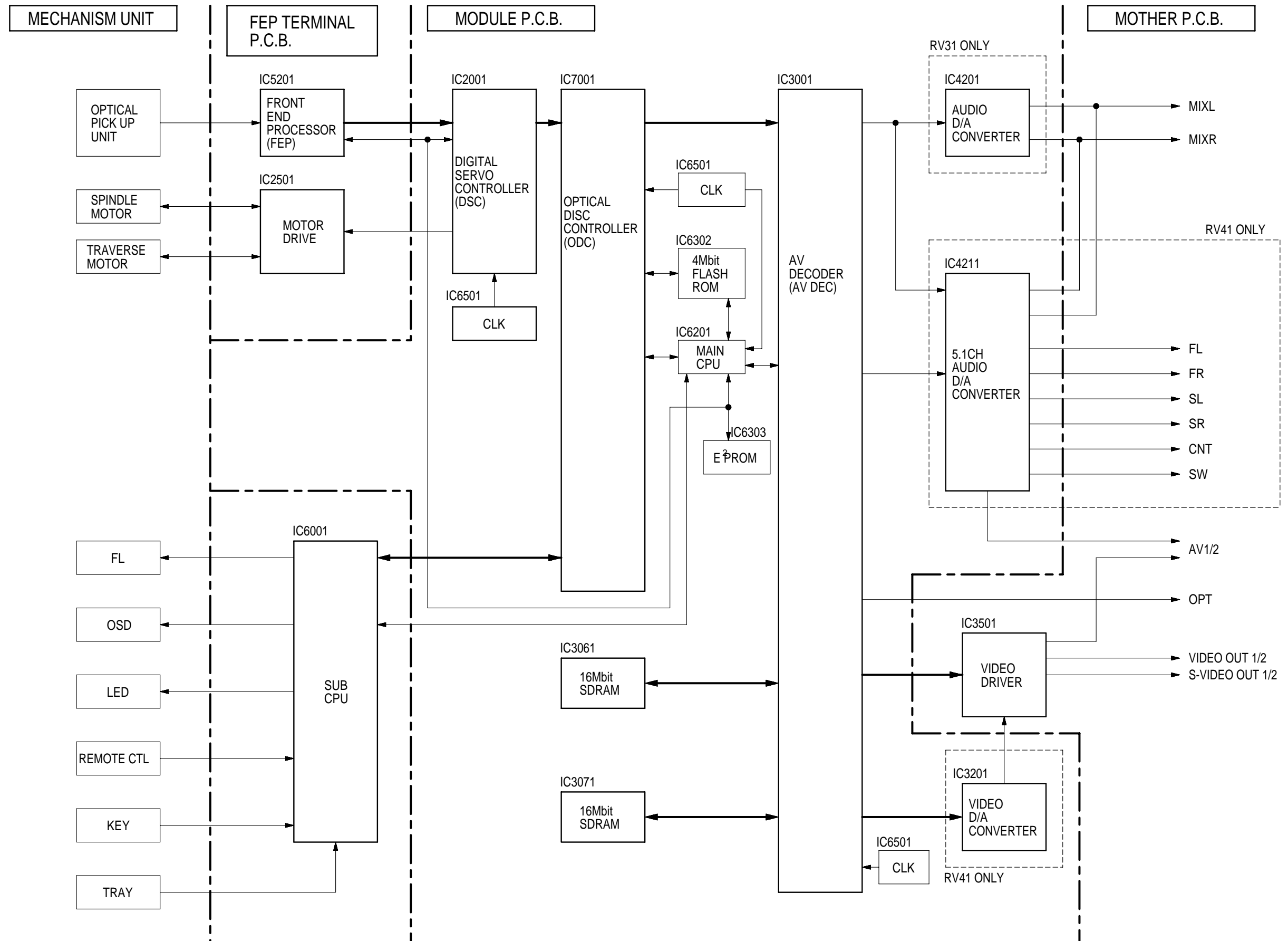
### 13.4. Scart P.C.B.

Ref No.	IC3801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.0	12.0	9.8	12.0	4.9	5.6	5.6	0	0	5.6	11.3	5.6	5.2	5.6	3.8	5.6	0	0	0	5.6
PLAY	3.5	12.0	9.8	12.0	9.3	5.6	5.6	5.6	0	5.6	11.3	5.6	5.2	5.6	3.8	5.6	0	0	0	5.6
Ref No.	IC3801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34						
STOP	5.7	5.7	5.6	5.6	5.7	5.7	5.6	4.1	4.4	4.4	2.8	3.1	3.1	0						
PLAY	5.7	5.7	5.6	5.6	5.7	5.7	5.6	4.1	9.0	9.0	2.8	3.1	3.1	0						
Ref No.	IC3851																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	0.7	0.8	0.8	0.8	0	0	0	5.2	5.2	5.2	0.7	0	0	0	5.2				
PLAY	0	0.7	0.8	0.8	0.8	0	0	0	5.2	5.2	5.2	0.7	0	0	0	5.2				
Ref No.	IC3852																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	0.7	0.8	0.8	0.8	0	0	0	5.0	5.0	5.0	0.7	0	0	0	5.2				
PLAY	0	0.7	0.8	0.8	0.8	0	0	0	5.0	5.0	5.0	0.7	0	0	0	5.2				
Ref No.	IC3853																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	3.8	0	0	0	0	0	0.8	0	2.9	3.1	0	2.9	3.1	2.9	3.1	5.2				
PLAY	3.8	0	0	0	0	0	0.8	0	2.9	3.1	0	2.9	3.1	2.9	3.1	5.2				
Ref No.	IC3891																			
MODE	1	2	3	4	5															
STOP	12.5	12.5	12.0	0	0															
PLAY	12.5	12.5	12.0	0	0															
Ref No.	Q3831						Q3832													
MODE	1	2	3	4	5	6	1	2	3	4	5	6								
STOP	0	5.0	5.2	0	5.2	5.2	0	5.0	0	0	0	0								
PLAY	0	5.0	5.2	0	5.2	5.2	0	5.0	0	0	0	0								

