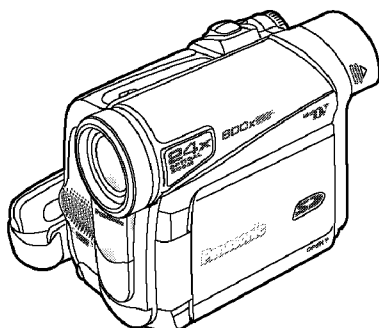


# Service Manual

## Digital Video Camcorder



**PbF**  
**Solder Lead free**

**PV-GS2P**  
**PV-GS9P**  
**PV-GS12P**  
**PV-GS14P**  
**PV-GS15P**  
**PV-GS9PC**  
**PV-GS13PC**  
**PV-GS15PC**

Colours

(S).....Silver Type

ITEM	SPECIFICATION	1	2	3	4	5	ITEM	SPECIFICATION	1	2	3	4	5
Digital Camcorder	Power Source: DC 7.8/7.2V Power Consumption: 4.5 W (Recording)	○	○	○	○	○	Speaker	1 round speaker 20 mm	○	○	○	○	○
AC Adaptor	Power Source: 110/120/220/240 V AC, 50/60 Hz Power Consumption: 18 W DC Output: DC 7.8 V, 1.4 A (Camcorder Operation) DC 8.4 V, 1.2 A (Battery Charging)	○	○	○	○	○	Standard Illumination	1,400 lx	○	○	○	○	○
Recording Format	Mini DV (Consumer-use Digital Video SD Format)	○	○	○	○	○	Minimum Required Illumination	1 lx (MagicPix Mode)	○	○	○	○	○
Tape Used	6.35 mm digital video tape	○	○	○	○	○	Output Level	Video Output Level: 1.0 Vp-p, 75 ohm S-Video Output Level: Y Output: 1.0 Vp-p, 75 ohm C Output: 0.286 Vp-p, 75 ohm Audio Output Level (Line): 316 mV, 600 ohm	○	○	○	○	○
Recording/ Playback Time	SP: 60 min.; LP: 120 min. (with DVM80)	○	○	○	○	○	Mic Input	Mic sensitivity -50 dB (0 dB=1 V/Pa, 1 kHz) (Stereo mini jack)	○	○	○	○	○
Video Recording System	Digital Component	○	○	○	○	○	USB	Card reader/writer function, USB 2.0 compliant (max. 12 Mbps) No copyright protection support	○	○	○	○	○
Television System	EIA Standard (525 lines, 60 fields) NTSC color signal	○	○	○	○	○	Digital Interface	DV Input/Output Jack (IEEE1394, 4-pin)	○	○	○	○	○
Audio Recording System	PCM Digital Recording 16 bit (48 kHz/2ch), 12 bit (32 kHz/4ch)	○	○	○	○	○	Card Memory Functions	Recording Media: MultiMediaCard (4 MB/8 MB/16 MB) SD Memory Card (8 MB/16 MB/32 MB/64 MB/128 MB/256 MB/512 MB) Still picture recording file format: JPEG (Design rule for Camera File system, based on Exif 2.2 standard), DPOF corresponding Still Image Size: 640 X 480 pixels (VGA)	○	○	○	○	○
Image Sensor	1/8-inch CCD Image Sensor	○	○	○	○	○	WEB Camera	Compression: Motion JPEG Image Size: 320 X 240 pixels (QVGA)	○	○	○	○	○
Lens	Auto Iris, F1.8, Focal length: 2.1 mm - 42 mm 2.1 mm - 46.2 mm 2.1 mm - 50.4 mm Macro (Full Range AF)	○	○	○	○	○	Operating Condition	0 °C~40 °C (32 °F~104 °F) (Temperature) 10 %~75 % (Humidity)	○	○	○	○	○
Filter Diameter	27 mm	○	○	○	○	○	Weight	Digital Camcorder: 0.45 kg (0.99 lbs.) AC Adaptor: 0.16 kg (0.35 lbs.)	○	○	○	○	○
Zoom	20:1 Power Zoom 22:1 Power Zoom 24:1 Power Zoom	○	○	○	○	○	Dimensions	Digital Camcorder: 112 mm x 87 mm x 69 mm (W x H x D) (4-7/16 inch x 3-7/16 inch x 2-1/16 inch) (W x H x D) AC Adaptor: 70 mm x 45 mm x 115 mm (W x H x D) (2-3/4 inch x 1-3/4 inch x 4-1/2 inch) (W x H x D)	○	○	○	○	○
Monitor	2.5-inch Liquid Crystal Display	○	○	○	○	○	Solder	This model uses lead free solder (PbF).	○	○	○	○	○
Viewfinder	Electronic Viewfinder Color Electronic Viewfinder	○	○	○	○	○							
Microphone	Stereo	○	○	○	○	○							

1. PV-GS9P/ PV-GS9PC

4. PV-GS14P

2. PV-GS12P

5. PV-GS15P/ PV-GS15PC

3. PV-GS2P/ PV-GS13PC

Weight and dimensions shown are approximate.  
Designs and specifications are subject to change without notice.

**Panasonic®**

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## **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# 1 SAFETY PRECAUTIONS

## GENERAL GUIDELINES

### 1. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  $\Delta$  in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 M $\Omega$  and 5.2 M $\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be infinity.

## LEAKAGE CURRENT HOT CHECK

(See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5 k $\Omega$ , 10 W resistor, in parallel with a 0.15  $\mu$ F capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 k $\Omega$ /V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.

6. The potential at any point should not exceed 0.75 V RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

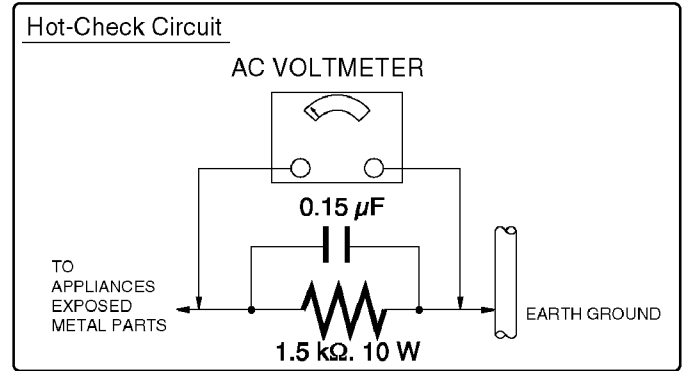


Figure. 1

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

### **CAUTION :**

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).



### 3 ABOUT LEAD FREE SOLDER (PbF)

#### Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.  
(Please refer to figures.)



Printed case

#### CAUTION:

- Pb free solder has a higher melting point than standard solder;  
Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.  
Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).  
In case of using high temperature soldering iron, please be carefull not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).
- All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.  
When soldering or unsoldering, completely remove all of the solder from the pins or solder area,  
and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

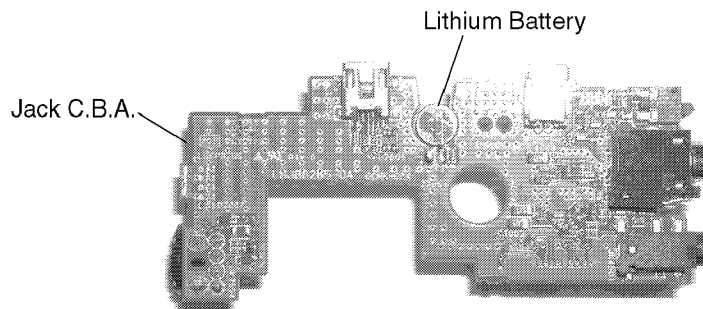
#### Recommendations

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

## 4 HOW TO REPLACE THE LITHIUM BATTERY

Remove the Jack C.B.A. (Refer to "DISASSEMBLY ASSEMBLY PROCEDURES.")

Unsolder the Lithium Battery "ML-621S/F9D" and then replace the new one.



### NOTE:

This Lithium battery is a critical component. (Type No.: ML-621S/F9D Manufactured by Panasonic.)

It must never be subjected to excessive heat or discharge.

It must therefore only be fitted in equipment designed specifically for its use.

Replacement batteries must be of the same type and manufacture.

They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose.

It should be disposed of in waste products destined for burial rather than incineration.

### CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the equipment manufacturer.

Discard used batteries according to manufacturer's instructions.

### PRECAUTION

Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.

Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

### VORSICHT

Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.

Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

### VARNING

Explosionsfara vid felaktigt batteribyte.

Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.

Kassera använt batteri enligt fabrikantens instruktion.

### ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.

Udskiftning må kun ske med batteri af samme fabrikat og type.

Levér det brugte batteri tilbage til leverandøren.

### VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.

Hävitätä käytetty paristo valmistajan ohjeiden mukaisesti.

## 5 HOW TO RECYCLE THE LITHIUM BATTERY

### U.S.A. CONSUMERS: ATTENTION: \_\_\_\_\_



A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

### ATTENTION: \_\_\_\_\_



A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

## 6 SERVICE NOTES (PLEASE READ)

### 6.1. SERVICE NOTES

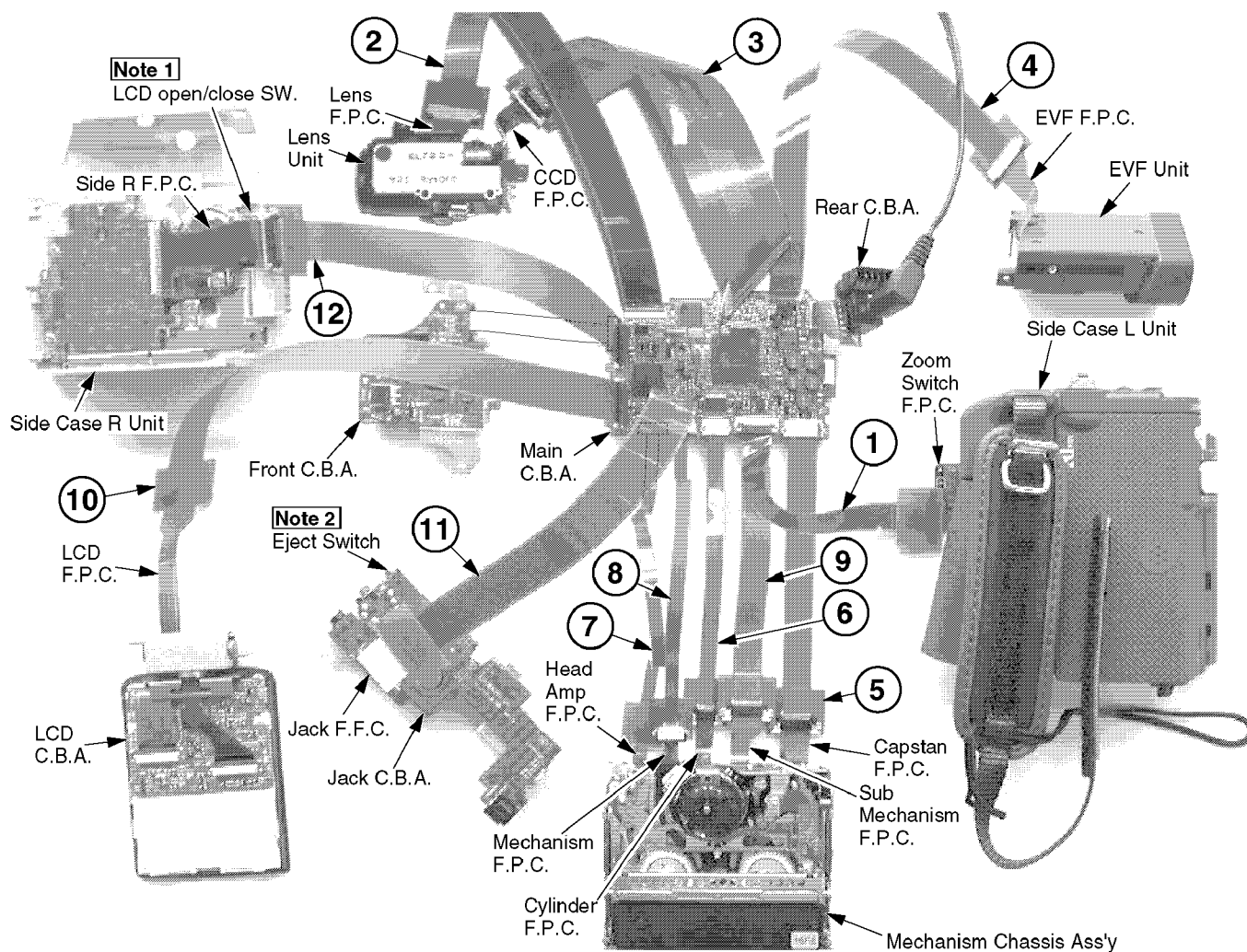
#### 6.1.1. EXTENSION CABLES FOR SERVICE POSITION

Using the following Extension Cables, place the unit as shown for check and service.

NO.	PART NUMBER	PART NAME	CONNECTION
①	LSUA0017	18Pin Extension Cable	FP10 on Main C.B.A. ~ Zoom Switch F.P.C. of Side Case L Unit
②	VUVS0012	22Pin Extension Cable	FP701 on Main C.B.A. ~ Lens F.P.C. on Lens Unit
③	VFKW0124A	14Pin Extension Cable	FP301 on Main C.B.A. ~ CCD F.P.C. on Lens Unit
④	VUVS0012	22Pin Extension Cable	FP9 on Main C.B.A. ~ EVF F.P.C. of EVF Unit
⑤	LSUA0017	18Pin Extension Cable	FP4 on Main C.B.A. ~ Capstan F.P.C. on Mechanism Chassis Ass'y
⑥	LSUA0016	10Pin Extension Cable	FP3 on Main C.B.A. ~ Cylinder F.P.C. on Mechanism Chassis Ass'y
⑦	VUVS0019	8Pin Extension Cable	FP5 on Main C.B.A. ~ Head Amp F.P.C. on Mechanism Chassis Ass'y
⑧	VUVS0019	8Pin Extension Cable	FP1 on Main C.B.A. ~ Mechanism F.P.C. on Mechanism Chassis Ass'y
⑨	LSUA0017	18Pin Extension Cable	FP2 on Main C.B.A. ~ Sub Mechanism F.P.C. on Mechanism Chassis Ass'y
⑩	LSUA0021	26Pin Extension Cable	FP8 on Main C.B.A. ~ LCD F.P.C. of Shaft Case Unit
⑪	VUVS0015	28Pin Extension Cable	FP7 on Main C.B.A. ~ Jack F.F.C. of Jack C.B.A.
⑫	LSUA0021	26Pin Extension Cable	FP11 on Main C.B.A. ~ Side R F.P.C. of Side Case R Unit <b>(For model with SD Slot)</b>
⑫	VUVS0007	12Pin Extension Cable	FP12 on Main C.B.A. ~ Side R F.P.C. of Side Case R Unit <b>(For model without SD Slot)</b>

**Note :**

1. The LCD open/close SW. is for changing between LCD Display or EVF Display. When turning on EVF Display, place some paper or tape, etc. on LCD open/close SW. so that this SW. stays ON.
2. To eject the Mechanism, hold down the Eject Switch on the Jack C.B.A. for a short time.
3. Use a grounded ESD wrist strap while disassembling the Lens portion.
4. Connect the F.P.C.s to the connectors, verifying the direction of F.P.C as shown.
5. Use extreme care when unplugging or plugging in connectors.



**Non ZIF connectors are on the Main C.B.A. as shown in gray.**

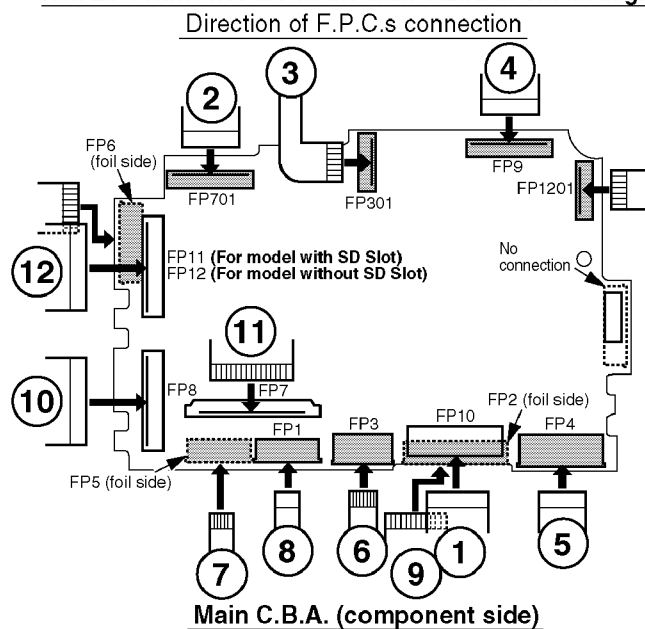


Fig. 1

## 6.1.2. ERROR DISPLAY

"PUSH THE RESET SWITCH" is displayed automatically on the EVF or the LCD Monitor when an undesirable condition has occurred.

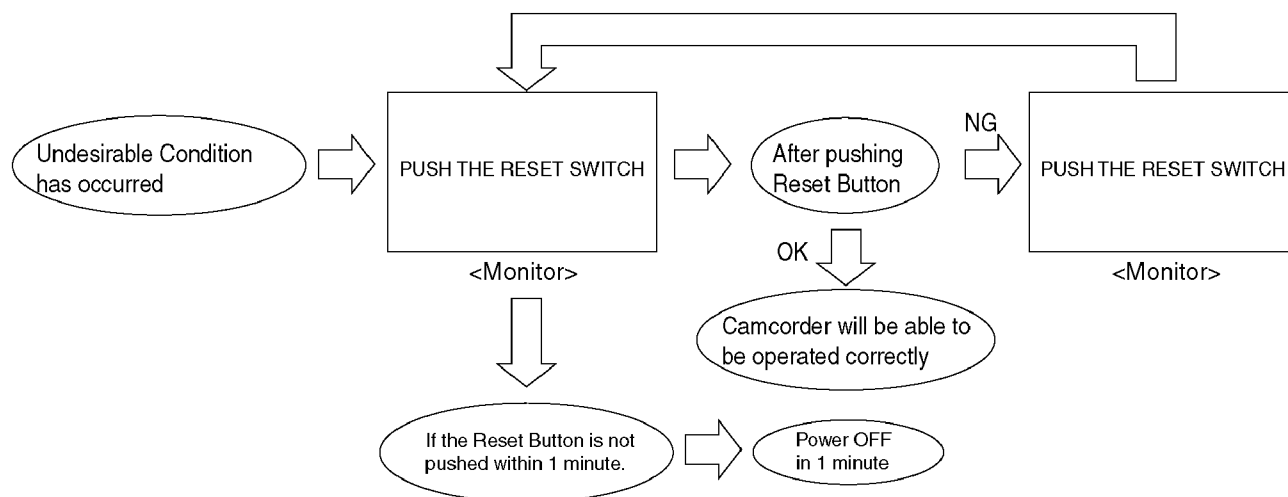


Fig. 2

**Note:**

When "PUSH THE RESET SWITCH" is displayed repeatedly, repair is required. Check the Error Code which is listed in the Service Menu.

### 6.1.3. SERVICE MENU

This function displays the following items in the Service Menu.

- \*1...Cylinder elapsed time reset

After replacing the Cylinder Unit, clear the Cylinder elapsed time to 0.

Press the STILL or the FADE button to select this item. Then, press the ENTER button.

- \*2...Cylinder elapsed time

This item displays the Cylinder elapsed time (in Base 16).

Calculation method of the Cylinder elapsed time:

(For example) If "0001234F" is displayed,     0001234F (in Base 16) = 74574 (in Base 10)

$$74574 \times 4.3 \text{ (seconds)} = 320672.5 \text{ (seconds)}$$

└ fixed value

$$320672.5 / 3600 \text{ (seconds)} = 89.1 \text{ (hours)}$$

- \*3...Mechanism lock code record

The current lock code, the last lock code and the lock code before last are displayed.

- \*4...Lens motor lock code record

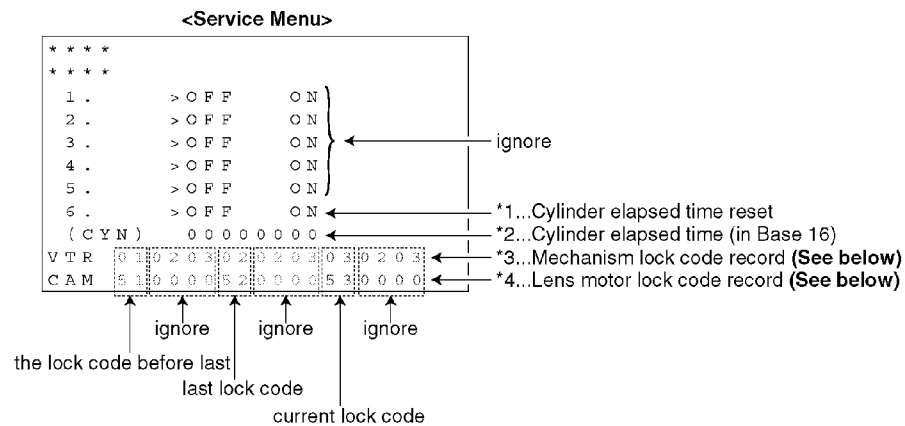
The current lock code, the last lock code and the lock code before last are displayed.

#### To enter the Service Menu:

Press the MENU button on the operation panel. Then, press and hold the BACKLIGHT, the REW- and the PHOTOSHOT buttons for more than 3 seconds **with no SD Card inserted**. The Service Menu will be displayed.

#### Note:

1. When an Error Display "PUSH THE RESET SWITCH" is displayed on the monitor, it is not necessary to push the MENU button to enter the Service Menu.
2. Do not operate items 1 ~5 in the Service Menu.



Mechanism & Lens motor lock code

Error Code	Explanation of cause
01	T Reel Lock
02	S Reel Lock
03	Tape Unloading (direction) Lock
04	Tape Loading (direction) Lock
05	Cylinder Lock
51	Zoom Motor Lock
52	Focus Motor Lock

Fig. 3

#### To exit the Service Menu:

Unplug the AC Cord.

#### Note:

After repairing, to delete all lock code, press and hold the BACKLIGHT, the REW- and the REC/PAUSE buttons for more than 3 seconds in power on condition (with no SD Card inserted). Otherwise, new lock code will not be recorded correctly.

### 6.1.4. REMOVAL/INSTALLATION OF F.P.C. FROM NON ZIF (Zero Insertion Force) CONNECTOR

**Removal/Installation of F.P.C. from the Non ZIF (Zero Insertion Force) connector:**

1. The Non ZIF connectors and the ZIF connectors are used on the unit. And there are 2 types (Type A, Type B) of Non ZIF connectors.
2. To remove the F.P.C. from the Non ZIF connector, use the Plier for Non ZIF Connector (LSVQ0028) to pull out the F.P.C. as shown. The same Plier for Non ZIF Connector (LSVQ0028) should also be used to install the F.P.C. to the Non ZIF Connector.

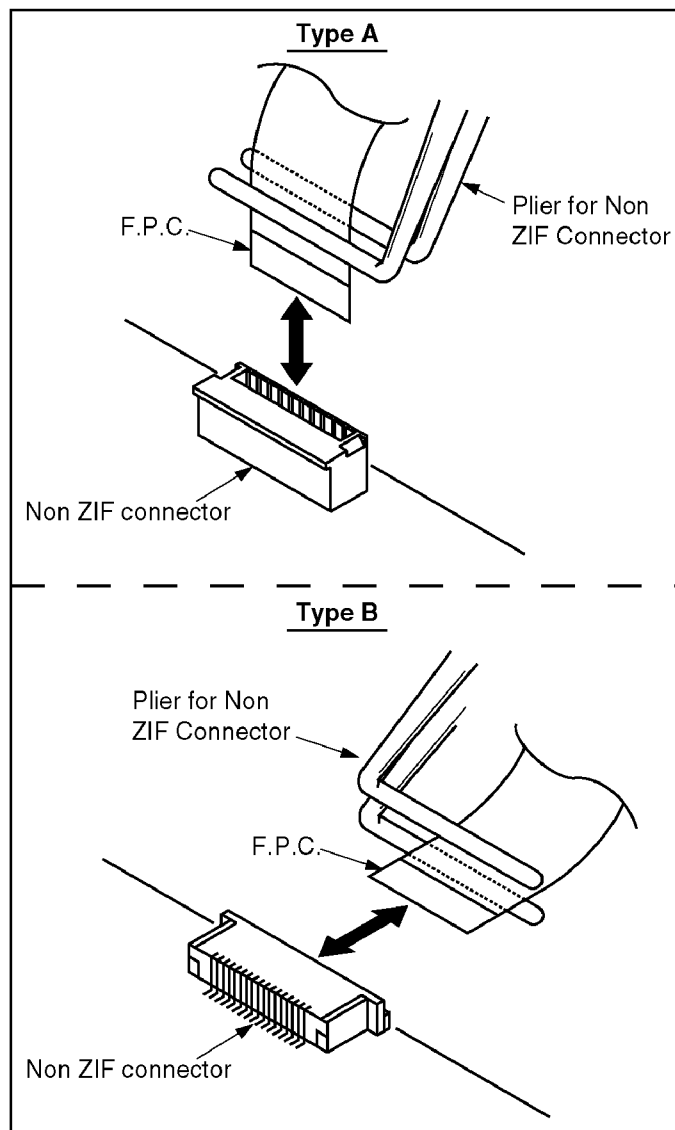


Fig. 4-1

3. Connect the F.P.C.s to the Non ZIF connectors, verifying the direction of F.P.C as shown.

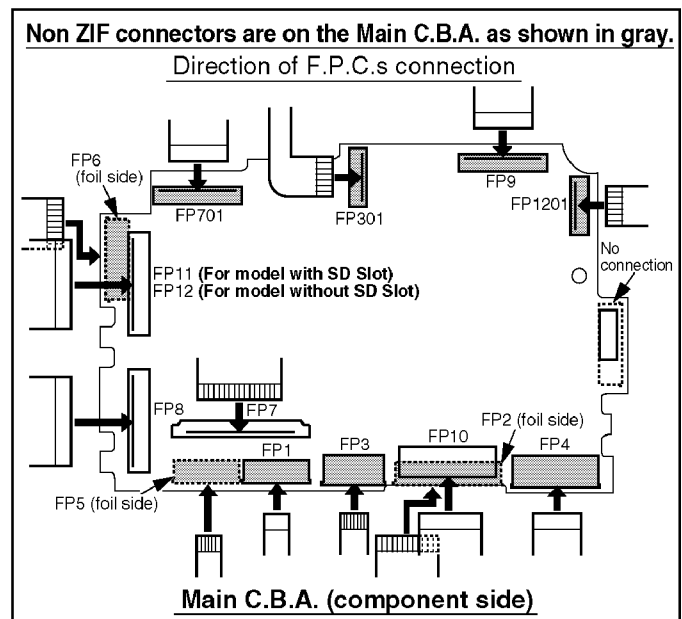


Fig. 4-2

### 6.1.5. METHOD FOR LOADING/UNLOADING OF MECHANISM

#### CAUTION:

If loading does not start after DC Power Supply is applied, DO NOT continue to apply DC Power.

Apply +3 VDC Power Supply to the Loading Motor terminals.

#### Loading:

DC (-) to Portion "a," DC (+) to Portion "b"

#### Unloading:

DC (+) to Portion "a," DC (-) to Portion "b"

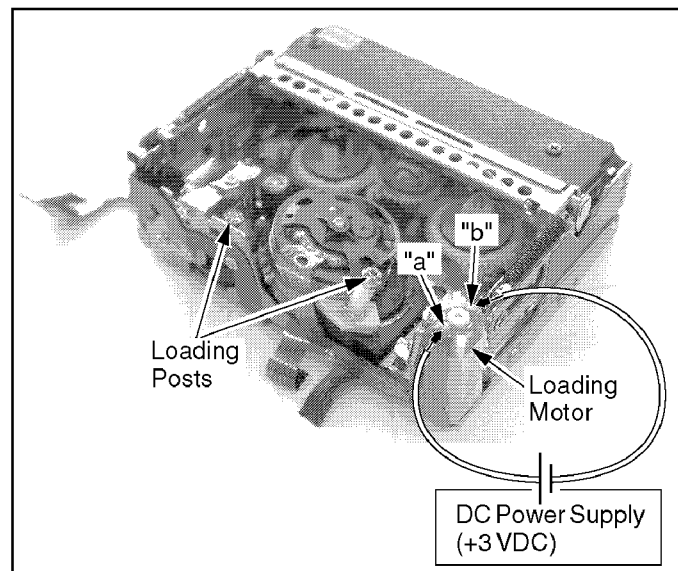


Fig. 5



### 6.1.6. HOW TO REMOVE A JAMMED TAPE

Remove a jammed tape in Electrical Method as follows:

1. Open the Jack Cover. Then, insert a flat headed (-) screwdriver or similar object into the gap of the Post Cover, and remove it while releasing the 2 Locking Tabs.

**Note:**

Be careful not to damage the Locking Tabs on the Post Cover.

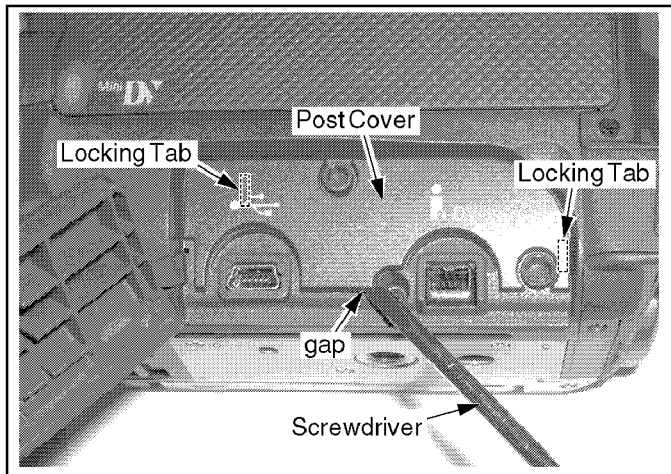


Fig. 6-1

2. Open the Cassette Cover by hand.
3. Apply +3 V DC Power Supply to Portions "a" and "b" on the Loading Motor.

**Note:**

DO NOT let the Cassette Up Unit eject when pushing down the Cassette Cover. If the Cassette Up Unit is in the up position, the cassette tape may be damaged.

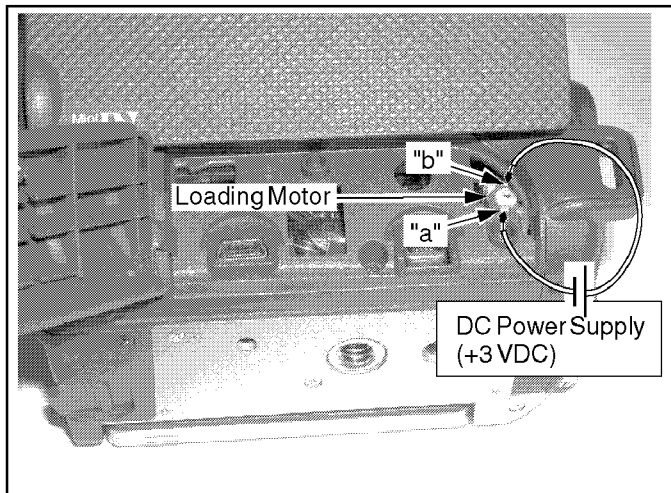


Fig. 6-2

4. When the Mechanism is in EJECT position (snapping sound), cut the Power Supply immediately.

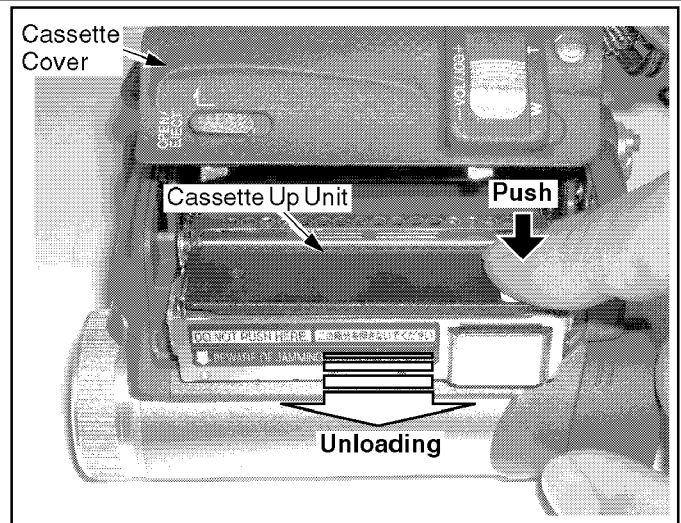


Fig. 6-3

5. Move up the Cassette Up Unit carefully by hand so as not to damage the Mechanism or tape due to tape slack.
6. Take out the cassette tape from the Cassette Up Unit carefully.
7. Remove the tape slack by rotating the Take-up Reel Gear of the cassette tape.
8. Connect the Power or Battery to set the Mechanism to STOP Position.

### 6.1.7. EEPROM DATA

**CAUTION:**

Be sure to save the EEPROM data using PC-EVR Adjustment Program before service and adjustment in order to make sure to avoid an accidental data loss, etc. using PC-EVR Adjustment Program by first.

EEPROM IC

C.B.A.	EEPROM IC Ref. No.
Main C.B.A.	IC6002

## 6.1.8. SIGNAL DESCRIPTION ON INTERFACE BOARD FOR ELECTRICAL ADJUSTMENT (LSUP0007)

A signal check can be performed using the Interface Board.

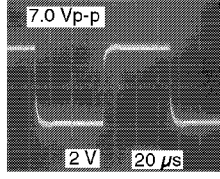
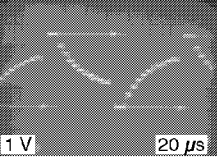
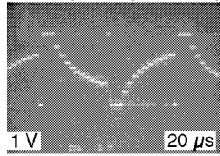
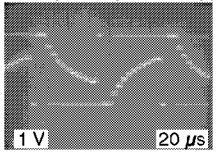
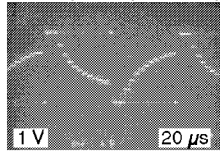
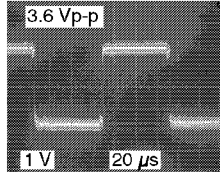
Pin No.	Signal Name	Description	Waveforms
TP101	EEPROM DAT	To monitor LCD VCOM signal at Pin 10 of FP8002 on LCD C.B.A. This test point is used for "LCD Horizontal free running adjustment" and "LCD VCOM level adjustment."	 <p>7.0 Vp-p 2 V 20 μs Camera Mode (Built in 10 step)</p>
TP102	EEPROM CLK	Not used	-----
TP103	EEPROM VDD	Not used	-----
TP104	-----	Not used	-----
TP105	EVF CR	Not used	-----
TP106	EVF CB	Not used	-----
TP107	MON PLL	Not used	-----
TP108	MON VCOM	Not used	-----
TP109	V850 VDD	Not used	-----
TP110	V850 VPP	Not used	-----
TP111	V850 SBO	Not used	-----
TP112	V850 SBI	Not used	-----
TP113	V850 SCK	Not used	-----
TP114	M103 MMOD0	<b>(For model with Color EVF)</b> To monitor EVF red signal at Pin 29 of IC901 on Main C.B.A. This test point is used for "EVF Sub Bright adjustment."	<p>2.0 V (1st step - 1st step)</p>  <p>1 V 20 μs Camera Mode (Built in 10 step)</p>
TP115	M103 MMOD1	<b>(For model with Color EVF)</b> To monitor EVF green signal at Pin 28 of IC901 on Main C.B.A. <b>(For model with Monochrome EVF)</b> To monitor EVF luminance at Pin 28 of IC901 on Main C.B.A. This test point is used for "EVF Sub Bright adjustment" and "EVF Contrast/Bright adjustment."	<div> <p><b>(Color EVF)</b> 2.05 V (1st step - 1st step)</p>  <p>1 V 20 μs Camera Mode (Built in 10 step)</p> </div> <div> <p><b>(Monochrome EVF)</b> 2.3 V (1st step - 1st step)</p>  <p>1 V 20 μs Camera Mode (Built in 10 step)</p> </div>
TP116	M103 VPP	<b>(For model with Color EVF)</b> To monitor EVF blue signal at Pin 27 of IC901 on Main C.B.A. This test point is used for "EVF Sub Bright adjustment."	<p>2.15 V (1st step - 1st step)</p>  <p>1 V 20 μs Camera Mode (Built in 10 step)</p>
TP117	M103 EXMOD1	To monitor EVF VCOM signal at Pin 21 of IC901 on Main C.B.A.	<p>3.6 Vp-p</p>  <p>1 V 20 μs Camera Mode (Color Bar Chart)</p>
TP118	EVF HD	Not used	-----
TP119	EVF R	Not used	-----
TP120	EVF B	Not used	-----

Fig. 7-1

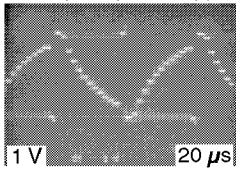
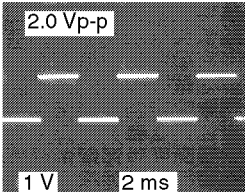
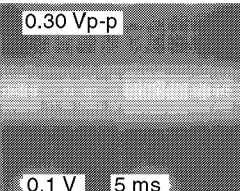
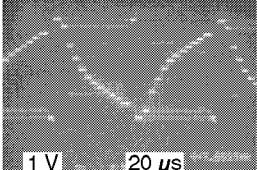
Pin No.	Signal Name	Description	Waveforms
TP121	EVF G	To monitor LCD green signal at Pin 6 of IC8001 on LCD C.B.A. This test point is used for "LCD Pedestal level adjustment" and "LCD Sub Pedestal level adjustment."	3.5 V (0 step - 0 step)  1 V 20 μs Camera Mode (Built in 10 step)
TP122	HID	To monitor HID signal at Pin 44 of IC3201 on Main C.B.A. This test point is used for "VCR PG shifter adjustment."	2.0 Vp-p  1 V 2 ms Rec/PB Mode
TP123	ENVELOPE	To monitor Envelope signal at Pin 41 of IC5001 on Main C.B.A.	0.30 Vp-p  0.1 V 5 ms PB Mode (SP)
TP124	SPA	Not used	-----
TP125	ATFI	To monitor ATF signal at Pin 23 of IC3201 on Main C.B.A.	-----
TP126	M103 REG3	Not used	-----
TP127	DGND	Grounding terminal	-----
TP128	EEPROM CS	Not used	-----
TP129	CAMF VDD	Not used	-----
TP130	CAMF VPP	Not used	-----
TP131	MON R	Not used	-----
TP132	MON G	Not used	-----
TP133	MON B	Not used	-----
TP134	CAM AGND	Grounding terminal	-----
TP135	(CAP FG)	Not used	-----
TP136	AGC OUT	Not used	-----
TP137	(M103 PON)	Not used	-----
TP138	AD IN	Not used	-----
TP139	AD IN2	Not used	-----
TP140	AGCOUT2	Not used	-----
TP141	SBO	To monitor LCD red signal at Pin 8 of IC8001 on LCD C.B.A. This test point is used for "LCD Sub Pedestal level adjustment."	3.4 V (0 step - 0 step)  1 V 20 μs Camera Mode (Built in 10 step)

Fig. 7-2

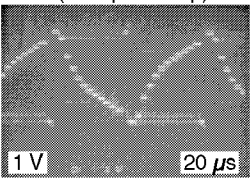
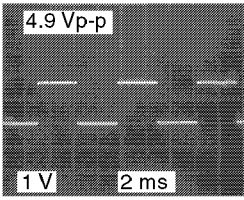
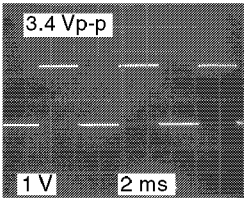
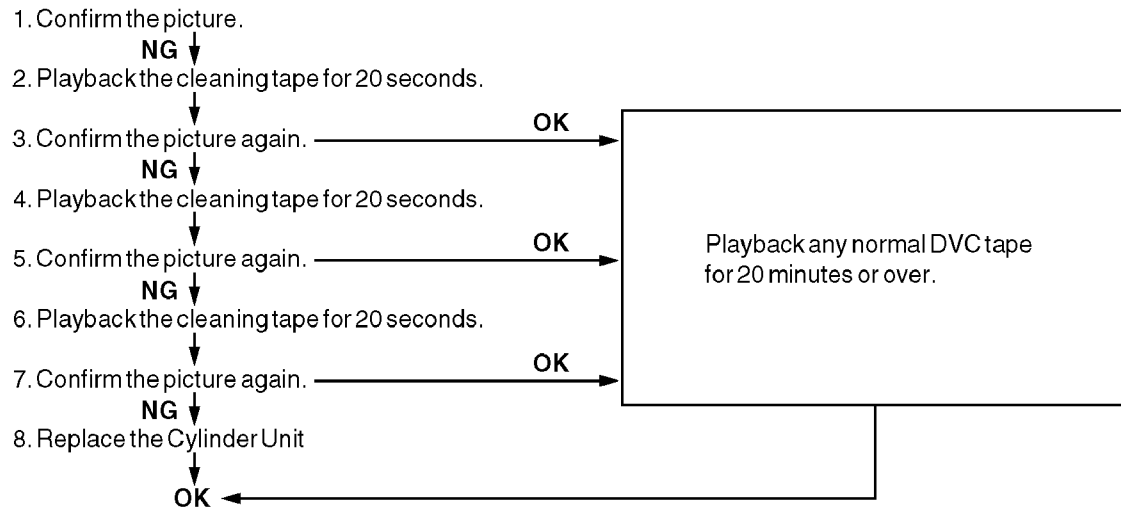
Pin No.	Signal Name	Description	Waveforms
TP142	UARTI	To monitor RS232C received data	-----
TP143	RF GND	Not used	-----
TP144	TCK	Not used	-----
TP145	TMS	Not used	-----
TP146	TDO	Not used	-----
TP147	TDI	Not used	-----
TP148	MIC CLOCK	MIC serial clock output from camcorder to PC	-----
TP149	MIC DATA	MIC serial data output from camcorder to PC	-----
TP150	SBI	To monitor LCD blue signal at Pin 4 of IC8001 on LCD C.B.A. This test point is used for "LCD Sub Pedestal level adjustment."	<p>3.6 V (0 step - 0 step)</p>  <p>1 V 20 μs</p> <p>Camera Mode (Built in 10 step)</p>
TP151	UARTO	To monitor RS232C transmitted data	-----
TP152	RECI	Not used	-----
TP153	SIO	Not used	-----
TP154	SCK	Not used	-----
TP155	VD	Not used	-----
TP156	(UNREG)	Power input terminal	-----
TP157	(UNREG GND)	Grounding terminal	-----
TP158	VTR RESET	Not used	-----
TP159	CAM RESET	Not used	-----
TP160	VTR RESET	Power microcontroller reset: low	-----
TP161	(HID2)	To monitor HID signal at Pin 44 of IC3201 on Main C.B.A.	 <p>4.9 Vp-p</p> <p>1 V 2 ms</p> <p>Rec/PB Mode</p>
TP162	(HID1)	To monitor HID signal at Pin 44 of IC3201 on Main C.B.A. (HID signal is inverted on Interface Board.)	 <p>3.4 Vp-p</p> <p>1 V 2 ms</p> <p>Rec/PB Mode</p>

Fig. 7-3

### 6.1.9. HOW TO USE THE DVC HEAD CLEANING TAPE / VFK1451

Please use the cleaning tape as described below.

**Note:** This cleaning tape has a total playback time of 2 minutes 30 seconds. it can be used 30 times.



The picture will look like this in case of clogged video head.

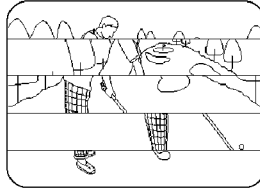


Fig. 8

## 6.1.10. REPLACEMENT PROCEDURES FOR CSP (CHIP SIZE PACKAGE) IC

### 6.1.10.1. EQUIPMENT

1. Pre-Heater
2. Spot Heater
3. Vacuum Pick-up
4. P.C.B. Holder

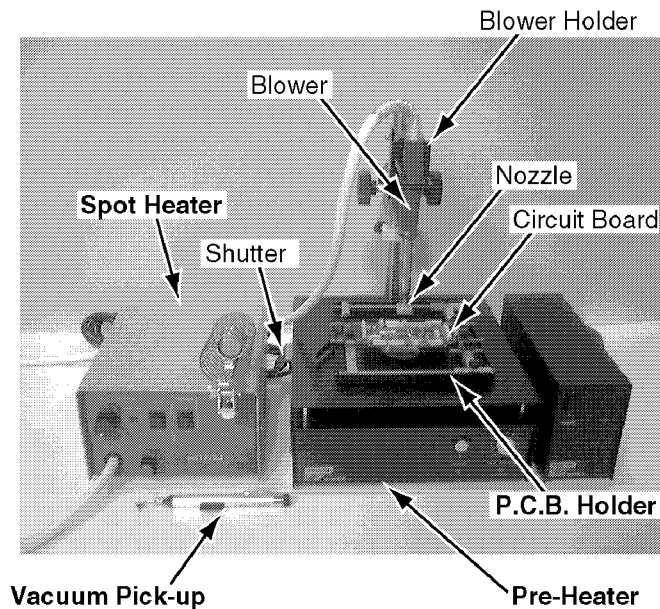


Fig. 9-1

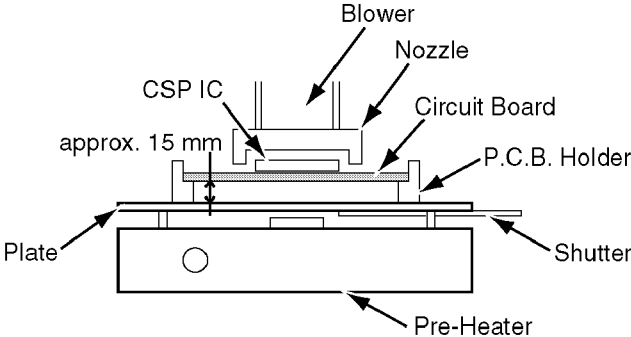
Fixture	Preparation for Fixture	Condition		Warming-up
		Heat Control Level	Air Control Level	
Spot Heater	Set a Nozzle to Blower of Spot Heater.	Level 8.5 (245 °C)	MAX	After setting fixtures, turn on the power. Then, wait for approx. 5 minutes to stabilize air condition. <b>Note:</b> Be sure to open the shutter of Pre-Heater.
Pre-Heater	Set the Blower to Blower Holder.	MAX (120 °C~150 °C)	---	
Reference for Temperature				

Fig. 9-2

### 6.1.10.2. REMOVAL OF CSP IC

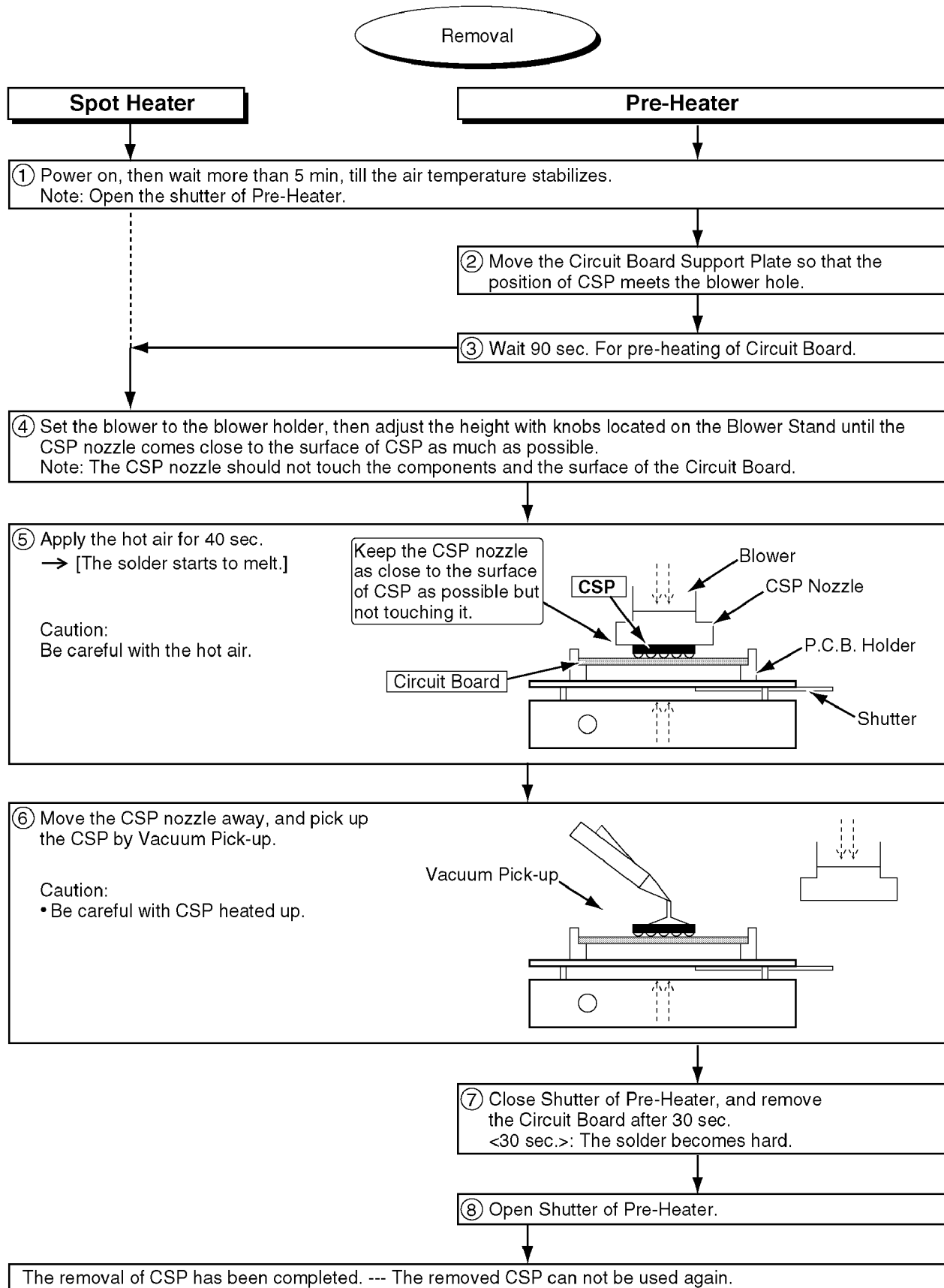


Fig. 9-3

### 6.1.10.3. INSTALLATION OF CSP IC

#### Mounting of CSP

##### A. Cleaning

##### ① Applying the flux to the round terminal pattern.

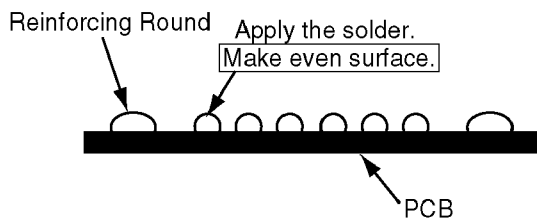
Apply the flux using an applicator, then tap it on round terminals.

##### ② Applying the solder to round terminals of PCB. --- [Using string solder]

Apply the solder to the soldering iron, then move the soldering iron on the round terminals so that the solder evenly stays on the round terminals (Confirm with Loupe).

Note:

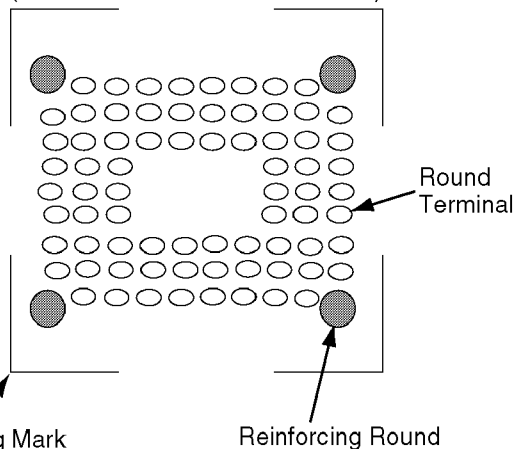
- The power of the soldering iron should be less than 30 W.
- Be sure to make all solders applied are the same in size and height.



Caution:

- Do not touch the round terminals with the soldering iron. Otherwise, pattern may be damage.

(Round Terminals Pattern of CSP)

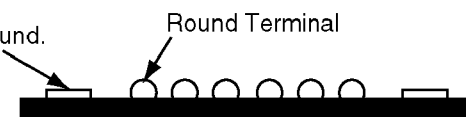


Remark:

There are 2 types of CSPs. One of them is with Reinforcing Round, and the other one is without.

##### ③ For CSP with Reinforcing Round → Removing the solder on 4 corners (Reinforcing Rounds)

Remove the solder on Reinforcing Round.



##### ④ Cleaning of the round terminal pattern using an applicator with the cleaner (alcohol etc.).

##### ⑤ Applying the flux to the round terminal pattern.

Note: Do not let any dust get into the flux.

##### B. Positioning

##### ⑥ Check if there are solder on new CSP or not. If not, perform steps (1) ~ (4).

Note: When applying the solder, do not touch the surface of CSP with the soldering iron.

- (1) Apply enough flux to the CSP.
- (2) Apply a small amount of the solder.
- (3) Clean the flux once.
- (4) Apply a small amount of flux to CSP.

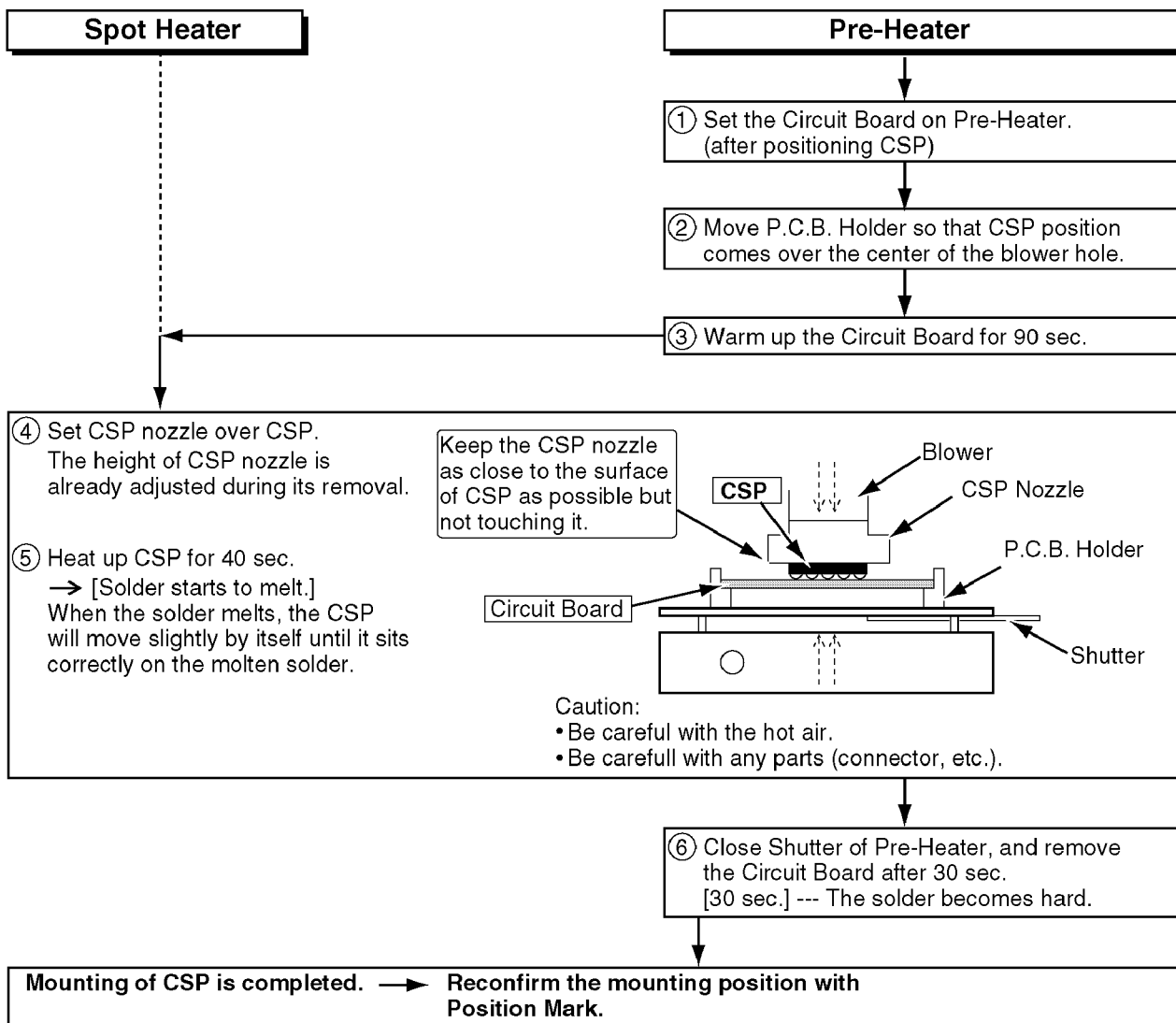
Note: Do not apply too much the flux.

##### ⑦ Positioning of new CSP on the round terminal pattern.

- Put CSP on the round terminal pattern so that 4 corners of CSP meet the positioning marks printed on PCB.

Fig. 9-4



**C. Mounting**

That's all for CSP repair, and the final confirmation if the repair work is OK or not should be made by assembling the repaired Circuit Board into the camera unit.

Fig. 9-5

#### 6.1.10.4. CSP IC LOCATION

Make sure to install CSP IC in the correct position on the Main C.B.A. as shown.

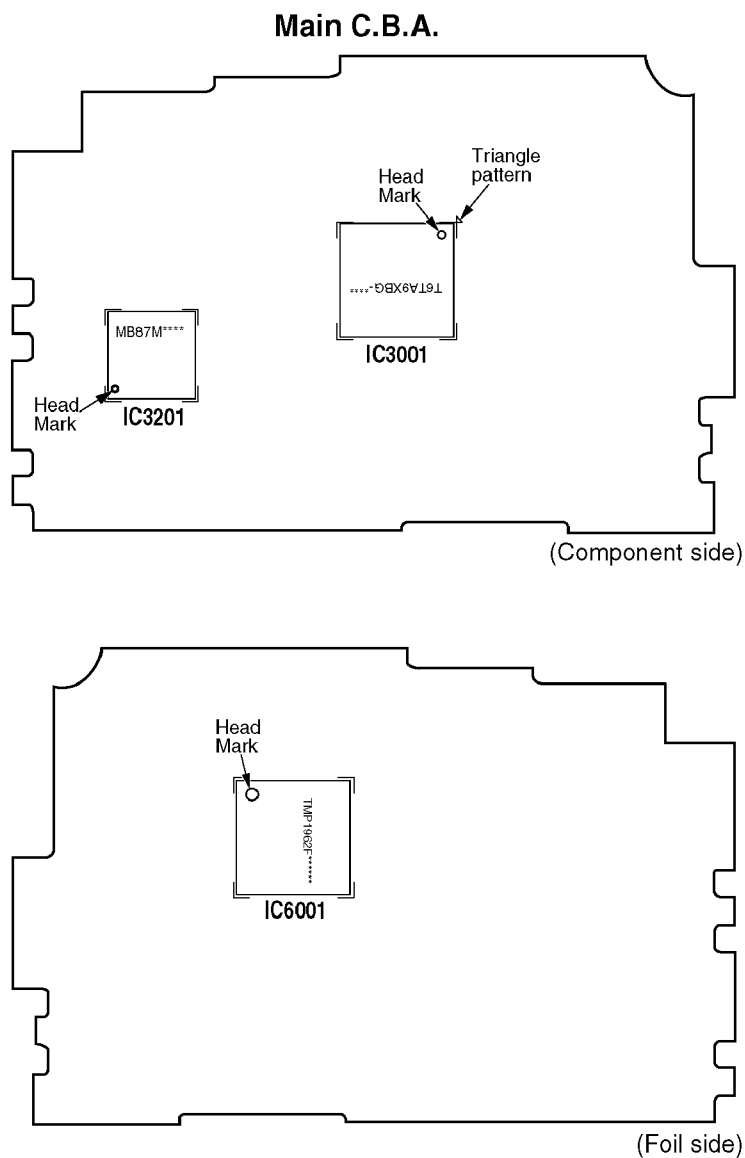


Fig. 9-6

#### 6.1.10.5. TEMPERATURE PROFILE FOR HEAT RESISTANCE OF CSP IC

When using equipment other than the Pre-Heater shown in Fig. 9-1, refer to the temperature profile. CSP ICs in the 2004 model have the following temperature profile.

