

AT898 Subminiature Cardioid Condenser Lavalier Microphone



Broadcast & Production Microphones

Features

- Maximum intelligibility and clean, accurate reproduction for vocalists, lecturers, stage and television talent, and houses of worship
- Low-profile design (a mere 5 mm in diameter) is ideal for applications requiring minimum visibility
- Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source
- Offers the convenience of battery or phantom power operation
- Rugged design and construction for reliable performance
- Switchable 80 Hz high-pass filter minimizes pickup of undesired low-frequency sounds
- Also available in wireless models (without power module) terminated for use with Audio-Technica wireless systems and many other manufacturers' wireless systems

Description

The AT898 is a subminiature clip-on/lavalier condenser microphone with a cardioid polar pattern. It is designed to provide accurate reproduction for vocalists, lecturers, stage and television talent, and houses of worship.

The microphone is intended to be worn on the clothing or hidden in props for excellent yet unobtrusive sound pickup. The wide-range capability of the microphone ensures clean, accurate reproduction with high intelligibility for speakers, presenters and other performers. Its small size makes it ideal for use in applications where minimum visibility is required.

The microphone requires 11V to 52V phantom power or a 1.5V AA battery for operation. A battery need not be in place for phantom power operation.

The microphone's cardioid polar pattern provides a 120° angle of acceptance.

The microphone includes a 3 m (9.8') permanently attached miniature cable. Its free end connects to the provided AT8537 power module via TA3F-type connector. The output of the power module is a 3-pin XLRM-type connector.

A recessed switch in the power module permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass filter) to help control undesired ambient noise.

The microphone comes equipped with a power module, a cable clip, a clothing clip base, a viper clip base, a magnet clip base and plate with lanyard, three single mic holders, two double mic holders, two windscreens and a battery. A protective carrying case is also included. The microphone has a low-reflectance black finish.

Operation and Maintenance

The AT898 requires 11V to 52V phantom power or a 1.5V AA battery for operation. A battery need not be in place for phantom power operation.

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. Alkaline batteries are recommended for longest life. Remove the battery during long-term storage.

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.

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 the microphone's sensitivity to popping in close vocal use. It also reduces 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.

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 the included 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.

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

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.

Wireless Models Description

The microphone is also available in a variety of terminations for use with Audio-Technica and many other manufacturers' wireless systems. No power module or battery is included (or required) with the wireless models. The wireless models' dimensions, polar pattern and included accessories are otherwise identical to those of the AT898.

The AT898cW is also available unterminated as the AT898c.

Cable Terminations

AT898cH	Terminated with a screw-down 4-pin connector for use with Audio-Technica® cH-style body-pack transmitters
AT898cW	Terminated with a locking 4-pin connector for use with Audio-Technica® cW-style body-pack transmitters
AT898cL4	Terminated for Sennheiser® wireless systems using Lemo connector
AT898cT4	Terminated for Shure® wireless systems using TA4F-type connector
AT898cT5	Terminated for Lectrosonics® wireless systems using TA5F-type connector
AT898c	Unterminated

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AT898

Architect's and Engineer's Specifications

The microphone shall be a fixed-charge condenser. It shall have a cardioid polar pattern with a uniform 120° angle of acceptance and a frequency response of 200 Hz to 15,000 Hz. The microphone shall operate from an external 11V to 52V DC phantom power source or, alternatively, from a 1.5V AA/UM3 battery. It shall be capable of handling sound input levels up to 131 dB (phantom) or 115 dB (battery) with a dynamic range of 100 dB (phantom) or 84 dB (battery). Nominal open-circuit output voltage shall be 7.0 mV (phantom) or 5.0 mV (battery) at 1 V, 1 Pascal. Output shall be low impedance balanced (200 ohms – phantom, 250 ohms – battery).

The microphone shall have a 3 m (9.8') permanently attached miniature cable terminating in a TA3F-type output connector. The output connector shall connect to a TB3M-type jack on the included power module. The power module shall contain a recessed switch to permit choice of flat response or 80 Hz low-frequency roll-off. The output of the power module shall be a 3-pin XLRM-type connector.

