

**SONY®**  
ELECTRONIC VIEWFINDER  
**HDVF-C30W**

**HDVS**

MAINTENANCE MANUAL  
1st Edition  
Serial No. 10001 and Higher

## ⚠️警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながることがあります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## ⚠️WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## ⚠️WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## ⚠️AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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# Manual Structure

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## Purpose of this manual

This manual is the maintenance manual for Electronic Viewfinder HDVF-C30W. This manual describes the information items necessary when the unit is supplied and installed, items that premise the service based on the components parts such as main parts replacement, schematic diagrams, board layouts and spare parts lists, assuming use of system and service engineers.

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## Relative manual

Besides this maintenance manual the following manual is available for this unit.

- **Operation Manual (Supplied with this unit)**

This manual is necessary for application and operation of this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in B&P Company equipment.

Semiconductors that cannot be searched for on this CD-ROM are listed in the maintenance manual for the corresponding unit. The maintenance manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

Part number: 9-968-546-XX

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## **Contents**

The following are summaries of the each section for understanding the manual.

### **Section 1 Service Overview**

Describes information about board locations, connector input/output signals, and replacement of LCD panel.

### **Section 2 Spare Parts**

Describes parts list, exploded views and supplied accessories used in the unit.

### **Section 3 Semiconductor Pin Assignments**

Contains information on semiconductors used for the unit.

It includes a complete list of the semiconductors and their ID Nos. for retrieving information on “Semiconductor Pin Assignments” CD-ROM, which is available separately.

Please refer to this section together with the “Semiconductor Pin Assignments” CD-ROM.

Information on the semiconductors not contained in the CD-ROM at the time of issue of this manual, if any, is given in this section as well.

### **Section 4 Block Diagram**

Describes overall block diagram of this unit.

### **Section 5 Schematic Diagrams**

Describes schematic diagrams for every circuit board and frame wiring .

### **Section 6 Board Layouts**

Describes board layouts for every circuit board.

# Section 1

## Service Overview

### 1-1. Check Item before Starting Maintenance

Before connecting to the HDW-750/730 series camcorder, confirm these two points beforehand.

If either one or both of these points is satisfied, the HDVF-C30W that is connected to the HD camcorder will have the B/W video picture on display.

If this error occurs, modification of the HD camcorder is needed.

#### Points to be confirmed

1. Version number of the ROM on the AT-143 board of HD camcorder is "V1.51 or lower".

##### Note

Version number can be confirmed using the DIAGNOSIS menu of HD camcorder.

2. Serial number falls within the followings:

HDW-750 : 70001 to 70557

HDW-750 : 10001 to 10400, 20001 to 20003

HDW-750P : 40001 to 40097

HDW-750CE : 40001 to 40036

HDW-730 : 10001 to 10053

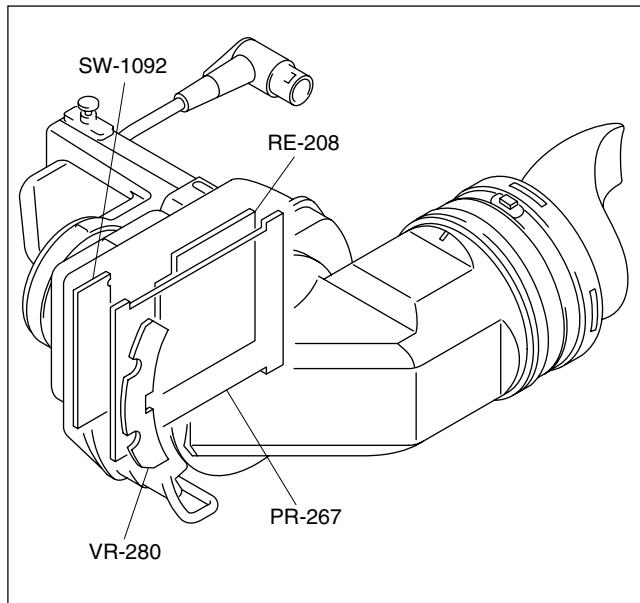
If modification of HD camcorder is needed, contact your local Sony Sales Office/Service Center.

### 1-2. Check Item after Completing Maintenance

When maintenance work is completed, check that the SEL1/SEL2 selector switch is set to the SEL1 position (lower position).

If it is set to the SEL2 position (upper position), the BRIGHT/CONTR/PEAKING adjustment controls are disabled.

### 1-3. Board Layouts



## 1-4. Circuit Description

### PR-267 board

The input Y, Pb and Pr signals are passed through the buffer and the pre-filter and are A/D-converted to the 10-bit digital signals. Then resultant signals are sent to the FPGA.

The digital input Y, Pb and Pr signals are clamped inside the FPGA, receive the BRIGHT, CONTRAST and PEAKING controls, and are finally converted to the RGB signals that are output to LCD. The above controls are realized by A/D-converting the analog control voltages from the VR-280 board and are supplied to FPGA.

The H1 signal and H2 signal are generated from the sync signal by the two comparators. The H1 signal extracts the zero-cross point of the three-level sync signal and the H2 signal extracts the sync signal near the zero-cross point. The H1 and H2 signals are supplied to FPGA that generates the H and V sync signals. The LCD drive pulse signals are generated from the H and V sync signals. The LCD drive pulse signals that are thus generated are supplied to LCD together with the RGB video signal and the LCD gamma correction voltage.

The various controls from the camera and VF are sent through IIC and are processed by FPGA from which the control commands are distributed to the respective circuits as the control signals as necessitated.

### RE-208 board

The RE-208 board contains the following three types of voltage regulator. 1. The voltage regulator supplying the analog and digital signal processing, generating the 3.1 V regulated voltage. 2. The voltage regulators supplying the LCD drive voltages, generating the 10.5 V, 20 V and -7.2 V regulated voltages. 3. The voltage regulator supplying the CCFL drive regulated voltage.

The maximum contrast of LCD is set by the variable resistor located inside the LCD. The LCD contrast can be controlled within the range with the use of CONTRAST under the maximum contrast set by the above variable resistor.

### VR-280 board

The VR-280 board contains the two sets of BRIGHT, CONTRAST and PEAKING controls. One set of these controls is for the external control. The other set of these controls is for the internal control. Either the external or the internal controls can be selected with the use of the SEL switch. The VR-280 board contains the tally lamp drive circuit that turns on or off the TALLY lamp in accordance with the command supplied from the camera.

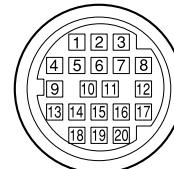
The VR-280 board contains also the switch that inverts the scanning direction from the right or left of display screen. This switch is interlocked with the viewfinder barrel presence so that the appropriate scanning direction is automatically selected as the viewfinder barrel is installed.

### SW-1092 board

The SW-1092 board contains the tally, zebra, marker, B&W and MAG function selector switches. The status information of these selector switches is sent to the PR-267 board.

## 1-5. Input and Output Signals of Connectors

VF (20P MALE)

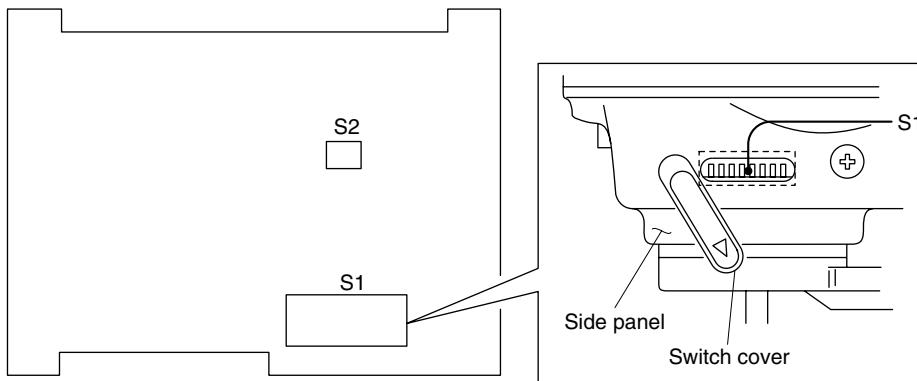


(EXTERNAL VIEW)

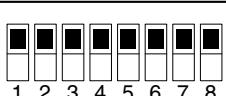
Pin No.	Signal Name	I/O	Specifications
1	S-DATA	IN/OUT	TTL level
2	NC		No connection
3	POWER OFF CTL	IN	POWER ON : OPEN POWER OFF : GND
4	SCK	IN	TTL level
5	NC		No connection
6	NC		No connection
7	NC		No connection
8	G TALLY	IN	ON : 5 V OFF : GND
9	NC		No connection
10	NC		No connection
11	NC		No connection
12	Y VIDEO	IN	1.0 V p-p Zo = 75 Ω
13	VIDEO GND		GND for VIDEO
14	Pb VIDEO	IN	0.7 V p-p Zo = 75 Ω
15	Pr VIDEO	IN	0.7 V p-p Zo = 75 Ω
16	NC		No connection
17	R TALLY	IN	ON : 5 V OFF : GND
18	NC		No connection
19	UNREG GND		GND for UNREG
20	UNREG	IN	DC 10.5 V to 17 V

## **1-6. Functions of On-board Switches and Controls**

## **1-6-1. PR-267 Board**



## S1 Switch

Ref. No.	Description	Factory setting
S1-1	Selects whether to enable all of the indicators in the upper and lower sections of the LCD screen, or only the BATT indicator.  OFF : Enable all indicators.  ON : Enable the BATT indicator only.	All OFF  OFF (Upper side)
S1-2	Selects the function of the B&W button on the front panel, B&W display priority or grayscale display priority.  OFF : Priority given to B&W display.  ON : Priority given to grayscale display.	ON (Lower side)
S1-3	Selects whether the PEAKING variable resistor (RV2/VR-208 board) on the front panel and the PEAKING control on the side panel should work together with the MAG button on the front panel or the SEL1/SEL2 switch on the side panel.  OFF : Work together with the SEL1/SEL2 switch.  ON : Work together with the MAG button.  This allows you to use different peaking settings for magnified and normal display.  The following table shows the relationship between switch S1-3 settings and the times when the PEAKING control and the PEAKING variable resistor are enabled and disabled.	

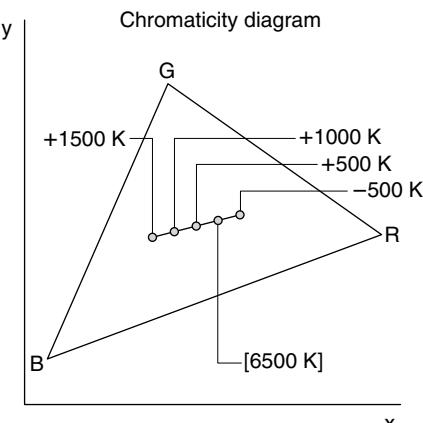
	S1-3: OFF		S1-3: ON	
	SEL1/SEL2 switch		MAG button	
	SEL1	SEL2	ON	OFF
			(Magnified display) (Normal display)	
PEAKING control*	Yes	No	No	Yes
PEAKING adjustment variable resistor*	No	Yes	Yes	No

\* : Refer to the Section 1-6-2. (Yes : Enabled, No : Disabled)

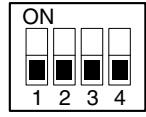
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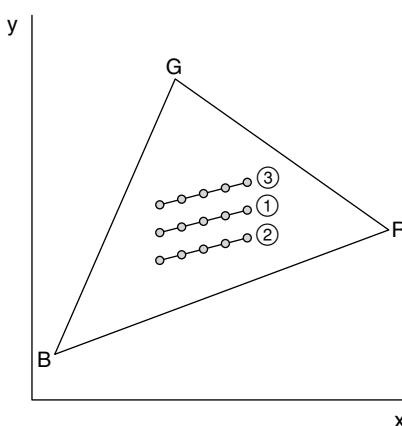
Ref. No.	Description	Factory setting																								
S1-4	Selects whether the magnified section of the picture is fixed as the center section or can be selected from the upper left, upper right, lower left, lower right, and center sections.  (Refer to "Magnifying the Picture" of the Operation Manual for the selection method.) OFF : Selectable from among the 5 sections. ON : Fixed as the center section. In this case, the display automatically returns to normal about 5 seconds after the MAG button is pressed.	All OFF  OFF (Upper side)  ON (Lower side)																								
S1-5	Not used.																									
S1-6 to 8	Adjust color temperature.	<table border="1"> <thead> <tr> <th>S1-6</th> <th>S1-7</th> <th>S1-8</th> <th>Color temperature</th> </tr> </thead> <tbody> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Factory setting (approx. 6500 K)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>Decreases approx. 500 K (becomes reddish)</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>OFF</td> <td>Increases approx. 500 K (becomes bluish)</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>OFF</td> <td>Increases approx. 1000 K (becomes bluish)</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>ON</td> <td>Increases approx. 1500 K (becomes bluish)</td> </tr> </tbody> </table>	S1-6	S1-7	S1-8	Color temperature	OFF	OFF	OFF	Factory setting (approx. 6500 K)	ON	OFF	OFF	Decreases approx. 500 K (becomes reddish)	OFF	ON	OFF	Increases approx. 500 K (becomes bluish)	ON	ON	OFF	Increases approx. 1000 K (becomes bluish)	OFF	OFF	ON	Increases approx. 1500 K (becomes bluish)
S1-6	S1-7	S1-8	Color temperature																							
OFF	OFF	OFF	Factory setting (approx. 6500 K)																							
ON	OFF	OFF	Decreases approx. 500 K (becomes reddish)																							
OFF	ON	OFF	Increases approx. 500 K (becomes bluish)																							
ON	ON	OFF	Increases approx. 1000 K (becomes bluish)																							
OFF	OFF	ON	Increases approx. 1500 K (becomes bluish)																							
<b>Note</b>																										
Color temperature does not change except by the above switch combinations. The screen display luminance decreases as a result of color temperature adjustment.																										
																										

## S2 Switch

Ref. No.	Description		Factory setting
S2-1, 2	Selects whether to enlarge the range of color temperature adjustment range or not on the y-axis of the chromaticity diagram with the use of the switch S1-6 to S1-8.		All OFF 
	<b>S2-1 (WB-Y)</b>	<b>S2-2 (WB+Y)</b>	<b>Chromaticity (y-axis direction)</b>
	OFF	OFF	Factory default setting (As shown in ① on the following diagram)
	ON	OFF	Chromaticity is adjusted toward the minus (Magenta) direction. (As shown in ② on the following diagram)
	OFF	ON	Chromaticity is adjusted toward the plus (Green) direction. (As shown in ③ on the following diagram)
	ON	ON	—

**Note**

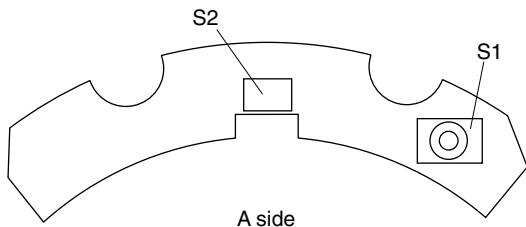
The switches S2-1 and S2-2 should be adjusted in combination with the switches S1-6 through S1-8.



S2-3	Selects direction of the display scanning forcibly from the right or the left. OFF : Normal direction (The switch S2 on the VR-208 board is enabled.) ON : Direction of scanning can be selected forcibly (The switch S2 on the VR-208 board is disabled.)
S2-4	TEST SAW waveform output switch ON : Generates the TEST SAW waveform within viewfinder. Use the TEST SAW signal to check the video signal system using the EX-909 board.

## 1-6-2. VR-208 Board

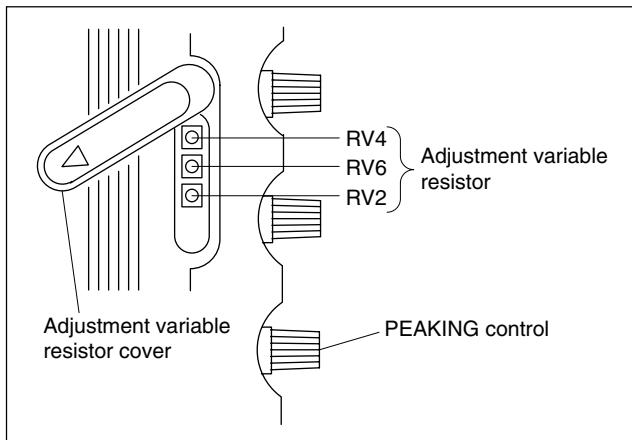
### Switch



#### Ref. No. Description

S1	SEL1/SEL2 selector switch (on side panel)
S2	Selects direction of the display scanning from the right or the left. When the viewfinder barrel is installed, this switch is set to ON so that the scanning in the reverse direction is obtained.

### Variable Resistor



#### Ref. No. Description

RV2	PEAKING adjustment	This adjustment is enabled by setting of the SEL1/SEL2 selector switch or that of the MAG button. For details, refer to Section 1-6-1, Switch S1-3.
RV4	BRIGHTNESS adjustment	They can be adjusted when the SEL1/SEL2 selector switch (on the side panel) is set to the SEL2 position.
RV6	CONTRAST adjustment	

## 1-7. Replacing the Main Parts

### 1-7-1. Replacing the LCD Panel

#### Note

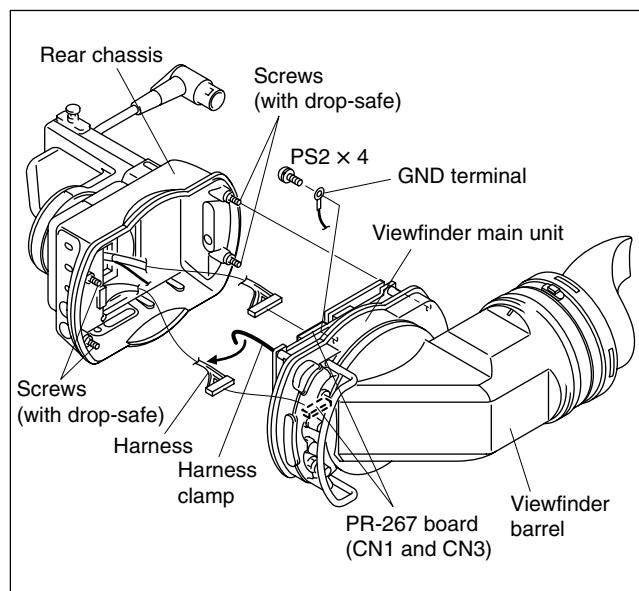
Replacement of the LCD panel backlight:

The backlight of the LCD panel has the life of about 40,000 hours as far as the set color temperature remains constant.

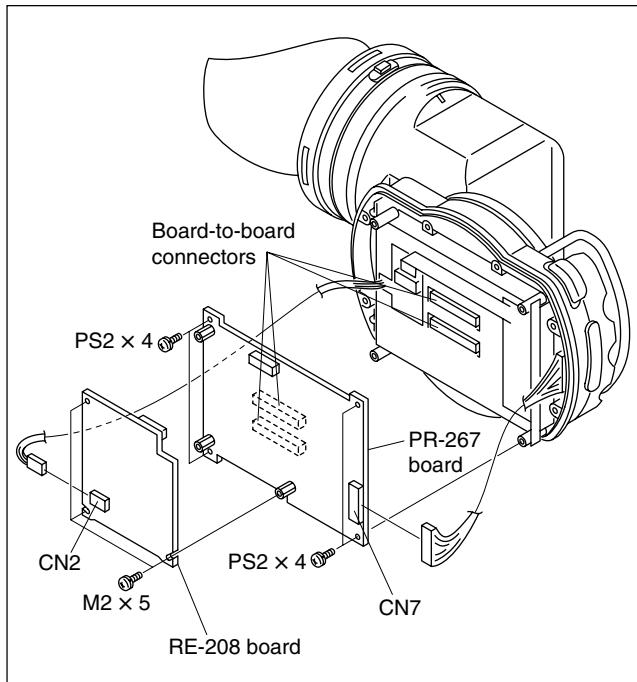
Replace the backlight when luminance of the backlight decreases to 150 cd/m<sup>2</sup> or less as a guideline.

Replacement of the backlight only is not possible. Replace the entire LCD panel.

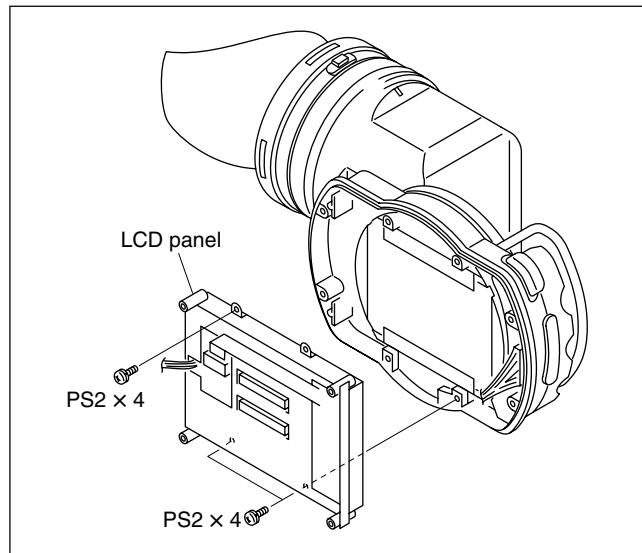
1. Loosen the four screws (with drop-safe) securing the rear chassis and remove the rear chassis.
2. Disconnect the harness from the harness clamp and disconnect the harness from the connectors (CN1, CN3) on the PR-267 board.
3. Remove the screw (PS2 × 4) and remove the GND terminal.



4. Disconnect the harness from the connector (CN2) on the RE-208 board.
5. Disconnect the harness from the connector (CN7) on the PR-267 board.
6. Remove the three screws (M2 × 5) and remove the RE-208 board from the PR-267 board.
7. Remove the four screws (PS2 × 4) and remove the board-to-board connector from the PR-267 board.



8. Remove the three screws (PS2 × 4) and remove the LCD panel.



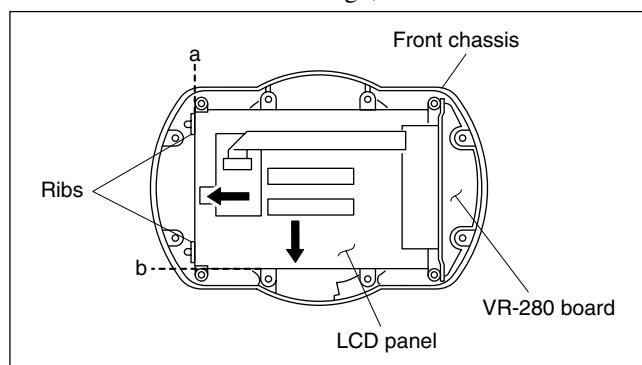
9. Install the new LCD panel.

#### **Precaution for installation**

When installing the new LCD panel, be careful not to attach dust or fingerprint on the display area of the LCD panel.

#### **Installation position**

Install the LCD panel by pushing it against the sides "a" and "b" as far as it can go, of the front chassis.



10. Perform the setting of the switches S1 and S2 of the PR-267 board. (Refer to Section 1-8-1.)
11. Install the removed parts by reversing the steps 1 to 7 of removal.

#### **Precaution for installation**

Be sure to insert the connectors to the circuit board securely for sure connection of the connectors.

