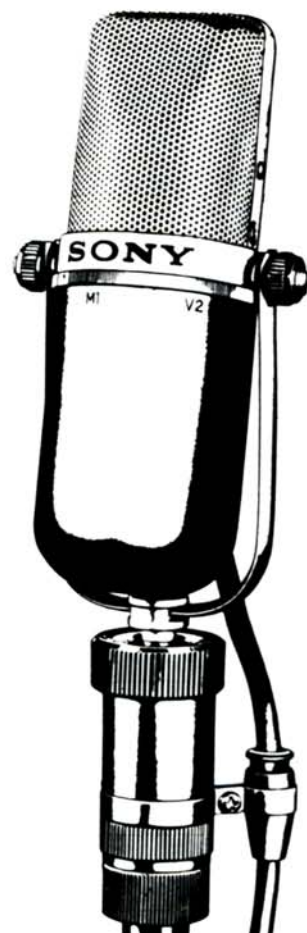


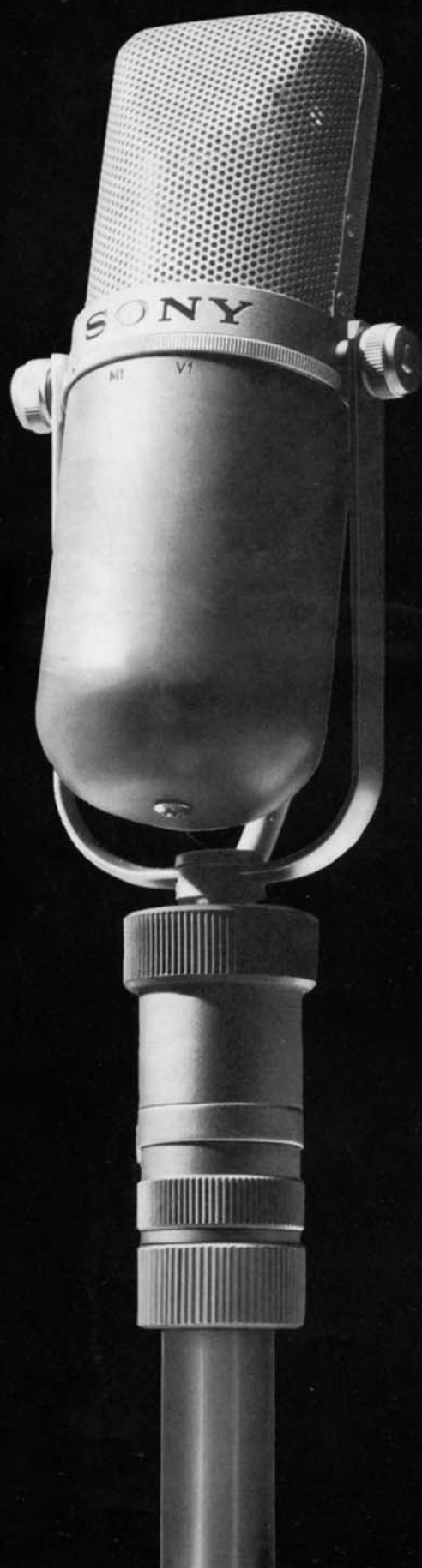
# **C-37P**

**VARIABLE-DIRECTIVITY  
CONDENSER STUDIO MICROPHONE**  
**Operating Instructions**



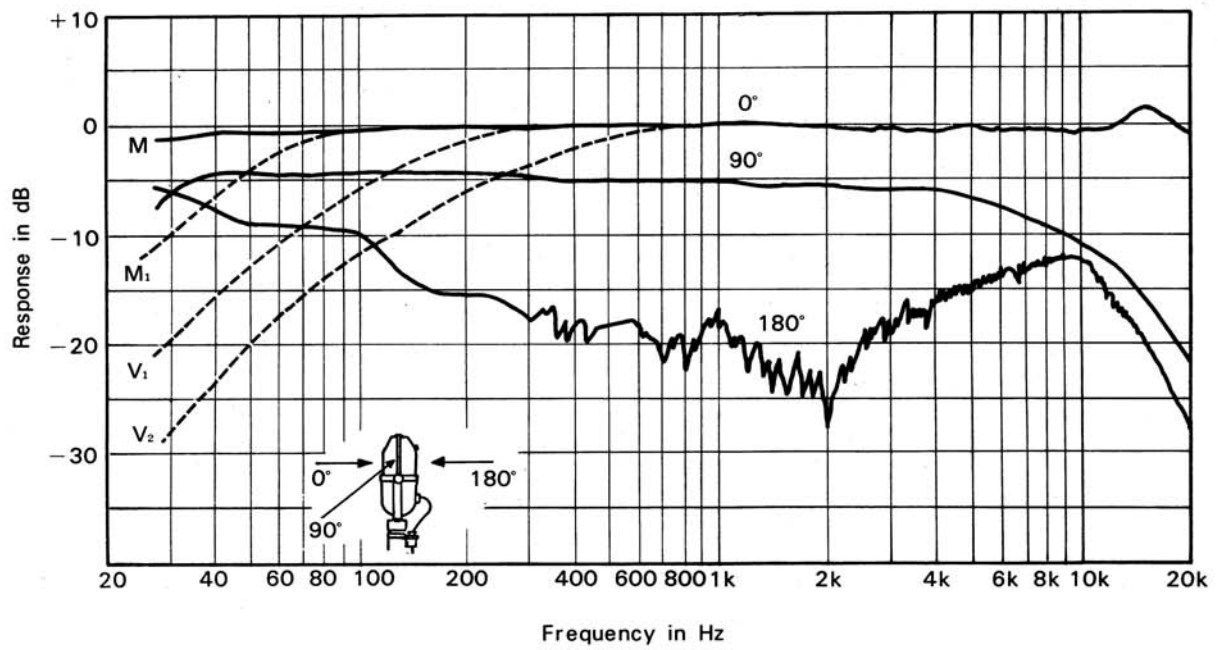
SONY Corporation, in its constant effort to develop new design and construction techniques, has successfully developed the new world standard for professional condenser microphones.

The SONY Model C-37P meets the stringent demands for broadcast and studio applications where an extremely high quality variable-directivity microphone is required.

