

Description

The AT873R is a small, wide-range condenser microphone with a hypercardioid polar pattern. Designed for use as a handheld vocal microphone, it is also well suited for lectern and stand applications. Its relatively small size makes it unassuming in any situation. The body of the microphone contains the electronics and features a 3-pin XLRM-type output connector. Superior internal shock mounting eliminates virtually all handling and cable noise. The output of the microphone is balanced low impedance.

Supplied as a hypercardioid, the AT873R 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: AT853C-ELE cardioid, AT853O-ELE omnidirectional, AT853SC-ELE subcardioid.

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 AT873R is powered from an external 48V DC phantom power supply.

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

Operation and Maintenance

The AT873R is a completely self-contained unit with an integral 3-pin XLRM-type output connector. An external 48V DC source is required to power the unit.

Output is low impedance balanced. The output connector mates with XLRF-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.

A variety of pickup patterns can be obtained via interchangeable elements which are easily field replaceable. To change the element, first unscrew and remove the outside metal grille. Next, remove the internal foam windscreen which is held in place by an adhesive ring around the base of the element. Be careful not to tear or stretch the foam. Now you can unscrew the element and install the new

one. Replace the internal foam windscreen, being certain that it is completely and evenly secured over the adhesive ring at the bottom. Finish by replacing the outside metal grille.

The AT873R's high sensitivity assures useful output under all miking conditions. It is also designed to provide distortion-free output even in very intense sound fields. However, the microphone's high output may overload sensitive electronic input stages. Many pre-amps, mixers and other electronics include a mic pad or input attenuator switch which may be used to prevent overload.

The microphone is furnished with an AT8405 stand clamp which allows the unit to be used on a desk, lectern, pulpit, etc. Also furnished is an AT8122 windscreen which 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 interchangeable elements. As supplied it shall have a hypercardioid polar pattern and a frequency response of 70 Hz to 20,000 Hz. It shall operate from an external 48V DC phantom power source. Output shall be low impedance balanced (100 ohms). Nominal open-circuit output voltage shall be 14.1 mV at 1 kHz, 1 Pascal.

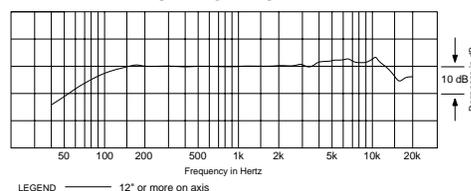
The microphone shall be 6.14" (156.0 mm) long and have a head diameter of 1.48" (37.7 mm). Weight shall be 5.1 oz (145 grams). Finish shall be low-reflectance black.

The Audio-Technica AT873R is specified.

AT873R HANDHELD REMOTE-POWERED HYPERCARDIOID CONDENSER MICROPHONE

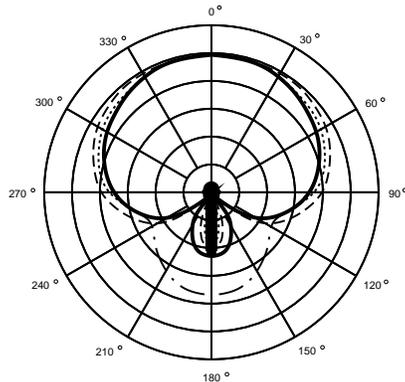


Frequency Response



AT873R

Polar Pattern

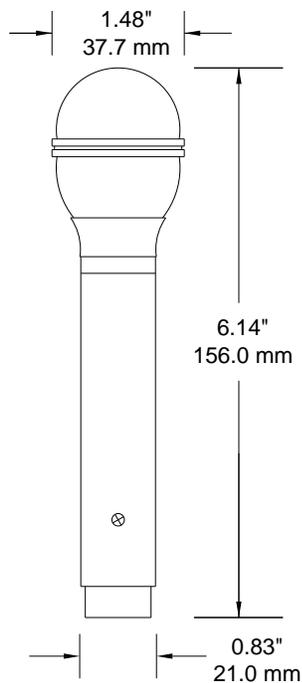


SCALE IS 5 DECIBELS PER DIVISION

LEGEND



Dimensions



AT873R SPECIFICATIONS†

ELEMENT	Fixed-charge back plate, permanently polarized condenser
POLAR PATTERN	Hypercardioid
FREQUENCY RESPONSE	70-20,000 Hz
OPEN CIRCUIT SENSITIVITY	-37 dB (14.1 mV) re 1V at 1 Pa*
IMPEDANCE	100 ohms
MAXIMUM INPUT SOUND LEVEL	140 dB SPL, 1 kHz at 1% T.H.D.
DYNAMIC RANGE (TYPICAL)	113 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO[†]	67 dB, 1 kHz at 1 Pa*
PHANTOM POWER REQUIREMENTS	48V DC, 3.2 mA typical
WEIGHT	5.1 oz (145 grams)
DIMENSIONS	6.14" (156.0 mm) long 1.48" (37.7 mm) head diameter
OUTPUT CONNECTOR	Integral 3-pin XLRM-type
ACCESSORIES FURNISHED	AT8122 foam windscreen; AT8405 stand clamp; soft vinyl protective pouch
OPTIONAL INTERCHANGEABLE ELEMENTS	AT853C-ELE cardioid (120°) 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.

Optional Accessories:

- CP8201 line matching transformer (Lo-Z to 50,000 ohms).
- AT8314 2-conductor, shielded, vinyl-jacketed, broadcast-type cable with XLRf-type connector at microphone end, XLRM-type connector at equipment end. Available in 10', 20', 25', 30', 50' & 100' lengths.
- AT8410a shock mount for boom or stand operation. Universal "clothes-pin" clamp fits tapered and cylindrical microphones.
- AT8415 low-profile shock mount for boom or stand operation.
- CP8506 four-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.



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