SONY

3CCD COLOR VIDEO CAMERA

DXC-390
DXC-390P

SERVICE MANUAL

1st Edition

ExwaveHAD™

⚠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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Manual Structure

Purpose of this manual

This manual is the Service Manual of the 3CCD color video camera DXC-390/390P. This manual contains the operating instructions, service overview, functions, electrical alignment, spare parts, semiconductor pin assignments, block diagrams, schematic diagrams and board layouts.

Related manuals

In addition to this Service Manual, the following manuals are provided for this unit.

- **Operation Manual (Supplied with the DXC-390/390P)**
  This manual is required for the proper operation and application of this unit.
  Part of the Operation Manual is included also in this Service Manual, in Section 1, “Operating Instructions” .
  Part number: 3-203-786-11

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**
  This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Communication System Solutions Network Company equipment.
  Semiconductors that cannot be searched for on this CD-ROM are listed in the service manual for the corresponding unit. The service manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.
  Part number: 9-968-546-XX

This section is extracted from operation manual.

SONY

SONY

3-203-786-**11**(1)

DXC-390/390P

3CCD Color Video Camera

Instructions for Use GB

CE **(DXC-390P only)**

DXC-390
DXC-390P *Exwave*HAD™

English

Owner's Record

The model and serial numbers are located at the bottom. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

For the customers in the U.S.A.
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for digital device pursuant to Subpart B of Part 15 of FCC Rules.

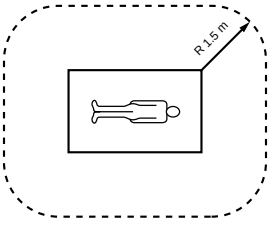
For the customers in Europe (for DXC-390P only)
This product with the CE marking complies with the EMC Directive (89/336/EEC) issued by the Commission of the European Community.
Compliance with this directive implies conformity to the following European standards:
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio)

Important safeguards/notices for use in the medical environments

1. All the equipments connected to this unit shall be certified according to Standard IEC60601-1, IEC60950, IEC60065 or other IEC/ISO Standards applicable to the equipments.
2. When this unit is used together with other equipment in the patient area*, the equipment shall be either powered by an isolation transformer or connected via an additional protective earth terminal to system ground unless it is certified according to Standard IEC60601-1.

   * Patient Area



3. The leakage current could increase when connected to other equipment.
4. This equipment generates, uses, and can radiate frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause interference to other equipment. If this unit causes interference (which can be determined by unplugging the power cord from the unit), try these measures: Relocate the unit with respect to the susceptible equipment. Plug this unit and the susceptible equipment into different branch circuit. Consult your dealer.
   (According to Standard EN60601-1-2 and CISPR11, Class B, Group 1)

Caution
When you dispose of the unit or accessories, you must obey the law in the relative area or country and the regulation in the relative hospital.

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Chapter 1

Overview

Features

High-quality images

- The high density 1/3 type, three-chip Exwave HAD™[1] CCD[2], containing some 380,000 (DXC-390) or 430,000 (DXC-390P) effective picture elements (pixels), offers superior picture quality: 800 TV lines of high horizontal resolution, high sensitivity of F8 at 2,000 lx, an excellent signal-to-noise ratio of 62 dB (DXC-390) or 61 dB (DXC-390P) and a low smear level.
- The adoption of the LSI digital signal processing technology reproduces a finer, more detailed picture.
- DynaLatitude processing enables you to adjust contrast finely according to the luminance signal level of each picture element.
- The DCC+ (Dynamic Contrast Control plus) function minimizes the phenomena whereby the whole screen turns white or a part of the image becomes colorless when shooting a very bright object.
- The Partial Enhance function enables you to adjust the sharpness and tint of only a specified color.

Wide Range of Exposure Control

The AGC (Auto Gain Control) function and CCD IRIS™[3] function automatically adjust a wide range of incoming light levels. When the lighting condition is poor, the AGC function automatically increases the gain up to 16 times. When incoming light is excessive, the CCD IRIS function automatically adjusts shutter speed to cut exposure to the equivalent of up to 10 aperture stops. When using the video camera in a fixed location or for a microscope system, the AGC, CCD IRIS and auto-iris controls automatically adjust a wide range of incoming light levels. The desired AE window can be set by using the AE AREA MANUAL function.

1) Exwave HAD™: Exwave Hole-Accumulated Diode
"Exwave HAD™" is a trademark of Sony Corporation.

2) CCD: Charge-Coupled Device

3) "CCD IRIS™" is a trademark of Sony Corporation.

Wide range of electronic shutter modes

The wide range of speeds for the electronic shutter minimizes blurring in fast-moving objects and produces acceptably bright still images of objects shot in poor light.

- Flickerless mode: This mode allows you to obtain flickerless images shot even under fluorescent light.
- Clear scan mode: This mode reduces horizontal bands appearing in computer displays when shooting the display with the conventional video camera.

Versatile use with external equipment

- The video camera is equipped with three types of outputs: composite, Y/C and RGB outputs. The camera offers a high-quality picture on a connected monitor or VCR.
- The camera can be remotely controlled with the RM-C950 remote control unit (not supplied).

RS-232C interface

The camera can be controlled from a computer via the RS-232C interface.
For details, contact your authorized Sony dealer.

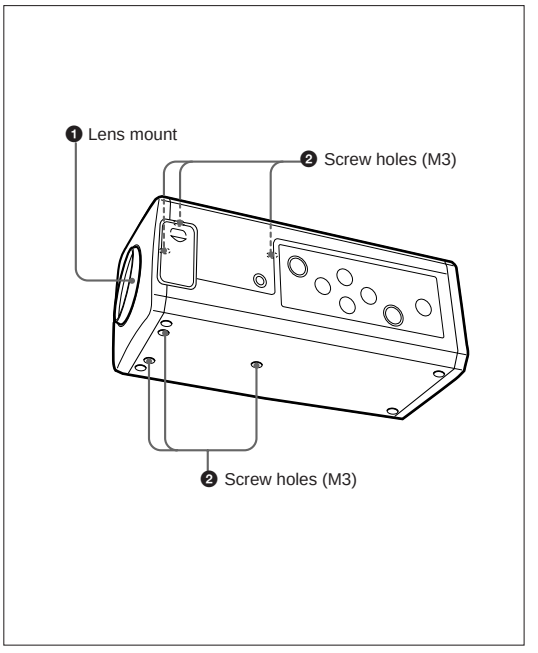
Compact and lightweight

The camera is compact (56 × 50 × 128 mm (2 1/4 × 2 × 5 1/8 inches)) and very light (approx. 370 g (13 oz)), allowing easy installation even where space is a problem.
Following are some sample applications:

- As a permanent fixture in theaters, concert halls, etc.
- As a bird's-eye view camera for special events
- As a video conference system camera
- As a camera for microscopes
- As a rooftop weather-monitoring camera
- As a laboratory monitor camera

Location and Functions of Parts and Controls

Front Panel/Top Panel/Bottom Panel



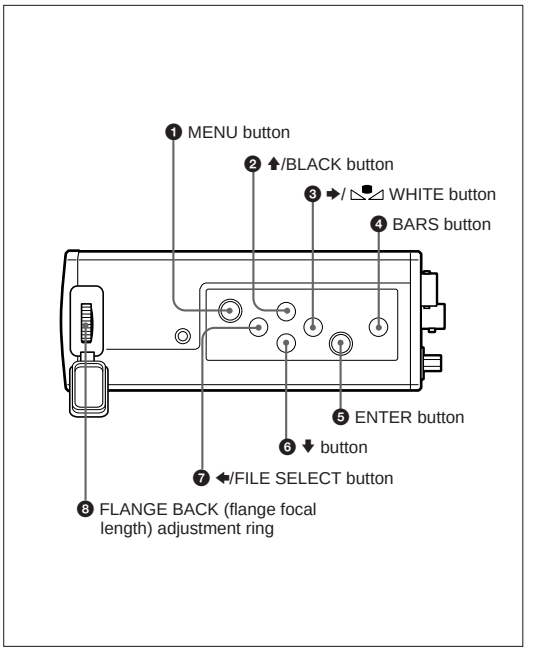
1 Lens Mount (C-mount)
Attach a C-mount lens or microscope adaptor.

Note

Be sure to use a lens whose projected part from the lens mount surface is less than 4.3 mm. Mounting the lens with a projected part greater than 4.3 mm may damage the internal mechanism of the camera.

2 Screw holes
Use these holes (M3, depth: 4 mm ($^3/_{16}$ inches)) to attach the supplied tripod adaptor to the camera for mounting the camera on a wall, ceiling or tripod.
For how to install the tripod adaptor, see "Mounting on a Tripod" on page 45.

Right Side Panel (Control Panel)



1 MENU button
Displays the MAIN menu on a monitor screen. Press again to exit the menu. When a setting menu is displayed, press this button to return to the MAIN menu.
For menu operations, see "Operation through Menus" on page 14.

2 ↑/BLACK (black balance) button
While the menu is displayed: Moves the menu cursor upward. Also use this button for an AE window setting, etc.
While the normal screen is displayed: Activates the automatic black balance adjustment.

3 →/ WHITE (white balance) button
While the menu is displayed: Increases the setting value or changes the setting. Also use this button for an AE window setting, etc.
While the normal screen is displayed: Activates the automatic white balance adjustment when MODE is set to AWB in WHITE BALANCE menu.

❹ BARS (color bars output) button
Outputs the color bar signal. Press again to revert to video signal output.
For monitor adjustment, contact your authorized Sony dealer.

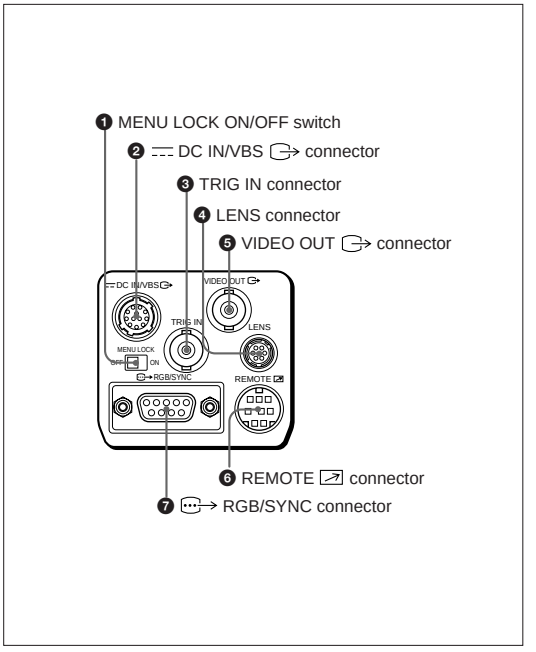
❺ ENTER button
Selects a setting menu in the MAIN menu. Also use this button for an AE window setting, etc.

❻ ↓ button
Moves the menu cursor downward. Also use this button for an AE window setting, etc.

❼ ←/FILE SELECT button
While the menu is displayed: Decreases the setting value or changes the setting. Also use this button for an AE window setting, etc.
While the normal screen is displayed: Switches the user preset file between A and B.

❽ FLANGE BACK (flange focal length) adjustment ring
Adjusts the flange focal length of a lens which is not equipped with this function.
For details on flange focal length adjustment, see "Adjusting the Flange Focal Length" on page 32.

Rear Panel



❶ MENU LOCK ON/OFF switch
When this switch is set to ON, the menu is not displayed on the screen even if you press the MENU button.

❷ DC IN/VBS (DC input/video signal output) connector (12-pin)
Connects to the CMA-D2/D2MD/D2CE/D2MDCE camera adaptor. Inputs the DC power and outputs the video signal.

❸ TRIG IN connector (BNC type)
Connects to a commercially available slave unit by converting to BNC type in strobe mode.

❹ LENS connector (6-pin)
Connects to a lens control cable when attaching the zoom lens especially designed for this camera.

❺ VIDEO OUT connector (BNC type)
Outputs a composite video signal.

❻ REMOTE connector (mini DIN 8-pin)
Connects to the RM-C950 remote control unit (not supplied).

❼ RGB/SYNC connector (D-sub 9-pin)
Outputs RGB signals and their respective sync signals. Use the CCXC-9DB/CCXC-9DD/CCMC-9DS connecting cable for the connections.

Chapter 2

Operation

Adjusting and Setting with Menus

Camera operational settings can be changed through simple adjustment of the settings on the on-screen menus. Settings can be adjusted to get the best possible results for the given shooting conditions or to enhance the image with special effects.

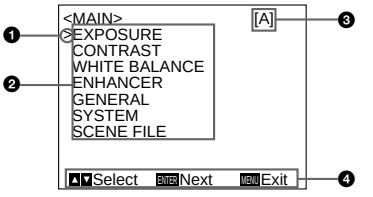
Menu Configuration

Before starting menu operation, make sure that the MENU LOCK ON/OFF switch on the rear panel is set to OFF.
To display a menu, press the MENU button on the right side panel. The MAIN menu is displayed on the monitor screen. The setting menu will be displayed by selecting the desired setting menu item with the ↑ or ↓ button and pressing the ENTER button.

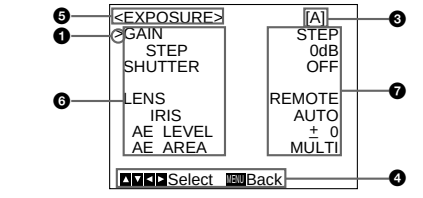
About on-screen menus

This section explains how to read the on-screen menu before starting menu operation.

MAIN menu



Setting menu



❶ Cursor
Selects a setting menu or setting item.
Move the cursor up or down using the ↑ or ↓ button.

❷ Setting menu items
When you select the desired item with the ↑ or ↓ button and press the ENTER button, the setting menu for adjustment and setting is displayed.

❸ User preset file
You can store two types of preset adjustments into files A and B. Indicates the currently selected preset file (A or B).

❹ Operational message
Indicates how to operate the currently displayed menu.

❺ Setting menu
Indicates the currently selected setting menu.

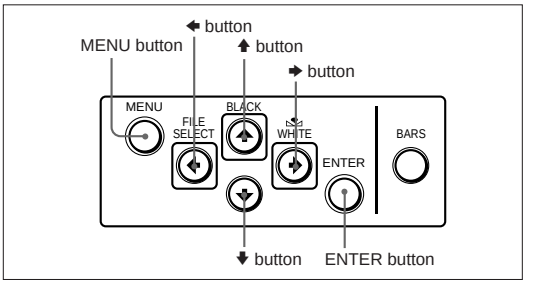
❻ Setting items
Indicates the items that can be adjusted in each setting menu.
Select the item by moving the cursor beside it with the ↑ or ↓ button.

❼ Set values
The currently set values are displayed.
Change the values using the ← or → button.

Operation through Menus

Menu operation buttons

Operate the menu with the buttons on the right side panel.

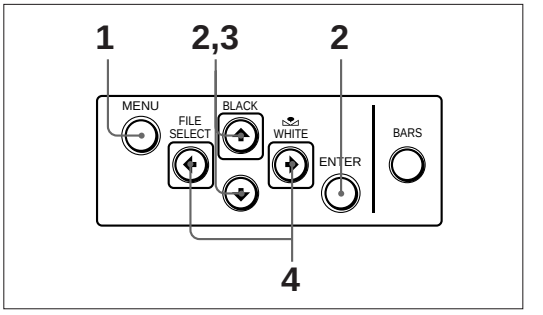


The following table shows the functions of the buttons.

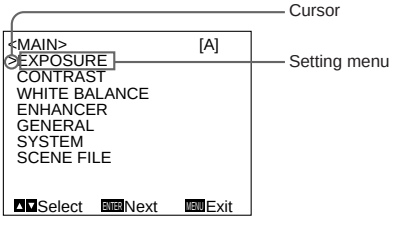
Button	Function
MENU	Displays the MAIN menu.
↑ button	Moves the cursor upward.
↓ button	Moves the cursor downward.
← button	Changes the setting/decreases the value.
→ button	Changes the setting/increases the value.

Menu operation procedure

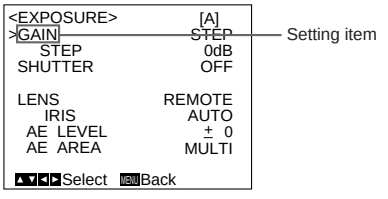
To change the settings on the menu, proceed as follows.



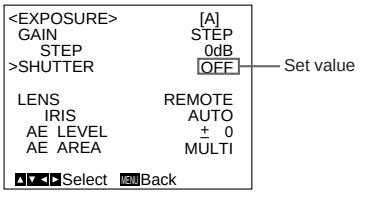
1 Press the MENU button.
The MAIN menu appears.



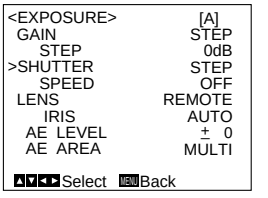
2 Move the cursor to the menu item to be set by pressing the ↑ or ↓ button, then press the ENTER button.
The setting menu is displayed.



3 Move the cursor to the item to be adjusted by pressing the ↑ or ↓ button.



4 Change the value by pressing the ← or → button.
Holding down the button changes the value quickly.



To reset to the initial set value

Select the item to be reset, then press the ← and → buttons simultaneously.
For the initial set value on each item, see "Initial Setting of the Menus" on page 31.

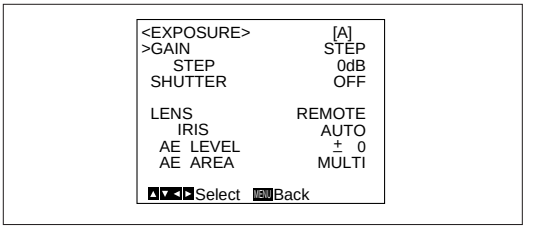
To return to the normal screen

Press the MENU button while the MAIN menu is displayed. While each setting menu is displayed, press the MENU button to return to the MAIN menu, then press it again to return to the normal screen.

Function of Menus

EXPOSURE menu

Adjusts the items relating to exposure, such as gain and shutter mode.



Setting items on the EXPOSURE menu

Setting item	Contents of setting	Ref. page
GAIN	Adjusts video gain.	16
STEP	Sets gain level.	16
SHUTTER	Sets the modes for the electronic shutter.	16
LENS	Sets the iris mode.	18
IRIS	Adjusts the iris automatically or manually.	19
AE LEVEL	Finely adjusts the focusing point of auto exposure adjustment.	19
AE AREA	Sets the AE window in AGC, CCD IRIS or auto iris adjustment mode.	19

GAIN

Adjusts the video gain.

Selection	Function
STEP	Sets the video gain to the desired level. Use this setting for shooting in an extremely dark place where even fully opening the lens iris still does not produce an acceptably bright image. The gain level can be set in the range from 0 to 24 dB in units of 1 dB.
AGC	Automatic gain control. Automatically adjusts the gain according to the brightness of the object to be shot. This setting is useful for shooting when lighting conditions may change. You can select the maximum gain level to be adjusted to 6, 12, 18 or 24 dB with the LIMIT setting.
HYPER	Increases the video gain to about 30 dB. This setting is useful when the lighting condition is very dark.

SHUTTER (electronic shutter)

Selects the electronic shutter modes.
This function enables you to obtain blur-free images of fast-moving objects and acceptably bright still images of objects shot in poor lighting conditions.

Selection	Function
OFF	Any electronic shutter mode does not function.
STEP	Sets the shutter speed to any of 15 steps in long-exposure mode and 11 steps in high-speed mode. Select SPEED and set the shutter speed from among the following values: **Long-exposure mode:** 0.1, 0.2, 0.3, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 7.0, and 8.0 sec. To set the speed, display OFF by pressing the ← and → buttons simultaneously, then select the desired value by pressing the → button. Each press changes the speed in the order as shown above. **High-speed mode:** FL (flickerless), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20000, 1/40000, 1/100000 To set the speed, display OFF by pressing the ← and → buttons simultaneously, then select the desired value by pressing the ← button. Each press changes the speed in the order as shown above. When using the camera in a 50 Hz lighting area (DXC-390) or in a 60 Hz lighting area (DXC-390P), the FL setting offers flickerless images even under fluorescent light.

Selection	Function
VARIABLE	Use for fine adjustment of the video output level in long exposure mode (low-speed mode) or in clear scan mode (high-speed mode). **Long exposure mode** You can set the SPEED value in units of 1 frame. For example, if you set to 50 frames (about 1.7 seconds), the video signal produced during this set time is output in the form of one complete frame at intervals of about 1.7 seconds. These pictures, which contain 50 frames of video information, are much brighter than normal one-frame images. This mode is useful for shooting a poorly illuminated object in a dark place. **To set the shutter speed** **1** Display OFF by pressing the ← and → buttons simultaneously. **2** Select the SPEED value by pressing the → button. Each time you press the button, the value changes in units of 1 frame. **To convert the value into the shutter speed** **Example:** When the value is set to 5 frames 5 × 1/30 = 0.1666 seconds (DXC-390) 5 × 1/25 = 0.2000 seconds (DXC-390P) **Notes** • Do not use AGC, CCD-IRIS, ATW, DCC+ and DYNALATITUDE functions in long exposure mode. • When you set the shutter speed to 1 second or higher, set the gain level to 0 dB.

(Continued)

Selection	Function
VARIABLE (Continued)	**Clear scan mode** You can set the shutter speed in units of 1H (horizontal scanning time: 63.56 µs for DXC-390, 64.00 µs for DXC-390P). Select SPEED, then select the value from 1/525H to 262/525H (DXC-390) or 1/625H to 312/625H (DXC-390P). This mode can be used for shooting computer displays with reduced horizontal bands appearing across the display screen. **To set the shutter speed** **1** Display OFF by pressing the ← and → buttons simultaneously. **2** Select the SPEED value by pressing the → button while observing the noise on the monitor screen so that you can obtain the image with minimum noise. Each time you press the button, the value changes in units of 1H. **To convert the value into the shutter speed** **Example:** When the value is set to 250H DXC-390: 250 × 63.56 µs (1H) + 34.9 µs (constant) = 15924.9 µs = Approx. 0.016 seconds DXC-390P: 250 × 64.00 µs (1H) + 35.0 µs (constant) = 16035.0 µs = Approx. 0.016 seconds
CCD-IRIS	Automatically adjusts the luminance level for optimum output level. When incoming light is excessive, this function automatically adjusts the shutter speed to cut exposure equivalent to up to 10 aperture stops.

Selection	Function
CCD-IRIS (Continued)	For example, this function is useful for microscope applications. When shooting with a microscope not equipped with the auto-iris lens, the luminance level that is just right for the human eye is often too bright for the video camera. When CCD-IRIS is selected, the electronic shutter automatically decreases excessive incident light to an appropriate level for the video camera. This function is also useful for cutting out excessive incident light that is not cut out by the auto-iris lens in scenes containing very bright patches (such as snow, or sea water reflecting sunlight). You can select the highest limit value of the variable range of the shutter speed. Select LIMIT, then set the speed to 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20000,1/40000 or 1/100000. **Note** You cannot use CCD-IRIS mode when using a lens that automatically adjusts the iris control according to the video signal input.

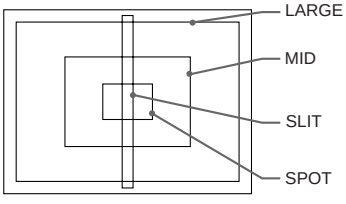
LENS

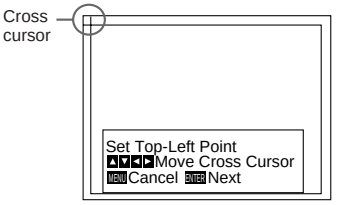
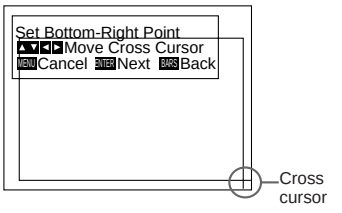
Selects the iris mode.

Selection	Function
VIDEO	Select when you use a lens that automatically adjusts the iris according to the input video signal. Select AE LEVEL, then adjust the auto exposure focusing point in the range from –127 to +127.
REMOTE	Select when you use a lens that adjusts the iris according to the DC power supplied.

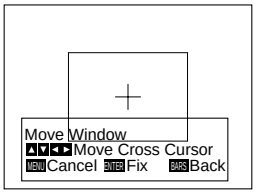
IRIS

Appears when you set LENS to REMOTE.
Selects how to adjust the iris. You can select AUTO or MANUAL.
AUTO: Adjusts the iris automatically.
MANUAL: Adjusts the iris with the IRIS control on the RM-C950 remote control unit.

Selection	Function
AE LEVEL	Sets auto exposure focusing point in the range from –127 to +127.
AE AREA	Sets the AE (Auto Exposure) window when the camera is set to AGC, CCD IRIS or auto-iris control mode. **MULTI:** Divides the screen into 9 sections and adjusts auto exposure according to the luminance level in each section. Normally set to this position. **LARGE, MID, SPOT and SLIT:** Displays the following AE windows and adjusts auto exposure according to the luminance level in each area. 

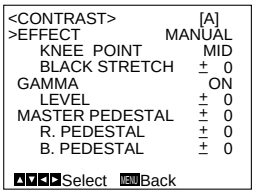
Selection	Function
AE AREA (Continued)	**MANUAL:** Sets the AE window with the desired size and position on the screen. Follow the steps below. **1** Select MANUAL and press the ENTER button.  **2** Move the cross cursor appearing at the left top corner with the ←, →, ↑ or ↓ button to set the upper and left side size, then press the ENTER button. 

(Continued)

Selection	Function
AE AREA (Continued)	**3** Move the cross cursor appearing at the right bottom corner with the ←, →, ↑ or ↓ button to set the lower and right side size, then press the ENTER button.  **4** Move the AE window to the desired position with the ←, →, ↑ or ↓ button, then press the ENTER button. **Note** To cancel the setting before completing the procedure, press the MENU button.
AE SPEED	Sets auto exposure focusing speed in AGC, CCD IRIS or auto-iris control mode. Selects from MID (normal speed), FAST (fast speed) and SLOW (slow speed). **Note** If lens hunting occurs, adjust with AE SPEED.
AE DETECT	Selects the detection method of the luminance level of the selected AE window. **AVERAGE:** Selects to detect the average luminance level of the whole AE window. **PEAK:** Selects to detect the part with the highest luminance level.

CONTRAST menu

Adjusts the contrast of the image.



Setting items in the CONTRAST menu

Setting item	Contents of setting	Ref. page
EFFECT	Adjusts the picture contrast in accordance with the incident luminance level.	21
KNEE POINT	Sets the knee point.	21
BLACK STRETCH	Adjusts the luminance of a dark portion of the screen.	21
GAMMA	Activates gamma compensation.	21
LEVEL	Adjusts the gamma level.	21
MASTER PEDESTAL	Sets the pedestal level of the output signal.	21
R./B. PEDESTAL	Finely adjust the pedestal level.	22

EFFECT

Selects the setting suitable for the incident luminance levels.

Selection	Function
MANUAL	Selects KNEE POINT setting or BLACK STRETCH. **KNEE POINT** Sets the knee point according to the incoming light levels. **OFF:** Knee processing does not function. **HIGH:** Sets the knee point to the highest level. **MID:** Normally, select this position. **LOW:** Sets the knee point to the lowest level. **BLACK STRETCH** Adjusts the luminance of the dark portion of the screen. You can set the value within the range from –10 to +10. The higher the setting, the brighter the screen.
DCC+	When shooting a very bright object, the whole screen may white out or a part of the image may be colorless. This setting minimizes these phenomena.
DYNA-LATITUDE	Adjusts the contrast according to the luminance level of each picture element. The setting is useful for shooting scenes mixed with bright and dark parts. You can set the level within the range from –10 to +10.

GAMMA

Activates gamma compensation.

Selection	Function
OFF	Outputs the video signal linearly without gamma compensation. Use this setting when you want to produce images for image processing or image analysis.
ON	Compensates the reproduction characteristics of a cathode-ray tube of a monitor to produce natural-tone image. Select LEVEL, then adjust so that you can obtain natural-tone image. Adjustable range is from –10 to +10.

MASTER PEDESTAL

The pedestal levels of the G, B and R output signals can be adjusted simultaneously.
Adjusts the darkness level of the black part of the image. Use this function to bring out details in heavily shaded areas. The adjustable range is from –127 to +127. Normally set to ±0.
Use of a waveform monitor allows easier adjustment.

(Continued)

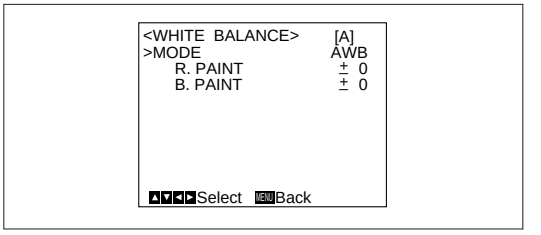
Adjusting direction	Effect
+	The whole screen becomes whiter.
–	The whole screen becomes blacker.

R. (red) PEDESTAL, B. (blue) PEDESTAL

Use these items to finely adjust the pedestal level of each color. Adjust while watching the monitor screen. The items can be finely adjusted within the range from –127 to +127.

WHITE BALANCE menu

Adjusts the white balance.



Setting items in the WHITE BALANCE menu

Setting item	Contents of setting	Ref. page
MODE	Selects the white balance modes.	23
R./B. PAINT	Finely adjusts the white balance (AWB, ATW).	23

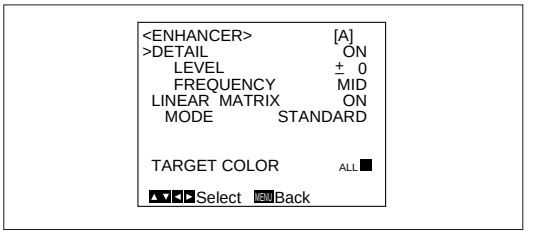
MODE

Selects the white balance modes.

Selection	Function
AWB	Adjusts the white balance atutomatically (auto white balance). When this item is selected, R. PAINT and B. PAINT are displayed. Use these items for fine adjustment. Adjust them while watching the monitor screen. **R. PAINT:** Finely adjusts the red in the range from –100 to +100. **B. PAINT:** Finely adjusts the blue in the range from –100 to +100. *For details, see "Adjusting the White Balance" on page 39.*
ATW NORMAL or ATW WIDE	Activates auto-tracing white balance. This mode is suitable for shooting when the light source changes. The white balance is automatically adjusted as the color temperature changes. Normally, set to ATW NORMAL. The ATW WIDE setting can cope with a wider range of color temperature changes. When these items are selected, R. PAINT, B. PAINT, AREA and SPEED are displayed. Use these items for fine adjustment. Adjust them while watching the monitor screen. The adjusted values are stored in memory other than AWB values. **R. PAINT:** Finely adjusts the red in the range from –10 to +10. **B. PAINT:** Finely adjusts the blue in the range from –10 to +10.
ATW NORMAL or ATW WIDE (Continued)	**AREA:** A detecting window appears on the monitor screen. Normally set to NORMAL to detect the average luminance level on the whole screen. If you want to display the desired window, set to MANUAL and follow the steps below. **1** Press the ENTER button. **2** Move the left top cross cursor with the ←, →, ↑ or ↓ button to set the upper and left side size, and press the ENTER button. **3** Move the right bottom cross cursor with the ←, →, ↑ or ↓ button to set the lower and right side size, and press the ENTER button. **4** Move the window to the desired position on the screen with the ←, →, ↑ or ↓ button, and press the ENTER button. **SPEED:** Sets the focusing speed. You can select SLOW (slow speed), MID (normal speed) or FAST (fast speed).
MANUAL	Use for manual adjustment of white balance. When this item is selected, R. GAIN and B. GAIN are displayed. Adjust them while watching the monitor screen. **R. GAIN:** Finely adjusts the red gain in the range from –127 to +127. **B. GAIN:** Finely adjusts the blue gain in the range from –127 to +127.
3200K	Selects for indoor shooting. (Color temperature: 3200K)
5600K	Selects for outdoor shooting. (Color temperature: 5600K)

ENHANCER menu

Adjusts the sharpness of the image outline and the color tone (hue).



Setting items in the ENHANCER menu

Setting item	Contents of setting	Ref. page
DETAIL	Enables or disables to adjust the sharpness of the image outline.	24
LEVEL	Adjusts the sharpness of the image outline.	24
FREQUENCY	Adjusts the sharpness of the detailed image outline.	24
LINEAR MATRIX	Enables or disables processing of a color matrix.	25
MODE	Finely adjusts the color tone.	25
TARGET COLOR	Specifies the color for DETAIL or LINEAR MATRIX adjustments.	25

DETAIL

Enables or disables adjustment of the sharpness of the image outline.

Selection	Function
ON	Enables adjustment of the sharpness of the image outline.
OFF	Disables adjustment of the sharpness of the image outline.

When you set DETAIL to ON, LEVEL and FREQUENCY are displayed.
Adjust the sharpness of the image outline in accordance with your shooting purpose and your taste.

Selection	Function
LEVEL	Adjusts the level in the range from –127 to +127. The lower level decreases the sharpness of the image outline and makes the image softer. The higher level increases the sharpness of the image outline and makes the image sharper.
FREQUENCY	Selects the frequency level with which the image outline is adjusted from LOW (lower frequency level), MID (middle frequency level) or HIGH (higher frequency level). Higher setting provides a sharper outline of detailed images.

LINEAR MATRIX

Processes an image with a color matrix to change the chroma saturation and hue in order to reproduce natural color.

Selection	Function
ON	Corrects the color to reproduce natural color.
OFF	Color correction does not function. Use when you want to process the image.

When you set LINEAR MATRIX to ON, MODE is displayed. You can adjust the color suitable for an object. When you set MODE to MANUAL, R. PAINT, G. PAINT and B. PAINT appear.

Selection	Function
STANDARD	Normally, select this setting.
R ENHANCE	Enhances the red.
B ENHANCE	Enhances the blue.
G ENHANCE	Enhances the green.
MANUAL	Adjusts each color finely. **R. PAINT:** Finely adjusts the red in the range from –30 to +30. **G. PAINT:** Finely adjusts the green in the range from –30 to +30. **B. PAINT:** Finely adjusts the blue in the range from –30 to +30.

TARGET COLOR

Select when adjusting DETAIL or LINEAR MATRIX for a specific color.

Selection	Function
ALL	Adjusts DETAIL or LINEAR MATRIX for the whole image. Normally, set to this position.
IN	Adjusts DETAIL or LINEAR MATRIX for a specific color. With the RANGE setting you can finely adjust the area in the range from –10 to +10.
OUT	Adjusts DETAIL or LINEAR MATRIX for colors other than a specified one.

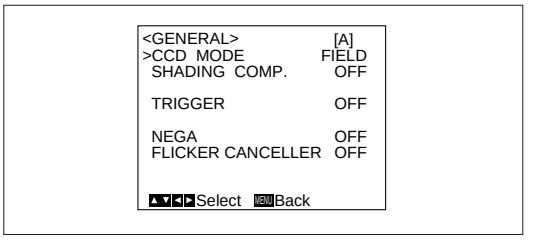
How to specify a color

1 Select IN or OUT and press the ENTER button.

2 Move the cross cursor (⧺) appearing in the center of the screen to the desired color with the ←, →, ↑ or ↓ button so that the cross cursor square covers the desired color, then press the ENTER button.
When you select IN, you can adjust the color indicated by the cross cursor (⧺).
When you select OUT, you can adjust colors other than that with the cross cursor.

GENERAL menu

Sets the general items.



Setting items in the GENERAL menu

Setting item	Contents of setting	Ref. page
CCD MODE	Selects the CCD read-out mode.	26
SHADING COMP.	Eliminates color at the top and bottom of the screen.	26
TRIGGER	Sets the polarity when connecting a slave unit to synchronize with a stroboscope.	27
NEGA	Reverses the output image to negative.	27
FLICKER CANCELLER	Reduces flicker when SHUTTER is set to CCD IRIS or OFF.	27

CCD MODE

Selects the CCD read-out mode.

Selection	Function
FIELD	Accumulates charges in field units. Use to shoot a moving object.
FRAME	Accumulates charges in frame units. Provides the image with the highest possible vertical resolution. Use to shoot a still object.

SHADING COMP. (Shading compensation)

Eliminates green or magenta color which may appear at the top or bottom of the screen, when the camera is used with an optical instrument.

Selection	Function
OFF	Color elimination does not function.
ON	If green or magenta color appears at the top or bottom of the screen when the camera is attached to a microscope, etc., select this setting.

When SHADING COMP. is set to ON, LEVEL is displayed. Adjust while watching the screen so that the color is eliminated. Adjustable range is from –127 to +127.

Adjusting direction	Effect
+	Green at the top and magenta at the bottom will be eliminated.
–	Magenta at the top and green at the bottom will be eliminated.

TRIGGER

Set when you use a slave unit connected to the TRIG IN connector and synchronize the camera with a stroboscope.

Selection	Function
OFF	Select when you do not connect a slave unit.
ON	Select when you connect a slave unit. Select POLARITY, and set it to the same polarity as the input pulse signal. ⍐: Falling edge ⍓: Rising edge

NEGA

Reverses the output image to negative/positive.

Selection	Function
OFF	Outputs the image normally.
ON	Outputs the image reversed to negative/positive.

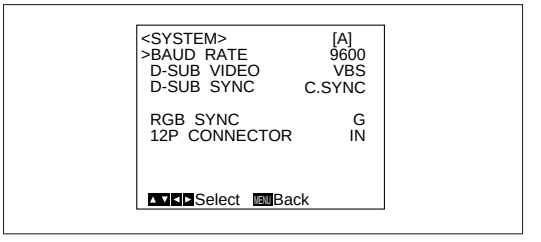
FLICKER CANCELLER

When using the camera in a 50 Hz lighting area (DXC-390) or in a 60 Hz lighting area (DXC-390P), you can obtain images with less flicker under fluorescent light even when SHUTTER is set to CCD IRIS or OFF. Set this item to OFF when you want to set NEGA to ON.

Selection	Function
OFF	Disables the FLICKER CANCELLER function.
ON	Reduces flicker.

SYSTEM menu

Sets the items relating to the system of the camera and selection of output signals.



Setting items in the SYSTEM menu

Setting item	Contents of setting	Ref. page
BAUD RATE	Selects the baud rate.	28
D-SUB VIDEO	Switches the video signal output from the ⋯→ RGB/SYNC connector (D-sub 9-pin).	28
D-SUB SYNC	Switches the sync signal output from the ⋯→ RGB/SYNC connector (D-sub 9-pin).	28
RGB SYNC	Adds a sync signal to the RGB output.	28
12P CONNECTOR	Switches the input and output of the ⎓ DC IN/VBS ⊃→ connector and selects the output signal.	29

(Continued)

Setting item	Contents of setting	Ref. page
(VBS lock) H. PHASE* SC. PHASE ROUGH* SC. PHASE FINE*	Adjusts the horizontal phase and SC (subcarrier) phase during external synchronization (with VBS signal input).	29
(HD/VD lock) H. PHASE*	Adjusts the horizontal phase during external synchronization (with HD/VD signal input).	30

* Displayed only when an external sync signal is input.

BAUD RATE

Switches the baud rate of the REMOTE connector at the rear panel.
Sets to any of 19200, 9600, 4800, 2400 and 1200.
Normally, set to 9600 when the RM-C950 remote control unit is connected to the REMOTE connector.

D-SUB VIDEO

Switches the video signal output from the RGB/SYNC connector (D-sub 9-pin) at the rear panel.

Selection	Function
VBS	Outputs VBS signal.
Y/C	Outputs Y/C signal.

D-SUB SYNC

Switches the sync signal output from the RGB/SYNC connector (D-sub 9-pin) at the rear panel.

Selection	Function
C.SYNC	Outputs the composite sync signal.
WEN	Outputs the WEN signal. When connecting peripheral equipment, the signal is used as trigger pulse output to the equipment. Select the polarity of the WEN signal with the POLARITY setting. ⊓: Negative ⊔: Positive

RGB SYNC

Adds a sync signal to the G signal or R, G and B signals output from the RGB/SYNC connector.

Selection	Function
OFF	No sync signal is added to an output signal.
G	Adds a sync signal to the G signal output from the RGB/SYNC connector.
RGB	Adds sync signals added to the G, B and R signals output from the RGB/SYNC connector.

12P CONNECTOR

Switches the input and output of the DC IN/VBS connector (12-pin). Selects the output signal from this connector when OUT is selected.

Selection	Function
IN	Functions as the input connector.
OUT	Functions as the output connector. Select the output signal with the SIGNAL setting. **HD/VD:** Outputs the HD/VD signal. **C. SYNC:** Outputs the composite sync signal.

VBS lock

Appears only when an external reference sync signal (VBS signal) is input. Adjusts the horizontal phase and SC (subcarrier) phase to synchronize the camera operation with the reference signal.

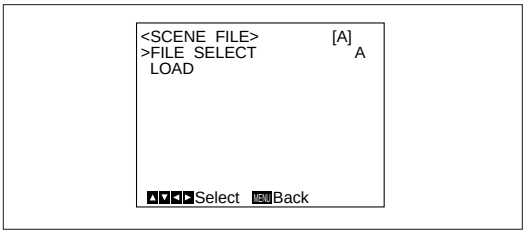
Selection	Function
H.PHASE	Adjusts the horizontal phase within the range from –20 to +127.
SC.PHASE ROUGH	Roughly adjusts the subcarrier phase by setting to 0° or 180°.
SC.PHASE FINE	Finely adjusts the subcarrier phase within the range from –127 to +127.

HD/VD lock

Appears only when an external reference sync signal (HD/VD signal) is input. Adjusts the horizontal phase to synchronize the camera operation with the reference signal. Select H.PHASE, then adjust the level within the range from –20 to +127.

SCENE FILE menu

Sets the preset menu settings.
The camera has two memory files (A or B) for storing the menu settings. You can store a different type of setting into each file, and switch to the file most suitable for the shooting conditions quickly. The currently selected memory file is shown in the upper right corner of the on-screen menu.



Setting items in the SCENE FILE menu

Setting item	Contents of setting	Ref. page
FILE SELECT	Selects the file into which you store the setting.	30
LOAD	Selects the type of setting to be stored, and loads it.	30

FILE SELECT
Selects the file A or B.

LOAD
Sets the setting to be stored into the file which you select with FILE SELECT, and stores the setting.

Selection	Type of setting
STANDARD	Suitable for a camera used as a permanent fixture.
MICROSCOPE	Suitable for a camera for a microscope.
FULL AUTO	Automatically adjusts settings.
STROBE	Suitable for stroboscopic shooting.
FILE B (or A)	When copying the settings between two files.

Storing the setting

1 Select A or B into which the setting is stored in the FILE SELECT setting.

2 Press the ↑ or ↓ button to select LOAD.

3 Press the ← or → button to select the desired setting to be stored, and press the ENTER button.
"Overwrite OK?" appears.

4 Press the ENTER button.
If you do not want to store the setting, press the MENU button.

Initial Setting of the Menus

If you want to reset the settings and values to the initial settings, press the ← and → buttons simultaneously.

Setting menu	Setting item	Initial setting
EXPOSURE	GAIN	STEP
	STEP	0 dB
	SHUTTER	OFF
	STEP	OFF
	LENS	REMOTE
	IRIS	MANUAL
	AE LEVEL	± 0
	AE AREA	MULTI
CONTRAST	EFFECT	MANUAL
	KNEE POINT	MID
	BLACK STRETCH	± 0
	GAMMA	ON
	LEVEL	± 0
	MASTER PEDESTAL	± 0
	R. PEDESTAL	± 0
	B. PEDESTAL	± 0
WHITE BALANCE	MODE	AWB
	R. PAINT	± 0
	B. PAINT	± 0
ENHANCER	DETAIL	ON
	LEVEL	± 0
	FREQUENCY	MID
	LINEAR MATRIX	ON
	MODE	STANDARD
	TARGET COLOR	ALL
GENERAL	CCD MODE	FIELD
	SHADING COMP.	OFF
	TRIGGER	OFF
	NEGA	OFF
	FLICKER CANCELLER	OFF
SYSTEM	BAUD RATE	9600
	D-SUB VIDEO	VBS
	D-SUB SYNC	C.SYNC
	RGB SYNC	G
	12P CONNECTOR	IN
	H. PHASE*	± 0
	SC PHASE ROUGH*	0°
	SC PHASE FINE*	± 0

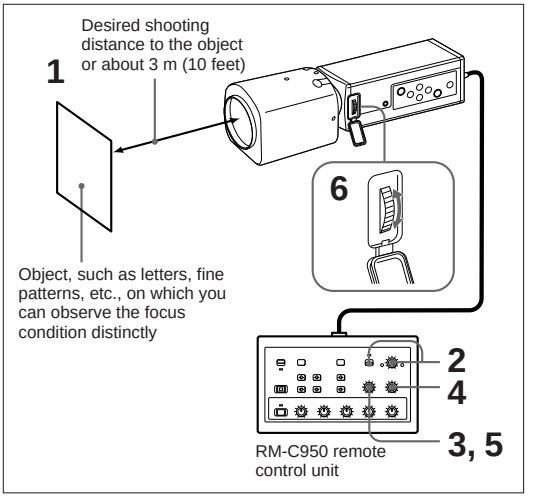
* Displayed only when an external sync signal is input.

