Service Manual

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AD0002037C2

Service Manual

Tuner/Amplifier

- SA-EH760

Colour

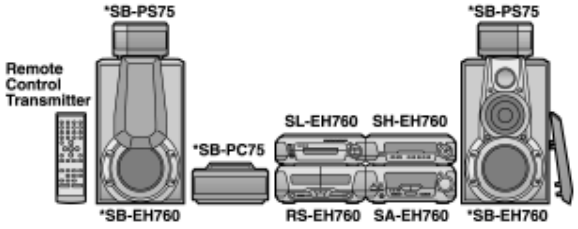
(S).....Silver Type

Areas

(E).....Europe.

(EB).....Great Britain.

(EG).....Germany, Italy, France, Netherlands and Denmark.



Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

System	SC-EH760
Sound Processor	SH-EH760
Tuner/Amplifier	**SA-EH760**
CD Changer	SL-EH760
Cassette Deck	RS-EH760
Front Speakers*	SB-EH760
Center Speaker*	SB-PC75
Surround Speakers*	SB-PS75

* : Made in Spain.

Specifications

Amplifier section

Power output (L/R both channel driven):

Stereo mode;		
DIN	**10 kHz, THD 1 % (High)**	2 × 20 W (6 Ω)
	1 kHz, THD 1 % (Mid)	2 × 20 W (6 Ω)
	100 Hz, THD 1 % (Low)	2 × 50 W (8 Ω)
RMS	**10 kHz, THD 10 % (High)**	2 × 30 W (6 Ω)
	1 kHz, THD 10 % (Mid)	2 × 30 W (6 Ω)
	100 Hz, THD 10 % (Low)	2 × 70 W (8 Ω)
PRO LOGIC mode:		
DIN FRONT	**1 kHz, THD 1 % /TTL Imp. (High/Mid);**	2 × 20 W (6 Ω)
	100 Hz, THD 1 % (Low);	2 × 50 W (8 Ω)
SURROUND	**1 kHz, THD 1 %;**	2 × 20 W (8 Ω)
CENTER	**1 kHz, THD 1 %;**	50 W (8 Ω)
RMS FRONT	**1 kHz, THD 10 % /TTL Imp. (High/Mid);**	2 × 30 W (6 Ω)
	100 Hz, THD 10 % (Low);	2 × 70 W (8 Ω)
SURROUND	**1 kHz, THD 10%;**	2 × 30 W (8 Ω)
CENTER	**1 kHz, THD 10 %;**	70 W (8 Ω)

PMPO 1 kHz: 3,000 W (High or Mid 6 Ω, Low, CENT., SURR. 8 Ω)

Total harmonic distortion:

Rated power at 1 kHz;	1 % (6 Ω)
Half power at 1 kHz;	0.1 % (6 Ω)

Load impedance:

FRONT	**(High/Mid);**	total impedance 6 Ω
	(Low);	8 Ω
SURROUND;		8 Ω
CENTER; 8 Ω		

S.WOOFER:

Center frequency;	70 Hz
LEVEL (VOL–20 dB):	MID +8 dB, MAX +12 dB

FM tuner section

Frequency range:	87.50 – 108.00 MHz (0.05 MHz steps)
Sensitivity:	1.8 µV (IHF usable)
S/N 26 dB:	1.5 µV
S/N (MONO):	70 dB (75 dB, IHF)
Antenna terminal(s):	75 Ω (unbalanced)

AM tuner section

Frequency range:	522 – 1629 kHz (9 kHz steps) 520 – 1630 kHz (10 kHz steps)
Sensitivity (S/N 20 dB):	500 µV/m

Timer section

Clock:	Quartz - lock type
Function:	Play timer (1 time, daily), Rec timer (1 time, daily), Sleep (120 min, 30 min intervals)
Setting intervals (Play/Rec):	1 minute – 23 hours 59 minutes (1 min intervals)

General

Power supply:	
(E), (EG) areas;	AC 230 V, 50 Hz
(EB) area;	AC 230 – 240 V, 50 Hz
Power consumption:	205 W
Standby;	
Normal mode	11 W
ECO mode	0.5 W
Dimensions (W×H×D):	293×118.5×346 mm
Mass:	5.3 kg

Notes: Specifications are subject to change without notice.
Mass and dimensions are approximate.
Total harmonic distortion is measured by the digital spectrum analyzer.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Before Repairs

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1. Turn off the power supply. Using a 10Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C703 and C702, C704) in order to discharge the voltage.

2. Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respectto supply voltage 230/240 V.

Power supply voltage	AC 230 V	AC 240 V
Consumed current 50 Hz	100 ~ 350 mA	

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2 Protection Circuitry

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The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The functions of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are shorted, or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedures outlined below.

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

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3 Accessories

TOP PREVIOUS NEXT

- AC power supply cord for (E),(EG) area/(RJA0019-X).....1 pc.

- AC power supply cord for (EB) area/(RJA0053-2X).....1 pc.

- AM loop antenna set/(RSA0022-J).....1 pc.

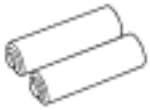
- FM indoor antenna/(RSA0007).....1 pc.

- Speaker cords/(REE0393).....2 pcs./(REE0984).....2 pcs./(REE0985).....2 pcs.

- Remote control transmitter/(RAK-EHA28WH).....1 pc.

- Remote control batteries/(R6/LR6,“AA”, UM-3).....2 pcs.

  Note: These are available on sales route.



- Antenna plug adaptor for (EB) area only/(SJP9009).....1 pc.

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4 Caution for AC Mains Lead

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(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

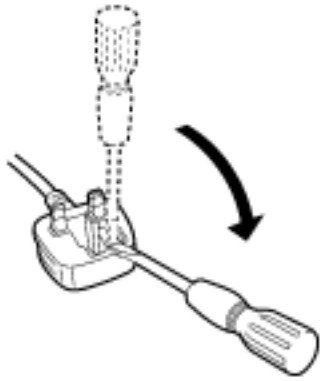
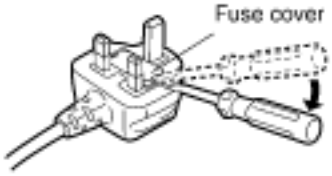


Figure B

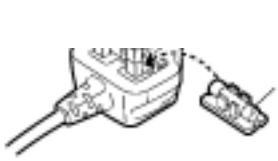


2. Replace the fuse and close or attach the fuse cover.

Figure A

Figure B

Brown or Red.



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5 Location of Controls

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TOP PREVIOUS NEXT

6 Operation Checks and Component Replacement/Procedures

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- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

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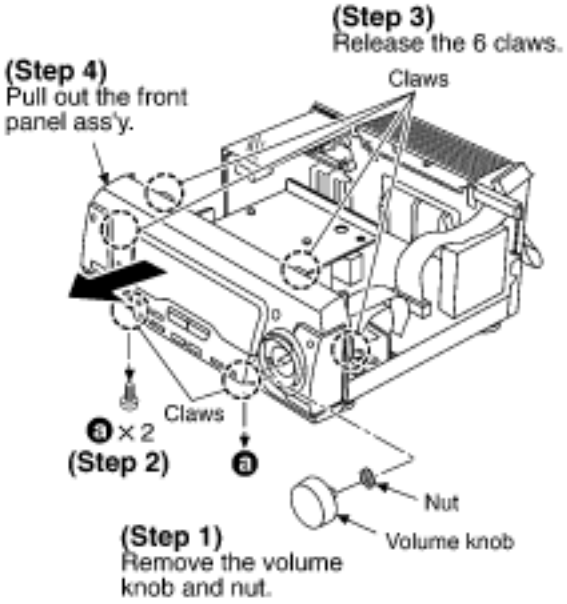
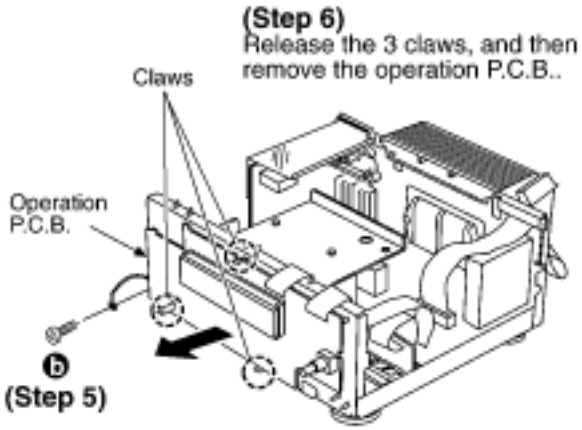
6.2 Checking for the operation P.C.B.

