

MICROPHONE
639A
<i>Western Electric</i>

# CARDIOID MICROPHONE

for  
SOUND SYSTEMS  
and

## RADIO BROADCASTING

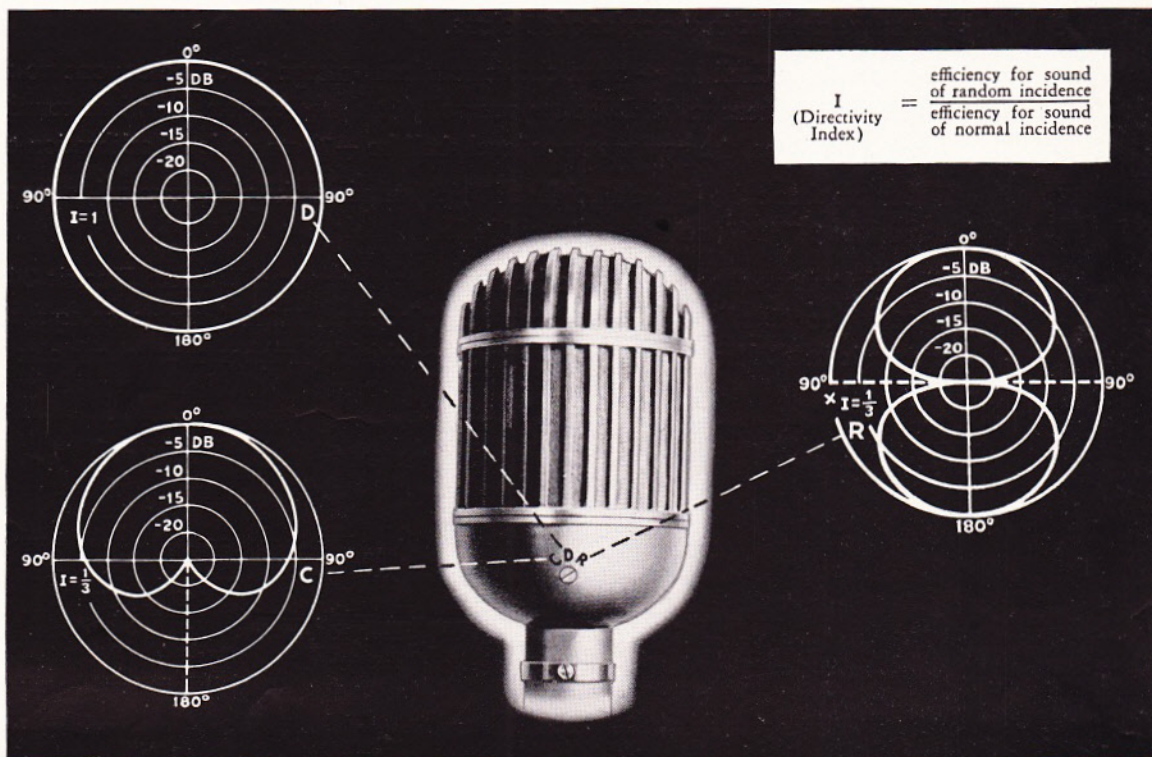


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igh quality and cardioid directivity of the Western Electric 639A Cardioid Microphone have brought it popular acceptance among public address and broadcast users — not only as an excellent all purpose microphone but also as the solution to many difficult microphone problems.

The Western Electric 639A Cardioid Microphone is a combination of a dynamic moving coil type pressure element and an improved ribbon type velocity element enclosed in an attractive housing which serves as a protective guard and as a wind screen.

When the outputs of these two elements are combined equally, the directional characteristic of the microphone is the heart shaped cardioid curve C, shown below. Use of the elements alone presents pattern D (dynamic) and R (ribbon).



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The cardioid directional performance of the 639A over the entire useful frequency range insures a practical, wide pick-up angle of at least 120° at the front of the microphone over which the quality is unchanged and the sensitivity remains practically the same. Sound engineers find this microphone invaluable for difficult studio, theatre, auditorium and night club jobs.

Stands and other accessories for use with Western Electric Cardioid Microphones are described in Sales Bulletin T-1756.

### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be the Western Electric 639A Cardioid Microphone or equivalent.

The microphone shall consist of a dynamic moving coil type pressure element and an improved ribbon type velocity element, assembled in a streamlined housing, arranged so that their outputs can either be used individually or combined equally. The three directivity patterns so provided shall be selectable through a screw driver operated switch mounted flush on the surface of the housing.

The pattern provided by combining the outputs of these elements shall be cardioid in form. The average discrimination between the front and back of the microphone shall be 20 db over the range 40 to 10,000 cycles per second. In the range from 70 to 7,000 cycles, the minimum discrimination at any frequency shall be 15 db.

The microphone shall have a smooth response and shall not deviate from the average more than  $\pm 4$  db over the range from 40 to 10,000 cycles. The average impedance throughout this range shall be in the order of 35 ohms.

The sensitivity shall be — open circuit terminal voltage 84 db below one volt/dyne/sq. cm. which is equivalent to 64 db below one volt/10 dynes/sq. cm. — when terminated by resistance of 35 ohms, the power output level shall be -76 vu (0 level calibration one milliwatt).

The microphone shall have a height of 7½" including the plug terminal, a length of 4-7/16", a width of 3-7/16", and a weight of 3¼ lbs.

The microphone shall be suitable for mounting either on a Western Electric 24A Table Stand or 22A Floor Stand, equipped with a 442A Jack and 712A Adapter, or equivalents, together with at least 10 ft. of KS-7133 two conductor shielded rubber covered cable or equivalent.

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