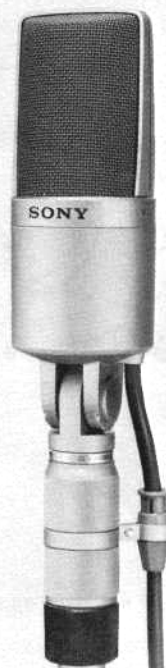


ECM-56P

E Model
USA Model



ELECTRET CONDENSER MICROPHONE

SPECIFICATIONS

GENERAL

Capsule:	Electret condenser capsule
Amplifier:	Sony junction FET
Power Supply:	Battery operation with Manganese EVEREADY 216 Mercury EVEREADY E146 External power operation facility
Microphone Cable:	5.2mm ($7/32$ ") dia., 2-conductor shielded cable, 6m (20ft), free- end
Mounting Thread:	PF1/2 -14 thread
Dimensions:	50 mm max. dia. x 207 mm (2" max. dia. x 8 1/4")
Weight:	500g (1 lb 1 oz) microphone only
Finish:	Non-reflective satin nickel finish
Environmental 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

**Recommended Optional
Accessory:** External power supply AC-148F

PERFORMANCES

Frequency Response:	20 Hz -20,000 Hz
Directivity:	Uni-directional
Output Impedance:	250 ohm $\pm 20\%$ at 1,000 Hz,
Output Level:	balanced Effective output level -53.8 dBm (0dBm = 1 mW/10 μ bar, 1,000 Hz) Open circuit voltage 0.2mV/u bar, at 1,000 Hz Output level diviation ± 2 dB Recommended load impedance is more than 3
Maximum Sound Pressure Input Level:	
Dynamic Range:	Approx. 134dB SPL Approx. 106dB

NOISE LEVEL Signal-

to-noise Ratio:	More than 46 dB (1,000 Hz, 1 jubar)
Inherent Noise:	Less than 28 dB SPL (0 dB SPL = 2x 10 ⁻⁴ ubar) Less than 40dB SPL
Wind Noise *1:	Less than 5 dB SPL/m gauss

**Induction Noise From
External Magnetic
Field *2:**

*1 Wind noise is the value measured by applying a wind velocity of 6.6ft/second from all directions on the microphone. The mean value is obtained and converted to the equivalent input sound level. 0dB = 2x10⁻⁴ ubar

*2 The external magnetic field induction noise is measured by placing the microphone in an alternating magnetic field of 50 Hz, 1 m gauss. The maximum noise value is measured and then converted to the equivalent input sound level. 0dB = 2x 10⁻⁴ ubar

POWER REQUIREMENTS

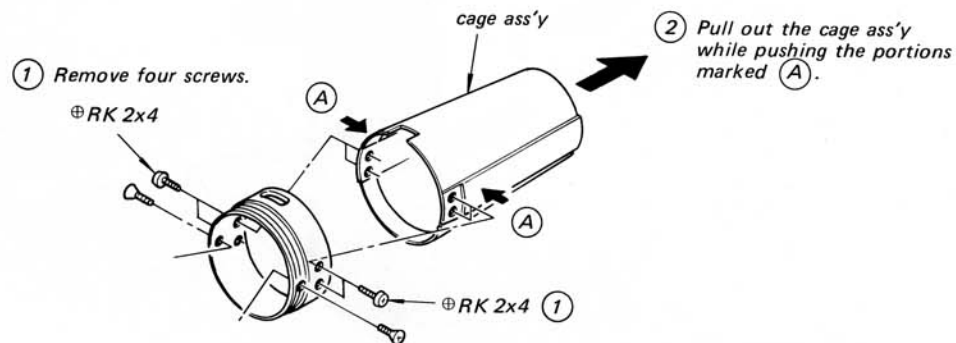
	9 V DC (battery operation)
	24V-54V DC (external power operation)
	7 V DC
	Less than 1 mA (with battery)
Normal Operating Voltage:	Less than 3.5 mA (with external power supply)
Battery Life:	
Minimum Operating Voltage:	Approx 400 hours with EVEREADY 216 (manganese)
Current Drain:	Approx. 600 hours with EVEREADY E146 (mercury)

SONY.