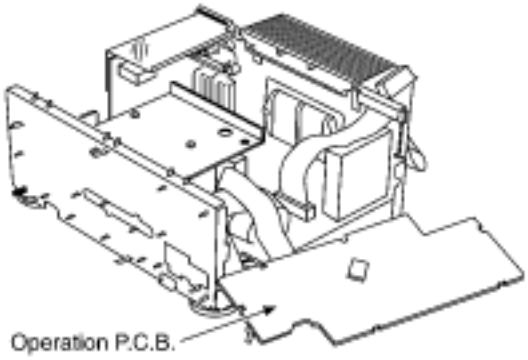
TOP PREVIOUS NEXT

- Follow the (Step 1) - (Step 3) of item 6.1.





- Check the operation P.C.B. as shown below.



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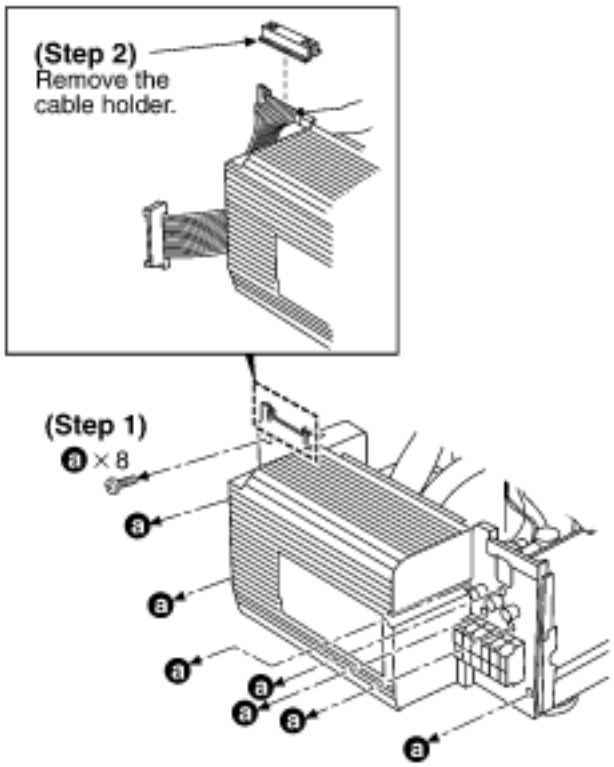
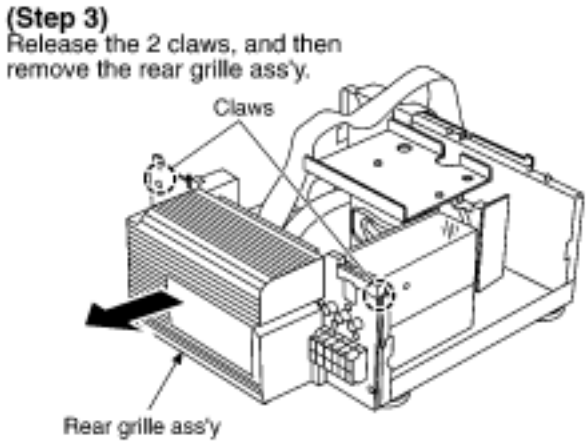
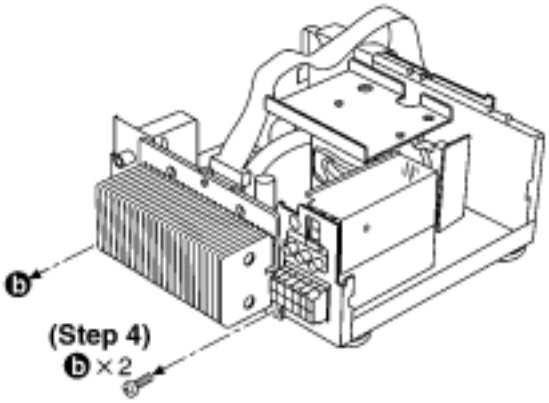
6.3 Checking for the main P.C.B.

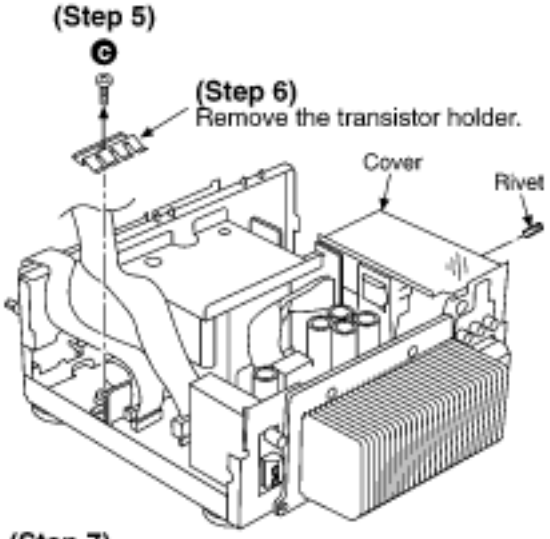
TOP PREVIOUS NEXT

- Follow the (Step 1) - (Step 3) of item 6.1.
- Follow the (Step 1) - (Step 6) of item 6.2.

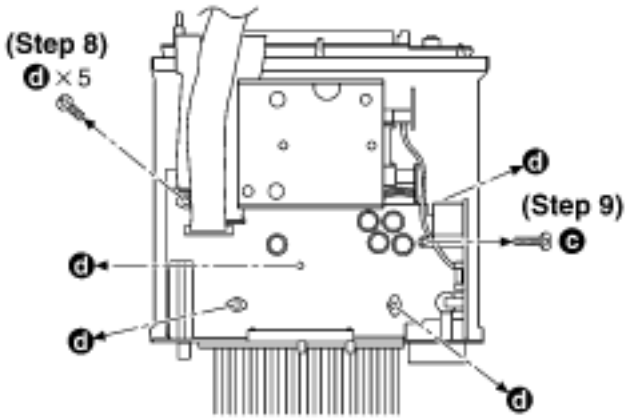


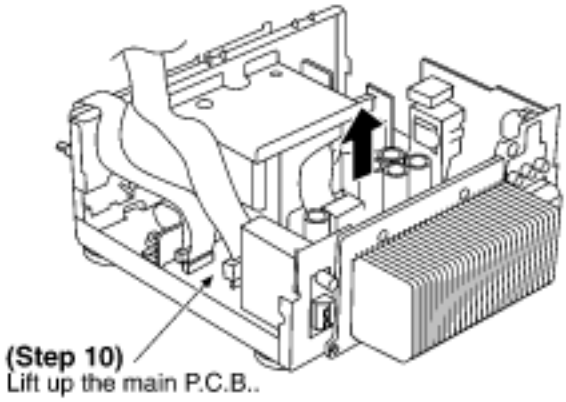




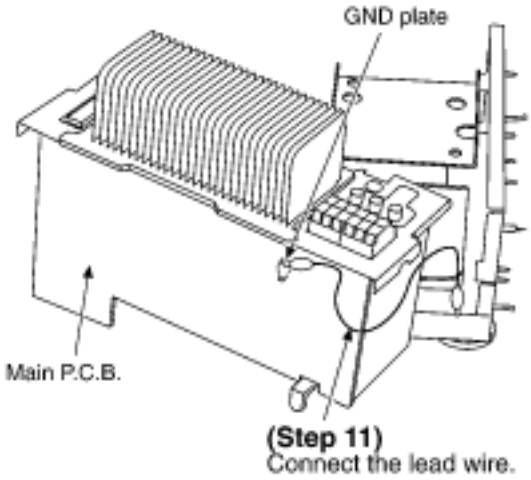


(Step 7)
Remove the rivet, and then remove the cover.





- Check the main P.C.B. as shown below.



