SONY

HD ELECTRONIC VIEWFINDER

HDVF-C30WR

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 angegeben 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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2. Spare Parts

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Manual Structure

Purpose of this manual

This manual is the maintenance manual for Electronic Viewfinder HDVF-C30WR. 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.

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 Broadcast and Professional equipment.
  Part number: 9-968-546-06

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, this unit 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.

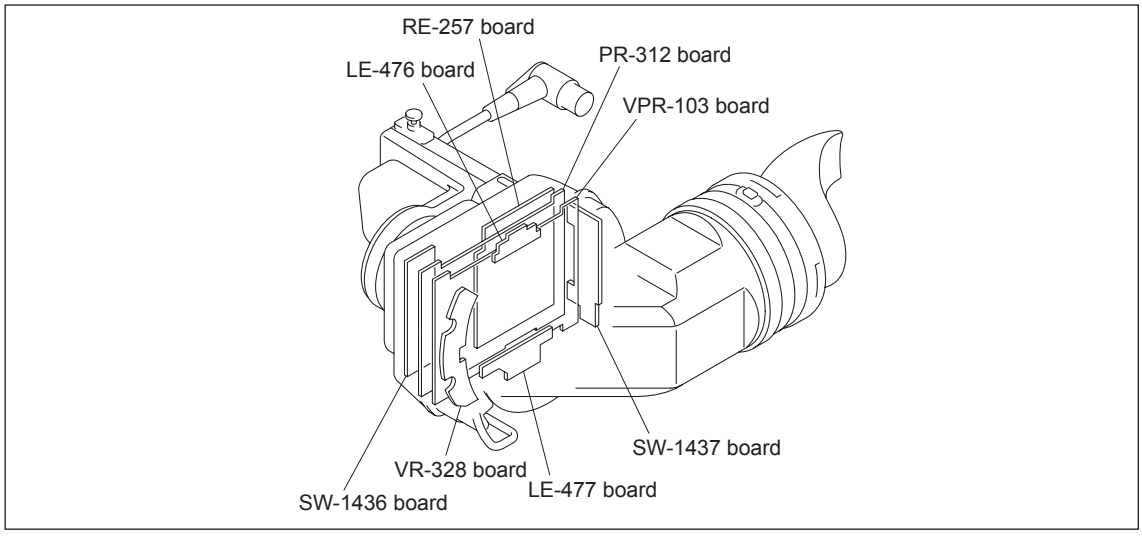
2. Serial number falls within the followings:
   HDW-750 : 70001 to 70557
   HDW-750 : 10001 to 10400, 20001 to 20003
   HDW-750P : 40001 to 40097
   HDW-750CE : 40001 to 40036
   HDW-730 : 10001 to 10053

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 SEL (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

1-4-1. PR-312 Board

Input signals Y, Pb, and Pr are passed through a buffer and pre-filter, converted from analog to digital in 74M 10 bits, and then input to FPGA. In FPGA, a video level is adjusted to the prescribed level using a multiplier. After that, the input signal is passed through a clamping circuit for the next process. Then, the resultant signal is sent to a circuit that controls a color-difference component when gray scales are added on both sides of a screen. (Black & White mode and color peaking) The signal is then controlled in brightness and converted into RGB using a matrix circuit. Lastly, an RGB 8-bit 37M output signal is sent to the VPR-103 board through MAG control (screen expansion). Each mode switching from the SW-1436 and SW-1437 boards is controlled by FPGA on the PR-312 board, and an internal digital signal is controlled by the level signal, from the VR-328 board, converted from analog to digital on the PR-312 board (ex. bright level). The PR-312 board mounts S1, S2, and S3. S1 is used for the same external mode switching (opened to users) as for HDVF-C30W. S2 and S3 are used for factory adjustment.

1-4-2. VPR-103 Board

The RGB 8-bit 37M signal from the PR-312 board is color-converted, gamma-converted, panel-corrected by IC101, and output to an LCD module. Moreover, it has a function that saves conversion and correction functions and outputs them directly to a panel. The RGB 8-bit 37M signal from the PR-312 board is once read into CPLD. The CPLD functions as a signal selector and controls whether to send the signal to IC101 (color conversion, gamma conversion, and panel correction) in the next stage or send them directly to the LCD module. When the RGB 8-bit 37M signal is sent to IC101, higher-precision reproducibility can be obtained by performing each conversion or correction for a panel in IC101. After that, the signal is passed through CPLD again and sent to the LCD module. The VPR-103 board also mounts a backlight driver that changes the voltage of LCD backlight and adjusts the contrast.

1-4-3. RE-257 Board

The RE-257 board consists of five switching regulators of analog and digital signal processing voltages (1.2 V, 1.8 V, 2.5 V, 3.2 V, and -7 V). The switching regulators have a short-circuit detection protection function, respectively. They convert the UNREG voltages from a camera into the voltages above and detect the UNREG voltages. The switching regulators also have a protection function during generation of low and high voltages.

1-4-4. VR-328 Board

There are two external and internal volume controls for control of brightness, contrast, and peaking. The VR-328 board mounts a function that switches the volume controls using a SEL (SEL1/SEL2 selector) switch and a tally lamp drive circuit. It also mounts a selector switch for reversing the right and left of a display screen. The selector switch operates in linkage with the installation of a VF tube.

1-4-5. SW-1436 Board

The SW-1436 board mounts a selector switch of tally, zebra, marker, B&W, and MAG functions. The obtained information is sent to the PR-312 board.

1-4-6. SW-1437 Board

The SW-1437 board consists of eight selector switches and one push-button switch. The assignable function can be turned on and off by using the four modes (including OFF) selected using two of the eight selector switches jointly with the push-button switch. Six types of fixed modes can be selected using the remaining six selector switches. Like the SW-1436 board, this control information is sent to the PR-312 board.

1-4-7. LE-476 Board

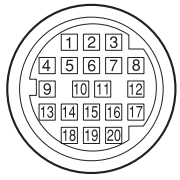
The LE-476 board is an LED-mounted board on the panel's upside for display the state. The board mounts three types of LEDs: G-TALLY, R-TALLY, and BATT-TALLY.

1-4-8. LE-477 Board

The LE-477 board is an LED-mounted board on the panel's lower side for display the state. The board mounts five types of LEDs: !, MAG, R-TALLY, for adjustment, and for VTR-save .

1-5. Input and Output Signals of Connectors

VF (20P MALE)

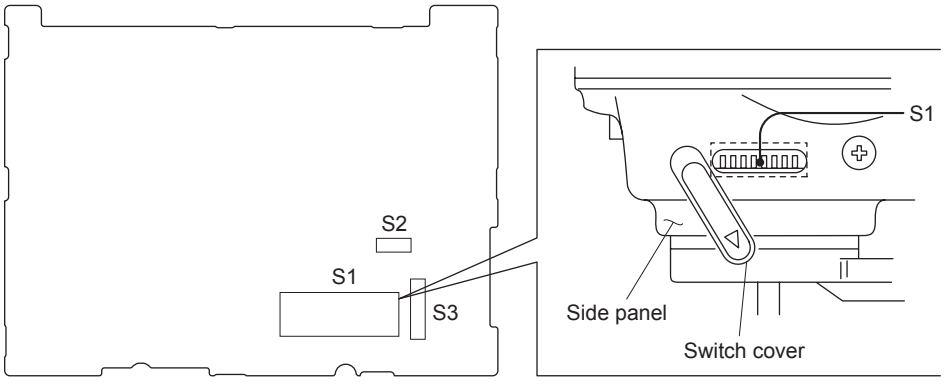


(EXTERNAL VIEW)

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-312 Board



(A side)

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.	
S1-2	Selects the function of the [B&W] button on the front panel. OFF: Priority given to B&W display. ON: Priority given to grayscale display.	
S1-3	Selects whether the PEAKING variable resistor (RV2/VR-328 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 [SEL] (SEL1/SEL2 selector) switch on the side panel. OFF: Work together with the [SEL] (SEL1/SEL2 selector) 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	
	[SEL] switch		[MAG] button	
	SEL1	SEL2	ON (Magnified display)	OFF (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)	

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.	
S1-5	Enable the color-peaking function by default	

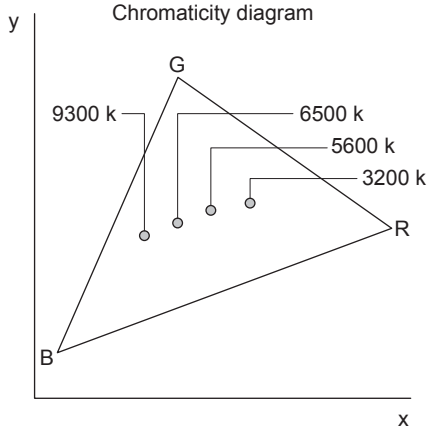
(Continued to next page)

(Continued from previous page)

Ref. No.	Description	Factory setting
S1-6, 7	Adjust color temperature.	ON (Upper side) / All OFF / 1 2 3 4 5 6 7 8 / OFF (Lower side)

S1-6	S1-7	Color temperature
OFF	OFF	6500 K
ON	OFF	5600 K
OFF	ON	3200 K (for test)
ON	ON	9300 K

Chromaticity diagram



S1-8	Not used. (Usually OFF)	

S2 Switch

Ref. No.	Description	Factory setting
S2-1	ON: Displays only peaking signal.	ON / 1 2 3 4
S2-2	ON: Crispens in the peaking signal. (For dark place)	
S2-3	ON: Inverts the direction of display from right to left or up and down.	
S2-4	ON: Crispens in the peaking signal. (According to luminance transition)	

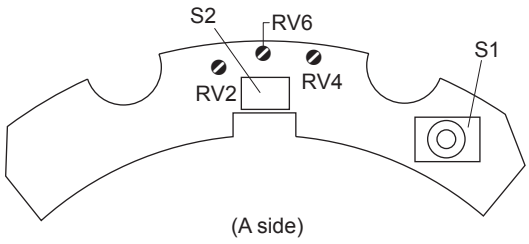
S3 Switch

Ref. No.	Description	Factory setting
S3	Corrects the chromaticity of a panel's standard color temperature in width of about 0.01 with the chromaticity of S3-7 in a chromaticity diagram as standard. (For fine-adjustment at factory.)	Only one of 1 to 7 is set to ON. / ON (Upper side) / 1 2 3 4 5 6 7 8 / OFF (Lower side)
S3-1	Corrects x and y from the standard. Correction quantity: x + 0.01, y + 0.01	
S3-2	Corrects x and y from the standard. Correction quantity: x – 0.01, y – 0.01	
S3-3	Corrects y from the standard. Correction quantity: +0.01	
S3-4	Corrects y from the standard. Correction quantity: –0.01	
S3-5	Corrects x from the standard. Correction quantity: +0.01	
S3-6	Corrects x from the standard. Correction quantity: –0.01	
S3-7	Standard	
S3-8	Not correct the chromaticity.	

Note

- Only one of S3-1 to S3-8 must be set to ON. Do not set two or more switches to ON or set all switches to OFF.
- Set S3-7 to ON when replacing the LCD module.

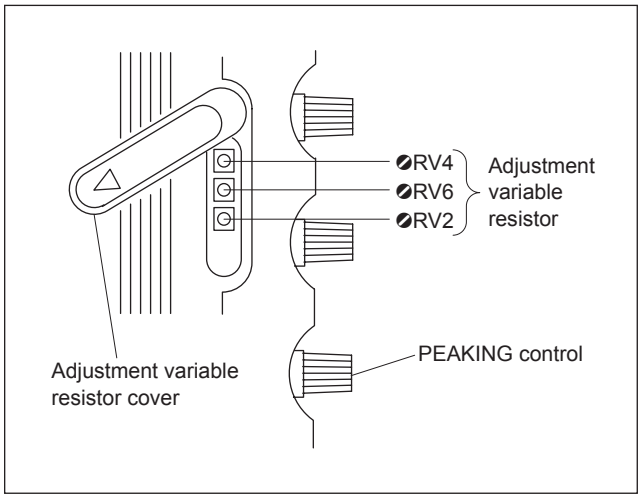
1-6-2. VR-208 Board



Switch

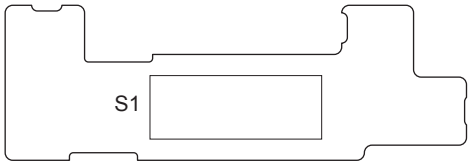
Ref. No.	Description
S1	SEL (SEL1/SEL2 selector) switch (on side panel)
S2	Selects direction of the display scanning from the right or the left. When the viewfinder tube is installed, this switch is set to ON so that the scanning in the reverse direction is obtained.

Variable Resistor



Ref. No.	Description	
RV4	BRIGHTNESS adjustment	They can be adjusted when the SEL (SEL1/SEL2 selector) switch (on the side panel) is set to the SEL2 position.
RV6	CONTRAST adjustment	
RV2	PEAKING adjustment	This adjustment is enabled by setting of the SEL (SEL1/SEL2 selector) switch or that of the MAG button. For details, refer to Section 1-6-1, Switch S1-3.

1-6-3. SW-1437 Board



(B side)

S1 Switch

Ref. No.	Description			Factory setting
S1-1f2	Sets the “assign” operation.			All OFF 
	S2-1	**S2-2**	**Assignment function**	
	OFF	OFF	Non-operation	
	ON	OFF	Analog adjustment trigger	
	OFF	ON	S-log gamma return ON/OFF	
	ON	ON	Color peaking ON/OFF	
	Analog adjustment trigger When a camera output analog level is not stabilized for each camera the high luminance becomes easy to clip or an accurate level cannot be displayed. The analog adjustment trigger automatically adjusts this trouble on the viewfinder (VF) sides. Color peaking The color peaking reproduces the luminance peaking and color of the portion where peaking on a black and white display screen, instead of the ordinary peaking of only luminance are applied .			
S1-3	ON: Natural peaking (Sense of resolution prioritized) OFF: Ordinary peaking (Equal to HDVF-C30W.) Natural peaking In this system, the peaking in the vertical direction is used, while noise clip is not severely applied. A sense of noise slightly becomes strong, and a sense of emphasis becomes weak. However, a sense of fine resolution can be obtained.			
S1-4	Sets the detection width during level display (gray scale) operation. ON: ±2 % OFF: ±5 %			
S1-5	Sets the display color during level display (gray scale) operation. ON: Yellow OFF: Original image color			
S1-6	Reverses the vertical and horizontal directions of a screen. ON: Reversal OFF: Ordinary			
S1-7	Displays the brightness over level. ON: Non-display OFF: Display			
S1-8	Power saving mode ON: Energy saving mode OFF: Standard **Note** The functions below do not operate in the energy saving mode. • Natural peaking • Uniformity correction • S-log gamma return • Panel gamma correction • Color temperature conversion using lower-surface setting switches (S1-6 and S1-7 on the PR-312 board) • Color area correction			

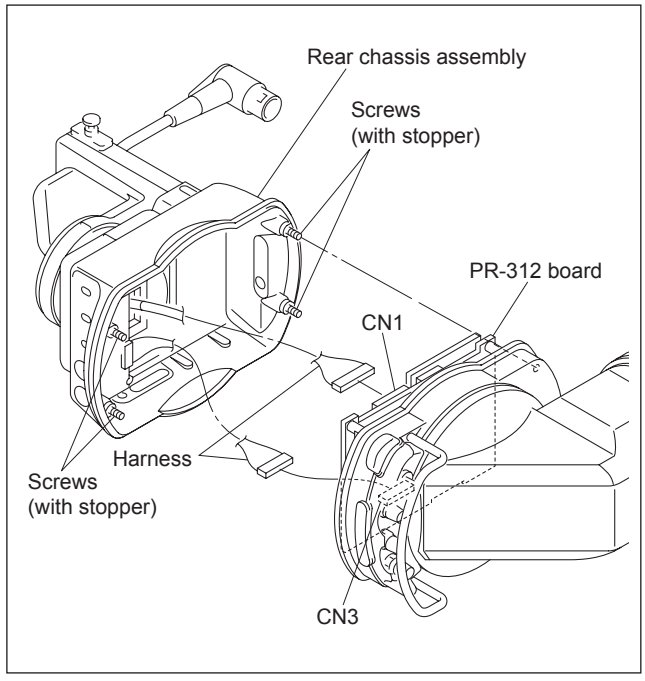
1-7. Replacing the Main Parts

1-7-1. Replacing the LCD Module

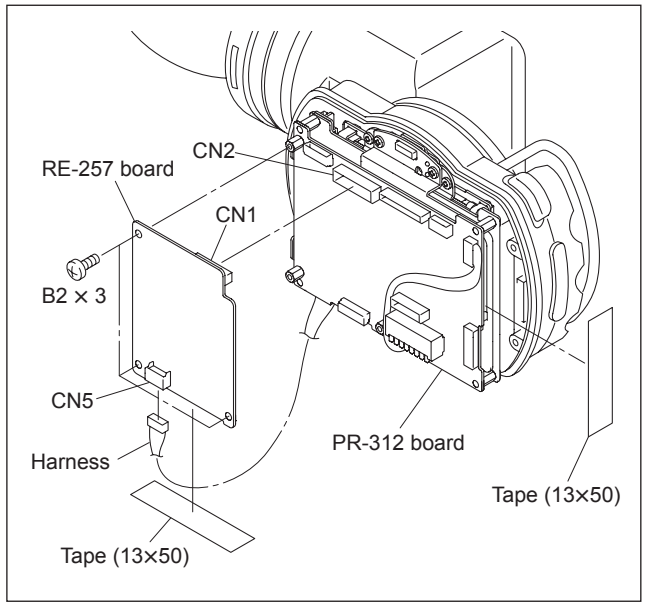
Note

- When replacing the LCD module, replace the two tapes (13 × 50) together.
- Replacement of the LCD module backlight:
  The backlight of the LCD module has the life of about 12,000 hours as far as the set color temperature remains constant.
  Replace the backlight when luminance of the backlight decreases to 150 cd/m^2 or less as a guideline.
  Replacement of the backlight only is not possible. Replace the entire LCD module.

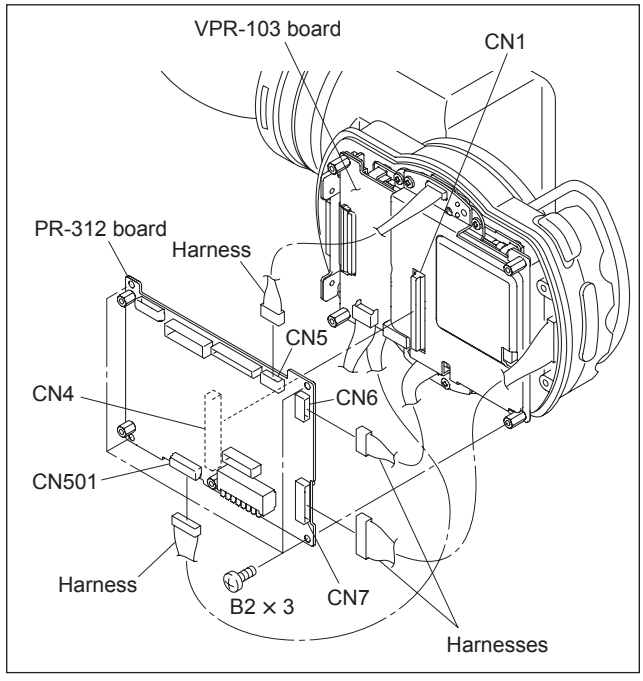
1. Loosen the four screws (with stopper) securing the rear chassis and remove the rear chassis.
2. Disconnect the harness from the connector (CN3) on the PR-312 board.
3. Disconnect the harness from the connector (CN1) on the PR-312 board.
4. Remove the rear chassis assembly.



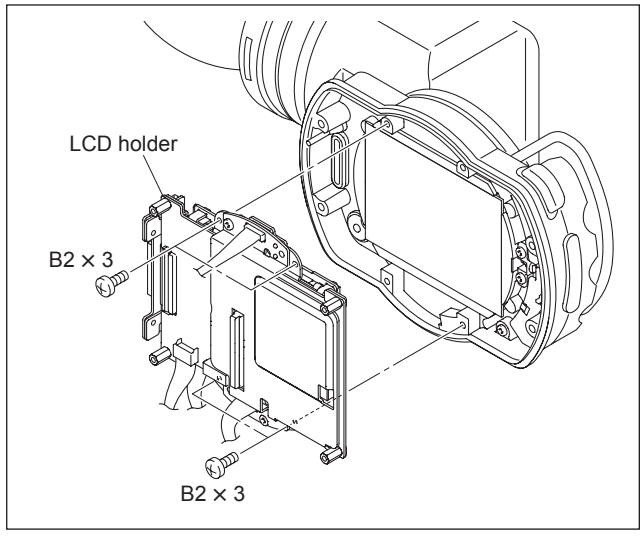
5. Peel off the two tapes (13 × 50).
6. Disconnect the harness from the connector (CN5) on the RE-257 board.
7. Remove the three screws.
8. Disconnect the connector (CN1) on the RE-257 board from the connector (CN2) on the PR-312 board.



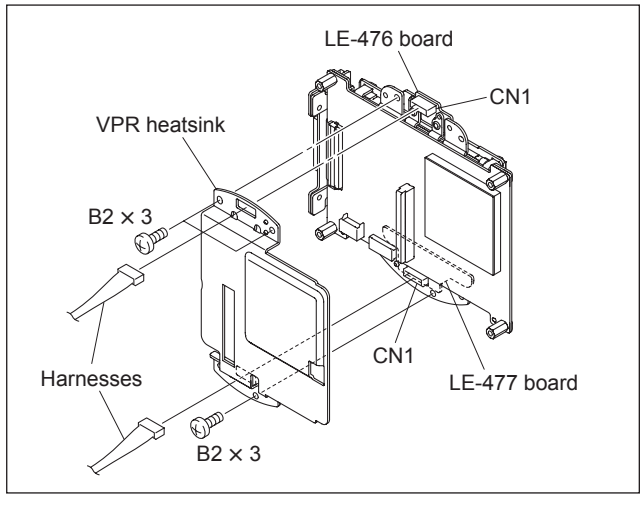
9. Disconnect the four harnesses from the connectors (CN5, CN6, CN7, CN501) on the PR-312 board.
10. Remove the four screws.
11. Disconnect the connector (CN4) on the PR-312 board from the connector (CN1) on the VPR-103 board.



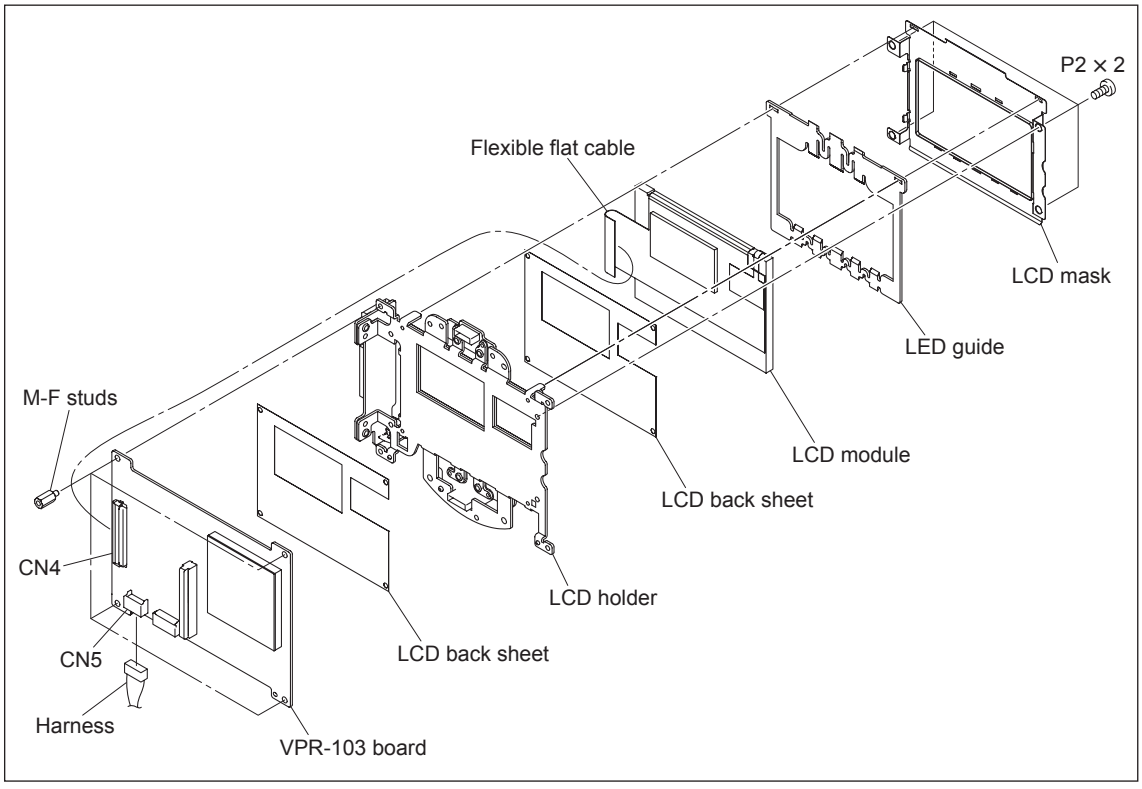
12. Remove the four screws, then remove the LCD holder.



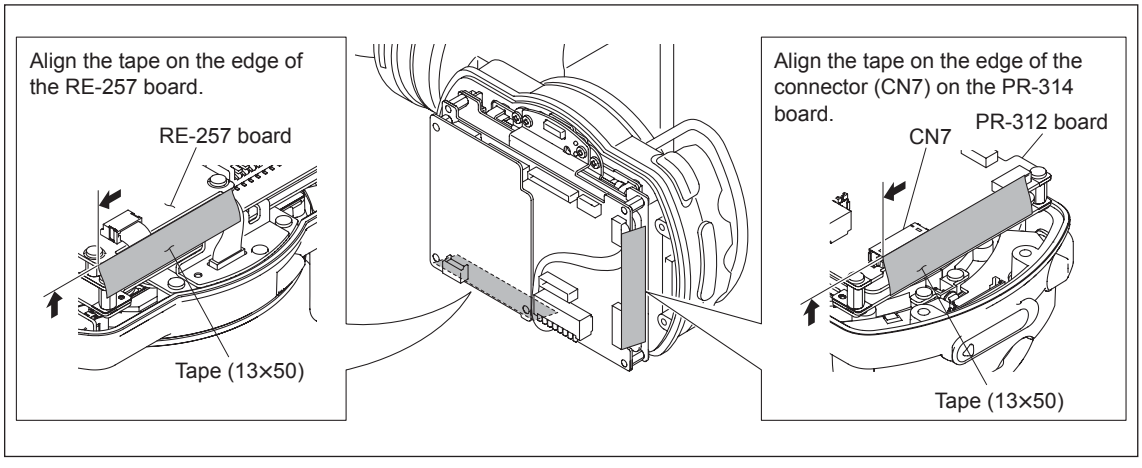
13. Disconnect the harness from the connector (CN1) on the LE-476 board.
14. Disconnect the harness from the connector (CN1) on the LE-477 board.
15. Remove the three screws, then remove the VPR heatsink.



16. Remove the four M-F studs.
17. Disconnect the harness and flexible flat cable from the connector (CN4 and CN5) on the VPR-103 board, then remove the VPR-103 board and LCD back sheet.
18. Remove the four screws, then remove the LCD mask, LED guide, LCD module and LCD back sheet from the LCD holder.



19. Install the new LCD module.
    Precaution for installation
    When installing the new LCD module, be careful not to attach dust or fingerprint on the display area of the LCD module.
20. Perform the setting of the switches S1 and S2 of the PR-312 board. (Refer to Section 1-8-1.)
21. Install the removed parts by reversing the steps 1 to 19 of removal.
    Precaution for installation
    - Be sure to insert the connectors to the circuit board securely for sure connection of the connectors.
    - Apply the tapes (13 × 50) to the portion as shown in the figure.



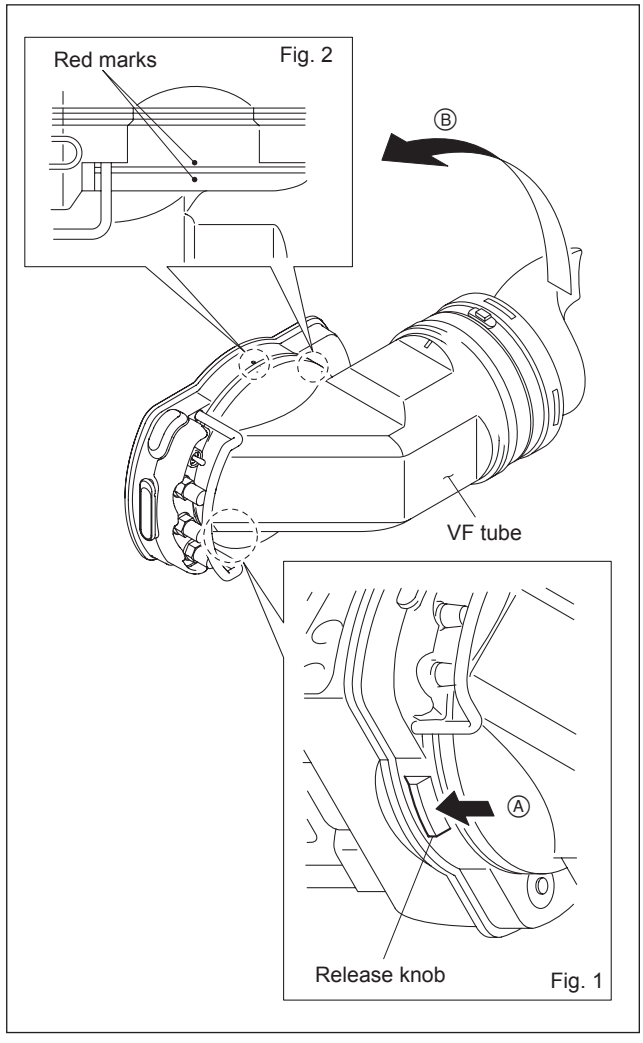
1-7-2. Replacing the Protection Glass and Glass Cushion

Parts to be prepared in addition to the protection glass:
• Glass cushion, 1 piece : 3-776-618-xx

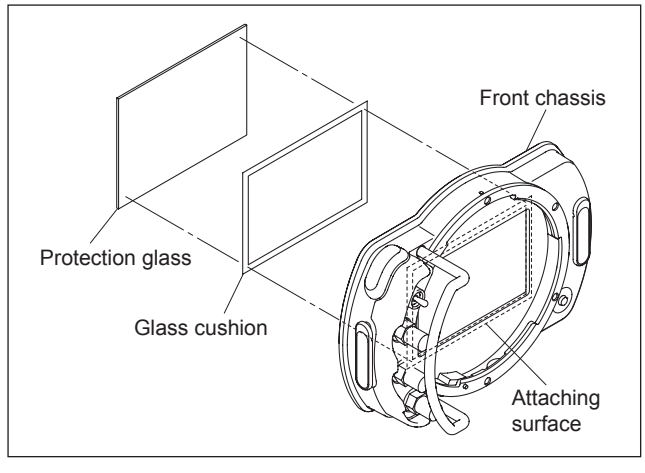
Removal

1. Push the release knob in the direction of the arrow Ⓐ to release the lock and remove the VF tube by rotating it in the direction of the arrow Ⓑ.

