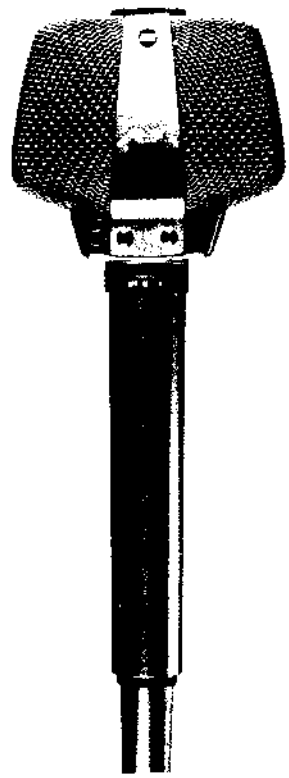
ECM-990F



E Model
AEP Model
US Model

ONE POINT STEREO ELECTRET CONDENSER MICROPHONE

SPECIFICATIONS

GENERAL

Type: One-point stereo electret condenser microphone (with back-electret condenser capsule)

FET: Sony junction FET

Battery: Penlight battery size AA,(IEC Designation R6)
Sony SUM-3S (manganese)
EVEREDAY No. 1015 (manganese)
No. E-91 (alkaline)
No. E-9 (mercury)

Microphone Cable: 3.9 mm dia. 3 m $5/32$" dia. 9 ft.
Single-conductor shielded for each channel

Dimensions: Screen (88 x 77.5 x 43) x Case 25 mm dia.
Total Length 210 (mm)
Screen ($3\,1/2 \times 3\,1/16 \times 1\,11/16$) x Case 1 inch dia.
Total Length $8\,1/4$ (inch)

Weight: 320 g 11.3 oz with battery

PERFORMANCES

Frequency Response: 40–16,000 Hz

Directivity: Uni-directional per each capsule

Output Impedance: 200 ohms ±20%, unbalanced

Output Level: (deviation ±3 dB)
Effective output level; -57 dBm (0 dB = 1 mW/10 μbar at 1,000 Hz)
Open circuit voltage; 0.13 mV/μbar at 1,000 Hz
Recommended load impedance is more than 3 k ohms.

Power Requirements: Normal operating voltage; 1.5 V DC
Minimum operating voltage; 1.2 V DC
Current drain; Less than 0.3 mA
Battery life; Approx. 4,000 hours with Sony SUM-3S, EVEREADY 1015, Approx. 4,000 hours with EVEREADY E-91

Noise Level: Signal-to-noise ratio;
More than 44 dB (1,000 Hz, 1 μbar)
Inherent noise; Less than 30 dB SPL (0 dB = 2×10^{-4} μbar)
Wind noise *1; Less than 50 dB SPL
Induction noise from external magnetic field *2; Less than 5 dB SPL/m gauss

*1 Wind noise is the value measured by applying a wind velocity of 6.6 ft/second from all directions to the microphone. The mean value is taken and converted to the equivalent input sound level. 0 dB = 2×10^{-4} μbar.

*2 The external magnetic field induction noise is measured with the microphone placed in the alternating magnetic field of 50 Hz, 1 m gauss. The maximum noise value is taken and then converted to the equivalent input sound level. 0 dB = 2×10^{-4} μbar

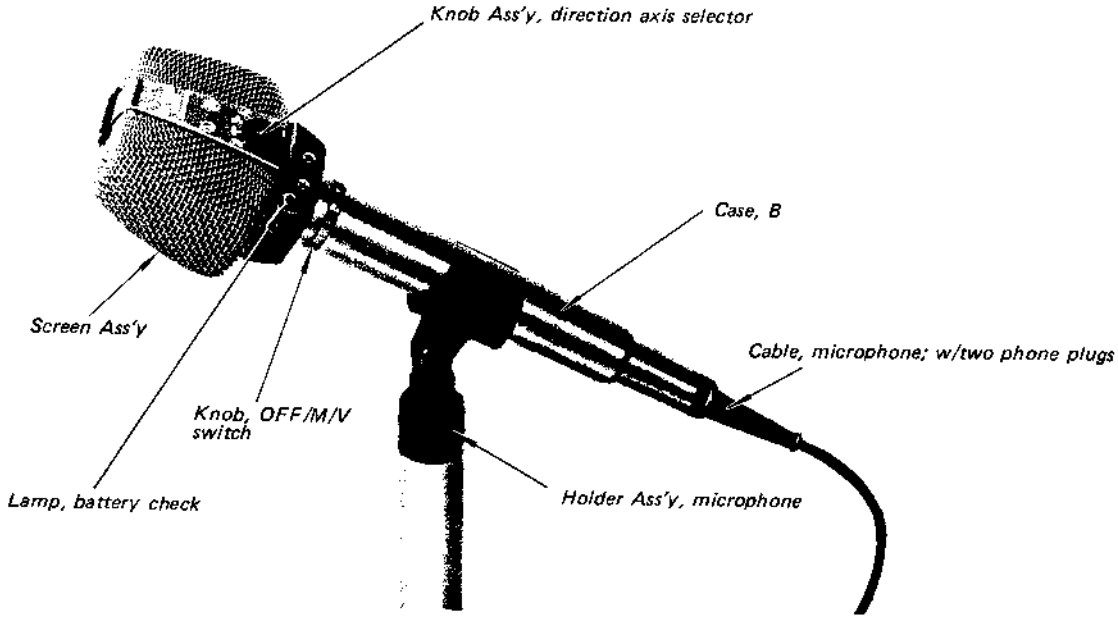
Maximum Sound Pressure Input Level: Approx. 126 dB SPL (at 1,000 Hz 1% distortion)

