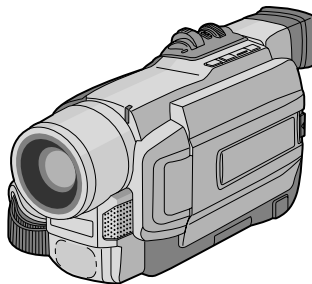


# JVC

## SERVICE MANUAL

### DIGITAL VIDEO CAMERA

# GR-DVL311ED, 411ED, 511ED



Mini DV PAL

Regarding service information other than these sections, refer to the GR-DVL150EG service manual (No. 86613) and GR-DVL150EG (Additional edition) service manual (No. 86613B). Also, be sure to note important safety precautions provided in the service manual.

### SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL311ED, 411ED, 511ED, 516ED, 716ED, 916ED)*

摄像机：中国制	
<b>整体</b>	
供电	: 直流 11.0V $\equiv$ (使用交流电源适配器时) 直流 7.2V $\equiv$ (使用电池时)
功率消耗	
液晶显示器关闭, 取景器打开	: 约 4.3 W
液晶显示器打开, 取景器关闭	: 约 5.3 W
摄像灯	: 约 3.5 W
尺寸 (宽×高×深)	: 83 mm × 97 mm × 188 mm (液晶显示器被关闭和取景器被推回时。)
重量	: 主机约 610 g (GR-DVL916/DVL511) 约 600 g (GR-DVL716/DVL411) 约 590 g (GR-DVL516/DVL311)
工作温度	: 0°C 至 40°C
工作湿度	: 35% 至 80%
保存温度	: -20°C 至 50°C
成像	: 1/4" CCD
镜头	: F1.8, f = 3.6 mm 至 36 mm, 10:1 电动变焦镜头
滤镜直径	: $\phi$ 37 mm
液晶显示器	: 对角线长度 3.5", 液晶板面 / TFT 活性母岩系统 (GR-DVL916/DVL511) 对角线长度 3", 液晶板面 / TFT 活性母岩系统 (GR-DVL716/DVL411) 对角线长度 2.5", 液晶板面 / TFT 活性母岩系统 (GR-DVL516/DVL311)
取景器	: 电子取景器带有 0.44" 彩色液晶 (GR-DVL916/DVL716/DVL511) 电子取景器带有 0.24" 黑白显示器 (GR-DVL516/DVL411/DVL311)
扬声器	: 单声道
<b>数字摄像机</b>	
制式	: DV 制式 (SD 模式)
信号制式	: PAL 标准
摄像/放像制式	: 视频: 数据构成记录 音频: PCM 数据记录 32 kHz 4-频道 (12-BIT), 48 kHz 2-频道 (16-BIT)
录像带	: Mini DV 录像带
走带速度	: SP: 18.8 mm/秒 LP: 12.5 mm/秒
最长摄像时间 (使用 80 分钟录像带)	: SP: 80 分钟 LP: 120 分钟
<b>数字静像照相机 (仅用于 GR-DVL916/DVL716/DVL516)</b>	
存储媒体	: SD 内存卡 / 多媒体卡
压缩系统	: JPEG (适用)
文件规格	: VGA: 640 × 480 像素
图像质量	: 2 种模式 [精细/标准]

大约可存储图像数	
使用存储卡 (8MB) (配备的) 的情况	
精细	: 100
标准	: 200
使用存储卡 (16MB) (选购的) 的情况	
精细	: 200
标准	: 400
使用存储卡 (32MB) (选购的) 的情况	
精细	: 400
标准	: 800
使用存储卡 (64MB) (选购的) 的情况	
精细	: 800
标准	: 1600

