

S70158VM304HM



VC-M304LM  
VC-M304HM



VC-M314IM

**VHS** VIDEO CASSETTE RECORDER

### MODELS

**VC-M304HM**  
**VC-M304LM**  
**VC-M314LM**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

This service manual covers only those items that differ from the VC-M314HM. For further information on items not covered by this supplement refer to the Service Manual for VC-M314HM.

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## PRECAUTIONS IN PART REPLACEMENT

***When servicing the unit with power on, be careful of the section outlined in white.***

***This is the primary power circuit which is live.***

When checking the solder side in the tape travel mode, make sure that the tape has been loaded and then turn over the PWB with due care to the primary power circuit.

Make readjustment, if needed after replacement of part, with the mechanism and its PWB in position in the main frame.

### **(1) Start and end sensors: Q701 and Q702**

Insert the sensor's projection deep into the upper hole of the holder. Make sure the PWB sensors are securely fitted.

When replacing the mechanism on the PWB care should be taken that the sensors locate into the mechanism holder.

### **(2) Photocoupler: IC901**

Refer to the symbol on the PWB and the anode marking of the part.

### **(3) Cam switches A and B: D708 and D705.**

Adjust the notch of the part to the white marker symbol on the PWB. The part must be flat to the PWB.

### **(4) Take-up and supply sensors: D711 and D712.**

Be careful not to confuse the setting direction of these parts in reference to the symbols on the PWB. The part must be flat to the PWB.

## SPECIFICATIONS

Format: VHS PAL standard  
Video recording system: Two rotary heads, helical scan system  
Video signal: PAL colour and I signals, 625 lines  
Recording/playing time: 240 min max. with an E-240 tape SP  
480 min max. with an E-240 tape LP  
Tape width: 12.7mm  
Tape speed: 23.39 mm/s SP  
11.70 mm/s LP  
Antenna: 75 ohm unbalanced  
Receiving channel: UHF Channel E21-E69;  
VHF Channel A~J,S1-S41(LM Models only)  
RF converter output signal: UHF Channel E21-E69 (Preset to CH E36)  
Power requirement: AC230V-240V, 50Hz  
Power consumption: Approx. 15W (AC230V/50Hz) and 3W max. in stand-by mode  
Operating temperature: 5°C to 40°C  
Storage temperature: -20°C to 55°C  
Weight: Approx. 3.2 kg  
Dimensions: 360 mm (W) x 289 mm (D) x 93 mm (H)  
(14-3/16" x 12-1/32" x 3-21/32")

### VIDEO

Input: 1.0 Vp-p, 75 ohm  
Output: 1.0 Vp-p, 75 ohm  
S/N ratio: 48 dB (SP mode)  
Horizontal resolution: Approx. 260 lines (SP mode with Super Picture)

### AUDIO 0 dBs = 0.775 Vrms

Input: Line1: -3.8 dBs, 10k ohm  
Output: Line1: -3.8 dBs, 1k ohm  
S/N ratio: 46 dB min. (SP mode)  
Frequency response: 80 Hz ~ 10 kHz (SP mode)  
80 Hz ~ 5 kHz (LP mode)  
Accessories included: 75 ohm coaxial cable  
Operation manual  
Infrared remote control  
Batteries

As part of our policy of continuous improvement, we reserve the right to alter design and specifications without notice.

Note: The antenna must correspond to the new standard DIN 45325 (IEC 169 - 2) for combined UHF/VHF antenna with 75 ohm connector.

