

Description

The AT859QMLx is a wide-range condenser microphone with a cardioid (unidirectional) polar pattern. It was designed for high quality sound reinforcement and other demanding sound pickup situations. The AT859QMLx features a 3-pin male connector insert at its base, allowing it to be plugged directly into a 3-pin panel jack connector. It can also be plugged directly into a standard microphone cable. The small-diameter alternating gooseneck design permits highly flexible positioning while eliminating the unsightly kinks and twists associated with conventional gooseneck types.

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

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

Operation and Maintenance

The AT859QMLx 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 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 AT859QMLx features a flat/roll-off switch built into its power module. The roll-off feature allows the low-frequency response to be attenuated to compensate for proximity effect if the unit is used very close. 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 small diameter gooseneck is very easy to manipulate for proper positioning. It is heavily lubricated to offer very smooth and quiet operation. Should it become noisy with prolonged use, apply a light machine oil directly on the gooseneck area affected.

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

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

Architects and Engineers Specifications

The microphone shall be a fixed-charge condenser with a cardioid polar pattern and a frequency response of 50 Hz to 18,000 Hz. It shall operate from an external 9V to 52V DC phantom power source.

The microphone shall have a nominal open-circuit output voltage of 5.0 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms). The microphone shall accept a 140 dB SPL at 1 kHz while producing no more than 1% T.H.D.

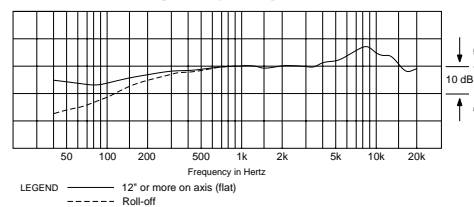
The microphone shall consist of a double gooseneck and shall have a self-contained power module with an XLRM-type connector insert at the base for direct connection to a mating XLR-type panel jack or cable connector. The power module shall contain a flat response/low-roll-off switch. The microphone shall have an overall length of 18.50" (470.0 mm). The case shall be turned brass and have a head diameter of 0.48" (12.3 mm). The microphone weight shall be 4.2 oz (120 grams). Finish shall be low-reflectance matte black.

The Audio-Technica AT859QMLx is specified.

AT859QMLx MINIATURE CARDIOID CONDENSER GOOSENECK MICROPHONE



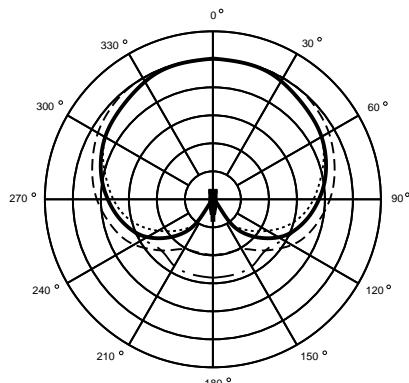
Frequency Response



LEGEND: ——— 12" or more on axis (flat)
----- Roll-off

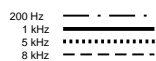
AT859QMLx

Polar Pattern

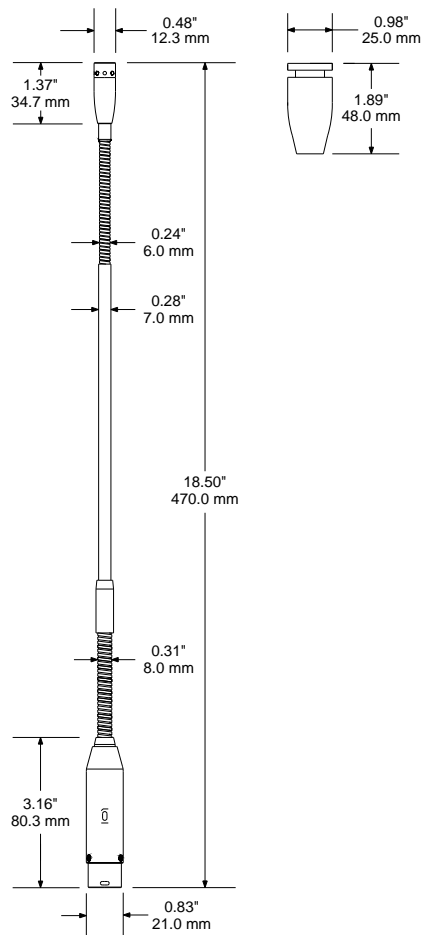


SCALE IS 5 DECIBELS PER DIVISION

LEGEND



Dimensions



AT859QMLx SPECIFICATIONS[†]

ELEMENT	Fixed-charge back plate, permanently polarized condenser
POLAR PATTERN	Cardioid (Unidirectional)
FREQUENCY RESPONSE	50-18,000 Hz
LOW-FREQUENCY ROLL-OFF	150 Hz, 6 dB/Octave
OPEN CIRCUIT SENSITIVITY	-46 dB (5.0 mV) re 1V at 1 Pa*
IMPEDANCE	200 ohms
MAXIMUM INPUT SOUND LEVEL	140 dB SPL, 1 kHz at 1% T.H.D.
DYNAMIC RANGE (TYPICAL)	111 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO[†]	65 dB, 1 kHz at 1 Pa*
SWITCH	Flat, roll-off (recessed)
PHANTOM POWER REQUIREMENTS	9-52V DC, 2 mA typical
WEIGHT	4.2 oz (120 grams)
DIMENSIONS	18.50" (470.0 mm) long 0.48" (12.3 mm) head diameter 0.83" (21.0 mm) power module diameter
OUTPUT CONNECTOR	Integral 3-pin XLRM-type
ACCESSORY FURNISHED	AT8102 two-stage foam windscreen

[†] 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.

Optional Accessories:

- AT8117 large foam windscreen for high-wind conditions.
- CP8201 line matching transformer (Lo-Z to 50,000 ohms).
- AT8202 adjustable in-line attenuator for use with low-impedance microphones.
- 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.
- CP8506 four-channel 48V phantom power supply (AC powered).
- CP8508 single-channel 24V phantom power supply (AC powered).
- AT8616x locking ring/isolator.
- AT8617x locking ring.

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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