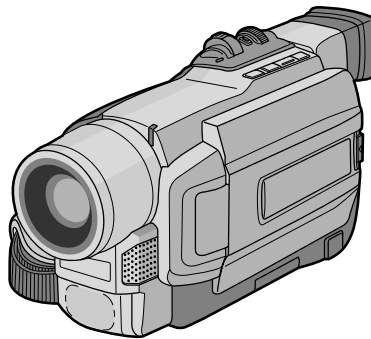


# JVC

## SERVICE MANUAL

### DIGITAL VIDEO CAMERA

# GR-DVL140EG, 157EG/EK, 257EK



Mini DV PAL

Regarding service information other than these sections, refer to the 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-DVL150,257,355,357,555,557)*

| Camcorder   |  | For Digital Still Camera (GR-DVL557/DVL555/DVL357/DVL355 only)                                    |  |
|---|--|---|--|
| <b>For General</b>  |  | <b>Storage media</b> : SD Memory Card/MultiMediaCard  |  |
| <b>Power supply</b> : DC 11.0 V $\pm$ (Using AC Adapter)<br>DC 7.2 V $\pm$ (Using battery pack)   |  | <b>Compression system</b> : JPEG (compatible)   |  |
| <b>Power consumption</b>  |  | <b>File size</b> : VGA (640 x 480 pixels)   |  |
| LCD monitor off, viewfinder on : Approx. 4.3 W  |  | <b>Picture quality</b> : 2 modes (FINE/STANDARD)  |  |
| LCD monitor on, viewfinder off : Approx. 5.3 W  |  | <b>Approximate number of storable images with memory card [8 MB] (provided)</b>                   |  |
| Video light : Approx. 3.5 W   |  | FINE : 100  |  |
| <b>Dimensions (W x H x D)</b> : 83 mm x 97 mm x 188 mm<br>(with the LCD monitor closed and the viewfinder pushed down)  |  | STANDARD : 200  |  |
| <b>Weight</b> : Approx. 610 g (GR-DVL557/DVL555)<br>Approx. 600 g (GR-DVL257)<br>Approx. 590 g (GR-DVL357/DVL355/DVL150)  |  | <b>with memory card [16 MB] (optional)</b>  |  |
| <b>Operating temperature</b> : 0°C to 40°C  |  | FINE : 200  |  |
| <b>Operating humidity</b> : 35% to 80%  |  | STANDARD : 400  |  |
| <b>Storage temperature</b> : -20°C to 50°C  |  | <b>with memory card [32 MB] (optional)</b>  |  |
| <b>Pickup</b> : 1/4" CCD  |  | FINE : 400  |  |
| <b>Lens</b> : F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens  |  | STANDARD : 800  |  |
| <b>Filter diameter</b> : $\phi$ 37 mm   |  | <b>with memory card [64 MB] (optional)</b>  |  |
| <b>LCD monitor</b> : 3.5" diagonally measured, LCD panel/TFT active matrix system<br>(GR-DVL557/DVL555)<br>3" diagonally measured, LCD panel/TFT active matrix system<br>(GR-DVL257)<br>2.5" diagonally measured, LCD panel/TFT active matrix system<br>(GR-DVL357/DVL355/DVL150) |  | FINE : 800  |  |
| <b>Viewfinder</b> : Electronic viewfinder with 0.44" colour LCD<br>(GR-DVL555)<br>Electronic viewfinder with 0.24" black/white LCD<br>(GR-DVL557/DVL357/DVL355/DVL257/DVL150)   |  | STANDARD : 1600   |  |
| <b>Speaker</b> : Monaural   |  | <b>For Connectors</b>   |  |
| <b>For Digital Video Camera</b>   |  | <b>S-Video</b>  |  |
| <b>Format</b> : DV format (SD mode)   |  | <b>Output</b> : Y : 1 V (p-p), 75 $\Omega$ , analogue<br>C : 0.29 V (p-p), 75 $\Omega$ , analogue |  |
| <b>Signal format</b> : PAL standard   |  | <b>AV</b>   |  |
| <b>Recording/Playback format</b> : Video: Digital component recording<br>Audio: PCM digital recording, 32 kHz 4-channel (12-bit),<br>48 kHz 2-channel (16-bit)  |  | <b>Video output</b> : 1 V (p-p), 75 $\Omega$ , analogue   |  |
| <b>Cassette</b> : Mini DV cassette  |  | <b>Audio output</b> : 300 mV (rms), 1 k $\Omega$ , analogue, stereo                               |  |
| Tape speed : SP: 18.8 mm/s<br>LP: 12.5 mm/s   |  | <b>DV</b>   |  |
| <b>Maximum recording time (using 80 min. cassette)</b> : SP: 80 min.<br>LP: 120 min.  |  | <b>Output</b> : 4-pin, IEEE 1394 compliant  |  |
|   |  | <b>Input (GR-DVL557/DVL357/DVL257 only)</b> : 4-pin, IEEE 1394 compliant                          |  |
|   |  | <b>USB (GR-DVL557/DVL555/DVL357/DVL355 only)</b> : 5-pin  |  |
|   |  | <b>PC (DIGITAL PHOTO)</b><br>(GR-DVL257/DVL150 only) : $\phi$ 2.5 mm, 3-pole                      |  |
|   |  | <b>EDIT (GR-DVL557/DVL555/DVL357/DVL355 only)</b> : $\phi$ 3.5 mm, 2-pole                         |  |
|   |  | <b>JLIP (GR-DVL257/DVL150 only)</b> : $\phi$ 3.5 mm, 4-pole                                       |  |
|   |  | <b>AC adapter AP-V10EG</b>  |  |
|   |  | <b>Power requirement</b> : AC 110 V to 240 V $\sim$ , 50 Hz/60 Hz                                 |  |
|   |  | <b>Output</b> : DC 11 V $\pm$ , 1 A   |  |
|   |  | <b>Dimensions (W x H x D)</b> : 59 mm x 31 mm x 84 mm   |  |
|   |  | <b>Weight</b> : Approx. 140 g (not including Power Cord)  |  |

