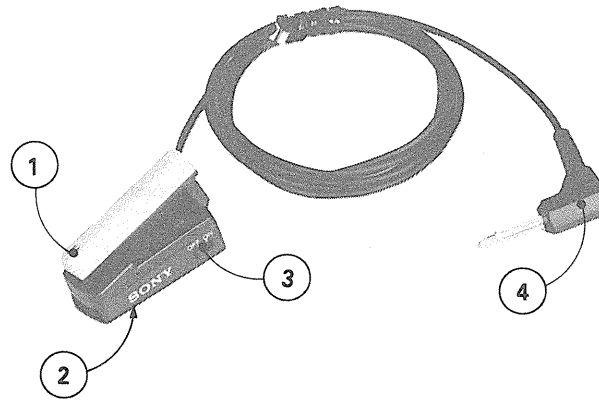


ECM-011

SERVICE MANUAL

US Model
 Canadian Model
 AEP Model
 UK Model
 E Model



PARTS IDENTIFICATION

- ① Microphone capsule housing
- ② Battery compartment
- ③ Power switch
- ④ L-shaped miniplug

SPECIFICATIONS

General

Type	Electret condenser microphone (with back-electret condenser capsule)	Maximum sound pressure input level (at 1,000 Hz, 1 % distortion)	More than 110 dB SPL (0 dB SPL = 2×10^{-4} μ bar)
Microphone cable	1.5 mm ($\frac{1}{16}$ inches) dia. \times 1 m (3.3 feet) long	Dynamic range	More than 76 dB
Battery	Alkaline manganese dioxide battery IEC Designation LR44 (Eveready A76 type) or equivalent	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
Dimensions (exclu. plug)	Microphone capsule housing 7 \times 7.5 \times 33 mm (w/h/d) ($\frac{9}{32} \times \frac{5}{16} \times 1\frac{1}{16}$ inches) Battery compartment 14.5 \times 10.5 \times 32.5 mm (w/h/d) ($1\frac{9}{32} \times \frac{7}{16} \times 1\frac{1}{16}$ inches)		
Weight	Approx. 15 g ($\frac{1}{2}$ oz)		
Finish	Microphone capsule housing: Silver Battery compartment: Matt black		
Supplied accessory	Sony Eveready Alkaline manganese dioxide battery A76 (1)		

Performance

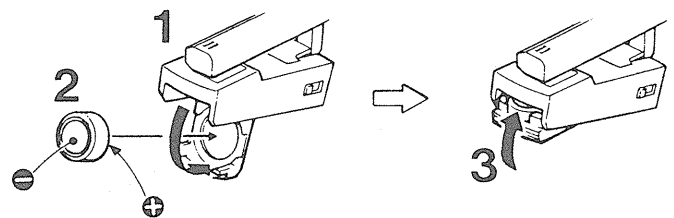
Frequency response	50 - 15,000 Hz
Directivity	Omni-directional
Output impedance	1.8 kilohms \pm 30 %, unbalanced
Output level (deviation \pm 3 dB)	Open circuit voltage -69.0 dB (0.35 mV) (0 dB = 1 V/ μ bar, 1,000 Hz)
Power requirements	Normal operating voltage: 1.5 V Minimum operating voltage: Approx. 1.1 V Current drain: Less than 0.2 mA
Battery life	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

