

**CONDENSER MICROPHONE**

# C-48

**OPERATING INSTRUCTIONS** page 2, 14

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

**MODE D'EMPLOI** page 6, 14

Avant toute opération, lire attentivement ce mode d'emploi.  
Conserver ce manuel pour toute référence ultérieure.

**BEDIENUNGSANLEITUNG** Seite 10, 14

Vor Inbetriebnahme lesen Sie bitte diese Bedienungsanleitung  
aufmerksam durch. Bewahren Sie diese Anleitung zum späteren  
Nachschlagen gut auf.



Microphone stand is optional.

Le support de microphone est disponible sur option.

Der Mikrofonständer ist gesondert lieferbar.

## FEATURES

### Microphone capsule

The C-48 utilizes two low impedance back-plates in the front and rear of the diaphragm that can pick up even low level transient sounds.

### Directivity selector switch

Omni-directional, uni-directional and bi-directional characteristics can be selected as required.

### Pad selector switch

This switch reduces the output level of the microphone to prevent any overload of the impedance translator resulting from the pick up of extremely high level sound sources.

### Two-way powering system

The C-48 operates with either an internal battery or an external power supply.

### LED indicator

The LED directivity indicator shows the selected directivity, whether the power is ON or OFF, and the battery condition.

### Microphone construction

By the use of heavy zinc and aluminum die castings in its construction, the C-48 avoids any resonance effects.

### FET amp

This microphone employs a high impedance, low noise FET amplifier, so even low volume signals can be faithfully reproduced.

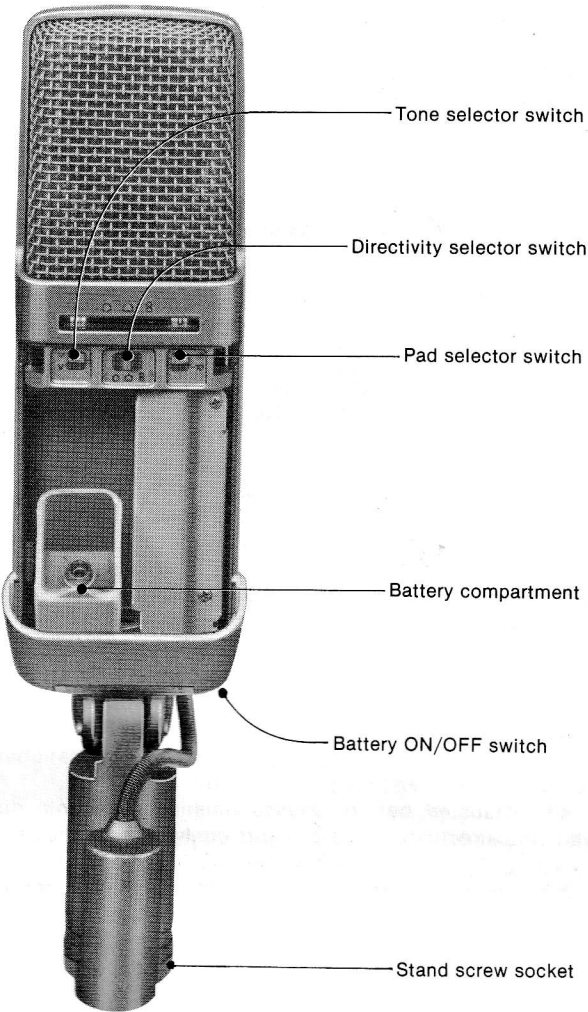
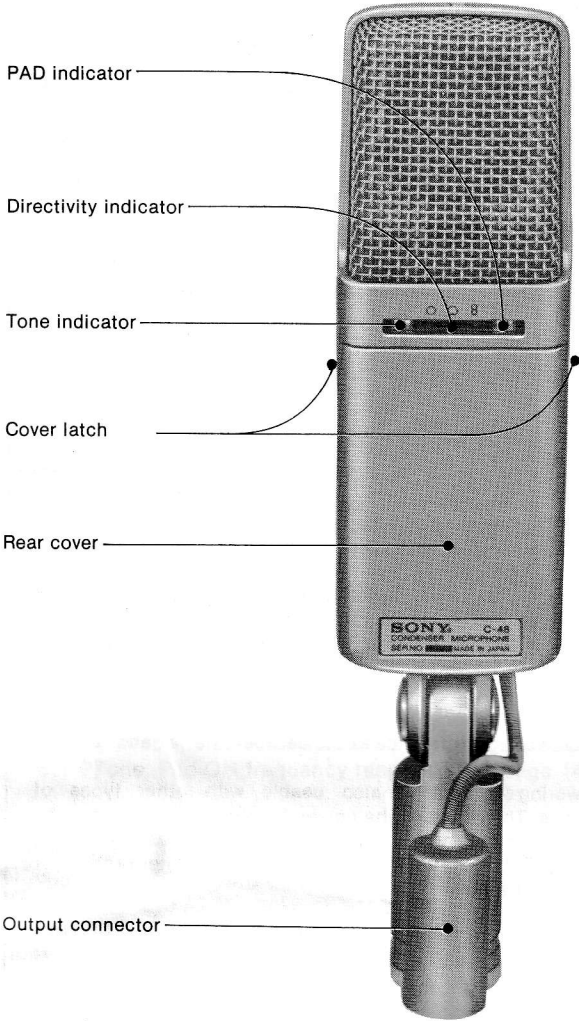
## PRECAUTIONS