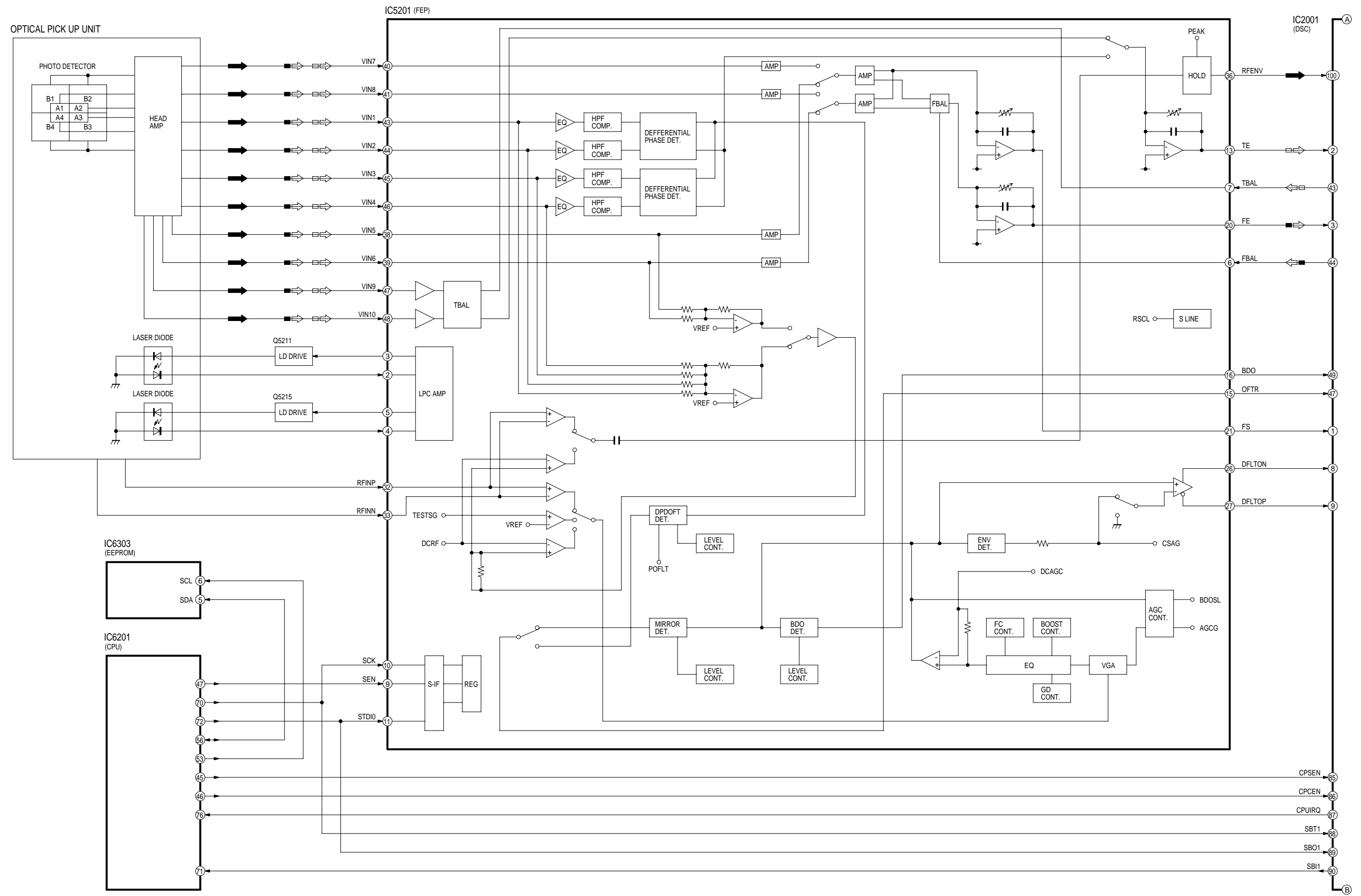


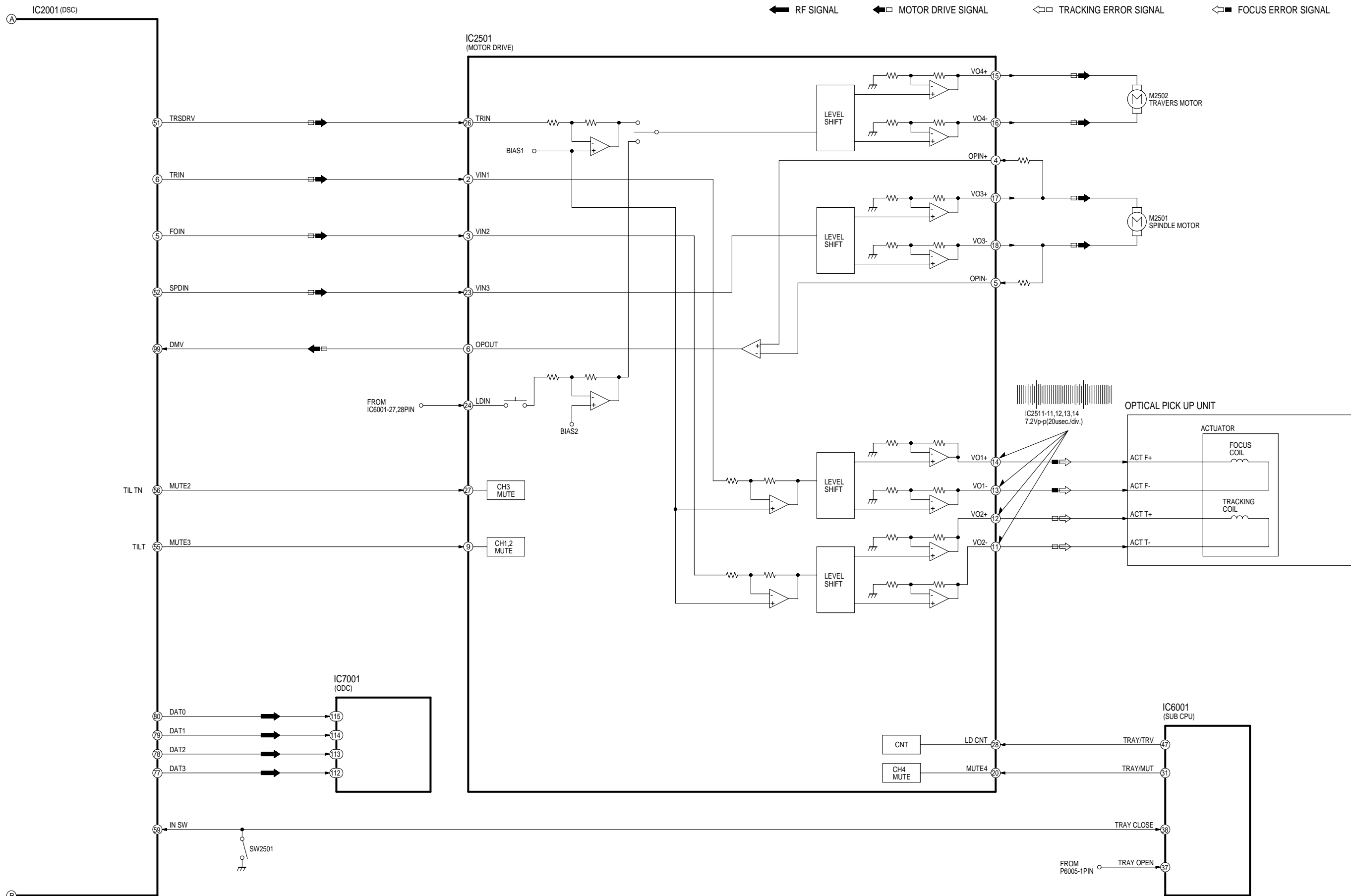
# 14 BLOCK DIAGRAM

## 14.1. OVERALL BLOCK DIAGRAM

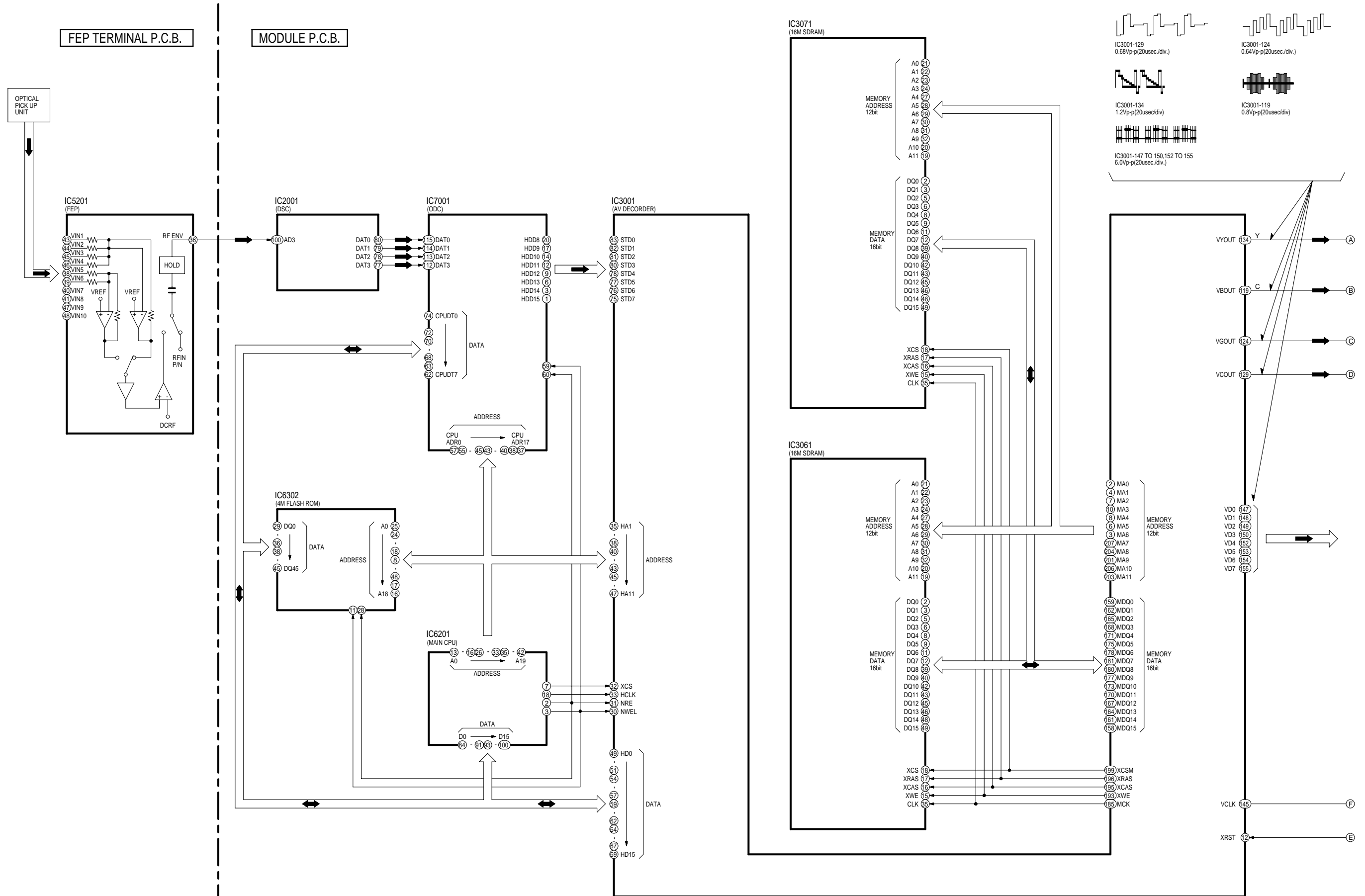


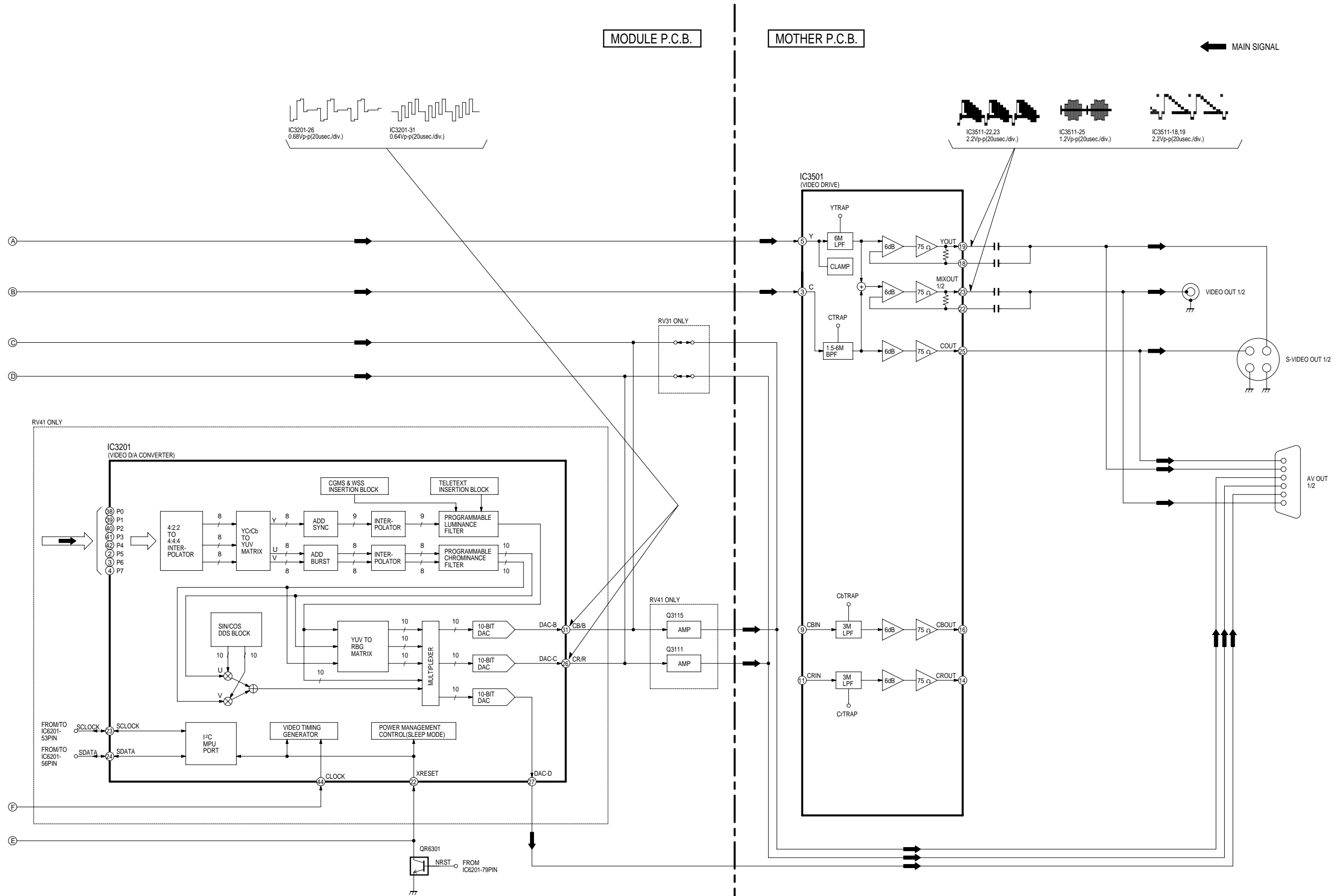
### 14.2. SERVO BLOCK DIAGRAM



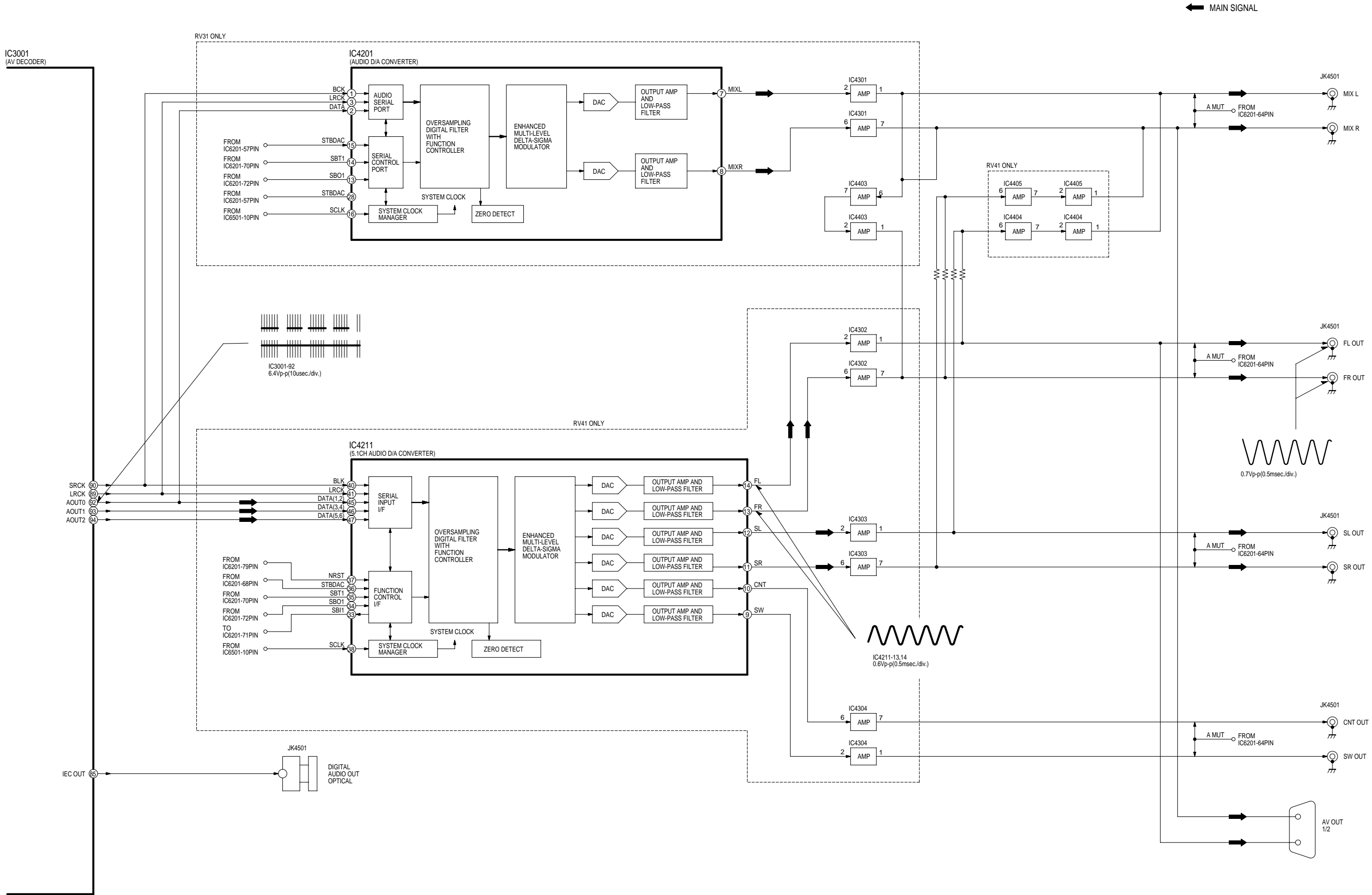


### 14.3. VIDEO BLOCK DIAGRAM



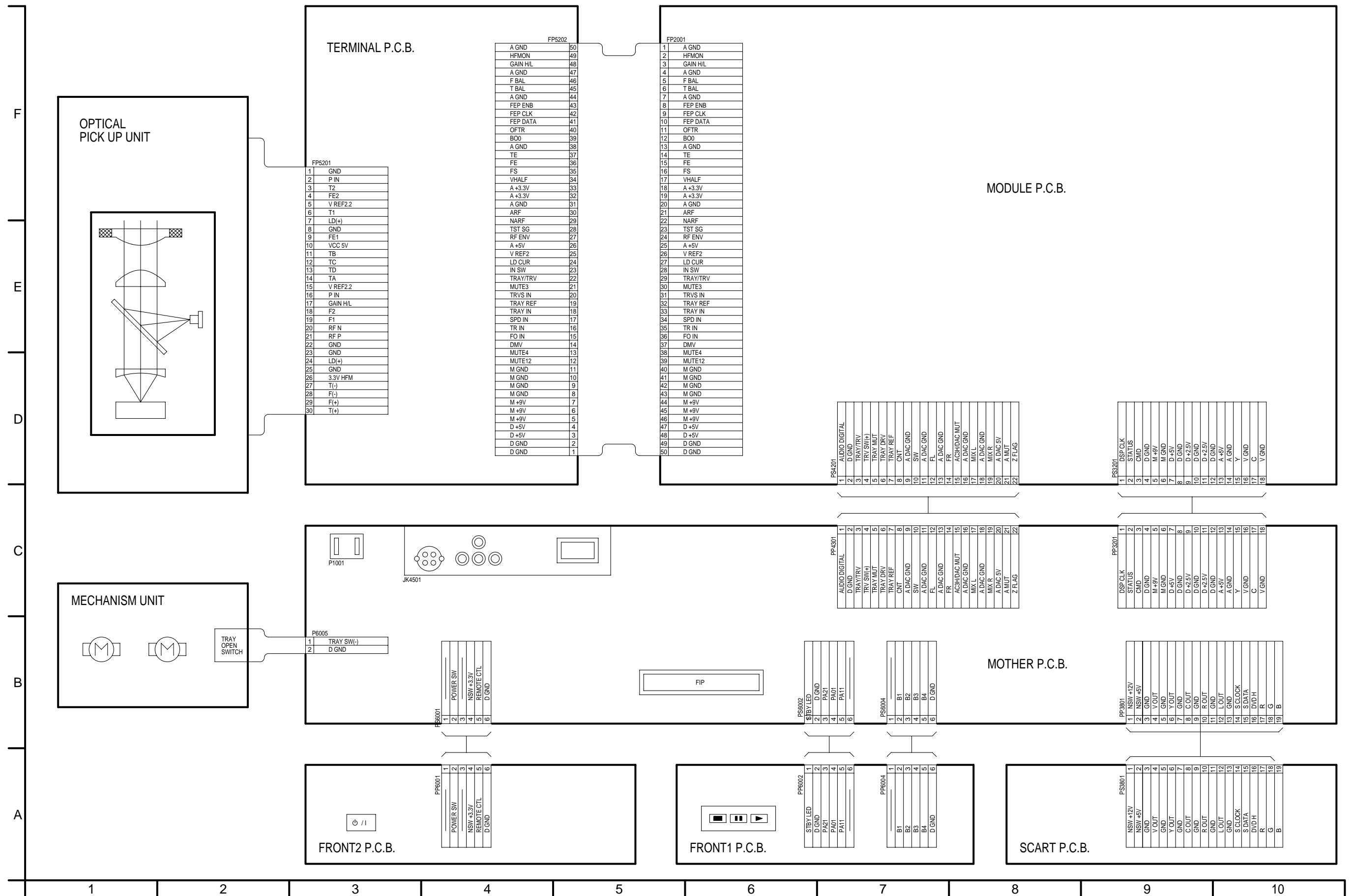


# 14.4. AUDIO BLOCK DIAGRAM

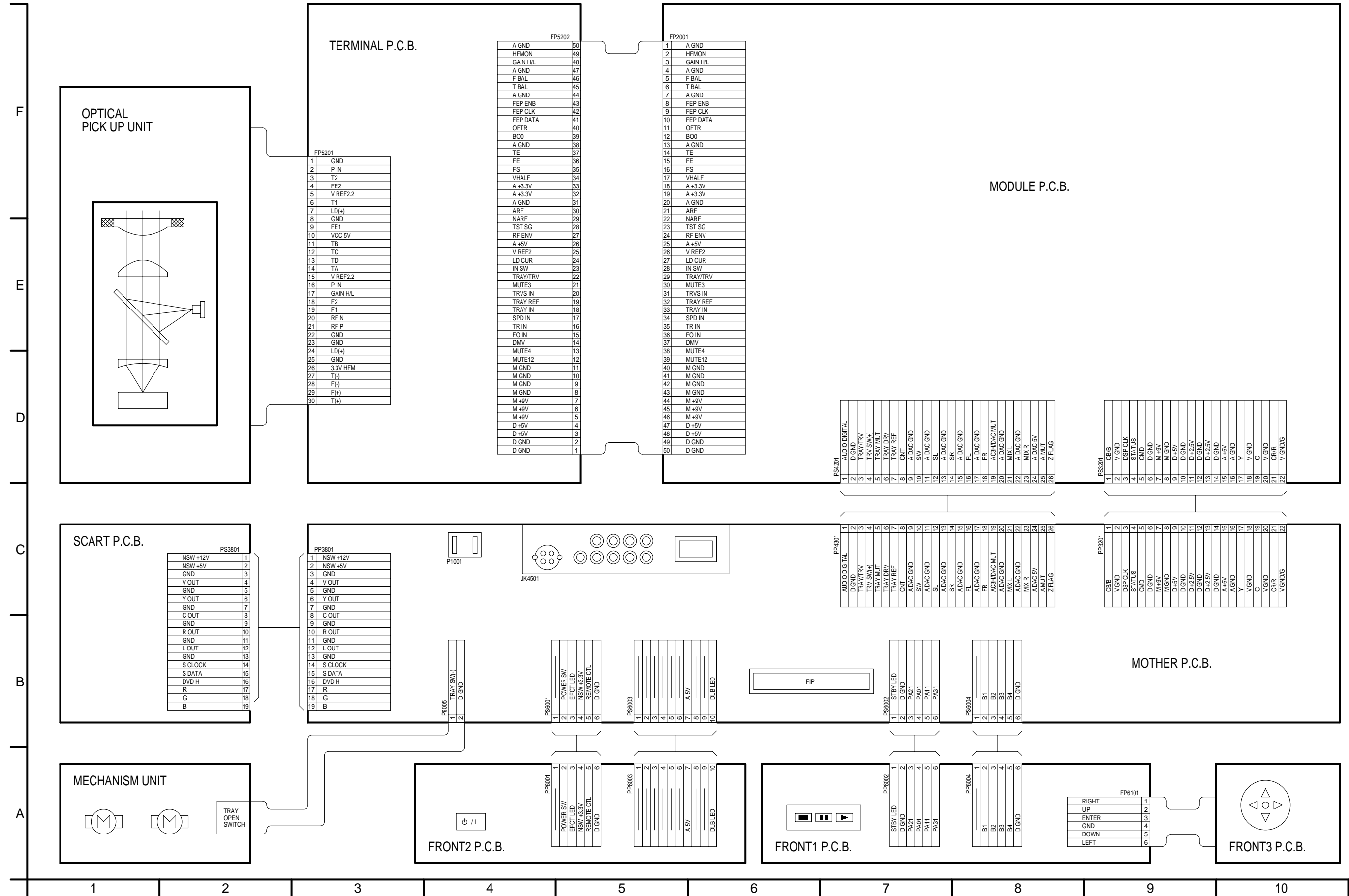


# 15 SCHEMATIC DIAGRAM

## 15.1. INTERCONNECTION SCHEMATIC DIAGRAM (DVD-RV31 ONLY)



15.2. INTERCONNECTION SCHEMATIC DIAGRAM (DVD-RV41 ONLY)





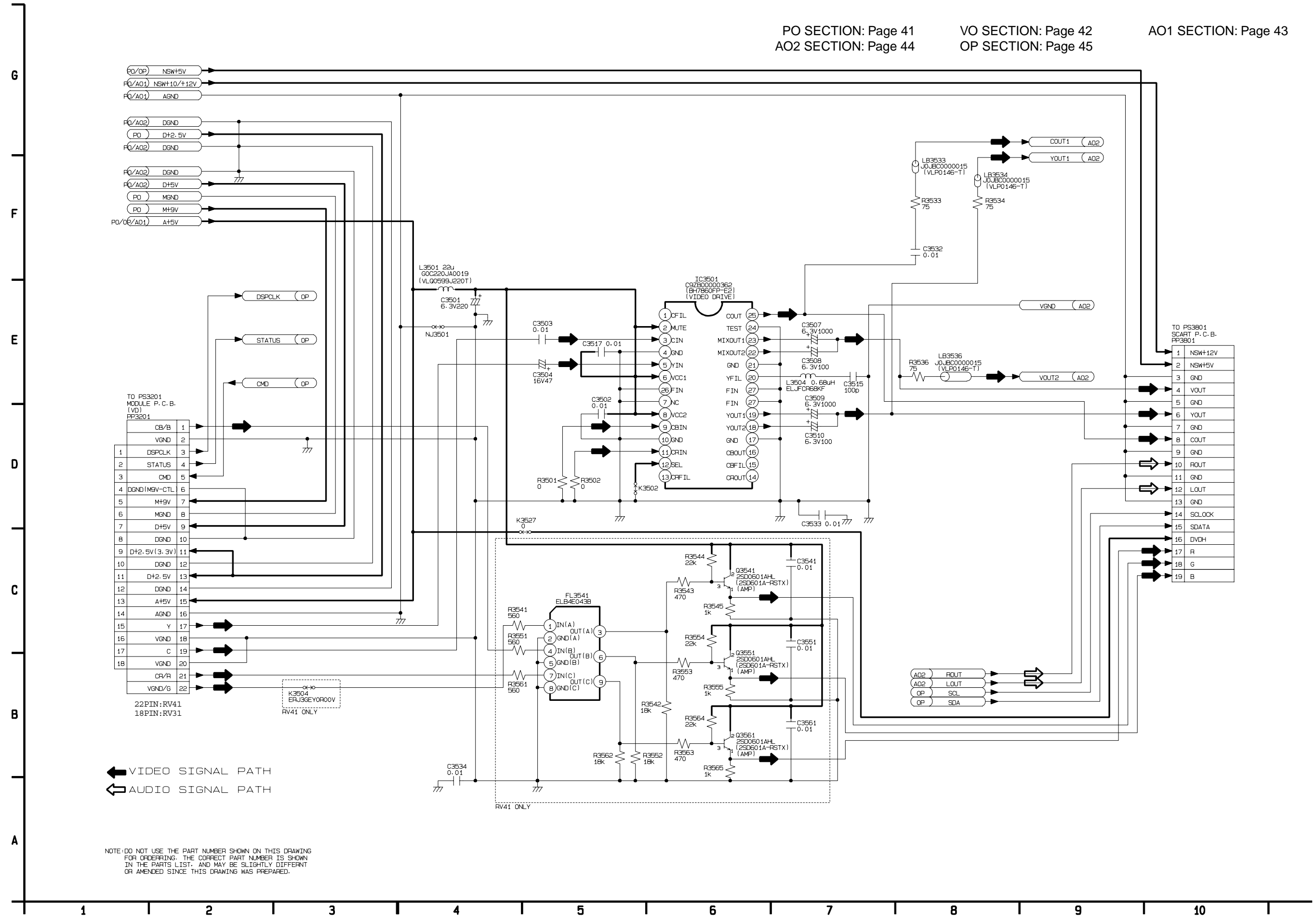


# 15.4. VIDEO OUT SECTION (MOTHER P.C.B. (2 / 5)) SCHEMATIC DIAGRAM

PO SECTION: Page 41  
AO2 SECTION: Page 44

VO SECTION: Page 42  
OP SECTION: Page 45

AO1 SECTION: Page 43









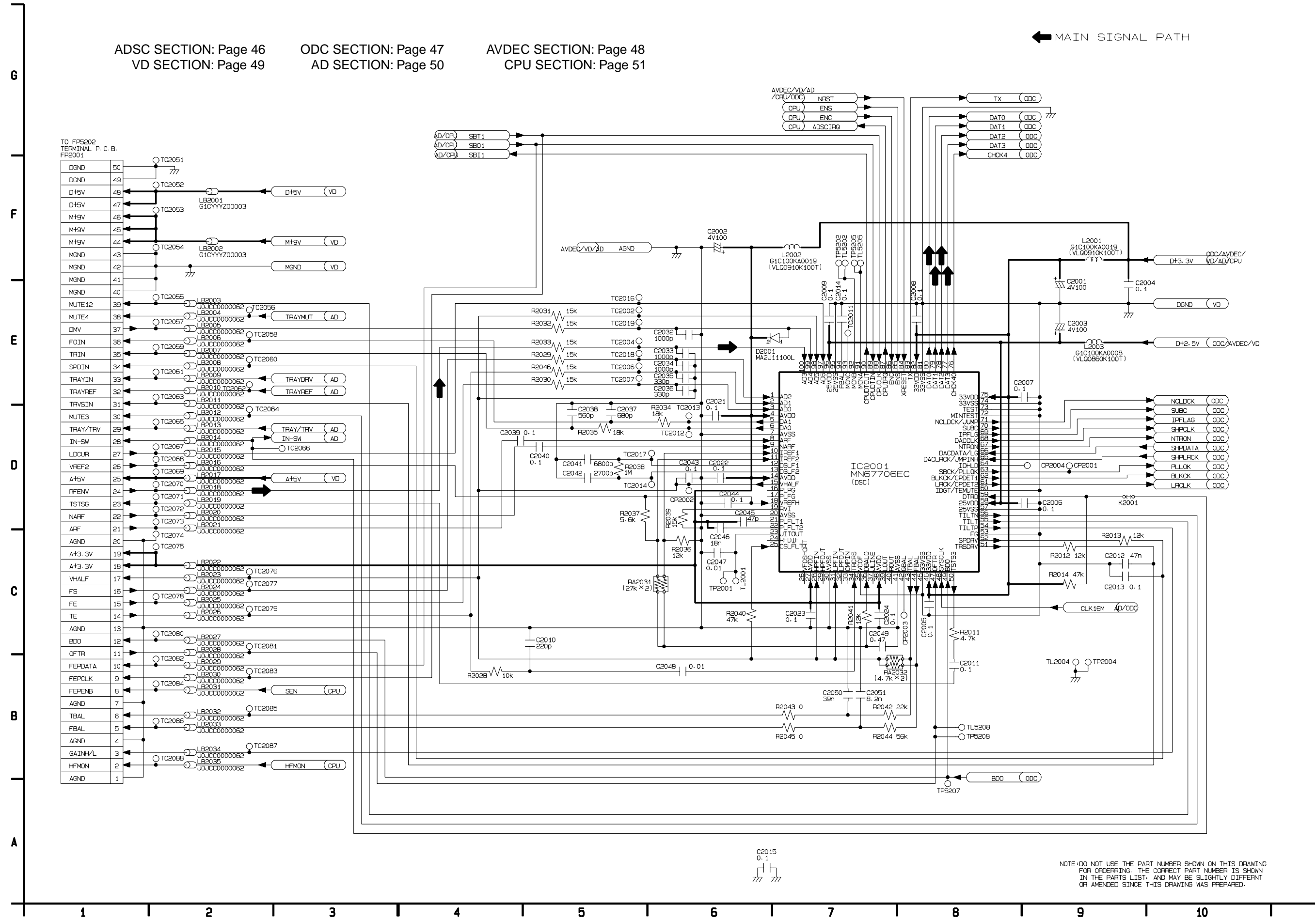
### 15.8. ADSC SECTION (MODULE P.C.B. (1 / 6)) SCHEMATIC DIAGRAM

ADSC SECTION: Page 46  
VD SECTION: Page 49

ODC SECTION: Page 47  
AD SECTION: Page 50

AVDEC SECTION: Page 48  
CPU SECTION: Page 51

← 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 DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.





