

ECM-55S/55B

E Model
J Model
US Model

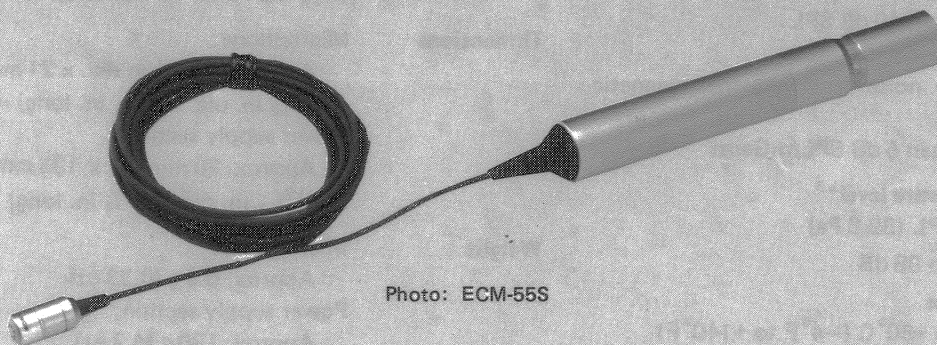


Photo: ECM-55S

ECM-55S: Silver type
ECM-55B: Black type

ELECTRET CONDENSER MICROPHONE

ECM-55S/55B

SPECIFICATIONS

Type Electret condenser microphone

Power supply Battery: IEC designation R6 or LR6 (size AA)
External power:
Phantom powering system
For J and E models, use optional Sony AC-148F external power supply.

Power requirements
Normal operating voltage:
1.5 Vdc at battery operation
48 Vdc at external power operation
Minimum operating voltage:
1.1 Vdc at battery operation
Current drain:
Less than 0.2 mA (with battery)
Less than 2 mA (with external power supply)
Battery life:
Approx. 5,000 hours with Sony SUM-3 (NS) New Super Battery (manganese battery)
Approx. 6,000 hours with Sony Eveready AM3 (LR6) alkaline battery

Frequency range 30–18,000 Hz

Directivity Omni-directional

Output impedance 100 ohms $\pm 20\%$ (1 kHz), balanced

Sensitivity (deviation ± 2 dB)
Open circuit voltage:
–52.0 dB (2.51 mV)/1 Pa at 1 kHz
Effective output level:
–48.0 dBm
(0 dBm = 1 mW/1 Pa, 1 kHz)
Recommended load impedance is more than 3 kohms.

Continued on next page.

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| Noise level | Signal-to-noise ratio: |
| | More than 66 dB (1 kHz, 1 Pa) |
| | Inherent noise: |
| | Less than 28 dB SPL |
| | Wind noise* ¹ : |
| | Less than 40 dB SPL |
| | (with wind screen) |
| | Induction noise from external magnetic field* ² : |
| | Less than 5 dB SPL/mGauss |
| Maximum input sound pressure level*³ | 126 dB SPL (39.8 Pa) |
| Dynamic range | More than 98 dB |
| 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 |

0 dB SPL = 20 μ Pa

*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 pressure level.

*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 then converted to the equivalent input sound pressure level.

*³ This is the maximum input level which produces 1% distortion at the output with 1,000 Hz.

| | |
|-----------------------------------|--|
| Microphone output terminal | Cannon XLR-3-12C type |
| Microphone cable | Approx. 2.3 mm dia., 3 m long (³ / ₃₂ inch dia., 10 feet long) |
| Dimensions | Microphone: |
| | Approx. 10.6 mm dia. x 21 mm long (⁷ / ₁₆ in. dia. x ²⁷ / ₃₂ in. long) |
| | Power supply section: |
| | Approx. 20 mm dia x 133 mm long (¹³ / ₁₆ in. dia. x 5 ¹ / ₄ in. long) |
| Weight | Microphone: |
| | Approx. 6.5 g (0.23 oz) |
| | Power supply section: |
| | Approx. 120 g (4.2 oz) (including cable, not including battery) |
| Finish | ECM-55S: Non-reflective satin-nickel finish |
| | ECM-55B: Black chromium finish (microphone capsule section) |
| | Non-reflective satin-nickel finish (power supply section) |

