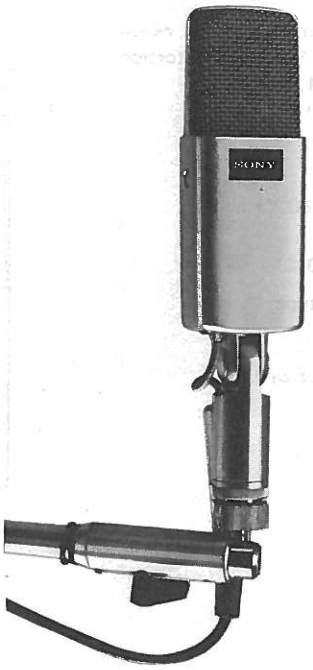
C-48

US Model
E Model



CONDENSER MICROPHONE

SPECIFICATIONS

Battery: 9V dc, battery size "006P" or equiv. (IEC designation 6F22)

Power Supply: Standard operating voltage: 9V
Minimum operating voltage: approx. 5.5V
Current drain: less than 5 mA (with battery)
less than 1 mA
(with external power supply)
Continuous battery duration: more than 50 hours with a 006P dry battery
Accepts external power supply of 48V dc

Directivity: Uni-, bi- and omni-directional

Output Impedance: 150Ω ±20% (balanced)

Output Level: Effective output level: -38.8 dBm
(0 dBm = 1 mW/10μbar, 1,000 Hz)
Open circuit voltage: -61.0 dB (0.89 mV)
(0 dB = 1 V/μbar, 1,000 Hz)
Output level deviation is ±2 dB
Recommended load impedance is more than 3 kΩ.

Frequency Response: 30 Hz—16,000 Hz

Noise Level:

S/N ratio:	More than 52 dB (1,000 Hz, 1μbar)
Inherent noise:	Less than 22 dB SPL (0 dB = 2×10^{-4} μbar)
Wind noise*3:	Less than 47 dB SPL
Induction noise from external magnetic field*4:	Less than 0 dB SPL/m gauss

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

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

— Continued on next page —

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Maximum Sound Pressure Input Level*3: Approx. 128 dB SPL

*3 This is the maximum input level which produces less than 1% wave distortion at the output with 1,000 Hz.
(0 dB = 2 x 10^{-4} μbar)

Dynamic Range: Approx. 106 dB

Acceptable Preservation Temperature: -4° to 140°F (-20° to 60°C)

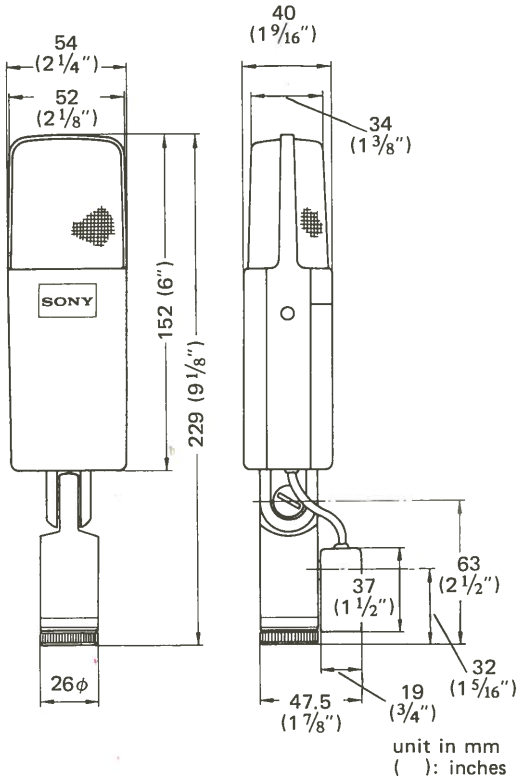
Proper Operating Temperature: 32° to 140°F (0° to 60°C)

Output Connector: CANNON XLR-3-12C type

Mounting Thread: PF½

Weight: 550 g (1 lb 4 oz) without cable

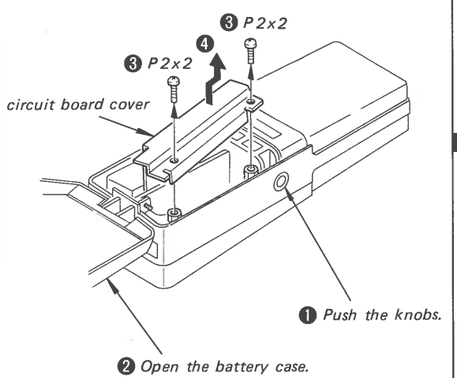
Dimensions:



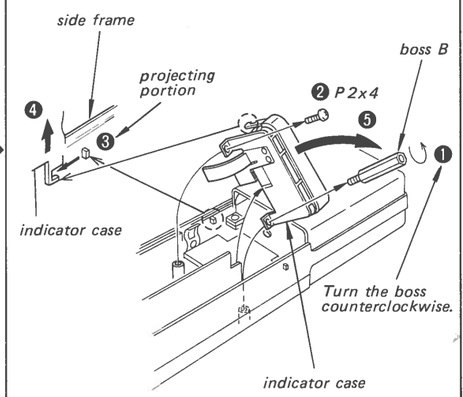
SECTION 1
DISASSEMBLY

Note: • Follow the disassembly procedure in the numerical order given.
• All screws are Phillips (cross recess) type unless otherwise noted. (–) = slotted head

CIRCUIT BOARD COVER REMOVAL



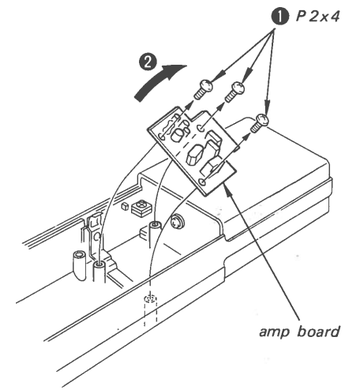
INDICATOR CASE REMOVAL



AMP BOARD REMOVAL

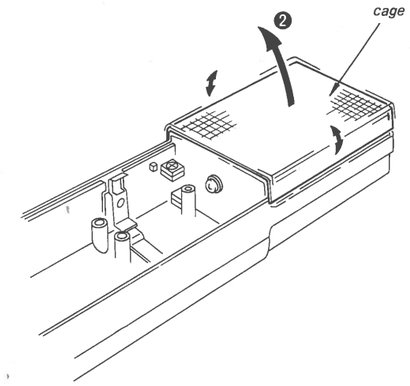
CAUTION

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

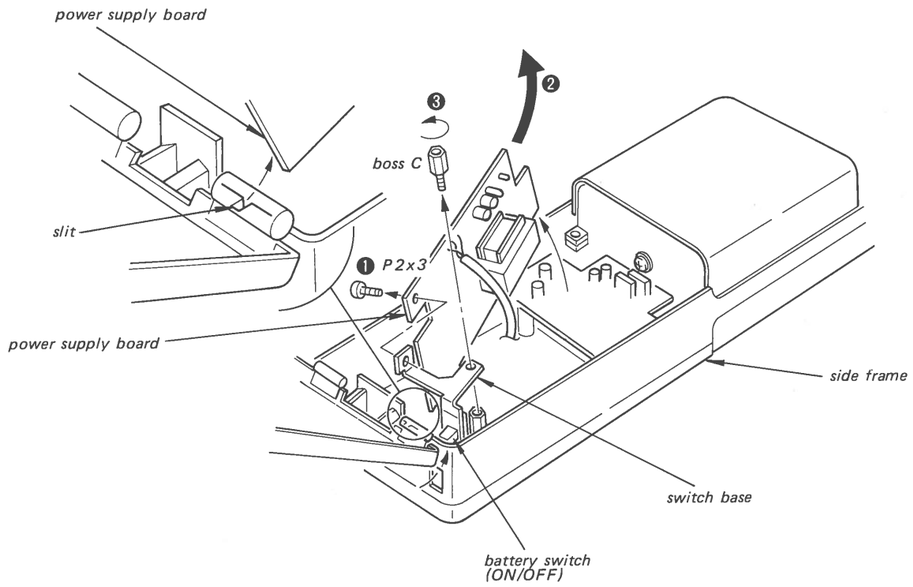


CAGE REMOVAL

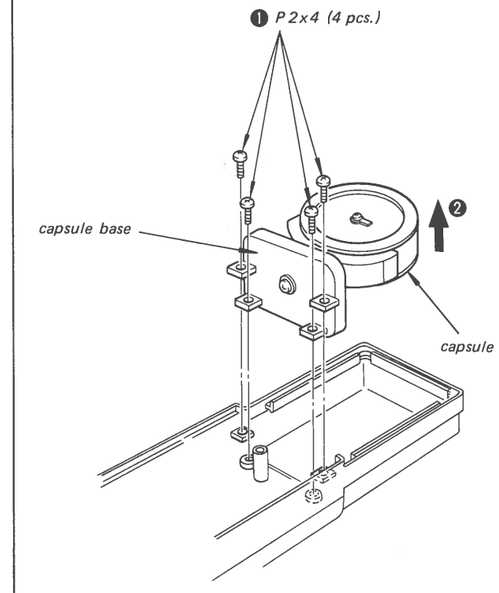
❶ *As cage is fixed by adhesive cement, remove locking compound.*



POWER SUPPLY BOARD/BATTERY SWITCH REMOVAL



CAPSULE ASS'Y REMOVAL



SECTION 2
DIAGRAMS

2-1. MOUNTING DIAGRAM

Replacement Semiconductors: See pages 7, 8.