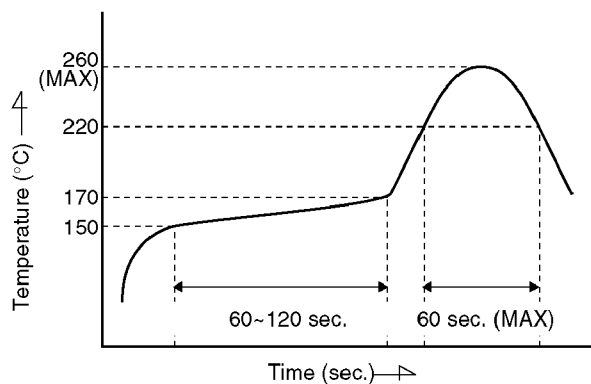


Fig. 9-7

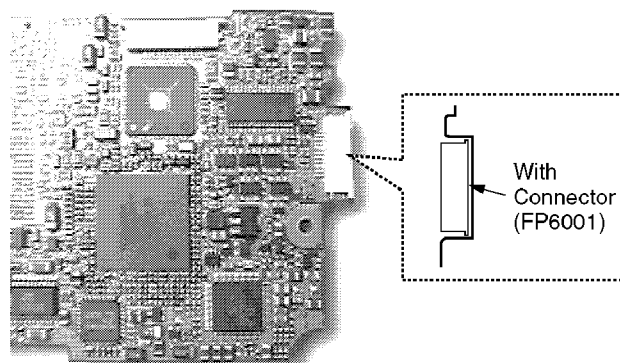
### 6.1.11. IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE

Two types of IC6001 (LSSK0045, C2DBMK000022) on the Main C.B.A. have been used on a running change basis. There are two servicing methods (Type A, B) because the adjacent circuit is different depending on which IC6001 is used in the unit.

Be sure to confirm if there is the Connector (FP6001) on the Main C.B.A. before servicing. When replacing, be sure to order the proper parts referring to the parts list for Type A or Type B as follows.

#### Type A: with the connector on the Main C.B.A.

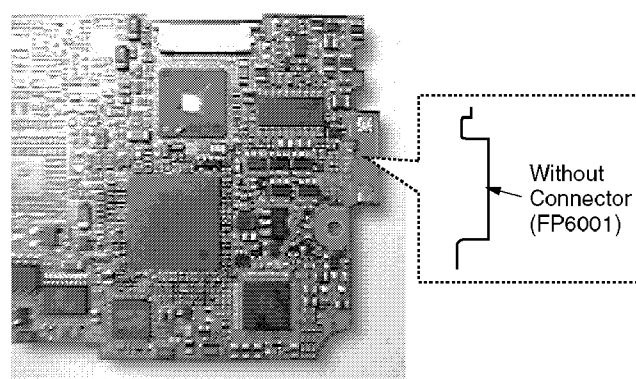
##### Main C.B.A.



(Foil side)

#### Type B: without the connector on the Main C.B.A.

##### Main C.B.A.



(Foil side)

Fig. 10

### 6.1.12. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

### 6.1.13. MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
NOT USED	PT

#### Note:

Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for Mark "PT."

Ref. No.	Type A	Type B
	Part No.	Part No.
IC6001	LSSK0045	C2DBMK000022
IC6006	C0CBCAC00129	C0CBCAC00144
IC6008	C0EBD0000281	C0EBB0000135
R6031	-----	ERJ2GE0R00X
R6032	ERJ2GE0R00X	-----
C6024	ECJ0EC1H120J	ECJ0EC1H270J
C6031	ECJ0EC1H120J	ECJ0EC1H220J
FP6001	K1MN12B00102	-----

## 7 DISASSEMBLY ASSEMBLY PROCEDURES

### 7.1. CABINET SECTION

#### 7.1.1. DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.

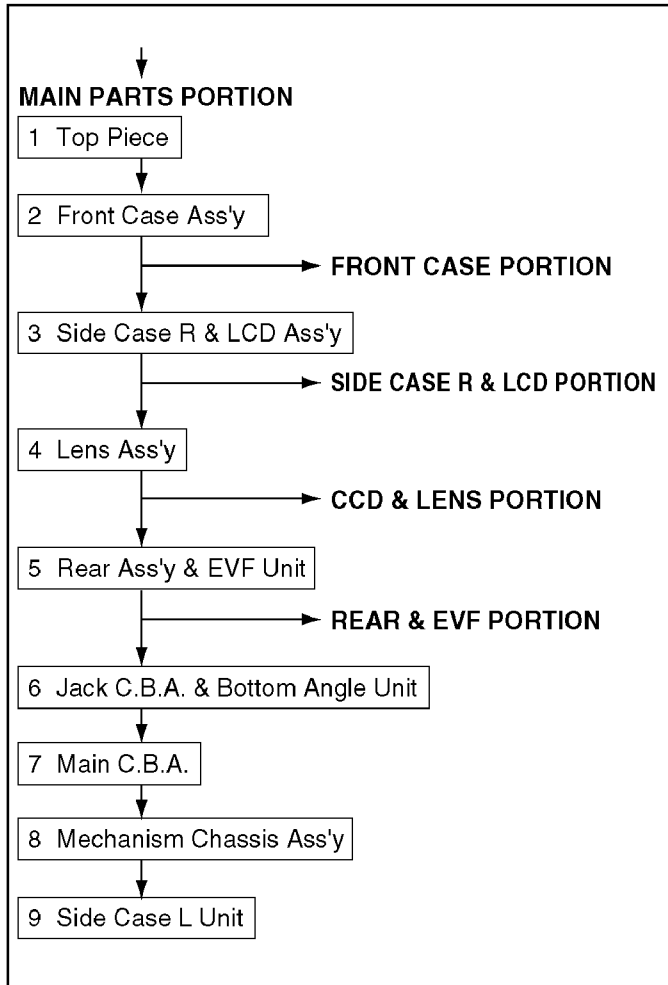


Fig. D1

**Note :**

1. When removing the cabinet, work with care so as not to break the Locking Tabs.
2. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
3. When reinstalling, ensure that the connectors are connected and electrical components have not been damaged.
4. Do not supply power to the unit during disassembly and reassembly.

## 7.1.2. Disassembly Method

### MAIN PARTS PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	③	Top Piece	①	2⑤24, 3(L-1)	1
2	-	Front Case Ass'y	①	3⑤24, ⑤31, ⑤32, 2⑤33, FP6	2
3	-	Side Case R & LCD Ass'y	①	3⑤24, 3⑤32, FP8, FP11 or FP12 (For model without SD Slot)	3
4	-	Lens Ass'y	①	2⑤24, FP301, FP701	4
5	-	Rear Ass'y & EVFUnit	①	④05, 4⑤24, ⑤24 (For model with S-VIDEO) FP9, FP1201	5
6	④0	Jack C.B.A.	①	⑤31, FP7, FP10 ⑤32	6
	⑦	Bottom Angle Unit			
7	⑩	Main C.B.A.	①	(L-2), FP1, FP2, FP3, FP4, FP5	7
8	-	Mechanism Chassis Ass'y	①	④56, (L-3) 3④13	8
	①	Mecha Base Plate Unit			
9	②	Side Case L Unit	①	-----	-

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

#### How to read chart shown above:


- A: Order of Procedure steps.  
When reassembling, perform steps(s) in reverse order.
- B: Ref No.
- C: Part to be removed or installed.
- D: Section No.
- E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.  
3④04 = 3 Screws ④04, 2(L-1) = 2 Looking Tabs (L-1)
- F: Refer to "Notes in chart."

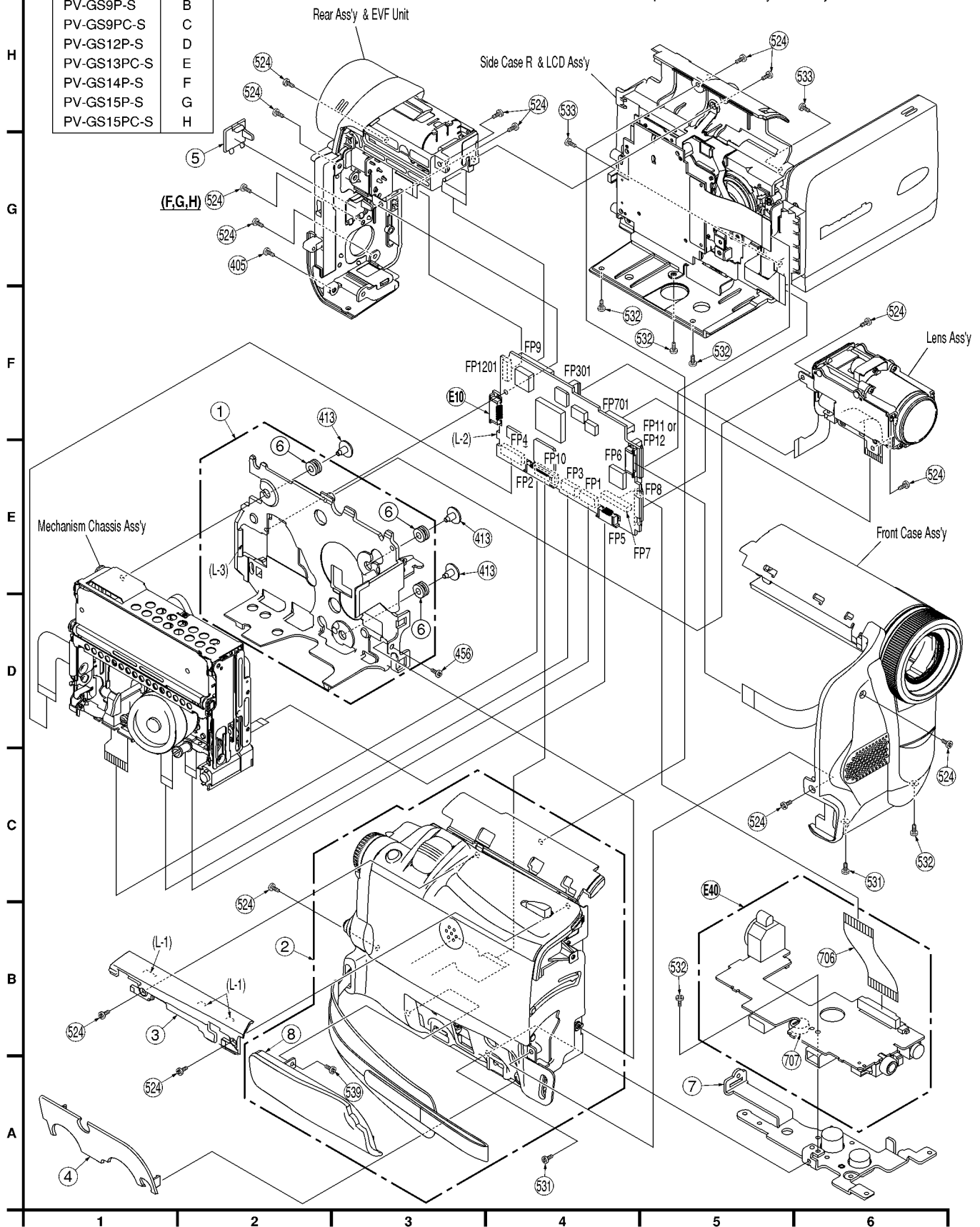
# 1 MAIN PARTS SECTION

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

**Note:**

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



**FRONT CASE PORTION**

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑤③	Decoration Label	②	-----	9
2	⑤②	Top Cover Unit	②	2⑤②④, (L-1)	9
3	⑤③①	Front C.B.A.	②	4⑤②④	10
4	⑤⑤	(For model with Light) Four Eyes Lens	②	-----	10
5	⑤①	Front Unit	②	-----	-

↑  
A↑  
B↑  
C↑  
D↑  
E↑  
F**How to read chart shown above:**

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.

D: Section No.


E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

3④④ = 3 Screws ④④, 2(L-1) = 2 Looking Tabs (L-1)

F: Refer to "Notes in chart."

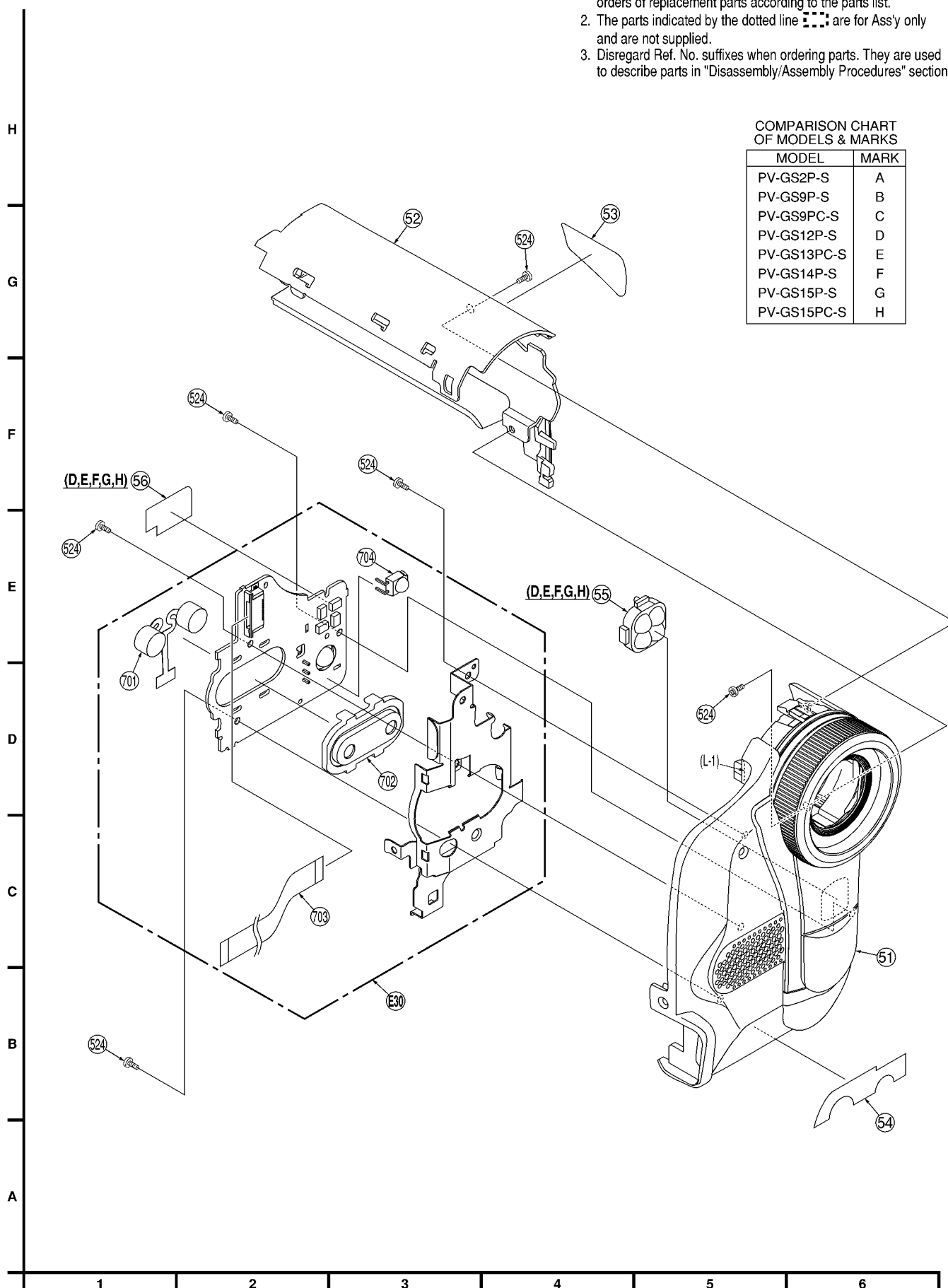
## ② FRONT CASE SECTION

### Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H





**SIDE CASE R & LCD PORTION**

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	③①	Side Case R Unit	③	④②, ④⑤⑦	11
2	③③	LCD Case A Unit	③	2⑤③⑦, 8(L-1)	-
3	③②	Shaft Case Unit	③	FP8001	11
4	⑤⑤①	LCD C.B.A.	③	⑤③③, 3(L-2), FP8002	12
5	-	LCD Panel Ass'y	③	4(L-3)	12
6	③⑤	Panel Shield Case Unit	③	2(L-4)	12
	③④	LCD Case B			

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	④②	LCD Panel	③	-----	13
2	③⑨	Reflect Sheet	③	-----	13
3	③⑦	Lead Light Panel Unit	③	-----	13
4	③⑧	Diffusion Sheet	③	-----	13
5	④①	BEF Sheet	③	-----	13
6	④①	DBEF Sheet	③	-----	13
7	③⑥	Panel Holder Unit	③	-----	13

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

**How to read chart shown above:**

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.

D: Section No.


E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

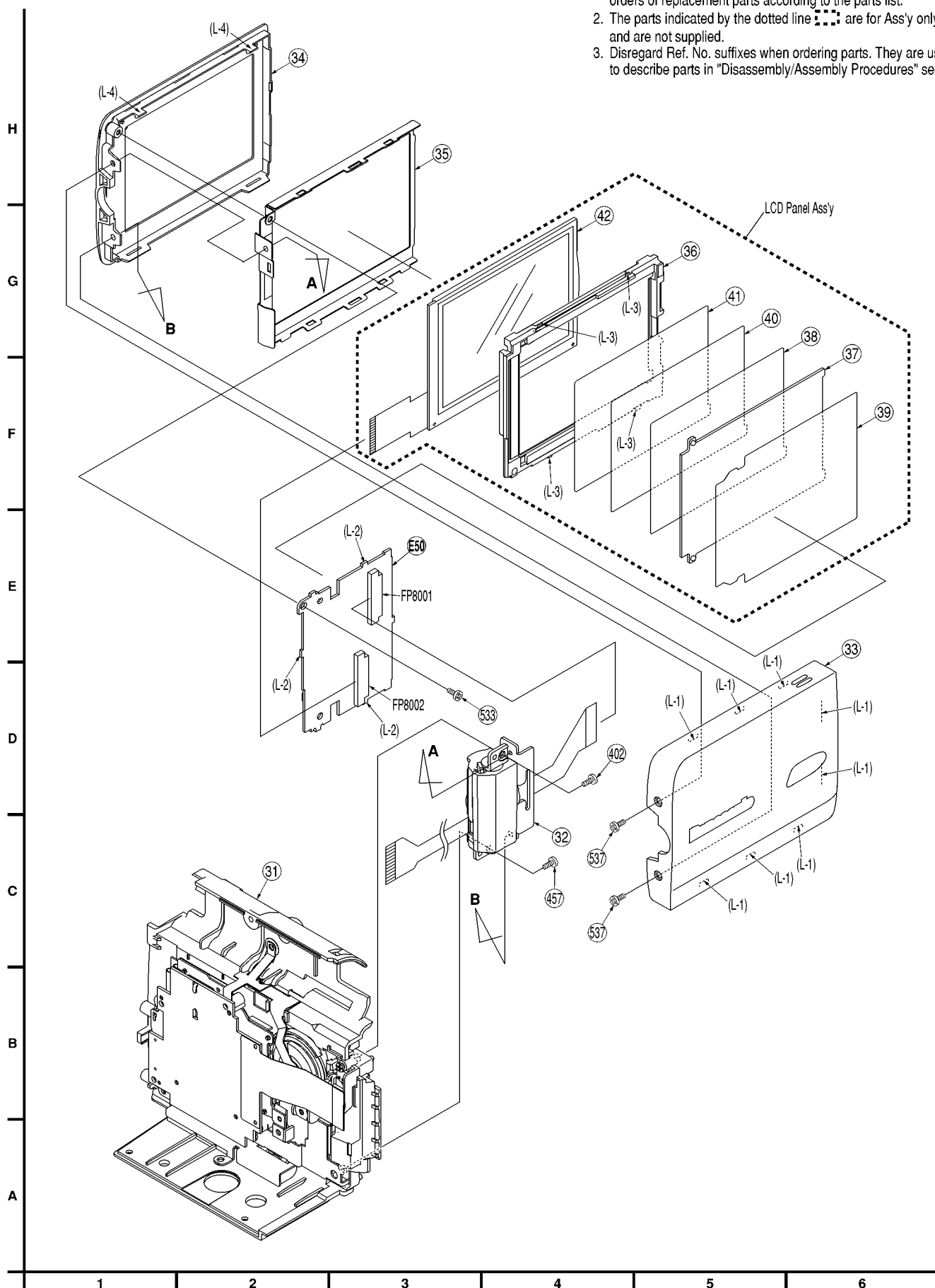
3④② = 3 Screws ④②, 2(L-1) = 2 Looking Tabs (L-1)

F: Refer to "Notes in chart."

### ③ SIDE CASE R AND LCD SECTION

**Note:**

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



**CCD & LENS PORTION**

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑥⑥①	CCD C.B.A.	4	2⑤③⑥	14
2	⑥④	Filter Rubber	4	-----	14
3	⑥③	Optical Filter	4	-----	14
4	⑥②	Filter Holder	4	-----	14
↑ A	↑ B	↑ C	↑ D	↑ E	↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑥⑤	Zoom Motor Unit	4	2⑤③⑥, Unsolder	15
2	⑥⑥	Focus Motor Unit	4	2⑤③⑥, Unsolder	15
↑ A	↑ B	↑ C	↑ D	↑ E	↑ F

**How to read chart shown above:**

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.

D: Section No.


E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

3④④ = 3 Screws ④④, 2(L-1) = 2 Looking Tabs (L-1)

F: Refer to "Notes in chart."



## 4 CCD AND LENS SECTION

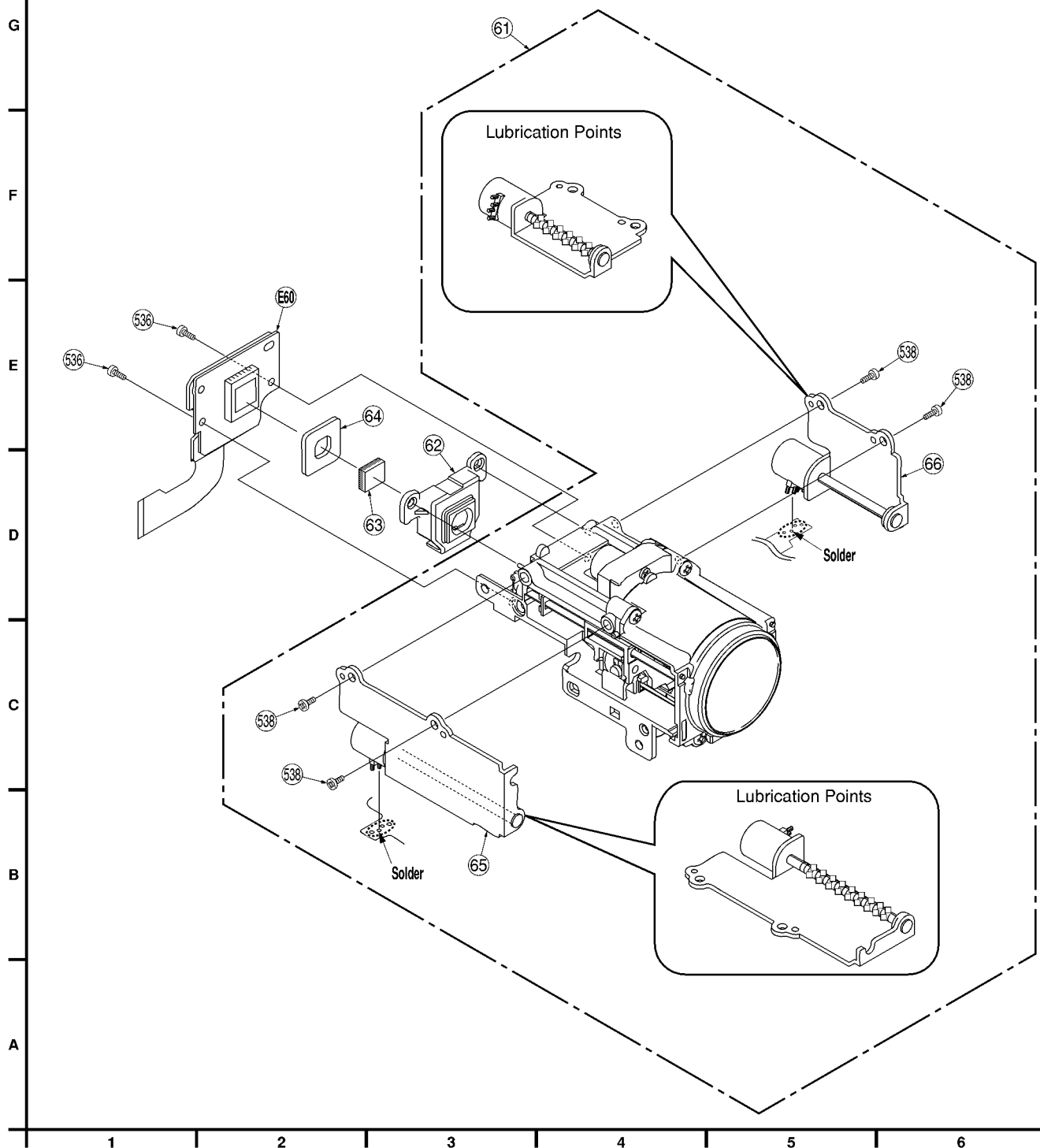
### Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.

### LUBRICATION POINTS

When the marked parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
 	Grease	Available from Factory	LSZG0030



**REAR & EVF PORTION**

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	②①	Rear C.B.A.	⑤	2⑤②④	-
2	①②	EVF Unit	⑤	2④⑤⑥	16

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	①⑥	EVF Slide Piece	⑤	2⑤③②	17
2	①③ ①⑤	EVF Base Frame EVF Earth Plate	⑤	2(L-1)	17
3	①④	EVF Spring	⑤	⑤③②, (L-2)	18
4	①⑦	EVF F.P.C.	⑤	FP951	18

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	①⑧ ①⑨	Eye Cap Eye Cap Piece	⑤	2⑤②④	19
2	②③	EVF Lens Unit	⑤	-----	20
3	②②	Eye Sight Lever	⑤	-----	20

↑ A    ↑ B    ↑ C    ↑ D    ↑ E    ↑ F

**How to read chart shown above:**

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.

D: Section No.


E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

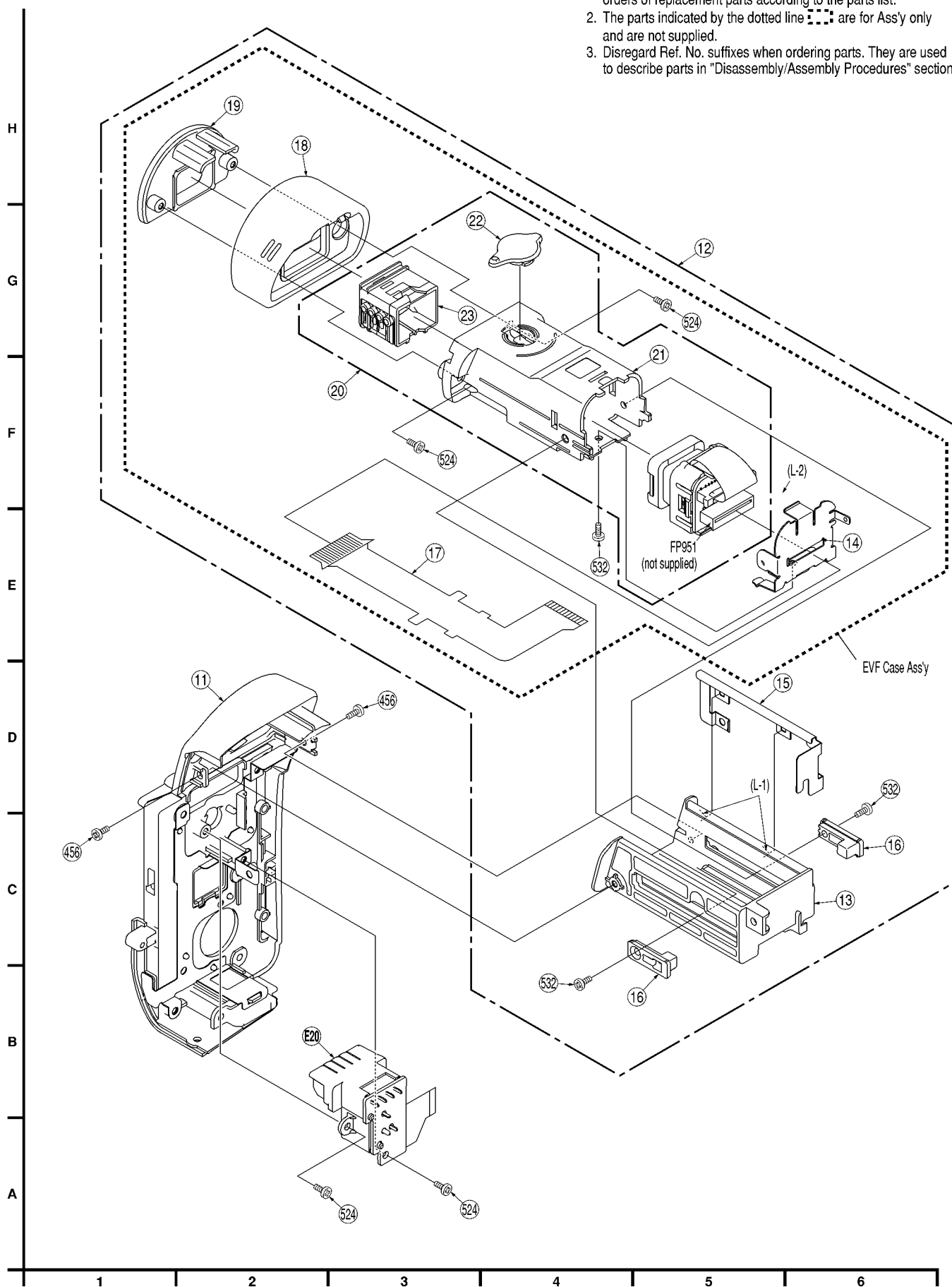
3④④ = 3 Screws ④④, 2(L-1) = 2 Looking Tabs (L-1)

F: Refer to "Notes in chart."

## ⑤ REAR AND EVF SECTION

**Note:**

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



## Notes in chart

### 1. Removal of Top Piece

- 1) Open the Cassette Cover and remove the 2 Screws (524).
- 2) Release the Locking Tab (L-1a) at first while pushing up the corner of the Top Piece carefully. Then, release the Locking Tabs (L-1b) and (L-1c) to remove it.

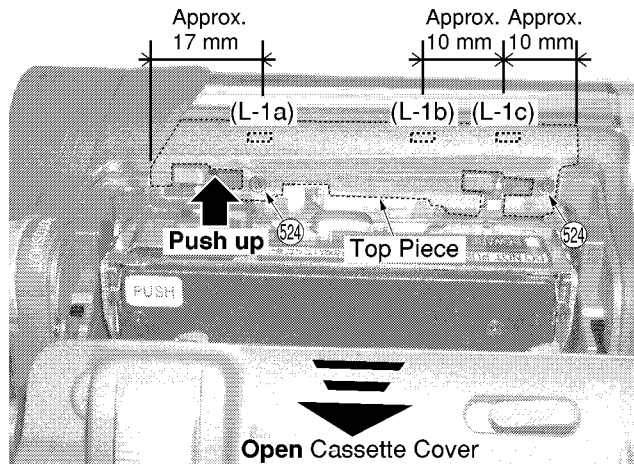


Fig. D2

### 2. Removal of Front Case Ass'y

- 1) Confirm the Hand Strap has released.
- 2) Open the LCD and remove the 7 Screws (524, 531, 532, 533).
- 3) Pull and slide the Front Case Ass'y carefully so as not to damage the inner F.F.C. Then, disconnect the Connector FP6 from the Main C.B.A.

#### Installation of Front Case Ass'y

Set the Front Case Ass'y, and connect the Connector FP6. Then, slide to install firmly the Front Case Ass'y while shaping the F.F.C.

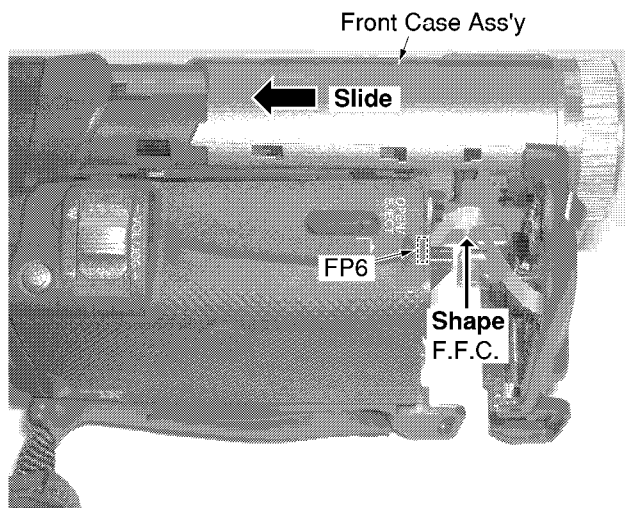
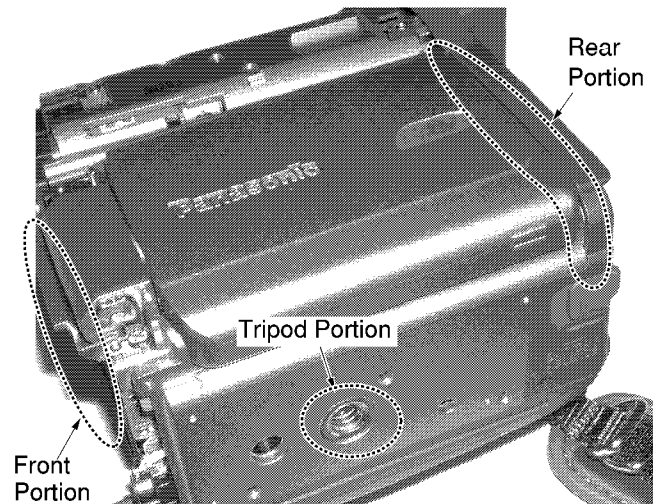
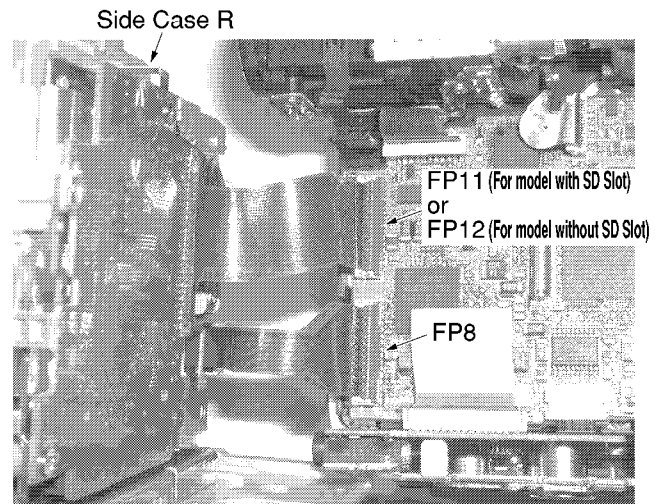


Fig. D3

### 3. Installation of Side Case R & LCD Ass'y

- 1) Connect the Connectors FP8 and FP11 (For model with SD Slot) or FP12 (For model without SD Slot) taking care not to "POSITION" the F.P.C.s to Front Portion.



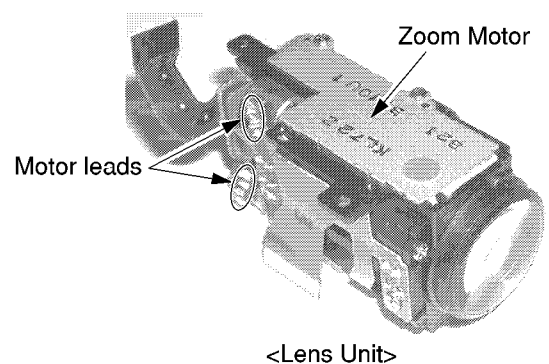
&lt;Bottom View&gt;

- 2) After installing, secure Tripod Portion and Rear Portion.

Fig. D4

### 4. Removal/Installation of Lens Unit

Take care not to damage the motor leads of the Lens Unit



&lt;Lens Unit&gt;

when handling.

Fig. D5

## 5. Removal of Rear Ass'y & EVF Unit

Remove both the Rear Ass'y and the EVF Unit After removing the 6 Screws (405, 524) **(For model with S-VIDEO)** or the 5 Screws (405, 524) **(For model without S-VIDEO)**.

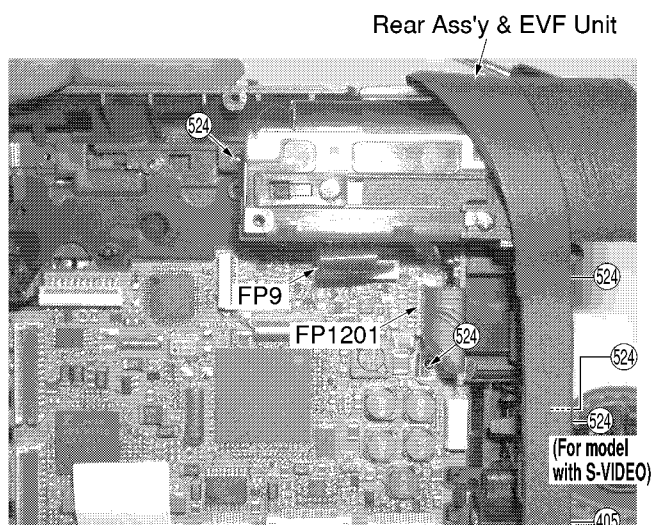


Fig. D6-1

## Installation of Rear Ass'y & EVF Unit

Insert Rib A of the Rear Ass'y into the groove of Side Case L Unit, then insert Projection B of the Rear Ass'y firmly.

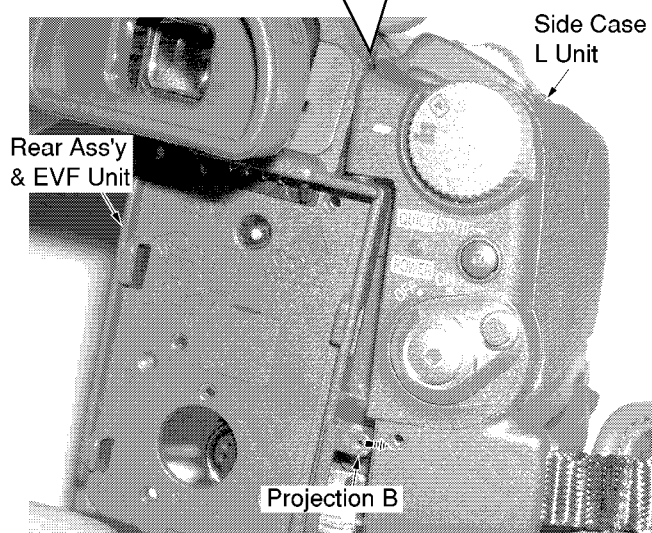
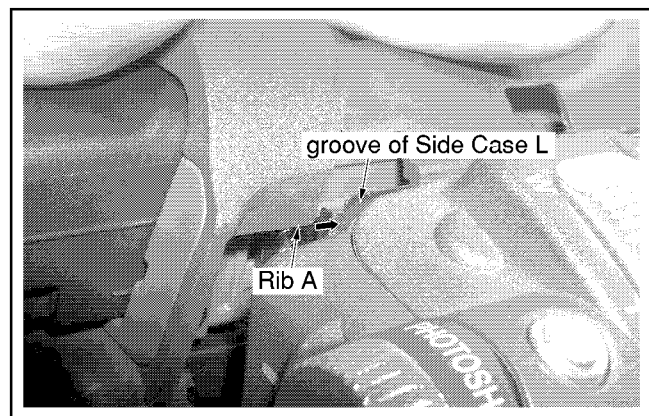


Fig. D6-2

## 6. Removal of Jack C.B.A. & Bottom Angle Unit

Be sure to remove (or install) it with the Jack Cover open and take care not to damage the F.P.C.s.

- 1) Remove the Screw (531) and disconnect the Connectors FP7 and FP10.
- 2) Remove both the Jack C.B.A. and the Bottom Angle Unit carefully bending the Zoom Switch F.P.C. without creasing it.

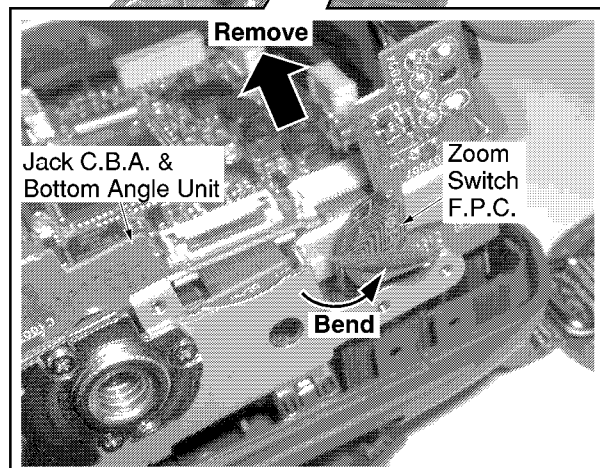
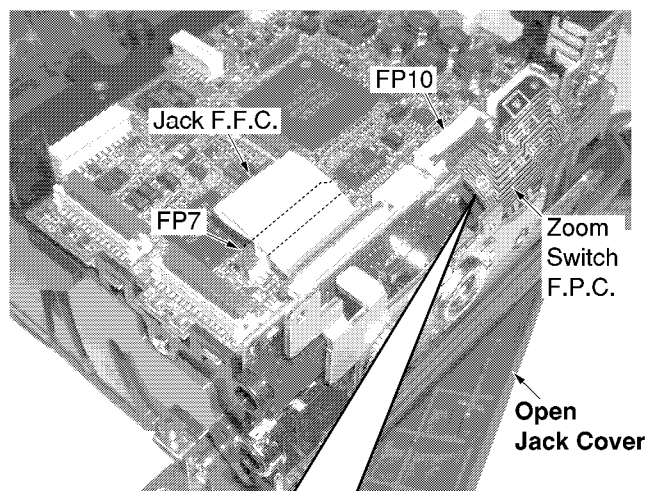


Fig. D7



## 7. Installation of Main C.B.A.

Take care not to damage the F.P.C.s.

- 1) Connect the Flexible Cables to the connectors on the Main C.B.A., verifying that the direction of the Flexible Cables is correct. Refer to "REMOVAL/INSTALLATION OF F.P.C. FROM NON ZIF (Zero Insertion Force) CONNECTOR."
- 2) After installing the Main C.B.A., confirm the F.P.C.s are positioned as shown.

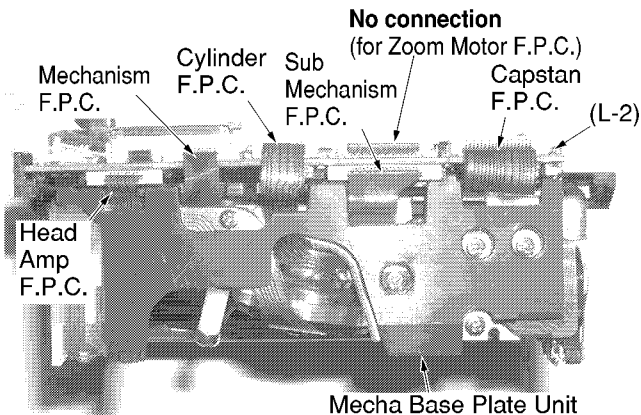


Fig. D8

## 8. Removal of Mechanism Chassis Ass'y & Mecha Base Plate Unit

Take care not to damage the F.P.C.s.

If necessary, these parts can be removed from the Side Case L Unit with the Main C.B.A. attached.

- 1) Remove the Screw (456), and release the Locking Tab (L-3).
- 2) Remove both the Mechanism Chassis Ass'y and the Mecha Base Plate Unit taking care not to damage the F.P.C. while passing them through the rib of the Side Case L Unit.

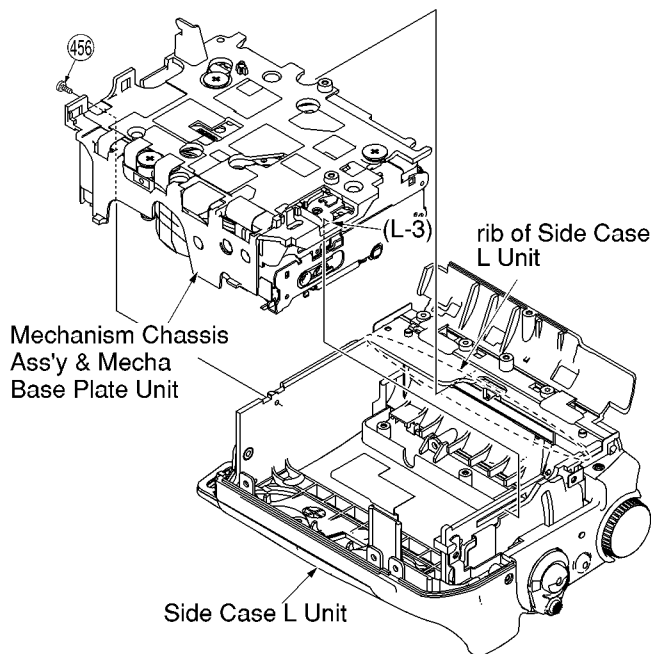


Fig. D9-1

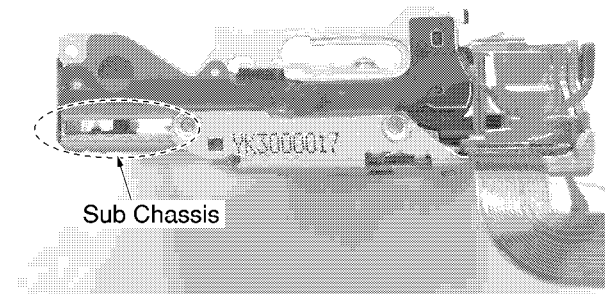
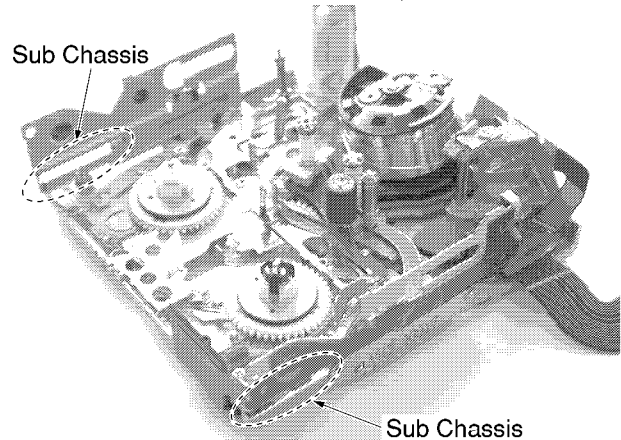
## Replacement of Mechanism Chassis Ass'y

When replacing the Main Chassis Unit or the Cylinder Unit, be sure to perform the Envelope Output Adjustment. Refer to "ENVELOPE OUTPUT ADJUSTMENT" in MECHANICAL ADJUSTMENT.

## Handling Caution of Mechanism Chassis Ass'y

When servicing the Mechanism Chassis Ass'y without the Cassette Up Unit, do not handle the Sub Chassis of the Mechanism Chassis Ass'y.

Mechanism Chassis Ass'y  
(without Cassette Up Unit)



<Side View>

Fig. D9-2

## 9. Removal of Top Cover Unit

When removing the Top Cover Unit, peel the Decoration Label on the Front Case Ass'y to access the Screw (524).

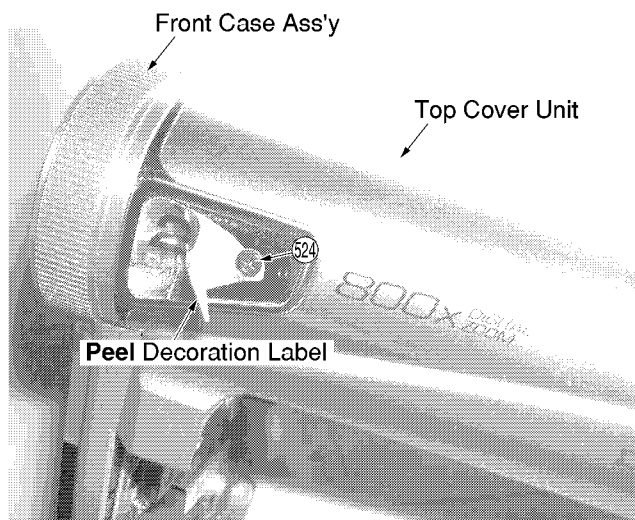


Fig. D10

## Installation of Top Cover Unit

- 1) Set the Top Cover Unit so that Portion A is inserted into the gap of the Top Cover Unit.
- 2) Secure the Locking Tab (L-1) and set the rib to the slot of the Top Cover Unit.
- 3) Tighten the 2 Screw (524), then put a new Decoration Label.

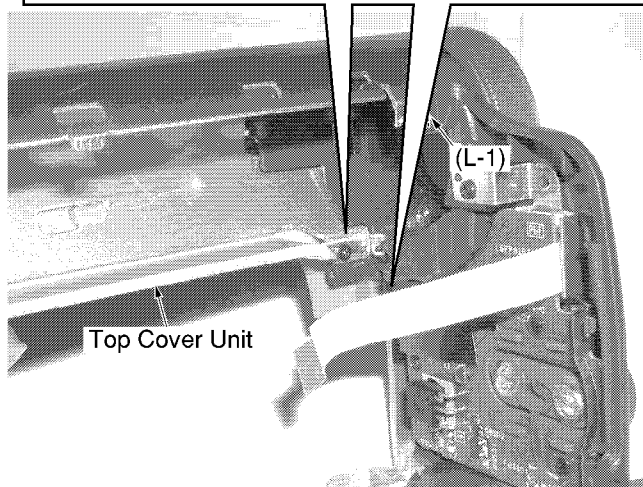
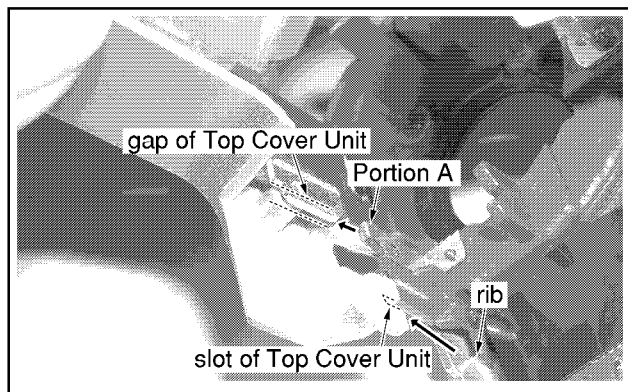


Fig. D11

## 10. Installation of Front C.B.A.

### (For model without Light)

Install the Front C.B.A. into the Front Case with 3 bosses

### (For model with Light)

Install the Four Eye Lens into the Front Case, and the Front C.B.A. with 5 bosses. Then, put the Light Shield Sheet in place on the Front C.B.A.

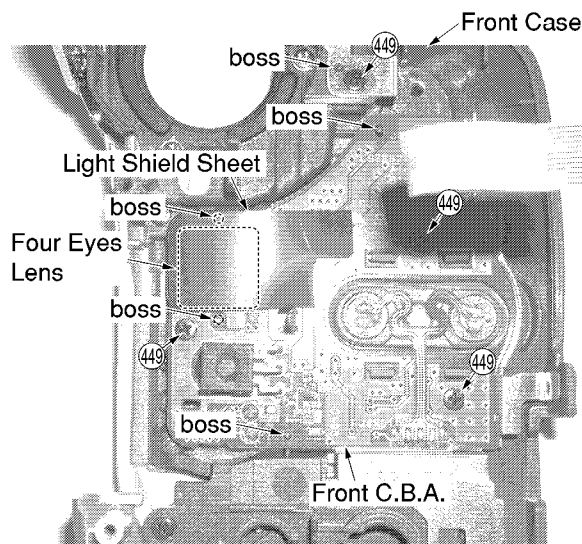


Fig. D12

### 11. Removal of Side Case R Unit

Open and rotate the LCD to access the 2 Screws (402, 457) as shown below, then remove it.

### Installation of Side Case R Unit

When installing, pay attention to the direction of the Shaft Case Unit. So, be sure to install the LCD into the Side Case R Unit with the LCD open as shown. Otherwise, the LCD open/close switch on the Side Case R Unit will be damaged.

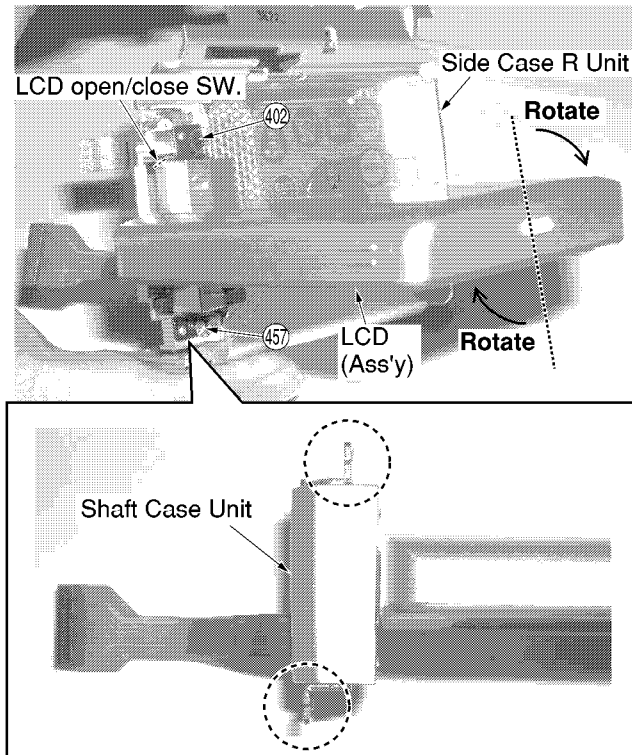


Fig. D13

### 12. Installation of LCD C.B.A., LCD Panel Ass'y, Panel Shield Case Unit, LCD Case B

Install in order shown below.

- 1) Install the Panel Shield Case Unit into the LCD Case B with the 2 Locking Tabs (L-4).
- 2) Install the LCD Panel Ass'y onto the Panel Shield Case Unit with the 4 Locking Tabs (L-3) while bending at the base of the LCD F.P.C. so as not to damage it.
- 3) Install the LCD C.B.A. onto the LCD Panel Ass'y by first inserting the Locking Tab (L-2a) into the slot of the Panel Shield Case Unit. Then, secure the 2 Locking Tabs (L-2b).
- 4) Tighten the Screw (533) while keeping the LCD C.B.A. pressed toward the right. Then, connect the Connector FP8002.

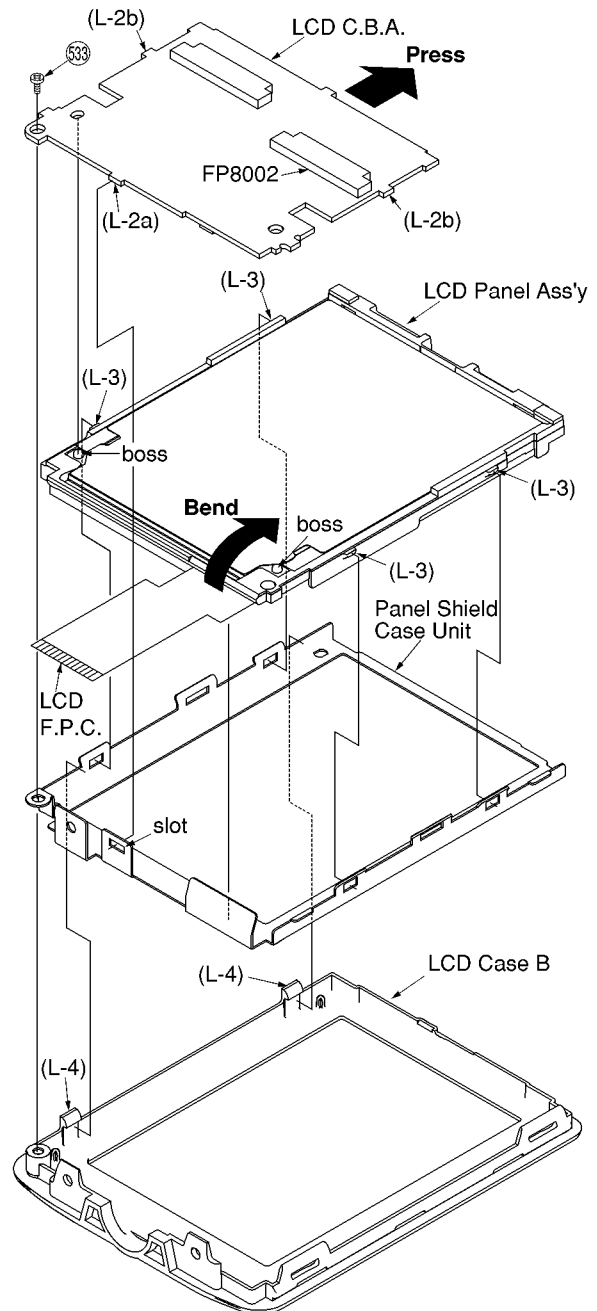


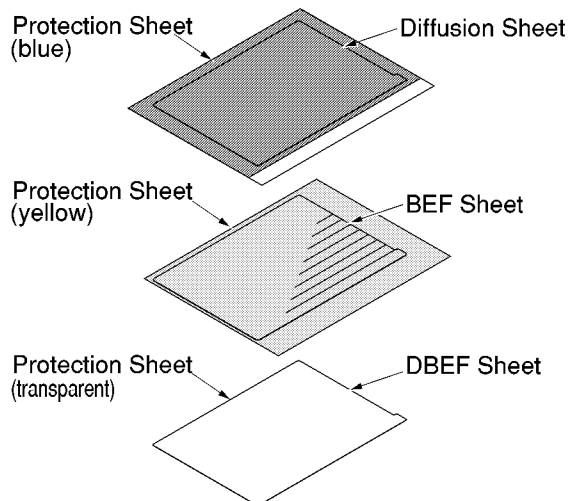
Fig. D14

### 13. Installation of LCD Panel, Reflect Sheet, Lead Light Panel, Diffusion Sheet, BEF Sheet, DBEF Sheet, Panel Holder Unit

- a. When replacing the LCD Panel, the Diffusion Sheet, the BEF Sheet and the DBEF Sheet, make sure to remove the Protection Sheets.

**To distinguish the sheets with Protection Sheet attached:**

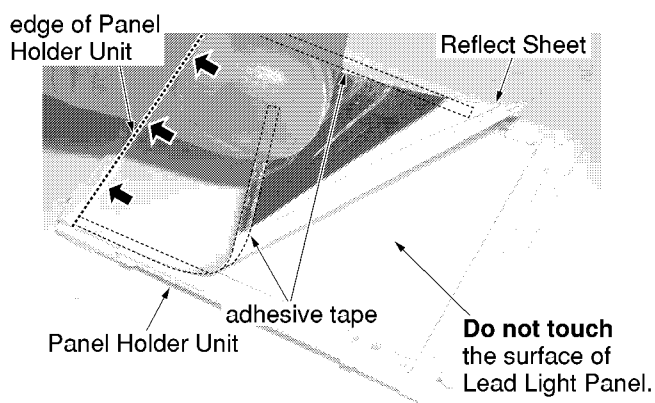
- A blue Protection Sheet is affixed to both faces of the Diffusion Sheet.
- A yellow Protection Sheet is affixed to both faces of the BEF Sheet.
- A transparent Protection Sheet is affixed to both faces of the DBEF Sheet.



- b. Use extreme care when handling the LCD Panel, the Reflect Sheet, the Lead Light Panel, the Diffusion Sheet, the BEF Sheet and the DBEF Sheet to avoid damage, dust, and spots (especially fingerprints, etc.)

Install in order shown below.

- 1) Install the DBEF Sheet, BEF Sheet and Diffusion Sheet while inserting the corners of the sheets to the slot of the Panel Holder Unit in order.
- 2) Install the Lead Light Panel while inserting the corners to the slots of the Panel Holder Unit. Then, hold down the bosses (column) on the Lead Light Panel securely.
- 3) Align the Reflect Sheet with the edge of the Panel Holder Unit, and install it using adhesive tape on the



Reflect Sheet.

Fig. D15-1

- 4) Install the LCD Panel with adhesive tape so that the cross marks are positioned in the center of the holes of the Panel Holder Unit.

