



# BP899 Subminiature Omnidirectional Condenser Lavalier Microphone



Broadcast & Production

## Features

- **Maximum intelligibility and clean, accurate reproduction for vocalists, lecturers, stage and television talent, and worship leaders**
- **Low-profile design (a mere 5.3 mm in diameter) is ideal for applications requiring minimum visibility**
- **Urethane elastomer cable with a double-spiral shield wire provides ultimate flexibility, strength, and resistance to abrasion and moisture**
- **Open-diaphragm design with protective mesh that repels sweat and other moisture for maximum frequency response and lasting performance**
- **Included resonance caps can be applied to microphone to improve intelligibility**
- **Low-sensitivity models available for theater use or other high-SPL applications**
- **RoHS compliant – free from all substances specified in the EU directive on hazardous substances**
- **The microphone capsule is housed in a rugged metal structure to shield the electronic circuitry from external electromagnetic noise**
- **The signal line of the cable is made of a high-durability CuSn (copper and tin) alloy that greatly enhances corrosion resistance and increases longevity**
- **Two included windscreens each feature a clasp that secures the windscreen to the mic, preventing it from blowing off in critical situations, such as at sporting events**
- **Clothing clip includes 16 distinct angle adjustments over 360° and two strain-relief clips for easy cable routing**
- **Models offered in black and beige (-TH)**
- **Also available in wireless models (without power module) terminated for use with Audio-Technica wireless systems and many other manufacturers' wireless systems**

## Wired Description

The BP899 is a subminiature clip-on/lavalier condenser microphone with an omnidirectional polar pattern. It is designed to provide accurate reproduction for lecturers, stage and television talent, and houses of worship.

The microphone is intended to be worn on 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 for operation.

The microphone includes a permanently attached 1.4 m (55") long, 2.0 mm (0.08")

diameter, 2-conductor shielded cable. Its free end connects to the provided AT8545 power module via a cH 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, one clothing clip, two windscreens, two resonance covers. A protective carrying case is also included. All BP899 models are available with a low-reflectance black finish; models are available in beige.

## Operation and Maintenance

The BP899 requires 11V to 52V 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.

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.

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 resonance cap to protect the microphone element from contaminants. An included resonance cap can be applied to the microphone to provide even greater intelligibility, and it is designed to direct sweat and other moisture away from the microphone.

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 wireless models, including the BP899cH. The BP899cH includes a 1.4 m (55") permanently attached miniature cable terminated with a screw-down 4-pin connector for use with Audio-Technica cH-style body-pack transmitters. Models are also available in a variety of terminations for use with many other manufacturers' wireless systems. No power module is included (or required) with the wireless models. The wireless models' dimensions, polar pattern and included accessories are otherwise identical to those of the BP899.

Also available unterminated as the BP899c.

## Cable Terminations

BP899

55" (1.4 m) permanently attached cable terminated with a cH-style screw-down 4-pin connector; AT8545 power module (with 80 Hz high-pass filter) for phantom power

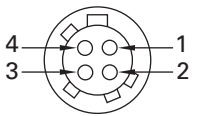
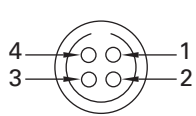
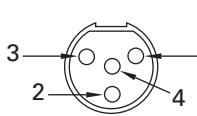
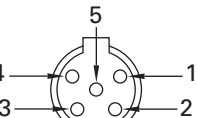
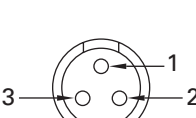
# BP899

BP899c, BP899c-TH	55" (1.4 m) permanently attached cable (unterminated); no power module
BP899cH, BP899cH-TH	55" (1.4 m) permanently attached cable terminated with a screw-down 4-pin connector for use with Audio-Technica cH-style body-pack wireless transmitters; no power module
BP899cW, BP899cW-TH	55" (1.4 m) permanently attached cable terminated with a locking 4-pin connector for use with Audio-Technica cW-style body-pack wireless transmitters; no power module
BP899cT4, BP899cT4-TH	55" (1.4 m) detachable cable terminated with TA4F-type connector for use with Shure wireless systems
BP899Lc, BP899Lc-TH	Low-sensitivity version of BP899c; 55" (1.4 m) permanently attached cable (unterminated); no power module
BP899LcH, BP899LcH-TH	Low-sensitivity version of BP899cH; 55" (1.4 m) permanently attached cable terminated with a screw-down 4-pin connector for use with Audio-Technica cH-style body-pack wireless transmitters; no power module
BP899LcW, BP899LcW-TH	Low-sensitivity version of BP899cW; 55" (1.4 m) permanently attached cable terminated with a locking 4-pin connector for use with Audio-Technica cW-style body-pack wireless transmitters; no power module
BP899LcT4, BP899LcT4-TH	Low-sensitivity version of BP899cT4; 55" (1.4 m) permanently attached cable terminated with TA4F-type connector for use with Shure wireless systems; no power module

Model numbers ending in "TH" are beige.