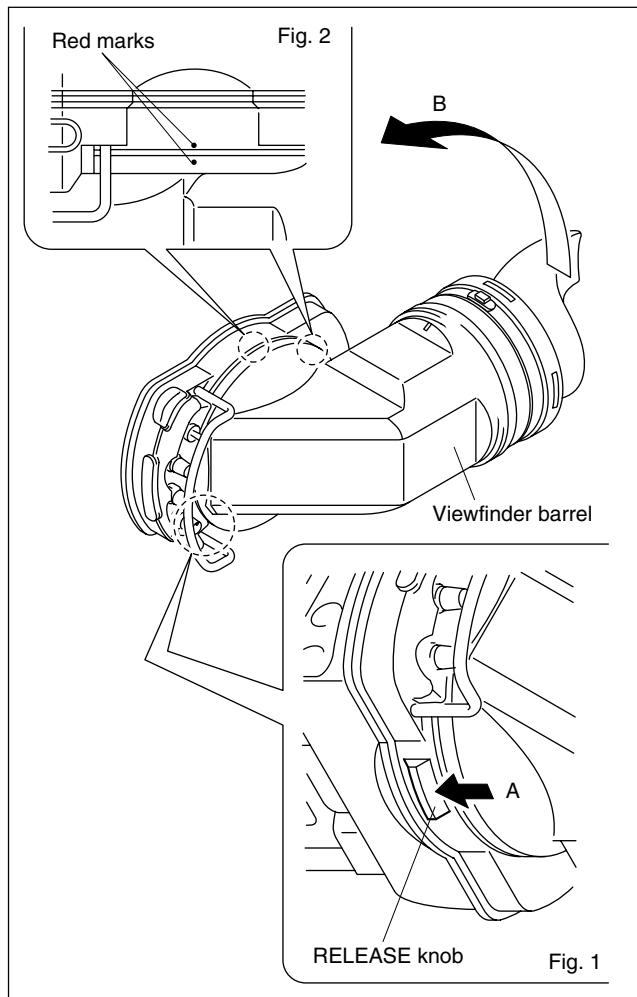
## 1-7-2. Replacing the Protection Glass

Parts to be prepared in addition to the protection glass:

- Glass cushion, 1 piece : 3-776-618-xx
- Radiation sheet, 2 pieces : 3-776-623-xx

### Removal

1. Push the RELEASE knob in the direction of the arrow A to release the lock and remove the viewfinder barrel by rotating it in the direction of the arrow B.



2. Remove the viewfinder main unit and then remove the LCD panel.  
(Perform steps 1 to 3, 5 and 8 of "1-7-1. Replacing the LCD Panel.")
3. Peel off the two radiation sheets.
4. Peel off the protection glass from glass cushion to remove it.
5. Peel off the glass cushion from the front chassis and wipe the attaching surface of the glass cushion with alcohol.

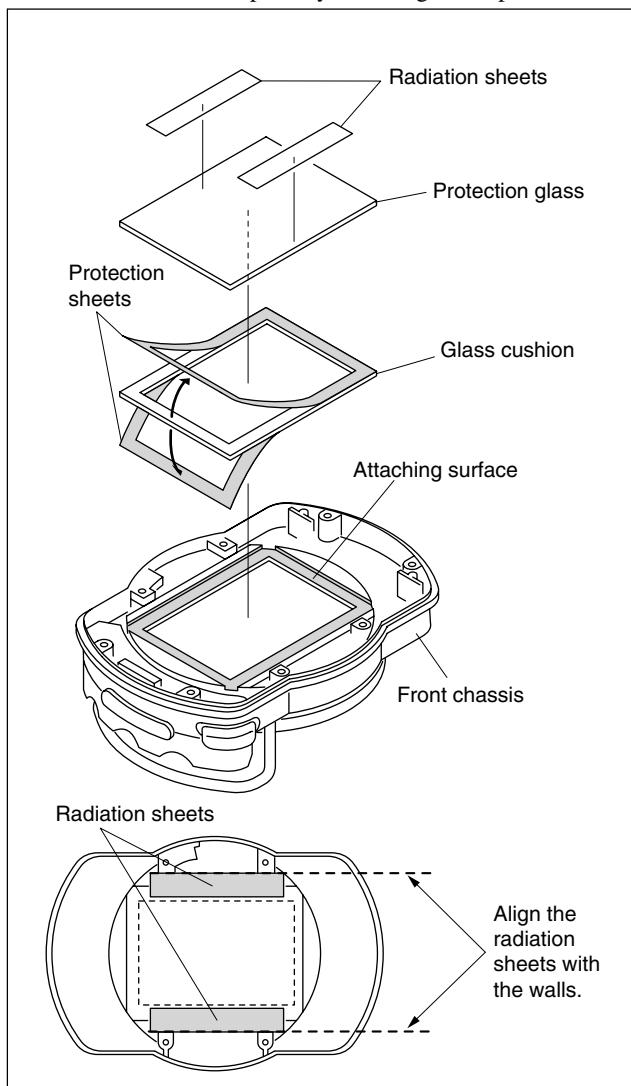
### Installation

6. Peel off the protection sheet from the new glass cushion and attach the new glass cushion to the attaching surface.

#### Precaution for attaching the glass cushion

- Attach the glass cushion so that any portion of the glass cushion should not protrude from the attaching surface.
- Attach the glass cushion with care so that any wrinkle should not be generated.

7. Peel off the protection sheet form the surface of the glass cushion attached, and install the new protection glass.
8. Attach the two radiation sheets to the positions as shown in the illustration.
9. Install the removed parts by reversing the steps of removal.



#### Precaution for installation

Align the red marks when installing the viewfinder barrel. (Fig. 2)

### 1-7-3. Replacing the Anti-Glare Sheet

The three different types of anti-glare sheet are used as shown below in this model.

Replace the desired type of anti-glare sheet as necessitated.

#### Replacing the Anti-Glare Sheet (Ring)

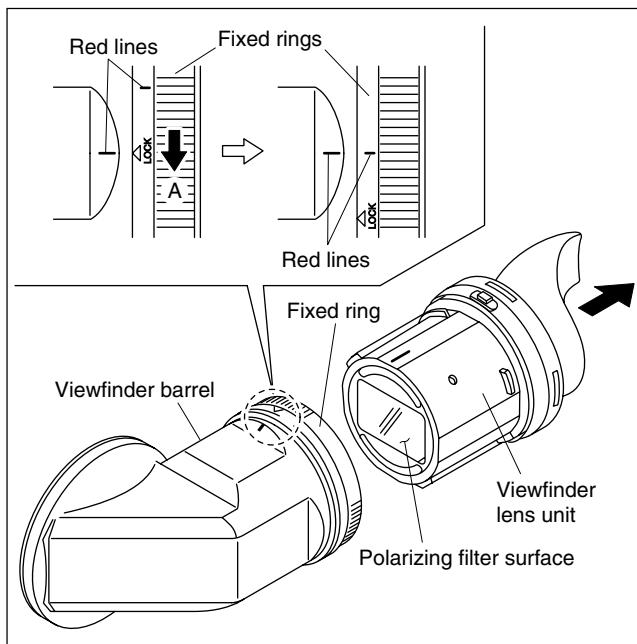
##### Required part

Anti-glare sheet (Ring) 1 piece : 3-789-426-xx

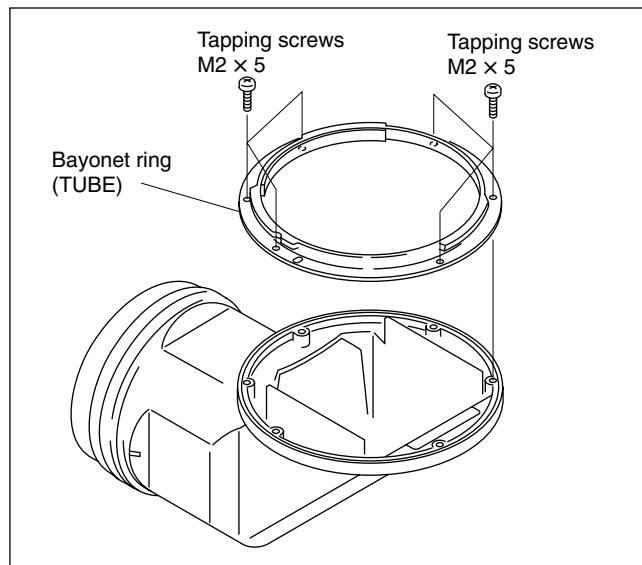
1. Push the RELEASE knob to release the lock and remove the viewfinder barrel. (Refer to Section 1-7-2, step 1.)
2. Rotate the fixed ring fully in the direction of the arrow A and align the key marks (red lines) of the fixed ring with that of the viewfinder barrel. Then remove the viewfinder lens unit.

##### Note

Be extremely careful not to give any scar on the polarizing filter surface of the viewfinder lens unit during the removal and installation procedures.



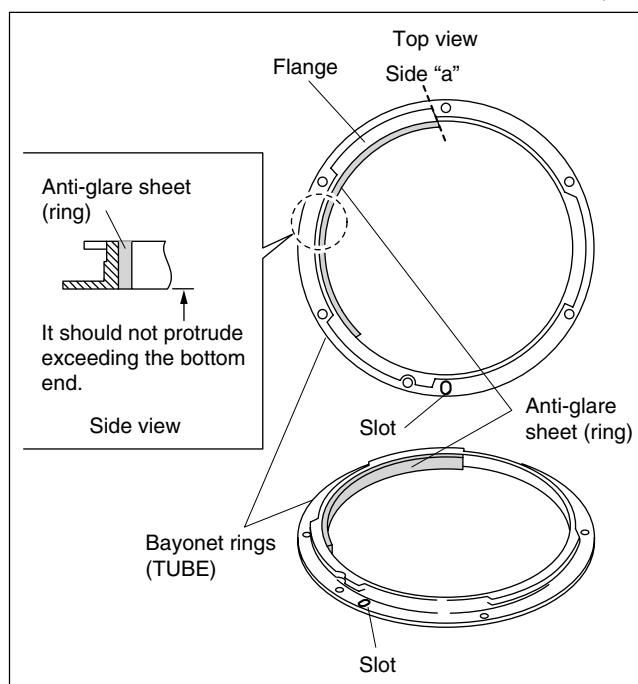
3. Remove the six screws (tapping screw M2 × 5) and remove the bayonet ring (TUBE) from the viewfinder barrel.



4. Peel off the anti-glare sheet (ring) from the bayonet ring (TUBE) and wipe the attaching surface with alcohol.
5. Place the bayonet ring (TUBE) on a flat work bench with its viewfinder barrel attaching surface facing downward.
6. Peel off the protection sheet of the new anti-glare sheet (ring). Align the shorter end-surface of the new anti-glare sheet with the flange end surface (side "a") of the bayonet ring (TUBE). Attach the new anti-glare sheet (ring) to the bayonet ring (TUBE) by pressing downward.

#### **Precaution for attaching the anti-glare sheet (ring)**

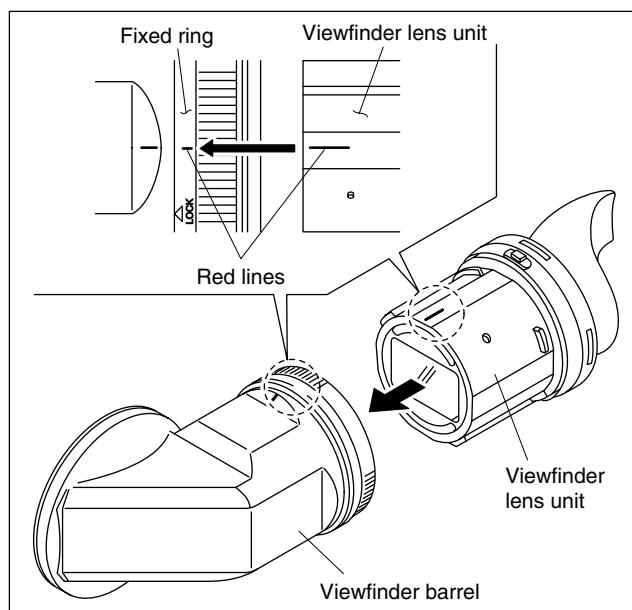
- Attach the anti-glare sheet (ring) with care so that the anti-glare sheet (ring) should not float or any wrinkle should not be generated.
- Attach the anti-glare sheet (ring) so that it should not protrude exceeding the circumference to which the viewfinder barrel of the bayonet ring (TUBE) is going to be installed. (If it protrudes exceeding the circumference, the anti-glare sheet (ring) becomes visible on the mirror inside the viewfinder barrel.)



7. Install the removed parts by reversing the steps 1 to 3 of removal.

#### **Precaution for installation**

Align the alignment mark (red) of the viewfinder lens unit with that of the alignment mark (red) of the fixed ring when installing the viewfinder lens unit, and insert the viewfinder lens unit.



#### **Replacing the Anti-Glare Sheet (Upper) and (Lower)**

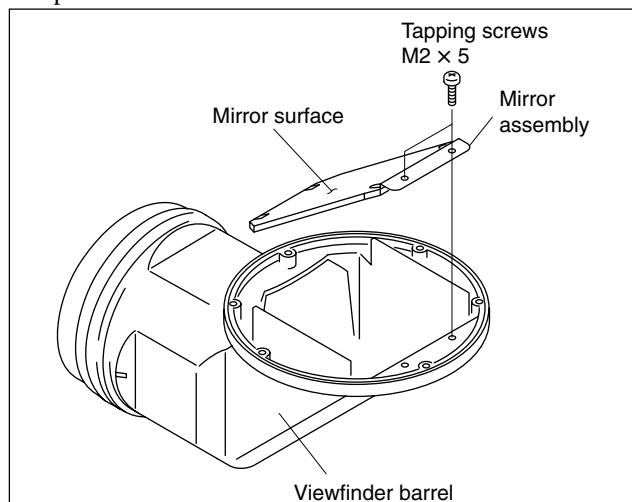
##### **Required parts**

- Anti-glare sheet (Upper) 1 piece : 3-789-424-xx
- Anti-glare sheet (Lower) 1 piece : 3-789-425-xx

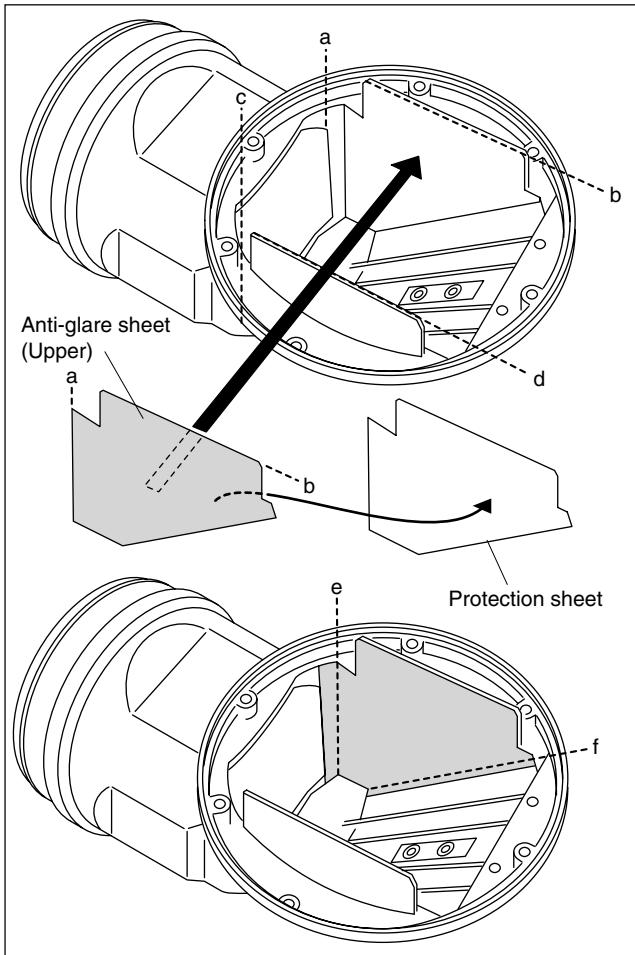
1. Execute steps 1 through 3 of the anti-glare sheet (ring) replacement procedure.
2. Remove the two screws (tapping screw M2 × 5) and remove the mirror assembly from the viewfinder barrel.

##### **Note**

Be extremely careful not to give any scar or stain on the mirror surface during the removal and installation procedures.



3. Peel off the anti-glare sheet (Upper) and (Lower) from the viewfinder barrel.
4. Peel off the protection sheet of the new anti-glare sheet (Upper). Align the new anti-glare sheet with the sides "a" and "b" of the viewfinder barrel. Attach the new anti-glare sheet (Upper) to the viewfinder barrel.
- Precaution for attaching the anti-glare sheet (Upper)**
  - Fold the sides "e" and "f" of the sheet so that they fit to the shape of the barrel and then attach them.
  - Attach the anti-glare sheet (Upper) including the sides "e" and "f" with care so that the anti-glare sheet (Upper) should not float or should not create any wrinkle.
5. Similarly, align the anti-glare sheet (Lower) with the sides "c" and "d" and attach it to the viewfinder barrel.



6. Install the removed parts by reversing the steps 1 and 2 of removal.

## 1-8. Setup after Replacement of the Main Parts and Board

### 1-8-1. When the LCD Panel is Replaced

Return the settings of the switches S1 (C-2) and S2 (B-2) on the PR-267 board to the default setting when shipped from the factory.

S1-6 to S1-8 : OFF (Preset the chromaticity setting.)

S2-1 to S2-4 : All OFF

### 1-8-2. When the PR-267 Board is Replaced

Set the switches S1 (C2) and S2 (B-2) settings to the original setting of the board.

## 1-9. Fixtures and Measuring Instruments

### 1-9-1. List of Fixtures and Measuring Instruments

Name of the fixture/ measuring instrument	Sony part number	Application
EX-909 board	A-8346-442-A	Used to check the PR-267 board
RE-208 EX unit	A-8346-433-A	Used to check the RE-208 board
Connecting cable	1-827-086-21	<ul style="list-style-type: none"> <li>• Used to check the PR-267/RE-208 board</li> <li>• Used to rewrite the PLD data</li> </ul>
Pattern box PTB-500	J-6029-140-B	Used to adjust brightness
PLD download tool	J-7120-140-A	Used to rewrite the PLD data
Luminance meter*	—	Used to adjust the brightness

\* : Use of the Minolta Model LS-100 Luminance Meter is recommended.

### 1-9-2. How to Extend the RE-208 Board

1. Remove the viewfinder barrel.  
(Refer to Section 1-7-2, step 1.)
2. Perform steps 1 to 3 of “1-7-1. Replacing the LCD Panel.”
3. Remove the RE-208 board.  
(Refer to Section 1-7-2, step 6.)

**Note**

Do not disconnect the harness from the connector CN2 on the RE-208 board.

4. Connect the EX-907 board to the CN2 connector on the PR-267 board. Because this connector is easy to be dropped off, secure the EX-907 board with the screw that was removed in the step 3.
5. Connect the EX-908 board to the CN1 connector on the RE-208 board.
6. Connect the connecting harness to the CN2 on the EX-907 and the EX-908 board, respectively.

**CAUTION**

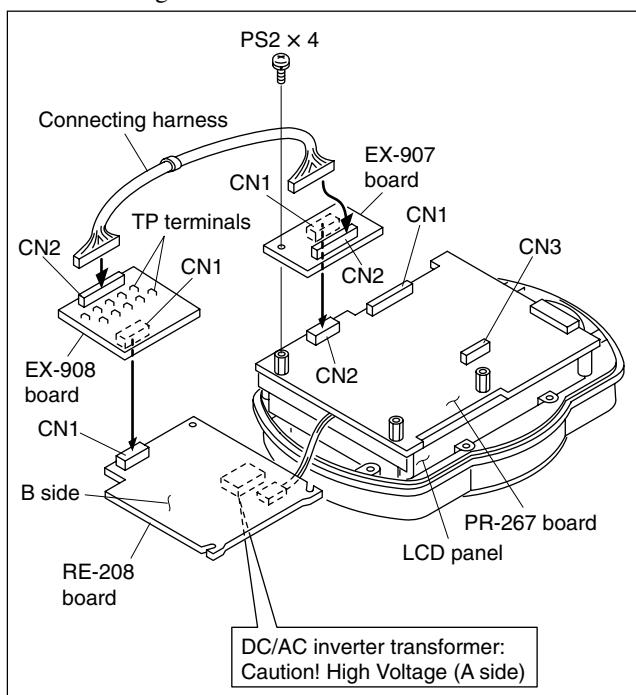
Side A of the RE-208 board has high-voltage area of DC/AC inverter transformer.

While turning on the electricity, perform the checks with extreme care so that you might not get the electric shock. (Refer to Section 1-12.)

7. Connect the connecting cable to the CN1 connector on the PR-267 board and the camera.

**Note**

Attach the insulating tape to the GND terminal of the connecting cable.



## 1-10. Diagnostics

This section describes the diagnostics of the PR-206 board, LCD panel and the RE-208 board.

### 1-10-1. Diagnostics of the PR-267 Board and the LCD Panel

When the abnormality occurs in the LCD display output, you can confirm whether the cause of the trouble is located in the LCD panel or in the PR-267 board by using the fixtures.

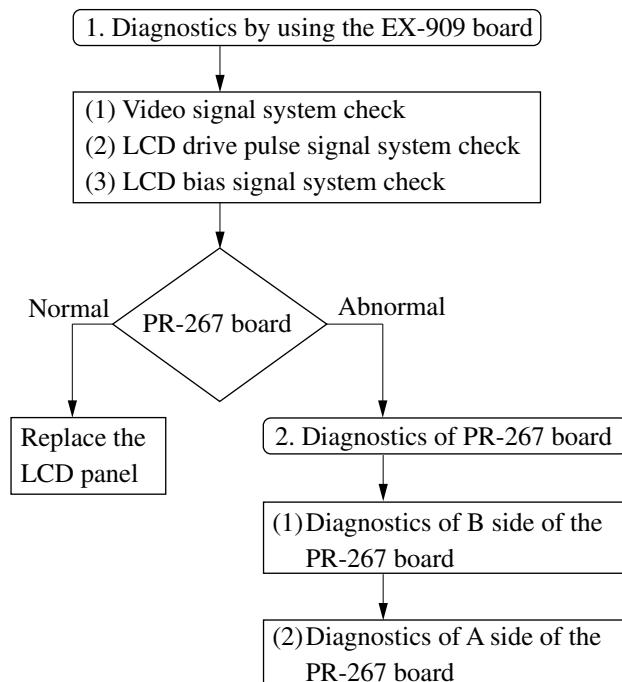
#### Equipment required

- Camera  
HDC-950 or HDW-750/750P/730 or HDW-F900.
- Oscilloscope  
Tektronix Model 2465B or equivalent

#### Fixtures

- EX-909 board      Sony part number : A-8346-442-A
- Connecting cable    Sony part number : 1-827-086-21
- RE-208 EX unit     Sony part number : A-8346-443-A  
Constituent parts
  - EX-907 board :      1 piece
  - EX-908 board :      1 piece
  - Connecting harness : 1 piece

#### Check procedure



### 1. Diagnostics by Using the EX-909 Board

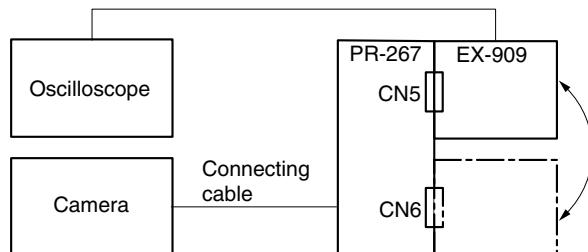
#### Equipment required

- Camera
- Oscilloscope

#### Fixtures

- EX-909 board
- Connecting cable

#### Connecting diagram



#### Note

The EX-909 board can be used by connecting either to the CN5 connector or the CN6 connector on the PR-267 board. Refer to the table 1 for the output signal of the TP terminal when connecting to the CN5 or CN6 connector.

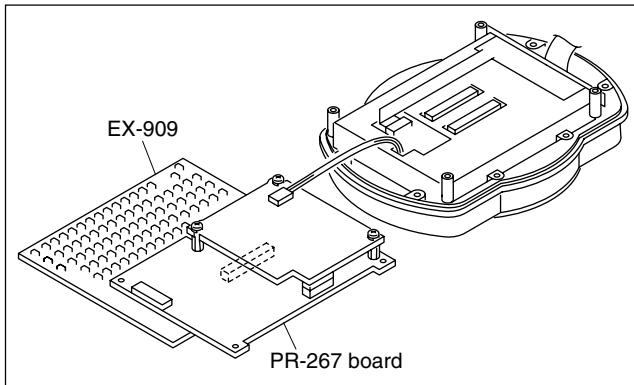
## Preparations

1. Remove the viewfinder barrel by pushing the RELEASE knob. (Refer to Section 1-7-2, step 1.)
2. Perform steps 1 to 3 and 5 of “1-7-1. Replacing the LCD Panel.”
3. Remove the RE-208 board.  
(Refer to Section 1-7-1, step 6.)

