

ECM-MS957

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
E Model*



SPECIFICATIONS

General

Type	One-point stereo (employing the Mid-side stereo system), electret condenser microphone
Microphone cord	4 mm diameter, two core-shielded OFC (Oxygen-free copper) cord with Canon XLR-5-12C type connector and gold plated L-shaped stereo miniplug
Stand screw	PF 1/2 screw
Dimensions	Approx. 40 × 183 mm (diameter × length) (1 5/8 × 7 1/4 in.), projecting parts and controls not included.
Mass	Approx. 330 g (11.7 oz.) including battery and cord
Supplied accessories	Wind screen (1) Microphone holder (PF 1/2 screw) (1) Microphone stand (1) Carrying case (1)

Performance

Frequency response	50 - 18,000 Hz
Directivity	Unidirectional × 2 (Directive angle : 90° or 120°) (switchable)
Output impedance	600 ohm ± 30% unbalanced
Sensitivity (directive angle 120°)	Open circuit output voltage *1 : -42 ± 3 dB Effective output level *2 : -45.8 ± 3 dBm Difference between L and R channel sensitivity : Less than 3 dB
Power requirements	Normal operating voltage : 1.5 V, R6 (Size AA) battery Minimum operating voltage : 1.1 V, R6 (Size AA) battery Battery life : Approx. 2,000 hours with Sony R6P (SR) battery
Maximum sound pressure level input *3	More than 115 dB SPL
Dynamic range	More than 90 dB
Operating temperature range	0°C - 40°C (32°F - 104°F)

*1 0 dB = 1 v/Pa, 1,000 Hz (1 Pa = 10 µbar = 94 dB SPL)

*2 0 dBm = 1 mW/Pa, 1,000 Hz

*3 1% wave distortion at 1,000 Hz (0 dB SPL = 2 × 10⁻⁵ Pa)

Design and specifications are subject to change without notice.

FEATURES

This microphone is suitable for use in a variety of situations such as at concerts or conferences with digital recording equipment (Sony DAT, MD, NT (Digital Microcorder), etc.).

- The turning capsule function allows both vertical and horizontal sound pick-up.
- The Mid-Side Stereo System provides a natural sound pick-up, delivering a stereo sound image with superb clarity.
- The directive angle (between left and right channels) can be set to 90° or 120° according to the sound source.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

ELECTRET CONDENSER STEREO MICROPHONE

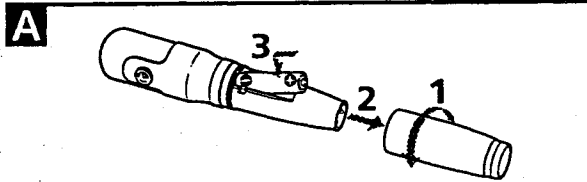
SONY®



SECTION 1 GENERAL

This section is extracted from instruction manual.

English



Installing the battery (See fig. A)

- 1 Turn the grip counterclockwise.
- 2 Pull out the grip to open the battery compartment.
- 3 Insert a new R6 (size AA) battery.

Battery life

When the power is turned on, the battery check indicator lights momentarily. When the battery becomes weak, the indicator remains dimly lit or does not light at all. In this case, replace the battery with a new one. The Sony R6P(SR) manganese battery gives continuous operation of the microphone for about 2,000 hours.

Notes on battery

To avoid damage to the unit from leakage and corrosion:

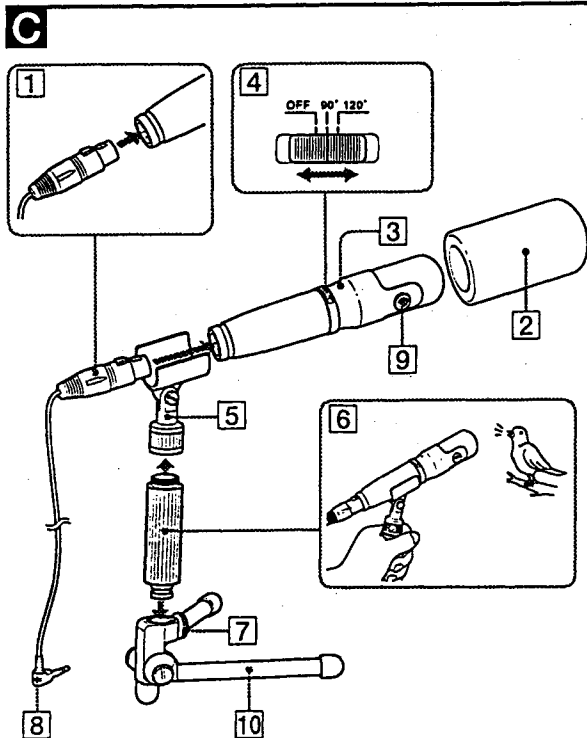
- Be sure to match the \oplus and \ominus on the battery with the same marks on the battery compartment.
- Do not try to recharge battery.
- Remove the battery if the microphone is not to be used for a long period of time.

In case of battery leakage, wipe off any deposit in the battery compartment before installing a new battery.



Connection (See fig. B)

Connect the L-shaped stereo miniplug to the MIC jack of your recording equipment (MD, DAT, etc.) as illustrated in fig. B.



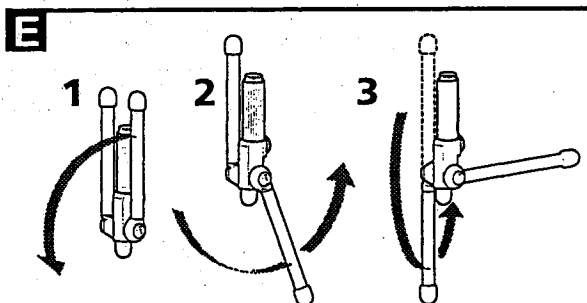
Parts Identification and Uses (See fig. C)

- 1 Connector**
Insert the connector in until it clicks. Remove the connector by pressing the button.
- 2 Wind screen**
Attach in order to reduce wind or breathing noise.
- 3 Battery check indicator**
When the power/directive angle switch is turned from OFF to ON, this indicator lights momentarily. When the battery becomes weak, the indicator remains dimly lit or does not light at all. In this case, replace the battery with a new one.
- 4 Power/directive angle switch**
Set the switch according to the sound source.

OFF	Turns power off.
90°	Use to pick up a relatively near, narrower sound source (instrumental solo, birds or insects' chirp, etc.)
120°	Use to pick up a relatively distant, wider sound source (orchestra, chorus, train, car race, etc.)

The above gives guidelines for selecting the appropriate angle. Although following those guidelines is encouraged, you can freely choose either angle according to your own preference.