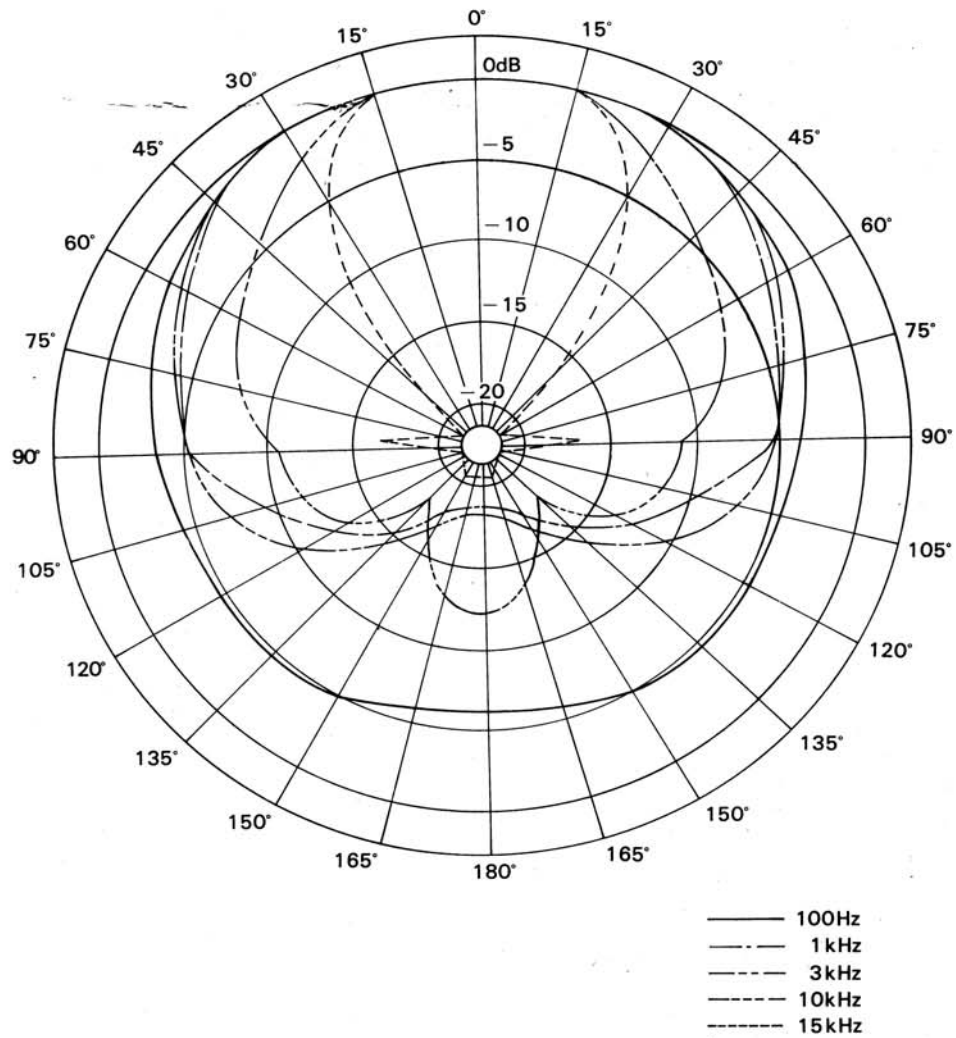




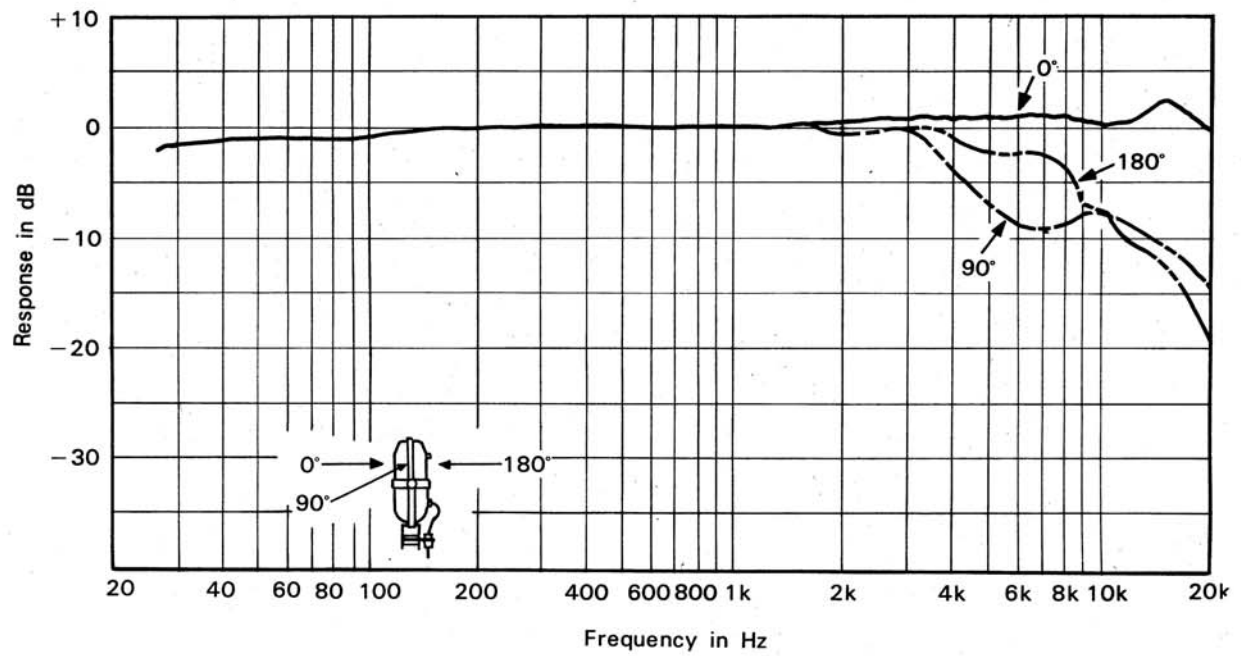
**Fig. 1 : Frequency Response Characteristics (uni-directional)**



