

SA-WM40

SERVICE MANUAL

Ver 1.2 2002.09



*US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model*

SPECIFICATIONS

For the U.S.A. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, from 20 – 170 Hz; rated 120 watts, minimum RMS power, with no more than 0.8 % total harmonic distortion from 250 milliwatts to rated output.

System

Type Active Subwoofer (magnetically shielded design)

Speaker unit

Woofer: 30 cm dia. (12 in.), cone type

Continuous RMS output

European model (DIN)

120 W

Other models (0.8%)

120 W

Reproduction frequency range

20 Hz – 170 Hz

High frequency cut-off frequency

50 Hz – 170 Hz

Phase selector

NORMAL, REVERSE

Inputs

Input jacks

LINE IN: input pin jack

SPEAKER IN: input terminals

Output jacks

LINE OUT: output pin jack

SPEAKER OUT: output terminals

General

Power requirements

European model

220 – 230 V AC, 50/60 Hz

Other models

120 V AC, 60 Hz

Power consumption

90 W

Dimensions

Approx. 360 x 425 x 430 mm

(w/h/d) (14 1/4 x 16 3/4 x 17 in.)

Mass

18 kg (36lb 11oz)

Supplied accessories

Audio connecting cord

(1 phono plug – 1 phono plug) (1)

Speaker cords (2)

Design and specifications are subject to change without notice.

ACTIVE SUBWOOFER

9-929-065-12

2002I0500-1

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Home Audio Company

Published by Sony Engineering Corporation

SONY®

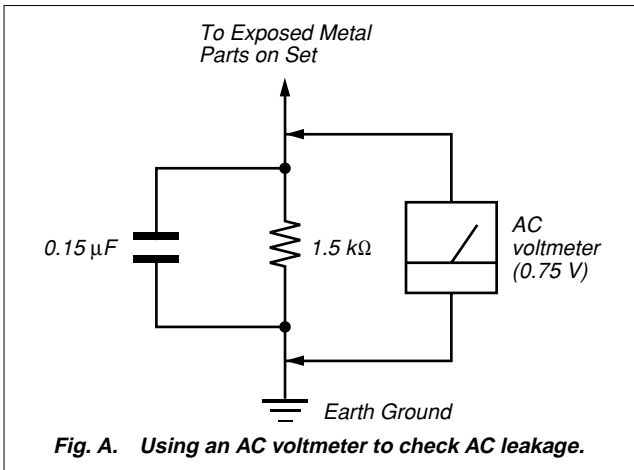
SAFETY CHECK-OUT

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

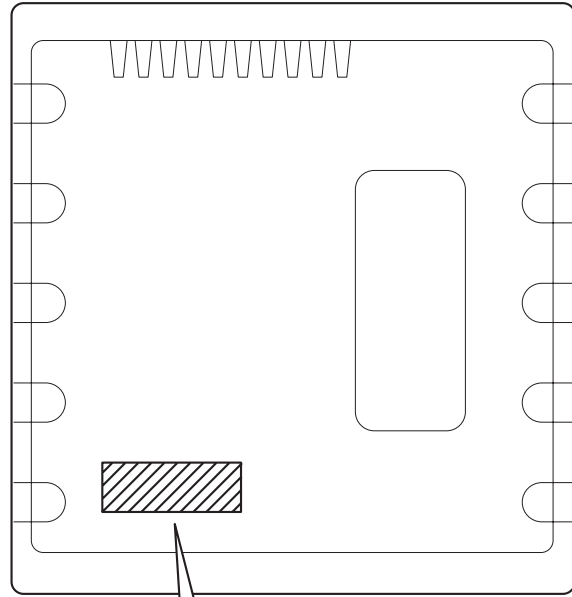
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

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)



MODEL IDENTIFICATION

– Rear View –



with this indication : US, Canadian models
without this indication : Except US, Canadian models

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.

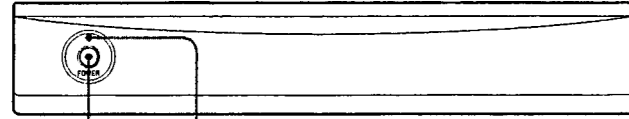
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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.

SECTION 1 GENERAL

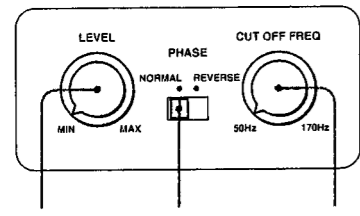
• Location of controls

– Front View (a part) –



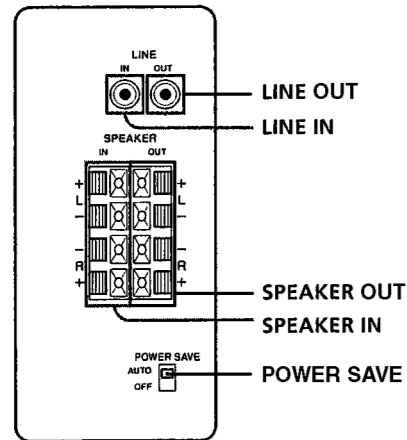
POWER (I/O) POWER indicator

– Upper View (a part) –



LEVEL PHASE CUT OFF FREQ

– Rear View (a part) –



LINE OUT

LINE IN

SPEAKER OUT

SPEAKER IN

POWER SAVE

AUTO OFF

SECTION 2 DIAGRAMS

2-1. NOTE FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

Note on Printed Wiring Boards:

- : parts extracted from the component side.
- : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

Note on Schematic Diagram:

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

Note:

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

Note:

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

- + : B+ Line.

- : B- Line.

- Voltages are dc with respect to ground under no-signal conditions.

no mark : Power on

() : Automatic power off

* : Impossible to measure

- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

- Signal path.