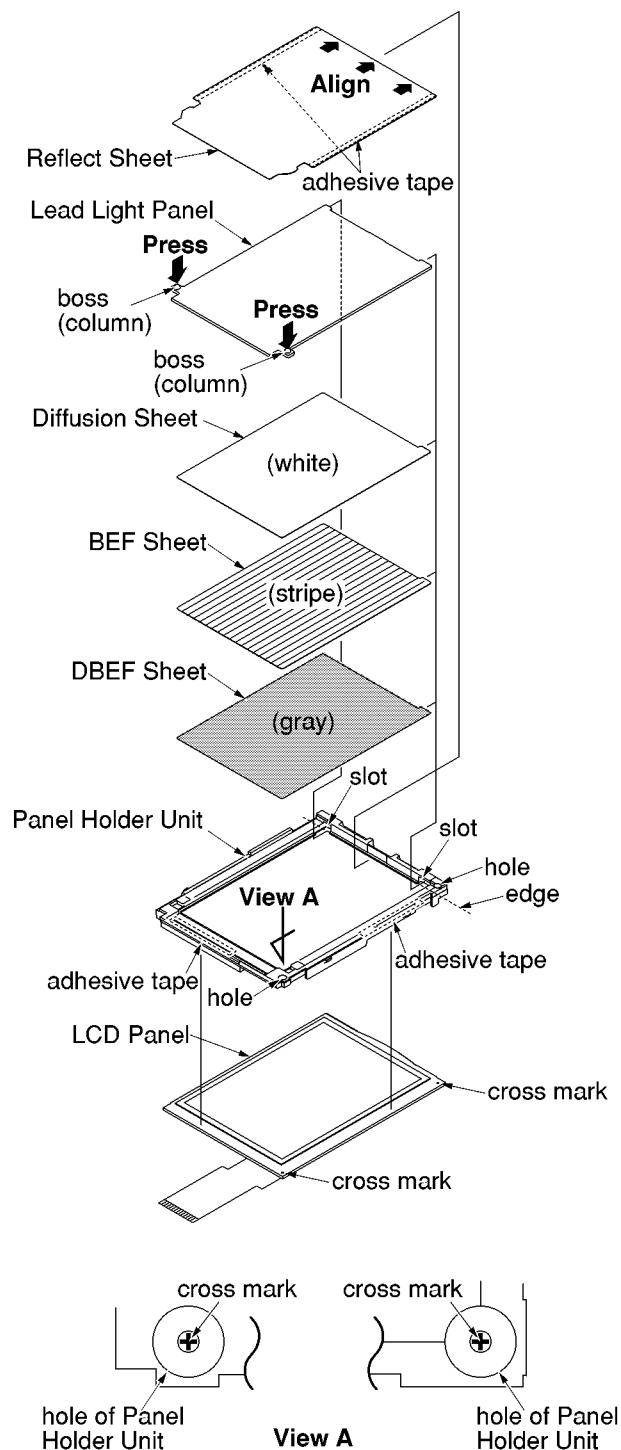


Fig. D15-2

#### 14. Removal of CCD C.B.A., Filter Rubber, Optical Filter, Filter Holder

##### CAUTION:

- 1) When removing the CCD C.B.A., take care that the Optical Filter does not fall out.
- 2) Take extreme caution when removing the CCD C.B.A. as it is easily damaged by static electricity. Use a Wrist Strap while removing and installing.
- 3) Do not touch the CCD window surface.

#### Installation of CCD C.B.A., Filter Rubber, Optical Filter, Filter Holder

Install in order shown below.

- 1) Install the Filter Holder correctly.
- 2) Install the Optical Filter correctly.  
**Note:** Make sure that no dust gets on the Optical Filter or in the Lens Unit. Clean the Optical Filter with lens cleaning paper dampened with lens cleaner if necessary.
- 3) Install the Filter Rubber on the Optical Filter correctly as shown below.  
**Note:** Make sure that no dust gets on the Filter Rubber.
- 4) Install the CCD C.B.A. into the Lens Unit. Then, tighten the 2 Screws (536).  
**Note:** Do not touch the Lens Surface. Clean the surface with lens cleaning paper dampened with lens cleaner if necessary.

#### 15. Installation of Zoom Motor Unit/Focus Motor Unit

Install the Zoom Motor Unit/Focus Motor Unit so that the Shaft of the Zoom Motor Unit/Focus Motor Unit is set in the Holder.

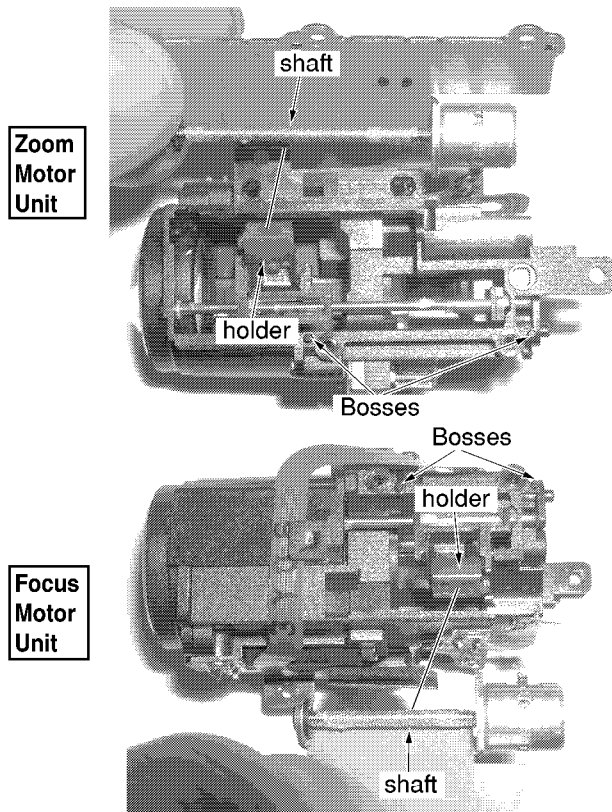


Fig. D16

#### 16. Installation of EVF Unit

- 1) Confirm that the EVF F.P.C. is hooked to the Hooking Portions on the Bottom.
- 2) Install the EVF Unit into the Rear Case Unit while holding the EVF F.P.C. to avoid damage of the EVF F.P.C.

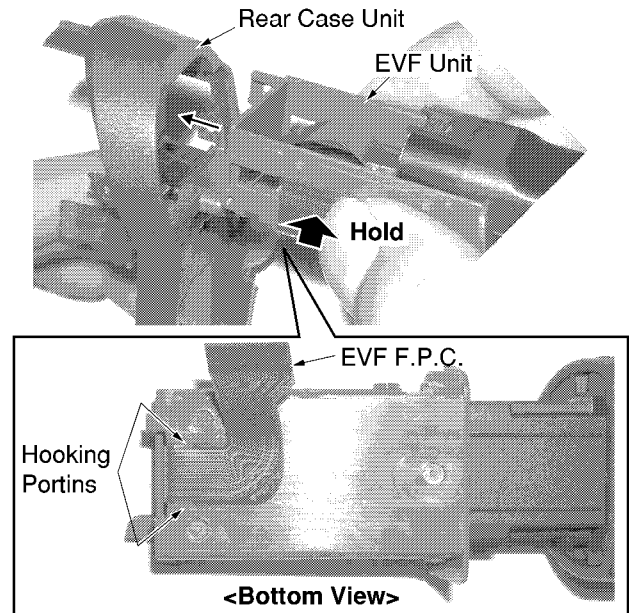


Fig. D17

#### 17. Installation of EVF Slide Piece, EVF Base Frame

- 1) Pass the EVF F.P.C. through the EVF Base Frame hole.
- 2) Install the EVF Slide Pieces into the EVF Base Frame from the both side.
- 3) Slide the EVF Case Ass'y to the end so that the ribs are inserted to the holes of the EVF Slide Pieces.
- 4) Confirm the threaded holes, and tighten the 2 Screws (532).
- 5) After installing, confirm the EVF moves correctly.

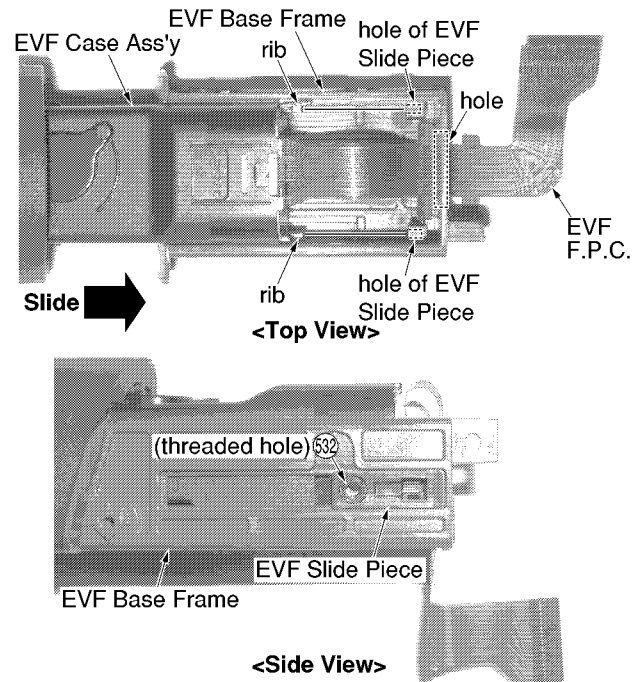


Fig. D18

### 18. Installation of EVF Spring, EVF F.P.C.

- 1) Insert the EVF F.P.C. into the EVF Spring hole paying particular attention to the direction.
- 2) Connect the EVF F.P.C. to Connector FP951.
- 3) Insert the Locking Tab (L-2) at first, then fit the EVF Spring in the EVF Case and tighten the Screw (532).

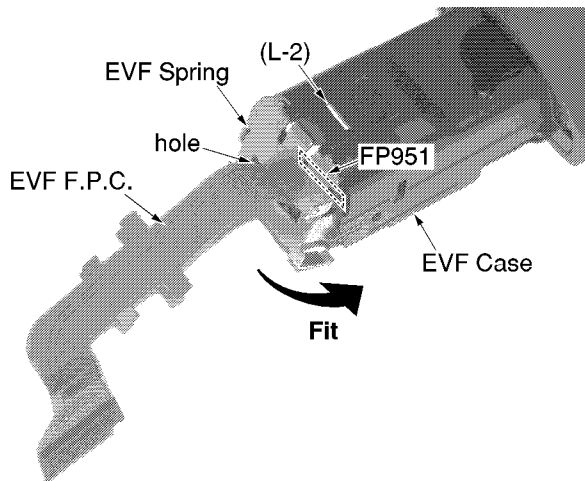


Fig. D19

### 19. Removal of Eye Cap, Eye Cap Piece

Remove both the Eye Cap and the Eye Cap Piece after removing the 2 Screws (524).

### 20. Handling cautions of EVF Lens Unit

Use extreme care when handling the EVF Lens Unit to avoid damage, dust, and spots (especially fingerprints, etc.)

#### Installation of EVF Lens Unit, Eye Sight Lever

- 1) Install the Eye Sight Lever into the EVF Case hole at the direction as shown.
- 2) Install the EVF Lens Unit into the EVF Case while grasping both sides of the springs with tweezers or, etc.
- 3) After installing, confirm the Eye Sight Lever and the EVF Lens Unit work together correctly.

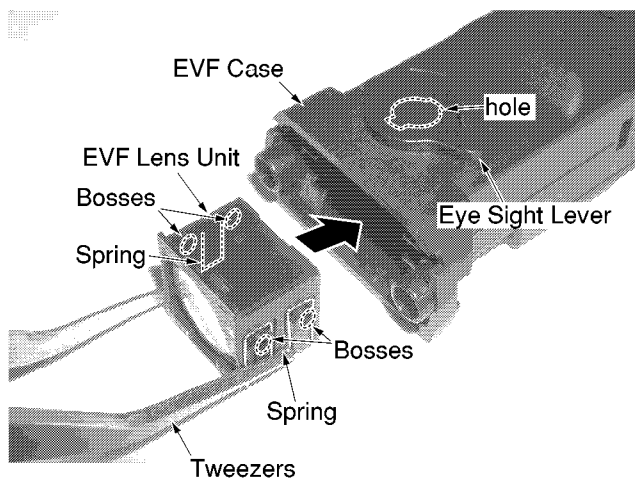


Fig. D20

## 7.2. MECHANISM SECTION

### Flow-Chart for Disassembly Procedures

No.	Item / Part	Fig.	Removal (Screw, Connector, Flex. & Other)
1	Cassette Up Unit	Fig. M1 Fig. M2 Fig. M3 Fig. M4	It makes the mechanism position in Eject condition (For Battery) 3-Screws (A) 3-Tabs
2	Cylinder Unit	Fig. M5 Fig. M6	1-Screw (B) 3-Screw (C) Cylinder Unit

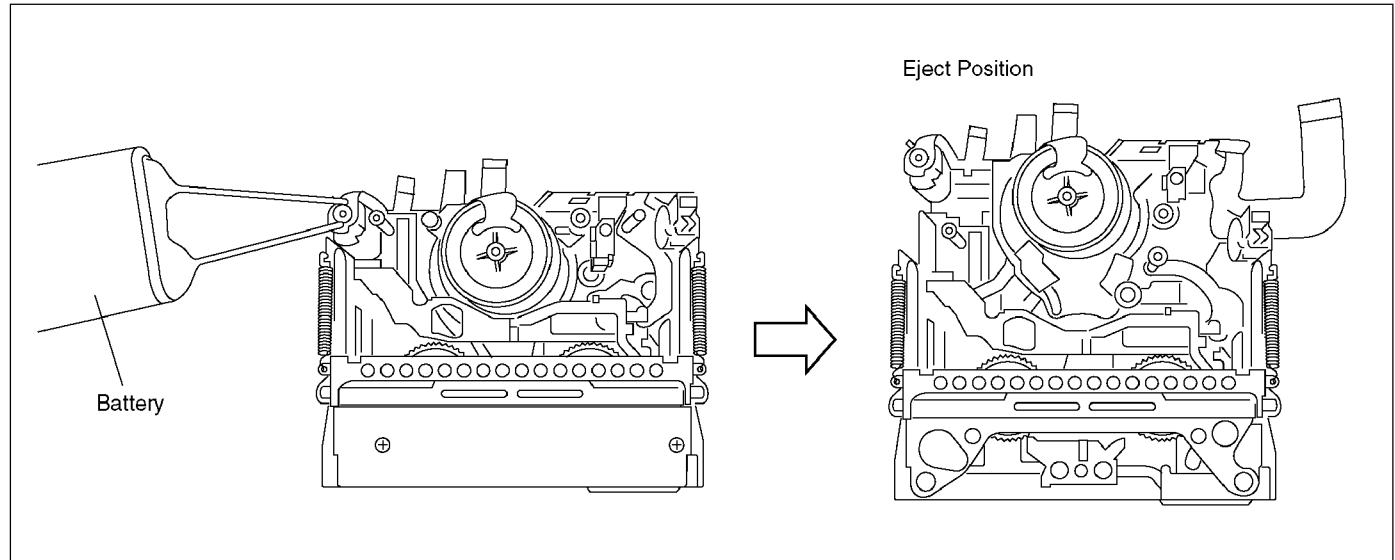


Fig. M1

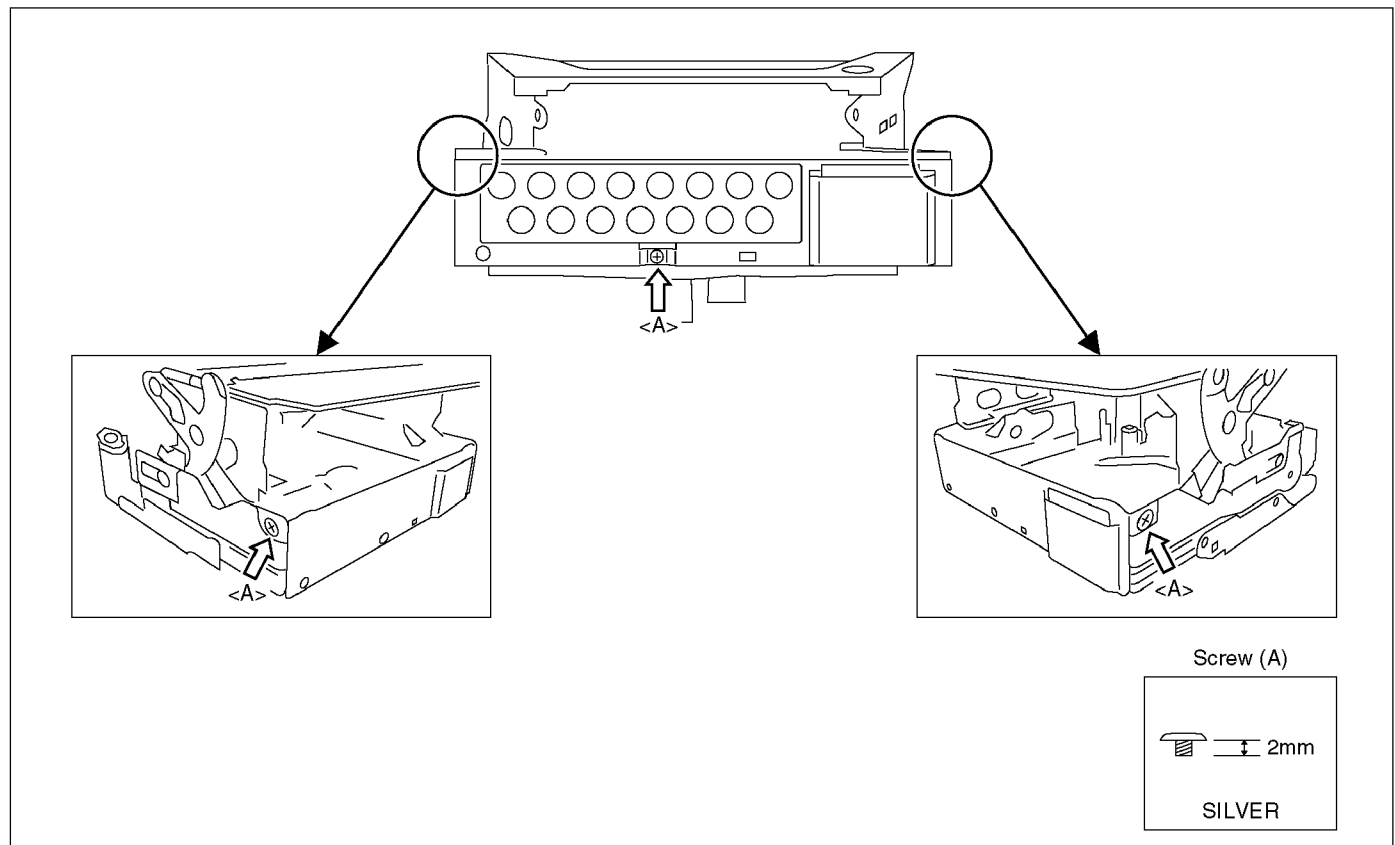


Fig. M2

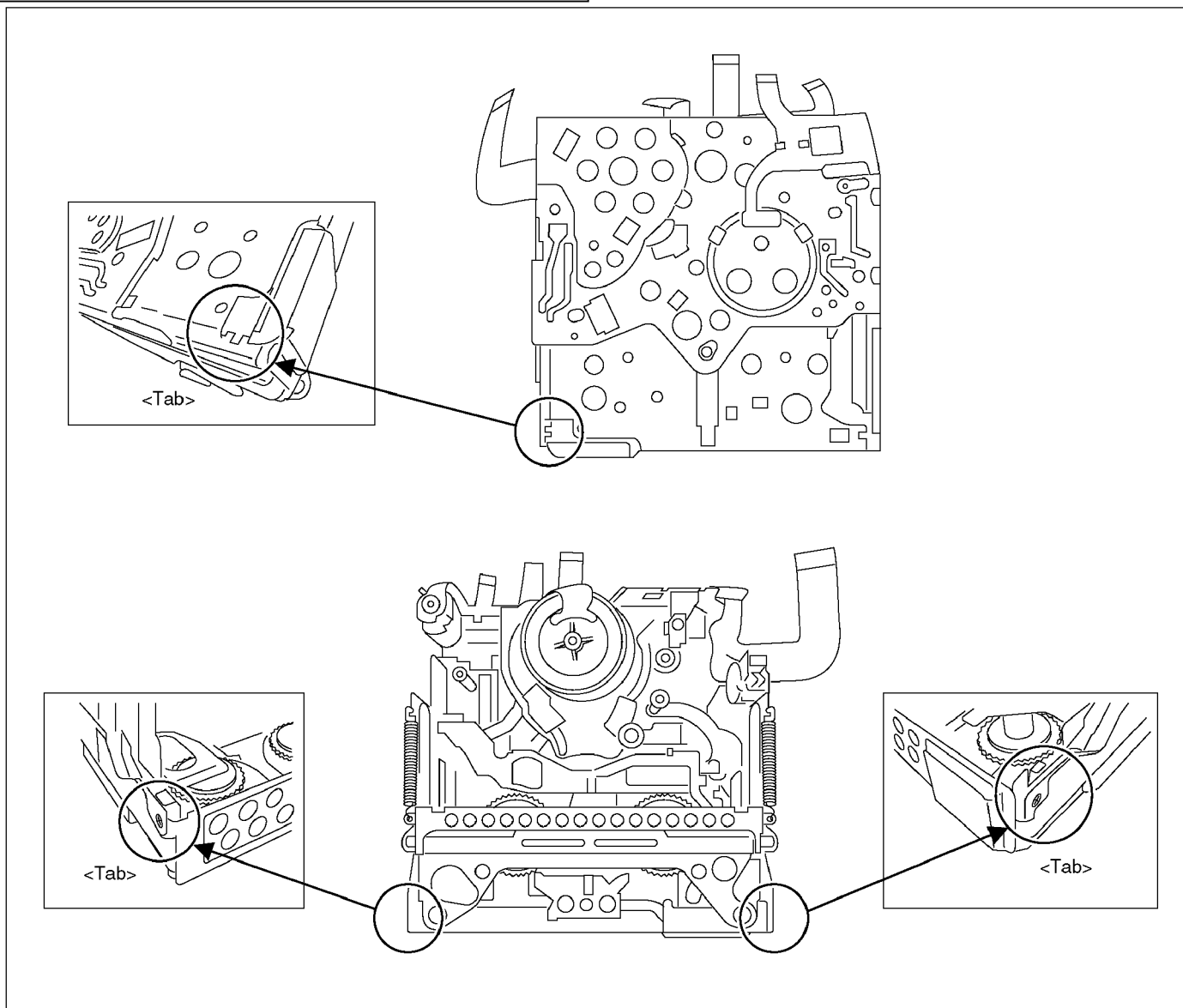
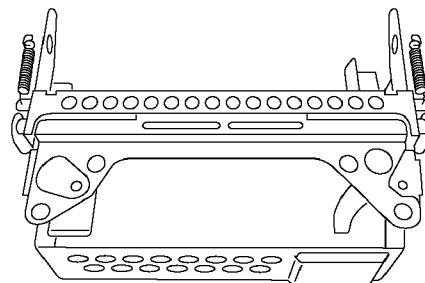
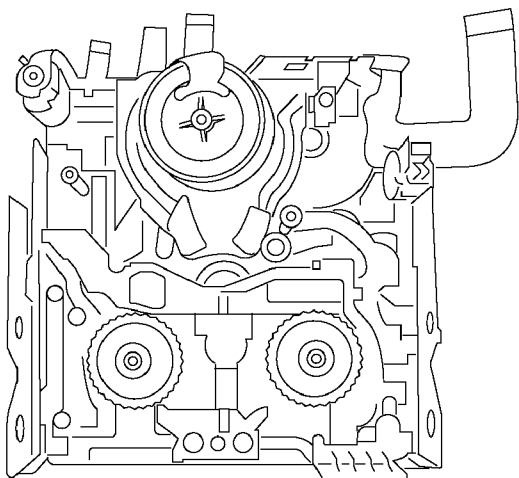
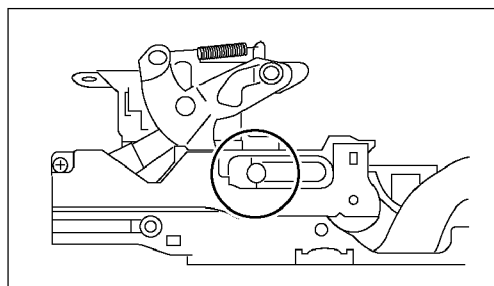
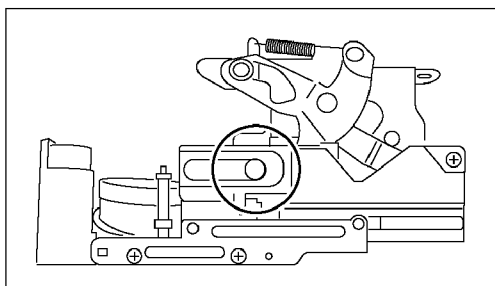


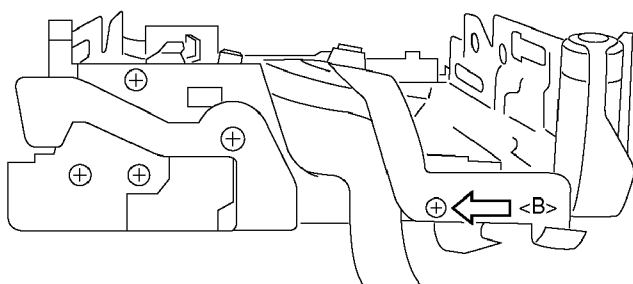
Fig. M3





Cassette Up Unit

Fig. M4



Screw (B)

2mm

SILVER

Fig. M5

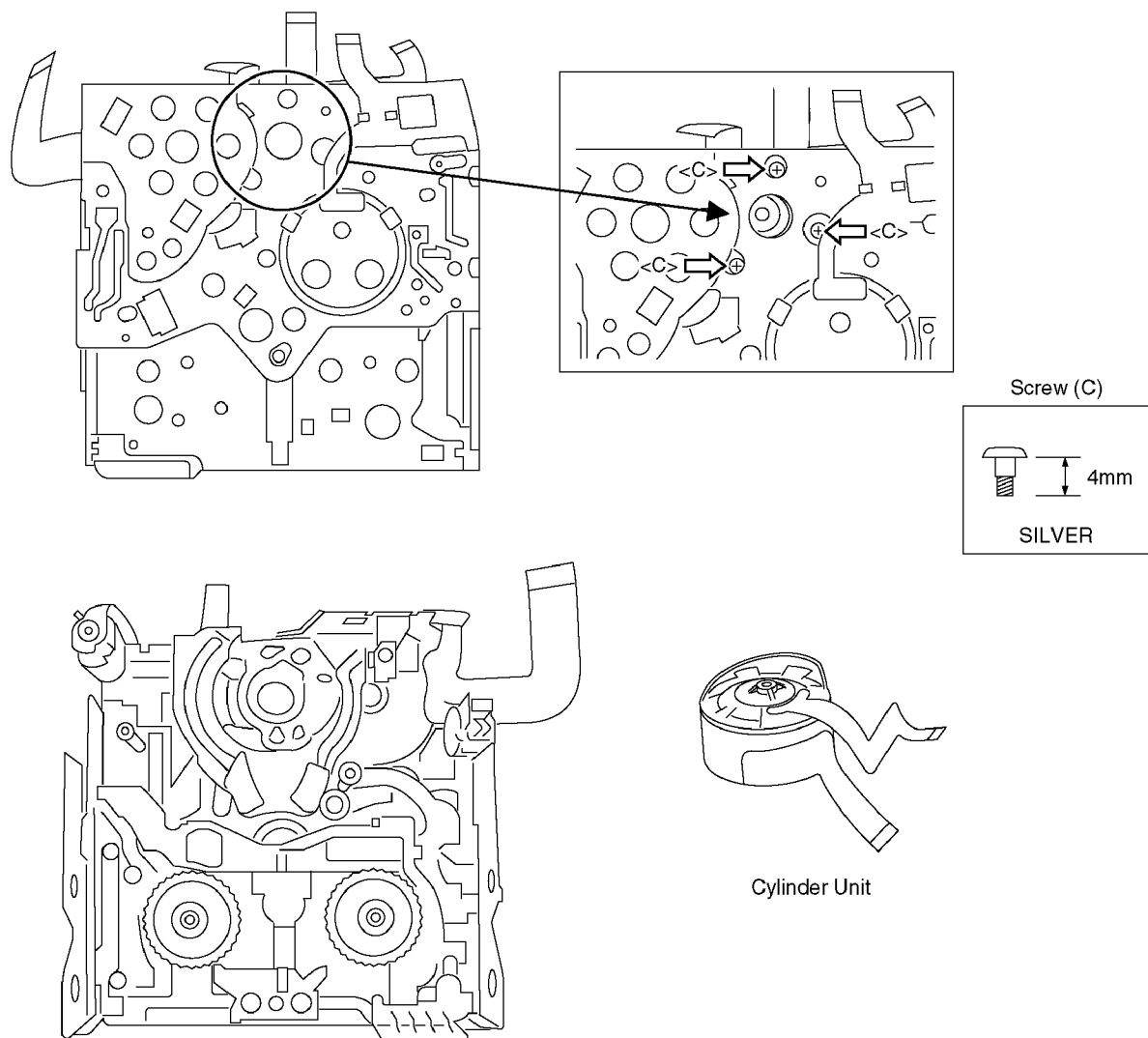
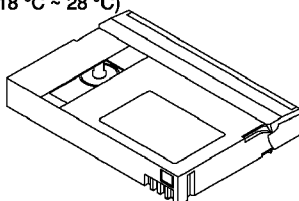
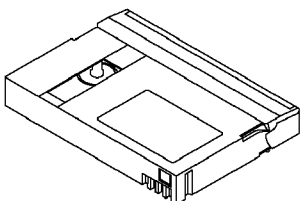
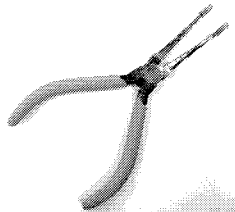
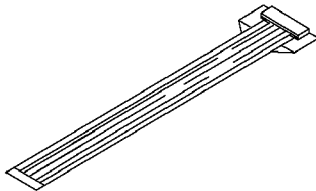

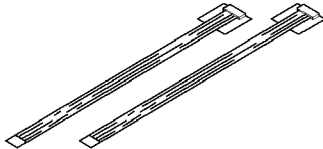
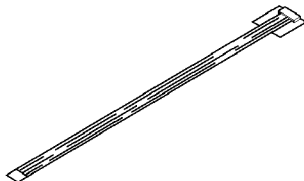
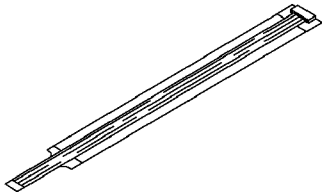
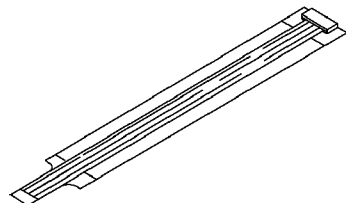
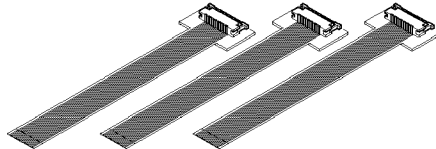
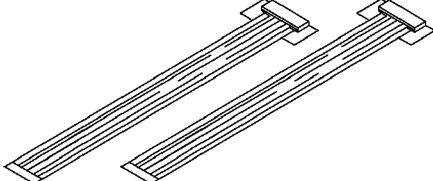
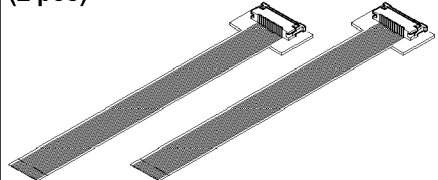
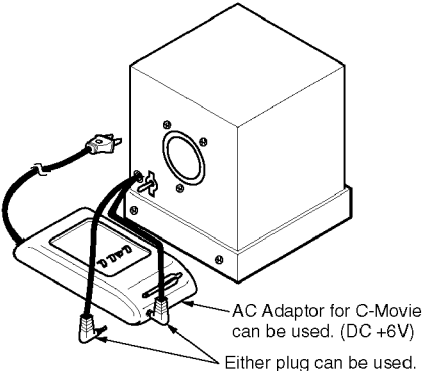
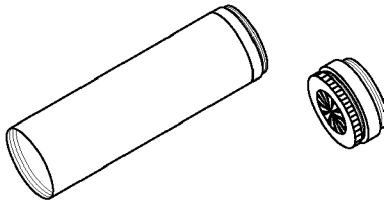


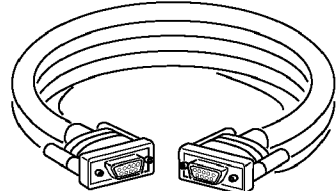

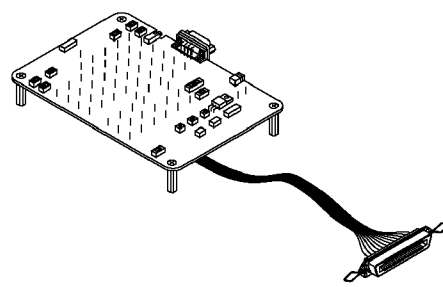
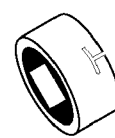
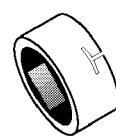
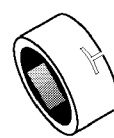

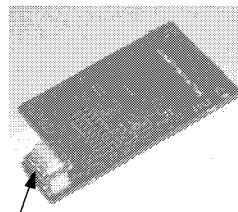
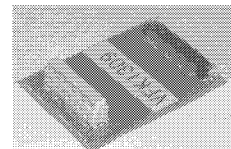
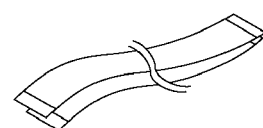


Fig. M6

## 8 ADJUSTMENT PROCEDURES

### 8.1. SERVICE FIXTURES & TOOLS

<b>Color Bar Standard Tape</b> (Keeping condition: Keep at 18 °C ~ 28 °C)	VFM3010EDS	<b>DVC Head Cleaning Tape</b>	VFK1451	<b>Plier for Non ZIF Connector</b> LSVQ0028
				
<b>Extension Cable 28P</b>	VUVS0015	<b>Grease</b>	LSZG0030	<b>Extension Cable 8P (2 pcs)</b> VUVS0019
				
<b>Extension Cable 10P</b>	LSUA0016	<b>Extension Cable 12P</b> This Extension Cable is used for models without SD Slot.	VUVS0007	<b>Extension Cable 14P</b> VFKW0124A
				
<b>Extension Cable 18P (3 pcs)</b>	LSUA0017	<b>Extension Cable 22P (2 pcs)</b>	VUVS0012	<b>Extension Cable 26P (2 pcs)</b> LSUA0021
				
				Either (one) of these Extension Cables is used for models without SD Slot.

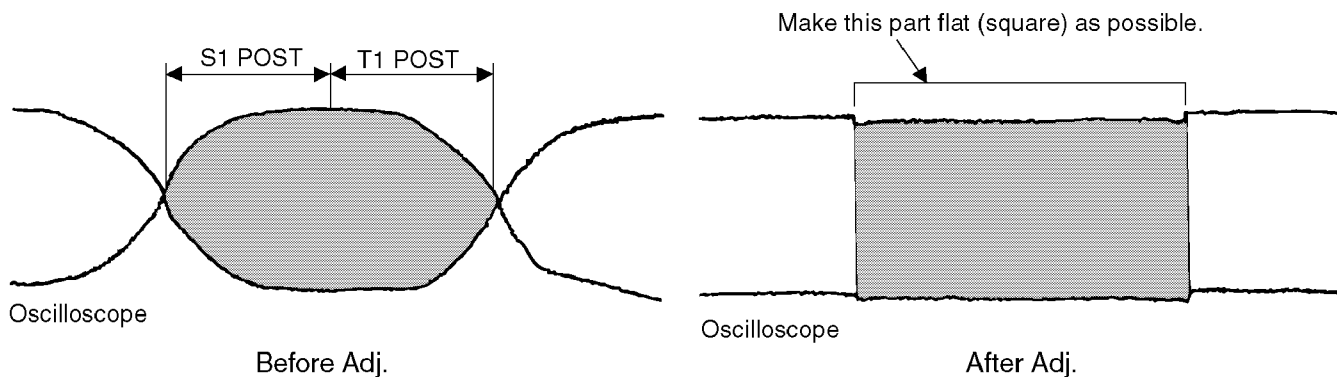
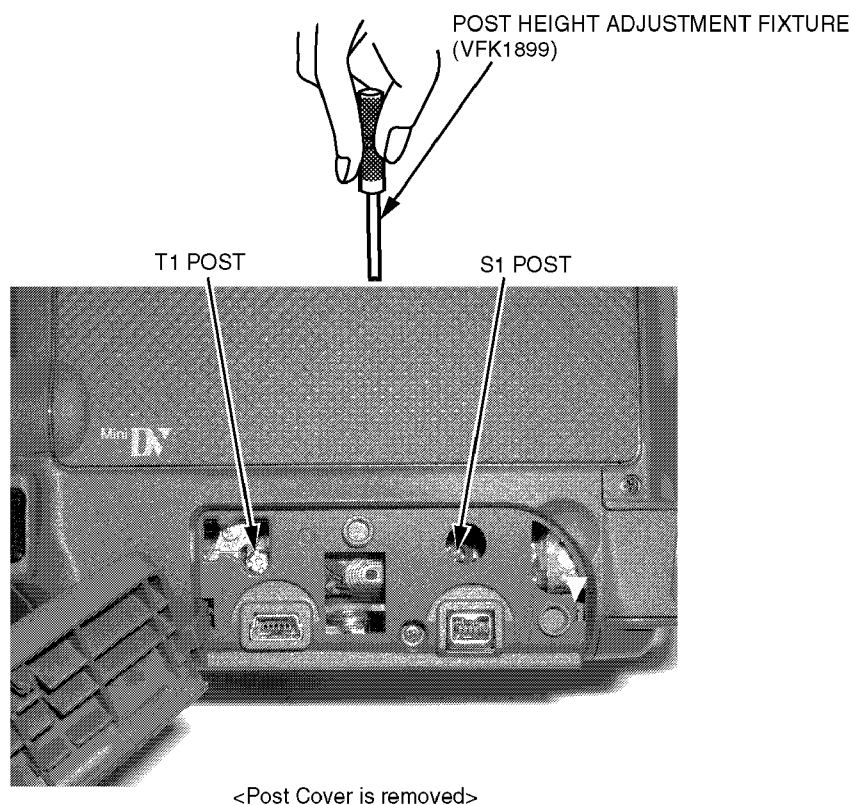
<div>Light Box and AC Adaptor</div> <div>VFK1164LBX1</div> <div></div> <div>(AC Adaptor is not supplied)</div>	<div>Infinity Lens (with Focus Chart)</div> <div>VFK1164TCM02</div> <div></div>		
<div>27mm Ring</div> <div>VFK1164TAR27</div> <div></div>	<div>Color Conversion Filter (C14)</div> <div>VFK1164TFCT2</div> <div></div>	<div>RS232C Cable</div> <div></div> <div>not supplied</div>	
<div>Post Height Adjustment Fixture</div> <div>VFK1899</div> <div></div>		<div>Interface Board for Electrical Adjustment</div> <div>LSUP0007</div> <div></div>	
<div>White Chart</div> <div>VFK1164TFWC2</div> <div></div>	<div>Color Bar Chart</div> <div>VFK1164TFCB2</div> <div></div>	<div>Gray Scale Chart</div> <div>VFK1164TFGS2</div> <div></div>	
<div>Connection Adaptor (2 pcs)</div> <div>VFK1898</div> <div></div>	<div>EVR Connector Board</div> <div>VFK1897</div> <div></div> <div>(With one Connection Adaptor)</div>	<div>EVR Connector Board</div> <div>VFK1309</div> <div></div>	<div>30 pin Flat Cable (2 pcs)</div> <div>VFK1317</div> <div></div>

## 8.2. MECHANICAL ADJUSTMENT

### 8.2.1. ENVELOPE OUTPUT ADJUSTMENT

When replacing the Main Chassis Unit or the Cylinder Unit, be sure to perform the Envelope Output Adjustment as shown below.

1. Open the Jack Cover. Then, insert a flat headed (-) screwdriver or similar object into the gap of the Post Cover, and remove it while releasing the 2 Locking Tabs.
2. Connect the Camcorder and the Interface Board with the EVR Connector Boards, the Connection Adaptors and the 30 pin Flat Cables.
3. Connect the oscilloscope to "Envelope TP" on the Interface Board.
4. Playback the Color Bar Standard Tape (VFM3010EDS).
5. Adjust the S1 post by turning the top of post with Post Height Adjustment Fixture so that the left half of envelope signal becomes flat as possible.
6. Adjust the T1 post by turning the top of post with Post Height Adjustment Fixture so that the right half of envelope signal becomes flat as possible.



**Note:**  
After the adjustment, be sure to confirm BER (Bit Error Ratio) using EVR Adjustment Software.  
If it is NG, try this adjustment once again.

## 8.3. ELECTRICAL ADJUSTMENT

### 8.3.1. INITIAL GUIDELINE

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

Adjustment Item		Replacement Parts														
		MAIN C.B.A.	IC501 (CAMERA SIGNAL PROCESS)	IC701 (FOCUS/ZOOM MOTOR DRIVE & IRIS/HALL AMP CONTROL)	IC901 (EVF SIGNAL PROCESS)	IC3001 (CAMERA DIGITAL SIGNAL PROCESS/SHUFFLING)	IC3101 (VIDEO/AUDIO SIGNAL PROCESS)	IC6001 (SYSTEM MICROCONTROLLER)	IC6002 (EEPROM)	LCD C.B.A.	IC8001(LCD RGB SIGNAL PROCESS)	CCD UNIT	LENS UNIT	CYLINDER UNIT	MAIN CHASSIS UNIT	
Camera	CAM hall amplifier and Iris PWM	○	○	○			○									
	CAM Tracking and De-focus adjustment	○	○									○				
	CAM WB measurement	○	○	○								○				
	CAM AWB 3100	○	○	○								○				
	CAM AWB 5100	○	○	○		○	○	○	○			○				
	CAM AWB 4500	○	○			○						○				
	CAM Address crack compensation	○										○				
Video	VCR Sensitivity adj of Tape sensors	○	○												○	
	VCR PG shifter adjustment	○	○										○		○	
	VCR luminance level adjustment	○				○		○								
	VCR Chroma level adjustment	○				○	○									
LCD	LCD Horizontal free running adjustment	○	○							○	○					
	LCD Pedestal level adjustment	○	○							○	○					
	LCD Sub Pedestal level adjustment	○								○	○					
	LCD VCOM level adjustment	○	○							○	○					
EVF	EVF Contrast adjustment	○	○		○											
	EVF Bright adjustment	○	○		○											
	EVF Sub Bright adjustment	○			○											

Note: ○ : Adjustment Item

### 8.3.2. TEST EQUIPMENT

1. Dual-Trace Oscilloscope

Voltage Range: 0.001 to 50 V/Div.

Frequency Range: DC to 50 MHz

Probes: 10:1, 1:1

2. Frequency Counter

3. Vectorscope

4. Plastic Tip Driver

5. Personal Computer

PC: IBM PC/AT or compatible

OS: Microsoft® Windows®98 - Windows®XP

CPU: 486 or higher

Drive: 3.5 inch 1.44 MB floppy disk drive

Port: D-Sub-9-pin Serial or D-Sub-25-pin Serial

Monitor: VGA Color

6. PC-EVR Adjustment Program (VF0D2004DV10)

**Note:**

Ask for the latest version when placing an order for the PC-EVR Adjustment Program.

7. Interface Board (LSUP0007)

8. RS232C Cable

9. Connection Adaptor (VFK1898)

10. EVR Connector Board (VFK1897)

11. EVR Connector Board (VFK1309)

12. 30 pin Flat Cable (VFK1317)

13. Color Bar Standard Tape (VFM3010EDS)

(Keeping condition: Keep at 18 °C ~ 28 °C)

14. Gray Scale Chart (VFK1164TFGS2)

15. White Chart (VFK1164TFWC2)

16. Color Bar Chart (VFK1164TFCB2)

17. Light Box and AC Adaptor (for VHS-C)

18. Infinity Lens (with Focus Chart) (VFK1164TCM02)

19. AC Adaptor (for DVC)

20. 27 mm Ring (VFK1164TAR27)

21. Color Conversion Filter (C14) (VFK1164TFCT2)

### 8.3.3. PREPARATION

1. Insert a flat headed (-) screwdriver or similar object, remove the EVR Cover.
2. Connect the 2 Connection Adaptors and the 2 EVR Connector Boards. Then, connect the 30 pin Flat Cables to P101 and P102 on the Interface Board.

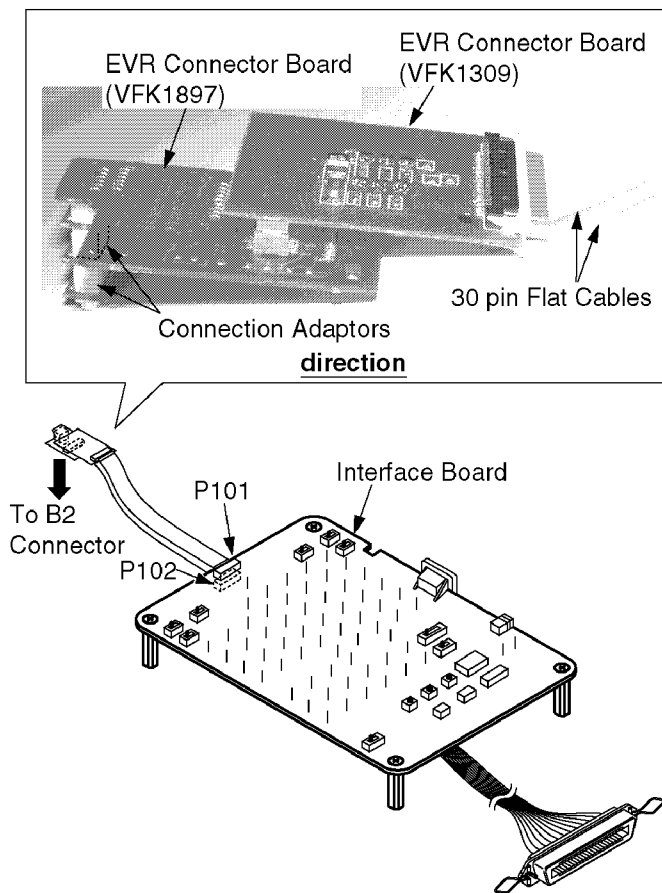


Fig. E1-1

#### Note:

When connecting them, pay attention to the direction of them.

3. Connect them to the Connector B2 on the Main C.B.A.

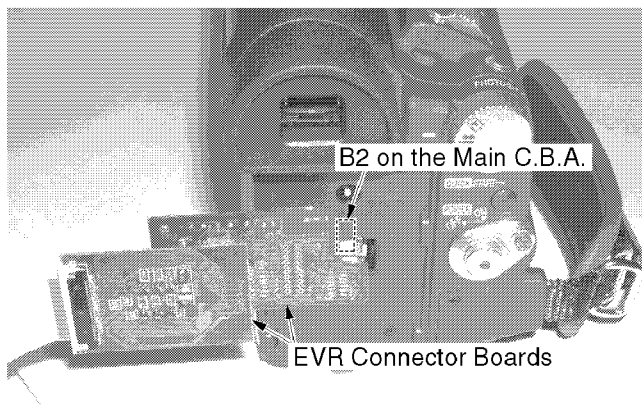


Fig. E1-2

4. Connect the AC Adaptor to the camcorder.
5. Connect the P106 on the Interface Board to RS232C of the PC with Inter Link Cable.
6. Set the SW115 (M103 EXMOD1) on the Interface Board to "GND."
7. Set the SW110 (RS232C SEL) on the Interface Board to "M3."
8. Set the SW114 (M103 VPP) on the Interface Board to "3V."
9. Set the SW103 (RECI) on the Interface Board to "OFF."
10. Set the SW108 (BST TEST) on the Interface Board to "OFF."
11. Set the SW109 (IRIS) on the Interface Board to center.
12. Set the SW111 (5V SEL) on the Interface Board to "CAM 5V."
13. Set the SW113 (POWER ON) on the Interface Board to "NORM."
14. Power on the unit.



## &lt;Computer Assisted Adjustment System&gt;

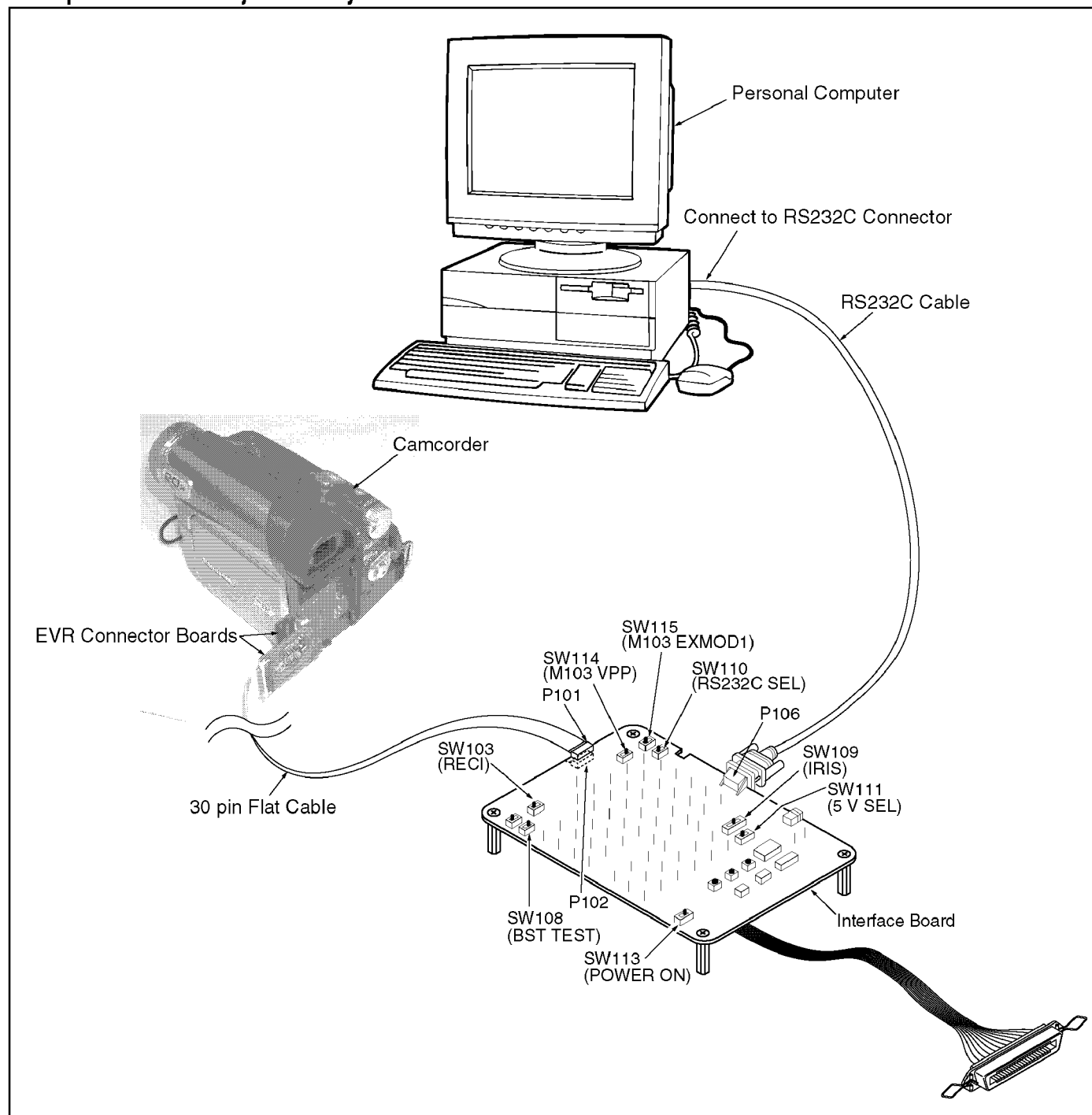


Fig. E1-3

### 8.3.4. TP Board Location

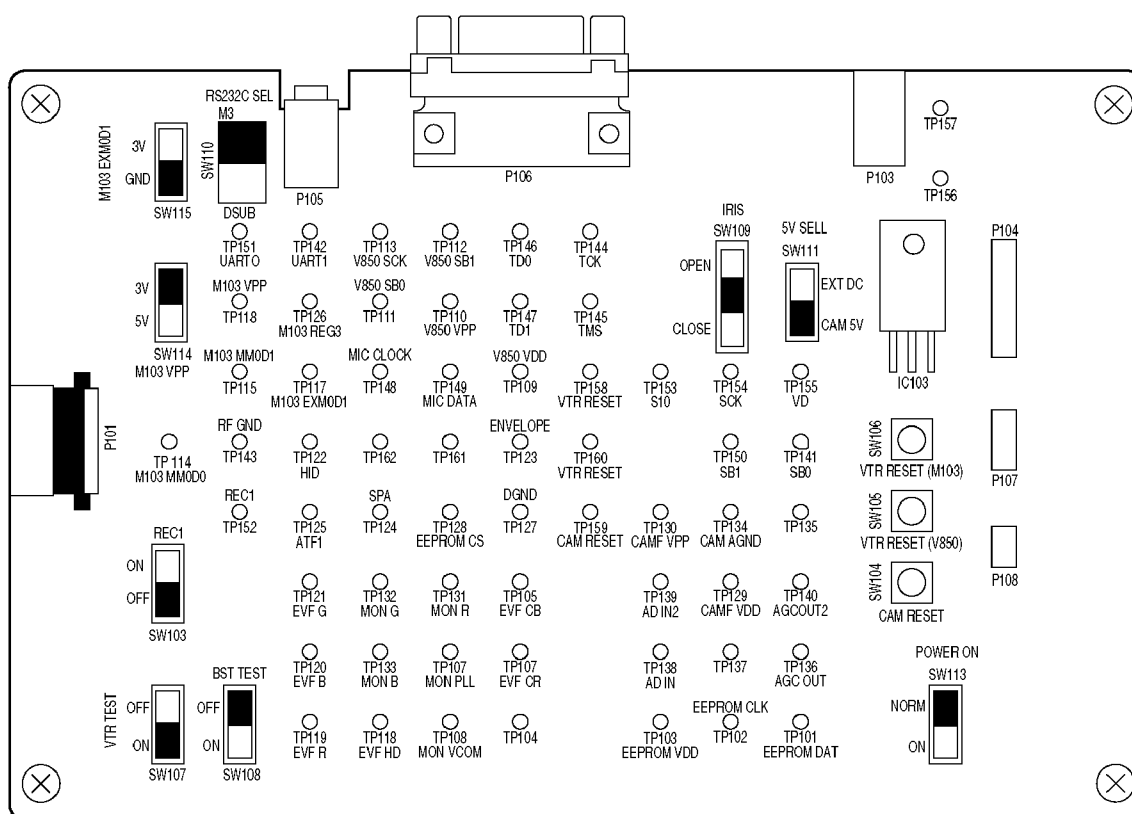
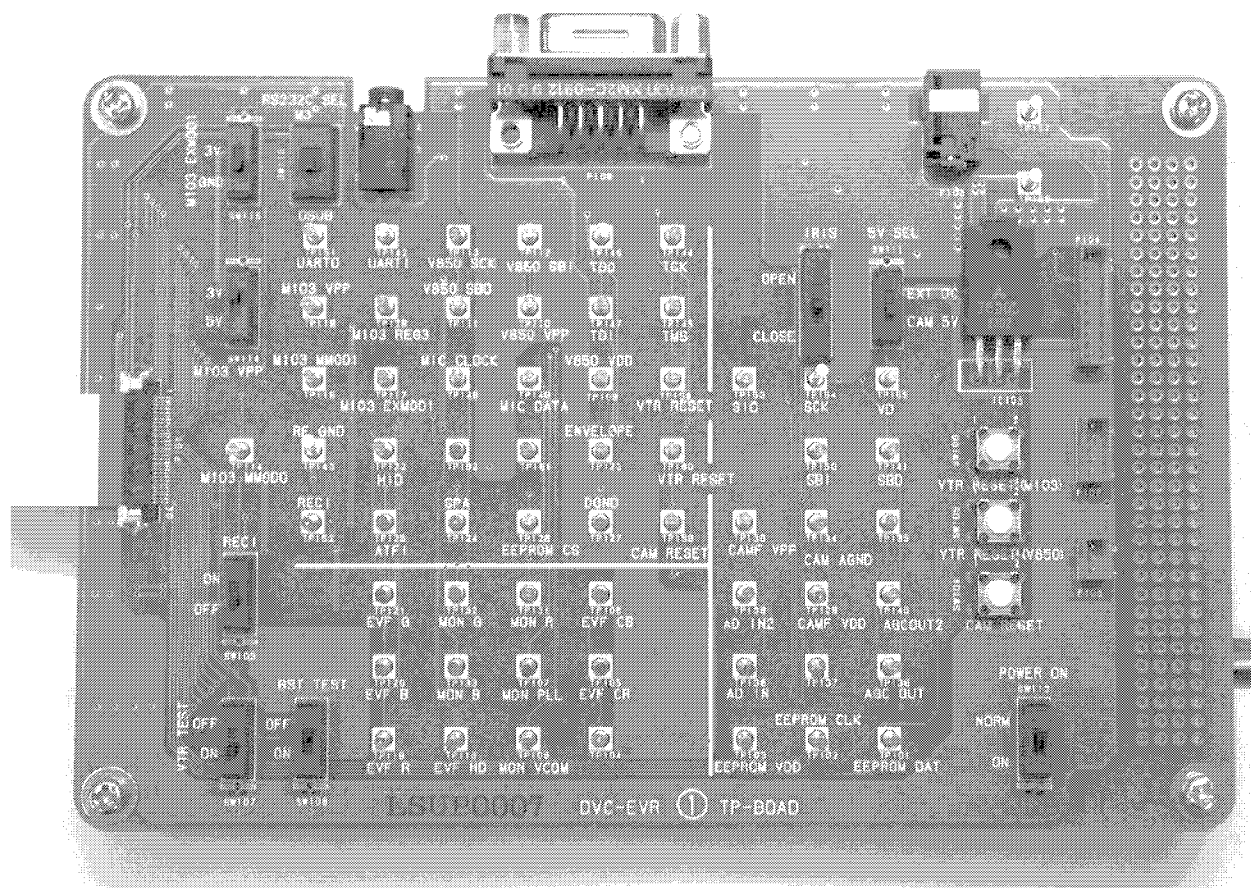


Fig. E1-4

### 8.3.5. SET UP OF PC-EVR ADJUSTMENT PROGRAM

1. Turn on the PC and install the PC-EVR Adjustment Program into the PC.
2. Execute the "kdv2004.exe" file by double clicking to start up the PC-EVR Adjustment Program.  
The main menu will be displayed.
3. Select the desired model.
4. Turn on the camcorder. Then click "Start."

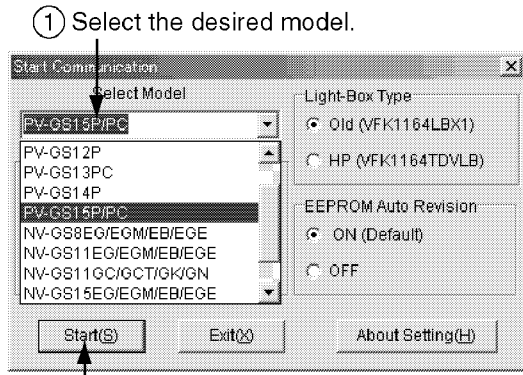


Fig. E2-1

5. When the communication is complete, the dialog will appear.  
Then, click "Yes," and "Save" to save the EEPROM data.

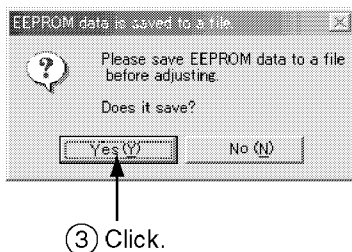


Fig. E2-2

6. When saving for EEPROM data is complete, the menu will appear.  
To perform each adjustment, display the adjustment menu by selecting the desired menu from "Camera Adjust," "Video Adjust," "LCD Adjust" or "EVF Adjust" and select each adjustment item.

- ④ Select the desired menu.

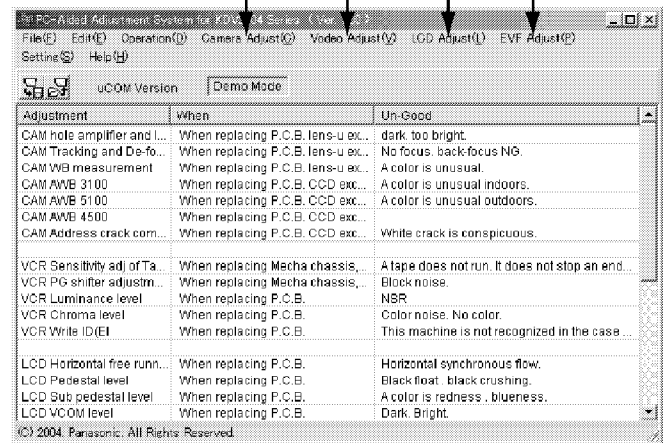


Fig. E2-3

#### Note:

The adjusted data is stored in the EEPROM IC after each adjustment.

7. After adjustment, to close the software, select "Exit" in the File menu or close the window.

- ⑤ Select "Exit" or close the window.

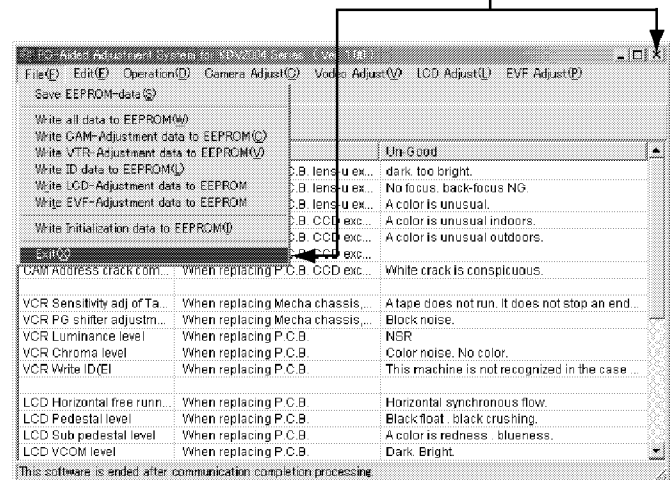



Fig. E2-4



9 SCHEMATIC DIAGRAMS

9.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

1. Important safety notice


Components identified by the sign  have special characteristics important for safety. When replacing any of these components. Use only the specified parts.

