

# SRS-Z30

## SERVICE MANUAL

Ver 1.1 2003.05

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



### SPECIFICATIONS

#### Speaker section

Enclosure type	Full range, Bass reflex, magnetically shielded
Speaker system	39 mm (diameter)
Impedance	8 $\Omega$
Rated input power	3 W

#### Amplifier section (Left Speaker)

Rated output	3 W + 3 W (10 % T.H.D., 1 kHz, 6 $\Omega$ )
Bass boost	MEGA BASS Input Input cord a stereo-mini plug (2 m) x 1 Stereo mini jack x 1
Input impedance	4.7 k $\Omega$ (at 1 kHz)
Output	Stereo mini jack x 1 (PHONES)

#### General

Power	DC 9V (supplied AC power adaptor)
Dimensions (w/h/d)	approx. 50 x 145 x 70 mm (2 x 5 <sup>3</sup> / <sub>4</sub> x 2 <sup>7</sup> / <sub>8</sub> inch)
Mass	(Left) 250 g (9 oz.), (Right) 200 g (7 oz.)

#### Supplied accessories

AC power adaptor (1)
Operating Instructions (1)

Design and specifications are subject to change without notice.

## ACTIVE SPEAKER SYSTEM

9-877-075-02  
2003E02-1  
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**Sony Corporation**  
Personal Audio Company  
Published by Sony Engineering Corporation

# SONY®

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**Notes on chip component replacement**

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

**● UNLEADED SOLDER**

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

**LF : LEAD FREE MARK**

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.  
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time. Soldering irons using a temperature regulator should be set to about 350°C.  
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity  
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder  
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

**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 IDENTIFÉS 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.

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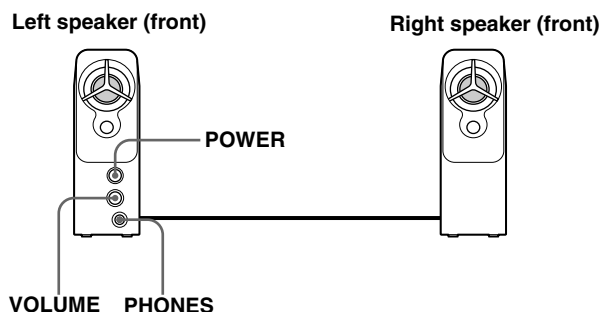
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**SECTION 1  
GENERAL**

