



NE800  
NE1600  
NE2400



# NE SERIES Two-Channel, Network-Enabled Power Amplifiers

Our 2-channel *ne* (Networked-Enabled) Series Amplifiers are designed to meet the specifications of the performance installation and constant voltage markets.

The **ne800** delivers 400W per channel @ 4 Ohms and is available in 25V, 70V and 100V models. The **ne1600** is rated at 800W per channel @ 4 Ohms and is available in 70V and 100V models. The largest amp in this line, the **ne2400**, delivers 1,200W per channel into a 4 Ohm or 70V load; a separate 100V output model is rated at 1,200W.

All models include balanced analog inputs, bridge mono mode, selectable 80Hz hi-pass filter, input sensitivity switch, full Ethernet control using Protea™ ne Software, remote standby for power up, and DC remote level control using an Ashly WR-1 or equivalent. ne Amplifiers are a great value for any install.

ne800, ne1600 & ne2400 Features:

- 10/100 Ethernet comes standard for remote control and monitoring
- Low-Z, 25V, 70V, 100V models
- Optional, Protea DSP (with FIR filter capability), AES3, CobraNet® and Dante®
- DC voltage remote gain control
- Switched-mode power supply, Class-D output
- Stepped, calibrated input attenuators
- Selectable input sensitivity 26dB, 32dB or 1.4V
- Remote power stand-by
- Disable all front panel controls via software
- Temperature sensitive variable speed fan with front-to-back airflow
- Selectable 80Hz HPF
- 4-stage level meters
- Output current and temp indicators
- Safety/Compliance: CE, FCC, RoHS

Front Panel		
Controls	Individual input attenuators, AC Power Switch	
Cooling	Temperature dependent speed-controlled fan (Front in, Side out)	
LED Indicators: Unit Status		
POWER	Blue	Switch: On, Off
STANDBY	Yellow	Standby, flashing
PROTECT	Red	On, Off
DISABLE	Yellow	Per Channel Pair: On, Off
COM	Green	On, for Ethernet data or Device ID
LED Indicators: Each Channel		
SIGNAL LEVEL	Red	Clip
	Yellow	-6dBu
	Green	-18dBu, -12dBu
BRIDGE	Green	Per Channel Pair
TEMP	Yellow	Per Channel
CURRENT	Green	Per Channel: Proportional to output

Remote Accessories	
WR-1	2-Channel Level Control
WR-1.5	Level Control Only
WR-5*	Programmable Selector
neWR-5*	Programmable Network Remote
FR-8*	8-Channel Network Fader Remote
FR-16*	16-Channel Network Fader Remote
RD/RW-8C*	Serial Data Fader Remote
Ashly Remote*	Remote Control Application for Apple® iPad®

ne Models	ne800	ne1600	ne2400
<i>Continuous Average Power Output: Per Channel, Low Z Models, Stereo Mode, All Channels Driven</i>			
8 Ohms	225W	450W	700W
4 Ohms	400W	800W	1200W
<i>Low Z Output: Bridge Mode, All Channels Driven</i>			
8 Ohms	800W	1600W	2400W
<i>25V, 70V, 100V Distributed Output Models: 20Hz–20kHz 1% THD</i>			
25V (per channel)	400W	—	—
70V (per channel)	400W	800W	—
100V (per channel)	400W	800W	1200W
<i>Line Current Draw: 120VAC Mains (divide in half for 230V)</i>			
Standby Mode	200mA	165mA	200mA
No Signal	475mA	500mA	475mA
Typical (1/8 power pink noise)	2.81A	4.95A	6.75A
Maximum (1/3 power pink noise)	4.93A	8.80A	12.6A
<i>Thermal Dissipation: BTU/hr, All Channels Driven</i>			
Standby mode	40	40	40
Idle (no signal)	109	109	109
Typical (1/8 power pink noise)	287	447	682
Maximum (1/3 power pink noise)	297	466	717
<i>Signal to Noise</i>			
20–20k, Unweighted	>107dB	>110dB	>112dB