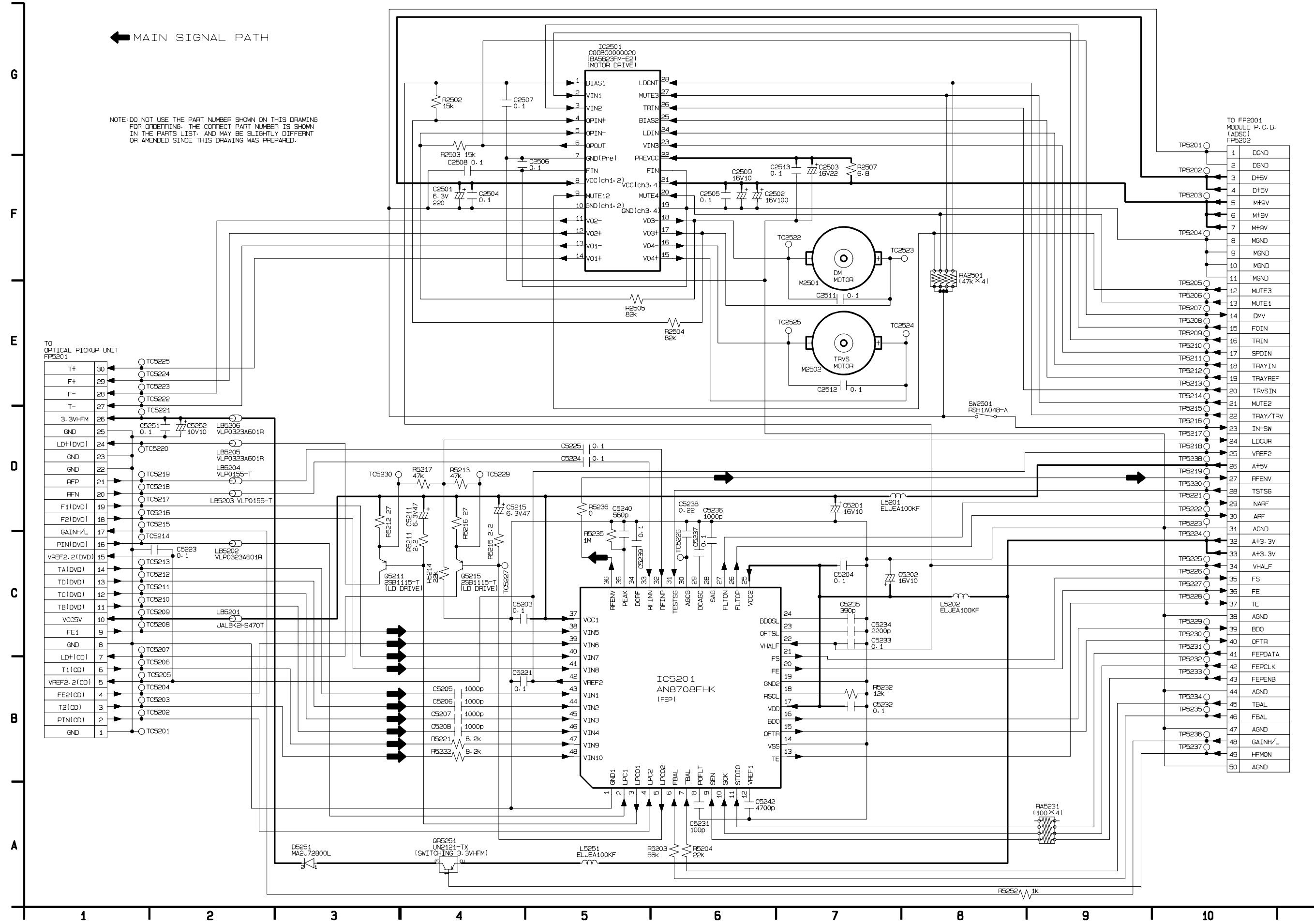




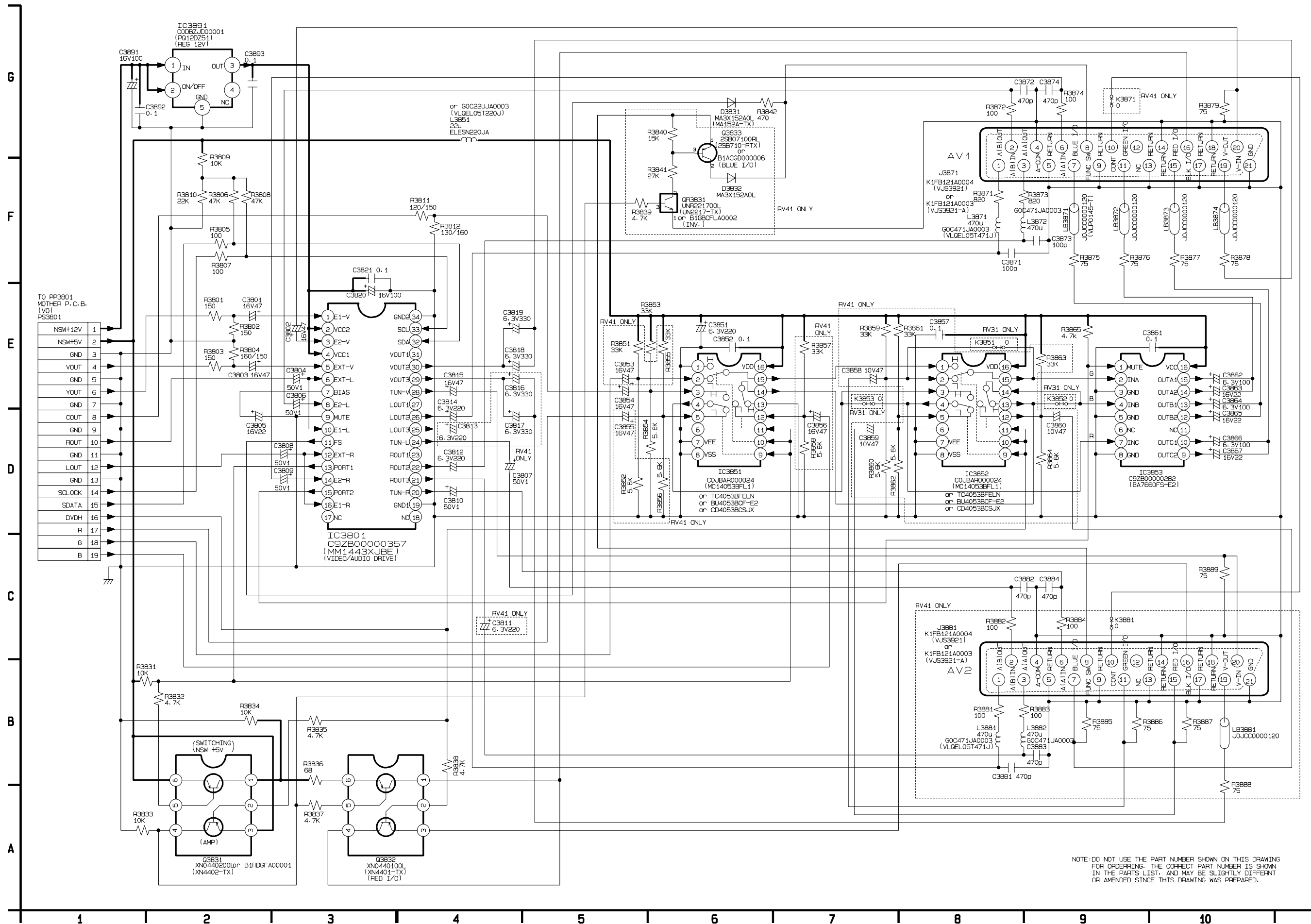




# 15.14. TERMINAL SCHEMATIC DIAGRAM



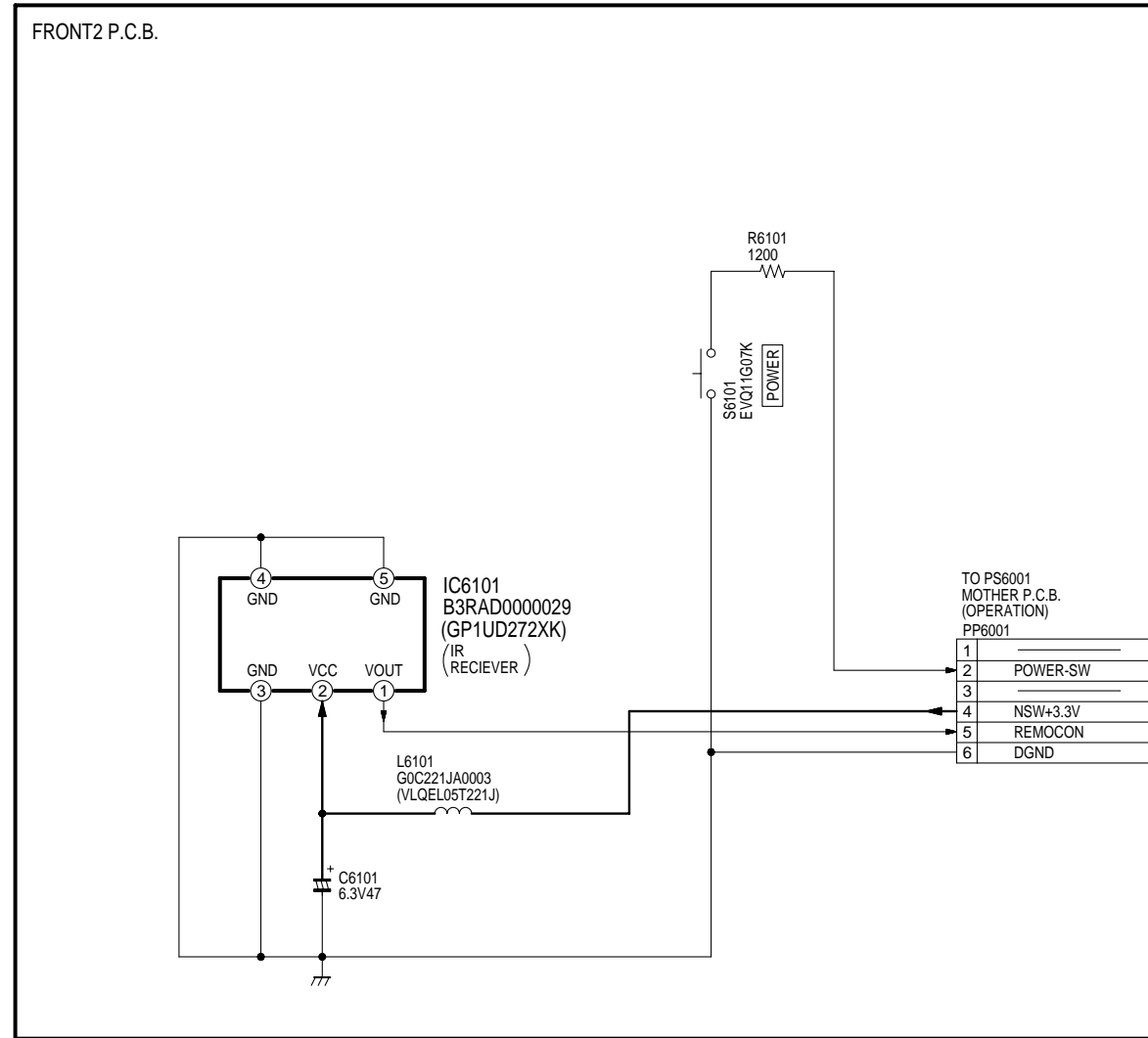
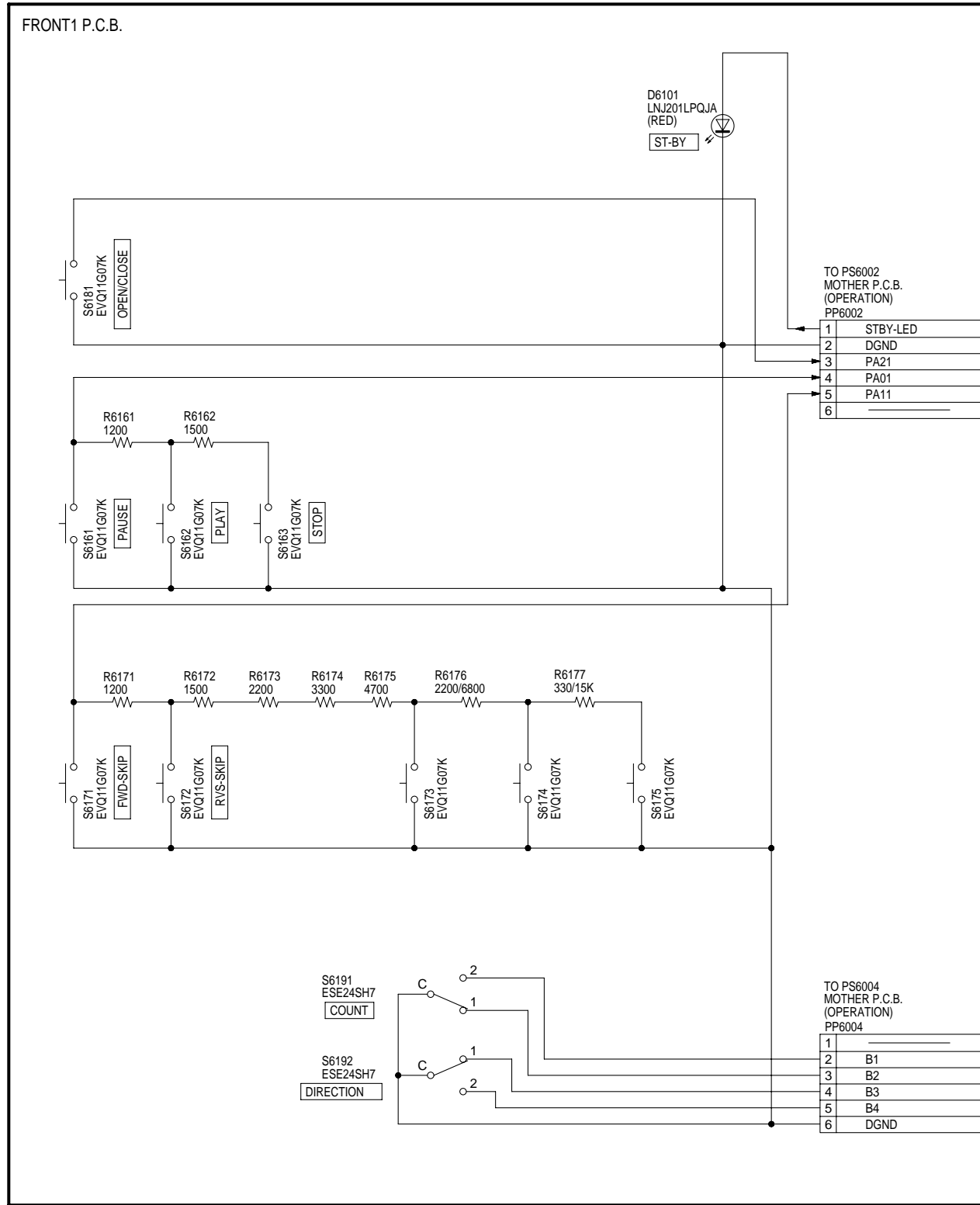
### 15.15. SCART SCHEMATIC DIAGRAM



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 DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

15.16. FRONT 1 AND FRONT 2 SCHEMATIC DIAGRAM (DVD-RV31 ONLY)

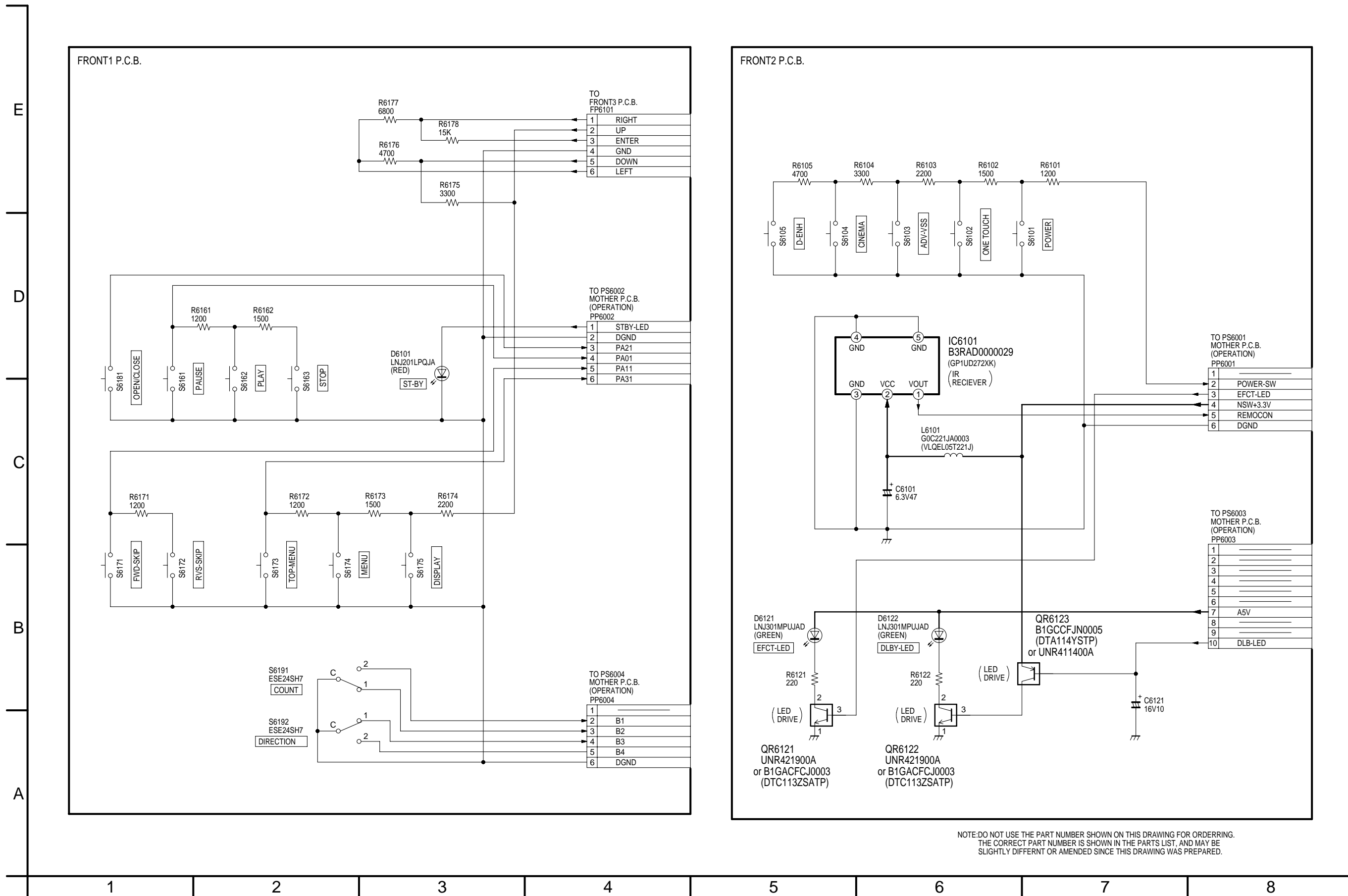
E  
D  
C  
B  
A



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.

1 2 3 4 5 6 7 8

### 15.17. FRONT1 AND FRONT 2 SCHEMATIC DIAGRAM (DVD-RV41 ONLY)



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 DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.







## 16.2. MOTHER P.C.B. AND MODULE P.C.B. ADDRESS INFORMATION

MOTHER P.C.B.							
Transistor		Q4420	B-7	IC4303	B-8	TL4401	C-6
Q1021	C-2	Q4421	B-7	IC4304	B-8	TL4402	C-6
Q1051	C-1	Q4901	D-4	IC4401	B-7	TL4420	C-5
Q1052	B-2	Q4911	D-4	IC4402	B-6	TL4470	C-5
Q1115	E-2	Q4912	D-4	IC4403	B-6	TL4901	C-7
Q3541	B-5	Q4913	D-4	IC4404	B-7	TL4902	C-7
Q3551	B-5	Q6061	F-6	IC4405	B-8	TP1101	E-3
Q3561	B-5	Q6071	E-3	IC4406	B-7	TP1102	E-3
Q4302	D-6	Transistor-resistors		IC4751	B-9	TP1103	D-3
Q4307	C-8	QR1115	E-1	IC4752	B-9	TP1104	B-3
Q4308	C-8	QR3521	B-2	IC4901	D-4	TP1105	D-3
Q4309	B-8	QR3522	B-2	IC4902	D-3	TP1106	E-2
Q4310	B-8	QR3571	B-3	IC4911	D-3	TP1107	E-3
Q4311	C-8	QR3572	B-4	IC6001	E-5	TP1111	E-7
Q4312	B-8	QR4301	C-5	IC6002	E-5	TP1112	F-3
Q4313	C-8	QR4302	D-6	Test Points		TP1113	E-5
Q4314	C-8	QR4304	D-5	TL1101	E-3	TP1114	E-3
Q4315	B-8	QR4305	C-8	TL1102	E-3	TP1115	E-2
Q4404	C-7	QR4306	C-8	TL1103	D-3	TP1116	F-6
Q4405	C-7	QR4307	C-5	TL1104	B-3	TP1117	E-1
Q4406	C-7	QR4316	B-9	TL1105	D-3	TP1118	F-1
Q4407	C-7	QR4317	B-9	TL1106	E-3	Connectors	
Q4408	B-7	QR4401	C-6	TL1107	E-4	DZ1001	A-2
Q4409	A-6	QR4402	C-6	TL1108	F-9	JK3571	A-3
Q4410	A-6	QR6021	F-4	TL1111	E-7	P1001	A-1
Q4411	B-6	QR6022	F-4	TL1112	E-4	P6005	F-7
Q4412	B-6	QR6023	E-7	TL1113	E-3	PP3201	E-7
Q4413	A-7	Integrated Circuits		TL1114	E-4	PP3801	A-5
Q4414	A-7	IC1101	D-1	TL1115	E-3	PP4301	E-8
Q4415	A-7	IC1125	E-2	TL1116	F-6	PS6001	F-2
Q4416	A-8	IC1151	E-1	TL1117	E-1	PS6002	F-8
Q4417	A-8	IC3501	B-4	TL4301	D-5	PS6003	F-1
Q4418	A-8	IC4301	C-8	TL4302	C-5	PS6004	F-8
Q4419	A-6	IC4302	C-7	TL4303	C-6	ZA1011	A-3