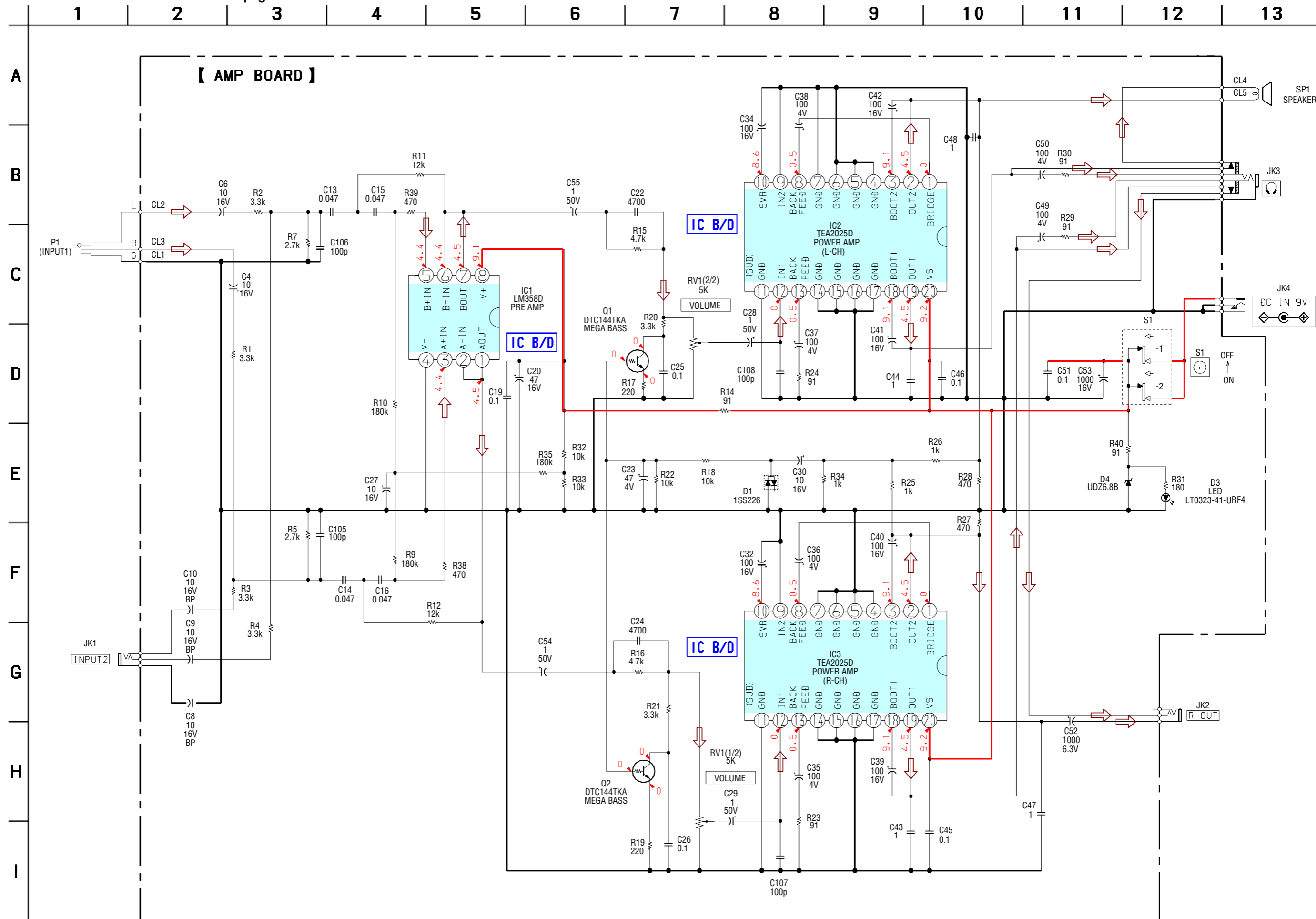
**LOCATING THE CONTROLS**

This section is extracted from instruction manual.



SECTION 2  
DIAGRAMS

2-1. SCHEMATIC DIAGRAM • Refer to page 6 for Notes.