BATTERY INSTALLATION

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

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

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



ELECTRET CONDENSER
 MICROPHONE
SONY

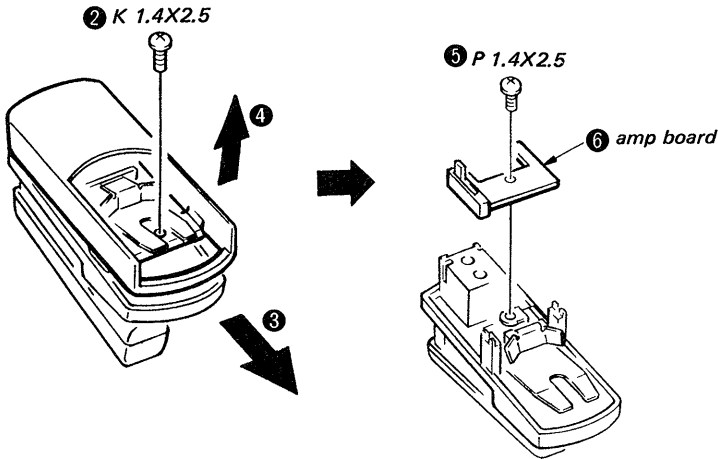


1. DISASSEMBLY

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

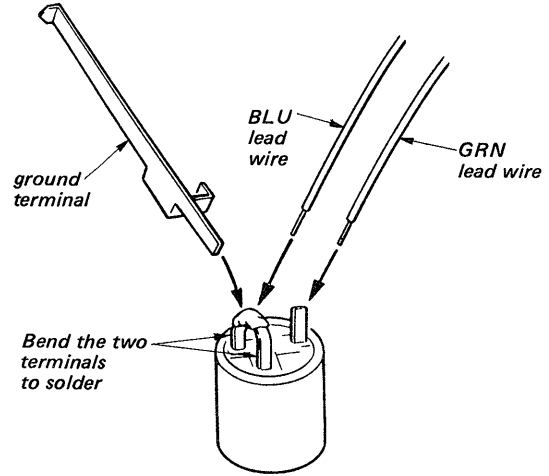
AMP BOARD REMOVAL

① Open the battery lid.



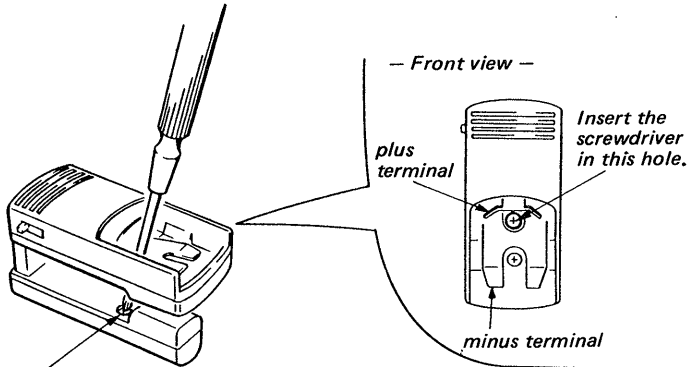
MICROPHONE UNIT INSTALLATION

① Solder the ground terminal and lead wires.

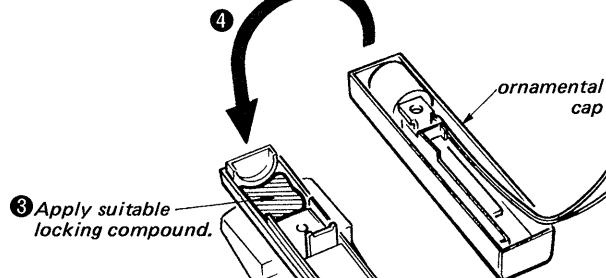
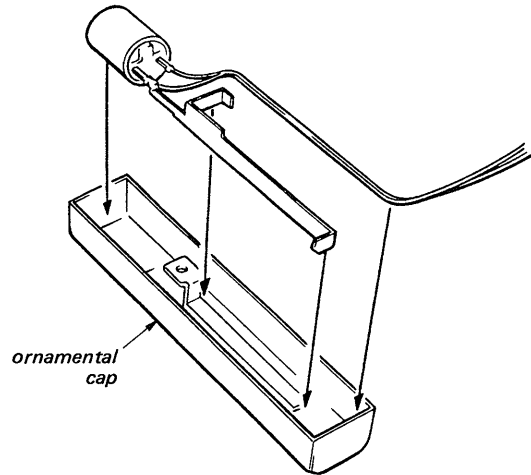


