PRO 70

audio-technica

Cardioid Condenser Lavalier Microphone

pro series

Features

- **Clip-on lavalier mic provides articulate, full-sounding voice pickup**
- **Also excels as an instrument mic, especially for pickup of acoustic guitar with included AT8444 instrument adapter**
- **Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source**
- **Offers the convenience of battery or phantom power operation**
- **Rugged design and construction for reliable performance**
- **Switchable 80 Hz high-pass filter minimizes pickup of undesired low-frequency sounds**

Description

The PRO 70 is a miniature clip-on/lavalier condenser microphone with a cardioid polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications.

The microphone is intended to be worn on the clothing or used as an instrument mic for excellent yet unobtrusive sound pickup. The wide-range capability of the microphone ensures clean, accurate reproduction with high intelligibility for speakers and presenters as well as for instrument pickup. Its small size makes it ideal for use in applications where minimum visibility is required.

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's cardioid polar pattern provides a 120° angle of acceptance.

The microphone includes a 1.8 m (6') permanently attached miniature cable. Its free end connects to the provided AT8531 power module via a TA3F-type connector. 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 filter). The roll-off position reduces the pickup of low-frequency ambient noise.

The microphone comes equipped with a power module, a clothing clip, an instrument adapter, a windscreen, a battery and a soft protective pouch.

Operation and Maintenance

The PRO 70 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.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

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 filter). The roll-off position reduces the microphones 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 filter, slide the switch toward the "bent" line. To turn the microphone on without engaging the filter, slide the switch toward the flat line.

For use as a lavalier, attach the microphone about six inches below the chin. Anticipate movements that may cause the microphone to rub against or be covered by clothing, and position the microphone to avoid it.

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.

Architect's and Engineer's Specifications

The microphone shall be a fixed charge condenser. It shall have a cardioid polar pattern and a frequency response of 100 Hz to 14,000 Hz. 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 123 dB (phantom and battery) with a dynamic range of 96 dB (phantom and battery). Nominal open-circuit output voltage shall be 5.6 mV (phantom) and (battery) at 1 V, 1 Pascal. Output shall be low impedance balanced (200 ohms—phantom and battery).

The microphone shall have a 1.8 m (6') permanently attached miniature cable connected to the 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.

The microphone shall be 25.0 mm (0.98") long and have a diameter of 10.2 mm (0.40"). Weight shall be 8 grams (0.3 oz). The microphone shall include a power module, a clothing clip, a windscreen, a battery, an instrument adapter and a protective carrying case. Finish shall be low-reflectance black.

The Audio-Technica PRO 70 is specified.

Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	100-14,000 Hz
Low frequency roll-off	80 Hz, 12 dB/octave
Open circuit sensitivity	Phantom: –45 dB (5.6 mV) re 1V at 1 Pa Battery: –45 dB (5.6 mV) re 1V at 1 Pa
Impedance	Phantom: 200 ohms Battery: 200 ohms
Maximum input sound level	Phantom: 123 dB SPL, 1 kHz at 1% T.H.D. Battery: 123 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	Phantom: 96 dB, 1 kHz at Max SPL Battery: 96 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	67 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: 0.3 oz (8 g) Power module: 4.7 oz (134 g)
Dimensions	Microphone: 25.0 mm (0.98") long, 10.2 mm (0.40") diameter Power module: 83.0 mm (3.27") 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	Integral 6' (1.8 m), permanently attached between microphone and power module
Audio-Technica case style	M1
Accessories furnished	AT8411 clothing clip; AT8444 instrument adapter; power module; windscreen; battery; soft protective pouch

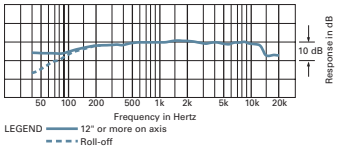
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

1 Pascal = 10 dynes/cm^2 = 10 microbars = 94 dB SPL

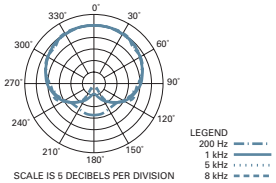
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 100–14,000 Hz



polar pattern



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