- 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).
- Connect the microphone cable firmly.
- The microphone and recording instruments should be turned on thirty minutes before they are actually used. This assures stable performance of the equipment.

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PARTS IDENTIFICATION



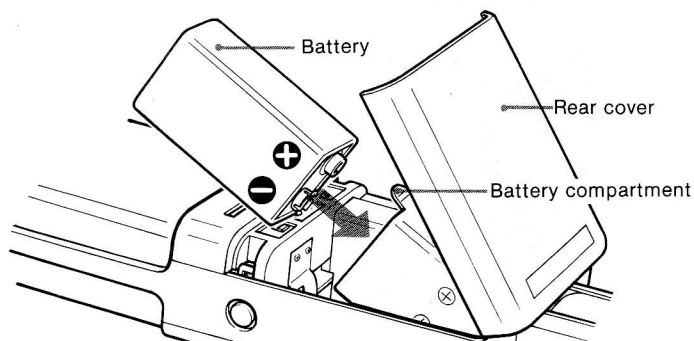
## POWER SOURCES AND OPERATION

### Preparation

Attach the microphone to the microphone stand.

### BATTERY OPERATION

- 1 Open the rear cover by pushing the two latches.
- 2 Pull out of the compartment and insert a battery into it. Observe the battery polarity indicated on the compartment.



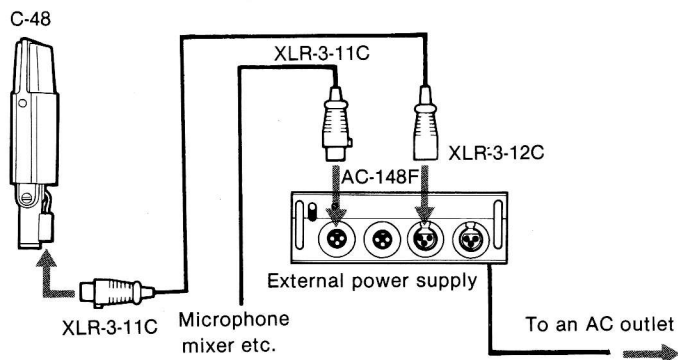
- 3 Close the compartment by pressing the rear cover.
- 4 Connect the output connector of the microphone and the input of the microphone mixer etc. with the microphone cable.
- 5 When using the microphone, set the battery ON/OFF switch to ON. The directivity indicator will illuminate. After using the microphone, remember to set the switch to OFF.

### Notes

- An exhausted battery causes noise or harmonic distortion. When the directivity indicator lights dimly, replace the battery with a fresh one.
- If the microphone is not to be used for a long time, or is operated on an external power supply, remove the battery to avoid any possibility of corrosion.
- In case of battery leakage, wipe off any deposit in the battery compartment before installing a new battery.

### EXTERNAL POWER SUPPLY

- 1 Connect the output connector of the microphone and the input of the external power supply (optional Sony AC-148F or equivalent).
- 2 Connect the output of the external power supply and the input of the microphone mixer etc.



### Note

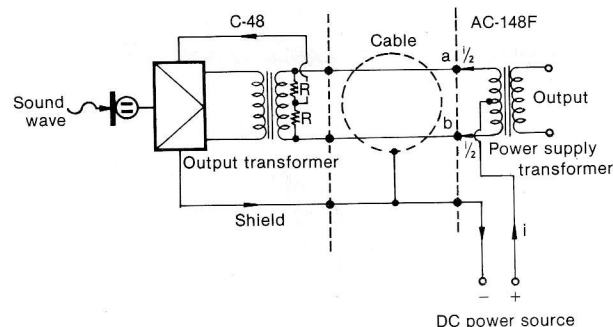
When using the microphone with the external power supply, if the battery ON/OFF switch is set to ON, current will be drawn from the battery. To avoid running down the battery, keep the switch at OFF.

