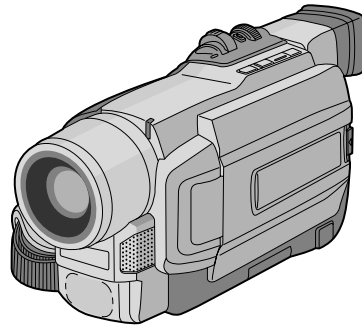


JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL210UM, DVL310UM



Mini **DV** NTSC

Regarding service information other than these sections, refer to the GR-DVL210U, DVL310U service manual (No. 86602/No. 86602B).

Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL310U/510U/815U/915U)*

Camcorder		For Digital Still Camera (GR-DVL915/DVL815/DVL510 only)	
For General		Storage media	: SD Memory Card/MultiMediaCard
Power supply	: DC 11.0 V \equiv (Using AC Adapter) DC 7.2 V \equiv (Using battery pack)	Compression system	: JPEG (compatible)
Power consumption		File size	: VGA (640 x 480 pixels)
LCD monitor off, viewfinder on	: Approx. 4.3 W	Picture quality	: 2 modes (FINE/STANDARD)
LCD monitor on, viewfinder off	: Approx. 5.3 W	Approximate number of storable images	
Video light	: Approx. 3.5 W	with memory card [8 MB] (provided with GR-DVL510 only)	
Dimensions (W x H x D)	: 83 mm x 97 mm x 188 mm (3-5/16" x 3-7/8" x 7-7/16") (with the LCD monitor closed and the viewfinder pushed down)	FINE	: 100
Weight		STANDARD	: 200
	: Approx. 610 g (1.4 lbs) (GR-DVL915)	with memory card [16 MB] (provided with GR-DVL915/DVL815 only)	
	: Approx. 600 g (1.4 lbs) (GR-DVL815)	FINE	: 200
	: Approx. 590 g (1.3 lbs) (GR-DVL510/DVL310)	STANDARD	: 400
Operating temperature	: 0°C to 40°C (32°F to 104°F)	with memory card [32 MB] (optional)	
Operating humidity	: 35% to 80%	FINE	: 400
Storage temperature	: -20°C to 50°C (-4°F to 122°F)	STANDARD	: 800
Pickup	: 1/4" CCD	with memory card [64 MB] (optional)	
Lens	: F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens	FINE	: 800
Filter diameter	: ϕ 37 mm	STANDARD	: 1600
LCD monitor	: 3.5" diagonally measured, LCD panel/TFT active matrix system (GR-DVL915) 3" diagonally measured, LCD panel/TFT active matrix system (GR-DVL815) 2.5" diagonally measured, LCD panel/TFT active matrix system (GR-DVL510/DVL310)	For Connectors	
Viewfinder	: Electronic viewfinder with 0.44" color LCD (GR-DVL915/DVL815) Electronic viewfinder with 0.24" black/white LCD (GR-DVL510/DVL310)	S-Video	
Speaker	: Monaural	Output	: Y : 1 V (p-p), 75 Ω , analog C : 0.29 V (p-p), 75 Ω , analog
For Digital Video Camera		Input (GR-DVL915 only)	: Y : 0.8 V (p-p) - 1.2 V (p-p), 75 Ω , analog C : 0.2 V (p-p) - 0.4 V (p-p), 75 Ω , analog
Format	: DV format (SD mode)	AV	
Signal format	: NTSC standard	Video output	: 1 V (p-p), 75 Ω , analog
Recording/Playback format	: Video: Digital component recording Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)	Video input (GR-DVL915 only)	: 0.8 V (p-p) - 1.2 V (p-p), 75 Ω , analog
Cassette	: Mini DV cassette	Audio output	: 300 mV (rms), 1 k Ω , analog, stereo
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s	Audio input (GR-DVL915 only)	: 300 mV (rms), 50 k Ω , analog, stereo
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.	DV	
		Output	: 4-pin, IEEE 1394 compliant
		Input	: 4-pin, IEEE 1394 compliant
		USB (GR-DVL915/DVL815/DVL510 only)	: 5-pin
		PC (DIGITAL PHOTO) (GR-DVL310 only)	: ϕ 2.5 mm, 3-pole
		EDIT (GR-DVL915/DVL815/DVL510 only)	: ϕ 3.5 mm, 2-pole
		JLIP (GR-DVL310 only)	: ϕ 3.5 mm, 4-pole
		AC adapter AP-V10U	
		Power requirement	
		U.S.A. and Canada	: AC 120 V \sim , 60 Hz
		Other countries	: 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 (2-3/8" x 1-1/4" x 3-5/16")
		Weight	: Approx. 130 g (0.29 lbs.)