#### 接口

<b>S-视频</b>	
输出	: Y : 1 V (p-p), 75 $\Omega$ , 模拟输出 C : 0.29 V (p-p), 75 $\Omega$ , 模拟输出
输入 (仅用于 GR-DVL916/DVL716)	: Y : 0.8 V (p-p) - 1.2 V (p-p), 75 $\Omega$ , 模拟输入 C : 0.2 V (p-p) - 0.4 V (p-p), 75 $\Omega$ , 模拟输入
<b>音频/视频</b>	
视频输出	: 1 V (p-p), 75 $\Omega$ , 模拟输出
视频输入 (仅用于 GR-DVL916/DVL716)	: 0.8 V (p-p) - 1.2 V (p-p), 75 $\Omega$ , 模拟输入
音频输出	: 300 mV (rms), 1 k $\Omega$ , 模拟输出, 立体声
音频输入 (仅用于 GR-DVL916/DVL716)	: 300 mV (rms), 50 k $\Omega$ , 模拟输入, 立体声
<b>数据视频</b>	
输出	: 4 芯, 符合 IEEE 1394
输入	: 4 芯, 符合 IEEE 1394
USB (仅用于 GR-DVL916/DVL716/DVL516)	: 5 芯
PC (数码照片)	
(仅用于 GR-DVL511/DVL411/DVL311)	: $\phi$ 2.5 mm, 3 极
EDIT (仅用于 GR-DVL916/DVL716/DVL516)	: $\phi$ 3.5 mm, 2 极
JLIP (仅用于 GR-DVL511/DVL411/DVL311)	: $\phi$ 3.5 mm, 4 极

#### 交流电源适配器 AP-V10ED : 中国制 (监制·检验·日本 JVC 公司)

电源	: 交流 110V ~ 240V~, 50 Hz/60 Hz
输出	: 直流 11V $\equiv$ , 1 A
外型尺寸 (宽×高×深)	: 59 mm × 31 mm × 84 mm
重量	: 约 140 g (不带电源导线)

除非指明 E & O.E., 规格显示是针对标准模式的。设计与规格若有变更, 恕不另行通知。

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The following table indicate main different points between models GR-DVL150EG, GR-DVL311ED, GR-DVL411ED and GR-DVL511ED.

ITEM \ MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
VIEW FINDER	B/W	←	←	COLOR
LCD MONITOR	2.5"	←	3.0"	3.5"
ACRYLIC PANEL(W/BACK LIGHT)	NOT USED	←	USED	←
TOTAL ZOOM RATIO	300X	500X	←	←
AC ADAPTER	AP-V10EG	AP-V10ED	←	←
REMOTE CONTROL UNIT	RM-V716U	RM-V711U	←	←

The following table indicate different parts number between models GR-DVL150EG, GR-DVL311ED, GR-DVL411ED and GR-DVL511ED.

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

REF. No. \ MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
1 PACKING CASE	LY32095-003A	LY32095-025A	LY32095-026A	LY32095-027A
2 CUSHION	LY32096-001A	*LY32345-001A	*←	*←
7 SHEET(AGREMENT)	—	LYT0378-003A	←	←
9 WARRANTY CARD	BT-54013-2	BT-59007-2	←	←
11 CD ROM	—	—	LY32210-002B	←
△ 12 AC ADAPTER	LY20688-013A	LY20688-015A	←	←
17 REMOTE CONTROL UNIT	LY20750-001A	YQ20922R	←	←
18 BATTERY,X2/LI BATTERY	AAA(R03)	PECA0903	←	←
23 CABLE ASSY/RM CABLE	PEAC0428-150	←	QAM0214-001	←
△ 25 POWER CORD	QMPL120-190-JR	QMPS120-190-JR	←	←
26 ADAPTER PLUG	QAM0302-001	—	—	—
28 CORE FILTER	QQR0918-002	←	—	—
31 PC CABLE	—	—	QAM0084-001	←
32 CORE FILTER	—	—	QQR0491-002	←
33 SHEET(APPROVAL)	—	LP40235-001A	←	←
34 S.CENTER LIST	—	BT-59009-1	←	←

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

**FINAL ASSEMBLY <M2>**

△ REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
102	ARM ASSY		LY20697-001B	*LY20697-001D	* ←	* ←
104	CASSETTE COVER ASSY		LY20704-001A	*LY20704-001B	* ←	* ←
107	COVER(AJUST)		LY32092-013A	LY32092-037A	LY32092-035A	LY32092-036A
108	SPACER(A)		—	*LY30029-0D8A	* ←	* ←
110	COVER(ZOOM)ASSY		LY32093-001A	*LY32093-001B	* ←	* ←
115	UPPER CASE ASSY		LY20707-003C	LY20707-009B	LY20717-009B	←
△ 130	FRONT COVER ASSY		LY20711-003A	LY20711-006B	←	←
130A	HOOD		LY32111-002A	LY32111-005B	←	←
136	STICKER(TOP)		LY43093-003A	LY43093-001A	LY43093-008A	←
137	STICKER(SIDE)		LY43094-002A	LY43094-001A	←	←
138	CAP(HOOD)ASSY		LY42182-002A	*LY43360-002A	* ←	* ←
160	SPECIAL SCREW		LY30018-006B	*LY30018-047A	* ←	* ←
251J	CCD BASE ASSY		YS40168F	#YS40168J	# ←	# ←

