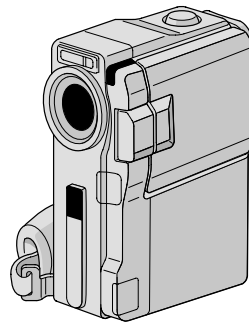


# JVC

## SERVICE MANUAL

### DIGITAL VIDEO CAMERA

# GR-DVX48A/A-S/EA, DVX49A, DVX78A/A-S/EA



Mini DV PAL  
DSC  
DIGITAL  
STILL CAMERA

Regarding service information other than these sections, refer to the GR-DVX44EG, DVX88EG service manual (No. 86617). Also, be sure to note important safety precautions provided in the service manual.

### SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVX78A/DVX49A/DVX48A/DVX78EA/DVX48EA/DVX78SH/DVX48SH)*

#### Camcorder

##### For General

Power supply	: DC 11.0 V $\equiv$ (Using AC Adapter) DC 7.2 V $\equiv$ (Using battery pack)
Power consumption	: Approx. 4.4 W (GR-DVX78), Approx. 4.0 W (GR-DVX49/DVX48)
LCD monitor off, viewfinder on	: Approx. 5.2 W (GR-DVX78), Approx. 4.8 W (GR-DVX49/DVX48)
LCD monitor on, viewfinder off	: Approx. 5.2 W (GR-DVX78), Approx. 4.8 W (GR-DVX49/DVX48)
Dimensions (W x H x D)	: 51 mm x 120 mm x 97 mm (with the LCD monitor closed and the viewfinder pushed back in)
Weight	: Approx. 500 g (GR-DVX78) Approx. 470 g (GR-DVX49/DVX48)
Operating temperature	: 0°C to 40°C
Operating humidity	: 35% to 80%
Storage temperature	: -20°C to 50°C
Pickup	: 1/4" CCD
Lens	: F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter	: $\phi$ 27 mm
LCD monitor	: 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	: Electronic viewfinder with 0.44" colour LCD
Speaker	: Monaural

##### For Digital Video Camera

Format	: DV format (SD mode)
Signal format	: PAL standard
Recording/Playback format	: Video: Digital component recording Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.

##### For Digital Still Camera (GR-DVX78 only)

Storage media	: SD Memory Card/MultiMediaCard
Compression system	: Still image: JPEG (compatible) Moving image: MPEG4 (compatible)
File size	: 2 modes (XGA: 1024 x 768 pixels/VGA: 640 x 480 pixels)
Picture quality	: 2 modes (FINE/STANDARD)
Approximate number of storable images (with the provided memory card [8 MB], with Sound Effects pre-stored)	
FINE	: 40 (VGA), 20 (XGA)
STANDARD	: 130 (VGA), 60 (XGA)
(with an optional memory card [16 MB])	
FINE	: 100 (VGA), 40 (XGA)
STANDARD	: 290 (VGA), 140 (XGA)
(with an optional memory card [32 MB])	
FINE	: 210 (VGA), 90 (XGA)
STANDARD	: 610 (VGA), 290 (XGA)
(with an optional memory card [64 MB])	
FINE	: 430 (VGA), 190 (XGA)
STANDARD	: 1230 (VGA), 600 (XGA)

#### For Connectors

##### AV

Video output	: 1 V (p-p), 75 $\Omega$ , analogue
Video input (GR-DVX78 only)	: 0.8 V (p-p) - 1.2 V (p-p), 75 $\Omega$ , analogue
Audio output	: 300 mV (rms), 1 k $\Omega$ , analogue, stereo
Audio input (GR-DVX78 only)	: 300 mV (rms), 50 k $\Omega$ , analogue, stereo
Headphone output (GR-DVX78 only)	: Stereo

##### DV

Input/output	: 4-pin, IEEE 1394 compliant
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#### AC Adapter AP-V10A, AP-V10EA or AP-V10ED

Power requirement	: AC 110 V to 240 V $\sim$ , 50 Hz/60 Hz
Output	: DC 11 V $\equiv$ , 1 A
Dimensions (W x H x D)	: 59 mm x 31 mm x 84 mm
Weight	: Approx. 140 g (not including Power Cord)

#### Jack Box

##### For General

Dimensions (W x H x D)	: 52 mm x 22 mm x 73 mm
Weight	: Approx. 35 g

##### For Connectors

USB (GR-DVX78 only)	: Type B
EDIT (GR-DVX78 only)	: $\phi$ 3.5 mm, 2-pole
S-Video	
Output	: Y : 1 V (p-p), 75 $\Omega$ , analogue C : 0.29 V (p-p), 75 $\Omega$ , analogue
Input (GR-DVX78 only)	: Y : 0.8 V (p-p) - 1.2 V (p-p), 75 $\Omega$ , analogue C : 0.2 V (p-p) - 0.4 V (p-p), 75 $\Omega$ , analogue
JLIP (GR-DVX49/DVX48 only)	: $\phi$ 3.5 mm, 4-pole
PC (DIGITAL PHOTO) (GR-DVX49/DVX48 only)	: $\phi$ 2.5 mm, 3-pole

