

# 1/4 Inch Free-Field Microphone

## Model 2520

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 WS3F
- Externally Polarized
- Supplied with individual calibration data

The Larson Davis Model 2520 is a free-field, 1/4 inch microphone designed for high level and high frequency measurements. It exhibits good temperature stability.

The Model 2520 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

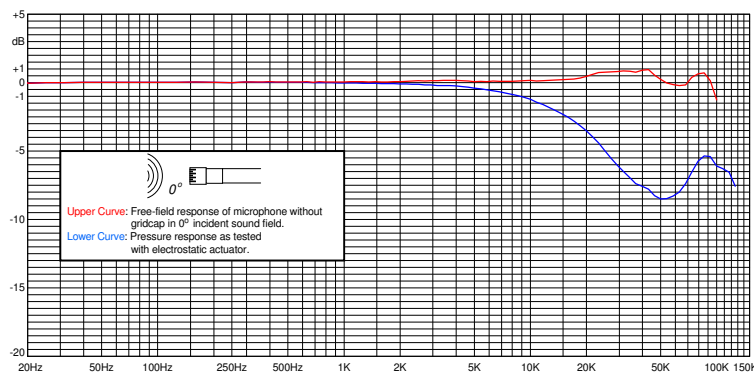
Model 2520		
Nominal Diameter	1/4 inch	
Open Circuit Frequency Response ( $\pm 2$ dB)	4 Hz to 80 kHz	
Open Circuit Sensitivity (250 Hz)	4 mV/Pa (-48 $\pm$ 2.4 dB re: 1V/Pa)	
Lower Limiting Frequency (-3 dB)	0.5 Hz to 3 Hz (rear vented)	
Cartridge Thermal Noise	30 dB(A)	
Distortion Limit (3%)	>164 dB re: 20 $\mu$ Pa at 100 Hz	
Diaphragm Resonance Frequency	90 kHz (90° phase-shift)	
Polarization Voltage	200 V	
Polarized Cartridge Capacitance (250 Hz)	6.8 pF	
Mean Temperature Coefficient	+0.01 dB/°C (-10 °C to +50 °C)	
Equivalent Air Volume	0.6 mm <sup>3</sup>	
Expected Long-Term Stability	>1000 years/dB at 20 °C (68 °F)	
Influence of Vibration	60 dB re: 20 $\mu$ Pa when excited with 1 m/s <sup>2</sup> axial vibration	
Influence of Magnetic Field	8 dB re: 20 $\mu$ Pa in 60 Hz, 80 A/m field	
Influence of Humidity	<0.1 dB, 0% to 90% RH, non-condensing	
Influence of Static Pressure	- 0.0073 dB/kPa	
Diameter	With Grid	7 mm (0.276 in)
	Without Grid	6.35 mm (0.250 in)
Height	With Grid	10.3 mm (0.406 in)
	Without Grid	9.2 mm (0.361 in)
Thread for preamplifier mounting	5.7 mm-60 UNS (0.2244-60 UNS)	

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

## Accessories and Related Products

<b>ADP043</b>	1/4 inch mic to 1/2 inch preamp adaptor	<b>CAL200</b>	Class 1 acoustic calibrator: 94/114 dB @ 1 kHz
<b>PRM828</b>	1/2 inch microphone preamplifier with Switchcraft connector for use with Larson Davis 812/820 and DSP80	<b>ADP024</b>	1/4 inch mic adaptor for CAL200
<b>PRM902</b>	1/2 inch microphone preamplifier with LEMO connector	<b>CAL250</b>	Class 1 acoustic calibrator: 114 dB @ 250 Hz
<b>PRM910B</b>	1/4 inch microphone preamplifier with Switchcraft connector	<b>ADP021</b>	1/4 inch mic adaptor for CAL250

## Typical Frequency Response from Calibration Certificate



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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.