



ATM73a Cardioid Condenser Headworn Microphone



Artist Series

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)
ATM73cH, ATM73cW—cable terminated for A-T wireless systems
ATM73ac—unterminated cable

Wired Description (ATM73a)

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.

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.

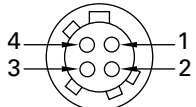
Wireless Description (ATM73cH, ATM73cW)

The microphone is also available in two wireless models, the ATM73cH and ATM73cW. The ATM73cH includes a 1.4 m (55") permanently attached miniature cable terminated with a screw-down 4-pin connector for use with Audio-Technica cH-style body-pack transmitters. The ATM73cW includes a 1.4 m (55") permanently attached miniature cable terminated with a locking 4-pin connector for use with Audio-Technica cW-style body-pack transmitters. No power module or battery is included (or required) with the ATM73cH and ATM73cW. The ATM73cH and ATM73cW dimensions, polar pattern, and included windscreens are otherwise identical to those of the ATM73a.

Also available unterminated as the ATM73ac.

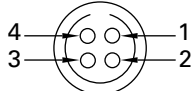
ATM73a

Wireless Termination Diagrams



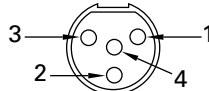
cW

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



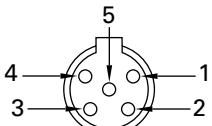
cH

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



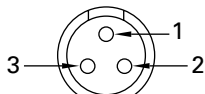
cT4

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



cT5

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 1
Pin 5	Line In	Open



cL4

Pin	Function	Wire Color
Pin 1	N/C	Open
Pin 2	N/C	Open
Pin 3	Bias + In, Mic Audio	Red
Shell/Case	Ground/Shield	Green

Specifications*

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	40-15,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave (power module)
Open circuit sensitivity	Phantom: -55 dB (1.7 mV) re 1V at 1 Pa Battery: -56 dB (1.5 mV) re 1V at 1 Pa
Impedance	Phantom: 200 ohms Battery: 270 ohms
Maximum input sound level	Phantom: 146 dB SPL, 1 kHz at 1% T.H.D. Battery: 132 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	Phantom: 111 dB, 1 kHz at Max SPL Battery: 97 dB, 1 kHz at Max SPL
Signal-to-noise ratio ¹	59 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 2 mA typical
Element power requirements	1.5-9V DC (0.5 mA current consumption typical at 1.5V DC)
Battery type	1.5V AA/UM3
Battery current / life	0.4 mA / 1200 hours typical (alkaline)
Switch	Off, on-flat, on-roll-off (power module)
Weight	Microphone: 31 g (1.1 oz) Power module: 139 g (4.9 oz)
Dimensions	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
Output connector	Power module: Integral 3-pin XLRM-type
Cable	1.4 m (4.6') long (wired) 1.4 m (55") long (wireless)
Audio-Technica case style	M5
Accessories furnished	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/cm² = 10 microbars = 94 dB SPL

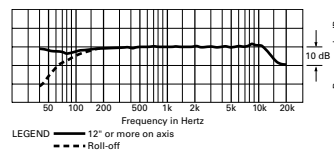
*Measured using AT8531 power module

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

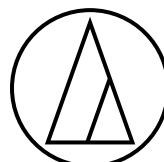
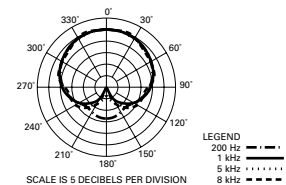
Specifications are subject to change without notice.



frequency response: 40-15,000 Hz



polar pattern



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