

JVC

SERVICE MANUAL

DIGITAL STILL CAMERA

GC-X3E-DS



Regarding service information other than these sections, refer to the GC-X1E service manual (No.86572). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS

Power source	: DC 5 V	Self timer	: 1 second, 8 seconds
Power consumption	: 3.6 W (when the LCD screen is off) 4.8 W (when the LCD screen is on)	Photo quality	: 3 modes (STANDARD/FINE/NO COMP.)
Dimensions	: 111 (W) mm x 67 (H) mm x 59 (D) mm (except protruding parts)	Number of storable photos (with an 8MB Memory card, STANDARD/FINE/NO COMP.)	: 2032 x 1536: approx. 10/8/0 1024 x 768: approx. 43/32/3 640 x 480: approx. 87/65/8
Weight	: Approx. 290 g (without a Memory card and battery)	Battery	: Lithium ion battery
Operating temperature	: 0°C to 40°C	Printer connector	: Output for optional printer
Relative humidity	: 35% to 80%	VIDEO output connector	: Two-pole plug, 3.5 mm diameter (PAL)
Storage temperature	: -20°C to 50°C	Digital output connector	: Mini-USB connector
LCD screen	: 2.0 inch, polysilicon TFT (200,000 pixels)		
Storage media	: SmartMedia™ 3.3V (up to 64MB)		
CCD	: 3.34 million pixels (3.24 million valid pixels), 1/1.8" square pixels, primary color filter, interlace scan CCD	AC Power Adapter/Charger AA-V37	
Focal distance	: 7.5 mm to 17.5 mm (equivalent to 37mm to 86 mm on a 35 mm still camera)	Power requirement	: AC 110 V ~ 240 V~, 50 Hz/60 Hz
Lens	: 2.3X optical zoom lens	Power consumption	: 14 W
Video	: 160 pixels x 120 pixels, 20 seconds, JVC original format	Output	
Recording format	: Exif Ver. 2.1 (DCF compliant), TIFF (Uncompressed), DPOF-compatible	Charge	: DC 3.6 V , 0.77 A
Sensitivity	: 80/160/320 (ISO compliant)	Camera	: DC 5.0 V , 1.5 A
Iris value (F value)	: F2.8/3.8, 5.6, 8, 11	Operating temperature	: 0°C to 40°C (when charging: 10°C to 35°C)
Exposure control	: Program AE, iris priority AE	Dimensions	: 68 (W) mm x 38 (H) mm x 110 (D) mm
Exposure compensation	: ±2EV (0.5EV steps)	Weight	: Approx. 230 g (without a DC cord)
Minimum subject distance	: Approx. 2 cm to 50 cm (in Macro mode)		
Light measurement system	: Multi, spot		
Flash	: Built-in, Auto/red-eye prevention/forced/disabled		
Recommended distance for flash	: Approx. 2.5 m		
Shutter speed	: Auto (Program AE: 1/8 seconds – 1/750 seconds), Iris priority AE: 2 seconds – 1/750 seconds)		
White balance	: Auto/Manual (☀, ☁, ☁, ☁, ☁)		
Focus	: Auto/Manual		

