

S04937VCM302HM



VC-M 302HM/LM



VC-M 312HM/LM

VHS VIDEO CASSETTE RECORDER

MODELS

VC-M302HM

VC-M312HM

VC-M302LM

VC-M312LM

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-M321HM. For further information on items not covered by this supplement refer to the Service Manual for VC-M321HM.

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PRECAUTIONS IN PART REPLACEMENT

When servicing the unit with power on, be careful to the section marked white all over.

This is the primary power circuit which is live.

When checking the soldering side in the tape travel mode, make sure first 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. Referring to the PWB, fix the sensors tight enough.

(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 of the symbol on the PWB. Do not allow any looseness.

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

Be careful not to confuse the setting direction of the parts in reference to the symbols on the PWB. Do not allow any looseness.

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 SHARP E-240 tape (PAL/SP)
480 min max. with SHARP E-240 tape (PAL/LP)
Tape width: 12.7mm
Tape speed: 23.39 mm/s (PAL/SP)
11.70 mm/s (PAL/LP)
Antenna: 75 ohm unbalanced
Receiving channel: UHF Channel E21-E69
RF converter output signal: UHF Channel E21-E69 (Preset to CH E36)
VHF Channel E21-E69; VHF Channels B--J, S1-S61(LM only)
Power requirement: AC230V-240V, 50Hz
Power consumption: Approx. 14 W (AC230V/50Hz) and 4W max. at 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 284 mm (D) x 93 mm (H)
(14-3/16" x 11-3/16" x 3-25/32")

VIDEO
Input: 1.0 Vp-p, 75 ohm
Output: 1.0 Vp-p, 75 ohm
S/N ratio: 45 dB (SP mode)
Horizontal resolution: Approx. 260 lines (SP mode with Supper 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 responce: 80 Hz ~ 10 kHz (SP mode)
80 Hz ~ 5 kHz (LP mode)

Accessories included: 75 ohm coaxial cable
Operation manual
Infrared remote control
Battery

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

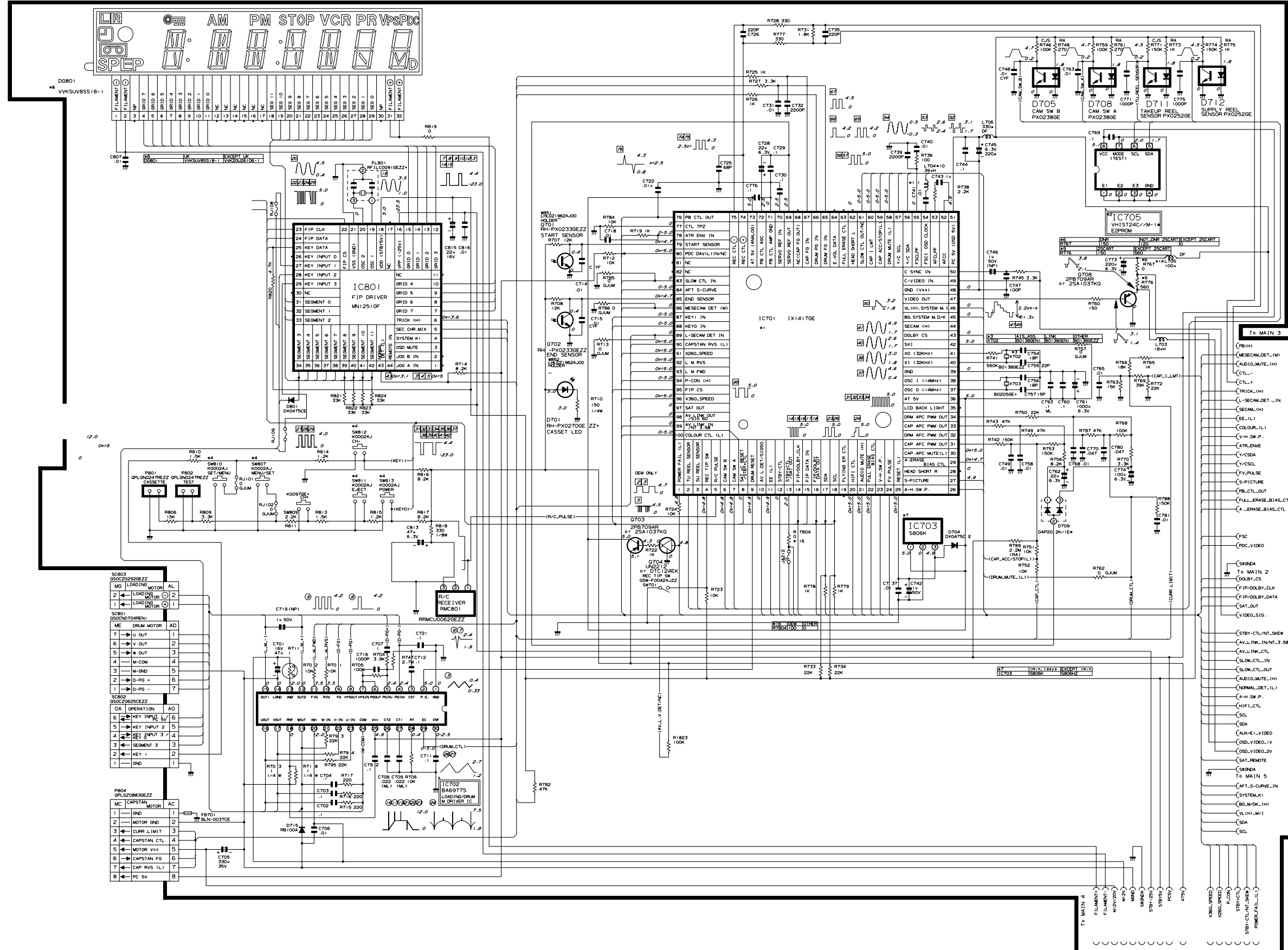
	MODEL	VC-M302HM	VC-M312HM	VC-M302LM	VC-M312LM
blank	blank	--	--	--	--
EP n **	NTSC Luminance level	0	0	0	0
EP n **	NTSC Chrominance level	7	7	7	7
SP n **	NTSC Luminance level	0	0	0	0
SP n **	NTSC Chrominance level	7	7	7	7
LP p **	PAL Luminance level	3	3	3	3
LP p **	PAL Chrominance level	5	5	5	5
blank	blank	--	--	--	--
SP p **	PAL Luminance level	3	3	3	3
SP p **	PAL Chrominance level	5	5	5	5
"0"	fixed	0	0	0	0
JP39	A.DUB	0	0	0	0
JP38	NOT SLOW ATR	0	0	0	0
JP37	I.REPLAY	0	0	0	0
JP36	NTPB	0	0	0	0
JP35	NTSC SKEW	0	0	0	0
JP34	HEAD2	0	0	0	0
JP33	HEAD1	0	0	0	0
JP32	HEAD0	1	1	1	1
JP31	PDC8bit	0	0	0	0
JP30	LCD	0	0	0	0
JP29	POS189	0	0	0	0
JP28	R/C CODE	0	0	0	0
JP27	DNR	0	0	0	0
JP26	POST CODE	0	0	0	0
JP25	SAT CTL	0	0	0	0
JP24	AV LINK	0	0	0	0
JP23	Hi-Fi	0	0	0	0
JP22	SORT/CLOCK	0	0	0	0
JP21	DECODER	0	0	0	0
JP20	SURROUND	0	0	0	0
JP19	IGR	0	0	0	0
JP18	NICAM	0	0	0	0
JP17	G-CODE1	0	1	0	1
JP16	G-CODE0	0	1	0	1
JP15	OEM	0	0	0	0
JP14	LP	1	1	1	1
JP13	F-AV	0	0	0	0
JP12	2 SCART	0	0	0	0
JP11	VPS8bit	0	0	0	0
JP10	TUNER2	0	0	1	1
JP 9	TUNER1	1	1	0	0
JP 8	TUNER0	1	1	0	0
JP 7	SYSTEM1	0	0	0	0
JP 6	SYSTEM0	0	0	0	0
JP 5	SAT CH VPS OFF	0	0	0	0
JP 4	LOW POWER	0	0	0	0
JP 3	SPATIALIZER	0	0	0	0
JP 2	VPS/PDC	0	0	0	0
JP 1	COLOR1	0	0	0	0
JP 0	COLOR0	0	0	0	0
	DISPLAY IN HEXADECIMAL	070735 350010 0004300	070735 350010 0034300	070735 350010 0004400	070735 35010 0034400