2. Do not use the part number shown on this drawing for ordering.  
The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:  
To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.  
However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information

 : Test point with no test pin.

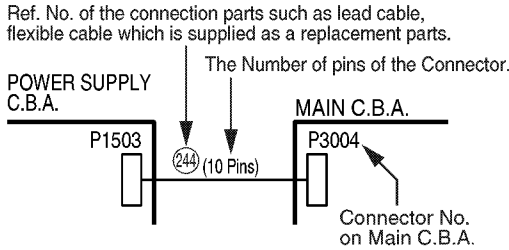
Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes  
The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

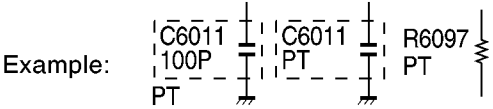
Example:  
(6.2V).....Zener Voltage

2. How to identify Connectors  
Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to, in other words, its counter part.  
Use the interconnection schematic diagram to find the connection between associated connectors.

Example:  
The connections between C.B.A.s are shown below.

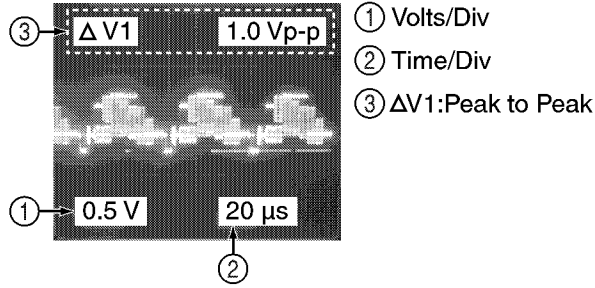


3. Parts marked "PT" are not used in any models included in this service model.



Signal Waveform Note

How to read Signal Waveform



Voltage Chart Note

Voltage Measurement

- a. Color bar signal in SP mode.
- b. ---:Unmeasurable or not necessary to measure.

Circuit Board Layout Note

Circuit Board Layout shows components installed for various models.  
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:

Circuit Board Layout includes components which are not used.

Model No. Identification Mark

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT

Note : Refer to item 3 of Schematic Diagram Notes for mark "PT".

9.2. MAIN SCHEMATIC DIAGRAMS

MAIN I SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

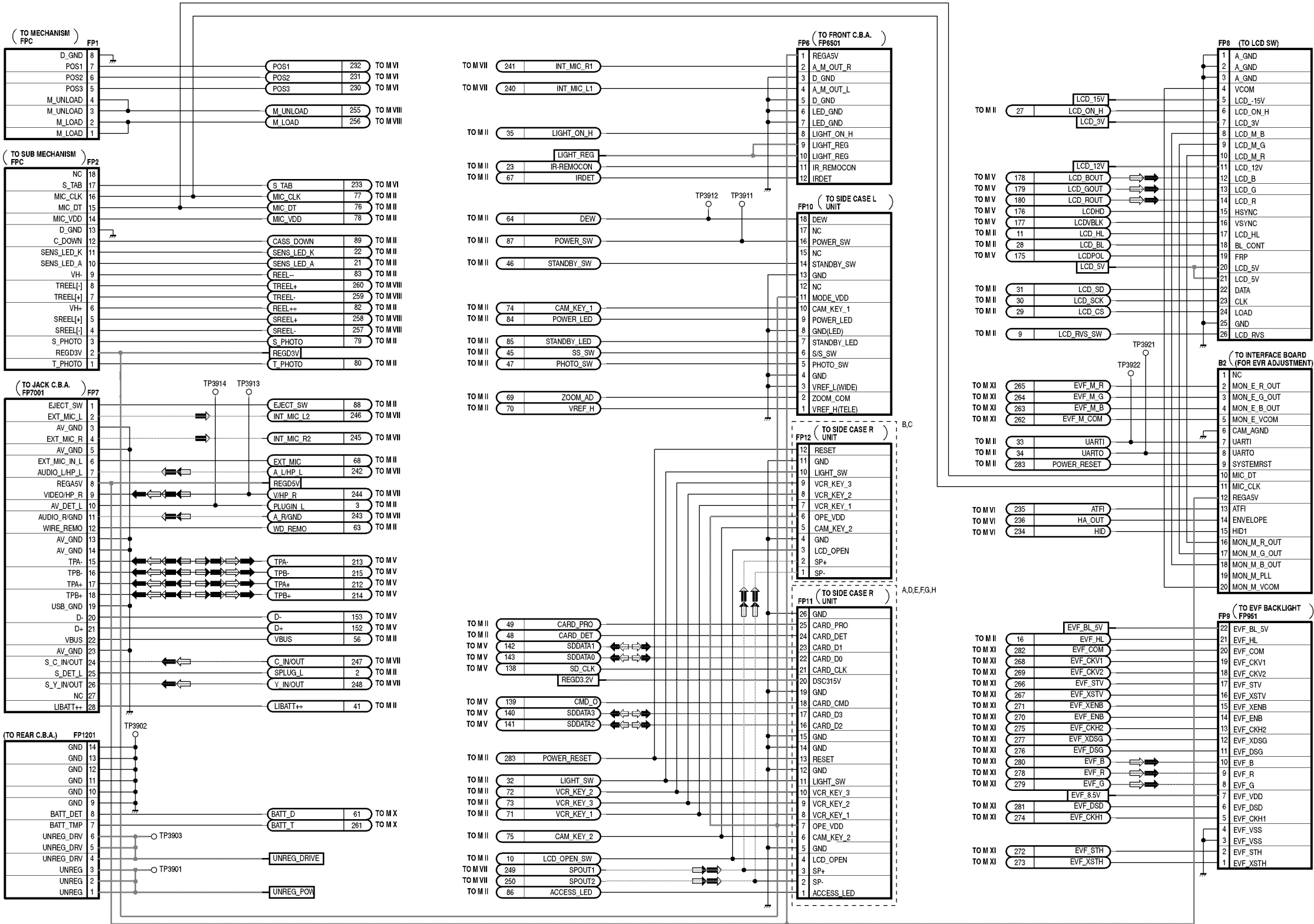
NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT

REC VIDEO SIGNAL PB VIDEO SIGNAL REC AUDIO SIGNAL PB AUDIO SIGNAL



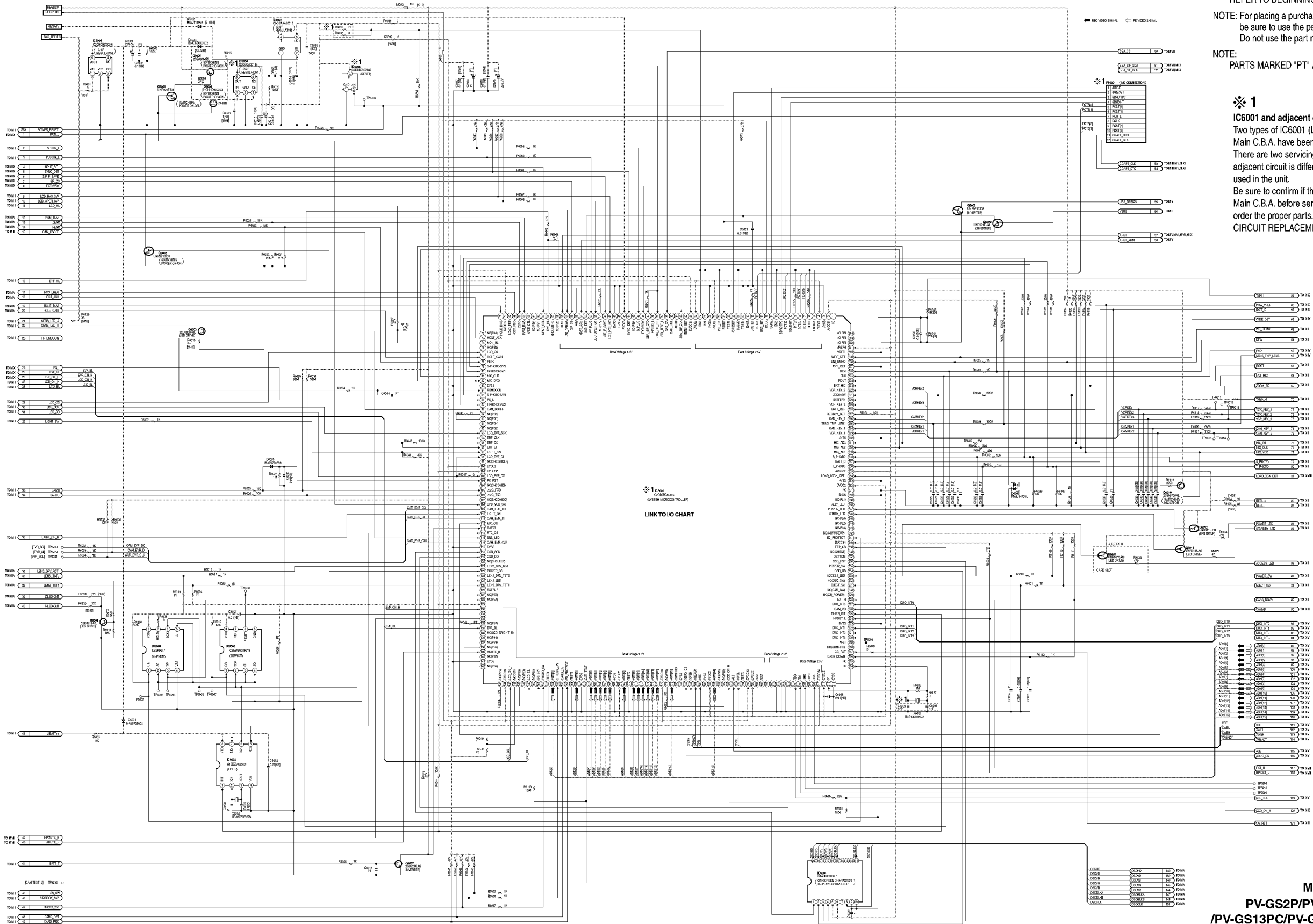
LINK TO VOLTAGE CHART

LSJB8262

MAIN I SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

MAIN II SCHEMATIC DIAGRAM



NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

NOTE:  
PARTS MARKED "PT" ARE NOT USED.

**※ 1**  
**IC6001 and adjacent circuit replacement note:**  
Two types of IC6001 (LSSK0045, C2DBMK000022) on the Main C.B.A. have been used on a running change basis. There are two servicing methods (Type A, B) because the adjacent circuit is different depending on which IC6001 is used in the unit.  
Be sure to confirm if there is the connector (FP6001) on the Main C.B.A. before servicing. When replacing, be sure to order the proper parts. Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES.

COMPARISON CHART OF MODELS & MARKS		
MODEL	MARK	
PV-GS2P-S	A	
PV-GS9P-S	B	
PV-GS9PC-S	C	
PV-GS12P-S	D	
PV-GS13PC-S	E	
PV-GS14P-S	F	
PV-GS15P-S	G	
PV-GS15PC-S	H	
Not Used	PT	

LINK TO VOLTAGE CHART

LSJB8262  
MAIN II SCHEMATIC DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P  
/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

I/O CHART OF IC6001

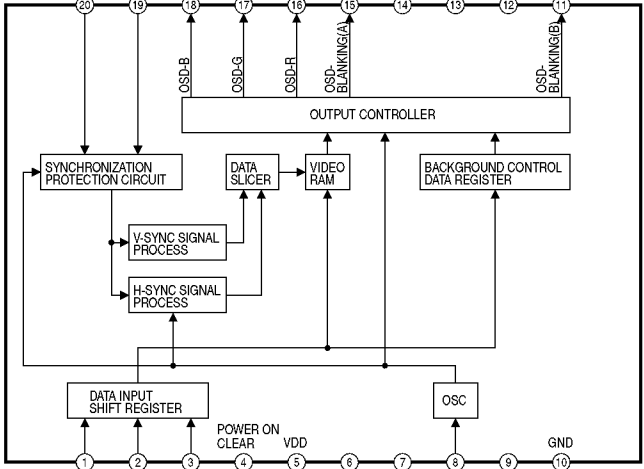
Pin No.	I/O	Signal Name	Description
1	---	NC	(Not used)
2	I	AVCC31	+2.8V
3	---	AVSS	Ground
4	I	DVCC2	+2.4V
5	---	ENDIAN	(Not used)
6	---	BOOT	(Not used)
7	---	PCTS3	(Not used)
8	---	PCTS0	(Not used)
9	---	INTLV	(Not used)
10	---	SDI DINT	(Not used)
11	---	PCTS2	(Not used)
12	---	SDAO TPC	(Not used)
13	---	BW0	(Not used)
14	---	IDBGE	(Not used)
15	---	DCLK	(Not used)
16	---	USB INT	(Not used)
17	---	PCTS1	(Not used)
18	---	SYSRDY	(Not used)
19	---	DVSS	Ground
20	---	TEST1	(Not used)
21	---	BUSMD	(Not used)
22	---	DRESET	(Not used)
23	---	TEST5	(Not used)
24	I	RESET	Reset : Low
25	---	PLL ON	(Not used)
26	I	FVCC2	+2.4V
27	---	FVSS	Ground
28	---	NMI	(Not used)
29	---	BW1	(Not used)
30	I	DVCC2	+2.4V
31	I	DVCC31	+1.8V
32	---	NC	(Not used)
33	O	SBA SIF CLK	Sub Audio / SIF Serial Clock
34	---	NC	(Not used)
35	---	NC	(Not used)
36	O	SBA CS	Sub Audio Chip Select
37	---	VTR TEST L	(Not used)
38	I	SBA SIF DTI	Sub Audio / SIF Serial Data
39	---	RPLUG L	(Not used)
40	O	SBA SIF DTO	Sub Audio / SIF Serial Data
41	O	EXT5VSW	Power Save : Low
42	I	S PLUG	S-Video In Detect : Low
43	---	NC	(Not used)
44	I	SYNC DET	Sync Detect
45	I	FVCC3	+3.4V
46	---	FVSS	Ground
47	---	DVSS	Ground
48	I	LCD RVS SW	LCD Reverse : Low
49	O	SIF P SAVE	IC3501 Power Save
50	---	BRIGHT ON	(Not used)
51	I	LCD OPEN SW	LCD Open : Low
52	I	AV PLUG	A/V Input Detect : Low
53	I	USB DET	USB Input Detect : Low
54	O	XRST ARM	IC3501 Reset
55	---	ARB	(Not used)
56	O	SIF CS	IC3501 Chip Select
57	O	USB DPBIAS	USB Bias Addition
58	O	XRST	Reset : Low
59	---	NC	(Not used)
60	---	SHCOMTRG	(Not used)
61	---	EVF HL	(Not used)
62	O	INPUT SEL	A/V Input Select
63	---	SHM BOOTREQ	(Not used)
64	---	NC	(Not used)
65	---	NC	(Not used)
66	O	PWM BIAS	PWM Bias Control
67	I	ZENC	Zoom Encoder
68	---	HOST REQ	(Not used)
69	---	NC	(Not used)
70	I	DVCC32	+2.8V
71	O	HOLE BIAS	Hall Bias Control

Pin No.	I/O	Signal Name	Description
72	---	NC	(Not used)
73	---	HOST ACK	(Not used)
74	---	MON HL	(Not used)
75	---	NC	(Not used)
76	O	LCD CS	LCD Chip Select
77	O	HOLE GAIN	Hall Amp Gain Control
78	I	FENC	Focus Encoder
79	O	S-PHOTO-SW2	Supply Photo TR Switch 2
80	O	T-PHOTO-SW1	Takeup Photo TR Switch 1
81	O	MIC CLK	MIC Serial Clock
82	I/O	MIC DATA	MIC Serial Data
83	---	DVSS	Ground
84	I	REMOCN	IR Remote Control Data
85	O	S-PHOTO-SW1	Supply Photo TR Switch 1
86	O	PS L	Power Save : Low
87	O	T-PHOTO-SW2	Takeup Photo TR Switch 2
88	---	CAM D3OFF	(Not used)
89	---	NC	(Not used)
90	---	NC	(Not used)
91	---	NC	(Not used)
92	---	NC	(Not used)
93	O	LCD SCK	LCD Serial Clock
94	O	ERF CLK	Serial Clock
95	O	ERF DO	Serial Data 0
96	I	ERF DI	Serial Data 1
97	I	LIGHT SW	Light SW On : Low
98	I	LCD DI	LCD Serial Data
99	---	SHCOMCLK	(Not used)
100	I	DVCC2	+2.4V
101	I	DVCC32	+2.8V
102	O	LCD DO	LCD Serial Data
103	I	PC RST	RS-232C Reset
104	---	SHCOMDI	(Not used)
105	I	232C RXD	RS-232C Received Data
106	O	232C TXD	RS-232C Transmitted Data
107	---	SHCOMDO	(Not used)
108	O	CPU VCC SW	IC6001 Power On : High
109	---	CAM EVR DO	(Not used)
110	O	LIGHT ON	Light On : High
111	---	CAM EVR DI	(Not used)
112	O	MIC ON	MIC Power On : Low
113	I	BATT-T	Battery Temperature Detect
114	O	RTC CS	Timer Chip Select
115	O	SNS LED	Sensor LED On : High
116	---	CAM EVR CLK	(Not used)
117	---	DVSS	Ground
118	O	OSD SCK	OSD Serial Clock
119	O	OSD DO	OSD Serial Data
120	---	SHSLEEP	(Not used)
121	O	LENS DRV RST	IC701 Reset
122	O	POWER ON	Power On : High
123	O	LENS DRV TST2	Lens Drive Test 2
124	O	LENS LED	LED Control
125	O	LENS DRV TST1	Lens Drive Test 1
126	---	RSTPUP	(Not used)
127	O	NC(PE6)	EEPROM Write Protect
128	O	NC(PE7)	EEPROM Write Enable
129	I	DVCC32	+2.8V
130	O	EVF ON H	EVF Power On : High
131	---	NC	(Not used)
132	---	HPMUTE H	(Not used)
133	---	NC	(Not used)
134	O	EVF BL	EVF Backlight On : High
135	---	LCD BRIGHT H	(Not used)
136	---	NC	(Not used)
137	---	NC	(Not used)
138	---	NC	(Not used)
139	---	NC	(Not used)
140	---	NC	(Not used)
141	---	DVSS	Ground
142	---	NC	(Not used)

Pin No.	I/O	Signal Name	Description
143	---	NC	(Not used)
144	I	DVCC33	+1.8V
145	O	LCD ON H	LCD Power On : High
146	---	MODE14	(Not used)
147	---	NC	(Not used)
148	---	NC	(Not used)
149	O	LCD BL	LCD Backlight On : High
150	---	NC	(Not used)
151	I	S/S SW	REC / Pause SW On : Low
152	I	PHOTO SW	Photo SW On : Low
153	---	TEST4	(Not used)
154	I/O	ADM[2]	Address / Data 2
155	I	STNDBY SW	Standby SW On : Low
156	I	CARD DET	SD Card Detect
157	I	SD PROTECT	SD Card Protect
158	---	TEST3	(Not used)
159	I/O	ADM[0]	Address / Data 0
160	---	DVSS	Ground
161	---	CAM TEST	(Not used)
162	I/O	ADM[1]	Address / Data 1
163	I/O	ADM[6]	Address / Data 6
164	I/O	ADM[3]	Address / Data 3
165	I/O	ADM[5]	Address / Data 5
166	I/O	ADM[4]	Address / Data 4
167	---	FVSS	Ground
168	I	FVCC2	+2.4V
169	I/O	ADM[9]	Address / Data 9
170	---	TEST0	(Not used)
171	I/O	ADM[8]	Address / Data 8
172	I/O	ADM[7]	Address / Data 7
173	I/O	ADM[10]	Address / Data 10
174	I/O	ADM[13]	Address / Data 13
175	I/O	ADM[11]	Address / Data 11
176	I/O	ADM[12]	Address / Data 12
177	I	DVCC33	+1.8V
178	---	NC	(Not used)
179	I/O	ADM[15]	Address / Data 15
180	---	SHMFIMO	(Not used)
181	---	DVSS	Ground
182	O	XDUO CS	IC3001 Chip Select
183	O	XWEH	Write Enable : Low
184	O	XREADY	Ready : Low
185	O	XRE	Read Enable : Low
186	---	FVSS	Ground
187	I	FVCC2	+2.4V
188	I/O	ADM[14]	Address / Data 14
189	---	NC	(Not used)
190	---	NC	(Not used)
191	O	CCD ON H	CCD Power On : High
192	O	ALE	Latch Enable
193	O	XWEL	White Enable : Low
194	---	TEST2	(Not used)
195	I	DVCC33	+1.8V
196	I	DVCC2	+2.4V
197	---	NC	(Not used)
198	---	NC	(Not used)
199	---	NC	(Not used)
200	---	XT1	(Not used)
201	---	CVCCCH	(Not used)
202	---	CAP1	(Not used)
203	---	CAP2	(Not used)
204	---	XT2	(Not used)
205	O	TD0	Test Data
206	I	TDI	Test Data
207	I	TMS	Test Mode Select
208	---	TRST	(Not used)
209	I	TCK	Test Clock
210	I	DVCC34	+2.8V
211	I	CVCC2	+2.4V
212	I	X1	13.5MHz Clock
213	---	CVSS	Ground

Pin No.	I/O	Signal Name	Description
214	O	X2	13.5MHz Clock
215	---	NC	(Not used)
216	I	CASS DOWN	Cassette Down : Low
217	O	CG RST	IC302 Reset
218	---	SHMFINT	(Not used)
219	---	AFST	(Not used)
220	I	DUO INT3	IC3001 Interrupt 3
221	I	DUO INT2	IC3001 Interrupt 2
222	I	DUO INT1	IC3001 Interrupt 1
223	---	DVSS	Ground
224	I	HPDET L	Headphone Detect : Low
225	I	TIMER INT	Timer Interrupt
226	I	CAMVD	Camera V-sync
227	I	DUO INT0	IC 3001 Interrupt 0
228	O	EXT H	Ext Input Select : High
229	---	CR POWER	(Not used)
230	---	NC	(Not used)
231	I	EJECT SW	Eject SW On : Low
232	---	NC	(Not used)
233	O	ACCESS LED	Access LED On : Low
234	O	OSD CS	OSD Chip Select
235	I	POWER SW	Power SW On : Low
236	O	OSD RST	OSD Reset : Low
237	---	NC	(Not used)
238	---	SHRST	(Not used)
239	O	EEP CS	IC 6002 Chip Select
240	I	DVCC34	+2.8V
241	O	FLASH CE	IC 6009 Chip Select
242	---	SHWAKEUP	(Not used)
243	---	NC	(Not used)
244	---	NC	(Not used)
245	---	NC	(Not used)
246	O	STNDBY LED	Standby LED On : Low
247	O	POWER LED	Power LED On : Low
248	---	TALLY LED	(Not used)
249	---	NC	(Not used)
250	---	DVSS	Ground
251	---	NC	(Not used)
252	I	DVCC2	+2.4V
253	---	AVSS	Ground
254	I	LOAD LOCK DET	Loading Lock Detect
255	I	AVCC32	+2.8V
256	I	T PHOTO	Takeup Photo TR On : Low
257	I	BATT D	Battery Detect
258	I	S PHOTO	Supply Photo TR On : Low
259	I	MIC AD1	MIC On : High
260	I	MIC AD2	MIC Serial Clock
261	I	MIC AD3	MIC Serial Data
262	---	AVSS	Ground
263	I	VCR KEY 1	VCR Key Data 1
264	I	CAM KEY 1	Camera Key Data 1
265	I	SENSE TMP LENS	Lens Temperature Sensor
266	I	CAM KEY 2	Camera Key Data 2
267	I	REGDV DET	+3V Detect
268	I	BATT REF	V-Ref for Battery
269	I	VCR KEY 3	VCR key Data 3
270	I	BATTERY	Battery Voltage Detect
271	I	ZOOMSW	Zoom SW Data
272	I	VCR KEY 2	VCR Key Data 2
273	I	EXT MIC	EXT MIC In Detect : Low
274	I	IROUT	IR Detect
275	I	F NO	F Number
276	I	DEW	Dew Sensor
277	---	AWP DET	(Not used)
278	I	UNI REMO	Wired Remote Control Data
279	I	WIDE DET	Wide Detect
280	---	VREFL	V-Ref Low (0V)
281	I	VREFH	V-Ref High (+2.8V)
282	---	NO PIN	(Not used)
283	---	NO PIN	(Not used)
284	---	NO PIN	(Not used)

IC6004 IC- DETAIL BLOCK DIAGRAM





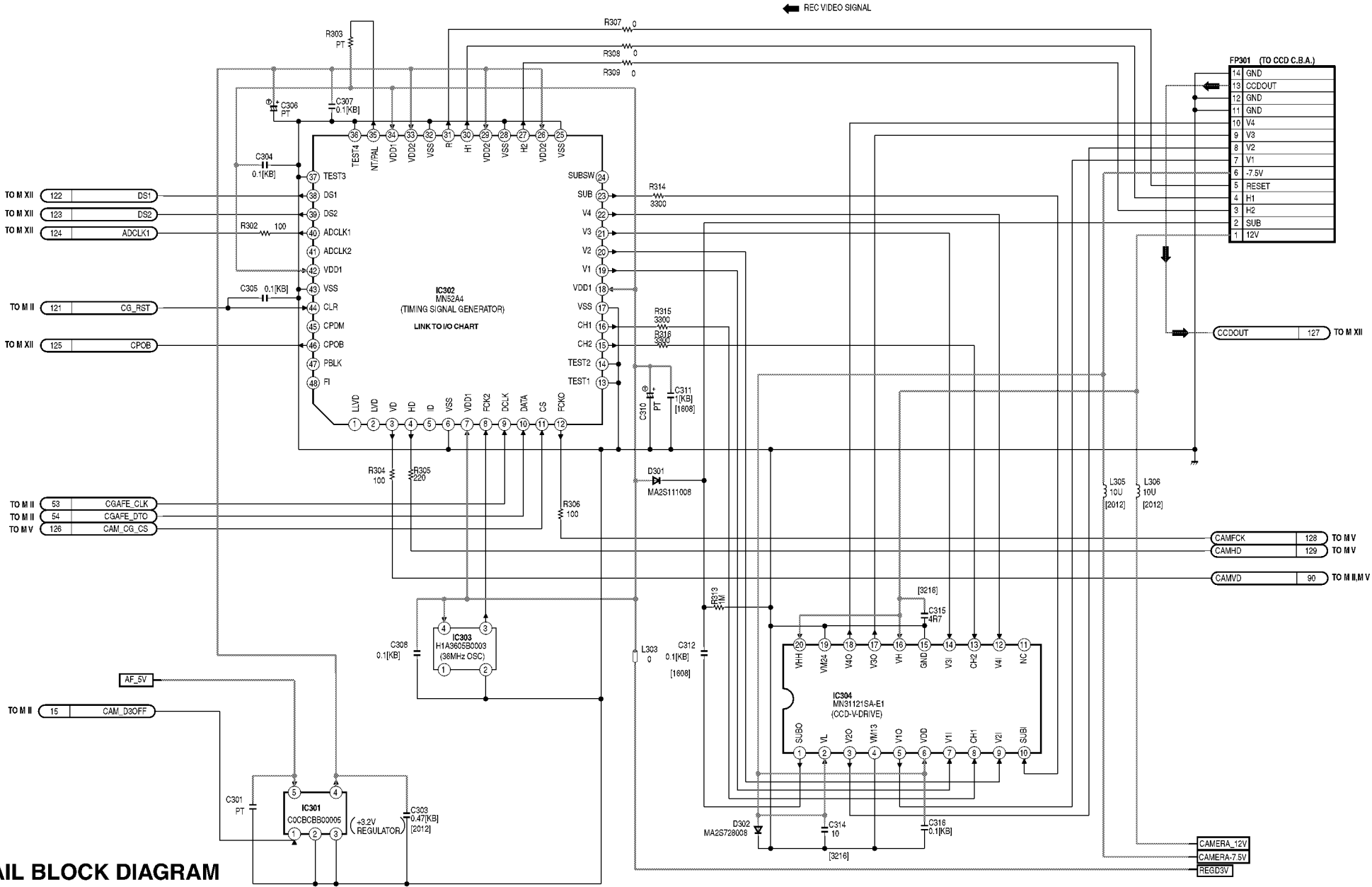
MAIN III SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

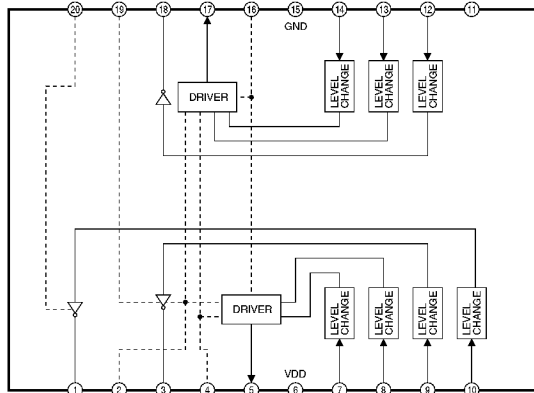
COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



I/O CHART OF IC302

Pin No.	I/O	Signal Name	Description
1	-	LLVD	(Not used)
2	-	LVD	(Not used)
3	O	VD	V-sync pulse
4	O	HD	H-sync pulse
5	-	ID	(Not used)
6	-	VSS	Ground
7	I	VDD1	+3.0V
8	I	FCK2	2FCK clock (36MHz)
9	I	DCLK	TG serial clock
10	I	DATA	TG serial data
11	I	CS	TG chip select : low
12	O	FCK0	FCK clock (18MHz)
13	-	TEST1	(Not used)
14	-	TEST2	(Not used)
15	O	CH2	Charge pulse 2
16	O	CH1	Charge pulse 1
17	-	VSS	Ground
18	I	VDD1	+3.0V
19	O	V1	V1 pulse
20	O	V2	V2 pulse
21	O	V3	V3 pulse
22	O	V4	V4 pulse
23	O	SUB	Sub control pulse
24	-	SUBSW	(Not used)
25	-	VSS	Ground
26	I	VDD2	+3.2V
27	O	H2	H2 pulse
28	-	VSS	Ground
29	I	VDD2	+3.2V
30	O	H1	H1 pulse
31	O	R	Reset pulse
32	-	VSS	Ground
33	I	VDD2	+3.2V
34	I	VDD1	+3.0V
35	O	FCK6M	6MHz clock
36	-	TEST4	(Not used)
37	-	TEST3	(Not used)
38	O	DS1	Sampling pulse 1
39	O	DS2	Sampling pulse 2
40	O	ADCLK1	A/D clock 1
41	O	ADCLK2	A/D clock 2
42	I	VDD1	+3.0V
43	-	VSS	Ground
44	-	CLR	(Not used)
45	O	CPDM	Dummy clamp pulse
46	O	CPOB	Optical black clamp pulse
47	O	PBLK	Pre lanking pulse
48	-	FI	(Not used)

IC304 IC- DETAIL BLOCK DIAGRAM



LINKTO VOLTAGE CHART

LSJB8262  
MAIN III SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

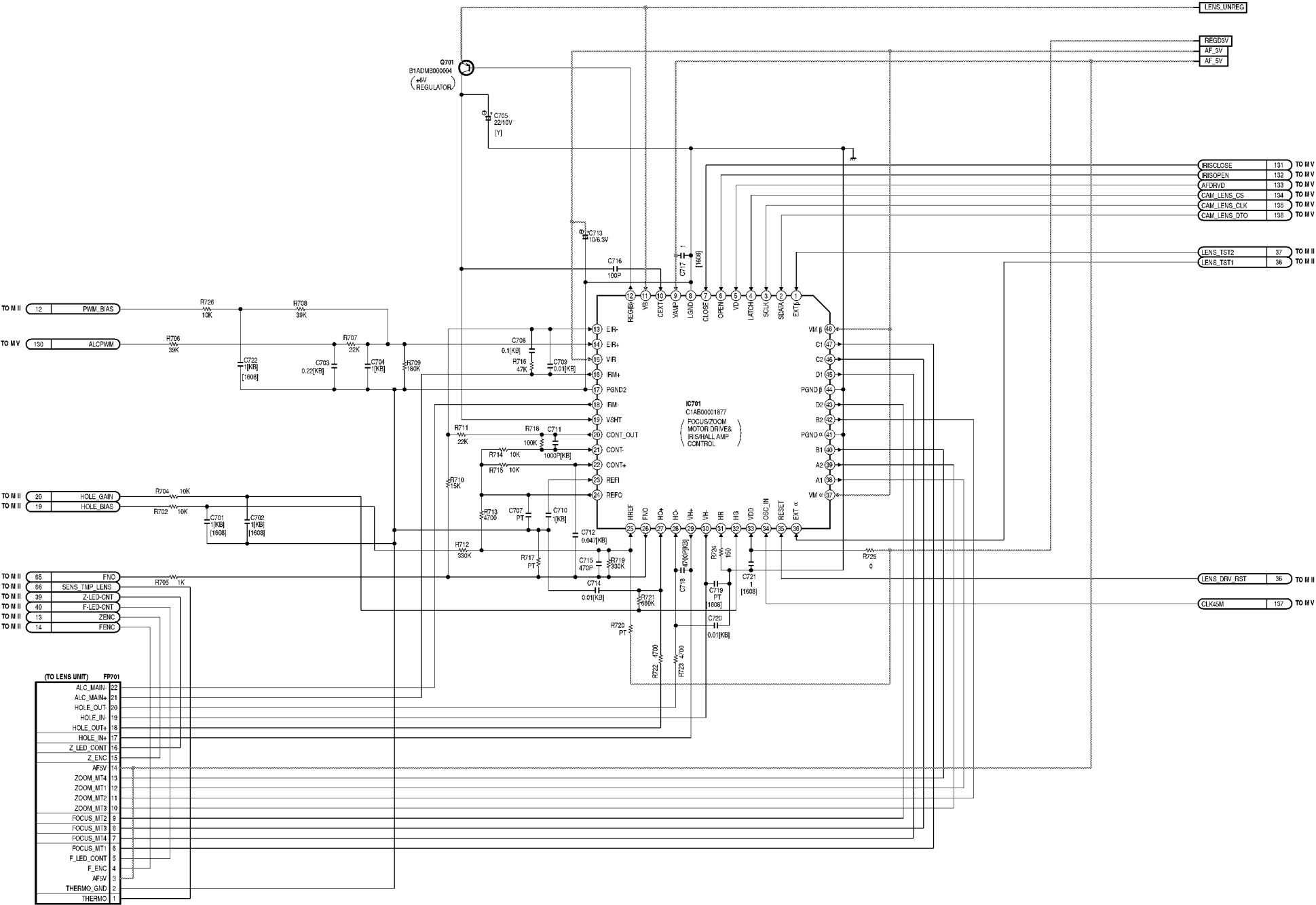
MAIN IV SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

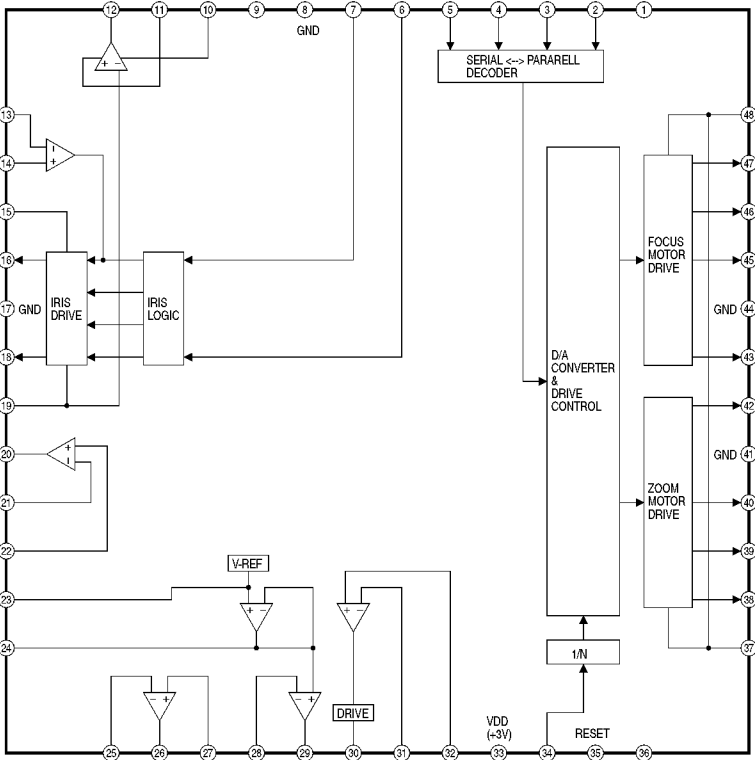
NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



IC701 IC- DETAIL BLOCK DIAGRAM



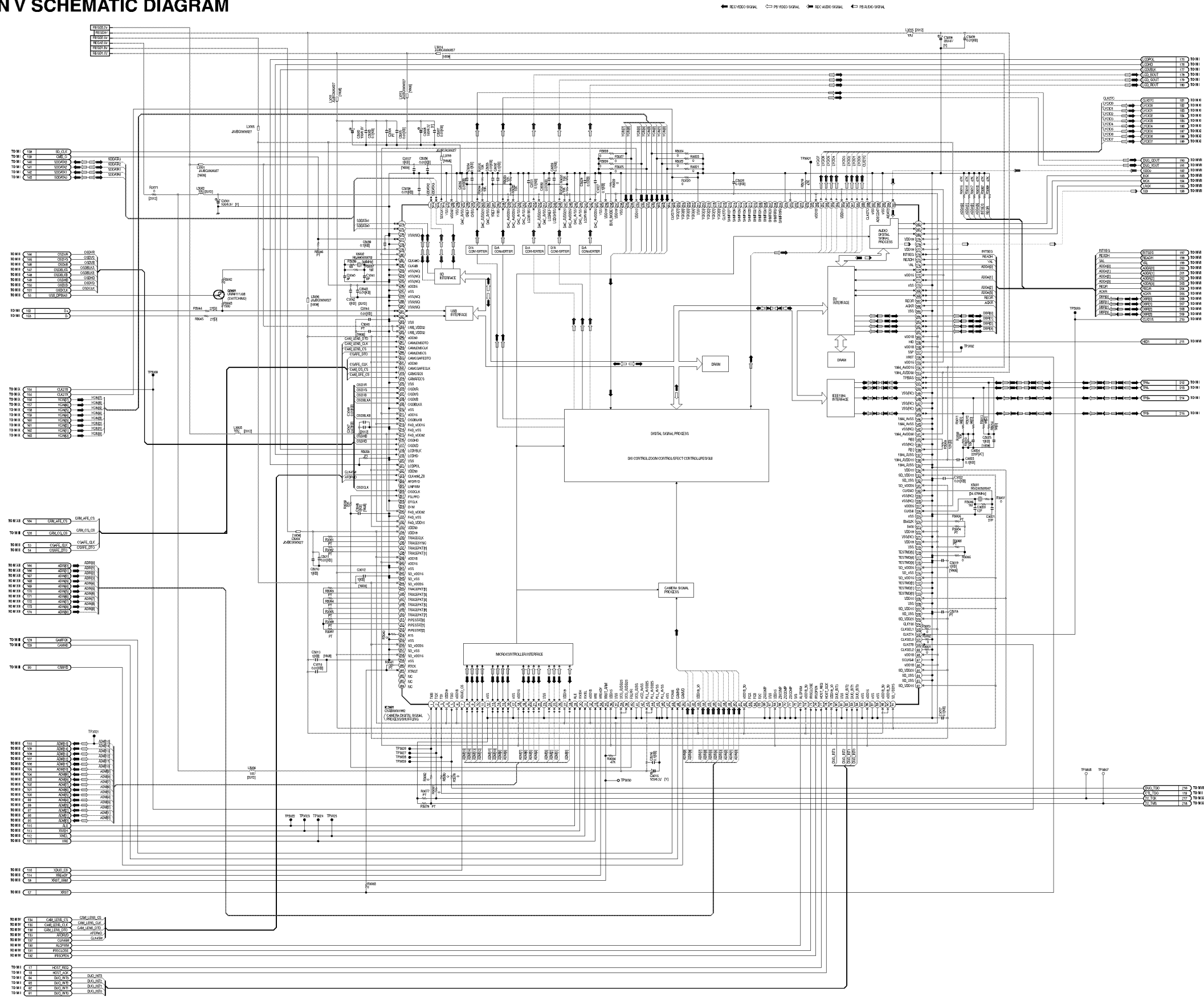
[LINK TO VOLTAGE CHART](#)

LSJB8262

MAIN IV SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

## MAIN V SCHEMATIC DIAGRAM



MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:  
PARTS MARKED "PT" ARE NOT USED.

NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

## LINK TO VOLTAGE CHART

**LSJB8262**

## MAIN V SCHEMATIC DIAGRAM

**PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC**

I/O CHART OF IC3001

Pin No.	I/O	Signal Name	Description
1	I	TMS	Test Mode Select
2	I	TCK	Test Clock
3	I	TDI	Test Data
4	I	VDD18	+1.8V
5	O	TDO	Test Data
6	I	VDD18	+1.8V
7	I	XDUO_CS	IC3001 Chip Select : Low
8	I/O	ADM(15)	Address / Data 15
9	I/O	ADM(14)	Address / Data 14
10	I/O	ADM(13)	Address / Data 13
11	I/O	ADM(12)	Address / Data 12
12	---	VSS	Ground
13	I/O	ADM(11)	Address / Data 11
14	I/O	ADM(10)	Address / Data 10
15	I/O	ADM(9)	Address / Data 9
16	I/O	ADM(8)	Address / Data 8
17	---	VSS	Ground
18	I	VDD15	+1.5V
19	I/O	ADM(7)	Address / Data 7
20	I/O	ADM(6)	Address / Data 6
21	I/O	ADM(5)	Address / Data 5
22	I/O	ADM(4)	Address / Data 4
23	---	VSS	Ground
24	I/O	ADM(3)	Address / Data 3
25	I/O	ADM(2)	Address / Data 2
26	I/O	ADM(1)	Address / Data 1
27	I	VDD18	+1.8V
28	I/O	ADM(0)	Address / Data 0
29	I	ALE	Latch Enable
30	I	XWEH	Write Enable:Low
31	I	XWEL	Write Enable:Low
32	I	VDD18	+1.8V
33	I	XRE	Read Enable:Low
34	I	XREADY	Ready:Low
35	I	XRST_ARM	Reset:Low
36	I	VDD15	+1.5V
37	---	VSS	Ground
38	I	VCO_AVDD25	+2.5V
39	I	VCO_AVDD25	+2.5V
40	I	FSLPFI	FSPLL LPF In
41	---	VCO_AVSS	Ground
42	---	VCO_AVSS	Ground
43	I	PLL_AVDD25	+2.5V
44	I	PLL_AVDD25	+2.5V
45	---	PLL_AVSS	Ground
46	---	PLL_AVSS	Ground
47	---	VSS	Ground
48	I	FCK45	4.5MHz Clock
49	I	CAMHD	Camera HD Pulse
50	I	CAMVD	Camera VD Pulse
51	I	ADIN(9)	Camera Data 9
52	I	ADIN(8)	Camera Data 8
53	I	VDD18_30	+3.0V
54	I	ADIN(7)	Camera Data 7
55	I	ADIN(6)	Camera Data 6
56	I	ADIN(5)	Camera Data 5
57	I	ADIN(4)	Camera Data 4
58	I	ADIN(3)	Camera Data 3
59	I	ADIN(2)	Camera Data 2
60	I	ADIN(1)	Camera Data 1
61	I	ADIN(0)	Camera Data 0
62	I	VDD18_30	+3.0V
63	---	FXA	( Not used )
64	---	FGB	( Not used )
65	---	F2C	( Not used )
66	---	ZACOMP	( Not used )
67	---	VSS	Ground
68	I	VDD15	+1.5V
69	---	ZBCOMP	( Not used )
70	---	ZCCOMP	( Not used )
71	---	ZDCOMP	( Not used )
72	---	SIG	( Not used )
73	O	ALCPWM	ALC PWM Control

Pin No.	I/O	Signal Name	Description
74	I	VDD18_30	+3.0V
75	O	IRISCLOSE	Iris Close Control
76	O	IRISOPEN	Iris Open Control
77	O	HOST_REQ	Request for DMA
78	I	HOST_ACK	Acknowledge for DMA
79	I	VDD18_30	+3.0V
80	O	DUO_INT3	IC3001 Interrupt 3
81	---	VSS	Ground
82	O	DUO_INT2	IC3001 Interrupt 2
83	O	DUO_INT1	IC3001 Interrupt 1
84	O	DUO_INT0	IC3001 Interrupt 0
85	---	VSS	Ground
86	I	VDD15	+1.5V
87	---	VSS	Ground
88	---	VSS	Ground
89	I	VDD18_30	+3.0V
90	I	VDD18_30	+3.0V
91	I	SD_VDD15	+1.5V
92	I	SD_VDD15	+1.5V
93	---	SD_VSS	Ground
94	---	SD_VSS	Ground
95	I	SD_VDD25	+2.5V
96	I	VDD18	+1.8V
97	---	SCLK54I	( Not used )
98	I	VDD18	+1.8V
99	---	CLKSEL2	( Not used )
100	O	CLK27B	27MHz Clock
101	---	CLKSELO	( Not used )
102	O	CLK27A	27MHz Clock
103	---	CLKSEL1	( Not used )
104	---	CLK135	( Not used )
105	I	SD_VDD25	+2.5V
106	---	SD_VSS	Ground
107	I	SD_VDD15	+1.5V
108	---	VSS	Ground
109	I	SD_VDD15	+1.5V
110	---	TESTMD(0)	( Not used )
111	---	TESTMD(1)	( Not used )
112	---	TESTMD(2)	( Not used )
113	I	SD_VDD15	+1.5V
114	---	SD_VSS	Ground
115	I	SD_VDD25	+2.5V
116	---	TESTMD(3)	( Not used )
117	---	TESTMD(4)	( Not used )
118	---	TESTMD(5)	( Not used )
119	---	VSS	Ground
120	I	VDD18	+1.8V
121	---	VSS(NC)	Ground
122	I	VDD18	+1.8V
123	---	S400	( Not used )
124	---	BIAS2K	( Not used )
125	---	VSS	Ground
126	I	CLK24I	24.576MHz Clock
127	I	VDD25	+2.5V
128	---	VSS(NC)	Ground
129	---	VSS(NC)	Ground
130	O	CLK24O	24.576MHz Clock
131	I	SD_VDD25	+2.5V
132	---	SD_VSS	Ground
133	I	SD_VDD15	+1.5V
134	I	VDD15	+1.5V
135	---	1394_AVSS	Ground
136	I	1394_AVDD15	+1.5V
137	---	1394_AVSS	Ground
138	O	R(1)	Current Limit Resistor(1)
139	---	VSS(NC)	Ground
140	I	R(0)	Current Limit Resistor(0)
141	I	1394_AVDD30	+3.0V
142	---	VSS(NC)	Ground
143	---	1394_AVSS	Ground
144	---	1394_AVSS	Ground
145	I/O	TPBN	Transaction Data B(-)
146	---	VSS(NC)	Ground

Pin No.	I/O	Signal Name	Description
147	---	VSS(NC)	Ground
148	I/O	TPBP	Transaction Data B(+)
149	---	VSS(NC)	Ground
150	I/O	TPAN	Transaction Data A(-)
151	I/O	TPAP	Transaction Data A(+)
152	I/O	TPBIAS	Transaction Bias
153	I	1394_AVDD30	+3.0V
154	I	1394_AVDD15	+1.5V
155	I	VDD15	+1.5V
156	I	XRST	Reset:Low
157	---	SSP	( Not used )
158	I	VDD18	+1.8V
159	I	HID	Head Switch Pulse
160	I	VDD18	+1.8V
161	I/O	DBR3	Digital Rec/PB Data 3
162	I/O	DBR2	Digital Rec/PB Data 2
163	I/O	DBR1	Digital Rec/PB Data 1
164	I/O	DBR0	Digital Rec/PB Data 0
165	---	VSS	Ground
166	O	ACKR	Acknowledge for RIP
167	I/O	REQOR	Request for RIP
168	I/O	ADDA(3)	Address/Data 3
169	I/O	ADDA(2)	Address/Data 2
170	---	VSS	Ground
171	I/O	ADDA(1)	Address/Data 1
172	I	VDD15	+1.5V
173	I/O	ADDA(0)	Address/Data 0
174	O	VAL	BUS Control
175	O	READH	BUS Control
176	I/O	INTSEG	Interrupt signal for Servo
177	I	VDD18	+1.8V
178	O	DODAT	Digital Audio Data
179	I	VDD18	+1.8V
180	O	DOLRCK	Digital Audio L/R Clock
181	O	DOMCK	Digital Audio Master Clock
182	O	DOBCK	Digital Audio Bit Clock
183	I	AIDAT1	Digital Audio Data
184	---	AIDAT2	( Not used )
185	---	VSS	Ground
186	---	ADECOAT	( Not used )
187	---	VSS	Ground
188	O	CLK27C	27MHz Clock
189	O	LYCIO0	Digital Video Data 0 for EVF
190	O	LYCIO1	Digital Video Data 1 for EVF
191	O	LYCIO2	Digital Video Data 2 for EVF
192	O	LYCIO3	Digital Video Data 3 for EVF
193	I	VDD15	+1.5V
194	O	LYCIO4	Digital Video Data 4 for EVF
195	O	LYCIO5	Digital Video Data 5 for EVF
196	O	LYCIO6	Digital Video Data 6 for EVF
197	O	LYCIO7	Digital Video Data 7 for EVF
198	I	VDD18	+1.8V
199	---	FRP	( Not used )
200	---	INF	( Not used )
201	---	SHMFINT	( Not used )
202	---	SHMFIRD	( Not used )
203	I	VDD18	+1.8V
204	---	VSS	Ground
205	---	SHMFIMR	( Not used )
206	---	SHMFIRS	( Not used )
207	---	SHMFICS	( Not used )
208	---	SHMFID0	( Not used )
209	---	SHMFID1	( Not used )
210	---	SHMFID2	( Not used )
211	---	SHMFID3	( Not used )
212	---	SHMFID4	( Not used )
213	---	SHMFID5	( Not used )
214	---	SHMFID6	( Not used )
215	---	SHMFID7	( Not used )
216	---	CLK27D	( Not used )
217	---	YCIO(0)	( Not used )
218	---	YCIO(1)	( Not used )
219	---	YCIO(2)	( Not used )

Pin No.	I/O	Signal Name	Description
220	---	YCIO(3)	( Not used )
221	---	VSS	Ground
222	---	YCIO(4)	( Not used )
223	---	YCIO(5)	( Not used )
224	---	YCIO(6)	( Not used )
225	---	YCIO(7)	( Not used )
226	I	CLK27X	27MHz Clock
227	I	YCIN(0)	Digital YIC Data 0
228	I	YCIN(1)	Digital YIC Data 1
229	I	YCIN(2)	Digital YIC Data 2
230	I	YCIN(3)	Digital YIC Data 3
231	I	YCIN(4)	Digital YIC Data 4
232	I	YCIN(5)	Digital YIC Data 5
233	I	VDD15	+1.5V
234	I	YCIN(6)	Digital YIC Data 6
235	I	YCIN(7)	Digital YIC Data 7
236	---	VSS	Ground
237	I	VDD18	+1.8V
238	---	BUS_MODE	( Not used )
239	I	VDD18	+1.8V
240	---	VSS	Ground
241	I	DAC_AVDD25	+2.5V
242	O	LCDROUT	LCD-Red Signal
243	O	LCDRVBS	LCD R Bias
244	---	DAC_AVSS	Ground
245	---	DAC_AVSS	Ground
246	I	DAC_AVDD25	+2.5V
247	I	DAC_AVDD25	+2.5V
248	O	LCDGOUT	LCD-Green Signal
249	I	LCDGVBS	LCD G Bias
250	I	LCDREF	LCD Reference Voltage
251	---	DAC_AVSS	Ground
252	I	DAC_AVDD25	+2.5V
253	O	LCDBOUT	LCD-Blue Signal
254	O	LCDBVBS	LCD B Bias
255	---	DAC_AVSS	Ground
256	---	DAC_AVSS	Ground
257	I	DAC_AVDD25	+2.5V
258	I	DAC_AVDD25	+2.5V
259	O	YOUT	Luminance Signal
260	I	YVBS	Y Bias
261	I	YREF	Y Reference Voltage
262	---	DAC_AVSS	Ground
263	I	DAC_AVDD25	+2.5V
264	O	COUT	Chrominance Signal
265	I	CVBS	C Bias
266	I	CREF	C Reference Voltage
267	---	DAC_AVSS	Ground
268	---	VSS	Ground
269	I	VSDD32	+3.2V
270	---	VSS	Ground
271	O	SDCLK	SD Serial Clock
272	I/O	DATA(3)	SD Data 3
273	I/O	DATA(2)	SD Data 2
274	I/O	DATA(1)	SD Data 1
275	I/O	DATA(0)	SD Data 0
276	---	VSS(NC)	Ground
277	I/O	CMD	CMD for SD
278	---	VSS(NC)	Ground
279	I	SD_VDD32	+3.2V
280	I	VDD15	+1.5V
281	O	CLK48O	48MHz Clock
282	I	CLK48I	48MHz Clock
283	---	VSS(NC)	Ground
284	---	VSS(NC)	Ground
285	---	VSS(NC)	Ground
286	I	VDD25	+2.5V
287	---	VSS	Ground
288	---	VSS(NC)	Ground
289	---	VSS(NC)	Ground
290	---	VSS(NC)	Ground
291	I/O	USB_DP	USB Data (+)
292	I/O	USB_DN	USB Data (-)

Pin No.	I/O	Signal Name	Description
293	---	VSS	Ground
294	I	USB_VDD32	+3.2V
295	I	USB_VDD32	+3.2V
296	I	VDD30	+3.0V
297	O	CAMLENSDIO	Lens Drive Serial Data
298	O	CAMLENSCLK	Lens Drive Serial Clock
299	O	CAMLENSCS	Lens Drive Chip Select
300	O	CAMCGAFEDIO	Camera DAC/TG Serial Data
301	I	VDD30	+3.0V
302	O	CAMCGAFECCLK	Camera DAC/TG Serial Clock
303	O	CAMCGCS	TG Chip Select
304	O	CAMAFECSS	Camera DAC Chip Select
305	---	VSS	Ground
306	I	OSDVR	OSD-Red Signal
307	I	OSDVG	OSD-Green Signal
308	I	OSDVB	OSD-Blue Signal
309	I	OSDBLKA	OSD-Blanking Pulse (A)
310	---	VSS	Ground
311	I	VDD15	+1.5V
312	I	OSDBLBK	OSD-Blanking Pulse (B)
313	I	FAD_VDD15	+1.5V
314	---	FAD_VSS	Ground
315	I	FAD_VDD32	+3.2V
316	O	OSDHD	OSD-HD Pulse
317	O	OSDVD	OSD-VD Pulse
318	O	LCDEVBLK	LCD V-Sync Pulse
319	O	LCDDHD	LCD H-Sync Pulse
320	---	VSS	Ground
321	I	LCDPOL	LCD Polarity Detect
322	I	VDD30	+3.0V
323	O	CLK45M_ZB	4.5MHz Clock
324	O	AFDRVDD	Lens Drive VD Pulse
325	---	LINPWM	( Not used )
326	O	OSDCLK	OSD Clock
327	O	FSLPFO	FSPLL LPF Out
328	---	DTCLK	( Not used )
329	---	DVM	( Not used )
330	I	FAD_VDD32	+3.2V
331	---	FAD_VSS	Ground
332	I	FAD_VDD15	+1.5V
333	I	VDD30	+3.0V
334	I	VDD18	+1.8V
335	---	TRACECLK	( Not used )
336	---	TRACESYNC	( Not used )
337	---	TRACEPKT(0)	( Not used )
338	---	TRACEPKT(1)	( Not used )
339	I	VDD18	+1.8V
340	I	VDD15	+1.5V
341	---	VSS	Ground
342	I	SD_VDD15	+1.5V
343	---	SD_VSS	Ground
344	I	SD_VDD25	+2.5V
345	---	TRACEPKT(2)	( Not used )
346	---	TRACEPKT(3)	( Not used )
347	---	TRACEPKT(4)	( Not used )
348	---	TRACEPKT(5)	( Not used )
349	---	TRACEPKT(6)	( Not used )
350	---	TRACEPKT(7)	( Not used )
351	---	PIPESTAT(0)	( Not used )
352	---	PIPESTAT(1)	( Not used )
353	---	PIPESTAT(2)	( Not used )
354	---	A15	( Not used )
355	---	VSS	Ground
356	I	SD_VDD25	+2.5V
357	---	SD_VSS	Ground
358	I	SD_VDD15	+1.5V
359	---	VSS	Ground
360	---	RTCK	( Not used )
361	I	XTRST	ResetLow
362	---	NC	( Not used )
363	---	NC	( Not used )
364	---	NC	( Not used )

MAIN VI SCHEMATIC DIAGRAM

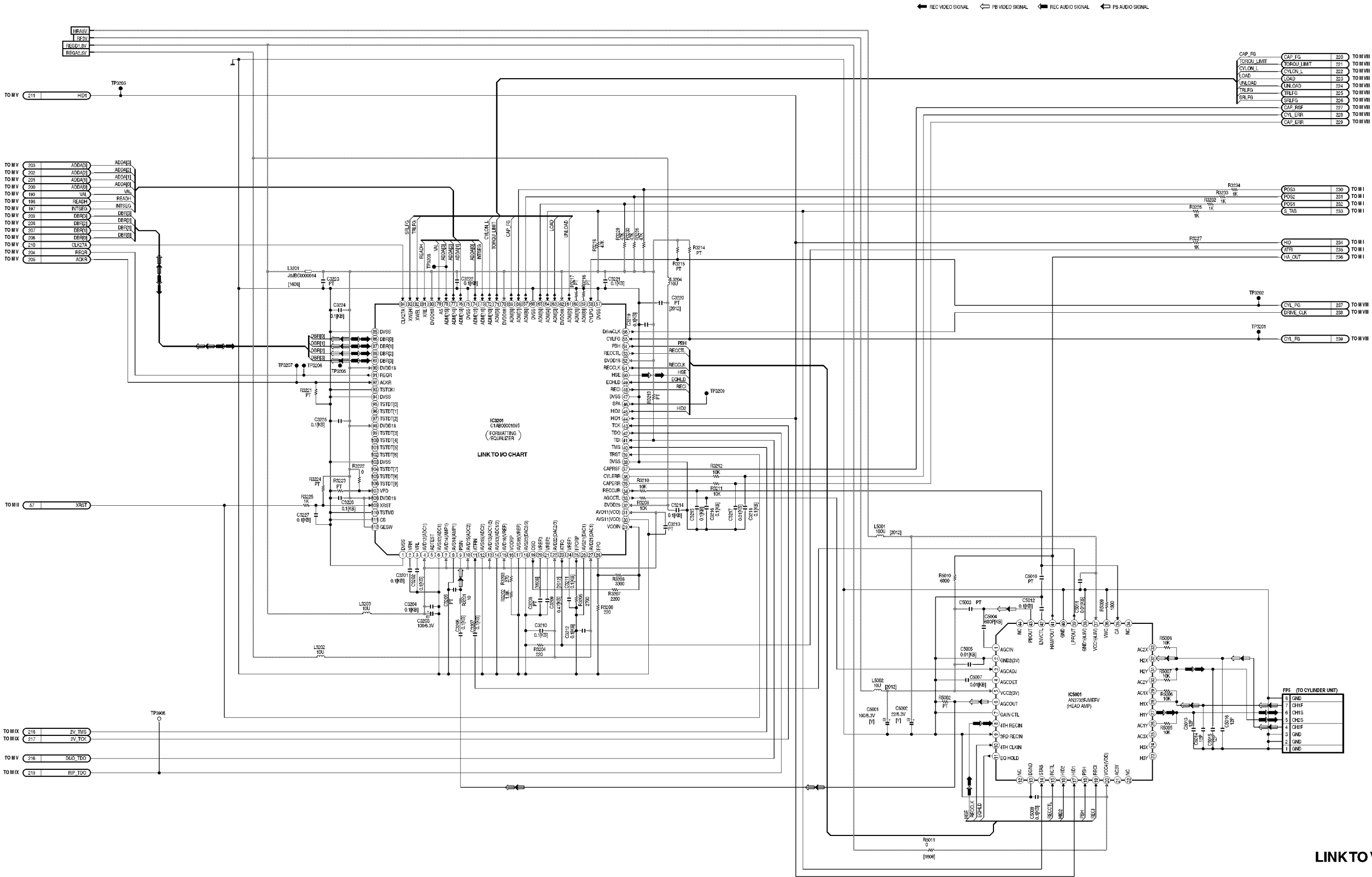
NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

