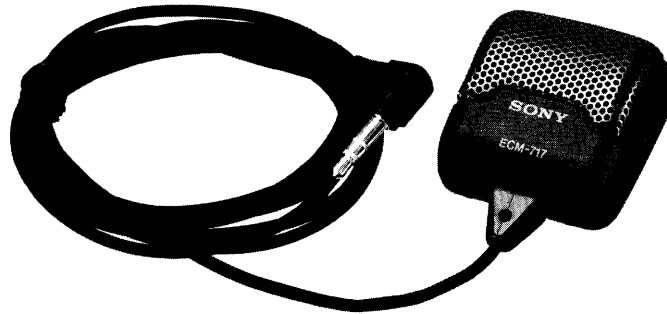


ECM-717

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
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Tourint Model*



SPECIFICATIONS

Type

Electret condenser microphone

Microphone cord

OFC (Oxygen Free Copper)
shielded cord

Diameter:

Approx. 2.2 mm ($\frac{3}{32}$ in.)

Length:

Approx. 1.5 m ($59\frac{1}{8}$ in.)

L-shaped stereo miniplug

Power source

Sony LR44 alkaline manganese
dioxide battery (1) (not supplied)
Plug in power type

Dimensions

Approx. 36 × 40 × 33 mm
(w/h/d) ($1\frac{7}{16} \times 1\frac{5}{8} \times 1\frac{5}{16}$ in.)

Mass (including battery)

Approx. 40 g (1.41 oz.)

Frequency response

100 - 15,000 Hz

Directivity

Unidirectional (stereo)

Output impedance

1.5 kilohm $\pm 30\%$

Sensitivity

- Open-circuit voltage level:
-47 \pm 4dB

L,R channel sensitivity

difference within 3dB

0dB=1 V/Pa, 1,000 Hz

(Measured by Sony standard
circuit)

(1Pa=10 μ bar =94 dB_{SPL})

- Effective Output level:

-54.8 \pm 4dBm

(0dBm=1 mW/Pa, 1,000 Hz)

**Maximum sound pressure
input level (at 1,000 Hz 1%
distortion)**

More than 110 dB_{SPL}

(0 dB_{SPL} = 2 × 10⁻⁵ Pa)

Dynamic range

More than 80 dB

Operating temperature

0°C - 40°C (32°F - 104°F)

Design and specifications are
subject to change without notice.

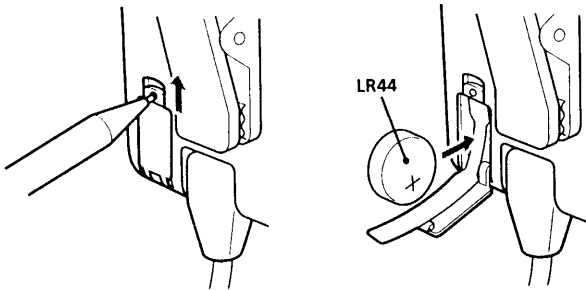


ELECTRET CONDENSER MICROPHONE
SONY®

SECTION 1 GENERAL

This section is extracted from instruction manual.

A



Installing the battery (see Fig. A)

- 1 Open the battery compartment lid using the tip of a mechanical pencil, etc., as illustrated.
- 2 Insert one LR44 alkaline manganese dioxide battery (not supplied) with correct polarity.
- 3 Close the battery compartment lid firmly.

Battery life

Approximately 100 hours with an alkaline manganese dioxide battery (LR44)

The red lamp lights up dimly or goes out when the battery is weak. If this happens, replace the battery with a new one. To avoid unnecessary battery wear and battery leakage, be sure to set the POWER switch to the OFF position after use.

Using the microphone (see Fig. B)

- 1 Plug the microphone into the microphone jack of your tape recorder, etc.
- 2 Set the POWER switch to "ON." The red lamp on the microphone will flash.
 - When using with a Sony tape recorder whose microphone jack is marked PLUG IN POWER. In this case, make sure that the POWER switch on the microphone is set to the OFF position.
 - If it is difficult to slide the POWER switch, try to slide it with your finger nail.

Using the clip (See Fig. C)

To place the microphone on top of a desk, etc.

Bend the joint section of the microphone (where the connecting cord exits) and use this part as a stand.

To clip the microphone on to your tie or breast pocket, etc.

Use the clip on the back of the microphone to attach the microphone to your tie or pocket, etc.

