

# AT4047/SV

CARDIOID  
CAPACITOR MICROPHONE



## Description

The AT4047/SV is a large-diaphragm, cardioid capacitor microphone designed for use in the most demanding applications. Incorporating a transformer-coupled output and specially-tuned element, the AT4047/SV provides sonic characteristics reminiscent of early F.E.T. studio microphone designs, while utilizing modern design and manufacturing techniques to ensure consistency and reliability.

The AT4047/SV has a wide dynamic range of 140 dB without the built-in attenuator, and it accepts up to 149 dB SPL without capsule or electronic-system distortion above 1% T.H.D. A switchable 10 dB (nominal) pad is built-in, increasing the SPL capabilities to 159 dB. These capabilities, coupled with the benefits of exceptionally low self-noise (9 dB SPL), combine in a versatile microphone that excels under the stringent demands of modern digital recording systems.

The AT4047/SV element utilizes dual, gold-plated and aged, large diaphragms for extended frequency response. The specially-tuned element improves dynamic range and the ability to handle high SPLs without sacrificing high-frequency characteristics. Floating-construction mounting of the element provides isolation from noise and vibration.

An integral 80 Hz hi-pass filter provides easy switching from a flat frequency response to a low-end roll-off. The hi-pass position reduces the microphone's sensitivity to "popping" in close vocal use; it also reduces the pickup of low-frequency ambient noise (i.e. traffic, air-handling systems, etc.) and room reverberation.

The AT4047/SV incorporates a dual-diaphragm configuration that allows undistorted reproduction of high sound pressure level signals at all frequencies. The 2-micron-thick, vapor-deposited gold diaphragms provide accurate reproduction of even the most subtle sounds, especially high-frequency signals not easily reproduced by conventional large-diaphragm condenser transducers. For a warm, true-to-life quality, the dual, large-diaphragm design provides remarkable low-frequency performance.

The diaphragms of every AT4047/SV are aged through five different steps to assure the optimum characteristics achieved will remain constant over years of use.

The symmetrical housing assembly surrounding the microphone capsule and its open acoustical environment allow the off-axis response to be ideally suited for studio work where natural reproduction of off-axis sound is of paramount importance.

The AT4047/SV will operate in conjunction with any remote "phantom" or "simplex" power source supplying 48V DC, such as the AC-powered Audio-Technica AT8801 single-channel and CP8506 four-channel phantom power supplies.

The AT4047/SV includes an AT8449/SV shock mount to provide mechanical isolation and secure mounting. This effective shock mount fits 5/8"-27 threaded stands. A stand clamp without shock mount, the AT8430 (in black only), is available as an optional accessory.



AT4047/SV with included AT8449/SV shock mount

## Architects and Engineers Specifications

The microphone shall be a large-diaphragm capacitor-type with a cardioid polar pattern and a frequency response of 20 Hz to 18,000 Hz. It shall operate from an external 48V DC ( $\pm 4V$ ) phantom power source. The dual-diaphragm element shall be internally shock mounted.

Nominal open-circuit output voltage shall be 17.7 mV at 1 kHz, 1 Pascal. The microphone shall have an output impedance of 250 ohms and output shall be balanced. The microphone shall accept a 149 dB SPL at 1 kHz while producing no greater than 1% T.H.D.

The microphone shall have a length of 6.69" (170.0 mm), a maximum body diameter of 2.10" (53.4 mm), and a weight of 14.5 oz (410 grams). Finish shall be matte silver color. A separate AT8449/SV shock mount, also with matte silver finish, shall be included.

The Audio-Technica AT4047/SV is specified.