## TECHNICAL INFORMATION

### External power supply system

The C-48 can utilize an external power supply.

This system uses an external DC power source, a standard two-conductor shielded microphone cable, and the transformer of the C-48. The external power supply Sony AC-148F (optional) is recommended for this purpose.



In this form of powering, the supply current (positive potential) is fed to the center-tap of the power supply transformer, and is conducted symmetrically via the "a" and "b" conductors whose original function is to carry the microphone output signal. After this current joins at the center of the resistor connected between the conductors, it flows from that junction to the microphone. The return current (negative potential) flows through the shield. While the phantom powering DC current is conducted via the audio signal wires of the microphone, there is no adverse effect on the signal, since no DC voltage difference exists between the "a" and "b" conductors.

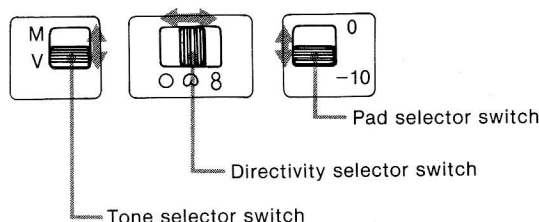
This powering system is also usable with other types of microphones. The outlet of the power supply transformer may be connected to any other type of microphone, such as condenser, dynamic, or ribbon, without causing noise, interference or deterioration of the signal.

### Note

With an external power supply system, never use an unbalanced microphone cable for connecting to the microphone.

## ADJUSTMENT OF SELECTOR SWITCHES

The tone selector switch, the directivity selector switch and the pad selector switch are located inside the microphone under the rear cover.



When changing the settings, be sure to turn off the amplifier to prevent microphone output noise that could damage the speaker or create a disturbance.

### tone selector switch

The tone selector switch adjusts the low frequency response. V position reduces the response in the low frequency range. When some room acoustics happen to emphasize low frequencies, resulting in "boomy" sound pickup, or when a microphone is placed in close proximity to the source, causing a "proximity" effect (a boosting of the bass response), set the selector switch to V. This position is preferable for closemiking of voice, and in situations where air conditioner noise or other sources of low frequency are encountered.

Generally keep the selector switch to M for a music source.

→ See "Tone, Pad ON frequency response" on page 14.

### DIRECTIVITY SELECTOR SWITCH

The desired directivity can be obtained by setting the directivity selector switch.

When the power is turned on, the directivity indicator will be illuminated and the directivity in use can be checked.

○ : **Omni-directional**

Sounds from all directions are picked up with equal level.

⊙ : **Uni-directional**

Sounds from the front are emphasized.

8 : **Bi-directional**

Sounds from the front and the rear are emphasized.

### PAD SELECTOR SWITCH

The pad selector switch reduces the output level of the microphone to prevent any overload of the impedance translator resulting from the pickup of extremely high level sound sources. Normally set the selector switch to 0, and when the recording of high sound level is necessary, set this to 10.

→ See "Tone, Pad ON frequency response" on page 14.

## SPECIFICATIONS

### General

Type	Condenser microphone
Semiconductors	2 junction FETs, 4 transistors, 4 diodes, 3 light-emitting diodes
Battery	IEC designation 6F22
Microphone output connector	Cannon XLR-3-12C type
Mounting thread	PF 1/2
Dimensions	54×229×40 mm (w/h/d) (2 1/4×9 1/8×1 5/8 inches)
Weight	approx. 550 g (1 lb 4 oz)
Finish	Satin color coating finish
Supplied accessories	Carrying case Stand adaptor (PF 1/2 to NS 5/8)

