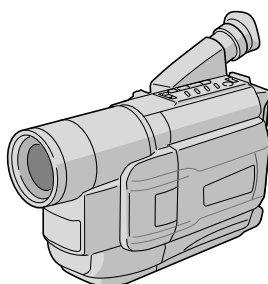


JVC

SERVICE MANUAL

COMPACT VHS CAMCORDER

GR-SXM180A/A-S, 280A/A-S, 480A/A-S



SVHS**G** VHS
PAL
625
Super VHS
Super VHS ET

Regarding service information other than these sections, refer to the GR-SXM67ED, SXM87ED service manual (No. 86655). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A/SXM180A/SX140A)*

Camcorder	
General	
Format	: S-VHS/VHS PAL standard
Power source	: DC 11 V (Using AC Adapter) DC 6 V (Using battery pack)
Power consumption	
Viewfinder on	: 4.0 W (GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A/SXM180A only) 3.7 W (GR-SX140A only)
LCD monitor* on	: 4.5 W (GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A/SXM180A only) 3.0 W
Video light**	: 3.0 W
* Applicable models only. ** GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A only.	
Signal system	: PAL-type
Video recording system	
Luminance	: FM recording
Colour	: Converted sub-carrier direct recording Conforms to VHS standard
Cassette	: / cassette
Tape speed	
SP	: 23.39 mm/sec.
LP	: 11.70 mm/sec.
Recording time (max.)	
SP	: 60 minutes
LP	: 120 minutes (with EC-60 cassette)
Operating temperature	: 0°C to 40°C
Operating humidity	: 35% to 80%
Storage temperature	: -20°C to 50°C
Weight	: Approx. 910 g (GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A only) Approx. 900 g (GR-SXM180A only) Approx. 850 g (GR-SX140A only)
Dimensions (W x H x D)	: 200 mm x 112 mm x 118 mm (GR-SXM78EA/SXM48EA/SXM780A/SXM480A/SXM280A/SXM180A only) 200 mm x 112 mm x 115 mm (GR-SX140A only) (with the LCD monitor* closed and with the viewfinder fully tilted downward)
* Applicable models only.	
Pickup	: 1/6" format CCD
Lens	: F1.6, f = 3.9 mm to 62.4 mm, 16:1 power zoom lens with auto iris and macro control, filter diameter 40.5 mm
Viewfinder	: Electronic viewfinder with 0.5" black/white CRT
White balance adjustment	: Auto/Manual adjustment
LCD monitor (Applicable models only)	: 3" diagonally measured, LCD panel/TFT active matrix system (GR-SXM78EA/SXM780A/SXM480A only) 2.5" diagonally measured, LCD panel/TFT active matrix system (GR-SXM48EA/SXM280A/SXM180A only)
Speaker (Applicable models only)	: Monaural
Connectors	
Video	: 1 V (p-p), 75 Ω unbalanced, analogue output (via Video output connector)
Audio	: 300 mV (rms), 1 kΩ analogue output (via Audio output connector)
Digital (GR-SXM78EA/SXM780A only)	: ø3.5 mm, 4-pole, mini-head jack
S-Video	: Y : 1 V (p-p), 75 Ω, analogue output C : 0.30 V (p-p), 75 Ω, analogue output
AC Adapter	
Power requirement	: AC 110 V — 240 V~, 50 Hz/60 Hz
Output	: DC 11 V , 1 A
Optional Accessories	
• Battery Packs BN-V12U, BN-V20U, BN-V400U • Compact S-VHS () Cassettes SE-C45/30 • Compact VHS () Cassettes EC-60/45/30 • Remote Control Unit RM-V700U • Active Carrying Bag CB-V7U	
Some accessories are not available in some areas. Please consult your nearest JVC dealer for details on accessories and their availability.	

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

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5. PARTS LIST (5-1 to 5-3)

5.1 PACKING AND ACCESSORY ASSEMBLY <M1> 5-1
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The following table indicate main different points between models GR-SXM67ED, GR-SXM180A and GR-SXM180A-S.

ITEM	MODEL	GR-SXM67ED	GR-SXM180A	GR-SXM180A-S
AC ADAPTER		AP-V12ED	AP-V12EG	←
BATTERY PACK		BN-V20BU	BN-V11U-E	←

The following table indicate main different points between models GR-SXM87ED, GR-SXM280A, GR-SXM280A-S, GR-SXM480A and GR-SXM480A-S.

ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
LCD MONITOR		2.5"	←	←	3"	←
AC ADAPTER		AP-V12ED	AP-V12EG	←	←	←
BATTERY PACK		BN-V20BU	BN-V11U-E	←	←	←

The following table indicate different parts number between models GR-SXM67ED, GR-SXM180A and GR-SXM180A-S.