# ROM MAP

	MODEL	VC-M304HM	VC-M304LM	VC-M314LM
blank	blank	---	---	---
EP n **	NTSC Luminance level	0	0	0
EP n **	NTSC Chrominance level	7	7	7
SP n **	NTSC Luminance level	0	0	0
SP n **	NTSC Chrominance level	7	7	7
LP p **	PAL Luminance level	0	0	0
LP p **	PAL Chrominance level	7	7	7
blank	blank	---	---	---
SP p **	PAL Luminance level	3	3	3
SP p **	PAL Chrominance level	4	4	4
"0"	fixed	0	0	0
JP39	A.DUB	0	0	0
JP38	NOT SLOW ATR	1	1	1
JP37	SQ PB	0	0	0
JP36	NTSC PB	0	0	0
JP35	NTSC SKEW	0	0	0
JP34	HEAD2	0	0	0
JP33	HEAD1	0	0	0
JP32	HEAD0	1	1	1
JP31	GAMMA correction	0	0	0
JP30	L/P-5 min	0	0	0
JP29	84 channel	0	0	0
JP28	R/C CODE 1	0	0	0
JP27	DNR	0	0	0
JP26	POST CODE	0	0	0
JP25	SAT CTL	0	0	0
JP24	AV LINK / 16 x 9	0	0	0
JP23	Hi-Fi	0	0	0
JP22	SORT/CLOCK	0	0	0
JP21	DECODER	0	0	0
JP20	SURROUND	0	0	0
JP19	IGR	0	0	0
JP18	NICAM	0	0	0
JP17	G-CODE1	0	0	1
JP16	G-CODE0	0	0	1
JP15	OEM	0	0	0
JP14	LP mode	1	1	1
JP13	F-AV	0	0	0
JP12	2 SCART	0	0	0
JP11	No RF OUT	0	0	0
JP10	TUNER2	0	1	1
JP 9	TUNER1	1	0	0
JP 8	TUNER0	1	0	0
JP 7	SYSTEM1	0	0	0
JP 6	SYSTEM0	0	0	0
JP 5	X 380 FF/REW	0	0	0
JP 4	LOW POWER	0	0	0
JP 3	N/A	0	0	0
JP 2	VPS/PDC	0	0	0
JP 1	COLOUR 1	0	0	0
JP 0	COLOUR 0	0	0	0
	DISPLAY IN HEXADECIMAL NOTATION	070734 0034 000014	070734 0044 000014	070734 0044 300014

0:LIGHT UP      1:FLASHING

# PARTS LIST

## PARTS REPLACEMENT

Parts marked with "△" are important for maintaining the safety of the set. Replace these parts with only those specified

### "HOW TO ORDER REPLACEMENT PARTS"

Contact your nearest SHARP Parts Distributor.  
For location of SHARP Parts Distributor.  
Call SHARP Manchester on (0161) 205 7531(0870) 600 0271

To have your order filled promptly and correctly, please supply the following informations.

- |                        |                       |
|------------------------|-----------------------|
| <b>1. MODEL NUMBER</b> | <b>2. REF. NO</b>     |
| <b>3. PART CODE</b>    | <b>4. DESCRIPTION</b> |
| <b>5. PRICE CODE</b>   |                       |

MARK ★: SPARE PARTS-DELIVERY SECTION

## HOW TO IDENTIFY CHIP TRANSISTORS AND DIODES BY ITS MARKING

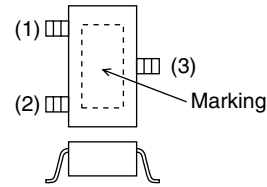


Fig. 1

- (1) Base/Input
- (2) Emitter/Ground
- (3) Collector/Output

PACKAGE	MARKING	PARTS CODE	TYPE	MARKING	PARTS CODE	TYPE
FIG 1.	6A	VSUN2111///-1*	PNP	14	VSDTA114EK/-1*	PNP
FIG 1.	6B	VSUN2112///-1*	PNP	15	VSDTA124EK/-1*	PNP
FIG 1.	6C	VSUN2113///-1*	PNP	16	VSDTA144EK/-1*	PNP
FIG 1.	8A	VSUN2211///-1*	NPN	24	VSDTC114EK/-1*	NPN
FIG 1.	8B	VSUN2212///-1*	NPN	25	VSDTC124EK/-1*	NPN
FIG 1.	8C	VSUN2213///-1*	NPN	26	VSDTC144EK/-1*	NPN
FIG 1.	FQ	VS2A1037KQ-1		BQ	VS2SC2412KQ-1	

## PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
MAIN UNIT	DUNTK6070TEVS	-	N/A	N/A	1	-	
MAIN UNIT	DUNTK6070TEVE	-	1	N/A	N/A	-	
MAIN UNIT	DUNTK6070TEVT	-	N/A	1	N/A	-	

## OPERATE PWB (NOT REPLACEMENT ITEM)

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
PWB	DUNTK6071TEV2	-	N/A	N/A	1	-	
PWB	DUNTK6071TEV3	-	1	1	N/A	-	

## DUNTK6070TEVS (VC-M304HM ) DUNTK6070TEVE (VC-M304LM) DUNTK6070TEVT (VC-M314LM)

## SWITCHES

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
SWITCH	QSW-K0097GEZZ	SW887	1	1	N/A	AB	U
SWITCH	QSW-K0097GEZZ	SW883	N/A	N/A	1	AB	U

## TUNERS

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
TUNER	VTUATMDB2-602	TU1401	1	N/A	N/A	BC	U
TUNER	VTUATMDG2-801	TU1401	N/A	1	1	BC	U

## RESISTORS

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
FUSE RESISTOR	VRD-RA2BE1R0J	R1406	N/A	1	1	AA	U

## PARTS LIST CONT...

### FRONT PANEL PARTS

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
PANEL ASSY	CPNLC2939TEV1	501	1	1	AS 314HM	AX	U
FRONT PANEL	HPNLC2939UMSA	501-1	1	1	AS 314HM	AN	U
PLAY BUTTON	JBTN-2961UMSG	501-2	1	1	AS 314HM	AC	U
CASSETTE FLAP	HDECQ2393UMSA	501-3	1	1	AS 314HM	AG	U
LCD IND PLATE	HINDP2223AJSA	501-4	1	1	AS 314HM	AD	U
CH REC BUTTON	JBTN-3051UMSD	501-5	1	1	AS 314HM	AC	U
MENU/SET BUTTON	JBTN-3049UMSD	501-6	1	1	AS 314HM	AC	U
CASSETTE SPRING	MSPRD0103AJFJ	501-7	1	1	AS 314HM	AD	U
STANDBY BUTTON	JBTN-3050UMSD	501-8	1	1	AS 314HM	AC	U

