

30 Series MICROPHONES



AT3528 CARDIOID CONDENSER MICROPHONE

Description

The AT3528 is a wide-range fixed-charge condenser microphone with a cardioid polar pattern. Featuring excellent performance specifications, this versatile microphone is designed to meet the needs of professional musicians in a wide range of applications, from project studio recording to high-quality sound reinforcement. It is also suitable for use in broadcasting and other situations which demand exceptional audio reproduction coupled with enduring reliability.

Audio-Technica design engineers have utilized the newest low-mass technology in the quest for superior performance. The back plate of the AT3528 element holds a fixed charge and has been aged to provide energy stabilization. The surface of the back plate has been precision-milled to ensure maximum charge linearity. The result is a reduction in both frequency response peaks and diaphragm break-up distortion.

The Audio-Technica fixed-charge condenser element design allows significant diaphragm weight reduction. The low-mass diaphragm improves transient response, increases response bandwidth and reduces handling and mechanical noise transfer.

The AT3528 is intended for use in professional applications where remote power is available. It requires 48V phantom power, which may be provided by a mixer or console, or by a separate, in-line source such as the Audio-Technica AT8801 single-channel and CP8506 four-channel phantom power supplies.

The cardioid (unidirectional) polar pattern of the AT3528 is more sensitive to sound originating directly in front of the element than to sounds coming from the sides or rear. Unidirectional microphones are useful in controlling feedback, reducing pickup of

unwanted sounds and providing isolation between performers during recording. They can also be used to allow greater microphone-to-performer distance with equal noise, compared to an omnidirectional microphone.

The AT3528 handles very high sound pressure levels with ease, accepting as high as 147 dB SPL before producing 1% T.H.D. A switchable 10 dB (nominal) pad is built-in, increasing its capabilities to 157 dB SPL.

An integral 80 Hz hi-pass filter provides easy switching from a flat frequency response to a low-end roll-off. The hi-pass position reduces the microphone's sensitivity to popping in close vocal use. It also reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically-coupled vibrations.

The AT3528 is enclosed in a rugged housing with a low-reflectance finish. Output is via a 3-pin professional connector. The included AT8405 snap-in stand adapter permits mounting on any microphone stand with $\frac{5}{16}$ "-27 threads.

Operation and Maintenance

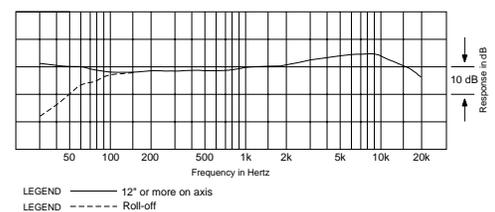
Output is low impedance balanced. The output connector mates with XLR-type cable connectors. The balanced signal appears across Pins 2 and 3 while the ground (shield) connection is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pin 2 in accordance with industry convention.

For balanced low-impedance inputs, AT8314 cable (or equal) is recommended. An accompanying drawing shows the wiring used at the equipment end of this cable. Note that

other manufacturers may employ other color codes for cable conductors. Regardless of color code, it is important that both ends of each cable are wired consistently, with the shield always connected to Pin 1, Pin 2 connected to Pin 2, and Pin 3 to Pin 3. This will ensure that all microphones are electrically in phase and reduce problems of uneven response and sound cancellation when two microphones are used close to each other.

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.

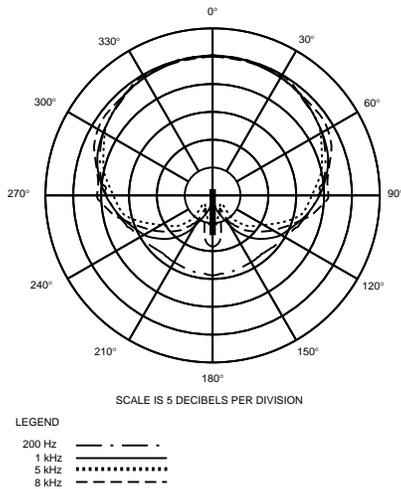
Frequency Response



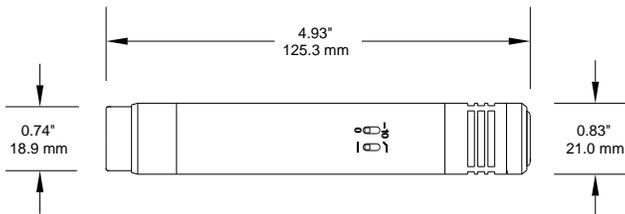
audio-technica®

AT3528

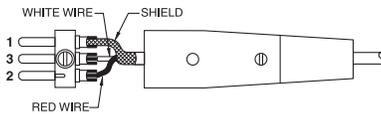
Polar Pattern



Dimensions



XLRM-Type Plug Wiring Low Impedance Balanced



AT3528 SPECIFICATIONS†

ELEMENT	Fixed-charge back plate permanently polarized condenser
POLAR PATTERN	Cardioid
FREQUENCY RESPONSE	30-20,000 Hz
OPEN CIRCUIT SENSITIVITY	-51 dB (2.8 mV) re 1V at 1 Pa*
IMPEDANCE	100 ohms
MAXIMUM INPUT SOUND LEVEL	147 dB SPL, 1 kHz at 1% T.H.D. 157 dB SPL, with 10 dB pad (nominal)
DYNAMIC RANGE (TYPICAL)	123 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO†	70 dB, 1 kHz at 1 Pa*
HI-PASS FILTER (LOW-END ROLL-OFF)	80 Hz, 12 dB/octave
POWER REQUIREMENTS	48V phantom (±4V), 4 mA typical
SWITCHES	Flat response, hi-pass; 10 dB pad (nominal)
WEIGHT (LESS ACCESSORIES)	3.7 oz (105 grams)
DIMENSIONS	4.93" (125.3 mm) long, 0.83" (21.0 mm) maximum body diameter
OUTPUT CONNECTOR	Integral 3-pin XLRM-type
ACCESSORIES FURNISHED	AT8405 snap-in clamp for 5/8"-27 threaded stands; foam windscreen; soft 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.

Optional Accessories:

- AT8314 2-conductor, shielded, vinyl-jacketed, broadcast-type cable with XLR-type connector at microphone end, XLRM-type connector at equipment end. Available in 10', 20', 25', 30', 50' and 100' lengths.
- AT8407 universal "clothes-pin" stand clamp fits both tapered and cylindrical microphones.
- AT8410a shock mount for boom or stand operation. 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.



Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224
Audio-Technica Limited, Old Lane, Leeds LS11 8AG England