

Service Manual

Portable CD Player

SL-S231C

**Colour**

(S) Silver Type

Area

(P) U.S.A.

(PC) Canada.

Please file and use this manual together with the service manual for Model No. SL-S232C, Order No. AD9803059C1.

MASH *
multi-stage noise shaping

* MASH is a trademark of NTT.

- Notes:**
- This simplified service manual is provided to indicate the differences between the original No. SL-S232C (P) and the subsequent model No. SL-S231C (P).
 - SL-S231C is not equipped with Wireless remote control on SL-S232C.
 - All parts are supplied by MESA.

Traverse Deck: RAE0145Z Mechanism Series

Specifications

Audio

No. of channels: 2 channels (left and right, stereo)
Frequency response: 20 to 20,000 Hz (+0.5 dB to -1.5 dB)
Output voltage: 0.6 V (50 kΩ)

S/N:

diameter 3.5 stereo mini jack
 more than 94 dB
 (Anti-shock memory OFF)

Wow and flutter:

Below measurable limit

DA converter:

1 bit, MASH*

Headphone output level:

max.9 mW+9 mW/16 Ω (variable)
 stereo mini jack diameter 3.5

Pickup

Light source: Semiconductor laser

Wavelength: 780 nm

General

Operation temperature range: 0°C – 40°C (32°F – 104°F)

Rechargeable temperature range: 5°C – 40°C (41°F – 104°F)

Power supply: DC 4.5 V

Power consumption:

Power source	Anti-shock OFF/ON
AC adaptor	2.8 W/ 3.0 W
Battery (DC 3V)	0.4 W/ 0.4 W
When recharging	3.6 W

Battery used:

Batteries used	Anti-shock OFF/ON
2 alkaline batteries	Approx. 20 hours/ 20 hours
Optional rechargeable batteries (P-3GAVA/2B)	Approx. 10 hours/ 10 hours

The play time may be less depending on the operating conditions.

Recharging time:

P-3GAVA/2B; Approx. 5 h

Dimensions (W × H × D):

128 × 27.8 × 144 mm
 (5¹/₁₆" / 1³/₃₂" / 5¹¹/₁₆")

Weight:

265 g (9.4 ounce) with batteries
 220 g (7.8 ounce) without batteries

Car kit**Cassette adaptor:**

Frequency response; 30-20,000Hz
 (This is the rating for the head section of the product.)

Dimensions (W × H × D); 102.4 × 12.1 × 63.8 mm

Weight / Cable length; 42 g / More than 1.4 m

Car adaptor:

Input; DC 12 / 24 V

Output; DC 4.5 V (0.6 A)

Dimensions (W × H × D); 104 × 32 × 33 mm

Cable length; More than 1.5 m

Playing time

When used in hold mode, at 25°C (77 °F) temperature and on flat and stable surface.

Note: Specifications are subject to change without notice.
 Weight and dimensions are approximate.

⚠ 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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
■ Schematic Diagram

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

Notes:

- S201 : Laser ON/OFF switch in "OFF" position.
(It turns "ON" with disc holder closed.)
- S202 : Rest detector in "OFF" position.
(It turns "OFF" when optical pickup comes to innermost periphery.)
- S301 : Memory/recall (MEMORY/RECALL) switch.
- S302 : Repeat (REPEAT) switch.
- S303, 304 : Skip/search (◀◀◀•SKIP/▶▶▶ SEARCH ▶▶▶) switches.
(S303:◀◀◀, S304:▶▶▶)
- S305 : Stop/power off (■ POWER OFF) switch.
- S306 : Play/pause (▶ ||) switch.
- S307 : Play mode selector (MODE) in "RANDOM" position.
(RANDOM ↔ NORMAL ↔ RESUME)
- S308 : Hold (HOLD) switch in "ON" position.
- S501 : Anti-shock (ANTI-SHOCK) switch in "OFF" position.
- S701 : XBS Selector (XBS) switch in "OFF" position.
- VR11 : Power supply voltage adjustment VR.
- VR701-1, VR701-2 : Volume control VR.

