

SA-C5B

SERVICE MANUAL

Ver 1.2 2002. 01



*AEP Model
UK Model
E Model
Australian Model
Chinese Model*

- SA-C5B is the speaker system in CMT-C5.

SPECIFICATIONS

Speaker system	Two-way, bass reflex system
Speaker units	9 cm dia., cone type woofer 2.5 cm dia., balance drive tweeter
Rated impedance	6 ohms
Dimensions (w/h/d)	Approx. 149 × 248 × 220 mm
Mass	Approx. 1.9 kg net per speaker

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.

与安全有关的零部件须知

在原理图上用阴影及 \triangle 标记来识别的零部件在安全操作上是具有关键性的。这些零部件要用本手册中所示的部件号对应的索尼零部件进行更换。

在安全操作上具有关键性的电路调整与索尼公司出版的维修手册完全一致。在更换关键零部件时或怀疑动作失常时，请进行这些调整操作。

SPEAKER SYSTEM

9-873-219-03
2002A1600-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

[When bringing in the equipment for service]

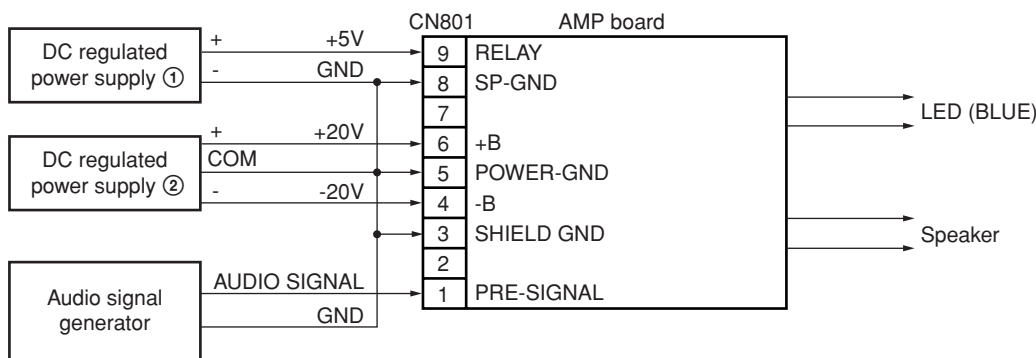
The notice is shown on both Warranty Card and Repair Service column of operation manual, telling to bringing in both of the equipment (HCD-C5) and speaker system (SA-C5B) together to service station when service (repair) is needed.

[How to check speaker only]

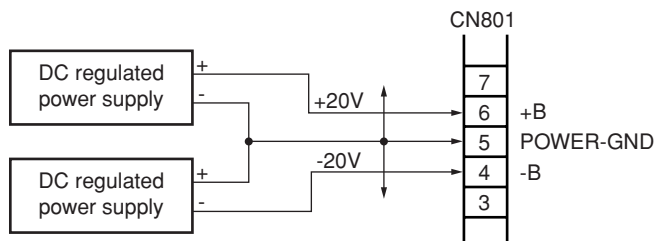
When only speaker is brought in for service, check its operations by supplying both the power and the signal to the AMP board of the speaker as shown below.

Check method :

1. Perform connection as shown below.



- DC regulated power supply ① (+5 V)
It functions to turn on the speaker relay driver.
- DC regulated power supply ② (±20 V)
It is desirable to use the DC regulated power supply of the dual tracking type that can supply its output voltages in two polarities of positive and negative polarities. However, the two units of the DC regulated power supply that supplies only a single output voltage can also be used. (See the figure below.)



- Audio signal generator
Output frequency : 1 kHz
Output voltage : 100mV p-p or less
Output impedance : 600 Ω

2. Turn on the main power of the DC regulated power supply ②.
Then turn on the main power of the DC regulated power supply ① (+ 5 V).
After that, input the output signal of the audio signal generator as shown.
3. Check that the LED (D831, D832 (BLUE)) turns on and the audio signal can be heard from the speaker.

