

ATM250

Hypercardioid Dynamic Instrument Microphone

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artist series live sound microphones



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Features

- Frequency response tailored for kick drum, percussion, brass and other highly dynamic instruments
- Handles very high SPL at close range
- Big, warm low-frequency response with excellent presence
- Rare-earth magnet for improved output and transient response
- Hypercardioid polar pattern provides maximum feedback rejection and isolation of desired sound source
- Rugged all-metal design and construction for years of trouble-free use
- Corrosion-resistant contacts from gold-plated XLRM-type connector
- Isolation clamp provides secure mounting, versatile positioning and effective dampening of unwanted mechanical noise

Description

The ATM250 is a dynamic microphone with a hypercardioid polar pattern. It is designed specifically for musical instrument pickup in the studio and on stage.

The hypercardioid 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 enclosed in a rugged housing. The included AT8471 isolation clamp permits mounting on any microphone stand with $\frac{5}{8}$ "-27 threads. A soft protective pouch is also included.

Operation and Maintenance

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.

Take care to keep foreign particles from entering the windscreens. An accumulation of iron or steel filings on the diaphragm, and/or foreign material in the windscreens' mesh surface, can degrade performance.

Specifications

Element	Dynamic
Polar pattern	Hypercardioid
Frequency response	40-15,000 Hz
Open circuit sensitivity	-54 dB (1.9 mV) re 1V at 1 Pa
Impedance	600 ohms
Weight	252 g (8.9 oz)
Dimensions	127.5 mm (5.02") long, 55.0 mm (2.17") diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	R9
Accessories furnished	AT8471 isolation clamp for $\frac{5}{8}$ "-27 threaded stands; $\frac{5}{8}$ "-27 to $\frac{3}{8}$ "-16 threaded adapter; soft protective pouch

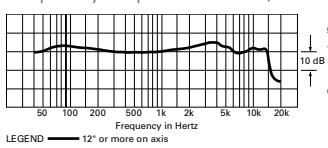
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

Specifications are subject to change without notice.



frequency response: 40–15,000 Hz

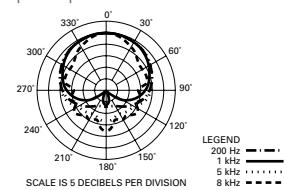


LEGEND — 12° or more on axis

Frequency in Hertz

Response in dB

polar pattern



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ATM450

Cardioid Condenser Instrument Microphone

 **audio-technica**

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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 5/8"-27 threads. A windscreens 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.

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

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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

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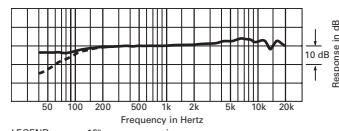
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¹ Typical, A-weighted, using Audio Precision System One.

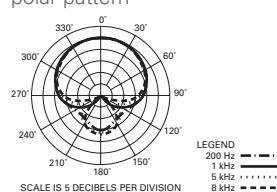
Specifications are subject to change without notice.



frequency response: 40–20,000 Hz



polar pattern



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Take care to keep foreign particles from entering the windscreens. An accumulation of iron or steel filings on the diaphragm, and/or foreign material in the windscreen's mesh surface, can degrade performance.

Note: Remove the rubber sleeve at the base of the microphone handle to use the AT8471 isolation stand clamp (not included) for more secure, permanent installation.

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Features

- Tailored response for musical instrument pickup—guitar cabinets, snare and other percussion
- Rare-earth magnet for improved output and transient response
- Special dual-wall floating construction reduces handling noise and assures consistent performance from mic to mic
- Hypercardioid polar pattern provides maximum feedback rejection and isolation of desired sound source
- Multi-stage flat-grille design is engineered to enable easy placement as close as possible to sound source
- Rugged all-metal design and construction for years of trouble-free use
- Corrosion-resistant contacts from gold-plated XLRM-type connector
- Quiet-Flex™ stand clamp provides silent, flexible microphone positioning

Description

The ATM650 is a dynamic microphone with a hypercardioid polar pattern. It is designed specifically for musical instrument pickup in the studio and on stage.

The hypercardioid 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 enclosed in a rugged housing with a multi-stage flat-grille design. The included AT8470 Quiet-Flex™ stand clamp permits mounting on any microphone stand with $\frac{5}{8}$ "-27 threads. A soft protective pouch is also included.

Operation and Maintenance

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.

When using the microphone in settings with a stage monitor speaker, the speaker should be located 135° off axis (45° off the rear of the microphone). This placement, in conjunction with the microphone's uniform hypercardioid pickup pattern, will virtually eliminate the possibility of undesired audio feedback.

Specifications

Element	Dynamic
Polar pattern	Hypercardioid
Frequency response	80-17,000 Hz
Open circuit sensitivity	-56 dB (1 mV) re 1V at 1 Pa
Impedance	300 ohms
Weight	279 g (9.8 oz)
Dimensions	164.2 mm (6.46") long, 38.8 mm (1.53") head diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	T5
Accessories furnished	AT8470 Quiet-Flex™ stand clamp for $\frac{5}{8}$ "-27 threaded stands; $\frac{5}{8}$ "-27 to $\frac{3}{8}$ "-16 threaded adapter; soft protective pouch

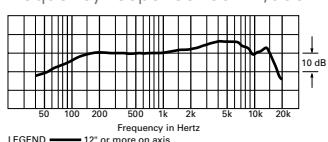
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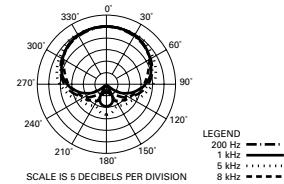
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frequency response: 80-17,000 Hz



polar pattern

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