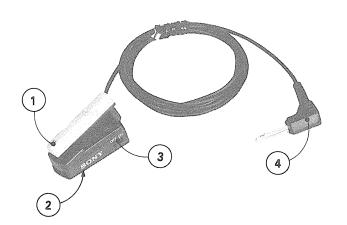
SERVICE MANUAL



US Model Canadian Model AEP Model UK Model E Model

PARTS IDENTIFICATION

- Microphone capsule housing
- Battery compartment
- Power switch
- L-shaped miniplug

SPECIFICATIONS

General

Battery

Type

electret condenser capsule)

Microphone cable

1.5 mm ($\frac{1}{16}$ inches) dia. × 1 m (3.3 feet) long Alkaline manganese dioxide battery IEC

Designation LR44 (Eveready A76 type) or

equivalent

Dimensions (exclu. plug)

Microphone capsule housing $7 \times 7.5 \times 33$ mm (w/h/d) $(\frac{9}{32} \times \frac{5}{16} \times 1\frac{5}{16} \text{ inches})$ Battery compartment

 $14.5 \times 10.5 \times 32.5 \text{ mm (w/h/d)}$

 $(^{19}/_{32} \times ^{7}/_{16} \times 1^{5}/_{16} \text{ inches})$

Weight Finish

Approx. 15 g ($\frac{1}{2}$ oz)

Microphone capsule housing: Silver

Battery compartment: Matt black

Supplied accessory Sony Eveready Alkaline manganese dioxide

battery A76 (1)

Performance

Battery life

Frequency response 50-15,000 Hz Directivity Omni-directional

1.8 kilohms ±30 %, unbalanced Output impedance

Output level (deviation ±3 dB)

Open circuit voltage

 $-69.0 \text{ dB} (0.35 \text{ mV}) (0 \text{ dB} = 1 \text{ V/}\mu\text{bar},$

1,000 Hz)

Power requirements Normal operating voltage: 1.5 V

Minimum operating voltage:

Approx. 1.1 V

Current drain: Less than 0.2 mA Approx. 600 hours with Sony Eveready

Alkaline manganese dioxide battery A76.

Approx. 1,000 hours with Sony Eveready

Mercury battery EPX675.

Noise level Signal-to-noise ratio:

More than 40 dB (1,000 Hz, 1 μ bar)

Inherent noise:

Less than 34 dB SPL

Electret condenser microphone (with back- Maximum sound pressure input level (at 1,000 Hz, 1 % distortion)

More than 110 dB SPL $(0 \text{ dB SPL} = 2 \times 10^{-4} \, \mu \text{bar})$

Dynamic range More than 76 dB

Environment temperatures

-20°C to +60°C (4°F to +140°F) for

storage

0°C to +60°C (+32°F to +140°F) for

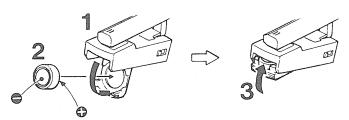
operation

BATTERY INSTALLATION

Install a button IEC designation LR44 (Eveready A76 type) battery (supplied) or equivalent.

- 1 Open the battery compartment lid.
- Insert the battery with correct polarity as shown in the illustration.
- Close the lid firmly.

The battery polarity is quite different from that of a conventional . battery. Its button side is the minus 🖨 pole, and the case side is the plus @ pole.







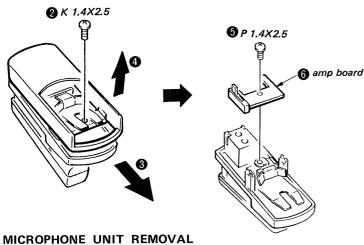


1. DISASSEMBLY

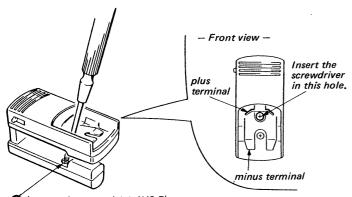
Note: Follow the disassembly procedure in the numerical order given.

