

TA-AX311

SERVICE MANUAL

US Model
Canadian Model
E Model
Australian Model



SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 40 - 20,000 Hz; rated 110 watts per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

Inputs

	Sensitivity	Impedance
PHONO	3.0 mV	50 kohms
TUNER, CD, VIDEO, TAPE	250 mV	50 kohms

Output	REC OUT: Voltage 250 mV, impedance 1 kohm SPEAKER: Accepts speakers of 8 to 16 ohms HEADPHONES: Accepts headphones with low and high impedance
Frequency response	PHONO: RIAA curve TUNER/CD/VIDEO/TAPE: 30 Hz - 30 kHz \pm 3 dB GRAPHIC EQUALIZER controls Boost/Cut range: \pm 8 dB (100 Hz, 330 Hz, 1 kHz, 3.3 kHz) \pm 6 dB (10 kHz)
Dimensions	Approx. 430 x 145 x 360 mm (w/h/d) (17 x 5 ⁵ / ₈ x 14 ¹ / ₈ inches)
Weight	Approx. 9.5 kg (20 lb. 15 oz.)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

INTEGRATED STEREO AMPLIFIER
SONY[®]

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

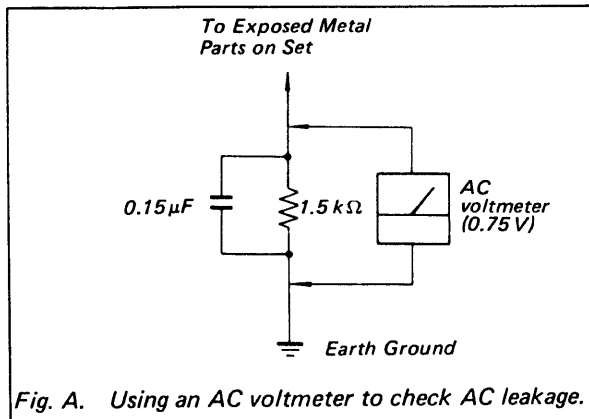
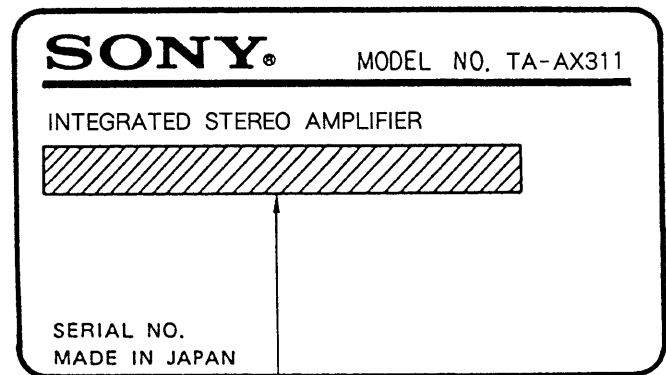


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MODEL IDENTIFICATION

— Specification Label —



US, Canadian models : AC 120V, 60Hz

200W (U) 400VA (CA)

Australian model : AC 220V~50/60Hz 220W

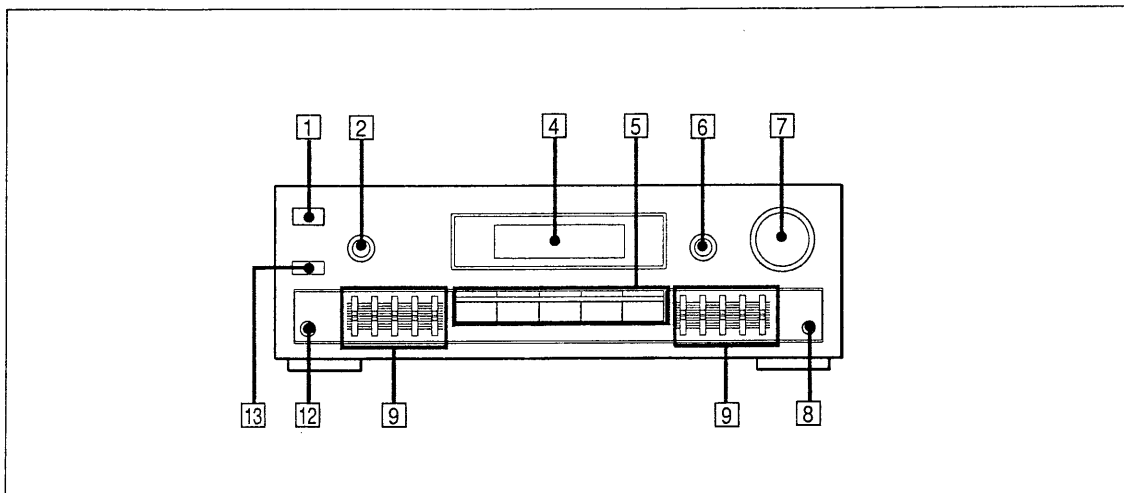
E model : AC 120/220/240V~50/60Hz

220W

SECTION 1 GENERAL

This section is extracted from instruction manual.

1-1. Location and Function of Controls



Amplifier

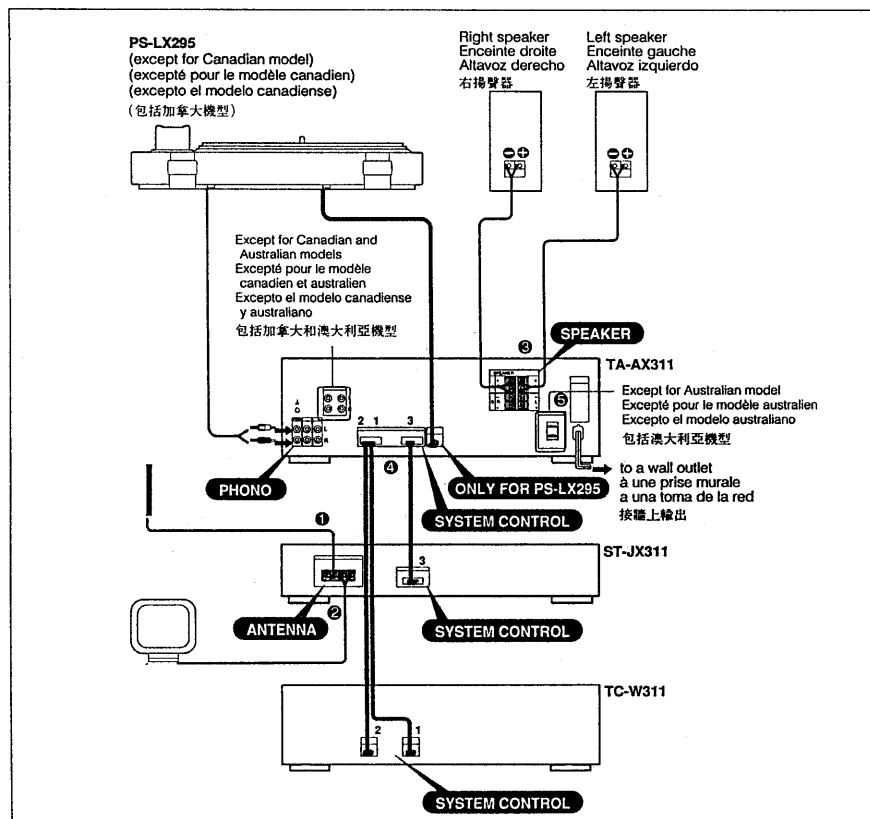
- | | |
|--|--|
| <p>1 SYSTEM POWER switch
When the SYSTEM POWER switch is turned ON, the settings on the display panel are automatically reset the original setting.</p> <p>2 SPEAKERS selector</p> <p>4 Display window</p> <p>5 Function selectors</p> | <p>6 BALANCE control</p> <p>7 MASTER VOLUME control</p> <p>8 DBFB switch</p> <p>9 Graphic equalizer controls</p> <p>12 HEADPHONES jack</p> <p>13 Remote control sensor</p> |
|--|--|

Remote Commander

<p style="text-align: right;">RM-S102</p>	<h4>Installing Batteries</h4> <p>1</p> <p>2 Two size-AA (R6) batteries</p>
<p>1 POWER button</p> <p>2 DBFB button</p> <p>3 TUNER PRESET +/- buttons</p> <p>4 VOL (volume) +/- buttons</p> <p>5 Function selectors</p> <p>6 CD player operation buttons CD ▶: Selects the CD function and starts CD playback.</p>	<h4>Battery life</h4> <p>About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the remote commander can no longer operate the unit. If this happens, replace both batteries with new ones.</p> <h4>To avoid battery leakage</h4> <p>When the commander is not be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.</p>

Connections

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for the right channel (R) and white ones are for the left channel (L).
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Keep speaker cords, connecting cords and power cords away from the AM loop antenna and the tuner's antenna lead-in to avoid possible noise pickup.



④ Speaker cords

You can connect two pairs of speaker systems: system A and system B. They can be selected individually or simultaneously with the selector on the front panel.

Cordons des enceintes acoustiques

Il est possible de raccorder deux paires d'enceintes acoustiques: le système A et le système B. Elles peuvent être sélectionnées individuellement ou simultanément à l'aide du sélecteur situé sur le panneau avant.

Cables de los altavoces

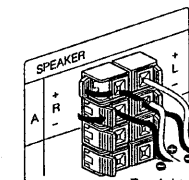
Usted podrá conectar dos pares de sistemas de altavoces: sistema A y sistema B. Estos sistemas podrán elegirse individual o simultáneamente con el selector del panel frontal.

揚聲器連接線

可以連接兩對揚聲器系統：

A系統和B系統。

利用前控制盤上的選擇鍵，可進行單獨或同時使用的選擇。



For left speaker
Pour l'enceinte gauche
Para el altavoz izquierdo
接左揚聲器

For right speaker
Pour l'enceinte droite
Para el altavoz derecho
接右揚聲器

④ Flat cords (supplied)

Connect the blue and black connectors to the same color connector jacks respectively for controlling each unit.

Cordons plats (fournis)

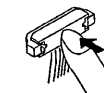
Brancher les connecteurs bleu et noir respectivement aux prises de la même couleur pour contrôler chaque appareil.

Cables planos (suministrados)

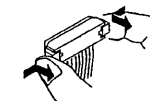
Inserte los conectores macho azul y negro en los hembra del mismo color a fin de controlar cada una de las unidades.

扁平連接線附

連接插頭與同色的連接器嚴格地相連接（藍對藍，黑對黑）。

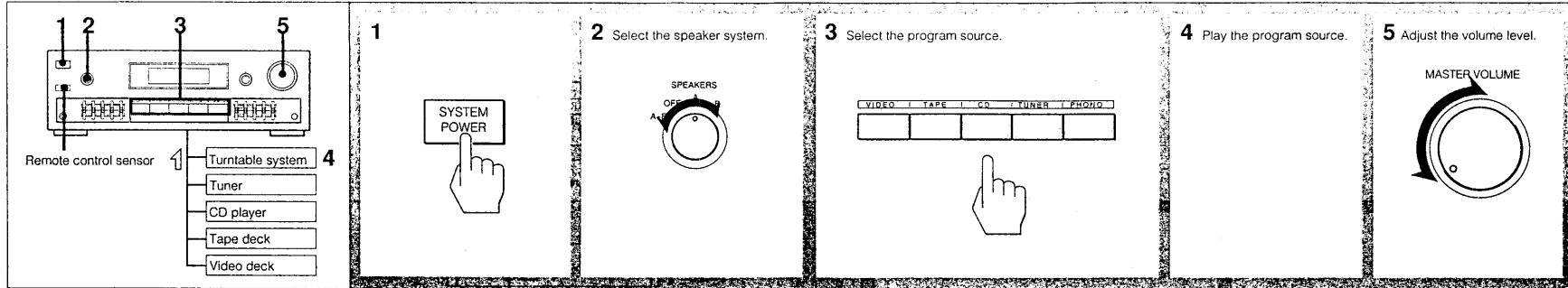


Push in until it clicks.
Pousser jusqu'à encliquetage.
Presione hasta que chasquee.
按機器上的掣子



To disconnect.
Para desconectar.
切斷連接

Listening to a Program Source



Selecting the speaker system

To drive speaker system A: Set SPEAKERS to "A".
 To drive speaker system B: Set SPEAKERS to "B".
 To drive both speakers: Set SPEAKERS to "A + B".
 For headphone listening only: Set SPEAKERS to "OFF".

