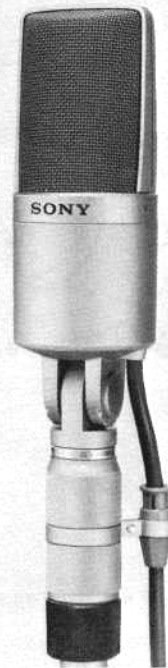


ECM-56P

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 deviation ± 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 10⁻⁴ubar) 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 = 2x10⁻⁴ubar
*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 10⁻⁴ubar

POWER REQUIREMENTS

9 V DC (battery operation)
24V-54V DC (external power operation)

7 V DC
Less than 1 mA (with battery)
Less than 3.5 mA

Normal Operating Voltage: (with external power supply)

Battery Life:
**Minimum Operating
Voltage:** Approx 400 hours with EVEREADY 216
(manganese)

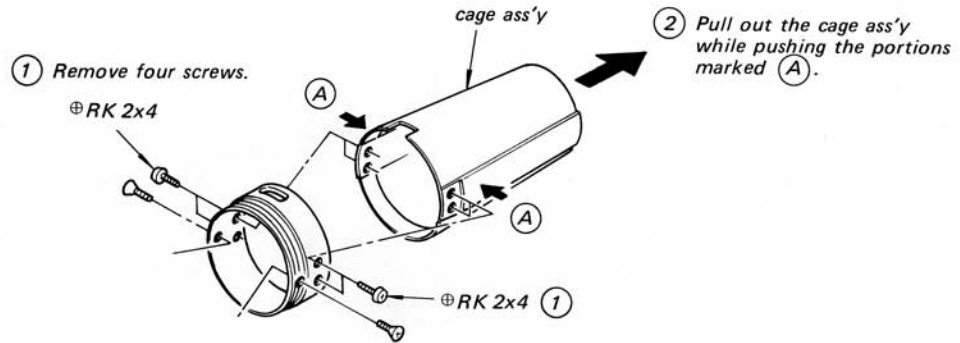
Current Drain: Approx. 600 hours with EVEREADY
E146 (mercury)

SONY.

