

# AT803

## Omnidirectional Condenser Lavalier Microphone



### Features

- **Clip-on lavalier mic provides high intelligibility for lecturers and stage/TV performers**
- **Provides excellent yet unobtrusive sound pickup**
- **Offers the convenience of battery or phantom power operation**
- **Rugged design and construction for reliable performance**
- **UniSteep® filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality**

### Description

The AT803 is a miniature clip-on/lavalier condenser microphone with an omnidirectional polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications.

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 includes a 1.8 m (6') permanently attached miniature cable. Its free end connects to the provided AT8531 power module via a TA3F-type connector. The output of the power module is a 3-pin XLRM-type connector.

A 3-position switch in the power module permits choice of off, on/flat response or on/low-roll-off (via integral 80 Hz high-pass UniSteep® filter). The roll-off position reduces the pickup of low-frequency ambient noise.

The microphone comes equipped with a power module, a clothing clip, a windscreen, a battery and a protective carrying case.

### Operation and Maintenance

The AT803 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, remove the cap from the top of the power module. Insert a fresh 1.5V AA battery ("+" end toward the cap release button), then reassemble the power module. For longest battery life, the switch should remain off except when the microphone is in use. 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.

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

A 3-position switch in the power module permits choice of off, on/flat response, or on/low-roll-off (via integral 80 Hz high-pass UniSteep® filter). 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, slide the switch toward the "bent" line. To turn the microphone on without engaging the UniSteep® filter, slide the switch toward the flat 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.

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.

### Architect's and Engineer's Specifications

The microphone shall be a fixed charge condenser. It shall have an omnidirectional polar pattern and a frequency response of 30 Hz to 20,000 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 135 dB (phantom) or 121 dB (battery) with a dynamic range of 107 dB (phantom) or 93 dB (battery). Nominal open-circuit output voltage shall be 6.3 mV (phantom) or 5.0 mV (battery) at 1 V, 1 Pascal. Output shall be low impedance balanced (200 ohms – phantom, 270 ohms – battery).

The microphone shall have a 1.8 m (6') 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 house the battery, and shall contain a switch that permits choice of off, on/flat response or on/low-roll-off (80 Hz). The output of the power module shall be a 3-pin XLRM-type connector.

The microphone shall be 25.0 mm (0.98") long and have a diameter of 10.2 mm (0.40"). Weight shall be 2.8 grams (0.1 oz). The microphone shall include a power module, a clothing clip, a windscreen, a battery and a protective carrying case. Finish shall be low-reflectance black.

The Audio-Technica AT803 is specified.

**Specifications**

<b>Element</b>	Fixed-charge back plate, permanently polarized condenser
<b>Polar pattern</b>	Omnidirectional
<b>Frequency response</b>	30-20,000 Hz
<b>Low frequency roll-off</b>	80 Hz, 18 dB/octave
<b>Open circuit sensitivity</b>	Phantom: -44 dB (6.3 mV) re 1V at 1 Pa Battery: -46 dB (5.0 mV) re 1V at 1 Pa
<b>Impedance</b>	Phantom: 200 ohms Battery: 270 ohms
<b>Maximum input sound level</b>	Phantom: 135 dB SPL, 1 kHz at 1% T.H.D. Battery: 121 dB SPL, 1 kHz at 1% T.H.D.
<b>Dynamic range (typical)</b>	Phantom: 107 dB, 1 kHz at Max SPL Battery: 93 dB, 1 kHz at Max SPL
<b>Signal-to-noise ratio<sup>1</sup></b>	66 dB, 1 kHz at 1 Pa
<b>Phantom power requirements</b>	11-52V DC, 2 mA typical
<b>Battery type</b>	1.5V AA/UM3
<b>Battery current / life</b>	0.4 mA / 1200 hours typical (alkaline)
<b>Switch</b>	Off, on-flat, on-roll-off
<b>Weight</b>	Microphone: 2.8 g (0.1 oz) Power module: 139 g (4.9 oz)
<b>Dimensions</b>	Microphone: 25.0 mm (0.98") long, 10.2 mm (0.40") diameter Power module: 84.0 mm (3.31") H x 63.0 mm (2.48") W x 22.0 mm (0.87") D
<b>Output connector</b>	Power module: Integral 3-pin XLRM-type
<b>Cable</b>	1.8 m (6') long (permanently attached to microphone), 2.6 mm (0.10") diameter, 2-conductor, shielded cable with TA3F-type connector
<b>Audio-Technica case style</b>	M1
<b>Accessories furnished</b>	AT8531 power module; AT8419 clothing clip; AT8116 windscreen; 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.

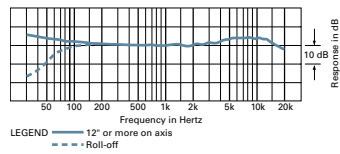
1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

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

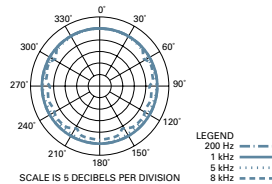
Specifications are subject to change without notice.



frequency response: 30–20,000 Hz



polar pattern



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0001-0185-01