- The voltage value and waveforms are the reference voltage of this measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of GND terminal (DC IN Jack).
Accordingly, there may arise some errors in the voltage values and waveforms depending upon the internal impedance of the tester or measuring unit.
- The parenthesized is the voltage for test disc (1kHz, L+R, 0 dB) in play mode, and the other, for no disc in stop mode.
- AC adaptor is used for power supply.
- Signal line

 : Positive voltage lines.
 : Audio signal lines.

Important safety notice:

Components identified by Δ 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.

Please refer to the service manual for Model No.SL-S232 (Oder No. AD980359C1) about Terminal Function of IC's.

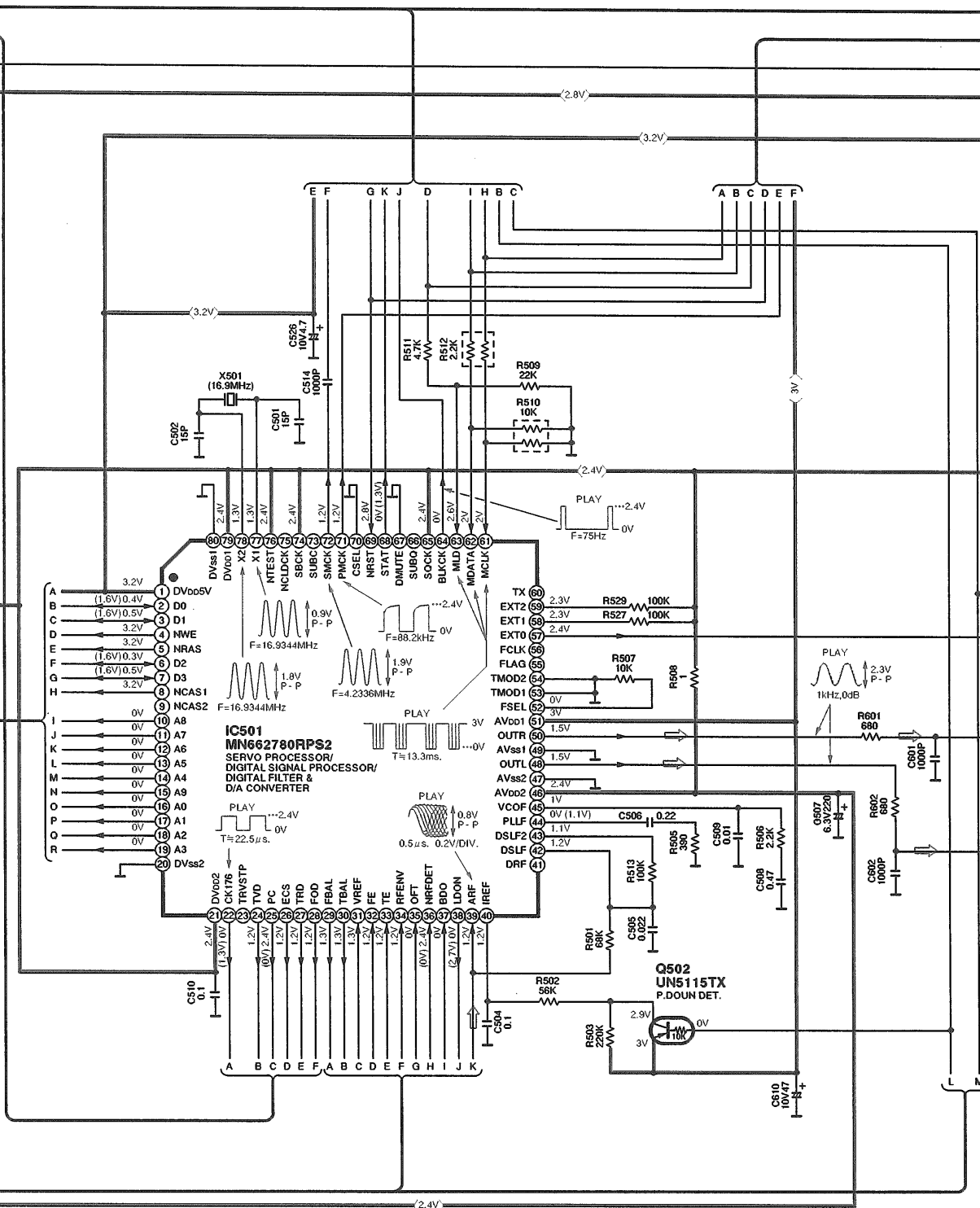
Caution!