	1	2	3	4	5	6
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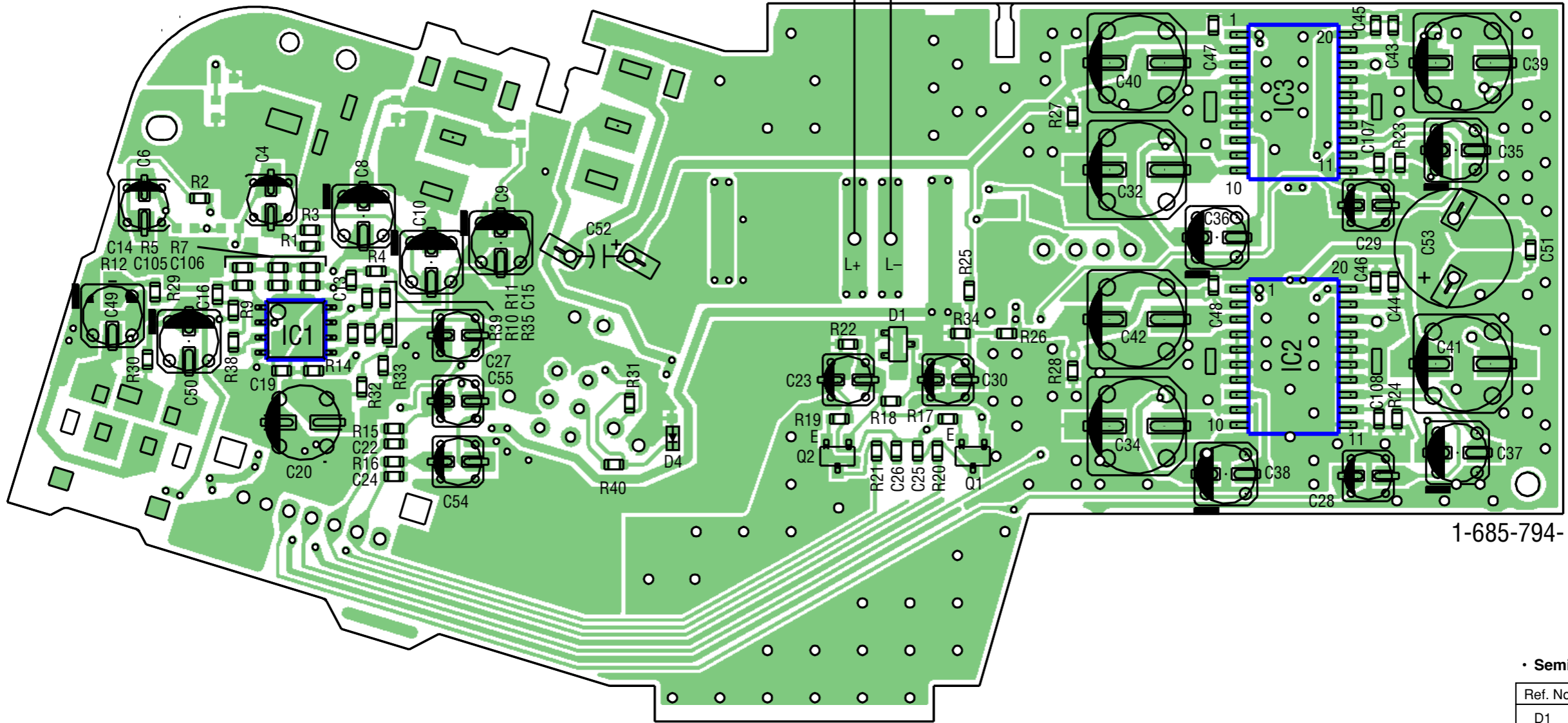
A

