



Sound intensity is a vector that indicates the strength and direction of sound energy flow. IEPE-SIP-8450 is a dual-microphone sound intensity probe designed in accordance with IEC 61043. It includes two 1/2" prepolarized measurement condenser microphones in a face-to-face configuration, along with their preamplifiers featuring IEPE interfaces, all precisely phase-matched. The microphones are separated by a fixed distance, determined by one of the three solid spacers provided: 8.5mm, 12mm and 50mm, covering the full frequency range from 50Hz to 6.3kHz. When used with a sound intensity analyzer, such as VT IEPE-2G05A with a license of Multi-Instrument Full Package, it can measure sound intensity and sound pressure simultaneously.

## Specifications

<b>Overall</b>	
Compliance	IEC 61043: 1993 Class 2
Frequency Range (1/3 Octave)	8.5mm, 250Hz ~ 6.3kHz
	12mm, 250Hz ~ 5kHz
	50mm, 31.5Hz ~ 1.25kHz
Dynamic Range	24dB*~135dB (*This lower limit can be extended below the microphone's thermal noise using the cross-correlation averaging algorithm offered in Multi-Instrument)
Output Connector	Lemo to Dual BNC
Extension Cable Length	3m (default)
Calibration Certificate	Individual Microphone Sensitivity Included
<b>Microphone Pair</b>	
Transducer Type	1/2", Free-field, Pre-polarized
Polarization Voltage	0 V
Sensitivity	-28.0dB ± 2dB (40mV/Pa ± 25%)
Sensitivity Difference	≤ 1dB
Free Field Frequency Response	10Hz ~12.5kHz ± 1dB
Frequency Response Difference	< 0.5dB
Phase Difference	< 0.2°, 50Hz ~ 630Hz < [f(Hz)/3000]°, 630Hz ~ 6.3kHz
Capacitance	About 15pF
Capacitance Difference	< 1pF
Thermal Noise	< 20 dBA
Max. SPL	140 dB
<b>Preamplifier Pair</b>	
Frequency Response	20Hz~20kHz, ±0.2dB
Input Attenuation	0.2 dB
Input Impedance	> 2 GΩ
Input Capacitance	< 1 pF (Ch.A, U-shaped ) < 0.5 pF (Ch.B)
Power Supply	4~20 mA (IEPE)
Noise Floor	< 4 μV (A weighted) < 15 μV (Z weighted)
Phase Difference	< 0.02°, 50Hz ~ 250Hz < [f(Hz)/12000]°, 250Hz~10kHz



# Sound Intensity Probe

Model: IEPE-SIP-8450