E. & O. E. Design and specifications subject to change without notice.

TABLE OF CONTENTS

Section	Title	Page
Important Safety Precautions		
DIFFERENT TABLE		
1. DISASSEMBLY		
1.3.2	Disassembly method (I)	1-1
2. ELECTRICAL ADJUSTMENT		
2.1	ELECTRICAL ADJUSTMENT	2-1
2.1.1	Precautions	2-1
2.1.2	Test instruments required for electrical adjustment	2-1
2.1.3	Required test equipment	2-1
2.1.4	Setup (LCD ADJUSTMENT)	2-1
2.1.5	Setup (CCD ADJUSTMENT)	2-2
2.2	Setup with patch cords and jig connector cables	2-3
3. CHARTS AND DIAGRAMS		
NOTES OF SCHEMATIC DIAGRAM		
CIRCUIT BOARD NOTES		
3.1	BOARD INTERCONNECTION	3-3
3.2	MAIN (SYSCON) SCHEMATIC DIAGRAM	3-5
3.3	MAIN (DSP146) SCHEMATIC DIAGRAM	3-7
3.4	MAIN (DSP97) SCHEMATIC DIAGRAM	3-9
3.5	MAIN (CDS AGC A/D AND ARM ROM) SCHEMATIC DIAGRAM	3-11
3.6	MAIN (STROBE CONTROL AND AUDIO) AND STROBE FLASH SCHEMATIC DIAGRAMS	3-12
3.7	MAIN (F/Z_MDA / IRIS) SCHEMATIC DIAGRAM	3-13
3.8	JACK (VIDEO OUT/USB/PRINTER/DC JACK/ MONITOR BACK LIGHT) SCHEMATIC DIAGRAM	3-14
3.9	CCD SCHEMATIC DIAGRAM	3-15
3.10	MONI REG (MONITOR) SCHEMATIC DIAGRAM	3-16
3.11	MONITOR REG (DC/DC) SCHEMATIC DIAGRAM	3-17
3.12	MAIN CIRCUIT BOARD	3-19
3.13	MONITOR REG CIRCUIT BOARD	3-25
3.16	JACK CIRCUIT BOARD	3-27
3.18	CCD CIRCUIT BOARD	3-29
3.20	STOROBE FLASH CIRCUIT BOARD	3-31
3.22	OVER ALL BLOCK DIAGRAM	3-33
4. PARTS LIST		
4.1	PACKING AND ACCESSORY ASSEMBLY <M1>	4-1
4.3	FINAL ASSEMBLY <M2>	4-3
4.4	ELECTRICAL PARTS LIST	4-6
	MAIN BOARD ASSEMBLY <01>	4-6
	CCD BOARD ASSEMBLY <02>	4-11
	MONI REG BOARD ASSEMBLY <03>	4-12
	JACK BOARD ASSEMBLY <04>	4-14
	STROBE FLASH BOARD ASSEMBLY <05>	4-15

SOFTWARE SECTION FOR Windows®

Operating Environment

The host computer that runs the Windows® operating environment must satisfy the following conditions.

USB Driver

1. Microsoft® Windows® 98/Windows® 98 Second Edition, Full version (Not Upgrade)/Windows® 2000 Professional (Not Upgrade)
2. Available USB port
3. CD-ROM drive

Video Player

1. CPU: Intel® Pentium® 200MHz class or higher
2. Microsoft® Windows® 95/Windows® 98
3. Display capability of 65,536 colors or more
4. CD-ROM drive
5. Minimum RAM requirement: 32MB
6. Minimum hard disk space requirement: 1MB

* The system requirements information is not a guarantee that provided software applications will work on all personal computers meeting those requirements.

* Microsoft®, Windows® are either registered trademarks or trademarks of Microsoft corporation in United States and/or other countries.

* Intel®, Pentium® are registered trademarks of Intel corporation.

* Other trademarks are property of their respective owners.

* If you use Windows® 95 or a personal computer which does not have a USB port, use an optional flash path, conversion card adapter, etc. For details on the operating environment of these devices, contact the dealers or manufacturers.

SOFTWARE SECTION FOR Macintosh®

Operating Environment

The host computer that runs the Macintosh® operating environment must satisfy the following conditions.

USB Driver

1. USB-compatible computer (iMac™, iBook™, Power Mac™ G3/G4, Power Book™ G3, etc.)
2. Mac OS 8.5.1/Mac OS 8.6/Mac OS 9.0

JVC Video Decoder

1. Power PC 603e/120MHz or faster
2. Mac OS 7.6.1 or later
3. QuickTime 3.0 or later
4. Minimum RAM requirement: 32MB
5. Minimum hard disk space requirement: 1MB

* Macintosh® is a registered trademark of Apple Computer.

* Other trademarks are property of their respective owners.