NOTE:  
PARTS MARKED "PT" ARE NOT USED.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



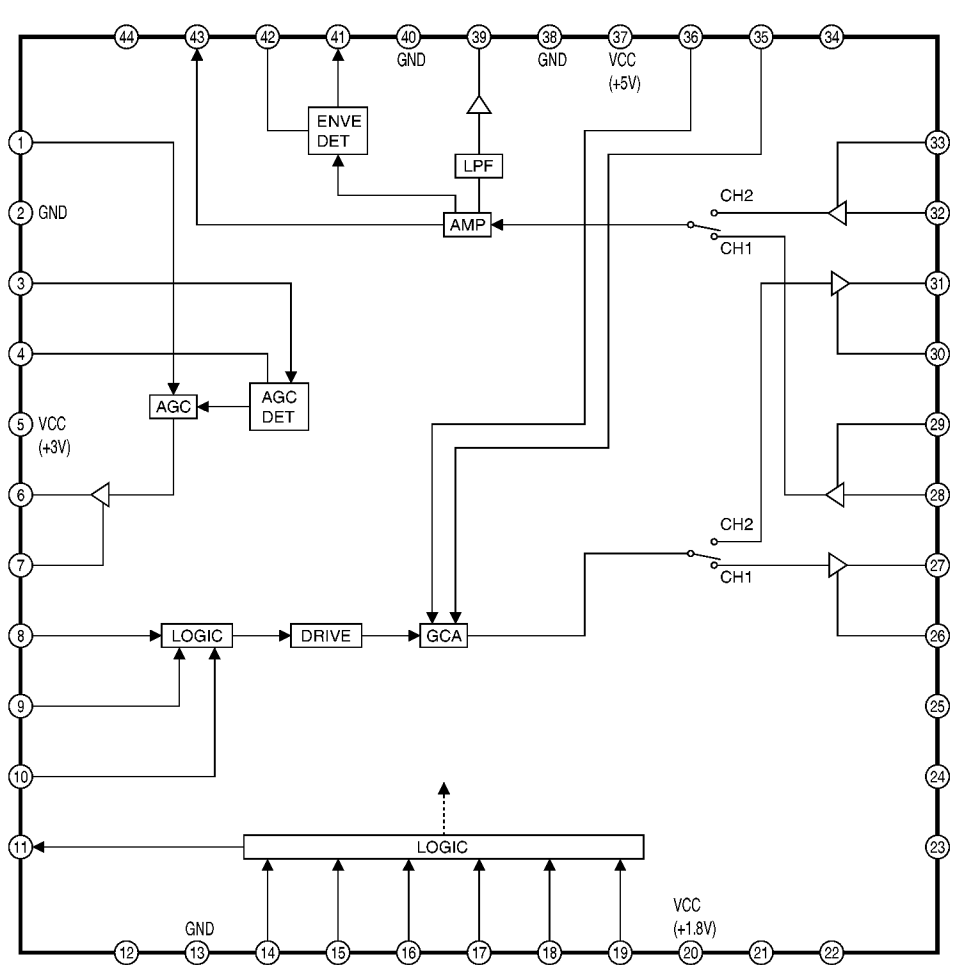
LINK TO VOLTAGE CHART

I/O CHART OF IC3201

Pin No.	I/O	Signal Name	Description
1	-	DVSS	Ground
2	-	VRH	V-ref : high
3	-	VRL	V-ref : low
4	I	AVD12 (ADC1)	+1.8V
5	-	ADTEST	Test pin
6	-	AVS12 (ADC1)	Ground
7	I	AVD14 (AMP1)	+1.8V
8	-	AVS14 (AMP1)	Ground
9	I	PBIN	PB data input (+)
10	I	AVD15 (ADC2)	+1.8V
11	I	ATFIN	ATF input
12	-	AVS15 (ADC2)	Ground
13	I	AVD13 (ADC1/2)	+1.8V
14	-	AVS13 (ADC1/2)	Ground
15	I	AVD16 (VREF)	+1.8V
16	-	VCORP	VCO reference resister
17	-	AVS16 (VREF)	Ground
18	-	AVS22 (DAC2/3)	Ground
19	O	OSO	Offset output
20	-	VREF3	V-ref3
21	-	VREF2	V-ref2
22	I	AVD22 (DAC2/3)	+1.8V
23	O	ATF0	ATF output
24	-	VREF1	V-ref1
25	O	FPORP	Frequency Phase out (+)
26	-	AVS21 (DAC1)	Ground
27	I	AVD21 (DAC1)	+1.8V
28	-	FRP	(Not used)
29	I	VCOIN	VCO input
30	-	AVS11 (VCO)	Ground
31	I	AVD11 (VCO)	+1.8V
32	I	DVDD25	+2.5V
33	O	AGCCTL	AGC control
34	O	RECCUR	Rec current control
35	-	CAPERR	Test pin
36	-	CYLERR	Test pin
37	-	CAPRSF	Test pin
38	-	DVSS	Ground
39	I	TRST	Reset : low
40	I	TMS	Test mode of JTAG
41	I	TDI	Test data out of JTAG
42	O	TDO	Test data In of JTAG
43	I	TCK	Test clock of JTAG
44	O	HID1	Head switch pulse 1
45	O	HID2	Head switch pulse 2
46	O	SPA	Sample pulse for ATF
47	-	DVSS	Ground
48	O	RECI	Rec on/off control
49	I	EQHLD	Equalizer hold
50	O	HSE	Rec data
51	O	RECCLK	Rec clock
52	I	DVDD18	+1.8V
53	O	RECCCTL	Rec control
54	O	PBH	PB mode : high
55	I	CYLFG	Cylinder FG head
56	O	DriveCLK	Drive clock

Pin No.	I/O	Signal Name	Description
57	-	DVSS	Ground
58	I	CYLPG	Cylinder PG head
59	-	ADM[0]	(Not used)
60	-	ADM[1]	(Not used)
61	I/O	ADM[2]	Address/data 2
62	I	ADD18	+1.8V
63	I/O	ADM[3]	Address/data 3
64	I/O	ADM[4]	Address/data 4
65	I/O	ADM[5]	Address/data 5
66	-	DVSS	Ground
67	I/O	ADM[6]	Address/data 6
68	I/O	ADM[7]	Address/data 7
69	I/O	ADM[8]	Address/data 8
70	I	DVDD18	+1.8V
71	I/O	ADM[9]	Address/data 9
72	I/O	ADM[10]	Address/data 10
73	I/O	ADM[11]	Address/data 11
74	I/O	ADM[12]	Address/data 12
75	-	DVSS	Ground
76	I/O	ADM[13]	Address/data 13
77	I/O	ADM[14]	Address/data 14
78	I/O	ADM[15]	Address/data 15
79	I	AS	Address strobe
80	I	DVDD18	+1.8V
81	I	XRE	Read enable
82	I	XWEL	Write enable
83	I	XWEH	Write enable
84	I	CLK27A	27MHz clock
85	-	DVSS	Ground
86	I/O	DVR[0]	Digital Rec/PB data (0)
87	I/O	DVR[1]	Digital Rec/PB data (1)
88	I/O	DVR[2]	Digital Rec/PB data (2)
89	I/O	DVR[3]	Digital Rec/PB data (3)
90	I	DVDD18	+1.8V
91	O	REQR	Request of R10
92	I	ACKR	Acknowledge for R10
93	-	TSTCKI	(Not used)
94	-	DVSS	Ground
95	-	TSTDIT[0]	(Not used)
96	-	TSTDIT[1]	(Not used)
97	-	TSTDIT[2]	(Not used)
98	I	DVDD18	+1.8V
99	-	TSTDIT[3]	(Not used)
100	-	TSTDIT[4]	(Not used)
101	-	TSTDIT[5]	(Not used)
102	-	TSTDIT[6]	(Not used)
103	-	DVSS	Ground
104	-	TSTDIT[7]	(Not used)
105	-	TSTDIT[8]	(Not used)
106	-	TSTDIT[9]	(Not used)
107	I	VPD	+1.8V
108	I	DVDD18	+1.8V
109	I	XRST	Reset : low
110	-	TSTMd	(Not used)
111	-	CS	(Not used)
112	-	GESW	(Not used)

IC5001 IC- DETAIL BLOCK DIAGRAM



I/O CHART OF IC3201 / IC5001 DETAIL BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC



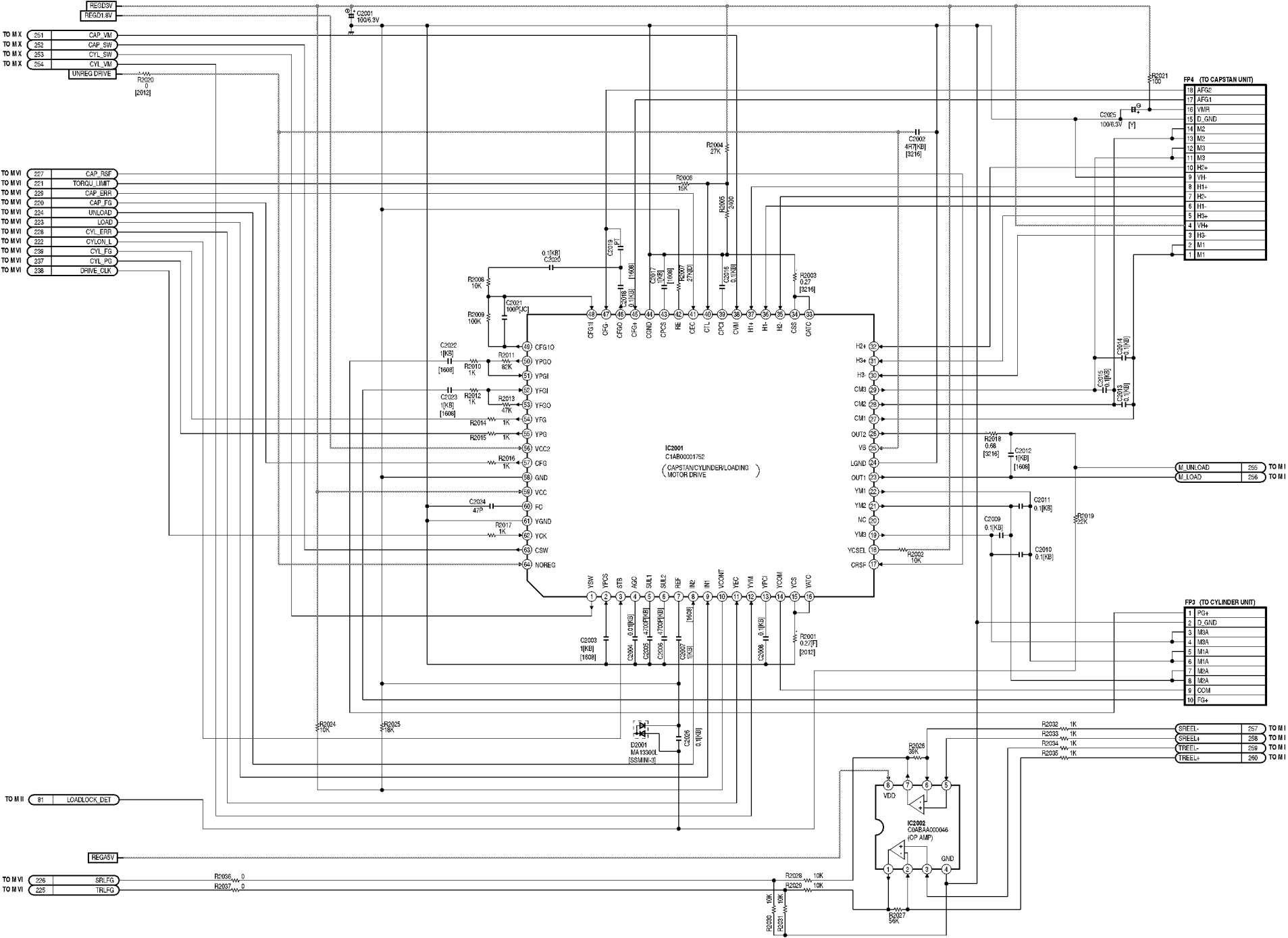
MAIN VIII SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

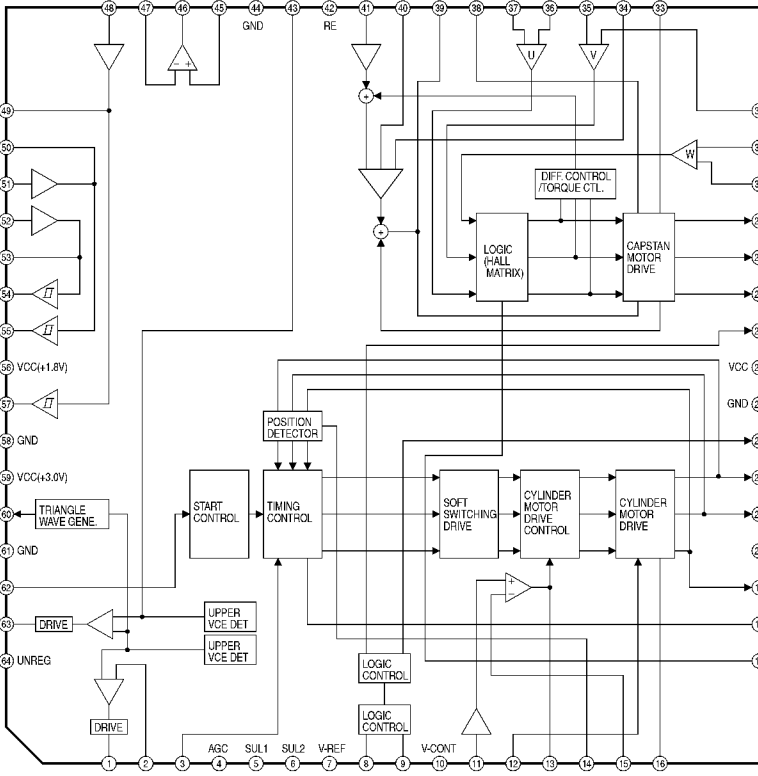
NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



IC2001 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

LSJB8262

MAIN VIII SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC



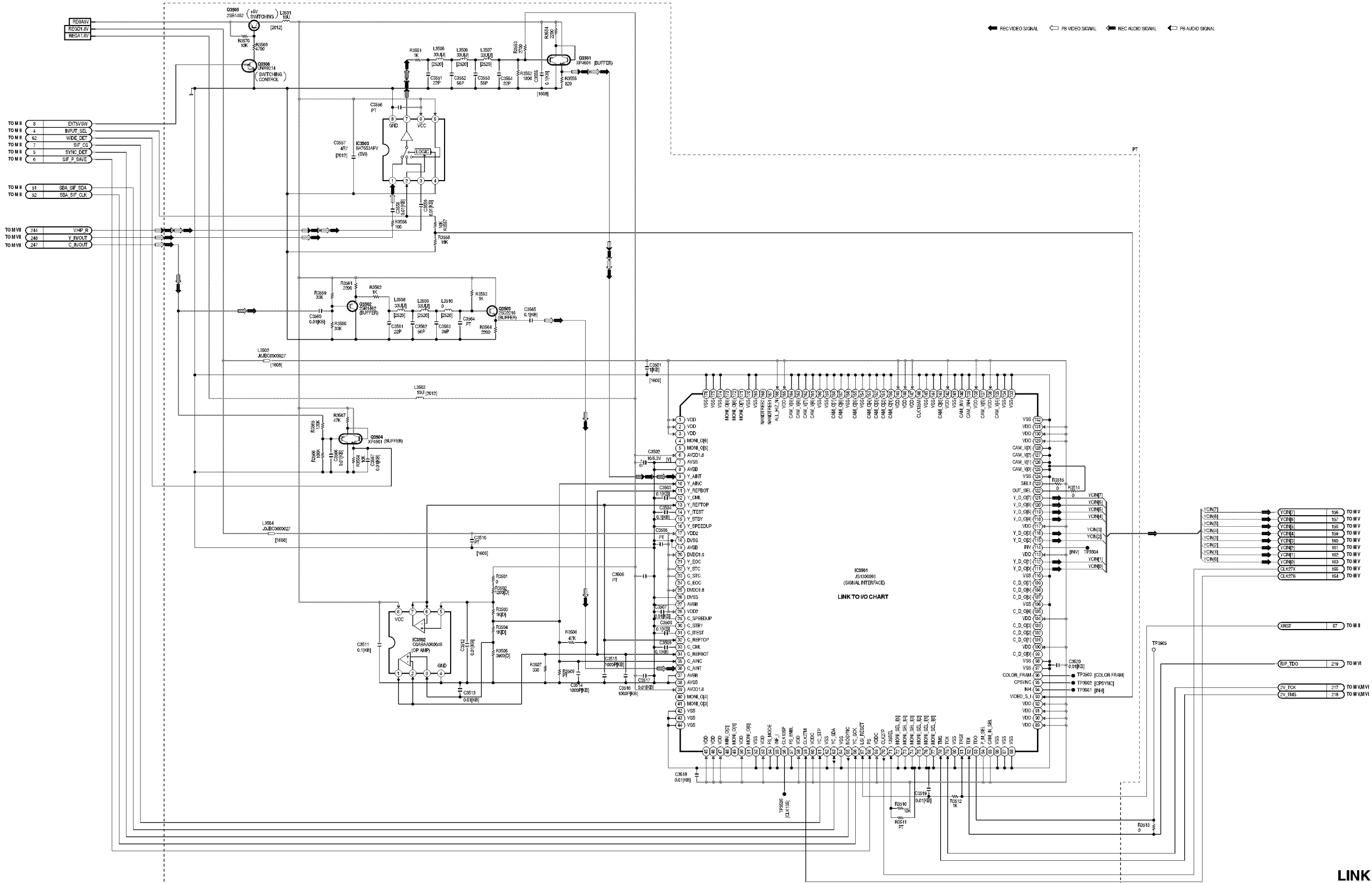
MAIN IX SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

NOTE:  
PARTS MARKED "PT" ARE NOT USED.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



LINK TO VOLTAGE CHART

LSJB8262

MAIN IX SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

I/O CHART OF IC3501

Pin No.	I/O	Signal Name	Description
1	I	VDD	+1.8V
2	I	VDD	+1.8V
3	I	VDD	+1.8V
4	-	MONI O[6]	(Not used)
5	-	MONI O[5]	(Not used)
6	I	AVDD2.5	+2.5V
7	-	AVSS	Ground
8	-	AVBB	Ground
9	I	Y AINT	Analog luminance signal
10	I	Y AINC	Analog luminance common
11	I	Y REFBOT	V-ref(L) for luminance A/D converter
12	-	Y CML	Luminance A/D converter internal bias
13	I	Y REFTOP	V-ref(H) for luminance A/D converter
14	-	Y ITEST	Luminance A/D converter internal bias
15	-	Y STBY	Power save standby
16	-	Y SPEEDUP	Speed test pin
17	I	VDD2	+1.8V
18	-	DVSS	Ground
19	-	AVBB	Ground
20	I	DVDD2.5	+2.5V
21	-	Y EOC	(Not used)
22	-	Y STC	(Not used)
23	-	C STC	(Not used)
24	-	C EOC	(Not used)
25	I	DVDD2.5	+2.5V
26	-	DVSS	Ground
27	-	AVBB	Ground
28	I	VDD2	+1.8V
29	-	C SPEEDUP	Speed test pin
30	-	C STBY	Power save standby
31	-	C ITEST	Chrominance A/D converter internal bias
32	I	C REFTOP	V-ref(H) for chrominance A/D converter
33	-	C CML	Chrominance A/D converter internal bias
34	I	C REFBOT	V-ref(L) for chrominance A/D converter
35	I	C AINC	Analog chrominance common
36	I	C AINT	Analog chrominance signal
37	-	AVBB	Ground
38	-	AVSS	Ground
39	I	AVDD2.5	+2.5V
40	-	MONI O[4]	(Not used)
41	-	MONI O[3]	(Not used)
42	-	VSS	Ground
43	-	VSS	Ground
44	-	VSS	Ground

Pin No.	I/O	Signal Name	Description
45	I	VDD	+1.8V
46	I	VDD	+1.8V
47	I	VDD	+1.8V
48	-	MONI O[2]	(Not used)
49	-	MONI O[1]	(Not used)
50	I	VDD	+1.8V
51	-	MONI O[0]	(Not used)
52	-	VSS	Ground
53	I	VDD	+1.8V
54	-	FS MODE	(Not used)
55	-	INF I	(Not used)
56	-	CLK135P	(Not used)
57	-	FS ENBL	(Not used)
58	I	VDD	+1.8V
59	I	CLK27M	27MHz clock
60	I	VDDC	+1.8V
61	I	YC STP	SIF chip select
62	-	VSS	Ground
63	I/O	YC SDA	SIF serial data
64	-	VSS	Ground
65	O	NOSYNC	No sync detect
66	I	YC SCK	SIF serial clock
67	I	LSI RESET	Reset : low
68	I	PS	Exit pause
69	I	VDDC	+1.8V
70	-	CLK27P	(Not used)
71	-	135SEL	(Not used)
72	-	MONI SEL I[5]	(Not used)
73	-	MONI SEL I[4]	(Not used)
74	-	MONI SEL I[3]	(Not used)
75	-	MONI SEL I[2]	(Not used)
76	-	MONI SEL I[1]	(Not used)
77	-	MONI SEL I[0]	(Not used)
78	I	TMS	Test mode select
79	I	TCK	Test clock
80	-	VSS	Ground
81	I	TRST	Reset : low
82	I	TDI	Test data
83	-	TDO	(Not used)
84	-	P M SEL	(Not used)
85	-	CAM IN SEL	(Not used)
86	-	VSS	Ground
87	-	VSS	Ground
88	-	VSS	Ground

Pin No.	I/O	Signal Name	Description
89	I	VDD	+1.8V
90	I	VDD	+1.8V
91	I	VDD	+1.8V
92	I	VDD	+1.8V
93	I	VIDEO S I	Input select
94	-	INH	(Not used)
95	-	CPSYNC	(Not used)
96	-	COLOR FRAM	(Not used)
97	-	VSS	Ground
98	-	VSS	Ground
99	-	C D O[0]	(Not used)
100	I	VDD	+1.8V
101	-	C D O[1]	(Not used)
102	-	C D O[2]	(Not used)
103	-	C D O[3]	(Not used)
104	I	VDD	+1.8V
105	-	C D O[4]	(Not used)
106	-	VSS	Ground
107	-	C D O[5]	(Not used)
108	-	C D O[6]	(Not used)
109	-	C D O[7]	(Not used)
110	-	VSS	Ground
111	O	Y D O[0]	Luminance data 0
112	O	Y D O[1]	Luminance data 1
113	I	VDD	+1.8V
114	-	INV	(Not used)
115	O	Y D O[2]	Luminance data 2
116	O	Y D O[3]	Luminance data 3
117	I	VDD	+1.8V
118	O	Y D O[4]	Luminance data 4
119	O	Y D O[5]	Luminance data 5
120	O	Y D O[6]	Luminance data 6
121	O	Y D O[7]	Luminance data 7
122	-	OUT SEL	(Not used)
123	-	SEL1	(Not used)
124	-	VSS	Ground
125	-	CAM Y[0]	(Not used)
126	-	CAM Y[1]	(Not used)
127	-	CAM Y[2]	(Not used)
128	-	CAM Y[3]	(Not used)
129	I	VDD	+1.8V
130	I	VDD	+1.8V
131	I	VDD	+1.8V
132	-	VSS	Ground

Pin No.	I/O	Signal Name	Description
133	-	VSS	Ground
134	-	VSS	Ground
135	-	CAM Y[4]	(Not used)
136	I	VDD	+1.8V
137	-	CAM Y[5]	(Not used)
138	I	VDD	+1.8V
139	-	CAM INH	(Not used)
140	-	CAM INV	(Not used)
141	-	VSS	Ground
142	I	VDD	+1.8V
143	-	CAM C[0]	(Not used)
144	-	VSS	Ground
145	-	VSS	Ground
146	-	CLK135M	(Not used)
147	I	VDD	+1.8V
148	I	VDD	+1.8V
149	I	VDD	+1.8V
150	-	CAM C[1]	(Not used)
151	-	CAM C[2]	(Not used)
152	-	CAM C[3]	(Not used)
153	-	CAM C[4]	(Not used)
154	-	VSS	Ground
155	-	CAM C[5]	(Not used)
156	-	VSS	Ground
157	-	CAM C[6]	(Not used)
158	-	CAM C[7]	(Not used)
159	-	VSS	Ground
160	-	VSS	Ground
161	-	CAM Y[6]	(Not used)
162	-	CAM Y[7]	(Not used)
163	-	CAM Y[8]	(Not used)
164	-	CAM Y[9]	(Not used)
165	I	VDD	+1.8V
166	I	ALL HIZ N	(Not used)
167	-	NANDTREE1	(Not used)
168	-	NANDTREE2	(Not used)
169	-	VSS	Ground
170	-	VSS	Ground
171	-	MONI O[7]	(Not used)
172	-	MONI O[8]	(Not used)
173	-	MONI O[9]	(Not used)
174	-	VSS	Ground
175	-	VSS	Ground
176	-	VSS	Ground

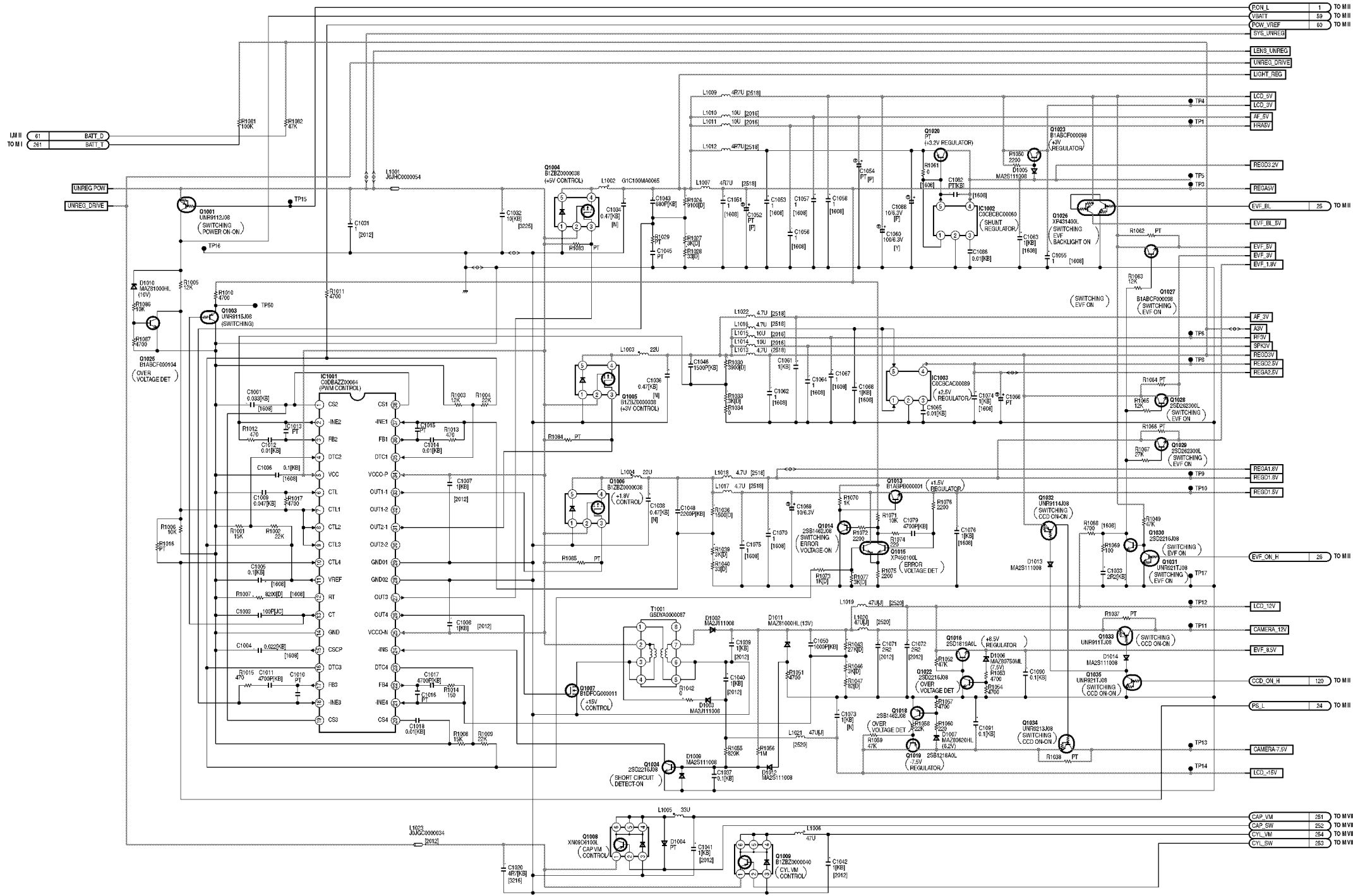
MAIN X SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

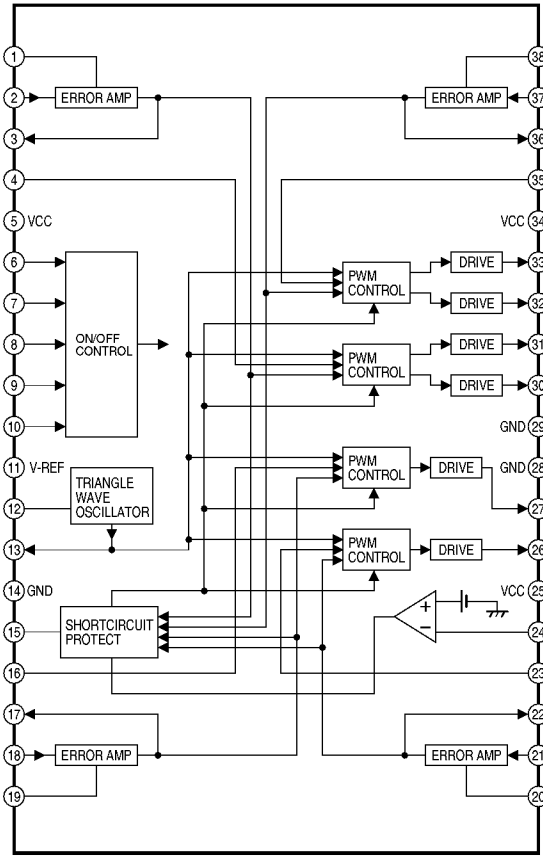
NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



IC1001 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

LSJB8262  
MAIN X SCHEMATIC DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC



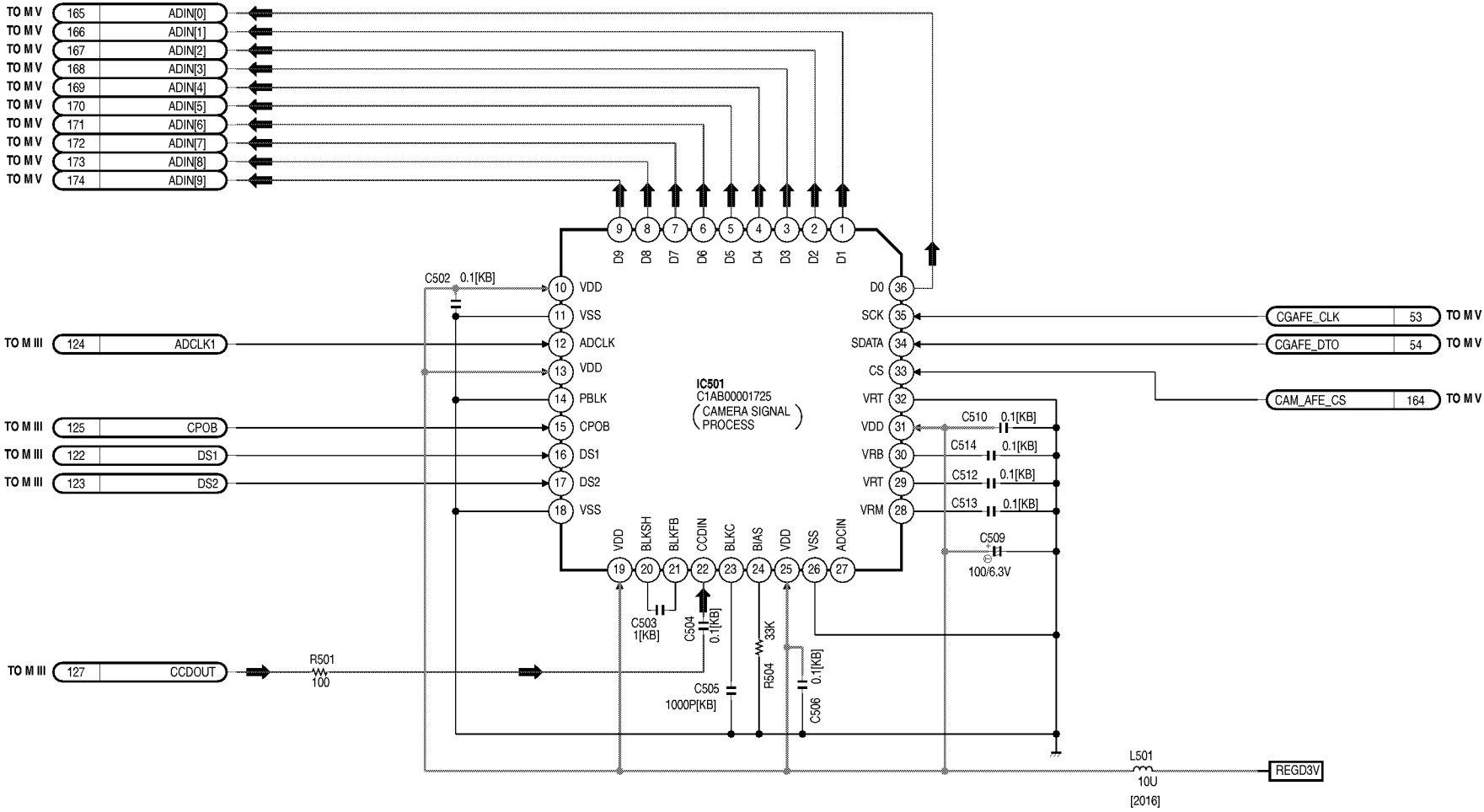
MAIN XII SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

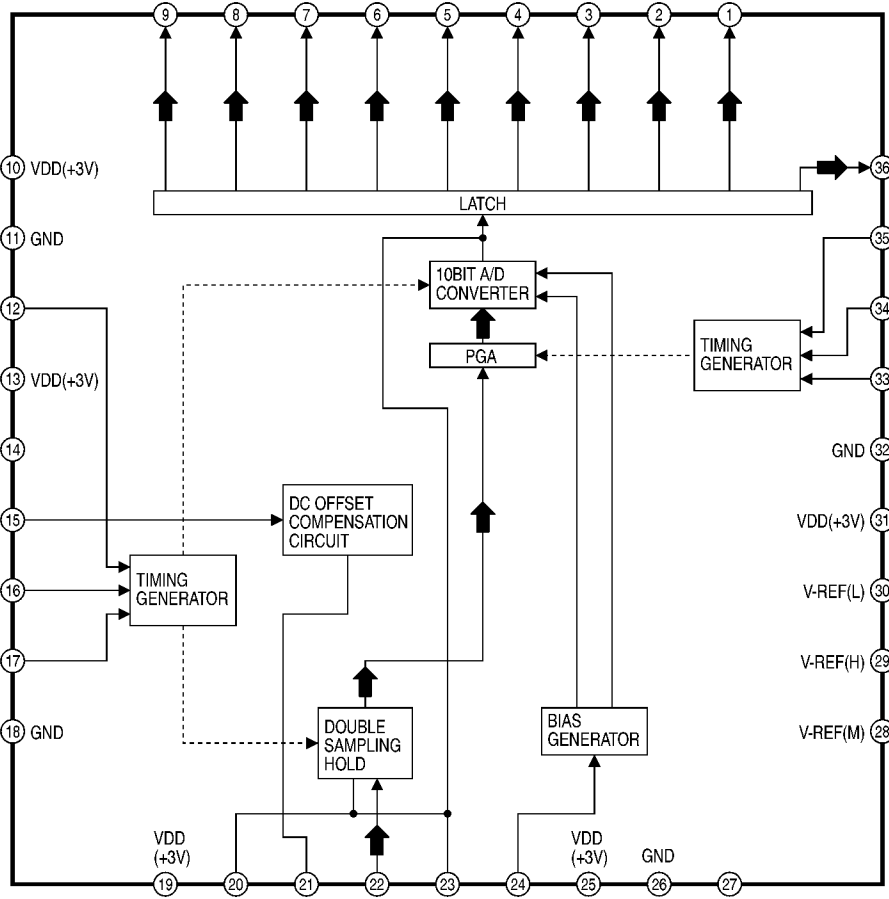
NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT



IC501 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

LSJB8262

MAIN XII SCHEMATIC DIAGRAM

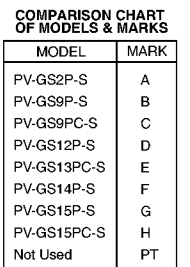
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

**CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE **2A 32V** FUSE.  
**ATTENTION:** POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME  
TYPE **2A 32V**

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT

The schematic diagram illustrates the internal circuitry of the Sony CCD-IR1000 camcorder, focusing on the audio and video processing sections. The circuit is organized into several functional blocks:

- Power Regulation:** A 3.5V regulator (CA001) is used to provide a stable power supply for the audio amplifiers. It includes a 2200µF capacitor (C4001) and a 225.3V resistor (R4002).
- Audio Amplification:** Three audio amplifiers (CA002, CA003, CA004) are used to drive the speakers. CA002 and CA003 are 2SB1402.008 (100mW) amplifiers, while CA004 is a 2SB1402.008 (100mW) amplifier. They are connected to a common speaker output (SPEAKER) through a 470µF capacitor (C4004).
- Video Amplification:** A video amplifier (CA003) is used to drive the video output. It is connected to a video output jack (V-JACK) through a 4700pF capacitor (C7001).
- Input/Output Jacks:** The diagram shows the internal connections for various jacks, including the AV JACK, V-JACK, S-JACK, and USB JACK. These jacks are connected to the internal circuitry through a series of resistors and capacitors.
- Remote Control Interface:** A remote control interface (FREE STYLE REMOTE) is shown, which includes a 100k resistor (R7001) and a 100k resistor (R7002) connected to the remote control signal.

The diagram also includes a detailed view of the internal connections for the AV JACK, V-JACK, S-JACK, and USB JACK, showing the specific pin connections and the components used for signal conditioning.

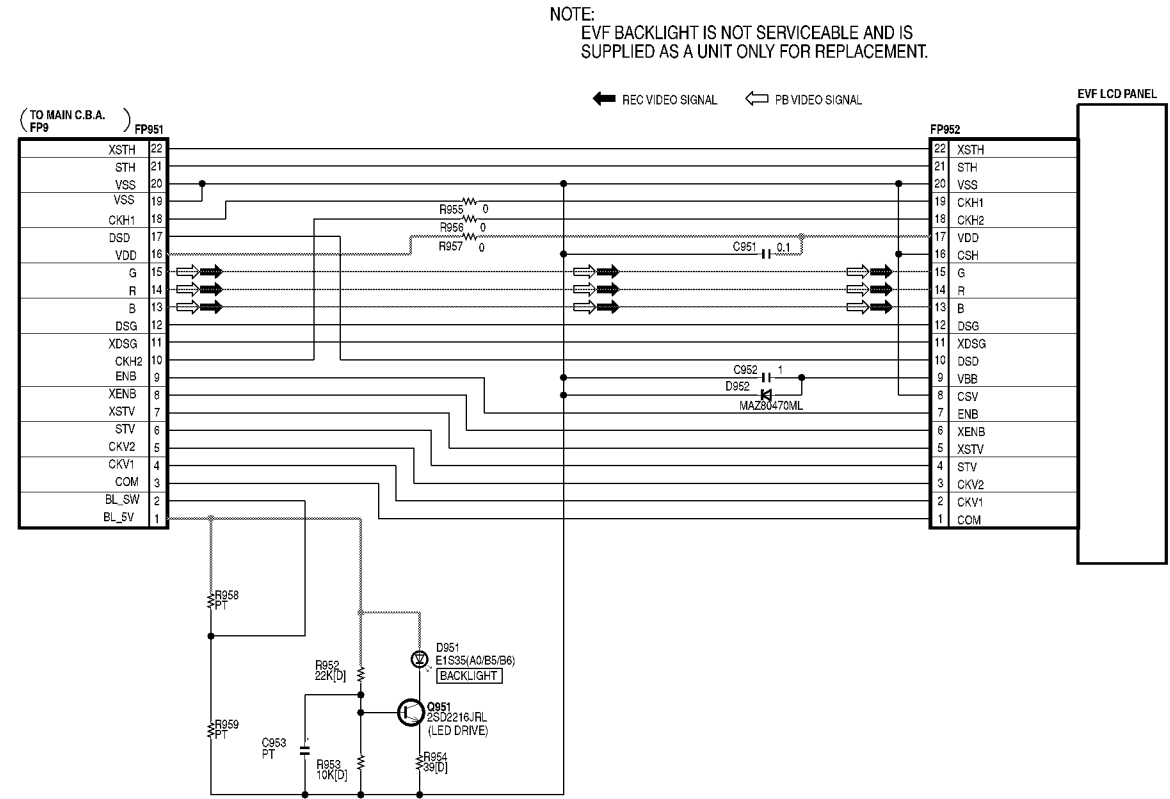
**PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC**



9.6. EVF BACKLIGHT / SIDE CASE R SCHEMATIC DIAGRAMS

EVF BACKLIGHT SCHEMATIC DIAGRAM

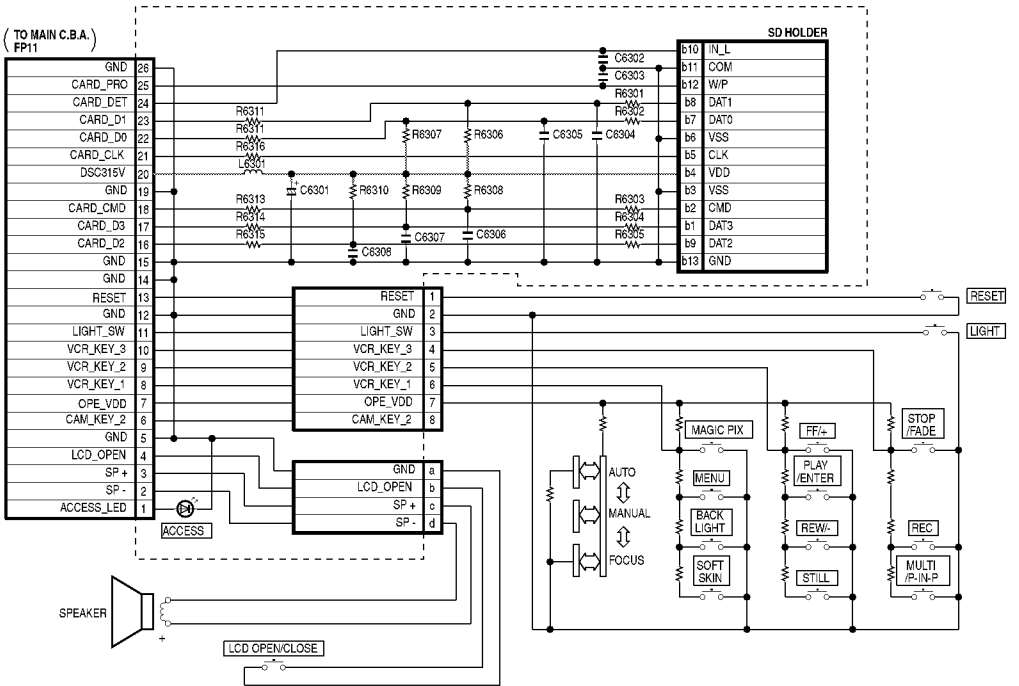
“FOR REFERENCE ONLY”



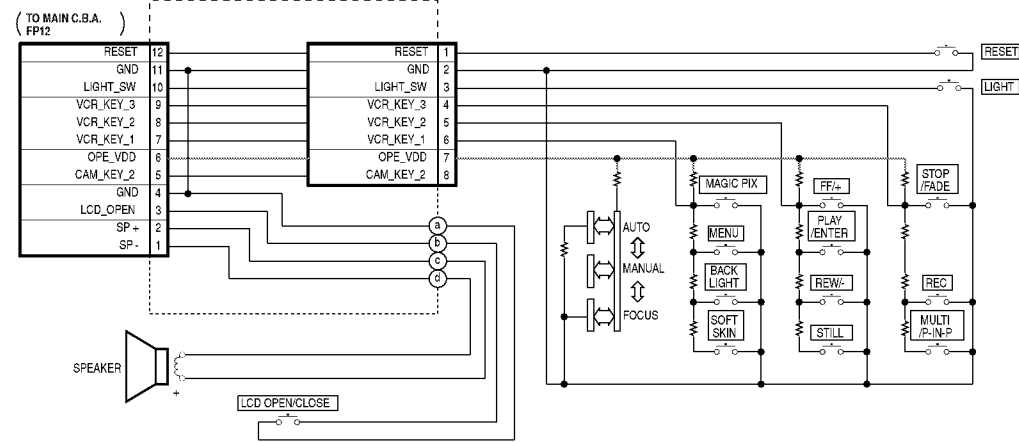
SIDE CASE R SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

(WITH SD SLOT)



(WITHOUT SD SLOT)



COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H
Not Used	PT

9.7. CCD / SIDE CASE L / LCD SW SCHEMATIC DIAGRAMS

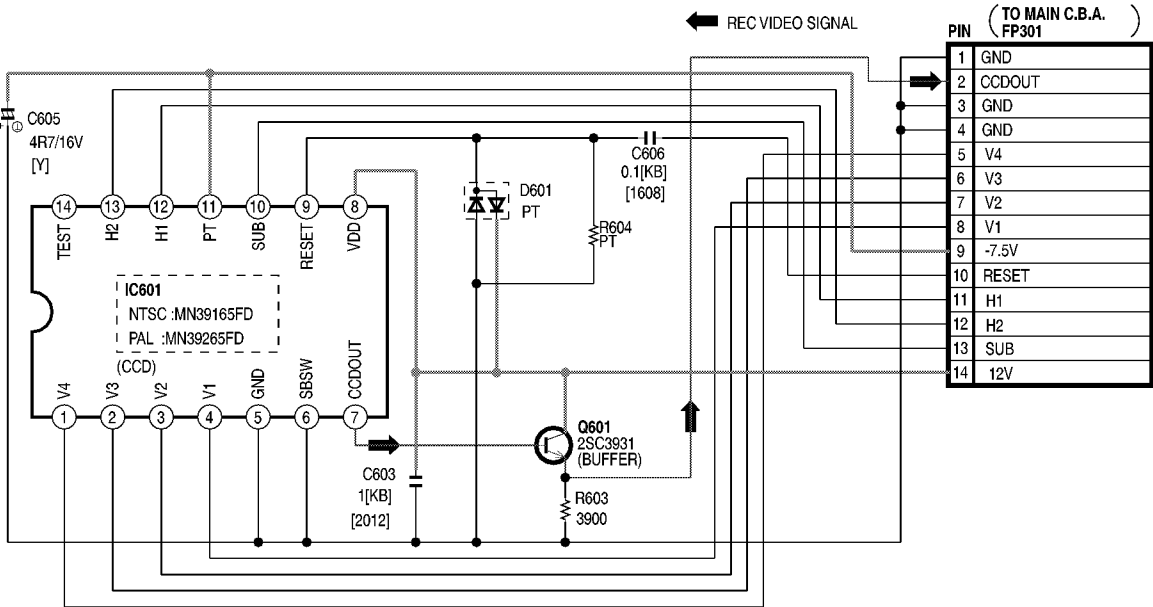
NOTE: For placing a purchase order of the parts,  
be sure to use the part number listed in the parts list.  
Do not use the part number on this diagram.

NOTE:  
PARTS MARKED "PT" ARE NOT USED.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

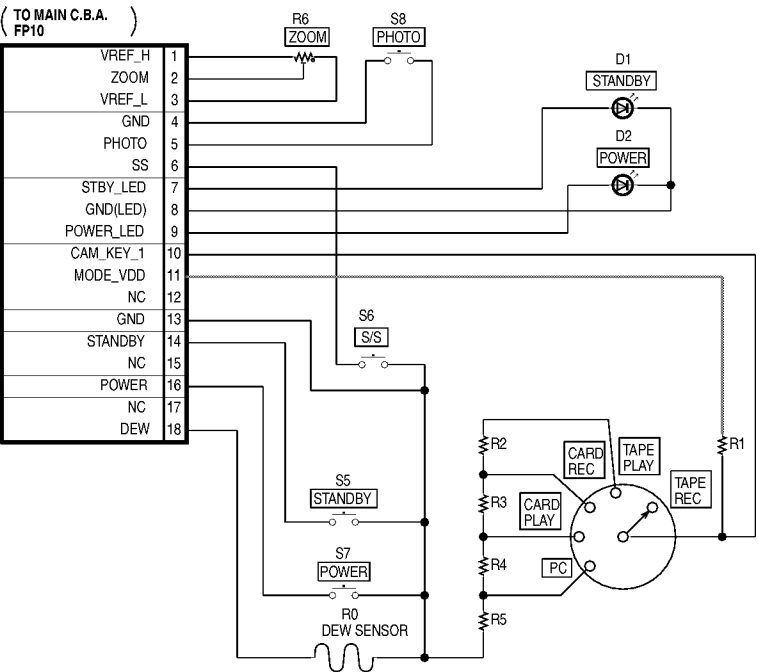
CCD SCHEMATIC DIAGRAM  
“FOR REFERENCE ONLY”

NOTE:  
CCD C.B.A. IS NOT SERVICEABLE AND IS  
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



SIDE CASE L SCHEMATIC DIAGRAM  
“FOR REFERENCE ONLY”

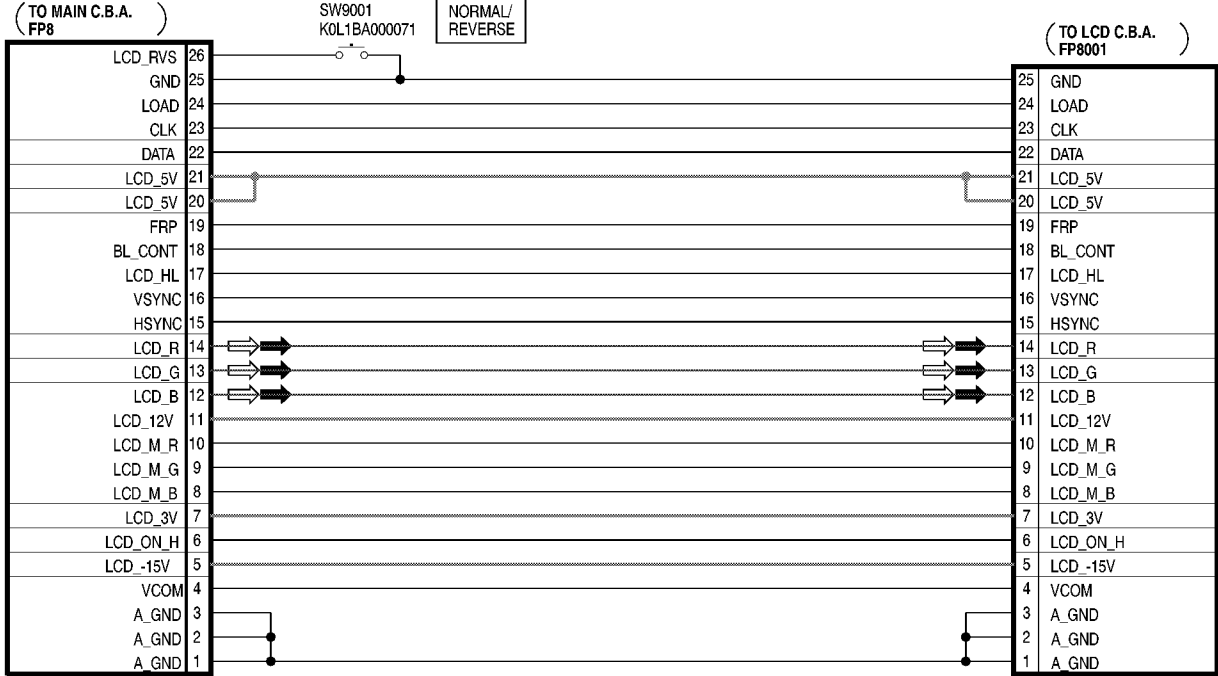
NOTE:  
SIDE CASE L UNIT IS NOT SERVICEABLE AND IS  
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



LCD SW SCHEMATIC DIAGRAM  
“FOR REFERENCE ONLY”

NOTE:  
LCD SW IS NOT SERVICEABLE AND IS  
SUPPLIED AS A SHAFT CASE UNIT ONLY FOR REPLACEMENT.

REC VIDEO SIGNAL  
PB VIDEO SIGNAL



CCD SCHEMATIC DIAGRAM  
SIDE CASE L SCHEMATIC DIAGRAM  
LCD SW SCHEMATIC DIAGRAM

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

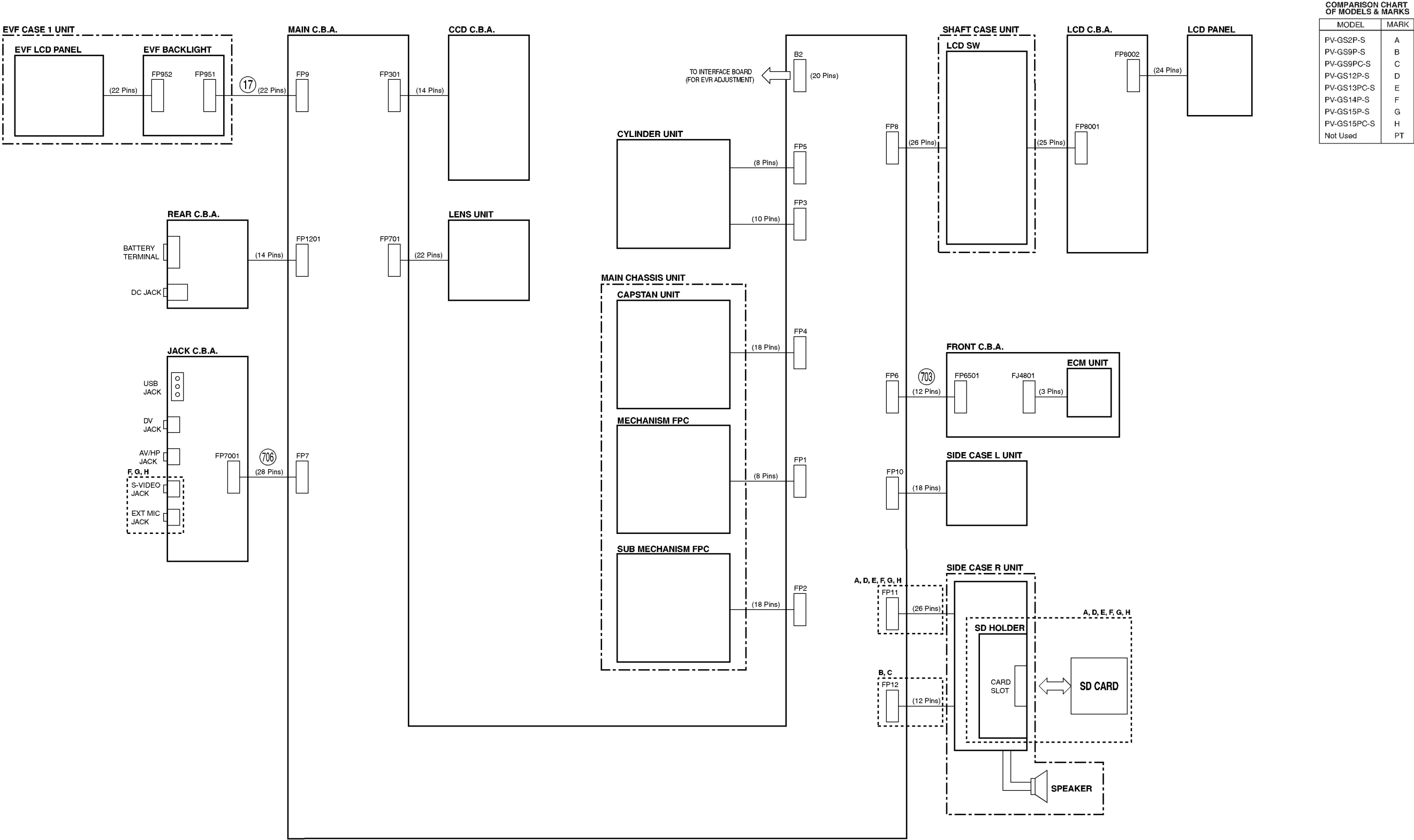
9.8. INTERCONNECTION SCHEMATIC DIAGRAM

INTERCONNECTION SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.