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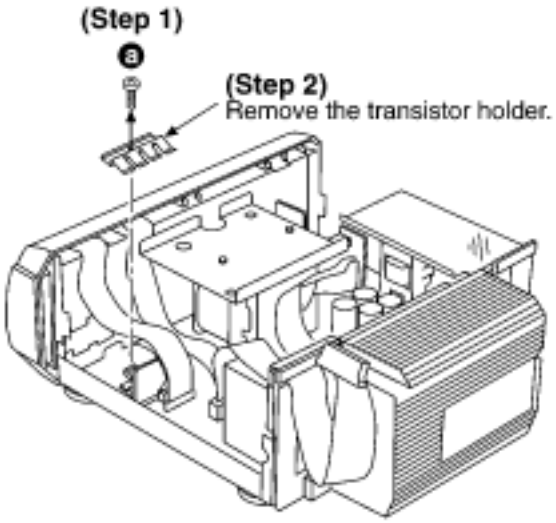
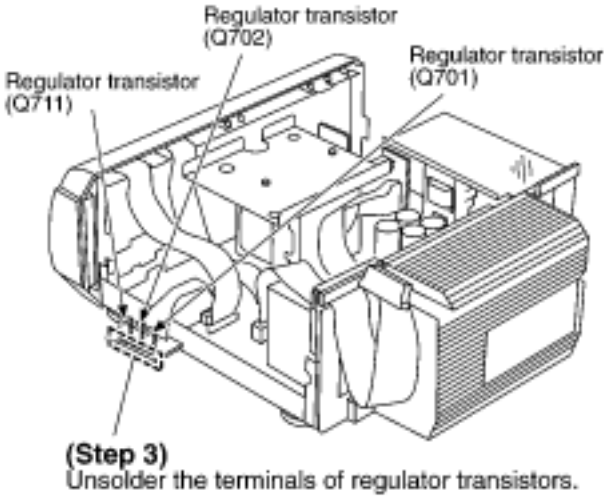
TOP PREVIOUS NEXT

6.4 Replacement for the regulator transistor

TOP PREVIOUS NEXT

- Follow the (Step 1) - (Step 3) of item 6.1.





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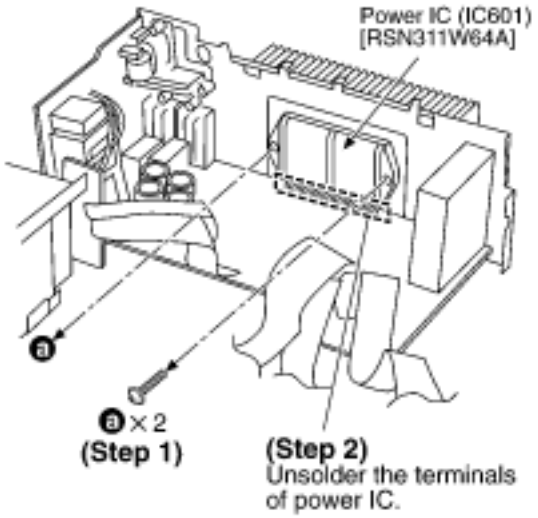
6.5 Replacement for the power IC

TOP PREVIOUS NEXT

- Follow the (Step 1) - (Step 3) of item 6.1.
- Follow the (Step 1) - (Step 6) of item 6.2.
- Follow the (Step 1) - (Step 10) of item 6.3.



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7 To Supply Power Source

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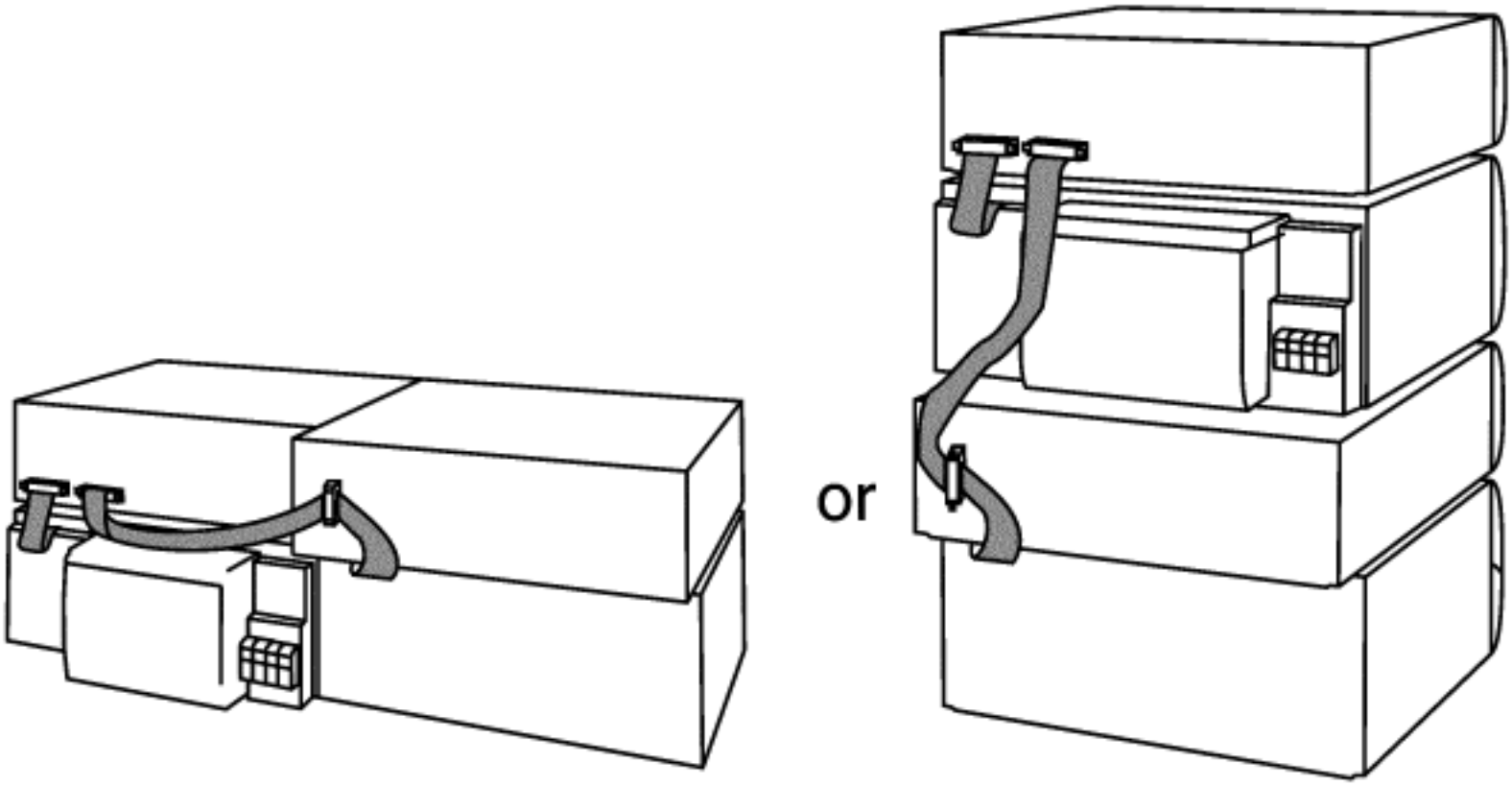
This unit SA-EH760 is designed to operate on power supplied form system connected./For system connection, refer to Fig. 7-1.