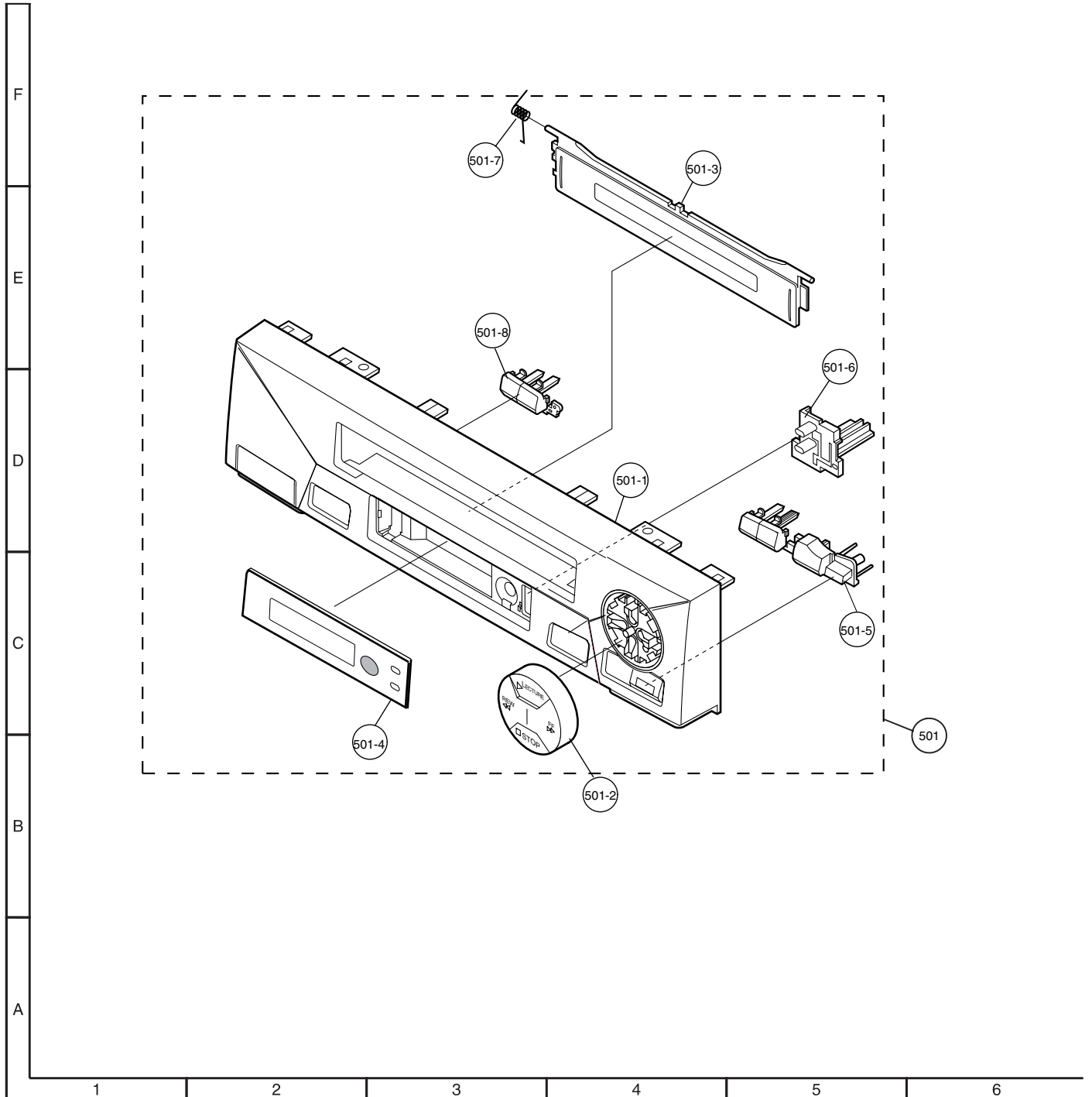
### SUPPLIED ACCESSORIES

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
CABLE (RF LEAD)	QCNW-7870UMZZ	-	1	1	1	AH	U
INSTRUCTION MANUAL	TINS-3991UMZZ	-	1	1	1	AG	U
REMOTE CONTROL	RRMCG0247AJSA	-	1	1	1	AQ	U
REMOTE CONTROL	RRMCG1256AJSA	-	1	1	1	BC	U

