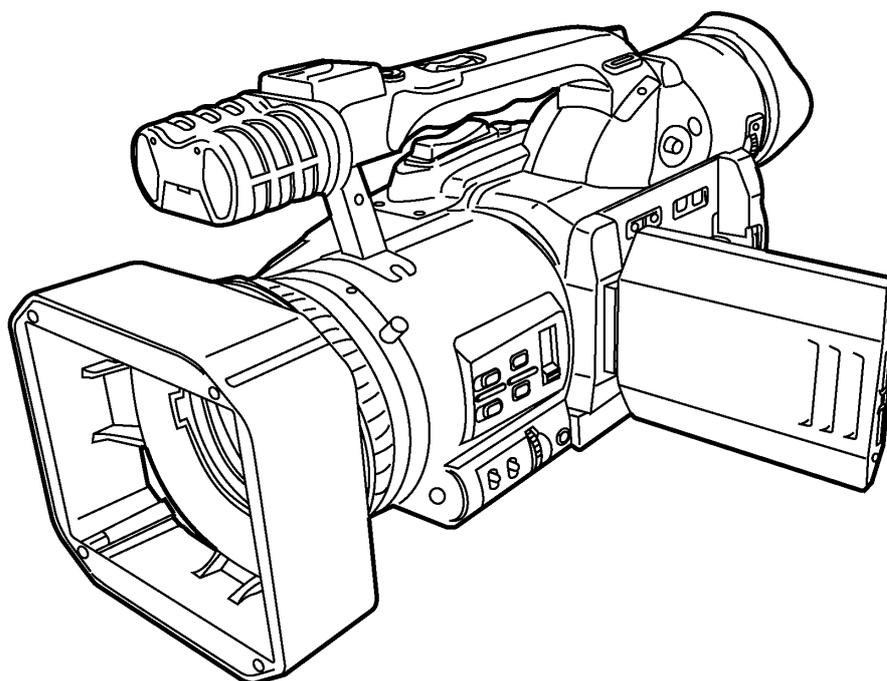


# Service Manual

- Sec. 1** *Service Information*
- Sec. 2** *Disassembly Procedures*
- Sec. 3** *Mechanical Adjustment*
- Sec. 4** *Electrical Adjustment*
- Sec. 5** *Block Diagrams*
- Sec. 6** *Schematic Diagrams*
- Sec. 7** *Circuit Board Diagrams*
- Sec. 8** *Exploded Views &  
Replacement Parts List*

Mini DV

Camera-Recorder  
**AG-DVX100BP/E/AN**  
**AG-DVX102BEN**  
**AG-DVC180BMC**



**Panasonic**<sup>®</sup>

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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.

## AG-DVX100BP

# Specifications

### [GENERAL]

Supply voltage: DC7.2 V/7.9 V
Power consumption
6.8 W (when the viewfinder is used)
7.2 W (when the LCD monitor is used)
9.8 W (max.)

 indicates safety information.

#### Ambient operating temperature

0 °C to 40 °C (32 °F to 104 °F)

#### Ambient operating humidity

10% to 85% (no condensation)

#### Weight

1.7 kg (3.7 lb)  
(excluding battery and accessories)

#### Dimensions (WxHxD)

139 mm x 160 mm x 364 mm  
(5-15/32 inches x 6-5/16 inches x 14-11/32 inches)

#### Recording format

DV (Digital video SD format)

#### Tape format

Mini DV system

#### Video signals recorded

525i (NTSC)  
In progressive mode, convert to 525i and record

#### Shooting mode

60i (525i)  
Progressive mode (30P/ 24P/ 24P advanced)

#### Audio signals recorded

PCM digital recording  
16bit: 48kHz/2ch  
12bit: 32kHz/4ch

#### Recording tracks

Digital video/audio:  
Helical tracks  
Time code:  
Helical tracks (sub code area)

#### Tape speeds

SP mode: 18.812 mm/sec.  
LP mode: 12.555 mm/sec.

#### Recording time (when AY-DVM63 is used)

SP mode: 60 minutes  
LP mode: 90 minutes

#### Tapes used

6.35 mm wide metal tapes

#### FF/REW time

Approx. 140 sec. (when AY-DVM63 is used)

#### Pickup devices

CCD image sensor (x3)  
(1/3-inch, interline transfer, progressive-capable)

#### Number of pixels

Total number of pixels: 410,000, Number of effective pixels: 380,000 (pixel offset system)

#### Lens

LEICA DICOMAR Optical image stabilizer lens,  
Motorized/Manual selectable 10x zoom,  
F1.6 (f=4.5 to 45 mm)  
(35 mm equivalent: 32.5 to 325 mm)

#### Color separation optical system

Prism system

#### ND filter

1/8, 1/64

#### Gain settings

0/+3/+6/+9/+12/+18 dB (60i mode)  
0/+3/+6/+9/+12 dB (progressive mode)  
(however, set to 0dB when the slow shutter mode is used)

#### Shutter speed settings

Regular shutter speed  
60i mode:  
1/60 (OFF), 1/100, 1/120,  
1/250, 1/500, 1/1000, 1/2000 sec.  
30P mode:  
1/30, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000  
sec.  
24P/24P (ADV) mode:  
1/24, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000  
sec.  
Synchronous scan settings  
60i mode: 1/60.3 to 1/250.0 sec.  
30P mode: 1/30.1 to 1/250.0 sec.  
24P/24P (ADV) mode:  
1/24.1 to 1/250.0 sec.  
Slow shutter settings  
60i mode: 1/4, 1/8, 1/15, 1/30  
30P mode: 1/4, 1/8, 1/15  
24P/24P (ADV) mode: 1/6, 1/12

#### Minimum subject luminance

3 lx (F1.6, gain 18 dB, video output 50 IRE)

#### Lens hood

Large-sized lens hood with wide angle of view

#### Filter diameter

72 mm

#### LCD monitor

3.5-inch LCD color monitor, 210,000 pixels

#### Viewfinder

0.44-inch LCD color viewfinder, 235,000 pixels

#### Internal microphone

Stereo microphone

#### Internal speaker

28 mm diameter

## Specifications (continued)

### [VIDEO]

#### Sampling frequency

Y: 13.5 MHz, Pb/Pb: 3.375 MHz

#### Quantizing

8 bit

#### Video compression system

DCT + variable-length code

#### Error correction

Reed-Solomon product code

### [AUDIO]

#### Sampling frequency

48 kHz/32 kHz

#### Quantizing

16 bit/12 bit

#### Frequency response

20 Hz to 20 kHz

#### Wow & flutter

Below measurable limits

### [CONNECTORS]

#### VIDEO IN/OUT (automatic input/output switching)

Pin jack, Analog composite input/output,  
1.0 V [p-p], 75 Ω

#### S-VIDEO IN/OUT (automatic input/output switching)

S-connector, Y/C separate signal  
Y: 1.0 V [p-p], C: 0.286 V [p-p],  
75 Ω

#### AUDIO IN/OUT (automatic input/output switching)

Pin jack x2 (CH1, CH2)  
Input: 316 mV, high impedance  
Output: 316 mV, 600 Ω

#### DV

4 pins, digital input/output, compliant with IEEE  
1394 standard

#### INPUT 1, INPUT 2

XLR (3 pins) x2 (CH1, CH2),  
LINE/MIC selectable, high impedance  
LINE: 0 dBu  
MIC:  
-50 dBu/-60 dBu (selectable in menu)

#### DC INPUT

7.9 V

#### PHONES

3.5-mm stereo mini jack, 100 Ω

#### CAM REMOTE

Mini jack (3.5 mm diameter)  
(FOCUS IRIS)  
Super mini jack (2.5 mm diameter)  
(ZOOM S/S)

### [AC ADAPTER]

#### Power Source:

110/120/220/240 V AC, 50/60 Hz

#### Power consumption

18 W

 indicates safety information.

#### Weight

160 g (0.35 lb)

#### Dimensions (W x H x D)

70 mm x 44.5 mm x 116 mm

(2-13/16 inches x 1-13/16 inches x 4-5/8 inches)

### [OPTIONAL UNITS]

#### Wide conversion lens

AG-LW7208G

#### 16: 9 conversion lens

AG-LA7200G

#### XLR microphone

AG-MC100G

#### Hard carrying case

AG-HT100G

#### Soft carrying case

AG-SC100G

#### Battery

CGR-D16 (1600 mAh)

CGP-D28 (2800 mAh)

CGA-D54 (5400 mAh: equivalent to accessory  
battery)

#### AC adapter kit

AG-B15 (equivalent to accessory AC cord, DC  
cord, AC adapter)

#### Cleaning tape

AY-DVMCL

# AG-DVX100BE

## Specifications

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### [GENERAL]

Supply voltage: DC7.2 V/7.9 V
Power consumption
6.8 W (when the viewfinder is used)
7.2 W (when the LCD monitor is used)
9.8 W (max.)

 indicates safety information.

#### Ambient operating temperature

0 °C to 40 °C

#### Ambient operating humidity

10% to 85% (no condensation)

#### Weight

1.7 kg (excluding battery and accessories)

#### Dimensions (WxHxD)

139 mm x 160 mm x 364 mm

#### Recording format

DV (Digital video SD format)

#### Tape format

Mini DV system

#### Video signals recorded

625i (PAL)

In progressive mode, convert to 625i and record

#### Shooting mode

50i (625i)

Progressive mode (25P)

#### Audio signals recorded

PCM digital recording

16bit: 48kHz/2ch

12bit: 32kHz/4ch

#### Recording tracks

Digital video/audio:

Helical tracks

Time code:

Helical tracks (sub code area)

#### Tape speeds

SP mode: 18.831 mm/sec.

LP mode: 12.568 mm/sec.

#### Recording time (when AY-DVM63 is used)

SP mode: 60 minutes

LP mode: 90 minutes

#### Tapes used

6.35 mm wide metal tapes

#### FF/REW time

Approx. 140 sec. (when AY-DVM63 is used)

#### Pickup devices

CCD image sensor (x3)

(1/3-inch, interline transfer, progressive-capable)

#### Number of pixels

Total number of pixels: 470,000, Number of effective pixels: 440,000 (pixel offset system)

#### Lens

LEICA DICOMAR Optical image stabilizer lens, Motorized/Manual selectable 10x zoom, F1.6 (f=4.5 to 45 mm) (35 mm equivalent: 32.5 to 325 mm)

#### Color separation optical system

Prism system

#### ND filter

1/8, 1/64

#### Gain settings

0/+3/+6/+9/+12/+18 dB (50i mode)

0/+3/+6/+9/+12 dB (progressive 25P mode)

(however, set to 0dB when the slow shutter mode is used)

#### Shutter speed settings

Regular shutter speed

50i mode:

1/50 (OFF), 1/60, 1/120,

1/250, 1/500, 1/1000, 1/2000 sec.

25P mode:

1/25, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000 sec.

Synchronous scan settings

50i mode: 1/50.2 to 1/248.0 sec.

25P mode: 1/25.1 to 1/248.0 sec.

Slow shutter settings

50i mode: 1/3, 1/6, 1/12, 1/25

25P mode: 1/3, 1/6, 1/12

#### Minimum subject luminance

3 lx (F1.6, gain 18 dB, video output 50 IRE)

#### Lens hood

Large-sized lens hood with wide angle of view

#### Filter diameter

72 mm

#### LCD monitor

3.5-inch LCD color monitor, 210,000 pixels

#### Viewfinder

0.44-inch LCD color viewfinder, 235,000 pixels

#### Internal microphone

Stereo microphone

#### Internal speaker

28 mm diameter

## Specifications (continued)

### [VIDEO]

#### Sampling frequency

Y: 13.5 MHz, Pb/Pb: 6.75 MHz

#### Quantizing

8 bit

#### Video compression system

DCT + variable-length code

#### Error correction

Reed-Solomon product code

### [AUDIO]

#### Sampling frequency

48 kHz/32 kHz

#### Quantizing

16 bit/12 bit

#### Frequency response

20 Hz to 20 kHz

#### Wow & flutter

Below measurable limits

### [CONNECTORS]

#### VIDEO IN/OUT (automatic input/output switching)

Pin jack, Analog composite input/output, 1.0 V [p-p], 75 Ω

#### S-VIDEO IN/OUT (automatic input/output switching)

S-connector, Y/C separate signal  
Y: 1.0 V [p-p], C: 0.3 V [p-p],  
75 Ω

#### AUDIO IN/OUT (automatic input/output switching)

Pin jack x2 (CH1, CH2)  
Input: 316 mV, high impedance  
Output: 316 mV, 600 Ω

#### DV

4 pins, digital input/output, compliant with IEEE 1394 standard

#### INPUT 1, INPUT 2

XLR (3 pins) x2 (CH1, CH2),  
LINE/MIC selectable, high impedance  
LINE: 0 dBu  
MIC:  
-50 dBu/-60 dBu (selectable in menu)

#### DC INPUT

7.9 V

#### PHONES

3.5-mm stereo mini jack, 100 Ω

#### CAM REMOTE

Mini jack (3.5 mm diameter)  
(FOCUS IRIS)  
Super-mini jack (2.5 mm diameter)  
(ZOOM S/S)

### [AC ADAPTER]

#### Power Source:

100-240 V AC, 50/60 Hz

#### Power Output:

8.4V 1.2A (Charging)

7.8V 1.4A (Supplying)

#### Power consumption

20 W

 indicates safety information.

#### Weight

160 g

#### Dimensions (W x H x D)

70 mm x 44.5 mm x 116 mm

### [OPTIONAL UNITS]

#### Wide conversion lens

AG-LW7208G

#### 16: 9 conversion lens

AG-LA7200G

#### XLR microphone

AG-MC100G

#### Hard carrying case

AG-HT100G

#### Soft carrying case

AG-SC100G

#### Battery

CGR-D16 (1600 mAh)

CGP-D28 (2800 mAh)

CGA-D54 (5400 mAh: equivalent to accessory battery)

#### AC adapter kit

AG-B15 (equivalent to accessory AC cord, DC cord, AC adapter)

#### Cleaning tape

AY-DVMCL

# SAFETY PRECAUTIONS

## GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts, which have been over-heated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## 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 ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5M $\Omega$ .

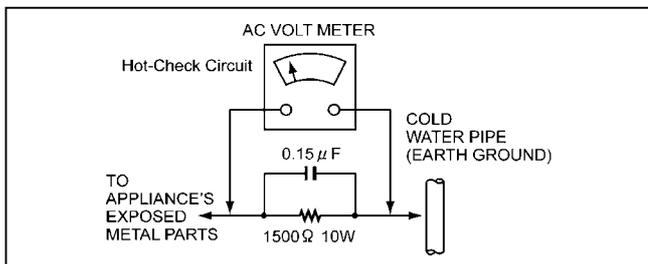


Figure1

## LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5K $\Omega$ , 10W resistor, in parallel with a 0.15 $\mu$  F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## ABOUT LEAD FREE SOLDER (PbF)

### Distinction of Pbf PCB:

PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

### Caution:

1. Pb free solder has a higher melting point than standard solder; Typically the melting point is 50–70 $^{\circ}$ F (30–40 $^{\circ}$ C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 $\pm$ 20 $^{\circ}$ F (370 $\pm$ 10 $^{\circ}$ C).
2. Pb free solder will tend to splash when heated too high (about 1100 $^{\circ}$ F/600 $^{\circ}$ C).

## 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 static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.

Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as “anti-static” can generate electrical charges 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 package 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 sufficient to damage an ES device).

## X-RADIATION

### WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

**Note:** It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV,  $\pm$ 0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

	<b>CAUTION</b> <b>RISK OF ELECTRIC SHOCK</b> <b>DO NOT OPEN</b>	
<p><b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER TO SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:**

- TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.
- TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, KEEP THIS EQUIPMENT AWAY FROM ALL LIQUIDS. USE AND STORE ONLY IN LOCATIONS WHICH ARE NOT EXPOSED TO THE RISK OF DRIPPING OR SPLASHING LIQUIDS, AND DO NOT PLACE ANY LIQUID CONTAINERS ON TOP OF THE EQUIPMENT.

**CAUTION:**

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

**CAUTION:**

In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.

**CAUTION:**

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**CAUTION:**

THE AC RECEPTACLE (MAINS SOCKET OUTLET) SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER CORD PLUG FROM THE AC RECEPTACLE.

**FCC Note:**

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

**Warning:**

To assure continued FCC emission limit compliance, the user must use only shielded interface cables when connecting to external units. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate it.

**CAUTION:**

Danger of explosion or fire if battery is mis-treated.

- Replace only with same or specified type.
- Do not disassemble or dispose of in fire.
- Do not store in temperatures over 140°F (60°C).
- Use specified charger for rechargeable batteries.
- Do not recharge the battery if it is not a rechargeable type.

**For Remote Controller**

- Replace battery with part No. CR2025 only.
- Do not recharge the battery.

**Camera-Recorder**

The rating plate is on the underside of the Camera-Recorder

**AC Adapter**

The rating plate is on the underside of the AC Adapter.

Disconnect the AC mains plug from the AC mains socket when not in use.

 indicates safety information.

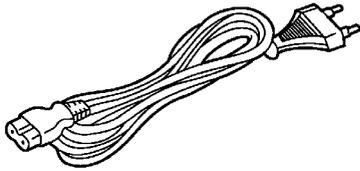
# Caution for AC Mains Lead

**FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.**

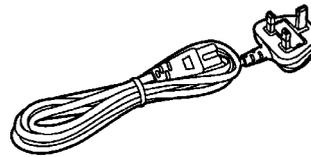
**This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.**

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

**FOR CONTINENTAL EUROPE, ETC.**  
Not to be used in the U.K.



**FOR U.K. ONLY**



**FOR U.K. ONLY**

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS1362.

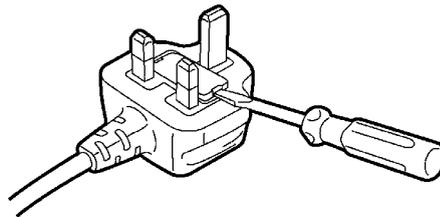
Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

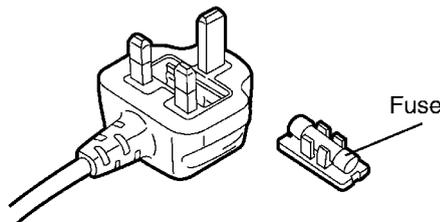
A replacement fuse cover can be purchased from your local Panasonic Dealer.

**How to replace the fuse**

**1. Open the fuse compartment with a screwdriver.**



**2. Replace the fuse**



 indicates safety information.

**■ DO NOT REMOVE PANEL COVERS BY UNSCREWING THEM.**

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

**WARNING:**

- TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.
- TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, KEEP THIS EQUIPMENT AWAY FROM ALL LIQUIDS. USE AND STORE ONLY IN LOCATIONS WHICH ARE NOT EXPOSED TO THE RISK OF DRIPPING OR SPLASHING LIQUIDS, AND DO NOT PLACE ANY LIQUID CONTAINERS ON TOP OF THE EQUIPMENT.

**CAUTION:**

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.**

**CAUTION:**

In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.

**Operating precaution**

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio signals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

**CAUTION:**

Danger of explosion or fire if battery is mis-treated.

- Replace only with same or specified type.
- Do not disassemble or dispose of in fire.
- Do not store in temperatures over 60°C.
- Use specified charger for rechargeable batteries.
- Do not recharge the battery if it is not a rechargeable type.

**For Remote Controller**

- Replace battery with part No. CR2025 only.
- Do not recharge the battery.

**Camera-Recorder**

The rating plate is on the underside of the Camera-Recorder

**AC Adapter**

The rating plate is on the underside of the AC Adapter.

Disconnect the AC mains plug from the AC mains socket when not in use.

**CAUTION:**

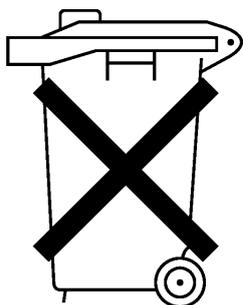
**THE AC RECEPTACLE (MAINS SOCKET OUTLET) SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.**

**TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER CORD PLUG FROM THE AC RECEPTACLE.**

 indicates safety information.

## Attention/Attentie

- Batteries are used for the main power source, memory back-up in the product and remote controller.  
At the end of their useful life, you should not throw them away.  
Instead, hand them in as small chemical waste.
- Voor de primaire voeding en het reservegeheugen van het apparaat, alsmede voor de afstandsbediening, wordt gebruik gemaakt van een batterij.  
Wanneer de batterij uitgeput is, mag u deze niet gewoon weggooien, maar dient u ze als klein chemisch afval weg te doen.

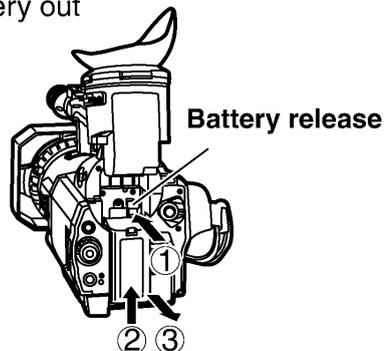


## To remove the battery/ Verwijderen van de batterij

### Main Power Battery

### Batterij Voor Primaire Voeding

While pressing the battery release,  
lift the battery out



**Panasonic®**

# SECTION 1

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## SERVICE INFORMATION

MODEL: **AG-DVX100BP/E/AN,102BEN,DVC180BMC**

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5-2. DIAGNOSTIC MENU (VCR mode) .....	INF-12
5-2-1. How to display the Error Rate .....	INF-12
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7-2-2. IRIS control input .....	INF-19
8. CAUTION WHEN INSTALLING AUDIO CONTROL KNOB .....	INF-20
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# 1. SERVICING FIXTURES AND TOOLS

The following servicing tools are required for mechanical and electrical servicing and alignment.

The items marked “**NEW**” in the following list are necessary for the AG-DVX100B/102B/DVC180B.

Please refer to “**Y**” and “**N**” in column of table below, which tools required for servicing the NTSC and PAL model.

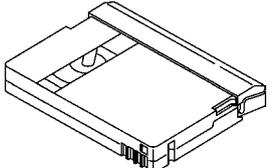
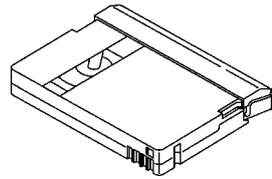
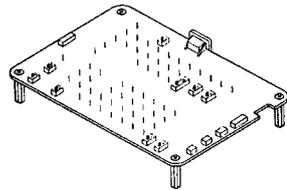
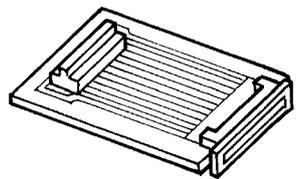
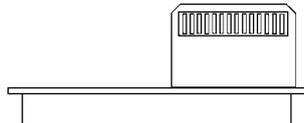
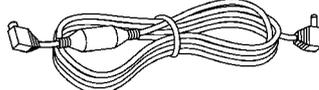
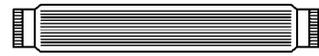
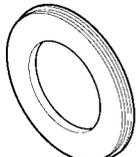
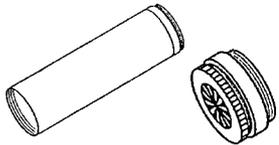
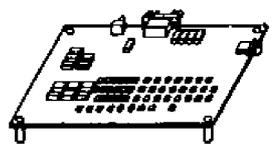
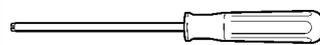
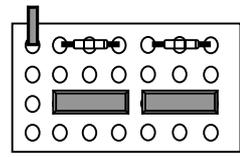
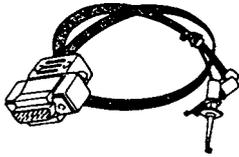
Please refer to “**Y**” in column of table below, these tools were also use for servicing the AG-DVX100A/DVC180A.

## 1-1. Summary Table of Servicing Fixtures and Tools

No	Parts No.	NAME	NTSC Model	PAL Model	AG-DVX100A/ DVC180A	REMARK
1	VFM3010EDS	DV Alignment Tape (Color bar)	Y	N	Y	
2	VFM3110EDS	DV Alignment Tape (Color bar)	N	Y	Y	
3	VFM3000LS	DV Alignment Tape (Linearity)	Y	Y	Y	
4	*VVS0026	EVR Adjustment Software	Y	N	N	<b>NEW</b> Download from the WEB site.
5	*VVS0027	EVR Adjustment Software	N	Y	N	<b>NEW</b> Download from the WEB site.
6	*VFK1481N	LISTA Software	Y	Y	Y	Download from the WEB site.
7	VFK1308P	Measuring Board	Y	Y	Y	
8	VFK1309A	EVR Connector Board	Y	Y	Y	Enable to use with VFK1309
9	VFK1763	Connector Adapter	Y	Y	N	60-30pin. It uses with AG-DVC30/32/33 and AG-DVC60/62/63.
10	VFK1982	Extension Cable	Y	Y	N	<b>NEW</b>
11	VJA0941	DC Cable	Y	Y	Y	2 pieces Required
12	VFK1317	30pin Flat Cable	Y	Y	Y	2 pieces Required
13	VFK1809	72mm Attachment Ring	Y	Y	Y	
14	VFK1164TAR43	43mm Attachment Ring	Y	Y	Y	
15	VFK1164TCM01	Collimator Set (Infinity Lens)	Y	Y	Y	
16	VFK1345	CC Filter Holder	Y	Y	Y	
17	VFK1346	Step Down Ring	Y	Y	Y	
18	VFK1659	Step-Up Ring (43mm-49mm)	Y	Y	Y	
19	VFK1660	Step-Up Ring (49mm-62mm)	Y	Y	Y	
20	VFK1341	CC Filter (LB40)	Y	N	Y	
21	VFK1342	CC Filter (LB80)	N	Y	Y	
22	VFK1347	CC Filter (LB120)	Y	Y	Y	
23	VFK1884	CC Filter (LBA2)	Y	Y	Y	
24	VFK1888	CC Filter (LBB6)	Y	Y	Y	
25	VFK1885	CC Filter (LBB2)	Y	N	Y	
26	VFK1886	CC Filter (CC C10)	N	Y	Y	
27	VFK1887	CC Filter (CC C20)	N	Y	Y	
28	VFK1409A	Measuring Board	Y	Y	Y	<b>NOTE 1</b>
29	VFK1899	Post Driver	Y	Y	N	<b>NOTE 2</b> It uses with AG-DVC30/32/33 and AG-DVC60/62/63.
30	VFK1810	LISTA Measuring Board	Y	Y	Y	<b>NOTE 1</b>
31	VFK1186	LISTA Cable	Y	Y	Y	
32	VFK1300	A/D Converter Board	Y	Y	Y	ISA PC Board.

### NOTE:

1. If you already have VFK1409S, it can be used for LISTA adjustment with VFK1810 instead of VFK1409A.  
(Refer to item “1-5. Connection of LISTA Adjustment system” on page MECH-4 in section 3.)
2. This Post Driver use for servicing the “A” mechanism of consumer model.

<p><b>1</b> VFM3010EDS <b>2</b> VFM3110EDS DV Alignment Tape (Color bar)</p> 	<p><b>3</b> VFM3000EDS DV Alignment Tape (Linearity)</p> 	<p><b>4</b> VVS0026 <b>5</b> VVS0027 EVR Adjustment Software</p> <p><b>6</b> VFK1481N LISTA Software</p> <p style="text-align: center;"><b>DOWN LOAD</b></p>	<p><b>7</b> VFK1308P Measuring Board</p> 
<p><b>8</b> VFK1309A EVR Connector Board</p> 	<p><b>9</b> VFK1763 Connector Adapter</p> 	<p><b>10</b> VFK1982 Extension Cable</p> 	<p><b>11</b> VJA0941 DC Cable</p> 
<p><b>12</b> VFK1317 30pin Flat Cable</p>  <p>(In case of using VFK1308P, required 2pcs. of this cable)</p>	<p><b>13</b> VFK1809 72 mm Attachment Ring</p> 	<p><b>14</b> VFK1164TAR43 43 mm Attachment Ring</p> 	<p><b>15</b> VFK1164TCM01 Collimator Set (Infinity Lens)</p> 
<p><b>16</b> VFK1345 CC Filter Holder</p> <p><b>17</b> VFK1346 Step Down Ring</p>  <p>VFK1345    VFK1346</p>	<p><b>18</b> VFK1659 Step-up Ring (43mm - 49mm)</p> <p><b>19</b> VFK1660 Step-up Ring (49mm - 62mm)</p>  <p>VFK1659 VFK1660</p>	<p><b>20</b> VFK1341 (LB40) <b>21</b> VFK1342 (LB80) <b>22</b> VFK1347 (LB120) CC Filter</p> 	<p><b>23</b> VFK1884 (LBA2) <b>24</b> VFK1888 (LBB6) <b>25</b> VFK1885 (LBB2) <b>26</b> VFK1886 (CC C10) <b>27</b> VFK1887 (CC C20) CC Filter</p> 
<p><b>28</b> VFK1409A Measuring Board</p> 	<p><b>29</b> VFK1899 Post Driver</p> 	<p><b>30</b> VFK1810 LISTA Measuring Board</p> 	<p><b>31</b> VFK1186 LISTA Cable</p> 
<p><b>32</b> VFK1300 A/D Converter Board</p> 			

To determine which servicing fixtures and tools are required for each adjustment, refer to the following table.

No.	Parts No.	NAME	ADJUSTMENT ITEM
1	VFM3010EDS	DV Alignment Tape (Color bar)	5-2. PG shifter adjustment (SEC.4)
2	VFM3110EDS	DV Alignment Tape (Color bar)	
3	VFM3000LS	DV Alignment Tape (Linearity)	1-8. LISTA Sensitivity Detection (SEC.3) 1-9. LISTA Linearity Adjustment (SEC.3)
4	VVS0026	EVR Adjustment Software	4. ADJUSTMENT PROCEDURE (CAMERA SECTION) (SEC.4)
5	VVS0027		5. ADJUSTMENT PROCEDURE (VTR SECTION) (SEC.4)
6	VFK1481N	LISTA Software	1-8. LISTA Sensitivity Detection (SEC.3) 1-9. LISTA Linearity Adjustment (SEC.3)
7	VFK1308P	Measuring Board	1-8. LISTA Sensitivity Detection (SEC.3)
8	VFK1309A	EVR Connector Board	1-9. LISTA Linearity Adjustment (SEC.3)
9	VFK1763	Connection Adapter	1-11. Self-REC/PLAY Envelope Waveform Confirmation (SEC.3)
10	VFK1982	Extension Cable	4. ADJUSTMENT PROCEDURE (CAMERA SECTION) (SEC.4)
11	VJA0941	DC Cable	5. ADJUSTMENT PROCEDURE (VTR SECTION) (SEC.4)
12	VFK1317	30pin Flat Cable	
13	VFK1809	72mm Attachment Ring	4-5. Zoom tracking adjustment (SEC.4) 4-6-2. White balance adjustment (5100K) (SEC.4) 4-6-3. White balance adjustment (4500K) (SEC.4) 4-6-4. White balance adjustment (3600K) (SEC.4)
14	VFK1164TAR43	43mm Attachment Ring	4-5. Zoom tracking adjustment (SEC.4)
15	VFK1164TCM01	Collimator Set (Infinity Lens)	
16	VFK1345	CC Filter Holder	4-6-2. White balance adjustment (5100K) (SEC.4)
17	VFK1346	Step Down Ring	4-6-3. White balance adjustment (4500K) (SEC.4)
18	VFK1659	Step-Up Ring (43mm-49mm)	4-6-4. White balance adjustment (3600K) (SEC.4)
19	VFK1660	Step-Up Ring (49mm-62mm)	
20	VFK1341	CC Filter (LB40)	4-6-4. White balance adjustment (3600K) (SEC.4)
21	VFK1342	CC Filter (LB80)	4-6-3. White balance adjustment (4500K) (SEC.4)
22	VFK1347	CC Filter (LB120)	4-6-2. White balance adjustment (5100K) (SEC.4) 4-6-3. White balance adjustment (4500K) (SEC.4)
23	VFK1884	CC Filter (LBA2)	4-6-2. White balance adjustment (5100K) (SEC.4)
24	VFK1888	CC Filter (LBB6)	
25	VFK1885	CC Filter (LBB2)	4-6-4. White balance adjustment (3600K) (SEC.4)
26	VFK1886	CC Filter (CC C10)	
27	VFK1887	CC Filter (CC C20)	4-6-3. White balance adjustment (4500K) (SEC.4)
28	VFK1409A	Measuring Board	1-8. LISTA Sensitivity Detection (SEC.3) 1-9. LISTA Linearity Adjustment (SEC.3)
29	VFK1899	Post Driver	1-9. LISTA Linearity Adjustment (SEC.3) 1-10. Tape Path Confirmation (SEC.3) 1-11. Self-REC/PLAY Envelope Waveform Confirmation (SEC.3)
30	VFK1810	LISTA Measuring Board	1-8. LISTA Sensitivity Detection (SEC.3)
31	VFK1186	LISTA Cable	1-9. LISTA Linearity Adjustment (SEC.3)
32	VFK1300	A/D Converter Board	

# 2. MAINTENANCE

Maintenance is done by periodically performing suitable maintenance servicing in order to maintain the best condition, so that the user can use the equipment safely. Video equipment with mounted mechanisms have parts which will wear, and their wear and deterioration cause troubles. Dust and dirt also can impair stable operation. For this reason it is important not to just perform repair at the time of trouble, but also to perform suitable maintenance at regular intervals.

The maintenance schedule requires replacement of mechanism unit, which contains a cylinder unit and so on.

## 2-1. Maintenance Schedule

No.	Part Name	Part No.	Cleaning	Replacement	Remark
---	Tape Transport Part	-----	100 hours	-----	*1
1	Mechanism Chassis Unit	VXY1903Z1	-----	Every 2000 hours	*2
2	Zoom Motor Unit	L6DABBHC0001	-----	Every 4000 hours	*2

**Note:**  
Hours of use are based on the head rotation hours. (Head rotation hours can be confirm on item HOUR METER in OTHER FUNCTION menu.)

Hours of use are recommendation. It may depend on temperature, humidity, quality of tape or dust condition.

Hours of use are listed as the reference of maintenance. They do not mean guarantee hours.

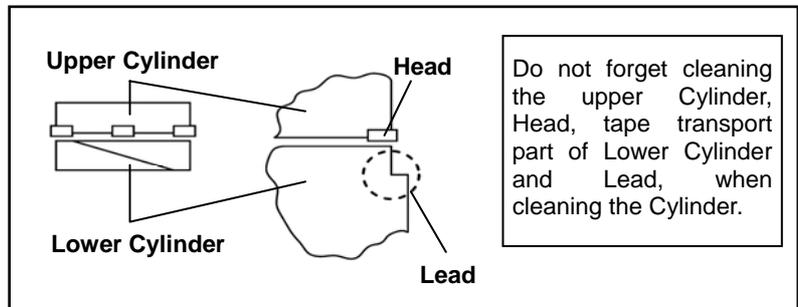
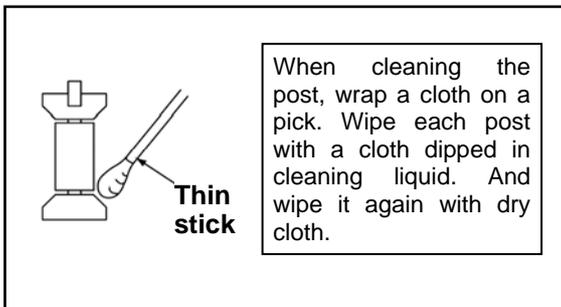
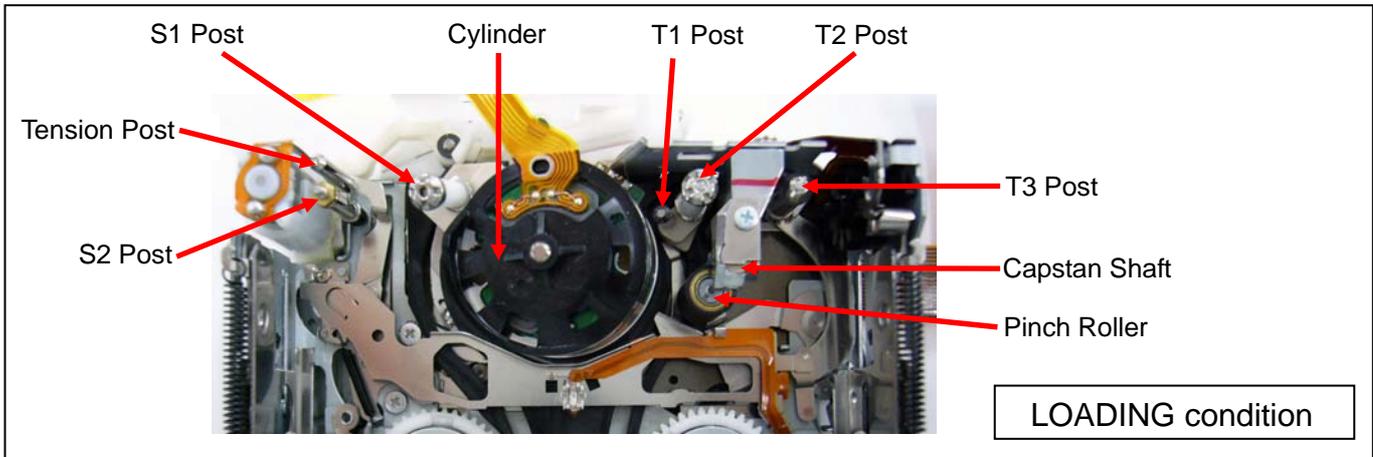
\*1. Tape Transport part is cleaned by cleaning liquid.

\*2. Please refer to the most recent execution outline, as the maintenance specifications and the part numbers may change.

## 2-2. Cleaning of Tape Transport Part

Please clean the below indicated tape transport parts with cleaning liquid when needed.

(Tension Post, S1 Post, Cylinder & Heads, T1 Post, T2 Post, T3 Post, Capstan Shaft and Pinch Roller)

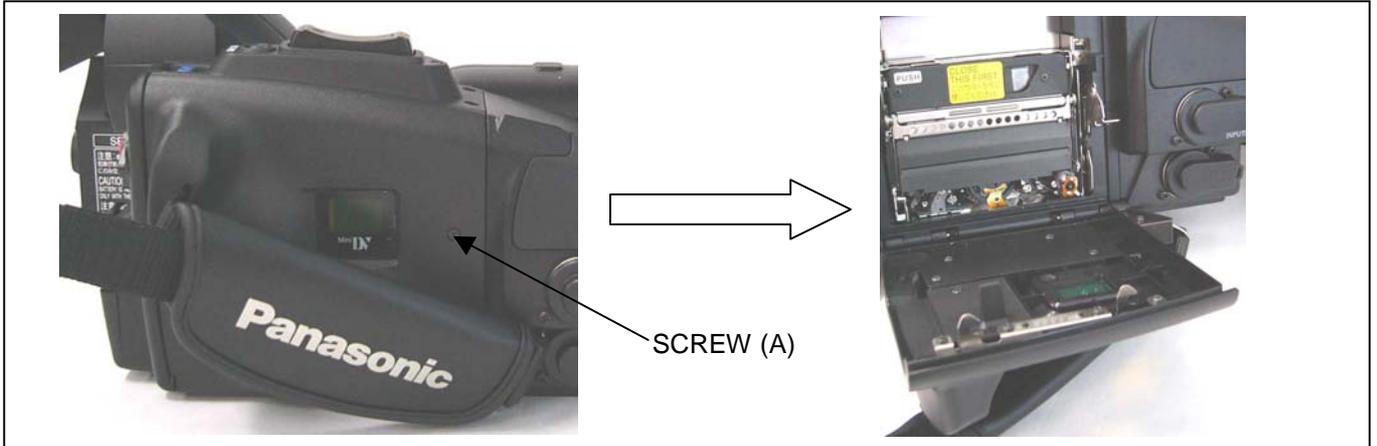


# 3. MANUAL TAPE EJECT (EMERGENCY EJECT)

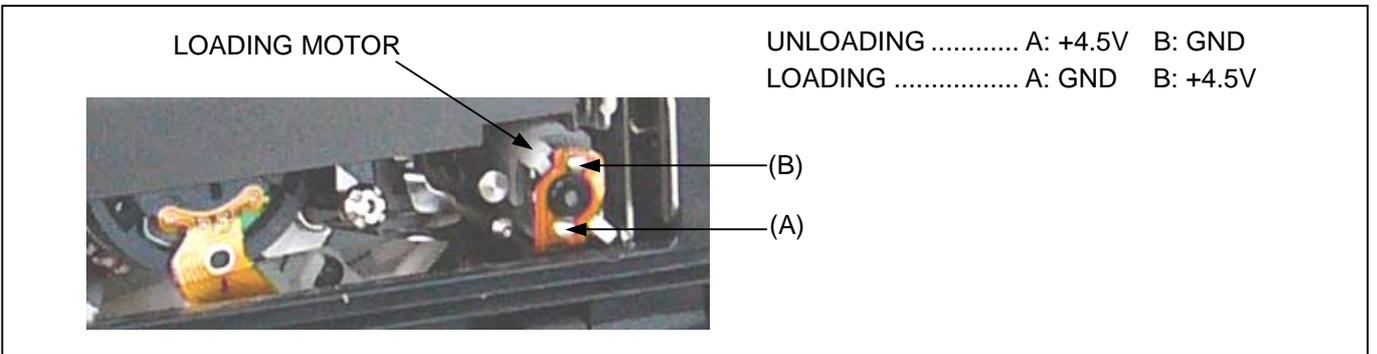
When the tape cannot be ejected by normal operation because of trouble in the electrical system or mechanical system, the tape can be removed from the unit manually by using the following method.

**NOTE:** By below indicated method, the unit will not take up tape slack. Be careful when removing the tape from Cassette Holder.

1. Unscrew the screw (A) and open the cassette cover as shown in figure.



2. Supply 4.5 Volts using 3 AA batteries in series to unload the posts using the motor.



3. Stop supplying the power when the tape is ejected and remove the tape from Cassette Holder.

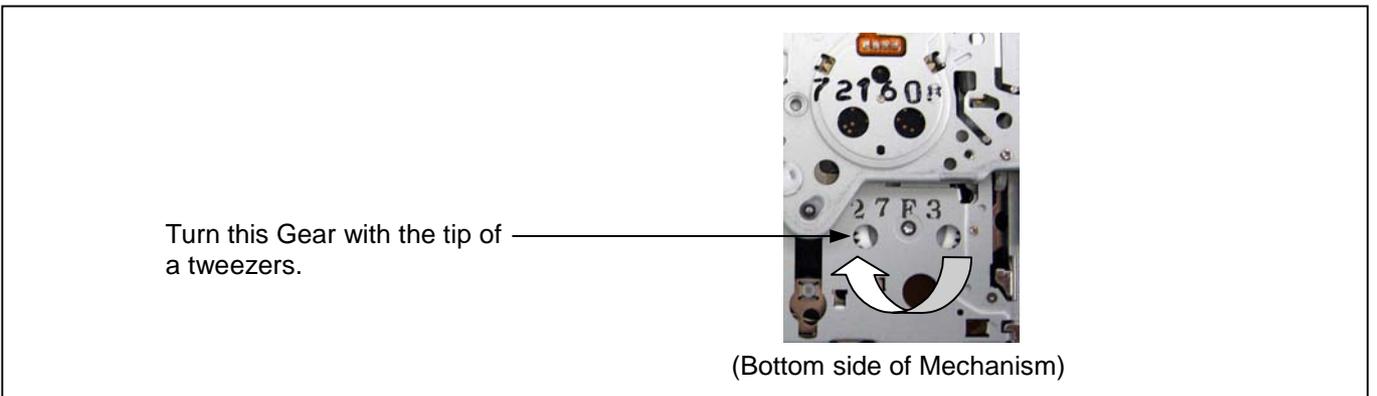
## <How to rolls up tape>

Be sure to take up the tape slack so that tape does not become damaged.

1. Remove the Mechanism Unit.
2. Supply 4.5 Volts to unload the posts using the motor.
3. Stop supplying the power at unloading complete position.

**NOTE:** If power is supplied too long, then the Cassette tape will be ejected prematurely.

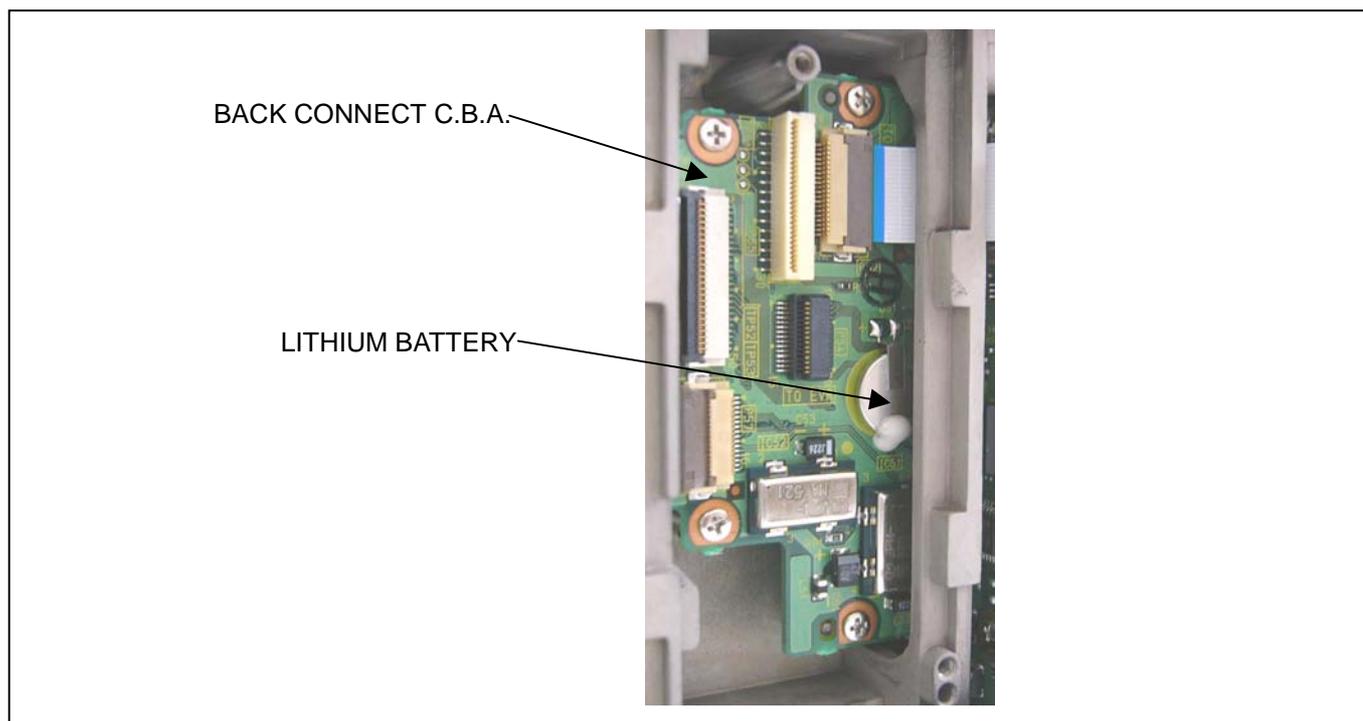
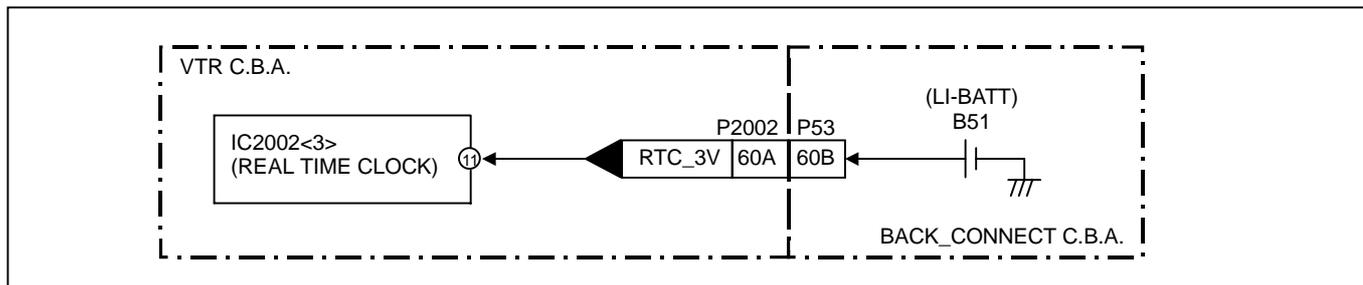
4. Turn the Gear of Supply Reel as shown in figure, and this will take up the slack in the tape.
5. Supply 4.5 Volts again to eject the tape using the motor and remove the tape from Cassette Holder.



# 4. LITHIUM BATTERY

## 4-1. Replacement Procedure

1. There is a Lithium battery on the BACK CONNECT C.B.A.
2. Unsolder the Lithium battery and then replace with the new one. Please refer to item “16. Removal of BACK CONNECT C.B.A.” in section 2(Disassembly Procedure) about how removal of BACK CONNECT C.B.A..



### NOTE:

The lithium battery is a critical component.

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.

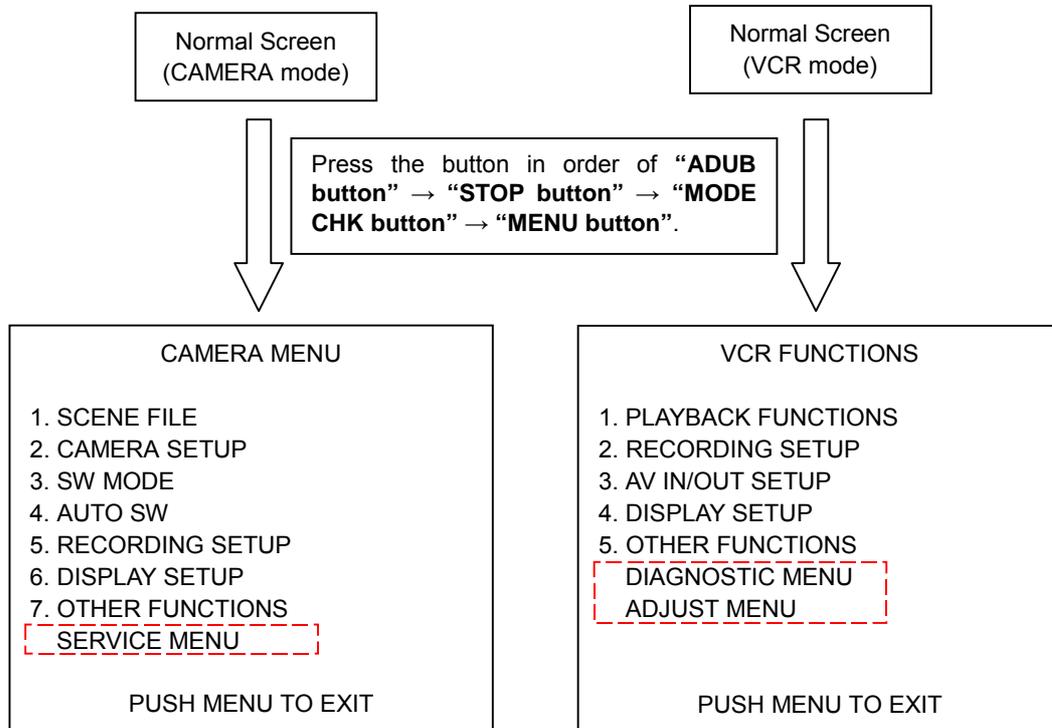
Discard used batteries according to manufacture's instructions.

# 5. SERVICE MENU

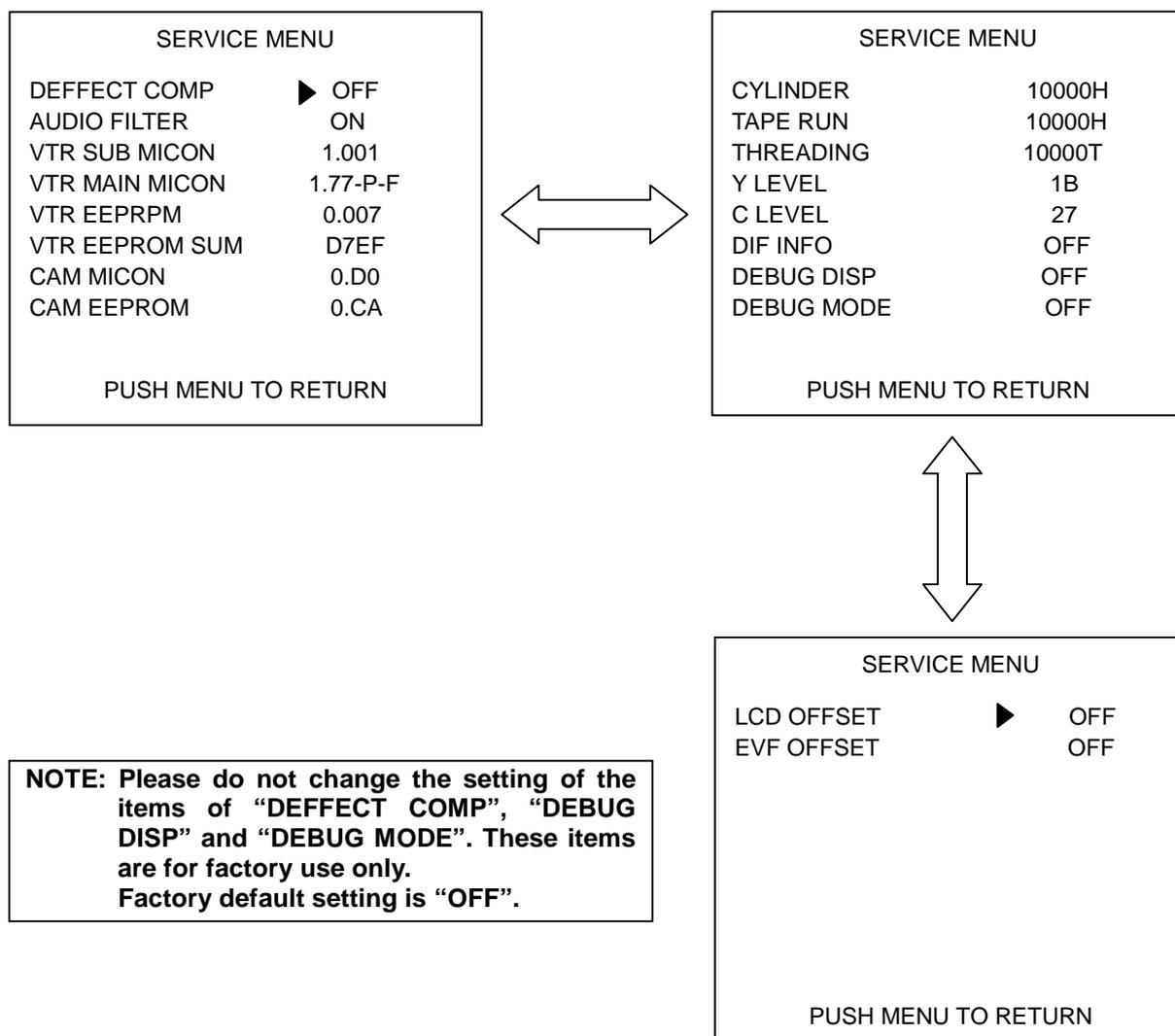
The SERVICE(CAMERA mode), DIAGNOSTIC(VCR mode) and ADJUST(VCR mode) menu can be displayed as follows.

Press the button in order of “**ADUB button**” → “**STOP button**” → “**MODE CHK button**” → “**MENU button**”, SERVICE menu in CAMERA mode, DIAGNOSTIC and the ADJUST menu in VCR mode can be displayed in addition to a setup menus.

Next, Tilt the OPERATION lever in the UP(▶:PLAY) or DOWN(■:STOP) direction, select the DIAGNOSTIC or ADJUST menu, press SET(STILL) of the OPERATION lever to open the DIAGNOSTIC or ADJUST menu.



## 5-1. SERVICE MENU (CAMERA mode)



### 5-1-1. Audio Filter

#### AUDIO FILTER

**ON:** The mechanism noise cancellation function operates by IC3001(DUO).

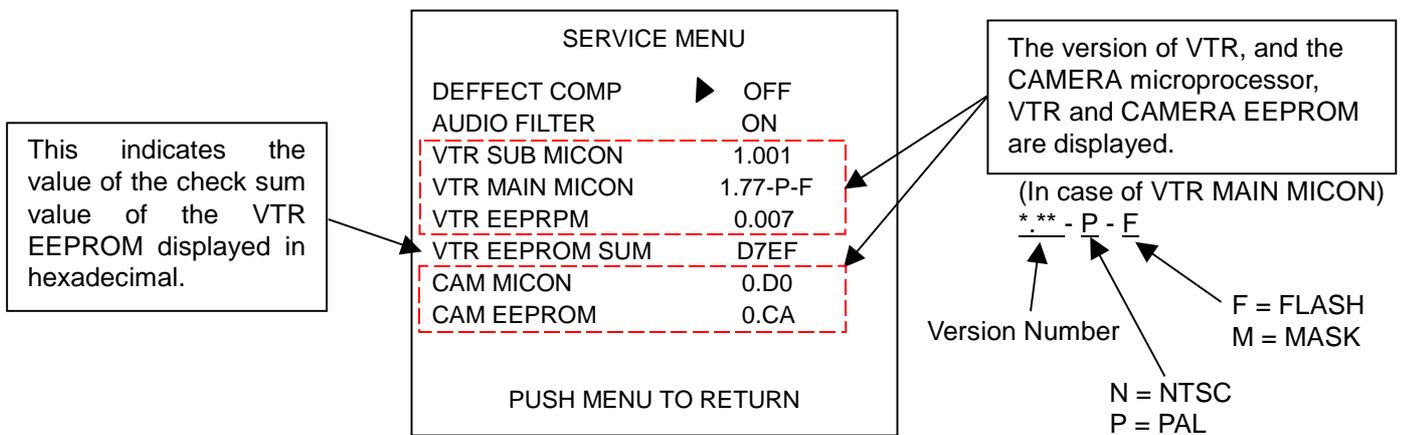
**OFF:** The mechanism noise cancellation function does not operate by IC3001(DUO).

Factory default setting is “ON”.

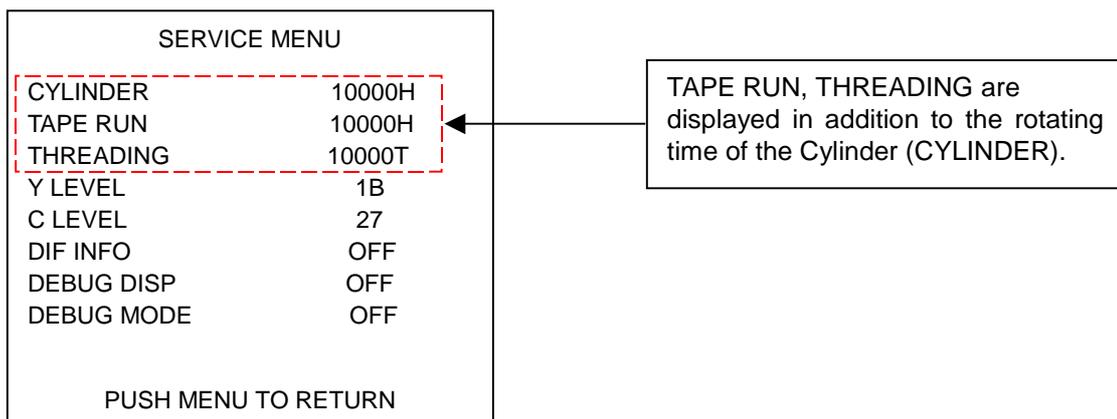
### 5-1-2. Software Version Display.

This unit have three pieces of microprocessor and two pieces of EEPROM.

---	CAMERA board	VTR board	
Microprocessor	IC301	IC2001(VTR MAIN MICON)	IC3001(VTR SUB MICON)
EEPROM	IC307	IC2006	---



### 5-1-3. Hour Meter Display.



ITEM	Display Data	Description
TAPE RUN	00000H – 99999H	It displays the time that the tape is running in units of hours.
THREADING	00000T – 99999T	It displays the number of times the tape is inserted.
CYLINDER	00000H – 99999H	It displays the time that the cylinder is rotating in units of hours. It displays same time as in the item HOUR METER of OTHER FUNCTION menu.

## 5-1-4. Adjustment item for Video Level

### Y LEVEL

Y level of VIDEO OUT and S-VIDEO OUTPUT signal can be adjusted on this item.

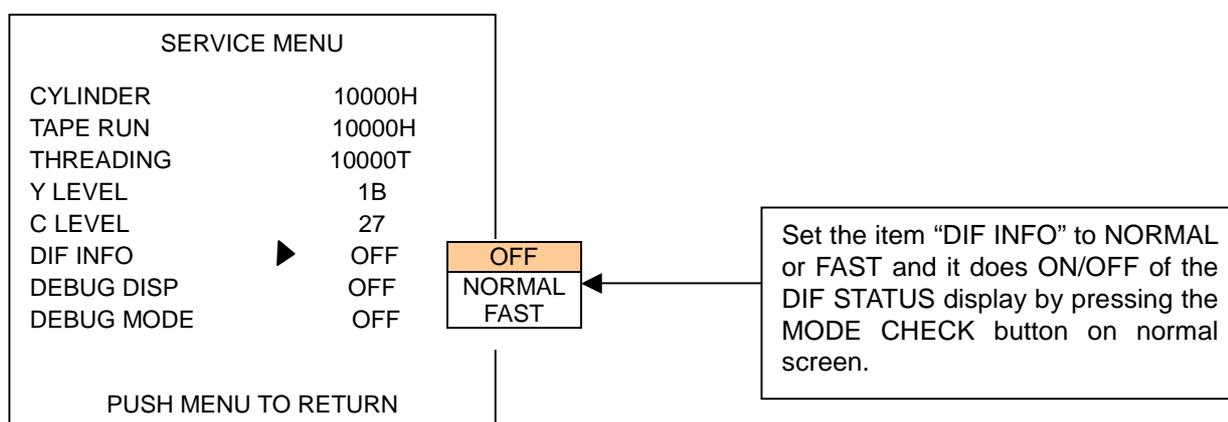
The displayed value is the same as value for Luminance level adjustment in EVR adjustment.

### C LEVEL

C level of VIDEO OUT and S-VIDEO OUTPUT signal can be adjusted on this item.

The displayed value is the same as value for Chroma level adjustment in EVR adjustment.

## 5-1-5. DIF Status Display.



**NORMAL:** The DIF STATUS display is updated every five frames.

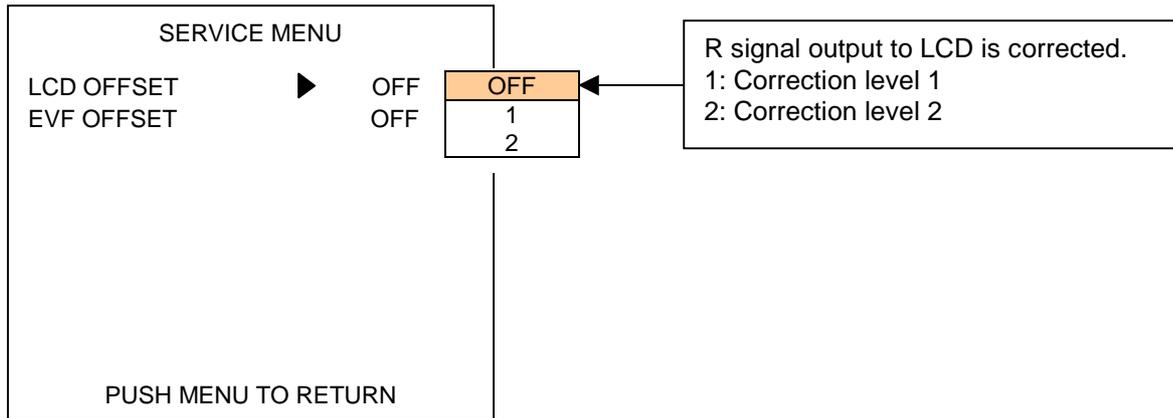
**FAST:** The DIF STATUS display is updated every frame.

Factory default setting is "OFF".

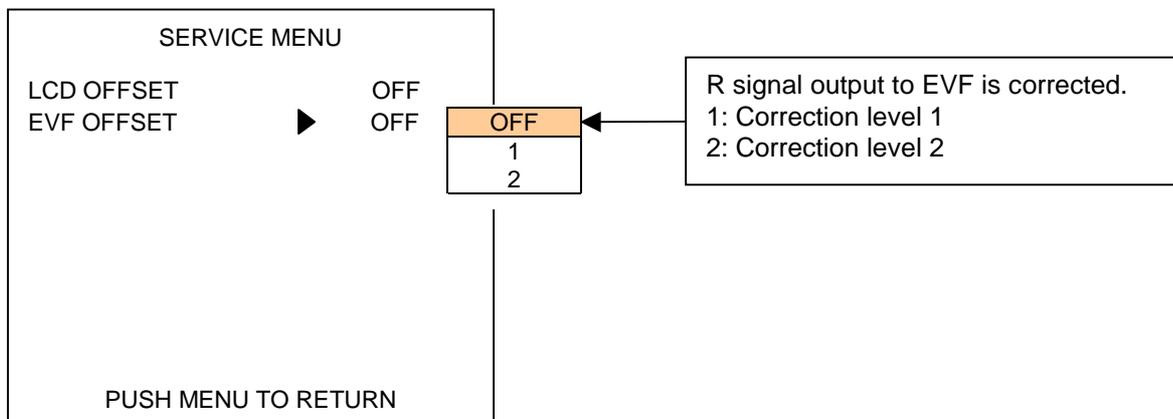
Items	Description	Remark
NODECNT	Number of NODE connections.	
MY_ID	NODE ID of this unit.	
ROOT_ID	ROOT ID	
IRM_ID	PHY ID of IRM	IRM(Isochronous Resonance Manager)
IN_CH	Input channel number of Isochronous data.	
OUT_CH	Output channel number of Isochronous data.	
DIFMODE	DIF mode	
RX_IN	Received condition of Isochronous data.	
O_BCC	Transmitted condition of Isochronous data.	
STYPE	Type of VIDEO signal	
FIELD	NTSC/PAL	
SPEED	Speed of Isochronous data.	IN_SPD in VCR MODE
UID	USER ID of 1394 equipment	
AS	Source pack of AUDIO	
ASC	Source control pack of AUDIO	
VS	Source pack of VIDEO	
VSC	Source control pack of VIDEO	
HEADER	HEADER pack	

## 5-1-6. LCD/EVF Correction

### LCD OFFSET



### EVF OFFSET

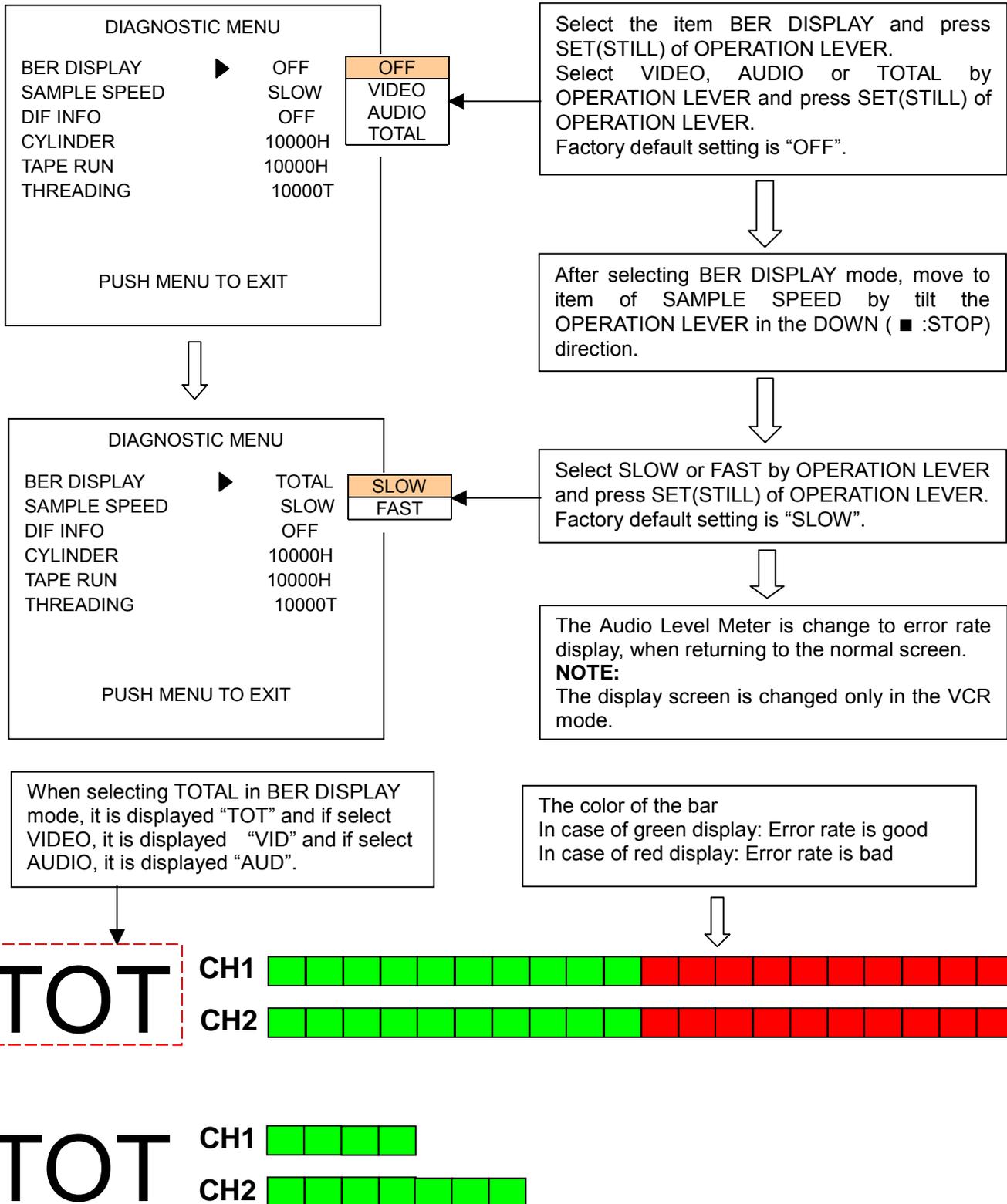


## 5-2. DIAGNOSTIC MENU (VCR mode)

### 5-2-1. How to display the Error Rate.

This unit can be displayed Error Rate and it shows the playing condition of the VCR.

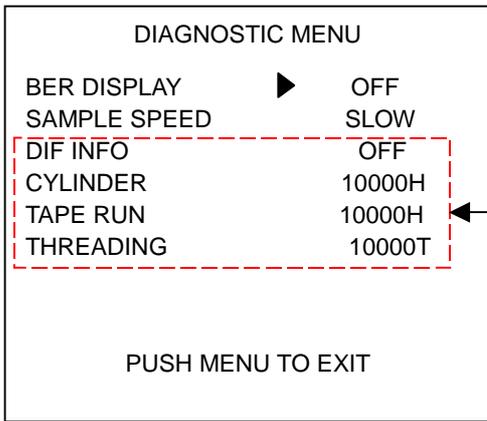
In case of the error rate is displayed, BER DISPLAY and SAMPLE SPEED mode is select on DIAGNOSTIC menu.



### How to confirm the Error rate.

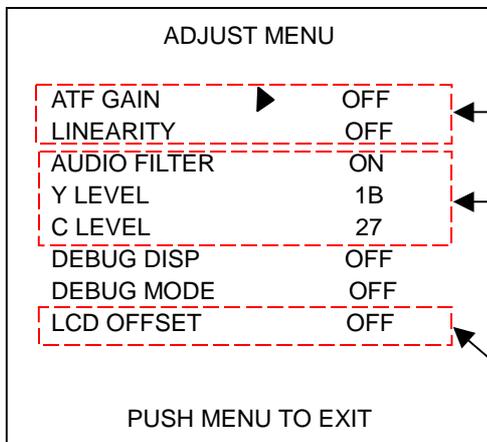
1. Select the TOTAL in item of BER DISPLAY.
2. Record the color bar signal on LP mode and playback the recorded portion. Confirm that the number of bar on display within 10 bars or less. The less bars displayed the better the error rate.

### 5-2-2. Other item.



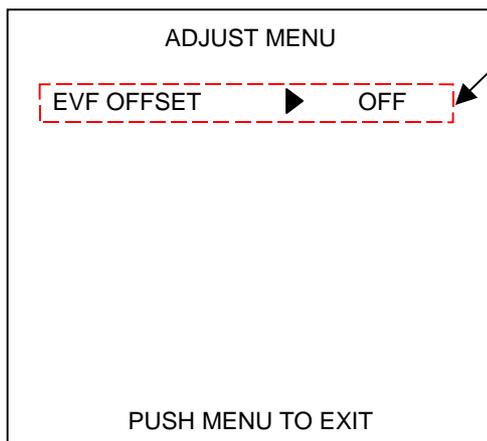
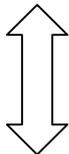
These items are displayed even by the CAMERA SERVICE menu. (refer to item 5-1-3 and 5-1-5. )

### 5-3. ADJUST MENU (VCR mode)



Setting item for LISTA Measurement

These items are displayed even by the CAMERA SERVICE menu. (refer to item 5-1-1 and 5-1-4. )



These items are displayed even by the CAMERA SERVICE menu. (refer to item 5-1-6. )

**NOTE:** Please do not change the setting of the items of “DEBUG DISP” and “DEBUG MODE”. These items are for factory use only.

## 5-3-1. Setting item for LISTA Measurement

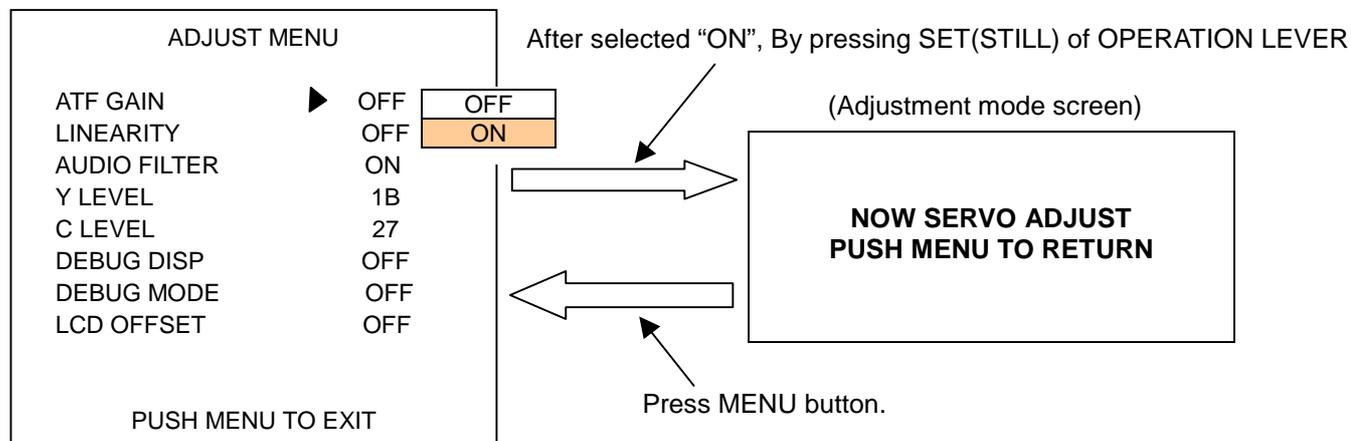
### ATF GAIN

The speed of the tape changes if this item set to "ON" for the ATF sensitivity confirmation.

After selected "ON", By pressing SET(STILL) of OPERATION LEVER, enter the adjustment mode and then exit the menu once. The VTR mode is operated when the menu mode is exited temporarily. The screen below is displayed.

**NOW SERVO ADJUST  
PUSH MENU TO RETURN**

It will be returned to ADJUST MENU when the MENU button is pressed in this condition.



### LINEARITY

The ATF sensitivity changes if this item set to "ON" for the LINEARITY confirmation.

After selected "ON", By pressing SET(STILL) of OPERATION LEVER, enter the adjustment mode and then exit the menu once. The VTR mode is operated when the menu mode is exited temporarily. The screen below is displayed.

**NOW SERVO ADJUST  
PUSH MENU TO RETURN**

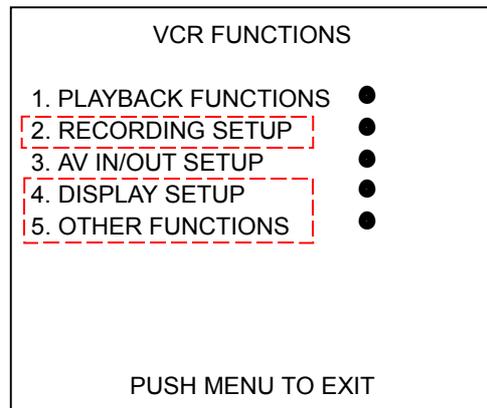
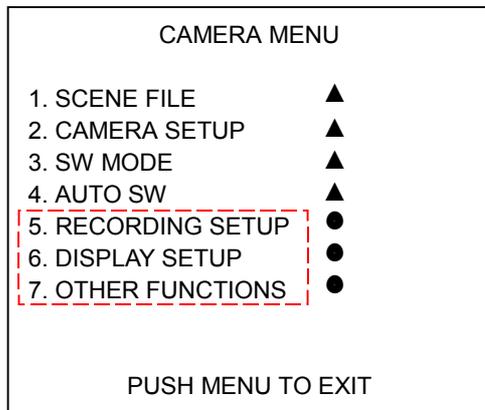
It will be returned to ADJUST MENU when the MENU button is pressed in this condition.

# 6. EEPROM

Several information are stored in EEPROM. Please refer to below explanation, which data stored in EEPROM.

## 6-1. Each Menu Data

### 6-1-1. Setting menu data



   Common display items

● : Each setting value are stored in VTR EEPROM.

▲ : Each setting value are stored in CAMERA EEPROM.

**NOTE1:** The item "PROGRESSIVE" and "NAME EDIT" in SCENE FILE screen, which is stored in VTR EEPROM.

**NOTE2:** The item "Aspect CONV" in CAMERA SETUP screen, which is stored in VTR EEPROM.

### 6-1-2. SERVICE menu data

Please refer to as follows.

ITEM	STORED IN
DEFECT COMP	X
AUDIO FILTER	VTR EEPROM
VTR SUB MICON	VTR SUB MICON (IC3001)
VTR MAIN MICON	VTR MAIN MICON (IC2001)
VTR EEPROM	VTR EEPROM
VTR EEPROM SUM	VTR EEPROM
CAM MICON	CAM MICON (IC301)
CAM EEPROM	CAM EEPROM
CYLINDER	VTR EEPROM
TAPE RUN	VTR EEPROM
THREADING	VTR EEPROM
Y LEVEL	VTR EEPROM
C LEVEL	VTR EEPROM
DIF INFO	X
DEBUG DISP	X
DEBUG MODE	X
LCD OFFSET	VTR EEPROM
EVF OFFSET	VTR EEPROM

### 6-1-3. DIAGNOSTIC menu data

Please refer to as follows.

ITEM	STORED IN
BER DISPLAY	X
SAMPLE SPEED	X
DIF INFO	X
CYLINDER	VTR EEPROM
TAPE RUN	VTR EEPROM
THREADING	VTR EEPROM

### 6-1-4. ADJUST menu data

Please refer to as follows.

ITEM	STORED IN
ATF GAIN	X
LINEARITY	X
AUDIO FILTER	X
Y LEVEL	VTR EEPROM
C LEVEL	VTR EEPROM
DEBUG DISP	X
DEBUG MODE	X
LCD OFFSET	VTR EEPROM
EVF OFFSET	VTR EEPROM

### 6-1-5. The other data

Except setting menu data, below indicated information are stored in EEPROM.

EEPROM	INFORMATION	REMARK
CAMERA EEPROM	CAMERA adjustment value	Adjustment values are set by EVR software.
	Control data	-----
VTR EEPROM	VTR adjustment Value	Adjustment values are set by EVR software or SERVICE/ADJUST menu.
	HOUR METER	-----
	Time code data	-----
	Control data	-----

# 7. CAMERA REMOTE

The operation of zoom operation and record start/stop can be remotely controlled by connecting a remote controller with **ZOOM S/S** remote jack.

The operation of focus and iris operation can be remotely controlled by connecting a remote controller with **FOCUS/IRIS** remote jack.

**NOTE:** CAMERA remote control is only effective in the CAMERA mode.

## 7-1. ZOOM S/S REMOTE

Please refer to below indicated specification, When external remote is checked.

