

NXE3.04  
 NXE3.02  
 NXE1.54  
 NXE1.52  
 NXE8004  
 NXE8002  
 NXE4004  
 NXE4002



# NXE SERIES

## POWER AMPLIFIERS W/ PROGRAMMABLE OUTPUTS AND ETHERNET CONTROL

Ashly's new line of *nX Power Amplifiers* feature lightweight, energy-efficient Class-D switching amplifier technology combined with a switch mode power supply. *nX* amplifiers are available in three product families (*nX*, *nXe*, *nXp*) and are designed to meet the most demanding live sound and fixed installation sound systems in stadiums, arenas, performance venues, worship spaces and convention centers.

The *nXe Series* is available in either 2 or 4-channel models. Use rear panel DIP switches to program each channel output for either High-Z (70V or 100V Constant Voltage) or Low-Z (stable down to 2 Ohms) operation. When in Sleep Mode, the *nX* amplifiers draw less than 1 Watt.

*nXe* is networkable with Ethernet control. It also has serial data control, aux preamp outputs, instant standby mode, preset recall, fault condition logic outputs, and optional network audio and digital audio capability. All controlled using our *Protea™ Software Suite*.

### nXe Series Features:

- 2 and 4-channel high-output, lightweight amplifiers with programmable output on each channel (High-Z or Low-Z, selected via rear panel DIP switches)
- Power-saving, *Energy Management System<sup>†</sup>* (Ashly EMS™) automatic <1W sleep-mode (defeatable)
- Front panel power switch and level controls (can be disabled for security)
- Rear panel DIP switches per channel for selection of high pass filter, limiter, input gain, and High-Z or Low-Z speaker output configuration
- Remote DC level control on each input channel

- Switch mode power supply automatically detects 120V or 240V AC operation
- Extensive protection circuitry, continuously variable cooling fans
- Multiple independent internal power supplies provide increased channel separation and reliability
- Ethernet port for use with control and monitoring of amplifier functions, with front panel COM activity LED
- Serial data port for use with Ashly remote control devices, or optional RS-232 converter for third party controllers (INA-1)
- Use *Protea™* Software to remotely disable all front panel controls, including the on/off switch, for a tamper-proof installation
- Real-Time Clock with Event Scheduler
- Instant Standby Mode, 30% reduction in power consumption with on/off triggered by contact closure, software control, or event scheduler
- Programmable power-on delay
- Preset recall via contact closure, software control, remote control, or event scheduler
- Aux preamp outputs, and fault condition logic outputs
- Optional Cobranet® or Dante® network audio and AES3 digital audio input with pass-through
- Neutrik® Combo XLR – 1/4" TRS jack plus Euroblock input connectors
- Neutrik® speakON® twist locking loud-speaker connectors for security, safety, and reliability
- Neutrik® powerCON® detachable AC mains connector

