

SPECIAL PURPOSE MICROPHONES



AT825 ONEPOINT® X/Y STEREO FIELD RECORDING MICROPHONE

Description

The AT825, an X/Y stereo condenser microphone with full mono compatibility, has been designed for broadcast and professional recording use. It is also well-suited for DAT field applications. Equally appropriate for hand-held or camera-mount use, the AT825 microphone provides full, natural stereo ambience in a compact, lightweight design.

Operators working on hectic ENG assignments will discover the AT825's ability to readily respond to the typical configuration for broadcast audio. This includes true stereo ambience (crowd noise, music, etc.) mixed with narrative talent on a center mono channel. Under a deadline crunch or in single-take situations, sound technicians will also appreciate the AT825's excellent channel separation.

The AT825 is equipped with a pair of wide-range, closely-matched, optimally-positioned miniature condenser cardioid elements. Because the polar response vs. frequency of these elements is so uniform, the AT825 provides the spatial impact and realism of a live sound field, while simultaneously remaining full and uniform when operating in mono (L+R). Consistently natural-sounding response is maintained over an arc of approximately 220°, and the L+R mono polar pattern is virtually free of lobes and comb effects.

The AT825 takes full advantage of Audio-Technica's condenser technology, providing an ultra-low-mass diaphragm for superb transient response. Engineered with a permanently-charged fixed back plate, the element features a diaphragm reduced to a mere 2-micron thickness (about 0.000079"). The results are minimal distortion, and improved frequency and transient response. Frequency response is smooth and peak-free over an extended 30 Hz to 20,000 Hz range.

True to its field-ready billing, the AT825 features a switchable low-roll-off filter, windscreens, and two-way power. An external 5-52V DC phantom power supply, or an internal 1.5V AA/UM3 battery (included), may be used. On battery, current demands are so low that battery life exceeds 1,000 hours in normal intermittent use. The battery is automatically bypassed when

phantom power is present. The supplied 16.5' shielded cable features a five-pin XLRF-type input connector and two standard three-pin XLRM-type output connectors. A snap-in microphone stand adapter is included for mounting to any stand with 3/8"-27 threads. A compact, soft vinyl pouch is provided to hold and protect the microphone and accessories.

Operation and Maintenance

Before attempting operation, if battery operation is desired, install the battery. Unscrew the upper section of the handle of the microphone and slide it down to reveal the battery compartment. Place battery in handle compartment, then reassemble the microphone. Be certain to observe battery polarity as indicated (+ end forward). Replacement AA batteries are readily available. While standard carbon-zinc batteries will operate the microphone satisfactorily, alkaline or mercury batteries are preferred for longer service life. Only "leakproof" batteries should be used.

The two stereo outputs are low impedance balanced. The balanced signals appear across Pins 2 and 3 for the left channel and Pins 4 and 5 for the right channel. The ground (shield) connection for both channels is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pins 2 and 4, in accordance with industry convention.

By locating the AT825 near the sound source, the stereo image width will be enhanced, but the room ambience will be decreased. Conversely, as the mic position recedes from the sound source, a narrower left/right stereo image will be achieved and more of the "room sound" will be noted. After experimenting with placement, operators will soon get the "feel" of where to position the AT825 for the best overall effect.

The high sensitivity of the AT825 assures useful output under most circumstances, and it is designed to provide a distortion-free signal even in very intense sound fields. In some cases, however, an attenuator such as the Audio-Technica AT8202 may be required between each microphone output and its preamplifier to avoid overloading sensitive input stages.

Architects and Engineers Specifications

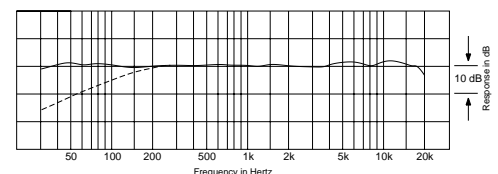
The microphone shall be a fixed-charge condenser with two condenser cardioid elements in an X/Y stereo configuration. The stereo angle shall be 110°. The frequency response shall be 30 Hz to 20,000 Hz, and the microphone shall have a switch for selection of flat or low-roll-off response.

The microphone shall have a nominal open-circuit output voltage of 4.4 mV at 1 kHz, 1 Pascal. It shall have an output impedance of 200 ohms and output shall be balanced. It shall be capable of operating from an external 5V to 52V DC phantom power source or, alternatively, from a 1.5V AA/UM3 battery. The microphone shall accept a 126 dB SPL at 1 kHz while producing no greater than 1% T.H.D.

The microphone shall include a foam windscreen and 16.5' shielded cable with a five-pin XLRF-type stereo connector and two standard three-pin XLRM-type output connectors. The microphone shall be 8.43" (214.0 mm) long and the head shall be 2.44" (62.0 mm) wide. The weight shall be 8.5 oz (240 grams). Finish shall be low-reflectance matte.