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## Wireless Termination Diagrams

 <p><b>cW</b></p> <table border="1"> <thead> <tr> <th>Function</th> <th>Wire Color</th> </tr> </thead> <tbody> <tr> <td><b>Pin 1</b> Ground/Shield</td> <td>Green</td> </tr> <tr> <td><b>Pin 2</b> Instrument</td> <td>Jumper to Pin 1</td> </tr> <tr> <td><b>Pin 3</b> Mic Audio</td> <td>Copper Color</td> </tr> <tr> <td><b>Pin 4</b> Bias + In</td> <td>Red</td> </tr> </tbody> </table>	Function	Wire Color	<b>Pin 1</b> Ground/Shield	Green	<b>Pin 2</b> Instrument	Jumper to Pin 1	<b>Pin 3</b> Mic Audio	Copper Color	<b>Pin 4</b> Bias + In	Red	 <p><b>cH</b></p> <table border="1"> <thead> <tr> <th>Function</th> <th>Wire Color</th> </tr> </thead> <tbody> <tr> <td><b>Pin 1</b> Ground/Shield</td> <td>Green</td> </tr> <tr> <td><b>Pin 2</b> Instrument</td> <td>Jumper to Pin 1</td> </tr> <tr> <td><b>Pin 3</b> Mic Audio</td> <td>Copper Color</td> </tr> <tr> <td><b>Pin 4</b> Bias + In</td> <td>Red</td> </tr> </tbody> </table>	Function	Wire Color	<b>Pin 1</b> Ground/Shield	Green	<b>Pin 2</b> Instrument	Jumper to Pin 1	<b>Pin 3</b> Mic Audio	Copper Color	<b>Pin 4</b> Bias + In	Red	 <p><b>cT4</b></p> <table border="1"> <thead> <tr> <th>Function</th> <th>Wire Color</th> </tr> </thead> <tbody> <tr> <td><b>Pin 1</b> Ground/Shield</td> <td>Green</td> </tr> <tr> <td><b>Pin 2</b> Bias + In</td> <td>Red</td> </tr> <tr> <td><b>Pin 3</b> Mic Audio</td> <td>Copper Color</td> </tr> <tr> <td><b>Pin 4</b> Source Load</td> <td>Jumper to Pin 3</td> </tr> </tbody> </table>	Function	Wire Color	<b>Pin 1</b> Ground/Shield	Green	<b>Pin 2</b> Bias + In	Red	<b>Pin 3</b> Mic Audio	Copper Color	<b>Pin 4</b> Source Load	Jumper to Pin 3
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## 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, 18 dB/octave (wired only)
<b>Open circuit sensitivity</b>	BP899: -42 dB (7.9 mV) (0 dB=1 V/Pa, 1 kHz) BP899L: -48 dB (3.9 mV) (0 dB=1 V/Pa, 1 kHz)
<b>Impedance</b>	250 ohms
<b>Maximum input sound level</b>	BP899: 140 dB SPL (1 kHz at 1% THD) BP899L: 146 dB SPL (1 kHz at 1% THD)
<b>Dynamic range (typical)</b>	112 dB (1 kHz at Max SPL)
<b>Signal-to-noise ratio<sup>1</sup></b>	BP899: 66 dB (1 kHz at 1 Pa, A-weighted) BP899L: 60 dB (1 kHz at 1 Pa, A-weighted)
<b>Phantom power requirements</b>	11-52V DC, 2 mA typical
<b>Switch</b>	Low cut: on/off
<b>Weight</b>	Microphone: 1.2 g (0.04 oz) Power module: 82 g (2.9g)
<b>Dimensions</b>	Microphone: 17.5 mm (0.69") long, 5.3 mm (0.21") diameter Power module: 96.0 mm (3.78") long, 19.0 mm (0.75") diameter
<b>Output connector</b>	Power module: Integral 3-pin XLRM-type
<b>Cable</b>	1.4 m (55") long (wired & wireless)
<b>Audio-Technica case style</b>	M29
<b>Accessories furnished</b>	AT8545 power module; clothing clip base (AT8461a, AT8461a-TH); two windscreens (AT8151a, AT8151a-TH); two resonance caps (AT8150a, AT8150a-TH); 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

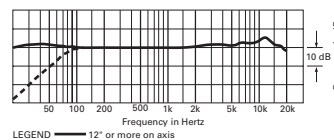
\*Measured using AT8545 power module

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

Specifications are subject to change without notice.

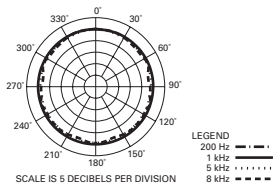


frequency response: 20–20,000 Hz



LEGEND — 12" or more on axis  
--- Roll-off

polar pattern



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