Accessories supplied

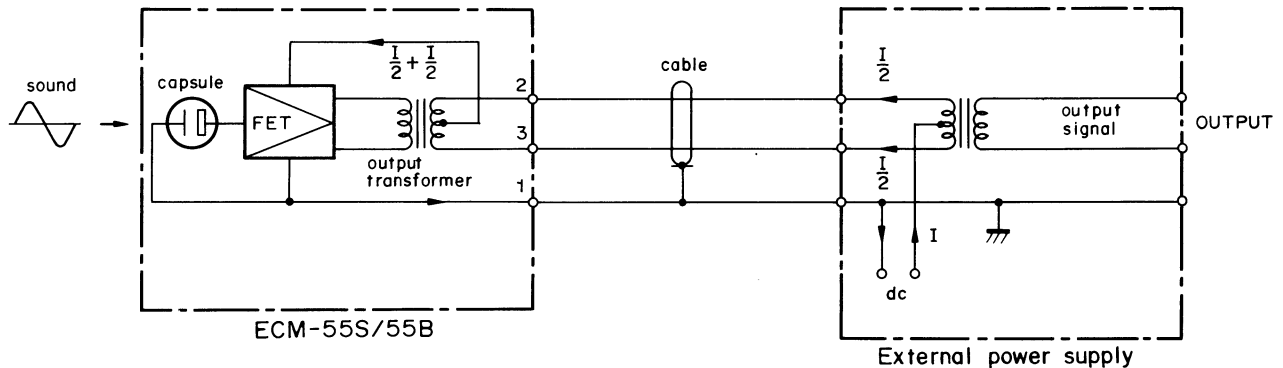
- Carrying case (1)
- Holder clip (2)
- Wind screen (1)

1. FEATURES

- Omni-directional characteristics with wide frequency range (30–18,000 Hz).
- Ideal design for professional application in radio and TV studios or other audio fields because of its high quality performance and its extremely compact size.

• External Power Supply

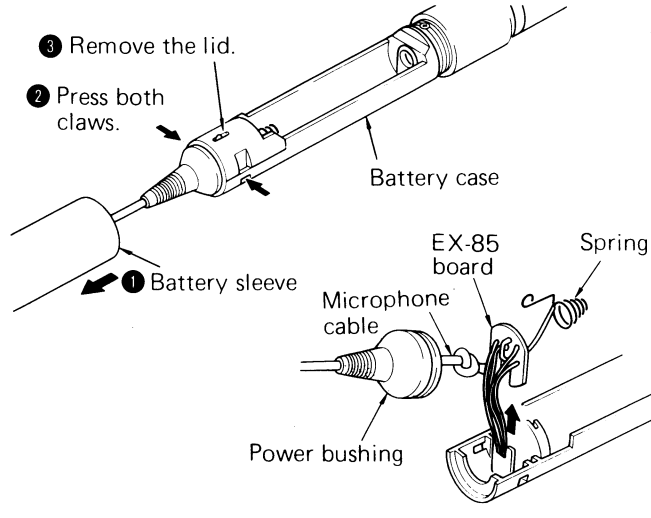
The ECM-55S/55B can also operate on the Sony AC-148F external power supply or equivalent. The microphone cable, shielded two-conductor cable, is used as both an audio signal cable and a dc power supply cable by connecting to the external power supply. Positive dc current is supplied to the microphone through the two inner conductors of the cable and negative dc current through the shielded conductor.



2. DISASSEMBLY

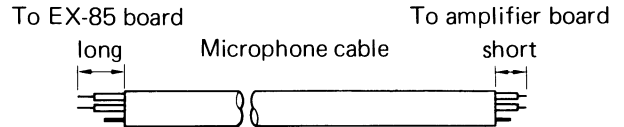
2-1. Power Supply Section

EX-85 Board and Microphone Cable Replacement



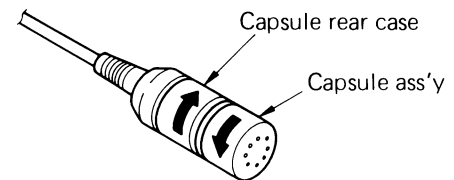
Caution

When installing the microphone cable, care should be taken not to mistake the direction of the lead edge.