Selecting the program source

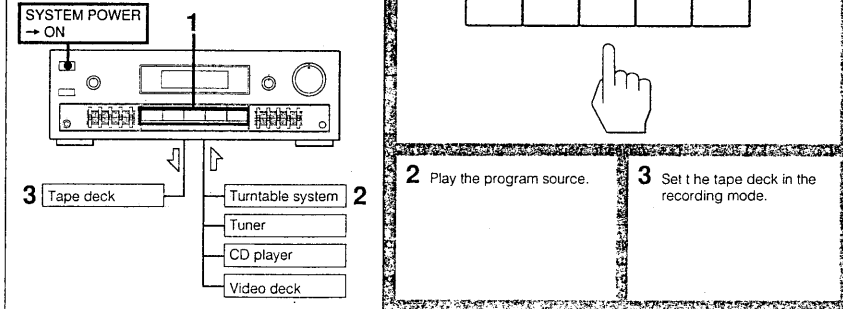
For a record program, press PHONO.
 For a tuner program, press TUNER.
 For a CD program, press CD.
 For a tape program, press TAPE.
 For a video sound program, press VIDEO.

Notes

- When SPEAKERS is set to "A + B", two pairs of speaker systems must be connected. Otherwise, no sound can be heard.
- The sound of rear (surround) speakers are not heard from the headphone.

Recording

You can record any program source using a tape deck connected to the TAPE jacks. The BALANCE, VOLUME, GRAPHIC EQUALIZER controls and the DBFB switch have no effect on recording.



SECTION 2 DIAGRAMS

2-1. DESCRIPTION ON IC101(μ PD75206-717-3BE)

Pin	Port	I/O	ACT	RESET	Outside	
1	RESET	I				DIGIT9
2	t0	O	H	High	L	DIGIT8
3	t1	O	H	High	L	DIGIT7
4	t2	O	H	High	L	DIGIT6
5	t3	O	H	High	L	DIGIT5
6	t4	O	H	High	L	DIGIT4
7	t5	O	H	High	L	DIGIT3
8	t6	O	H	High	L	DIGIT2
9	t7	O	H	High	L	DIGIT1
10	t8	O	H	High	L	NC
11	t9	O	H	High	L	DBFB
12	t10	O	H	High	L	FRONT MUTE
13	t11	O	H	High	L	REAR MUTE
14	t12	O	H	High	L	DRLC CONTROL
15	t13	O	H	High	L	DRLC SW A
16	t14	O	H	High	L	DRLC SW B
17	t15	O	H	High	L	- 30V
18	Vload		-	High		- 4V
19	Vpre		-	High		NC
20	s9	O	H	High	L	SEG9
21	s8	O	H	High	L	SEG8
22	s7	O	H	High	L	SEG7
23	s6	O	H	High	L	SEG6
24	s5	O	H	High	L	SEG5/KEY OUT5
25	s4	O	H	High	L	+ 5V
26	V _{DD}			High		SEG4/KEY OUT4
27	s3	O	H	High	L	SEG3/KEY OUT3
28	s2	O	H	High	L	SEG2/KEY OUT2
29	s1	O	H	High	L	SEG1/KEY OUT1
30	s0	O	H	High	L	KEY IN 1
31	p00	I	H	In	L	KEY IN 2
32	p01	I	H	In	L	

High : High - impedance status

In : Input status

Pin	Port	I/O	ACT	RESET	Outsided	
33	p02	I	H	In	L	KEY IN 3
34	p03	I	H	In	L	KEY IN 4
35	p10	I	H	In		RM - 1
36	p11	I	H	In		RM - 2
37	p12	I	L	In		DRLC SW
38	p13	I	L	In		POWER SW
39	p20	O	H	In	L	ST LC7535/LC7822
40	p21	O	L	In	L	ST LV1001M
41	p22	O	H	In	L	SV MSM59371
42	p23	O	H	In	L	VOL +
43	p30	O	H	In	L	VOL -
44	p31	O	H	In	L	VIDEO A
45	p32	O	H	In	L	VIDEO B
46	p33	O	L	In	L	TC PAUSE/PRO LOGIC
47	p60	O	H	In	L	STOP
48	p61	O	H	In	L	CLOCK
49	p62	O	H	In	L	DATA
50	p63	O	H	In	L	FRONT SP relay
51	p40	O	L	In	L	RECOU SW V1
52	p41	O	L	In	L	RECOU SW V2
53	p42	O	L	In	L	RECOU SW TAPE
54	p43	O	H	In	L	POWER RELAY
55	ppo	O	H	In	L	REAR SP relay
56	x1					
57	x2					
58	Vss					
59	xt1					
60	zt2					
61	p50	O	H	In		DRLC READY
62	p51	O	H	In		MIX SW
63	p52	O	H	In		DOLBY SW
64	p53	O	H	In		SIM SW

High : High-impedance status

In : Input status

2-2. KEY OPERATION

Key input has priority over serial input.

(1) Setting

KEY OUT KEY IN	S0	S1	S2	S3	S4
P00	PHONO	TUNER	CD	TAPE	VIDEO01
P02	DBFB	DELAY	DOLBY	HALL	SIMULATED

Note 1. SURROUND ON/OFF.

(2) FUNCTION Key (PHONO,TUNER, CD, TAPE, VIDEO1-4) operation

These keys execute operations below when pressed.
 FUNCTION ICSerial data
 REC OUT SWStatic data
 VIDEO SW.....Static data
 FRONT MUTE.....One shot
 REAR MUTEOne shot

(3) REAR MUTE PORT

The port is turned to "H" by switching to SURR ON, MODE or FUNCTION.

(Key input, Serial input)

Also the port is "H" three seconds after POWER ON is selected.

REAR MUTE PORT has priority over other ports to output when POWER OFF is selected and operates when SUB VOLUME is turned to ∞.

However there is no output for the port switching the main FUNCTION when DRLC ON is selected.

(4) DRLC CONTROL PORT (used for SP relay too)

The port is turned to "H" only when DRLC ON is selected. (Key input, Serial input)

(5) POWER RELAY PORT

The port is turned to "H" when either POWER ON or DRLC ON is selected. (Key input, Serial input RM-1, RM-2) Both MAIN and SUB are turned OFF when ALL OFF serial input is selected.

(6) DOLBY PORT

The port is turned to "L" HALL or SIM is selected. (Key input, Serial input)

(7) SIM PORT

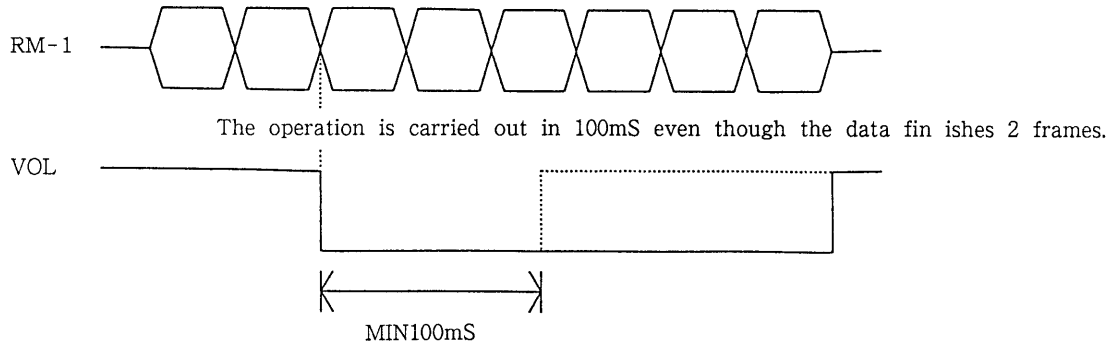
The port is turned to "L" when SIM is selected. (Key input, Serial input)

The relation between Switch ON and FUNCTION

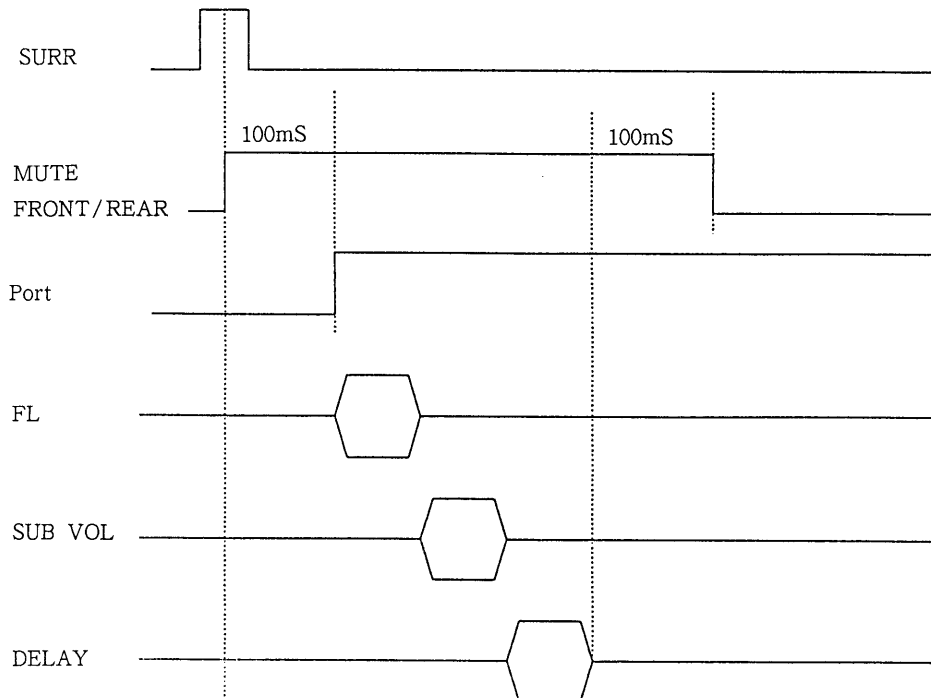
SW	TA-AX311/AV411
1. PHONO	10000001
2. TUNER	01000001
3. CD	00100001
4. TAPE	00010000
5. VIDEO 3	none
6. VIDEO 2	none
7. VIDEO 1	00000011
8. VIDEO 4	none