ADDRESS INFORMATION

MODULE P.C.B.															
Transistor		CP6201	F-2 C	CP6320	F-2 C	TC2002	C-6 F	TC3203	A-6 F	TL6204	F-3 C				
Q3101	C-2 F	CP6202	F-2 C	CP6321	F-2 C	TC2004	C-6 F	TC3204	A-6 F	TL6205	F-4 C				
Q3105	C-3 F	CP6203	F-2 C	CP6322	F-2 C	TC2006	C-6 F	TC3205	A-6 F	TL6206	F-4 C				
Q3111	C-2 F	CP6204	F-2 C	CP6323	F-2 C	TC2007	C-7 F	TC3206	B-6 F	TL6207	F-3 C				
Q3115	C-3 F	CP6205	F-2 C	CP6324	F-2 C	TC2011	C-6 F	TC3207	B-6 F	TL6208	F-4 C				
Q3211	B-5 F	CP6206	E-2 C	CP6325	F-2 C	TC2012	C-6 F	TC3208	B-5 F	TL6210	F-4 C				
Transistor-resistors		CP6207	E-2 C	CP6326	E-1 C	TC2013	C-6 F	TC3209	B-5 F	TL6289	F-3 C				
QR3301	B-5 F	CP6208	E-2 C	CP6327	E-2 C	TC2014	C-6 F	TC3301	A-5 F	TP2001	D-7 F				
QR4211	A-2 F	CP6209	E-2 C	CP6328	E-3 F	TC2016	B-6 F	TC3302	A-5 F	TP2004	D-7 F				
QR6301	F-3 C	CP6210	E-2 C	CP6329	E-3 F	TC2017	C-6 F	TC3303	A-5 F	TP5202	D-7 F				
Integrated Circuits		CP6211	E-6 F	CP6330	E-3 F	TC2018	C-6 F	TC3304	A-5 F	TP5205	E-7 F				
IC2001	C-6 F	CP6212	E-3 C	CP6331	E-3 F	TC2019	B-6 F	TC3305	A-5 F	TP5208	D-7 F				
IC3001	E-6 C	CP6213	E-3 C	CP6332	E-3 F	TC2050	B-7 F	TC4201	A-3 F	TP6201	F-5 F				
IC3051	E-5 C	CP6214	E-3 C	CP6333	E-3 F	TC2051	B-7 F	TC4202	A-3 F	TP6202	F-5 F				
IC3061	D-1 F	CP6215	E-3 C	CP6334	E-3 F	TC2052	B-7 F	TC4203	A-3 F	TP6203	F-5 F				
IC3071	D-2 F	CP6216	E-3 C	CP6335	E-3 F	TC2053	B-7 F	TC4204	A-3 F	TP6204	F-5 F				
IC3091	C-1 F	CP6217	E-5 F	CP7001	D-4 F	TC2054	B-7 F	TC4205	A-4 F	TP6205	F-4 F				
IC3201	B-4 C	CP6218	E-3 C	CP7002	D-4 F	TC2055	B-7 F	TC4206	A-4 F	TP6206	F-4 F				
IC3301	B-3 C	CP6219	E-5 F	CP7004	E-3 F	TC2057	B-7 F	TC4207	A-4 F	TP6207	F-5 F				
IC4201	B-3 F	CP6220	E-3 C	CP7005	E-3 F	TC2058	B-7 F	TC4208	A-4 F	TP6208	F-5 F				
IC4211	A-2 F	CP6221	E-5 F	CP7006	D-3 F	TC2059	C-7 F	TC4209	A-4 F	TP6209	F-5 F				
IC6201	E-3 C	CP6222	D-3 C	CP7007	D-3 F	TC2060	C-7 F	TC4210	A-4 F	TP6210	F-4 F				
IC6221	D-3 C	CP6223	D-3 C	CP7008	D-3 F	TC2061	C-7 F	TC4211	B-4 F	TP6251	B-6 F				
IC6222	D-4 F	CP6224	E-3 C	CP7010	C-4 F	TC2062	C-7 F	TC4212	B-4 F	TP6252	B-6 F				
IC6251	B-1 C	CP6225	F-3 C	CP7011	C-4 F	TC2063	C-7 F	TC4213	B-4 F	TP6253	A-6 F				
IC6301	F-2 C	CP6226	F-3 C	CP7012	C-4 F	TC2064	C-7 F	TC4214	B-4 F	TP6254	B-6 F				
IC6302	E-6 F	CP6227	F-4 C	CP7013	C-4 F	TC2065	C-7 F	TC4215	B-4 F	TP6255	A-6 F				
IC6303	E-4 C	CP6228	F-4 C	CP7015	C-5 F	TC2066	C-7 F	TC4216	B-4 F	TP6256	A-6 F				
IC6501	B-2 F	CP6229	F-5 F	CP7016	C-5 F	TC2067	C-7 F	TC4217	B-3 F	TP6257	A-6 F				
IC6551	B-7 C	CP6230	F-3 C	CP7018	C-5 F	TC2068	C-7 F	TC4218	B-3 F	TP6258	A-6 F				
IC7001	C-4 C	CP6231	F-3 C	CP7019	C-5 F	TC2069	C-7 F	TC4219	B-3 F	TP6259	B-6 F				
Test Points		CP6232	F-3 C	CP7020	C-5 F	TC2070	C-7 F	TC4220	B-3 F	TP6501	C-2 F				
CP2001	C-5 F	CP6233	F-3 C	CP7021	C-5 F	TC2071	C-7 F	TC5207	D-6 F	TP6503	B-2 F				
CP2002	C-2 C	CP6301	F-5 F	CP7022	C-5 F	TC2072	C-7 F	TC6201	F-3 F	TP6504	B-2 F				
CP2003	D-2 C	CP6302	F-4 C	CP7023	C-5 F	TC2073	C-7 F	TC6230	F-3 F	TP6505	C-2 F				
CP2004	C-3 C	CP6303	F-4 C	CP7024	C-5 F	TC2074	D-7 F	TC6231	F-2 F	Connectors					
CP3001	F-2 F	CP6304	F-4 C	CP7025	C-5 F	TC2075	C-7 F	TC6232	F-2 F	FP2001	C-1 C				
CP3002	F-2 F	CP6305	F-4 C	CP7026	C-5 F	TC2076	C-7 F	TC6233	F-2 F	FP3202	A-2 C				
CP3003	F-2 F	CP6306	E-4 C	CP7027	C-5 F	TC2077	C-7 F	TC6234	F-3 F	FP3203	A-3 C				
CP3004	F-2 F	CP6307	F-4 C	CP7028	C-5 F	TC2078	C-7 F	TC6235	F-3 F	FP4202	A-4 C				
CP3005	F-2 F	CP6308	E-4 C	CP7029	C-5 F	TC2079	C-7 F	TC6236	F-3 F	PS3201	A-5 F				
CP3006	F-2 F	CP6309	E-4 C	CP7030	C-5 F	TC2080	C-7 F	TC6237	F-3 F	PS4201	A-3 F				
CP3007	F-2 F	CP6310	E-3 C	CP7031	C-5 F	TC2081	C-7 F	TC6238	F-3 F	PS6201	F-4 C				
CP3008	F-2 F	CP6311	E-3 C	CP7032	C-5 F	TC2082	C-7 F	TC6311	F-6 F						
CP3009	F-2 F	CP6312	E-3 C	CP7033	C-5 F	TC2083	C-7 F	TL2001	D-1 C						
CP3010	F-2 F	CP6313	E-3 C	CP7034	C-5 F	TC2084	C-7 F	TL2004	D-1 C						
CP3011	D-5 C	CP6314	E-3 C	CP7035	C-5 F	TC2085	D-7 F	TL5202	D-1 C						
CP3012	D-5 C	CP6315	E-3 C	CP7036	C-5 F	TC2086	D-7 F	TL5205	E-1 C						
CP4201	B-3 F	CP6316	E-3 C	CP7037	C-4 F	TC2087	D-7 F	TL5208	D-1 C						
CP4202	B-3 F	CP6317	E-4 C	CP7038	E-5 C	TC2088	D-7 F	TL6201	F-3 C						
CP4203	B-3 F	CP6318	E-4 C	CP7039	E-5 C	TC3201	A-5 F	TL6202	F-3 C						
CP4204	B-3 F	CP6319	E-4 C	CP7040	C-4 C	TC3202	A-6 F	TL6203	F-3 C						

ADDRESS INFORMATION  
 C ...COMPONENT SIDE  
 F ... FOIL SIDE

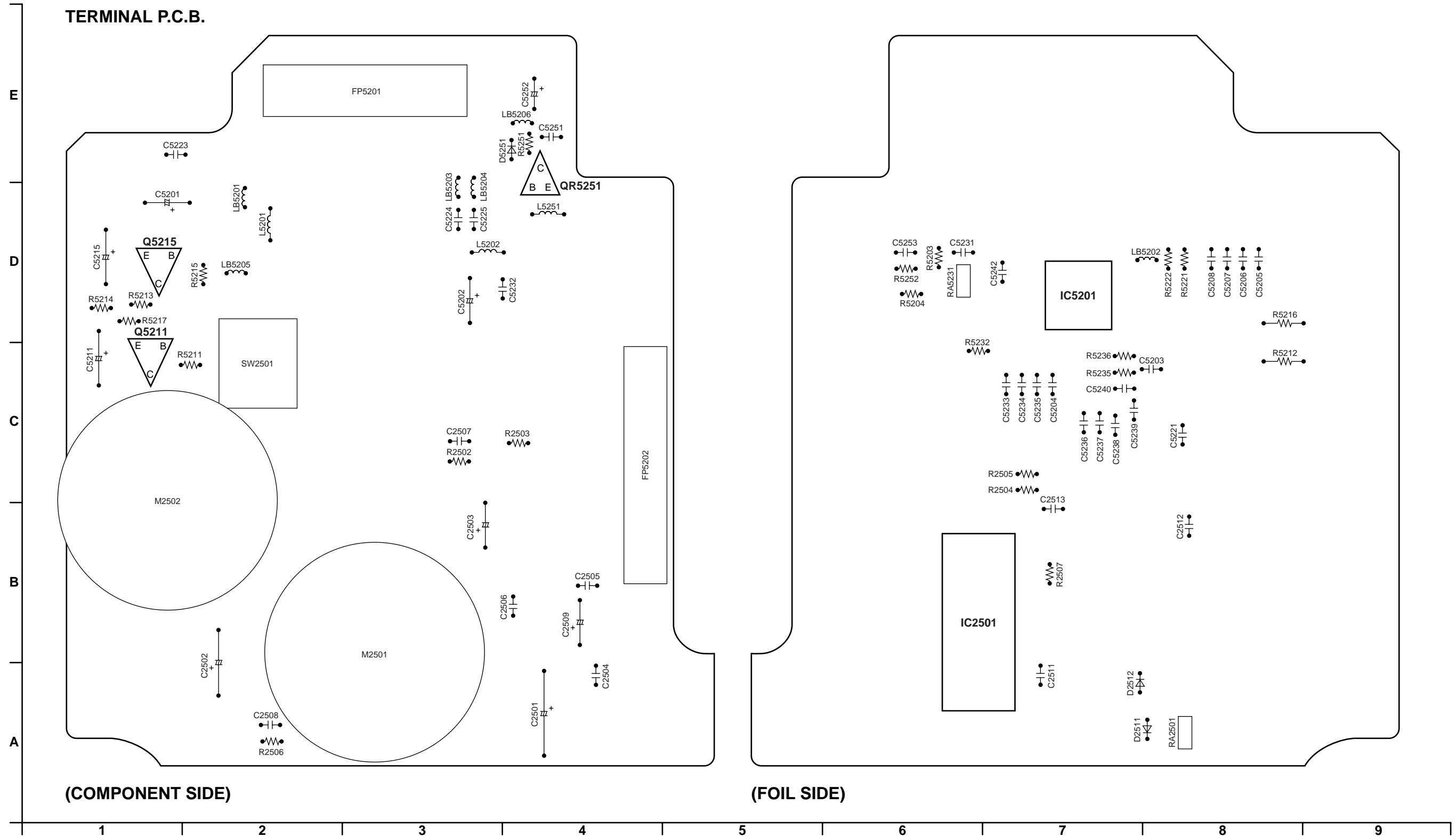




16.5. TERMINAL P.C.B.

TERMINAL P.C.B.			
Transistor		Integrated Circuits	
Q5211	C-1	IC2501	A-6
Transistor-resistors		IC5201	D-7
QR5251	D-4		

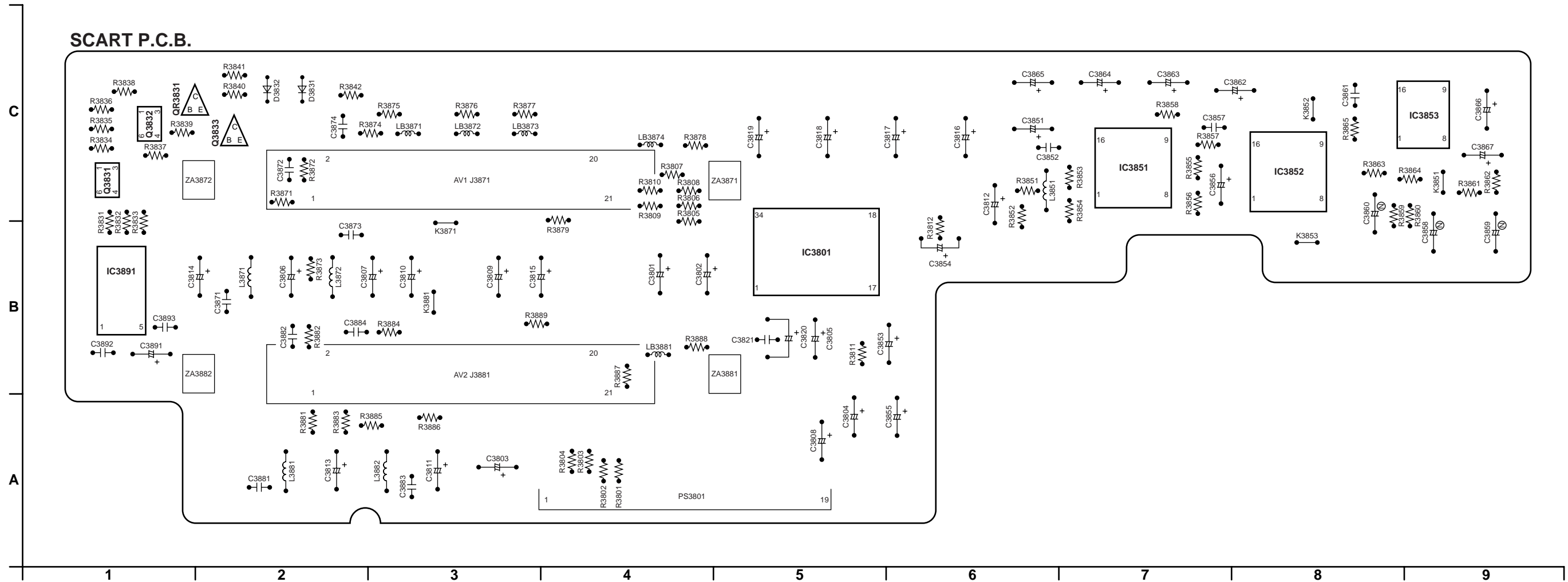
ADDRESS INFORMATION



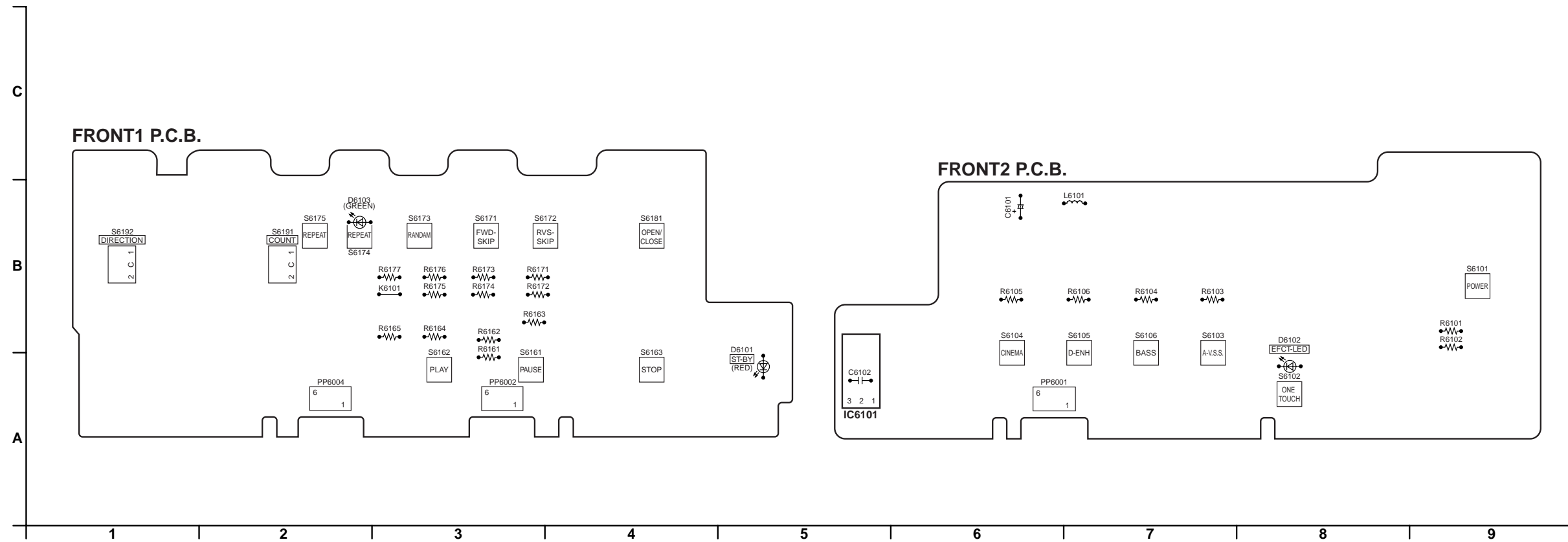
# 16.6. SCART P.C.B.

SCART P.C.B.					
Transistors		Integrated circuits		Connectors	
Q3831	C-1	IC3801	B-5	PS3801	A-4
Q3832	C-1	IC3851	C-7	ZA3871	C-5
Q3833	C-2	IC3852	C-8	ZA3872	C-1
Transistor - resistors		IC3853	C-9	ZA3881	B-5
QR3831	C-1	IC3891	B-1	ZA3882	B-1