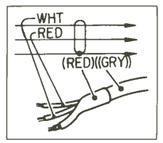
– Conductor Side –

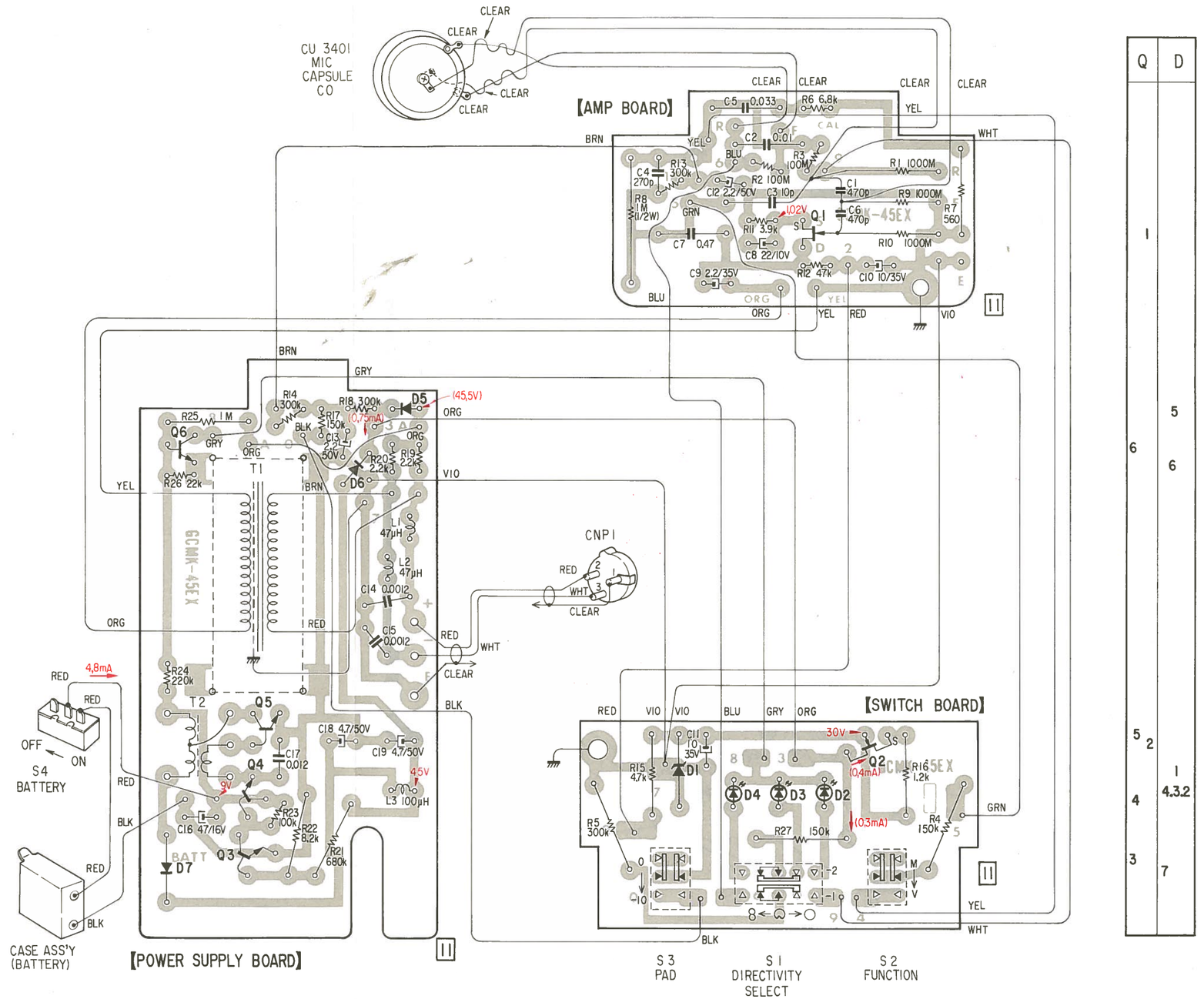
CAUTION

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

Note:

- Color code of sleeving over the end of the jacket.



