

MODEL 426A14

# PHANTOM POWERED PREAMPLIFIER

- Quickly change between any 1/2" and 1/4" 0V, IEC 61094-4 compliant microphones
- 15.5 dB(A) noise floor, 100 kHz capability
- Fast rise times for superior impulse responses and transients
- 1% THD at 156 dB SPL

## TYPICAL APPLICATIONS

- Loudspeaker design (rub and buzz)
- Accurate modeling
- High definition recording

## STANDARDS COMPLIANCE

- Microphone capsules 377B02 and 377C01 are IEC 61094-4 WS2F compliant, and designed to be used in an IEC 61672 Class 1 compliant
- Calibration with reference microphone traceable to NIST, PTB or DFM National Labs accredited to ISO 17025, ANSI-Z540.3 by A2LA or ILAC and are RoHS, CE compliant



## USE OF MODEL 426A14

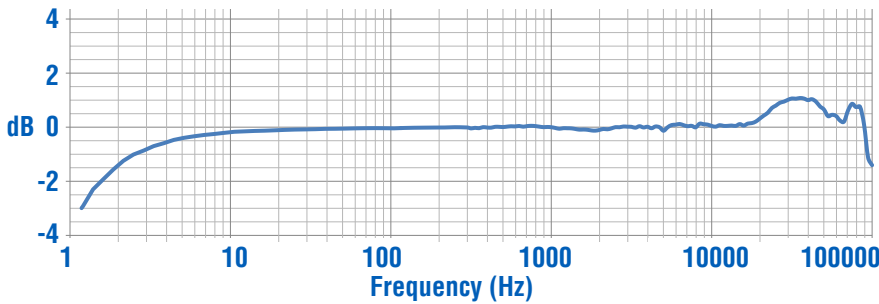
PCB Piezotronics Inc., a global leader for test and measurement sensors since 1967 and inventor of ICP® technology, has brought its precision microphone portfolio to the professional audio market. PCB's unique convertible design allows the 426A14 to mate with any 1/2 in or 1/4 in prepolarized IEC 61094-4 compliant microphone capsule. This flexibility allows users to tailor the capsule for the application while leveraging the investment in a single universal 48V preamplifier.

Model 426A14 includes a preamplifier (powered by 48V, 24V, or 12V phantom power), 1/2 in microphone adapter, 1/4 in microphone adapter, and holder. All of PCB's prepolarized microphone capsules are compatible with the 426A14 preamplifier. If low noise is required, use a 377B02 1/2 in high sensitivity capsule with a 15.5 dBA noise floor rating. For high frequency or amplitude, use a 1/4 in microphone to reach 100 kHz and 164 dB.

Every capsule is designed to the rigorous standards required by test and measurement research engineers and has a flat response across a wide frequency range. This provides the truest representation of natural sound and accurate results for the modeling of other microphones, speakers, or musical instruments. Unlike plastic diaphragms used in some phantom powered microphones, PCB® uses a proprietary metal alloy which remains stable during temperature, humidity, and atmospheric pressure changes, for accurate responses.

# 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.



## OPTIONAL ACCESSORIES

- **079A49** – microphone holder
- **079A06** – 1/2" microphone windscreen
- **079A07** – 1/4" microphone windscreen
- **079C20** – 1/4" microphone nose cone
- **079B21** – 1/2" microphone nose cone
- **CAL200** – handheld calibrator
- **CAL250** – handheld calibrator

SPECIFICATIONS - MOST COMMON PHANTOM POWERED MICROPHONE AND PREAMPLIFIER SYSTEMS				
System	376A31	376A32	376A33	379A33
Microphone	377C01	377B02	377A06	Stereo Paired
Preamplifier	426A14	426A14	426A14	
Microphone Diameter	¼ in (6 mm)	½ in (12 mm)	½ in (12 mm)	½ in (12 mm)
Sensitivity at 250 Hz	2 mV/Pa (± 3 dB)	50 mV/Pa (± 1.5 dB)	12.6 mV/Pa (± 2 dB)	12.6 mV/Pa (± 1.5 dB)
Frequency Range ± 2 dB	5 – 80,000 Hz	3.75 – 20,000 Hz	3.15 – 31,500 Hz	3.15 – 31,500 Hz
Frequency Range ± 3 dB	4 – 100,000 Hz	N/A	3.15 – 40,000 Hz	3.15 – 40,000 Hz
Harmonic Distortion Limit: 3% (1% Rating)	165 (156) dB re 20 µPa	137 (136) dB re 20 µPa	150 (150) dB re 20 µPa	150 (150) dB re 20 µPa
Inherent Noise	40 dB[A] re 20 µPa	15.5 dB[A] re 20 µPa	22 dB[A] re 20 µPa	22 dB[A] re 20 µPa
<b>Environmental Specifications</b>				
Operating Temperature Range	-40 to +65 °C (-40 to +150 °F)	-40 to +65 °C (-40 to +150 °F)	-40 to +65 °C (-40 to +150 °F)	-40 to +65 °C (-40 to +150 °F)
Temperature Coefficient of Sensitivity	+0.006 (dB/°C)	+0.009 (dB/°C)	+0.006 (dB/°C)	+0.006 (dB/°C)
Static Pressure Coefficient (dB/kPa)	-0.009 (dB/kPa)	-0.013 (dB/kPa)	-0.007 (dB/kPa)	-0.007 (dB/kPa)
Humidity Coefficient of Sensitivity (0 - 100% non-condensing)	±0.001 dB/%RH	±0.001 dB/%RH	±0.002 dB/%RH	±0.002 dB/%RH
<b>Electrical Specifications</b>				
Polarization Voltage	0 V	0 V	0 V	0 V
Supply Voltage	48V, 24V, or 12V	48V, 24V, or 12V	48V, 24V, or 12V	48V, 24V, or 12V
Maximum Output Voltage	± 10 volts when using 48 volts, ± 6 volts when using 24 volts, ± 3 volts when using 12 volts			
<b>Physical Specifications</b>				
Size (Diameter x Length, with Grid)	0.79 x 6.85 in (20 x 174 mm)	0.79 x 7 in (20 x 178 mm)	0.79 x 6.85 in (20 x 174 mm)	0.79 x 6.85 in (20 x 174 mm)
Diaphragm Material	metal alloy proprietary diaphragm			
Connector	XLR 3 Pin	XLR 3 Pin	XLR 3 Pin	XLR 3 Pin
All specifications typical and are based on the 48V phantom power unless otherwise stated. Stereo pair has enhanced relative phase characteristics and frequency 5 to 20,000 Hz (±1 dB).				



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