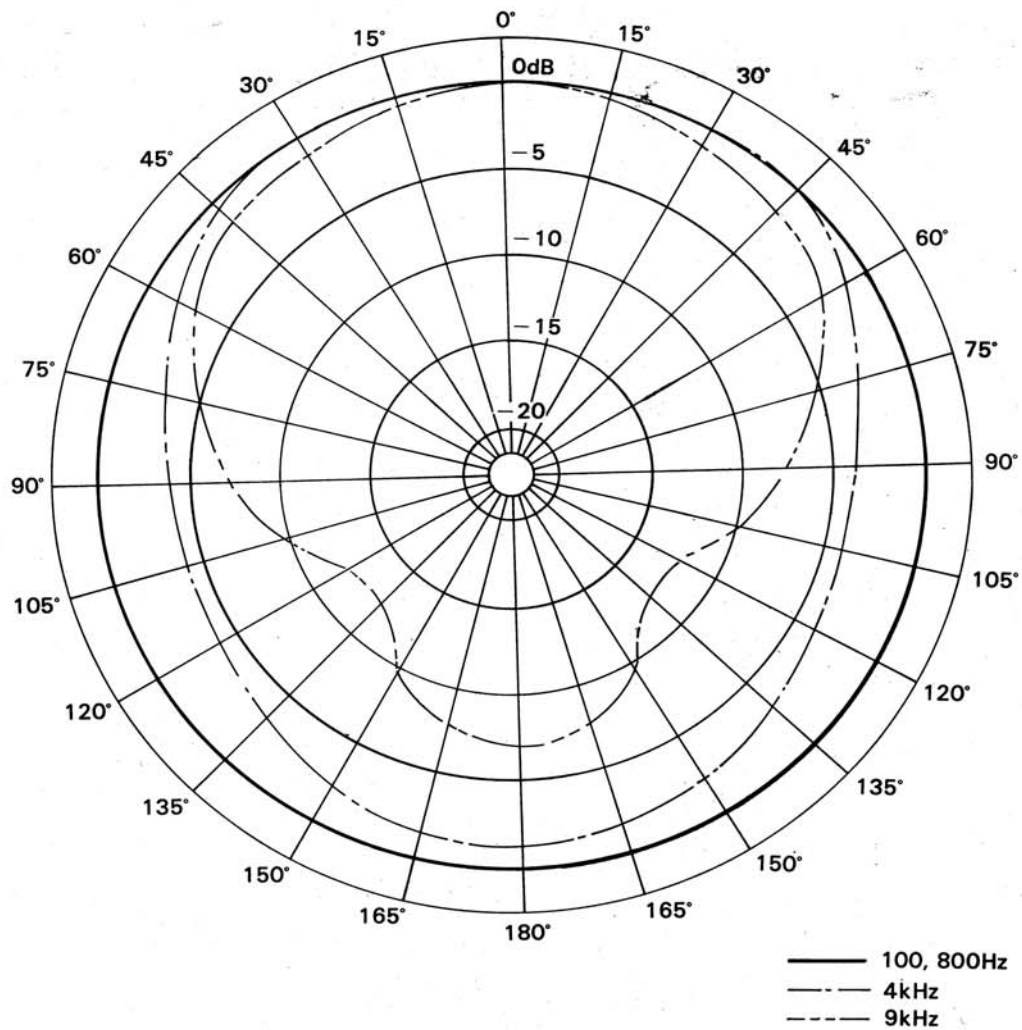
**Fig. 2 : Directivity Characteristics (uni-directional)**