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

△ REF. NO.	ITEM	MODEL	GR-SXM67ED	GR-SXM180A	GR-SXM180A-S
1	PACKING CASE		LY32563-017A	LY32563-013A	LY32563-015A
8	WARRANTY CARD		BT-59011-2	—	—
△ 11	AC ADAPTER		LY20847-002A	LY20847-001B	←
△ 12	POWER CORD		QMPS120-190-JR	QMPL120-190-JR	QMPS110-190-JR
△ 13	BATTERY PACK		LY31199-001A	YQ10629E	←
18	GUARANTY CARD		BT-59012-1	—	—
△ 24	SHEET(CON.PLUG)		—	LYT0609-001A	←
△ 25	CONVERSION PLUG		—	PEMC1012-02	PEMC1012

FINAL ASSEMBLY <M2>

△ REF. NO.	ITEM	MODEL	GR-SXM67ED	GR-SXM180A	GR-SXM180A-S
101	CASSETTE COVER(M)ASSY		LY20694-002B	LY20694-001B	←
103	UPPER CASE(M)		LY10257-061A	LY10257-046A	←
125	TOP OPERATION UNIT		LY20614-014C	LY20614-004C	←
135	FRONT COVER ASSY		LY20683-030A	LY20683-032A	←
135F	COVER(LIGHT)		LY30934-022A	LY30934-021A	←

MONITOR ASSEMBLY <M5>

△ REF. NO.	ITEM	MODEL	GR-SXM67ED	GR-SXM180A	GR-SXM180A-S
△ 500	MONITOR ASSY		LY20836-008A	LY20836-011A	←
△ 501	MONITOR COVER ASSY		LY20834-006A	LY20834-008A	←
501B	STICKER(B)		LY32554-002A	LY32554-001A	←
505	HINGE COVER(UPPER)		LY31939-001A	LY31939-003A	←

MAIN BOARD ASSEMBLY <01>

△ REF. NO.	ITEM	MODEL	GR-SXM67ED	GR-SXM180A	GR-SXM180A-S
IC105	IC(DIGITAL)		TC7S66FU	—	TC7S66FU
R4013	MG RESISTOR		NRSA63J-102X	—	NRSA63J-102X
R4030	MG RESISTOR		NRSA63J-102X	—	NRSA63J-102X
R4031	MG RESISTOR		NRSA63J-102X	—	NRSA63J-102X
C4024	CAPACITOR		NCF31EZ-104X	—	NCF31EZ-104X
C4041	CAPACITOR		NCB30JK-105X	—	NCB30JK-105X
C4042	CAPACITOR		NCB30JK-105X	—	NCB30JK-105X
L501	MG RESISTOR		NRSA63J-0R0X	—	NRSA63J-0R0X
CN13	FFC/FPC CONNECTOR		QGF0507F3-14X	QGF0507F4-14X	QGF0507F3-14X
CN18	FFC/FPC CONNECTOR		QGF0507F3-12X	QGF0507F4-12X	QGF0507F3-12X

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

The following table indicate different parts number between models GR-SXM87ED, GR-SXM280A, GR-SXM280A-S, GR-SXM480A and GR-SXM480A-S.
PACKING AND ACCESSORY ASSEMBLY <M1> Note: As for IB (INSTRUCTIONS), refer to sec.5.

△ REF. NO.	ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
1	PACKING CASE		LY32563-001A	LY32563-009A	LY32563-011A	LY32563-005A	LY32563-007A
8	WARRANTY CARD		BT-59011-2	—	—	—	—
△ 11	AC ADAPTER		LY20847-002A	LY20847-001B	←	←	←
△ 12	POWER CORD		QMPS120-190-JR	QMPL120-190-JR	QMPS110-190-JR	QMPL120-190-JR	QMPS110-190-JR
△ 13	BATTERY PACK		LY31199-001A	YQ10629E	←	←	←
18	GUARANTY CARD		BT-59012-1	—	—	—	—
△ 24	SHEET(CON.PLUG)		—	LYT0609-001A	←	←	←
△ 25	CONVERSION PLUG		—	PEMC1012-02	PEMC1012	PEMC1012-02	PEMC1012

FINAL ASSEMBLY <M2>

△ REF. NO.	ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
103	UPPER CASE(M)		LY10257-059A	LY10257-047A	←	LY10257-048A	←