**ELECTRONIC VIEWFINDER ASSEMBLY <M4>**

△ REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
300	VF UNIT		LY20744-002B	—	—	LY20712-004A
301	EYE PIECE ASSY/EYE CUP		PTY20744-001	LY32349-001A	←	PTY20712-001
302	TOP CASE SUB ASSY/CASE A(VF)		PTY20712-011	LY20766-001A	←	PTY20712-011
303	BOTTOM CASE		PTY20712-021	—	—	PTY20712-021
304	CAP(VF)		PTY20712-022	LY32351-001A	←	PTY20712-022
305	HINGE ASSY/VF HINGE ASSY		PTY20712-031	LY20768-001A	←	PTY20712-031
306	LCD ASSY/LCD MODULE		#PTY20744-042	QLD0193-001	←	PTY20712-041
307	FPC		QAL0288-001	QAL0380-002	←	QAL0287-001
308	SPECIAL SCREW,X4		LY30018-063A	—	—	LY30018-063A
309	SPECIAL SCREW,X3		LY30018-055A	LY30018-052A	←	LY30018-055A
310	SPECIAL SCREW,X2		LY30018-035A	—	—	LY30018-035A
311	SCREW		PTY20744-051	—	—	PTY20712-051
313	LABEL/COLOR		—	—	—	LY40074-001A
314	LABEL(VF)		LY43041-002A	←	←	—
321	CASE B(VF)		—	LY20767-001A	←	—
322	SPECIAL SCREW		—	LY30019-037A	←	—
323	LEVER(VF)		—	LY43231-001A	←	—
324	LENS ASSY		—	LY32472-001A	←	—
324A	LENS(A)		—	LY43356-001A	←	—
324B	LENS(B)		—	LY43357-001A	←	—
325	SPRING(VF)		—	LY43404-001A	←	—
331	SHEET		—	LY43236-001A	←	—
332	SHEET2(POLA)		—	LY43246-001A	←	—
333	HOLDER LCD(VF)		—	LY32347-001A	←	—
334	SHEET(CUSION)		—	LY43245-001A	←	—
335	SHEET1(POLA)		—	LY43234-001A	←	—
336	SHEET(VF)		—	LY43232-001A	←	—
337	SHEET(DIFF)		—	LY43235-001A	←	—
338	HOLDER(LED)		—	LY43238-001A	←	—
339	GUIDE(VF),X2		—	LY43239-001A	←	—
340	SPECIAL SCREW,X4		—	LY30018-060A	←	—

**MONITOR ASSEMBLY <M5>**

△ REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
△ 500	MONITOR ASSY		LYH20246-008B	*LYH20246-017A	LYH20246-020A	LYH20246-021A
△ 501	MONITOR COVER ASSY		LY20702-002B	*LY20702-002C	LY20721-003B	←
501D	SPECIAL SCREW,X2		LY30018-084A	←	LY30018-011A	←
501E	SHEET(MON)		—	—	LY42368-001A	←
501F	SHIELD SHEET		LY40559-001A	* —	* —	* —
501H	WINDOW		LY32087-001B	←	LY32121-003A	←
501J	EARTH MON		—	—	LY42386-001A	←
501K	EL(WINDOW)		—	—	LY42193-001A	←
502	MONITOR CASE ASSY		LY10264-001A	←	LY20598-001A	LY20598-002A
502A	EARTH MON(2)		—	—	LY42388-001A	←
503	HOLDER		LY20674-001A	←	LY20567-001A	LY20568-001A
508	BACK LIGHT		QLL0093-001	←	QLL0094-001	QLL0081-001
509	LCD MODULE		QLD0154-001	←	QLD0118-001	QLD0096-002
516	HOLDER(3LCD)		—	—	LY20566-001B	—
517	SPACER(A)		—	—	—	LY30029-0A5A
518	SPACER(A)		—	—	—	LY30029-0Q6A

**Notes :** Mark ← is same as left.  
 Mark — is not used.  
 Mark \* reference model was also changed.  
 Mark # is missing for GR-DVL150EG.