**Note**

Do not disconnect the harness from the connector CN2 on the RE-208 board.

4. Remove the PR-267 board.  
(Refer to Section 1-7-1, step 7.)
5. Install the RE-208 board to the PR-267 board with three screws (M2 × 5).
6. Connect the EX-909 board to the PR-267 board as shown in the figure below.



7. Connect the connecting cable to the connector (CN1) on the PR-267 board and the camera.

**Note**

Attach the insulating tape to the GND terminal of the connecting cable.

8. Turn on the power of the camera and select the color bar signal as the output signal from the camera (Set the OUTPUT/DCC switch on the camera side panel to the BARS position).
9. Set the switch S2-4 of the PR-267 board to ON.

## Diagnostics points

### (1) Video signal system check

Connect an oscilloscope to TP101, TP102, and TP103 of the EX-909 board and confirm that the sawtooth waveforms of the R, G, and B signal are normal.

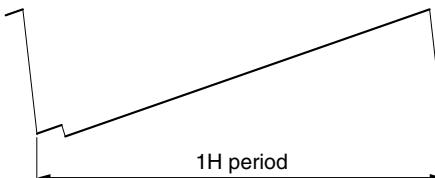
When the EX-909 board is connected to the CN5 connector :

TP101 : Bch, TP102 : Gch, TP103 : Rch

When the EX-909 board is connected to the CN6 connector :

TP101 : Rch, TP102 : Gch, TP103 : Bch

Normal sawtooth waveform  
(Common to R, G, and B signals)

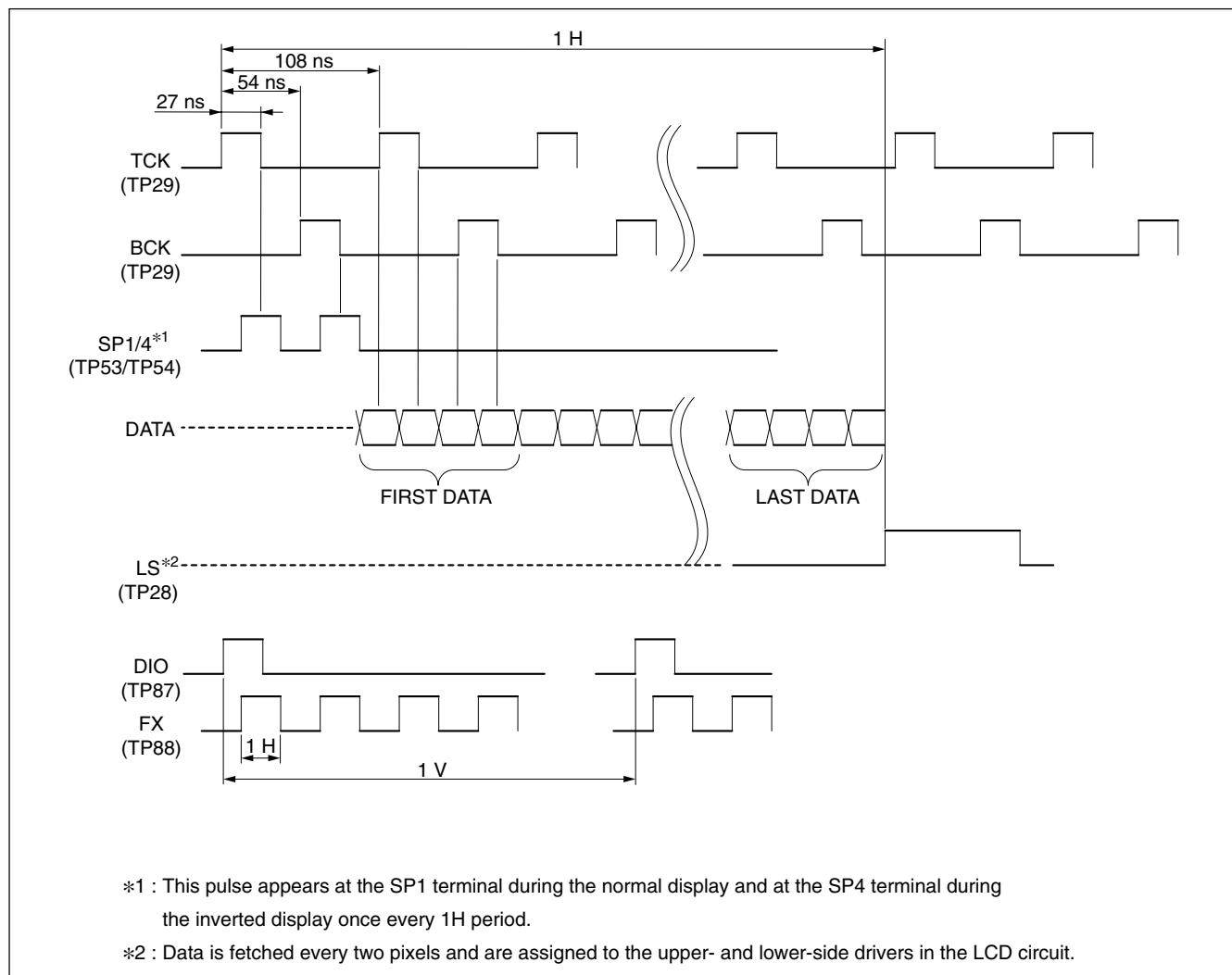


**Note**

Check the 8-bit output signal of R, G, and B by connecting an oscilloscope to TP2 to TP25 on the EX-909 board.  
(Refer to table 1.)

## (2) LCD drive pulse signal system check

Connect an oscilloscope to TP28, TP29, TP53, TP54, TP87, and TP88 of the EX-909 board and confirm that the following signal timings are maintained.



### (3) LCD bias signal system check

Connect an oscilloscope to TP31-48, TP59, TP89, TP90, and TP93 of the EX-909 board and confirm that the output voltages meet the voltage values as described in table 1.

**Table 1**

TP No.	TP name	Function	CN5 connection	CN6 connection
101	—	Video signal (D/A output)	Bch signal	Rch signal
102	—	Video signal (D/A output)	Gch signal	Gch signal
103	—	Video signal (D/A output)	Rch signal	Bch signal
1	GND	GND	GND	GND
2 to 25	—	*3		
26	POL	Video signal polarity inverted (L)	POL	POL
27	REV	LCD drive polarity (Inverted every H period))	REV	REV
28	LS	LCD video output	LS	LS
29	TCK/BCK	H transfer clock	TCK	BCK
30	GND	GND	GND	GND
31	VH0 *1	+Gamma correction (9.5 V)	VH0	VH0
34	VH3 *1	+Gamma correction (7.1 V)	VH3	VH3
38	VH7 *1	+Gamma correction (5 V)	VH7	VH7
39	VH8 *1	+Gamma correction (5 V)	VH8	VH8
40	VL8 *1	-Gamma correction (4.8 V)	VL8	VL8
41	VL7 *1	-Gamma correction (4.8 V)	VL7	VL7
45	VL3 *1	-Gamma correction (2.8 V)	VL3	VL3
48	VL0 *1	-Gamma correction (0.4 V)	VL0	VL0
49	TLBR/BLBR	H display is inverted Normal : L/H, Inverted : H/L	TLBR	BLBR
53	SP1	H transfer starts during normal mode	SP1	SP4
54	SP4	H transfer starts during inverted mode	SP4	SP1
59	VLCO *2	Source driver power supply (10.5 V)	VLCO	VLCO
61	GND	GND	GND	GND
62	GND	GND	GND	GND
63	GND	GND	GND	GND
76	GND	GND	GND	GND
87	DIO	V transfer starts	DIO	GND
88	FX	V transfer clock	FX	GND
89	VOFF *2	Gate bias (-7.2 V)	VOFF	GND
90	VGG *2	Gate bias (20 V)	VGG	GND
93	VCCO *2	Logic system power supply (3.1 V)	VCCO	VCCO

**Notes**

\*1 : VH, VL: LCD S-shape characteristics and 2.2nd power characteristics correction bias

\*2 : VLCO, VOFF, VGG, VCCO : Power supply for the source driver and gate driver.

\*3 : 0- to 7-bit signal of Rch, Gch, and Bch signals that are sent to LCD.

TP2 to TP9 : 0- to 7-bit Rch signal

TP10 to TP17 : 0- to 7-bit Gch signal

TP18 to TP25 : 0- to 7-bit Bch signal

## 2. Diagnostics of PR-267 Board

### Equipment required

- Camera
- Oscilloscope

### (1) Diagnostics of B side of the PR-267 board

#### Fixture

Connecting cable

#### Preparations

1. Preparation of diagnostics has already been completed using the EX-909 board.
2. Set the switch S2-4 on the PR-267 board to OFF.
3. Remove the EX-909 board.

#### Notes

- Do not disconnect the connecting cable from the connector (CN1) on the PR-267 board.
- Do not disconnect the harness from the connector (CN2) on the RE-208 board.

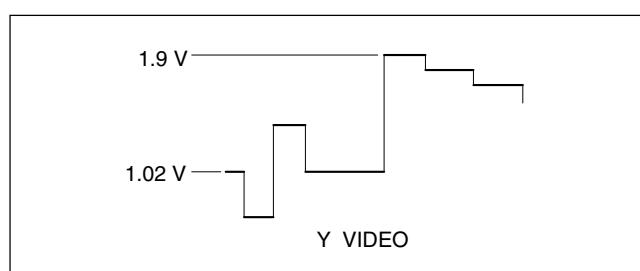
#### Diagnostics points

Check the following points with an oscilloscope and confirm that the waveforms, signals and voltages are normal.

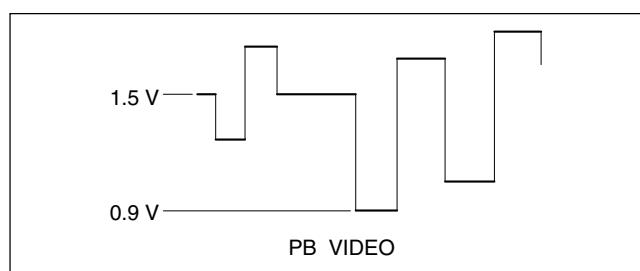
#### Note

The alphanumeric in parentheses ( ) of Ref.No. indicates the addresses on the board.

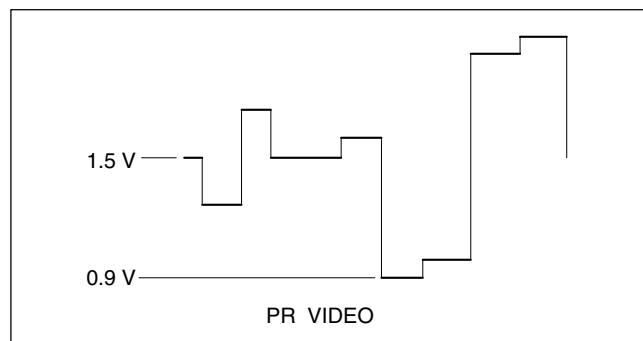
### (1) Pin-6/IC7 (B-1)



### (2) Pin-6/IC5 (B-1)



### (3) Pin-6/IC6 (B-1)

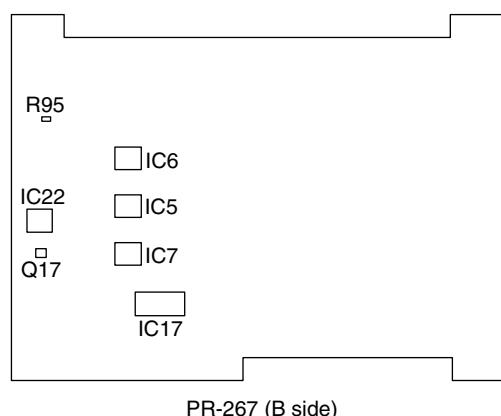


### (4) Pin-4/IC17 (C-2)

- Controlling AD start signal: 1 pulse/1 H

### (5) Voltage

- R95 (A-1) : DC 1.5 V
- Pin-14/IC22 (B-1) : DC 0.5 V
- Emitter/Q17 (B-1) : DC 2.0 V



PR-267 (B side)

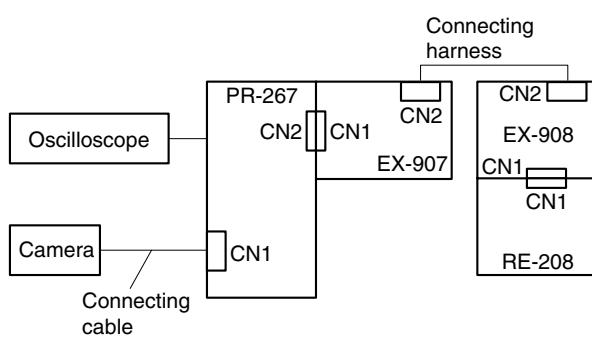
## (2) Diagnostics of A side of the PR-267 board

Diagnostics of the A side of PR-267 board is performed by connecting the RE-208 EX unit.

### Fixtures

- Connecting cable
- RE-208 EX unit

### Connecting diagram



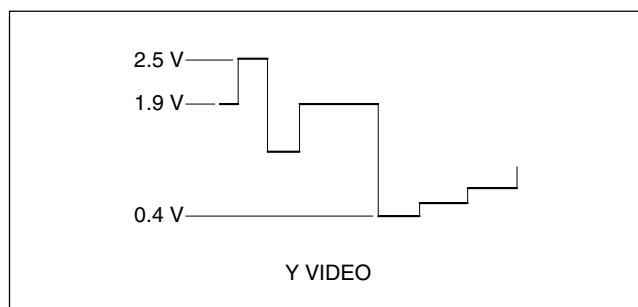
### Preparation

Perform steps 3 to 7 of “1-9-2. How To Extend the RE-208 Board”.

### Diagnostics points

Check the following points with an oscilloscope and confirm that the waveforms, signals and voltages are normal.

#### (1) Pin-6/IC1 (B-1)



#### (2) Pin-1 and 2/CN1 (A-2)

- Confirm that the signal is output.  
(Amplitude of 3 to 5 V)

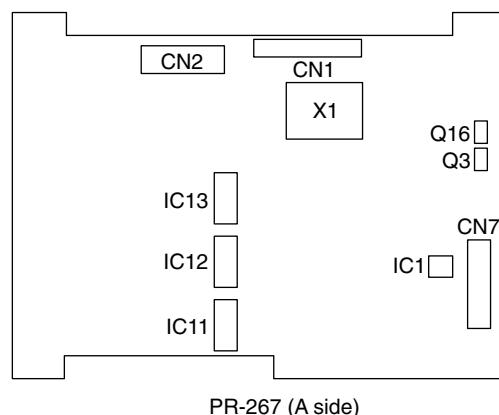
#### (3) Pin-15/IC11, IC12 (C-3), IC13 (B-3)

- Clock pulse for video signal : 37 MHz

#### (4) Voltage

- Collector/Q3 (B-1) : DC  $3.0 \pm 0.1$  V
- Collector/Q16 (A-1) : DC  $2.5 \pm 0.1$  V

- Pin-8/X1 (A-2) : DC 1.0 to 2.0 V
- Pin-7/CN7 (C-1) : Voltage changes from 0 to 2.0 V when RV6/VR-280 board is rotated.
- Pin-8/CN7 (C-1) : Voltage changes from 0 to 2.0 V when the CONTR control is rotated.
- Pin-9/CN7 (C-1) : Voltage changes from 0 to 2.0 V when RV4/VR-280 board is rotated.
- Pin-10/CN7 (C-1) : Voltage changes from 0 to 2.0 V when the BRIGHT control is rotated.
- Pin-11/CN7 (C-1) : Voltage changes from 0 to 2.0 V when RV2/VR-280 board is rotated.
- Pin-12/CN7 (C-1) : Voltage changes from 0 to 2.0 V when the PEAKING control is rotated.



PR-267 (A side)

## 1-10-2. Voltage Check of the RE-208 Board

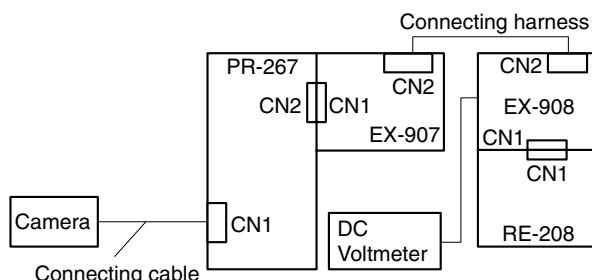
### Equipment required

- Camera  
HDC-950 or HDW-750/750P/730 or HDW-F900
- DC Voltmeter

### Fixtures

- Connecting cable      Sony part number : 1-827-086-21
- RE-208 EX unit      Sony part number : A-8346-443-A  
Constituent parts
  - EX-907 board :      1 piece
  - EX-908 board :      1 piece
  - Connecting harness : 1 piece

### Connecting diagram



### Preparation

Perform steps 1 to 7 of “1-9-2. How to Extend the RE-208 Board”.

### Voltage check points

Check the voltage at the following TP terminal on the EX-908 board.

TP No.	TP name	Voltage check
TP3	UNREG	DC 10.5 to 17 V
TP5	CONT_MAX	DC 0.28 V or less
TP6	CONT_GND	0 V
TP8	+3.3 V	DC $3.1 \pm 0.1$ V
TP10	POWER_OFF	OPEN or DC 5 V
TP11	-6.6 V	DC $-7.2^{+1.0}_{-0.4}$ V
TP13	+19.5 V	DC $+20 \pm 1$ V
TP14	NC	-
TP15	+10.5 V	DC $+10.5 \pm 0.4$ V
TP16	CONTRAST	DC 0 to 2.0 V

## 1-11. How to Measure Luminance

### Equipment required

- Camera  
HDC-950 or HDW-750/750P/730 or HDW-F900

### Fixtures

- Pattern box PTB-500  
Sony part No. : J-6029-140-B
- Luminance Meter  
Minolta Model LS-100 or equivalent (that must have already been calibrated before)

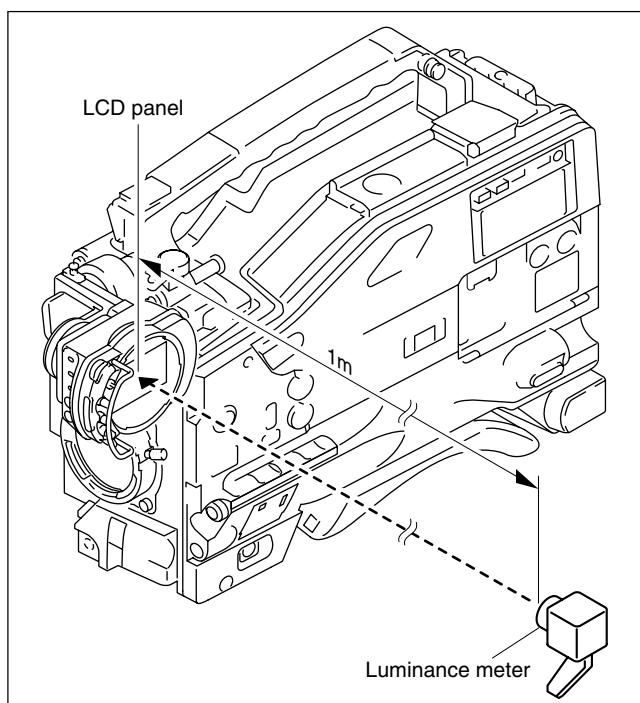
### Procedure

1. Remove the viewfinder barrel by pushing the RE-LEASE knob. (Refer to Section 1-7-2, step 2.)
2. Install the front chassis of the HDVF-C30W in the camera.
3. Rotate the BRIGHT control and CONTR control fully clockwise (MAX) beforehand.
4. Light on the pattern box and warm it up for about 30 minutes.
5. Shoot the pattern box with the camera.  
(Be sure that the screen is entirely white.)
6. Open the iris and confirm that all of the output signals from the camera are entirely white and their levels are 100% or more.

### Note

Be sure that the luminance meter is fixed and the pattern box is shot from the front.

7. Measure luminance from the front of the LCD panel of the HDVF-C30W.

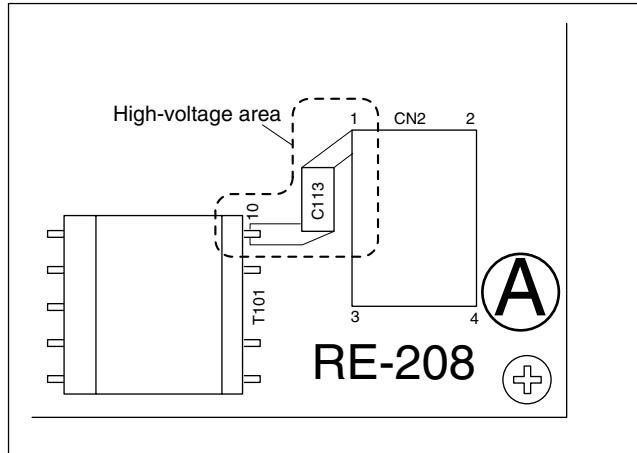


## 1-12. Precautions When Repairing the High-Voltage Areas of the DC/AC Inverter Transformer

### CAUTION

The RE-208 board contains the high-voltage DC/AC inverter transformer (T101).

Repair the unit with extreme care not to touch the high-voltage area (below figure) when the high voltage area is exposed.



## 1-13. Rewriting the PLD Internal Data

This unit uses the PLD (Programmable Logic Device) that conforms to the e-Production (EPR) system when rewriting the internal data.

If the PLD needs to be upgraded, contact your Sony Sales Office/Service Center.

### Note

As the PLD cannot be replaced, replace the entire PR-267 board when the PLD is defective.

### e-Production system has the advantages as shown below.

- To rewrite the PLD internal data:
  1. The standard fixture cable can be used.
  2. The standard software (PLD Download Tool) can be used.
- The PLD internal data is controlled in the Sony Database Server under the name Project file (E\_xxx\_xxx\_xx\_xx).
- The printed circuit board is equipped with the standard connector (EPR connector) to write the PLD internal data. The indication "EPR" is shown on the printed circuit board.

### Corresponding PLD

PLD (Ref No./board name)	EPR connector (Ref No./board name)	Project file No.
IC16/PR-267	CN4/PR-267	E_000_000_72_xx

### Equipment required

- PLD download tool (Sony part number : J-7120-140-A)
- PC
  - PC having parallel port
  - PC in which the PLD Download Tool software is already installed.
- Regarding the applicable OS and the operating environment, refer to "Download Tool Operating Instruction for Device Programming."
- Camera
  - A camera that can be connected to HDVF-C30W (such as HDW-750 and the like).
- Connecting cable (Sony part number : 1-827-086-21)
  - Connect the PR-267 board to the camera.

## Data write procedure

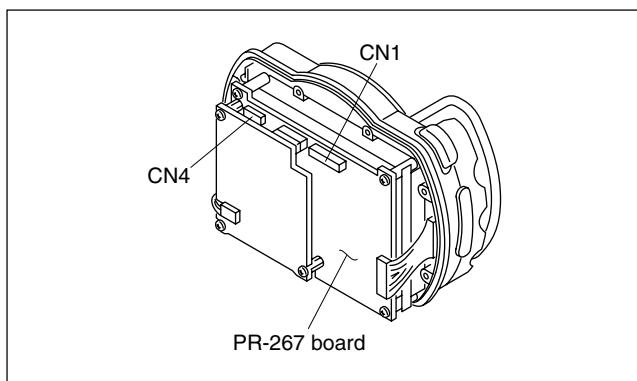
Data write procedure in the PLD is outlined below. For details of data write procedure, refer to "Download Tool Operating Instruction for Device Programming" which is available in the same site where the PLD Download Tool software is available.

1. Prepare the Project file.

**Note**

Download the Project file from the Sony Database Server.