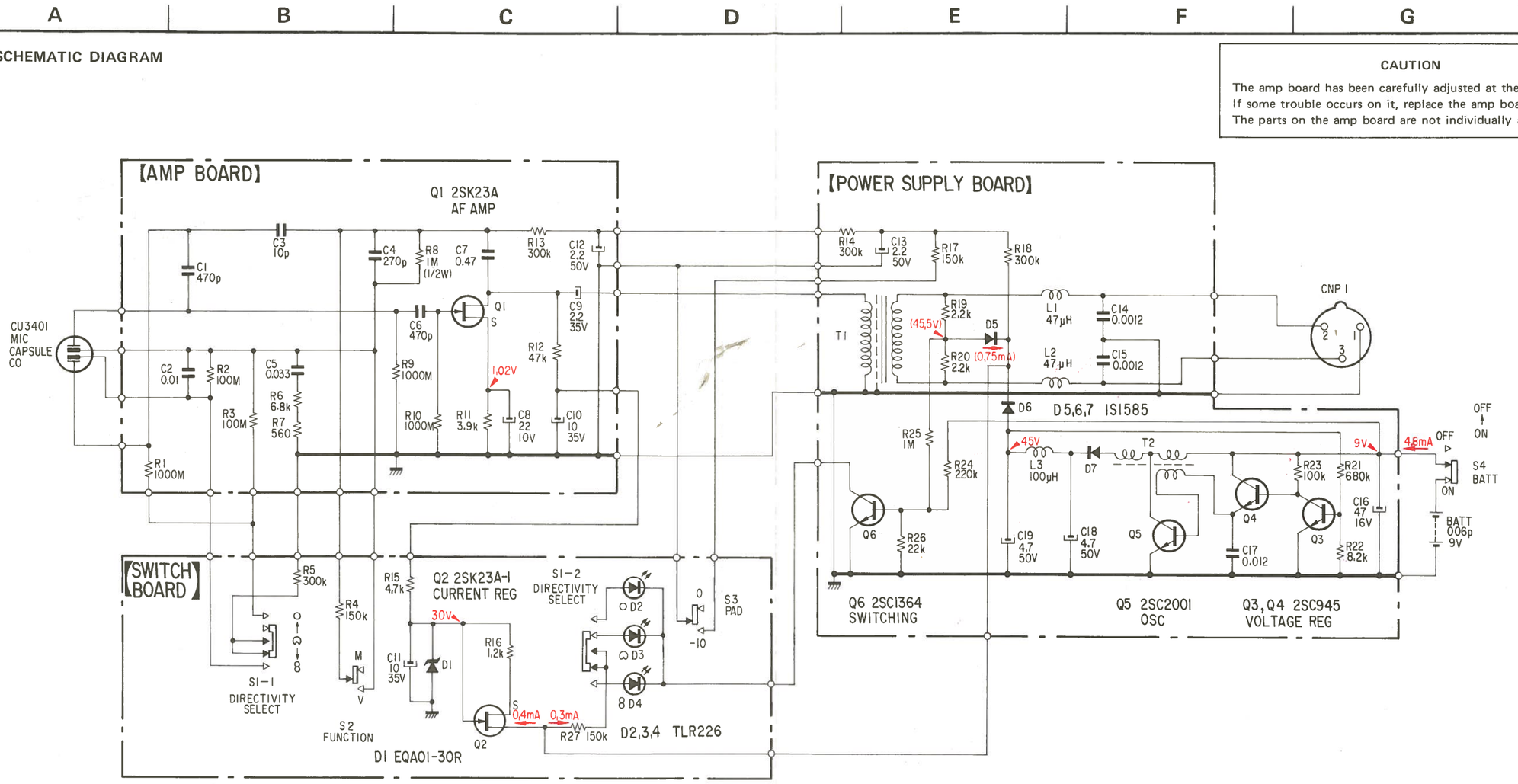


Q	D
1	5
6	6
5	2
4	4.3.2
3	7

2-2. SCHEMATIC DIAGRAM

CAUTION

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

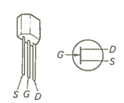
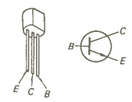
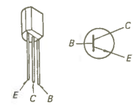
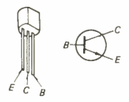
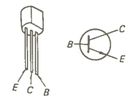
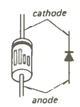
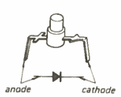
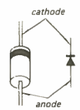


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ: 1000Ω, MΩ: 1000 kΩ