0:LIGHT UP 1:FLASHING

MAIN CIRCUIT (1)

MAIN (1)

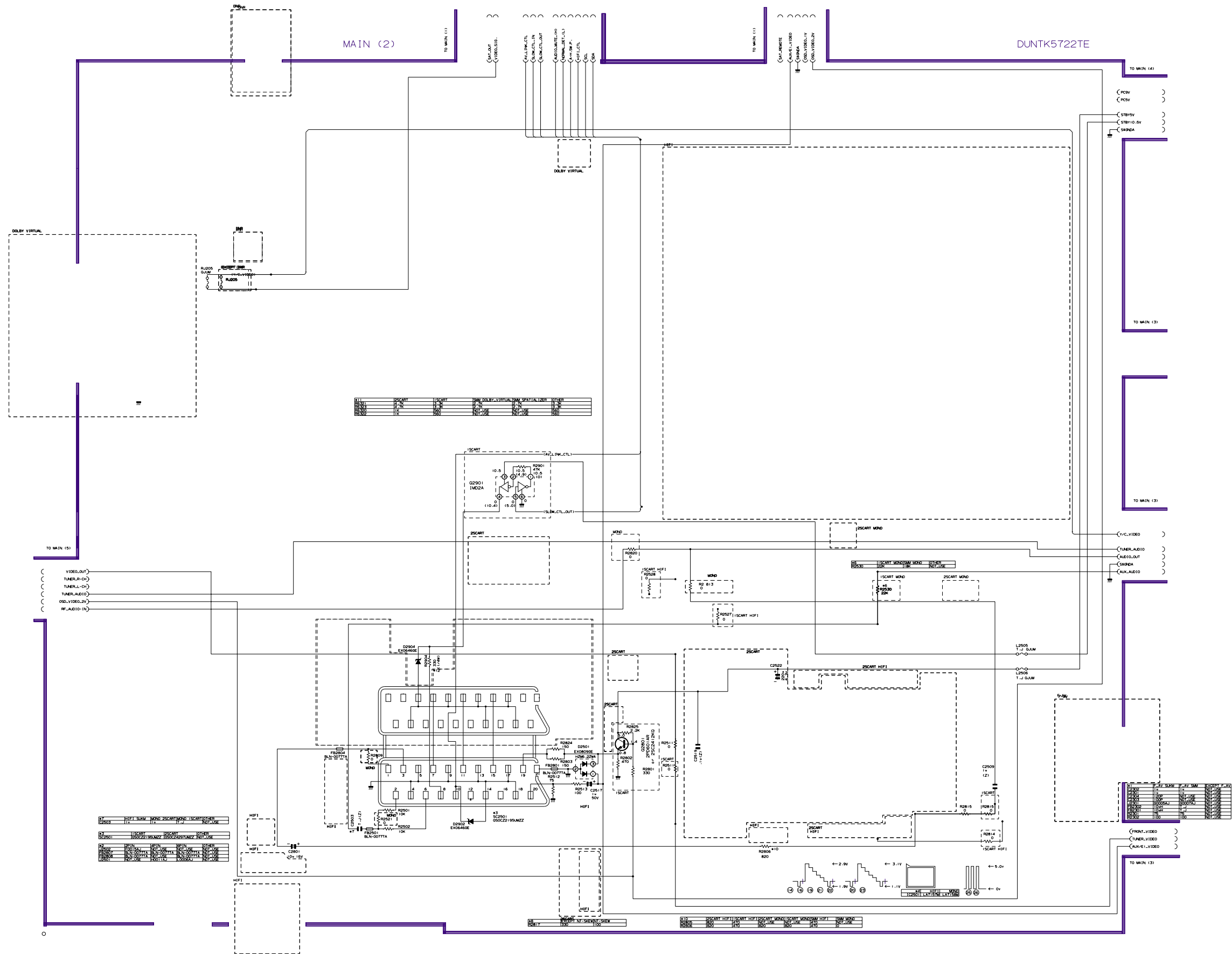
DUNTK5722TE



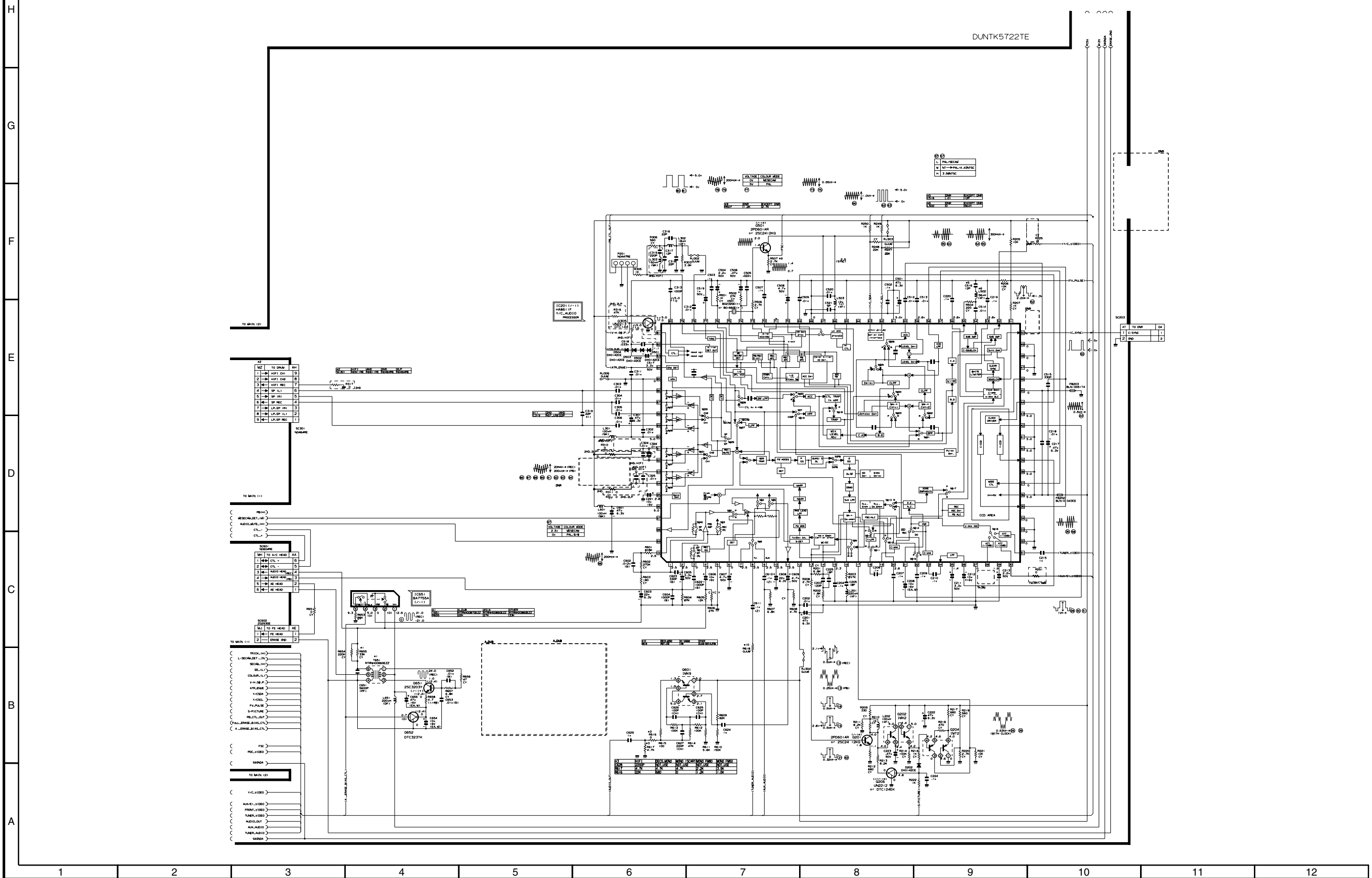
H
G
F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10 11 12

MAIN CIRCUIT (2)



MAIN CIRCUIT (3)



DUNT5722TE

SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:

BE SURE TO USE GENUINE PARTS FOR SECURING THE SAFETY AND RELIABILITY OF THE SET.

PARTS MARKED WITH "⚠" AND PARTS SHADED (IN BLACK) ARE ESPECIALLY IMPORTANT FOR MAINTAINING THE SAFETY AND PROTECTING ABILITY OF THE SET. BE SURE TO REPLACE THEM WITH PARTS OF SPECIFIED PART NUMBER

SAFETY NOTES:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

NOTE:

1. The unit of resistance "ohm" is omitted (K: 1000 ohms M: 1 Meg ohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. The unit capacitance "F" is omitted ($\mu = \mu\text{F}$, p= μF).
4. The values in parentheses are the ones in the PB mode: the values without parentheses are the ones in the REC mode.

VOLTAGE MEASUREMENT CONDITIONS:

1. DC voltages are measured between points indicated and chassis ground by VTVM, with AC230V/50Hz supplied to unit and all controls are set to normal viewing picture unless otherwise noted.
2. Voltages are measured with 10000 μV B & W or colour noted.

WAVEFORM MEASUREMENT CONDITIONS:

10000 μV 87.5 percent modulated colour bar signal id fed into tuner.