Timing chart

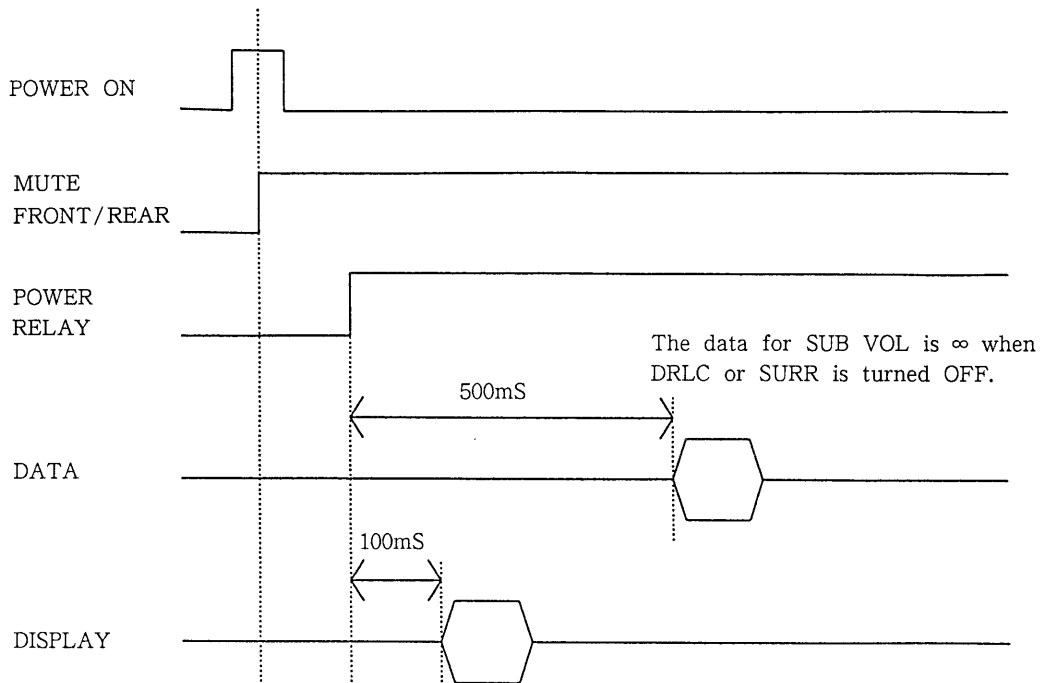
VOL + / -



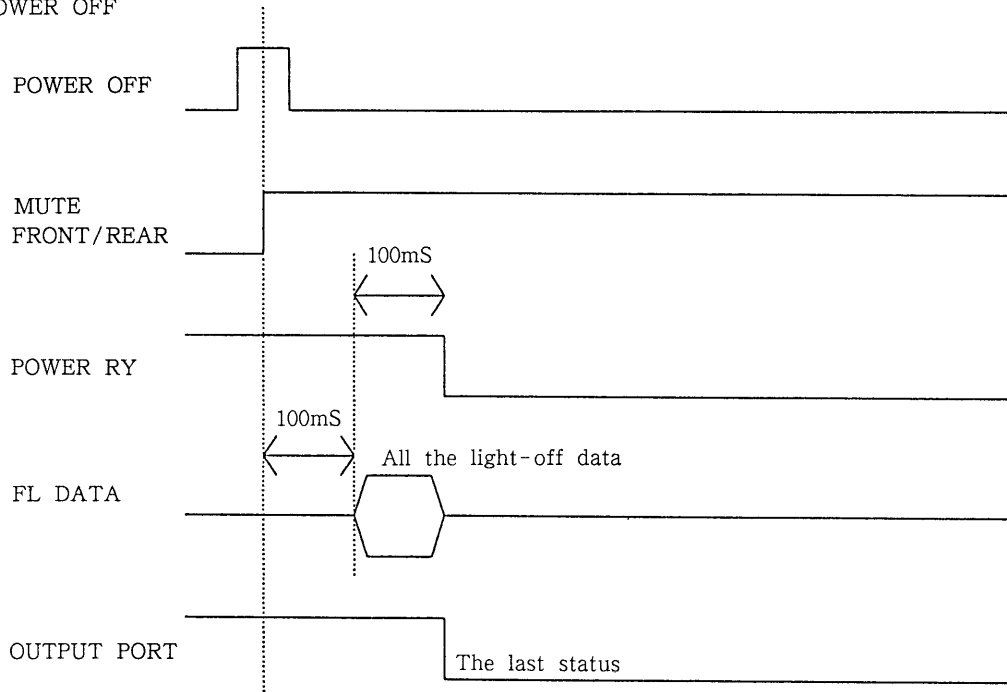
MUTE must be switched 100mS forward or backward during SURR MODE switching (including SURR/OFF switch).



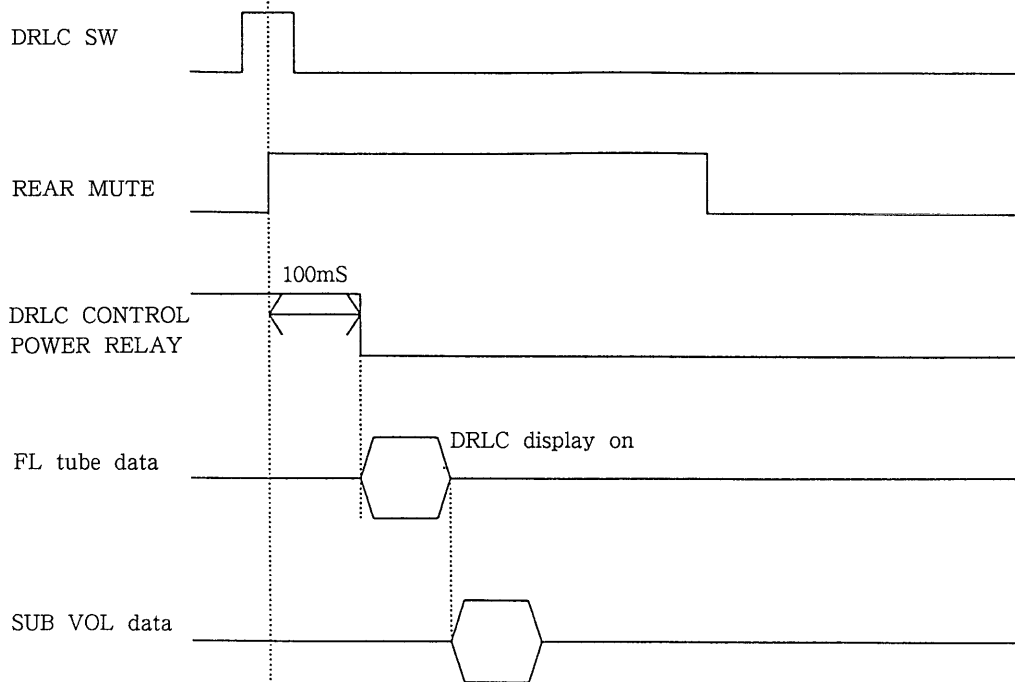
POWER ON (The same operation when starting the buck up system.)