**MAIN BOARD ASSEMBLY <01>**

REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
PW	MAIN BOARD ASSY		YB10330PA-01	YB10330PD-01	←	←
IC1001	IC(MICRO ROM)		UPD703039F1-A15	UPD703039F1-A06	←	←
IC1006	IC(MICRO ROM)		MB90097PFV139	MB90099PFV115	←	←
IC3002	IC(DIGITAL)		M51V18165D50TSK	*M11L16161A-45T	*←	*←
R3323	MG RESISTOR		NRSA6AJ-823W	*NRSA6AJ-473W	*←	*←
C6212	CAPACITOR		—	*NCB21CK-104X	*←	*←

**MONITOR BOARD ASSEMBLY <02>**

REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
PW1	MONITOR BOARD ASSY		YB10326I-01	YB10326IK	YB10326JK	YB10326M
IC7602	IC		BA15532F	*BA4558F	*←	*←
Q7101	TRANSISTOR		2SA1774/QR/-X	←	←	—
Q7605	TRANSISTOR		—	—	DTA144EE	←
Q7606	TRANSISTOR		—	—	DTC144EE	←
R7101	MG RESISTOR		NRSA63J-562X	NRSA63J-271X	←	—
R7102	MG RESISTOR/CAPACITOR		NRSA63J-562X	NDC31HJ-221X	←	—
R7103	MG RESISTOR		NRSA63J-103X	—	—	—
R7110	MG RESISTOR		NRSA63J-0R0X	←	←	—
R7111	MG RESISTOR		NRSA63J-0R0X	—	—	—
R7112	MG RESISTOR		NRSA63J-0R0X	—	—	—
R7113	MG RESISTOR		NRSA63J-0R0X	—	—	—
R7114	MG RESISTOR		NRSA63J-0R0X	—	—	—
R7115	MG RESISTOR		NRSA63J-0R0X	—	—	—
R7116	MG RESISTOR		—	NRSA6AJ-392W	←	—
R7604	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7605	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7606	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7612	CMF RESISTOR		NRVA63D-223X	←	NRVA63D-682X	←
R7621	MG RESISTOR		NRSA63J-0R0X	←	—	—
R7622	MG RESISTOR		—	—	NRSA63J-223X	←
R7623	MG RESISTOR		—	—	NRSA63J-223X	←
R7624	CMF RESISTOR		—	—	NRVA63D-223X	←
R7625	CMF RESISTOR		—	—	NRVA63D-223X	←
R7626	CMF RESISTOR		—	—	—	NRVA63D-183X
R7627	CMF RESISTOR		—	—	—	NRVA63D-334X
R7640	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7641	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7642	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7643	MG RESISTOR		—	—	—	NRSA63J-0R0X
R7644	MG RESISTOR		—	NRSA63J-0R0X	←	←
R7645	MG RESISTOR		—	NRSA63J-0R0X	←	←
R7646	MG RESISTOR		—	—	—	NRSA63J-0R0X
C7607	T CAPACITOR		NBP41CM-106X	*NBP41DM-106X	*←	*←
C7618	CAPACITOR		NCB10JK-106X	*NCB11CK-225X	*←	*←
C7619	CAPACITOR		NCB10JK-106X	*NCB11CK-225X	*←	*←
C7634	CAPACITOR		NCB10JK-106X	*NCB11CK-225X	*←	*←
C7636	CAPACITOR		—	—	NCF31CZ-104X	←
C7638	CAPACITOR		—	—	—	NCB21AK-225X
C7639	T CAPACITOR		—	—	—	NBE21AM-106X
L7605	COIL		NQL315K-100X	←	—	—
L7606	COIL		—	—	NQL315K-100X	←
OT2	SHIELD SHEET		LY43119-001A	←	←	—
OT3	SPACER (A)		—	LY30029-049A	←	—
WR1	WIRE_X2		—	YU40017-020-2	←	—