* If you use Macintosh® which does not have a USB port, use an optional flash path, conversion card adapter, etc. For details on the operating environment of these devices, contact the dealers or manufacturers.

The following table indicate main different features between models GC-X1E, GC-X3E and GC-QX5HDU.

ITEM	MODEL	GC-X1E	GC-X3E
Installing the Film Copying Adapter		NO	YES
Shooting Film(Film Copy Mode)		NO	YES

The following table indicate different parts number between models GC-X1E, GC-X3E.

PACKING ASSEMBLY <M1>

REF NO.	ITEM	MODEL	GC-X1E	GC-X3E
1	PACKING CASE		LY31465-003A	LY32048-003A
4	SHEET		LY42548-001A	—
5	HOOD(OP)		LY31822-001A	—
5A	POLY BAG		QPA01001505	—
9	CD-ROM ASSEMBLY		LY31074-010A	LY31074-015A
13	FILM COPY ADAP.		—	LY20687-001A
14	FILM HOLDER AS		—	LY32047-001A
15	CUSHION(ACC)		—	LY32050-001A
△ 31	INST.BOOK(EN)		LYT0544-001C	LYT0670-001A
△ 32	INST.BOOK(FR)		LYT0544-002A	LYT0670-002A
△ 33	INST.BOOK(SP)		LYT0544-003A	LYT0670-003A

Note : Mark — is not used.

FINAL ASSEMBLY <M1>

REF NO.	ITEM	MODEL	GC-X1E	GC-X3E
103	BOARD HOLDER ASSEMBLY		LY31457-002A	LY31457-007B
107C	SHEET		LY30023-016A	LY30023-016A
110	TOP COVER ASSEMBLY		LY31460-002A	LY31460-008B
111	OPERATION UNIT		LY20521-002C	LY20521-007B
113	SPACER(A)		LY30029-016A	—
118	MICROPHONE		—	LY31454-001A
130	SHEET		—	LY42890-001A
131	SPACER(A)		—	LY30029-0C2A
152	REAR COVER ASSEMBLY		LY20519-002B	LY20519-008B
153	FRONT COVER ASSEMBLY		LYH20147-003A	LYH20222-005A
153A	FRONT COVER		LY20516-002A	LY20516-010A
153B	GRIP		LY42320-001A	LY31444-002A

Note : Mark — is not used.

OP BLOCK ASSEMBLY <M3>

REF NO.	ITEM	MODEL	GC-X1E	GC-X3E
203	OPTICAL BLOCK ASSEMBLY		LY31490-001B	LY31490-003A
221	TILT FRAME		*LY20716-001A	←

Note : Mark — is not used.

Note : Mark * reference model was also changed.

MAIN BOARD ASSEMBLY <01>

REF NO.	MODEL		GC-X1E	GC-X3E
	ITEM			
PW1	MAIN BOARD ASSEMBLY		YB10282P-06	YB10299E-03

CCD BOARD ASSEMBLY <02>

REF NO.	MODEL		GC-X1E	GC-X3E
	ITEM			
PW1	MAIN BOARD ASSEMBLY		YB10283P1-04	YB10300E1-02

MONI REG BOARD ASSEMBLY <03>

REF NO.	MODEL		GC-X1E	GC-X3E
	ITEM			
PW4	MONI REG BOARD ASSEMBLY		YB10283P4-04	YB10300E4-02

JACK BOARD ASSEMBLY <04>

REF NO.	MODEL		GC-X1E	GC-X3E
	ITEM			
PW2	JACK BOARD ASSEMBLY		YB10283P2-04	YB10300E2-02

STROBE BOARD ASSEMBLY <05>

REF NO.	MODEL		GC-X1E	GC-X3E
	ITEM			
PW3	STROBE BOARD ASSEMBLY		YB10283P3-04	YB10300E3-02

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the \triangle symbol and shaded (■) parts are critical for safety.
Replace only with specified part numbers.
Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation Tape 3) Spacers 5) Barrier
2) PVC tubing 4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

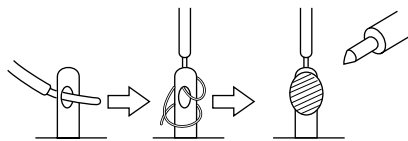


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

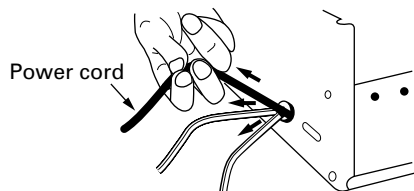


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

1) **Connector part number** : E03830-001

2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).

