

MODEL 130A24

1/2" WATER AND DUST RESISTANT FREE-FIELD MICROPHONE

- Water and dust resistant
- Dynamic range: 30 dB(A) - 143 dB

TYPICAL APPLICATIONS

- Brake and tire noise testing
- Acoustic camera and holography
- Beamforming
- Noise source identification
- Non-contact defect detection

STANDARDS COMPLIANCE

- IP55 Rated
- Calibration reference microphone traceable to NIST, PTB or DFM National Labs
- PCB calibration service in compliance with ISO 10012-1, ANSI/NCSL Z540.3



USE OF MODEL 130A24

Model 130A24 is a 1/2 in (12 mm) prepolarized microphone and preamplifier system with a replaceable water and dust resistant cover. This acoustically transparent lid provides an unobtrusive alternative to windscreens and a more consistent response than rubber protective covers. The 130A24 has a wide dynamic range and is an excellent choice for large channel array microphone applications, outdoor measurements, high humidity applications, or harsh industrial settings where dust or oil splash is a concern.

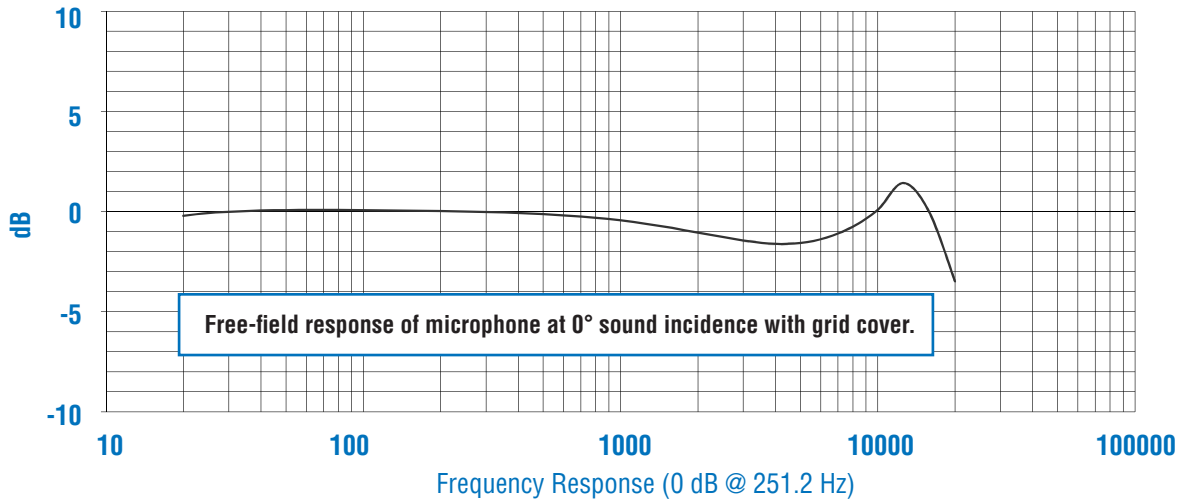
Acoustic pressure waves may be altered by objects in the sound field including the microphone itself. The 130A24 corrects for its own presence, providing more accurate measurements within a free-field. Although the 130A24 is optimized for free-field, it can be used for pressure and diffuse field applications with manual corrections.

POLARIZATION VOLTAGE – ICP® (0V) PREPOLARIZED

PCB® is the inventor of ICP® sensor power technology. All manufacturers of IEC 61094-4 compliant prepolarized (0V) microphones use the technology that PCB developed. Prepolarized microphones operate on 2-20 mA constant current supply and use coaxial cables resulting in significant per channel cost savings over the PCB 200V models. Other ICP® compatible sensors such as accelerometers, force, strain, and pressure sensors use the same power supplies and cables as prepolarized microphones, further reducing set-up time and initial investment costs.

PCB® QUALITY COMMITMENT

PCB is uniquely equipped with a state of the art, CNC machining facility, allowing control over quality, pricing, and delivery. Investments in clean rooms, anechoic, and environmental test chambers, combined with our rigorous testing and aging process, ensures our products will survive in demanding environmental conditions. PCB has the industry's best 5-year warranty with a "Total Customer Satisfaction" policy.



130A24 PREPOLARIZED FREE-FIELD ARRAY MICROPHONE		
Nominal Microphone Diameter	in (mm)	1/2 (12)
Sensitivity at 250 Hz (± 3 dB)	mV/Pa (dB re 1 V/Pa)	10 mV/Pa
Frequency range (± 3 dB)	Hz	20 – 16,000
Phase Match 100 Hz to 3 kHz	Degrees	± 3
Phase Match 3 kHz to 5 kHz	Degrees	± 5
Distortion Limit (3% distortion)	dB	143
Distortion Limit (Max before clipping)	dB	150
Cartridge Thermal Noise	dB(A)	30
Pressure Equalization Vent	Venting Type	Front Vented
Environmental Specifications		
Operating Temperature Range	°F (°C)	+14 to 122 (-10 to 50)
Water Resistant	-	Yes
Dust Resistant	-	Yes
Electrical Specifications		
Polarization Voltage	V	0
Constant Current Excitation	mA	2 - 20
Physical Specifications		
Size (Diameter x Length with Grid)	in (mm)	0.52 x 2.75 (13.2 x 69.9)
Mating Cable Connectors	Coaxial	BNC Jack

* all specifications typical unless otherwise noted

OPTIONAL ACCESSORIES

- **079A06** – windscreen for 1/2" microphones
- **079A11** – 1/2" microphone holder
- **079A15** – tripod microphone stand with boom arm
- **079B16** – miniature microphone stand
- **079A18** – clamp on flexible extension arm
- **079B23** – microphone holder with swivel mount
- **079A44** – extension arm for flexible clamp
- **079A46** – 5-pack of replaceable water resistant pads
- **CAL200** – hand-held calibrator
- **ACS-21** – microphone system calibration