B

C

**[AMP BOARD] (SIDE A)**

SP1  
SPEAKER

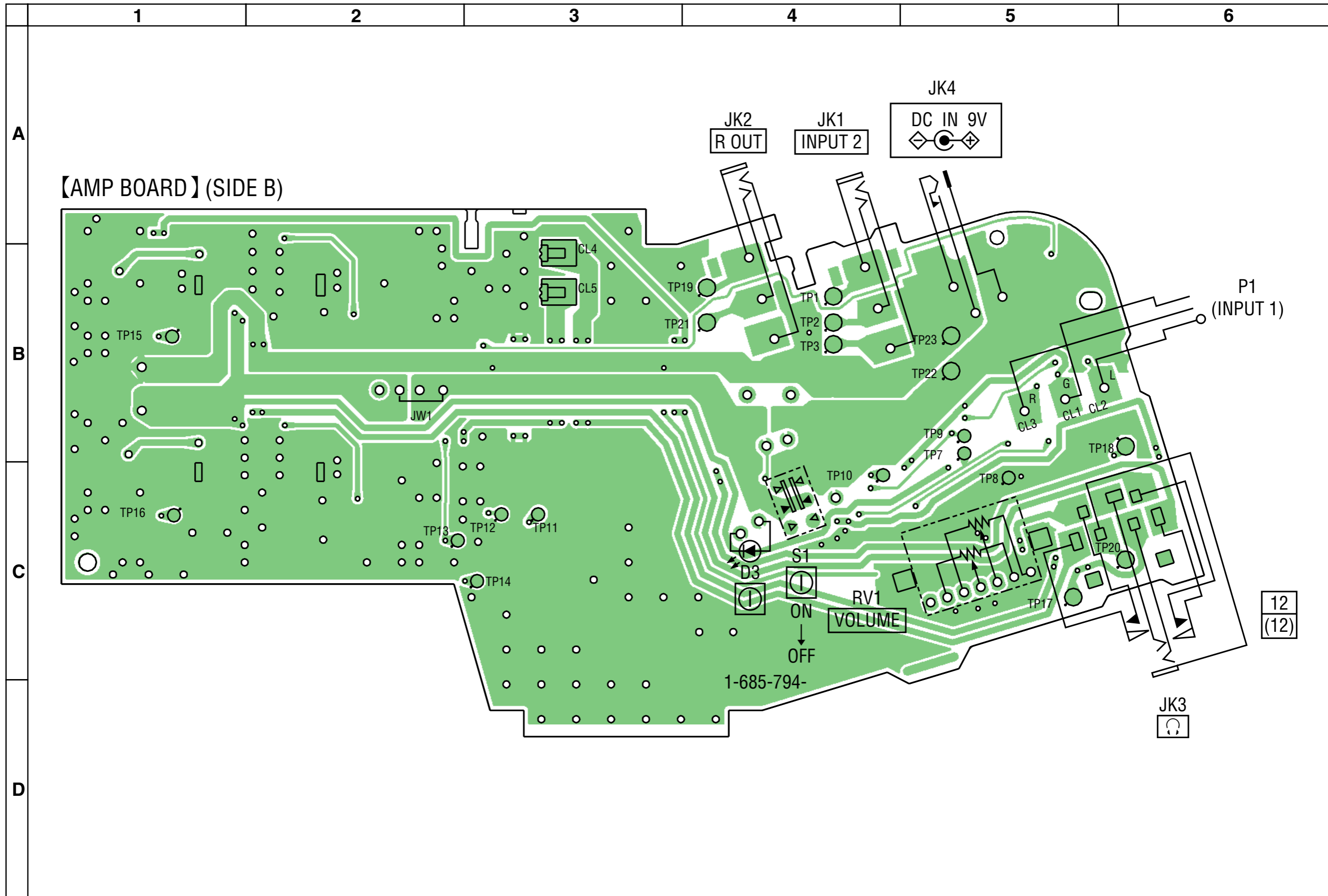


1-685-794-

12  
(12)

• Semiconductor

Ref. No.	Location
D1	B-4
IC1	B-2
IC2	B-5
IC3	A-5
Q1	C-4
Q2	C-4



# SRS-Z30




## For schematic diagrams.

### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4$  W or less unless otherwise specified.
- : B+ Line.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- Voltagess are dc with respect to ground under no-signal conditions.
- Voltagess are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- ⇒** : AUDIO

## Note on Printed Wiring Boards:

### Note:

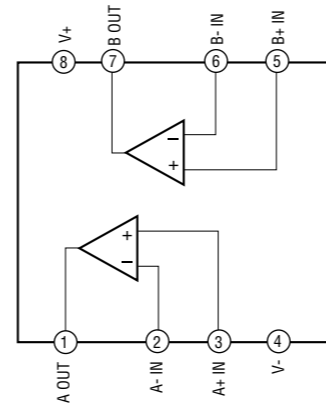
-  : parts extracted from the component side.
-  : Through hole.
-  : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

### Caution:

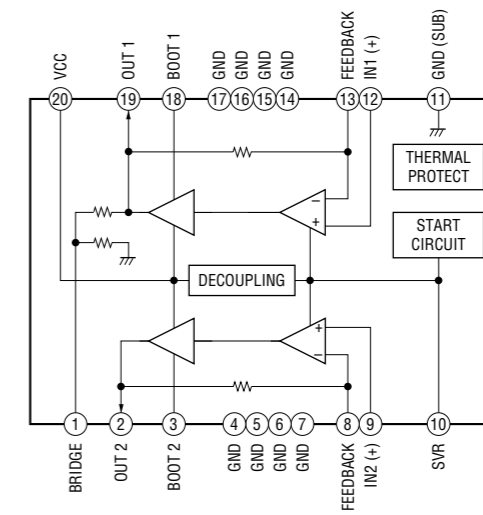
Pattern face side :Parts on the pattern face side seen from the (Side B) pattern face are indicated.  
 Parts face side : Parts on the parts face side seen from the (Side A) parts face are indicated.