- Voltages are dc with respect to ground unless otherwise noted.
- Readings and currents are taken under no-signal conditions with a VOM (20 kΩ/V).
  ( ) : When power supply unit is used.
- Voltage variations may be noted due to normal production tolerances.

Replacement Semiconductors

For replacement, use semiconductors except in ( ).

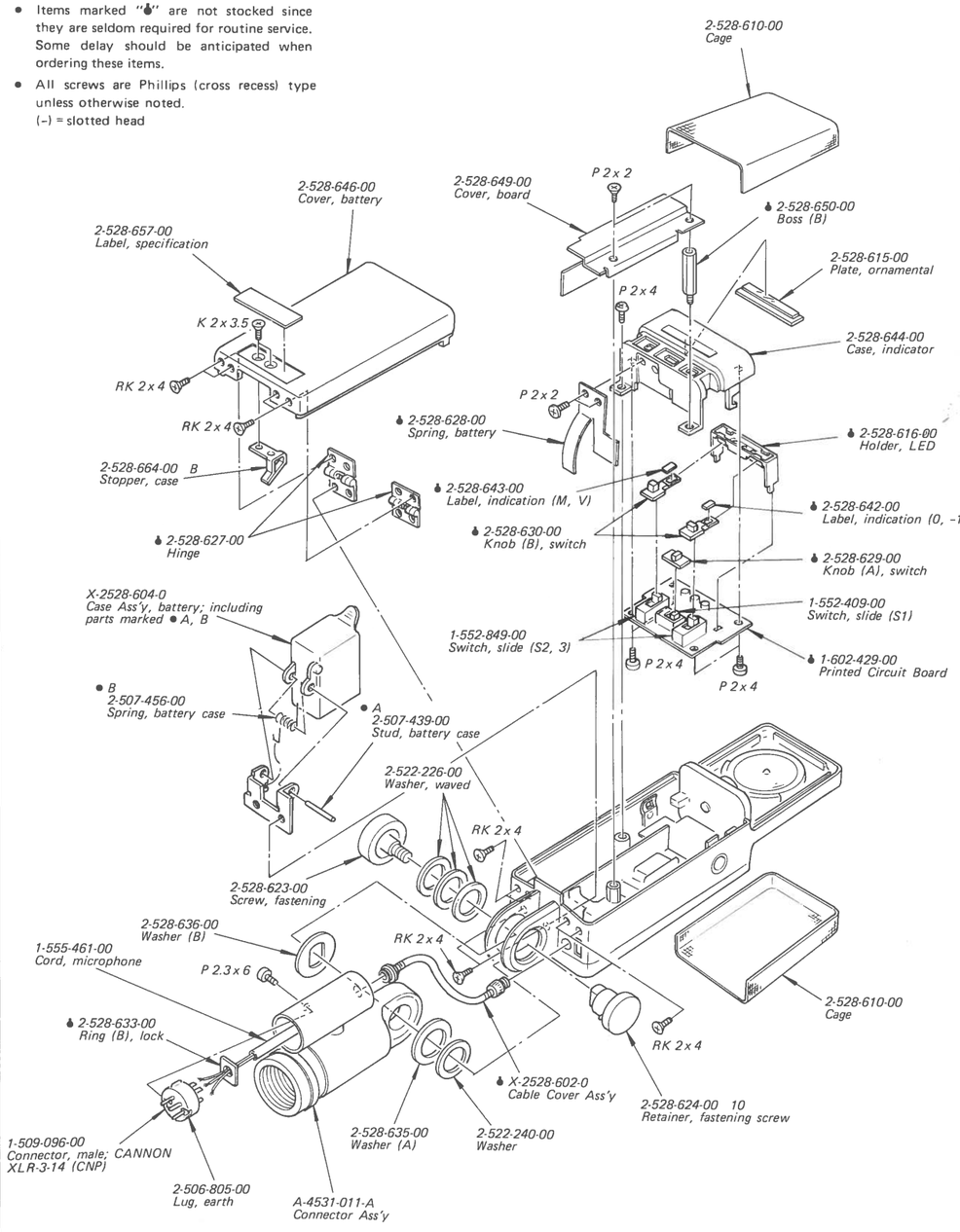
Q2: 2SK23A-1 **T1-3** 	**Q3, 4: 2SC1364** **T3-1** 	(2SC945-P) **T3-5** 	**Q5: 2SC2001 (2SC2001L)** **T3-1** 	**Q6: 2SC1364 (2SC1364-7)** **T3-1** 
D1: EQB01-30 (EQA01-30R) **D1-13** 	**D2–4: TLR226** **D18-3** 		**D5–7: 1S1585** **D1-5** 	