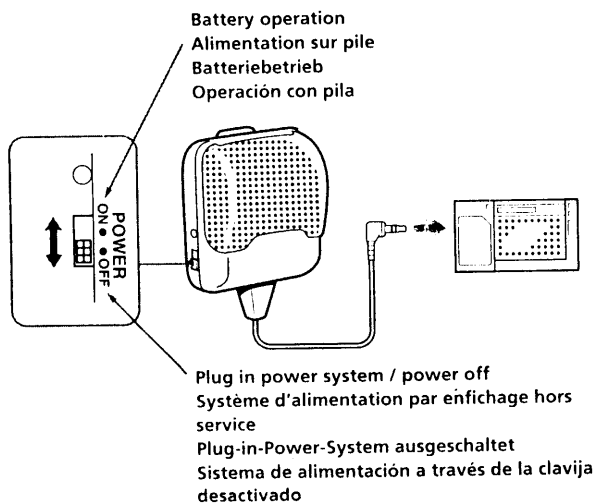
Precautions

- If the microphone is placed too near the loud-speakers, acoustic feedback (a howling effect) may occur. If this happens, change the direction of the microphone until the howling stops, or decrease the speaker volume.
- Do not leave the microphone in a location subject to direct sunlight, heat or moisture.
- The microphone should never be dropped or subjected to extreme shock.
- When using outdoors, avoid getting the microphone wet.

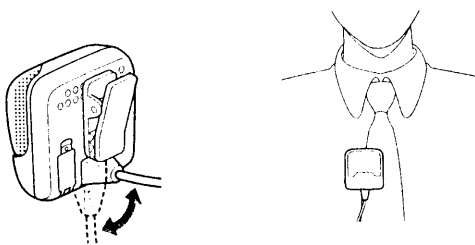
Notes on the battery

- Keep the battery out of the reach of children.
- Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.