INTERCONNECTION SCHEMATIC DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

9.9. VOLTAGE CHART

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN C.B.A. (CAMERA SECTION)

MODE PIN NO.	CAMERA
IC301	
1	2.9
2	0
3	0
4	3.4
5	5.0
IC302	
1	---
2	---
3	0.1
4	0.3
5	---
6	0
7	3.0
8	1.2
9	2.9
10	0
11	2.9
12	0.6
13	0
14	0
15	2.9
16	2.9
17	0
18	3.0
19	0.2
20	0.2
21	2.7
22	2.7
23	2.9
24	---
25	0
26	3.2
27	0.6
28	0
29	3.2
30	0.9
31	0
32	0
33	3.2
34	3.0
35	1.3
36	0
37	0
38	0.1
39	0.2
40	0.7
41	---
42	3.0
43	0
44	2.8
45	---
46	0.1
47	0.6
48	---

MODE PIN NO.	CAMERA
IC303	
1	---
2	0
3	1.2
4	3.2
IC304	
1	-7.0
2	-7.0
3	-0.2
4	0
5	0
6	3.0
7	0.4
8	2.9
9	0.2
10	2.9
11	---
12	2.7
13	2.9
14	2.7
15	0
16	12.0
17	-6.6
18	-6.6
19	0
20	12.0
IC701	
1	0.1
2	2.9
3	2.9
4	2.9
5	0
6	0
7	0
8	0
9	5.0
10	1.3
11	7.8
12	7.4
13	1.6
14	1.6
15	2.9
16	1.1
17	0
18	0.1
19	5.1
20	1.5
21	1.5
22	1.5
23	1.5
24	1.5
25	1.5
26	1.8
27	1.5
28	1.5

MODE PIN NO.	CAMERA
29	1.9
30	1.1
31	0.2
32	1.0
33	2.9
34	1.0
35	2.9
36	2.9
37	2.9
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	2.9
IC901	
1	2.9
2	0.3
3	2.8
4	0.3
5	0
6	0.3
7	2.9
8	2.9
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0.5
19	4.1
20	4.9
21	2.3
22	2.6
23	0
24	4.9
25	4.9
26	0.2
27	2.6
28	2.6
29	2.6
30	0
31	2.9
32	0
33	0
34	2.7

MODE PIN NO.	CAMERA
35	0.2
36	1.4
37	1.5
38	2.9
39	2.8
40	0.1
41	0.4
42	2.5
43	1.5
44	1.5
45	2.8
46	0.1
47	0.1
48	0
49	0
50	0.7
51	0.7
52	0.6
53	1.0
54	0.7
55	0.8
56	1.9
57	0.7
58	0.8
59	0.9
60	2.9
61	0
62	0
63	0
64	0
Q701	
E	7.9
C	0.1
B	7.4

MAIN C.B.A. (POWER/VIDEO/AUDIO SECTION)

MODE PIN NO.	CAMERA
IC501	
1	1.4
2	1.3
3	1.5
4	1.4
5	1.4
6	1.8
7	0.4
8	0.1
9	0
10	2.8
11	0
12	1.2
13	2.8
14	0
15	0.1
16	0.5
17	0.5
18	0
19	2.8
20	2.0
21	2.1
22	2.1
23	2.0
24	1.3
25	2.8
26	0
27	0.9
28	1.5
29	2.0
30	1.0
31	2.8
32	0
33	2.9
34	2.9
35	0.1
36	1.5
IC1001	
1	1.8
2	1.2
3	---
4	0.8
5	0
6	0
7	0
8	5.1
9	0
10	5.1
11	0
12	0
13	0
14	0
15	0.1
16	2.0
17	0.7

MODE PIN NO.	CAMERA
18	0
19	1.7
20	1.9
21	1.2
22	0.6
23	0.8
24	1.9
25	7.6
26	3.2
27	2.7
28	0
29	0
30	4.1
31	4.8
32	5.0
33	5.7
34	7.7
35	7.7
36	0.1
37	1.2
38	0.2
IC1002	
1	4.3
2	0
3	1.3
4	3.2
5	4.3
IC1003	
1	2.8
2	0
3	0
4	2.5
5	2.8
IC3101	
1	1.0
2	0.6
3	1.0
4	0.5
5	0.6
6	0.6
7	1.9
8	0
9	0
10	0
11	2.9
12	0
13	0
14	1.9
15	1.9
16	---
17	0
18	2.9
19	0.9
20	1.0
21	0

MODE PIN NO.	CAMERA
22	0
23	0
24	0
25	0.1
26	2.9
27	0
28	1.2
29	0
30	5.0
31	0.5
32	0.6
33	0
34	0.1
35	0
36	0
37	0
38	0
39	0
40	0
41	5.0
42	0
43	0.1
44	0
45	0
46	0
47	1.5
48	1.5
49	0
50	0
51	1.5
52	1.5
53	1.5
54	1.5
55	2.9
56	2.9
57	0
58	0
59	1.5
60	1.5
61	1.5
62	1.1
63	0
64	0
IC5001	
1	2.9
2	0
3	1.5
4	2.4
5	3.0
6	0.6
7	0
8	0
9	0
10	0.8
11	0

MODE PIN NO.	CAMERA
12	---
13	0
14	0.1
15	0
16	1.9
17	1.0
18	0
19	0
20	1.9
21	---
22	---
23	---
24	---
25	---
26	1.2
27	1.2
28	4.7
29	1.5
30	4.6
31	4.6
32	4.6
33	1.5
34	---
35	0.8
36	0
37	5.0
38	0
39	2.6
40	2.2
41	2.9
42	2.9
43	2.1
44	---
Q1001	
E	0
C	0
B	8.0
Q1003	
E	0
C	0
B	0.6
Q1004	
1	0
2	7.7
3	2.7
4	4.8
5	4.8
Q1005	
1	0
2	7.7
3	4.8
4	2.7
5	2.7

MODE PIN NO.	CAMERA
Q1006	
1	0
2	7.6
3	5.7
4	1.7
5	1.7
Q1007	
S	0
D	7.2
G	3.2
Q1008	
1	7.6
2	6.9
3	0
4	7.7
5	7.7
6	7.6
Q1009	
1	7.7
2	6.9
3	0
4	7.7
5	7.7
6	7.7
Q1013	
E	1.5
C	1.8
B	2.1
Q1014	
E	2.2
C	0
B	1.6
Q1015	
1	0.9
2	1.5
3	1.4
4	0.9
5	1.5
6	1.8
Q1016	
E	8.5
C	12.0
B	9.1
Q1018	
E	0
C	-4.5
B	-0.6
Q1019	
E	-6.8
C	-14.7
B	-7.3
Q1020	
E	4.9
C	3.2
B	4.3

MODE PIN NO.	CAMERA
Q1022	
E	0
C	9.1
B	0.6
Q1023	
E	3.1
C	4.9
B	3.7
Q1024	
E	0
C	1.9
B	0
Q1025	
E	0
C	3.0
B	0
Q1026	
1	0
2	0
3	0
4	5.0
5	5.0
6	5.0
Q1027	
E	0.5
C	5.0
B	0.1
Q1028	
E	1.1
C	2.9
B	0.1
Q1029	
E	0.1
C	1.9
B	0.1
Q1030	
E	0
C	0.1
B	0.7
Q1031	
E	0.1
C	0.7
B	0
Q1032	
E	2.9
C	2.9
B	0.6
Q1033	
E	12.1
C	12.0
B	0.7
Q1034	
E	-6.8
C	-6.8
B	2.9

MODE PIN NO.	CAMERA
Q1035	
E	0
C	0.1
B	1.9
Q3001	
E	3.3
C	1.5
B	3.3
TP1	5.0
TP3	5.0
TP4	3.0
TP5	3.2
TP6	3.0
TP8	2.5
TP9	1.8
TP10	1.5
TP11	12.0
TP12	12.0
TP13	-7.5
TP14	-15.0
TP15	8.0
TP16	0
TP17	0
TP50	1.3
TP3001	1.0
TP3002	0
TP3003	0.9
TP3009	0.1
TP3022	0
TP3023	1.9
TP3024	1.2
TP3025	1.9
TP3026	1.9
TP3027	0
TP3028	0.1
TP3029	0.8
TP3030	1.9
TP3201	1.0
TP3202	0.2
TP3203	0
TP3205	1.9
TP3206	0
TP3207	0
TP3208	0.1
TP3209	0
TP3505	0
TP3901	7.7
TP3902	0
TP3903	7.7
TP3905	0
TP3906	0.9
TP3907	1.9
TP3908	0
TP3911	0

MODE PIN NO.	CAMERA
TP3912	0.1
TP3913	0
TP3914	1.9
TP3921	2.8
TP3922	2.8

VOLTAGE CHART

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES  
REFER TO BEGINNING OF SCHEMATIC SECTION.

## MAIN C.B.A. (SYSTEM CONTROL/SERVO SECTION)

MODE PIN NO.	REC	PLAY
IC2001		
1	7.5	7.5
2	1.9	0.9
3	0	0
4	1.7	1.7
5	0.4	0.4
6	0.4	0.4
7	1.2	1.2
8	0	0
9	0	0
10	1.9	1.9
11	1.6	1.6
12	3.0	3.0
13	2.2	2.2
14	1.5	1.5
15	0.1	0.1
16	0.1	0.1
17	0	0
18	2.5	2.5
19	1.5	1.5
20	0.1	0.1
21	1.5	1.5
22	1.5	1.5
23	0	0
24	0	0
25	7.9	7.9
26	0	0
27	0.6	0.6
28	0.5	0.6
29	0.5	0.6
30	2.4	2.4
31	2.4	2.4
32	0.6	0.6
33	0.1	0.1
34	0.1	0.1
35	0.5	0.5
36	1.5	1.5
37	1.5	1.5
38	1.0	1.1
39	2.2	2.2
40	0.3	0.3
41	1.2	1.2
42	1.2	1.2
43	1.9	1.9
44	0	0
45	1.3	1.4
46	1.4	1.4
47	1.3	1.3
48	1.2	1.2
49	1.2	1.2
50	1.2	1.2
51	1.2	1.2
52	1.2	1.2
53	1.2	1.2
54	1.0	1.1

MODE PIN NO.	REC	PLAY
55	0.2	0.2
56	1.9	1.9
57	1.0	1.0
58	0	0
59	2.9	2.9
60	1.9	1.9
61	0	0
62	1.0	1.0
63	7.7	7.7
64	7.9	7.9
IC2002		
1	—	—
2	1.5	1.5
3	1.5	1.5
4	0	0
5	1.5	0
6	1.5	0
7	—	0
8	5.0	5.0
IC6002		
1	2.9	2.9
2	2.9	2.9
3	2.9	2.9
4	2.9	2.9
5	0	0
6	2.9	2.9
7	2.8	2.9
8	2.8	2.8
IC6003		
1	2.8	2.8
2	0.4	0.4
3	0.7	0.6
4	0	0
5	0	0
6	2.9	2.9
7	2.9	2.9
8	3.4	3.4
IC6004		
1	2.9	2.9
2	2.9	2.7
3	2.9	2.9
4	2.9	2.9
5	2.8	2.8
6	2.9	2.8
7	1.2	1.2
8	1.4	1.4
9	0	0
10	0	0
11	0.1	0.1
12	0.1	0.1
13	0	0
14	0	0
15	0.1	0.1
16	0.1	0.1
17	0	0.1

MODE PIN NO.	REC	PLAY
18	0	0
19	2.8	2.8
20	2.7	2.7
IC6005		
1	7.9	7.9
2	0	0
3	2.8	2.8
4	0.1	0.1
5	2.5	2.5
IC6006		
1	2.8	2.8
2	0	0
3	7.9	7.9
4	0.1	0
5	3.5	3.5
IC6007		
1	0	0
2	4.4	4.4
3	2.9	2.9
4	2.5	2.5
IC6008		
E	2.5	2.5
C	2.5	2.5
B	0	0
IC6009		
1	2.9	2.9
2	2.9	2.9
3	0	0
4	0	0
5	2.9	2.9
6	2.9	2.9
7	2.9	2.9
8	2.8	2.8
Q6001		
E	0	0
C	0	0
B	2.9	2.9
Q6002		
E	0	0
C	0.1	0.1
B	2.9	2.9
Q6003		
E	0.2	0.1
C	7.3	7.3
B	0.2	0
Q6004		
E	0	0
C	5.0	5.7
B	0	0
Q6005		
E	2.9	2.9
C	2.8	2.8
B	2.2	2.2

[illegible]

**VOLTAGE CHART**

**PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC**

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

LCD C.B.A.

MODE PIN NO.	CAMERA
IC8001	
1	7.5
2	7.3
3	2.4
4	2.4
5	2.4
6	2.5
7	2.4
8	2.4
9	2.4
10	11.9
11	0
12	---
13	---
14	---
15	---
16	---
17	---
18	---
19	6.0
20	0
21	1.4
22	1.4
23	1.2
24	0.3
25	0
26	0
27	1.0
28	1.0
29	3.0
30	0
31	0
32	0
33	0
34	0
35	0
36	3.0
37	0
38	0
39	2.8
40	1.0
41	0
42	3.0
43	3.0
44	0
45	2.8
46	0
47	2.5
48	2.5
Q8001	
E	0
C	0.1
B	3.1

MODE PIN NO.	CAMERA
Q8002	
E	0
C	0.1
B	1.9
Q8003	
E	12.0
C	11.9
B	11.2
Q8004	
E	3.2
C	3.1
B	2.4
Q8005	
E	7.3
C	11.9
B	7.9
Q8006	
E	0
C	7.9
B	0.5
Q8007	
E	0
C	0.1
B	1.9
Q8008	
E	4.9
C	4.9
B	4.2
Q8009	
E	0
C	0
B	0.6
Q8010	
E	3.0
C	3.0
B	0
Q8011	
E	-14.6
C	-14.6
B	3.0
Q8012	
E	1.4
C	0
B	0.8
Q8013	
1	0.7
2	1.2
3	11.9
4	1.2
5	1.7
6	11.9
Q8014	
E	0.8
C	1.8
B	1.4

JACK C.B.A.

[illegible][illegible]

## 10 CIRCUIT BOARD LAYOUT

### 10.1. MAIN C.B.A.

**MAIN C.B.A. LSEP8262B1 (A,D,E) / LSEP8262A1 (B,C) / LSEP8262C1 (F,G,H)**

NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.  
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,  
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

**NOTE: MULTILAYER C.B.A.**  
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

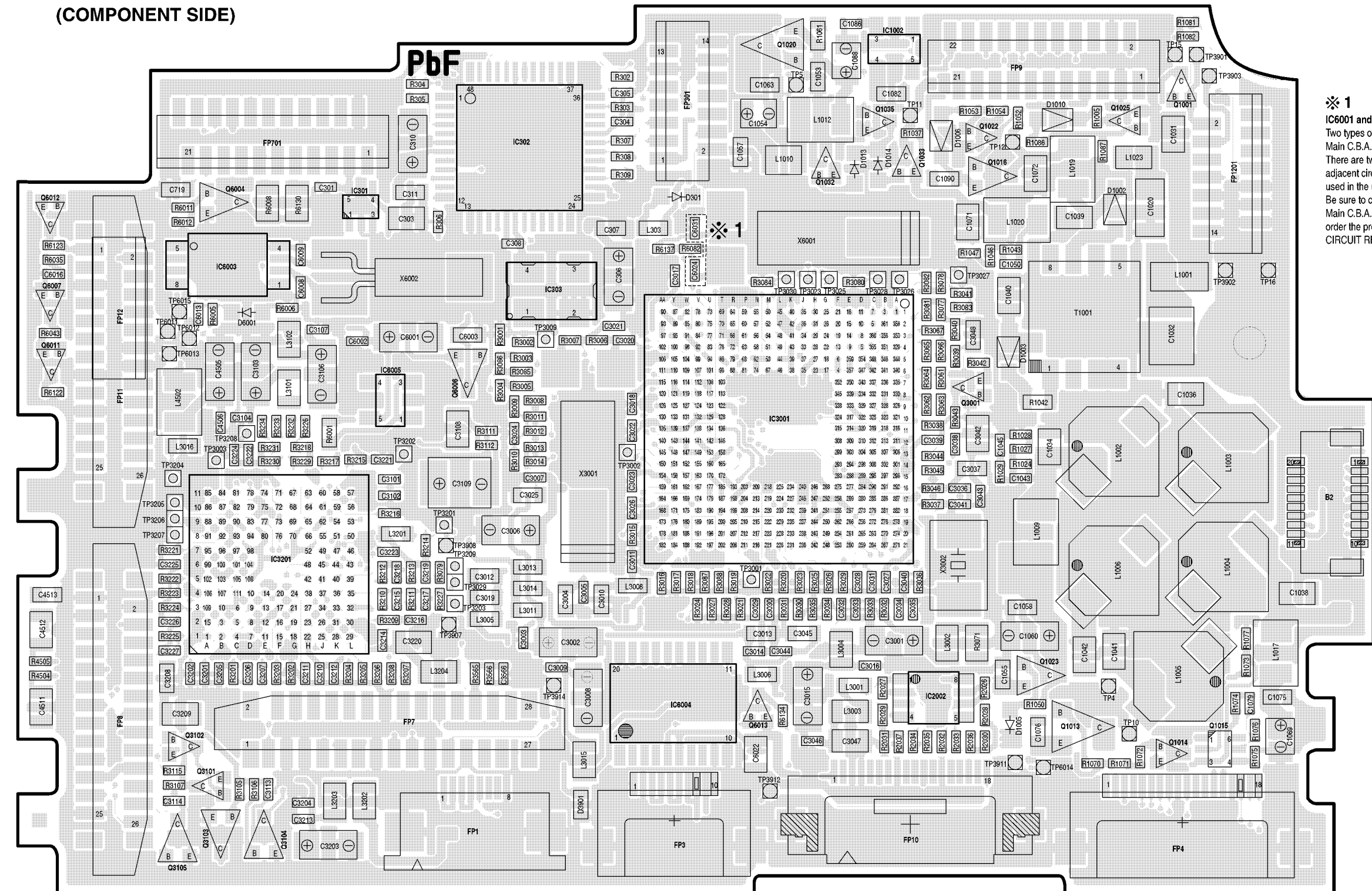
NOTE:  
 "LSJB\*\*\*\* A1 B1 C1 D1 E1 P1 Q1 R1 S1 T1." is printed on Main C.B.A.  
 When ordering Main C.B.A., make the order with "LSEP\*\*\*\*\*" instead of "LSJB\*\*\*\*\*".  
 You will find a mark such as "LSJB8262-1 A1 ● C1 D1 E1 P1 Q1 R1 S1 T1", which  
 means the part number of Main C.B.A. you are servicing.  
 Then "LSEP8262B1" will be the part number to order the Main C.B.A. you need.

## COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

✱ 1

**IC6001 and adjacent circuit replacement note:**  
Two types of IC6001 (LSSK0045, C2DBMK000022) on the Main C.B.A. have been used on a running change basis. There are two servicing methods (Type A, B) because the adjacent circuit is different depending on which IC6001 is used in the unit.  
Be sure to confirm if there is the connector (FP6001) on the Main C.B.A. before servicing. When replacing, be sure to order the proper parts. Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES.



LSJB8262

MAIN C.B.A.  
LSEP8262A1/LSEP8262B1/LSEP8262C1

**PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC**

MAIN C.B.A. LSEP8262B1 (A,D,E) / LSEP8262A1 (B,C) / LSEP8262C1 (F,G,H)

NOTE: MULTILAYER C.B.A.  
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS. FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING, PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

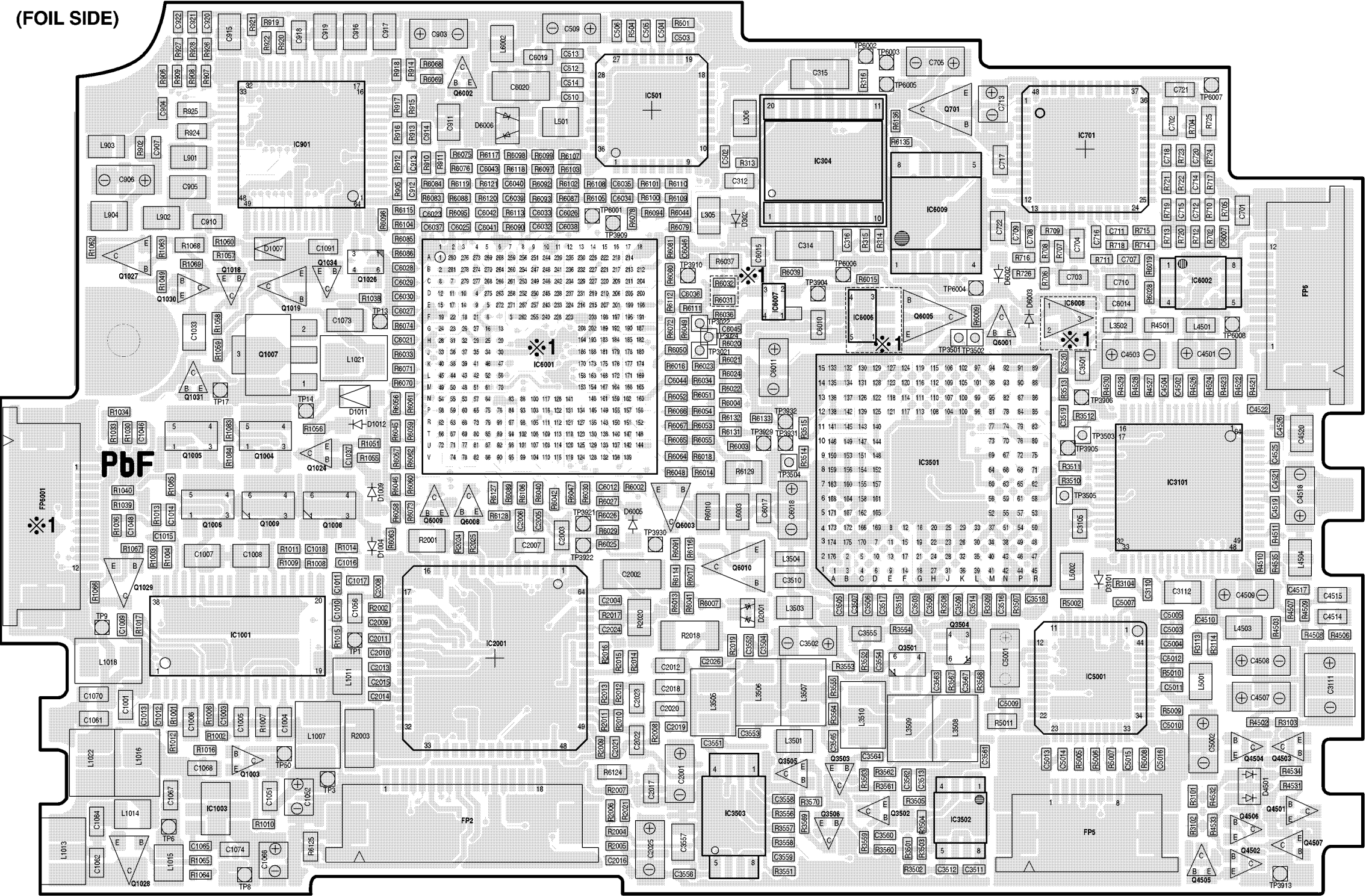
NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

NOTE:  
"LSJB\*\*\*\* A1 B1 C1 D1 E1 P1 Q1 R1 S1 T1." is printed on Main C.B.A.  
When ordering Main C.B.A., make the order with "LSEP\*\*\*\*" instead of "LSJB\*\*\*\*".  
You will find a mark such as "LSJB8262-1 A1●C1 D1 E1 P1 Q1 R1 S1 T1", which means the part number of Main C.B.A. you are servicing.  
Then "LSEP8262B1" will be the part number to order the Main C.B.A. you need.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

(FOIL SIDE)



※ 1  
IC6001 and adjacent circuit replacement note:  
Two types of IC6001 (LSSK0045, C2DBMK000022) on the Main C.B.A. have been used on a running change basis. There are two servicing methods (Type A, B) because the adjacent circuit is different depending on which IC6001 is used in the unit.  
Be sure to confirm if there is the connector (FP6001) on the Main C.B.A. before servicing. When replacing, be sure to order the proper parts. Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES.




10.2. REAR C.B.A.

REAR C.B.A. LSEP8263A1

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE 2A 32V FUSE.  
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES  
D'INCENDIE N'UTILISERQUE DES FUSIBLE DE MEME  
TYPE 2A 32V



NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

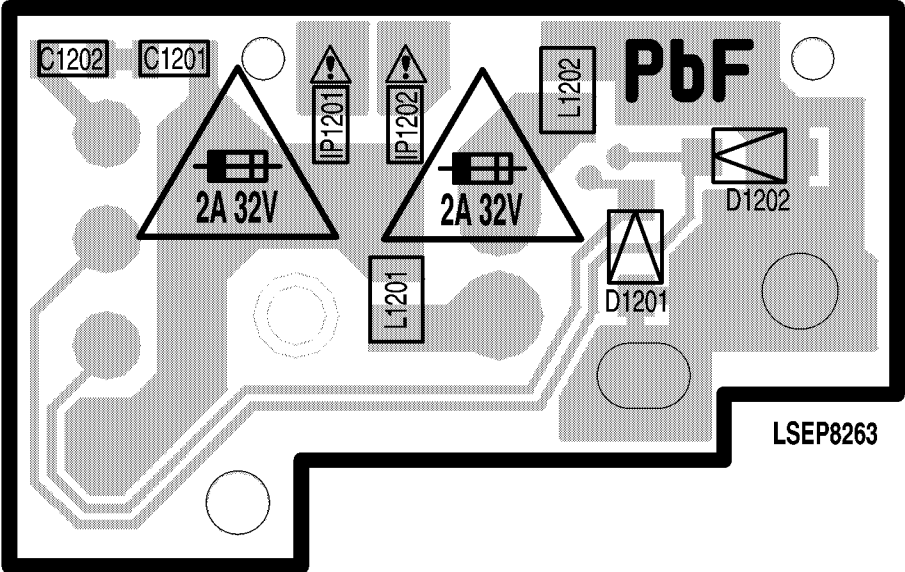
IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.  
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,  
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

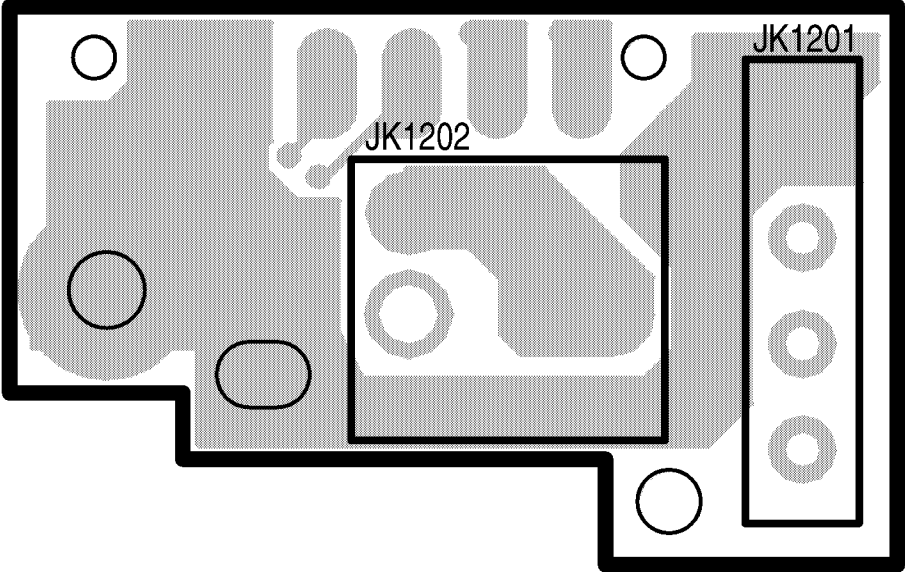
COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

(COMPONENT SIDE)



(DUAL PATTERNS)

(FOIL SIDE)



(DUAL PATTERNS)

10.3. FRONT C.B.A.

FRONT C.B.A. LSEP8264A1 (A,B,C) / LSEP8264B1 (D,E,F,G,H)

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

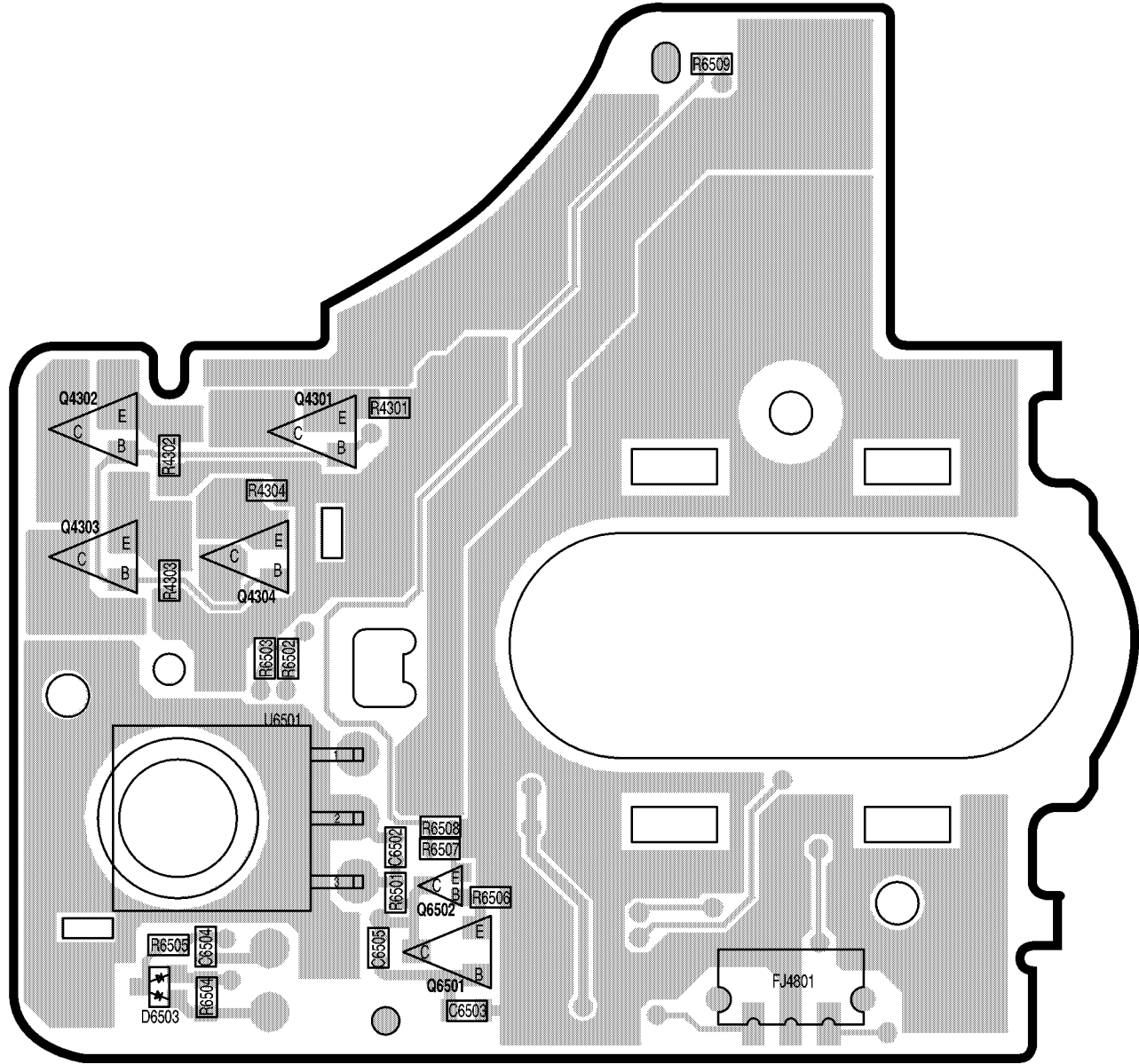
NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.  
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,  
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

COMPARISON CHART  
OF MODELS & MARKS

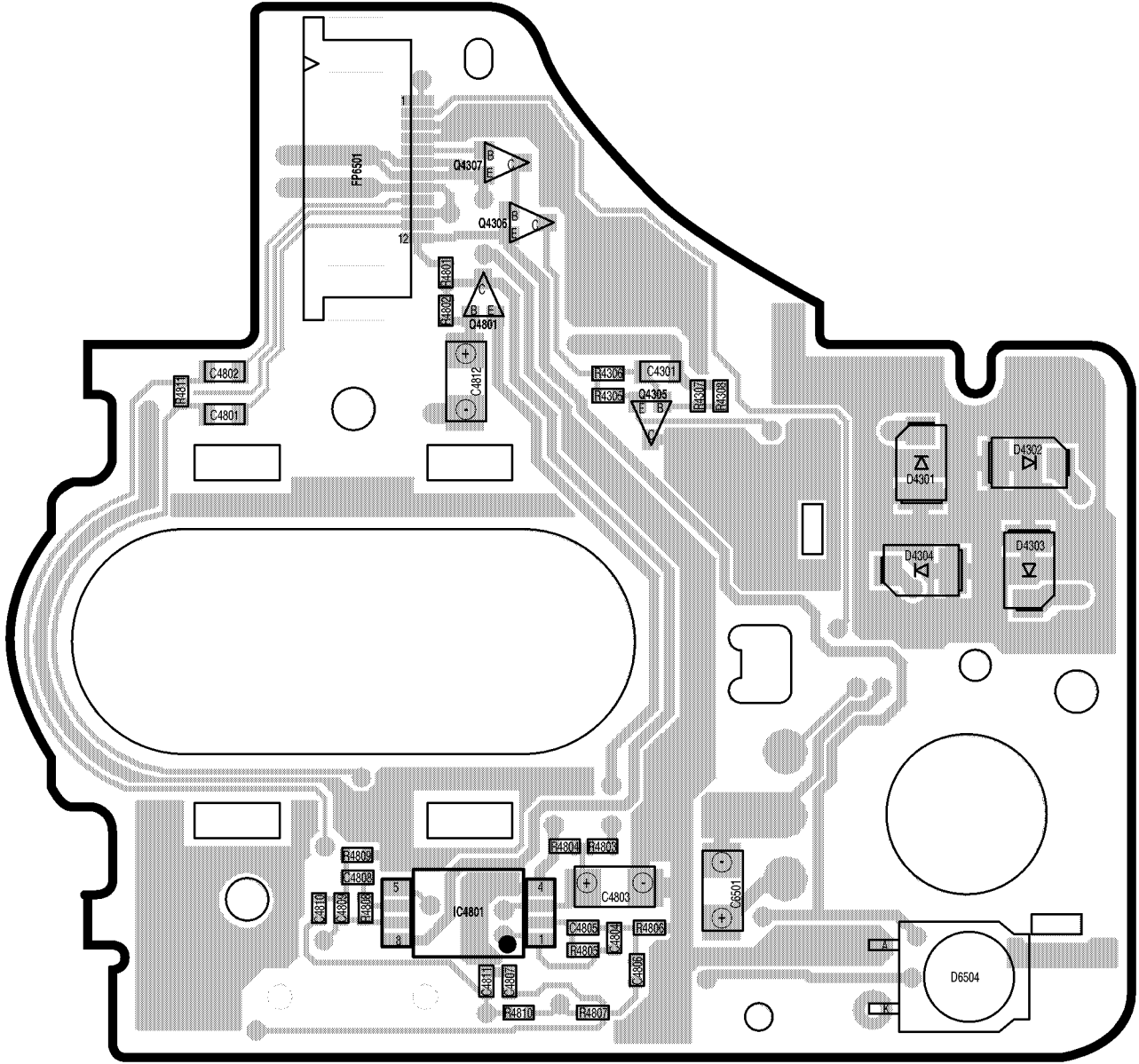
MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

(COMPONENT SIDE)



(DUAL PATTERNS)

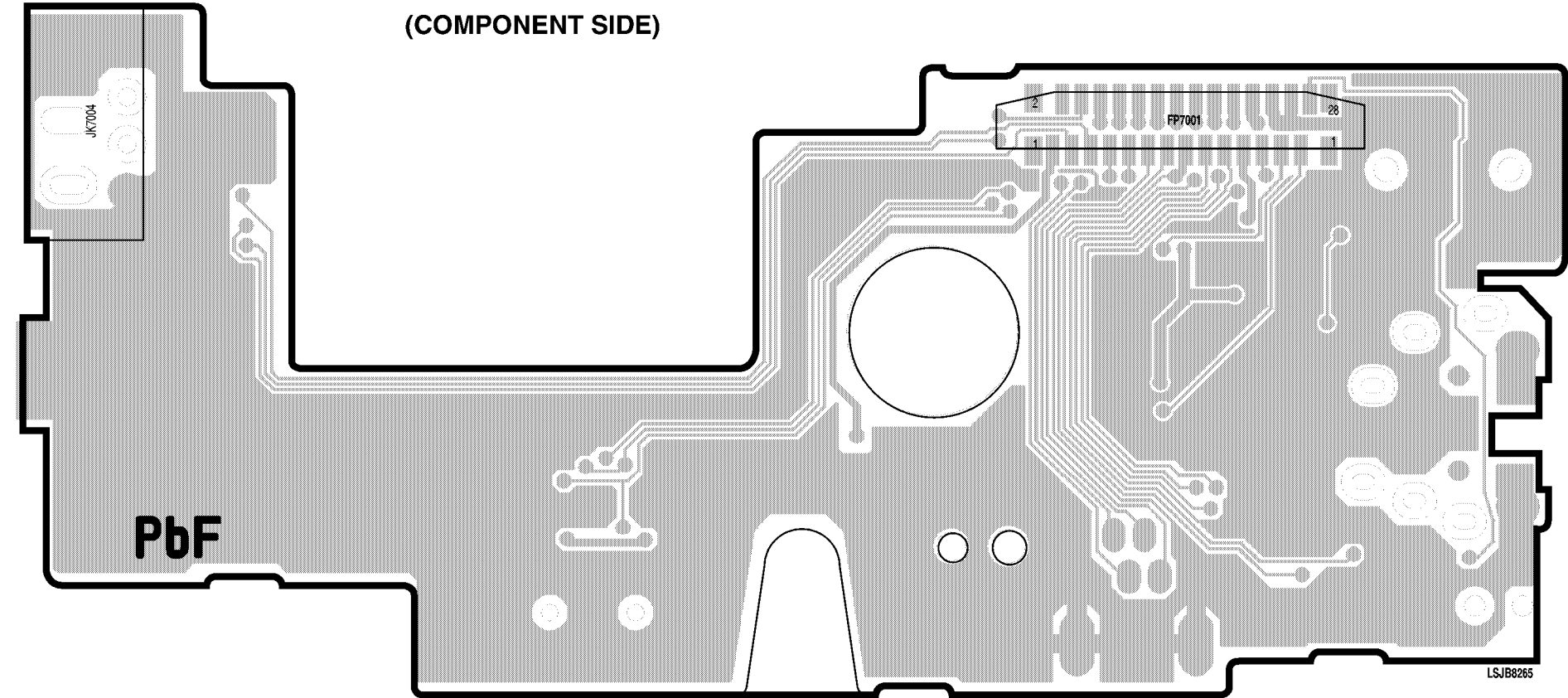
(FOIL SIDE)



(DUAL PATTERNS)

10.4. JACK C.B.A.

JACK C.B.A. LSEP8265A1 (A,B,C,D,E) / LSEP8265C1 (F,G,H)



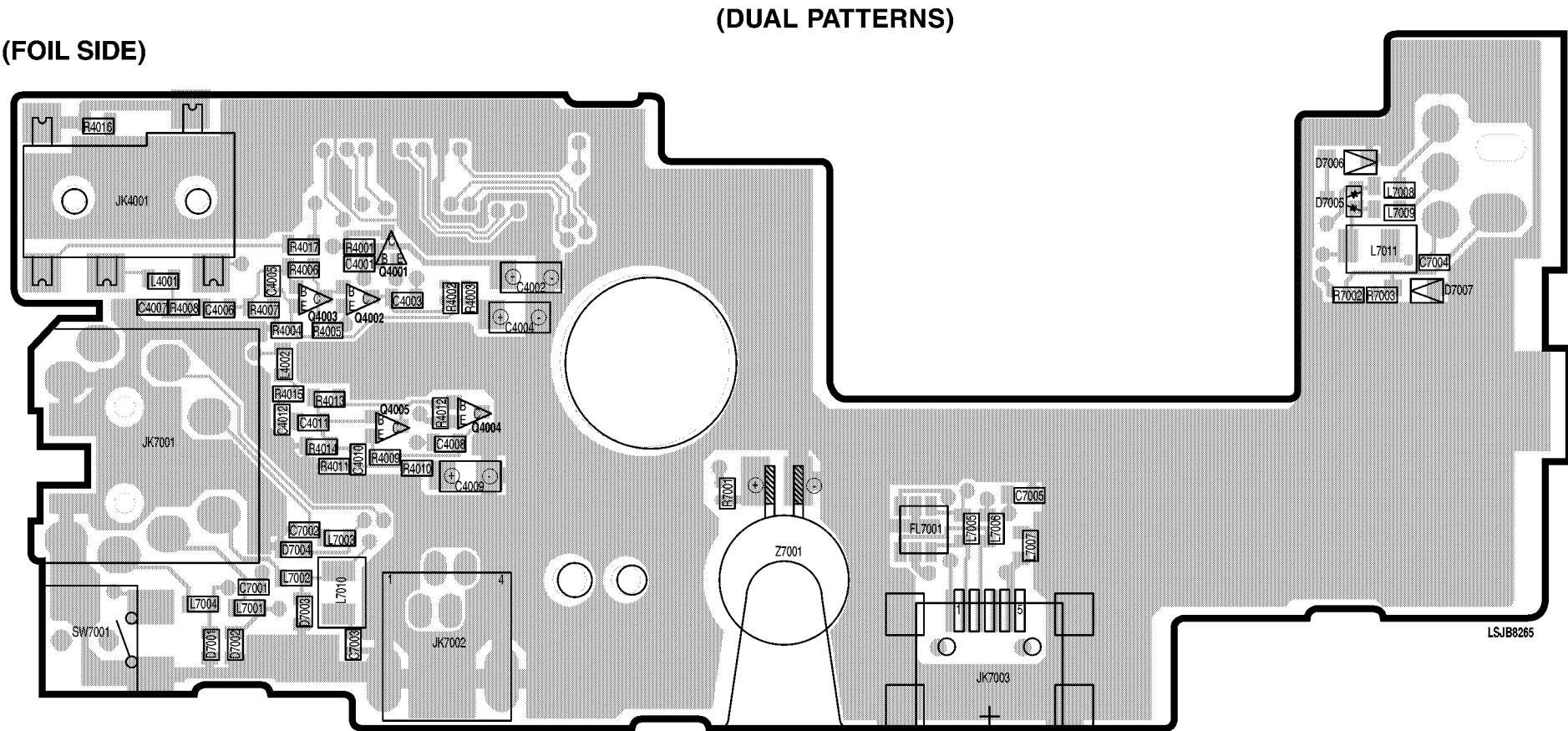
COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.  
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,  
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.



(DUAL PATTERNS)

JACK C.B.A.  
LSEP8265A1/LSEP8265C1

PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

10.5. LCD C.B.A.

LCD C.B.A. LSEP8267A1

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

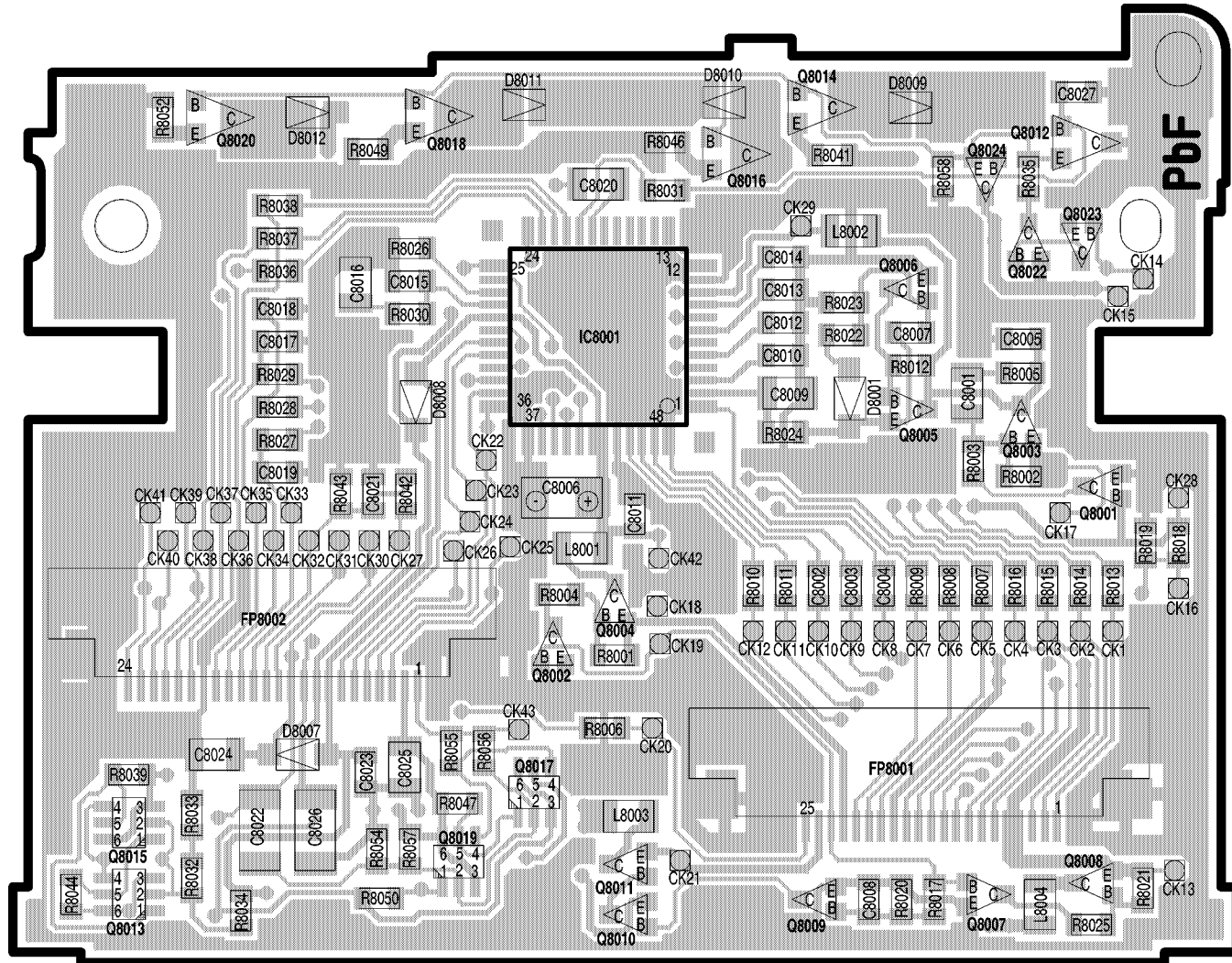
NOTE:  
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.  
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,  
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:  
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

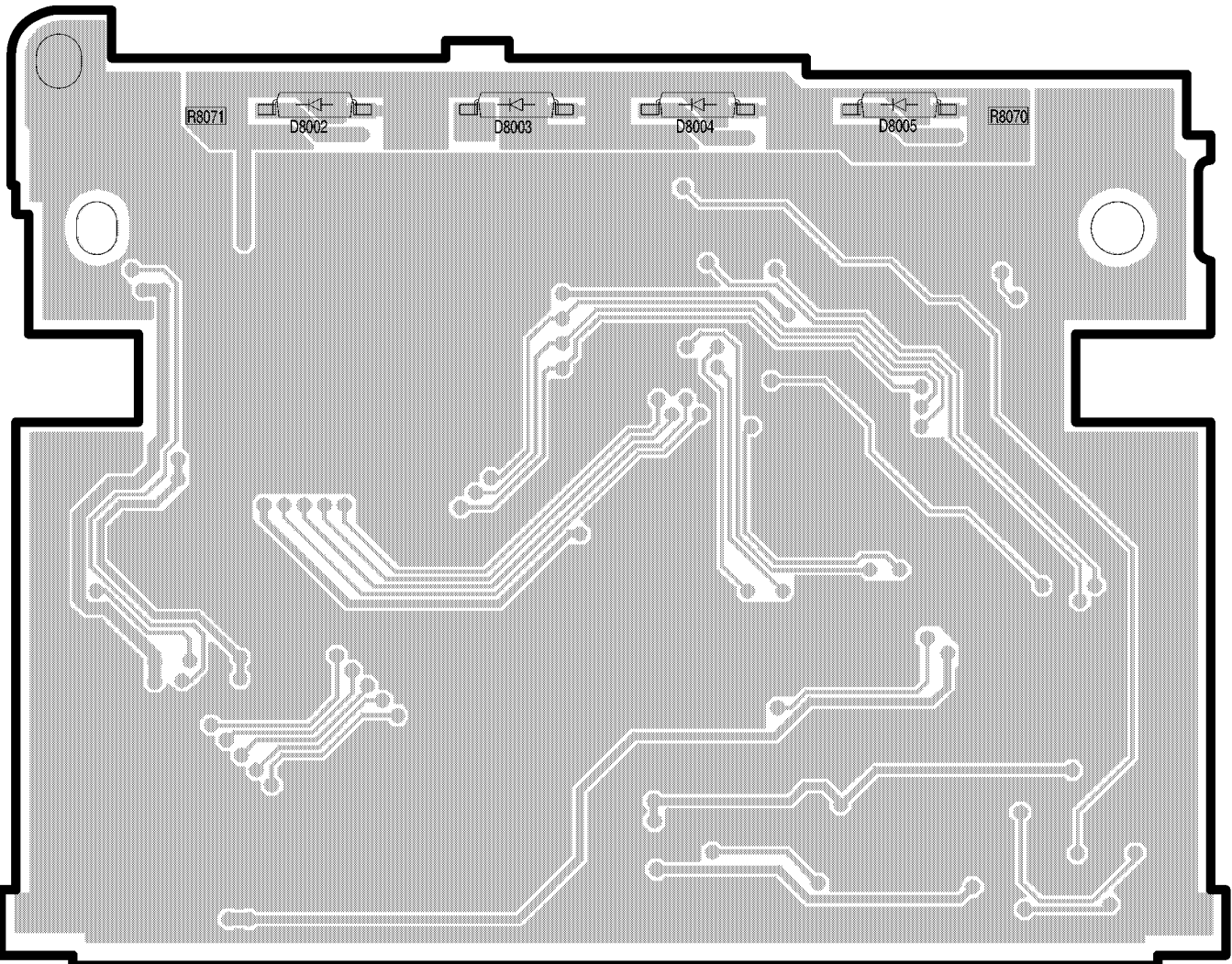
(COMPONENT SIDE)



LSJB8267

(DUAL PATTERNS)

(FOIL SIDE)

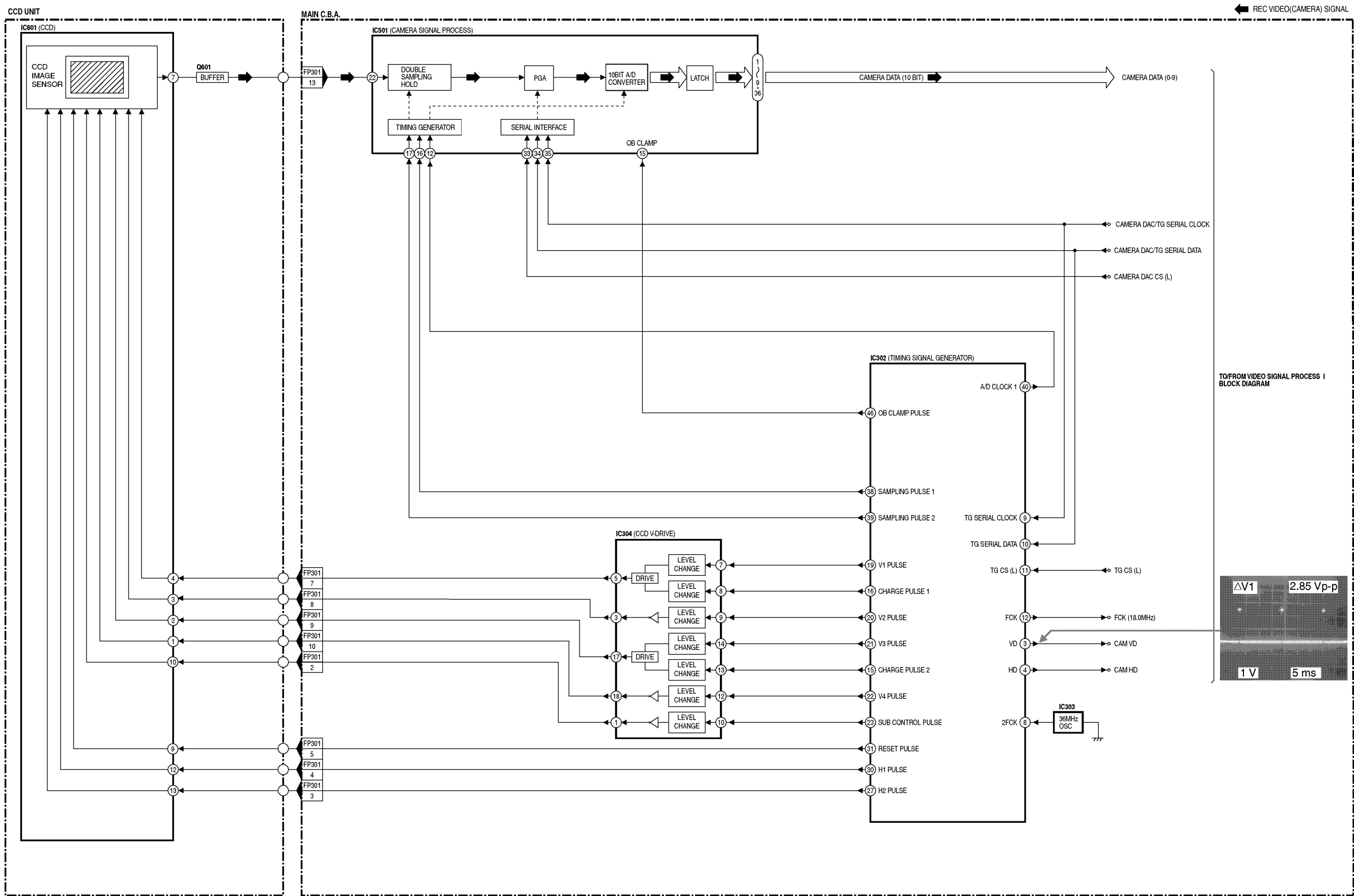


LSJB8267

(DUAL PATTERNS)

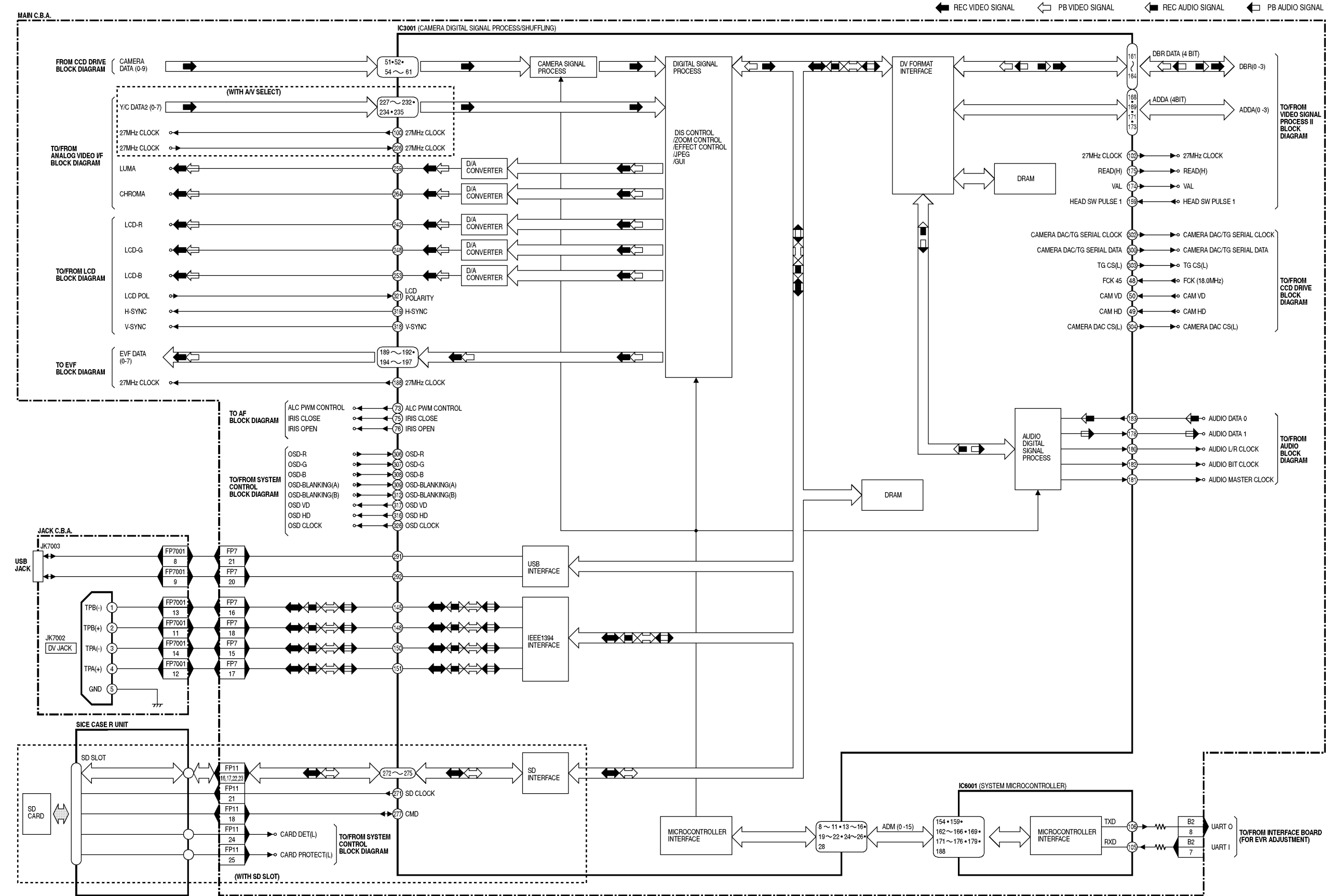
# 11 BLOCK DIAGRAMS

## CCD DRIVE BLOCK DIAGRAM



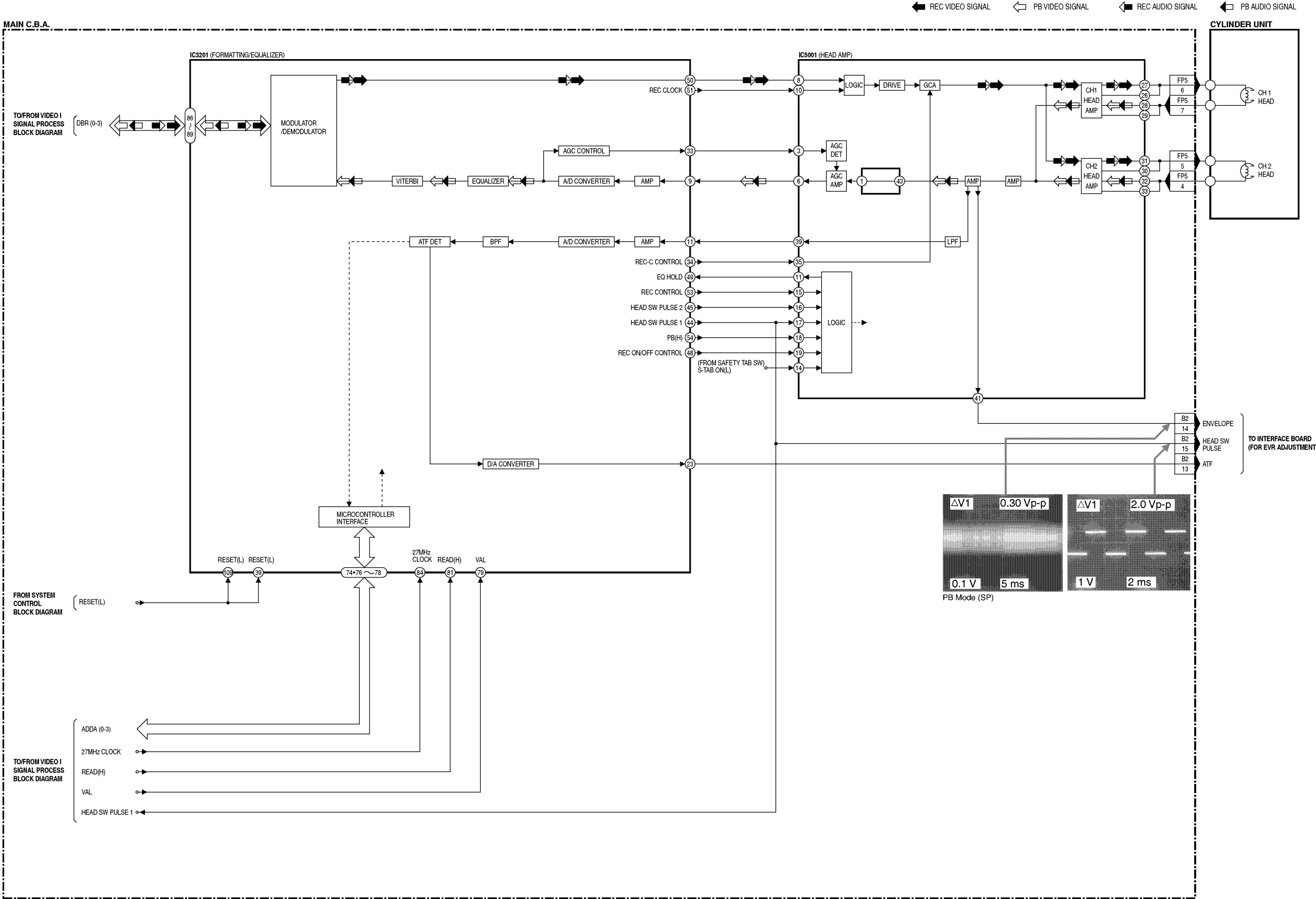
CCD DRIVE BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

VIDEO SIGNAL PROCESS I BLOCK DIAGRAM



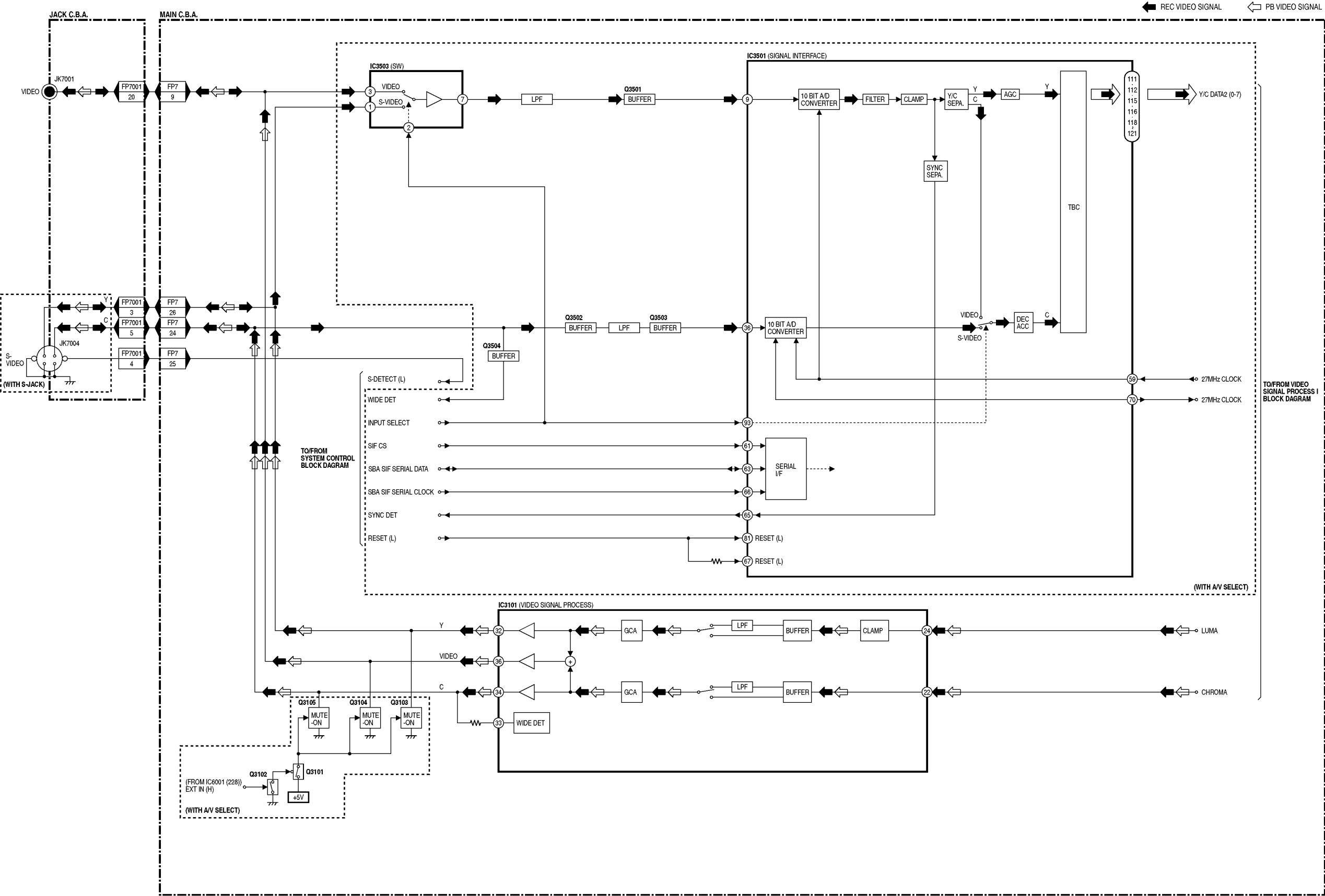
VIDEO SIGNAL PROCESS I BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