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

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The following table indicate main different points between models GR-DVL150EG, GR-DVL140EG, GR-DVL157EG, GR-DVL157EK and GR-DVL257EK.

| ITEM           | MODEL | GR-DVL150EG | GR-DVL140EG | GR-DVL157EG | GR-DVL157EK | GR-DVL257EK |
|----------------|-------|-------------|-------------|-------------|-------------|-------------|
| LCD MONITOR    |       | 2.5"        | ←           | ←           | ←           | 3.0"        |
| VIDEO LIGHT    |       | Used        | Not used    | Used        | ←           | ←           |
| AC ADAPTER     |       | AP-V10EG    | ←           | ←           | AP-V10EK    | ←           |
| REMOTE CONTROL |       | Provided    | Optional    | Provided    | ←           | ←           |

The following table indicate different parts number between models GR-DVL150EG, GR-DVL140EG, GR-DVL157EG, GR-DVL157EK and GR-DVL257EK.

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

| REF. NO | ITEM                | MODEL | GR-DVL150EG    | GR-DVL140EG  | GR-DVL157EG  | GR-DVL157EK    | GR-DVL257EK  |
|---------|---------------------|-------|----------------|--------------|--------------|----------------|--------------|
| 1       | PACKING CASE        |       | LY32095-003A   | ←            | LY32095-007A | ←              | LY32095-001A |
| 4       | POLY BAG            |       | QPA02003006    | ←            | ←            | YQM30061-3     | QPA02003006  |
| 7       | SHEET(AGREMENT)     |       | ←              | ←            | LYT0378-003A | ←              | ←            |
| 8       | Q.CARD(JUK)         |       | ←              | ←            | ←            | LYT0194-001B   | ←            |
| 9       | WARRANTY CARD       |       | BT-54013-2     | ←            | ←            | BT-54008-2     | ←            |
| 10      | SHEET(CORR)         |       | ←              | LYT0747-008A | ←            | ←              | ←            |
| 11      | CD ROM              |       | ←              | ←            | LY32210-002B | ←              | ←            |
| 17      | REMOTE CONTROL UNIT |       | LY20750-001A   | ←            | LY20750-001A | ←              | ←            |
| 18      | BATTERY,X2          |       | AAA(R03)       | ←            | AAA(R03)     | ←              | ←            |
| 23      | CABLE ASSY          |       | PEAC0428-150   | ←            | QAM0214-001  | ←              | ←            |
| 25      | POWER CORD          |       | QMPS120-190-JR | ←            | ←            | QMPS110-190-JR | ←            |
| 31      | PC CABLE            |       | ←              | ←            | QAM0084-001  | ←              | ←            |
| 32      | CORE FILTER         |       | ←              | ←            | QQR0491-002  | ←              | ←            |

