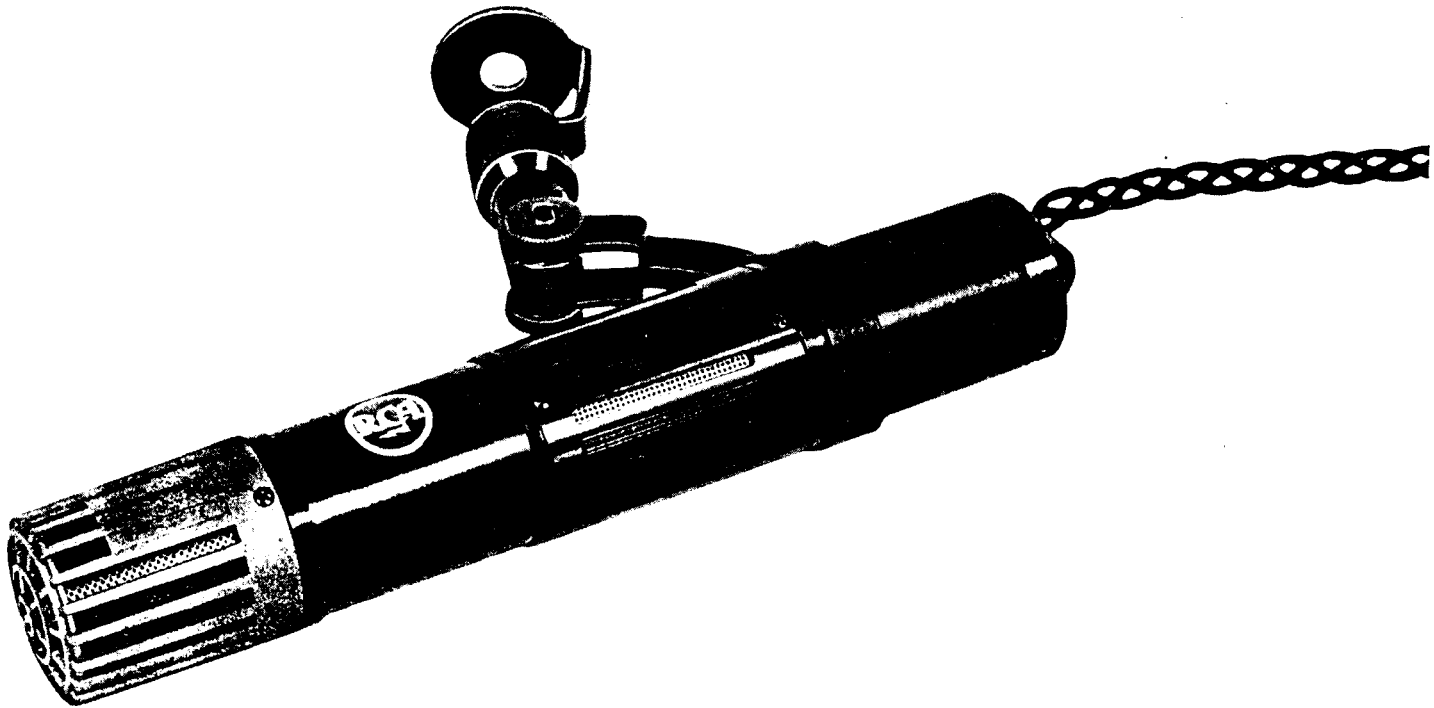


ULTRADIRECTIONAL MICROPHONE

TYPE BK-10A



FEATURES

- Simplifies microphone and camera placement problems—ultra-directional characteristics provide quality pickup under adverse conditions
- Lightweight for TV boom operation
- High quality reproduction over entire audio frequency range
- Maximum sensitivity lies on major mechanical axis
- Rugged construction—improved resistance to gun blasts
- Improved long-life flexible cable

USE

The RCA Type BK-10A Ultradirectional Microphone is designed to provide quality audio pickup under adverse conditions during television broadcast, radio broadcast, recording and public address. This is accomplished by a highly sensitive second order gradient directional characteristic which may be used to increase the signal to noise ratio of the microphone.

The BK-10A is a ribbon type bigradient uniaxial microphone with a frequency response that is essentially uniform from 80 to 15,000 cycles suiting it for reproduction of both speech and music. The response pattern and the improved signal to noise ratio simplify microphone and camera placements; and allows for greater distance between the microphone and the talent than heretofore possible. It is especially effective for TV studio boom use in high noise areas. Other uses indicated for the new microphone are: situations where feedback from monitor speakers is a problem; and controlling the level of the leading voice in a choral group. The microphone incorporates a filter which effectively reduces the possibility of damage to the instrument from sharp blasts and other violent noises. The axial directivity combined with a Boom Stand such as the KS-3B, make the microphone very easy to handle to keep the sound source "in focus."