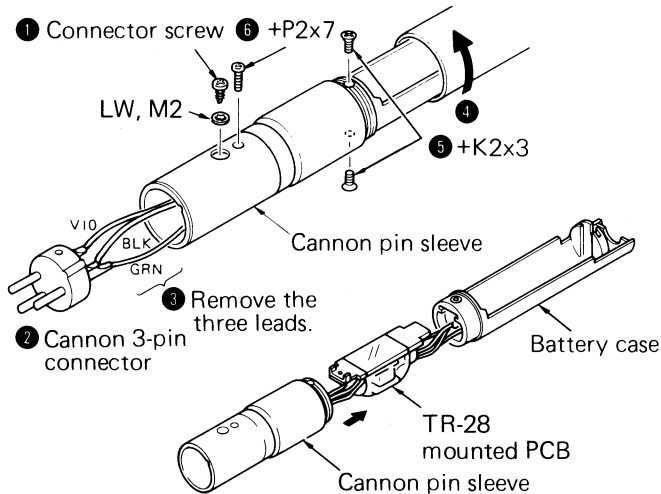
2-3. Microphone Capsule

Capsule Ass'y Replacement



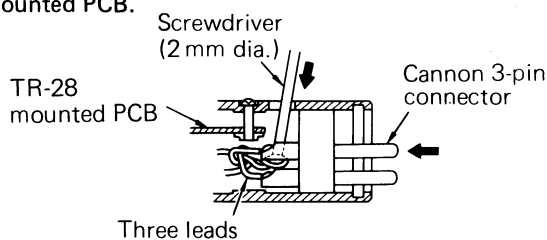
2-2. Transformer Section

Cannon Pin Insert and TR-28 Mounted PCB

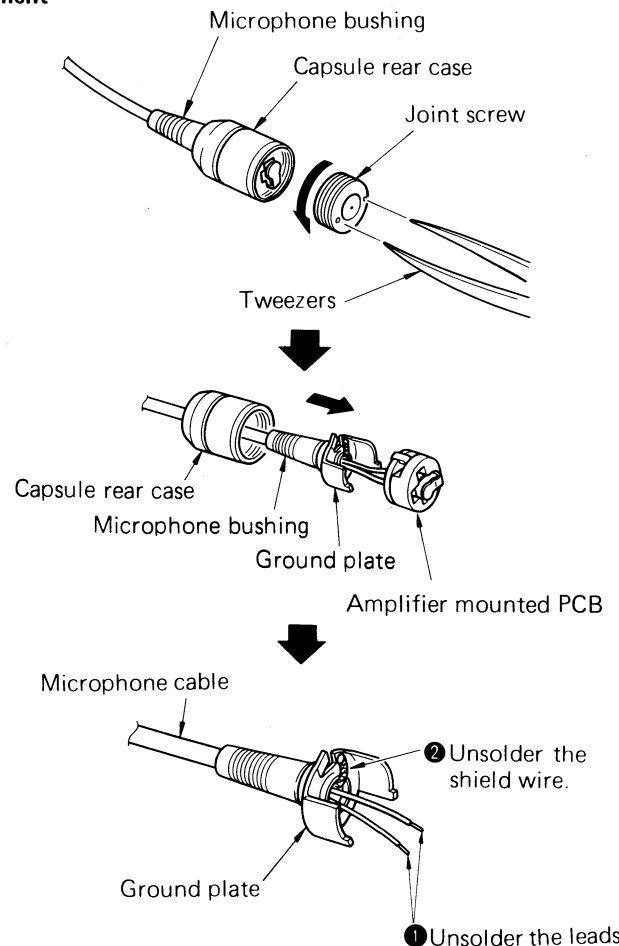


Note: Cannon 3-pin connector reinstallation

When reinstalling the Cannon 3-pin connector, turn the connector three times ccw to twist the leads and push the leads downwards with a screwdriver (2 mm dia.) through the 4 mm dia. hole not to catch on the TR-28 mounted PCB.



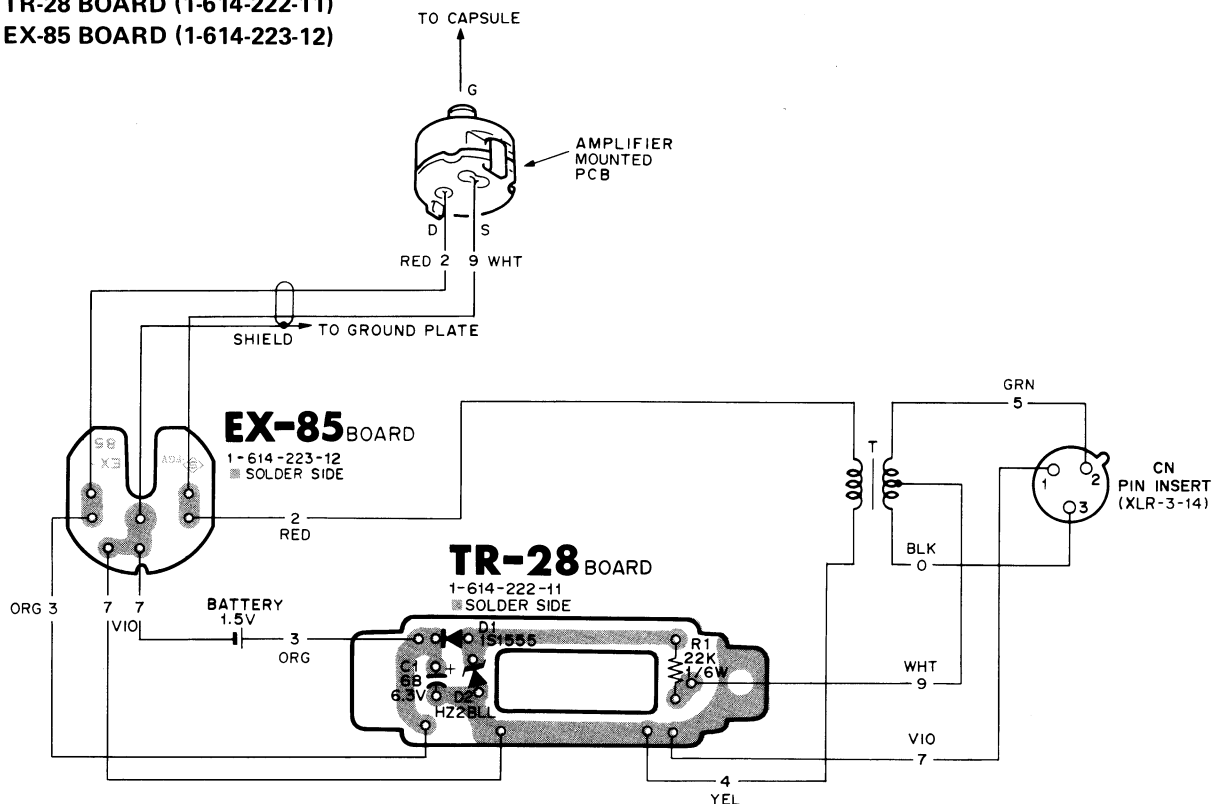
Amplifier Mounted PCB and Microphone Cable Replacement