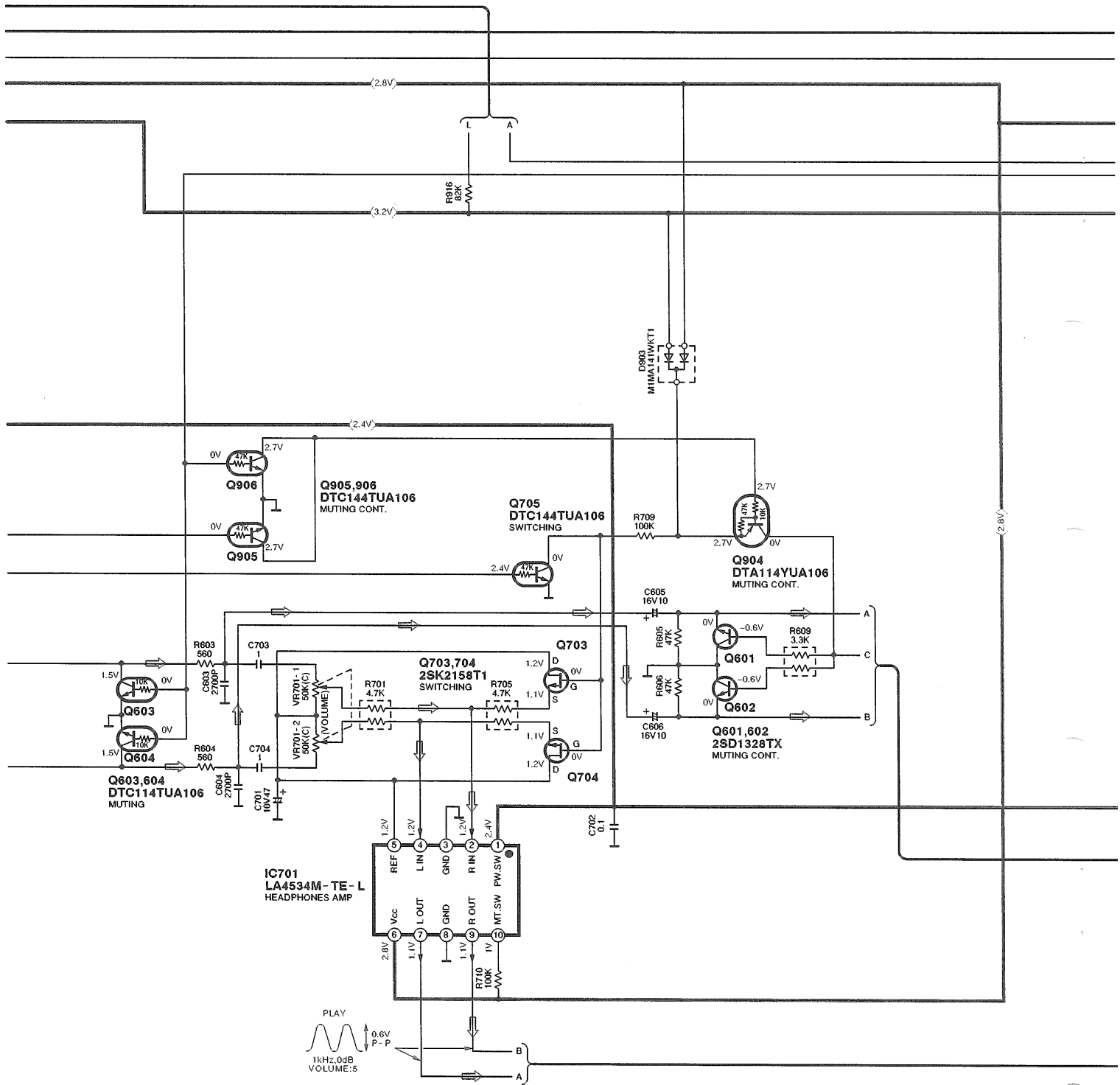
IC and LSI are sensitive to static electricity.

