ES973

audio-technica

engineered sound® microphones

Hypercardioid Condenser Handheld Microphone

Features

- **Designed for quality sound reinforcement with smooth, accurate audio reproduction in handheld and fixed-mount applications**
- **Superior off-axis rejection for maximum gain before feedback**
- **High sensitivity and high SPL capability**
- **Superior anti-shock engineering ensures low handling noise and quiet performance**
- **Uniform hypercardioid polar pattern with 100° acceptance angle**
- **UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)**
- **Available interchangeable elements permit angle of acceptance from 100° to 360°**
- **Rugged design and construction for reliable performance**
- **Integral 80 Hz UniSteep® filter switch and 10 dB pad switch**

Description

The ES973 is a handheld condenser microphone with a hypercardioid polar pattern. It is designed for quality sound reinforcement, professional recording and broadcasting.

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

The microphone's hypercardioid polar pattern provides a 100° angle of acceptance. Additional interchangeable elements with omnidirectional (360°) and cardioid (120°) pickup patterns are available.

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

The microphone is equipped with a switchable 10 dB pad and a switch that permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass UniSteep® filter).

The microphone is enclosed in a rugged housing with a low-reflectance black finish. The included AT8405a stand clamp permits mounting on any microphone stand with 5/8"-27 threads. A windscreen and a soft protective pouch are also included.

Operation and Maintenance

The ES973 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.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

An integral 80 Hz high-pass UniSteep® filter provides easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations. To engage the filter, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the "bent" line.

The microphone is also equipped with a switchable 10 dB pad that lowers the microphone's sensitivity, thus providing higher SPL capability for flexible use with a wide range of users and system configurations. To engage the 10 dB pad, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the -10 position.

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 handheld or fixed-mount applications. It shall have a hypercardioid polar pattern with a uniform 100° angle of acceptance and a frequency response of 70 Hz to 20,000 Hz. It should be capable of accepting optional interchangeable elements for additional polar patterns. 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 155 dB (165 dB with 10 dB pad) with a dynamic range of 131 dB. Nominal open-circuit output voltage shall be 8.9 mV at 1V, 1 Pascal. Output shall be low impedance balanced (200 ohms).

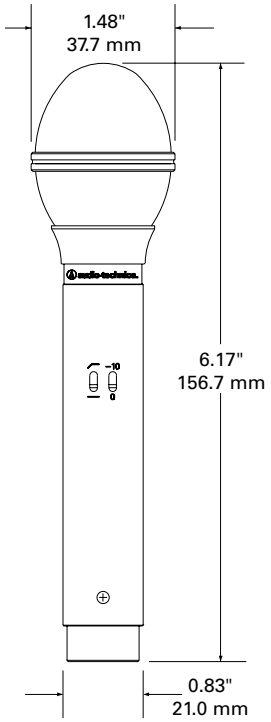
The output of the microphone shall be a 3-pin XLRM-type connector.

The microphone shall be equipped with a switchable 10 dB pad and a switch that permits choice of flat response or 80 Hz low-frequency roll-off.

The microphone shall be 156.7 mm (6.17") long and have a head diameter of 37.7 mm (1.48"). Weight shall be 160 g (5.6 oz). The microphone shall include a stand clamp, a windscreen and a soft protective pouch.

The Audio-Technica ES973 is specified.

ES973



Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Hypercardioid
Frequency response	70-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Open circuit sensitivity	–41 dB (8.9 mV) re 1V at 1 Pa
Impedance	200 ohms
Maximum input sound level	155 dB SPL, 1 kHz at 1% T.H.D.; 165 dB SPL, with 10 dB pad (nominal)
Dynamic range (typical)	131 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	70 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 3 mA typical
Switches	Flat, roll-off; 10 dB pad (nominal)
Weight	160 g (5.6 oz)
Dimensions	156.7 mm (6.17") long, 37.7 mm (1.48") head diameter
Output connector	Integral 3-pin XLRM-type
Optional interchangeable elements	UE-O omnidirectional (360°) UE-C cardioid (120°)
Audio-Technica case style	S2
Accessories furnished	AT8405a stand clamp for $^5/_8$"-27 threaded stands; AT8122 foam windscreen; soft protective pouch

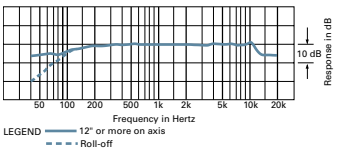
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

1 Pascal = 10 dynes/cm^2 = 10 microbars = 94 dB SPL

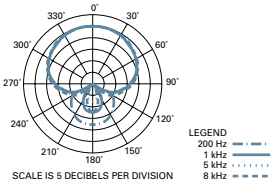
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 70–20,000 Hz



polar pattern



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