



BP894x MicroSet® Cardioid Condenser Headworn Microphones



Broadcast & Production Microphones

Features

- Features a rotating capsule housing with talk-side indicator for perfect polar pattern placement from either ear
- Subminiature cardioid condenser capsule offers extremely intelligible, natural vocal reproduction
- Inconspicuous, lightweight headset with capsule diameter of just 2.6 mm is ideal for applications requiring minimum visibility
- Ergonomic under-ear design—the flexible, lightweight, contoured loop hooks behind the ear for an ultra-secure, comfortable fit even for those wearing glasses
- Detachable, field-replaceable cable with robust connector at the earset and a variety of available terminations
- Handles high sound pressure levels with ease
- Wired version's power module (AT8545) includes a high-pass filter that provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality
- Comes with the AT8464x Dual-Ear Adapter Kit that converts the single-ear MicroSet to a unit that's worn on both ears for maximum stability and comfort
- Constructed of hypoallergenic materials

BP894x Description

The BP894x is a headworn condenser microphone with cardioid polar pattern. It is designed to provide intelligible natural audio for stage and television talent, lecturers, and worship leaders.

The microphone includes a 1.4 m (55") detachable, field-replaceable cable that is available in a variety of terminations for use in wired and wireless applications, as indicated below.

Cable Terminations

BP894x, BP894x-TH: Terminated with a cH-style screw-down 4-pin connector for use with the included AT8545 power module.

BP894xcH, BP894xcH-TH: Terminated with a cH-style screw-down 4-pin connector for use with Audio-Technica wireless systems featuring cH-style connector.

BP894xcW, BP894xcW-TH: Terminated with a cW-style locking 4-pin connector for use with Audio-Technica wireless systems featuring cW-style connector.

BP894xcLM3, BP894xcLM3-TH: Terminated for Sennheiser® wireless systems using locking 3.5 mm connector.

BP894xcT4, BP894xcT4-TH: Terminated with TA4F-type connector for Shure® wireless systems.

Model numbers ending in "TH" are beige.

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The wired models (BP894x, BP894x-TH) require 11V to 52V phantom power for operation. Included for this purpose is the AT8545 power module, which is equipped with a cH-style screw-down 4-pin input connector and a 3-pin XLRM-type output connector. A recessed switch in the power module permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass UniSteep® filter) to help control undesired ambient noise. A belt clip is also included to hold the power module.

All models of the microphone come with a cable clip, a dual-ear adapter kit, two windscreens, a moisture guard, and a protective carrying case. The microphone is available in black and beige.

Operation and Maintenance

The BP894x requires 11V to 52V phantom power for operation (wired only).

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.

The AT8545 power module included with wired models is equipped with an 80 Hz high-pass UniSteep® filter that 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 UniSteep® filter, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the "bent" line.

The flexible design of the BP894x MicroSet enables it to be worn on either the left or right ear. Bend a gentle upward curve in the microphone's boom, then hook the lightweight contoured loop around the back of your ear, so that the boom extends from the bottom of your ear. Adjust the boom as needed to follow the contour of your face, positioning the microphone near the corner of your mouth. The microphone has a large acoustical sweet spot; experiment with placement near the corner of your mouth for optimal performance.

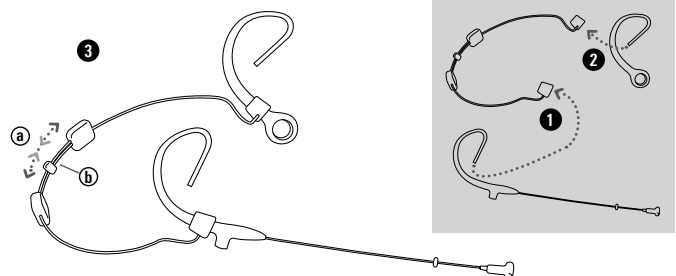
The BP894x features a unique 180-degree rotating capsule housing, which must be adjusted when moving the microphone from one ear to the other. A talk-side indicator shows you which way to turn the capsule housing for your desired position. Simply locate the white dot on the capsule housing and rotate the capsule until the white dot faces your mouth.

A cable clip is provided for strain relief, allowing the microphone to remain securely in place without the weight of the cable pulling on the headset. To use the clip, slip the cable into the clip's cable-holding groove, then attach the clip to your clothing, leaving enough slack in the microphone cable to allow for free, comfortable motion.