Shooting

Adjusting the Flange Focal Length

This section explains how to adjust the flange focal length (distance from the lens mounting plane to an object). Adjustment method varies with the lens you use.

When you use the VCL-610WEA zoom lens



The following is an example of flange focal length adjustment using the RM-C950 remote control unit. Adjust it using the FLANGE BACK (flange focal length) adjustment ring on the camera.

Note

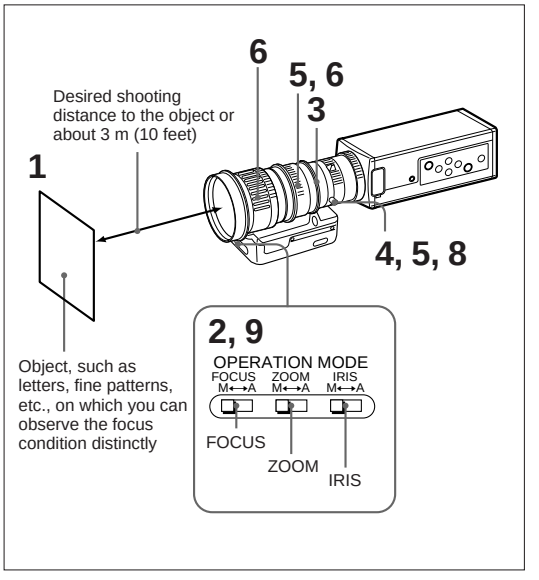
Be sure to set the iris fully open before adjusting the flange focal length.

1. Point the camera to an object at the desired shooting distance or about 3 m (10 feet) away.
2. Set the IRIS AUTO/MANUAL knob to MANUAL, and turn the IRIS knob to OPEN as far as it goes.
3. Turn the ZOOM knob to TELE (telephoto) as far as it goes.
4. Adjust the focus on the object used in step 1 by turning the FOCUS knob.
5. Turn the ZOOM knob to WIDE (wide-angle) as far as it goes.
6. Adjust the focus on the object used in step 1 by turning the FLANGE BACK (flange focal length) adjustment ring on the camera.
7. Repeat steps 3 to 6 until you achieve sharp focus both in the telephoto and wide-angle positions.

Now the flange focal length adjustment is completed. You do not need to readjust the flange focal length unless you replace the lens.

When you use the VCL-614WEA zoom lens

You do not need to use the FLANGE BACK (flange focal length) adjustment ring on the camera.



Note

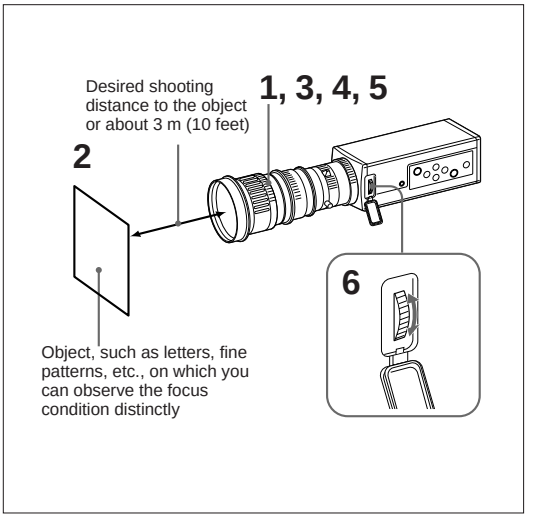
Be sure to set the iris fully open before adjusting the flange focal length.

1. Point the camera to an object at the desired shooting distance or about 3 m (10 feet) away.
2. Set the FOCUS, ZOOM, IRIS M/A switches on the lens to M (Manual) position using a pointed object.
3. Turn the iris ring to 1.4 (open).
4. Turn the fixing screw for the F.f adjustment ring counterclockwise to loosen it.
5. Turn the ZOOM ring clockwise to align 5.5 (wide-angle) with the white line, then turn the F.f adjustment ring by holding the F.f fixing screw to adjust the focus on the object used in step 1.
6. Turn the ZOOM ring counterclockwise to align 77 (telephoto) with the white line, then adjust the focus on the object.
7. Repeat steps 5 and 6 until you achieve sharp focus both in the telephoto and wide-angle positions.
8. Turn the fixing screw for the F.f adjustment ring clockwise to tighten it firmly.
9. Set the FOCUS, ZOOM, IRIS M/A switches on the lens to A (Auto) position.

Now the flange focal length adjustment is completed. You do not need to readjust the flange focal length unless you replace the lens.

When you use a zoom lens not equipped with the flange focal length adjustment function

Adjust the flange focal length using the FLANGE BACK (flange focal length) adjustment ring on the camera.



1 Set the iris fully open if the lens is equipped with the iris ring.
If you use the auto iris lens, illuminate the object appropriately so that the iris is open.

2 Point the camera to an object at the desired shooting distance or about 3 m (10 feet) away.

3 Turn the zoom ring to TELE (telephoto) as far as it goes.

4 Adjust the focus on the object used in step 2 by turning the focus lens on the lens.

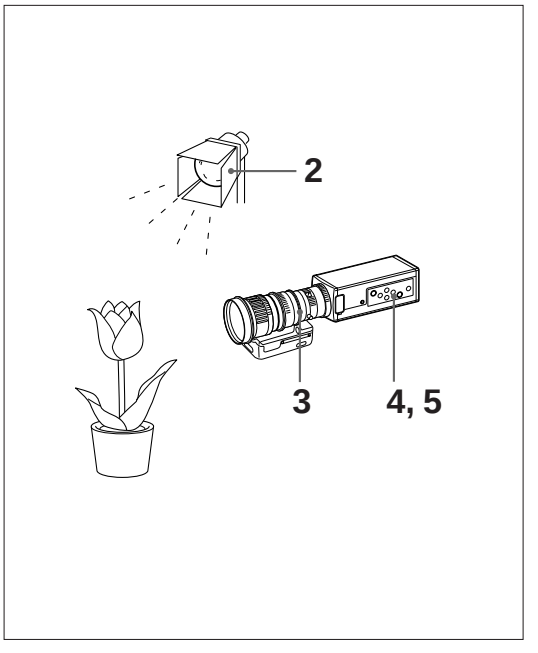
5 Turn the zoom ring to WIDE (wide-angle) as far as it goes.

6 Adjust the focus on the object used in step 2 by turning the FLANGE BACK (flange focal length) adjustment ring on the camera.
Do not turn the focus ring on the lens during adjustment.

7 Repeat steps 3 to 6 until you achieve sharp focus both in the telephoto and wide-angle positions.

Now the flange focal length adjustment is completed.
You do not need to readjust the flange focal length unless you replace the lens.

Basic Shooting Procedure



1 Turn on the power of the camera and all connected devices.

2 Illuminate an object with proper lighting.

3 Point the camera at the object and adjust the iris, focus and zoom.
For details, see "Adjusting the Iris, Focus And Zoom" on pages 36 to 37.

4 Adjust the white balance.
For details, see "Adjusting the White Balance" on page 39.

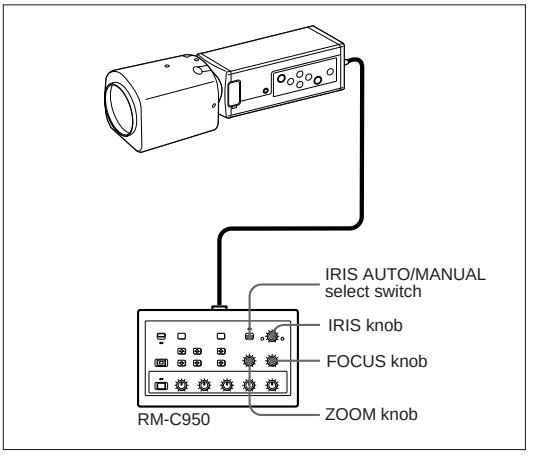
5 Adjust the settings as required.
For details, see "Adjusting And Setting with Menus" on page 12.

6 Start shooting.

Adjusting the Iris, Focus and Zoom

The following is an example of the iris, focus and zoom adjustments using the RM-C950 remote control unit.
For details, refer to the Operating Instructions supplied with the RM-C950.

When you use the VCL-610WEA zoom lens



Adjusting the iris automatically

Set the IRIS AUTO/MANUAL switch on the RM-C950 to AUTO.

Note

You cannot adjust the iris manually with the VCL-610WEA.

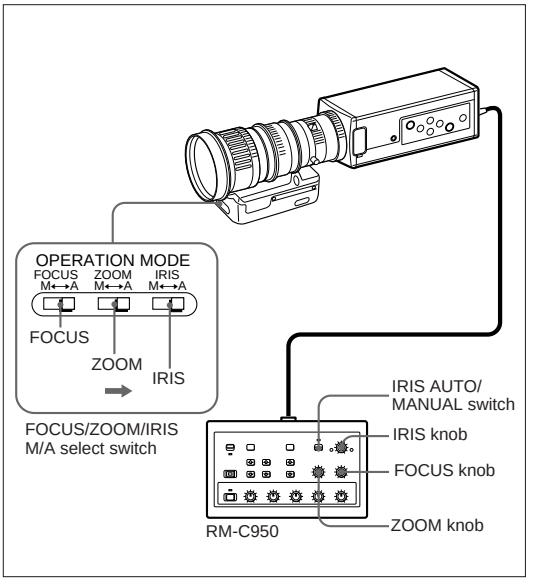
Adjusting the focus

Adjust the focus by turning the FOCUS knob on the RM-C950.

Zooming

Turn the ZOOM knob on the RM-C950 as required.

When you use the VCL-614WEA zoom lens



Adjusting the iris

1. Set the IRIS M/A select switch on the lens to A (Auto), and the IRIS AUTO/MANUAL switch on the remote control unit to MANUAL.
2. Adjust the iris by turning the IRIS knob on the remote control unit.

Adjusting the focus

1. Set the FOCUS M/A select switch on the lens to A (Auto).
2. Adjust the focus by turning the FOCUS knob on the remote control unit.

Zooming

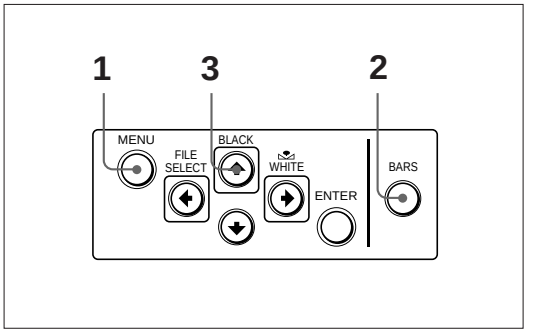
1. Set the ZOOM M/A select switch on the lens to A (Auto).
2. Turn the ZOOM knob on the remote control unit.

Note

When adjusting the iris, focus and zoom manually using the rings on the lens, make sure to set the IRIS, FOCUS and ZOOM M/A select switches to M (Manual) before operating the iris, focus and zoom.
Manual operations with the switch set to A may cause damage to the lens.

Adjusting the Black Balance

Be sure to adjust the black balance when you use the camera for the first time, or after you have not used it for a long period of time, or if there is a sudden change in the temperature.



Operation procedure

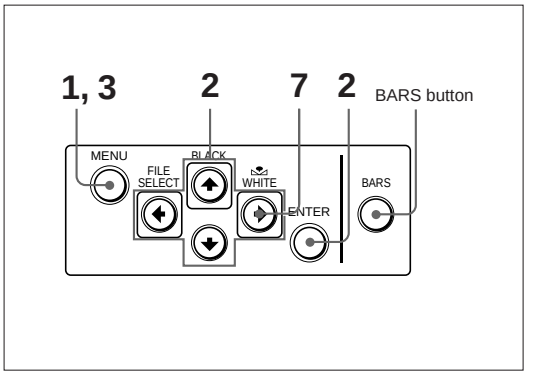
1. If any menu is displayed on the screen, press the MENU button to remove it.
2. If a color bar signal is displayed on the screen, press the BARS button to remove it.
3. Press the BLACK button.
   The lens iris control is automatically closed, and the black balance is adjusted. If you use a manual-iris lens, close the iris then press the BLACK button.
   While adjusting, the bars are displayed. When the adjustment is completed, the message “BLACK: OK” appears on the screen.
   The adjusted black level is stored in the memory and remains even after the power is turned off.

Black balance adjustment errors

If the black balance adjustment is not successful, the message “BLACK: NG” appears on the screen. If this happens, take the necessary measures and perform steps 1 through 3 again.
For details, see “List of Messages” on page 59.

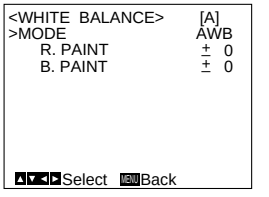
Adjusting the White Balance

Each time the lighting condition changes, be sure to adjust the white balance so that optimum color reproduction is obtained.



Operation procedure

1. Press the MENU button to display the MAIN menu.
2. Select the WHITE BALANCE menu, and set MODE to AWB.



For menu operation, see “Operation through Menus (Menu operation procedure)” on page 14.

3. Press the MENU button twice to remove the menu.
4. Display the camera image on the monitor screen.

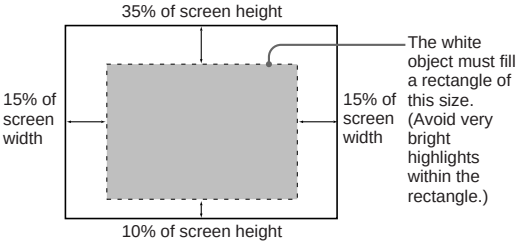
Note

If a color bar signal is displayed on the screen, press the BARS button to turn it off.

5. Set the lens iris control as follows:
   When using an auto-iris lens: Set to auto-iris control.
   When using a manual-iris lens: Set to an appropriate iris opening value.

(Continued)

6 Place a white object (white pattern, white cloth, etc.) in the same light as that falling on the object to be shot, then zoom in on the white object to fill the screen as follows.



The white object can be a white wall near the object to be shot.

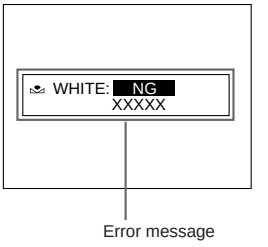
Notes

- Do not include highly reflective objects in the picture.
- Always shoot the image under suitable lighting conditions.

7 Press the WHITE button.
During adjustment the bars appear. The message "WHITE: OK" appears on the screen when the adjustment is done.
The adjusted white level is automatically stored in memory and remains even if the camera's power is turned off.
To shoot under the same conditions, the stored white balance is recalled by setting MODE to AWB in the WHITE BALANCE menu.

White balance adjustment errors

If the auto white balance adjustment is not successful, an error message appears on the screen. If this happens, take the necessary measures and perform steps 1 through 7 again.
For more details, see "List of Messages" on page 59.



Adjusting the Picture Tone in a Multi-Camera System

When configuring a multi-camera system, adjust all cameras to prevent camera-to-camera variations in picture tone. Before making the adjustments outlined below, input the same sync signal to all cameras.
For connections, see "Connecting Two or More Cameras – Multi Camera System" on page 51.

Connecting the cameras to video equipment with phase indication capability

When connecting to a special-effects generator, a chroma-key unit, or other video equipment with phase indication capability, the basic adjustment procedure is as follows:

1 Turn on the phase indication capability of the connected video equipment.

2 Adjust the horizontal phase using the menu.
Select H. PHASE from the SYSTEM menu.
For more details, see "Operation through Menu" on page 14.

3 Adjust the subcarrier phase using the menu.
Select SC. PHASE from the SYSTEM menu.
First adjust the subcarrier phase roughly with SC. PHASE ROUGH by setting to between 0° and 180°, then adjust it finely using SC. PHASE FINE.
For more details, refer to the instruction manual of the connected video equipment with phase indication capability.

Connecting the cameras to video equipment without phase indication capability

Use one of the cameras as a reference camera and adjust the other cameras to the reference camera one by one.

1 Adjust the horizontal phase. Select H. PHASE from the SYSTEM menu, and adjust so that the reference video signal and the output signal have the same horizontal sync phase. Use a waveform monitor or an oscilloscope to check the phase.

2 Adjust the subcarrier phase. Select SC. PHASE from the SYSTEM menu.
First adjust the subcarrier phase roughly with SC. PHASE ROUGH by setting to between 0° and 180°, then adjust it finely using SC. PHASE FINE so that the reference video signal and the output video signal have the same subcarrier phase. Use a vectorscope or the wiping function of a special-effects generator to display the images of both the reference camera and the camera to be adjusted simultaneously on the screen.

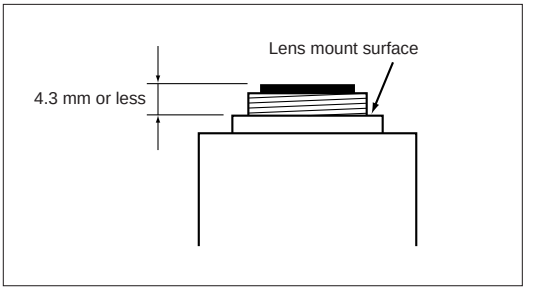
Chapter 3

Installation and Connections

Installation

Applicable Lens

C-mount lenses with the following lens mount surface can be attached to the camera.

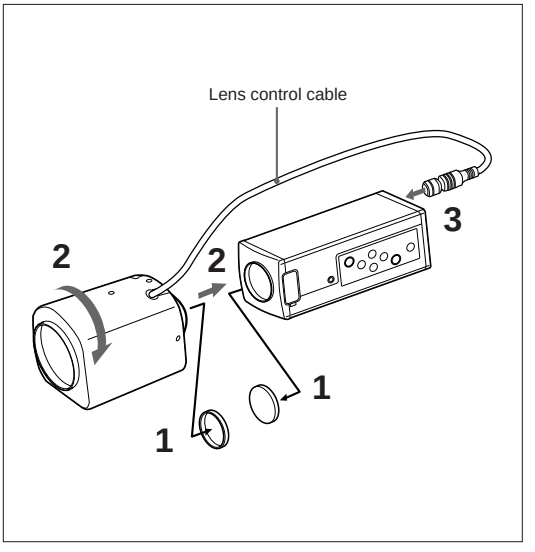


Note

Be sure to use a lens whose projected part from the lens mount surface is less than 4.3 mm. Mounting the lens with a projected part greater than 4.3 mm may damage the internal mechanism of the camera.

Mounting the Lens

Mounting the VCL-610WEA Zoom Lens



1 Remove the mount caps of the camera and lens.

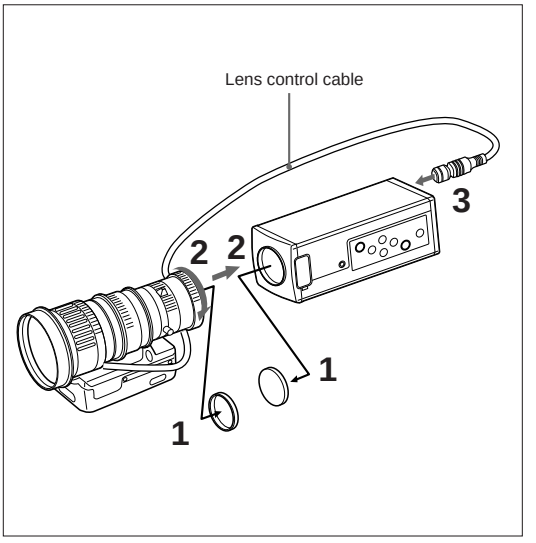
2 Align the threaded portion of the lens mount with that of the camera mount, and slowly rotate the lens clockwise to fix to the camera.

3 Connect the lens control cable to the LENS connector on the camera.

To adjust the position of the lens

After fixing the lens to the camera, rotate the lens further clockwise. When the lens mount is slipped, rotate the lens in the desired direction.

Mounting the VCL-614WEA Zoom Lens



1 Remove the mount caps of the camera and lens.

2 Align the threaded portion of the lens mount with that of the camera mount, and turn the mount lock ring clockwise as far as it goes to fix the lens to the camera.

3 Connect the lens control cable to the LENS connector on the camera.

To adjust the position of the lens
After tightening the mount lock ring, loosen it by turning it counterclockwise by approximately 90º. Then rotate the lens to adjust the position, and tighten the mount lock ring securely.

Mounting C-mount lens other than the VCL-610WEA and VCL-614WEA other

Also refer to the instruction manual supplied with the lens.

1 Remove the mount caps of the camera and lens.

2 Align the threaded portion of the lens mount with that of the camera mount, and slowly rotate the lens clockwise to fit to the camera.

To adjust the position of the lens
Refer to the instruction manual supplied with the lens.

Mounting a Microscope Adaptor

To attach the camera to a microscope, an operating microscope, etc., it is necessary to mount an appropriate adaptor. The method for mounting the adaptor is the same as for the lens.
For details, refer to the instruction manual for each adaptor.

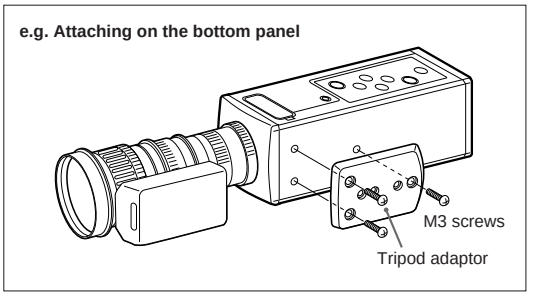
Mounting on a Tripod

Install the supplied tripod adaptor using the three screw holes (M3) on the top or bottom panel. Then attach the tripod to the adaptor using the following mounting screws:

U1/4”, 20 UNC
ℓ = 4.5 mm ± 0.2 mm (ISO standard)

Attaching the supplied tripod adaptor

Following is an example of attaching the tripod adaptor to the bottom panel of the camera. You can also attach the tripod adaptor to the top panel of the camera.



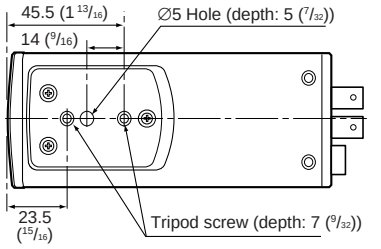
Mounting to a Wall or Ceiling

Attach the camera with the tripod adaptor to the mounting bracket or suspension bracket using the appropriate screws (U1/4”, 20 UNC) that fit the tripod holes of the adaptor.

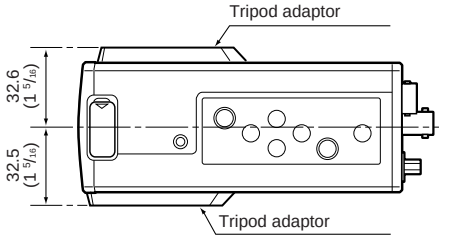
(Continued)

Reference dimensions for attaching a tripod

Top

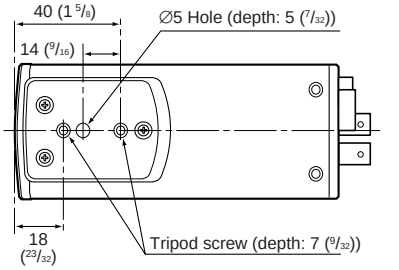


Side



Unit: mm (inches)

Bottom



Unit: mm (inches)

Basic System Connection

To supply power to the camera, use the CMA-D2/D2MD/D2CE/D2MDCE camera adaptor.

There are two methods for connecting the camera and the camera adaptor.
- Using the CCDC cable which only supplies power to the camera (*For connecting method, see page 48.*)
- Using the CCMC cable which supplies power to the camera and transmits video signals to the camera adaptor (*For connecting method, see page 49.*)

The camera adaptor you can use with your camera varies with the signal systems and uses.

System / Use	EIA standard, NTSC color system	CCIR standard, PAL color system
Medical	CMA-D2MD	CMA-D2MDCE
Non-medical	CMA-D2	CMA-D2CE

Note on use of camera adaptors

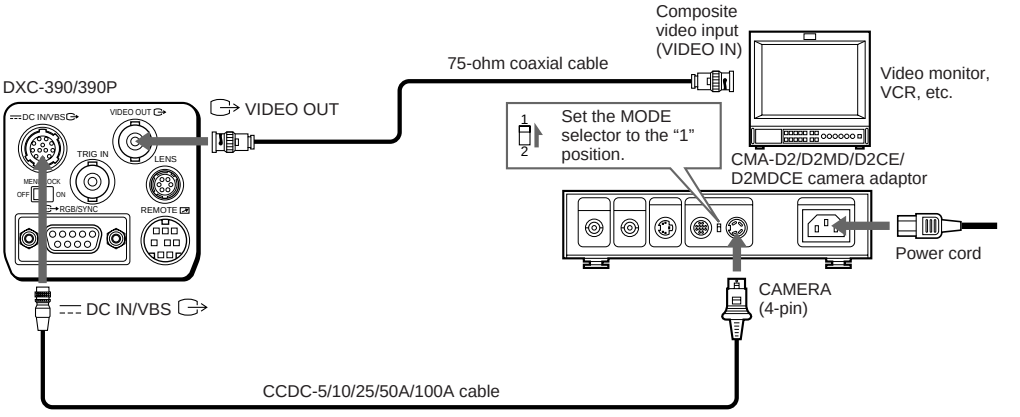
Be sure to use one camera adaptor for each DXC-390/390P unit.
Although the camera adaptor has two CAMERA connectors (4-pin and 12-pin), the power consumption of the camera is such that two camera units cannot be connected at the same time.

Note on connections

Be sure to turn off the power supply for all equipment before making any connections.

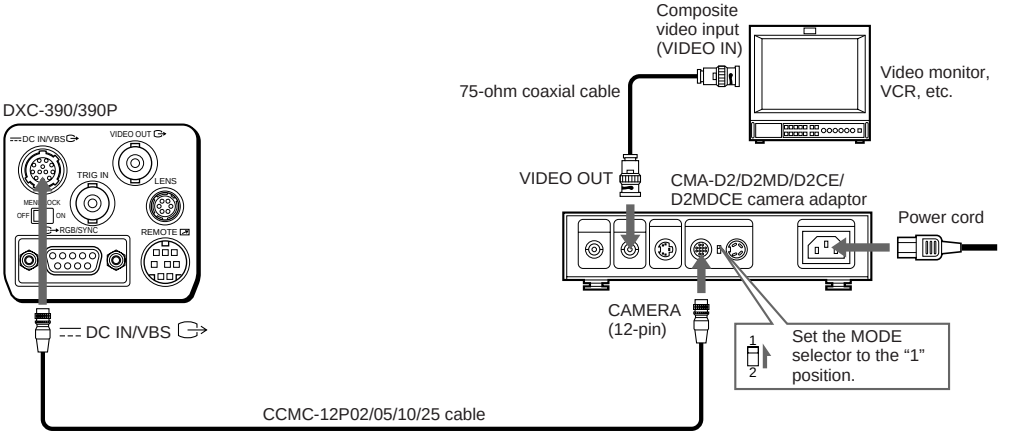
Connecting to Video Equipment with Composite Video Input Connectors

Connecting using the CCDC cable



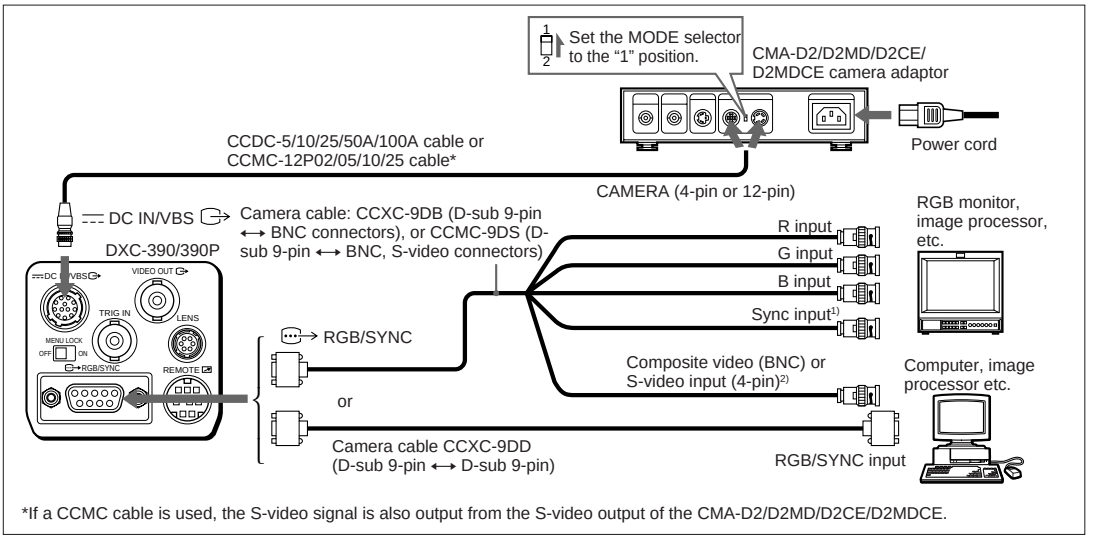
Setup using a CCDC cable (for supplying power only)

Connecting using a CCMC cable



Setup using a CCMC cable (for supplying power to camera and video signals to the camera adapter)

Connecting to Video Equipment with RGB or S-Video Inputs



*If a CCMC cable is used, the S-video signal is also output from the S-video output of the CMA-D2/D2MD/D2CE/D2MDCE.

1) When using a video monitor without a sync signal input connector, the camera can be set to output a sync signal with the G signal or RGB signals.
For details, see "SYSTEM menu" on page 27.

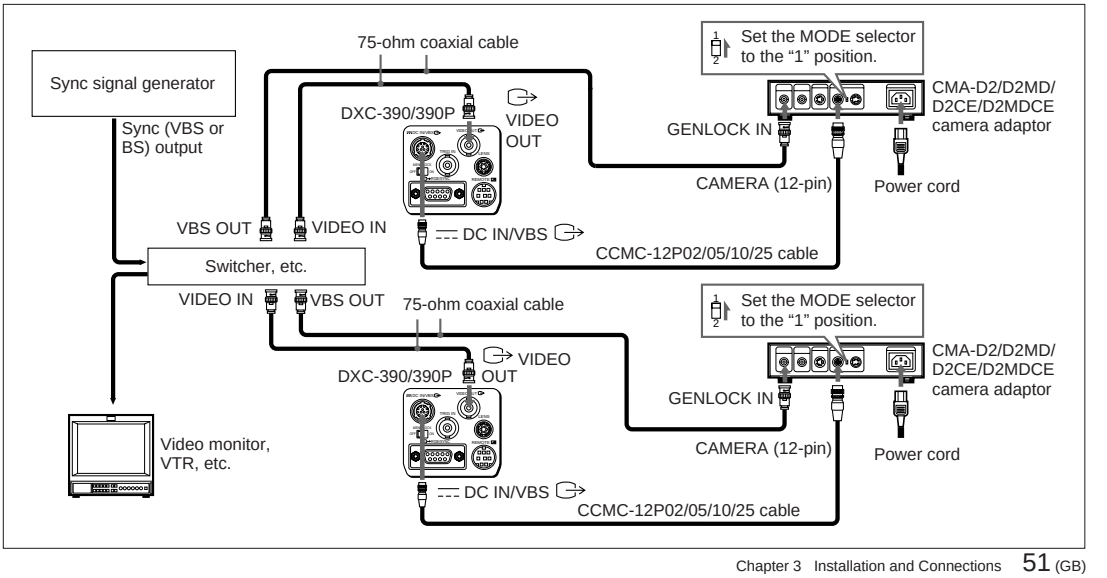
2) This setup is for connecting to a composite video (VBS) connector. To output separated Y/C signals to the S-video input of video equipment, use a CCMC-9DS camera cable.
For details on switching camera output between VBS (composite video) and Y/C, see "SYSTEM menu" on page 27.

Connecting Two or More Cameras—Multi-Camera System

Notes on multi-camera system

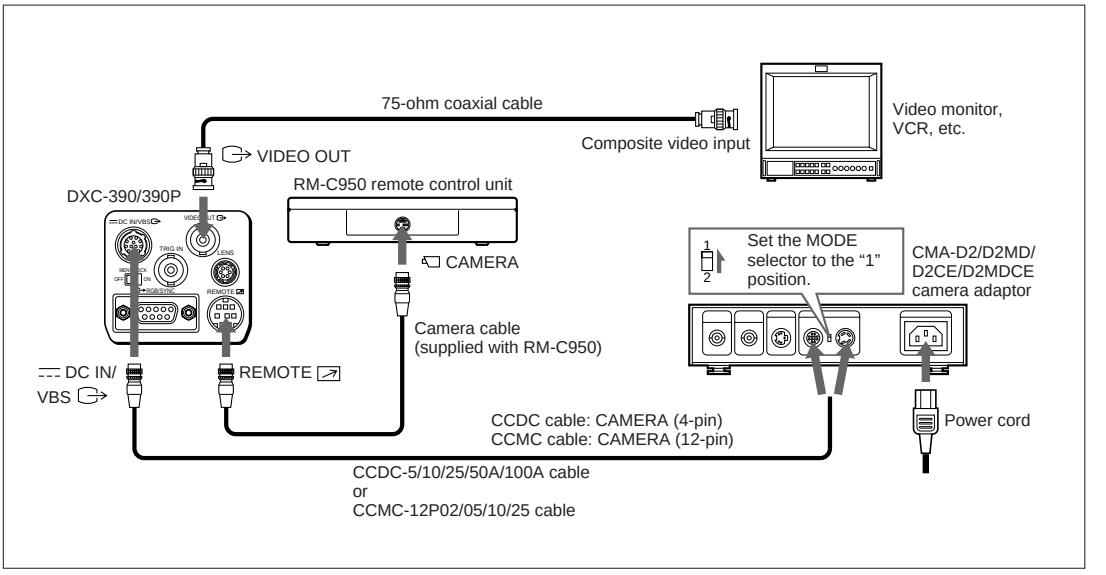
Perform the following to prevent flicker when switching between two or more cameras connected to a video switcher:

• Supply the same sync signal to the GENLOCK IN connectors on each camera adaptor (see below).
• Adjust the subcarrier and horizontal synchronization phases for all cameras.
For more details, see "Adjusting the Picture Tone in a Multi-Camera System" on page 41.



Connecting to a Remote Control Unit

You can connect the RM-C950 remote control unit.



Operating the Camera with the RM-C950 Remote Control Unit

When the RM-C950 remote control unit is used with this camera, the names and functions of the PRINT, FLASH, LONG EXPOSURE and FUNCTION buttons and the GAIN control change as follows, in accordance with the functions of the camera.

Functions of the PRINT, FLASH, LONG EXPOSURE and FUNCTION buttons and GAIN control on the RM-C950

Buttons/control on the RM-C950	Button/control names when used with the camera	Function
PRINT	ENTER	Use when displaying the setting menu selected in the MAIN menu, or use to set the AE window, etc. manually in the menus.
FLASH	FILE SELECT	Use to switch a preset file between A and B.
LONG EXPOSURE ⇧ ⇩	SHUTTER SPEED	Use to set the shutter speed without displaying the menu when SHUTTER is set to STEP or VARIABLE in the menu.
GAIN	GAIN	Use to change the variable range of gain levels to 0–24 dB.
FUNCTION ⇧	BLACK	Use to start the auto black balance adjustment.

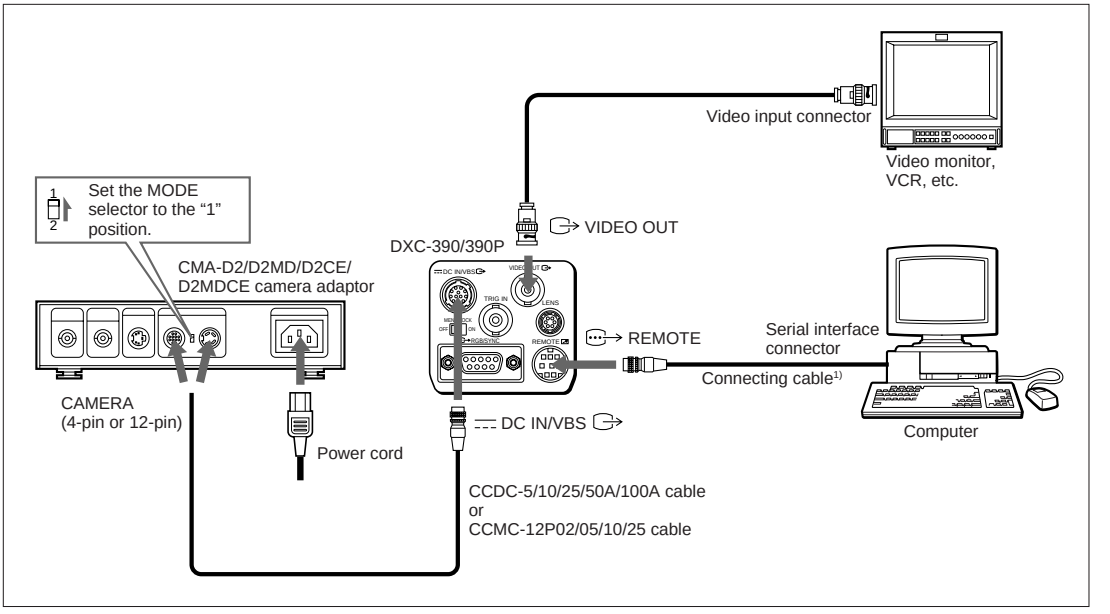
Attaching the supplied name sheet

The sheet for the button names when the camera is used with the remote control unit is supplied with the camera. Attach the name sheet to the control panel of the RM-C950.

1 Before attaching, clean the control panel of the RM-C950.

2 Peel off the adhesive sheet at the back of the name sheet and attach the name sheet to the panel.

Connecting to a Computer

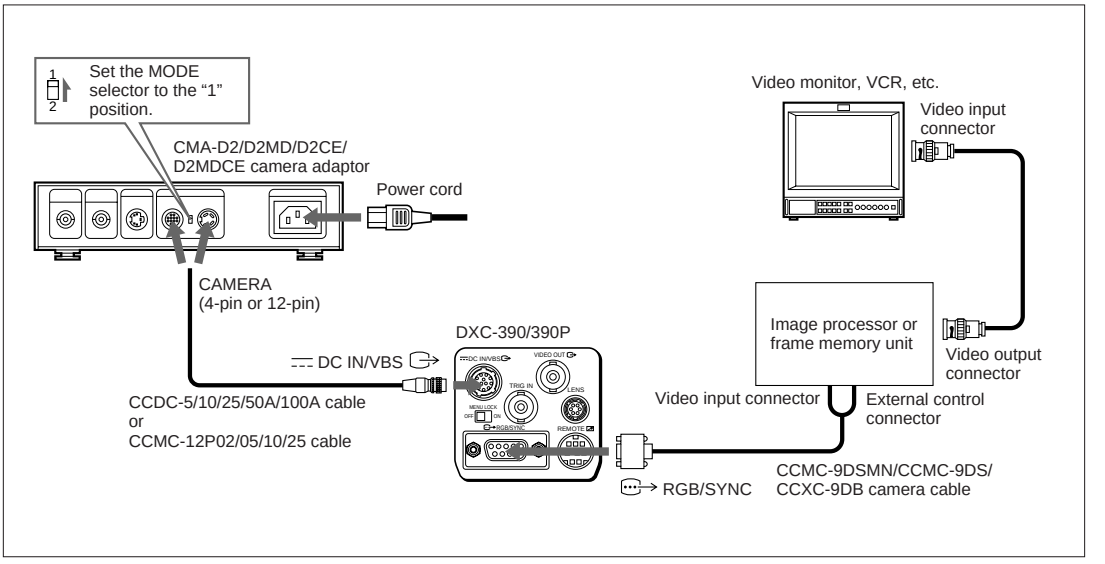


System for controlling the camera with a computer using an RS-232C command

1) Use the shielded connecting cable for connecting to a computer.

For more details on RS-232C protocols and cables for connection to a computer, contact your authorized Sony dealer.

Connections for Long Exposure Shooting

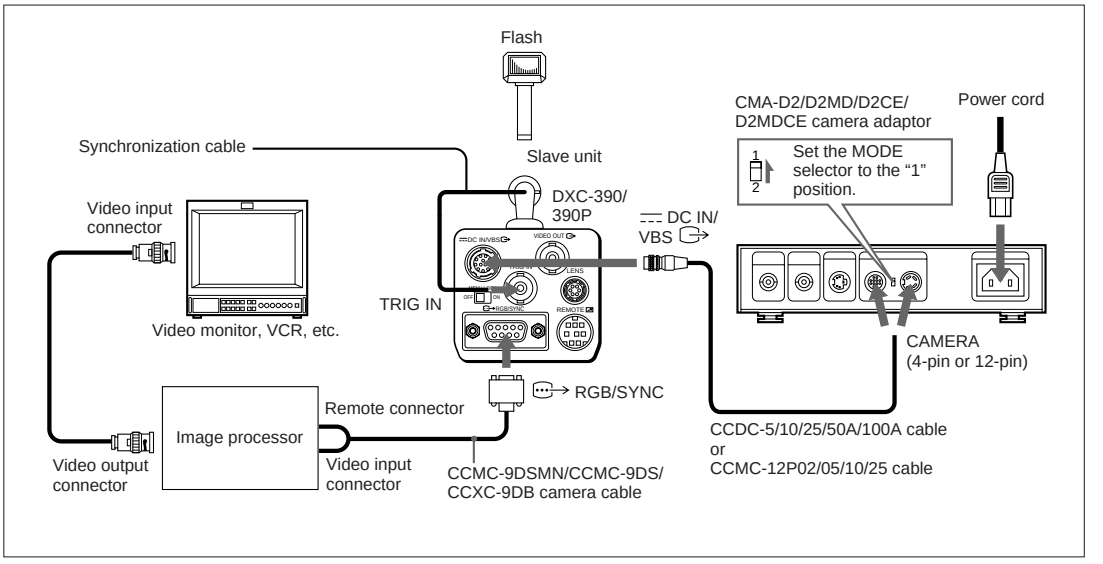


System for shooting using long exposure in VARIABLE mode for electronic shutter

Note

When shooting with long exposure, set D-SUB SYNC to WEN and RGB SYNC to G (or RGB) in the SYSTEM menu *(page 28)*.

Connections for Shooting Using a Flash



Note

When connecting a flash unit, set TRIGGER to ON in the GENERAL menu *(page 27)* and D-SUB SYNC to WEN in the SYSTEM menu *(page 28)*.

Chapter 4 Appendix

Precautions

Operating or storage location

Operating or storing the camera in the following locations may cause damage to the camera:

- Extremely hot or cold places (Operating temperature: –5°C to +45°C [23°F to 113°F])
- Exposed in direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
- Close to sources of strong magnetism
- Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters
- Locations subject to strong vibration or shock

Ventilation

To prevent heat buildup, do not block air circulation around the camera.

Transportation

When transporting the camera, repack it as originally packed at the factory or in materials equal in quality.

