



PRO 42 Cardioid Condenser Miniature Boundary Microphone

The PRO42 is a wide-range miniature condenser microphone with a hemi-cardioid (half-space cardioid) polar pattern. It was designed for surface-mounted applications in high-quality sound reinforcement and other demanding sound pickup situations. Its small size makes the PRO42 ideal for use in applications where minimum visibility is required. The PRO42 features a 25' (7.6 m) 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 unit's integral electronics can be powered from any external 9V to 52VDC phantom power source.

With the fixed-charge "back plate" construction, a gold-vaporized diaphragm just 2 microns thick (about 0.000079") can be used. This reduces moving mass substantially, improving frequency response and transient response while reducing distortion. Positioning a properly designed miniature unidirectional microphone centrally on a large, flat, unobstructed surface yields several distinct advantages. Directionality is increased by 3 dB, promoting enhanced gain before feedback and further suppression of ambient noise. Sensitivity is increased for improved signal-to-noise ratio. Phase distortion due to reflected sound energy from the boundary itself is eliminated.

The microphone element is enclosed in a rugged case and protected by heavy perforated steel. The rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone. The low-profile housing has a low-reflectance black finish.

BENEFITS

- Very low-profile design for minimum visibility
- Wide-range condenser element with low-mass diaphragm for superior performance
- Self-contained electronics eliminate need for external power modules
- Rugged design and construction
- 25' (7.6 m) cable permanently attached between microphone and XLRM-type connector

Design Information

POLAR PATTERN	Cardioid
FREQUENCY RESPONSE	70-14,000 Hz
IMPEDANCE	100 ohms
POWER	9-52V DC, 2 mA typical
WEIGHT	1.2 oz (35 grams)
DIMENSIONS	1.44" (36.6 mm) max width, 2.14" (54.3 mm) max length, 0.61" (15.5 mm) height

Architects' and Engineers' Specifications

The boundary microphone shall be a wide-range condenser type with cardioid (unidirectional) polar pattern. The microphone shall include a permanently-attached miniature cable, and operate on any external 9V to 52V DC phantom power source. The microphone element shall be enclosed in a rugged housing with low-reflectance black finish. The miniature boundary microphone shall be Tech Works PRO 42.

Tech Works™



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A Division of: **United Communication Technology, Inc.**
22347 La Palma Ave., Suite #107, Yorba Linda, CA 92887
Direct Line: **714-694-1040** Fax: **714-694-1041** Toll Free: **1-800-813-1080**
Web site **www.tech4people.com**