

### DESCRIPTION

The AKG D-58E has been designed for close-talk use wherever high ambient noise levels, feedback-prone environmental acoustics, wide temperature extremes, and moderately high humidity levels are problems. An unusually compact and lightweight microphone, the D-58E may be used either gooseneck-mounted or hand-held. In either configuration, it is recommended for general radio communications, paging/public address, talkback/intercom, and specialized broadcast applications. (Mounted on the GN-7E or GN-14E gooseneck, the D-58E is excellent as a newsdesk microphone in the clutter of the newsroom or as a sports announcer's microphone in crowded, noisy stadiums and arenas. Hand-held — and used with the W-32 windscreen — it makes a superb and unobtrusive report microphone under noisy environmental conditions in the field.)

The D-58E achieves its high noise rejection and relative immunity to acoustic feedback by combining a dynamic pressure-gradient transducer with a front- and side-ported housing in a differential design technique. As a result, the microphone clearly reproduces speech originating within its recommended working distance (approximately 5 cm or 2 in.), but greatly attenuates low-frequency on-axis noise and feedback components originating at a distance of 1 m ( $\approx 3\frac{1}{4}$  ft) or more. Higher-frequency noise and feedback components are attenuated by the microphone's tight hypercardioid directional pattern at these frequencies. For improved speech intelligibility in narrow-band communications channels, on-axis response is intentionally emphasized between 1 kHz and 5 kHz. This rising-response characteristic also contributes to better noise penetration in paging applications where the loudspeakers are likely to be in extremely noisy areas.

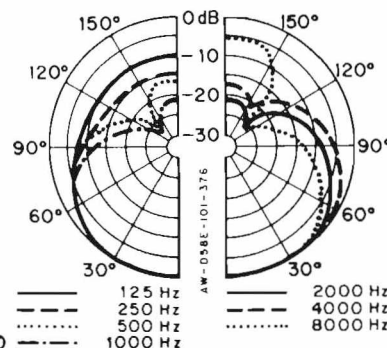
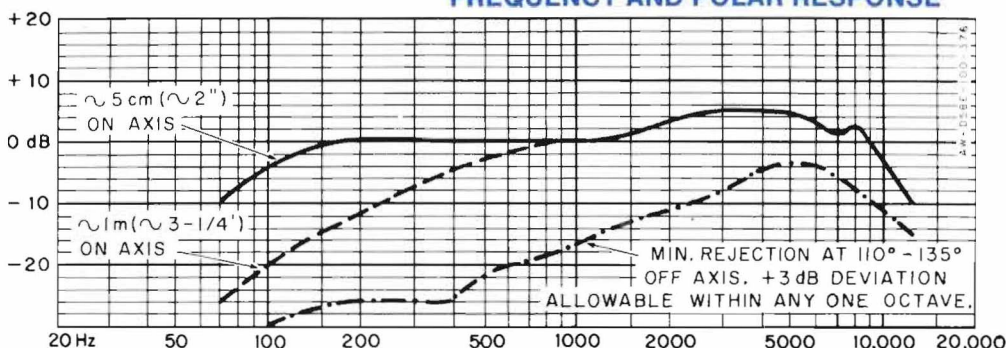


A rugged brass case and integral wire-mesh grille effectively encapsulate the microphone's transducer element against metal particles and dust. The D-58E operates satisfactorily over a wide range of temperatures and withstands moderately high humidity.

The D-58E is a low-impedance balanced-output unit fitted with a standard 3-pin male XLR-type connector. The microphone is supplied in a foam-lined vinyl protective case. Several optional accessories — listed in the Technical Data section — are available.

Also listed in this sheet are several mating AKG cable assemblies for use with low-impedance amplifying equipment, and two low-to-high-impedance transformer/cable assemblies for use with high-impedance amplifying equipment. (Each of these transformer/cable assemblies retains all the advantages of a low-impedance balanced microphone over the full cable run to the high-impedance equipment.)

### FREQUENCY AND POLAR RESPONSE



### TECHNICAL DATA

Transducer Type: Dynamic  
 Directional Characteristic: Hypercardioid  
 Frequency Range: 70-12,000 Hz  
 Nominal Impedance: 200 ohms  
 Recommended Load Impedance:  $\geq 500$  ohms  
 Sensitivity at 1 kHz:

Open circuit: 0.72 mV/Pa; -62.9 dBV\*  
 Maximum power level: -62 dBm (re: 1 mW/10 dynes/cm<sup>2</sup>)  
 EIA G<sub>m</sub>: -154.5 dBm  
 Tolerance: +0, -2.5 dB

Sound Pressure Level for 0.5% THD:

1000 Hz: 128 dB

Hum Sensitivity: -127 dBm (1 mG field)

Temperature Range: -20°C ( $\approx -4^\circ$ F) to +60°C ( $\approx +140^\circ$ F)

Maximum Relative Humidity: 90%

Case Material: Nickel-plated brass; steel-wire mesh

Dimensions: See Dimensions figure overleaf

Schematic: See Schematic figure overleaf

Net Weight: 45 g ( $\approx 1\frac{1}{2}$  oz)

Included Accessories: Foam-lined vinyl case

Optional Accessories:

GN series modular flexible-gooseneck kits

KM-221C flange adapter

KM-237 clamp adapter

KM-238 clamp adapter

ST-4A table stand

ST-305 anti-shock table stand

W-32 foam windscreen

MCH-series cable assemblies (listed overleaf)

for use with goosenecks

\* 1 Pa (Pascal) = 10  $\mu$ b = 10 dynes/cm<sup>2</sup>  $\approx$  94 dB SPL

## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall incorporate a dynamic pressure-gradient transducer enclosed in a front- and side-ported housing to produce a differential noise-cancelling characteristic. The microphone shall have a frequency range of 70-12,000 Hz, with an on-axis rising response between 1000 Hz and 5000 Hz for improved speech intelligibility in narrowband communications channels. When used within a working distance of 5 cm ( $\approx 2$  in.), the microphone's rejection of on-axis noise originating at a distance of 1 m ( $\approx 3\frac{1}{4}$  ft) or more shall exceed 16 dB at 100 Hz. The microphone shall have a hypercardioid directional pattern. The off-axis discrimination shall exceed 16 dB at 1000 Hz at a sound-incidence angle of 110-135 degrees, and an effective hypercardioid pattern shall be maintained over the entire frequency range.

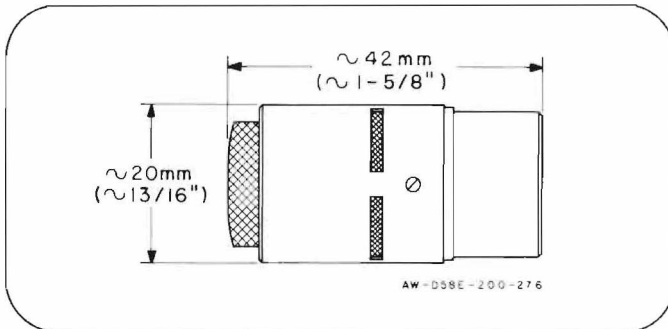
The microphone shall have a nominal impedance of 200 ohms. The output level shall be -62 dBm (re: 1 mW/10 dynes/cm<sup>2</sup>), and the microphone shall be capable of handling a maximum sound-pressure level of 50 Pa (128 dB SPL) at 1000 Hz with distortion not exceeding 0.5%. The EIA sensitivity rating ( $G_m$ ) shall be -154.5 dBm.

A wire-mesh screen, commensurate with the acoustical properties of the unit, shall protect the microphone system from metal particles and dust. The diaphragm material shall be nonmetallic MAKROFOL. The microphone shall be capable of operating over a temperature range of -20°C ( $\approx -4^\circ\text{F}$ ) to +60°C ( $\approx +140^\circ\text{F}$ ), and at a maximum relative humidity of 90%.

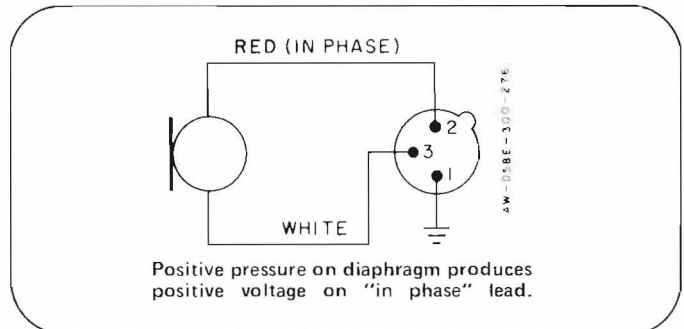
The microphone shall incorporate a 3-pin male audio connector designed to mate with Cannon XLR, Neutrik 3FC, Switchcraft A3F or equivalent connectors. A foam-lined vinyl carrying case shall also be provided. The finish of the microphone shall be matte nickel and shall not create specular light reflections.

The microphone shall be 42 mm ( $\approx 1\frac{5}{8}$  in.) long by 20 mm ( $\approx 13/16$  in.) in diameter, and the net weight shall not exceed 45 g ( $\approx 1\frac{1}{2}$  oz). The microphone herein specified shall be the AKG D-58E.

### DIMENSIONS



### SCHEMATIC



### OPTIONAL AKG HEAVY-DUTY SHIELDED CABLE ASSEMBLIES FOR THIS MICROPHONE

**NOTE:** All cable assemblies except the MCH-50 are 6.1 m ( $\approx 20$  ft) long. All are available in black.

**MCH-20** Low-impedance cable assembly w/o switch (female XLR-type connector to male XLR-type connector)

**MCH-20F** Low-impedance cable assembly w/o switch (female XLR-type connector to stripped-and-tinned ends)

**MCH-20P** Low-impedance cable assembly w/o switch (female XLR-type connector to phone plug)

**MCH-20S** Low-impedance cable assembly w/switch (female XLR-type connector to male XLR-type connector)

**MCH-20T** High-impedance cable assembly w/o switch (female XLR-type connector to transformer w/phone plug)

**MCH-20TS** High-impedance cable assembly w/switch (female XLR-type connector to transformer w/phone plug)

**MCH-50** Low-impedance 15.2 m ( $\approx 50$  ft) cable assembly (female XLR-type connector to male XLR-type connector)



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