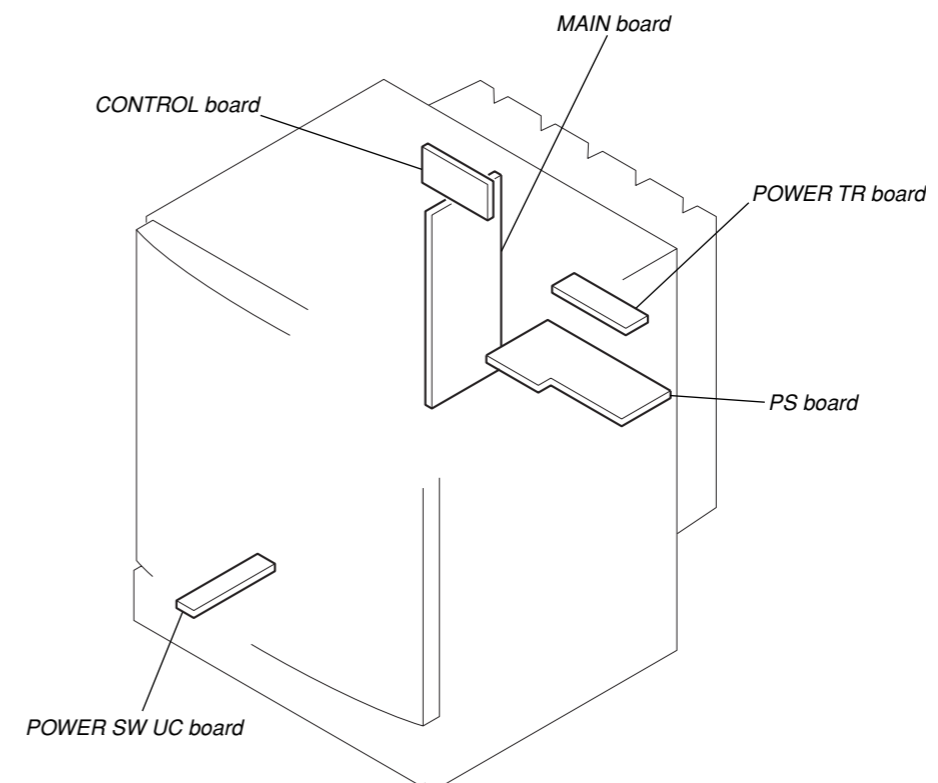
⇒ : AUDIO

- Abbreviation

AUS : Australian model

CND : Canadian model

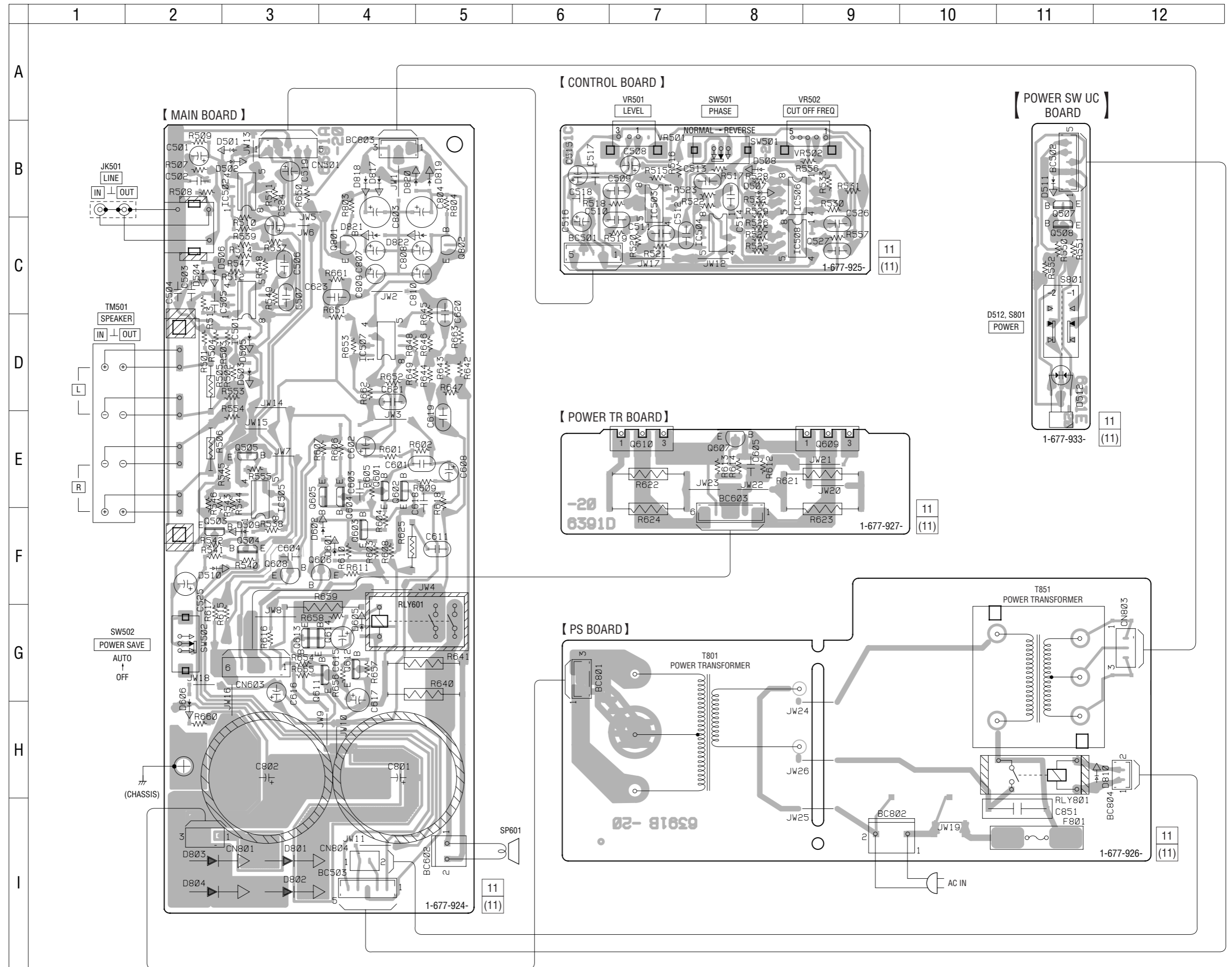
• Circuit Boards Location



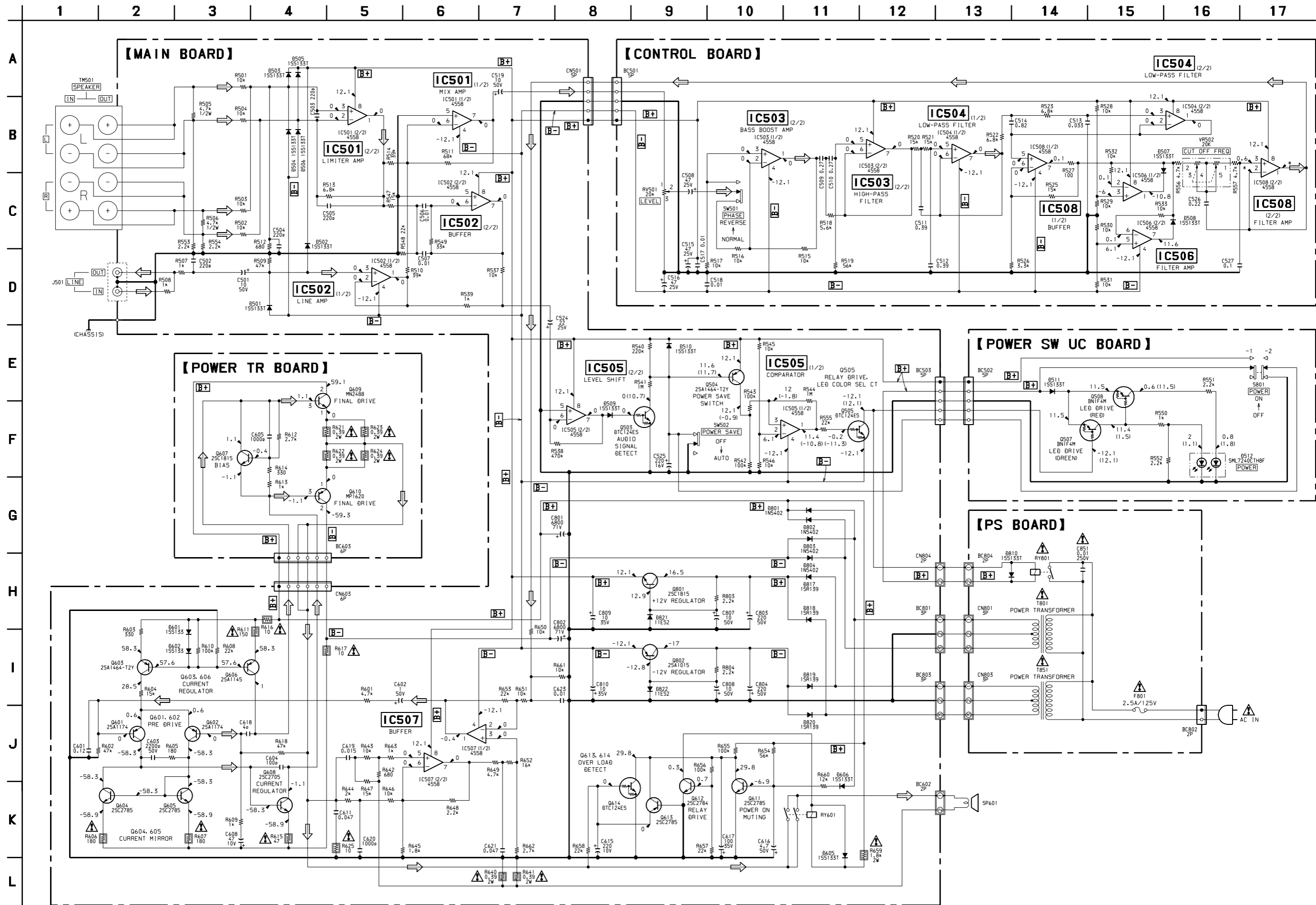
2-2. PRINTED WIRING BOARDS (US, Canadian models) • See page 3 for Note on Printed Wiring Boards. • See page 3 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location
D501	B-3
D502	B-3
D503	D-3
D504	C-2
D505	D-3
D506	C-2
D507	B-8
D508	B-8
D509	F-3
D510	F-2
D511	B-11
D512	D-11
D601	F-4
D602	F-4
D605	G-4
D606	H-2
D801	I-3
