



Features

- **Audio-Technica's premier studio condenser instrument microphone**
- **Pure, realistic sound quality for overheads, percussion, acoustic guitar, strings and other acoustic instruments**
- **Side-address stick-design microphone with more diaphragm surface area than most traditional large diaphragm side-address microphones**
- **Discrete components carefully selected for optimized capsule performance**
- **Transformer-coupled output is optimized to provide sonic character**
- **Exceptionally low noise with high-SPL capability**
- **Hand assembled and inspected for 100% quality control**
- **Advanced internal shock mounting decouples the capsule from the microphone body**
- **Elegant, durable housing of aluminum and brass**
- **Innovative isolation clamp provides secure mounting, versatile positioning and effective dampening of unwanted mechanical noise.**
- **Custom hard-shell carrying case with die-cut foam compartments offers protection for one or two microphones**

Description

The AT5045 is a large-diaphragm electret side-address condenser instrument microphone with a cardioid polar pattern. It is engineered to meet the most critical acoustic requirements of professional recording. Its large-diaphragm characteristics and fast transient response make it an ideal instrument microphone, designed specifically for use on overheads, percussion, acoustic guitar, strings and other acoustic instruments in professional live-sound and studio applications.

The microphone requires 48V 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 in controlling feedback, reducing pickup of unwanted sounds and providing isolation between performers.

The AT5045 features a large, rectangular element, carefully engineered to improve transient response and increase response bandwidth. The two-micron-thick, vapor-deposited gold diaphragm has been aged to achieve optimum sonic characteristics that will remain constant over years of use.

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

The microphone is enclosed in a rugged housing. The included AT8481 isolation clamp permits mounting on any microphone stand with $\frac{5}{8}$ "-27 threads. An AT8165 windscreens and a custom hard-shell carrying case are also included.

Operation & Maintenance

The AT5045 requires 48V 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.

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.

How to use the AT8481 isolation clamp

Before placing the microphone into the AT8481 isolation clamp, make certain that the locking mechanism on the top of the clamp is in the unlocked position.

Insert the AT5045 into the clamp's front opening with the microphone's Audio-Technica logo facing outward and the microphone body vertically centered in the clamp. Firmly press the AT5045 inward until you hear a click and the microphone feels snug in the clamp. Finally, secure the microphone by turning the lever on the top of the clamp to the locked position.

To remove, turn the lever on the top of the clamp to the unlocked position, then pull the AT5045 directly outward. A slight twisting motion can aid in removing the microphone from the clamp.

Architect's and Engineer's Specifications

The microphone shall be a large-diaphragm, side-address, 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 48V DC phantom power source. It shall be capable of handling sound input levels up to 149 dB with a dynamic range of 141 dB. Nominal open-circuit output voltage shall be 17.7 mV at 1V, 1 Pascal. Output shall be low impedance balanced (100 ohms).

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

The microphone shall be 177.0 mm (6.97") long and have a maximum body diameter of 25.0 mm (0.98"). Weight shall be 197 g (7.0 oz). The microphone shall include an isolation clamp, a windscreens and a protective carrying case.

The Audio-Technica AT5045 is specified.

Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	20 – 20,000 Hz
Open circuit sensitivity	-35 dB (17.7 mV) re 1V at 1 Pa
Impedance	100 ohms
Maximum input sound level	149 dB SPL, 1 kHz at 1% T.H.D.
Noise¹	8 dB SPL
Dynamic range (typical)	141 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	86 dB, 1 kHz at 1 Pa
Phantom power requirements	48V DC, 1.4 mA typical
Weight	197 g (7.0 oz)
Dimensions	177.0 mm (6.97") long, 25.0 mm (0.98") maximum body diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	R11
Accessories furnished	AT8481 isolation clamp for 5/8"-27 threaded stands; AT8165 windscreen; protective carrying case

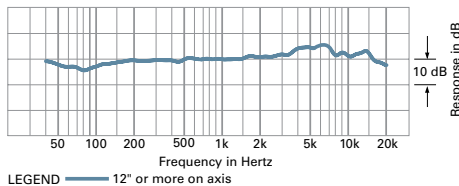
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

