

## FEATURES

- Superior control room microphone
- Improved unidirectional characteristic with wide pickup angle on front
- Three position voice-music switch allows selection of most desirable operating characteristic
- Simplifies microphone and camera placement problems—maximum sensitivity lies on major mechanical axis
- Small size—ideal for TV boom operation
- Exceptionally good shielding permits operation in high hum fields
- Improved long-life flexible cable and boom mount



BK-5B Microphone mounted on MA-2305 Desk Stand

## DESCRIPTION

The RCA Type BK-5B Uniaxial Microphone is a dependable, high-quality ribbon instrument possessing an improved unidirectional characteristic, and designed for broadcast use in AM, FM and TV stations. The microphone has a frequency response that is essentially uniform from 50 to 15,000 cycles. Its excellent response and frequency range, combined with its unexcelled cardioid directional characteristic makes it ideal for reproducing both speech and music.

The microphone has been especially engineered with the television studio in mind. Since maximum sensitivity lies on the major mechanical axis, it is a one axis, or uniaxial type microphone. This directional characteristic simplifies microphone and camera placement problems. Incorporated in the unit is a blast filter which effectively reduces damage to the microphone from gun blasts and other violent noises. In addition, the small size, light weight, unobtrusive yet attractive gray finish and appearance render it espe-

cially suitable for television, but it is also admirably suited to general broadcasting and high-fidelity sound systems.

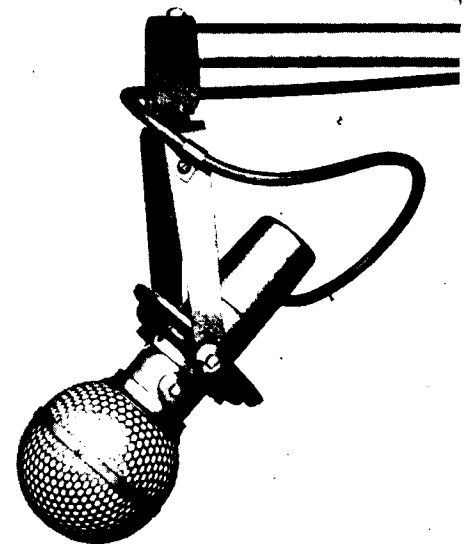
The Type BK-5B Microphone is a unidirectional microphone in which the moving element is a thin corrugated metallic ribbon clamped under light tension to cause it to vibrate at its own resonant frequency. The ribbon is placed between the pole pieces of a magnetic circuit. One side of the ribbon is open to the atmosphere and the other opens on an acoustical labyrinth which has phase-shift openings giving the instrument its improved unidirectional characteristics. The labyrinth of the microphone houses an impedance matching transformer and switch for selecting response characteristics for voice or music.

A unique feature of the BK-5B is a blast filter consisting of two separate cloth layers supported by perforated metal screens. The filters effectively reduce damage to the microphone from gun blasts and other loud noises encountered in broadcast programming. In addition, the transformer is exceptionally well shielded against stray magnetic

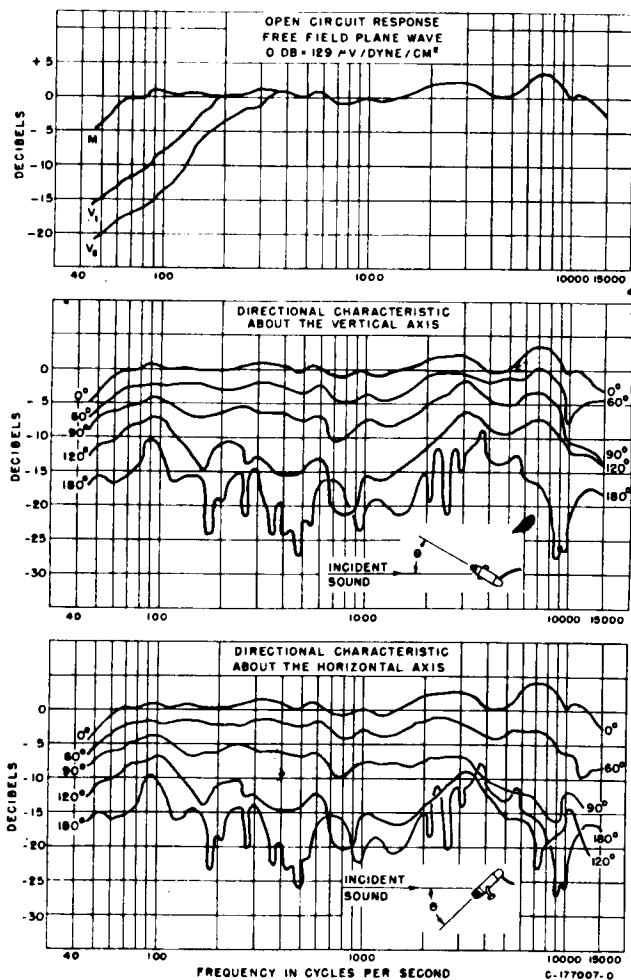
fields and can perform satisfactorily in high hum fields. As further protection for the sensitive vibrating ribbon a wind screen is available for use with the instrument. Its use is recommended if the instrument is to be used outdoors.

The integration of the blast filter, acoustic phase-shift network and especially designed connector to couple the ribbon to the labyrinth is responsible for the unique uniaxial characteristic of the BK-5B, and uniform frequency response over the entire aural spectrum. The microphone is supported on a cushion mounting which has a 1/2-inch internal pipe thread to fit RCA desk or floor stands. An improved shock mount based on panel meter mounts designed for military use is incorporated in the optional Boom Unit. This new mount isolates the microphone effectively from vibration and shock transmitted by the boom. There are no rubber band mountings to wear out. A 30-foot flexible cable, supplied with the microphone, makes use of tinned cadmium bronze wire to provide longer life.

BK-5B Microphone with Wind Screen and Boom Mount.



FREQUENCY RESPONSE OF THE BK-5B MICROPHONE



The small size and axial directivity aid in placing the BK-5B in inconspicuous fixed locations. There are no shiny external parts to reflect light and draw attention to the instrument. The axial directivity combined with the Boom Mount (MI-11012) make the microphone very easy to handle to keep the sound source "in focus." The addition of the wind screen to this combination does not cause a loss of the sense of the pickup axis.

## SPECIFICATIONS

### Performance Specifications

Directional Characteristic	Unidirectional
Frequency Response	50 to 15,000 cps
Output Impedance	250 ohms, may be changed to 30 or 150 ohms
Load Impedance	Unloaded input transformer
Effective Output Level at 1000 cps	
Sound Pressure 10 dynes/CM <sup>2</sup>	-56 dbm
EIA Rating (GM) (150 ohm connection)	-150 dbm
Hum Pickup Level	
Relative to a field of $1 \times 10^{-8}$ gauss	-128 dbm
Cable	3-conductor, shielded, 30 feet, no plug
Dimensions (overall)	7" x 2 3/4" x 2 7/8"
Weight	1 pound, 11 ozs. (less cable)
Finish	Low luster gray enamel
Mounting	1/2" pipe thread (female)

### Ordering Information

Type BK-5B Uniaxial Microphone	MA-2314
--------------------------------	---------

### Accessories

Boom Mount	MA-2324
Wind Screen	MA-2325
Desk Stand	MA-2305