



1-CHANNEL PUBLIC ADDRESS MIXER/AMPLIFIERS

Models NQ-PA120, NQ-PA240, NQ-PA600



Models NQ-PA120 & NQ-PA240



Model NQ-PA600

DESCRIPTION

Bogen's Nyquist networked Public Address Mixer/Amplifier (PAMA) series offers cost-effective performance for permanent installations and commercial sound and is designed to meet the rigorous requirements of today's sophisticated sound systems. Developed with the commercial sound contractor in mind, the PAMA series provides unparalleled flexibility and versatility without the need for add-on modules. It includes an embedded pro-audio DSP for extensive and comprehensive signal processing – allowing users to skillfully manage and mix multiple audio input channels. The resulting audio signal mix can be directed to the PAMA's speaker out or line out, or streamed over the Nyquist network where it can be used for audio distribution to one or more zones.

The Nyquist NQ-PAXxx are now capable of Standalone Operation that allows for use of these appliances for AoIP applications such as a SIP endpoint to act as a paging mixer/amplifier for an existing PBX/VoIP phone system, or a paging mixer/amplifier on an existing PBX/analog phone system. Additionally, the NQ-PAXxx audio power amplifiers to be used in standalone audio applications where a networked amplifier is desired for remote volume, mixing and DSP control from a web browser-enabled device.

When used in a Nyquist 7000 ecosystem, zone-based program audio selection and volume levels can be remotely adjusted using Nyquist's web-based Zone Volume and Audio Distribution Control, which has been specially designed for use with low-cost tablets.

The PAMAs fit a wide range of commercial audio applications that require multi-zone paging and/or background music distribution at businesses, restaurants, retail stores, industrial facilities, and many other venues. These PAMAs are available in 120-, 240-, and 600-watt models, each with the same features to provide power and performance no matter how large or small the application. In addition to their extensive flexibility, the Nyquist networked PAMAs use the latest in Class D amplifier technology and provide unparalleled sonic quality, exceptional reliability, and reduced heat output for increased operating efficiency.

FEATURES

- **4 MIC/Line Inputs**
 - CH1-CH4 configurable balanced/unbalanced inputs via 2 XLR and 4 screw-terminal connections
 - CH4 can be configured to support Push-to-Talk Mic applications
 - Mic inputs can be configured to supply Phantom Power when needed
- **Web-based DSP control**
 - 16-band Graphic Equalizer
 - Signal Present and Clip Monitor
 - Adjustable High Pass, Low Pass, and Bandpass Filters
 - Noise Gate
 - Compressor/Limiter
 - 7-band Parametric Equalizer
 - Delay / Peak Limiter
 - Speaker Presets / RMS Limiter / Status
- **Standalone Operation**
- **Standalone SIP Endpoint Support**
- **8 ohm/70V output; 600 ohm balanced line output**
- **Nyquist network-based audio input (paging, audio distribution)**
- **Mixed signal can be routed to Line or Speaker Out or over the Nyquist network**
- **Safety: CAN/CSA C22.2 No. 62368-1:2014; UL62368-1:2014; EN 62368-1:2014**
- **EMC: FCC Part 15b Class A; ICES-003, Issue 6: 2016; EN 55032:2012; EN 55035:2017**
- **1/2 Rack Width – Wall-, Rack-, or Shelf-mountable: 8.0" W x 1.70" H x 8.6" D (2" H with rubber feet installed)**
- **19" Rack Mount Kit (NQ-RMK03; sold separately)**

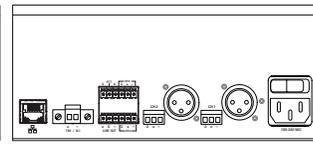
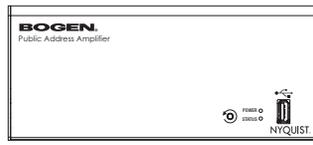
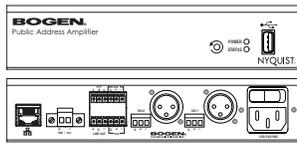
A & E SPECIFICATIONS

The **Nyquist based Public Address Mixer/Amplifier (PAMA) series** shall be a model _____, rated at _____ watts RMS (NQ-PA120/120 watts, NQ-PA240/240 watts, and NQ-PA600/600 watts) with 8 ohm / 70V operation. The PAMA shall support the following: four (4) software selectable Mic or Line Input channels via two (2) XLR connectors and four (4) sets of Phoenix-style screw-terminals; one input channel shall be capable of being configured to support a Push-to-Talk microphone (e.g., Bogen DDU-250). The amplifier power output shall provide a frequency response from 20 Hz - 20 kHz < 0.03% THD+N at rated power with distortion of less than 0.03%. The PAMA shall support the following features: line-level output to drive input on a local amplifier; one (1) USB 2.0 host port (Type-A connector) for future use; two (2) x RGB "full spectrum" LED indicators for Power and Status. To access the higher-level functions of the PAMA it is designed with a 10/100 network connection that allows installers and users to access the Graphical User Interface setup and operate the Digital Signal Processing controls: 16-band Graphic Equalizer; Signal Present and Clip Monitor; Adjustable High Pass, Low Pass, and Bandpass Filters; Noise Gate; Compressor/Limiter; Delay; Peak Limiter; Speaker Presets; RMS Limiter; Status; and 7-band Parametric Equalizer. The PAMA has been designed without physical sliders and knobs so that unauthorized users cannot tamper with the settings. Program selection and audio levels shall be remotely adjustable using a web-based Zone Volume and Audio Distribution Control. Any Public Address Mixer/Amplifier with physical sliders and knobs used to adjust settings shall not be considered equal. The PAMA shall be powered by Universal Mains supply (100VAC - 240VAC) and shall be wall-, shelf- or rack-mountable and include the required wall mounting bracket hardware. Public Address Mixer/Amplifiers that don't provide these features shall not be considered equivalent.



