# Service Manual Portable CD Player SL-S201C





Please file and use this manual together with the service manual for Model No. SL-S200, Order No. AD9803045C0.

Notes: • This simplified service manual is provided to indicate the differences between the original No. SL-S200 (P/PC) and the subsequent model No. SL-S201C (P/PC).

• SL-S201C is equipped with Car Kit on SL-S200.

· All parts are supplied by MESA.

# Specifications

#### Audio

No. of channels: Frequency response: Output voltage: S/N: Wow and flutter: DA converter: Headphones output level:

2 channel (left and right, stereo) 20 to 20,000 Hz (+ 0.5 dB to -1.5 dB) 0.6 V (50 k $\Omega$ ) More than 94 dB \*<sup>1</sup> Below measurable limit 1 bit, MASH Max. 9 mW + 9 mW/16  $\Omega$  (variable)

Semiconductor laser

780 nm

#### Pick up

Light source: Wavelength:

#### General

Operational temperature range:  $0^{\circ}C - 40^{\circ}C$  ( $32^{\circ}F - 104^{\circ}F$ ) Rechargeable temperature range:  $5^{\circ}C - 40^{\circ}C$  ( $41^{\circ}F - 104^{\circ}F$ ) Power supply: DC 4.5 V Power consumption:

Power sourceAnti-shock OFF/ONAC adaptor4.3 W/4.5 W

#### Play time:

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

Batteries used	Anti-shock OFF/ON			
2 alkaline batteries *3	About 10 hours/ 8.5 hours			
Rechargeable batteries (RP-BP60) *3	About 3.0 hours/ 2.5 hours			
Optional rechargeable batteries (P-3GAVA/2B) *3	About 5.5 hours/ 5.0 hours			

(\*<sup>3</sup>These batteries are not included.)

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

Recharging time:
RP-BP60;
P-3GAVA/2B;
SH-CDB8D;

Dimensions ( $W \times H \times D$ ):

Weight:

#### Cassette adaptor (Car Kit)

Frequency response:30 to 20,000 Hz(This is the rating for the head section of the product.)Dimensions (W × H × D): $102.4 \times 12.1 \times 63.8 \text{ mm}$ Weight:42 gCable length:More than 1.4 m

#### Car adaptor (Car Kit)

Input:	DC 12/24 V
Output:	
SH-CDC10;	DC 4.5 V (0.6 A)
SH-CDC11;	DC 4.5 V (0.8 A)
Dimensions ( $W \times H \times D$ ):	104 × 32 × 23 mm

Cable length:

iono oro oubicatto abanza udbauta -

More than 1.5 m

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

- \*1 This specification was measured in the anti-shock OFF mode.
- \*2 MASH is a trademark of NTT.

#### **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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**Colour** (H) ...... Gray Type

Area

About 3 hours

About 5 hours

About 3 hours

128 × 28.0 × 144 mm

(5<sup>1</sup>/16" × 1<sup>3</sup>/32" × 5<sup>11</sup>/16")

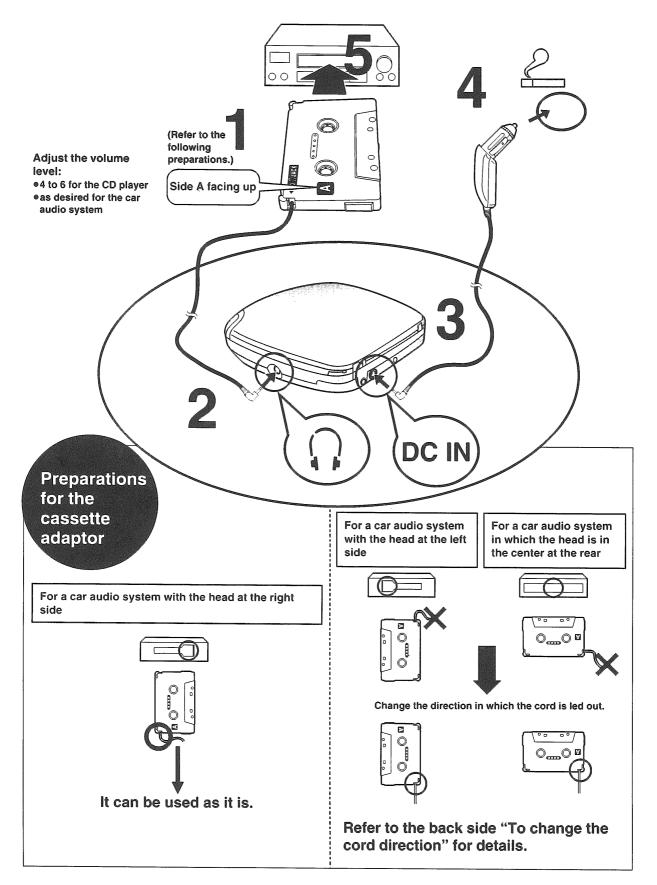
265 g (9.4 oz.) with batteries

220 g (7.8 oz.) without batteries

(P) ..... U.S.A. (PC) ..... Canada.



