

Description

The AT857AMa is a wide-range condenser microphone designed for quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. Standing 12.21" above the mounting surface, its small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. The AT857AML is a 19" version of this microphone.

Supplied as a cardioid, the AT857AMa easily accepts interchangeable elements to permit selection of angle of acceptance from 100° to 360°. The following optional elements are available from an authorized Audio-Technica dealer or the A-T service department: AT853H-ELE hypercardioid, AT8530-ELE omnidirectional, AT853SC-ELE subcardioid.

The microphone features a 9.8' (3.0 m) permanently-attached miniature cable with a 3-pin TA3F output connector. It can be powered from an external 9V to 52V DC phantom power supply or from a 1.5V AA battery. Current demands are so low that a premium battery will provide about 1200 hours of continuous use. A built-in 3-position switch on the power module allows selection of off, on/flat response or on/low-roll-off.

Audio-Technica design engineers have utilized the newest low-mass technology in the quest for superior performance. The permanent charge is now on the fixed back plate, rather than the moving element. With A-T fixed charge "back plate" construction, a gold-vaporized diaphragm just 2 microns thick (or about 0.000079") can be used. This reduces moving mass, thus improving frequency response and transient response while reducing distortion.

The microphone element is enclosed in a rugged housing with a low-reflectance black finish. A 5/8"-27 threaded flange allows the microphone to mate with the threads of a standard microphone desk or floor stand. A 5/8"-27 threaded stud is also provided so it can be secured to a permanent mounting surface.

Installation and Operation

To install the battery, remove the cap from the top of the power module. Insert the battery, being certain to observe battery polarity as marked (+ end toward the cap release button). For longest battery life, the switch should remain off except when the microphone is in use. While standard carbon-zinc AA batteries will operate the microphone satisfactorily, alkaline or mercury cells are preferred for longer service life. Only "leakproof" batteries should be used. The battery does not have to be in place to use in phantom power mode. Phantom power requires 9V to 52V DC.

Output is low impedance balanced. The output connector of the power module mates with XLR-type cable connectors. The balanced signal appears across Pins 2 and 3, while the ground (shield) connection is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pin 2,

in accordance with industry convention.

The AT8102 two-stage foam windscreen simply slips over the head of the microphone, effectively reducing wind noise or "popping" when used extra close.

The small-diameter gooseneck is easy to manipulate for proper positioning. Heavily lubricated, it operates smoothly and quietly. Should the unit become noisy with prolonged use, apply a light machine oil directly on the gooseneck area affected.

While a modern condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for long periods of time. Extremely high humidity should also be avoided.

Architects and Engineers Specifications

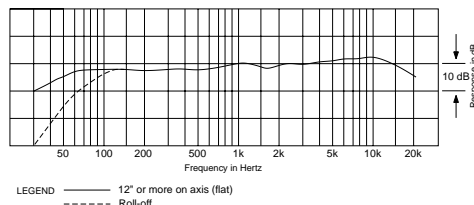
The microphone shall be a fixed-charge condenser with a cardioid polar pattern and a frequency response of 30 Hz to 20,000 Hz. It shall be capable of accepting optional interchangeable elements for additional polar patterns. It shall operate from an external 9V to 52V DC phantom power source or, alternatively, from a 1.5V AA/UM3 battery. Nominal open-circuit output voltage shall be 6.3 mV (phantom) or 5.6 mV (battery) at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms-phantom, 270 ohms-battery).

The microphone shall have a permanently-attached 9.8' (3.0 m) miniature cable, terminating in a TA3F output connector. The output connector shall connect to a TB3M jack on a power module. The included power module shall house the battery, and contain an off/on/low-roll-off switch. The power module shall terminate in a 3-pin XLRM-type connector.

The microphone shall be a small-diameter alternating gooseneck design, with 12.21" (310.2 mm) [19.00" (482.5 mm)] overall length. Head diameter shall be 0.47" (12.0 mm). The microphone shall include a 5/8"-27 threaded flange to mate with the threads of a standard microphone desk or floor stand. A 5/8"-27 threaded stud shall be provided for permanent installation to a mounting surface. The microphone weight shall be 3.6 oz (103 grams) [4.6 oz (131 grams)], without cable. Finish shall be low-reflectance black.

The Audio-Technica AT857AMa [AT857AML] is specified.

