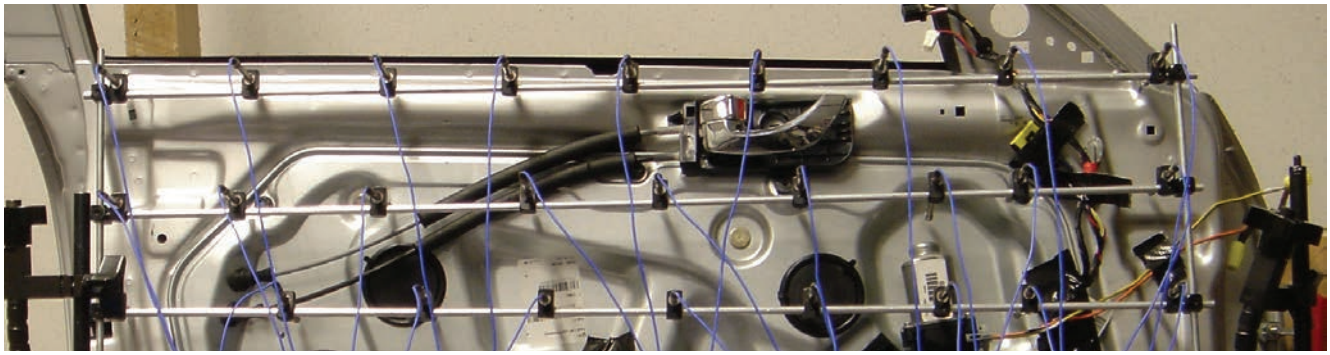
PCB PIEZOTRONICS
AN AMPHENOL COMPANY



SERIES 130

PREPOLARIZED ICP® ARRAY MICROPHONES

- Low per channel cost
- Powered by ICP® sensor signal conditioners
- Integrated preamplifier
- TEDS IEEE 1451.4 enabled
- Rugged water & dust resistant model available

TYPICAL APPLICATIONS

- Holography & Beamforming
- Sound Pressure Mapping
- Multichannel Measurements
- Noise Source Identification
- Non-contact Defect Detection
- Audible Range Testing
- Brake and Tire Noise

USE OF SERIES 130

Prepolarized ICP® array microphones are a cost-effective alternative to the precision microphones and are suitable for measuring sound within the normal range of the human hearing capability. PCB's 130 series of array microphones are single piece units that include a built-in preamplifier and have excellent phase specifications. Using multiple microphones and spacing them in a predetermined pattern coordinated with the proper software, special transformation of a complex sound field is projected to effectively map the acoustic energy flow. End users can now pinpoint the noise source, and determine the speed and direction of sound. Array microphones are an excellent choice for noise identification, near-field acoustic holography, sound pressure mapping, acoustic camera, beamforming, and other large channel count applications.

PCB® ARRAY MICROPHONES

PCB has a large assortment of array microphones allowing the end user to tailor the sensor to the specific application. From the value oriented 130F series that connects via a BNC, 10-32 or SMB connector, to the premier 130A23 that bridges the gap between the cost effective array style electret microphones and the more expensive test and measurement grade condenser style microphones, you are sure to find a model that fits your test requirement and budget. Should your application require special microphones that will be utilized in challenging environments, PCB has additional models. Model 130B40 is designed to minimize the effects of wind, and is low profile measuring 1/8" (3mm) high for tests in space confined areas. The water and dust resistant model 130A24 rounds out the line and is designed to keep contamination off the diaphragm, making it perfect for brake and tire noise, machinery monitoring, pass-by noise, and general outdoor testing.

Model 130F22
(SMB Socket)

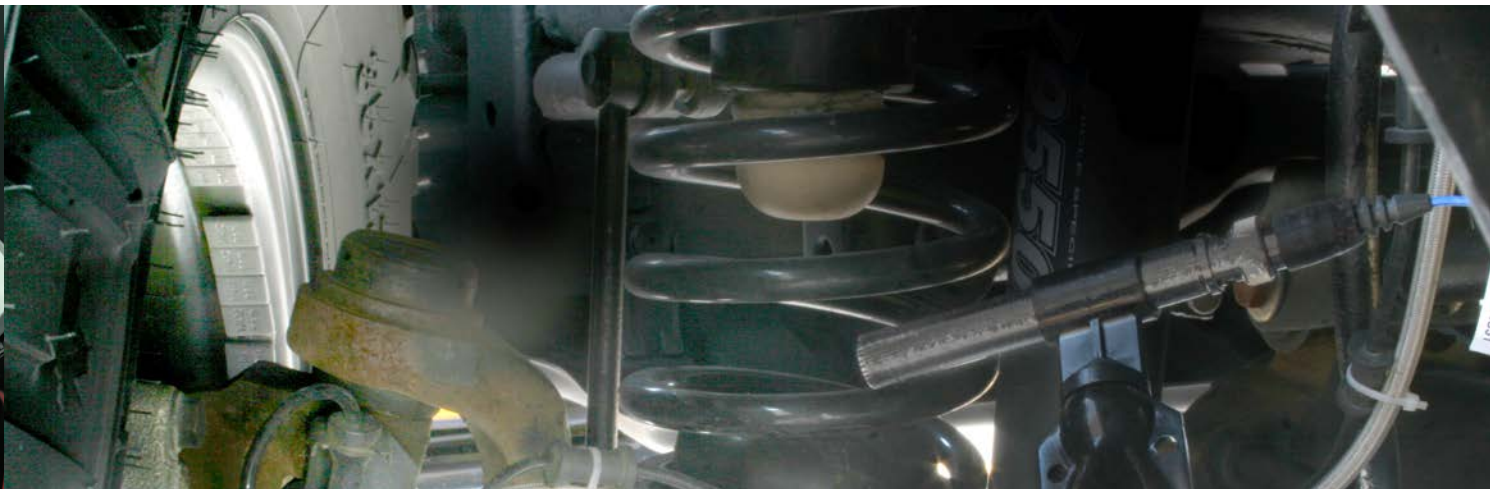
Model 130A23
Higher Amplitude & Wider Frquency
(SMB Socket)