Environmental Temperatures: -4° to 140°F (-20° to 60°C) for storage
32° to 140°F (0° to 60°C) for operation

SONY®

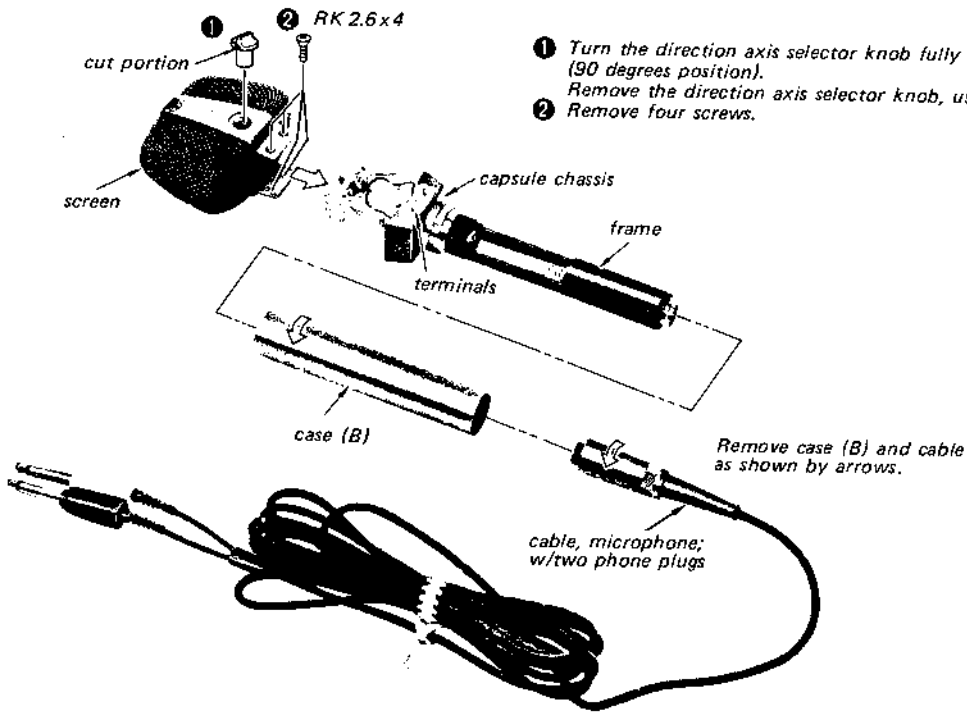
SERVICE MANUAL

1. EXTERNAL VIEW



2. DISASSEMBLY

Remove the parts in the numerical order.



❶ Turn the direction axis selector knob fully left-ward (90 degrees position).
Remove the direction axis selector knob, using tweezers.
❷ Remove four screws.