B



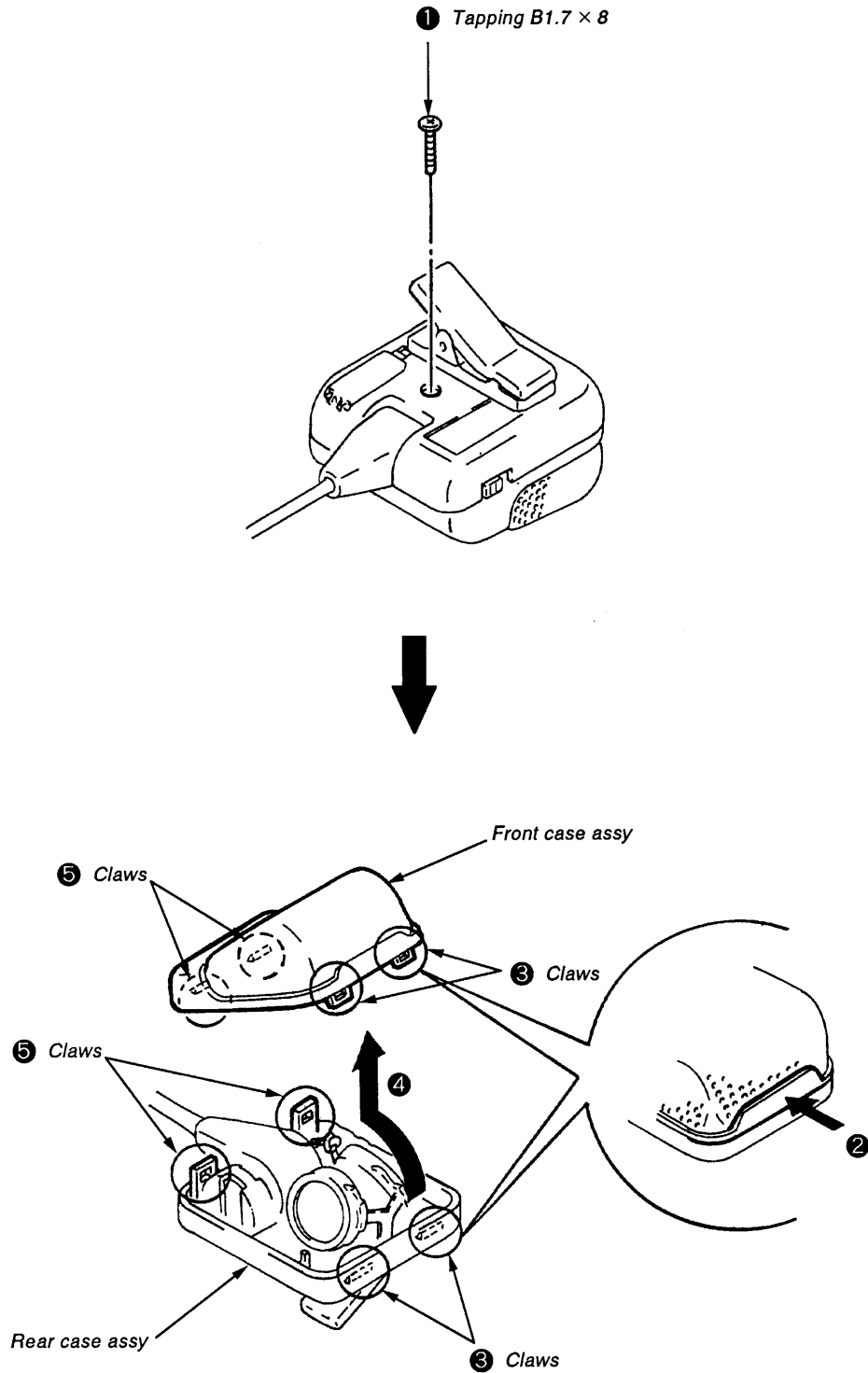
C



SECTION 2 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

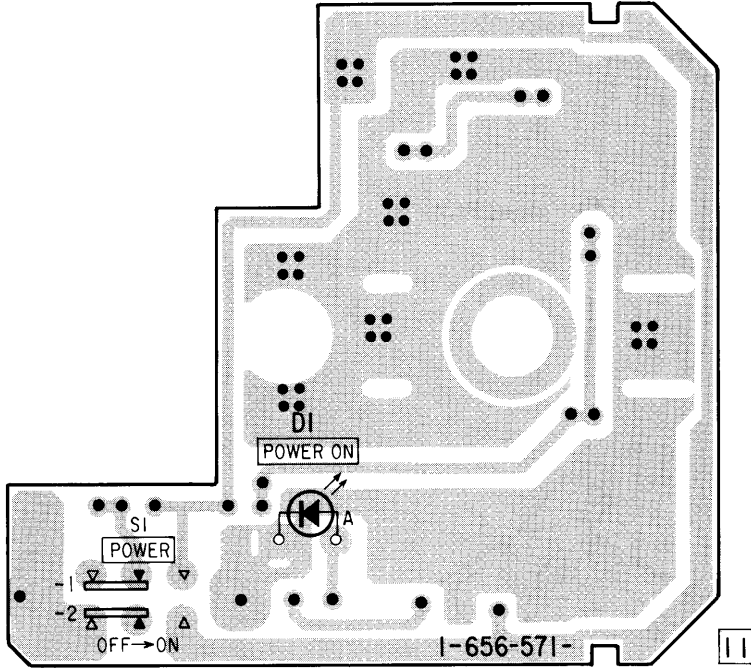
FRONT CASE ASSY/REAR CASE ASSY