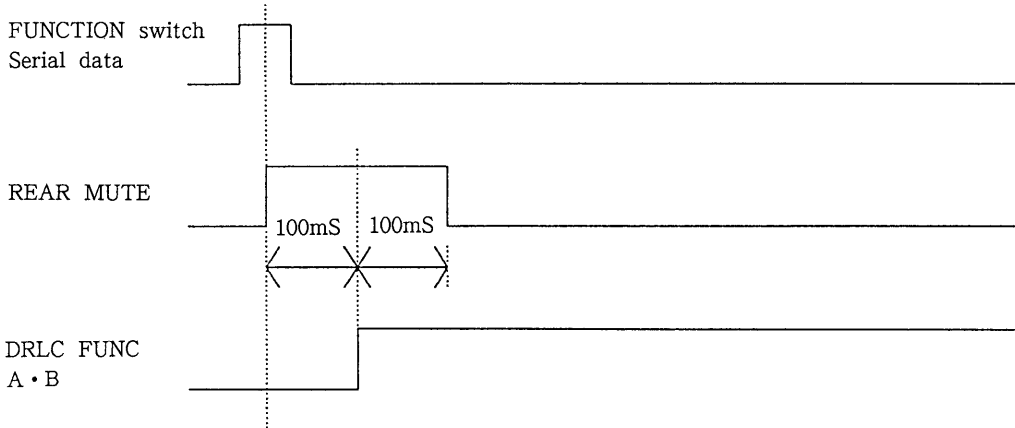
POWER OFF



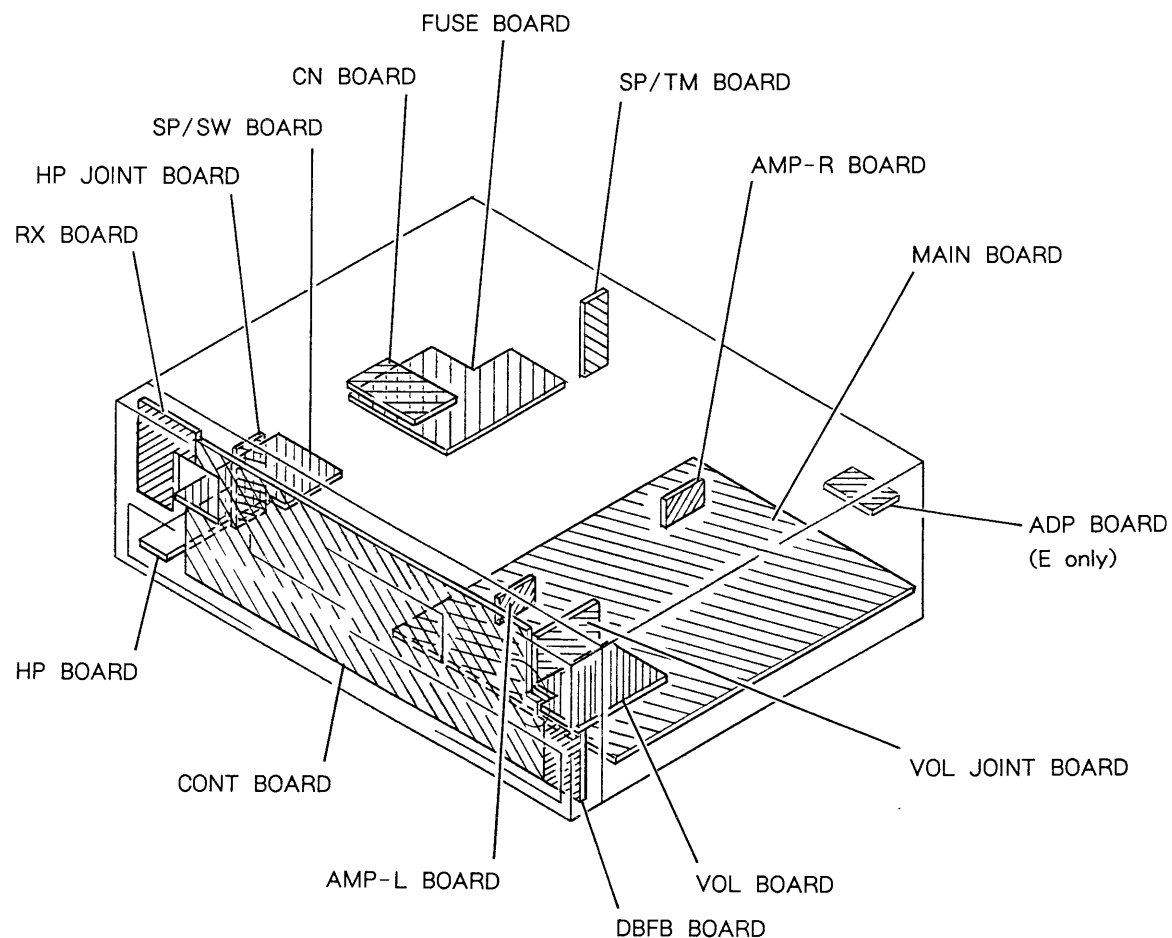
Timing chart
DRLC



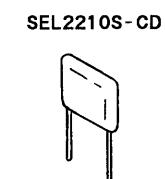
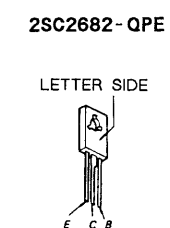
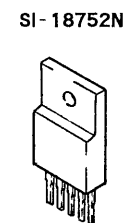
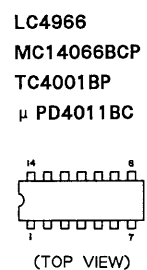
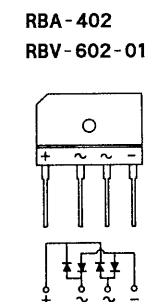
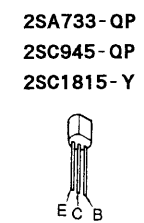
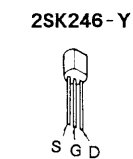
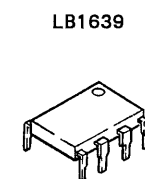
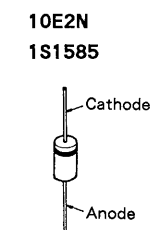
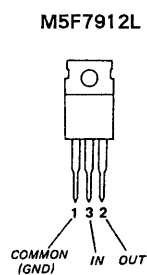
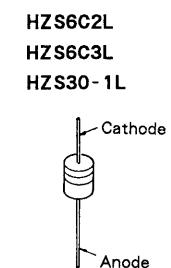
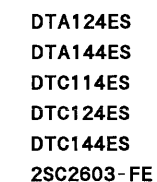
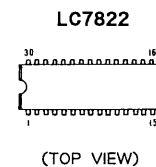
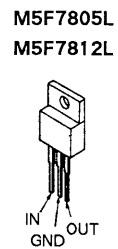
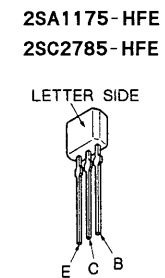
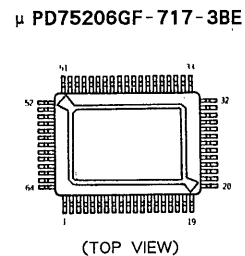
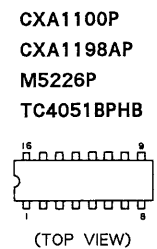
DRLC FUNCTION



2-3. CIRCUIT BOARDS LOCATION



2-4. SEMICONDUCTOR LEAD LAYOUTS



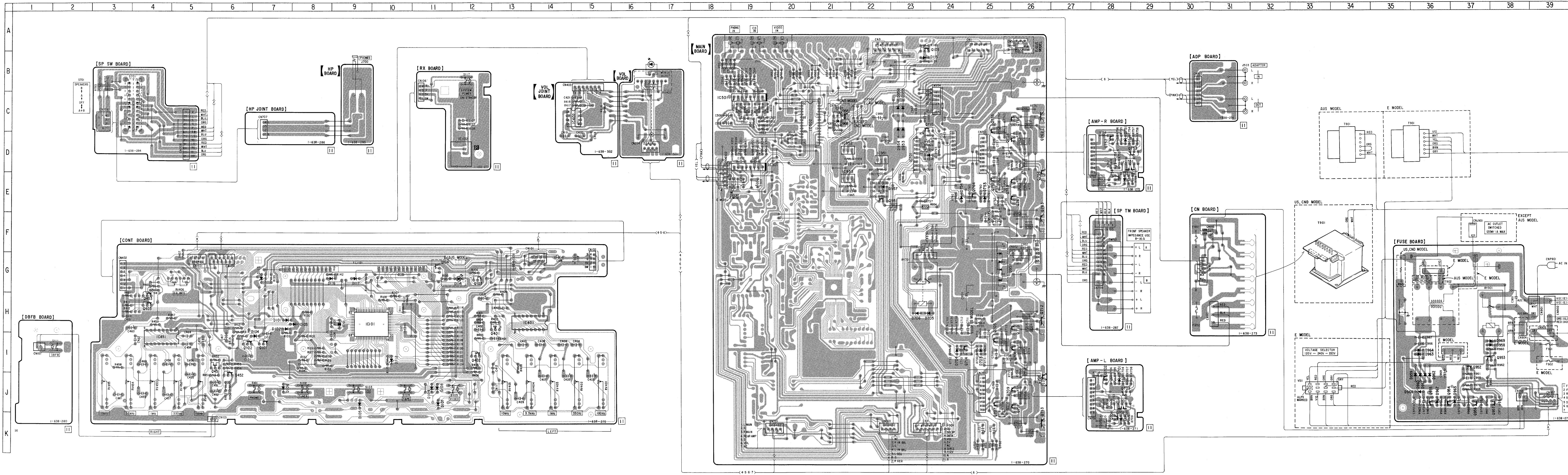
2-5. PRINTED WIRING BOARDS

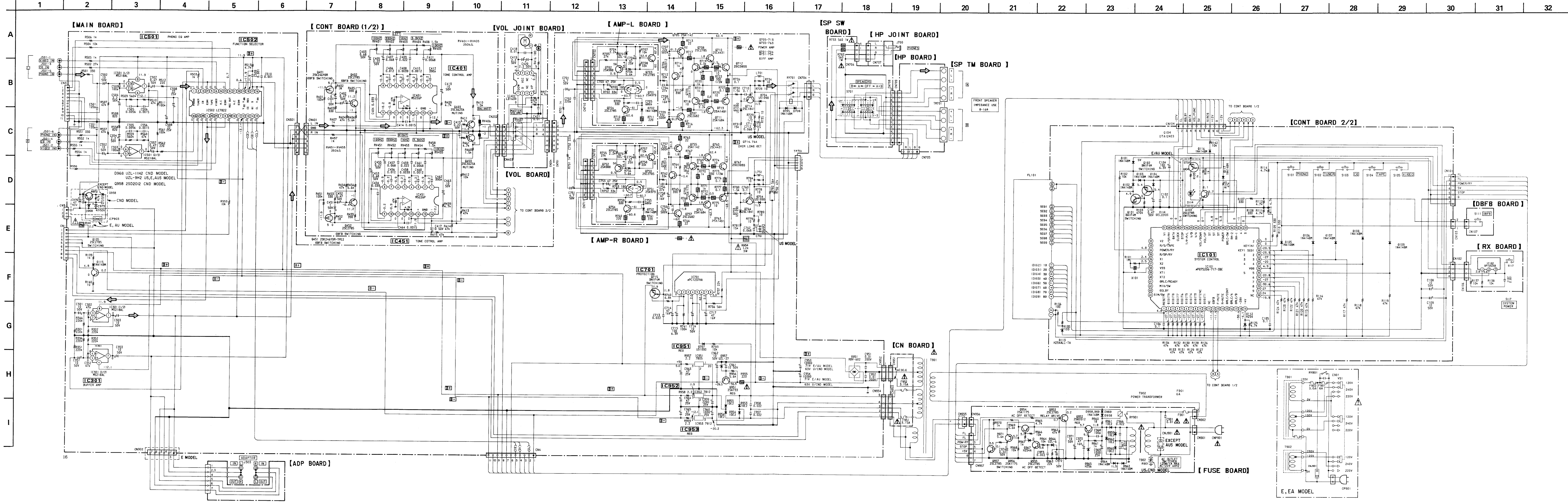
• See page 13 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	H-7	Q708	I-26
D102	H-7	Q709	J-26
D103	H-8	Q710	H-26
D104	H-9	Q711	H-26
D105	J-9	Q712	H-26
D106	J-7	Q713	K-26
D107	J-11	Q714	I-24
D108	J-11	Q715	C-23
D109	J-11	Q751	D-28
D112	I-10	Q752	D-28
D113	G-7	Q753	D-29
D114	G-12	Q754	F-28
D115	B-23	Q755	C-25
D116	G-8	Q756	D-26
D117	G-9	Q757	F-25
D101	J-8	Q758	C-26
D702	K-28	Q759	F-26
D703	I-25	Q760	C-26
D704	I-24	Q761	F-26
D705	H-23	Q762	C-26
D706	H-23	Q763	F-26
D707	D-23	Q764	F-25
D751	D-28	Q951	F-22
D752	E-28	Q952	I-37
D753	E-25	Q953	I-37
D754	G-24	Q954	J-36
D951	G-24	Q955	J-36
D953	C-23	Q956	J-37
D954	C-23	Q957	J-37
D955	C-23	Q958	C-21
D956	C-23		
D957	E-22	IC101	H-9
D958	I-37	IC102	D-12
D959	J-36	IC301	D-19
D960	J-36	IC401	H-13
D961	J-36	IC402	C-15
D962	J-36	IC451	I-4
D963	I-36	IC501	C-19
D964	I-36	IC502	C-20
D965	J-37	IC701	D-23
D966	J-36	IC951	D-22
D967	J-36	IC952	D-21
D968	C-21	IC953	F-21
D969	I-37		
Q101	I-7		
Q102	I-6		
Q103	C-12		
Q104	H-11		
Q105	A-23		
Q401	H-13		
Q402	I-12		
Q403	H-4		
Q451	I-6		
Q452	I-6		
Q453	G-4		
Q701	J-28		
Q702	J-28		
Q703	J-28		
Q704	K-28		
Q705	I-26		
Q706	J-26		
Q707	J-25		

Note on Mounting Diagram:
 • : parts extracted from the component side.





Note on Schematic Diagram:

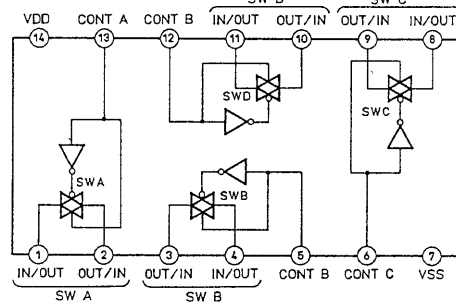
- All capacitors are in μF unless otherwise noted. pF = $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \square : nonflammable resistor.
- \square : fusible resistor.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

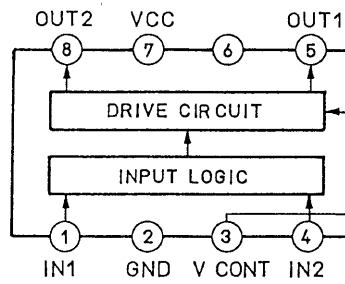
- \square B+ : B+ Line
- \square B- : B- Line
- no mark: No-signal/PHONO MODE
- Voltagess are taken with a VOM (input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- \Rightarrow : PHONO

2-7. IC BLOCK DIAGRAMS

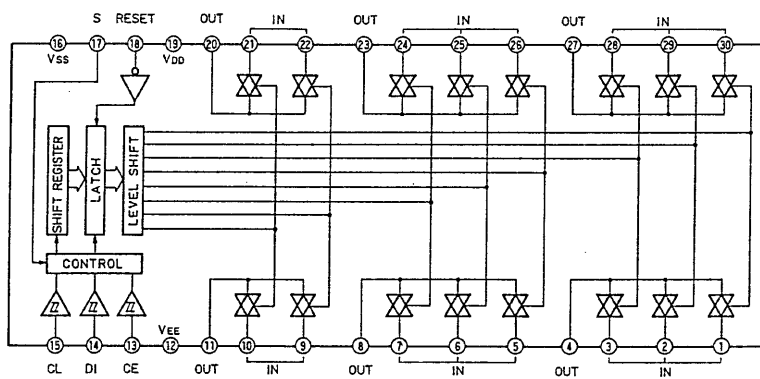
IC302 LC4966



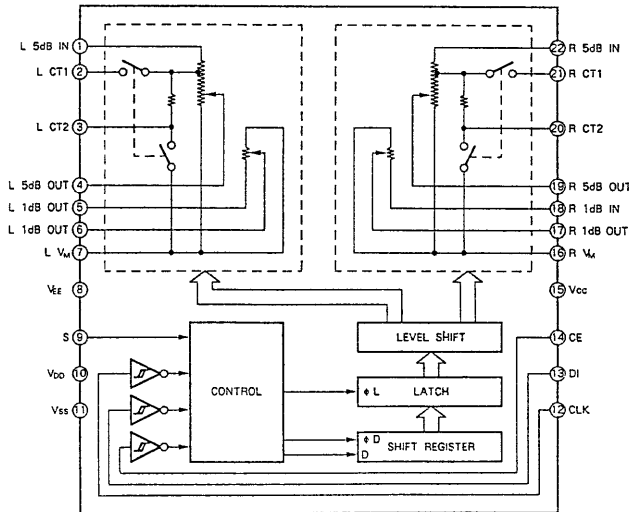
IC402 LB1639



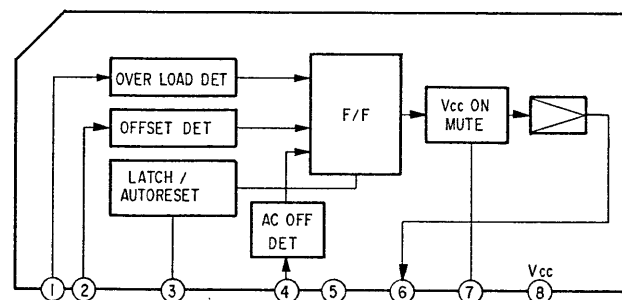
IC404 LC7535



IC502 LC7822



IC701 μ PC1237HA



SECTION 3 EXPLODED VIEWS

NOTE :

