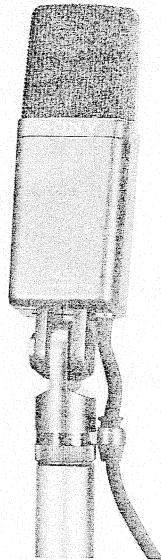


SERVICE MANUAL



*AEP Model
UK Model
E Model*

• Microphone stand is optional.

SPECIFICATIONS

General

Type	Condenser microphone
Battery	IEC designation R6 (size AA) battery
Microphone cable output connector	Cannon XLR-3-12C type
Dimensions	50 × 197 × 34 mm (w/h/d) (2 × 7 ⁷ / ₈ × 1 ³ / ₈ inches)
Weight	Approx. 780 g (1 lb 12 oz) not incl. battery Approx. 800 g (1 lb 13 oz) incl. battery
Finish	Metallic silver gray finish

Performance

Frequency response	20–20,000 Hz
Directivity	Cardioid
Output impedance	200 ohms ±20%, balanced
Output level (deviation ±2 dB)	Open circuit voltage: –72 dB (0.25 mV) (0 dB = 1 V/μbar, 1,000 Hz) (1 μbar = 0.1 Pascal) Effective output level: –51 dBm (0 dBm = 1 mW/10 μbar, 1,000 Hz) Recommended load impedance is more than 3 kilohms.

Power requirements	Battery operation Normal operating voltage: 1.5 V Minimum operating voltage: Approx. 1.1 V Current drain: Less than 7.0 mA (at normal operating voltage) Battery life: Approx. 100 hours with Sony SUM-3(NS) New Super battery External power operation DC 48 V
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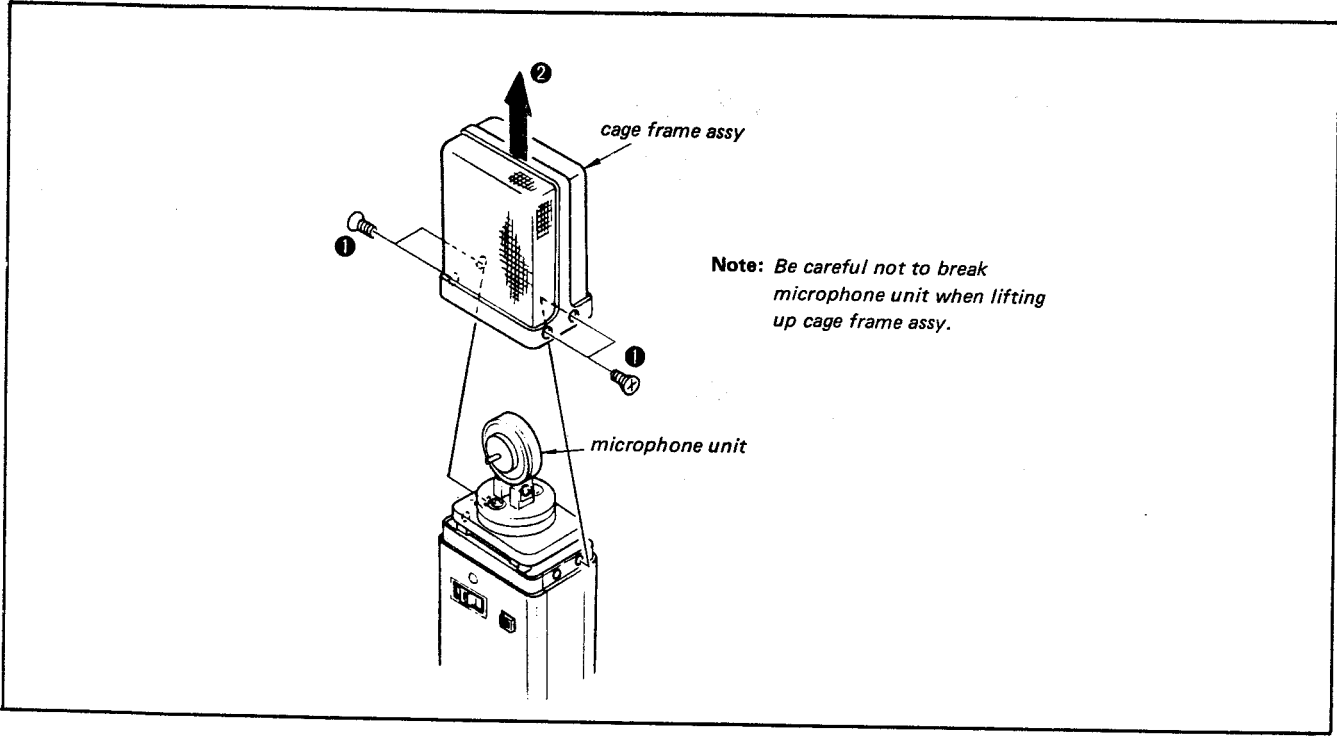
Noise level	Signal-to-noise ratio (with the use on the internal battery) More than 52 dB (1,000 Hz, 1 μbar) Inherent noise (with the use on the internal battery) Less than 22 dB SPL (0 dB SPL = 2 × 10 ^{–4} μbar) Wind noise * ¹ Less than 42 dB SPL Induction noise from external magnetic field * ² 5 dB SPL/m gauss
	* ¹ Wind noise is the value measured by applying a wind velocity of 2 m/sec. (6.6 ft./sec.) 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 an alternating magnetic field of 50 Hz, 1 milligauss. The maximum noise value is taken and converted to the equivalent input sound level. 0 dB = 2 × 10 ^{–4} μbar
	Maximum sound pressure input level More than 138 dB SPL (at 1,000 Hz, 1% distortion)
	Dynamic range More than 116 dB (with the use on internal battery)
	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



