

# BPHS1

## Broadcast Stereo Headset

 **audio-technica**

**broadcast & production** microphones



### Features

- **Microphone features polar pattern and frequency response tailored for natural, highly intelligible vocal reproduction**
- **Closed-back circumaural ear cups help seal out crowd noise and other background distractions**
- **Neodymium magnets in microphone and headphones for high output level & detailed sound reproduction**
- **Rugged design with user-replaceable cable and ear pads**
- **Cardioid pickup pattern of the dynamic microphone rejects off-axis sounds**
- **Boom-mounted microphone can be positioned on the left or right side**
- **Adjustable cushioned headband and lightweight design for long-wearing comfort**
- **Cable terminations:**
  - **3-pin XLRM-type connector for microphone**
  - **¼" 3-conductor for headphones**

### Description

The BPHS1 is a rugged broadcast stereo headset with closed-back circumaural (around-the-ear) ear cups and a professional boom-mounted microphone that can be worn on either side. It is designed for news and sports broadcasting, announcing and interviews.

The headset's microphone has a cardioid polar pattern tailored for pickup of speech with maximum voice intelligibility over a wide range of frequencies. It is more sensitive to sound originating directly in front of the element, making it useful in reducing pickup of unwanted sounds. The flexible gooseneck boom swivels for easy positioning on either the right or left side.

The dual earphones offer an extended frequency response of 20-20,000 Hz and smooth, natural sound reproduction. At the heart of each earpiece, a 40 mm neodymium driver offers impressive power handling for high maximum sound pressure levels. Generously padded circumaural ear cups provide acoustic isolation and long-wearing comfort; the adjustable headband is also crafted and cushioned for listening comfort.

The headset includes a user-replaceable detachable 3.3 m (10.8') cable terminating in two output connectors, one each for the microphone and headphone: the microphone output is a 3-pin XLRM-type connector; the headphones' output is a 3-conductor ¼" connector. Three windscreens are also included to protect against noise from breath and wind.

### Operation & Maintenance

The BPHS1 broadcast headset features a flexible microphone boom that pivots so that it can be worn on either side of the face. Put on the headset with the microphone boom on the desired side. (Note: For stereo monitoring, the earphone with a red insert on the yoke assembly carries the right stereo channel.) Adjust the boom as needed to follow the contour of your face, positioning the microphone near the corner of your mouth.

Experiment with placement for optimal performance: Positioning the microphone closer to your mouth will increase the low-end response for a more robust, full-range sound. As you move the microphone away from your mouth, the low-end response will diminish.

To remove included 3.3 m (10.8') shielded cable, loosen and remove the thumb screw and pull the multi-pin connector out of its socket. To replace the cable, plug the multi-pin connector into the socket, replace and tighten the thumb screw.

The cable features a standard 3-pin XLRM-type microphone output connector and a ¼" headphone output connector. Output from the microphone's XLRM-type connector 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 headphone ¼" connector is wired for stereo operation: the end portion of the connector (Tip) carries the left channel; the center portion (Ring) carries the right channel; and the bottom portion (Sleeve) carries the ground.

Take care to keep foreign particles from entering the windscreen. An accumulation of iron or steel filings on the diaphragm, and/or foreign material in the windscreen's mesh surface, can degrade performance.

### Architect's and Engineer's Specifications

The headset shall be a stereo broadcast headset with closed-back ear cups and a boom-mounted microphone that can be positioned on the left or right side.

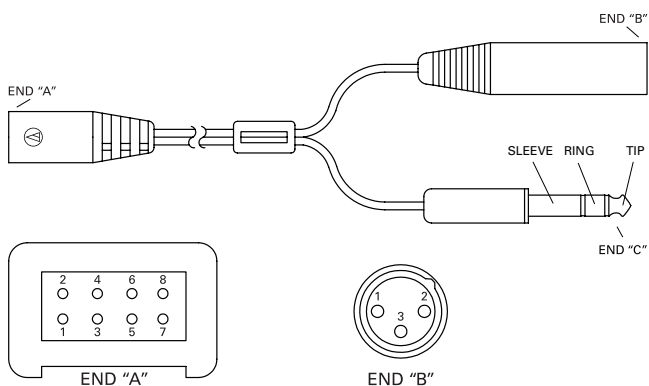
Padded circumaural ear cups shall provide acoustic isolation; the headband shall be adjustable and cushioned. The earphones shall have an extended frequency response of 20 Hz to 20,000 Hz, and shall be equipped with 40 mm neodymium drivers.

The microphone shall be a moving coil dynamic with a neodymium magnet. It shall have a cardioid polar pattern and a frequency response of 40 Hz to 20,000 Hz. Nominal open-circuit output voltage shall be 1.4 mV at 1V, 1 Pascal. Output shall be low impedance balanced (560 ohms). The boom shall be of a pivoting, flexible design.

The headset shall have a 3.3 m (10.8') user-replaceable detachable cable terminating in two output connectors, one each for the microphone and headphone. The output of the microphone shall be a 3-pin XLRM-type connector. The output of the headphone shall be a 3-conductor ¼" connector.

Weight shall be 264 g (9.3 oz). It shall include three windscreens. Finish shall be low-reflectance black.

The Audio-Technica BPHS1 is specified.



		XLRM-TYPE 1/4" PLUG		
FUNCTION		END "A"	END "B"	END "C"
<b>MIC</b>	MIC +	PIN 1	PIN 2	-
	MIC -	PIN 2	PIN 3	-
	SHIELD	PINS 3, 4	PIN1	-
<b>HP</b>	SPEAKER L-, R-	PINS 5, 6	-	SLEEVE
	SPEAKER R+	PIN 7	-	RING
	SPEAKER L+	PIN 8	-	TIP

## Specifications

<b>Headphone type</b>	Closed-back dynamic
<b>Headphone driver</b>	40 mm, neodymium magnet, copper-clad aluminum wire voice coil
<b>Microphone element</b>	Dynamic
<b>Microphone polar pattern</b>	Cardioid
<b>Frequency response</b>	Headphone: 20-20,000 Hz Microphone: 40-20,000 Hz
<b>Open circuit sensitivity</b>	-57 dB (1.4 mV) re 1V at 1 Pa (microphone)
<b>Sensitivity</b>	100 dB (headphone)
<b>Maximum input power</b>	1,600 mW at 1 kHz
<b>Impedance</b>	Headphone: 65 ohms Microphone: 560 ohms
<b>Weight</b>	264 g (9.3 oz)
<b>Dimensions</b>	82.0 mm (3.23") wide (earcup); 46.0 mm (1.81") wide (headband); 180.1 mm (7.09") long (boom), microphone extended; 24.0 mm (0.94") diameter (microphone)
<b>Cable</b>	3.3 m (10.8') long with 8-pin connector at headset end; 3-pin XLRM-type connector (microphone) and 6.3 mm (1/4") phone plug (headphone) outputs
<b>Accessories furnished</b>	3 windscreens; spare connector screw

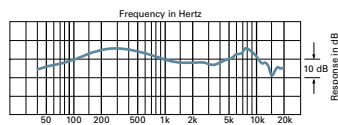
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

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

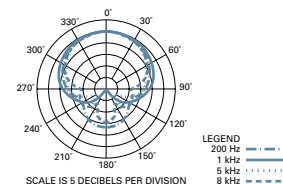
Specifications are subject to change without notice.

microphone  
frequency response: 40–20,000 Hz



1/4" Close Talking  
Tested using Brüel & Kjaer Type 4227 Artificial Mouth

microphone  
polar pattern



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