2. Remove the viewfinder main unit and then remove the LCD module.
(Perform steps 1 to 12 of "1-7-1. Replacing the LCD module.")



3. Peel off the protection glass from glass cushion to remove it.
4. Peel off the glass cushion from the front chassis and wipe the attaching surface with alcohol.



Installation

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

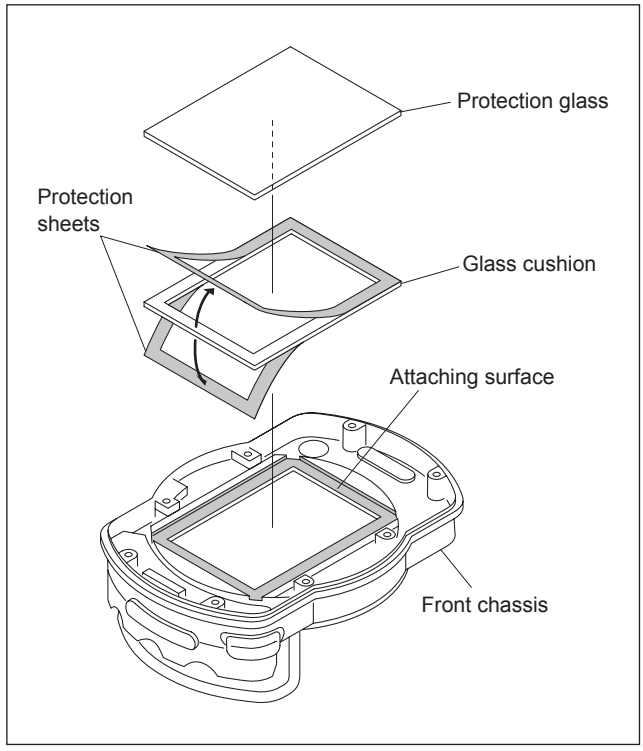
   Precaution for attaching the glass cushion

   - 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.

6. Peel off the protection sheet form the surface of the glass cushion attached, and install the new protection glass.
7. To install, reverse the removal procedure.

   Precaution for installation

   Align the red marks when installing the VF tube. (Fig. 2 in Removal)



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

The two different types of anti-glare sheet are used in this unit.
Replace the desired type of anti-glare sheet as necessitated.

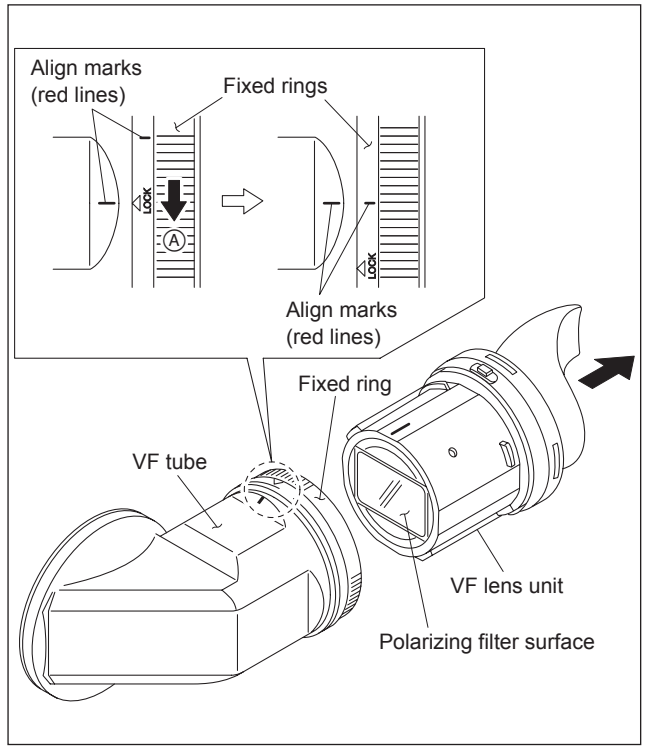
Required part

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

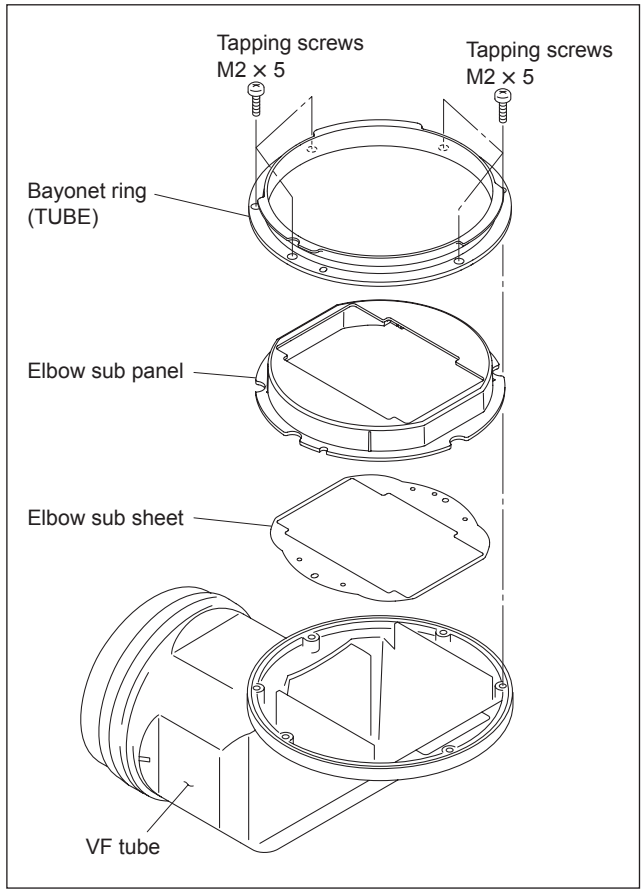
1. Push the release knob to release the lock and remove the VF tube. (Refer to Section 1-7-2, step 1.)
2. Rotate the fixed ring fully in the direction of the arrow Ⓐ and align the alignment marks (red lines) of the fixed ring with that of the VF tube. Then remove the VF lens unit.

   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.



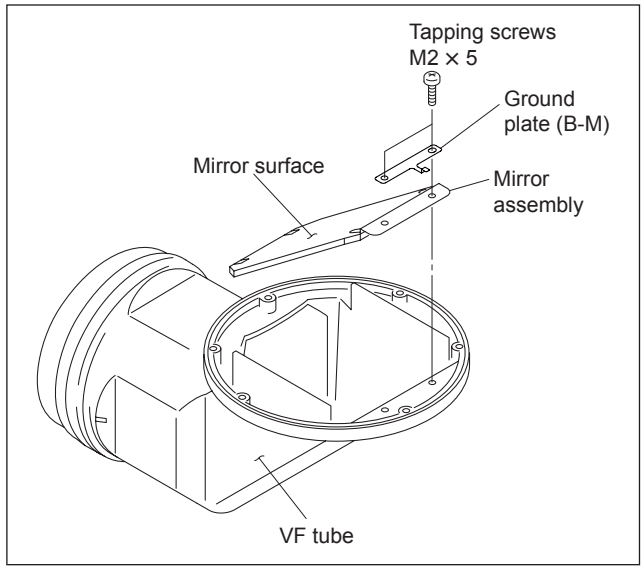
3. Remove the six screws and remove the bayonet ring (TUBE), elbow sub panel and elbow sub sheet from the VF tube.



4. Remove the two screws and remove the ground plate (B-M) and mirror assembly from the VF tube.

Note

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

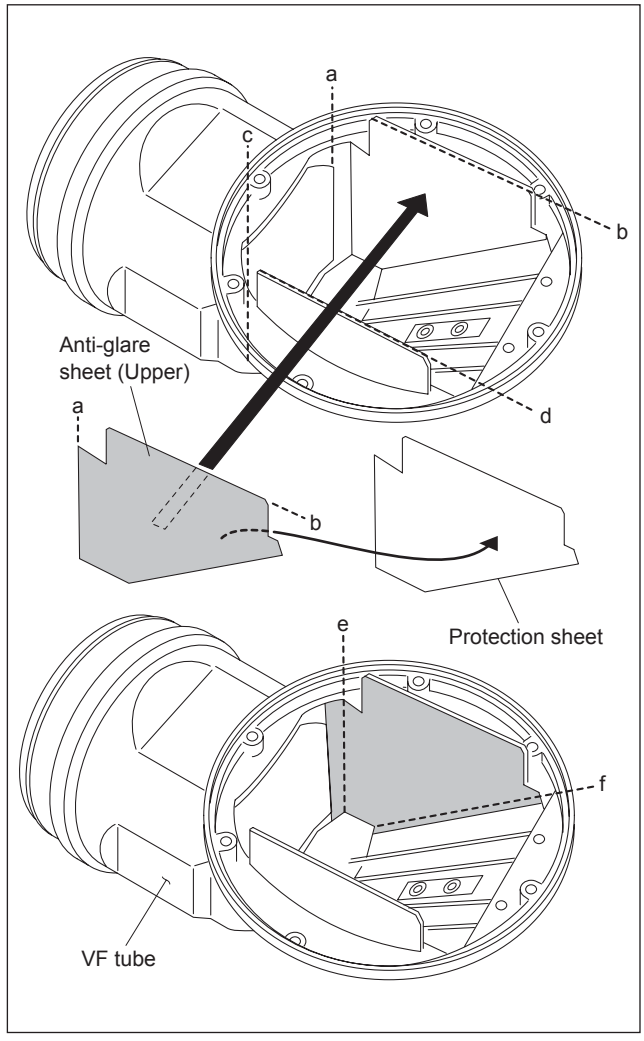


5. Peel off the anti-glare sheet (Upper) and (Lower) from the VF tube.
6. Peel off the protection sheet of the new anti-glare sheet (Upper). Align the new anti-glare sheet with the sides “a” and “b” of the VF tube. Attach the new anti-glare sheet (Upper) to the VF tube.

   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 VF tube 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.

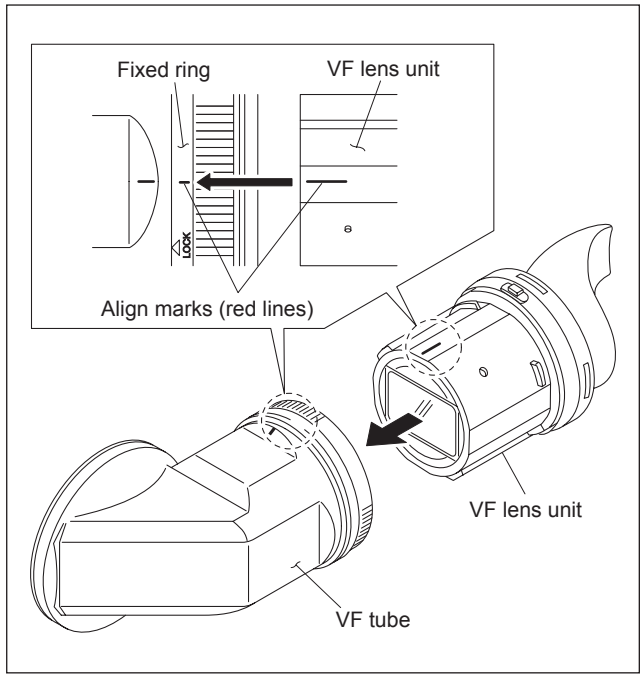
7. Similarly, align the anti-glare sheet (Lower) with the sides “c” and “d” and attach it to the VF tube.



8. To install, reverse the removal procedure.

   Precaution for installation

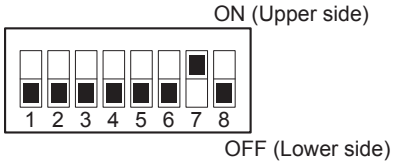
   Align the alignment mark (red) of the VF lens unit with that of the alignment mark (red) of the fixed ring when installing the VF lens unit, and insert the VF lens unit.



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

1-8-1. When the LCD Module is Replaced

Return the setting of the switch S3-7 on the PR-312 board to ON.
(Other numbered switches on S3 are OFF.)



1-8-2. When the PR-312 Board is Replaced

Set the switches S1 and S2 settings to the setting of the former board.

1-9. Voltage Check of the RE-257 Board

Equipment required

- Camera

Voltage check points

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

TP No.	TP name	Voltage check
TP1	+2.5 V	DC 2.25 ±0.10 V
TP2	+1.8 V	DC 1.8 ±0.1 V
TP3	+3.2 V	DC 3.2 ±0.1 V
TP4	–7 V	DC –7.0 ±0.1 V
TP5	+1.2 V	DC +1.2 ±0.1 V

1-10. How to Measure Luminance

Equipment required

- Camera

Fixtures

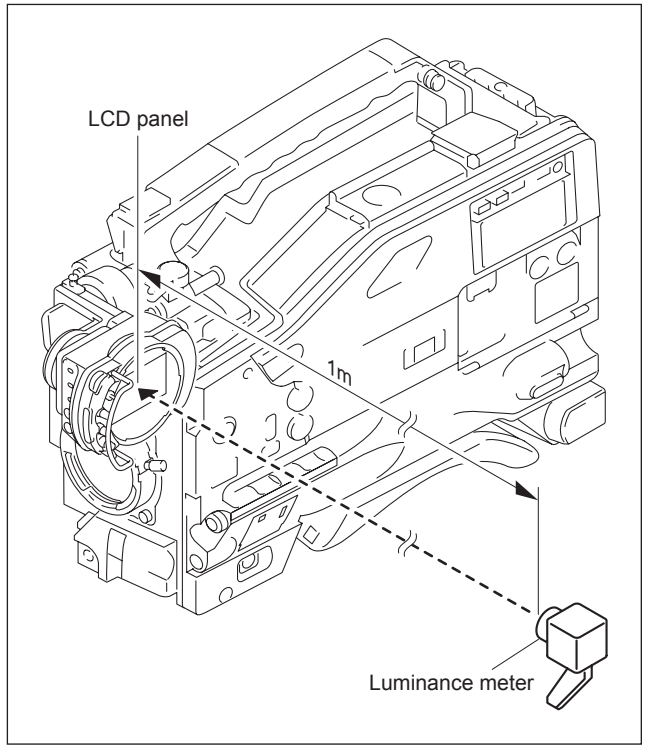
- Pattern box PTB-500
  Sony part No. : J-6029-140-B
- Luminance Meter
  Konica Minolta Model LS-100 or equivalent (that must have already been calibrated before)

Procedure

1. Remove the VF tube by pushing the release knob. (Refer to Section 1-7-2, step 1.)
2. Install the front chassis of the HDVF-C30WR 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 module of the HDVF-C30WR.



1-11. 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-312 board or PR-103 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	EPR connector (Ref No./board name)	EPR type	Project file No.
IC500/PR-312	CN500/PR-312	EPR2	E_000_004_40_xx
IC11/VPR-103	CN3/VPR-103	EPR	E_000_004_41_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-C30WR.
- Connecting cable (Sony part number : 1-827-086-23)

Data write procedure

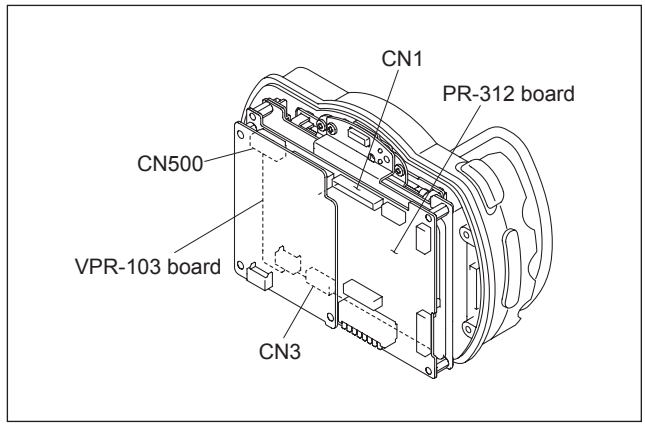
Data write procedure in the PLD is outlined below.
For details of data write procedure, refer to “Download Tool Operating Instruction for Device Programming” which is available in the same site where the PLD Download Tool software is available.

1. Prepare the Project file.
   Note
   Download the Project file from the Sony Database Server.

2. Push the release knob and remove the VF tube. (Refer to Section 1-7-2, step 1.)

3. Perform steps 1 to 4 of “1-7-1. Replacing the LCD Module.”
4. Connect the camera to the connector (CN1) on the PR-312 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 (CN500/PR-312 board or CN3/VPR-103 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 PLD Download Tool software.
8. When the programming completes correctly (without an error message), restart the device.



1-12. 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.

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.

1-13. Lead-free Solder

Boards requiring use of lead-free 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 lead-free solder for the printed circuit board printed with the lead free mark.
- The lead-free solder melts at a temperature about 40 ˚C 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.

1-14. Recommended Replacement Parts

The following listed parts are recommended for replacement.

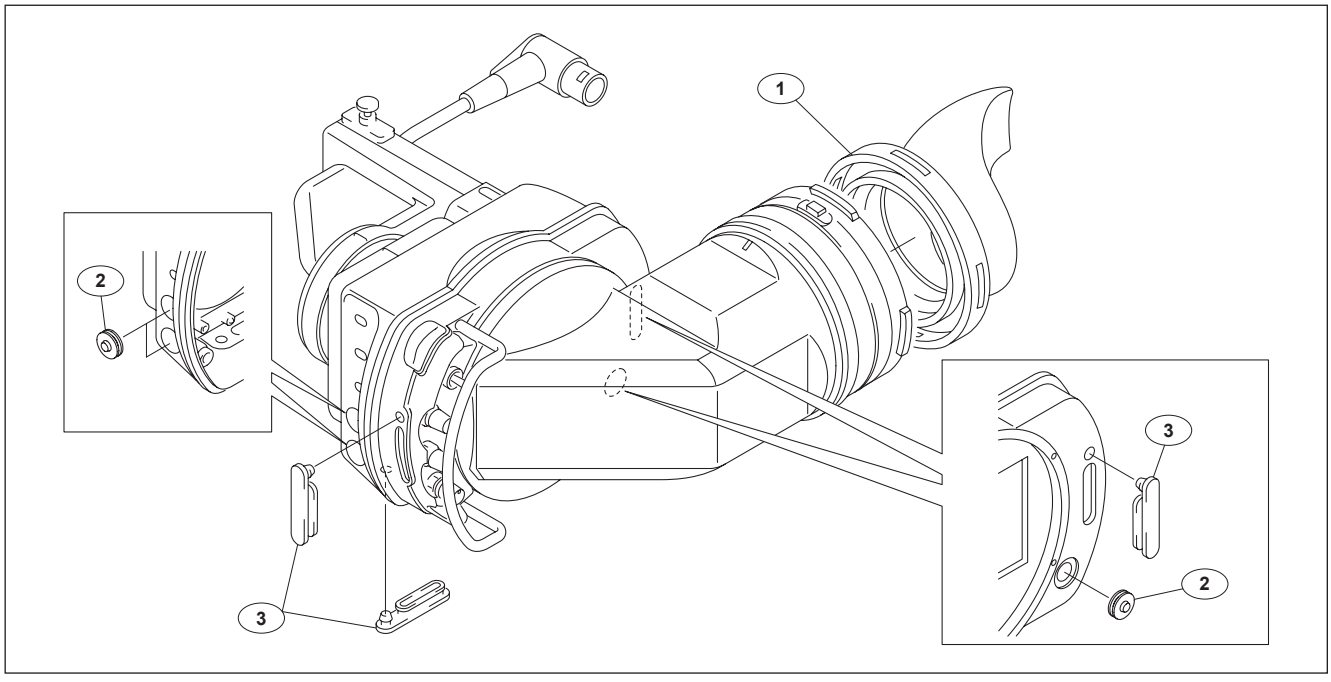
Rubber parts

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

Backlight

The backlight of the LCD module has the life of about 12,000 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 module.

No.	Part name	Sonny part number	Remarks
①	Eye cap	3-776-341-01	Rubber part
②	SW cover	3-676-244-03	Rubber part
③	Cap	3-776-614-01	Rubber part
–	LCD module	1-804-912-11	Refer to Section 1-7-1.

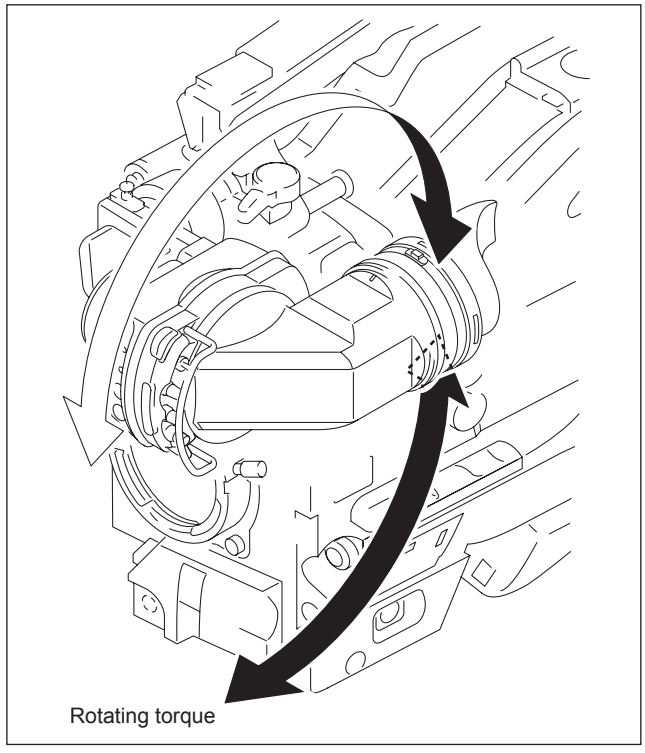


1-15. Viewfinder Rotating Torque Adjustment

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.

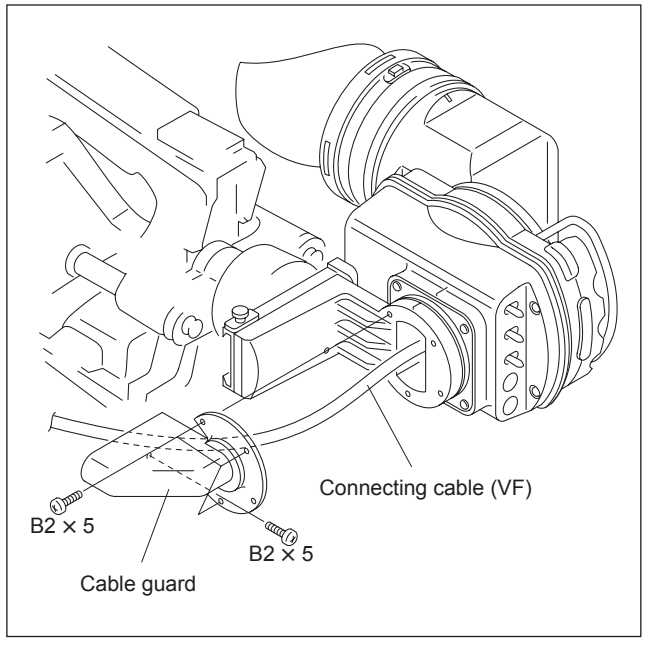
Fixtures

Hexagon wrench (d = 1.5 mm)



Adjustment Procedure

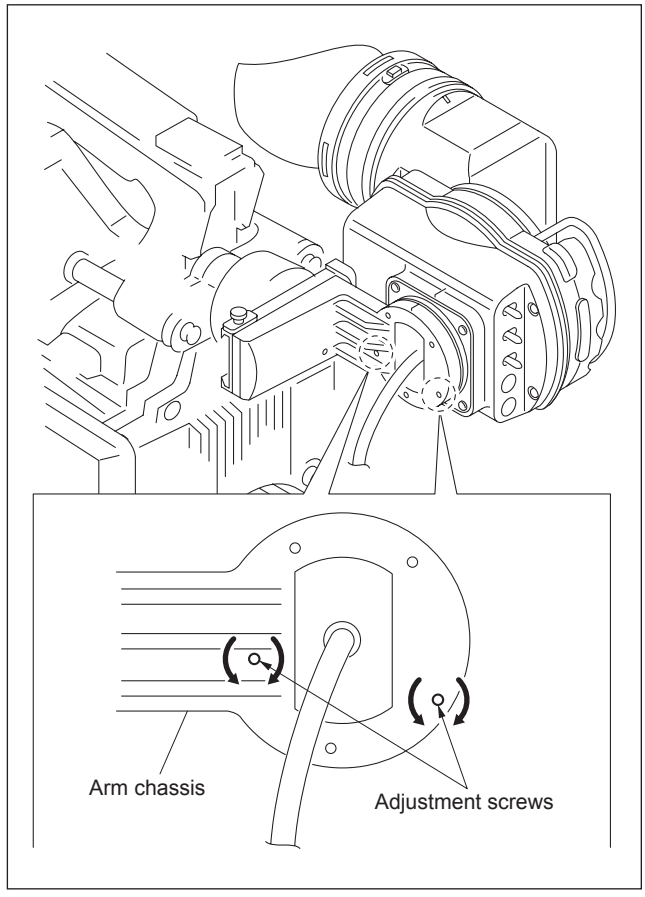
1. Remove the four screws and remove the cable guard.



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.



1-16. 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

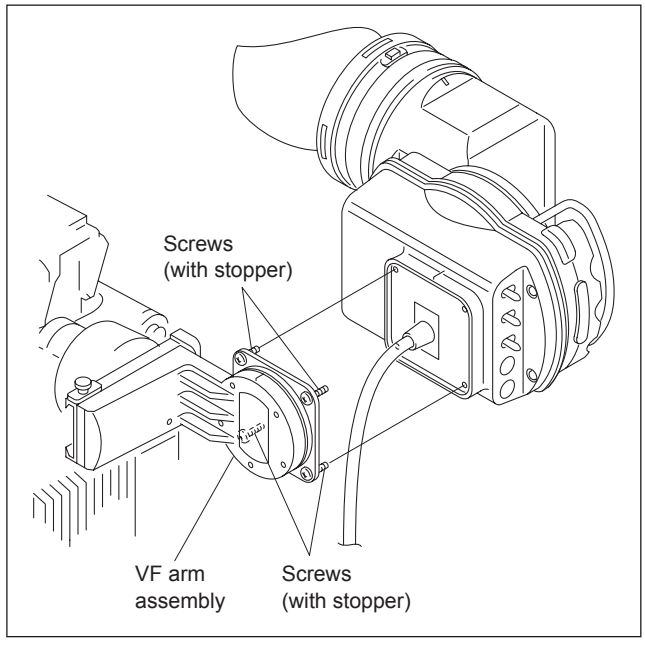
Sony grease (SGL-801): 7-651-000-11

Procedure

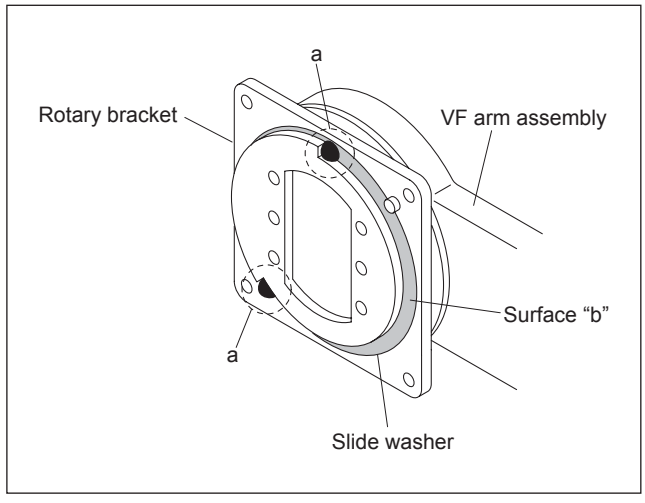
The following procedure presumes that the viewfinder is already attached on a camera.

1. Remove the four screws and remove the cable guard.
   (Refer to step 1 of Adjustment Procedure in Section 1-15.)

2. Disconnect the connecting cable (VF) from the camera.
3. Loosen the four screws (with stopper) of the VF arm assembly and remove the viewfinder.
   Release the connecting cable (VF) from the square hole of the VF arm assembly.



4. Apply Sony grease to the portion “a” (at the two locations) of the VF 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 surface “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.

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.