Cleaning

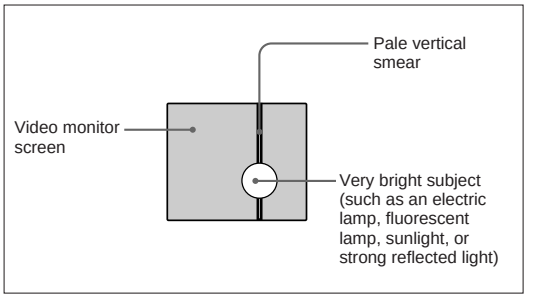
- Use a blower to remove dust from the lens or optical filter.
- Use a soft, dry cloth to clean the external surfaces of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

Typical CCD Phenomena

The following phenomena may appear on the monitor screen while you are using the DXC-390/390P color video camera. These phenomena stem from the high sensitivity of the CCD image sensors, and do not indicate a fault within the camera.

Vertical smear

A “smear” may appear to extend vertically from very bright subjects, as shown below.



This phenomenon is common to CCD imaging elements using an interline transfer system, and is caused when electric charge induced by infrared radiation deep within the photo sensor is transferred to the resistors.

Aliasing

When shooting fine stripes, straight lines or similar patterns, the lines may become slightly jagged.

Blemishes

A CCD image sensor consists of an array of individual picture elements (pixels). A malfunctioning sensor element will show up as a single pixel blemish in the image. This is generally not a problem.

White speckles

When you shoot a poorly illuminated object at a high temperature, small white dots may appear all over the entire screen image.

List of Messages

The following messages may appear on the screen. Take the necessary measures shown below.

Messages while adjusting the white balance automatically

Message	Meaning/remedies
WHITE: OK	Automatic white balance adjustment has succeeded.
WHITE: NG LEVEL LOW	The video level of the image is too low. • Increase the illumination. • Widen the iris opening. • Increase the video gain. Take the measures above, then press the WHITE button.
WHITE: NG LEVEL HIGH	The video level of the image is too high. • Remove any brightly illuminated objects. • Decrease the illumination. • Close the iris opening. • Decrease the video gain. Take the measures above, then press the WHITE button.
WHITE: NG TEMP LOW	Color temperature is too low. Change the color temperature of the object to the appropriate level.

Messages while adjusting the white balance automatically (continued)

Message	Meaning/remedies
WHITE: NG TEMP HIGH	Color temperature is too high. Change the color temperature of the object to the appropriate level.
WHITE: NG TRY AGAIN	The camera has failed to adjust the white balance. Add white part to the object shot. Take the measures above, then try again. If the message appears even if you repeat adjustment, the camera needs to be checked. Consult your authorized Sony dealer.

Messages while adjusting the black balance automatically

Message	Meaning/remedies
BLACK: OK	Automatic black balance adjustment has succeeded.
BLACK: NG IRIS close?	The camera has failed to adjust the black balance. Close the iris opening, than press the BLACK button.

Specifications

Image system/optical system

Image device
1/3 type CCD, interline transfer type
Effective picture elements
DXC-390: 768 (horizontal) × 494 (vertical)
DXC-390P: 752 (horizontal) × 582 (vertical)
Lens mount C-mount

Video system

Synchronization
Internal/external synchronization (VBS, HD/VD), switched automatically
Signal format
DXC-390: NTSC standard format (EIA standard)
DXC-390P: PAL standard format (CCIR stnadard)
Scanning DXC-390: 525 lines, 2:1 interlace
DXC-390P: 625 lines, 2:1 interlace
Scanning frequency
DXC-390: 15.734 kHz (horizontal), 59.94 Hz (vertical)
DXC-390P: 15.625 kHz (horizontal), 50.00 Hz (vertical)

Functions/performance

Horizontal resolution
800 TV lines
Sensitivity 2000 lux (F8, 3,200K)
Signal-to-noise ratio
DXC-390: 62 dB
DXC-390P: 61 dB
Gain control AGC: Automatic Gain Control
STEP: 0–24 dB (in units of 1 dB)
HYPER
White balance
AWB: R. PAINT, B. PAINT
MANUAL: R. GAIN, B. GAIN
ATW: R. PAINT, B. PAINT
3200K
5600K
Electronic shutter speed
Adjustable in the range from 1/100000 to about 8.0 sec. (adjustable with CCD IRIS)
Linear matrix
ON/OFF switchable
Gamma compensation
ON/OFF switchable
Charge accumulation mode
Switchable between field and frame mode

Inputs/outputs

Video input/output signals
Composite video: 1 Vp-p (75 ohms)
R/G/B: 1.0 Vp-p (75 ohms at R/G/B on Sync)
Y: 1 Vp-p (75 ohms)
Y/C: 1 Vp-p, same level as VBS chroma, 75 ohms
SYNC: 2 Vp-p, 75 ohms
External sync input
VBS/BS, HD/VD (VBS 1 Vp-p or Burst 0.3 Vp-p, SYNC 0.3 Vp-p or HD/VD 4.0 Vp-p, 75 ohms)
Input/output connectors
VIDEO OUT: BNC, 75 ohms, unbalanced
DC IN/VBS: 12-pin
REMOTE: mini DIN 18-pin
TRIG IN: BNC, TTL
RGB/SYNC: D-sub 9-pin
LENS: 6-pin connector for the zoom lens especially designed for this camera

General

Power supply
12 V DC
Power consumption
Approx. 7.6 W
Operating temperature
–5°C to +45°C (23°F to +113°F)
Storage and transport temperature
–20°C to +60°C (–4°F to +140°F)
Operating humidity
20% to 80% (free of condensation)
Storage and transport humidity
20% to 90% (free of condensation)
Dimensions $56 \times 50 \times 128$ mm ($2\ ^1/_4 \times 2 \times 5\ ^1/_8$ inches) (w/h/d) (not including the projecting parts)
Mass Approx. 370 g (13 oz)
Supplied accessories
Lens mount cap (1)
Tripod adaptor (1)
Name sheet for the buttons on the RM-C950 (1)
Instructions for Use (1)
Warranty card (1) (DXC-390 only)
Sales companies' guide (1) (DXC-390P only)

(Continued)

Specifications

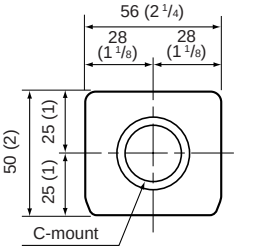
Medical specifications

Protection against electric shock
Class I
Protection against harmful ingress of water
Ordinary
Degree of safety in the presence of flammable anesthetics or oxygen
Not suitable for use in the presence of flammable anesthetics or oxygen
Mode of operation
Continuous

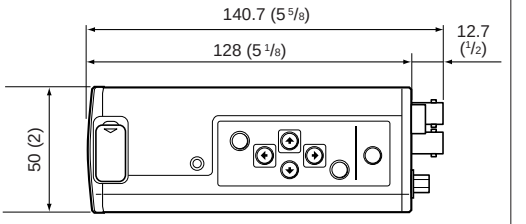
Design and specifications are subject to change without notice.

Demensions

Front

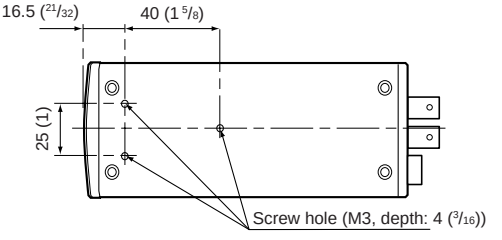


Side

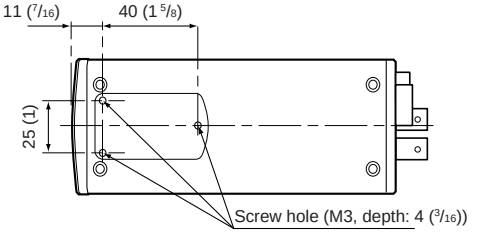


Unit: mm (inches)

Top



Bottom



Unit: mm (inches)

Optional Accessories

Lenses

VCL-614WEA zoom lens (14 ×, f = 5.5 – 77 mm)
VCL-610WEA zoom lens (10 ×, f = 6.5 – 65 mm)

Camera adaptor

CMA-D2 camera adaptor (for NTSC format)
CMA-D2MD camera adaptor (for NTSC format, medical use)
CMA-D2CE camera adaptor (for PAL format)
CMA-D2MDCE camera adaptor (for PAL format, medical use)

Remote control unit

RM-C950 remote control unit (connecting cable supplied)

Power supply cable

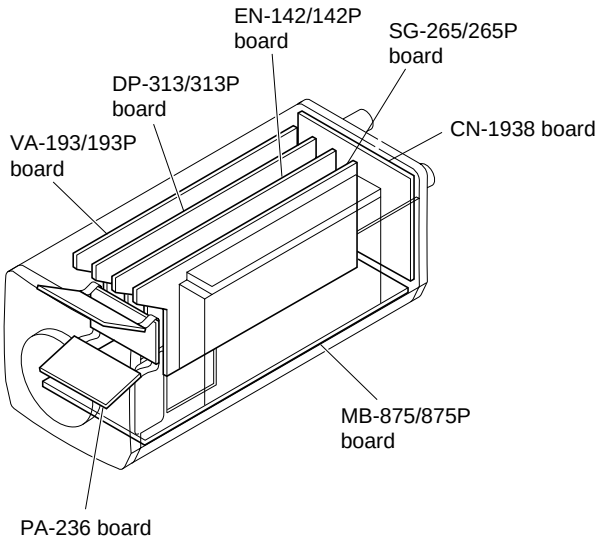
CCDC series (length: 5 m [16 ft], 10 m [32 ft], or 25 m [82 ft])
CCDCA series (length: 50 m [164 ft], or 100 m [328 ft])
CCMC series (length: 2 m [7 ft], 5 m [16 ft], 10 m [32 ft], or 25 m [82 ft])

Camera cable

CCXC-9DB (D-sub ⟷ BNC × 5)
CCXC-9DD (D-sub ⟷ D-sub)
CCMC-9DS (D-sub ⟷ BNC × 4, S-video connector)
CCMC-9DSMN (D-sub ⟷ BNC × 3, phono jack, S-video connector)

Section 2
Service Overviw

2-1. Board location

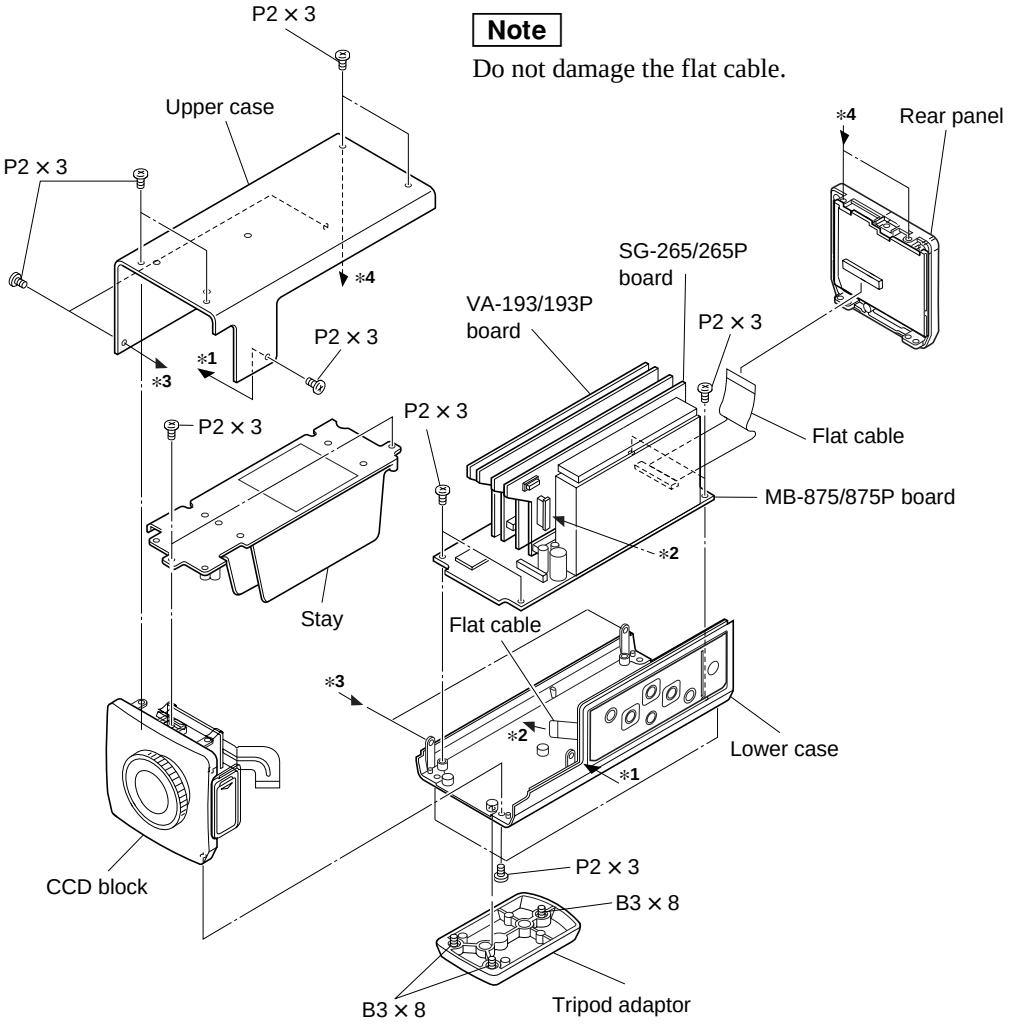


2-2. Removal of cabinet

1. Remove the seven screws (P2 × 3) and then remove the upper case.
2. Remove the two screws (P2 × 3) and then remove the stay.
3. Remove the two screws (P2 × 3) and then remove the rear panel.
   Remove the flat cable from the rear panel.
4. Loosen the three screws (B3 × 8) and then remove the tripod adaptor. (These screws cannot be removed because of stoppers.)
5. Remove the CCD block, referring to the Section2-3. “Removal of CCD block”.
6. Remove the flat cable from the SG-265/265P board.
7. Remove the four screws (P2 × 3) on the MB-875/875P board and then remove the lower case.

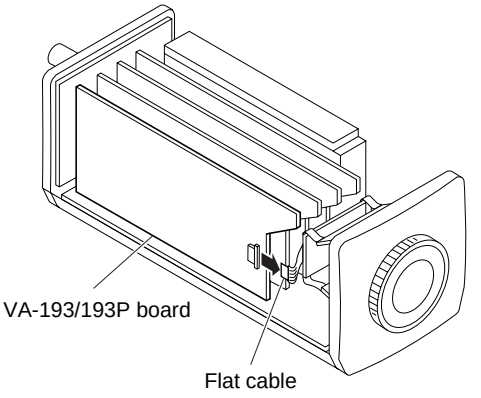
Note

Do not damage the flat cable.



2-3. Removal of CCD block

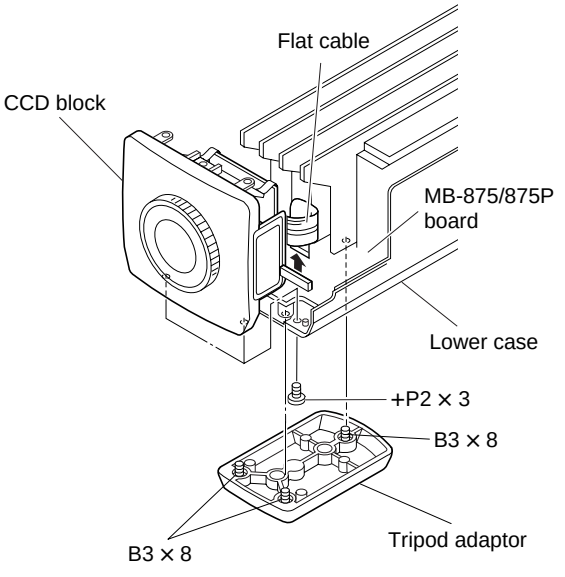
1. Remove the upper case and stay, referring to the Section 2-2. “ Removal of cabinet ”.
2. Remove the flat cable from the VA-193/193P board.



3. Loosen the three screws (B3 × 8) and then remove the tripod adaptor. (These screws cannot be removed because of stoppers.)
4. Remove the two screws and draw the CCD block.
5. Remove the flat cable from the MB-875/875P board and then remove the CCD block.

Note

- Do not damage the flat cable.
- Pay carefull attention not to give the stress in the PA-236 board and prism block, since it may cause damage them.



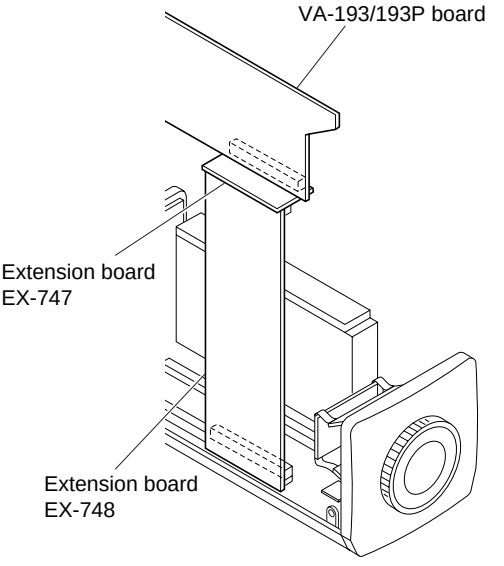
2-4. How to use an extension board

Extension boards are not in use for adjustment.
These are in use for check of VA-193/193P, DP-313/313P, EN-142/142P, SG-265/265P boards.

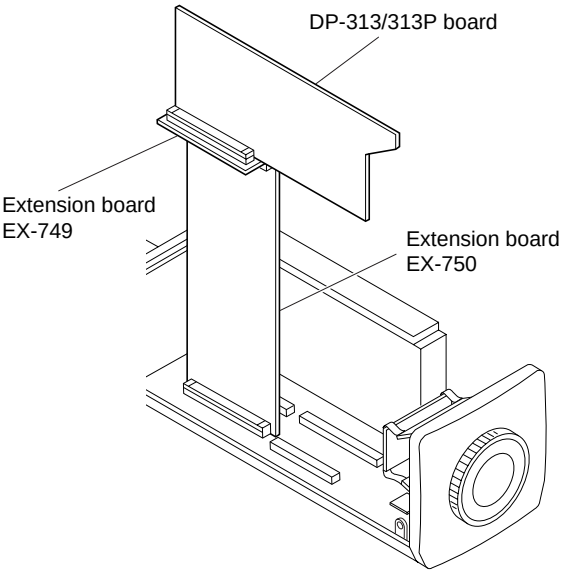
Extension board

- EX-747 : J-6432-130-A
- EX-748 : J-6432-140-A
- EX-749 : J-6432-150-A
- EX-750 : J-6432-160-A

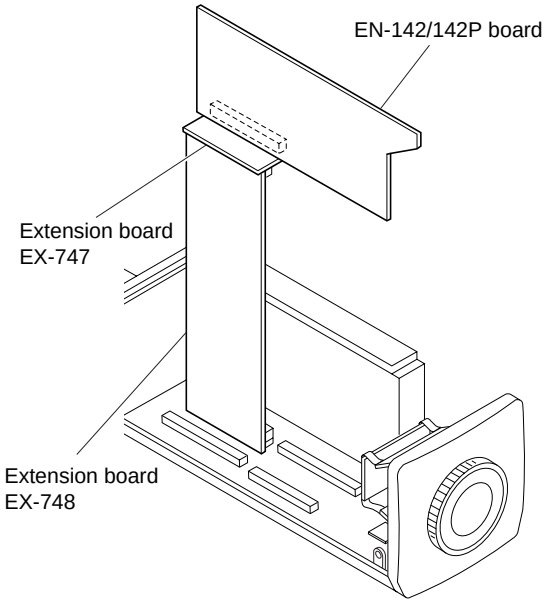
• In cases of the VA-193/193P board



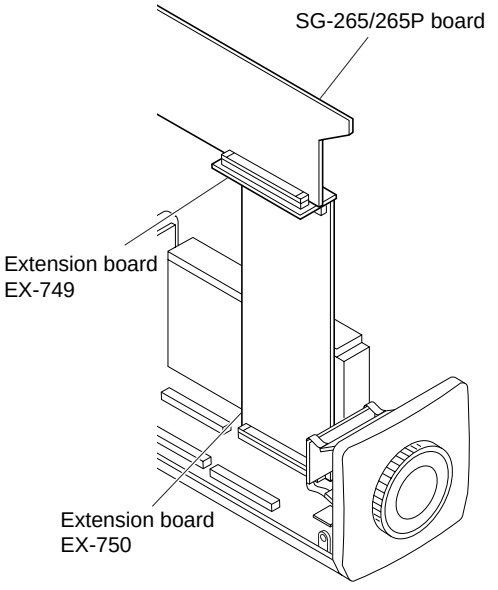
• In cases of the DP-313/313P board



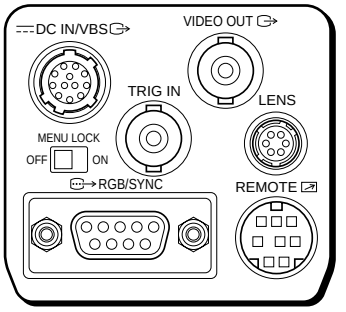
• **In cases of the EN-142/142P board**



• **In cases of the SG-265/265P board**

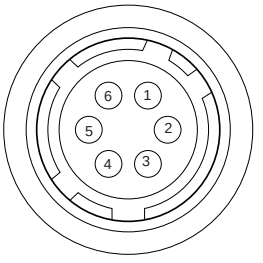


2-5. Input/output signals of connectors



DXC-390/390P REAR PANEL

LENS

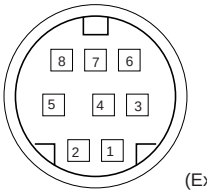


(External view)

LENS connector (6-pin)

Pin No.	Signal
1	Focus control
2	Zoom control
3	GND
4	Iris close
5	Iris control/video (signal)
6	+12V

REMOTE

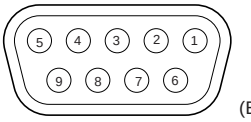


(External view)

REMOTE connector (8-pin)

Pin No.	Signal
1	HSK output
2	HSK input
3	TXD_–
4	GND
5	RXD_–
6	TXD_+
7	UNREG_+
8	RXD_+

RGB/SYNC

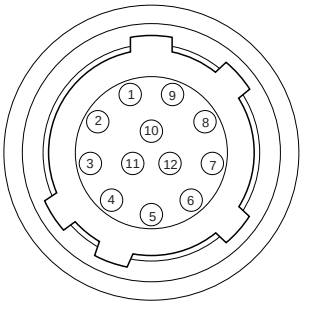


(External view)

RGB/SYNC connector (D-sub 9-pin)

Pin No.	Signal
1	VBS output (GND)
2	RGB output (GND)
3	R/VBS output
4	G/Y output
5	B/C output
6	VBS/Y output
7	SYNC/WEN output (signal)
8	SYNC output (GND)
9	–/C output

DC IN/VBS



(External view)

DC IN/VBS connector (12-pin)

Pin No.	External sync mode		Internal sync mode
	HD/VD	VBS	
1	GND	GND	GND
2	+12V	+12V	+12V
3	VBS/Y output (GND)	VBS/Y output (GND)	VBS/Y output (GND)
4	VBS/Y output (signal)	VBS/Y output (signal)	VBS/Y output (signal)
5	EXT HD input (GND)	–	HD output (GND)
6	EXT HD input (signal)	–	–/HD output (signal)
7	EXT VD input (signal)	EXT VBS input (signal)	SYNC/VD output (signal)
8	–/C output (GND)	–/C output (GND)	–/C output (GND)
9	–/C output (signal)	–/C output (signal)	–/C output (signal)
10	GND	GND	GND
11	+12V	+12V	+12V
12	EXT VD input (GND)	EXT VBS input (GND)	SYNC/VD output (GND)

Section 3
Circuit Operation Description

3-1. VA-193 Board

The VA-193 board consists of the circuit blocks described below.

- S/H, AGC Circuit and Pre-amplifier (Main circuit : CXA1757R)
- Processing circuit
- Shading correcting circuit
- Signal generator circuit for lens control

(1) S/H, AGC Circuit and Pre-amplifier (Main circuit : CXA1757R)

In CXA1757R (IC901), RGB signal that is input from the PA-236 board, is separated signal using correlative double sampling processing. There is sampling-hold by input XSHD and XSHP sampling pulses, is processed. The separated signal is amplified by a AGC amplifier. This AGC amplifier can control gain by voltage. This voltage is input from IC902, is changed by every gain mode.

The signal that is through the AGC amplifier, is input to the pre-amplifier circuit. In the pre-amplifier, gives a gain to R-channel and B-channel signals, suppresses sensitive uneven between RGB. After that, is output from IC901 via blanking process and clamp circuit. The black output level is approximately 1.8V.

(2) Processing Circuit

The RGB signal that is output from IC901 eliminates the 14 MHz component by the trap filter after through the buffer. After that, it is input to the white-balance amplifier (from IC910 to IC912).

This amplifier can be controlled a gain by a voltage (VCA), VCA gain of R-channel and B-channel is controlled by a voltage giving from IC906 and the white-balance processing is performed.

And VCA of G-channel is given the signal for compensation from the shading compensation circuit, it is performed compensation by controlling a gain of G-channel. The signal after performing white-balance, after through a pre-knee circuit and a white-clip circuit, is clamped OPB part by the feedback clamp circuit (from IC915 to IC918) to approximately 2.1 Vdc, is output to the DP-313 board.

(3) Shading Compensation Circuit

V-periodic delta wave is generated, it uses the voltage for VCA gain control, so that shading compensation function is realized.

The generated delta wave is adjusted so that the wave center will be around the center on the screen.

The delta wave slant, central adjustment value, offset adjustment value and delta wave generating on/off are set in IC903 and IC906.

(4) Lens Control Signal Generator circuit

Signals for controlled lens iris, focus and zoom are generated. About iris, the signals for video servo and DC control are alternated (IC913). The video servo signal makes the Y-signal from the RGB signal of previous AGC in IC901 and is input to VCA (IC907) via gain amplifier and clamp circuit. This VCA sets a gain according to convergence level from IC903. The control signal for DC control, that is set voltage in IC903, is output after adjusted gain. The voltage range of the signal is approximately from 2.5 V to 7.5 V. The ZOOM and FOCUS control signals are the same set voltage in IC903, are output after adjusted gain. The voltage range is the same approximately from 2.5 V to 7.5 V. A voltage of IC903 is controlled from a microprocessor, and then a lens is controlled.

3-2. DP-313 Board

The DP-313 board consists of the circuit blocks described below.

- A/D converter circuit for video signal
- Around CXD9117R
- CXD9087R and its surrounding circuits
- D/A converter circuit for video signal
- Clock phase control circuit

(1) A/D converter circuit for video signal

The analog signal (RGB) that is processed every kind at the VA-193 board, is converted to 10-bit digital signal at CXD2310AR (from IC401 to IC403). Sampling frequency is 14 MHz. The top reference voltage (approximately 4V) and bottom reference voltage (approximately 2V) that are the standard voltage, are set in IC406 (D/A converter), are input via buffer (IC411). Also, calibration pulse for IC401, IC402 and IC403 is input after mixing inside between generated in hard ware (around IC420) and generated in software via IC406.

(2) CXD9117R and its surrounding circuit

The digital converted RGB signals are input to CXD9117R (IC404), digital signal processing performs. The IC inside setting is performs by the serial communication (BUSY, PRN-CS, SDI-3, SDO-3 and SCLK-3) from a microprocessor. Also, a data communication with EEROM (IC405) is controlled by CXD9117R.

(3) CXD9087R and its surrounding circuit

10-bit digital signal after processing in CXD9117R is input to CXD9087R, performs digital signal processing. The IC inside setting is performed by the serial communication (CS, SDCK and SDA0-SDA3) from a microprocessor. The output signal is Y and color differential signal (Y, CR and CB, every 10-bit). Also, AHD and AVD that are output at the same time, are sent to the MB-875 board and ECK is sent to the SG-265 board.

(4) D/A converter circuit for video signal

Y, CR and CB (every 10-bit) that are output from CXD9087R, are input to CXD2307R and are converted to analog signals. The clock frequency for conversion is 28 MHz.

And, an output amplitude can be set independently Y, CR and CB by setting a reference voltage from IC406.

(5) Clock phase control circuit

14 MHz and 28 MHz clock pulses that is input from the MB-875 board, are performed phase adjustment and are output via buffer to each IC (A/D converter for video circuit, CXD9117R, CXD9087R and D/A converter for video circuit).

For CXD9117R and CXD9087R, 3.3 V amplitude is output after converted from 5 V amplitude.

3-3. EN-142 Board

The EN-142 board generates the composite signal (VBS and Y/C) by the encoder IC from Y, CR (R-Y) and CB (B-Y) that are output from the DP-313 board.
In the another system, RGB signals are also generated by the discrete circuit.
These output signals are output through the driver circuits.

- **Encode (IC704)**

The color differential signals (Y, R-Y and B-Y) are input to IC704, then encode, VBS and Y/C signals are generated.

The input Y signal gain is performed at gain control amplifier in IC704, and also the input R-Y and B-Y signals gain are performed at GCA in IC703.

Each level setting (Y, SYNC, BURST, SETUP and White-clip) is performed by IC701.

The title signal from the DP-313 board can be also mixed to a final output signal of IC704 turning the S701 switch on.

- **RGB generator circuit**

RGB signals are made from color differential signals (Y, R-Y and B-Y) output the DP-313 board. SYNC addition independently controls ON/OFF for R/B and G.

- **Video signal driver circuit**

VBS, Y, C, R, G and B signals output via 75-ohm driver circuit. HD, VD, C, SYNC and WEN signals also output via driver circuit.

Also, HD line and VD line using both input and output are change-controlled by two-way buffer IC712.

3-4. SG-265 Board

The microprocessor communicates a data with each board, and controls a camera.
And, by external sync circuit around the Gen.Lock IC, sync mode is discriminated and sync source signal is separated. These construct 4fsc clock PLL.

- **Microprocessor IC107 (uPD70F3017)**
  This is 32-bit RISC microprocessor of a flash type. The clock frequency uses 17 MHz (X101).
  Program write terminal is common use with the communication terminal (UART), a change connection performs between software rewrite in IC102 and normal communication.
  IC101 is EEPROM stored camera setting data.

- **Character generator block**
  The clock uses 7 MHz that is divided 14 MHz to half in IC103.
  The character and Key signal are made in IC111, are input to CXD9087R.

- **External communication block**
  One is RS232C, communicates with external through driver circuit (IC112).
  Another is CCU protocol, takes on sending in Q102 and receiving in Q101.

- **Iris value converter block**
  In the exclusive lens for DXC-390, an iris value gets as voltage.
  Its voltage is adapted for a dynamic range of A/D converter of the microprocessor in IC115, is taken the microprocessor.

- **Sync signal generator (IC231)**
  Each kind sync signal (HD, VD, FLD, LALT, BF and OBLK) is output.

- **External sync signal (VBS and HD/VD)**
  Sync mode is discriminated by a input sync source signal from external. SYNC and BURST are separated from its signal and input to IC230, compare phase with the internal HD and SC signals.
  In the VBS external sync mode, 4fsc clock signal is synchronized in SC-PLL whichever NTSC and PAL systems. In the HD/VD external sync mode, it is synchronized only PAL system.
  In the internal sync mode and HD/VD external sync mode of NTSC system, PLL is not consisted, VCXO is generated by a fixed voltage.
  HD and SC phase on those external sync mode are adjusted.
  And, a sync source signal is changed amplitude to 5 Vp-p after through buffer and separated.

3-5. MB-875 Board

The MB-875 board is installed the oscillator circuit for master clock, the timing generator for the CCD driving pulse, the IC generated detection boundary and the DC-DC converter.

- **28 MHz oscillating circuit**

  This circuit consists of the P-COMP (HD phase comparative output) signal and PLL in VCO.
  When the internal sync and VBS external sync, it is crystal type VCO, HD and VD. When the external sync, it is generated 28 MHz of the master clock in the LC type VCO oscillator.
  Both oscillator circuits do not operate simultaneously.
  The oscillator clock improves the duty ratio in IC635, IC636 and its around circuit.

- **Timing generator (IC611)**

  28 MHz and AHD/AVD from the DP-313 board are input, each pulse for driving the CCD is generated.

• V1, V2, V3 and V4	Vertical transfer pulse
• H1 and H2	Horizontal transfer pulse
• VSUB	Electric charge sweep out pulse
• RG	Reset gate pulse

  The transfer pulse is sent via H-driver circuit (IC612) and V-driver circuit (IC601, IC604 and IC607) to the PA board, the sample and hold pulse are sent to the VA-193 board.

- **CXD9115AR (IC606)**

  The window signal for detection frame is generated.
  H-Window and V-Window signals are mixed in IC628 and IC629, are output to the DP-313 board.
  A CCD accumulative time is realized according to a trigger input.

- **DC-DC converter (DD601)**

  The voltages of +15V, +9V, +5V (A), +5V (D), +3.3V and −7.5V are generated from the external input power supply UNREG (+), so that supply to each board.
  Independently, UNREG (+) is passed through a filter, it is supplied as UNREG (LENS).

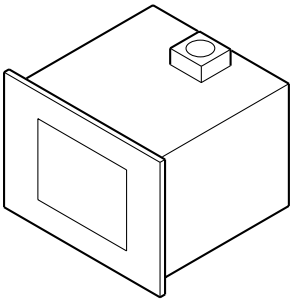
Section 4
Electrical Alignment

4-1. Preparation

4-1-1. Adjustment Fixture and Measurement Equipment

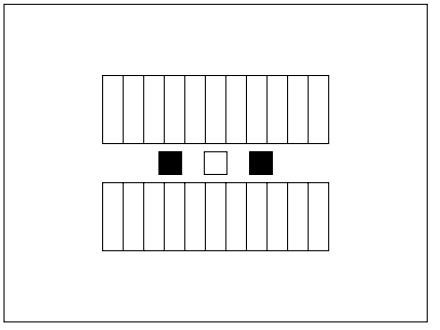
J-6029-140-B	Pattern box PTB-500

・Light source for adjustment chart
Power supply from 90 to 240VAC



J-6026-130-B	Grayscale chart

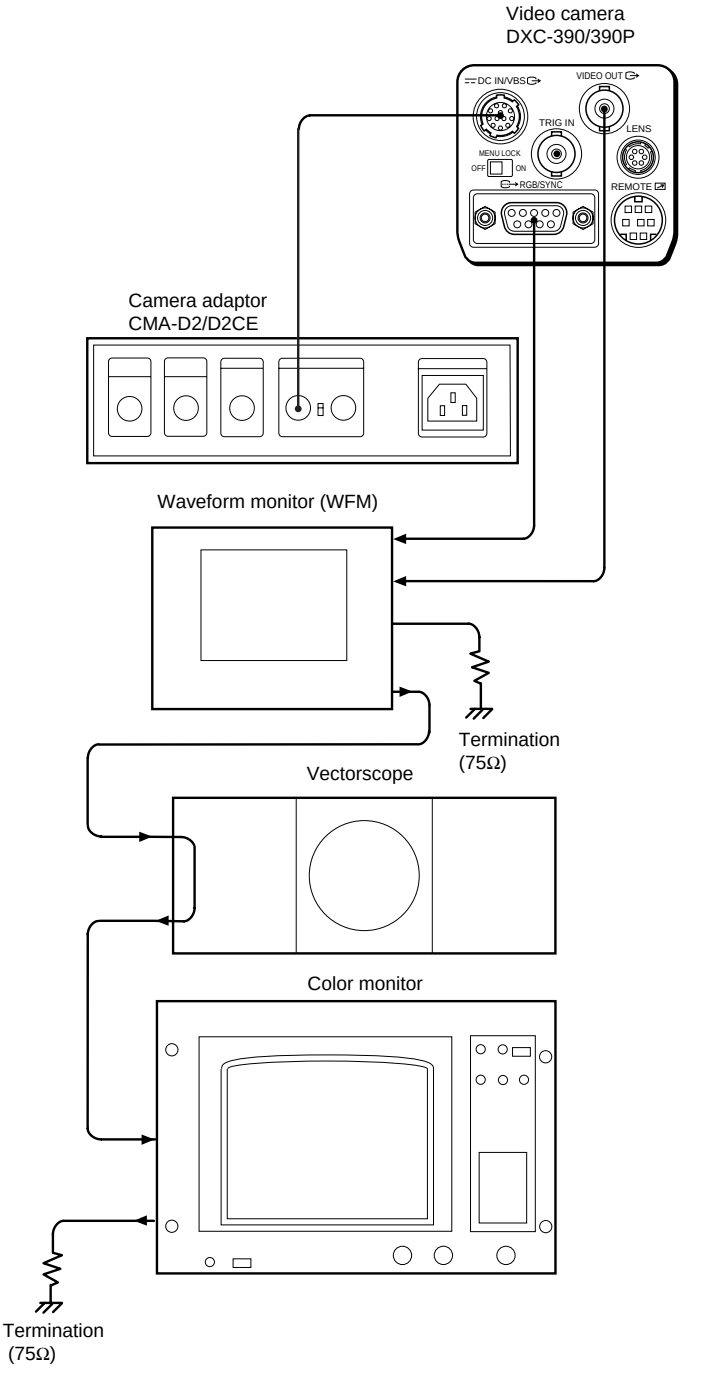
・For video level adjustment, etc.



Commercially Available Products

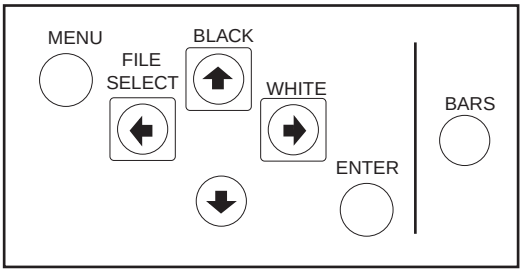
- Vectorscope
- Waveform monitor
- Frequency counter
- Signal generator
- Digital voltmeter
- Color monitor
- Lens (C-mount type and manual iris type)

4-1-2. Equipment Connection



4-1-3. Description of Side Panel Sheet Switches

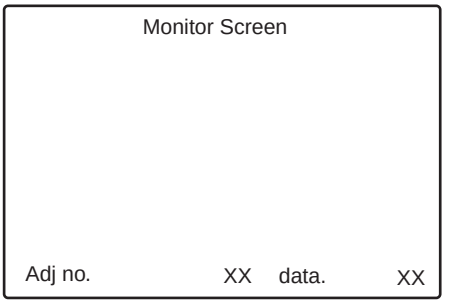
Adj. no. is selected by the arrow → (up) or the arrow ←(down).
Data is adjusted by the arrow ↑(up) or the arrow↓(down).



Side Panel Sheet Switch

4-1-4. Super Reset (data initialization)

1. Pressing the S101 switch on the SG-265 board and turn the power on.
2. After fifteen seconds, the initial data is written and the picture appears.
3. Turn the S102 switch on the SG-265 to the ADJ side (down side).
4. The ADJ picture is displayed.



Adjust number XX is shown data XX.

4-2. Adjustment

4-2-1. VCO Adjustment (original oscillator adjustment)

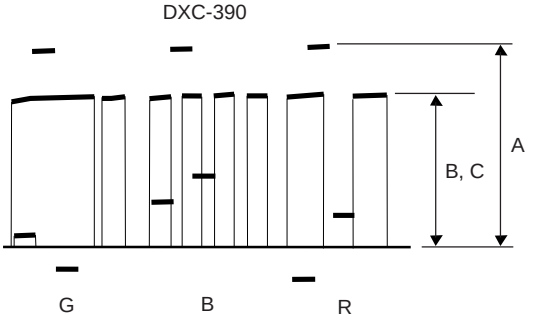
Equipment : Monitor screen
Preparation : Input the VBS OUT on a camera to the EXT IN on a signal generator. Input the SC output on a signal generator to a frequency counter.
Adjustment Procedure : Adjust Adj61 (NTSC) or Adj14 (PAL) so that the SC frequency becomes the specification.
Specification : 3.579545 MHz ±5 Hz (NTSC)
: 4.433618 MHz ±5 Hz (PAL)

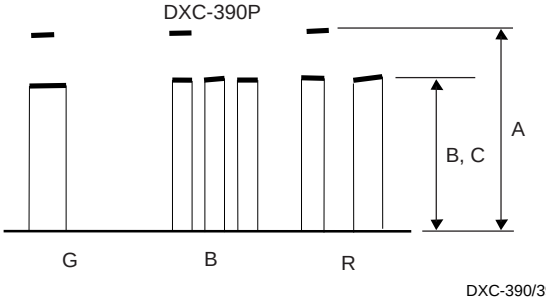
4-2-2. Built-in Color Bars Adjustment (adjustment from DSP)

Equipment : Waveform monitor and vectorscope
Preparation : Press the BARS button to the built-in color bars side.

- **R/G/B OUT Adjustment** Adjust Adj31 so that the white level becomes the specification A.
- **R OUT Adjustment** Adjust Adj32 so that the waveform becomes the specification B.
- **B OUT Adjustment** Adjust Adj33 so that the waveform becomes the specification C.

Specification : A=75 IRE ±1 IRE (NTSC)
700 mV ±7 mV (PAL)
B : The waveform becomes flat.
C : The waveform becomes flat.



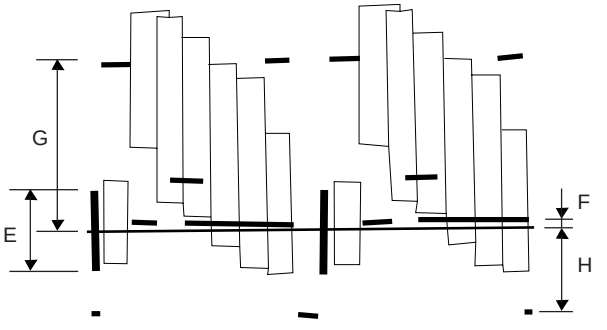


• **VBS OUT Adjustment**

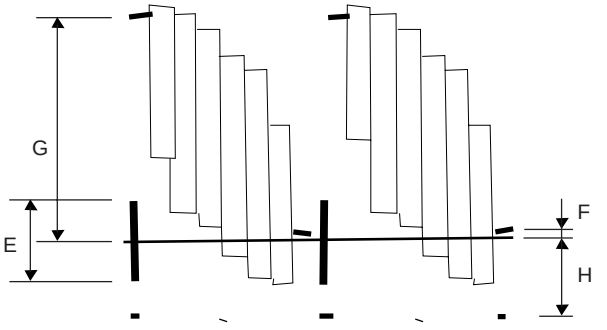
Adjustment Procedure
- Adjust Adj72 and Adj73 so that the chroma level becomes the specification D.
- Adjust Adj74 so that the burst level becomes the specification E.
- Adjust Adj75 so that the set up level becomes the specification F.
- Adjust Adj76 so that the Y level becomes the specification G.
- Adjust Adj77 so that the SYNC level becomes the specification H.

Specification : D : Adjust each color spot within the frame ⊞ on a vectorscope.
E = 40 IRE ±1 IRE (NTSC)
300 mV ±7 mV (PAL)
F = 0 IRE (NTSC)
0 mV (PAL)
G = 75 IRE ±1 IRE (NTSC)
700 mV ±7 mV (PAL)
H = 40 IRE ±1 IRE (NTSC)
300 mV ±7 mV (PAL)

DXC-390



DXC-390P



4-2-3. CCD OUT Adjustment

Equipment: Waveform monitor and vectorscope

Adjustment Procedure

1. Press the BARS button, the built-in color bars will be OFF.
2. Shut the lens iris.
3. Turn the S102 switch on the SG-265 board to the OPE side (up side).

• **Pedestal Adjustment**

4. Press the BLACK button (↑).
5. Confirm the specification A.

Specification : A : Confirm that BLACK OK is displayed.

• **Pre-white Balance Adjustment**

6. Shoot the grayscale chart, adjust the VBS OUT level by the lens iris to approximately 80 % level.
7. Turn the S102 switch on the SG-265 board to the ADJ side (down side).
8. Press the MENU button to show the DSP ADJ display.
9. Make settings the DSP Adj549 to the data01.
10. Turn the S102 switch on the SG-265 board to the OPE side (up side).
11. Press the WHITE button (→).
12. Confirm the specification B.

Specification : B : Confirm that PRE WB OK is displayed.

13. Turn the S102 switch on the SG-265 board to the ADJ side (down side).
14. Return the DSP Adj549 to the data00.
15. Press the MENU button to show the ADJ display.