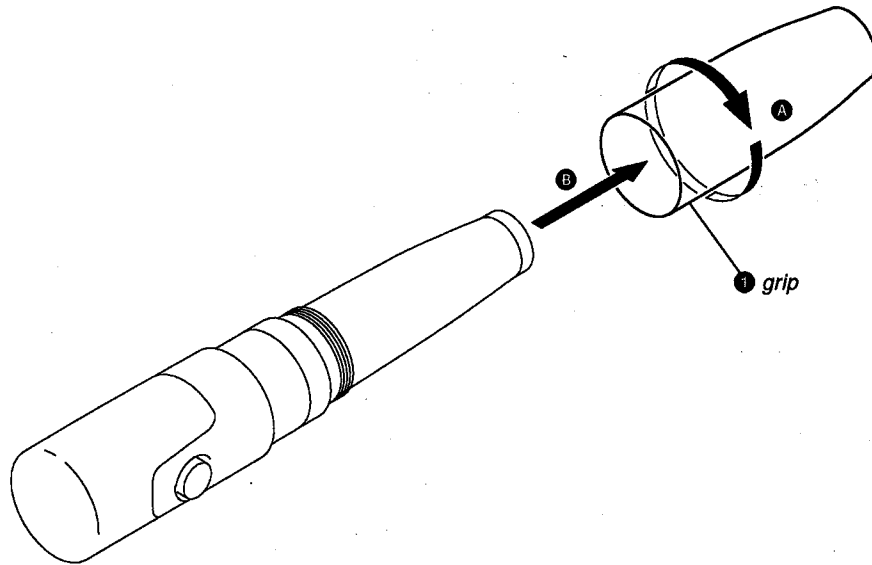
- 5 Microphone holder**
You can also connect to a microphone stand (PF 1/3) (optional).
- 6 Grip**
As shown in the illustration, it can be used as a handy microphone. Loosen the screw and detach the grip from the microphone stand.
- 7 Screw**
Tighten the screw after setting the direction of the microphone.
- 8 L-shaped stereo miniplug**
Connect to the MIC jack of your recording equipment (DAT, MD, NT, etc.)
- 9 Turning capsule button (See fig. D)**
Set the turning capsule button according to the direction of the sound source. As shown in the illustration, set the microphone head toward the sound source by pressing the turning capsule button.
 - ⓐ Using the microphone vertically
This position makes a more accurate sound pick-up. Use this position after monitoring and adjusting the sound quality of your recording equipment.
 - ⓑ Using the microphone horizontally
This position makes for a successful sound pick-up without any fine adjustments.
- 10 Microphone stand (See fig. E)**
As shown in the illustration, spread out the legs to use the stand.



SECTION 2 DISASSEMBLY

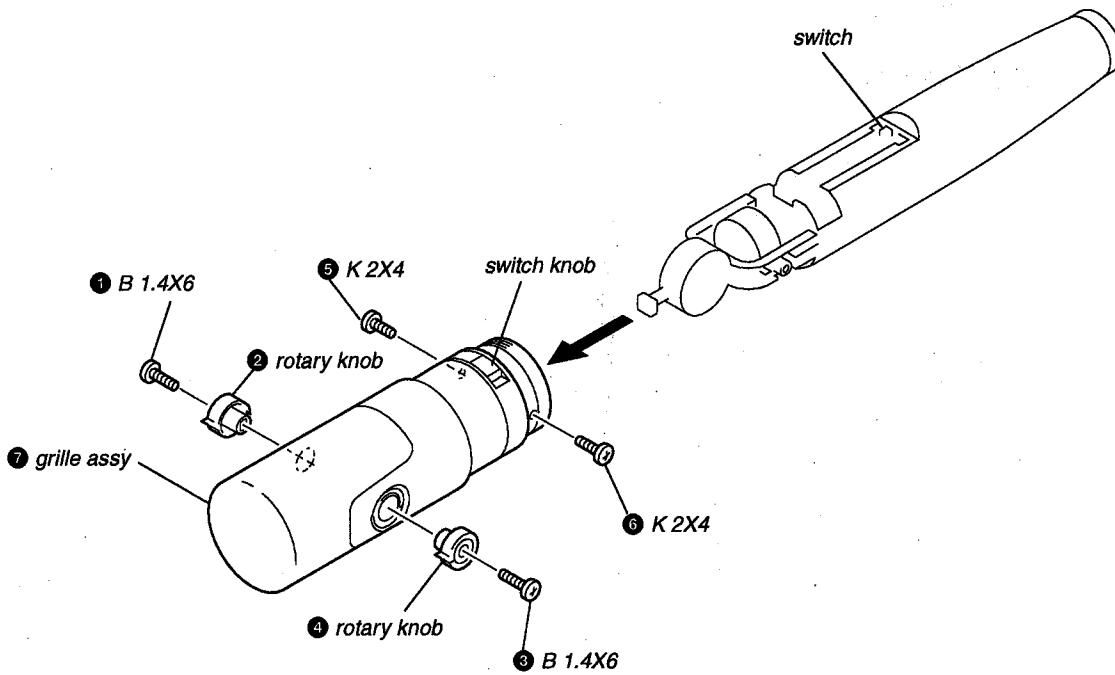
Note : Follow the disassembly procedure in the numerical order given.