MONITOR ASSEMBLY <M5>

△ REF. NO.	ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
△ 500	MONITOR ASSY		LY20836-001A	←	←	LY20836-004A	←
502	MONITOR CASE ASSY		LY32036-002A	←	←	LY32035-001A	←
502E	SPACER(A)		LY30029-0T7A	←	←	—	—
504	SHIELD CASE		LY32330-001A	←	←	LY32332-001A	←
518	LCD MODULE		QLD0176-001	←	←	QLD0213-001	←
519	LIGHT SCREEN		LY43392-001A	←	←	LY43391-001A	←
520	LAMP		QLL0110-001	←	←	QLL0111-001	←
521	HOLDER,X2		LY43393-001	←	←	LY43394-001A	←
522	SHEET		LY43396-001A	←	←	LY43395-001A	←
523	DIFFUSION SHEET		LY43362-001A	←	←	LY43363-001A	←
527	SPACER(A)		—	—	—	LY30029-0R6A	←
528	LCD FRAME(3)		—	—	—	LY32333-001A	←
529	SPACER(A),X2		—	—	—	LY30029-0R5A	←

MAIN BOARD ASSEMBLY <01>

△ REF. NO.	ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
PW1	MAIN BOARD ASSY		YB10356EK1-01	←	←	YB10356E11-01	←
IC105	IC(DIGITAL)		TC7S66FU	—	TC7S66FU	—	TC7S66FU
Q6621	PAIR TRANSISTOR		—	—	—	HN1C01FU/G/-X	←
Q6622	TRANSISTOR		—	—	—	2SA1577/QR/-X	←
R4030	MG RESISTOR		NRSA63J-102X	—	NRSA63J-102X	—	NRSA63J-102X
R4031	MG RESISTOR		NRSA63J-102X	—	NRSA63J-102X	—	NRSA63J-102X
R6622	CMF RESISTOR		—	—	—	NRVA63D-104X	←
R6623	CMF RESISTOR		—	—	—	NRVA63D-473X	←
R6624	MG RESISTOR		—	—	—	NRSA63J-273X	←
R6625	MG RESISTOR		—	—	—	NRSA63J-822X	←
R6626	CMF RESISTOR		—	—	—	NRVA63D-273X	←
R6627	CMF RESISTOR		—	—	—	NRVA63D-183X	←
C4041	CAPACITOR		NCB30JK-105X	—	NCB30JK-105X	—	NCB30JK-105X
C4042	CAPACITOR		NCB30JK-105X	—	NCB30JK-105X	—	NCB30JK-105X
C6622	CAPACITOR		—	—	—	NCB21CK-105X	←
CN13	FFC/FPC CONNECTOR		QGF0507F3-14X	QGF0507F4-14X	QGF0507F3-14X	QGF0507F4-14X	QGF0507F3-14X
CN18	FFC/FPC CONNECTOR		QGF0507F3-12X	QGF0507F4-12X	QGF0507F3-12X	QGF0507F4-12X	QGF0507F3-12X

MONITOR BOARD ASSEMBLY <07>

△ REF. NO.	ITEM	MODEL	GR-SXM87ED	GR-SXM280A	GR-SXM280A-S	GR-SXM480A	GR-SXM480A-S
PW	MONITOR BOARD ASSY		YB20913A	←	←	YB20913B	←
IC7603	IC		SN74AHC1G04K	←	←	—	—
Q7607	TRANSISTOR		DTC144EE	←	←	—	—
R7602	MG RESISTOR		NRSA63D-752X	←	←	NRSA63D-432X	←
R7607	MG RESISTOR		NRSA63D-822X	←	←	NRSA63D-153X	←
R7637	MG RESISTOR		NRSA63J-223X	←	←	NRSA63J-682X	←
R7640	MG RESISTOR		NRSA02J-182X	←	←	NRSA02J-122X	←
R7641	MG RESISTOR		NRSA02J-331X	←	←	NRSA02J-821X	←
R7642	MG RESISTOR		—	—	—	NRSA63J-0R0X	←
R7643	MG RESISTOR		—	—	—	NRSA63J-123X	←
R7644	MG RESISTOR		—	—	—	NRSA63J-123X	←
R7645	MG RESISTOR		NRSA63J-682X	←	←	NRSA63J-123X	←
R7646	MG RESISTOR		NRSA63J-392X	←	←	NRSA63J-222X	←
R7647	MG RESISTOR		—	—	—	NRSA63J-0R0X	←
R7648	MG RESISTOR		NRSA63J-103X	←	←	—	—
R7649	MG RESISTOR		—	—	—	NRSA63J-333X	←
R7650	MG RESISTOR		NRSA63J-103X	←	←	—	—
C7623	CAPACITOR		NCB31EK-682X	←	←	—	—
C7627	CAPACITOR		NCB31EK-103X	←	←	—	—
C7630	CAPACITOR		—	—	—	NCB31EK-103X	←
L7603	COIL		—	—	—	NQL38DK-220X	←
L7604	COIL		NQL38DK-220X	←	←	—	—

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



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