Notes :

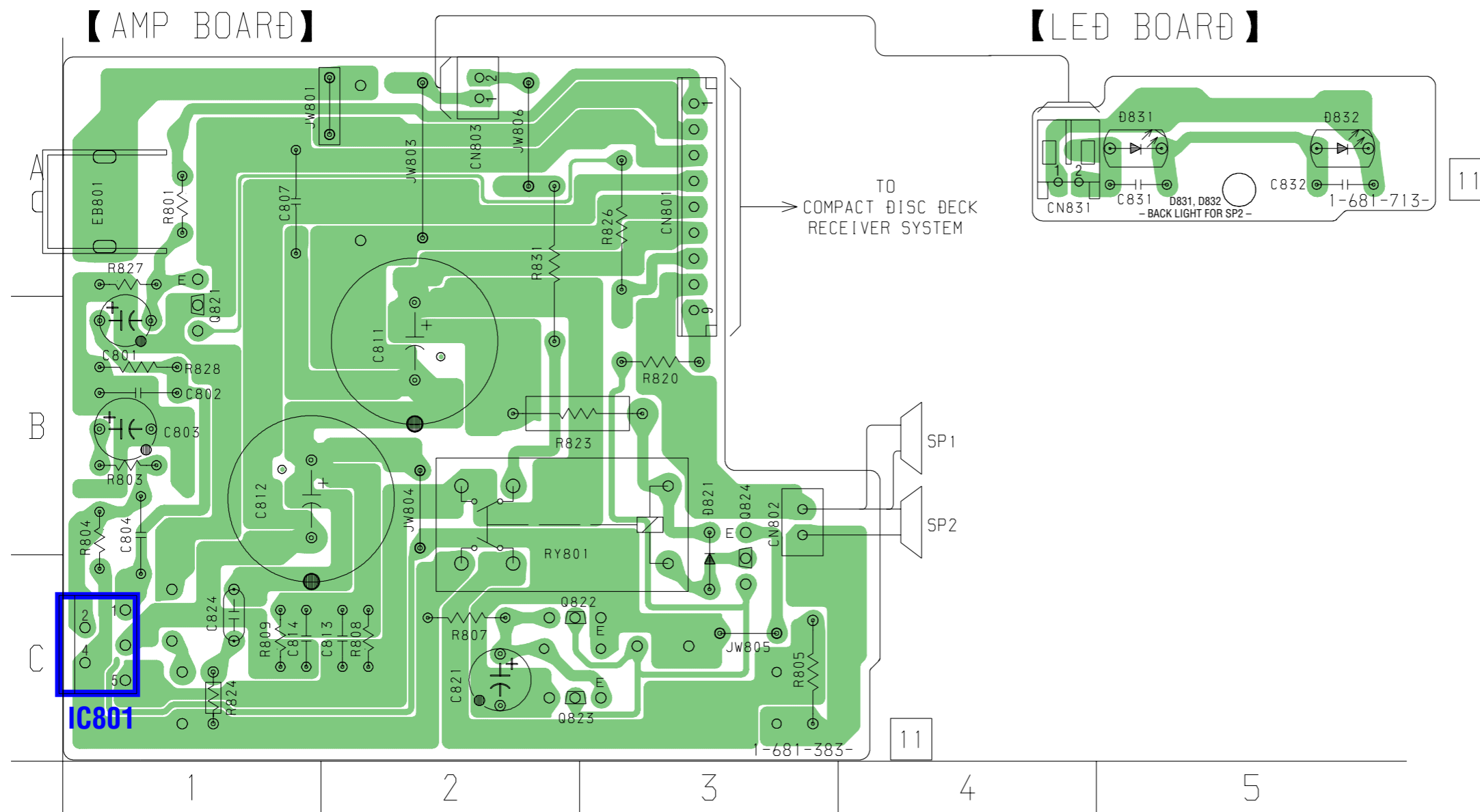
- ① For the speaker cord, disconnect it from the speaker or leave it open.
- ② Be careful not to apply an excessive input audio signal to the speaker.
- ③ If the power voltage is less than +/- 14 V, the speaker relay will not be activated.

[Caution when removing the front panel]

The special screwdriver (Sony part code No. 7-640-005-55) of star type (six star type) is required to remove the front panel.