2-1. GRIP

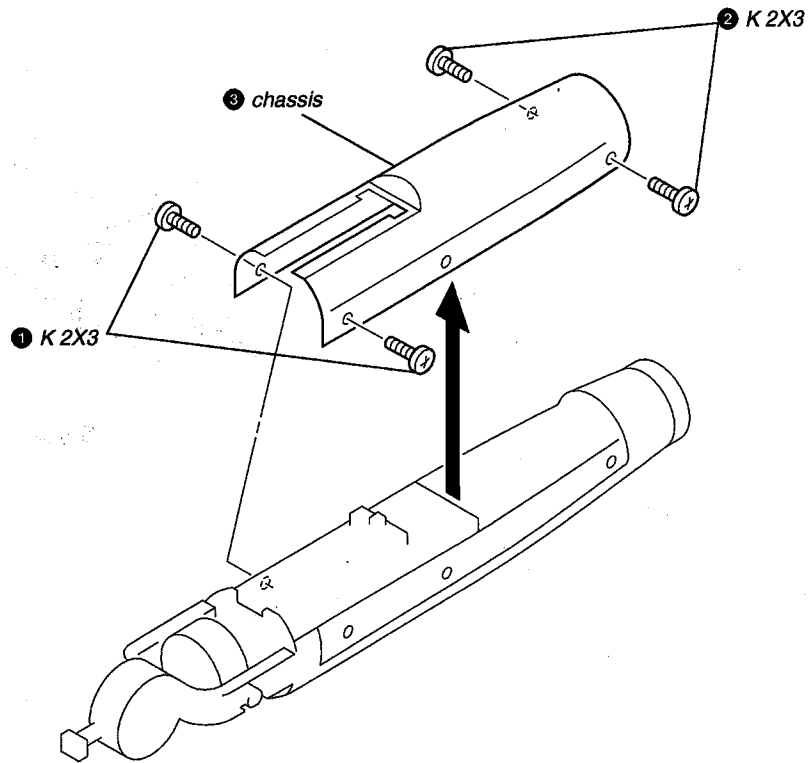


2-2. GRILLE ASSY

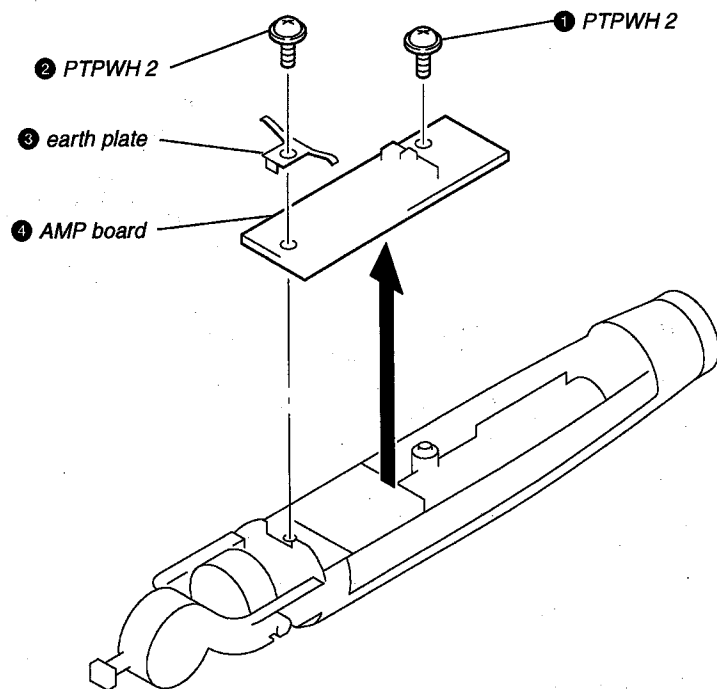
Note) When installing, fit the position switch knob and switch.



