

ES935H6

Hypercardioid Condenser Gooseneck Microphone



engineered sound® microphones



Features

- **Unobtrusive design with an overall length of only 197.3 mm (7.77")**
- **Plugs into any standard XLR-type connector, or direct mounts to 5/8"-27 stands using included thread-mount adapter**
- **Low-profile element provides uniform hypercardioid polar pattern with 100° acceptance angle**
- **Superior off-axis rejection for maximum gain before feedback**
- **UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)**
- **Easy-to-adjust, rugged, small-diameter gooseneck with virtually no "memory" permits quick positioning into desired shape**
- **UniSteep® filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality**
- **Available interchangeable elements permit angle of acceptance from 90° to 360°**
- **Included low-profile isolation mount attenuates noise, shock and vibration**

Description

The ES935H6 is a wide-range miniature condenser microphone with a hypercardioid 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 ES935H6 stands 197.3 mm (7.77") from the table or podium.

The microphone requires 11V to 52V phantom power for operation.

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.

An XLRM-type connector insert at the base allows the microphone to be plugged directly into an XLR-type panel jack or microphone cable.

A recessed switch permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass UniSteep® filter) to help control undesired ambient noise.

The microphone comes equipped with a two-stage foam windscreen, a low-profile isolation mount, and a stand clamp to permit attaching the microphone to a standard 5/8"-27 or 3/8"-16 threaded mic stand or

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

Installation and Operation

The ES935H6 requires 11V to 52V phantom power for operation.

Output is low impedance (Lo-Z) balanced. The signal appears across Pins 2 and 3; Pin 1 is ground (shield). Output phase is "Pin 2 hot" — positive acoustic pressure produces positive voltage at Pin 2.

The microphone can be mounted on a podium or desktop with the included AT8474 low-profile isolation mount. Designed to be mounted either above or beneath the mounting surface, the AT8474 firmly secures the microphone while providing maximum attenuation of noise, shock and vibration transmitted through the mounting surface. An AT8473 stand clamp is also included to permit attaching the microphone to a standard 5/8"-27 or 3/8"-16 threaded mic stand or mounting flange.

The provided two-stage foam windscreen simply slips over the element, effectively reducing wind noise and popping.

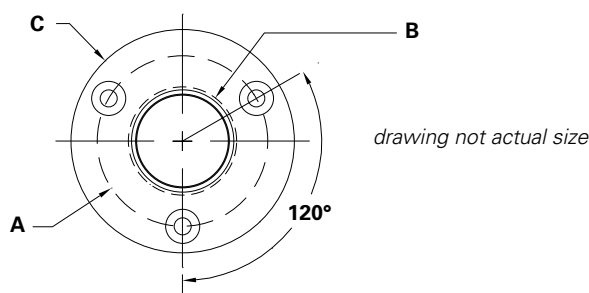
An integral 80 Hz high-pass UniSteep® filter provides easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the microphone's sensitivity to popping in close vocal use. It also reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations. To engage the UniSteep® filter, use the end tip of a paperclip or other small pointed instrument to slide the switch toward the "bent" line.

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.

AT8474 Isolation Mount Installation Instructions

Mounting Dimensions

- A. 1.5 mm (1/16") pilot holes 3 places on 40.0 mm (1.57") circle.
- B. 25.4 mm (1.00") hole through the mounting surface.
- C. Outside edge of mount, 52.4 mm (2.06") diameter.



1. The AT8474 mount can be mounted either above or below the table surface.
2. Locate the center of the mounting location and mark it. **Allow enough clearance to accommodate the AT8474 mount on the desired surface and make certain there are no physical obstructions below the desired location.**
3. Locate the three mounting screw holes and mark them.
4. Using a 1" hole saw, drill the through-hole for the microphone body. (Note: Although a 1" drill bit will work, a hole saw provides for a cleaner hole and is less likely to damage the table surface.)
5. Using a 1.5 mm (1/16") drill bit, drill three pilot holes for the mounting screws. (If mounting below the table surface, be certain **NOT** to drill pilot holes through the table.)