AMP BOARD REMOVAL

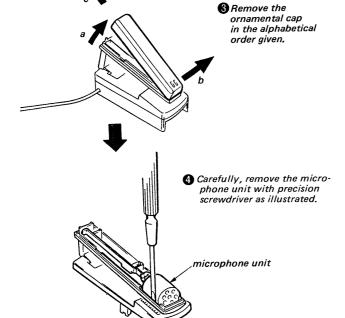
1 Open the battery lid.



1 Open the battery lid.

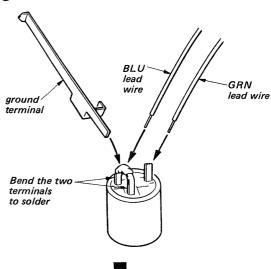


2 Loosen the screw (K 1.4X2.5).

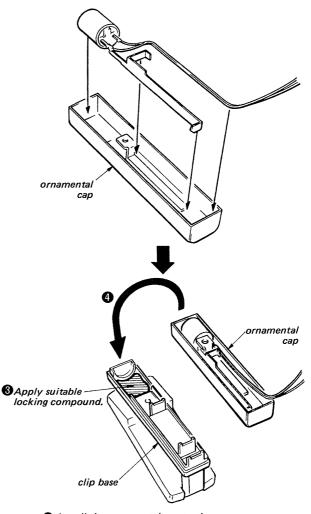


MICROPHONE UNIT INSTALLATION

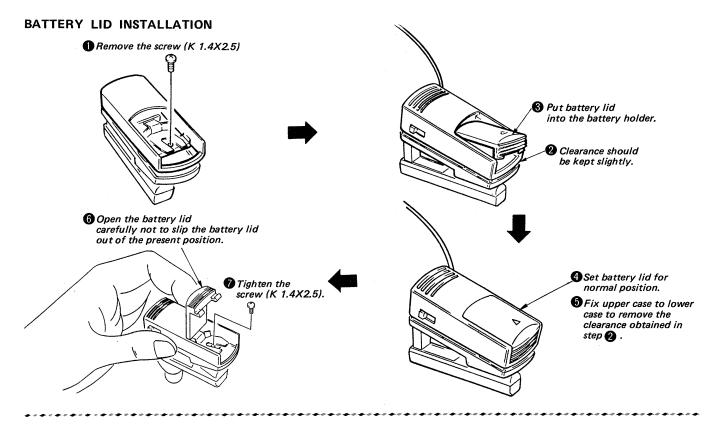
Solder the ground terminal and lead wires.



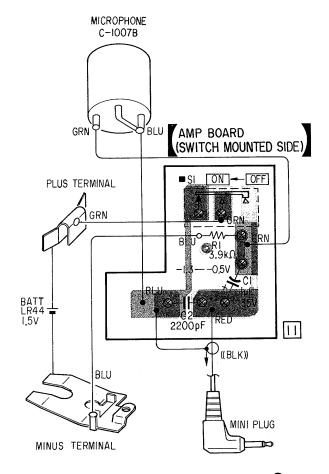
2 Set the microphone unit to the ornamental cap.



4 Install the ornamental cap to the clip base.



MOUNTING DIAGRAM



Switch

Ref. No.	Switch	Position		
S1	power	OFF		

- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).

Note: Voltage changes according to the rank of microphone unit.

- Voltage variations may be noted due to normal production tolerances.
- : parts extracted from the C, R mounted side.
- : part mounted on the switch mounted side.

3. EXPLODED VIEW AND PARTS LIST

NOTE:

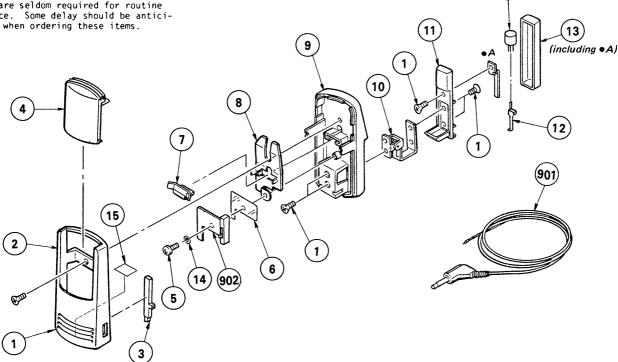
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be antici-pated when ordering these items.