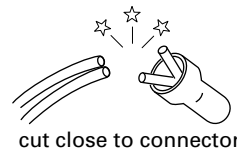


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

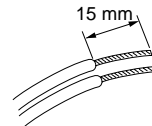


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

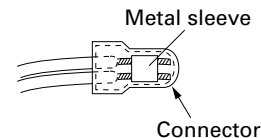


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

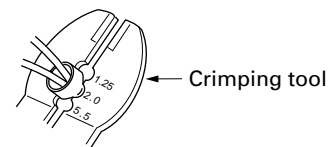


Fig.6

(5) Check the four points noted in Fig.7.

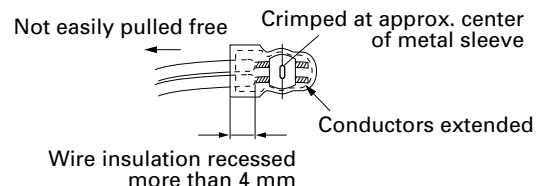


Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

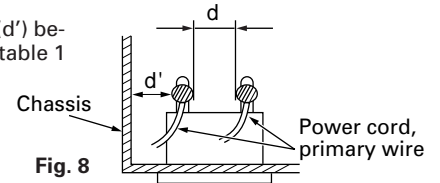
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

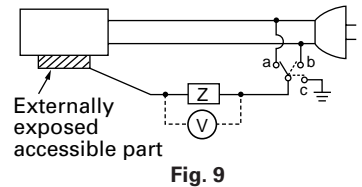


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.



5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

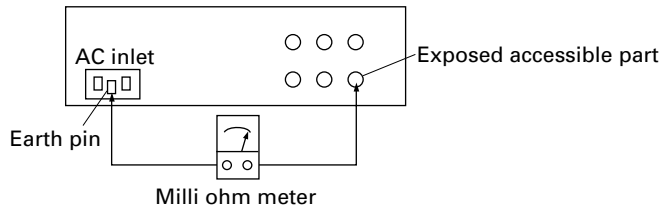


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	$1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm}$ (Power cord) $d' \geq 6 \text{ mm}$ (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
		50 kΩ	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 1 DISASSEMBLY

NOTE : This service manual has indicated only the item different from GC-X1E-S No.86572.

1.3.2 Disassembly method (I)

STEP	PART NAME	FIG. NO.	POINT	NOTE	
①	FRONT CASE REAR CASE	Fig 1-3-1	Remove screws 2 (115), 3 (156), 4 (157), 1 (154)		
②	OPERATION UNIT		Remove the Connector ① MAIN CN4001 ↔ OPERATION UNIT Remove the TOP COVER	Remove screws 3 (116) 2 (115)	Note 1
③	STROBE BOARD ASSEMBLY	Fig 1-3-1	Remove the Connector ① MAIN CN6601 ↔ STROBE CN6501	Remove screw 1 (114)	Note 1 Note 2
	JACK BOARD ASSEMBLY	Fig 1-3-2	Remove the Connector ② MAIN CN5501 ↔ JACK CN101 ③ LCD MODULE (BL) ↔ JACK CN701	Remove screws 2 (114) ④ (SD3), ⑤ (SD4), ⑥ (SD5)	
④	LCD MODULE		Remove the Connector ⑦ MAIN CN3002 ↔ LCD MODULE (LCD)	Remove screws 2 (114)	Note 1 Note 3
⑤	MAIN BOARD ASSEMBLY	Fig 1-3-2	Remove the Connector ⑧ MAIN CN501 ↔ OP UNIT ⑨ MAIN CN2501 ↔ MIC ⑩ MAIN CN3001 ↔ MON/REG CN9001		Note 1
	MONI/REG BOARD ASSEMBLY		⑪ MON/REG TL9001 ↔ Frame Assy Remove the PWB HOLDER	⑫ (SD1) Remove screws 2 (114)	Note 1
⑥	OP UNIT	Fig 1-3-3	Remove from the Frame Assy	Remove screws 3 (117)	

