

## Description

The AT857QMa is a wide-range condenser microphone designed for quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. A 3-pin male connector insert at the base allows the AT857QMa to be plugged directly into a 3-pin panel jack connector or a standard microphone cable. With an overall height of 14.51", its small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. The AT857QMLa is a 19.00" version of this microphone.

Supplied as a cardioid, the AT857QMa 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, AT853O-ELE omnidirectional, AT853SC-ELE subcardioid.

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 result is remarkable stability of performance.

A flat-response/low-roll-off switch is built into the integral power module of the microphone. The low-roll-off feature attenuates low-frequency response to compensate for proximity effect if the unit is used very close. Low roll-off can also be used to minimize background ambience, air conditioning rumble, mechanical noise, etc., improving the quality of sound pickup under difficult conditions.

The microphone element is enclosed in a rugged housing with a low-reflectance black finish.

## Installation and Operation

The AT857QMa is a completely self-contained unit ready to plug into a mating XLR-type panel jack or cable connector. An external 9V to 52V DC source is required to power the unit.

Output is low impedance balanced. The XLRM-type connector 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 provided AT8102 two-stage foam wind-screen 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. Exposure to high temperatures can result in gradual and permanent reduction of the output level. 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. Nominal open-circuit output voltage shall be 7.0 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms).

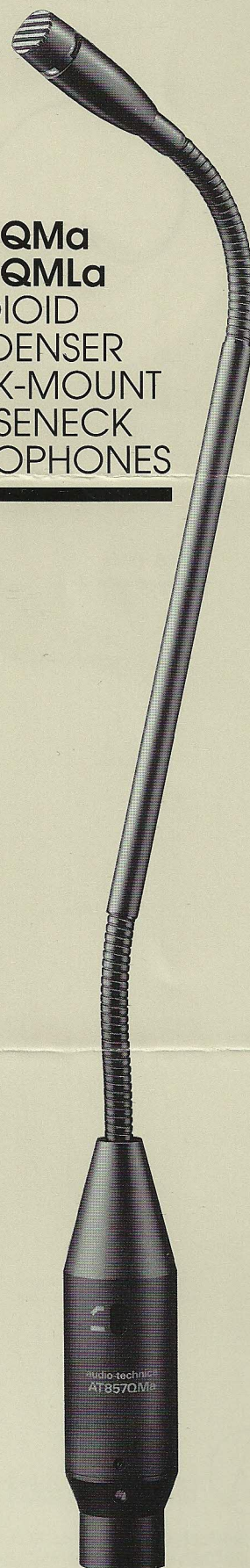
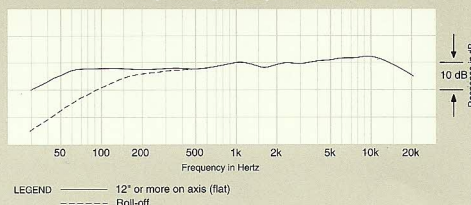
The microphone shall have a self-contained power module with an XLRM-type connector insert at the base for direct connection to a mating XLR-type panel jack or cable connector. The power module shall contain a switch for low-frequency roll-off.

The microphone shall be a small-diameter alternating gooseneck design with a length of 14.51" (368.6 mm) [19.00" (482.6 mm)]. Head diameter shall be 0.47" (12.0 mm). The microphone weight shall be 4.2 oz (120 grams) [4.4 oz (126 grams)]. Finish shall be low-reflectance black.

The Audio-Technica AT857QMa [AT857QMLa] is specified.