## FINAL ASSEMBLY <M2>

| REF. NO | ITEM             | MODEL | GR-DVL150EG  | GR-DVL140EG  | GR-DVL157EG  | GR-DVL157EK | GR-DVL257EK  |
|---------|------------------|-------|--------------|--------------|--------------|-------------|--------------|
| 115     | UPPER CASE ASSY  |       | LY20707-003C | LY20707-011A | LY20707-003C | ←           | LY20717-003C |
| 130     | FRONT COVER ASSY |       | LY20711-003A | LY20711-004A | LY20711-003A | ←           | ←            |
| 130A    | HOOD             |       | LY32111-002A | LY32111-003A | LY32111-002A | ←           | ←            |
| 132     | DC LIGHT ASSY    |       | LY31617-002A | ←            | LY31617-002A | ←           | ←            |
| 132A    | LAMP             |       | YQ44266      | ←            | YQ44266      | ←           | ←            |
| 136     | STICKER(TOP)     |       | LY43093-003A | LY43093-002A | LY43093-009A | ←           | LY43093-010A |
| 137     | STICKER(SIDE)    |       | LY43094-002A | ←            | LY43094-001A | ←           | ←            |
| 139     | COVER(LIGHT)     |       | ←            | LY31660-003A | ←            | ←           | ←            |
| 158     | SPECIAL SCREW,X2 |       | LY30018-0D6A | LY30018-090A | LY30018-0D6A | ←           | ←            |
| 196     | BRACKET(OP)ASSY  |       | LY42846-001C | LY42846-001A | LY42846-001C | ←           | ←            |

## MONITOR ASSEMBLY <M5>

| REF. NO | ITEM               | MODEL | GR-DVL150EG   | GR-DVL140EG   | GR-DVL157EG   | GR-DVL157EK | GR-DVL257EK   |
|---------|--------------------|-------|---------------|---------------|---------------|-------------|---------------|
| 500     | MONITOR ASSY       |       | LYH20246-008B | LYH20246-015A | LYH20246-008B | ←           | LYH20246-009A |
| 501     | MONITOR COVER ASSY |       | LY20702-002B  | ←             | ←             | ←           | LY20721-003A  |
| 501D    | SPECIAL SCREW,X2   |       | LY30018-084A  | ←             | ←             | ←           | LY30018-011A  |
| 501E    | SHEET(MON)         |       | ←             | ←             | ←             | ←           | LY42368-001A  |
| 501H    | WINDOW             |       | LY32087-001B  | ←             | ←             | ←           | LY32121-003A  |
| 501J    | EARTH MON          |       | ←             | ←             | ←             | ←           | LY42386-001A  |
| 501K    | EL(WINDOW)         |       | ←             | ←             | ←             | ←           | LY42193-001A  |
| 502     | MONITOR CASE ASSY  |       | LY10264-001A  | ←             | ←             | ←           | LY20598-002A  |
| 502A    | EARTH MON(2)       |       | ←             | ←             | ←             | ←           | LY42388-001A  |
| 503     | HOLDER             |       | LY20674-001A  | ←             | ←             | ←           | LY20567-001A  |
| 508     | BACK LIGHT         |       | QLL0093-001   | ←             | ←             | ←           | QLL0081-001   |
| 509     | LCD MODULE         |       | QLD0154-001   | ←             | ←             | ←           | QLD0096-002   |
| 516     | HOLDER             |       | ←             | ←             | ←             | ←           | LY20566-001B  |

Notes : Mark — is not used.  
 Mark ← is same as left.

**MAIN BOARD ASSEMBLY <01>**

| △ REF. NO | MODEL<br>ITEM     | GR-DVL150EG   | GR-DVL140EG  | GR-DVL157EG   | GR-DVL157EK | GR-DVL257EK |
|-----------|-------------------|---------------|--------------|---------------|-------------|-------------|
| PW        | MAIN BOARD ASSY   | YB10313PA-03  | YB10330PB-01 | YB10330PA-01  | ←           | ←           |
| IC1403    | IC(DIGITAL)       | —             | TC7W53FU     | —             | —           | —           |
| Q6207     | TRANSISTOR        | 2SD1621/TU/-X | —            | 2SD1621/TU/-X | ←           | ←           |
| Q6217     | PAIR TRANSISTOR   | UMZ1N         | —            | UMZ1N         | ←           | ←           |
| R1410     | MG RESISTOR       | —             | NRSA6AJ-331W | —             | —           | —           |
| R1411     | MG RESISTOR       | —             | NRSA6AJ-473W | —             | —           | —           |
| R1412     | MG RESISTOR       | —             | NRSA6AJ-331W | —             | —           | —           |
| R1413     | MG RESISTOR       | NRSA6AJ-331W  | —            | NRSA6AJ-331W  | ←           | ←           |
| R6014     | MG RESISTOR       | NRSA63J-0R0X  | —            | NRSA63J-0R0X  | ←           | ←           |
| R6217     | MG RESISTOR       | NRSA6AJ-151W  | —            | NRSA6AJ-151W  | ←           | ←           |
| R6218     | MG RESISTOR       | NRSA6AJ-104W  | —            | NRSA6AJ-104W  | ←           | ←           |
| R6242     | MG RESISTOR       | NRSA6AJ-104W  | —            | NRSA6AJ-104W  | ←           | ←           |
| R6243     | MG RESISTOR       | NRSA6AJ-823W  | —            | NRSA6AJ-823W  | ←           | ←           |
| R6244     | MG RESISTOR       | NRSA6AJ-152W  | —            | NRSA6AJ-152W  | ←           | ←           |
| R6245     | MG RESISTOR       | NRSA6AJ-562W  | —            | NRSA6AJ-562W  | ←           | ←           |
| R6246     | MG RESISTOR       | NRSA6AJ-222W  | —            | NRSA6AJ-222W  | ←           | ←           |
| C6213     | CAPACITOR         | NCB11EK-105X  | —            | NCB11EK-105X  | ←           | ←           |
| L6205     | COIL              | NQL35BK-100X  | —            | NQL35BK-100X  | ←           | ←           |
| X3001     | CRYSTAL RESONATOR | NAX0480-001X  | NAX0206-001X | NAX0480-001X  | ←           | ←           |
| S6001     | SLIDE SWITCH      | —             | NSW0096-001X | —             | —           | —           |