Terminal (refer to figure A)	Contents
A	Record start/stop input
B	Zooming control input
C	GND

**Equivalent circuit of ZOOM S/S REMOTE jack**

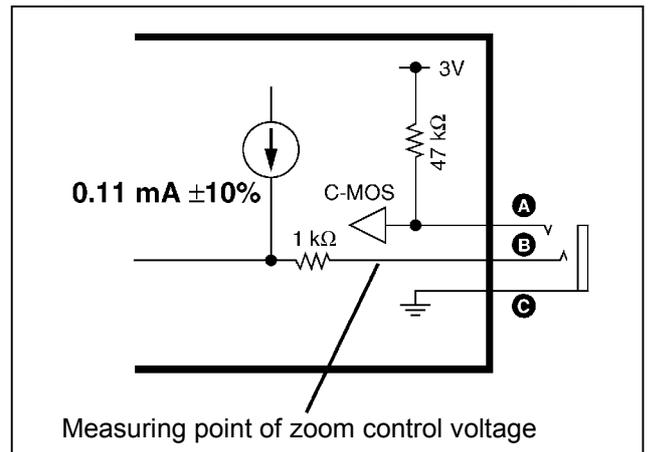


Figure A

### 7-1-1. Record start / stop input

Every time A terminal connects with the GND, it repeats recording and a recording stop.

### 7-1-2. Zooming control input

With the voltage to input to the B terminal, the zoom speed changes. As for the relation between the zoom control voltage and the zoom speed, it is as shown in the following.

**Relation between the zoom control voltage and zoom speed**

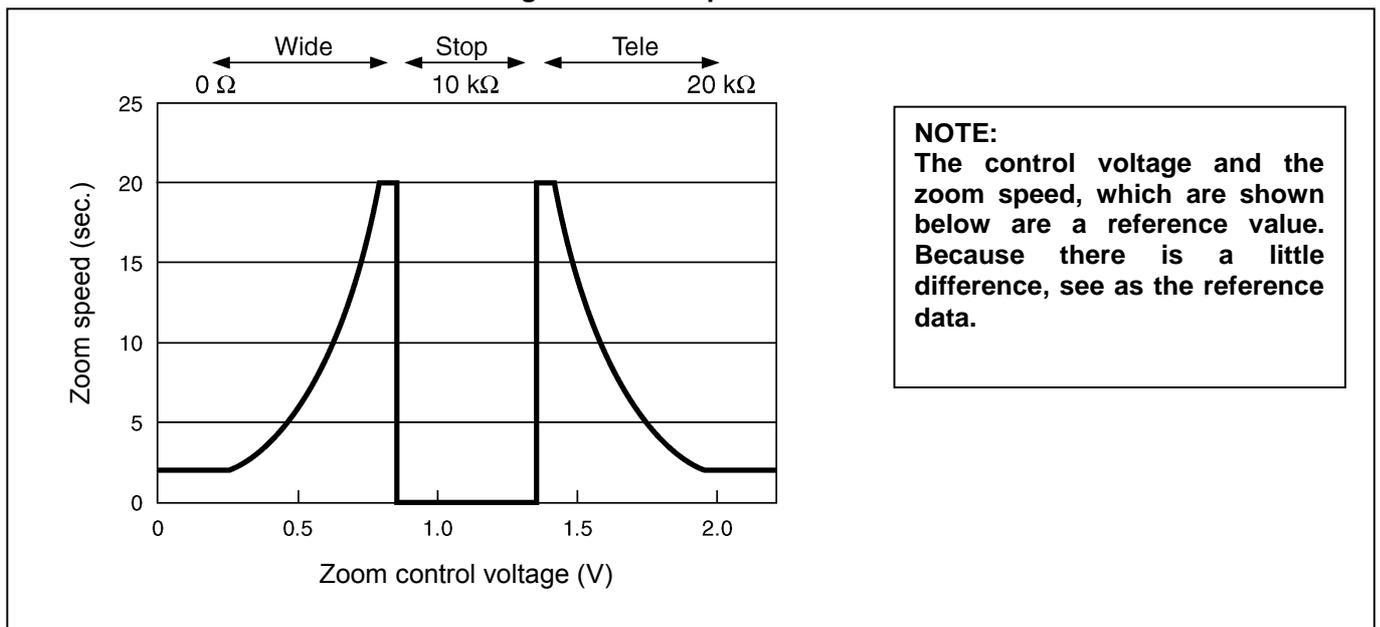


Figure B

## 7-2. FOCUS/IRIS REMOTE

Please refer to below indicated specification, When external remote is checked.

Terminal (refer to figure A)	Contents
A	GND
B	FOCUS control input
C	IRIS control input
D	IRIS(AUTO/MANU) switch input

### Equivalent circuit of FOCUS/IRIS REMOTE jack

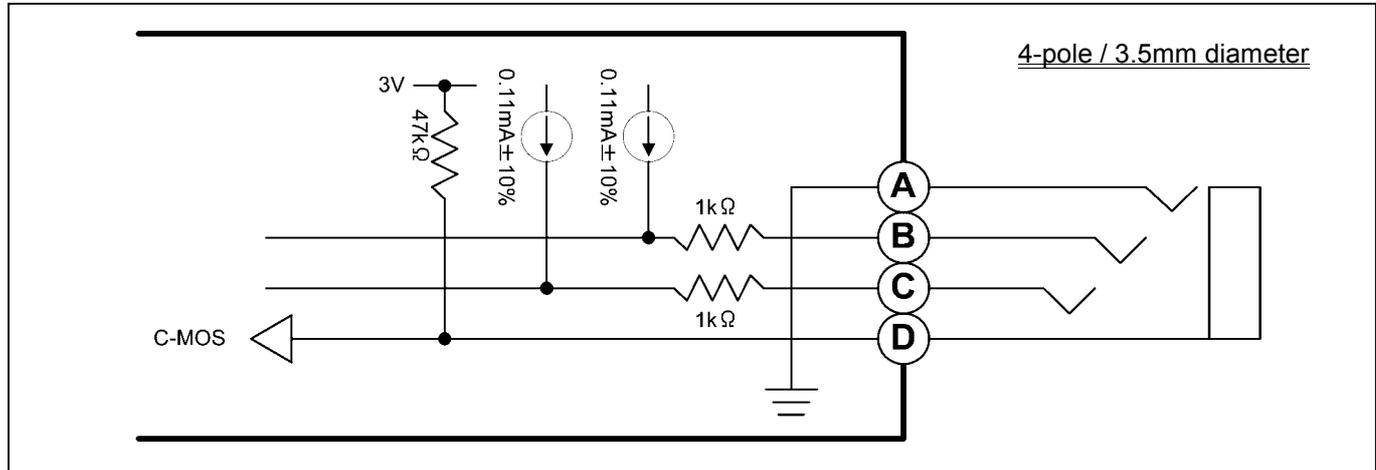


Figure C

### 7-2-1. Focus control input

With the voltage to input to the B terminal, the focus is changes. As for the relation between the focus control voltage and the focus, it is as shown in the following.

#### Relation between the focus control voltage and focus

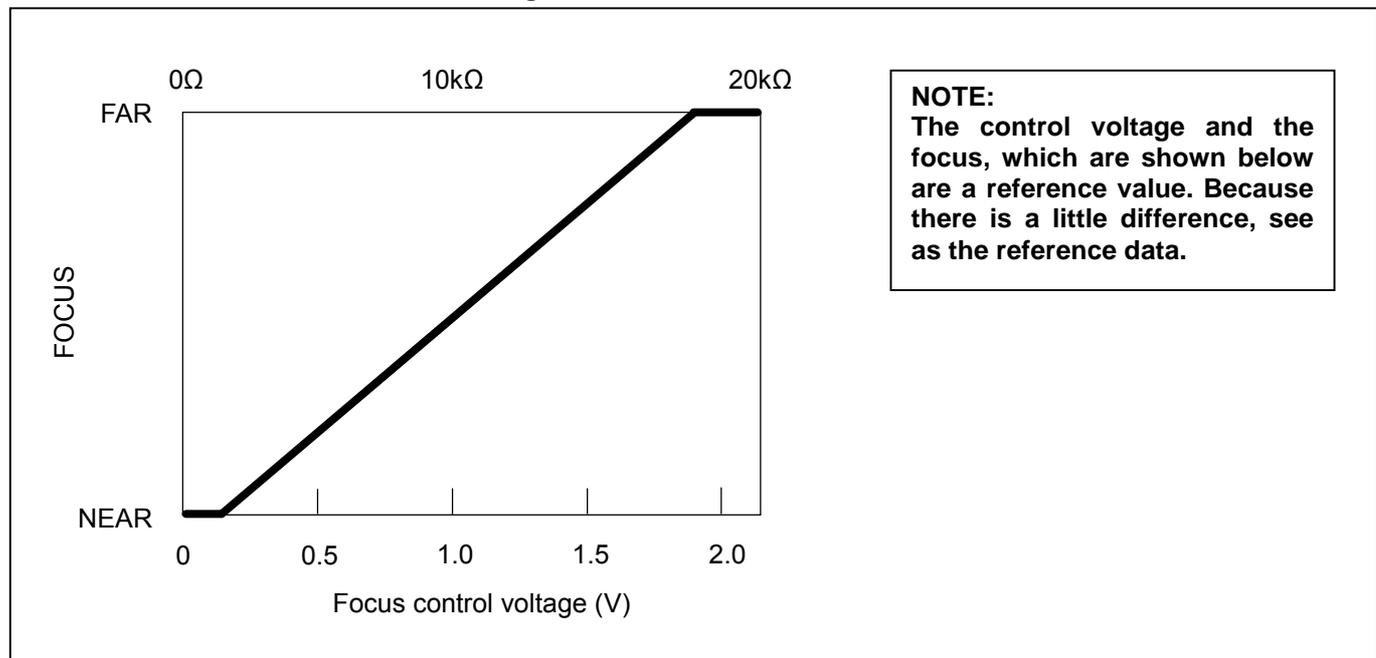


Figure D

When terminal B is open, the focus remote control becomes invalid.

## 7-2-2. IRIS control input

When terminal D is open, the VCR becomes AUTO-IRIS mode. When terminal D connects with the GND, the VCR becomes MANUAL-IRIS mode.

With the voltage to input to the C terminal, the iris is changes. As for the relation between the iris control voltage and the iris, it is as shown in the following.

Even if AUTO-IRIS is used, the iris can be corrected according to the input voltage.

### Relation between the iris control voltage and iris

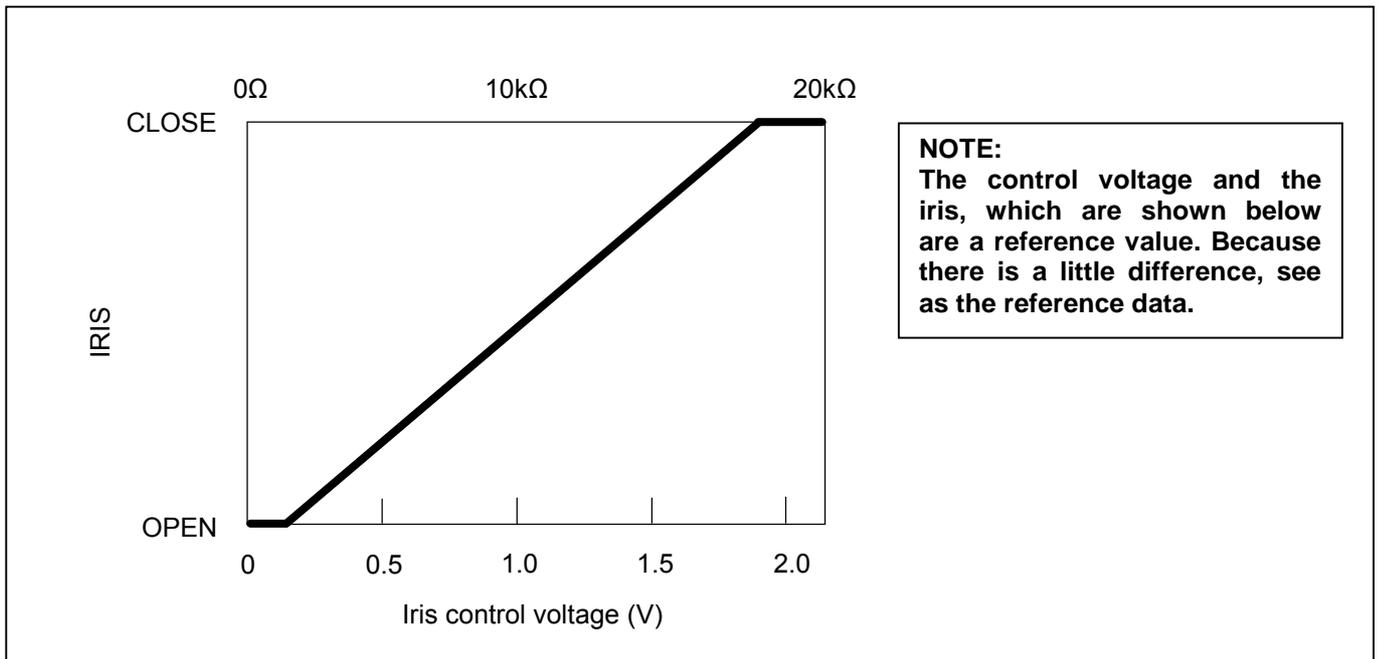
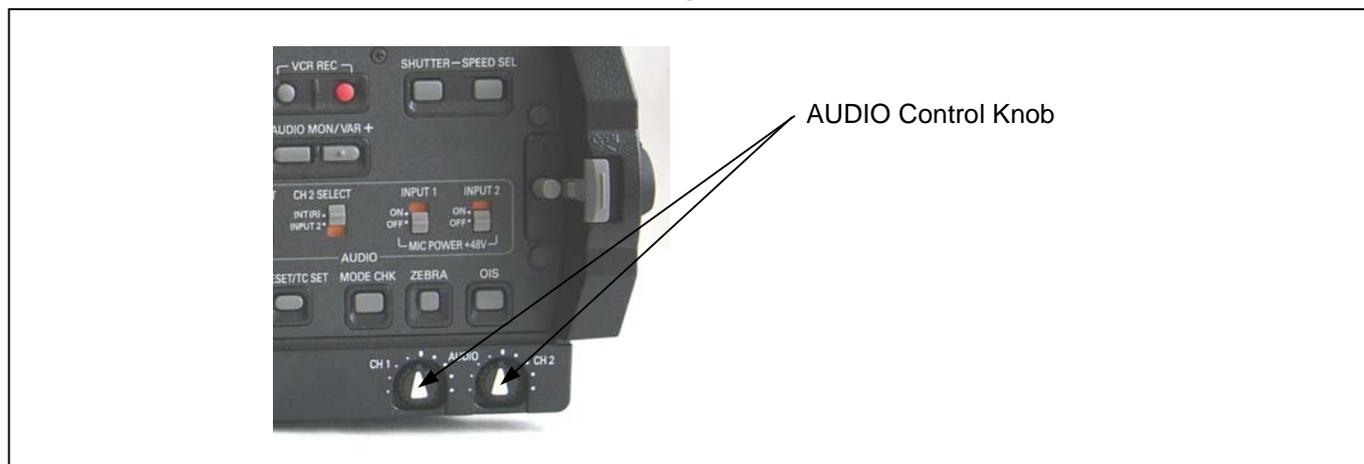


Figure E

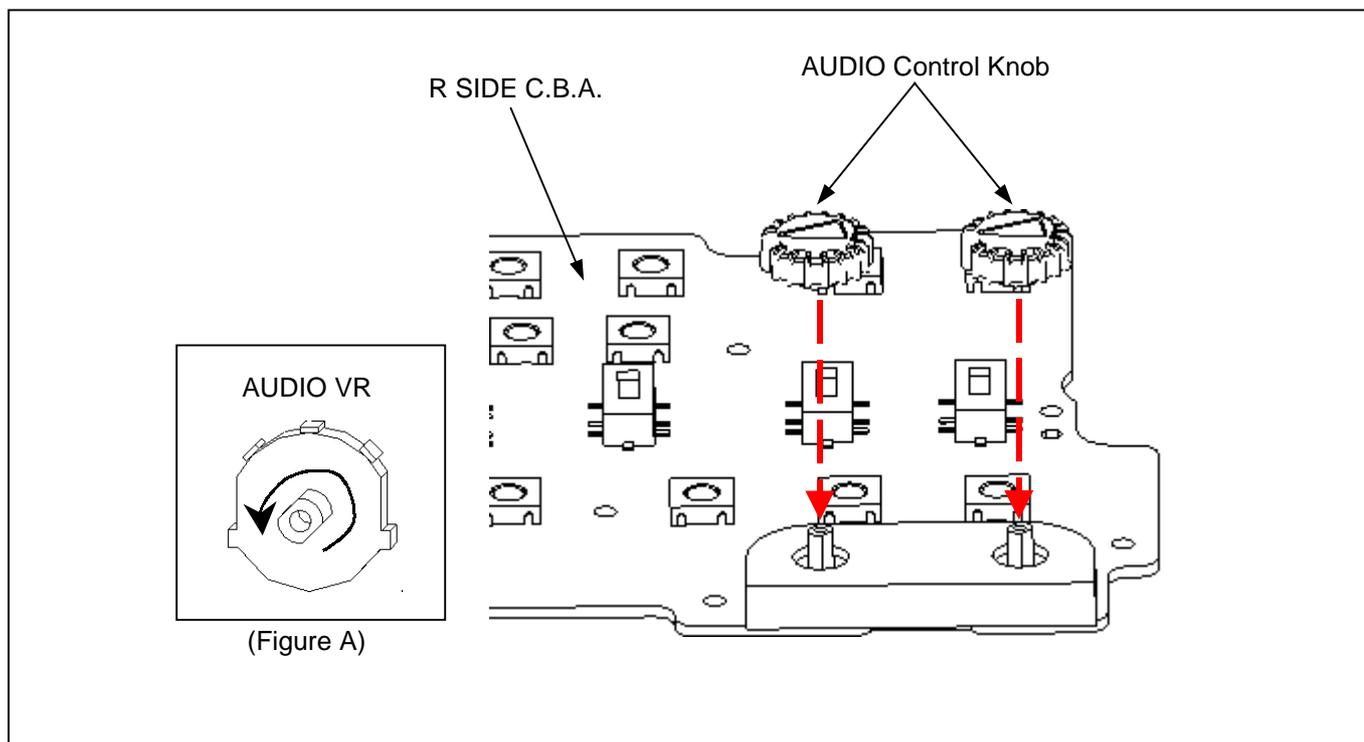
## 8. CAUTION WHEN INSTALLING AUDIO CONTROL KNOB

The AUDIO VR is weak against stress. So when the AUDIO Control Knob is removed from the AUDIO VR, it is very possible that AUDIO VR is broken. Please replace the AUDIO VR by a new one, when you have removed the AUDIO Control Knob from the AUDIO VR. When installing the AUDIO Control Knob, set its direction as follows.

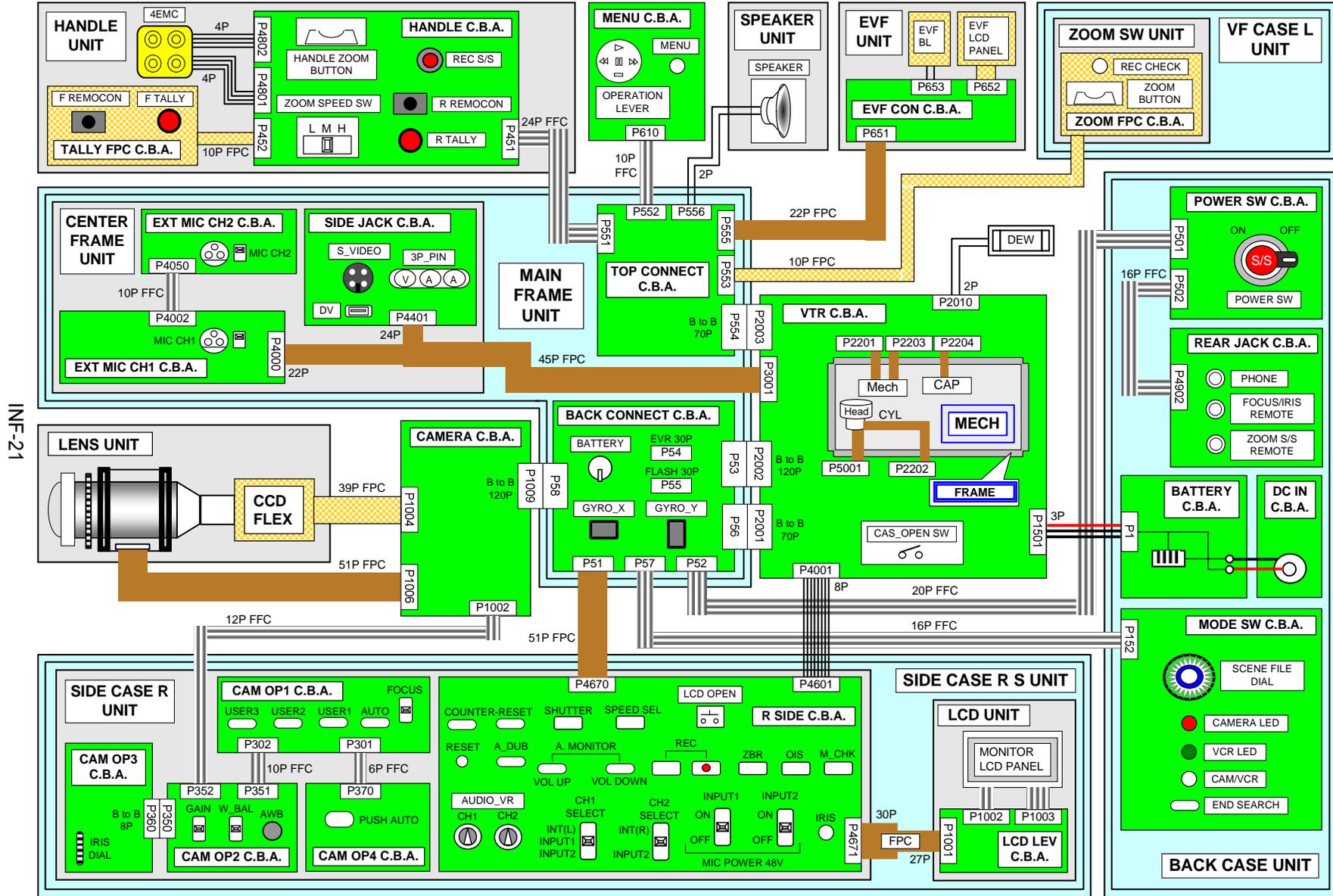


### (Installation of AUDIO Control Knob)

1. Set the AUDIO VR to fully counter-clockwise as shown in figure A.
2. Install the AUDIO Control Knob to AUDIO VR as follows.



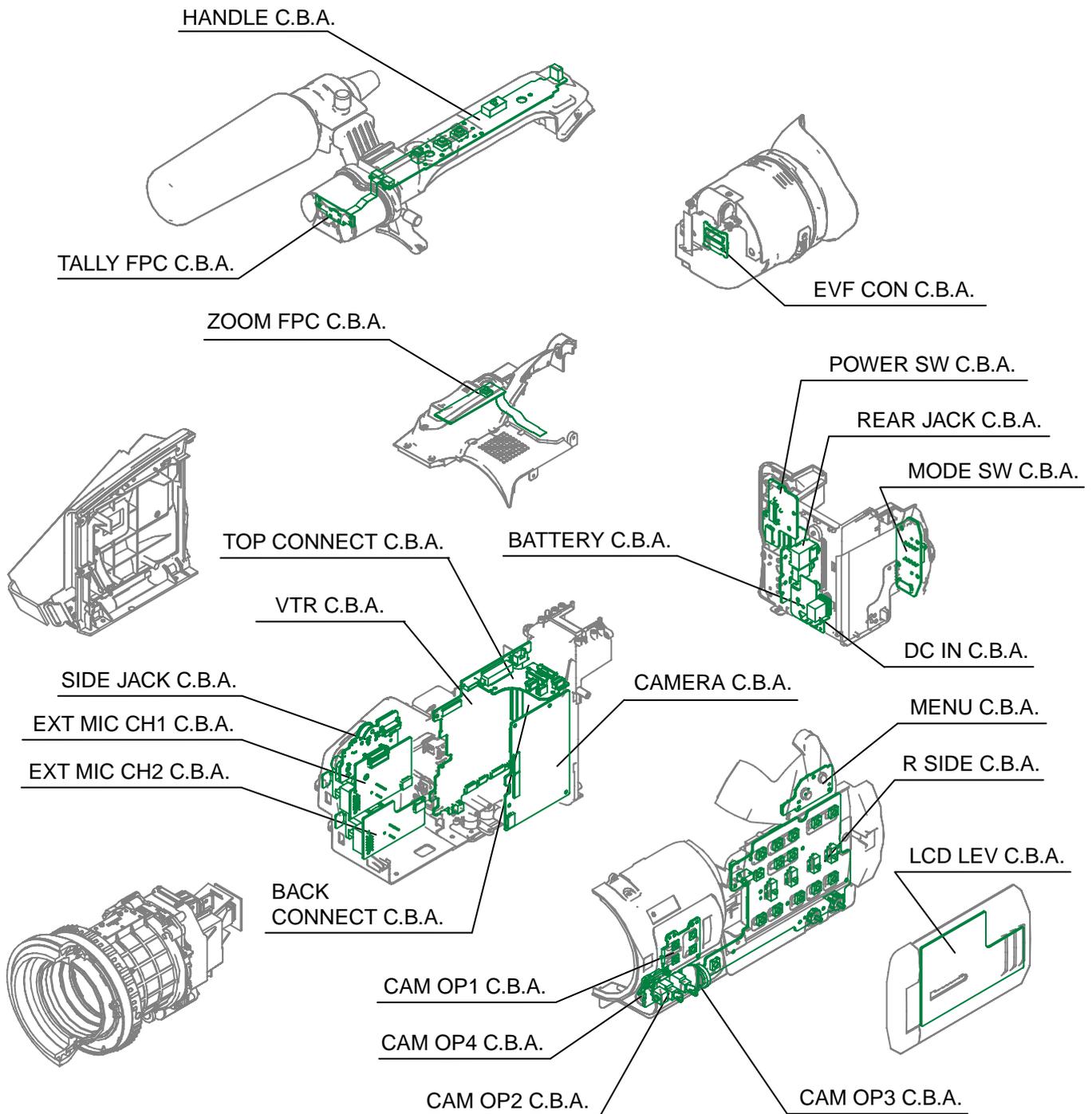
# INTER CONNECTION DIAGRAM



INF-21

# 9. INTERCONNECTION

# 10. CIRCUIT BOARD LAYOUT



# SECTION 2

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## DISASSEMBLY PROCEDURES

MODEL: **AJ-DVX100BP/E/AN,102BEN,DVC180BMC**

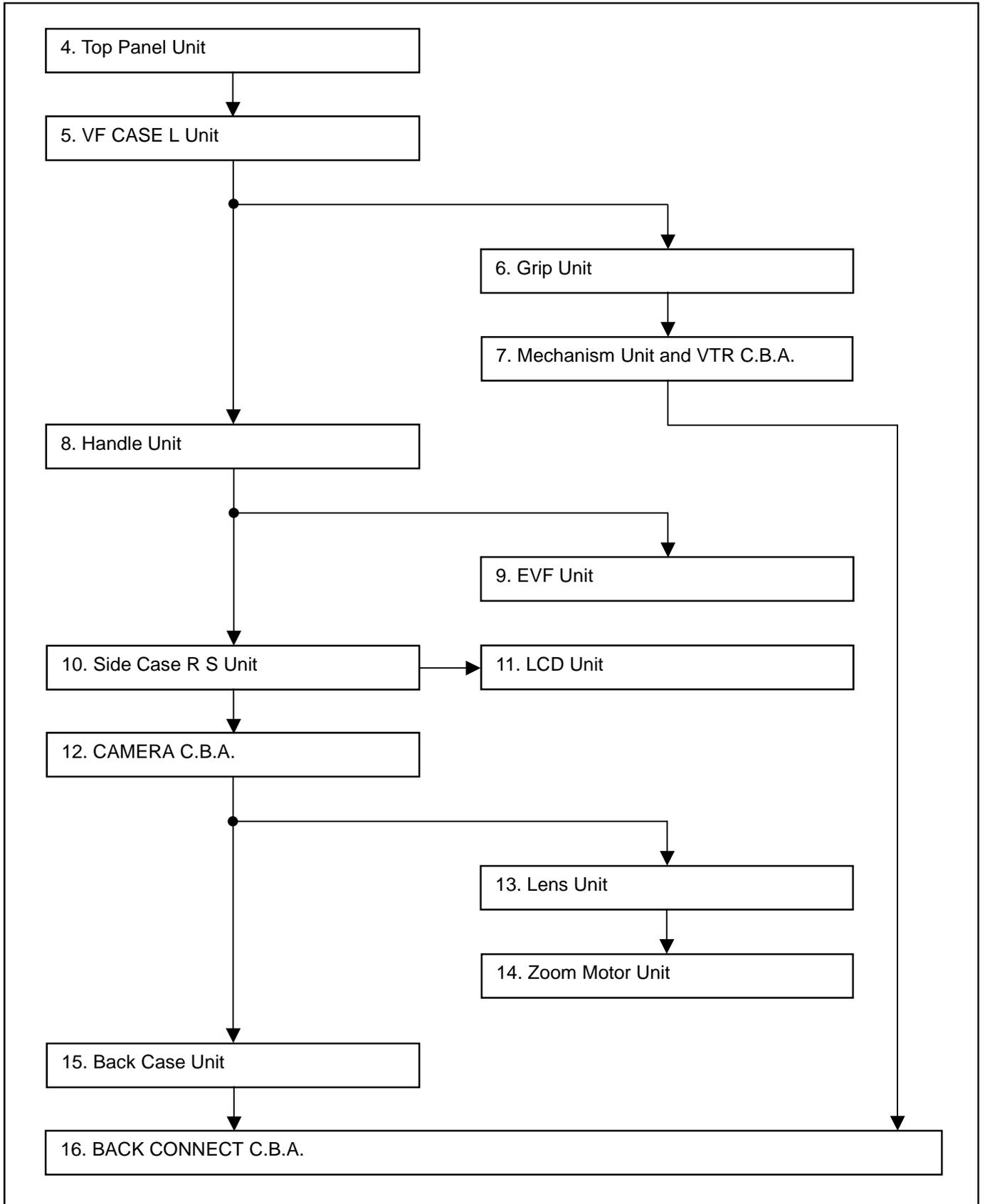
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### CONTENTS

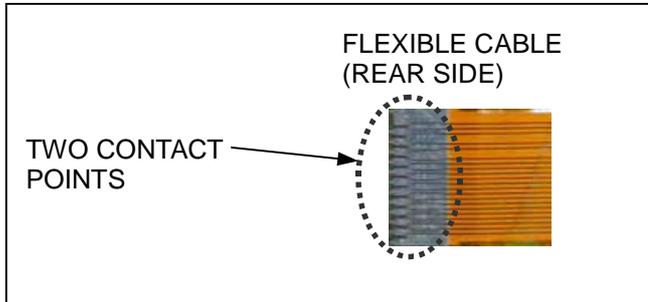
1. Disassembly Flowchart .....	DIS-1
2. Note when inserting Flexible Cable.....	DIS-2
3. Type of Screws.....	DIS-2
4. Removal of Top Panel Unit .....	DIS-3
5. Removal of VF CASE L Unit .....	DIS-3
6. Removal of Grip Unit. ....	DIS-4
7. Removal of Mechanism Unit and VTR C.B.A.....	DIS-6
8. Removal of Handle Unit .....	DIS-8
9. Removal of EVF Unit.....	DIS-8
10. Removal of Side Case R S Unit .....	DIS-9
11. Removal of LCD Unit.....	DIS-11
12. Removal of CAMERA C.B.A. ....	DIS-12
13. Removal of Lens Unit .....	DIS-12
14. Removal of Zoom Motor Unit .....	DIS-12
15. Removal of Back Case Unit .....	DIS-13
16. Removal of BACK CONNECT C.B.A. ....	DIS-14

# 1. Disassembly Flowchart



## 2. Note when inserting Flexible Cable

The flexible cables, have two sets of contacts on each cable, see the figure below. When inserting these cables into the connector, make sure that the cables are fully inserted, if not they may damage the connector.



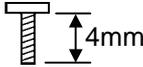
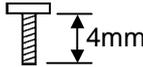
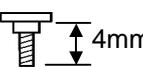
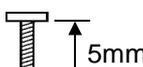
P51 on BACK CONNECT C.B.A.  
 P4670 on R\_SIDE C.B.A.  
 P1004 and P1006 on CAMERA C.B.A.  
 P3001 on VTR C.B.A.  
 P1001 on LED LEV C.B.A.(LCD UNIT)

CCD  $\leftrightarrow$  P1004  
 LENS  $\leftrightarrow$  P1006  
 P52 (BACK CONNECT C.B.A.)  $\leftrightarrow$  P4604 (R\_SIDE C.B.A.)  
 P3001 (VTR C.B.A.)  $\leftrightarrow$  P4401 (SIDE\_JACK C.B.A.)  
 & P4000(EXT MIC CH1 C.B.A.) : one contact point  
 LCD Panel  $\leftrightarrow$  P1001

When P1004 flexible cable is not making correct contact, the camera's picture will not be seen.  
 When P1006 flexible cable is not making correct contact, the LENS will not operate.  
 When P51 or P4670 flexible cable is not making correct contact, the VTR will not operate.  
 If any of the above symptoms occur after you assemble the camera recorder, please check the indicated connector.

## 3. Type of Screws

As for this procedure, a screw is described by the alphabet. The specified screw, refer to the table below about any type. When constructive, be careful not to mistake to put a screw.

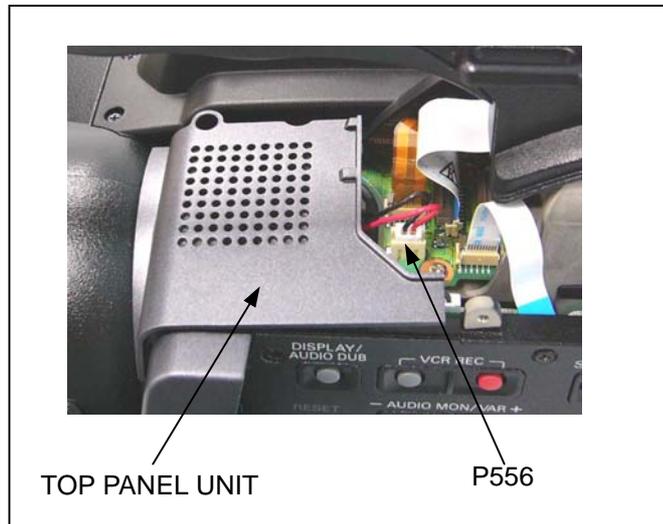
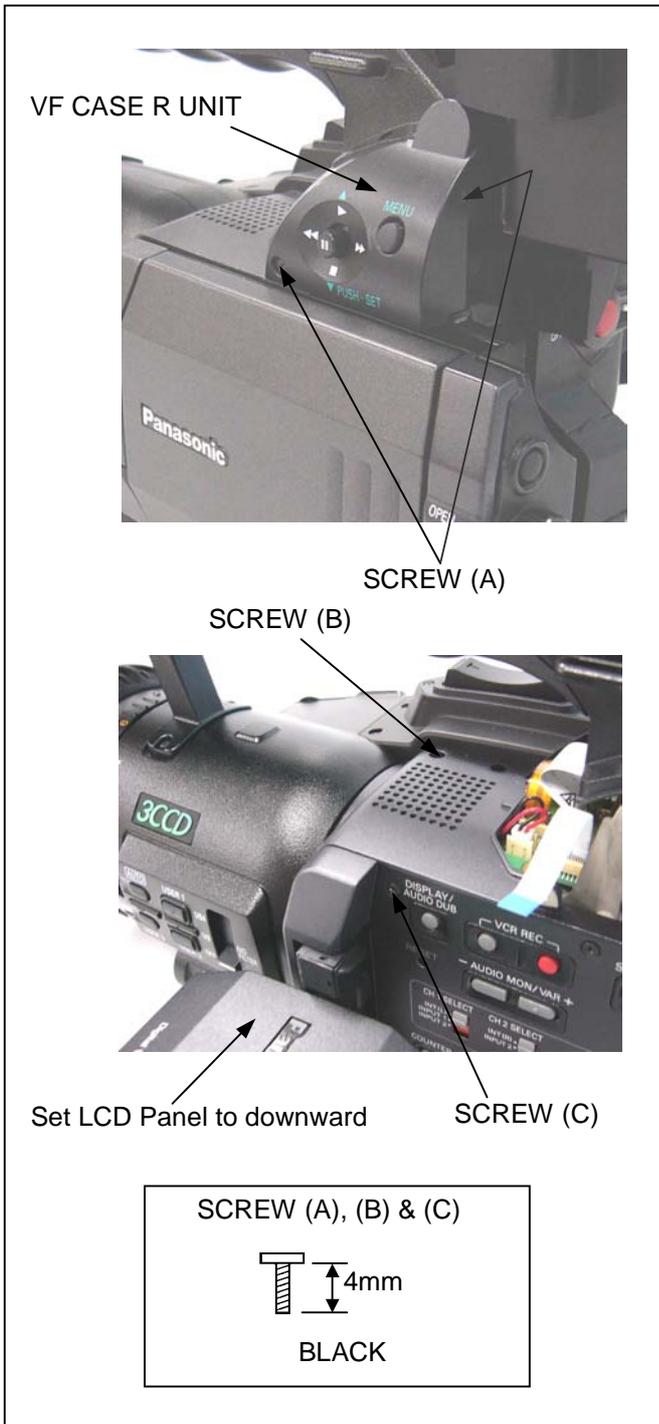
TYPE	Figure	Apply to screw
A	 BLACK	A, B, C, D, E, F, G, K, N, O, P, W, X, Y
B	 SILVER	H, I, L, M, Q, T, U, Z
C	 SILVER	J
D	 BLACK	R
E	 SILVER	S
F	 SILVER	V

#### 4. Removal of Top Panel Unit

1. Unscrew the 2 screws (A) and disconnect a connector P610 on MENU C.B.A., then remove the VF CASE R UNIT.
2. Unscrew the 2 screws (B) and (C).

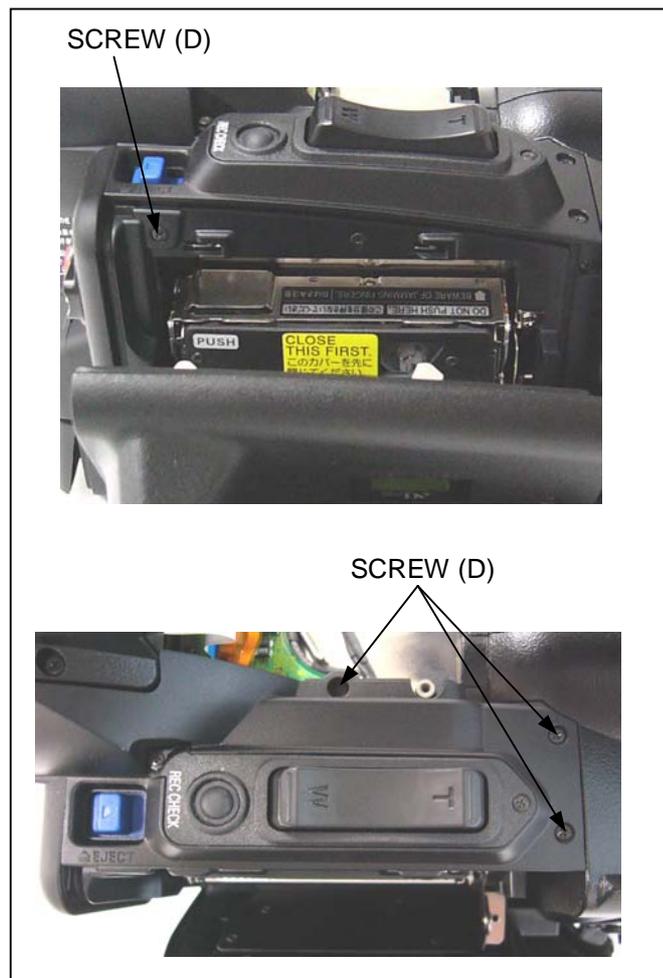
**NOTE: When unscrew the screw (C), set the LCD Panel to downward to protect damage on face of LCD.**

3. Disconnect a connector P556 on TOP CONNECT C.B.A. and remove the Top Panel Unit.



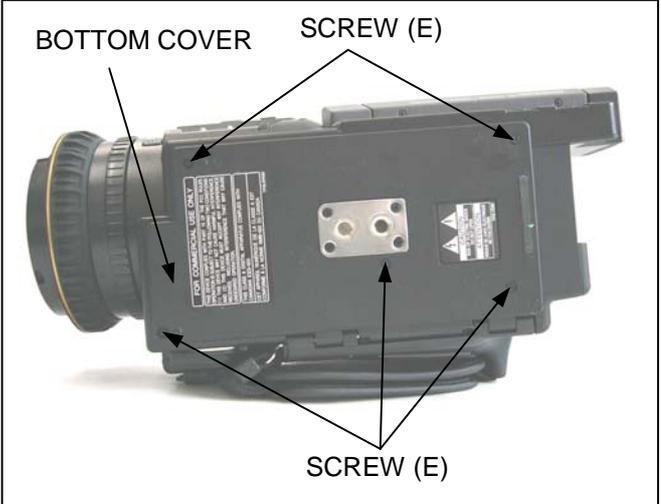
#### 5. Removal of VF CASE L Unit

1. Remove the Top Panel Unit.
2. Open the Cassette Cover.
3. Unscrew the 5 screws (D).
4. Disconnect a connector P553 on TOP CONNECT C.B.A. and remove the VF CASE L UNIT.



## 6. Removal of Grip Unit

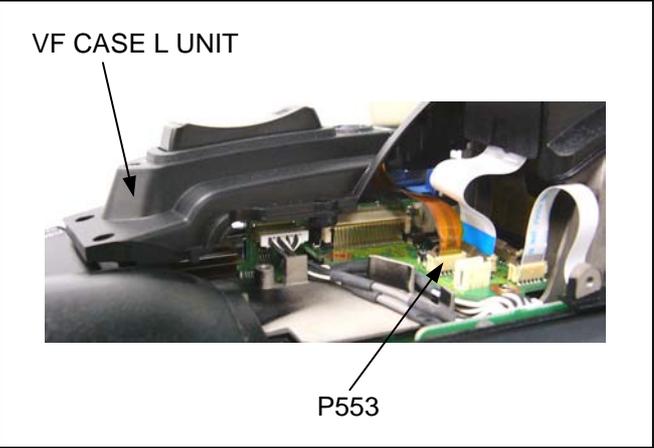
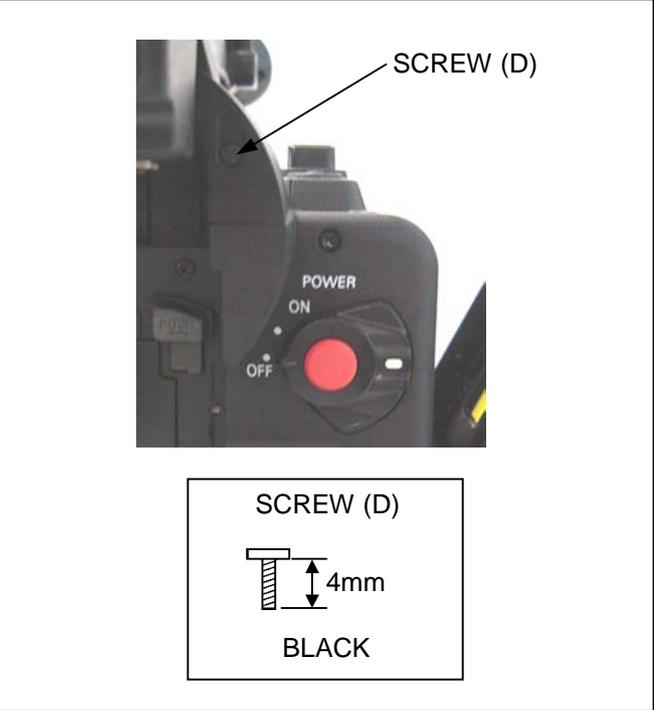
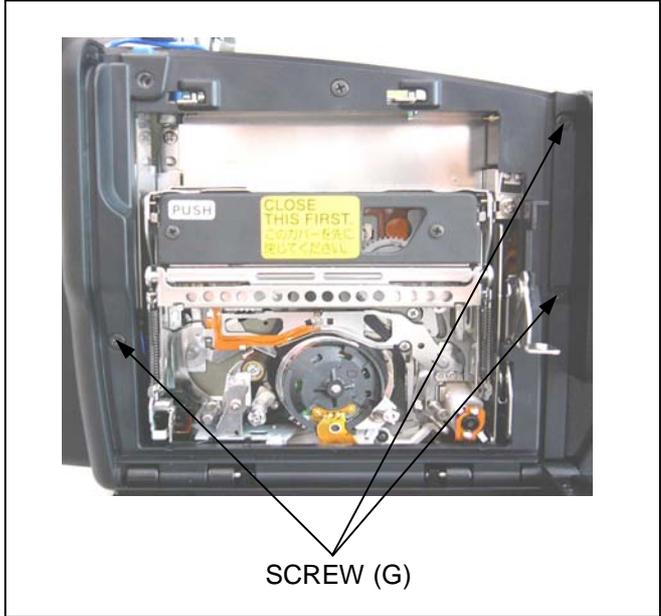
1. Remove the VF CASE L Unit.
2. Unscrew the 5 screws (E) and remove the Bottom Cover.

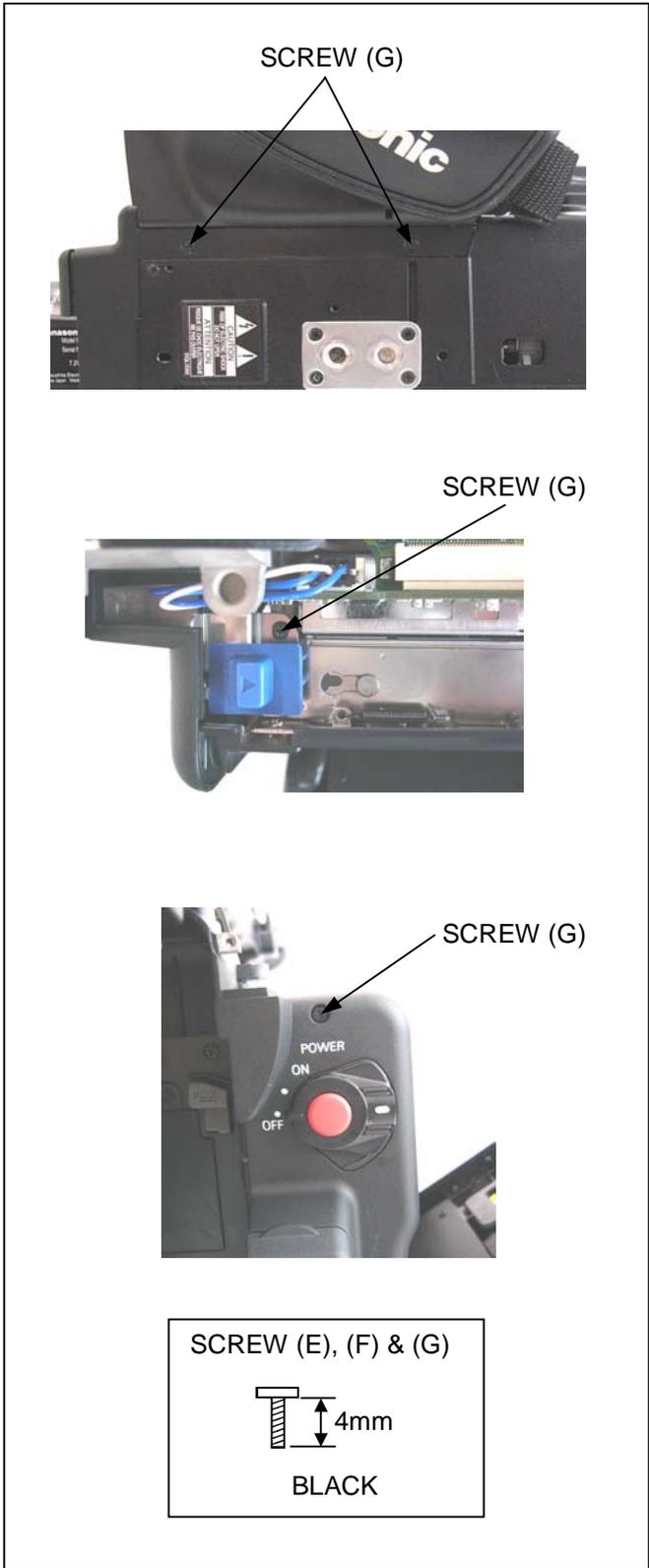


3. Unscrew the screw (F) and open the cassette cover.



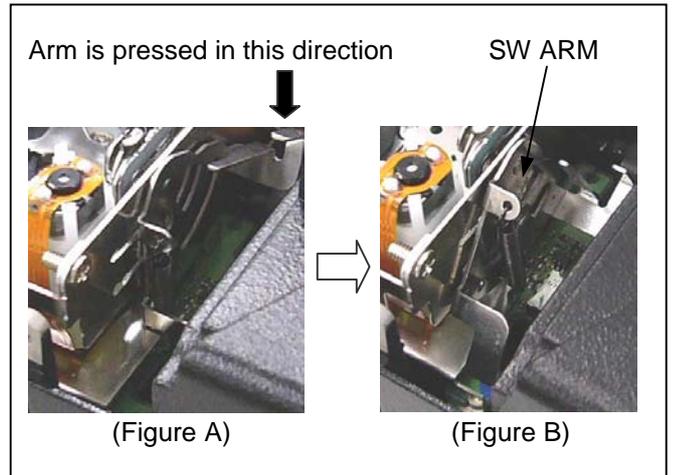
4. Unscrew the 7 screws (G) and remove the Grip Unit.



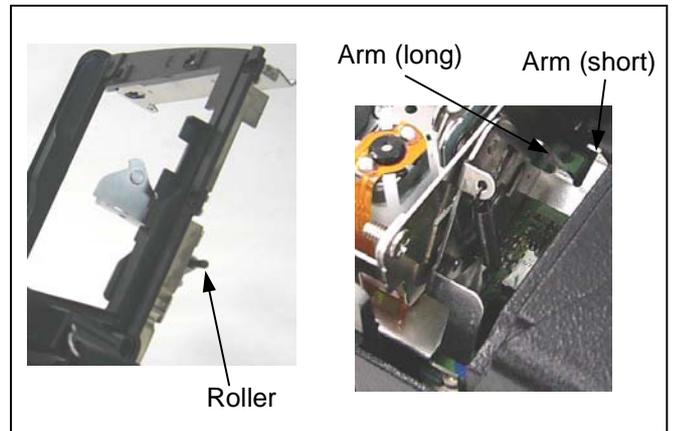


**< Note in installation >**

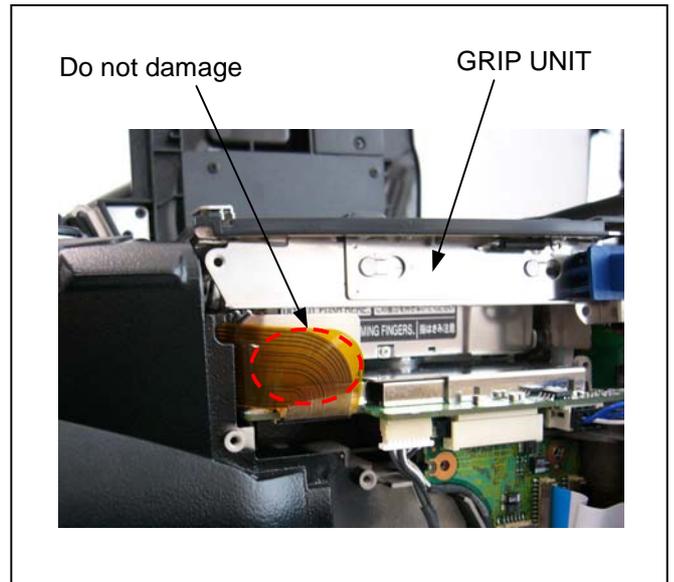
1. Arm should be pressed in the direction of an arrows as shown in figure A, and so that the position of the SW ARM is put into the state of figure B.



2. The Grip Unit is installed so that the roller of the Grip Unit puts between a long arm and short arm.

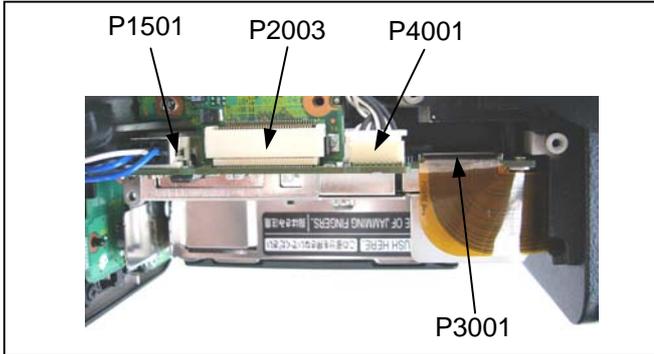


3. Be careful not to damage the flexible cable as shown in figure in installation of Grip Unit.



## 7. Removal of Mechanism Unit and VTR C.B.A.

1. Remove the Grip Unit.
2. Disconnect 3 connectors P1501, P4001 and P3001 on VTR C.B.A.

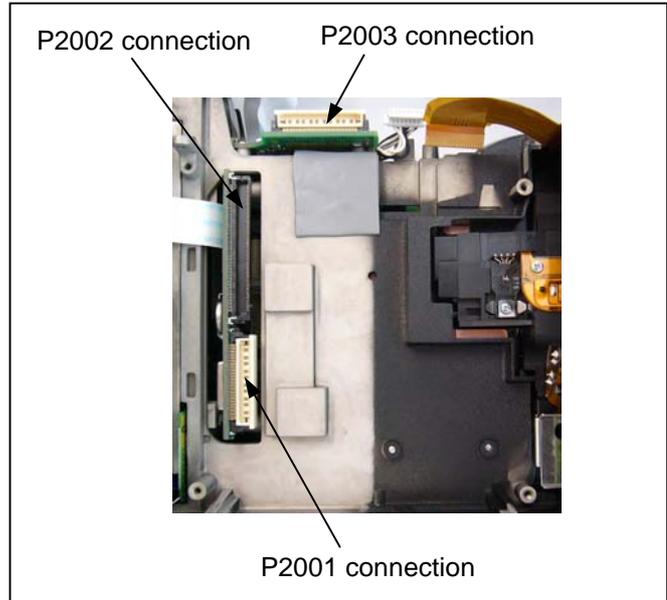
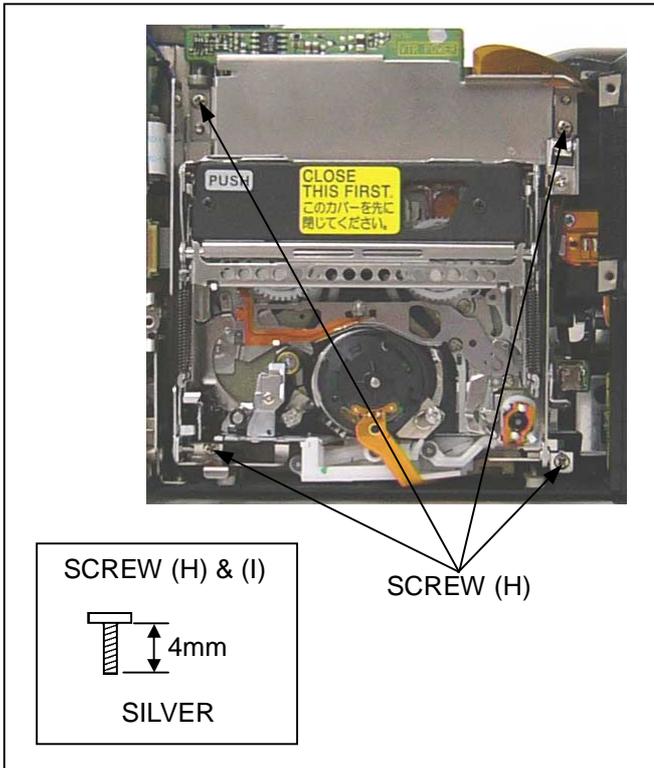


3. Unscrew the 4 screws (H) and remove the Mechanism Unit (with VTR C.B.A.).

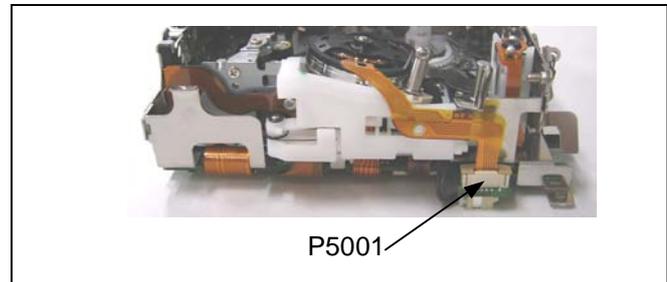
**NOTE:** When lift up the Mechanism Unit (with VTR C.B.A.) to remove Mechanism Unit (with VTR C.B.A.), be careful because the 3 connectors on VTR C.B.A (P2001, P2002 and P2003) are combined.

Please lift up the VTR C.B.A. with mechanism chassis (There is a possibility of giving the warp to the mechanism chassis because the connector is hard when only the mechanism chassis is lifted up by hand).

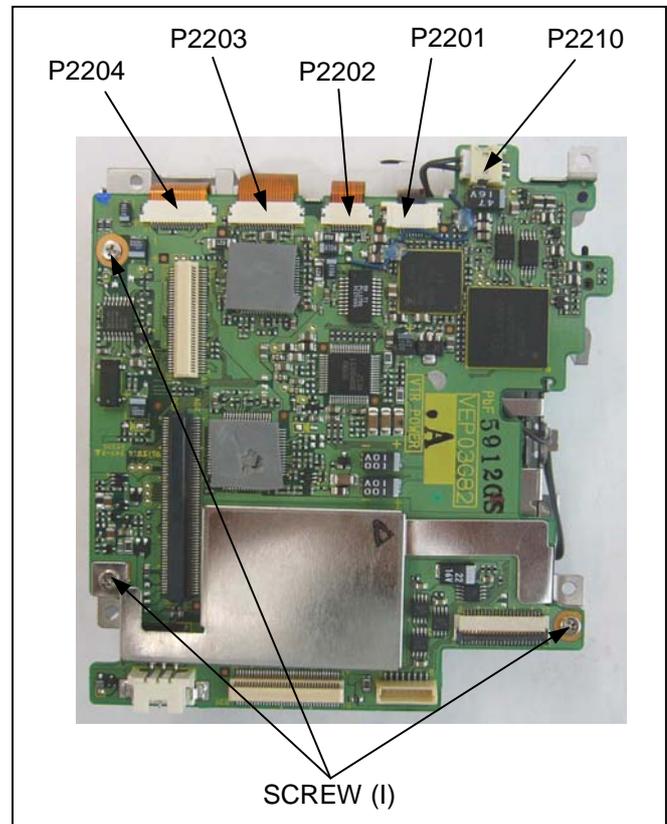
Also do not damage the Cleaning roller. Check the connector has been connected securely when the Mechanism Unit (with VTR C.B.A.) is installed.



4. Disconnect the connector P5001 on VTR C.B.A.



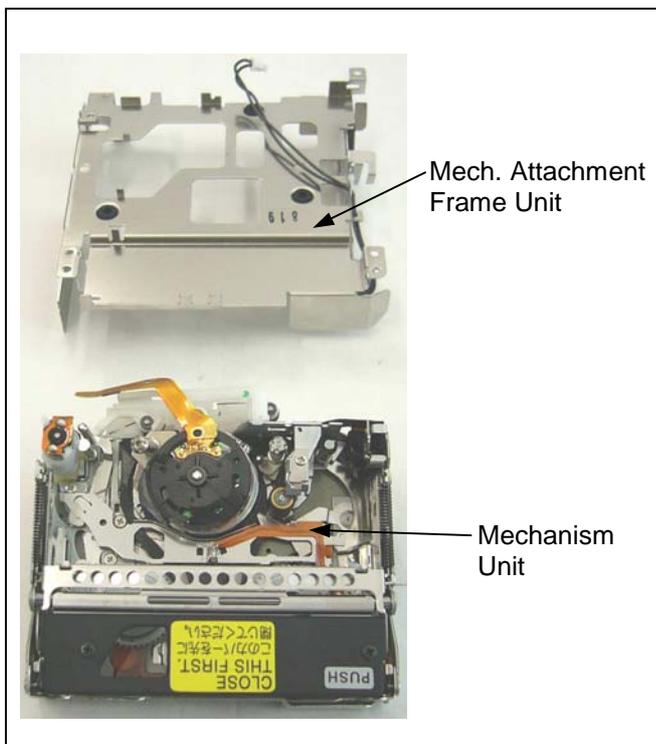
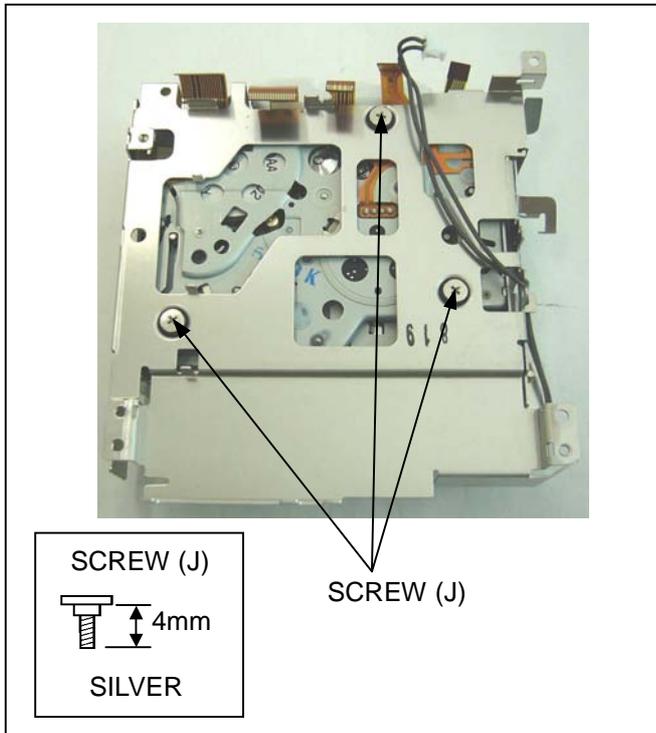
5. Disconnect the connectors P2201, P2202, P2203, P2204 and on VTR C.B.A..
6. Unscrew the 3 screws (I) and remove the VTR C.B.A..



**NOTE: The connector P2201, 2202, 2203 and 2204 are not lock types. Please pull out flexible cable with a pick etc..**

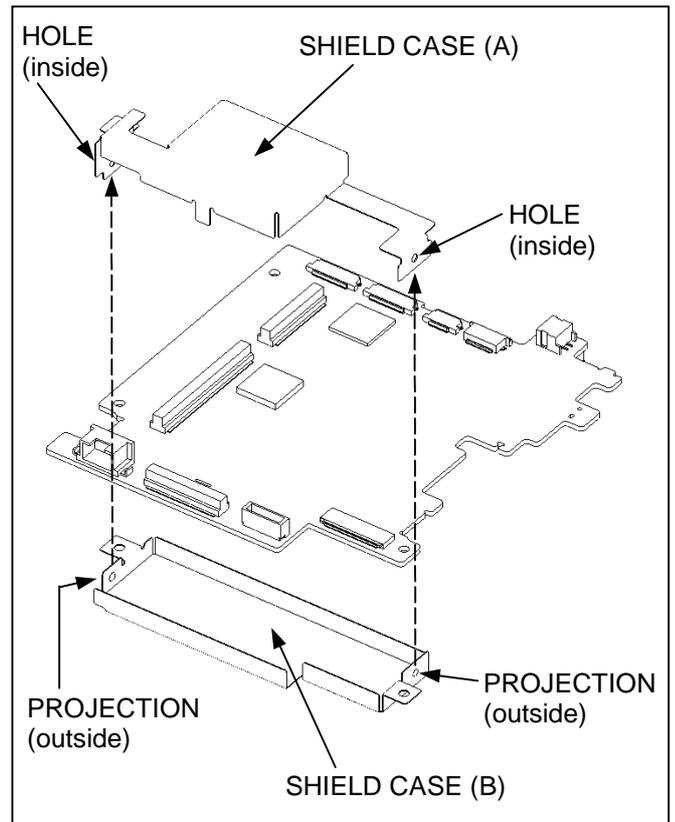
**NOTE: Even if VTR C.B.A. is not exchanged to new one, the calendar setting is reset only by removing it. Please set it again by a setting menu.**

7. Unscrew the 3 screws (J) and remove the Mechanism Unit from Mech. Attachment Frame Unit.



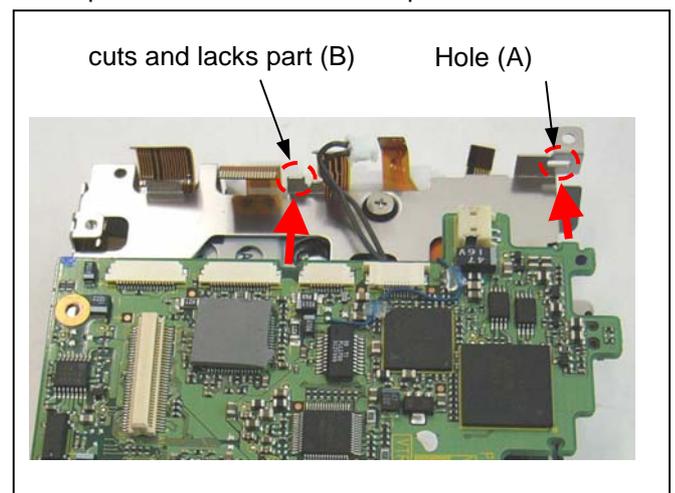
**< Note in installation of VTR C.B.A.>**

After install SHILED CASE (A) to VTR C.B.A., install the SHILED CASE (B) to be puts projection part of SHIELD CASE (A) in the hole part of SHILED CASE (B).



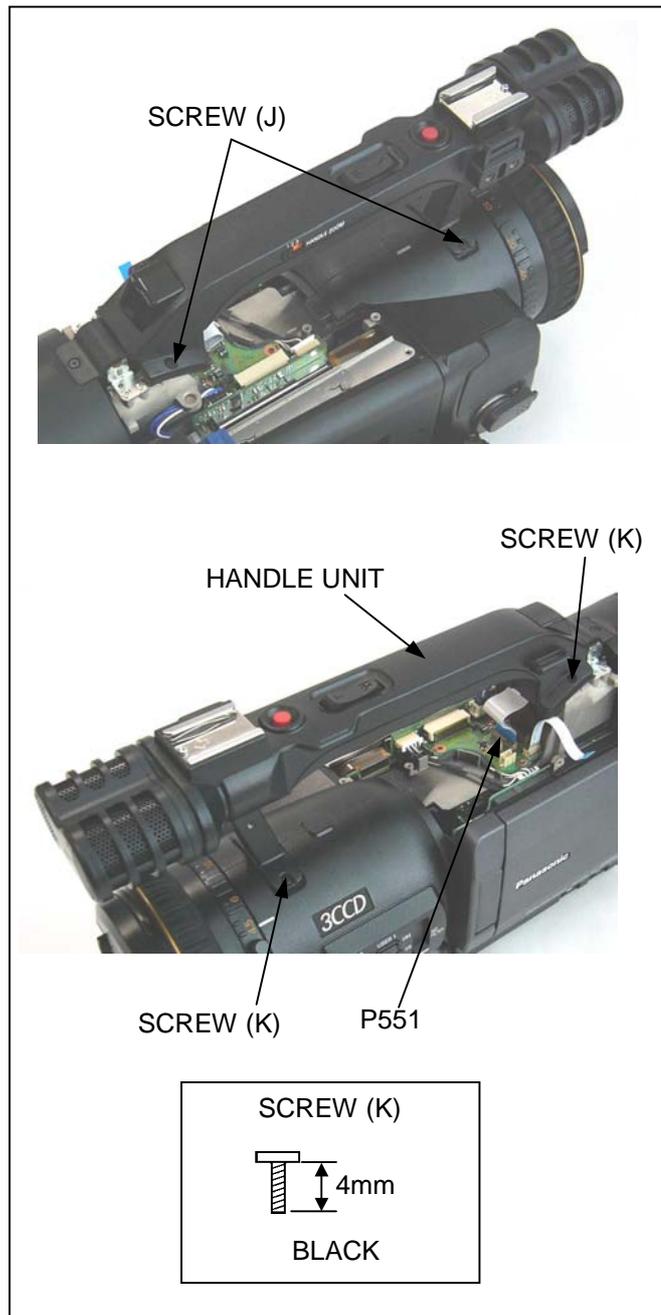
Please insert the cuts and lacks part of VTR C.B.A. as shown in figure to hole (A) of Mech. Attachment Frame Unit.

Please install VTR C.B.A. so that the cuts and lacks part (B) of the Mech. Attachment Frame Unit may correspond to the cuts and lacks part of VTR C.B.A..



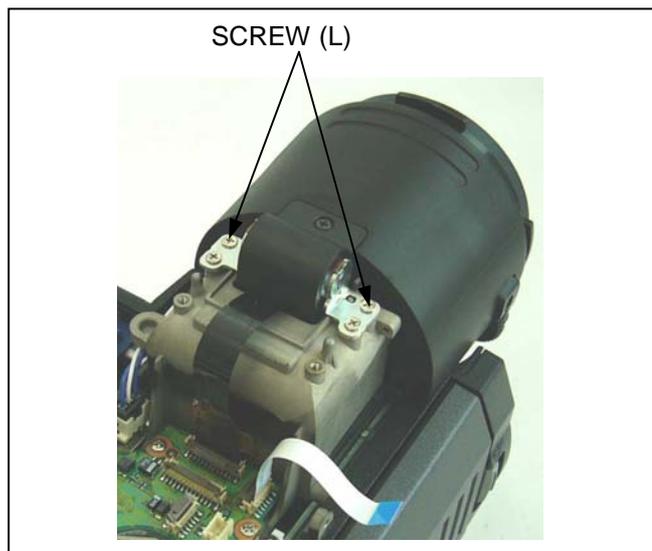
## 8. Removal of Handle Unit

1. Remove the VF CASE L Unit.
2. Unscrew the 4 screws (K) and disconnect the connector P551 on TOP CONNECT C.B.A., then remove the HANDLE UNIT.

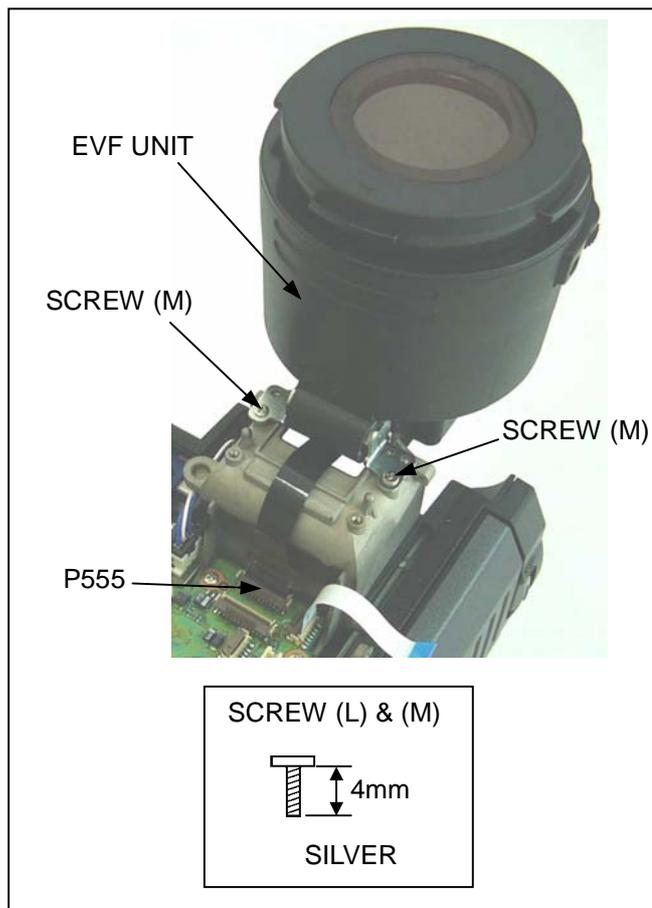


## 9. Removal of EVF Unit

1. Remove the Handle Unit.
2. Unscrew the 2 screws (L).

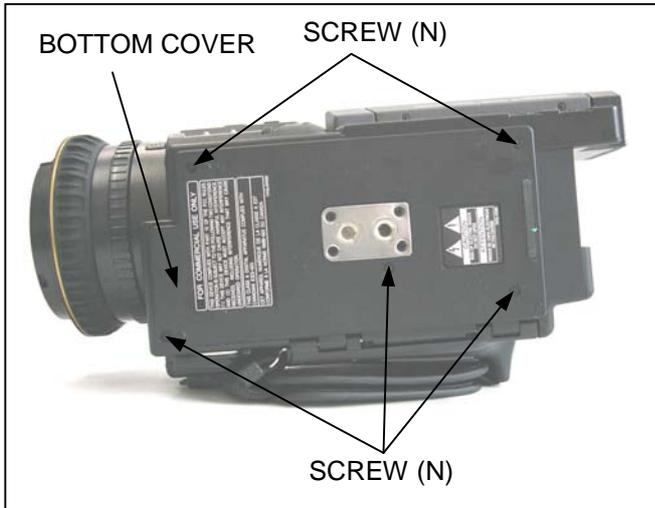


3. Make the condition which lift up the EVF Unit as shown figure and unscrew the 2 screws (M).
4. Disconnect the connector P555 on TOP CONNECT C.B.A. and remove the EVF Unit.

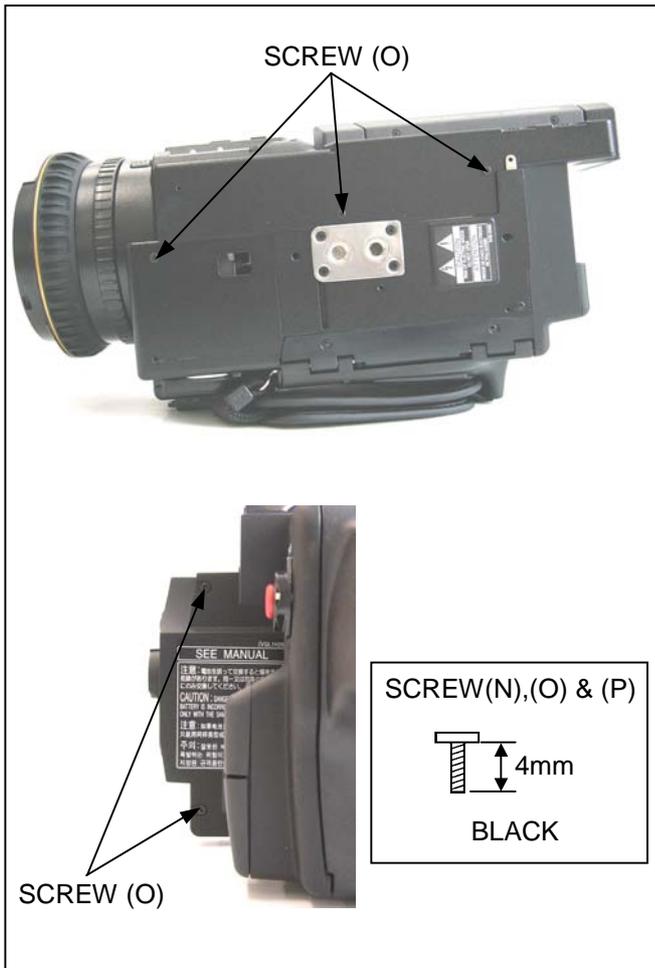


## 10. Removal of Side Case R S Unit

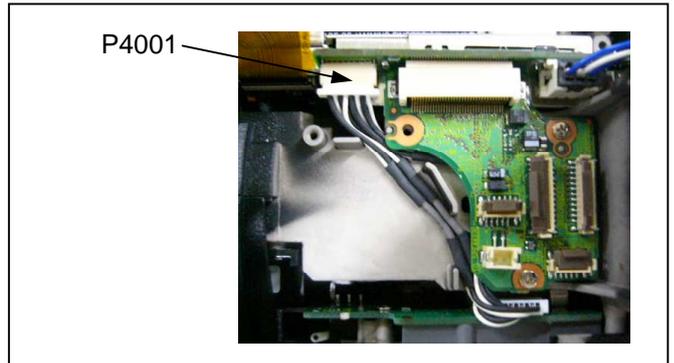
1. Remove the Handle Unit.
2. Unscrew the 5 screws (N) and remove the Bottom Cover.



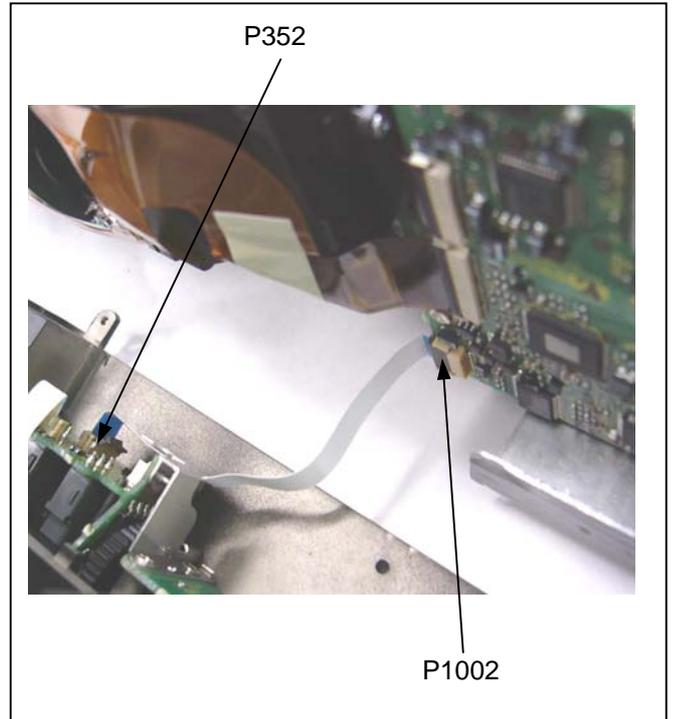
3. Unscrew the 5 screws (O).
4. Unscrew the 3 screws (P).



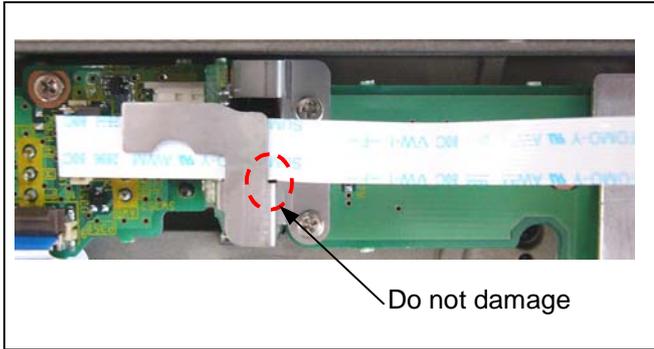
5. Disconnect a connector P4001 on VTR C.B.A..



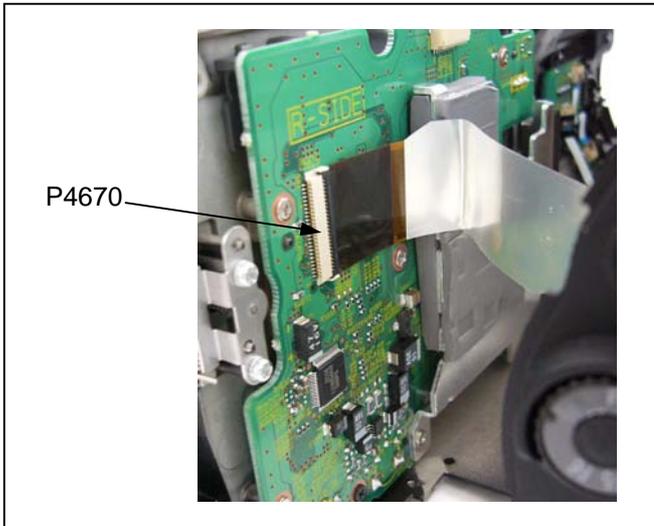
6. Disconnect a connector P1002 on CAMERA C.B.A. (You may disconnect either connector P352 on CAM OP2 C.B.A. or P1002 is disconnected).



**NOTE:** Do not damage the flexible cable in part shown in figure. And please confirm the wire is processed as shown in figure when install it.