DESCRIPTION

The Type BK-10A Ultradirectional Microphone is a second order gradient directional instrument with uniform frequency response from 80 to 15,000 cycles. Excellent directivity is accomplished by matching and combining the electrical outputs of two unidirectional ribbon microphone elements.

The unidirectional microphone elements are similar in construction and performance to those used in the BK-5A Microphone. Each element has a thin corrugated metallic ribbon clamped under light tension, thus making its natural frequency of vibration sub-audible. The ribbon is placed between the poles of a magnetic circuit. One side of the ribbon is open to the atmosphere, and the other side opens into an acoustical labyrinth which has phase shift openings. The labyrinth of each microphone element houses an impedance matching transformer. Each element has its own blast filter. In addition, the transformer is exceptionally well shielded against stray magnetic fields.

The BK-10A will perform satisfactorily in high hum fields because of its improved wiring and shielding. The elements are carefully matched so that the performance of each complements the other. In addition, the shock isolation mounting provided incorporates improved compact design features. This mount does not generate any noise and isolates the microphone effectively from its support. There are no rubber band mountings to wear out. The cable supplied with the microphone is braided tinsel cord 18

inches long which has been especially designed to attenuate "stand" noise.

The BK-10A has a low-gloss finish, which with compact mounting arrangement, provide minimum light reflection and minimum shadow. The output impedance of the microphone is 200 ohms for 150- and 250-ohm unloaded input transformers but may be changed at the terminal board to 40 ohms for 30- and 50-ohm input transformers. The output level is maintained at -56 dbm, and hum pick-up is reduced to a level of -130 dbm.

SPECIFICATIONS

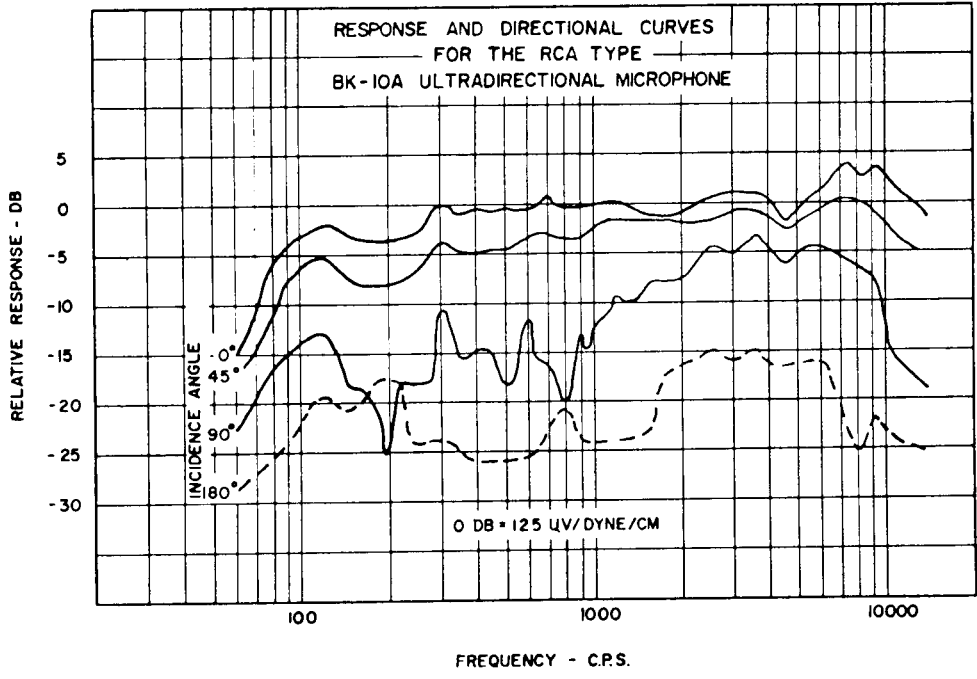
Directional Characteristic.....	Unidirectional 2nd Order Gradient Characteristic
Frequency Response.....	80 to 15,000 cps
Output Impedance.....	200 or 40 ohms
Load Impedance.....	Unloaded input transformer
Effective Output Level at 1000 cps.....	-56 dbm
EIA Rating (Gm).....	-150 db
*Hum Pickup Level.....	-130 dbm
Cable.....	Braided tinsel, 18 inches long
Dimensions (overall).....	10½" x 1¾" x 2⅞"
Weight.....	2 lb., 8 oz. (less cable)
Finish.....	Two Tone, Black and Low gloss gray enamel
Stock Identification	MI-11018-A

Accessories

Microphone Boom and Stand.....	MI-11056
Microphone Boom and Perambulator.....	MI-26574

*Relative to a field of 1×10^{-3} gauss

Frequency Response Curves for BK-10A Microphone.



BK-10A Directional Characteristic.