The **C4000 Series** is built upon Bogen's award-winning Nyquist software-based IP communications platform, which provides users with unparalleled flexibility and scalability, whatever their application.

Models
NQ-PA120, NQ-PA240
Front/Rear Panels



Models NQ-PA600 Front/Rear Panels

TECHNICAL SPECIFICATIONS

	NQ-PA120	NQ-PA240	NQ-PA600
Power Output	120W @ 70V/8 ohms	240W @ 70V/8 ohms	600W @ 70V/8 ohms
Line-In Sensitivity (Gain min./max.)	Continuously variable from 2V to 0.1V RMS		
MIC-In Sensitivity (Gain min./max.)	Continuously variable from 0.1V to 0.006V RMS		
MIC Equivalent Input Noise (EIN)	100 dB		
Line Out Bandwidth	20 Hz - 20 kHz < 0.03% THD+N		
Line Out	600-ohm electronically balanced, via 3-pin Phoenix on 6-pin Phoenix Plug/Header		
S/N Ratio (20 kHz BW)	97 dB		
Power Output Bandwidth	20 Hz - 20 kHz < .03% THD+N		
THD+N @ 1 kHz rated power	< 0.03%		
Rated Load Impedance	8 ohms		
Frequency Response @ 1 Watt	20 Hz - 20 kHz +/- 0.25 dB		
Amplifier Class of Operation	Class D		
Connectors	Power	10A Line Cord C14 IEC Inlet	
	Inputs	Channels 1, 2 Balanced 3-pin Phoenix Plugs/Headers and Balanced 3-pin Neutrik XLRs; Channel 3 Balanced 3-pin Phoenix on 6-pin Phoenix Plug/Header; Channel 4 Balanced 3-pin Phoenix only via 6-pin Phoenix Plug/Header; RJ45; USB 2.0 Type A	
	Outputs	Power Amplifier: 2-pin "touch proof" Phoenix Plug/Header Line Out balanced via 3-pin Phoenix on 6-pin Phoenix Plug/Header; streaming out via Nyquist network	
AC Input Voltage Range	85 VAC to 265 VAC 50/60 Hz		
Maximum AC Current	2A	3A	7A
Indicators	Status & Power LEDs (front) / Network LEDs (rear)		
Operating Temperature Range	-15 C to +40 C		
Thermal Emissions (Full Power)	90 BTU/hr.	135 BTU/hr.	225 BTU/hr.
Cooling	Convection		
Protection	RF, DC, Low Frequency, Thermal, Low Impedance, Short Circuit, Clip Limiting		
DSP Based Audio Features	16-band Graphic Equalizer; Signal Present and Clip Monitor; Adjustable High Pass, Low Pass, and Bandpass Filters; Noise Gate; Compressor/Limiter; 7-band Parametric Equalizer		
Special Features	Sleep Mode (defeatable), Power Factor Correction (PFC), 89% Amplifier Efficiency, On/Off Muting, Bridge Mode Switch, Channel 4 PTT (Push-to-Talk)		
Networking	Cat5 or better 10/100 network connectivity to Bogen's Nyquist network		
Certifications	CE and FCC Part 15b Class A; ICES-003, Issue 6; 2016; EN 55032:2012; EN 55035:2017		
Product Weight	5.2 lbs.		8.3 lbs.
Physical Dimensions:	1/2 Rack Width x 1RU*		1/2 Rack Width x 2RU**
*Single Rack Space (1RU)	8.00" W x 1.70" H x 13.48" D (Depth includes Phoenix connectors: width is without rack mount brackets attached; height excludes rubber mounting feet)		
**Double Rack Space (2RU)	8.00" W x 3.43" H x 13.48" D (Depth includes Phoenix connectors: width is without rack mount brackets attached; height excludes rubber mounting feet)		

Limited Warranty, Exclusion of Certain Damages

The NQ-PA120, NQ-PA240, and NQ-PA600 are warranted to be free from defects in materials and workmanship for five (5) years from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective (as confirmed by Bogen upon inspection) during the warranty period will be repaired or replaced by Bogen, at Bogen's option, with new or refurbished product, provided the product is shipped insured and prepaid to: Bogen Factory Service Department: 4570 Shelby Air Drive, Suite 11, Memphis, TN 38118, USA. Repaired or replacement product(s) will be returned to you freight prepaid. This warranty does not extend to any of our products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation or have been modified or repaired in any manner whatsoever, or where the serial number or date code has been removed or defaced.

THE FOREGOING LIMITED WARRANTY IS BOGEN'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. BOGEN MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW. Bogen's liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the price of the product. IN NO EVENT SHALL BOGEN BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF DATA OR LOSS OF USE DAMAGES) ARISING OUT OF THE MANUFACTURE, SALE OR SUPPLYING OF PRODUCTS, EVEN IF BOGEN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Products that are out of warranty will also be repaired by Bogen Factory Service Department -- same address as above or call 201-934-8500, at owner's expense. Returned products which do not qualify for warranty service, may be repaired or replaced at Bogen's option with a previously repaired or refurbished items. The parts and labor involved in these repairs are warranted for 90 days when repaired by the Bogen Factory Service Department. All parts and labor charges as well as shipping charges will be at the owner's expense.

All returns require a Return Authorization number. For most efficient warranty or repair service, please include a description of the failure.

09/2017

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