## • IC BLOCK DIAGRAM

IC1 LM358D



IC2,3 TEA2025D-013TR

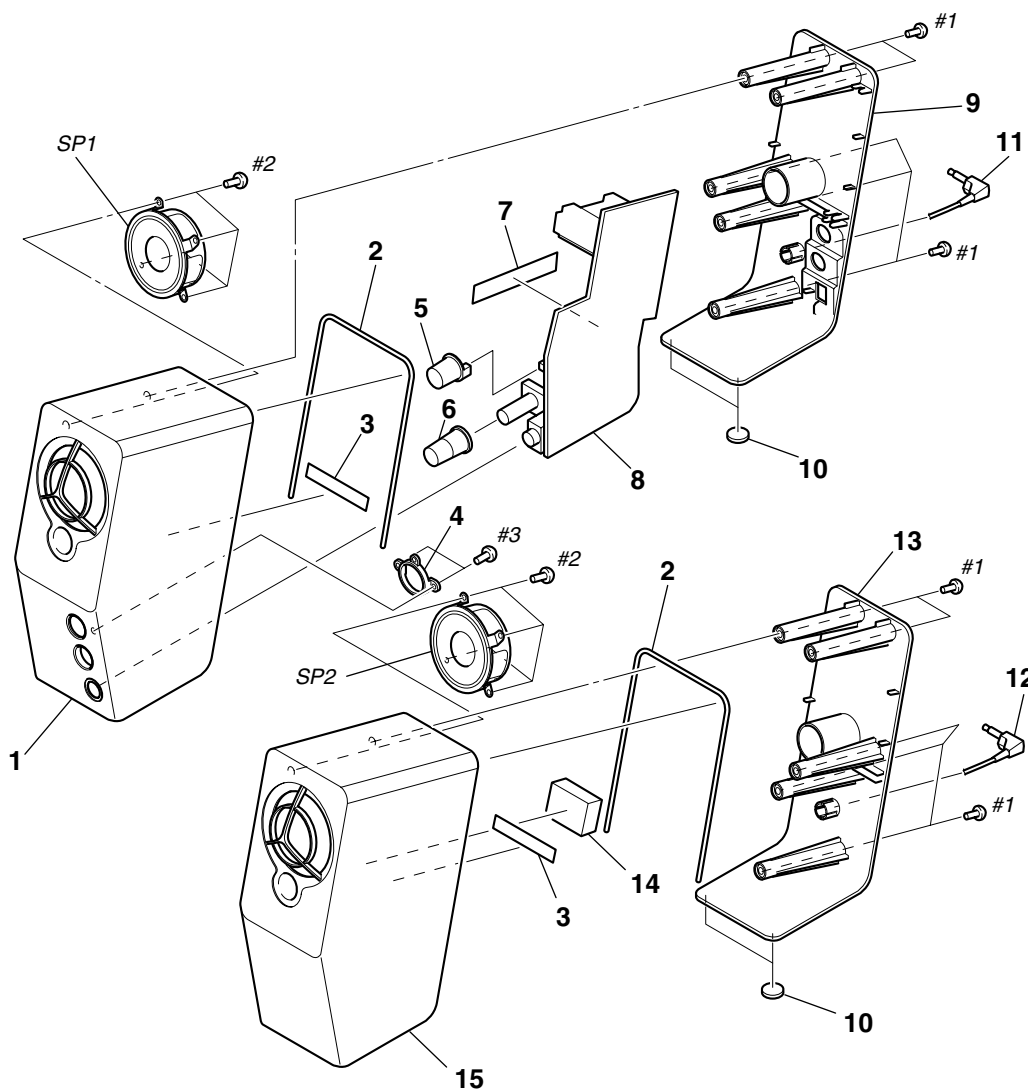


## SECTION 3 EXPLODED VIEWS

**NOTE :**

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- 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 and accessories and packing materials are given in the last of this parts list.

### 3-1. MAIN SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-247-419-01	CABINET (L), FRONT		11	1-824-827-11	CORD (WITH PLUG)	
2	3-247-426-01	RUBBER, SEAL		12	1-824-828-11	CORD (WITH PLUG)	
3	3-247-430-01	SHEET (LARGE), PACKING		13	3-247-422-01	CABINET (R), REAR	
4	3-247-425-01	PLATE, LIGHT GUIDE		14	3-247-428-01	URETHANE, PACKING	
5	3-247-423-01	KNOB (POWER)		15	3-247-420-01	CABINET (R), FRONT	
6	3-247-424-01	KNOB (VOLUME)		SP1	1-825-195-11	SPEAKER (039F009)	
7	3-247-429-01	SHEET (SMALL), PACKING		SP2	1-825-195-11	SPEAKER (039F009)	
* 8	A-3347-365-A	AMP BOARD, COMPLETE		#1	7-685-104-14	SCREW +P 2X6 TYPE2 NON-SLIT	
9	3-247-421-01	CABINET (L), REAR		#2	7-685-133-14	SCREW +P 2.6X6 TYPE2 NON-SLIT	
10	3-247-431-01	FOOT, RUBBER		#3	7-685-103-14	SCREW +P 2X5 TYPE2 NON-SLIT	

