

ATND931H & ATND931WH

Hypercardioid Condenser Gooseneck Microphone with Dante™ Network Output

network microphones



Features

- Wall/ceiling plate power module with Dante™ network output permits permanent installation in standard, 2-gang electrical box and direct connection to the network via Ethernet cable
- Uniform hypercardioid polar pattern with 100° acceptance angle
- Low-profile design with low-reflectance finish for minimum visibility
- Superior off-axis rejection for maximum gain before feedback
- Logic input accepts external switch for connection to the Dante™ network
- UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)
- UniSteep® filter provides a steep low-frequency attenuation to minimize pickup of undesired ambient noise
- Easy-to-adjust, rugged, small-diameter gooseneck with virtually no “memory” permits quick positioning into desired shape
- Available interchangeable elements permit angle of acceptance from 90° to 360°
- Ideal for boardrooms, school and government settings, teleconferencing, houses of worship and other installed applications
- Available in two colors: black (ATND931H) and white (ATND931WH)

Description

The ATND931H is a wide-range miniature condenser microphone with a hypercardioid polar pattern. It is designed for quality sound reinforcement. The small-diameter gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. The combination of small size and excellent response makes the microphone ideal for boardrooms, school and government settings, teleconferencing, houses of worship and other installed applications.

The microphone is equipped with UniGuard® RFI-shielding technology, which offers outstanding rejection of radio frequency interference (RFI).

The microphone's hypercardioid polar pattern provides a 100° angle of acceptance. Additional interchangeable elements with omnidirectional (360°), cardioid (120°) and MicroLine® (90°) pickup patterns are available.

The microphone's free end connects to the provided ATND8734 Dante-enabled wall/ceiling plate power module via a special TA3F-type connector designed to optimize RFI immunity. The power module features a removable, circular cover plate that can be painted with commercially available spray paint. The power module includes an RJ-45 output jack for easy connection to the network via CAT5e (or better) cable. Additionally, logic input screw terminals accept an external switch for connection to the Dante™ network.

The power module is equipped with an 80 Hz low-cut UniSteep® filter, three-position input gain level selector (+30 dB, +40 dB and +50 dB), and red/green LED status indicator, which can all be controlled remotely via third-party software.* Default settings for the power module are as follows: low-cut filter off, +40 dB input gain, LEDs off.

The microphone is enclosed in a rugged housing with a low-reflectance black finish and comes equipped with a wall/ceiling plate power module and a two-stage foam windscreen. The microphone is also available with white housing and windscreen as the ATND931WH.

Installation and Operation

A uniform 100° angle of acceptance provides well-balanced audio pickup. The microphone should be located forward of the front-most source, above the rear-most source, and “aimed” between them. Increasing the height of the mic above the sources will tend to equalize sound levels between them, but may also increase background/reverberant sound pickup. When possible, the distance from the mic to the rear-most source should be no more than twice the distance to the front source, to maintain front-to-rear balance.

Width of pickup is approximately 2.5 times the distance to the closest source. If additional mics are needed for wide sources, they should be positioned apart laterally at least 2.5 times the distance to the front source, to avoid phase cancellation (Fig. 1).

The provided two-stage foam windscreen simply snaps over the head of the microphone, effectively reducing noise from wind or ventilation air currents.

The power module allows for remote control of a high-pass filter to provide easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations. Mic gain and LED ring color may also be controlled remotely through the power module.

The power module is equipped with logic input screw terminals which can be used to trigger functions on compatible Dante-enabled devices, such as a video camera's pan/tilt or a rooms lighting preset.

The ATND8734 wall/ceiling plate power module is designed to be mounted in a standard metal U.S. 2-gang electrical box. For safety and best performance, use the electrical box only for the ATND8734; do not include any AC power conductors.

The power module is powered by network PoE.

Connect the TA3F-type connector on the microphone to the TB3M-type connector in the power module plate.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided.

