

# Engineered Sound<sup>®</sup>

**AT935AMRx/ML**

MicroLine<sup>®</sup>

Miniature  
Condenser  
Gooseneck  
Adapter-mount  
Microphone

## Description

The AT935AMRx/ML is a wide-range condenser microphone with a MicroLine<sup>®</sup> polar pattern. It is designed for quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. The small-diameter gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. The AT935AMRx/ML features a  $\frac{5}{8}$ "-27 threaded flange that allows it to mate with the threads of a standard microphone desk or floor stand. A  $\frac{5}{8}$ "-27 threaded stud is also provided so it can be secured to a permanent mounting surface.

The microphone features an 11' (3.3 m) permanently-attached miniature cable. Its free end connects to the provided AT8533x power module via internal solderless screw terminals for simple cable-length adjustment in the field. It can be powered from any external 9V to 52V DC phantom power supply. A recessed switch in the power module permits choice of flat response or low-frequency roll-off to help control undesired ambient noise.

Four additional interchangeable elements are available to permit selection of angle of acceptance from 90° to 360°.

Audio-Technica design engineers have utilized the newest low-mass diaphragm 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 (about .000079") can be used. This considerably reduces moving mass, thus improving frequency response and transient response while reducing distortion.

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

By removing an attached AT8533x power module, the cable from the microphone can be routed out the bottom of the microphone instead of exiting from the side as supplied (Fig. 1).

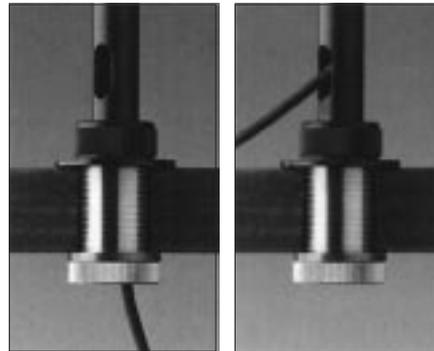


Figure 1. Cable routing

The provided foam windscreens simply slips over the MicroLine element, 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.

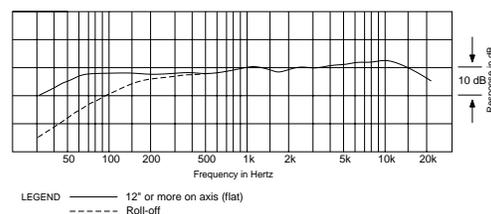
While a modern condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Exposure to high temperature can result in gradual and permanent reduction of the output level. Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110°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

## Installation and Operation

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.

To shorten the cable, remove the three screws from the base of the power module and slide the outer case up the cable to reveal the circuit board and screw terminals. Loosen the three terminal screws and remove the cable from the module. Next, slide the case off the cable, cut the cable to the desired length (allowing a few extra inches) and slide the case back onto the cable. Tie a single knot in the cable about two inches from the cut end. Following Figure 2, cut the cable off 1" down from the top of the knot and carefully remove  $\frac{1}{2}$ " of the outer jacket. Strip the mic cable wires and attach them to their respective terminals (Fig. 3). Make certain that the terminals are clamped on the conductors, not on the insulation, and that there are no loose strands of wire which might touch other terminals. Replace the case, being certain that it goes over the case grounding contact and that the roll-off switch is accessible. Finish by replacing the three base screws and testing for proper operation.

## Frequency Response (Typical)



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

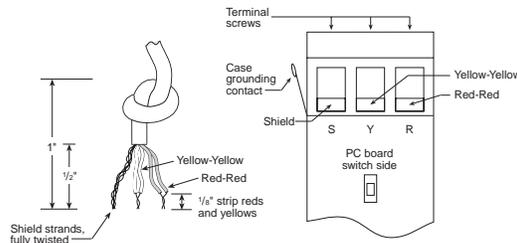


Figure 2

Figure 3



audio-technica<sup>®</sup>

# AT935AMRx/ML

## AT935AMRx/ML Specifications†

<b>Element</b>	Fixed-charge back plate permanently polarized condenser
<b>Polar Pattern</b>	MicroLine®
<b>Frequency Response</b>	30-20,000 Hz
<b>Low-frequency Roll-off</b>	150 Hz, 6 dB/octave
<b>Open Circuit Sensitivity</b>	-36 dB (15.8 mV) re 1V at 1 Pa*
<b>Impedance</b>	200 ohms (1000 ohms without power module)
<b>Maximum Input Sound Level</b>	131 dB SPL, 1 kHz at 1% T.H.D.
<b>Dynamic Range (Typical)</b>	105 dB, 1 kHz at Max SPL
<b>Signal-to-noise Ratio†</b>	68 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>	
<b>Microphone (less cable)</b>	2.1 oz (60 grams)
<b>Power Module</b>	2.1 oz (60 grams)
<b>Dimensions</b>	
<b>Microphone</b>	11.02" (280.0 mm) long, 0.31" (8.0 mm) head diameter
<b>Power Module</b>	3.58" (91.0 mm) long, 0.83" (21.0 mm) diameter
<b>Output Connector (Power Module)</b>	Integral 3-pin XLRM-type
<b>Cable</b>	11' (3.3 m) long (permanently attached to microphone), 0.10" (2.6 mm) diameter, 2-conductor, shielded cable; free end attaches to screw terminals in power module
<b>Accessories Furnished</b>	AT8138 MicroLine foam windscreen; AT8533x power module; AT8425 5/8"-27 threaded mounting stud
<b>Optional Interchangeable Elements²</b>	AT853C-ELE cardioid (120°) 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.  
² These elements require a P12024 element adapter.

## Architects and Engineers Specifications

The microphone shall be a fixed-charge condenser with a MicroLine® 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 with the included power module shall be 15.8 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms).

The microphone shall have a permanently-attached 11' (3.3 m) miniature cable with a pigtail output. The pigtail output shall connect to a power module via internal solderless screw terminals. The power module shall include a switch for low-frequency roll-off and shall terminate in a 3-pin XLRM-type output connector.

The microphone shall be a small-diameter gooseneck design, with an overall length of 11.02" (280.0 mm). Head diameter shall be 0.31" (8.0 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 2.1 oz (60 grams) without cable. Finish shall be low-reflectance black.

The Audio-Technica AT935AMRx/ML is specified.

## 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.

