

# Uni-axial Stereo/Monaural Condenser Microphone C-220A

- A microphone of unusual versatility and highest professional quality.
- Uni-axial stereophonic pick-up with one microphone.
- Electronically variable coverage angles for stereophonic sound pick-ups.
- Directivity pattern smoothly variable from Omni-directional, through Uni-directional modes for the respective two channels.
- Remote and electronically variable directivity axis for monaural pick-ups.



The Sony C-220A provides complete microphone facilities for M-S intensity stereo, conventional left/right stereo or monophonic modes. Continuously variable electrical controls at the power supply allow independent selection of each microphone polar pattern.

Two complete microphones are contained within the C-220 case. Each diaphragm is less than one inch in diameter to provide extended high frequency response. The diaphragms are constructed from a super-thin polyester film and a micro-coating of

gold uniformly applied over the entire surface by an exclusive vacuum process. Exceptionally uniform low frequency response, and low noise is obtained by use of the premium quality Sony designed 6D-H3 tube as a cathode follower.

The lower capsule assembly is attached to the microphone case while the top element can be rotated about a common axis to facilitate the various modes of operation. Scales are inscribed in both the top and bottom of the microphone case for accurate positioning of each element.

The C-220A and associated CP-5 MS power supply are normally connected by a 30-foot cable. Extension cables are available allowing the use of 200 feet of interconnecting cable between the microphone and power supply.

A CP-5 MS power supply is used with the Sony C-220 Stereo Microphone. Providing the necessary operating voltages for both cathode followers. Elaborate filtering networks in both plate and filament supplies guarantee the absence of hum while solid-state rectifiers and premium quality electrolytic filter capacitors assure trouble free operation over extended periods of time. Operating controls at the power supply include, polar pattern controls, high and low frequency filters, matrix networks, mode and impedance selectors.

**LIST PRICE \$625.00 COMPLETE**

# Architects and Engineering Specifications

The microphone shall be a Sony Model C-220A and CP-5 MS power supply or equivalent. The microphone shall consist of two separate condenser capsules and associated cathode followers mounted in a single case. Provisions shall be made to mechanically change the physical orientation of the condenser capsules with respect to each other over a range of 270 degrees. The condenser diaphragm shall be non-metallic, pre-stressed polyester film with a vapor-deposited gold film forming the conductive surface. Internal wiring of the microphone shall be on laminated fiberglass epoxy copper material. Connection of the microphone and power supply shall be accomplished by a single multiple conductor shielded cable.

The power supply shall contain separate controls in each channel for the functions of high cut filter, low frequency attenuation and polar pattern. Continuously variable controls shall be used to select polar patterns. Their design is to be such that intermediate patterns can be obtained at the users discretion.

Provisions will be incorporated to select the microphone characteristics from LR stereo, MS stereo or Variable Directional monaural at the power supply and 6db of attenuation will be available at each microphone characteristic. Output will be balanced to ground. Output level shall be as follows:

LR . . . . low impedance: -60db  
 LR . . . . high impedance: -54db  
 M-S . . . . 54db

V-AX . . . . 54db where Odb=1 volt/10 micro bar.

Residual microphone noise shall be less than 26 phons. The microphone shall be equipped with a shock isolating stand coupler provided with 1/2" pipe threads to 5/8" x 27 threads.

The C-220A will be supplied with a CP-5MS power supply, 30-foot microphone-power supply interconnecting cable and packed in a deluxe carrying case.

# Specifications

## System

Stereophonic condenser microphone.  
 (Two condenser microphone capsules are mounted in one case.)

Frequency response  
 40 to 15,000 c/s  $\pm$  2.5db.

Directional characteristic  
 Omni-directional, uni-directional, bi-directional. Continuously variable.

## Output impedance

LR-L . . . . . 60 ohms  
 LR-H . . . . . 250 ohms  
 M-S . . . . . 150 ohms  
 V-AX . . . . . 150 ohms  
 Balanced, switch selected.

## Output level

Mode	Output impedance	Effective output level	Open circuit level	EIA rating	
LR-L	ohms 60	dbm (1) -53.8	db (2) -60.0	mV 1.0	GM db (3) -145.8
LR-H	250	-53.8	-54.0	2.0	-145.8
M-S	150	-53.8	-60.0	1.0	-145.8
V-AX	150	-53.8	-60.0	1.0	-145.8

(1) The effective output level is defined as the ratio in db of the electric power available from the microphone relative to 0.001 watt, under the sound pressure level of 10 micro bar.

(2) Odb=1 volt/10 micro bar.

(3) EIA standard.

6 db lower output is available for tabulated values by means of a built-in switch.

## Signal to noise ratio

Better than 60 db (1,000 c/s, 10 micro bar).

## Stand screw

1/2" pipe thread, or 5/14 - 18 parallel thread.

## Finish

Microphone: stainless steel,  
 Power supply: chrome-satin finish and light gray baked enamel.

## Tubes and diodes used

6DH3 x 2, 1S125 x 2, 1S121 x 2

## Dimensions

Microphone: 1 1/8" x 10"  
 Power supply: 4 1/4" x 10 5/16" x 5 1/4"

## Weight

Microphone: 20 oz.  
 Power supply: 6 lbs.

## Power supply

100/117/220V 50/60 c/s

## Power consumption

10VA

above specifications subject to change without notice.

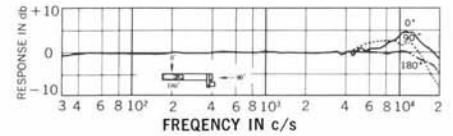
# Accessories

(supplied with equipment)

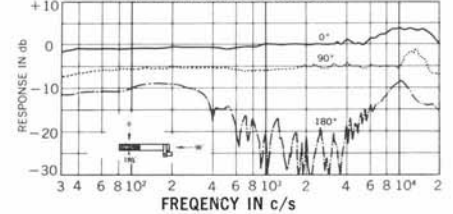
Power supply CP-5 MS . . . . .	1
Microphone cable, 30 feet . . . . .	1
Fuse, 0.5A . . . . .	1
Pilot lamp, 8V . . . . .	1
Output connector . . . . .	2
Power source voltage designator (100, 117, 220V) . . . . .	1 each
Carrying case . . . . .	1
Instruction manual . . . . .	1

# TYPICAL FREQUENCY RESPONSES

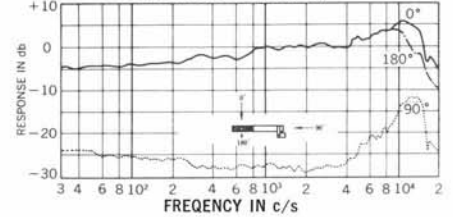
C-220A STEREO CONDENSER MICROPHONE (Omni-directional position)



C-220A STEREO CONDENSER MICROPHONE (Uni-directional position)

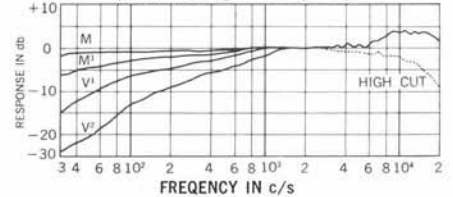


C-220A STEREO CONDENSER MICROPHONE (Bi-directional position)



# TYPICAL OPERATING CHARACTERISTICS

C-220A STEREO CONDENSER MICROPHONE (Low cut & high cut response)



# TYPICAL MODES OF DIRECTIONAL CHARACTERISTICS (one capsule)