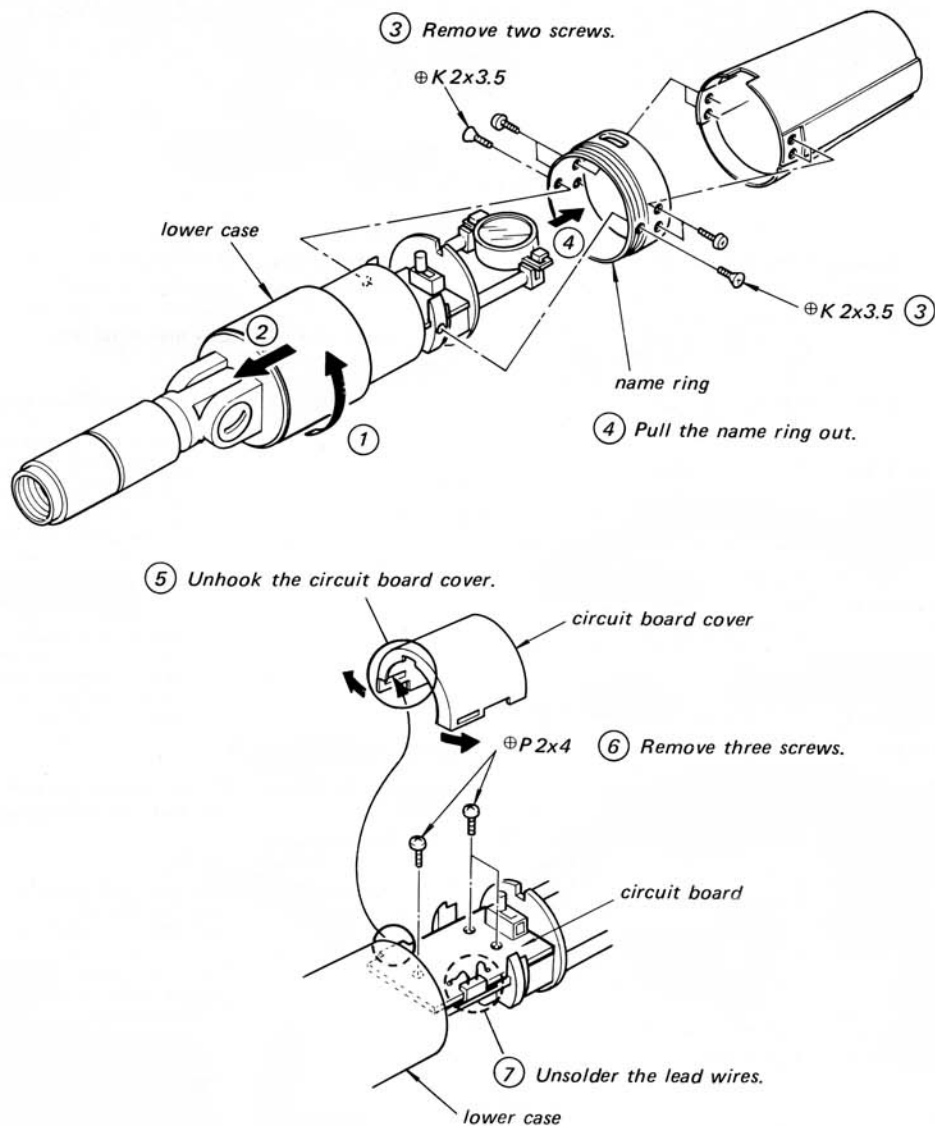
SERVICE MANUAL

1. DISASSEMBLY

1-1. Cage Removal



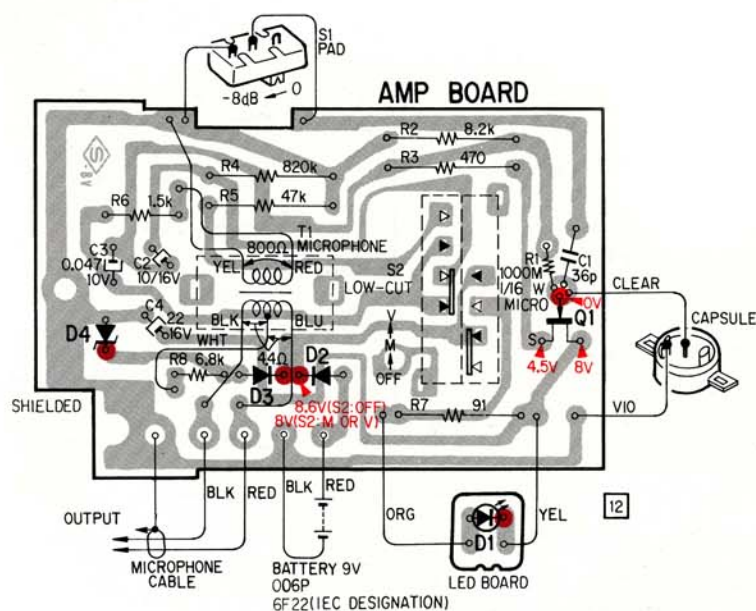
1-2. Circuit Board Removal



2. DIAGRAMS

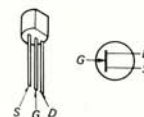
2-1. Mounting Diagram

— Conductor Side —

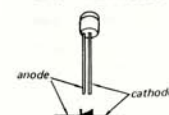


Note:

Resistance of T1 are dc resistance of mounted transformer.