2. Push the RELEASE knob and remove the viewfinder barrel. (Refer to Section 1-7-2, step 1.)
3. Perform steps 1 to 3 of "1-7-1. Replacing the LCD Panel."
4. Connect the camera to the connector (CN1) on the PR-267 board using the connecting cable.
5. Turn off the power of the camera. Connect the PC parallel port to the EPR connector of the target board (CN4/PR-267 board) using the PLD download tool cable.



6. Turn on the power of the camera.  
Start the Download Tool software and read the Project file.
7. Program the PLD with the Download Tool software.
8. Upon completion of programming, check that error message is not displayed. Turn off the power of the camera and back on.

## 1-14. Notes on Repair Parts

### 1. Safety Related Components Warning

**WARNING**

Components marked  $\Delta$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

### 3. Stock of Parts

Parts marked with "o" at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

## 1-15. Unleaded Solder

Boards requiring use of unleaded solder are printed with a lead free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

 : LEAD FREE MARK

**Notes**

- Be sure to use the unleaded solder for the printed circuit board printed with the lead free mark.
- The unleaded solder melts at a temperature about 40 ° higher than the ordinary solder, therefore, it is recommended to use the soldering iron having a temperature regulator.
- The ordinary soldering iron can be used but the iron tip has to be applied to the solder joint for a slightly longer time. The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful.

## 1-16. Recommended Replacement Parts

The following listed parts are recommended for replacement.

### Rubber parts

Check the parts for deformation or deterioration from time to time and replace them as necessitated.

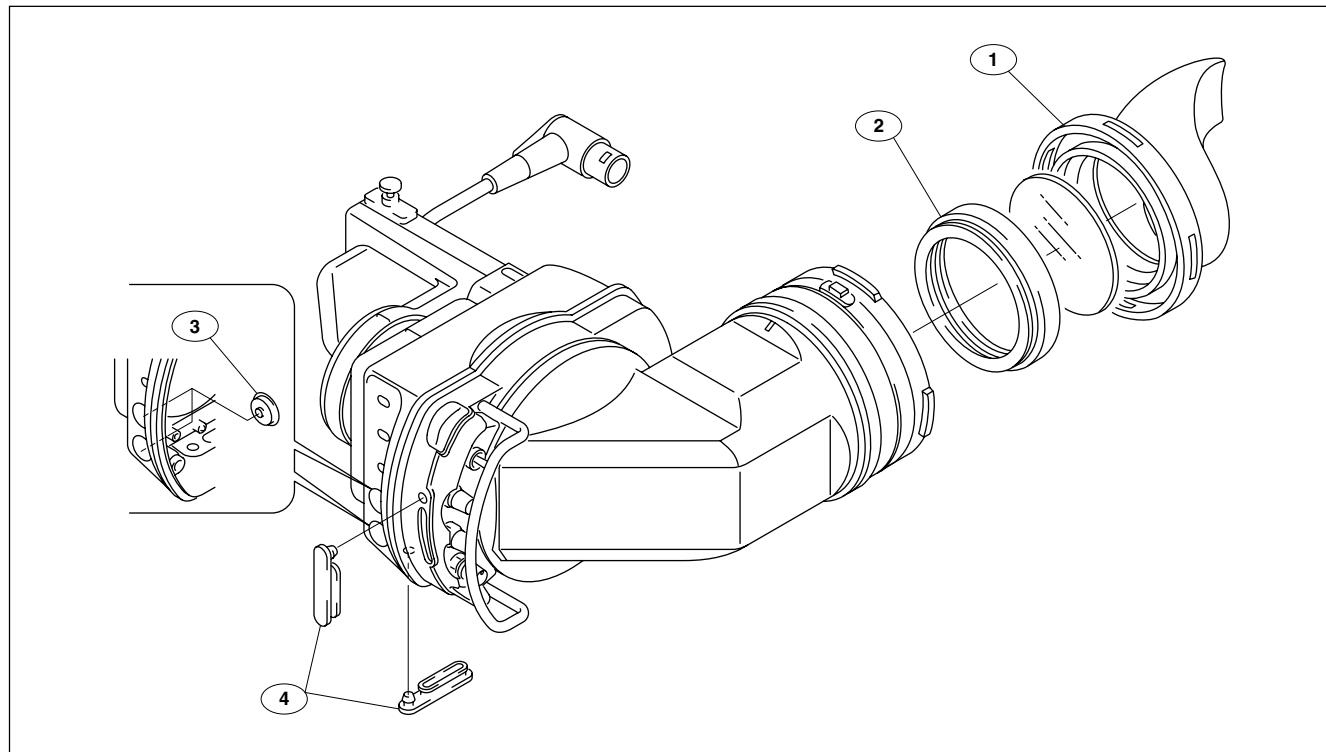
### Backlight

The backlight of the LCD panel has the life of about 40,000 hours as far as the set color temperature remains constant.

Replace the backlight when luminance of the backlight decreases to 150 cd or less as a guideline.

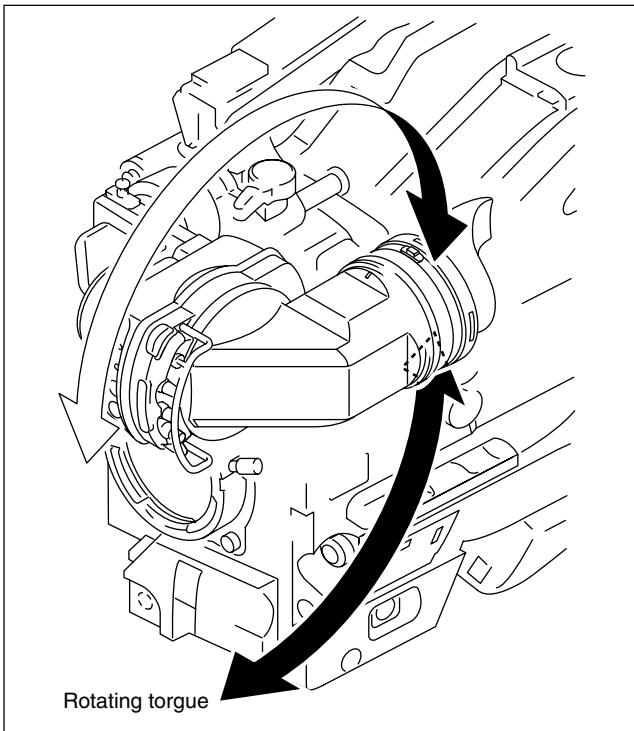
Replacement of the backlight only is not possible. Replace the entire LCD panel.

No.	Part name	Sonny part number	Remarks
①	Eye cap	3-776-341-01	Rubber part
②	MC holder	3-623-709-01	Rubber part
③	SW cover	3-676-244-03	Rubber part
④	Cap	3-776-614-01	Rubber part
-	Backlight	1-804-892-11	Replace the entire LCD panel. (Refer to Section 1-7-1.)



## 1-17. Viewfinder Rotating Torque Adjustment

Rotating torque of viewfinder can be adjusted by the adjustment screw when you want to adjust the strength to rotate the viewfinder or when the rotating force of viewfinder has decreased after years of usage.

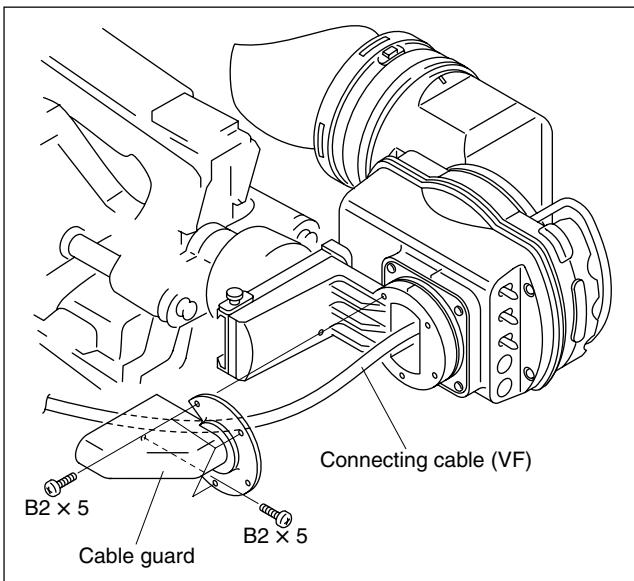


### Fixtures

Hexagon wrench ( $d = 1.5 \text{ mm}$ )

### Adjustment Procedure

1. Remove the four screws and remove the cable guard.



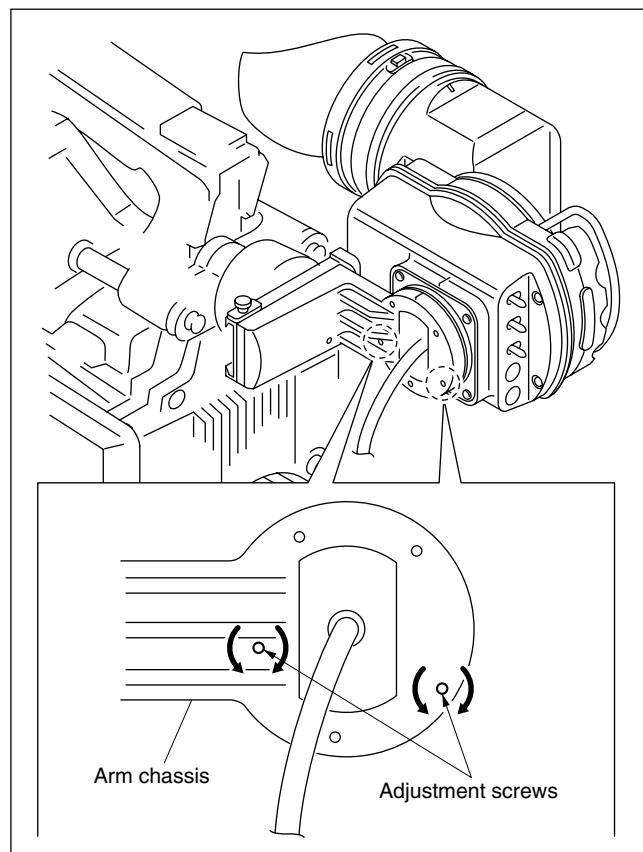
2. Adjust the viewfinder rotating torque by turning the two adjustment screws (hexagon socket screw H3 × 5) of the arm chassis with the hexagon wrench.

Rotating clockwise : Increases the rotating torque  
Rotating counter-clockwise :

Decreases the rotating torque

#### Note

Rotate the two adjustment screws by the same amount of angle.



3. When adjustment is completed, confirm that the viewfinder rotates smoothly.

## 1-18. When Rotation of Viewfinder Becomes Difficult

When viewfinder is rotated very frequently, there can be a case that rotation of viewfinder becomes difficult or that operator has uncomfortable feeling of rotation.

This phenomenon occurs when rotating block of a viewfinder runs out of grease. Apply grease in the following procedure.

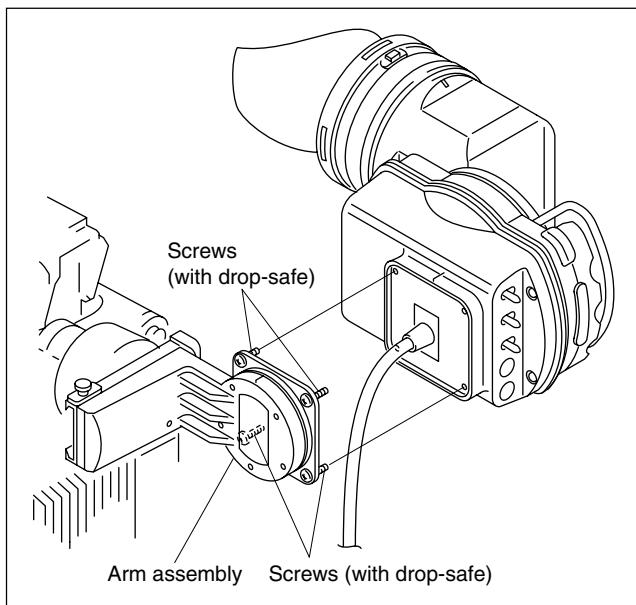
### Fixture

Sony grease (SGL-801) : 7-651-000-11

### Procedure

The following procedure presumes that the viewfinder is already installed in a camera.

1. Remove the four screws ( $B2 \times 5$ ) and remove the cable guard. (Refer to Section 1-17, step 1.)
2. Disconnect the connecting cable (VF) from the camera.
3. Loosen the four screws (with drop-safe) of the arm assembly and remove the viewfinder.  
Disconnect the connecting cable (VF) from the square hole of the arm assembly.



4. Apply Sony grease to the portion "a" (at the two locations) of the arm assembly.

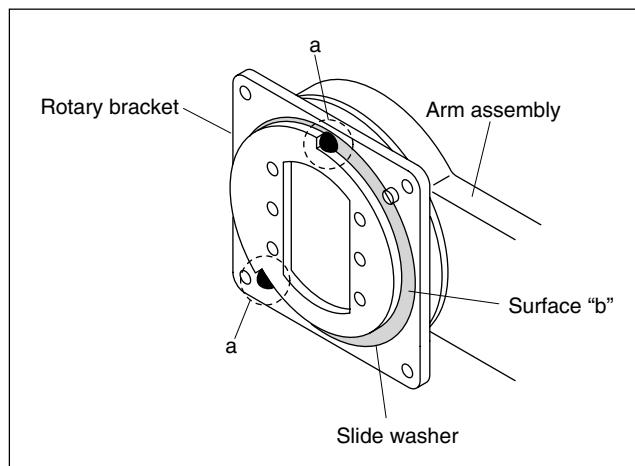
#### Note

Apply sufficient amount Sony grease satisfying the requirement of step 5.

5. Rotate the rotary bracket to the right and left several times until Sony grease is spread out over the entire surface of the portion "b" of the slide washer.

#### Note

Wipe off the extra grease that oozes out to the rotary bracket.



6. Install the viewfinder by reversing the steps 1 to 3.
7. Check that the viewfinder rotates smoothly.

## Section 2

### Spare Parts

#### 2-1. Notes on Repair Parts

##### 1. Safety Related Components Warning

###### **WARNING**

Components marked △ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

##### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

##### 3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

##### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

#### 2-1. 補修部品注意事項

##### 1. 安全重要部品

###### **△警告**

△印のついた部品は安全性を維持するために重要な部品です。したがって、交換する時は必ず指定の部品を使ってください。

##### 2. 部品の共通化

ソニーから供給する補修用部品は、セットに使われているものと異なることがあります。  
これは部品の共通化、改良等によるものです。  
部品表には現時点での共通化された補修用部品が記載されています。

##### 3. 部品の在庫

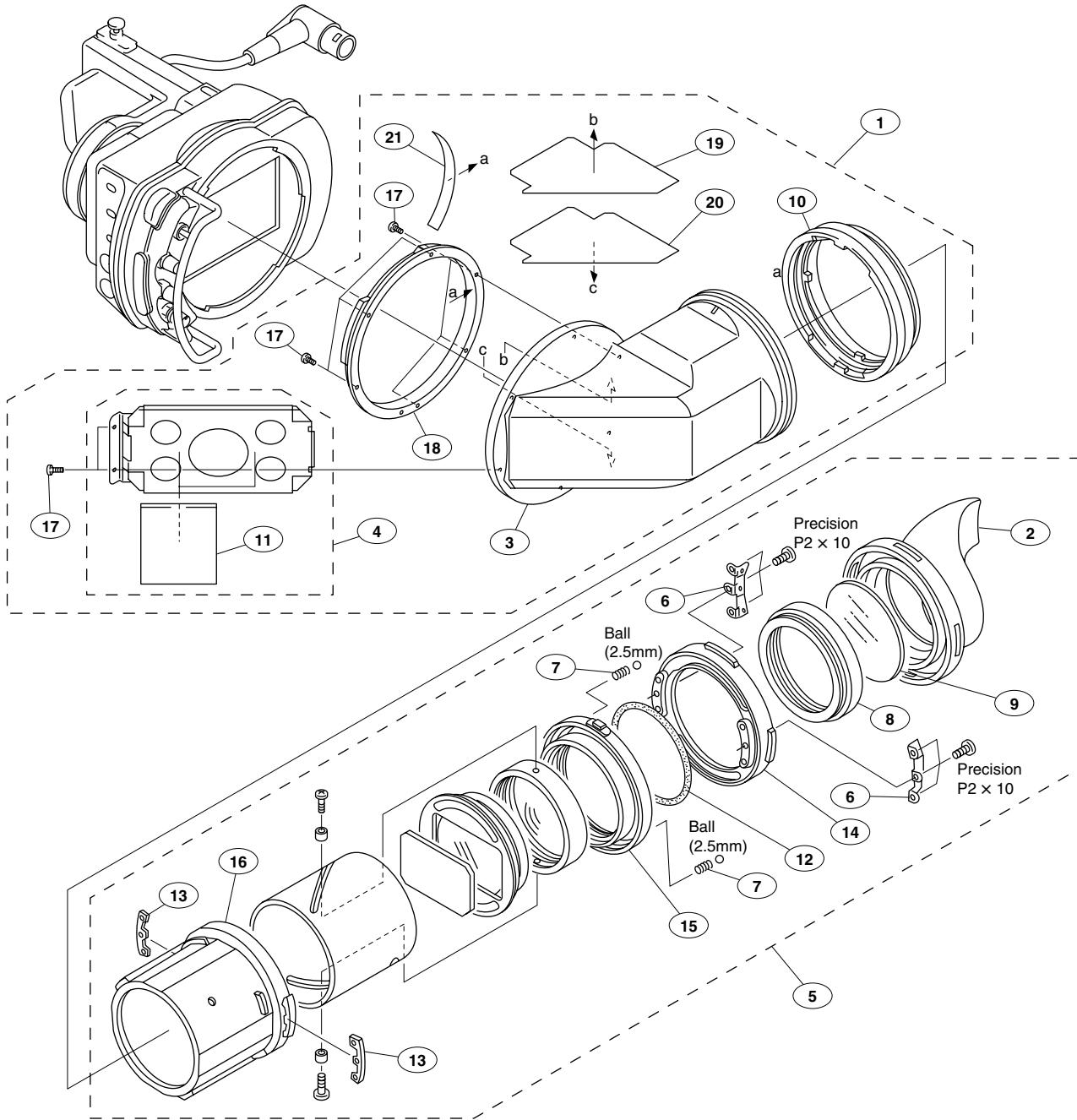
部品表のSP (Supply code) 欄に “o” で示される部品は在庫していないことがあります、納期が長くなることがあります。

##### 4. ハーネス

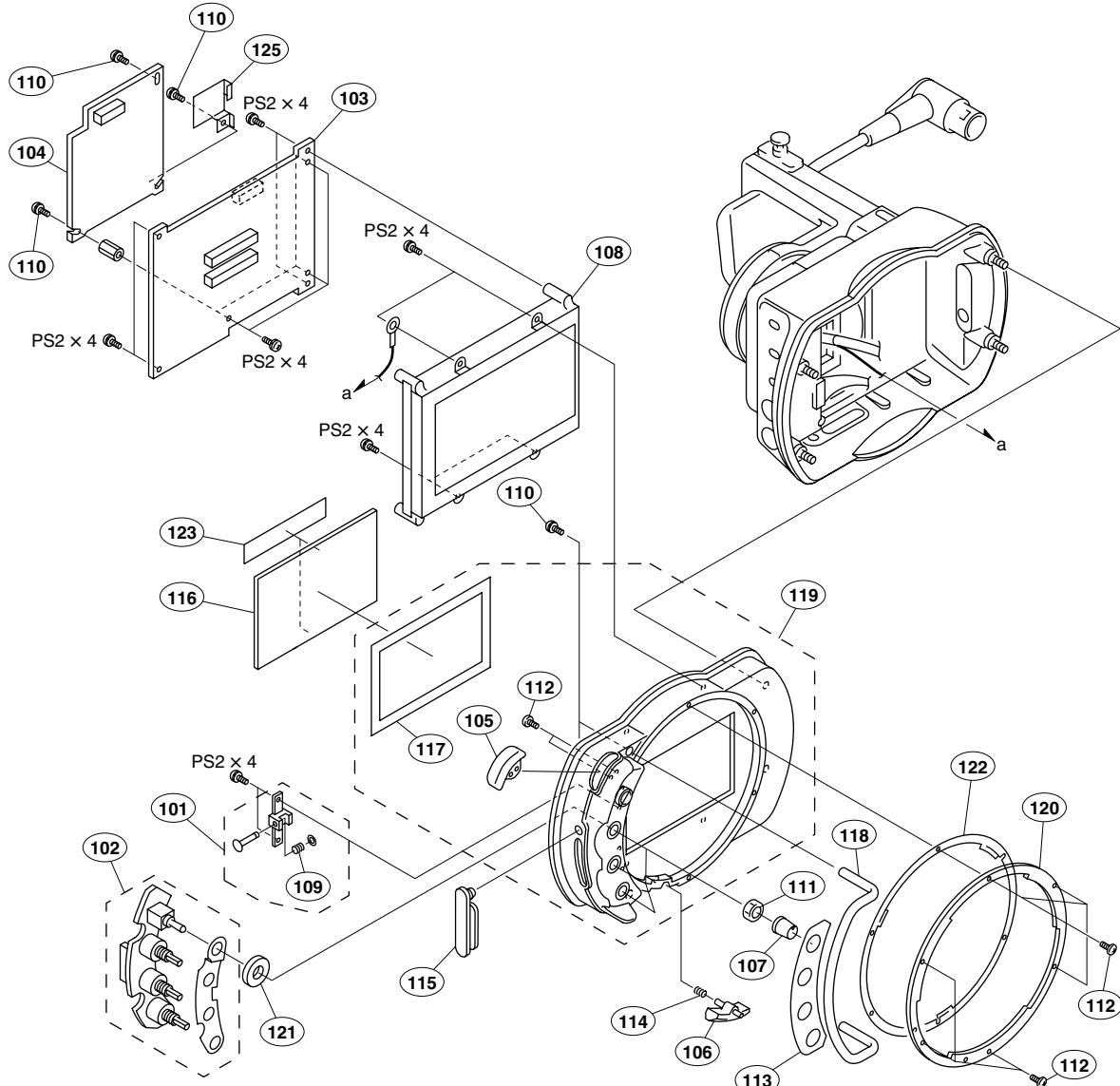
部品番号が記載されていないハーネスは、サービス部品として登録されていません。  
これらは、リストに展開されているコンポーネント部品で補修してください。

## **VF Lens Unit and Elbow Assembly**

## 2-2. Exploded Views



No.	Part No.	SP	Description	No.	Part No.	SP	Description
1	A-8279-814-D	s	ASSY, ELBOW	16	3-742-060-01	o	HOLDER, RING
2	A-8319-943-A	s	EYE CUP (RP)	17	3-776-622-01	s	SCREW(M2), TAPPING
3	X-3608-589-2	s	ASSY, VF TUBE	18	3-776-637-01	s	RING(TUBE), BAYONET
4	X-3608-590-1	s	ASSY, MIRROR	19	3-789-424-01	s	SHEET(UPPER), ANTI-GLARE
5	1-758-921-11	s	LENS UNIT, VF	20	3-789-425-01	s	SHEET(LOWER), ANTI-GLARE
6	3-176-414-01	o	RETAINER, RING	21	3-789-426-01	s	SHEET(RING), ANTI-GLARE
7	3-573-150-00	s	SPRING, COMPRESSION				
8	3-623-709-01	o	MC HOLDER				
9	3-623-710-01	o	MC, GLASS				
10	3-692-136-03	o	FIXED RING				
11	3-723-073-01	o	CUSHION, MIRROR				
12	3-726-904-01	o	RING (MT), O (CR)				
13	3-742-038-01	o	NUT (2), PLATE (SST)				
14	3-742-052-03	o	HOLDER, EYE CUP				
15	3-742-053-02	o	RING				