MICROPHONE UNIT REMOVAL

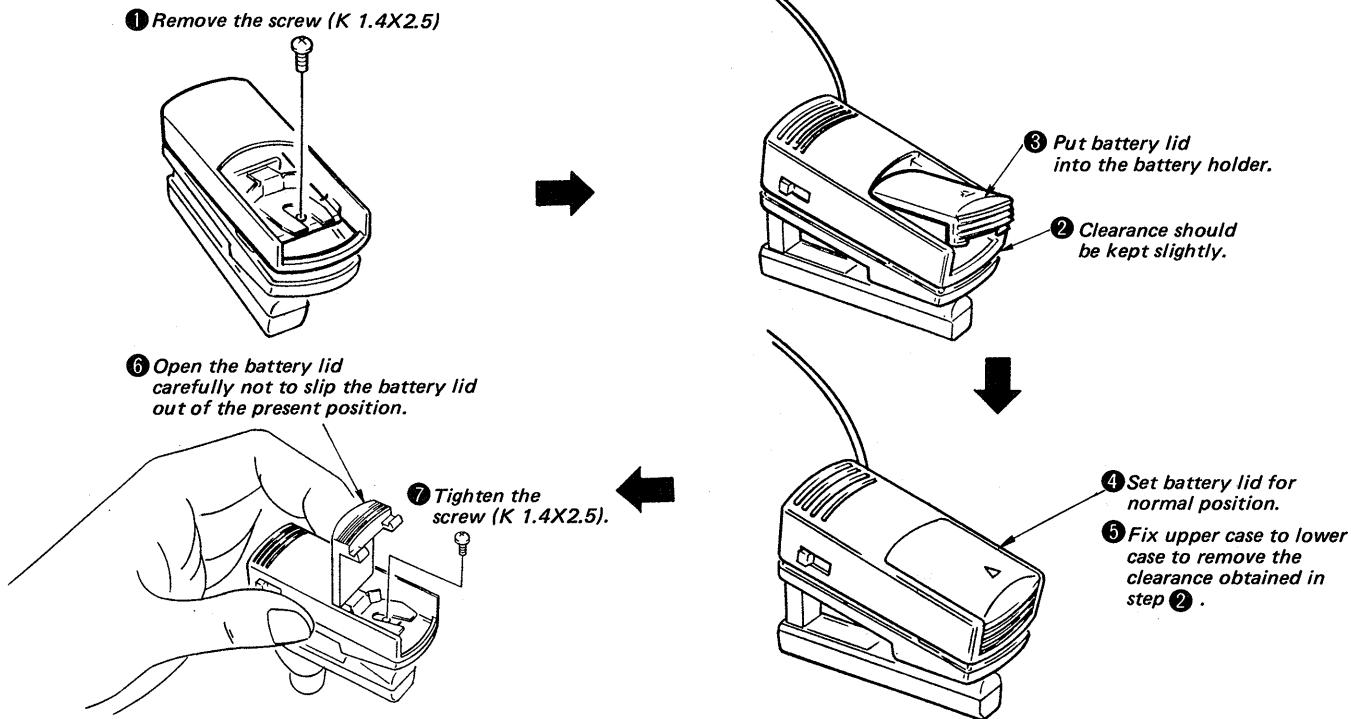
① Open the battery lid.



