

# BP4071

## Line + Gradient Condenser Microphone

broadcast & production microphones



### Features

- **Designed for critical long-distance pickup in broadcasting, film/TV production and theater sound reinforcement applications**
- **Innovative acoustic design provides the same directivity as mics up to 50% longer**
- **Direct-coupled, balanced output ensures a clean signal even in high-output conditions**
- **Transformerless design for improved pickup of transients**
- **Rugged housing made of lightweight structural-grade aluminum alloy**
- **Integral 80 Hz high-pass filter switch and 10 dB pad switch**

### Description

The BP4071 is an externally polarized (DC bias) condenser microphone with a line + gradient polar pattern. It is designed for use in professional recording, broadcasting, film/TV/video production, wildlife recording, high-quality sound reinforcement and other demanding applications.

The microphone requires 48V phantom power for operation.

The microphone's highly directional polar pattern provides a narrow acceptance angle along with crisp, intelligible audio reproduction desirable for long-distance sound pickup.

The output of the microphone is a 3-pin XLRM-type connector.

The microphone is equipped with a switchable 10 dB pad and a switch that permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass filter).

The microphone is enclosed in a rugged aluminum alloy housing. The included AT8405a stand clamp permits mounting on any microphone stand with  $\frac{5}{8}$ "-27 threads. A windscreen, two o-rings and a protective carrying case are also included.

### Operation and Maintenance

The BP4071 requires 48V 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.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

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 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.

The microphone is also equipped with a switchable 10 dB pad that lowers the microphone's sensitivity, thus providing higher SPL capability for flexible use with a wide range of users and system configurations. To engage the 10 dB pad, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the -10 position.

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.

**Note:** To use the microphone with a camera-mount microphone holder whose diameter is too large to secure the microphone, slide the two supplied o-rings onto the microphone handle, spaced so that one fits just in front of, and the other fits just behind, the rubber nubs inside the microphone holder. When the top of the microphone holder is closed and tightened down, the o-rings should hold the microphone securely in place.

### Architect's and Engineer's Specifications

The microphone shall be an externally polarized (DC bias) condenser. It shall have a line + gradient polar pattern and a frequency response of 20 Hz to 20,000 Hz. The microphone shall operate from an external 48V DC phantom power source. It shall be capable of handling sound input levels up to 141 dB (151 dB with 10 dB pad) with a dynamic range of 128 dB. Nominal open circuit output voltage shall be 35.5 mV at 1 V, 1 Pascal. Output shall be low impedance balanced (50 ohms).

The output of the microphone shall be a 3-pin XLRM-type connector.

The microphone shall be equipped with a switchable 10 dB pad and a switch that permits choice of flat response or 80 Hz low-frequency roll-off.

The microphone shall be 395.0 mm (15.55") long and have a diameter of 21.0 mm (0.83"). Weight shall be 136 grams (4.8 oz). The microphone shall be enclosed in an aluminum alloy housing. The microphone shall include a stand clamp, a windscreen, two o-rings and a protective carrying case.

The Audio-Technica BP4071 is specified.

**Specifications**

<b>Element</b>	Externally polarized (DC bias) condenser
<b>Polar pattern</b>	Line + gradient
<b>Frequency response</b>	20-20,000 Hz
<b>Low frequency roll-off</b>	80 Hz, 18 dB/octave
<b>Open circuit sensitivity</b>	-29 dB (35.5 mV) re 1V at 1 Pa
<b>Impedance</b>	50 ohms
<b>Maximum input sound level</b>	141 dB SPL, 1 kHz at 1% T.H.D.; 151 dB SPL, with 10 dB pad (nominal)
<b>Noise<sup>1</sup></b>	13 dB SPL
<b>Dynamic range (typical)</b>	128 dB, 1 kHz at Max SPL
<b>Signal-to-noise ratio<sup>1</sup></b>	81 dB, 1 kHz at 1 Pa
<b>Phantom power requirements</b>	48V DC, 4.8 mA typical
<b>Switches</b>	Flat, roll-off ; 10 dB pad (nominal)
<b>Weight</b>	136 g (4.8 oz)
<b>Dimensions</b>	395.0 mm (15.55") long, 21.0 mm (0.83") diameter
<b>Output connector</b>	Integral 3-pin XLRM-type
<b>Audio-Technica case style</b>	SG3
<b>Accessories furnished</b>	AT8405a stand clamp for 5/8"-27 threaded stands; 5/8"-27 to 3/8"-16 thread- ed adapter; AT8145 windscreen; two o-rings; 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.

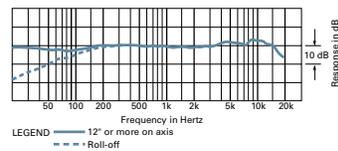
1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

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

Specifications are subject to change without notice.



frequency response: 20–20,000 Hz



polar pattern