D802	I-3
D803	I-2
D804	I-2
D810	H-12
D817	B-4
D818	B-4
D819	B-5
D820	B-5
D821	C-4
D822	C-5
IC501	C-3
IC502	B-3
IC503	B-7
IC504	C-8
IC505	E-3
IC506	B-8
IC507	D-4
IC508	C-8
Q503	F-2
Q504	F-3
Q505	E-3
Q507	B-11
Q508	C-11
Q601	E-4
Q602	F-4
Q603	F-4
Q604	E-4
Q605	E-4
Q606	F-4
Q607	E-8
Q608	F-3
Q609	E-9
Q610	E-7
Q611	G-4
Q612	G-4
Q613	G-3
Q614	G-4
Q801	C-4
Q802	C-5



2-3. SCHEMATIC DIAGRAM (US, Canadian models) • See page 3 for Note on Schematic Diagram.



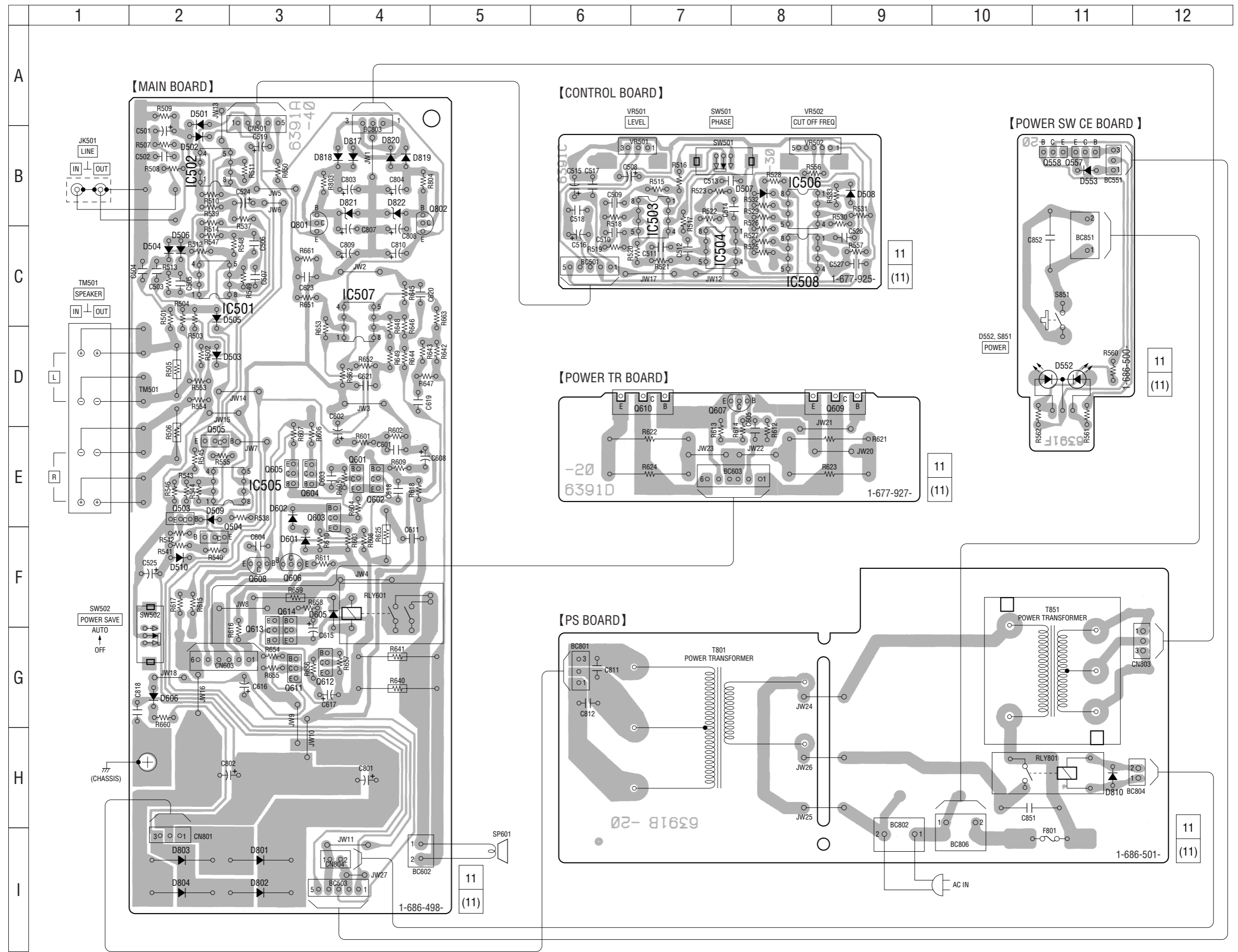
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