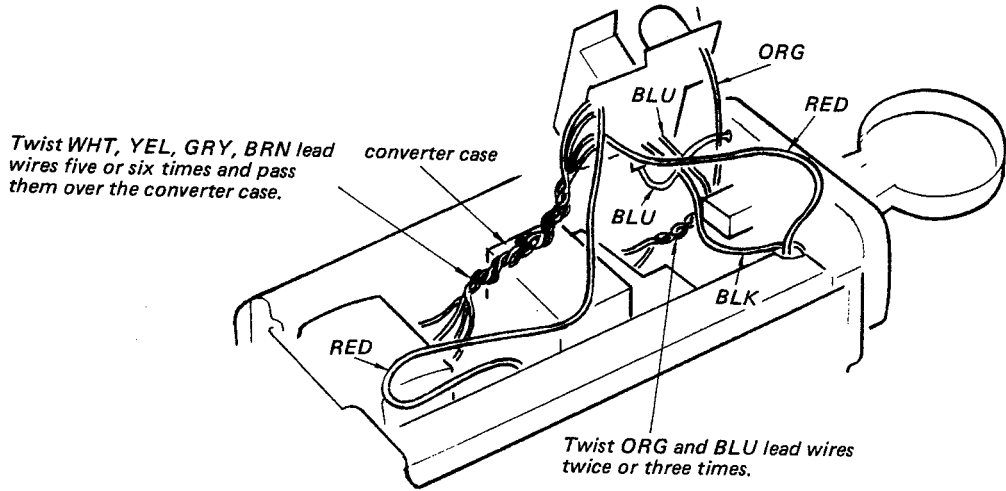
CONDENSER MICROPHONE
SONY®

1. CAGE FRAME ASSY REMOVAL

Note: Follow the disassembly procedure in the numerical order given.