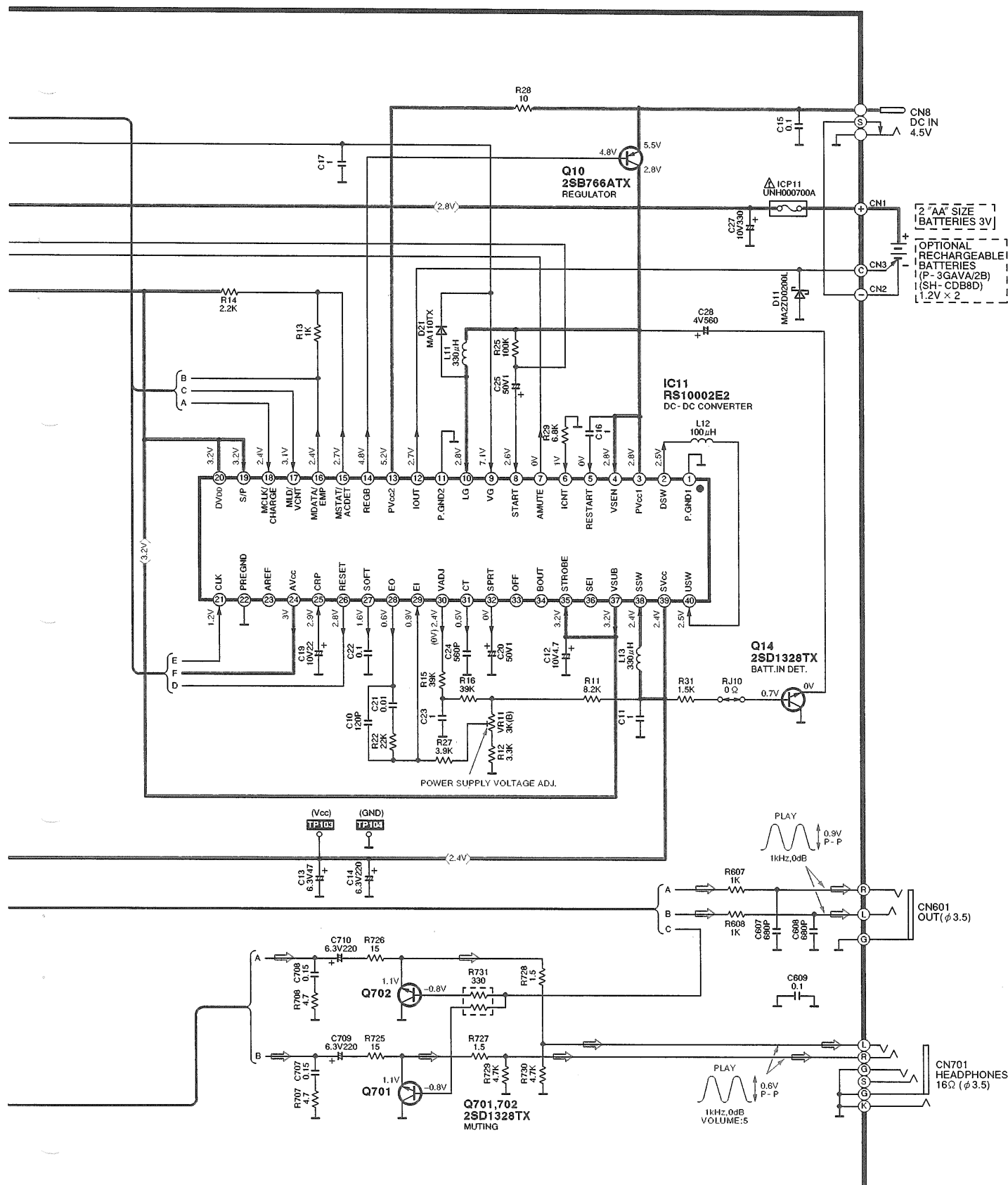
Secondary trouble can be prevented by taking care during repair.

- 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 pins of IC or LSI with fingers directly.