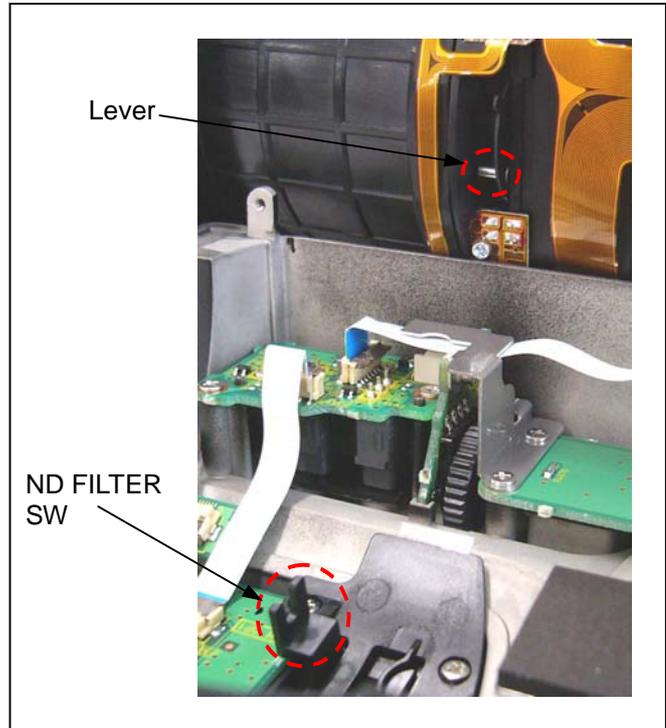


7. Disconnect a connector P4670 on R-SIDE C.B.A. and remove the Side Case R S Unit.

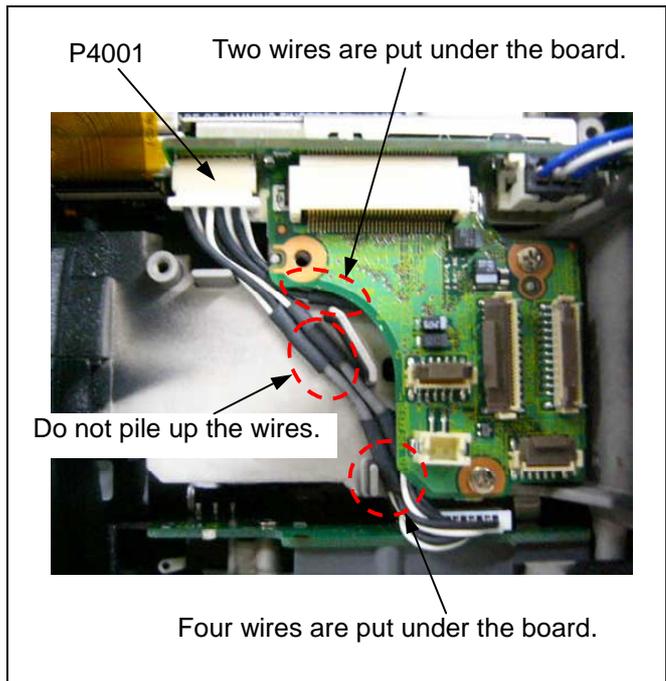


**NOTE:** Be careful when connect or disconnect the flexible cable from or to connector P4670, because it has possibility damaging to connector.

**NOTE:** When installing a Side Case R S unit, make the condition that the lever of ND filter on the lens unit is inserted in the ND FILTER SW (As for the figure, ND FILTER SW shows the condition of OFF).

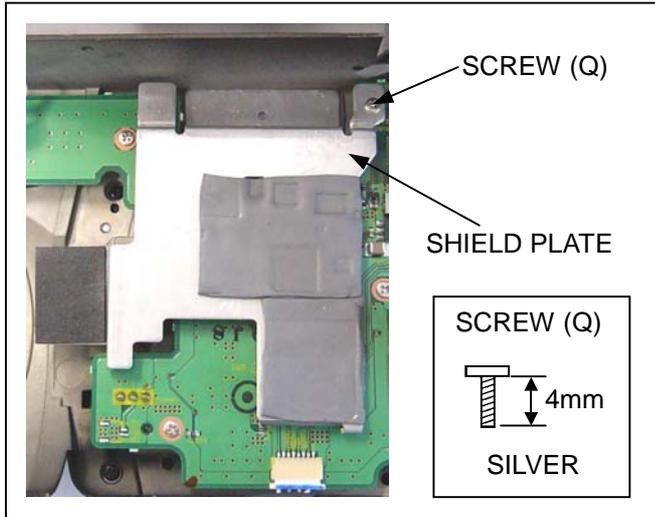


**NOTE:** When the connector P4001 is connected on VTR C.B.A., make the condition about wire is processed as shown in figure.

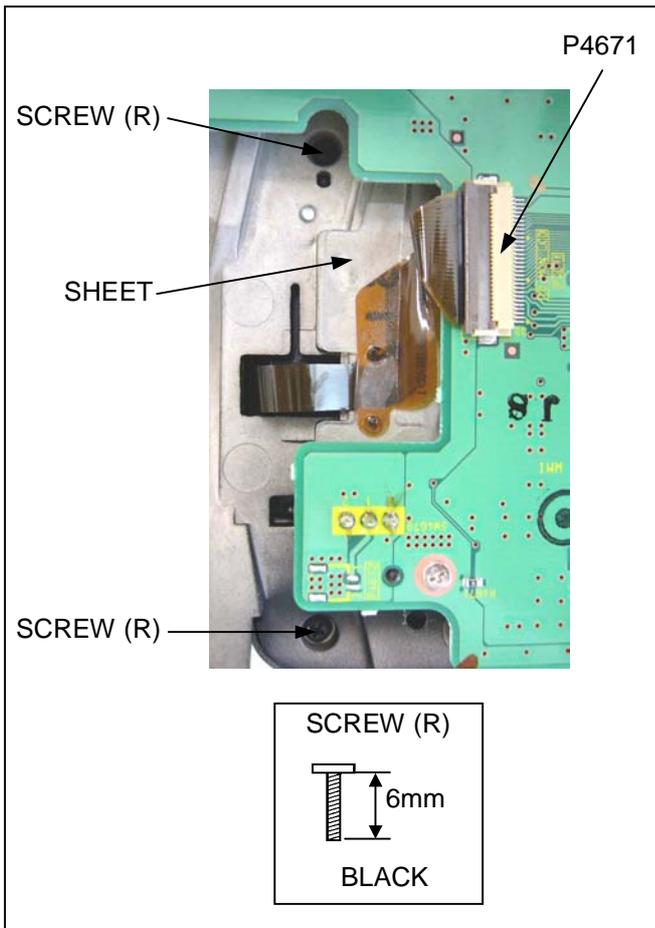


## 11. Removal of LCD Unit

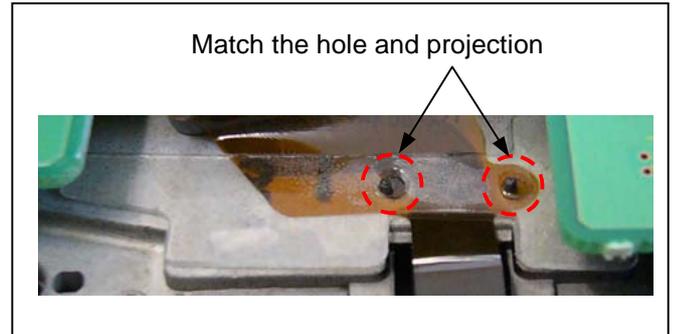
1. Remove the Side Case R S Unit.
2. Unscrew the screw (Q) and remove the SHIELD PLATE.



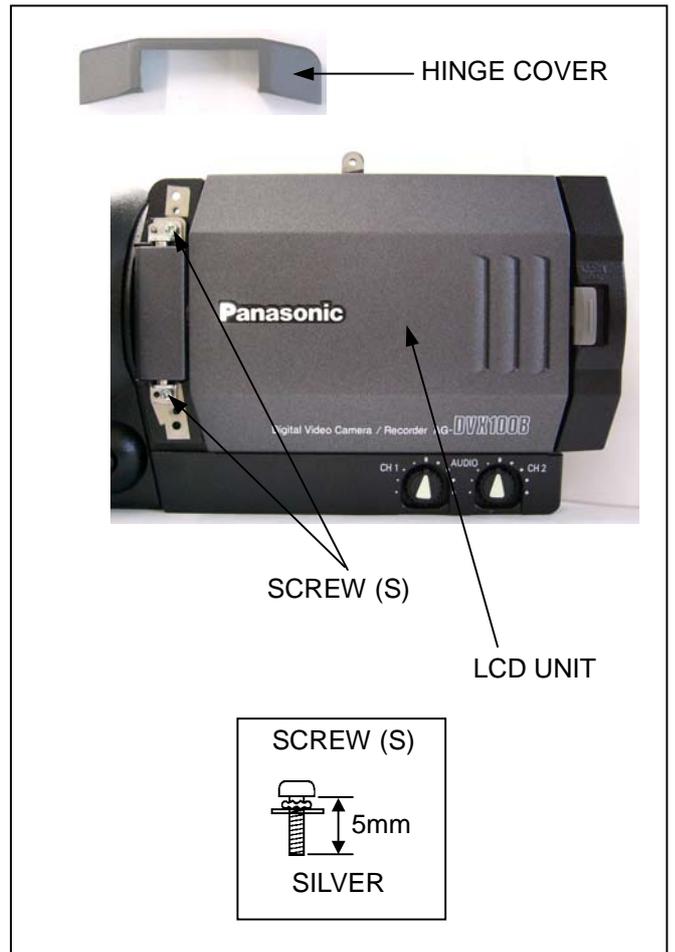
3. Remove the SHEET as shown in figure.
4. Unscrew the 2 screws (R) and remove the HINGE COVER.
5. Disconnect a connector P4671 on R-SIDE C.B.A..



**NOTE:** Please match the hole of flexible cable and projection of Side Case when you put the SHEET.



6. Unscrew the 2 screws (S) and remove the LCD Unit.



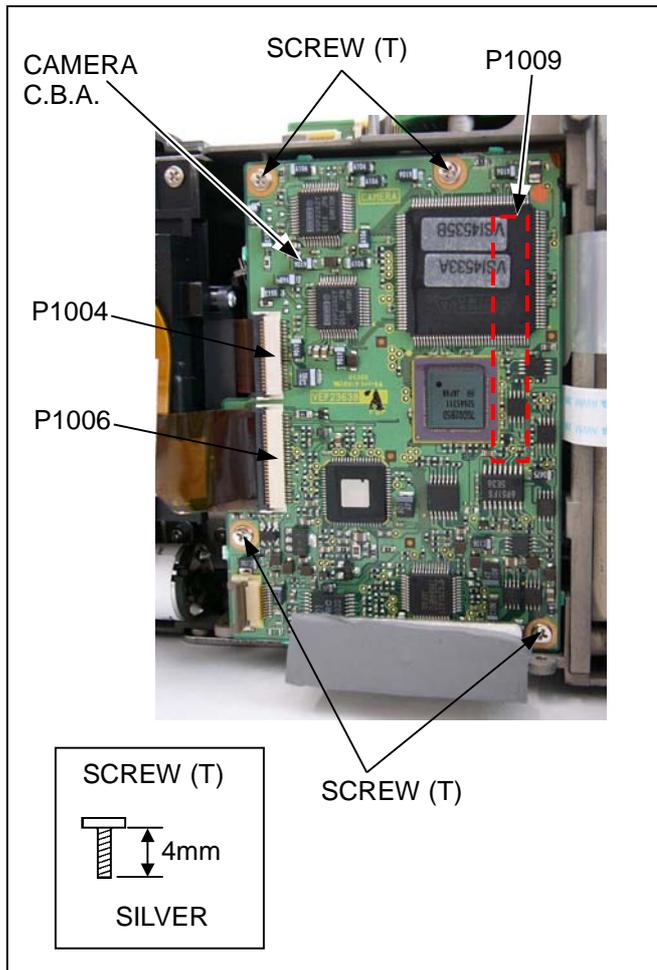
## 12. Removal of CAMERA C.B.A.

1. Remove the Side Case R S Unit.
2. Disconnect connector P1004 and P1006 on CAMERA C.B.A..
3. Unscrew the 4 screws (T) and remove the CAMERA C.B.A..

**NOTE:** When removal of the CAMERA C.B.A., the connector P1009 is disconnected (P1009 is connected between CAMERA and BACK CONNECT C.B.A.). Be careful not to damage the connector P1009.

Check the connector has been connected securely when the CAMERA C.B.A. is installed.

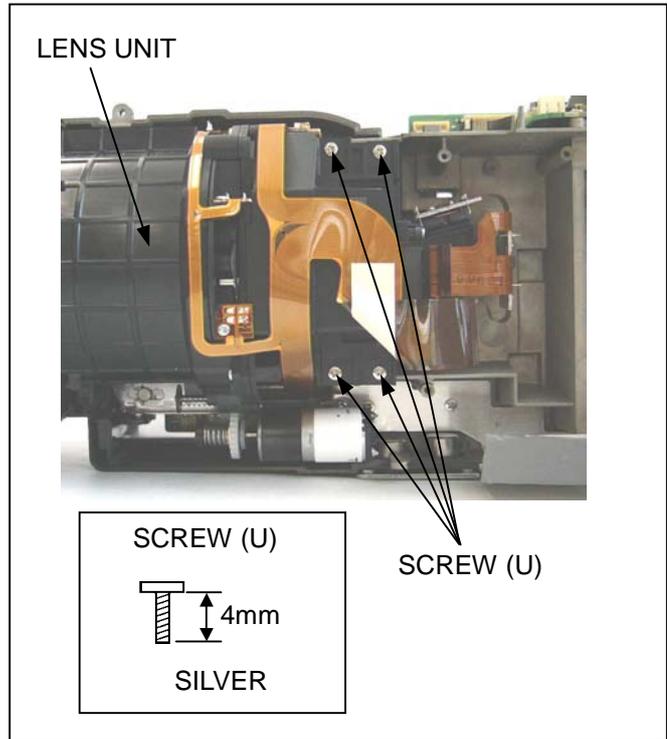
Moreover, please do not hit the CAMERA C.B.A. to the plate in this side when you remove or install the CAMERA C.B.A..



## 13. Removal of Lens Unit

1. Remove the CAMERA C.B.A..
2. Unscrew the 4 screws (U) and remove the Lens Unit.

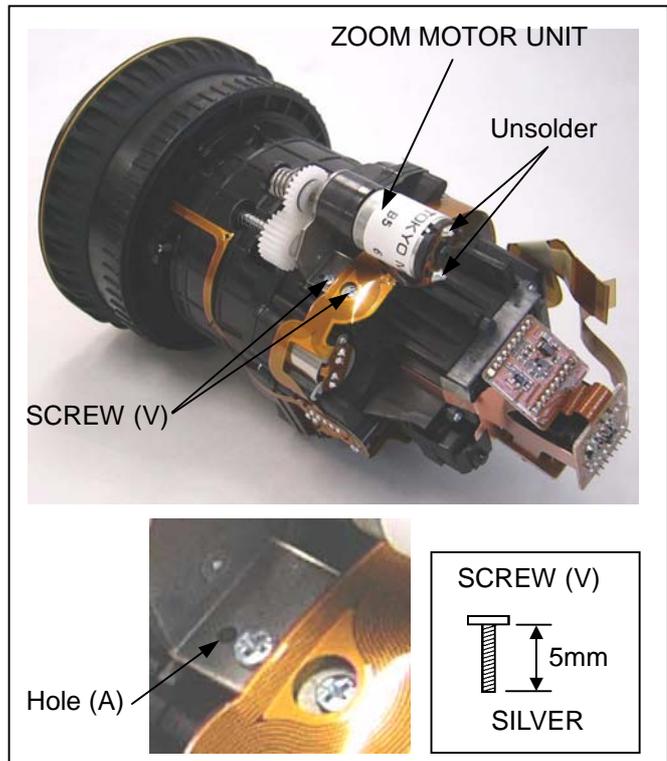
**NOTE:** When installing a Lens Unit, set the ZOOM SW to SERVO position.



## 14. Removal of Zoom Motor Unit

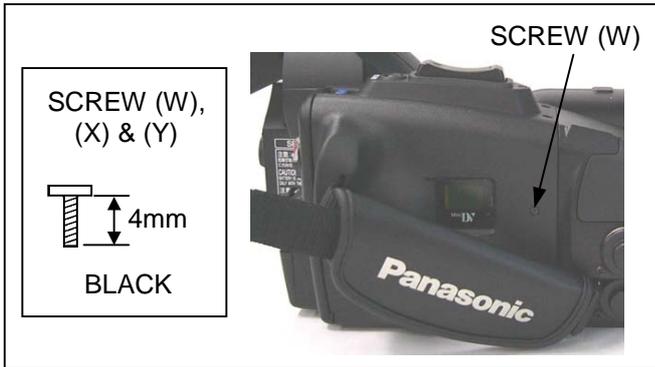
1. Remove the Lens Unit.
2. Soldering is removed on the zoom motor.
3. Unscrew the 2 screws (V) and remove the Zoom Motor Unit.

**NOTE:** Match the hole (A) and projection of Lens Unit as shown in figure and tighten the 2 screws (V) in installation of Zoom Motor Unit.

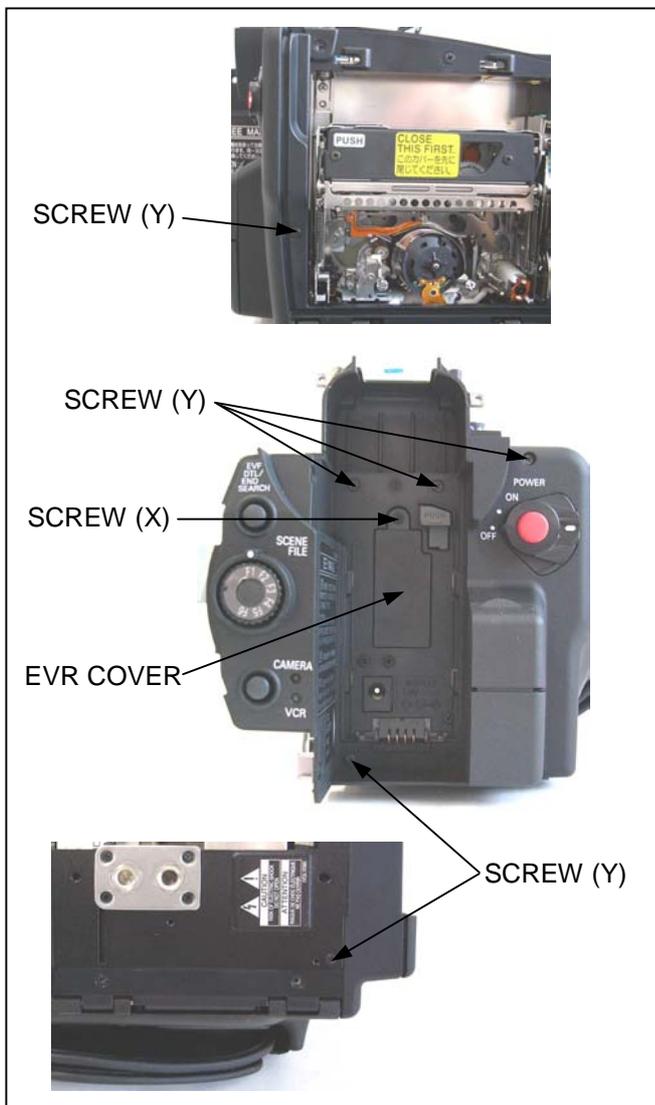


## 15. Removal of Back Case Unit

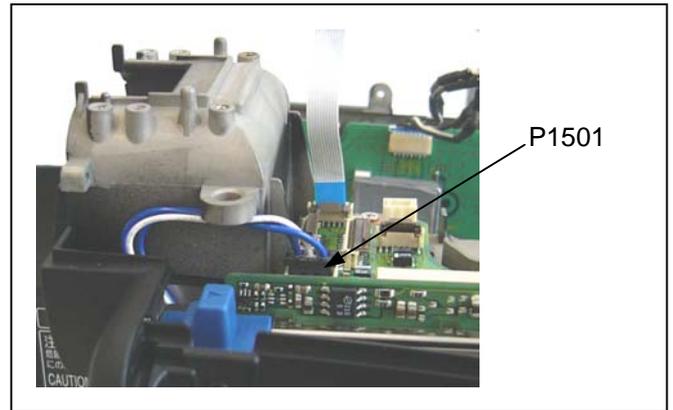
1. Remove the Side Case R S Unit.
2. Remove the CAMERA C.B.A..
3. Unscrew the screw (W) and open the cassette cover.



4. Unscrew the screw (X) and remove the EVR Cover.
5. Unscrew the 6 screws (Y).



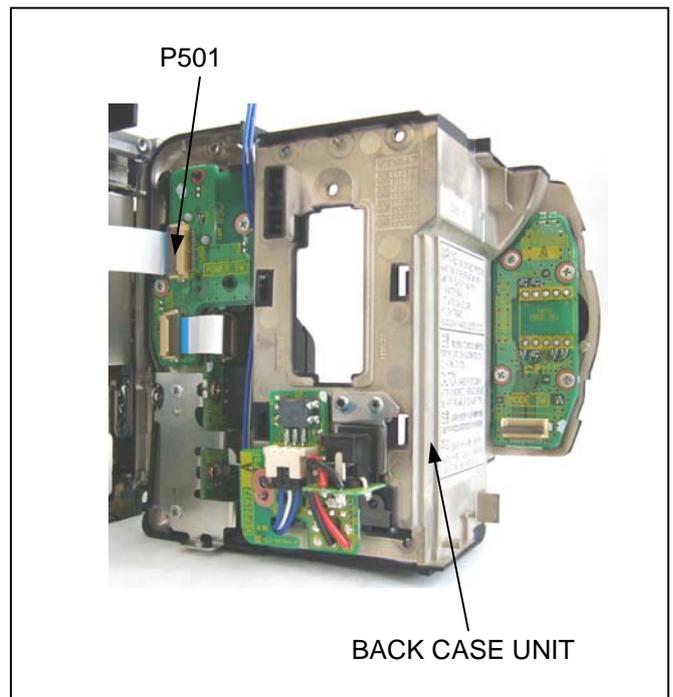
6. Disconnect a connector P1501 on VTR C.B.A..  
**NOTE: When the connector P1501 is connected on VTR C.B.A., make the condition about wire is processed as shown in figure.**



7. Disconnect a connector P152 on MODE SW C.B.A..

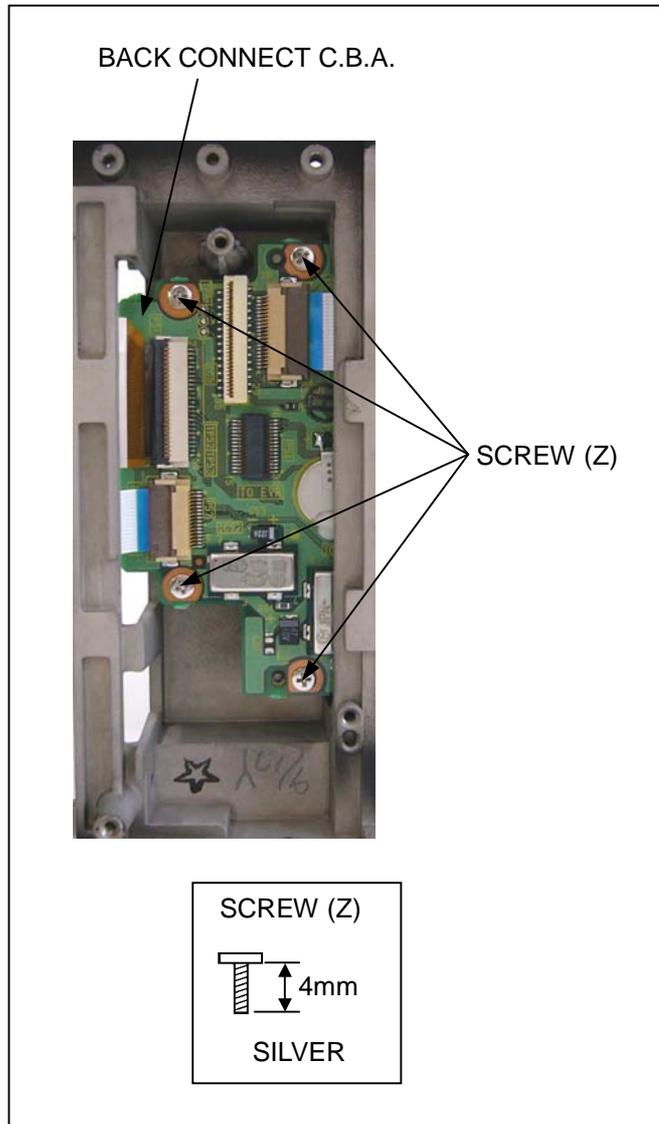


8. Disconnect a connector P1501 on POWER SW C.B.A. and remove the Back Case Unit.



## 16. Removal of BACK CONNECT C.B.A.

1. Remove the Mechanism Unit (with VTR C.B.A.).
2. Remove the Side Case R S Unit.
3. Remove the CAMERA C.B.A..
4. Remove the Back Case Unit.
5. Unscrew the 4 screws (Z) and remove the BACK CONNECT C.B.A..



# SECTION 3

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## MECHANICAL ADJUSTMENT

MODEL: AG-DVX100BP/E/AN,102BEN,DVC180BMC

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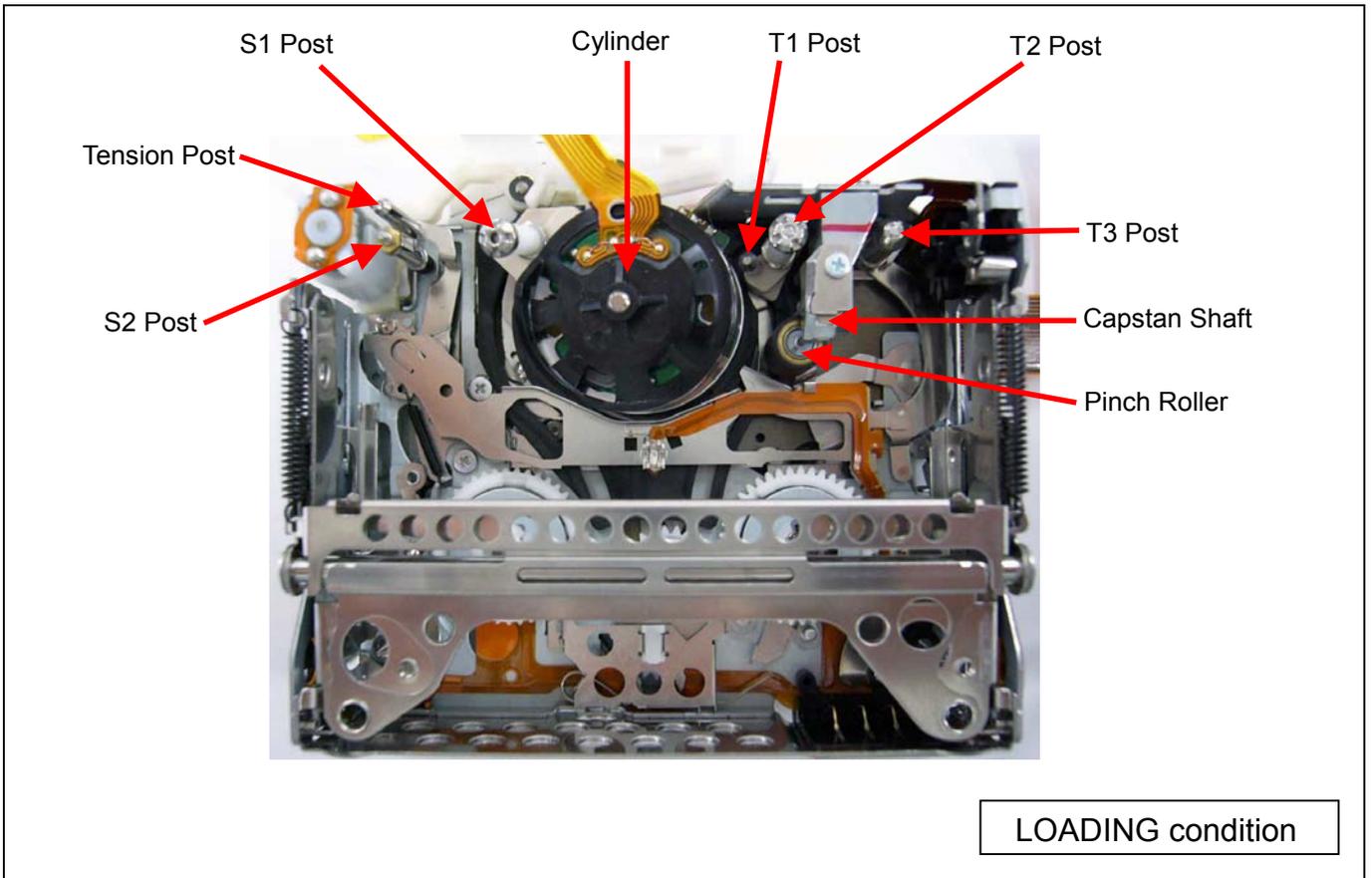
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### CONTENTS

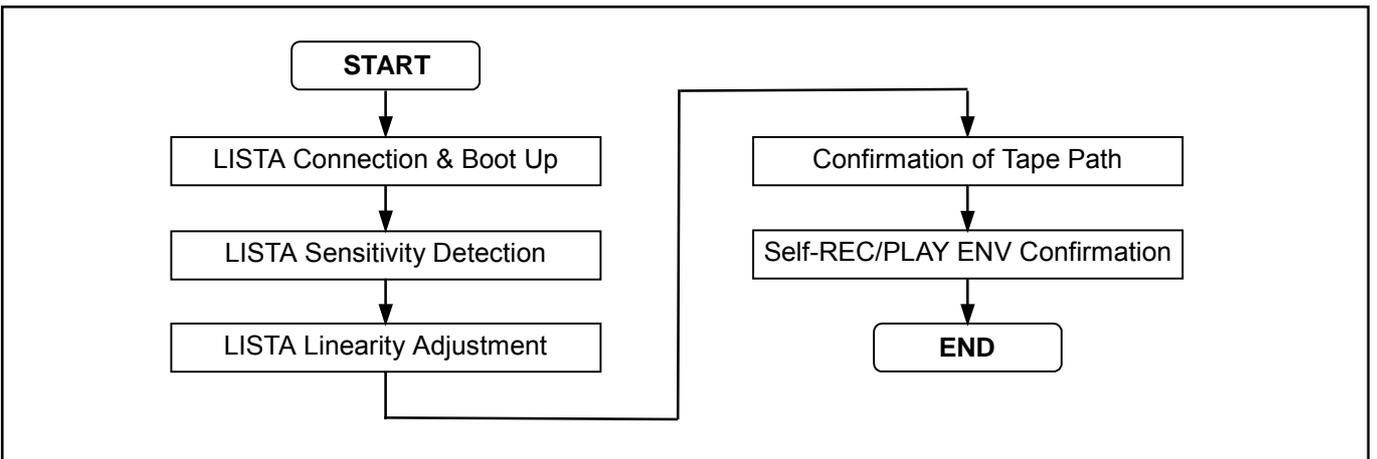
1. MECHANICAL ADJUSTMENT AND CONFIRMATION .....	MECH-1
1-1. Name of Tape Transportation.....	MECH-1
1-2. Tape Path Adjustment Procedure.....	MECH-1
1-3. Adjustment of S1 & T2 Post.....	MECH-2
1-4. Confirmation of EVR Tools .....	MECH-2
1-5. Connection of LISTA Adjustment System .....	MECH-4
1-6. Boot up the LISTA Software .....	MECH-6
1-7. How to Enter the Alignment Tape Data .....	MECH-7
1-8. LISTA Sensitivity Detection .....	MECH-8
1-9. LISTA Linearity Adjustment .....	MECH-9
1-10. Tape Path Confirmation.....	MECH-11
1-11. Self-REC/PLAY Envelope Waveform Confirmation.....	MECH-11
2. MECHANICAL PARTS REPLACEMENT PROCEDURE .....	MECH-12
2-1. Cleaning Roller Unit.....	MECH-12

# 1. MECHANICAL ADJUSTMENT AND CONFIRMATION

## 1-1. Name of Tape Transportation



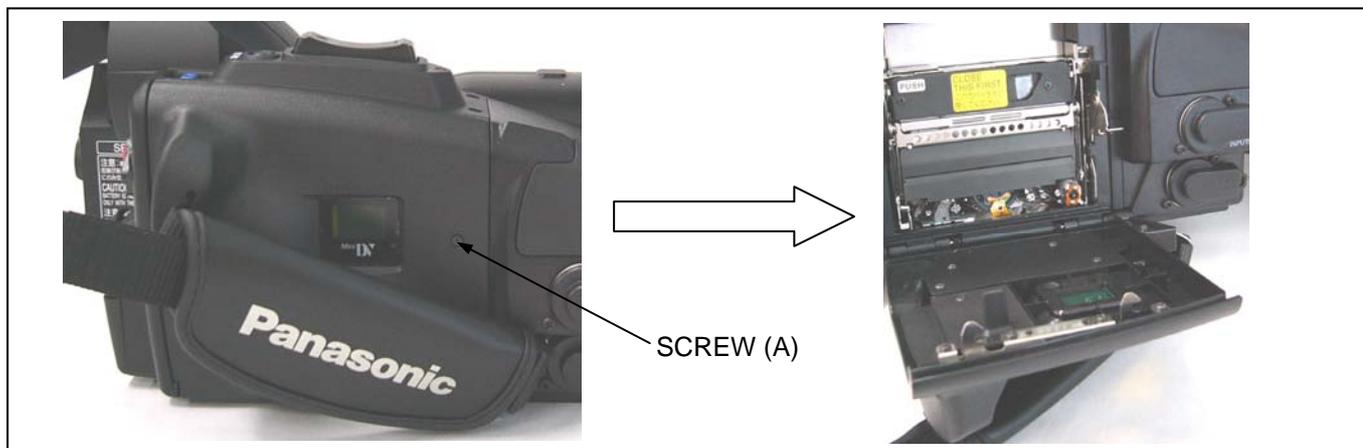
## 1-2. Tape Path Adjustment Procedure



### 1-3. Adjustment of S1 and T2 Post

LISTA linearity and Envelope waveform are adjusted by S1 and T2 post. To adjust height of S1 and T2 post, below indicated operation is required.

1. Set to VCR mode in camera recorder and open the cassette cover.
2. Insert DV tape and confirm that the camera recorder is in the loading completion condition.
3. Close the cassette cover.
4. Unscrew the screw (A) and open the cassette cover.



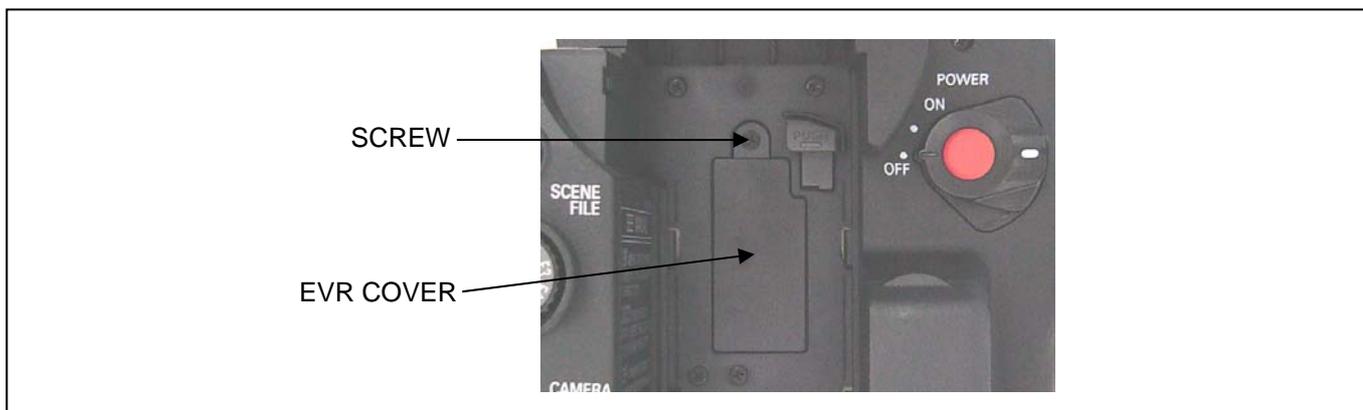
### 1-4. Connection of EVR Tools

To performing the confirmation of envelope (item "1-11. Self-REC/PLAY Envelope Confirmation"), the following tools are required.

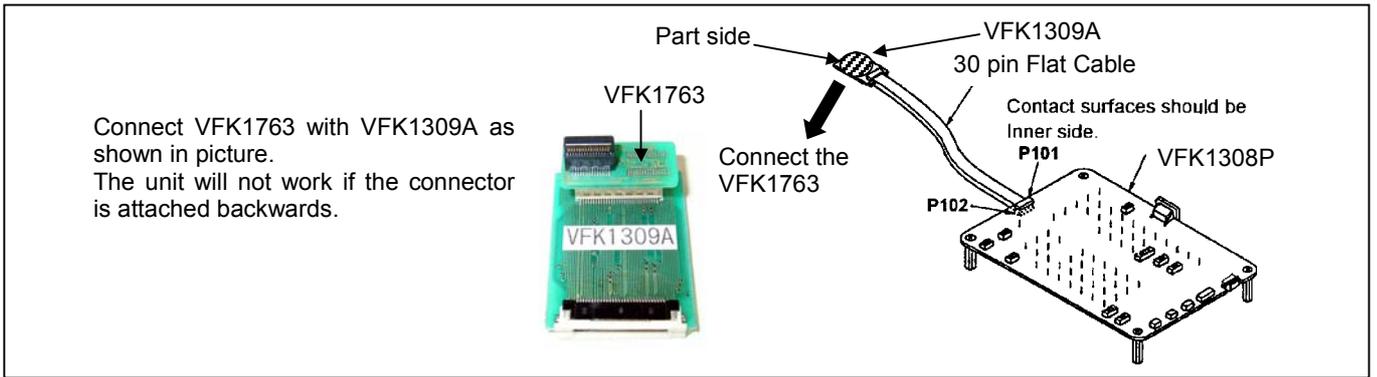
NAME	Part Number	Pcs.	Remark
Measuring Board	VFK1308P	1	
30pin Flat Cable	VFK1317	2	
EVR Connector Board	VFK1309A	1	<b>NOTE:</b> Enable to use with VFK1309
Connection Adapter	VFK1763	1	60 to 30pin
Extension Cable	VFK1982	1	
DC Cable	VJA1128 or LSJA0310	1	For DVX100B/DVX102B/DVC180MC
AC Adapter	----	1	For DVX100B/DVX102B/DVC180MC

To confirm the envelope output, connect the Connection and Measuring Boards as described below.

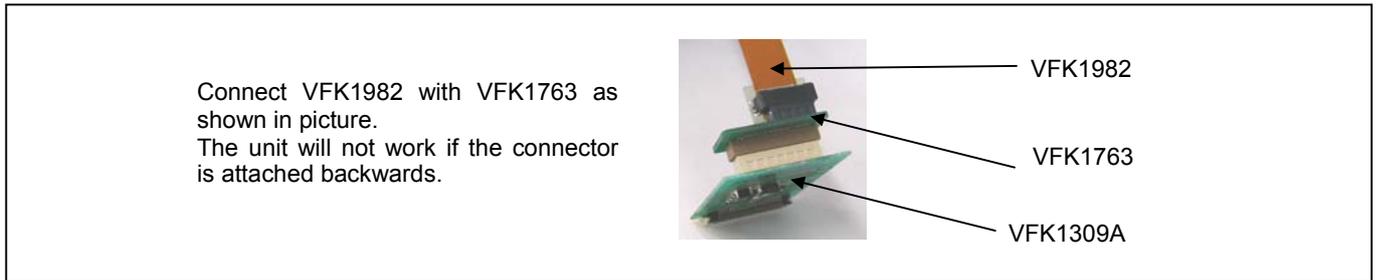
1. Loosen the screw and remove the EVR COVER.



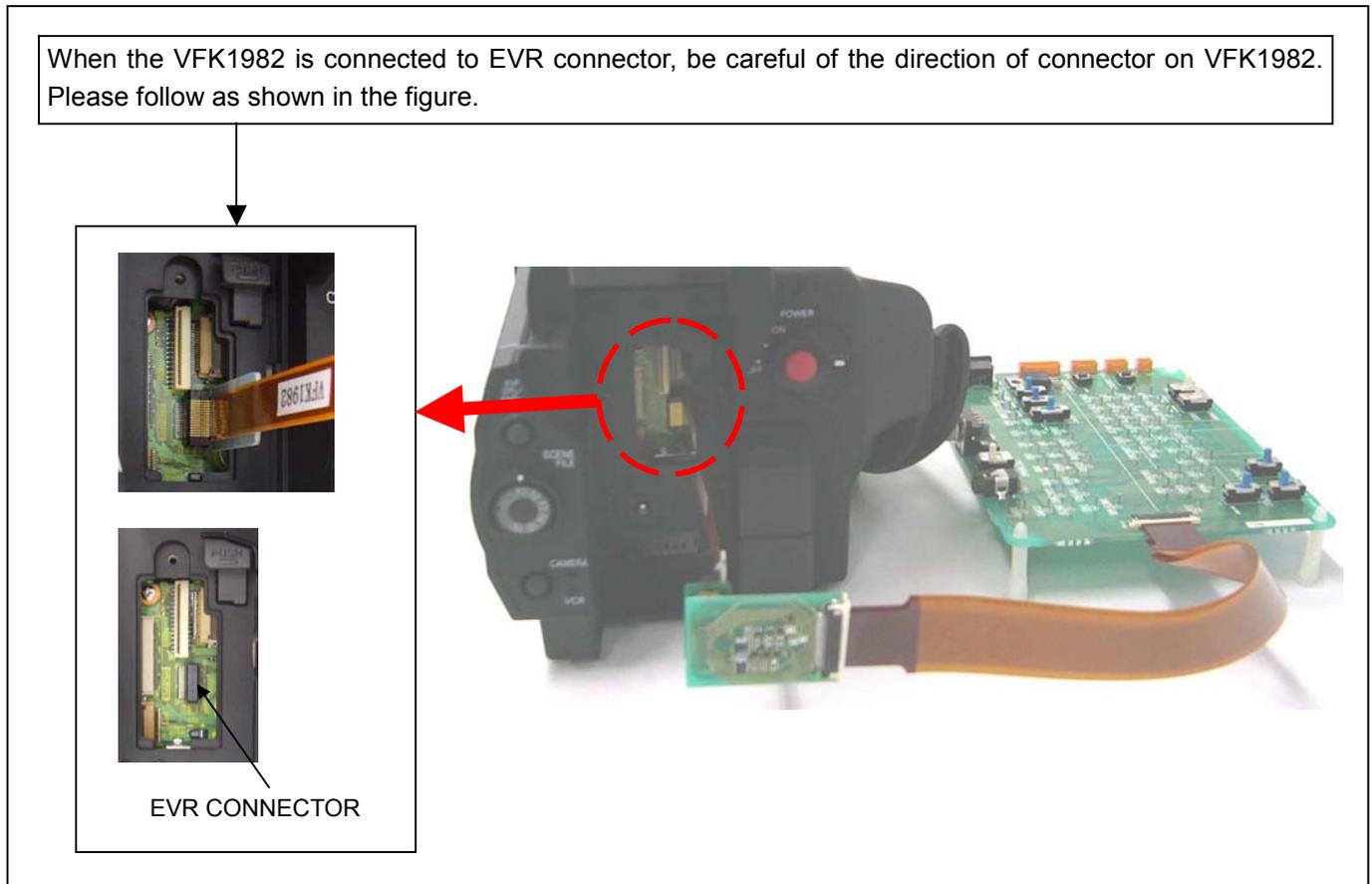
- Connect the 2 pcs. of 30 pin flat cables (VFK1317) between P101/P102 on the Measuring Board (VFK1308P), and 2 connectors on the EVR Connector Board (VFK1309A). Make sure that the contact surface of 2 pcs. of 30 pin Flat Cables are inner side and direction of the EVR Connector Board is as shown in Figure. Then connect the Connection Adapter (VFK1763).



- Connect the Extension Cable (VFK1982) to Connection Adapter (VFK1763).



- Connect the Extension Cable (VFK1982) to EVR connector in Unit. Then make sure that the direction of the VFK1982 is correct as shown in Figure.



## 1-5. Connection of LISTA Adjustment System

<b>TAPE</b>	VFM3000LS (DV LISTA)
<b>M. EQ</b>	Personal Computer (A/D Board should be installed.)
<b>TOOL</b>	VFK1481N (LISTA Software), VFK1186 (LISTA Cable), VFK1300 (A/D Converter Board), VFK1308P (Measuring Board), VFK1409A (Measuring Board) ← <b>NOTE 2</b> VFK1317 (30P flat cable): 2pcs, VFK1309A (EVR connector board) ← <b>NOTE 1</b> VFK1763 (Connection Adapter), VFK1982 (Extension Cable), VJA0941 (DC cable): 2pcs.
<b>TP</b>	In case of use VFK1409A <b>F2</b> : ATF-ERR (VFK1409A), <b>TP2</b> : TRG/HSW (VFK1409A), <b>GND</b> : GND (VFK1409A) In case of use VFK1409S <b>F2</b> : ATF-ERR (VFK1409S), <b>TP2</b> : TRG/HSW (VFK1810), <b>GND</b> : GND (VFK1409S)

### NOTE 1:

Enable to use with VFK1309.

### NOTE 2:

If you already have VFK1409S (Measuring board), it can be used to perform LISTA adjustment with VFK1810. Please refer to next explanation for installation of VFK1409S.

**VFK1409S**

Red colour of Lead wire

TP2

**VFK1810**

TP1

Black colour of Lead wire

1. Install the two test points of VFK1810 to through hole in this area and solder it at test point at foil side of VFK1409S to fixed VFK1810.
2. Insert the two lead wires of VFK1810 to through hole.
3. Solder the red color of lead wire to pin1 of P108 on foil side on VFK1409S.
4. Solder the black color of lead wire to pin3 of P106 on foil side on VFK1409S.

1. Set the switches on the Measuring Board as shown below.

### <VFK1308P>

SW NAME& No.	Setting Position
RS232C SEL (SW101)	D-SUB
VTR TEST (SW103)	L
BST TEST (SW104)	NORMAL
SW105	H
SW106	OFF
SW107	CENTER position
SW108	H
FLUSH1 (SW102)	NORMAL
FLUSH2 (SW109)	NORMAL

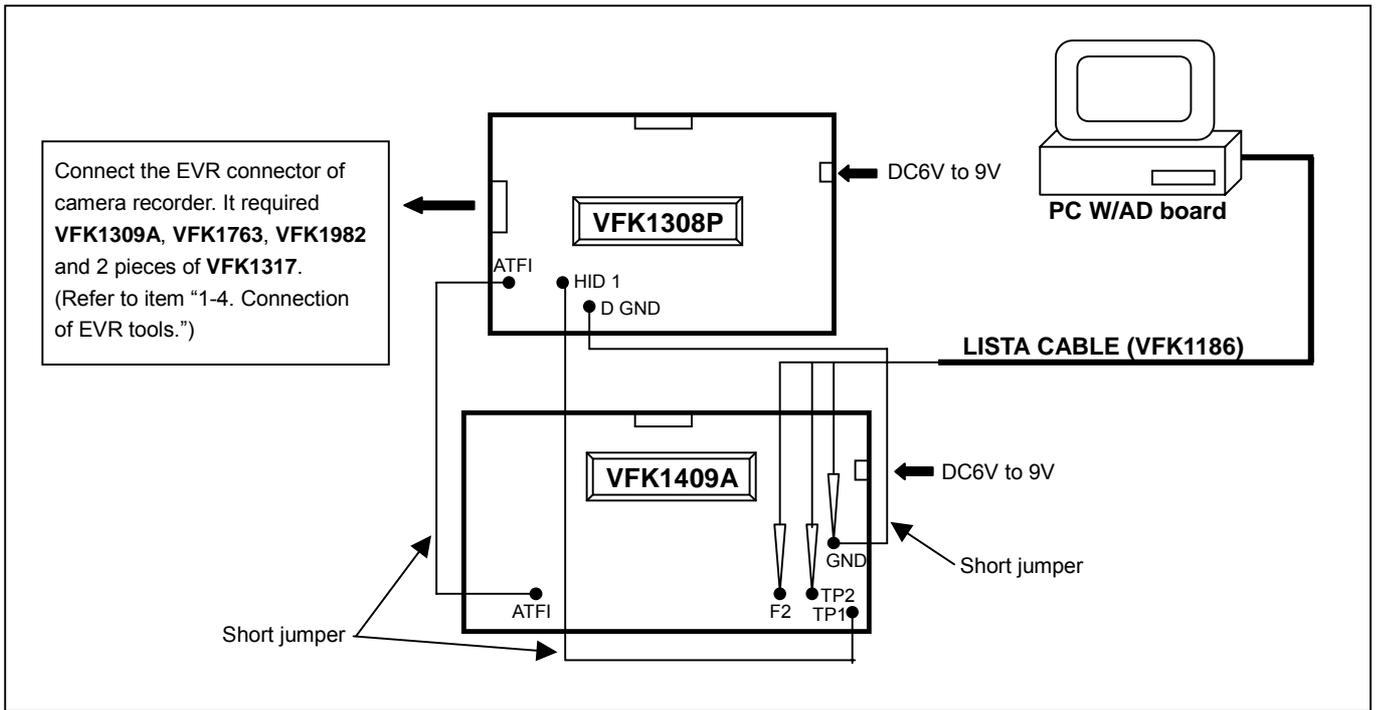
### <VFK1409S or VFK1409A>

SW NAME& No.	Setting Position
RS232C SEL (S110)	D-SUB
REC I (S101)	NOR
LSI TEST (S102)	NOR
S104	NOR
S114	EXT
S201	Right side
S202	Right side
S203	Right side
LISTA ON-OFF	ON

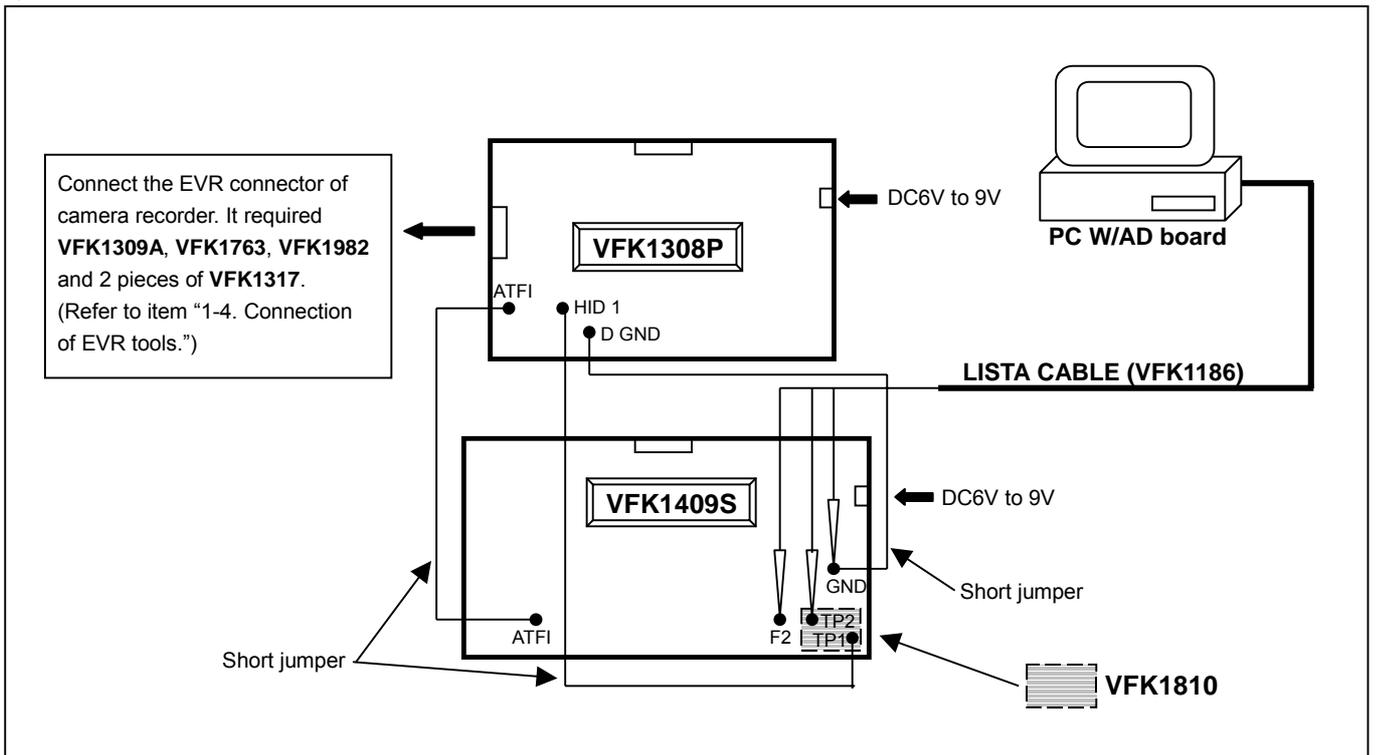
2. Connect a PC, the Measuring Board and the camera recorder as shown below.

**<CONNECTION>**

1) In case of use VFK1409A



2) In case of use VFK1409S



3. Connect the clips of the LISTA cable to test point on the Measuring Board. (Refer to Items "Sensitivity Detection" and "Linearity Adjustment".)

## 1-6. Boot up the LISTA Software

1. Boot up the LISTA software on DOS mode.

### < How to Install and Boot Up >

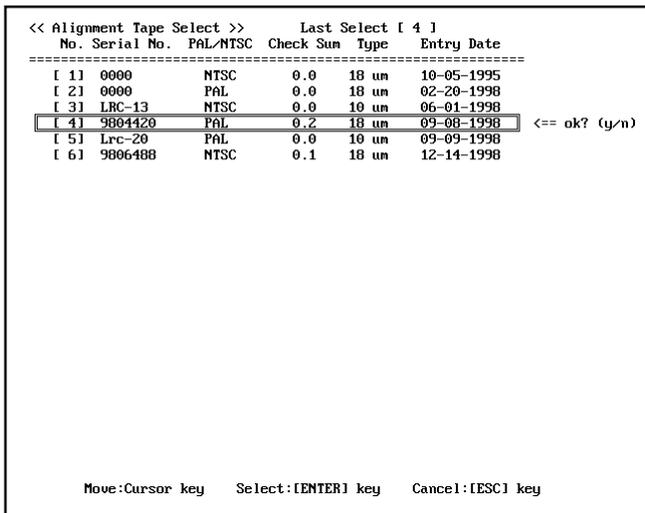
Make a directory like C: LISTA and copy all files in the VFK1481N(LISTA Software) to it on PC.  
Type "LISTA" and press **ENTER** key, then boot up the LISTA software VFK1481N.

2. After boot up the LISTA software, <<< **FORMAT SELECT** >>> display appears. Select the item "DV".  
After select the format, <<< **VTR SELECT** >>> display appears, and select the model "AG-DVC200".

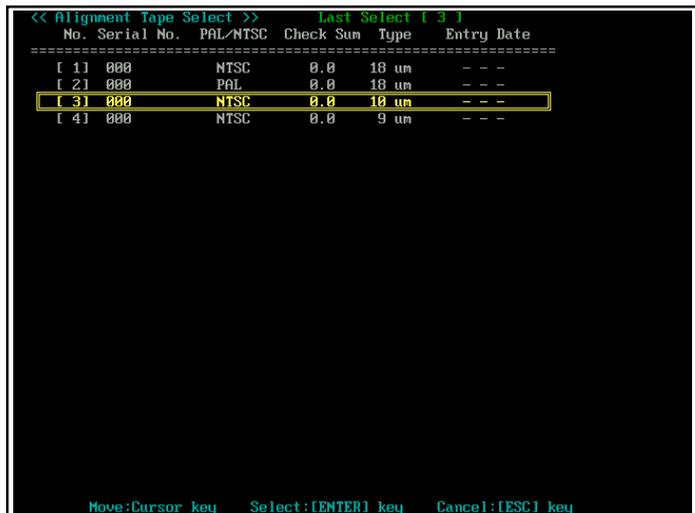


3. Next, select the Serial number of the Alignment tape on the screen. In case of LISTA software is not entered with data of alignment tape, press the ESC key, then main menu is displayed on the screen. And select the item "<4> **Alignment Tape**" for entry the data on the attachment sheet, which is enclosed with alignment tape.
4. In case of LISTA software has entered data of alignment tape, select the serial number of Alignment tape, then message appears "ok? (y/n)" on the screen. And press "Y" or "ENTER" key, then LISTA main menu is displayed on screen.

### < In case of Alignment Tape entered already >



### < In case of Alignment Tape does not entered >



## 1-7. How to Enter the Alignment Tape Data

1. Select the item “<4> Alignment Tape” on the LISTA main menu.
2. Select the item “<2> ENTRY” on the alignment menu.
3. After the screen displays the screen of <<Alignment Tape Data Entry>>, first input the Serial Number follow the printed number on the tape label. And input the number “0” or “1” for selected the PAL/NTSC. And after that enter the tape type, input “0” for DVCPRO, input “1” for DV or input “2” for HDLP.
4. After selecting the tape type, the frame for inputting the DATA and CHECK SUM appears on the screen. Input the numerical value in numerical order on the data sheet, which is enclosed with alignment tape. If the wrong number is inputted, the error message on the screen, then confirm that data on the sheet.
5. After the data entry, the screen returns to “LISTA MAIN” menu. Confirm the serial number of the alignment tape.

<< Alignment Tape Data Entry >>

Serial No. Lrc-20 (NTSC) 10μm

[1]	- 0.1
[2]	0.1
[3]	0.0
[4]	0.2
[5]	0.6
[6]	0.5
[7]	0.7
[8]	0.9
[9]	1.0
[10]	0.8

[11]	0.7
[12]	1.0
[13]	0.7
[14]	0.5
[15]	0.2
[16]	- 0.5
[17]	- 0.3
[18]	- 0.3
[19]	- 0.1
[20]	- 0.6

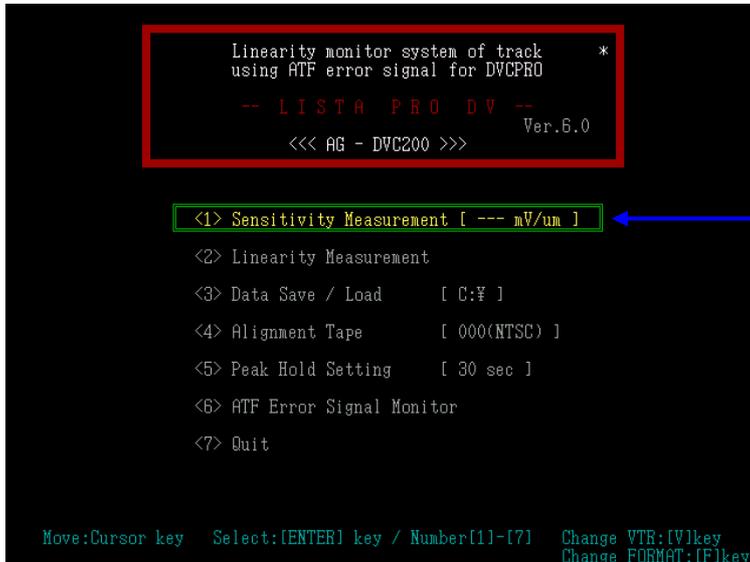
[21]	- 0.4
[22]	- 0.2
[23]	- 0.7
[24]	- 0.6
[25]	- 0.7
[26]	- 0.3
[27]	- 0.4
[28]	- 0.4
[29]	- 0.6
[30]	- 0.3

[31]	- 0.4
[32]	- 0.6
[33]	- 0.3
[34]	- 0.2
[35]	- 0.1
[36]	- 0.3
[37]	- 0.1
[CS]	- 0.6

**NOTE:** This is sample only, you must enter information from your alignment tape. Each tape is different.

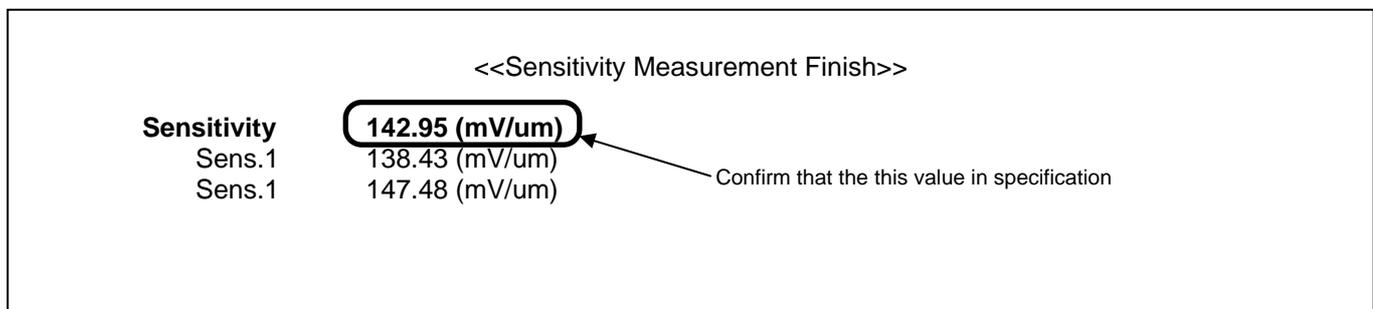
## 1-8. LISTA Sensitivity Detection

<b>TP</b>	In case of use VFK1409A <b>F2</b> : ATF-ERR (VFK1409A), <b>TP2</b> : TRG/HSW (VFK1409A), <b>GND</b> : GND (VFK1409A) In case of use VFK1409S <b>F2</b> : ATF-ERR (VFK1409S), <b>TP2</b> : TRG/HSW (VFK1810), <b>GND</b> : GND (VFK1409S)
<b>VTR MODE</b>	PLAY
<b>ADJ. MODE</b>	Refer to below explanation
<b>TAPE</b>	VFM3000LS (DV LISTA)
<b>SPEC.</b>	70 mV / $\mu$ m to 170 mV / $\mu$ m



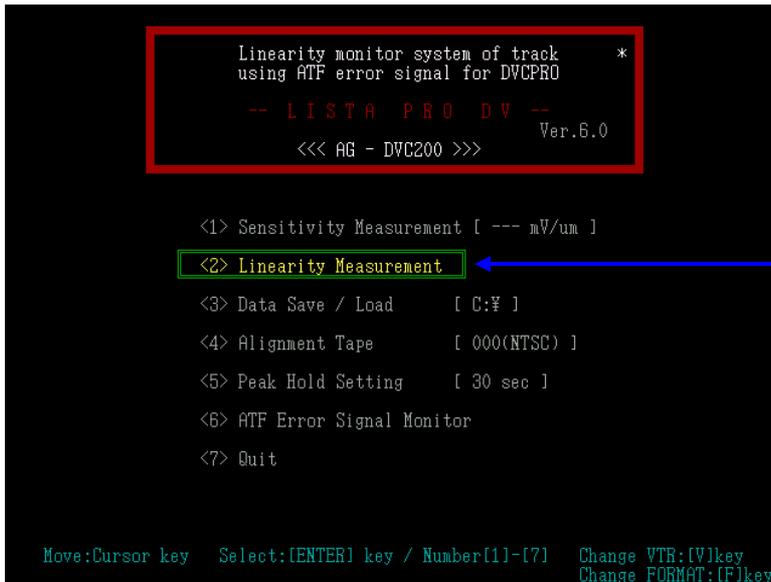
Select at Sensitivity Detection.

1. Set the camera recorder to VCR mode.
2. Insert the DV Alignment Tape (VFM3000LS) to the camera recorder.
3. Press the button in order of “**ADUB button**” → “**STOP button**” → “**MODE CHK button**” → “**MENU button**”, to open the “**VCR FUNCTION MENU**”.
4. Select the item “**ADJUST MENU**” and press the SET(STILL) button to open the “**ADJUST MENU**”.
5. Select the item “**ATF GAIN**” and press the SET(STILL) button.
6. Select the item “**ON**” and press the SET(STILL) button, then message “**NOW SERVO ADJUST PUSH MENU TO RETURN**” appears on screen and press the PLAY button to playback the tape.
7. Select item “**<1> Sensitivity Measurement**” on the LISTA main menu, and press “**ENTER**”.
8. Then the tape is played back (tape speed : 101.2%) automatically, and message “**1.2% Speed...**” appears on the screen.
9. Press the ENTER key, and then start measurement of the sensitivity value.
10. Confirm that the sensitivity value is with in specification, after the message “**<<Sensitivity Measurement Finish>>**”.



## 1-9. LISTA Linearity Adjustment

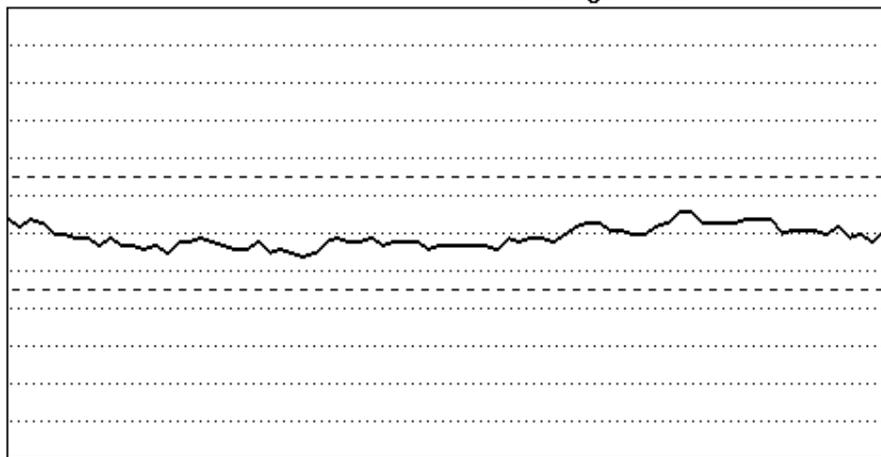
<b>TP</b>	In case of use VFK1409A <b>F2</b> : ATF-ERR (VFK1409A), <b>TP2</b> : TRG/HSW (VFK1409A), <b>GND</b> : GND (VFK1409A) In case of use VFK1409S <b>F2</b> : ATF-ERR (VFK1409S), <b>TP2</b> : TRG/HSW (VFK1810), <b>GND</b> : GND (VFK1409S)
<b>ADJ.</b>	S1 and T1 Post Height
<b>VTR MODE</b>	PLAY
<b>ADJ. MODE</b>	Refer to below explanation
<b>TAPE</b>	VFM3000LS (DV LISTA)
<b>TOOL</b>	VFK1899 : Post Driver
<b>SPEC.</b>	Linearity : less than 3 $\mu$ m



Select at Linearity Measurement.

1. Set the camera recorder to VCR mode.
2. Insert the DV Alignment Tape (VFM3000LS) to the camera recorder.
3. Open the cassette cover follow the item “1-3. Adjustment of S1 and T2 Post” in this section.
4. Press the button in order of “ADUB button” → “STOP button” → “MODE CHK button” → “MENU button”, to open the “VCR FUNCTION MENU”.
5. Select the item “ADJUST MENU” and press the SET(STILL) button to open the “ADJUST MENU”.
6. Select the item “LINEARITY” and press the SET(STILL) button.
7. Select the item “ON” and press the SET(STILL) button, then message “NOW SERVO ADJUST PUSH MENU TO RETURN” appears on screen and press the PLAY button to playback the tape.
8. Select item “<2> Linearity Measurement” on the LISTA main menu, and press “ENTER”, then the Linearity Waveform appears.
9. When the waveform as shown in figure below is displayed on the screen, press the “BS (Back Space)” key for display the waveform positioned at the center of the scale on screen. Adjust S1 and T1 post height by using the post driver so that the linearity waveform is becomes flat as possible, and it should be within specification. (Adjust linearity waveform in the red dot line on the screen.)

Average : 16 1um/div



Adjust Linearity into this area.

Centering --> [BackSpace]  
Peak Hold on/off --> [SPACE]  
Average( 64) --> [ENTER]  
Exit --> [ESC]

**POINT :**

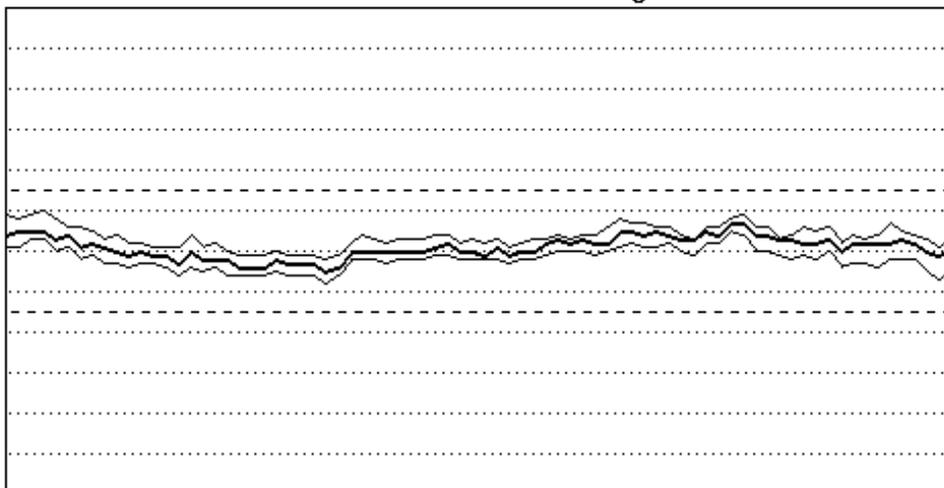
The left side of the waveform (entrance side) is adjusted by the height of S1 post and the right side of the waveform (exit side) is adjusted by the height of T2 post.

When the post driver is removed from upper part of post, linearity waveform is changed.

After finishing this adjustment, eject the tape and insert the tape again to confirm that the shape of the linearity waveform has not changed.

10. Press “SPACE” key to perform the Peak Hold in 30 seconds when linearity is displayed.
11. After finishing the Peak Hold, press “SHIFT” and “}” key simultaneously on the Key Board, then the numerical values of “Linearity” and “Waving” is displayed on left lower portion of screen. And confirm the numerical value of “Linearity” is in the specification. If the “Linearity” is out of specification, adjust height of S1 and T1 post.
12. After this measurement is finished, press the ESC key to return to the main menu.

Average : 64 1um/div



Confirm this value

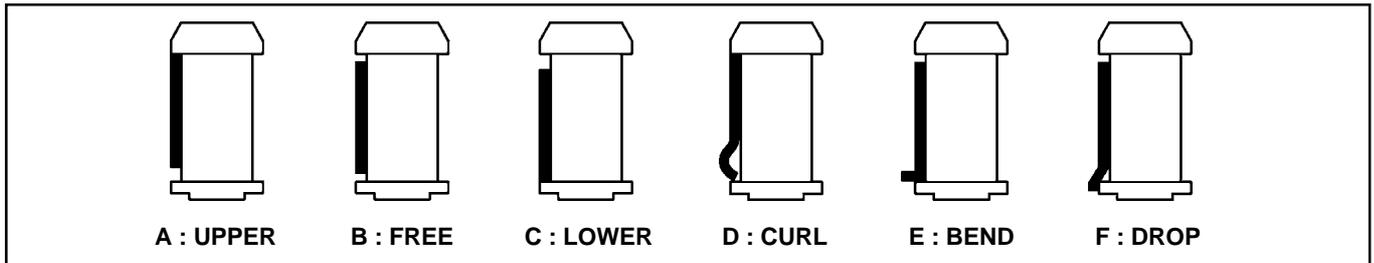
Linearity: 1.2 um  
Waving : 0.9 um

MENU --> [ESC]

## 1-10. Tape Pass Confirmation

1. Insert the Blank tape to the camera recorder.
2. Open the cassette cover follow the item "1-3. Adjustment of S1 and T2 Post" in this section.
3. Play back the Blank tape and confirm that the tape passes without curling at the upper and lower guides of the following posts in the Play modes as shown in below table.

Post Name	Tape limit (refer to figure)					
	A	B	C	D	E	F
S1 post	NG	NG	OK	NG	NG	NG
S2 post	OK	OK	NG	NG	NG	NG
T2 post	OK	NG	NG	NG	NG	NG
T3 post	NG	OK	OK	NG	NG	NG



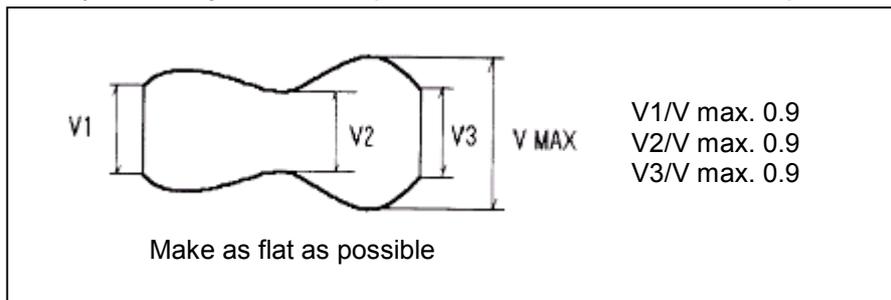
4. Confirm that the tape damage does not occur on tape at S1, T1 and T2 post by loading and unloading.
5. If curl and tape damage occurred at S1 and T2 post, adjust height of post by post driver.

## 1-11. Self-REC/PLAY Envelope Waveform Confirmation

1. Connect the EVR tools (refer to item "1-4. Connection of EVR Tools").
2. Connect the oscilloscope to the Measuring Points [ENVELOPE] and [HID] as a trigger on the Measuring Board (VFK1308P).

**NOTE: Please use [D GND] as GND of probe, when you connect [ENVELOPE].**

3. Record a color bar signal.
4. Play back the just recorded portion and confirm that the envelope is within the following specifications.



5. Confirm that the envelope is within the following specification, when the mode is changed as follows.  
 STOP→PLAY: Envelope appears completely within 2 seconds and stable.  
 REV→PLAY : Envelope appears completely within 2 seconds.
6. Confirm that the shape of envelope is diamond style.
7. If it is out of the specification, adjust height of the S1 and T2 Post. Then open the cassette cover follow the item "1-3. Adjustment of S1 and T2 Post" in this section.

## 2. MECHANICAL PARTS REPLACEMENT PROCEDURE

### 2-1. Cleaning Roller Unit

#### (Removal)

1. Remove the Mechanism Unit.
2. Unscrew the 2 screws (A) and (B), then remove the Cleaning Roller Unit.

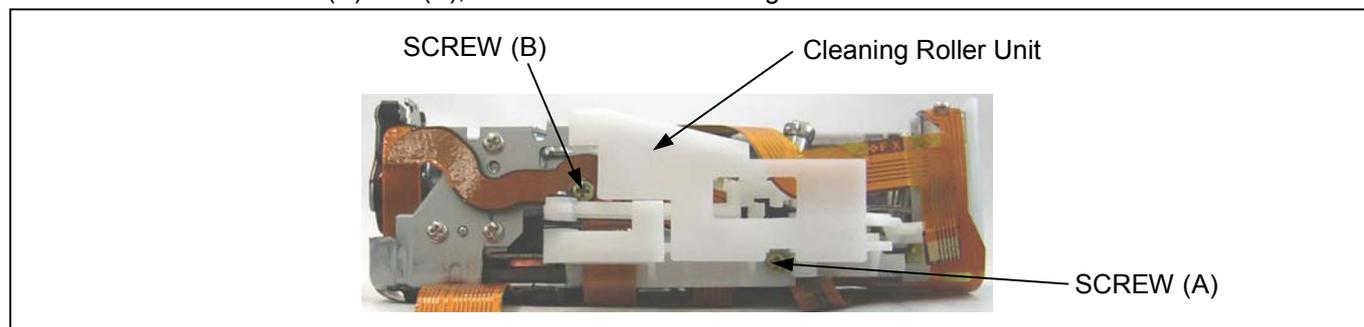


Figure A

#### (Installation)

1. Hook the portion (B) of Cleaning Roller Unit to portion (A) of Mechanism Chassis and install the Cleaning Roller Unit. Then be careful the Release Arm does not run onto the part at end of sub chassis (C) as shown in figure B.

**NOTE:** Supply the voltage to loading motor and the Cleaning Roller Unit is installed in the mechanical position as shown in figure (B) to simple installation (No problem it installation in loading complete position).

2. Tighten the Screw (A) and (B) as shown in figure A. When tighten the screw (B), flexible cable also tighten up together as shown in figure A.

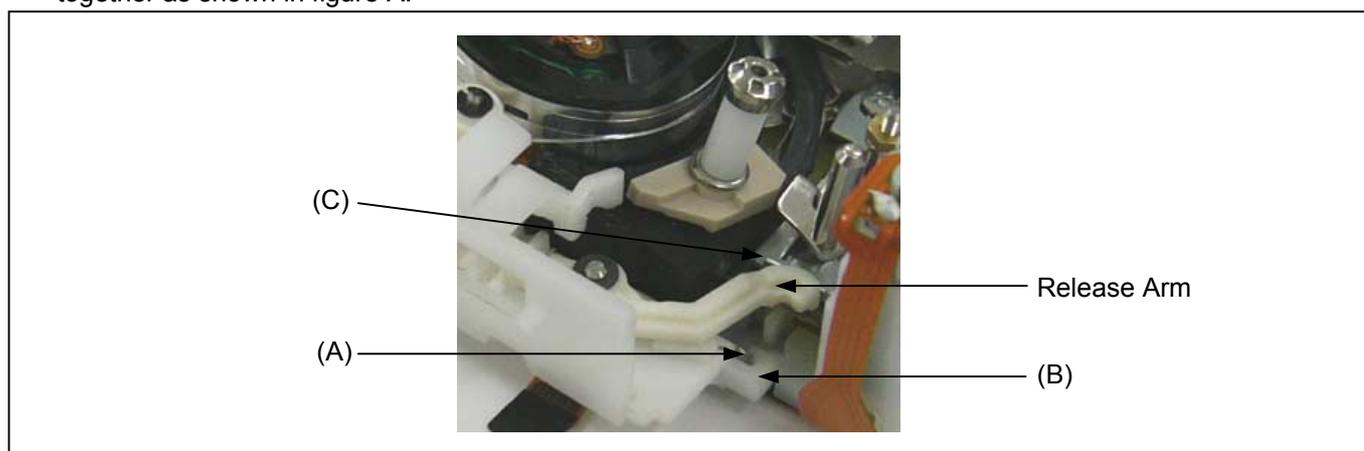


Figure B

#### (Confirmation of Operation)

1. To confirm that the Cleaning Roller operates normally on the Mechanism Unit, supply the voltage to loading motor and confirm that the Cleaning Roller touches the Cylinder in loading operation.

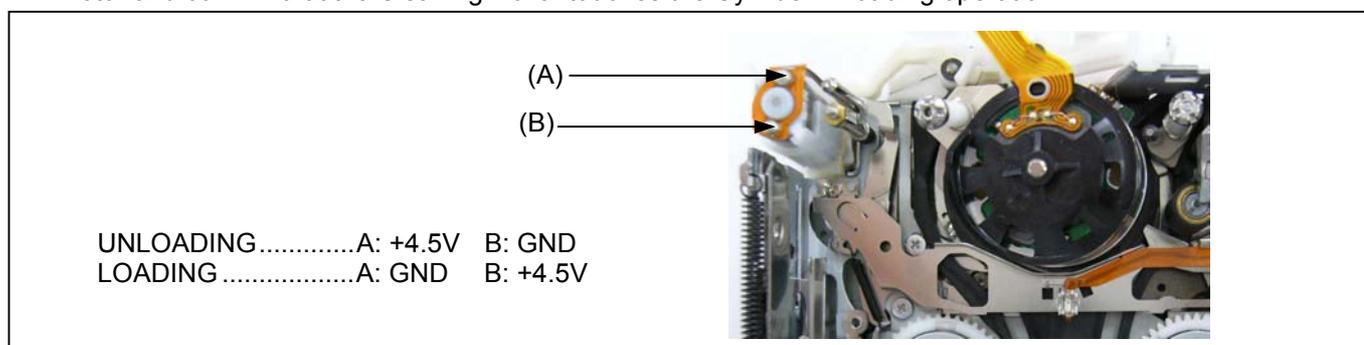


Figure C

# SECTION 4

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## ELECTRICAL ADJUSTMENT

MODEL: AG-DVX100BP/E/AN,102BEN,DVC180BMC

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# 1. REQUIRED TOOLS AND EQUIPMENT

## 1-1. Required tools and equipment for each adjustment items.

Below indicated tools are required to perform each adjustment in addition to tools in introduced in item1-2.