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。

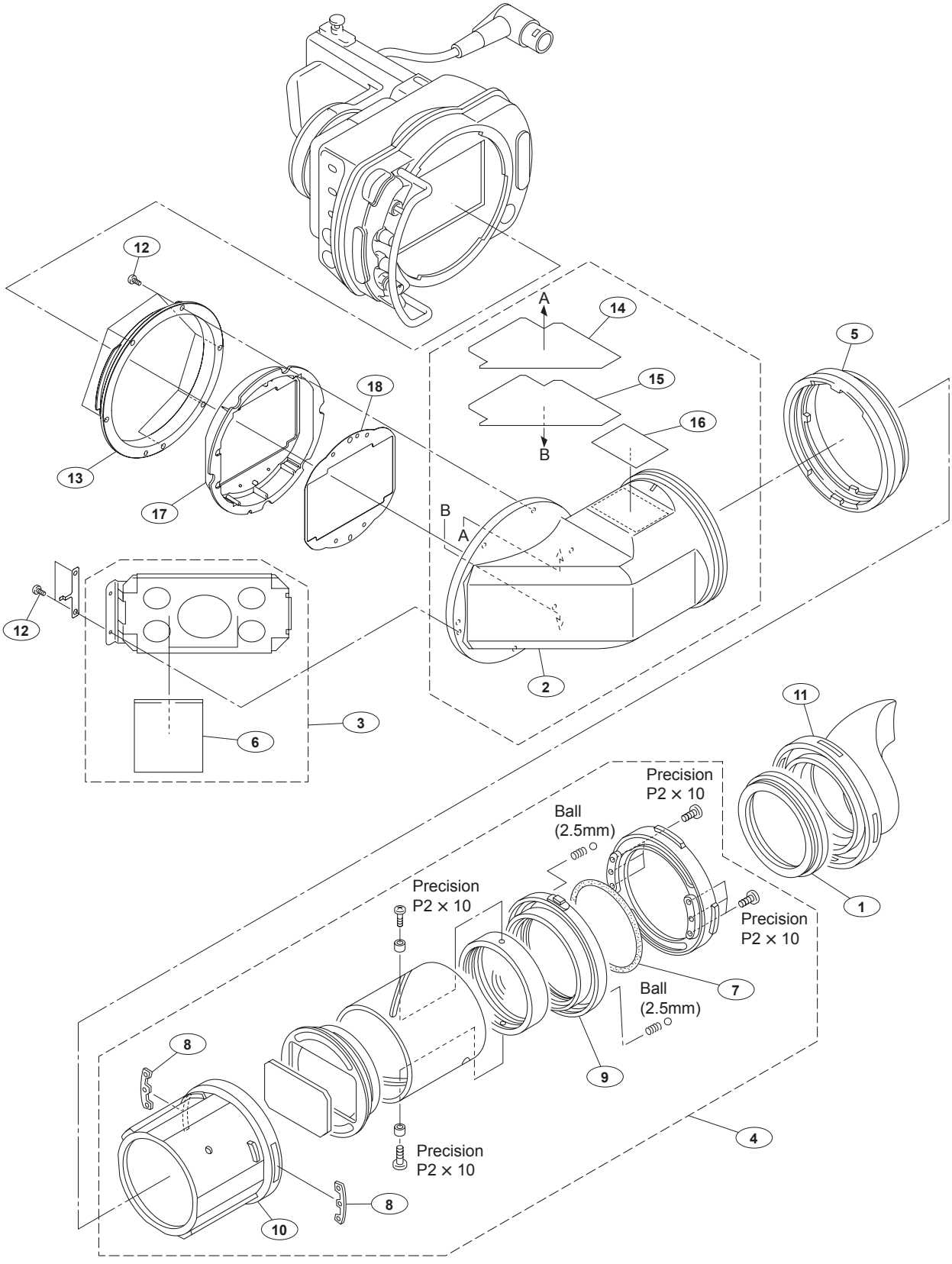
3. 部品の在庫

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，納期が長くなることがあります。

4. ハーネス

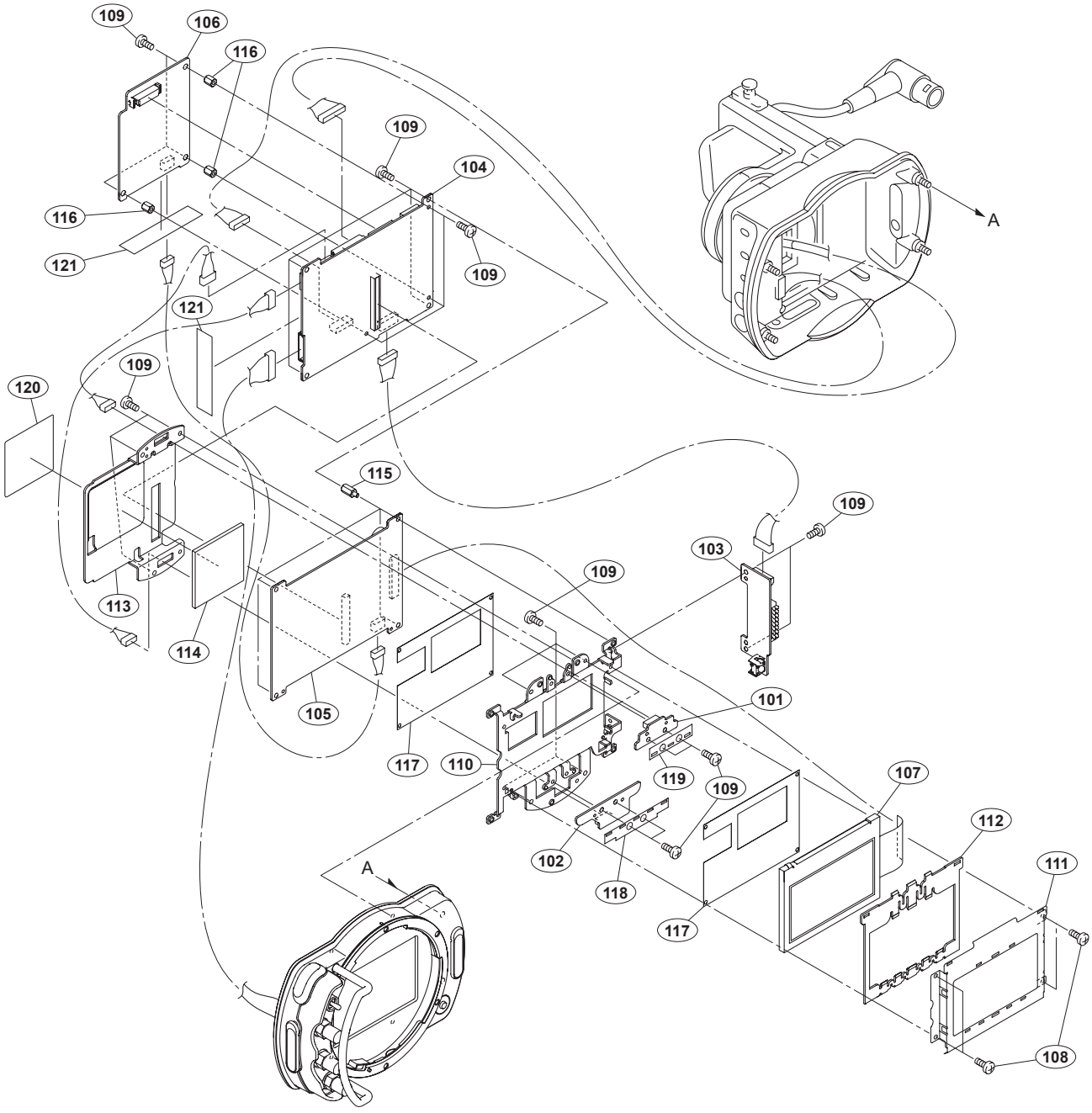
部品番号の記載されていないハーネスは，サービス部品として登録されていません。

2-2. Exploded Views

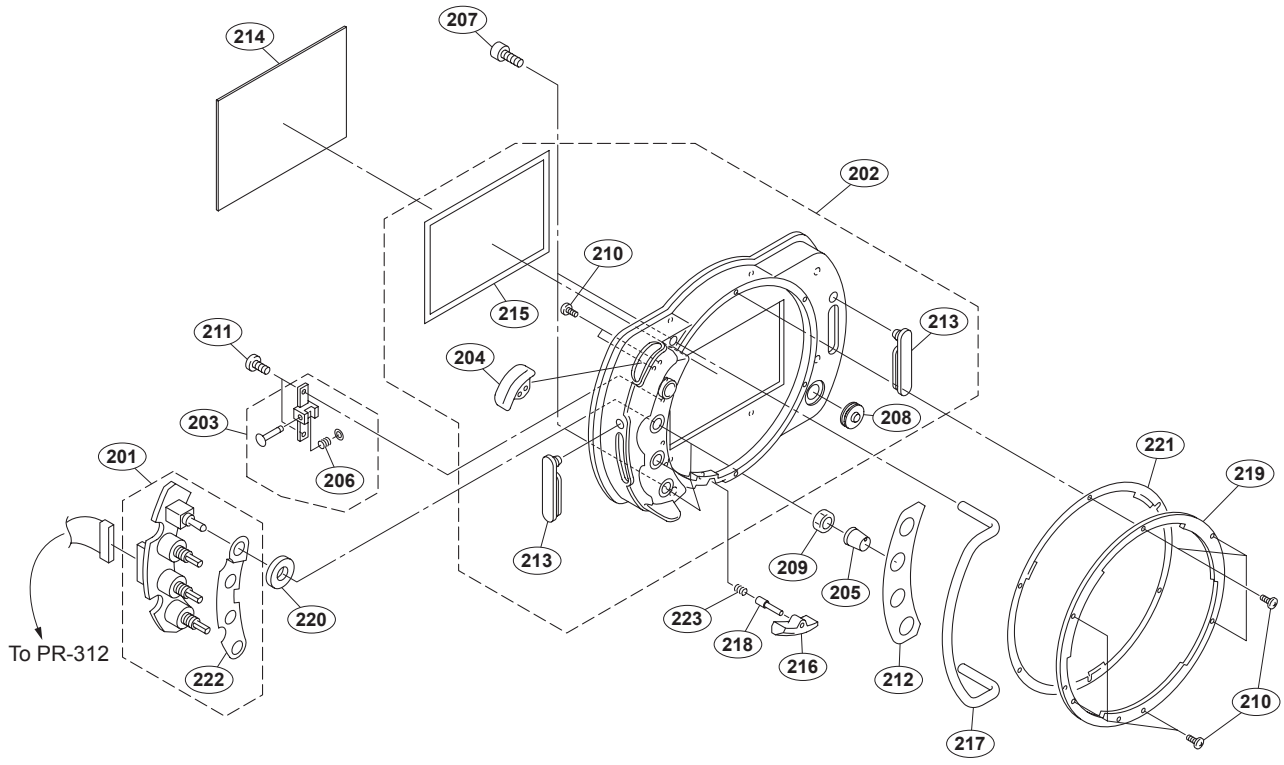


No.	Part No.	SP	Description
1	A-1708-457-A	s	FILTER ASSY,UV-IR CUT
2	X-2348-507-2	s	ASSY, VF TUBE
3	X-3608-590-2	s	ASSY,MIRROR
4	1-788-975-11	s	LENS UNIT, VF
5	3-692-136-03	s	FIXED RING
6	3-723-073-01	s	CUSHION, MIRROR
7	3-726-904-01	s	RING (MT), O
8	3-742-038-01	s	NUT (2), PLATE
9	3-742-053-02	s	RING
10	3-742-060-02	s	HOLDER, RING
11	3-776-341-01	s	EYE CUP
12	3-776-622-02	s	SCREW(M2),TAPPING
13	3-776-637-02	s	RING(TUBE),BAYONET
14	3-789-424-01	s	SHEET(UPPER),ANTI-GLARE
15	3-789-425-01	s	SHEET(LOWER),ANTI-GLARE
16	4-139-384-01	s	LABEL, SAULER LIGHT CAUTION
17	4-139-826-01	s	PANEL, ELBOW SUB
18	4-145-339-01	s	SHEET, ELBOW SUB
	7-627-553-78	s	SCREW,PRECISION +P 2X10
	7-671-158-01	s	BALL, STAINLESS (2.5 DIA)

Front Chassis 1

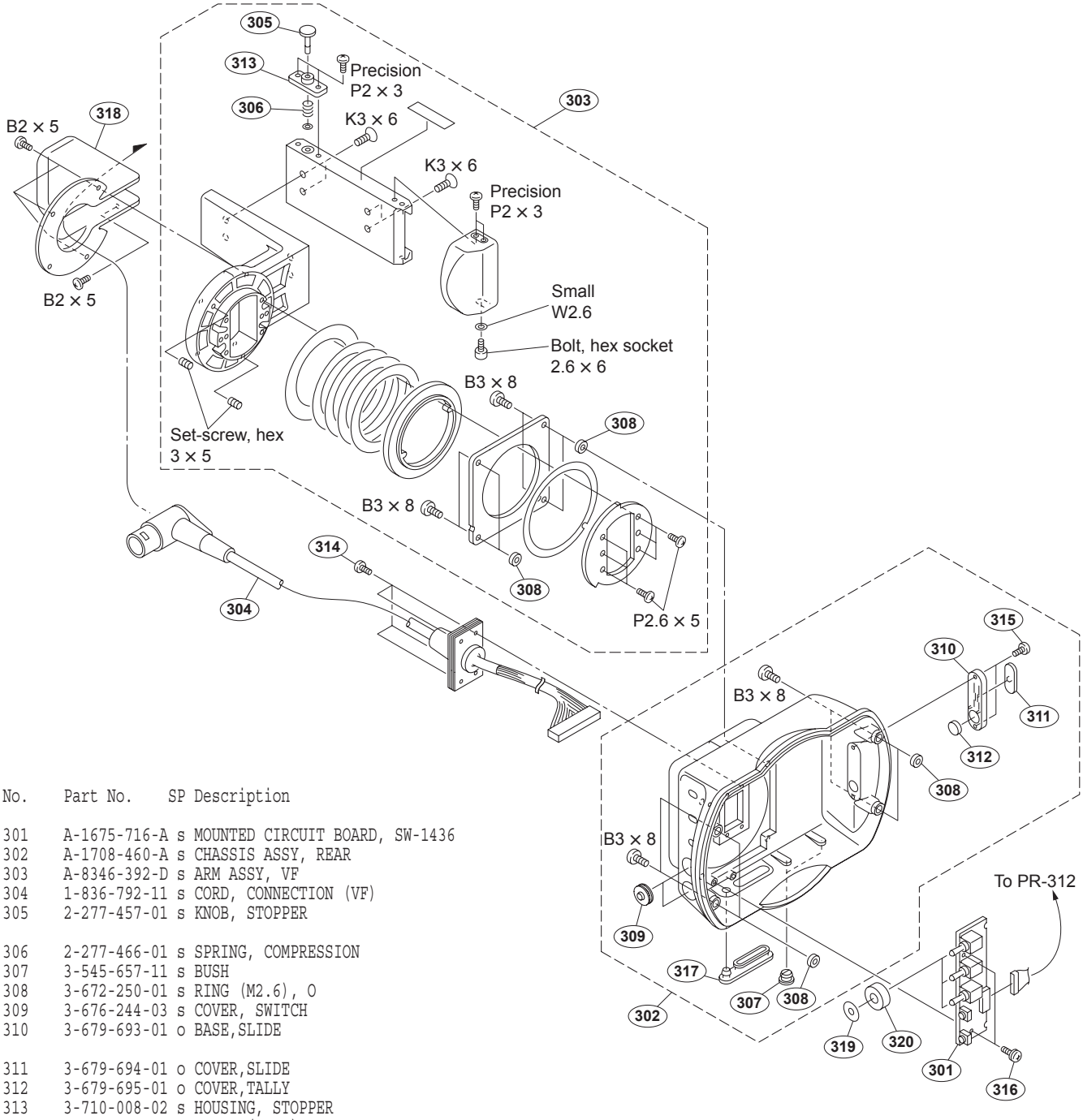


No.	Part No.	SP	Description
101	A-1675-714-A	s	MOUNTED CIRCUIT BOARD, LE-476
102	A-1675-715-A	s	MOUNTED CIRCUIT BOARD, LE-477
103	A-1675-717-A	s	MOUNTED CIRCUIT BOARD, SW-1437
104	A-1675-722-A	s	MOUNTED CIRCUIT BOARD, PR-312
105	A-1675-723-A	s	MOUNTED CIRCUIT BOARD, VPR-103
106	A-1675-724-A	s	MOUNTED CIRCUIT BOARD, RE-257
107	1-802-913-11	s	LCD MODULE
108	3-080-202-01	s	SCREW (M2), LOCK ACE, P2
109	3-729-076-01	s	SCREW (+B) (2X3)
110	4-139-822-02	s	HOLDER , LCD
111	4-139-823-02	s	MASK, LCD
112	4-139-824-02	s	GUIDE, LED
113	4-139-825-01	s	HEAT SINK, VPR
114	4-139-977-01	s	SEAL(ASIC), HEAT
115	4-139-978-01	s	M-F STUD M2X7
116	4-139-979-01	s	F-F STUD M2X5
117	4-140-521-02	s	SHEET, LCD BACK
118	4-144-672-01	s	MASK, 5-LED
119	4-144-673-01	s	MASK, 3-LED
120	4-144-674-01	s	SEAL (U), HEAT SINK
121	4-119-886-01	s	TAPE (13X50)



No.	Part No.	SP	Description
201	A-1675-718-A	s	MOUNTED CIRCUIT BOARD, VR-328
202	A-1708-461-A	s	CHASSIS ASSY, FRONT
203	A-8279-815-A	s	ASSY,SPRING
204	X-3608-579-1	s	ASSY,COVER TALLY
205	X-3608-581-1	s	VOLUME KNOB ASSY
206	2-277-466-01	s	SPRING, COMPRESSION
207	3-185-531-01	s	BOLT M2X8, W HEXAGON
208	3-676-244-03	s	COVER, SWITCH
209	3-685-104-03	s	NUT (M6), CONTROL
210	3-729-061-02	s	SCREW (M2) (TYPE 1)
211	3-729-076-01	s	SCREW (+B) (2X3)
212	3-776-605-02	s	LABEL,VF
213	3-776-614-01	s	CAP
214	3-776-617-01	s	GLASS,PROTECTION
215	3-776-618-02	s	GLASS,CUSHION
216	3-776-619-02	s	KNOB,RELEASE
217	3-776-624-02	s	GUARD,BAR
218	3-776-628-01	s	PIN
219	3-776-629-01	s	RING(CHASSIS),BAYONET
220	3-776-630-01	s	CUSHION(VR),DROP PROTECTION
221	3-776-636-03	s	SPRING,BAYONET
222	4-139-821-01	s	PLATE, VR GROUND
223	4-139-980-01	s	SPRING, COMPRESSION

Rear Chassis



No.	Part No.	SP	Description
301	A-1675-716-A	s	MOUNTED CIRCUIT BOARD, SW-1436
302	A-1708-460-A	s	CHASSIS ASSY, REAR
303	A-8346-392-D	s	ARM ASSY, VF
304	1-836-792-11	s	CORD, CONNECTION (VF)
305	2-277-457-01	s	KNOB, STOPPER
306	2-277-466-01	s	SPRING, COMPRESSION
307	3-545-657-11	s	BUSH
308	3-672-250-01	s	RING (M2.6), O
309	3-676-244-03	s	COVER, SWITCH
310	3-679-693-01	o	BASE,SLIDE
311	3-679-694-01	o	COVER,SLIDE
312	3-679-695-01	o	COVER,TALLY
313	3-710-008-02	s	HOUSING, STOPPER
314	3-719-381-22	s	SCREW (M2X6)
315	3-729-061-02	s	SCREW (M2) (TYPE 1)
316	3-729-076-01	s	SCREW (+B) (2X3)
317	3-776-614-01	s	CAP
318	3-776-797-01	s	GUARD,CABLE
319	4-139-829-01	s	GROUND (W T-SW)
320	4-144-993-01	s	CUSHION, T-SW
	7-627-553-38	s	SCREW,PRECISION +P 2X3
	7-627-556-58	s	SCREW +P 2.6X5
	7-682-247-09	s	SCREW +K 3X6
	7-682-548-09	s	SCREW +B 3X8
	7-683-239-08	s	SCREW H3X5
	7-683-412-05	s	BOLT,HEXAGON SOCKET 2.6X6
	7-688-002-02	s	W 2.6, SMALL
	7-621-772-20	s	SCREW +B 2X5

2-3. Electrical Parts List

LE-476 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-714-A	s	MOUNTED CIRCUIT BOARD, LE-476
C1	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
CN1	1-784-210-21	s	CONNECTOR 7P
D1	8-719-073-33	s	DIODE CL-165HR/YG-D-T
D2	8-719-077-09	s	DIODE CL-196HR-CD-T
D3	8-719-073-33	s	DIODE CL-165HR/YG-D-T
D11	8-719-083-58	s	DI UDZSUSTE-173.9B
D12	8-719-083-58	s	DI UDZSUSTE-173.9B
D13	8-719-083-58	s	DI UDZSUSTE-173.9B
D14	8-719-083-58	s	DI UDZSUSTE-173.9B
D15	8-719-083-58	s	DI UDZSUSTE-173.9B

LE-477 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-715-A	s	MOUNTED CIRCUIT BOARD, LE-477
C1	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
CN1	1-779-806-21	s	CONNECTOR 8P
D1	6-501-355-01	s	DIODE CL-197TD2-CD-T
D2	6-501-257-01	s	DIODE CL-197TLY-CD-T
D3	8-719-077-09	s	DIODE CL-196HR-CD-T
D4	6-501-257-01	s	DIODE CL-197TLY-CD-T
D5	6-501-355-01	s	DIODE CL-197TD2-CD-T
D12	8-719-083-58	s	DI UDZSUSTE-173.9B
D13	8-719-083-58	s	DI UDZSUSTE-173.9B
D14	8-719-083-58	s	DI UDZSUSTE-173.9B
D15	8-719-083-58	s	DI UDZSUSTE-173.9B
D16	8-719-083-58	s	DI UDZSUSTE-173.9B

PR-312 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-722-A	s	MOUNTED CIRCUIT BOARD, PR-312
C1	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C2	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
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	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C6	1-100-055-21	s	CAP, CHIP CERAMIC 22MF B 3225
C7	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C8	1-100-567-81	s	CAP,CHIP CERAMIC 0.01MF B 1005
C9	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C10	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C11	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C12	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C13	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C14	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C15	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C16	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C17	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C18	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C19	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C20	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C21	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C22	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C23	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C24	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C25	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C26	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C27	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C28	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C29	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C30	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C31	1-112-746-91	s	CAP, CERAMIC 4.7MF B (1608)
C34	1-112-746-91	s	CAP, CERAMIC 4.7MF B (1608)
C35	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C36	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C37	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C38	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C39	1-164-874-81	s	CAP,CHIP CERAMIC 100PF CH 1005
C40	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C42	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C43	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C44	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C45	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C46	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C47	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C48	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C49	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C50	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C51	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C52	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C53	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C54	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C55	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C56	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C57	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C58	1-164-850-81	s	CAP, CHIP CERAMIC 10PF CH 1005
C59	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C60	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005

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Ref. No. or Q'ty	Part No.	SP	Description
C61	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C62	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C63	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C64	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C65	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C66	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C67	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C68	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C69	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C70	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C71	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C72	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C73	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C74	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C75	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C76	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C77	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C78	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C79	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C80	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C81	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C82	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C83	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C84	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C85	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C86	1-112-299-91	s	CAP, CERAMIC 2.2MF B (2012)
C89	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C90	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C91	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C92	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C94	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C95	1-107-819-81	s	CAP,CHIP CERAMIC 22000PF B1005
C96	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C97	1-112-746-91	s	CAP, CERAMIC 4.7MF B (1608)
C98	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C99	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C101	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C102	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C103	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C104	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C105	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C106	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C107	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C108	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C109	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C114	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C115	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C116	1-164-878-81	s	CAP,CHIP CERAMIC 150PF CH 1005
C117	1-100-055-21	s	CAP, CHIP CERAMIC 22MF B 3225
C119	1-164-840-81	s	CAP, CHIP CERAMIC 1PF CK 1005
C121	1-164-840-81	s	CAP, CHIP CERAMIC 1PF CK 1005
C123	1-164-840-81	s	CAP, CHIP CERAMIC 1PF CK 1005
C125	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C126	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C127	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C135	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C136	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C306	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C307	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005

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Ref. No. or Q'ty	Part No.	SP	Description
C308	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C309	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C310	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C311	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C312	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C313	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C314	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C315	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C316	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C317	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C318	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C319	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C320	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C321	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C322	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C323	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C324	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C325	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C326	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C327	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C328	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C329	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C330	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C331	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C332	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C333	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C334	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C335	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C500	1-164-939-81	s	CAP, CHIPCERAMIC 2200PF B 1005
C501	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C502	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C503	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C504	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C505	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C506	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C507	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C509	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C510	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C511	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C512	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C513	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C516	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C517	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C518	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C519	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C520	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C521	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C524	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C525	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C526	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C527	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C528	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C529	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C530	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C531	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C532	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C533	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C534	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C535	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005

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Ref. No. or Q'ty	Part No.	SP	Description
C536	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C537	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C538	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C539	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C540	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C541	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C542	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C543	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C544	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C545	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C546	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C547	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C548	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C549	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C550	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C551	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C552	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C553	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C554	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C555	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C556	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C557	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C558	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C559	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C560	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C561	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C562	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C563	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C564	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C565	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C566	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C567	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C568	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C569	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C570	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C571	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C572	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C573	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
CN1	1-695-209-21	s	PIN, CONNECTOR (PC BOARD) 15P
CN2	1-784-241-21	o	CONNECTOR, BOARD TO BOARD 30P
CN3	1-695-889-21	s	PIN, CONNECTOR (PC BOARD) 10P
CN4	1-785-553-21	o	CONNECTOR, BOARD TO BOARD 120P
CN5	1-770-624-21	s	PIN, CONNECTOR 7P
CN6	1-770-625-21	s	PIN, CONNECTOR 8P
CN7	1-764-097-21	o	PIN, CONNECTOR (PC BOARD) 12P
CN500	1-770-627-21	s	PIN, CONNECTOR 10P
CN501	1-770-628-21	s	PIN, CONNECTOR 11P
D1	8-719-941-84	s	DIODE DA204UT106
D2	8-719-941-84	s	DIODE DA204UT106
D3	8-719-941-84	s	DIODE DA204UT106
D4	6-501-207-01	s	DIODE CL-201HR-C-TSL
D5	8-719-941-84	s	DIODE DA204UT106
E1	1-535-877-22	s	CHIP, CHECKER
FB305	1-414-864-21	s	FERRITE, EMI (SMD) (1608)
FB306	1-414-864-21	s	FERRITE, EMI (SMD) (1608)
FB307	1-414-864-21	s	FERRITE, EMI (SMD) (1608)
FB308	1-414-864-21	s	FERRITE, EMI (SMD) (1608)
FB309	1-481-196-21	o	FERRITE, EMI (SMD) (3216)

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Ref. No. or Q'ty	Part No.	SP	Description
FB310	1-400-461-21	s	FERRITE, EMI (SMD) (1005)
FB500	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB501	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB502	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB503	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB504	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB505	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FB506	1-469-094-21	s	FERRITE, EMI (SMD) (1608)
FL1	1-233-943-21	s	FILTER, LOW PASS
FL2	1-233-943-21	s	FILTER, LOW PASS
FL3	1-233-943-21	s	FILTER, LOW PASS
IC1	8-759-447-20	s	IC AD8041ARZ-REEL
IC2	8-759-371-78	s	IC LT1431CS8-E1
IC3	8-759-447-20	s	IC AD8041ARZ-REEL
IC4	8-759-447-20	s	IC AD8041ARZ-REEL
IC5	8-759-447-20	s	IC AD8041ARZ-REEL
IC6	8-759-447-20	s	IC AD8041ARZ-REEL
IC7	8-759-447-20	s	IC AD8041ARZ-REEL
IC8	8-759-287-55	s	IC TC7S66FU(TE85R)
IC9	8-759-287-55	s	IC TC7S66FU(TE85R)
IC10	8-759-287-55	s	IC TC7S66FU(TE85R)
IC14	6-710-021-01	s	IC CAT24C16WI-GT3
IC15	8-759-592-44	s	IC TC7SZ04FU(TE85R)
IC17	6-703-725-01	s	IC AD7829BRUZ-REEL7
IC18	6-709-646-01	s	IC TLC2933AIPWR
IC19	8-759-592-44	s	IC TC7SZ04FU(TE85R)
IC21	8-759-347-09	s	IC NJU7034V-TE2
IC22	8-759-347-09	s	IC NJU7034V-TE2
IC23	8-759-655-23	s	IC TC75W57FK(TE85R)
IC203	8-759-675-54	s	IC TC7W53FK(TE85R)
IC204	6-706-487-01	s	IC TC7SH08FU(T5RSOYJF)
IC501	6-704-643-01	s	IC R3112N221A-TR-FA
IC502	6-713-878-01	s	IC EPCS64SI16N
IC503	6-706-488-01	s	IC TC7SH14FU(T5RSOYJF)
IC504	6-706-489-01	s	IC TC7SH32FU(T5RSOYJF)
L1	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L2	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L3	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L4	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L5	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L500	1-414-396-41	s	INDUCTOR (SMD) 4.7UH
L502	1-414-398-41	s	INDUCTOR (SMD) 10.0UH
L503	1-414-398-41	s	INDUCTOR (SMD) 10.0UH
Q1	8-729-928-25	s	TRANSISTOR 2SA1774TL-QR
Q2	8-729-928-25	s	TRANSISTOR 2SA1774TL-QR
Q3	8-729-209-73	s	TRANSISTOR 2SA1213Y-TE12L
Q4	8-729-928-28	s	TRANSISTOR DTA144EE-TL
Q13	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
Q14	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
Q15	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
Q17	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
Q21	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
Q22	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q23	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q24	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q25	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q26	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q27	8-729-928-82	s	TRANSISTOR DTC144EE-TL