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

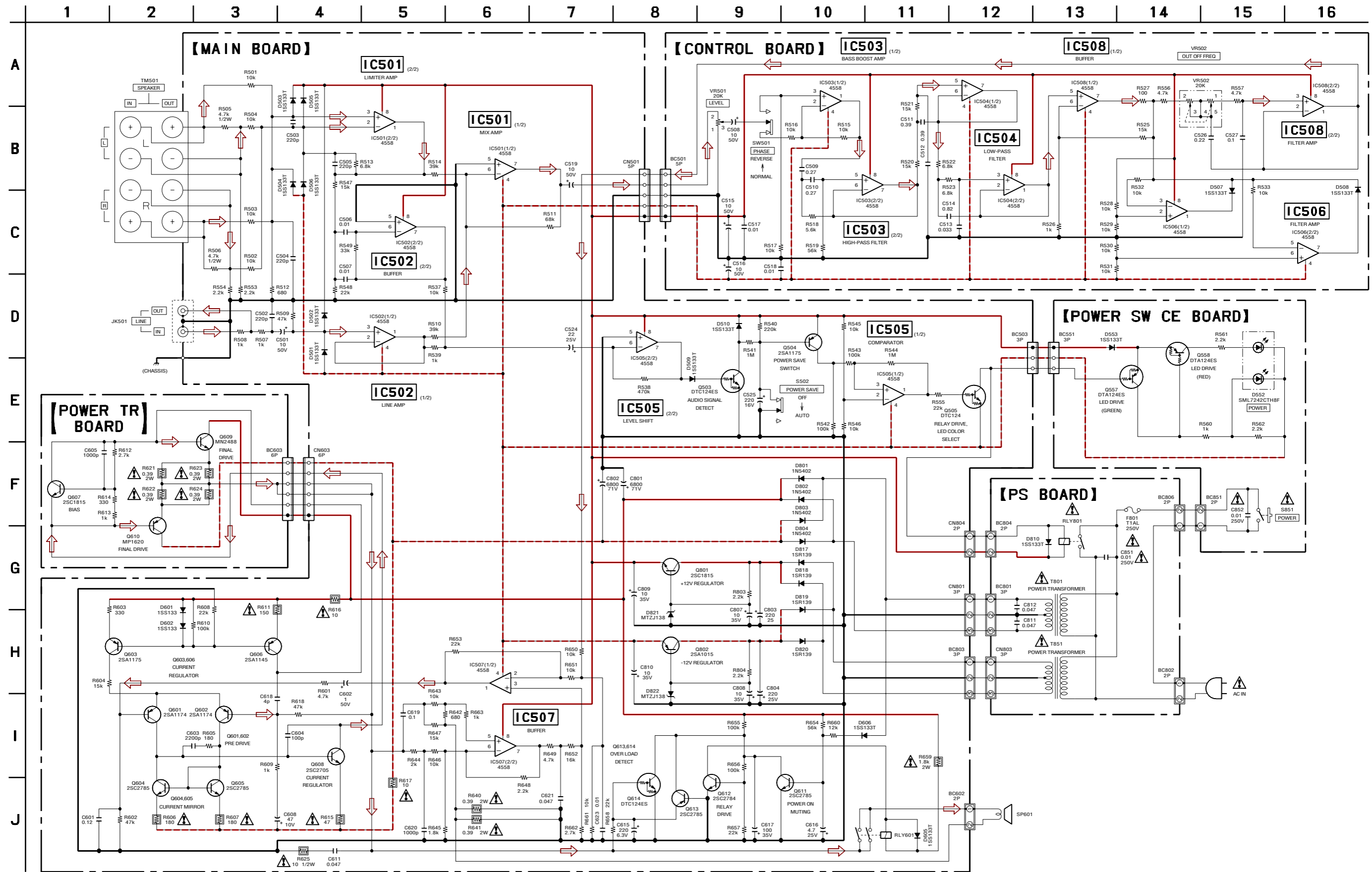
2-4. PRINTED WIRING BOARDS (Except US, Canadian models) • See page 3 for Note on Printed Wiring Boards. • See page 3 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location
D501	A-2
D502	B-2
D503	D-2
D504	C-2
D505	C-2
D506	C-2
D507	B-8
D508	B-9
D509	E-2
D510	F-2
D552	D-11
D553	B-11
D601	F-2
D602	E-3
D605	F-4
D606	G-2
D801	I-3
D802	I-3
D803	I-2
D804	I-2
D810	H-11
D817	B-4
D818	B-4
D819	B-4
D820	B-4
D821	B-4
D822	B-4
IC501	C-2
IC502	B-2
IC503	B-7
IC504	C-7
IC505	E-2
IC506	B-8
IC507	C-4
IC508	C-8
Q503	E-2
Q504	F-2
Q505	E-2
Q557	B-11
Q558	B-11
Q601	E-4
Q602	E-4
Q603	E-4
Q604	E-3
Q605	E-3
Q606	F-3
Q607	D-7
Q608	F-3
Q609	D-8
Q610	D-9
Q611	G-3
Q612	G-3
Q613	G-3
Q614	G-3
Q801	B-3
Q802	B-4



2-5. SCHEMATIC DIAGRAM (Except US, Canadian models) • See page 3 for Note on Schematic Diagram.



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

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

SECTION 3 EXPLODED VIEW

NOTE:

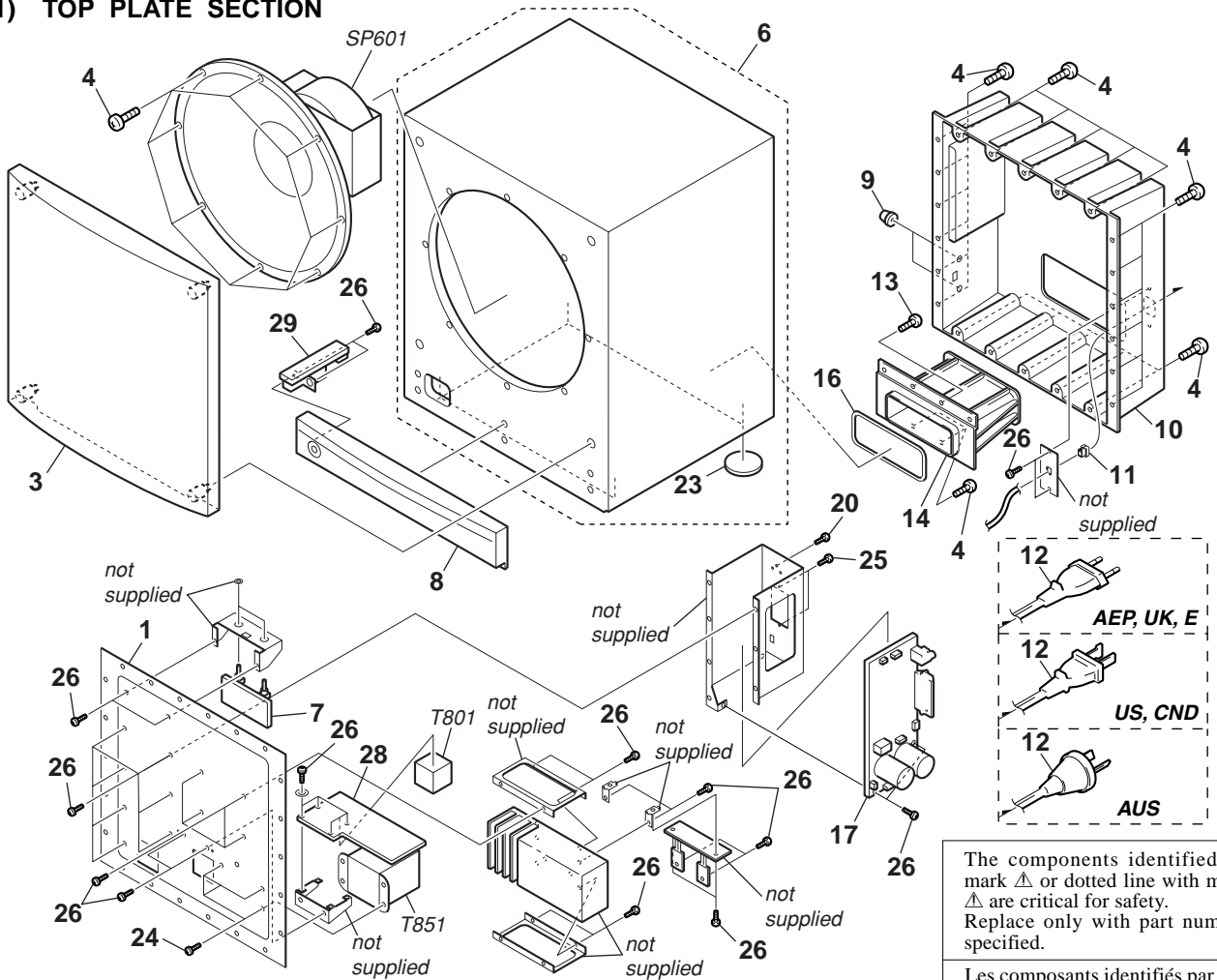
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

↑↑
 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.
- Accessories are given in the last of the electrical parts list.

- Abbreviation
 AUS : Australian model
 CND : Canadian model
 TW : Taiwan model

(1) TOP PLATE SECTION



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.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-228-132-01	PLATE, REAR		17	A-4473-570-A	MAIN BOARD, COMPLETE (US, CND)	
3	X-4952-847-1	FRAME ASSY, GRILLE		17	A-4731-069-A	MAIN BOARD, COMPLETE (EXCEPT US, CND)	
4	4-914-430-11	SCREW (4X20), TAPPING		20	3-710-901-11	SCREW, TAPPING	
6	A-4412-160-A	CABINET ASSY, SPEAKER		23	4-981-864-01	FOOT	
7	A-4473-571-A	CONTROL BOARD, COMPLETE		24	7-685-660-19	SCREW +BVTP 4X10 TYPE2 N-S	
8	X-4952-848-1	PANEL ASSY, FRONT (US, CND, E, AUS)		25	7-685-647-79	SCREW +P 3X10 TYPE2 NON-SLIT	
8	X-4952-914-1	PANEL ASSY, FRONT (AEP, UK)		26	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	
9	4-228-138-01	BUTTON		28	1-677-926-11	PS BOARD (US, CND)	
10	4-228-148-01	COVER, REAR (US, CND)		28	1-686-501-11	PS BOARD (EXCEPT US, CND)	
10	4-228-148-11	COVER, REAR (EXCEPT US, CND)		29	1-677-933-11	POWER SW UC BOARD (US, CND)	
* 11	3-703-244-00	BUSHING (2104), CORD		29	1-686-500-11	POWER SW CE BOARD (EXCEPT US, CND)	
Δ 12	1-696-571-21	CORD, POWER (AEP, E)		SP601	1-529-652-11	SPEAKER (30cm)	
Δ 12	1-696-845-31	CORD, POWER (AUS)		Δ T801	1-435-488-11	TRANSFORMER, POWER (US, CND)	
Δ 12	1-751-520-11	CORD, POWER (UK, TW)		Δ T801	1-435-489-11	TRANSFORMER, POWER (AEP, UK, AUS)	
Δ 12	1-783-820-11	CORD, POWER (US, CND)		Δ T801	1-435-491-11	TRANSFORMER, POWER (E)	
13	7-621-846-60	SCREW (4X25), TAPPING		Δ T851	1-435-492-11	TRANSFORMER, POWER (US, CND)	
14	4-228-141-01	DUCT (A)		Δ T851	1-435-493-11	TRANSFORMER, POWER (AEP, UK, AUS)	
16	4-229-627-01	PACKING		Δ T851	1-435-495-11	TRANSFORMER, POWER (E)	

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- 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 and -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
- Abbreviation
AUS : Australian model SP : Singapore model
CND : Canadian model TW : Taiwan model
MY : Malaysia model

- 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. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- **CAPACITORS**
uF: μ F
- **COILS**
uH: μ H