SECTION 3
EXPLODED VIEWS

3-1.

Note:

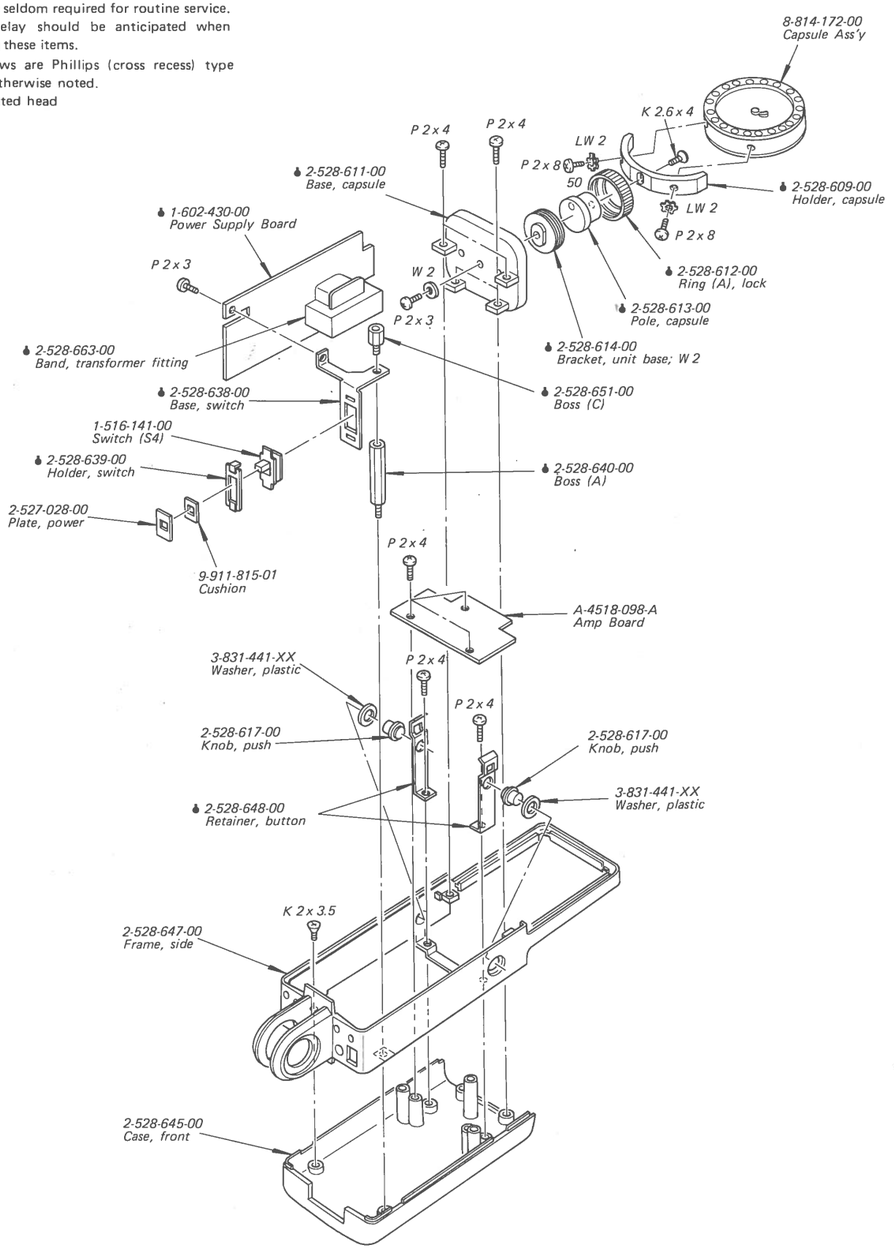
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head