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Ref. No. or Q'ty	Part No.	SP	Description
Q28	8-729-928-82	s	TRANSISTOR DTC144EE-TL
Q29	8-729-928-82	s	TRANSISTOR DTC144EE-TL
Q30	8-729-928-82	s	TRANSISTOR DTC144EE-TL
Q31	8-729-928-82	s	TRANSISTOR DTC144EE-TL
R1	1-208-899-81	s	RES, CHIP 3.3K (1005)
R2	1-208-899-81	s	RES, CHIP 3.3K (1005)
R3	1-208-899-81	s	RES, CHIP 3.3K (1005)
R4	1-208-927-81	s	RES, CHIP 47K (1005)
R5	1-208-887-81	s	RES, CHIP 1.0K (1005)
R6	1-208-863-81	s	RES, CHIP 100 (1005)
R7	1-208-863-81	s	RES, CHIP 100 (1005)
R8	1-208-863-81	s	RES, CHIP 100 (1005)
R9	1-208-863-81	s	RES, CHIP 100 (1005)
R10	1-208-899-81	s	RES, CHIP 3.3K (1005)
R11	1-208-895-81	s	RES, CHIP 2.2K (1005)
R12	1-208-859-81	s	RES, CHIP 68 (1005)
R13	1-208-879-81	s	RES, CHIP 470 (1005)
R14	1-208-883-81	s	RES, CHIP 680 (1005)
R15	1-208-915-81	s	RES, CHIP 15K (1005)
R16	1-208-899-81	s	RES, CHIP 3.3K (1005)
R17	1-208-891-81	s	RES, CHIP 1.5K (1005)
R18	1-208-899-81	s	RES, CHIP 3.3K (1005)
R19	1-208-935-81	s	RES, CHIP 100K (1005)
R20	1-208-899-81	s	RES, CHIP 3.3K (1005)
R21	1-208-935-81	s	RES, CHIP 100K (1005)
R22	1-208-863-81	s	RES, CHIP 100 (1005)
R23	1-208-879-81	s	RES, CHIP 470 (1005)
R24	1-208-887-81	s	RES, CHIP 1.0K (1005)
R25	1-208-919-81	s	RES, CHIP 22K (1005)
R26	1-208-863-81	s	RES, CHIP 100 (1005)
R27	1-208-879-81	s	RES, CHIP 470 (1005)
R28	1-208-887-81	s	RES, CHIP 1.0K (1005)
R29	1-208-919-81	s	RES, CHIP 22K (1005)
R30	1-208-899-81	s	RES, CHIP 3.3K (1005)
R31	1-208-863-81	s	RES, CHIP 100 (1005)
R32	1-208-895-81	s	RES, CHIP 2.2K (1005)
R33	1-208-879-81	s	RES, CHIP 470 (1005)
R34	1-208-903-81	s	RES, CHIP 4.7K (1005)
R35	1-208-875-81	s	RES, CHIP 330 (1005)
R36	1-208-923-81	s	RES, CHIP 33K (1005)
R37	1-208-887-81	s	RES, CHIP 1.0K (1005)
R38	1-208-891-81	s	RES, CHIP 1.5K (1005)
R39	1-208-915-81	s	RES, CHIP 15K (1005)
R40	1-208-927-81	s	RES, CHIP 47K (1005)
R41	1-208-899-81	s	RES, CHIP 3.3K (1005)
R42	1-208-891-81	s	RES, CHIP 1.5K (1005)
R43	1-208-863-81	s	RES, CHIP 100 (1005)
R44	1-208-875-81	s	RES, CHIP 330 (1005)
R45	1-208-891-81	s	RES, CHIP 1.5K (1005)
R46	1-208-863-81	s	RES, CHIP 100 (1005)
R47	1-208-935-81	s	RES, CHIP 100K (1005)
R48	1-208-903-81	s	RES, CHIP 4.7K (1005)
R49	1-208-907-81	s	RES, CHIP 6.8K (1005)
R50	1-208-879-81	s	RES, CHIP 470 (1005)
R51	1-208-867-81	s	RES, CHIP 150 (1005)
R52	1-208-899-81	s	RES, CHIP 3.3K (1005)
R53	1-208-871-81	s	RES, CHIP 220 (1005)
R54	1-208-911-81	s	RES, CHIP 10K (1005)
R55	1-208-911-81	s	RES, CHIP 10K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R56	1-208-871-81	s	RES, CHIP 220 (1005)
R57	1-208-871-81	s	RES, CHIP 220 (1005)
R58	1-208-863-81	s	RES, CHIP 100 (1005)
R59	1-208-903-81	s	RES, CHIP 4.7K (1005)
R60	1-208-891-81	s	RES, CHIP 1.5K (1005)
R61	1-208-891-81	s	RES, CHIP 1.5K (1005)
R62	1-208-895-81	s	RES, CHIP 2.2K (1005)
R63	1-208-863-81	s	RES, CHIP 100 (1005)
R64	1-208-887-81	s	RES, CHIP 1.0K (1005)
R65	1-208-923-81	s	RES, CHIP 33K (1005)
R66	1-208-879-81	s	RES, CHIP 470 (1005)
R67	1-220-882-81	s	RES, CHIP 33 (1005)
R68	1-208-875-81	s	RES, CHIP 330 (1005)
R69	1-208-887-81	s	RES, CHIP 1.0K (1005)
R70	1-208-923-81	s	RES, CHIP 33K (1005)
R71	1-208-879-81	s	RES, CHIP 470 (1005)
R72	1-208-863-81	s	RES, CHIP 100 (1005)
R73	1-208-915-81	s	RES, CHIP 15K (1005)
R74	1-208-903-81	s	RES, CHIP 4.7K (1005)
R75	1-208-891-81	s	RES, CHIP 1.5K (1005)
R76	1-208-911-81	s	RES, CHIP 10K (1005)
R77	1-208-911-81	s	RES, CHIP 10K (1005)
R78	1-208-911-81	s	RES, CHIP 10K (1005)
R79	1-208-891-81	s	RES, CHIP 1.5K (1005)
R80	1-220-882-81	s	RES, CHIP 33 (1005)
R81	1-208-911-81	s	RES, CHIP 10K (1005)
R82	1-208-891-81	s	RES, CHIP 1.5K (1005)
R83	1-208-911-81	s	RES, CHIP 10K (1005)
R84	1-208-855-81	s	RES, CHIP 47 (1005)
R85	1-208-911-81	s	RES, CHIP 10K (1005)
R86	1-208-907-81	s	RES, CHIP 6.8K (1005)
R87	1-208-875-81	s	RES, CHIP 330 (1005)
R88	1-208-911-81	s	RES, CHIP 10K (1005)
R89	1-208-915-81	s	RES, CHIP 15K (1005)
R90	1-208-911-81	s	RES, CHIP 10K (1005)
R91	1-208-903-81	s	RES, CHIP 4.7K (1005)
R92	1-208-855-81	s	RES, CHIP 47 (1005)
R93	1-208-855-81	s	RES, CHIP 47 (1005)
R94	1-208-907-81	s	RES, CHIP 6.8K (1005)
R95	1-208-863-81	s	RES, CHIP 100 (1005)
R96	1-208-927-81	s	RES, CHIP 47K (1005)
R97	1-208-863-81	s	RES, CHIP 100 (1005)
R98	1-208-863-81	s	RES, CHIP 100 (1005)
R99	1-208-863-81	s	RES, CHIP 100 (1005)
R100	1-208-887-81	s	RES, CHIP 1.0K (1005)
R101	1-220-870-81	s	RES, CHIP 10 (1005)
R102	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R103	1-208-863-81	s	RES, CHIP 100 (1005)
R104	1-208-863-81	s	RES, CHIP 100 (1005)
R106	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R107	1-208-887-81	s	RES, CHIP 1.0K (1005)
R108	1-208-887-81	s	RES, CHIP 1.0K (1005)
R109	1-220-870-81	s	RES, CHIP 10 (1005)
R110	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R111	1-208-863-81	s	RES, CHIP 100 (1005)
R112	1-208-863-81	s	RES, CHIP 100 (1005)
R114	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R115	1-208-887-81	s	RES, CHIP 1.0K (1005)
R116	1-208-887-81	s	RES, CHIP 1.0K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R117	1-220-870-81	s	RES, CHIP 10 (1005)
R118	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R119	1-208-863-81	s	RES, CHIP 100 (1005)
R120	1-208-863-81	s	RES, CHIP 100 (1005)
R122	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R123	1-208-887-81	s	RES, CHIP 1.0K (1005)
R125	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R126	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R127	1-208-927-81	s	RES, CHIP 47K (1005)
R129	1-208-927-81	s	RES, CHIP 47K (1005)
R130	1-208-927-81	s	RES, CHIP 47K (1005)
R131	1-208-927-81	s	RES, CHIP 47K (1005)
R132	1-208-927-81	s	RES, CHIP 47K (1005)
R133	1-208-927-81	s	RES, CHIP 47K (1005)
R134	1-208-927-81	s	RES, CHIP 47K (1005)
R135	1-208-887-81	s	RES, CHIP 1.0K (1005)
R136	1-208-887-81	s	RES, CHIP 1.0K (1005)
R137	1-208-887-81	s	RES, CHIP 1.0K (1005)
R138	1-208-887-81	s	RES, CHIP 1.0K (1005)
R139	1-208-887-81	s	RES, CHIP 1.0K (1005)
R140	1-208-887-81	s	RES, CHIP 1.0K (1005)
R141	1-208-879-81	s	RES, CHIP 470 (1005)
R142	1-208-871-81	s	RES, CHIP 220 (1005)
R143	1-208-927-81	s	RES, CHIP 47K (1005)
R144	1-208-927-81	s	RES, CHIP 47K (1005)
R145	1-208-927-81	s	RES, CHIP 47K (1005)
R146	1-208-927-81	s	RES, CHIP 47K (1005)
R147	1-208-927-81	s	RES, CHIP 47K (1005)
R148	1-208-927-81	s	RES, CHIP 47K (1005)
R149	1-208-927-81	s	RES, CHIP 47K (1005)
R150	1-208-927-81	s	RES, CHIP 47K (1005)
R151	1-208-859-81	s	RES, CHIP 68 (1005)
R152	1-208-871-81	s	RES, CHIP 220 (1005)
R153	1-208-867-81	s	RES, CHIP 150 (1005)
R154	1-208-859-81	s	RES, CHIP 68 (1005)
R155	1-208-871-81	s	RES, CHIP 220 (1005)
R156	1-208-879-81	s	RES, CHIP 470 (1005)
R157	1-208-879-81	s	RES, CHIP 470 (1005)
R158	1-208-875-81	s	RES, CHIP 330 (1005)
R159	1-208-879-81	s	RES, CHIP 470 (1005)
R160	1-208-879-81	s	RES, CHIP 470 (1005)
R175	1-208-895-81	s	RES, CHIP 2.2K (1005)
R176	1-208-875-81	s	RES, CHIP 330 (1005)
R177	1-208-911-81	s	RES, CHIP 10K (1005)
R178	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R179	1-208-899-81	s	RES, CHIP 3.3K (1005)
R180	1-208-863-81	s	RES, CHIP 100 (1005)
R181	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R187	1-208-887-81	s	RES, CHIP 1.0K (1005)
R188	1-208-935-81	s	RES, CHIP 100K (1005)
R189	1-208-863-81	s	RES, CHIP 100 (1005)
R199	1-208-903-81	s	RES, CHIP 4.7K (1005)
R203	1-208-887-81	s	RES, CHIP 1.0K (1005)
R204	1-208-887-81	s	RES, CHIP 1.0K (1005)
R205	1-208-895-81	s	RES, CHIP 2.2K (1005)
R206	1-208-895-81	s	RES, CHIP 2.2K (1005)
R207	1-208-895-81	s	RES, CHIP 2.2K (1005)
R208	1-208-895-81	s	RES, CHIP 2.2K (1005)
R209	1-208-895-81	s	RES, CHIP 2.2K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R210	1-208-895-81	s	RES, CHIP 2.2K (1005)
R211	1-208-895-81	s	RES, CHIP 2.2K (1005)
R212	1-208-895-81	s	RES, CHIP 2.2K (1005)
R213	1-208-927-81	s	RES, CHIP 47K (1005)
R214	1-208-927-81	s	RES, CHIP 47K (1005)
R223	1-208-887-81	s	RES, CHIP 1.0K (1005)
R224	1-208-855-81	s	RES, CHIP 47 (1005)
R225	1-208-887-81	s	RES, CHIP 1.0K (1005)
R226	1-208-859-81	s	RES, CHIP 68 (1005)
R300	1-208-903-81	s	RES, CHIP 4.7K (1005)
R301	1-208-887-81	s	RES, CHIP 1.0K (1005)
R302	1-208-951-81	s	RES, CHIP 470K (1005)
R303	1-208-903-81	s	RES, CHIP 4.7K (1005)
R304	1-208-903-81	s	RES, CHIP 4.7K (1005)
R317	1-208-899-81	s	RES, CHIP 3.3K (1005)
R319	1-208-911-81	s	RES, CHIP 10K (1005)
R320	1-208-911-81	s	RES, CHIP 10K (1005)
R321	1-208-911-81	s	RES, CHIP 10K (1005)
R401	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R406	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R407	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R413	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R414	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R416	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R417	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R418	1-243-975-81	s	RES, CHIP 4.7M (1005)
R500	1-208-911-81	s	RES, CHIP 10K (1005)
R501	1-208-859-81	s	RES, CHIP 68 (1005)
R502	1-208-859-81	s	RES, CHIP 68 (1005)
R506	1-208-855-81	s	RES, CHIP 47 (1005)
R508	1-208-859-81	s	RES, CHIP 68 (1005)
R509	1-208-855-81	s	RES, CHIP 47 (1005)
R512	1-208-911-81	s	RES, CHIP 10K (1005)
R513	1-208-911-81	s	RES, CHIP 10K (1005)
R515	1-208-911-81	s	RES, CHIP 10K (1005)
R516	1-208-927-81	s	RES, CHIP 47K (1005)
R517	1-208-855-81	s	RES, CHIP 47 (1005)
R519	1-208-859-81	s	RES, CHIP 68 (1005)
R520	1-208-859-81	s	RES, CHIP 68 (1005)
R521	1-208-859-81	s	RES, CHIP 68 (1005)
R523	1-208-859-81	s	RES, CHIP 68 (1005)
R524	1-208-859-81	s	RES, CHIP 68 (1005)
R525	1-208-911-81	s	RES, CHIP 10K (1005)
R526	1-208-911-81	s	RES, CHIP 10K (1005)
R527	1-208-911-81	s	RES, CHIP 10K (1005)
R528	1-208-911-81	s	RES, CHIP 10K (1005)
R530	1-208-911-81	s	RES, CHIP 10K (1005)
R532	1-208-911-81	s	RES, CHIP 10K (1005)
R537	1-208-855-81	s	RES, CHIP 47 (1005)
R538	1-208-855-81	s	RES, CHIP 47 (1005)
R539	1-208-855-81	s	RES, CHIP 47 (1005)
R540	1-208-855-81	s	RES, CHIP 47 (1005)
R541	1-208-855-81	s	RES, CHIP 47 (1005)
R542	1-208-855-81	s	RES, CHIP 47 (1005)
R543	1-208-855-81	s	RES, CHIP 47 (1005)
R544	1-208-887-81	s	RES, CHIP 1.0K (1005)
R545	1-208-855-81	s	RES, CHIP 47 (1005)
R546	1-208-855-81	s	RES, CHIP 47 (1005)
R548	1-208-855-81	s	RES, CHIP 47 (1005)

(PR-312 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R549	1-208-895-81	s	RES, CHIP 2.2K (1005)
R550	1-208-895-81	s	RES, CHIP 2.2K (1005)
R551	1-208-895-81	s	RES, CHIP 2.2K (1005)
R552	1-208-895-81	s	RES, CHIP 2.2K (1005)
R553	1-208-895-81	s	RES, CHIP 2.2K (1005)
R554	1-208-895-81	s	RES, CHIP 2.2K (1005)
R555	1-208-895-81	s	RES, CHIP 2.2K (1005)
R556	1-208-895-81	s	RES, CHIP 2.2K (1005)
R557	1-208-895-81	s	RES, CHIP 2.2K (1005)
R558	1-208-895-81	s	RES, CHIP 2.2K (1005)
R559	1-208-895-81	s	RES, CHIP 2.2K (1005)
R560	1-208-895-81	s	RES, CHIP 2.2K (1005)
R561	1-208-895-81	s	RES, CHIP 2.2K (1005)
R562	1-208-895-81	s	RES, CHIP 2.2K (1005)
R563	1-208-911-81	s	RES, CHIP 10K (1005)
R564	1-208-911-81	s	RES, CHIP 10K (1005)
R565	1-208-859-81	s	RES, CHIP 68 (1005)
R566	1-208-911-81	s	RES, CHIP 10K (1005)
R567	1-208-895-81	s	RES, CHIP 2.2K (1005)
RB1	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB2	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB3	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB4	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB5	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB6	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB500	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB501	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB502	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB503	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB504	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB505	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB506	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB507	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB508	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB509	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB510	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB511	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB512	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB513	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB514	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB515	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB516	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB517	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB518	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB519	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB520	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB521	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB522	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB523	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB524	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB525	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB526	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB527	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB528	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB529	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB530	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB531	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB532	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB533	1-234-371-21	s	RES, NETWORK 47 (1005X4)

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Ref. No. or Q'ty	Part No.	SP	Description
RB534	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB535	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB536	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB537	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB538	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB539	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB540	1-234-380-21	s	RES, NETWORK 47K (1005X4)
RB541	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB542	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB543	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB544	1-234-380-21	s	RES, NETWORK 47K (1005X4)
RB545	1-234-380-21	s	RES, NETWORK 47K (1005X4)
RB546	1-234-373-21	s	RES, NETWORK 220 (1005X4)
RB547	1-234-373-21	s	RES, NETWORK 220 (1005X4)
RB802	1-234-380-21	s	RES, NETWORK 47K (1005X4)
RB803	1-233-412-21	s	RES, CHIP NETWORK 1.0K (3216)
RB804	1-233-412-21	s	RES, CHIP NETWORK 1.0K (3216)
S1	1-786-900-11	s	SWITCH, DIP (8P)
S2	1-692-270-41	s	SWITCH, SLIDE
S3	1-692-271-41	s	SWITCH, SLIDE
TP1	1-535-877-22	s	CHIP, CHECKER
X1	1-795-933-11	s	OSCILLATOR (VOLTAGE CONTROL)

RE-257 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-724-A	s	MOUNTED CIRCUIT BOARD, RE-257
C1	1-125-827-91	s	CAP, CHIP CERAMIC 1MF B
C3	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C4	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C5	1-125-827-91	s	CAP, CHIP CERAMIC 1MF B
C7	1-112-300-91	s	CAP, CERAMIC 4.7MF B (2012)
C8	1-112-777-11	s	CAP, CERAMIC 0.01MF X7R 1005
C9	1-164-874-81	s	CAP,CHIP CERAMIC 100PF CH 1005
C10	1-112-777-11	s	CAP, CERAMIC 0.01MF X7R 1005
C11	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C12	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C13	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C14	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C15	1-112-777-11	s	CAP, CERAMIC 0.01MF X7R 1005
C16	1-107-819-81	s	CAP,CHIP CERAMIC 22000PF B1005
C17	1-162-969-91	s	CAP, CERAMIC 6800PF B 1608
C18	1-107-819-81	s	CAP,CHIP CERAMIC 22000PF B1005
C19	1-162-969-91	s	CAP, CERAMIC 6800PF B 1608
C20	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C21	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C22	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C23	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C24	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C25	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C26	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C27	1-100-827-21	s	CAP, ELECT 150MF (8X7)
C28	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C29	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C30	1-135-349-21	s	CAP, ELECT 22MF (6.3X6)
C31	1-100-827-21	s	CAP, ELECT 150MF (8X7)
C32	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C33	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C34	1-112-777-11	s	CAP, CERAMIC 0.01MF X7R 1005
C35	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C36	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C37	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C38	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C39	1-112-777-11	s	CAP, CERAMIC 0.01MF X7R 1005
C40	1-107-819-81	s	CAP,CHIP CERAMIC 22000PF B1005
C41	1-162-969-91	s	CAP, CERAMIC 6800PF B 1608
C42	1-107-819-81	s	CAP,CHIP CERAMIC 22000PF B1005
C43	1-162-969-91	s	CAP, CERAMIC 6800PF B 1608
C44	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C45	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C46	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C47	1-100-566-91	s	CAP, CHIP CERAMIC 0.1MF B 1608
C48	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C49	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C50	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C51	1-100-827-21	s	CAP, ELECT 150MF (8X7)
C52	1-135-349-21	s	CAP, ELECT 22MF (6.3X6)
C53	1-100-827-21	s	CAP, ELECT 150MF (8X7)
C54	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C55	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C57	1-112-300-91	s	CAP, CERAMIC 4.7MF B (2012)
C58	1-125-827-91	s	CAP, CHIP CERAMIC 1MF B
C59	1-164-882-81	s	CAP,CHIP CERAMIC 220PF CH 1005
C60	1-112-691-11	s	CAP, CERAMIC 22MF R 3225

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Ref. No. or Q'ty	Part No.	SP	Description
C61	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C62	1-135-960-91	s	CAP, CHIP CERAMIC 10MF B(3225)
C63	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C67	1-125-827-91	s	CAP, CHIP CERAMIC 1MF B
C68	1-100-909-11	s	CAP, CERAMIC 10MF X6S 2012
C200	1-127-715-91	s	CAP,CHIP CERAMIC 0.22MF B 1608
C201	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
CN5	1-580-057-21	s	PIN, CONNECTOR (SMD) 4P
D1	8-719-069-28	s	DIODE 1SS400TE-61
D2	8-719-065-59	s	DIODE MBR0530T1
D3	8-719-065-59	s	DIODE MBR0530T1
D4	8-719-069-28	s	DIODE 1SS400TE-61
D5	8-719-065-59	s	DIODE MBR0530T1
D6	8-719-065-59	s	DIODE MBR0530T1
D7	8-719-072-43	s	DIODE RB050L-40TE25
D19	8-719-083-57	s	DI UDZSUSTE-173.6B
D20	6-500-695-01	s	DI UDZSUSTE-172.7B
D21	6-500-694-01	s	DI UDZSUSTE-172.4B
D22	8-719-083-59	s	DI UDZSUSTE-174.3B
D23	8-719-069-58	s	DI UDZSUSTE-177.5B
D24	8-719-069-28	s	DIODE 1SS400TE-61
D25	8-719-069-28	s	DIODE 1SS400TE-61
E1	1-535-877-22	s	CHIP, CHECKER
IC1	6-711-947-01	s	IC MM1431CURE
IC2	8-759-338-95	s	IC NJM2903V(TE2)
IC3	6-711-947-01	s	IC MM1431CURE
IC4	8-759-338-95	s	IC NJM2903V(TE2)
IC5	6-702-510-01	s	IC TPS5120DBTRG4
IC6	6-702-510-01	s	IC TPS5120DBTRG4
IC7	6-705-481-01	s	IC LT1931ES5#TR
IC200	6-704-565-01	s	IC R3112N161A-TR-FA
IC201	6-706-487-01	s	IC TC7SH08FU(T5RSOYJF)
L1	1-419-630-21	s	COIL, CHOKE 4.7UH
L2	1-400-869-11	s	COIL, CHOKE 47UH
L3	1-456-622-21	s	COIL, CHOKE 1UH
L4	1-416-344-21	s	COIL, CHOKE 10UH
L5	1-456-622-21	s	COIL, CHOKE 1UH
L6	1-469-529-21	s	INDUCTOR, (SMD) 10UH
L7	1-400-869-11	s	COIL, CHOKE 47UH
L8	1-456-622-21	s	COIL, CHOKE 1UH
L9	1-456-622-21	s	COIL, CHOKE 1UH
L10	1-416-346-21	s	COIL, CHOKE 33UH
L11	1-416-346-21	s	COIL, CHOKE 33UH
L12	1-456-622-21	s	COIL, CHOKE 1UH
L13	1-456-622-21	s	COIL, CHOKE 1UH
L15	1-456-622-21	s	COIL, CHOKE 1UH
Q1	6-551-380-01	s	TRANSISTOR SI4425BDY-T1
Q2	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q4	8-729-928-05	s	TRANSISTOR 2SC4617TL-QR
Q5	8-729-928-28	s	TRANSISTOR DTA144EE-TL
Q6	8-729-928-05	s	TRANSISTOR 2SC4617TL-QR
Q7	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q8	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q9	8-729-928-05	s	TRANSISTOR 2SC4617TL-QR
Q10	8-729-928-82	s	TRANSISTOR DTC144EE-TL
Q11	8-729-928-28	s	TRANSISTOR DTA144EE-TL

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Ref. No. or Q'ty	Part No.	SP	Description
Q14	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q15	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q16	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q17	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q18	6-551-261-01	s	TRANSISTOR SI4804BDY-T1
Q19	6-551-261-01	s	TRANSISTOR SI4804BDY-T1
Q20	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q21	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q22	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q23	8-729-929-27	s	TRANSISTOR DTC114TE-TL
Q24	6-551-261-01	s	TRANSISTOR SI4804BDY-T1
Q25	6-551-261-01	s	TRANSISTOR SI4804BDY-T1
Q26	8-729-928-05	s	TRANSISTOR 2SC4617TL-QR
Q27	8-729-928-05	s	TRANSISTOR 2SC4617TL-QR
Q200	8-729-928-28	s	TRANSISTOR DTA144EE-TL
Q201	8-729-928-82	s	TRANSISTOR DTC144EE-TL
R1	1-208-907-81	s	RES, CHIP 6.8K (1005)
R2	1-208-907-81	s	RES, CHIP 6.8K (1005)
R3	1-208-907-81	s	RES, CHIP 6.8K (1005)
R4	1-208-919-81	s	RES, CHIP 22K (1005)
R5	1-208-919-81	s	RES, CHIP 22K (1005)
R6	1-208-887-81	s	RES, CHIP 1.0K (1005)
R7	1-208-907-81	s	RES, CHIP 6.8K (1005)
R8	1-208-903-81	s	RES, CHIP 4.7K (1005)
R9	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R10	1-208-895-81	s	RES, CHIP 2.2K (1005)
R11	1-208-871-81	s	RES, CHIP 220 (1005)
R12	1-208-903-81	s	RES, CHIP 4.7K (1005)
R13	1-208-931-81	s	RES, CHIP 68K (1005)
R14	1-208-931-81	s	RES, CHIP 68K (1005)
R15	1-208-911-81	s	RES, CHIP 10K (1005)
R16	1-208-911-81	s	RES, CHIP 10K (1005)
R17	1-208-927-81	s	RES, CHIP 47K (1005)
R18	1-208-911-81	s	RES, CHIP 10K (1005)
R20	1-208-907-81	s	RES, CHIP 6.8K (1005)
R21	1-208-907-81	s	RES, CHIP 6.8K (1005)
R22	1-208-907-81	s	RES, CHIP 6.8K (1005)
R23	1-208-927-81	s	RES, CHIP 47K (1005)
R24	1-208-927-81	s	RES, CHIP 47K (1005)
R25	1-208-927-81	s	RES, CHIP 47K (1005)
R27	1-208-911-81	s	RES, CHIP 10K (1005)
R28	1-208-915-81	s	RES, CHIP 15K (1005)
R29	1-208-919-81	s	RES, CHIP 22K (1005)
R30	1-208-927-81	s	RES, CHIP 47K (1005)
R31	1-208-879-81	s	RES, CHIP 470 (1005)
R32	1-208-903-81	s	RES, CHIP 4.7K (1005)
R33	1-208-887-81	s	RES, CHIP 1.0K (1005)
R34	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R35	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R37	1-208-919-81	s	RES, CHIP 22K (1005)
R38	1-208-935-81	s	RES, CHIP 100K (1005)
R39	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R40	1-208-935-81	s	RES, CHIP 100K (1005)
R41	1-208-863-81	s	RES, CHIP 100 (1005)
R42	1-208-863-81	s	RES, CHIP 100 (1005)
R43	1-208-863-81	s	RES, CHIP 100 (1005)
R44	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R46	1-208-927-81	s	RES, CHIP 47K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R47	1-208-919-81	s	RES, CHIP 22K (1005)
R48	1-208-887-81	s	RES, CHIP 1.0K (1005)
R49	1-208-911-81	s	RES, CHIP 10K (1005)
R50	1-208-923-81	s	RES, CHIP 33K (1005)
R51	1-208-927-81	s	RES, CHIP 47K (1005)
R52	1-208-927-81	s	RES, CHIP 47K (1005)
R53	1-208-895-81	s	RES, CHIP 2.2K (1005)
R54	1-208-883-81	s	RES, CHIP 680 (1005)
R55	1-208-923-81	s	RES, CHIP 33K (1005)
R56	1-208-923-81	s	RES, CHIP 33K (1005)
R57	1-208-927-81	s	RES, CHIP 47K (1005)
R58	1-208-911-81	s	RES, CHIP 10K (1005)
R59	1-208-887-81	s	RES, CHIP 1.0K (1005)
R60	1-208-911-81	s	RES, CHIP 10K (1005)
R61	1-208-883-81	s	RES, CHIP 680 (1005)
R62	1-208-923-81	s	RES, CHIP 33K (1005)
R63	1-208-927-81	s	RES, CHIP 47K (1005)
R64	1-208-927-81	s	RES, CHIP 47K (1005)
R65	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R66	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R67	1-208-919-81	s	RES, CHIP 22K (1005)
R68	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R69	1-208-919-81	s	RES, CHIP 22K (1005)
R70	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R71	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R72	1-208-919-81	s	RES, CHIP 22K (1005)
R73	1-208-863-81	s	RES, CHIP 100 (1005)
R74	1-208-863-81	s	RES, CHIP 100 (1005)
R75	1-208-863-81	s	RES, CHIP 100 (1005)
R76	1-208-935-81	s	RES, CHIP 100K (1005)
R77	1-208-911-81	s	RES, CHIP 10K (1005)
R78	1-208-927-81	s	RES, CHIP 47K (1005)
R79	1-208-919-81	s	RES, CHIP 22K (1005)
R80	1-208-887-81	s	RES, CHIP 1.0K (1005)
R81	1-208-911-81	s	RES, CHIP 10K (1005)
R82	1-208-927-81	s	RES, CHIP 47K (1005)
R83	1-208-927-81	s	RES, CHIP 47K (1005)
R84	1-208-927-81	s	RES, CHIP 47K (1005)
R85	1-208-911-81	s	RES, CHIP 10K (1005)
R86	1-208-883-81	s	RES, CHIP 680 (1005)
R87	1-208-923-81	s	RES, CHIP 33K (1005)
R88	1-208-927-81	s	RES, CHIP 47K (1005)
R90	1-208-911-81	s	RES, CHIP 10K (1005)
R91	1-208-887-81	s	RES, CHIP 1.0K (1005)
R92	1-208-919-81	s	RES, CHIP 22K (1005)
R93	1-208-883-81	s	RES, CHIP 680 (1005)
R94	1-208-923-81	s	RES, CHIP 33K (1005)
R95	1-208-923-81	s	RES, CHIP 33K (1005)
R96	1-208-923-81	s	RES, CHIP 33K (1005)
R97	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R98	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R99	1-208-919-81	s	RES, CHIP 22K (1005)
R100	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R101	1-208-919-81	s	RES, CHIP 22K (1005)
R102	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R103	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R104	1-208-907-81	s	RES, CHIP 6.8K (1005)
R105	1-208-923-81	s	RES, CHIP 33K (1005)
R106	1-208-943-81	s	RES, CHIP 220K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R107	1-208-919-81	s	RES, CHIP 22K (1005)
R108	1-208-931-81	s	RES, CHIP 68K (1005)
R109	1-208-911-81	s	RES, CHIP 10K (1005)
R126	1-208-923-81	s	RES, CHIP 33K (1005)
R127	1-208-923-81	s	RES, CHIP 33K (1005)
R128	1-208-895-81	s	RES, CHIP 2.2K (1005)
R129	1-208-927-81	s	RES, CHIP 47K (1005)
R131	1-208-923-81	s	RES, CHIP 33K (1005)
R133	1-208-935-81	s	RES, CHIP 100K (1005)
R136	1-208-871-81	s	RES, CHIP 220 (1005)
R137	1-208-927-81	s	RES, CHIP 47K (1005)
R151	1-208-899-81	s	RES, CHIP 3.3K (1005)
R152	1-208-919-81	s	RES, CHIP 22K (1005)
R153	1-208-903-81	s	RES, CHIP 4.7K (1005)
R154	1-208-903-81	s	RES, CHIP 4.7K (1005)
R155	1-208-903-81	s	RES, CHIP 4.7K (1005)
R156	1-208-895-81	s	RES, CHIP 2.2K (1005)
R200	1-208-911-81	s	RES, CHIP 10K (1005)
R201	1-208-911-81	s	RES, CHIP 10K (1005)
R202	1-208-911-81	s	RES, CHIP 10K (1005)
R204	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R206	1-218-990-81	s	CONDUCTOR, CHIP (1005)
THP1	⚠ 1-802-063-21	s	THERMISTOR, POSITIVE
TP1	1-535-877-22	s	CHIP, CHECKER
TP2	1-535-877-22	s	CHIP, CHECKER
TP3	1-535-877-22	s	CHIP, CHECKER
TP4	1-535-877-22	s	CHIP, CHECKER
TP5	1-535-877-22	s	CHIP, CHECKER

SW-1436 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-716-A	s	MOUNTED CIRCUIT BOARD, SW-1436
C1	1-100-567-81	s	CAP,CHIP CERAMIC 0.01MF B 1005
CN1	1-764-095-21	o	PIN, CONNECTOR (PC BOARD) 10P
Q2	8-729-117-36	s	TRANSISTOR 2SC4177-T1L5
R1	1-208-879-81	s	RES, CHIP 470 (1005)
R2	1-208-891-81	s	RES, CHIP 1.5K (1005)
R3	1-208-923-81	s	RES, CHIP 33K (1005)
R5	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R6	1-208-863-81	s	RES, CHIP 100 (1005)
R7	1-208-863-81	s	RES, CHIP 100 (1005)
R8	1-208-863-81	s	RES, CHIP 100 (1005)
R9	1-208-863-81	s	RES, CHIP 100 (1005)
R10	1-208-863-81	s	RES, CHIP 100 (1005)
R11	1-208-863-81	s	RES, CHIP 100 (1005)
R12	1-208-871-81	s	RES, CHIP 220 (1005)
R13	1-208-875-81	s	RES, CHIP 330 (1005)
R14	1-208-899-81	s	RES, CHIP 3.3K (1005)
S1	1-762-489-21	s	SWITCH, TOGGLE
S2	1-762-020-21	s	SWITCH, TOGGLE
S3	1-762-019-21	s	SWITCH, TOGGLE
S4	1-786-520-11	s	SWITCH, TACTILE
S5	1-786-520-11	s	SWITCH, TACTILE

SW-1437 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-717-A	s	MOUNTED CIRCUIT BOARD, SW-1437
CN1	1-770-628-21	s	PIN, CONNECTOR 11P
R1	1-208-863-81	s	RES, CHIP 100 (1005)
RB1	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB2	1-234-372-21	s	RES, NETWORK 100 (1005X4)
S1	1-786-900-11	s	SWITCH, DIP (8P)
S2	1-786-520-11	s	SWITCH, TACTILE