### Performance

Frequency response	30 Hz – 16,000 Hz (See page 14)
Directivity	Selectable uni-directional, omni-directional or bi-directional (See page 14)
Output impedance	150 ohms ±20%, balanced
Output level (deviation ±2 dB)	Open circuit voltage* <sup>1</sup> : -61.0 dB (0.89 mV) Effective output level* <sup>2</sup> : -38.8 dBm * <sup>1</sup> 0 dB = 1 V/μ bar 1,000 Hz * <sup>2</sup> 0 dB = 1 mW/10 μ bar 1,000 Hz Recommended load impedance is more than 3 kohms.
Power requirements for battery operation	Normal operating voltage: 9 V Minimum operating voltage: approx. 5.5 V Current drain: Less than 5 mA (at normal operating voltage) Battery life: Approx. 50 hours with Sony super battery S-006P
Power requirements for external power operation	Normal operating voltage: 48 V Internal impedance: 3.4 kohms Current drain: Less than 1 mA
Noise level	Signal-to-noise ratio: More than 52 dB (1,000 Hz, 1 μ bar) Inherent noise: Less than 22 dB SPL (0 dB = 2×10 <sup>-4</sup> μ bar) Wind noise* <sup>1</sup> : Less than 47 dB SPL Induction noise from external magnetic field* <sup>2</sup> : 0 dB SPL/m gauss

\*<sup>1</sup> 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<sup>-4</sup> μ bar

\*<sup>2</sup> 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<sup>-4</sup> μ bar

Maximum sound pressure input level (at 1,000 Hz, 1% distortion)  
more than 128 dB SPL (Normal)

Dynamic range Approx. 106 dB

Environmental temperatures

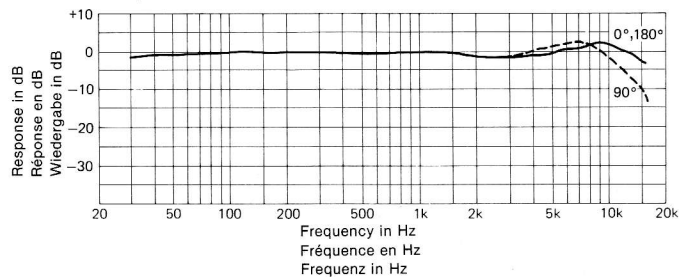
-20°C to +60°C (-4°F to +140°F) for storage  
0°C to +60°C (+32°F to +140°F) for operation

Design and specifications subject to change without notice.

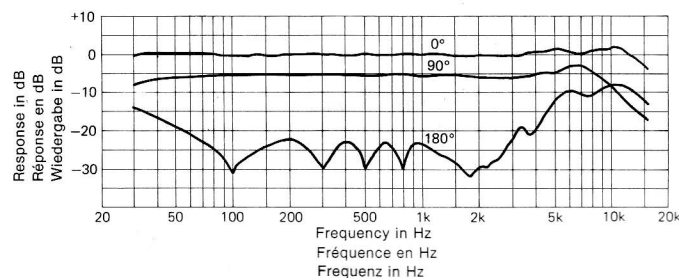
# FREQUENCY RESPONSE/ REPOSE EN FREQUENCE/ ÜBERTRAGUNGSBEREICH

## FREQUENCY RESPONSE REPOSE EN FREQUENCE ÜBERTRAGUNGSBEREICH

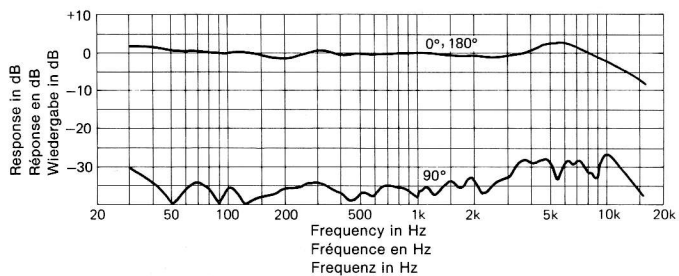
Omni-directional  
Omni-directionnel  
Nierenförmig



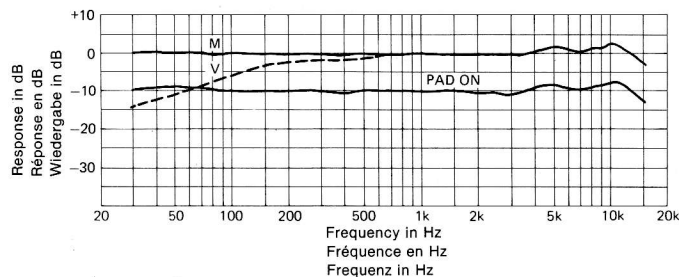
Uni-directional  
Uni-directionnel  
Kugelförmig