# Connection



# When the sound volume is extremely low

- Set the play direction for the car audio system to the forward (FWD) direction.
- If the sound volume is still low:
- ② Adjust the balance between the left and right channels of the car audio system

### Concerning the Car Audio System

Position the cassette adaptor with side A facing up and set the play direction for the car audio system to the forward (FWD) direction.

The head positions of the cassette adaptor and the car audio system do not match in the reverse direction, causing the sound volume from the speakers to be extremely low.

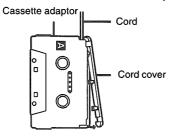
• When model SH-CDM10A is used with the auto-reverse car audio system, the play direction will be automatically set to forward (FWD).

• For manual reverse systems, switch to the side where the sound comes out.

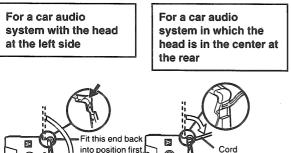
### To change the cord direction

With some car audio systems it is necessary to change the direction in which the cord is led out.

#### Remove the cover of the cassette adaptor.



**2** Pull out the cord, align it with the head section of the car audio system, and change the position from which it extends.



## Car Audio System

into the groove

When the car audio system has a blank skip function
The blank skip function may operate when the CD player stops.
Therefore, be sure to set the blank skip function to off.

#### Note:

Depending on the type of vehicle, static may be heard if the unit is connected via line cord to the car audio system's CD IN jack or AUX IN jack. If this occurs, it is recommended that you use the provided cassette adaptor.

#### When you leave the car

Push the eject button to remove the cassette adaptor.

# Caution

Please understand that we cannot take responsibility for the unit falling or any other damage that may occur as a result of faulty installation.

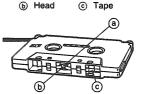
#### Car adaptor

- •The provided car adaptor is made specifically for use with DC 4.5 V Panasonic portable CD players. Do not use it with other devices.
- •Do not use the adaptor for a long period with the batteries left in the unit because this may shorten the life of the batteries.
- Pay attention to the car battery capacity when using this adaptor for a long period.
- Do not expose this adaptor to strong sunlight or very high temperatures.
- Be sure to remove this adaptor from the cigarette lighter socket when not using this adaptor or before leaving the automobile.
- •The power source polarities of this unit are  $\Leftrightarrow \mathbb{C} \to \mathbb{C}$ , check the DC IN jack.

#### Cassette adaptor

Protective film

- •Bunch the excess cord together or place it so that it will not interfere with operation.
- Do not touch the head or tape.
- •A protective film has been placed over the heads to prevent them from being damaged. Do not remove this film.



- After use, remove the cassette adaptor and keep it so that no dust will adhere to the head section.
- After installing the cassette adaptor in the car audio system, do not allow its cord to make contact with the control section.
- The sound quality deteriorates when the head section of the car audio system becomes dirty. It is, therefore, a good idea to clean it periodically.
- Do not leave this adaptor in a vehicle which is exposed to direct sunlight.
- Do not bring any magnetized objects near this adaptor's head position.
- Because of the nature of its construction, the sound of something rotating can be heard in this adaptor. This is normal and not indicative of a malfunction.
- During the winter months when the temperature inside the vehicle falls to an extremely low level, there may be times when the unit cannot be used because the cord is too stiff to allow the adaptor to be installed in its proper position.
- If the pinch rollers or car audio capstan are dirty, it may not longer be possible to install the cassette adaptor in the car audio system. Clean the rollers and capstan using a cotton swab.

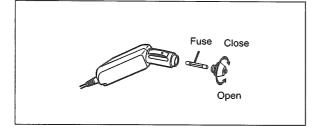
## Car Adaptor

The provided car adaptor must be connected.

- •This car adaptor can be used in an automobile which has a 12 V or 24 V battery. You can use it in a truck or other large vehicle. (This is a special-purpose negative ground car adaptor.)
- •Do not connect the adaptor immediately after using the cigarette lighter.
- •Leave a little slack in the car adaptor's cord, making sure that it does not run underneath the unit.
- To replace the fuse
- **1** Remove the plug cap by rotating it in the direction shown by the arrow, and take out the old fuse.
- 2 Insert the new fuse (125 V/250 V, 500 mA type) into the fuse receptacle and reinstall the plug cap.

Note:

For continued protection against risk of fire, replace only with same type 125 V/250 V, 500 mA fuse.