• **Target Color Setting**

16. Make settings the Adj98 data to 004.
17. Make settings the Adj99 data to 002.
18. Make settings the Adj100 data to 024.
19. Turn the S102 switch on the SG-265 board to the OPE side (up side).

Section 5
Spare Parts

5-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

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

2. Standardization of Parts

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

3. Stock of Parts

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

4. Harness

Harnesses with no part number are not registered as spare parts.
In need of repair, get components shown in the list and repair using them.

5-1. 補修部品注意事項

1. 安全重要部品

⚠警告

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

2. 部品の共通化

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

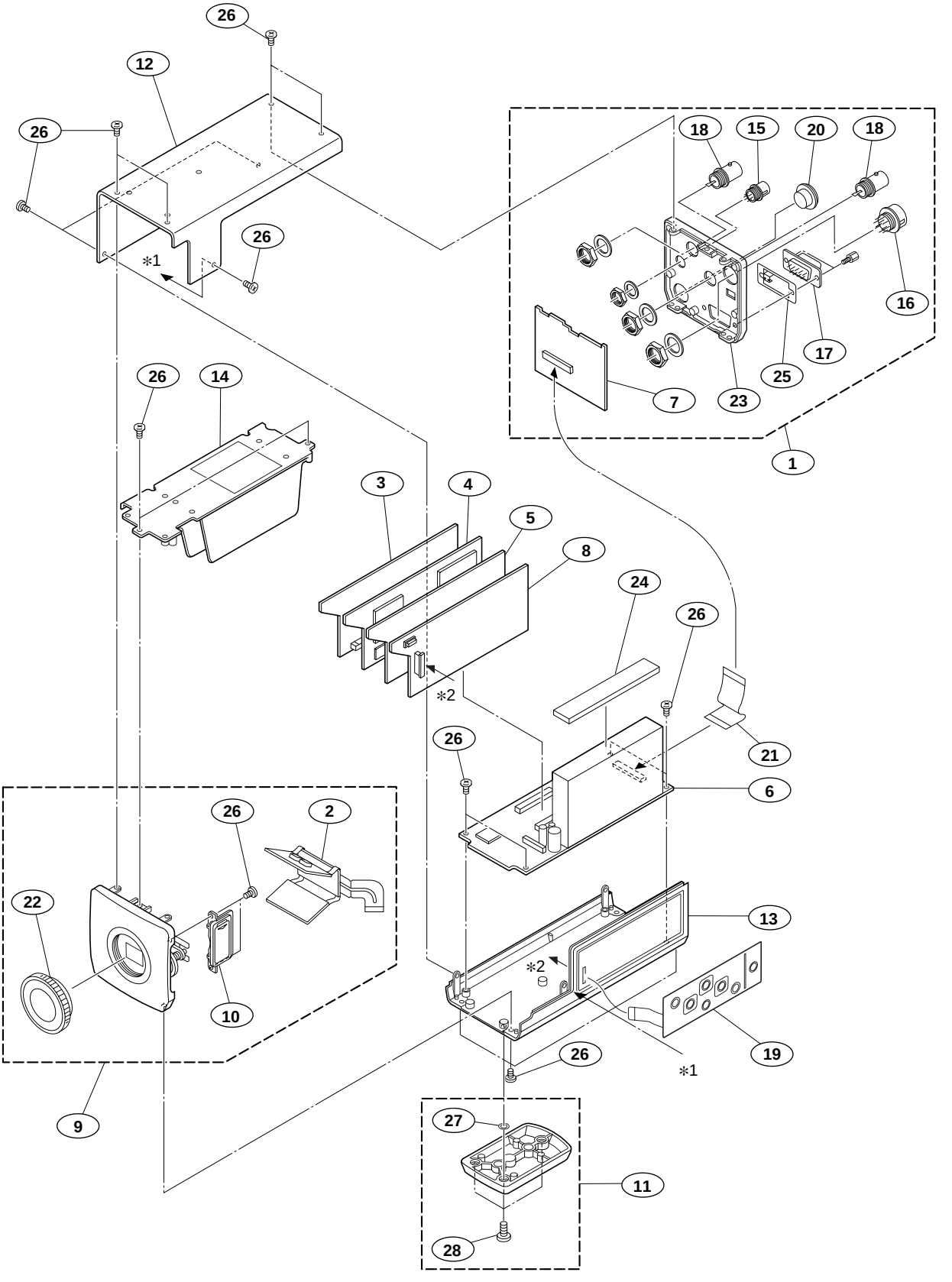
3. 部品の在庫

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

4. ハーネス

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

5-2. Exploded View



NO.	Part No.	SP	Description
1	A-8325-284-A	o	PANEL ASSY,REAR
2	A-8325-287-A	o	MOUNTED CIRCUIT BOARD,PA-236
3	A-8325-288-A	o	MOUNTED CIRCUIT BOARD,VA-193
4	A-8325-289-A	o	MOUNTED CIRCUIT BOARD,DP-313[for UC,J]
	A-8325-309-A	o	MOUNTED CIRCUIT BOARD,DP-313P[for CE]
5	A-8325-290-A	o	MOUNTED CIRCUIT BOARD,EN-142[for UC,J]
	A-8325-310-A	o	MOUNTED CIRCUIT BOARD,EN-142P[for CE]
6	A-8325-292-A	o	MOUNTED CIRCUIT BOARD,MB-875[for UC,J]
	A-8325-312-A	o	MOUNTED CIRCUIT BOARD,MB-875P[for CE]
7	A-8325-293-A	o	MOUNTED CIRCUIT BOARD,CN-1938
8	A-8325-909-A	o	MOUNTED CIRCUIT BOARD,SG-265[for UC,J]
	A-8325-910-A	o	MOUNTED CIRCUIT BOARD,SG-265P[for CE]
9	A-8326-195-A	s	CHU COMPLETE ASSY[for UC,J]
	A-8326-196-A	s	CHU COMPLETE ASSY[for CE]
10	X-3605-837-1	o	GUIDE ASSY, ADJUSTER SCREW
11	X-3605-838-1	s	ADAPTOR ASSY,TRIPOD
12	X-3605-839-1	o	CASE ASSY,UPPER
13	X-3605-840-1	o	CASE ASSY,LOWER
14	X-3605-841-1	o	STAY ASSY
15	1-562-222-21	s	RECEPTACLE,CONNECTOR 6P[LENS]
16	1-562-381-00	s	CONNECTOR,ROUND TYPE 12P[DC IN/VBS]
17	1-580-090-11	s	SOCKET,D-SUB CONNECTOR 9P[RGB/SYNC]
18	1-580-724-21	s	CONNECTOR,BNC[VIDEO OUT, TRIG IN]
19	1-771-944-11	s	SWITCH,SHEET
20	1-774-806-11	s	CONNECTOR,ROUND TYPE(8PIN)[REMOTE]
21	1-792-595-11	s	CABLE,FLEXIBLE FLAT(30 CORE)
22	2-042-385-00	s	CAP,C MOUNT
23	3-626-695-01	o	PANEL,REAR
24	3-626-707-01	o	RUBBER(10X60X4)
25	3-737-536-03	o	LUG,GROUND,CONNECTOR
26	3-968-729-81	s	SCREW (M2),LOCK ACE,P2(+P2X3)
27	7-623-923-11	s	WASHER 2.6, NYLON
28	7-682-548-04	s	SCREW +B3X8

5-3. Electrical Parts List

CN-1938 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-293-A	o	MOUNTED CIRCUIT BOARD, CN-1938
C001	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C002	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C003	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C004	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C005	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C006	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C007	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C008	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C009	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C010	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C011	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
C012	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C013	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C014	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C015	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
C016	1-164-939-11	s	CAPACITOR,CHIP CERAMIC 2200PF
C017	1-164-939-11	s	CAPACITOR,CHIP CERAMIC 2200PF
C018	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
C019	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
C020	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C021	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C022	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C023	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C024	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C025	1-164-870-11	s	CAPACITOR,CHIP CERAMIC 68PF/16
C026	1-164-870-11	s	CAPACITOR,CHIP CERAMIC 68PF/16
C027	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C028	1-164-878-11	s	CAPACITOR,CHIP CERAMIC 150PF
C029	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C030	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C031	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C032	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C033	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
CN007	1-573-370-21	s	CONNECTOR,FFC/FPC 30P
D001	8-719-510-30	s	DIODE D2FL20
F001	⚠ 1-533-483-11	s	FUSE CHIP 1.6A/125V (6125)
FB003	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB004	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB005	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB006	1-500-215-11	s	BEAD, FERRITE (CHIP)
FL001	1-234-066-11	s	FILTER, CHIP EMI
L001	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L002	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L003	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L004	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L005	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L006	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L007	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L008	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L009	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L010	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L011	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L012	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L013	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)

(CN-1938 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L014	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L015	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
L016	1-410-981-31	s	CHIP INDUCTOR 0.1UH (2012)
R001	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R002	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R003	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R004	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
S001	1-571-738-11	s	SWITCH,SLIDE (2-2-2)

DP-313 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-289-A	o	MOUNTED CIRCUIT BOARD, DP-313 [for UC,J]
1pc	A-8325-309-A	o	MOUNTED CIRCUIT BOARD, DP-313P [for CE]
C401	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C402	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C403	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C404	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C405	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C406	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C407	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C408	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C409	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C410	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C411	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C412	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C413	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C414	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C415	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C416	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C417	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C418	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C422	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C425	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C427	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C428	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C433	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C434	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C435	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C437	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C439	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C440	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C441	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C442	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C443	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C444	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C445	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C446	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C447	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C448	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C451	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C452	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C453	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C454	1-135-208-11	s	CAPACITOR,TANTALUM 1MF/10V
C456	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C457	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C459	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C460	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C461	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C462	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C463	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C464	1-125-839-11	s	CAPACITOR,TANTALUM 47MF/6.3V
C465	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C468	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C469	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C470	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C471	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C472	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C473	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F

(DP-313 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C474	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C475	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C476	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C477	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C478	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C479	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C480	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C482	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
CN401	1-794-307-11	o	CONNECTOR,BOARD TO BOARD
IC401	8-752-376-32	s	IC CXD2310AR
IC402	8-752-376-32	s	IC CXD2310AR
IC403	8-752-376-32	s	IC CXD2310AR
IC404	8-759-661-32	o	IC CXD9117R
IC405	8-759-662-10	s	IC AT28BV64-30TC
IC406	8-759-064-36	s	IC MB88346BPFV
IC409	8-759-661-30	o	IC CXD9087R
IC410	8-752-363-60	s	IC CXD2307R-T4
IC411	8-759-669-45	s	IC TL062CPWR-12
IC414	8-759-531-92	s	IC TC7WH04FU(TE12R)
IC415	8-759-523-95	s	IC TC74VHC74FT(EL)
IC416	8-759-491-46	s	IC TC74VHCT04AFT(EL)
IC420	8-759-101-12	s	IC UPC311G2
IC421	8-759-058-62	s	IC TC7S08FU-TE85R
IC423	8-759-523-81	s	IC TC74VHC08FT(EL)
L401	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L402	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L403	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L404	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L405	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L406	1-412-028-11	s	CHIP INDUCTOR 4.7UH (3225)
L407	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L408	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
Q401	8-729-117-32	s	TRANSISTOR 2SC4177
Q402	8-729-117-16	s	TRANSISTOR 2SA1611M6
R403	1-219-600-11	s	RESISTOR,CHIP 56K 1/16W(1005)
R404	1-219-598-11	s	RESISTOR,CHIP 47K 1/16W(1005)
R405	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R408	1-218-929-11	s	RESISTOR,CHIP 10 1/16W (1005)
R409	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R410	1-218-929-11	s	RESISTOR,CHIP 10 1/16W (1005)
R411	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R412	1-218-929-11	s	RESISTOR,CHIP 10 1/16W (1005)
R415	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R416	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R417	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R418	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R419	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R422	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R423	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R425	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R426	1-218-949-11	s	RESISTOR,CHIP 470 1/16W
R427	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R428	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R429	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R430	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R442	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R443	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for CE]

(DP-313 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R444	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R446	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R458	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R459	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R462	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R463	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R465	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R476	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R477	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R478	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R479	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R480	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R487	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R488	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R489	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R490	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R491	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R492	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R494	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R497	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R498	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R500	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R501	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R502	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R503	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R504	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R505	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R506	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R509	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R510	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R511	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R513	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R514	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R516	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R517	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R518	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R519	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R522	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R524	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R531	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R532	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R535	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R536	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R537	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R538	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R539	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R540	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R541	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R542	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R543	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R544	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R545	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R546	1-208-721-11	s	RESISTOR,CHIP 39K 1/16W (1005)
R547	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R548	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R549	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R550	1-208-721-11	s	RESISTOR,CHIP 39K 1/16W (1005)
R551	1-208-721-11	s	RESISTOR,CHIP 39K 1/16W (1005)
R552	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)

(DP-313 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R555	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R556	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R557	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R558	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R559	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R560	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R561	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R562	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R563	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R564	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R567	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R568	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R569	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R570	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R571	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R572	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R575	1-218-941-11	s	RESISTOR,CHIP 100 (1005)
R576	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R577	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R578	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R581	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R582	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R583	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R584	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R585	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R586	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R587	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R588	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R589	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
R590	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R592	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R593	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R594	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R595	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R596	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R597	1-216-864-11	s	RESISTOR,CHIP 0 1/16W (1608)
TP401	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP402	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP403	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP404	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP405	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

EN-142 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-290-A	o	MOUNTED CIRCUIT BOARD, EN-142 [for UC,J]
1pc	A-8325-310-A	o	MOUNTED CIRCUIT BOARD, EN-142P [for CE]
C701	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C702	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C703	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C704	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C705	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C706	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C707	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C708	1-164-844-11	s	CAPACITOR,CHIP 4PF/16V (1005)
C709	1-164-844-11	s	CAPACITOR,CHIP 4PF/16V (1005)
C710	1-164-844-11	s	CAPACITOR,CHIP 4PF/16V (1005)
C711	1-164-380-11	s	CAPACITOR,CERAMIC 51PF CH (M-)
C712	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C713	1-164-380-11	s	CAPACITOR,CERAMIC 51PF CH (M-)
C714	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C715	1-164-380-11	s	CAPACITOR,CERAMIC 51PF CH (M-)
C716	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C717	1-164-852-11	s	CAPACITOR,CHIP CERAMIC 12PF/16V
C718	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C719	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C720	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C721	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C722	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C723	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C724	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C725	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C726	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C727	1-164-848-11	s	CAPACITOR,CERAMIC 8PF/16V(1005)
C728	1-164-845-11	s	CAPACITOR,CERAMIC 5PF/16V(1005)
C729	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C730	1-107-685-11	s	CAPACITOR,TANTALUM 15MF/6.3V
C731	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C732	1-107-685-11	s	CAPACITOR,TANTALUM 15MF/6.3V
C733	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C734	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C735	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C736	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C737	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C738	1-104-912-11	s	CAPACITOR,TANTALUM 3.3MF/16V
C739	1-104-912-11	s	CAPACITOR,TANTALUM 3.3MF/16V
C740	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C741	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C742	1-104-912-11	s	CAPACITOR,TANTALUM 3.3MF/16V
C744	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C745	1-164-848-11	s	CAPACITOR,CERAMIC 8PF/16V(1005)
C746	1-104-912-11	s	CAPACITOR,TANTALUM 3.3MF/16V
C747	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C748	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C749	1-164-848-11	s	CAPACITOR,CERAMIC 8PF/16V(1005)
C750	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C751	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C752	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C753	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C754	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C755	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C756	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F

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Ref. No. or Q'ty	Part No.	SP	Description
C757	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C758	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C759	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C760	1-104-912-11	s	CAPACITOR,TANTALUM 3.3MF/16V
C761	1-164-852-11	s	CAPACITOR,CHIP CERAMIC 12PF/16V
C762	1-164-848-11	s	CAPACITOR,CERAMIC 8PF/16V(1005)
C763	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C764	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C765	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C767	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C768	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C769	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C770	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C771	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C772	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C773	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C774	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C775	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C776	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C777	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C778	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C779	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C780	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C781	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C782	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C783	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C784	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C785	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C786	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C787	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C789	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C790	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C791	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C792	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C793	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C794	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C795	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C796	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C797	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C798	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C799	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C800	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C801	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C802	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C803	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C804	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C805	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
C806	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
CN701	1-794-204-11	o	CONNECTOR,BOARD TO BOARD
DL701	1-411-935-11	s	DELAY LINE
FL701	1-234-503-11	s	FILTER, LOW PASS (14MHZ)
FL702	1-234-503-11	s	FILTER, LOW PASS (14MHZ)
FL703	1-234-503-11	s	FILTER, LOW PASS (14MHZ)
FL704	1-234-178-11	s	FILTER, BAND PASS (3.58MHZ) [for UC,J]
FL704	1-234-150-11	s	FILTER, BAND PASS 4.48MHZ [for CE]
IC3	8-759-523-02	s	IC TC74HC4053AFT(EL)

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Ref. No. or Q'ty	Part No.	SP	Description
IC4	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC701	8-759-064-36	s	IC MB88346BPFV
IC702	8-759-058-62	s	IC TC7S08FU-TE85R
IC703	8-759-196-69	s	IC BA7655AF-E2
IC704	8-752-056-59	s	IC CXA1592R
IC705	8-759-064-36	s	IC MB88346BPFV
IC706	8-759-082-61	s	IC TC4W53FU
IC707	8-759-082-61	s	IC TC4W53FU
IC708	8-759-392-35	s	IC LT1361CS8-E2
IC709	8-759-392-33	s	IC LT1362CS-E2
IC710	8-759-392-33	s	IC LT1362CS-E2
IC711	8-759-058-62	s	IC TC7S08FU-TE85R
IC712	8-759-435-08	s	IC MAX314CSE-TE2
IC844	8-759-485-79	s	IC TC7SET08FU(TE85L)
IC848	8-759-082-58	s	IC TC7W08FU
IC849	8-759-485-79	s	IC TC7SET08FU(TE85L)
L701	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L702	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L704	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L705	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
Q701	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q702	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q703	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q704	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q705	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q706	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q707	8-729-117-32	s	TRANSISTOR 2SC4177
Q708	8-729-926-19	s	TRANSISTOR 2SC4103-Q
Q709	8-729-117-32	s	TRANSISTOR 2SC4177
Q710	8-729-402-19	s	TRANSISTOR XN6501
Q711	8-729-117-32	s	TRANSISTOR 2SC4177
Q712	8-729-122-63	s	TRANSISTOR 2SA1226-E4
Q713	8-729-117-32	s	TRANSISTOR 2SC4177
Q714	8-729-402-19	s	TRANSISTOR XN6501
Q715	8-729-122-63	s	TRANSISTOR 2SA1226-E4
Q716	8-729-117-32	s	TRANSISTOR 2SC4177
Q717	8-729-402-19	s	TRANSISTOR XN6501
Q718	8-729-122-63	s	TRANSISTOR 2SA1226-E4
Q719	8-729-117-32	s	TRANSISTOR 2SC4177
Q720	8-729-926-19	s	TRANSISTOR 2SC4103-Q
Q721	8-729-117-32	s	TRANSISTOR 2SC4177
Q722	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q723	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q724	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q725	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q726	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q727	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q728	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q729	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q730	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q731	8-729-117-32	s	TRANSISTOR 2SC4177
Q732	8-729-117-32	s	TRANSISTOR 2SC4177
Q733	8-729-117-32	s	TRANSISTOR 2SC4177
Q734	8-729-117-32	s	TRANSISTOR 2SC4177
Q735	8-729-117-32	s	TRANSISTOR 2SC4177
Q736	8-729-117-32	s	TRANSISTOR 2SC4177
Q737	8-729-117-32	s	TRANSISTOR 2SC4177
Q738	8-729-117-32	s	TRANSISTOR 2SC4177

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Ref. No. or Q'ty	Part No.	SP	Description
Q739	8-729-117-32	s	TRANSISTOR 2SC4177
R701	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R702	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R703	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R704	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R705	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R706	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R707	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R708	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R709	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R710	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R711	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R712	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R713	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R714	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R715	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R716	1-218-960-11	s	RESISTOR,CHIP 3.9K 1/16W
R717	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R718	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R719	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R720	1-208-688-11	s	RESISTOR,CHIP 1.6K 1/16W 1005
R721	1-220-881-11	s	RESISTOR,CHIP 30 1/16W (1005)
R722	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R723	1-208-861-81	s	RESISTOR,CHIP 82 1/16W (1005)
R724	1-208-687-11	s	RESISTOR,CHIP 1.5K 1/16W (1005)
R725	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R726	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R727	1-208-683-11	s	RESISTOR,CHIP 1K 1/16W (1005)
R728	1-208-683-11	s	RESISTOR,CHIP 1K 1/16W (1005)
R729	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R730	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R731	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R732	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R733	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R734	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R735	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R736	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R737	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R738	1-220-168-11	s	RESISTOR,CHIP 62 1/16W
R739	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R740	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R741	1-208-687-11	s	RESISTOR,CHIP 1.5K 1/16W (1005)
R742	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R743	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R744	1-208-683-11	s	RESISTOR,CHIP 1K 1/16W (1005)
R745	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R746	1-208-862-11	s	RESISTOR,CHIP 91 1/16W(1005)
R747	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R748	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1608)
R749	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for UC,J]
R750	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R751	1-208-671-11	s	RESISTOR,CHIP 330 1/16W (1005)
R752	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R753	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R754	1-208-671-11	s	RESISTOR,CHIP 330 1/16W (1005)
R755	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R756	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R757	1-208-688-11	s	RESISTOR,CHIP 1.6K 1/16W 1005
R758	1-208-663-11	s	RESISTOR,CHIP 150 1/16W (1005)
R759	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R760	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for CE]
R761	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for UC,J]
R762	1-208-674-11	s	RESISTOR,CHIP 430 1/16W (1005)
R763	1-208-683-11	s	RESISTOR,CHIP 1K 1/16W (1005)
R764	1-208-687-11	s	RESISTOR,CHIP 1.5K 1/16W (1005)
R765	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R766	1-208-689-11	s	RESISTOR,CHIP 1.8K 1/16W(1005)
R767	1-208-652-11	s	RESISTOR,CHIP 51 1/16W (1005)
R768	1-208-683-11	s	RESISTOR,CHIP 1K 1/16W (1005)
R770	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R771	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R772	1-220-179-11	s	RESISTOR,CHIP 510 1/16W(1005)
R773	1-208-661-11	s	RESISTOR,CHIP 120 1/16W (1005)
R774	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R775	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R776	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R777	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)
R778	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R779	1-208-701-11	s	RESISTOR,CHIP 5.6K 1/16W(1005)
R780	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R781	1-208-671-11	s	RESISTOR,CHIP 330 1/16W (1005)
R782	1-208-689-11	s	RESISTOR,CHIP 1.8K 1/16W(1005)
R783	1-208-671-11	s	RESISTOR,CHIP 330 1/16W (1005)
R784	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R785	1-208-697-11	s	RESISTOR,CHIP 3.9K 1/16W(1005)
R786	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R787	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R788	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R789	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R790	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R791	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R792	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R793	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R794	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R795	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R796	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R797	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R798	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R799	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R800	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R801	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R802	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R803	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R804	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R805	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R806	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R807	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R808	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R809	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R810	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R811	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R812	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R813	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1006)
R814	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)

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Ref. No. or Q'ty	Part No.	SP	Description
R815	1-208-675-11	s	RESISTOR,CHIP 470 1/16W (1005)
R816	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R817	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R818	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R819	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R820	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R821	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R822	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R823	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R824	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R825	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R826	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R827	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R828	1-208-668-11	s	RESISTOR,CHIP 240 1/16W(1005)
R829	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R830	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R831	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R832	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R833	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R834	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R835	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R836	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R837	1-208-679-11	s	RESISTOR,CHIP 680 1/16W (1005)
R838	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R839	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R840	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R841	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R842	1-218-665-11	s	RESISTOR,CHIP 75 1/16W (1608)
R843	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R844	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R845	1-218-666-11	s	RESISTOR,CHIP 82 1/16W (1608)
R846	1-218-666-11	s	RESISTOR,CHIP 82 1/16W (1608)
R847	1-218-666-11	s	RESISTOR,CHIP 82 1/16W (1608)
R848	1-218-666-11	s	RESISTOR,CHIP 82 1/16W (1608)
R849	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R850	1-218-672-11	s	RESISTOR,CHIP 150 1/16W(1608)
R851	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R852	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R853	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R854	1-218-962-11	s	RESISTOR,CHIP 5.6K 1/16W
R855	1-218-962-11	s	RESISTOR,CHIP 5.6K 1/16W
R856	1-218-962-11	s	RESISTOR,CHIP 5.6K 1/16W
R857	1-218-948-11	s	RESISTOR,CHIP 390 1/16W (1005)
R858	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R859	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
S701	1-771-795-11	s	SWITCH, SLIDE
TP701	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP702	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP703	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP704	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP705	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP706	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

MB-875 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-292-A	o	MOUNTED CIRCUIT BOARD, MB-875 [for UC,J]
1pc	A-8325-312-A	o	MOUNTED CIRCUIT BOARD, MB-875P [for CE]
C601	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C602	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C603	1-104-920-11	s	CAPACITOR,TANTALUM 4.7MF/35V
C604	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C605	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C606	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C607	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C608	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C609	1-104-914-11	s	CAPACITOR,CHIP TANTALUM 22MF/16V
C610	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C611	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C612	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C613	1-135-149-21	s	CAPACITOR,TANTALUM 2.2MF/10V
C614	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C615	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C616	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C617	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C618	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C619	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C620	1-104-920-11	s	CAPACITOR,TANTALUM 4.7MF/35V
C621	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C622	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C623	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C625	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C626	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C627	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C628	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C629	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C630	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C631	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C632	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C633	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C634	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C635	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C636	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C637	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C638	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C639	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C640	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C641	1-104-920-11	s	CAPACITOR,TANTALUM 4.7MF/35V
C642	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C643	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C644	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C645	1-164-860-11	s	CAPACITOR,CHIP CERAMIC 27PF/16V
C649	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C650	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C651	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C652	1-110-398-11	s	CAPACITOR,TANTALUM 15MF/35V
C653	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C654	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C655	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C656	1-110-398-11	s	CAPACITOR,TANTALUM 15MF/35V
C657	1-115-709-11	s	CAPACITOR,ELECT 680MF / 6.3V
C658	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C659	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F

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Ref. No. or Q'ty	Part No.	SP	Description
C660	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C661	1-115-705-11	s	CAPACITOR,ELECT 150MF / 6.3V
C662	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C663	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C664	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C665	1-115-778-11	s	CAPACITOR,ELECT 82MF/25V(105C)
C666	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C667	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C669	1-115-757-11	s	CAPACITOR,ELECT 330MF/16V(105C)
C670	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C671	1-164-156-11	s	CAPACITOR,CERAMIC 0.1MF/25V F
C672	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C673	1-110-398-11	s	CAPACITOR,TANTALUM 15MF/35V
C674	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C675	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C676	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C677	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C678	1-110-398-11	s	CAPACITOR,TANTALUM 15MF/35V
C679	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C680	1-162-966-11	s	CAPACITOR,CERAMIC 2200PF/50V B
C681	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C682	1-104-910-11	s	CAPACITOR,TANTALUM 15MF/10V
C683	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C684	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C685	1-164-856-11	s	CAPACITOR,CERAMIC 18PF/16V CH
C686	1-164-856-11	s	CAPACITOR,CERAMIC 18PF/16V CH
C687	1-164-866-11	s	CAPACITOR,CHIP CERAMIC 47PF/16V
C689	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C690	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C691	1-164-843-11	s	CAPACITOR,CHIP CERAMIC 3PF/16V
C694	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C695	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C696	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
CN601	1-750-360-21	s	CONNECTOR,FFC/FPC (ZIF) 24P
CN602	1-794-306-11	o	CONNECTOR,BOARD TO BOARD 70P
CN603	1-770-677-11	o	CONNECTOR,BOARD TO BOARD 50P
CN604	1-794-306-11	o	CONNECTOR,BOARD TO BOARD 70P
CN605	1-770-677-11	o	CONNECTOR,BOARD TO BOARD 50P
CN606	1-766-360-21	s	CONNECTOR,FFC/FPC (LIF) 30P
D601	8-719-059-51	s	DIODE MA3J142E0LSO
D602	8-719-059-51	s	DIODE MA3J142E0LSO
D603	8-719-059-51	s	DIODE MA3J142E0LSO
D604	8-719-420-77	s	DIODE MA724
D605	8-719-420-77	s	DIODE MA724
D606	8-719-974-98	s	DIODE HVM17-01(VARI-CAP)
DD601	1-476-017-11	s	CONVERTER UNIT, DC-DC
IC601	8-752-372-14	s	IC CXD1267AN
IC602	8-759-064-36	s	IC MB88346BPFV
IC603	8-759-082-61	s	IC TC4W53FU
IC604	8-752-372-14	s	IC CXD1267AN
IC606	8-759-661-31	s	IC CXD9115AR
IC607	8-752-372-14	s	IC CXD1267AN
IC608	8-759-058-58	s	IC TC7S04FU-TE85R
IC609	8-759-058-58	s	IC TC7S04FU-TE85R
IC611	8-752-351-03	s	IC CXD1256AR
IC612	8-759-491-46	s	IC TC74VHCT04AFT(EL)

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Ref. No. or Q'ty	Part No.	SP	Description
IC614	8-759-257-96	s	IC TC7S14FU(TE85R)
IC615	8-759-195-81	s	IC TC7S86FU
IC616	8-759-058-62	s	IC TC7S08FU-TE85R
IC619	8-759-566-06	s	IC TC7WH08FU(TE12R)
IC621	8-759-447-77	s	IC TC7WH74FU(TR12R)
IC625	8-759-082-59	s	IC TC7W32FU
IC627	8-759-058-64	s	IC TC7S32FU-TE85R
IC628	8-759-196-97	s	IC TC7SH32FU(TE85R)
IC629	8-759-196-97	s	IC TC7SH32FU(TE85R)
IC630	8-759-196-96	s	IC TC7SH08FU(TE85R)
IC631	8-759-196-97	s	IC TC7SH32FU(TE85R)
IC632	8-759-524-19	s	IC TC74VHC164FT(EL)
IC633	8-759-058-54	s	IC TC7S00FU-TE85R
IC634	8-759-058-54	s	IC TC7S00FU-TE85R
IC635	8-759-271-86	s	IC TC7SH04FU
IC636	8-759-271-86	s	IC TC7SH04FU
L601	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L602	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L603	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L604	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L605	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L606	1-412-026-11	s	INDUCTOR,CHIP 1UH (3225)
L607	1-424-673-11	s	COIL, CHOKE 4.7UH
L608	1-424-673-11	s	COIL, CHOKE 4.7UH
L609	1-424-673-11	s	COIL, CHOKE 4.7UH
L610	1-424-673-11	s	COIL, CHOKE 4.7UH
L611	1-424-673-11	s	COIL, CHOKE 4.7UH
L612	1-424-673-11	s	COIL, CHOKE 4.7UH
L613	1-424-673-11	s	COIL, CHOKE 4.7UH
L614	1-424-673-11	s	COIL, CHOKE 4.7UH
L615	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L616	1-412-177-11	s	MICRO INDUCTOR
L617	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L618	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
Q602	8-729-141-53	s	TRANSISTOR 2SK94-X2X3X4
Q603	8-729-117-16	s	TRANSISTOR 2SA1611M6
R601	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R602	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R605	1-218-975-11	s	RESISTOR,CHIP 68K 1/16W(1608)
R606	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R608	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R609	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R610	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R611	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R612	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R613	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R614	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R616	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R617	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R619	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R621	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R624	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R625	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R626	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R627	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for CE]
R628	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R629	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)

(MB-875 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R630	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R632	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R633	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R635	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R637	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R638	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R639	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R640	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R641	1-218-950-11	s	RESISTOR,CHIP 560 1/16W
R642	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R643	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R644	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R646	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R647	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R648	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R649	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R650	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R651	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R652	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R653	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R654	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R658	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for CE]
R659	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for UC,J]
R660	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R661	1-216-798-11	s	RESISTOR,CHIP 12 1/16W 1608
R662	1-216-798-11	s	RESISTOR,CHIP 12 1/16W 1608
R663	1-216-798-11	s	RESISTOR,CHIP 12 1/16W 1608
R664	1-216-798-11	s	RESISTOR,CHIP 12 1/16W 1608
R665	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R666	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R667	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R668	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R669	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R670	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R671	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R672	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R673	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R674	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R676	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R677	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R678	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R679	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R680	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R681	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R682	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R683	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R684	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R685	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R686	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R687	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R688	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R689	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R690	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R691	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R692	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R693	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W

(MB-875 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
TP601	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
X601	1-767-618-11	s	OSCILLATOR, CRYSTAL [for UC,J]
X601	1-767-620-11	s	OSCILLATOR, CRYSTAL [for CE]

PA-236 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-287-A	o	MOUNTED CIRCUIT BOARD, PA-236
C101	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C102	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C104	1-104-823-11	s	CAPACITOR,CHIP TANTALUM 47MF/16V
C105	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C106	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C107	1-104-478-11	s	CAPACITOR,TANTALUM 10MF/35V
C108	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C201	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C202	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C204	1-104-823-11	s	CAPACITOR,CHIP TANTALUM 47MF/16V
C205	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C206	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C207	1-104-478-11	s	CAPACITOR,TANTALUM 10MF/35V
C208	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C301	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C302	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C304	1-104-823-11	s	CAPACITOR,CHIP TANTALUM 47MF/16V
C305	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
C306	1-107-826-11	s	CAPACITOR,CHIP CERAMIC 0.1MF
C307	1-104-478-11	s	CAPACITOR,TANTALUM 10MF/35V
C308	1-162-970-11	s	CAPACITOR,CERAMIC 0.01MF/25V B
Q101	8-729-117-32	s	TRANSISTOR 2SC4177
Q201	8-729-117-32	s	TRANSISTOR 2SC4177
Q301	8-729-117-32	s	TRANSISTOR 2SC4177
R101	1-216-857-11	s	RESISTOR,CHIP 1M 1/16W 1608
R102	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R103	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R201	1-216-857-11	s	RESISTOR,CHIP 1M 1/16W 1608
R202	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R203	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608
R301	1-216-857-11	s	RESISTOR,CHIP 1M 1/16W 1608
R302	1-216-809-11	s	RESISTOR,CHIP 100 1/16W 1608
R303	1-216-830-11	s	RESISTOR,CHIP 5.6K 1/16W 1608

SG-265 BOARD

(SG-265 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-909-A	o	MOUNTED CIRCUIT BOARD, SG-265 [for UC,J]
1pc	A-8325-910-A	o	MOUNTED CIRCUIT BOARD, SG-265P [for CE]
C101	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C102	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C104	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C106	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C107	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C108	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C109	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C110	1-164-852-11	s	CAPACITOR,CHIP CERAMIC 12PF/16V
C111	1-164-852-11	s	CAPACITOR,CHIP CERAMIC 12PF/16V
C112	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C113	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C114	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C115	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C116	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C117	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C120	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C121	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C122	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C123	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C124	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C125	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C126	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C127	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C128	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C129	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C130	1-135-177-21	s	CAPACITOR,TANTALUM 1MF/25V
C131	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C132	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C133	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C134	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C135	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C136	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C137	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C138	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C139	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C140	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C141	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C142	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C143	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C144	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C145	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C146	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C148	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C149	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C150	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C151	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C152	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C153	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C154	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C155	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C156	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C230	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C231	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C232	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C233	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C234	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C235	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C236	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C237	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C238	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C239	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C240	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C241	1-164-866-11	s	CAPACITOR,CHIP CERAMIC 47PF/16V
C242	1-164-866-11	s	CAPACITOR,CHIP CERAMIC 47PF/16V
C243	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C244	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C245	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C246	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C247	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C248	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C249	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C250	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C251	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C252	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C253	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C254	1-164-739-11	s	CAPACITOR,CERAMIC 560PF (1608)
C255	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C256	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C257	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C258	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C259	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C260	1-107-819-11	s	CAPACITOR,CERAMIC 22000PF/16V(1005)
C261	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C262	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C263	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C264	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C265	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C266	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C267	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C268	1-107-689-21	s	CAPACITOR,TANTALUM 1MF/35V
C269	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C270	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C271	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C272	1-164-864-11	s	CAPACITOR,CHIP CERAMIC 39PF/16V
C273	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C274	1-164-866-11	s	CAPACITOR,CHIP CERAMIC 47PF/16V
C275	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C276	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C277	1-164-870-11	s	CAPACITOR,CHIP CERAMIC 68PF/16V [for UC,J]
C277	1-164-862-11	s	CAPACITOR,CHIP CERAMIC 33PF/16V [for CE]
C278	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C279	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C280	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C281	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C282	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C283	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C284	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C285	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C286	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C287	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C288	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C289	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F

(SG-265 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C290	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C291	1-113-981-11	s	CAPACITOR,TANTALUM 22MF/20V
C292	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C293	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C294	1-164-858-11	s	CAPACITOR,CERAMIC 22PF/16V 1005
C295	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C296	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C297	1-164-854-11	s	CAPACITOR,CERAMIC 15PF/16V CH
C298	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C299	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C300	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C301	1-113-682-11	s	CAPACITOR,TANTALUM 33MF/10V
C302	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C303	1-104-913-11	s	CAPACITOR,CHIP TANTALUM 10MF/16V
C304	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C305	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C306	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C307	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C308	1-164-856-11	s	CAPACITOR,CERAMIC 18PF/16V CH
C309	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C310	1-113-991-11	s	CAPACITOR,TANTALUM 33MF/16V
C311	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C312	1-164-856-11	s	CAPACITOR,CERAMIC 18PF/16V CH
C313	1-164-856-11	s	CAPACITOR,CERAMIC 18PF/16V CH
C314	1-164-882-11	s	CAPACITOR,CERAMIC 220PF/16V CH
CN101	1-774-710-41	o	CONNECTOR,BOARD TO BOARD 20P
CN102	1-766-210-21	s	HOUSING, CONNECTOR 8P
CN103	1-794-307-11	o	CONNECTOR, BOARD TO BOARD
D101	8-719-073-01	s	DIODE MA111-(K8).S0
D230	8-719-059-51	s	DIODE MA3J142E0LSO
D231	8-719-059-52	s	DIODE MA3J14300LSO
D232	8-719-059-51	s	DIODE MA3J142E0LSO
FB101	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB102	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB103	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB104	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB105	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB106	1-500-215-11	s	BEAD, FERRITE (CHIP)
FB107	1-500-215-11	s	BEAD, FERRITE (CHIP)
IC101	8-759-589-29	s	IC X24645S8I-2.7T2
IC102	8-759-082-61	s	IC TC4W53FU
IC103	8-759-083-94	s	IC TC7W74FU
IC106	8-759-524-50	s	IC TC74VHC541FT(EL)
IC107	8-759-663-37	s	IC UPD70F3017AYGC-8EU
IC108	8-759-490-41	s	IC TC74VHCT541AFT(EL)
IC109	8-759-548-91	s	IC S-80830ALUP-EAT-T2
IC111	8-759-662-75	s	IC UPD6466GS-541-E2
IC112	8-759-441-99	s	IC MAX3232CSE-TE2
IC113	8-759-058-58	s	IC TC7S04FU-TE85R
IC115	8-759-198-34	s	IC TA75S558F
IC230	8-752-335-47	s	IC CXD1216M
IC231	8-752-341-58	s	IC CXD1217Q
IC232	8-759-058-58	s	IC TC7S04FU-TE85R
IC233	8-759-524-19	s	IC TC74VHC164FT(EL)
IC234	8-759-058-58	s	IC TC7S04FU-TE85R
IC235	8-759-058-58	s	IC TC7S04FU-TE85R
IC236	8-759-064-36	s	IC MB88346BPFV
IC237	8-759-058-62	s	IC TC7S08FU-TE85R

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Ref. No. or Q'ty	Part No.	SP	Description
IC238	8-759-101-12	s	IC UPC311G2
IC239	8-759-195-81	s	IC TC7S86FU
IC240	8-759-058-62	s	IC TC7S08FU-TE85R
IC241	8-759-058-58	s	IC TC7S04FU-TE85R
IC242	8-759-702-08	s	IC NJM360M
IC243	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC244	8-759-523-04	s	IC TC74HC4538AFT
IC245	8-759-669-45	s	IC TL062CPWR-12
IC246	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC247	8-759-510-71	s	IC BA10358F-E2
IC248	8-759-523-97	s	IC TC74VHC123AFT(EL)
IC249	8-759-058-62	s	IC TC7S08FU-TE85R
L101	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L102	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L103	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L104	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L230	1-412-957-11	s	INDUCTOR,33UH (2520)
L231	1-412-031-11	s	INDUCTOR,CHIP 47UH (3225)
L232	1-410-656-11	s	INDUCTOR,CHIP 150UH (3225) [for UC,J]
L232	1-410-393-11	s	INDUCTOR,CHIP 100UH (3225) [for CE]
L233	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L234	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L235	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
Q101	8-729-117-32	s	TRANSISTOR 2SC4177
Q102	8-729-117-32	s	TRANSISTOR 2SC4177
Q103	8-729-117-32	s	TRANSISTOR 2SC4177
Q104	8-729-104-25	s	TRANSISTOR 2SB804-AV
Q230	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q231	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q232	8-729-117-32	s	TRANSISTOR 2SC4177
Q233	8-729-402-84	s	TRANSISTOR XN4601
Q234	8-729-403-29	s	TRANSISTOR XN6435
Q235	8-729-402-19	s	TRANSISTOR XN6501
Q236	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q237	8-729-403-29	s	TRANSISTOR XN6435
Q238	8-729-402-84	s	TRANSISTOR XN4601 [for UC,J]
Q239	8-729-402-19	s	TRANSISTOR XN6501
Q240	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q241	8-729-117-32	s	TRANSISTOR 2SC4177
R101	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R102	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R103	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R106	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R107	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R108	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R109	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R110	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R111	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R112	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R113	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R114	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R115	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R116	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R117	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R118	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W

(SG-265 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R119	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R120	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R121	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R122	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R123	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for UC,J]
R124	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R125	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R126	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R127	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R128	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R129	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R130	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R131	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R133	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R134	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R135	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R136	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R137	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R138	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R139	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R141	1-218-973-11	s	RESISTOR,CHIP 47K 1/16W (1005)
R142	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R143	1-218-973-11	s	RESISTOR,CHIP 47K 1/16W (1005)
R144	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R145	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R146	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R147	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R148	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R149	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R150	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R151	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R152	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R153	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R154	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R155	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R156	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R157	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R158	1-218-960-11	s	RESISTOR,CHIP 3.9K 1/16W
R159	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R160	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R161	1-218-962-11	s	RESISTOR,CHIP 5.6K 1/16W
R162	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R163	1-208-713-11	s	RESISTOR,CHIP 18K 1/16W (1005)
R164	1-208-697-11	s	RESISTOR,CHIP 3.9K 1/16W(1005)
R165	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R166	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R167	1-208-697-11	s	RESISTOR,CHIP 3.9K 1/16W(1005)
R168	1-208-713-11	s	RESISTOR,CHIP 18K 1/16W (1005)
R169	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R170	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R171	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R172	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R173	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R174	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R175	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R176	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R177	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R178	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R180	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W

(SG-265 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R183	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R184	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R185	1-208-703-11	s	RESISTOR,CHIP 6.8K 1/16W(1005)
R186	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R187	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R188	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R230	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R231	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R232	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R233	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for UC,J]
R234	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R235	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R236	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for CE]
R237	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R238	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R239	1-216-833-11	s	RESISTOR,CHIP 10K 1/16W (1608) [for UC,J]
R240	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R241	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R242	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for CE]
R243	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R244	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R245	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for CE]
R247	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005) [for UC,J]
R248	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)
R249	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R250	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R251	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R252	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R253	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)
R254	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)
R255	1-218-975-11	s	RESISTOR,CHIP 68K 1/16W(1608)
R256	1-218-981-11	s	RESISTOR,CHIP 220K 1/16W(1005)
R257	1-218-975-11	s	RESISTOR,CHIP 68K 1/16W(1608)
R258	1-218-981-11	s	RESISTOR,CHIP 220K 1/16W(1005)
R259	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R260	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R261	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R262	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R263	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R264	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R265	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for UC,J]
R266	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for CE]
R267	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R268	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W [for UC,J]
R269	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R270	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R271	1-219-606-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R272	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R273	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R274	1-208-692-11	s	RESISTOR,CHIP 2.4K 1/16W(1005)
R275	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R276	1-208-699-11	s	RESISTOR,CHIP 4.7K 1/16W(1005)
R277	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R278	1-218-989-11	s	RESISTOR,CHIP 1M 1/16W (1005)
R280	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R281	1-218-980-11	s	RESISTOR CHIP 180K 1/16W(1005)

