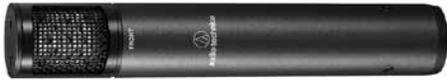


ATM450

Cardioid Condenser Instrument Microphone



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.

Features

- **Uncompromising sound quality for overheads, percussion, acoustic guitar, strings and other acoustic instruments**
- **Unique side-address stick design maximizes placement options with minimal obstructions**
- **Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source**
- **Rugged all-metal design and construction for years of trouble free use**
- **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 ATM450 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 $\frac{5}{8}$ "-27 threads. A windscreen and a soft protective pouch are also included.

Operation and Maintenance

The ATM450 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.

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Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	40-20,000 Hz
Low frequency roll-off	80 Hz, 12 dB/octave
Open circuit sensitivity	-41 dB (8.9 mV) re 1V at 1 Pa
Impedance	200 ohms
Maximum input sound level	152 dB SPL, 1 kHz at 1% T.H.D.; 162 dB SPL, with 10 dB pad (nominal)
Dynamic range (typical)	127 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	69 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 3.5 mA typical
Switches	Flat, roll-off; 10 dB pad
Weight	98 g (3.5 oz)
Dimensions	126.9 mm (5.00") long, 21.0 mm (0.83") diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	S11
Accessories furnished	AT8471 isolation clamp for $\frac{5}{8}$ "-27 threaded stands; $\frac{5}{8}$ "-27 to $\frac{3}{8}$ "-16 threaded adapter; 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.

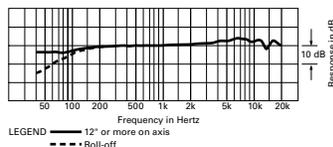
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

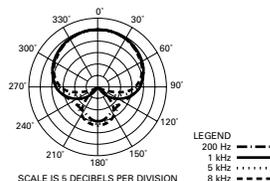
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frequency response: 40–20,000 Hz



polar pattern



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