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.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4473-571-A	CONTROL BOARD, COMPLETE *****		R527	1-247-807-31	CARBON 100 5%	1/4W
		< CONNECTOR >		R528	1-249-429-11	CARBON 10K 5%	1/4W
* BC501	1-564-508-11	PLUG, CONNECTOR 5P		R529	1-249-429-11	CARBON 10K 5%	1/4W
		< CAPACITOR >		R530	1-249-429-11	CARBON 10K 5%	1/4W
C508	1-126-964-11	ELECT 10uF 20%	50V	R531	1-249-429-11	CARBON 10K 5%	1/4W
C509	1-136-170-00	MYLAR 0.27uF 5%	50V	R532	1-249-429-11	CARBON 10K 5%	1/4W
C510	1-136-170-00	MYLAR 0.27uF 5%	50V	R533	1-249-429-11	CARBON 10K 5%	1/4W
C511	1-137-193-11	MYLAR 0.39uF 5%	50V	R556	1-247-847-11	CARBON 4.7K 5%	1/4W
C512	1-137-193-11	MYLAR 0.39uF 5%	50V	R557	1-247-847-11	CARBON 4.7K 5%	1/4W
		< DIODE >				< SWITCH >	
C513	1-130-489-00	MYLAR 0.033uF 5%	50V	SW501	1-571-588-21	SWITCH, SLIDE (PHASE)	
C514	1-136-176-00	MYLAR 0.82uF 5%	50V			< VARIABLE RESISTOR >	
C515	1-126-964-11	ELECT 10uF 20%	50V	VR501	1-227-492-11	RES, VAR, CARBON 20K (LEVEL)	
C516	1-126-964-11	ELECT 10uF 20%	50V	VR502	1-227-493-11	RES, VAR, CARBON 20K (CUT OFF FREQ)	
C517	1-130-483-00	MYLAR 0.01uF 5%	50V			*****	
C518	1-130-483-00	MYLAR 0.01uF 5%	50V		A-4473-570-A	MAIN BOARD, COMPLETE (US, CND)	
C526	1-130-499-00	MYLAR 0.22uF 5%	50V		A-4731-069-A	MAIN BOARD, COMPLETE (EXCEPT US, CND)	
C527	1-130-495-00	MYLAR 0.1uF 5%	50V			*****	
		< IC >				< CONNECTOR >	
D507	8-719-991-33	DIODE 1SS133T-77		* BC503	1-564-508-11	PLUG, CONNECTOR 5P	
D508	8-719-991-33	DIODE 1SS133T-77		* BC602	1-566-693-11	PIN, CONNECTOR 2P	
		< RESISTOR >		* BC803	1-564-506-11	PLUG, CONNECTOR 3P	
IC503	8-759-145-58	IC BA4558				< CAPACITOR >	
IC504	8-759-145-58	IC BA4558		C501	1-126-964-11	ELECT 10uF 20%	50V
IC506	8-759-145-58	IC BA4558		C502	1-102-978-00	CERAMIC 220PF 5%	50V
IC508	8-759-145-58	IC BA4558		C503	1-102-978-00	CERAMIC 220PF 5%	50V
		< DIODE >		C504	1-102-978-00	CERAMIC 220PF 5%	50V
R515	1-249-429-11	CARBON 10K 5%	1/4W	C505	1-102-978-00	CERAMIC 220PF 5%	50V
R516	1-249-429-11	CARBON 10K 5%	1/4W	C506	1-130-483-00	MYLAR 0.01uF 5%	50V
R517	1-249-429-11	CARBON 10K 5%	1/4W	C507	1-130-483-00	MYLAR 0.01uF 5%	50V
R518	1-249-426-11	CARBON 5.6K 5%	1/4W	C519	1-126-964-11	ELECT 10uF 20%	50V
R519	1-249-438-11	CARBON 56K 5%	1/4W	C524	1-128-551-11	ELECT 22uF 20%	63V
		< DIODE >		C525	1-126-934-11	ELECT 220uF 20%	16V
R520	1-249-431-11	CARBON 15K 5%	1/4W	C601	1-136-166-00	MYLAR 0.12uF 5%	50V
R521	1-249-431-11	CARBON 15K 5%	1/4W	C602	1-126-960-11	ELECT 1uF 20%	50V
R522	1-249-427-11	CARBON 6.8K 5%	1/4W	C603	1-101-002-00	CERAMIC 0.0022uF	50V
R523	1-249-427-11	CARBON 6.8K 5%	1/4W	C604	1-102-973-00	CERAMIC 100PF 5%	50V
R525	1-249-431-11	CARBON 15K 5%	1/4W	C608	1-126-947-11	ELECT 47uF 20%	10V
		< DIODE >		C611	1-130-491-00	MYLAR 0.047uF 5%	50V
R526	1-249-417-11	CARBON 1K 5%	1/4W				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C615	1-126-934-11	ELECT	220uF 20% 10V			< JACK >	
C616	1-126-963-11	ELECT	4.7uF 20% 50V				
C617	1-126-948-11	ELECT	100uF 20% 35V				
C618	1-102-937-00	CERAMIC	4.0PF 0.25PF 50V	JK501	1-785-795-11	JACK, PIN 2P (LINE)	
C619	1-130-485-00	MYLAR	0.015uF 5% 50V (US, CND)			< TRANSISTOR >	
C619	1-130-495-00	MYLAR	0.1uF 5% 50V (EXCEPT US, CND)	Q503	8-729-029-86	TRANSISTOR	DTC124ESA-TP
C620	1-101-001-00	CERAMIC	0.001uF 50V	Q504	8-729-119-54	TRANSISTOR	2SA1464-T2Y13 (US, CND)
C621	1-130-491-00	MYLAR	0.047uF 5% 50V	Q504	8-729-119-76	TRANSISTOR	2SA1175-HFE (EXCEPT US, CND)
C623	1-130-483-00	MYLAR	0.01uF 5% 50V	Q505	8-729-029-86	TRANSISTOR	DTC124ESA-TP
C801	1-165-946-11	ELECT	6800uF 20% 71V	Q601	8-729-117-41	TRANSISTOR	2SA1174-P
C802	1-165-946-11	ELECT	6800uF 20% 71V	Q602	8-729-117-41	TRANSISTOR	2SA1174-P
C803	1-104-666-11	ELECT	220uF 20% 25V	Q603	8-729-119-54	TRANSISTOR	2SA1464-T2Y13 (US, CND)
C804	1-104-666-11	ELECT	220uF 20% 25V	Q603	8-729-119-76	TRANSISTOR	2SA1175-HFE (EXCEPT US, CND)
C807	1-126-964-11	ELECT	10uF 20% 50V	Q604	8-729-119-78	TRANSISTOR	2SC2785-F
C808	1-126-964-11	ELECT	10uF 20% 50V	Q605	8-729-119-78	TRANSISTOR	2SC2785-F
C809	1-126-964-11	ELECT	10uF 20% 50V	Q606	8-729-214-51	TRANSISTOR	2SA1145-0
C810	1-126-964-11	ELECT	10uF 20% 50V	Q608	8-729-270-51	TRANSISTOR	2SC2705-0
		< CONNECTOR >		Q611	8-729-119-78	TRANSISTOR	2SC2785-F
* CN501	1-564-508-11	PLUG, CONNECTOR 5P		Q612	8-729-178-41	TRANSISTOR	2SC2784-P
* CN603	1-564-509-11	PLUG, CONNECTOR 6P		Q613	8-729-119-78	TRANSISTOR	2SC2785-F
* CN804	1-564-505-11	PLUG, CONNECTOR 2P		Q614	8-729-029-86	TRANSISTOR	DTC124ESA-TP
		< DIODE >		Q801	8-729-281-53	TRANSISTOR	2SC1815-GR
D501	8-719-991-33	DIODE 1SS133T-77		Q802	8-729-231-12	TRANSISTOR	2SA1015TP-0
D502	8-719-991-33	DIODE 1SS133T-77				< RESISTOR >	
D503	8-719-991-33	DIODE 1SS133T-77		R501	1-249-429-11	CARBON	10K 5% 1/4W
D504	8-719-991-33	DIODE 1SS133T-77		R502	1-249-429-11	CARBON	10K 5% 1/4W
D505	8-719-991-33	DIODE 1SS133T-77		R503	1-249-429-11	CARBON	10K 5% 1/4W
D506	8-719-991-33	DIODE 1SS133T-77		R504	1-249-429-11	CARBON	10K 5% 1/4W
D509	8-719-991-33	DIODE 1SS133T-77		R505	1-247-760-11	CARBON	4.7K 5% 1/2W
D510	8-719-991-33	DIODE 1SS133T-77		R506	1-247-760-11	CARBON	4.7K 5% 1/2W
D601	8-719-991-33	DIODE 1SS133T-77		R507	1-249-417-11	CARBON	1K 5% 1/4W
D602	8-719-991-33	DIODE 1SS133T-77		R508	1-249-417-11	CARBON	1K 5% 1/4W
D605	8-719-991-33	DIODE 1SS133T-77		R509	1-249-437-11	CARBON	47K 5% 1/4W
D606	8-719-991-33	DIODE 1SS133T-77		R510	1-249-436-11	CARBON	39K 5% 1/4W
D801	8-719-030-52	DIODE 1N5402		R511	1-249-439-11	CARBON	68K 5% 1/4W
D802	8-719-030-52	DIODE 1N5402		R512	1-249-415-11	CARBON	680 5% 1/4W
D803	8-719-030-52	DIODE 1N5402		R513	1-249-427-11	CARBON	6.8K 5% 1/4W
D804	8-719-030-52	DIODE 1N5402		R514	1-249-436-11	CARBON	39K 5% 1/4W
D817	8-719-200-82	DIODE 1SR139-100		R537	1-249-429-11	CARBON	10K 5% 1/4W
D818	8-719-200-82	DIODE 1SR139-100		R538	1-247-895-00	CARBON	470K 5% 1/4W
D819	8-719-200-82	DIODE 1SR139-100		R539	1-249-417-11	CARBON	1K 5% 1/4W
D820	8-719-200-82	DIODE 1SR139-100		R540	1-247-887-00	CARBON	220K 5% 1/4W
D821	8-719-200-82	DIODE 11ES2 (US, CND)		R541	1-247-903-00	CARBON	1M 5% 1/4W
D821	8-719-110-36	DIODE RD13ESB2 (EXCEPT US, CND)		R542	1-249-441-11	CARBON	100K 5% 1/4W
D822	8-719-200-82	DIODE 11ES2 (US, CND)		R543	1-249-441-11	CARBON	100K 5% 1/4W
D822	8-719-110-36	DIODE RD13ESB2 (EXCEPT US, CND)		R544	1-247-903-00	CARBON	1M 5% 1/4W
		< IC >		R545	1-249-429-11	CARBON	10K 5% 1/4W
IC501	8-759-145-58	IC BA4558		R546	1-249-429-11	CARBON	10K 5% 1/4W
IC502	8-759-145-58	IC BA4558		R547	1-249-431-11	CARBON	15K 5% 1/4W
IC505	8-759-145-58	IC BA4558		R548	1-249-433-11	CARBON	22K 5% 1/4W
IC507	8-759-145-58	IC BA4558		R549	1-249-435-11	CARBON	33K 5% 1/4W
				R553	1-249-421-11	CARBON	2.2K 5% 1/4W
				R554	1-249-421-11	CARBON	2.2K 5% 1/4W
				R555	1-249-433-11	CARBON	22K 5% 1/4W
				R601	1-249-425-11	CARBON	4.7K 5% 1/4W

