



## AT899 SUBMINIATURE OMNIDIRECTIONAL CONDENSER MICROPHONE

### Description

The AT899 is a subminiature condenser microphone with an omnidirectional pickup pattern. It is intended to be worn by performers for excellent yet unobtrusive sound pickup. The wide-range capability of the AT899 ensures clean, accurate reproduction with high intelligibility for singers, lecturers, and stage and television performers. Its small, 5 mm size makes the AT899 ideal for use in applications in which minimum visibility is crucial.

The microphone has a 9.8' (3 m) permanently attached miniature cable with a 3-pin TA3F output connector, which mates with a 3-pin TB3M connector on the AT8537 power module provided. It can be powered from an external 11V to 52V DC phantom power supply or from a 1.5V AA battery. Current demands are so low that a premium battery will provide about 1200 hours of continuous use. A recessed switch in the power module permits choice of flat response or a low-frequency roll-off to help control undesired ambient noise.

The microphone element is enclosed in a rugged housing with low-reflectance black finish. Internal construction is designed to minimize handling, clothing, and wind noise. Each unit includes an accessory kit with three single and two double microphone holders that attach to the included clothing clip, viper clip, and magnetic mount bases. Also included are two windscreens, two element covers and a cable clip. Replacement accessories are available separately. The microphone is well protected by a specially designed carrying case.

### Operation and Maintenance

Output is low-impedance balanced. The output connector of the power module mates with XLR-type cable connectors. The balanced signal appears across Pins 2 and 3, while the ground (shield) connection is Pin 1.

Output is phased so that positive acoustic pressure produces positive voltage at Pin 2 in accordance with industry convention.

To install the battery, unscrew the base of the power supply unit and insert one AA battery into the battery compartment, being certain to observe battery polarity as marked. Then simply screw the base shut. While standard carbon-zinc AA batteries will operate the microphone satisfactorily, alkaline or other premium cells are preferred for longer service life. Only "leakproof" batteries should be used. Phantom power may be used with or without a battery in place. Phantom power requires 11V to 52V DC.

The AT899 is designed to be worn as a lavalier or hidden in loose clothing or in the hair. For use as a lavalier, attach the microphone about six inches below the chin. Anticipate movements that may cause the microphone to rub against or be covered by clothing, and position the microphone to avoid it. The included single and double mic holders are interchangeable with all the bases. To change the holders, simply remove original holder and snap in the desired one. When using the microphone in extremely close situations, slip the included open-pore foam windscreen over the mic to reduce wind noise or "popping." Use the included element cover to protect the microphone element from moisture, makeup, and other potential contaminants.

**CAUTION!** To avoid possible injury, use caution when affixing the AT899 viper clip to clothing. The pins are sharp and may puncture skin. For best results, ensure that pin ends rest on outside of clothing.

While a modern condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Exposing the microphone to high temperatures can result in gradual and permanent

reduction of the output level. Avoid leaving the microphone in open sun or in areas where temperatures exceed 110° F (43° C) for long periods of time. Extremely high humidity should also be avoided.

### Architects and Engineers Specifications

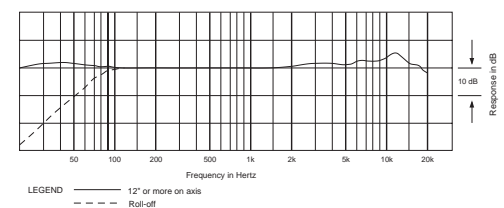
The microphone shall be a fixed-charge condenser with an omnidirectional polar pattern and a frequency response of 20 Hz to 20,000 Hz. It shall operate from an external 11V to 52V DC phantom power source or, alternatively, from a 1.5V AA/UM3 battery. Nominal open circuit output voltage shall be 7.0 mV (phantom) or 5.0 mV (battery) at 1 kHz, 1 Pascal. Output with the AT8537 power module shall be low-impedance balanced (200 ohms-phantom, 250 ohms-battery).

The microphone shall have a permanently attached 9.8' (3 m) miniature cable terminating in a TA3F connector. The output connector shall connect to a TB3M jack on the included power module. The power module shall house the battery, and contain a low-roll-off switch. The power module shall terminate in a 3-pin XLRM-type connector.

The microphone shall be 0.63" (16.0 mm) long and 0.20" (5.0 mm) in diameter. The microphone weight shall be 0.02 oz (0.5 g) without cable. Finish shall be low-reflectance black.

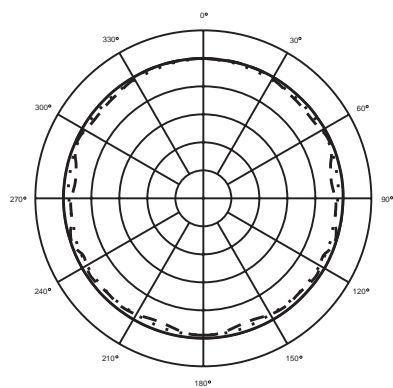
The Audio-Technica AT899 is specified.