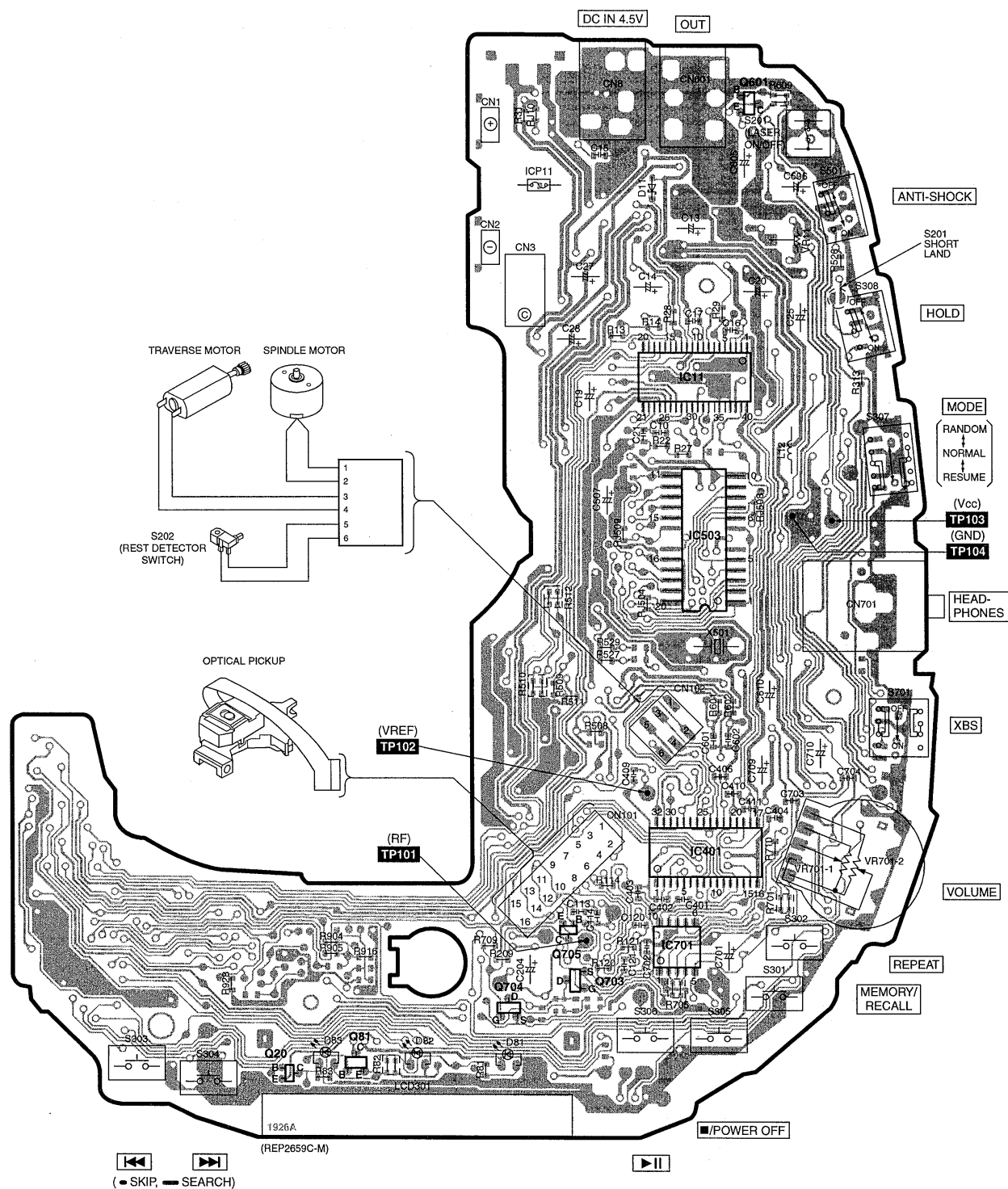


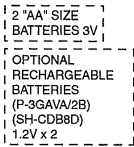




Printed Circuit Board and Wiring Connection Diagram

This circuit board diagram may be modified at any time with the development of new technology.