**MONITOR BOARD ASSEMBLY <02>**

| △ REF. NO | MODEL<br>ITEM      | GR-DVL150EG  | GR-DVL140EG  | GR-DVL157EG  | GR-DVL157EK | GR-DVL257EK  |
|-----------|--------------------|--------------|--------------|--------------|-------------|--------------|
| PW1       | MONITOR BOARD ASSY | YB1032611-01 | YB10324P1-01 | YB103261-01  | ←           | YB10324J-03  |
| Q7605     | DIGI TRANSISTOR    | —            | —            | —            | —           | DTA144EE     |
| Q7606     | DIGI TRANSISTOR    | —            | —            | —            | —           | DTA144EE     |
| R2        | MG RESISTOR        | NRSA63J-103X | —            | NRSA63J-103X | ←           | ←            |
| R7612     | MG RESISTOR        | NRVA63D-223X | NRVA63D-682X | NRVA63D-223X | ←           | NRVA63D-682X |
| R7621     | MG RESISTOR        | NRSA63J-0R0X | ←            | ←            | ←           | —            |
| R7622     | MG RESISTOR        | —            | —            | —            | —           | NRSA63J-223X |
| R7623     | MG RESISTOR        | —            | —            | —            | —           | NRSA63J-223X |
| R7624     | MG RESISTOR        | —            | —            | —            | —           | NRVA63D-223X |
| R7625     | MG RESISTOR        | —            | —            | —            | —           | NRVA63D-223X |
| C7636     | CAPACITOR          | —            | —            | —            | —           | NCF31CZ-104X |
| L7605     | COIL               | NQL315K-100X | ←            | ←            | ←           | —            |
| L7606     | COIL               | —            | —            | —            | —           | NQL315K-100X |
| SW1       | SHIELD SWITCH      | NSW0092-001X | —            | NSW0092-001X | ←           | ←            |

**LCD BL BOARD ASSEMBLY <03>**

| △ REF. NO | MODEL<br>ITEM     | GR-DVL150EG | GR-DVL140EG  | GR-DVL157EG | GR-DVL157EK | GR-DVL257EK    |
|-----------|-------------------|-------------|--------------|-------------|-------------|----------------|
| PW2       | LCD BL BOARD ASSY | YB10325B    | YB10324B2-02 | YB10325B    | ←           | YB10324A2-02   |
| IC751     | IC                | —           | —            | —           | —           | MIP805         |
| D751      | DIODE             | —           | —            | —           | —           | 1SS376         |
| R751      | MG RESISTOR       | —           | —            | —           | —           | NRSA63J-104X   |
| C751      | CAPACITOR         | —           | —            | —           | —           | NBE20JM-106X   |
| C752      | CAPACITOR         | —           | —            | —           | —           | NBE20JM-106X   |
| C753      | CAPACITOR         | —           | —            | —           | —           | NCB31HK-222X   |
| C754      | CAPACITOR         | —           | —            | —           | —           | NCB31HK-222X   |
| L751      | COIL              | —           | —            | —           | —           | NQLZ011-681X   |
| L752      | COIL              | —           | —            | —           | —           | NQL315K-100X   |
| CN754     | CONNECTOR         | —           | —            | —           | —           | QGF0505F2-06X  |
| △ F751    | FUSE              | —           | —            | —           | —           | NMFZ007-R20X-K |

**JACK BOARD ASSEMBLY <06>**

| △ REF. NO | MODEL<br>ITEM   | GR-DVL150EG  | GR-DVL140EG  | GR-DVL157EG  | GR-DVL157EK | GR-DVL257EK |
|-----------|-----------------|--------------|--------------|--------------|-------------|-------------|
| PW1       | JACK BOARD ASSY | YB10314A1-03 | YB10314A1-02 | YB10314A1-03 | ←           | ←           |
| OT2       | SPACER-B,X2     | —            | LY30017-023A | —            | —           | —           |

Notes : Mark — is not used.  
Mark ← is same as left.



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VIDEO DIVISION

S40894