CAPACITORS: MF:μF, PF:μμF.

RESISTORS

Remarks

· All resistors are in ohms. · F : nonflammable



GENERAL SECTION

No.	Part No.	<u>Description</u>
1	7-627-551-27	SCREW, PRECISION +K 1.4X2.5
2	2-537-816-01 2-537-812-01	COVER, BATTERY
3	2-537-812-01	KNOB, SWITCH
4	2-537-817-01	LID, BATTERY
5	7-627-451-18	SCRÉW, PRECISION +P 1.4X2.5
6	2-537-825-01	
7	2-537-810-01	TERMINAL BOARD, PLUS
8	2-537-811-01	TERMINAL BOARD, MINUS
9	2-537-815-01	HOLDER, BATTERY
10	X-2537-802-1	CLIP ASSY
11	2-537-814-01	BASE, CLIP
12	*2-537-813-01	TERMINAL, GROUND
13	X-2537-801-1	CAP ASSY, ORNAMENTAL
14	2-537-824-01	
15	2-537-823-01	CLOTH, BLIND

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901 902 903	1-558-031-11 *1-616-217-11 8-814-189-10	CORD, MIC (D PC BOARD, AM MICROPHONE,	PLIFIEŔ	,	
C1 C2	1-131-408-11 1-162-302-31	TANTALUM CERAMIC	1MF 2200PF	20% 30%	35V 16V
R1	1-247-845-00	CARBON 3	.9K 5	% 1/	′6W
S1	1-554-669-00	SWITCH, SLID	E		

(903)

ACCESSORY & PACKING MATERIAL

Part No.	Description			
2-533-669-01	LID, TRANSPARENT			
2-537-818-01	FRAME, INNER			
2-537-820-01	PLATE, ORNAMENTAL			
2-537-821-01	INDIVIDUAL CARTON			
2-599-264-11	MANUAL, INSTRUCTION			

ECM-011

SONY. SERVICE MANUAL

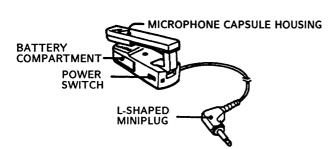
US Model Canadian Model AEP Model UK Model E Model

SUPPLEMENT-1

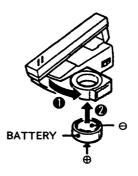
File this supplement with the service manual.

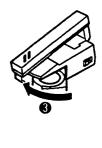
Subject: Revision of schematic diagram, printed wiring board and mechanical part.

PARTS IDENTIFICATION



BATTERY INSTALLATION

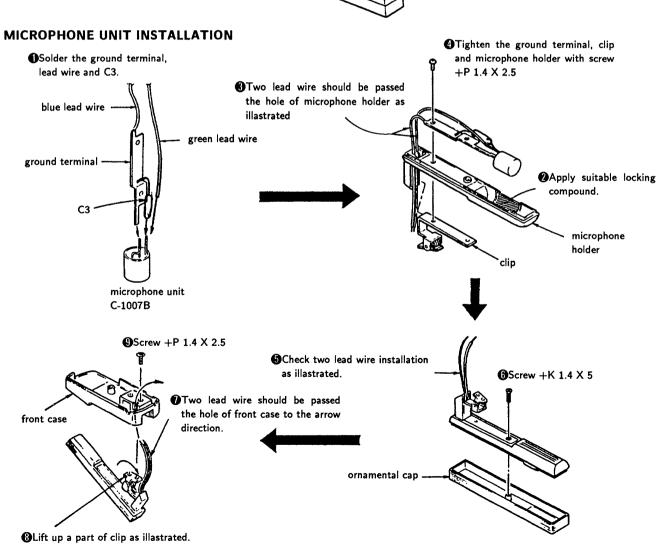




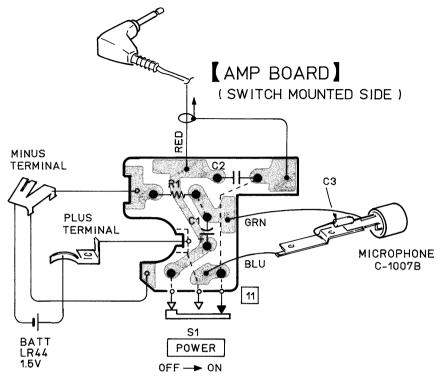
- Open the battery compartment lid.
- ② Insert the battery with correct palarity as shown in the illustration.
- 3 Close the lid firmly.