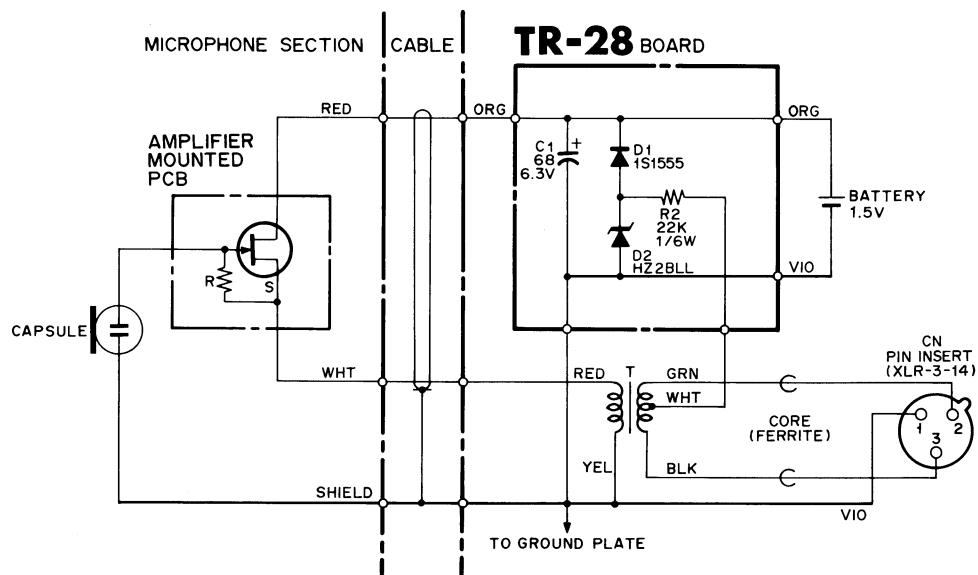
3. CIRCUIT BOARDS DIAGRAM

TR-28 BOARD (1-614-222-11)

EX-85 BOARD (1-614-223-12)



4. SCHEMATIC DIAGRAM



CAUTION:

The individual parts on the TR-28 and amplifier boards are not supplied.

If any trouble occurs on the board, replace the TR-28 or amplifier mounted PCB.

ECM-55S/55B; (J) #100,001 and higher
(U) #200,001 and higher
(E) #400,001 and higher

5. REPLACEABLE PARTS

Parts Ordering Information

Standardization of Parts

Repair parts supplied from Sony Parts Center may not be always identical with the part which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".

This manual's exploded views and electrical parts list are indicating the part numbers of the "standardized genuine parts at present".

Parts marked with S in the column of SP

These parts are normally stocked as replaceable parts.

Parts marked with O in the column of SP

Orders for these parts will be processed, but allow for additional delivery time.

Parts without Part No.

These parts are not stocked because they are seldom required for routine service.