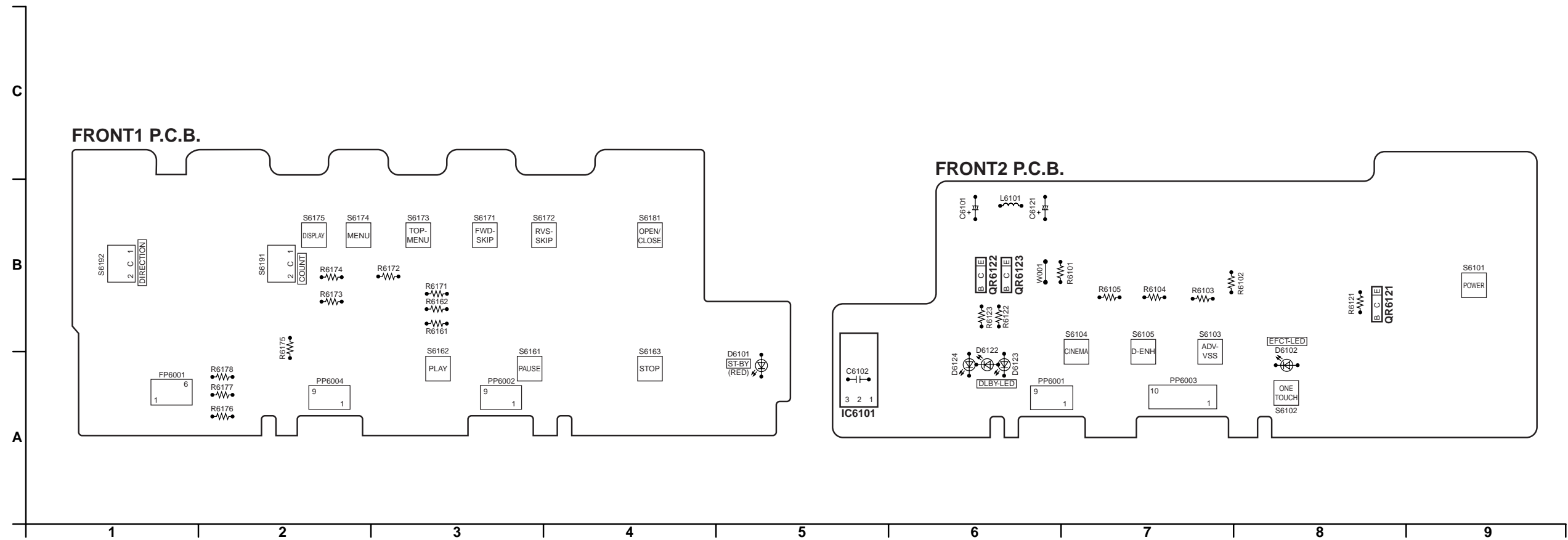
ADDRESS INFORMATION



### 16.7. FRONT 1 P.C.B. AND FRONT 2 P.C.B. (DVD-RV31 ONLY)



### 16.8. FRONT 1 P.C.B. AND FRONT 2 P.C.B. (DVD-RV41 ONLY)

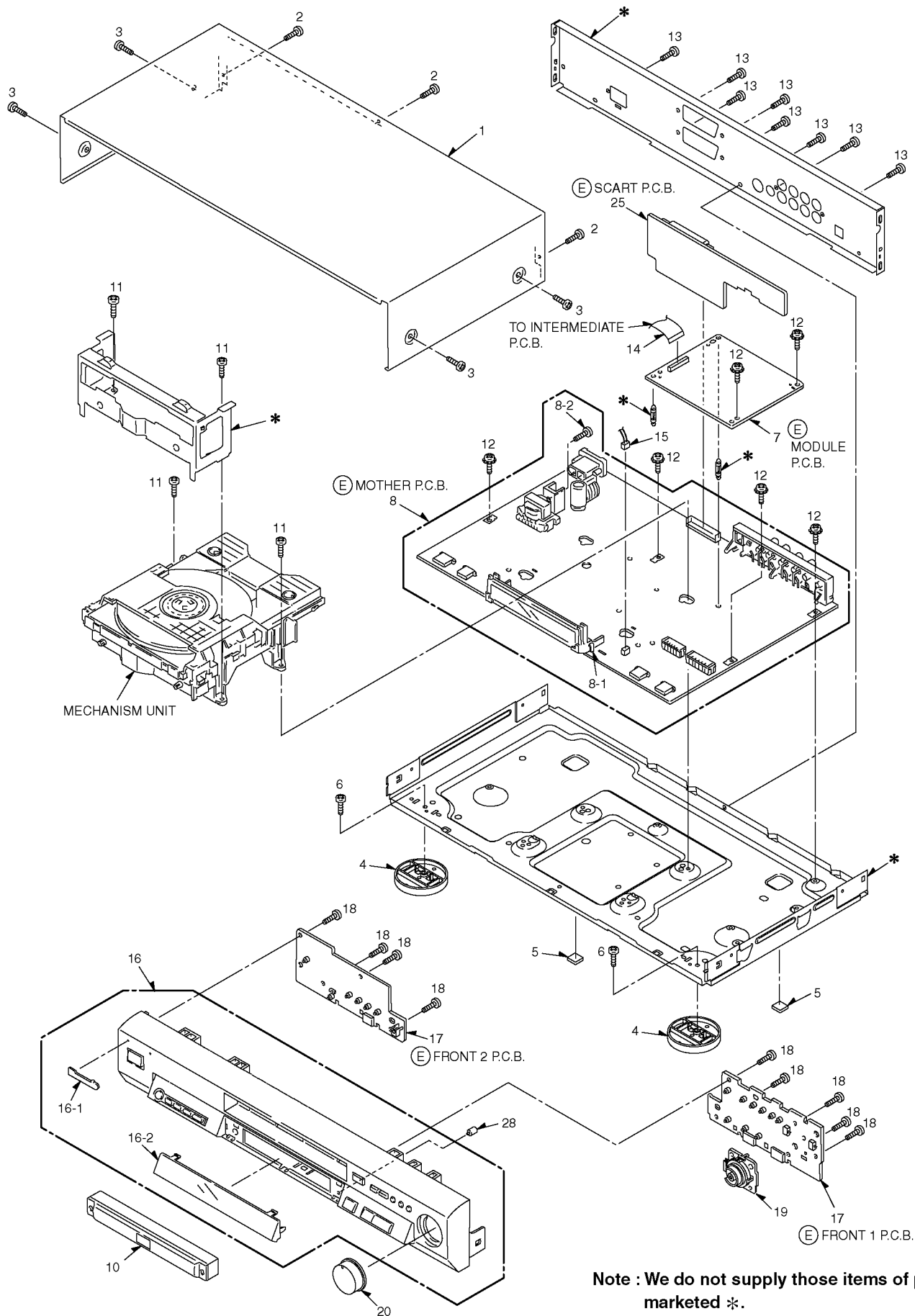






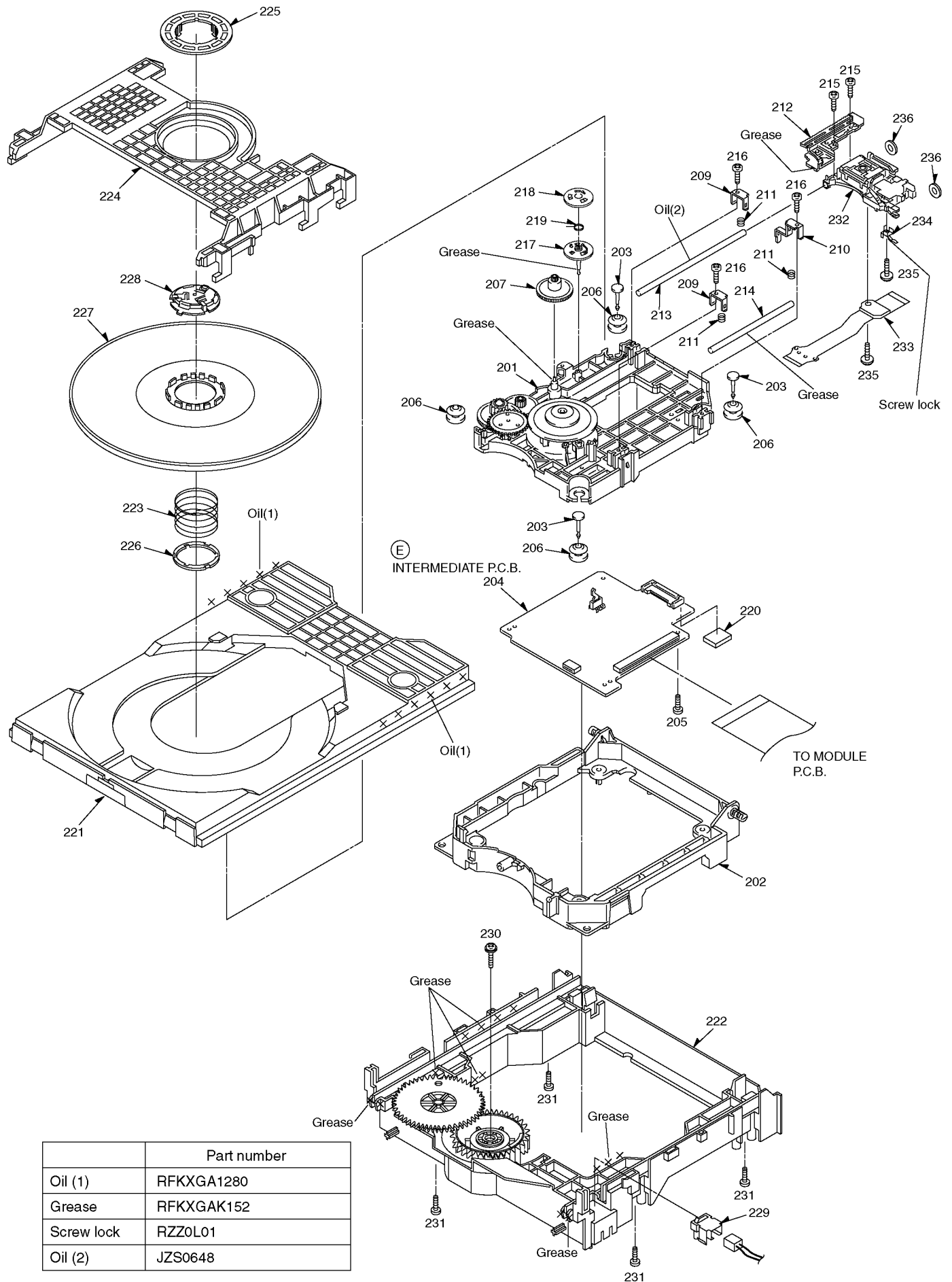
# 17 EXPLODED VIEWS

## 17.1. Casing Parts & Mechanism Section Exploded View (DVD-RV31 only)



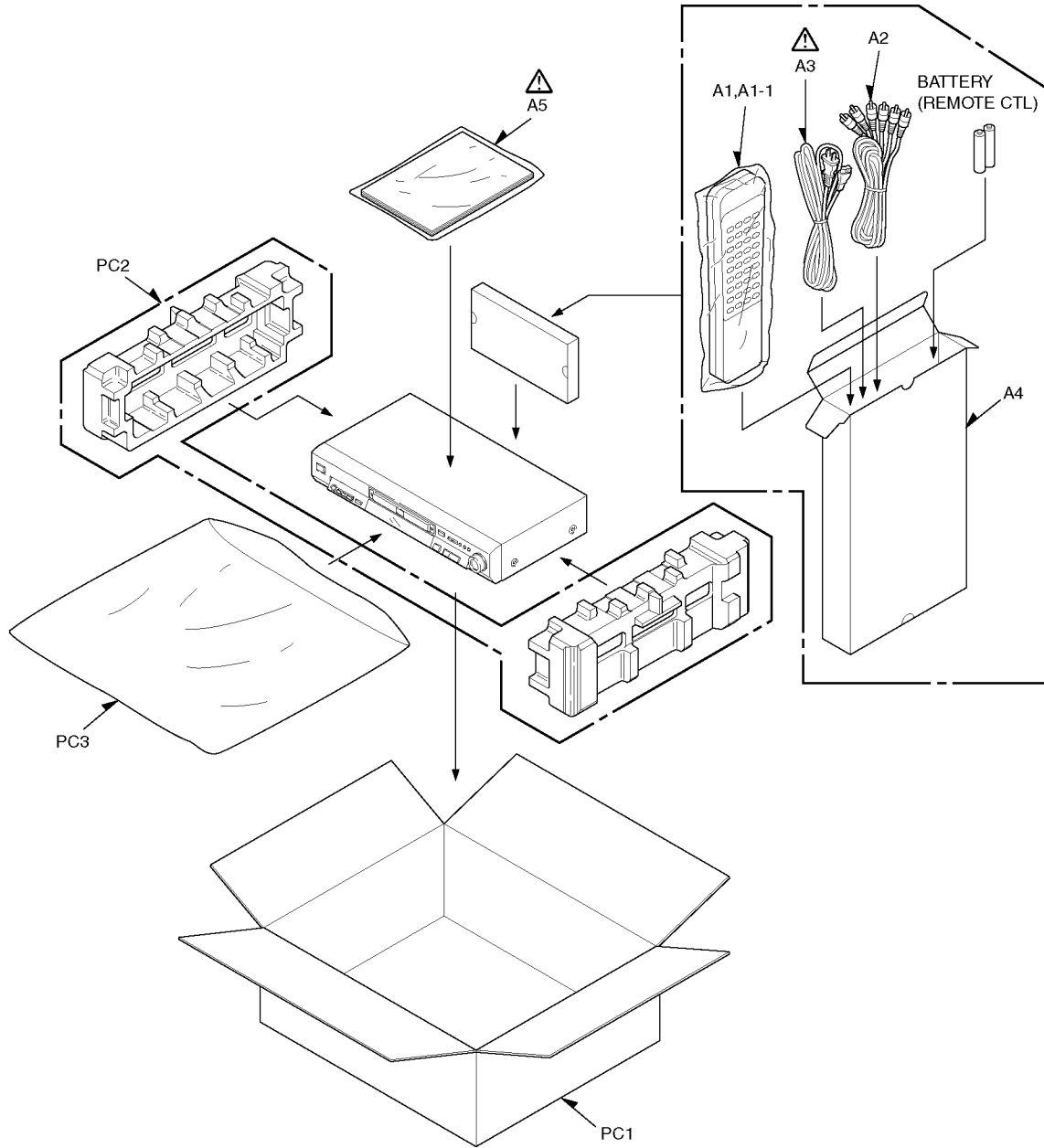


### 17.3. Mechanism Section Exploded View



	Part number
Oil (1)	RFKXGA1280
Grease	RFKXGAK152
Screw lock	RZZ0L01
Oil (2)	JZS0648

### 17.4. Packing & Accessories Section Exploded View



# 18 REPLACEMENT PARTS LIST

## Notes:

\*Important safety notice:

Components identified by  $\triangle$  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 eine vom hersteller spezifizierte einheit ausgetauscht werden.

\*Capacity values are in microfarads ( $\mu$ 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 that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

\*\*<IA>”, “<IB>”, “<IC>”, “<ID>”, marks in Remarks indicate languages of instruction manuals.

[<IA>:German/Italian/French, <IB>:Spanish/Polish, <IC>: Dutch/Swedish/Danish, <ID>: English]

\*\*\*1”, “\*2”, “\*3”, “\*4”, “\*5”, “\*6”, “\*7”, “\*8”, “\*9”, “\*10”, “\*11”, “\*12”, “\*13”, “\*14”, “\*15”, marks in Remarks indicate models.

[\*1:DVD-RV31E-S, \*2:DVD-RV31E-K, \*3:DVD-RV31EB-S,

\*4:DVD-RV31EB-K, \*5:DVD-RV31EG-S,

\*6:DVD-RV31EG-K, \*7:DVD-RV41E-S, \*8:DVD-RV41EB-S,

\*9:DVD-RV41EG-S,

\*10:DVD-RV31E-S/RV31E-K/RV31EG-S/RV31EG-K/RV41E-S/RV41EG-S,

\*11:DVD-RV31EB-S/RV31EB-K/RV41EB-S,

\*12:DVD-RV31E-S/RV31EB-S/RV31EG-S,

\*13:DVD-RV31E-K/RV31EB-K/RV31EG-K,

\*14:DVD-RV31E-S/RV31E-K/RV31EB-S/RV31EB-K/RV31EG-S/RV31EG-K,

\*15:DVD-RV41E-S/RV41EB-S/RV41EG-S]

\*[SPC] in Remarks columns parts that are supplied by S.P.C..

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKM0435-K	TOP COVER	1	[SPC]*13
1	RKM0435-S	TOP COVER	1	[SPC]*12
2	VHD0690	SCREW	3	[SPC]*12*13
3	VHD1041	SCREW	4	[SPC]*13
3	VHD1094	SCREW	4	[SPC]*12
4	RYQ0349-K	LEG	2	[SPC]*12*13
5	RKA0115-K	FOOT RUBBER	2	[SPC]*12*13
6	XTV3+8G	SCREW	2	[SPC]*12*13
7	REP3098B	MODULE P.C.B.	1	(RTL) [SPC]*12*13

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
8	REP3099B	MOTHER P.C.B.	1	(RTL) [SPC]*12*13
8-1	RMN0639	FL HOLDER	1	[SPC]*12*13
8-2	XYN3+F8	SCREW	1	[SPC]*12*13
10	RYF0576-K	TRAY TOP	1	[SPC]*13
10	RYF0576-S	TRAY TOP	1	[SPC]*12
11	XTV3+10J	SCREW	4	[SPC]*12*13
12	RHD30090	SCREW	6	[SPC]*12*13
13	VHD0690	SCREW	8	[SPC]*12*13
14	REZ1355	FLEXIBLE CABLE(50P)	1	[SPC]*12*13
15	REX1057	CONNECTOR CABLE(2P)	1	(P6005-MECHA) [SPC]*12*13
16	RYP1041C-S	FRONT PANEL ASS'Y 2	1	[MAVD]*12
16	RYP0847B-K	FRONT PANEL ASS'Y 2	1	[MAVD]*13
16-1	VGB0298	PANASONIC BADGE	1	[SPC]*12*13
16-2	RKW0639A-Q	FRONT COVER	1	[SPC]*12*13
17	REP3100C	FRONT 1,2 P.C.B.	1	(RTL) [SPC]*12*13
18	XTBS26+10J	SCREW	9	[SPC]*12*13
19	RXQ0755	SHUTTLE BASE ASS'Y	1	[SPC]*12*13
20	RGW0365-K	SHUTTLE KNOB	1	[SPC]*13
20	RGW0365-S	SHUTTLE KNOB	1	[SPC]*12
25	REP3138B	SCART P.C.B.	1	(RTL) [SPC]*12*13
28	RGL0546	INDICATOR PIECE	1	[SPC]*12*13
101	RKM0435-S	TOP COVER	1	[SPC]*15
102	VHD0690	SCREW	3	[SPC]*15
103	VHD1094	SCREW	4	[SPC]*15
104	VYK8895	LEG	2	[SPC]*15
105	RKA0115-K	FOOT RUBBER	2	[SPC]*15
106	XTV3+8G	SCREW	2	[SPC]*15
107	REP3098S	MODULE P.C.B.	1	(RTL)[SPC]*15
108	REP3099J	MOTHER P.C.B.	1	(RTL)[SPC]*15
108-1	RMN0639	FL HOLDER	1	[SPC]*15
108-2	XYN3+F8	SCREW	1	[SPC]*15
110	RYF0576-S	TRAY TOP	1	[SPC]*15
111	XTV3+10J	SCREW	4	[SPC]*15
112	RHD30090	SCREW	6	[SPC]*15
113	VHD0690	SCREW	8	[SPC]*15
114	REZ1355	FLEXIBLE CABLE(50P)	1	(FP2001- FP5202) [SPC]*15
115	REX1057	CONNECTOR CABLE(2P)	1	(P6005-MECHA) [SPC]*15
116	RYP1018-S	FRONT PANEL ASS'Y 1	1	[SPC]*15
116-1	VGB0298	PANASONIC BADGE	1	[SPC]*15
116-2	RKW0639A-Q	FRONT COVER	1	[SPC]*15
117	REP3164BA	FRONT 1 P.C.B.	1	(RTL)[SPC]*15
118	XTBS26+10J	SCREW	9	[SPC]*15
119	RXQ0753	SHUTTLE BASE ASS'Y	1	[SPC]*15
120	RGW0370-S	SHUTTLE KNOB	1	[SPC]*15
125	REP3164AB	FRONT 2 P.C.B.	1	(RTL)[SPC]*15
126	REP3173A	FRONT 3 P.C.B.	1	(RTL)[SPC]*15
127	RGW0369-S	CURSOLE RING	1	[SPC]*15
128	RGJ0022-S	JOYSTICK KNOB	1	[SPC]*15
129	XQN17+CG4	SCREW	1	[SPC]*15
130	REP3138A	SCART P.C.B.	1	(RTL)[SPC]*15
133	RGL0546	INDICATOR PIECE	1	[SPC]*15
201	RXQ0745B	SPINDLE MOTOR ASS'Y	1	[SPC]
202	RMR1323-X	MIDDLE CHASSIS	1	[SPC]
203	RMS0712	FIXED PIN	3	[SPC]
204	REP3091B-1N	INTERMEDIATE P.C.B.	1	(RTL)[SPC]
205	XTW2+8P	SCREW	1	[SPC]
206	RMG0545-A	FLOATING RUBBER	4	[SPC]
207	RDG0499	TRAVERSE GEAR(A)	1	[SPC]
209	RMC0415	ADJUST SPRING HOLDER1	2	[SPC]
210	RMC0416	ADJUST SPRING HOLDER2	1	[SPC]
211	RME0320	ADJUST SPRING	3	[SPC]
212	RMM0234	TRAVERSE DRIVE RACK	1	[SPC]
213	RMS0710	DRIVE SHAFT	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
214	RMS0711	GUIDE SHAFT	1	[SPC]
215	RHD17028	SCREW	2	[SPC]
216	VHD1224	SCREW	3	[SPC]
217	RDG0500	TRAVERSE GEAR(B)	1	[SPC]
218	RDG0501	TRAVERSE GEAR(C)	1	[SPC]
219	RME0319	TRAVERSE GEAR SPRING	1	[SPC]
220	RMG0558-K	PCB RUBBER	1	[SPC]
221	RGQ0280-K	TRAY	1	[SPC]
222	RXQ0747	MECHA CHASSIS ASS`Y	1	[SPC]
223	RME0318-1	CLAMPER SPRING	1	[SPC]
224	RMR1317-K	CLAMP PLATE	1	[SPC]
225	RMR1318-X	FIXTURE	1	[SPC]
226	RMR1321-X	SPRING HOLDER	1	[SPC]
227	RXQ0724	CLAMPER ASS`Y	1	[SPC]
228	RXQ0729	MAGNET HOLDER ASS`Y	1	[SPC]
229	RSH1A049-U	OPEN SWITCH	1	[SPC]
230	XTW3+12S	SCREW	1	[SPC]
231	XTV3+10J	SCREW	4	[SPC]
232	RAF3020A-1	OPTICAL PICK-UP	1	[SPC]
233	RJB2308A	INTERFACE FPC	1	[SPC] (FP5201-OPU)
234	RMC0418	SHAFT SPRING	1	[SPC]
235	VHD1057	SCREW	2	[SPC]
236	RMG0561-T	CUSHION RUBBER	2	[SPC]
A1	VEQ2380	REMOTE CONTROL ASS`Y	1	[SPC]
A1-1	TR1122722020	BATTERY COVER	1	[SPC]
A2	VJA0788	AV CORD	1	K2KA6CA00001 [SPC]
A3	RJA0019-1X	AC CORD	1	[SPC]*10 △
A3	RJA0053-2X	AC CORD	1	[SPC]*11 △
A4	RPQF0220	ACCESSORY CASE	1	[SPC]*10
A4	VPK2386Z	ACCESSORY CASE	1	[SPC]*11
A5	RQT5866-D	OPERATING INSTRUCTIONS	1	<IA>[SPC]*1*2 *5*6*7*9 △ ;
A5	RQT5868-E	OPERATING INSTRUCTIONS	1	<IB>[SPC]*1*2 *7 △
A5	RQT5867-H	OPERATING INSTRUCTIONS	1	<IC>[SPC]*5*6 *9 △
A5	RQT5869-B	OPERATING INSTRUCTIONS	1	<ID>[SPC]*1*2 *3*4*7*8 △
C1001	ECQU2A104MLC	0.1U	1	[SPC]
C1002	ECQU2A104MLC	0.1U	1	[SPC]
C1003	VCK0286B471	CERAMIC CAPACITOR	1	F1BAF471A013 [SPC]
C1005	VCK0286E102	CERAMIC CAPACITOR	1	F1BAF1020011 [SPC]
C1013	ECEC2GG680	68U	1	[SPC] △
C1021	VCK0106K221	CERAMIC CAPACITOR	1	F1B3D221A002 [SPC]
C1031	VCK0266K182T	CERAMIC CAPACITOR	1	F1B2H1820001 [SPC]
C1041	ECQB1H223JF	50V 0.022U	1	[SPC]
C1051	ECQB1H104JF	50V 0.1U	1	[SPC]
C1052	ECQB1H683JF	50V 0.068U	1	[SPC]
C1053	ECQB1H104JF	50V 0.1U	1	[SPC]
C1101	ECQV1H104JL	50V 0.1U	1	[SPC]
C1102	ECQB1H223JF	50V 0.022U	1	[SPC]
C1111	VCEA1AJH102B	10V 1000U	1	F2A1A102A013 [SPC]
C1112	VCEA1AJC102B	10V 1000U	1	F2A1A1020004 [SPC]
C1115	ECUX1E104ZJV	25V 0.1U	1	F1H1E104A026 [SPC]
C1116	VCEA1AJC221B	10V 220U	1	F2A1A2210005 [SPC]
C1117	ECA0JM102	6.3V 1000U	1	[SPC]
C1121	VCEA1AJH102B	10V 1000U	1	F2A1A102A013 [SPC]
C1125	ECA0JM102	6.3V 1000U	1	[SPC]
C1131	VCEA1EJH181	25V 180U	1	F2A1E1810001 [SPC]
C1133	VCEA1EJC330B	25V 33U	1	F2A1E3300011 [SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1141	VCEA1EJH181	25V 180U	1	F2A1E1810001 [SPC]
C1143	VCEA1EJC330B	25V 33U	1	F2A1E3300011 [SPC]
C1151	VCEA1EJH271B	25V 270U	1	F2A1E2710001 [SPC]
C1153	VCEA1EJC221B	16V 220U	1	F2A1E2210008 [SPC]
C1154	VCEA1CJC221B	16V 220U	1	F2A1C2210006 [SPC]
C1161	VCEA1HJH560B	50V 56U	1	F2A1H5600002 [SPC]
C1171	VCEA1AJH181B	10V 180U	1	F2A1A1810002 [SPC]
C2001	EEVHB0G101	4V 100U	1	[SPC]
C2002	EEVHB0G101	4V 100U	1	[SPC]
C2003	EEVHB0G101	4V 100U	1	[SPC]
C2004	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2005	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2006	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2007	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2008	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2009	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2010	ECUX1H221KBV	50V 220P	1	[SPC]
C2011	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2012	ECUX1C473KBV	16V 0.047U	1	[SPC]
C2013	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2014	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2015	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2021	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2022	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2023	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2024	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2032	ECUX1H102JCV	50V 1000P	1	[SPC]
C2033	ECUX1H102JCV	50V 1000P	1	[SPC]
C2034	ECUX1H102JCV	50V 1000P	1	[SPC]
C2035	ECUX1H331JCV	50V 330P	1	F1H1H3310005 [SPC]
C2036	ECUX1H331JCV	50V 330P	1	F1H1H3310005 [SPC]
C2037	ECUX1H681JCV	50V 680P	1	[SPC]
C2038	ECUX1H561JCV	50V 560P	1	[SPC]
C2039	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2040	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2041	ECUX1H682KBV	50V 6800P	1	[SPC]
C2042	ECUX1H272KBV	50V 2700P	1	[SPC]
C2043	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2044	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2045	ECUX1H470JCV	50V 47P	1	[SPC]
C2046	ECUX1C183KBV	16V 0.018U	1	[SPC]
C2047	ECUV1C103KBV	16V 0.01U	1	F1H1C103A071 [SPC]
C2048	ECUX1H103KBV	50V 0.01U	1	[SPC]
C2049	ECUM1C474KBN	16V 0.47U	1	[SPC]
C2050	ECUX1C393KBV	16V 0.039U	1	[SPC]
C2051	ECUX1H822KBV	50V 8200P	1	[SPC]
C2501	EEVFC0J221P	6.3V 220U	1	[SPC]
C2502	ECEV1CA101W	16V 100U	1	[SPC]
C2503	ECEV1CA220W	16V 22U	1	[SPC]
C2504	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2505	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2506	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2507	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2508	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2509	EEVFC1C100R	16V 10U	1	[SPC]
C2511	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2512	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C2513	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C3001	ECEV0JA331	6.3V 330U	1	[SPC]
C3002	ECEV0JA331	6.3V 330U	1	[SPC]
C3003	ECEV0JA331	6.3V 330U	1	[SPC]
C3004	ECUX1A105ZJV	10V 1U	1	[SPC]
C3005	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C3006	ECUX1C104ZJV	16V 0.1U	1	[SPC]
C3007	ECUX1A105ZJV	10V 1U	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3008	ECUX1A105ZFV	10V 1U	1	[SPC]
C3009	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3010	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3011	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3012	ECUX1A105ZFV	10V 1U	1	[SPC]
C3013	ECUX1A105ZFV	10V 1U	1	[SPC]
C3014	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3015	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3016	ECUX1A105ZFV	10V 1U	1	[SPC]
C3017	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3018	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3019	ECUX1A105ZFV	10V 1U	1	[SPC]
C3020	ECUX1A105ZFV	10V 1U	1	[SPC]
C3021	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3022	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3023	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3024	ECUX1A105ZFV	10V 1U	1	[SPC]
C3025	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3026	ECUX1A105ZFV	10V 1U	1	[SPC]
C3027	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3028	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3029	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3030	ECUX1A105ZFV	10V 1U	1	[SPC]
C3031	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3032	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3033	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3034	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3035	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3036	ECUX1H220JCV	50V 22P	1	[SPC]
C3041	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3042	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3051	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3052	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C3061	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3062	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3063	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3064	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3065	ECUX1A105ZFV	10V 1U	1	[SPC]
C3066	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3071	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3072	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3073	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3074	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3075	ECUX1A105ZFV	10V 1U	1	[SPC]
C3076	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3080	ECEV0JA331	6.3V 330U	1	[SPC]
C3081	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3082	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3083	ECUM1A105KBN	10V 1U	1	F1J1A1050002 [SPC]
C3084	ECUM1A105KBN	10V 1U	1	F1J1A1050002 [SPC]
C3085	ECUM1A105KBN	10V 1U	1	F1J1A1050002 [SPC]
C3086	ECUM1A105KBN	10V 1U	1	F1J1A1050002 [SPC]
C3087	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3088	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3089	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3091	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3092	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3093	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C3111	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3115	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3201	EEVHB0G101	4V 100U	1	[SPC]*15
C3202	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3203	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3204	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3205	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3206	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3207	ECUX1C104KRV	16V 0.1U	1	[SPC]*15