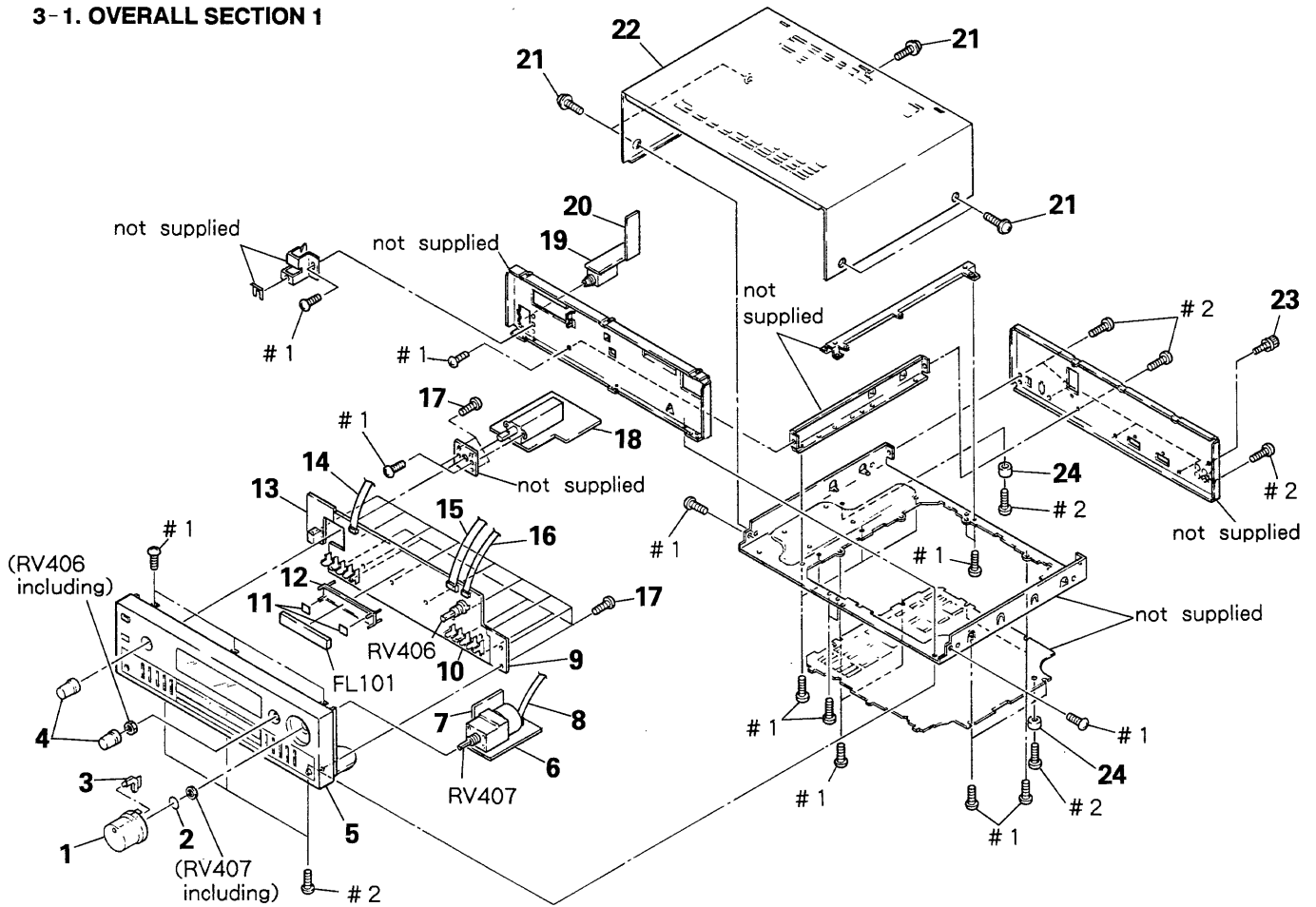
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)...(RED)
 ↑ ↑
Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

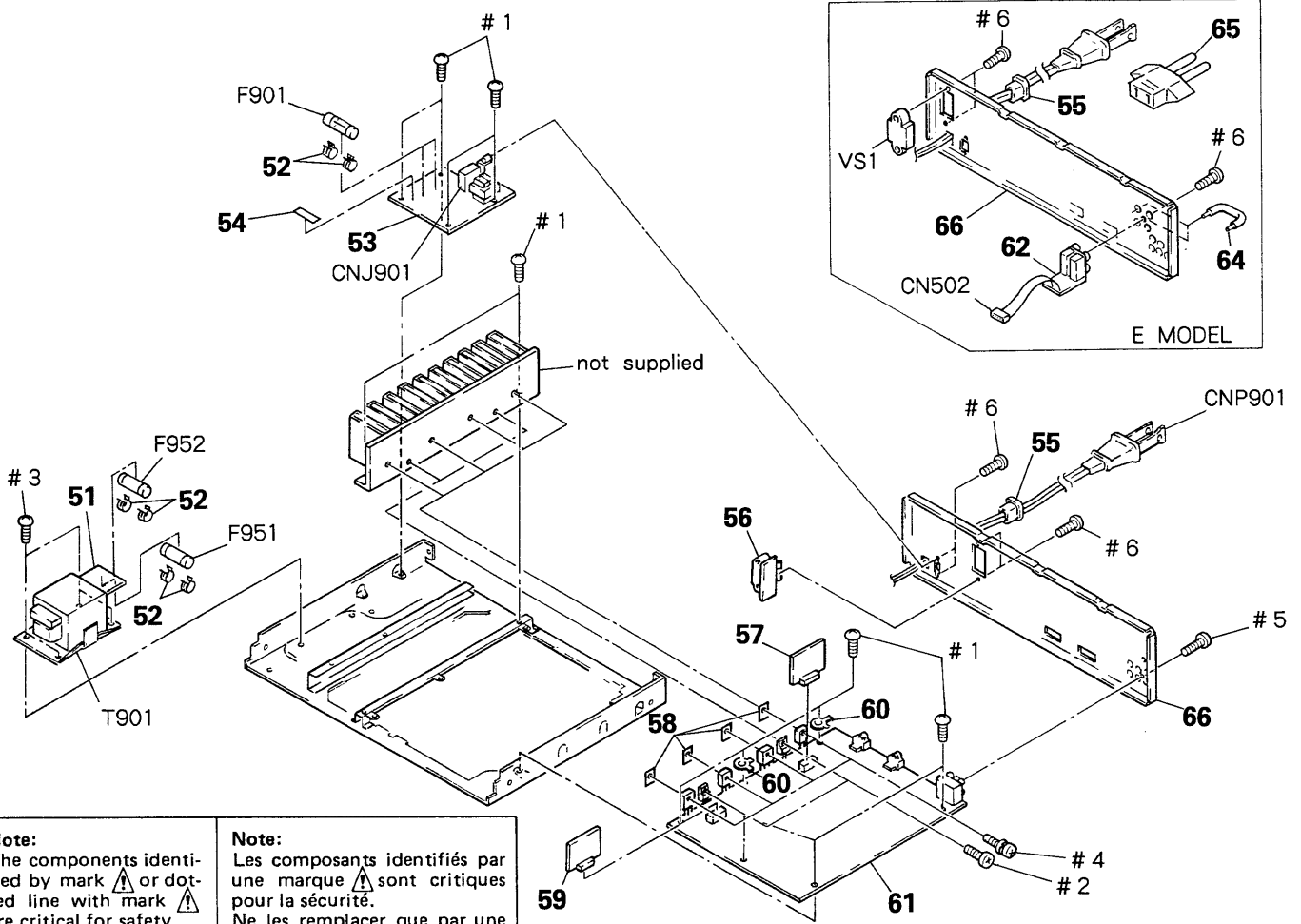
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3-1. OVERALL SECTION 1



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-943-091-01	KNOB (VOL)		13	* 1-638-277-11	RX BOARD	
2	3-350-426-01	SPRING, RING		14	1-590-486-11	WIRE, FLAT TYPE (7 CORE)	
3	4-943-092-01	PLATE(VOL), LIGHT GUIDE		15	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
4	4-943-420-01	KNOB (DIA. 19)		16	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
5	A-4323-865-A	PANEL ASSY, FRONT (US, Canadian)		17	4-928-635-01	SCREW, +BV (2. 6X8) TAPPING	
	A-4323-867-A	PANEL ASSY, FRONT (E, Australian)		18	* 1-638-284-11	SP SW BOARD	
6	* 1-638-278-11	VOL BOARD		19	* 1-638-285-11	HP BOARD	
7	* 1-638-279-11	VOL JOINT BOARD		20	* 1-638-286-11	HP JOINT BOARD	
8	1-590-485-11	WIRE, FLAT TYPE (7 CORE)		21	3-704-366-01	SCREW (CASE) (M3X8)	
9	* 1-638-280-11	DBFB BOARD		22	4-931-031-11	CASE	
10	* A-4341-710-A	CONT BOARD, COMPLETE (US, Canadian)		23	3-706-165-00	SCREW	
	* A-4341-715-A	CONT BOARD, COMPLETE (E, Australian)		24	X-4941-229-1	FOOT ASSY (F2112S-M)	
11	* 4-921-941-01	CUSHION (FL)					
12	* 4-943-107-01	HOLDER (FL TUBE)					