Model 130B40
Low Profile
Surface Microphone Pad

Model 130F20
(BNC Jack)

Model 130F21
(10-32 Jack)

Model 130A24
Water & Dust Resistant
(BNC Jack)



STANDARDS COMPLIANCE

- Calibration of reference equipment is traceable to one or more of the following National Labs: NIST, PTB or DFM
- Calibration is performed in compliance with ISO 10012-1 and ANSI/NCSL Z540.3
- Frequency response determined by IEC 61094-5

TEDS COMPLIANCE

Transducer Electronic Data Sheets (TEDS) enhance the identification of each microphone. This is very helpful in large channel count applications. All series 130 microphones are CE marked and contain IEEE 1451.4 TEDS memory circuitry.

CE TEDS CIRCUITRY COMPATIBLE

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.

PREPOLARIZED ARRAY MICROPHONES WITH INTEGRAL PREAMPLIFIER						
Model Number	**(New) 130A24**	**130A23**	**130F20**	**130F21**	**130F22**	**130B40**
Microphone Diameter	1/2 in	1/4 in	1/4 in [4]	1/4 in	1/4 in	1/4 in
Response	Free-field	Free-field	Free-field	Free-field	Free-field	Pressure
Sensitivity (± 3 dB at 250 Hz)	10 mV/Pa	14 mV/Pa	45 mV/Pa	45 mV/Pa	45 mV/Pa	8.5 mV/Pa
Frequency response (± 2 dB)	20 Hz to 16 kHz [2]	20 Hz to 20 kHz	10 Hz to 20 kHz [1]	10 Hz to 20 kHz [1]	10 Hz to 20 kHz [1]	20 Hz to 10 kHz [2] [5]
Dynamic Range	< 30 dBA to >143 dB [3]	< 30 dBA to >143 dB [3]	24 dBA to >122 dB	24 dBA to >122 dB	24 dBA to >122 dB	<32 dBA to >142 dB [3]
Polarized Voltage	0 V	0 V	0 V	0 V	0 V	0 V
Temperature Range (°F)	+14 to +122 °F	+14 to +122 °F	+14 to +122 °F	+14 to +122 °F	+14 to +122 °F	-40 to +176 °F
Temperature Range (°C)	-10 to +50 °C	-10 to +50 °C	-10 to +50 °C	-10 to +50 °C	-10 to +50 °C	-40 to +80 °C
Connector	BNC Jack	SMB Socket	BNC Jack	10-32 Jack	SMB Socket	10-32 Jack
Features	Rugged water and dust resistant	High frequency and high amplitudes	General purpose	General purpose	Quick release connector	Low profile and surface mount to minimize wind

Notes: [1] ± 4 dB. [2] 20 Hz to 10 kHz ± 3 dB. [3] 150 dB max without clipping. [4] 1/2" preamplifier diameter. [5] 20 to 20 kHz ± 6 dB.

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.

CAL200

ADP024

079A31

Calibration Accessories

CAL200 – Acoustic Calibrator

ADP024 – CAL200 to 1/4" Microphone Adaptor

079A31 – 8-Channel Coupler for the CAL250 Calibrator

079A06

079A07

079A53

Environmental Protection

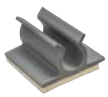
079A06 – 3-1/2" Windscreen for 1/2" Microphone

079A07 – 3-1/2" Windscreen for 1/4" Microphone

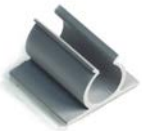
079A53 – 3/4" Windscreen for 1/4" Microphone

379A02

079A11



079A12



079A13

079B10

079B32

Holders

079A02 – Array Microphone Stand

079A11 – Holder for 1/2" Microphone

079A12 – Clip Holder for 1/4" Microphone

079A13 – Clip Holder for 1/2" Microphone

079B10 – Holder for 1/4" Microphone

079B32 – Clip Holder for 1/4" Microphone

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