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

# TABLE OF CONTENTS

**DIFFERENT TABLE** ..... 1 to 3

**4. CHARTS AND DIAGRAMS (4-1 to 4-2)**

4.1 JUNCTION CIRCUIT BOARD ..... 4-1

4.2 JACK CIRCUIT BOARD ..... 4-2

**5. PARTS LIST (5-1 to 5-12)**

5.1 PACKING AND ACCESSORY ASSEMBLY <M1> ..... 5-1

5.2 ELECTRICAL PARTS LIST (GR-DVX78A/A-S/EA) ..... 5-3

MAIN BOARD ASSEMBLY <01> ..... 5-3

The following table indicate main different points between models GR-DVX44EG, GR-DVX48A, GR-DVX48A-S, GR-DVX48EA and GR-DVX49A.

ITEM \ MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
AC ADAPTER	AP-V10EG	AP-V10A	AP-V10A-S	AP-V10EA	AP-V10A

The following table indicate main different points between models GR-DVX88EG, GR-DVX78A, GR-DVX78A-S and GR-DVX78EA.

ITEM \ MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
AC ADAPTER	AP-V10EG	AP-V10A	AP-V10A-S	AP-V10EA

The following table indicate different parts number between models GR-DVX44EG, GR-DVX48A, GR-DVX48A-S, GR-DVX48EA and GR-DVX49A.

**PACKING AND ACCESSORY ASSEMBLY <M1>** Note: As for IB (INSTRUCTIONS), refer to sec.5.

REF. NO.	ITEM \ MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
1	PACKING CASE	LY32032-008A	LY32032-010A	←	LY31717-023A	←
9	WARRANTY CARD	BT-54013-2	—	—	BT-56001-2	—
△ 12	AC ADAPTER	LY20688-013A	LY20688-003A	LY20688-014A	LY20688-007A	LY20688-003A
14	JACK BOX	LY32142-002A	*LY32142-002B	*←	*←	*←
△ 28	POWER CORD	QMPL120-190-JR	←	QMPS110-190-JR	QMPH020-190-JR	QMPL120-190-JR
29	ADAPTER PLUG	QAM0302-001	—	—	—	—
31	SER.NET CARD	—	—	—	BT-56002-2	—
33	SHEET(CON.PLUG)	—	LYT0609-001A	←	—	LYT0609-001A
△ 34	CONVERSION PLUG	—	PEMC1012-02	PEMC1012	—	PEMC1012-02

**FINAL ASSEMBLY <M2>**

REF. NO.	ITEM \ MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
101	LOWER CASE	LY10287-002A	*LY10287-002B	*←	*←	*←
191	PLATE	LY42906-004A	LY42906-008A	←	←	LY42906-009A
215	STICKER	LY43130-006A	LY43130-007A	←	←	←
216	SPACER(A)	LY30029-0H7B	*LY30029-0H7C	*←	*←	*←
220	FRONT COVER ASSY	LY20731-004B	LY20731-002C	←	←	LY20731-007B
220H	COVER(AV)	LY32136-004A	LY32136-007A	←	←	←
221	SCREW	QYSPSGT1740Z	QYSPSGT1740R	←	←	←
229	SCREW	QYSPSGT1735Z	*QYSPSGT1730Z	*←	*←	*←

Notes : Mark ← is same as left.  
 Mark — is not used.  
 Mark \* reference model was also changed.

**MAIN BOARD ASSEMBLY <01>**

△ REF. NO.	ITEM	MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
IC1401	CSP IC ASSY		YQ44887A	*YQ44888A	*←	*←	*←
R1413	MG RESISTOR		—	*NRSA6AJ-331W	*←	*←	*←
R6014	MG RESISTOR		—	*NRSA63J-0R0X	*←	*←	*←
C3001	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3005	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3008	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3035	CAPACITOR		NDCA1HJ-270W	*NDCA1HJ-180W	*←	*←	*←
C3501	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3502	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3503	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C3701	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4305	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4307	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4310	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4315	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4324	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4331	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C6003	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
OT7	SPACER(A)		—	*LY30029-0Q4A	*←	*←	*←

**MDA BOARD ASSEMBLY <02>**

△ REF. NO.	ITEM	MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
C4803	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4851	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C4861	T CAPACITOR		NCBA1HK-102W	*NCBA1CK-103W	*←	*←	*←
C4862	T CAPACITOR		NCBA1HK-102W	*NCBA1CK-103W	*←	*←	*←
C4864	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←

**JUNCTION BOARD ASSEMBLY <06>**

△ REF. NO.	ITEM	MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
PW2	JUNCTION BOARD ASSY		YB10323B2-01	←	←	←	*YB10323B2-02

**AUDIO BOARD ASSEMBLY <08>**

△ REF. NO.	ITEM	MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
C2108	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C2207	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C2208	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C2211	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C2214	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←
C2402	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←	*←

**JACK BOARD ASSEMBLY <09>**

△ REF. NO.	ITEM	MODEL	GR-DVX44EG	GR-DVX48A	GR-DVX48A-S	GR-DVX48EA	GR-DVX49A
PW1	JACK BOARD ASSY		YB10323C1	←	←	←	*YB10323C1-01

The following table indicate different parts number between models GR-DVX88EG, GR-DVX78A, GR-DVX78A-S and GR-DVX78EA.