CONNEC- TOR/HL	NO.OF PINS	CONNECTION
③	80	MAIN Board CN3001 ↔ MONI/REG Board CN9001
④	1	MONI/REG Board TL9001 ↔ MAIN FRAME (RED)
⑤	1	JACK Board TP3 ↔ MAIN FRAME (BROWN)
⑥	1	JACK Board TP2 ↔ MONI/REG Board J9001 (BLACK)
⑥	1	JACK Board TP1 ↔ MONI/REG Board J9002 (RED)
⑧	22	MAIN Board CN501 ↔ OP UNIT
⑩	2	MAIN Board CN502 ↔ OP UNIT
⑦	24	MAIN Board CN3002 ↔ LCD MODULE (LCD)
③	2	JACK Board CN701 ↔ LCD MODULE (BL)
①	14	MAIN Board CN6601 ↔ STROBE Board CN6501
②	38	MAIN Board CN5501 ↔ JACK Board CN101
⑨	28	MAIN Board CN2001 ↔ CCD Board CN1001
①	12	MAIN Board CN4001 ↔ OPERATION UNIT
⑤	1	STROBE UNIT WIRE (ORANGE) ↔ STROBE Board J6501 (Through hole)
⑥	1	STROBE UNIT WIRE (BROWN) ↔ STROBE Board J6502 (Through hole)
⑦	1	STROBE UNIT WIRE (RED) ↔ STROBE Board J6503 (Through hole)
⑧	1	STROBE UNIT WIRE (BLACK) ↔ STROBE Board J6504 (Through hole)
⑨	1	STROBE UNIT WIRE (Red, Thin wire) ↔ STROBE Board J6505 (Through hole)
⑩	1	STROBE UNIT WIRE (BLACK, Thin wire) ↔ STROBE Board J6506 (Through hole)
⑨	2	MAIN CN2501 ↔ MIC

Note 1

Destination of connectors.

Note: Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.

↔ : Board to Board connector

↔ : Flat wire

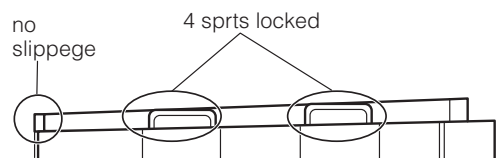
↔ : Wire

Note 2

Be careful from electric shock hazard because the capacitor (C6512) for the strobe is exposed. Be sure to positively discharge the capacitor if it is energized by short-circuiting a resistor (10 - 22 k) connected at both capacitor terminals. Please be very careful when doing this job.

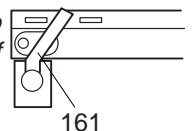
Note 3

LCD panel is fixed by four hooks of backlight. Insert LCD panel in a hook firmly.



Note 5

Stick to let it pass between LEDs. Stick to come out on the left of the sheet metal of a video terminal.