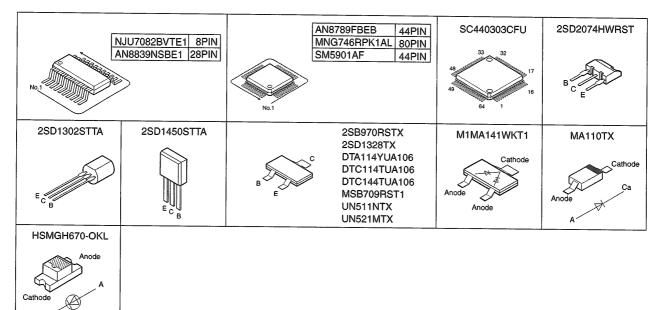


If the fuse blows frequently, there may be something wrong with the adaptor. Consult your dealer.

## Troubleshooting Guide

Problem	Checkpoint	Remedy				
	Did you adjust the volume level of the unit?	Adjust the volume level of the unit to 4 or higher.				
	Did you adjust the volume level of the car audio system?	Adjust the volume level of the car audio system to the desired level.				
The sound volume is	Have you removed the cord cover of the cassette adaptor?	Install the cord cover properly.				
extremely low.	Does the car audio system have an auto-reverse function?	Set the play direction for the car audio system to the forward (FWD) direction. (The forward (FWD) direction is the side which produces sound or which has the greatest sound volume.]				
The cassette adaptor cannot be inserted	Did you check the position of the car audio's head?	Check the position of the head in relation to the car audio system to ensure the cassette adaptor is installed correctly.				
into the car audio system.	Have you inserted the side with the cord in first?	Remove the cord cover, and change the position from which the cord extends.				
The unit cannot be turned on.	Is the fuse for the car adaptor blown?	Insert a new fuse.				

# Type Illustration of IC's, Transistors and Diodes



# 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.
- S305 : Stop/power off ( POWER OFF) switch.
- S306 : Play/pause (▶ III) switch.
- S307 : Play mode selector (MODE) in "RANDOM" position. (RANDOM  $\leftrightarrow$  NORMAL  $\leftrightarrow$  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.

Please refer to the service manual for Model No.SL-S200 (Oder No. AD 980345C0) about Terminal Function of IC's.

- 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
  - - > : Audio signal lines.

Important safety notice:

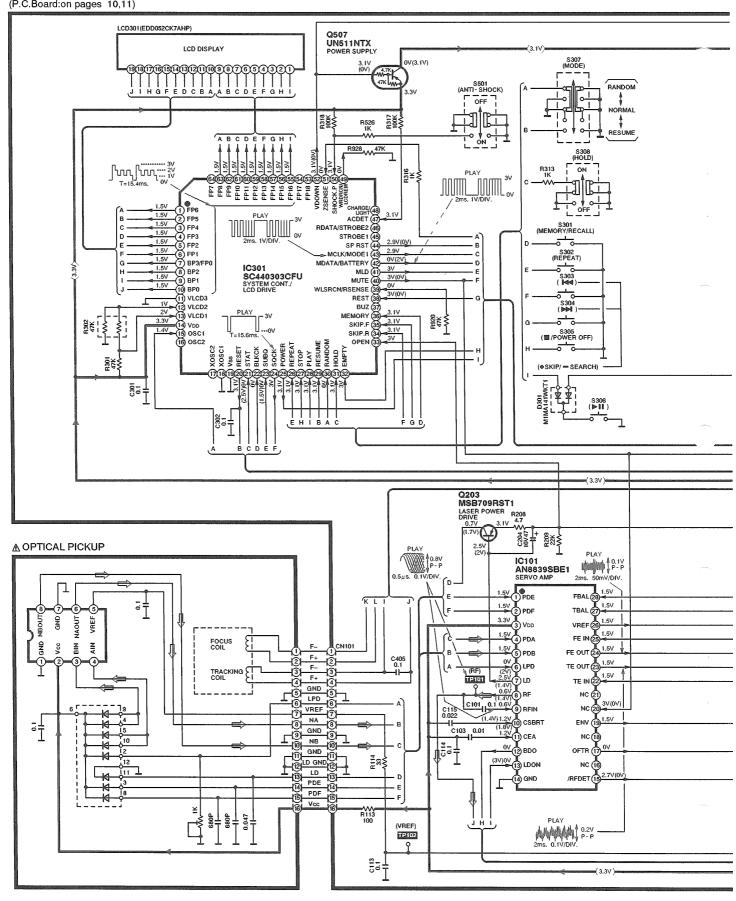
Components identified by  $\triangle$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

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

#### Caution!

IC and LSI are sensitive to static electricity.

