

Electret Condenser Microphone

Operating Instructions

ECM-55B

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English

Before operating the unit, please read this manual thoroughly. This manual should be retained for future reference.

For the customers in Europe

This product is intended for use in the following Electromagnetic Environments: E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).

ATTENTION

The electromagnetic fields at the specific frequencies may influence the sound of this unit.

For the customers in the U.S.A.

SONY LIMITED WARRANTY - Please visit <http://www.sony.com/psa/warranty> for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

For the customers in Canada

SONY LIMITED WARRANTY - Please visit <http://www.sonybiz.ca/pro/lang/en/ca/article/resources-warranty-product-registration> for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

For the customers in Europe

Sony Professional Solutions Europe - Standard Warranty and Exceptions on Standard Warranty.

Please visit https://pro.sony/en_GB/support-services/warranty/support-professional-solutions-europe-standard-product-warranty for important information and complete terms and conditions.

For the customers in Korea

SONY LIMITED WARRANTY - Please visit <http://bpeng.sony.co.kr/handler/BPAS-Start> for important information and complete terms and conditions of Sony's limited warranty applicable to this product.

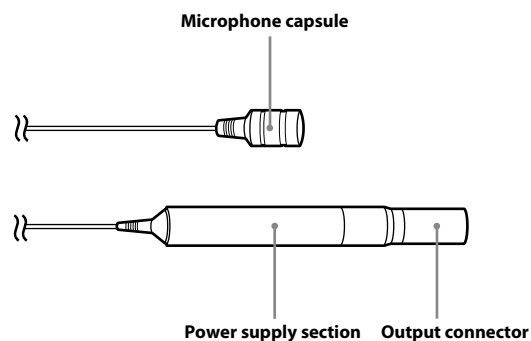
FEATURES

- Two-way powering system using an internal battery or external power supply.
- 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.
- Supplied with three types of microphone holders to be used according the situation and a convenient and compact storage case.

PRECAUTIONS

- The microphone should never be dropped or subjected to any excessive shock.
- Keep the microphone away from extremely high temperatures (above 60 °C or 140 °F)
- If the microphone is used too close to speakers, the sound from the speakers will be picked up and produce a howling effect (i.e., acoustic feedback). To prevent howling, avoid facing the microphone toward the speakers and maintain as much distance from the speakers as possible.
- Microphone and recording instruments should be turned on 10 minutes before they are actually used. This assures stable performance of the microphones and instruments.

PARTS IDENTIFICATION



Supplied accessories

Wind screen



Microphone holders



Double-clip
microphone holder



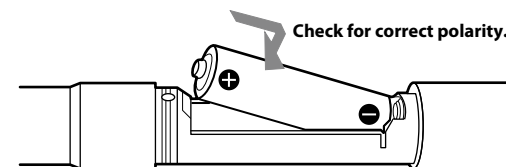
Horizontal
microphone holder



Vertical
microphone holder

BATTERY OPERATION

- 1 Open the battery compartment by turning the sleeve counterclockwise.
- 2 Insert an IEC designation R6 or LR6 (size AA) battery into the battery compartment.



- 3 Close the compartment by turning the sleeve clockwise. Be sure to close the sleeve firmly, otherwise malfunction or noise may occur due to the loose fit.

Notes

- If the microphone is not to be used for a long time, remove the battery to avoid any possibility of corrosion.
- In case of battery leakage, wipe off any deposit in the battery compartment.
- Battery life depends on the battery type being used. Refer to the "Battery life" in "Specifications" below. When the battery is exhausted, sensitivity will be decreased and distortion will be heard. When this occurs, replace with a new battery.

CONNECTIONS

The output connector of the microphone is the XLR-3-12C type. Connect the microphone plug to the microphone input of a mixer or a tape recorder. The microphone cable is 3 m (10 feet) long.

If a longer cable is necessary, an extension cable up to 200 m (660 feet) may be used without affecting sound quality or performance. Use a cable with an XLR-3-11C connector at one end and an appropriate plug at the other end which matches the input equipment.

Note

If cable connector connection is necessary, note that there are two basic types of connections, balanced to ground and unbalanced to ground, and solder connections carefully. Poor soldering may cause hum pick up.

EXTERNAL POWER SUPPLY

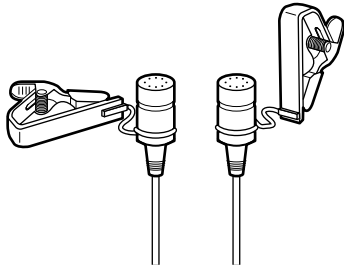
The ECM-55B is designed for external powering (12 to 48 V DC) as well as internal battery power. The external power supply system consists of a DC power source, standard two conductor shielded microphone cable, and center-tapped transformer of the microphone. Use an external power supply unit available in the marketplace.

