

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: $150\Omega \pm 20\%$ (balanced)

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

Frequency Response: 30 Hz—16,000 Hz

Noise Level: S/N ratio: More than 52 dB (1,000 Hz, 1 μ bar)
Inherent noise: Less than 22 dB SPL
(0 dB = 2×10^{-4} μ bar)
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 direc-
tions on the microphone. The mean value is
obtained and converted to the equivalent input
sound level. (0 dB = 2×10^{-4} μ bar)

*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} μ bar)

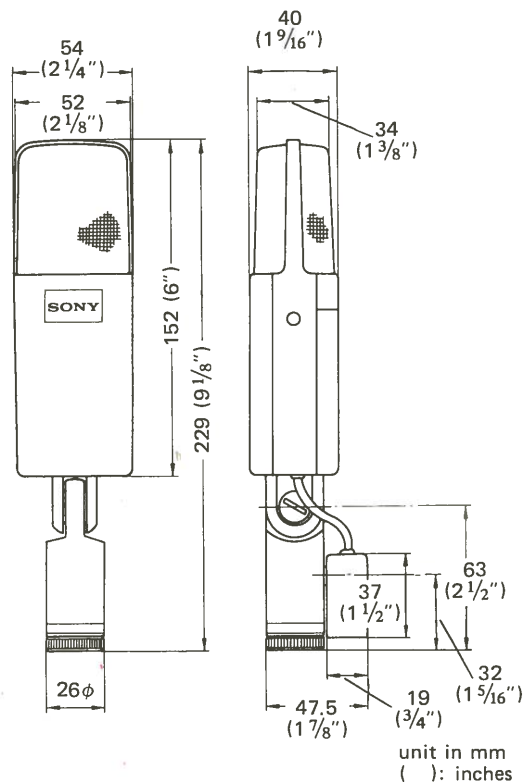
— Continued on next page —

SONY[®]

SERVICE MANUAL

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 = 2×10^{-4} μ bar)
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

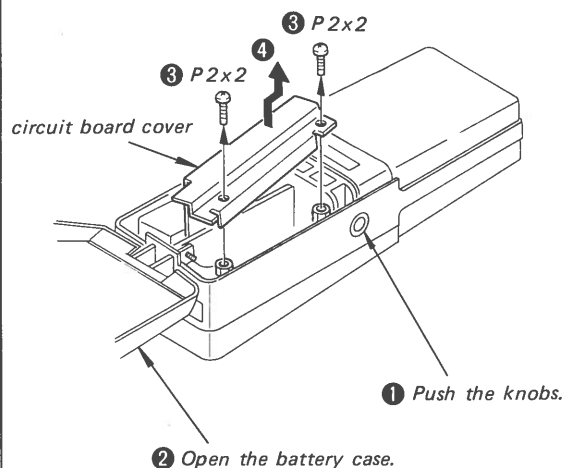
Dimensions:



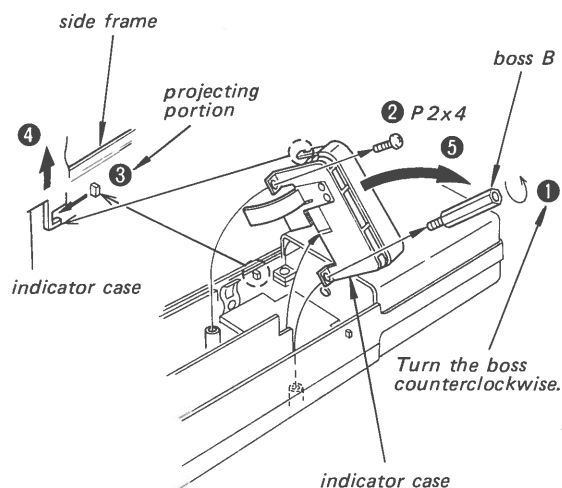
SECTION 1 DISASSEMBLY

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

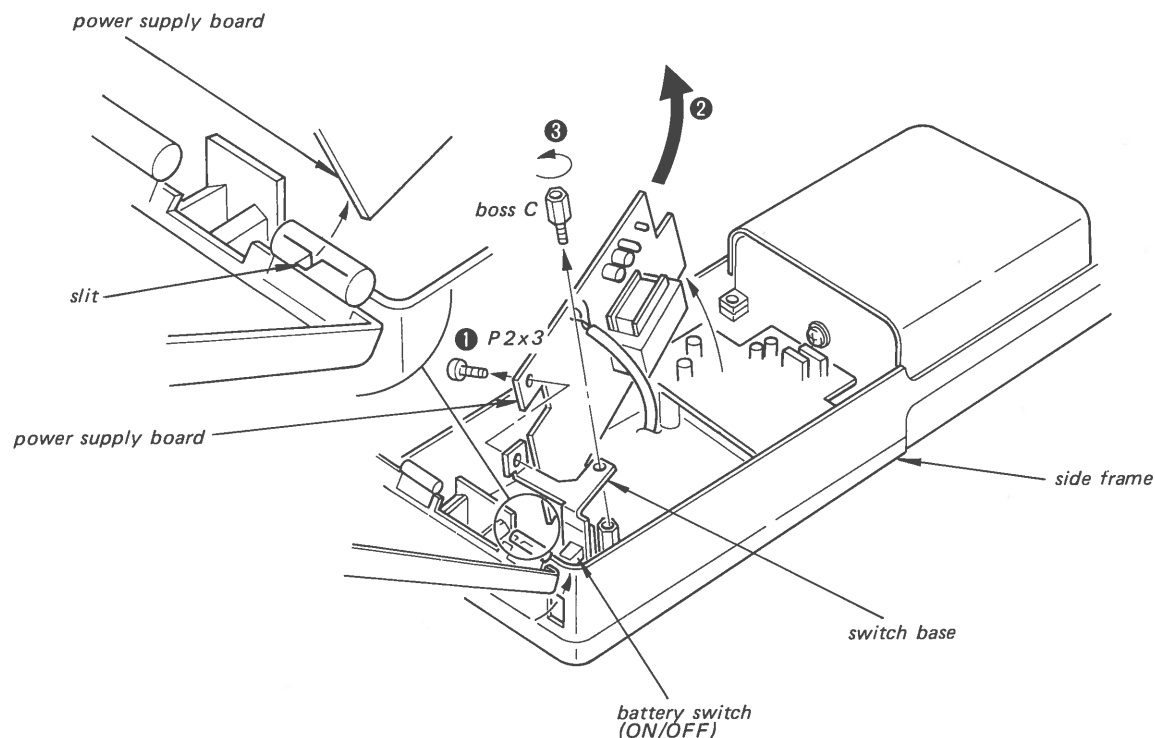
CIRCUIT BOARD COVER REMOVAL



INDICATOR CASE REMOVAL



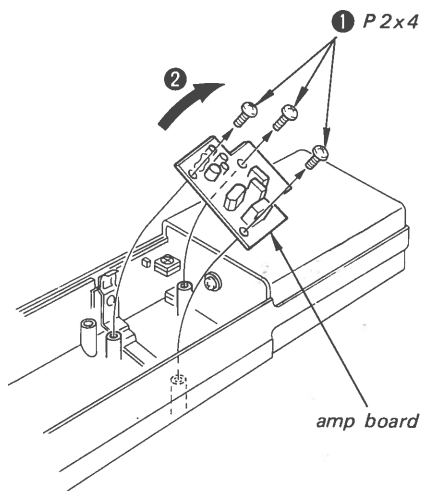
POWER SUPPLY BOARD/BATTERY SWITCH REMOVAL



AMP BOARD REMOVAL

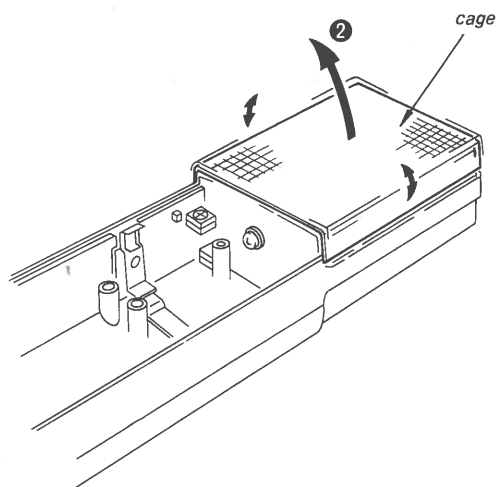
CAUTION

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.