3-2. OVERALL SECTION 2



Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	* 1-638-273-11	CN BOARD		66	* 4-943-458-11	PANEL, BACK (US)	
52	1-533-217-31	HOLDER, FUSE			* 4-943-458-21	PANEL, BACK (E)	
53	* 1-638-276-11	FUSE BOARD			* 4-943-458-31	PANEL, BACK (Australian)	
54	* 3-701-947-16	LABEL (T3.15A), FUSE (E, Australian)			* 4-943-458-41	PANEL, BACK (Canadian)	
55	* 3-703-244-00	BUSHING (2104), CORD (US, Canadian, Australian)		CN502	1-569-132-11	PIN, CONNECTOR 7P	
	* 3-703-571-11	BUSHING (S) (4516), CORD (E)		CNJ901	1-540-057-11	OUTLET AC (POLAR) (US, Canadian)	
56	* 1-638-287-11	SP TM BOARD			1-540-038-11	OUTLET AC (NON POLAR) (E)	
57	* 1-638-272-11	AMP-R BOARD		CNP901	1-551-188-XX	CORD, POWER (E)	
58	4-911-232-01	SHEET, INSULATING			1-551-478-00	CORD, POWER (US, Canadian)	
59	* 1-638-271-11	AMP-L BOARD			1-559-912-11	CORD, POWER (Australian)	
60	* 4-942-204-01	PLATE, GROUND		F901	1-532-237-00	FUSE, TIME LAG (E, Australian)	
					1-576-110-11	FUSE (US, Canadian)	
61	* A-4341-708-A	MAIN BOARD, COMPLETE (US)		F951	1-532-237-00	FUSE, TIME LAG (E, Australian)	
	* A-4341-713-A	MAIN BOARD, COMPLETE (E)			1-576-107-11	FUSE (US, Canadian)	
	* A-4341-814-A	MAIN BOARD, COMPLETE (Australian)		F952	1-532-237-00	FUSE, TIME LAG (E, Australian)	
	* A-4341-950-A	MAIN BOARD, COMPLETE (Canadian)			1-576-107-11	FUSE (US, Canadian)	
64	1-535-530-11	PLUG, JUMPER (E)		T901	1-450-368-11	TRANSFORMER, POWER (US, Canadian)	
65	1-569-007-11	ADAPTER, CONVERSION 2P (E)			1-450-369-11	TRANSFORMER, POWER (E, Australian)	
				VS1	* 1-571-515-11	SWITCH, POWER VOLTAGE SELECTION (E)	

SECTION 4

ELECTRICAL PARTS LIST

NOTE :

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL : metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : μ , for example :
uA... : μ A... , μ PA... , μ PA... ,
uPB... , μ PB... , μ PC... , μ PC... ,
uPD... , μ PD...
- CAPACITORS :
uF : μ F
- COILS
uH : μ H

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	* 1-638-274-11	ADP BOARD (E)				< RESISTOR >	

		< CONNECTOR >		R702	1-249-435-11	CARBON 33K 5% 1/4W	
				R703	1-249-409-11	CARBON 220 5% 1/4W	
				R704	1-249-421-11	CARBON 2.2K 5% 1/4W	
CN502	1-569-132-11	PIN, CONNECTOR		R705	1-249-434-11	CARBON 27K 5% 1/4W	
		< JACK >		R706	1-249-426-11	CARBON 5.6K 5% 1/4W	
				R707	1-249-429-11	CARBON 10K 5% 1/4W	
J503	1-580-905-11	JACK, PIN 4P		R708	1-249-435-11	CARBON 33K 5% 1/4W	
	(E)			R709	1-249-411-11	CARBON 330 5% 1/4W	
	* 1-638-271-11	AMP-L BOARD		R710	Δ 1-247-704-11	CARBON 220 5% 1/4W	
		< CAPACITOR >		R711	Δ 1-247-704-11	CARBON 220 5% 1/4W	

C703	1-124-477-11	ELECT 47uF 20% 25V			* 1-638-272-11	AMP-R BOARD	
C704	1-124-477-11	ELECT 47uF 20% 25V				*****	
C705	1-162-292-31	CERAMIC 680PF 10% 50V				< CAPACITOR >	
		< CONNECTOR >		C753	1-124-477-11	ELECT 47uF 20% 25V	
				C754	1-124-477-11	ELECT 47uF 20% 25V	
				C755	1-162-292-31	CERAMIC 680PF 10% 50V	
CN702	1-560-943-00	PIN, CONNECTOR 9P				< CONNECTOR >	
		< DIODE >		CN703	1-560-943-00	PIN, CONNECTOR 9P	
D701	8-719-933-40	DIODE HZS6C2L				< DIODE >	
D702	8-719-987-63	DIODE 1N4148M		D751	8-719-933-40	DIODE HZS6C2L	
		< TRANSISTOR >		D752	8-719-987-63	DIODE 1N4148M	
Q701	8-729-620-18	TRANSISTOR 2SA979-FG					
Q702	8-729-108-14	TRANSISTOR 2SA988-F					
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE (Canadian, Australian, E)					
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE (US)					
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE					

AMP - R CN CONT

Ref. No. Part No. Description Remarks

< TRANSISTOR >

Q751	8-729-620-18	TRANSISTOR	2SA979-FG	
Q752	8-729-108-14	TRANSISTOR	2SA988-F	
Q753	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q754	8-729-119-78	TRANSISTOR	2SC2785-HFE	

< RESISTOR >

R752	1-249-435-11	CARBON	33K	5%	1/4W
R753	1-249-409-11	CARBON	220	5%	1/4W
R754	1-249-421-11	CARBON	2.2K	5%	1/4W
R755	1-249-434-11	CARBON	27K	5%	1/4W
R756	1-249-426-11	CARBON	5.6K	5%	1/4W
R757	1-249-429-11	CARBON	10K	5%	1/4W
R758	1-249-435-11	CARBON	33K	5%	1/4W
R759	1-249-411-11	CARBON	330	5%	1/4W
R760	△1-247-704-11	CARBON	220	5%	1/4W
R761	△1-247-704-11	CARBON	220	5%	1/4W

* 1-638-273-11 CN BOARD

< FUSE >

F951	△1-576-107-11	FUSE (US, Canadian)
F951	△1-532-237-00	FUSE, TIME LAG (Australian, E)
F952	△1-532-237-00	FUSE, TIME LAG (Australian, E)
F952	△1-576-107-11	FUSE (US, Canadian)

* A-4341-710-A CONT BOARD, COMPLETE (US, Canadian)

* A-4341-715-A CONT BOARD, COMPLETE (E, Australian)

* 1-638-275-11 CONT BOARD
1-241-434-11 RES, VAR, SLIDE 250K
1-533-217-31 HOLDER, FUSE
4-352-844-01 PIN, LEAD, COATING
* 4-921-941-01 CUSHION (FL)
* 4-943-107-01 HOLDER (FL TUBE)

Ref. No. Part No. Description Remarks

< CAPACITOR >

C101	1-124-902-00	ELECT	0.47uF	20%	50V
C102	1-130-495-00	MYLAR	0.1uF	5%	50V
C104	1-124-443-00	ELECT	100uF	20%	10V
C105	1-130-495-00	MYLAR	0.1uF	5%	50V
C106	1-130-495-00	MYLAR	0.1uF	5%	50V
C108	1-136-171-00	FILM	0.33uF	5%	50V
C109	1-136-171-00	FILM	0.33uF	5%	50V
C401	1-124-903-11	ELECT	1uF	20%	50V
C402	1-124-902-00	ELECT	0.47uF	20%	50V
C403	1-124-254-00	ELECT	0.68uF	20%	50V
C404	1-130-490-11	MYLAR	0.039uF	5%	50V
C405	1-124-464-11	ELECT	0.22uF	20%	50V
C406	1-130-484-00	MYLAR	0.012uF	5%	50V
C407	1-130-493-00	MYLAR	0.068uF	5%	50V
C408	1-130-478-00	MYLAR	0.0039uF	5%	50V
C409	1-130-487-00	MYLAR	0.022uF	5%	50V
C410	1-164-086-11	CERAMIC	0.0012uF	10%	50V
C411	1-130-481-00	MYLAR	0.0068uF	5%	50V
C412	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)
C414	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C415	1-136-169-00	FILM	0.22uF	5%	50V
C417	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)
C451	1-124-903-11	ELECT	1uF	20%	50V
C452	1-124-902-00	ELECT	0.47uF	20%	50V
C453	1-124-254-00	ELECT	0.68uF	20%	50V
C454	1-130-490-11	MYLAR	0.039uF	5%	50V
C455	1-124-464-11	ELECT	0.22uF	20%	50V
C456	1-130-484-00	MYLAR	0.012uF	5%	50V
C457	1-130-493-00	MYLAR	0.068uF	5%	50V
C458	1-130-478-00	MYLAR	0.0039uF	5%	50V
C459	1-130-487-00	MYLAR	0.022uF	5%	50V
C460	1-164-086-11	CERAMIC	0.0012uF	10%	50V
C461	1-130-481-00	MYLAR	0.0068uF	5%	50V
C462	1-162-289-31	CERAMIC	390PF	10%	50V
C463	1-124-907-11	ELECT	10uF	20%	50V (US, Canadian)
C464	1-161-374-11	CERAMIC	0.0015uF	20%	50V

CONT

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< CONNECTOR >				< RESISTOR >			
CN101	* 1-568-850-11	SOCKET, CONNECTOR 7P		R101	1-247-903-00	CARBON 1M 5% 1/4W	
CN102	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P		R102	1-249-429-11	CARBON 10K 5% 1/4W	
CN104	* 1-568-854-11	SOCKET, CONNECTOR 11P		R103	1-247-895-00	CARBON 470K 5% 1/4W	
CN401	* 1-568-850-11	SOCKET, CONNECTOR 7P		R105	1-249-417-11	CARBON 1K 5% 1/4W	
CN402	* 1-561-651-00	SOCKET, CONNECTOR 7P				(Australian, E)	
< DIODE >				R106	1-249-417-11	CARBON 1K 5% 1/4W	
D101	8-719-987-63	DIODE N4148M		R107	1-249-411-11	CARBON 330 5% 1/4W	
D102	8-719-987-63	DIODE N4148M		R108	1-249-411-11	CARBON 330 5% 1/4W	
D103	8-719-987-63	DIODE N4148M		R109	1-249-411-11	CARBON 330 5% 1/4W	
D104	8-719-987-63	DIODE N4148M		R110	1-249-411-11	CARBON 330 5% 1/4W	
D105	8-719-987-63	DIODE N4148M		R111	1-249-425-11	CARBON 4.7K 5% 1/4W	
D106	8-719-987-63	DIODE N4148M		R112	1-249-425-11	CARBON 4.7K 5% 1/4W	
D107	8-719-987-63	DIODE N4148M		R113	1-249-425-11	CARBON 4.7K 5% 1/4W	
D108	8-719-987-63	DIODE N4148M		R114	1-249-425-11	CARBON 4.7K 5% 1/4W	
D109	8-719-987-63	DIODE N4148M		R115	1-249-437-11	CARBON 47K 5% 1/4W	
D112	8-719-985-53	DIODE HZS4ALL		R116	1-249-437-11	CARBON 47K 5% 1/4W	
D113	8-719-985-53	DIODE HZS4ALL		R117	1-249-437-11	CARBON 47K 5% 1/4W	
D114	8-719-301-37	DIODE SEL2210S-CD (Australian, E)		R118	1-249-437-11	CARBON 47K 5% 1/4W	
D116	8-719-987-63	DIODE N4148M		R119	1-249-437-11	CARBON 47K 5% 1/4W	
D117	8-719-987-63	DIODE N4148M		R120	1-249-437-11	CARBON 47K 5% 1/4W	
< FILTER >				R121	1-249-437-11	CARBON 47K 5% 1/4W	
FL101	1-519-663-11	INDICATOR TUBE, FLUORESCENT		R122	1-249-437-11	CARBON 47K 5% 1/4W	
< IC >				R123	1-249-437-11	CARBON 47K 5% 1/4W	
IC101	8-759-154-40	IC uPD75206-717-3BE		R124	1-249-437-11	CARBON 47K 5% 1/4W	
IC401	8-759-602-04	IC M5226P		R125	1-249-425-11	CARBON 4.7K 5% 1/4W	
IC451	8-759-602-04	IC M5226P		R126	1-249-437-11	CARBON 47K 5% 1/4W	
< TRANSISTOR >				R127	1-249-437-11	CARBON 47K 5% 1/4W	
Q101	8-729-900-36	TRANSISTOR DTC124ES		R128	1-249-437-11	CARBON 47K 5% 1/4W	
Q102	8-729-900-63	TRANSISTOR DTA124ES		R129	1-249-437-11	CARBON 47K 5% 1/4W	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE		R130	1-249-437-11	CARBON 47K 5% 1/4W	
Q104	8-729-900-63	TRANSISTOR DTA124ES (Australian, E)		R131	1-249-437-11	CARBON 47K 5% 1/4W	
Q401	8-729-224-61	TRANSISTOR 2SK246-Y		R132	1-249-437-11	CARBON 47K 5% 1/4W	
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE		R133	1-249-437-11	CARBON 47K 5% 1/4W	
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK		R134	1-249-437-11	CARBON 47K 5% 1/4W	
Q451	8-729-224-61	TRANSISTOR 2SK246-Y		R135	1-249-405-11	CARBON 100 5% 1/4W	
Q452	8-729-119-78	TRANSISTOR 2SC2785-HFE		R136	1-249-405-11	CARBON 100 5% 1/4W	
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK		R142	1-249-429-11	CARBON 10K 5% 1/4W	
				R143	1-249-437-11	CARBON 47K 5% 1/4W	
				R401	1-249-441-11	CARBON 100K 5% 1/4W	
				R402	1-247-903-00	CARBON 1M 5% 1/4W	
				R403	1-249-411-11	CARBON 330 5% 1/4W	
				R404	1-249-437-11	CARBON 47K 5% 1/4W	
				R405	1-249-412-11	CARBON 390 5% 1/4W	
				R406	1-249-426-11	CARBON 5.6K 5% 1/4W	
				R407	1-249-417-11	CARBON 1K 5% 1/4W	