SECTION 1
DIAGRAMS

1-1. PRINTED WIRING BOARD



• Semiconductor Location (AMP BOARD)

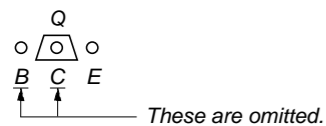
Ref. No.	Location
D821	B-3
IC801	C-1
Q821	B-1
Q822	C-2
Q823	C-2
Q824	C-3

• Semiconductor Location (LED BOARD)

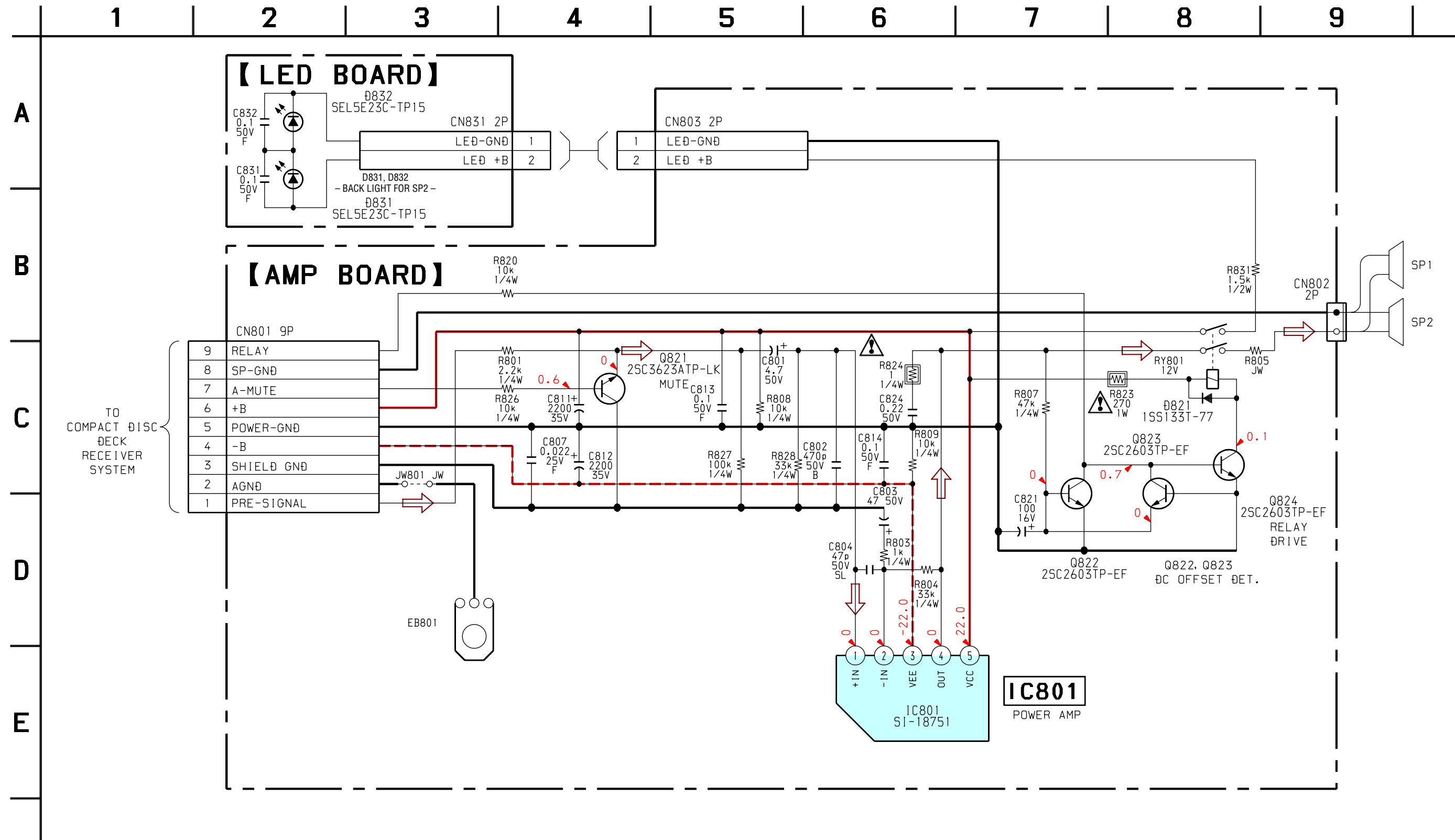
Ref. No.	Location
D831	A-5
D832	A-5

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
- Indication of transistor



1-2. SCHEMATIC DIAGRAM



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. p: pF. 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.