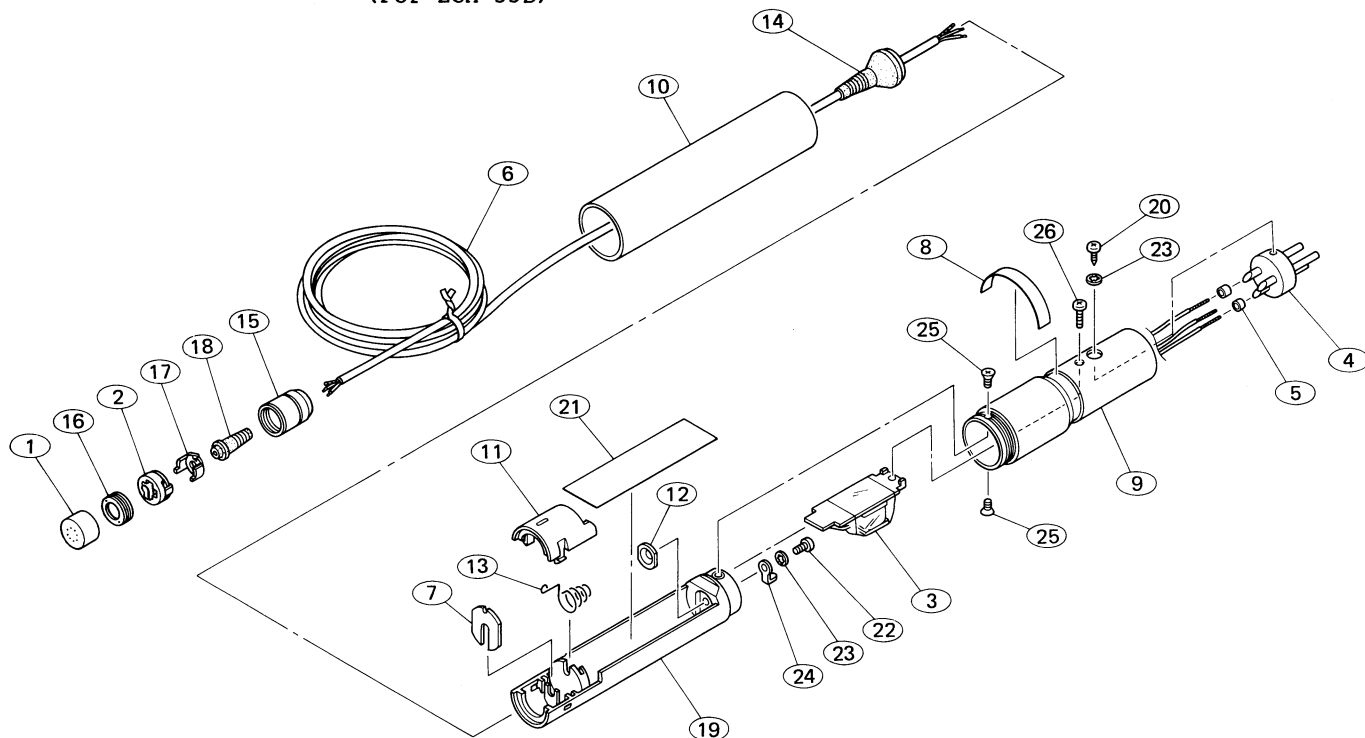
5-1. Exploded View and Parts List

Index
No. SP Part No. Description

ECM-55S/55B

1 S A-4510-048-A CAPSULE ASSY
(For ECM-55S)
S A-4510-051-A CAPSULE ASSY
(For ECM-55B)

| Index No. | SP | Part No. | Description |
|-----------|----|--------------|--------------------------------------|
| 2 | S | A-4518-240-A | MOUNTED PCB, AMPLIFIER |
| 3 | S | A-4538-025-A | MOUNTED PCB, TR-28 |
| 4 | S | 1-509-096-00 | PIN INSERT, CANNON XLR-3-14 |
| 5 | S | 1-543-060-00 | CORE |
| 6 | S | 1-557-884-11 | CABLE, MICROPHONE |
| 7 | S | 1-614-223-11 | PC BOARD, EX-85 |
| 8 | O | 2-522-065-01 | LABEL, MODEL NUMBER (For ECM-55B) |
| | O | 2-522-082-01 | LABEL, MODEL NUMBER (For ECM-55S) |
| 9 | O | 2-522-068-01 | SLEEVE, PIN, CANNON |
| 10 | O | 2-522-069-01 | SLEEVE, BATTERY |
| 11 | S | 2-522-070-01 | LID, CASE |
| 12 | S | 2-522-071-01 | TERMINAL, BATTERY |
| 13 | S | 2-522-072-01 | SPRING |
| 14 | S | 2-522-074-01 | BUSHING, POWER |
| 15 | O | 2-522-075-01 | CASE, REAR, CAPSULE (For ECM-55S) |
| | O | 2-522-075-11 | CASE, REAR, CAPSULE (For ECM-55B) |
| 16 | O | 2-522-076-01 | SCREW, JOINT |
| 17 | O | 2-522-078-01 | PLATE, GROUND |
| 18 | S | 2-522-079-11 | BUSHING, MICROPHONE |
| 19 | S | 2-522-084-01 | CASE, BATTERY |
| 20 | O | 2-522-402-11 | SCREW, CANNON CONNECTOR |
| 21 | O | 2-523-710-00 | LABEL, BATTERY |
| 22 | S | 7-621-255-12 | SCREW, +P2x3 |
| 23 | S | 7-623-305-07 | LOCK WASHER, M2, TYPE (A) |
| 24 | S | 7-623-505-01 | LUG 2 |
| 25 | S | 7-627-452-17 | SCREW, PRECISION +K2x3 |
| 26 | S | 7-627-553-87 | SCREW, PRECISION +P2x7 |



5-2. Electrical Parts List

| Ref. No. | SP | Part No. | Description |
|------------------------|----|--------------|----------------------------|
| AMPLIFIER BOARD | | | |
| - | S | A-4518-240-A | MOUNTED PCB,AMPLIFIER |
| EX-85 BOARD | | | |
| - | S | 1-614-223-12 | PC BOARD,EX-85 |
| TR-28 BOARD | | | |
| - | S | A-4538-025-A | MOUNTED PCB,TR-28 |
| FRAME | | | |
| - | S | 1-509-096-00 | PIN INSERT,CANNON XLR-3-14 |
| - | S | 1-557-884-11 | CABLE,MICROPHONE |