VIDEO SIGNAL PROCESS II BLOCK DIAGRAM



VIDEO SIGNAL PROCESS II BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

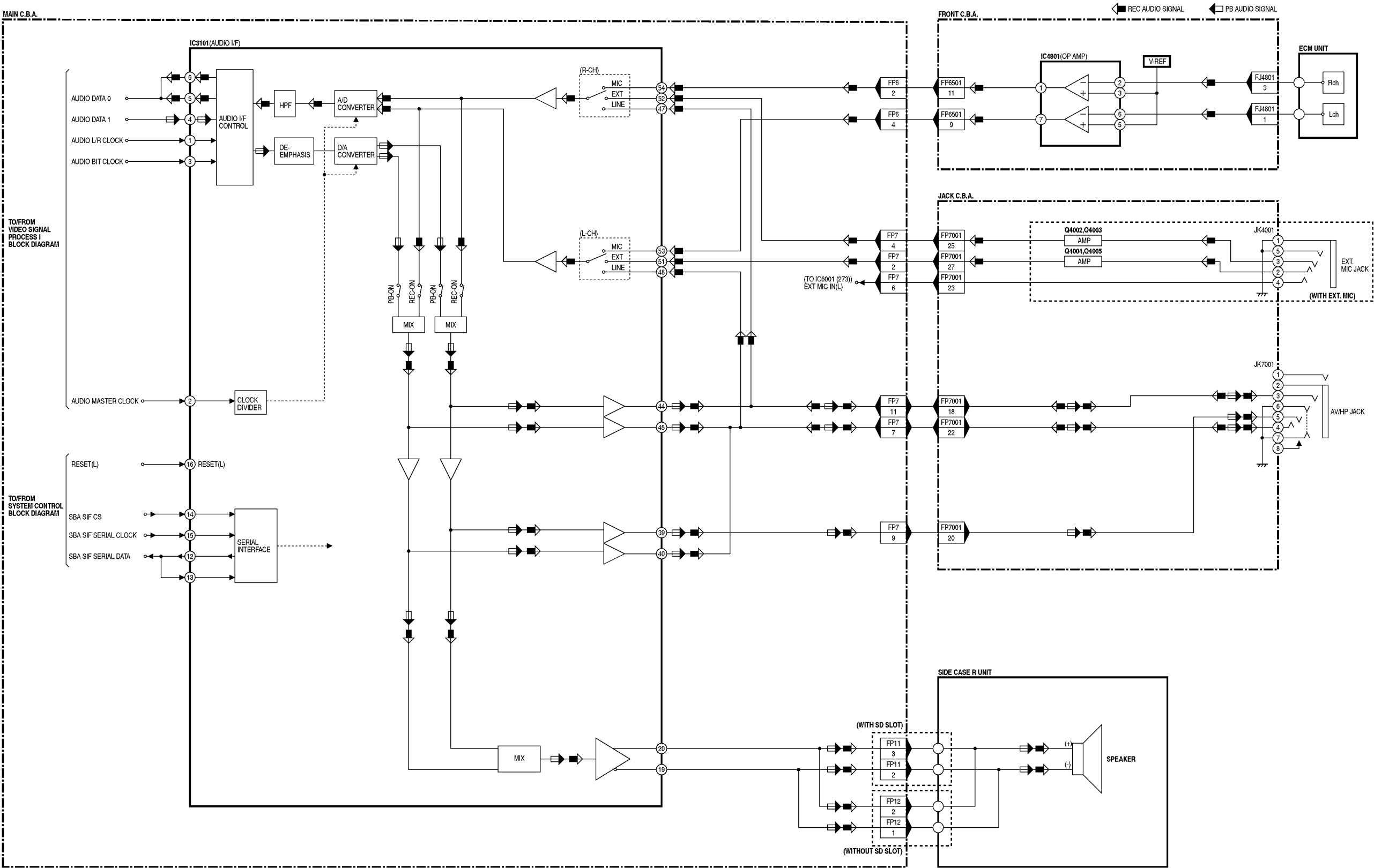
ANALOG VIDEO I/F BLOCK DIAGRAM



ANALOG VIDEO I/F BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC



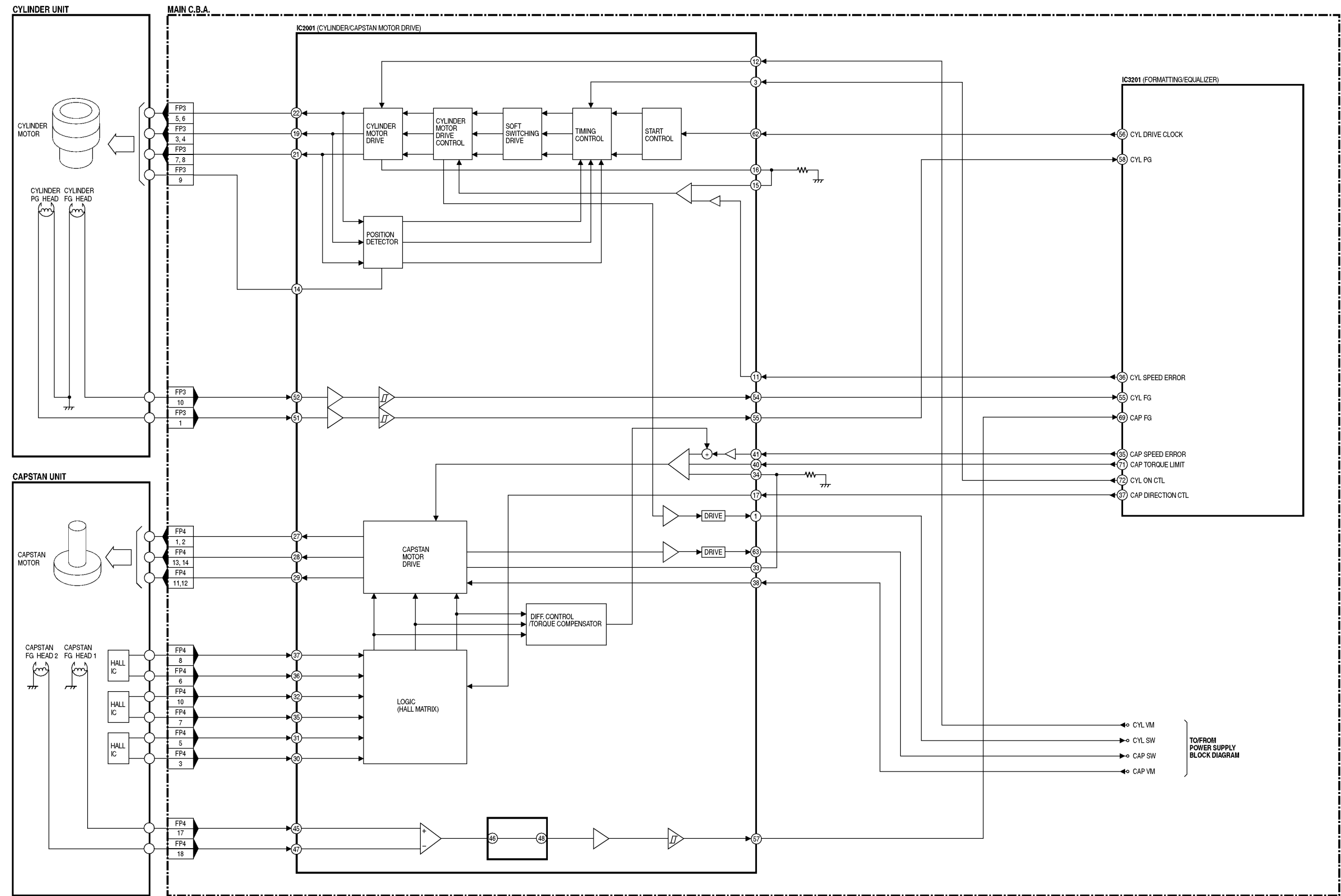
AUDIO SIGNAL PROCESS BLOCK DIAGRAM



AUDIO SIGNAL PROCESS BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

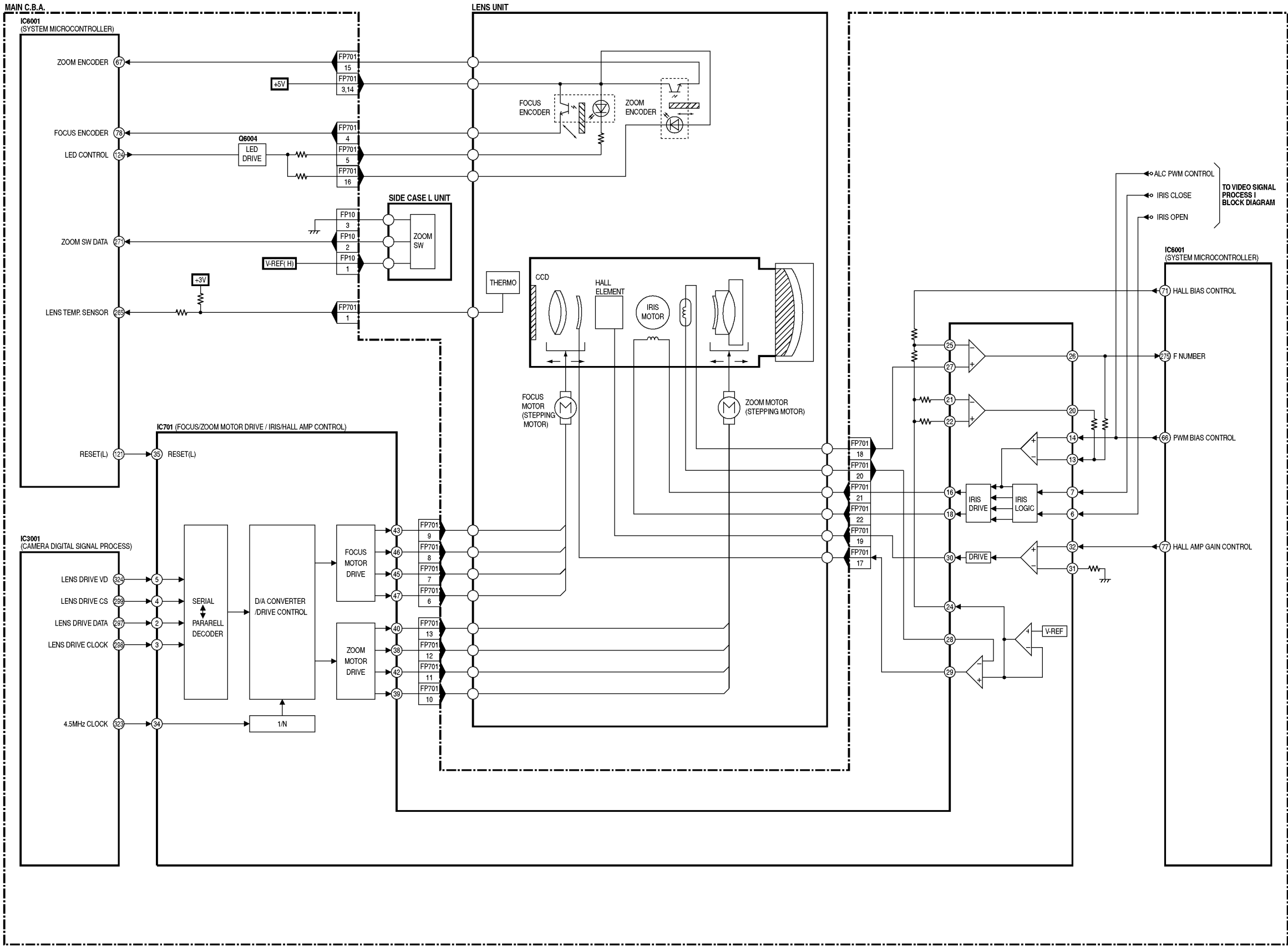


SERVO BLOCK DIAGRAM



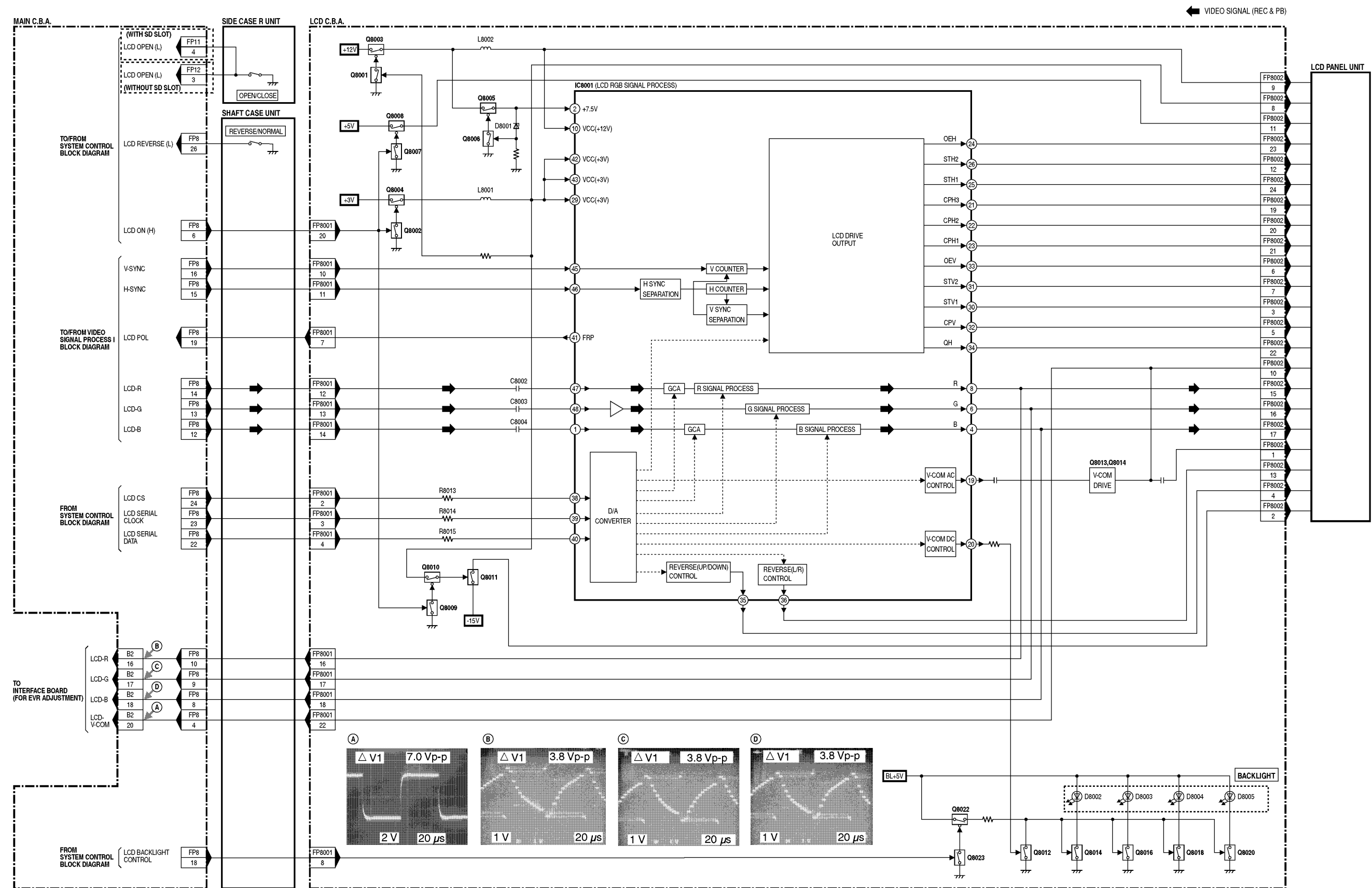
SERVO BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

AF BLOCK DIAGRAM



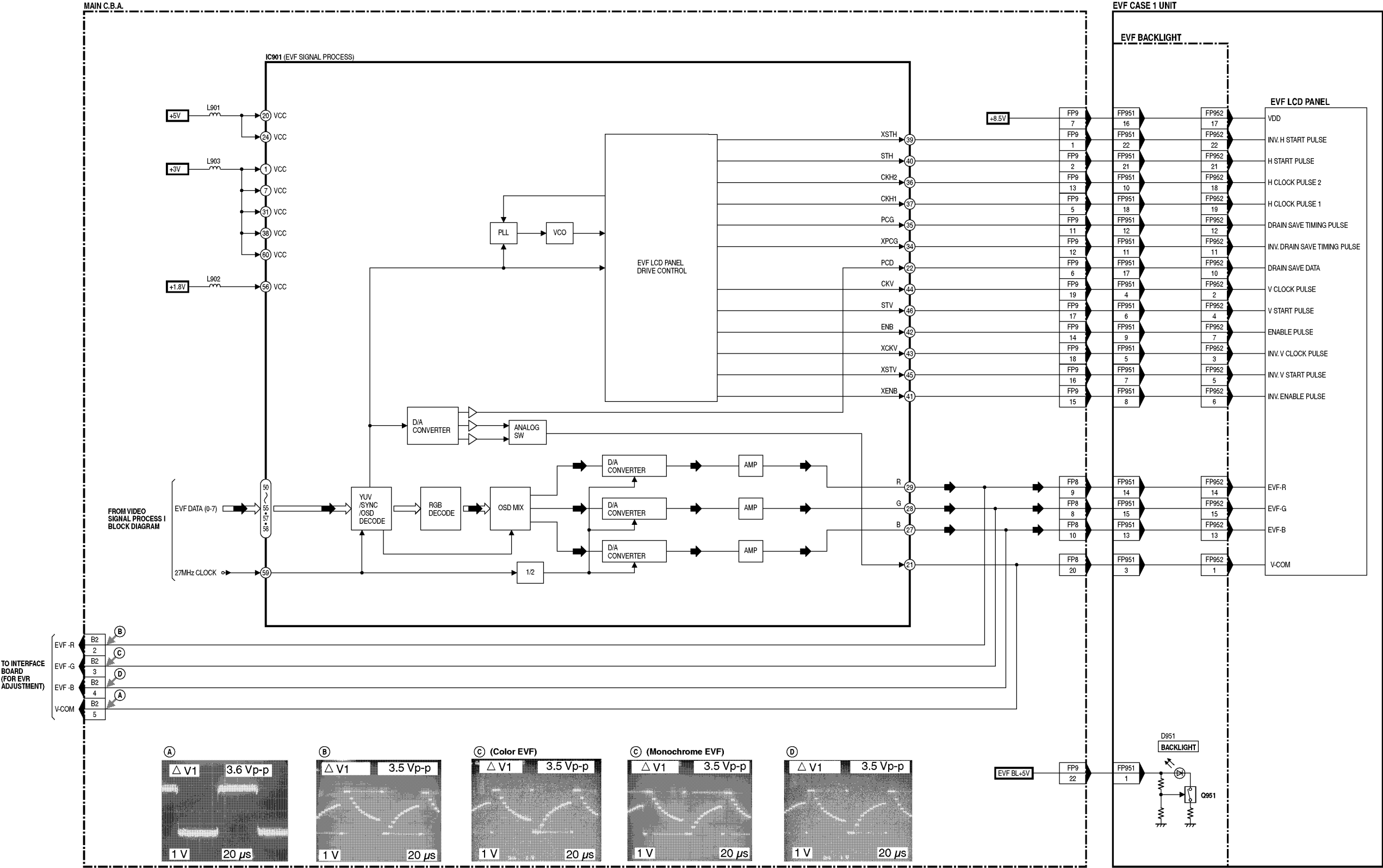
AF BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

LCD DRIVE BLOCK DIAGRAM



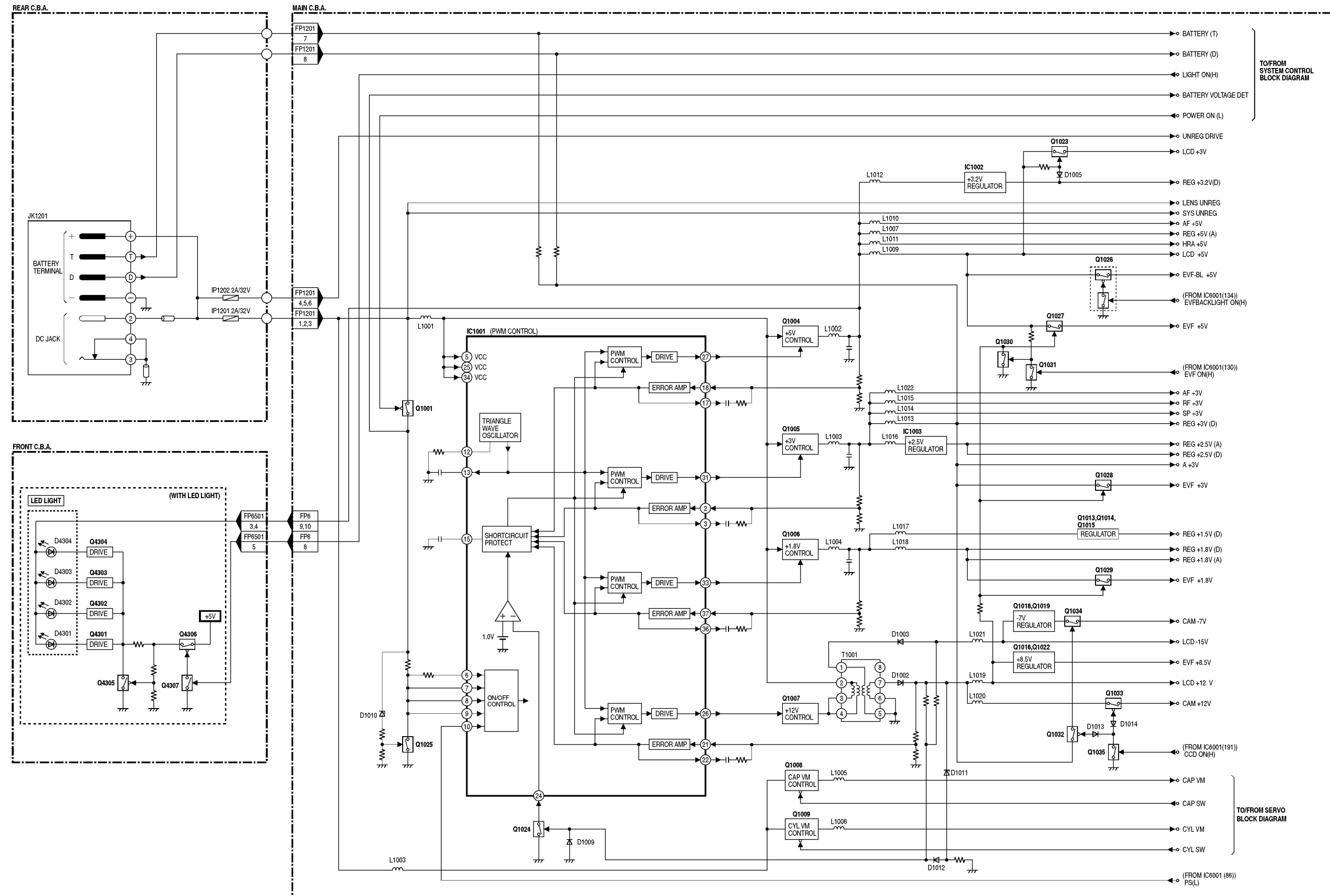
LCD DRIVE BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

EVF BLOCK DIAGRAM



EVF BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC

# POWER SUPPLY BLOCK DIAGRAM



POWER SUPPLY BLOCK DIAGRAM  
PV-GS2P/PV-GS9P/PV-GS9PC/PV-GS12P/PV-GS13PC/PV-GS14P/PV-GS15P/PV-GS15PC






## 12.1. MAIN PARTS SECTION

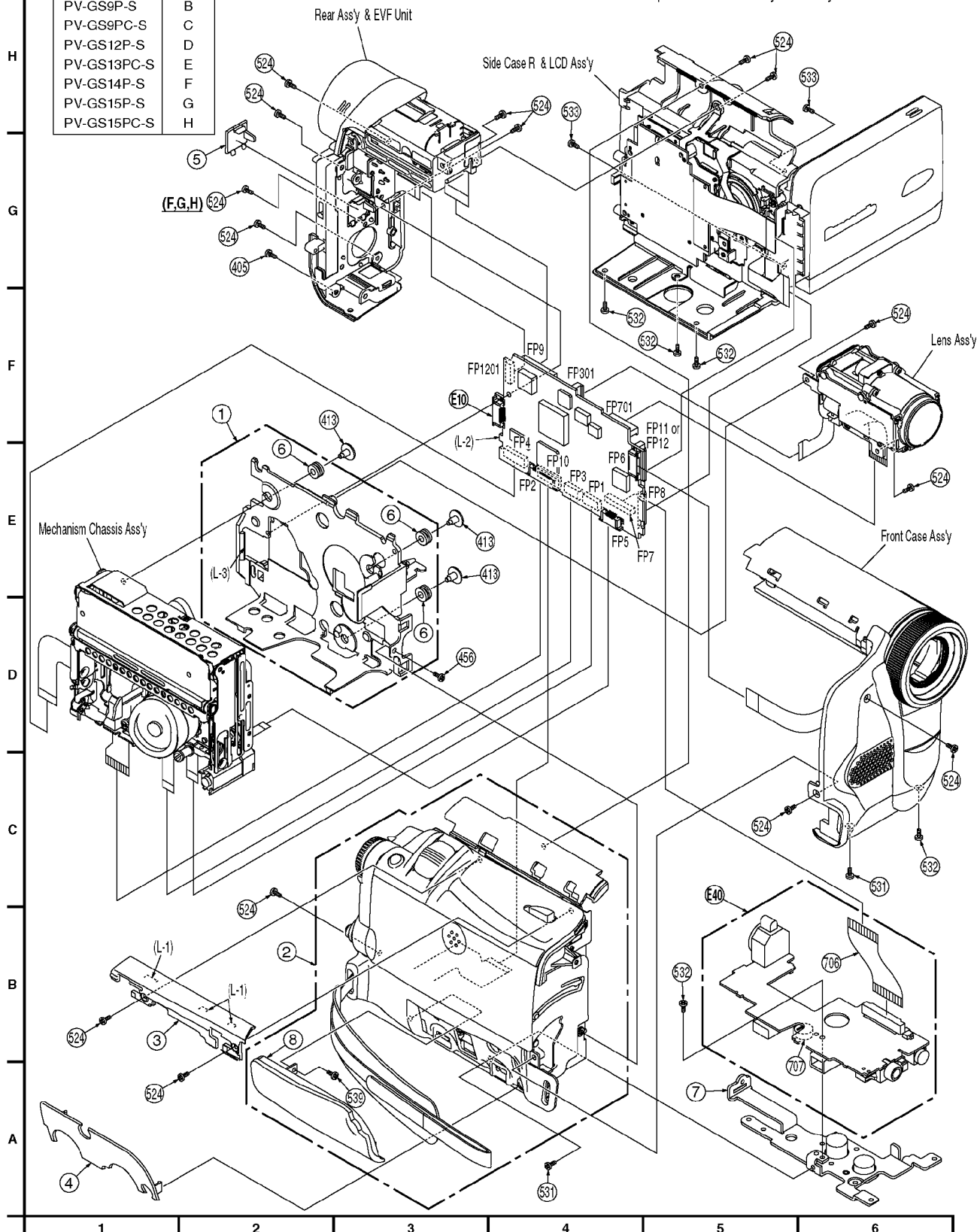
## 1 MAIN PARTS SECTION

## COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

**Note:**


1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Assy only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



## 12.2. FRONT CASE SECTION

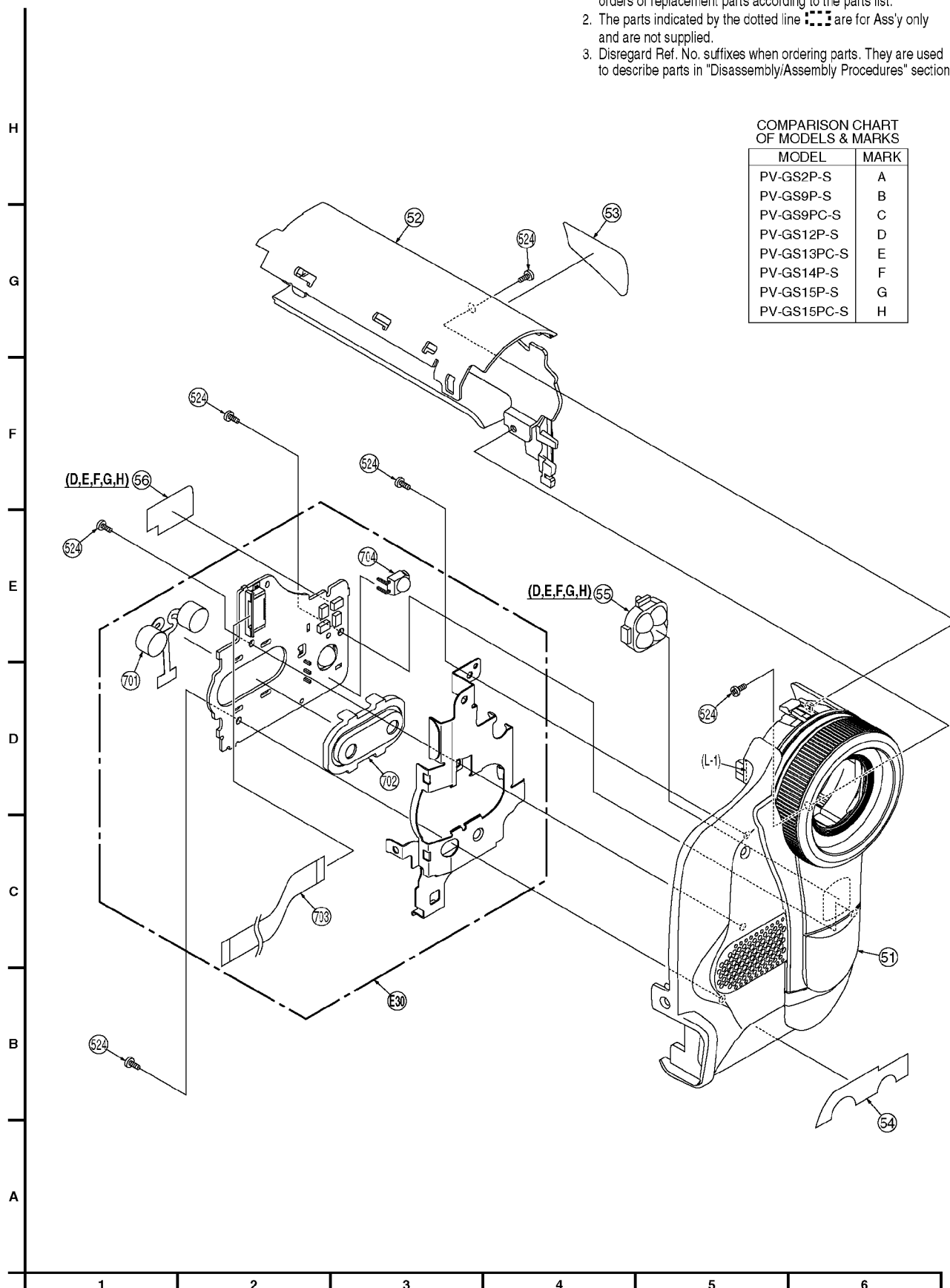
### 2 FRONT CASE SECTION

**Note:**

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.

COMPARISON CHART  
OF MODELS & MARKS


MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

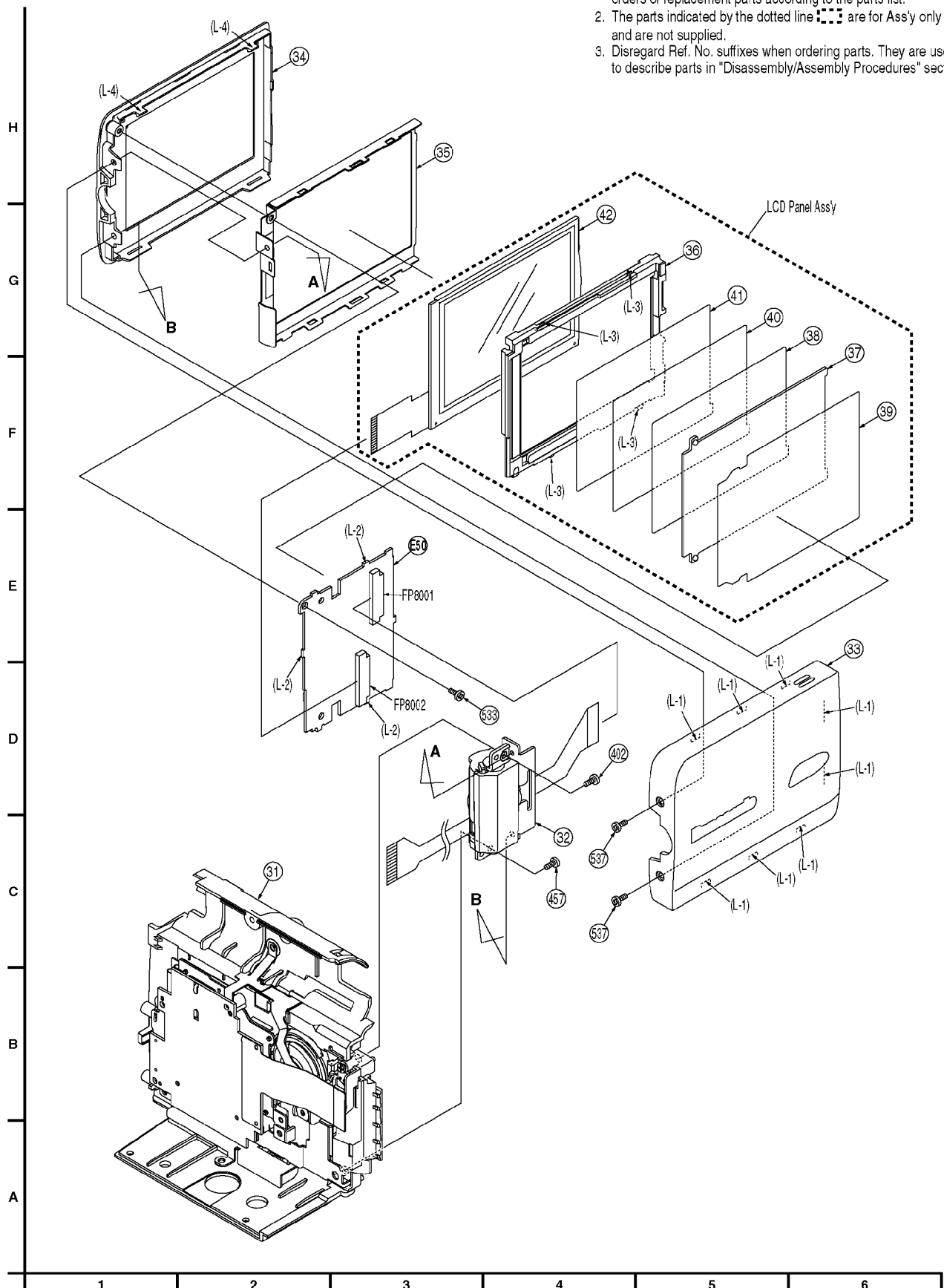


## 12.3. SIDE CASE AND LCD SECTION

### ③ SIDE CASE R AND LCD SECTION

**Note:**


1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



## 12.4. CCD AND LENS SECTION



### ④ CCD AND LENS SECTION

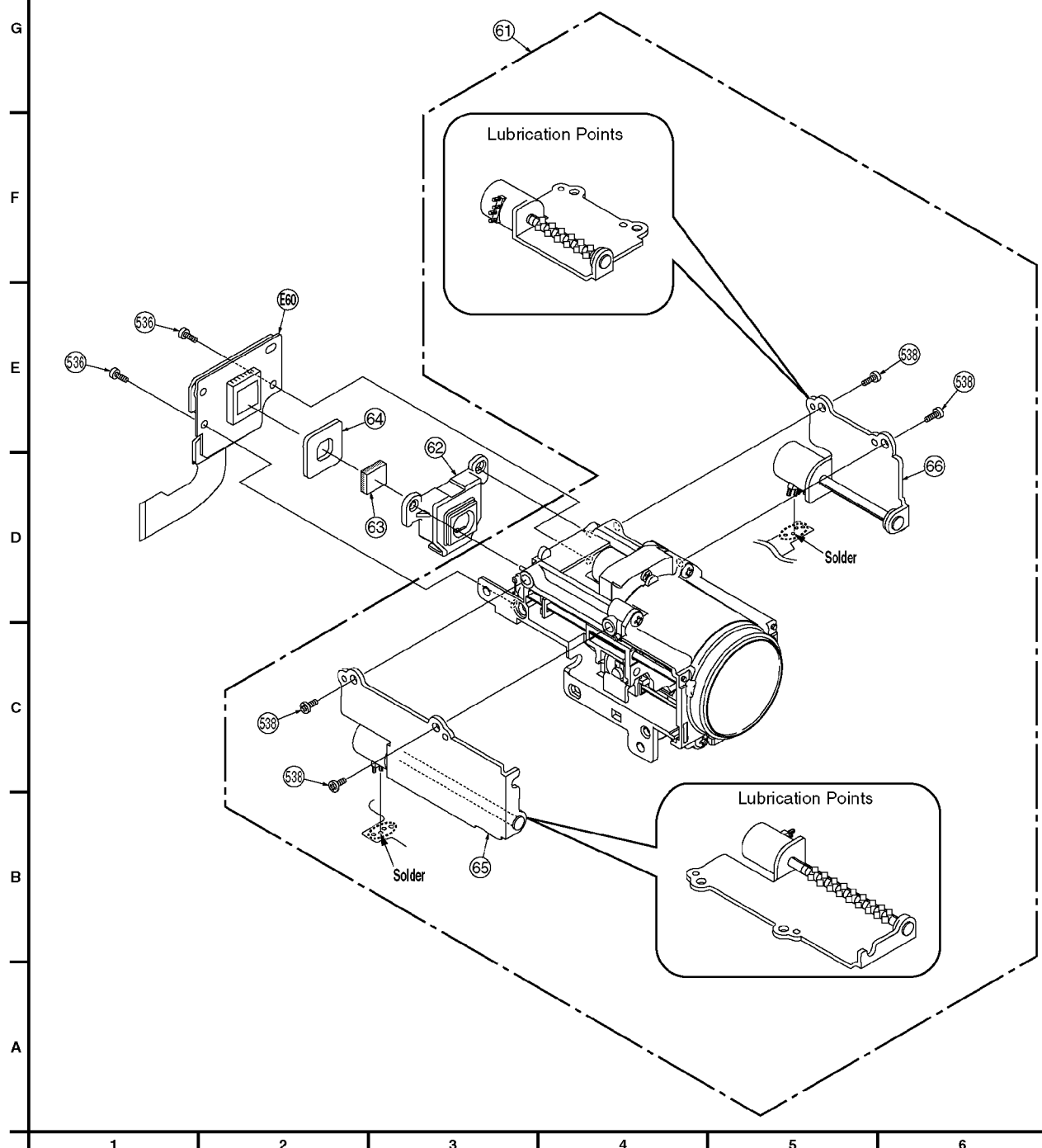
**Note:**

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.

**LUBRICATION POINTS**

When the marked parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

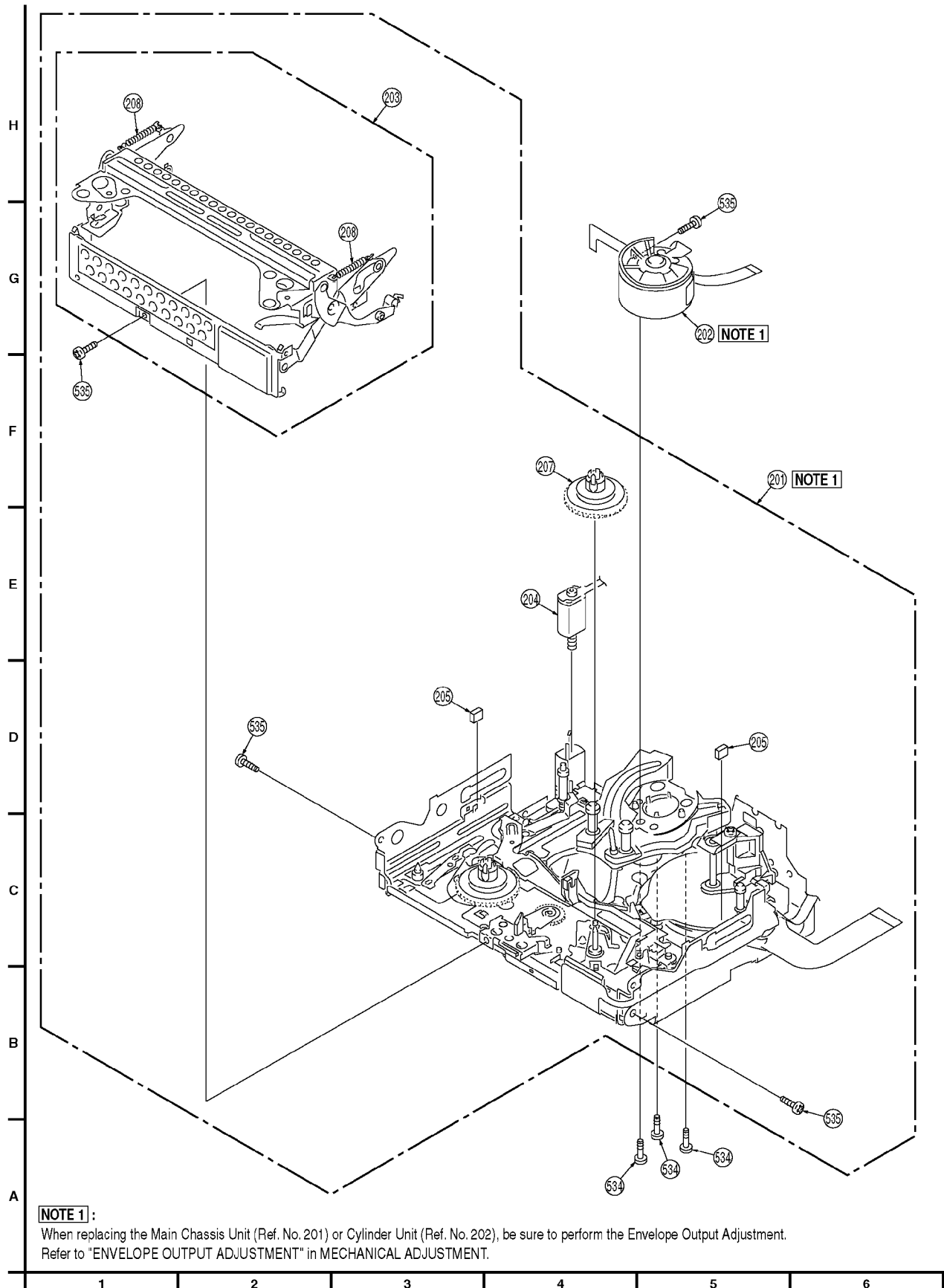
Mark	Kind of Lubricant	Availability	Part Number
 	Grease	Available from Factory	LSZG0030





## 12.6. MECHANISM SECTION

### ⑥ MECHANISM SECTION



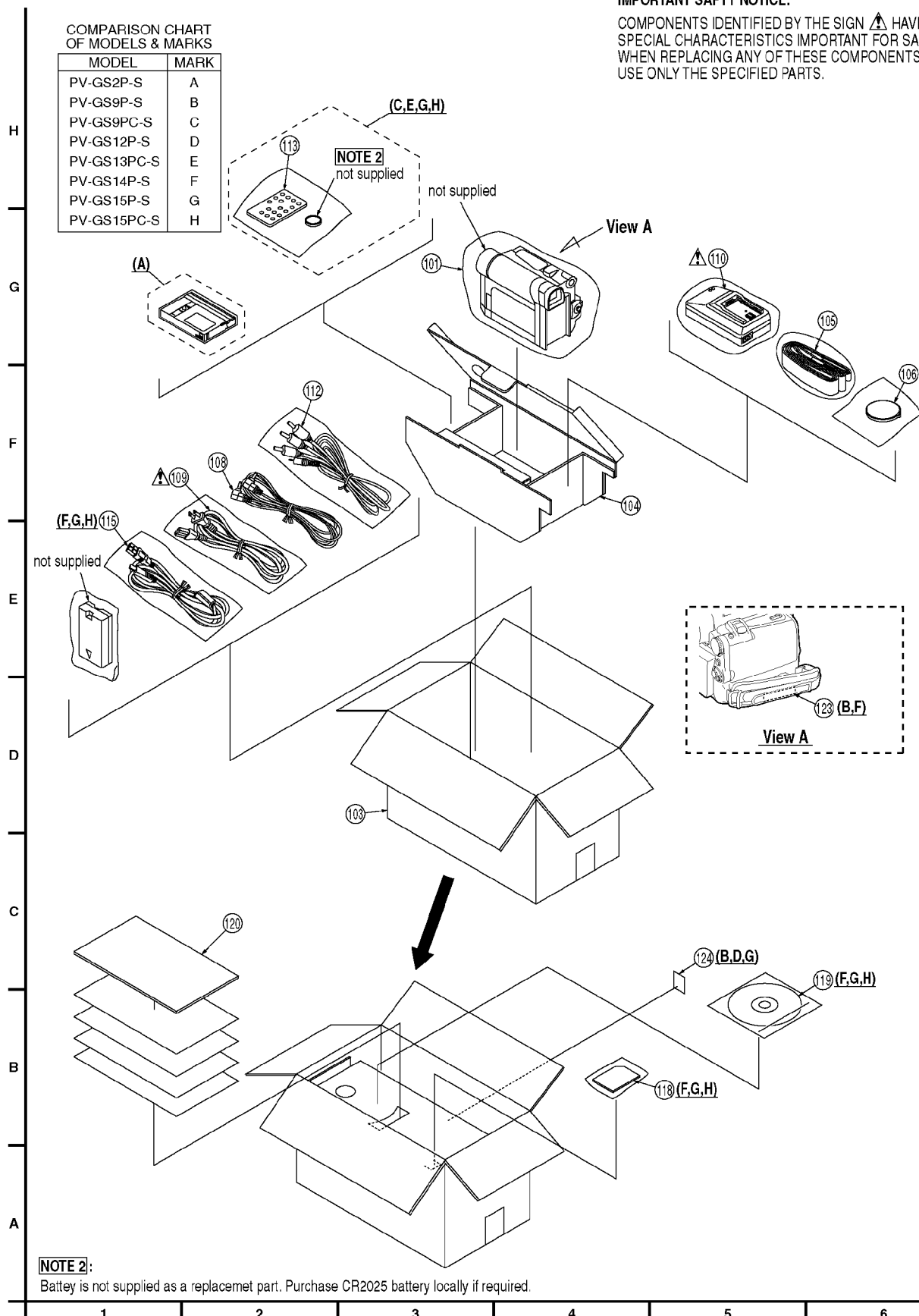
## 7 PACKING PARTS AND ACCESSORIES SECTION

### COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

**IMPORTANT SAFETY NOTICE:**

COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



# 13 REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

## 13.1. REPLACEMENT NOTES

### 13.1.1. General Notes

1. Use only original replacement parts:

To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

#### 2. IMPORTANT SAFETY NOTICE

Components identified by the sign  $\triangle$  have special characteristics important for safety. When replacing any of these components, use only the specified parts.

#### 3. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Definition of Parts supplier:
  - a. Parts with mark "SPC" in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.
  - b. Parts without mark in the Remarks column are supplied from MKE.
7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.
8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

### 13.1.2. Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation  
RTL: Retention Time Limited  
This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
3. Main Chassis Unit (Ref. No. 201) or Cylinder Unit (Ref. No. 202) replacement note:  
When replacing the Main Chassis Unit or the Cylinder Unit, be sure to perform the Envelope Output Adjustment. Refer to "ENVELOPE OUTPUT ADJUSTMENT" in MECHANICAL ADJUSTMENT.

### 13.1.3. Electrical Replacement Notes

1. Unless otherwise specified;  
All resistors are in  $\Omega$ , K = 1,000  $\Omega$ , M = 1,000 k $\Omega$ .
2. Abbreviation  
RTL: Retention Time Limited  
This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.  
NR: Non Repairable Board Ass'y  
MGF CHIP: Metal Glaze Film Chip  
C CHIP: Ceramic Chip  
COMPLX CMP: Complex Component  
W FLMPRF: Wirewound Flameproof  
C.B.A.: Circuit Board Assembly  
P.C.B.: Printed Circuit Board  
E.S.D.: Electrostatically Sensitive Devices
3. SERVICE OF CHIP PARTS  
When servicing chip parts, please use a soldering iron of less than 30 W.
4. When replacing 0  $\Omega$  resistor, a wire can be substituted for it.
5. Parts with mark "CSP" in the Remarks column are CSP (Chip Size Package) IC.
6. IC6002 replacement note:  
When replacing this IC, be sure to write the initial data with PC-EVR Adjustment Program.

### COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H



## 13.2. MECHANICAL REPLACEMENT PARTS LIST

### COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

#### Definition of Parts supplier:

1. Parts with mark "SPC" in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.
2. Parts without mark in the Remarks column are supplied from MKE.

#### MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	LSYK1325	MECHA BASE PLATE UNIT	1
2	LSYK1307	SIDE CASE L UNIT,ABS RESIN ( A,D,E,F,G,H )	1
2	LSYK1306	SIDE CASE L UNIT,ABS RESIN ( B,C )	1
3	LSMD0800	TOP PIECE	1
4	LSKM1026	POST COVER	1
5	LSKF0559	EVR COVER	1
6	LSMG0140	MECHA DAMPER RUBBER	1
7	LSXA0555	BOTTOM ANGLE UNIT	1
8	LSKF0576	JACK COVER	1
11	LSYK1300	REAR CASE UNIT,ABS RESIN ( A,B,C,D,E )	5
11	LSYK1301	REAR CASE UNIT,ABS RESIN ( F,G,H )	5
12	LSYK1292	ELECTRICAL VIEWFINDER UNIT ( A,B,C,D,E )	5 RTL
12	LSYK1293	ELECTRICAL VIEWFINDER UNIT ( F,G,H )	5 RTL
13	LSKM1023	EVF BASE FRAME	5
14	LSMA0721	EVF SPRING	5
15	LSSC0693	EVF EARTH PLATE,STEEL	5
16	LSMD0799	EVF SLIDE PIECE	5
17	LSJB8274	EVF FLEXIBLE PRINTED CIRCUIT	5
18	LSMG0138	EYE CAP	5
19	LSMD0796	EYE CAP PIECE	5
20	LSYK1296	EVF CASE 1 UNIT ( A,B,C,D,E )	5
20	LSYK1297	EVF CASE 1 UNIT ( F,G,H )	5
21	LSKM1024	EVF CASE,ABS RESIN	5
22	LSGT0068	EYE SIGHT LEVER	5
23	LSYK1381	EVF LENS UNIT	5
31	LSYK1373	SIDE CASE R UNIT,ABS RESIN ( A )	3
31	LSYK1345	SIDE CASE R UNIT,ABS RESIN ( B,C )	3
31	LSYK1346	SIDE CASE R UNIT,ABS RESIN ( D,E )	3
31	LSYK1347	SIDE CASE R UNIT,ABS RESIN ( F,G,H )	3
32	LSXY0587	SHAFT CASE UNIT ( A,B,C,D,E )	3
32	LSXY0588	SHAFT CASE UNIT ( F,G,H )	3
33	LSYK1327	LCD CASE A UNIT,ABS RESIN ( A,D,E )	3

PV-GS2P / PV-GS9P / PV-GS12P / PV-GS14P / PV-GS15P / PV-GS9PC / PV-GS13PC / PV-GS15PC

Ref. No.	Part No.	Part Name & Description	Remarks
33	LSYK1326	LCD CASE A UNIT,ABS RESIN ( B,C )	3
33	LSYK1328	LCD CASE A UNIT,ABS RESIN ( F,G,H )	3
34	LSKM1022	LCD CASE B,ABS RESIN	3
35	LSXY0573	PANEL SHIELD CASE UNIT	3
36	LSXY0578	PANEL HOLDER UNIT	3
37	LSGL0403	LEAD LIGHT PANEL	3
38	LSGL0404	DIFFUSION SHEET	3
39	LSGL0405	REFLECT SHEET	3
40	LSGL0406	BEF SHEET	3
41	LSGL0407	DBEF SHEET	3
42	LSBDDYH00014	LIQUID CRYSTAL DISPLAY PANEL	3
51	LSYK1370	FRONT UNIT ( A )	2
51	LSYK1333	FRONT UNIT ( B,C )	2
51	LSYK1364	FRONT UNIT ( D )	2
51	LSYK1334	FRONT UNIT ( E )	2
51	LSYK1366	FRONT UNIT ( F )	2
51	LSYK1335	FRONT UNIT ( G,H )	2
52	LSYK1337	TOP COVER UNIT ( A,D,E )	2
52	LSYK1336	TOP COVER UNIT ( B,C )	2
52	LSYK1338	TOP COVER UNIT ( F,G,H )	2
53	LSQL1608	DECORATION LABEL ( A,E,F )	2
53	LSQL1607	DECORATION LABEL ( B,C,D )	2
53	LSQL1609	DECORATION LABEL ( G,H )	2
54	LSQL1603	JACK LABEL ( A,B,C,D,E )	2
54	LSQL1604	JACK LABEL ( F,G,H )	2
55	LSFL0200	FOUR EYES LENS ( D,E,F,G,H )	2
56	LSGQ0108	LIGHT SHIELD SHEET ( D,F,G,H )	2
61	LSXN0031	LENS UNIT	4
62	LSDW0058	FILTER HOLDER	4
63	VDL1390-B	OPTICAL LOW PASS FILTER	4
64	VMX3282	FILTER RUBBER	4
65	L6HA66NB0001	ZOOM MOTOR UNIT	4
66	L6HA66NB0002	FOCUS MOTOR UNIT	4
101	VFF1129	BAG,POLYETHYLENE	7
103	LSPG1731	PACKING CASE,PAPER ( A )	7
103	LSPG1669	PACKING CASE,PAPER ( B )	7
103	LSPG1670	PACKING CASE,PAPER ( C )	7
103	LSPG1713	PACKING CASE,PAPER ( D )	7
103	LSPG1684	PACKING CASE,PAPER ( E )	7
103	LSPG1714	PACKING CASE,PAPER ( F )	7
103	LSPG1672	PACKING CASE,PAPER ( G )	7
103	LSPG1673	PACKING CASE,PAPER ( H )	7
104	LSTG1300	DVC PACKING	7
105	LSFC0018	SHOULDER BELT	7
106	LSYF0547	LENS CAP UNIT	7
108	LSJA0288	DC CABLE W/PLUG	7
109	K2CB2CB00014	AC CORD W/PLUG	7 △
110	PV-DAC11-D	AC ADAPTOR UNIT ( A,B,D,F,G )	7 △
110	PV-DAC11-K-D	AC ADAPTOR UNIT ( C,E,H )	7 △
112	K2KC4CB00014	AUDIO VIDEO CABLE W/PLUG	7
113	LSSQ0411	INFRARED REMOTE CONTROL UNIT ( C,E,G,H )	7
115	KIHA05CD0006	USB CABLE W/PLUG ( E,G,H )	7
118	RP-SD008BMK0	SD CARD ( E,G,H )	7
119	LSFT0577	APPLICATION SOFTWARE CD-ROM ( E )	7
119	LSFT0575	APPLICATION SOFTWARE CD-ROM ( G,H )	7
120	LSQT0832-A	INSTRUCTION BOOK ( A )	7
120	LSQT0802-A	INSTRUCTION BOOK ( B,D,F,G )	7
120	LSQT0803-A	INSTRUCTION BOOK ( C,E,H )	7
123	N9ZZ00000027	SECURITY TAG ( B,F )	7
124	RZZ0124	SECURITY TAG (CHECK POINT) ( B,D,G )	7
201	VXY1804Z1	MAIN CHASSIS UNIT	6
202	VEG1659-M	CYLINDER UNIT	6
203	VXA7624	CASSETTE UP UNIT	6 SPC
204	VEM0783	LOADING MOTOR UNIT	6 SPC
205	PN166.VT	PHOTO TRANSISTOR	6 SPC
207	VXR0401	T-REEL MOTOR	6 SPC
208	VMB3766	CASSETTE UP SPRING	6 SPC

Ref. No.	Part No.	Part Name & Description	Remarks
402	XQN2+BJ4FXK	SCREW, STEEL	3
405	XQN16+B3FZ	SCREW, STEEL	1
413	LSHD0051	SCREW, STEEL	1
456	XQN16+BJ3FN	SCREW, STEEL	1, 5
457	XQN2+BF5FN	SCREW, STEEL	3
524	XQN16+BJ4FXK	SCREW, STEEL	1, 2, 5
531	XQN16+BF4FXK	SCREW, STEEL	1
532	XQN16+BF4FN	SCREW, STEEL	1, 5
533	XQN16+BJ4FN	SCREW, STEEL	1, 3
534	VHD1585	SCREW, STEEL	6
535	XQN14+B2FN	SCREW, STEEL	6
536	XQN16+AJ4FN	SCREW, STEEL	4
537	XQN16+BF3FN	SCREW, STEEL	3
538	LSHD0095	SCREW, STEEL	4
539	XQN16+BJ4	SCREW, STEEL	1
701	LSEK0543	ELECTRIC CONDENSER MICROPHONE UNIT	2
702	LSMG0136	MIC DAMPER	2
703	LSJW0057	FLEXIBLE FLAT CABLE W/OUT PLUG, 5V	2
704	B3RAB0000024	INFRARED RECEIVER	2
706	LSJW0059	JACK FLEXIBLE FLAT CABLE W/OUT PLUG, 5V	1
707	ML-621S/F9D	BATTERY	1
E10	LSEP8262B1	MAIN C.B.A. ( A,D,E )	1 RTL
E10	LSEP8262A1	MAIN C.B.A. ( B,C )	1 RTL
E10	LSEP8262C1	MAIN C.B.A. ( F,G,H )	1 RTL
E20	LSEP8263A1	REAR C.B.A. NR	5
E30	LSEP8264A1	FRONT C.B.A. ( A,B,C )	2 RTL
E30	LSEP8264B1	FRONT C.B.A. ( D,E,F,G,H )	2 RTL
E40	LSEP8265A1	JACK C.B.A. ( A,B,C,D,E )	1 RTL
E40	LSEP8265C1	JACK C.B.A. ( F,G,H )	1 RTL
E50	LSEP8267A1	LIQUID CRYSTAL DISPLAY C.B.A.	3 RTL
E60	LSEQ0720	CCD C.B.A. NR	4

## SERVICE FIXTURES AND TOOLS

Ref. No.	Part No.	Part Name & Description	Remarks
	VFM3010EDS	COLOR BAR STANDARD TAPE	SPC
	VFK1451	DVC HEAD CLEANING TAPE	SPC
	LSVQ0028	PLIER FOR NON ZIF CONNECTOR	
	VFKW0124A	EXTENSION CABLE 14P	
	VUVS0012	EXTENSION CABLE 22P	
	LSUA0017	EXTENSION CABLE 18P	
	LSUA0016	EXTENSION CABLE 10P	
	VUVS0007	EXTENSION CABLE 12P	
	VUVS0015	EXTENSION CABLE 28P	
	VUVS0019	EXTENSION CABLE 8P	
	LSUA0021	EXTENSION CABLE 26P	
	LSZG0030	GREASE	
	VFK1164LBX1	LIGHT BOX	SPC
	VFK1164TCM02	INFINITY LENS (WITH FOCUS CHART)	SPC
	VFK1164TAR58	ATTACHMENT RING (58mm)	SPC
	VFK1164TAR55	ATTACHMENT RING (55mm)	SPC
	VFK1164TAR52	ATTACHMENT RING (52mm)	SPC
	VFK1164TAR49	ATTACHMENT RING (49mm)	SPC
	VFK1164TAR46	ATTACHMENT RING (46mm)	SPC
	VFK1164TAR43	ATTACHMENT RING (43mm)	SPC
	VFK1164TAR37	ATTACHMENT RING (37mm)	SPC
	VFK1164TAR3A	ATTACHMENT RING (30.5mm)	SPC
	VFK1164TAR27	ATTACHMENT RING (27mm)	SPC
	VFK1164TFCT2	COLOR CONVERSION FILTER (C14)	SPC
	VFK1899	POST HEIGHT ADJUSTMENT FIXTURE	SPC
	LSUP0007	INTERFACE BOARD FOR ELECTRICAL ADJUSTMENT	
	VFK1898	CONNECTION ADAPTOR	SPC
	VFK1897	EVR CONNECTOR BOARD	SPC
	VFK1309	EVR CONNECTOR BOARD	SPC
	VFK1317	FLAT CABLE 30P	SPC
	VFK1164TFWC2	WHITE CHART	SPC
	VFK1164TFCB2	COLOR BAR CHART	SPC
	VFK1164TFGS2	GRAY SCALE CHART	SPC

## 13.3. ELECTRICAL REPLACEMENT PARTS LIST

## COMPARISON CHART OF MODELS &amp; MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

## Definition of Parts supplier:

1. All parts are supplied from MKE.

## PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E10	LSEP8262B1	MAIN C.B.A. ( A,D,E )	E.S.D. RTL
E10	LSEP8262A1	MAIN C.B.A. ( B,C )	E.S.D. RTL
E10	LSEP8262C1	MAIN C.B.A. ( F,G,H )	E.S.D. RTL
E20	LSEP8263A1	REAR C.B.A. NR	
E30	LSEP8264A1	FRONT C.B.A. ( A,B,C )	RTL
E30	LSEP8264B1	FRONT C.B.A. ( D,E,F,G,H )	RTL
E40	LSEP8265A1	JACK C.B.A. ( A,B,C,D,E )	RTL
E40	LSEP8265C1	JACK C.B.A. ( F,G,H )	RTL
E50	LSEP8267A1	LIQUID CRYSTAL DISPLAY C.B.A.	RTL
E60	LSEQ0720	CCD C.B.A. NR	

## 13.3.1. MAIN C.B.A

## COMPARISON CHART OF MODELS &amp; MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

## INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC301	C0CBCBB00005	IC, LINEAR	
IC302	MN52A4	IC, LOGIC	E.S.D.
IC303	H1A3605B0003	CRYSTAL OSCILLATOR	
IC304	MN31121SA-E1	IC, LOGIC	E.S.D.
IC501	C1AB00001725	IC, LINEAR	
IC701	C1AB00001877	IC, LINEAR	
IC901	C1AB00001842	IC, LINEAR	
IC1001	C0DBAZZ00064	IC, LINEAR	
IC1002	C0CBCBC00060	IC, LINEAR	

Ref. No.	Part No.	Part Name & Description	Remarks
IC1003	C0CBCAC00089	IC, LINEAR	
IC2001	C1AB00001752	IC, LINEAR	
IC2002	C0ABAA000046	IC, LINEAR	
IC3001	C1AB00001962	IC, LOGIC	E.S.D. CSP
IC3101	C1AB00001894	IC, LOGIC	E.S.D.
IC3201	C1AB00001695	IC, LOGIC	E.S.D. CSP
IC5001	AN3732FJMEFV	IC, LINEAR	
IC6001	LSSK0045	IC, 32BIT MICROCONTROLLER *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	E.S.D. CSP
IC6001	C2DBMK000022	IC, 32BIT MICROCONTROLLER *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	E.S.D. CSP
IC6002	C3EBGG000013	IC, 16K EEPROM	E.S.D.
IC6002	C3EBGG000016	IC, 16K EEPROM	E.S.D.
IC6003	C1ZBZ0002438	IC, LOGIC	E.S.D.
IC6004	C1AB00001927	IC, LOGIC	E.S.D.
IC6005	C0CBCBC00061	IC, CMOS STANDARD LOGIC	E.S.D.
IC6006	C0CBCAC00129	IC, LINEAR *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	
IC6006	C0CBCAC00144	IC, LINEAR *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	
IC6007	C0CBAAA00016	IC, LINEAR	
IC6008	C0EBD0000281	IC, LINEAR *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	
IC6008	C0EBB0000135	IC, LINEAR *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	
IC6009	LSSK0047	IC, 2M FLASH MEMORY	E.S.D.

## TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q701	B1ADMB000004	TRANSISTOR SI PNP CHIP	
Q1001	UNR9112J08	TRANSISTOR SI PNP CHIP	
Q1001	B1GDCFL0019	TRANSISTOR SI PNP CHIP	
Q1003	UNR9115J08	TRANSISTOR SI PNP CHIP	
Q1003	B1GDCFJA0015	TRANSISTOR SI PNP CHIP	
Q1004	B1ZBZ0000038	TRANSISTOR SI PNP CHIP	
Q1005	B1ZBZ0000038	TRANSISTOR SI PNP CHIP	
Q1006	B1ZBZ0000038	TRANSISTOR SI PNP CHIP	
Q1007	B1DFCG000011	TRANSISTOR FET	
Q1008	XN09D6100L	TRANSISTOR SI CHIP	
Q1009	B1ZBZ0000040	TRANSISTOR SI PNP CHIP	
Q1013	2SC559200L	TRANSISTOR SI NPN CHIP	
Q1013	B1ABPB000001	TRANSISTOR SI PNP CHIP	
Q1014	2SB1462J08	TRANSISTOR SI PNP CHIP	
Q1014	B1ADCF000072	TRANSISTOR SI PNP CHIP	
Q1015	XP0450100L	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q1016	2SD1819A0L	TRANSISTOR SI NPN CHIP	
Q1016	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1018	2SB1462J08	TRANSISTOR SI PNP CHIP	
Q1018	B1ADCF000072	TRANSISTOR SI PNP CHIP	
Q1019	2SB1218A0L	TRANSISTOR SI PNP CHIP	
Q1019	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q1019	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q1022	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q1022	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1023	B1ABCF000098	TRANSISTOR SI NPN CHIP	
Q1023	B1ABCF000099	TRANSISTOR SI NPN CHIP	
Q1024	2SD2216J08	TRANSISTOR SI NPN CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
Q1024	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1025	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q1025	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1026	XP0431400L	TRANSISTOR SI NPN CHIP	
Q1027	B1ABCF000098	TRANSISTOR SI NPN CHIP	
Q1027	B1ABCF000099	TRANSISTOR SI NPN CHIP	
Q1028	2SD262300L	TRANSISTOR SI NPN CHIP	
Q1029	2SD262300L	TRANSISTOR SI NPN CHIP	
Q1030	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q1030	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1031	UNR921TJ08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q1032	UNR9114J08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q1032	B1GDCFJN0017	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q1033	UNR911TJ08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q1033	B1GDCFLM0005	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q1034	UNR9213J08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q1034	B1GBCFNN0029	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q1034	B1GBCFNN0030	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q1035	UNR921TJ08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q3001	UNR9111J08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q3001	B1GDCFJJ0027	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6001	UNR921FJ08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q6002	UNR9213J08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q6002	B1GBCFNN0029	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q6002	B1GBCFNN0030	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q6003	2SD1820A0L	TRANSISTOR SI NPN CHIP	
Q6004	2SD1819A0L	TRANSISTOR SI NPN CHIP	
Q6004	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6005	2SB09700RL	TRANSISTOR SI PNP CHIP	
Q6006	B1CHHD000003	TRANSISTOR FET	
Q6007	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q6007	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q6008	UNR921TJ08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6008	B1GBCFLN0003	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6009	UNR921EJ08	TRANSISTOR COMPLEX CMP SI PNP CHIP	
Q6010	2SB09700RL	TRANSISTOR SI PNP CHIP	
Q6011	UNR9115J08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6011	B1GDCFJA0015	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6012	UNR9115J08	TRANSISTOR COMPLEX CMP SI NPN CHIP ( A,D,E,F,G,H )	
Q6012	B1GDCFJA0015	TRANSISTOR COMPLEX CMP SI NPN CHIP ( A,D,E,F,G,H )	
Q6013	UNR9115J08	TRANSISTOR COMPLEX CMP SI NPN CHIP	
Q6013	B1GDCFJA0015	TRANSISTOR COMPLEX CMP SI NPN CHIP	

## DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D301	MA2S111008	DIODE SI CHIP	
D301	BOACK000003	DIODE SI CHIP	
D301	MA2S11100L	DIODE SI CHIP	
D302	MA2S728008	DIODE SI CHIP	
D302	BOJCD000002	DIODE SI CHIP	
D302	MA2S72800L	DIODE SI CHIP	
D1002	MA2J111008	DIODE SI CHIP	
D1002	BOACK000005	DIODE SI CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
D1002	MA2J11100L	DIODE SI CHIP	
D1003	MA2J111008	DIODE SI CHIP	
D1003	B0ACCK000005	DIODE SI CHIP	
D1003	MA2J11100L	DIODE SI CHIP	
D1005	MA2S111008	DIODE SI CHIP	
D1005	B0ACCK000003	DIODE SI CHIP	
D1005	MA2S11100L	DIODE SI CHIP	
D1006	MAZ80750ML	DIODE SI CHIP	
D1007	MAZ80620HL	DIODE ZENER CHIP 6.2V	
D1009	MA2S111008	DIODE SI CHIP	
D1009	B0ACCK000003	DIODE SI CHIP	
D1009	MA2S11100L	DIODE SI CHIP	
D1010	MAZ81000HL	DIODE ZENER CHIP 10V	
D1011	MAZ81300ML	DIODE ZENER CHIP 13V	
D1012	MA2S111008	DIODE SI CHIP	
D1012	B0ACCK000003	DIODE SI CHIP	
D1012	MA2S11100L	DIODE SI CHIP	
D1013	MA2S111008	DIODE SI CHIP	
D1013	B0ACCK000003	DIODE SI CHIP	
D1013	MA2S11100L	DIODE SI CHIP	
D1014	MA2S111008	DIODE SI CHIP	
D1014	B0ACCK000003	DIODE SI CHIP	
D1014	MA2S11100L	DIODE SI CHIP	
D2001	MA3S13300L	DIODE SI CHIP	
D3101	MA2SD24008	DIODE SI CHIP ( F,G,H )	
D6001	MA2S728008	DIODE SI CHIP	
D6001	B0JCDD000002	DIODE SI CHIP	
D6001	MA2S72800L	DIODE SI CHIP	
D6002	MA2J111008	DIODE SI CHIP	
D6003	B0JCDD000002	DIODE SI CHIP	
D6005	MA2S728008	DIODE SI CHIP	
D6005	B0JCDD000002	DIODE SI CHIP	
D6005	MA2S72800L	DIODE SI CHIP	
D6006	MA3J14700L	DIODE SI CHIP	

## RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R302	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R304	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R305	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R306	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R307	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R308	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R309	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R313	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R314	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R315	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R316	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R501	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R504	ERJ2GEJ333X	MGF CHIP 1/16W 33K	
R702	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R704	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R705	D0GA102JA015	MGF CHIP 1/16W 1K	
R706	ERJ2GEJ393X	MGF CHIP 1/16W 39K	
R707	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R708	ERJ2GEJ393X	MGF CHIP 1/16W 39K	
R709	ERJ2GEJ184X	MGF CHIP 1/16W 180K	
R710	ERJ2GEJ153X	MGF CHIP 1/16W 15K	
R711	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R712	ERJ2GEJ334X	MGF CHIP 1/16W 330K	
R713	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R714	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R715	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R716	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R718	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R719	ERJ2GEJ334X	MGF CHIP 1/16W 330K	
R721	ERJ2GEJ684X	MGF CHIP 1/16W 680K	
R722	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R723	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R724	ERJ2GEJ151X	MGF CHIP 1/16W 150	
R725	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R726	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R902	ERJ2GE0R00X	MGF CHIP 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R906	D0GA102JA015	MGF CHIP 1/16W 1K	
R907	D0GA102JA015	MGF CHIP 1/16W 1K	
R908	D0GA102JA015	MGF CHIP 1/16W 1K	
R909	D0GA102JA015	MGF CHIP 1/16W 1K	
R911	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R914	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R920	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R921	ERJ2GEJ560X	MGF CHIP 1/16W 56	
R924	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R925	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R926	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R927	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R928	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R1001	ERJ2GEJ153X	MGF CHIP 1/16W 15K	
R1002	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R1003	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R1004	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R1005	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R1006	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R1007	ERA3YED822V	MGF CHIP 1/8W 8.2K	
R1008	ERJ2GEJ153X	MGF CHIP 1/16W 15K	
R1009	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R1010	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1011	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1012	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1013	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1014	ERJ2GEJ151X	MGF CHIP 1/16W 150	
R1015	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1017	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1024	D0HA912ZA001	MGF CHIP 1/16W 9.1K	
R1027	D0HA302ZA001	MGF CHIP 1/16W 3K	
R1028	D0HA330ZA002	MGF CHIP 1/16W 33	
R1030	D0HA392ZA001	MGF CHIP 1/16W 3.9K	
R1033	D0HA302ZA001	MGF CHIP 1/16W 3K	
R1034	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1036	D0HA152ZA001	MGF CHIP 1/16W 1.5K	
R1039	D0HA302ZA001	MGF CHIP 1/16W 3K	
R1040	D0HA330ZA002	MGF CHIP 1/16W 33	
R1042	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R1043	D0HA273ZA001	MGF CHIP 1/16W 27K	
R1046	D0HA302ZA001	MGF CHIP 1/16W 3K	
R1047	D0HA820ZA002	MGF CHIP 1/16W 82	
R1049	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R1050	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R1051	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1052	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R1053	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1054	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1055	ERJ2GEJ824X	MGF CHIP 1/16W 820K	
R1056	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R1057	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1058	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R1059	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R1060	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R1061	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R1063	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R1065	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R1067	ERJ2GEJ273X	MGF CHIP 1/16W 27K	
R1068	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R1069	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R1070	D0GA102JA015	MGF CHIP 1/16W 1K	
R1071	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R1072	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R1073	D0HA102ZA001	MGF CHIP 1/16W 1K	
R1074	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R1075	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R1076	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R1077	D0HA302ZA001	MGF CHIP 1/16W 3K	
R1081	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R1082	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R1086	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R1087	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R2001	D1BDR2700001	MGF CHIP 1/8W 0.27	

Ref. No.	Part No.	Part Name & Description	Remarks
R2002	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2003	ERJ8GEYJR27V	MGF CHIP 1/8W 0.27	
R2004	ERJ2GEJ273X	MGF CHIP 1/16W 27K	
R2005	D0GA242JA015	MGF CHIP 1/16W 2.4K	
R2006	ERJ2GEJ153X	MGF CHIP 1/16W 15K	
R2007	ERJ2RHD273X	MGF CHIP 1/16W 27K	
R2008	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2009	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R2010	D0GA102JA015	MGF CHIP 1/16W 1K	
R2011	ERJ2GEJ823X	MGF CHIP 1/16W 82K	
R2012	D0GA102JA015	MGF CHIP 1/16W 1K	
R2013	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R2014	D0GA102JA015	MGF CHIP 1/16W 1K	
R2015	D0GA102JA015	MGF CHIP 1/16W 1K	
R2016	D0GA102JA015	MGF CHIP 1/16W 1K	
R2017	D0GA102JA015	MGF CHIP 1/16W 1K	
R2018	ERJ8GEYJR68V	MGF CHIP 1/8W 0.68	
R2019	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R2020	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2021	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R2024	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2025	ERJ2GEJ183X	MGF CHIP 1/16W 18K	
R2026	ERJ2GEJ393X	MGF CHIP 1/16W 39K	
R2027	ERJ2GEJ563X	MGF CHIP 1/16W 56K	
R2028	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2029	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2030	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2031	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R2032	D0GA102JA015	MGF CHIP 1/16W 1K	
R2033	D0GA102JA015	MGF CHIP 1/16W 1K	
R2034	D0GA102JA015	MGF CHIP 1/16W 1K	
R2035	D0GA102JA015	MGF CHIP 1/16W 1K	
R2036	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R2037	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3001	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3002	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3003	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3006	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R3007	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3008	ERJ2RHD123X	MGF CHIP 1/16W 12K	
R3009	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3010	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3011	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3012	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3013	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3014	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3015	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3016	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3017	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3018	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3019	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3020	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3021	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3022	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3023	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3024	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3025	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3026	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3027	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3028	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3029	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3030	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3031	ERJ2GEJ153X	MGF CHIP 1/16W 15K	
R3032	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3033	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R3034	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3035	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3036	ERJ2GEJ680X	MGF CHIP 1/16W 68	
R3037	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R3039	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R3040	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3042	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3043	D0GA152JA015	MGF CHIP 1/16W 1.5K	

PV-GS2P / PV-GS9P / PV-GS12P / PV-GS14P / PV-GS15P / PV-GS9PC / PV-GS13PC / PV-GS15PC

Ref. No.	Part No.	Part Name & Description	Remarks
R3044	ERJ2RKD270X	MGF CHIP 1/16W 27	
R3045	ERJ2RKD270X	MGF CHIP 1/16W 27	
R3071	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R3079	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3080	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3081	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3082	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3083	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3084	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3085	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3087	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3088	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3101	ERJ2GEJ680X	MGF CHIP 1/16W 68 ( F,G,H )	
R3102	ERJ2GEJ680X	MGF CHIP 1/16W 68 ( F,G,H )	
R3103	ERJ2GEJ680X	MGF CHIP 1/16W 68	
R3104	ERJ2RHD752X	MGF CHIP 1/16W 7.5K ( F,G,H )	
R3112	ERJ2GE0R00X	MGF CHIP 1/16W 0 ( F,G,H )	
R3114	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3201	ERJ2GEJ100X	MGF CHIP 1/16W 10	
R3202	D0GA182JA015	MGF CHIP 1/16W 1.8K	
R3203	ERJ2GEJ271X	MGF CHIP 1/16W 270	
R3204	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R3205	D0GA272JA015	MGF CHIP 1/16W 2.7K	
R3206	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R3207	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R3208	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R3209	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3210	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3211	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3212	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R3218	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3222	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3225	D0GA102JA015	MGF CHIP 1/16W 1K	
R3226	D0GA102JA015	MGF CHIP 1/16W 1K	
R3227	D0GA102JA015	MGF CHIP 1/16W 1K	
R3229	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3230	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3231	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R3232	D0GA102JA015	MGF CHIP 1/16W 1K	
R3233	D0GA102JA015	MGF CHIP 1/16W 1K	
R3234	D0GA102JA015	MGF CHIP 1/16W 1K	
R3513	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R4501	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R4502	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R4503	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R4504	ERJ2GEJ561X	MGF CHIP 1/16W 560	
R4505	ERJ2GEJ561X	MGF CHIP 1/16W 560	
R4510	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R4511	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R4521	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4522	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4523	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4524	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4526	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4527	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4528	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R4529	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4530	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R4531	D0GA562JA015	MGF CHIP 1/16W 5.6K ( A,D,E )	
R4531	D0GA102JA015	MGF CHIP 1/16W 1K ( B,C )	
R4531	ERJ2GEJ103X	MGF CHIP 1/16W 10K ( F,G,H )	
R4535	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R5005	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R5006	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R5007	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R5008	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R5009	D0GA182JA015	MGF CHIP 1/16W 1.8K	
R5010	D0GA682JA015	MGF CHIP 1/16W 6.8K	
R5011	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6001	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6002	D0GA102JA015	MGF CHIP 1/16W 1K	
R6003	D0GA102JA015	MGF CHIP 1/16W 1K	
R6004	D0GA102JA015	MGF CHIP 1/16W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6005	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6006	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6007	D0GA102JA015	MGF CHIP 1/16W 1K	
R6008	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6009	D0GA272JA015	MGF CHIP 1/16W 2.7K	
R6010	ERJ6GEYJ330V	MGF CHIP 1/10W 33	
R6011	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6012	D0GA392JA015	MGF CHIP 1/16W 3.9K	
R6016	D0GA102JA015	MGF CHIP 1/16W 1K	
R6017	D0GA102JA015	MGF CHIP 1/16W 1K	
R6018	D0GA102JA015	MGF CHIP 1/16W 1K	
R6019	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R6020	D0GA682JA015	MGF CHIP 1/16W 6.8K	
R6021	ERJ2GEJ183X	MGF CHIP 1/16W 18K	
R6022	ERJ2GEJ183X	MGF CHIP 1/16W 18K	
R6023	ERJ2GEJ273X	MGF CHIP 1/16W 27K	
R6024	ERJ2GEJ273X	MGF CHIP 1/16W 27K	
R6025	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6026	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6027	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6029	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6030	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6031	ERJ2GE0R00X	MGF CHIP 1/16W 0 *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	
R6032	ERJ2GE0R00X	MGF CHIP 1/16W 0 *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	
R6033	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6034	D0GA102JA015	MGF CHIP 1/16W 1K	
R6035	D0GA102JA015	MGF CHIP 1/16W 1K	
R6036	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6037	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6039	ERJ2GEJ393X	MGF CHIP 1/16W 39K	
R6041	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6042	D0GA152JA015	MGF CHIP 1/16W 1.5K	
R6043	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6044	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6045	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6046	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6047	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6049	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6051	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6052	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6053	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6054	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6055	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6056	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6057	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6058	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6059	D0GA102JA015	MGF CHIP 1/16W 1K	
R6060	D0GA102JA015	MGF CHIP 1/16W 1K	
R6061	D0GA102JA015	MGF CHIP 1/16W 1K	
R6062	D0GA102JA015	MGF CHIP 1/16W 1K	
R6063	D0GA102JA015	MGF CHIP 1/16W 1K	
R6065	D0GA102JA015	MGF CHIP 1/16W 1K	
R6066	D0GA102JA015	MGF CHIP 1/16W 1K	
R6067	D0GA102JA015	MGF CHIP 1/16W 1K	
R6068	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6069	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6071	D0GA102JA015	MGF CHIP 1/16W 1K	
R6073	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6075	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6076	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6078	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6079	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6080	ERJ2GEJ821X	MGF CHIP 1/16W 820	
R6081	D0GA152JA015	MGF CHIP 1/16W 1.5K	
R6082	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6083	ERJ2RHD683X	MGF CHIP 1/16W 68K	
R6084	ERJ2RHD223X	MGF CHIP 1/16W 22K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6085	D0GA102JA015	MGF CHIP 1/16W 1K	
R6086	D0GA102JA015	MGF CHIP 1/16W 1K	
R6087	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6088	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6089	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6090	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6091	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6092	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6093	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6094	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6095	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R6096	ERJ2GEJ394X	MGF CHIP 1/16W 390K	
R6097	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6098	D0GA822JA015	MGF CHIP 1/16W 8.2K	
R6099	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R6100	D0GA102JA015	MGF CHIP 1/16W 1K	
R6101	D0GA102JA015	MGF CHIP 1/16W 1K	
R6102	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6103	D0GA822JA015	MGF CHIP 1/16W 8.2K	
R6104	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R6105	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6106	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6107	ERJ2GEJ123X	MGF CHIP 1/16W 12K	
R6108	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6109	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6110	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6111	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6112	D0GA102JA015	MGF CHIP 1/16W 1K	
R6113	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6114	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6115	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6116	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6117	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6118	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6119	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6120	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6121	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6122	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R6123	ERJ2GEJ471X	MGF CHIP 1/16W 470 (A,D,E,F,G,H)	
R6124	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R6125	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R6127	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6128	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6129	ERJ6GEYJ330V	MGF CHIP 1/10W 33	
R6130	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6131	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6132	ERJ2GEJ103X	MGF CHIP 1/16W 10K	
R6133	D0GA152JA015	MGF CHIP 1/16W 1.5K	
R6134	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R6135	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6136	ERJ2GEJ473X	MGF CHIP 1/16W 47K	
R6137	ERJ2GE0R00X	MGF CHIP 1/16W 0	

## CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C303	F1J0J4750004	C CHIP 6.3V 0.47UF	
C304	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C305	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C307	F1H1C104A041	C CHIP 16V 0.1UF	
C308	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C311	ECJ1VB1A105K	C CHIP 10V 1UF	
C312	F1H1C104A041	C CHIP 16V 0.1UF	
C314	F1K1A1060014	C CHIP 10V 10UF	
C315	ECJ3YF1C475Z	C CHIP 16V 4.7UF	
C316	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C502	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C503	F1G0J105A001	C CHIP 6.3V 1UF	
C504	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C505	F1G1H102A457	C CHIP 50V 1000PF	
C506	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C509	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C510	ECJ0EB1A104K	C CHIP 10V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C512	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C513	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C514	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C701	ECJ1VB1A105K	C CHIP 10V 1UF	
C702	ECJ1VB1A105K	C CHIP 10V 1UF	
C703	ECJ1VB1A224K	C CHIP 10V 0.22UF	
C704	ECJ1VB1A105K	C CHIP 10V 1UF	
C705	F3FLA226A026	TANTALUM CHIP 10V 220UF	
C708	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C709	FLG1C103A046	C CHIP 16V 0.01UF	
C710	ECJ1VB1A105K	C CHIP 10V 1UF	
C711	FLG1H102A457	C CHIP 50V 1000PF	
C712	ECJ0EB1A473K	C CHIP 10V 0.047	
C713	ECST0JZ106R	TANTALUM CHIP 6.3V 10UF	
C714	FLG1C103A046	C CHIP 16V 0.01UF	
C715	ECJ0EB1H471K	C CHIP 50V 470PF	
C716	ECJ0EB1E101K	C CHIP 25V 100PF	
C717	ECJ1VF1A105Z	C CHIP 10V 1UF	
C718	FLG1E4720004	C CHIP 25V 4700PF	
C720	FLG1C103A046	C CHIP 16V 0.01UF	
C721	ECJ1VF1A105Z	C CHIP 10V 1UF	
C722	ECJ1VB1A105K	C CHIP 10V 1UF	
C903	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C905	FLJ1C1050011	C CHIP 16V 1UF	
C910	FLH1C104A041	C CHIP 16V 0.1UF	
C915	FLJ1C1050011	C CHIP 16V 1UF	
C916	FLJ1A2250007	C CHIP 10V 2.2UF	
C917	FLJ1A2250007	C CHIP 10V 2.2UF	
C919	FLJ1A2250007	C CHIP 10V 2.2UF	
C1001	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C1003	ECJ0EC1H101J	C CHIP 50V 100PF	
C1004	FLH1E223A029	C CHIP 25V 0.022UF	
C1005	FLH1C104A041	C CHIP 16V 0.1UF	
C1006	FLH1C104A041	C CHIP 16V 0.1UF	
C1007	FLJ1C1050011	C CHIP 16V 1UF	
C1008	FLJ1C1050011	C CHIP 16V 1UF	
C1009	ECJ0EB1A473K	C CHIP 10V 0.047	
C1011	FLG1E4720004	C CHIP 25V 4700PF	
C1012	FLG1C103A046	C CHIP 16V 0.01UF	
C1014	FLG1C103A046	C CHIP 16V 0.01UF	
C1017	FLG1E4720004	C CHIP 25V 4700PF	
C1018	FLG1C103A046	C CHIP 16V 0.01UF	
C1020	ECJ3YB1C475K	C CHIP 16V 4.7UF	
C1031	ECJ2VF1C105Z	C CHIP 16V 1UFM	
C1032	FL11C106A011	C CHIP 16V 10UF	
C1033	FLJ1A2250007	C CHIP 10V 2.2UF	
C1034	FLJ0J4750004	C CHIP 6.3V 0.47UF	
C1036	FLJ0J4750004	C CHIP 6.3V 0.47UF	
C1037	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C1038	FLJ0J4750004	C CHIP 6.3V 0.47UF	
C1039	FLJ1C1050011	C CHIP 16V 1UF	
C1040	FLJ1C1050011	C CHIP 16V 1UF	
C1041	FLJ1C1050011	C CHIP 16V 1UF	
C1042	FLJ1C1050011	C CHIP 16V 1UF	
C1043	FLG1H681A401	C CHIP 50V 680PF	
C1046	ECJ0EB1H152K	C CHIP 50V 1500PF	
C1048	FLG1H222A457	C CHIP 50V 2200PF	
C1050	FLG1H102A457	C CHIP 50V 1000PF	
C1051	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1053	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1055	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1056	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1057	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1058	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1060	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C1061	ECJ1VB1A105K	C CHIP 10V 1UF	
C1062	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1063	ECJ1VB1A105K	C CHIP 10V 1UF	
C1064	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1065	FLG1C103A046	C CHIP 16V 0.01UF	
C1067	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1068	ECJ1VB1A105K	C CHIP 10V 1UF	
C1069	ECST0JZ106R	TANTALUM CHIP 6.3V 10UF	

PV-GS2P / PV-GS9P / PV-GS12P / PV-GS14P / PV-GS15P / PV-GS9PC / PV-GS13PC / PV-GS15PC

Ref. No.	Part No.	Part Name & Description	Remarks
C1070	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1071	ECJ2YF1C225Z	C CHIP 16V 2.2UF	
C1072	ECJ2YF1C225Z	C CHIP 16V 2.2UF	
C1073	FLJ1C1050011	C CHIP 16V 1UF	
C1074	ECJ1VB1A105K	C CHIP 10V 1UF	
C1075	ECJ1VF1A105Z	C CHIP 10V 1UF	
C1076	ECJ1VB1A105K	C CHIP 10V 1UF	
C1079	FLG1E4720004	C CHIP 25V 4700PF	
C1086	FLG1C103A046	C CHIP 16V 0.01UF	
C1088	ECST0JZ106R	TANTALUM CHIP 6.3V 10UF	
C1090	FLH1C104A041	C CHIP 16V 0.1UF	
C1091	FLH1C104A041	C CHIP 16V 0.1UF	
C2001	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C2002	ECJ3YB1C475K	C CHIP 16V 4.7UF	
C2003	ECJ1VB1A105K	C CHIP 10V 1UF	
C2004	FLG1C103A046	C CHIP 16V 0.01UF	
C2005	FLG1E4720004	C CHIP 25V 4700PF	
C2006	FLG1E4720004	C CHIP 25V 4700PF	
C2007	ECJ1VB1A105K	C CHIP 10V 1UF	
C2008	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2009	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2010	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2011	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2012	ECJ1VB1A105K	C CHIP 10V 1UF	
C2013	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2014	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2015	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2016	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C2017	ECJ1VB1A105K	C CHIP 10V 1UF	
C2018	FLH1C104A041	C CHIP 16V 0.1UF	
C2020	FLH1C104A041	C CHIP 16V 0.1UF	
C2021	ECJ0EC1H101J	C CHIP 50V 100PF	
C2022	ECJ1VB1A105K	C CHIP 10V 1UF	
C2023	ECJ1VB1A105K	C CHIP 10V 1UF	
C2024	ECJ0EC1H470J	C CHIP 50V 47PF	
C2025	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C2026	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3001	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3002	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3003	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3005	FLG1C103A046	C CHIP 16V 0.01UF	
C3006	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3007	FLG1C103A046	C CHIP 16V 0.01UF	
C3008	F3F0G226A030	TANTALUM CHIP 4V 220UF	
C3009	FLG1C103A046	C CHIP 16V 0.01UF	
C3010	ECJ1VB1A105K	C CHIP 10V 1UF	
C3011	FLG1C103A046	C CHIP 16V 0.01UF	
C3012	ECJ1VB1A105K	C CHIP 10V 1UF	
C3013	ECJ1VB1A105K	C CHIP 10V 1UF	
C3014	FLG1C103A046	C CHIP 16V 0.01UF	
C3015	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3016	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3017	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3019	ECJ1VB1A105K	C CHIP 10V 1UF	
C3020	ECJ0EC1H120J	C CHIP 50V 12PF	
C3021	ECJ0EC1H270J	C CHIP 50V 27PF	
C3022	FLG1C103A046	C CHIP 16V 0.01UF	
C3023	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3024	ECJ0EC1H221J	C CHIP 50V 220PF	
C3025	ECJ1VB1A105K	C CHIP 10V 1UF	
C3026	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3027	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3028	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3029	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3030	FLG1C103A046	C CHIP 16V 0.01UF	
C3031	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3032	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3033	FLG1C103A046	C CHIP 16V 0.01UF	
C3034	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3035	FLG1C103A046	C CHIP 16V 0.01UF	
C3036	FLG1C103A046	C CHIP 16V 0.01UF	
C3037	ECJ1VB1A105K	C CHIP 10V 1UF	
C3038	FLG1C103A046	C CHIP 16V 0.01UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C3039	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3040	ECJ0EC1H080D	C CHIP 50V 8PF	
C3041	ECJ0EC1H080D	C CHIP 50V 8PF	
C3042	FLJ1C1050011	C CHIP 16V 1UF	
C3043	FLG1C103A046	C CHIP 16V 0.01UF	
C3044	FLG1C103A046	C CHIP 16V 0.01UF	
C3046	FLG1C103A046	C CHIP 16V 0.01UF	
C3047	FLJ0J4750004	C CHIP 6.3V 0.47UF	
C3048	ECJ1VB1A105K	C CHIP 10V 1UF	
C3101	FLG1C103A046	C CHIP 16V 0.01UF	
C3102	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3103	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3104	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3105	FLH1C104A041	C CHIP 16V 0.1UF	
C3106	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3107	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3108	FLJ1C1050011	C CHIP 16V 1UF ( F,G,H )	
C3109	F3G0J107A017	TANTALUM CHIP 6.3V 1000UF ( F,G,H )	
C3110	FLG1C103A046	C CHIP 16V 0.01UF ( F,G,H )	
C3111	F3G0J107A017	TANTALUM CHIP 6.3V 1000UF	
C3112	FLJ1C1050011	C CHIP 16V 1UF	
C3201	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3202	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3203	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C3204	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3206	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3207	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3209	FLJ0J4750004	C CHIP 6.3V 0.47UF	
C3210	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3211	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3212	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3214	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3215	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3216	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3217	FLG1C103A046	C CHIP 16V 0.01UF	
C3218	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3219	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3221	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3222	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3224	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3225	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3226	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C3227	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4502	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4504	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4505	F3F0G226A030	TANTALUM CHIP 4V 220UF	
C4506	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4507	F3F0G226A030	TANTALUM CHIP 4V 220UF	
C4508	F3F0G226A030	TANTALUM CHIP 4V 220UF	
C4509	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C4510	FLG1C103A046	C CHIP 16V 0.01UF	
C4511	FLJ1C1050011	C CHIP 16V 1UF	
C4512	FLJ1C1050011	C CHIP 16V 1UF	
C4513	ECJ1VB1A224K	C CHIP 10V 0.22UF	
C4517	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4518	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C4519	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C4520	FLJ1A2250007	C CHIP 10V 2.2UF	
C4521	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C5001	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C5002	ECST0JY226R	TANTALUM CHIP 6.3V 22UF	
C5004	FLG1H681A401	C CHIP 50V 680PF	
C5005	FLG1C103A046	C CHIP 16V 0.01UF	
C5007	FLG1C103A046	C CHIP 16V 0.01UF	
C5009	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C5011	FLG1C103A046	C CHIP 16V 0.01UF	
C5012	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C5013	ECJ0EC1H120J	C CHIP 50V 12PF	
C5014	ECJ0EC1H120J	C CHIP 50V 12PF	
C5015	ECJ0EC1H120J	C CHIP 50V 12PF	
C5016	ECJ0EC1H120J	C CHIP 50V 12PF	
C6001	ECST0JY226R	TANTALUM CHIP 6.3V 22UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C6002	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C6003	ECJ1VB1A105K	C CHIP 10V 1UF	
C6007	FLG1C103A046	C CHIP 16V 0.01UF	
C6009	ECJ0EC1H040C	C CHIP 50V 4PF	
C6010	FLH1C104A041	C CHIP 16V 0.1UF	
C6011	ECST0JY226R	TANTALUM CHIP 6.3V 22UF	
C6012	FLG1C103A046	C CHIP 16V 0.01UF	
C6013	FLG1C103A046	C CHIP 16V 0.01UF	
C6014	FLH1C104A041	C CHIP 16V 0.1UF	
C6015	ECJ1VB1A105K	C CHIP 10V 1UF	
C6017	FLH1C104A041	C CHIP 16V 0.1UF	
C6019	FLH1C104A041	C CHIP 16V 0.1UF	
C6020	ECST0JY226R	TANTALUM CHIP 6.3V 22UF	
C6021	FLG1C103A046	C CHIP 16V 0.01UF	
C6022	ECJ2VF1C105Z	C CHIP 16V 1UFM	
C6023	FLG1C103A046	C CHIP 16V 0.01UF	
C6024	ECJ0EC1H120J	C CHIP 50V 12PF *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	
C6024	ECJ0EC1H270J	C CHIP 50V 27PF *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	
C6025	FLG1C103A046	C CHIP 16V 0.01UF	
C6026	FLG1C103A046	C CHIP 16V 0.01UF	
C6027	FLG1C103A046	C CHIP 16V 0.01UF	
C6028	FLG1C103A046	C CHIP 16V 0.01UF	
C6029	FLG1C103A046	C CHIP 16V 0.01UF	
C6030	ECJ0EF1C104Z	C CHIP 16V 0.1UF	
C6031	ECJ0EC1H120J	C CHIP 50V 12PF *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	
C6031	ECJ0EC1H220J	C CHIP 50V 22PF *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE B)	
C6032	FLG1C103A046	C CHIP 16V 0.01UF	
C6033	FLG1C103A046	C CHIP 16V 0.01UF	
C6035	FLG1C103A046	C CHIP 16V 0.01UF	
C6036	FLG1C103A046	C CHIP 16V 0.01UF	
C6037	FLG1C103A046	C CHIP 16V 0.01UF	
C6039	FLG1C103A046	C CHIP 16V 0.01UF	
C6040	FLG1C103A046	C CHIP 16V 0.01UF	
C6041	FLG1C103A046	C CHIP 16V 0.01UF	
C6042	FLG1C103A046	C CHIP 16V 0.01UF	
C6043	FLG1C103A046	C CHIP 16V 0.01UF	
C6045	ECJ0EB1A104K	C CHIP 10V 0.1UF	
C6046	FLG1C103A046	C CHIP 16V 0.01UF	

## COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L303	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L305	G1C100Z00013	INDUCTOR CHIP 10UH	
L306	G1C100Z00013	INDUCTOR CHIP 10UH	
L501	G1C100K00020	COIL CHIP 10UH	
L901	G1C100Z00013	INDUCTOR CHIP 10UH	
L902	G1C100M00010	COIL CHIP 10UH	
L903	G1C100M00010	COIL CHIP 10UH	
L1001	J0JHC0000054	BEADS CORE	
L1002	G1C100MA0065	CHOKE COIL 10UH	
L1003	G1C220MA0065	CHOKE COIL 22UH	
L1004	G1C220MA0065	CHOKE COIL 22UH	
L1005	G1C330MA0065	CHOKE COIL 33UH	
L1006	G1C470MA0065	CHOKE COIL 47UH	
L1007	G1C4R7MA0031	COIL CHIP 4.7UH	
L1009	G1C4R7MA0031	COIL CHIP 4.7UH	
L1010	G1C100K00020	COIL CHIP 10UH	
L1011	G1C100K00020	COIL CHIP 10UH	
L1012	G1C4R7MA0031	COIL CHIP 4.7UH	
L1013	G1C4R7MA0031	COIL CHIP 4.7UH	



Ref. No.	Part No.	Part Name & Description	Remarks
L1014	G1C100K00020	COIL CHIP 10UH	
L1015	G1C100K00020	COIL CHIP 10UH	
L1016	G1C4R7MA0031	COIL CHIP 4.7UH	
L1017	G1C4R7MA0031	COIL CHIP 4.7UH	
L1018	G1C4R7MA0031	COIL CHIP 4.7UH	
L1019	G1C470JA0041	COIL CHIP 47UH	
L1020	G1C470JA0041	COIL CHIP 47UH	
L1021	G1C470JA0041	COIL CHIP 47UH	
L1022	G1C4R7MA0031	COIL CHIP 4.7UH	
L1023	J0JGC0000034	FERRITE BEAD CHIP	
L3001	J0JBC0000027	FERRITE BEAD CHIP	
L3002	G1C100M00010	COIL CHIP 10UH	
L3003	G1C100KA0055	COIL CHIP 10UH	
L3004	G1C100M00010	COIL CHIP 10UH	
L3005	J0JBC0000027	FERRITE BEAD CHIP	
L3006	J0JBC0000027	FERRITE BEAD CHIP	
L3008	J0JBC0000027	FERRITE BEAD CHIP	
L3011	J0JBC0000027	FERRITE BEAD CHIP	
L3013	J0JBC0000027	FERRITE BEAD CHIP	
L3014	J0JBC0000027	FERRITE BEAD CHIP	
L3015	G1C100M00010	COIL CHIP 10UH	
L3016	J0JBC0000027	FERRITE BEAD CHIP	
L3101	G1C100M00010	COIL CHIP 10UH	
L3102	G1C100M00010	COIL CHIP 10UH	
L3201	J0JBC0000014	BEAD INDUCTOR	
L3202	G1C100M00010	COIL CHIP 10UH	
L3203	G1C100M00010	COIL CHIP 10UH	
L3204	G1C100M00010	COIL CHIP 10UH	
L4501	J0JBC0000027	FERRITE BEAD CHIP	
L4502	G1C470MA0031	COIL CHIP 47UH	
L4503	G1C100M00010	COIL CHIP 10UH	
L4504	G1C100M00010	COIL CHIP 10UH	
L5001	G1C101KA0031	COIL CHIP 100UH	
L5002	G1C100M00010	COIL CHIP 10UH	
L6002	G1C100M00010	COIL CHIP 10UH	
L6003	ERJ6GEY0R00V	MGF CHIP 1/10W 0	

## CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X3001	H0J245500047	CRYSTAL OSCILLATOR	
X3002	H0J480500019	CRYSTAL OSCILLATOR	
X6001	H0A135500002	CRYSTAL OSCILLATOR	
X6002	H0A327200093	CRYSTAL OSCILLATOR	

## FPC CONNECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
FP1	K1MN08B00115	CONNECTOR 8P	
FP2	K1MN18B00089	CONNECTOR 18P	
FP3	K1MN10B00080	CONNECTOR 10P	
FP4	K1MN18B00059	CONNECTOR 18P	
FP5	K1MN08B00115	CONNECTOR 8P	
FP6	K1MN12B00102	CONNECTOR 12P	
FP7	K1MN28A00038	CONNECTOR 28P	
FP8	K1MN26A00063	CONNECTOR 26P	
FP9	K1MN22A00061	CONNECTOR 22P	
FP10	K1MN18B00063	CONNECTOR 18P	
FP11	K1MN26A00063	CONNECTOR 26P ( A,D,E,F,G,H )	
FP12	K1MN12A00067	CONNECTOR 12P ( B,C )	
FP301	K1MN14A00088	CONNECTOR 14P	
FP701	K1MN22A00065	CONNECTOR 22P	
FP1201	K1MN14A00081	CONNECTOR 14P	
FP6001	K1MN12B00102	CONNECTOR 12P *Refer to "IC6001 AND ADJACENT CIRCUIT REPLACEMENT NOTE" in SERVICE NOTES. (TYPE A)	

## TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T1001	G5DYA0000087	TRANSFORMER	

## 13.3.2. REAR C.B.A. NR

## DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1201	B0BC01200021	DIODE ZENER CHIP 12V	
D1202	B0BC01200021	DIODE ZENER CHIP 12V	

## CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1201	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C1202	ECJ1VF1H103Z	C CHIP 50V 0.01UF	

## COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1201	J0JGC0000034	FERRITE BEAD CHIP	
L1202	J0JGC0000034	FERRITE BEAD CHIP	

## FUSE &amp; PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
IP1201	K5H2022A0008	CIUCUIT PROTECTOR CHIP 32V 2A	△
IP1202	ERBSE2R00U	CIUCUIT PROTECTOR CHIP 32V 2A	△

## JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK1201	K4ZZ07000003	DC JACK SOCKET	

## 13.3.3. FRONT C.B.A.

## COMPARISON CHART OF MODELS &amp; MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

## INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC4801	C0ABBB000262	IC, LINEAR	
IC4801	C0ABBB000105	IC, LINEAR	

## TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q4301	2SD0601ASL	TRANSISTOR SI NPN CHIP ( D,E,F,G,H )	
Q4302	2SD0601ASL	TRANSISTOR SI NPN CHIP ( D,E,F,G,H )	
Q4303	2SD0601ASL	TRANSISTOR SI NPN CHIP ( D,E,F,G,H )	
Q4304	2SD0601ASL	TRANSISTOR SI NPN CHIP ( D,E,F,G,H )	
Q4305	2SB1462JRL	TRANSISTOR SI PNP CHIP ( D,E,F,G,H )	
Q4306	UNR9112J08	TRANSISTOR COMPLX CMP SI NPN CHIP ( D,E,F,G,H )	
Q4306	B1GDCFL0019	TRANSISTOR COMPLX CMP SI NPN CHIP ( D,E,F,G,H )	
Q4307	UNR9213J08	TRANSISTOR COMPLX CMP SI PNP CHIP ( D,E,F,G,H )	
Q4307	B1GBCFNN0029	TRANSISTOR COMPLX CMP SI PNP CHIP ( D,E,F,G,H )	
Q4307	B1GBCFNN0030	TRANSISTOR COMPLX CMP SI PNP CHIP ( D,E,F,G,H )	

Ref. No.	Part No.	Part Name & Description	Remarks
Q4801	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q4801	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q6501	2SD10300SL	TRANSISTOR SI NPN CHIP	
Q6502	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q6502	B1ABCF000104	TRANSISTOR SI NPN CHIP	

## DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D4301	B3AFB0000056	LIGHT EMITTING DIODE ( D,E,F,G,H )	
D4302	B3AFB0000056	LIGHT EMITTING DIODE ( D,E,F,G,H )	
D4303	B3AFB0000056	LIGHT EMITTING DIODE ( D,E,F,G,H )	
D4304	B3AFB0000056	LIGHT EMITTING DIODE ( D,E,F,G,H )	
D6503	MA3S132D0L	DIODE SI CHIP	
D6504	B3GA00000041	LIGHT EMITTING DIODE	

## RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R4301	D0HB470ZA003	MGF CHIP 1/16W 47 ( D,E,F,G,H )	
R4302	D0HB470ZA003	MGF CHIP 1/16W 47 ( D,E,F,G,H )	
R4303	D0HB470ZA003	MGF CHIP 1/16W 47 ( D,E,F,G,H )	
R4304	D0HB470ZA003	MGF CHIP 1/16W 47 ( D,E,F,G,H )	
R4305	ERJ2RHD222X	MGF CHIP 1/16W 2.2K ( D,E,F,G,H )	
R4306	ERJ2RHD333X	MGF CHIP 1/16W 33K ( D,E,F,G,H )	
R4307	ERJ2RHD822X	MGF CHIP 1/16W 2.2K ( D,E,F,G,H )	
R4801	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R4802	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R4803	ERJ2GEJ223X	MGF CHIP 1/16W 22K	
R4804	ERJ2GEJ333X	MGF CHIP 1/16W 33K	
R4805	ERJ2GEJ124X	MGF CHIP 1/16W 120K	
R4806	ERJ2GEJ333X	MGF CHIP 1/16W 33K	
R4807	ERJ2RHD392X	MGF CHIP 1/16W 3.9	
R4808	ERJ2GEJ124X	MGF CHIP 1/16W 120K	
R4809	ERJ2GEJ333X	MGF CHIP 1/16W 33K	
R4810	ERJ2RHD392X	MGF CHIP 1/16W 3.9	
R6501	ERJ2GEJ560X	MGF CHIP 1/16W 56	
R6502	ERJ2GEJ683X	MGF CHIP 1/16W 68K	
R6503	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6504	ERJ3GEYJ106V	MGF CHIP 1/16W 10M	
R6505	ERJ2GEJ225X	MGF CHIP 1/16W 2.2M	
R6506	ERJ2GEJ334X	MGF CHIP 1/16W 330K	
R6507	D0GA182JA015	MGF CHIP 1/16W 1.8K	
R6508	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R6509	D0GA102JA015	MGF CHIP 1/16W 1K	

## CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C4301	ECJ1VB1A105K	C CHIP 10V 1UF ( D,E,F,G,H )	
C4801	ECJ1VB1A105K	C CHIP 10V 1UF	
C4802	ECJ1VB1A105K	C CHIP 10V 1UF	
C4803	ECST1CY475	TANTALUM CHIP 16V 4.7UF	
C4804	ECJ0EB1E822K	C CHIP 25V 8200PF	
C4805	ECJ0EB1A273K	C CHIP 10V 0.027	
C4806	ECJ0EB1A273K	C CHIP 10V 0.027	
C4808	ECJ0EB1A273K	C CHIP 10V 0.027	
C4809	ECJ0EB1E822K	C CHIP 25V 8200PF	
C4810	ECJ0EB1A273K	C CHIP 10V 0.027	
C4812	ECST0JY226R	TANTALUM CHIP 6.3V 22UF	
C6501	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C6502	ECJ0EF1C104Z	C CHIP 16V 0.1UF	
C6503	ECJ1VB0J474K	C CHIP 6.3V 0.47UF	
C6504	ECJ0EB1A104K	C CHIP 10V 0.1UF	

## FPC CONNECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
FP6501	K1MN12B00102	CONNECTOR 12P	

## MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
701	LSEK0543	ELECTRIC CONDENSER MICROPHONE UNIT	
702	LSMG0136	MIC DAMPER	
703	LSJW0057	FLEXIBLE FLAT CABLE W/OUT PLUG, 5V	
704	B3RAB0000024	INFRARED RECEIVER	

## 13.3.4. JACK C.B.A.

## COMPARISON CHART OF MODELS &amp; MARKS

MODEL	MARK
PV-GS2P-S	A
PV-GS9P-S	B
PV-GS9PC-S	C
PV-GS12P-S	D
PV-GS13PC-S	E
PV-GS14P-S	F
PV-GS15P-S	G
PV-GS15PC-S	H

## TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q4001	2SD2216J08	TRANSISTOR SI NPN CHIP ( F,G,H )	
Q4001	B1ABCF000104	TRANSISTOR SI NPN CHIP ( F,G,H )	
Q4002	2SB1462J08	TRANSISTOR SI PNP CHIP ( F,G,H )	
Q4002	B1ADCF000072	TRANSISTOR SI PNP CHIP ( F,G,H )	
Q4003	2SD2216J08	TRANSISTOR SI NPN CHIP ( F,G,H )	
Q4003	B1ABCF000104	TRANSISTOR SI NPN CHIP ( F,G,H )	
Q4004	2SB1462J08	TRANSISTOR SI PNP CHIP ( F,G,H )	
Q4004	B1ADCF000072	TRANSISTOR SI PNP CHIP ( F,G,H )	
Q4005	2SD2216J08	TRANSISTOR SI NPN CHIP ( F,G,H )	
Q4005	B1ABCF000104	TRANSISTOR SI NPN CHIP ( F,G,H )	

## DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D7001	D4ED1120A005	SURGE ABSORBER	
D7005	B0BD6R800009	DIODE ZENER CHIP 6.8V ( F,G,H )	
D7006	B0BC6R200019	DIODE ZENER CHIP 6.2V ( F,G,H )	
D7007	B0BC6R200019	DIODE ZENER CHIP 6.2V ( F,G,H )	

## RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R4001	D0GA222JA015	MGF CHIP 1/16W 2.2K ( F,G,H )	
R4002	D0GA562JA015	MGF CHIP 1/16W 5.6K ( F,G,H )	
R4003	ERJ2GEJ151X	MGF CHIP 1/16W 150 ( F,G,H )	
R4004	D0GA122JA015	MGF CHIP 1/16W 1.2 ( F,G,H )	
R4005	ERJ2GEJ103X	MGF CHIP 1/16W 10K ( F,G,H )	
R4006	ERA3YKD154V	MGF CHIP 1/16W 150K ( F,G,H )	
R4007	ERA3YKD563V	MGF CHIP 1/16W 56K ( F,G,H )	

**13.3.5. LIQUID CRYSTAL DISPLAY C.B.A.****INTEGRATED CIRCUITS**

Ref. No.	Part No.	Part Name & Description	Remarks
IC8001	AN2540FHQ-V	IC, LINEAR	

**TRANSISTORS**

Ref. No.	Part No.	Part Name & Description	Remarks
Q8001	UNR9212J08	TRANSISTOR SI NPN CHIP	
Q8001	BIIBCFL00024	TRANSISTOR SI NPN CHIP	
Q8002	UNR921TJ08	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8002	BIIBCFLN0003	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8003	2SB1462J08	TRANSISTOR SI PNP CHIP	
Q8003	BIADCF000072	TRANSISTOR SI PNP CHIP	
Q8004	2SB1462J08	TRANSISTOR SI PNP CHIP	
Q8004	BIADCF000072	TRANSISTOR SI PNP CHIP	
Q8005	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q8005	BIABCF000104	TRANSISTOR SI NPN CHIP	
Q8006	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q8006	BIABCF000104	TRANSISTOR SI NPN CHIP	
Q8007	UNR921TJ08	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8007	BIIBCFLN0003	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8008	2SB1462J08	TRANSISTOR SI PNP CHIP	
Q8008	BIADCF000072	TRANSISTOR SI PNP CHIP	
Q8009	2SD2216J08	TRANSISTOR SI NPN CHIP	
Q8009	BIABCF000104	TRANSISTOR SI NPN CHIP	
Q8010	UNR9114J08	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8010	BIIDCFJN0017	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8011	UNR9212J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8011	BIIBCFL00024	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8012	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q8013	XP0450100L	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8014	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8015	XP0440100L	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8016	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8018	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8020	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8022	UNR9112J08	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8022	BIIDCFLL0019	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8023	UNR921TJ08	TRANSISTOR COMPLX CMP SI PNP CHIP	
Q8023	BIIBCFLN0003	TRANSISTOR COMPLX CMP SI PNP CHIP	

**DIODES**

Ref. No.	Part No.	Part Name & Description	Remarks
D8001	MAZ80680ML	DIODE ZENER CHIP 6.8V	
D8002	B3AFB0000068	LIGHT EMITTING DIODE	
D8003	B3AFB0000068	LIGHT EMITTING DIODE	
D8004	B3AFB0000068	LIGHT EMITTING DIODE	
D8005	B3AFB0000068	LIGHT EMITTING DIODE	
D8009	MAZ80680ML	DIODE ZENER CHIP 6.8V	
D8010	MAZ80680ML	DIODE ZENER CHIP 6.8V	
D8011	MAZ80680ML	DIODE ZENER CHIP 6.8V	
D8012	MAZ80680ML	DIODE ZENER CHIP 6.8V	

**RESISTORS**

Ref. No.	Part No.	Part Name & Description	Remarks
R8001	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8002	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8003	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8004	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R8005	ERJ3GEYR00V	MGF CHIP 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R4008	ERJ2GEJ471X	MGF CHIP 1/16W 470 ( F,G,H )	
R4009	D0GA562JA015	MGF CHIP 1/16W 5.6K ( F,G,H )	
R4010	ERJ2GEJ151X	MGF CHIP 1/16W 150 ( F,G,H )	
R4011	D0GA122JA015	MGF CHIP 1/16W 1.2 ( F,G,H )	
R4012	ERJ2GEJ103X	MGF CHIP 1/16W 10K ( F,G,H )	
R4013	ERA3YKD154V	MGF CHIP 1/16W 150K ( F,G,H )	
R4014	ERA3YKD563V	MGF CHIP 1/16W 56K ( F,G,H )	
R4015	ERJ2GEJ471X	MGF CHIP 1/16W 470 ( F,G,H )	
R4016	ERJ3GEY0R00V	MGF CHIP 1/16W 0 ( F,G,H )	
R4017	ERJ3GEY0R00V	MGF CHIP 1/16W 0 ( F,G,H )	
R7001	D0GA122JA015	MGF CHIP 1/16W 1.2	
R7002	ERJ2GEJ331X	MGF CHIP 1/16W 330 ( F,G,H )	

**CAPACITORS**

Ref. No.	Part No.	Part Name & Description	Remarks
C4001	F1G1C103A046	C CHIP 16V 0.01UF ( F,G,H )	
C4002	ECST0JY226R	TANTALUM CHIP 6.3V 22UF ( F,G,H )	
C4003	ECJ1VB1A105K	C CHIP 10V 1UF ( F,G,H )	
C4004	F3F0G226A030	TANTALUM CHIP 4V 220UF ( F,G,H )	
C4006	ECJ1VB1A105K	C CHIP 10V 1UF ( F,G,H )	
C4007	ECJ0EB1H332K	C CHIP 50V 3300PF ( F,G,H )	
C4008	ECJ1VB1A105K	C CHIP 10V 1UF ( F,G,H )	
C4009	F3F0G226A030	TANTALUM CHIP 4V 220UF ( F,G,H )	
C4011	ECJ1VB1A105K	C CHIP 10V 1UF ( F,G,H )	
C4012	ECJ0EB1H332K	C CHIP 50V 3300PF ( F,G,H )	
C7001	F1G1E4720004	C CHIP 25V 4700PF	
C7002	F1G1E4720004	C CHIP 25V 4700PF	

**COILS**

Ref. No.	Part No.	Part Name & Description	Remarks
L4001	J0JBC0000036	FERRITE CORE ( F,G,H )	
L4002	J0JBC0000036	FERRITE CORE ( F,G,H )	
L7001	J0JBC0000027	FERRITE BEAD CHIP	
L7002	J0JBC0000027	FERRITE BEAD CHIP	
L7003	J0JBC0000027	FERRITE BEAD CHIP	
L7004	J0JBC0000027	FERRITE BEAD CHIP	
L7005	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L7006	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L7007	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L7008	J0JBC0000027	FERRITE BEAD CHIP ( F,G,H )	
L7009	J0JBC0000027	FERRITE BEAD CHIP ( F,G,H )	

**FPC CONNECTOR**

Ref. No.	Part No.	Part Name & Description	Remarks
FP7001	K1MN28A00038	CONNECTOR 28P	

**SWITCHES**

Ref. No.	Part No.	Part Name & Description	Remarks
SW7001	ESE22MH22	SWITCH	

**JACKS**

Ref. No.	Part No.	Part Name & Description	Remarks
JK4001	K2HC105E0007	MIC JACK SOCKET ( F,G,H )	
JK7001	K2HC107B0003	A/V JACK SOCKET	
JK7002	K2YZ04000019	MINI DV JACK SOCKET	
JK7003	K2HZ105E0001	USB MINI JACK SOCKET	
JK7004	K2YZ06000022	S-VIDEO JACK SOCKET ( F,G,H )	

**MISCELLANEOUS**

Ref. No.	Part No.	Part Name & Description	Remarks
706	LSJW0059	JACK FLEXIBLE FLAT CABLE W/OUT PLUG,5V	
707	ML-621S/F9D	BATTERY	

Ref. No.	Part No.	Part Name & Description	Remarks
R8006	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8007	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8008	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8009	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8010	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8011	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8012	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8013	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8014	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8015	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8016	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8017	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8020	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8021	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8022	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R8023	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R8024	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8025	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8026	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R8027	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8028	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8029	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8030	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8031	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8032	D0HB104ZA002	MGF CHIP 1/16W 100K	
R8033	ERA3YED123V	MGF CHIP 1/16W 12K	
R8034	D0HB184ZA002	MGF CHIP 1/16W 180K	
R8035	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R8036	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8037	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8038	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8039	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R8041	ERA3YHD330V	MGF CHIP 1/8W 33	
R8042	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8043	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8044	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R8046	ERA3YHD330V	MGF CHIP 1/8W 33	
R8049	ERA3YHD330V	MGF CHIP 1/8W 33	
R8052	ERA3YHD330V	MGF CHIP 1/8W 33	
R8054	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8056	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8057	ERJ3GEYJ113V	MGF CHIP 1/16W 11K	

## CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8001	FLJ1C474A059	C CHIP 16V 0.47UF	
C8002	FLH1C104A041	C CHIP 16V 0.1UF	
C8003	FLH1C104A041	C CHIP 16V 0.1UF	
C8004	FLH1C104A041	C CHIP 16V 0.1UF	
C8006	F3F0J106A032	TANTALUM CHIP 6.3V 100UF	
C8007	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C8008	ECJ1VB1A224K	C CHIP 10V 0.22UF	
C8009	FLJ1C1050011	C CHIP 16V 1UF	
C8010	FLH0J1050013	C CHIP 6.3V 1UF	
C8011	FLH1C104A041	C CHIP 16V 0.1UF	
C8012	ECJ1VB1A105K	C CHIP 10V 1UF	
C8013	ECJ1VB1A105K	C CHIP 10V 1UF	
C8014	FLH1C104A041	C CHIP 16V 0.1UF	
C8015	FLH1H152A219	C CHIP 50V 1500PF	
C8016	ECJ2YB0J225K	C CHIP 6.3V 2.2UF	
C8020	ECJ2YF1C225Z	C CHIP 16V 2.2UF	
C8021	FLH1C104A041	C CHIP 16V 0.1UF	
C8022	ECJ3VF1C225Z	C CHIP 16V 2.2UF	
C8023	FLH1C104A008	C CHIP 16V 0.1UF	
C8024	FLJ1A1050002	C CHIP 10V 1UF	
C8025	FLJ1C1050011	C CHIP 16V 1UF	
C8026	ECJ3YB1C475K	C CHIP 16V 4.7UF	

## COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8001	G1C100M00010	COIL CHIP 10UH	
L8002	G1C100M00010	COIL CHIP 10UH	

Ref. No.	Part No.	Part Name & Description	Remarks
L8003	G1C100M00010	COIL CHIP 10UH	
L8004	G1C100M00010	COIL CHIP 10UH	

## FPC CONNECTORS

Ref. No.	Part No.	Part Name & Description	Remarks
FP8001	K1MN25B00064	CONNECTOR 25P	
FP8002	K1MN24B00112	CONNECTOR 24P	