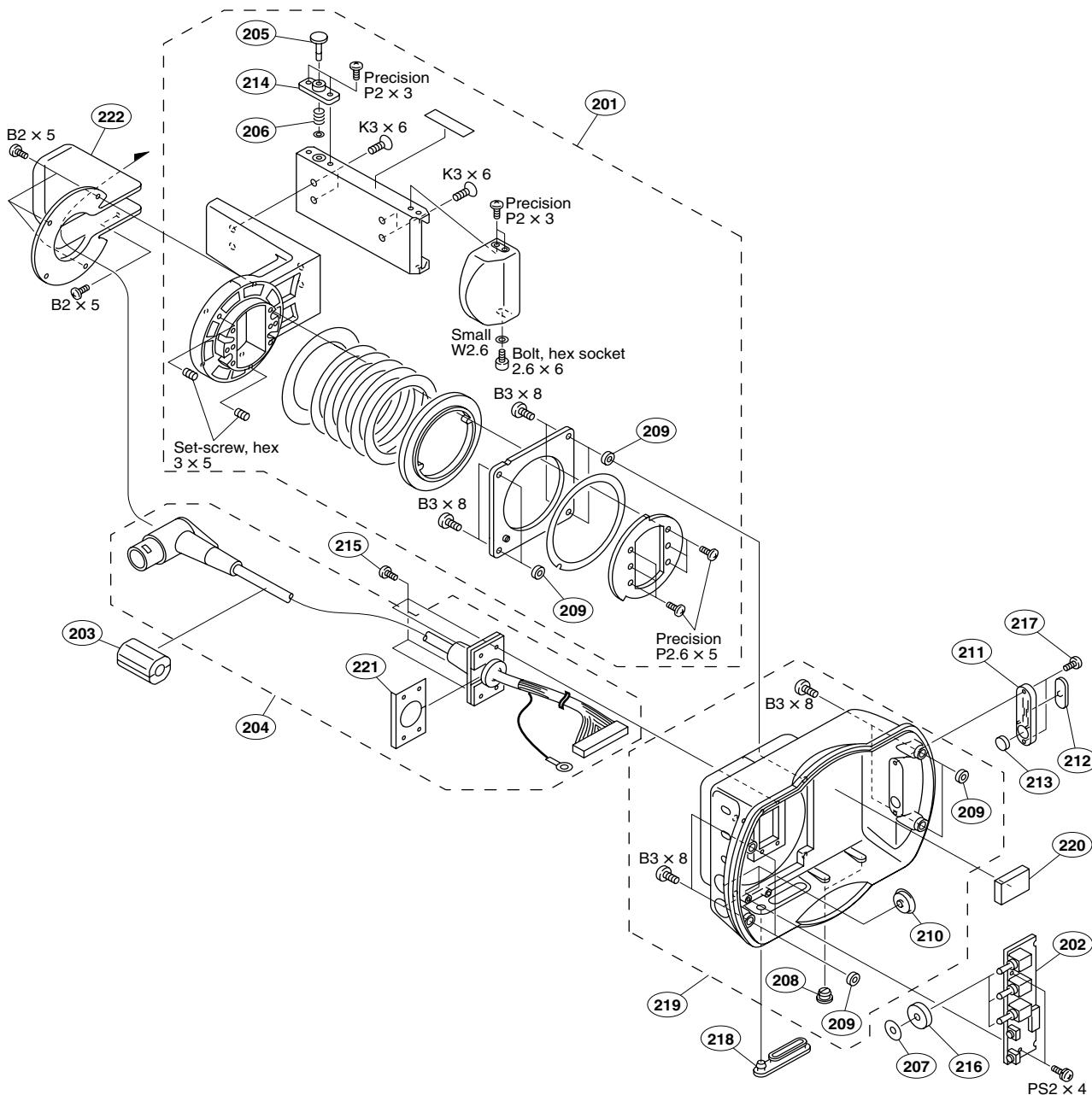


No.	Part No.	SP Description
101	A-8279-815-A	s ASSY, SPRING
102	A-8346-398-A	s MOUNTED CIRCUIT BOARD, VR-280
103	A-8346-399-A	s MOUNTED CIRCUIT BOARD, PR-267
104	A-8346-400-A	s MOUNTED CIRCUIT BOARD, RE-208
105	X-3608-579-1	s ASSY, COVER TALLY
106	X-3608-580-1	s KNOB ASSY, RELEASE
107	X-3608-581-1	s VOLUME KNOB ASSY
108	1-804-892-11	s DISPLAY PANEL, LIQUID CRYSTAL
109	2-277-466-01	s SPRING, COMPRESSION (STEEL)
110	2-640-315-01	o SCREW (M2X5), SMALL (STEEL)
111	3-685-104-01	s NUT (M6), CONTROL (STEEL)
112	3-729-061-01	s SCREW (M2X4.5) (TYPE 1) (STEEL)
113	3-776-605-02	s LABEL, VF
114	3-776-613-01	s SPRING, COMPRESSION
115	3-776-614-01	s CAP

No.	Part No.	SP Description
116	3-776-617-01	s GLASS, PROTECTION
117	3-776-618-01	s GLASS, CUSHION
118	3-776-624-01	s GUARD, BAR
119	A-8279-816-A	s ASSY, FRONT CHASSIS
120	3-776-629-01	o RING(CHASSIS), BAYONET
121	3-776-630-01	s CUSHION(VR), DROP PROTECTION
122	3-776-636-02	s SPRING, BAYONET
123	3-776-623-01	s SHEET, RADIATION
125	3-776-604-02	s SHEET, INSULATING

7-628-253-00 s SCREW +PS 2X4

## Rear Chassis



No.	Part No.	SP	Description	No.	Part No.	SP	Description
201	A-8346-392-A	s	ARM ASSY, VF	217	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1) (STEEL)
202	A-8346-397-A	s	MOUNTED CIRCUIT BOARD, SW-1092	218	3-776-614-01	s	CAP
203	1-469-969-11	s	CLAMP, FERRITE	219	A-8279-817-A	s	ASSY, REAR CHASSIS
204	1-827-086-11	s	CORD, CONNECTION (VF)	220	3-776-625-01	s	RUBBER, RADIATION
205	2-277-457-00	s	KNOB, STOPPER	221	3-776-586-01	s	CUSHION (CABLE), DROP PROTECTION
206	2-277-466-01	s	SPRING, COMPRESSION (STEEL)	222	3-776-797-01	s	GUARD, CABLE
207	2-300-629-00	s	PLATE, BLIND				
208	3-545-657-11	s	BUSHING(BLACK) (PLA)				
209	3-603-733-01	s	HOLDER, SCREW				
210	3-676-244-00	s	COVER, SWITCH				
211	3-679-693-01	o	BASE, SLIDE				
212	3-679-694-01	o	COVER, SLIDE				
213	3-679-695-01	o	COVER, TALLY				
214	3-710-008-02	s	HOUSING, STOPPER				
215	3-719-381-21	s	SCREW +P M2X6 (EP-FE/ZNBK) LOCK				
216	3-729-007-01	o	PLATE, ORNAMENTAL, TOGGLE SWITCH				

## 2-3. Electrical Parts List

PR-267 BOARD

Ref. No.  
or Q'ty Part No. SP Description

1pc	A-8346-399-A	s MOUNTED CIRCUIT BOARD, PR-267
C1	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C2	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C3	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C4	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C5	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C6	1-165-811-11	s CAPCITOR,CHIP CERAMIC 22MF B
C7	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C8	1-164-943-11	s CAPACITOR,CHIP CERAMIC 0.01MF
C9	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C10	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C11	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C12	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C13	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C14	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C15	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C16	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C17	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C18	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C19	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C20	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C21	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C22	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C23	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C24	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C25	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C26	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C27	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C28	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C29	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C30	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C31	1-127-760-11	s CAPACITOR,CERAMIC 4.7MF/6.3V
C32	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C33	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C34	1-127-760-11	s CAPACITOR,CERAMIC 4.7MF/6.3V
C35	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C36	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C37	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C38	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C39	1-164-874-11	s CAPACITOR,CHIP CERAMIC 100PF
C40	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C41	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C42	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C43	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C44	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C45	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C46	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C47	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C48	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C49	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C50	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C51	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C52	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C53	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C54	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C55	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C56	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C57	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V

(PR-267 BOARD)

Ref. No.  
or Q'ty Part No. SP Description

C58	1-164-850-11	s CAPACITOR,CERAMIC 10PF/16V CH
C59	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C60	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C61	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C62	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C63	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C64	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C65	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C66	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C67	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C68	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C69	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C70	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C71	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C72	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C73	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C74	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C75	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C76	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C77	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C78	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C79	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C80	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C81	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C82	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C83	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C84	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C85	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C86	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C87	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C88	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C89	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C90	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C91	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C92	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C93	1-127-820-11	s CAPACITOR, SQUARE CHIP 4.7MF
C94	1-125-889-11	s CAPACITOR, C.CERAMIC 2.2MF
C95	1-107-819-11	s CAP,CERAMIC 22000PF/16V(1005)
C96	1-125-837-11	s CAPACITOR,CHIP CERAMIC1MF/6.3V
C97	1-127-760-11	s CAPACITOR,CERAMIC 4.7MF/6.3V
C98	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C99	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C100	1-127-820-11	s CAPACITOR, SQUARE CHIP 4.7MF
C101	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C102	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C103	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C104	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C105	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C106	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C107	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C108	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C109	1-164-937-11	s CAPACITOR,CHIP CERAMIC 1000PF
C110	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C111	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C112	1-127-760-11	s CAPACITOR,CERAMIC 4.7MF/6.3V
C113	1-127-760-11	s CAPACITOR,CERAMIC 4.7MF/6.3V
C114	1-100-159-91	s CAP, CERAMIC 22MF B (SMD) 3216
C115	1-125-777-11	s CAPACITOR,CERAMIC 0.1MF/10V
C116	1-164-878-11	s CAPACITOR, CHIP CERAMIC 150PF

Ref. No. or Q'ty	Part No.	SP Description
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C117	1-165-811-11 s	CAPCITOR,CHIP CERAMIC 22MF B
C119	1-164-840-11 s	CAPACITOR,CHIP CERAMIC 1PF
C121	1-164-840-11 s	CAPACITOR,CHIP CERAMIC 1PF
C123	1-164-840-11 s	CAPACITOR,CHIP CERAMIC 1PF
C125	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C126	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C127	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C128	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C129	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C130	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C131	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C132	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C133	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C134	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C135	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C136	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C137	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C201	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C202	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C203	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C204	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C205	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C207	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C208	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C209	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C210	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C211	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C212	1-125-777-11 s	CAPACITOR,CERAMIC 0.1MF/10V
C213	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C214	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C215	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C216	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
C217	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C218	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C219	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C220	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C221	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C222	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C223	1-164-937-11 s	CAPACITOR,CHIP CERAMIC 1000PF
C224	1-100-159-91 s	CAP, CERAMIC 22MF B (SMD) 3216
CN1	1-695-209-21 s	PIN, CONNECTOR (PC BOARD) 15P
CN2	1-778-006-21 o	CONNECTOR, BOARD TO BOARD 20P
CN3	1-695-889-21 s	PIN, CONNECTOR (PC BOARD) 10P
CN4	1-764-093-21 o	PIN, CONNECTOR (PC BOARD) 8P
CN7	1-764-097-11 o	PIN, CONNECTOR (PC BOARD) 12P
D1	8-719-941-23 s	DIODE DA204U
D2	8-719-941-23 s	DIODE DA204U
D3	8-719-941-23 s	DIODE DA204U
D4	8-719-989-53 s	LED CL-200HR-C-TSL
D5	8-719-941-23 s	DIODE DA204U
D6	8-719-421-27 s	DIODE MA728
D7	8-719-421-27 s	DIODE MA728
FL1	1-233-996-11 s	FILTER,LOW PASS
FL2	1-233-996-11 s	FILTER,LOW PASS
FL3	1-233-996-11 s	FILTER,LOW PASS
IC1	8-759-447-19 s	IC AD8041AR
IC2	8-759-371-78 s	IC LT1431CS8-E1
IC3	8-759-447-19 s	IC AD8041AR

Ref. No. or Q'ty	Part No.	SP Description
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IC4	8-759-447-19 s	IC AD8041AR
IC5	8-759-447-19 s	IC AD8041AR
IC6	8-759-447-19 s	IC AD8041AR
IC7	8-759-447-19 s	IC AD8041AR
IC8	8-759-062-66 s	IC TC7S66F
IC9	8-759-062-66 s	IC TC7S66F
IC10	8-759-062-66 s	IC TC7S66F
IC11	8-759-686-89 s	IC AD9203ARU-RL7
IC12	8-759-686-89 s	IC AD9203ARU-RL7
IC13	8-759-686-89 s	IC AD9203ARU-RL7
IC15	6-702-238-11 s	IC HY57V643220CT-7TR
IC17	6-703-725-01 s	IC AD7829BRU-REEL7
IC18	8-759-669-78 s	IC TLC29331PWR-12
IC19	8-759-592-44 s	IC TC7S204FU(TE85R)
IC20	8-759-564-49 s	IC TC7W53FU-TE12R
IC21	8-759-347-09 s	IC NJU7034V (TE2)
IC22	8-759-347-09 s	IC NJU7034V (TE2)
IC23	8-759-335-29 s	IC MAX942CSA
IC24	6-703-726-01 s	IC AD8644ARU-REEL
IC25	6-703-726-01 s	IC AD8644ARU-REEL
IC26	6-700-387-01 s	IC EPC2LC20-TP
IC27	8-759-918-65 s	IC TL7700CPS
IC28	8-759-084-79 s	IC TC7S14F
L1	1-414-752-11 s	INDUCTOR 2.2UH
L2	1-414-752-11 s	INDUCTOR 2.2UH
L4	1-414-752-11 s	INDUCTOR 2.2UH
L5	1-414-752-11 s	INDUCTOR 2.2UH
L6	1-414-752-11 s	INDUCTOR 2.2UH
L7	1-414-752-11 s	INDUCTOR 2.2UH
Q1	8-729-140-63 s	TRANSISTOR 2SA1611-M5M6
Q2	8-729-140-63 s	TRANSISTOR 2SA1611-M5M6
Q3	8-729-230-27 s	TRANSISTOR 2SA1213Y-TE12L
Q4	8-729-928-27 s	TRANSISTOR DTA144EE
Q13	8-729-117-31 s	TRANSISTOR 2SC4177-L5
Q14	8-729-117-31 s	TRANSISTOR 2SC4177-L5
Q15	8-729-117-31 s	TRANSISTOR 2SC4177-L5
Q16	8-729-230-27 s	TRANSISTOR 2SA1213Y-TE12L
Q17	8-729-117-31 s	TRANSISTOR 2SC4177-L5
Q18	8-729-117-31 s	TRANSISTOR 2SC4177-L5
Q21	8-729-117-31 s	TRANSISTOR 2SC4177-L5
R1	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R2	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R3	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R4	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R5	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R6	1-218-941-11 s	RESISTOR,CHIP 100 1/16W (1005)
R7	1-218-941-11 s	RESISTOR,CHIP 100 1/16W (1005)
R10	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R11	1-208-691-11 s	RESISTOR,CHIP 2.2K 1/16W(1005)
R12	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R13	1-208-675-11 s	RESISTOR,CHIP 470 1/16W (1005)
R14	1-208-679-11 s	RESISTOR,CHIP 680 1/16W (1005)
R15	1-208-711-11 s	RESISTOR,CHIP 15K 1/16W (1005)
R16	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R17	1-208-687-11 s	RESISTOR,CHIP 1.5K 1/16W (1005)
R18	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R19	1-208-935-11 s	RESISTOR,CHIP 100K (1005)

## (PR-267 BOARD)

Ref. No.  
or Q'ty Part No. SP Description

R20	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R21	1-208-935-11	s RESISTOR,CHIP 100K (1005)
R22	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R23	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R24	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R25	1-208-715-11	s RESISTOR,CHIP 22K 1/16W (1005)
R26	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R27	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R28	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R29	1-208-715-11	s RESISTOR,CHIP 22K 1/16W (1005)
R30	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R31	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R32	1-208-691-11	s RESISTOR,CHIP 2.2K 1/16W(1005)
R33	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R34	1-208-699-11	s RESISTOR,CHIP 4.7K 1/16W(1005)
R35	1-208-671-11	s RESISTOR,CHIP 330 1/16W (1005)
R36	1-208-719-11	s RESISTOR,CHIP 33K 1/16W (1005)
R37	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R38	1-208-687-11	s RESISTOR,CHIP 1.5K 1/16W (1005)
R39	1-208-711-11	s RESISTOR,CHIP 15K 1/16W (1005)
R40	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R41	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R42	1-208-687-11	s RESISTOR,CHIP 1.5K 1/16W (1005)
R43	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R44	1-208-671-11	s RESISTOR,CHIP 330 1/16W (1005)
R45	1-208-687-11	s RESISTOR,CHIP 1.5K 1/16W (1005)
R46	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R47	1-208-935-11	s RESISTOR,CHIP 100K (1005)
R48	1-208-699-11	s RESISTOR,CHIP 4.7K 1/16W(1005)
R49	1-208-703-11	s RESISTOR,CHIP 6.8K 1/16W(1005)
R50	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R51	1-208-647-11	s RESISTOR,CHIP 33 1/16W (1005)
R52	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R53	1-218-945-11	s RESISTOR,CHIP 220 1/16W(1005)
R54	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R55	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R56	1-218-945-11	s RESISTOR,CHIP 220 1/16W(1005)
R57	1-218-945-11	s RESISTOR,CHIP 220 1/16W(1005)
R58	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R59	1-208-699-11	s RESISTOR,CHIP 4.7K 1/16W(1005)
R60	1-208-687-11	s RESISTOR,CHIP 1.5K 1/16W (1005)
R61	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R62	1-208-691-11	s RESISTOR,CHIP 2.2K 1/16W(1005)
R63	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R64	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R65	1-208-719-11	s RESISTOR,CHIP 33K 1/16W (1005)
R66	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R67	1-208-647-11	s RESISTOR,CHIP 33 1/16W (1005)
R68	1-208-671-11	s RESISTOR,CHIP 330 1/16W (1005)
R69	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R70	1-208-719-11	s RESISTOR,CHIP 33K 1/16W (1005)
R71	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R72	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R73	1-208-711-11	s RESISTOR,CHIP 15K 1/16W (1005)
R74	1-208-687-11	s RESISTOR,CHIP 1.5K 1/16W (1005)
R75	1-208-679-11	s RESISTOR,CHIP 680 1/16W (1005)
R76	1-208-695-11	s RESISTOR,CHIP 3.3K 1/16W(1005)
R77	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R78	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)

## (PR-267 BOARD)

Ref. No.  
or Q'ty Part No. SP Description

R79	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R80	1-208-647-11	s RESISTOR,CHIP 33 1/16W (1005)
R81	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R82	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R83	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R84	1-208-855-81	s RESISTOR,CHIP 47 1/16W (1005)
R85	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R86	1-208-703-11	s RESISTOR,CHIP 6.8K 1/16W(1005)
R87	1-208-671-11	s RESISTOR,CHIP 330 1/16W (1005)
R88	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R89	1-208-711-11	s RESISTOR,CHIP 15K 1/16W (1005)
R90	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R91	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R92	1-208-855-81	s RESISTOR,CHIP 47 1/16W (1005)
R93	1-208-855-81	s RESISTOR,CHIP 47 1/16W (1005)
R94	1-208-703-11	s RESISTOR,CHIP 6.8K 1/16W(1005)
R95	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R96	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R97	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R98	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R99	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R100	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R101	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R102	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R103	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R104	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R105	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R106	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R107	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R108	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R109	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R110	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R111	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R112	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R113	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R114	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R115	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R116	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R117	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R118	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R119	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R120	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R121	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R122	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R123	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R124	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R125	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R126	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R127	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R128	1-218-939-11	s RESISTOR,CHIP 68 1/16W (1005)
R129	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R130	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R131	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R132	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R133	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R134	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R135	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R136	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)
R137	1-208-683-11	s RESISTOR,CHIP 1K 1/16W (1005)



(PR-267 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R261	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R262	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R263	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R264	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R265	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R266	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R267	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R268	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R269	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R270	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R271	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R272	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R273	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R274	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R275	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R276	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R277	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R278	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R279	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R280	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R281	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R282	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R283	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R284	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R285	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R286	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R287	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R288	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R289	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R290	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R291	1-208-939-11 s	RESISTOR,CHIP 150K (1005)
R292	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R293	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R294	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R295	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R296	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R297	1-208-711-11 s	RESISTOR,CHIP 15K 1/16W (1005)
R298	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R299	1-218-941-11 s	RESISTOR,CHIP 100 1/16W (1005)
R300	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R301	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R302	1-218-985-11 s	RESISTOR,CHIP 470K 1/16W(1005)
R303	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R304	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R305	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R306	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R307	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R308	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R309	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R310	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R314	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R315	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R317	1-208-695-11 s	RESISTOR,CHIP 3.3K 1/16W(1005)
R318	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R319	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R320	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R321	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R322	1-218-945-11 s	RESISTOR,CHIP 220 1/16W(1005)
R323	1-218-945-11 s	RESISTOR,CHIP 220 1/16W(1005)

(PR-267 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R324	1-218-945-11 s	RESISTOR,CHIP 220 1/16W(1005)
S1	1-771-881-11 s	SWITCH, DIGITAL (SMD)
S2	1-692-270-41 s	SWITCH, SLIDE
X1	1-795-933-11 s	OSCILLATOR (VOLTAGE CONTROL)

## RE-208 BOARD

Ref. No.  
or Q'ty Part No. SP Description

1pc	A-8346-400-A	s MOUNTED CIRCUIT BOARD, RE-208
C1	1-127-692-11	s CAP, CHIP CERAMIC 10MF B 3216
C2	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C3	1-128-991-21	s CAP, ELECT 10MF (5.3X5.5)
C4	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C5	1-125-827-11	s CAPACITOR, CERAMIC 1MF/25V
C6	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C7	1-164-315-11	s CAPACITOR, CERAMIC 470PF/50V CH
C8	1-127-760-11	s CAPACITOR, CERAMIC 4.7MF/6.3V
C9	1-165-176-11	s CAPACITOR, CERAMIC 47000PF/16V
C10	1-165-176-11	s CAPACITOR, CERAMIC 47000PF/16V
C11	1-127-760-11	s CAPACITOR, CERAMIC 4.7MF/6.3V
C12	1-127-760-11	s CAPACITOR, CERAMIC 4.7MF/6.3V
C13	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C14	1-100-552-21	s CAPACITOR, ELECT 10MF
C15	1-164-227-11	s CAPACITOR, CERAMIC 0.022MF/25V
C16	1-164-227-11	s CAPACITOR, CERAMIC 0.022MF/25V
C17	1-164-227-11	s CAPACITOR, CERAMIC 0.022MF/25V
C18	1-107-826-11	s CAPACITOR, CHIP CERAMIC 0.1MF
C19	1-131-998-11	s CAP, SOLID ELECT 82MF 6.3 V
C20	1-107-826-11	s CAPACITOR, CHIP CERAMIC 0.1MF
C22	1-131-999-11	s CAPACITOR, SOLID ELECT 150MF
C23	1-164-227-11	s CAPACITOR, CERAMIC 0.022MF/25V
C24	1-100-552-21	s CAPACITOR, ELECT 10MF
C25	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C26	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C27	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C28	1-127-738-11	s CAPACITOR, CERAMIC 4.7MF/25V
C29	1-135-346-11	s CAP, SOLID ELECT 39MF 16V
C30	1-127-820-11	s CAPACITOR, SQUARE CHIP 4.7MF
C31	1-127-760-11	s CAPACITOR, CERAMIC 4.7MF/6.3V
C32	1-127-760-11	s CAPACITOR, CERAMIC 4.7MF/6.3V
C33	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C101	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C102	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C103	1-115-339-11	s CAPACITOR, CERAMIC 0.1MF/50V
C104	1-125-827-11	s CAPACITOR, CERAMIC 1MF/25V
C105	1-165-176-11	s CAPACITOR, CERAMIC 47000PF/16V
C106	1-100-552-21	s CAPACITOR, ELECT 10MF
C107	1-100-552-21	s CAPACITOR, ELECT 10MF
C108	1-164-227-11	s CAPACITOR, CERAMIC 0.022MF/25V
C109	1-127-956-11	s CAPACITOR, CHIP FILM 0.1MF
C110	1-162-964-11	s CAPACITOR, CERAMIC 1000PF/50V B
C111	1-127-954-11	s CAPACITOR, CHIP FILM 0.047MF
C112	1-127-952-11	s CAPACITOR, FILM 0.022MF (3216)
C113	1-119-972-91	s CAPACITOR, CERAMIC 12PF SL 3216
C114	1-127-956-11	s CAPACITOR, CHIP FILM 0.1MF
C115	1-127-952-11	s CAPACITOR, FILM 0.022MF (3216)
CN1	1-785-912-21	o CONNECTOR, BOARD TO BOARD 20P
CN2	1-815-494-21	s PIN, CONNECTOR 2P
D1	8-719-991-00	s DIODE DAP222
D2	8-719-938-75	s DIODE SB05-05CP (RECTI)
D3	8-719-938-75	s DIODE SB05-05CP (RECTI)
D4	8-719-991-00	s DIODE DAP222
D5	8-719-989-93	s DIODE SB01-15CP
D6	8-719-938-75	s DIODE SB05-05CP (RECTI)
D7	8-719-938-75	s DIODE SB05-05CP (RECTI)