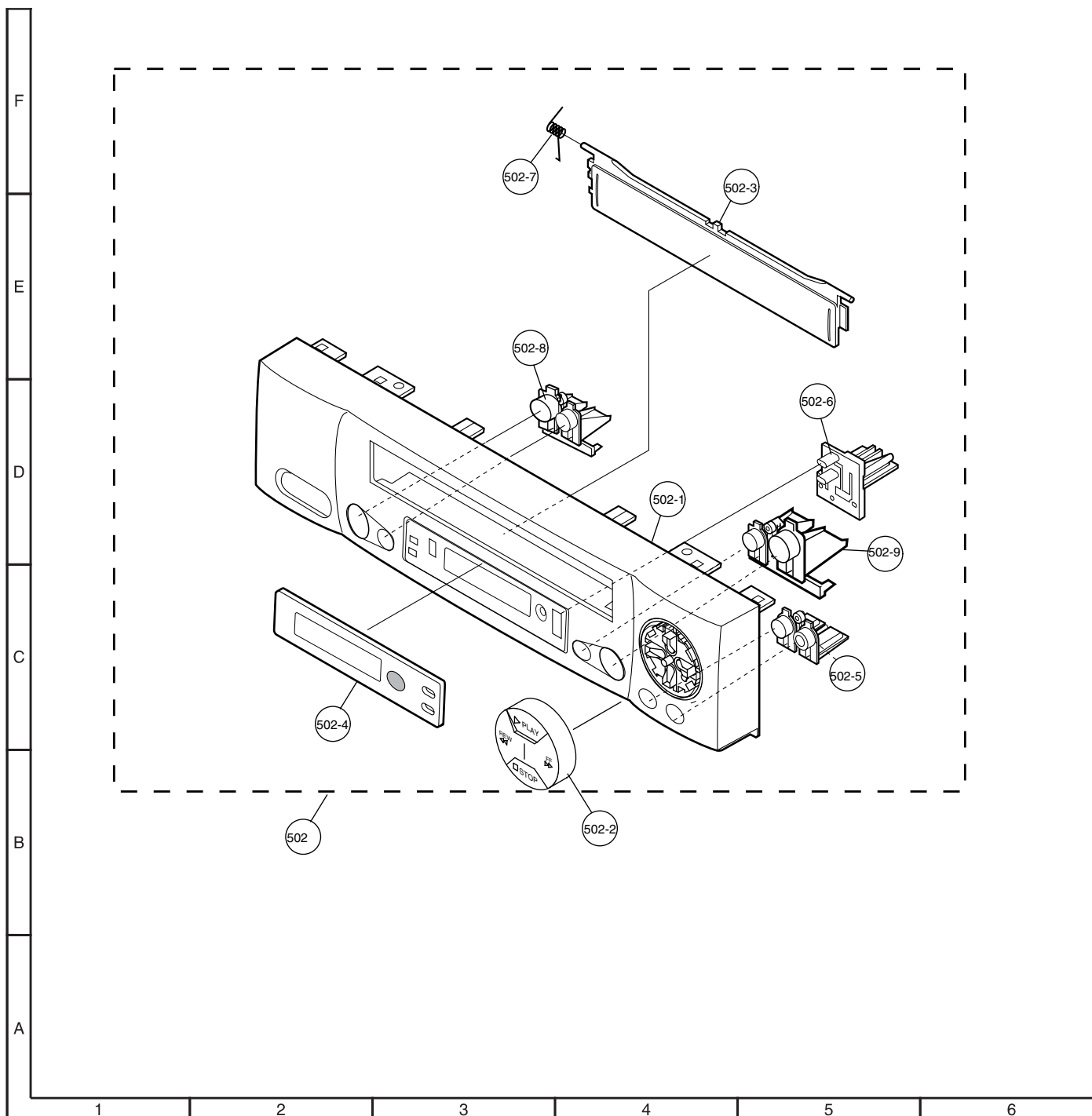
### NOT A REPLACEABLE ITEM

DESCRIPTION	PART CODE	REF NO	304HM	304LM	314LM	CODE	★
PACKING CASE	SPAKC4755UMZZ	-	1	1	1	-	-
PACK ADD FRONT (R)	SPAKX1135UMZZ	-	1	1	1	-	-
PACK ADD REAR (L)	SPAKX1134UMZZ	-	1	1	1	-	-
LABEL	TLAB-A001URE0	-	1	1	1	-	-

