

13.5. REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:


13.5.1. REPLACEMENT NOTES

13.5.1.1. General Notes

1. Use only original replacement parts:

To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. IMPORTANT SAFETY NOTICE

Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.

13.5.1.2. Electrical Replacement Notes

1. Item numbers with capital letter E (Example: E1, E2,...) in the Ref. No. column are shown in the exploded views.
2. The parts with "■" mark are supplied as an unit, and their individual parts are also supplied separately.
3. Unless otherwise specified;
 - All resistors are in Ω , 1/4 W, $\pm 5\%$, carbon, K = 1 000 Ω , M = 1 000 k Ω .
 - All capacitors are in μF , P = $\mu\mu\text{F}$, $\pm 10\%$.
 - All coils are in μH , M = 1 000 μH , $\pm 10\%$.
4. Abbreviation
 - RTL: Retention Time Limited
 - This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
 - NR: Non Repairable Board Ass'y
 - MGF CHIP: Metal Glaze Film Chip
 - C CHIP: Ceramic Chip
 - COMPLX CMP: Complex Component
 - W FLMPRF: Wirewound Flameproof
 - C.B.A.: Circuit Board Assembly
 - P.C.B.: Printed Circuit Board
 - E.S.D.: Electrostatically Sensitive Devices
5. SERVICE OF CHIP PARTS
 - When servicing chip parts, please use a soldering iron of less than 30 watts. Refer to "IC, TRANSISTOR AND CHIP PART INFORMATION" page.
6. The parts with "●" are 0 Ω resistor. When replacing, a wire can be substituted for a 0 Ω resistor.
7. Since the UHF/VHF TUNER/TV DEMODULATOR UNIT (Ref. No. E82) has already been pre-adjusted at the factory, do not try to adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT. The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.

13.5.2. MECHANICAL REPLACEMENT PARTS LIST

13.5.2.1. MECHANISM PARTS ON CHASSIS

Ref. No.	Part No.	Part Name & Description	Remarks
384	LSSQ0220	ROD ANTENNA	
385	LSKM0405	TUNER TOP CASE,ABS RESIN	
386	LSGU0122	TUNER OPERATION BUTTON	
387	VGW0183	EIS BUTTON	
388	LSKA0013	TUNER SHEET	
391	LSKM0257	TUNER BOTTOM CASE,ABS RESIN	
392	VGQ4456	LOCK KNOB	
393	VMB3131	COIL SPRING	
394	LSKA0010	RUBBER FOOT	
395	LSMA0412	TUNER TRIPOD FRAME	

13.5.2.2. SCREWS AND WASHERS

Ref. No.	Part No.	Part Name & Description	Remarks
404	XQN2+BF3FXK	SCREW,STEEL	
620	XQN2+BJ6FXK	SCREW,STEEL	
641	XUC5VW	E-RING	

13.5.3. ELECTRICAL REPLACEMENT PARTS LIST

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E81	LSEQ0566	TV TUNER C.B.A.	■ E.S.D. RTL

