



# 1/2" Water & Dust Resistant Prepolarized Array Microphone and Preamplifier

Model 130A24 is a free-field prepolarized array microphone and preamplifier system recommended for harsh applications and environments



## Use of model 130A24 Free-field microphones

Model 130A24 is a 1/2" (12mm) prepolarized microphone and preamplifier system with a replaceable water and dust resistant cover. This acoustically transparent cover provides an unobtrusive alternative to windscreens and a more consistent response than rubber protective covers. The 130A24 has a wide dynamic range from 30 dBA (inherent noise level) to 150 dB. This array microphone is equipped with a rugged stainless steel grid cap similar to our high end condenser microphones. The 130A24 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 can be altered by objects in the sound field including the microphone used to measure it. To correct for this, free-field microphones are designed to compensate for their own presence in the sound field. This provides accurate measurements within a free-field. Although the 130A24 is optimized for flat response in a free-field, it also provides excellent response in many pressure and diffuse field microphone applications

## ICP® (0V Polarization)

PCB® is the inventor of ICP® sensor power technology. Model 130A24 operates on this same ICP® sensor power or 2-20 mA constant current supply. Prepolarized microphones use standard coaxial cables and are ICP® compliant, allowing power supplies to be shared with other ICP® compliant products such as accelerometers, pressure sensors, etc. This interchangeability can result in a significant per-channel cost savings as well as reduce test set-up time.

## PCB® Quality Commitment

PCB Piezotronics acoustic products are used by some of the world's largest automotive, aerospace & defense, electronic, and consumer goods manufacturers. PCB® uses only the highest quality material and components for its microphones. While other manufacturers outsource their manufacturing, PCB® has invested heavily in on-going employee training as well as in a state of the art, in-house CNC machining facility. This allows us to control factors that affect quality and delivery. PCB® has also invested in a clean room, anechoic room, and environmental test chambers to test and provide quality products. Our rigorous environmental testing and aging process ensures that our products will survive in demanding temperature or humidity conditions.

Model 130A24 microphone system is backed by a best in class 5-year warranty and our "Total Customer Satisfaction" (TCS) policy. Application support is available through our 24-Hour SensorLine<sup>SM</sup> at 716-684-0001.

## Applications

- Brake noise testing
- Tire noise analysis
- Acoustic holography
- Beamforming
- Noise source identification
- General audible range testing
- Non-contact defect detection
- Acoustic tests where oil splash, high humidity or dust is a concern

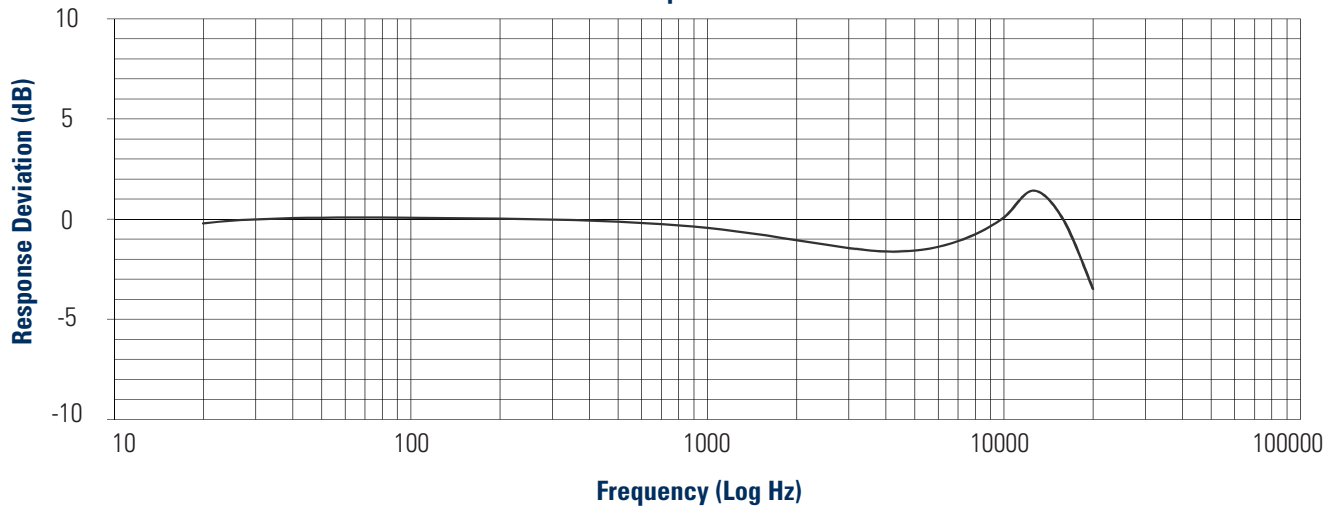
## Highlights

- Water and dust resistant
- Max Amplitude: 143 dB (150 dB Clip)
- Cartridge Noise: 30 dBA
- Frequency: 20 Hz - 16 kHz
- Sensitivity: 10 mV/Pa
- Temperature: -10 to +50 °C
- Polarization: Prepolarized (0V)



# 1/2" Free-Field Prepolarized Microphone and Preamplifier

### Response Plot



Specifications - 1/2" Free-Field Array Microphone Model 130A24	
<b>Acoustic</b>	
Nominal Microphone Diameter	1/2" (12mm)
Polarization Voltage	0V (prepolarized)
Open Circuit Sensitivity (at 250 Hz)	10 mV/Pa
Frequency range (+/- 2 dB)	20 to 16,000 Hz
Phase Match 100 Hz to 3 kHz	+/- 3 degrees
Phase Match 3 kHz to 5 kHz	+/- 5 degrees
Distortion Limit (3% distortion)	143 dB
Distortion Limit (Max before clipping)	150 dB
Cartridge Thermal Noise	30dB(A)
Pressure Equalization Vent	Front Vented
<b>Environmental</b>	
Operating Temperature Range	+14 to 122 °F (-10 to 50 °C)
Water Resistant	Yes
Dust Resistant	Yes
<b>Physical</b>	
Size (Diameter x Height (with grid))	0.52" x 2.75"(13.2 x 69.9 mm)
Mating Cable Connectors	BNC Jack

### TEDS microphone and preamplifier combinations:

- TEDS 1451.4 preprogrammed

### Optional accessories:

- 079A06 – Windscreen for 1/2" microphones
- 079A11 – 1/2" microphone holder
- 079A15 – Tripod microphone stand with boom arm
- 079A16 – Miniature microphone stand
- 079A18 – Clamp on flexible extension arm
- 079B21 – 1/2" nose cone for wind tunnel testing
- 079B23 – Microphone holder with swivel mount
- 079A44 – Extension arm for flexible clamp
- 100-15124-40 – Replaceable water resistant pads
- CAL200 – Handheld calibrator
- CAL250 – Handheld calibrator
- ACS-21 – Microphone and preamplifier system calibration



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24-hour SensorLine<sup>SM</sup> 716-684-0001

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AS9100 CERTIFIED ■ ISO 9001 CERTIFIED

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Hochwertige Messtechnik und Beratung aus einer Hand



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