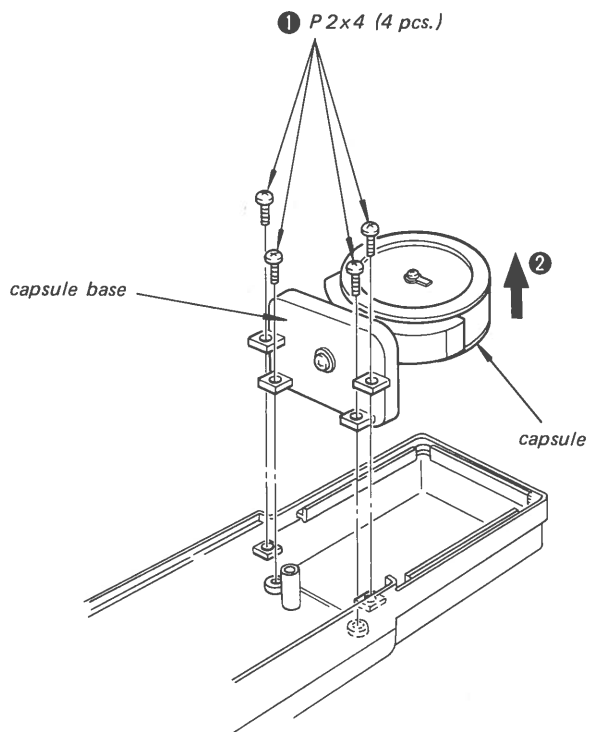


CAGE REMOVAL

- ① As cage is fixed by adhesive cement, remove locking compound.



CAPSULE ASS'Y REMOVAL



SECTION 2

DIAGRAMS

A

B

C

D

2-1. MOUNTING DIAGRAM

Replacement Semiconductors: See pages 7, 8.

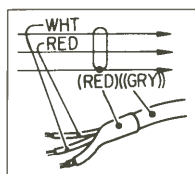
– Conductor Side –

CAUTION

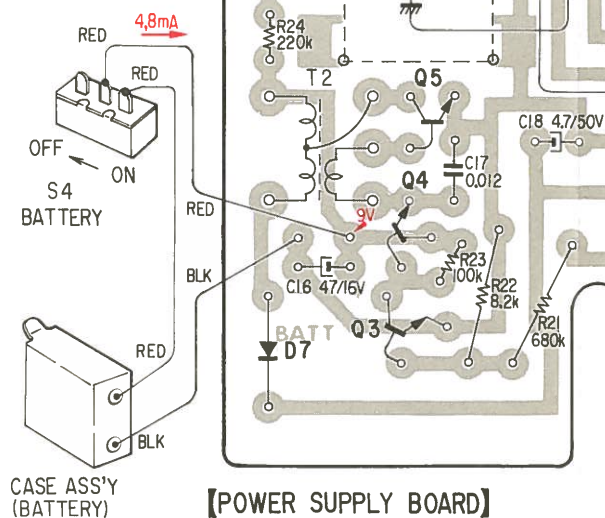
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Note:

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



CU 3401
MIC
CAPSULE
CO

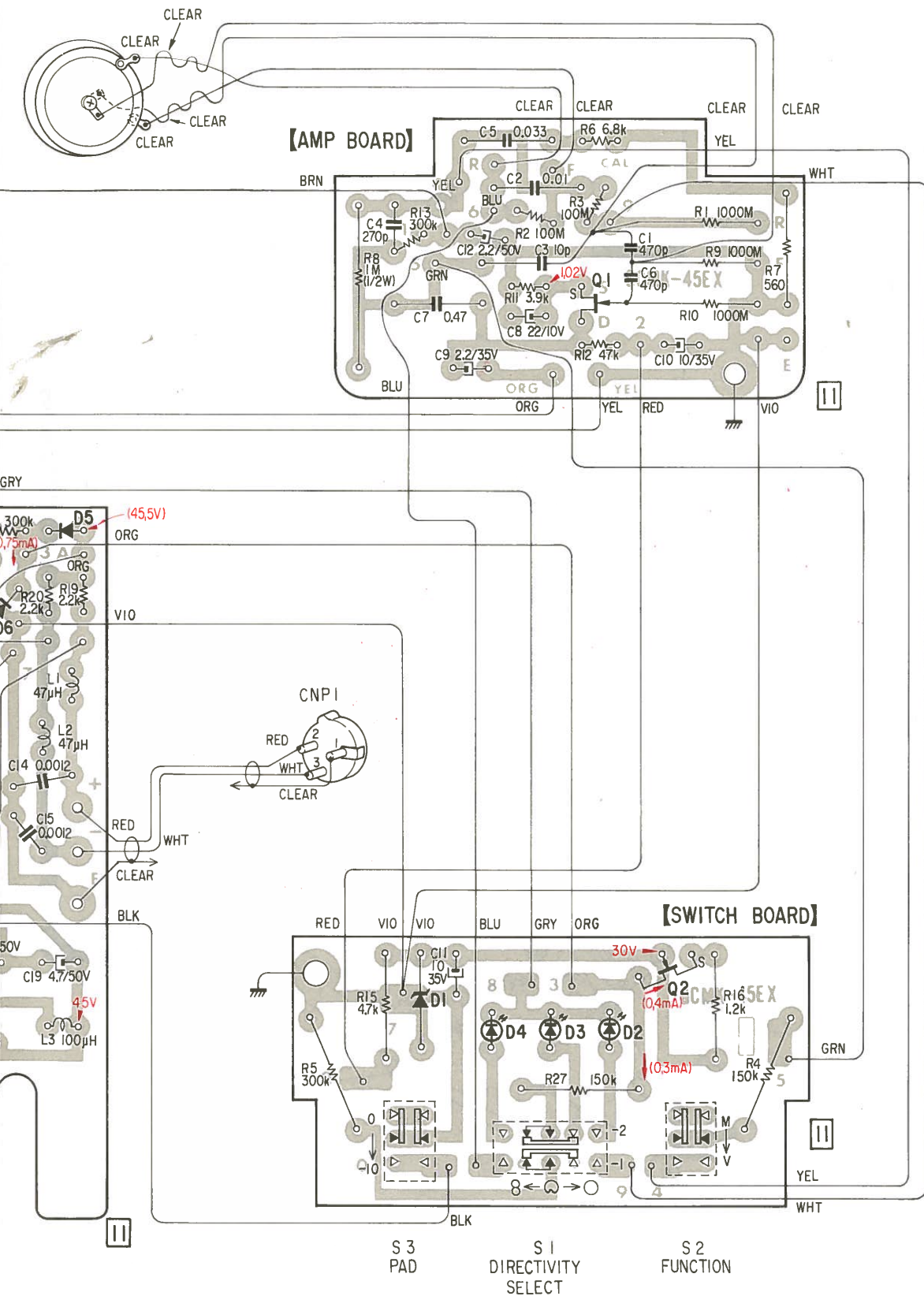


E

F

G

H



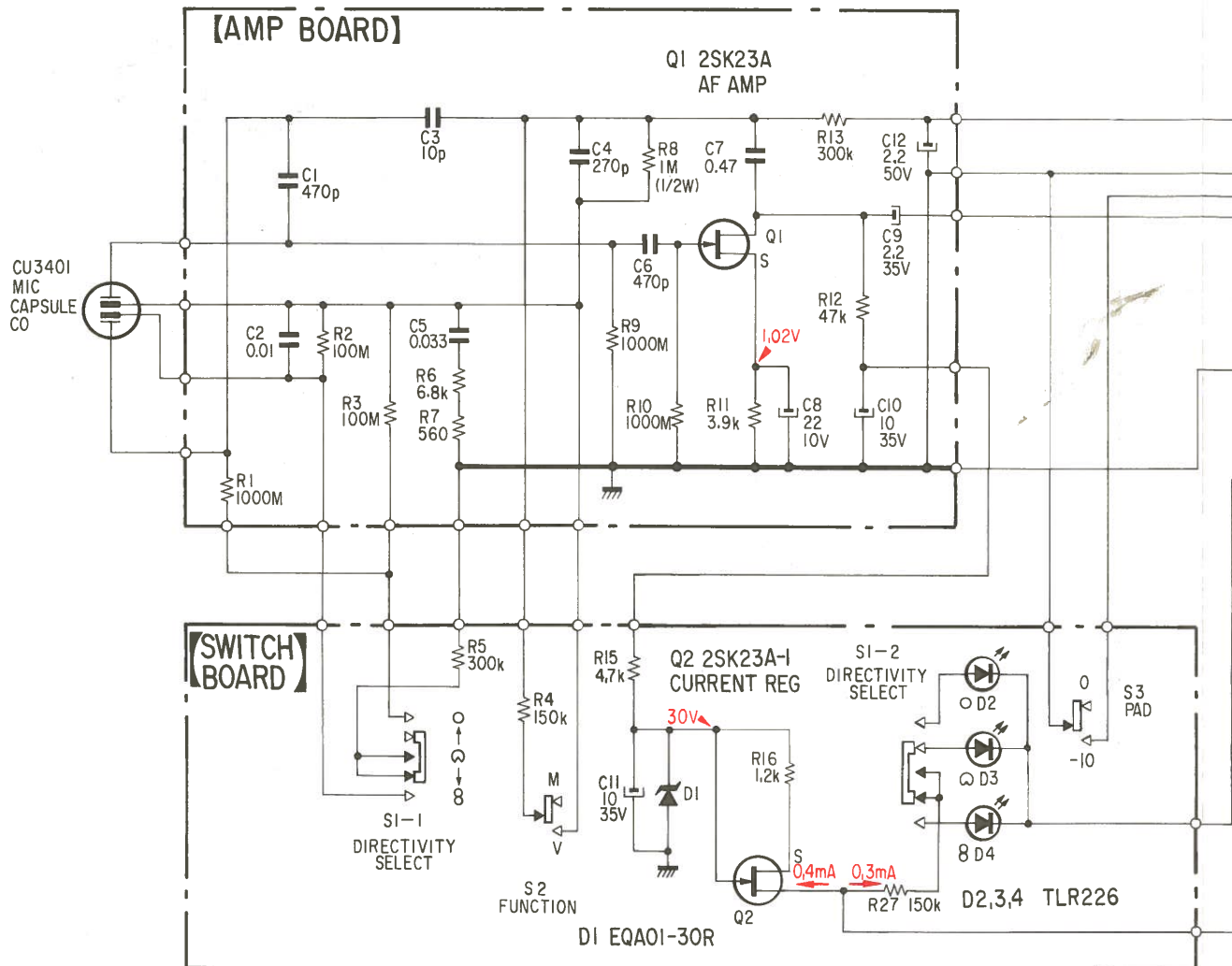
A

B

C

D

2-2. SCHEMATIC DIAGRAM

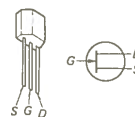
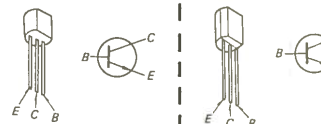
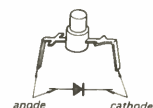


Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k Ω : 1000 Ω , M Ω : 1000 k Ω
- Voltages are dc with respect to ground unless otherwise noted.
- Readings and currents are taken under no-signal conditions with a VOM (20 k Ω /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
T1-3Q3, 4: 2SC1364 (2SC945-P)
T3-1 T3-5D1: EQB01-30 (EQA01-30R)
D1-13D2-4: TL226
D18-3

