



Features

- Offers the convenience of battery or phantom power operation
- Direct mounts to any 5/8"-27 stand, or to included threaded mounting flange
- UniLine® polar pattern provides narrow 90° 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, alternating 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°

Description

The U857AU is a wide-range condenser microphone with a UniLine® (line cardioid) polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications.

The small-diameter double gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. The U857AU stands 427.0 mm (16.81") from the table or podium.

The microphone requires 11V to 52V phantom power or a 1.5V AA battery for operation. A battery need not be in place for phantom power operation.

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

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

The microphone includes a 3 m (9.8') permanently attached miniature cable. Its free end connects to the provided AT8531 power module via a special TA3F-type connector designed to optimize RFI immunity. The output of the power module is a 3-pin XLRM-type connector.

A 3-position switch in the power module permits choice of off, on/flat response, or on/low-roll-off (via integral 80 Hz high-pass UniSteep® filter). The roll-off position reduces the pickup of low-frequency ambient noise.

The microphone comes equipped with a power module, a mounting flange, a cable pass-through adapter, a two-stage foam windscreen and a battery. The microphone is enclosed in a rugged housing with a low-reflectance black finish.

Installation and Operation

The U857AU requires 11V to 52V phantom power or a 1.5V AA battery for operation. A battery need not be in place for phantom power operation.

To install the battery, remove the cap from the top of the power module. Insert a fresh 1.5V AA battery ("+" end toward the cap release button), then reassemble the power module. For longest battery life, the switch should remain off except when the microphone is in use. Alkaline batteries are recommended for longest life. Remove the battery during long-term storage.

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 provided two-stage foam windscreen simply slips over the head of the microphone, effectively reducing wind noise or popping.

A 3-position switch in the power module permits choice of off, on/flat response, or on/low-roll-off (via integral 80 Hz high-pass UniSteep® filter). 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, slide the switch toward the "bent" line. To turn the microphone on without engaging the UniSteep® filter, slide the switch toward the flat line.

Cable exit is from the bottom of the microphone. The included pass-through adapter, designed for use with desk stands and microphone stands, provides a side-exit for the cable.

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.

Note: Audio-Technica has developed a special RFI-shielding mechanism, which is an integral part of the connectors in the UniPoint® line. If you remove or replace the connector, you may adversely affect the unit's RFI immunity. Audio-Technica offers a crimp tool (ATCT) and RFI shields that enable you to shorten the cable and correctly reinstall the connector while maintaining the highest level of RFI immunity.

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 UniLine® (line cardioid) polar pattern with a uniform 90° angle of acceptance and a frequency response of 30 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 or, alternatively, from a 1.5V AA/UM3 battery. It shall be capable of handling sound input levels up to 130 dB (phantom) or 120 dB (battery) with a dynamic range of 110 dB (phantom) or 100 dB (battery). Nominal open-circuit output voltage shall be 12.5 mV (phantom) or 11.2 mV (battery) at 1 V, 1 Pascal. Output shall be low impedance balanced (200 ohms – phantom, 270 ohms – battery). It shall offer outstanding rejection of radio frequency interference (RFI).

The microphone shall have a 3 m (9.8') permanently attached miniature cable terminating in a special TA3F-type output connector designed to optimize RFI immunity. The output connector shall connect to a TB3M-

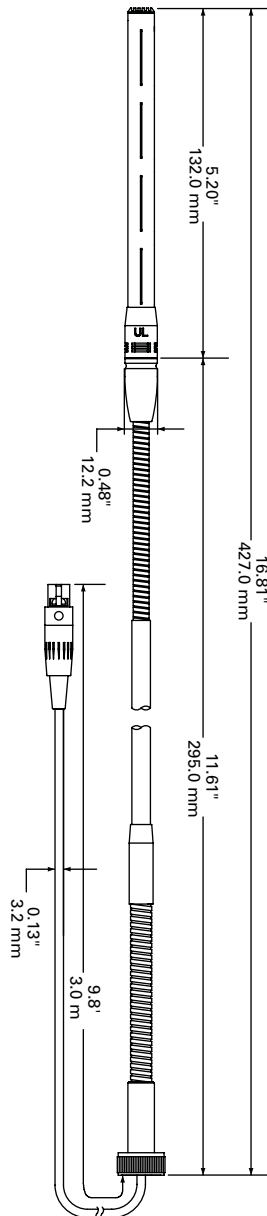
U857AU

type jack on the included power module. The power module shall house the battery, and shall contain a switch that permits choice of off, on/flat response, or on/low-roll-off (80 Hz). The output of the power module shall be a 3-pin XLRM-type connector.

A 5/8"-27 threaded flange shall be provided for permanent installation to a mounting surface. An included pass-through adapter shall provide a side-exit for the cable. A two-stage foam windscreen shall also be included.

The microphone shall be a small-diameter alternating gooseneck design, with an overall length of 427.0 mm (16.81") and a head diameter of 12.2 mm (0.48"). Weight shall be 131 grams (4.9 oz). Finish shall be low-reflectance black.

The Audio-Technica U857AU is specified.



Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	UniLine® (line cardioid)
Frequency response	30-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Open circuit sensitivity	Phantom: -38 dB (12.5 mV) re 1V at 1 Pa Battery: -39 dB (11.2 mV) re 1V at 1 Pa
Impedance	Phantom: 200 ohms Battery: 270 ohms
Maximum input sound level	Phantom: 130 dB SPL, 1 kHz at 1% T.H.D. Battery: 120 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	Phantom: 110 dB, 1 kHz at Max SPL Battery: 100 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	74 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 2 mA typical
Battery type	1.5V AA/UM3
Battery current / life	0.4 mA / 1200 hours typical (alkaline)
Switch	Off, on-flat, on-roll-off
Weight	Microphone: 141 g (5.0 oz) Power module: 139 g (4.9 oz)
Dimensions	Microphone: 427.0 mm (16.81") long, 12.2 mm (0.48") head diameter Power module: 84.0 mm (3.31") H x 63.0 mm (2.48") W x 22.0 mm (0.87") D
Output connector	Power module: Integral 3-pin XLRM-type
Cable	3.0 m (9.8') long (permanently attached to microphone), 3.2 mm (0.13") diameter, 2-conductor shielded cable with TA3F-type connector
Optional interchangeable elements	UE-O omnidirectional (360°) UE-C cardioid (120°) UE-H hypercardioid (100°)
Audio-Technica case style	M33
Accessories furnished	AT8531 power module; AT8663 A-mount flange; AT8664 A-mount cable pass-through adapter; AT8154 two-stage foam windscreen; battery

In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

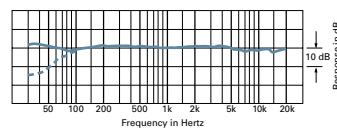
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

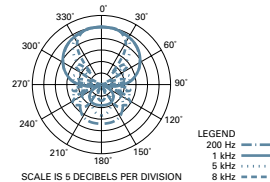
Specifications are subject to change without notice.



frequency response: 30-20,000 Hz



polar pattern



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