MAIN	POWER SWITCH CE	POWER SW UC
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Ref. No.	Part No.	Description	Remark
R602	1-249-437-11	CARBON 47K	5% 1/4W
R603	1-249-411-11	CARBON 330	5% 1/4W
R604	1-249-431-11	CARBON 15K	5% 1/4W
R605	1-249-408-11	CARBON 180	5% 1/4W
△R606	1-247-703-11	CARBON 180	5% 1/4W F (US, CND)
△R606	1-249-408-11	CARBON 180	5% 1/4W F (EXCEPT US, CND)
△R607	1-247-703-11	CARBON 180	5% 1/4W F (US, CND)
△R607	1-249-408-11	CARBON 180	5% 1/4W F (EXCEPT US, CND)
R608	1-249-433-11	CARBON 22K	5% 1/4W
R609	1-249-417-11	CARBON 1K	5% 1/4W
R610	1-249-441-11	CARBON 100K	5% 1/4W
△R611	1-247-702-11	CARBON 150	5% 1/4W F (US, CND)
△R611	1-249-407-11	CARBON 150	5% 1/4W F (EXCEPT US, CND)
△R615	1-247-696-11	CARBON 47	5% 1/4W F (US, CND)
△R615	1-249-401-11	CARBON 47	5% 1/4W F (EXCEPT US, CND)
△R616	1-247-688-11	CARBON 10	5% 1/4W F (US, CND)
△R616	1-249-393-11	CARBON 10	5% 1/4W F (EXCEPT US, CND)
△R617	1-247-688-11	CARBON 10	5% 1/4W F (US, CND)
△R617	1-249-393-11	CARBON 10	5% 1/4W F (EXCEPT US, CND)
R618	1-249-437-11	CARBON 47K	5% 1/4W
△R625	1-247-688-11	CARBON 10	5% 1/4W F (US, CND)
△R625	1-247-727-11	CARBON 10	5% 1/4W F (EXCEPT US, CND)
△R640	1-216-364-11	METAL OXIDE FILM 0.39	5% 2W F
△R641	1-216-364-11	METAL OXIDE FILM 0.39	5% 2W F
R642	1-249-415-11	CARBON 680	5% 1/4W
R643	1-249-429-11	CARBON 10K	5% 1/4W
R644	1-247-838-00	CARBON 2K	5% 1/4W
R645	1-249-420-11	CARBON 1.8K	5% 1/4W
R646	1-249-429-11	CARBON 10K	5% 1/4W
R647	1-249-431-11	CARBON 15K	5% 1/4W
R648	1-249-421-11	CARBON 2.2K	5% 1/4W
R649	1-249-425-11	CARBON 4.7K	5% 1/4W
R650	1-249-429-11	CARBON 10K	5% 1/4W
R651	1-249-429-11	CARBON 10K	5% 1/4W
R652	1-247-860-11	CARBON 16K	5% 1/4W
R653	1-249-433-11	CARBON 22K	5% 1/4W
R654	1-249-438-11	CARBON 56K	5% 1/4W
R655	1-249-441-11	CARBON 100K	5% 1/4W
R656	1-249-441-11	CARBON 100K	5% 1/4W
R657	1-249-433-11	CARBON 22K	5% 1/4W
R658	1-249-433-11	CARBON 22K	5% 1/4W
△R659	1-216-458-71	METAL OXIDE 1.8K	5% 2W F
R660	1-249-430-11	CARBON 12K	5% 1/4W
R661	1-249-429-11	CARBON 10K	5% 1/4W
R662	1-249-422-11	CARBON 2.7K	5% 1/4W
R663	1-249-417-11	CARBON 1K	5% 1/4W