E

F

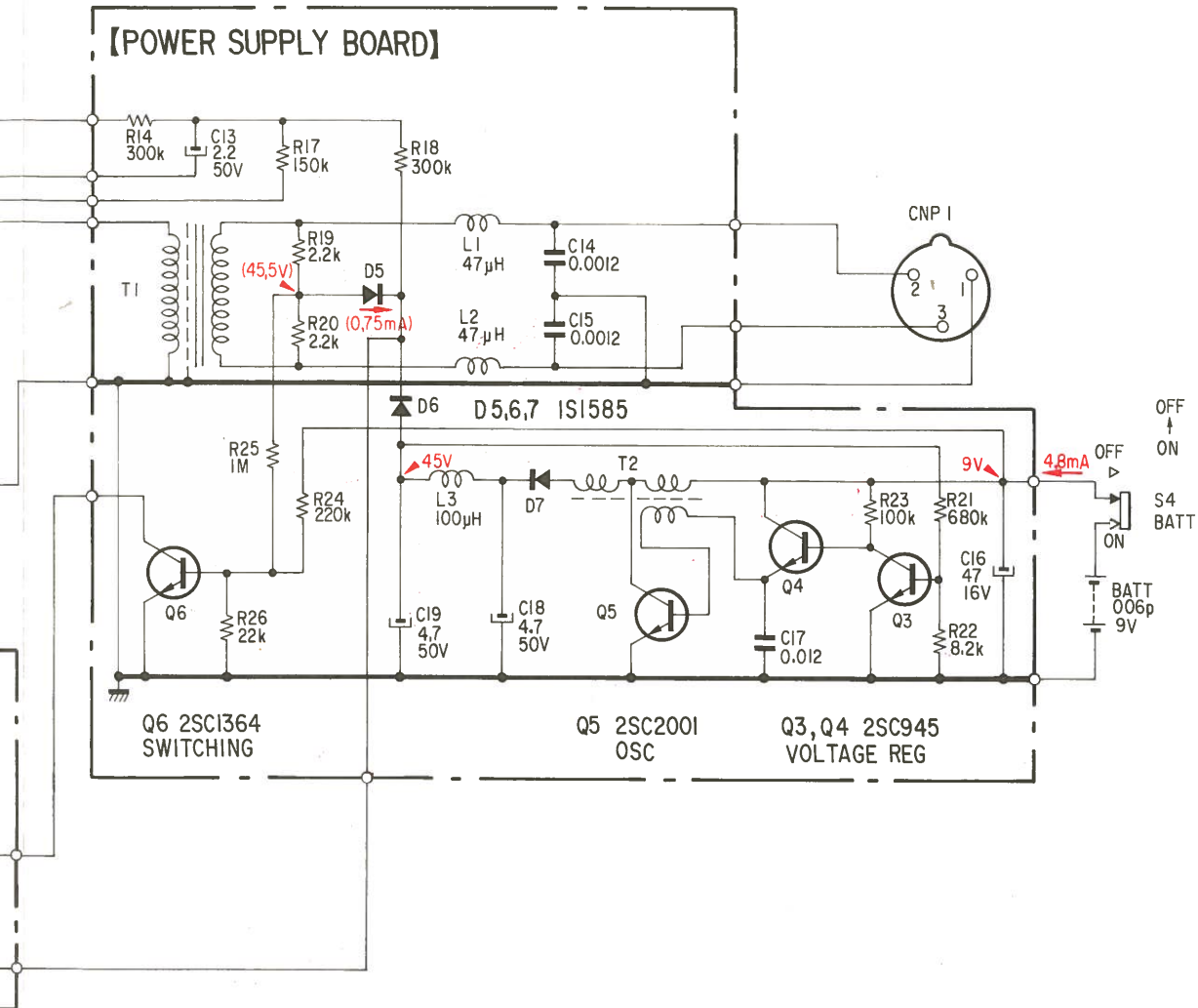
G

H

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.

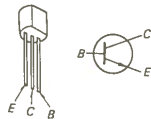
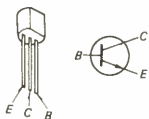
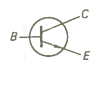
[POWER SUPPLY BOARD]



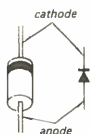
5-P)