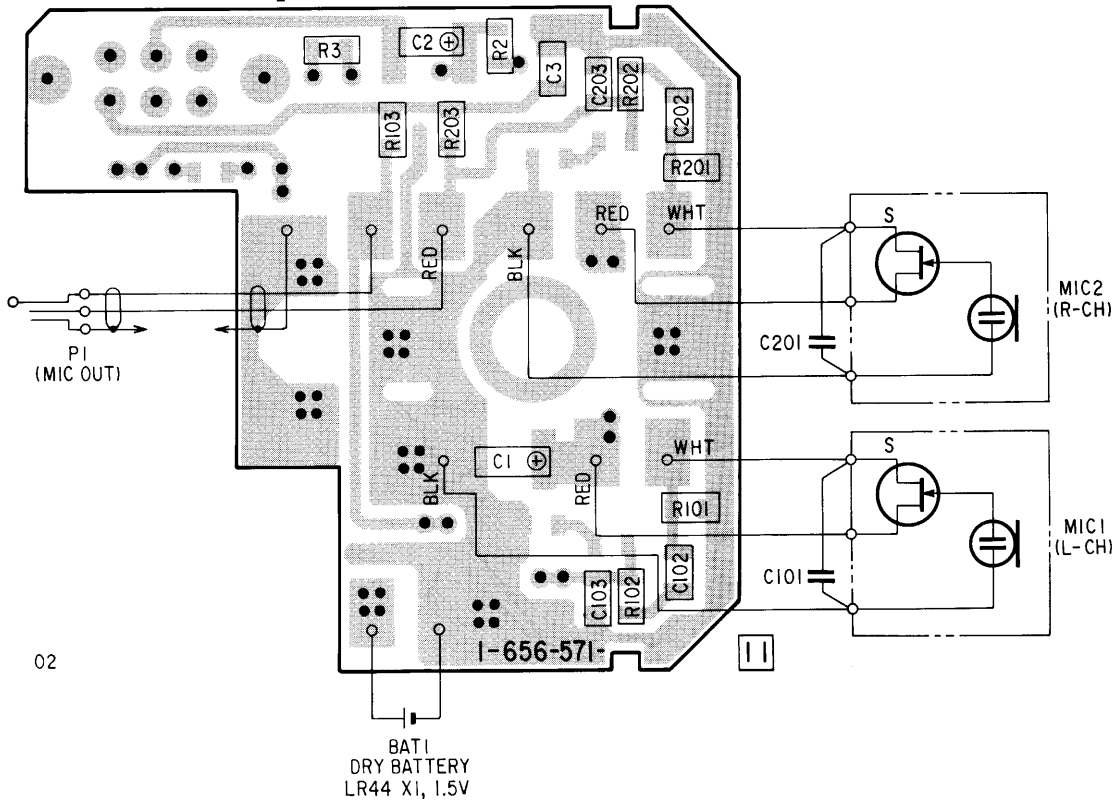
SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARDS

[AMPLIFIER BOARD](CONDUCTOR SIDE)



[AMPLIFIER BOARD](COMPONENT SIDE)



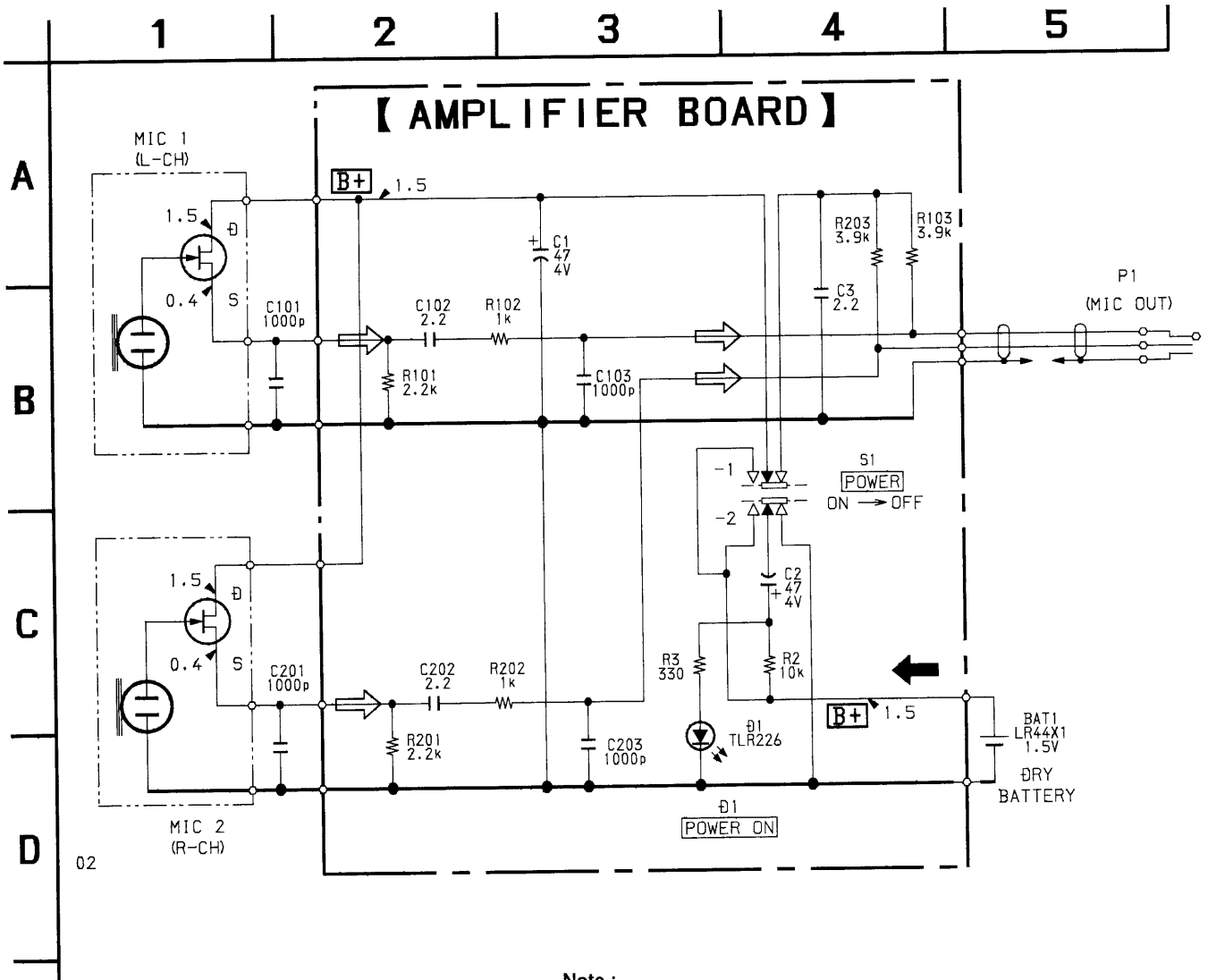
Note:

- — : 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 pattern face are indicated.
 Parts face side : Parts on the parts face side seen from the parts face are indicated.

3-2. SCHEMATIC DIAGRAM



Note :

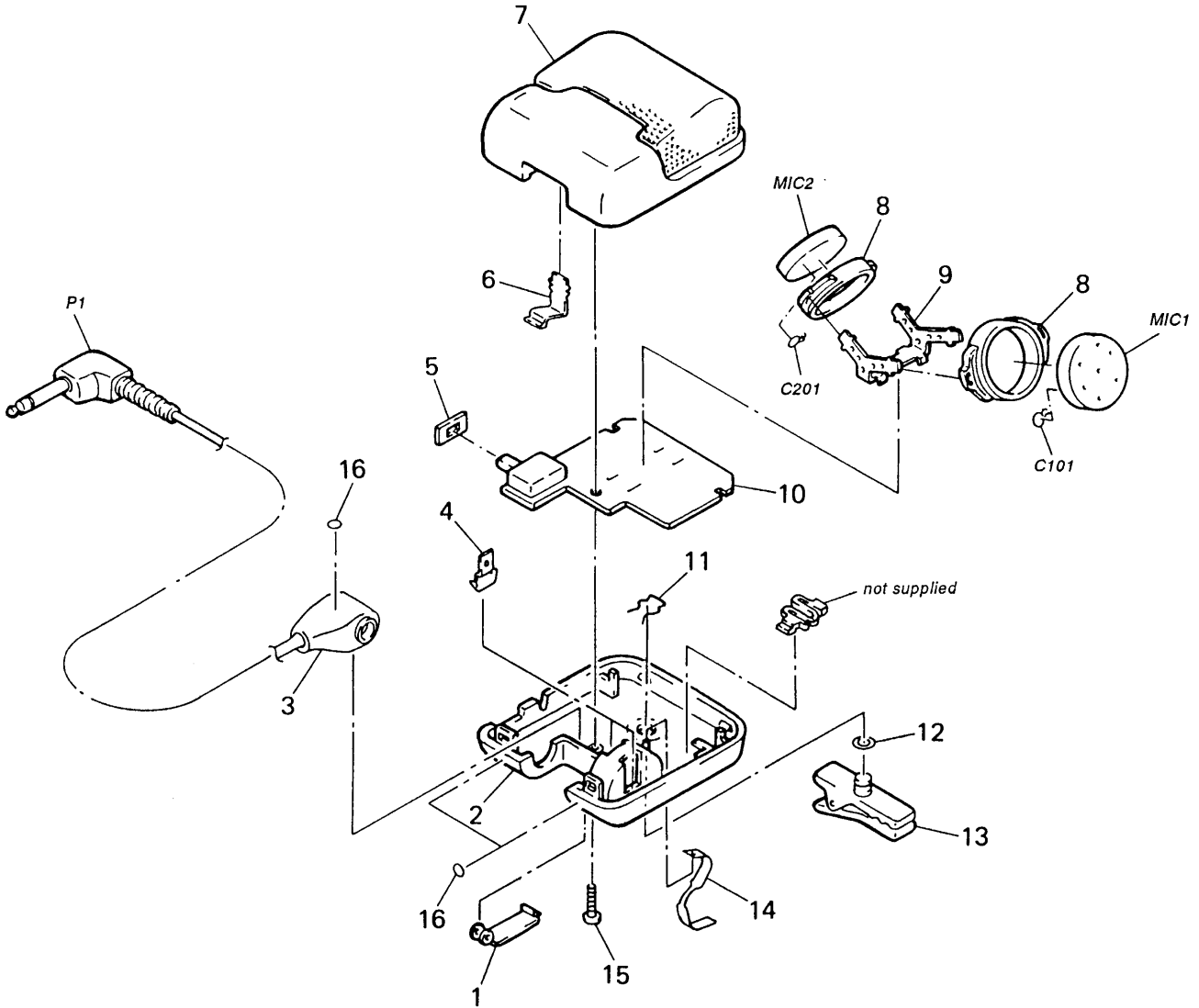
- All capacitors are in μ F unless otherwise noted. pF: μ μ F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- **B+** : B+ Line
- Power voltage is dc1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
⇒