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3208	ECUM1A105KBN	10V 1U	1	F1J1A1050002 [SPC]*15
C3209	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3210	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3211	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3501	ECA0JM221	6.3V 220U	1	[SPC]
C3502	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3503	ECUX1H103KBV	50V 0.01U	1	[SPC]
C3504	ECEA1CKA470	16V 47U	1	[SPC]
C3507	ECA0JM102	6.3V 1000U	1	[SPC]
C3508	ECEA0JKA101	6.3V 100U	1	[SPC]
C3509	ECA0JM102	6.3V 1000U	1	[SPC]
C3510	ECEA0JKA101	6.3V 100U	1	[SPC]
C3515	ECUX1H101JCV	50V 100P	1	[SPC]
C3517	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3532	ECUX1H103KBV	50V 0.01U	1	[SPC]
C3533	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3534	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3541	ECUX1H103ZFV	50V 0.01U	1	[SPC]*15
C3551	ECUX1H103ZFV	50V 0.01U	1	[SPC]*15
C3561	ECUX1H103ZFV	50V 0.01U	1	[SPC]*15
C3801	ECEA1CKA470	16V 47U	1	[SPC]
C3802	ECEA1CKA470	16V 47U	1	[SPC]
C3803	ECEA1CKA470	16V 47U	1	[SPC]
C3804	ECEA1HKA010	50V 1U	1	[SPC]
C3805	ECEA1CKA220	16V 22U	1	[SPC]
C3806	ECEA1HKA010	50V 1U	1	[SPC]
C3807	ECEA1HKA010	50V 1U	1	[SPC]
C3808	ECEA1HKA010	50V 1U	1	[SPC]
C3809	ECEA1HKA010	50V 1U	1	[SPC]
C3810	ECEA1HKA010	50V 1U	1	[SPC]
C3811	ECEA0JKA221	6.3V 220U	1	[SPC]*15
C3812	ECEA0JKA221	6.3V 220U	1	[SPC]
C3813	ECEA0JKA221	6.3V 220U	1	[SPC]*15
C3814	ECEA0JKA221	6.3V 220U	1	[SPC]
C3815	ECEA1CKA470	16V 47U	1	[SPC]
C3816	ECEA0JKA331	6.3V 330U	1	[SPC]*15
C3817	ECEA0JKA331	6.3V 330U	1	[SPC]*15
C3818	ECEA0JKA331	6.3V 330U	1	[SPC]
C3819	ECEA0JKA331	6.3V 330U	1	[SPC]
C3820	ECEA1CKA101	16V 100U	1	[SPC]
C3821	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3851	ECEA0JKA221	6.3V 220U	1	[SPC]
C3852	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3853	ECEA1CKA470	16V 47U	1	[SPC]*15
C3854	ECEA1CKA470	16V 47U	1	[SPC]
C3855	ECEA1CKA470	16V 47U	1	[SPC]*15
C3856	ECEA1CKA470	16V 47U	1	[SPC]*15
C3857	ECUX1C104ZFV	16V 0.1U	1	[SPC]*15
C3858	ECEA1AKN470	10V 47U	1	[SPC]*15
C3859	ECEA1AKN470	10V 47U	1	[SPC]*15
C3860	ECEA1AKN470	10V 47U	1	[SPC]*15
C3861	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3862	ECEA0JKA101	6.3V 100U	1	[SPC]
C3863	ECEA1CKA220	16V 22U	1	[SPC]
C3864	ECEA0JKA101	6.3V 100U	1	[SPC]
C3865	ECEA1CKA220	16V 22U	1	[SPC]
C3866	ECEA0JKA101	6.3V 100U	1	[SPC]
C3867	ECEA1CKA220	16V 22U	1	[SPC]
C3871	ECUX1H101JCV	50V 100P	1	[SPC]
C3872	ECUX1H471JCV	50V 470P	1	[SPC]
C3873	ECUX1H101JCV	50V 100P	1	[SPC]
C3874	ECUX1H471JCV	50V 470P	1	[SPC]
C3881	ECUX1H471JCV	50V 470P	1	[SPC]*15
C3882	ECUX1H471JCV	50V 470P	1	[SPC]
C3883	ECUX1H471JCV	50V 470P	1	[SPC]*15
C3884	ECUX1H471JCV	50V 470P	1	[SPC]
C3891	ECEA1CKA101	16V 100U	1	[SPC]
C3892	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3893	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4201	ECEV0JA331	6.3V 330U	1	[SPC]*14
C4202	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]*14

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4204	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]*14
C4206	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]*14
C4208	ECUX1C104ZV	16V 0.1U	1	[SPC]
C4209	ECUX1C104ZV	16V 0.1U	1	[SPC]
C4210	ECUX1C104ZV	16V 0.1U	1	[SPC]
C4213	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]*15
C4215	ECUX1C104ZV	16V 0.1U	1	[SPC]*15
C4216	EEVHBOJ101	4V 100U	1	EEVHBOJ101P [SPC]*15
C4218	ECUX1C104ZV	16V 0.1U	1	[SPC]
C4303	ECA1CAK470X	16V 47U	1	[SPC]*14
C4304	ECA1CAK470X	16V 47U	1	[SPC]*14
C4305	ECA1CAK470X	16V 47U	1	[SPC]*15
C4306	ECA1CAK470X	16V 47U	1	[SPC]*15
C4307	ECA1CAK470X	16V 47U	1	[SPC]*15
C4308	ECA1CAK470X	16V 47U	1	[SPC]*15
C4309	ECA1CAK470X	16V 47U	1	[SPC]*15
C4310	ECA1CAK470X	16V 47U	1	[SPC]*15
C4312	ECA0JM102	6.3V 1000U	1	[SPC]
C4313	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4314	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*14
C4315	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*14
C4316	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4317	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4318	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4319	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4320	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4321	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4323	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4324	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4325	ECUX1H102JCV	50V 1000P	1	[SPC]*14
C4326	ECUX1H102JCV	50V 1000P	1	[SPC]*14
C4327	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4328	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4329	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4330	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4331	ECUX1H680JCV	50V 68P	1	[SPC]*15
C4332	ECUX1H680JCV	50V 68P	1	[SPC]*15
C4333	ECUX1H680JCV	50V 68P	1	[SPC]*15
C4334	ECUX1H101JCV	50V 100P	1	[SPC]*15
C4335	ECUX1H101JCV	50V 100P	1	[SPC]*15
C4336	ECUX1H101JCV	50V 100P	1	[SPC]*14
C4337	ECUX1H101JCV	50V 100P	1	[SPC]*14
C4338	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4401	ECUX1C333KBV	16V 0.033U	1	[SPC]*14
C4405	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*14
C4406	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*14
C4408	ECUX1C104KBV	16V 0.1U	1	[SPC]*14
C4411	ECUX1H103KBV	50V 0.01U	1	[SPC]*14
C4414	ECA1ANK470X	10V 47U	1	[SPC]*15
C4414	ECA1CAK470X	16V 47U	1	[SPC]*14
C4415	ECA1ANK470X	10V 47U	1	[SPC]*15
C4415	ECA1CAK470X	16V 47U	1	[SPC]*14
C4416	ECA1CAK470X	16V 47U	1	[SPC]*15
C4417	ECA1CAK470X	16V 47U	1	[SPC]*15
C4418	ECA1ANK470X	10V 47U	1	[SPC]*14
C4419	ECA1CAK470X	16V 47U	1	[SPC]*15
C4420	ECA1CAK470X	16V 47U	1	[SPC]*15
C4421	ECA1CAK470X	16V 47U	1	[SPC]*15
C4422	ECA1ANK470X	10V 47U	1	[SPC]*15
C4423	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4424	ECUX1H102JCV	50V 1000P	1	[SPC]*15

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4425	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4426	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4427	ECUX1H102JCV	50V 1000P	1	[SPC]
C4428	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4429	ECUX1H102JCV	50V 1000P	1	[SPC]
C4430	ECUX1H102JCV	50V 1000P	1	[SPC]*15
C4431	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4432	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4435	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4436	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4437	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4438	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4439	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]*15
C4586	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4587	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4588	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4589	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4781	ECEALHKA4R7	50V 4.7U	1	[SPC]
C4782	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C4901	ECA1CAK470X	16V 47U	1	[SPC]*15
C4902	ECA1EM221	25V 220U	1	[SPC]
C4911	ECA1EM221	25V 220U	1	[SPC]*15
C4912	ECA1CAK470X	16V 47U	1	[SPC]*15
C4913	ECA1EM221	25V 220U	1	[SPC]
C5201	EEVHB1C100	16V 10U	1	[SPC]
C5202	EEVHB1C100	16V 10U	1	[SPC]
C5203	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5204	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5205	ECUX1H102JCV	50V 1000P	1	[SPC]
C5206	ECUX1H102JCV	50V 1000P	1	[SPC]
C5207	ECUX1H102JCV	50V 1000P	1	[SPC]
C5208	ECUX1H102JCV	50V 1000P	1	[SPC]
C5211	EEVHBOJ470	6.3V 47U	1	[SPC]
C5215	EEVHBOJ470	6.3V 47U	1	[SPC]
C5221	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5223	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5224	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5225	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5231	ECUX1H101JCV	50V 100P	1	[SPC]
C5232	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5233	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5234	ECUX1H222KBV	50V 2200P	1	[SPC]
C5235	ECUX1H391JCV	50V 390P	1	[SPC]
C5236	ECUX1H102JCV	50V 1000P	1	[SPC]
C5237	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5238	ECUV1A224KBV	10V 0.22U	1	F1H1A224A001 [SPC]
C5239	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5240	ECUX1H561JCV	50V 560P	1	[SPC]
C5242	ECUX1H472KBV	50V 4700P	1	[SPC]
C5251	ECUX1C104ZV	16V 0.1U	1	[SPC]
C5252	F3K1A1060001	10V 10U	1	[SPC]
C5253	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
C6001	ECEA0GKS221	4V 220U	1	[SPC]
C6002	ECEALHKA100	50V 10U	1	[SPC]
C6003	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]
C6014	ECUX1H103ZV	50V 0.01U	1	[SPC]
C6015	ECUX1H103ZV	50V 0.01U	1	[SPC]
C6016	ECUX1H103ZV	50V 0.01U	1	[SPC]
C6017	ECUX1H103ZV	50V 0.01U	1	[SPC]
C6021	ECUX1E104ZV	25V 0.1U	1	F1H1E104A026 [SPC]



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6022	ECUX1E104ZFV	25V 0.1U	1	F1H1E104A026 [SPC]	D1131	11EQS10TA1	DIODE	1	B0JAML000004 [SPC]
C6033	ECUX1H103ZFV	50V 0.01U	1	[SPC]	D1132	MA7180A-TR	DIODE	1	MAZ71800AC [SPC]
C6061	ECUX1H103ZFV	50V 0.01U	1	[SPC]	D1141	11EQS10TA1	DIODE	1	B0JAML000004 [SPC]
C6071	ECUX1E104ZFV	25V 0.1U	1	F1H1E104A026 [SPC]	D1151	11EQS10TA1	DIODE	1	B0JAML000004 [SPC]
C6072	ECEA0JKS470	6.3V 47U	1	[SPC]	D1152	11EQS10TA1	DIODE	1	B0JAML000004 [SPC]
C6101	ECEA0JKA470	6.3V 47U	1	[SPC]	D1161	AU01Z	DIODE	1	B0HAGM000006 [SPC]
C6121	ECEA1CKA100	16V 10U	1	[SPC]*15	D1162	MA8030-HTX	DIODE	1	MAZ80300HL [SPC]
C6201	EEVHB0J330	6.3V 33U	1	[SPC]	D1171	AK04	DIODE	1	B0JAMC000003 [SPC]
C6202	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D2001	MA111-TX	DIODE	1	MA2J111100L [SPC]
C6203	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D3091	MA111-TX	DIODE	1	MA2J111100L [SPC]
C6204	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D3831	MA152A	DIODE	1	MA3X152A0L [SPC]
C6205	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D3832	MA152A	DIODE	1	MA3X152A0L [SPC]*15
C6206	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D4301	MA8047M	DIODE	1	MAZ80470M [SPC]
C6211	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D4403	1SS355TE-17	DIODE	1	B0ACCK000005 [SPC]*14
C6251	ECUX1A105ZFV	10V 1U	1	[SPC]	D4901	AK04	DIODE	1	B0JAMC000003 [SPC]*15
C6252	ECUX1H471JCV	50V 470P	1	[SPC]	D5251	MA728-TX	DIODE	1	MA2J72800L [SPC]
C6253	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]	D6071	MA8039H	DIODE	1	MAZ80390H [SPC]
C6257	EEVHB0J101	4V 100U	1	EEVHB0J101P [SPC]	D6101	LNJ201LPQJA	LED (RED) ,ST-BY	1	[SPC]
C6301	ECUX1H101JCV	50V 100P	1	[SPC]	D6121	LNJ301MPUJAD	LED (GREEN) ,EFCT	1	[SPC]*15
C6302	ECUX1C104KBV	16V 0.1U	1	[SPC]	D6122	LNJ301MPUJAD	LED (GREEN) ,DLB	1	[SPC]*15
C6303	ECUX1C104ZFV	16V 0.1U	1	[SPC]	D6301	MA728-TX	DIODE	1	MA2J72800L [SPC]
C6304	ECUX1C104ZFV	16V 0.1U	1	[SPC]	DL6001	A2BB00000085	DISPLAY TUBE	1	[SPC]
C6305	ECUX1C104ZFV	16V 0.1U	1	[SPC]	F1001	XBA2C16TB0L	FUSE	1	K5Y162B00002 [SPC] △
C6501	EEVHB0J330	6.3V 33U	1	[SPC]	FL3541	ELB4E043B	FILTER	1	[SPC]*15
C6502	EEVHB1C100	16V 10U	1	[SPC]	FL4201	VLF1491S105T	FILTER	1	F1J1A1050021 [SPC]
C6503	ECUX1C104ZFV	16V 0.1U	1	[SPC]	FL6251	VLF1491S105T	FILTER	1	F1J1A1050021 [SPC]
C6504	ECUX1C104ZFV	16V 0.1U	1	[SPC]	FL6253	VLF1491S105T	FILTER	1	F1J1A1050021 [SPC]
C6505	ECUX1C104ZFV	16V 0.1U	1	[SPC]	FL6254	VLF1491S105T	FILTER	1	F1J1A1050021 [SPC]
C6511	ECUX1H150JCV	50V 15P	1	[SPC]	FL6255	VLF1491S104T	FILTER	1	F1J1E1040022 [SPC]
C6512	ECUX1H150JCV	50V 15P	1	[SPC]	FP2001	K1MN50A00005	CONNECTOR (50P)	1	[SPC]
C6553	ECUX1C104ZFV	16V 0.1U	1	[SPC]	FP5201	K1MN30B00062	CONNECTOR (30P)	1	[SPC]
C7001	EEVHB0G101	4V 100U	1	[SPC]	FP5202	K1MN50B00010	CONNECTOR (50P)	1	[SPC]
C7002	EEVHB0G101	4V 100U	1	[SPC]	FP6101	K1MN06C00002	CONNECTOR (6P)	1	[SPC]*15
C7011	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC1101	C0DAEMZ00001	IC	1	[SPC]
C7012	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC1125	PQ07RX11	IC	1	C0DAEZG00009 [SPC]
C7013	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC1151	PQ09DZ1U	IC	1	C0CBCHG00001 [SPC]
C7014	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC2001	MN67706EC	IC	1	[SPC]
C7015	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC2501	C0GBG0000033	IC	1	[SPC]
C7016	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3001	MN677533MP	IC	1	[SPC]
C7017	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3051	PQ018EZ01ZP	IC	1	C0DBCHG00001 [SPC]
C7018	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3061	MNX7160BT1	IC	1	MNX7160BT10 [SPC]
C7019	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3071	C3ABKG000048	IC	1	[SPC]
C7020	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3091	C0CBCBD00002	IC	1	[SPC]
C7021	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3201	ADV7170SU	IC	1	[SPC]*15
C7022	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3501	C9ZB00000362	IC	1	[SPC]
C7023	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3801	C9ZB00000357	IC	1	[SPC]
C7024	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3851	MC14053BFL1	IC	1	C0JBAR000024 [SPC]
C7026	ECUX1C104ZFV	16V 0.1U	1	[SPC]	IC3852	MC14053BFL1	IC	1	C0JBAR000024 [SPC]*15
C7027	ECUX1C104ZFV	16V 0.1U	1	[SPC]					
D1002	ENC471D5ATRB	DIODE	1	J0LG00000006 [SPC] △					
D1011	S1WBA80-4062	DIODE	1	B0EBKT000002 [SPC]					
D1031	AP01C	DIODE	1	B0HADV000010 [SPC] △					
D1041	AU01Z	DIODE	1	B0HAGM000006 [SPC]					
D1051	1SS254	DIODE	1	B0AAED000003 [SPC]					
D1052	1SS254	DIODE	1	B0AAED000003 [SPC]					
D1053	MA4022-LTA	DIODE	1	[SPC]					
D1054	AU01Z	DIODE	1	B0HAGM000006 [SPC]					
D1101	MA7075A	DIODE	1	[SPC]					
D1111	21DQ06FC4	DIODE	1	B0JAMG000013 [SPC]					
D1121	21DQ06FC4	DIODE	1	B0JAMG000013 [SPC]					
D1126	B0EAKL000031	DIODE	1	[SPC]					