	3000 & 1500 Watt Models				800 & 400 Watt Models			
nXe Series	nXe 3.04	nXe 3.02	nXe 1.54	nXe 1.52	nXe 8004	nXe 8002	nXe 4004	nXe 4002
Channels	4	2	4	2	4	2	4	2
<i>*Max Output Power: Measured in Watts, Per Channel, Low-Z Output, All Channels Driven</i>								
2 Ohms	3,000	3,000	1,500	1,500	800	800	400	400
4 Ohms	2,000	2,000	1,500	1,500	800	800	400	400
8 Ohms	1,250	1,250	1,250	1,250	800	800	400	400
<i>*Low Z Output: Measured in Watts, Bridge Mode, All Channels Driven</i>								
4 Ohms	6,000	6,000	3,000	3,000	1600	1600	800	800
8 Ohms	4,000	4,000	3,000	3,000	1600	1600	800	800
<i>*70V, 100V Output: Measured in Watts, All Channels Driven</i>								
70V (per channel)	2,450	2,450	1,500	1,500	800	800	400	400
100V (per channel)	1,250	1,250	1,250	1,250	800	800	400	400
<i>Total Power Draw, Measured in Watts, Total for all Channels</i>								
Sleep Mode	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Standby Mode	70	40	70	40	40	25	40	25
Idle (no signal)	100	55	100	55	70	40	70	40
<i>Current Draw: Measured in Amps, Total for all Channels, 120VAC, Divide by 2 for 240V</i>								
Sleep Mode	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Standby Mode	1.30	0.70	1.30	0.70	0.70	0.38	0.70	0.38
Idle (no signal)	1.85	1.00	1.85	1.00	1.30	0.70	1.30	0.70
<i>Max Current Draw: Measured in Amps, Typical Input, All Channels Driven, Divide by 2 for 240V</i>								
1/2 Max Power @ 2 Ohms	29.5	14.7	16.0	8.0	8.8	4.6	5.0	2.6
<i>Thermal Dissipation: BTU/hr, Typical Input, Total for all Channels</i>								
Sleep mode	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Standby mode	238	136	238	136	136	85	136	85
Idle (no signal)	340	187	340	187	238	136	238	136
1/2 Max Power @ 2 Ohms	2,720	1,360	1,700	850	970	495	595	305

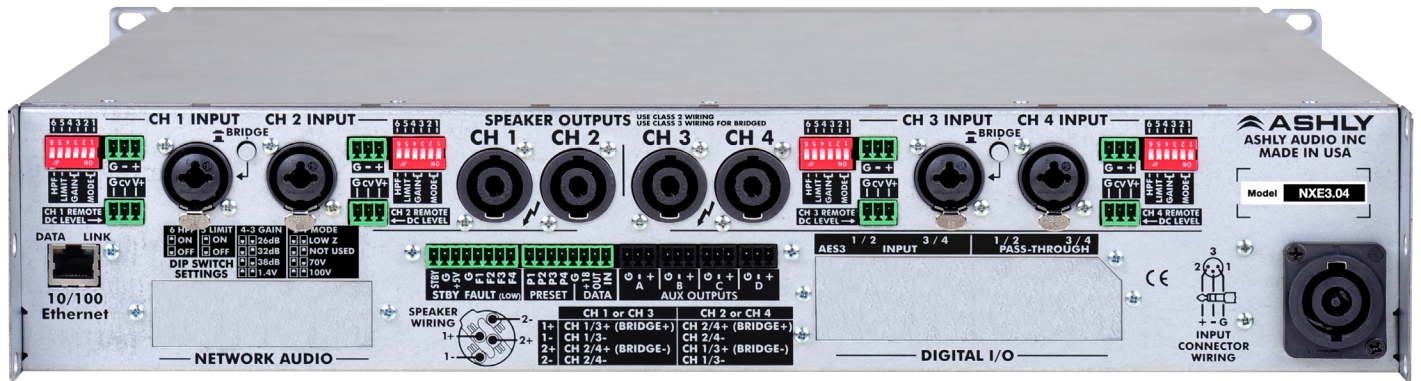
\* Measurements based on CEA-2006/490A, 20ms 1kHz 1% THD+N, 480ms 1kHz -20dB.

† <1W sleep mode can be defeated for applications that are subject to third-party performance standards that prohibit a sleep mode, including those used for Mass Notification and Emergency Communication Systems and those subject to ANSI/UL 2572.