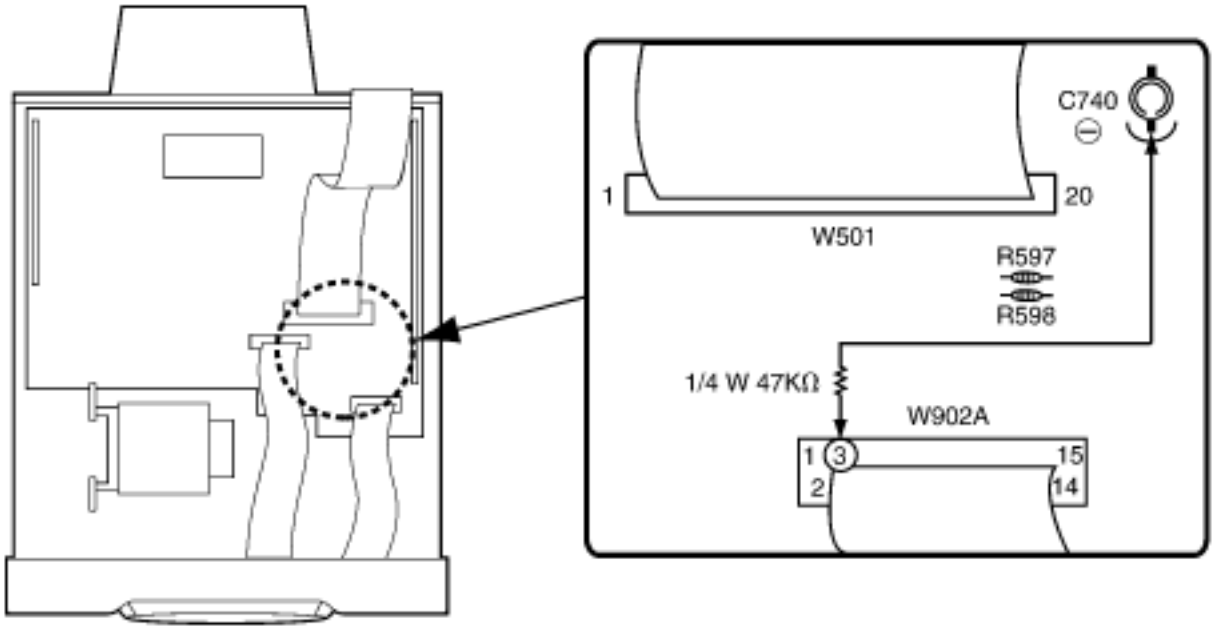
Fig. 7-1.



When the unit SA-EH760 has to test and service alone, use the following method to supply power source.

1. Short the section between W902A Pin 3 and C740 (-) (GND). (Refer to Fig. 7-2.)
2. Connect this unit to an AC power supply cord./(This unit come to stand-by mode.)
3. Turn the unit ON.

Fig. 7-2.



Notes:

Use only this method when checking the voltage etc../In case of checking the operations, use the system connections to supply power source.

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8 Self-Diagnostic Mode

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This unit is equipped with a self-diagnostic function which, in the event of a malfunction, automatically displays a code indicating the nature of the malfunction.

Use this self-diagnostic function when servicing the unit.

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8.1 To display the malfunction code

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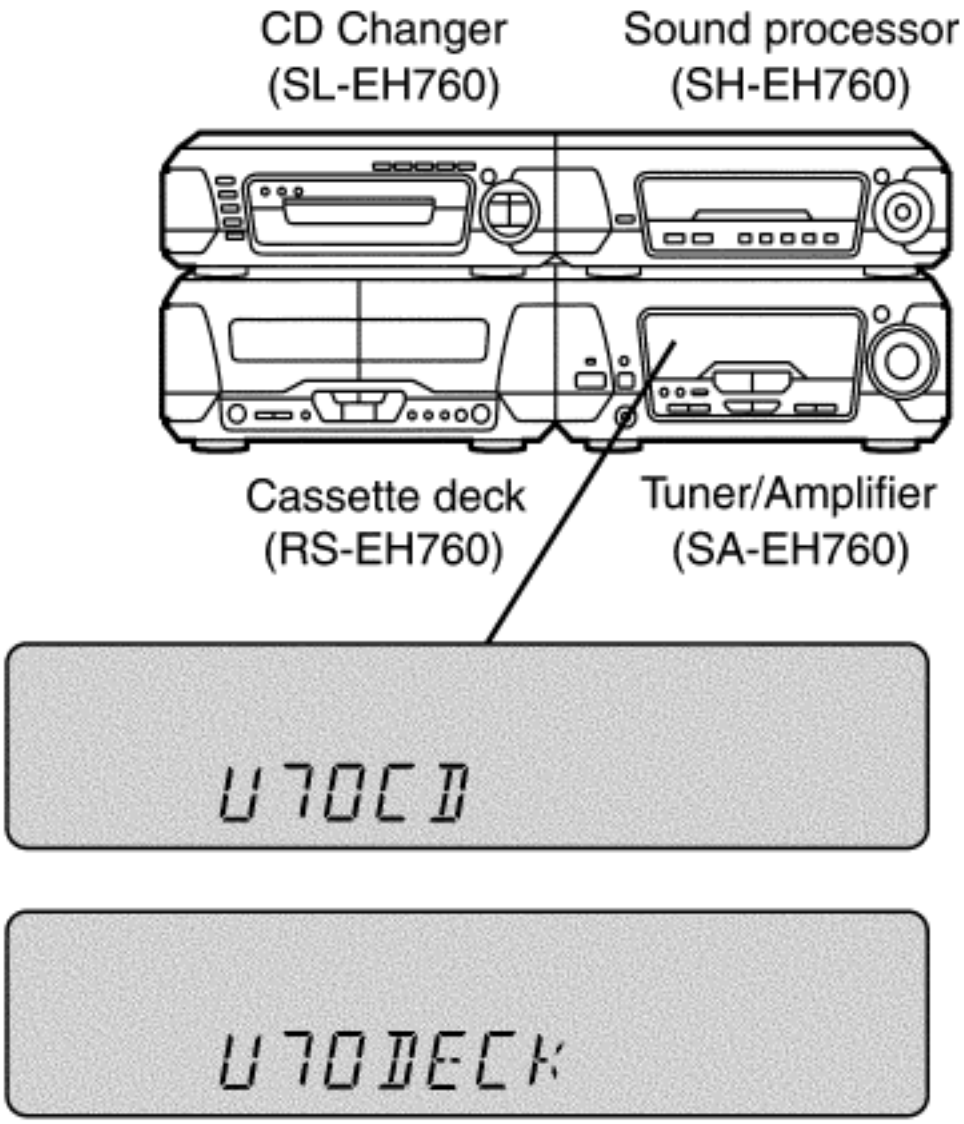
- U70 CD:/U70 DECK:

  Automatically displays on the tuner/amplifier when a malfunction occurs. Refer to Fig. 8-1.

- F61:

  Automatically displays on the tuner/amplifier when a malfunction occurs. Refer to Fig. 8-1.

Fig. 8-1.



8.2 To return to the normal display

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1. For U70 CD/U70 DECK
    - Press an any operation button on the tuner/amplifier.
    - To re-display the code, switch the power off (POWER STANDBY button), and then switch power back on again.
2. For F61
    - If F61 is displayed, the power will automatically be switched off and the standby indicator will light up.
    - F61 will be displayed for 3 seconds, and then the clock will be displayed.
    - To re-display the code, switch the power on. F61 will be re-displayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off.

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8.3 Display contents

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TOP PREVIOUS NEXT

8.3.1 U70 CD, U70 DECK/(displayed automatically)

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- Problem or condition

  A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.

  1. If U70 is displayed on the tuner/amplifier, the tape deck or CD Changer cannot be operated by remote control.

- Correction Procedure

  1. To check for correct insertion of flat cables.

     - Insert each connector until you hear a click.
     - Insert the flat cables at the back of the unit in the order indicated. Refer to Fig. 8-2.

       Make sure the white side of the cable is on your right side. Refer to Fig. 8-3.

Fig. 8-2.

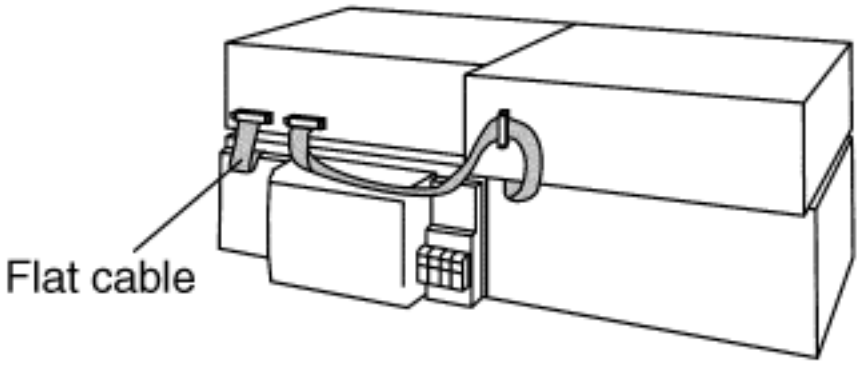
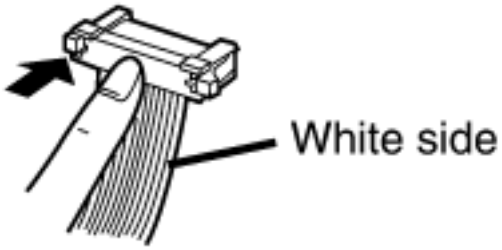


Fig. 8-3.