CAUTION:

This circuit diagram is original one. Therefore there may be a slight difference from yours

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"

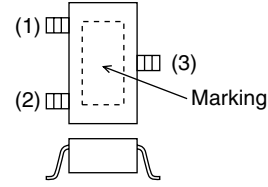
Contact your nearest SHARP Parts Distributor.
For location of SHARP Parts Distributor.
Call SHARP Manchester on (0161) 205 7531

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

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

MARK ★: SPARE PARTS-DELIVERY SECTION

HOW TO IDENTIFY CHIP TRANSISTORS AND DIODES BY ITS MARKING



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

Fig. 1

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	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
MAIN UNIT	DUNTK5522TEV2	-	1	N/A	N/A	N/A	N/A	-	-
MAIN UNIT	DUNTK5722TEP3	-	N/A	1	N/A	N/A	N/A	-	-
MAIN UNIT	DUNTK5722TEP1	-	N/A	N/A	1	N/A	N/A	-	-
MAIN UNIT	DUNTK5722TEP2	-	N/A	N/A	N/A	1	N/A	-	-
MAIN UNIT	DUNTK5722TEP4	-	N/A	N/A	N/A	N/A	1	-	-

DUNTK5522TEV2 (VC-M321HM) DUNTK5722TEP3 (VC-M312HM)
DUNTK5722TEP1(VC-M302HM) DUNTK5722TEP2(VC-M302LM)
DUNTK5722TEP4 (VC-M312LM)

INTERGRATED CIRCUITS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICECODE	★
GI M-CON 96K V3	RH-IX1419UMN6	IC701	1	N/A	N/A	N/A	N/A	AZ	U
GI M-CON 80K V3	RH-IX1420UMN8	IC701	N/A	1	1	1	1	AZ	U
EEPROM 2K	VHISLA2402S-1	IC705	N/A	1	N/A	N/A	1	AF	U
EEPROM 16K	VHISLA2401S-1	IC705	N/A	N/A	1	1	N/A	AG	U
EEPROM 8K	VHISLA2408S-1	IC705	1	N/A	N/A	N/A	N/A	AF	U
AV SWITCHER IC FOR MONO	VHILA7148M/-1	IC2501	1	N/A	N/A	N/A	N/A	AL	U
VPS/PDC IC	VHISDA5650X1E	IC1801	1	N/A	N/A	N/A	N/A	AU	U

TRANSISTORS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICECODE	★
TRANSISTOR 2SD 1856	VS2SD1856// -1	Q9903	1	1	N/A	N/A	1	AG	J
CHIP TRANS 22K/22K NPN X 2 (8B)	VSUN2213///-1	Q1402	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PB709AR NPN	VS2PB709AR/-1	Q2903	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VSUN2211///-1	Q9803	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VSUN2211///-1	Q9904	1	1	N/A	N/A	1	AA	J
CHIP TRANS 2PD601AR PNP	VSUN2211///-1	Q9910	1	1	N/A	N/A	1	AA	J
CHIP TRANS PNP	VSUN2112///-1	Q9909	1	1	N/A	N/A	1	AA	J
CHIP TRANS 2PD601AR PNP	VS2PD601AR/-1	Q1803	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VS2PD601AR/-1	Q1804	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VS2PD601AR/-1	Q2801	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VS2PD601AR/-1	Q210	1	N/A	N/A	N/A	N/A	AA	J
CHIP TRANS 2PD601AR PNP	VS2PD601AR/-1	Q9704	1	N/A	N/A	N/A	N/A	AA	J

PARTS LIST CONT...

DIODES

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
DIODE	RH-DX0220CEZZ	D9905	N/A	1	1	1	1	AB	J
ZENER DIODE	RH-EX0809GEZZ	D2502	1	N/A	N/A	N/A	N/A	AA	J
ZENER DIODE	RH-EX0809GEZZ	D2903	1	N/A	N/A	N/A	N/A	AA	J
ZENER DIODE MTZ 20A	RH-EX0654GEZZ	D9904	1	1	N/A	N/A	1	AA	J
DIODE Vrrrm 100V	VHDERB3201-1E	D9903	1	1	N/A	N/A	1	AC	J
SWITCH DIODE 15DFIN	VHD15DF1FC/1E	D9603	1	1	N/A	N/A	1	AC	J
DIODE	VHD1SS119//--1	D1802	1	N/A	N/A	N/A	N/A	AB	J
DIODE	VHD1SS119//--1	D1803	1	N/A	N/A	N/A	N/A	AB	J
DIODE	VHD1SS119//--1	D9702	1	N/A	N/A	N/A	N/A	AB	J
DIODE	VHD1SS119//--1	D9802	1	N/A	N/A	N/A	N/A	AB	J
DIODE	VHD1SS119//--1	D504	N/A	1	1	1	1	AB	J
DIODE	VHDM152WK/-1	D1601	1	N/A	N/A	N/A	N/A	AB	J

COILS AND TRANSFORMERS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
PEAKING COIL 330UH 10%	VP-DF331K0000	L706	N/A	1	1	1	1	AA	J
PEAKING COIL 8.2UH 10%	VP-ZK8R2K0000	L1801	1	N/A	N/A	N/A	N/A	AB	J
PEAKING COIL 8.2UH 10%	VP-ZK8R2K0000	L1802	1	N/A	N/A	N/A	N/A	AB	J
PEAKING COIL 3.3UH 10%	VP-XF3R3K0000	L2504	1	N/A	N/A	N/A	N/A	AB	J
CHOKE COIL 10UH	RCLIP0171CEZZ	L9601	1	1	N/A	N/A	1	AE	J