2. LEAD WIRES ARRANGEMENT

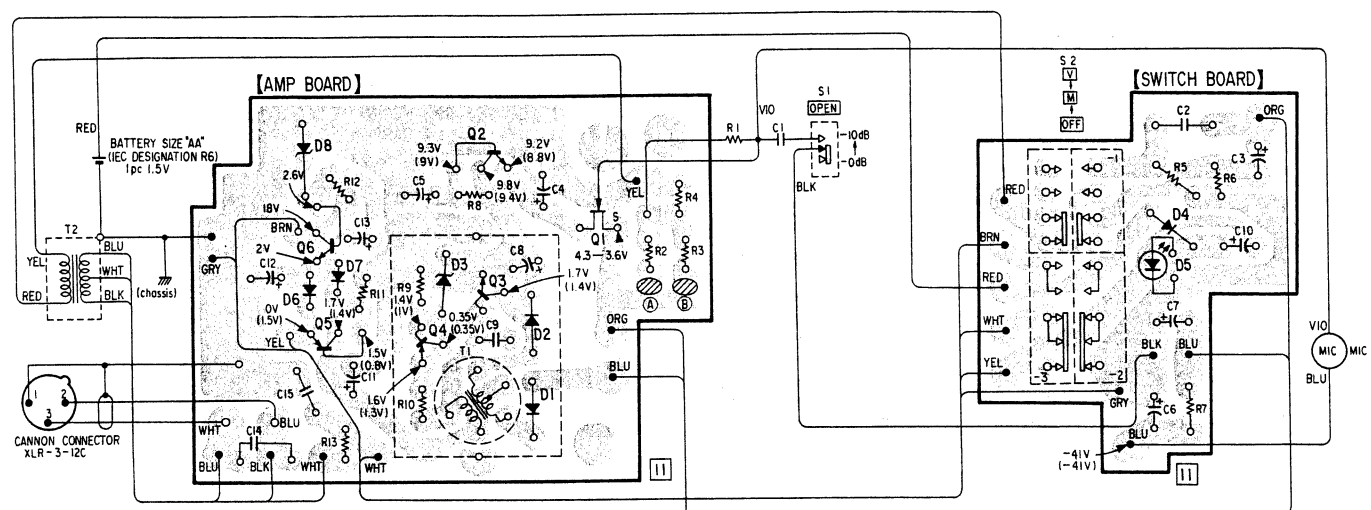


• Semiconductor Lead Layouts

1S1555 HZ2CLL RD8.2EB3 11DQ03 cathode anode	2SK30A-0 S G D	2SA1175 2SC2784 letter side E C B	2SA733-P 2SC2001 E C B	SR605C long short anode cathode
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3. MOUNTING DIAGRAM — Conductor Side —

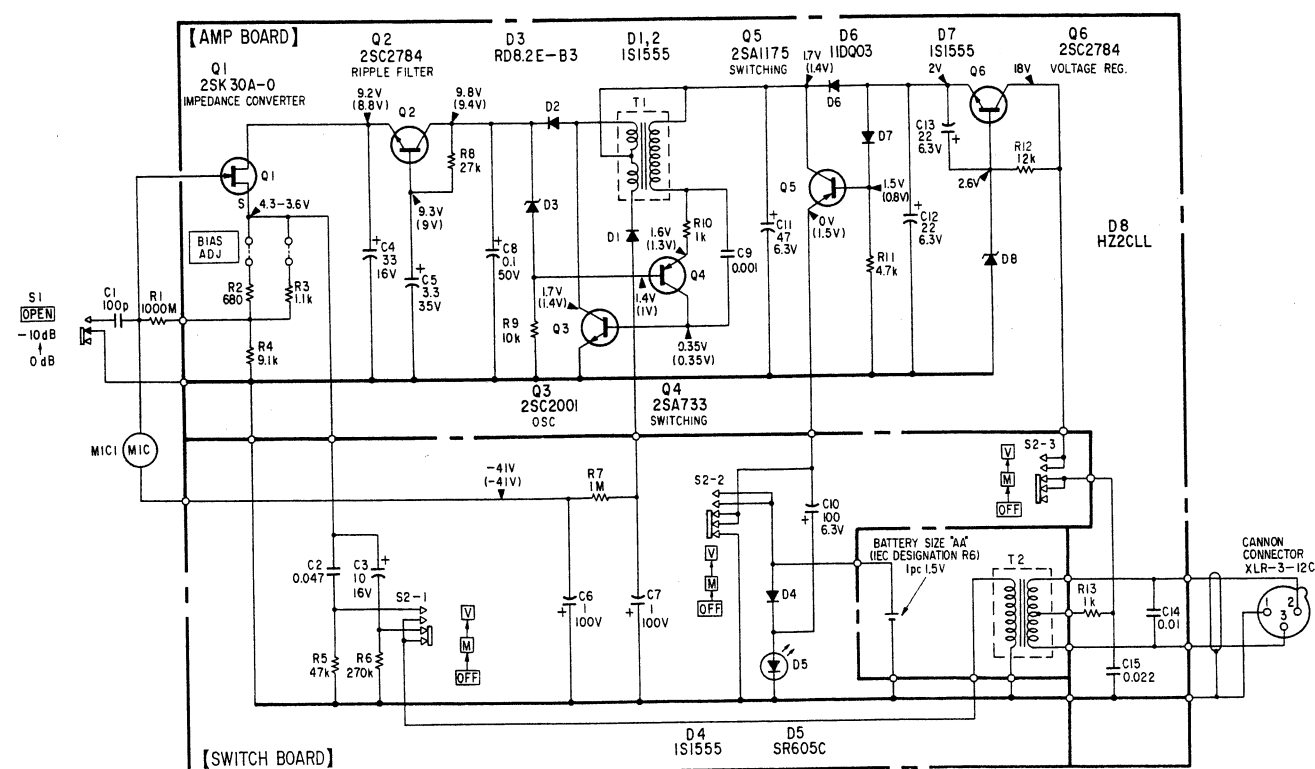
Q	6	5	4	2	3	1	Q
D	8	7	3	2	1	4	D
	6	7				5	