**Q5: 2SC2001 (2SC2001L)
T3-1**

**Q6: 2SC1364 (2SC1364-7)
T3-1**



**D5-7: 1S1585
D1-5**



D

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



A

B

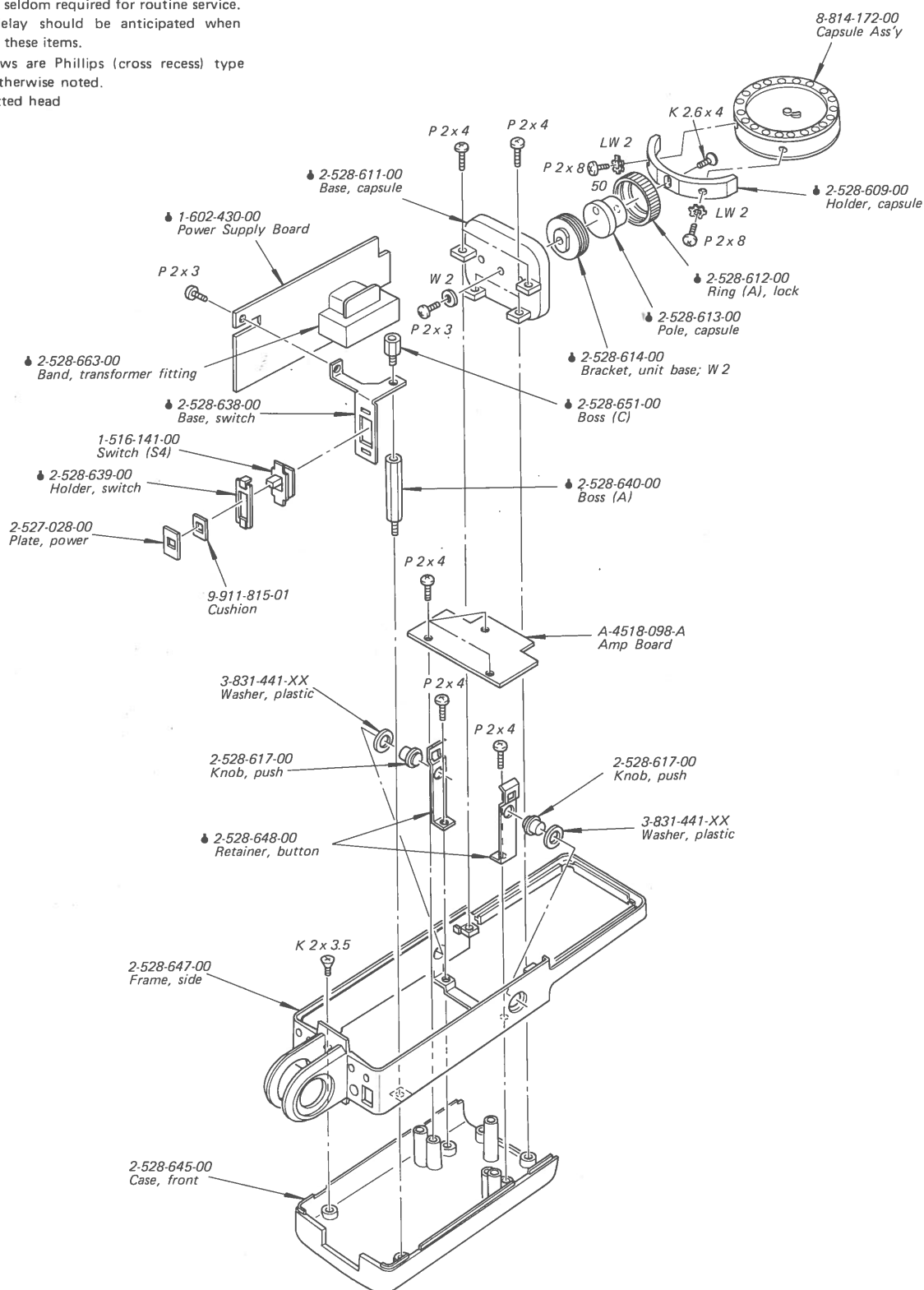
C

D

3-2.

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(-) = 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 μ F	35 V	tantalum
C13	1-131-496-00	2.2 μ F	50 V	tantalum

RESISTORS

R4	1-214-781-00	150 k Ω	¼W	1%	metal-oxide
R5	1-214-788-00	300 k Ω	¼W	1%	metal-oxide
R14	1-214-788-00	300 k Ω	¼W	1%	metal-oxide
R15	1-214-745-00	4.7 k Ω	¼W	1%	metal-oxide
R16	1-214-731-00	1.2 k Ω	¼W	1%	metal-oxide
R17	1-214-781-00	150 k Ω	¼W	1%	metal-oxide
R18	1-214-788-00	300 k Ω	¼W	1%	metal-oxide
R19,20	1-214-995-00	2.2 k Ω	¼W	1%	metal-oxide
R22	1-246-495-00	8.2 k Ω	¼W	1%	carbon
R24	1-214-785-00	220 k Ω	¼W	1%	metal-oxide
R25	1-214-964-00	1 M Ω	¼W	1%	metal-oxide
R26	1-214-761-00	22 k Ω	¼W	1%	metal-oxide
R27	1-214-781-00	150 k Ω	¼W	1%	metal-oxide

MISCELLANEOUS

CNP	1-509-096-00	Connector, male; CANNON XLR-3-14
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Ref. No. Part No. Description

L1,2	1-407-165-XX	47 μ H, microinductor
L3	1-407-169-XX	100 μ H, 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

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