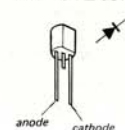
D1 TLR102



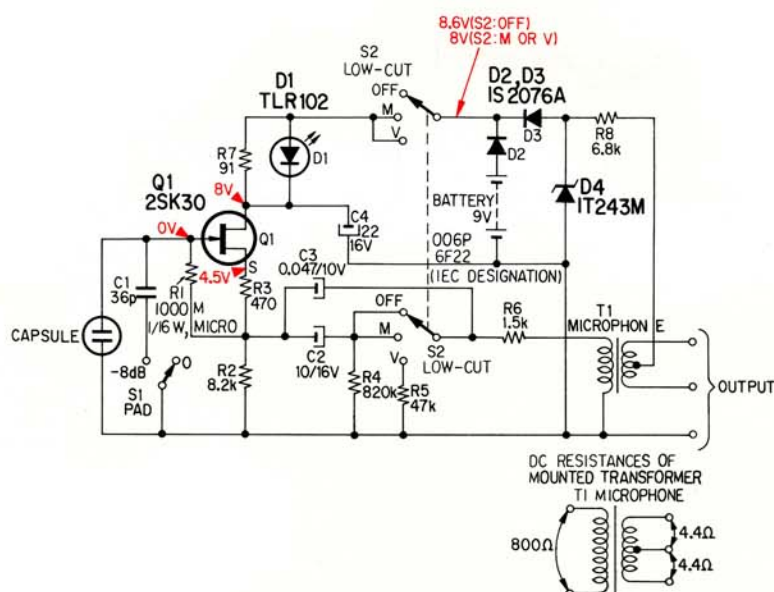
D2.3 1S2076A



D4 1T243M



2-2. Schematic Diagram



Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type.
 $p = \mu\mu\text{F}$
- All resistors are in Ω , $\frac{1}{4}\text{W}$ and carbon type unless otherwise noted.
 $k = 1,000 \quad M = 1,000k$
- Voltages are DC with respect to ground.
Readings are taken under no-signal conditions with a VOM (20 $k\Omega/V$).

- Voltage variations may be noted due to normal production tolerances.
- Switch Mode:

- Switch Mode:

Ref. No.	Switch	Position
S1	PAD	0 dB
S2	LOW-CUT (OFF-M-V)	OFF

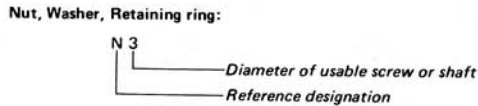
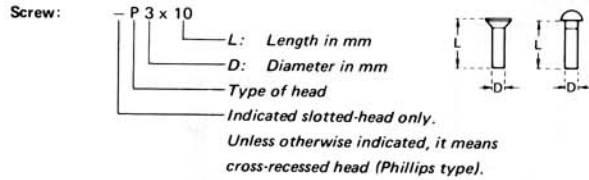
4. ELECTRICAL PARTS LIST

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>	<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>
SEMICONDUCTORS			RESISTOR		
Transistor			Regular-type 1/4W carbon resistors are omitted. Check the schematic diagram for the resistance values. M = 1000 k		
Q1	2SK30		R1	1-208-256-11	1000 M, $\frac{1}{16}$ W; micro
Diodes			SWITCHES		
D1	TLR102		S1	1-516-608-00	Slide, PAD
D2,3	1S2076A		S2	1-516-814-00	Slide, low-cut
D4	1T243M		MISCELLANEOUS		
CAPACITORS			T1	1-429-046-00	Transformer, microphone
All capacitors are in uF unless otherwise indicated. 50 or less working volts are omitted except for electrolytic type. (elect = electrolytic, p = <i>UUUF</i>)				1-534-161-31	Cable, microphone
C1	1-102-479-11	36 p ceramic			
C2	1-131-199-11	10 16 V			
C3	1-127-018-11	0.047 10V			
C4	1-121-990-11	22 16V elect			

ACCESSORIES

<i>Part No.</i>	<i>Description</i>
2-052-522-00	Adaptor, stand screw
2-522-223-00	Case, carrying
2-599-061-21	Manual, instruction (E Model)
2-599-061-22	Manual, instruction (USA Model)
3-793-557-00	Leaflet

5. HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	