Model 426A14 48V Preamplifier

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                          | Microphone                      | Preampifier                    | System                          |
|                                 | 376A31                          | 376A32                         | 376A33                          | 379A33                          |
|                                 | 377C01                          | 377B02                         | 377A06                          | Stereo Paired                   |
| Mic. Diameter                   | 1/4 in (6 mm)                   | 1/2 in (12 mm)                 | 1/2 in (12 mm)                  | 1/2 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         |

Environmental Specifications

- Operating Temperature Range: -40 to +65 °C (-40 to +150 °F)
- Temperature Coefficient of Sensitivity: +0.006 (dB/°C)
- Static Pressure Coefficient (dB/kPa): -0.009 (dB/kPa)
- Humidity Coefficient of Sensitivity (0 - 100% non-condensing): ±0.001 dB/%RH
- Electrical Specifications
  - Polarization Voltage: 0 V
  - Supply Voltage: 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

Physical Specifications

- 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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