SECTION 2 ELECTRICAL ADJUSTMENT

2.1 ELECTRICAL ADJUSTMENT

2.1.1 Precautions


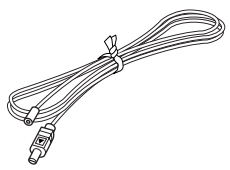
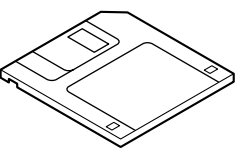
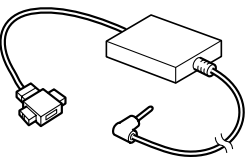
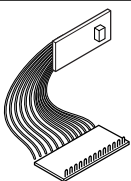
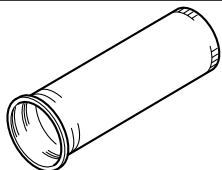

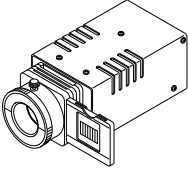
Both the camera section and deck section of this model are designed and manufactured to be adjustment-free. However, if both or either of the following parts is replaced, it needs special adjustment with a personal computer at a JVC service equipment after the part replacement

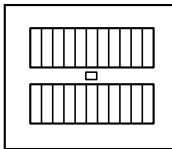
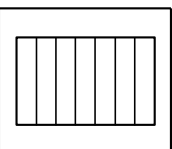
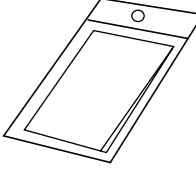
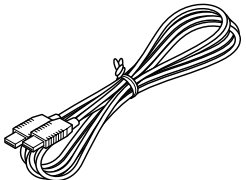
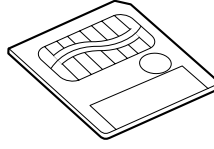
- OP block assembly
- EEPROM (on the MAIN board)

When there is some trouble in the electric circuit, it is required to detect the faulty part with specified test instruments first and then to proceed to repair, replacement and adjustment.

1. When checking a signal at a chip test point, be sure to use an IC clip or the like not to apply any stress to the test point. When replacing a chip part (IC in particular), completely remove solder chips from it and its periphery before proceeding to part replacement (in order to avoid exfoliation of the pattern).
2. Carefully disconnect/connect connectors because they are apt to get damaged.

2.1.2 Test instruments required for electrical adjustment

1	Patch cord ASSY YTU93105	2	Jig connector cable YTU93104B
			
3	Service support system YTU94057-49	4	PC cable QAM0099-002
			
5	Jig connector cable YTU93106A	6	INF adjustment lens YTU92001B
			
7	Camera stand YTU93079	8	Light box assembly YTU93096A
			

9	Gray scale chart YTU94133A	10	Color bar chart YTU94133C
			
11	Cleaning cloth KSM-01	12	USB QAM0252-001
			
13	Smart media card 16MB		
			

2.1.3 Required test equipment

1. Color TV monitor.
2. AC power adapter (AA-V37 or equivalent)
3. Oscilloscope (dual-trace type, for more than 20 MHz).
4. Digital voltmeter
5. Frequency counter (with threshold level adjuster)
6. Personal computer

2.1.4 Setup (LCD ADJUSTMENT)

Setup for electrical adjustment with personal computer

Note 1: As a general rule for adjustment with a personal computer, connect a personal computer to its **PRINTER** terminal.

Note 2: Use DC cord to supply the power.

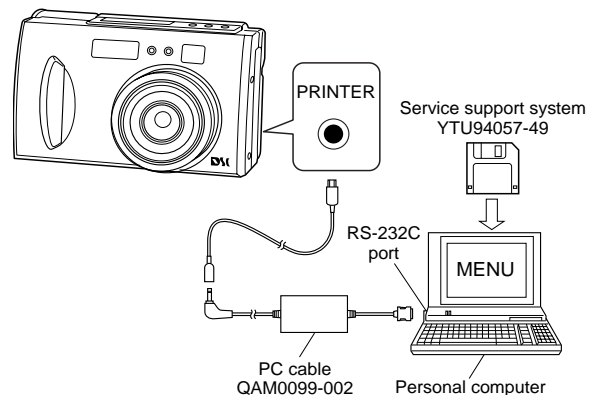


Fig. 2-1-1 Setup for electrical adjustment with personal computer (I)