SECTION 4 EXPLODED VIEW

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- 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	Remark	Ref.No.	Part No.	Description	Remark
1	2-544-572-01	LID, BATTERY CASE		12	2-544-608-01	CUSHION (A)	
2	X-2542-128-1	CASE ASSY, REAR		13	X-2542-129-1	CLIP ASSY	
3	2-544-568-01	BUSHING, STAND		14	2-544-578-01	SHEET, BATTERY	
4	2-544-569-01	TERMINAL, BATTERY		15	3-318-203-31	SCREW (B1.7×8), TAPPING	
5	2-544-587-01	SHEET, BLIND		16	2-544-571-01	FOOT, RUBBER	
6	2-544-567-01	SPRING, STAND		C101	1-164-085-11	CERAMIC 0.001MF 10% 50V	
7	X-2542-127-1	CASE ASSY, FRONT		C201	1-164-085-11	CERAMIC 0.001MF 10% 50V	
8	2-542-250-01	SUSPENDER		MIC1	8-814-171-20	CAPSULE, CONDENSER MICROPHONE	
* 9	2-544-576-01	HOLDER, MICROPHONE		MIC2	8-814-171-20	CAPSULE, CONDENSER MICROPHONE	
* 10	A-4542-282-A	AMPLIFIER BOARD, COMPLETE		P1	1-696-840-11	CORD, MICROPHONE (2 CORE) (MIC OUT)	
11	2-544-577-01	SPRING, LOCK					

SECTION 5 ELECTRICAL PARTS LIST

AMPLIFIER

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 : 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

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

Ref. No.	Part No.	Description	Remark		
*	A-4542-282-A	AMPLIFIER BOARD, COMPLETE *****			
		< CAPACITOR >			
C1	1-104-908-11	TANTAL. CHIP 47MF	20%		4V
C2	1-104-908-11	TANTAL. CHIP 47MF	20%		4V
C3	1-164-505-11	CERAMIC CHIP 2.2MF			16V
C102	1-164-505-11	CERAMIC CHIP 2.2MF			16V
C103	1-162-964-11	CERAMIC CHIP 0.001uF	10%		50V
C202	1-164-505-11	CERAMIC CHIP 2.2MF			16V
C203	1-162-964-11	CERAMIC CHIP 0.001uF	10%		50V
		< DIODE >			
D1	8-719-812-26	LED TLR226 (POWER ON)			
		< RESISTOR >			
R2	1-216-833-11	METAL CHIP 10K 5%			1/16W
R3	1-216-815-11	METAL CHIP 330 5%			1/16W
R101	1-216-825-11	METAL CHIP 2.2K 5%			1/16W
R102	1-216-821-11	METAL CHIP 1K 5%			1/16W
R103	1-216-828-11	METAL CHIP 3.9K 5%			1/16W
R201	1-216-825-11	METAL CHIP 2.2K 5%			1/16W
R202	1-216-821-11	METAL CHIP 1K 5%			1/16W
R203	1-216-828-11	METAL CHIP 3.9K 5%			1/16W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S1	1-554-671-21	SWITCH, SLIDE (POWER)	

		MISCELLANEOUS *****	
MIC1	8-814-171-20	CAPSULE, CONDENSER MICROPHONE	
MIC2	8-814-171-20	CAPSULE, CONDENSER MICROPHONE	
C101	1-164-085-11	CERAMIC 0.001MF 10% 50V	
C201	1-164-085-11	CERAMIC 0.001MF 10% 50V	
P1	1-696-840-11	CORD, MICROPHONE (2 CORE) (MIC OUT)	

