

U857R & U857RL

Cardioid Condenser Adapter-Mount Gooseneck Microphones



Features

- **Direct mounts to any 5/8"-27 stand, or to included threaded mounting flange**
- **Low-profile element provides uniform cardioid polar pattern with 120° 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 U857R is a wide-range condenser microphone with a 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 U857R stands 305.0 mm (12.01") from the table or podium; it is also available in a 421.0 mm (16.58") version as U857RL. The two models are identical in all other respects.

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

The microphone includes a 3 m (9.8') permanently attached miniature cable. Its free end connects to the provided AT8538 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 recessed switch in the power module 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 power module, a mounting

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

Installation and Operation

The U857R 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 provided two-stage foam windscreen simply slips over the head of the microphone, effectively reducing wind noise or 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.

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 cardioid polar pattern with a uniform 120° 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. It shall be capable of handling sound input levels up to 139 dB with a dynamic range of 115 dB. Nominal open-circuit output voltage shall be 11.2 mV at 1V, 1 Pascal. Output shall be low impedance balanced (250 ohms). 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-type jack on the included power module. The power module shall contain a recessed switch to permit choice of flat response or 80 Hz low-frequency roll-off. The output of the power module shall be a 3-pin XLRM-type connector.

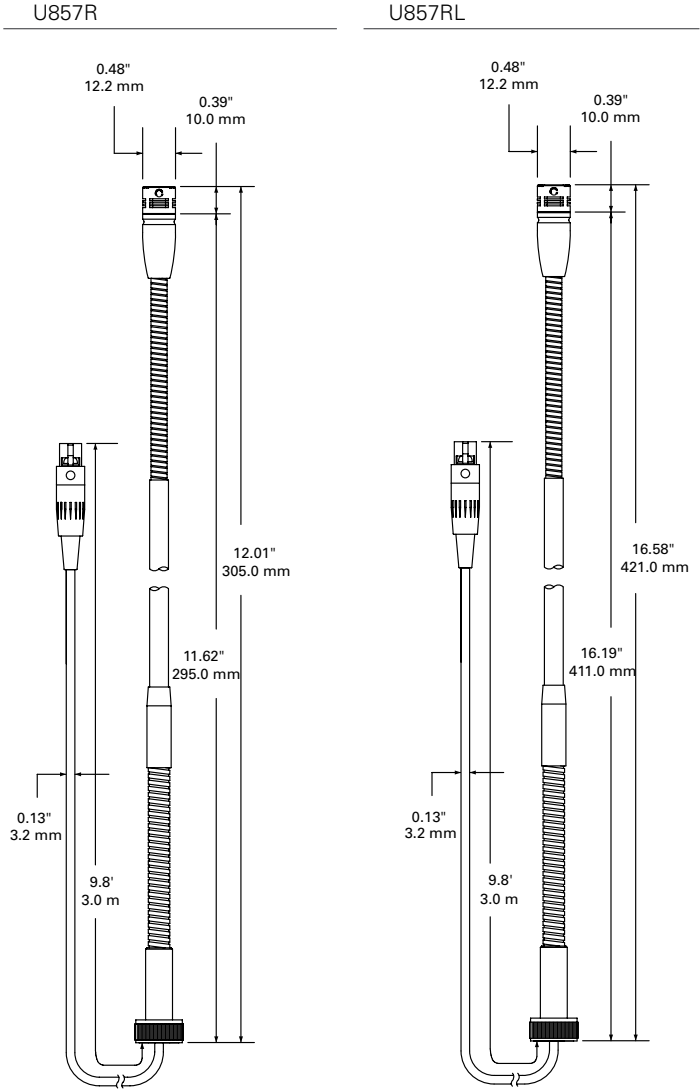
A 5/8"-27 threaded flange shall be provided for permanent installation to a mounting surface. An included pass-through adapter shall provide a side-exit for the cable. A two-stage foam windscreen shall also be included.

The microphone shall be a small-diameter alternating gooseneck design, with an overall length of 305.0 mm (12.01") [421.0 mm (16.58")] and a head diameter of 12.2 mm (0.48"). Weight shall be 124 grams (4.4 oz)

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[131 grams (4.6 oz)]. Finish shall be low-reflectance black.

The Audio-Technica U857R [U857RL] is specified.



Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	30-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Open circuit sensitivity	-39 dB (11.2 mV) re 1V at 1 Pa
Impedance	250 ohms
Maximum input sound level	139 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	115 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	70 dB, 1 kHz at 1 Pa
Phantom power requirements	11-52V DC, 2 mA typical
Switch	Flat, roll-off
Weight	U857R Microphone: 124 g (4.4 oz) U857RL Microphone: 131 g (4.6 oz) Power module: 81 g (2.9 oz)
Dimensions	U857R Microphone: 305.0 mm (12.01") long, 12.2 mm (0.48") head diameter U857RL Microphone: 421.0 mm (16.58") long, 12.2 mm (0.48") head diameter Power module: 92.9 mm (3.66") long, 18.9 mm (0.74") diameter
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-H hypercardioid (100°) UE-UL UniLine® (90°)
Audio-Technica case style	M2
Accessories furnished	AT8538 power module; AT8663 A-mount flange; AT8664 A-mount cable pass-through adapter; AT8153 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.

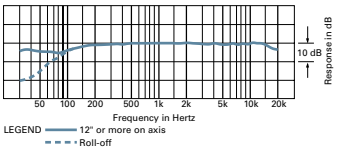
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

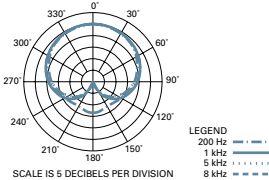
Specifications are subject to change without notice.



frequency response: 30-20,000 Hz



polar pattern



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