## 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, -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 :  $\mu$ , for example :  
uA.... :  $\mu$  A.... , uPA.... :  $\mu$  PA....  
uPB.... :  $\mu$  PB.... , uPC.... :  $\mu$  PC....  
uPD.... :  $\mu$  PD....
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
CND : Canadian  
AUS : Australian  
C&SA : Central and South America  
JEW : Tourist  
SP : Singapore  
KR : Korean

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

Les composants identifiés par une marque  $\Delta$  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
*	A-3347-365-A	AMP BOARD, COMPLETE *****	
< CAPACITOR >			
C4	1-124-779-00	ELECT CHIP 10uF	20% 16V
C6	1-124-779-00	ELECT CHIP 10uF	20% 16V
C8	1-100-403-11	ELECT (NONPOLAR)10uF	20% 16V
C9	1-100-403-11	ELECT (NONPOLAR)10uF	20% 16V
C10	1-100-403-11	ELECT (NONPOLAR)10uF	20% 16V
C13	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C14	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C15	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C16	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C19	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C20	1-126-204-11	ELECT CHIP 47uF	20% 16V
C22	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C23	1-126-607-11	ELECT CHIP 47uF	20% 4V
C24	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C25	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C26	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C27	1-124-779-00	ELECT CHIP 10uF	20% 16V
C28	1-126-193-11	ELECT 1uF	20% 50V
C29	1-126-193-11	ELECT 1uF	20% 50V
C30	1-124-779-00	ELECT CHIP 10uF	20% 16V
C32	1-117-681-11	ELECT CHIP 100uF	20% 16V
C34	1-117-681-11	ELECT CHIP 100uF	20% 16V
C35	1-126-209-11	ELECT CHIP 100uF	20% 4V
C36	1-126-209-11	ELECT CHIP 100uF	20% 4V
C37	1-126-209-11	ELECT CHIP 100uF	20% 4V
C38	1-126-209-11	ELECT CHIP 100uF	20% 4V
C39	1-117-681-11	ELECT CHIP 100uF	20% 16V
C40	1-117-681-11	ELECT CHIP 100uF	20% 16V
C41	1-117-681-11	ELECT CHIP 100uF	20% 16V
C42	1-117-681-11	ELECT CHIP 100uF	20% 16V
C43	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C44	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C45	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C46	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C47	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C48	1-125-837-91	CERAMIC CHIP 1uF	10% 6.3V
C49	1-126-209-11	ELECT CHIP 100uF	20% 4V

Ref. No.	Part No.	Description	Remark
C50	1-126-209-11	ELECT CHIP 100uF	20% 4V
C51	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C52	1-126-916-11	ELECT 1000uF	20% 6.3V
C53	1-126-767-11	ELECT 1000uF	20% 16V
C54	1-126-193-11	ELECT 1uF	20% 50V
C55	1-126-193-11	ELECT 1uF	20% 50V
C105	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C106	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C107	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C108	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
< DIODE >			
D1	8-719-800-76	DIODE 1SS226	
D3	6-500-479-01	DIODE LTO323-41-URF4 (①)	
D4	8-719-978-33	DIODE DTZ-TT11-6.8B	
< IC >			
IC1	8-759-467-94	IC LM358D	
IC2	8-759-524-84	IC TEA2025D-013TR	
IC3	8-759-524-84	IC TEA2025D-013TR	
< JACK >			
JK1	1-566-822-51	JACK (INPUT 2)	
JK2	1-566-822-51	JACK (R OUT)	
JK3	1-815-629-11	JACK (⊕)	
JK4	1-569-966-21	JACK,DC(POLARITY UNIFIED TYPE) (DC IN 9V)	
< TRANSISTOR >			
Q1	8-729-027-60	TRANSISTOR DTC144TKA-T146	
Q2	8-729-027-60	TRANSISTOR DTC144TKA-T146	
< RESISTOR >			
R1	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R2	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R3	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R4	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R5	1-216-826-11	METAL CHIP 2.7K	5% 1/10W
R7	1-216-826-11	METAL CHIP 2.7K	5% 1/10W
R9	1-216-848-11	METAL CHIP 180K	5% 1/10W
R10	1-216-848-11	METAL CHIP 180K	5% 1/10W
R11	1-216-834-11	METAL CHIP 12K	5% 1/10W