		ACCESSORIES & PACKING MATERIALS *****	
	3-798-974-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE)	

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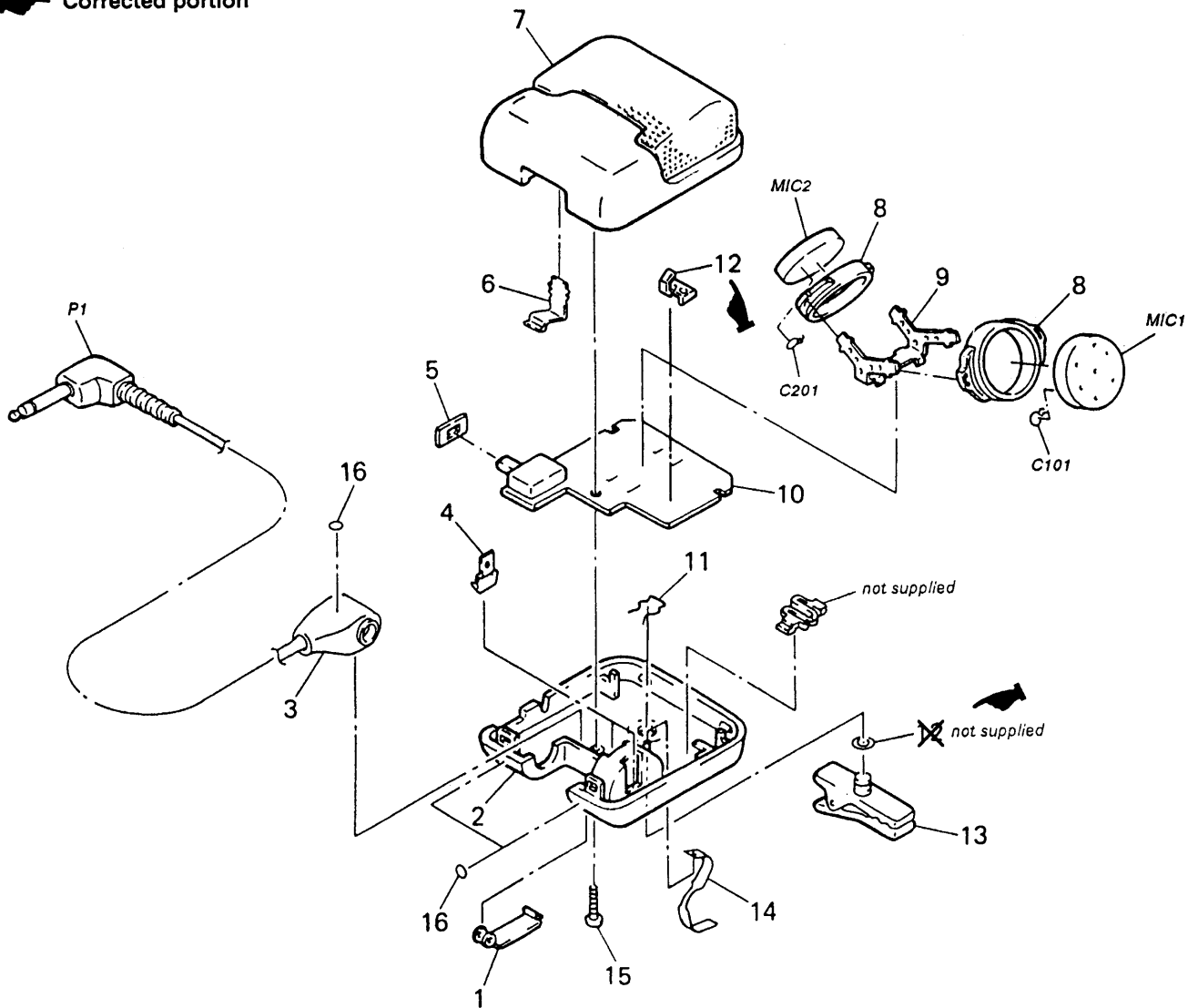
CORRECTION-1

File this Correction with the Service Manual.

Page	INCORRECT			CORRECT	
	Ref. No.	Part No.	Description	Part No.	Description
6	12	2-544-608-01	CUSHION (A)	2-544-650-01	TERMINAL, PLUS

(ECN-MC500024)

 Corrected portion



Sony Corporation
Consumer A&V Products Company
Personal A&V Products Div.