Note: When making a true comparison of energy efficiency, one must look at the Thermal Dissipation (BTU/hr) numbers for a product. All other efficiency, i.e. "percentage" numbers are not standards based, and therefore may be marketing hype. Ashly Audio builds highly efficient Class-D amplification with SMPS that will equal or surpass the competition on BTU/hr thermal output (unused energy given off as heat). Please check our published BTU/hr specifications for more information.



nXuses Neutrik® Components



*nXe 3.04 Rear Panel Configuration*

# NXE SERIES POWER AMPLIFIERS w/ PROGRAMMABLE OUTPUTS AND ETHERNET CONTROL

Specifications	Notes: <i>OdBu = 0.775 VRMS</i>
Voltage Gain	Selectable at 26dB, 32dB, 38dB, or 1.4V
Damping Factor	>250 (8 Ohms load <1kHz)
Input High Pass Filter	80Hz 2nd order
Distortion (SMPTe, typical)	<0.5%
Distortion (THD-N, typical)	<0.5% (8 Ohms, 10dB below rated power, 20Hz–20kHz)
Channel Separation	-75dB (dB from full output, 1kHz)
Signal-to-Noise (20Hz–20kHz, unweighted)	>114dB (all 3.0x models) >111dB (all 1.5x models) >108dB (all 800x models) >105dB (all 400x models)
Frequency Response	20Hz–20kHz, +/-0.05dB
Balanced Input Connector	Euroblock 3.5mm, 1/4" TRS and XLR Combo jack
Input Impedance	10k Ohms
Maximum Input Level	+21dBu
Speaker Output Connector	Neutrik® speakON®
Control Network	Compatible w/ standard 100MB Ethernet
AUX Output Connector	Balanced Euroblock 3.5mm
AUX Output Maximum Level	+21dBu
Remote Standby Contact Closure	Euroblock 3.5mm, close contact to GND for standby mode
Preset Recall Contact Closure	Euroblock 3.5mm, close contact to GND for preset 1-4 recall
Data Connection	Euroblock 3.5mm - Gnd, +18V, In, Out
Fault Condition Logic Outputs	Euroblock 3.5mm - 4 available
Remote DC Level Control	Euroblock 3.5mm - Gnd, CV, V+ per input
Attenuators (per channel)	Front panel, software, offset link group, and remote. Fully off = Mute
Amplifier Protection	Inrush current limitation, temperature monitoring, output over-power protection, mains fuses
Cooling	Continuously variable temperature controlled axial fan(s)
Environmental	32–113 deg F, (0–45 deg, C) (noncondensing)

Front Panel LED Indicators	
<b>White LED</b>	
POWER	Switch: On, Off, Standby (flashing)
<b>Red LED</b>	
CLIP/MUTE	Per Channel: Clip @ 1dB below full output / Mute
PROTECT	On (fault condition or shut down), Off
<b>Green LED</b>	
SIGNAL	Per Channel: -18dB below rated output
BRIDGE	Per Channel Pair: On, Off
COM	On, for Ethernet data or Device ID
CURRENT	Per Channel: Proportional to output
<b>Yellow LED</b>	
TEMP	Per Channel: On dim at 90% max operating temperature, full bright + protect at 100%
SLEEP	On, amplifier is asleep from audio inactivity
DISABLE	On, power switch & front panel attenuators are disabled

Weights and Dimensions	
Unit Weight	1.54/3.04: 28.7lbs (13kg) 1.52/3.02: 22.7lbs (10.3kg) 4002/8002: 22.2lbs (10.1kg) 4004/8004: 25.9lbs (11.7kg)
Shipping Weight	1.54/3.04: 35.2lbs (16kg) 1.52/3.02: 29.2lbs (13.3kg) 4002/8002: 28.7lbs (13.1kg) 4004/8004: 32.4lbs (14.8kg)
Unit Dimensions (all models)	19"W x 3.5"H x 16.84"D (483mm x 89mm x 428mm)
Shipping Dimensions	24.5"W x 22"H x 5.25"D (622mm x 559mm x 133mm)

Power Requirements (@ 50/60Hz)		
Nominal (Automatic Sensing SMPS)	120VAC	240VAC
Operating Range	70–135VAC	140–270VAC
Minimum power-up	85VAC	170VAC
Power Cable Connector	20A powerCON® (32A powerCON® 3.04 model only)	