CAPACITORS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
CHIP CAPACITOR 10PF/50V	VCCCCY1HH100D	C225	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 10PF/50V	VCCCCY1HH100D	C1633	1	1	1	N/A	N/A	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH180J	C225	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH180J	C1633	N/A	N/A	N/A	1	1	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH6R0D	C1613	1	1	1	N/A	N/A	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH8R0D	C1613	N/A	N/A	N/A	1	1	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH121J	C810	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH121J	C812	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 18PF/50V	VCCCCY1HH820J	C1624	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.022UF/50V	VCKYCY1HF223Z	C511	1	N/A	N/A	N/A	N/A	AB	J
CHIP CAPACITOR 0.0UF/50V	VCKYCY1HF103Z	C1631	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/50V	VCKYCY1HF103Z	C1635	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/50V	VCKYCY1HF103Z	C1642	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/50V	VCKYCY1HF103Z	C2521	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/50V	VCKYCY1HF103Z	C2525	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/50V	VCKYCY1HF103Z	C737	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.01UF/25V	VCKYCY1EF104Z	C1807	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1EF104Z	C1810	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1EF104K	C611	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1CB104K	C702	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1CB104K	C703	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1CB104K	C704	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.1UF/16V	VCKYCY1CB104K	C712	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.033UF/16V	VCKYCY1CB333K	C518	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.033UF/16V	VCKYCY1CB333K	C1805	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.033UF/16V	VCKYCY1CB333K	C1803	1	N/A	N/A	N/A	N/A	AA	J
CHIP CAPACITOR 0.022UF/25V	VCKYCY1EB223K	C1622	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.012UF/25V	VCKYCY1EB123K	C1625	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 0.012UF/25V	VCKYCY1EB123K	C1647	N/A	1	1	1	1	AA	J
CHIP CAPACITOR 1UF/16V	VCKYD41CF105Z	C624	N/A	1	1	1	1	AC	J
CHIP CAPACITOR 1UF/16V	VCKYD41CF105Z	C2501	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 1UF/16V	VCKYD41CF105Z	C2503	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 0.012UF/25V	VCKYCY1EB103K	C1647	N/A	1	1	1	1	AC	J
CHIP CAPACITOR 1UF/10V	VCKYCY1AF105Z	C2505	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 1UF/10V	VCKYCY1AF105Z	C2507	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 1UF/10V	VCKYCY1AF105Z	C2509	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 1UF/10V	VCKYCY1AF105Z	C624	1	N/A	N/A	N/A	N/A	AC	J
CHIP CAPACITOR 1UF/10V	VCKYCY1AF105Z	C1645	N/A	1	1	1	1	AC	J
CERAMIC CAPACITOR 0.01UF/16V	VCKYD41CY103N	C737	N/A	1	1	1	1	AA	J
CERAMIC CAPACITOR 0.01UF/16V	VCKYD41CY103N	C1631	N/A	1	1	1	1	AA	J
CERAMIC CAPACITOR 0.01UF/16V	VCKYD41CY103N	C1635	N/A	1	1	1	1	AA	J
CERAMIC CAPACITOR 0.0047UF/16V	VCKYD41CX472N	C1809	1	N/A	N/A	N/A	N/A	AA	J
CERAMIC CAPACITOR 220PF/50V	VCKYD41HB221K	RJ516	N/A	1	1	1	1	AA	J
CERAMIC CAPACITOR 150PF/50V	VCCSPA1HL151J	C1806	1	N/A	N/A	N/A	N/A	AA	J
FILM CAPACITOR 0.0022UF 50V	VCQYTA1HM222J	C1804	1	N/A	N/A	N/A	N/A	AA	J
ELECTROLYTIC CAPACITOR 100UF/10V	VCEAEM1AW107M	C2523	1	N/A	N/A	1	1	AC	J
ELECTROLYTIC CAPACITOR 4.7UF/50V	VCEAEM1HW475M	C510	1	N/A	N/A	N/A	N/A	AA	J
ELECTROLYTIC CAPACITOR 220UF/6.3V	VCEAEM0JW227M	C745	1	N/A	N/A	N/A	N/A	AA	J
ELECTROLYTIC CAPACITOR 220UF/6.3V	VCEAEM0JW227M	C773	1	N/A	N/A	N/A	N/A	AA	J
ELECTROLYTIC CAPACITOR 220UF/6.3V	VCEAEM0JW227M	C413	N/A	1	1	1	1	AA	J
ELECTROLYTIC CAPACITOR 220UF/6.3V	VCEAEM0JW227M	C1413	N/A	1	1	1	1	AA	J
ELECTROLYTIC CAPACITOR 47UF/6.3V	VCEAEM1VW477M	C9605	1	1	N/A	N/A	1	AB	J
ELECTROLYTIC CAPACITOR 47UF/6.3V	VCEAEM0JW476M	C745	1	N/A	N/A	N/A	N/A	AB	J
ELECTROLYTIC CAPACITOR 47UF/6.3V	VCEAEM0JW476M	C1808	1	N/A	N/A	N/A	N/A	AB	J
ELECTROLYTIC CAPACITOR 47UF/6.3V	VCEAEM1VW476M	C1634	1	1	N/A	N/A	1	AB	J
ELECTROLYTIC CAPACITOR 33UF/16V	VCEAEM1CW336M	C1648	N/A	1	1	1	1	AA	J
ELECTROLYTIC CAPACITOR 1UF/50V	VCEAEM1HW105M	C2518	N/A	1	1	1	1	AA	J
ELECTROLYTIC CAPACITOR 1UF/50V	VCEAEM1HW105M	C9702	N/A	1	1	1	1	AA	J
ELECTROLYTIC CAPACITOR 10UF/50V	VCEAEM1HW106M	C9903	1	1	N/A	N/A	1	AA	J
ELECTROLYTIC CAPACITOR 47UF/6.3V	VCEAEM1CW106M	C2803	1	N/A	N/A	N/A	N/A	AB	J
ELECTROLYTIC CAPACITOR 10UF/16V	VCEAEM1CW106M	C2805	1	N/A	N/A	N/A	N/A	AA	J
ELECTROLYTIC CAPACITOR 100UF/10V	VCEAEM0JW107M	C773	1	N/A	N/A	N/A	N/A	AB	J
ELECTROLYTIC CAPACITOR 100UF/10V	VCEAEM1CW107M	C2520	1	N/A	N/A	N/A	N/A	AB	J

PARTS LIST CONT...