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

**LCD BL BOARD ASSEMBLY <03>**

REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
PW2	LCD BL BOARD ASSY		YB10325B	*YB10325B-01	YB10325A	←
IC751	IC		—	—	MIP805	←
Q7501	POW TRANSISTOR/TRANSISTOR		2SC3647/ST/-X	*2SD1664/QR/-W	*←	*←
Q7502	POW TRANSISTOR/TRANSISTOR		2SC3647/ST/-X	*2SD1664/QR/-W	*←	*←
D751	DIODE		—	—	1SS376	←
R751	MG RESISTOR		—	—	NRSA63J-104X	←
R7511	MG RESISTOR		—	*NRSA63J-0R0X	*←	*←
C751	T CAPACITOR		—	—	NBE20JM-106X	←
C752	T CAPACITOR		—	—	NBE20JM-106X	←
C753	CAPACITOR		—	—	NCB31HK-222X	←
C754	CAPACITOR		—	—	NCB31HK-222X	←
C7503	MPPS CAPACITOR/CAPACITOR		NFV41HJ-223X	*NCB31EK-223X	*←	*←
L751	COIL		—	—	NQLZ011-681X	←
L752	COIL		—	—	NQL315K-100X	←
CN754	FPC CONNECTOR		—	—	QGF0505F2-06X	←
F751	FUSE		—	—	NMFZ007-R20X-K	←

**B/W VF BOARD ASSEMBLY <08>**

REF. No.	ITEM	MODEL	GR-DVL150EG	GR-DVL311ED	GR-DVL411ED	GR-DVL511ED
PW	B/W VF BOARD ASSY		—	YB20910B	←	—
IC7001	IC		—	MCVVQ111FB	←	—
Q7001	PAIR TRANSISTOR		—	PUMX1	←	—
D7001	LED		—	NSCW100A0/ST/-X	←	—
D7002	SI DIODE		—	MA111	←	—
R7001	MG RESISTOR		—	NRSA63J-103X	←	—
R7002	MG RESISTOR		—	NRSA63J-182X	←	—
R7003	MG RESISTOR		—	NRSA63J-183X	←	—
R7004	MG RESISTOR		—	NRSA63J-0R0X	←	—
R7006	CMF RESISTOR		—	NRVA63D-333X	←	—
R7007	CMF RESISTOR		—	NRVA63D-153X	←	—
R7008	CMF RESISTOR		—	NRVA63D-473X	←	—
R7009	MG RESISTOR		—	NRSA63J-682X	←	—
R7010	MG RESISTOR		—	NRSA63J-102X	←	—
R7011	MG RESISTOR		—	NRSA63J-332X	←	—
R7012	MG RESISTOR		—	NRSA63J-561X	←	—
R7013	MG RESISTOR		—	NRSA63J-470X	←	—
VR7001	TRIM RESISTOR		—	NVP0016-223X	←	—
C7001	CAPACITOR		—	NCF31CZ-104X	←	—
C7002	CAPACITOR		—	NCF31CZ-104X	←	—
C7003	CAPACITOR		—	NCB21AK-105X	←	—
C7004	CAPACITOR		—	NCB31EK-223X	←	—
C7005	CAPACITOR		—	NCB31EK-103X	←	—
C7006	CAPACITOR		—	NCF21CZ-105X	←	—
C7007	CAPACITOR		—	NCF31CZ-104X	←	—
C7008	CAPACITOR		—	NCF31CZ-104X	←	—
C7009	CAPACITOR		—	NCF31CZ-104X	←	—
C7010	CAPACITOR		—	NCF31CZ-104X	←	—
C7011	CAPACITOR		—	NCB31HK-102X	←	—
C7012	CAPACITOR		—	NCB31EK-103X	←	—
C7013	CAPACITOR		—	NCF31CZ-104X	←	—
C7014	CAPACITOR		—	NCF31CZ-104X	←	—
C7015	CAPACITOR		—	NCB31EK-103X	←	—
C7016	CAPACITOR		—	NCB11CK-475X	←	—
C7017	CAPACITOR		—	NCB10JK-106X	←	—
L7001	COIL		—	NQL38DK-100X	←	—
L7002	COIL		—	NQL38DK-100X	←	—
CN7001	FPC CONNECTOR		—	QGF0517F1-06X	←	—
CN7002	FPC CONNECTOR		—	QGF0517F2-20X	←	—

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



**JVC**

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