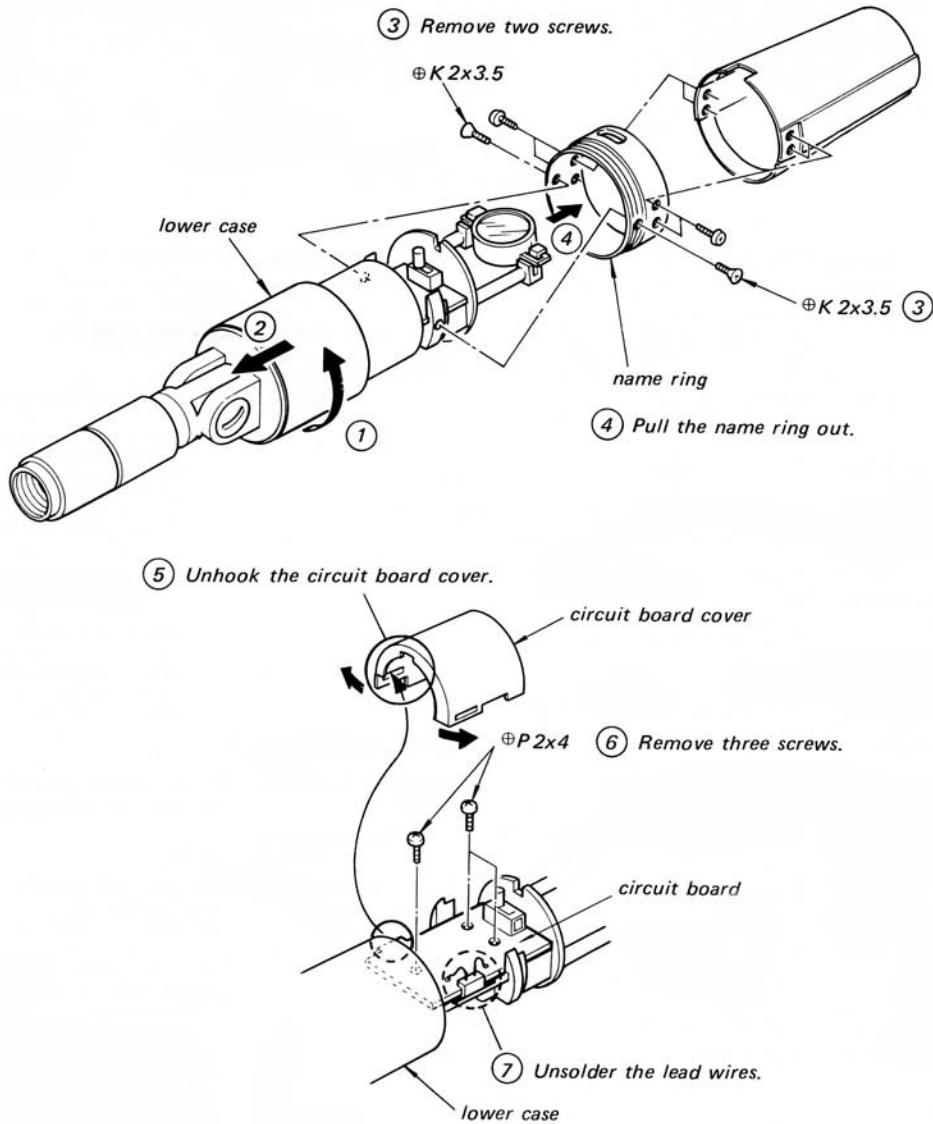
SERVICE MANUAL

1. DISASSEMBLY

1-1. Cage Removal



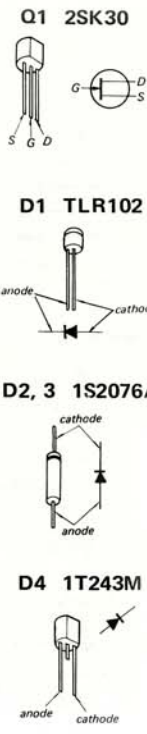
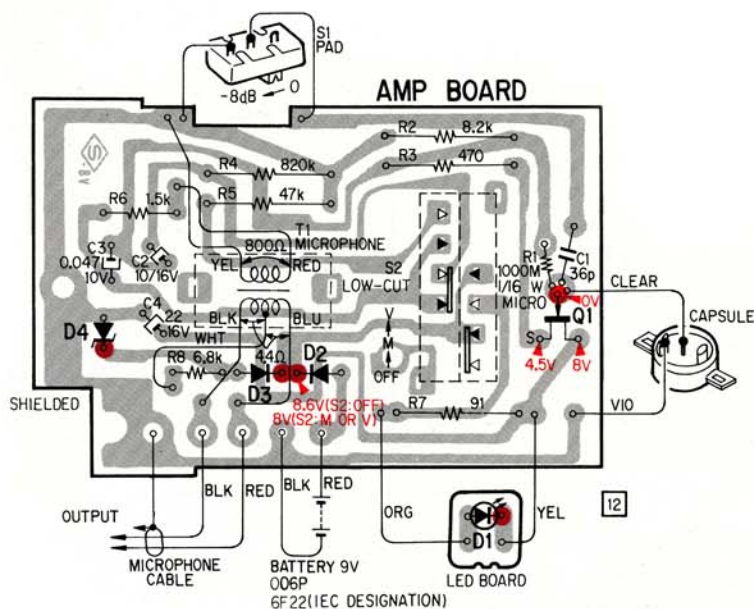
1-2. Circuit Board Removal



2. DIAGRAMS

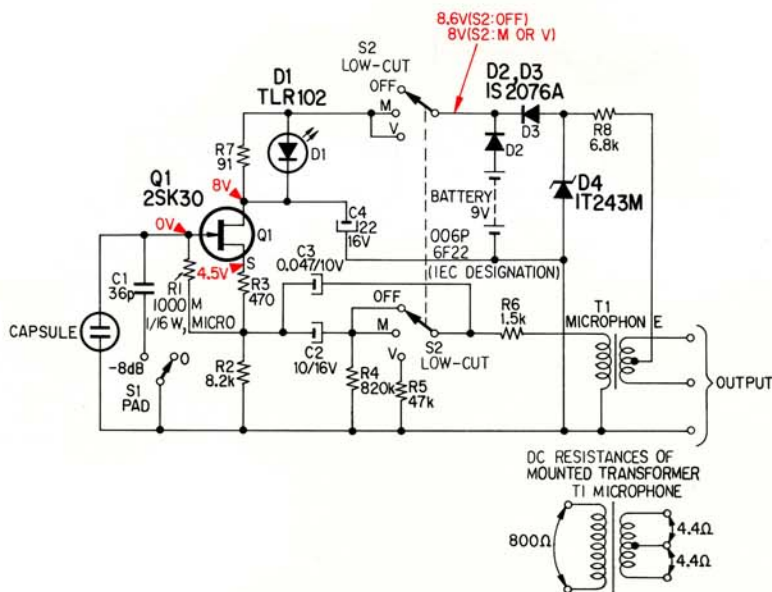
2-1. Mounting Diagram

— Conductor Side —



Note:
Resistance of T1 are dc resistance of mounted transformer.