(SG-265 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R282	1-208-703-11	s	RESISTOR,CHIP 6.8K 1/16W(1005)
R283	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R284	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R285	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R286	1-208-922-11	s	RESISTOR,CHIP 30K 1/16W (1005)
R287	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R288	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R289	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R290	1-208-701-11	s	RESISTOR,CHIP 5.6K 1/16W(1005)
R291	1-208-702-11	s	RESISTOR,CHIP 6.2K 1/16W(1005)
R292	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R293	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R294	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R295	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R296	1-208-703-11	s	RESISTOR,CHIP 6.8K 1/16W(1005)
R297	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R298	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R299	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R300	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R301	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R302	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R303	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R304	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R305	1-219-606-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R306	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R307	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R308	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R310	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R311	1-208-707-11	s	RESISTOR,CHIP 10K 1/16W (1005)
R312	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R313	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R314	1-218-980-11	s	RESISTOR,CHIP 180K 1/16W(1005)
R315	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R316	1-218-973-11	s	RESISTOR,CHIP 47K 1/16W (1005) [for UC,J]
R317	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R318	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R319	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R320	1-218-958-11	s	RESISTOR,CHIP 2.7K 1/16W(1005)
R321	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W [for UC,J]
R321	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W [for CE]
R322	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R323	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W [for UC,J]
R324	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R325	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R326	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R327	1-218-943-11	s	RESISTOR,CHIP 150 1/16W [for CE]
R328	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R329	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R330	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R331	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R333	1-218-968-11	s	RESISTOR,CHIP 18K 1/16W
R334	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R335	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R336	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R337	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R338	1-218-848-11	s	RESISTOR,CHIP 1.1K 1/16W(1608)
R339	1-218-977-11	s	RESISTOR,CHIP 100K 1/16W(1005)
R340	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)

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Ref. No. or Q'ty	Part No.	SP	Description
R341	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R342	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R343	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R344	1-218-969-11	s	RESISTOR,CHIP 22K 1/16W (1608)
R345	1-208-689-11	s	RESISTOR,CHIP 1.8K 1/16W(1005)
R346	1-218-941-11	s	RESISTOR,CHIP 100 1/16W (1005)
R347	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R348	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R349	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
S101	1-572-473-11	s	SWITCH, TACTIL
S102	1-771-795-11	s	SWITCH, SLIDE
TP105	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP106	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP107	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP230	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP231	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP232	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP233	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP234	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
X101	1-781-839-11	s	VIBRATOR, CRYSTAL
X230	1-767-617-11	s	OSCILLATOR, CRYSTAL [for UC,J]
X230	1-767-619-11	s	OSCILLATOR, CRYSTAL [for CE]

VA-193 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8325-288-A	o	MOUNTED CIRCUIT BOARD, VA-193
C901	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C902	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C903	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C904	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C905	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C906	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C907	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C908	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C909	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C910	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C911	1-164-943-11	s	CAPACITOR,CHIP CERAMIC 0.01MF
C912	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C913	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C914	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C915	1-164-937-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C916	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C917	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C918	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C919	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C920	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C921	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C922	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C923	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C924	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C925	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C926	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C927	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C928	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C929	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C930	1-135-070-00	s	CAPACITOR,TANTALUM 0.1MF/35V
C931	1-135-181-21	s	CAPACITOR,TANTALUM 4.7MF/6.3V
C932	1-135-181-21	s	CAPACITOR,TANTALUM 4.7MF/6.3V
C933	1-135-181-21	s	CAPACITOR,TANTALUM 4.7MF/6.3V
C934	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C935	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C936	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C938	1-107-686-11	s	CAPACITOR,CHIP TANTALUM 4.7MF/16V
C939	1-110-569-11	s	CAPACITOR,CHIP TANTALUM 47MF/6.3V
C940	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C941	1-104-752-11	s	CAPACITOR,TANTALUM 33MF/6.3V
C943	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C944	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C946	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C947	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C949	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C950	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C951	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C952	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C953	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C954	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C955	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C956	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C957	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C958	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C959	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C960	1-135-259-11	s	CAPACITOR,TANTALUM 10MF/6.3V F
C961	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F

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Ref. No. or Q'ty	Part No.	SP	Description
C962	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C963	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C964	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C965	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C966	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C967	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C968	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C969	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C970	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C971	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C973	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C974	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C975	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C976	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C977	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C978	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C979	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C980	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C981	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C982	1-135-208-11	s	CAPACITOR,TANTALUM 1MF/10V
C983	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C984	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C985	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C986	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C987	1-135-208-11	s	CAPACITOR,TANTALUM 1MF/10V
C988	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C989	1-135-210-11	s	CAPACITOR,TANTALUM 4.7MF/10V
C990	1-135-208-11	s	CAPACITOR,TANTALUM 1MF/10V
C991	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C992	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C993	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C994	1-135-333-11	s	CAPACITOR,TANTALUM 1MF/16V
C995	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C996	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C997	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C998	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C999	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1000	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1001	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1002	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C1003	1-113-642-11	s	CAPACITOR,TANTALUM 47MF/10V
C1004	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1005	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C1006	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1007	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1008	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1009	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C1010	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1011	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1012	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1013	1-113-985-11	s	CAPACITOR,TANTALUM 10MF/20V
C1014	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1015	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1016	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1017	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1018	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1019	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1020	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1025	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F

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Ref. No. or Q'ty	Part No.	SP	Description
C1026	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C1027	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1028	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1029	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1030	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1031	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1032	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1033	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1034	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C1035	1-107-820-11	s	CAPACITOR,CHIP CERAMIC 0.1MF F
C1036	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C1037	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
C1038	1-164-874-11	s	CAPACITOR,CHIP CERAMIC 100PF
CN901	1-794-204-11	o	CONNECTOR,BOARD TO BOARD
CN902	1-691-346-11	s	CONNECTOR,FFC/FPC 8P
D901	8-719-421-69	s	DIODE MA133
FL901	1-234-504-11	s	FILTER, TRAP (14.3MHZ)
FL902	1-234-504-11	s	FILTER, TRAP (14.3MHZ)
FL903	1-234-504-11	s	FILTER, TRAP (14.3MHZ)
IC901	8-752-064-37	s	IC CXA1757R
IC902	8-759-064-36	s	IC MB88346BPFV
IC903	8-759-064-36	s	IC MB88346BPFV
IC904	8-759-669-45	s	IC TL062CPWR-12
IC905	8-759-076-06	s	IC TL064CPW
IC906	8-759-064-36	s	IC MB88346BPFV
IC907	8-759-196-69	s	IC BA7655AF-E2
IC908	8-759-082-61	s	IC TC4W53FU
IC909	8-759-058-58	s	IC TC7S04FU-TE85R
IC910	8-759-661-29	s	IC LT1251CS-E2
IC911	8-759-661-29	s	IC LT1251CS-E2
IC912	8-759-661-29	s	IC LT1251CS-E2
IC913	8-759-082-61	s	IC TC4W53FU
IC914	8-759-700-95	s	IC NJM1496M
IC915	8-759-062-66	s	IC TC7S66F
IC916	8-759-062-66	s	IC TC7S66F
IC917	8-759-062-66	s	IC TC7S66F
IC918	8-759-076-06	s	IC TL064CPW
IC919	8-759-082-61	s	IC TC4W53FU
IC920	8-759-058-62	s	IC TC7S08FU-TE85R
L901	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L902	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L903	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
L904	1-412-030-11	s	INDUCTOR,CHIP 22UH (3225)
Q901	8-729-117-32	s	TRANSISTOR 2SC4177
Q902	8-729-117-32	s	TRANSISTOR 2SC4177
Q903	8-729-117-32	s	TRANSISTOR 2SC4177
Q904	8-729-117-32	s	TRANSISTOR 2SC4177
Q905	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q906	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q907	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q908	8-729-117-16	s	TRANSISTOR 2SA1611M6
Q909	8-729-117-32	s	TRANSISTOR 2SC4177
Q910	8-729-117-32	s	TRANSISTOR 2SC4177
Q911	8-729-117-32	s	TRANSISTOR 2SC4177
Q912	8-729-117-32	s	TRANSISTOR 2SC4177
Q913	8-729-402-84	s	TRANSISTOR XN4601
Q914	8-729-117-32	s	TRANSISTOR 2SC4177

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Ref. No. or Q'ty	Part No.	SP	Description
Q915	8-729-402-84	s	TRANSISTOR XN4601
Q916	8-729-402-84	s	TRANSISTOR XN4601
Q917	8-729-402-84	s	TRANSISTOR XN4601
Q918	8-729-402-84	s	TRANSISTOR XN4601
Q919	8-729-402-84	s	TRANSISTOR XN4601
Q920	8-729-402-84	s	TRANSISTOR XN4601
Q921	8-729-402-84	s	TRANSISTOR XN4601
Q922	8-729-117-32	s	TRANSISTOR 2SC4177
Q923	8-729-402-84	s	TRANSISTOR XN4601
Q924	8-729-117-32	s	TRANSISTOR 2SC4177
Q925	8-729-402-84	s	TRANSISTOR XN4601
Q926	8-729-117-32	s	TRANSISTOR 2SC4177
R901	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R902	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R903	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R904	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R905	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R906	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R907	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R908	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R909	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R910	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R911	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R912	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R913	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R914	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R915	1-218-971-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R916	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R917	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R918	1-208-715-11	s	RESISTOR,CHIP 22K 1/16W (1005)
R919	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R920	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R921	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R922	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R923	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R924	1-218-937-11	s	RESISTOR,CHIP 47 1/16W
R925	1-218-937-11	s	RESISTOR,CHIP 47 1/16W
R926	1-218-937-11	s	RESISTOR,CHIP 47 1/16W
R927	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R928	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R929	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R930	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R931	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R932	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R933	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R934	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R935	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R936	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R937	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R938	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R939	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R940	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R941	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R942	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R943	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R944	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R947	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R948	1-218-972-11	s	RESISTOR,CHIP 39K 1/16W (1005)
R949	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R950	1-218-972-11	s	RESISTOR,CHIP 39K 1/16W (1005)
R951	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R952	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R953	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R954	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R955	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R956	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R957	1-218-958-11	s	RESISTOR,CHIP 2.7K 1/16W(1005)
R958	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R959	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R960	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R961	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R962	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R963	1-218-958-11	s	RESISTOR,CHIP 2.7K 1/16W(1005)
R964	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R965	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R966	1-218-951-11	s	RESISTOR,CHIP 680 1/16W
R967	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R968	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R969	1-218-958-11	s	RESISTOR,CHIP 2.7K 1/16W(1005)
R970	1-218-951-11	s	RESISTOR,CHIP 680 1/16
R971	1-218-955-11	s	RESISTOR,CHIP 1.5K 1/16W
R972	1-218-945-11	s	RESISTOR,CHIP 220 1/16W(1005)
R973	1-219-605-11	s	RESISTOR,CHIP 91K 1/16W(1005)
R974	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R975	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R976	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R977	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R978	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R979	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R980	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R981	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R982	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R983	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R984	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R985	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R986	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R987	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R988	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R989	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R990	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R991	1-219-598-11	s	RESISTOR,CHIP 47K 1/16W(1005)
R992	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R993	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R994	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R995	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R996	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R997	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R998	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R999	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)
R1000	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R1001	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R1002	1-218-953-11	s	RESISTOR,CHIP 1K 1/16W
R1003	1-218-973-11	s	RESISTOR,CHIP 47K 1/16W (1005)
R1004	1-218-966-11	s	RESISTOR,CHIP 12K 1/16W
R1005	1-218-967-11	s	RESISTOR,CHIP 15K 1/16W (1608)

(VA-193 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1006	1-208-713-11	s	RESISTOR,CHIP 18K 1/16W (1005)
R1007	1-220-196-11	s	RESISTOR,CHIP 13K 1/16W (1005)
R1008	1-219-600-11	s	RESISTOR,CHIP 56K 1/16W (1005)
R1009	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R1010	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R1011	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R1012	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R1013	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R1014	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R1015	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R1016	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R1017	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R1018	1-218-947-11	s	RESISTOR,CHIP 330 1/16W
R1019	1-218-959-11	s	RESISTOR,CHIP 3.3K 1/16W
R1020	1-208-643-11	s	RESISTOR,CHIP 22 1/16W (1005)
R1021	1-218-957-11	s	RESISTOR,CHIP 2.2K 1/16W(1608)
R1022	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R1023	1-218-954-11	s	RESISTOR,CHIP 1.2K 1/16W
R1024	1-218-962-11	s	RESISTOR,CHIP 5.6K 1/16W
R1025	1-218-961-11	s	RESISTOR,CHIP 4.7K 1/16W
R1026	1-208-713-11	s	RESISTOR,CHIP 18K 1/16W (1005)
R1027	1-220-196-11	s	RESISTOR,CHIP 13K 1/16W (1005)
R1028	1-219-600-11	s	RESISTOR,CHIP 56K 1/16W(1005)
R1029	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R1030	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1031	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1032	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1033	1-208-713-11	s	RESISTOR,CHIP 18K 1/16W (1005)
R1034	1-219-600-11	s	RESISTOR,CHIP 56K 1/16W (1005)
R1035	1-218-970-11	s	RESISTOR,CHIP 27K 1/16W (1005)
R1036	1-220-196-11	s	RESISTOR,CHIP 13K 1/16W (1005)
R1037	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R1038	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R1039	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R1040	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1041	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1042	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R1043	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R1044	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R1045	1-208-899-11	s	RESISTOR,CHIP 3.3K 1/16W(1005)
R1046	1-208-719-11	s	RESISTOR,CHIP 33K 1/16W (1005)
R1047	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1048	1-208-691-11	s	RESISTOR,CHIP 2.2K 1/16W(1005)
R1049	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R1050	1-218-965-11	s	RESISTOR,CHIP 10K 1/16W
R1051	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1053	1-218-990-11	s	RESISTOR,CHIP 0 1/16W (1005)
R1057	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R1058	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R1059	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R1060	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R1061	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
R1062	1-218-864-11	s	RESISTOR,CHIP 5.1K 1/16W(1608)
TP901	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP902	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP903	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP904	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP905	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

(VA-193 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
TP906	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP907	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP908	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP909	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP910	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP911	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)
TP912	1-535-757-11	s	CHIP, CHECKER (CONNECTOR)

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-562-222-21	s	RECEPTACLE,CONNECTOR 6P
1pc	1-562-381-00	s	CONNECTOR (RECEPTACLE) 12P
1pc	1-580-090-11	s	SOCKET, D-SUB CONNECTOR 9P
2pcs	1-580-724-21	s	CONNECTOR, BNC
1pc	1-771-944-11	s	SWITCH, SHEET
1pc	1-774-806-11	s	CONNECTOR, ROUND TYPE
1pc	1-792-595-11	s	CABLE, FLEXIBLE FLAT (30 CORE)

5-4. Packing Materials & Supplied Accessories

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-203-786-01	s	MANUAL, INSTRUCTION [for J]
1pc	3-203-786-11	s	MANUAL, INSTRUCTION [for UC,CE]
1pc	3-626-916-01	o	SEAL FOR REMOTE CONTROL
1pc	X-3605-838-1	s	ADAPTOR ASSY,TRIPOD
3pcs	7-623-923-11	s	WASHER PLASTIC (2.6X0.3)
3pcs	7-682-548-04	s	SCREW +B3X8(EP-FE/CU,NI,CR)

Section 6
Semiconductor Pin Assignments

The following describes the semiconductor types used in this unit.
For semiconductors marked with page numbers in the index, refer to the corresponding pages in this section. However, in some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.
In addition, for semiconductors with ID Nos., refer to the separate CD-ROM titled “Semiconductor Pin Assignments” (Sony Part No. 9-968-546-xx) that allows searching for parts by semiconductor type or ID No.
The semiconductors in the manual or on the CD-ROM are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.
Pin assignments and block diagrams are based on the IC manufacturer’s data book.

本機に使用されている半導体型名の一覧を下記に示します。
索引中，ページが記載されている半導体は，本章の該当ページを参照してください。ただし，互換性のない型名を併記している場合がありますので，部品を交換するときは，Spare Partsの章を参照してください。
また，ID番号が記載されている半導体は，別途発行の “Semiconductor Pin Assignments” CD−ROM版 (ソニー部品番号：9−968−546−xx)を参照してください。
半導体型名またはID番号から検索ができます。
マニュアルまたはCD−ROMに掲載されている半導体は，それぞれの機能を等価的に表わしたものです。
外観やインデックスマークの表示方法が実物と異なる場合があります。
ピン配置およびブロック図はICメーカーのデータブックに従いました。

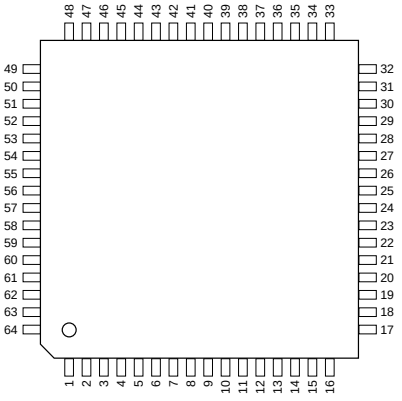
Index

IC

CXA1757R-T6 (SONY)

HEAD AMP FOR MULTI CCD DIGITAL CAMERA

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	AGCMAX	17	—	GND	33	—	BTP2	49	I	CLPDM
2	I	AGCCONT	18	—	GND	34	—	GTP2	50	I	PLTG
3	I	CSHI	19	O	BCLP	35	—	RTP2	51	I	PLTP
4	—	NC	20	O	BOUT	36	—	BTP1	52	I	PLTCR1
5	I	WCCONT	21	O	GCLP	37	—	GTP1	53	I	PLTCR2
6	—	NC	22	O	GOUT	38	—	RTP1	54	I	PLTCB1
7	—	NC	23	O	RCLP	39	—	GND	55	I	PLTCB2
8	I	IOUTCONT	24	O	ROUT	40	I	BDIN	56	—	Vcc
9	—	GND	25	—	Vcc	41	I	BPIN	57	I	PLTT
10	—	GND	26	—	Vcc	42	I	GDIN	58	I	PLTB
11	I	VRBCONT	27	I	CLPCB	43	I	GPIN	59	—	GND
12	—	Vcc	28	I	CLPCG	44	I	RDIN	60	I	XRS
13	—	Vcc	29	I	CLPCR	45	I	RPIN	61	I	CLPBL
14	O	VRB	30	I	BGAIN	46	—	Vcc	62	I	PBLK
15	O	VRT	31	I	RGAIN	47	I	XSHD	63	I	CLPOB
16	I	OFFSET	32	—	GND	48	I	XSHP	64	—	Vcc

INPUTS

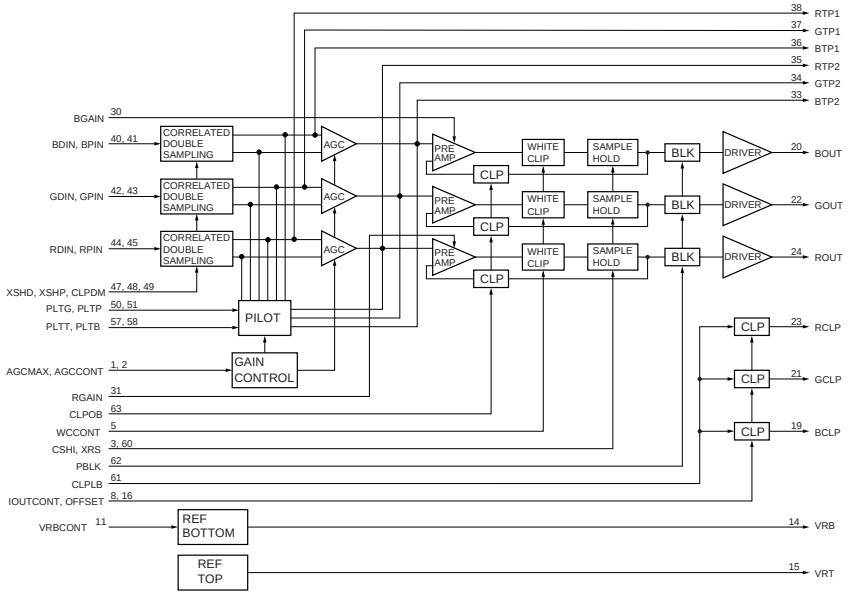
AGCCONT : AGC GAIN CONTROL
AGCMAX : MAX AGC GAIN CONTROL
BDIN : B CHANNEL CCD SIGNAL
BGAIN : B GAIN CONTROL
BPIN : B CHANNEL CCD SIGNAL
CLPBL : CLAMP PULSE
CLPCB : AGC CLAMP
CLPCG : AGC CLAMP
CLPCR : AGC CLAMP
CLPDM : CLAMP PULSE
CLPOB : CLAMP PULSE
CSHI : A/D S/H SLEW RATE CONTROL
GDIN : G CHANNEL CCD SIGNAL
GPIN : G CHANNEL CCD SIGNAL
IOUTCONT : INPUT CLAMP SIGNAL CONTROL
OFFSET : CLAMP SIGNAL VOLTAGE CONTROL
PBLK : PREBLANKING PULSE
PLTB : AGC GAIN MATCHING PULSE
PLTCB1 : AGC GAIN MATCHING CAPACITOR
PLTCB2 : AGC GAIN MATCHING CAPACITOR
PLTCR1 : AGC GAIN MATCHING CAPACITOR
PLTCR2 : AGC GAIN MATCHING CAPACITOR
PLTG : AGC GAIN MATCHING PULSE
PLTP : AGC GAIN MATCHING PULSE
PLTT : AGC GAIN MATCHING PULSE
RDIN : R CHANNEL CCD SIGNAL
RGAIN : R GAIN CONTROL
RPIN : R CHANNEL CCD SIGNAL
VRBCONT : VRB CONTROL
WCCONT : WHITE CLIP VOLTAGE CONTROL
XRS : S/H PULSE (A/D CONVERTER)
XSHD : S/H PULSE
XSHP : S/H PULSE

OUTPUTS

BCLP : B SIGNAL CLAMP
BOUT : B SIGNAL
GCLP : G SIGNAL CLAMP
GOUT : G SIGMAL
RCLP : R SIGNAL CLAMP
ROUT : R SIGNAL
VRB : A/D REFERENCE VOLTAGE
VRT : A/D REFERENCE VOLTAGE

OTHERS

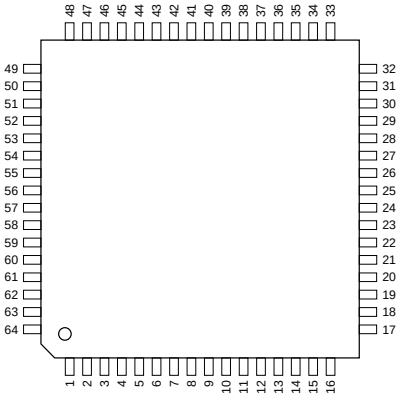
BTP1 : B CHANNEL CDS SIGNAL TEST POINT
BTP2 : B CHANNEL AGC SIGNAL TEST POINT
GTP1 : G CHANNEL CDS SIGNAL TEST POINT
GTP2 : G CHANNEL AGC SIGNAL TEST POINT
RTP1 : R CHANNEL CDS SIGNAL TEST POINT
RTP2 : R CHANNEL AGC SIGNAL TEST POINT
NC : NO CONNECTION



CXD1256AR (SONY)

TIMING GENERATOR FOR CCD CAMERA

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	OSCO	17	O	A3	33	O	$\overline{V3}$	49	I/O	CLP2
2	I	OSCI	18	O	A0	34	O	$\overline{SG2}$	50	I/O	CLP3
3	I	EF	19	O	A1	35	O	$\overline{V4}$	51	O	CLP4
4	I	ED0	20	O	A2	36	I	TEST2	52	O	PBLK
5	I	ED1	21	—	GND	37	O	$\overline{MCK}$	53	O	ID
6	I	ED2	22	O	RG	38	O	$\overline{SHP}$	54	O	WEN
7	I	SMD1	23	O	LH1	39	O	$\overline{SHD}$	55	I	GM
8	—	GND	24	—	Vcc	40	—	GND	56	—	Vcc
9	I	SMD2	25	—	Vcc	41	O	$\overline{SP1}$	57	O	CL
10	O	$\overline{VCT}$	26	O	H1	42	O	$\overline{SP2}$	58	I	PS
11	I	D1	27	O	H2	43	O	$\overline{SH1}$	59	I	HD
12	I	D2	28	—	GND	44	O	$\overline{SH2}$	60	I	VD
13	I	D3	29	O	$\overline{SUB}$	45	O	$\overline{DL1}$	61	I	HTSG
14	I	D4	30	O	$\overline{V2}$	46	O	$\overline{DL2}$	62	I	TEST
15	O	A5	31	O	$\overline{V1}$	47	O	BFG	63	O	$\overline{CK}$
16	O	A4	32	O	$\overline{SG1}$	48	O	CLP1	64	I	CK

INPUTS

CK : NTSC (1820 fH)/PAL (1816 fH) CLOCK
D1 : NORMALLY FIX TO "LOW" LEVEL
D2 : $\overline{COLOR}$/BW SELECT
D3 : $\overline{FIELD}$/FRAME SELECT
D4 : $\overline{NTSC}$ (EIA) /PAL (CCIR) SELECT
ED0 - ED2 : SHUTTER SPEED SETTING
EF : (NOT IN USE)
GM : $\overline{ANALOG\ PROCESSING}$/DIGITAL PROCESSING
HD : HORIZONTAL SYNC
HTSG : XSG1, XSG2 CONTROL
OSCI : INVERTER FOR OSCILLATOR
PS : SHUTTER SPEED SELECT ($\overline{SERIAL}$/PARALLEL)
SMD1, SMD2 : SHUTTER MODE SETTING
VD : VERTICAL SYNC

OUTPUTS

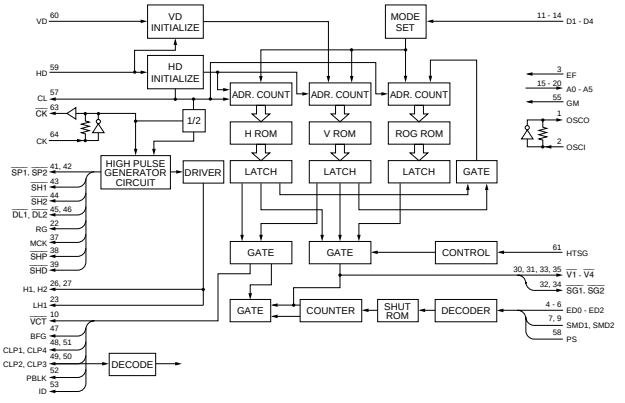
A0 - A5 : (NOT IN USE)
BFG : ENCODER/CHROMA MODULATOR PULSE
$\overline{CK}$: NTSC (1820 fH)/PAL (1816 fH) CLOCK
CL : NTSC (910 fH)/PAL (908 fH) CLOCK
CLP1, CLP4 : CLAMP PULSE
$\overline{DL1}$, $\overline{DL2}$: CLOCK FOR DELAY LINE
H1, H2 : CCD HORIZONTAL REGISTER DRIVE CLOCK
ID : LINE IDENTIFICATION
LH1 : CLOCK FOR LAST CCD VERTICAL REGISTER
MCK : NTSC (910 fH)/PAL (908 fH) CLOCK
OSCO : INVERTER FOR OSCILLATOR
PBLK : BLANKING CLEANING PULSE
RG : RESET GATE PULSE
$\overline{SG1}$, $\overline{SG2}$: CCD ELECTRIC CHARGE READ OUT PULSE
$\overline{SH1}$, $\overline{SH2}$: SELECTION
SHD, $\overline{SHD}$: DATA S/H PULSE
SHP, $\overline{SHP}$: PRE-CHARGE LEVEL S/H PULSE
$\overline{SP1}$, $\overline{SP2}$: COLOR SEPARATION S/H PULSE
$\overline{SUB}$: CCD ELECTRIC CHARGE SUBSTRATE PULSE
$\overline{V1}$ - $\overline{V4}$: CCD VERTICAL REGISTER DRIVE CLOCK
$\overline{VCT}$: (NOT IN USE)
WEN : WRITE ENABLE

INPUT/OUTPUT

CLP2, CLP3 : CLAMP PULSE

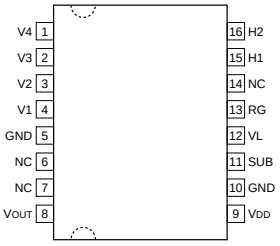
OTHER

TEST, TEST2 : TEST



ICX258AL (SONY)
ICX259AL (SONY)

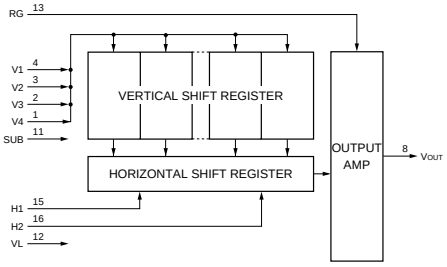
1/3-INCH CCD IMAGE BLOCK
—TOP VIEW—



INPUTS
H1, H2 : HORIZONTAL REGISTER TRANSFER CLOCK
RG : RESET GATE CLOCK
SUB : OVERFLOW DRAIN
VL : PROTECTION TRANSISTOR BIAS
V1 - V4 : VERTICAL REGISTER TRANSFER CLOCK

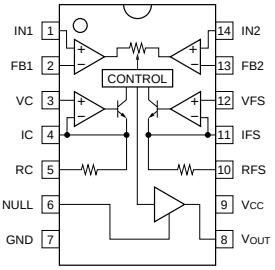
OUTPUT
VOUT : SIGNAL OUTPUT

OTHER
NC : NO CONNECTION

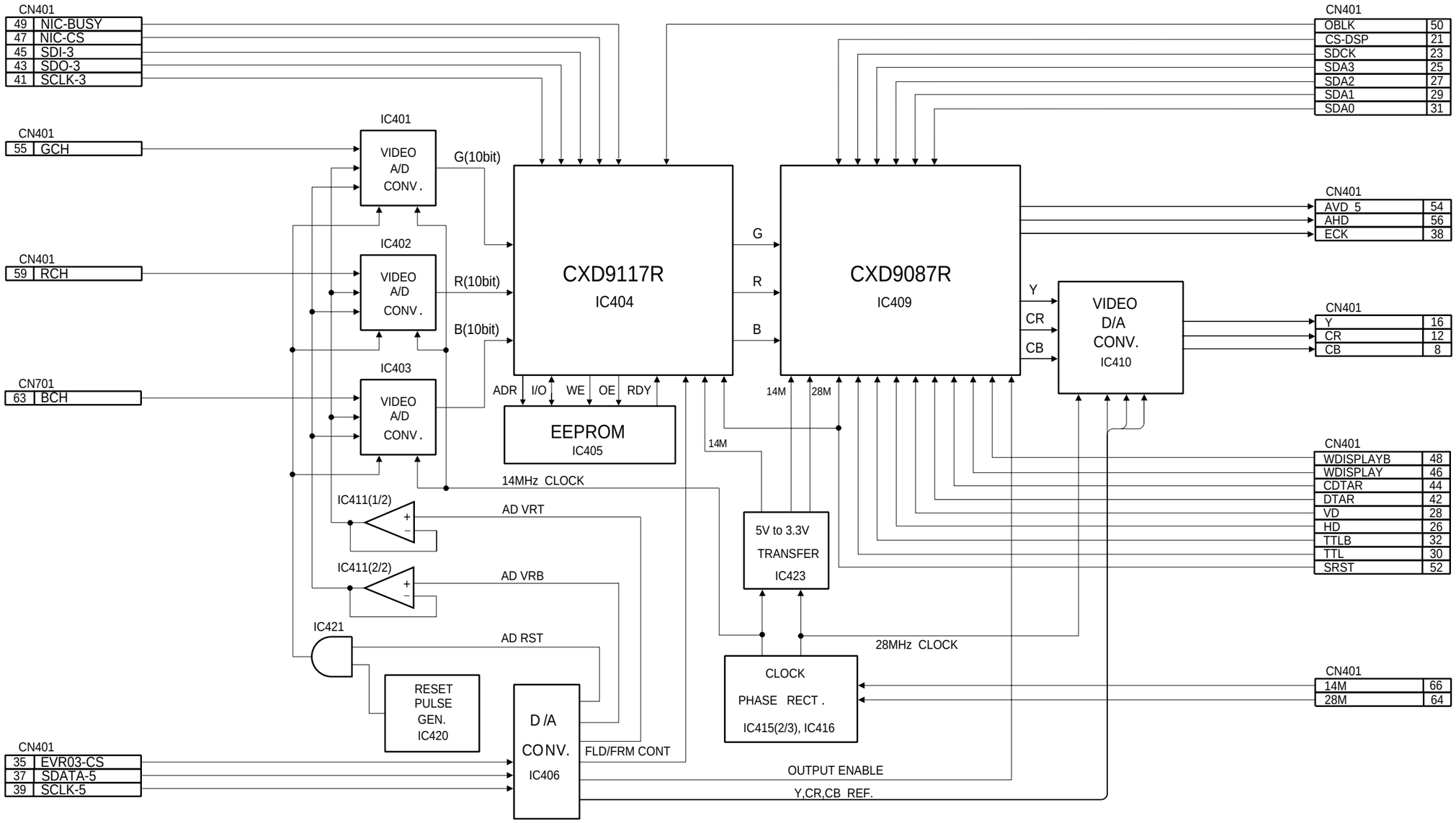


LT1251CS (LINEAR TECH)

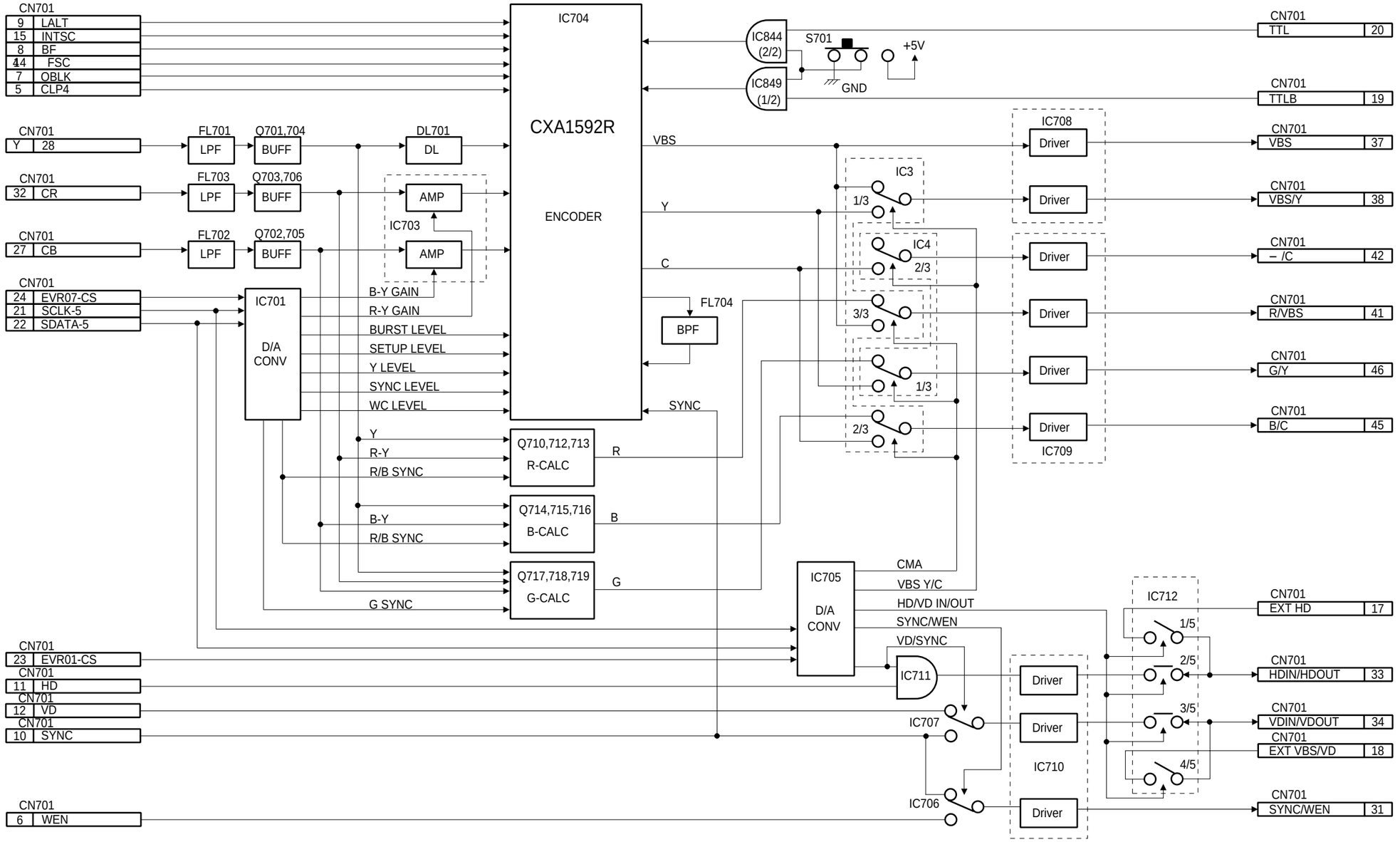
VIDEO FADER AND DC GAIN CONTROL AMPLIFIER
—TOP VIEW—



Section 7
Block Diagrams



DP-313


CN701
9 LALT
15 INTSC
8 BF
14 FSC
7 OBLK
5 CLP4
CN701
Y 28
FL701
LPF
Q701,704
BUFF
DL701
DL
CN701
32 CR
FL703
LPF
Q703,706
BUFF
AMP
IC703
CN701
27 CB
FL702
LPF
Q702,705
BUFF
AMP
CN701
24 EVR07-CS
21 SCLK-5
22 SDATA-5
IC701
D/A
CONV
B-Y GAIN
R-Y GAIN
BURST LEVEL
SETUP LEVEL
Y LEVEL
SYNC LEVEL
WC LEVEL
IC704
CXA1592R
ENCODER
Y
R-Y
R/B SYNC
Q710,712,713
R-CALC
R
B-Y
R/B SYNC
Q714,715,716
B-CALC
B
G SYNC
Q717,718,719
G-CALC
G
SYNC
IC844
(2/2)
IC849
(1/2)
S701
+5V
GND
VBS
Y
C
FL704
BPF
SYNC
IC3
1/3
IC4
2/3
3/3
1/3
2/3
IC708
Driver
Driver
Driver
Driver
Driver
IC709
Driver
CN701
TTL 20
CN701
TTLB 19
CN701
VBS 37
CN701
VBS/Y 38
CN701
– /C 42
CN701
R/VBS 41
CN701
G/Y 46
CN701
B/C 45
CN701
23 EVR01-CS
CN701
11 HD
CN701
12 VD
CN701
10 SYNC
CN701
6 WEN
IC705
D/A
CONV
CMA
VBS Y/C
HD/VD IN/OUT
SYNC/WEN
VD/SYNC
IC711
IC707
IC706
Driver
Driver
Driver
IC710
IC712
1/5
2/5
3/5
4/5
CN701
EXT HD 17
CN701
HDIN/HDOUT 33
CN701
VDIN/VDOUT 34
CN701
EXT VBS/VD 18
CN701
SYNC/WEN 31

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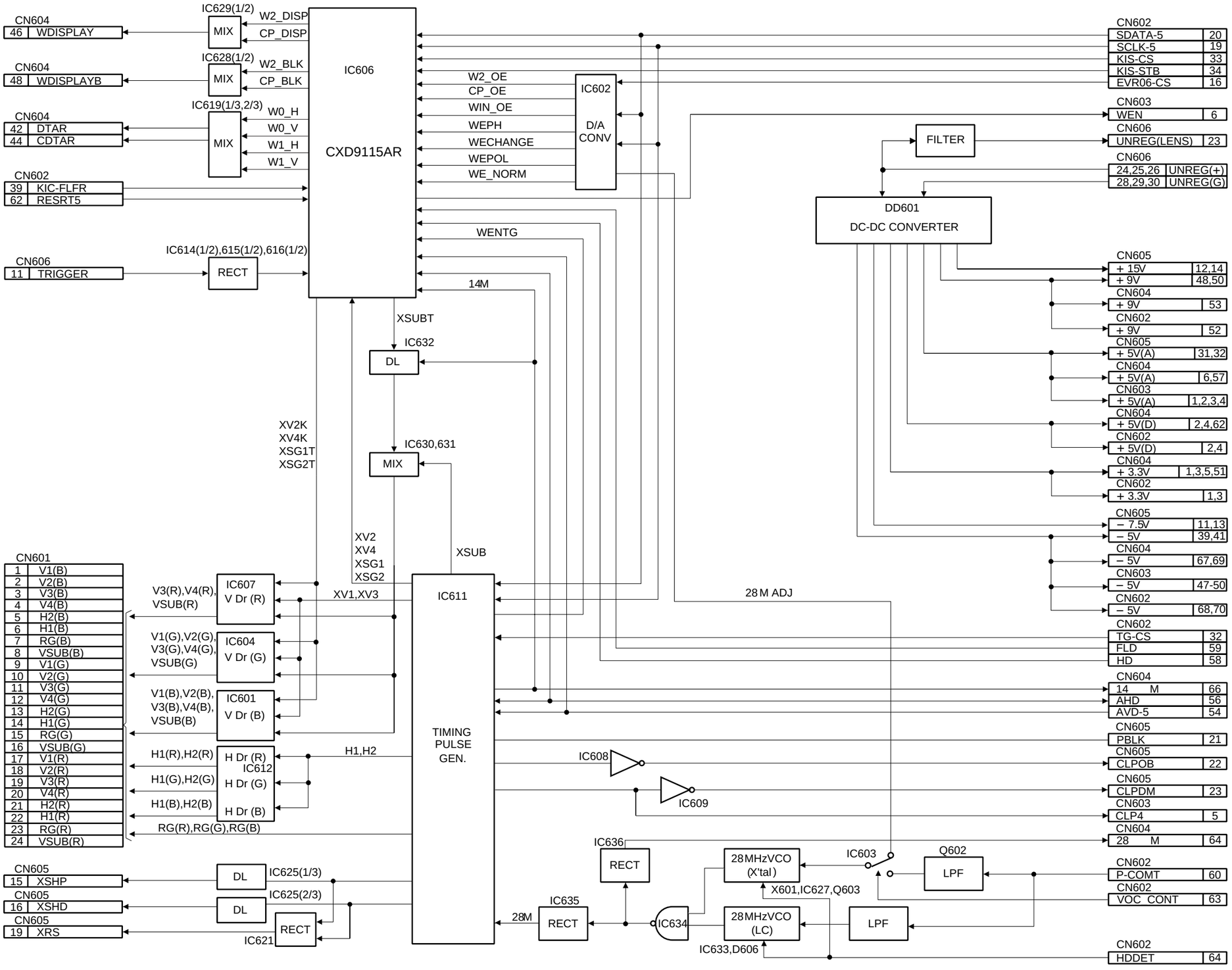
IC606
CXD9115AR
IC629(1/2)
MIX
W2_DISP
CP_DISP
IC628(1/2)
MIX
W2_BLK
CP_BLK
IC619(1/3,2/3)
MIX
W0_H
W0_V
W1_H
W1_V
CN604
46 WDISPLAY
CN604
48 WDISPLAYB
CN604
42 DTAR
44 CDTAR
CN602
39 KIC-FLFR
62 RESRT5
CN606
11 TRIGGER
IC614(1/2),615(1/2),616(1/2)
RECT
W2_OE
CP_OE
WIN_OE
WEPH
WECHANGE
WEPOL
WE_NORM
IC602
D/A
CONV
WENTG
14M
XSUBT
IC632
DL
XV2K
XV4K
XSG1T
XSG2T
IC630,631
MIX
XV2
XV4
XSG1
XSG2
XSUB
IC611
TIMING
PULSE
GEN.
XV1,XV3
28 M ADJ
CN601
1 V1(B)
2 V2(B)
3 V3(B)
4 V4(B)
5 H2(B)
6 H1(B)
7 RG(B)
8 VSUB(B)
9 V1(G)
10 V2(G)
11 V3(G)
12 V4(G)
13 H2(G)
14 H1(G)
15 RG(G)
16 VSUB(G)
17 V1(R)
18 V2(R)
19 V3(R)
20 V4(R)
21 H2(R)
22 H1(R)
23 RG(R)
24 VSUB(R)
V3(R),V4(R),
VSUB(R)
IC607
V Dr (R)
V1(G),V2(G),
V3(G),V4(G),
VSUB(G)
IC604
V Dr (G)
V1(B),V2(B),
V3(B),V4(B),
VSUB(B)
IC601
V Dr (B)
H1(R),H2(R)
H1(G),H2(G)
H1(B),H2(B)
H Dr (R)
IC612
H Dr (G)
H Dr (B)
H1,H2
RG(R),RG(G),RG(B)
CN605
15 XSHP
CN605
16 XSHD
CN605
19 XRS
DL
IC625(1/3)
DL
IC625(2/3)
RECT
IC621
IC608
IC609
IC636
RECT
IC635
RECT
28M
IC634
28MHzVCO
(X'tal)
28MHzVCO
(LC)
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IC603
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LPF
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DD601
DC-DC CONVERTER
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SCLK-5 19
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24,25,26 UNREG(+)
28,29,30 UNREG(G)
CN605
+ 15V 12,14
+ 9V 48,50
CN604
+ 9V 53
CN602
+ 9V 52
CN605
+ 5V(A) 31,32
CN604
+ 5V(A) 6,57
CN603
+ 5V(A) 1,2,3,4
CN604
+ 5V(D) 2,4,62
CN602
+ 5V(D) 2,4
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+ 3.3V 1,3,5,51
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+ 3.3V 1,3
CN605
– 7.5V 11,13
– 5V 39,41
CN604
– 5V 67,69
CN603
– 5V 47-50
CN602
– 5V 68,70
CN602
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HD 58
CN604
14 M 66
AHD 56
AVD-5 54
CN605
PBLK 21
CN605
CLPOB 22
CN605
CLPDM 23
CN603
CLP4 5
CN604
28 M 64
CN602
P-COMT 60
CN602
VOC CONT 63
CN602
HDDET 64

