AE5100

audio-technica

Cardioid Condenser Instrument Microphone

artist elite® live sound microphones

Features

- **Uncompromising sound quality for overheads, percussion, acoustic guitar, strings and other acoustic instruments**
- **Large-diaphragm capsule delivers accurate and natural response**
- **Low-profile design permits innovative placement options previously unattainable with a large-diaphragm condenser**
- **Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source**
- **Robust all-metal design for enduring dependability on the road**
- **Isolation clamp provides secure mounting, versatile positioning, and effective dampening of unwanted mechanical noise**
- **Integral 80 Hz high-pass filter switch and 10 dB pad switch**

Description

The AE5100 is a fixed-charge condenser microphone with a cardioid polar pattern. It is designed specifically for use on overheads, percussion, acoustic guitar, strings and other acoustic instruments in professional live-sound and studio applications.

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

The cardioid polar pattern of the microphone is more sensitive to sound originating directly in front of the element, making it useful for controlling feedback and reducing pickup of unwanted sounds.

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 filter).

The microphone is enclosed in a rugged housing. The included AT8471 isolation 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 AE5100 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 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 high-pass 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 extended periods. Extremely high humidity should also be avoided.

Architect's and Engineer's Specifications

The microphone shall be a fixed-charge condenser. It shall have a cardioid polar pattern with a uniform 120° angle of acceptance and a frequency response of 20 Hz to 20,000 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 148 dB (158 dB with 10 dB pad) with a dynamic range of 137 dB. Nominal open-circuit output voltage shall be 15.8 mV at 1V, 1 Pascal. Output shall be low impedance balanced (150 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 148.5 mm (5.85") long and have a maximum diameter of 26.0 mm (1.02"). Weight shall be 143 grams (5.0 oz). The microphone shall include an isolation clamp, a windscreen and a soft protective pouch.

The Audio-Technica AE5100 is specified.

AE5100

Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	20-20,000 Hz
Low frequency roll-off	80 Hz, 12 dB/octave
Open circuit sensitivity	–36 dB (15.8 mV) re 1V at 1 Pa
Impedance	150 ohms
Maximum input sound level	148 dB SPL, 1 kHz at 1% T.H.D.; 158 dB SPL, with 10 dB pad (nominal)
Noise	11 dB SPL
Dynamic range (typical)	137 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	83 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 3.2 mA typical
Switches	Flat, roll-off; 10 dB pad (nominal)
Weight	143 g (5.0 oz)
Dimensions	148.5 mm (5.85") long, 26.0 mm (1.02") maximum diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	S4
Accessories furnished	AT8471 isolation clamp for $^5/_8$"-27 threaded stands; $^5/_8$"-27 to $^3/_8$"-16 threaded adapter; AT8136 windscreen; soft protective pouch

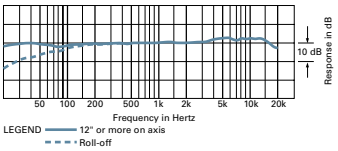
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

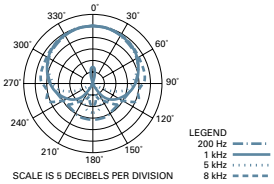
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 20–20,000 Hz



polar pattern



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