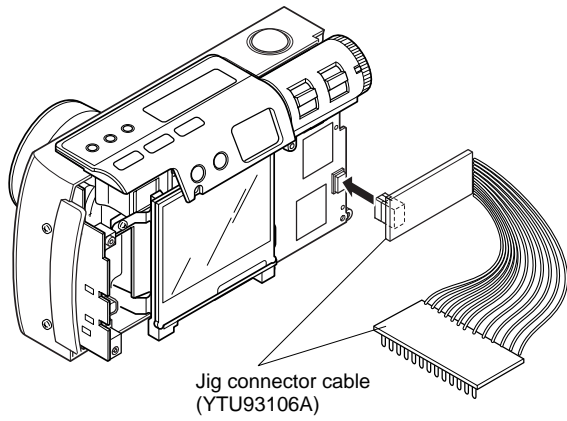


Fig. 2-1-2 Setup for electrical adjustment with personal computer (II)

2.1.5 Setup (CCD ADJUSTMENT)

Setup for electrical adjustment with personal computer

Note 1: As a general rule for adjustment with a personal computer, connect a personal computer to its DIGITAL terminal.

Note 2: Use DC cord to supply the power.

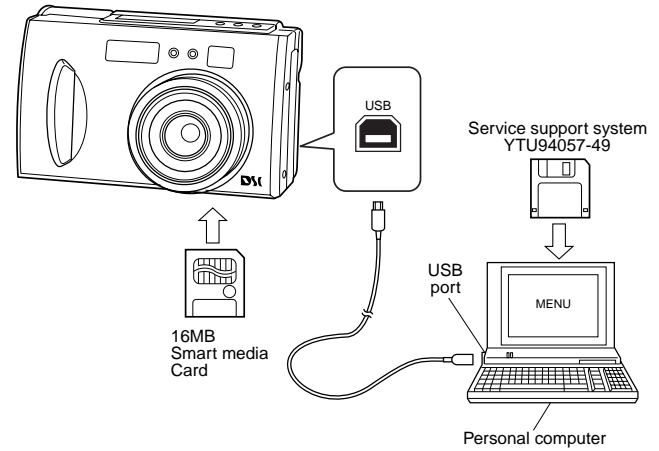


Fig. 2-1-3 Setup for electrical adjustment with personal computer (I)

Pin No.	FUNCTION	Pin No	FUNCTION
1	AL3.3V	16	AL3.3V
2	AL3.3V	17	NC
3	JTAGMODE	18	135TMS
4	135TDI	19	135TDO
5	135nTRST	20	135TCK
6	32RST	21	32DBI
7	32nTRST	22	32TMS
8	32TDO	23	32TDI
9	32TCK	24	NC
10	M_BLUE	25	M_COM
11	RPD	26	M_SIG_C
12	M_PSIG	27	M_RED
13	M_GREEN	28	M_SIG_GND
14	NC	29	GND
15	GND	30	GND

Table 2-1-1 Jig Connector Function

2.2 Setup with patch cords and jig connector cables

Note:

Fig. 2-2-1 shows an example of expansion setup that facilitates inspection of major boards because main components are connected by means of patch cords and jig cables. For proceeding to electrical adjustment in such the setup, disassemble the set at certain level required for the current adjustment objectives referring to the section 1 "DISASSEMBLY" and properly set up the expanded set and test instruments.

