

ES945/LED & ES945SV/LED



engineered sound® microphones

Omnidirectional Condenser Boundary Microphones with Mute Switch and LED Indicator



Features

- **Mounts unobtrusively in tabletops**
- **Low-profile element provides uniform omnidirectional polar pattern with 360° acceptance angle**
- **UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)**
- **Self-contained electronics eliminate the need for external power module**
- **Rugged all-metal case with a two-layer steel mesh grille**
- **Capacitive-type touch-sensitive switch allows users to easily mute/un-mute the microphone**
- **Integral LED ring indicates mute status—green when mic is live, red when muted**
- **Isolators provide mechanical dampening of mounting-surface vibration**
- **Available in two colors: black (ES945/LED) and silver (ES945SV/LED)**

Description

The ES945/LED is a wide-range condenser microphone with an omnidirectional polar pattern. It is designed for unobtrusive table-mounted use in high-quality sound reinforcement, conferencing, professional recording, television and other demanding sound pickup applications.

The microphone features a capacitive-type touch-sensitive switch that toggles between on/mute and a Red/Green LED indicator ring that displays mute status.

The microphone requires 11V to 52V phantom power for operation.

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

The output of the microphone is a 3-pin XLRM-type connector.

Isolators are included with the microphone for optional mechanical isolation from the mounting surface. The microphone is enclosed in a heavy-duty die-cast case and is protected by a two-layer steel mesh grille. The low-profile housing has a low-reflectance black finish. The microphone is also available in silver as the ES945SV/LED.

Installation and Operation

The ES945/LED requires 11V to 52V phantom power for operation.

Output is low impedance (Lo-Z) balanced. The signal appears across Pins 2 and 3; Pin 1 is ground (shield). Output phase is “Pin 2 hot”—positive acoustic pressure produces positive voltage at Pin 2.

The microphone should be installed on a flat, unobstructed mounting surface. The small-diameter capsule near the boundary eliminates phase distortion and delivers clear, high-output performance.

To mount the microphone in a tabletop without the isolators, a 20.5 mm (¹³/₁₆”) diameter hole is required. To mount the microphone with the isolators, a 23.5 mm (¹⁵/₁₆”) hole is required. Place the isolators on either side of the hole to achieve mechanical isolation from the mounting surface.

The capacitive-type touch-sensitive switch enables muting functionality: press to mute, press again to un-mute. The LED indicator ring lights green when the microphone is live and lights red when the microphone is muted.

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.

Architect’s and Engineer’s Specifications

The microphone shall be a fixed-charge condenser designed for use in table-mount boundary applications. It shall have an omnidirectional polar pattern and a frequency response of 40 Hz to 19,000 Hz. The microphone shall operate from an external 11V to 52V DC phantom power source. It shall be capable of handling sound input levels up to 142 dB with a dynamic range of 113 dB. Nominal open circuit output voltage shall be 10 mV at 1 V, 1 Pascal. Output shall be low impedance balanced (200 ohms). It shall offer outstanding rejection of radio frequency interference (RFI).

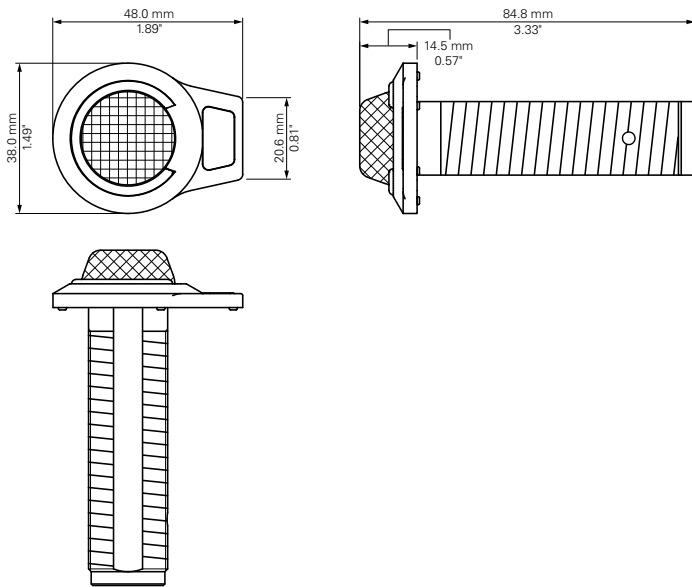
The microphone shall feature a capacitive-type touch-sensitive switch that toggles between on/mute and a Red/Green LED indicator ring that displays mute status.

The microphone shall incorporate self-contained electronics, eliminating the need for an external power module. The output of the microphone shall be a 3-pin XLRM-type connector.

The microphone shall have a maximum diameter of 48.0 mm (1.89”) and an overall length of 84.8 mm (3.33”). Weight shall be 65 grams (2.3 oz). The microphone shall be housed in an all-metal case with a two-layer steel mesh grille. Finish shall be low-reflectance black [silver]. The microphone shall include resilient isolators for reduction of mechanical noise transfer from the mounting surface.

The Audio-Technica ES945/LED (ES945SV/LED) is specified.

ES945/LED & ES945SV/LED



Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Omnidirectional
Frequency response	40-19,000 Hz
Open circuit sensitivity	-40 dB (10 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)	113 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	65 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 5.7 mA typical
Switch	Touch-sensitive control: on/mute
Weight	65 g (2.3 oz)
Dimensions	84.8 mm (3.33") long, 38.0 mm (1.49") diameter 48.0 mm (1.89") maximum width
Output connector	Integral 3-pin XLRM-type
Accessories furnished	One pair isolators

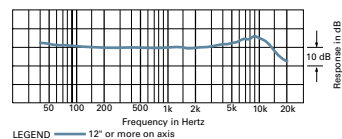
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

¹ Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 40–19,000 Hz



polar pattern