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB2025	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2026	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2027	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2028	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2029	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2030	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2031	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2032	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2033	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2034	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB2035	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB3001	JALBK2HS470T	COIL	1	G1CYYYZ00003 [SPC]
LB3002	JALBK2HS470T	COIL	1	G1CYYYZ00003 [SPC]
LB3011	J0JCC0000077	COIL	1	[SPC]*15
LB3201	VLP0155-T	COIL	1	J0JCC0000119 [SPC]*15
LB3202	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
LB3203	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
LB3204	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
LB3206	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB3207	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB3208	VLP0155-T	COIL	1	J0JCC0000119 [SPC]*15
LB3209	VLP0155-T	COIL	1	J0JCC0000119 [SPC]*15
LB3533	JALBK1HM601T	COIL	1	J0JBC0000015 [SPC]
LB3534	JALBK1HM601T	COIL	1	J0JBC0000015 [SPC]
LB3536	JALBK1HM601T	COIL	1	J0JBC0000015 [SPC]
LB3871	JALBK2HM601T	COIL	1	J0JCC0000120 [SPC]
LB3872	JALBK2HM601T	COIL	1	J0JCC0000120 [SPC]
LB3873	JALBK2HM601T	COIL	1	J0JCC0000120 [SPC]
LB3874	JALBK2HM601T	COIL	1	J0JCC0000120 [SPC]
LB3881	JALBK2HM601T	COIL	1	J0JCC0000120 [SPC]*15
LB4200	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4201	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4202	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4203	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4204	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4205	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4206	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4207	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4208	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4209	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4210	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB4211	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4212	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4213	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]*15
LB4214	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4215	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4216	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB4217	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB5201	JALBK2HS470T	CHIP SOLID INDUCTOR	1	G1CYYYZ00003 [SPC]
LB5202	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB5203	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB5204	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB5205	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB5206	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6001	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6002	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
LB6005	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6006	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6007	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6008	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6009	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
LB6015	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
LB6021	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6022	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6023	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6024	ERJ3GEY0R00	1/16W 0	1	[SPC]
LB6201	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6202	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB6501	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6502	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6512	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB6513	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB6514	VLP0155-T	COIL	1	J0JCC0000119 [SPC]
LB6515	J0JCC0000077	COIL	1	[SPC]
LB7001	JALBK2HS470T	COIL	1	G1CYYYZ00003 [SPC]
LB7002	JALBK2HS470T	COIL	1	G1CYYYZ00003 [SPC]
LR1041	J1ZZA0000001	COIL	1	[SPC]
P1001	VJS3166-1	AC INLET	1	K2AA2B000002 [SPC] △
P6005	VJP3233A002	CONNECTOR(MALE)2P	1	K1KA02A00010 [SPC]
PC1	RP65371	PACKING CASE	1	[SPC]*9
PC1	RP65372	PACKING CASE	1	[SPC]*7
PC1	RP65374	PACKING CASE	1	[SPC]*8
PC1	RP65377	PACKING CASE	1	[SPC]*5
PC1	RP65378	PACKING CASE	1	[SPC]*1
PC1	RP65379	PACKING CASE	1	[SPC]*3
PC1	RP65416	PACKING CASE	1	[SPC]*6
PC1	RP65417	PACKING CASE	1	[SPC]*2
PC1	RP65418	PACKING CASE	1	[SPC]*4
PC2	RPN1385	CUSHION(L/R)	1	[SPC]
PC3	VFP0693	POLYETHYLENE BAG	1	[SPC]
PP3201	K1KA18A00060	CONNECTOR(MALE)18P	1	[SPC]*14
PP3201	K1KA22A00044	CONNECTOR(MALE)22P	1	[SPC]*15
PP3801	VJP3042G019W	CONNECTOR(MALE)19P	1	K1KA19A00011 [SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PP4301	K1KA22A00044	CONNECTOR(MALE)22P	1	[SPC]*14
PP4301	VJP4369E026B	CONNECTOR(MALE)26P	1	K1KA26A00089 [SPC]*15
PP6001	K1KA06B00126	CONNECTOR(MALE)6P	1	[SPC]
PP6002	K1KA06B00126	CONNECTOR(MALE)6P	1	[SPC]
PP6003	K1KA10B00155	CONNECTOR(MALE)10P	1	[SPC]*15
PP6004	K1KA06B00126	CONNECTOR(MALE)6P	1	[SPC]
PR1161	VSF0015A025	IC PROTECTOR	1	D4FAR2500001 [SPC] △
PR1171	VSF0015A10T	IC PROTECTOR	1	B1ZAZ0000030 [SPC] △
PR4911	VSF0015A10T	IC PROTECTOR	1	B1ZAZ0000030 [SPC]*15 △
PS3201	K1KB18A00034	CONNECTOR(FEMALE)18P	1	[SPC]*14
PS3201	VJS4222C022B	CONNECTOR(FEMALE)22P	1	K1KB22A00025 [SPC]*15
PS3801	VJS3042F019W	CONNECTOR(FEMALE)19P	1	K1KB19B00005 [SPC]
PS4201	VJS4222C022B	CONNECTOR(FEMALE)22P	1	K1KB22A00025 [SPC]*14
PS4201	VJS4222C026B	CONNECTOR(FEMALE)26P	1	K1KB26A00027 [SPC]*15
PS6001	K1KB06B00033	CONNECTOR(FEMALE)6P	1	[SPC]
PS6002	K1KB06B00033	CONNECTOR(FEMALE)6P	1	[SPC]
PS6003	K1KB10B00045	CONNECTOR(FEMALE)10P	1	[SPC]*15
PS6004	K1KB06B00033	CONNECTOR(FEMALE)6P	1	[SPC]
PS6201	VJS2961C010	CONNECTOR(FEMALE)10P	1	K1KB10A00075 [SPC]
Q1021	2SC4908LF654	TRANSISTOR	1	B1BACT000012 [SPC]
Q1051	B3PBA0000104	PHOTO CUPLER	1	[SPC]
Q1052	2SD1996-STA	TRANSISTOR	1	2SD19960SA [SPC]
Q1115	B1DGDD000002	TRANSISTOR	1	[SPC]
Q3111	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]*15
Q3115	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]*15
Q3211	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]*15
Q3541	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q3551	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q3561	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q3831	XN4402	TRANSISTOR	1	XN04402 [SPC]
Q3832	XN4401	TRANSISTOR	1	XN04401 [SPC]
Q3833	2SB710-R	TRANSISTOR	1	2SB07100R [SPC]*15
Q4302	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]
Q4309	2SD1328	TRANSISTOR	1	2SD132806 [SPC]*15
Q4310	2SD1328	TRANSISTOR	1	2SD132806 [SPC]*15
Q4311	2SD1328	TRANSISTOR	1	2SD132806 [SPC]*15
Q4410	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4411	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]
Q4412	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]
Q4413	2SD1328	TRANSISTOR	1	2SD132806 [SPC]*15
Q4413	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*14
Q4414	2SD1328	TRANSISTOR	1	2SD132806 [SPC]*15
Q4414	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*14
Q4415	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q4416	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q4417	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q4418	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q4419	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4901	2SB709A-RSTX	TRANSISTOR	1	2SB0709AHL [SPC]*15
Q4911	2SB1434RSTA	TRANSISTOR	1	2SB14340HA [SPC]*15
Q4912	2SB1320A-RTA	TRANSISTOR	1	2SB1320ARA [SPC]*15
Q4913	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]*15
Q5211	2SB1115-T	TRANSISTOR	1	B1BDBF000004 [SPC]
Q5215	2SB1115-T	TRANSISTOR	1	B1BDBF000004 [SPC]
Q6061	2SD1996-RSTA	TRANSISTOR	1	2SD19960HA [SPC]
Q6071	2SD1992A-R	TRANSISTOR	1	[SPC]
QR1115	UN2213-TX	TRANSISTOR	1	UNR221300L [SPC]
QR3831	UN2217	TRANSISTOR	1	UNR2217 [SPC]*15
QR4301	UN2211	TRANSISTOR	1	UNR2211 [SPC]
QR4302	UN2211	TRANSISTOR	1	UNR2211 [SPC]
QR4304	UN2111	TRANSISTOR	1	UNR2111 [SPC]
QR4305	UN2211	TRANSISTOR	1	UNR2211 [SPC]*15
QR4306	UN2111	TRANSISTOR	1	UNR2111 [SPC]*15
QR5251	UN2121-TX	TRANSISTOR	1	UNR212100L [SPC]
QR6021	DTA123JK-T96	TRANSISTOR	1	B1GDCFEM0002 [SPC]*15
QR6022	DTA123JK-T96	TRANSISTOR	1	B1GDCFEM0002 [SPC]
QR6121	UN4219TA	TRANSISTOR	1	UNR421900A [SPC]*15
QR6122	UN4219TA	TRANSISTOR	1	UNR421900A [SPC]*15
QR6123	UN4114	TRANSISTOR	1	UNR4114 [SPC]*15
QR6301	UN5212-TX	TRANSISTOR	1	UNR521200L [SPC]
R1002	ERC12AGM334	330K	1	[SPC] △
R1031	ERDS2FJ224	1/4W 220K	1	[SPC]
R1032	ERDS2FJ224	1/4W 220K	1	[SPC]
R1041	ERDS2TJ334	1/4W 330K	1	[SPC]
R1042	ERDS2TJ334	1/4W 330K	1	[SPC]
R1043	ERG2SJ680	2W 68	1	[SPC]
R1051	ERDS2TJ750	1/4W 75	1	[SPC]
R1052	ERDS2TJ2R2	1/4W 2.2	1	[SPC]
R1053	ERDS2TJ331	1/4W 330	1	[SPC]
R1054	ER0S2CKG6800	1/4W 680	1	[SPC]
R1101	ERJ3GEYJ750	1/16W 75	1	[SPC]
R1102	ERJ3GEYF122	1/16W 1.2K	1	[SPC]
R1103	ERJ3GEYF122	1/16W 1.2K	1	[SPC]
R1104	ERJ3GEYJ561	1/16W 560	1	[SPC]
R1105	ERJ6GEYJ271	1/10W 270	1	[SPC]
R1106	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]
R1107	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R1115	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R1116	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R1125	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R1126	ERJ3GEYF122	1/16W 1.2K	1	[SPC]
R1127	ERJ3GEYF122	1/16W 1.2K	1	[SPC]
R1161	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R1181	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R2011	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R2012	ERJ3GEYJ123	1/16W 12K	1	[SPC]
R2013	ERJ3RBD123	1/16W 12K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2014	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R2028	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R2029	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2030	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2031	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2032	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2033	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2034	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R2035	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R2036	ERJ3GEYJ123	1/16W 12K	1	[SPC]
R2037	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R2038	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R2039	ERJ3GEYF153	1/16W 15K	1	[SPC]
R2040	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R2041	ERJ3GEYF123	1/16W 12K	1	[SPC]
R2042	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R2043	ERJ3GEY0R00	1/16W 0	1	[SPC]
R2044	ERJ3GEYJ563	1/16W 56K	1	[SPC]
R2045	ERJ3GEY0R00	1/16W 0	1	[SPC]
R2046	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2502	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2503	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2504	ERJ3GEYJ823	1/16W 82K	1	[SPC]
R2505	ERJ3GEYJ823	1/16W 82K	1	[SPC]
R2507	ERJ6GEYJ6R8	1/10W 6.8	1	[SPC]
R3001	ERJ3GEYJ220	1/16W 22	1	[SPC]
R3002	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3003	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3004	ERJ3GEYJ221	1/16W 220	1	[SPC]
R3005	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R3007	ERJ3GEY0R00	1/16W 0	1	[SPC]
R3071	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3080	ERJ3RBD752	1/16W 7.5K	1	ERJ3RBD752V [SPC]
R3082	ERJ3RBD202	1/16W 2K	1	[SPC]
R3083	ERJ3RBD132	1/16W 1.3K	1	[SPC]
R3084	ERJ3RBD752	1/16W 7.5K	1	ERJ3RBD752V [SPC]
R3085	ERJ3RBD183	1/16W 18K	1	[SPC]
R3086	ERJ3RBD432	1/16W 4.3K	1	[SPC]
R3087	ERJ3RBD752	1/16W 7.5K	1	ERJ3RBD752V [SPC]
R3088	ERJ3RBD752	1/16W 7.5K	1	ERJ3RBD752V [SPC]
R3089	ERJ3RBD242	1/16W 2.4K	1	[SPC]
R3090	ERJ3RBD112	1/16W 1.1K	1	[SPC]
R3091	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*14
R3092	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*14
R3101	ERJ3RED750	1/16W 75	1	ERJ3RED750V [SPC]
R3104	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3105	ERJ3RED750	1/16W 75	1	ERJ3RED750V [SPC]
R3111	ERJ3RBD221	1/16W 220	1	[SPC]*15
R3111	ERJ3RED750	1/16W 75	1	ERJ3RED750V [SPC]*14
R3112	ERJ3GEYJ330	1/16W 33	1	[SPC]*15
R3113	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3115	ERJ3RBD221	1/16W 220	1	[SPC]*15
R3115	ERJ3RED750	1/16W 75	1	ERJ3RED750V [SPC]*14
R3116	ERJ3GEYJ330	1/16W 33	1	[SPC]*15
R3117	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3201	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R3202	ERJ3RBD272	1/16W 2.7K	1	[SPC]*15
R3203	ERJ3RBD332	1/16W 3.3K	1	[SPC]*15
R3204	ERJ3RBD102	1/16W 1K	1	[SPC]*15
R3211	ERJ3RBD221	1/16W 220	1	[SPC]*15
R3212	ERJ3GEYJ330	1/16W 33	1	[SPC]*15
R3213	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3501	ERJ3GEY0R00	1/16W 0	1	[SPC]
R3502	ERJ3GEY0R00	1/16W 0	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3533	ERJ3GEYF750	1/16W 75	1	[SPC]
R3534	ERJ3GEYF750	1/16W 75	1	[SPC]
R3536	ERJ3GEYF750	1/16W 75	1	[SPC]
R3541	ERJ3GEYJ561	1/16W 560	1	[SPC]*15
R3542	ERJ3GEYJ183	1/16W 18K	1	[SPC]*15
R3543	ERJ3GEYJ471	1/16W 470	1	[SPC]*15
R3544	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R3545	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3551	ERJ3GEYJ561	1/16W 560	1	[SPC]*15
R3552	ERJ3GEYJ183	1/16W 18K	1	[SPC]*15
R3553	ERJ3GEYJ471	1/16W 470	1	[SPC]*15
R3554	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R3555	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3561	ERJ3GEYJ561	1/16W 560	1	[SPC]*15
R3562	ERJ3GEYJ183	1/16W 18K	1	[SPC]*15
R3563	ERJ3GEYJ471	1/16W 470	1	[SPC]*15
R3564	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R3565	ERJ3GEYJ102	1/16W 1K	1	[SPC]*15
R3801	ERJ3GEYF151	1/16W 150	1	[SPC]
R3802	ERJ3GEYF151	1/16W 150	1	[SPC]
R3803	ERJ3GEYF151	1/16W 150	1	[SPC]
R3804	ERJ3GEYF161V	1/16W 160	1	[SPC]
R3805	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3806	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R3807	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3808	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R3809	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3810	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R3811	ERJ3GEYF121	1/16W 120	1	ERJ3GEYF121V [SPC]*15
R3811	ERJ3GEYF151	1/16W 150	1	[SPC]*14
R3812	ERJ3GEYF131	1/16W 130	1	[SPC]*15
R3812	ERJ3GEYF161	1/16W 160	1	[SPC]*14
R3831	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3832	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3833	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3834	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3835	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3836	ERJ3GEYJ680	1/16W 68	1	ERJ3GEYJ680V [SPC]
R3837	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3838	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3839	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R3840	ERJ3GEYJ153	1/16W 15K	1	[SPC]*15
R3841	ERJ3GEYJ273	1/16W 27K	1	[SPC]*15
R3842	ERJ3GEYJ471	1/16W 470	1	[SPC]
R3851	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3852	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3853	ERJ3GEYJ333	1/16W 33K	1	[SPC]
R3854	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R3855	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3856	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3857	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3858	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3859	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3860	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3861	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3862	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3863	ERJ3GEYG333	1/16W 33K	1	[SPC]*15
R3864	ERJ3GEYG562	1/16W 5.6K	1	[SPC]*15
R3865	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3871	ERJ3GEYJ821	1/16W 820	1	[SPC]
R3872	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3873	ERJ3GEYJ821	1/16W 820	1	[SPC]
R3874	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3875	ERJ3EKF75R0V	3W 75	1	[SPC]
R3876	ERJ3EKF75R0V	3W 75	1	[SPC]
R3877	ERJ3EKF75R0V	3W 75	1	[SPC]
R3878	ERJ3EKF75R0V	3W 75	1	[SPC]
R3879	ERJ3EKF75R0V	3W 75	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3881	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R3882	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R3883	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R3884	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R3885	ERJ3GEYJ750	1/16W 75	1	[SPC]*15
R3886	ERJ3GEYJ750	1/16W 75	1	[SPC]*15
R3887	ERJ3GEYJ750	1/16W 75	1	[SPC]*15
R3888	ERJ3EKF75R0V	3W 75	1	[SPC]*15
R3889	ERJ3EKF75R0V	3W 75	1	[SPC]
R4201	ERJ3GEY0R00	1/16W 0	1	[SPC]
R4211	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
R4212	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]*15
R4301	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R4302	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R4304	ERJ8GEYJ102	1/8W 1K	1	[SPC]
R4305	ERJ3GEY0R00	1/16W 0	1	[SPC]*14
R4306	ERJ3GEY0R00	1/16W 0	1	[SPC]*14
R4307	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
R4308	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
R4309	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R4310	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R4311	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R4312	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]*15
R4313	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R4314	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4315	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R4318	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4319	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4320	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4324	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4325	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4326	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]*15
R4327	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]*15
R4328	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4329	ERJ3GEYJ104	1/16W 100K	1	[SPC]*14
R4330	ERJ3GEYJ104	1/16W 100K	1	[SPC]*14
R4331	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]*14
R4332	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]*14
R4333	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4334	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4335	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4336	ERJ3GEYJ104	1/16W 100K	1	[SPC]*15
R4337	ERJ3GEYJ302	1/16W 3K	1	[SPC]*15
R4338	ERJ3GEYJ302	1/16W 3K	1	[SPC]*15
R4339	ERJ3GEYJ302	1/16W 3K	1	[SPC]*15
R4341	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4342	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4343	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R4344	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R4345	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R4346	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4347	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4348	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*15
R4349	ERJ3GEYJ123	1/16W 12K	1	[SPC]*15
R4350	ERJ3GEYJ123	1/16W 12K	1	[SPC]*15
R4351	ERJ3GEYJ123	1/16W 12K	1	[SPC]*15
R4352	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*14
R4353	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*14
R4354	ERJ3GEYJ223	1/16W 22K	1	[SPC]*15
R4355	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*14
R4356	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*14
R4357	ERJ3GEYJ823	1/16W 82K	1	[SPC]*15
R4362	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R4401	ERJ3GEYJ683	1/16W 68K	1	[SPC]*14
R4402	ERJ3GEYJ683	1/16W 68K	1	[SPC]*14
R4404	ERJ3GEYJ473	1/16W 47K	1	[SPC]*14
R4407	ERJ3GEYJ473	1/16W 47K	1	[SPC]*14