2. Breakage of flat cable. (Check and replace.)

3. If the problem is not corrected by items 1 and 2 above, this indicates a faulty IC.

   SA-EH760:

   IC901 (LC8A524A5N28)

   SL-EH760:

   IC451 (M38504M6200F)

   RS-EH760:

   IC701 (M38503M2400F)

   Check these ICs and replace.

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8.3.2 F61

TOP PREVIOUS NEXT

- Problem or condition

  When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.

- Correction procedure

  Faulty Tuner/Amplifier (SA-EH760) output IC (IC601). (When a DC voltage is applied to speaker terminals.)

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9 Schematic Diagram Notes

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- This schematic diagram may be modified at any time with the development of new technology.

Notes:

- S901:

  Power Standby/on switch (

   /I)

- S902:

  ECO mode switch (MODE)

- S903:

  Clock/timer, demo switch/(CLOCK/TIMER,

   DEMO)

- S904:

  Play timer/record timer switch/(

   PLAY/

   REC)

- S905:

  FM mode switch/(FM AUTO/MONO)

- S906:

Tuning mode switch/(TUNING MODE)

- S907:

  Set switch (SET)

- S908:

  Source input switch/(INPUT SELECTOR)

- S909:

  6 ch discrete input switch/(6 CH DISCRETE INIPUT)

- S910:

  Tuning down switch (TUNING,

  )

- S911:

  Tuning up switch (TUNING,

  )

- S912:

  Tuner/band switch (TUNER/BAND)

- S913:

  Digital super woofer switch/(DIGITAL S.WOOFER)

- S914:

  RDS display mode PS switch/(RDS DISP MODE-PS)

- S915:

RDS display mode PTY switch/(RDS DISP MODE-PTY)

- VR901:

  Volume control VR (VOLUME)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on theinternal impedance of the DC circuit tester.

  - No mark

    : Power ON (FM or AM)

- Important safety notice:

  Components identified by⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer´s specified parts shown in the parts list.

- Caution!

  IC and LSI are sensitive to static electricity.

  Secondary trouble can be prevented by taking care during repair.

  Cover the parts boxes made of plastics with aluminum foil.

  Ground the soldering iron.

  Put a conductive mat on the work table.

  Do not touch the legs of IC or LSI with the fingers directly.

- Voltage and signal line

  -

: Positive voltage line

❍

: Negative voltage line

❍

: AM signal line

❍

: AM OSC signal line

❍

: FM signal line

❍

: FM OSC signal line

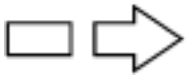
❍

: Center sp.drive signal line

❍

: Surround sp.drive signal line

❍



: Source signal line

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10 Schematic Diagram

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11 Printed Circuit Board Diagram

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12 Type Illustration of ICs, Transistors and Diodes

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13 Wiring Connection Diagram

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TOP PREVIOUS NEXT

14 Terminal Function of ICs

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14.1 IC901 (LC8A524A5N28):System Control/FL Drive

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TOP PREVIOUS NEXT

14.1 IC901 (LC8A524A5N28):/System Control/FL Drive

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Pin No.	Terminal Name	I/O	Function
1	CHECK	O	Clock check signal output
2	LC72 DI	O	PLL data signal output for IC102
3	LC72 CE	O	Chip enable signal output for IC102
4	LC72 DO/ST	I	IF count data/stereo detect signal input from IC102
5	LC72 CK	O	Clock signal output for IC102
6	RL1	O	Speaker select signal output
7	RL2	O	Speaker select signal output
8	ST/AV6CH	-	Not used, open
9	SEL TUNER	O	Tuner select signal output
10	SEL/ TUNER	I	Tuner select signal output (Not used, connected to VDD)
11	AC IN	I	Power failure detect signal input
12	RESET	I	Reset signal input
13	X IN	I	Oscillator connected terminal (32.7 kHz)
14	X OUT	O	
15	VSS	-	GND terminal
16	XC IN	I	Oscillator connected terminal (6 MHz)
17	XC OUT	O	
18	VDD1	I	Power supply terminal
19	KEY TU	I	Operation key signal input
20	KEY KARAOKE	I	Operation key signal input
21	SH REQ	I	Request signal input from Sound Processor
22	NC(GND)	-	Not used, connected to GND
23	VR JOGB	I	Volume control signal input
24	VR JOGA		
25	MIC DET	I	Microphone connecting detect signal input (Not used)
26	HP SW	I	Headphone connecting detect signal input
27	RDS CLK	I	RDS clock signal input

28	RDS DATA	I	RDS data signal input
29	REMOCON	I	Remote control signal input
30	NC	-	Not used, open
31 | 37	7G | 1G	O	Grid signal output
38	NC	-	Not used, open
39			
40 | 45	P1 | P6	O	Segment signal output
46	VDD3	I	Power supply terminal
47 | 50	P7 | P10	O	Segment signal output
51	-VP	I	Power supply terminal (negative)
52 | 71	P11 | P30	O	Segment signal output
72	VDD4	I	Power supply terminal
73 | 77	P31 | P35	O	Segment signal output
78	REGIN0	I	Area select signal input
79	REGIN1		
80	STANDBY	O	LED (STANDBY) drive signal output
81	TIMER	O	LED (TIMER) drive signal output
82	S.W LED	O	LED (DIGITAL S.WOOFER) drive signal output
83	LOUNGE	-	LED (LOUNGE) drive signal output (Not used, open)
84	CHORUS	-	LED (CHORUS) drive signal output (Not used, open)
85	MUTE	O	Muting signal output
86	POWER	O	Power control signal output
87	/ECO	O	ECO signal output
88	MUTE2	O	Muting signal output
89	VSS2	-	GND terminal
90	VDD2	I	Power supply terminal
91	NC	-	Not used, open
92			
93	RL4	-	Not used, open

94	SH CS	O	Chip select signal output for Sound Processor
95	SH DO	O	Serial communication signal to Sound Processor (Data signal output)
96	SH DI	I	Serial communication signal to Sound Processor (Data signal input)
97	SH CK	I	Serial communication signal to Sound Processor (Clock signal input)
98	E DET	I	Unusual condition detect signal input
99	CR TIMER	I/O	TIME CONSTANT terminal
100	SD	I	Station detector signal input from tuner circuit

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TOP PREVIOUS NEXT

15 Block Diagram

TOP PREVIOUS NEXT

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TOP PREVIOUS NEXT

16 Replacement Parts List

TOP PREVIOUS NEXT

Notes:

- Important safety notice:

  Components identified by⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacture’s specified parts shown in the parts list.

- The<IA> <IB> <IC> <ID> marks in Remarks indicate language of instruction manual.