- Note:**
- : parts extracted from the component side.
 - : parts extracted from the conductor side.

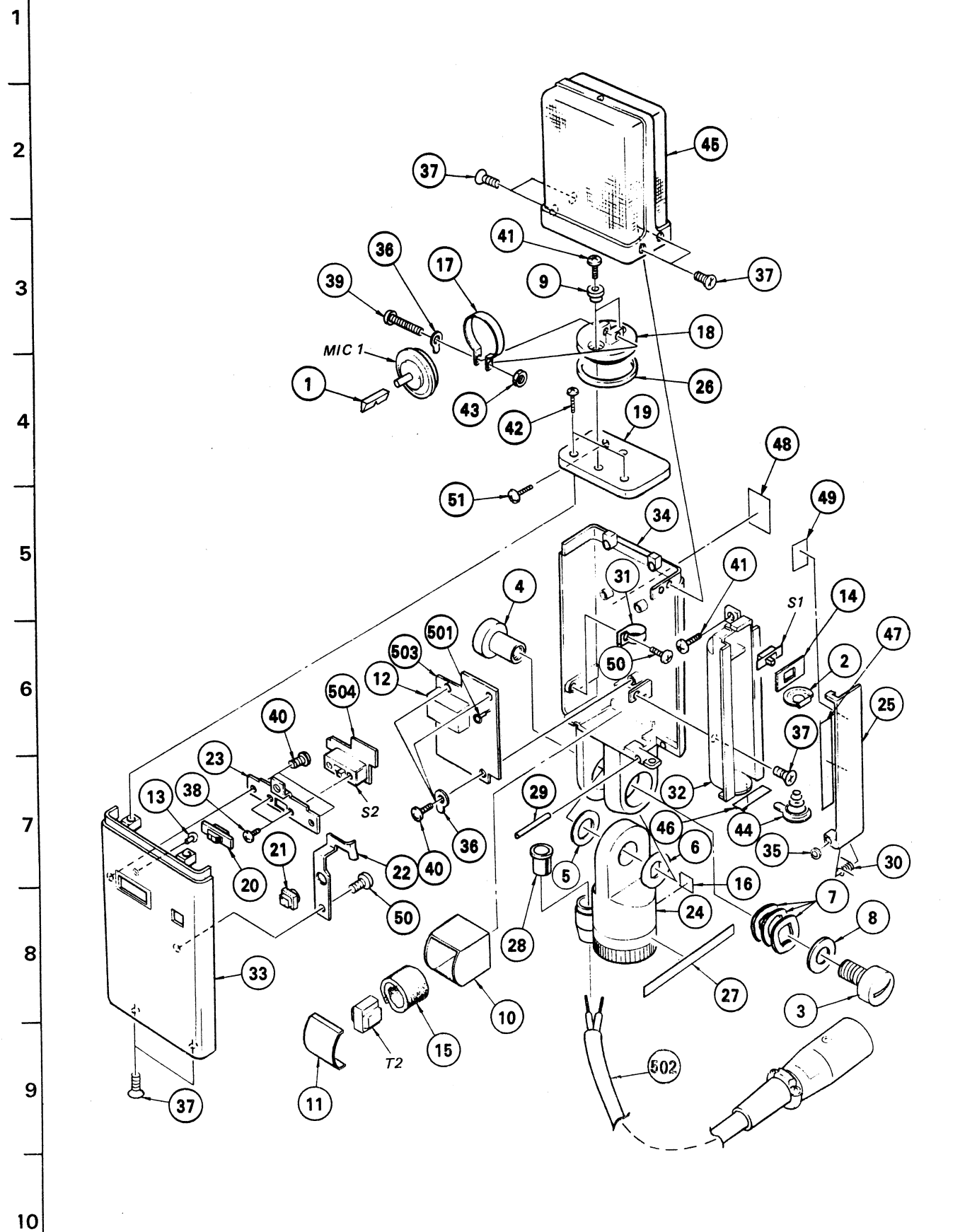
Q1 Bias Adjustment	
Source potential of Q1 when connecting patterns (A), (B).	
Less than 4.3V	Connect the patterns (A), (B).
4.3V—5.3V	Connect the pattern (A) only.
More than 5.3V	Connect the pattern (B) only.