■ Replacement Parts List

Notes: • Important safety notice:

Components identified by Δ 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 parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
- ALL parts are supplied by MESA.
- The "<IA> <IB> <IC> <ID>" marks in Remarks indicate language of instruction manual.
 <IA> : English
 <IB> : English
 <IC> : Canadian French
 <ID> : Canadian French

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Δ A1	RFEA403C-S	AC ADAPTOR	1 (P)	
A2	RFEV705P-KS	STEREO HEADPHONES	1 (P)	
A3	RQT4055-2P	INSTRUCTION MANUAL	1 (P)<IA>, CAR MOUNT	
A4	RQT4322-P	INSTRUCTION MANUAL	1 (P)<IB>	
Δ A5	SH-CDC10PPY	CAR ADAPTOR	1 (P)	
A5-1	XBA2C05NB10	FUSE	1 (P)	
A6	SH-COM10BPYK	CASSETTE ADAPTER	1 (P)	
Δ A11	RFEA403C-S	AC ADAPTOR	1 (PC)	
A12	RFEV317P-KS	STEREO EARPHONE	1 (PC)	
A13	SQX7185	WARRANTY CARD	1 (PC)	
A14	SQX9131	SERVICE CENTER LIST	1 (PC)	
A15	RQT4055-2P	INSTRUCTION MANUAL	1 (PC)<IA>, CAR MOUNT	
A16	RQT4056-C	INSTRUCTION MANUAL	1 (PC)<IC>, CAR MOUNT	
A17	RQT4322-P	INSTRUCTION MANUAL	1 (PC)<IB>	
A18	RQT4323-C	INSTRUCTION MANUAL	1 (PC)<ID>	
Δ A19	SH-CDC11PCY	CAR ADAPTOR	1 (PC)	
A19-1	XBA2C05NB10	FUSE	1 (PC)	
A20	SH-COM10BPYK	CASSETTE ADAPTER	1 (PC)	
C10	ECUV1H121KCV	50V 120P	1	
C11	ECUVNA1052FV	10V 1U	1	
C12	RCST1AY475RE	10V 4.7U	1	
C13	RCE0JSC4701X	6.3V 47U	1	
C14	RCE0JKA2211G	6.3V 220U	1	
C15	ECUZNC1042FV	16V 0.1U	1	
C16, 17	ECUVNA1052FV	10V 1U	2	
C19	ECEA1AKS220	10V 22U	1	
C20	ECEA1HKS010	50V 1U	1	
C21	ECUV1E103KBV	25V 0.01U	1	
C22	ECUZNC1042FV	16V 0.1U	1	
C23	ECUVNA1052FV	10V 1U	1	
C24	ECUV1H561KBV	50V 560U	1	
C25	ECEA1HKS010	50V 1U	1	
C27	RCE1AMT3311V	10V 330U	1	
C28	RCE0GMT5611V	4V 560U	1	
C101	ECUV1C104KBV	16V 0.1U	1	
C103	ECUV1E103KBV	25V 0.01U	1	
C111	ECUV1C223KBV	16V 0.022U	1	
C112	ECUV1H391KBV	50V 390P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C113, 14	ECUZNC1042FV	16V 0.1U	2	
C115	ECUV1C223KBV	16V 0.022U	1	
C120	ECUV1H332KBV	50V 3300P	1	
C121	ECUV1H271KBV	50V 270P	1	
C204	RCE1AKA4701G	10V 47U	1	
C301, 02	ECUVNA1052FV	10V 1U	2	
C401	ECUV1H102KBV	50V 1000P	1	
C402-04	ECUV1E123KBV	25V 0.012U	3	
C406	ECUVNA1052FV	10V 1U	1	
C409	ECUV1E123KBV	25V 0.012U	1	
C410	ECUVNA1052FV	10V 1U	1	
C411	ECUZNC1042FV	16V 0.1U	1	
C501, 02	ECUV1H150KCV	50V 15P	2	
C503	ECUV1H561KBV	50V 560P	1	
C504	ECUZNC1042FV	16V 0.1U	1	
C505	ECUV1C223KBV	16V 0.022U	1	
C506	ECUVNA224KBV	10V 0.22U	1	