# EXPLODED DIAGRAM OF FRONT PANEL VC-M304HM/LM

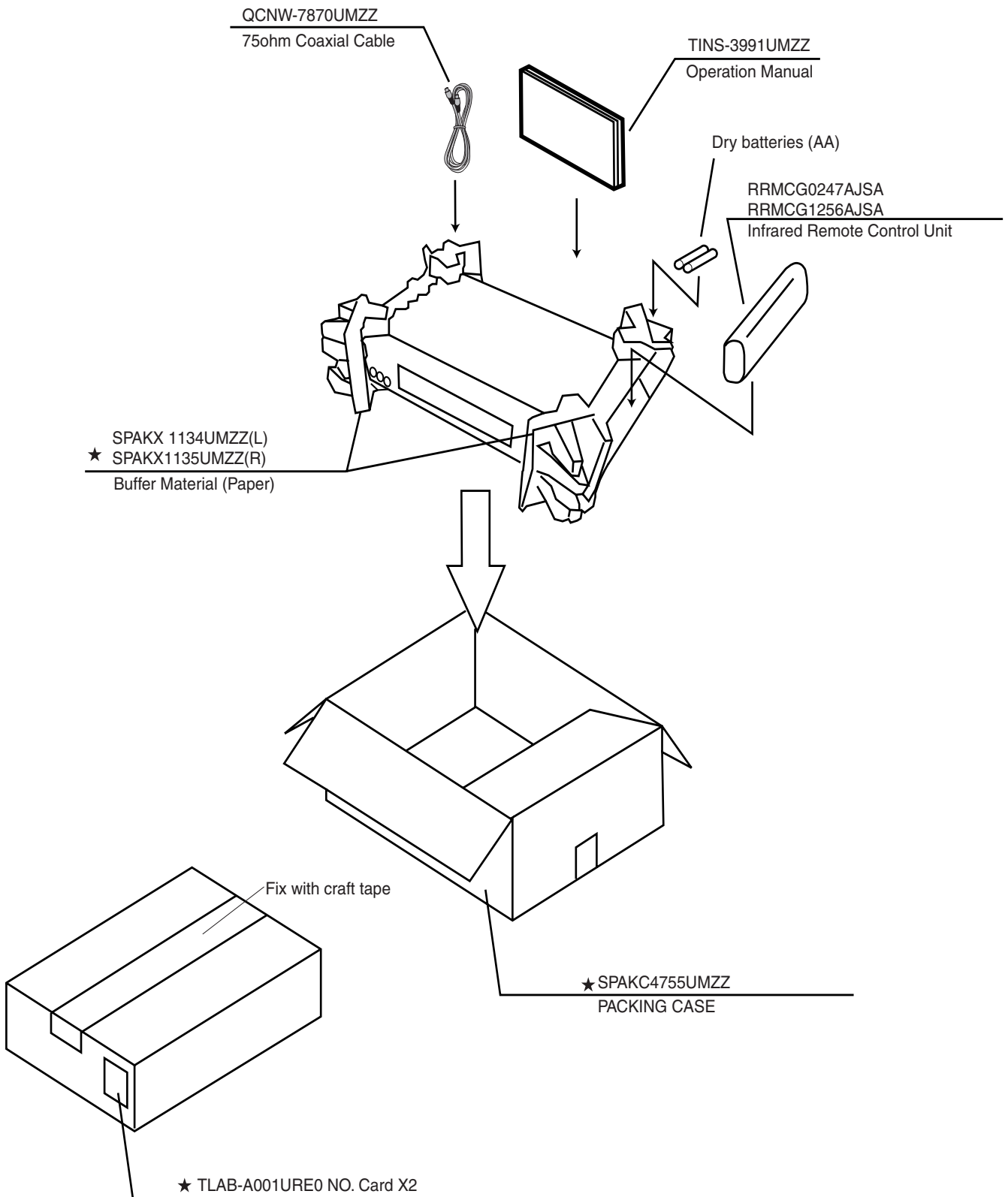


# EXPLODED DIAGRAM OF FRONT PANEL VC-M314LM





# PACKING OF THE SET



MARK ★ NOT REPLACEMENT ITEM

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