Notes

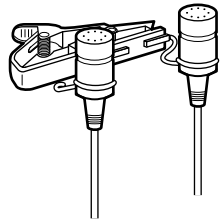
- When an external power supply is used, the internal battery is not discharged. However, if an exhausted battery is installed while operating with external power supply, sensitivity will be decreased and noise/distortion will be heard.
- For extending the cable between the power supply and the microphone, use a balanced-type cable.

MORE ABOUT MICROPHONE USE

- To reduce the effect of wind or breath noise, attach the supplied wind screen to the microphone.
- The supplied microphone holders are convenient for attaching the microphone to clothing. Be careful not to cover the microphone head.



The double-clip microphone holder attaches two microphones to allow more stable operation.



Performance

Frequency response	30 Hz to 18,000 Hz
Directivity	Omn-directional
Output impedance	150 Ω ±20%, balanced
Sensitivity (typ.)	-52 dB (2.5 mV) (0 dB=1 V/Pa, 1 kHz)
Signal-to-noise ratio	66 dB (typ) (IEC 179, A-weighted, 1 kHz, 1 Pa)
Inherent noise	28 dB SPL (typ) (0 dB = 2 × 10 ⁻⁵ Pa)
Wind noise*1	Less than 40 dB SPL (with wind screen)
Maximum input sound pressure level*2	126 dB SPL (typ)
Dynamic range	98 dB (typ)
Operating temperature	0 °C to 60 °C (32 °F to 140 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)

*1 Value derived by applying a wind velocity of 2 m/sec. (6.6 ft./sec.) to the microphone from all directions, and converting the mean value to the equivalent input sound pressure level (0 dB = 2 × 10⁻⁵ Pa)

*2 Value derived by taking the input level at which 1% waveform distortion occurs with a 1-kHz microphone output signal, and converting it to the equivalent input sound pressure level (0 dB = 2 × 10⁻⁵ Pa).

Power requirements

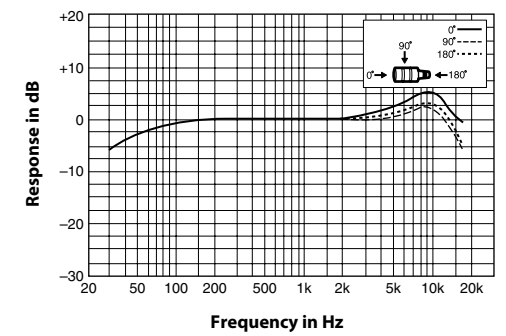
Normal operating voltage	1.5 V DC at battery operation
Minimum operating voltage	1.1 V DC at battery operation
External power supply	12 V to 48 V DC
Current drain	Less than 0.2 mA (with battery) Less than 2.0 mA (with external power supply)
Battery life	R6 manganese battery: Approx. 5,000 hours LR6 alkaline battery: Approx. 6,000 hours

Design and specifications subject to change without notice.

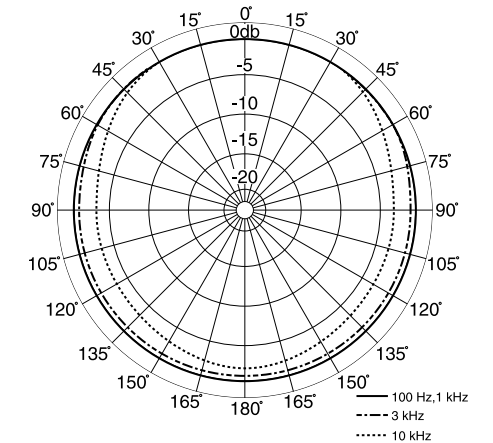
Note

Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

Frequency response



Directivity



SPECIFICATIONS

General

Type	Electret condenser microphone
Power supply	Battery: IEC designation R6 or LR6 (size AA) ×1 External power: 12 V to 48 V DC (IEC 61938 P12/P24/P48)
Output connector	XLR-3-12C type
Microphone cable	2.3 mm dia., 3 m long (3/32 in. dia., 10 ft. long)
Dimensions	Microphone: 10.6 mm dia. × 21 mm (7/16 in. dia. × 27/32 in.) Power supply section: 20 mm dia. × 126 mm (13/16 in. dia. × 5 in.)
Mass	Microphone: Approx. 6.5 g (0.23 oz.) Power supply section: Approx. 120 g (4.2 oz.) (including cable, not including battery)
Supplied accessories	Storage case (1) Microphone holder (3) Wind screen (1) Operating Instructions (1) Warranty booklet (1)