**Fig. 3 : Frequency Response Characteristics (omni-directional)**

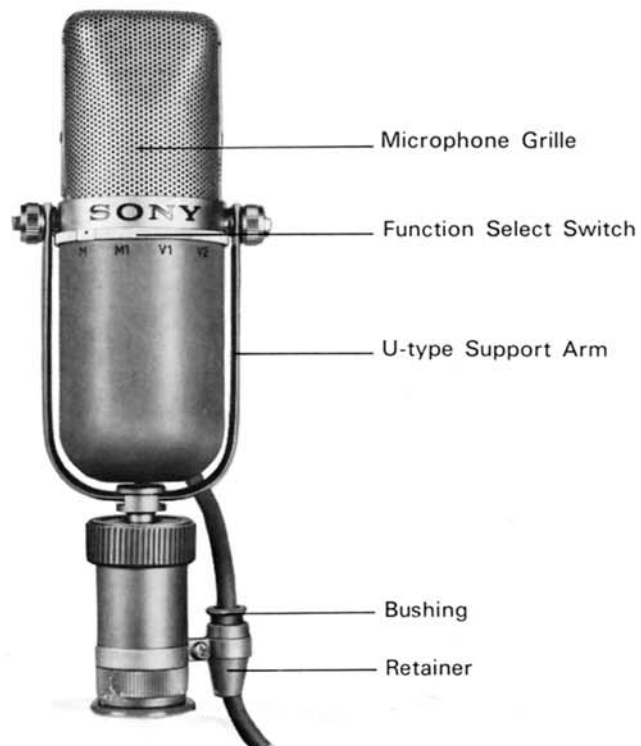


**Fig. 4 : Directivity Characteristics (omni-directional)**



## OPERATING INSTRUCTIONS

Operating the C-37P requires no special knowledge, but this manual should be read carefully so that the microphone's full capabilities may be realized.



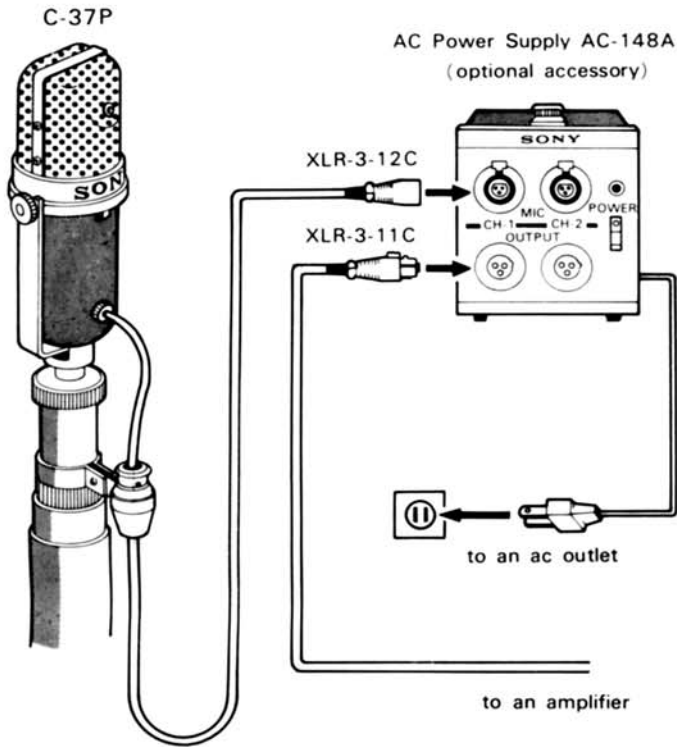


## Power Connection

The C-37P can be operated from an external power supply voltage using the SONY AC-148A Power Supply (or equivalent). Refer to the illustration below and the "Phantom Power System" section on page 8.