Ref. No.	Part No.	Description			Remark
R12	1-216-834-11	METAL CHIP	12K	5%	1/10W
R14	1-218-667-11	METAL CHIP	91	5%	1/10W
R15	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R16	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R17	1-216-813-11	METAL CHIP	220	5%	1/10W
R18	1-216-833-11	METAL CHIP	10K	5%	1/10W
R19	1-216-813-11	METAL CHIP	220	5%	1/10W
R20	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R21	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R22	1-216-833-11	METAL CHIP	10K	5%	1/10W
R23	1-218-667-11	METAL CHIP	91	5%	1/10W
R24	1-218-667-11	METAL CHIP	91	5%	1/10W
R25	1-216-821-11	METAL CHIP	1K	5%	1/10W
R26	1-216-821-11	METAL CHIP	1K	5%	1/10W
R27	1-216-817-11	METAL CHIP	470	5%	1/10W
R28	1-216-817-11	METAL CHIP	470	5%	1/10W
R29	1-218-667-11	METAL CHIP	91	5%	1/10W
R30	1-218-667-11	METAL CHIP	91	5%	1/10W
R31	1-216-812-11	METAL CHIP	180	5%	1/10W
R32	1-216-833-11	METAL CHIP	10K	5%	1/10W
R33	1-216-833-11	METAL CHIP	10K	5%	1/10W
R34	1-216-821-11	METAL CHIP	1K	5%	1/10W
R35	1-216-848-11	METAL CHIP	180K	5%	1/10W
R38	1-216-817-11	METAL CHIP	470	5%	1/10W
R39	1-216-817-11	METAL CHIP	470	5%	1/10W
R40	1-218-667-11	METAL CHIP	91	5%	1/10W
< VARIABLE RESISTOR >					
RV1	1-227-368-11	RES, VAR, CARBON 5K/5K (VOLUME)			
< SWITCH >					
S1	1-786-445-11	SWITCH, PUSH (Ⓛ)			
*****					
MISCELLANEOUS *****					
11	1-824-827-11	CORD (WITH PLUG)			
12	1-824-828-11	CORD (WITH PLUG)			
SP1	1-825-195-11	SPEAKER (039F009)			
SP2	1-825-195-11	SPEAKER (039F009)			
*****					
ACCESSORIES *****					
△	1-418-576-11	ADAPTOR, AC (AC-S911T) (C&SA,CND,US)			
△	1-467-852-12	ADAPTOR, AC (AUS)			
△	1-476-220-12	ADAPTOR, AC (JEW)			
△	1-476-379-11	ADAPTOR, AC (AEP,SP)			
△	1-476-380-11	ADAPTOR, AC (UK)			
△	1-478-197-11	ADAPTOR, AC (AC-S911T) (KR)			
△	1-569-007-12	ADAPTOR, CONVERSION (JEW)			
	3-246-342-02	MANUAL, INSTRUCTION (JAPANESE) (JEW)			
	3-246-342-12	MANUAL, INSTRUCTION (ENGLISH,FRENCH,GERMAN,SPANISH) (AUS,C&SA,CND,SP,UK,US)			
	3-246-342-22	MANUAL, INSTRUCTION (ENGLISH,FRENCH,GERMAN,SPANISH,DUTCH, SWEDISH,ITALIAN,PORTUGUESE, FINNISH,KOREAN) (AEP,JEW,KR)			

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.

