

## DESCRIPTION

Universally acknowledged as *the* bass-drum microphone *par excellence*, the AKG D-12E has won worldwide acclaim for its special ability to capture and enhance the sonic impact of this extremely low-register percussion instrument. (The versatile D-12E is not restricted to just this one application though. Other instruments that also reach down into the very lowest octave of music — the E-flat electric guitar, low-frequency driver of the Leslie, string bass, deep brass and woodwinds, etc. — are all rendered with exceptional warmth and fullness by this time-tested microphone.) Equally important is the D-12E's corresponding ability to provide such pronounced bass *cleanly* — without unwanted boominess or muddiness, and without susceptibility to various forms of low-frequency noise.

This difficult (and seemingly contradictory) blend of features is achieved in the D-12E through a judicious combination of design elements. To start with, a moving-coil transducer having an unusually large-diameter diaphragm and highly linear large-excursion performance is coupled to a special bass-resonator chamber. This assembly is then acoustically integrated with a housing of optimum size and shape for its intended application. The result (as shown in the curves and data below) is a remarkable microphone offering: (1) useable response extending down to 30 Hz; (2) pronounced but smoothly contoured proximity-effect boost extending into the bass region

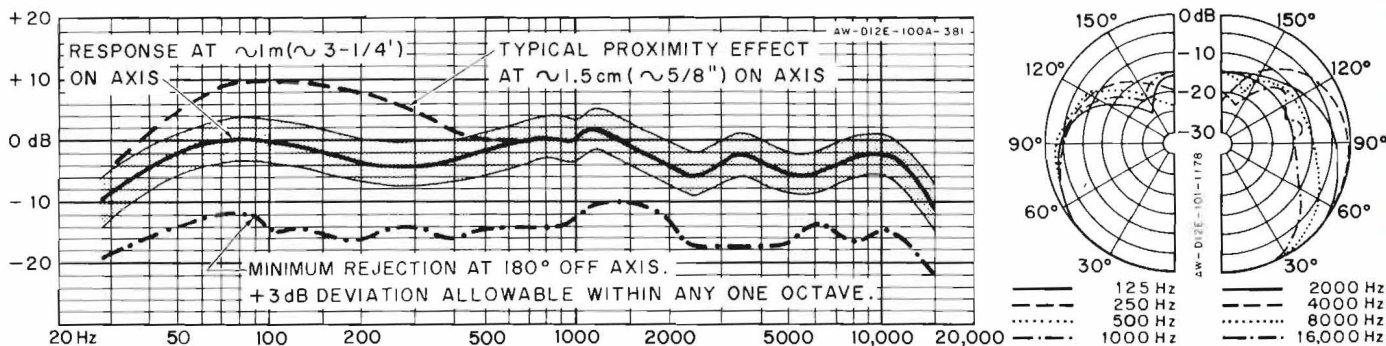


well below 100 Hz; (3) low-distortion output — even in close proximity to any of the low-frequency high-amplitude sound sources mentioned above; (4) good rejection of acoustic feedback and background noise at virtually all frequencies.

In addition, the D-12E's transducer element is specially spring-suspended for superb isolation from the effects of handling noise, mechanical shocks and spurious low-frequency vibrations. As still another precaution, the transducer incorporates a hum-bucking winding to cancel the effects of electromagnetically induced noise from ever-present power and lighting cables as well as from dimmers, power switchboards and the like.

*continued overleaf*

## FREQUENCY AND POLAR RESPONSE



## TECHNICAL DATA

Transducer Type: Dynamic  
 Directional Characteristic: Cardioid  
 Directional Reference:  
 Nickel grille = front of mic; black grille = rear of mic  
 Frequency Range: 30-15,000 Hz  
 Nominal Impedance at 1 kHz: 290 ohms  
 Rated-Impedance Category: 250 ohms  
 Recommended Load Impedance:  $\geq$  500 ohms  
 Sensitivity at 1 kHz:

Open circuit: 2.2 mV/Pa; -53.2 dBV\*  
 Maximum power level: -53 dBm (re: 1mW/10 dynes/cm<sup>2</sup>)  
 EIA G<sub>m</sub>: -145 dBm  
 High-Z output w/MCH-20T -20TS (optional): -43 dBV at 1 Pa\*  
 Tolerance: +2, -1.5 dB

Sound Pressure Level for 0.5% THD:  
 40 Hz: 120 dB; 1000 Hz, 5000 Hz: 128 dB  
 Hum Sensitivity (1 mG field): -132 dBm  
 Case Material: Steel-wire mesh; nickel-plated brass; blk trim  
 Dimensions: See Dimensions figure  
 Schematic: See Schematic figure  
 Net Weight: 480 g ( $\approx$ 17 oz)  
 Included Accessories:

SA-30 flex. snap-in stand adapter with 5/8-in. -27 thread  
 Foam-lined vinyl case  
 Optional Accessories:  
 SA-26 clothespin stand adapter with 5/8-in. -27 thread  
 KM-series floor and boom stands, stand accessories  
 ST-series table stands  
 MCH-series heavy-duty microphone cable assemblies

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

## DESCRIPTION (Continued)

Finally, the microphone's wire-mesh and polyurethane-foam windscreen/pop filter provides highly effective reduction of wind noise, breath pop and similar acoustic interference. In conjunction with the rest of the microphone housing, this ruggedized assembly also encapsulates all internal parts against metal particles and dust. Note that the two halves of the windscreen/pop filter are color-coded for ease of directional reference. The nickel grille indicates the front of the microphone

(i.e., its in-phase axis of maximum sensitivity), while the black grille indicates the rear of the microphone.