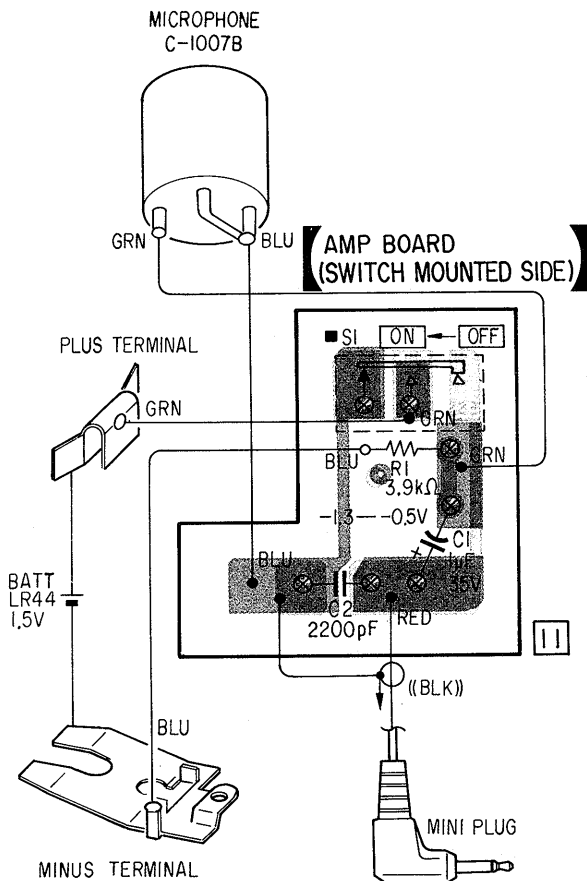
② Set the microphone unit to the ornamental cap.



BATTERY LID INSTALLATION



2. 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.
- ⊗ : Through hole.
- ▨ : C, R mounted side pattern.

3. EXPLODED VIEW AND PARTS LIST

NOTE:

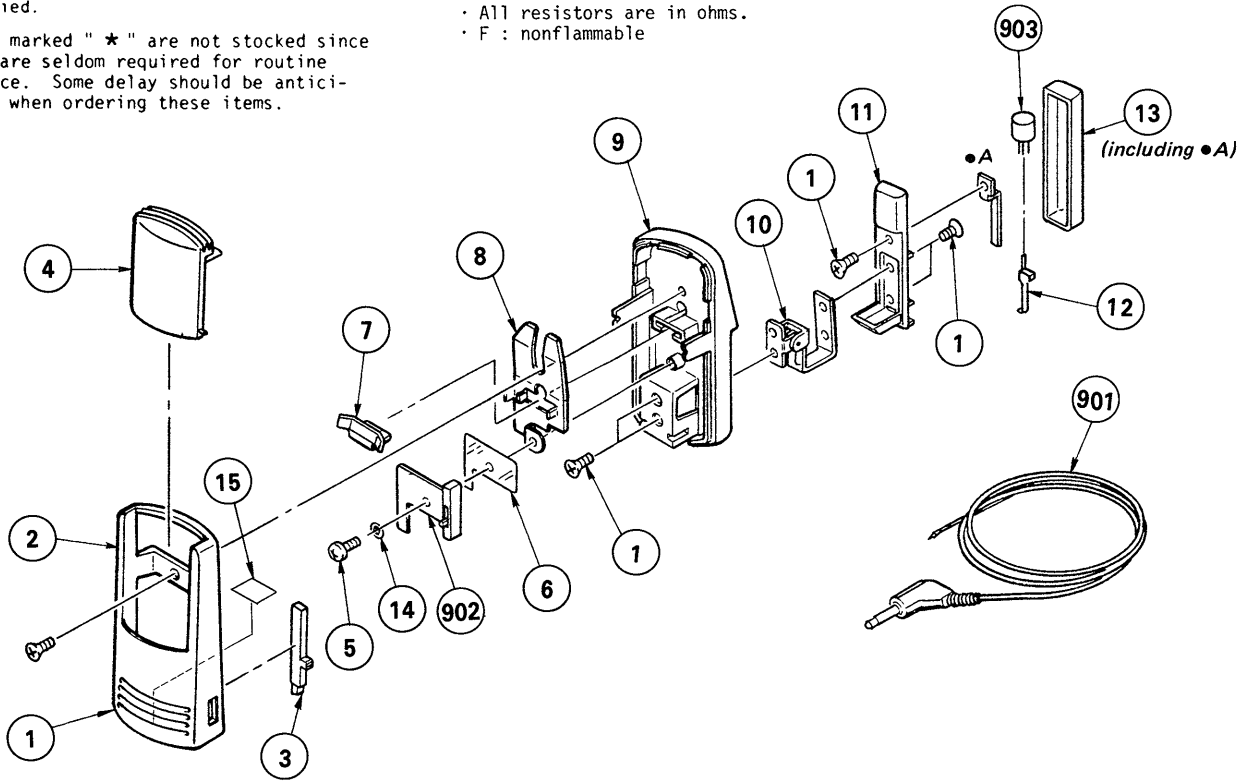
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable



GENERAL SECTION

No.	Part No.	Description
1	7-627-551-27	SCREW, PRECISION +K 1.4X2.5
2	2-537-816-01	COVER, BATTERY
3	2-537-812-01	KNOB, SWITCH
4	2-537-817-01	LID, BATTERY
5	7-627-451-18	SCREW, PRECISION +P 1.4X2.5
6	2-537-825-01	SHEET, INSULATION
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	WASHER
15	2-537-823-01	CLOTH, BLIND

ELECTRICAL PARTS

Remarks	Ref.No.	Part No.	Description
	901	1-558-031-11	CORD, MIC (DIA.1.5)(1 CORE)
	902	*1-616-217-11	PC BOARD, AMPLIFIER
	903	8-814-189-10	MICROPHONE, BUILT-IN (C-1007B)
	C1	1-131-408-11	TANTALUM 1MF 20% 35V
	C2	1-162-302-31	CERAMIC 2200PF 30% 16V
	R1	1-247-845-00	CARBON 3.9K 5% 1/6W
	S1	1-554-669-00	SWITCH, SLIDE

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

Sony Corporation

ECM-011

SONY SERVICE MANUAL

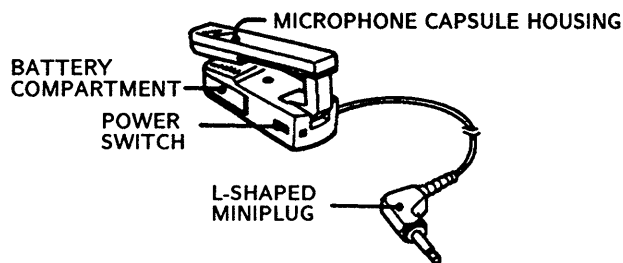
US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT-1

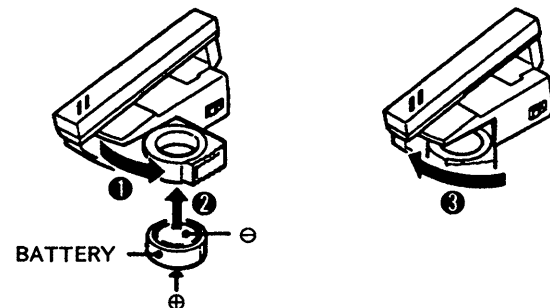
File this supplement with the service manual.