### Optional accessory Power Supply AC-148A

The optional SONY Model AC-148A power supply will directly power any two microphones with phantom power capability (DC 48-54 V). The AC-148A will power up to twelve microphones when adapted for studio use. Refer to the operating instructions of the AC-148A for set-up and operating procedures.

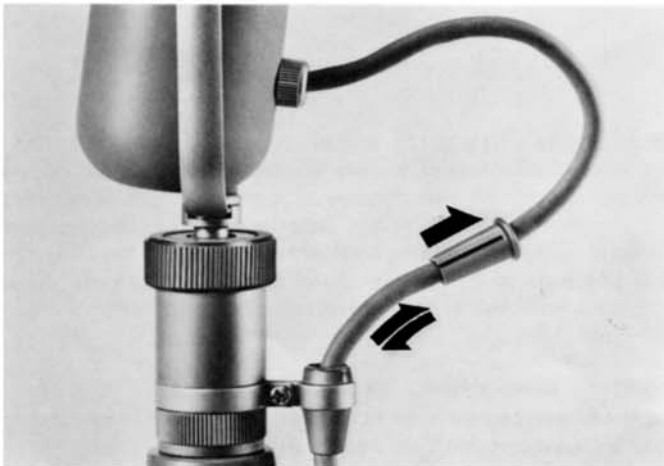


Due to the use of Phantom Power System, the C-37P must have balanced output connections. Therefore, use balanced-type cable for extending cable between the power supply and the C-37P.

### Microphone Cable Length Adjustment

When the microphone angle is changed, adjust the microphone cable to its proper length.

1. Pull out the bushing from the retainer.
2. Adjust the cable length.
3. Reinsert the bushing into the retainer.



## Directivity Select Switch

Directivity of the C-37P may be switched from cardioid to omnidirectional by setting the directivity select switch (located on the rear cage) to either the "U" or "N" position with the supplied screwdriver. The "U" represents the uni-directional (cardioid) characteristics; the "N", the non-directional (omni-directional) characteristics.

Note: To avoid undesirable microphone output noise caused when the directivity select switch is moved, reduce the microphone amplifier level or select the directivity pattern before connecting the microphone.



## Function Select Switch

The function select switch has four functions

SYMBOL	FUNCTION
M	Flat (full range) frequency response
M1	Slight low frequency attenuation
V1	Low frequency attenuation
V2	Severe low frequency attenuation (roll-off)

M, M1, V1, V2 can be selected to provide the best frequency response characteristics for the specific sound pickup circumstances. Refer to the Fig. 1 on page 4.



## Pad Switch

To prevent overload of the impedance translator resulting from the pickup of extremely high level sound sources, the pad switch (located on the center-rear of the microphone) reduces the output level of the microphone capsule by approx. 8 dB. This allows even the highest sound levels encountered in practice to be reproduced without distortion.

In general, set the switch to [0] position. When the recording

of high sound level is necessary, set the switch to  $[-8\text{ dB}]$  position. The output level of the microphone is reduced by approx. 8 dB.