Digital Input Options (Factory installed w/ DAC4 Converter)	
OPAES2	2-Ch AES3 Input w/ AES3 pass-thru
OPAES4	4-Ch AES3 Input w/ AES3 pass-thru
CNM-2	CobraNet® Digital Interface
OPDante	Dante® Digital Interface
OPAVB	AVB Digital Interface (in development)

Remote Accessories	
WR-1	2-Channel Level Control
WR-1.5	Level and Preset Recall
WR-2	Four-Position Switch
WR-5*	Programmable Button Controller
neWR-5*	Programmable Network Button Controller
FR-8	8-Channel Network Fader Remote
FR-16	16-Channel Network Fader Remote
Ashly Remote	Remote Control Application for Apple® iPad®

\*Function is limited to Mute and Preset Recall ©2014 All features, specifications and graphical representations are subject to change or improvement without notice and may not represent the final product.



# NXE SERIES

## ARCHITECT & ENGINEERING SPECS

### **nXe3.04**

The unit shall be a 4 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 3,000W per channel at Low Z, 2,450W per channel in 70V mode, and 1,250W in 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <28.7 lbs (13kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe3.04**.

### **nXe3.02**

The unit shall be a 2 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 3,000W per channel at Low Z, 2,450W per channel in 70V mode, and 1,250W in 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <22.7 lbs (10.3kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe3.02**.

### **nXe1.54**

The unit shall be a 4 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 1,500W per channel at Low Z and 70V modes, and 1,250W in 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <28.7 lbs (13kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe1.54**.

### **nXe1.52**

The unit shall be a 2 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 1,500W per channel at Low Z and 70V modes, and 1,250W in 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <22.7 lbs (10.3kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe1.52**.



# NXE SERIES

## ARCHITECT & ENGINEERING SPECS

### **nXe8004**

The unit shall be a 4 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 800W per channel at Low Z, 70V, and 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <25.9 lbs (11.7kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe8004**.

### **nXe8002**

The unit shall be a 2 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 800W per channel at Low Z, 70V, and 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <22.2 lbs (10.1kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe8002**.

### **nXe4004**

The unit shall be a 4 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 400W per channel at Low Z, 70V, and 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <25.9 lbs (11.7kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe4004**.

### **nXe4002**

The unit shall be a 2 channel multi-mode amplifier capable of driving 2 Ohm loads at full power. The maximum rated output power shall be 400W per channel at Low Z, 70V, and 100V mode. There shall be an automatic but defeatable sleep mode consuming <1W, and instant standby mode controlled by contact closure or software. A switch mode power supply shall auto-detect 120VAC or 240VAC mains, and a Neutrik® powerCON shall be used for the AC cord. Each channel shall have selectable output mode of Low Z, 70V, or 100V, an 80Hz high-pass filter, input limiter, and input gain settings of 26dB, 32dB, 38dB, or 1.4V. Each channel shall have remote DC level control. Input connectors shall be Neutrik® XLR/TRS combo jack and Euroblock, while output connectors shall be Neutrik® speakON. The unit shall have a front panel power switch and level controls that can be disabled. LEDs shall indicate Protect, Sleep, Disabled, Com, and Bridge mode status, as well as Temperature, Output Current, Output Signal, and Clipping/Mute status per channel. The unit shall have Ethernet control with a real-time clock for event scheduling. The unit shall have serial data remote control, aux preamp outputs, preset control, fault condition logic outputs, optional network audio and AES3 digital audio capability. The amplifier shall have temperature dependent variable speed forced-air cooling. The unit shall weigh <22.2 lbs (10.1kg), measure 19"W x 3.5"H x 16.8"D (483mm x 89mm x 428mm), and mount in a standard 19" rack. There shall be a five year warranty for units purchased in the US. No other unit shall be acceptable unless all specifications represented herein are met or exceeded and submitted in writing by an independent testing agent.

The power amplifier shall be an Ashly **nXe4002**.