CONT DBFB FUSE

Ref. No.	Part No.	Description	Remarks
R408	1-249-419-11	CARBON 1.5K 5% 1/4W	
R409	1-249-425-11	CARBON 4.7K 5% 1/4W	
R410	1-249-419-11	CARBON 1.5K 5% 1/4W	
R411	1-249-425-11	CARBON 4.7K 5% 1/4W	
R412	1-249-429-11	CARBON 10K 5% 1/4W	
R413	1-249-437-11	CARBON 47K 5% 1/4W	
R414	1-249-437-11	CARBON 47K 5% 1/4W	
R415	1-249-437-11	CARBON 47K 5% 1/4W	
R451	1-249-441-11	CARBON 100K 5% 1/4W	
R452	1-247-903-00	CARBON 1M 5% 1/4W	
R453	1-249-411-11	CARBON 330 5% 1/4W	
R454	1-249-437-11	CARBON 47K 5% 1/4W	
R455	1-249-412-11	CARBON 390 5% 1/4W	
R456	1-249-426-11	CARBON 5.6K 5% 1/4W	
R457	1-249-417-11	CARBON 1K 5% 1/4W	
R458	1-249-419-11	CARBON 1.5K 5% 1/4W	
R459	1-249-425-11	CARBON 4.7K 5% 1/4W	
R460	1-249-419-11	CARBON 1.5K 5% 1/4W	
R461	1-249-425-11	CARBON 4.7K 5% 1/4W	
< VARIABLE RESISTOR >			
RV401	1-241-434-11	RES, VAR, SLIDE 250K (100KHz)	
RV402	1-241-434-11	RES, VAR, SLIDE 250K (300KHz)	
RV403	1-241-434-11	RES, VAR, SLIDE 250K (1kHz)	
RV404	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)	
RV405	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)	
RV406	1-241-022-11	RES, VAR, CARBON 150K/150K (BALANCE)	
RV451	1-241-434-11	RES, VAR, SLIDE 250K (100KHz)	
RV452	1-241-434-11	RES, VAR, SLIDE 250K (300KHz)	
RV453	1-241-434-11	RES, VAR, SLIDE 250K (1kHz)	
RV454	1-241-434-11	RES, VAR, SLIDE 250K (3.3KHz)	
RV455	1-241-434-11	RES, VAR, SLIDE 250K (10KHz)	
< SWITCH >			
S101	1-554-303-21	SWITCH, TACTILE (PHONE)	
S102	1-554-303-21	SWITCH, TACTILE (TUNER)	
S103	1-554-303-21	SWITCH, TACTILE (CD)	
S104	1-554-303-21	SWITCH, TACTILE (TAPE)	
S105	1-554-303-21	SWITCH, TACTILE (VIDEO)	
< CRYSTAL >			
X101	1-567-775-11	VIBRATOR, CERAMIC	

Ref. No.	Part No.	Description	Remarks
*	1-638-280-11	DBFB BOARD *****	
< CONNECTOR >			
CN107	* 1-568-951-11	PIN, CONNECTOR 2P	
< SWITCH >			
S111	1-554-303-21	SWITCH, TACTILE (DBFB)	

*	1-638-276-11	FUSE BOARD *****	
< CAPACITOR >			
C901	1-161-744-00	CERAMIC 0.01uF 400V	
C966	1-130-487-00	MYLAR 0.022uF 5% 50V	
C967	1-130-487-00	MYLAR 0.022uF 5% 50V	
C968	1-162-282-31	CERAMIC 100PF 10% 50V	
C969	1-124-557-11	ELECT 1000uF 20% 25V	
C970	1-124-477-11	ELECT 47uF 20% 25V	
C971	1-124-907-11	ELECT 10uF 20% 50V	
C972	1-124-903-11	ELECT 1uF 20% 50V	
C973	1-130-487-00	MYLAR 0.022uF 5% 50V	
C974	1-124-464-11	ELECT 0.22uF 20% 50V	
< CONNECTOR >			
CN901	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
CN902	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
CN903	1-535-139-00	BASE POST 2P (E)	
CN904	* 1-535-115-00	TERMINAL (E)	
CN905	* 1-535-116-00	TERMINAL (E)	
CN956	* 1-564-777-11	PLUG, CONNECTOR (2.5MM) 2P	
CN957	* 1-568-826-11	SOCKET, CONNECTOR 7P	
CNJ901	△1-540-057-11	OUTLET, AC (POLAR) (AC OUTLET) (US, Canadian)	
CNJ901	△1-540-038-11	OUTLET, AC (NONPOLAR) (1P) (E)	
< DIODE >			
D958	8-719-987-63	DIODE N4148M	
D959	8-719-200-77	DIODE 10E2N	
D960	8-719-200-77	DIODE 10E2N	
D961	8-719-200-77	DIODE 10E2N	
D962	8-719-200-77	DIODE 10E2N	

Note:
The components identified by mark **△** or dotted line with mark **△** are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

FUSE **HP** **HP JOINT** **MAIN**

Ref. No.	Part No.	Description	Remarks
D963	8-719-987-63	DIODE N4148M	
D964	8-719-987-63	DIODE N4148M	
D965	8-719-933-41	DIODE HZS6C3L	
D966	8-719-933-41	DIODE HZS6C3L	
D967	8-719-985-53	DIODE HZS4ALL	
D969	8-719-987-63	DIODE 11ES2	
< FUSE >			
F901	△1-532-237-00	FUSE, TIME LAG (E, Australian)	
F901	△1-576-110-11	FUSE (US, Canadian)	
< TRANSISTOR >			
Q952	8-729-209-15	TRANSISTOR 2SD2012	
Q953	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q954	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q955	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q956	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q957	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R901	1-202-725-00	SOLID 3.3M 10% 1/2W (US, Canadian)	
R960	1-249-396-11	CARBON 18 5% 1/6W	
R961	1-249-417-11	CARBON 1K 5% 1/4W	
R962	1-249-437-11	CARBON 47K 5% 1/4W	
R963	1-249-433-11	CARBON 22K 5% 1/4W	
R964	1-249-429-11	CARBON 10K 5% 1/4W	
R965	1-249-425-11	CARBON 4.7K 5% 1/4W	
R966	1-249-429-11	CARBON 10K 5% 1/4W	
R967	1-249-417-11	CARBON 1K 5% 1/4W	
R968	1-249-429-11	CARBON 10K 5% 1/4W	
R969	1-249-426-11	CARBON 5.6K 5% 1/4W	
R970	1-249-417-11	CARBON 1K 5% 1/4W	
R971	1-249-426-11	CARBON 5.6K 5% 1/4W	
< RELAY >			
RY901	△1-515-617-11	RELAY (Australian, E)	
RY901	△1-515-701-11	RELAY (US, Canadian)	
< TRANSFORMER >			
T902	△1-449-993-21	TRANSFORMER, POWER (US, Canadian)	
T902	△1-450-067-11	TRANSFORMER, POWER (Australian, E)	

Ref. No.	Part No.	Description	Remarks
*	1-638-285-11	HP BOARD *****	
< JACK >			
J700	1-568-515-21	JACK (LARGE TYPE) (PHONES)	

*	1-638-286-11	HP JOINT BOARD *****	
< CONNECTOR >			
CN707	* 1-506-509-11	PIN, CONNECTOR 4P	

*	A-4341-814-A	MAIN BOARD, COMPLETE (Australian) *****	
*	A-4341-950-A	MAIN BOARD, COMPLETE (Canadian) *****	
*	A-4341-713-A	MAIN BOARD, COMPLETE (E) *****	
*	A-4341-708-A	MAIN BOARD, COMPLETE (US) *****	
*	1-683-270-11	MAIN BOARD	
	1-533-217-31	HOLDER, FUSE (US)	
*	4-942-204-01	PLATE, GROUND	
< CAPACITOR >			
C301	1-124-907-11	ELECT 10uF 20% 50V	
C302	1-162-215-31	CERAMIC 47PF 5% 50V	
C303	1-124-907-11	ELECT 10uF 20% 50V	
C351	1-124-907-11	ELECT 10uF 20% 50V	
C352	1-162-215-31	CERAMIC 47PF 5% 50V	
C353	1-124-907-11	ELECT 10uF 20% 50V	
C501	1-162-283-31	CERAMIC 120PF 10% 50V	
C502	1-124-907-11	ELECT 10uF 20% 50V	
C503	1-162-282-31	CERAMIC 100PF 10% 50V	
C504	1-124-925-11	ELECT 2.2uF 20% 100V	
C506	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C507	1-124-902-00	ELECT 0.47uF 20% 50V	
C508	1-126-233-11	ELECT 22uF 20% 50V	
C509	1-162-294-31	CERAMIC 0.001uF 10% 50V	