NOTE: Forrow the disassembly in the numerical order given.

Screw +K 1.4 X 5 Phack case Pamp board Pront case



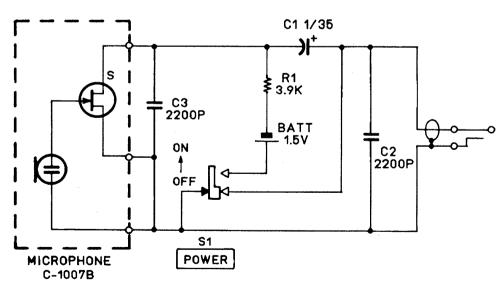
PRINTED WIRING BOARD



• Note:

- · o : parts extracted from the component side.
 - : Through hole.
- · Pattern on the side which is seen.

SCHEMATIC DIAGRAM

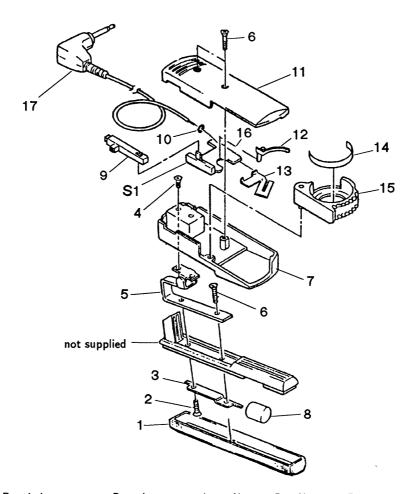


- Note:
- All capacitors are in μF unless otherwise noted. $pF: \mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

EXPLODED VIEWS

NOTE:

- ◆ 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.