2-3. CHASSIS

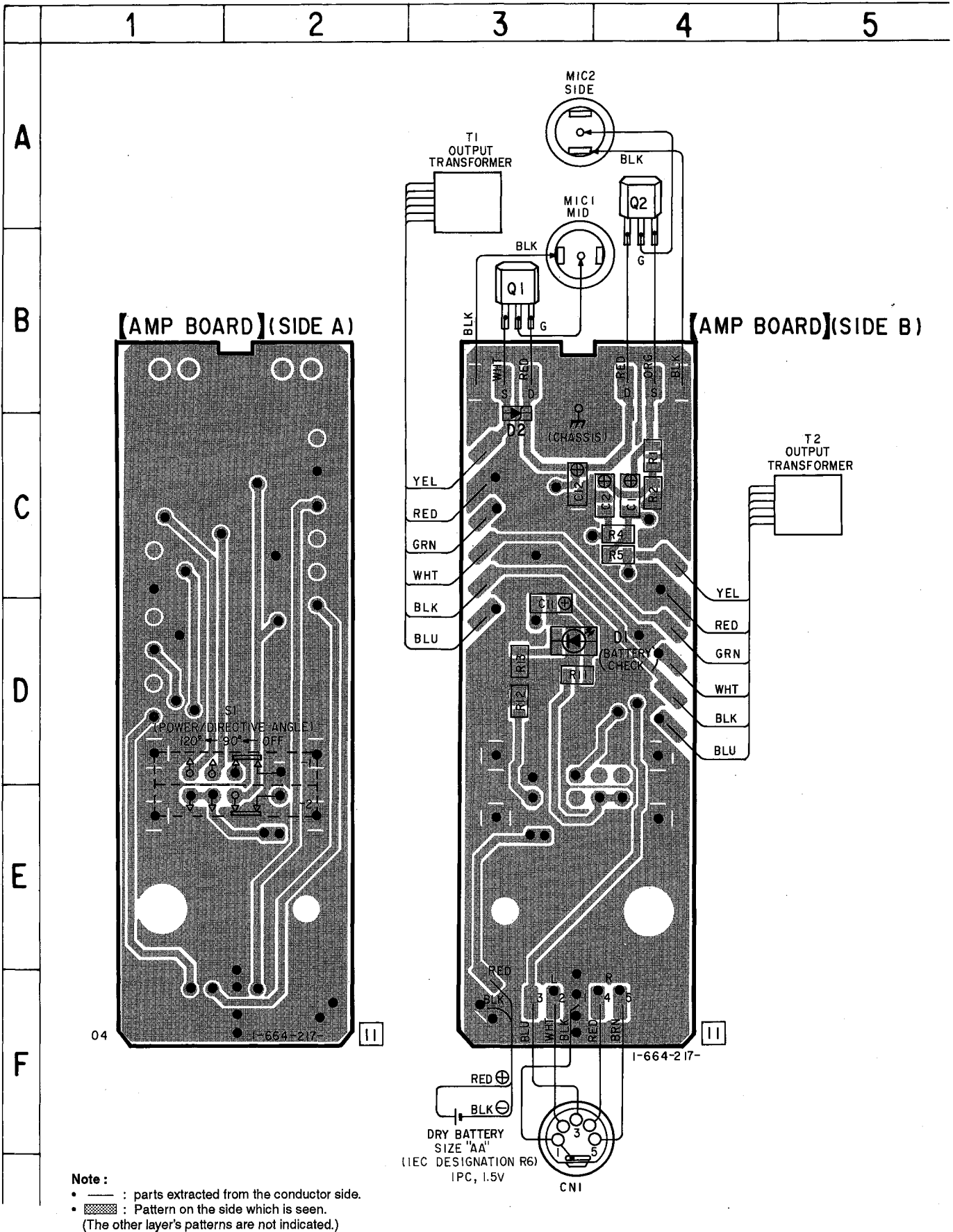


2-4. AMP BOARD



SECTION 3 DIAGRAMS

3-1. PRINTED WIRING BOARD



SECTION 4 EXPLODED VIEW

NOTE:

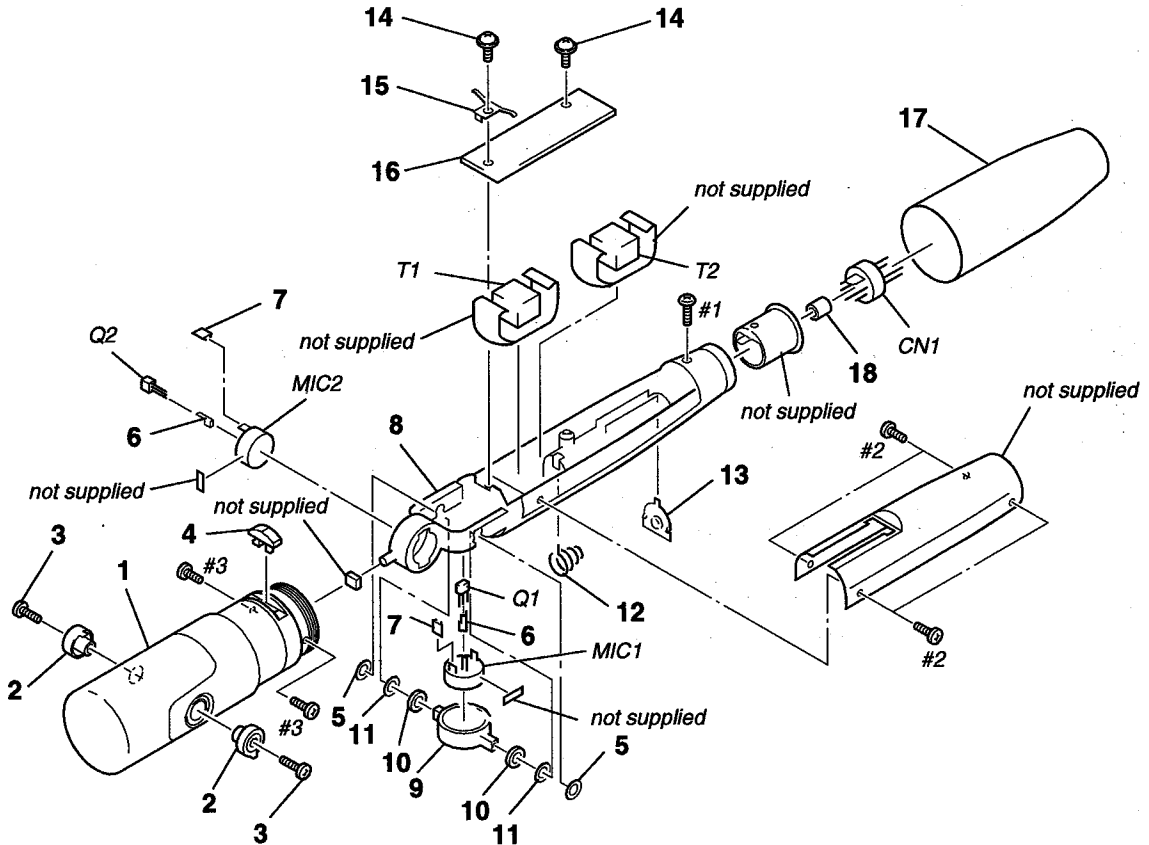
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example :

KNOB, BALANCE (WHITE) ... (RED)