6. Place the AT8474 mount over the hole and partially tighten the three screws. Then place the microphone in the AT8474 so that the microphone's power module (base) extends through the AT8474 mount into the hole. Tighten all three screws evenly. For maximum security, the screws should be tight enough to ensure that the microphone is held securely in place and cannot be removed without loosening the screws.
7. If mounting the AT8474 mount below the surface of the table, slide the rubber trim ring over the microphone (above the table surface) and seat it between the microphone and the sides of the hole for a finished appearance. (If mounting the AT8474 above the surface of the table, you may also choose to use the trim ring beneath the surface of the table, for added attenuation of noise, shock and vibration.)
8. After installing the microphone, assure maximum shock mount effectiveness by providing some slack in the connecting cable. The cable can be secured to the table with a standard wire clip or cable tie (not included).

Architect's and Engineer's Specifications

The microphone shall be a fixed-charge condenser designed for permanent installation or portable applications. 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. The microphone shall operate from an external 11V to 52V DC phantom power source. It shall be capable of handling sound input levels up to 138 dB with a dynamic range of 109 dB. Nominal open-circuit output voltage shall be 10.0 mV at 1 V, 1 Pascal. Output shall be low impedance balanced (250 ohms). It shall offer outstanding rejection of radio frequency interference (RFI).

The microphone shall incorporate a self-contained power module with an XLRM-type connector at the base for direct connection to a mating XLRM-type panel jack or cable connector. It shall include a recessed switch to permit choice of flat response or low-frequency roll-off.

A universal isolation-type shock mount suitable for above or below surface installation shall be supplied for mounting the microphone in a solid surface. It shall be possible to firmly secure the microphone in the mount. The mount shall include appropriate hardware for installation. For alternative mounting and portable applications, the microphone shall be supplied with a stand clamp to permit attaching the microphone directly to a standard 5/8"-27 or 3/8"-16 thread. A two-stage foam windscreen shall also be included.

The microphone shall be a small-diameter gooseneck design, with an overall length of 197.3 mm (7.77") and a head diameter of 8.4 mm (0.33"). Weight shall be 104 grams (3.7 oz). Finish shall be low-reflectance black.

The Audio-Technica ES935H6 is specified.

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
Open circuit sensitivity	-40 dB (10.0 mV) re 1V at 1 Pa
Impedance	250 ohms
Maximum input sound level	138 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	109 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	65 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 4 mA typical
Switch	Flat, roll-off
Weight	104 g (3.7 oz)
Dimensions	197.3 mm (7.77") long, 8.4 mm (0.33") head diameter, 18.9 mm (0.74") base diameter
Output connector	Integral 3-pin XLRM-type
Optional interchangeable elements	ESE-O omnidirectional (360°) ESE-C cardioid (120°) ESE-ML MicroLine® (90°)
Audio-Technica case style	M26
Accessories furnished	AT8474 universal isolation mount; AT8473 quick-mount stand adapter; 5/8"-27 to 3/8"-16 threaded adapter; AT8109 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.

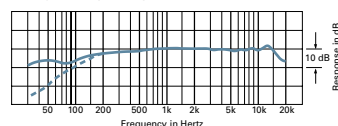
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

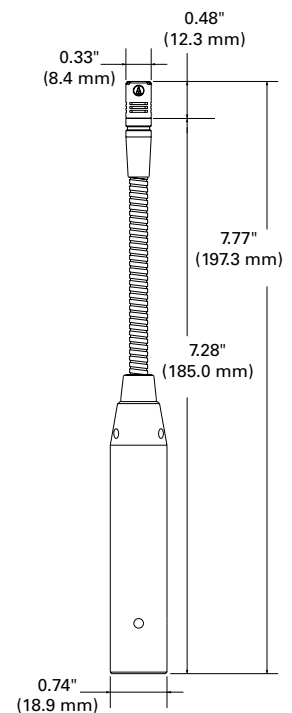
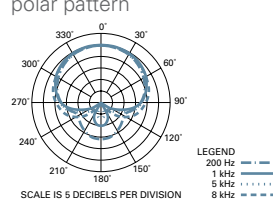
Specifications are subject to change without notice.



frequency response: 80–20,000 Hz



polar pattern



 **audio-technica**

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