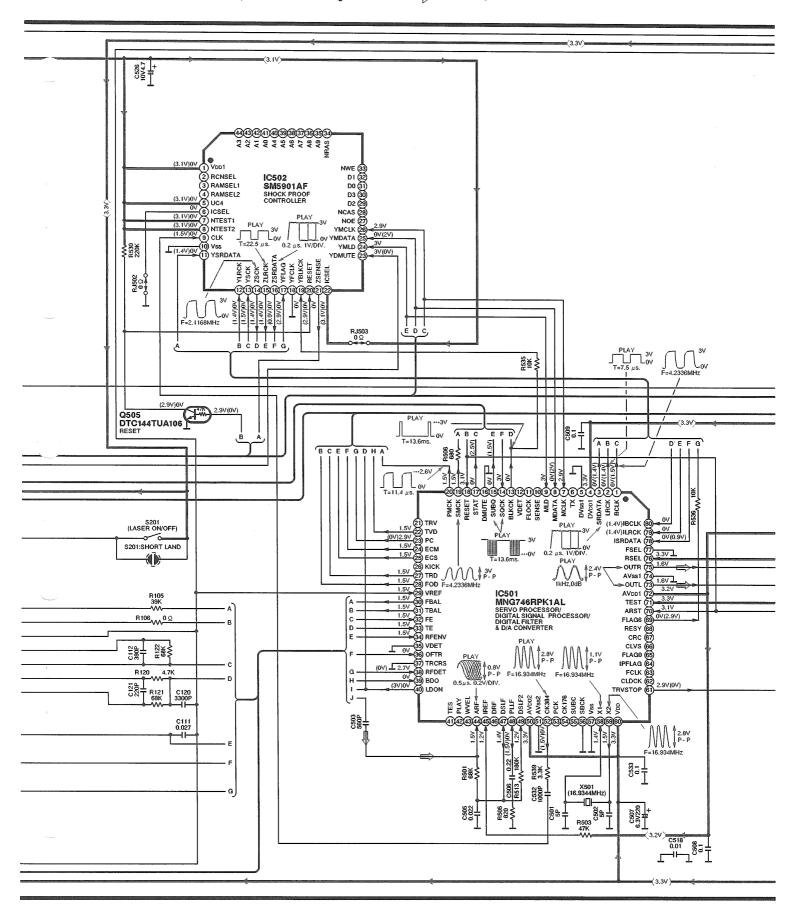
- Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.