5-3. Accessories Supplied

| Qty | SP | Part No. | Description |
|-------------------------|----|--------------|---|
| 1 | S | 2-599-255-01 | MANUAL,INSTRUCTION (For J Model) |
| 1 | S | 2-599-255-12 | MANUAL,INSTRUCTION (For E Model) |
| 1 | S | 2-599-255-21 | MANUAL,INSTRUCTION (For US Model) |
| For ECM-55S Only | | | |
| 1 | S | X-2522-013-1 | CLIP ASSY,HORIZONTAL |
| 1 | S | X-2522-014-1 | CLIP ASSY,DOUBLE (For US Model Only) |
| 1 | S | X-2522-016-1 | CLIP ASSY,VERTICAL (For J and E Models Only) |
| 1 | S | X-2522-021-1 | CASE ASSY,CARRYING |
| 1 | S | X-2522-024-1 | WIND SCREEN ASSY |
| For ECM-55B Only | | | |
| 1 | S | X-2522-010-1 | CLIP ASSY,HORIZONTAL |
| 1 | S | X-2522-011-1 | CLIP ASSY,DOUBLE (For US Model Only) |
| 1 | S | X-2522-012-1 | CLIP ASSY,VERTICAL (For J and E Models Only) |
| 1 | S | X-2522-022-1 | CASE ASSY,CARRYING |
| 1 | S | X-2522-023-1 | WIND SCREEN ASSY |

WIND SCREEN ASSY



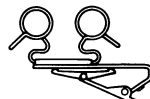
HORIZONTAL
CLIP ASSY



VERTICAL
CLIP ASSY



DOUBLE
CLIP ASSY



ECM-55SC/55BC

E Model

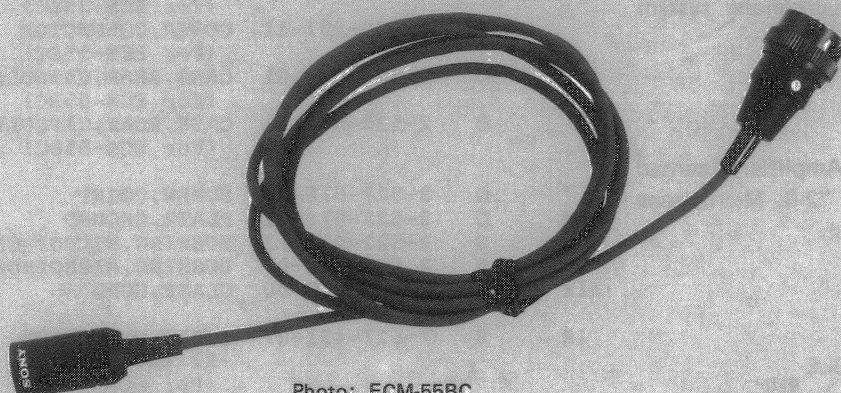


Photo: ECM-55BC

ECM-55SC: Silver type

ECM-55BC: Black type

ELECTRET CONDENSER MICROPHONE

SPECIFICATIONS

| | |
|----------------------------|---|
| Type | Electret condenser microphone |
| Frequency range | 30 to 18,000 Hz |
| Directivity | Omni-directional |
| Power supply | Power is supplied by a Sony wireless microphone system transmitter. |
| Operating temperature | 0°C to 60°C (+32°F to +140°F) |
| Microphone output terminal | Sony SMC9-4P type |
| Microphone cable | Approx. 2.3 mm dia., 1.2 m long (³ / ₃₂ in. dia., 3.9 ft. long) |

Dimensions (without cable)

Approx. 10.6 mm dia. x 21 mm long
(⁷/₁₆ in. dia. x ²⁷/₃₂ in. long)

Weight (without cable)

Approx. 6.5 g (0.23 oz)

Finish

SC type: Non-reflective satin-nickel finish
BC type: Black chromium finish

Accessories supplied

Holder clip (1)
Wind screen (1)

Design and specifications subject to change without notice.

ECM-55SC/55BC

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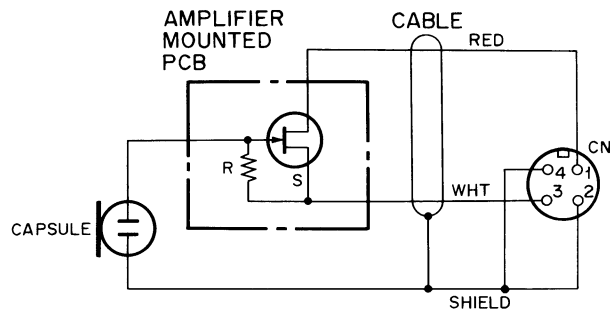
1. INTRODUCTION

The Sony ECM-55SC/55BC is a miniature high performance microphone for professional use designed to be used with a transmitter as part of a wireless microphone system (WRT-27 series or WRT-220 etc.).

2. DISASSEMBLY

For the replacement of Capsule Assy, Amplifier Mounted PCB and Microphone Cable, refer to "2-3. Microphone Capsule" of ECM-55S/55B service manual.

3. SCHEMATIC DIAGRAM



CAUTION:

The individual parts of the amplifier board are not supplied. If any trouble occurs on it, replace the amplifier mounted PCB.