  <IA>: Spanish, Swedish

  <IB>: English

  <IC>: German, French, Italian

  <ID>: Netherlands, Danish

- The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

- The marking [RTL] indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availabilityis dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks

1	RKM0395C-S	CABINET	1	
2	RHD30007-S	SCREW	4	
3	XTBS3+10JFZ1	SCREW	1	
4	REX0967	WIRE ASS'Y	1	
5	RMZ0339	ZENNER COVER	1	
6	RGW0343-S	KNOB,VOLUME	1	
7	RHN90001	NUT	1	
8	RKA0106-N	FOOT RING	4	
9	RKF0606-K	BACK GRILL	1	
10	RKW0581-1V	FL WINDOW	1	
11	RMN0427	CABLE HOLDER	1	
12	RYP0946-S	FRONT PANEL ASS'Y	1	
12-1	RGB0025-A	TECHNICS BADGE	1	
13	SHG1654	RUBBER	4	
14	XTB3+10JFZ	SCREW	11	
15	XTB3+8JFZ	SCREW	13	
16	XTW3+15T	SCREW	2	
17	XTBS3+8JFZ1	SCREW	2	
18	RLBT4001-N	FERRITE CORE	1	
19	RMN0582	HOLDER	1	
20	SHR9112	RIVET	1	
21	XTB3+20JFZ	SCREW	1	
A1	RAK-EHA28WH	REMOTE CONTROLLER	1	
A1-1	RKK0123-H	BATTERY COVER	1	
A2	REE0393	SPEAKER CORD	2	
A3	REE0984	SPEAKER CORD	2	
A4	REE0985	SPEAKER CORD	2	
A5	RJA0019-X	AC POWER SUPPLY CORD	1	(E,EG)/ ⚠
A5	RJA0053-2X	AC POWER SUPPLY CORD	1	(EB)⚠
A6	RQA0117	WARRANTY CARD	1	
A7	RQCB0169	SERVICE CENTER LIST	1	
A8	RQT5354-E	OPERATING INSTRUCTIONS	1	(E)/<IA>

A8	RQT5355-B	OPERATING INSTRUCTIONS	1	(EB)/<IB>
A8	RQT5352-D	OPERATING INSTRUCTIONS	1	(EG)/<IC>
A8	RQT5353-H	OPERATING INSTRUCTIONS	1	(EG)/<ID>
A9	RSA0007	FM INDOOR ANTENNA	1	
A10	RSA0022-J	AM LOOP ANTENNA	1	
A11	RQCA0735	SETTING GUIDE	1	(EB)
A12	SJP9009	ANT ADAPTOR	1	(EB)
C151	ECEA1CKS100	16V 10U	1	
C152	ECBT1H331KB5	50V 330P	1	
C153	ECBT1H102KB5	50V 1000P	1	
C154	ECBT1H561KB5	50V 560P	1	
C155	ECBT1H102KB5	50V 1000P	1	
C156,57	ECBT1H470J5	50V 47P	2	
C158,59	RCE0JKA470BG	6.3V 47U	2	
C160	ECBT1H102KB5	50V 1000P	1	
C201,02	ECBT1H104KB5	50V 0.1U	2	
C395,96	ECBT1H473KB5	50V 0.047U	2	
C509,10	ECBT1H103KB5	50V 0.01U	2	
C550	ECBT1C103NS5	16V 0.01U	1	
C551	ECA1HAK2R2XB	50V 2.2U	1	
C552	ECBT1H103KB5	50V 0.01U	1	
C553	RCE1HKAR47BG	50V 0.47U	1	
C554	ECA1AAK221XH	10V 220U	1	
C564	ECA1CAK100XB	16V 10U	1	
C601,02	ECA1CAK100XB	16V 10U	2	
C603,04	ECBT1H471KB5	50V 470P	2	
C605,06	ECBT1H102KB5	50V 1000P	2	
C607,08	ECBT1H471KB5	50V 470P	2	
C609,10	ECBT1H560J5	50V 56P	2	
C611,12	ECBT1H150JC5	50V 15P	2	
C613,14	ECBT1H470J5	50V 47P	2	
C616	ECEA1HKNR47B	50V 0.47U	1	
C617,18	ECKR2H103ZU	500V 0.01U	2	
C619	ECBT1H103KB5	50V 0.01U	1	
C620,21	ECQV1H473JM3	50V 0.047U	2	

C622	ECA1HM101	50V 100U	1	
C624,25	ECQV1H473JM3	50V 0.047U	2	
C626,27	ECQV1H104JM3	50V 0.1U	2	
C631,32	ECBT1H473KB5	50V 0.047U	2	
C635-37	ECBT1H473KB5	50V 0.047U	3	
C639-44	ECBT1H102KB5	50V 1000P	6	
C645,46	ECBT1H473KB5	50V 0.047U	2	
C647-50	ECBT1H102KB5	50V 1000P	4	
C651	ECBT1H473KB5	50V 0.047U	1	
C652	ECBT1H102KB5	50V 1000P	1	
C659,60	ECA1CAK100XB	16V 10U	2	
C666	ECBT1H473KB5	50V 0.047U	1	
C701-04	ECA1VM472E	35V 4700U	4	⚠
C705	ECBT1H103KB5	50V 0.01U	1	
C706	RCE1VKA100BG	35V 10U	1	
C707,08	ECBT1H473KB5	50V 0.047U	2	
C709	ECQV1H104JM3	50V 0.1U	1	
C710	ECBT1H473KB5	50V 0.047U	1	
C714	ECBT1H102KB5	50V 1000P	1	
C715	ECA1EAM472XE	25V 4700U	1	⚠
C717	ECA1CAK330XB	16V 33U	1	
C718	RCE1AKA101BG	10V 100U	1	
C719,20	ECBT1H473KB5	50V 0.047U	2	
C721	RCE1AKA101BG	10V 100U	1	
C722	ECEA1CKS101	16V 100U	1	
C723,24	ECBT1H473KB5	50V 0.047U	2	
C731	ECBT1H102KB5	50V 1000P	1	
C732	ECBT1H223KB5	50V 0.022U	1	
C733	ECBT1H473KB5	50V 0.047U	1	
C734	RCE1HKA3R3BG	50V 3.3U	1	
C735	ECBT1H473KB5	50V 0.047U	1	
C737	ECA1HM101	50V 100U	1	⚠
C740	ECA1CAK100XB	16V 10U	1	
C741	ECQE1104KF3	100V 0.1U	1	
C753	ECKR1H103ZF5	50V 0.01U	1	
C754	ECBT1H103KB5	50V 0.01U	1	

C755	ECA1CAM102XB	16V 1000U	1	⚠
C758	ECBT1H103KB5	50V 0.01U	1	
C759	RCE1AKA470BG	10V 47U	1	
C761	ECQE1104KF3	100V 0.1U	1	
C791	ECKWRS102MBC	1000P	1	⚠
C901	EEAFC0J101B	6.3V 100U	1	
C902	RCE1AM102BV	10V 1000U	1	
C903,04	ECBT1H103KB5	50V 0.01U	2	
C905	ECBT1H102KB5	50V 1000P	1	
C907,08	ECBT1H471KB5	50V 470P	2	
C909	ECBT1H102KB5	50V 1000P	1	
C910	ECBT1H200JC5	50V 20P	1	
C911	ECBT1H180J5	50V 18P	1	
C912	ECBT1H104KB5	50V 0.1U	1	
C913	ECA1CAK100XB	16V 10U	1	
C914	ECEA1HKS2R2	50V 2.2U	1	
C915	ECBT1H103KB5	50V 0.01U	1	
C916	EEAFC0J101B	6.3V 100U	1	
C917	ECBT1H103KB5	50V 0.01U	1	
C918	ECEA0JKS101	6.3V 100U	1	
C919,20	RCE1HKA4R7BG	50V 4.7U	2	
C921	ECBT1H102KB5	50V 1000P	1	
C922	ECA1VAK330XB	35V 33U	1	
C923,24	ECBT1H104KB5	50V 0.1U	2	
C925,26	ECBT1H102KB5	50V 1000P	2	
C927,28	RCE1HKA4R7BG	50V 4.7U	2	
C931	ECA1CAK100XB	16V 10U	1	
C961	ECEA1CKS100	16V 10U	1	
CN601	RJU057W012	CONNECTOR(12P)	1	
CN602	RJU057W008	CONNECTOR(8P)	1	
CN603	RJU057W004	CONNECTOR(4P)	1	
CN701-13	RJS1A1101T1	CONNECTOR(1P)	13	
CN781	RJS10T5ZA	CONNECTOR(10P)	1	
CP101	RJT100W11	CONNECTOR(11P)	1	