## (RE-208 BOARD)

Ref. No.  
or Q'ty Part No. SP Description

D16	8-719-991-00	s DIODE DAP222
D101	8-719-938-75	s DIODE SB05-05CP (RECTI)
IC1	8-759-560-89	s IC MB3761PF-ER
IC2	8-759-371-78	s IC LT1431CS8-E1
IC3	8-759-669-64	s IC TLI451ACPWR-12
IC4	8-759-530-57	s IC TLV431ACDBV2
IC5	8-759-100-93	s IC UPC393G2
IC101	8-759-711-50	s IC NJU7022M
IC102	6-704-068-01	s IC LT1768CGN#TR-100
L1	1-416-344-11	s COIL, CHOKE 10UH
L2	1-416-344-11	s COIL, CHOKE 10UH
L3	1-424-700-21	s COIL, CHOKE (SMD) 100UH
L4	1-416-344-11	s COIL, CHOKE 10UH
L5	1-416-344-11	s COIL, CHOKE 10UH
L101	1-424-700-21	s COIL, CHOKE (SMD) 100UH
L102	1-424-700-21	s COIL, CHOKE (SMD) 100UH
Q1	8-729-927-99	s TRANSISTOR 2SC4617R
Q2	8-729-928-27	s TRANSISTOR DTA144EE
Q3	8-729-928-81	s TRANSISTOR DTC144EE
Q4	8-729-928-81	s TRANSISTOR DTC144EE
Q5	8-729-928-27	s TRANSISTOR DTA144EE
Q6	8-729-927-99	s TRANSISTOR 2SC4617R
Q7	8-729-928-81	s TRANSISTOR DTC144EE
Q8	8-729-927-99	s TRANSISTOR 2SC4617R
Q9	8-729-012-35	s TRANSISTOR 2SK711-BL
Q10	8-729-927-99	s TRANSISTOR 2SC4617R
Q11	8-729-928-19	s TRANSISTOR 2SA1774R
Q12	8-729-054-99	s TRANSISTOR SI4559EY-T1
Q13	8-729-927-99	s TRANSISTOR 2SC4617R
Q14	8-729-928-19	s TRANSISTOR 2SA1774R
Q15	6-550-022-01	s TRANSISTOR SI9407AEY-T1
Q16	8-729-927-99	s TRANSISTOR 2SC4617R
Q17	8-729-928-81	s TRANSISTOR DTC144EE
Q18	8-729-928-19	s TRANSISTOR 2SA1774R
Q101	8-729-928-81	s TRANSISTOR DTC144EE
Q106	8-729-040-83	s TRANSISTOR SI4450DY-T1
Q107	8-729-106-68	s TRANSISTOR 2SD1615A-GP
Q108	8-729-106-68	s TRANSISTOR 2SD1615A-GP
R1	1-208-935-11	s RESISTOR,CHIP 100K (1005)
R2	1-208-927-11	s RESISTOR,CHIP 47K 1/16W(1005)
R3	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R4	1-208-931-11	s RESISTOR,CHIP 68K (1005)
R5	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R6	1-208-679-11	s RESISTOR,CHIP 680 1/16W (1005)
R7	1-208-931-11	s RESISTOR,CHIP 68K (1005)
R8	1-218-990-11	s RESISTOR,CHIP 0 1/16W (1005)
R9	1-208-699-11	s RESISTOR,CHIP 4.7K 1/16W(1005)
R10	1-208-703-11	s RESISTOR,CHIP 6.8K 1/16W(1005)
R11	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R12	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R13	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R14	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R15	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R16	1-208-707-11	s RESISTOR,CHIP 10K 1/16W (1005)
R17	1-218-941-11	s RESISTOR,CHIP 100 1/16W (1005)
R18	1-208-675-11	s RESISTOR,CHIP 470 1/16W (1005)
R19	1-208-703-11	s RESISTOR,CHIP 6.8K 1/16W(1005)

## (RE-208 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R20	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R21	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R22	1-208-691-11 s	RESISTOR,CHIP 2.2K 1/16W(1005)
R23	1-208-691-11 s	RESISTOR,CHIP 2.2K 1/16W(1005)
R24	1-208-943-11 s	RESISTOR,CHIP 220K
R25	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R26	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R27	1-208-943-11 s	RESISTOR,CHIP 220K
R28	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R29	1-208-931-11 s	RESISTOR,CHIP 68K (1005)
R30	1-208-931-11 s	RESISTOR,CHIP 68K (1005)
R31	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R32	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R33	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R34	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R35	1-218-939-11 s	RESISTOR,CHIP 68 1/16W (1005)
R36	1-208-711-11 s	RESISTOR,CHIP 15K 1/16W (1005)
R37	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R38	1-208-855-81 s	RESISTOR,CHIP 47 1/16W (1005)
R39	1-218-941-11 s	RESISTOR,CHIP 100 1/16W (1005)
R40	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R41	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R42	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R43	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R44	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R45	1-208-635-11 s	RESISTOR,CHIP 10 1/16W (1005)
R46	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R47	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R48	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R49	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R50	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R51	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R52	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R53	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R54	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)
R55	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
R56	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R57	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R58	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R59	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R60	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R61	1-208-711-11 s	RESISTOR,CHIP 15K 1/16W (1005)
R62	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R63	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R64	1-208-927-11 s	RESISTOR,CHIP 47K 1/16W(1005)
R65	1-218-945-11 s	RESISTOR,CHIP 220 1/16W(1005)
R101	1-208-935-11 s	RESISTOR,CHIP 100K (1005)
R102	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R103	1-208-715-11 s	RESISTOR,CHIP 22K 1/16W (1005)
R104	1-208-935-11 s	RESISTOR,CHIP 100K (1005)
R105	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R106	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R107	1-208-939-11 s	RESISTOR,CHIP 150K (1005)
R108	1-208-931-11 s	RESISTOR,CHIP 68K (1005)
R109	1-208-719-11 s	RESISTOR,CHIP 33K 1/16W (1005)
R110	1-208-947-11 s	RESISTOR,CHIP 330K 1/16W(1005)
R111	1-208-707-11 s	RESISTOR,CHIP 10K 1/16W (1005)
R112	1-218-941-11 s	RESISTOR,CHIP 100 1/16W (1005)
R113	1-208-683-11 s	RESISTOR,CHIP 1K 1/16W (1005)

## (RE-208 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R114	1-219-706-11 s	RESISTOR,CHIP 0.10/1W
R115	1-208-699-11 s	RESISTOR,CHIP 4.7K 1/16W(1005)
T1	1-439-719-11 s	TRANSFORMER, DC-DC CONVERTER
T101	△ 1-439-709-11 s	TRANSFORMER, DC/AC INVERTER

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SW-1092 BOARD

Ref. No.  
or Q'ty Part No. SP Description

1pc	A-8346-397-A	s MOUNTED CIRCUIT BOARD, SW-1092
C1	1-164-943-11	s CAPACITOR, CHIP CERAMIC 0.01MF
CN1	1-764-095-11	o PIN, CONNECTOR (PC BOARD) 10P
D1	8-719-989-53	s LED CL-200HR-C-TSL
Q1	8-729-117-31	s TRANSISTOR 2SC4177-L5
Q2	8-729-117-31	s TRANSISTOR 2SC4177-L5
R1	1-208-675-11	s RESISTOR, CHIP 470 1/16W (1005)
R2	1-208-687-11	s RESISTOR, CHIP 1.5K 1/16W (1005)
R3	1-208-719-11	s RESISTOR, CHIP 33K 1/16W (1005)
R4	1-208-643-11	s RESISTOR, CHIP 22 1/16W (1005)
R5	1-218-990-11	s RESISTOR, CHIP 0 1/16W (1005)
R6	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R7	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R8	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R9	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R10	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R11	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R12	1-218-945-11	s RESISTOR, CHIP 220 1/16W(1005)
R13	1-208-671-11	s RESISTOR, CHIP 330 1/16W (1005)
R14	1-208-695-11	s RESISTOR, CHIP 3.3K 1/16W(1005)
S1	1-762-489-11	s SWITCH, TOGGLE
S2	1-762-020-11	s SWITCH, TOGGLE
S3	1-762-019-11	s SWITCH, TOGGLE
S4	1-786-520-11	s SWITCH, TACTILE
S5	1-786-520-11	s SWITCH, TACTILE

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VR-280 BOARD

Ref. No.  
or Q'ty Part No. SP Description

1pc	A-8346-398-A	s MOUNTED CIRCUIT BOARD, VR-280
CN1	1-695-890-11	o PIN, CONNECTOR (PC BOARD) 12P
D1	8-719-989-53	s LED CL-200HR-C-TSL
D2	8-719-989-53	s LED CL-200HR-C-TSL
Q1	8-729-117-31	s TRANSISTOR 2SC4177-L5
Q2	8-729-117-31	s TRANSISTOR 2SC4177-L5
R13	1-208-643-11	s RESISTOR, CHIP 22 1/16W (1005)
R14	1-208-643-11	s RESISTOR, CHIP 22 1/16W (1005)
R15	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
R16	1-218-941-11	s RESISTOR, CHIP 100 1/16W (1005)
RV1	1-238-293-11	s RESISTOR, VAR, CARBON 10K
RV2	1-225-813-21	s RES, ADJ, CERMET 50K
RV3	1-238-293-11	s RESISTOR, VAR, CARBON 10K
RV4	1-225-813-21	s RES, ADJ, CERMET 50K
RV5	1-238-293-11	s RESISTOR, VAR, CARBON 10K
RV6	1-225-813-21	s RES, ADJ, CERMET 50K
S1	1-570-984-11	s SWITCH, TOGGLE
S2	1-771-483-61	s SWITCH, PUSH (1 KEY)

## **2-4. Packing Materials and Supplied Accessories List**

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FRAME

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-758-921-11	s LENS UNIT, VF
1pc	1-469-969-11	s CLAMP, FERRITE
1pc	1-804-892-11	s DISPLAY PANEL, LIQUID CRYSTAL
HN001	1-827-086-11	s CORD, CONNECTION (VF) (TO CN1/PR-267 BOARD)
1pc	1-695-214-11	o HOUSING, CONNECTOR 15P
15pcs	1-695-215-11	o TERMINAL, SOLDERLESS
HN002	-----	HARNESS (SW) (TO CN3/PR-267 BOARD & CN1/SW-1092 BOARD)
20pcs	1-695-215-11	o TERMINAL, SOLDERLESS
HN003	-----	HARNESS (VR) (TO CN7/PR-267 BOARD & CN1/VR-280 BOARD)
24pcs	1-695-215-11	o TERMINAL, SOLDERLESS

Ref. No. or Q'ty	Part No.	SP Description
1pc	3-775-745-01	s OPERATION MANUAL

## **2-5. Optional Fixtures List**

Part No.	SP Description
A-8346-442-A	s MOUNTED CIRCUIT BOARD, EX-909
A-8346-443-A	s RX-208 EX UNIT (WITH MOUNT)
J-6029-140-B	o PATTERN BOX, PTB-500
J-7120-140-A	o PLD DOWNLOAD TOOL
1-827-086-21	s CORD, CONNECTION (VF)



## Section 3

### Semiconductor Pin Assignments

The following describes the semiconductor types used in this unit.

For semiconductors marked with page numbers in the index, refer to the corresponding pages in this section. However, in some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.

In addition, for semiconductors with ID Nos., refer to the separate CD-ROM titled "Semiconductor Pin Assignments" (Sony Part No. 9-968-546-xx) that allows searching for parts by semiconductor type or ID No.

The semiconductors in the manual or on the CD-ROM are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.

Pin assignments and block diagrams are based on the IC manufacturer's data book.

本機に使用されている半導体型名の一覧を下記に示します。索引中、ページが記載されている半導体は、本章の該当ページを参照してください。ただし、互換性のない型名を併記している場合がありますので、部品を交換するときは、Spare Partsの章を参照してください。

また、ID番号が記載されている半導体は、別途発行の "Semiconductor Pin Assignments" CD-ROM版(ソニー部品番号: 9-968-546-xx)を参照してください。

半導体型名またはID番号から検索ができます。

マニュアルまたはCD-ROMに掲載されている半導体は、それぞれの機能を等価的に表わしたものです。

外観やインデックスマークの表示方法が実物と異なる場合があります。

ピン配置およびブロック図はICメーカーのデータブックに従いました。

DIODE	Page or ID No.	TRANSISTOR	Page or ID No.	IC	Page or ID No.
DA204U .....	DC001-01	2SA1213Y-TE12L .....	TC002-01	AD7829BRU-REEL7 .....	3-2
DA204UT106 .....	DC001-01	2SA1611-M5M6 .....	TC001-01	AD8041AR .....	AD8041AR
DAP222 .....	DC001-02	2SA1611T1-M5M6 .....	TC001-01	AD8041AR-REEL .....	AD8041AR
DAP222-TL .....	DC001-02	2SA1774R .....	TC001-01	AD8644ARU-REEL .....	XRA10324AF
MA728 .....	DC008-01	2SA1774TL-QR .....	TC001-01	AD9203ARU-RL7 .....	3-2
MA728-TX .....	DC008-01	2SC4177-L5 .....	TC001-02	AD9203ARURL7 .....	3-2
SB01-15CP .....	DC001-06	2SC4177-T1L5 .....	TC001-02	EPC2LC20-TP .....	EPC2LC20
SB01-15CP-TB .....	DC001-06	2SC4617R .....	TC001-02	EPF10K100EFC484-2N .....	EPFFC484AA
SB05-05CP(RECTI) .....	DC001-06	2SC4617TL-QR .....	TC001-02	HY57V643220CT-7TR .....	
SB05-05CP-TB .....	DC001-06	2SD1615A-GP .....	TC002-02	MB811643242A-100FN .....	
		2SD1615A-T1GP .....	TC002-02		
		2SK711-BL .....	TC001-05		
		2SK711-BL(TE85L) .....	TC001-05		

LED	Page or ID No.				
CL-200HR-C-TSL .....	LC008-04	DTA144EE .....	TC001-04	LT1431CS8-E1 .....	LT1431CS8-E1
		DTA144EE-TL .....	TC001-04	LT1768CGNTR-100 .....	3-3
		DTC144EE .....	TC001-03	MAX942CSA .....	MAX942CSA
		DTC144EE-TL .....	TC001-03	MB3761PF-ER .....	MB3761PF
		SI4450DY-T1 .....	TC012-06	NJU7022M .....	RC4558
		SI4559EY-T1 .....	TC012-03	NJU7022M-TE2 .....	RC4558
		SI9407AEY-T1 .....	TC012-04	NJU7034V(TE2) .....	NJU7034V-TE2

TC7S14F .....	TC7S14FU
TC7S14F(TE85R) .....	TC7S14FU
TC7S66F .....	SC14S66F
TC7S66F(TE85R) .....	SC14S66F
TC7SZ04FU(TE85R) .....	TC7S04F
TC7W53FU(TE12R) .....	TC4W53FU
TL1451ACPWR-12 .....	TL1451CNS
TL7700CPS .....	TL7700CPS
TL7700CPS-E20 .....	TL7700CPS
TLC2933IPWR-12 .....	TLC2933IPWR
TLV431ACDBV2 .....	TLV431AIDBV

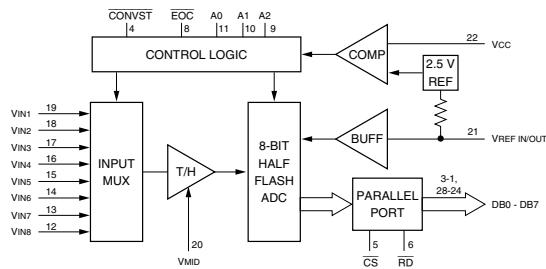
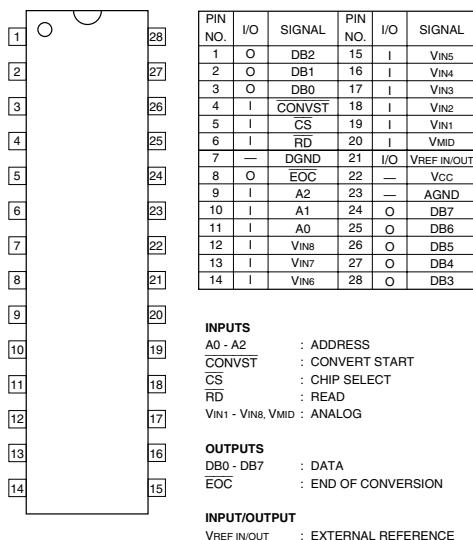
UPC393G2 .....	UA393DC
UPC393G2-E2 .....	UA393DC

## IC

AD7829BRU-REEL7 (AD)

2 MSPS 8 CHANNEL 8-BIT A/D CONVERTER

—TOP VIEW—

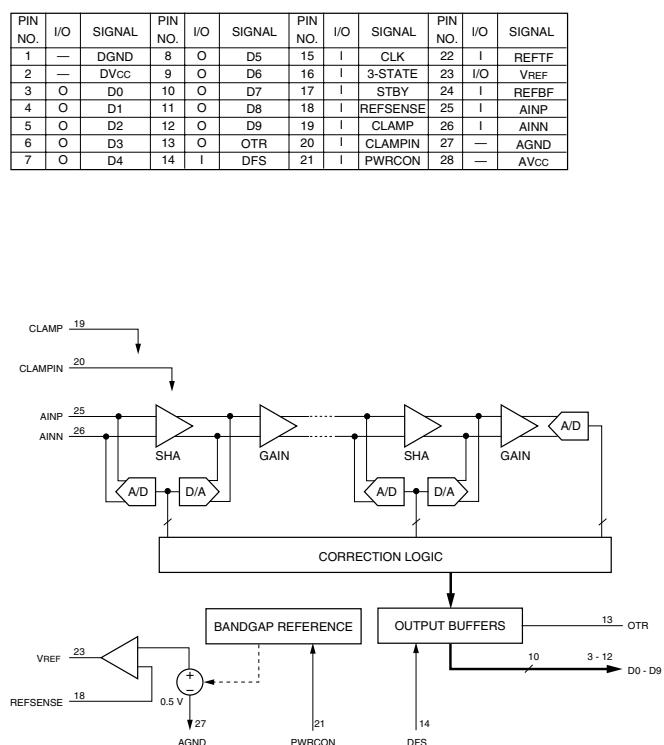
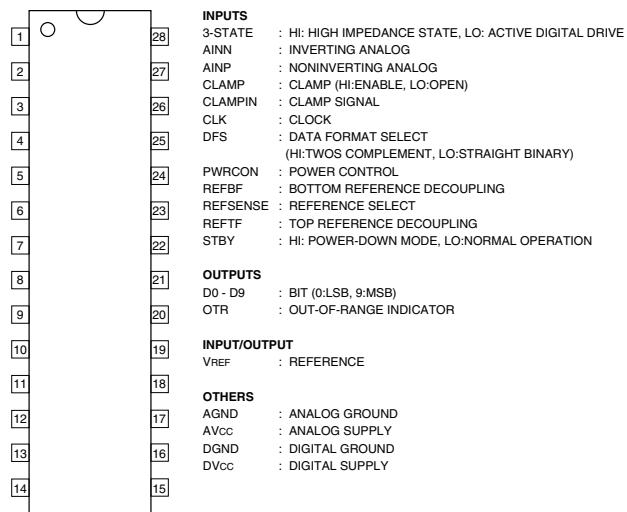


AD9203ARU-RL7 (AD)

AD9203ARURL7

10-BIT 40 MSPS A/D CONVERTER

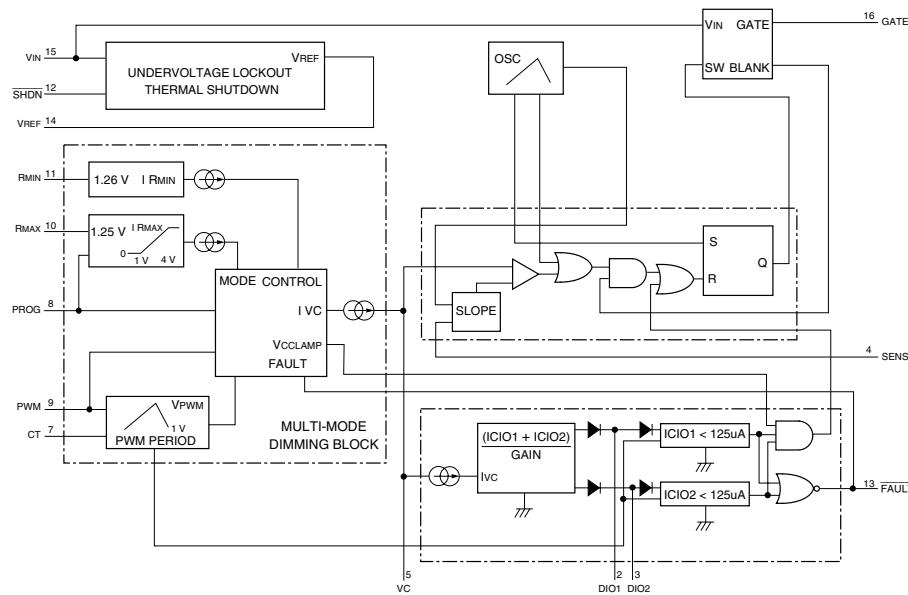
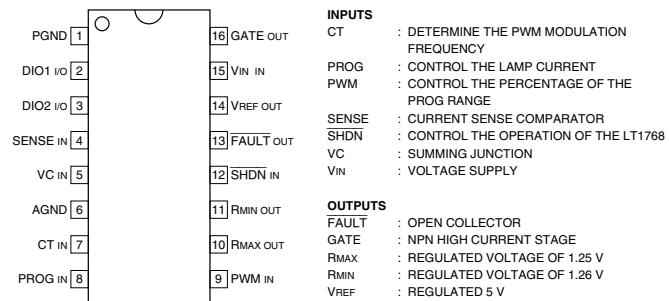
—TOP VIEW—