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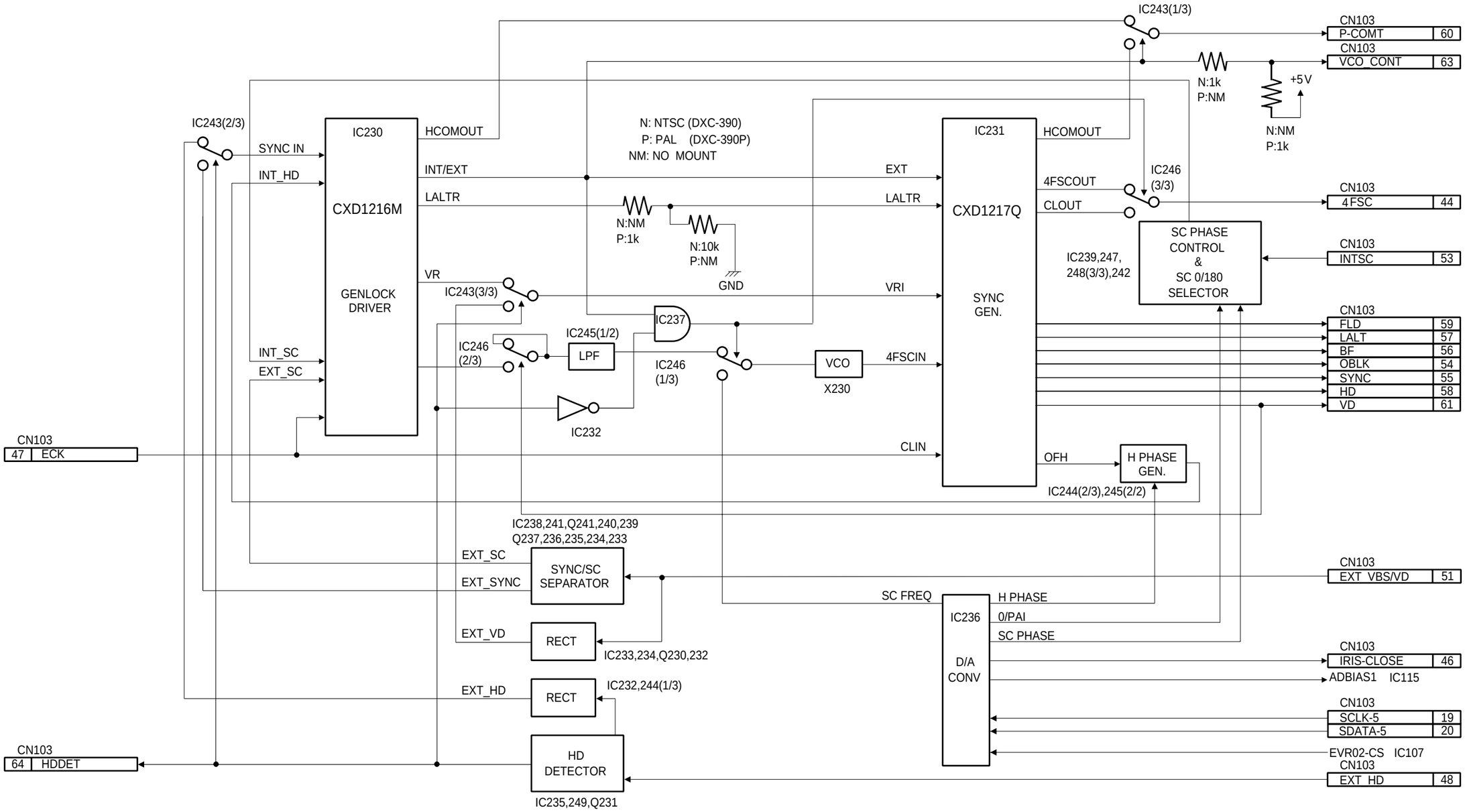
IC243(1/3)
CN103
P-COMT 60
CN103
VCO_CONT 63
N:1k
P:NM
+5V
N:NM
P:1k
IC243(2/3)
SYNC IN
INT_HD
IC230
CXD1216M
GENLOCK
DRIVER
HCOMOUT
INT/EXT
LALTR
N: NTSC (DXC-390)
P: PAL (DXC-390P)
NM: NO MOUNT
N:NM
P:1k
N:10k
P:NM
GND
VR
IC243(3/3)
IC237
IC245(1/2)
LPF
IC246
(2/3)
IC246
(1/3)
VCO
X230
4FSCIN
IC232
INT_SC
EXT_SC
IC231
CXD1217Q
SYNC
GEN.
EXT
LALTR
VRI
HCOMOUT
4FSCOUT
CLOUT
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(3/3)
CN103
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IC239,247,
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CONTROL
&
SC 0/180
SELECTOR
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CN103
FLD 59
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BF 56
OBLK 54
SYNC 55
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CN103
47 ECK
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OFH
H PHASE
GEN.
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Q237,236,235,234,233
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EXT_SYNC
SYNC/SC
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CN103
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SDATA-5 20
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CN103
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HD
DETECTOR
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CN103
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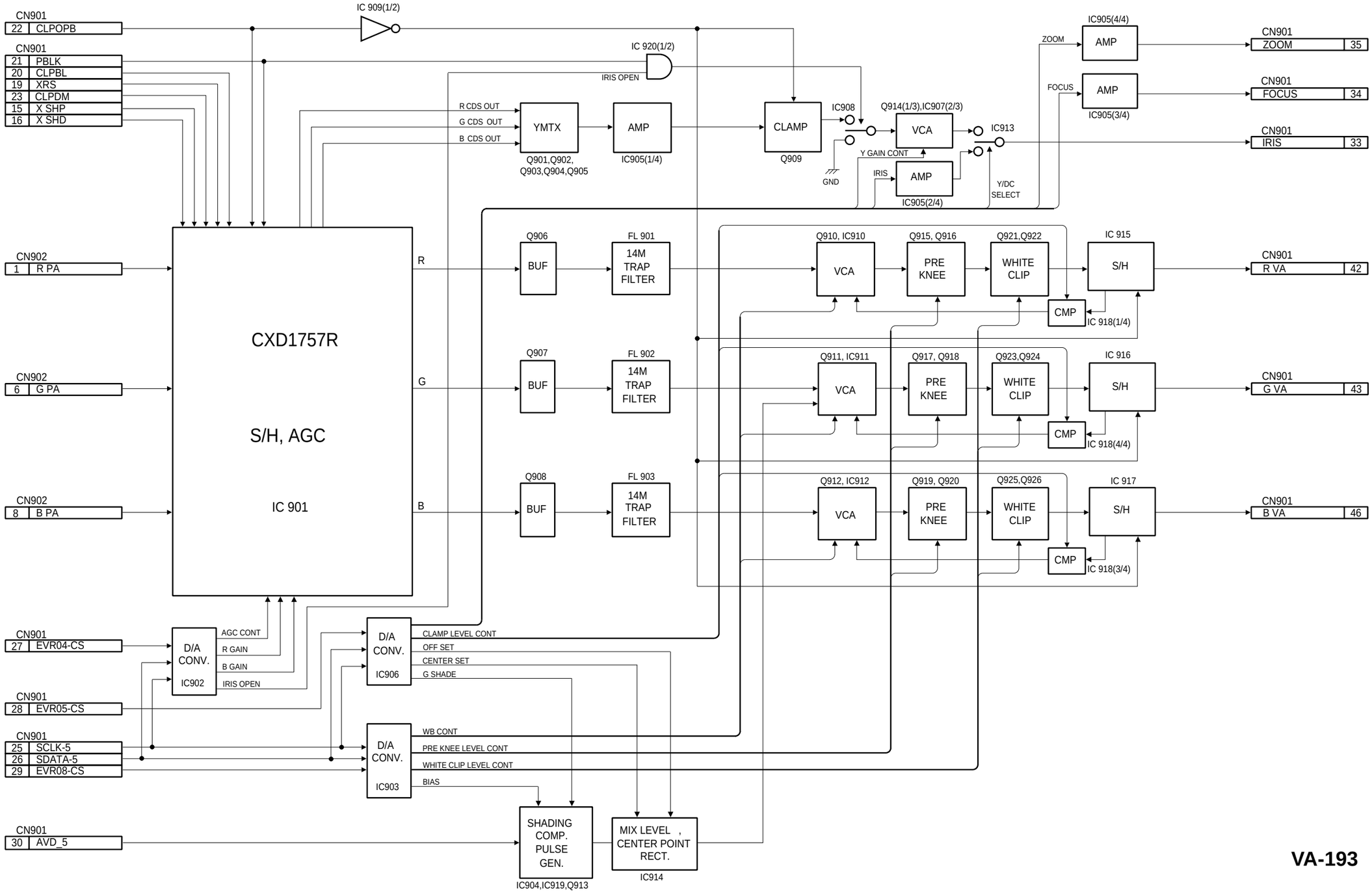
CN901
22 CLPOPB
CN901
21 PBLK
20 CLPBL
19 XRS
23 CLPDM
15 X SHP
16 X SHD
CN902
1 R PA
CN902
6 G PA
CN902
8 B PA
CN901
27 EVR04-CS
CN901
28 EVR05-CS
CN901
25 SCLK-5
26 SDATA-5
29 EVR08-CS
CN901
30 AVD_5
CXD1757R
S/H, AGC
IC 901
R
G
B
IC 909(1/2)
IC 920(1/2)
IRIS OPEN
R CDS OUT
G CDS OUT
B CDS OUT
YMTX
Q901,Q902,
Q903,Q904,Q905
AMP
IC905(1/4)
CLAMP
Q909
IC908
GND
Q914(1/3),IC907(2/3)
VCA
IC913
Y GAIN CONT
IRIS
AMP
IC905(2/4)
Y/DC
SELECT
ZOOM
AMP
IC905(4/4)
FOCUS
AMP
IC905(3/4)
CN901
ZOOM 35
CN901
FOCUS 34
CN901
IRIS 33
Q906
BUF
FL 901
14M
TRAP
FILTER
Q910, IC910
VCA
Q915, Q916
PRE
KNEE
Q921,Q922
WHITE
CLIP
IC 915
S/H
CMP
IC 918(1/4)
CN901
R VA 42
Q907
BUF
FL 902
14M
TRAP
FILTER
Q911, IC911
VCA
Q917, Q918
PRE
KNEE
Q923,Q924
WHITE
CLIP
IC 916
S/H
CMP
IC 918(4/4)
CN901
G VA 43
Q908
BUF
FL 903
14M
TRAP
FILTER
Q912, IC912
VCA
Q919, Q920
PRE
KNEE
Q925,Q926
WHITE
CLIP
IC 917
S/H
CMP
IC 918(3/4)
CN901
B VA 46
D/A
CONV.
IC902
AGC CONT
R GAIN
B GAIN
IRIS OPEN
D/A
CONV.
IC906
CLAMP LEVEL CONT
OFF SET
CENTER SET
G SHADE
D/A
CONV.
IC903
WB CONT
PRE KNEE LEVEL CONT
WHITE CLIP LEVEL CONT
BIAS
SHADING
COMP.
PULSE
GEN.
IC904,IC919,Q913
MIX LEVEL ,
CENTER POINT
RECT.
IC914

VA-193

Section 8
Schematic Diagrams

PA-236

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EN-142

CN102

PA(R)	1	1	R PA
GND	2	2	GND
-7.5V	3	3	-7.5V
+15V	4	4	+15V
GND	5	5	GND
PA(G)	6	6	G PA
GND	7	7	GND
PA(B)	8	8	B PA

CN902

CN101

V1(B)	1	1	V1(B)
V2(B)	2	2	V2(B)
V3(B)	3	3	V3(B)
V4(B)	4	4	V4(B)
H2(B)	5	5	H2(B)
H1(B)	6	6	H1(B)
RG(B)	7	7	RG(B)
VSUB(B)	8	8	VSUB(B)
V1(G)	9	9	V1(G)
V2(G)	10	10	V2(G)
V3(G)	11	11	V3(G)
V4(G)	12	12	V4(G)
H2(G)	13	13	H2(G)
H1(G)	14	14	H1(G)
RG(G)	15	15	RG(G)
VSUB(G)	16	16	VSUB(G)
V1(R)	17	17	V1(R)
V2(R)	18	18	V2(R)
V3(R)	19	19	V3(R)
V4(R)	20	20	V4(R)
H2(R)	21	21	H2(R)
H1(R)	22	22	H1(R)
RG(R)	23	23	RG(R)
VSUB(R)	24	24	VSUB(R)

CN601

CN801

1	GND(A)	GND(A)	1
2	GND(A)	GND(A)	2
3	GND(A)	GND(A)	3
4	GND(A)	GND(A)	4
5	GND(A)	GND(A)	5
6	GND(A)	GND(A)	6
7	GND(A)	GND(A)	7
8	GND(A)	GND(A)	8
9	NC	NC	9
10	NC	NC	10
11	-7.5V	-7.5V	11
12	+15V	+15V	12
13	-7.5V	-7.5V	13
14	+15V	+15V	14
15	XSHP	X SHP	15
16	XSHD	X SHD	16
17	GND(A)	GND(A)	17
18	GND(A)	GND(A)	18
19	XRS	XRS	19
20	CLPBL	CLPBL	20
21	PBLK	PBLK	21
22	CLPOB	CLPOB	22
23	CLPDM	CLPDM	23
24	GND(A)	GND(A)	24
25	SCLK-5	SCLK-5	25
26	SDATA-5	SDATA-5	26
27	EVR04-CS	EVR04-CS	27
28	EVR05-CS	EVR05-CS	28
29	EVR08-CS	EVR08-CS	29
30	AVD_5	AVD_5	30
31	+5V(A)	+5V(A)	31
32	+5V(A)	+5V(A)	32
33	IRS_CONT/VIDEO	IRIS	33
34	FOCUS_CONT	FOCUS	34
35	ZOOM_CONT	ZOOM	35
36	GND(A)	GND(A)	36
37	NC	NC	37
38	NC	NC	38
39	-5V	-5V	39
40	GND(A)	GND(A)	40
41	-5V	-5V	41
42	RCH	R VA	42
43	GCH	G VA	43
44	GND(A)	GND(A)	44
45	GND(A)	GND(A)	45
46	BCH	B VA	46
47	GND(A)	GND(A)	47
48	+9V	+9V	48
49	GND(A)	GND(A)	49
50	+9V	+9V	50

CN603

1	+5V(A)	+5V(A)	1
2	+5V(A)	+5V(A)	2
3	+5V(A)	+5V(A)	3
4	+5V(A)	+5V(A)	4
5	CLP4	CLP4	5
6	WEN	WEN	6
7	OBLK	OBLK	7
8	BF	BF	8
9	LALT	LALT	9
10	SYNC	SYNC	10
11	HD	HD	11
12	VD	VD	12
13	GND(A)	GND(A)	13
14	4FSC	4FSC	14
15	INTSC	INTSC	15
16	GND(A)	GND(A)	16
17	EXT HD	EXT_HD	17
18	EXT VBS/VD	EXT_VBS/VD	18
19	TTLB	TTLB	19
20	TTL	TTL	20
21	SCLK-5	SCLK-5	21
22	SDATA-5	SDATA-5	22
23	EVR01-CS	EVR01-CS	23
24	EVR07-CS	EVR07-CS	24
25	NC	NC	25
26	NC	NC	26
27	CB	CB	27
28	Y	Y	28
29	GND(A)	GND(A)	29
30	GND(A)	GND(A)	30
31	SYNCWEN	SYNCWEN	31
32	CR	CR	32
33	HDNIHDOUT	HD_IN/HD_OUT	33
34	VDINVDOUT	VD_IN/VD_OUT	34
35	GND(A)	GND(A)	35
36	GND(A)	GND(A)	36
37	VBS	VBS	37
38	VBSY	VBSY	38
39	GND(A)	GND(A)	39
40	GND(A)	GND(A)	40
41	RVBS	R/VBS	41
42	-/C	-/C	42
43	GND(A)	GND(A)	43
44	GND(A)	GND(A)	44
45	B/C	B/C	45
46	G/Y	G/Y	46
47	-5V	-5V	47
48	-5V	-5V	48
49	-5V	-5V	49
50	-5V	-5V	50

CN701

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SG-265

CN-1938

FLAT CABLE 30P

CN401		CN604
+3.3V	1	+3.3V
+5V(D)	2	+5V(D)
+3.3V	3	+3.3V
+5V(D)	4	+5V(D)
+3.3V	5	+3.3V
+5V(A)	6	+5V(A)
GND(D)	7	GND(D)
CB	8	CB
GND(D)	9	GND(D)
GND(A)	10	GND(A)
GND(D)	11	GND(D)
CR	12	CR
WB_AE	13	WB_AE
GND(A)	14	GND(A)
NC	15	NC
Y	16	Y
WRGBCH0	17	WRGBCH0
GND(A)	18	GND(A)
WRGBCH1	19	WRGBCH1
SBLK	20	SBLK
CS-DSP	21	CS-DSP
NC	22	NC
SDCK	23	SDCK
BECOL	24	BECOL
SDA3	25	SDA3
HD	26	HD
SDA2	27	SDA2
VD	28	VD
SDA1	29	SDA1
TTL	30	TTL
SDA0	31	SDA0
TTLB	32	TTLB
NC	33	NC
NC	34	NC
EVR03-CS	35	EVR03-CS
GND(D)	36	GND(D)
SDATA-5	37	SDATA-5
ECK	38	ECK
SCLK-5	39	SCLK-5
GND(D)	40	GND(D)
SCLK-3	41	SCLK-3
DTAR	42	DTAR
SDO-3	43	SDO-3
CDTAR	44	CDTAR
SDI-3	45	SDI-3
WDISPLAY	46	WDISPLAY
NIC-CS	47	PRN-CS
WDISPLAY1B	48	WDISPLAY1B
NICBUSY	49	BUSY
OBLK	50	OBLK
+3.3V	51	+3.3V
SRST	52	SRST
+9V	53	+9V
AVD_5	54	AVD
GCH	55	GCH
AHD	56	AHD
+5V(A)	57	+5V(A)
PBLKDSP	58	PBLKDSP
RCH	59	RCH
CLPDSP	60	CLPDSP
GND(A)	61	GND(A)
+5V(D)	62	+5V(D)
BCH	63	BCH
28M	64	28M
GND(A)	65	GND(A)
14M	66	14M
-5V	67	-5V
GND(D)	68	GND(D)
-5V	69	-5V
GND(D)	70	GND(D)

CN606		CN007
FOCUS_CONT	1	FOCUS CONT
ZOOM_CONT	2	ZOOM CONT
IRIS_CLOSE	3	IRIS CLOSE
IRIS_CONT/VIDEO	4	IRIS CONT/VIDEO
HSK_O	5	HSK_O
HSK_I	6	HSK_I
TX_DATA	7	TXDATA
RX_DATA	8	RXDATA
CMA_DATA	9	CMADATA
PW_CONT	10	PW CONT
TRIGGER	11	TRIGGER
VBS/Y	12	VBS/Y
VBS	13	VBS
-/C	14	-/C
GND	15	GND
R/VBS	16	R/VBS
G/Y	17	G/Y
B/C	18	B/C
GND	19	GND
SYNC/WEN	20	SYNC/WEN
VD_IN/VD_OUT	21	VD IN/VD OUT
HD_IN/HD_OUT	22	HD IN/HD OUT
UNREG(LENS)	23	UNREG(LENS)
UNREG(+)	24	UNREG(+)
UNREG(+)	25	UNREG(+)
UNREG(+)	26	UNREG(+)
PROTECT	27	PROTECT
UNREG(G)	28	UNREG(G)
UNREG(G)	29	UNREG(G)
UNREG(G)	30	UNREG(G)

CN002

UNREG_G	1
UNREG_+	2
VBS/Y_G	3
VBS/Y_X	4
-/HD_G	5
-/HD_X	6
SYNC/VD_X	7
-/C_G	8
-/C_X	9
UNREG_G	10
UNREG_+	11
SYNC/VD_G	12

DC IN /VBS

CN003

VBS/Y/C_G	1
R/G/B_G	2
R/VBS_X	3
G/Y_X	4
B/C_X	5
VBS/Y/_X	6
SYNC/WEN_OUT_X	7
SYNC_G	8
-/C_X	9

RGB /SYNC

CN004

HSK_O	1
HSK_I	2
TXD_-	3
UNREG_G	4
RXD_-	5
TXD_+	6
UNREG_+	7
RXD_+	8

REMOTE

CN005

FOCUS CONT	1
ZOOM CONT	2
UNREG(G)	3
IRIS CLOSE	4
IRIS CONT/VIDEO	5
UNREG(+)	6

LENS

CN001 VIDEO OUT

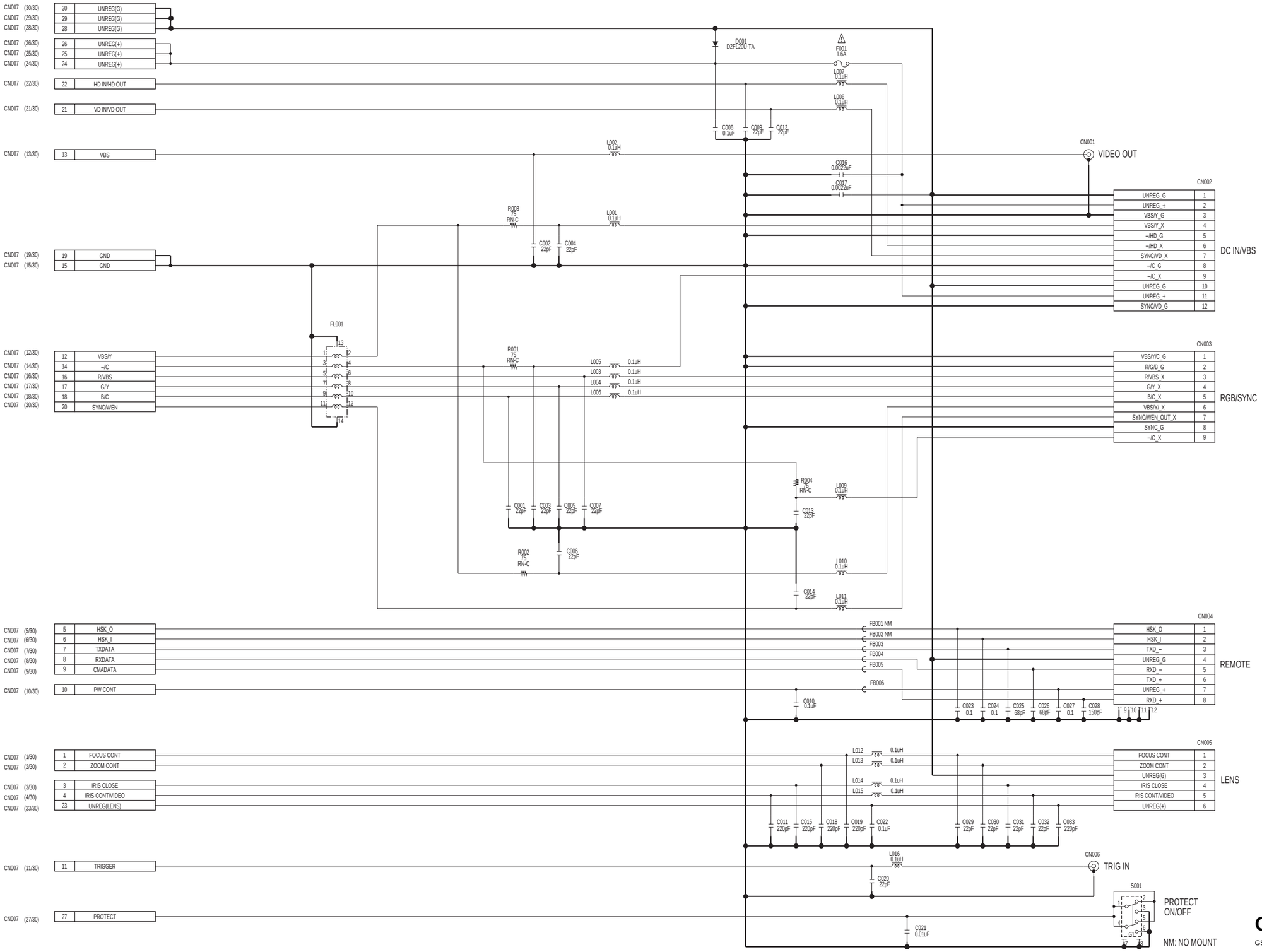
CN006 TRIG IN

CN602		CN103
+3.3V	1	+3.3V
+5V(D)	2	+5V(D)
+3.3V	3	+3.3V
+5V(D)	4	+5V(D)
PW_CONT	5	PW_CONT
CMA_DATA	6	CMA_DATA
UNREG(+)	7	UNREG(+)
RX_DATA	8	RX_DATA
TX_DATA	9	TX_DATA
HSK_I	10	HSK_I
HSK_O	11	HSK_O
EVR01-CS	12	EVR01-CS
EVR03-CS	13	EVR03-CS
EVR04-CS	14	EVR04-CS
EVR05-CS	15	EVR05-CS
EVR06-CS	16	EVR06-CS
EVR07-CS	17	EVR07-CS
EVR08-CS	18	EVR08-CS
SCLK-5	19	SCLK-5
SDATA-5	20	SDATA-5
NIC_BUSY	21	NIC_BUSY
NIS_CS	22	NIS_CS
SDO-3	23	SDO-3
SCLK-3	24	SCLK-3
SDI-3	25	SDI-3
SDA0	26	SDA0
SDA1	27	SDA1
SDA2	28	SDA2
SDA3	29	SDA3
SDCK	30	SDCK
CS-DSP	31	CS-DSP
TG-CS	32	TG-CS
KIC-CS	33	KIC-CS
KIC-STB	34	KIC-STB
SRST	35	SRST
WRGBCH0	36	WRGBCH0
WRGBCH1	37	WRGBCH1
BECOL	38	BECOL
PKDET	39	KIC_FLFR
WB_AE	40	WB_AE
TTL	41	TTL
TTLB	42	TTLB
PROTECT	43	PROTECT
4FSC	44	4FSC
GND(D)	45	GND(D)
CLOSE	46	IRIS_CLOSE
ECK	47	ECK
EXT_HD	48	EXT_HD
GND(D)	49	GND(D)
EVR09-CS	50	EVR09-CS
EXT_VBS/VD	51	EXT_VBS/VD
+9V	52	+9V
INTSC	53	INTSC
OBLK	54	OBLK
SYNC	55	SYNC
BF	56	BF
LALT	57	LALT
HD	58	HD
FLD	59	FLD
P-COMP	60	P-COMP
VD	61	VD
RESET5	62	RESET5
VCO_CONT	63	VCO_CONT
HDDET	64	HDDET
TRIGGER	65	TRIGGER
14M	66	14M
GND(A)	67	GND(A)
-5V	68	-5V
GND(A)	69	GND(A)
-5V	70	-5V

CN101		CN102
NIC	1	MENU_SW
GND	2	BARS_SW
VPP_IN	3	UP_SW
RESET	4	LEFT_SW
TXD	5	RIGHT_SW
RXD	6	ENTER_SW
GND	7	DOWN_SW
OPENDOJ	8	GND
MENU	9	
PRESET	10	
TX232_OUT	11	
RX232_IN	12	
+3.3V_OUT	13	
SENSE_J/G	14	
TCK_IN	15	
TMS_IN	16	
RU SW	17	
L/D SW	18	
ENTER	19	
BARS	20	

SERVICE

TO SHEET SWITCH



CN-1938

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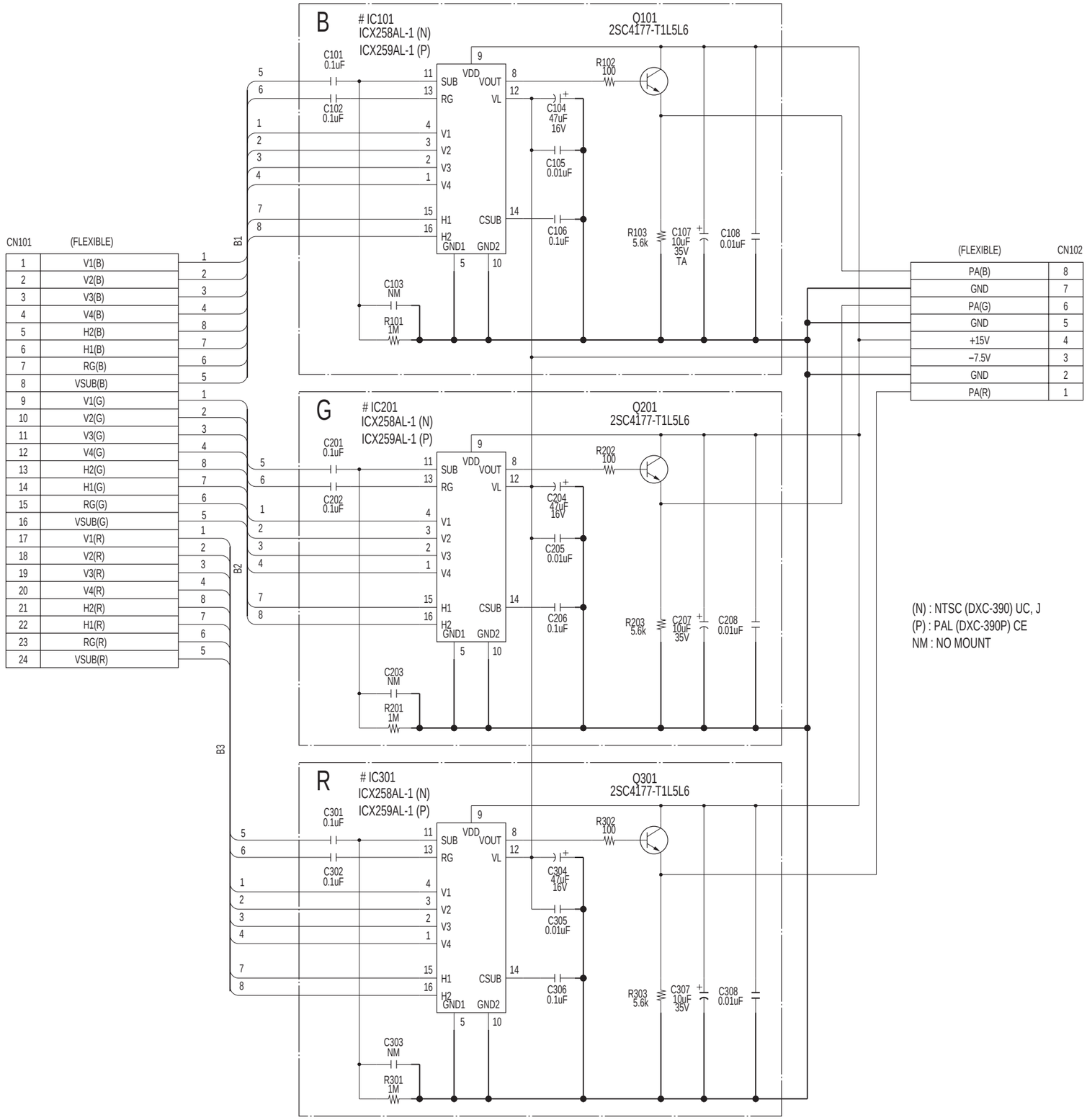
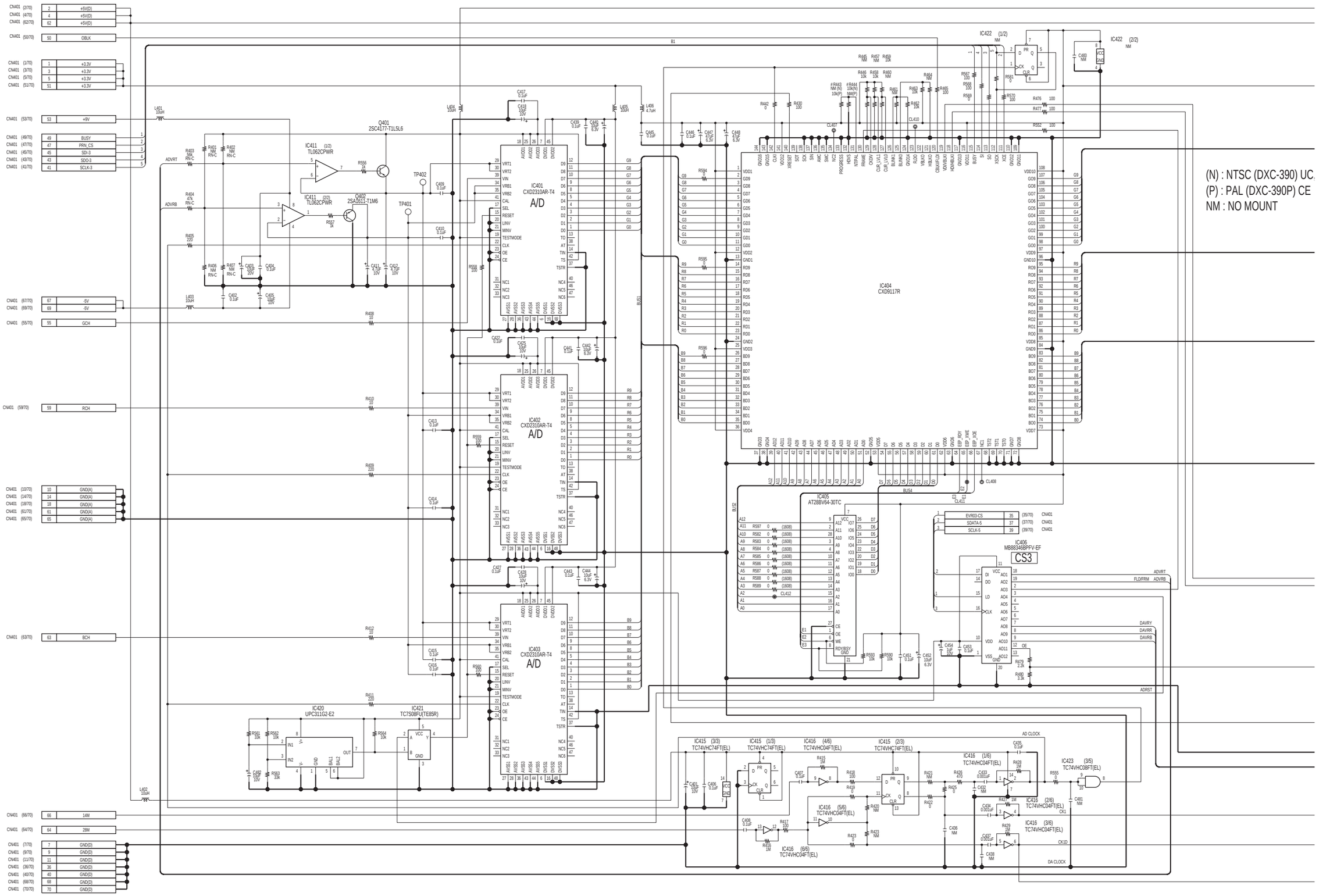


(N) : NTSC (DXC-390) UC, J
(P) : PAL (DXC-390P) CE
NM : NO MOUNT

PA-236

GS-SKX-1150_PA-236_011_001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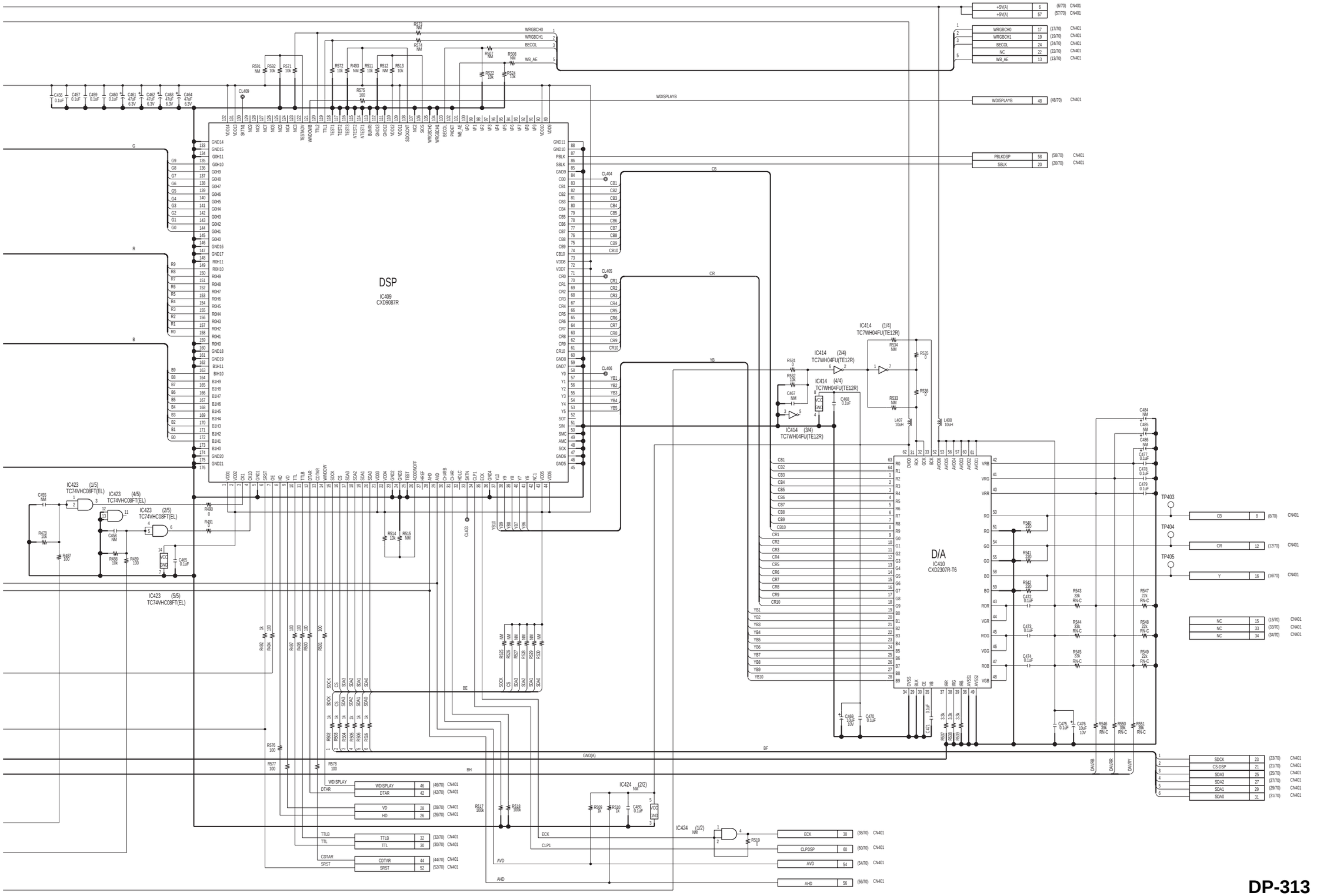
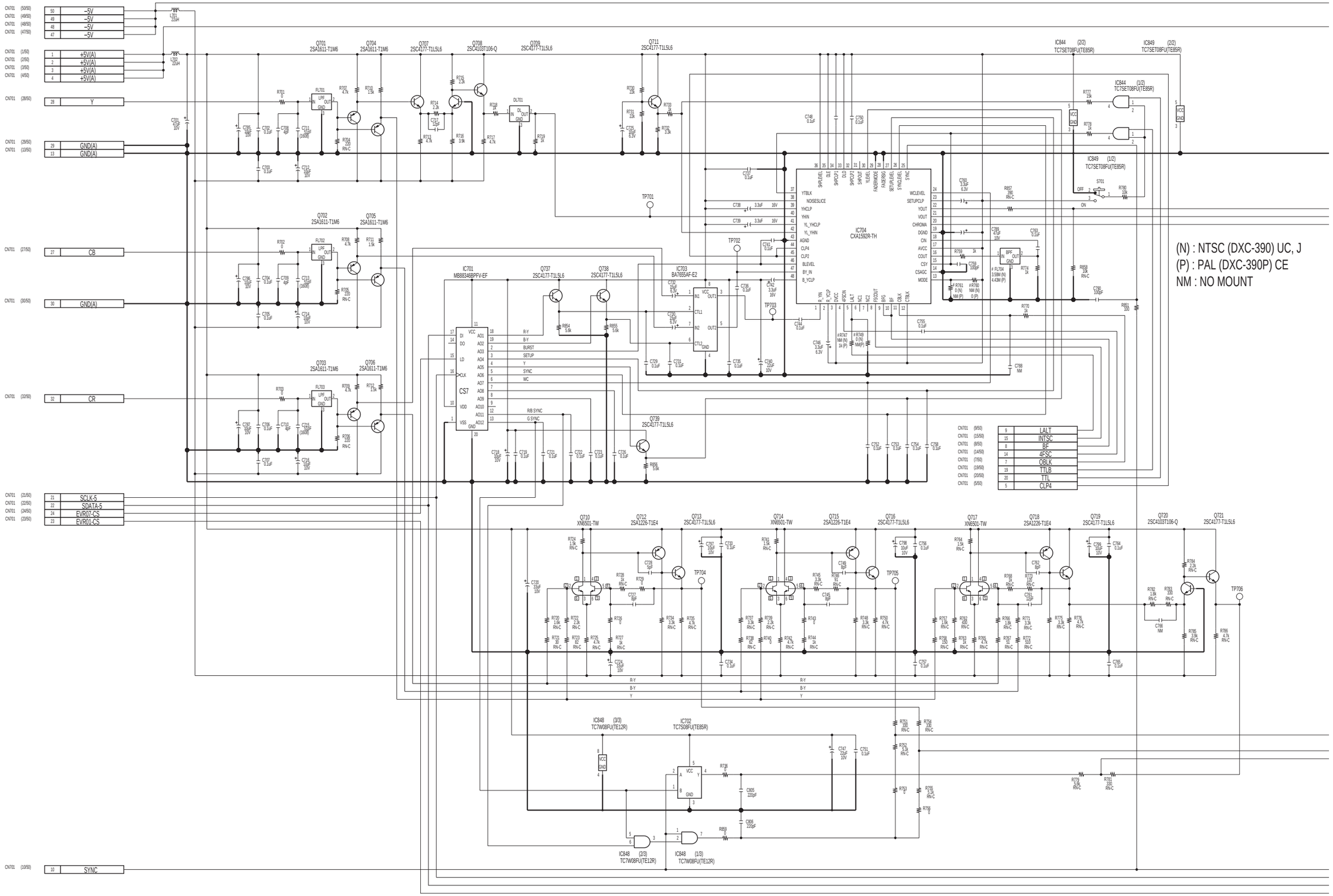
(P) : PAL (DXC-390P) CE
NM : NO MOUNT
IC401 CXD2310AR-T4 A/D
IC402 CXD2310AR-T4 A/D
IC403 CXD2310AR-T4 A/D
IC404 CXD9117R
IC405 AT28BV64-30TC
IC406 MB88346BPFV-EF
CS3
IC411 (1/2) TL062CPWR
IC411 (2/2) TL062CPWR
IC415 (3/3) TC74VHC74FT(EL)
IC415 (1/3) TC74VHC74FT(EL)
IC415 (2/3) TC74VHC74FT(EL)
IC416 (4/6) TC74VHC04FT(EL)
IC416 (5/6) TC74VHC04FT(EL)
IC416 (6/6) TC74VHC04FT(EL)
IC416 (1/6) TC74VHC04FT(EL)
IC416 (2/6) TC74VHC04FT(EL)
IC416 (3/6) TC74VHC04FT(EL)
IC420 UPC311G2-E2
IC421 TC7S08FU(TE85R)
IC422 (1/2) NM
IC422 (2/2) NM
Q401 2SC4177-T1L5L6
Q402 2SA1611-T1M6
TP401
TP402
CN401 (2/70) +5V(D)
CN401 (4/70) +5V(D)
CN401 (62/70) +5V(D)
CN401 (50/70) OBLK
CN401 (1/70) +3.3V
CN401 (3/70) +3.3V
CN401 (5/70) +3.3V
CN401 (51/70) +3.3V
CN401 (53/70) +9V
CN401 (49/70) BUSY
CN401 (47/70) PRN_CS
CN401 (45/70) SDI-3
CN401 (43/70) SDO-3
CN401 (41/70) SCLK-3
CN401 (67/70) -5V
CN401 (69/70) -5V
CN401 (55/70) GCH
CN401 (59/70) RCH
CN401 (63/70) BCH
CN401 (10/70) GND(A)
CN401 (14/70) GND(A)
CN401 (18/70) GND(A)
CN401 (61/70) GND(A)
CN401 (65/70) GND(A)
CN401 (66/70) 14M
CN401 (64/70) 28M
CN401 (7/70) GND(D)
CN401 (9/70) GND(D)
CN401 (11/70) GND(D)
CN401 (36/70) GND(D)
CN401 (40/70) GND(D)
CN401 (68/70) GND(D)
CN401 (70/70) GND(D)
EVR03-CS
SDATA-5
SCLK-5
ADVRT
ADVRB
ADRST
FLD/FRM
DAVRY
DAVRR
DAVRB
AD CLOCK
DA CLOCK
CK1
CK1D
B1
B2
B3
BUS1
BUS2
BUS3
BUS4
BUS5