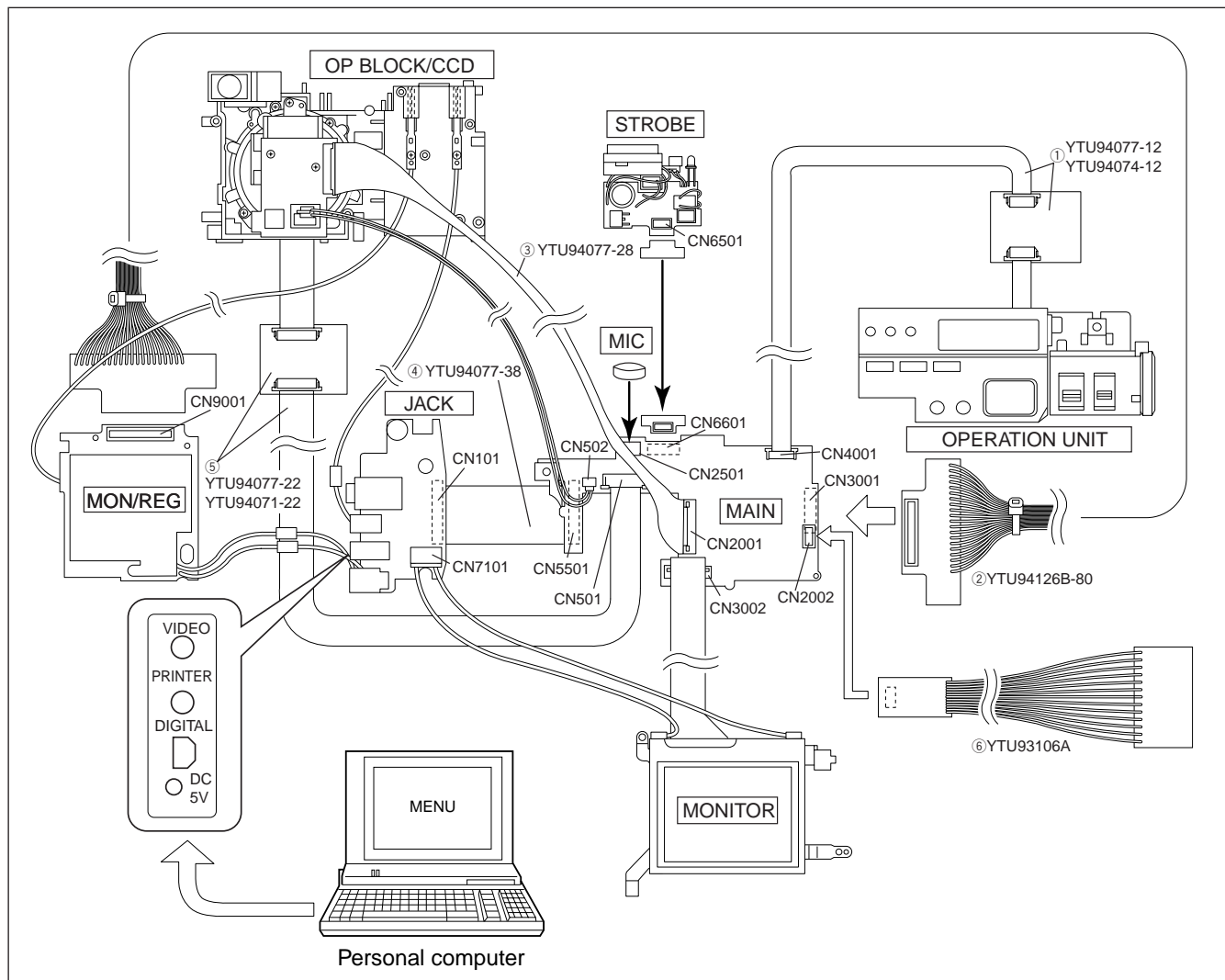


Fig. 2-2-1

	Connection		Pin No.	Parts Number			
①	MAIN CN4001	↔	OPRATION UNIT	12	YTU94077-12 YTU94074-12	FPC wire FPC CN.ASSY	
②	MAIN CN3001	↔	MON/REG	CN9001	80	YTU94126B-80	B TO B CN.ASSY
③	MAIN CN2001	↔	CCD	CN1001	28	YTU94077-28	FPC wire
④	MAIN CN5501	↔	JACK	CN101	38	YTU94077-38	FPC wire
⑤	MAIN CN501	↔	OPUNIT		22	YTU94077-22 YTU94074-22	FPC wire FPC CN.ASSY
⑥	MAIN CN2202	↔			30	YTU93106A	JIG CN.cable



JVC

VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894