The Audio-Technica AT825 is specified.

Frequency Response

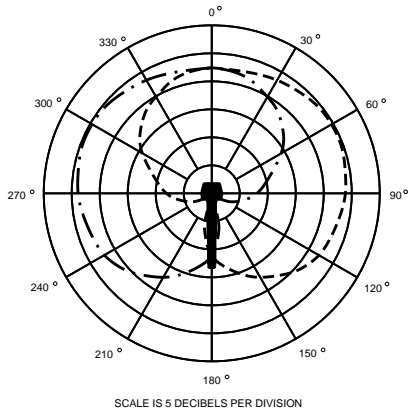


LEGEND ——— 12" or more on axis (flat)
----- Roll-off



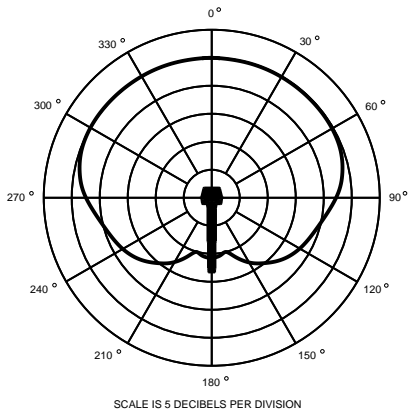
AT825

Stereo Polar Pattern



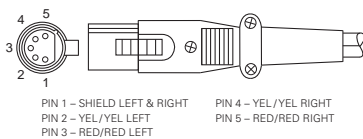
LEGEND
LEFT 1 kHz - - - - -
RIGHT 1 kHz - - - - -

Mono (L + R) Polar Pattern

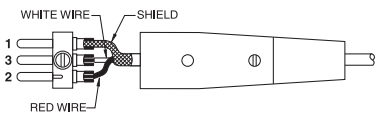


LEGEND
1 kHz ———

Five-pin XLR-type Plug Wiring



**XLRM-type Plug Wiring
Low Impedance Balanced**



AT825 SPECIFICATIONS[†]

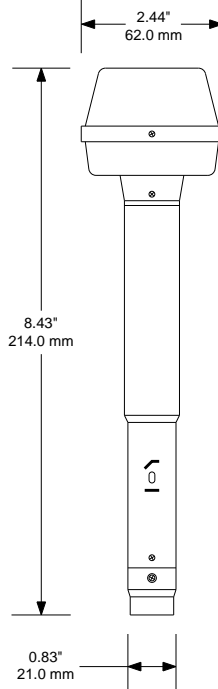
ELEMENTS	Fixed-charge back plate permanently polarized condenser
POLAR PATTERN	X/Y stereo
FREQUENCY RESPONSE	30-20,000 Hz
LOW-FREQUENCY ROLL-OFF	150 Hz, 6 dB/octave
OPEN CIRCUIT SENSITIVITY	-47 dB (4.4 mV) re 1V at 1 Pa*
CHANNEL BALANCE	≤ 2.5 dB
IMPEDANCE	200 ohms balanced
MAXIMUM INPUT SOUND LEVEL	126 dB SPL, 1 kHz at 1% T.H.D.
SIGNAL-TO-NOISE RATIO[‡]	70 dB, 1 kHz at 1 Pa*
DYNAMIC RANGE (TYPICAL)	102 dB, 1 kHz at Max SPL
PHANTOM POWER REQUIREMENTS	5-52V DC, 2 mA typical (each channel)
BATTERY TYPE	Use only "leakproof" AA/UM3 1.5V battery
BATTERY CURRENT	2 mA typical
BATTERY LIFE (INTERMITTENT USE)	More than 1000 hours (alkaline battery)
SWITCH	Flat, roll-off (recessed)
WEIGHT (LESS CABLE AND ACCESSORIES)	8.5 oz (240 grams)
DIMENSIONS	8.43" (214.0 mm) long, 2.44" (62.0 mm) head width, 0.83" (21.0 mm) body diameter
OUTPUT CONNECTOR	Integral 5-pin XLRM-type
CABLE	16.5' (5 m) long, 8 conductors under two shields, vinyl-jacketed, stereo cable with 5-pin XLRF-type connector at microphone end, two 3-pin XLRM-type connectors at output end
ACCESSORIES FURNISHED	AT8405 snap-in stand clamp for 5/8"-27 threaded stands; battery; AT8120 windscreen; soft vinyl protective pouch

[†] 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.

Dimensions



Optional Accessories:

- AT8202 adjustable in-line attenuator for use with balanced Lo-Z microphones.
- AT8407 universal "clothes-pin" stand clamp fits both tapered and cylindrical microphones.
- AT8415 low-profile shock mount for boom or stand operation.
- 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.



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