- : nonflammable resistor.
- : panel designation.

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

以阴影和▲标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

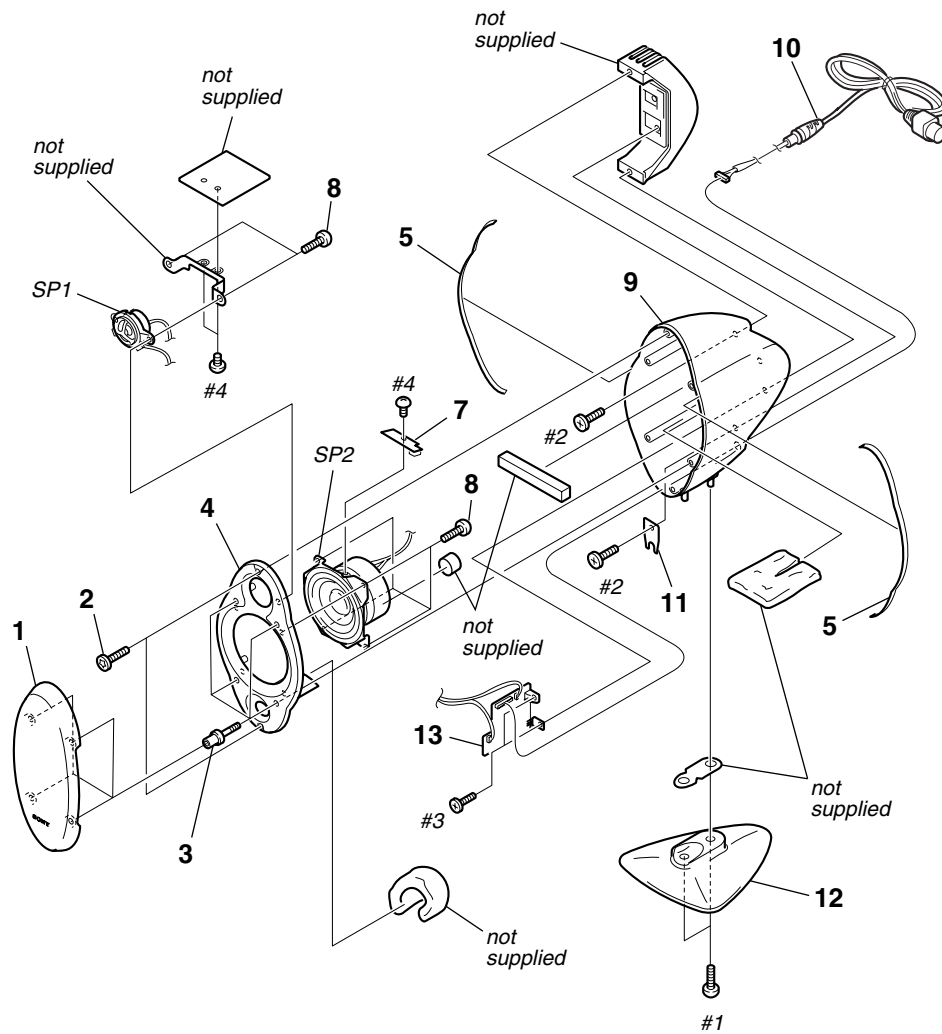
- : B+ Line.
- : B- Line.

- Voltages and dc with respect to ground under no-signal conditions.
no mark : AUDIO
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

SECTION 2 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences 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.