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 4-7)	
4.1 MONITOR CIRCUIT BOARD	4-1
4.2 LCD BL CIRCUIT BOARD	4-3
4.3 JACK CIRCUIT BOARD	4-5
4.4 JUNCTION CIRCUIT BOARD	4-7
5. PARTS LIST (5-1 to 5-5)	
5.1 PACKING AND ACCESSORY ASSEMBLY <M1>	5-1
5.2 FINAL ASSEMBLY <M2>	5-3

The following table indicate main different points between models GR-DVL210U and GR-DVL210UM.

ITEM	MODEL	GR-DVL210U	GR-DVL210UM
AC ADAPTER		AP-V10U	AP-V10EG

The following table indicate main different points between models GR-DVL310U and GR-DVL310UM.

ITEM	MODEL	GR-DVL310U	GR-DVL310UM
AC ADAPTER		AP-V10U	AP-V10EN

The following table indicate different parts number between models GR-DVL210U and GR-DVL210UM.

For the schematic diagrams and parts list of the Main board assembly, please refer to the service manual No.86602B, which is an additional edition of the service manual for the GR-DVL210U/310U/515U.

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

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
1	PACKING CASE		LY32095-003A	—
2	CUSHION		LY32096-001A	*LY32345-001A
7	SHEET(AGREMENT)		—	LYT0378-003A
8	Q.CARD(JCA)		YU10350	—
9	WARRANTY INF.		BT-51005-4	—
10	REGIST.CARD		BT-51020-2	—
△ 12	AC ADAPTER		LY20739-001A	LY20688-012A
20	POLY BAG		QPGA017-03005	*QPA01703005
21	CORE FILTER		—	*QQR0490-002
△ 22	POWER CORD		—	QMPS110-190-JR

FINAL ASSEMBLY <M2>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
101	LOWER CASE ASSY		LY20706-001C	LY20706-010A
102	ARM ASSY		LY20697-001A	*LY20697-001C
104	CASSETTE COVER ASSY		LY20704-001A	*LY20704-001B
110	COVER(ZOOM)ASSY		LY32093-001A	*LY32093-001B
115	UPPER CASE(2.5)ASSY		LY20707-002B	LY20707-016A
137	STICKER(SIDE)		LY43094-003A	*LY43094-001A
143	SPECIAL SCREW		LY30018-084A,(X2)	*LY30018-084A,(X1)
146	SPECIAL SCREW		LY30018-084A,(X2)	*LY30018-084A,(X3)
151	SPECIAL SCREW		—	*LY30018-023A
158	SPECIAL SCREW		LY30018-090A	*LY30018-0D6A
160	SPECIAL SCREW		LY30018-006B	*LY30018-047A
196	BKT(OP)ASSY		LY42846-001A	*LY42846-001C
196A	BUSH,X2		LY42796-001A	*LY42796-002A

Notes : Mark — is not used.
Mark * reference model was also changed.

ELECTRONIC VIEWFINDER ASSEMBLY <M4>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
300	VF UNIT		LY20744-001A	*LY20744-001B

MAIN BOARD ASSEMBLY <01>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
R1413	MG RESISTOR		—	*NRSA6AJ-331W
R3323	MG RESISTOR		NRSA6AJ-823W	*NRSA6AJ-473W
R6014	MG RESISTOR		—	*NRSA63J-0R0X
X3001	CRYSTAL RESONATOR		NAX0206-001X	*NAX0480-001X

MONITOR BOARD ASSEMBLY <02>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
PW1	MONITOR BOARD ASSY		YB10324F1-03	*YB10326F-01
IC7602	IC		BA15532F	*BA4558F
C7618	CAPACITOR		NCB10JK-106X	*NCB11CK-225X
C7619	CAPACITOR		NCB10JK-106X	*NCB11CK-225X
C7634	CAPACITOR		NCB10JK-106X	*NCB11CK-225X