13.5.3.1. TV TUNER C.B.A. ■

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC7101	NJM2380AFTE1	IC, LINEAR SHUNT REGULATOR	
IC7201	D789124AM503	IC, 16BIT MICROCONTROLLER	E.S.D.
IC7202	R3111Q391ATR	IC, LINEAR RESET	
	OR S80839ANNPT2	IC, LINEAR RESET	
	OR XC61CN3902NR	IC, LINEAR RESET	
IC7204	LC74723M9629	IC, LOGIC CHARACTER GENERATOR	E.S.D.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q7001	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q7002	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q7101	DTC124EU	CHIP	
	OR UN5212	CHIP	
Q7102	DTA124EU	CHIP	
	OR UN5112	CHIP	
Q7103	DTC124EU	CHIP	
	OR UN5212	CHIP	
Q7104	2SD1328	CHIP	
	OR 2SD2436	CHIP	
Q7105	2SD1328	CHIP	
	OR 2SD2436	CHIP	
Q7106	2SD1119	CHIP	△
	OR 2SD2150T100R	CHIP	△
Q7107	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
Q7108	2SC2412K1	CHIP	
	OR 2SD601A	CHIP	
Q7109	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q7201	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D7001	RD12S-T1B	ZENER CHIP 12V	
D7002	RD12S-T1B	ZENER CHIP 12V	
D7003	RD12S-T1B	ZENER CHIP 12V	
D7101	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D7103	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D7104	RD12S-T1B	ZENER CHIP 12V	
D7105	EP10QY03TE8L	CHIP	
D7106	MA188	CHIP	
D7107	MA8240-HTX	ZENER CHIP 24V	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R7007	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7008	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R7009	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R7010	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R7011	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R7012	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R7014	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R7015	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R7017	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R7018	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7019	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7029	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R7102	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R7103	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7105	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7106	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R7108	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R7109	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R7110	ERJ8GEYJ221V	MGF CHIP 1/8W 220	
R7111	ERJ8GEYJ221V	MGF CHIP 1/8W 220	
R7112	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7113	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R7114	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R7115	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R7116	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R7117	VRJSD6D4702	MGF CHIP +-0.5% 1/10W 47K	
R7118	VRJSD6D3902	MGF CHIP +-0.5% 1/10W 39K	
R7119	VRJSD6D5601	MGF CHIP +-0.5% 1/10W 5.6K	
R7121	ERJ8GEYJ101V	MGF CHIP 1/8W 100	
R7122	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R7123	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7124	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7125	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7201	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7203	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R7204	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7205	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7206	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7207	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7208	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7209	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7210	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7211	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7212	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7213	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7214	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7215	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7220	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R7221	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7222	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7223	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7224	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7229	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R7236	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7237	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R7239	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R7240	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C7001	ECEA0JKA221	ELECTROLYTIC 6.3V 220	
C7004	ECUVLH103ZFN	C CHIP +80%-20% 50V 0.01	
C7005	ECUVLH103ZFN	C CHIP +80%-20% 50V 0.01	
C7015	ECEA1HKA4R7	ELECTROLYTIC 50V 4.7	
C7101	ECEA1CKA220	ELECTROLYTIC 16V 22	
C7102	ECUVLH102KBN	C CHIP 50V 1000P	
C7103	EEAFC1C470H	ELECTROLYTIC 16V 47	
C7104	VCUSQFC475MB	C CHIP +-20% 16V 4.7	
C7105	ECEA1HKA010	ELECTROLYTIC 50V 1	
C7106	ECUVLH153KBN	C CHIP 50V 0.015	
C7107	ECUVLH104KBN	C CHIP 50V 0.1	
C7108	ECUV1C105ZFM	C CHIP +80%-20% 16V 1	
C7109	VCUSQAH224KB	C CHIP 50V 0.22	
C7110	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3	
C7111	EEAFC0J101H	ELECTROLYTIC 6.3V 100	
C7112	ECUVLH104ZFN	C CHIP +80%-20% 50V 0.1	
C7113	ECEA0JKA470	ELECTROLYTIC 6.3V 47	
C7114	ECUV1A105KBN	C CHIP 10V 1	
C7115	ECUVLH472KBN	C CHIP 50V 4700P	
C7117	ECUV1H222KBN	C CHIP 50V 2200P	
C7118	ECUVLH104ZFN	C CHIP +80%-20% 50V 0.1	
C7201	ECUVLH104ZFN	C CHIP +80%-20% 50V 0.1	
C7204	ECUV1H104ZFN	C CHIP +80%-20% 50V 0.1	
C7205	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C7207	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C7208	ECUV1H121JCN	C CHIP +-5% 50V 120P	
C7210	ECEA0JKA470	ELECTROLYTIC 6.3V 47	
C7211	ECUV1H180JCN	C CHIP +-5% 50V 18P	
C7212	ECUV1H220JCN	C CHIP +-5% 50V 22P	
C7213	ECUV1H220JCN	C CHIP +-5% 50V 22P	
C7214	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C7215	ECUVLH103ZFN	C CHIP +80%-20% 50V 0.01	

FILTERS

Ref. No.	Part No.	Part Name & Description	Remarks
FL7001	ELB4E041B		

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L7001	ELESN100KA	10	
L7101	VLQSAB7D220K	22	
L7102	ELESN101KA	100	
L7103	ELESN470KA	47	
L7104	VLQSAB7D220K	22	
L7201	LSLJGLA180KF	CHIP 18	
L7202	BK2125HM102	FERRITE CORE 1K	
L7203	BK2125HM102	FERRITE CORE 1K	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X7201	EF0EC7164T4		

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW7201	EVQ23404M	PUSH SWITCH	
SW7202	EVQ23404M	PUSH SWITCH	
SW7203	EVQ23404M	PUSH SWITCH	

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T7103	LSTP0093		

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
J1	LSEK0362	LUG TERMINAL ASS'Y	
E83	LSEK0378	TV TUNER CABLE W/PLUG	

13.5.3.2. ELECTRICAL PARTS LOCATED ON CHASSIS

Ref. No.	Part No.	Part Name & Description	Remarks
E82	ENG36705G	TUNER, UHF/VHF NR	E.S.D.
E84	LSSC0338	TUNER SHIELD CASE A,STEEL	
E85	LSSC0339	TUNER SHIELD CASE B,STEEL	

13.5.3.3. SUMMARY OF "E" ITEM NUMBERS

REFER TO ELECTRICAL PARTS LIST FOR MODEL INFORMATION

Ref. No.	Part No.	Part Name & Description	Remarks
E81	LSEQ0566	TV TUNER C.B.A.	RTL
E82	ENG36705G	TUNER, UHF/VHF NR	
E83	LSEK0378	TV TUNER CABLE W/PLUG	
E84	LSSC0338	TUNER SHIELD CASE A,STEEL	
E85	LSSC0339	TUNER SHIELD CASE B,STEEL	