### Windscreen and Shock-mounting

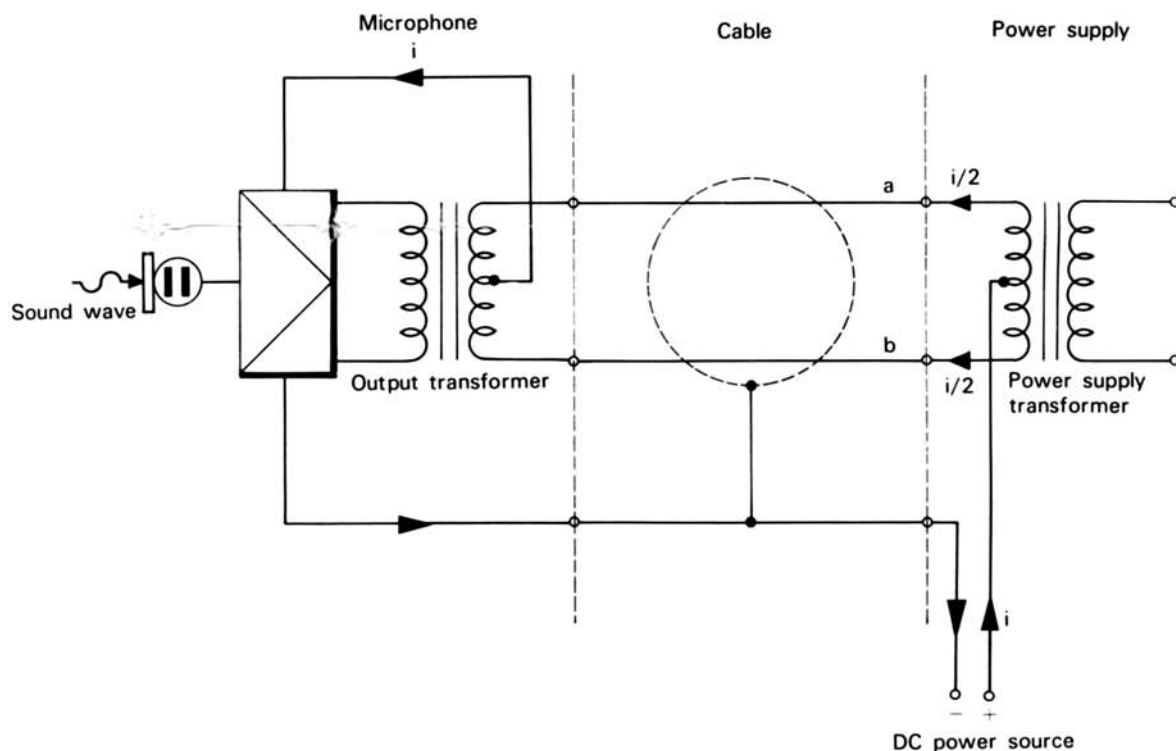
The microphone grille is equipped with a windscreen which surrounds the capsule. The capsule is fully shock-mounted to eliminate the pickup of vibrations transmitted through the microphone stand.

## TECHNICAL INFORMATION

### Phantom Power System

The C-37P utilizes the standard phantom power (DC 48–54 V) system. The phantom power system consists of a DC power source, the standard two-conductor shielded microphone cable and center-tap transformer of the C-37P. The SONY AC Power Supply Model AC-148A is recommended as an optional accessory.

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. Then, this voltage is fed to the center-tap of the microphone transformer. (Refer to the illustration below.) The negative potential is sent through the shield. The phantom powering DC voltage is completely isolated from the audio signal of the microphone, and has no adverse effect on the signal. This powering system offers the following advantages.



### Interchangeability with other types of microphone

The outlet of the power supply transformer may be connected to any other type of microphone . . . condenser, dynamic, ribbon, etc. . . without causing noise, interference or deterioration of the signal, since no voltage difference occurs between the A and B conductors. Improper polarity connections of A and B conductors will not affect operation of the C-37P.

### Simplified microphone set-up

Once the powering system is set-up, the C-37P is as convenient to use as any dynamic or ribbon microphone.



### FET Pre-amplifier Circuit

The FET circuit of the C-37P assures extremely low intermodulation and total harmonic distortion. This circuit provides superior linearity and dynamic range. Intermodulation distortion remains less than 1% at the sound pressure levels up to 154 dB SPL\*, and total harmonic distortion remains less than 1% at 1 kHz. This circuit has an equivalent inherent noise level of less than 24 dB SPL. Accordingly, an extraordinary dynamic range of 130 dB is obtained.

All circuit components are mounted on an epoxy-tetron printed board which is completely moisture-proof and is protected by a dust cover. This assures stable operation even in the most humid operating conditions.

\* 70 Hz and 7 kHz ; 4 : 1 Ratio. Applied to input of impedance translator at a level which is equivalent to capsule output at 154 dB SPL.

### BLOCK DIAGRAM