Adjustment	Item	Required Tool	Remark	
CAMERA	Zoom SW center value	Unnecessary		
	Hall Amp (Auto)	Unnecessary		
	Iris PWM (Auto)	Unnecessary		
	OISu (Auto)	Unnecessary		
	Zoom Tracking (Auto)	72mm Attachment Ring (VFK1809)		
		43mm Attachment Ring (VFK1164TAR43)		
		Collimator Set (VFK1164TCM01)		
		Halogen lamp		
	White Balance (3100K) (Auto)	Halogen lamp & Grayscale chart		
		Color Pyrometer & Lux Meter		
	White Balance (5100K) (Auto)	CC filter (LB120) (VFK1347)		
		CC filter (LBA2) (VFK1884)		
		CC filter (LBB6) (VFK1888)		
		72mm Attachment Ring (VFK1809)		
		CC Filter Holder (VFK1345)		
		Step-down Ring (62mm-52mm) (VFK1346)		
		Step-up Ring (43mm-49mm) (VFK1659)		
		Step-up Ring (49mm-62mm) (VFK1660)		
		Halogen lamp & Grayscale chart		
		Color Pyrometer & Lux Meter		
	White Balance (4500K) (Auto)	CC filter (LB120) (VFK1347)		NTSC model only
		CC filter (LB80) (VFK1342)		PAL model only
		CC filter (CC C20) (VFK1887)		PAL model only
		72mm Attachment Ring (VFK1809)		
		CC Filter Holder (VFK1345)		
		Step-down Ring (62mm-52mm) (VFK1346)		
		Step-up Ring (43mm-49mm) (VFK1659)		
		Step-up Ring (49mm-62mm) (VFK1660)		
		Halogen lamp & Grayscale chart		
		Color Pyrometer & Lux Meter		
	White Balance (3600K) (Auto)	CC filter (LB40) (VFK1341)		NTSC model only
		CC filter (LBB2) (VFK1885)		NTSC model only
		CC filter (CC C10) (VFK1886)		PAL model only
72mm Attachment Ring (VFK1809)				
CC Filter Holder (VFK1345)				
Step-down Ring (62mm-52mm) (VFK1346)				
Step-up Ring (43mm-49mm) (VFK1659)				
Step-up Ring (49mm-62mm) (VFK1660)				
Halogen lamp & Grayscale chart				
Color Pyrometer & Lux Meter				
CCD White scratch damage revision (Auto)	Unnecessary			
White Shading (Auto)	Halogen lamp			
VTR	Sensitivity adj. of tape sensors (Auto)	Unnecessary		
	PG Shifter (Auto)	Oscilloscope		
		DV Color bar Alignment Tape (VFM3010EDS)	NTSC model only	
		DV Color bar Alignment Tape (VFM3110EDS)	PAL model only	
	Luminance Level	Waveform Monitor	NTSC model only	
		Oscilloscope	PAL model only	
Chroma Level	Waveform Monitor	NTSC model only		
	Oscilloscope	PAL model only		

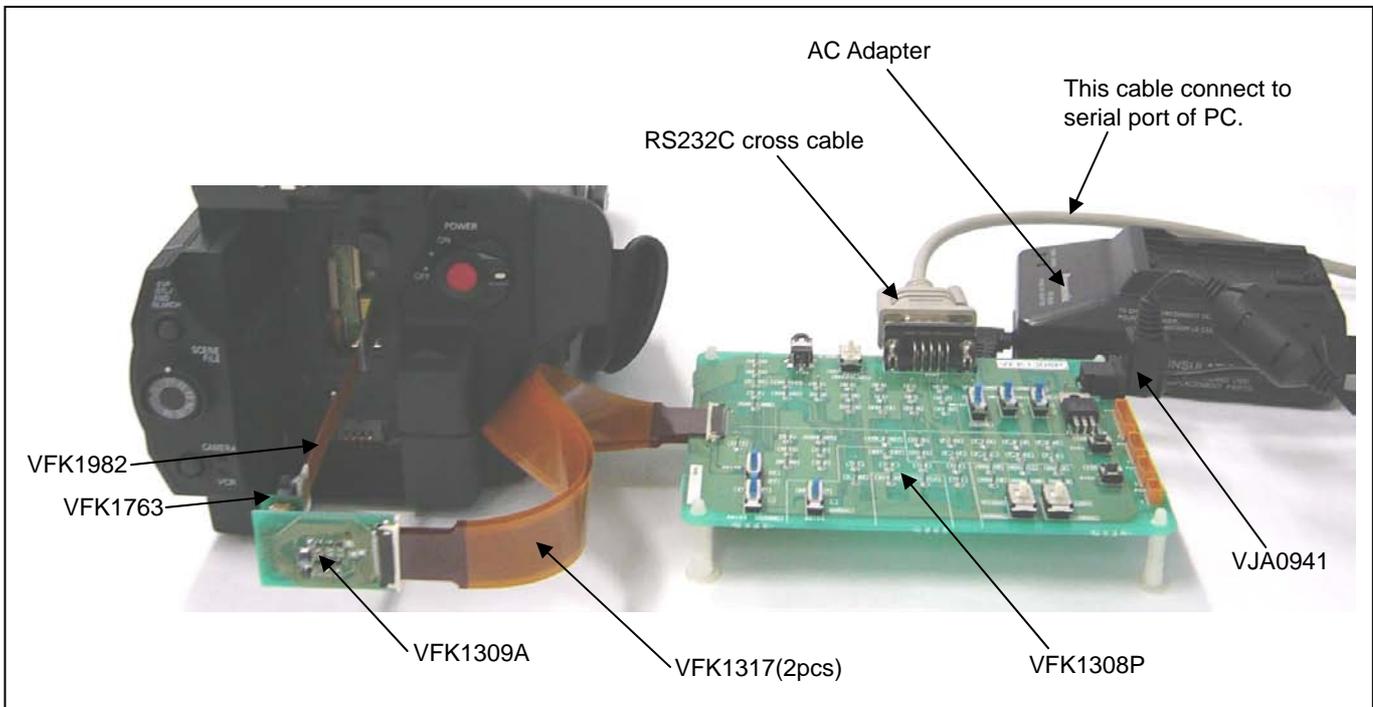
## 1-2. Required tools and equipment for PC EVR software

When performing the PC EVR electrical adjustment, the following tools are required.

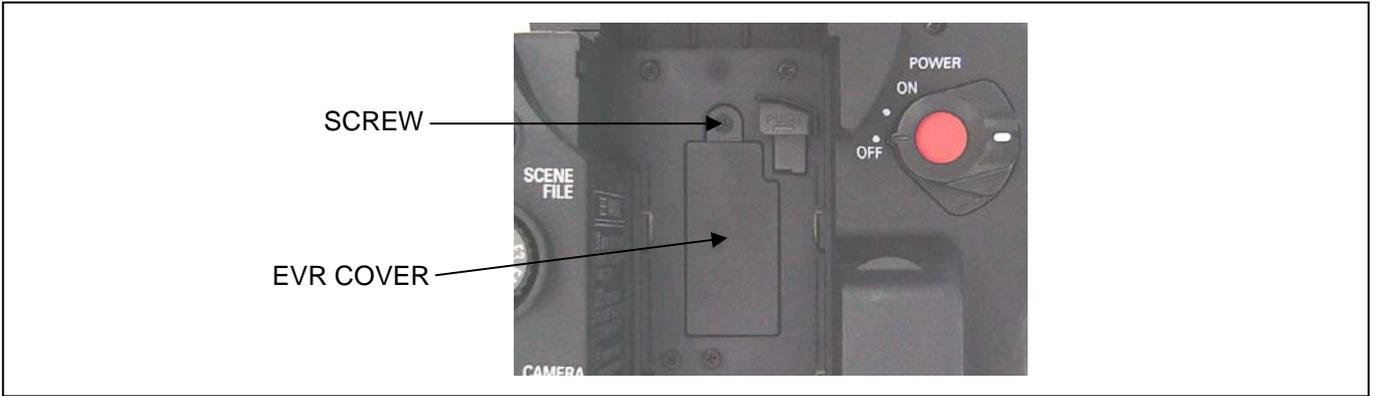
NAME	Part Number	Pcs.	Remark
PC EVR Software	VVS0025	1	Download from the Global Service WEB site.
Measuring Board	VFK1308P	1	
EVR Connector Board	VFK1309A	1	Enable to use with VFK1309
30pin Flat Cable	VFK1317	2	
Connector Adapter	VFK1763	1	60 to 30pin
Extension Cable	VFK1982	1	
DC Cable	VJA1128 or LSJA0310	1	For Measuring Board
DC Cable	VJA0941	1	For DVX100B/DVX102B/DVC180MC
9pin RS232C cross cable	---	1	
AC Adapter	---	2	
Personal Computer	---	1	<b>*NOTE:</b>

\*OS: WINDOWS XP SP2

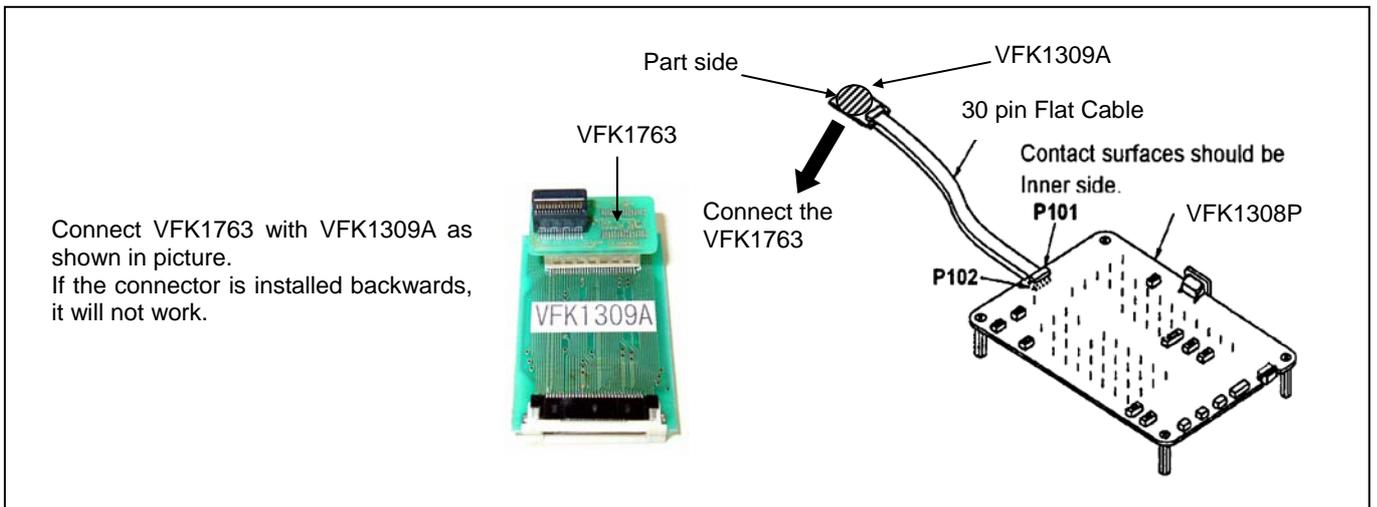
## 2. CONNECTION



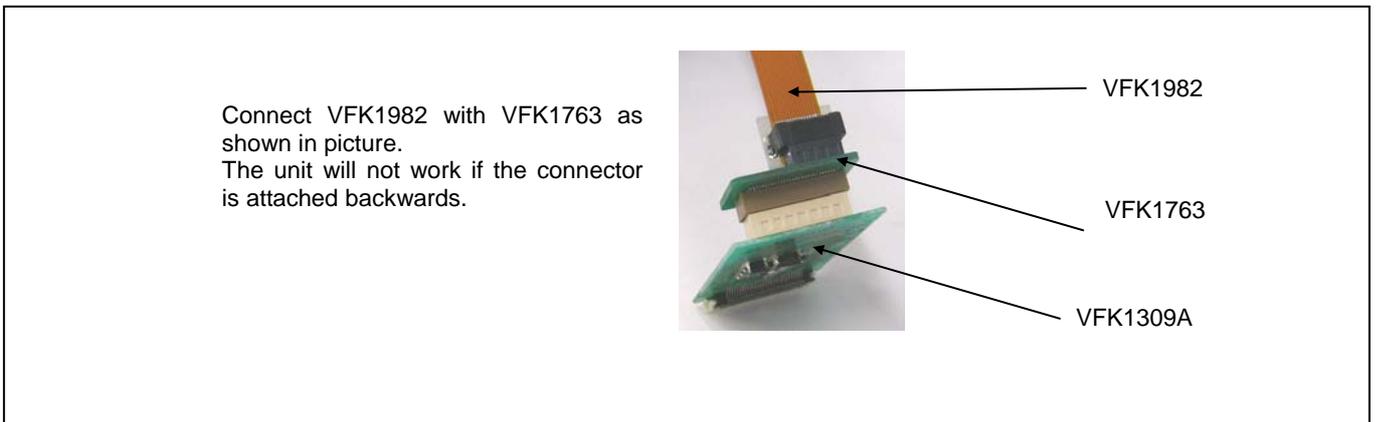
1. Loosen the screw and remove the EVR cover.



2. Connect the 2 pcs. of 30 pin flat cables (VFK1317) between P101/P102 on the Measuring Board (VFK1308P), and 2 connectors on the EVR Connector Board (VFK1309A). Make sure that the contact surface of 2 pcs. of 30 pin Flat Cables are inner side and direction of the EVR Connector Board is as shown in Figures. Then connect the Connection Adapter (VFK1763).

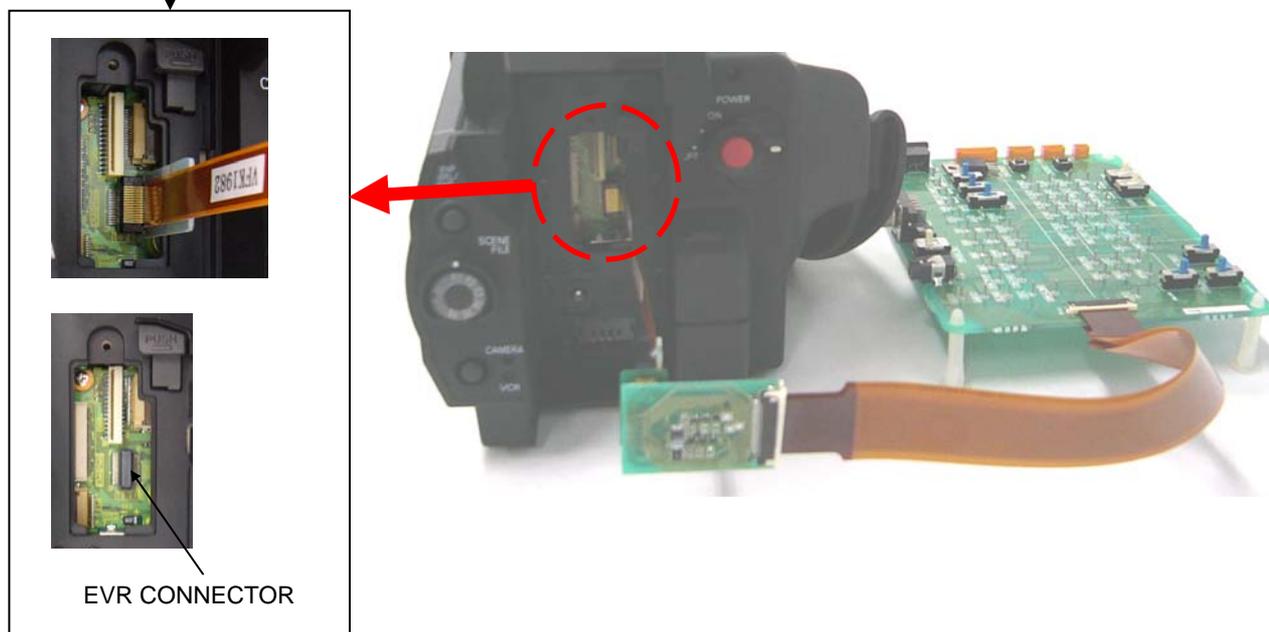


3. Connect the Extension Cable (VFK1982) to Connection Adapter (VFK1763).



4. Connect the Extension Cable (VFK1982) to EVR connector in Unit. Then make sure that the direction of the VFK1982 is correct as shown in Figure.

When the VFK1982 is connected to EVR connector, be careful of the direction of connector on VFK1982. Please follow as shown in the figure.



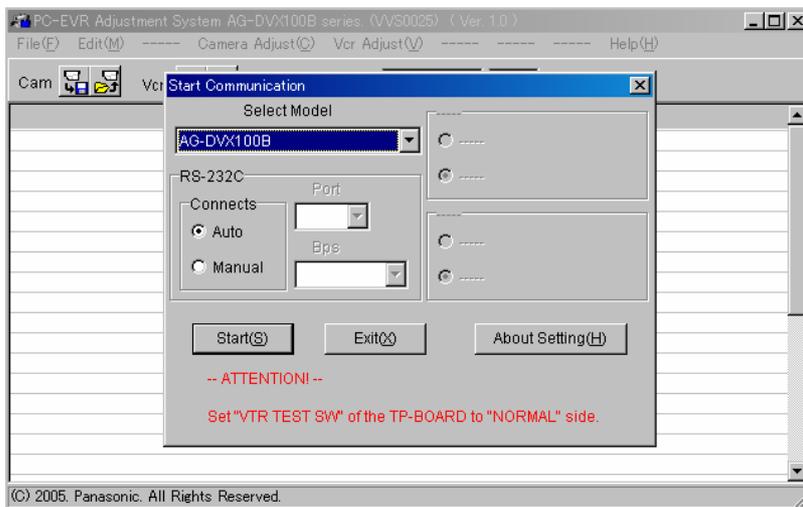
5. Supply DC6V-9V to the Measuring Board (VFK1308P). Please use the DC cable (VJA0941) and AC Adapter to supply DC voltage to Measuring Board.
6. Connect a 9 pin RS-232C cross cable between the Measuring Board and RS-232C connector on Personal Computer.
7. Unless otherwise specified on the message of the EVR software or this adjustment procedure, set the switches on the Measuring Board as shown in the table below.

NAME	SETTING POSITION
RS232C SEL (SW101)	D-SUB
VTR TEST (SW103)	NORMAL
BST TEST (SW104)	NORMAL
SW107	CENTER position
SW108	H
SW105	H
SW106	OFF
FLUSH1 (SW102)	NORMAL
FLUSH2 (SW109)	NORMAL

# 3. PC EVR SOFTWARE

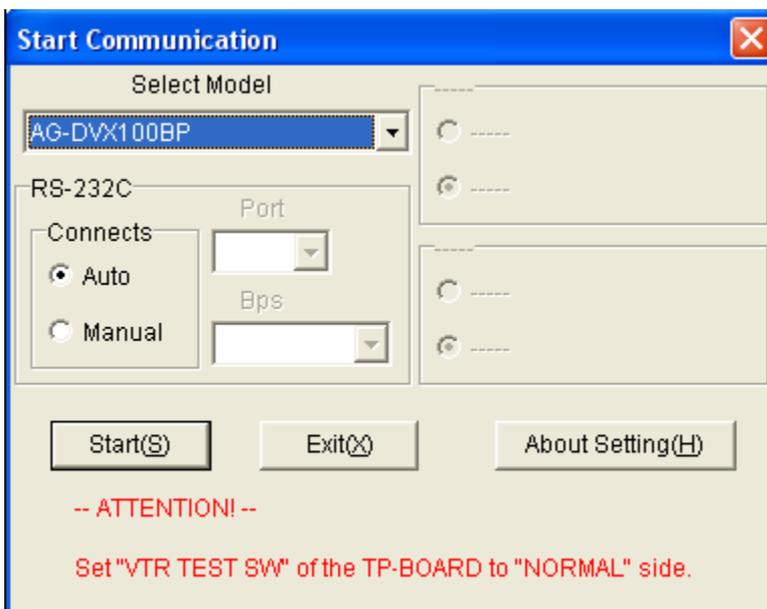
## 3-1. Setup

1. Copy all files of the PC EVR software for AG-DVX100B series to the PC.
2. Supply power to the measuring board.
3. Supply power to the Camera-Recorder and turn power ON.
4. Start up the PC EVR software by double-clicking “**dvx100b.exe**”. The following screen will appear.



## 3-2. Setting of communication

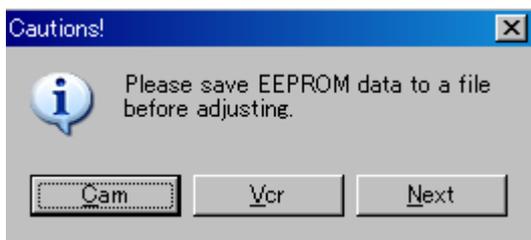
1. Select the model in “**Select Model**” box.



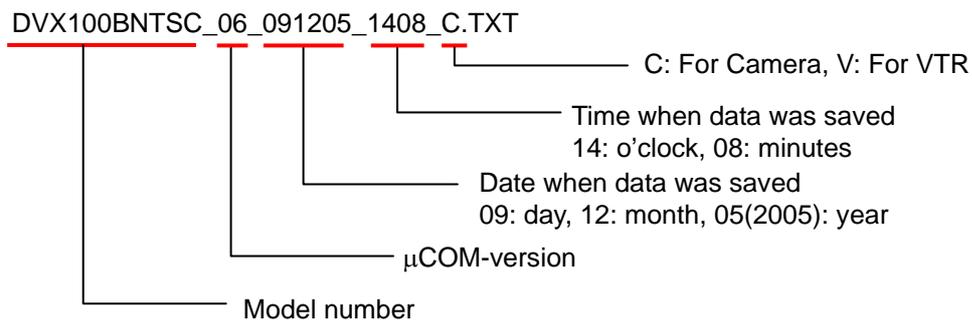
2. Click “**Start(S)**” button.

### 3-3. Save EEPROM data of Camera-Recorder to PC

1. When communication between the PC and the Camera-Recorder has been succeeded, the following message appears.



2. Click "**C**am" button to save Camera adjustment data and "**V**cr" button to save VTR adjustment data. The screen to save data will appear. Save the data with the file name currently displayed. The file name is generated according to the following rule to prevent the data from being written in the Camera-Recorder whose  $\mu$ COM-version is different.

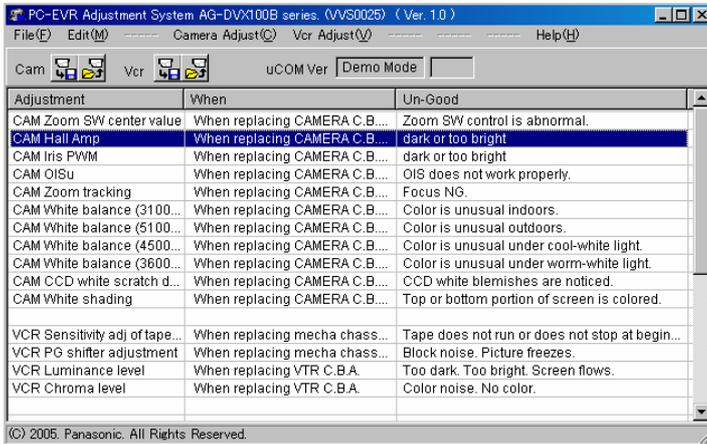


### 3-4. Main menu

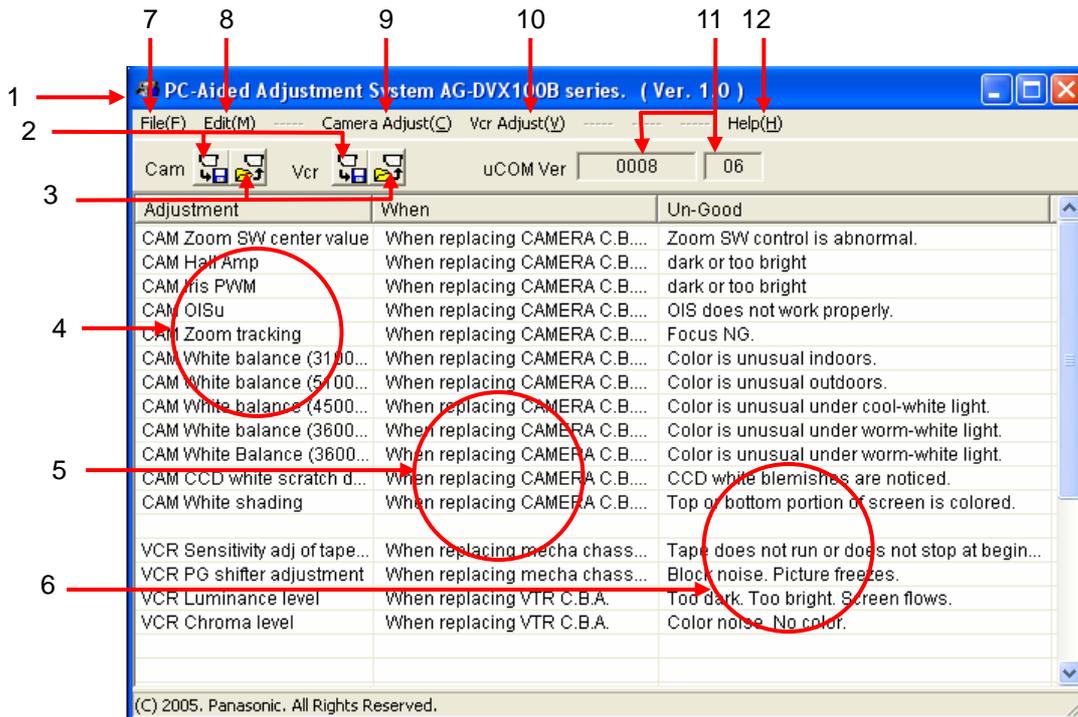
1. Click "Next" button after saving EEPROM data.



2. Main menu will appear as follows.



#### 3-4-1. Explanation of main menu



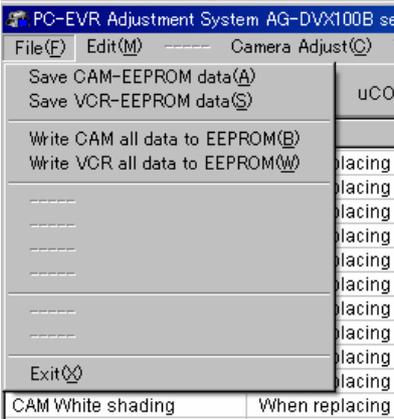
- 1: Software name and version
- 2: Save EEPROM data to PC
- 3: Write EEPROM data from PC
- 4: List of adjustment items
- 5: When required
- 6: Phenomenon when adjustment is not good

- 7: Save and write EEPROM data
- 8: Memory editor (Usually not used)
- 9: CAMERA adjustment
- 10: VTR adjustment
- 11:  $\mu$ COM version
- 12: Open help

### 3-5. Write EEPROM data from PC to Camera-Recorder

You can return the Camera-Recorder to the condition before adjustment by writing EEPROM data, which has been saved before adjustment, to the Camera-Recorder.

1. Click the button for writing EEPROM data, which is indicated by “3” in the main menu on the previous page, or select “Write CAM all data to EEPROM(B)” or “Write VCR all data to EEPROM(W)” in “File(F)” menu.



**NOTE:** When “Exit(X)” is clicked, PC EVR software ends.

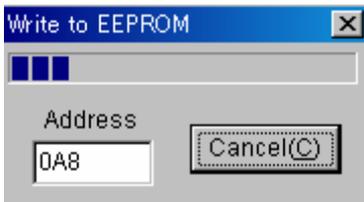
2. The following warning message will appear when no back-up file (data) exists.



When “Cancel(C)” button is clicked, writing EEPROM data is canceled.

When “Ignore(I)” button is clicked, the screen for selecting the file to be written will appear.

3. Select the file to be written in the Camera-Recorder and click “Open(O)” button in the screen. Writing starts and the following message appears.



When writing has been completed, “Cancel(C)” button changes to “OK(O)” button as follows.



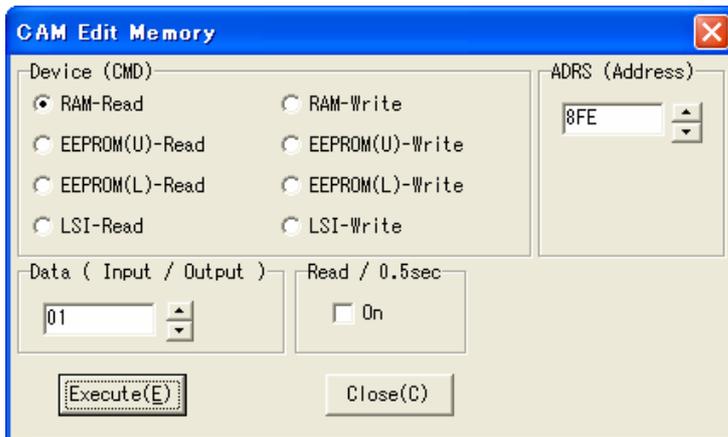
## 4. ADJUSTMENT PROCEDURE (CAMERA SECTION)

Set the Camera-Recorder to CAMERA mode.  
Perform adjustments according to the order of main menu.

### 4-1. Zoom SW center value adjustment

Double-click the adjustment item “Zoom SW center value” in the main menu.  
The instructions of adjustment will appear.  
Perform adjustment according to the instructions.

1. Set the unit to CAMERA mode.
2. Select “Edit” → “Editing the CAM memory”.



#### Readout the data of zoom position at T side

3. Click “RAM-Read” in “Device”.
4. Press T side button of zoom SW on the Grip cover to T position fully and release the finger from the button slowly.
5. Input “8FE” in “ADRS” box and click “Execute(E)” button.
6. Take notes of numeral value in “Data” box.
7. Input “8FF” in “ADRS” box and click “Execute(E)” button.
8. Take notes of numeral value in “Data” box.
9. Repeat three times from the above steps 4 to 8.
10. Select the minimum value among three measurement value.

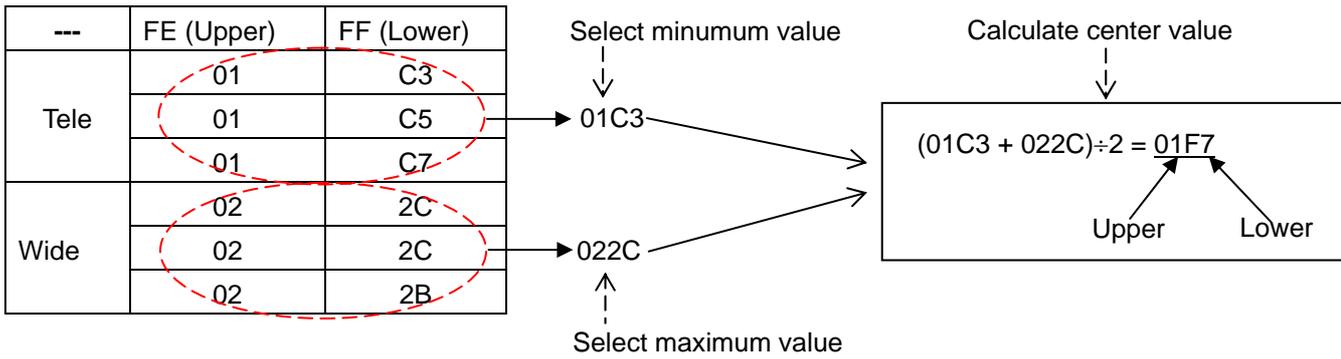
#### Readout the data of zoom position at W side

11. Press S side button of zoom SW on the Grip cover to W position fully and release the finger from the button slowly.
12. Input “8FE” in “ADRS” box and click “Execute(E)” button.
13. Take notes of numeral value in “Data” box.
14. Input “8FF” in “ADRS” box and click “Execute(E)” button.
15. Take notes of numeral value in “Data” box.
16. Repeat three times from the above steps 11 to 15.
17. Select the maximum value among three measurement value.

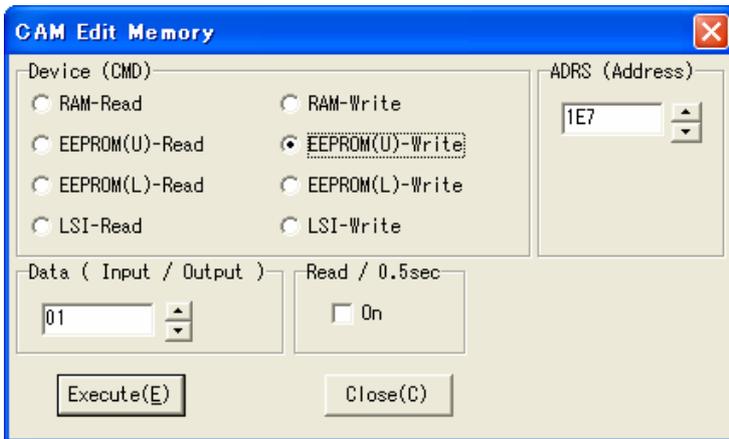
### Calculation of zoom SW center value

18. Calculate the center value with the minimum value of T side and the maximum value of W side as follows.

<For example>



### Writing the data of zoom SW center value



19. Click **“EEPROM(U)-Write”** in **“Device”**.

20. Input **“1E7”** in **“ADRS”** box.

21. Input the upper portion of zoom SW center value, which is calculated at step 18, in **“Data”** box and click **“Execute”** button.

Example: Input **“01”** when the zoom SW center value is **“01F7”**.

22. Click **“EEPROM(L)-Write”** in **“Device”**.

23. Confirm that **“1E7”** is in **“ADRS”** box.

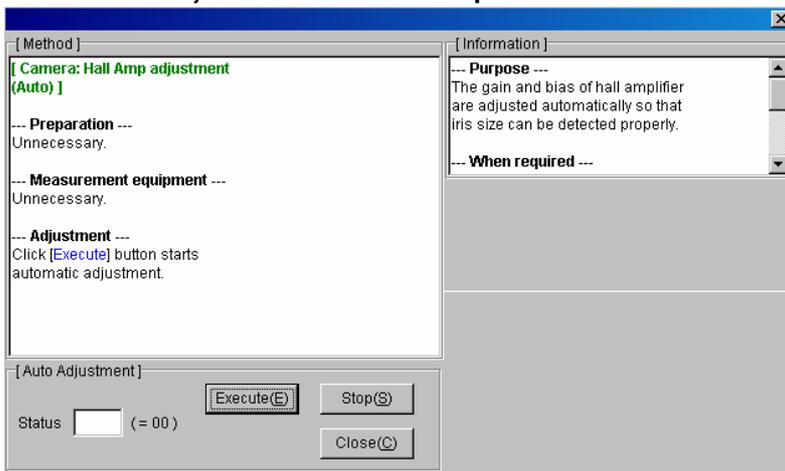
24. Input the lower portion of zoom SW center value, which is calculated at step 18, in **“Data”** box and click **“Execute(E)”** button.

Example: Input **“F7”** when the zoom SW center value is **“01F7”**.

25. Operate the zoom SW on the Grip cover and confirm that zoom operation works smoothly.

## 4-2. Hall Amp adjustment (Auto)

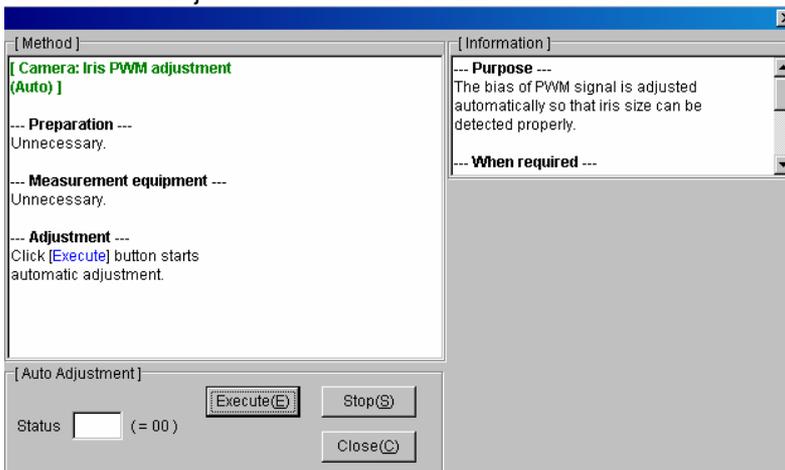
1. Double-click the adjustment item “Hall Amp” in the main menu. The following screen will appear.



2. Click “Execute(E)” button. Automatic adjustment starts.
3. After adjustment has been completed, click “Close(C)” button to escape this menu.

## 4-3. Iris PWM adjustment (Auto)

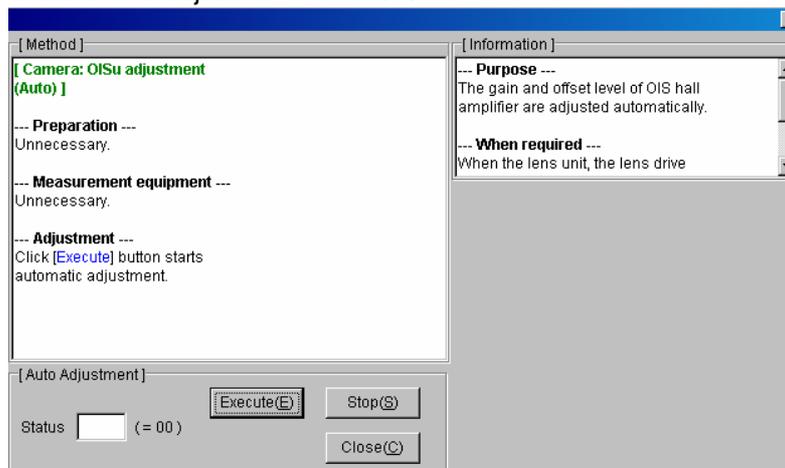
1. Double-click the adjustment item “Iris PWM” in the main menu. The following screen will appear.



2. Click “Execute(E)” button. Automatic adjustment starts.
3. After adjustment has been completed, click “Close(C)” button to escape this menu.

## 4-4. OISu adjustment (Auto)

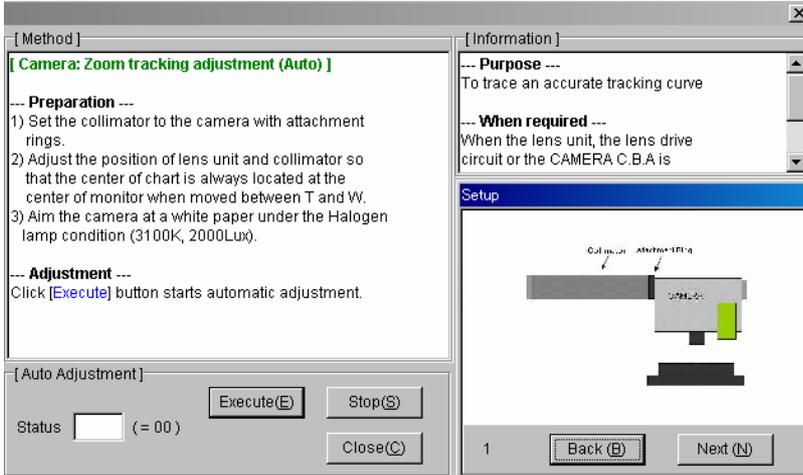
1. Double-click the adjustment item “OISu” in the main menu. The following screen will appear.



2. Click “Execute(E)” button. Automatic adjustment starts.
3. After adjustment has been completed, click “Close(C)” button to escape this menu.

## 4-5. Zoom tracking adjustment (Auto)

1. Set the 72mm Attachment Ring (VFK1809) to the front of Lens.
2. Set the 43mm attachment ring (VFK1164TAR43) to the Collimator (VFK1164TCM01).
3. Set the Collimator (VFK1164TCM01) with the 43mm attachment ring (VFK1164TAR43) to 72mm Attachment Ring (VFK1809).
4. Adjust the position of lens unit and collimator so that the center of chart is always located at the center of monitor when moved between T and W.
5. Set the Iris to Auto.
6. Aim the Camera-Recorder at white paper under the Halogen lamp condition (3100K, 2000Lux).
7. Double-click the adjustment item **“Zoom tracking”** in the main menu. The following screen will appear.



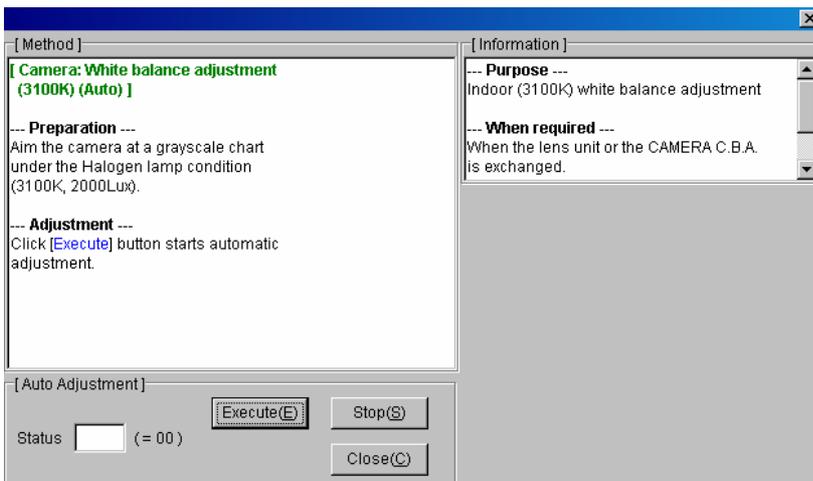
8. Click **“Execute(E)”** button. Automatic adjustment starts.
9. After adjustment has been completed, click **“Close(C)”** button to escape this menu.

## 4-6. White balance adjustment

1. Set the ND filter SW to 1/8 position.
2. Set the Camera-Recorder to ATW mode.
3. Set the Iris to Auto.
4. Execute ABB.

### 4-6-1. White balance adjustment (3100K) (Auto)

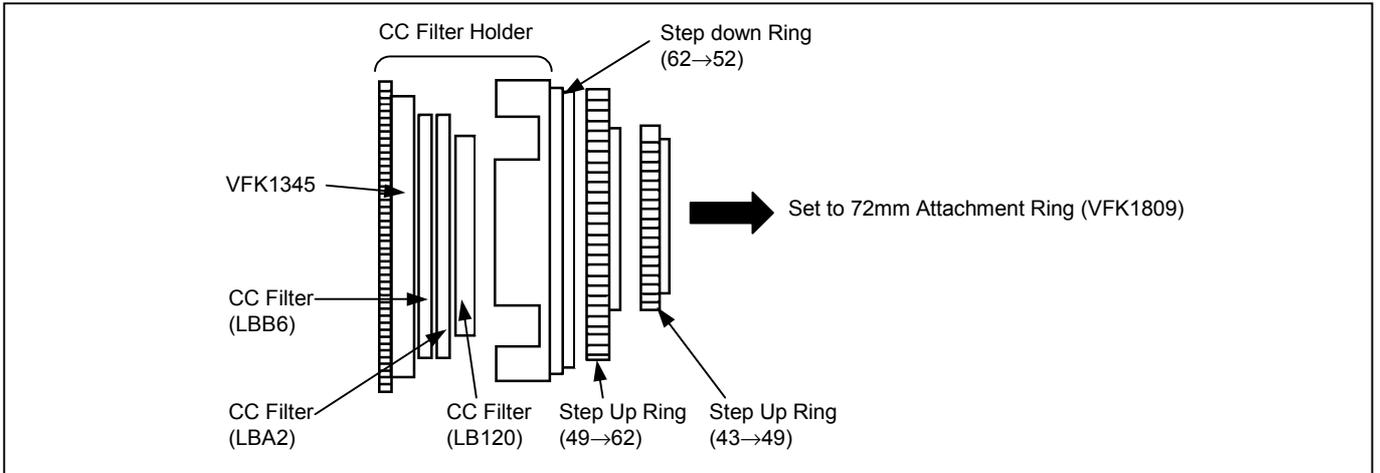
1. Aim the Camera-Recorder at grayscale chart under the Halogen lamp condition (3100K, 2000Lux).
2. Double-click the adjustment item **“White balance (3100K)”** in the main menu. The following screen will appear.



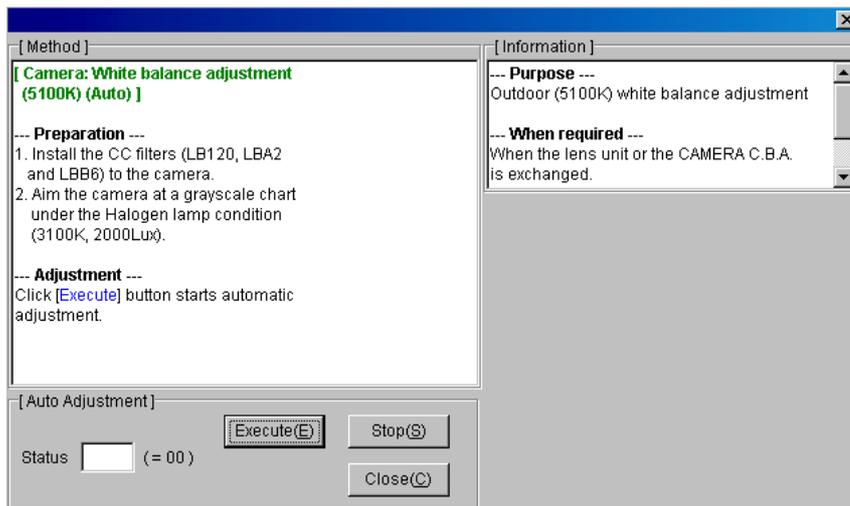
3. Click **“Execute(E)”** button. Automatic adjustment starts.
4. After adjustment has been completed, click **“Close(C)”** button to escape this menu.

#### 4-6-2. White balance adjustment (5100K) (Auto)

1. Set the Color Conversion filters (LB120: VFK1347), (LBA2: VFK1884) and (LBB6: VFK1888) to the CC Filter Holder (VFK1345).
2. Set the one Step-down Ring (VFK1346) and two Step-up Rings (VFK1659, VFK1660) to the CC Filter Holder as shown in figure.
3. Set the 72mm Attachment Ring (VFK1809) to the front of Lens.
4. Set the CC Filter Holder with Step-up & down Rings to 72mm Attachment Ring (VFK1809).



5. Aim the Camera-Recorder at grayscale chart under the Halogen lamp condition (3100K, 2000Lux).
6. Double-click the adjustment item **“White balance (5100K)”** in the main menu. The following screen will appear.



7. Click **“Execute(E)”** button. Automatic adjustment starts.
8. After adjustment has been completed, click **“Close(C)”** button to escape this menu.

### 4-6-3. White balance adjustment (4500K) (Auto)

#### < In case of NTSC model >

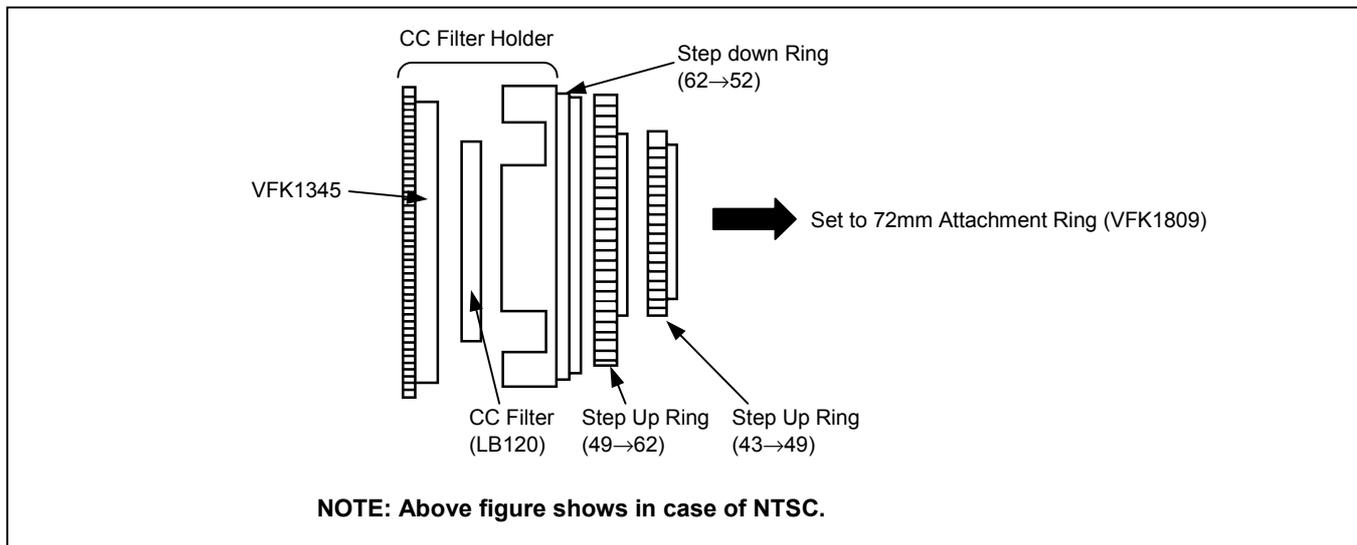
1. Set the Color Conversion filter (LB120: VFK1347) to the CC Filter Holder (VFK1345).

#### < In case of PAL model >

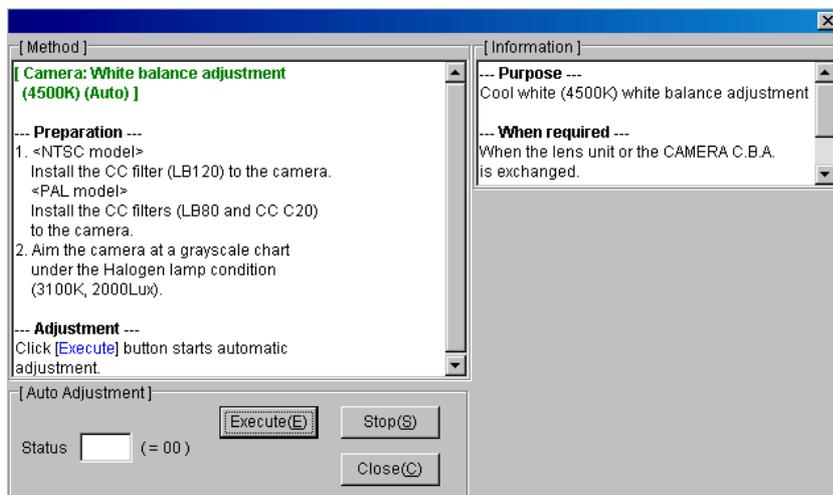
1. Set the Color Conversion filters (LB80: VFK1342) and (CC C20: VFK1887) to the CC Filter Holder (VFK1345).

#### < Common procedures >

2. Set the one Step-down Ring (VFK1346) and two Step-up Rings (VFK1659, VFK1660) to the CC Filter Holder as shown in figure.
3. Set the 72mm Attachment Ring (VFK1809) to the front of Lens.
4. Set the CC Filter Holder with Step-up & down Rings to 72mm Attachment Ring (VFK1809).



5. Aim the Camera-Recorder at grayscale chart under the Halogen lamp condition (3100K, 2000Lux).
6. Double-click the adjustment item **“White balance (4500K)”** in the main menu. The following screen will appear.



7. Click **“Execute(E)”** button. Automatic adjustment starts.
8. After adjustment has been completed, click **“Close(C)”** button to escape this menu.

#### 4-6-4. White balance adjustment (3600K) (Auto)

##### < In case of NTSC model >

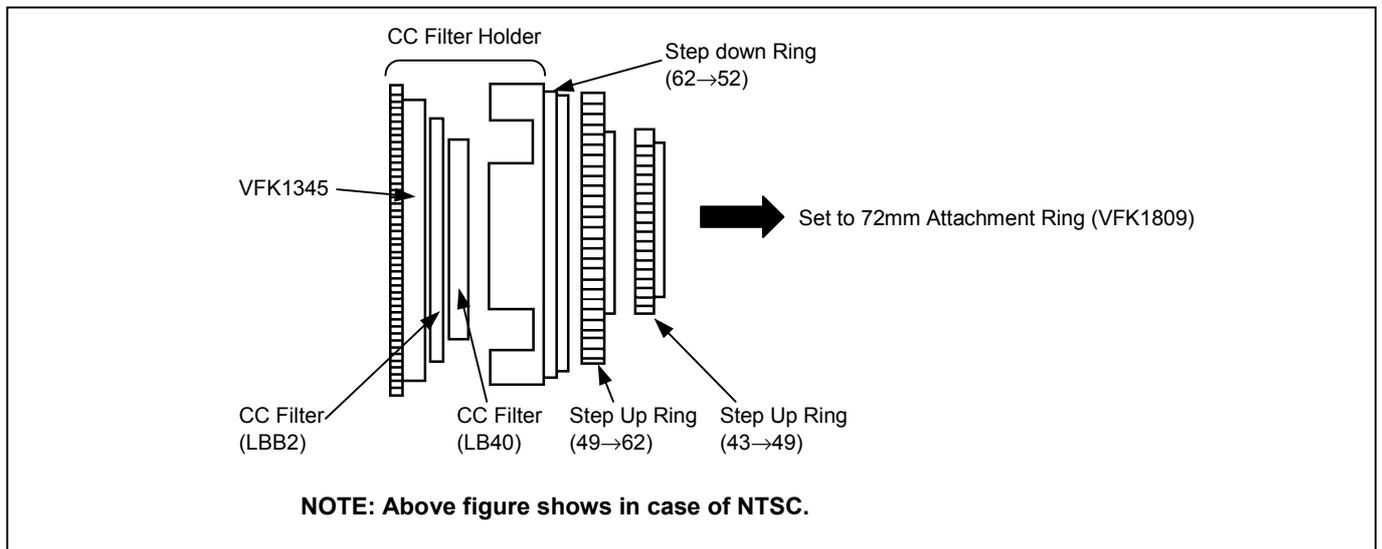
1. Set the Color Conversion filters (LB40: VFK1341) and (LBB2: VFK1885) to the CC Filter Holder (VFK1345).

##### < In case of PAL model >

1. Set the Color Conversion filter (CC C10: VFK1886) to the CC Filter Holder (VFK1345).

##### < Common procedures >

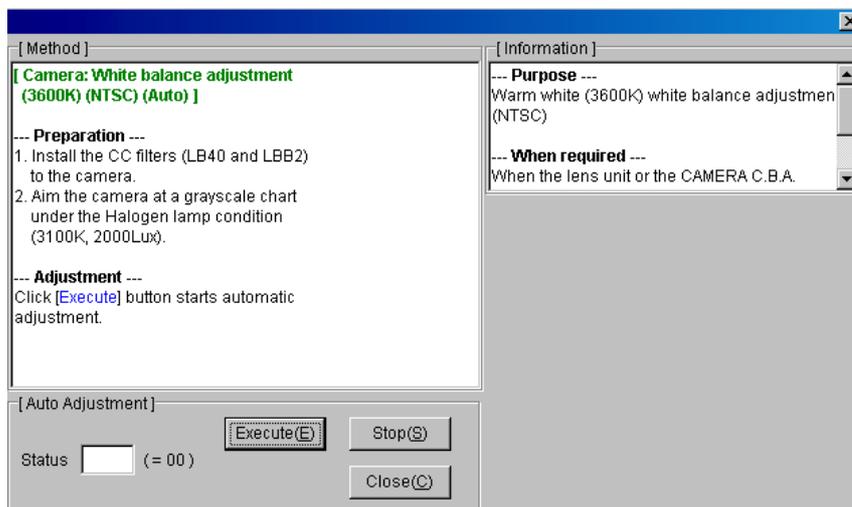
2. Set the one Step-down Ring (VFK1346) and two Step-up Rings (VFK1659, VFK1660) to the CC Filter Holder as shown in figure.
3. Set the 72mm Attachment Ring (VFK1809) to the front of Lens.
4. Set the CC Filter Holder with Step-up & down Rings to 72mm Attachment Ring (VFK1809).



5. Aim the Camera-Recorder at grayscale chart under the Halogen lamp condition (3100K, 2000Lux).

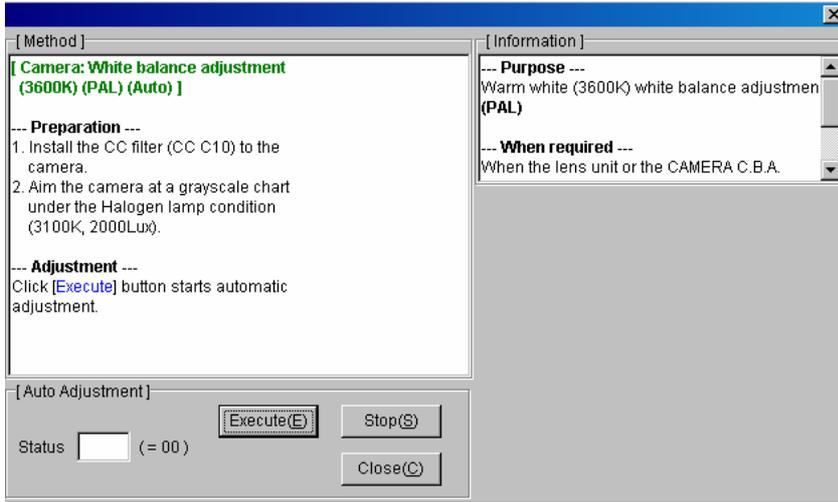
##### < In case of NTSC model >

6. Double-click the adjustment item “**White balance (3600K) (NTSC)**” in the main menu. The following screen will appear.



< In case of PAL model >

6. Double-click the adjustment item “White balance (3600K) (PAL)” in the main menu. The following screen will appear.

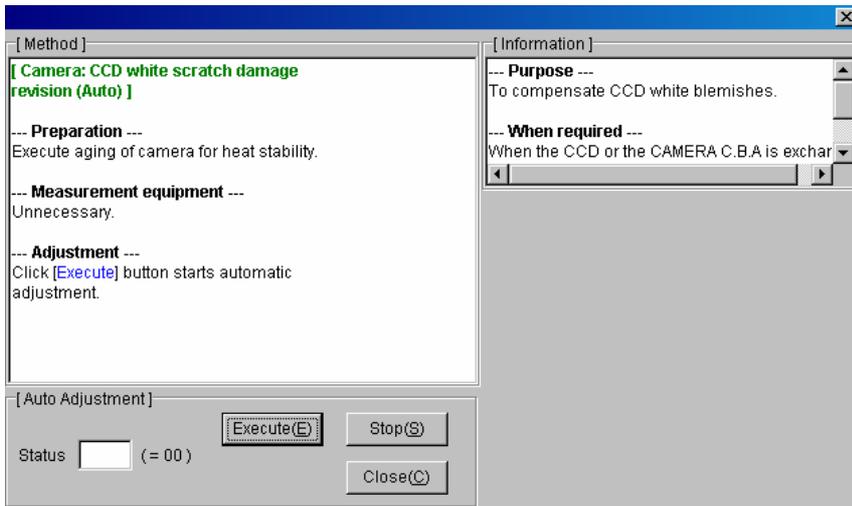


< Common procedures >

7. Click “Execute(E)” button. Automatic adjustment starts.
8. After adjustment has been completed, click “Close(C)” button to escape this menu.

### 4-7 CCD white scratch damage revision adjustment (Auto)

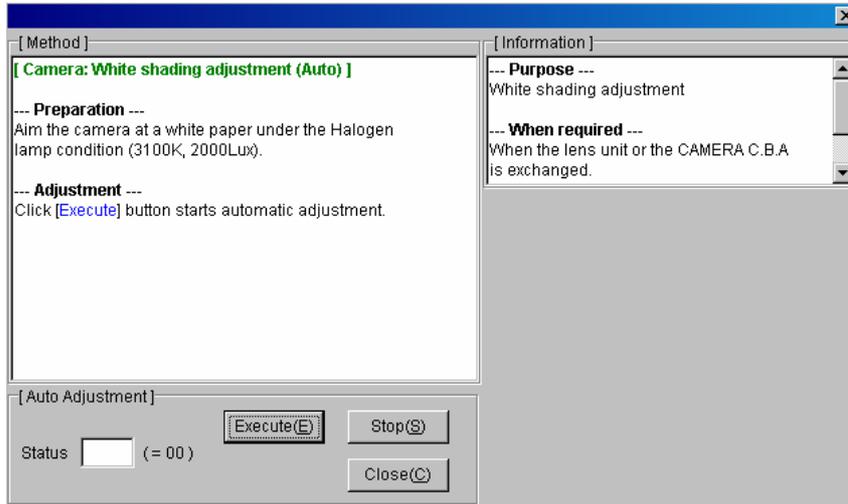
1. Execute aging of Camera-Recorder for heat stability.
2. Double-click the adjustment item “CCD white scratch damage revision” in the main menu. The following screen will appear.



3. Click “Execute(E)” button. Automatic adjustment starts.
4. After adjustment has been completed, click “Close(C)” button to escape this menu.

## 4-8 White shading adjustment (Auto)

1. Set the GAIN SW of Camera-Recorder to L (0dB).
2. Set the ATW to OFF.
3. Set the Iris to Auto.
4. Aim the Camera-Recorder at white paper under the Halogen lamp condition (3100K, 2000Lux).
5. Shoot the white paper so that the full screen is white.
6. Set White Balance by pressing the AWB SW and confirm that the message “**AWB OK**” appears on the center of screen.
7. Set the “**Marker**” to ON.
8. Press the ZEBRA SW and confirm that the marker appears on the screen.
9. Adjust the Iris dial so that luminance level is 70 to 80%. (Luminance level can be confirmed by numerical value displayed at lower left corner of screen.)
10. Double-click the adjustment item “**White shading**” in the main menu. The following screen will appear.



11. Click “**Execute(E)**” button. Automatic adjustment starts.
12. After adjustment has been completed, click “**Close(C)**” button to escape this menu.

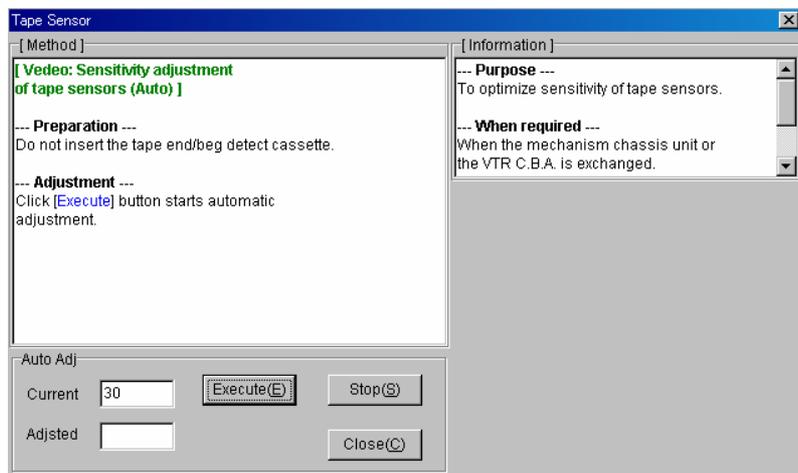
## 5. ADJUSTMENT PROCEDURE (VTR SECTION)

Set the Camera-Recorder to VCR mode.  
Perform adjustments according to the order of main menu.

### 5-1. Sensitivity adjustment of tape sensors (Auto)

**NOTE:** Do not insert the tape end/beg detect cassette to the Camera-Recorder.

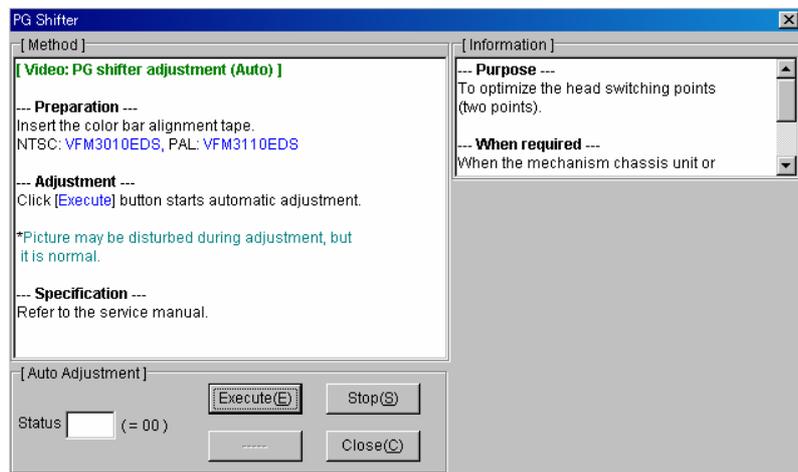
1. Double-click the adjustment item “**Sensitivity adj. of tape sensors**” in the main menu. The following screen will appear.



2. Click “**Execute(E)**” button. Automatic adjustment starts.
3. After adjustment has been completed, click “**Close(C)**” button to escape this menu.

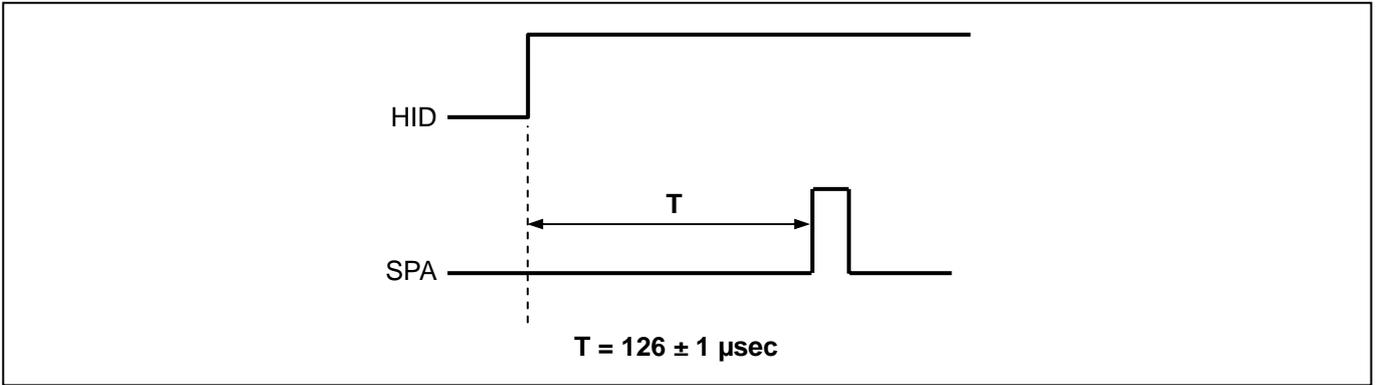
### 5-2. PG shifter adjustment (Auto)

1. Connect the oscilloscope to “**HID**” and “**SPA**” on the measuring board VFK1308P.
2. Insert the DV color bar alignment tape (VFM3010EDS: NTSC or VFM3110EDS: PAL) to the Camera-Recorder.
3. Double-click the adjustment item “**PG shifter**” in the main menu. The following screen will appear.



4. Click “**Execute(E)**” button. Automatic adjustment starts.

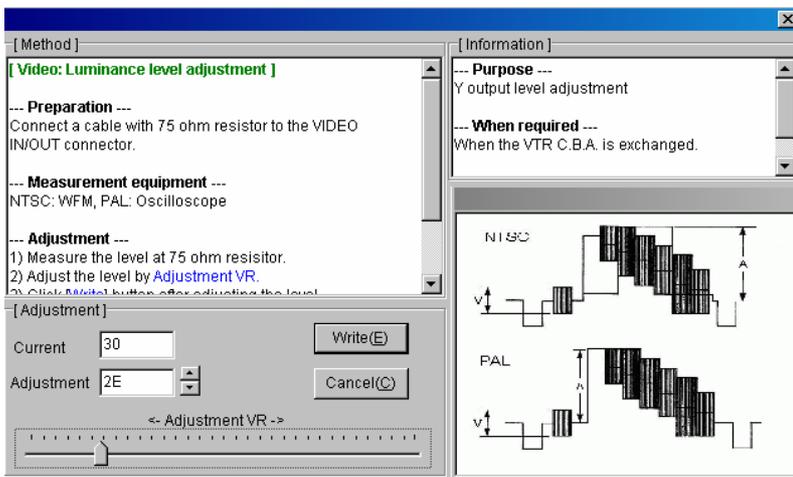
5. After adjustment has been completed, confirm that the portion “T” is within specification as shown below.



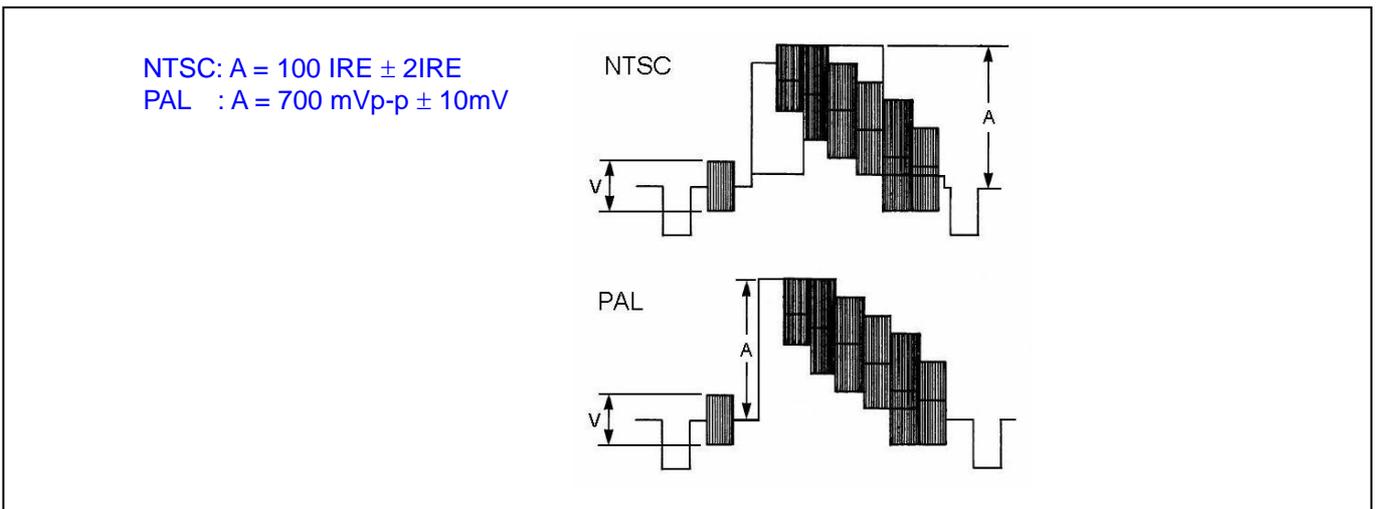
6. Click “Close(C)” button to escape this menu.

### 5-3. Luminance level adjustment

1. Connect the WFM (for NTSC) or the oscilloscope (for PAL) to the VIDEO OUT with 75ohm termination.
2. Double-click the adjustment item “Luminance level” in the main menu. The following screen will appear.



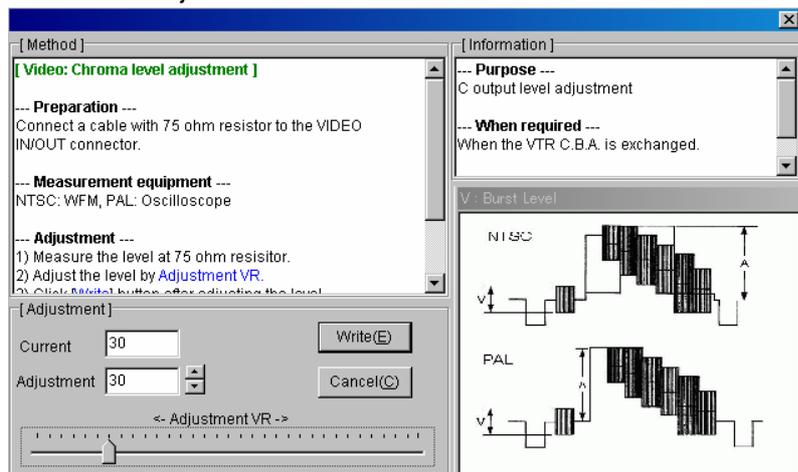
3. Adjust luminance level by pressing the arrow keys of keyboard so that it is within specification.



4. Click “Write(E)” button after adjustment has been completed.

## 5-4. Chroma level adjustment

1. Connect the WFM (for NTSC) or the oscilloscope (for PAL) to the VIDEO OUT with 75ohm termination.
2. Double-click the adjustment item “**Chroma level**” in the main menu. The following screen will appear.



3. Adjust chroma level by pressing the arrow keys of keyboard so that it is within specification.

NTSC:  $V(\text{Burst}) = 40 \text{ IRE} \pm 3 \text{ IRE}$   
PAL :  $V(\text{Burst}) = 300 \text{ mVp-p} \pm 20 \text{ mV}$

The diagram shows two waveform diagrams. The top one is labeled "NTSC" and the bottom one is labeled "PAL". Both diagrams show a series of horizontal bars of varying heights, representing the burst level. A vertical arrow labeled 'A' indicates the amplitude of the burst, and a horizontal arrow labeled 'V' indicates the width of the burst. The NTSC diagram shows a higher burst level than the PAL diagram.

