

# ATM73a

## Cardioid Condenser Headworn Microphone



### Features

- **Ideal for drummers, keyboard players, guitarists or anyone requiring hands-free operation**
- **Comfortable, unobtrusive headband design with side-of-mouth pickup**
- **Belt-mounted power module operates on battery or phantom power**
- **Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source**
- **Rugged design and construction for reliable performance**
- **Switchable 80 Hz high-pass filter minimizes pickup of undesired low-frequency sounds**
- **Also available in two additional versions (without power module)**  
**ATM73cW— cable terminated for A-T UniPak® wireless systems**  
**ATM73ac— unterminated cable**

### ATM73a Description

The ATM73a is a headworn condenser microphone with a cardioid polar pattern. It is designed for use by performing musicians and others who require professional-quality vocal pickup with hands-free operation.

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's cardioid polar pattern provides a 120° angle of acceptance.

The microphone includes a 1.4 m (4.6') 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 filter). The roll-off position reduces the pickup of low-frequency ambient noise.

The microphone comes equipped with a power module, two windscreens and a battery.

### ATM73cW Description

The microphone is also available in a wireless model, the ATM73cW. The ATM73cW includes a 1.4 m (55") permanently attached miniature cable terminated with a locking 4-pin connector for use with Audio-Technica UniPak® body-pack transmitters. No power module or battery is included (or required) with the ATM73cW. The ATM73cW dimensions, polar pattern, and included windscreens are otherwise identical to those of the ATM73a.

The ATM73cW is also available unterminated as the ATM73ac.

### Operation and Maintenance

The ATM73a 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.

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 filter). 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, slide the switch toward the "bent" line. To turn the microphone on without engaging the high-pass filter, slide the switch toward the flat line.

For maximum stability and minimum visibility, the headband should be worn around the back of the head, with each cushioned support pad resting on the temple in front of the ear. The cable should remain clipped to the headband, with some slack at the boom connection. The headset is designed so the microphone descends from the left support pad.

After use in high-moisture applications, such as aerobics instruction, on-stage performing, etc., remove the foam screen, wipe off the headset with a towel and permit them to air-dry. (Do not store in a closed space, such as a plastic bag, until all moisture has evaporated.)

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.

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## Specifications

<b>Element</b>	Fixed-charge back plate, permanently polarized condenser
<b>Polar pattern</b>	Cardioid
<b>Frequency response</b>	40-15,000 Hz
<b>Low frequency roll-off</b>	80 Hz, 18 dB/octave
<b>Open circuit sensitivity</b>	Phantom: -55 dB (1.7 mV) re 1V at 1 Pa Battery: -56 dB (1.5 mV) re 1V at 1 Pa
<b>Impedance</b>	Phantom: 200 ohms Battery: 270 ohms
<b>Maximum input sound level</b>	Phantom: 146 dB SPL, 1 kHz at 1% T.H.D. Battery: 132 dB SPL, 1 kHz at 1% T.H.D.
<b>Dynamic range (typical)</b>	Phantom: 111 dB, 1 kHz at Max SPL Battery: 97 dB, 1 kHz at Max SPL
<b>Signal-to-noise ratio<sup>1</sup></b>	59 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: 31 g (1.1 oz) Power module: 139 g (4.9 oz)
<b>Dimensions</b>	Microphone: 10.0 mm (0.39") diameter Power module: 84.0 mm (3.31") H x 63.0 mm (2.48") W x 22.0 mm (0.87") D Headset: 165.0 mm (6.49") nominal at widest point, 67.0 mm (2.64") flexible boom
<b>Output connector</b>	Power module: Integral 3-pin XLRM-type
<b>Cable</b>	1.4 m (4.6') 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>	M5
<b>Accessories furnished</b>	AT8531 power module; AT8128 windscreen; AT8125 windscreen; battery

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

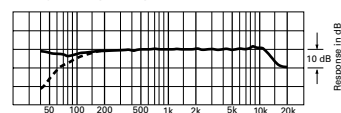
1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

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

Specifications are subject to change without notice.

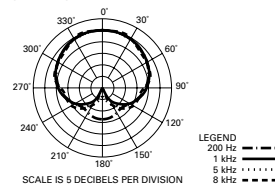


frequency response: 40–15,000 Hz



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

polar pattern



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