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

PARTS IDENTIFICATION



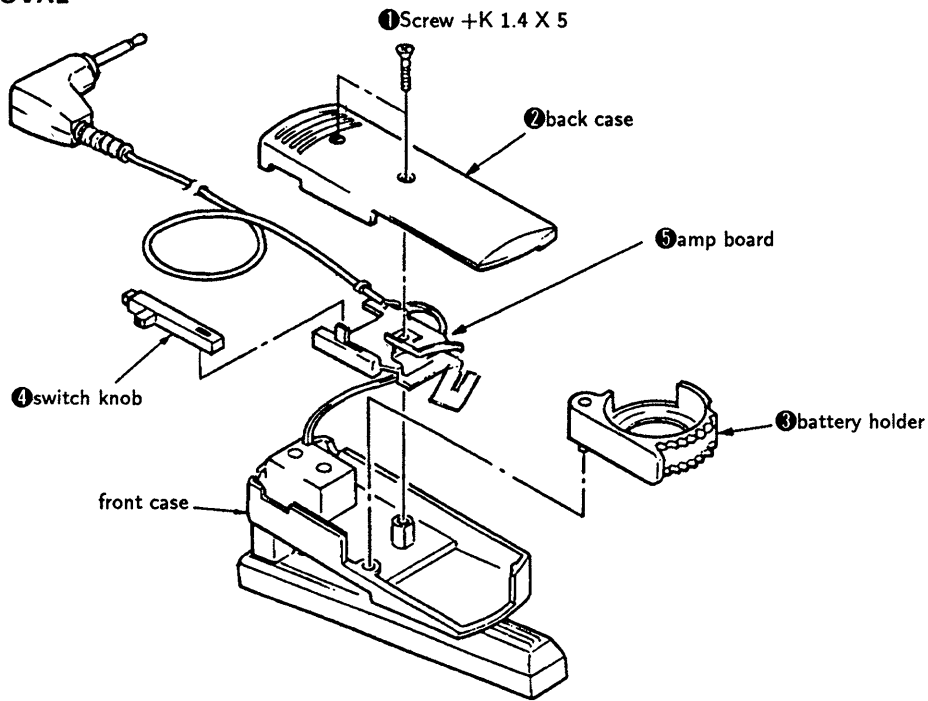
BATTERY INSTALLATION



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

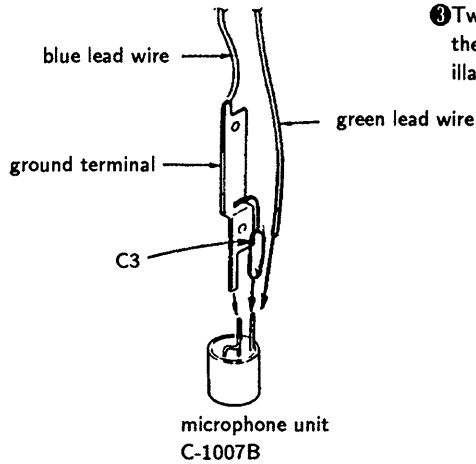
NOTE : Follow the disassembly in the numerical order given.

AMP BOARD REMOVAL

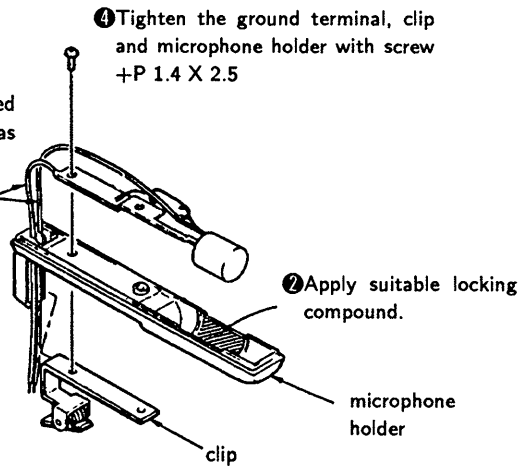


MICROPHONE UNIT INSTALLATION

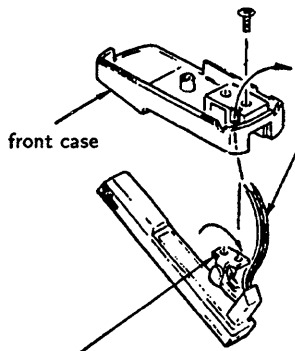
① Solder the ground terminal, lead wire and C3.