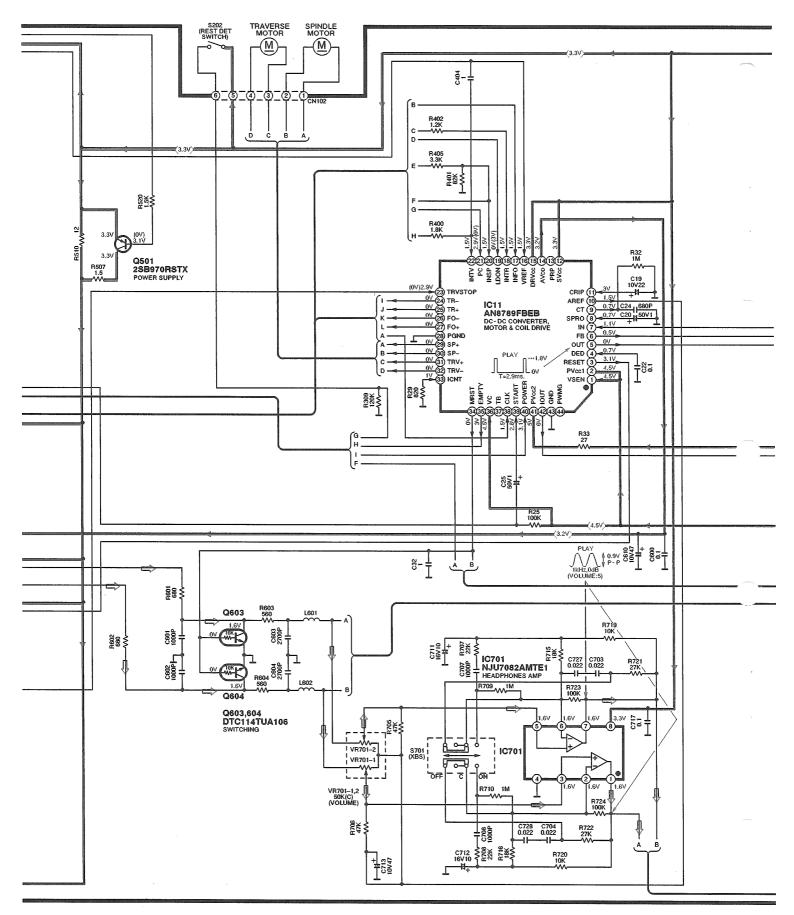
- 6 -

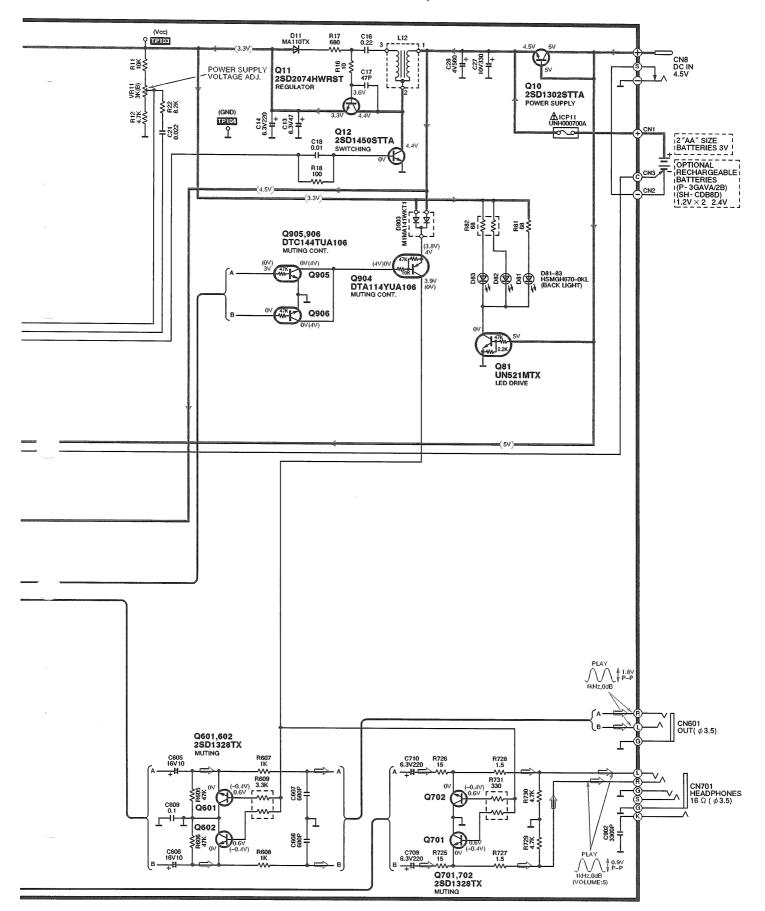
SL-S201C

(P.C.Board:on pages 10,11)