C507	RCE0JKA2211G	6.3V 220U	1	
C508	ECUV0J474KBV	6.3V 0.47U	1	
C509	ECUV1E103KBV	25V 0.01U	1	
C510	ECUZNC1042FV	16V 0.1U	1	
C514	ECUV1H102KBV	50V 1000P	1	
C525	ECUZNC1042FV	16V 0.1U	1	
C526	RCST1AY475RE	10V 4.7U	1	
C601, 02	ECUV1H102KBV	50V 1000P	2	
C603, 04	ECUV1H272KBV	50V 2700P	2	
C605, 06	ECEA1CKS100	16V 10U	2	
C607, 08	ECUV1H681KBV	50V 680P	2	
C609	ECUZNC1042FV	16V 0.1U	1	
C610	RCEJAKA4701G	10V 47U	1	
C701	RCE1AKA4701G	10V 47U	1	
C702	ECUZNC1042FV	16V 0.1U	1	
C703, 04	ECUVNA1052FV	10V 1U	2	
C707, 08	ECUVNA154KBV	10V 0.15U	2	
C709, 10	ECA0JAK221XH	6.3V 220U	2	
CN1, N2	RJC93015-1	CONNECTOR (16P)	2	
CN3	RJH5104	CONNECTOR (6P)	1	
CN8	RJ43K09-C	BATTERY TERMINAL	1	
CN101	RJS2A4716M1	R. BATT. TERMINAL (16P)	1	
CN102	RJS2A5106T1	OUT PUT JACK (6P)	1	
CN601	RJJD3S52B-C	HEADPHONES JACK	1	
CN701	RJJ33TK07-C	DC IN JACK	1	
D11	MA2ZD0200L	DIODE	1	
D21	MA110TX	DIODE	1	
D81-83	HSMGH670-0KL	LED	3	
D301	M1MA141WKT1	DIODE	1	
D903	M1MA141WKT1	DIODE	1	
IC11	RS10002E2	IC	1	
IC101	AN8839MSBE1	IC	1	
IC301	SC502167CPB	IC	1	
IC401	BH6508FSE2	IC	1	
IC501	MN662780RPS2	IC	1	
IC503	MNV4400-T8T	IC	1	
IC701	LA4534M-TE-L	IC	1	
Δ ICP11	UNH000700A	IC PROTECTOR	1	
L11	RLQU331KT-W	COIL	1	
L12	RLQB101KT-0	COIL	1	
L13	RLQU331KT-W	COIL	1	
LCD301	EDD052CK7AHP	LCD	1	
P1	RPN1068	COVER	1 (P)	
P2	RPN1133	TRAY	1 (P)	
P3	RPQ0851	PASTEBOARD	1 (P)	
P11	RPK1002	GIFT BOX	1 (PC)	
P12	RPQ0836-1	PAD 1	1 (PC)	
P13	RPQ0819	SPACER	1 (PC)	
P14	RPQ0869	PAD 2	1 (PC)	
P15	RPF0046	POLYETHYLENE COVER	1 (PC)	
P16	RPF0111	PROTECTION COVER	1 (PC)	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q10	2SB766ATX	TRANSISTOR	1		RJ508, 09	ERJ3GEY0R00V	CHIP JUMPER	2	
Q14	2SD1328QRSTX	TRANSISTOR	1						
Q20	DTA114YUA106	TRANSISTOR	1		SW201	ESE11SV6	SW, LASER ON/OFF	1	
Q81	2SD1328QRSTX	TRANSISTOR	1		SW301-06	EVQ11G05R	SW	6	
Q203	MSB709RST1	TRANSISTOR	1		SW307	RSS3A007-1A	SW, MODE	1	
Q502	UN5115TX	TRANSISTOR	1		SW308	RSS2A010-1A	SW, HOLD	1	
Q601, 02	2SD1328QRSTX	TRANSISTOR	2		SW501	RSS2A010-1A	SW, ANTI-SHOCKE	1	
Q603, 04	DTC114TUA106	TRANSISTOR	2		SW701	RSS2A010-1A	SW, XBS	1	
Q701, 02	2SD1328QRSTX	TRANSISTOR	2						
Q703, 04	2SK2158T1	TRANSISTOR	2		VR11	RRN3A05B33WL	VR, VOLTAGE ADJ.	1	
Q705	DTC144TUA106	TRANSISTOR	1		VR701	EVUTUFB11C54	VR, VOLUME	1	
Q904	DTA114YUA106	TRANSISTOR	1						
Q905, 06	DTC144TUA106	TRANSISTOR	2		X501	RSXZ16M9M01T	OSCILLATOR	1	
R11	ERJ3GEYJ822V	1/16W 8.2K	1						