CP601	RJT057W012-1	CONNECTOR(12P)	1	
CP602	RJT057W008-1	CONNECTOR(8P)	1	
CP603	RJT057W004-1	CONNECTOR(4P)	1	
D151	MA4051M	DIODE	1	⚠
D201	MA4056M	DIODE	1	
D306	SELS5223C	LED	1	
D500	MA165	DIODE	1	
D551,52	MA165	DIODE	2	
D555	MA4100M	DIODE	1	
D558	MA165	DIODE	1	
D563	MA165	DIODE	1	
D601,02	SB360L6508	DIODE	2	
D607	1SS291TA	DIODE	1	
D613,14	MA165	DIODE	2	
D657-59	MA165	DIODE	3	
D701-04	1N5402BF	DIODE	4	⚠
D705	RL1N4003N02	DIODE	1	⚠
D711	RL1N4003N02	DIODE	1	
D715	MA165	DIODE	1	
D717-20	RL1N4003N02	DIODE	4	⚠
D721	MA4300M	DIODE	1	⚠
D723	MA4150M	DIODE	1	⚠
D725	MA4082LTA	DIODE	1	⚠
D730	MA4091H	DIODE	1	⚠
D736	MA165	DIODE	1	
D737	MA4082LTA	DIODE	1	⚠
D738-40	MA165	DIODE	3	
D741-44	RL1N4003N02	DIODE	4	⚠
D745	MA4051M	DIODE	1	
D746	RL1N4003N02	DIODE	1	
D747	MA4068L	DIODE	1	⚠
D749	MA165	DIODE	1	
D751,52	1N5402BF	DIODE	2	⚠
D753-55	RL1N4003N02	DIODE	3	⚠

D756,57	MA700	DIODE	2	
D758	MA165	DIODE	1	
D760	MA165	DIODE	1	
D761	RL1N4003N02	DIODE	1	⚠
D901,02	1SS291TA	DIODE	2	
D903,04	MA165	DIODE	2	
D905	1SS291TA	DIODE	1	
D906,07	MA165	DIODE	2	
D915	1SS291TA	DIODE	1	
D933,34	MA165	DIODE	2	
D951	LNJ301MPUJAD	LED	1	
D954	SELS5923C	LED	1	
D956	SELS5923C	LED	1	
D961	MA4075M	DIODE	1	
D973	MA4030M	DIODE	1	⚠
D974	MA165	DIODE	1	
F1	XBA2C20TB0	FUSE,T2A	1	⚠
FL901	RSL0298-F	FL	1	
IC151	LC72721NMTLM	IC	1	
IC201	BU4053BCFE2	IC	1	
IC601	RSN311W64A	IC	1	⚠
IC901	LC8A524A5N28	IC	1	
JK601 02	RJH5603-1J	6P SP TANSI	2	
JK603	RJH2308	JACK	1	
JK701	SJS9236	JACK AC INLET	1	⚠
JK903	RJJ37TN02-C	JACK,HEADPHONE	1	
L151,52	ELEXT101KA9	COIL	2	
L153	RLQA1R0JT1-Y	COIL	1	
L601-06	RLQYR73MW1-0	COIL	6	
L701	RLQZ371	LINE FILTER	1	⚠
L901	RLQA100JT1-Y	COIL	1	

L902	RLQA1R0JT1-Y	COIL	1	
P1	RPG4787	PACKING CASE(SYSTEM)	1	(E)
P1	RPG4789	PACKING CASE(SYSTEM)	1	(EB)
P1	RPG4788	PACKING CASE(SYSTEM)	1	(EG)
P2	RPQ0951	PAD(SYSTEM)	1	
P3	RPG4397	PACKING CASE(RS)	1	
P3	RPG4396	PACKING CASE(SA)	1	
P3	RPG4398	PACKING CASE(SH)	1	
P3	RPG4399	PACKING CASE(SL)	1	
P4	RPN1195-2	PAD(RS)	1	
P4	RPN1194	PAD(SA)	1	
P4	RPN1196	PAD(SH)	1	
P4	RPN1197	PAD(SL)	1	
P5	RPF0139	PROTECTION BAG(F.B.)	1	
P6	SPP740-1	SHEET	1	
PCB1	REP2964A-M	MAIN PCB	1	[RTL]
PCB2	REP2966A-S	SUB PCB	1	(E,EG)/[RTL]
PCB2	REP2966B-S	SUB PCB	1	(EB)/[RTL]
Q503	2SC3327A	TRANSISTOR	1	
Q551	2SA1995RSTA	TRANSISTOR	1	
Q554	2SA1995RSTA	TRANSISTOR	1	
Q555	2SC3327A	TRANSISTOR	1	
Q558	UN4211	TRANSISTOR	1	
Q601,02	2SC5398RSTA	TRANSISTOR	2	
Q605-08	2SC3327A	TRANSISTOR	4	
Q617,18	2SC3327A	TRANSISTOR	2	
Q701	2SD2374PQAU	TRANSISTOR	1	⚠
Q702	2SB1548PQAU	TRANSISTOR	1	⚠
Q703	2SD2137PQTA	TRANSISTOR	1	⚠
Q705	2SA1995RSTA	TRANSISTOR	1	⚠
Q706	UN4211	TRANSISTOR	1	
Q707	2SB1548PQAU	TRANSISTOR	1	⚠

Q708	UN4211	TRANSISTOR	1	
Q709	2SC3327A	TRANSISTOR	1	
Q711	2SB1548PQAU	TRANSISTOR	1	⚠
Q723	2SC3940AQSTA	TRANSISTOR	1	⚠
Q725	2SC5398RSTA	TRANSISTOR	1	⚠
Q726	2SC3940AQSTA	TRANSISTOR	1	⚠
Q791	2SC3327A	TRANSISTOR	1	
Q901	UN4212TA	TRANSISTOR	1	
Q902	UN411FTA	TRANSISTOR	1	
Q911,12	2SC3327A	TRANSISTOR	2	
Q961	UN4115	TRANSISTOR	1	
R151,52	ERDS2FJ102	1/4W 1K	2	
R153,54	ERDS2FJ104	1/4W 100K	2	
R155	ERDS2FJ121	1/4W 120	1	
R158	ERDS2FJ102	1/4W 1K	1	
R202-04	ERDS2FJ104	1/4W 100K	3	
R211	ERDS2FJ271	1/4W 270	1	
R229,30	ERDS2FJ102	1/4W 1K	2	
R509-12	ERDS2FJ470	1/4W 47	4	
R544	ERDS2FJ103	1/4W 10K	1	
R546,47	ERDS2FJ562	1/4W 5.6K	2	
R548	ERDS2FJ102	1/4W 1K	1	
R551	ERDS2FJ183	1/4W 18K	1	
R552	ERDS2FJ473	1/4W 47K	1	
R553,54	ERDS2FJ562	1/4W 5.6K	2	
R555	ERDS2FJ223	1/4W 22K	1	
R556	ERDS2FJ104	1/4W 100K	1	
R557	ERDS2FJ103	1/4W 10K	1	
R558	ERDS2FJ222	1/4W 2.2K	1	
R559	ERDS2FJ472	1/4W 4.7K	1	
R561	ERDS2FJ104	1/4W 100K	1	
R563,64	ERDS2FJ272	1/4W 2.7K	2	
R570	ERDS2TJ225	1/4W 2.2M	1	
R571	ERDS2FJ562	1/4W 5.6K	1	
R572	ERDS2FJ153	1/4W 15K	1	