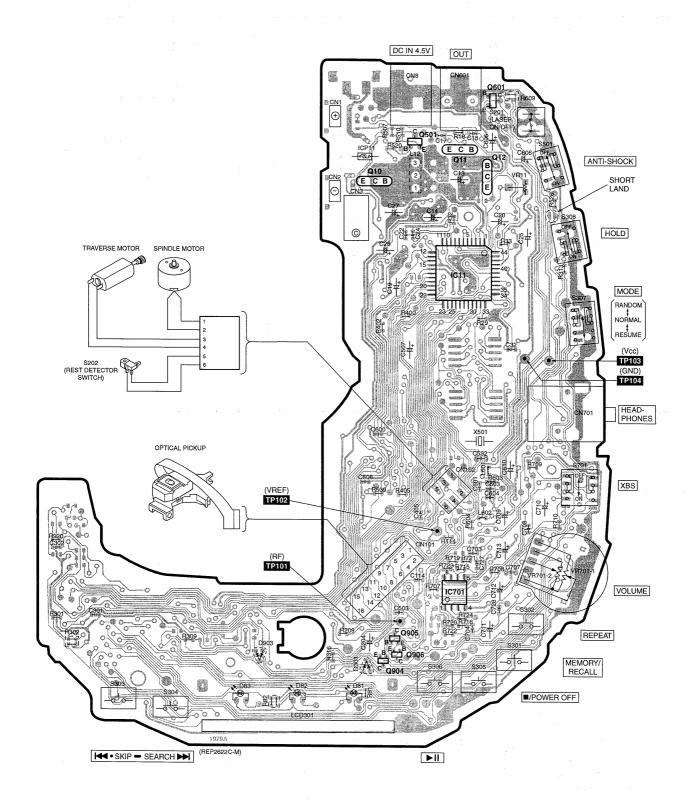
- 7 -





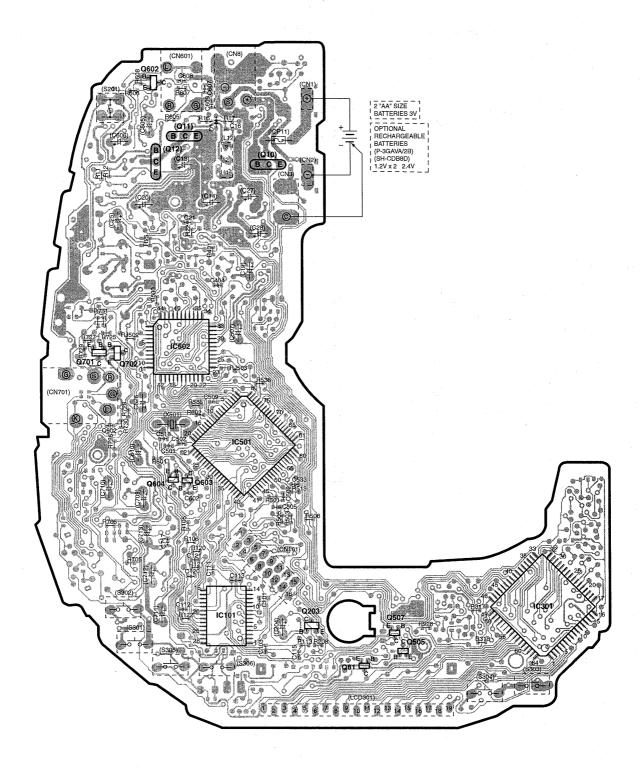
# Printed Circuit Board and Wiring Connection Diagram

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



- 10 -

SL-S201C



<u>∕</u>∆ A1

A2

A3

A4

/ A5 <u>∕</u>∆ A5-1

AG

A8

A9

A10

A11

A12

A13

A14

<u>A A15-1</u>

A16 C13

C14

C16

C17

C18

C19

C20

C21

C22

C24

C25

C27

C28

C32

C101

C103

C111

C112

C113

C114

C115

C120

C121

C204

C404

C405

C503

C505

C301,02

C501,02

A A15

<u>∕</u>∆ A7

# Replacement Parts List

Notes: • Important safety notice:

- Components identified by A mark hav important for safety.
  - Furthermore, special parts which h retardant (resistors), high-quality sound (resistors), etc. are used.
  - When replacing any of components manufacture's specified parts shown in
- All parts are supplied by MESA.
- The "<IA> <IB> <IC> <ID>" marks in Re of instruction manual.
- <IA> : English
- <IB> : English