## LT1768CGNTR-100 (LINEAR TECH)

## HIGH POWER CCFL CONTROLLER

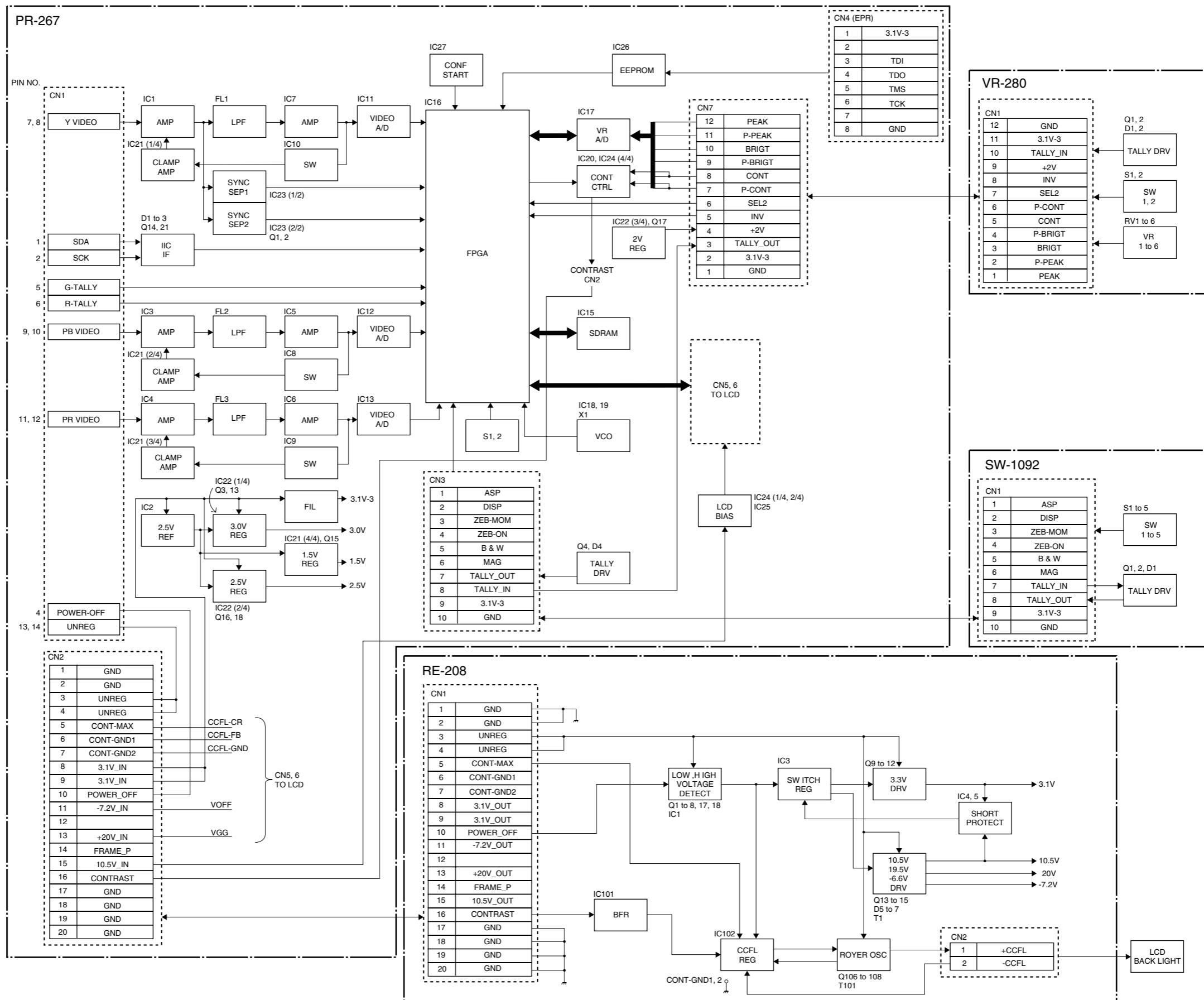
—TOP VIEW—





## Section 4

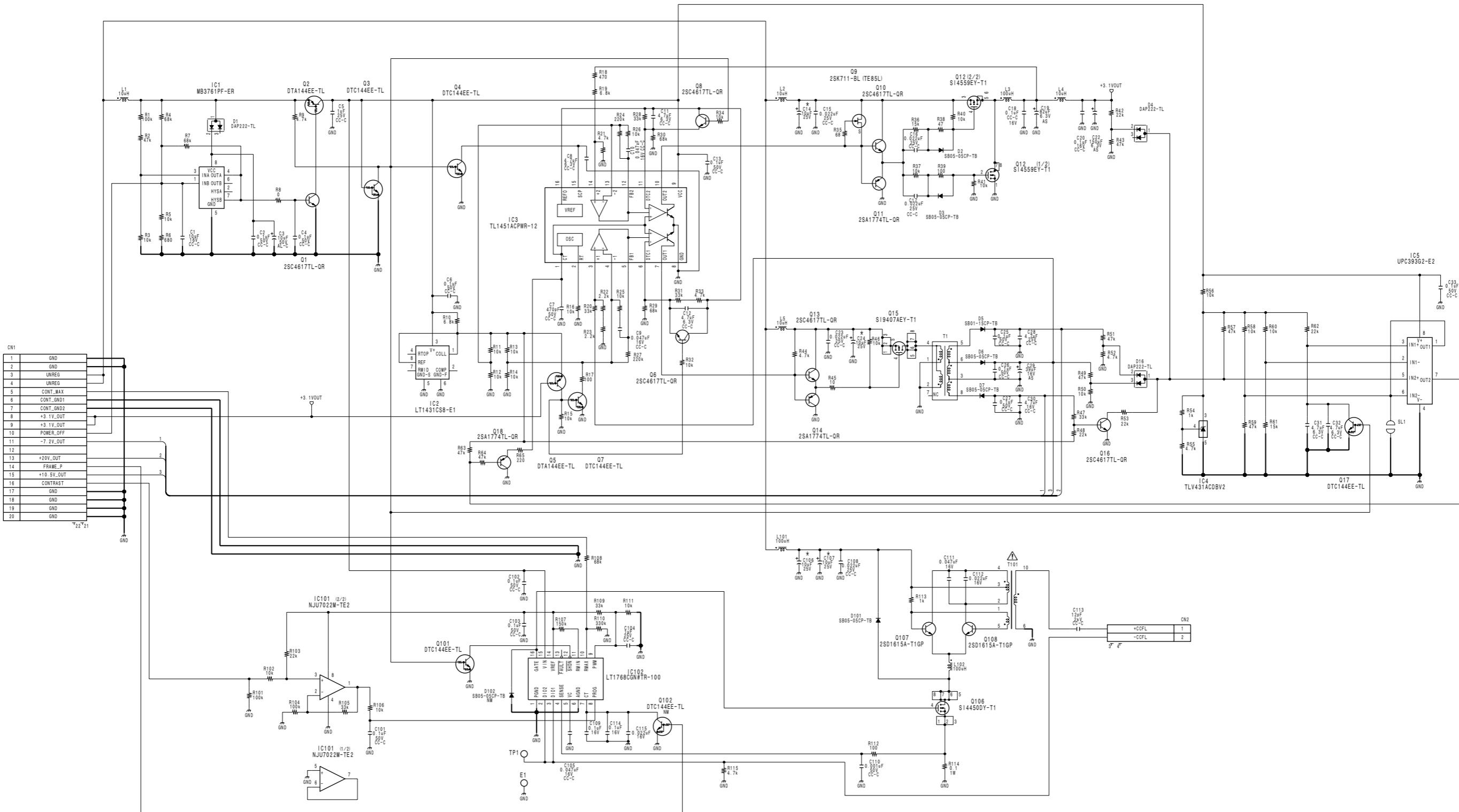
### Block Diagram

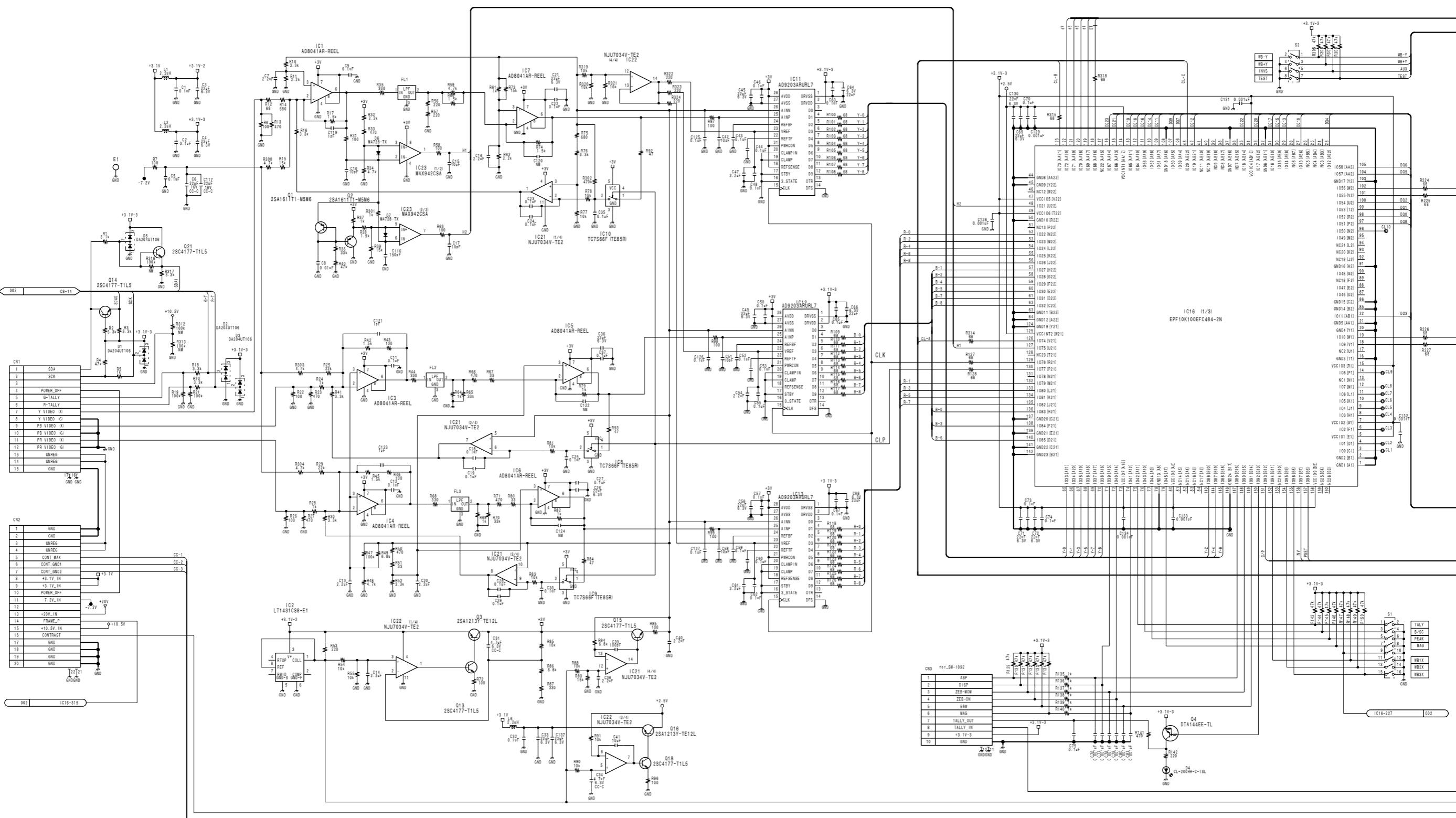


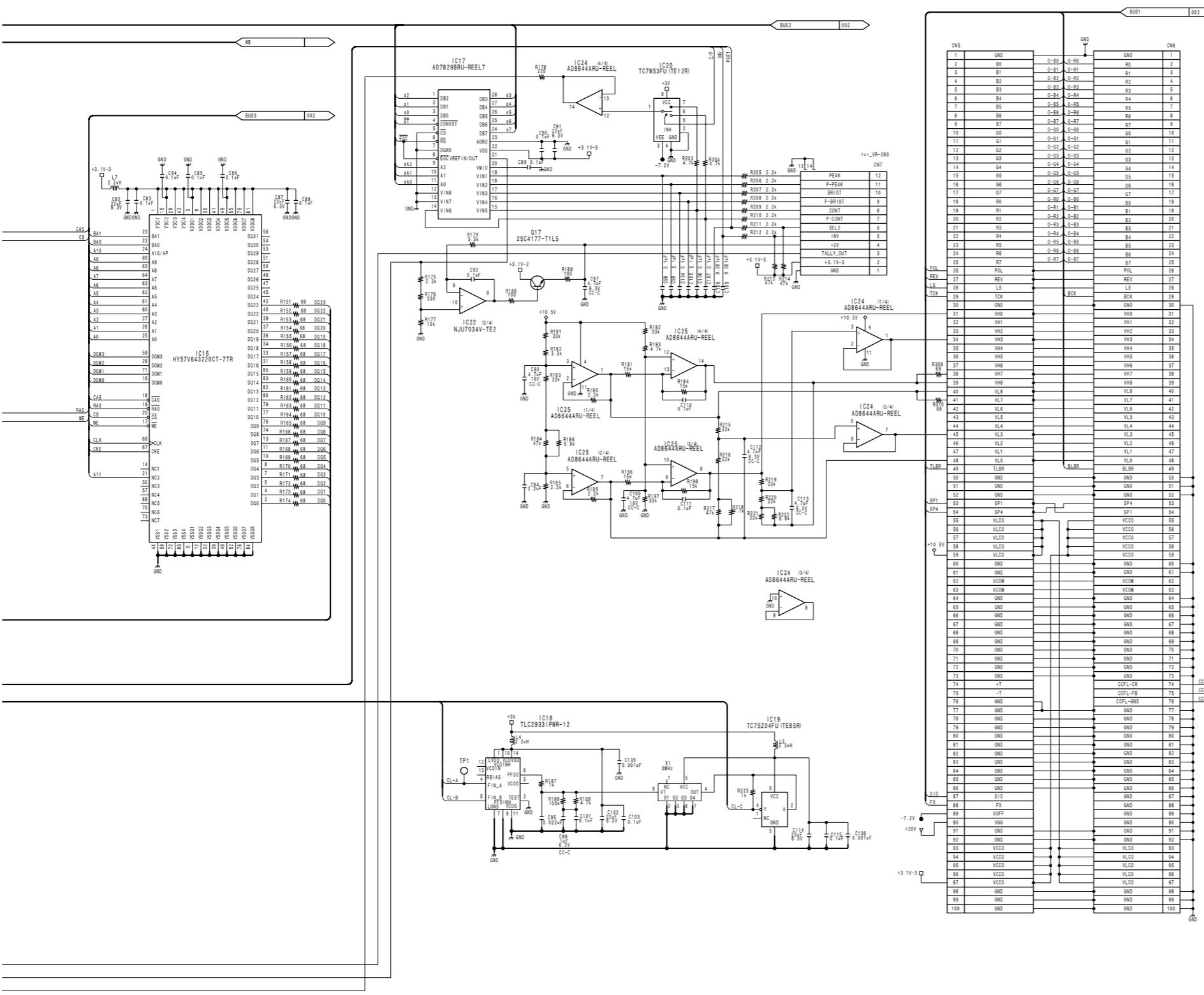


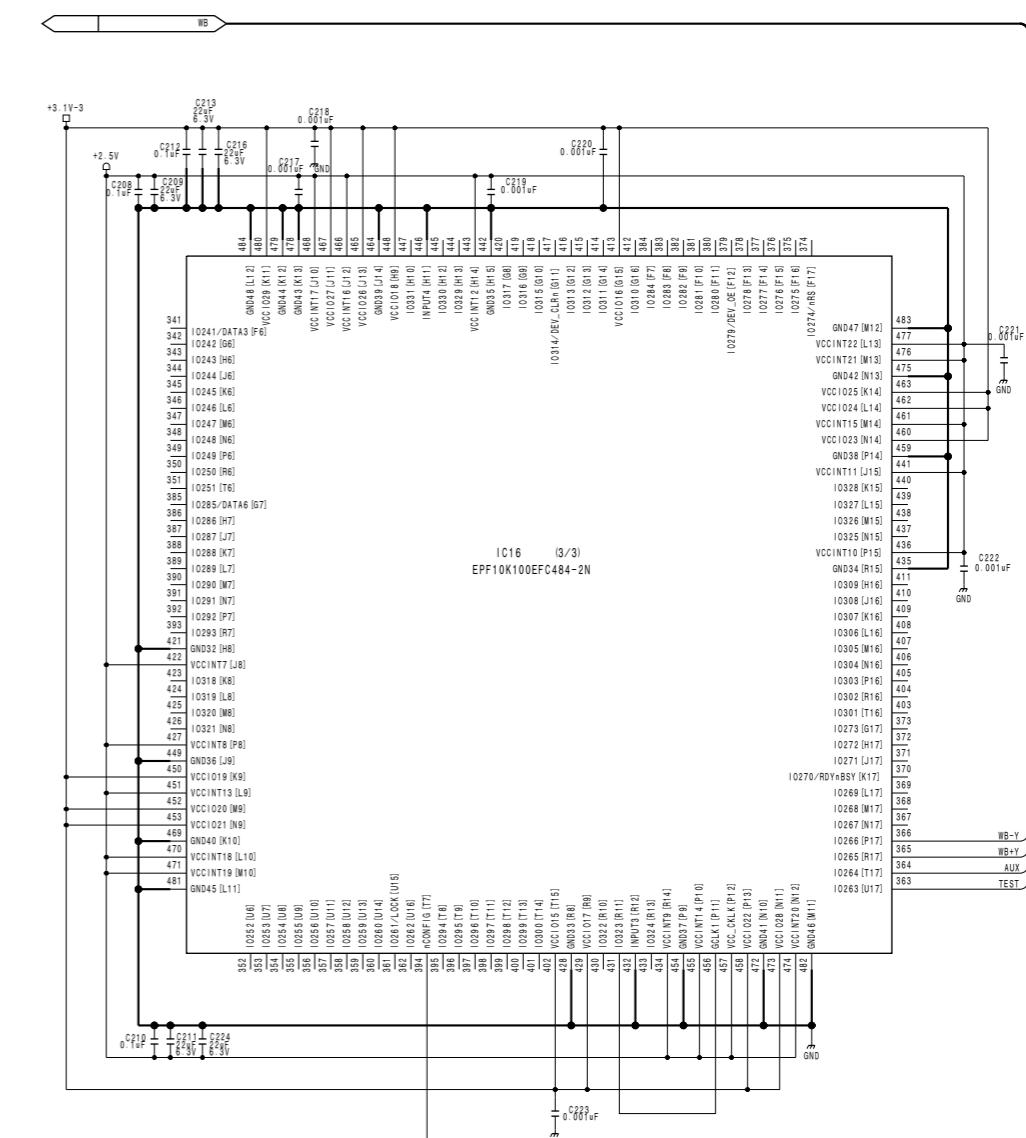
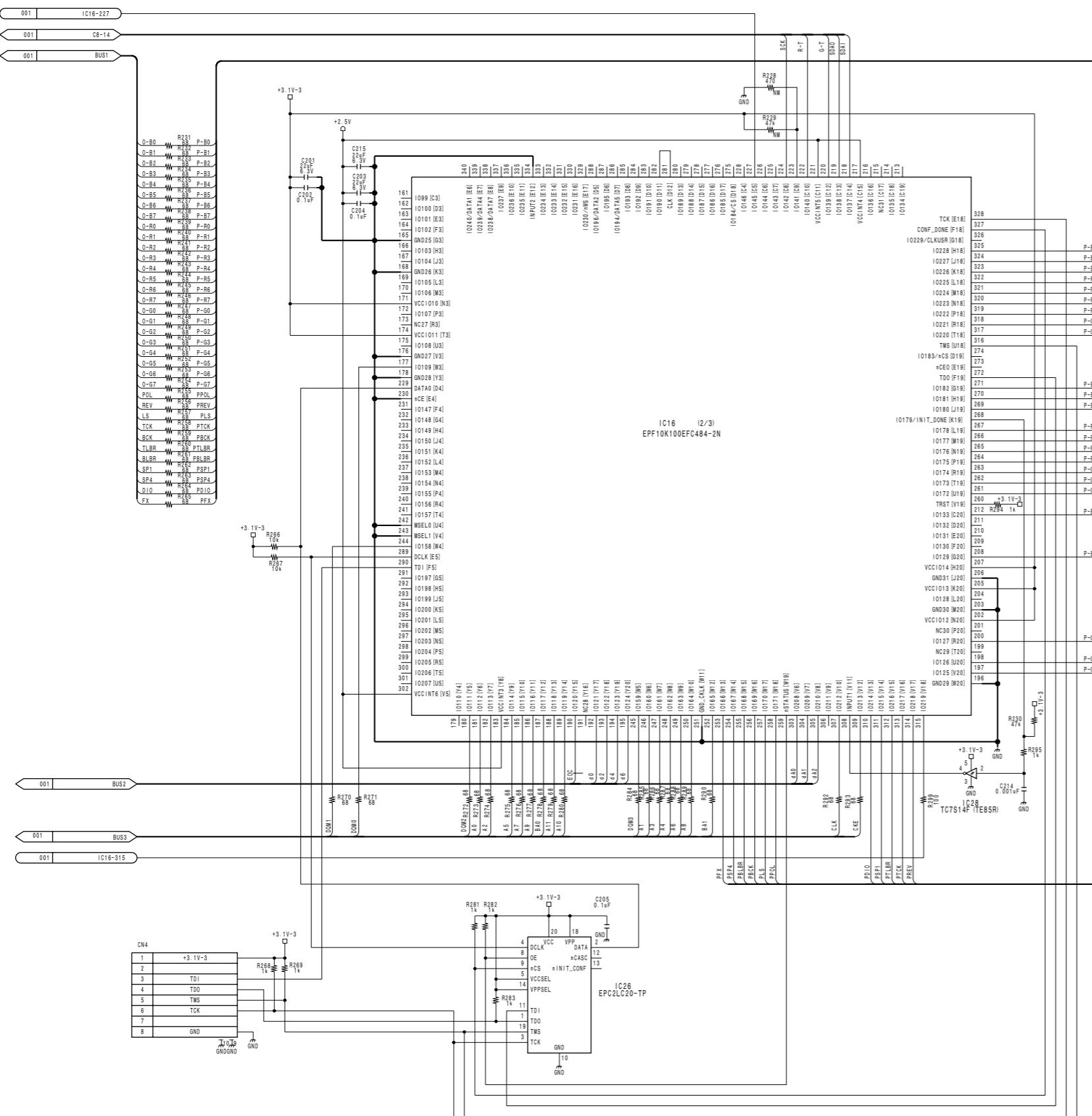
## Section 5