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	X-4953-847-1	FRAME ASSY, GRILLE		11	4-235-539-01	PLATE	
2	4-234-735-01	SCREW, ORNAMENT		12	4-234-726-01	BASE (STAND)	
3	4-234-729-01	SCREW (P), ORNAMENT		13	A-4476-915-A	AMP BOARD, COMPLETE	
4	4-234-725-01	PANEL, FRONT		SP1	1-544-854-11	SPEAKER (2.5cm)	
5	4-234-730-01	PACKING (A)		SP2	1-544-853-11	SPEAKER (9cm)	
7	1-681-713-11	LED BOARD		#1	7-685-662-79	SCREW +BVTP 4X14 TYPE2 N-S	
8	4-874-614-71	SCREW		#2	7-682-563-04	SCREW +B 4X12	
9	4-234-724-01	CABINET, SPEAKER		#3	7-682-548-04	SCREW +B 3X8	
10	1-757-788-11	CORD, CONNECTION		#4	7-685-871-01	SCREW +BVTT 3X6 (S)	

SECTION 3 ELECTRICAL PARTS LIST

AMP **LED**

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.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μF
- COILS
uH: μH
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- SEMICONDUCTORS
In each case, u: μ, for example:
uA...: μA... , uPA... , μPA... ,
uPB... , μPB... , uPC... , μPC... ,
uPD... , μPD...

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

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

以阴影和△标志来识别的零部件在安全方面具有关键性。因此只能以规定号码的零部件来更换。

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	A-4476-915-A	AMP BOARD, COMPLETE *****		R827	1-249-441-11	CARBON 100K 5%	1/4W
		< CAPACITOR >		R828	1-249-435-11	CARBON 33K 5%	1/4W
C801	1-126-963-11	ELECT 4.7uF 20%	50V	R831	1-260-330-11	CARBON 1.5K 5%	1/2W
C802	1-162-290-31	CERAMIC 470PF 10%	50V			< RELAY >	
C803	1-126-967-11	ELECT 47uF 20%	50V	RY801	1-755-170-11	RELAY (12V)	
C804	1-162-215-31	CERAMIC 47PF 5%	50V	*****			
C807	1-161-494-00	CERAMIC 0.022uF	25V		1-681-713-11	LED BOARD *****	
C811	1-126-953-11	ELECT 2200uF 20%	35V			< CAPACITOR >	
C812	1-126-953-11	ELECT 2200uF 20%	35V	C831	1-164-159-11	CERAMIC 0.1uF	50V
C813	1-164-159-11	CERAMIC 0.1uF	50V	C832	1-164-159-11	CERAMIC 0.1uF	50V
C814	1-164-159-11	CERAMIC 0.1uF	50V			< CONNECTOR >	
C821	1-126-382-11	ELECT 100uF 20%	16V	CN831	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
C824	1-136-169-00	FILM 0.22uF 5%	50V			< DIODE >	
		< CONNECTOR >		D831	8-719-072-76	DIODE SEL5E23C-TP15 (BACK LIGHT)	
* CN801	1-564-512-11	PLUG, CONNECTOR 9P		D832	8-719-072-76	DIODE SEL5E23C-TP15 (BACK LIGHT)	
		< DIODE >		*****			
D821	8-719-991-33	DIODE 1SS133T-77				MISCELLANEOUS *****	
		< IC >		10	1-757-788-11	CORD, CONNECTION	
IC801	8-759-502-31	IC SI-18751		SP1	1-544-854-11	SPEAKER (2.5cm)	
		< TRANSISTOR >		SP2	1-544-853-11	SPEAKER (9cm)	
Q821	8-729-141-30	TRANSISTOR 2SC3623ATP-LK					
Q822	8-729-620-05	TRANSISTOR 2SC2603TP-EF					
Q823	8-729-620-05	TRANSISTOR 2SC2603TP-EF					
Q824	8-729-620-05	TRANSISTOR 2SC2603TP-EF					
		< RESISTOR >					
R801	1-249-421-11	CARBON 2.2K 5%	1/4W				
R803	1-249-417-11	CARBON 1K 5%	1/4W				
R804	1-249-435-11	CARBON 33K 5%	1/4W				
R807	1-249-437-11	CARBON 47K 5%	1/4W				
R808	1-249-429-11	CARBON 10K 5%	1/4W				
R809	1-249-429-11	CARBON 10K 5%	1/4W				
R820	1-249-429-11	CARBON 10K 5%	1/4W				
△R823	1-216-429-00	METAL OXIDE 270 5%	1W				
△R824	1-249-381-11	CARBON 1 5%	1/4W				F
R826	1-249-429-11	CARBON 10K 5%	1/4W				

MEMO

