



DESCRIPTION

The ES945 is a wide-range condenser microphone with an omnidirectional polar pattern. It is designed for unobtrusive table, ceiling or panel-mounted applications for high-quality sound reinforcement, teleconferencing, professional recording, television and other demanding sound pickup applications.

The ES945 is equipped with UniGuard™ RFI-shielding technology, which offers outstanding rejection of radio frequency interference (RFI).

The microphone should be placed on a flat, unobstructed mounting surface. The small-diameter capsule near the boundary eliminates phase

distortion and delivers clear, high-output performance.

The microphone requires 11V to 52V phantom power for operation. The microphone is enclosed in a heavy-duty die-cast case and protected by a two-layer steel mesh grille. The low-profile housing has a low-reflectance black finish. The microphone is also available in white as the ES945W (shown above). Isolators are included with the microphone for optional mechanical isolation from the mounting surface.

INSTALLATION AND OPERATION

Output is low impedance balanced. The balanced signal appears across Pins 2 and 3, while the ground (shield) connection is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pin 2 in accordance with industry convention.

To mount the ES945 in a ceiling or table top **without the isolators**, a **1³/₁₆" (20.5 mm) diameter hole is required**. To mount the ES945 **with the isolators**, a **1⁵/₁₆" (23.5 mm) hole is required**. Place the isolators on either side of the hole to achieve mechanical isolation from the mounting surface.

While a modern fixed-charge condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Exposure to high temperature can result in gradual and permanent reduction of the output level. Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for long periods of time. Extremely high humidity should also be avoided.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The microphone shall be a fixed-charge condenser designed for use in table, ceiling or panel-mount boundary applications. It shall have a frequency response of 40 Hz to 18,000 Hz and an omnidirectional polar pattern. It shall have a self-contained power module and shall operate from an external 11V to 52V DC phantom power source. It shall offer outstanding rejection of radio frequency interference (RFI). It shall be capable of handling sound input levels up to 142 dB with a dynamic range of 112 dB. Nominal open circuit output voltage shall be 7.9 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms) from an integral 3-pin XLRM-type connector.

The microphone shall have a maximum diameter of 28.0 mm (1.10") and an overall length of 69.0 mm (2.72"). Weight shall be 63 grams (2.2 oz). The microphone shall be housed in an all-metal case with a two-layer steel mesh grille. Finish shall be low reflectance black [white]. Resilient isolators shall be provided for reduction of mechanical noise transfer from the mounting panel. The Audio-Technica ES945 [ES945W] is specified.

ES945 SPECIFICATIONS*

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| ELEMENT | Fixed-charge back plate permanently polarized condenser |
| POLAR PATTERN | Omnidirectional |
| FREQUENCY RESPONSE | 40-18,000 Hz |
| OPEN CIRCUIT SENSITIVITY | -42 dB (7.9 mV) re 1V at 1 Pa* |
| IMPEDANCE | 200 ohms |
| MAXIMUM INPUT SOUND LEVEL | 142 dB SPL, 1 kHz at 1% T.H.D. |
| DYNAMIC RANGE (typical) | 112 dB, 1 kHz at Max SPL |
| SIGNAL-TO-NOISE RATIO[†] | 64 dB, 1 kHz at 1 Pa* |
| PHANTOM POWER REQUIREMENTS | 11-52V DC, 2 mA typical |
| WEIGHT | 63 g (2.2 oz) |
| DIMENSIONS | 28.0 mm (1.10") diameter, 69.0 mm (2.72") length |
| OUTPUT CONNECTOR | Integral 3-pin XLRM-type |
| ACCESSORY FURNISHED | One pair isolators |

[†]In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

*1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

[†]Typical, A-weighted, using Audio Precision System One. Specifications are subject to change without notice.