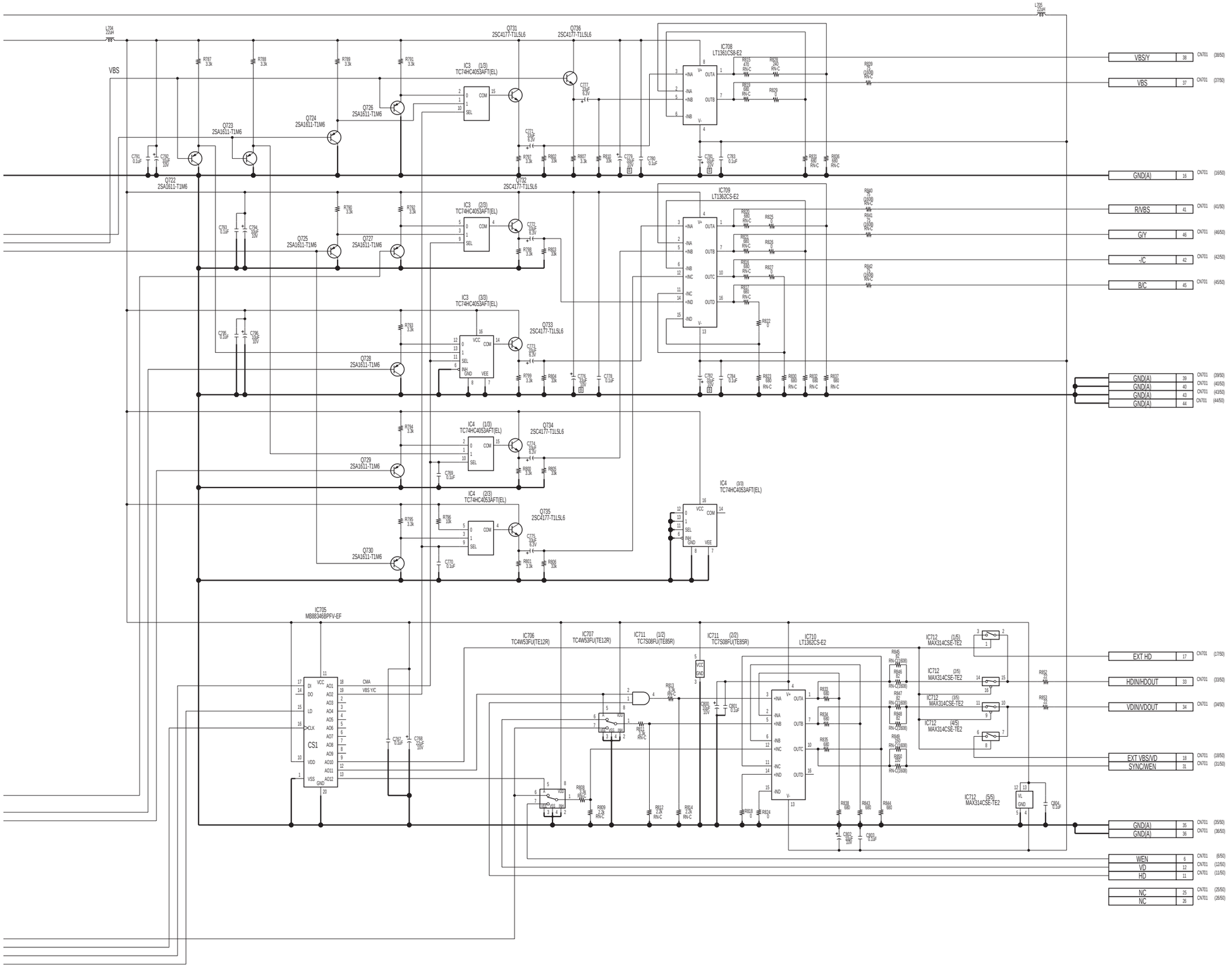


DP-313

GS-SKX-1150_DP-313_011_101

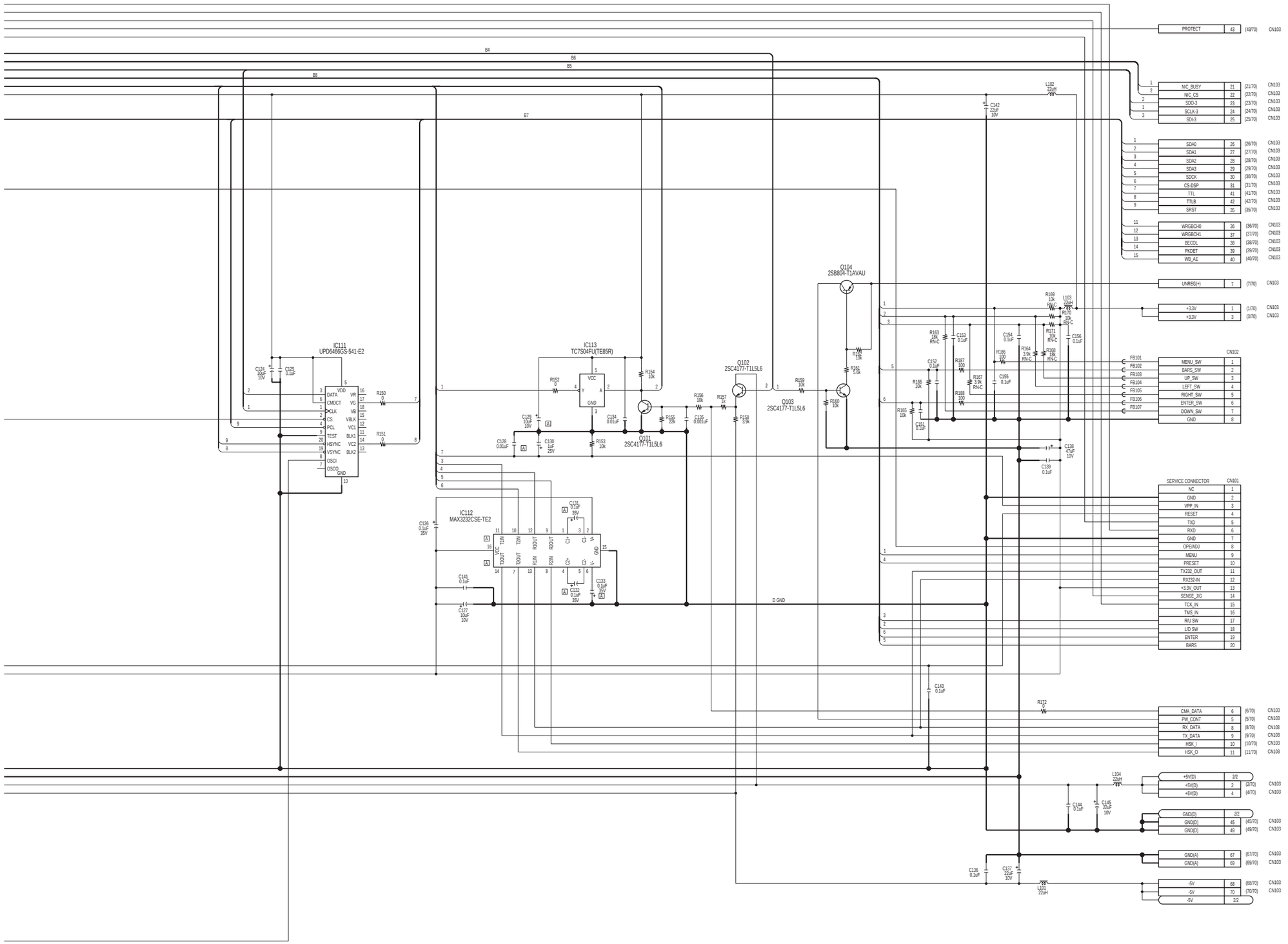


(N) : NTSC (DXC-390) UC, J
(P) : PAL (DXC-390P) CE
NM : NO MOUNT


VBS
Q722 2SA1611-T1M6
Q723 2SA1611-T1M6
Q724 2SA1611-T1M6
Q725 2SA1611-T1M6
Q726 2SA1611-T1M6
Q727 2SA1611-T1M6
Q728 2SA1611-T1M6
Q729 2SA1611-T1M6
Q730 2SA1611-T1M6
Q731 2SC4177-T1L5L6
Q732 2SC4177-T1L5L6
Q733 2SC4177-T1L5L6
Q734 2SC4177-T1L5L6
Q735 2SC4177-T1L5L6
Q736 2SC4177-T1L5L6
IC3 (1/3) TC74HC4053AFT(EL)
IC3 (2/3) TC74HC4053AFT(EL)
IC3 (3/3) TC74HC4053AFT(EL)
IC4 (1/3) TC74HC4053AFT(EL)
IC4 (2/3) TC74HC4053AFT(EL)
IC4 (3/3) TC74HC4053AFT(EL)
IC705 MB88346BPFV-EF
IC706 TC4W53FU(TE12R)
IC707 TC4W53FU(TE12R)
IC708 LT1361CS8-E2
IC709 LT1362CS-E2
IC710 LT1362CS-E2
IC711 (1/2) TC7S08FU(TE85R)
IC711 (2/2) TC7S08FU(TE85R)
IC712 (1/5) MAX314CSE-TE2
IC712 (2/5) MAX314CSE-TE2
IC712 (3/5) MAX314CSE-TE2
IC712 (4/5) MAX314CSE-TE2
IC712 (5/5) MAX314CSE-TE2
L704 22uH
L705 22uH
VBS/Y
VBS
GND(A)
R/VBS
G/Y
-/C
B/C
GND(A)
GND(A)
GND(A)
GND(A)
EXT HD
HDIN/HDOUT
VDIN/VDOUT
EXT VBS/VD
SYNC/WEN
GND(A)
GND(A)
WEN
VD
HD
NC
NC
CN701 (38/50)
CN701 (37/50)
CN701 (16/50)
CN701 (41/50)
CN701 (46/50)
CN701 (42/50)
CN701 (45/50)
CN701 (39/50)
CN701 (40/50)
CN701 (43/50)
CN701 (44/50)
CN701 (17/50)
CN701 (33/50)
CN701 (34/50)
CN701 (18/50)
CN701 (31/50)
CN701 (35/50)
CN701 (36/50)
CN701 (6/50)
CN701 (12/50)
CN701 (11/50)
CN701 (25/50)
CN701 (26/50)

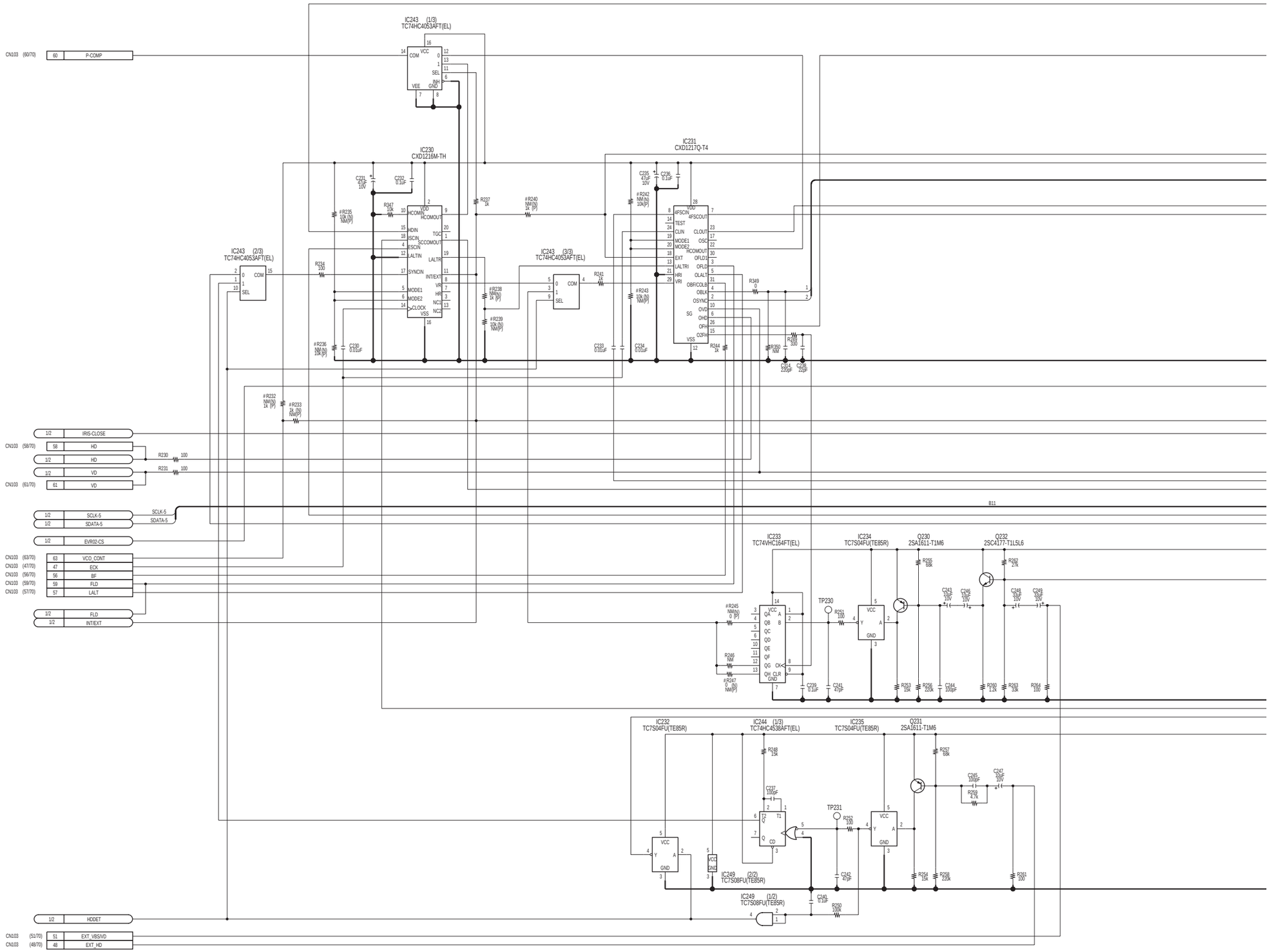
(N) : NTSC (DXC-390) UC, J
(P) : PAL (DXC-390P) CE
NM : NO MOUNT

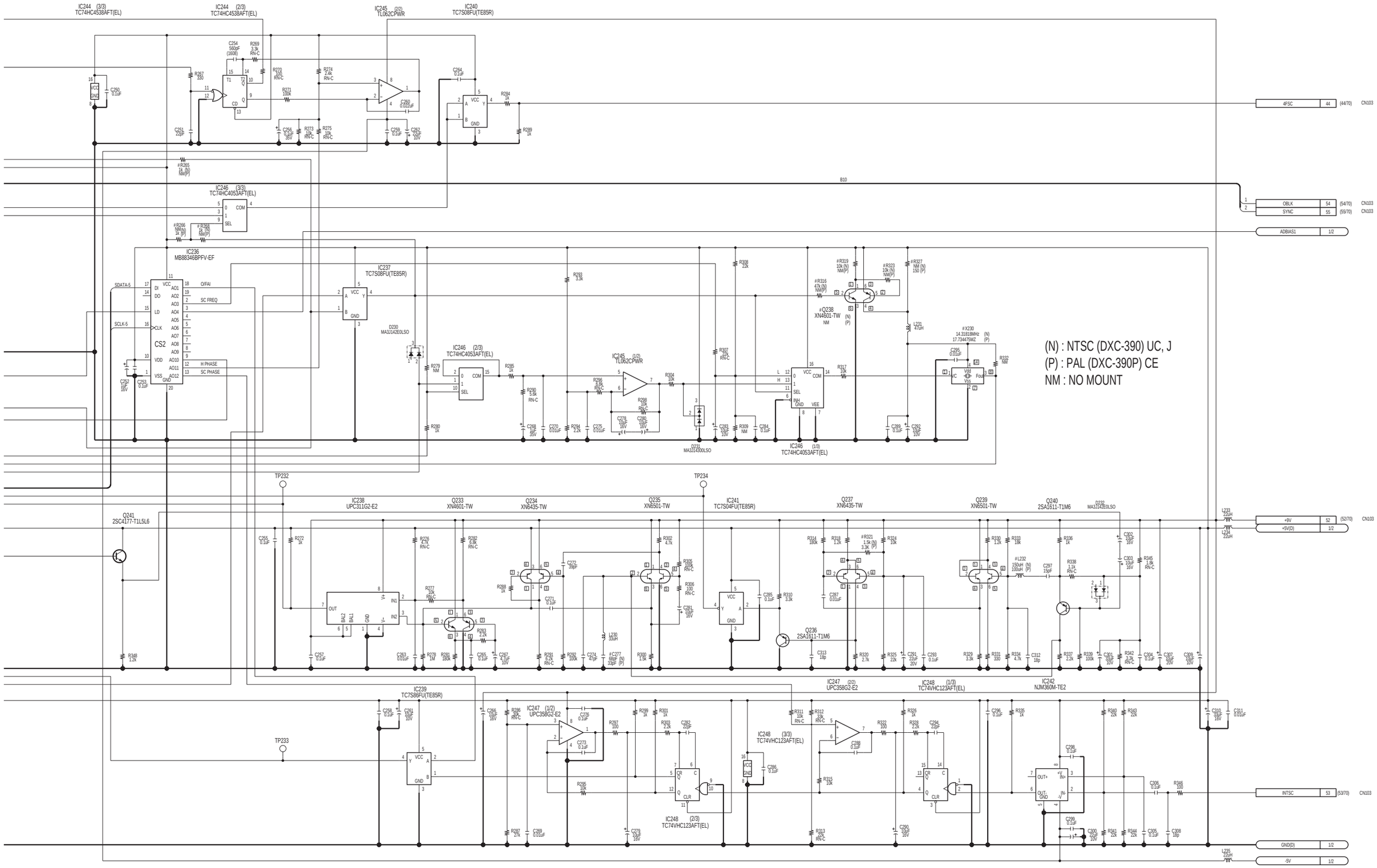
IC101 X24645S8I-2.7T2
IC102 TC4W53FU(TE12R)
IC103 TC7W74FU(TE12R)
IC106 TC74VHC541FT(EL)
IC107 UPD70F3017AYGC-8EU
IC108 TC74VHCT541AFT(EL)
IC109 S-80830ALUP-EAT-T2
IC114 (1/2) NM
IC114 (2/2) NM
IC115 TA75S558F(TE85R)



SG-265 (1/2)

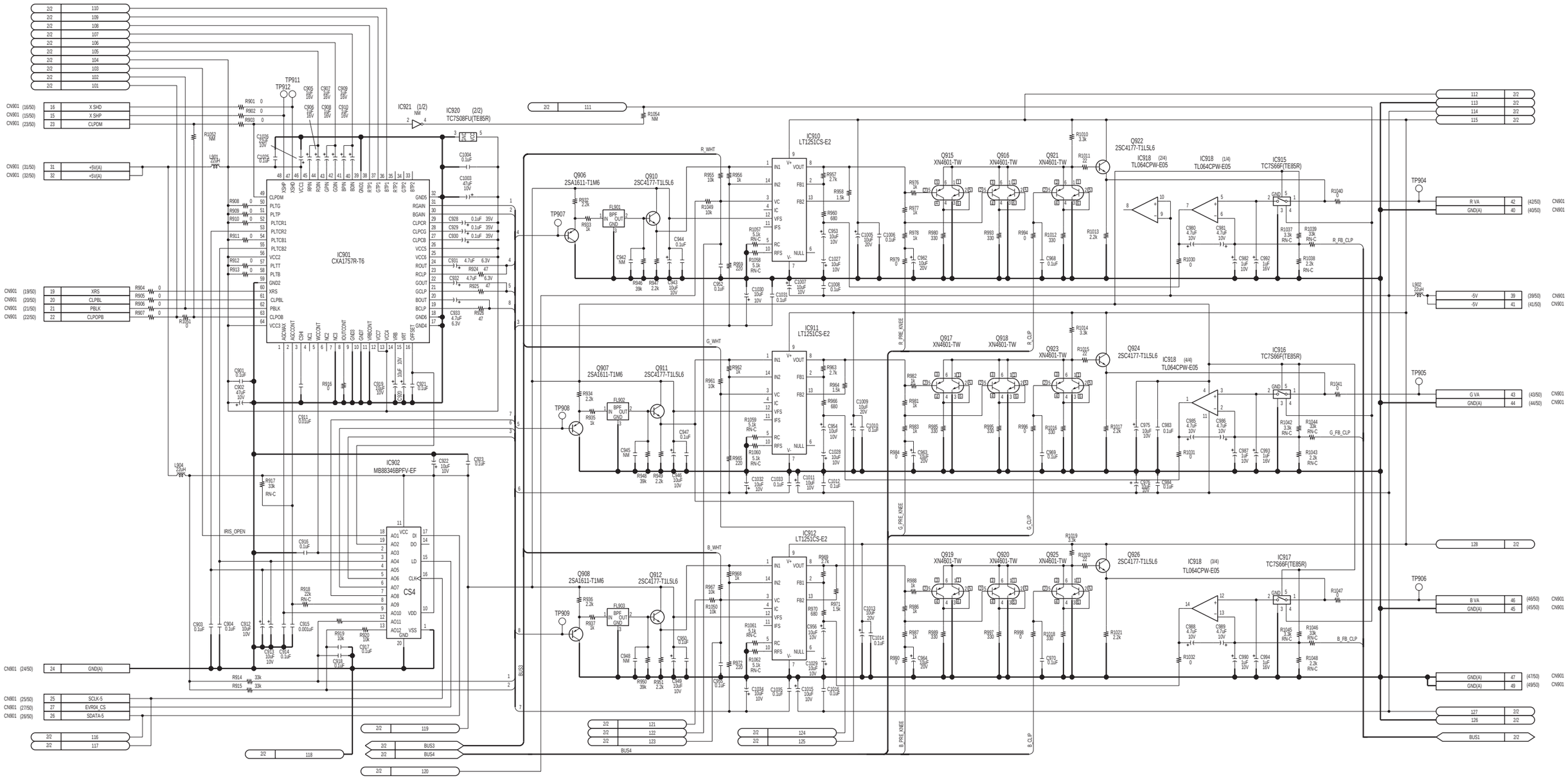
GS-SKX-1150_SG-265_011_101


IC243 (1/3)
TC74HC4053AFT(EL)
IC230
CXD1216M-TH
IC231
CXD1217Q-T4
IC243 (2/3)
TC74HC4053AFT(EL)
IC243 (3/3)
TC74HC4053AFT(EL)
CN103 (60/70)
P-COMP
CN103 (58/70)
HD
CN103 (61/70)
VD
CN103 (63/70)
VCO_CONT
CN103 (47/70)
EOK
CN103 (56/70)
BF
CN103 (59/70)
FLD
CN103 (57/70)
LALT
CN103 (51/70)
EXT_VBS/VD
CN103 (48/70)
EXT_HD
IRIS-CLOSE
SCLK-5
SDATA-5
EVR02-CS
INT/EXT
HDDET
B11
IC233
TC74VHC164FT(EL)
IC234
TC7S04FU(TE85R)
Q230
2SA1611-T1M6
Q232
2SC4177-T1L5L6
TP230
IC232
TC7S04FU(TE85R)
IC244 (1/3)
TC74HC4538AFT(EL)
IC235
TC7S04FU(TE85R)
Q231
2SA1611-T1M6
TP231
IC249 (2/2)
TC7S08FU(TE85R)
IC249 (1/2)
TC7S08FU(TE85R)



SG-265 (2/2)

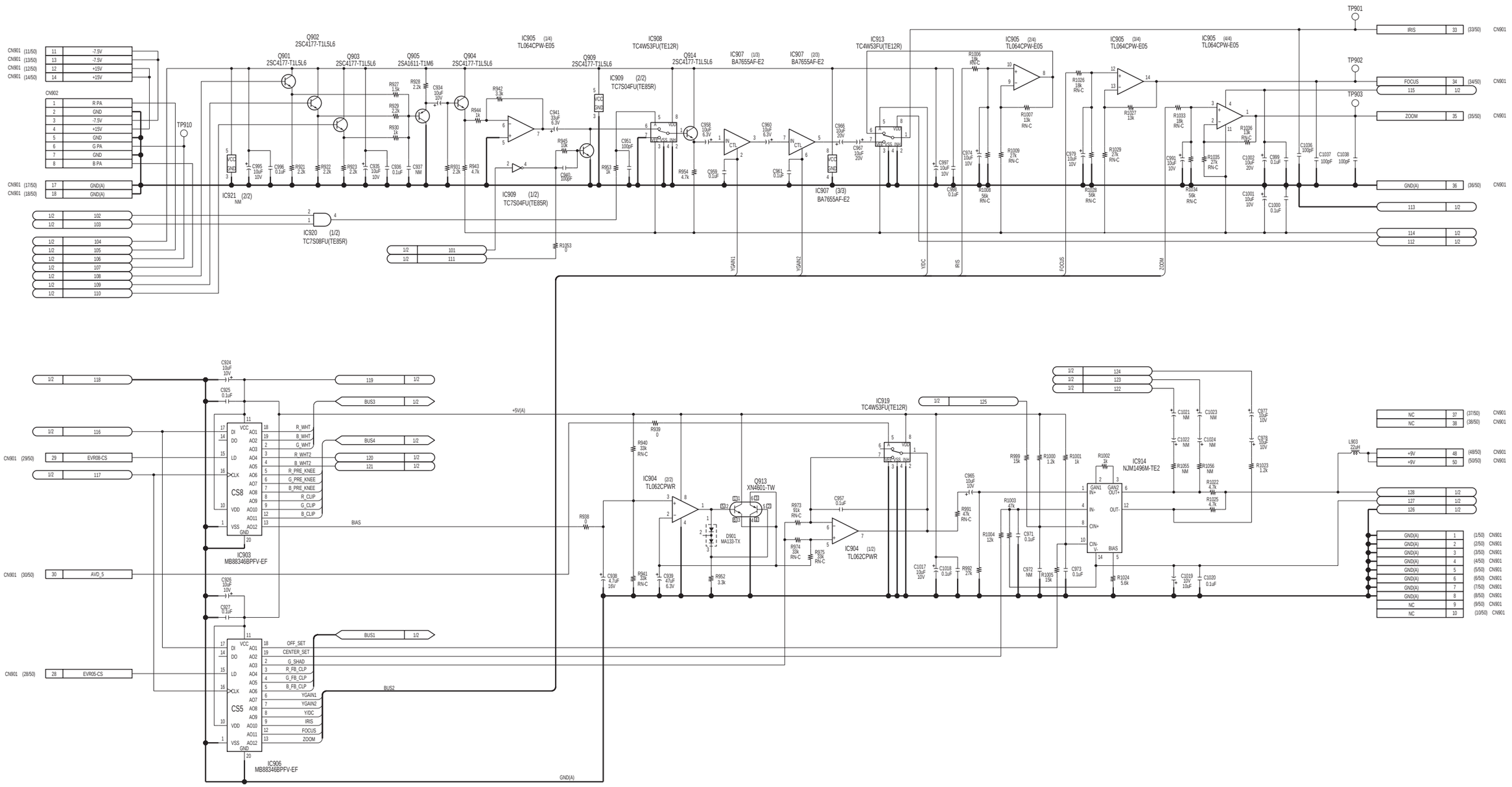
GS-SKX-1150_SG-265_011_102



VA-193 (1/2)

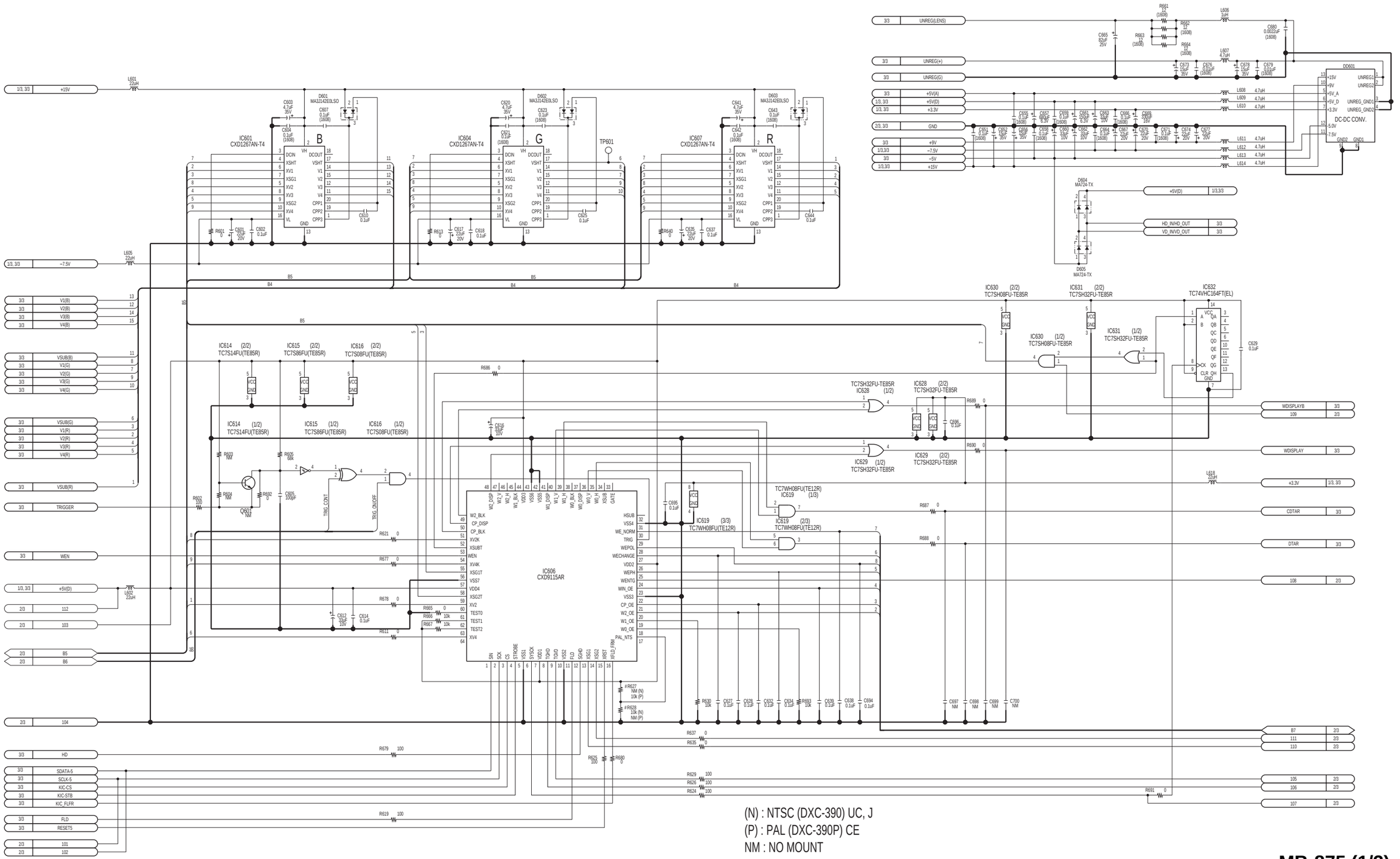
GS-SKX-1150_VA-193_011_101

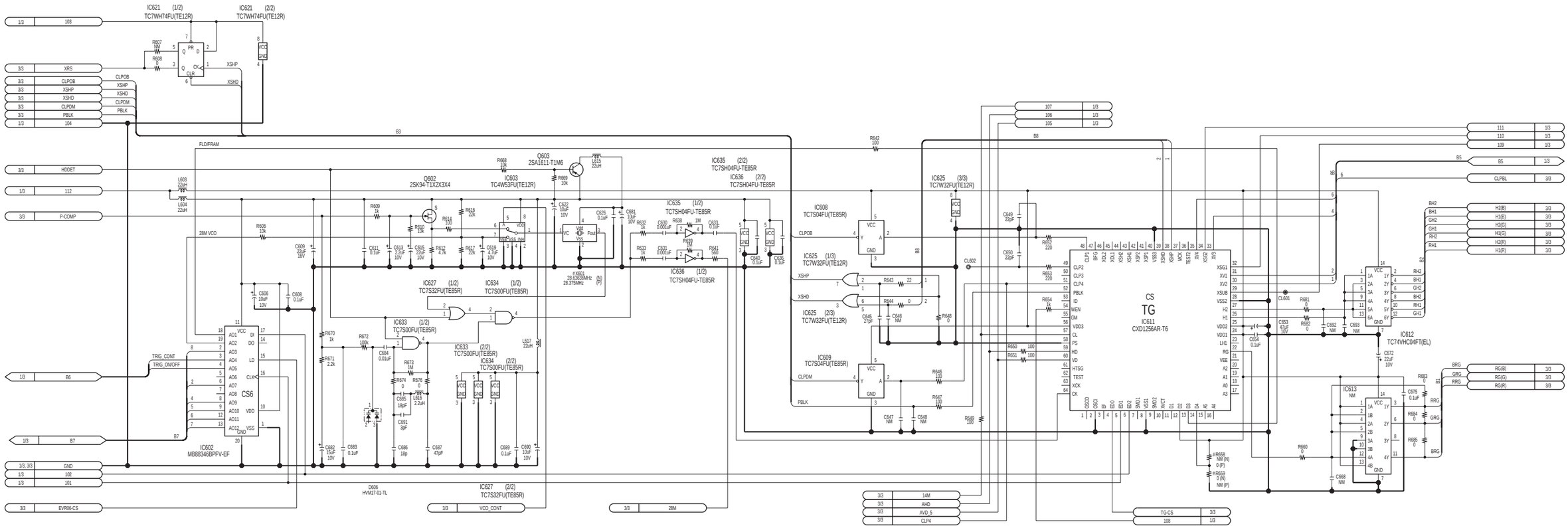
DXC-390/390P



VA-193 (2/2)

GS-SKX-1150_VA-193_011_102


IC601 CXD1267AN-T4
IC604 CXD1267AN-T4
IC607 CXD1267AN-T4
IC606 CXD9115AR
IC614 (2/2) TC7S14FU(TE85R)
IC615 (2/2) TC7S86FU(TE85R)
IC616 (2/2) TC7S08FU(TE85R)
IC614 (1/2) TC7S14FU(TE85R)
IC615 (1/2) TC7S86FU(TE85R)
IC616 (1/2) TC7S08FU(TE85R)
IC630 (2/2) TC7SH08FU-TE85R
IC631 (2/2) TC7SH32FU-TE85R
IC630 (1/2) TC7SH08FU-TE85R
IC631 (1/2) TC7SH32FU-TE85R
IC632 TC74VHC164FT(EL)
IC628 (2/2) TC7SH32FU-TE85R
IC628 (1/2) TC7SH32FU-TE85R
IC629 (1/2) TC7SH32FU-TE85R
IC629 (2/2) TC7SH32FU-TE85R
IC619 (3/3) TC7WH08FU(TE12R)
IC619 (2/3) TC7WH08FU(TE12R)
TC7WH08FU(TE12R) IC619 (1/3)
DD601 DC-DC CONV.
TP601
Q601 NM
D601 MA3314265LSO
D602 MA3314265LSO
D603 MA3314265LSO
D604 MA724-TX
D605 MA724-TX
+15V
UNREG(LENS)
UNREG(+)
UNREG(G)
+5V(A)
+5V(D)
+3.3V
GND
+9V
−7.5V
−5V
−15V
UNREG1
UNREG2
+5V_A
+5V_D
UNREG_GND1
UNREG_GND2
5.0V
7.5V
GND2
GND1
HD_IN/HD_OUT
VD_IN/VD_OUT
V1(B)
V2(B)
V3(B)
V4(B)
VSUB(B)
V1(G)
V2(G)
V3(G)
V4(G)
VSUB(G)
V1(R)
V2(R)
V3(R)
V4(R)
VSUB(R)
TRIGGER
WEN
+5V(D)
HD
SDATA-5
SCLK-5
KIC-CS
KIC-STB
KIC_FLFR
FLD
RESET5
WDISPLAYB
WDISPLAY
+3.3V
CDTAR
DTAR
B7
TRIG_CONT
TRIG_ON/OFF
(N) : NTSC (DXC-390) UC, J
(P) : PAL (DXC-390P) CE
NM : NO MOUNT



(N) : NTSC (DXC-390) UC, J
(P) : PAL (DXC-390P) CE
NM : NO MOUNT

MB-875 (2/3)

GS-SKX-1150_MB-875_011_102

CN602 SG-265

70	-5V
69	GND(A)
68	-5V
67	GND(A)
66	14M
65	TRIGGER
64	HDDET
63	VCO_CONT
62	RESET5
61	VD
60	P-COMP
59	FLD
58	HD
57	LALT
56	BF
55	SYNC
54	OBLK
53	INTSC
52	+9V
51	EXT_VBS/VD
50	EVR09-CS
49	GND(D)
48	EXT_HD
47	ECK
46	IRIS_CLOSE
45	GND(D)
44	4FSC
43	PROTECT
42	TTLB
41	TTL
40	WB_AE
39	KIC_FLFR
38	BECOL
37	WRGBCH1
36	WRGBCH0
35	SRST
34	KIC-STB
33	KIC-CS
32	TG-CS
31	CS-DSP
30	SDCK
29	SDA3
28	SDA2
27	SDA1
26	SDA0
25	SDI-3
24	SCLK-3
23	SDO-3
22	NIC-CS
21	NIC-BUSY
20	SDATA-5
19	SCLK-5
18	EVR08-CS
17	EVR07-CS
16	EVR06-CS
15	EVR05-CS
14	EVR04-CS
13	EVR03-CS
12	EVR01-CS
11	HSK_O
10	HSK_I
9	TX_DATA
8	RX_DATA
7	UNREG(+)
6	CMA_DATA
5	PW_CONT
4	+5V(D)
3	+3.3V
2	+5V(D)
1	+3.3V

CN603 EN-142

1	+5V(A)
2	+5V(A)
3	+5V(A)
4	+5V(A)
5	CLP4
6	WEN
7	OBLK
8	BF
9	LALT
10	SYNC
11	HD
12	VD
13	GND(A)
14	4FSC
15	INTSC
16	GND(A)
17	EXT_HD
18	EXT_VBS/VD
19	TTLB
20	TTL
21	SCLK-5
22	SDATA-5
23	EVR01-CS
24	EVR07-CS
25	NC
26	NC
27	CB
28	Y
29	GND(A)
30	GND(A)
31	SYNC/WEN
32	CR
33	HD_IN/HD_OUT
34	VD_IN/VD_OUT
35	GND(A)
36	GND(A)
37	VBS
38	VBS/Y
39	GND(A)
40	GND(A)
41	R/VBS
42	-/C
43	GND(A)
44	GND(A)
45	B/C
46	G/Y
47	-5V
48	-5V
49	-5V
50	-5V

CN601 PA-236

24	VSUB(R)
23	RG(R)
22	H1(R)
21	H2(R)
20	V4(R)
19	V3(R)
18	V2(R)
17	V1(R)
16	VSUB(G)
15	RG(G)
14	H1(G)
13	H2(G)
12	V4(G)
11	V3(G)
10	V2(G)
9	V1(G)
8	VSUB(B)
7	RG(B)
6	H1(B)
5	H2(B)
4	V4(B)
3	V3(B)
2	V2(B)
1	V1(B)

CN606 CN-1938

30	UNREG(G)
29	UNREG(G)
28	UNREG(G)
27	PROTECT
26	UNREG(+)
25	UNREG(+)
24	UNREG(+)
23	UNREG(LENS)
22	HD_IN/HD_OUT
21	VD_IN/VD_OUT
20	SYNC/WEN
19	GND
18	B/C
17	G/Y
16	R/VBS
15	GND
14	-/C
13	VBS
12	VBSY
11	TRIGGER
10	PW_CONT
9	CMA_DATA
8	RX_DATA
7	TX_DATA
6	HSK_I
5	HSK_O
4	IRIS_CONT/VIDEO
3	IRIS_CLOSE
2	ZOOM_CONT
1	FOCUS_CONT

CN604 DP-313

70	GND(D)
69	-5V
68	GND(D)
67	-5V
66	14M
65	GND(A)
64	28M
63	BCH
62	+5V(D)
61	GND(A)
60	CLPDSP
59	RCH
58	PBLKDSP
57	+5V(A)
56	AHD
55	GCH
54	AVD_5
53	+9V
52	SRST
51	+3.3V
50	OBLK
49	NIC-BUSY
48	WDISPLAYB
47	NIC-CS
46	WDISPLAY
45	SDI-3
44	CDTAR
43	SDO-3
42	DTAR
41	SCLK-3
40	GND(D)
39	SCLK-5
38	ECK
37	SDATA-5
36	GND(D)
35	EVR03-CS
34	NC
33	NC
32	TTLB
31	SDA0
30	TTL
29	SDA1
28	VD
27	SDA2
26	HD
25	SDA3
24	BECOL
23	SDCK
22	NC
21	CS-DSP
20	SBLK
19	WRGBCH1
18	GND(A)
17	WRGBCH0
16	Y
15	NC
14	GND(A)
13	WB_AE
12	CR
11	GND(D)
10	GND(A)
9	GND(D)
8	CB
7	GND(D)
6	+5V(A)
5	+3.3V
4	+5V(D)
3	+3.3V
2	+5V(D)
1	+3.3V