<p>Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C510	1-162-294-31	CERAMIC	0.001uF 10% 50V	C957	1-130-487-00	MYLAR	0.022uF 5% 50V
C551	1-162-283-31	CERAMIC	120PF 10% 50V	C958	1-130-487-00	MYLAR	0.022uF 5% 50V
C552	1-124-907-11	ELECT	10uF 20% 50V	C959	1-124-563-11	ELECT	2200uF 20% 25V
C553	1-162-282-31	CERAMIC	100PF 10% 50V	C960	1-124-557-11	ELECT	1000uF 20% 25V
C554	1-124-925-11	ELECT	2.2uF 20% 100V	C961	1-124-907-11	ELECT	10uF 20% 50V
C555	1-130-480-00	MYLAR	0.0056uF 5% 50V	C962	1-124-907-11	ELECT	10uF 20% 50V
C556	1-161-374-11	CERAMIC	0.0015uF 20% 50V	C963	1-124-477-11	ELECT	47uF 20% 25V
C557	1-124-902-00	ELECT	0.47uF 20% 50V	C964	1-124-477-11	ELECT	47uF 20% 25V
C558	1-126-233-11	ELECT	22uF 20% 50V	C965	1-124-477-11	ELECT	47uF 20% 25V
C701	1-124-927-11	ELECT	4.7uF 20% 100V	C975	1-124-910-11	ELECT	47uF 20% 50V (Canadian)
C702	1-162-286-31	CERAMIC	220PF 10% 50V	C976	1-124-910-11	ELECT	47uF 20% 50V (Canadian)
C706	1-162-209-31	CERAMIC	27PF 5% 50V			< CONNECTOR >	
C707	1-161-959-00	CERAMIC	22PF 10% 500V	CN1	1-565-949-11	SOCKET, CONNECTOR 9P (SYSTEM CONTROL 3)	
C708	1-124-477-11	ELECT	47uF 20% 25V	CN3	* 1-566-858-11	SOCKET, CONNECTOR 11P (SYSTEM CONTROL 2, 1)	
C709	1-161-959-00	CERAMIC	22PF 10% 500V	CN5	* 1-564-358-00	PIN, CONNECTOR 3P (Australian, E)	
C710	1-130-495-00	MYLAR	0.1uF 5% 50V	CN301	* 1-568-826-11	SOCKET, CONNECTOR 7P	
C711	1-130-493-00	MYLAR	0.068uF 5% 50V (Canadian, E, Australian)	CN302	* 1-564-779-11	PLUG, CONNECTOR (2.5MM) 6P (E)	
C712	1-130-489-00	MYLAR	0.033uF 5% 50V (US)	CN701	* 1-568-826-11	SOCKET, CONNECTOR 7P	
C712	1-130-493-00	MYLAR	0.068uF 5% 50V (Canadian, E, Australian)	CN710	* 1-563-192-11	CONNECTOR (SOCKET) 9P	
C713	1-130-487-00	MYLAR	0.022uF 5% 50V	CN711	* 1-563-192-11	CONNECTOR (SOCKET) 9P	
C714	1-124-477-11	ELECT	47uF 20% 25V	CN903	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (E)	
C715	1-124-443-00	ELECT	100uF 20% 10V			< DIODE >	
C716	1-124-907-11	ELECT	10uF 20% 50V	D115	8-719-987-63	DIODE 1N4148M	
C717	1-124-477-11	ELECT	47uF 20% 25V	D703	8-719-815-85	DIODE 1S1585	
C751	1-124-927-11	ELECT	4.7uF 20% 100V	D704	8-719-815-85	DIODE 1S1585	
C752	1-162-286-31	CERAMIC	220PF 10% 50V	D705	8-719-987-63	DIODE 1N4148M	
C756	1-162-209-31	CERAMIC	27PF 5% 50V	D706	8-719-987-63	DIODE 1N4148M (Canadian, E, Australian)	
C757	1-161-959-00	CERAMIC	22PF 10% 500V	D707	8-719-815-85	DIODE 1S1585	
C758	1-124-477-11	ELECT	47uF 20% 25V	D753	8-719-815-85	DIODE 1S1585	
C759	1-161-959-00	CERAMIC	22PF 10% 500V	D754	8-719-815-85	DIODE 1S1585	
C760	1-130-495-00	MYLAR	0.1uF 5% 50V	D951	8-719-302-38	DIODE RBV-602-01	
C761	1-130-493-00	MYLAR	0.068uF 5% 50V (Canadian, E, Australian)	D953	8-719-200-77	DIODE 10E2N	
C762	1-130-489-00	MYLAR	0.033uF 5% 50V (US)	D954	8-719-200-77	DIODE 10E2N	
C762	1-130-493-00	MYLAR	0.068uF 5% 50V (Canadian, E, Australian)	D955	8-719-200-77	DIODE 10E2N	
C951	1-106-367-00	MYLAR	0.01uF 5% 200V	D956	8-719-200-77	DIODE 10E2N	
C952	1-106-367-00	MYLAR	0.01uF 5% 200V	D957	8-719-002-49	DIODE HZS30-1L	
C953	1-125-479-11	ELECT	10000uF 20% 63V (US, Canadian)	D968	8-719-001-54	DIODE UZL-11H2 (Canadian)	
C953	1-126-358-11	ELECT	10000uF 20% 71V (Australian, E)	D968	8-719-001-25	DIODE UZL-9H2 (US, Australian, E)	
C954	1-126-358-11	ELECT	10000uF 20% 71V (Australian, E)				
C954	1-125-479-11	ELECT	10000uF 20% 63V (US, Canadian)				

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< IC >					
IC301	8-759-634-50	IC M5218AL		Q764	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
IC501	8-759-634-50	IC M5218AL		Q951	8-729-141-03	TRANSISTOR 2SA733-QP	
IC502	8-759-805-14	IC LC7822		Q958	8-729-209-15	TRANSISTOR 2SD2012 (Canadian)	
IC701	8-759-111-68	IC uPC1237HA				< RESISTOR >	
IC951	8-759-231-53	IC M5F7805L		R139	1-249-417-11	CARBON 1K 5% 1/4W	
IC952	8-759-604-33	IC M5F7812L		R140	1-249-393-11	CARBON 10 5% 1/4W	
IC953	8-759-604-51	IC M5F7912L		R141	△1-249-478-11	CARBON 2.2 5% 1/2W F	(Australian, E)
		< IC LINK >		R301	1-247-887-00	CARBON 220K 5% 1/4W	
ICP903	1-532-841-21	LINK IC (Australian, E)		R302	1-247-887-00	CARBON 220K 5% 1/4W	
		< JACK >		R346	1-247-887-00	CARBON 220K 5% 1/4W	
J501	1-580-826-11	JACK, PIN (PHONE CD VIDEO)		R351	1-247-887-00	CARBON 220K 5% 1/4W	
		< COIL >		R352	1-247-887-00	CARBON 220K 5% 1/4W	
L701	* 1-420-872-00	COIL, AIR CORE		R396	1-247-887-00	CARBON 220K 5% 1/4W	
L751	* 1-420-872-00	COIL, AIR CORE		R501	1-249-411-11	CARBON 330 5% 1/4W	
		< TRANSISTOR >		R502	1-249-417-11	CARBON 1K 5% 1/4W	
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE		R503	1-249-429-11	CARBON 10K 5% 1/4W	
Q705	8-729-141-06	TRANSISTOR 2SA1142-QPE		R504	1-249-417-11	CARBON 1K 5% 1/4W	
Q706	8-729-209-15	TRANSISTOR 2SD2012		R505	1-249-417-11	CARBON 1K 5% 1/4W	
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE		R506	1-249-417-11	CARBON 1K 5% 1/4W	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		R507	1-249-437-11	CARBON 47K 5% 1/4W	
Q709	8-729-119-76	TRANSISTOR 2SA1175-HFE		R508	1-249-416-11	CARBON 820 5% 1/4W	
		(Canadian, E, Australian)		R509	1-247-897-11	CARBON 560K 5% 1/4W	
Q709	8-729-620-02	TRANSISTOR 2SA1115-EF (US)		R510	1-249-437-11	CARBON 47K 5% 1/4W	
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK		R511	1-249-441-11	CARBON 100K 5% 1/4W	
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK		R512	1-249-409-11	CARBON 220 5% 1/4W	
Q712	8-729-320-83	TRANSISTOR 2SC3855-OY		R513	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q713	8-729-320-86	TRANSISTOR 2SA1491-OY		R551	1-249-411-11	CARBON 330 5% 1/4W	
Q714	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R552	1-249-417-11	CARBON 1K 5% 1/4W	
Q715	8-729-900-36	TRANSISTOR DTC124ES		R553	1-249-429-11	CARBON 10K 5% 1/4W	
Q755	8-729-141-06	TRANSISTOR 2SA1142-QPE		R554	1-249-417-11	CARBON 1K 5% 1/4W	
Q756	8-729-209-15	TRANSISTOR 2SD2012		R555	1-249-417-11	CARBON 1K 5% 1/4W	
Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE		R556	1-249-417-11	CARBON 1K 5% 1/4W	
Q758	8-729-119-78	TRANSISTOR 2SC2785-HFE		R557	1-249-437-11	CARBON 47K 5% 1/4W	
Q759	8-729-119-76	TRANSISTOR 2SA1175-HFE (Canadian, E, Australian)		R558	1-249-416-11	CARBON 820 5% 1/4W	
Q759	8-729-620-02	TRANSISTOR 2SA1115-EF (US)		R559	1-247-897-11	CARBON 560K 5% 1/4W	
Q760	8-729-141-46	TRANSISTOR 2SC4431-LK		R560	1-249-437-11	CARBON 47K 5% 1/4W	
Q761	8-729-141-37	TRANSISTOR 2SA1684-LK		R561	1-249-441-11	CARBON 100K 5% 1/4W	
Q762	8-729-320-83	TRANSISTOR 2SC3855-OY		R562	1-249-409-11	CARBON 220 5% 1/4W	
Q763	8-729-320-86	TRANSISTOR 2SA1491-OY		R701	1-249-417-11	CARBON 1K 5% 1/4W	
				R712	1-249-435-11	CARBON 33K 5% 1/4W	
				R713	△1-247-692-11	CARBON 22 5% 1/4W	
				R714	1-249-417-11	CARBON 1K 5% 1/4W	

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

RX **SP SW** **SP TM** **VOL** **VOL JOINT**

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
CN106	* 1-565-295-11	PLUG, CONNECTOR 4P	
		< IC >	
IC102	8-749-920-83	IC GP1U52XB	
		< RESISTOR >	
R137	1-249-429-11	CARBON 10K 5% 1/4W	
R138	1-249-429-11	CARBON 10K 5% 1/4W	
		< SWITCH >	
S117	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	

	* 1-638-284-11	SP SW BOARD	

		< CONNECTOR >	
CN706	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P	
CN708	* 1-506-786-11	PLUG, CONNECTOR (2.5MM) 12P	
		< RESISTOR >	
R733	△1-216-431-11	METAL OXIDE 560 5% 1W F	
R783	△1-216-431-11	METAL OXIDE 560 5% 1W F	
		< SWITCH >	
S701	1-572-685-11	SWITCH, ROTARY SLIDE (SPEAKERS)	

	* 1-638-287-11	SP TM BOARD	

		< CONNECTOR >	
CN705	* 1-564-778-11	PLUG, CONNECTOR (2.5MM) 4P	
TM701	1-537-341-11	TERMINAL BOARD (8P SP) (SPEAKER A, B)	

Ref. No.	Part No.	Description	Remarks
	* 1-638-501-11	VOL BOARD	

		< CONNECTOR >	
CN204	* 1-568-826-11	SOCKET, CONNECTOR 7P	
		< VARIABLE RESISTOR >	
RV407	1-241-405-11	RES, VAR, CARBON 100K/100K (MASTER VOLUME)	

	* 1-638-502-11	VOL JOINT BOARD	

		< CAPACITOR >	
C418	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C419	1-124-925-11	ELECT 2.2uF 20% 100V	
C420	1-124-925-11	ELECT 2.2uF 20% 100V	
C421	1-162-306-11	CERAMIC 0.01uF 20% 16V	
		< IC >	
IC402	8-759-820-62	IC LB1639	
		< RESISTOR >	
R416	1-249-409-11	CARBON 220 5% 1/4W	
R417	1-249-425-11	CARBON 4.7K 5% 1/4W	
R418	1-249-425-11	CARBON 4.7K 5% 1/4W	

		MISCELLANEOUS	

8	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
14	1-590-486-11	WIRE, FLAT TYPE (7 CORE)	
15	1-590-488-11	WIRE, FLAT TYPE (11 CORE)	
16	1-590-538-11	WIRE, FLAT TYPE (7 CORE)	
64	1-535-530-11	PLUG, JUMPER (E)	
65	△1-569-007-11	ADAPTER, CONVERSION 2P (E)	
CNP901	△1-551-188-XX	CORD, POWER (E)	
CNP901	△1-551-478-00	CORD, POWER (US, Canadian)	
CNP901	△1-559-912-11	CORD, POWER (Australian)	
T901	△1-450-368-11	TRANSFORMER, POWER (US, Canadian)	
T901	△1-450-369-11	TRANSFORMER, POWER (E, Australian)	
VS-1	△* 1-571-515-11	SWITCH, POWER VOLTAGE SELECTION (E)	

<p>Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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