4. Click “**Write(E)**” button after adjustment has been completed.

# SECTION 5

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## BLOCK DIAGRAMS

## ブロック図

MODEL: AG-DVX100B/P/E/AN,102BEN,DVC180BMC

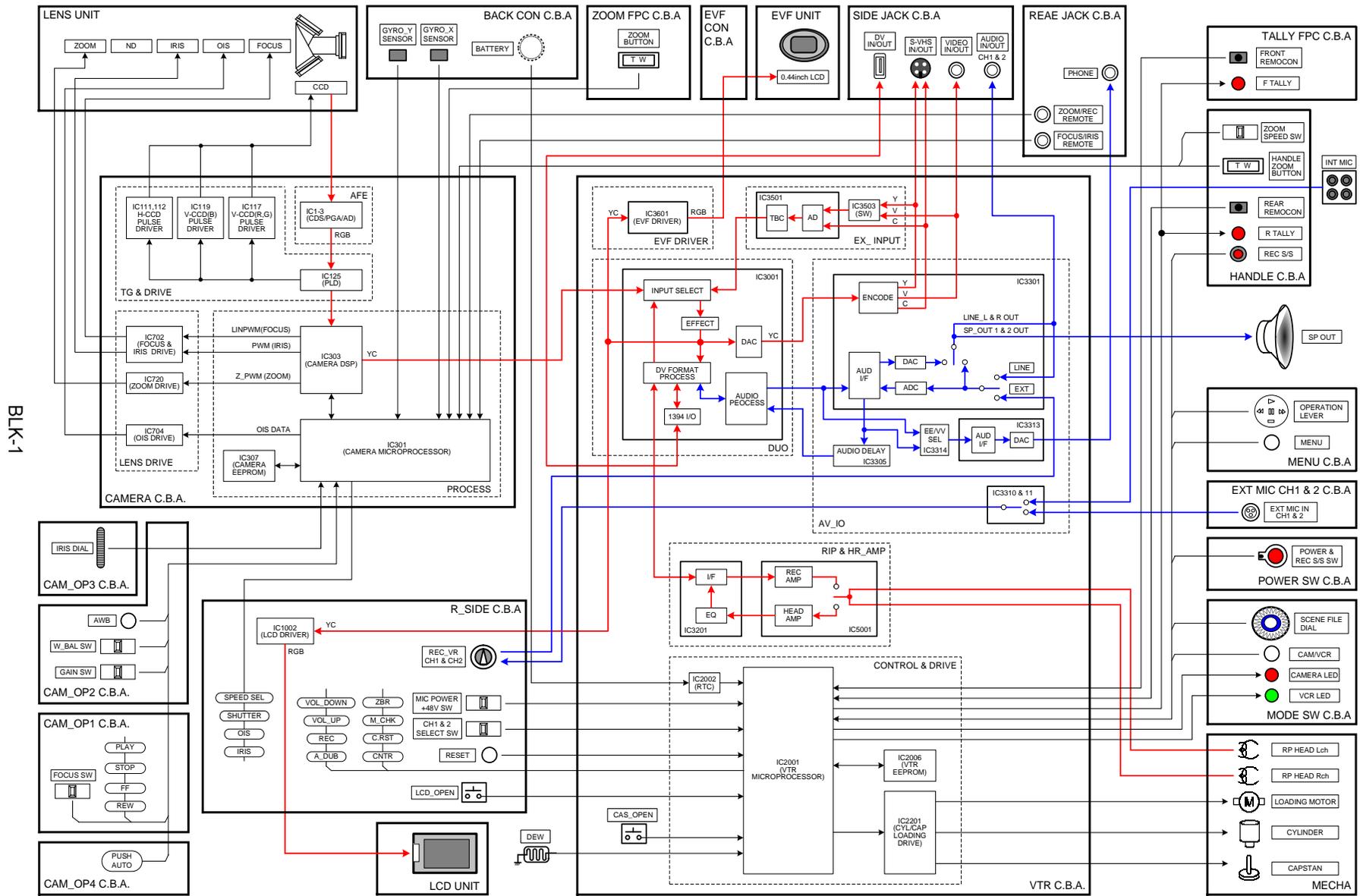
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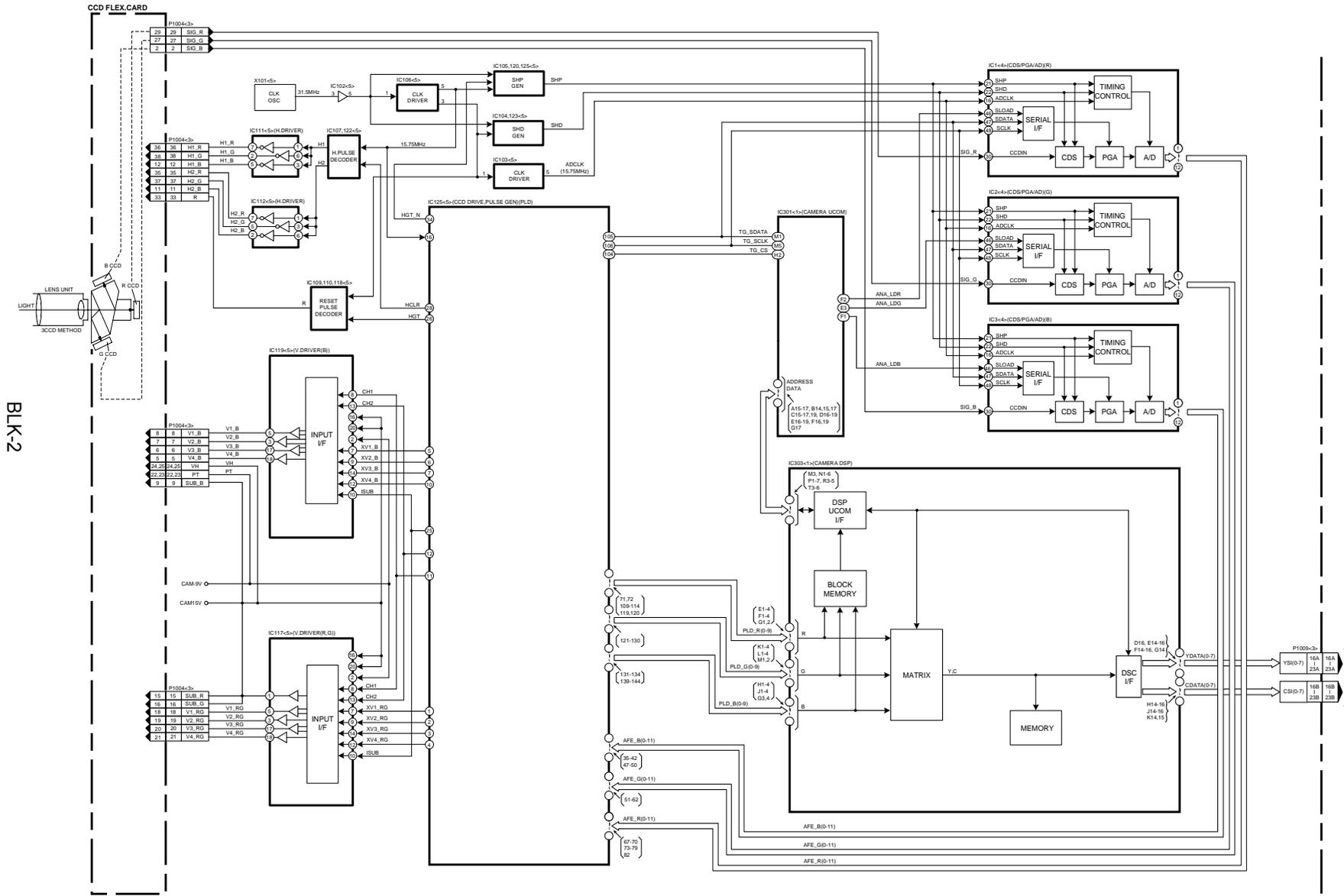
OVERALL BLOCK DIAGRAM.....	BLK-1
SENSOR/PROCESS (AFE / TG & DRIVE/PROCESS: CAMERA) BLOCK DIAGRAM .....	BLK-2
LENS DRIVE (LENZ DRIVE / PROCESS: CAMERA) BLOCK DIAGRAM.....	BLK-3
VIDEO (VTR) BLOCK DIAGRAM .....	BLK-4
MONITOR (EVF: VTR / LCD: R SIDE) BLOCK DIAGRAM .....	BLK-5
CONTROL (CONTROL / DRIVE: VTR) BLOCK DIAGRAM .....	BLK-6

# OVERALL BLOCK DIAGRAM



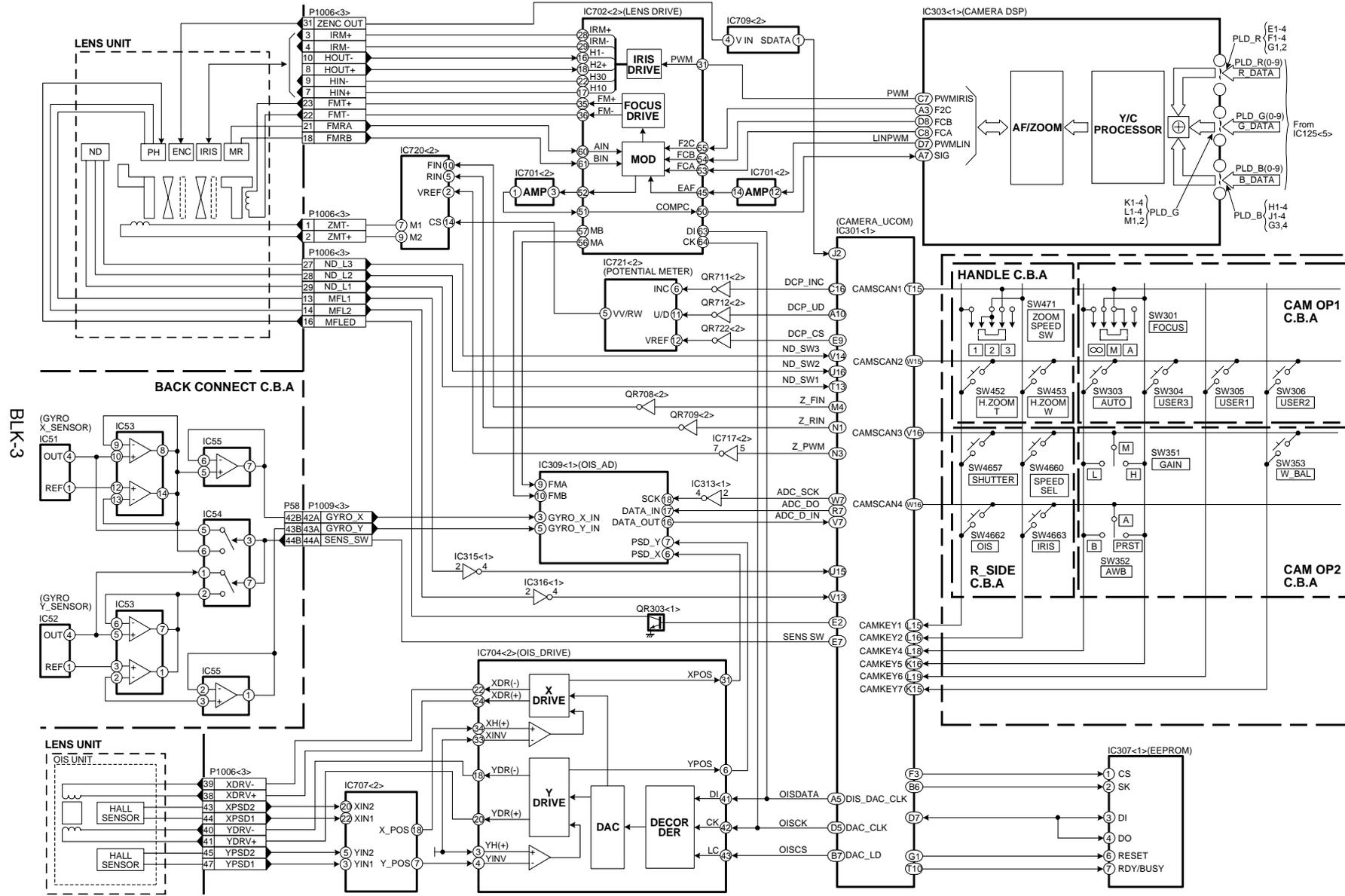
BLK-1

# SENSOR/PROCESS(AFE/TG & DRIVE/PROCESS: CAMERA) BLOCK DIAGRAM

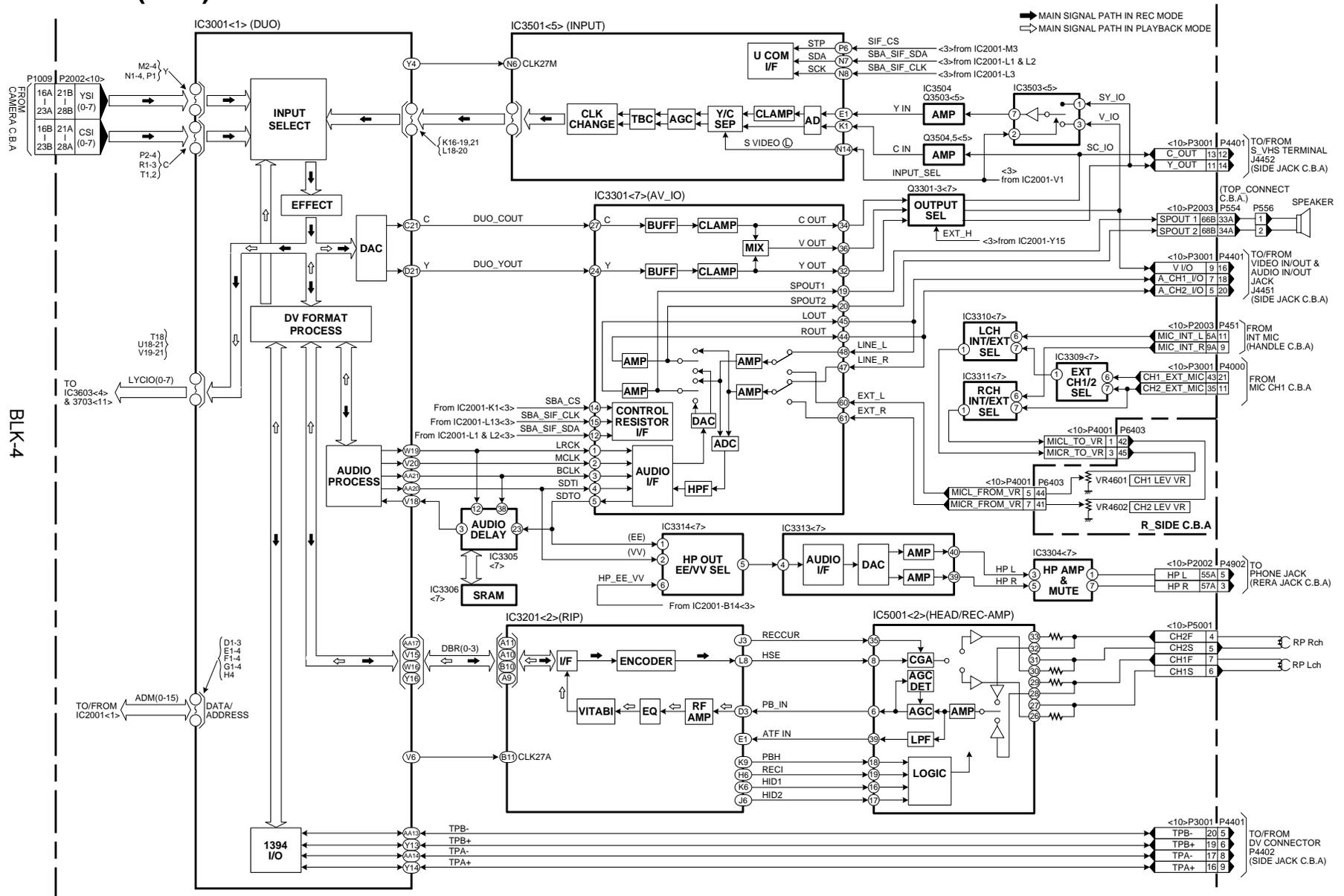


BLK-2

# LENZ DRIVE (LENZ DRIVE / PROCESS: CAMERA) BLOCK DIAGRAM

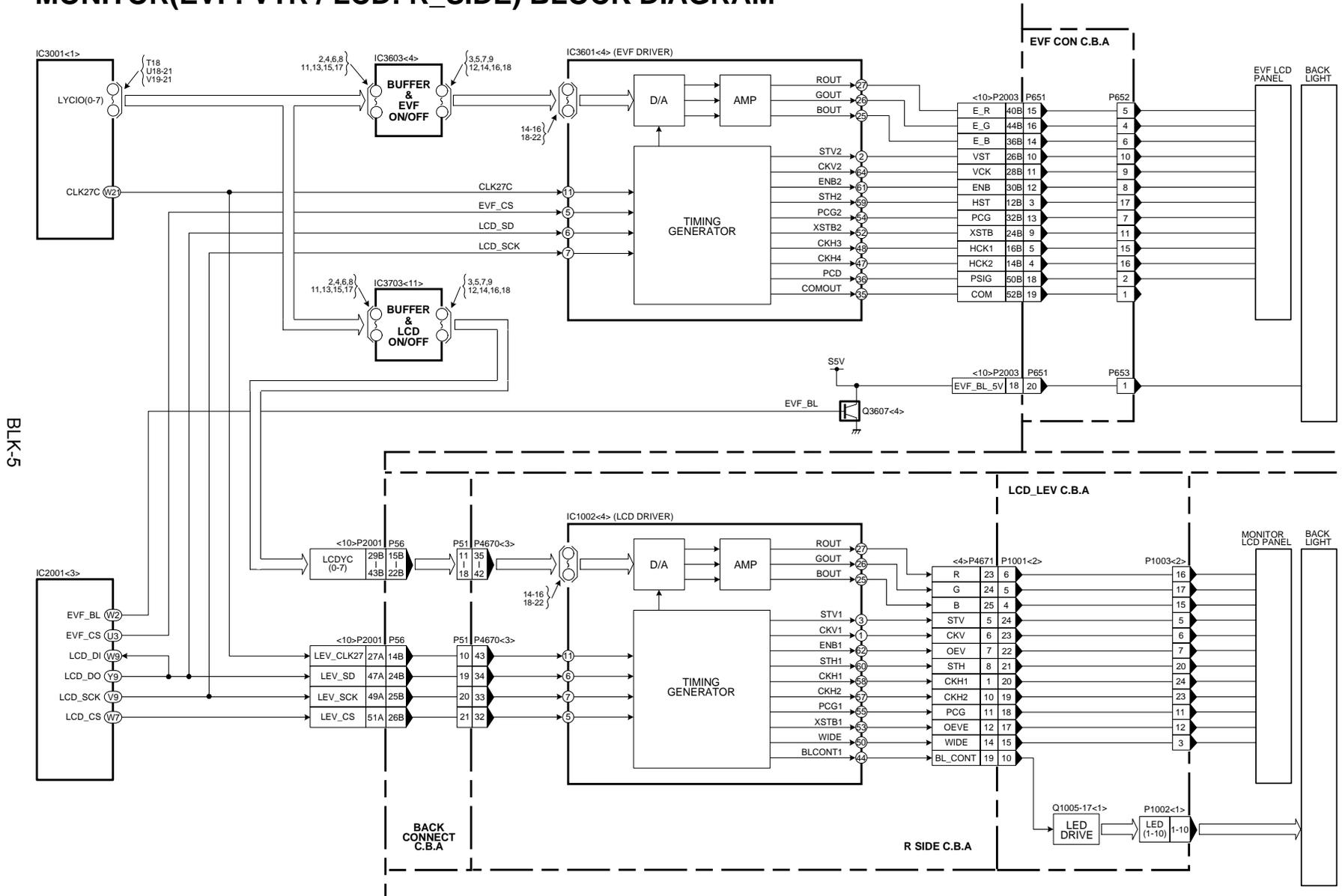


# VIDEO (VTR) BLOCK DIAGRAM



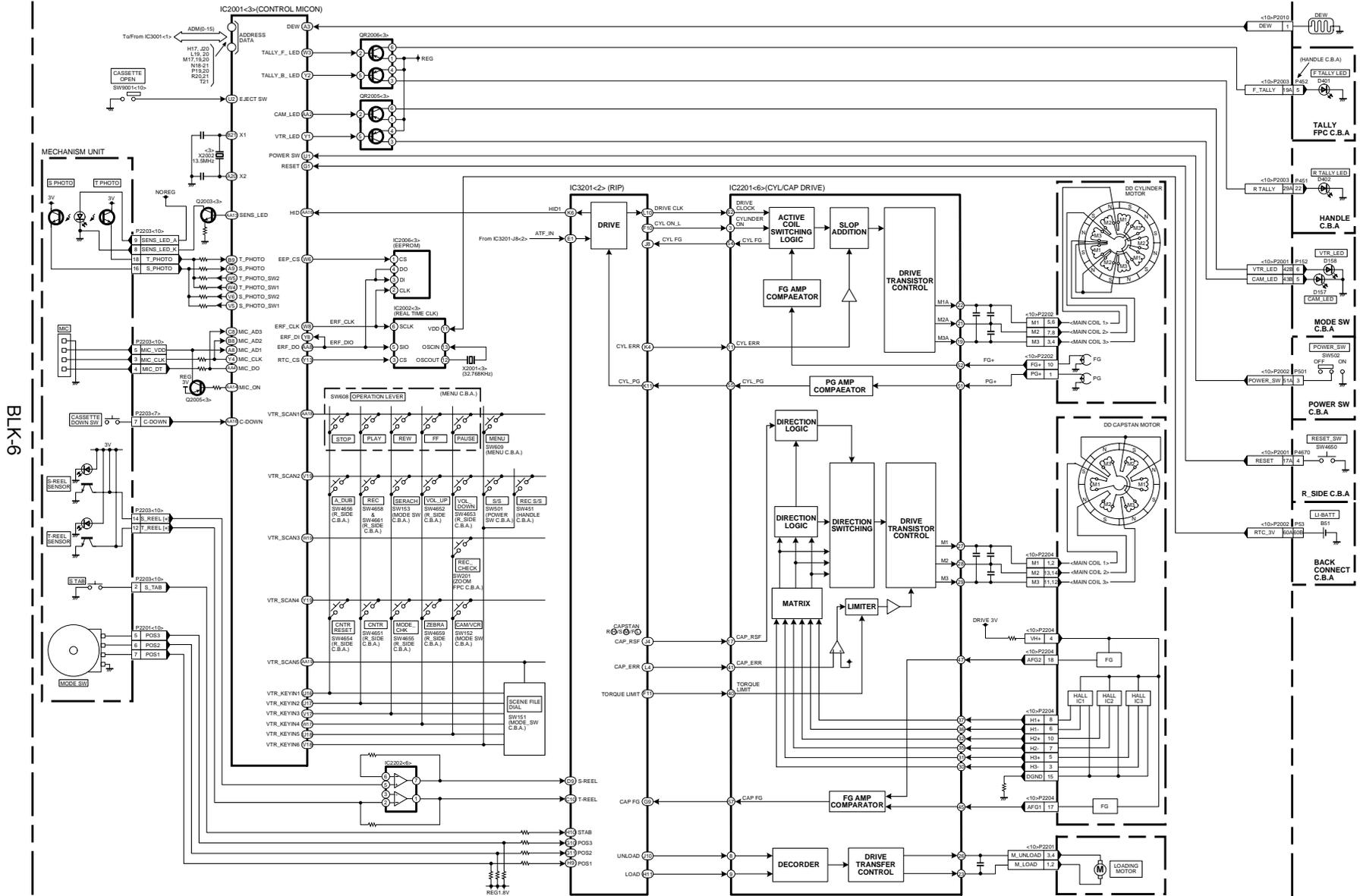
BLK-4

# MONITOR(EVF: VTR / LCD: R\_SIDE) BLOCK DIAGRAM



BLK-5

# CONTROL (CONTROL / DRIVE: VIDEO) BLOCK DIAGRAM



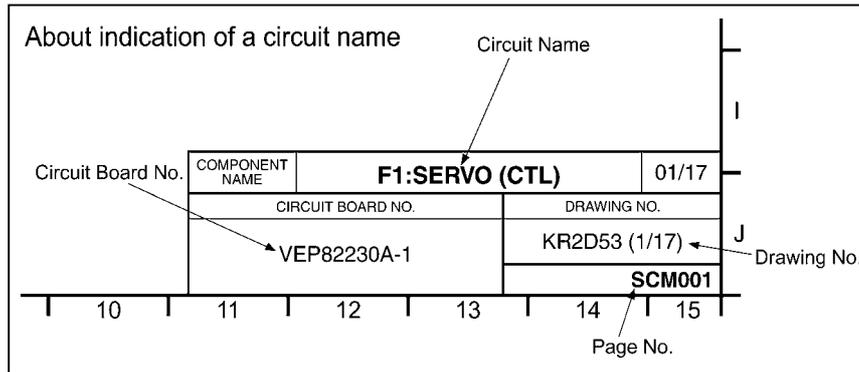
BLK-6

# SECTION 6

## SCHEMATIC DIAGRAMS

## 回路図

MODEL: AG-DVX100B/P/E/AN,102BEN,DVC180BMC

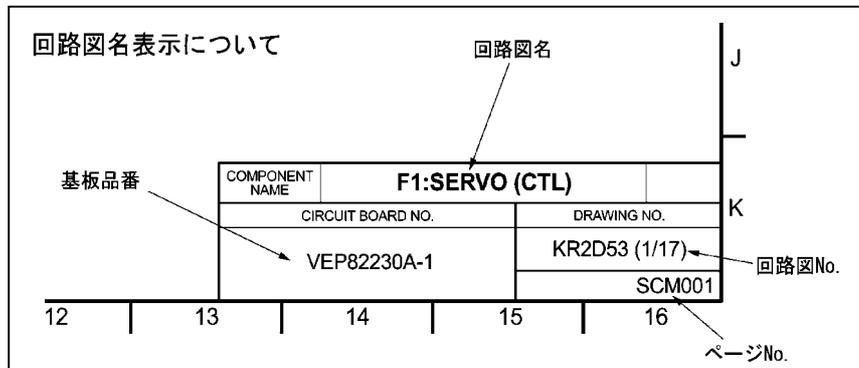


**NOTE:**  
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST SECTION.

### CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.  
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

**IMPORTANT SAFETY NOTICE:**  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



### 警告

 の部品は、安全上重要な部品です。  
交換するときは、安全及び性能維持のため、必ず指定の部品をご使用ください。  
部品は難燃性や耐電圧など、安全上の特性を持ったものとなっていますので、部品交換は、使用されているものと同じ特性の部品をご使用ください。  
部品ご注文の際には必ず部品リストに記載の品番でご注文ください。

	<b>警告</b>
	AC100Vの加わっている活電部(充電部、活電部)に直接触れないでください。 感電注意 感電ややけどの可能性が あります。

-  印の部品は安全上重要な部品です。交換するときは、安全上および性能維持のため必ず指定の部品をご使用ください。
-  内は充電部です。AC 100Vが加わっておりますので点検、修理のときは感電しないよう充分ご注意ください。
- 部品交換時には、電源プラグをぬいてから行ってください。
- 一次側(充電部)の電圧・波形は、一次側アースを基準に測定してください。
- 部品品番は、部品価格表で確認の上交換ください。

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HANDLE (2/3) ..... SCM044  
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## DC IN

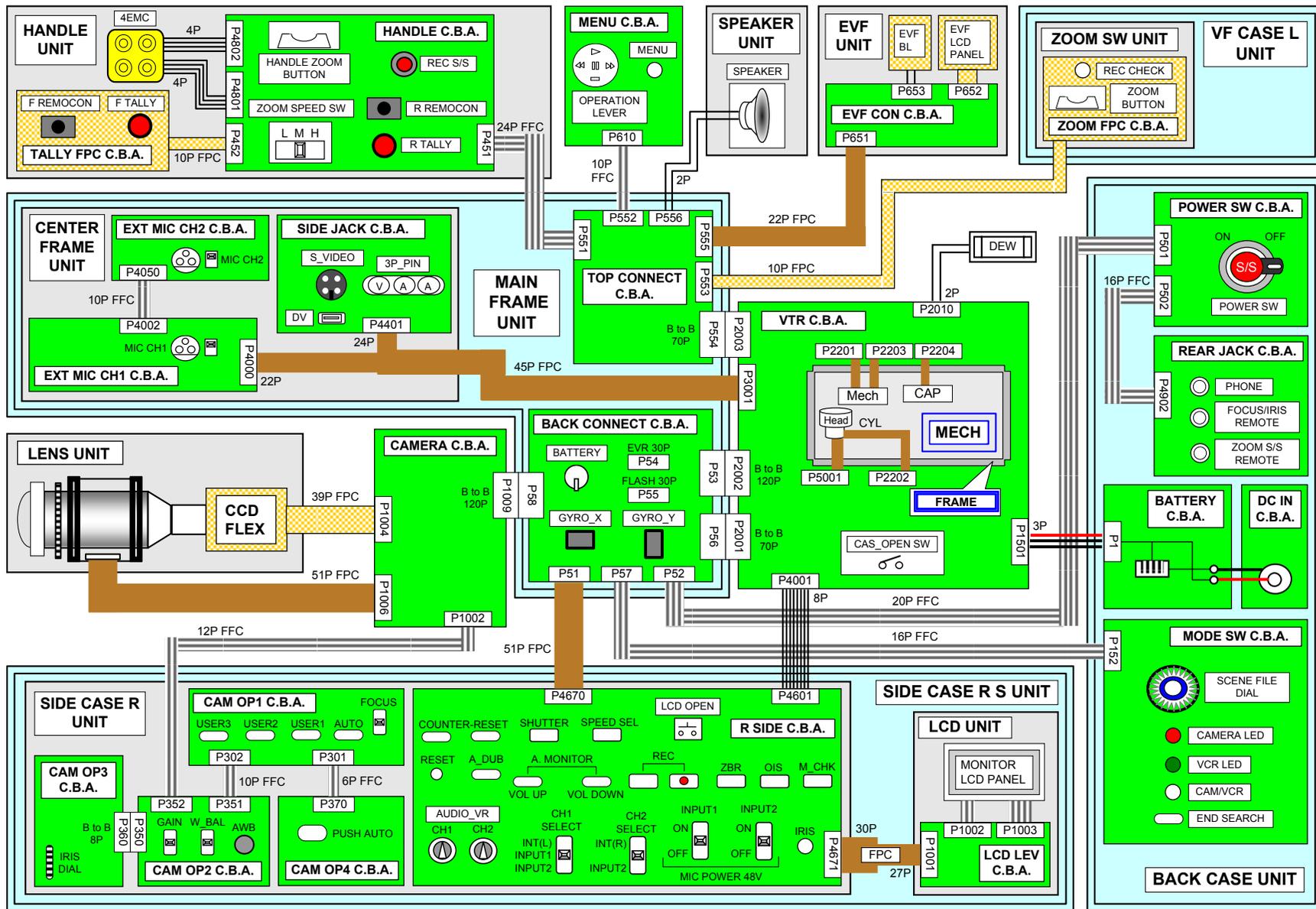
DC IN ..... SCM047

## ZOOM FPC

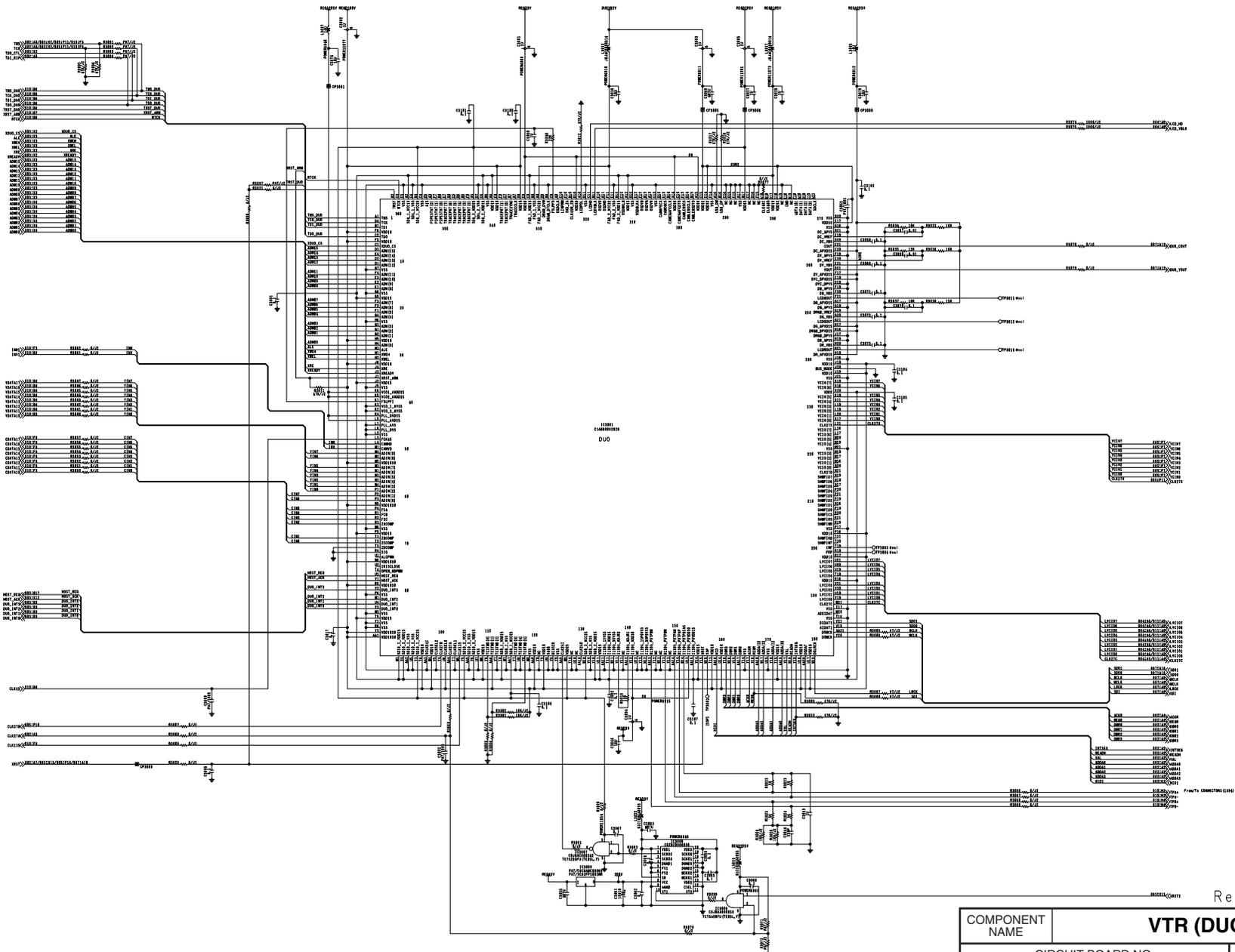
ZOOM FPC ..... SCM048

## TALLY FPC

TALLY FPC ..... SCM049



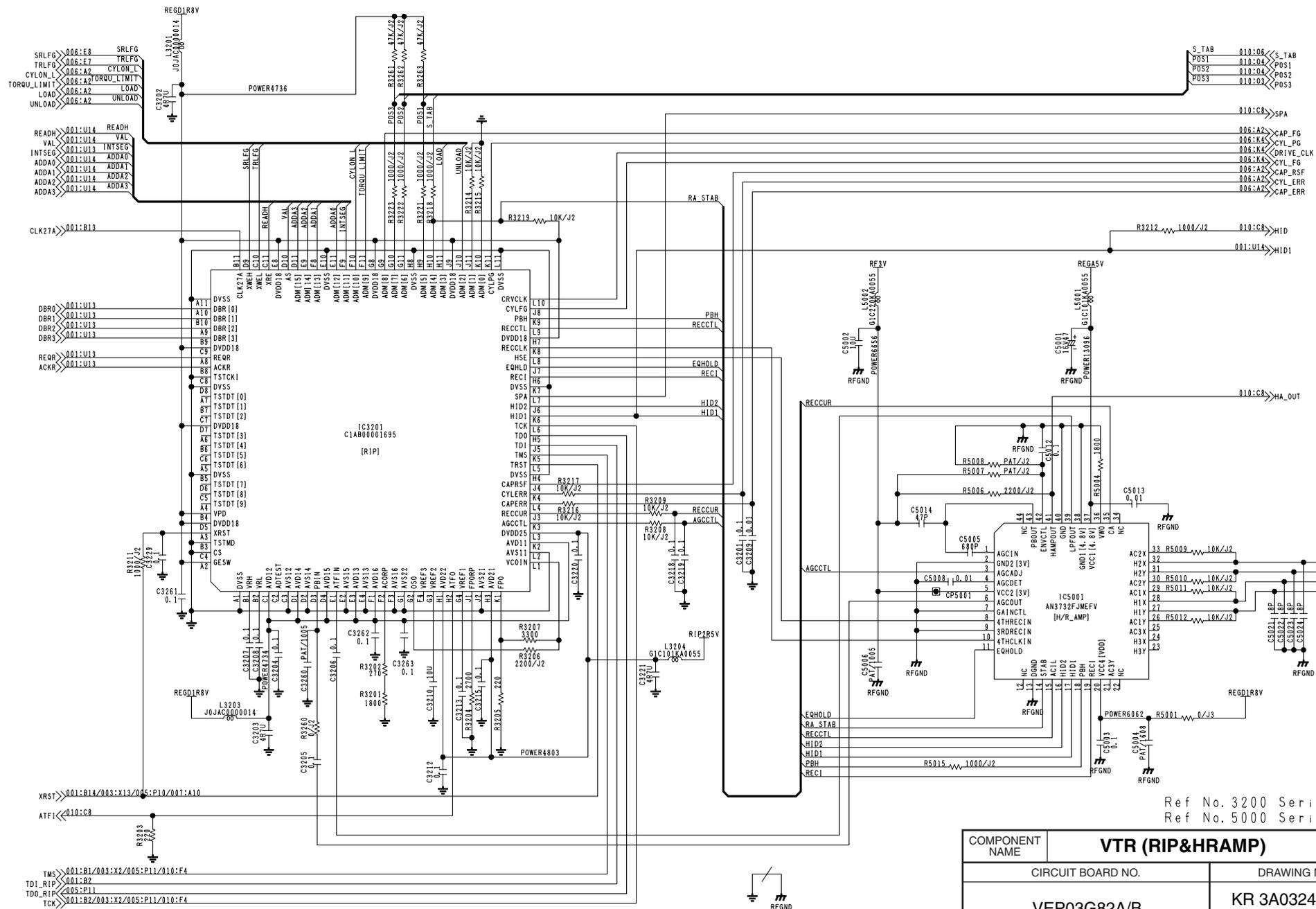
COMPONENT NAME	<b>INTERCONNECTION</b>		01/01
CIRCUIT BOARD NO.			DRAWING NO.
			(1/1)
			<b>SCM001</b>



Ref No. 3000 Series.

COMPONENT NAME	<b>VTR (DUO)</b>		01/11
CIRCUIT BOARD NO.		DRAWING NO.	
VEP03G82A/B		KR 3A0324 (1/11)	
<b>SCM002</b>			

A  
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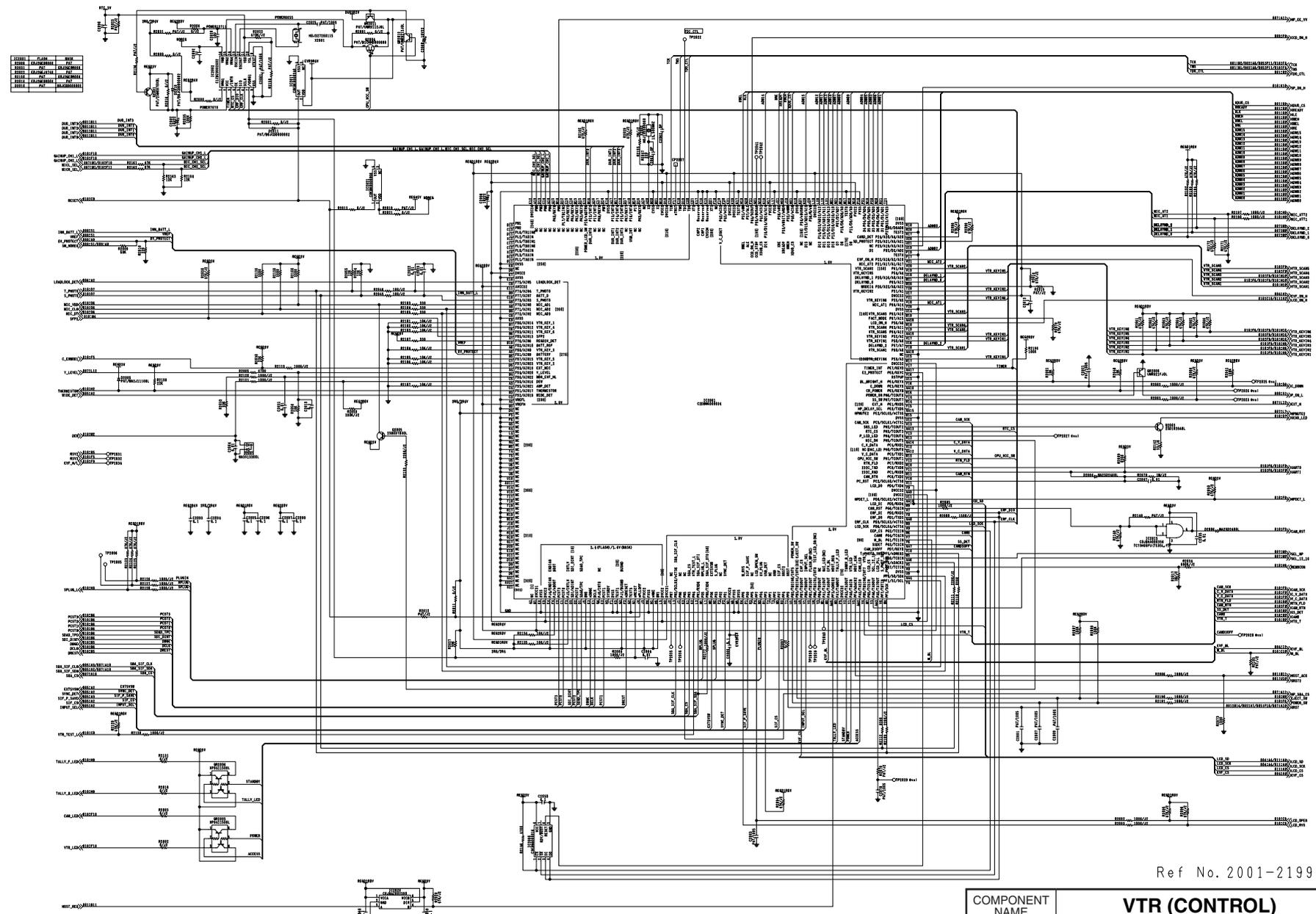
Ref No. 3200 Series.  
Ref No. 5000 Series.

COMPONENT NAME	<b>VTR (RIP&amp;HRAMP)</b>	02/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO.
		KR 3A0324 (2/11)
		<b>SCM003</b>

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

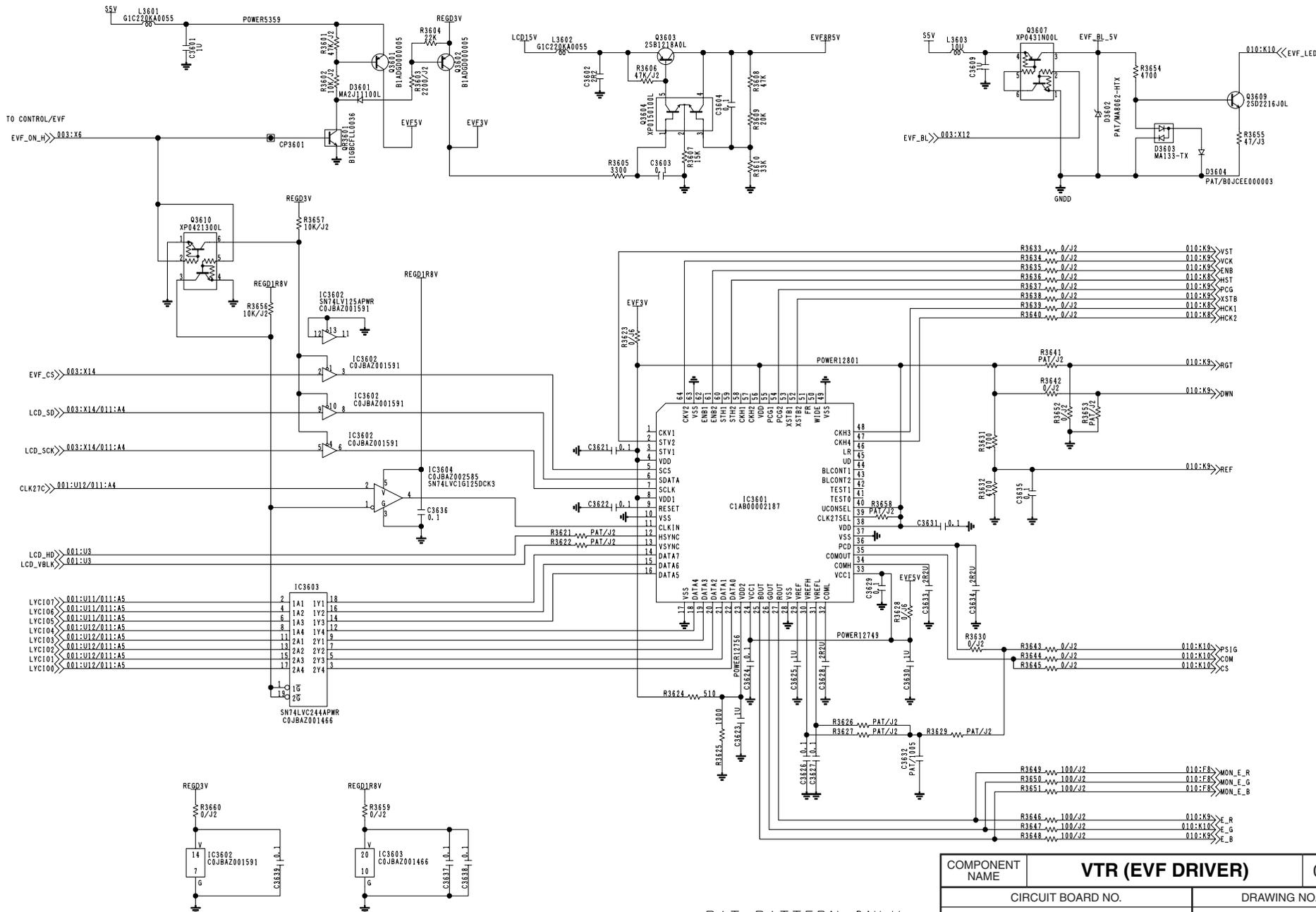
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Ref No. 2001-2199 Series.

COMPONENT NAME	<b>VTR (CONTROL)</b>	03/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO.
		KR 3A0324 (3/11)
		<b>SCM004</b>

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

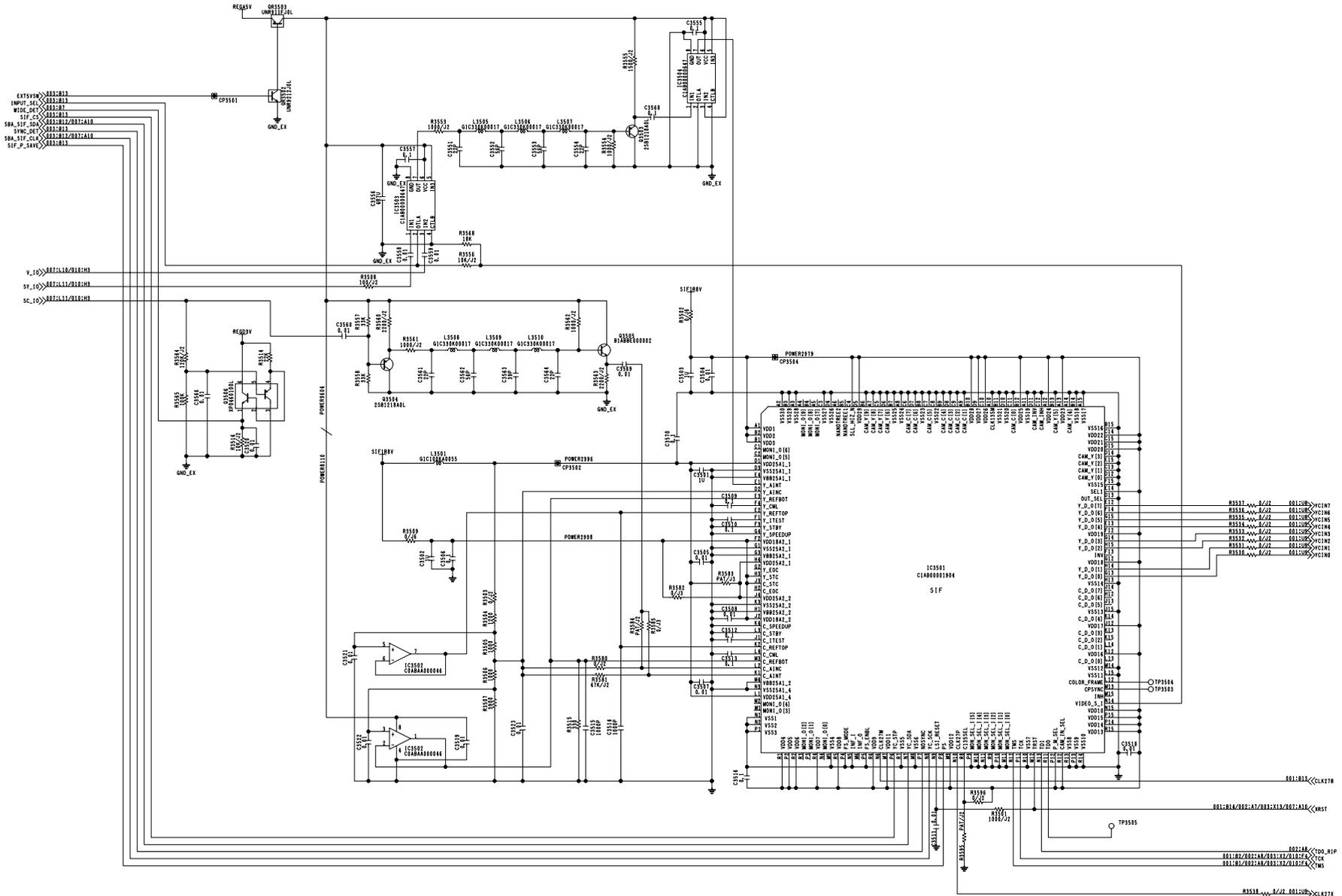


PAT=PATTERN ONLY  
Ref No. 3600 Series.

COMPONENT NAME	<b>VTR (EVF DRIVER)</b>	04/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO.
		KR 3A0324 (4/11)
		<b>SCM005</b>

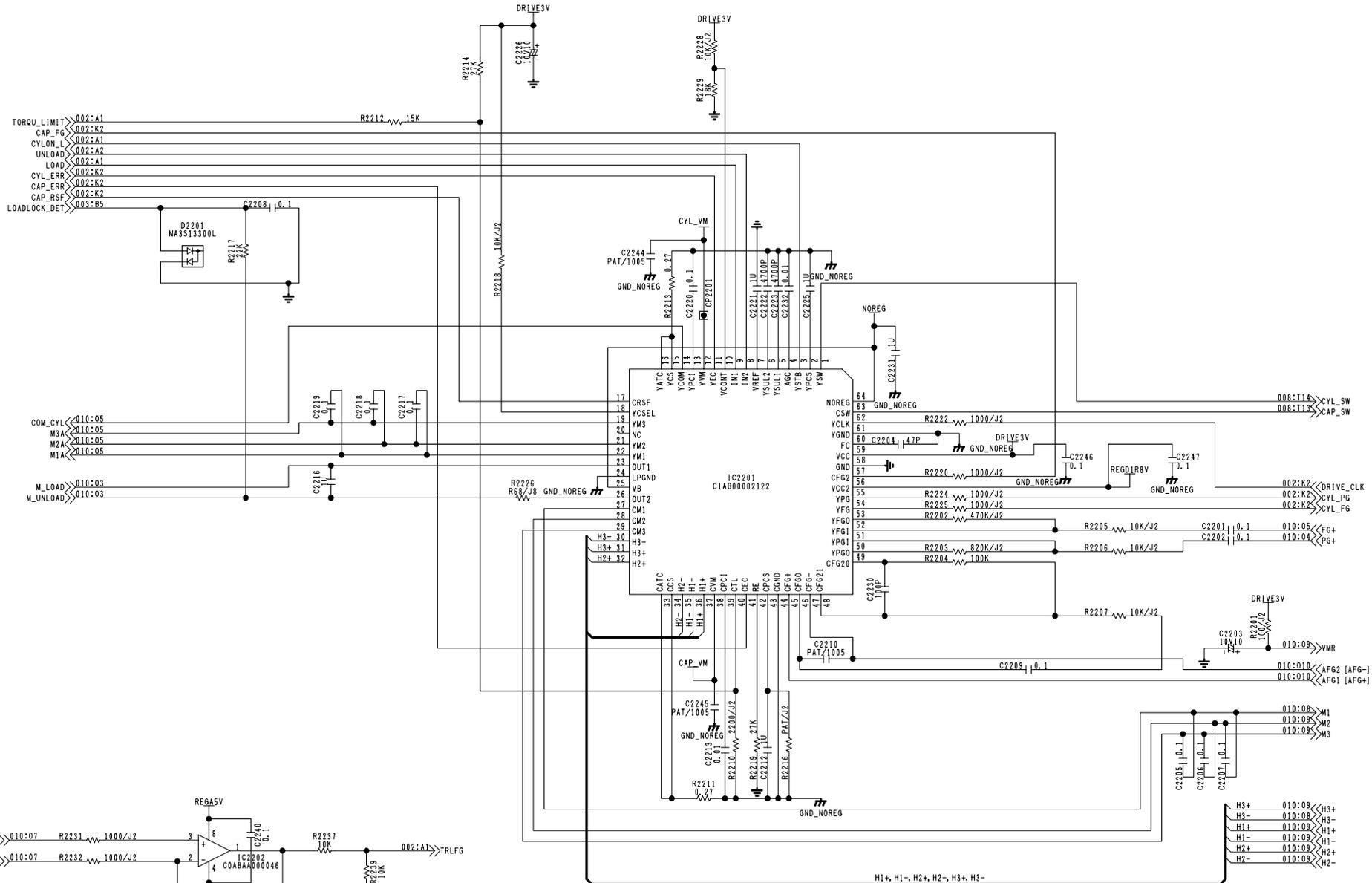
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



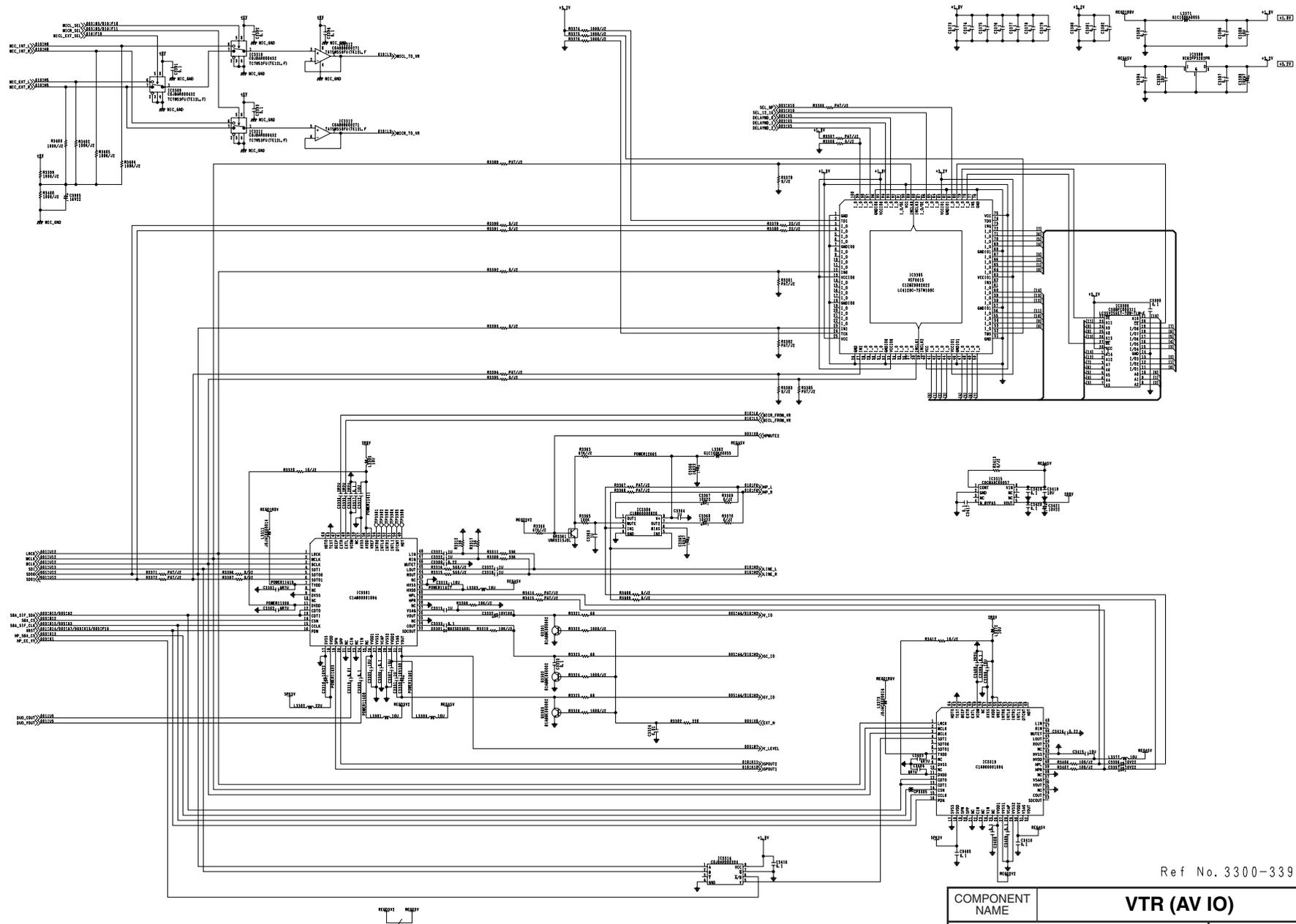
COMPONENT NAME	<b>VTR (EXT INPUT)</b>	05/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO. KR 3A0324 (5/11)
		<b>SCM006</b>

PAT=PATTERN ONLY  
Ref No. 3500 Series.



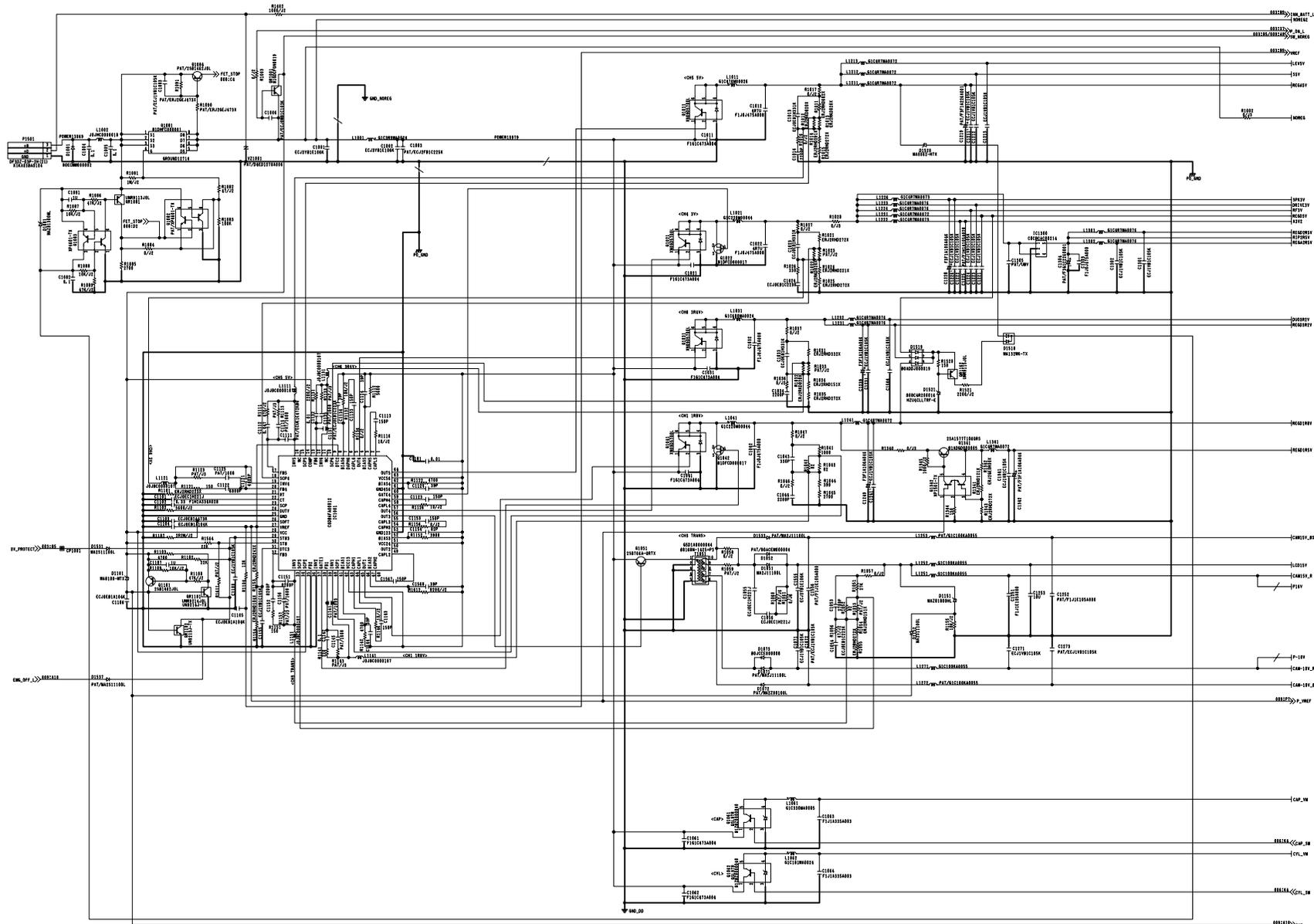
PAT=PATTERN ONLY  
Ref No.2200 Series.

COMPONENT NAME	<b>VTR (DRIVER)</b>	06/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO.
		KR 3A0324 (6/11)
		<b>SCM007</b>



Ref No. 3300-3399 Series.

COMPONENT NAME	<b>VTR (AV IO)</b>		07/11
CIRCUIT BOARD NO.		DRAWING NO.	
VEP03G82A/B		KR 3A0324 (7/11)	
<b>SCM008</b>			

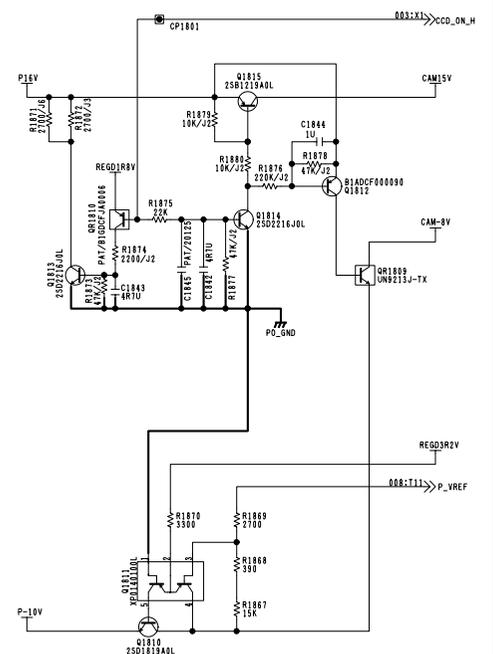
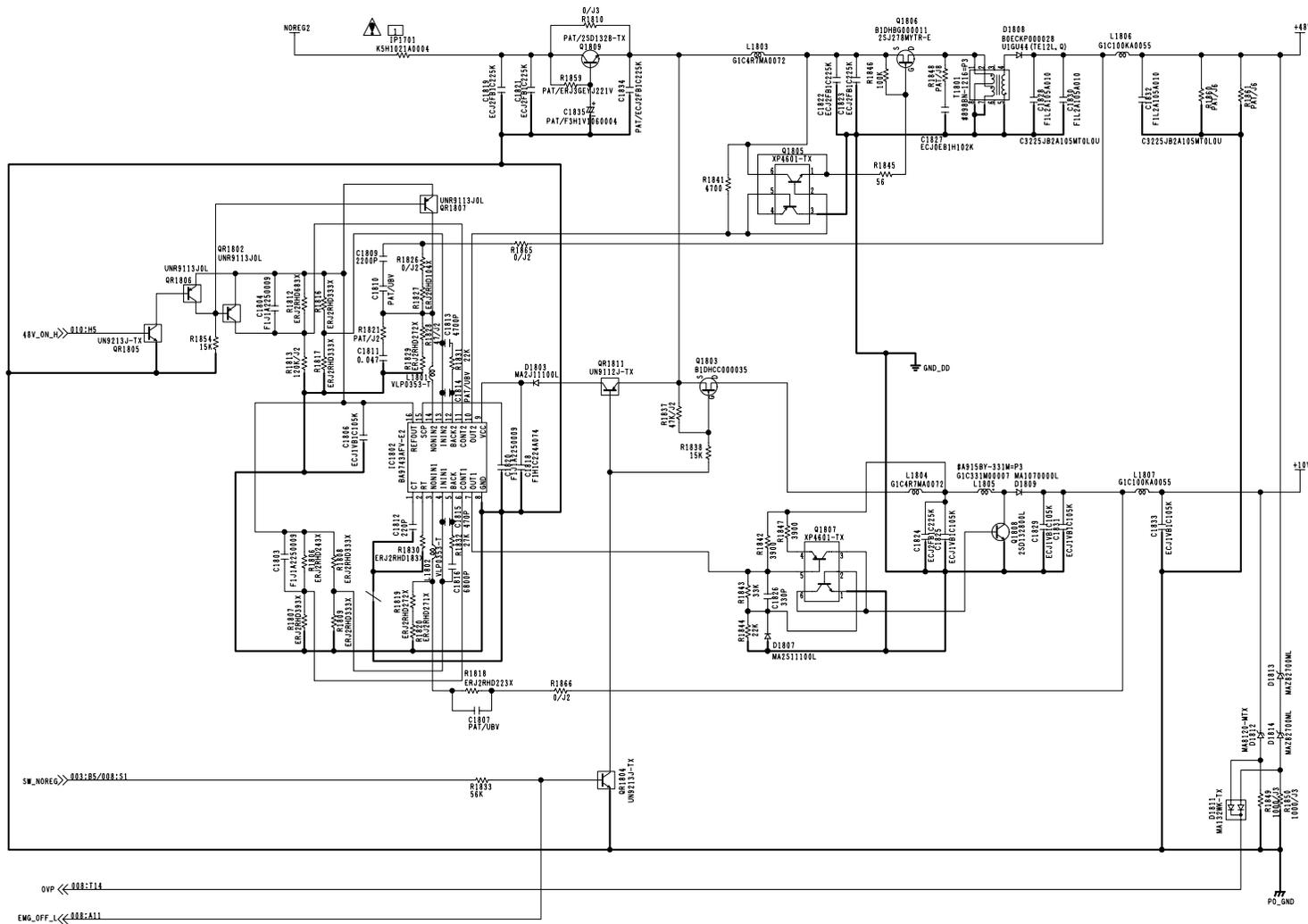


Ref No.1000 Series.

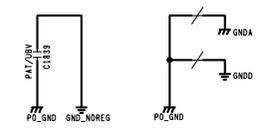
COMPONENT NAME	<b>VTR (POWER 1)</b>	08/11
CIRCUIT BOARD NO.	VEP03G82A/B	DRAWING NO.
		KR 3A0324 (8/11)
		<b>SCM009</b>

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

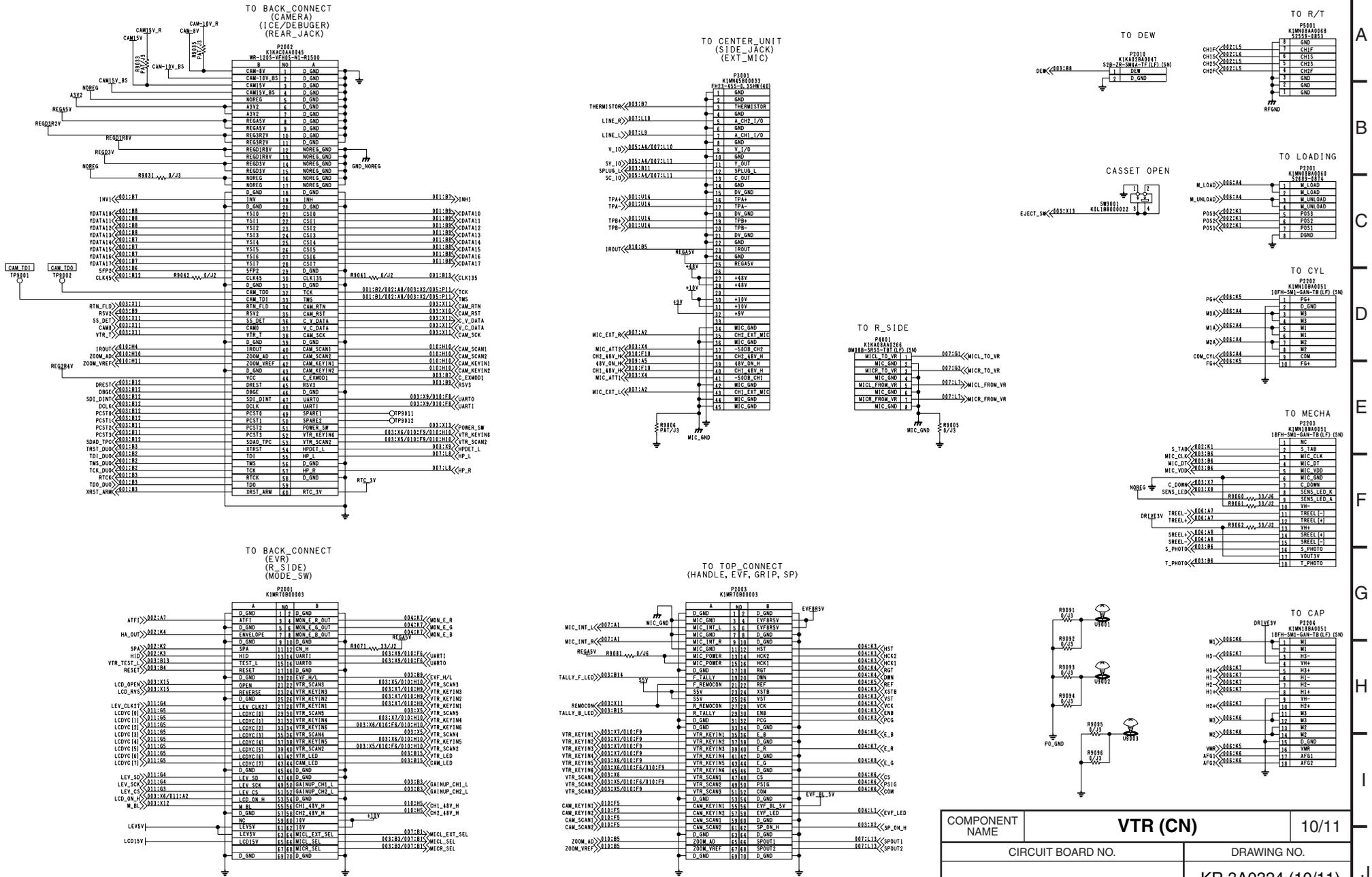


PAT=PATTERN ONLY

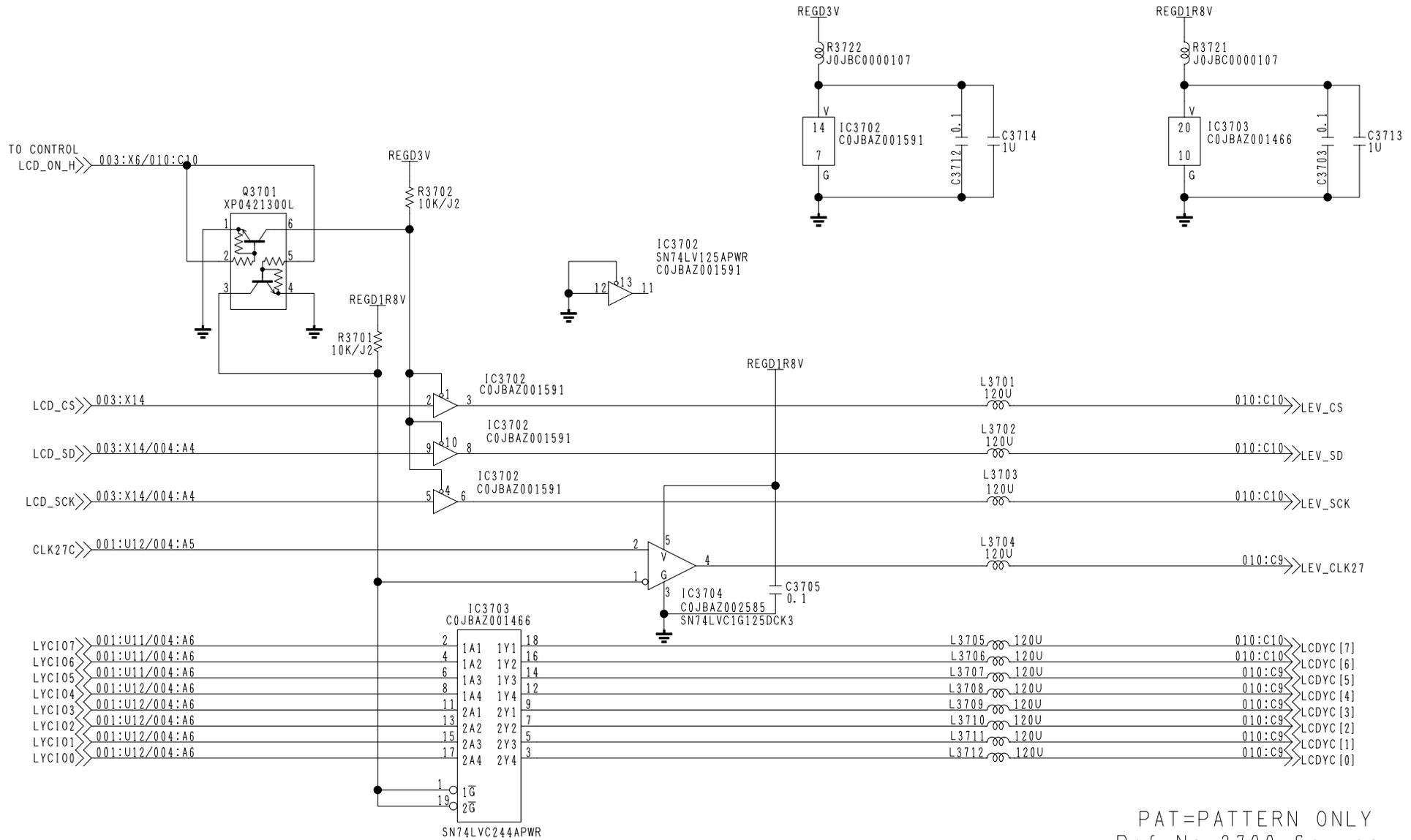


**警告** △印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。  
 Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

COMPONENT NAME	<b>VTR (POWER 2)</b>	09/11
CIRCUIT BOARD NO.	DRAWING NO.	
VEP03G82A/B	KR 3A0324 (9/11)	
<b>SCM010</b>		

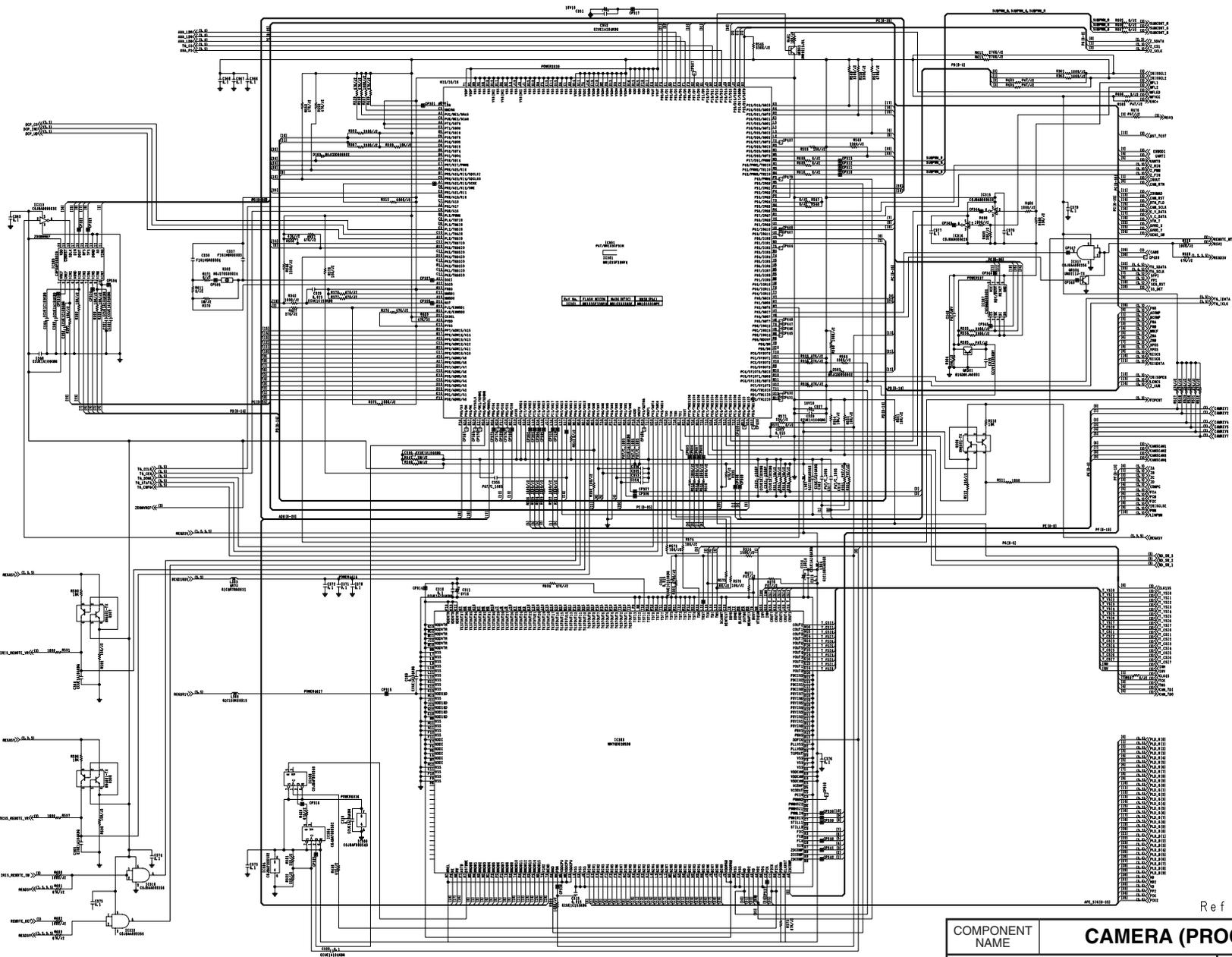


COMPONENT NAME	<b>VTR (CN)</b>	10/11
CIRCUIT BOARD NO.	DRAWING NO.	
VEP03G82A/B	KR 3A0324 (10/11)	
<b>SCM011</b>		



PAT=PATTERN ONLY  
Ref No. 3700 Series.

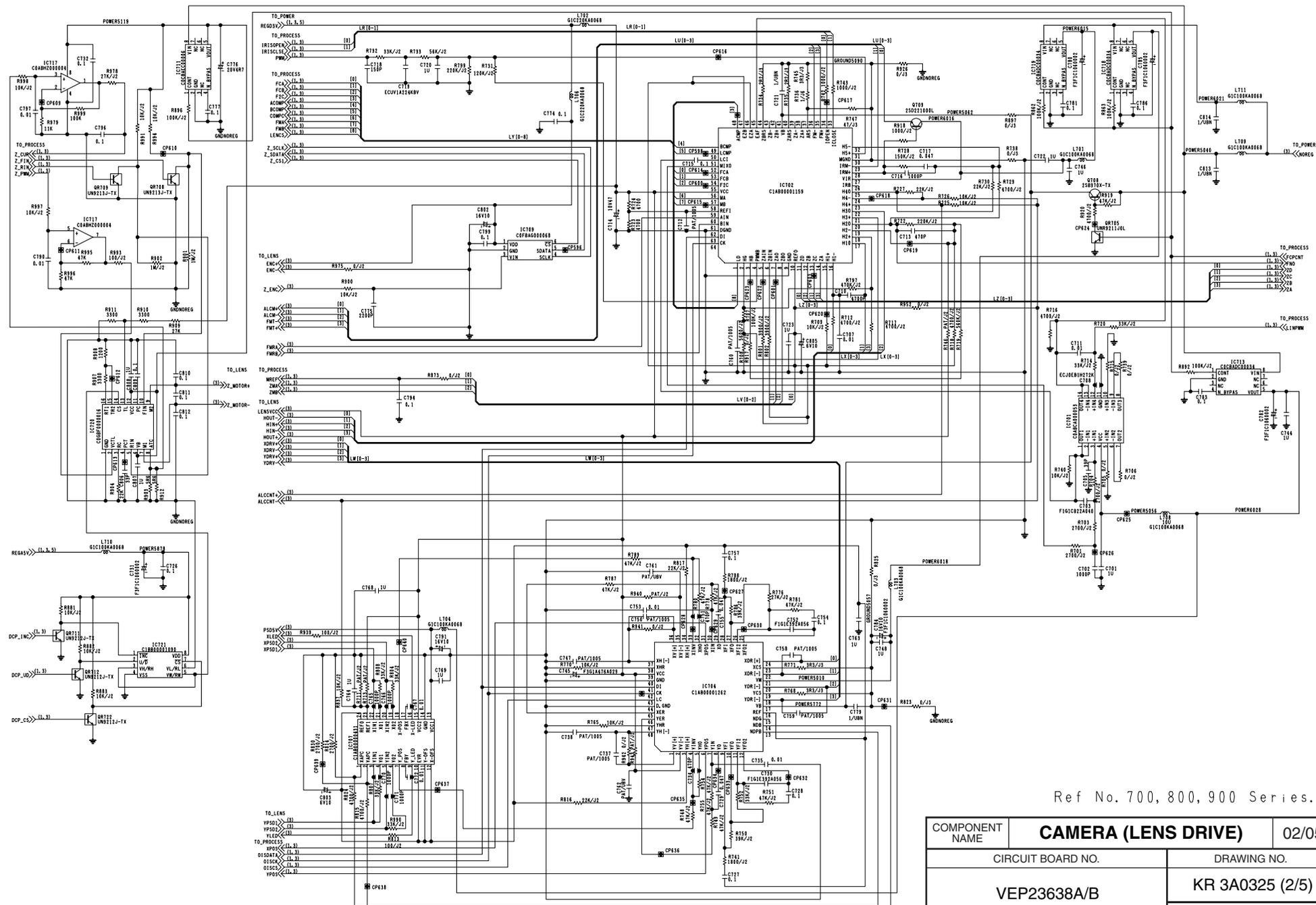
COMPONENT NAME	<b>VTR (LCD BUFFER)</b>	11/11
CIRCUIT BOARD NO.		DRAWING NO.
VEP03G82A/B		KR 3A0324 (11/11)
<b>SCM012</b>		



Ref No. 300-699 Series.

COMPONENT NAME	<b>CAMERA (PROCESS)</b>	01/05
CIRCUIT BOARD NO.	DRAWING NO.	
VEP23638A/B	KR 3A0325 (1/5)	
	<b>SCM013</b>	

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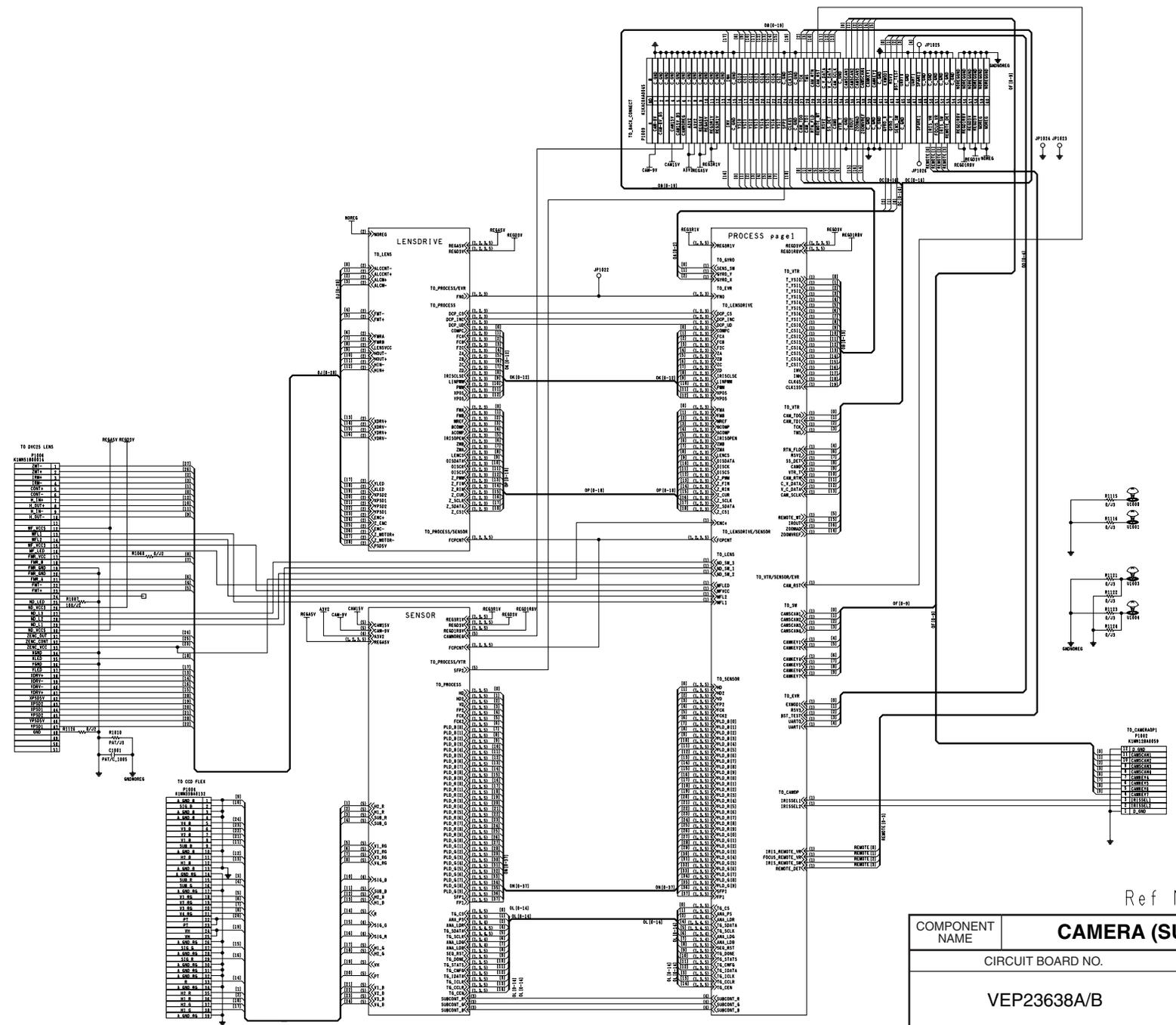


Ref No. 700, 800, 900 Series.