### Frequency Response



# AT899

## Polar Pattern

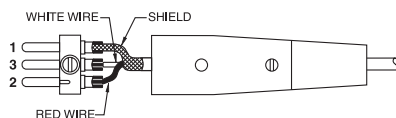


SCALE IS 5 DECIBELS PER DIVISION

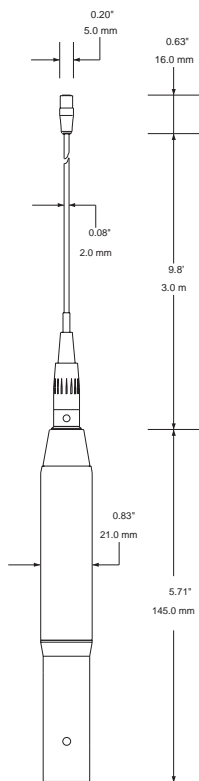
### LEGEND

200 Hz  
1 kHz  
5 kHz  
8 kHz

## XLRM-Type Plug Wiring Low Impedance Balanced



## Dimensions



## AT899 SPECIFICATIONS†

<b>ELEMENT</b>	Fixed-charge back plate permanently polarized condenser	
<b>POLAR PATTERN</b>	Omnidirectional	
<b>FREQUENCY RESPONSE</b>	20-20,000 Hz	
<b>LOW-FREQUENCY ROLL-OFF</b>	80 Hz, 12 dB/octave	
<b>OPEN CIRCUIT SENSITIVITY</b>	PHANTOM BATTERY	-43 dB (7.0 mV) re 1V at 1 Pa* -46 dB (5.0 mV) re 1V at 1 Pa*
<b>IMPEDANCE</b>	PHANTOM BATTERY	200 ohms 250 ohms
<b>MAXIMUM INPUT SOUND LEVEL</b>	PHANTOM BATTERY	138 dB SPL, 1 kHz at 1% T.H.D. 116 dB SPL, 1 kHz at 1% T.H.D.
<b>DYNAMIC RANGE (TYPICAL)</b>	PHANTOM BATTERY	108 dB, 1 kHz at Max SPL 86 dB, 1 kHz at Max SPL
<b>SIGNAL-TO-NOISE RATIO<sup>1</sup></b>	64 dB, 1 kHz at 1 Pa*	
<b>SWITCH</b>	Flat response, low-roll-off (recessed)	
<b>BATTERY TYPE</b>	Use only "leakproof" AA/UM3 1.5V battery	
<b>BATTERY CURRENT</b>	0.4 mA typical	
<b>BATTERY LIFE</b>	1200 hours (alkaline battery)	
<b>PHANTOM POWER REQUIREMENTS</b>	11-52V DC, 2 mA typical	
<b>WEIGHT (LESS CABLE AND ACCESSORIES)</b>		
<b>MICROPHONE</b>	0.02 oz (0.5 g)	
<b>POWER MODULE</b>	3.6 oz (102 g)	
<b>DIMENSIONS</b>		
<b>MICROPHONE</b>	0.63" (16.0 mm) long, 0.20" (5.0 mm) diameter	
<b>POWER MODULE</b>	5.71" (145.0 mm) long, 0.83" (21.0 mm) diameter	
<b>OUTPUT CONNECTOR (POWER MODULE)</b>	Integral 3-pin XLRM-type	
<b>CABLE</b>	9.8' (3.0 m) long (permanently attached to microphone), 0.08" (2.0 mm) diameter, 2-conductor, shielded cable with TA3F output connector that mates with TB3M jack on power module	

## ACCESSORIES FURNISHED

AT8537 power module; AT8439 cable clip; clothing clip base; viper clip base; magnet clip base and plate with lanyard; three single mic holders; two double mic holders; two element covers; two windscreens; battery; 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. Specifications are subject to change without notice.

\* 1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

<sup>1</sup> Typical, A-weighted, using Audio Precision System One.

## Optional Accessories:

- AT899AK accessory kit for AT899 models includes clothing clip base, viper clip base, magnet clip base with plate and lanyard, three single mic holders, two double mic holders, two element covers and two windscreens.
- AT8150 three-pack of element covers (black).
- AT8151 three-pack of windscreens (black).
- AT8461 clothing clip base with single and double mic holders.
- AT8202 adjustable in-line attenuator for use with balanced Lo-Z microphones.
- AT8314 2-conductor, shielded, vinyl-jacketed cable with XLRF-type connector at microphone end, XLRM-type connector at equipment end. Available in 1.5', 3', 6', 10', 15', 20', 25', 30', 50' & 100' lengths.
- AT8801 single-channel 48V phantom power supply (AC powered).
- CP8201 line matching transformer (Lo-Z to 50,000 ohms).
- CP8506 four-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.

**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.

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



Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224

Audio-Technica Limited, Old Lane, Leeds LS11 8AG England

Form No. 0310-0864-00-B/W P51557 © 2002 Audio-Technica U.S., Inc. Printed in U.S.A.