Part No.	Description	Remarks	<u>No.</u>	Part No.	Description		cription Remark	
X-2537-801-1	CAP ASSY, ORNAMENTAL (SILVER)		16	* 1-619-254-11	PC BOARD,	AMP		
X-2537-803-1	CAP ASSY, ORNAMENTAL (BLACK)		17	1-558-713-11	CORD, MIC (DIA. 1.5)	(1 CORE	:)
7-627-551-27	SCREW, PRECIESION +P	1.4X2.5			`	,	•	•
* 2-537-813-03	TERMINAL, GROUND							
7-627-451-38	SCREW PRECISION +K 1.4	4 X 2	C1	1-131-347-00	TANTALUM	1uF	20%	35V
X-2537-805-1	CLIP, ASSY		C2	1-161-375-00	CERAMIC	2200PF	20%	50V
			C3	1-161-375-00	CERAMIC	2200PF	20%	50V
7-627-451-78	SCREW, PRECISION +K 1.	.4X5	R1	1-249-424-11	CARBON	3.9K	5%	1/4W
2-537-844-01	CASE, FRONT		S1	1-554-669-00	SWITH, SLID	E	. •	,
8-814-189-31	MICROPHONE, BUILT-IN ((C-1007B)						
2-537-812-01	KNOB, SWITH							
* 2-537-847-01	CLAMP, CORD			ACCESSOR	/ & PACKIN	G MAT	ERIAL	
2-537-845-01	CASE, BACK			2-559-263-13	MANUAL, IN:	STRACTIO	ON	
2-537-841-01	TERMINAL (+), BATTERY	,			,			
2-537-842-02	TERMINAL (-), BATTERY	Y '						
* 2-537-837-01	LABEL, BATTERY							
2-537-838-01	HOLDER, BATTERY							Engl
	X-2537-801-1 X-2537-803-1 7-627-551-27 * 2-537-813-03 7-627-451-38 X-2537-805-1 7-627-451-78 2-537-844-01 8-814-189-31 2-537-847-01 * 2-537-847-01 2-537-845-01 2-537-841-01 2-537-842-02 * 2-537-837-01	X-2537-801-1 CAP ASSY, ORNAMENTAL X-2537-803-1 CAP ASSY, ORNAMENTAL 7-627-551-27 SCREW, PRECIESION +P * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1. X-2537-805-1 CLIP, ASSY 7-627-451-78 SCREW, PRECISION +K 1. 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN 1. 2-537-812-01 KNOB, SWITH 2-537-847-01 CLAMP, CORD 2-537-845-01 CASE, BACK 2-537-841-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY	X-2537-801-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 X-2537-805-1 CLIP, ASSY 7-627-451-78 SCREW, PRECISION +K 1.4X5 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN (C-1007B) 2-537-812-01 KNOB, SWITH * 2-537-847-01 CLAMP, CORD 2-537-845-01 CASE, BACK 2-537-841-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY	X-2537-803-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 C1 X-2537-805-1 CLIP, ASSY C2 7-627-451-78 SCREW, PRECISION +K 1.4X5 R1 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN (C-1007B) 2-537-812-01 KNOB, SWITH * 2-537-845-01 CLAMP, CORD 2-537-845-01 CASE, BACK 2-537-841-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY	X-2537-801-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 X-2537-805-1 CLIP, ASSY C2 1-161-375-00 C3 1-554-669-00 * 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN (C-1007B) 2-537-812-01 KNOB, SWITH * 2-537-847-01 CLAMP, CORD ACCESSORY 2-537-845-01 CASE, BACK 2-537-841-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY	X-2537-801-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 X-2537-805-1 CLIP, ASSY C2 1-161-375-00 CERAMIC C3 1-161-375-00 CERAMIC C3 1-161-375-00 CERAMIC C3 1-161-375-00 CERAMIC C3 1-161-375-00 SWITH 2-537-844-01 CASE, FRONT S-627-451-78 SCREW, PRECISION +K 1.4X5 R1 1-249-424-11 CARBON 2-537-844-01 CASE, FRONT S-627-845-01 KNOB, SWITH 2-537-847-01 CLAMP, CORD ACCESSORY & PACKIN 2-537-845-01 CASE, BACK 2-537-845-	X-2537-801-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 X-2537-805-1 CLIP, ASSY C1 1-131-347-00 TANTALUM 1uF C2537-805-1 CLIP, ASSY C2 1-161-375-00 CERAMIC 2200PF C3 1-161-375-00 CERAMIC 2200PF C3 1-161-375-00 CERAMIC 2200PF C3 1-161-375-00 SWITH, SLIDE * 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN (C-1007B) 2-537-845-01 KNOB, SWITH * 2-537-847-01 CLAMP, CORD ACCESSORY & PACKING MAT 2-537-845-01 CASE, BACK 2-537-845-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY	X-2537-801-1 CAP ASSY, ORNAMENTAL (SILVER) X-2537-803-1 CAP ASSY, ORNAMENTAL (BLACK) 7-627-551-27 SCREW, PRECIESION +P 1.4X2.5 * 2-537-813-03 TERMINAL, GROUND 7-627-451-38 SCREW PRECISION +K 1.4 X 2 X-2537-805-1 CLIP, ASSY C2 1-161-375-00 CERAMIC 2200PF 20% C3 1-161-375-00 SWITH, SLIDE * 2-537-844-01 CASE, FRONT 8-814-189-31 MICROPHONE, BUILT-IN (C-1007B) 2-537-812-01 KNOB, SWITH * 2-537-847-01 CLAMP, CORD * ACCESSORY & PACKING MATERIAL 2-537-845-01 CASE, BACK 2-537-845-01 TERMINAL (+), BATTERY 2-537-842-02 TERMINAL (-), BATTERY * 2-537-837-01 LABEL, BATTERY

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