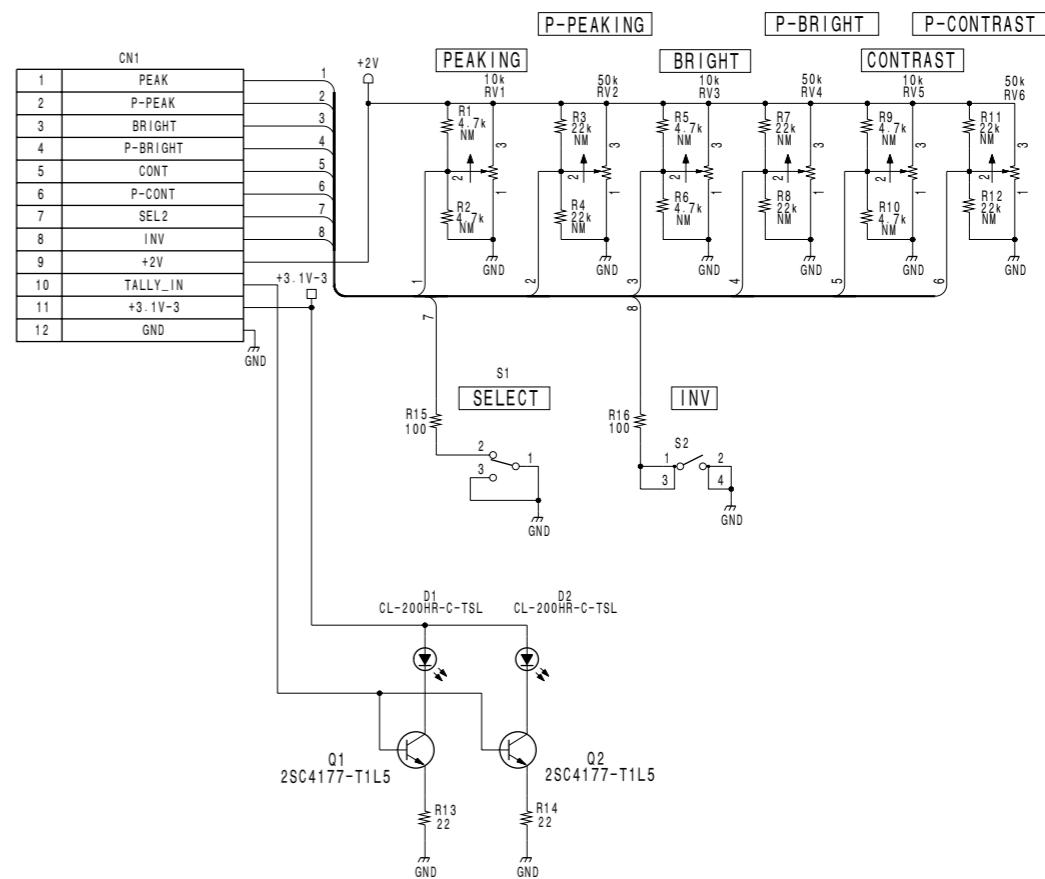
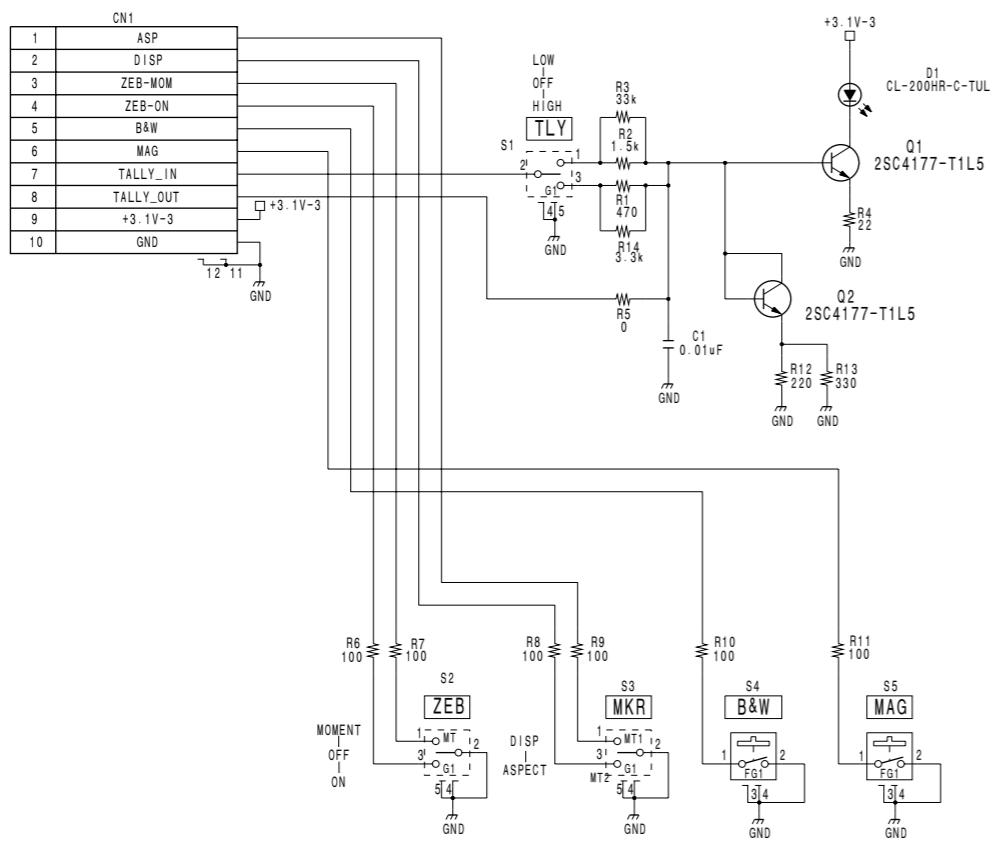
### Schematic Diagrams









**SW-1092**

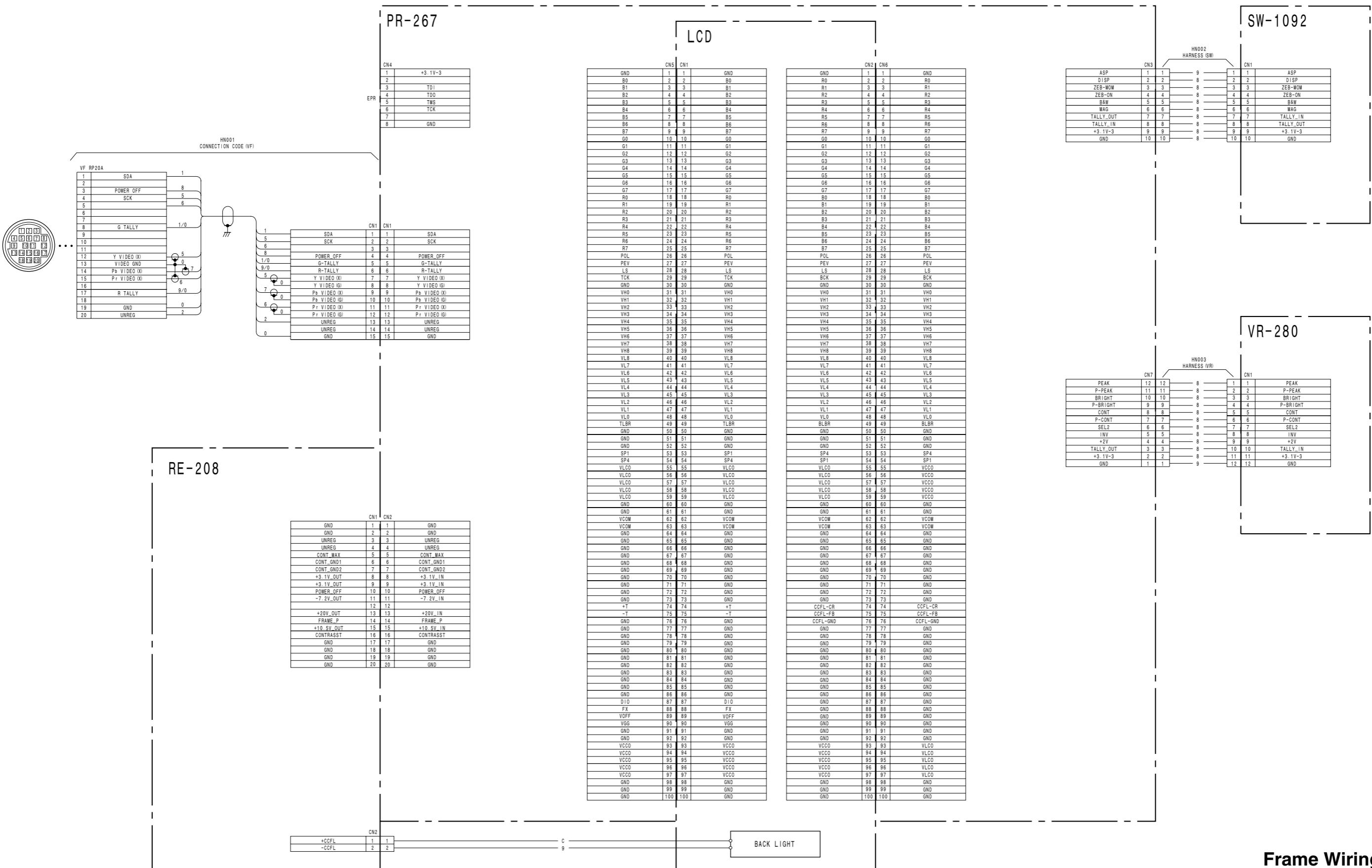
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LOT NO. 331-  
CXA-088\_SW-1092\_011\_1

**VR-280**

BOARD NO. 1-688-281-11  
LOT NO. 331-  
CXA-088\_VR-280\_011\_1

## Frame Wiring

## Frame Wiring



Frame Wiring

LOT NO. 331-

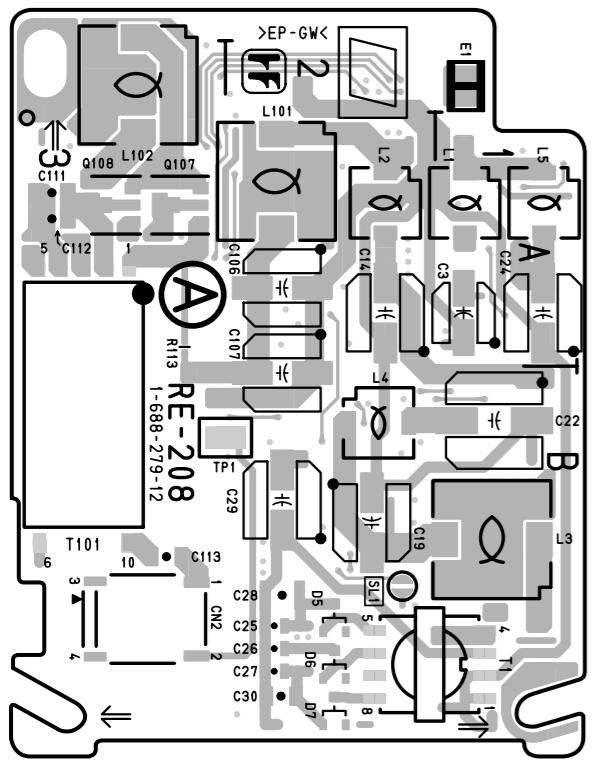
## Section 6

### Board Layouts

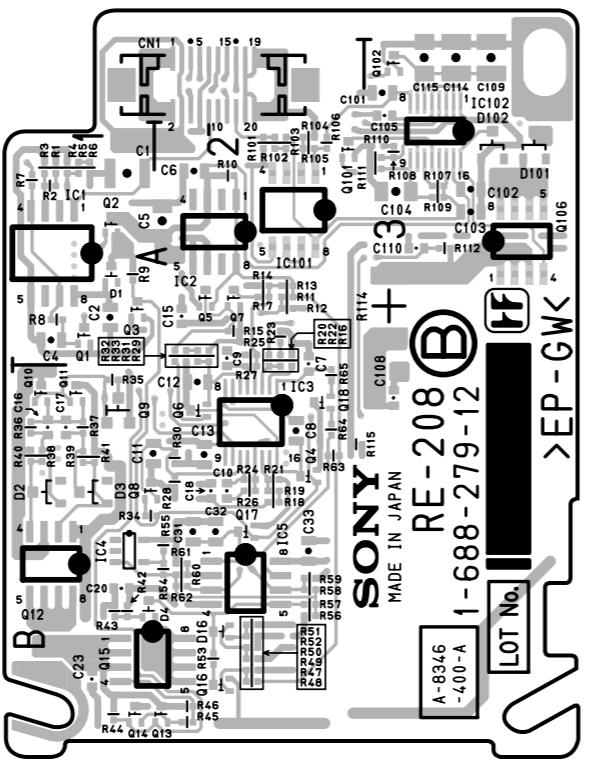
PR-267 (1-688-278-11)

\*: B SIDE

C1	*A3	C88	*A4	CN4	A4	R24	*B1	R111	B3	R198	*C3	R288	*A4	
C2	*A3	C89	*C2	CN5	*B2	R25	*B1	R112	B3	R199	*A2	R289	*A4	
C3	*A3	C90	*C2	CN6	*B2	R26	*A1	R113	C3	R203	*C1	R290	B4	
C4	*A3	C91	*C1	CN7	B1	R27	*A1	R114	C3	R204	*B1	R291	*A4	
C5	*A4	C92	*B1			R28	*A1	R115	C3	R205	*C1	R292	*A4	
C6	*A3	C93	*B2	D1	*A2	R29	*A1	R116	C3	R206	*C1	R293	*A4	
C7	*B1	C94	*C2	D2	*A2	R30	*A1	R117	C3	R207	*C1	R294	B4	
C8	*C1	C95	*A2	D3	*A2	R31	*C1	R118	B3	R208	*C1	R295	*B4	
C9	*B1	C96	*A2	D4	B4	R32	C1	R119	B3	R209	*C1	R296	*A4	
C10	*C1	C97	*B1	D5	*A2	R33	C1	R120	B3	R210	*B1	R297	*A4	
C11	*B1	C98	*C1	D6	*C1	R34	C1	R121	B3	R211	*B1	R298	B4	
C12	*B1	C99	*C1	D7	C1	R35	*C1	R122	B3	R212	*B1	R299	*B4	
C13	*B1	C100	*B3	E1	A1	R37	C1	R124	B3	R214	*B1	R301	C1	
C14	*B1	C101	*A2	FL1	B1	R39	C1	R125	B3	R215	*C2	R302	*A1	
C15	C1	C102	*A2	FL2	B1	R40	*C1	R127	B3	R216	*C2	R303	*B1	
C16	*B1	C103	*A2	FL3	B1	R41	*B1	R128	B4	R218	*C2	R304	*A1	
C17	C1	C104	*C1					R129	B4	R219	*C3	R306	B2	
C18	*A1	C105	*C1					R130	*B2	R220	*C3	R307	B2	
C19	*A1	C106	*C1					R131	*B2	R221	*C3	R308	B2	
C20	*A1	C107	*C1	IC1	B1	R43	*B1	R132	*B2	R222	*C3	R309	*B3	
C21	*B2	C108	*C1	IC2	A1	R44	*B1	R133	*B2	R223	*A2	R310	*B3	
C22	*B2	C109	*C1	IC3	B1	R45	*B1	R134	*B2	R224	B4	R312	*A2	
C23	*A1	C110	*B3	IC4	A1	R46	*B1	R135	*C2	R225	B4	R313	*A2	
C24	*A1	C111	*C3	IC5	*B1	R47	*B1	R136	*C2	R226	B4	R314	B3	
C25	*A1	C112	*C2	IC6	*A1	R48	*B1	R137	*C2	R227	B4	R315	B3	
C26	*B2	C113	*C3	IC7	*B1	R49	*B1	R138	*C2	R228	C4	R316	*A1	
C27	*B2	C114	*A2	IC8	*A1	R50	*A1	R139	*C2	R229	C4	R317	*A1	
C28	*A1	C115	*A2	IC9	*A1	R51	*A1	R140	*C2	R230	*B4	R318	B4	
C29	*A1	C116	C1	IC10	*A1	R52	*A1	R141	*B2	R231	*A3	R319	*B1	
C30	*A1	C117	*A4	IC11	C3	R53	A1	R142	B4	R232	*A3	R320	*B1	
C31	*B1	C119	*C1	IC12	B3	R54	*B1	R143	*C2	R233	*A3	R321	*B1	
C32	A1	C120	*B2	IC13	B3	R55	*B1	R144	*C1	R234	*A3	R322	*B1	
C33	A1	C121	*B1	IC15	B4	R56	*B1	R145	*C2	R235	*A3	R323	*B1	
C34	*B1	C122	*B2	IC16	*B4	R57	*B1	R146	*C2	R236	*A3	R324	*B1	
C35	*A1	C123	*B1	IC17	*B2	R58	C1	R147	*C2	R237	*A3	X1	A2	
C36	*B2	C124	*A2	IC18	*A2	R59	*B1	R148	*C2	R238	S1	C2		
C37	*B2	C125	C2	IC19	*A2	R60	*B1	R149	*C1	R239	S2	B2		
C38	*A1	C126	B2	IC20	*C1	R61	*B1	R150	*C1	R240				
C39	*A1	C127	B2	IC21	*A1	R62	*B1	R151	B3	R241	TP1	B2		
C40	*A1	C128	C4	IC22	*B1	R63	C1	R152	B3	R242				
C41	*B1	C129	C4	IC23	C1	R64	*B1	R153	B3	R243				
C42	C2	C130	B4	IC24	*C2	R65	*B1	R154	B3	R244				
C43	C2	C131	B4	IC25	*B2	R66	*B1	R155	B4	R245				
C44	C2	C132	C4	IC26	A1	R67	*B1	R156	B4	R246				
C45	C2	C133	B3	IC27	*A4	R68	*B1	R157	B4	R247				
C46	C2	C134	B4	IC28	*B4	R69	*B1	R158	B4	R248				
C47	C2	C135	*A2		L1	*A3	R71	*A1	R159	*A4	R249			
C48	C2	C136	*A2		L2	*A3	R72	B1	R160	*A4	R250			
C49	B2	C137	A1		L3	*A3	R73	*B1	R161	*A4	R251			
C50	B2	C201	C4		L4	*A2	R74	*B2	R162	*A4	R252			
C51	B2	C202	C4		L5	*A2	R75	*A1	R163	*A4	R253			
C52	B2	C203	C4		L6	A1	R76	*A1	R164	*A4	R254			
C53	B2	C204	B4		L7	*A4	R77	*A1	R165	*A4	R255			
C54	B2	C205	*A1				R78	*A1	R166	*A4	R256			
C55	B2	C207	*A4		Q1	*C1	R79	*B2	R167	B4	R257			
C56	B2	C208	B4		Q2	*C1	R80	*A1	R168	B4	R258			
C57	B2	C209	B4		Q3	B1	R81	*A1	R169	B4	R259	B3		
C58	B2	C210	C4		Q4	B4	R82	*A2	R170	B4	R260	B3		
C59	B2	C211	C4		Q13	B1	R83	*A1	R171	B4	R261	B3		
C60	B2	C212	B4		Q14	*A2	R84	*A1	R172	B4	R262	B4		
C61	B2	C213	C4		Q15	*A1	R85	*B1	R173	B4	R263	B3		
C62	B2	C214	*B4		Q16	A1	R86	*B1	R174	B4	R264	B4		
C63	C3	C215	B4		Q17	*B1	R87	*B1	R175	*B1	R265	B4		
C64	C3	C216	C4		Q18	B1	R88	*A1	R176	*B1	R266	C4		
C65	B3	C217	B4		Q21	*A1	R89	*A1	R177	*B1	R267	C4		
C66	B3	C218	B3				R90	*B1	R178	*C3	R268	*A4		
C67	B3	C219	C4				R91	*B1	R179	*B1	R269	*A4		
C68	B3	C220	C4				R92	*A1	R180	*B1	R270	*A4		
C69	B4	C221	B4				R93	*A1	R181	*C2	R271	B4		
C70	B4	C222	B4				R94	*A1	R182	*B2	R272	B4		
C71	B4	C223	C3				R95	*A1	R183	*B2	R273	B4		
C72	B4	C224	C4				R96	B1	R184	*C2	R274	B4		
C73	B4						R97	C2	R185	*C2	R275			



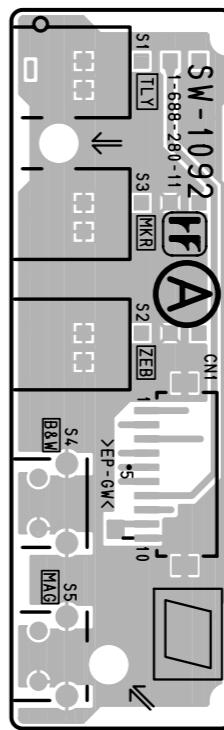
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SUFFIX: -12



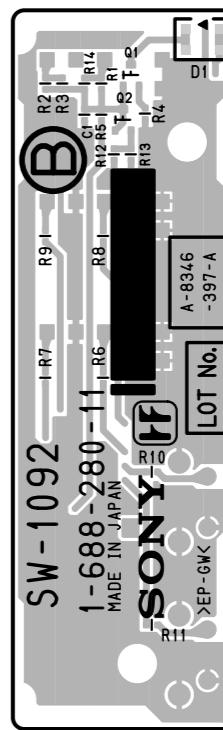
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SUFFIX: -12

RE-208 (1-688-279-12)

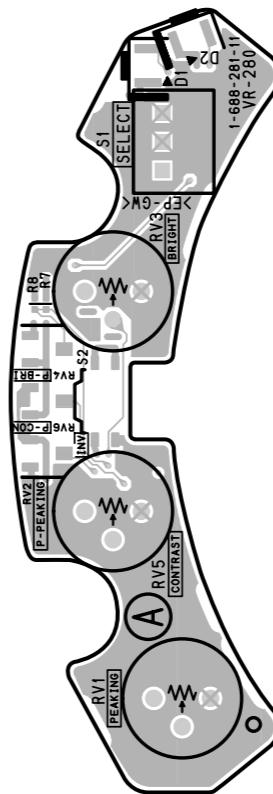
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C1	*A1	C111 A3 Q5 *A2 R23 *A2 R65 *B2
C2	*A1	C112 A3 Q6 *B2 R24 *B2 R101 *A2
C3	A1	C113 B3 Q7 *A2 R25 *A2 R102 *A2
C4	*A1	C114 *A3 Q8 *B1 R26 *B2 R103 *A2
C5	*A2	C115 *A3 Q9 *B1 R27 *B2 R104 *A2
C6	*A2	Q10 *B1 R28 *B2 R105 *A2
C7	*A2	CN1 *A2 Q11 *B1 R29 *A2 R106 *A2
C8	*B2	CN2 B3 Q12 *B1 R30 *B2 R107 *A3
C9	*A2	Q13 *B2 R31 *A2 R108 *A3
C10	*B2	D1 *A1 Q14 *B1 R32 *A2 R109 *A3
C11	*B1	D2 *B1 Q15 *B1 R33 *A2 R110 *A3
C12	*B2	D3 *B1 Q16 *B2 R34 *B1 R111 *A3
C13	*B2	D4 *B1 Q17 *B2 R35 *B1 R112 *A3
C14	A2	D5 B2 Q18 *B2 R36 *B1 R113 A3
C15	*A2	D6 B2 Q101 *A2 R37 *B1 R114 *A3
C16	*B1	D7 B2 Q102 *A3 R38 *B1 R115 *B2
C17	*B1	D16 *B2 Q106 *A3 R39 *B1
C18	*B2	D101 *A3 Q107 A3 R40 *B1 SL1 B2
C19	B2	D102 *A3 Q108 A3 R41 *B1
C20	*B1	R42 *B1 T1 B2
C22	B1	E1 A1 R1 *A1 R43 *B1 T101 B3
C23	*B1	R2 *A1 R44 *B1
C24	A1	IC1 *A1 R3 *A1 R45 *B2 TP1 B2
C25	B2	IC2 *A2 R4 *A1 R46 *B2
C26	B2	IC3 *B2 R5 *A1 R47 *B2
C27	B2	IC4 *B1 R6 *A1 R48 *B2
C28	B2	IC5 *B2 R7 *A1 R49 *B2
C29	B2	IC101 *A2 R8 *A1 R50 *B2
C30	B2	IC102 *A3 R9 *A1 R51 *B2
C31	*B2	R10 *A2 R52 *B2
C32	*B2	L1 A1 R11 *A2 R53 *B2
C33	*B2	L2 A2 R12 *A2 R54 *B2
C101	*A3	L3 B1 R13 *A2 R55 *B2
C102	*A3	L4 B2 R14 *A2 R56 *B2
C103	*A3	L5 A1 R15 *A2 R57 *B2
C104	*A3	L101 A2 R16 *A2 R58 *B2
C105	*A3	L102 A3 R17 *A2 R59 *B2
C106	A2	R18 *B2 R60 *B2
C107	B2	Q1 *A1 R19 *B2 R61 *B2
C108	*B3	Q2 *A1 R20 *A2 R62 *B2
C109	*A3	Q3 *A1 R21 *B2 R63 *B2
C110	*A3	Q4 *B2 R22 *A2 R64 *B2



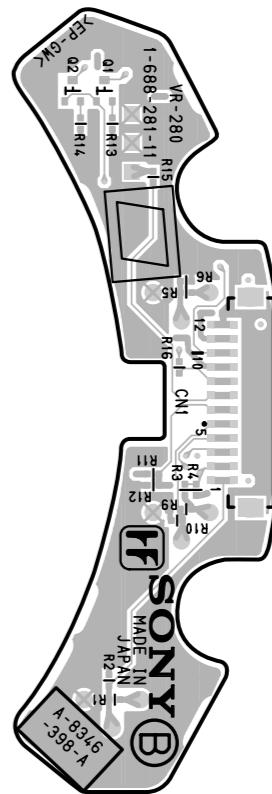
**SW-1092** -A SIDE-  
SUFFIX: -11



**SW-1092** -B SIDE-  
SUFFIX: -11



**VR-280** -A SIDE-  
SUFFIX: -11



**VR-280** -B SIDE-  
SUFFIX: -11



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