VPR-103 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-1675-723-A	s	MOUNTED CIRCUIT BOARD, VPR-103
C1	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C2	1-100-672-91	s	CAP, CERAMIC 10MF C (3216)
C3	1-100-567-81	s	CAP,CHIP CERAMIC 0.01MF B 1005
C4	1-100-567-81	s	CAP,CHIP CERAMIC 0.01MF B 1005
C5	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C6	1-119-923-81	s	CAP, CERAMIC 0.047MF B 1005
C7	1-100-880-91	s	CAP, CERAMIC 100MF C (3225)
C8	1-164-939-81	s	CAP, CHIPCERAMIC 2200PF B 1005
C9	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C10	1-164-866-81	s	CAP, CHIP CERAMIC 47PF CH 1005
C11	1-164-874-81	s	CAP,CHIP CERAMIC 100PF CH 1005
C12	1-164-939-81	s	CAP, CHIPCERAMIC 2200PF B 1005
C13	1-112-692-81	s	CAP,CHIP CERAMIC1000PF CH 1005
C14	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C15	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C16	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C17	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C18	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C19	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C20	1-100-611-91	s	CAP, CERAMIC 22MF C (2012)
C21	1-100-611-91	s	CAP, CERAMIC 22MF C (2012)
C22	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C23	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C24	1-100-611-91	s	CAP, CERAMIC 22MF C (2012)
C25	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C26	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C27	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C28	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C29	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C30	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C31	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C32	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C33	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C34	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C35	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C36	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C37	1-112-746-91	s	CAP, CERAMIC 4.7MF B (1608)
C38	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C39	1-163-037-91	s	CAP, CERAMIC 22000PF B (2012)
C40	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C41	1-112-298-91	o	CAP, CERAMIC 1MF B (1608)
C42	1-165-629-91	s	CAP, CERAMIC 1000000PF B(3225)
C43	1-164-858-81	s	CAP, CHIP CERAMIC 22PF CH 1005
C44	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C45	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C46	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C47	1-100-611-91	s	CAP, CERAMIC 22MF C (2012)
C48	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C49	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C50	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C51	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C52	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C53	1-100-611-91	s	CAP, CERAMIC 22MF C (2012)
C54	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C55	1-137-980-91	s	CAP,CHIP CERAMIC 0.47MF B 3216
C101	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C102	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005

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Ref. No. or Q'ty	Part No.	SP	Description
C103	1-100-159-91	s	CAP, CERAMIC 22MF B (SMD) 3216
C104	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C105	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C106	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C107	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C108	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C109	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C110	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C111	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C112	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C113	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C114	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C115	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C116	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C117	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C118	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C119	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C120	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C121	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C122	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C123	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C124	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C125	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C126	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C127	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C128	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C129	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C130	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C131	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C132	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C133	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C134	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C135	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C136	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C137	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C138	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C139	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C140	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C141	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C142	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C143	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C144	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C145	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C146	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C147	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C148	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C149	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C150	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C151	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C152	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C153	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C154	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C155	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C156	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C157	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C158	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C159	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C160	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C161	1-165-989-91	s	CAP, CERAMIC 10MF (2012)

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Ref. No. or Q'ty	Part No.	SP	Description
C162	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C163	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C164	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C165	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C166	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C167	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C168	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C169	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C170	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C171	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C172	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C173	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C174	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C175	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C176	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C177	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C178	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C179	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C180	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C181	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C182	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C183	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C184	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C185	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C186	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C187	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C188	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C189	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C190	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C191	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C192	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C193	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C194	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C195	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C196	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C197	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C198	1-125-777-81	s	CAP, CHIP CERAMIC 0.1MF B 1005
C199	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C200	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C201	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C202	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C203	1-112-717-91	s	CAP, CERAMIC 1UF B (1005)
C204	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
C205	1-165-989-91	s	CAP, CERAMIC 10MF (2012)
CN1	1-785-551-21	o	CONNECTOR, BOARD TO BOARD 120P
CN3	1-764-093-21	o	PIN, CONNECTOR (PC BOARD) 8P
CN4	1-778-451-31	s	CONNECTOR, FFC/FPC(ZIF) AN 50P
CN5	1-580-057-21	s	PIN, CONNECTOR (SMD) 4P
D1	8-719-065-59	s	DIODE MBR0530T1
D2	6-501-124-01	s	DIODE RSX101VA-30TR
E1	1-535-877-22	s	CHIP, CHECKER
E101	1-535-877-22	s	CHIP, CHECKER
IC1	6-701-572-01	s	IC TPS54610PWPR
IC2	6-712-135-01	o	IC R1173H001D-T1-F
IC3	6-712-135-01	o	IC R1173H001D-T1-F
IC4	8-759-488-34	s	IC TLV2221CDBV
IC5	6-707-529-01	s	IC TPS61041DBVR

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Ref. No. or Q'ty	Part No.	SP	Description
IC6	8-759-183-53	s	IC TL431CPK-E2
IC8	6-712-135-01	o	IC R1173H001D-T1-F
IC10	6-712-135-01	o	IC R1173H001D-T1-F
L1	1-416-948-21	s	COIL, CHOKE 10UH
L2	1-416-948-21	s	COIL, CHOKE 10UH
L3	1-469-549-21	s	INDUCTOR, CHIP 1.0UH (LB2016)
L4	1-469-551-21	s	INDUCTOR, CHIP 2.2UH (LB2016)
L5	1-416-344-21	s	COIL, CHOKE 10UH
L6	1-416-344-21	s	COIL, CHOKE 10UH
L7	1-469-549-21	s	INDUCTOR, CHIP 1.0UH (LB2016)
L101	1-414-392-41	s	INDUCTOR (SMD) 1.0UH
L102	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L103	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L104	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L105	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L106	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L107	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L108	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L109	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L110	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L111	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L112	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L113	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L114	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L115	1-469-555-21	s	INDUCTOR, CHIP 10UH (LB2016)
L116	1-414-392-41	s	INDUCTOR (SMD) 1.0UH
L117	1-414-392-41	s	INDUCTOR (SMD) 1.0UH
L118	1-414-392-41	s	INDUCTOR (SMD) 1.0UH
R1	1-208-855-81	s	RES, CHIP 47 (1005)
R2	1-220-870-81	s	RES, CHIP 10 (1005)
R3	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R4	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R5	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R6	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R7	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R8	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R9	1-208-931-81	s	RES, CHIP 68K (1005)
R10	1-208-915-81	s	RES, CHIP 15K (1005)
R11	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R12	1-208-859-81	s	RES, CHIP 68 (1005)
R13	1-208-911-81	s	RES, CHIP 10K (1005)
R14	1-208-911-81	s	RES, CHIP 10K (1005)
R15	1-208-875-81	s	RES, CHIP 330 (1005)
R16	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R17	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R18	1-208-863-81	s	RES, CHIP 100 (1005)
R19	1-208-915-81	s	RES, CHIP 15K (1005)
R20	1-208-911-81	s	RES, CHIP 10K (1005)
R22	1-208-931-81	s	RES, CHIP 68K (1005)
R25	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R26	1-208-891-81	s	RES, CHIP 1.5K (1005)
R27	1-208-887-81	s	RES, CHIP 1.0K (1005)
R28	1-208-875-81	s	RES, CHIP 330 (1005)
R29	1-208-879-81	s	RES, CHIP 470 (1005)
R30	1-208-887-81	s	RES, CHIP 1.0K (1005)
R31	1-208-895-81	s	RES, CHIP 2.2K (1005)
R32	1-208-939-81	s	RES, CHIP 150K (1005)
R33	1-208-915-81	s	RES, CHIP 15K (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R35	1-208-927-81	s	RES, CHIP 47K (1005)
R36	1-208-927-81	s	RES, CHIP 47K (1005)
R37	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R38	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R39	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R40	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R41	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R42	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R44	1-220-238-91	s	RES, SQUARE TYPE CHIP 10(3225)
R45	1-208-903-81	s	RES, CHIP 4.7K (1005)
R46	1-208-903-81	s	RES, CHIP 4.7K (1005)
R47	1-208-927-81	s	RES, CHIP 47K (1005)
R48	1-208-860-81	s	RES, CHIP 75 (1005)
R49	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R50	1-208-903-81	s	RES, CHIP 4.7K (1005)
R52	1-208-927-81	s	RES, CHIP 47K (1005)
R53	1-208-927-81	s	RES, CHIP 47K (1005)
R54	1-208-919-81	s	RES, CHIP 22K (1005)
R55	1-208-927-81	s	RES, CHIP 47K (1005)
R56	1-208-903-81	s	RES, CHIP 4.7K (1005)
R57	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R58	1-208-927-81	s	RES, CHIP 47K (1005)
R62	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R63	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R64	1-208-863-81	s	RES, CHIP 100 (1005)
R65	1-208-875-81	s	RES, CHIP 330 (1005)
R66	1-208-891-81	s	RES, CHIP 1.5K (1005)
R67	1-208-887-81	s	RES, CHIP 1.0K (1005)
R68	1-208-855-81	s	RES, CHIP 47 (1005)
R69	1-208-855-81	s	RES, CHIP 47 (1005)
R70	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R71	1-220-870-81	s	RES, CHIP 10 (1005)
R72	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R73	1-208-895-81	s	RES, CHIP 2.2K (1005)
R74	1-208-887-81	s	RES, CHIP 1.0K (1005)
R75	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R76	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R77	1-220-870-81	s	RES, CHIP 10 (1005)
R78	1-208-855-81	s	RES, CHIP 47 (1005)
R79	1-208-855-81	s	RES, CHIP 47 (1005)
R101	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R102	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R103	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R104	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R105	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R106	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R107	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R108	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R109	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R110	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R111	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R112	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R113	1-208-863-81	s	RES, CHIP 100 (1005)
R114	1-208-863-81	s	RES, CHIP 100 (1005)
R115	1-208-863-81	s	RES, CHIP 100 (1005)
R116	1-208-863-81	s	RES, CHIP 100 (1005)
R117	1-208-863-81	s	RES, CHIP 100 (1005)
R118	1-220-870-81	s	RES, CHIP 10 (1005)
R119	1-208-911-81	s	RES, CHIP 10K (1005)

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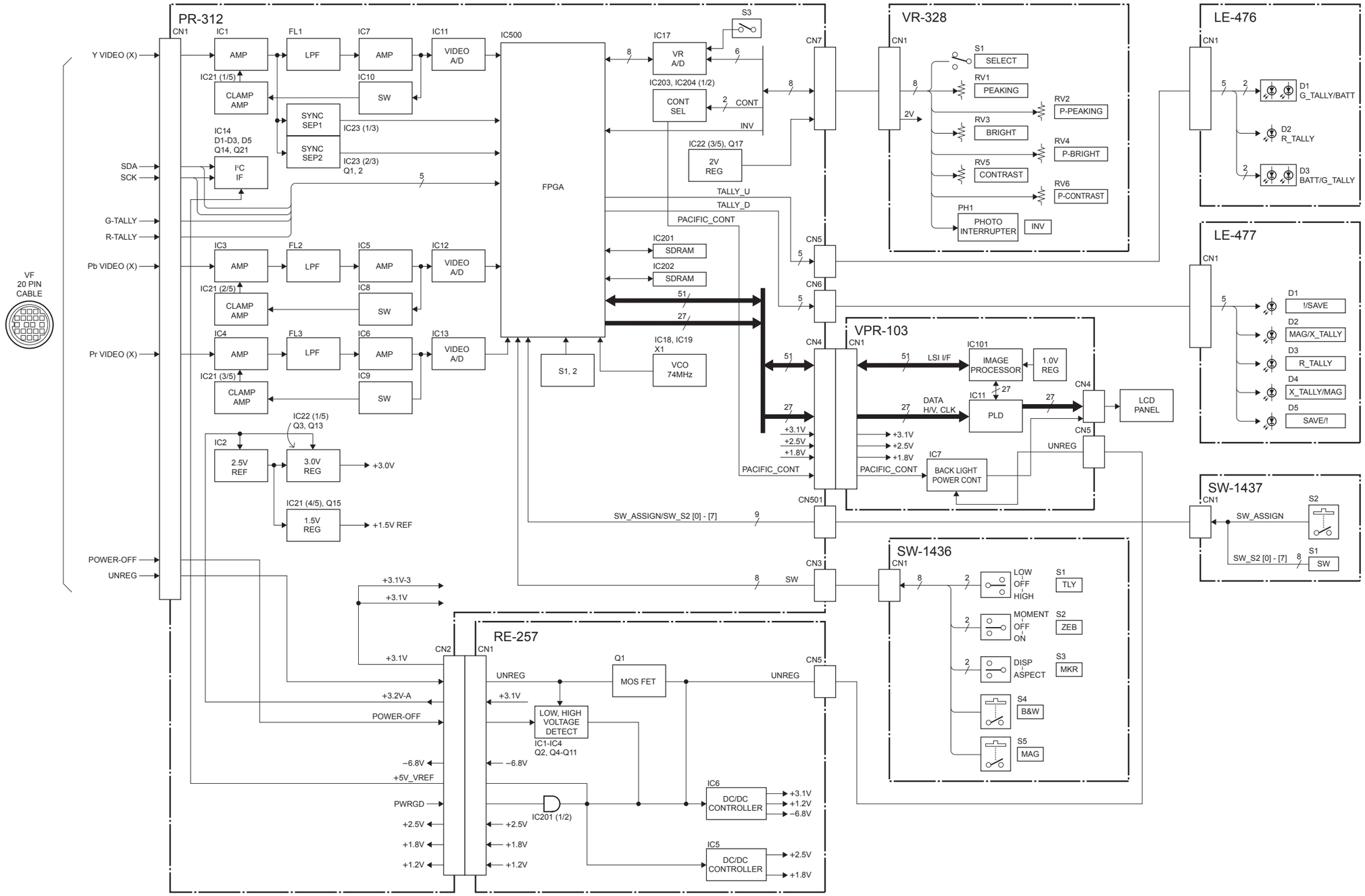
Ref. No. or Q'ty	Part No.	SP	Description
R120	1-208-911-81	s	RES, CHIP 10K (1005)
R121	1-208-911-81	s	RES, CHIP 10K (1005)
R122	1-208-863-81	s	RES, CHIP 100 (1005)
R123	1-208-863-81	s	RES, CHIP 100 (1005)
R124	1-208-863-81	s	RES, CHIP 100 (1005)
R126	1-208-911-81	s	RES, CHIP 10K (1005)
R127	1-208-863-81	s	RES, CHIP 100 (1005)
R128	1-208-911-81	s	RES, CHIP 10K (1005)
R129	1-208-863-81	s	RES, CHIP 100 (1005)
R130	1-208-863-81	s	RES, CHIP 100 (1005)
R131	1-208-863-81	s	RES, CHIP 100 (1005)
R132	1-208-911-81	s	RES, CHIP 10K (1005)
R133	1-208-863-81	s	RES, CHIP 100 (1005)
R134	1-208-863-81	s	RES, CHIP 100 (1005)
R135	1-208-915-81	s	RES, CHIP 15K (1005)
R136	1-208-863-81	s	RES, CHIP 100 (1005)
R137	1-208-915-81	s	RES, CHIP 15K (1005)
R139	1-208-911-81	s	RES, CHIP 10K (1005)
R140	1-208-911-81	s	RES, CHIP 10K (1005)
R141	1-220-882-81	s	RES, CHIP 33 (1005)
R142	1-220-882-81	s	RES, CHIP 33 (1005)
R143	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R144	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R145	1-218-990-81	s	CONDUCTOR, CHIP (1005)
R146	1-208-863-81	s	RES, CHIP 100 (1005)
R147	1-208-911-81	s	RES, CHIP 10K (1005)
R148	1-208-863-81	s	RES, CHIP 100 (1005)
R149	1-208-863-81	s	RES, CHIP 100 (1005)
R152	1-208-855-81	s	RES, CHIP 47 (1005)
R153	1-208-855-81	s	RES, CHIP 47 (1005)
R154	1-208-855-81	s	RES, CHIP 47 (1005)
R155	1-208-855-81	s	RES, CHIP 47 (1005)
RB1	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB2	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB3	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB4	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB5	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB6	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB101	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB102	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB103	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB104	1-234-372-21	s	RES, NETWORK 100 (1005X4)
RB105	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB106	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB107	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB108	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB109	1-234-371-21	s	RES, NETWORK 47 (1005X4)
RB110	1-234-371-21	s	RES, NETWORK 47 (1005X4)
TP101	1-535-877-22	s	CHIP, CHECKER
TP102	1-535-877-22	s	CHIP, CHECKER

2-4. Packing Materials & Supplied Accessories

```
------------
VR-328 BOARD
------------
 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc      A-1675-718-A s MOUNTED CIRCUIT BOARD, VR-328
 1pc      4-139-821-01 s PLATE, VR GROUND

 C1       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C2       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C3       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C4       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C5       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005

 C6       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C7       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005
 C8       1-125-777-81 s CAP, CHIP CERAMIC 0.1MF B 1005

 CN1      1-695-890-21 o PIN, CONNECTOR (PC BOARD) 12P

 D1       6-501-207-01 s DIODE CL-201HR-C-TSL
 D2       6-501-207-01 s DIODE CL-201HR-C-TSL

 PH1      8-719-069-53 s DIODE CPI-210-T

 Q1       8-729-117-36 s TRANSISTOR 2SC4177-T1L5
 Q2       8-729-117-36 s TRANSISTOR 2SC4177-T1L5
 Q3       8-729-928-25 s TRANSISTOR 2SA1774TL-QR

 R13      1-220-878-81 s RES, CHIP 22 (1005)
 R14      1-220-878-81 s RES, CHIP 22 (1005)
 R15      1-208-863-81 s RES, CHIP 100 (1005)
 R16      1-208-863-81 s RES, CHIP 100 (1005)
 R17      1-208-879-81 s RES, CHIP 470 (1005)

 R18      1-208-935-81 s RES, CHIP 100K (1005)
 R19      1-208-911-81 s RES, CHIP 10K (1005)

 RV1      1-238-293-11 s RES, VAR, CARBON 10K
 RV2      1-225-813-21 s RES, ADJ, CERMET 50K
 RV3      1-238-293-11 s RES, VAR, CARBON 10K
 RV4      1-225-813-21 s RES, ADJ, CERMET 50K
 RV5      1-238-293-11 s RES, VAR, CARBON 10K

 RV6      1-225-813-21 s RES, ADJ, CERMET 50K

 S1       1-570-984-21 s SWITCH, TOGGLE
```

```
--------------------------------------
PACKING MATERIALS & SUPPLIED ACCESSORIES
--------------------------------------
 Ref. No.
 or Q'ty  Part No.    SP Description

 1pc    ⚠ 4-134-878-01 s OPERATION MANUAL
```

Section 3
Block Diagrams Overall

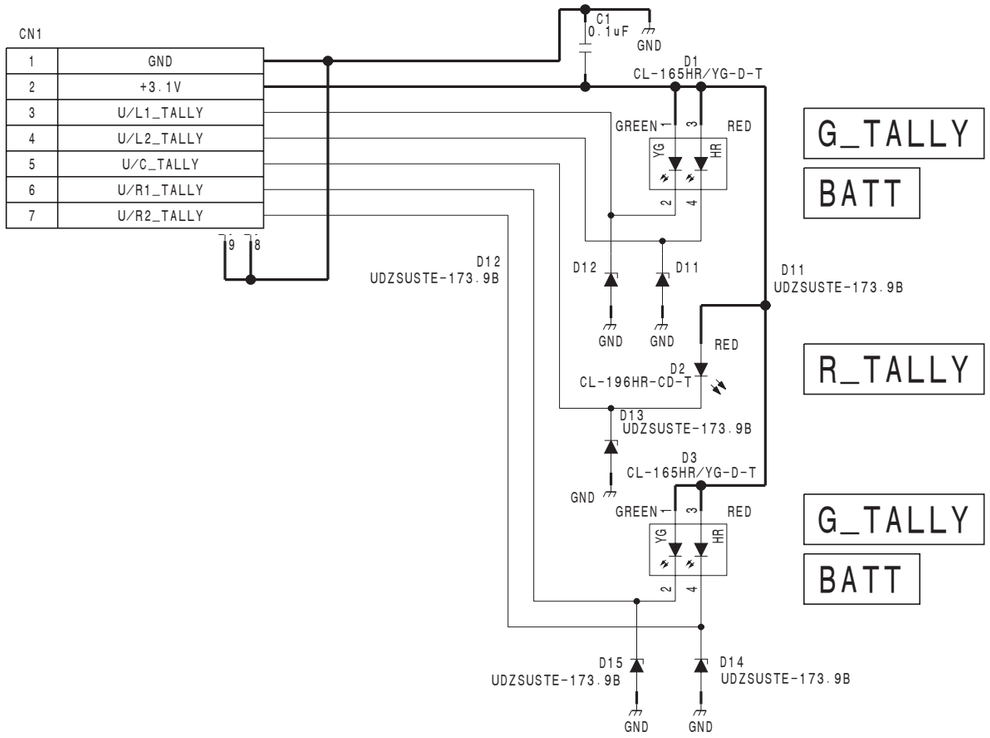


Overall Block

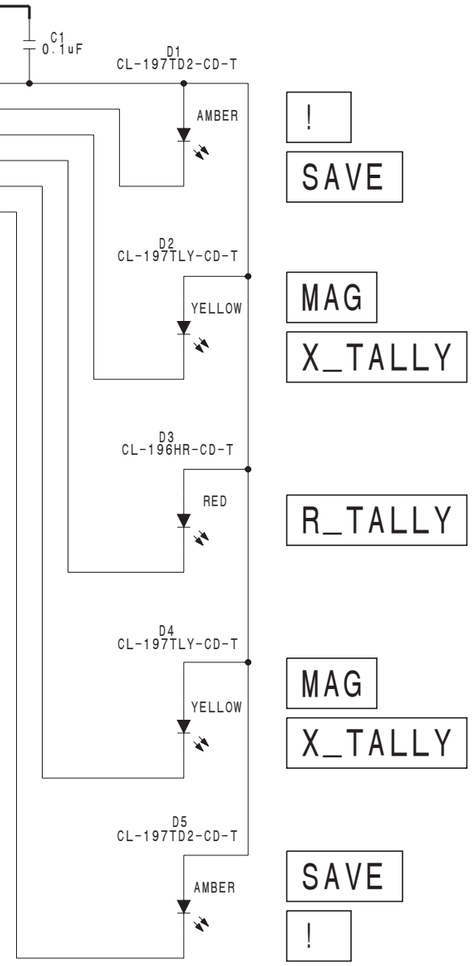
Section 4
Schematic Diagrams

Index

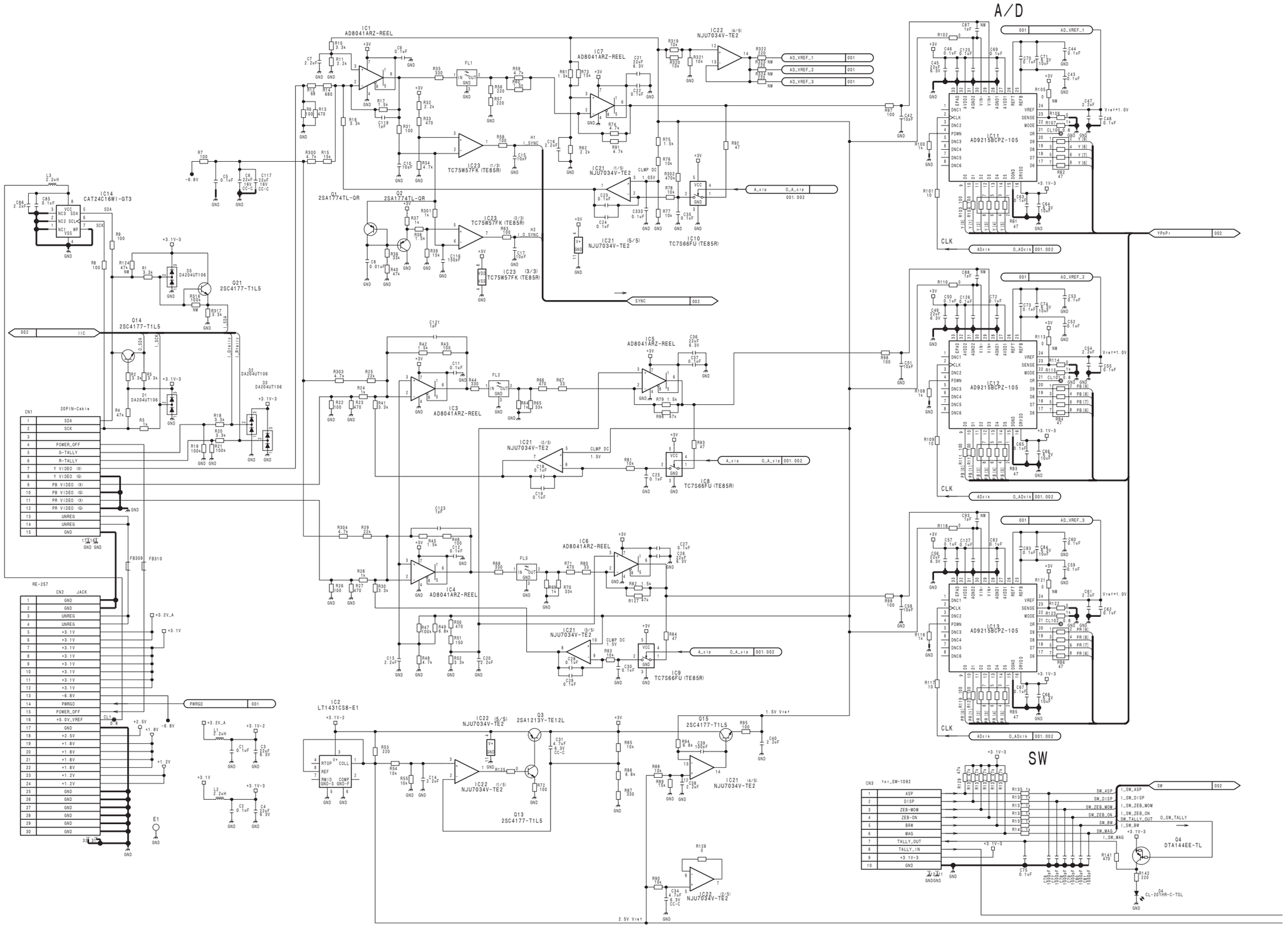
4-1



LE-476
BOARD NO. 1-879-253-12

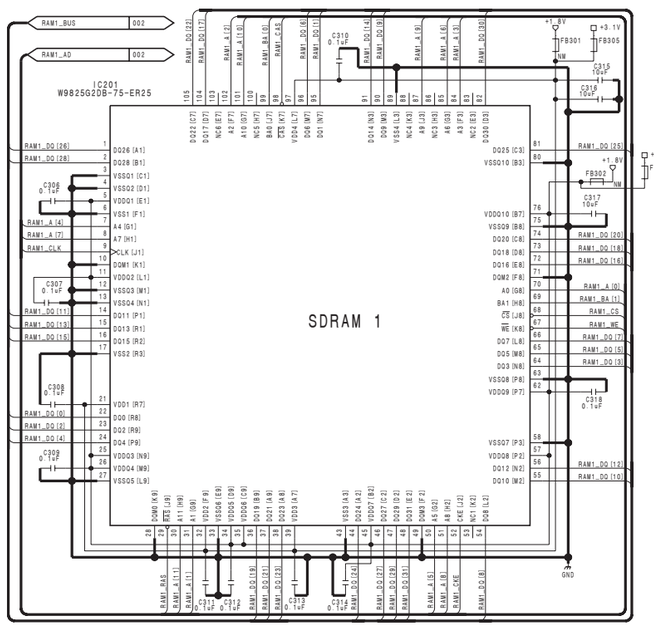


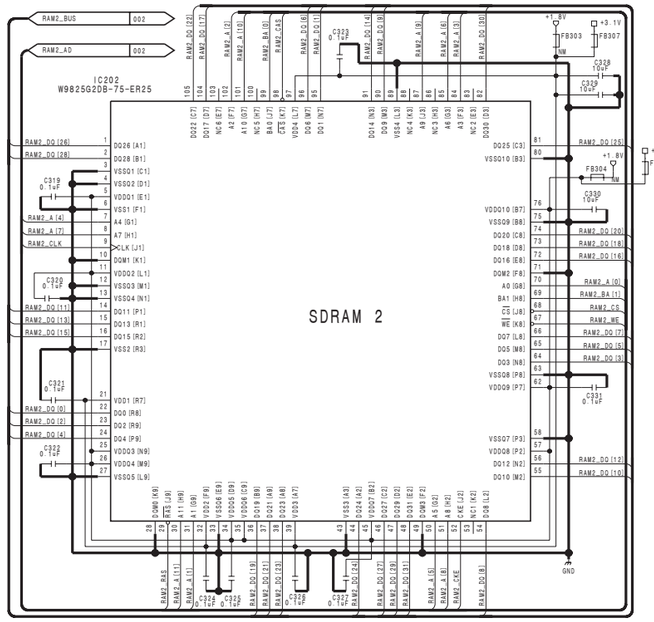
LE-477
BOARD NO. 1-879-254-12

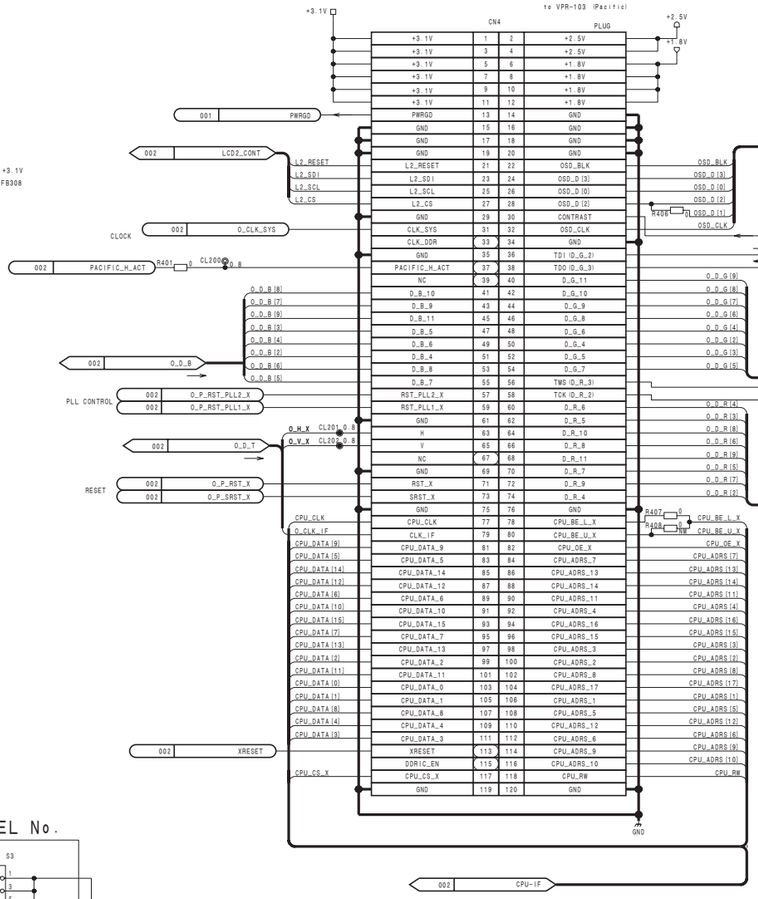

A/D
SW
IC1 AD8041ARZ-REEL
IC3 AD8041ARZ-REEL
IC4 AD8041ARZ-REEL
IC5 AD8041ARZ-REEL
IC6 AD8041ARZ-REEL
IC7 AD8041ARZ-REEL
IC11 AD9215BCPZ-105
IC12 AD9215BCPZ-105
IC13 AD9215BCPZ-105
IC14 CAT24C16WI-GT3
IC21 NJU7034V-TE2
IC22 NJU7034V-TE2
IC23 TC75W57FK (TE85R)
IC8 TC7S66FU (TE85R)
IC9 TC7S66FU (TE85R)
IC10 TC7S66FU (TE85R)
IC2 LT1431CS8-E1
Q1 2SA1774TL-QR
Q2 2SA1774TL-QR
Q3 2SA1213Y-TE12L
Q13 2SC4177-T1L5
Q14 2SC4177-T1L5
Q15 2SC4177-T1L5
Q21 2SC4177-T1L5
Q4 DTA144EE-TL
D1 DA204UT106
D2 DA204UT106
D3 DA204UT106
D5 DA204UT106
D24 CL-207HR-C-TSL
CN1 20PIN-Cable
SDA
SCK
POWER_OFF
G-TALLY
R-TALLY
Y VIDEO (X)
Y VIDEO (G)
PB VIDEO (X)
PB VIDEO (G)
PR VIDEO (X)
PR VIDEO (G)
UNREG
UNREG
GND
RE-257
CN2 JACK
GND
UNREG
+3.1V
+6.8V
+2.5V
+1.8V
+1.2V
+3.2V_A
PWRGD
POWER_OFF
+5.0V_VREF
CN3 for_SW-1092
ASP
DISP
ZEB-MOM
ZEB-ON
BAW
MAG
TALLY_OUT
TALLY_IN
+3.1V-3
GND
SYNC
H1 I_SYNC
H2 I_D_SYNC
IIC
CLK
CLMP DC 1.65V
CLMP DC 1.5V
2.5V Vref
1.5V Vref
Vref=1.0V
A_clp
O_A_clp
ADclk
O_ADclk
AD_VREF_1
AD_VREF_2
AD_VREF_3
YPbPr
SW
I_SW_ASP
I_SW_DISP
I_SW_ZEB_MOM
I_SW_ZEB_ON
O_SW_TALLY
I_SW_BW
I_SW_MAG

