



PRO-42

Cardioid Condenser Miniature Boundary Microphone

The PRO-42 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 PRO-42 ideal for use in applications where minimum visibility is required. The PRO-42 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 for minimum visibility
- Wide range condenser element with low mass
- Self-contained electronics eliminate need for external power modules
- Rugged design and construction
- 25 (7.6m) cable permanently attached between microphone and XLRM type connector

Design Information

Power	9-52V DC
Color	Black
Dimensions	1.44" W x 2.14" L x 0.61" H
Frequency Response	70 - 14K Hz
Sensitivity	-60dB
Pattern	Cardioid
Impedance	100 Ohms

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



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