RFEA403C-S

RQT4055-2P

R0T4591-P

RFEA403C-S

SOX7185

RQCB0792

RQT4055-2P

RQT4056-C

RQT4591-P

RQT4336-C

<IC> : Canadian French <ID> : Canadian French

Ref.No. | Part No. | Part Name & Description

RFEV705P-KS STEREO HEADPHONES

SH-CDC10PPY CAR ADAPTOR

XBA2C05NB10 FUSE, 250V 0. 5A

SH-CDM10BPYK CASSETTE ADAPTOR

RFEV317P-KS STEREO EARPHONES

SH-CDC11PCY CAR ADAPTOR

RCEOJSC4701X 6.3V

RCEOJKA2211G 6.3V

ECUVNA224KBV 10V

ECUV1H470KCV 50V

ECUV1E103KBV 25V

ECEA1AKS220 10V

ECEA1HKS010 50V

ECUV1C223KBV 16V

ECUZNC104ZFV 16V

ECUV1H681KBV 50V

ECEA1HKS010 50V RCE1AMT3311V 10V

RCEOGMT5611V 4V

ECUVNA105ZFV 10V

ECUV1C104KBV 16V

ECUV1E103KBV 25V

ECUV1C273KBV 16V

ECUV1H391KBV 50V

ECUVNE104ZFN 25V

ECUZNC104ZFV 16V

ECUV1C223KBV 16V

ECUV1H332KBV 50V

ECUV1H221KBV 50V

RCE1AKA4701G 10V

ECUZNC104ZFV 16V

ECUVNA105ZFV 10V

ECUVIC104KBV 16V

ECUV1H050CCV 50V

ECUV1H561KBV 50V

ECUV1C223KBV 16V

XBA2C05NB10 | FUSE, 250V 0. 5A

SH-CDM10BPYK CASSETTE ADAPTOR

AC ADAPTOR

WARRANTY CARD SERVICE CENTER LIST

CAR KIT INSTRUCTIONS

CAR KIT INSTRUCTIONS

OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS

47U

220U

47P

0.22U

0.010

0.0220

0.1U

680P

3300

560U

0.1U

0.010

0.0270

390P

0.1U

0.1U

0.0220

3300P

220P

4711

0.10

0.1U

10

5P

560P

0.022U

10

10

22U

10

AC ADAPTOR

CAR KIT INSTRUCTIONS

OPERATING INSTRUCTIONS

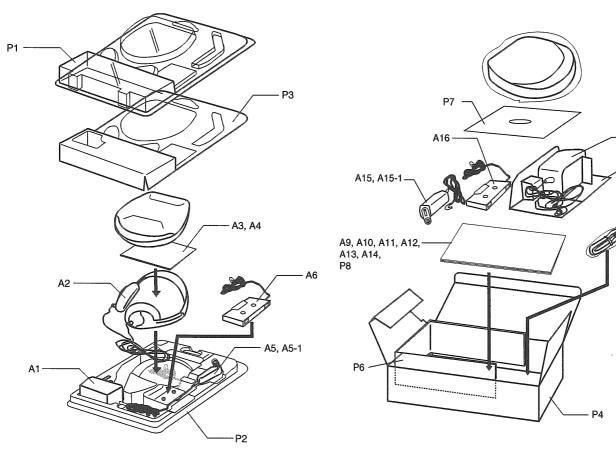
	. 1	1:04					
		List	Ref.No.	Part No.	Part Name & Description	nPcs	Remarks
			C506	ECUVNA224KBV	10V 0.22U	1	
			C507	RCE0JKA2211G	6.3V 220U	1	
v	e s	pecial characteristics	C508,09	ECUZNC104ZFV	16V 0.1U	2	
			C518	ECUV1E103KBV	25V 0.01U	1	
ł	۱a	e purposes of fire-	C526		10V 4.7U	1	
		capacitors), low-noise	C532	ECUV1H102KBN	50V 1000P	1	
	•	,,	C533	ECUZNC104ZFV	16V 0.1U	1	
ts	s.	be sure to use only	C600	ECUZNC104ZFV	16V 0.1U	1	
		e parts list.	C601,02	ECUV1H102KBV	50V 1000P	2	
	• • • •		C603, 04	ECUV1H272KBV	50V 2700P	2	
6	m	arks indicate language	C605,06	ECEA1CKS100	16V 10U	2	
0	1110	and anguage	C607,08	ECUV1H681KBV	50V 680P	2	
			C609	ECUZNC104ZFV	16V 0.1U	1	
			C610	RCE1AKA470IG	10V 47U	1	
			C703, 04	ECUV1C223KBV	16V 0.022U	2	
			C707		50V 1000P	1	
_			C708	ECUV1H102KBV	50V 1000P	1	
			C709, 10	ECA0JAK221XH	6.3V 220U	2	
			C711, 12	ECEA1CKS100	16V 10U	2	
			C713		10V 47U	1	
			C717	ECUZNC104ZFV	16V 0.1U	1	
			C727, 28	ECUV1C223KBV	16V 0.022U	2	
			C902	ECUV1H332KBV	50V 3300P	1	
,	D	J n1	1			<u> </u>	
n	Pcs	Remarks	CN1, N2	RJC93015-1	CONNECTOR (15P)	2	
_			CN3	RJH5104	CONNECTOR (2P)	1	
-		(P)	CN8	RJJ43K09-C	CONNECTOR (9P)	1	
-		(P)	CN101	RJS2A4716M1	CONNECTOR (16P)	1	
-	1		CN102	RJS2A5106T1	CONNECTOR (6P)	1	
-		(P) <1B>	CN601	RJJD3S5ZB-C	CONNECTOR (5P)	1	
-	_	(P)	CN701	RJJ33TK07-C	CONNECTOR (7P)	1	
_	1						
_	1		D11	MAIIOTX	DIODE	1	
-	1		D81-83	HSMGH670-OKL	LED	3	
_	1	(PC)	D301	M1MA141WKT1	DIODE	1	
_	1		D903	M1MA141WKT1	DIODE	1	
-	1						
-	1		1011	AN8789FBEB		1	
-	1		10101	AN8839SBE1	IC	1	
-	1		1C301	SC440303CFU	IC	1	
-	1		IC501	MNG746RPK1AL	IC	1	
-	1		10502	SM5901AF	10	1	
-	1	(PC)	10701	NJU7082AMTE1	10	1	
-	1	(PC)				-	
-			A 1CP11	UNH000700A	IC PROTECTOR	1	
-	1						
	1		L12	RLZ0028T-M	COIL, SWITCHING	1	
			L601,02	RLBV121AV-I	COIL, CHOKE	2	
-	1					1.	
	1		LCD301	EDD052CK7AHP	LCD ASSY	1	
-							
-	1		P1	RPN1068	COVER		(P)
-	1		P2	RPN1133	TRAY		(P)
			P3	RPQ0849	MOUNT		(P)
	1		P4 P5	RPK1050	PACKING CASE	-	(PC)
-			-	RPQ0819	SPACER	1	
	1		P6	RPQ0836-1	PAD	_	(PC)
-	1		P7	RPQ0869	PAD	1	(PC)
+	1		P8	RPF0046	POLYETHYLENE COVER	1	(PC)
-	1		0001		D. C. D. 4001 X		
-	1		PCB1	REP2622C-M	P. C. B. ASS' Y	1	
	1		010	00012000774	TRANCIOTOR	+	
	1		Q10	2SD1302STTA	TRANSISTOR	11	
-	1		Q11	2SD2074HWRST	TRANSISTOR	1	
-			Q12	2SD1450STTA	TRANSISTOR	1	
-	1		Q81	UN521MTX	TRANSISTOR	1	
	1		Q203	MSB709RST1	TRANSISTOR	1	
4	1		Q501	2SB97ORSTX	TRANSISTOR	1	
1	1		Q505	DTC144TUA106	TRANSISTOR	1	
1	2		Q507	UN511NTX	TRANSISTOR	1	
ļ	1		Q601,02	2SD1328QRSTX	TRANSISTOR	2	
ļ	1		Q603,04	DTC114TUA106	TRANSISTOR	2	
	2		Q701,02	2SD1328QRSTX	TRANSISTOR	2	
	1		Q904	DTA114YUA106	TRANSISTOR	1	
	1		Q905,06	DTC144TUA106	TRANSISTOR	2	
J						1	
J					· · · · · · · · · · · · · · · · · · ·	1	
-	-					-	