## AT857QMa AT857QMLa CARDIOID CONDENSER QUICK-MOUNT GOOSENECK MICROPHONES

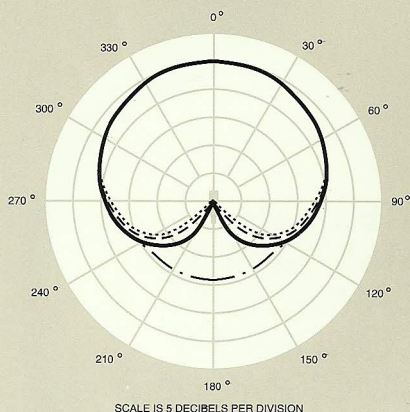
Frequency Response



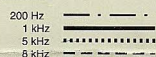


# AT857QMa AT857QMLa

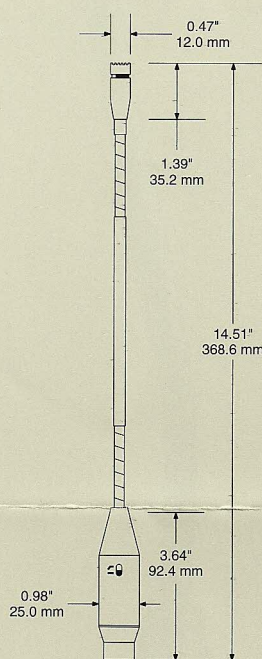
Polar Pattern



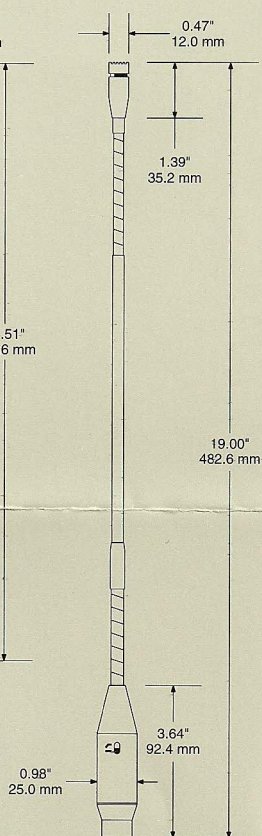
LEGEND



AT857QMa  
Dimensions



AT857QMLa  
Dimensions



## AT857QMa/AT857QMLa SPECIFICATIONS\*

<b>ELEMENT</b>	Fixed-charge back plate permanently polarized condenser
<b>POLAR PATTERN</b>	Cardioid (Unidirectional)
<b>FREQUENCY RESPONSE</b>	30-20,000 Hz
<b>LOW-FREQUENCY ROLL-OFF</b>	150 Hz, 6 dB/octave
<b>OPEN CIRCUIT SENSITIVITY</b>	-43 dB (7.0 mV) re 1V at 1 Pa*
<b>IMPEDANCE</b>	200 ohms
<b>MAXIMUM INPUT SOUND LEVEL</b>	139 dB SPL, 1 kHz at 1% T.H.D.
<b>DYNAMIC RANGE (TYPICAL)</b>	112 dB, 1 kHz at Max SPL
<b>SIGNAL-TO-NOISE RATIO†</b>	67 dB, 1 kHz at 1 Pa*
<b>SWITCH</b>	Flat response, low-roll-off (recessed)
<b>PHANTOM POWER REQUIREMENTS</b>	9-52V DC, 2 mA typical
<b>WEIGHT</b>	(AT857QMa) 4.2 oz (120 grams) (AT857QMLa) 4.4 oz (126 grams)
<b>DIMENSIONS</b>	(AT857QMa) 14.51" (368.6 mm) long (AT857QMLa) 19.00" (482.6 mm) long (BOTH) 0.47" (12.0 mm) head diameter 0.98" (25.0 mm) power module diameter
<b>OUTPUT CONNECTOR (POWER MODULE)</b>	Integral 3-pin XLRM-type
<b>ACCESSORY FURNISHED</b>	AT8102 two-stage foam windscreen
<b>OPTIONAL INTERCHANGEABLE ELEMENTS</b>	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/cm<sup>2</sup> = 10 microbars = 94 dB SPL

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

### Optional Accessories:

- AT8104a large metal 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).
- CP8508 single-channel 24V 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.



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