R591	ERDS2FJ472	1/4W 4.7K	1	
R597,98	ERDS2FJ222	1/4W 2.2K	2	
R601-04	ERDS2FJ332	1/4W 3.3K	4	
R605,06	ERDS2FJ472	1/4W 4.7K	2	
R607,08	ERDS2FJ563	1/4W 56K	2	
R609,10	ERDS2FJ154	1/4W 150K	2	
R611,12	ERDS2FJ563	1/4W 56K	2	
R614,15	ERDS2FJ472	1/4W 4.7K	2	
R617,18	ERDS2FJ472	1/4W 4.7K	2	
R619,20	ERDS2FJ124	1/4W 120K	2	
R621	ERDS2FJ154	1/4W 150K	1	
R622,23	ERDS2FJ124	1/4W 120K	2	
R624	ERDS2FJ154	1/4W 150K	1	
R626	ERDS2FJ102	1/4W 1K	1	
R627	ERDS2FJ474	1/4W 470K	1	
R628	ERDS2FJ223	1/4W 22K	1	
R629	ERDS2FJ102	1/4W 1K	1	
R631,32	ERDS2FJ392	1/4W 3.9K	2	
R635	ERDS2FJ222	1/4W 2.2K	1	
R637	ERDS2FJ153	1/4W 15K	1	
R638	ERDS2FJ683	1/4W 68K	1	
R639,40	ERDS1FJ100	1/2W 10	2	⚠
R641,42	ERD2FCG100	1/4W 10	2	⚠
R643,44	ERDS1FJ100	1/2W 10	2	⚠
R645,46	ERD2FCG100	1/4W 10	2	⚠
R647	ERDS2FJ391	1/4W 390	1	⚠
R648	ERDS2FJ121	1/4W 120	1	⚠
R649,50	ERDS1FJ100	1/2W 10	2	⚠
R651,52	ERD2FCG100	1/4W 10	2	⚠
R667	ERDS2FJ392	1/4W 3.9K	1	
R668	ERDS2FJ473	1/4W 47K	1	
R669,70	ERDS1FJ470	1/2W 47	2	⚠
R672	ERDS2FJ473	1/4W 47K	1	
R675	ERDS2FJ392	1/4W 3.9K	1	
R683-86	ERDS2FJ102	1/4W 1K	4	

R687,88	ERDS2FJ152	1/4W 1.5K	2	
R691	ERDS1FJ151	1/2W 150	1	⚠
R702	ERDS2FJ273	1/4W 27K	1	
R703-05	ERG1SJ222	1W 2.2K	3	
R707	ERD2FCJ4R7	1/4W 4.7	1	⚠
R708	ERDS2FJ472	1/4W 4.7K	1	
R712	ERDS2FJ222	1/4W 2.2K	1	
R719	ERDS2FJ332	1/4W 3.3K	1	
R720	ERDS2FJ392	1/4W 3.9K	1	
R721	ERD2FCJ4R7	1/4W 4.7	1	⚠
R722	ERQ16NKW2R2E	1/6W 2.2	1	⚠
R723	ERDS2FJ562	1/4W 5.6K	1	
R724	ERDS2FJ392	1/4W 3.9K	1	
R725	ERDS2FJ100	1/4W 10	1	
R727	ERDS2FJ392	1/4W 3.9K	1	
R729	ERDS2FJ221	1/4W 220	1	
R738	ERDS2FJ392	1/4W 3.9K	1	
R739	ERDS2FJ473	1/4W 47K	1	
R749	ERDS2FJ102	1/4W 1K	1	
R763	ERDS2FJ472	1/4W 4.7K	1	
R764	ERDS2FJ331	1/4W 330	1	
R765	ERDS1FJ221	1/2W 220	1	⚠
R766	ERDS1FJ470	1/2W 47	1	⚠
R767	ERD2FCJ4R7	1/4W 4.7	1	⚠
R768	ERDS2FJ101	1/4W 100	1	
R770	ERDS2FJ104	1/4W 100K	1	
R771	ERDS2FJ222	1/4W 2.2K	1	
R772	ERDS2FJ223	1/4W 22K	1	
R773,74	ERDS1FJ180	1/2W 18	2	⚠
R776	ERDS2FJ103	1/4W 10K	1	
R777	ERDS2FJ102	1/4W 1K	1	
R791,92	RSFMB40KT-L	FUSE PROTECTOR	2	⚠
R793	ERDS2FJ1R0	1/4W 1	1	
R794	ERDS2FJ473	1/4W 47K	1	
R795	ERDS2FJ392	1/4W 3.9K	1	

R797	ERD16TJ000T	1/4W 0	1	
R901	ERDS2FJ821	1/4W 820	1	
R902	ERDS2FJ102	1/4W 1K	1	
R903	ERDS2FJ122	1/4W 1.2K	1	
R904	ERDS2FJ152	1/4W 1.5K	1	
R905	ERDS2FJ182	1/4W 1.8K	1	
R906	ERDS2FJ222	1/4W 2.2K	1	
R907	ERDS2FJ332	1/4W 3.3K	1	
R908	ERDS2FJ472	1/4W 4.7K	1	
R909	ERDS2FJ182	1/4W 1.8K	1	
R910	ERDS2FJ222	1/4W 2.2K	1	
R911	ERDS2FJ332	1/4W 3.3K	1	
R912	ERDS2FJ472	1/4W 4.7K	1	
R913	ERDS2FJ821	1/4W 820	1	
R914	ERDS2FJ102	1/4W 1K	1	
R915	ERDS2FJ122	1/4W 1.2K	1	
R916	ERDS2FJ152	1/4W 1.5K	1	
R918	ERDS2FJ103	1/4W 10K	1	
R919	ERDS2FJ153	1/4W 15K	1	
R921,22	ERDS2FJ103	1/4W 10K	2	
R923	ERDS2FJ223	1/4W 22K	1	
R924,25	ERDS2FJ102	1/4W 1K	2	
R926	ERDS2FJ222	1/4W 2.2K	1	
R928	ERDS2FJ473	1/4W 47K	1	
R929-32	ERDS2FJ102	1/4W 1K	4	
R933	ERDS2FJ471	1/4W 470	1	
R934-36	ERDS2FJ101	1/4W 100	3	
R937	ERDS2FJ103	1/4W 10K	1	
R938	ERDS2FJ102	1/4W 1K	1	
R939	ERDS2FJ152	1/4W 1.5K	1	
R941,42	ERDS2FJ102	1/4W 1K	2	
R943	ERDS2FJ101	1/4W 100	1	
R944	ERDS2FJ222	1/4W 2.2K	1	
R945	ERDS2FJ101	1/4W 100	1	
R946	ERDS2FJ102	1/4W 1K	1	
R949	ERDS2FJ472	1/4W 4.7K	1	

R950	ERDS2FJ101	1/4W 100	1	
R951	ERDS2FJ334	1/4W 330K	1	
R952	ERDS2TJ106T	1/4W 10M	1	
R953	ERDS2FJ101	1/4W 100	1	
R954	ERDS2FJ104	1/4W 100K	1	
R955	ERDS2FJ824	1/4W 820K	1	
R956-58	ERDS2FJ102	1/4W 1K	3	
R959	ERDS2FJ470	1/4W 47	1	
R960	ERDS2FJ152	1/4W 1.5K	1	
R961,62	ERDS2FJ223	1/4W 22K	2	
R963,64	ERDS2FJ121	1/4W 120	2	
R965,66	ERDS2FJ392	1/4W 3.9K	2	
R967	ERDS2FJ222	1/4W 2.2K	1	
R968	ERDS2FJ105	1/4W 1M	1	
R969	ERDS2FJ272	1/4W 2.7K	1	
R975	ERDS2FJ154	1/4W 150K	1	
R976	ERDS2FJ104	1/4W 100K	1	
R984	ERDS2FJ221	1/4W 220	1	
R986	ERDS2FJ152	1/4W 1.5K	1	
R987,88	ERDS2FJ102	1/4W 1K	2	
R990	ERDS2FJ104	1/4W 100K	1	
R991	ERDS2FJ473	1/4W 47K	1	
R993	ERDS2FJ104	1/4W 100K	1	
R995	ERDS2FJ221	1/4W 220	1	
R996,97	ERDS2FJ151	1/4W 150	2	
RL602	RSY0050-0	RELAY	1	⚠
RL605	RSY0050-0	RELAY	1	⚠
RL701	RSY0030M-0	RELAY	1	⚠
RL702	RSY0040M-0	RELAY	1	⚠
S901-15	EVQ11G05R	SW	15	
T701	RTP2N5B012	POWER TRANSFORMER	1	⚠
T702	RTP1H3E001	POWER TRANSFORMER	1	⚠

VR901	EVQVBXFK124B	V.R.	1	
X151	RSXC4M33S02T	OSCILLATOR	1	
X901	EF0EC6004T4	OSCILLATOR	1	
X902	RSXD32K7S02	OSCILLATOR	1	
Z120	RAN0005EM	TUNER UNIT	1	
Z701	ERZV10V511CS	COMPONENT COMBINATION	1	⚠
Z901	RCDGP1U28XD	REMOTE SENSOR	1	

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17 Cabinet Parts Location

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18 Packaging

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