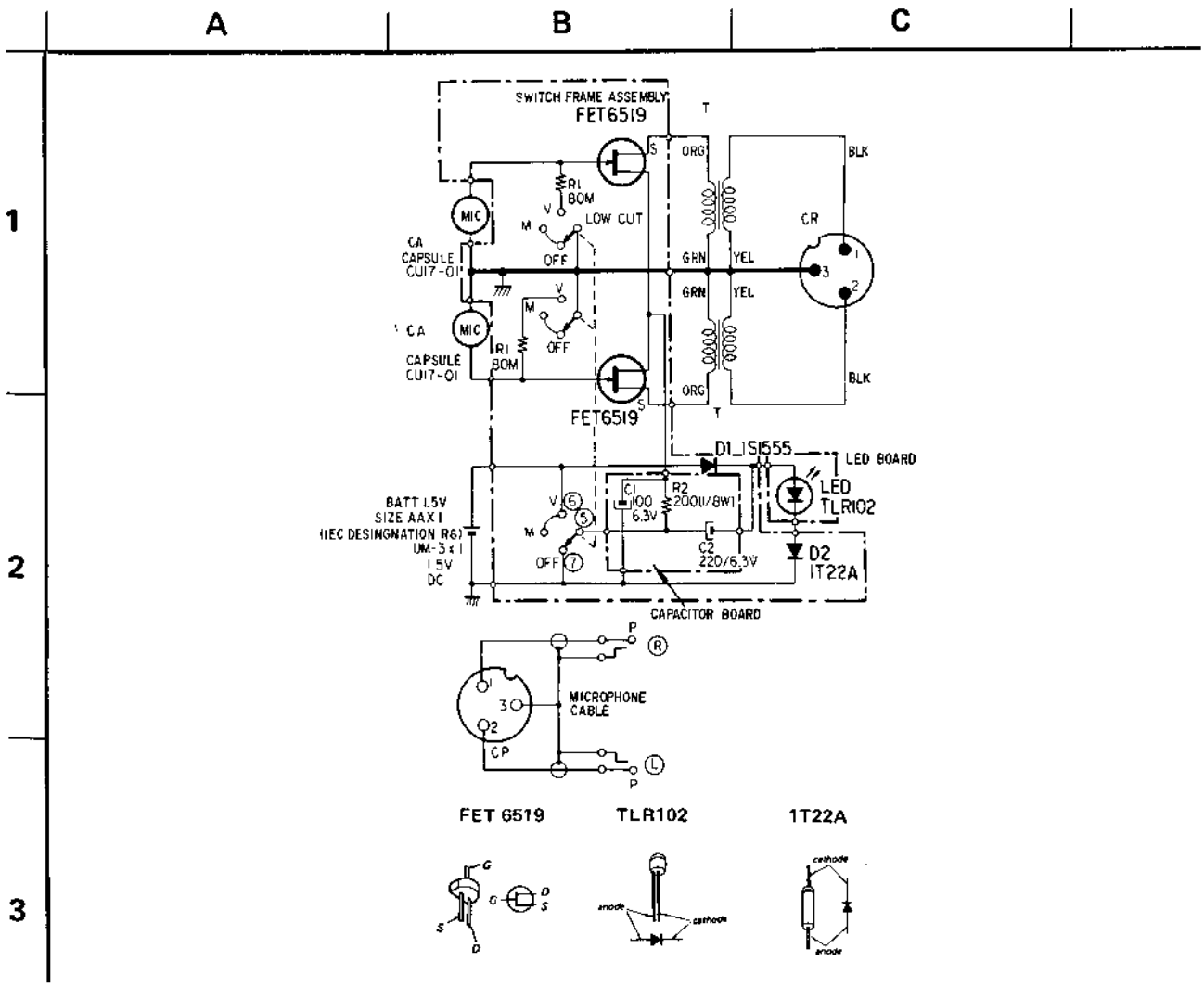
3. TROUBLESHOOTING

CONDITION	PRELIMINARY CHECK	FINAL REMEDY
No sound.	1. Opposite insertion of battery. 2. Low voltage. 3. Dirty terminal of battery.	Replace switch frame ass'y.
Low level sound. (Low sensitivity)	1. Low voltage. 2. Dirty terminal of battery.	Replace switch frame ass'y. Replace microphone capsule.
Noisy sound. Intermittent sound.	1. Broken lead wires transformer. 2. Broken wires of cord or plug.	Replace switch frame ass'y.
Only noise can be heard.	1. Low voltage. 2. Dirty terminal of battery.	Replace switch frame ass'y.
OFF/M/V switch is not effective.		Replace switch frame ass'y. Replace microphone capsule.

CAUTION

The circuit board has been carefully adjusted at the factory. If some trouble occurs on it, replace the circuit board. The parts on the circuit board are not individually available.