RESISTORS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
CHIP RESISTOR 2.7K-OHM	VRS-CY1JF272J	R244	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.7K-OHM	VRS-CY1JF272J	R245	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.7K-OHM	VRS-CY1JF272J	R9703	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R1602	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R2521	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R2522	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R2810	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	RJ105	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R225	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R1675	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	RJ1	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R2511	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R2815	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R251	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	RJ10	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	R616	N/A	1	1	1	1	AA	J
CHIP RESISTOR 0-OHM	VRS-CY1JF000J	RJ4	N/A	1	1	1	1	AA	J
CHIP RESISTOR 680-OHM	VRS-CY1JF681J	R616	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 150K-OHM	VRS-CY1JF151J	R755	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESIS120-OHM	VRS-CY1JF122J	R815	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 22K-OHM	VRS-CY1JF223J	R2530	N/A	1	1	1	1	AA	J
CHIP RESISTOR 1.5K-OHM	VRS-CY1JF152J	R813	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 4.7K-OHM	VRS-CY1JF474J	R1502	N/A	1	1	1	1	AA	J
CHIP RESISTOR 5.6K-OHM	VRS-CY1JF562J	R1631	N/A	1	1	1	1	AA	J
CHIP RESISTOR 220K-OHM	VRS-CY1JF224J	R1674	N/A	1	1	1	1	AA	J
CHIP RESISTOR 100.OHM	VRS-CY1JF101J	R1820	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 100.OHM	VRS-CY1JF101J	R2516	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 6.8K-OHM	VRS-CY1JF682J	R1808	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 6.8K-OHM	VRS-CY1JF682J	R1810	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 100K-OHM	VRS-CY1JF104J	R1814	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 100K-OHM	VRS-CY1JF104J	R1819	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 10K-OHM	VRS-CY1JF103J	R2503	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 10K-OHM	VRS-CY1JF103J	R2504	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 330-OHM	VRS-CY1JF331J	R1644	N/A	1	1	1	1	AA	J
CHIP RESISTOR 330-OHM	VRS-CY1JF331J	R2801	N/A	1	1	1	1	AA	J
CHIP RESISTOR 75-OHM	VRS-CY1JF750J	R2515	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 75-OHM	VRS-CY1JF750J	R2804	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.2K-OHM	VRS-CY1JF222J	R1815	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.2K-OHM	VRS-CY1JF222J	R246	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.2K-OHM	VRS-CY1JF222J	R1646	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 2.2K-OHM	VRS-CY1JF222J	R2825	N/A	N/A	N/A	1	1	AA	J
CHIP RESISTOR 27K-OHM	VRS-CY1JF271J	R1644	1	1	1	N/A	N/A	AA	J
CHIP RESISTOR 4.7K-OHM	VRS-CY1JF472J	R1631	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 4.7K-OHM	VRS-CY1JF472J	R2902	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 4.7K-OHM	VRS-CY1JF472J	R503	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 15K-OHM	VRS-CY1JF153J	R2906	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 18K-OHM	VRS-CY1JF183J	R2905	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 18K-OHM	VRS-CY1JF183J	R9702	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 27K-OHM	VRS-CY1JF273J	R2531	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 27K-OHM	VRS-CY1JF273J	R2903	1	1	N/A	N/A	1	AA	J
CHIP RESISTOR 3.3K-OHM	VRS-CY1JF332J	R9802	1	N/A	N/A	N/A	N/A	AA	J
CHIP RESISTOR 3.3K-OHM	VRS-CY1JF392J	R1632	N/A	N/A	N/A	1	1	AA	J
CHIP RESISTOR 3.3K-OHM	VRS-CY1JF392J	R1645	N/A	1	1	1	1	AA	J
CHIP RESISTOR 3.3K-OHM	VRS-CY1JF332J	R1621	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 10K-OHM 1/8-W	VRD-RA2BE103J	R712	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 10K-OHM 1/8-W	VRD-RA2BE103J	R1816	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 120-OHM	VRD-RA2BE121J	R767	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 1.5K-OHM 1/8-W	VRD-RA2BE152J	R813	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 102K-OHM 1/8-W	VRD-RA2BE122J	R815	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 6.8-OHM 1/8-W	VRD-RA2BE682J	R1404	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 3.9-OHM 1/8-W	VRD-RA2BE392J	R1404	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 220K-OHM 1/8-W	VRD-RA2BE224J	R1501	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 470K-OHM 1/8-W	VRD-RA2BE474J	R1619	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 3.3K-OHM 1/8-W	VRD-RA2BE332J	R1621	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 1K-OHM 1/8-W	VRD-RA2BE102J	R1670	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 560-OHM 1/8-W	VRD-RA2BE561J	R1672	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 560-OHM 1/8-W	VRD-RA2BE561J	R2821	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 560-OHM 1/8-W	VRD-RA2BE561J	R2822	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 470-OHM 1/8-W	VRD-RA2BE471J	R2802	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 820-OHM 1/8-W	VRD-RA2BE821J	R2808	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 820-OHM 1/8-W	VRD-RA2BE821J	R2903	1	N/A	N/A	N/A	N/A	AA	J
AXIAL RESISTOR 4.7K-OHM 1/4-W	VRD-RA2EE472J	R9904	1	1	N/A	N/A	1	AA	J
AXIAL RESISTOR 150-OHM 1/4-W	VRD-RA2EE151J	R9908	N/A	1	1	1	1	AA	J
AXIAL RESISTOR 330-OHM 1/4-W	VRD-RA2EE331J	R9908	1	N/A	N/A	N/A	N/A	AA	J

TUNERS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
TUNER	VTUATMCB1-102	TU1551	N/A	1	1	N/A	N/A	BB	U
TUNER	VTUATMCG1-401	TU1551	N/A	N/A	N/A	1	1	BD	U

OPERATE PWB PARTS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
SWITCH	QSW-K0097GEZZ	SW886	N/A	1	1	1	1	AB	U
SWITCH	QSW-K0097GEZZ	SW887	N/A	1	1	1	1	AB	U
SHUTTLE SWITCH	QSW-Z0001AJZZ	SW881	1	N/A	N/A	N/A	N/A	AN	U

PARTS LIST CONT...