Ref. No.	Part No.	Part Name & DescriptionPc	s Remarks	Ref. No.	Part No.	Part Name & Description	Bac	Bomenko
			G Reling 1 K5	X501	RSXZ16M9M01T	OSCILLATOR	1	
R11	ERJ3GEYJ103Z							
	ERJ3GEYJ472V ERJ3GEYJ100V							
R17	ERJ3GEYJ681V	1/16W 680					-	
	ERJ3GEYJ101V						-	
R22 R25	ERJ3GEYJ822V ERJ3GEYJ104Z							
	ERJ3GEYJ821V							
R32	ERJ3GEYJ105V	1/16W 1M					-	
	ERJ3GEYJ270V							
R81 R82		1/16W 68 1/32W 68						
	ERJ3GEYJ393V							
	ERJ3GEYOROOV							
	ERJ3GEYJ101V ERJ3GEYJ330V							
	ERJ3GEYJ472V						-	
R121, 22	ERJ3GEYJ683V	1/16W 68K	2					
	ERJ3GEYJ4R7V							
	ERJ3GEYJ223V ERJ3GEYJ473V						-	
R302	EXBV4V473JV	1/32W 47K					-	
		1/16W 120K						
	ERJ3GEYJ102Z ERJ3GEYJ102Z							
		1/16W 100K						
R400	ERJ3GEYJ182V	1/16W 1.8K						
		1/16W 82K						
	ERJ3GEYJ122V ERJ3GEYJ332V	1/16W 1.2K 1/16W 3.3K						
		1/16W 68K						
	ERJ3GEYJ473V							
	ERJ3GEYJ821Z ERJ3GEYJ681V						<u> </u>	
		1/16W 1.5						
	ERJ3GEYJ120V							
	ERJ3GEYJ184V ERJ3GEYJ152V			L				
	ERJ3GEYJ1927							
R530	ERJ3GEYJ224V	1/16W 220K						
	ERJ6GEYJ103V							
	ERJ3GEYJ103Z ERJ3GEYJ332V	1/16W 10K 1/16W 3.3K						
	ERJ3GEYJ681V		2					
	MCR03PZHJ561							
	ERJ3GEYJ473V ERJ3GEYJ102Z		2				-	
		1/32W 3. 3K						
	ERJ3GEYJ473V		2					
	ERJ3GEYJ223V ERJ3GEYJ105V							
	ERJ3GEYJ103V		2					
R719, 20	ERJ3GEYJ103Z	1/16W 10K	)		· · · ·			
	ERJ3GEYJ273V ERJ3GEYJ104Z						L	
	ERJ3GEYJ104Z ERJ3GEYJ150V							
R727, 28	ERJ3GEYJ1R5V	1/16W 1.5	2					
	ERJ3GEYJ472V							
	EXBV4V331JV ERJ3GEYJ473V	1/32W 330 1/16W 47K						
	ERJ3GEYJ473V						-	
RJ502, 03	ERJ3GEYOROOV	CHIP JUMPER	2					
S201	ESE11SV6	SW, LASER ON/OFF					$\vdash$	
\$301-06	EVQ11G05R	SW, PUSH	6					
		SW, MODE						
		SW, HOLD SW, ANT I - SHOCK						
\$701		SW, XBS						
VR11 VR701	RRN3A05B33WL EVUTUFB11C54	VR, VOLTAGE ADJ. VR, VOLUME			ļ			
****	EV010F011604	The TOLOME					-	
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# Change of Replacement Parts List Note: All parts are supplied by MESA.

Ref. No.	Chan	ge of Parts No.		Remarks
nei. No.	SL-S200C	SL-S201C	Part Name & Description	
CABINET PAF	RTS			-
1	RFKJLS200P-H	RFKJLS201CPH	BOTTOM CABINET ASS'Y	
7	RYF0441E-H	RYF0441J-H	CD COVER ASS'Y	
11	RSL5203-C	EDD052CK7AHP	LCD	

# Packaging



(P)

(PC)

Printed in Japan F980401200YM/KH

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