4. REPLACEABLE PARTS

Parts marked with S in the column of SP

These parts are normally stocked as replaceable parts.

Parts marked with O in the column of SP

Orders for these parts will be processed, but allow for additional delivery time.

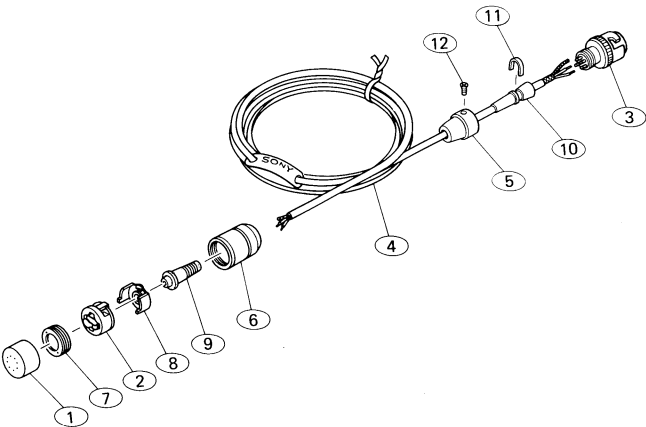
Parts without Part No.

These parts are not stocked because they are seldom required for routine service.

4-1. Exploded View and Parts List

| Index No. | SP | Part No. | Description |
|---------------|----|--------------|-----------------------------------|
| ECM-55SC/55BC | | | |
| 1 | S | A-4510-048-A | CAPSULE ASSY (For ECM-55SC) |
| | S | A-4510-051-A | CAPSULE ASSY (For ECM-55BC) |
| 2 | S | A-4518-240-A | MOUNTED PCB, AMPLIFIER |
| 3 | S | 1-560-155-00 | PLUG, CONNECTOR (For ECM-55SC) |
| | S | 1-560-155-21 | PLUG, CONNECTOR (For ECM-55BC) |

| Ref. No. | SP | Part No. | Description |
|----------|----|--------------|---|
| 4 | S | 1-557-884-21 | CABLE, MICROPHONE |
| 5 | S | 2-388-907-01 | COVER, CONNECTOR (For ECM-55BC) |
| | S | 2-388-907-11 | COVER, CONNECTOR (For ECM-55SC) |
| 6 | O | 2-522-075-01 | CASE, REAR, CAPSULE (For ECM-55SC) |
| | O | 2-522-075-11 | CASE, REAR, CAPSULE (For ECM-55BC) |
| 7 | O | 2-522-076-01 | SCREW, JOINT |
| 8 | O | 2-522-078-01 | PLATE, GROUND |
| 9 | S | 2-522-079-11 | BUSHING, MICROPHONE |
| 10 | S | 2-523-605-00 | BUSHING, MICROPHONE |
| 11 | S | 2-523-606-00 | CLAMP, CORD |
| 12 | S | 7-627-451-07 | SCREW, PRECISION +K1.4x1.6 (For ECM-55SC) |
| | S | 7-627-451-08 | SCREW, PRECISION +K1.4x1.6 (For ECM-55BC) |



4-2. Accessories Supplied

| Qty | SP | Part No. | Description |
|-------------------|----|--------------|-----------------------|
| 1 | S | 2-599-271-11 | MANUAL, INSTRUCTION |
| For ECM-55SC Only | | | |
| 1 | S | X-2522-013-1 | CLIP ASSY, HORIZONTAL |
| 1 | S | X-2522-024-1 | WIND SCREEN ASSY |
| For ECM-55BC Only | | | |
| 1 | S | X-2522-010-1 | CLIP ASSY, HORIZONTAL |
| 1 | S | X-2522-023-1 | WIND SCREEN ASSY |

WIND SCREEN ASSY



HORIZONTAL CLIP ASSY



ECM-55SPT/55BPT

E Model



Photo: ECM-55SPT

ECM-55SPT: Silver type
ECM-55BPT: Black type

ELECTRET CONDENSER MICROPHONE

SPECIFICATIONS

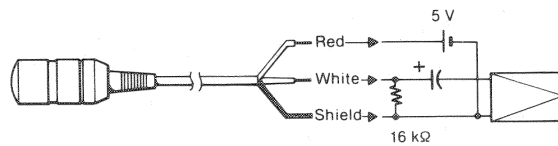
| | |
|----------------------------|--|
| Type | Electret condenser microphone |
| Frequency range | 30 to 18,000 Hz |
| Directivity | Omni-directional |
| Sensitivity | −38.5 dB (11.9 mV)/1 Pa at 1 kHz Deviation ±2.0 dB |
| Power requirements | Supply voltage range: 5.0 to 10.0 V DC Current drain: Less than 0.3 mA |
| Noise level | Inherent noise: Less than 28 dB SPL (0 dB SPL = 20 μPa) Wind noise: Less than 40 dB SPL with wind screen (0 dB SPL = 20 μPa) |
| Operating temperature | 0°C to 60°C (+32°F to +140°F) |
| Microphone cable | Approx. 2.3 mm dia., 3 m long (³ / ₃₂ in. dia., 10 ft. long) Two-conductor shielded cable (pig tail) |
| Dimensions (without cable) | Approx. 10.6 mm dia. x 21 mm long (⁷ / ₁₆ in. dia. x ¹³ / ₁₆ in. long) |
| Weight (without cable) | Approx. 6.5 g (0.23 oz) |

| | |
|--------|---|
| Finish | ECM-55BPT: Black chromium finish ECM-55SPT: Non-reflective satin-nickel finish |
|--------|---|

| | |
|----------------------|------------------------------------|
| Accessories supplied | Wind screen (1) Holder clip (1) |
|----------------------|------------------------------------|