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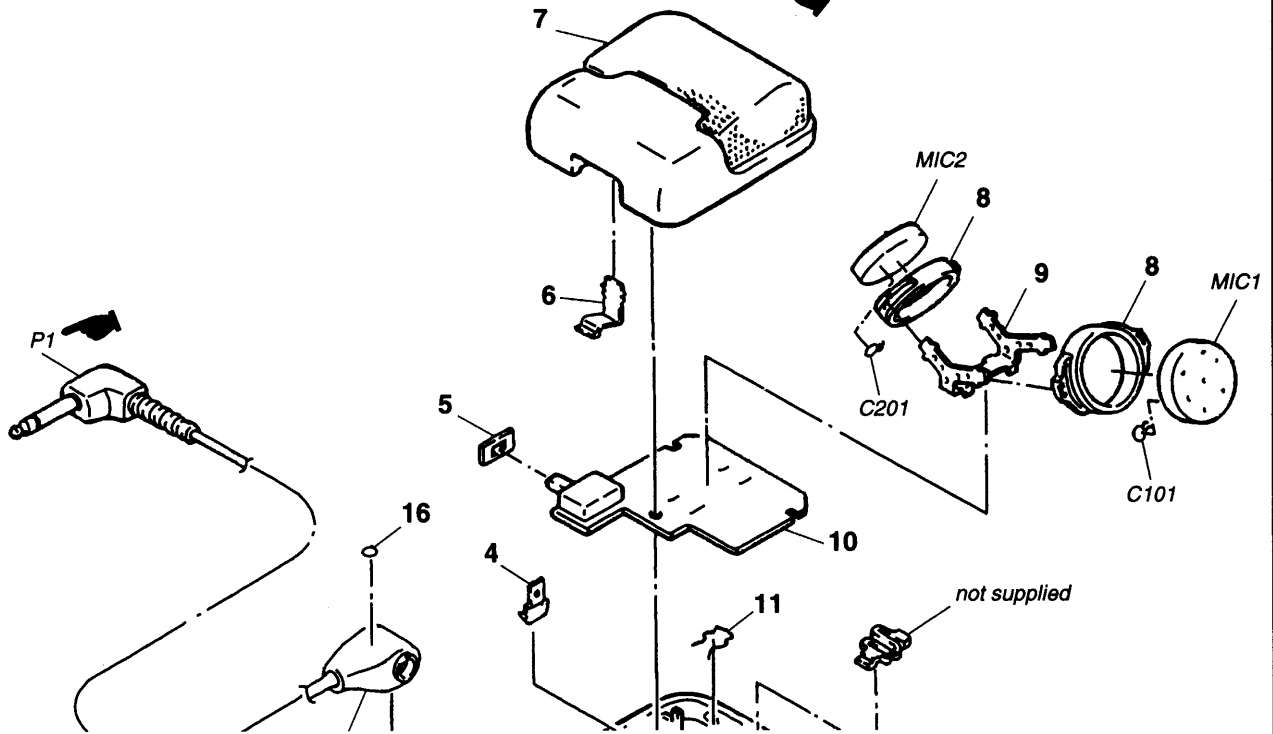
US Model
Canadian Model
AEP Model
UK Model
E Model
Tourist Model

CORRECTION - 2

Correct your Service Manual as shown below.

 : indicates corrected portion

Page	INCORRECT			CORRECT	
	Ref. No.	Part No.	Description	Part No.	Description
6	P1	1-696-840-11	CORD, MICROPHONE (2 CORE) (MIC OUT)	1-696-840-21	CORD, MICROPHONE (2 CORE) (MIC OUT)
7	P1	1-696-840-11	CORD, MICROPHONE (2 CORE) (MIC OUT)	1-696-840-21	CORD, MICROPHONE (2 CORE) (MIC OUT)



(SPM-97013)

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SERVICE MANUAL

Ver 1.0 1999.07

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CORRECTION - 3

Correct your Service Manual as shown below.

Page	Incorrect				Correct		
	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
6	8	2-542-250-01	SUSPENDER		2-545-447-01	HOLDER, CAPSULE	
6, 7	MIC1	8-814-171-20	CAPSULE, CONDENSER MICROPHONE		8-814-289-90	CAPSULE, MICROPHONE (CU14-03)	
	MIC2	8-814-171-20	CAPSULE, CONDENSER MICROPHONE		8-814-289-90	CAPSULE, MICROPHONE (CU14-03)	

(SPM-99027)