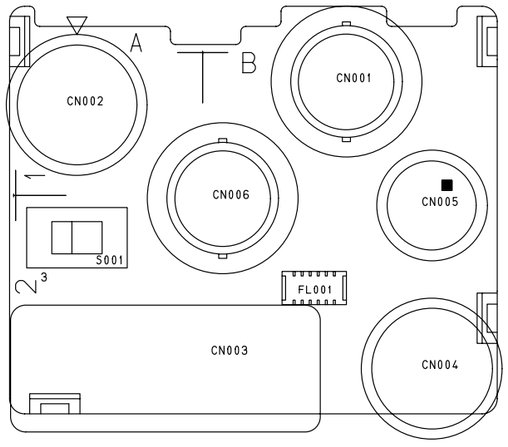
CN605 VA-193

1	GND(A)
2	GND(A)
3	GND(A)
4	GND(A)
5	GND(A)
6	GND(A)
7	GND(A)
8	GND(A)
9	NC
10	NC
11	-7.5V
12	+15V
13	-7.5V
14	+15V
15	XSHP
16	XSHD
17	GND(A)
18	GND(A)
19	XRS
20	CLPBL
21	PBLK
22	CLPOB
23	CLPDM
24	GND(A)
25	SCLK-5
26	SDATA-5
27	EVR04-CS
28	EVR05-CS
29	EVR08-CS
30	AVD_5
31	+5V(A)
32	+5V(A)
33	IRIS_CONT/VIDEO
34	FOCUS_CONT
35	ZOOM_CONT
36	GND(A)
37	NC
38	NC
39	-5V
40	GND(A)
41	-5V
42	RCH
43	GCH
44	GND(A)
45	GND(A)
46	BCH
47	GND(A)
48	+9V
49	GND(A)
50	+9V

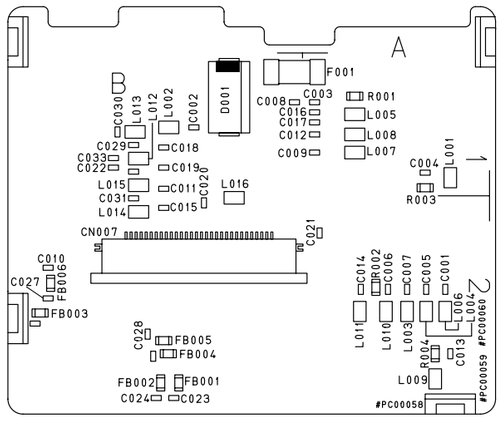
MB-875 (3/3)

GS-SKX-1150_MB-875_011_103

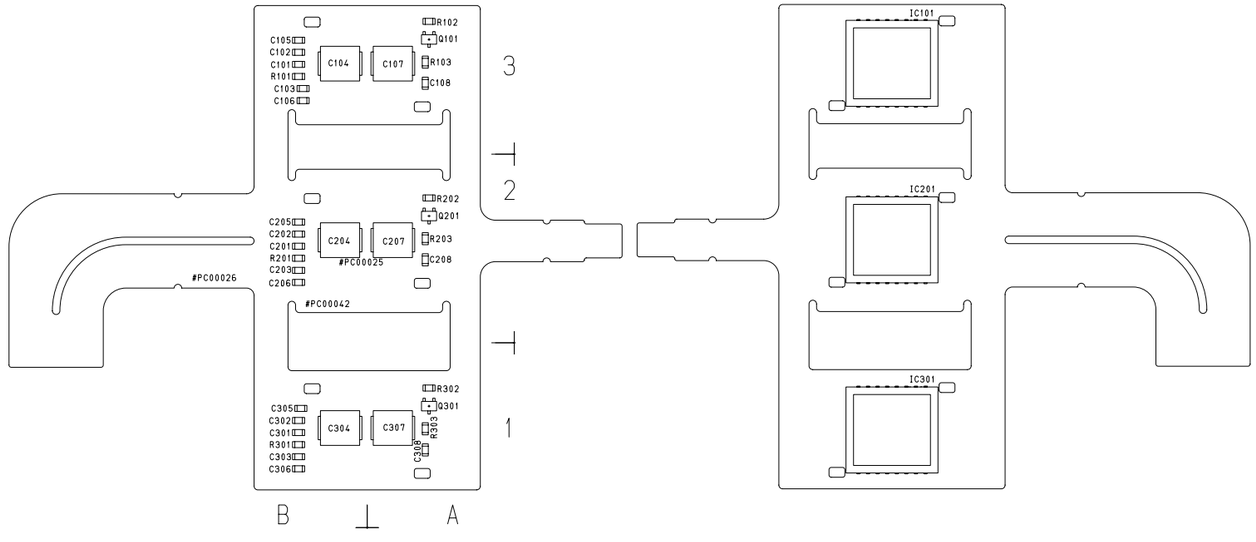
Section 9
Board Layouts



CN-1938 -A side-
SUFFIX: -11

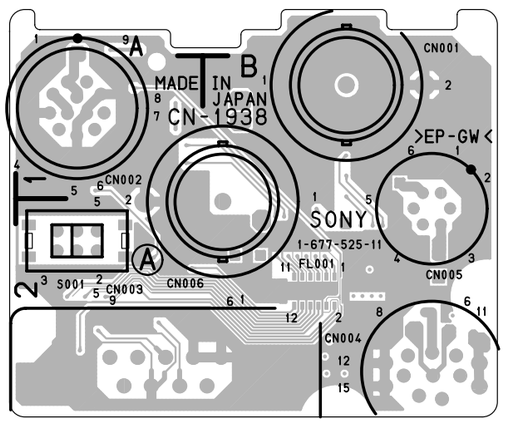


CN-1938 -B side-
SUFFIX: -11

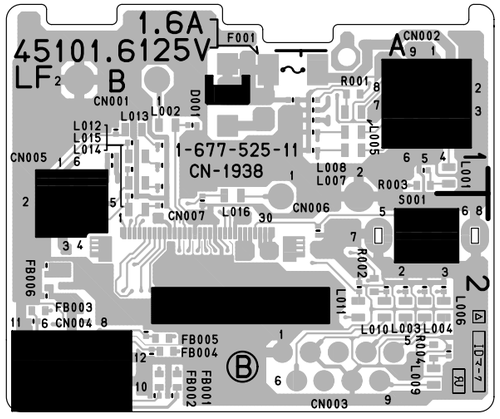


PA-236 -A side-
SUFFIX: -11

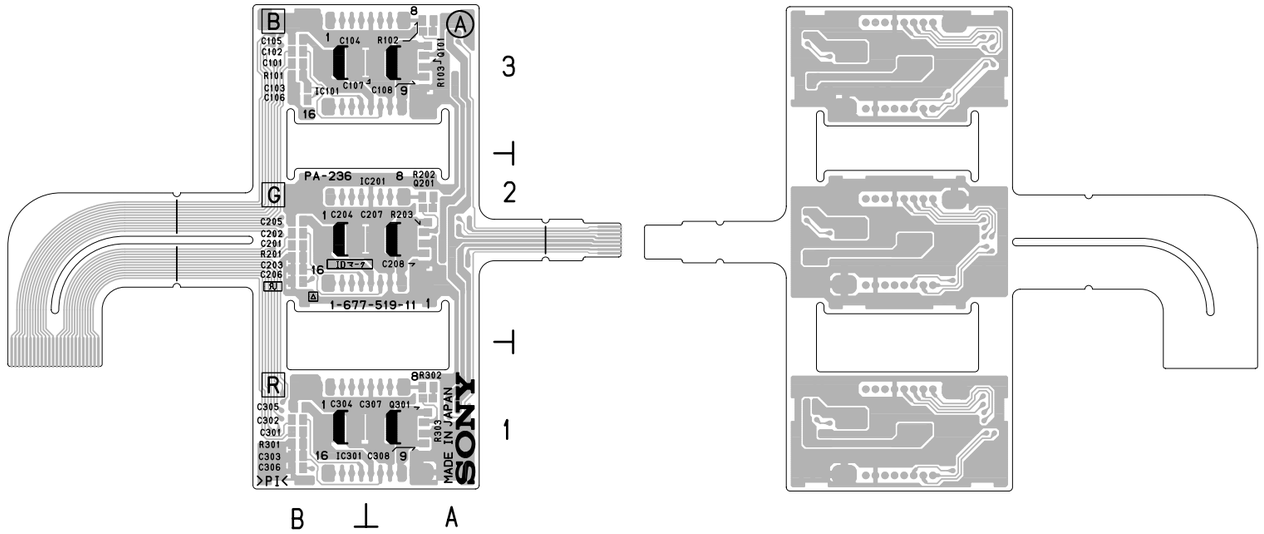
PA-236 -B side-
SUFFIX: -11



CN-1938 -A side-
SUFFIX: -11

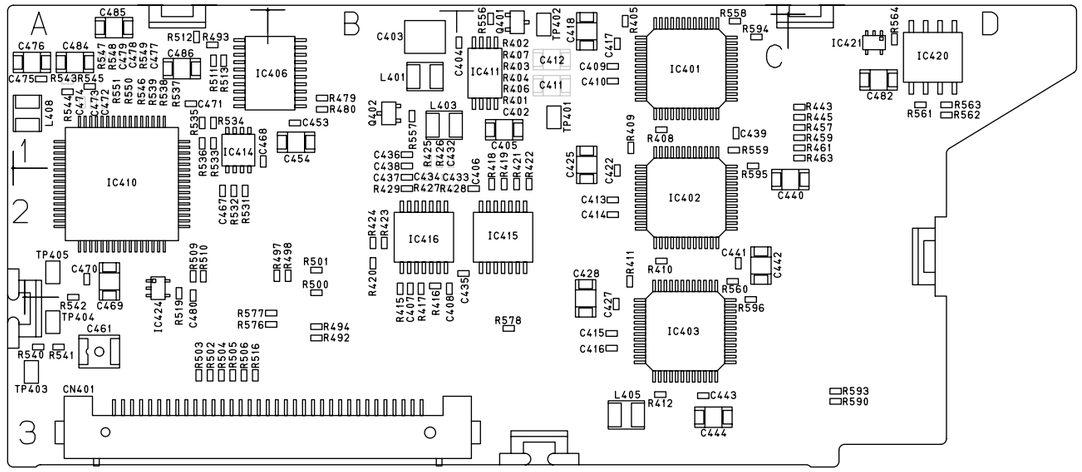


CN-1938 -B side-
SUFFIX: -11

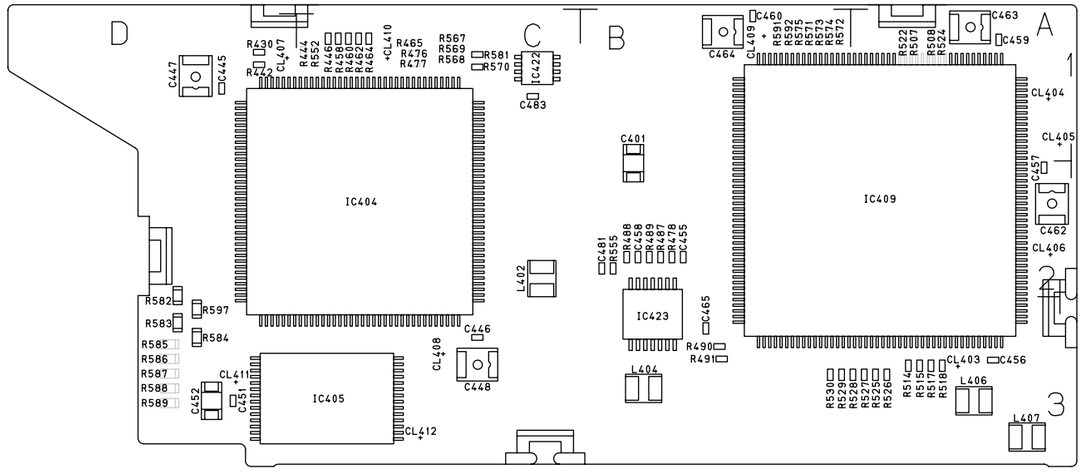


PA-236 -A side-
SUFFIX: -11

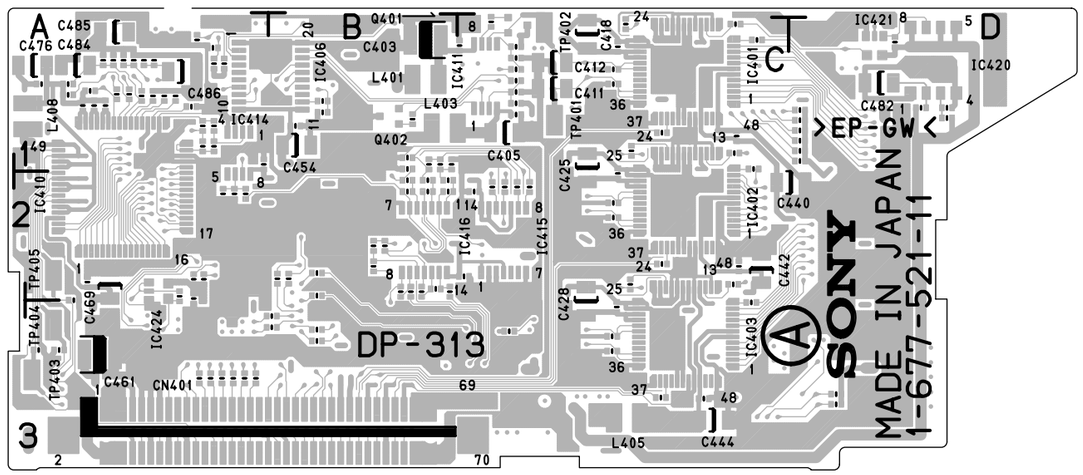
PA-236 -B side-
SUFFIX: -11



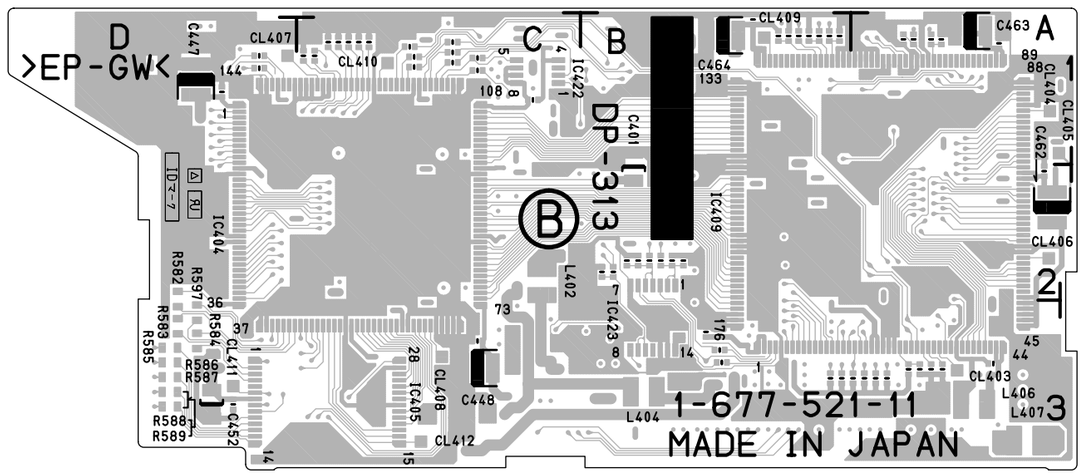
DP-313 -A SIDE-
SUFFIX: -11



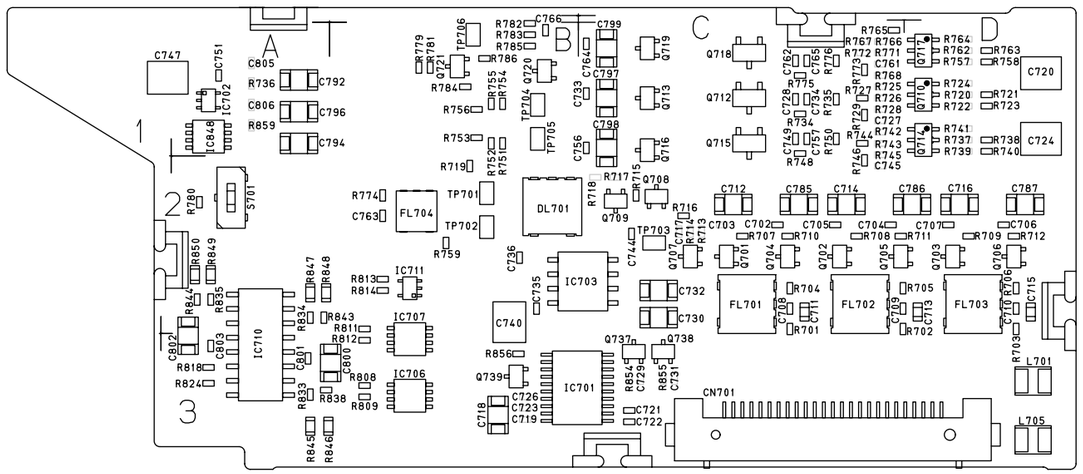
DP-313 -B SIDE-
SUFFIX: -11



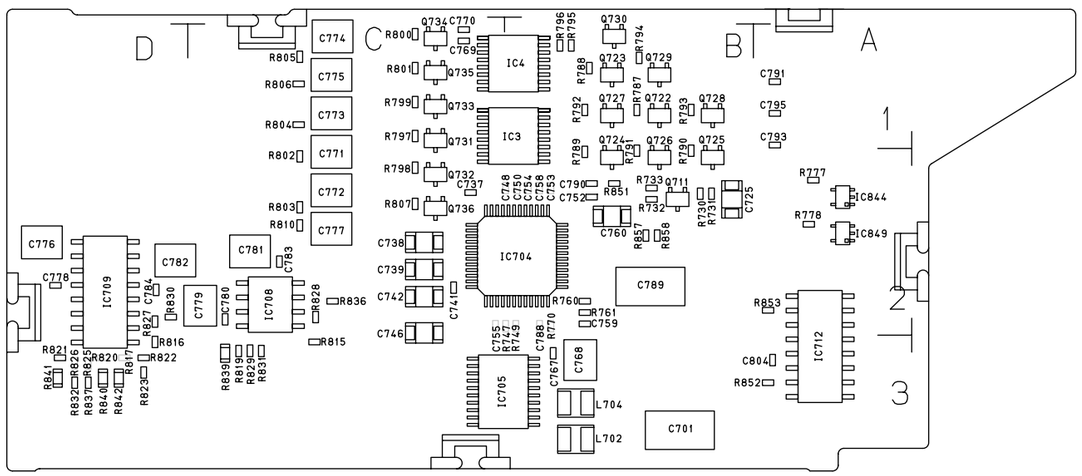
DP-313 -A SIDE-
SUFFIX: -11



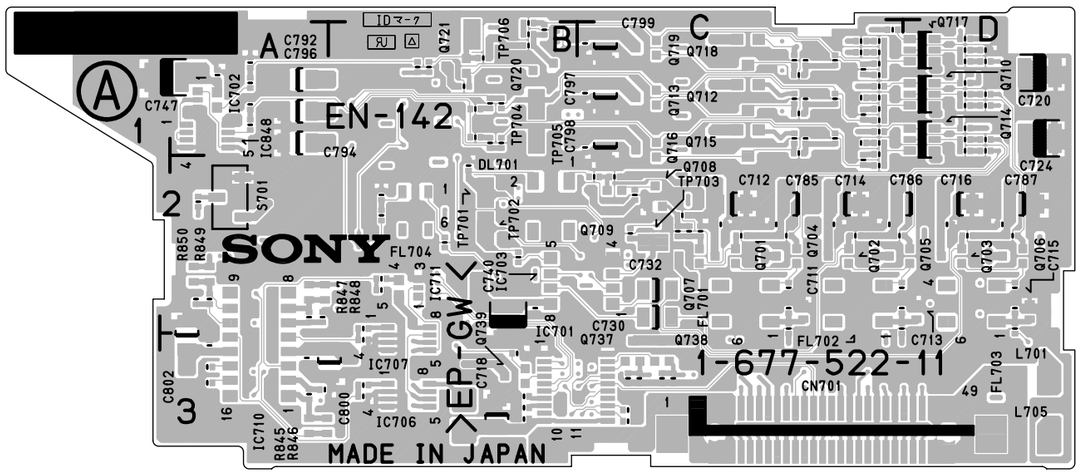
DP-313 -B SIDE-
SUFFIX: -11



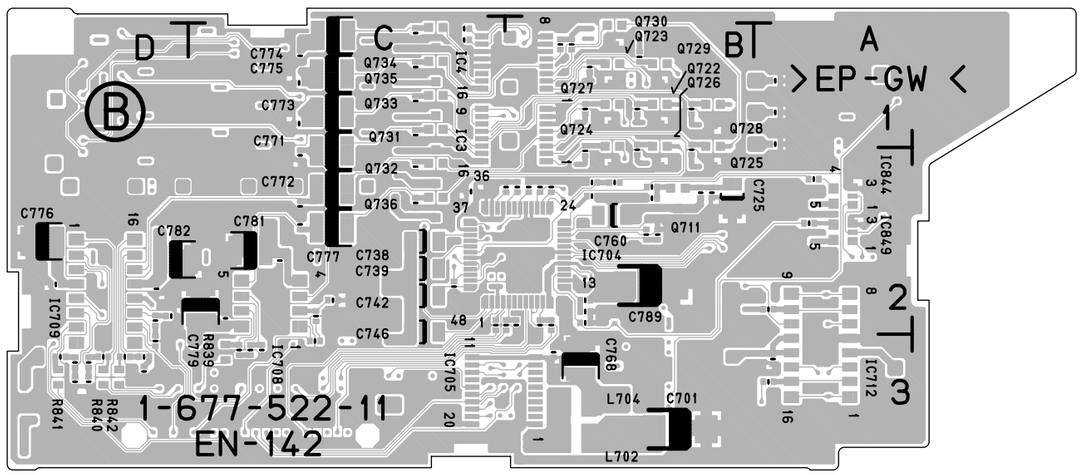
EN-142 -A SIDE-
SUFFIX: -11



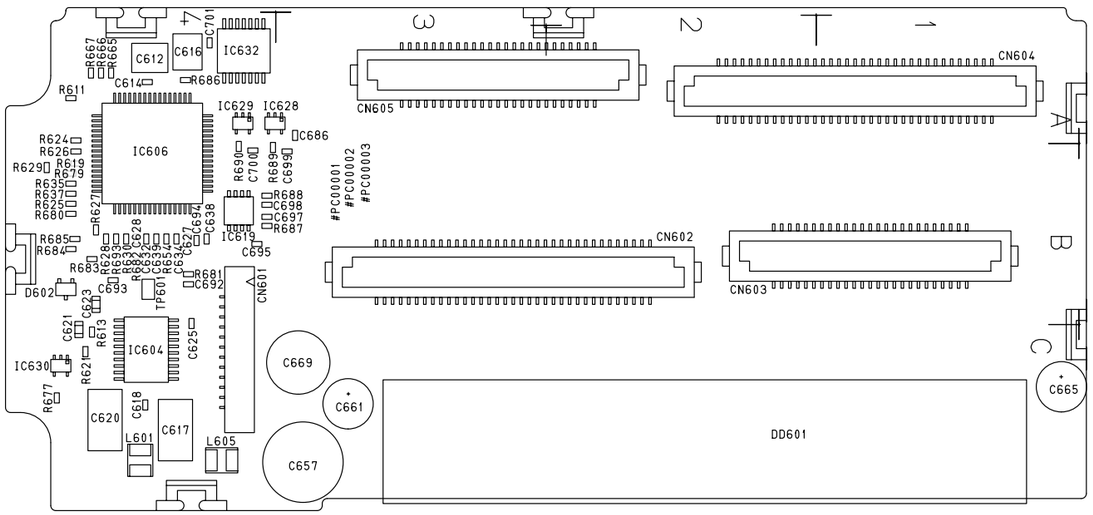
EN-142 -B SIDE-
SUFFIX: -11



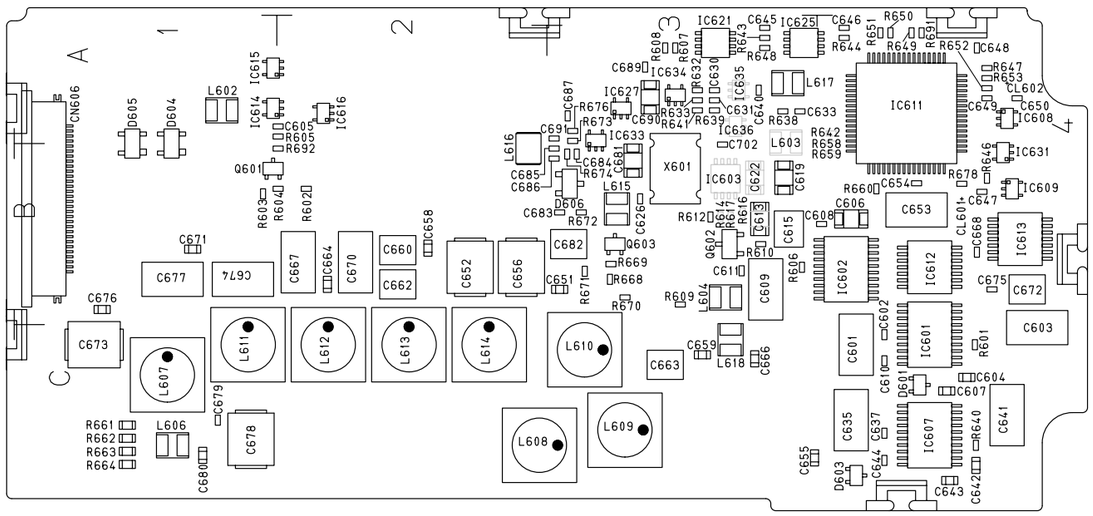
EN-142 -A SIDE-
SUFFIX: -11



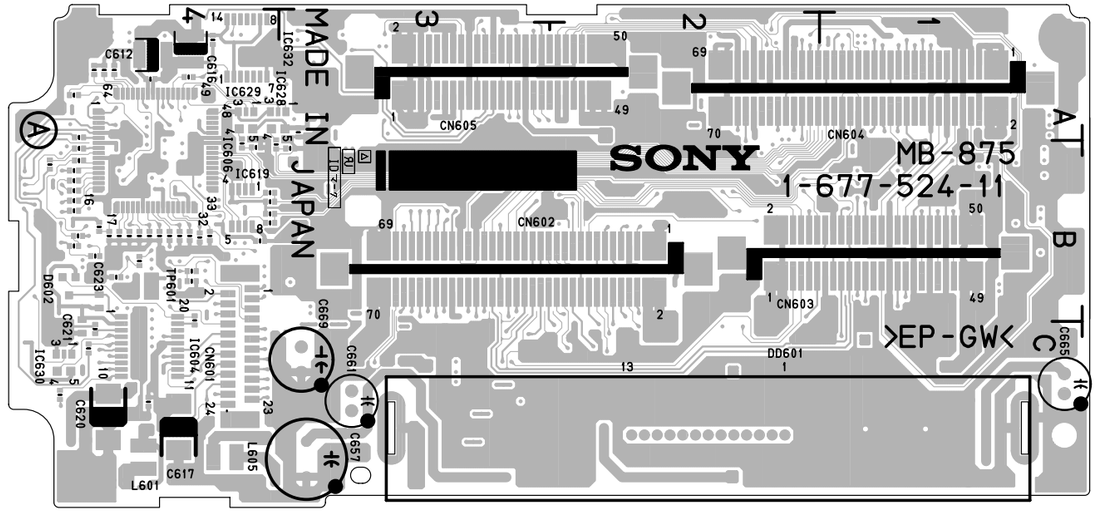
EN-142 -B SIDE-
SUFFIX: -11



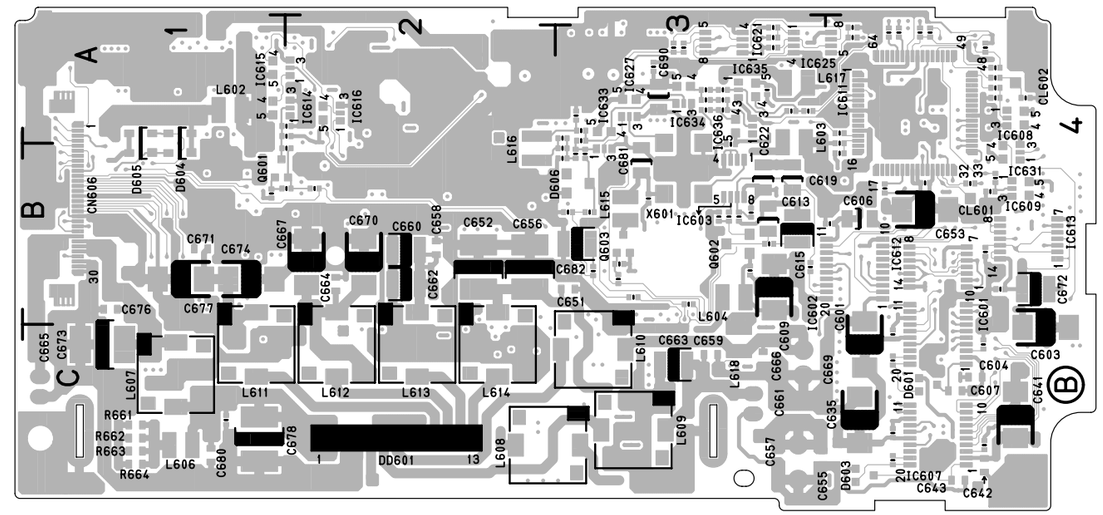
MB-875 -A SIDE-
SUFFIX: -11



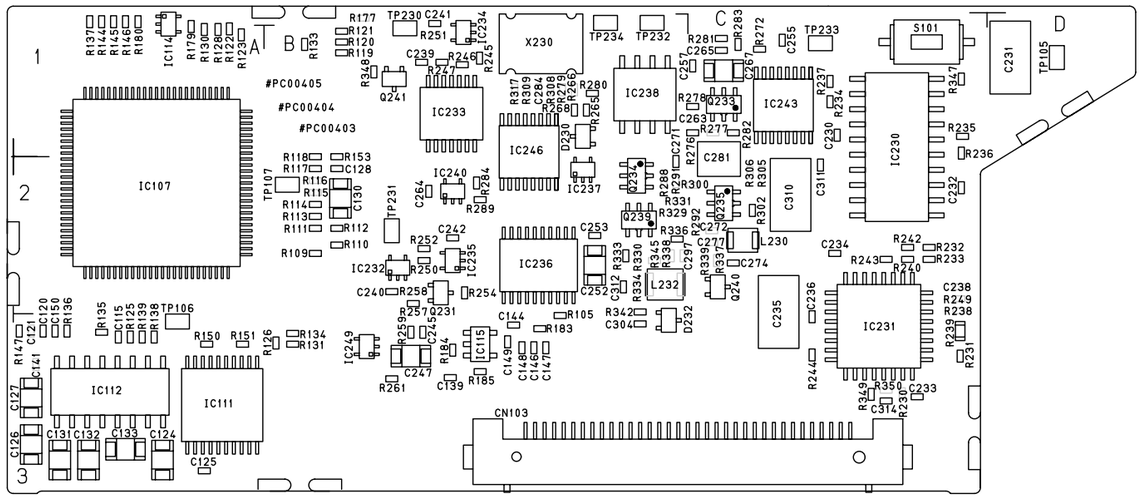
MB-875 -B SIDE-
SUFFIX: -11



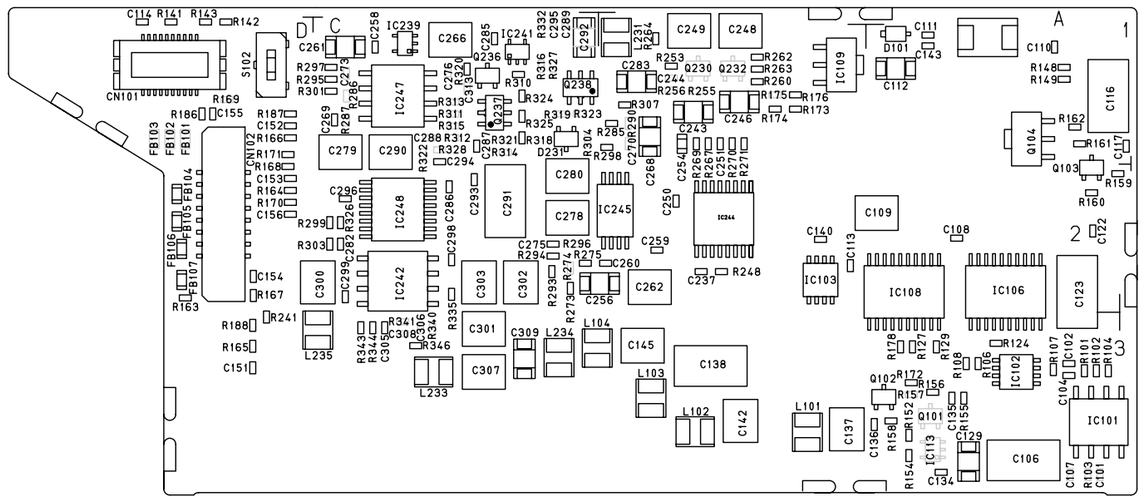
MB-875 -A SIDE-
SUFFIX: -11



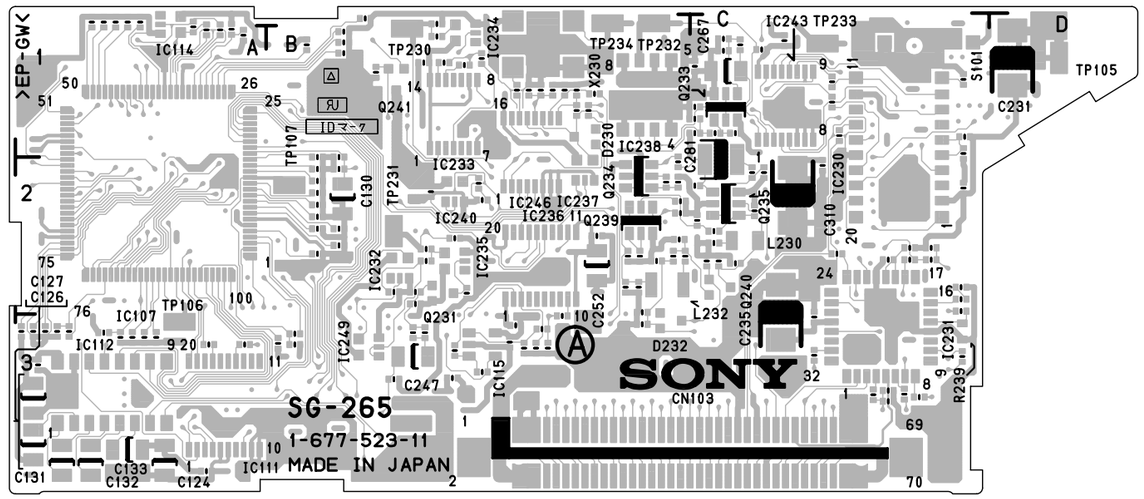
MB-875 -B SIDE-
SUFFIX: -11



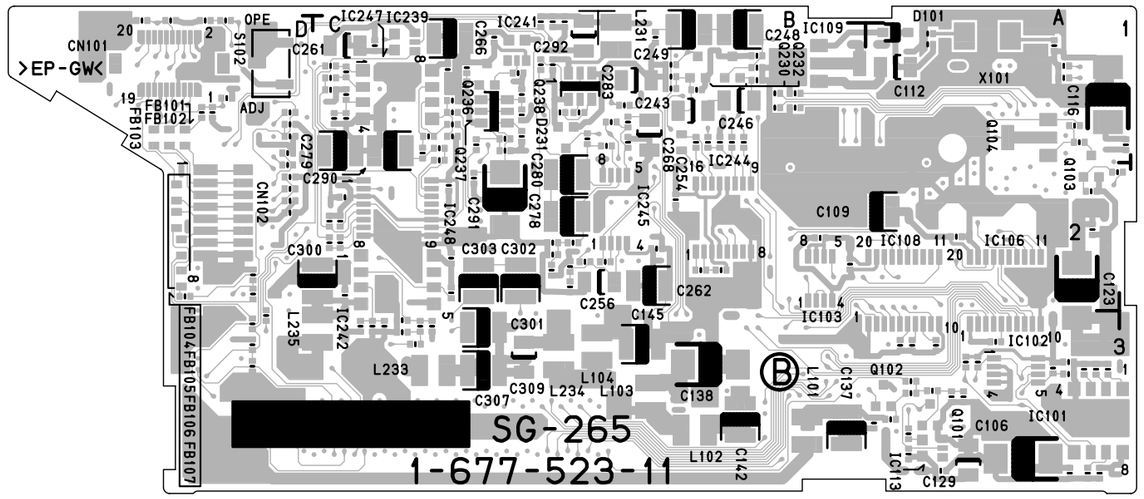
SG-265 -A SIDE-
SUFFIX: -11



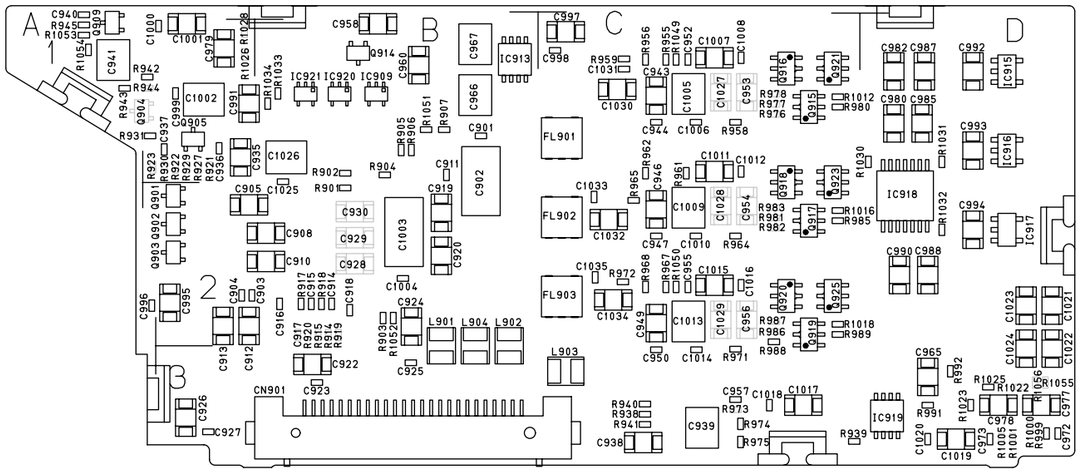
SG-265 -B SIDE-
SUFFIX: -11



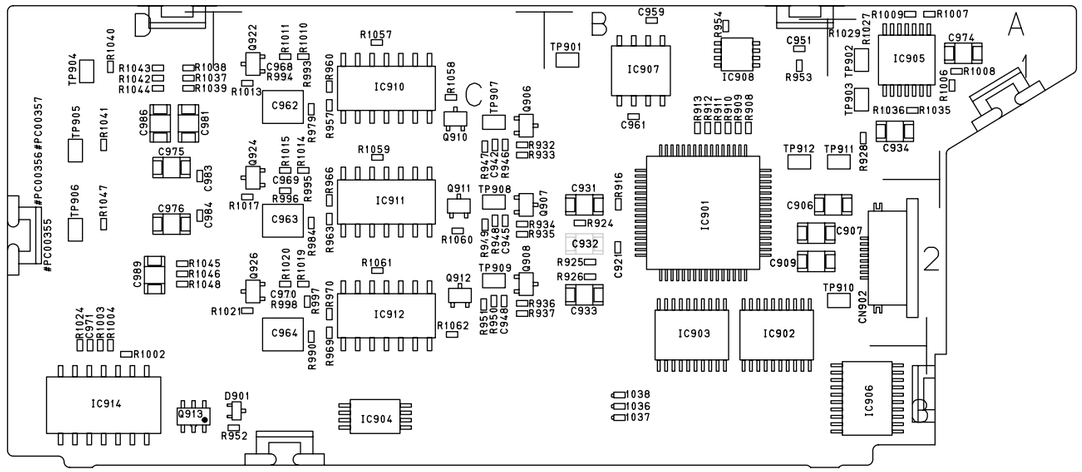
SG-265 -A SIDE-
SUFFIX: -11



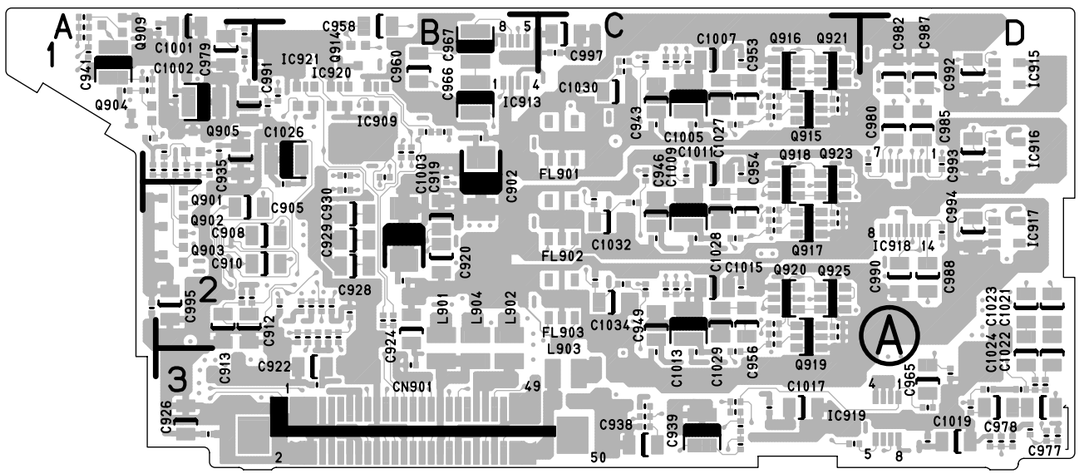
SG-265 -B SIDE-
SUFFIX: -11



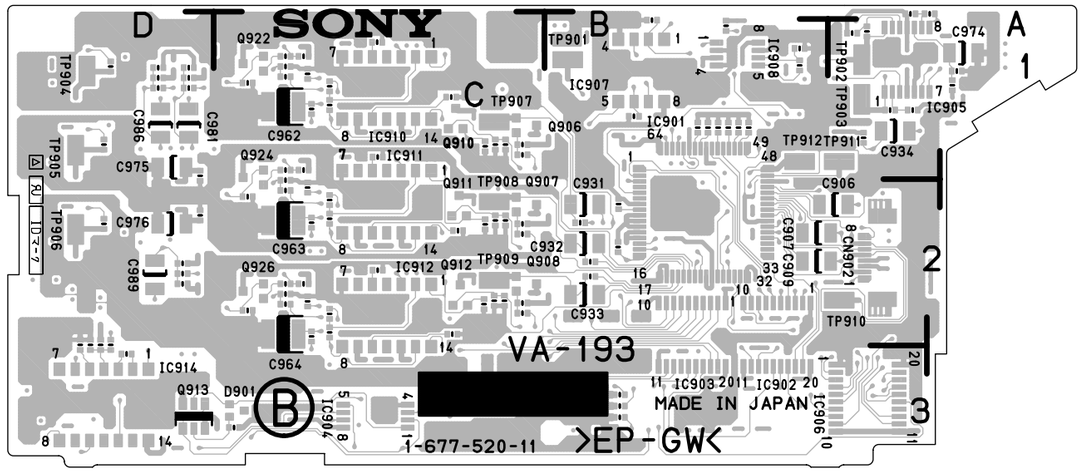
VA-193 -A SIDE-
SUFFIX: -11



VA-193 -B SIDE-
SUFFIX: -11



VA-193 -A SIDE-
SUFFIX: -11



VA-193 -B SIDE-
SUFFIX: -11

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