COMPONENT NAME	<b>CAMERA (LENS DRIVE)</b>	02/05
CIRCUIT BOARD NO.		DRAWING NO.
VEP23638A/B		KR 3A0325 (2/5)
<b>SCM014</b>		

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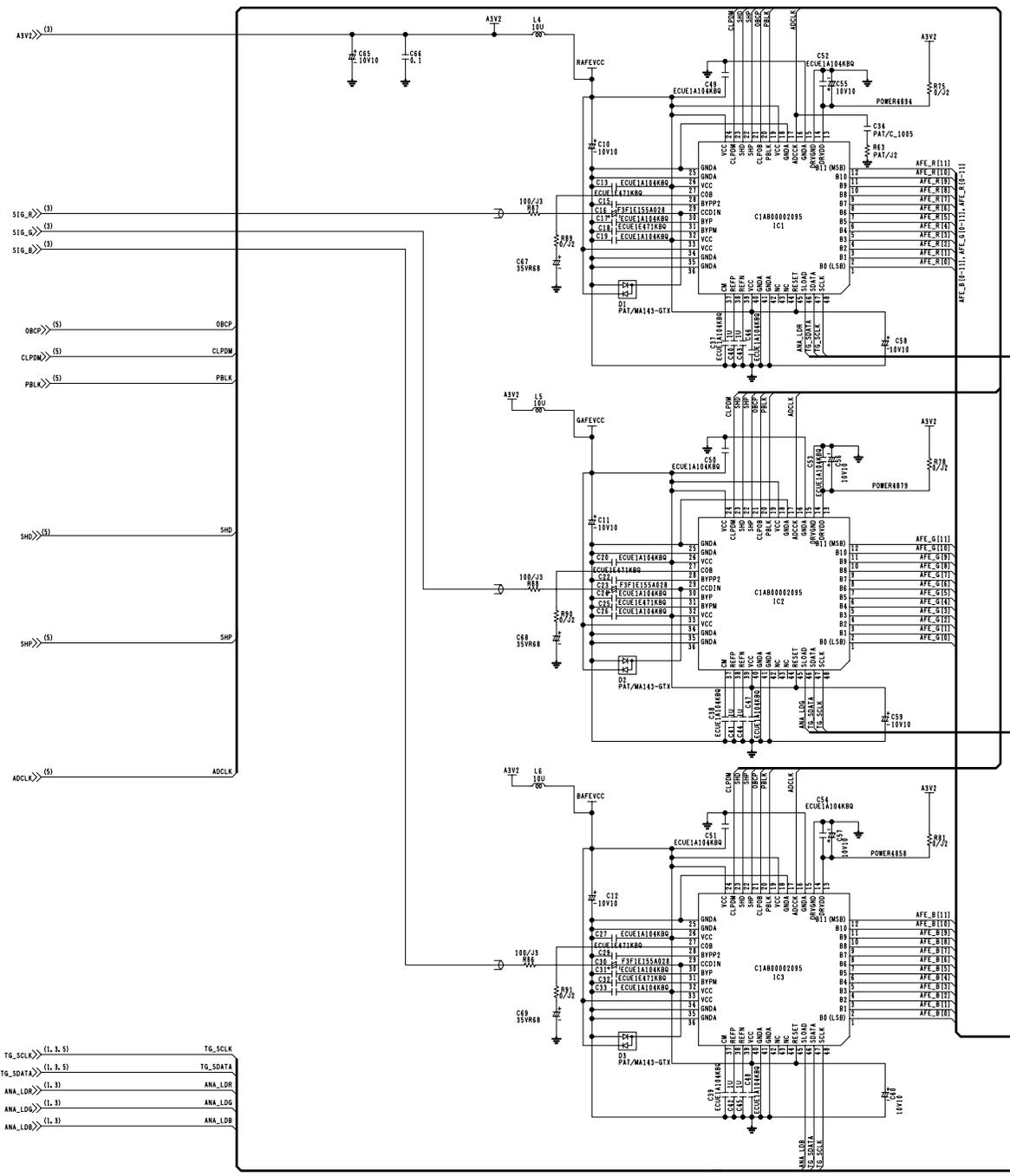
A  
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Ref No.1000 Series.

COMPONENT NAME	<b>CAMERA (SUB CN)</b>	03/05
CIRCUIT BOARD NO.	DRAWING NO.	
<b>VEP23638A/B</b>	<b>KR 3A0325 (3/5)</b>	
	<b>SCM015</b>	

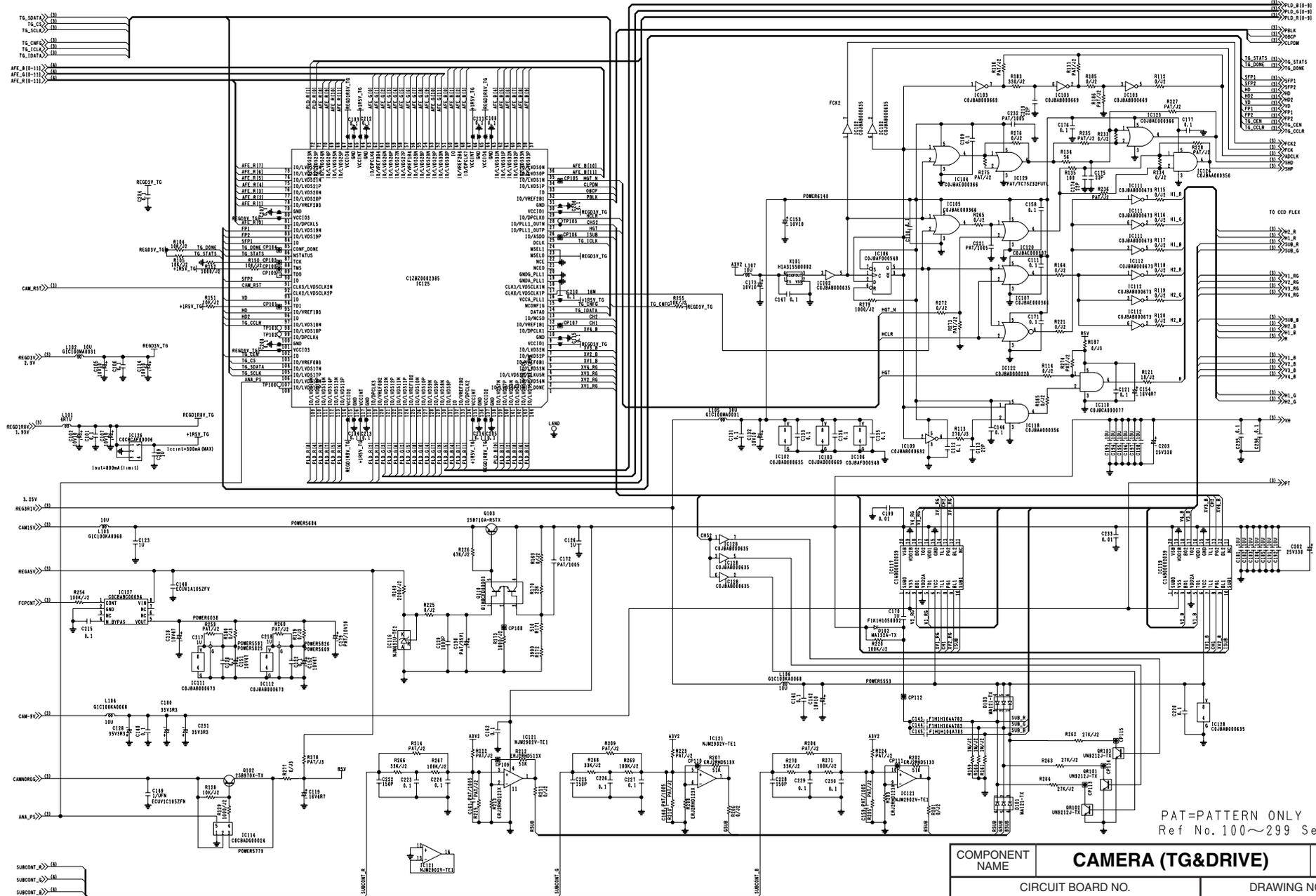
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



COMPONENT NAME	<b>CAMERA (AFE)</b>	04/05
CIRCUIT BOARD NO.		DRAWING NO.
VEP23638A/B		KR 3A0325 (4/5)
<b>SCM016</b>		

A  
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

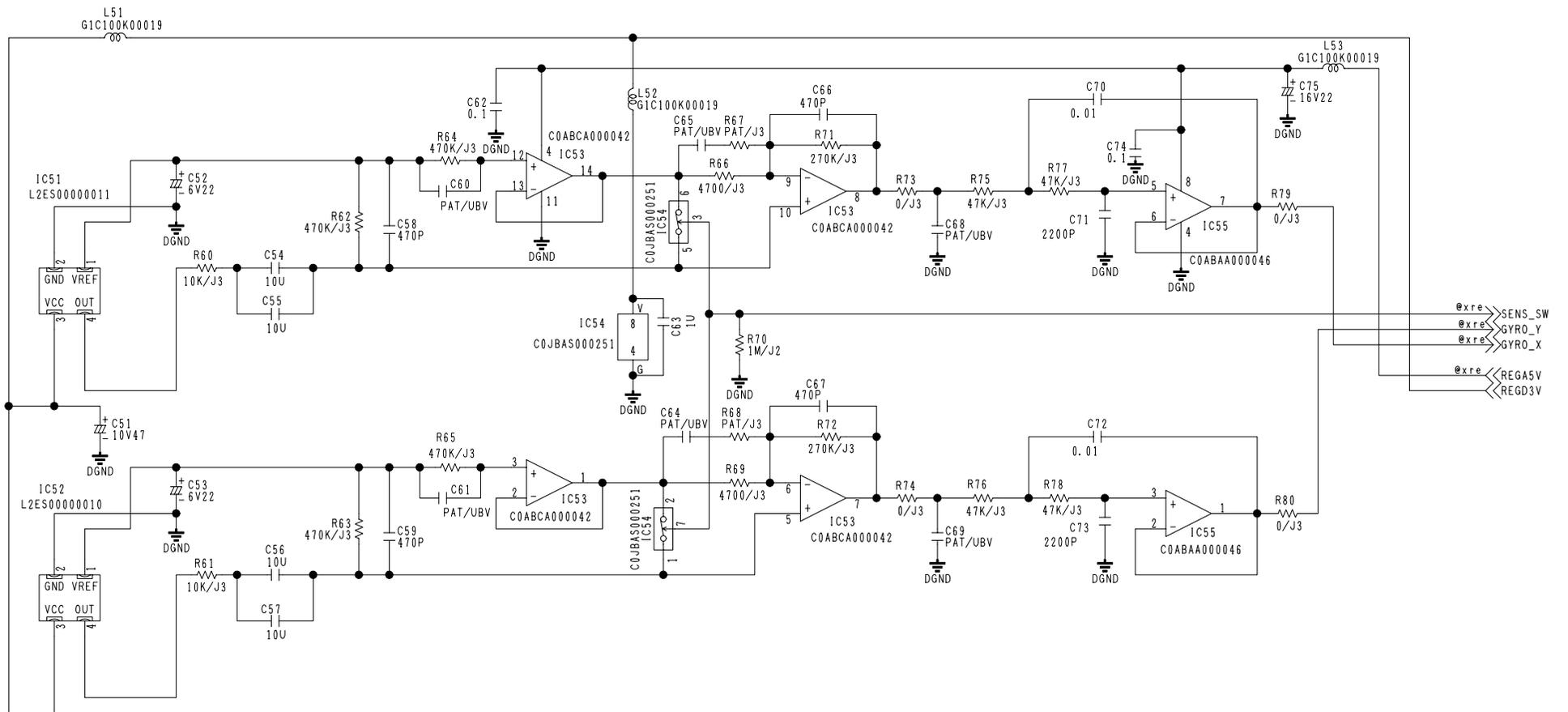


COMPONENT NAME	<b>CAMERA (TG&amp;DRIVE)</b>	05/05
CIRCUIT BOARD NO.	VEP23638A/B	DRAWING NO.
		KR 3A0325 (5/5)
		<b>SCM017</b>

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15





Ref No. 51-100Series.

COMPONENT NAME	<b>BACK CONNECT (GYRO)</b>	02/02
CIRCUIT BOARD NO.	DRAWING NO.	
VEP001K6A	KR 3A0323 (2/2)	
<b>SCM019</b>		

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P551  
K1M24AA0018  
FH12-24S-0, 55V (78)

1	D_GND
2	D_GND
3	R_TALLY_LED
4	R_REMOCON
5	DSV
6	CAM_KEYIN1
7	CAM_KEYIN2
8	CAM_SCAN1
9	CAM_SCAN2
10	VTR_KEYIN6
11	VTR_SCAN2
12	D_GND
13	MIC_GND
14	MIC_GND
15	MIC_GND
16	MIC_R
17	MIC_GND
18	REGA5V
19	D_GND
20	DSV
21	F_REMOCON
22	F_TALLY_LED
23	D_GND
24	D_GND

P552  
K1M10AA0018  
FH12-10S-0, 55V (78)

1	D_GND
2	D_GND
3	VTR_KEYIN3
4	VTR_KEYIN1
5	VTR_KEYIN5
6	VTR_KEYIN2
7	VTR_KEYIN4
8	VTR_SCAN1
9	VTR_KEYIN6
10	D_GND

P553  
K1M10AA0018  
FH12-10S-0, 55V (78)

1	D_GND
2	D_GND
3	D_GND
4	ZOOM_VREF
5	ZOOM_AD
6	VTR_SCAN3
7	VTR_KEYIN5
8	D_GND
9	D_GND
10	D_GND

P554  
K1MR70B00004  
WR-FL70P-HF-HD-A1E-R1000

B	NO.	A	
1	D_GND	1	D_GND
2	A_GND	2	EVF8RSV
3	MIC_INT_L	3	EVF8RSV
4	A_GND	4	D_GND
5	MIC_INT_R	5	D_GND
6	A_GND	6	HST
7	MIC_POWER	7	HCK2
8	MIC_POWER	8	HCK1
9	D_GND	9	RG1
10	F_TALLY	10	DWN
11	F_REMOCON	11	REF
12	SSV	12	XSTB
13	SSV	13	VST
14	R_REMOCON	14	VCK
15	R_TALLY	15	ENB
16	D_GND	16	PCG
17	D_GND	17	D_GND
18	VTR_KEYIN1	18	E_B
19	VTR_KEYIN2	19	D_GND
20	VTR_KEYIN3	20	E_R
21	VTR_KEYIN4	21	D_GND
22	VTR_KEYIN5	22	E_G
23	VTR_KEYIN6	23	D_GND
24	VTR_SCAN1	24	CS
25	VTR_SCAN2	25	PSIG
26	VTR_SCAN3	26	COM
27	D_GND	27	D_GND
28	CAM_KEYIN1	28	EVF_BL_5V
29	CAM_KEYIN2	29	EVF_LED
30	CAM_SCAN1	30	D_GND
31	CAM_SCAN2	31	SP_ON_H
32	D_GND	32	D_GND
33	ZOOM_AD	33	SPOUT1
34	ZOOM_VREF	34	SPOUT2
35	D_GND	35	D_GND

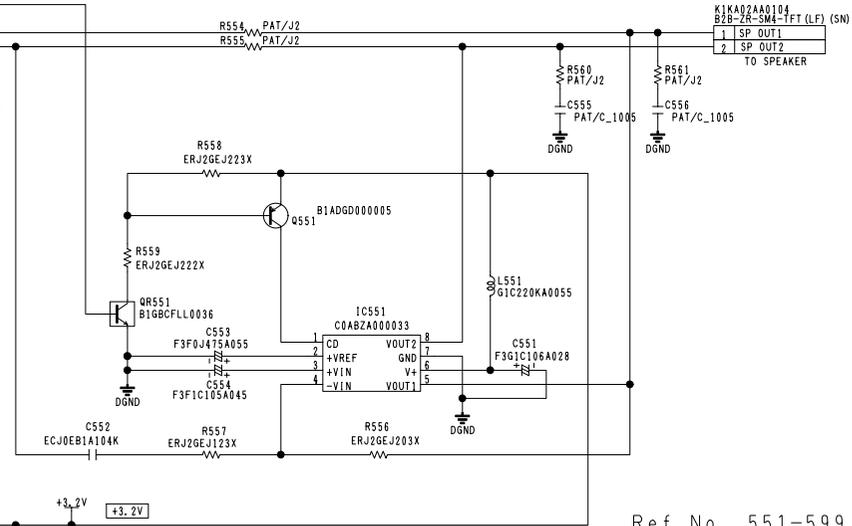
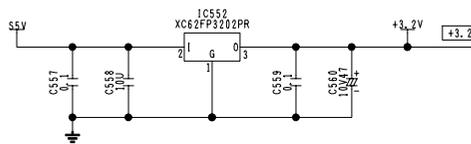
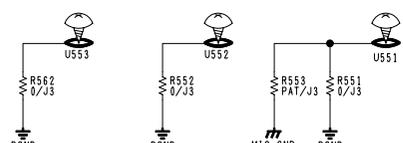
P555  
K1MN2AA0018  
FH12-22S-0, 55V (78)

22	EVF8RSV
21	D_GND
20	HST
19	HCK2
18	HCK1
17	RG1
16	DWN
15	REF
14	XSTB
13	VST
12	VCK
11	ENB
10	PCG
9	E_B
8	E_R
7	E_G
6	CS
5	PSIG
4	COM
3	EVF_BL_5V
2	EVF_LED
1	D_GND

P556

1	SP_OUT1
2	SP_OUT2

D551  
MA35781D0L



Ref No. 551-599 Series.

COMPONENT NAME	<b>TOP CONNECT</b>		01/01
CIRCUIT BOARD NO.	VEP001K7A		DRAWING NO.
			KR 3A0324 (1/1)
			<b>SCM020</b>

P302  
K1MN06BA0059  
FH12-6S-0.5SH(78)

D_GND	1
D_GND	2
CAM_SCAN1	3
CAM_KEYIN6	4
D_GND	5
D_GND	6

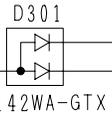
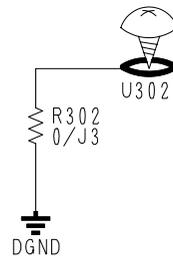
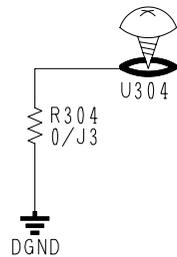
FROM CAM\_OP4

P301  
K1MN10BA0059  
FH12-10S-0.5SH(78)

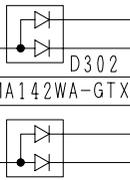
D_GND	10
D_GND	9
CAM_SCAN1	8
CAM_SCAN2	7
CAM_KEYIN6	6
CAM_KEYIN7	5
CAM_KEYIN4	4
CAM_KEYIN5	3
D_GND	2
D_GND	1

FROM CAM\_OP2

DGND



MA142WA-GTX



MA142WA-GTX



MA142WA-GTX

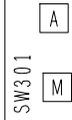


MA142WA-GTX

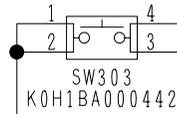
KOD113B00029  
SSSS810301

FOCUS

DGND

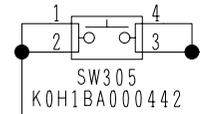


SW301



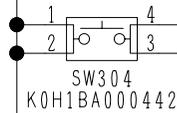
SW303  
KOH1BA000442

AUTO



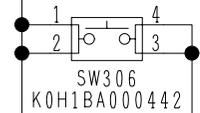
SW305  
KOH1BA000442

USER1



SW304  
KOH1BA000442

USER3



SW306  
KOH1BA000442

USER2

Ref No. 300 Series.

COMPONENT NAME	<b>CAM OP1</b>		01/01
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G11A		KR 6A0201 (1/1)	
<b>SCM021</b>			

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P352  
K1MN12AA0018  
FH12-12S-0.5SV (78)

D_GND	1
CAM_SCAN1	2
CAM_SCAN2	3
CAM_SCAN3	4
CAM_SCAN4	5
CAM_KEYIN4	6
CAM_KEYIN5	7
CAM_KEYIN6	8
CAM_KEYIN7	9
IRIS_SEL1	10
IRIS_SEL2	11
D_GND	12

FROM CAMERA

P350  
K1ZZ0001279  
08PS-JED

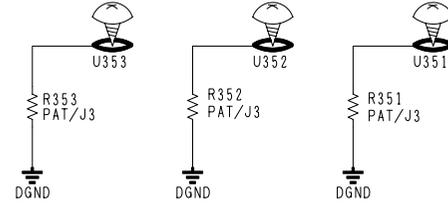
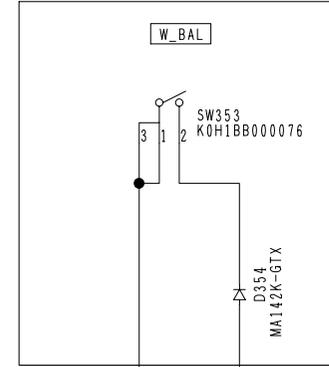
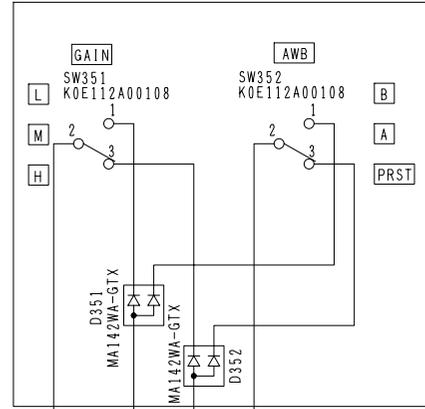
B	NO	A
D_GND	1	D_GND
IRIS_SEL1	2	IRIS_SEL2
D_GND	3	D_GND
D_GND	4	D_GND

TO CAM\_OP3

P351  
K1MN10AA0018  
FH12-10S-0.5SV (78)

D_GND	1
D_GND	2
CAM_SCAN1	3
CAM_SCAN2	4
CAM_KEYIN6	5
CAM_KEYIN7	6
CAM_KEYIN4	7
CAM_KEYIN5	8
D_GND	9
D_GND	10

TO CAM\_OP1

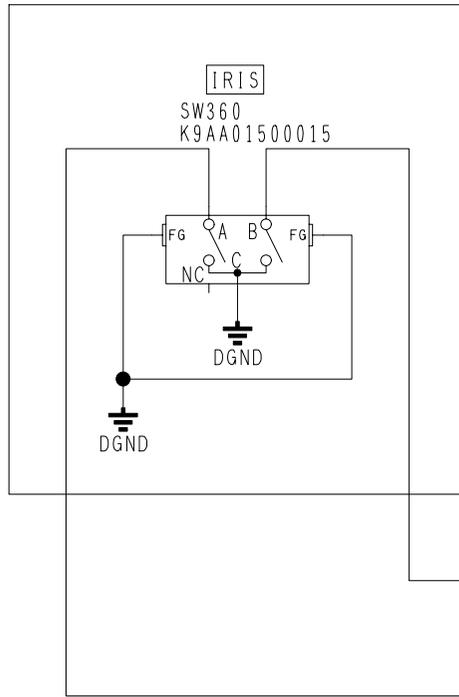
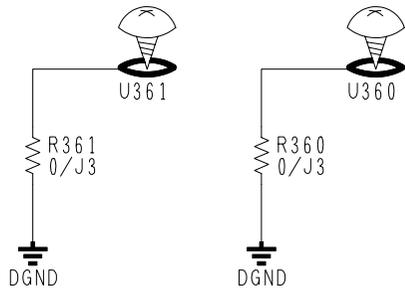


Ref No.350 Series.

COMPONENT NAME	<b>CAM OP2</b>		01/01
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G12A		KR 6A0202 (1/1)	
<b>SCM022</b>			

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



P360  
K1ZZ00001307  
08R-JED (LF) (SN)

A	NO	B
D_GND	1	D_GND
IRIS_SEL1	2	IRIS_SEL2
D_GND	3	D_GND
D_GND	4	D_GND

TO CAM\_OP2



COMPONENT NAME	<b>CAM OP3</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G13A		KR 6A0203 (1/1)
<b>SCM023</b>		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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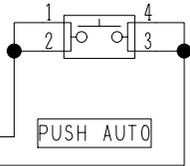
P370  
 K1MN06BA0059  
 FH12-6S-0.5SH(78)

D_GND	1
D_GND	2
CAM_KEY1N6	3
CAM_SCAN1	4
D_GND	5
D_GND	6

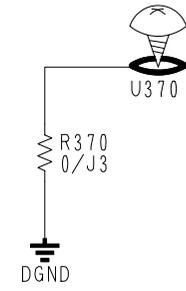
FROM CAM\_OP1



SW370  
 KOH1BA000442



PUSH AUTO

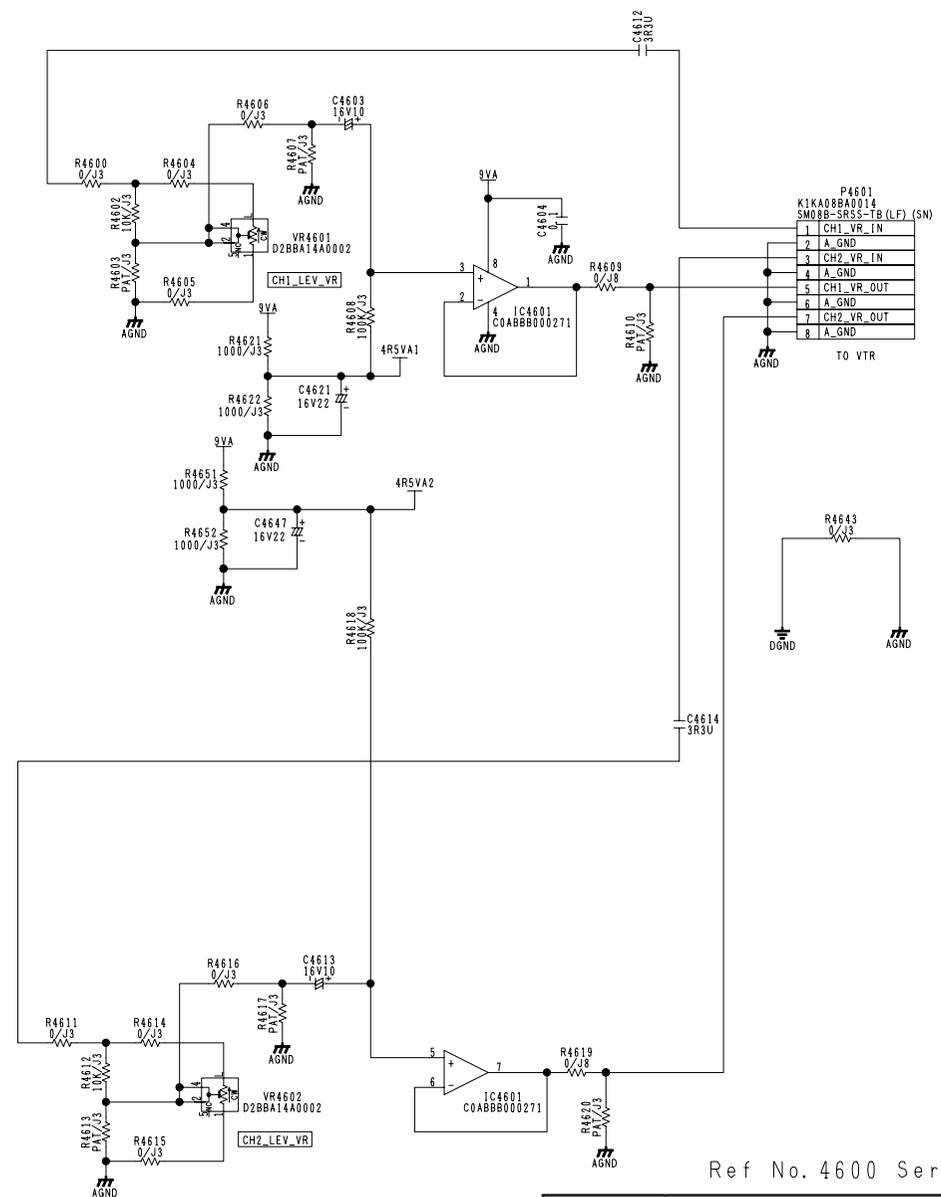
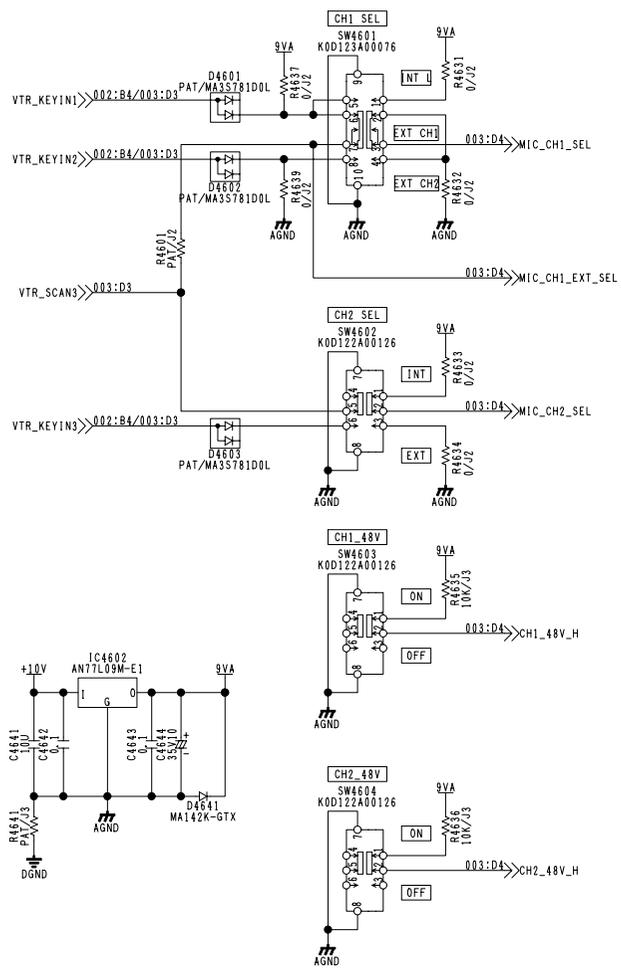


Ref No. 370 Series.

COMPONENT NAME	<b>CAM OP4</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G14A		KR 6A0204 (1/1)
<b>SCM024</b>		

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

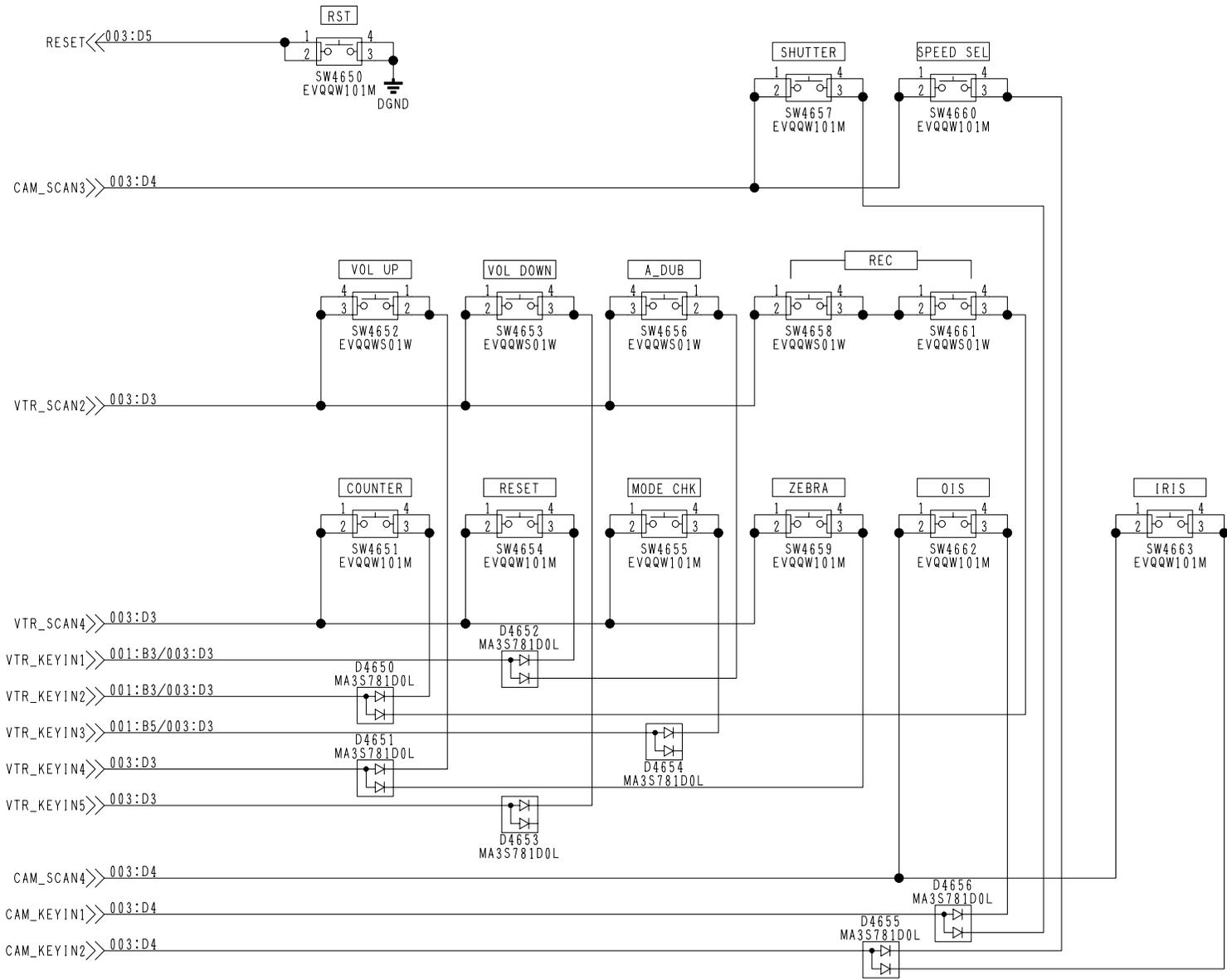


Ref No. 4600 Series.

COMPONENT NAME	<b>R SIDE (AUDIO)</b>	01/05
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G09A		KR 6A0199 (1/5)
<b>SCM025</b>		

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



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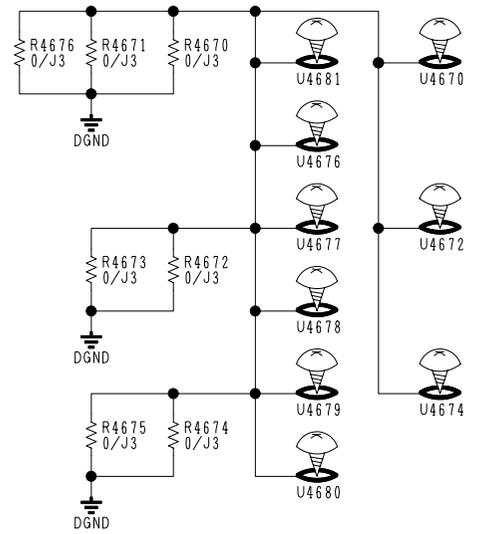
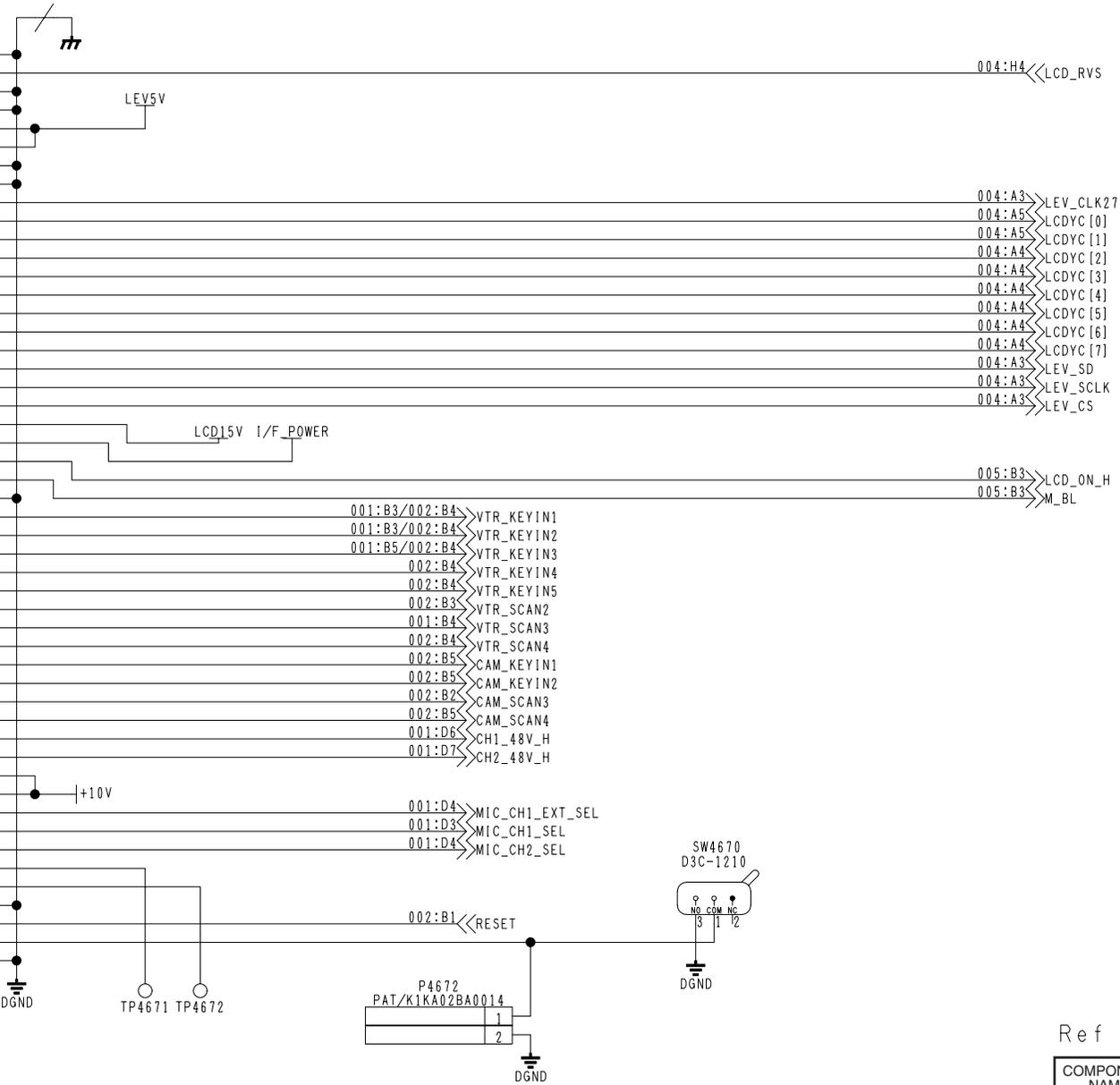
COMPONENT NAME	<b>R SIDE (KEY)</b>		02/05
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G09A		KR 6A0199 (2/5)	
		<b>SCM026</b>	

Ref No. 4650 Series.

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

P4670  
K1MN51B00014  
FH23-51S-0.3SHW(40)

D_GND	51
LCD_RVS	50
D_GND	49
D_GND	48
LEV5V	47
LEV5V	46
D_GND	45
D_GND	44
LEV_CLK27	43
LCDYC [0]	42
LCDYC [1]	41
LCDYC [2]	40
LCDYC [3]	39
LCDYC [4]	38
LCDYC [5]	37
LCDYC [6]	36
LCDYC [7]	35
LEV_SD	34
LEV_SCK	33
LEV_CS	32
LCD15V	31
I/F POWER	30
LCD_ON_H	29
M_BL	28
D_GND	27
VTR_KEYIN1	26
VTR_KEYIN2	25
VTR_KEYIN3	24
VTR_KEYIN4	23
VTR_KEYIN5	22
VTR_SCAN2	21
VTR_SCAN3	20
VTR_SCAN4	19
CAM_KEYIN1	18
CAM_KEYIN2	17
CAM_SCAN3	16
CAM_SCAN4	15
CH1_48V_H	14
CH2_48V_H	13
+10V	12
+10V	11
MIC_CH1_EXT_SEL	10
MIC_CH1_SEL	9
MIC_CH2_SEL	8
GAINUP_CH1_L	7
GAINUP_CH2_L	6
D_GND	5
RESET	4
LCD_OPEN	3
D_GND	2
NC	1

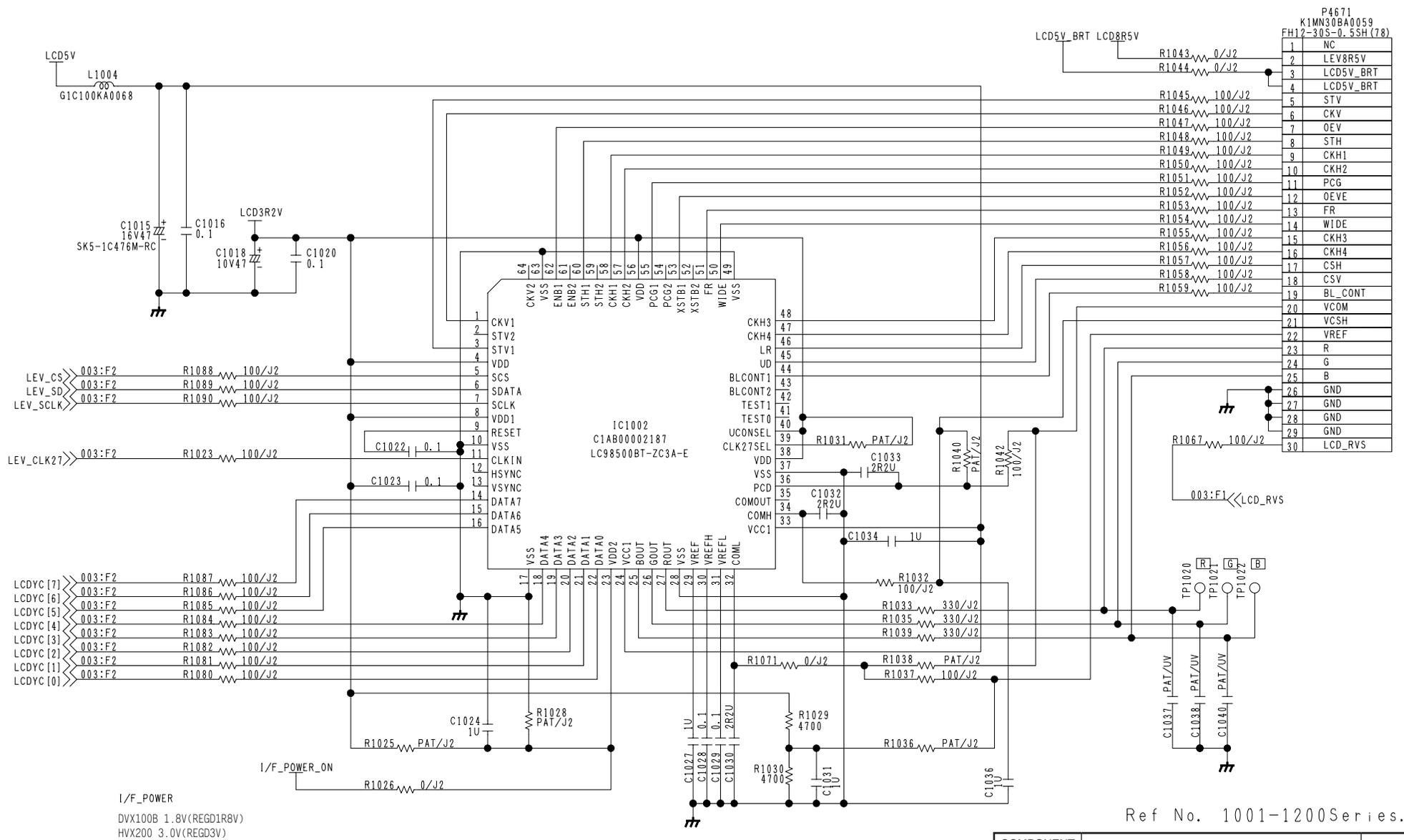


Ref No. 4670 Series.

COMPONENT NAME	<b>R SIDE</b>	03/05
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G09A		KR 6A0199 (3/5)
<b>SCM027</b>		

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

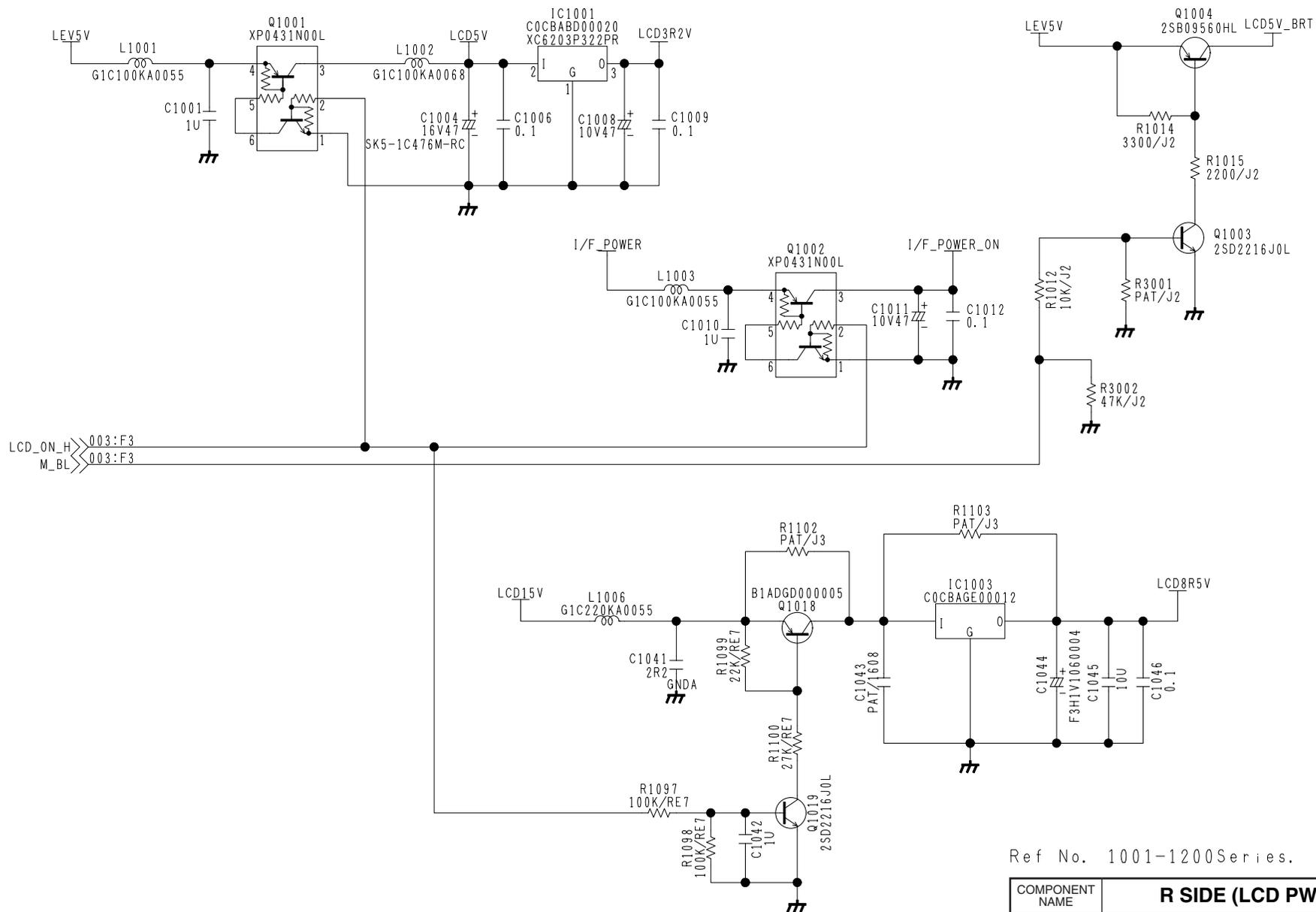
A  
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G  
H  
I  
J



P4671  
K1MN30BA0059  
FH12-30S-0.5SH(78)

1	NC
2	LEV8R5V
3	LCD5V_BRT
4	LCD5V_BRT
5	STV
6	CKV
7	OEV
8	STH
9	CKH1
10	CKH2
11	PCG
12	OEVE
13	FR
14	WIDE
15	CKH3
16	CKH4
17	CSH
18	CSV
19	BL_CONT
20	VCOM
21	VCSH
22	VREF
23	R
24	G
25	B
26	GND
27	GND
28	GND
29	GND
30	LCD_RVS

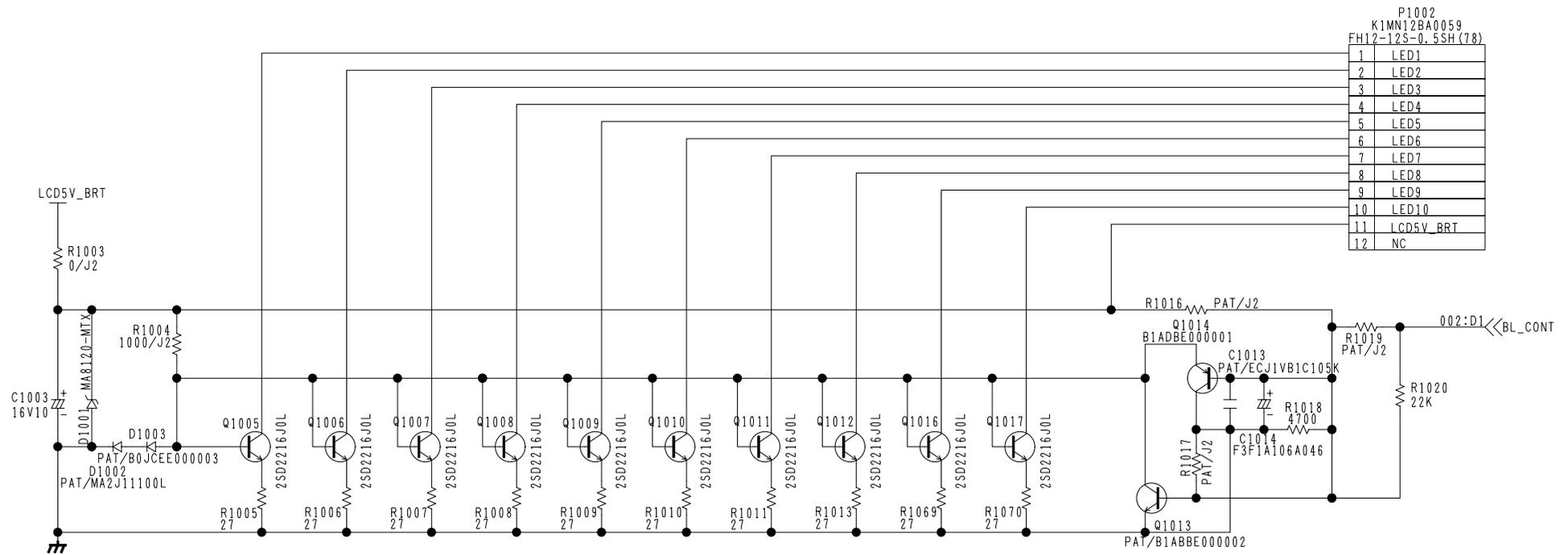
COMPONENT NAME	<b>R SIDE (LEV)</b>	04/05
CIRCUIT BOARD NO.	VEP06G09A	DRAWING NO.
		KR 6A0199 (4/5)
		<b>SCM028</b>



Ref No. 1001-1200 Series.

COMPONENT NAME	<b>R SIDE (LCD PWR)</b>	05/05
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G09A		KR 6A0199 (5/5)
<b>SCM029</b>		

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P1002	
K1MN12BA0059	
FH12-12S-0.5SH(78)	
1	LED1
2	LED2
3	LED3
4	LED4
5	LED5
6	LED6
7	LED7
8	LED8
9	LED9
10	LED10
11	LCD5V_BRT
12	NC

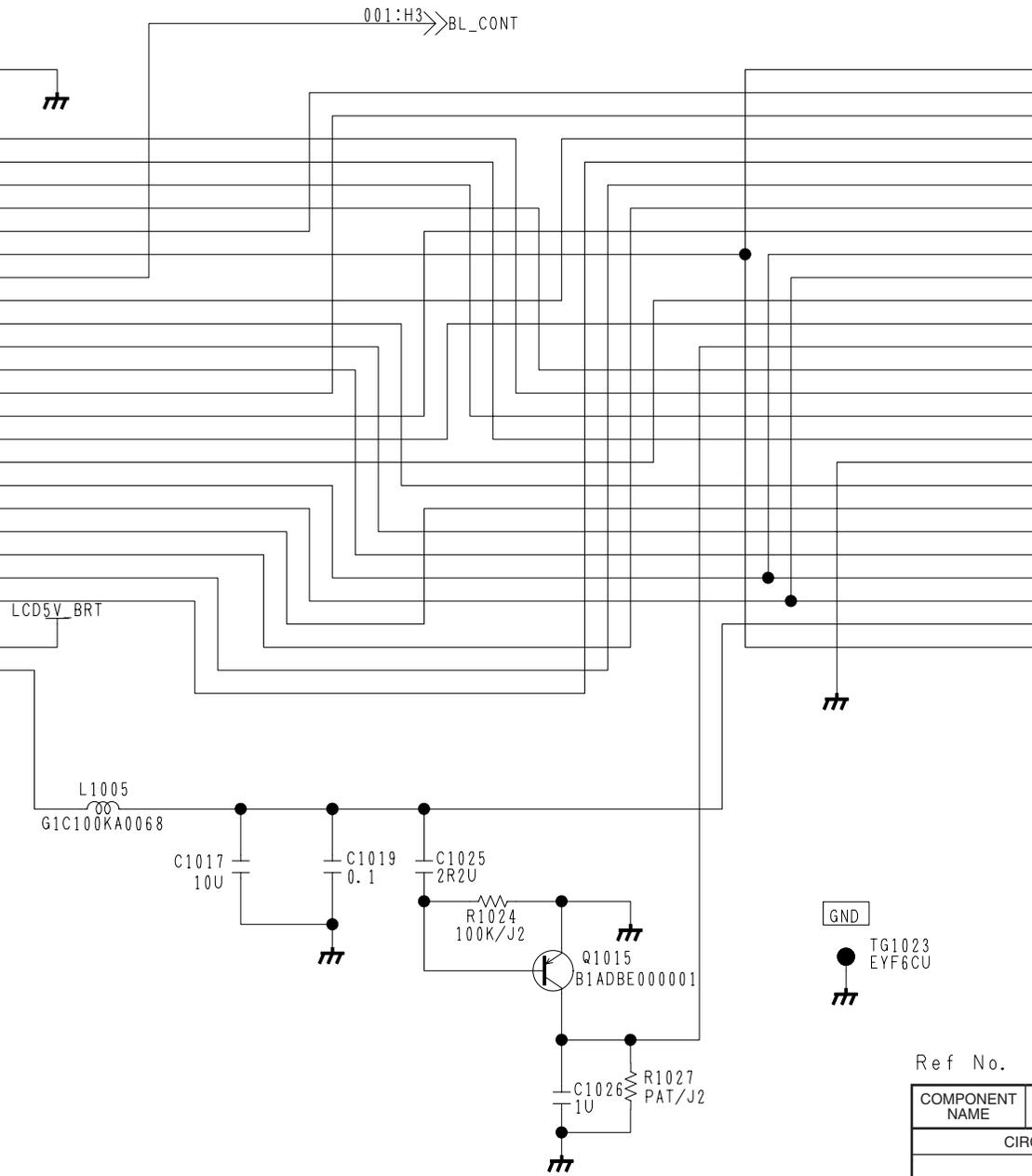
Ref No. 1001-1200Series.

COMPONENT NAME	<b>LCD LEV</b>	01/02
CIRCUIT BOARD NO.		DRAWING NO.
VEP08346A		KR 8A0057 (1/2)
<b>SCM030</b>		

A  
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J

P1001	
K1MN27B00036	
FH23-27S-0.3SHW (40)	
GND	1
GND	2
GND	3
B	4
G	5
R	6
VREF	7
VCSH	8
VCOM	9
BL_CONT	10
CSV	11
CSH	12
CKH4	13
CKH3	14
WIDE	15
FR	16
OEVE	17
PCG	18
CKH2	19
CKH1	20
STH	21
OEV	22
CKV	23
STV	24
LCD5V_BRT	25
LCD5V_BRT	26
LEV8R5V	27

P1003	
K1MN26BA0059	
FH12-26S-0.5SH (78)	
1	VCOM
2	VCSH
3	WIDE
4	CSV
5	STV
6	CKV
7	OEV
8	FR
9	CKD2
10	CKD1
11	PCG
12	OEVE
13	VVSS
14	VREF
15	B
16	R
17	G
18	VSS
19	CSH
20	STH
21	CKH4
22	CKH3
23	CKH2
24	CKH1
25	VDD
26	VCOM



Ref No. 1001-1200Series.

COMPONENT NAME	<b>LCD LEV</b>	02/02
CIRCUIT BOARD NO.		DRAWING NO.
VEP08346A		KR 8A0057 (2/2)
<b>SCM031</b>		

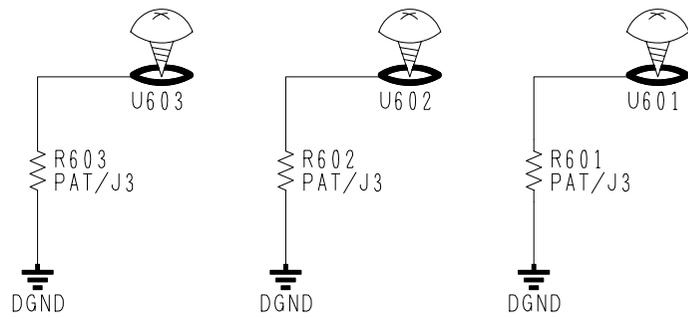
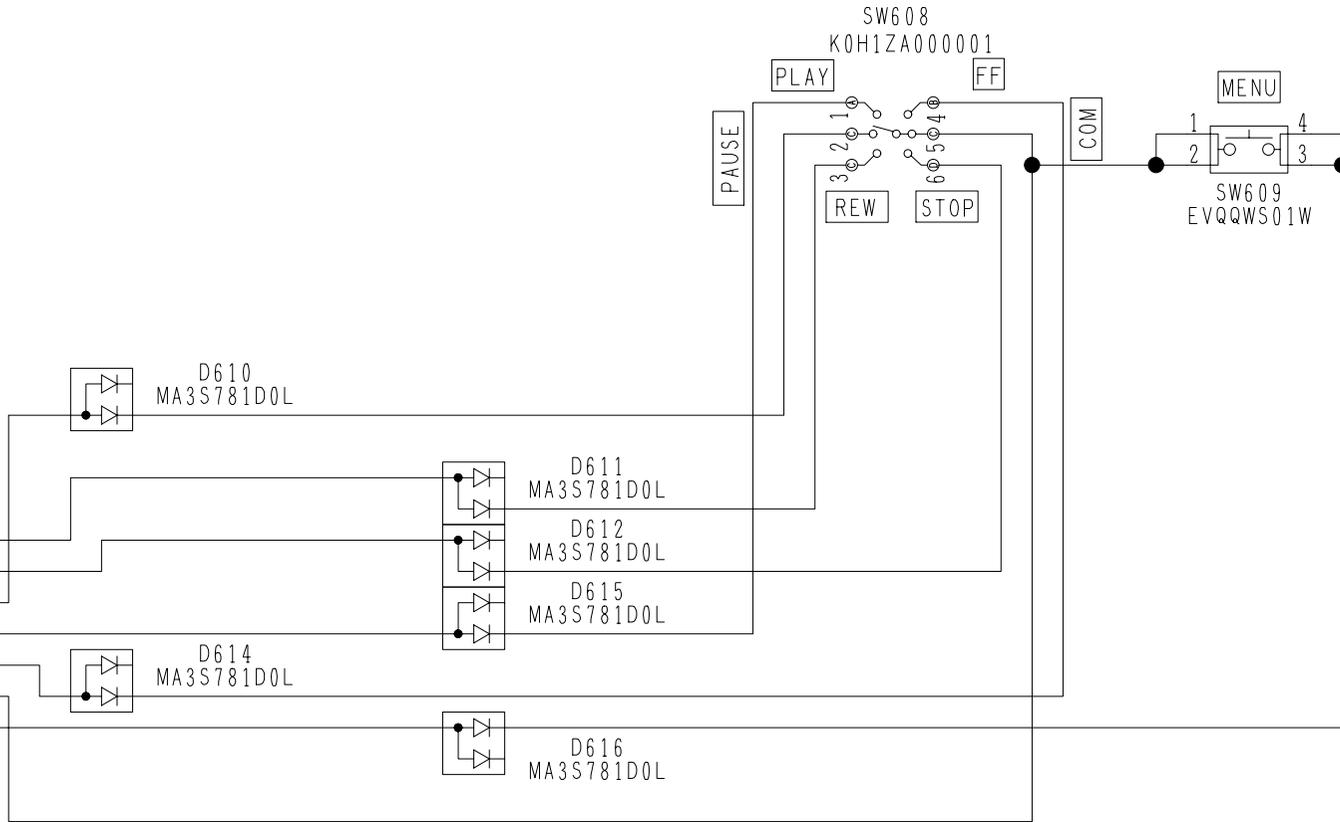
A  
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H  
I  
J

P610  
K1MN10BA0059  
FH12-10S-0.5SH (78)

D_GND	10
D_GND	9
VTR_KEYIN3	8
VTR_KEYIN1	7
VTR_KEYIN5	6
VTR_KEYIN2	5
VTR_KEYIN4	4
VTR_SCAN1	3
VTR_KEYIN6	2
D_GND	1

TO TOP\_CONNECT

DGND



Ref No. 601-650 Series.

COMPONENT NAME	<b>MENU</b>		01/01
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G10A		KR 6A0200 (1/1)	
<b>SCM032</b>			

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H  
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J

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

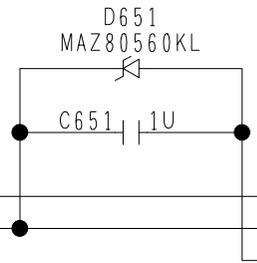
P651  
K1MN22BA0080  
FA1S022HA1R3000

EVF8R5V	1
D_GND	2
HST	3
HCK2	4
HCK1	5
RGT	6
DWN	7
REF	8
XSTB	9
VST	10
VCK	11
ENB	12
PCG	13
E_B	14
E_R	15
E_G	16
CS	17
PSIG	18
COM	19
EVF_BL_5V	20
EVF_LED	21
D_GND	22

TO TOP\_CONNECT



- R651 0/J2
- R652 0/J2
- R653 0/J2
- R654 0/J2
- R655 0/J2
- R656 0/J2
- R657 0/J2
- R658 0/J2
- R659 0/J2
- R660 0/J2
- R661 0/J2
- R662 0/J2
- R663 0/J2
- R664 0/J2
- R665 0/J2
- R666 0/J2
- R667 0/J2
- R668 0/J2
- R669 0/J2
- R670 0/J2
- R671 0/J2



P652  
K1MN20BA0081  
FA2S020HA1R3000

20	VDD
19	VSS
18	VSSG
17	HST
16	HCK2
15	HCK1
14	RGT
13	DWN
12	REF
11	XSTB
10	VST
9	VCK
8	ENB
7	PCG
6	BLUE
5	RED
4	GREEN
3	CS
2	PSIG
1	COM

TO EVF\_LCD\_PANEL

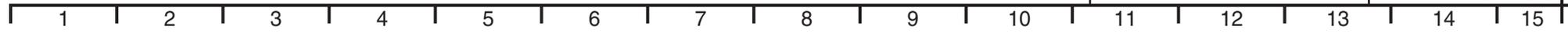
P653  
K1KA02BA0014  
SM02B-SRSS-TB(LF) (SN)

1	EVF_BL_5V
2	EVF_BL_GND

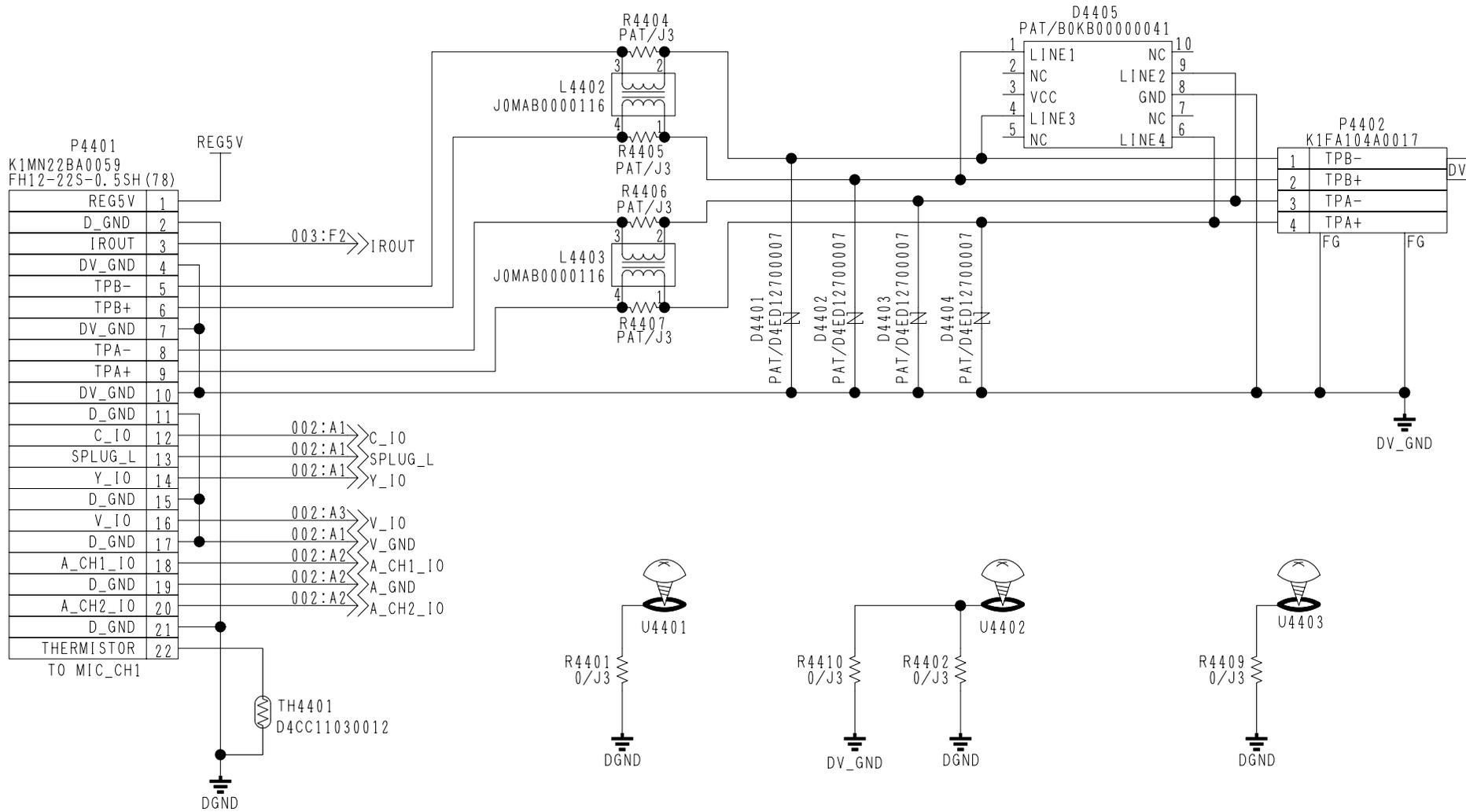
TO EVF\_BL

Ref No. 651-700 Series.

COMPONENT NAME	<b>EVF CONNECT</b>	01/01
CIRCUIT BOARD NO.	DRAWING NO.	
VEP29166A	KR 3A0339 (1/1)	
	<b>SCM033</b>	



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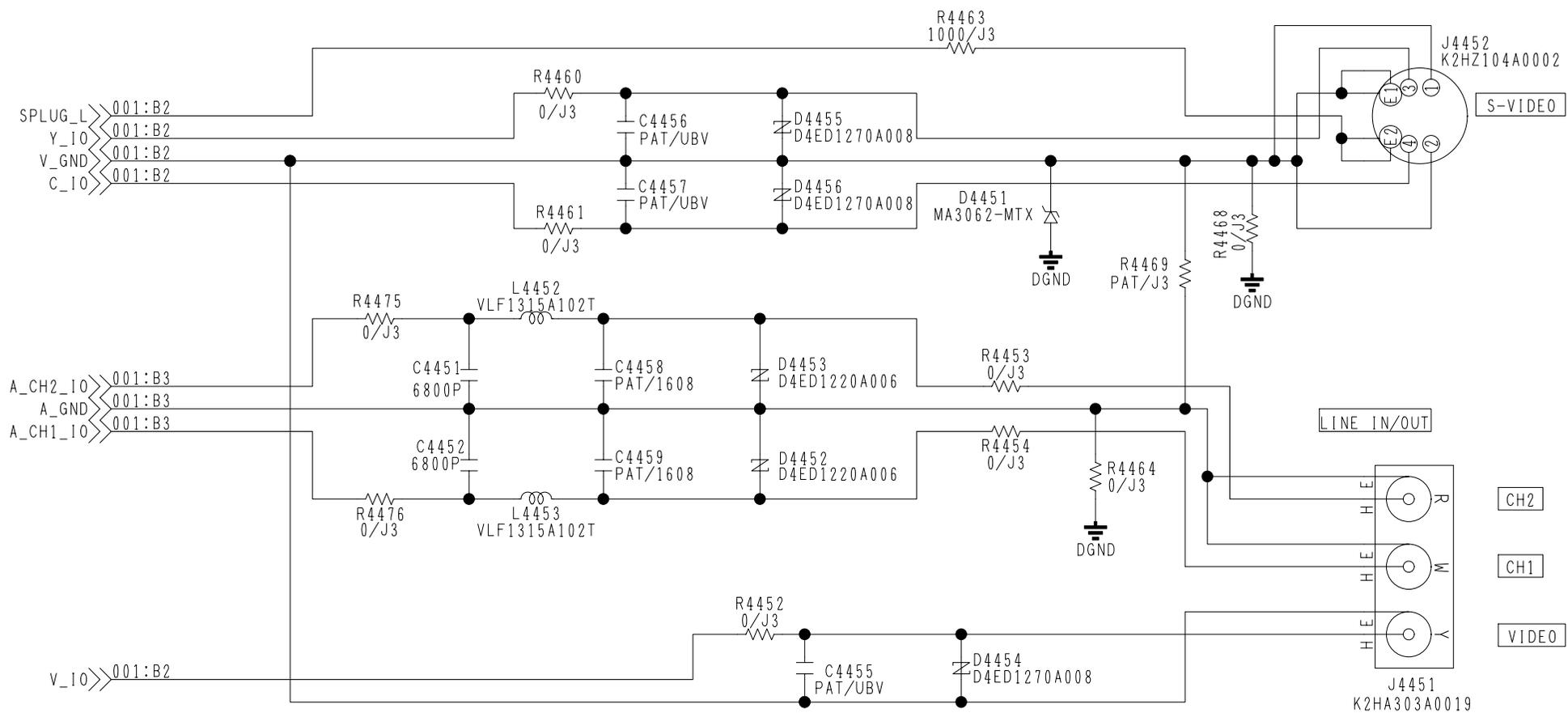
P4401  
K1MN22BA0059  
FH12-22S-0.5SH (78)

REG5V	1
D_GND	2
IROUT	3
DV_GND	4
TPB-	5
TPB+	6
DV_GND	7
TPA-	8
TPA+	9
DV_GND	10
D_GND	11
C_IO	12
SPLUG_L	13
Y_IO	14
D_GND	15
V_IO	16
D_GND	17
A_CH1_IO	18
D_GND	19
A_CH2_IO	20
D_GND	21
THERMISTOR	22

TO MIC\_CH1

Ref No. 4400-4450 Series.

COMPONENT NAME	<b>SIDE JACK</b>		01/03
CIRCUIT BOARD NO.		DRAWING NO.	
VEP04893A		KR 4A0151 (1/3)	
<b>SCM034</b>			

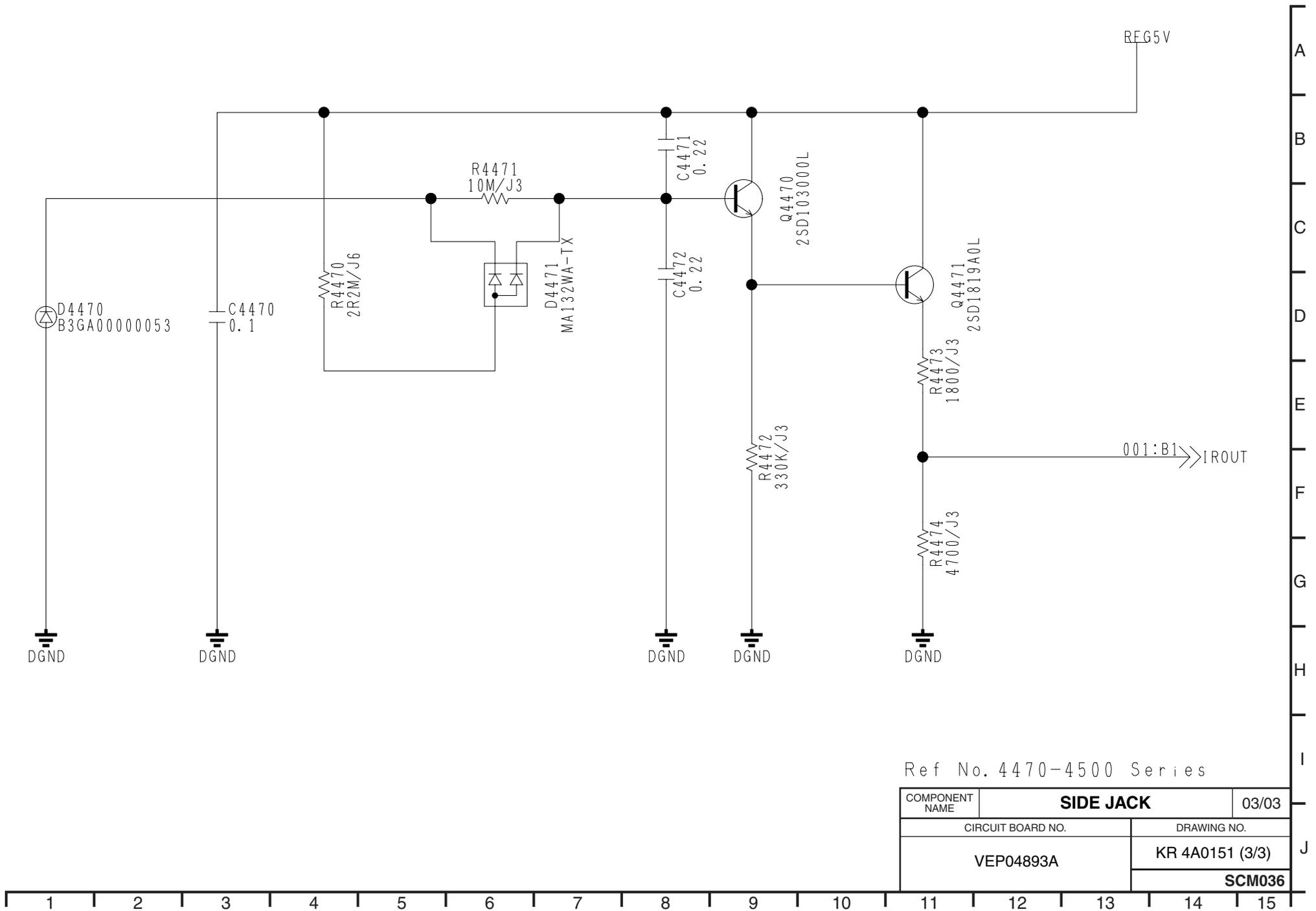


Ref No. 4451-4469 Series.