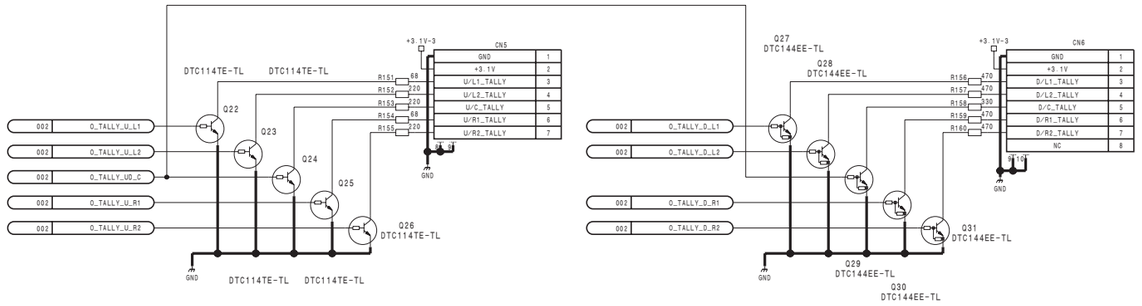
PR-312 (1/2)
SUFFIX: -12

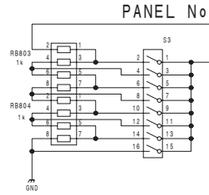
PR-312 (1/2)
SUFFIX: -12

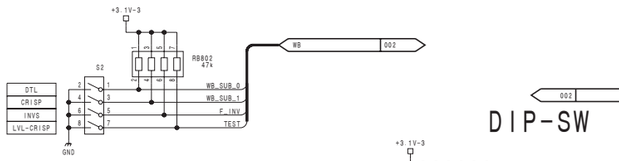


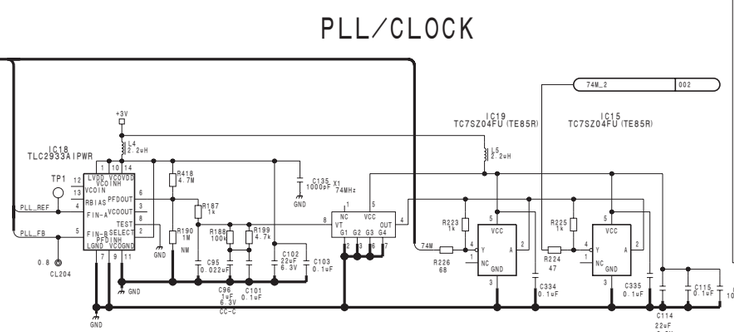


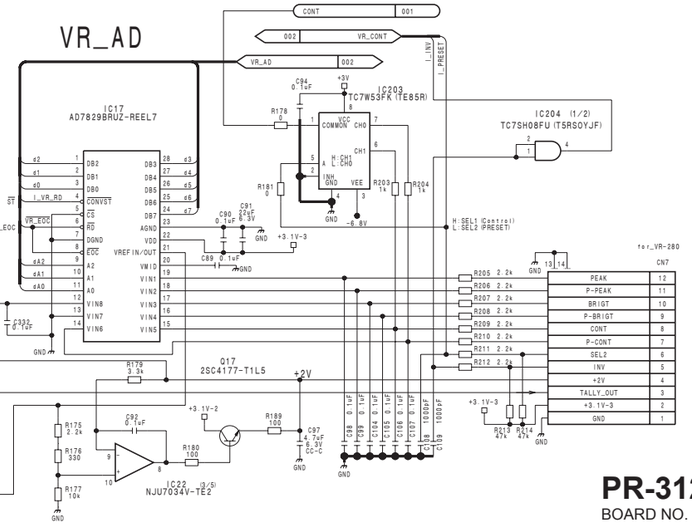


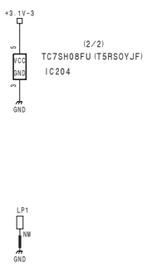




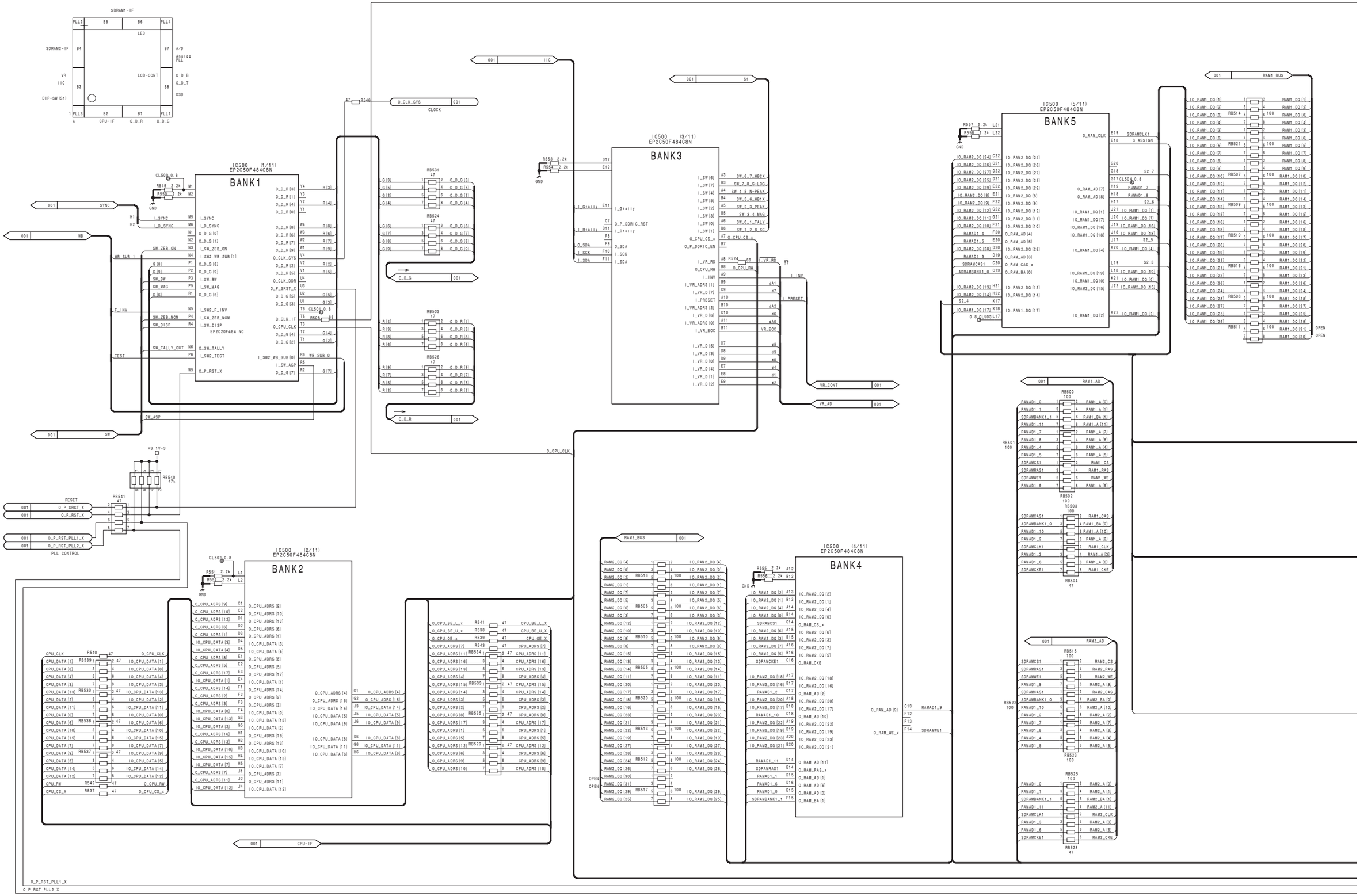








PR-312 (1/2)
BOARD NO. 1-879-250-12


SDRAM1-IF
SDRAM2-IF
VR
IIC
DIP-SW(S1)
LED
LCD-CONT
A/D
Analog PLL
O_D_B
O_D_T
OSD
PLL3
CPU-IF
O_D_R
O_D_G
PLL1
PLL2
PLL4
IC500 (1/11) EP2C50F484C8N
BANK1
EP2C20F484 NC
IC500 (2/11) EP2C50F484C8N
BANK2
IC500 (3/11) EP2C50F484C8N
BANK3
IC500 (4/11) EP2C50F484C8N
BANK4
IC500 (5/11) EP2C50F484C8N
BANK5
SYNC
WB
SW
RESET
PLL CONTROL
CLOCK
IIC
S1
RAM1_BUS
RAM2_BUS
RAM1_AD
RAM2_AD
CPU-IF
O_CPU_CLK
O_P_RST_PLL1_X
O_P_RST_PLL2_X
VR_CONT
VR_AD
SW_ASP
WB_SUB_O
F_INV
TEST
SW_TALLY_OUT
SW_ZEB_ON
SW_ZEB_MOM
SW_DISP
SW_BW
SW_MAG
WB_SUB_1
SDRAMCLK1
S_ASSIGN
SDRAMCAS1
SDRAMRAS1
SDRAMWE1
SDRAMBANK1_0
SDRAMBANK1_1
RAMAD1_0
RAMAD1_1
RAMAD1_2
RAMAD1_3
RAMAD1_4
RAMAD1_5
RAMAD1_6
RAMAD1_7
RAMAD1_8
RAMAD1_9
RAMAD1_10
RAMAD1_11
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RAMA1_BA (1)
RAMA1_A (0)
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RAMA1_A (2)
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RAM1_WE
RAM1_CAS
RAM1_CLK
RAM1_CKE
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RAM2_RAS
RAM2_WE
RAM2_CAS
RAM2_CLK
RAM2_CKE
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CPU_DATA (15)
CPU_RW
CPU_CS_x
CPU_CLK
CPU_ADRS (0)
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O_RAM_CKE
O_RAM_CS_x
O_RAM_WE_x
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O_RAM_BA (1)
O_RAM_AD (0)
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O_RAM_AD (6)
O_RAM_AD (7)
O_RAM_AD (8)
O_RAM_AD (9)
O_RAM_AD (10)
O_RAM_CAS_x
O_RAM_RAS_x
SW_0_1_TALY
SW_1_2_B_SC
SW_2_3_PEAK
SW_3_4_MAG
SW_4_5_N-PEAK
SW_5_6_WB1X
SW_6_7_WB2X
SW_7_8_S-LOG
SW_INV
SW_PRESET
VR_EOC
VR_RD
VR_WR
I_Rtally
I_Gtally
O_SDA
I_SCK
I_SDA
O_P_DDRIC_RST
R540 47
R541 47
R542 47
R543 47
R548 47
R549 2.2k
R550 2.2k
R551 2.2k
R552 2.2k
R553 2.2k
R554 2.2k
R555 2.2k
R556 2.2k
R557 2.2k
R558 2.2k
R524 68
R525 68
RB501 100
RB502 100
RB503 100
RB504 47
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RB513 47
RB514 47
RB515 100
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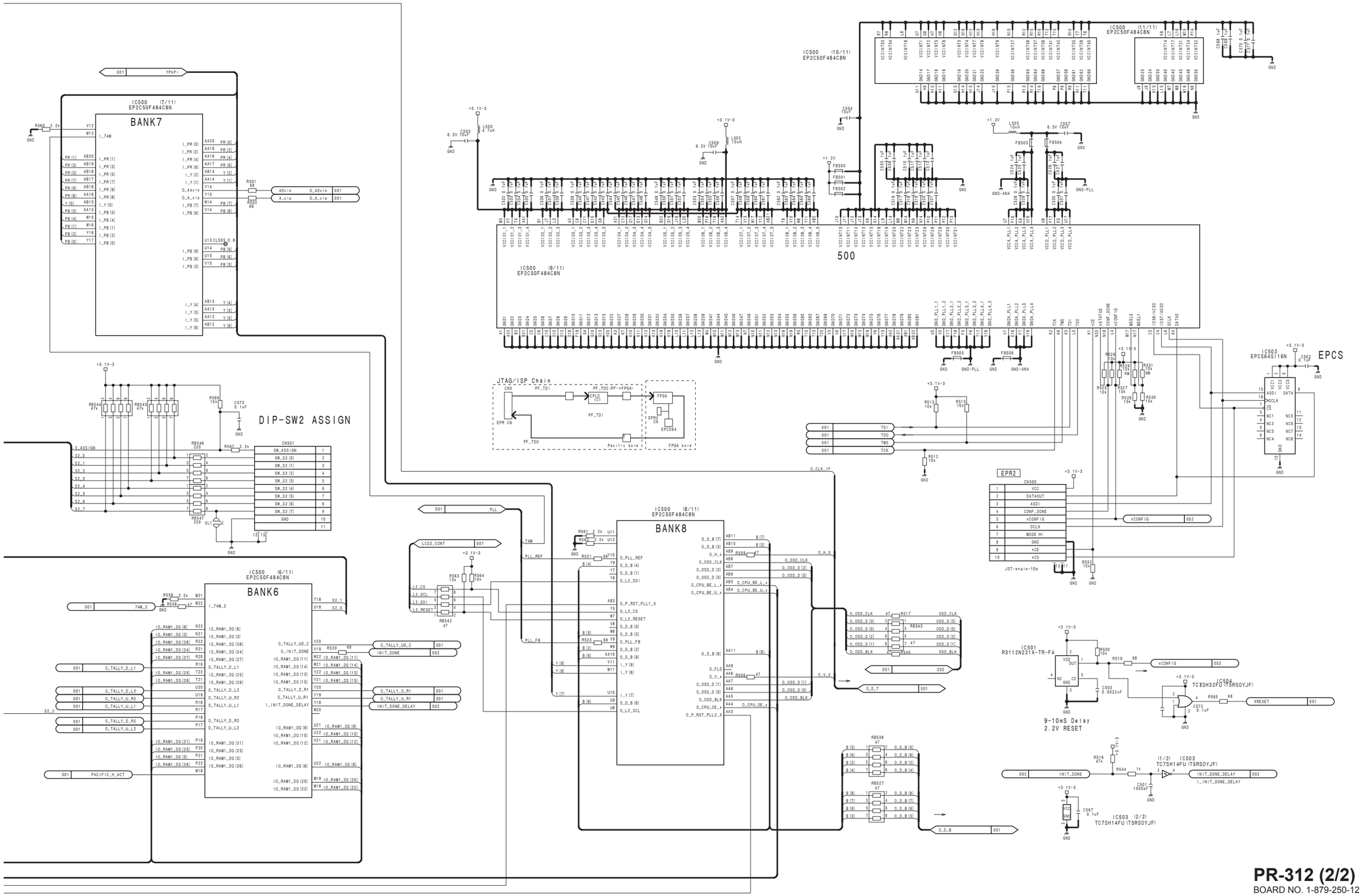
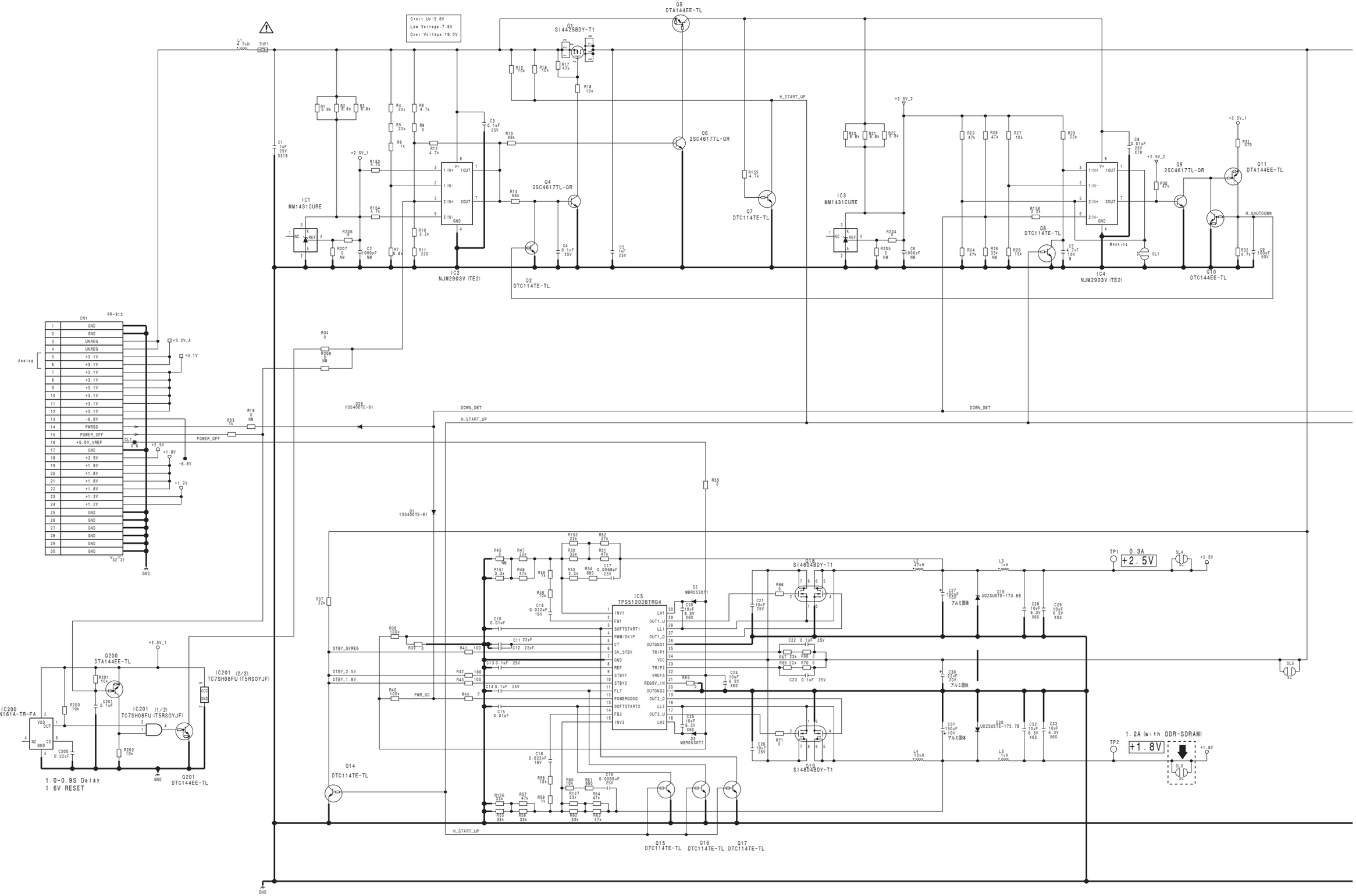
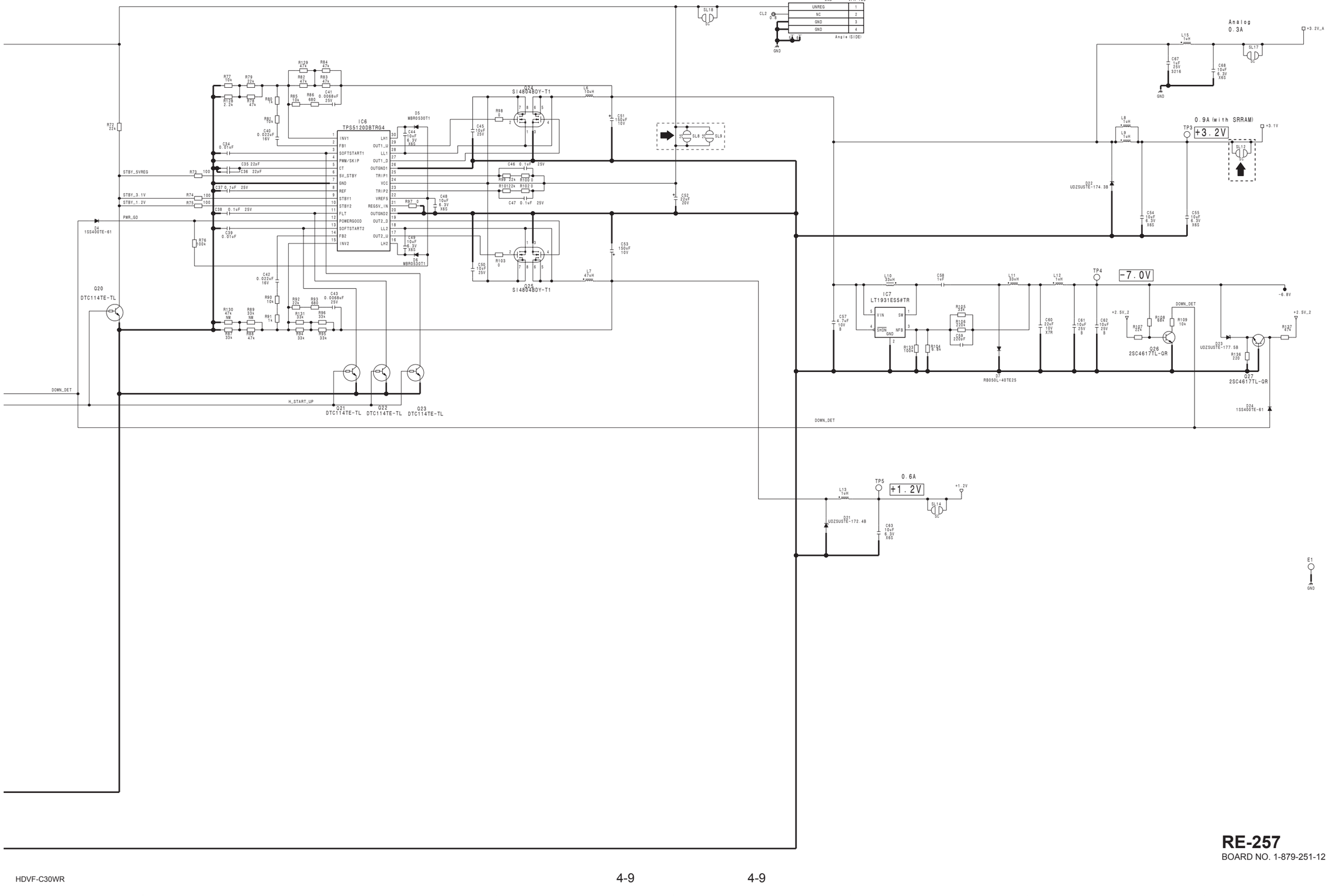
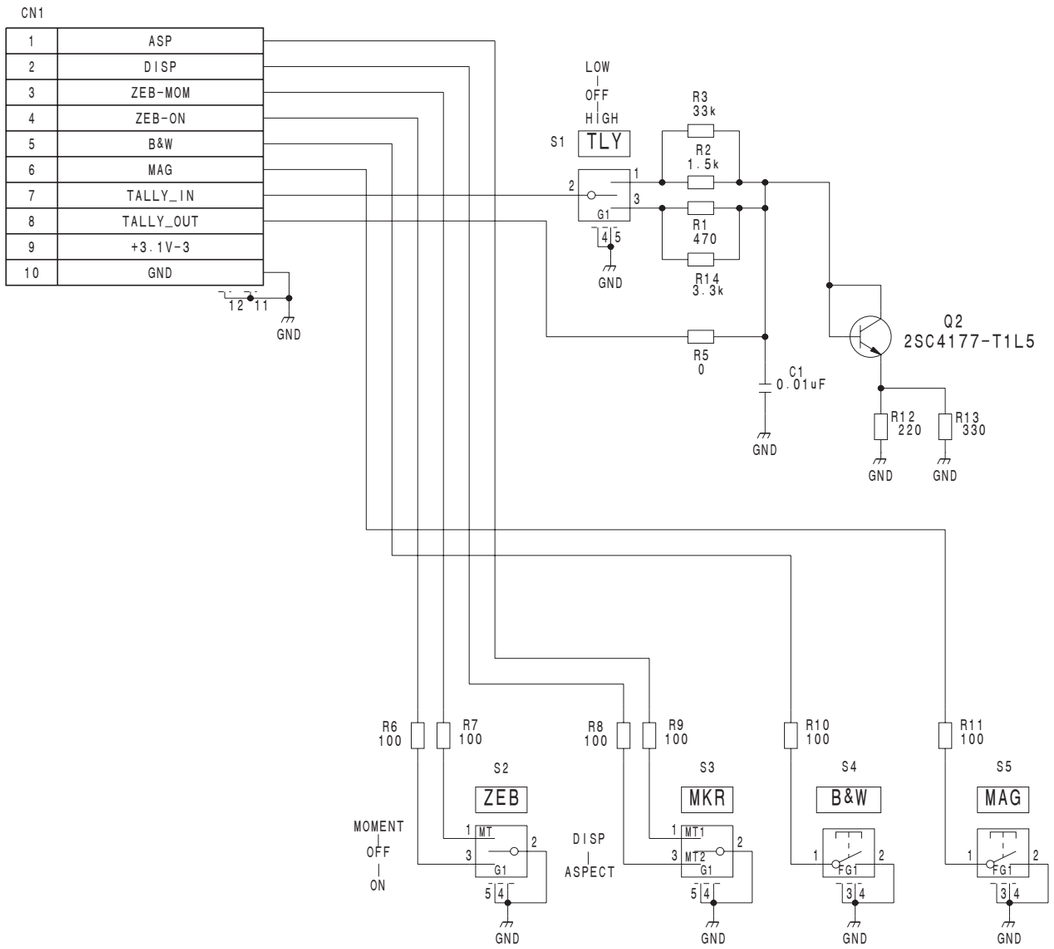
RB535 47
RB536 47
RB537 47
RB538 47
RB539 47
RB540 47K
RB541 47
RB542 47
RB543 47
CL500_0.8
CL501_0.8
CL502_0.8
CL503_0.8
+3.1V-3
GND
OPEN

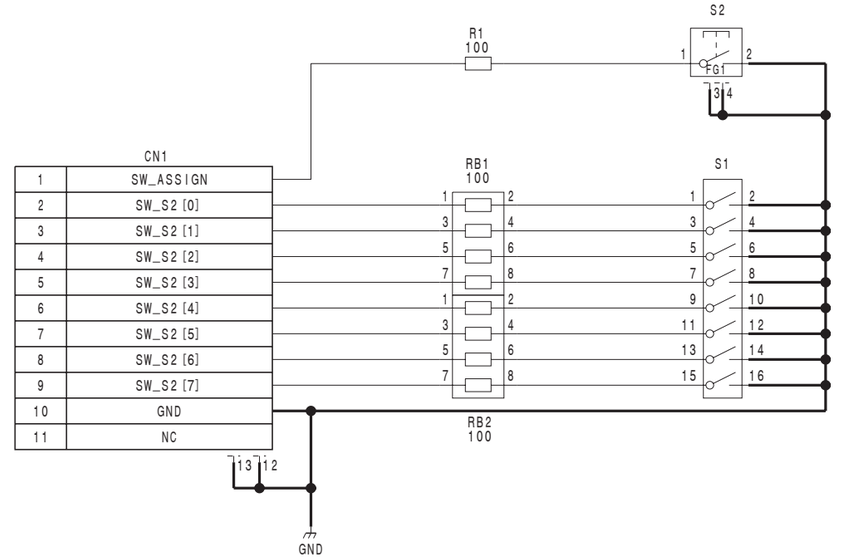

IC500 (7/11) EP2C50F484C8N
BANK7
IC500 (10/11) EP2C50F484C8N
IC500 (11/11) EP2C50F484C8N
IC500 (9/11) EP2C50F484C8N
500
IC500 (8/11) EP2C50F484C8N
BANK8
IC500 (6/11) EP2C50F484C8N
BANK6
DIP-SW2 ASSIGN
JTAG/ISP Chain
Pacific board
FPGA board
IC502 EPCS64S116N
EPCS
EPR2
IC501 R3112N221A-TR-FA
9-10mS Delay 2.2V RESET
IC503 TC7SH14FU (T5RSOYJF)
IC505 TC7SH32FU (T5RSOYJF)
PR-312 (2/2)
BOARD NO. 1-879-250-12


Start Up:9.8V
Low Voltage:7.5V
Over Voltage:19.0V
L1 4.7uH
THP1
Q1 SI4425BDY-T1
Q5 DTA144EE-TL
Q6 2SC4617TL-QR
Q4 2SC4617TL-QR
Q7 DTC114TE-TL
Q2 DTC114TE-TL
IC1 MM1431CURE
IC2 NJM2903V (TE2)
IC3 MM1431CURE
IC4 NJM2903V (TE2)
Q8 DTC114TE-TL
Q9 2SC4617TL-QR
Q10 DTA144EE-TL
Q11 DTA144EE-TL
H_START_UP
+2.5V_1
+2.5V_2
H_SHUTDOWN
Masking
SL1
PR-312
CN1
Analog
+3.2V_A
+3.1V
D25 1SS400TE-61
D1 1SS400TE-61
DOWN_DET
POWER_OFF
+2.5V
+1.8V
-6.8V
+1.2V
GND
IC5 TPS5120DBTRG4
Q18 SI4804BDY-T1
Q19 SI4804BDY-T1
D2 MBR0530T1
D3 MBR0530T1
Q14 DTC114TE-TL
Q15 DTC114TE-TL
Q16 DTC114TE-TL
Q17 DTC114TE-TL
STBY_5VREG
STBY_2.5V
STBY_1.8V
PWR_GD
Q200 DTA144EE-TL
IC200 R3112N161A-TR-FA
IC201 (1/2) TC7SH08FU (T5RSOYJF)
IC201 (2/2) TC7SH08FU (T5RSOYJF)
Q201 DTC144EE-TL
1.0-0.9S Delay
1.6V RESET
TP1 0.3A +2.5V
TP2 1.2A (with DDR-SDRAM) +1.8V
D19 UDZSUSTE-173.6B
D20 UDZSUSTE-172.7B

