

PRO 45 & PRO 45W

Cardioid Condenser Hanging Microphones

propoint® microphones



Features

- **Wide-range condenser element with low-mass diaphragm for superior performance**
- **Cardioid polar pattern with 120° acceptance angle**
- **Self-contained electronics eliminate need for external power modules**
- **Flat, smooth frequency response**
- **Steel hanger positions microphone over choirs, instrumental groups and theater stages**
- **Available in two colors: black (PRO 45) and white (PRO 45W)**

Description

The PRO 45 is a wide-range miniature condenser microphone with a cardioid polar pattern. It is ideal for suspension over choirs, instrumental groups or theater stages.

The microphone requires 9V to 52V phantom power for operation.

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

The microphone includes a 7.6 m (25') permanently attached miniature cable with an XLRM-type connector, which allows it to be plugged directly into an XLRF-type jack or cable connector.

The microphone comes equipped with a vinyl-coated steel hanger for positioning over a choir/orchestra/stage. A foam windscreen is also included.

The microphone is enclosed in a rugged housing with a low-reflectance black finish. It is also available with white housing, cable, hanger and windscreen as the PRO 45W.

Installation and Operation

The PRO 45 requires 9V to 52V phantom power for operation.

A uniform 120° 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 (Fig. 1). 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 pickup should be no more than twice the distance to the front source, to maintain front-to-rear balance (Fig. 1).

Width of pickup is approximately three times the distance to the closest performer. If additional mics are needed for wide sources, they should

not be closer together laterally than three times the distance to the front source, to avoid phase cancellation (Fig. 2).

To orient the microphone in the proper direction, twist the microphone housing slightly in its wire holder (clockwise rotation moves the microphone to the right; counterclockwise rotation moves it to the left).

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 windscreen simply slips over the head of the microphone, effectively reducing noise from wind or ventilation air currents.

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

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 70 Hz to 16,000 Hz. The microphone shall operate from an external 9V to 52V DC phantom power source. It shall be capable of handling sound input levels up to 134 dB with a dynamic range of 106 dB. Nominal open-circuit output voltage shall be 14.1 mV at 1V, 1 Pascal. Output shall be low impedance balanced (100 ohms).

The microphone shall incorporate self-contained electronics, eliminating the need for an external power module. The microphone shall have a 7.6 m (25') permanently attached miniature cable with a 3-pin XLRM-type connector for direct connection to a mating XLRF-type jack or cable connector.

An adjustable steel wire hanger shall be provided for suspended installations. The steel wire hanger shall attach to the microphone body and allow for the positioning of the microphone without the need for tools. A foam windscreen shall also be included.

The microphone shall be a hanging design, with an overall length of 56.9 mm (2.24") and a head diameter of 12.0 mm (0.47"). Weight shall be 15 grams (0.5 oz) without cable. The microphone, cable and steel hanger shall be black [white].

The Audio-Technica PRO 45 [PRO 45W] is specified.

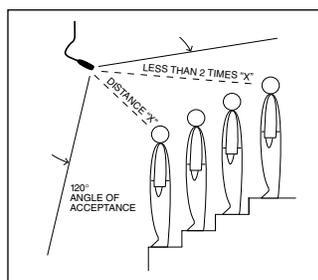


Figure 1

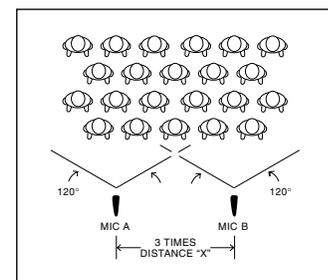


Figure 2

PRO 45 & PRO 45W

Specifications

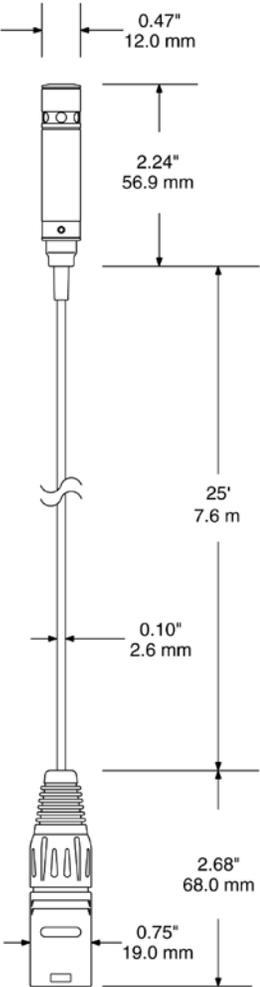
Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	70-16,000 Hz
Open circuit sensitivity	-37 dB (14.1 mV) re 1V at 1 Pa
Impedance	100 ohms
Maximum input sound level	134 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	106 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	66 dB, 1 kHz at 1 Pa
Phantom power requirements	9-52V DC, 2 mA typical
Weight	15 g (0.5 oz)
Dimensions	56.9 mm (2.24") long, 12.0 mm (0.47") head diameter
Output connector	3-pin XLRM-type on cable
Cable	7.6 m (25') long, permanently attached
Audio-Technica case style	M21
Accessories furnished	
PRO 45	AT8146 windscreen; AT8451 steel hanger
PRO 45W	AT8146(WH) windscreen; AT8451(WH) steel hanger

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

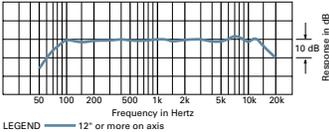
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

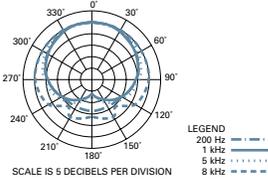
Specifications are subject to change without notice.



frequency response: 70-16,000 Hz



polar pattern



Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224
 Audio-Technica Limited, Old Lane, Leeds LS11 8AG England
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