The microphone shall be 23.0 mm (0.91") long and have a diameter of 5.3 mm (0.21"). Weight shall be 0.9 grams (0.03 oz). The microphone shall include a power module, a cable clip, a clothing clip base, a viper clip base, a magnet clip base and plate with lanyard, three single mic holders, two double mic holders, two windscreens, a battery and a protective carrying case. Finish shall be low-reflectance black.

The microphone shall also be available with a 1.4 m (55") permanently attached miniature cable terminated for use with Audio-Technica body-pack transmitters and a variety of other manufacturers' wireless systems. The wireless models' dimensions, polar pattern and included accessories (excluding power module and battery) shall be identical to those of the wired model. The microphone shall also be available unterminated.

The Audio-Technica AT898 is specified.

The Audio-Technica [AT898cW]; [AT898cH]; [AT898cL4]; [AT898cT4]; [AT898cT5] (wireless version) is specified.

The Audio-Technica AT898c (unterminated) is specified.

Wireless Termination Diagrams

AT898cH, cH-TH

Pin	Function	Wire Color
Pin 1	Ground/Shield	Copper Color
Pin 2	Instrument	Jumper to Pin 1
Pin 3	Mic Audio	White
Pin 4	Bias + In	Red

AT898cW, cW-TH

Pin	Function	Wire Color
Pin 1	Ground/Shield	Copper Color
Pin 2	Instrument	Jumper to Pin 1
Pin 3	Mic Audio	White
Pin 4	Bias + In	Red

AT898cT4

Pin	Function	Wire Color
Pin 1	Ground/Shield	Copper Color
Pin 2	Bias + In	Red
Pin 3	Mic Audio	White
Pin 4	Source Load	Jumper to Pin 3

AT898cT5, cT5-TH

Pin	Function	Wire Color
Pin 1	Ground/Shield	Copper Color
Pin 2	Bias + In	Red
Pin 3	Mic Audio	White
Pin 4	Source Load	Jumper to Pin 1
Pin 5	Line In	Open

AT898cL4, cL4-TH

Pin	Function	Wire Color
Pin 1	N/C	Open
Pin 2	N/C	Open
Pin 3	Bias + In, Mic Audio	White

Shell/Case Ground/Shield Copper Color

Specifications

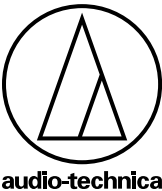
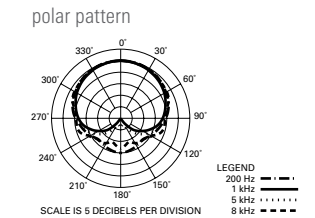
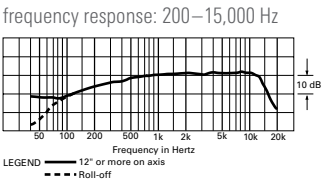
Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	200-15,000 Hz
Low frequency roll-off	80 Hz, 12 dB/octave
Open circuit sensitivity	Phantom: -43 dB (7.0 mV) re 1V at 1 Pa Battery: -46 dB (5.0 mV) re 1V at 1 Pa
Impedance	Phantom: 200 ohms Battery: 250 ohms
Maximum input sound level	Phantom: 131 dB SPL, 1 kHz at 1% T.H.D. Battery: 115 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	Phantom: 100 dB, 1 kHz at Max SPL Battery: 84 dB, 1 kHz at Max SPL
Signal-to-noise ratio ¹	63 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 2 mA typical
Battery type	1.5V AA/UM3
Battery current / life	0.4 mA / 1200 hours typical (alkaline)
Switch	Flat, roll-off
Weight	Microphone: 0.9 g (0.03 oz) Power module: 102 g (3.6 oz)
Dimensions	Microphone: 23.0 mm (0.91") long, 5.3 mm (0.21") diameter Power module: 145.0 mm (5.71") long, 21.0 mm (0.83") diameter
Output connector	Power module: Integral 3-pin XLRM-type
Cable	3.0 m (9.8') long (permanently attached to microphone), 2.0 mm (0.08") diameter, 2-conductor, shielded cable with TA3F-type output connector that mates with TB3M-type jack on power module
Audio-Technica case style	M30
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 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.

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.



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