**PACKING AND ACCESSORY ASSEMBLY <M1> Note: As for IB (INSTRUCTIONS), refer to sec.5.**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
1	PACKING CASE		LY32032-007A	LY32032-009A	←	LY32032-022A
4	POLY BAG		QPA02003006	QPA02003506	←	QPA02003006
9	WARRANTY CARD		BT-54013-2	—	—	BT-56001-2
11	CD ROM		LY32210-004A	*LY32210-004B	*←	*←
△ 12	AC ADAPTER		LY20688-013A	LY20688-003A	LY20688-014A	LY20688-007A
14	JACK BOX		LY32142-001A	*LY32142-001B	*←	*←
△ 28	POWER CORD		QMPL120-190-JR	←	QMPS110-190-JR	QMPH020-190-JR
29	ADAPTER PLUG		QAM0302-001	—	—	—
31	SER.NET CARD		—	—	—	BT-56002-2
32	CORE FILTER		—	QQR0918-001	←	←
33	SHEET(CON.PLUG)		—	LYT0609-001A	←	—
△ 34	CONVERSION PLUG		—	PEMC1012-02	PEMC1012	—

Notes : Mark ← is same as left.  
 Mark — is not used.  
 Mark \* reference model was also changed.

**FINAL ASSEMBLY <M2>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
101	LOWER CASE ASSY		LY20727-001A	*LY20727-001B	*←	*←
191	PLATE		LY42906-003A	LY42906-007A	←	←
215	STICKER		LY43130-002A	LY43130-004A	←	←
216	SPACER(A)		LY30029-0H7B	*LY30029-0H7C	*←	*←
220	FRONT COVER ASSY		LY20731-003B	LY20731-001D	←	←
220H	COVER(AV)		LY32136-003A	LY32136-006A	←	←
221	SCREW		QYSPSGT1740Z	QYSPSGT1740R	←	←
229	SCREW		QYSPSGT1735Z	*QYSPSGT1730Z	*←	*←
231	SCREW		QYSPSGT1735Z	*QYSPSGT1730Z	*←	*←

**MAIN BOARD ASSEMBLY <01>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
PW	MAIN BOARD ASSY		YB10319B-02	YB10319C-02	←	←

**MDA BOARD ASSEMBLY <02>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
IC4804	IC		UPC358G2/5/-W	*NJM3414AG	*←	*←
R4836	MG RESISTOR		NRSA6AJ-102W	*NRSA6AJ-0R0W	*←	*←
C4803	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C4851	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C4861	CAPACITOR		NCBA1HK-102W	*NCBA1CK-103W	*←	*←
C4862	CAPACITOR		NCBA1HK-102W	*NCBA1CK-103W	*←	*←
C4864	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←

**JUNCTION BOARD ASSEMBLY <06>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
PW2	JUNCTION BOARD ASSY		YB10323A2-01	*YB10323C2-02	*←	*←
D8502	ZENER DIODE		—	*UMZ6.8EN	*←	*←
C8502	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←

**AUDIO BOARD ASSEMBLY <08>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
PW2	AUDIO BOARD ASSY		YB10320C2-02	YB10320A2-02	←	←
R2201	MG RESISTOR		—	NRSA6AJ-103W	←	←
R2202	MG RESISTOR		—	NRSA6AJ-103W	←	←
R2203	MG RESISTOR		—	NRSA6AJ-473W	←	←
R2204	MG RESISTOR		—	NRSA6AJ-473W	←	←
C2108	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2207	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2208	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2211	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2214	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2223	CAPACITOR		NCBA1AK-104W	—	—	—
C2224	CAPACITOR		NCBA1AK-104W	—	—	—
C2301	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2402	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←
C2751	T CAPACITOR		NBE20JM-106X	*NBE80JM-106X	*←	*←

**JACK BOARD ASSEMBLY <09>**

△ REF. NO.	ITEM	MODEL	GR-DVX88EG	GR-DVX78A	GR-DVX78A-S	GR-DVX78EA
PW1	JACK BOARD ASSY		YB10323B1	*YB10323B1-01	*←	*←
Q2801	TRANSISTOR		—	*2SD1979/S/-X	*←	*←
R2801	MG RESISTOR		—	*NRSA63J-103X	*←	*←
R2805	MG RESISTOR		—	*NRSA63J-0R0X	*←	*←
C2801	CAPACITOR		—	*NCB31CK-683X	*←	*←
C2803	CAPACITOR		—	*NCB31EK-153X	*←	*←

Notes : Mark ← is same as left.  
 Mark — is not used.  
 Mark \* reference model was also changed.



**JVC**

VICTOR COMPANY OF JAPAN, LIMITED  
VIDEO DIVISION

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