MISCELLANEOUS PARTS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
W-RGB SOCKET 42 PIN	QSOCZ4297UMZZ	SC2501	1	N/A	N/A	N/A	N/A	AH	U
RGB SOCKET 21 PIN	QSOCZ2195UMZZ	SC2502	N/A	1	1	1	1	AE	U
BALUN	RBLN-0077TAZZ	FB2802	1	N/A	N/A	N/A	N/A	AM	J
BALUN	RBLN-0077TAZZ	FB2806	1	N/A	N/A	N/A	N/A	AM	J

MECHANICAL PARTS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
TOP CABINET MET	CCABA3116TEV2	600	-	1	1	1	1	AT	U
TOP CAB SCREW -G	LX-HZ3097GEFF	609	-	N/A	4	4	4	AA	U
AUTO HEAD CLEANER	CLEVP0287AJZZ	26	-	N/A	N/A	N/A	N/A	AD	U

FRONT PANEL PARTS

DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
PANEL COMPLETE	CPNLC2584TEV1	501	-	N/A	1	1	N/A	AX	U
PANEL COMPLETE	CPNLC2585TEV1	501	-	1	N/A	N/A	1	AX	U
STANDBY BUTTON	JBTN-2872UMSB	501-8	-	1	1	1	1	AE	U
MENU/SET BUTTON C-PNL	JBTN-2873UMSA	501-6	-	1	1	1	1	AC	U
CH/REC BUTTON	JBTN-2874UMSB	501-5	-	1	1	1	1	AE	U
FRONT PANEL	HPNLC2585UMSA	501-1	-	1	N/A	N/A	1	AM	U
FRONT PANEL	HPNLC2584UMSA	501-1	-	N/A	1	1	N/A	AM	U
DEC WINDOW C PNL G2	HDECQ2035UMSA	501-4	-	1	1	1	1	AH	U
CASSETTE FLAP	HDECQ2031UMSA	501-3	-	1	1	1	1	AE	U
SHARP BADGE EP3 7 MAL	HBDGB1008AJSA	501-2	-	1	1	1	1	AD	U
BUTTON ASSY	CBTN-2961TEV2		-	1	1	1	1	AF	U
BUTTON HOLDER	LHLDZ2066AJZZ	503	-	1	1	1	1	AH	U
PLAY/STOP BUTTON	JBTN-2961AJSC	502	-	1	1	1	1	AH	U
CASSETTE SPRING	MSPRD0103AJFJ		-	1	1	1	1	AD	U

SUPPLIED ACCESSORIES

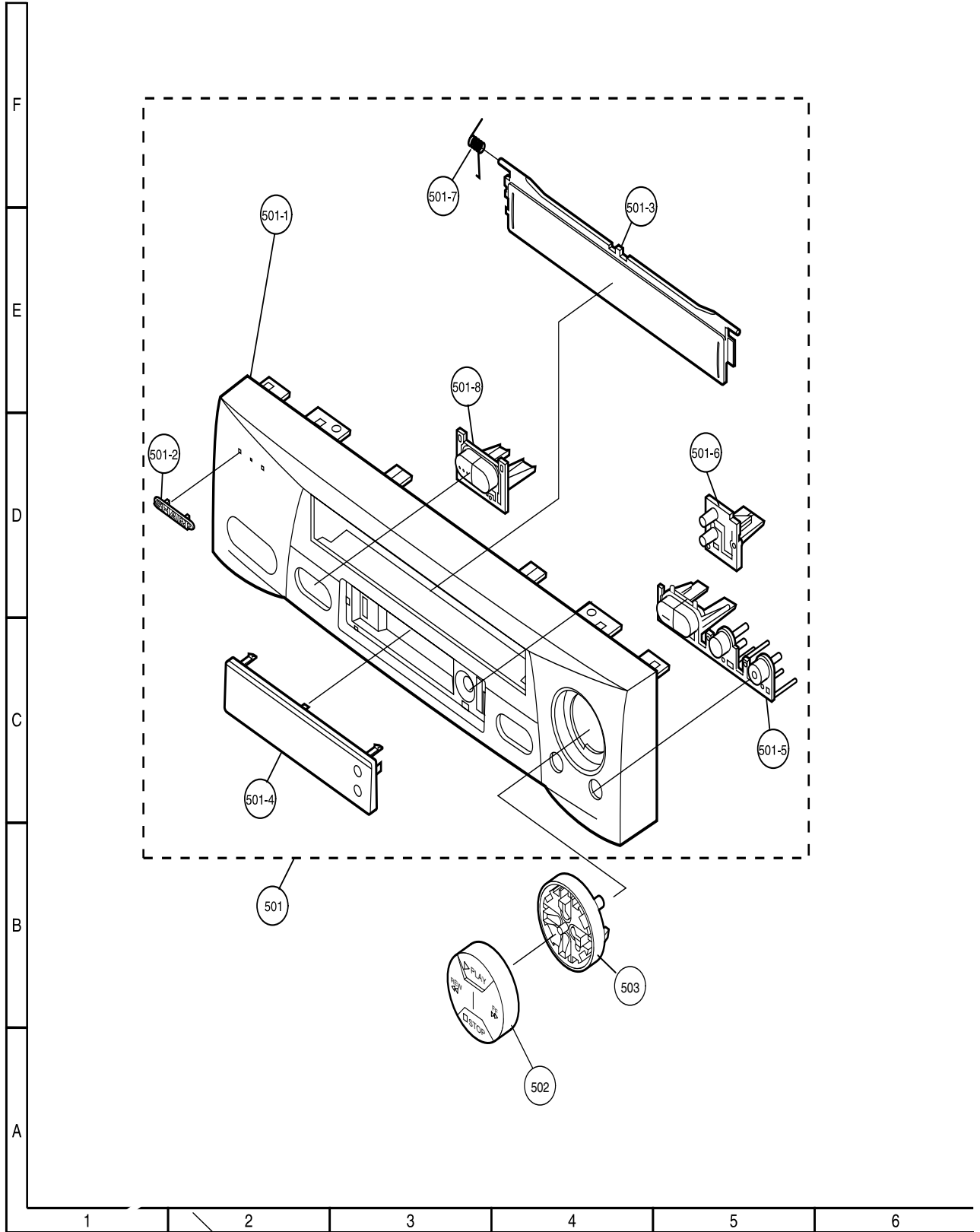
DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
INSTRUCTION MANUAL	TINS-3559UMZZ	-	-	N/A	1	1	N/A	AM	U
INSTRUCTION MANUAL	TINS-3560UMZZ	-	-	1	N/A	N/A	1	AM	U
REMOTE CONTROL	RRMCG0247AJSA	-	-	1	1	1	1	AQ	U