Frequency Response

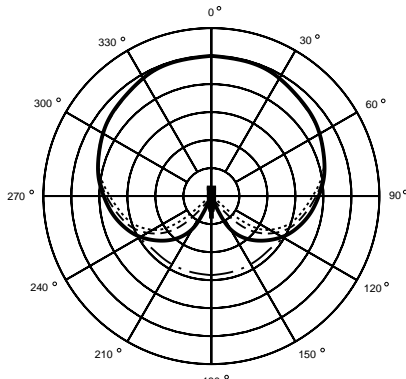


AT857AMa AT857AML CARDIOID CONDENSER ADAPTER- MOUNT GOOSENECK MICROPHONES

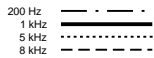


AT857AMa AT857AMLa

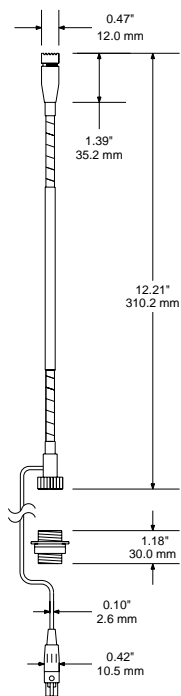
Polar Pattern



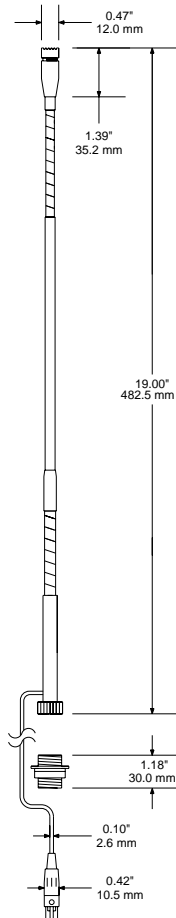
LEGEND



AT857AMa
Dimensions



AT857AMLa
Dimensions



AT857AMa/AT857AMLa SPECIFICATIONS*

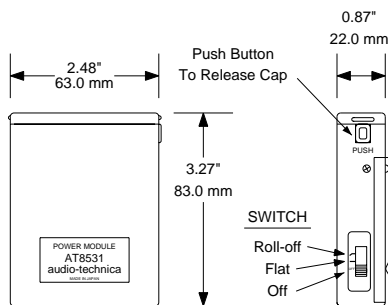
ELEMENT	Fixed-charge back plate permanently polarized condenser	
POLAR PATTERN	Cardioid (Unidirectional)	
FREQUENCY RESPONSE	30-20,000 Hz	
LOW-FREQUENCY ROLL-OFF	80 Hz, 18 dB/octave	
OPEN CIRCUIT SENSITIVITY	PHANTOM	-44 dB (6.3 mV) re 1V at 1 Pa*
	BATTERY	-45 dB (5.6 mV) re 1V at 1 Pa*
IMPEDANCE	PHANTOM	200 ohms
	BATTERY	270 ohms
MAXIMUM INPUT SOUND LEVEL	PHANTOM	135 dB SPL, 1 kHz at 1% T.H.D.
	BATTERY	121 dB SPL, 1 kHz at 1% T.H.D.
DYNAMIC RANGE (TYPICAL)	PHANTOM	108 dB, 1 kHz at Max SPL
	BATTERY	94 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO[†]	67 dB, 1 kHz at 1 Pa*	
SWITCH	Off, on-flat, on-roll-off	
BATTERY TYPE	Use only "leakproof" AA/UM3 1.5V battery	
BATTERY CURRENT	0.4 mA typical	
BATTERY LIFE	1200 hours (alkaline battery)	
PHANTOM POWER REQUIREMENTS	9-52V DC, 2 mA typical	
WEIGHT	MICROPHONE	(AT857AMa) 3.6 oz (103 grams)
		(AT857AMLa) 4.6 oz (131 grams)
	POWER MODULE	5.2 oz (147 grams)
DIMENSIONS	MICROPHONE	(AT857AMa) 12.21" (310.2 mm) long above mounting surface
		(AT857AMLa) 19.00" (482.5 mm) long above mounting surface
		(BOTH) 0.47" (12.0 mm) head diameter
	POWER MODULE	3.27" (83.0 mm) H x 2.48" (63.0 mm) W x 0.87" (22.0 mm) D
OUTPUT CONNECTOR (POWER MODULE)	Integral 3-pin XLRM-type	
CABLE	9.8' (3.0 m) long (permanently attached to microphone), 0.10" (2.6 mm) diameter, 2-conductor, shielded cable with TA3F output connector that mates with TB3M jack on power module	
ACCESSORIES FURNISHED	AT8102 two-stage foam windscreen; AT8531 power module; battery; AT8425 5/8"-27 threaded mounting stud	
OPTIONAL INTERCHANGEABLE ELEMENTS	AT853H-ELE hypercardioid (100°) AT853O-ELE omnidirectional (360°) AT853SC-ELE subcardioid (170°)	

[†] 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

[†] Typical, A-weighted, using Audio Precision System One.

AT8531 Power Module



Optional Accessories:

- AT8104a metal lockable windscreen.
- AT8117 large foam windscreen.
- AT8314 2-conductor, shielded, vinyl-jacketed, broadcast-type cable with XLRM-type connector at microphone end, XLRM-type connector at equipment end. Available in 10', 20', 25', 30', 50' & 100' lengths.
- AT8416 shock mount.
- CP8201 line matching transformer (Lo-Z to 50,000 ohms).
- CP8506 four-channel 48V phantom power supply (AC powered).
- AT8801 single-channel 48V phantom power supply (AC powered).

One-Year Limited Warranty

Audio-Technica microphones and accessories purchased in the U.S.A. are warranted for one year from date of purchase by Audio-Technica U.S., Inc. (A.T.U.S.) to be free of defects in materials and workmanship. In event of such defect, product will be repaired promptly without charge or, at our option, replaced with a new product of equal or superior value if delivered to A.T.U.S. or an Authorized Service Center, prepaid, together with the sales slip or other proof of purchase date. **Prior approval from A.T.U.S. is required for return.** This warranty excludes defects due to normal wear, abuse, shipping damage, or failure to use product in accordance with instructions. This warranty is void in the event of unauthorized repair or modification.

For return approval and shipping information, contact the Service Department, Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224.

Except to the extent precluded by applicable state law, **A.T.U.S. will have no liability for any consequential, incidental, or special damages; any warranty of merchantability or fitness for particular purpose expires when this warranty expires.**

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Outside the U.S.A., please contact your local dealer for warranty details.



Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224
Audio-Technica Limited, Old Lane, Leeds LS11 8AG England

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