3-2.

Note:

- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head



SECTION 4
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	SEMICONDUCTORS	
	Transistors	
Q2	8-722-361-11	2SK23A-1
Q3,4	8-729-663-47	2SC1364
Q5	8-729-100-13	2SC2001
Q6	8-729-663-47	2SC1364
	Diodes	
D1	8-719-931-30	EQB01-30
D2–4	8-719-812-26	TLR226
D5–7	8-719-815-85	1S1585
	CAPACITORS	
C11	1-131-353-00	10 μF 35 V tantalum
C13	1-131-496-00	2.2 μF 50 V tantalum
	RESISTORS	
R4	1-214-781-00	150 kΩ ¼W 1% metal-oxide
R5	1-214-788-00	300 kΩ ¼W 1% metal-oxide
R14	1-214-788-00	300 kΩ ¼W 1% metal-oxide
R15	1-214-745-00	4.7 kΩ ¼W 1% metal-oxide
R16	1-214-731-00	1.2 kΩ ¼W 1% metal-oxide
R17	1-214-781-00	150 kΩ ¼W 1% metal-oxide
R18	1-214-788-00	300 kΩ ¼W 1% metal-oxide
R19,20	1-214-995-00	2.2 kΩ ¼W 1% metal-oxide
R22	1-246-495-00	8.2 kΩ ¼W 1% carbon
R24	1-214-785-00	220 kΩ ¼W 1% metal-oxide
R25	1-214-964-00	1 MΩ ¼W 1% metal-oxide
R26	1-214-761-00	22 kΩ ¼W 1% metal-oxide
R27	1-214-781-00	150 kΩ ¼W 1% metal-oxide
	MISCELLANEOUS	
CNP	1-509-096-00	Connector, male; CANNON XLR-3-14

Ref. No.	Part No.	Description
L1,2	1-407-165-XX	47 μH, microinductor
L3	1-407-169-XX	100 μH, microinductor
S1	1-552-409-00	Switch, slide
S2,3	1-552-849-00	Switch, slide
S4	1-516-141-00	Switch
T1	1-429-061-00	Microphone Transformer
T2	1-433-226-00	OSC Coil
	A-4518-098-A	Amp Board
	1-555-461-00	Cord, microphone
●	1-602-429-00	Printed Circuit Board
●	1-602-430-00	Power Supply Board

ACCESSORIES AND PACKING MATERIALS

Part No.	Description
X-2528-603-0	Case, carrying
2-052-522-02	Adaptor, screw
2-528-655-00	Carton
2-599-150-11	Manual, instruction (E model)
2-599-150-21	Manual, instruction (US model)
3-701-627-00	Bag, plastic (for microphone)
3-701-628-00	Bag, plastic (for instruction manual)
3-703-050-00	Label, warning
3-794-422-21	Card, warranty
4-022-133-00	Bag, protection

● Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

C-48

Sony Corporation

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