

# 1 Inch Free-Field Microphone

## Model 2570

Larson  
Davis



### Typical Applications

- Precision sound level measurements
- Environmental noise monitoring
- Industrial hygiene noise studies
- Machinery noise control
- Research and development



### Features

- Rugged
- Accurate
- Wide frequency range
- Flat frequency response
- Stable over temperature and humidity
- Meets IEC 61094-4 Type WS1F
- Externally Polarized
- Supplied with individual calibration data

The Larson Davis Model 2570 is a free-field, 1 inch microphone. It exhibits good temperature stability, an important parameter for microphones.

The Model 2570 is the appropriate microphone for use with precision sound level meters intended to meet the specifications of IEC 60651 Type 1 and ANSI S1.4-1983 Type 1.

# Technical Specifications

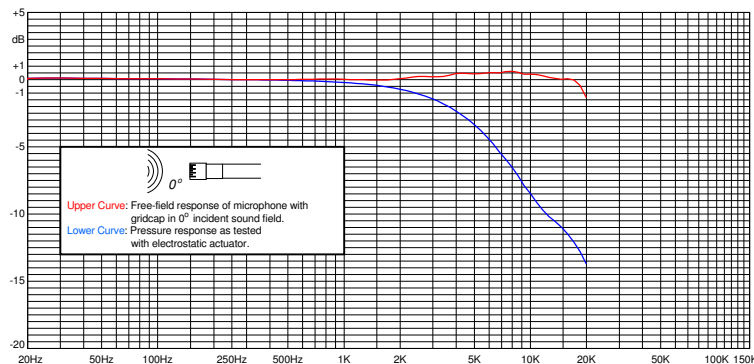
Model 2570		
Nominal Diameter	1 inch	
Open Circuit Frequency Response ( $\pm 2$ dB)	2.6 Hz to 20 kHz	
Open Circuit Sensitivity (250 Hz)	48 mV/Pa (-26.4 $\pm$ 1.5 dB re: 1V/Pa)	
Lower Limiting Frequency (-3 dB)	1 Hz to 2 Hz (rear vented)	
Cartridge Thermal Noise	10 dB(A)	
Distortion Limit (3%)	>146 dB re: 20 $\mu$ Pa at 100 Hz	
Diaphragm Resonance Frequency	11 kHz (90° phase-shift)	
Polarization Voltage	200 V	
Polarized Cartridge Capacitance (250 Hz)	48 pF	
Mean Temperature Coefficient	+0.01 dB/°C (-10 °C to +50 °C)	
Equivalent Air Volume	130 mm <sup>3</sup>	
Expected Long-Term Stability	>1000 years/dB at 20 °C (68 °F)	
Influence of Vibration	68 dB re: 20 $\mu$ Pa when excited with 1 m/s <sup>2</sup> axial vibration	
Influence of Magnetic Field	0 dB re: 20 $\mu$ Pa in 60 Hz, 80 A/m field	
Influence of Humidity	<0.1 dB, 0% to 95% RH, non-condensing	
Influence of Static Pressure	- 0.0136 dB/kPa	
Diameter	With Grid	23.77 mm (0.936 in)
	Without Grid	23.77 mm (0.936 in)
Height	With Grid	19 mm (0.748 in)
	Without Grid	17 mm (0.668 in)
Thread for preamplifier mounting	23.11 mm-60 UNS (0.9098-60 UNS)	

Unless otherwise specified, all data are valid at 23 °C, 101.3 kPa and 50% RH

## Accessories and Related Products

ADP008	1 inch to 1/2 inch preamp adaptor	PRM902	1/2 inch microphone preamplifier with LEMO connector
PRM828	1/2 inch microphone preamplifier with Switchcraft connector for use with Larson Davis 812/820 and DSP80	CAL250	Class 1 acoustic calibrator: 114 dB @ 250 Hz
PRM900C	1/2 inch microphone preamplifier with Switchcraft connector		

## Typical Frequency Response from Calibration Certificate



**Larson Davis, Inc.** – Acoustic Test Products Group  
 1681 West 820 North, Provo, UT 84601-1341 USA  
 Toll Free: 888-258-3222 Phone: 801-375-0177 Fax: 801-375-0182  
 Email: info@LarsonDavis.com www.LarsonDavis.com

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**Larson Davis** provides a complete line of acoustic measurement tools including dosimeters, sound level meters, real time analyzers, preamplifiers, calibrators, and microphones.