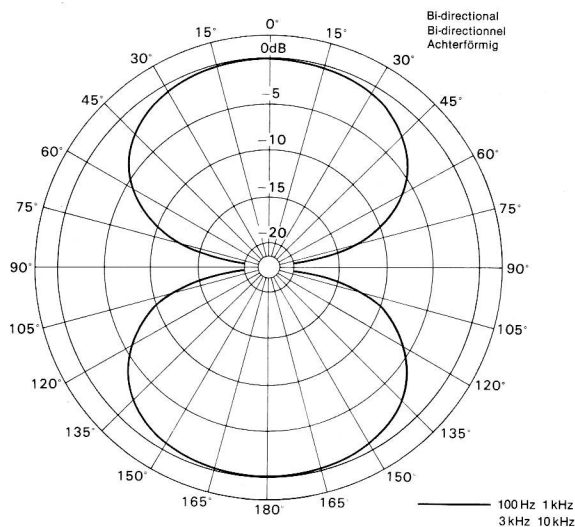
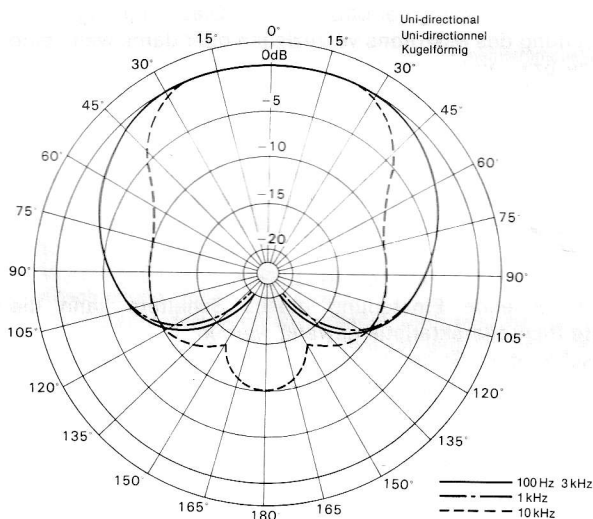
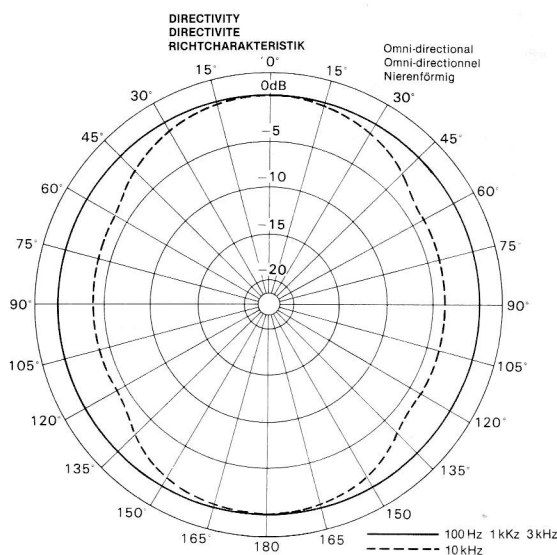
Bi-directional  
Bi-directionnel  
Achterförmig



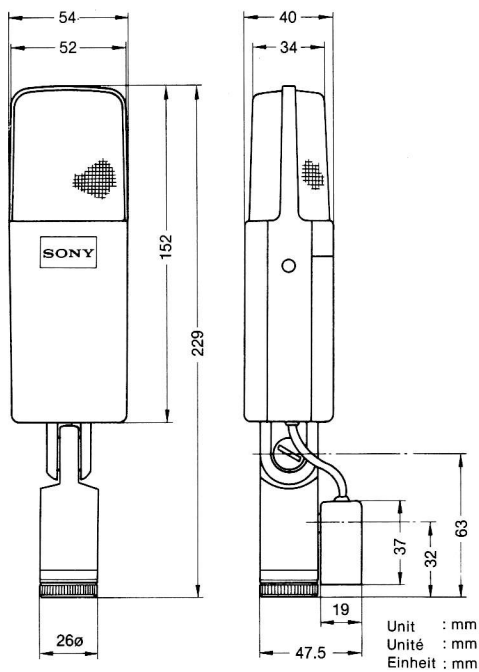
Tone, Pad ON  
Réglage de tonalité et d'atténuation  
Klang-, Dämpfungswähler: ON



# DIRECTIVITY/ DIRECTIVITE/ RICHTCHARAKTERISTIK



DIMENSIONS/DIMENSIONS/ABMESSUNGEN



BLOCK DIAGRAM/SCHEMA DE PRINCIPE/BLOCKSCHALTPLAN