2-2. Schematic Diagram



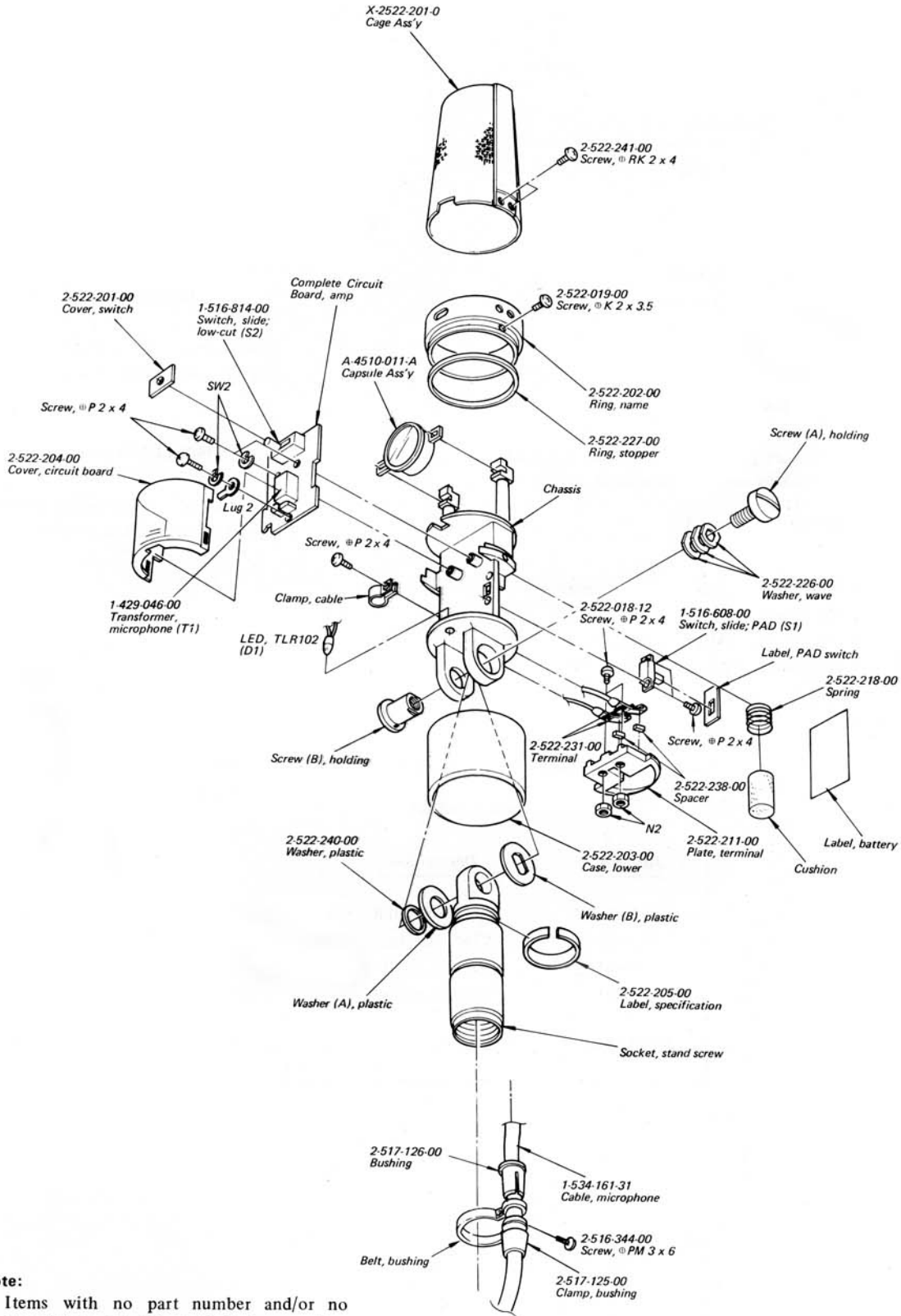
Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. $\rho = \mu\mu\text{F}$
- All resistors are in Ω , $\frac{1}{4} W$ and carbon type unless otherwise noted. $k = 1,000$ $M = 1,000 k$
- 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:

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

3. EXPLODED VIEW



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.

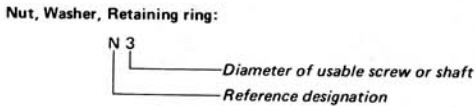
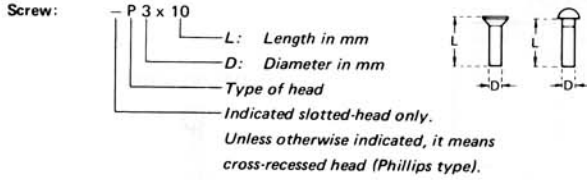
4. ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
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, 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 = UUF)				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

<u>Part No.</u>	<u>Description</u>
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		braizer-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	