4. 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 Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
(): measured with dry battery.
no mark: measured with external power supply.
 - Voltage variations may be noted due to normal production tolerances.

5. EXPLODED VIEW



6. PARTS LIST

GENERAL SECTION		
No.	Part No.	Description
1	2-523-713-00	TERMINAL
2	2-520-113-00	BOARD, TERMINAL, POSITIVE
3	2-535-624-01	SCREW (A), FASTENING
4	2-522-214-11	SCREW (B), FASTENING
5	*2-522-215-00	WASHER (A), NYLON
6	*2-522-219-00	WASHER, NYLON (B)
7	2-522-226-00	WASHER, (MIDDLE)
8	2-522-240-00	WASHER
9	2-529-729-00	CUSHION (B), BASE
10	*2-535-111-00	CASE, SHIELD
11	*2-535-112-00	LID, SHIELD CASE
12	*2-535-113-00	CASE, CONVERTER
13	*2-535-114-00	COVER, LED
14	2-535-120-00	LABEL, PAD
15	*2-535-123-00	PACKING
16	2-535-134-01	SEAL, DIGITAL
17	*2-535-603-01	BELT, CAPSULE
18	*2-535-604-01	HOLDER, CAPSULE
19	*2-535-605-01	BASE, CAPSULE
20	2-535-606-01	KNOB, SWITCH
21	2-535-607-01	PUSH BUTTON
22	2-535-608-01	RETAINER, BUTTON
23	*2-535-609-01	HOLDER, SWITCH
24	2-535-610-01	POLE, STAND
25	2-535-611-01	COVER, BATTERY
26	*2-535-612-01	CUSHION (A), BASE
27	*2-535-613-01	LABEL, MODEL NUMBER
28	2-535-614-01	BUSHING, FREE
29	2-535-615-01	PIN
30	2-535-616-01	SPRING, TORSION
31	*2-535-617-01	CLAMP, CABLE
32	2-535-618-01	CASE, BATTERY
33	2-535-619-01	CASE, BACK
34	2-535-620-01	CASE, FRONT
35	3-302-553-00	RESERVOIR, OIL
36	7-623-505-01	LUG 2
37	7-627-652-18	SCREW, PRECISION +RK 2X3
38	7-627-552-08	SCREW, PRECISION +P 1.7X2.5
39	7-621-255-85	SCREW +P 2X14
40	7-621-255-20	SCREW +P 2X4
41	7-621-283-10	SCREW +P 2X10
42	7-627-553-98	SCREW, PRECISION +P 2X8
43	7-622-205-05	NUT M2 TYPE2
44	X-2523-006-0	TERMINAL ASSY, NEGATIVE
45	X-2535-601-1	FRAME ASSY, CAGE

NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

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

GENERAL SECTION		
No.	Part No.	Description
46	X-2535-603-1	CUSHION (B) ASSY
47	*X-2535-602-2	CUSHION (A) ASSY
48	3-703-708-11	STICKER, SONY SYMBOL (18)
49	3-880-032-00	LABEL
50	7-621-255-10	SCREW +P 2X3
51	7-621-255-40	SCREW +P 2X6

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-557-150-11	CORD, MICROPHONE (2 CORE)
82	2-100-951-00	ADAPTER, SCREW, STAND, SAD-34
83	2-100-952-00	ADAPTER, SCREW, STAND (SAD-35)
84	2-535-623-01	CASE, ORNAMENTAL
85	2-599-226-11	MANUAL, INSTRUCTION
86	3-701-622-00	BAG, POLYETHYLENE
87	3-793-557-11	INSTRUCTION

ELECTRICAL PARTS		
Ref.No.	Part No.	Description
501	1-535-240-00	TERMINAL, HERMETIC
502	1-557-148-11	CABLE, MICROPHONE (2 CORE)
503	*1-611-656-11	PC BOARD, AMPLIFIER
504	*1-611-657-11	PC BOARD, SWITCH
C1	1-102-973-00	CERAMIC 100PF 5% 50V
C2	1-130-491-00	MYLAR 0.047MF 5% 50V
C3	1-123-617-00	ELECT 10MF 20% 16V
C4	1-123-318-00	ELECT 33MF 20% 16V
C5	1-123-613-00	ELECT 3.3MF 20% 35V
C6	1-123-380-00	ELECT 1MF 20% 100V
C7	1-123-380-00	ELECT 1MF 20% 100V
C8	1-123-607-00	ELECT 0.1MF 20% 50V
C9	1-161-190-00	CERAMIC 0.001MF 10% 25V
C10	1-123-661-00	ELECT 100MF 20% 6.3V
C11	1-131-387-00	TANTALUM 47MF 20% 6.3V
C12	1-131-385-00	TANTALUM 22MF 20% 6.3V
C13	1-123-618-00	ELECT 22MF 20% 6.3V
C14	1-130-516-00	MYLAR 0.01MF 10% 50V
C15	1-136-157-00	MYLAR 0.022MF 10% 50V
D1	8-719-815-55	DIODE 1S1555
D2	8-719-815-55	DIODE 1S1555
D3	8-719-100-49	DIODE RD8.2EB3
D4	8-719-815-55	DIODE 1S1555
D5	8-719-160-52	DIODE SR605C
D6	8-719-200-08	DIODE 11DQ03
D7	8-719-815-55	DIODE 1S1555
D8	8-719-921-13	DIODE HZ2CLL
MIC1	8-814-179-00	MICROPHONE UNIT (CU24-01)
Q1	8-729-203-02	TRANSISTOR 2SK30A-0
Q2	8-729-178-43	TRANSISTOR 2SC2784
Q3	8-729-100-13	TRANSISTOR 2SC2001
Q4	8-729-173-37	TRANSISTOR 2SA733-P
Q5	8-729-117-54	TRANSISTOR 2SA1175
Q6	8-729-178-43	TRANSISTOR 2SC2784

NOTE:

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

If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μF.

RESISTORS

All resistors are in ohms.
F: nonflammable

COILS

MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ, for example:

UA....: μA..., UPA....: μPA..., UPC....: μPC,
UPD....: μPD...

Sony Corporation

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