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4414	ERJ3GEYJ563	1/16W 56K	1	[SPC]*14
R4415	ERJ3GEYJ473	1/16W 47K	1	[SPC]*14
R4422	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4423	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4424	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4427	ERJ3GEYJ473	1/16W 47K	1	[SPC]*15
R4428	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4429	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4432	ERJ3GEYJ473	1/16W 47K	1	[SPC]*15
R4433	ERJ3GEYJ473	1/16W 47K	1	[SPC]*15
R4434	ERJ3GEYJ473	1/16W 47K	1	[SPC]*15
R4435	ERJ3GEYJ473	1/16W 47K	1	[SPC]*15
R4436	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4437	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4439	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4440	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4441	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4442	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4443	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4444	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4446	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4447	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4448	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4449	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4450	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4451	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4452	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4453	ERJ3GEYJ821	1/16W 820	1	[SPC]*15
R4454	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4455	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4459	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4460	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4461	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R4462	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R4463	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R4464	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R4465	ERJ3GEYJ221	1/16W 220	1	[SPC]*15
R4467	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4468	ERJ3GEY0R00	1/16W 0	1	[SPC]*14
R4469	ERJ3GEYJ821	1/16W 820	1	[SPC]*14
R4470	ERJ3GEYJ332	1/16W 3.3K	1	[SPC]*14
R4471	ERJ3GEYJ223	1/16W 22K	1	[SPC]*14
R4472	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4473	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4474	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4475	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4476	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4477	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4478	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4479	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4480	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4481	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4482	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]*15
R4483	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4484	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4485	ERJ3GEYJ392	1/16W 3.9K	1	[SPC]*15
R4901	ERJ3RBD822	1/16W 8.2K	1	[SPC]*15
R4902	ERJ3RBD152	1/16W 1.5K	1	[SPC]*15
R4903	ERJ3GEYJ333	1/16W 33K	1	[SPC]*15
R4911	ERJ3RBD822	1/16W 8.2K	1	[SPC]*15
R4912	ERJ3GEYJ331	1/16W 330	1	[SPC]*15
R4913	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R5203	ERJ3GEYJ563	1/16W 56K	1	[SPC]
R5204	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R5211	ERJ3GEYJ2R2	1/16W 2.2	1	[SPC]
R5212	ERJ12YJ270	1/2W 27	1	[SPC]
R5213	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R5214	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R5215	ERJ3GEYJ2R2	1/16W 2.2	1	[SPC]
R5216	ERJ12YJ270	1/2W 27	1	[SPC]
R5217	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R5221	ERJ3GEYJ822	1/16W 8.2K	1	[SPC]
R5222	ERJ3GEYJ822	1/16W 8.2K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R5232	ERJ3RBD123	1/16W 12K	1	[SPC]
R5235	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R5236	ERJ3GEY0R00	1/16W 0	1	[SPC]
R5252	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6001	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6002	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6003	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6004	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6005	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6006	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6007	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6008	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6009	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6011	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6012	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]*15
R6012	ERJ3GEYJ272	1/16W 2.7K	1	[SPC]*14
R6013	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6014	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
R6014	ERJ3GEYJ272	1/16W 2.7K	1	[SPC]*14
R6015	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6016	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]
R6021	ERJ3GEYJ303	1/16W 30K	1	[SPC]
R6022	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6023	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6024	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6026	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R6031	ERJ3GEYJ103	1/16W 10K	1	[SPC]*14
R6032	ERJ3GEYJ103	1/16W 10K	1	[SPC]*15
R6034	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R6036	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6037	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6057	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6058	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6059	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6061	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6071	ERJ6GEYJ221	1/10W 220	1	[SPC]
R6101	ERDS2TJ122	1/4W 1.2K	1	[SPC]
R6102	ERDS2TJ152	1/4W 1.5K	1	[SPC]*15
R6103	ERDS2TJ222	1/4W 2.2K	1	[SPC]*15
R6104	ERDS2TJ332	1/4W 3.3K	1	[SPC]*15
R6105	ERDS2TJ472	1/4W 4.7K	1	[SPC]*15
R6121	ERDS2TJ221	1/4W 220	1	[SPC]*15
R6122	ERDS2TJ221	1/4W 220	1	[SPC]*15
R6161	ERDS2TJ122	1/4W 1.2K	1	[SPC]
R6162	ERDS2TJ152	1/4W 1.5K	1	[SPC]
R6171	ERDS2TJ122	1/4W 1.2K	1	[SPC]
R6172	ERDS2TJ122	1/4W 1.2K	1	[SPC]*15
R6172	ERDS2TJ152	1/4W 1.5K	1	[SPC]*14
R6173	ERDS2TJ152	1/4W 1.5K	1	[SPC]*15
R6173	ERDS2TJ222	1/4W 2.2K	1	[SPC]*14
R6174	ERDS2TJ222	1/4W 2.2K	1	[SPC]*15
R6174	ERDS2TJ332	1/4W 3.3K	1	[SPC]*14
R6175	ERDS2TJ332	1/4W 3.3K	1	[SPC]*15
R6175	ERDS2TJ472	1/4W 4.7K	1	[SPC]*14
R6176	ERDS2TJ472	1/4W 4.7K	1	[SPC]*15
R6176	ERDS2TJ682	1/4W 6.8K	1	[SPC]*14
R6177	ERDS2TJ153	1/4W 15K	1	[SPC]*14
R6177	ERDS2TJ682	1/4W 6.8K	1	[SPC]*15
R6178	ERDS2TJ153	1/4W 15K	1	[SPC]*15
R6201	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6202	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6204	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6205	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6301	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6302	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R6303	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R6512	ERJ3RBD331	1/16W 330	1	[SPC]
R6513	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6514	ERJ3GEYJ470	1/16W 47	1	[SPC]
R6515	ERJ3GEYJ100	1/16W 10	1	[SPC]
R7001	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R7002	ERJ3GEYJ473	1/16W 47K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
RA2031	EXBV4V273J	RESISTOR-RESISTOR	1	[SPC]
RA2032	EXBV4V472J	RESISTOR-RESISTOR	1	[SPC]
RA2501	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
RA3008	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA3009	EXBV4V221J	RESISTOR-RESISTOR	1	D1H42212A001 [SPC]
RA3010	EXBV4V221J	RESISTOR-RESISTOR	1	D1H42212A001 [SPC]
RA3011	EXBV4V473J	RESISTOR-RESISTOR	1	EXBV4V473JV [SPC]
RA3201	EXBV8V471J	RESISTOR-RESISTOR	1	EXBV8V471JV [SPC]*15
RA3202	EXBV8V471J	RESISTOR-RESISTOR	1	EXBV8V471JV [SPC]*15
RA3203	EXBV4V101J	RESISTOR-RESISTOR	1	D1H41012A001 [SPC]*15
RA3204	EXBV4V473J	RESISTOR-RESISTOR	1	EXBV4V473JV [SPC]*15
RA5231	EXBV8V101J	RESISTOR-RESISTOR	1	[SPC]
RA6201	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA6202	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA6203	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA6204	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA6205	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
RA6206	EXBV4V473J	RESISTOR-RESISTOR	1	EXBV4V473JV [SPC]
RA6207	EXBV4V472J	RESISTOR-RESISTOR	1	[SPC]
RA7001	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
RA7002	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
RA7003	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
S6101	EVQ11G07K	SWITCH (POWER)	1	[SPC]
S6102	EVQ11G07K	SWITCH (ONE TOUCH)	1	[SPC]*15
S6103	EVQ11G07K	SWITCH (A-V.S.S.)	1	[SPC]*15
S6104	EVQ11G07K	SWITCH (CINEMA)	1	[SPC]*15
S6105	EVQ11G07K	SWITCH (D-ENH)	1	[SPC]*15
S6161	EVQ11G07K	SWITCH (PAUSE)	1	[SPC]
S6162	EVQ11G07K	SWITCH (PLAY)	1	[SPC]
S6163	EVQ11G07K	SWITCH (STOP)	1	[SPC]
S6171	EVQ11G07K	SWITCH (FWD-SKIP)	1	[SPC]
S6172	EVQ11G07K	SWITCH (RVS-SKIP)	1	[SPC]
S6173	EVQ11G07K	SWITCH (ADVSS)	1	[SPC]*14
S6173	EVQ11G07K	SWITCH (TOP-MENU)	1	[SPC]*15
S6174	EVQ11G07K	SWITCH (BASS)	1	[SPC]*14
S6174	EVQ11G07K	SWITCH (MENU)	1	[SPC]*15
S6175	EVQ11G07K	SWITCH (D-ENH)	1	[SPC]*14
S6175	EVQ11G07K	SWITCH (DISPLAY)	1	[SPC]*15
S6181	EVQ11G07K	SWITCH (OPEN/CLOSE)	1	[SPC]
S6191	ESE24SH7	SWITCH (COUNT)	1	[SPC]
S6192	ESE24SH7	SWITCH (DIRECTION)	1	[SPC]
SW2501	RSH1A048-A	DOUBLE SWITCH	1	[SPC]
T1021	ETS29AS136AC	TRANSFORMER	1	[SPC]
W001	ERDS2T0	1/4W 0	1	[SPC]*15
W701	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
W702	ERJ3GEY0R00	1/16W 0	1	[SPC]*15
X6001	H2B800400007	CERAMIC OSCILLATOR	1	[SPC]
X6501	VSX1044	CRYSTAL OSCILLATOR	1	H0J368500003 [SPC]

# 19 Additional Contents 1

## 19.1. Replacement Edition

Please do away with the former Supplement Manuals (Order No.ODSD010844S0 and ODSD011156S0) and use this Supplement Manuals instead of the former one.

## 19.2. Precautions in Replacing Optical Pick-Up

- There are two different types of optical pick-up, one with black-colored base (resin: RAF3022A-1) and the other with gray-colored base (Zinc dicast: RAF3020A-1).
- When replacing the optical pick-up, check the base color first and then follow the procedure shown in the drawing below.<Fig. 1>

## 19.3. Use of Optical Pick-Up for Different Models

< As of April, 2002 >

Use	Model No.
New/Former Type <BLACK(resin)/GRAY(zinc dicast)>	DVD-RV21, DVD-RV26, DVD-RV31, DVD-RV36, DVD-RV41, DVD-RV46, DVD-RA71, DVD-RP91, DVD-H2000, SL-DV250, SL-HDV600
New Type <BLACK(resin)>	DVD-RV31GD, DVD-RP56, DVD-RA60, DVD-RA61

## 19.4. Repair / Replacement Policy for the DL1 Mechanism ' s Optical Pick-up

### 19.4.1. Resin-base(black) Optical Pick-up

Should be replaced with the resin-base pick-up (RAF3022A-1).

(If the replacement resin-base Pick-up has a shaft spring, remove it.)

### 19.4.2. Zinc dicast-base(gray) Optical Pick-up

- Should be replaced with the optical pick-up kit (RAF3022AKIT).

#### 19.4.2.1. Optical Pick-up Kit Components

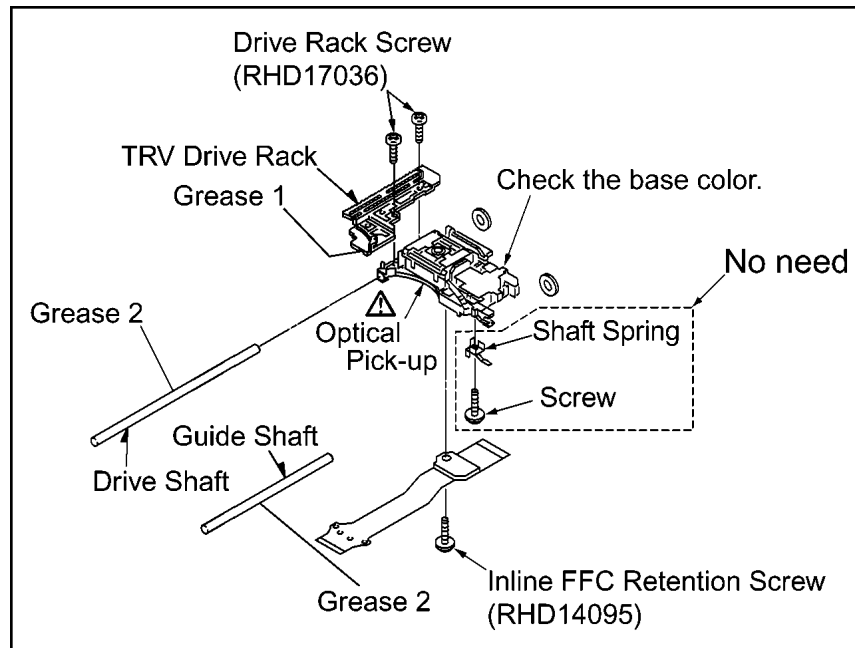
Optical Pick-up Kit: **RAF3022AKIT**

- Resin-base Optical Pick-up (RAF3022A-1).....1pc.
- Drive Rack Screw (RHD17036).....2pcs.
- Inline FCC Retention Screw (RHD14095).....1pc.
- Instruction Sheet (PSD01-002).....1pc.



## 19.5. Replacement Steps

1. Remove Optical Pick-up from traverse mechanism and then install Resin-base Optical Pick-up.
2. Replace Drive Rack Screw and Inline FFC Retention Screw with their counterparts included in the Optical Pick-up Kit (No need for Shaft Spring and its Screw).



<Fig. 1>

## 19.6. Replacement Parts List and Exploded View

**Note:**

- All parts that are supplied by SPC.

### 19.6.1. Change in Replacement Parts List

- DVD-RV31(A,EU), <ODSD010416C8>
- DVD-RV31(EN,PM,PX), <ODSD010417C3>
- DVD-RV41(A), <ODSD010411C3>
- DVD-RV46(EN), <ODSD011158C3>

<Original>

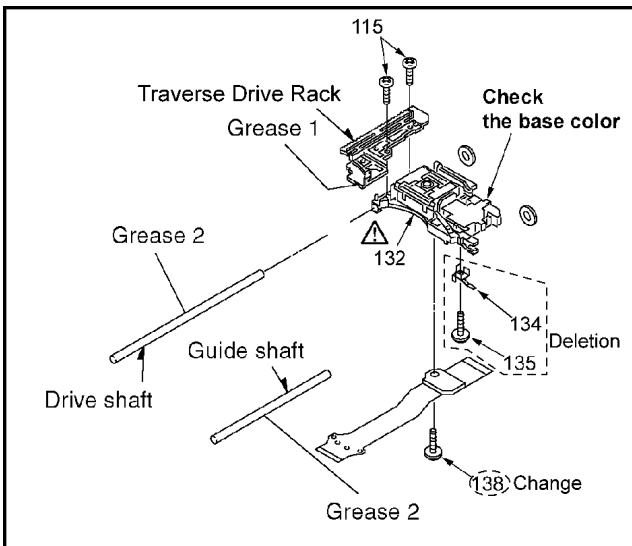
Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17028	SCREW	2	
132	RAF3020A-1	OPTICAL PICK-UP	1	△
134	RMC0418	SHAFT SPRING	1	
135	VHD1057	SCREW	2	



< New >

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
115	RHD17036	SCREW	2	change
132	RAF3022A-1	OPTICAL PICK-UP	1	△ change
134	---	---	-	deletion
135	---	---	-	deletion
138	RHD14095	SCREW	1	change
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	△ addition

#### 19.6.1.1. Mechanism Section Exploded View



	Part No.
Grease1	RFKXGAK152
Grease2	RFKXPG641

### 19.6.2. Change in Replacement Parts List

- DVD-RV21(U), <ODSD010528C1>
- DVD-RV26(U), <ODSD010308A1>
- DVD-RV31/RV41(U,CA), <ODSD010203C1>
- DVD-RV31/RV41(E,EB,EG), <ODSD010307C2>
- DVD-RV31(German Product Model)(E,EB,EG), <MB0106004S2>
- DVD-RV36(E,EG), <ODSD010736C2>
- DVD-RA71(EN), <ODSD010527C3>
- DVD-RA71(E,EB,EG), <ODSD010304C2>
- DVD-RA71(A), <ODSD010525C3>
- DVD-RP91(D), <ODSD010305C1>
- DVD-H2000(D), <ODSD010629C1>

<Original>

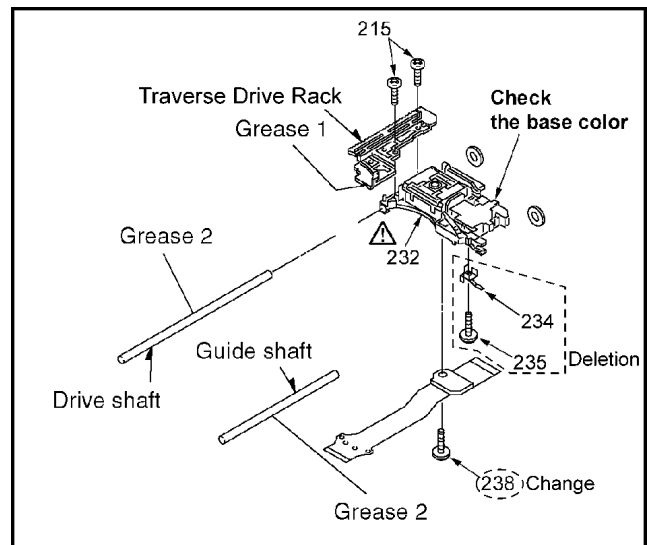
Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
215	RHD17028	SCREW	2	
232	RAF3020A-1	OPTICAL PICK-UP	1	△
234	RMC0418	SHAFT SPRING	1	
235	VHD1057	SCREW	2	



< New >

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
215	RHD17036	SCREW	2	change
232	RAF3022A-1	OPTICAL PICK-UP	1	△ change
234	---	---	-	deletion
235	---	---	-	deletion
238	RHD14095	SCREW	1	change
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	△ addition

#### 19.6.2.1. Mechanism Section Exploded View



	Part No.
Grease1	RFKXGAK152
Grease2	RFKXPG641

### 19.6.3. Change in Replacement Parts List

- DVD-RV31(GD), <ODSD010737C3>
- DVD-RP56(U,CA), <ODSD010734C1>

<Original>

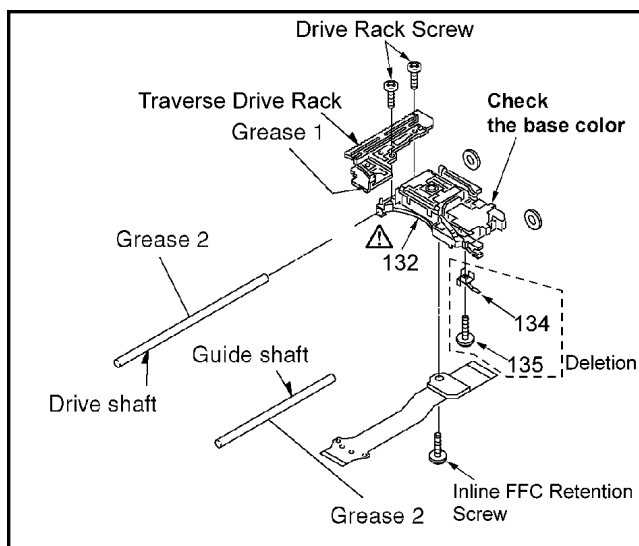
Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
132	RD-DDP006-M	OPTICAL PICK-UP	1	△
134	RMC0418	SHAFT SPRING	1	
135	RHD14096	SCREW	1	



< New >

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
132	RAF3022A-1	OPTICAL PICK-UP	1	△ change
134	---	---	-	deletion
135	---	---	-	deletion

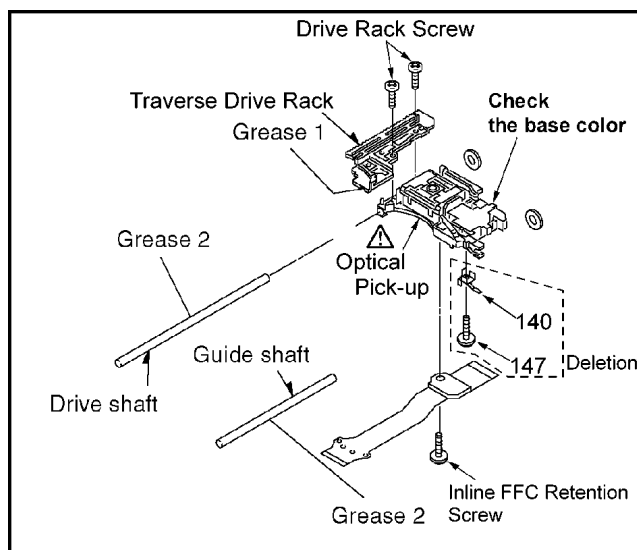
#### 19.6.3.1. Mechanism Section Exploded View



	Part No.
Grease1	RFKXGAK152
Grease2	RFKXPG641

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
140	---	---	-	deletion
147	---	---	-	deletion

#### 19.6.4.1. Mechanism Section Exploded View



	Part No.
Grease1	RFKXGAK152
Grease2	RFKXPG641

### 19.6.4. Change in Replacement Parts List

- DVD-RA60(U), <ODSD011157C1>
- DVD-RA61(E,EB,EG), <ODSD010952C2>
- DVD-RA61(EN), <ODSD011159C3>
- DVD-RA61(A,EU), <ODSD011160C8>

<Original>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
140	RMC0418	SHAFT SPRING	1	
147	RHD14096	SCREW	1	



< New >

### 19.6.5. Change in Replacement Parts List

- SL-DV250(EG), <AD0103078C2>
- SL-DV250(EE,GCS,GN), <AD0107130C8>



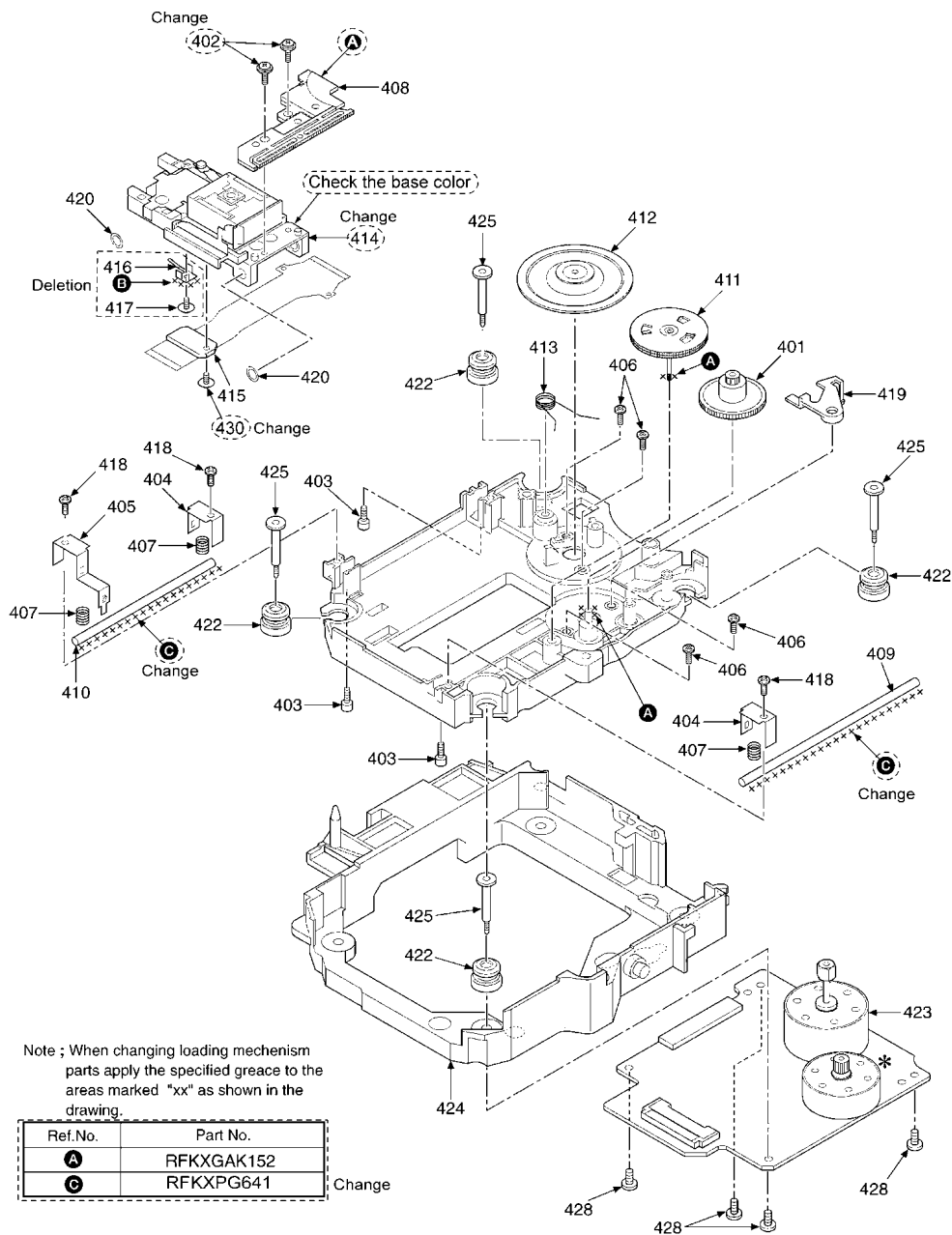
<Original>

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
402	RHD17028	SCREW	2	
414	RAF3020A-1	OPTICAL PICK-UP	1	△
416	RMC0418	SHAFT SPRING	1	
417	VHD1057	SCREW	2	

< New >

Ref. No.	Parts No.	Part Name & Description	Pcs	Remarks
402	RHD17036	SCREW	2	change
414	RAF3022A-1	OPTICAL PICK-UP	1	△ change
416	---	---	-	deletion
417	---	---	-	deletion
430	RHD14095	SCREW	1	change
KIT1	RAF3022AKIT	OPTICAL PICK-UP KIT	1	△ addition

#### 19.6.5.1. Mechanism Section Exploded View





## &lt;Old&gt;

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



## &lt;New&gt;

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	△

**20.1.2. 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.

## &lt;Old&gt;

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



## &lt;New&gt;

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	△

**20.1.3. Change of Replacement Parts List**

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

## &lt;Original&gt;

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



## &lt;New&gt;

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

**20.1.4. 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)

## &lt;Original&gt;

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



## &lt;New&gt;

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