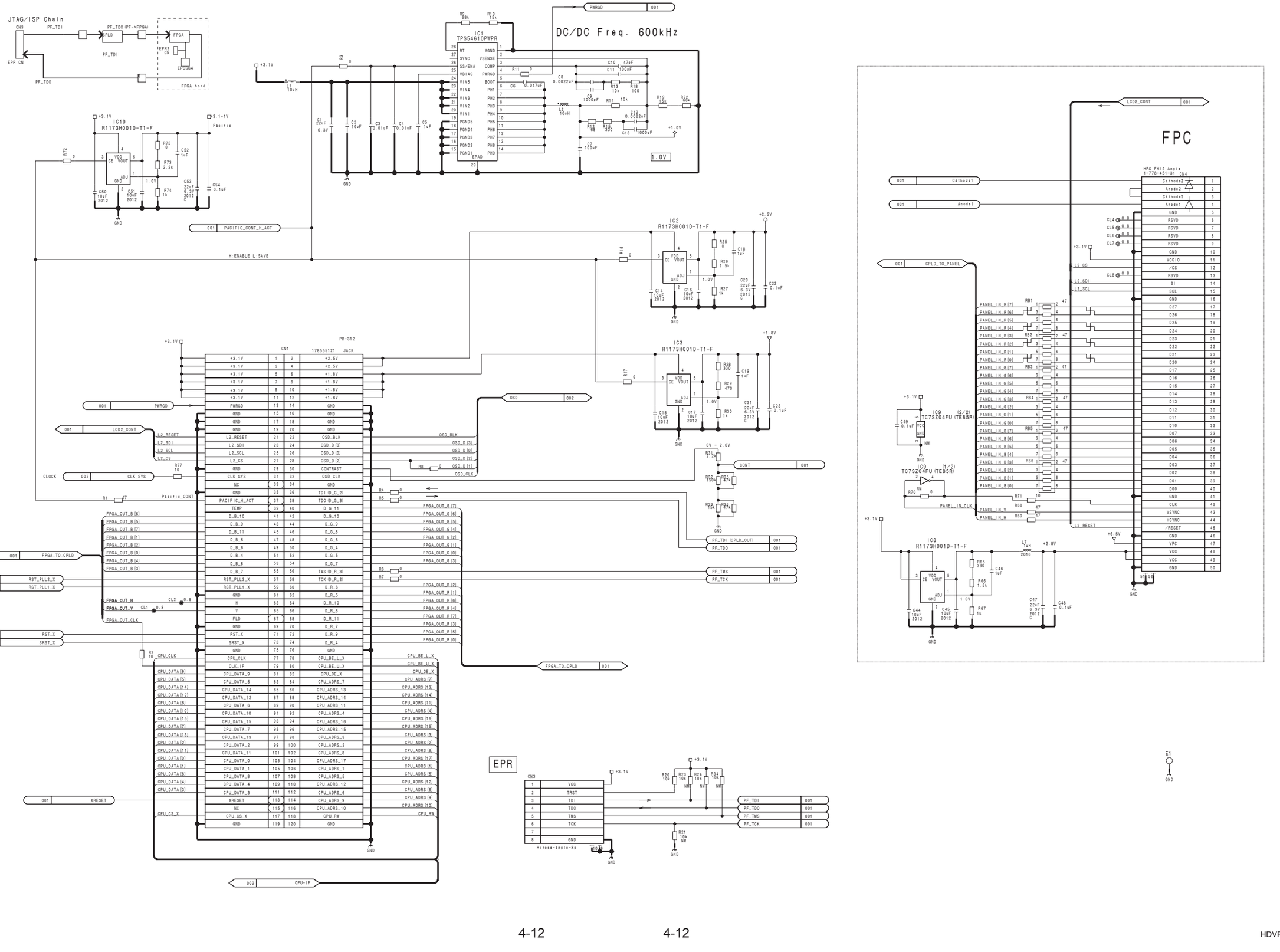

CN5 VPR-103
UNREG 1
NC 2
GND 3
GND 4
Angle (SIDE)
CL2
IC6
TPS5120DBTRG4
Q24 SI4804BDY-T1
Q25 SI4804BDY-T1
D4 1SS400TE-61
D5 MBR0530T1
D6 MBR0530T1
Q20 DTC114TE-TL
Q21 DTC114TE-TL
Q22 DTC114TE-TL
Q23 DTC114TE-TL
STBY_5VREG
STBY_3.1V
STBY_1.2V
PWR_GO
DOWN_DET
H_START_UP
Analog 0.3A
+3.2V_A
0.9A (with SRRAM)
TP3 +3.2V
+3.1V
D22 UDZSUSTE-174.3B
IC7 LT1931ES5#TR
TP4 -7.0V
-6.8V
D7 RB050L-40TE25
Q26 2SC4617TL-QR
Q27 2SC4617TL-QR
D24 1SS400TE-61
D23 UDZSUSTE-177.5B
TP5 0.6A +1.2V
D21 UDZSUSTE-172.4B
E1 GND



SW-1436
BOARD NO. 1-879-255-12



SW-1437
BOARD NO. 1-879-256-12


JTAG/ISP Chain
CN3
PF_TDI
PF_TDI (PF->FPGA)
EPLD
FPGA
EPR2 CN
EPCS64
PF_TDI
EPR CN
PF_TDO
FPGA board
DC/DC Freq. 600kHz
IC1
TPS54610PWPR
PWRGD
001
1.0V
IC10
R1173H001D-T1-F
Pacific
GND
001 PACIFIC_CONT_H_ACT
H:ENABLE L:SAVE
IC2
R1173H001D-T1-F
+2.5V
IC3
R1173H001D-T1-F
+1.8V
PR-312
CN1
178555121 JACK
001 PWRGD
001 LCD2_CONT
CLOCK
002 CLK_SYS
Pacific_CONT
001 FPGA_TO_CPLD
PLL CONTROL
002 RST_PLL2_X
002 RST_PLL1_X
FPGA_OUT_H
FPGA_OUT_V
FPGA_OUT_CLK
RESET
002 RST_X
002 SRST_X
001 XRESET
002 CPU-IF
OSD
002
OSD_BLK
OSD_D [3]
OSD_D [0]
OSD_D [2]
OSD_D [1]
OSD_CLK
0V ~ 2.0V
CONT
001
PF_TDI (CPLD_OUT)
PF_TDO
PF_TMS
PF_TCK
FPGA_OUT_G [7]
FPGA_OUT_G [6]
FPGA_OUT_G [5]
FPGA_OUT_G [4]
FPGA_OUT_G [2]
FPGA_OUT_G [1]
FPGA_OUT_G [0]
FPGA_OUT_G [3]
FPGA_OUT_R [2]
FPGA_OUT_R [1]
FPGA_OUT_R [6]
FPGA_OUT_R [4]
FPGA_OUT_R [7]
FPGA_OUT_R [3]
FPGA_OUT_R [5]
FPGA_OUT_R [0]
FPGA_TO_CPLD
001
CPU_BE_L_X
CPU_BE_U_X
CPU_OE_X
CPU_ADRS [7]
CPU_ADRS [13]
CPU_ADRS [14]
CPU_ADRS [11]
CPU_ADRS [4]
CPU_ADRS [16]
CPU_ADRS [15]
CPU_ADRS [3]
CPU_ADRS [2]
CPU_ADRS [8]
CPU_ADRS [17]
CPU_ADRS [1]
CPU_ADRS [5]
CPU_ADRS [12]
CPU_ADRS [6]
CPU_ADRS [9]
CPU_ADRS [10]
CPU_RW
CPU_CLK
CPU_DATA [9]
CPU_DATA [5]
CPU_DATA [14]
CPU_DATA [12]
CPU_DATA [6]
CPU_DATA [10]
CPU_DATA [15]
CPU_DATA [7]
CPU_DATA [13]
CPU_DATA [2]
CPU_DATA [11]
CPU_DATA [0]
CPU_DATA [1]
CPU_DATA [8]
CPU_DATA [4]
CPU_DATA [3]
CPU_CS_X
EPR
CN3
VCC
TRST
TDI
TDO
TMS
TCK
GND
Hirose-angle-8p
PF_TDI 001
PF_TDO 001
PF_TMS 001
PF_TCK 001
FPC
HRS FH12 Angle
1-778-451-31 CN4
001 Cathode1
001 Anode1
001 CPLD_TO_PANEL
IC9 (2/2)
TC7SZ04FU (TE85R)
IC9 (1/2)
TC7SZ04FU (TE85R)
IC8
R1173H001D-T1-F
PANEL_IN_CLK
PANEL_IN_V
PANEL_IN_H
L2_RESET
L2_CS
L2_SDI
L2_SCL
E1
GND

VPR-103 (1/2)
SUFFIX: -12

EPM570F256C5N

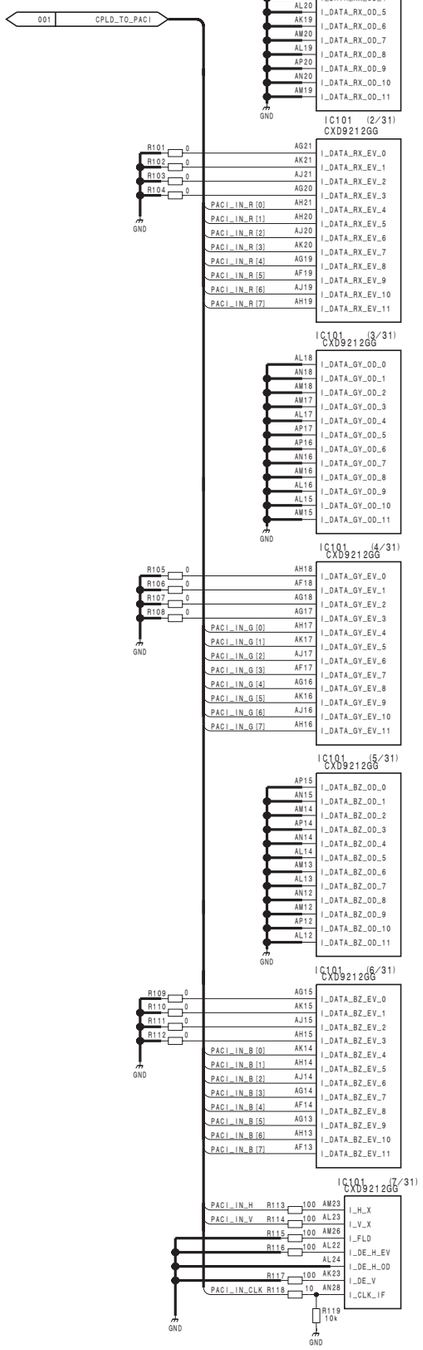
LCD REF

BackLight POWER 1

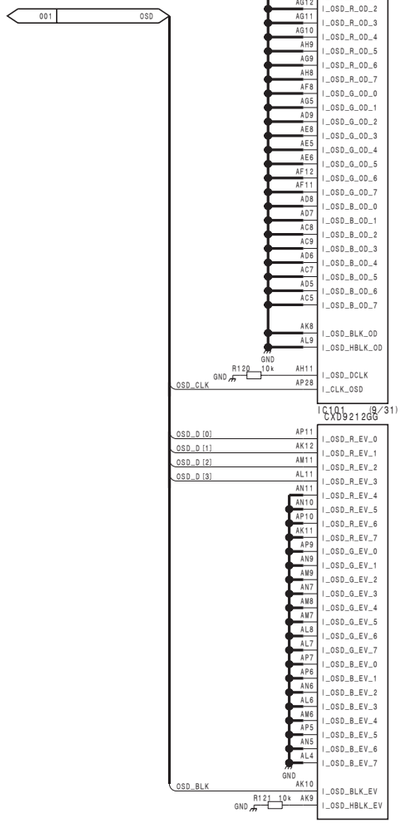
4-13

VPR-103 (2/2)
SUFFIX: -12

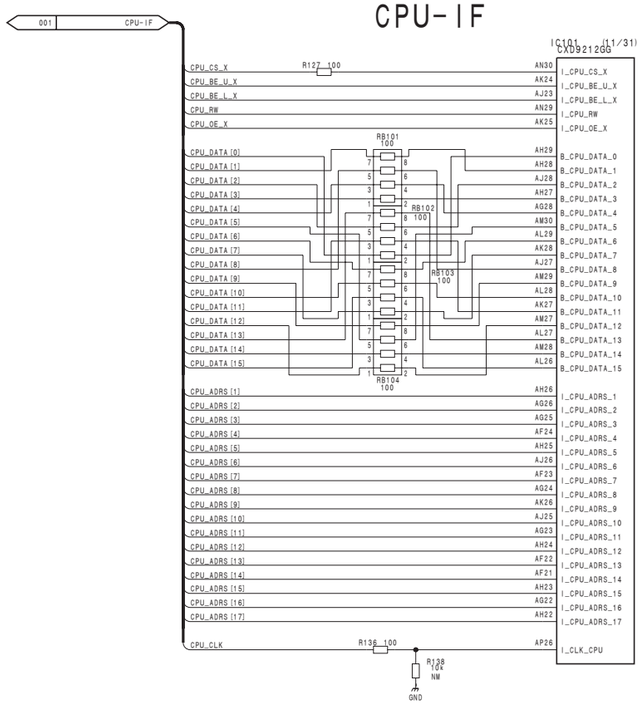
INPUT

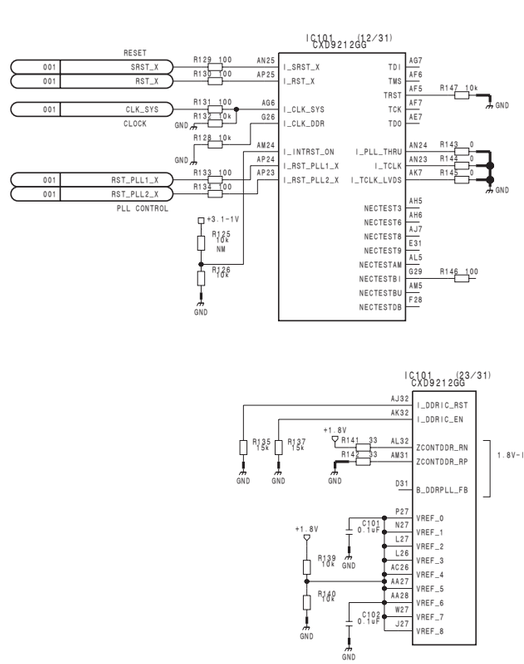


OSD

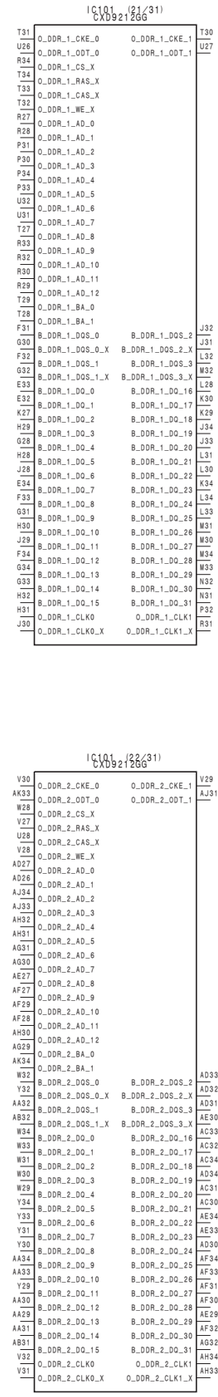


CPU-IF



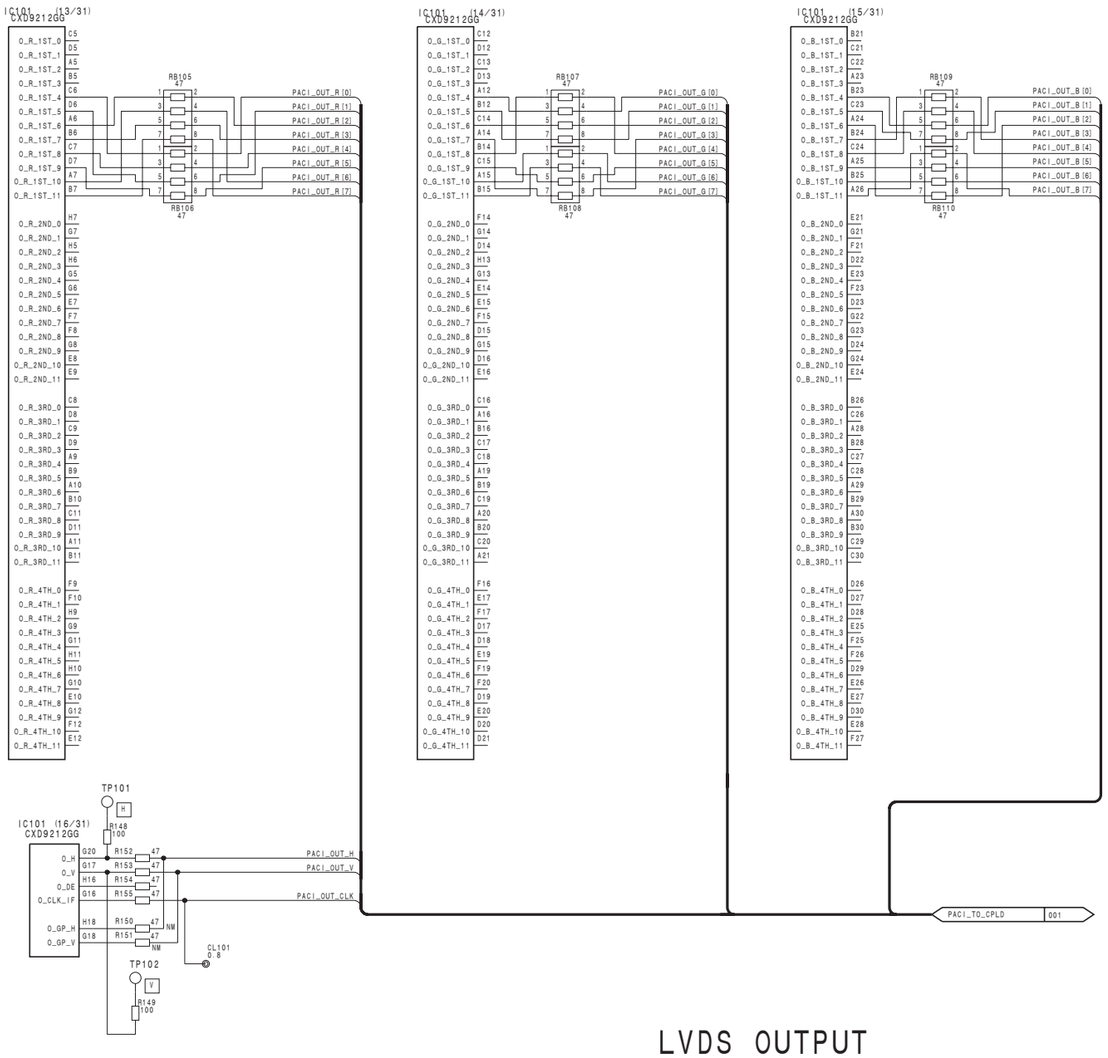


SDRAM-IF

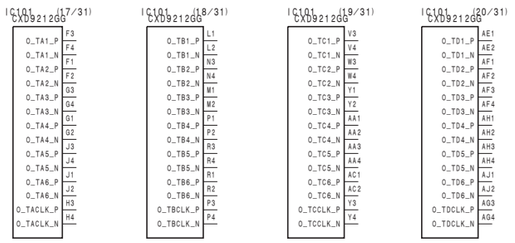


4-14

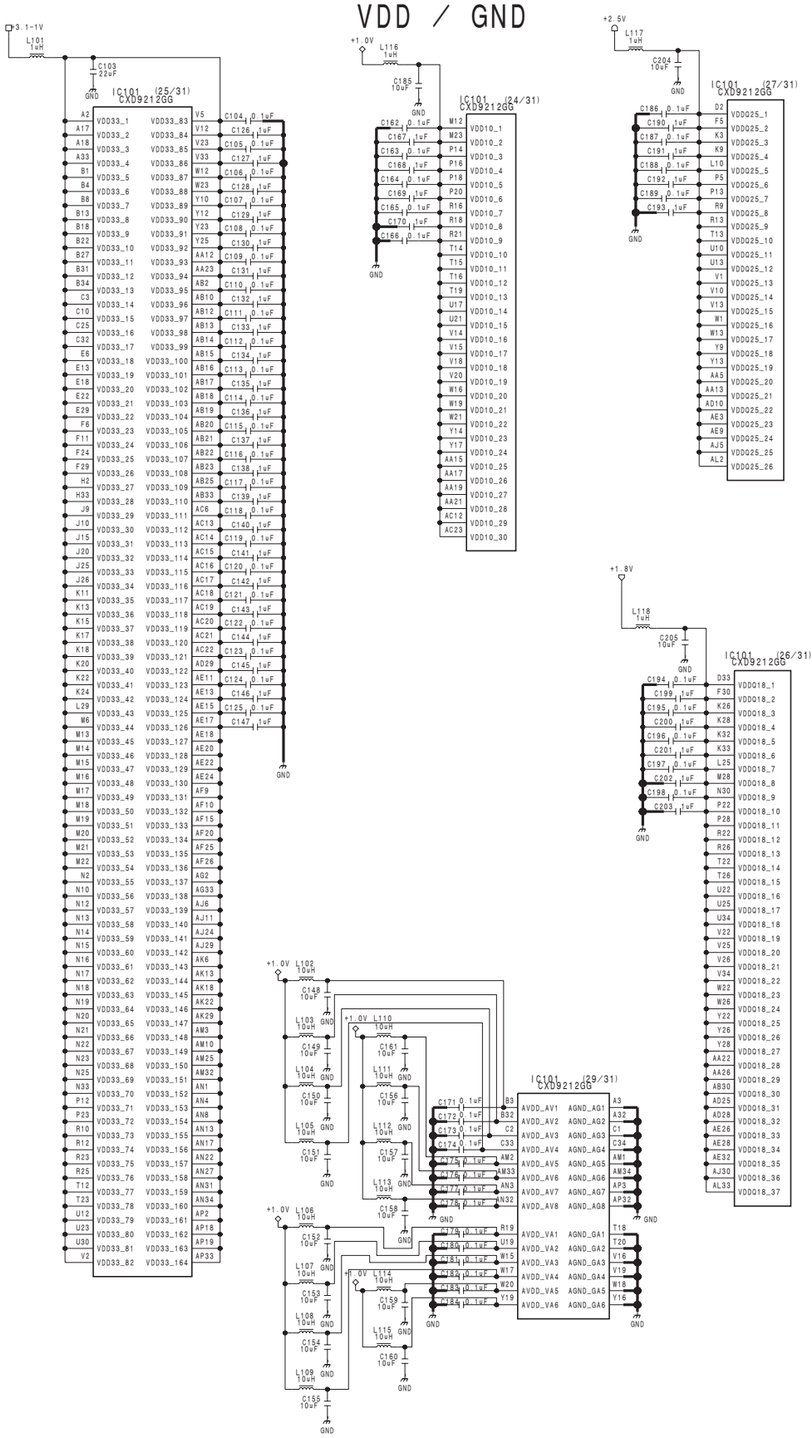
LVTTL OUTPUT



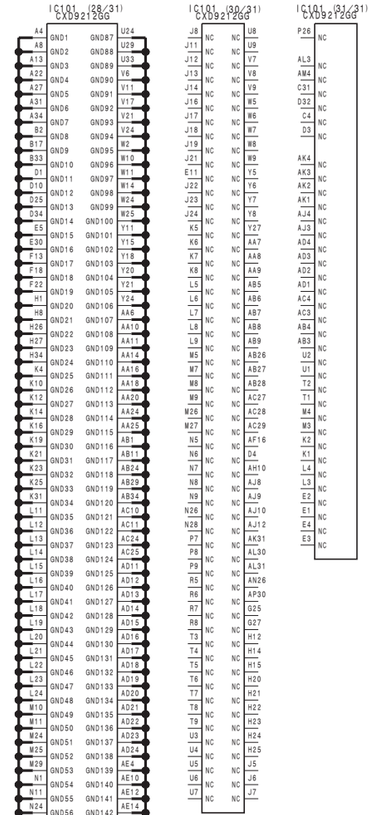
LVDS OUTPUT



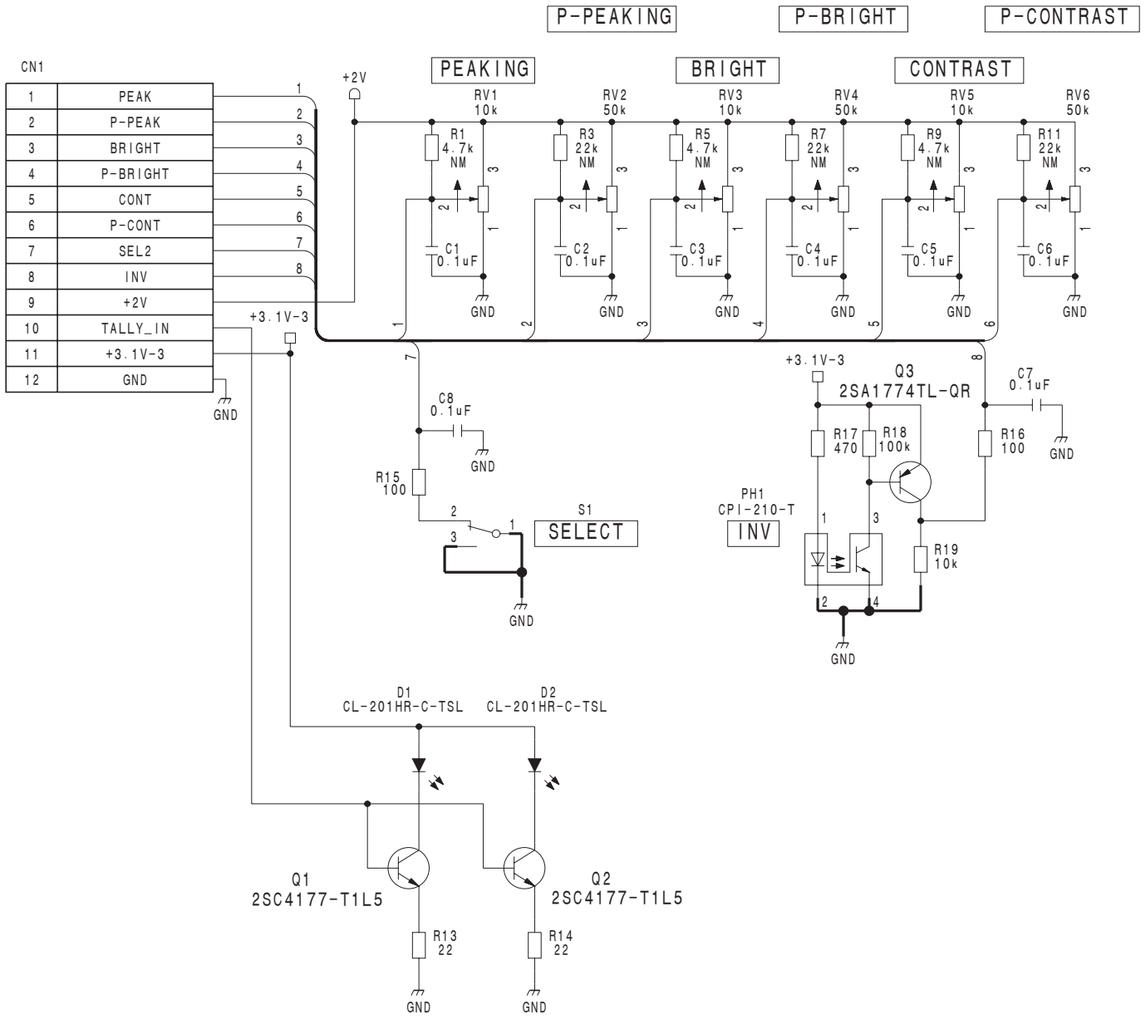
VDD / GND

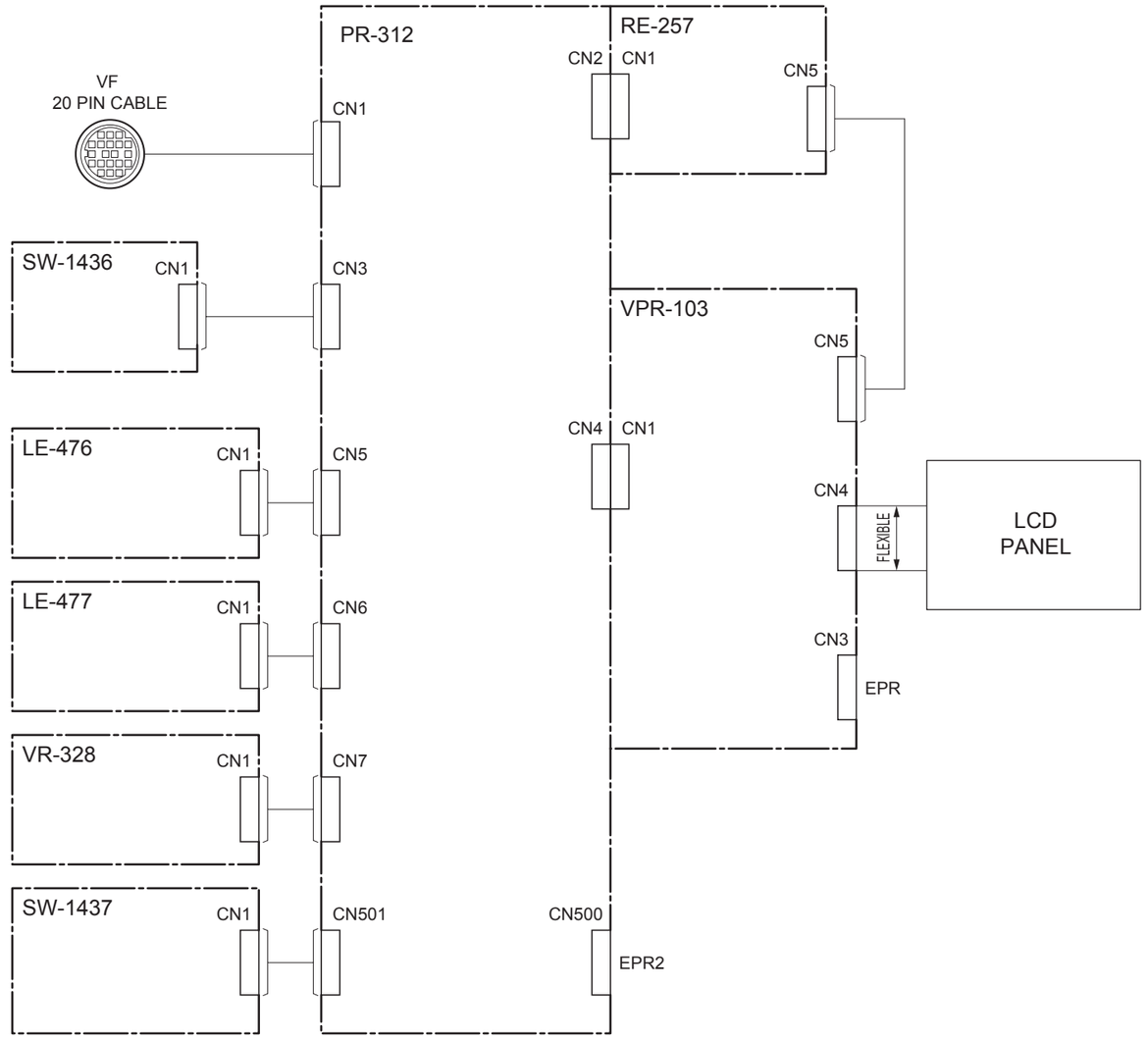


N.C.