R12	ERJ3GEYJ332V	1/16W 3.3K	1						
R13	ERJ3GEYJ102Z	1/16W 1K	1						
R14	ERJ3GEYJ222V	1/16W 2.2K	1						
R15, 16	ERJ3GEYJ393V	1/16W 39K	2						
R22	ERJ3GEYJ223V	1/16W 22K	1						
R25	ERJ3GEYJ104Z	1/16W 100K	1						
R27	ERJ3GEYJ392V	1/16W 3.9K	1						
R28	ERJ3GEYJ100V	1/16W 10	1						
R29	ERJ3GEYJ682V	1/16W 6.8K	1						
R31	ERJ3GEYJ152V	1/16W 1.5K	1						
R81	ERJ3GEYJ220V	1/16W 22	1						
R82	EXBV4V220JV	22	1						
R83	ERJ3GEYJ102Z	1/16W 1K	1						
R105, 06	ERJ3GEY0R00V	1/16W 0	2						
R113, 14	ERJ3GEYJ330V	1/16W 33	2						
R120	ERJ3GEYJ472V	1/16W 4.7K	1						
R121	ERJ3GEYJ563V	1/16W 56K	1						
R122	ERJ3GEYJ683V	1/16W 68K	1						
R208	ERJ3GEYJ2R2V	1/16W 2.2	1						
R209	ERJ3GEYJ223V	1/16W 22K	1						
R301	ERJ3GEYJ392V	1/16W 3.9K	1						
R302	ERJ3GEYJ104Z	1/16W 100K	1						
R313	ERJ3GEYJ102Z	1/16W 1K	1						
R501	ERJ3GEYJ683V	1/16W 68K	1						
R502	ERJ3GEYJ563V	1/16W 56K	1						
R503	ERJ3GEYJ224V	1/16W 220K	1						
R505	ERJ3GEYJ391V	1/16W 390	1						
R506	ERJ3GEYJ222V	1/16W 2.2K	1						
R507	ERJ3GEYJ103Z	1/16W 10K	1						
R508	ERJ3GEYJ1R0V	1/16W 1	1						
R509	ERJ3GEYJ223V	1/16W 22K	1						
R510	EXBV4V103JV	10K	1						
R511	ERJ3GEYJ472V	1/16W 4.7K	1						
R512	EXBV4V222JV	2.2K	1						
R513	ERJ3GEYJ104Z	1/16W 100K	1						
R526	ERJ3GEYJ102Z	1/16W 1K	1						
R527	ERJ3GEYJ104Z	1/16W 100K	1						
R529	ERJ3GEYJ104Z	1/16W 100K	1						
R601, 02	ERJ3GEYJ681V	1/16W 680	2						
R603, 04	MCR03PZHJ561	1/16W 560	2						
R605, 06	ERJ3GEYJ473V	1/16W 47K	2						
R607, 08	ERJ3GEYJ102Z	1/16W 1K	2						
R609	EXBV4V332JV	3.3K	1						
R701	EXBV4V472JV	4.7K	1						
R705	EXBV4V472JV	4.7K	1						
R707, 08	ERJ3GEYJ4R7V	1/16W 4.7	2						
R709, 10	ERJ3GEYJ104Z	1/16W 100K	2						
R725, 26	ERJ3GEYJ150V	1/16W 15	2						
R727, 28	ERJ3GEYJ1R5V	1/16W 1.5	2						
R729, 30	ERJ3GEYJ472V	1/16W 4.7K	2						
R731	EXBV4V331JV	330	1						
R904	ERJ3GEYJ123V	1/16W 12K	1						
R905	ERJ3GEYJ393V	1/16W 39K	1						
R916	ERJ3GEYJ823V	1/16W 82K	1						
R928	ERJ3GEYJ473V	1/16W 47K	1						
RJ10	ERJ3GEY0R00V	CHIP JUMPER	1						
RJ502	ERJ3GEY0R00V	CHIP JUMPER	1						
RJ504	ERJ3GEY0R00V	CHIP JUMPER	1						
RJ506	ERJ3GEY0R00V	CHIP JUMPER	1						

Replacement Parts List

Ref. No.	Change of Parts No.		Part Name & Description	Remarks
	SL-S232C(P)	➡ SL-S231C(P/PC)		
CABINET PARTS				
7	RYF0460C-S	RYF0460B-S	CD COVER ASS'Y	
14	RKW0500-K	_____	PANEL	

Packaging