COMPONENT NAME	<b>SIDE JACK</b>		02/03
CIRCUIT BOARD NO.	VEP04893A		DRAWING NO.
			KR 4A0151 (2/3)
			<b>SCM035</b>

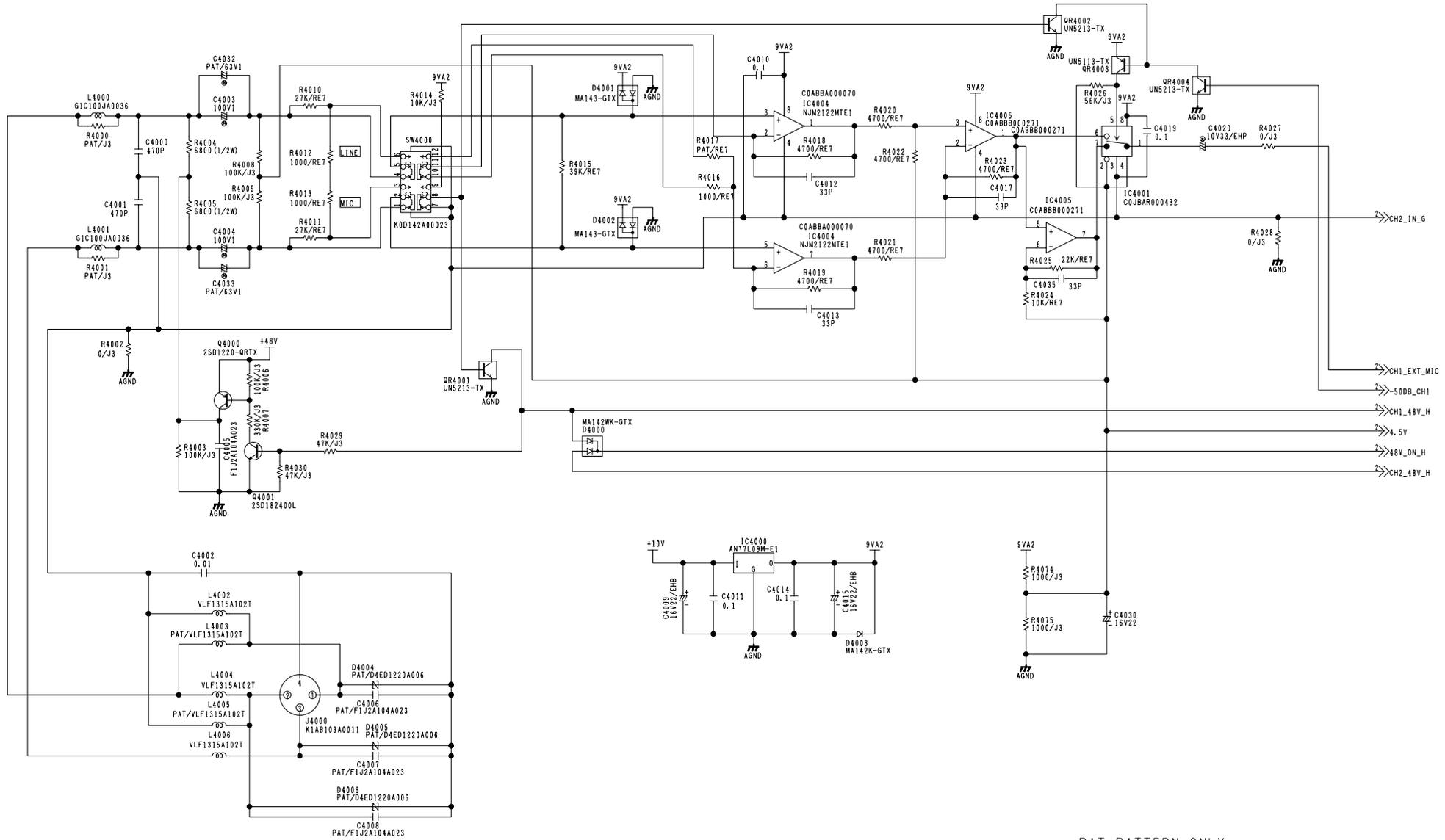
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
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Ref No. 4470-4500 Series

COMPONENT NAME	<b>SIDE JACK</b>		03/03
CIRCUIT BOARD NO.		DRAWING NO.	
VEP04893A		KR 4A0151 (3/3)	
		<b>SCM036</b>	



PAT=PATTERN ONLY  
 Ref No. 4000-4050 Series

COMPONENT NAME	<b>MIC CH1</b>		01/02
CIRCUIT BOARD NO.		DRAWING NO.	
VEP04894A		KR 4A0152 (1/2)	
<b>SCM037</b>			

P4000  
K1MN24BA0079  
FH12A-24S-0.5SH (78)

A_GND	24
A_GND	23
A_GND	22
CH1_EXT_MIC	21
A_GND	20
A_GND	19
-50DB_CH1	18
CH1_48V_H	17
48V_ON_H	16
CH2_48V_H	15
-50DB_CH2	14
A_GND	13
A_GND	12
CH2_EXT_MIC	11
A_GND	10
A_GND	9
	8
+9V	7
+10V	6
+10V	5
	4
+48V	3
+48V	2
	1

FROM VTR/POWER

AGND

9VA2

+10V

CH2\_48V\_H >>> 1

CH1\_EXT\_MIC >>> 1

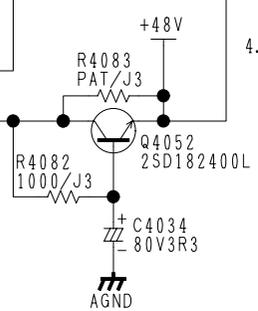
-50DB\_CH1 >>> 1  
CH1\_48V\_H >>> 1  
48V\_ON\_H >>> 1

CH2\_IN\_G >>> 1

P4002  
K1MN10BA0059  
FH12-10S-0.5SH (78)

1	A_GND
2	A_GND
3	CH2_EXT_MIC
4	A_GND
5	+10V
6	REG +48V
7	-50DB_CH2
8	CH2_48V_H
9	A_GND
10	4.5V

TO MIC\_CH2

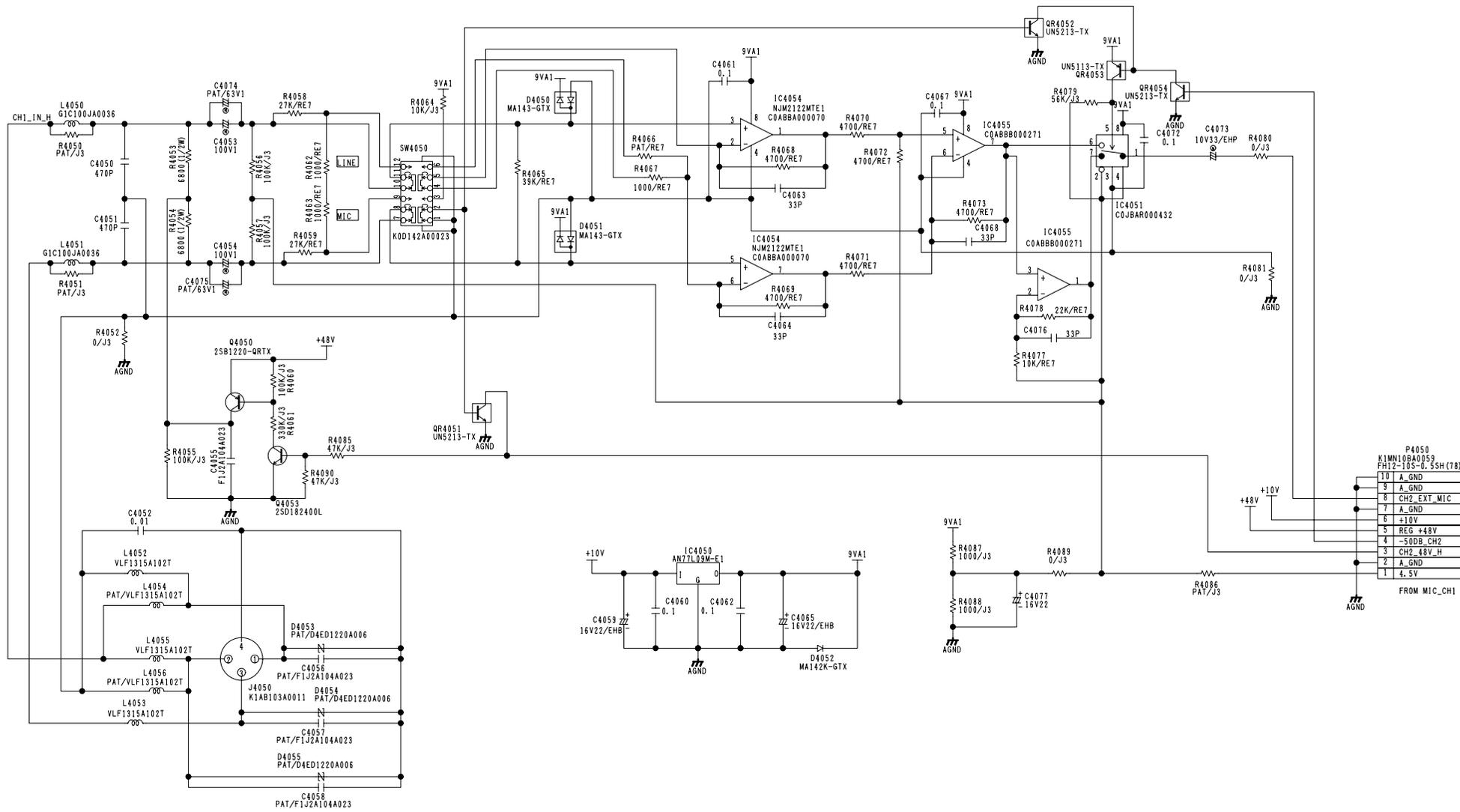


Ref No. 4000-4050 Series

COMPONENT NAME	<b>MIC CH1 (CNT)</b>	02/02
CIRCUIT BOARD NO.	DRAWING NO.	
VEP04894A	KR 4A0152 (2/2)	
	<b>SCM038</b>	

A  
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G  
H  
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J

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

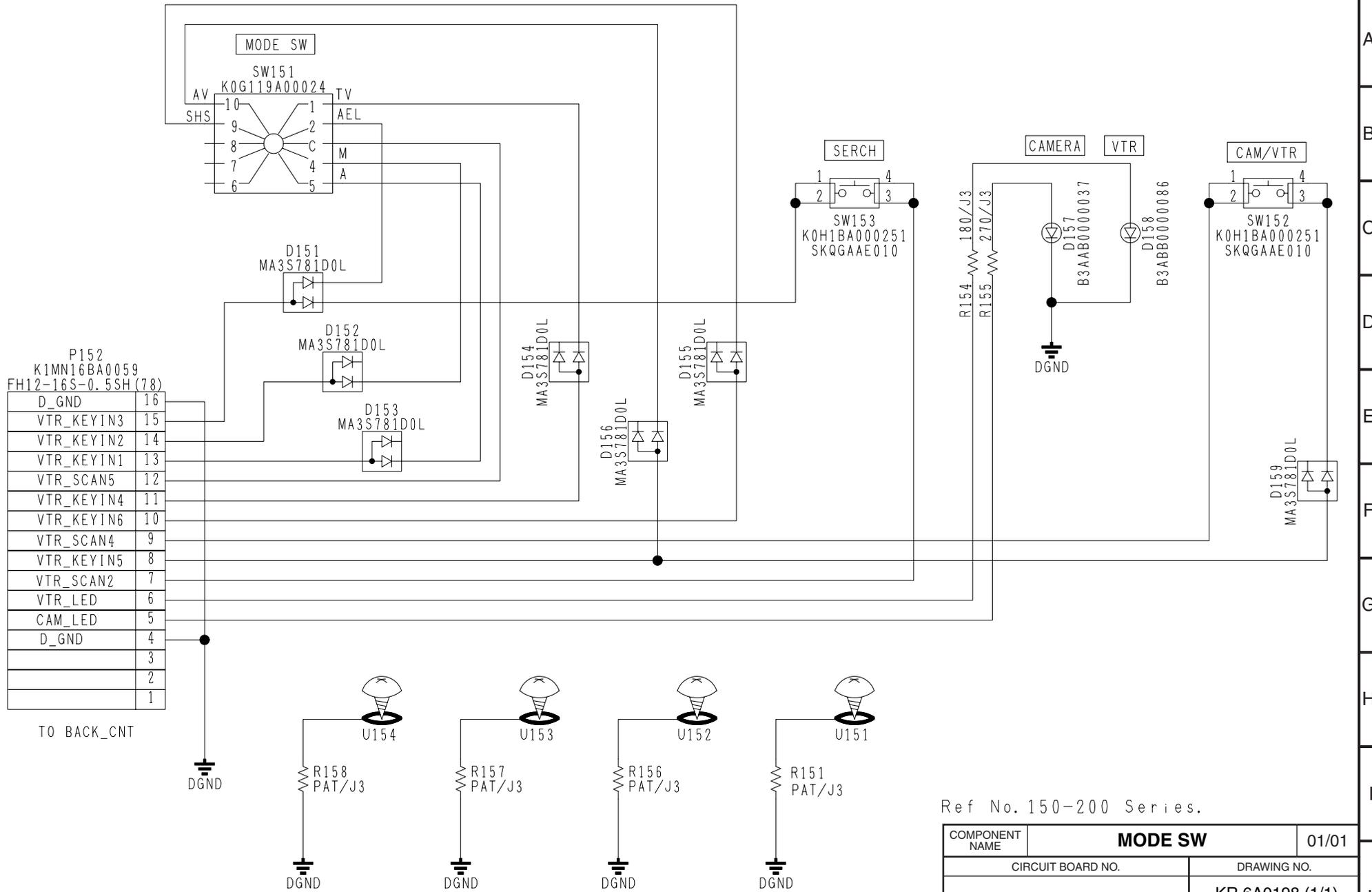


PAT=PATTERN ONLY  
Ref No. 4051-4100 Series

COMPONENT NAME	<b>MIC CH2</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP04895A		KR 4A0153 (1/1)
<b>SCM039</b>		

A  
B  
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J

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



P152	
K1MN16BA0059	
FH12-16S-0.5SH(78)	
D_GND	16
VTR_KEYIN3	15
VTR_KEYIN2	14
VTR_KEYIN1	13
VTR_SCAN5	12
VTR_KEYIN4	11
VTR_KEYIN6	10
VTR_SCAN4	9
VTR_KEYIN5	8
VTR_SCAN2	7
VTR_LED	6
CAM_LED	5
D_GND	4
	3
	2
	1

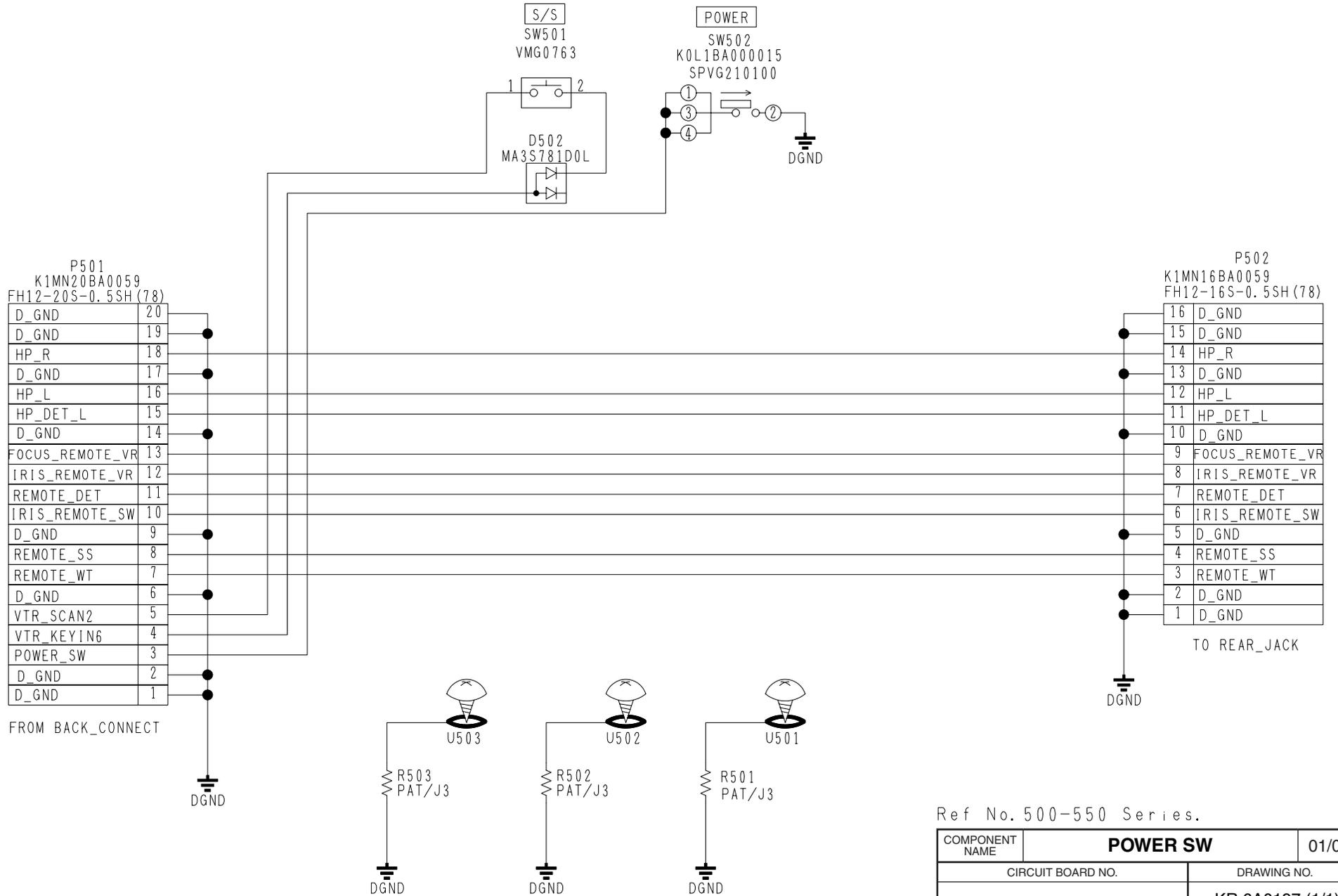
TO BACK\_CNT

Ref No. 150-200 Series.

COMPONENT NAME	<b>MODE SW</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G08A		KR 6A0198 (1/1)
<b>SCM040</b>		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
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Ref No. 500-550 Series.

COMPONENT NAME	<b>POWER SW</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G07A		KR 6A0197 (1/1)
<b>SCM041</b>		

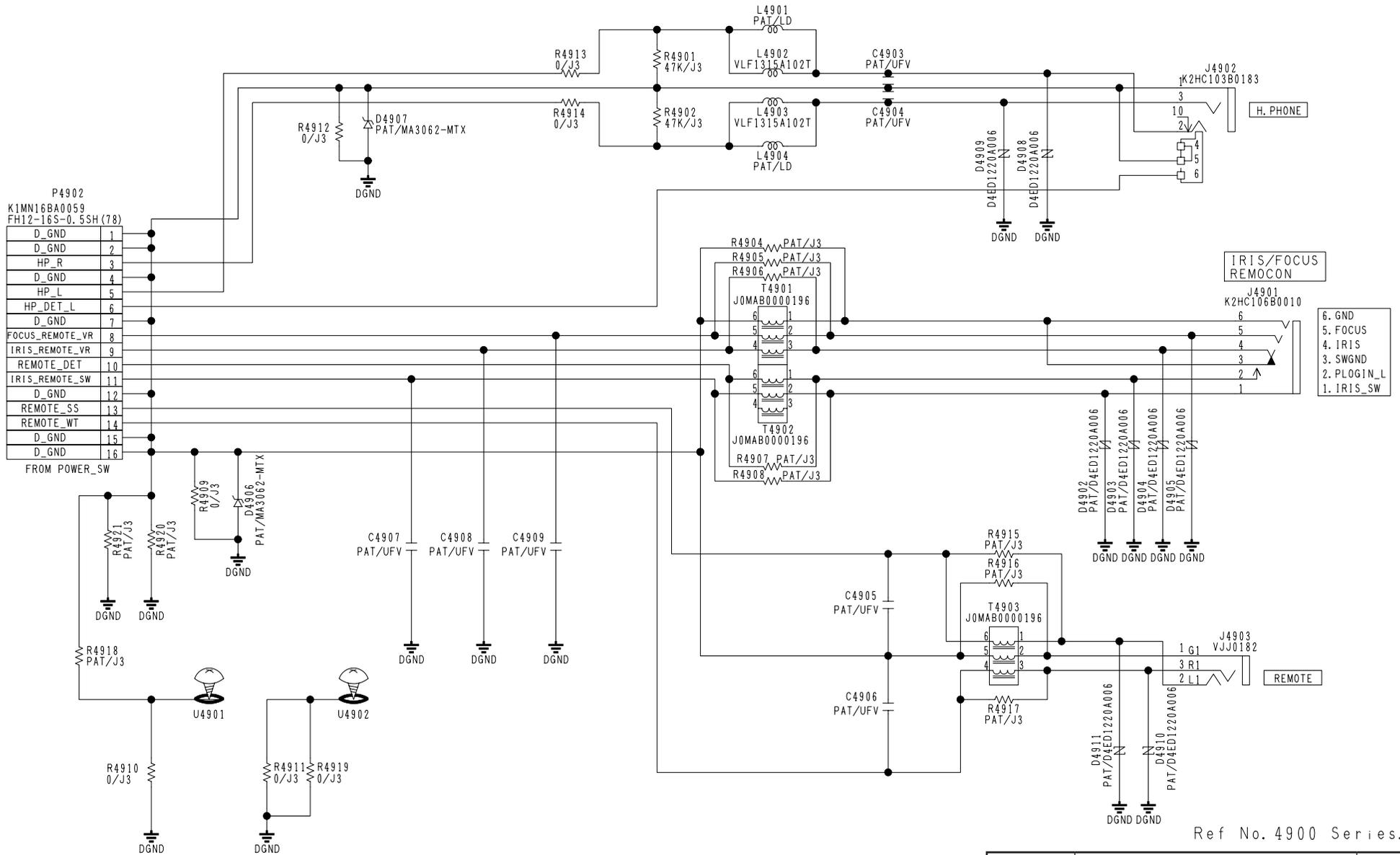
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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J

P4902  
K1MN16BA0059  
FH12-16S-0.5SH (78)

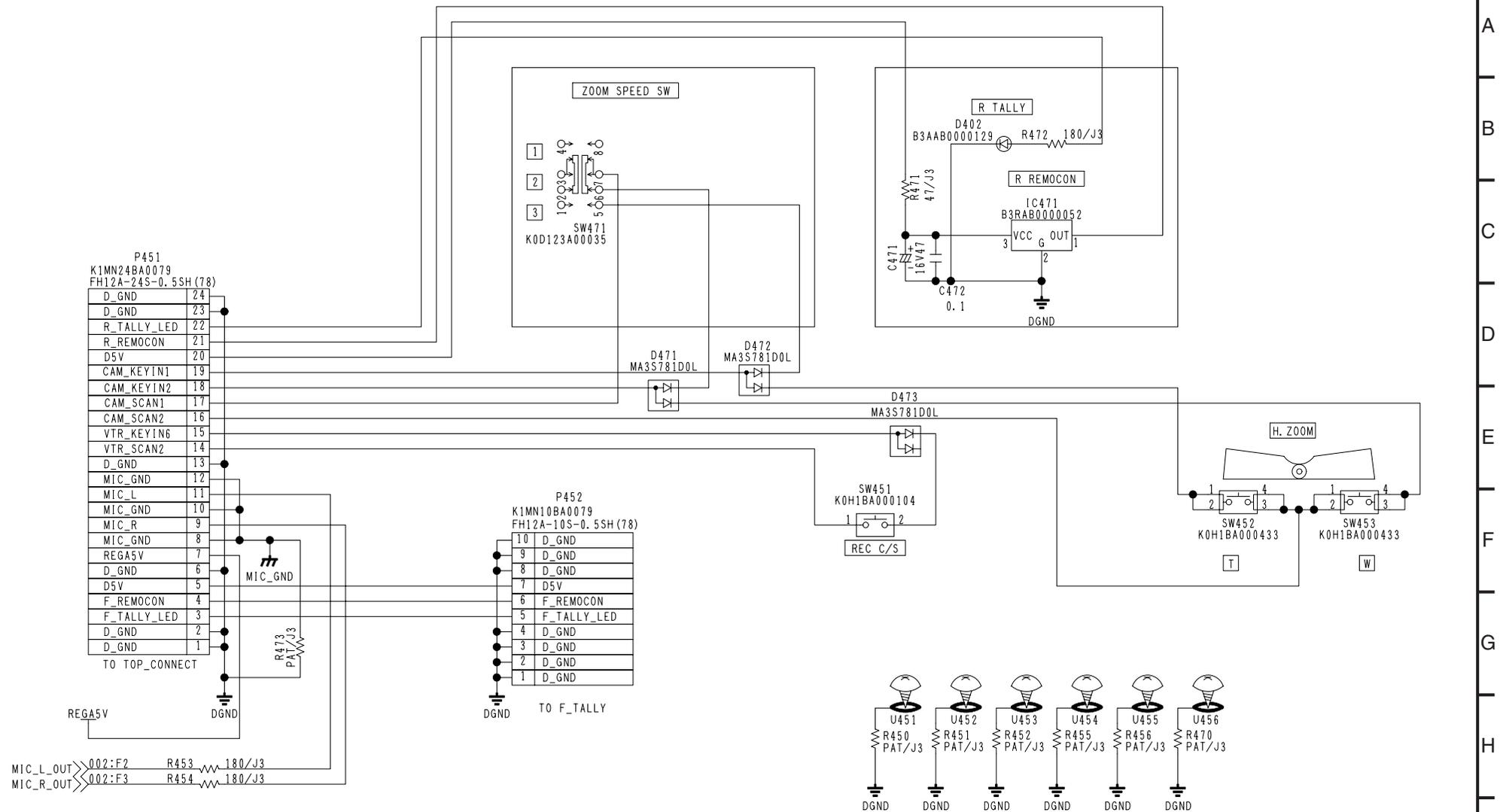
D_GND	1
D_GND	2
HP_R	3
D_GND	4
HP_L	5
HP_DET_L	6
D_GND	7
FOCUS_REMOTE_VR	8
IRIS_REMOTE_VR	9
REMOTE_DET	10
IRIS_REMOTE_SW	11
D_GND	12
REMOTE_SS	13
REMOTE_WT	14
D_GND	15
D_GND	16

FROM POWER\_SW



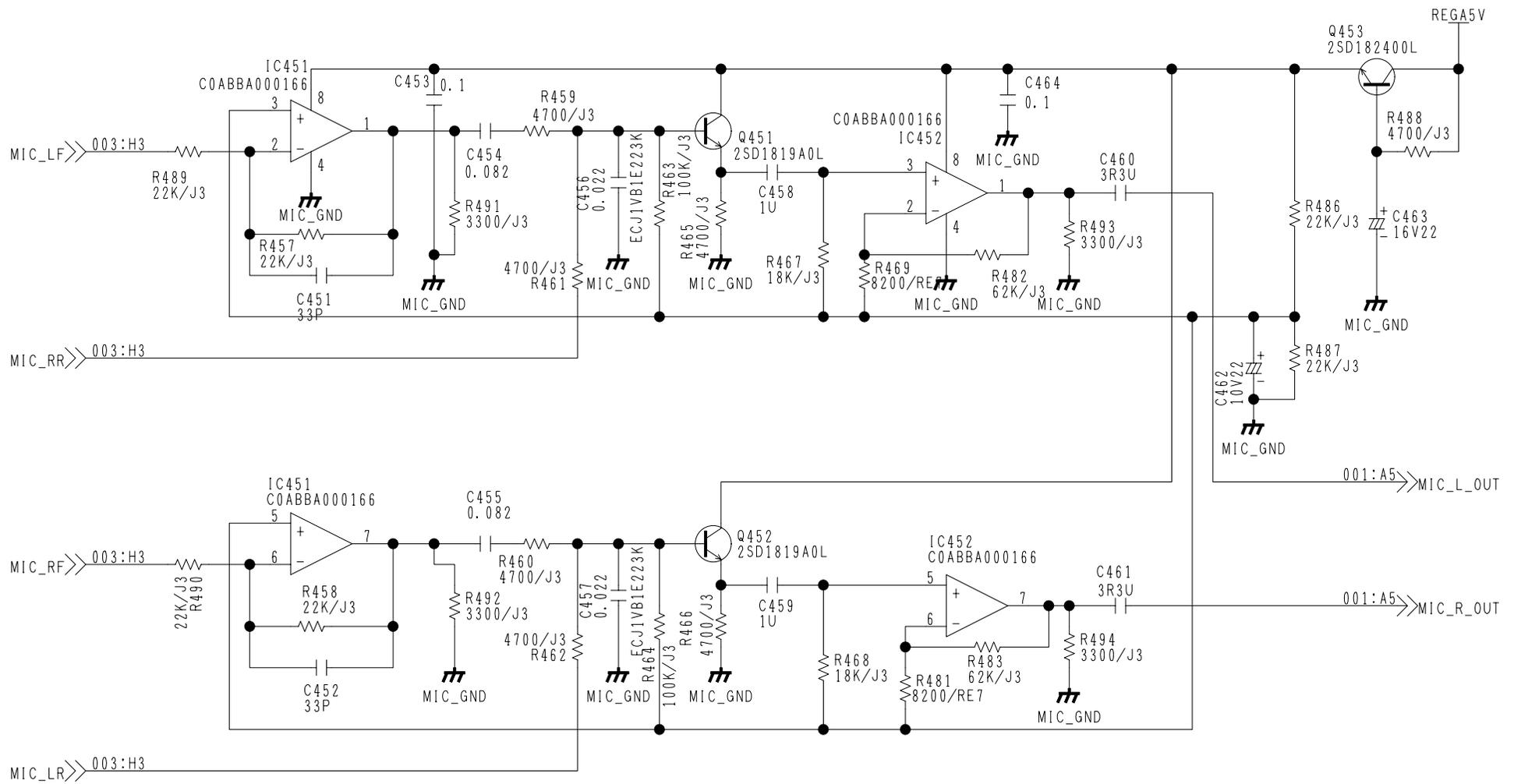
Ref No. 4900 Series.

COMPONENT NAME	<b>REAR JACK</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP04892A		KR 4A0150 (1/1)
<b>SCM042</b>		



Ref No. 450-470 Series.

COMPONENT NAME	<b>HANDLE</b>	01/03
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G15A		KR 6A0205 (1/3)
		<b>SCM043</b>



Ref No. 450-500 Series.  
470-480 NOT USE

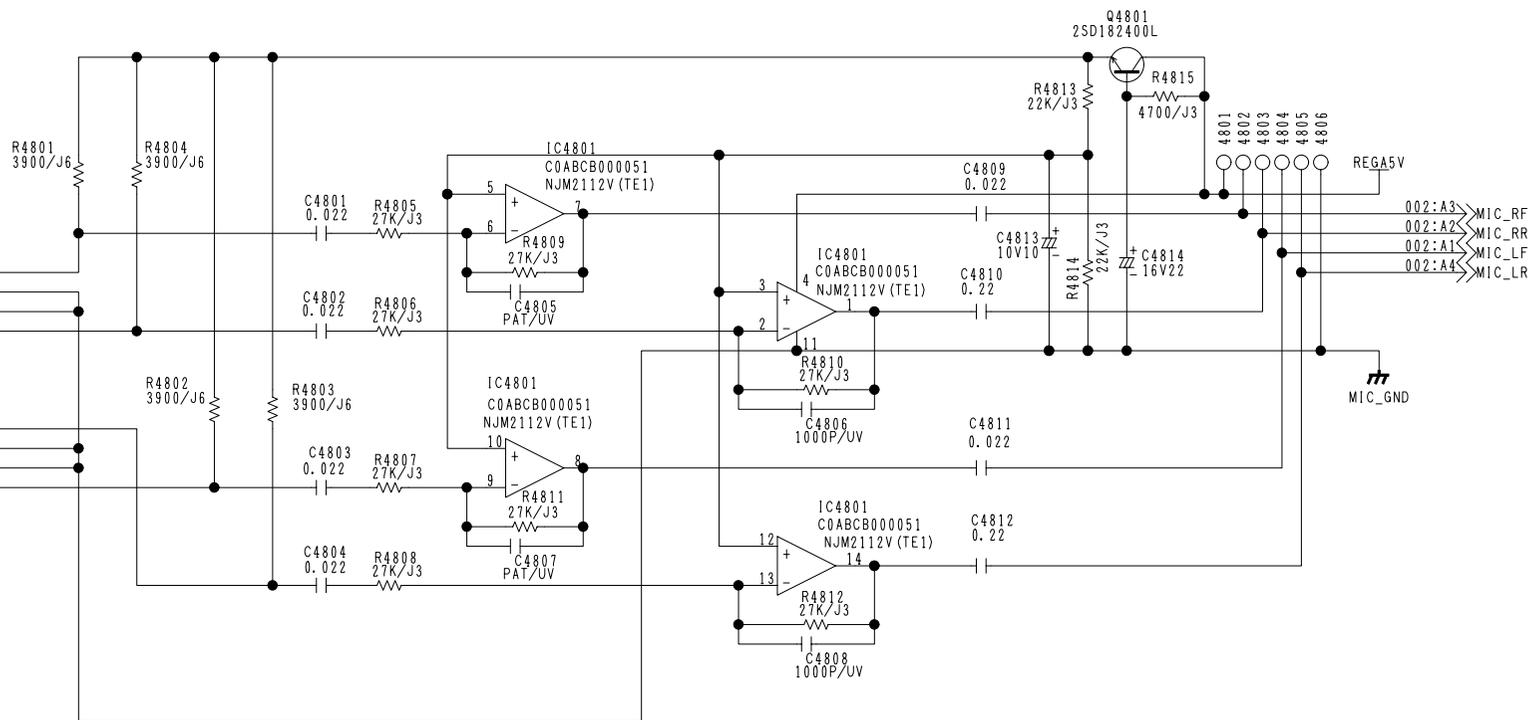
COMPONENT NAME	<b>HANDLE</b>		02/03
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G15A		KR 6A0205 (2/3)	
		<b>SCM044</b>	

P4801	
K1KA04BA0014	
SM04B-SRSS-TB (LF) (SN)	
MIC_RF	1
MIC_GND	2
MIC_GND	3
MIC_RR	4

TO ECM\_RF, RR

P4802	
K1KA04BA0014	
SM04B-SRSS-TB (LF) (SN)	
MIC_LR	1
MIC_GND	2
MIC_GND	3
MIC_LF	4

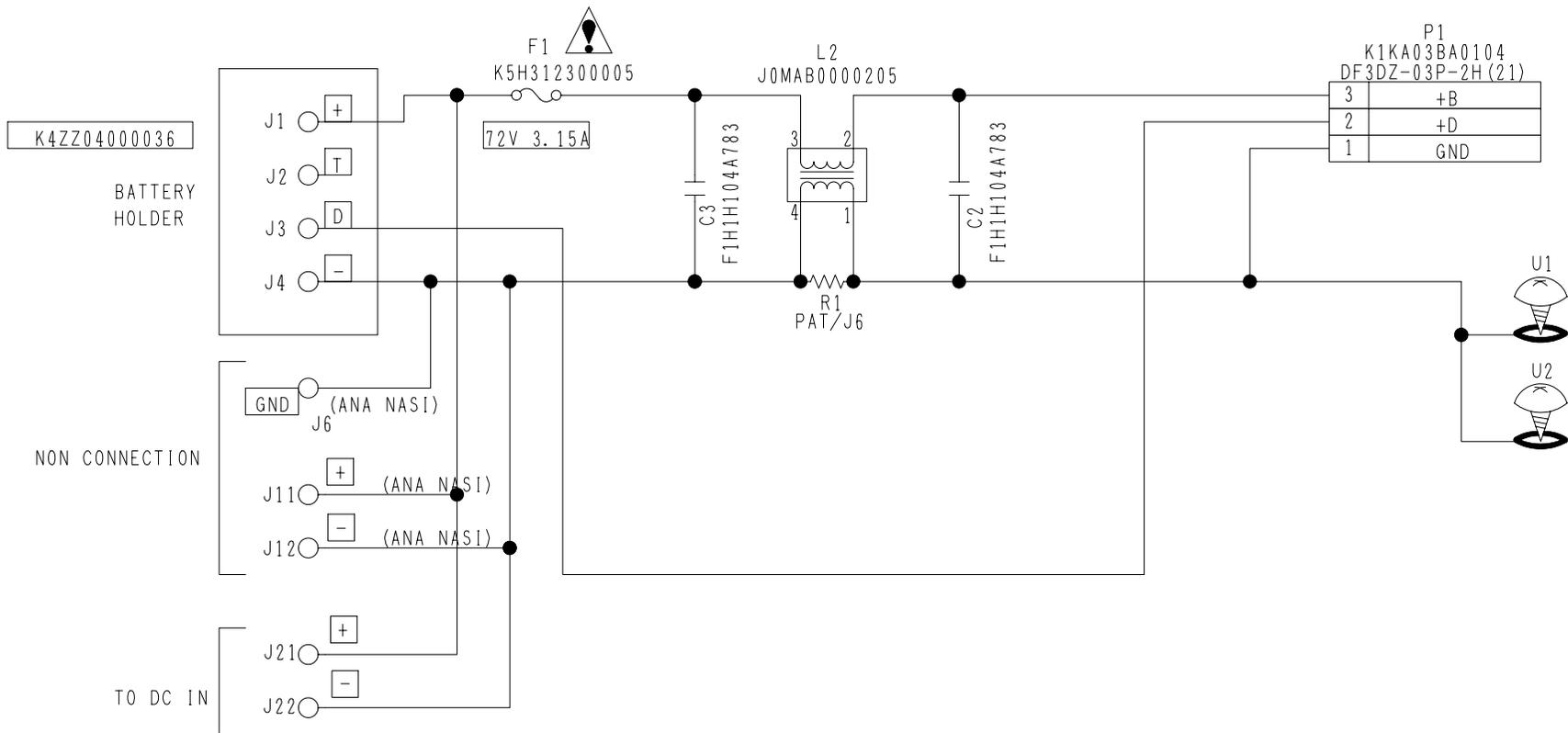
TO ECM\_LF, LR



Ref No. 4800 Series.

COMPONENT NAME	<b>HANDLE</b>	03/03
CIRCUIT BOARD NO.		DRAWING NO.
VEP06G15A		KR 6A0205 (3/3)
<b>SCM045</b>		

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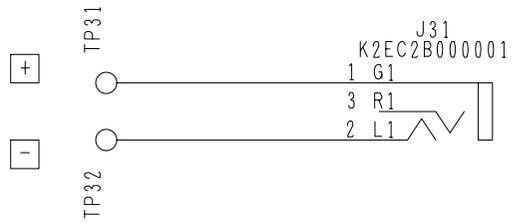
A  
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J

PAT=PATTERN ONLY  
Ref No. 1-30 Series.

**警告** △印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。  
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

COMPONENT NAME	<b>BATTERY</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP01972A		KR 1A0139 (1/1)
<b>SCM046</b>		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



Ref No. 31-49

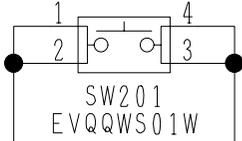
COMPONENT NAME	<b>DC IN</b>		01/01
CIRCUIT BOARD NO.		DRAWING NO.	
VEP01971A		KR 1A0138 (1/1)	
<b>SCM047</b>			

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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J

REC CHECK

ZOOM UNIT



VR201  
D2B1B15B0001

C201  
PAT/UFV

C202  
PAT/UFV



D\_GND

CN\_FX  
CN\_VJS3791D006

D_GND	1
ZOOM_VREF	2
ZOOM_AD	3
VTR_SCAN3	4
VTR_KEYIN5	5
D_GND	6

TO TOP\_CONNECT



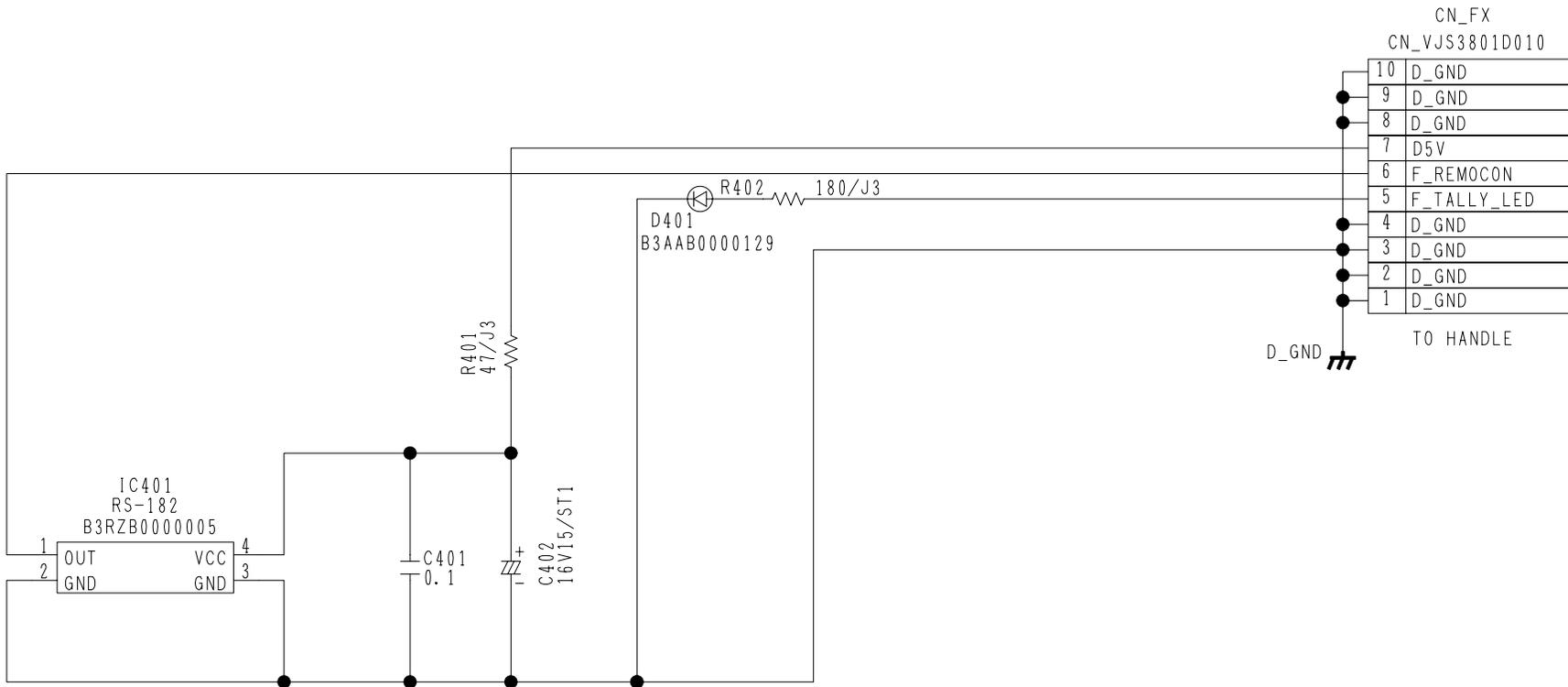
D\_GND

Ref No. 201-250 Series.

COMPONENT NAME	<b>ZOOM FPC</b>		01/01
CIRCUIT BOARD NO.		DRAWING NO.	
VEP06G16A		KR 6A0206 (1/1)	
<b>SCM048</b>			

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



Ref No. 400-450 Series.

COMPONENT NAME	<b>TALLY FPC</b>	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP66499A		KR 6A0207 (1/1)
<b>SCM049</b>		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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# SECTION 7

## CIRCUIT BOARD DIAGRAMS

## プリント基板図

MODEL: AG-DVX100B/P/E/AN,102BEN,DVC180BMC

**NOTE:**  
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST SECTION.

### CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.  
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

**IMPORTANT SAFETY NOTICE:**  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

### 警告

 の部品は、安全上重要な部品です。  
交換するときは、安全及び性能維持のため、必ず指定の部品をご使用ください。  
部品は難燃性や耐電圧など、安全上の特性を持ったものとなっていますので、部品交換は、使用されているものと同じ特性の部品をご使用ください。  
部品ご注文の際には必ず部品リストに記載の品番でご注文ください。

 警告	
 感電注意	AC100Vの加わっている 活電部(充電部、活電部) に直接触れないでください。 感電ややけどの可能性 があります。

①  警告  印の部品は安全上重要な部品です。  
交換するときは、安全上および性能維持のため  
必ず指定の部品をご使用ください。

②  内は充電部です。AC 100Vが加わっておりますので点検、修理  
のときは感電しないよう充分ご注意ください。

③ 部品交換時には、電源プラグをぬいてから行ってください。

④ 一次側(充電部)の電圧・波形は、一次側アースを基準に測定して  
ください。

⑤ 部品品番は、部品価格表で確認の上交換ください。

## CONTENTS

VTR C.B.A. (FOIL SIDE) .....	CBA-1
VTR C.B.A. (COMPONENT SIDE) .....	CBA-2
CAMERA C.B.A. (FOIL SIDE) .....	CBA-3
CAMERA C.B.A. (COMPONENT SIDE) .....	CBA-4

# VIDEO C.B.A. (FOIL SIDE)

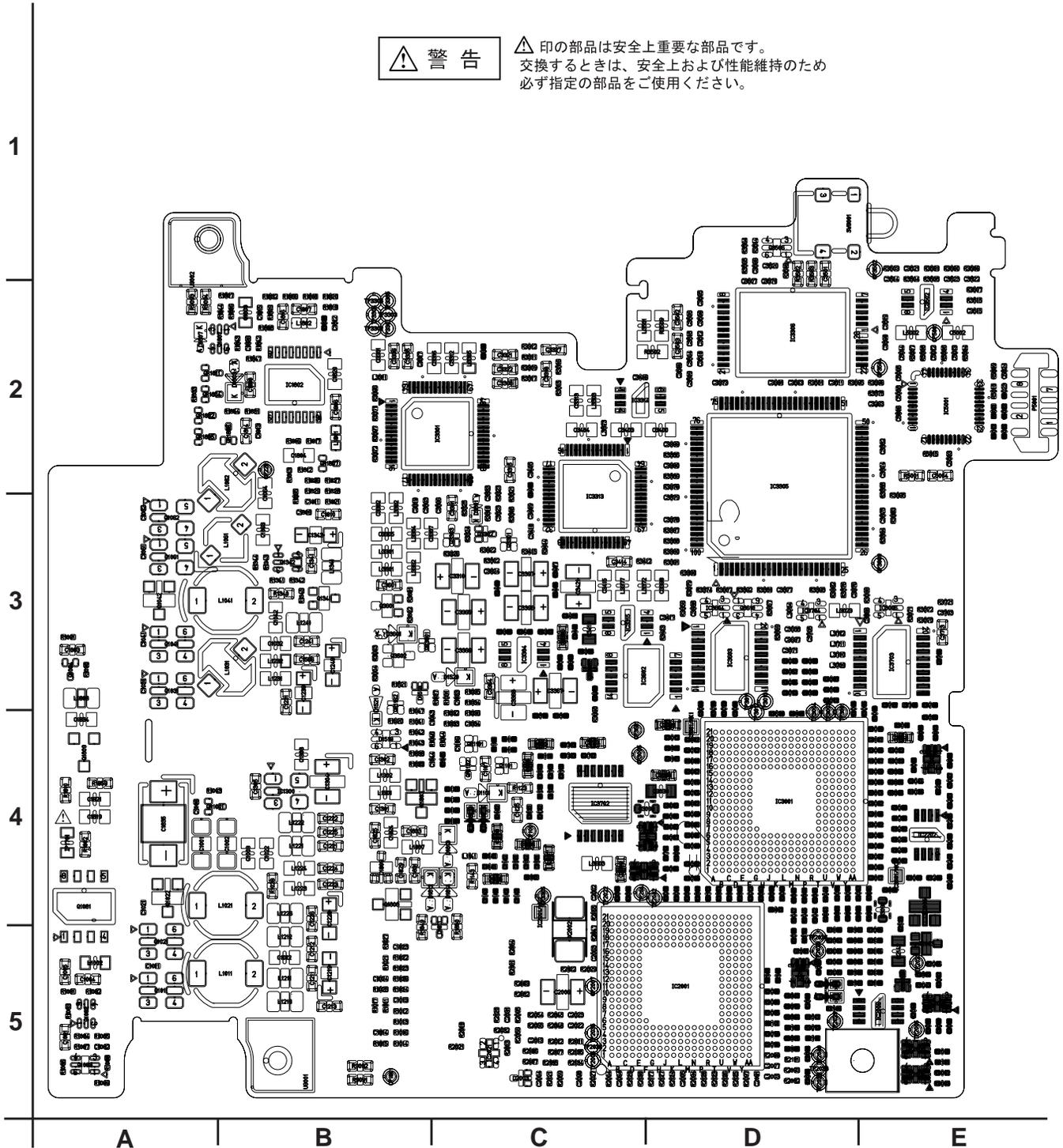
FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1300	B4	IC3305	D2	IC5001	E2	Q1083	A5	Q3506	D1	QR1805	A2	TP2023	E5	TP3003	D4
IC1802	B2	IC3306	D2	IP1701	A4	Q1101	C4	Q3601	B3	QR1806	B2	TP2025	D5	TP3004	D4
IC2001	D5	IC3313	C3	P5001	E2	Q1341	B3	Q3602	B3	QR1807	B2	TP2026	D5	TP3011	D3
IC2006	E5	IC3314	C2	Q1011	A5	Q1342	B3	Q3607	C4	QR1811	A2	TP2029	D5	TP3012	D3
IC2015	D5	IC3315	C3	Q1021	A5	Q1803	B4	Q3610	D3	QR2005	E5	TP2035	C5	TP3013	D4
IC2020	E5	IC3502	E2	Q1022	A4	Q1807	B2	Q3701	D4	QR2006	E5	TP2036	C5	TP3301	B2
IC2021	C5	IC3602	C3	Q1031	A3	Q1808	B4	QR1001	A4	QR2008	E5	TP2038	D5	TP3302	B2
IC2202	E4	IC3603	D3	Q1041	A3	Q2003	E5	QR1101	C4	QR3601	B3	TP2039	D5	TP3303	B2
IC3001	D4	IC3604	D3	Q1042	A3	Q2005	E4	QR1102	C4	SW9001	D1	TP2040	D5	TP3304	B2
IC3006	E3	IC3702	C4	Q1061	A3	Q3301	C3	QR1162	B3	TP2005	E5	TP2041	C4	TP3305	B2
IC3007	E4	IC3703	E3	Q1062	A3	Q3302	C3	QR1802	A2	TP2006	C5	TP2042	D4	TP3306	B2
IC3301	C2	IC3704	D3	Q1081	A4	Q3303	C3	QR1804	A2	TP2022	C4	TP3001	D4	X2002	C5

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



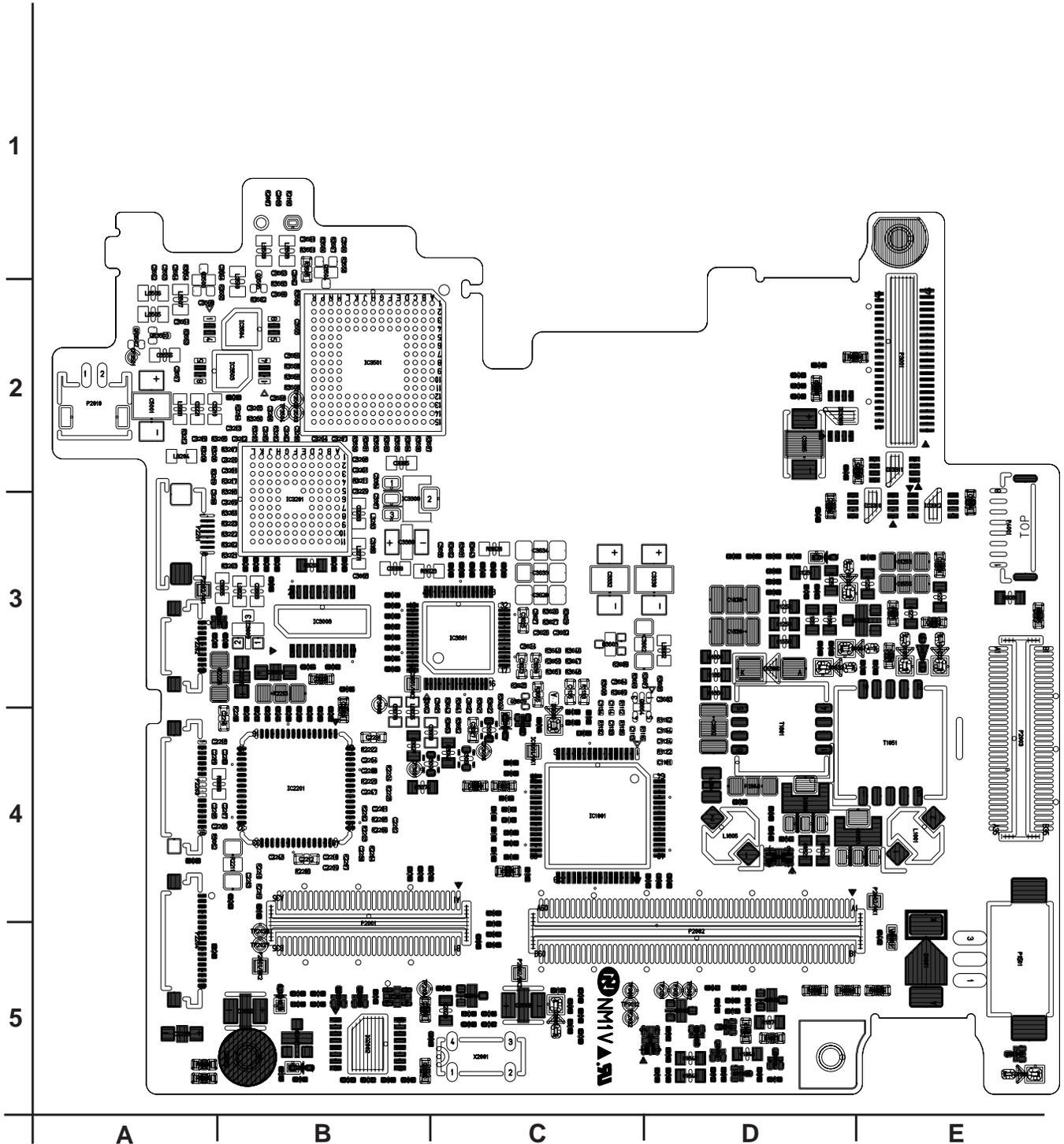
 印の部品は安全上重要な部品です。  
交換するときは、安全上および性能維持のため  
必ず指定の部品をご使用ください。



# VIDEO C.B.A. (COMPONENT SIDE)

COMPONENT SIDE

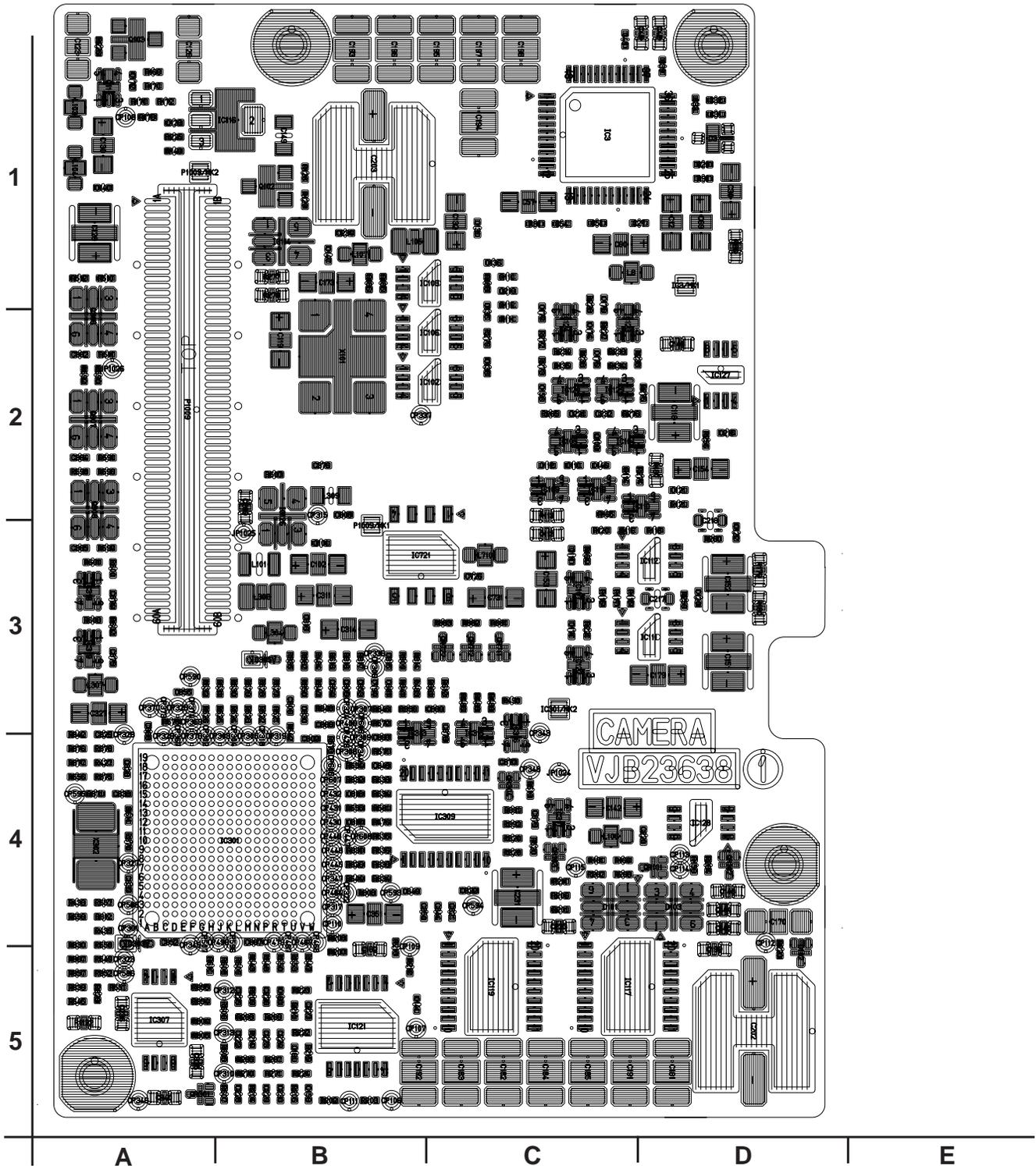
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1001	C4	IC3310	E3	P2001	B5	P3001	E2	Q1813	D5	Q3609	C3	TP2032	C5	TP9012	C5
IC2002	B5	IC3311	E2	P2002	D5	P4001	E3	Q1814	D5	QR1081	E5	TP2034	B5	X2001	C5
IC2017	B5	IC3312	E3	P2003	E4	Q1051	E4	Q1815	D5	QR1809	D5	TP3503	B2		
IC2201	B4	IC3501	B2	P2010	A2	Q1805	D4	Q3503	A2	QR3502	A2	TP3504	B2		
IC3008	B3	IC3503	B2	P2201	A3	Q1806	D4	Q3504	B1	QR3503	A2	TP3505	B2		
IC3201	B3	IC3504	B2	P2202	A3	Q1810	D5	Q3505	B2	TP2027	B5	TP9001	D5		
IC3308	B3	IC3601	C3	P2203	A4	Q1811	D5	Q3603	C3	TP2028	B5	TP9002	D5		
IC3309	D2	P1501	E5	P2204	A5	Q1812	D5	Q3604	C3	TP2031	D5	TP9011	C5		



# CAMERA C.B.A. (FOIL SIDE)

FOIL SIDE

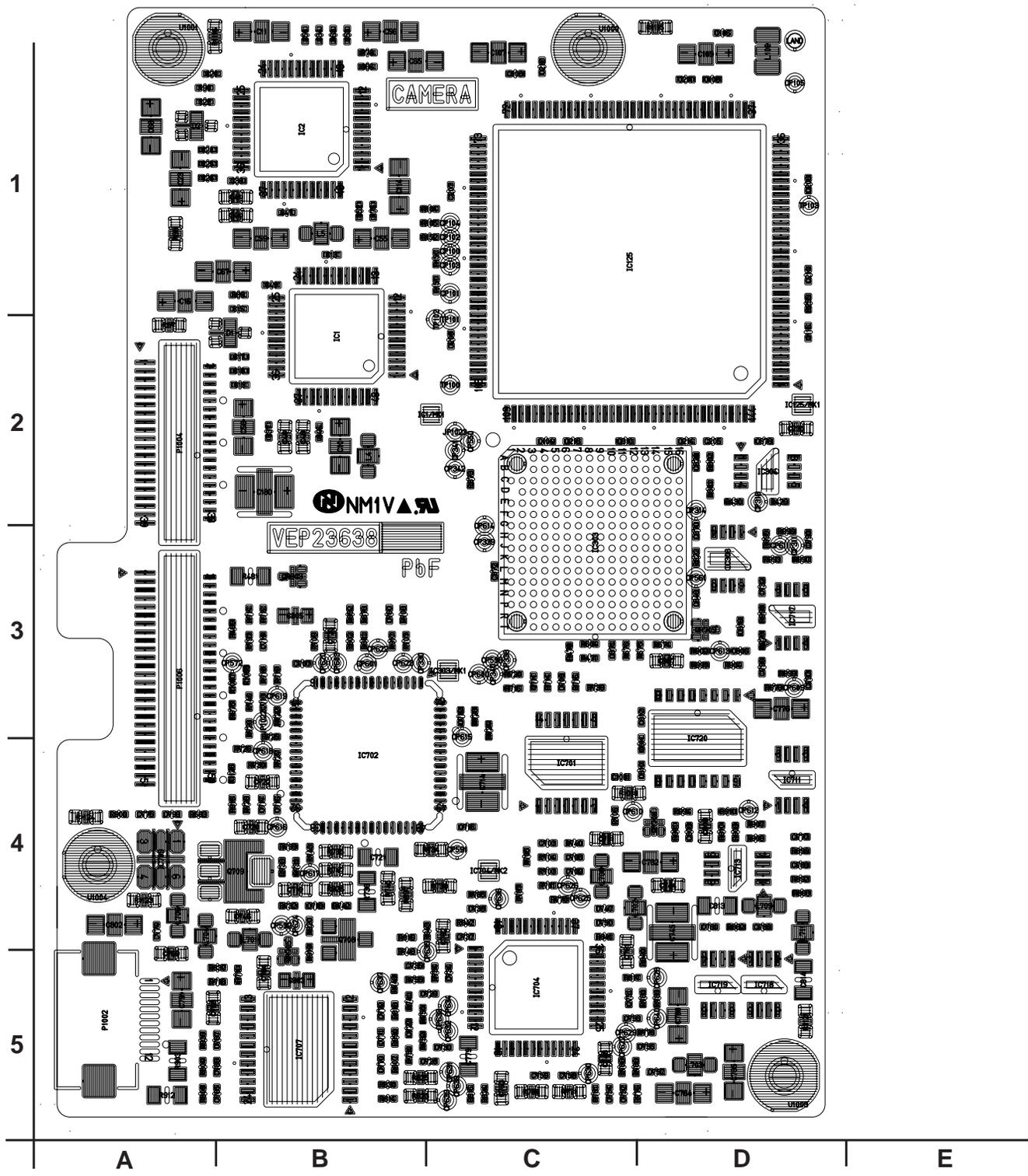
REF	LOC														
IC3	C1	IC109	C2	IC118	C2	IC126	B2	IC313	B3	P1009	A2	QR101	D4	QR722	C3
IC102	C2	IC110	D2	IC119	C5	IC127	D2	IC315	C3	Q102	B1	QR102	D4	X101	B2
IC103	C1	IC111	D3	IC120	C2	IC128	D4	IC316	C3	Q103	A1	QR103	C4	X302	A4
IC104	C2	IC112	D3	IC121	B5	IC129	C2	IC317	C4	Q110	A1	QR301	A5		
IC105	C2	IC114	B1	IC122	C3	IC301	B4	IC318	A3	Q306	A2	QR304	C4		
IC106	C2	IC116	B1	IC123	C2	IC307	A5	IC319	A3	Q307	A2	QR711	C3		
IC107	C3	IC117	C5	IC124	C2	IC309	C4	IC721	B3	Q308	A2	QR712	C3		



# CAMERA C.B.A. (COMPONENT SIDE)

COMPONENT SIDE

REF	LOC														
IC1	B2	IC304	D2	IC704	C5	IC713	D4	IC720	D3	Q708	B4	QR708	D4	TP102	C2
IC2	B1	IC308	D3	IC707	B5	IC717	D3	P1002	A5	Q709	B4	QR709	D3	TP103	D1
IC125	C1	IC701	C4	IC709	A4	IC718	D5	P1004	A2	QR303	B3	TP100	C2		
IC303	C3	IC702	B4	IC711	D4	IC719	D5	P1006	A3	QR705	B5	TP101	C2		



# SECTION 8

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## EXPLODED VIEWS & REPLACEMENT PARTS LIST

MODEL: AG-DVX100BP/BE/BAN, AG-DVX102BEN, AG-DVC180BMC

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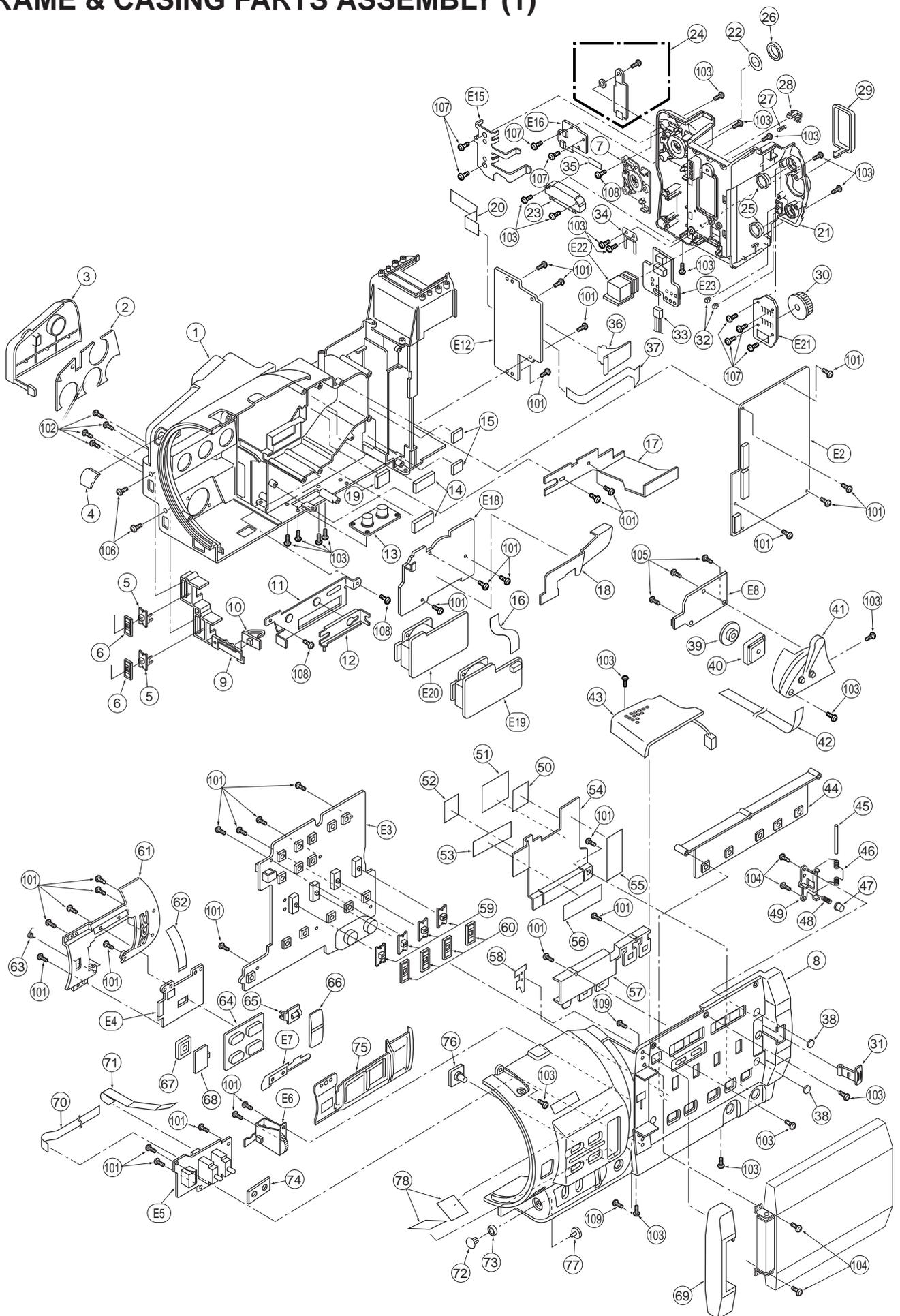
Note:

1. \*Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS ( $\mu\text{F}$ ), P= $\mu\mu\text{F}$ .
3. The P.C. Board unit marked with "■" shown below the main assembled parts.
4. The parts marked with  $\text{\textcircled{E}}$  on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE  
Components identified with the mark  $\Delta$  have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.  
After the discontinuation of this assembly in production, it will no longer be available.
7. "M" in Remark column indicates needed in the periodical maintenance.

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ELECTRICAL REPLACEMENT PARTS LIST .....	EPL-1

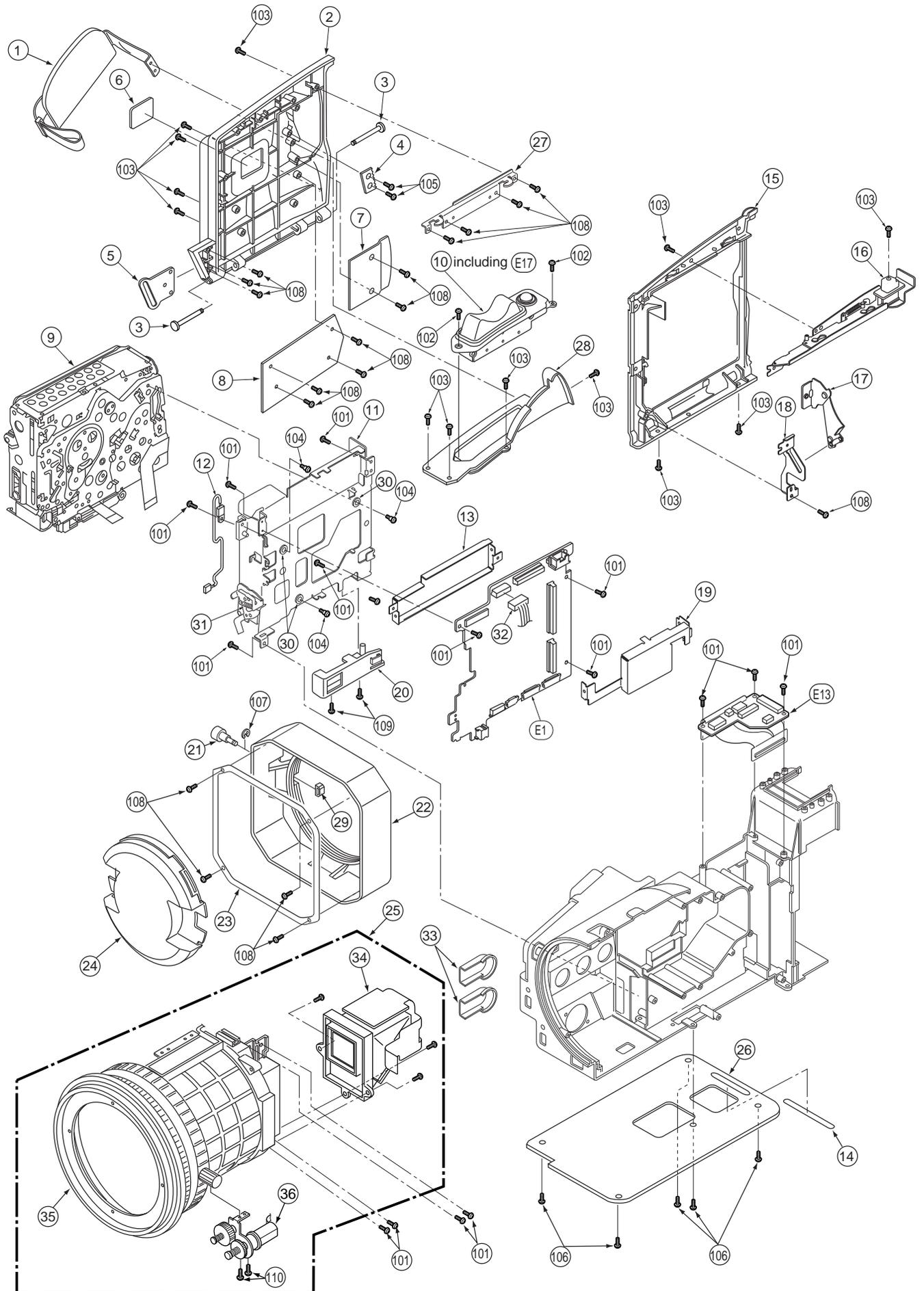
# FRAME & CASING PARTS ASSEMBLY (1)



# FRAME & CASING PARTS ASSEMBLY(1)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VKM6819	CENTER FRAME U	1		75	VGQ8614	CAM RIB CASE	1	
2	VGH4856	SIDE JACK NAME PLATE	1		76	VGU9885	IRIS BUTTON	1	
3	VJF1470	SIDE JACK CAP	1		77	VGU9223	W. BAL. KNOB (LOWER)	1	
4	VKW3295	AWB WINDOW	1		78	VGQ7175	ND KNOB SHEET	2	
5	VGU9194	MIC SWITCHING KNOB	2						
6	VMG1460	SLIDE SW RUBBER COVER	2						
7	VYQ3546	START/STOP U	1		101	XQN2+B4FN	SCREW	32	
8	VYK1R55	SIDE CASE R 1U	1		102	XYN26+A6FJK	SCREW	4	
9	VGQ6902	MIC SWITCHING KNOB HOLDER	1		103	XQN2+B4FJK	SCREW	22	
10	VGU9246	ZOOM CLUCH KNOB	1		104	XYN2+C5FJ	SCREW	4	
11	VML3710	CLUTCH SLIDE PLATE	1		105	XQN2+BJ4FJK	SCREW	3	
12	VMP8588	CLUTCH LEVER	1		106	XQN16+BJ4FJK	SCREW	2	
13	VMP8198	TRIPOD FRAME	1		107	XQN2+BJ6FJ	SCREW	8	
14	VGQ8097	COOLING SHEET C3	2		108	XYN2+C3FJ	SCREW	3	
15	VMG1517	LENS HEAT SINK SHEET (2)	2		109	XQN2+CJ6FJK	SCREW	2	
16	VWJ10G6033L0	FLEXIBLE CABLE	1						
17	VSC5793	CF HEAT SINK	1						
18	VWJ1806	FLEXIBLE CABLE	1						
19	VGQ8096	COOLING SHEET C2	1		E2	VEP23638A	CAMERA C. B. A.	1	FOR AG-DVX100BP/AN
20	VWJ20G6055L0	FLEXIBLE CABLE	1		E2	VEP23638B	CAMERA C. B. A.	1	FOR AG-DVX100BE/EN/MC
21	VG6147	BACK CASE	1		E3	VEP06G09A	R SIDE C. B. A.	1	
22	VMX0531	CLUTCH SPACER	1		E4	VEP06G11A	CAM OP1 C. B. A.	1	
23	K4Z204000036	BATTERY TERMINAL	1		E5	VEP06G12A	CAM OP2 C. B. A.	1	
24	VYF2920	EVR COVER U	1		E6	VEP06G13A	CAM OP3 C. B. A.	1	
25	VGU9219	CAMERA/VCR BUTTON	2		E7	VEP06G14A	CAM OP4 C. B. A.	1	
26	VHN0194	SPACER	1		E8	VEP06G10A	MENU C. B. A.	1	
27	VMB3210	BATTERY LOCK SPRING	1		E12	VEP001K6A	BACK CONNECT C. B. A.	1	
28	VGU8582	BATTERY LOCK BUTTON	1		E15	VEP04892A	REAR JACK C. B. A.	1	
29	VJF1469	H. P CAP	1		E16	VEP06G07A	POWER SW C. B. A.	1	
30	VYQ3547	MODE DIAL U P. C. BOARD	1		E18	VEP04893A	SIDE JACK C. B. A.	1	
31	VGU9197	MONITOR LOCK KNOB	1		E19	VEP04895A	MIC CH2 C. B. A.	1	
32	VGL1012	MODE PANEL LIGHT	2		E20	VEP04894A	MIC CH1 C. B. A.	1	
33	VEE1A51	DC CABLE	1		E21	VEP06G08A	MODE SW C. B. A.	1	
34	VMP7340	DC IN ANGLE	1		E22	VEP01971A	DC IN C. B. A.	1	
35	VWJ16G6033L0	FLEXIBLE CABLE	1		E23	VEP01972A	BATTERY C. B. A.	1	
36	VWJ1804	FLEXIBLE CABLE	1						
37	VWJ16G6090L0	FLEXIBLE CABLE	1						
38	VMG1715	LCD CUSHION	2						
39	VGU9209	JOY STICK BUTTON	1						
40	VGU9199	MENU BUTTON	1						
41	VGQ8692	VF CASE (R)	1						
42	VWJ10G6050L0	FLEXIBLE CABLE	1						
43	VYK1R48	TOP PANEL U	1						
44	VGU9887	VTR BUTTON2	1						
45	VMS7187	LCD LOCK SHAFT	1						
46	VMB3659	MONITOR OPENER SPRING	1						
47	VGQ6901	MONITOR KNOB	1						
48	VMB3996	POP UP SPRING	1						
49	VMP7331	OPENER HOLDER ANGLE	1						
50	VGQ8750	COOLING SHEET C5	1						
51	VGQ8751	COOLING SHEET C6	1						
52	VMT1633	FPC CUSHION	1						
53	VGQ8817	COOLING SHEET R4	1						
54	VSC5792	CAMERA HEAT SINK	1						
55	VGQ8753	COOLING SHEET R3	1						
56	VGQ8752	COOLING SHEET R2	1						
57	VGU9886	VTR BUTTON1	1						
58	VMZ3612	HINGE FPC HOLD SHEET	1						
59	VGU9894	SLIDE KNOB	4						
60	VGH4857	SLIDE KNOB SHEET	4						
61	VGQ8613	ND FILTER HOLDER	1						
62	VWJ06G6033L0	FLEXIBLE CABLE	1						
63	VMB4000	FOCUS KNOB SPRING	1						
64	VGU9893	CAMERA OP BUTTON	1						
65	VGU9222	ND SWITCHING KNOB	1						
66	VGQ6906	HOLDER BLIND SHEET	1						
67	VGU9211	FOCUS BUTTON	1						
68	VGU9213	FOCUS SLIDE KNOB	1						
69	VGQ8612	LCD HINGE COVER	1						
70	VWJ12G6080L0	FLEXIBLE CABLE	1						
71	VWJ10G6050L0	FLEXIBLE CABLE	1						
72	VGU9217	W. BAL. KNOB (UPPER)	1						
73	VMG1418	RAIN COVER RUBBER (B)	1						
74	VMG1520	TOGGLE SW CUSHION	1						

# FRAME & CASING PARTS ASSEMBLY (2)

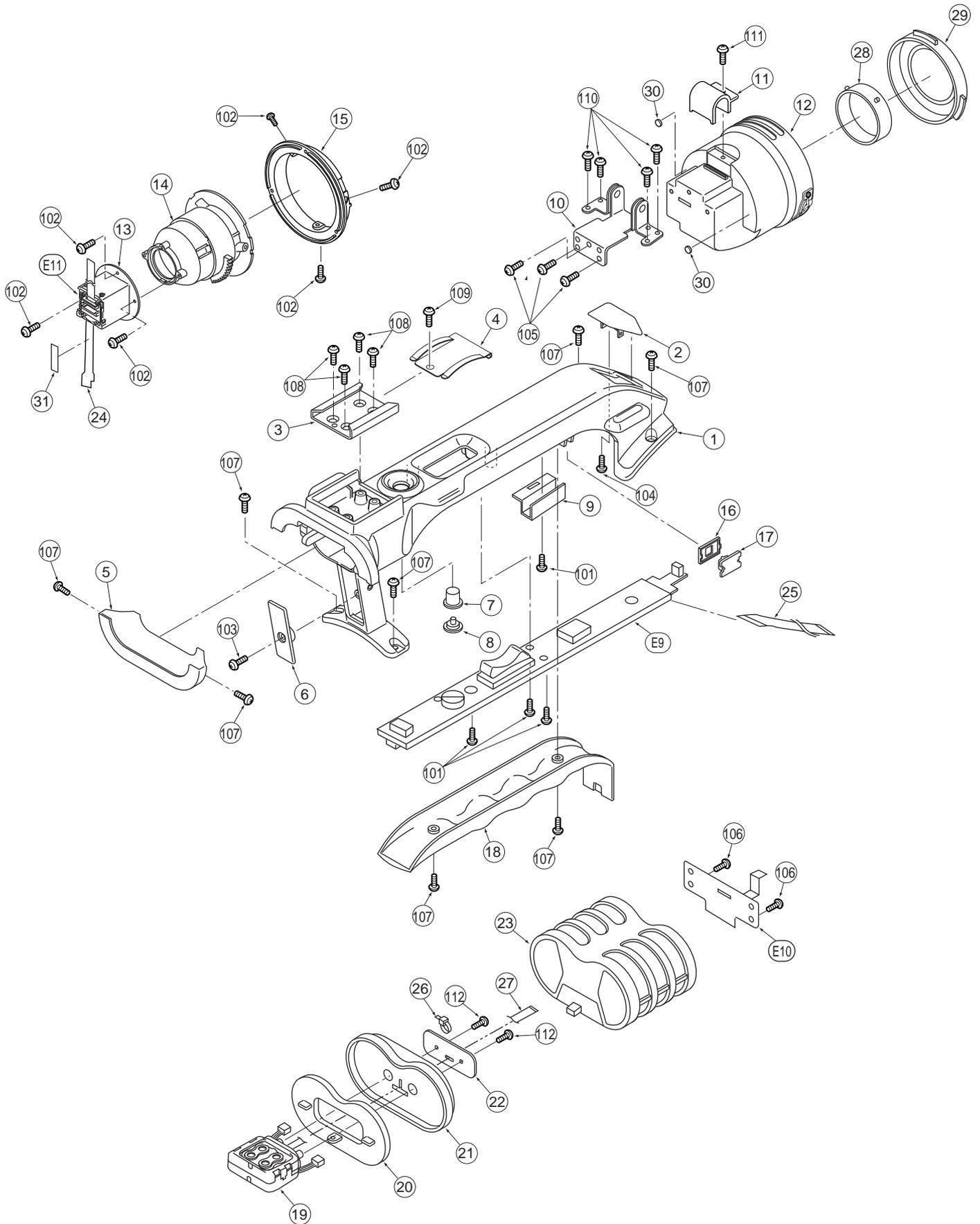


MPL-3

# FRAME & CASING PARTS ASSEMBLY(2)

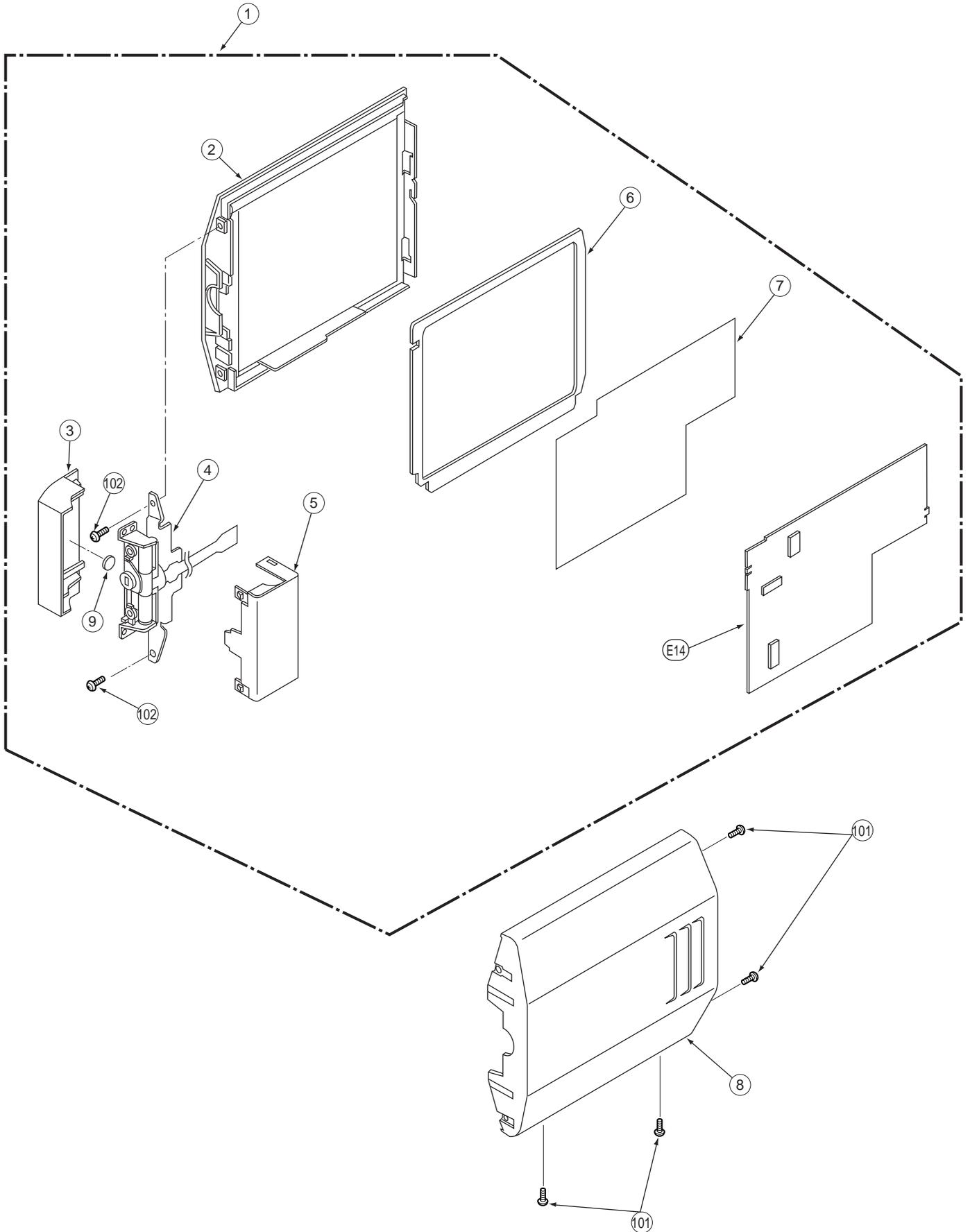
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VFB0215	GRIP BELT	1						
2	VGP6148	GRIP COVER	1						
3	VMS7653	CASSETTE COVER SHAFT	2						
4	VMP8331	BELT FIX ANGLE	1						
5	VMP7325	GRIP BELT ANGLE (FRONT)	1						
6	VGH4860	CASSETTE COVER WINDOW	1						
7	VGQ8611	GARAGE COVER HOLDER	1						
8	VGf1043	GRIP SHEET	1						
9	VXY1903Z1	MECHA U	1						
10	VYQ3542	ZOOM SW U	1						
11	VXK1835	MECHA FRAME U	1						
12	L2BB00000001	DEW SENSOR	1						
13	VSC5766	POWER SHIELD (B)	1						
14	VKA0340	GRIP DUSTPROOF RUBBER	1						
15	VGP6149	GRIP FRAME	1						
16	VXA8179	LOCK U	1						
17	VXL3325	LINK ARM U	1						
18	VMAOU09	LINK GUIDE	1						
19	VSC5765	POWER SHIELD (A)	1						
20	VML3898	CLEANING ROLLER U	1						
21	VHD1546	SCREW	1						
22	VGQ8545	LENS HOOD	1						
23	VMP7605	LENS HOOD WINDOW	1						
24	VYK0Z96	LENS CAP U	1						
25	VXW0742	CAMERA LENS U	1	FOR AG-DVX100BP/AN					
25	VXW0743	CAMERA LENS U	1	FOR AG-DVX100BE/EN/MC					
26	VGQ8618	BOTTOM COVER	1						
27	VMP8473	CASSETTE LOCK ANGLE	1						
28	VGP6155	SIDE TOP PANEL	1						
29	VGU9255	HOOD FIX PIECE	1						
30	VMG1107	MECH DUMPER RUBBER	3						
31	VMB3680	EJECT LOCK BUTTON SPRING	1						
32	VEE1B96	AUDIO CABLE	1						
33	VJF1468	XLR CAP	2						
34	VXQ1372	PRISM U	1	FOR AG-DVX100BP/AN					
34	VXQ1373	PRISM U	1	FOR AG-DVX100BE/EN/MC					
35	VXW0741	LENS U	1						
36	L6DABHC0001	ZOOM MOTOR U	1						
101	XQN2+B4FN	SCREW	15						
102	XQN16+Bj6FJK	SCREW	2						
103	XQN2+B4FJK	SCREW	13						
104	VHD1133	SCREW	3						
105	XTB26+6GFJK	SCREW	2						
106	XQN2+B4FJK	SCREW	5						
107	XUC15FJ	E-RING	1						
108	XQN2+Bj5FJK	SCREW	18						
109	XQN14+B25FJ	SCREW	2						
110	XQN16+CJ5FJ	SCREW	2						
E1	VEP03G82A	VTR C. B. A.	1	FOR AG-DVX100BP/AN					
E1	VEP03G82B	VTR C. B. A.	1	FOR AG-DVX100BE/EN/MC					
E13	VEP001K7A	TOP CONNECT C. B. A.	1						
E17	VEP06G16A	ZOOM SW FLEX C. B. A.	1						

# HANDLE EVF PARTS ASSEMBLY





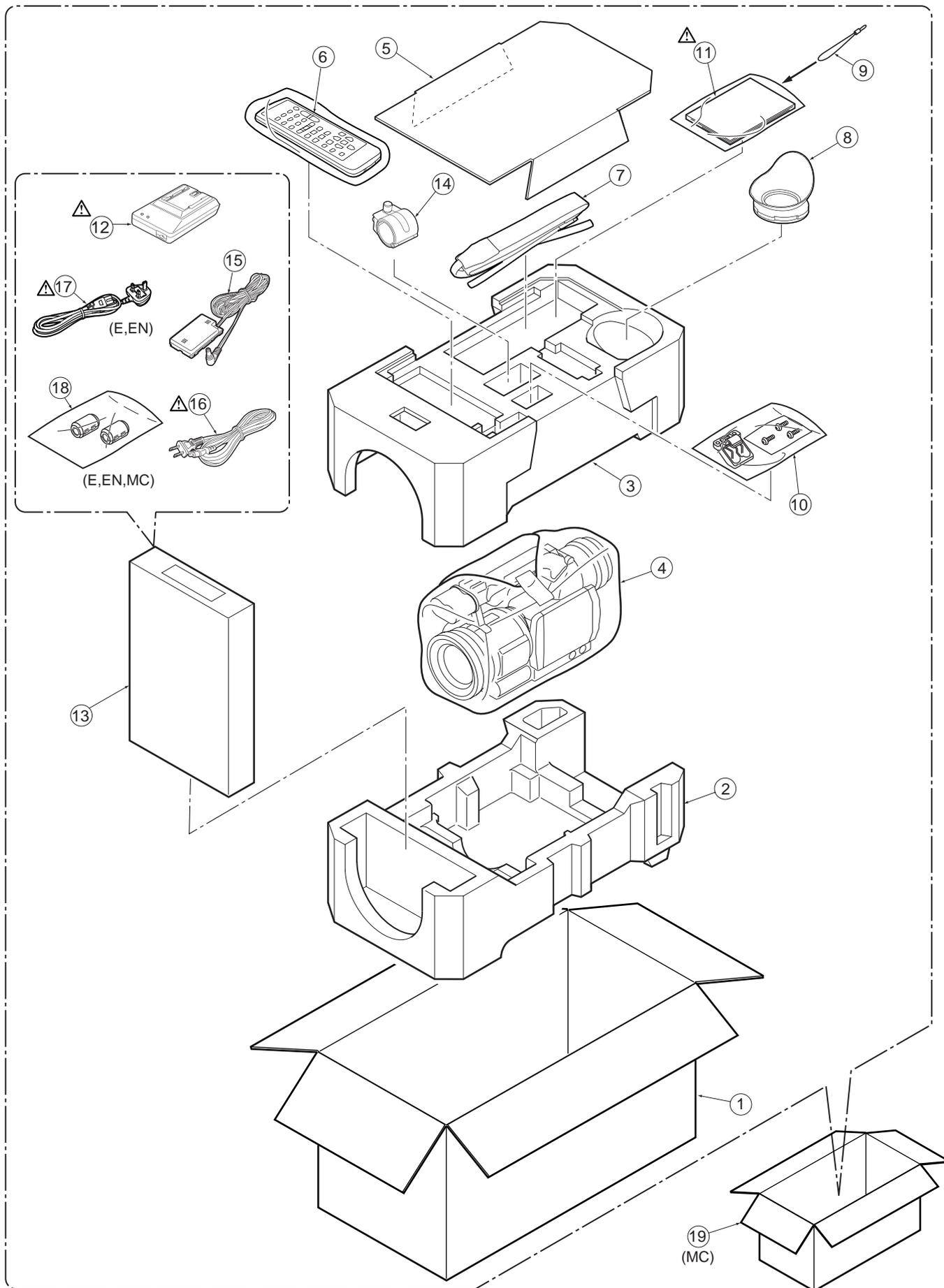
# LCD PARTS ASSEMBLY





# PACKING PARTS ASSEMBLY

Components identified with the mark  $\triangle$  have the special characteristics for safety. When replacing any of these components, use only the same type.





# ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP03G82A	VTR C.B.A.	1	(RTL) FOR AG-DVX100BP/AN	C1023	ECJOEB1H331K	C. CAPACITOR CH 50V 330P	1	
■ E1	VEP03G82B	VTR C.B.A.	1	(RTL) FOR AG-DVX100BE/EN/MC	C1024	ECJOEB1C223	C. CAPACITOR CH 16V 0.022P	1	
■ E2	VEP23G38A	CAMERA C.B.A.	1	(RTL) FOR AG-DVX100BP/AN	C1031	F1G1C473A004	C. CAPACITOR CH 16V 0.047U	1	
■ E2	VEP23G38B	CAMERA C.B.A.	1	(RTL) FOR AG-DVX100BE/EN/MC	C1032	F1JOJ475A008	C. CAPACITOR CH6.3V 4.7U	1	
■ E3	VEP06G09A	R SIDE C.B.A.	1	(RTL)	C1033	ECJOEB1H331K	C. CAPACITOR CH 50V 330P	1	
■ E4	VEP06G11A	CAM OP1 C.B.A.	1	(RTL)	C1034	ECJOEB1H222K	C. CAPACITOR CH 50V 2200P	1	
■ E5	VEP06G12A	CAM OP2 C.B.A.	1	(RTL)	C1041	F1G1C473A004	C. CAPACITOR CH 16V 0.047U	1	
■ E6	VEP06G13A	CAM OP3 C.B.A.	1	(RTL)	C1042	F1JOJ475A008	C. CAPACITOR CH6.3V 4.7U	1	
■ E7	VEP06G14A	CAM OP4 C.B.A.	1	(RTL)	C1043	ECJOEB1H331K	C. CAPACITOR CH 50V 330P	1	
■ E8	VEP06G10A	MENU C.B.A.	1	(RTL)	C1044	ECJOEB1H222K	C. CAPACITOR CH 50V 2200P	1	
■ E9	VEP06G15A	HANDLE C.B.A.	1	(RTL)	C1053	ECJOEB1H272K	C. CAPACITOR CH 50V 2700P	1	
■ E10	VEP66499A	F TALLY FLEX C.B.A.	1	(RTL)	C1054	ECJOEB1C223	C. CAPACITOR CH 16V 0.022P	1	
■ E11	VEP29166A	EVF CONNECT C.B.A.	1	(RTL)	C1055, 56	ECJOEC1H221J	C. CAPACITOR CH 50V 220P	2	
■ E12	VEP001K6A	BACK CONNECT C.B.A.	1	(RTL)	C1061, 62	F1G1C473A004	C. CAPACITOR CH 16V 0.047U	2	
■ E13	VEP001K7A	TOP CONNECT C.B.A.	1	(RTL)	C1063, 64	F1J1A335A003	C. CAPACITOR CH 10V 3.3U	2	
■ E14	VEP08346A	LCD LEV C.B.A.	1	(RTL)	C1071	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
■ E15	VEP04892A	REAR JACK C.B.A.	1	(RTL)	C1081	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
■ E16	VEP06G07A	POWER SW C.B.A.	1	(RTL)	C1082	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
■ E17	VEP06G16A	ZOOM SW FLEX C.B.A.	1	(RTL)	C1101	ECJOEC1H221J	C. CAPACITOR CH 50V 220P	1	
■ E18	VEP04893A	SIDE JACK C.B.A.	1	(RTL)	C1102	F1H1A334A028	C. CAPACITOR CH 10V 0.33U	1	
■ E19	VEP04895A	MIC CH2 C.B.A.	1	(RTL)	C1103	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
■ E20	VEP04894A	MIC CH1 C.B.A.	1	(RTL)	C1104-06	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	3	
■ E21	VEP06G08A	MODE SW C.B.A.	1	(RTL)	C1107, 08	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	2	
■ E22	VEP01971A	DC IN C.B.A.	1	(RTL)	C1112	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
■ E23	VEP01972A	BATTERY C.B.A.	1	(RTL)	C1113	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1114	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
					C1121, 22	ECJOEB1E682K	C. CAPACITOR CH 25V 6800P	2	
					C1123	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1124	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
					C1132	ECJOEB1E103K	C. CAPACITOR CH 25V 0.01U	1	
					C1133	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1134	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
					C1142	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
					C1143	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1144	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
					C1151, 52	ECJOEB1C822K	C. CAPACITOR CH 16V 8200P	2	
					C1153	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1154	ECJOEC1H820J	C. CAPACITOR CH 50V 82P	1	
					C1155	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1181	ECJOEB1E103K	C. CAPACITOR CH 25V 0.01U	1	
					C1211-13	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	3	
					C1221-24	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	4	
					C1226	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1228	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
					C1231	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1239	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
					C1241	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1249	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
					C1251	F1J1E105A080	C. CAPACITOR CH 25V 1U	1	
					C1253	ECJ3YB1E106K	C. CAPACITOR CH 25V 10U	1	
					C1271	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1301, 02	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	2	
					C1303	F1JOJ475A008	C. CAPACITOR CH6.3V 4.7U	1	
					C1341	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1555	ECJ3YB1E106K	C. CAPACITOR CH 25V 10U	1	
					C1566	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1567	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
					C1568	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
					C1803, 04	F1J1A2250009	C. CAPACITOR CH 10V 2.2U	2	
					C1806	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1809	ECJOEB1H222K	C. CAPACITOR CH 50V 2200P	1	
					C1811	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
					C1812	ECJOEC1H221J	C. CAPACITOR CH 50V 220P	1	
					C1813	ECJOEB1E472K	C. CAPACITOR CH 25V 4700P	1	
					C1815	ECJOEB1H471K	C. CAPACITOR CH 50V 470P	1	
					C1816	ECJ1VB1H682K	C. CAPACITOR CH 50V 6800P	1	
					C1818	F1H1C224A074	C. CAPACITOR CH 16V 0.22U	1	
					C1819	ECJ2FB1C225K	C. CAPACITOR CH 16V 2.2U	1	
					C1820	F1J1A2250009	C. CAPACITOR CH 10V 2.2U	1	
					C1821-24	ECJ2FB1C225K	C. CAPACITOR CH 16V 2.2U	4	
					C1825	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
					C1826	ECJOEB1H331K	C. CAPACITOR CH 50V 330P	1	
					C1827	ECJOEB1H102K	C. CAPACITOR CH 50V 1000P	1	
					C1828	F1L2A105A010	C. CAPACITOR CH100V 1U	1	
					C1829	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
■ E1	VEP03G82A	VTR C.B.A.	1	(RTL) FOR AG-DVX100BP/AN					
■ E1	VEP03G82B	VTR C.B.A.	1	(RTL) FOR AG-DVX100BE/EN/MC					
C1001, 02	ECJ3YB1E106K	C. CAPACITOR CH 25V 10U	2						
C1004, 05	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	2						
C1011	F1G1C473A004	C. CAPACITOR CH 16V 0.047U	1						
C1012	F1JOJ475A008	C. CAPACITOR CH6.3V 4.7U	1						
C1013	ECJOEB1H331K	C. CAPACITOR CH 50V 330P	1						
C1014	ECJOEB1H222K	C. CAPACITOR CH 50V 2200P	1						
C1021	F1G1C473A004	C. CAPACITOR CH 16V 0.047U	1						
C1022	F1JOJ475A008	C. CAPACITOR CH6.3V 4.7U	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1830	F1L2A105A010	C. CAPACITOR CH100V	1U	1
C1831	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C1832	F1L2A105A010	C. CAPACITOR CH100V	1U	1
C1833	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C1842, 43	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	2
C1844	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2002	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	1
C2004	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2005	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C2006	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	1
C2008	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	1
C2012, 13	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C2022, 23	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	2
C2028	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C2031	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2035	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2047	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2058-60	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3
C2062, 63	ECJOEC1H080D	C. CAPACITOR CH 50V	8P	2
C2064	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2090	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2092	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2093-98	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	6
C2201, 02	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C2203	F3F1A106A046	T. CAPACITOR CH 10V	10U	1
C2204	ECJOEC1H470J	C. CAPACITOR CH 50V	47P	1
C2205-09	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	5
C2212	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2213	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2216	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2217-20	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	4
C2221	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2222, 23	ECJOEB1E472K	C. CAPACITOR CH 25V	4700P	2
C2225	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2226	F3F1A106A046	T. CAPACITOR CH 10V	10U	1
C2230	ECJOEC1H101J	C. CAPACITOR CH 50V	100P	1
C2231	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C2232	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C2240	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C2243	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C2246, 47	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3006	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3017	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3027, 28	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	2
C3030	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3043	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3044	ECJOEC1H221J	C. CAPACITOR CH 50V	220P	1
C3046	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3055	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	1
C3056	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3057	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3058	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3059	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3060	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3061	F3F1A106A046	T. CAPACITOR CH 10V	10U	1
C3062	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3063	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	1
C3064-67	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	4
C3068	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3069	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	1
C3070-73	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	4
C3074	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3078	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3081, 82	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3091-95	F1H0J1050022	C. CAPACITOR CH6. 3V	1U	5
C3100-02	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3
C3104-07	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	4
C3201	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3202, 03	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	2
C3204-08	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	5
C3209	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3210	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3212, 13	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3215	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3218-20	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3221	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	1
C3229	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3261-63	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3
C3301, 02	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	2
C3303	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3305	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3306	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3307	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3308	ECJ1VB1A224K	T. CAPACITOR CH 10V	0. 22U	1
C3310	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	1
C3312, 13	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	2
C3315	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3316	F1J1A2250009	C. CAPACITOR CH 10V	2. 2U	1
C3317	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3318	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3319	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3321, 22	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	2
C3323	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3324	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3327	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3330	F3H1A1070006	T. CAPACITOR CH 10V	100U	1
C3331	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3332	F3H1A1070006	T. CAPACITOR CH 10V	100U	1
C3333	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3335, 36	ECJ1VB0J225K	C. CAPACITOR CH6. 3V	2. 2U	2
C3373-84	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	12
C3385	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3386, 87	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3388	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3389	F3G1A476A029	T. CAPACITOR CH 10V	47U	1
C3390	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3391-94	F1H1H104A783	C. CAPACITOR CH 50V	0. 1U	4
C3395	F3H1C226A063	T. CAPACITOR CH 25V	22U	1
C3396, 97	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	2
C3398	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3399	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3400	F1J1A2250009	C. CAPACITOR CH 10V	2. 2U	1
C3403, 04	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	2
C3405	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3408-10	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3
C3414	ECJ1VB1A224K	T. CAPACITOR CH 10V	0. 22U	1
C3415	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3416-18	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	3
C3419	ECJ2FB0J106K	C. CAPACITOR CH 50V	10U	1
C3420	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3421	F3G1A226A035	T. CAPACITOR CH6. 3V	22U	1
C3501-03	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	3
C3504, 05	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	2
C3506	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3507, 08	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	2
C3509, 10	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3511	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3512, 13	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3514, 15	ECJOEB1H102K	C. CAPACITOR CH 50V	1000P	2
C3516	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3518-23	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	6
C3551	ECJOEC1H220J	C. CAPACITOR CH 50V	22P	1
C3552, 53	ECJOEC1H560J	C. CAPACITOR CH 50V	56P	2
C3554	ECJOEC1H220J	C. CAPACITOR CH 50V	22P	1
C3555	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3556	F1J0J475A008	C. CAPACITOR CH6. 3V	4. 7U	1
C3557	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3558-60	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	3
C3561	ECJOEC1H220J	C. CAPACITOR CH 50V	22P	1
C3562	ECJOEC1H560J	C. CAPACITOR CH 50V	56P	1
C3563	ECJOEC1H390J	C. CAPACITOR CH 50V	39P	1
C3564	ECJOEC1H220J	C. CAPACITOR CH 50V	22P	1
C3566	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3568	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3569	ECJOEB1E103K	C. CAPACITOR CH 25V	0. 01U	1
C3570	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	1
C3601	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1
C3602	F1K1E225A047	C. CAPACITOR CH 25V	2. 2U	1
C3603, 04	ECJOEB1A104K	C. CAPACITOR CH 10V	0. 1U	2
C3609	ECJ1VB1C105K	C. CAPACITOR CH 16V	1U	1

Components identified with the mark  $\Delta$  have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3621, 22	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C3623	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C3624	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3625	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C3626, 27	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C3628	FK1A225A007	C. CAPACITOR CH 10V 2.2U	1	
C3629	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3630	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C3631	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3633, 34	FK1A225A007	C. CAPACITOR CH 10V 2.2U	2	
C3635-39	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	5	
C3703	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3705	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3712	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C3713, 14	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	2	
C5001	F3H1C4760008	T. CAPACITOR CH 16V 47U	1	
C5002	ECJ2FB0J106K	C. CAPACITOR CH 50V 10U	1	
C5003	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C5005	ECJOEB1H681K	C. CAPACITOR CH 50V 680P	1	
C5008	ECJOEB1E103K	C. CAPACITOR CH 25V 0.01U	1	
C5012	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C5013	ECJOEB1E103K	C. CAPACITOR CH 25V 0.01U	1	
C5014	ECJOEC1H470J	C. CAPACITOR CH 50V 47P	1	
C5021-24	ECJOEC1H080D	C. CAPACITOR CH 50V 8P	4	
D1001	NSD03A20	D10DE	1	
D1051	MA111	D10DE	1	
D1073	BOJCC000008	D10DE	1	
D1081	MA8130-M	D10DE	1	MAZ81300ML
D1101	MA8100-M	D10DE	1	MAZ81000ML
D1151	MAZ81800HL	D10DE	1	
D1152	MA2S11100L	D10DE	1	
D1518	MA3S132E0L	D10DE	1	
D1519	BOADDJ000019	D10DE	1	
D1520	MAZ80620HL	D10DE	1	
D1521	BOBC4R200016	D10DE	1	
D1531	MA2S11100L	D10DE	1	
D1803	MA111	D10DE	1	
D1807	MA2S11100L	D10DE	1	
D1808	BOECKP000028	D10DE	1	
D1809	MA3J70000L	D10DE	1	
D1811	MA3S132E0L	D10DE	1	
D1812	MA8120-M	D10DE	1	MAZ81200ML
D1813, 14	MAZ82700ML	D10DE	2	
D2003	MA3S13300L	D10DE	1	
D2004	MA2SD2400L	D10DE	1	
D2006	MA2SD2400L	D10DE	1	
D2201	MA3S13300L	D10DE	1	
D3301	MA2SD2400L	D10DE	1	
D3601	MA111	D10DE	1	
D3603	MA3S13300L	D10DE	1	
IC1001	CODBAFA00012	IC	1	
IC1300	COBCAC00214	IC	1	
IC1802	BA9743AFV	IC	1	CODBAZC00010
IC2001	C2DBMK000034	IC	1	
IC2002	C1ZBZ0002602	IC	1	
IC2006	C3EBGG000016	IC	1	
IC2015	COJBAA000356	IC	1	
IC2017	COEBE0000240	IC	1	
IC2020	COJBAA0002390	IC	1	
IC2021	COEBK0000066	IC	1	
IC2201	C1AB00002122	IC	1	
IC2202	COABAA000046	IC	1	
IC3001	C1AB00002028	IC	1	
IC3006	COJBAA000358	IC	1	
IC3007	COJBAC000342	IC	1	
IC3008	COZBZ0000830	IC	1	
IC3201	C1AB00001695	IC	1	
IC3301	C1AB00001894	IC	1	
IC3305	VEF0015	IC	1	
IC3306	C3BBFC000311	IC	1	
IC3308	XC62FP3202P	IC	1	COCBABC00063
IC3309-11	COJBAR000432	IC	3	
IC3312	COABBB000271	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3313	C1AB00001894	IC	1	
IC3314	COJBAR000394	IC	1	
IC3315	COCBAC000057	IC	1	
IC3501	C1AB00001904	IC	1	
IC3502	COABAA000046	IC	1	
IC3503, 04	C1AB00000647	IC	2	
IC3601	C1AB00002187	IC	1	
IC3602	COJBAA0001591	IC	1	
IC3603	COJBAA0001466	IC	1	
IC3604	COJBAA0002585	IC	1	
IC3702	COJBAA0001591	IC	1	
IC3703	COJBAA0001466	IC	1	
IC3704	COJBAA0002585	IC	1	
IC5001	AN3732FJMEFV	IC	1	
$\Delta$ IP1701	K5H1021A0004	IC	1	
L1001	G1C3R9MA0024	COIL	3.9UH	1
L1002	JOJHC0000018	FILTER		1
L1011	G1C470M00026	COIL	47UH	1
L1021	G1C220M00044	COIL	22UH	1
L1031	G1C680MA0024	COIL	68UH	1
L1041	G1C220M00044	COIL	22UH	1
L1061	G1C330MA00085	COIL	33UH	1
L1062	G1C181MA0024	COIL	180UH	1
L1111	JOJBC0000107	FILTER		1
L1121	JOJBC0000107	FILTER		1
L1131	JOJBC0000107	FILTER		1
L1141	JOJBC0000107	FILTER		1
L1151	JOJBC0000107	FILTER		1
L1211-13	G1C4R7MA0072	COIL	4.7UH	3
L1221	G1C4R7MA0072	COIL	4.7UH	1
L1222	G1C4R7MA0073	COIL	4.7UH	1
L1223, 24	G1C4R7MA0076	COIL	4.7UH	2
L1226	G1C4R7MA0073	COIL	4.7UH	1
L1231, 32	G1C4R7MA0076	COIL	4.7UH	2
L1241	G1C4R7MA0072	COIL	4.7UH	1
L1251, 52	G1C100KA0055	COIL	10UH	2
L1271	G1C100KA0055	COIL	10UH	1
L1301, 02	G1C4R7MA0076	COIL	4.7UH	2
L1341	G1C4R7MA0072	COIL	4.7UH	1
L1801, 02	JOJBC0000019	FILTER		2
L1803, 04	G1C4R7MA0072	COIL	4.7UH	2
L1805	G1C331M00007	COIL	330UH	1
L1806, 07	G1C100KA0055	COIL	10UH	2
L3012	JOJAC0000014	FILTER		1
L3017	JOJAC0000014	FILTER		1
L3022, 23	G1C100KA0055	COIL	10UH	2
L3025	G1C100KA0055	COIL	10UH	1
L3027	G1C100KA0055	COIL	10UH	1
L3201	JOJAC0000014	FILTER		1
L3203	JOJAC0000014	FILTER		1
L3204	G1C101KA0055	COIL	100UH	1
L3301	G1C100KA0055	COIL	10UH	1
L3302	G1C220KA0055	COIL	22UH	1
L3303-05	G1C100KA0055	COIL	10UH	3
L3311	JOJAC0000014	FILTER		1
L3371, 72	G1C100KA0055	COIL	10UH	2
L3373	JOJAC0000014	FILTER		1
L3377	G1C100KA0055	COIL	10UH	1
L3501	G1C100KA0055	COIL	10UH	1
L3505-10	G1C330K00017	COIL	33UH	6
L3601, 02	G1C220KA0055	COIL	22UH	2
L3603	G1C100KA0055	COIL	10UH	1
L3701-12	JOJCC0000396	FILTER		12
L5001	G1C101KA0055	COIL	100UH	1
L5002	G1C220KA0055	COIL	22UH	1
P1501	K1KA03BA0104	CONNECTOR (MALE)		1
P2001	K1MR70B00003	CONNECTOR		1
P2002	K1KACOAA0045	CONNECTOR (MALE)		1
P2003	K1MR70B00003	CONNECTOR		1
P2010	K1KA02BA0047	CONNECTOR (MALE)		1
P2201	K1MN08BA0060	CONNECTOR		1
P2202	K1MN10BA0051	CONNECTOR		1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P2203, 04	K1MN18BA0051	CONNECTOR	2		R1035	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
P3001	K1MN45B00033	CONNECTOR	1		R1036, 37	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
P4001	K1KA08AA0266	CONNECTOR (MALE)	1		R1041	ERJ2RHD102	M. RESISTOR CH 1/16W 1K	1	
P5001	K1MN08AA0068	CONNECTOR	1		R1042, 43	ERJ2RKD820	M. RESISTOR CH 1/16W 82	2	
Q1011	XN09D5700L	TRANSISTOR	1		R1044	ERJ2RHD391	M. RESISTOR CH 1/16W 390	1	
Q1021	XN09D5700L	TRANSISTOR	1		R1045	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
Q1022	B1DFCD000017	TRANSISTOR	1		R1046, 47	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
Q1031	XN09D5700L	TRANSISTOR	1		R1051	ERJ2RHD273	M. RESISTOR CH 1/16W 27K	1	
Q1041	XN09D5700L	TRANSISTOR	1		R1052	ERJ2RKD820	M. RESISTOR CH 1/16W 82	1	
Q1042	B1DFCD000017	TRANSISTOR	1		R1054	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1	
Q1051	2SB766A-R	TRANSISTOR	1		R1055	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
Q1061, 62	B1ZBZ0000040	TRANSISTOR	2		R1056	ERJ2GEJ470	M. RESISTOR CH 1/16W 47	1	
Q1081	B1DHF0000001	TRANSISTOR	1		R1057, 58	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
Q1083	XPO460100L	TRANSISTOR	1		R1061	ERJ3GEYOR00	M. RESISTOR CH 1/10W 0	1	DOYDR0000005
Q1101	2SB1462JOL	TRANSISTOR	1		R1081	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
Q1341	B1ADGD000005	TRANSISTOR	1		R1082	ERJ2GEJ470	M. RESISTOR CH 1/16W 47	1	
Q1342	XP1501	TRANSISTOR-RESISTOR	1	XP0150100L	R1083	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
Q1803	B1DHCC000035	TRANSISTOR	1		R1084	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
Q1805	XPO460100L	TRANSISTOR	1		R1085	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
Q1806	B1DHGG000011	TRANSISTOR	1		R1086	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
Q1807	XPO460100L	TRANSISTOR	1		R1087, 88	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
Q1808	2SD1328	TRANSISTOR	1		R1089	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
Q1810	2SD1819A-R	TRANSISTOR	1		R1101	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
Q1811	XP1401	TRANSISTOR-RESISTOR	1	XP0140100L	R1102	ERJ2GEJ562	M. RESISTOR CH 1/16W 5.6K	1	
Q1812	B1ADCF000090	TRANSISTOR	1		R1103	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
Q1813, 14	2SD2216JOL	TRANSISTOR	2		R1104	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
Q1815	2SB1219A	TRANSISTOR	1		R1107	ERJ2GEJ225	M. RESISTOR CH 1/16W 2.2M	1	
Q2003	2SD1820AOL	TRANSISTOR	1		R1108	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
Q2005	2SB0970XOL	TRANSISTOR	1		R1109	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
Q3301-03	B1ABBE000002	TRANSISTOR	3		R1111	ERJ2GEJ471	M. RESISTOR CH 1/16W 470	1	
Q3503, 04	2SB1218AOL	TRANSISTOR	2		R1112	ERJ2RHD562	M. RESISTOR CH 1/16W 5.6K	1	
Q3505	B1ABBE000002	TRANSISTOR	1		R1116	ERJ2GEJ100	M. RESISTOR CH 1/16W 10	1	
Q3506	XPO460100L	TRANSISTOR	1		R1121	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1	
Q3601, 02	B1ADGD000005	TRANSISTOR	2		R1122	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
Q3603	2SB1218AOL	TRANSISTOR	1		R1126	ERJ2GEJ100	M. RESISTOR CH 1/16W 10	1	
Q3604	XP1501	TRANSISTOR-RESISTOR	1	XP0150100L	R1131	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
Q3607	XPO431N00L	TRANSISTOR	1		R1132	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
Q3609	2SD2216JOL	TRANSISTOR	1		R1136	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
Q3610	XPO421300L	TRANSISTOR	1		R1141	ERJ2RHD221	M. RESISTOR CH 1/16W 220	1	
Q3701	XPO421300L	TRANSISTOR	1		R1142	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
QR1001	B1GDCFGN0019	TRANSISTOR-RESISTOR	1		R1146	ERJ2GEJ100	M. RESISTOR CH 1/16W 10	1	
QR1081	UNR9113JOL	TRANSISTOR	1		R1151	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1	
QR1101	UNR9214JOL	TRANSISTOR	1		R1152	ERJ2RHD392	M. RESISTOR CH 1/16W 3.9K	1	
QR1102	UNR9213JOL	TRANSISTOR	1		R1153	ERJ2RHD243	M. RESISTOR CH 1/16W 24K	1	
QR1162	UNR9115JOL	TRANSISTOR	1		R1154	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
QR1802	UNR9113JOL	TRANSISTOR	1		R1155	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
QR1804, 05	UNR9213JOL	TRANSISTOR	2		R1156	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
QR1806, 07	UNR9113JOL	TRANSISTOR	2		R1182	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
QR1809	UNR9213JOL	TRANSISTOR	1		R1340	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
QR1811	UNR9112JOL	TRANSISTOR	1		R1341	ERJ2RHD121	M. RESISTOR CH 1/16W 120	1	
QR2005, 06	XPO411500L	TRANSISTOR	2		R1342	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
QR2008	UNR921FJOL	TRANSISTOR	1		R1343	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
QR3502	UNR9212JOL	TRANSISTOR	1		R1344	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1	
QR3503	UNR911FJOL	TRANSISTOR-RESISTOR	1		R1345	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
QR3601	B1GBCFLL0036	TRANSISTOR-RESISTOR	1		R1402	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R1002	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R1520	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1	
R1003	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1		R1521	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R1011	ERJ2RHD682	M. RESISTOR CH 1/16W 6.8K	1		R1564	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R1012, 13	ERJ2RKD820	M. RESISTOR CH 1/16W 82	2		R1612	ERJ2RHD822	M. RESISTOR CH 1/16W 8.2K	1	
R1014	ERJ2RHD391	M. RESISTOR CH 1/16W 390	1		R1806	ERJ2RHD243	M. RESISTOR CH 1/16W 24K	1	
R1015	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1		R1807	ERJ2RHD393	M. RESISTOR CH 1/16W 39K	1	
R1016, 17	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2		R1808, 09	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	2	
R1021	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1		R1810	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1022	ERJ2RKD820	M. RESISTOR CH 1/16W 82	1		R1812	ERJ2RHD683	M. RESISTOR CH 1/16W 68K	1	
R1024	ERJ2RHD221	M. RESISTOR CH 1/16W 220	1		R1813	ERJ2GEJ124	M. RESISTOR CH 1/16W 120K	1	
R1025	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1		R1816, 17	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	2	
R1026	ERJ2RHD331X	M. RESISTOR CH 1/16W 330	1		R1818	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R1027	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1		R1819	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
R1028	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R1820	ERJ2RHD271	M. RESISTOR CH 1/16W 270	1	
R1031	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1		R1826	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R1032	ERJ2RKD820	M. RESISTOR CH 1/16W 82	1		R1827	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R1034	ERJ2RHD151	M. RESISTOR CH 1/16W 150	1		R1828	ERJ2GEJ470	M. RESISTOR CH 1/16W 47	1	
					R1829	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
					R1830	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
					R1831	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1832	ERJ2RHD273	M. RESISTOR CH 1/16W 27K	1	
R1833	ERJ2RHD563	M. RESISTOR CH 1/16W 56K	1	
R1837	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R1838	ERJ2RHD153	M. RESISTOR CH 1/16W 15K	1	
R1841	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
R1842	ERJ2RHD392	M. RESISTOR CH 1/16W 3.9K	1	
R1843	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	
R1844	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R1845	ERJ2RKD560	M. RESISTOR CH 1/16W 56	1	
R1846	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R1847	ERJ2RHD392	M. RESISTOR CH 1/16W 3.9K	1	
R1849, 50	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R1854	ERJ2RHD153	M. RESISTOR CH 1/16W 15K	1	
R1865, 66	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R1867	ERJ2RHD153	M. RESISTOR CH 1/16W 15K	1	
R1868	ERJ2RHD391	M. RESISTOR CH 1/16W 390	1	
R1869	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	
R1870	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	
R1871	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	1	
R1872	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R1873	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R1874	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R1875	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R1876	ERJ2GEJ224	M. RESISTOR CH 1/16W 220K	1	
R1877, 78	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R1879, 80	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R2001-03	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	3	
R2004	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2005	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
R2006	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2008	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2009	ERJ2RHD683	M. RESISTOR CH 1/16W 68K	1	
R2010	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R2011	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2013	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2014	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2016	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2017	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R2018	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2020	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2021	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2022	ERJ2GEJ474	M. RESISTOR CH 1/16W 470K	1	
R2027	ERJ2RHD393	M. RESISTOR CH 1/16W 39K	1	
R2029	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2030	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R2032	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	
R2034	ERJ2GEJ684	M. RESISTOR CH 1/16W 680K	1	
R2035	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R2038	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2040	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
R2041	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R2045, 46	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	2	
R2047	ERJ2RHD221	M. RESISTOR CH 1/16W 220	1	
R2050	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2054, 55	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	2	
R2056	ERJ2RHD103	M. RESISTOR CH 1/16W 10K	1	
R2059	ERJ2GEJ394	M. RESISTOR CH 1/16W 390K	1	
R2061-66	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	6	
R2070	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2073	ERJ2RHD182	M. RESISTOR CH 1/16W 1.8K	1	
R2079	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R2080	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	1	
R2081	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
R2082, 83	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2084	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2085, 86	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2087, 88	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	2	
R2089	ERJ2RHD822	M. RESISTOR CH 1/16W 8.2K	1	
R2090, 91	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R2092, 93	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2094-96	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	3	
R2097	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2098, 99	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R2102	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2103-05	ERJ2RHD331X	M. RESISTOR CH 1/16W 330	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2107	ERJ2RHD331X	M. RESISTOR CH 1/16W 330	1	
R2108	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	
R2109	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R2110	ERJ2RHD822	M. RESISTOR CH 1/16W 8.2K	1	
R2111	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R2112	ERJ2RHD822	M. RESISTOR CH 1/16W 8.2K	1	
R2119-21	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	3	
R2123-25	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	3	
R2126-28	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	3	
R2129	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2130	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2131	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R2133	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R2134, 35	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R2138, 39	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	2	
R2142	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R2146	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
R2149	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R2155	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R2161, 62	ERJ2RHD473	M. RESISTOR CH 1/16W 47K	2	
R2163, 64	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	2	
R2171, 72	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R2177	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2181-87	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	7	
R2190, 91	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2192-94	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	3	
R2196	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R2197, 98	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2199	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R2201	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R2202	ERJ2GEJ474	M. RESISTOR CH 1/16W 470K	1	
R2203	ERJ2GEJ824	M. RESISTOR CH 1/16W 820K	1	
R2204	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R2205-07	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	3	
R2210	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R2211	ERJ8RQRJ27	M. RESISTOR CH 1/8W 0.27	1	
R2212	ERJ2RHD153	M. RESISTOR CH 1/16W 15K	1	
R2213	ERJ8RQRJ27	M. RESISTOR CH 1/8W 0.27	1	
R2214	ERJ2RHD273	M. RESISTOR CH 1/16W 27K	1	
R2217	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R2218	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R2219	ERJ2RHD273	M. RESISTOR CH 1/16W 27K	1	
R2220	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2222	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2224, 25	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R2226	ERJ8GEYJR68	M. RESISTOR CH 1/8W 0.68	1	
R2228	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R2229	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
R2230-32	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	3	
R2234	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R2235	ERJ2RHD563	M. RESISTOR CH 1/16W 56K	1	
R2236	ERJ2RHD393	M. RESISTOR CH 1/16W 39K	1	
R2237-40	ERJ2RHD103	M. RESISTOR CH 1/16W 10K	4	
R3001	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R3003	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R3004	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R3005-08	ERJ2GEJ470	M. RESISTOR CH 1/16W 47	4	
R3009-12	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	4	
R3013	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
R3017, 18	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R3020, 21	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R3022-25	ERJ2RKD560	M. RESISTOR CH 1/16W 56	4	
R3026	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R3029	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R3033, 34	ERJ2RHD103	M. RESISTOR CH 1/16W 10K	2	
R3035	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
R3036, 37	ERJ2RHD103	M. RESISTOR CH 1/16W 10K	2	
R3038	ERJ2RHD153	M. RESISTOR CH 1/16W 15K	1	
R3040-47	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	8	
R3048	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R3050-57	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	8	
R3061-63	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	3	
R3066-70	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	5	
R3074, 75	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R3077-79	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	3	



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C31	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C32	ECUX1E471KBQ	C. CAPACITOR CH 25V 470P	1	
C33	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C37-39	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	3	
C40-45	ECUX1A105KBV	C. CAPACITOR CH 10V 1U	6	
C46-54	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	9	
C55-60	F3F1A106A046	T. CAPACITOR CH 10V 10U	6	
C65	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C66	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C67-69	F3F1V684A032	T. CAPACITOR CH 35V 0.68U	3	
C101	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C102	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C103, 04	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C105	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C106	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C107	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C108-12	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	5	
C113	ECJ1VC1H220J	C. CAPACITOR CH 50V 22P	1	
C114	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C115	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C118	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C119	F3F1C475A045	T. CAPACITOR CH 16V 4.7U	1	
C120-22	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	3	
C123	FK1H1050002	C. CAPACITOR CH 50V 1U	1	
C126	FK1H1050002	C. CAPACITOR CH 50V 1U	1	
C128	F3G1V335A021	T. CAPACITOR CH 35V 3.3U	1	
C129	ECJOEB1E102K	C. CAPACITOR CH 25V 1000P	1	
C131	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C132	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C133	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C135, 36	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C140	ECJOEF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C141	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C142	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C143-45	FK1H104A783	C. CAPACITOR CH 50V 0.1U	3	
C146, 47	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C148	ECUX1A105ZFV	C. CAPACITOR CH 10V 1U	1	
C149	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	F1J1C105A063
C151, 52	F3G1A476A029	T. CAPACITOR CH 10V 47U	2	
C153	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C154	F3F1C475A045	T. CAPACITOR CH 16V 4.7U	1	
C158	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C162	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	1	
C170	FK1H1050002	C. CAPACITOR CH 50V 1U	1	
C171	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C173	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C174, 75	ECJOEC1H220J	C. CAPACITOR CH 50V 22P	2	
C176, 77	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C180	F3G1V335A021	T. CAPACITOR CH 35V 3.3U	1	
C181-85	F1L1E1060018	C. CAPACITOR CH 25V 10U	5	
C191-98	F1L1E1060018	C. CAPACITOR CH 25V 10U	8	
C199	ECJ1VB1H103K	C. CAPACITOR CH 50V 0.01U	1	
C202, 03	EEHBI1E331UP	E. CAPACITOR 25V 330P	2	
C205-08	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	4	
C209	ECUX1A105KBV	C. CAPACITOR CH 10V 1U	1	
C210-14	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	5	
C215	ECJOEF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C217, 18	F1H0J1050022	C. CAPACITOR CH6. 3V 1U	2	
C219	ECJOEC1H220J	C. CAPACITOR CH 50V 22P	1	
C220	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C222	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
C223, 24	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C225	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
C226, 27	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C228	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
C229, 30	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C231	F3G1V335A021	T. CAPACITOR CH 35V 3.3U	1	
C233	ECJ1VB1H103K	C. CAPACITOR CH 50V 0.01U	1	
C234	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C235, 36	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	2	
C301, 02	ECJOEB1E102K	C. CAPACITOR CH 25V 1000P	2	
C308	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C310	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C311	F3F0J106A055	T. CAPACITOR CH6. 3V 10U	1	
C313	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C314	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C315	ECJOEB1C153K	C. CAPACITOR CH 16V 0.015U	1	
C319-22	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	4	
C325	ECUX1A105KBV	C. CAPACITOR CH 10V 1U	1	
C327	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C328	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C329	ECJOEB1C153K	C. CAPACITOR CH 16V 0.015U	1	
C330	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C337	F1G1H8R00003	C. CAPACITOR CH 50V 8P	1	
C338	F1G1H5R00004	C. CAPACITOR CH 50V 5P	1	
C343	ECJOEB1C153K	C. CAPACITOR CH 16V 0.015U	1	
C344	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C348, 49	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C350	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C351	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C352, 53	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	2	
C362	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C363	ECJOEB1C153K	C. CAPACITOR CH 16V 0.015U	1	
C364-79	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	16	
C701	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	1	
C702	ECJOEB1H102K	C. CAPACITOR CH 50V 1000P	1	
C703	F1G1C822A040	C. CAPACITOR CH 16V 8200P	1	
C705	ECJOEC1H390J	C. CAPACITOR CH 50V 39P	1	
C707	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C708	ECJOEB1H272K	C. CAPACITOR CH 50V 2700P	1	
C710	ECJOEB1E472K	C. CAPACITOR CH 25V 4700P	1	
C711	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C713	ECJOEB1H471K	C. CAPACITOR CH 50V 470P	1	
C714	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C715	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C716	ECJOEB1H102K	C. CAPACITOR CH 50V 1000P	1	
C717	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
C718	ECJOEC1H151J	C. CAPACITOR CH 50V 150P	1	
C719	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	
C720	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	1	
C721	ECUX1C105KBN	C. CAPACITOR CH 10V 1U	1	F1J1C105A118
C722, 23	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	2	
C726-28	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	3	
C729	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
C730	F1G1E392A056	C. CAPACITOR CH 25V 3900P	1	
C731	F3F1C1060002	T. CAPACITOR CH 16V 10U	1	
C732	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C734	ECJOEB1H471K	C. CAPACITOR CH 50V 470P	1	
C735	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C744	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	1	
C745	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C746	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	1	
C748	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	1	
C751	ECJOEB1H471K	C. CAPACITOR CH 50V 470P	1	
C752	F1G1E392A056	C. CAPACITOR CH 25V 3900P	1	
C753	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C754	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C755	ECJOEB1A473K	C. CAPACITOR CH 10V 0.047U	1	
C757	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C763, 64	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	2	
C765, 66	ECJOEB1H102K	C. CAPACITOR CH 50V 1000P	2	
C767	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C768, 69	ECJ1VB1A105K	C. CAPACITOR CH 10V 1U	2	
C770, 71	ECJOEB1H102K	C. CAPACITOR CH 50V 1000P	2	
C772	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C774	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C775	ECJOEB1H222K	C. CAPACITOR CH 50V 2200P	1	
C776	F3F1D4750002	T. CAPACITOR CH 20V 4.7U	1	
C777	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C779	ECUX1C105KBN	C. CAPACITOR CH 10V 1U	1	F1J1C105A118
C780	F3F1C1060002	T. CAPACITOR CH 16V 10U	1	
C781	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C782	F3F1C1060002	T. CAPACITOR CH 16V 10U	1	
C783	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C784, 85	F3F1C1060002	T. CAPACITOR CH 16V 10U	2	
C786	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C790	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C791	F3F1C1060002	T. CAPACITOR CH 16V 10U	1	
C794	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C796	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C797	ECJOEB1C103K	C. CAPACITOR CH 16V 0.01U	1	
C799	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C802	F3F1C1060002	T. CAPACITOR CH 16V 10U	1	
C803	F3EOJ106A016	T. CAPACITOR CH6. 3V 10U	1	
C805	F3EOJ106A016	T. CAPACITOR CH6. 3V 10U	1	
C806	ECJOEC1H330J	C. CAPACITOR CH 50V 33P	1	
C807.08	ECJ1V1B1A105K	C. CAPACITOR CH 10V 1U	2	
C809-12	ECJOEB1A104K	C. CAPACITOR CH 10V 0.1U	4	
C813.14	ECUX1C105KBN	C. CAPACITOR CH 10V 1U	2	F1J1C105A118
D101	MA121	D10DE	1	
D102	MA3S132A0L	D10DE	1	
D103	MA121	D10DE	1	
D303	BOJCDD000002	D10DE	1	
D305	BOJCDD000002	D10DE	1	
IC1-C3	C1AB00002095	IC	3	
IC102	COJBAB000635	IC	1	
IC103	COJBAB000669	IC	1	
IC104.05	COJBAB000366	IC	2	
IC106	COJBAF000548	IC	1	
IC107	COJBAB000366	IC	1	
IC109	COJBAB000632	IC	1	
IC110	COJBAB000077	IC	1	
IC111.12	COJBAB000673	IC	2	
IC114	COCBADG00024	IC	1	
IC116	NJM431U	IC	1	CODBEZC00003
IC117	C1AB00002039	IC	1	
IC118	COJBAB000356	IC	1	
IC119	C1AB00002039	IC	1	
IC120	COJBAB000307	IC	1	
IC121	COABCA000038	IC	1	
IC122	COJBAD000220	IC	1	
IC123	COJBAB000366	IC	1	
IC124	COJBAB000356	IC	1	
IC125	C1ZBZ0002385	PLD	1	
IC126	COCBACAF00006	IC	1	
IC127	COCBAC000094	IC	1	
IC128	COJBAB000635	IC	1	
IC301	MN103S33NSE	IC	1	MN103SF33NY4 FOR VEP23638A
IC301	MN103S33NPE	IC	1	FOR VEP23638B
IC303	MN7GD02B5DR	IC	1	
IC304	COJBAF000582	IC	1	
IC307	C3EBG6000003	EEPROM	1	
IC308	COJBAF000548	IC	1	
IC309	COFBAG000065	IC	1	
IC313	COJBAB000632	IC	1	
IC315.16	COJBAB000629	IC	2	
IC317-19	COJBAB000356	IC	3	
IC701	COABCA000053	IC	1	
IC702	C1AB00002150	IC	1	
IC704	C1AB00002145	IC	1	
IC707	C1AB00000431	IC	1	
IC709	COFBAG000068	IC	1	
IC711	COCBAC000006	IC	1	
IC713	COCBAD000034	IC	1	
IC717	COABHZ000004	IC	1	
IC718.19	COCBAD000034	IC	2	
IC720	COGBF0000016	IC	1	
IC721	C1BB00001090	IC	1	
ID307	VVVS14535B	SOFTWARE	1	DOWNLOAD ONLY FOR VEP23638A
ID307	VVVS14536B	SOFTWARE	1	DOWNLOAD ONLY FOR VEP23638B
L4-L6	G1C100KA0068	COIL 10UH	3	
L101	G1C4R7MA0115	COIL 4.7UH	1	
L102	G1C100MA0031	COIL 10UH	1	
L103.04	G1C100KA0068	COIL 10UH	2	
L105	G1C100MA0031	COIL 10UH	1	
L106.07	G1C100KA0068	COIL 10UH	2	
L303	G1C4R7MA0031	COIL 4.7UH	1	
L304	G1C100KA0068	COIL 10UH	1	
L307	G1C100KA0068	COIL 10UH	1	
L309	G1C100K00019	COIL 10UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L701	G1C100KA0068	COIL 10UH	1	
L702	G1C220KA0068	COIL 22UH	1	
L703.04	G1C100KA0068	COIL 10UH	2	
L706	G1C220KA0068	COIL 22UH	1	
L708-11	G1C100KA0068	COIL 10UH	4	
P1002	K1MN12BA0059	CONNECTOR	1	
P1004	K1MN39BA0132	CONNECTOR	1	
P1006	K1MN51B00014	CONNECTOR	1	
P1009	K1KAC0AA0045	CONNECTOR (MALE)	1	
Q102	2SB0970XOL	TRANSISTOR	1	
Q103	2SB710A-R	TRANSISTOR	1	
Q110	B1HBCFD00003	TRANSISTOR-RESISTOR	1	
Q306-08	XN0460100L	TRANSISTOR-RESISTOR	3	
Q708	2SB0970XOL	TRANSISTOR	1	
Q709	2SD221000L	TRANSISTOR	1	
QR101-03	UNR9212JOL	TRANSISTOR	3	
QR301	B1GD0BEJG0003	TRANSISTOR-RESISTOR	1	
QR303	UNR9215JOL	TRANSISTOR	1	
QR304	UNR9211JOL	TRANSISTOR	1	
QR705	UNR9211JOL	TRANSISTOR	1	
QR708.09	UNR9213JOL	TRANSISTOR	2	
QR711.12	UNR9212JOL	TRANSISTOR	2	
QR722	UNR9212JOL	TRANSISTOR	1	
R75	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R78	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R81	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R86-88	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R89-91	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	3	
R104.05	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R112	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R113	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R114-20	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	7	
R121	ERJ2GEJ180	M. RESISTOR CH 1/16W 18	1	
R128	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R129	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R134	ERJ2RHD560	M. RESISTOR CH 1/16W 56	1	
R135	ERJ2RHD101	M. RESISTOR CH 1/16W 100	1	
R149	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R150.51	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R152	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R159-61	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	3	
R164.65	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	2	
R169	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R170	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R171	ERJ2RHD511	M. RESISTOR CH 1/16W 510	1	
R172	ERJ2RHD392	M. RESISTOR CH 1/16W 3.9K	1	
R173	ERJ2GEJ182	M. RESISTOR CH 1/16W 1.8K	1	
R179.80	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R183	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	1	
R185	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R187	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R201	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R202	ERJ2RHD513	M. RESISTOR CH 1/16W 51K	1	
R203	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
R206	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R207	ERJ2RHD513	M. RESISTOR CH 1/16W 51K	1	
R208	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
R211	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R212	ERJ2RHD513	M. RESISTOR CH 1/16W 51K	1	
R213	ERJ2RHD123	M. RESISTOR CH 1/16W 12K	1	
R220	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R221	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R225	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R226	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R233.34	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	2	
R255	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R256	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R262-64	ERJ2GEJ273	M. RESISTOR CH 1/16W 27K	3	
R265	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R266	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R267	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R268	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R269	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R270	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R271	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R272	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R276	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R277	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R279	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R301, 02	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	2	
R304	ERJ2GEJ393	M. RESISTOR CH 1/16W 39K	1	
R308, 09	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R312	ERJ2GEJ682	M. RESISTOR CH 1/16W 6.8K	1	
R314	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	1	
R317, 18	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	2	
R320	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R322	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R326	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R328	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R329, 30	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R333-35	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	3	
R339	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R341	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R342	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R346	ERJ2GEJ122	M. RESISTOR CH 1/16W 1.2K	1	
R347, 48	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	2	
R350	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R352	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	
R354, 55	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	2	
R356	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R357	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R361, 62	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R367	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	
R370	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R371	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R373	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R375	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R376	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R377, 78	ERJ2GEJ471	M. RESISTOR CH 1/16W 470	2	
R391, 92	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R427	ERJ2GEJ271	M. RESISTOR CH 1/16W 270	1	
R429, 30	ERJ2GEJ471	M. RESISTOR CH 1/16W 470	2	
R433	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R439	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R466	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R481	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R486	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R488, 89	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	2	
R490	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R507	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R510	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
R511	ERJ2RHD102	M. RESISTOR CH 1/16W 1K	1	
R512	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1	
R519	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R520	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R521-26	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	6	
R527, 28	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R529, 30	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	2	
R531, 32	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R533-36	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	4	
R542	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R543-45	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	3	
R547, 48	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R549, 50	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	2	
R551	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R553-55	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	3	
R556-59	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	4	
R561	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R571	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	1	
R572	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R573-76	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	4	
R578	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R590	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	
R591	ERJ2RHD102	M. RESISTOR CH 1/16W 1K	1	
R592	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1	
R596	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R597	ERJ2RHD102	M. RESISTOR CH 1/16W 1K	1	
R598	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1	
R600	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R601	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R602	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R603, 04	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R605-11	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	7	
R612, 13	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	2	
R701	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R703, 04	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	2	
R705, 06	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R707	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R708	ERJ2GEJ562	M. RESISTOR CH 1/16W 5.6K	1	
R709	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R712	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R714	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R715	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R716-18	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	3	
R719	ERJ2GEJ564	M. RESISTOR CH 1/16W 560K	1	
R720	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R722	ERJ2GEJ224	M. RESISTOR CH 1/16W 220K	1	
R723, 24	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	2	
R725, 26	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R727	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	1	
R728	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1	
R729	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R730	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	1	
R731	ERJ2GEJ124	M. RESISTOR CH 1/16W 120K	1	
R732	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R733	ERJ2GEJ563	M. RESISTOR CH 1/16W 56K	1	
R734, 35	ERJ3GEYJ2R2	M. RESISTOR CH 1/16W 2.2	2	
R736	ERJ6GEYJ1R0	M. RESISTOR CH 1/10W 1	1	
R738	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R739	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R740	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R741	ERJ2GEJ182	M. RESISTOR CH 1/16W 1.8K	1	
R742, 43	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	2	
R745	ERJ3GEYJ3R3	M. RESISTOR CH 1/16W 3.3	1	
R747	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R748, 49	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R750	ERJ2GEJ393	M. RESISTOR CH 1/16W 39K	1	
R751	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R752	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R754, 55	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R765	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R768	ERJ3GEYJ3R3	M. RESISTOR CH 1/16W 3.3	1	
R770	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R771	ERJ3GEYJ3R3	M. RESISTOR CH 1/16W 3.3	1	
R776	ERJ2GEJ273	M. RESISTOR CH 1/16W 27K	1	
R778	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R780, 81	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R786	ERJ2GEJ393	M. RESISTOR CH 1/16W 39K	1	
R787	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R788	ERJ2GEJ182	M. RESISTOR CH 1/16W 1.8K	1	
R789	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R797	ERJ2GEJ474	M. RESISTOR CH 1/16W 470K	1	
R799	ERJ2GEJ224	M. RESISTOR CH 1/16W 220K	1	
R801, 02	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	2	
R804	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R807, 08	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	2	
R813	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R814	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R815	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R816, 17	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	2	
R823	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R824	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R825	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R830	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R837	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R862, 63	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	2	
R873	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R881-83	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	3	
R892	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R896	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R897	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R900	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R901, 02	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	2	
R903	ERAS39J5R6	M. RESISTOR 5.6	1	
R904	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R907	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	
R908	ERJ2RHD122	M. RESISTOR CH 1/16W 1.2K	1	
R909	ERJ2RHD273	M. RESISTOR CH 1/16W 27K	1	
R910, 11	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	2	
R912	ERAS39J5R6	M. RESISTOR 5.6	1	
R917	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R918	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R919	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R920	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R926	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R939	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R941, 42	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R952	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R975	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R978	ERJ2GEJ273	M. RESISTOR CH 1/16W 27K	1	
R979	ERJ2RHD113	M. RESISTOR CH 1/16W 11K	1	
R990	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	
R991	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R993	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R994	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R995, 96	ERJ2RHD473	M. RESISTOR CH 1/16W 47K	2	
R997, 98	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R999	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	
R1068	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R1087	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1115, 16	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1121-24	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1126	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
X101	H1A3155B0002	CRYSTAL OSCILLATOR	1	
X302	HOJ270500024	CRYSTAL OSCILLATOR	1	
■ E3	VEP06G09A	R SIDE C. B. A.	1	(RTL)
C1001	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1004	F3H1C4760008	T. CAPACITOR CH 16V 47U	1	
C1006	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1008	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C1009	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1010	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1011	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C1012	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1015	F3H1C4760008	T. CAPACITOR CH 16V 47U	1	
C1016	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1018	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C1020	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1022, 23	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	2	
C1024	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1027	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1028, 29	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	2	
C1030	F1H0J2250003	C. CAPACITOR CH6.3V 2.2U	1	
C1031	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1032, 33	F1H0J2250003	C. CAPACITOR CH6.3V 2.2U	2	
C1034	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1036	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C1041	F1K1E225A047	C. CAPACITOR CH 25V 2.2U	1	
C1042	ECJ2YB1A105K	C. CAPACITOR CH 10V 1U	1	
C1044	F3H1V1060004	T. CAPACITOR CH 35V 10U	1	
C1045	ECUX1C106KBP	C. CAPACITOR CH 16V 10U	1	
C1046	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C4603	F3G1C106A028	T. CAPACITOR CH 16V 10U	1	
C4604	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C4612	F1J1A335A005	C. CAPACITOR CH 10V 3.3U	1	
C4613	F3G1C106A028	T. CAPACITOR CH 16V 10U	1	
C4614	F1J1A335A005	C. CAPACITOR CH 10V 3.3U	1	
C4621	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4641	ECUX1C106KBP	C. CAPACITOR CH 16V 10U	1	
C4642, 43	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	2	
C4644	F3H1V106A049	T. CAPACITOR CH 35V 10U	1	
C4647	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	
D4641	MA142K	DIODE	1	
D4650-56	MA3S781D0L	DIODE	7	
IC1001	C0CBABD00020	IC	1	
IC1002	C1AB00002187	IC	1	
IC1003	C0CBAGE00012	IC	1	
IC4601	COABBB000271	IC	1	
IC4602	AN77L09M	IC	1	
L1001	G1C100KA0055	COIL 10UH	1	
L1002	G1C100KA0068	COIL 10UH	1	
L1003	G1C100KA0055	COIL 10UH	1	
L1004	G1C100KA0068	COIL 10UH	1	
L1006	G1C220KA0055	COIL 22UH	1	
P4601	K1KA08BA0014	CONNECTOR (MALE)	1	
P4670	K1MN51B00014	CONNECTOR	1	
P4671	K1MN30BA0059	CONNECTOR	1	
Q1001, 02	XP0431N00L	TRANSISTOR	2	
Q1003	2SD2216J0L	TRANSISTOR	1	
Q1004	2SB09560HL	TRANSISTOR	1	
Q1018	B1ADG0000005	TRANSISTOR	1	
Q1019	2SD2216J0L	TRANSISTOR	1	
R1012	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R1014	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	
R1015	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R1023	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1026	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R1029, 30	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	2	
R1032	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1033	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	1	
R1035	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	1	
R1037	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1039	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	1	
R1042	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1043, 44	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	2	
R1045-59	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	15	
R1067	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
R1071	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R1080-90	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	11	
R1097, 98	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	2	
R1099	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	1	
R1100	ERJ3RBD273	M. RESISTOR CH 1/16W 27K	1	
R3002	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	
R4600	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4602	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4604-06	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R4608	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4609	ERJ8GEYOR00	M. RESISTOR CH 1/8W 0	1	
R4611	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4612	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4614-16	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R4618	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4619	ERJ8GEYOR00	M. RESISTOR CH 1/8W 0	1	
R4621, 22	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R4631-34	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	4	
R4635, 36	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4637	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R4639	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	1	
R4643	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4651, 52	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R4670-76	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	7	
SW4601	KOD123A00076	SWITCH	1	
SW4602-04	KOD122A00126	SWITCH	3	
SW4650, 51	EVQQW101M	SWITCH	2	
SW4652, 53	EVQQWS01W	SWITCH	2	
SW4654, 55	EVQQW101M	SWITCH	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
SW4656	EVQWS01W	SWITCH	1	
SW4657	EVQW101M	SWITCH	1	
SW4658	EVQWS01W	SWITCH	1	
SW4659, 60	EVQW101M	SWITCH	2	
SW4661	EVQWS01W	SWITCH	1	
SW4662, 63	EVQW101M	SWITCH	2	
SW4670	KOC112B00009	SWITCH	1	
VR4601, 02	D2BBA14A0002	V. RESISTOR 10K	2	
		MISCELLANEOUS		
	VGG8615	AUDIO VR COVER	1	
	VGU9212	AUDIO ROTATING KNOG	2	
	VGH4611	KNOB SEAL	1	
	XQN2+BJ4FJK	SCREW	1	
■ E4	VEP06G11A	CAM OP1 C. B. A.	1	(RTL)
D301-04	MA142WA	DIODE	4	
P301	K1MN10BA0059	CONNECTOR	1	
P302	K1MN06BA0059	CONNECTOR	1	
R302	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R304	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
SW301	KOD113B00029	SWITCH	1	
SW303-06	KOH1BA000442	SWITCH	4	
■ E5	VEP06G12A	CAM OP2 C. B. A.	1	(RTL)
D351, 52	MA142WA	DIODE	2	
D354	MA142K	DIODE	1	
P350	K1ZZ00001279	CONNECTOR	1	
P351	K1MN10AA0018	CONNECTOR	1	
P352	K1MN12AA0018	CONNECTOR	1	
SW351, 52	KOE112A00108	SWITCH	2	
SW353	KOH1BB000076	SWITCH	1	
		MISCELLANEOUS		
	VMX3507	TACT SW SPACER	1	
■ E6	VEP06G13A	CAM OP3 C. B. A.	1	(RTL)
P360	K1ZZ00001307	CONNECTOR	1	
R360, 61	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
SW360	K9AA01500015	SWITCH	1	
		MISCELLANEOUS		
	VMP8476	IRIS JOG ANGLE	1	
	XQN2+B4FN	SCREW	2	
	VGG6917	MENU ROTATION KNOB SHEET	1	
	VGU9198	ROTATION KNOB	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E7	VEP06G14A	CAM OP4 C. B. A.	1	(RTL)
P370	K1MN06BA0059	CONNECTOR	1	
R370	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
SW370	KOH1BA000442	SWITCH	1	
		MISCELLANEOUS		
	VMP7335	C. B. A. HOLDER ANGLE	1	
	XQN2+B4FN	SCREW	2	
■ E8	VEP06G10A	MENU C. B. A.	1	(RTL)
D610-12	MA3S781D0L	DIODE	3	
D614-16	MA3S781D0L	DIODE	3	
P610	K1MN10BA0059	CONNECTOR	1	
SW608	KOH1ZA000001	SWITCH	1	
SW609	EVQWS01W	SWITCH	1	
■ E9	VEP06G15A	HANDLE C. B. A.	1	(RTL)
C451, 52	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	2	
C453	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C454, 55	ECUX1C823KBV	C. CAPACITOR CH 16V 0.082U	2	ECJ1XB1C823K
C456, 57	ECJ1VB1E223K	C. CAPACITOR CH 25V 0.022U	2	
C458, 59	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	2	
C460, 61	F1J1A335A003	C. CAPACITOR CH 10V 3.3U	2	
C462	F3G1A226A035	T. CAPACITOR CH6. 3V 22U	1	
C463	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	
C464	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C471	F3H1C476A064	T. CAPACITOR CH 16V 47U	1	
C472	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C4801-04	ECJ1VB1E223K	C. CAPACITOR CH 25V 0.022U	4	
C4806	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	ECJ1XC1H102J
C4808	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	ECJ1XC1H102J
C4809	ECJ1VB1E223K	C. CAPACITOR CH 25V 0.022U	1	
C4810	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	
C4811	ECJ1VB1E223K	C. CAPACITOR CH 25V 0.022U	1	
C4812	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	
C4813	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C4814	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	
D402	B3AAB0000129	LED	1	
D471-73	MA3S781D0L	DIODE	3	
IC451, 52	COABBA000166	IC	2	
IC471	B3RAB0000052	IC	1	
IC4801	COABC0000051	IC	1	
P451	K1MN24BA0059	CONNECTOR	1	
P452	K1MN10BA0079	CONNECTOR	1	
P4801, 02	K1KA04BA0014	CONNECTOR (MALE)	2	
Q451, 52	2SD1819A-R	TRANSISTOR	2	
Q453	2SD182400L	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q4801	2SD182400L	TRANSISTOR	1	
R453, 54	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	2	
R457, 58	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R459-62	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	4	
R463, 64	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R465, 66	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R467, 68	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	2	
R469	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R471	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R472	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R481	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R482, 83	ERJ3GEYJ623	M. RESISTOR CH 1/16W 62K	2	
R486, 87	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R488	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R489, 90	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R491-94	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	4	
R4801-04	ERJ6GEYJ392	M. RESISTOR CH 1/10W 3.9K	4	
R4805-12	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	8	
R4813, 14	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R4815	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
SW451	RSH1A77ZA-A	SWITCH	1	KOH1BA000104
SW452, 53	KOH1BA000433	SWITCH	2	
SW471	KOD123A00035	SWITCH	1	
		MISCELLANEOUS		
	VG06880	HANDLE S/S HOLDER	1	
	VG06881	T/W BUTTON HOLDER	1	
	VGU9208	HANDLE T/W BUTTON	1	
	VMG1480	HANDLE T/W BUTTON RUBBER	1	
	VMS7185	HANDLE ZOOM SHAFT	1	
	XUC15FP	E-RING	2	
	XON2-BJ4FJ	SCREW	2	
■ E10	VEP66499A	F TALLY FLEX C. B. A.	1	(RTL)
C401	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C402	F3G1C156A028	T. CAPACITOR CH 16V 15U	1	
D401	B3AAB0000129	LED	1	
IC401	VEK8283	REMOTE CONTROL RECEIVER	1	B3RZB0000001
R401	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R402	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
		MISCELLANEOUS		
	VMZ3344	INSULATION PLATE	1	
	VGFO957	MIC SHADING SHEET	1	
■ E11	VEP29166A	EVF CONNECT C. B. A.	1	(RTL)
C651	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
D651	MA8056-MH	DIODE	1	
P651	K1MN22BA0080	CONNECTOR	1	
P652	K1MN20BA0081	CONNECTOR	1	
P653	K1KA02BA0014	CONNECTOR (MALE)	1	
R651-71	ERJ2GEOR00	M. RESISTOR CH 1/16W 0	21	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■ E12	VEP001K6A	BACK CONNECT C. B. A.	1	(RTL)
B51	N4EZH27Z0001	BATTERY	1	
C51	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
C52, 53	F3FOJ226A055	T. CAPACITOR CH6.3V 22U	2	
C54-57	F1JOJ106A014	T. CAPACITOR CH6.3V 10U	4	
C58, 59	ECJ1VB1H471K	C. CAPACITOR CH 50V 470P	2	
C62	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C63	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
C66, 67	ECJ1VB1H471K	C. CAPACITOR CH 50V 470P	2	
C70	ECJ1VB1H103K	C. CAPACITOR CH 50V 0.01U	1	
C71	ECJ1VB1H222K	C. CAPACITOR CH 50V 220P	1	
C72	ECJ1VB1H103K	C. CAPACITOR CH 50V 0.01U	1	
C73	ECJ1VB1H222K	C. CAPACITOR CH 50V 220P	1	
C74	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C75	F3G1C2260001	T. CAPACITOR CH 16V 22U	1	
IC51	L2ES00000013	SENSOR U	1	
IC52	L2ES00000012	SENSOR U	1	
IC53	COABCA000042	IC	1	
IC54	COJBAS000251	IC	1	
IC55	COABAA000046	IC	1	
L51-53	G1C100K00019	COIL 10UH	3	
P51	K1MN51B00014	CONNECTOR	1	
P52	K1MN20BA0059	CONNECTOR	1	
P53	K1KAC0BA0029	CONNECTOR (FEMALE)	1	
P54	K1KA30AA0044	CONNECTOR (MALE)	1	
P55	K1MN30AA0039	CONNECTOR	1	
P56	K1MR70B00004	CONNECTOR	1	
P57	K1MN16BA0059	CONNECTOR	1	
P58	K1KAC0BA0029	CONNECTOR (FEMALE)	1	
R51	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R52-57	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	
R58	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R60, 61	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R62-65	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	4	
R66	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R69	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R70	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
R71, 72	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	2	
R73, 74	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R75-78	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	4	
R79, 80	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
■ E13	VEP001K7A	TOP CONNECT C. B. A.	1	(RTL)
C551	F3G1C106A028	T. CAPACITOR CH 16V 10U	1	
C552	ECJ0EB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C553	F3FOJ475A055	T. CAPACITOR CH6.3V 4.5U	1	
C554	F3F1C105A045	T. CAPACITOR CH 16V 1U	1	
C557	ECJ0EB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C558	ECJ2FB0J106K	C. CAPACITOR CH 50V 10U	1	
C559	ECJ0EB1A104K	C. CAPACITOR CH 10V 0.1U	1	
C560	F3G1A476A029	T. CAPACITOR CH 10V 47U	1	
D551	MA3781D0L	DIODE	1	
IC551	COABZA000033	IC	1	
IC552	XC62FP3202P	IC	1	COCBABC00063
L551	G1C220KA0055	COIL 22UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P551	K1MN24AA0018	CONNECTOR	1	
P552, 53	K1MN10AA0018	CONNECTOR	2	
P554	K1MR70B00004	CONNECTOR	1	
P555	K1MN22AA0018	CONNECTOR	1	
P556	K1KA02AA0104	CONNECTOR (MALE)	1	
Q551	B1ADGD000005	TRANSISTOR	1	
QR551	B1GBCFLL0036	TRANSISTOR-RESISTOR	1	
R551, 52	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R556	ERJ2GEJ203	M. RESISTOR CH 1/16W 20K	1	
R557	ERJ2GEJ123	M. RESISTOR CH 1/16W 12K	1	
R558	ERJ2GEJ223	M. RESISTOR CH 1/16W 22K	1	
R559	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	
R562	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
■ E14	VEP08346A	LCD LEV C. B. A.	1	(RTL)
C1003	F3G1C106A028	T. CAPACITOR CH 16V 10U	1	
C1014	F3F1A106A046	T. CAPACITOR CH 10V 10U	1	
C1017	ECUX1C106KBP	C. CAPACITOR CH 16V 10U	1	
C1019	ECJ0EF1C104Z	C. CAPACITOR CH 16V 0.1U	1	
C1025	ECJ2FB1C225K	C. CAPACITOR CH 16V 2.2U	1	
C1026	ECJ1VB1C105K	C. CAPACITOR CH 16V 1U	1	
D1001	MA8120-M	DIODE	1	MAZ81200ML
L1005	G1C100KA0068	COIL 10UH	1	
P1001	K1MN27B00036	CONNECTOR	1	
P1002	K1MN12BA0059	CONNECTOR	1	
P1003	K1MN26BA0059	CONNECTOR	1	
Q1005-12	2SD2216J0L	TRANSISTOR	8	
Q1014, 15	B1ADBE000001	TRANSISTOR	2	
Q1016, 17	2SD2216J0L	TRANSISTOR	2	
R1003	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
R1004	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R1005-11	ERJ2RKD270	M. RESISTOR CH 1/16W 27	7	
R1013	ERJ2RKD270	M. RESISTOR CH 1/16W 27	1	
R1018	ERJ2RHD472	M. RESISTOR CH 1/16W 4.7K	1	
R1020	ERJ2RHD223	M. RESISTOR CH 1/16W 22K	1	
R1024	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
R1069, 70	ERJ2RKD270	M. RESISTOR CH 1/16W 27	2	
TG1023	EYF6CU	TEST POINT	1	
■ E15	VEP04892A	REAR JACK C. B. A.	1	(RTL)
D4908, 09	D4ED1220A006	VARIABLE RESISTOR	2	
J4901	K2HC106B0010	AC POWER PLUG	1	
J4902	K2HC103B0183	JACK	1	
J4903	K2HD103B0015	JACK	1	
L4902, 03	JOJBC0000014	FILTER	2	
P4902	K1MN16BA0059	CONNECTOR	1	
R4901, 02	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R4909-14	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	6	
R4919	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
T4901-03	JOMAB0000196	FILTER	3	
		MISCELLANEOUS		
	VMP8472	BACK JACK ANGLE	1	
	XQN2+B4FN	SCREW	2	
■ E16	VEP06G07A	POWER SW C. B. A.	1	(RTL)
D502	MA3S781D0L	DIODE	1	
P501	K1MN20BA0059	CONNECTOR	1	
P502	K1MN16BA0059	CONNECTOR	1	
SW501	VMG0763	SWITCH	1	
SW502	KOL1BA000015	SWITCH	1	
■ E17	VEP06G16A	ZOOM SW FLEX C. B. A.	1	(RTL)
SW201	EVQWS01W	SWITCH	1	
VR201	D2B1B15B0001	V. RESISTOR 100K	1	
■ E18	VEP04893A	SIDE JACK C. B. A.	1	(RTL)
C4451, 52	ECJ1VB1H682K	C. CAPACITOR CH 50V 6800P	2	
C4470	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	1	
C4471, 72	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	2	
D4405	B0KB00000041	DIODE	1	
D4451	MA3062M	DIODE	1	
D4452, 53	D4ED1220A006	VARIABLE RESISTOR	2	
D4454-56	D4ED1270A008	VARIABLE RESISTOR	3	
D4470	B3GA00000053	DIODE	1	
D4471	MA3S132D0L	DIODE	1	
J4451	K2HA303A0019	JACK	1	
J4452	K2HZ104A0002	S TERMINAL JACK	1	
L4402, 03	JOMAB0000116	FILTER	2	
L4452, 53	JOJBC0000014	FILTER	2	
P4401	K1MN22BA0059	CONNECTOR	1	
P4402	K1FA104A0017	CONNECTOR	1	
Q4470	2SD103000L	TRANSISTOR	1	
Q4471	2SD1819A-R	TRANSISTOR	1	
R4401, 02	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4409, 10	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4452-54	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R4460, 61	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4463	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R4464	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R4468	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R4470	ERJ6GEYJ225	M. RESISTOR CH 1/10W 2.2M	1	DOG225JA003
R4471	ERJ3GEYJ106	M. RESISTOR CH 1/16W 10M	1	
R4472	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R4473	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4474	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4475, 76	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
TH4401	D4CC11030012	THERMISTOR	1	
■ E19	VEP04895A	MIC CH2 C.B.A.	1	(RTL)
C4050, 51	ECJ1VC1H471J	C. CAPACITOR CH 50V 470P	2	
C4052	ECJ1VF1H103Z	C. CAPACITOR CH 50V 0.01U	1	
C4053, 54	F2A2A1050001	E. CAPACITOR 100V 1M	2	
C4055	F1J2A104A023	C. CAPACITOR CH100V 0.1U	1	
C4059	EEEHB1C220	E. CAPACITOR 16V 22U	1	
C4060-62	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	3	
C4063, 64	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	2	
C4065	EEEHB1C220	E. CAPACITOR 16V 22U	1	
C4067	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	1	
C4068	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	1	
C4072	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	1	
C4073	EEEHP1A330	E. CAPACITOR 10V 33P	1	
C4076	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	1	
C4077	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	
D4050, 51	MA3J14300L	DIODE	2	
D4052	MA142K	DIODE	1	
IC4050	AN77L09M	IC	1	
IC4051	COJBAR000432	IC	1	
IC4054	NJM2122M	IC	1	COABBA000070
IC4055	COABBB000271	IC	1	
J4050	K1AB103A0011	CONNECTOR (FEMALE)	1	
L4050, 51	G1C100JA0036	COIL 10UH	2	
L4052, 53	JOJBC0000014	FILTER	2	
L4055	JOJBC0000014	FILTER	1	
P4050	K1MN10BA0059	CONNECTOR	1	
Q4050	2SB1220-R	TRANSISTOR	1	
Q4053	2SD182400L	TRANSISTOR	1	
QR4051, 52	UNR521L00L	TRANSISTOR	2	
QR4053	UNR511300L	TRANSISTOR	1	
QR4054	UNR521L00L	TRANSISTOR	1	
R4052	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4053, 54	ERJ12YJ682	M. RESISTOR CH 1/2W 6.8K	2	
R4055-57	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	3	
R4058, 59	ERJ3RBD273	M. RESISTOR CH 1/16W 27K	2	
R4060	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4061	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R4062, 63	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R4064	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4065	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R4067	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R4068-73	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	6	
R4077	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R4078	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	1	
R4079	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R4080, 81	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4085	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4087, 88	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4089	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4090	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
SW4050	KOD142A00023	SWITCH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E20	VEP04894A	MIC CH1 C.B.A.	1	(RTL)
C4000, 01	ECJ1VC1H471J	C. CAPACITOR CH 50V 470P	2	
C4002	ECJ1VF1H103Z	C. CAPACITOR CH 50V 0.01U	1	
C4003, 04	F2A2A1050001	E. CAPACITOR 100V 1M	2	
C4005	F1J2A104A023	C. CAPACITOR CH100V 0.1U	1	
C4009	EEEHB1C220	E. CAPACITOR 16V 22U	1	
C4010, 11	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	2	
C4012, 13	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	2	
C4014	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	1	
C4015	EEEHB1C220	E. CAPACITOR 16V 22U	1	
C4017	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	1	
C4019	ECJ1VF1E104Z	C. CAPACITOR CH 25V 0.1U	1	
C4020	EEEHP1A330	E. CAPACITOR 10V 33P	1	
C4030	F3H1C226A063	T. CAPACITOR CH 25V 22U	1	
C4034	EEEFK1K3R3R	C. CAPACITOR CH 80V 3.3U	1	
C4035	ECJ1VC1H330J	C. CAPACITOR CH 50V 33P	1	
D4000	MA142WK	DIODE	1	
D4001, 02	MA3J14300L	DIODE	2	
D4003	MA142K	DIODE	1	
IC4000	AN77L09M	IC	1	
IC4001	COJBAR000432	IC	1	
IC4004	NJM2122M	IC	1	COABBA000070
IC4005	COABBB000271	IC	1	
J4000	K1AB103A0011	CONNECTOR (FEMALE)	1	
L4000, 01	G1C100JA0036	COIL 10UH	2	
L4002	JOJBC0000014	FILTER	1	
L4004	JOJBC0000014	FILTER	1	
L4006	JOJBC0000014	FILTER	1	
P4000	K1MN24BA0079	CONNECTOR	1	
P4002	K1MN10BA0059	CONNECTOR	1	
Q4000	2SB1220-R	TRANSISTOR	1	
Q4001	2SD182400L	TRANSISTOR	1	
Q4052	2SD182400L	TRANSISTOR	1	
QR4001, 02	UNR521L00L	TRANSISTOR	2	
QR4003	UNR511300L	TRANSISTOR	1	
QR4004	UNR521L00L	TRANSISTOR	1	
R4002	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4003	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4004, 05	ERJ12YJ682	M. RESISTOR CH 1/2W 6.8K	2	
R4006	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4007	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R4008, 09	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R4010, 11	ERJ3RBD273	M. RESISTOR CH 1/16W 27K	2	
R4012, 13	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R4014	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4015	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R4016	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R4018-23	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	6	
R4024	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R4025	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	1	
R4026	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R4027, 28	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4029, 30	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R4031	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4074, 75	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4082	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
SW4000	KOD142A00023	SWITCH	1	

Components identified with the mark  $\Delta$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E21	VEP06G08A	MODE SW C. B. A.	1	(RTL)					
D151-56	MA3S781D0L	DIODE	6						
D157	B3AAB0000037	DIODE	1						
D158	B3ABB0000086	LED	1						
D159	MA3S781D0L	DIODE	1						
P152	K1MN16BA0059	CONNECTOR	1						
R154	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1						
R155	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1						
SW151	KOG119A00024	SWITCH	1						
SW152, 53	KOH1BA000251	SWITCH	2						
■ E22	VEP01971A	DC IN C. B. A.	1	(RTL)					
J31	VJS3381	CONNECTOR (FEMALE)	1	K2EC2B000001					
■ E23	VEP01972A	BATTERY C. B. A.	1	(RTL)					
C2, C3	F1H1H104A783	C. CAPACITOR CH 50V 0.1U	2						
$\Delta$ F1	K5H312300005	FUSE	1						
L2	JOMAB0000205	FILTER	1						
P1	K1KA03BA0104	CONNECTOR (MALE)	1						