The included AT8464x Dual-Ear Adapter Kit allows you to convert the BP894x to a dual-ear unit for increased stability and comfort. The BP894x attaches to either side of the adapter so that the microphone can be worn on either the left or right of your mouth. The headband easily adjusts to fit both children and adults.

How to use the Dual-Ear Microphone Mount

1. Insert the rounded end of your BP894x ear hook into the larger opening of the adapter's left or right tapered holder. Firmly seat the ear hook in the tapered holder.
2. Insert the small rounded end of the additional supplied ear hook into the larger opening of the adapter's remaining tapered holder. Firmly seat the ear hook in the tapered holder.
3. Open the adapter's adjustable behind-the-neck headband to its maximum position by pushing the headband's adjusting tabs together (a). Put the behind-the-neck headband on, hooking the ear hooks over your ears. Adjust the fit of the headband as needed by sliding the headband's adjusting tabs until you arrive at a secure, comfortable fit (a). Attach the microphone cable to the cable clip positioned between the headband's adjusting tabs (b).

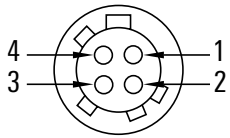


The donut-shaped moisture guard is provided to protect the element from sweat and moisture. Position the moisture guard as close to the element as possible to provide maximum protection. To remove the moisture guard, first remove the element cover and place it out of harm's way. Gently slide the moisture guard over the element. Replace the element cover.

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.

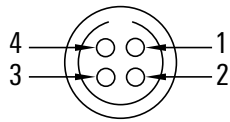
BP894x

Wireless Termination Diagrams



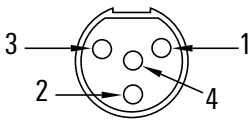
BP894xcW, cW-TH

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



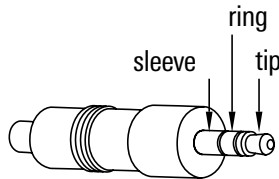
BP894xcH, cH-TH

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



BP894xcT4, cT4-TH

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



BP894xcLM3, cLM3-TH

Part	Function	Wire Color
Sleeve	Ground/Shield	Green
Ring	Mic Audio	Copper Color
Tip	Bias + In	Red

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Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	20-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave (wired only)
Open circuit sensitivity	-47 dB (4.3 mV) re 1V at 1 Pa
Impedance	250 ohms (wired only)
Maximum input sound level	135 dB SPL, 1 kHz at 3% T.H.D.
Dynamic range (typical)	98 dB, 1 kHz at 3% T.H.D. Max SPL (wired only)
Signal-to-noise ratio ¹	57 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 2 mA typical (wired only)
Current consumption	0.25 mA typical at 5V (wireless only)
Voltage range	3.5-10V (wireless only)
Switch	Flat, roll-off (wired only)
Weight	Microphone, boom & earpiece: 2.0 g (0.07 oz) (without cable) Power module (wired only): 85 g (3.0 oz)
Dimensions	Microphone: 9.67 mm (0.38") long, 2.6 mm (0.10") diameter Boom: 98.4 mm (3.87") long, 1.07 mm (0.04") diameter Power module (wired only): 100.0 mm (3.94") long, 18.9 mm (0.74") diameter
Output connector (power module)	Integral 3-pin XLRM-type
Cable	Detachable 1.4 m (55") long, 1.6 mm (0.06") diameter, 2- or 3-conductor shielded cable (termination dependent)
Audio-Technica case style	M40
Accessories furnished	AT8545 power module (wired only); AT8464x dual-ear adapter kit; AT8440 cable clip; AT8163 windscreen; AT8171 windscreen; moisture guard; belt clip (wired only); 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.

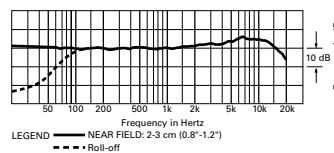
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

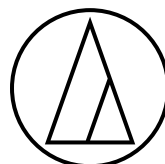
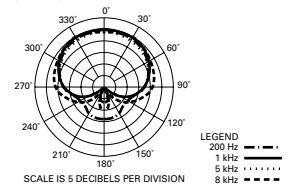
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frequency response: 20–20,000 Hz



polar pattern



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