AT5040

audio-technica

Studio Vocal Microphone

50 series microphones

Features

- **Audio-Technica's premier studio condenser vocal microphone**
- **Extremely musical high-fidelity performance, with profound realism and depth, presence and purity of sound**
- **Four rectangular diaphragms (2 micron) function together as Audio-Technica's largest-ever element, providing combined surface area twice that of a standard one-inch circular diaphragm**
- **Exceptionally low noise and wide dynamic range ideal for studio vocals**
- **Discrete components carefully selected for optimized capsule performance**
- **High-SPL capability and extended frequency response**
- **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**
- **Included advanced-design custom AT8480 shock mount provides superior isolation**
- **Custom hard-shell carrying case with die-cut foam compartments offers protection during storage and transport**

Description

The AT5040 is a large-diaphragm side-address electret condenser vocal microphone with a cardioid polar pattern. It is engineered to meet the most critical acoustic requirements of professional recording. Designed as a first-choice vocal microphone, the AT5040 features an extremely smooth top end with controlled sibilance. Large-diaphragm characteristics and fast transient response also make it ideal for recording acoustic instruments such as piano, guitar, strings and saxophone.

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 AT5040 features a four-part rectangular element; four matched diaphragms function together (with outputs proprietarily summed) as a single high-performance element offering large surface area without the increased weight and decreased transient response that are the expected limitations of diaphragm size. Each AT5040 diaphragm is carefully engineered to improve transient response and increase response bandwidth. Each is 2 microns thick, vapor-deposited gold and aged so that the optimum characteristics 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 AT8480 shock mount provides superior isolation and permits mounting on any microphone stand with $^{5}/_{8}$"-27 threads. A custom hard-shell carrying case is also included.

Operation & Maintenance

The AT5040 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.

An Audio-Technica logo is on the front of the microphone. Position this side of the microphone toward the sound source.

In use, secure the cable to the mic stand or boom, leaving a slack loop at the mic. This will ensure the most effective shock isolation and reduce the possibility of accidentally pulling the microphone out of its mount.

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 AT8480 shock mount

Before placing the microphone into the AT8480 shock mount, make certain that the locking mechanism on the top of the shock mount is in the unlocked position.

To position the AT5040 into the AT8480 shock mount, insert the microphone directly into the shock mount's front opening with the AT5040 Audio-Technica logo facing outward and the microphone body vertically centered in the shock mount clamps. Firmly press the AT5040 inward until you hear a click and the microphone feels snug in the shock mount. Finally, secure the microphone by turning the lever on the top of the shock mount to the locked position.

To remove, first turn the lever on the top of the shock mount toward the unlocked position. Next, pull the AT5040 directly outward. A slight twisting motion can aid in removing the microphone from the shock mount.

Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	20 – 20,000 Hz
Open circuit sensitivity	–25 dB (56.2 mV) re 1V at 1 Pa
Impedance	50 ohms
Maximum input sound level	142 dB SPL, 1 kHz at 1% T.H.D.
Noise[1]	5 dB SPL
Dynamic range (typical)	137 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	89 dB, 1 kHz at 1 Pa
Phantom power requirements	48V DC, 3.8 mA typical
Weight	582 g (20.5 oz)
Dimensions	165.3 mm (6.51") long, 57.0 mm (2.24") maximum body diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	R10
Accessories furnished	AT8480 shock mount for $^5/_8$"-27 threaded stands; protective carrying case

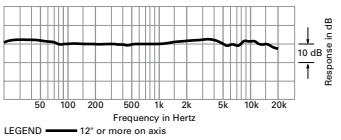
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

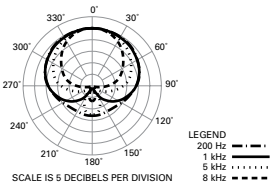
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 20–20,000 Hz



polar pattern



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