Design and specifications subject to change without notice.
The above values are measured in "Connection" below.

CONNECTION



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40000079 Tue, 24 Sep 2024 14:43:08 GMT

ECM-55SPT/55BPT

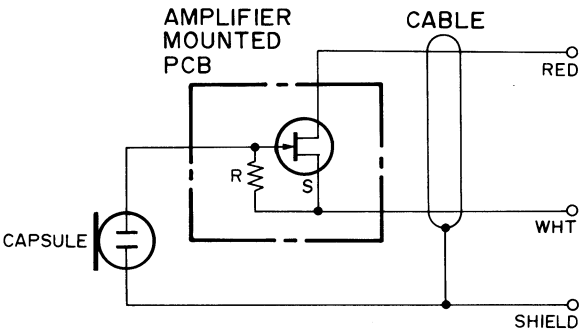
1. INTRODUCTION

The Sony ECM-55SPT/55BPT is a miniaturesized, high performance, high reliability professional use microphone, designed for use with a transmitter as part of a wireless microphone system.

2. DISASSEMBLY

For the replacement of Capsule Assy, Amplifier Mounted PCB and Microphone Cable, refer to "2-3. Microphone Capsule" of ECM-55S/55B service manual.

3. SCHEMATIC DIAGRAM



CAUTION:
The individual parts of the amplifier board are not supplied.
If any trouble occurs on it, replace the amplifier mounted PCB.

4. REPLACEABLE PARTS

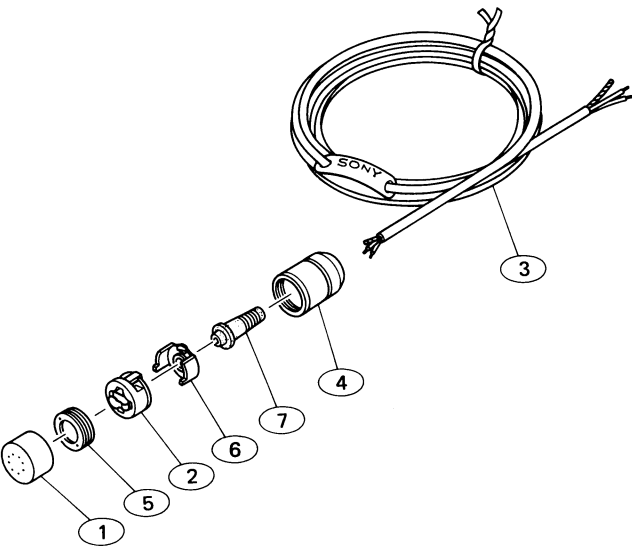
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Parts without Part No.
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4-1. Exploded View and Parts List

| Ref. No. | SP | Part No. | Description |
|------------------------|----|--------------|--------------------------------------|
| ECM-55SPT/55BPT | | | |
| 1 | S | A-4510-048-A | CAPSULE ASSY (For ECM-55SPT) |
| | S | A-4510-051-A | CAPSULE ASSY (For ECM-55BPT) |
| 2 | S | A-4518-240-A | MOUNTED PCB,AMPLIFIER |
| 3 | S | 1-557-884-11 | CABLE,MICROPHONE |
| 4 | O | 2-522-075-01 | CASE,REAR,CAPSULE (For ECM-55SPT) |
| | O | 2-522-075-11 | CASE,REAR,CAPSULE (For ECM-55BPT) |
| 5 | O | 2-522-076-01 | SCREW,JOINT |
| 6 | O | 2-522-078-01 | PLATE,GROUND |
| 7 | S | 2-522-079-11 | BUSHING,MICROPHONE |



4-2. Accessories Supplied

| Qty | SP | Part No. | Description |
|---------------------------|----|--------------|----------------------|
| 1 | S | 2-599-256-41 | MANUAL,INSTRUCTION |
| For ECM-55SPT Only | | | |
| 1 | S | X-2522-013-1 | CLIP ASSY,HORIZONTAL |
| 1 | S | X-2522-024-1 | WIND SCREEN ASSY |
| For ECM-55BPT Only | | | |
| 1 | S | X-2522-010-1 | CLIP ASSY,HORIZONTAL |
| 1 | S | X-2522-023-1 | WIND SCREEN ASSY |

WIND SCREEN ASSY



HORIZONTAL CLIP ASSY