The D-12E is a low-impedance balanced-output unit fitted with a standard 3-pin male XLR-type connector. The microphone is supplied complete with an SA-30 stand adapter and a foam-lined vinyl protective case. Several optional accessories — listed in the Technical Data section — are available.

## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a dynamic pressure-gradient type. It shall employ a large-diaphragm transducer and special bass-resonator chamber to produce a frequency range of 30-15,000 Hz, accompanied by a 10-dB variable bass-versus-distance contour at 100 Hz that shall range from flat response (0 dB) at a working distance of 1 m ( $\approx 3\text{-}1/4$  ft) to +10 dB typical proximity-effect boost at a working distance of 1.5 cm ( $\approx 5/8$  in.). The microphone shall have a cardioid directional pattern. Its front-to-rear rejection shall exceed 12 dB at 1000 Hz at a sound-incidence angle of 180 degrees, and an effective cardioid pattern shall be maintained over the entire frequency range.

The microphone shall have a nominal (true) impedance of 290 ohms. The output level shall be  $-53$  dBm (re:  $1\text{ mW}/10\text{ dynes}/\text{cm}^2$ ), 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  $-145$  dBm.

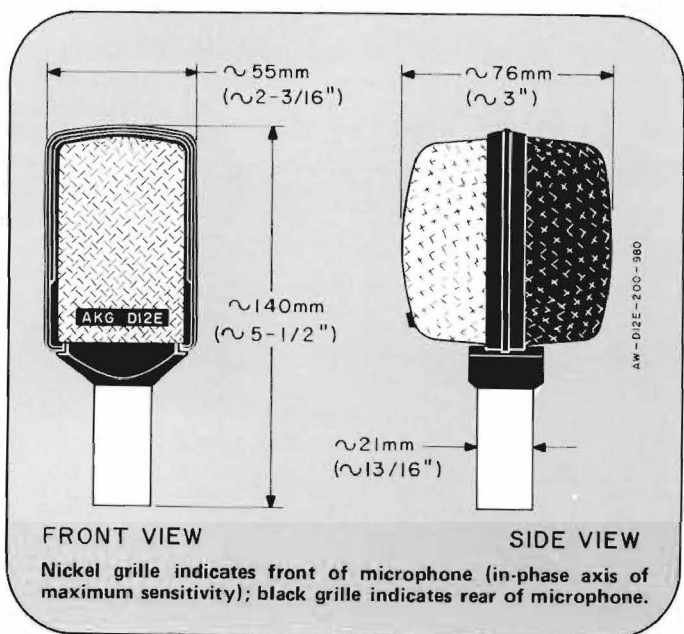
An integral wire-mesh windscreen, lined with polyurethane foam and commensurate with the acoustical properties of the unit, shall protect the microphone system from metal particles and dust. The two halves

of the windscreen assembly shall be color-coded for purposes of directional reference as follows: (1) a nickel-colored grille shall indicate the front of the microphone (i.e., its in-phase axis of maximum sensitivity); (2) a black-colored grille shall indicate the rear of the microphone. The transducer element shall be spring-suspended to isolate the element from the effects of handling noise, mechanical shocks, and spurious vibrations, and shall incorporate a hum-bucking winding to cancel the effects of stray magnetic fields. The transducer diaphragm material shall be nonmetallic MAKROFOL<sup>TM</sup>.

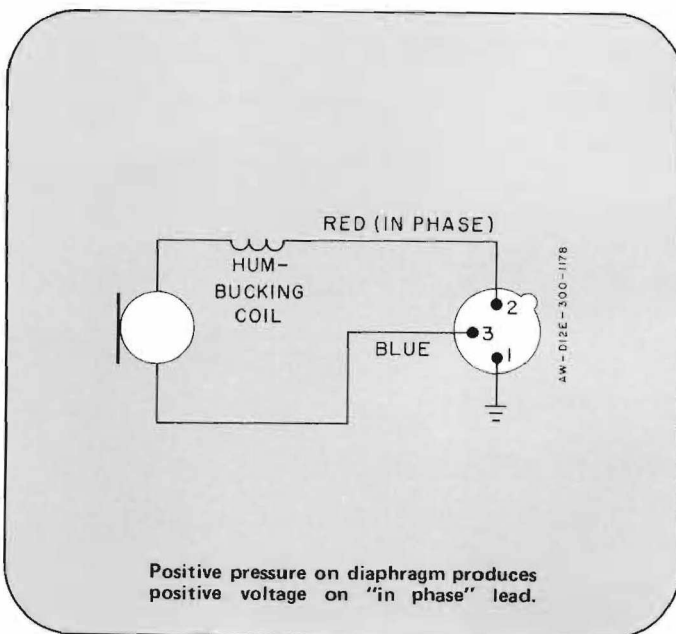
The microphone shall incorporate a 3-pin male audio connector designed to mate with Cannon XLR, Neutrik 3FC, Switchcraft A3F, or equivalent connectors. An AKG model SA-30 swivel stand adapter with standard 5/8-in.  $-27$  thread, and a foam-lined vinyl carrying case shall also be provided. The finish of the microphone shall be matte nickel and black, and shall not create specular light reflections.

The microphone shall be 140 mm ( $\approx 5\text{-}1/2$  in.) long by 55 mm ( $\approx 2\text{-}3/16$  in.) wide by 76 mm ( $\approx 3$  in.) deep by 21 mm ( $\approx 13/16$  in.) in shaft diameter, and the net weight shall not exceed 480 g ( $\approx 17$  oz). The microphone herein specified shall be the AKG D-12E.

### DIMENSIONS



### SCHEMATIC



1350 Z 0062/60A

21-782-10M1



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