Ref. No.	Part No.	Description	Remark
R803	1-249-421-11	CARBON 2.2K	5% 1/4W
R804	1-249-421-11	CARBON 2.2K	5% 1/4W
		< RELAY >	
RLY601	1-515-920-11	RELAY (24V)	
		< SWITCH >	
SW502	1-571-588-21	SWITCH, SLIDE (POWER SAVE)	
		< TERMINAL >	
TM501	1-537-737-11	TERMINAL BOARD (SPEAKER) (US, CND)	
TM501	1-537-922-11	TERMINAL BOARD (SP) (SPEAKER)	(EXCEPT US, CND)

	1-686-500-11	POWER SWITCH CE BOARD	(EXCEPT US, CND)

		< CONNECTOR >	
BC551	1-564-506-11	PLUG, CONNECTOR 3P	
BC851	1-564-320-00	PIN, CONNECTOR (3.96mm PITCH) 2P	
		< CAPACITOR >	
△C852	1-113-925-11	CERAMIC 0.01uF	20% 250V
		< DIODE >	
D552	8-719-061-31	LED SML72420CTH8F (POWER)	
D553	8-719-991-33	DIODE 1SS133T-77	
		< TRANSISTOR >	
Q557	8-729-029-40	TRANSISTOR DTA124ESA	
Q558	8-729-029-40	TRANSISTOR DTA124ESA	
		< RESISTOR >	
R560	1-249-417-11	CARBON 1K	5% 1/4W
R561	1-249-421-11	CARBON 2.2K	5% 1/4W
R562	1-249-421-11	CARBON 2.2K	5% 1/4W
		< SWITCH >	
△S851	1-554-522-00	SWITCH, PUSH (1 KEY) (POWER)	

	1-677-933-11	POWER SW UC BOARD (US, CND)	

		< CONNECTOR >	
* BC502	1-566-693-11	PIN, CONNECTOR 2P	
		< DIODE >	
D511	8-719-991-33	DIODE 1SS133T-77	
D512	8-719-061-31	LED SML72420CTH8F (POWER)	
		< TRANSISTOR >	
Q507	8-729-029-40	TRANSISTOR BN1F4M	
Q508	8-729-029-40	TRANSISTOR BN1F4M	

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POWER SW UC

PS

POWER TR

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< RESISTOR >				< TRANSISTOR/IC >	
R550	1-249-417-11	CARBON	1K 5% 1/4W	Q607	8-729-281-53	TRANSISTOR	2SC1815-GR
R551	1-249-421-11	CARBON	2.2K 5% 1/4W	Q609	8-749-010-25	IC	MN2488-OPY-M
R552	1-249-421-11	CARBON	2.2K 5% 1/4W	Q610	8-749-010-26	IC	MP1620-OPY-M
		< SWITCH >				< RESISTOR >	
S801	1-554-920-11	SWITCH, PUSH (AC POWER) (1 KEY)	(POWER)	R612	1-249-422-11	CARBON	2.7K 5% 1/4W
*****				R613	1-249-417-11	CARBON	1K 5% 1/4W
	1-677-926-11	PS BOARD	*****	R614	1-249-411-11	CARBON	330 5% 1/4W
		< CONNECTOR >		△ R621	1-216-364-11	METAL OXIDE FILM	0.39 5% 2W F
BC801	1-564-506-11	PLUG, CONNECTOR 3P		△ R622	1-216-364-11	METAL OXIDE FILM	0.39 5% 2W F
BC802	1-564-320-00	PIN, CONNECTOR (3.96mm PITCH) 2P	(EXCEPT US, CND)	△ R623	1-216-364-11	METAL OXIDE FILM	0.39 5% 2W F
BC804	1-564-505-11	PLUG, CONNECTOR 2P		△ R624	1-216-364-11	METAL OXIDE FILM	0.39 5% 2W F
BC806	1-564-320-00	PIN, CONNECTOR (3.96mm PITCH) 2P	(EXCEPT US, CND)	*****			
		< CAPACITOR >				MISCELLANEOUS	*****
△ C851	1-113-925-11	CERAMIC	0.01uF 20% 250V	△ 12	1-696-571-21	CORD, POWER (AEP, E)	
		< CONNECTOR >		△ 12	1-696-845-31	CORD, POWER (AUS)	
* CN801	1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P (US, CND)		△ 12	1-751-520-11	CORD, POWER (UK, TW)	
* CN803	1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P		△ 12	1-783-820-11	CORD, POWER (US, CND)	
		< DIODE >		SP601	1-529-652-11	SPEAKER (30cm)	
D810	8-719-991-33	DIODE	1SS133T-77	△ T801	1-435-488-11	TRANSFORMER, POWER (US, CND)	
		< FUSE >		△ T801	1-435-489-11	TRANSFORMER, POWER (AEP, UK, AUS)	
△ F801	1-532-437-11	FUSE, GLASS TUBE (2.5A/125V) (US, CND)		△ T801	1-435-491-11	TRANSFORMER, POWER (E)	
△ F801	1-532-463-51	FUSE (T1AL/250V) (EXCEPT US, CND)		△ T851	1-435-492-11	TRANSFORMER, POWER (US, CND)	
		< RELAY >		△ T851	1-435-493-11	TRANSFORMER, POWER (AEP, UK, AUS)	
△ RLY801	1-755-276-11	RELAY, POWER		△ T851	1-435-495-11	TRANSFORMER, POWER (E)	
		< POWER TRANSFORMER >		*****			
△ T801	1-435-488-11	TRANSFORMER, POWER (US, CND)				ACCESSORIES	*****
△ T801	1-435-489-11	TRANSFORMER, POWER (AEP, UK, AUS)		△	1-569-008-21	ADAPTOR, CONVERSION 2P	(MY, SP, TW, AUS)
△ T801	1-435-491-11	TRANSFORMER, POWER (E)			1-769-329-21	CORD, CONNECTION (PIN-PIN)	
△ T851	1-435-492-11	TRANSFORMER, POWER (US, CND)			1-769-433-21	CORD, SPEAKER	
△ T851	1-435-493-11	TRANSFORMER, POWER (AEP, UK, AUS)			4-228-525-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH)	(US, UK)
△ T851	1-435-495-11	TRANSFORMER, POWER (E)			4-228-525-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	(CND, AEP, MY, SP, AUS)
*****					4-228-525-31	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN, PORTUGUESE, FINNISH, DANISH, SPANISH) (AEP)	
	1-677-927-11	POWER TR BOARD	*****		4-228-525-11	MANUAL, INSTRUCTION (SPANISH, CHINESE)	(MY, SP, TW)
		< CONNECTOR >					
BC603	1-506-947-11	PIN, CONNECTOR 6P					
		< CAPACITOR >					
C605	1-101-001-00	CERAMIC	0.001uF 50V				

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