③ Two lead wire should be passed the hole of microphone holder as illustrated

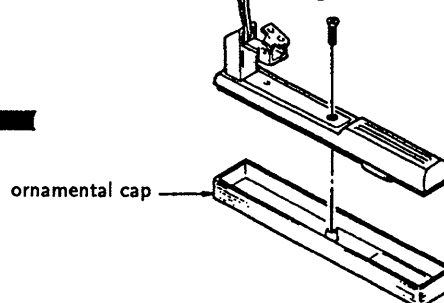


⑨ Screw +P 1.4 X 2.5



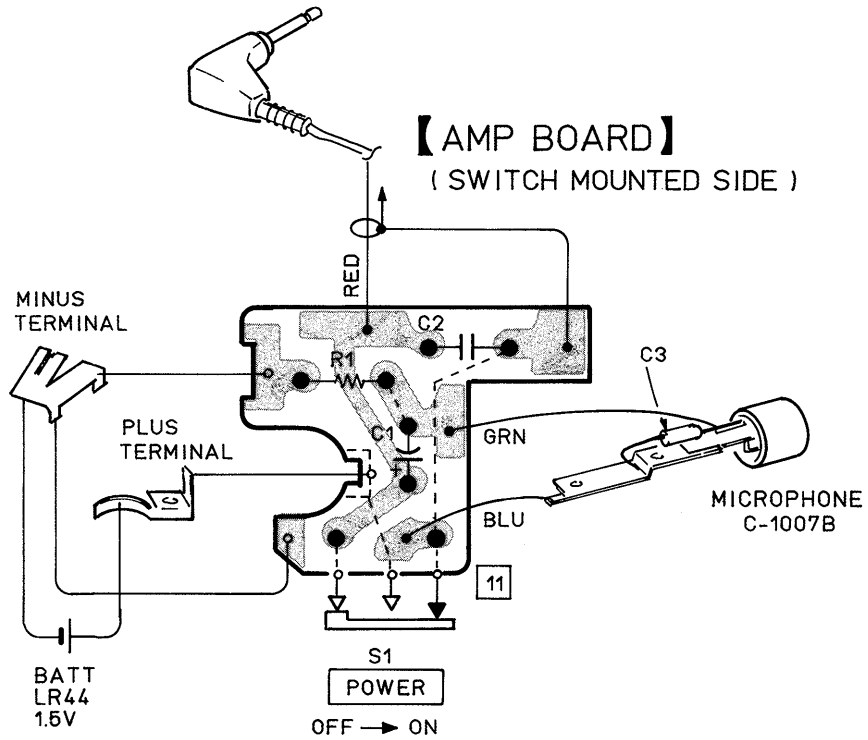
⑤ Check two lead wire installation as illustrated.

⑥ Screw +K 1.4 X 5



⑧ Lift up a part of clip as illustrated.

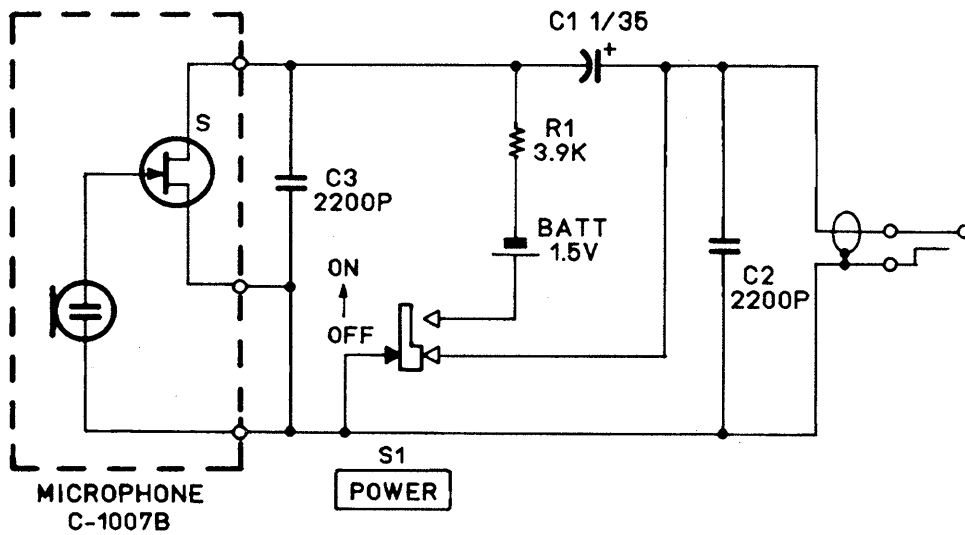
PRINTED WIRING BOARD



• Note :

- ○ — : parts extracted from the component side.
- ● : Through hole.
- [Pattern] : Pattern on the side which is seen.

SCHEMATIC DIAGRAM



• Note :

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