↑ ↑
Parts Color Cabinet's Color

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2542-140-1	GRILLE ASSY		* 15	2-545-116-01	PLATE, GROUND	
2	2-545-112-01	KNOB, ROTARY		* 16	A-4542-430-A	AMP BOARD, COMPLETE	
3	3-316-938-51	SCREW (B1.4X6), TAPPING		* 17	2-545-108-01	GRIP	
4	2-545-111-01	KNOB, SWITCH		18	1-543-298-11	BEAD, FERRITE	
5	3-701-441-21	WASHER		CN1	1-560-490-00	PIN, CONNECTOR 5P	
6	2-523-713-00	TERMINAL		MIC1	8-814-281-90	MIC-CAPSULE, CONDENSER CU17-06 (MID)	
* 7	2-532-219-00	TERMINAL, GROUND		MIC2	8-814-178-00	MIC-CAPSULE, CONDENSER CU17-03 (SIDE)	
* 8	2-545-122-01	FRAME		Q1	8-729-037-43	FET 2SK1578-A	
* 9	2-545-113-01	FRAME, ROTARY		Q1	8-729-037-43	FET 2SK1578-B	
10	2-545-114-01	WASHER, RUBBER		Q2	8-729-037-43	FET 2SK1578-A	
11	3-701-443-11	WASHER		Q2	8-729-037-43	FET 2SK1578-B	
12	2-545-126-01	TERMINAL, MINUS		T1	1-431-068-11	TRANSFORMER, OUTPUT	
13	2-545-110-01	TERMINAL, PLUS		T2	1-431-068-11	TRANSFORMER, OUTPUT	
14	3-669-480-21	+ PTPWH 2					

SECTION 5 ELECTRICAL PARTS LIST

AMP

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **SEMICONDUCTORS**
In each case, u : μ , for example:
uA.. : μ A.. uPA.. : μ PA..
uPB.. : μ PB.. uPC.. : μ PC.. uPD.. : μ PD..
- **CAPACITORS**
uF : μ F
- **COILS**
uH : μ H

When indicating parts by reference number, please include the board.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>			
*	A-4542-430-A	AMP BOARD, COMPLETE *****				
< CAPACITOR >						
C1	1-135-259-11	TANTAL CHIP	10uF	20%	6.3V	
C2	1-135-259-11	TANTAL CHIP	10uF	20%	6.3V	
C11	1-104-847-11	TANTAL CHIP	22uF	20%	4V	
C12	1-115-167-11	TANTALUM	10uF	20%	4V	
< DIODE >						
D1	8-719-989-53	LED CL-200HR-C-TSL (BATTERY CHECK)				
D2	8-719-976-96	DIODE DTZ4.7C				
< RESISTOR >						
R1	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R2	1-216-058-00	METAL GLAZE	2.4K	5%	1/10W	
R4	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R5	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R11	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R12	1-216-041-00	METAL CHIP	470	5%	1/10W	
R13	1-216-025-00	METAL GLAZE	100	5%	1/10W	
< SWITCH >						
S1	1-762-894-11	SWITCH, SLIDE (POWER/DIRECTIVE ANGLE)				

MISCELLANEOUS *****						
18	1-543-298-11	BEAD, FERRITE				
CN1	1-560-490-00	PIN, CONNECTOR 5P				
MIC1	8-814-281-90	MIC-CUPSULE, CONDENSER CU17-06 (MID)				
MIC2	8-814-178-00	MIC-CUPSULE, CONDENSER CU17-03 (SIDE)				
Q1	8-729-037-43	FET 2SK1578-A				
Q1	8-729-037-43	FET 2SK1578-B				
Q2	8-729-037-43	FET 2SK1578-A				
Q2	8-729-037-43	FET 2SK1578-B				
T1	1-431-068-11	TRANSFORMER, OUTPUT				
T2	1-431-068-11	TRANSFORMER, OUTPUT				

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
ACCESSORIES & PACKING MATERIALS *****			
	1-777-830-11	CORD, MICROPHONE (2 CORE)	
	2-542-105-01	SCREW (B), SET	
	2-545-055-01	SCREEN, WINDOW	
	2-545-124-01	POLE, STAND	
	2-545-148-01	PORCH, CARRYING	
	3-859-112-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, ITALIAN)	
	7-623-710-37	WASHER 6, WAVE	
	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
	A-4540-435-A	HOLDER ASSY	
	X-2542-144-1	STAND ASSY, MIC	

***** HARDWARE LIST *****			
#1	7-621-775-40	SCREW +P 2.6X8	
#2	7-627-452-18	SCREW, PRECISION +K 2X3	
#3	7-627-452-28	SCREW, PRECISION +K 2X4	