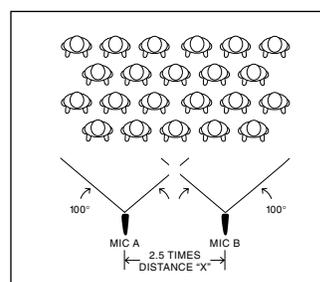


Figure 1

ATND931H & ATND931WH

Architect's and Engineer's Specifications

The microphone shall be a fixed-charge condenser designed for permanent installation. It shall have a hypercardioid polar pattern with a uniform 100° angle of acceptance and a frequency response of 80 Hz to 20,000 Hz. It shall be capable of accepting optional interchangeable elements for additional polar patterns. It shall offer outstanding rejection of radio frequency interference (RFI).

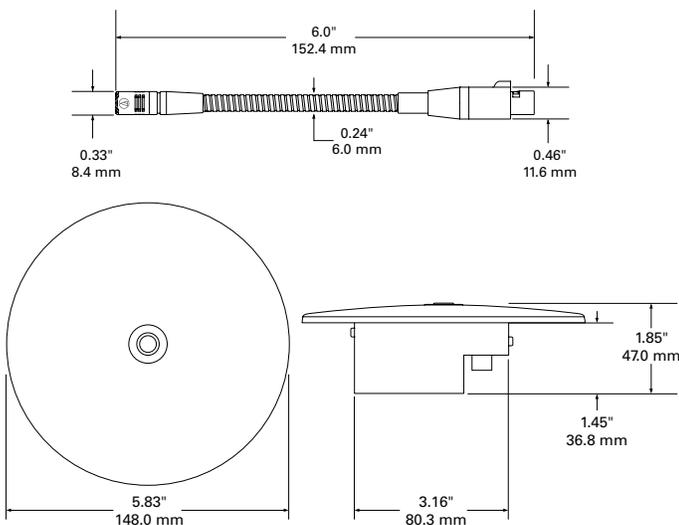
The microphone shall incorporate a special TA3F-type output connector designed to optimize RFI immunity. The output connector shall connect to a TB3M-type jack on the included power module. The output connection on the power module shall be an RJ-45 terminal using standard network protocol. Logic input screw terminals shall be provided to accept commercially available external switches. The power module shall be capable of driving a Dante audio flow. The plate power module shall be designed to mount in a standard 2-gang metal electrical box for ceiling or wall mounting. The power module shall contain an 80 Hz "low cut" switch to tailor the low-frequency response and minimize pickup of unwanted sounds; it shall be selectable remotely via third-party software.* There shall also be three gain levels (+30 dB, +40 dB, and +50 dB), selectable remotely via third-party software. The power module shall include a red/green LED ring, controllable via third-party software, and a removable, circular face plate that can be painted with commercially available spray paint.

A two-stage foam windscreen shall be included with the microphone.

The microphone shall be a small-diameter gooseneck design, with an overall length (with capsule) of 152.4 mm (6.0") and a head diameter of 8.4 mm (0.33"). Weight shall be 39 grams (1.4 oz). The microphone shall be black [white].

The Audio-Technica ATND931H [ATND931WH] is specified.

* For a list of compatible third-party software consult the "About Network Audio" page at Audio-Technica.com.



Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Hypercardioid
Frequency response	80-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Maximum input levels	-15 dBu @ +30 dB gain -25 dBu @ +40 dB gain -35 dBu @ +50 dB gain
Signal-to-noise ratio¹	68 dB, 1 kHz at 1 Pa
Weight	Microphone: 39 g (1.4 oz) Power module: 330 g (11.6 oz)
Dimensions	Microphone: 152.4 mm (6.0") long, 8.4 mm (0.33") head diameter, 11.6 mm (0.46") base diameter Power module: 148.0 mm (5.83") diameter x 47.0 mm (1.85") depth
Output connector	Power module: RJ-45
Cable requirement	Power module: CAT5e or better
Optional interchangeable elements	ESE-O omnidirectional (360°) ESE-C cardioid (120°) ESE-ML MicroLine® (90°)
Audio-Technica case style	M41
Accessories furnished	ATND931H ATND8734 wall/ceiling plate power module with Dante™ network output; AT8109 two-stage foam windscreen ATND931WH ATND8734 wall/ceiling plate power module with Dante™ network output; AT8109(WH) 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.

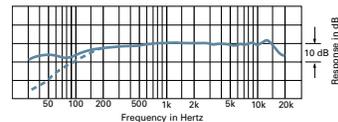
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

¹ Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.



frequency response: 80–20,000 Hz



LEGEND — 12° or more on axis
--- Roll-off

polar pattern



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