NOT A REPLACEABLE ITEM

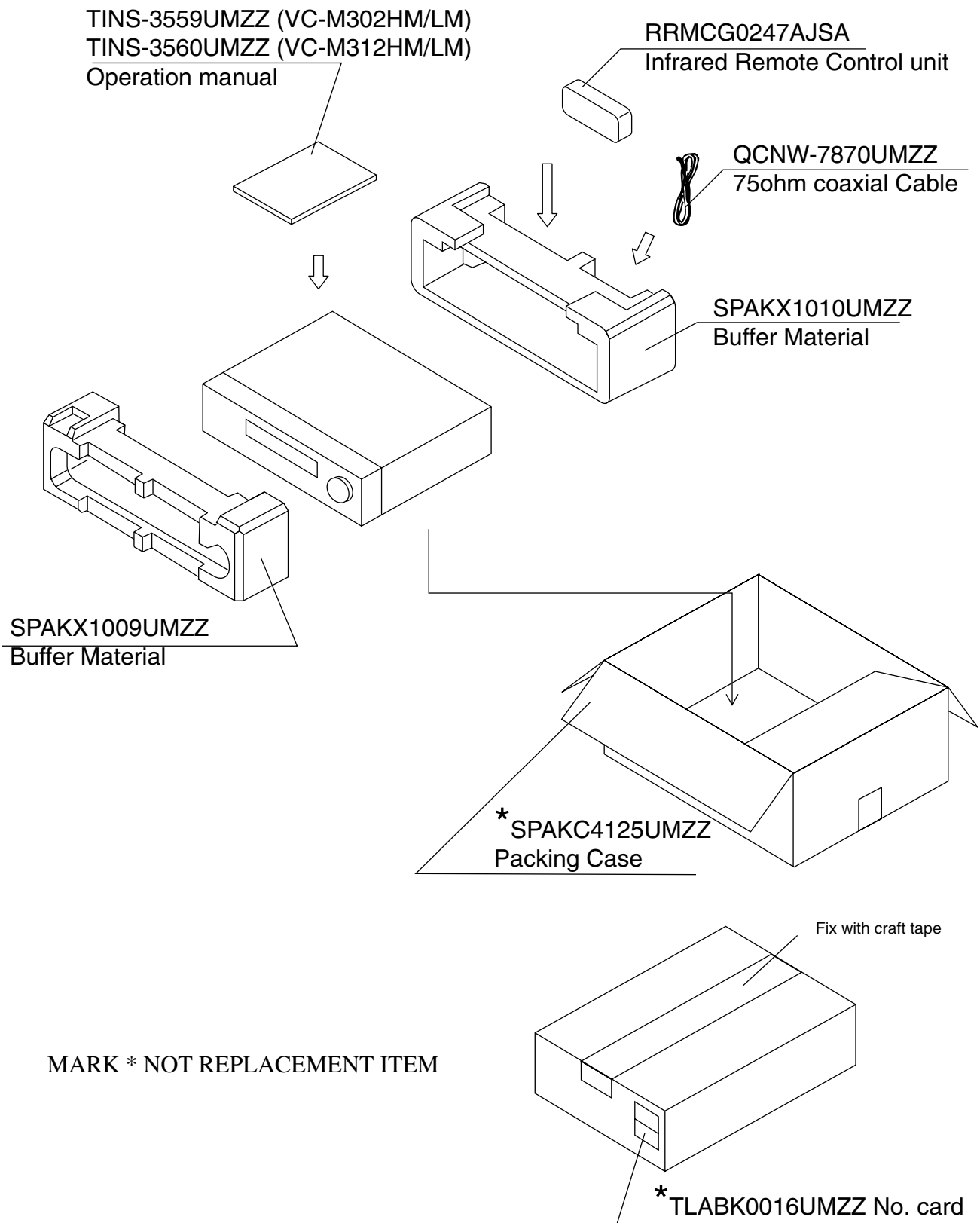
DESCRIPTION	PART CODE	REF. NO	321HM	312HM	302HM	302LM	312LM	PRICE CODE	★
PACKING CASE	CPAKC4125UMZZ	-	-	N/A	1	1	1	-	-
PACKING ASSY BACK	SPAKX1010UMZZ	-	-	N/A	1	1	1	-	-
PACKING ASSY FRONT	SPAKX1009UMZZ	-	-	N/A	1	1	1	-	-
LABEL ASSY	TLABK0015UMZZ	-	-	N/A	1	1	1	-	-

REF No WHICH HAS A (-) PLEASE REFER TO SERVICE MANUAL VC-M321HM

FRONT PANEL ASSEMBLY



PACKING OF THE SET



SHARP®