VPR-103 (2/2)
BOARD NO. 1-879-252-12



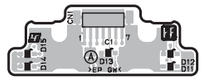


VR-328
BOARD NO. 1-879-257-12

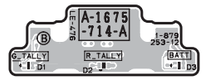
Frame Wiring

Section 5
Board Layouts

Index

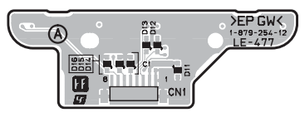


LE-476 -A SIDE-
SUFFIX: -12

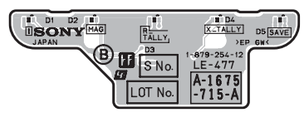


LE-476 -B SIDE-
SUFFIX: -12

```
--------------------
LE-476 (1-879-253-12)
--------------------
*:B SIDE

C1       A1

CN1      A1

D1      *A1
D2      *A1
D3      *A1
D11      A1
D12      A1
D13      A1
D14      A1
D15      A1
```

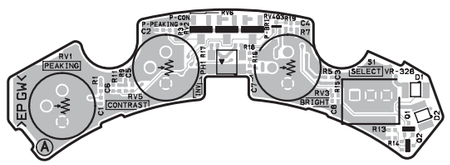


LE-477 -A SIDE-
SUFFIX: -12

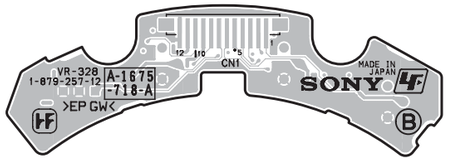


LE-477 -B SIDE-
SUFFIX: -12

```
--------------------
LE-477 (1-879-254-12)
--------------------
*:B SIDE

C1       A1

CN1      A1

D1      *A1
D2      *A1
D3      *A1
D4      *A1
D5      *A1
D11      A1
D12      A1
D13      A1
D14      A1
D15      A1
D16      A1
```

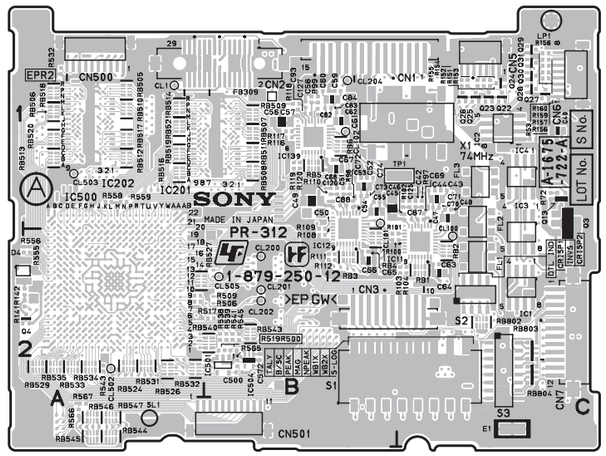


VR-328 -A SIDE-
SUFFIX: -12

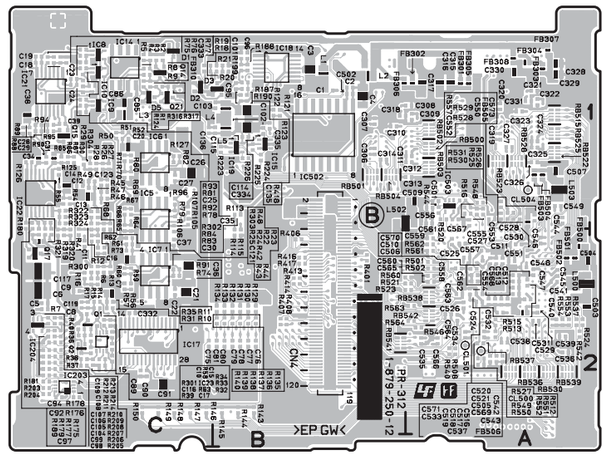


VR-328 -B SIDE-
SUFFIX: -12

```
--------------------
VR-328 (1-879-257-12)
--------------------
*:B SIDE

C1       A1    R3       A1
C2       A1    R5       A1
C3       A1    R7       A1
C4       A1    R9       A1
C5       A1    R11      A1
C6       A1    R13      A1
C7       A1    R14      A1
C8       A1    R15      A1
               R16      A1
CN1     *A1    R17      A1
               R18      A1
D1       A1    R19      A1
D2       A1
               RV1      A1
PH1      A1    RV2      A1
               RV3      A1
Q1       A1    RV4      A1
Q2       A1    RV5      A1
Q3       A1    RV6      A1

R1       A1    S1       A1
```



PR-312 -A SIDE-
SUFFIX: -12

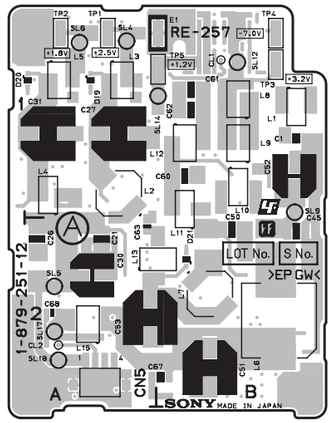


PR-312 -B SIDE-
SUFFIX: -12

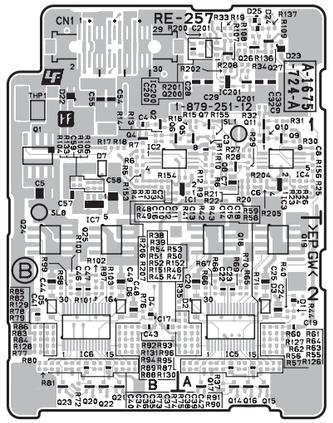
PR-312 (1-879-250-12)
---
*:B SIDE

C1	*B1	C53	B1	C103	*B1	C500	B2	C554	*A2	D4	A2	IC202	A1	R10	*C2	R59	*C2	R108	B2	R158	C1	R414	*B2	R559	A1	RB533	A2
C2	*B1	C54	B1	C104	*C2	C501	*A1	C555	*A1	D5	*C1	IC203	*C2	R11	*C2	R60	*C2	R109	B2	R159	C1	R416	*B2	R560	*A2	RB534	A2
C3	*B1	C55	B1	C105	*C2	C502	*B1	C556	*A1			IC204	*C2	R12	*C2	R61	*C2	R110	B1	R160	C1	R417	*B2	R561	*A2	RB535	A2
C4	*B1	C56	B1	C106	*C2	C503	*A2	C557	*A2	E1	C2	IC500	A2	R13	*C2	R62	*C2	R111	B2	R175	*C2	R418	*B1	R562	*A2	RB536	*A2
C5	*C2	C57	B1	C107	*C2	C504	*A2	C558	*A2			IC501	B2	R14	*C2	R63	*C2	R112	B2	R176	*C1	R500	B2	R563	*A2	RB537	*A2
C6	*C2	C58	B1	C108	*C2	C505	*A2	C559	*A2	FB301	*A1	IC502	*B1	R15	*C2	R64	*C1	R113	*B1	R177	*C2	R501	*A2	R564	*A2	RB538	*A2
C7	*C2	C59	B1	C109	*C2	C506	*A2	C560	*A2	FB302	*A1	IC503	*A1	R16	*C2	R65	*C1	R114	*B2	R178	*C2	R502	*A2	R565	B2	RB539	*A2
C8	*C2	C60	B1	C114	*B1	C507	*A1	C561	*A1	FB303	*A1	IC504	B2	R17	*C2	R66	*C1	R115	*B2	R179	*C2	R506	A2	R566	A2	RB540	B2
C9	*C2	C61	B1	C115	*B1	C509	*A1	C562	*A2	FB304	*A1			R18	*B1	R67	*C1	R116	B1	R180	*C1	R508	*A2	R567	A2	RB541	*B2
C10	*C2	C62	B1	C116	*C2	C510	*A2	C563	*A2	FB305	*A1	L1	*B1	R19	*B1	R68	*C1	R117	B1	R181	*C2	R509	A2			RB542	*A2
C11	*C2	C63	C2	C117	*C2	C511	*A2	C564	*A2	FB306	*B1	L2	*B1	R20	*B1	R69	*C1	R118	B1	R187	*B1	R512	*A2	RB1	C2	RB543	B2
C12	*C1	C64	C2	C119	*C2	C512	*A2	C565	*A2	FB307	*A1	L3	*C1	R21	*B1	R70	*C1	R119	B1	R188	*B1	R513	*A2	RB2	C2	RB544	A2
C13	*C1	C65	B2	C121	*C2	C513	*A2	C566	*A2	FB308	*A1	L4	*B1	R22	*C1	R71	*C1	R120	B1	R189	*C2	R515	*A2	RB3	B2	RB545	A2
C14	*C1	C66	B2	C123	*C1	C516	*A2	C567	*A1	FB309	B1	L5	*B1	R23	*C1	R72	C1	R121	*B1	R190	*B1	R516	*A1	RB4	B2	RB546	A2
C15	*C2	C67	B1	C125	C1	C517	*A2	C568	*A2	FB310	*C1	L500	*A2	R24	*C1	R73	*C2	R122	*B1	R199	*B1	R517	B2	RB5	B1	RB547	A2
C16	*C2	C68	B1	C126	B1	C518	*A2	C569	*A2	FB500	*A2	L502	*A1	R25	*C1	R74	*C2	R123	*B1	R203	*C2	R519	B2	RB6	B1	RB802	C2
C17	*C2	C69	C1	C127	B1	C519	*A2	C570	*A2	FB501	*A2	L503	*A1	R26	*C1	R75	*C1	R124	*C1	R204	*C2	R520	*A1	RB500	*A1	RB803	C2
C18	*C1	C70	C1	C135	*B1	C520	*A2	C571	*A2	FB502	*A2			R27	*C1	R76	*C1	R125	*C1	R205	*C2	R521	*A2	RB501	*B1	RB804	C2
C19	*C1	C71	C1	C136	*C1	C521	*A2	C572	B2	FB503	*A1	LP1	C1	R28	*C1	R77	*C1	R126	*C1	R206	*C2	R523	*A2	RB502	*A1		
C20	*C1	C72	B1	C306	*B1	C524	*A2	C573	*A1	FB504	*A1			R29	*C1	R78	*C1	R127	*C1	R207	*C2	R524	*A2	RB503	*A1	S1	C2
C21	*C2	C73	B1	C307	*B1	C525	*A2			FB505	*A1	Q1	*C2	R30	*C1	R79	*C1	R129	*B2	R208	*C2	R525	*A1	RB504	*B1	S2	C2
C22	*C2	C74	B1	C308	*A1	C526	*A2	CL1	A1	FB506	*A2	Q2	*C2	R31	*C2	R80	*C1	R130	*B2	R209	*C2	R526	*A1	RB505	A1	S3	C2
C23	*C1	C75	*C2	C309	*A1	C527	*A2	CL100	C2			Q3	C1	R32	*C2	R81	*C1	R131	*B2	R210	*C2	R527	*A2	RB506	A1		
C24	*C1	C76	*B2	C310	*B1	C528	*A2	CL101	B1	FL1	C2	Q4	A2	R33	*C2	R82	*C1	R132	*B2	R211	*C2	R528	*A1	RB507	B1	SL1	A2
C25	*C1	C77	*B2	C311	*A1	C529	*A2	CL102	B1	FL2	C1	Q13	C1	R34	*C2	R83	*C1	R133	*B2	R212	*C2	R529	*A1	RB508	B1		
C26	*C1	C78	*B2	C312	*A1	C530	*A2	CL200	B2	FL3	C1	Q14	*C1	R35	*C2	R84	*C1	R134	*B2	R213	*C2	R530	*A1	RB509	B1	TP1	C1
C27	*C1	C79	*B2	C313	*A1	C531	*A2	CL201	B2			Q15	*C1	R36	*C2	R85	*C1	R135	*B2	R214	*C2	R531	*A1	RB510	A1		
C28	*C1	C80	*B2	C314	*B1	C532	*A2	CL202	B2	IC1	C2	Q17	*C2	R37	*C2	R86	*C1	R136	*B2	R223	*B1	R532	A1	RB511	B1	X1	C1
C29	*C1	C81	*B2	C315	*A1	C533	*A2	CL204	B1	IC2	C1	Q21	*C1	R38	*C2	R87	*C1	R137	*B2	R224	*B1	R537	*A2	RB512	A1		
C30	*C1	C82	B1	C316	*A1	C534	*A2	CL500	*A2	IC3	C2	Q22	C1	R39	*C2	R88	*C1	R138	*B2	R225	*B1	R538	B2	RB513	A1		
C31	*C1	C83	B1	C317	*A1	C535	*A2	CL501	*A2	IC4	C1	Q23	C1	R40	*C2	R89	*C1	R139	*B2	R226	*B1	R539	B2	RB514	A1		
C34	*C1	C84	B1	C318	*B1	C536	*A2	CL502	A2	IC5	*C1	Q24	C1	R41	*C2	R90	*C1	R140	*B2	R300	*C2	R540	*A2	RB515	*A1		
C35	*C1	C85	*C1	C319	*A1	C537	*A2	CL503	A1	IC6	*C1	Q25	C1	R42	*C2	R91	*C2	R141	A2	R301	*C2	R541	B2	RB516	A1		
C36	*C2	C86	*C1	C320	*A1	C538	*A2	CL504	*A1	IC7	*C2	Q26	C1	R43	*C2	R92	*C1	R142	A2	R302	*C1	R542	*A2	RB517	A1		
C37	*C2	C87	C1	C321	*A1	C539	*A2	CL505	B2	IC8	*C1	Q27	C1	R44	*C2	R93	*C1	R143	*B2	R303	*C1	R543	A2	RB518	A1		
C38	*C1	C88	B1	C322	*A1	C540	*A2			IC9	*C1	Q28	C1	R45	*C1	R94	*C1	R144	*B2	R304	*C1	R544	*A1	RB519	A1		
C39	*C1	C89	*C2	C323	*A1	C541	*A2	CN1	B1	IC10	*C1	Q29	C1	R46	*C1	R95	*C1	R145	*B2	R316	*C1	R545	B2	RB520	A1		
C40	C1	C90	*C2	C324	*A1	C542	*A2	CN2	B1	IC11	C2	Q30	C1	R47	*C1	R96	*C1	R146	*C2	R317	*C1	R546	*A2	RB521	A1		
C42	C1	C91	*C2	C325	*A1	C543	*A2	CN3	B2	IC12	B2	Q31	C1	R48	*C1	R97	C1	R147	*C2	R319	*C2	R548	*A1	RB522	*A1		
C43	C1	C92	*C1	C326	*A1	C544	*A1	CN4	*B2	IC13	B1			R49	*C1	R98	B1	R148	*C2	R320	*C2	R549	*A2	RB523	*A1		
C44	C1	C93	B1	C327	*A1	C545	*A2	CN5	C1	IC14	*C1	R1	*C1	R50	*C1	R99	B1	R149	*C2	R321	*C2	R550	*A2	RB524	A2		
C45	B1	C94	*C2	C328	*A1	C546	*A2	CN6	C1	IC15	*B1	R2	*C1	R51	*C1	R100	B2	R150	*C2	R322	*C1	R551	*A2	RB525	*A1		
C46	C1	C95	*B1	C329	*A1	C547	*A2	CN7	C2	IC17	*C2	R3	*C1	R52	*C1	R101	B2	R151	C1	R323	*C1	R552	*A2	RB526	A2		
C47	C1	C96	*B1	C330	*A1	C548	*A2	CN500	A1	IC18	*B1	R4	*C1	R53	C1	R102	C1	R152	C1	R324	*C1	R553	*A2	RB527	A2		
C48	C1	C97	*C2	C331	*A1	C549	*A1	CN501	B2	IC19	*B1	R5	*C1	R54	*C1	R103	C2	R153	C1	R401	*B2	R554	*A2	RB528	*A1		
C49	B1	C98	*C2	C332	*C2	C550	*A1			IC21	*C1	R6	*C2	R55	*C1	R104	C2	R154	C1	R406	*B2	R555	A2	RB529	A2		
C50	B1	C99	*C2	C333	*C1	C551	*A2	D1	*C1	IC22	*C1	R7	*C2	R56	*C2	R105	*C1	R155	C1	R407	*B2	R556	A2	RB530	*A2		
C51	B1	C101	*B1	C334	*B1	C552	*A1	D2	*C1	IC23	*C2	R8	*C1	R57	*C2	R106	*C2	R156	C1	R408	*B2	R557	*A1	RB531	A2		
C52	B1	C102	*B1	C335	*B1	C553	*A1	D3	*B1	IC201	B1	R9	*C1	R58	*C2	R107	*C1	R157	C1	R413	*B2	R558	A1	RB532	A2		

RE-257, SW-1436, SW-1437



RE-257 -A SIDE-
SUFFIX: -12



RE-257 -B SIDE-
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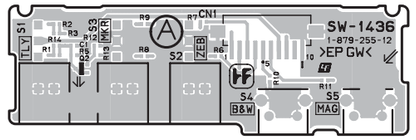

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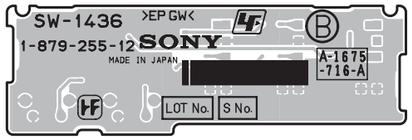
SUFFIX: -12



SW-1436 -B SIDE-
SUFFIX: -12

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RE-257 (1-879-251-12)
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*:B SIDE
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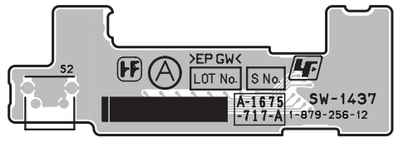
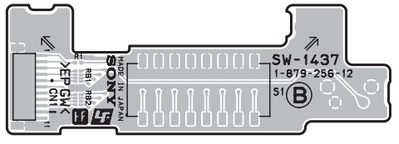
C1	B1	C43	*B2	D24	*A1	Q16	*A2	R28	*A1	R71	*A2	R129	*B2
C2	*B1	C44	*B2	D25	*A1	Q17	*A2	R29	*A1	R72	*B2	R130	*B2
C3	*A1	C45	B2			Q18	*A2	R30	*A1	R73	*B2	R131	*B2
C4	*B1	C46	*B2	E1	B1	Q19	*A2	R31	*A1	R74	*B2	R133	*B1
C5	*B1	C47	*B2			Q20	*B2	R32	*A1	R75	*B2	R136	*A1
C6	*A1	C48	*B2	IC1	*A1	Q21	*B2	R33	*A1	R76	*B2	R137	*A1
C7	*A1	C49	*B2	IC2	*B1	Q22	*B2	R34	*A1	R77	*B2	R151	*A2
C8	*A1	C50	B2	IC3	*A1	Q23	*B2	R35	*A2	R78	*B2	R152	*A2
C9	*A1	C51	B2	IC4	*A1	Q24	*B2	R37	*A2	R79	*B2	R153	*B1
C10	*A2	C52	B1	IC5	*A2	Q25	*B2	R38	*A2	R80	*B2	R154	*A1
C11	*A2	C53	A2	IC6	*B2	Q26	*A1	R39	*A2	R81	*B2	R155	*A1
C12	*A2	C54	*B1	IC7	*B1	Q27	*A1	R40	*A2	R82	*B2	R156	*A1
C13	*A2	C55	*B1	IC200	*A1	Q200	*A1	R41	*A2	R83	*B2	R200	*A1
C14	*A2	C57	*B1	IC201	*A1	Q201	*A1	R42	*A2	R84	*B2	R201	*A1
C15	*A2	C58	*B1					R43	*A2	R85	*B2	R202	*A1
C16	*A2	C59	*B1	L1	B1	R1	*B1	R44	*A2	R86	*B2	R204	*A1
C17	*B2	C60	B1	L2	A1	R2	*B1	R45	*A2	R87	*B2	R205	*A1
C18	*A2	C61	B1	L3	A1	R3	*B1	R46	*A2	R88	*B2	R206	*B1
C19	*A2	C62	B1	L4	A1	R4	*B1	R47	*A2	R89	*B2	R207	*B1
C20	*A2	C63	A2	L5	A1	R5	*B1	R48	*A2	R90	*B2	R208	*A1
C21	A2	C67	B2	L6	B2	R6	*B1	R49	*A2	R91	*B2		
C22	*A2	C68	A2	L7	B2	R7	*B1	R50	*A2	R92	*B2	SL1	*A1
C23	*A2	C200	*A1	L8	B1	R8	*A1	R51	*A2	R93	*B2	SL4	A1
C24	*A2	C201	*A1	L9	B1	R9	*A1	R52	*A2	R94	*B2	SL5	A2
C25	*A2			L10	B1	R10	*A1	R53	*A2	R95	*B2	SL6	A1
C26	A2	CL1	B1	L11	B1	R11	*A1	R54	*A2	R96	*B2	SL8	*B1
C27	A1	CL2	A2	L12	B1	R12	*A1	R55	*A2	R97	*B2	SL9	B1
C28	*A1	CN1	*B1	L13	B2	R13	*B1	R56	*A2	R98	*B2	SL12	B1
C29	*A1	CN5	A2	L15	A2	R14	*B1	R57	*A2	R99	*B2	SL14	B1
C30	A2					R15	*A1	R58	*A2	R100	*B2	SL17	A2
C31	A1	D1	*A2	Q1	*B1	R16	*A1	R59	*A2	R101	*B2	SL18	A2
C32	*A1	D2	*A2	Q2	*B1	R17	*B1	R60	*A2	R102	*B2		
C33	*A1	D3	*A2	Q4	*B1	R18	*B1	R61	*A2	R103	*B2	THP1	*B1
C34	*B2	D4	*B2	Q5	*A1	R19	*A1	R62	*A2	R104	*B1		
C35	*B2	D5	*B2	Q6	*B1	R20	*A1	R63	*A2	R105	*B1	TP1	A1
C36	*B2	D6	*B2	Q7	*A1	R21	*A1	R64	*A2	R106	*B1	TP2	A1
C37	*B2	D7	*B1	Q8	*A1	R22	*A1	R65	*A2	R107	*A1	TP3	B1
C38	*B2	D19	A1	Q9	*A1	R23	*A1	R66	*A2	R108	*A1	TP4	B1
C39	*B2	D20	A1	Q10	*A1	R24	*A1	R67	*A2	R109	*A1	TP5	B1
C40	*B2	D21	B2	Q11	*A1	R25	*A1	R68	*A2	R126	*A2		
C41	*B2	D22	*B1	Q14	*A2	R26	*A1	R69	*A2	R127	*A2		
C42	*B2	D23	*A1	Q15	*A2	R27	*A1	R70	*A2	R128	*B2		



SW-1437 -A SIDE-
SUFFIX: -12



SW-1437 -B SIDE-
SUFFIX: -12

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SW-1437 (1-879-256-12)
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*:B SIDE

CN1     *A1

R1      *A1

RB1     *A1
RB2     *A1

S1      *A1
S2       A1
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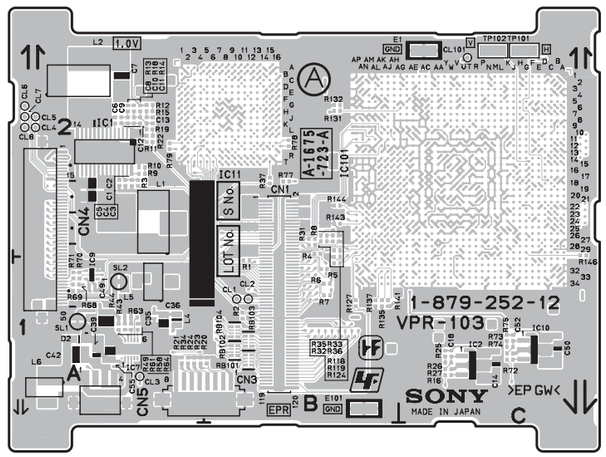
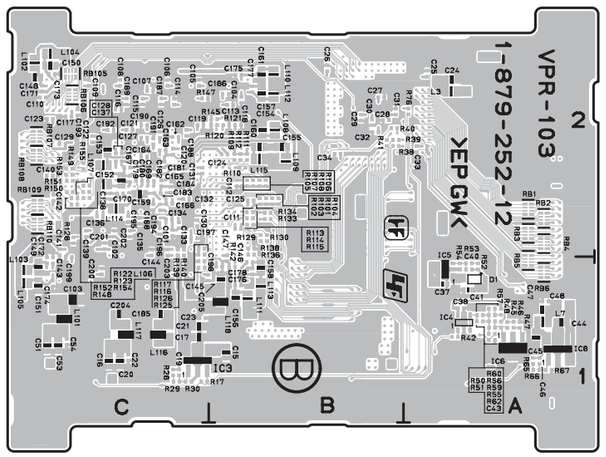
5-3



VPR-103 -A SIDE-
SUFFIX: -12



VPR-103 -B SIDE-
SUFFIX: -12

VPR-103 (1-879-252-12)
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*:B SIDE

C1	A2	C34	*B2	C112	*B2	C145	*C1	C178	*B1	CL5	A2	L4	A1	R11	A2	R44	A1	R77	B2	R131	B2	RB102	B1
C2	A2	C35	A1	C113	*B2	C146	*B1	C179	*C2	CL6	A2	L5	A1	R12	A2	R45	*A1	R78	B2	R132	B2	RB103	B1
C3	A2	C36	A1	C114	*C2	C147	*B1	C180	*C2	CL7	A2	L6	A1	R13	A2	R46	*A1	R79	A2	R133	*B2	RB104	B1
C4	A2	C37	*A1	C115	*C2	C148	*C2	C181	*C2	CL8	A2	L7	*A1	R14	A2	R47	*A1	R101	*B2	R134	*B2	RB105	*C2
C5	A2	C38	*A1	C116	*C2	C149	*C1	C182	*C2	CL101	C2	L101	*C1	R15	A2	R48	*A1	R102	*B2	R135	B1	RB106	*C2
C6	A2	C39	A1	C117	*C2	C150	*C2	C183	*C2			L102	*C2	R16	C1	R49	A1	R103	*B2	R136	*B2	RB107	*C2
C7	A2	C40	*A1	C118	*B2	C151	*C1	C184	*C2	CN1	B1	L103	*C1	R17	*C1	R50	*A1	R104	*B2	R137	B1	RB108	*C2
C8	A2	C41	*A1	C119	*C2	C152	*C2	C185	*C1	CN3	A1	L104	*C2	R18	A2	R51	*A1	R105	*B2	R138	*B2	RB109	*C2
C9	A2	C42	A1	C120	*C2	C153	*C2	C186	*B2	CN4	A2	L105	*C1	R19	A2	R52	*A1	R106	*B2	R139	*C2	RB110	*C2
C10	A2	C43	*A1	C121	*C2	C154	*B2	C187	*C2	CN5	A1	L106	*C2	R20	B1	R53	*A1	R107	*B2	R140	*C2		
C11	A2	C44	*A1	C122	*C2	C155	*B2	C188	*C2			L107	*C2	R21	A1	R54	*A1	R108	*B2	R141	B1	SL1	A1
C12	A2	C45	*A1	C123	*C2	C156	*B1	C189	*C2	D1	*A1	L108	*B2	R22	A2	R55	*A1	R109	*B2	R142	*B1	SL2	A1
C13	A2	C46	*A1	C124	*B2	C157	*B2	C190	*C2	D2	A1	L109	*B2	R23	A1	R56	*A1	R110	*B2	R143	B2		
C14	C1	C47	*A1	C125	*B2	C158	*B1	C191	*C2			L110	*B2	R24	A1	R57	*A1	R111	*B2	R144	B2	TP101	C2
C15	*B1	C48	*A1	C126	*C2	C159	*C2	C192	*C2	E1	C2	L111	*B1	R25	C1	R58	A1	R112	*B2	R145	*B2	TP102	C2
C16	*C1	C49	A1	C127	*C2	C160	*B2	C193	*C2	E101	B1	L112	*B2	R26	C1	R59	*A1	R113	*B2	R146	C2		
C17	*C1	C50	C1	C128	*C2	C161	*B2	C194	*C2			L113	*B1	R27	C1	R60	*A1	R114	*B2	R147	*C2		
C18	C1	C51	*C1	C129	*C2	C162	*C2	C195	*C2	IC1	A2	L114	*C2	R28	*C1	R61	A1	R115	*B2	R148	*C2		
C19	*C1	C52	C1	C130	*C2	C163	*C2	C196	*C2	IC2	C1	L115	*B2	R29	*C1	R62	*A1	R116	*C2	R149	*C2		
C20	*C1	C53	*C1	C131	*C2	C164	*C2	C197	*C2	IC3	*C1	L116	*C1	R30	*C1	R63	A1	R117	*C2	R150	*C2		
C21	*C1	C54	*C1	C132	*C2	C165	*C2	C198	*B1	IC4	*A1	L117	*C1	R31	B2	R64	A1	R118	B2	R151	*C2		
C22	*C1	C55	A1	C133	*C2	C166	*C2	C199	*C1	IC5	*A1	L118	*B1	R32	B2	R65	*A1	R119	B1	R152	*C2		
C23	*C1	C101	*C2	C134	*C2	C167	*C2	C200	*C1	IC6	*A1			R33	B2	R66	*A1	R120	*B2	R153	*C2		
C24	*A2	C102	*C2	C135	*C2	C168	*C2	C201	*C2	IC7	A1	R1	B1	R34	A1	R67	*A1	R121	*B2	R154	*C2		
C25	*A2	C103	*C1	C136	*C2	C169	*C2	C202	*C2	IC8	*A1	R2	B1	R35	B2	R68	A1	R122	*C2	R155	*C2		
C26	*B2	C104	*B2	C137	*C2	C170	*C2	C203	*C2	IC9	A1	R3	A2	R36	B2	R69	A1	R123	*C2				
C27	*B2	C105	*C2	C138	*C2	C171	*C2	C204	*C1	IC10	C1	R4	B2	R37	B2	R70	A1	R124	B1	RB1	*A2		
C28	*B2	C106	*C2	C139	*C2	C172	*C1	C205	*B1	IC11	B2	R5	B1	R38	*B2	R71	A1	R125	*C1	RB2	*A2		
C29	*B2	C107	*C2	C140	*C2	C173	*C2			IC101	C2	R6	B1	R39	*B2	R72	C1	R126	*C1	RB3	*A2		
C30	*B2	C108	*C2	C141	*C2	C174	*C1	CL1	B1			R7	B1	R40	*B2	R73	C1	R127	B1	RB4	*A2		
C31	*B2	C109	*C2	C142	*C2	C175	*B2	CL2	B1	L1	A2	R8	B2	R41	*B2	R74	C1	R128	*C2	RB5	*A1		
C32	*B2	C110	*C2	C143	*C1	C176	*B1	CL3	A1	L2	A2	R9	A2	R42	*A1	R75	C1	R129	*B2	RB6	*A1		
C33	*A2	C111	*B2	C144	*C2	C177	*B2	CL4	A2	L3	*A2	R10	A2	R43	A1	R76	*A2	R130	*B2	RB101	B1		

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