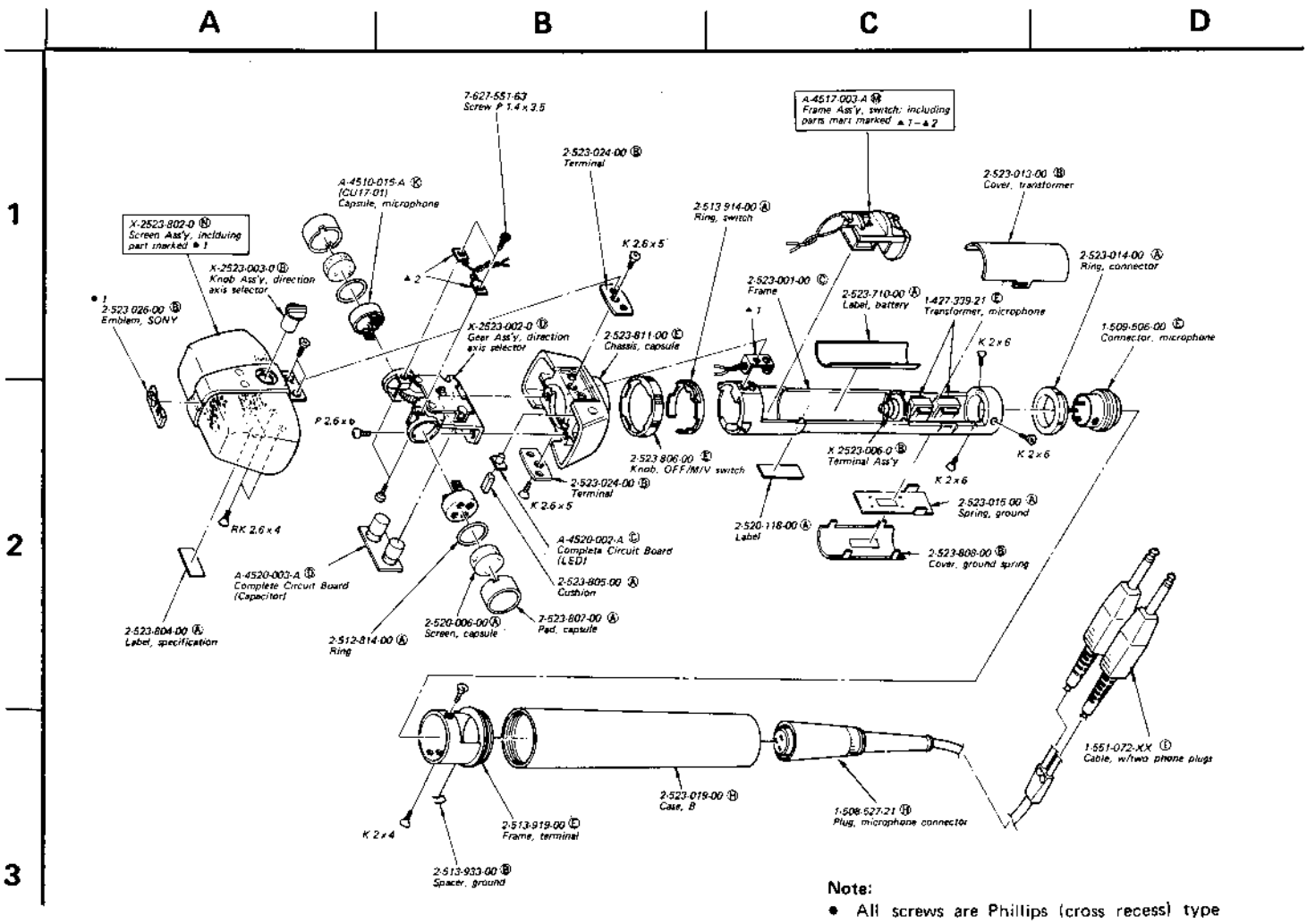
4. SCHEMATIC DIAGRAM



5. ACCESSORIES & PACKING MATERIALS

Part No.	*Description*
A-4581-009-A	Holder Ass'y, microphone (E model)
A-4581-009-B	Ⓔ Holder Ass'y, microphone (AEP model)
A-4581-009-C	Holder Ass'y, microphone (US model)
1-528-027-11	Ⓑ Battery
2-100-951-00	Ⓑ Adaptor, stand screw (AEP model)
2-100-952-00	Adaptor, stand screw (E model, US model)
2-523-070-00	Ⓗ Case, carrying
2-523-073-00	Ⓐ Sheet, protector
2-523-802-00	Ⓒ Carton
2-599-086-11	Ⓑ Manual, instruction
3-701-620-00	Ⓐ Bag, plastic
3-793-557-11	Ⓐ Leaflet, battery (AEP model)

6. EXPLODED VIEW



Note:

- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Sony Corporation