# AT4047/SV

## Specifications†

ELEMENT	Externally polarized (DC bias) capacitor
POLAR PATTERN	Cardioid (Unidirectional)
FREQUENCY RESPONSE	20-18,000 Hz
OPEN CIRCUIT SENSITIVITY (1 kHz)	-35 dB (17.7 mV) ± 2 dB, re 1V at 1 Pa*1
IMPEDANCE	250 ohms
MAXIMUM INPUT SOUND LEVEL	149 dB SPL, 1 kHz at 1% T.H.D. 159 dB SPL, with 10 dB pad (nominal)
NOISE, TYPICAL (A-WEIGHTED) <sup>2</sup>	9 dB SPL
DYNAMIC RANGE, TYPICAL	140 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO, TYPICAL	85 dB, 1 kHz at 1 Pa*
HI-PASS FILTER (LOW-END ROLL-OFF)	80 Hz, 12 dB/octave
POWER REQUIREMENTS	48V DC phantom (±4V)
CURRENT CONSUMPTION, TYPICAL	3.0 mA
WEIGHT (LESS CABLE AND CLAMP)	14.5 oz (410 grams)
DIMENSIONS	6.69" (170.0 mm) long, 2.10" (53.4 mm) maximum body diameter
ACCESSORIES FURNISHED	AT8449/SV 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<sup>2</sup> = 10 microbars = 94 dB SPL

<sup>1</sup> Measured at diaphragm

<sup>2</sup> Using Audio Precision System One

## Optional Accessories:

- AT8137 large cylindrical foam windscreen.
- AT8314 2-conductor, shielded, vinyl-jacketed, broadcast-type cable with XLR-type connector at microphone end, XLRM-type connector at equipment end. Available in 10', 20', 25', 30', 50' & 100' lengths.
- AT8430 stand clamp for 5/8"-27 threaded stands.
- CP8506 four-channel 48V phantom power supply (AC powered).
- AT8801 single-channel 48V phantom power supply (AC powered).

### One-Year Limited Warranty

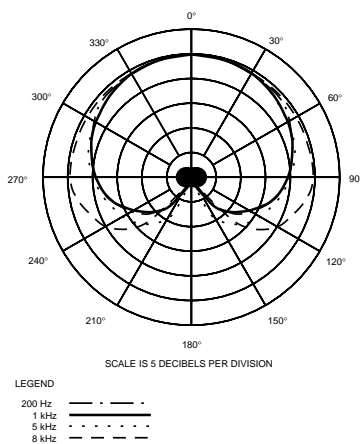
Audio-Technica microphones and accessories purchased in the U.S.A. are warranted for one year from date of purchase by Audio-Technica U.S., Inc. (A.T.U.S.) to be free of defects in materials and workmanship. In event of such defect, product will be repaired promptly without charge or, at our option, replaced with a new product of equal or superior value if delivered to A.T.U.S. or an Authorized Service Center, prepaid, together with the sales slip or other proof of purchase date. **Prior approval from A.T.U.S. is required for return.** This warranty excludes defects due to normal wear, abuse, shipping damage, or failure to use product in accordance with instructions. This warranty is void in the event of unauthorized repair or modification, or removal or defacing of the product labeling.

**For return approval and shipping information,** contact the Service Department, Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224.

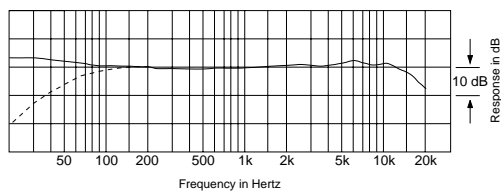
Except to the extent precluded by applicable state law, **A.T.U.S. will have no liability for any consequential, incidental, or special damages; any warranty of merchantability or fitness for particular purpose expires when this warranty expires.**

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

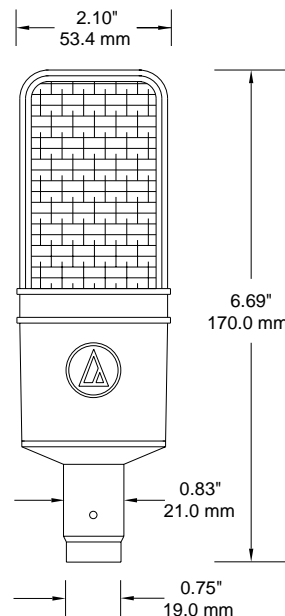
## Polar Pattern



## Frequency Response



## Dimensions



Outside the U.S.A., please contact your local dealer for warranty details.