LCD BL BOARD ASSEMBLY <03>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
PW2	LCD BL BOARD ASSY		YB10324B2-02	*YB10325B

JACK BOARD ASSEMBLY <06>

△ REF. NO	ITEM	MODEL	GR-DVL210U	GR-DVL210UM
PW1	JACK BOARD ASSY		YB10314A1-01	*YB10314A1-03
HD1	HOLDER(J.PWB)		LY32086-001A	*LY32086-001B

Notes : Mark — is not used.
 Mark : * reference model was also changed.

The following table indicate different parts number between models GR-DVL310U and GR-DVL310UM.
 For the schematic diagrams and parts list of the Main board assembly, please refer to the service manual No.86602B,
 which is an additional edition of the service manual for the GR-DVL210U/310U/515U.

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

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
1	PACKING CASE		LY32095-007A	—
2	CUSHION		LY32096-001A	*LY32345-001A
8	Q.CARD(JCA)		YU10350	—
9	WARRANTY INF.		BT-51005-4	—
10	REGIST.CARD		BT-51020-2	—
11	CD ROM		LY32210-002A	*LY32210-002B
△ 12	AC ADAPTER		LY20739-001A	LY20688-011A
20	POLY BAG		QPGA017-03005	*QPA01703005
21	CORE FILTER		—	*QQR0490-002
△ 22	POWER CORD		—	QMPS150-190-JR
23	S CABLE		—	QAM0004-003
24	CORE FILTER		—	QQR0491-002
30	MINI DV TAPE		—	M-DV30MEBU

FINAL ASSEMBLY <M2>

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
101	LOWER CASE ASSY		LY20706-001B	LY20706-010A
102	ARM ASSY		LY20697-001A	*LY20697-001C
104	CASSETTE COVER ASSY		LY20704-001A	*LY20704-001B
110	COVER(ZOOM)ASSY		LY32093-001A	*LY32093-001B
115	UPPER CASE(2.5)ASSY		LY20707-001B	LY20707-018A
136	STICKER(TOP)		LY43093-012A	LY43093-008A
137	STICKER(SIDE)		LY43094-003A	*LY43094-001A
143	SPECIAL SCREW		LY30018-084A,(X2)	*LY30018-084A,(X1)
146	SPECIAL SCREW		LY30018-084A,(X2)	*LY30018-084A,(X3)
151	SPECIAL SCREW		—	*LY30018-023A
158	SPECIAL SCREW		LY30018-090A	*LY30018-0D6A
160	SPECIAL SCREW		LY30018-006B	*LY30018-047A
196	BKT(OP)ASSY		LY42846-001A	*LY42846-001C
196A	BUSH,X2		LY42796-001A	*LY42796-002A

MAIN BOARD ASSEMBLY <01>

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
R1413	MG RESISTOR		—	*NRSA6AJ-331W
R3323	MG RESISTOR		NRSA6AJ-823W	*NRSA6AJ-473W
R6014	MG RESISTOR		—	*NRSA63J-0R0X
X3001	CRYSTAL RESONATOR		NAX0206-001X	*NAX0480-001X

MONITOR BOARD ASSEMBLY <02>

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
PW1	MONITOR BOARD ASSY		YB10324E1-03	*YB10326E-01
IC7602	IC		BA15532F	*BA4558F
C7618	CAPACITOR		NCB10JK-106X	*NCB11CK-225X
C7619	CAPACITOR		NCB10JK-106X	*NCB11CK-225X
C7634	CAPACITOR		NCB10JK-106X	*NCB11CK-225X

LCD BL BOARD ASSEMBLY <03>

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
PW2	LCD BL BOARD ASSY		YB10324B2-02	*YB10325B

JACK BOARD ASSEMBLY <06>

△ REF. NO	ITEM	MODEL	GR-DVL310U	GR-DVL310UM
PW1	JACK BOARD ASSY		YB10314A1-01	*YB10314A1-03
HD1	HOLDER(J.PWB)		LY32086-001A	*LY32086-001B

Notes : Mark — is not used.
 Mark : * reference model was also changed.



JVC

VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894