NE uses Neutrik® Components



ne2400pe Rear Panel

# NE SERIES Two-Channel, Network-Enabled Power Amplifiers

Specifications	Note: $0dBu = 0.775 VRMS$
Frequency Response (8 Ohms)	20Hz–20kHz, (unweighted) $\pm 1dB$
Input Impedance	20k Ohms, Balanced
Input Sensitivity	26dB, 32dB or 1.4V
Maximum Input Level	+21dBu
Distortion (8 Ohm load)	(SMPTE) <0.5% typical (THD-N) <0.5% typical
Damping Factor	>250 (8 Ohms, 1kHz)
Output Circuitry	Class D
Amplifier/Load Protection	Output Overcurrent, Main Supply Rail Overvoltage, Chassis Temperature, Inrush Limiting, Mains Fuse
Environmental	40–120° F, (4–49° C) noncondensing

Rear Panel	
Controls	Ethernet 10/100, Bridge switch, Remote standby, Remote Level (2)
Connectors (each channel)	Input: Euroblock, XLR Output: Euroblock, speakON®
Power Requirements	
AC Main	120VAC or 240VAC, $\pm 10\%$ 50–60Hz
Power Cable Connector	15A Edison, 3-Prong IEC

Weights and Dimensions	
Dimensions	19" W x 3.50" H x 15.5" D (483mm x 394mm x 88.9mm)
Unit Weight	800: 19.6lbs (8.9kg) 1600: 20.4lbs (9.27kg) 2400: 20.8 lbs (9.45kg)
Shipping Weight	800: 27 lbs (9kg) 1600: 27 lbs (10kg) 2400: 27 lbs (10kg)



# Protea™

## DIGITAL SIGNAL PROCESSING FOR NE TWO-CHANNEL

Protea is compatible with Microsoft® Windows 8, 7 (Vista/XP) 32 & 64 bit systems.



Audio professionals find our Protea™ DSP to be very intuitive and easy to navigate—and you will too. No need to attend a one-week training class away from home to learn our software. Common sense layout of controls and features, on-line help, or a visit to the Technical Support page on our website provides answers to all of your questions.

Protea™ DSP Specifications	
<i>All DSP functions can be linked to 1 of 16 link groups</i>	
Input Source Selection	
Input Source Select Options	Analog, Auto (Net, AES3, Analog)
Brick Wall Limiter	
Threshold	-20dBu to +20dBu
Ratio	Infinite
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Compressor	
Threshold	-20dBu to +20dBu
Ratio	1.2:1 to infinite
Attack	0.2 to 50ms
Release	5ms/dB to 1000ms/dB
Detector	Peak/Average
Attenuation Bus	2 available
Metering	In, Out, Attenuation, Graphical
Autoleveler Controls	
Target Level	-40dBu to +20dBu
Action	Gentle, normal, aggressive, user defined
Maximum Gain	0dB to +22dB
Ratio	1.2:1 to 10:1
Threshold Below Target	-30dB to 0dB
Gain Increase/Decrease Rate	5ms/dB to 1000ms/dB
Hold Time	0-6 sec
Metering	Input, Gain, Attenuation
Ducking: High/Low Priority, Trigger, Filibuster, Ducked Program	
Trigger Threshold	-80dBu to +20 dBu
Ducking Release	5ms/dB to 1000ms/dB
Ducking Depth	0dB to -30dB, -∞
Enable Ducking at Matrix Mixer	Yes
Metering	Input

Gate	
Threshold	-80dBu to +20dBu
Range	off, 100dB to 0dB
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Metering	Key Signal, Gate LED, Graphical
Advanced Gate Controls	
Key Engage Enable	Yes
Key Frequency	20Hz to 20kHz
Key Bandwidth	0.016 to 3.995 Octave
Gain	
Gain (with/without VCA)	-50dB to +12dB, off, polarity invert
Digital VCA Groups	4 available
neWR-5 Remote Gain	0 to -50dB, Mute
EQ: 31-Band Graphic	
Filter Type	Constant Q or Proportional Q
Bandwidth	0.499oct to 0.25oct
EQ: Parametric 2,4,6, or 10 Band	
Frequency	20-20kHz
Level	-30dB to +15dB
Q Value	0.016 to 3.995 Octave
EQ: Hi/Low Shelf 6/12 dB/oct	
Frequency	20Hz-20kHz
Level	-15dB to +15dB
EQ: All Pass	
Frequency	20Hz-20kHz
EQ: Variable Q HP/LP	
Frequency	20Hz-20kHz
Q Value	3.047 to 0.267
EQ: Notch/Bandpass	
Frequency	20Hz-20kHz
Q Value	92.436 to 0.267
Crossover: 2 Way, 3 Way, 4 Way Crossover & High Pass/Low Pass Filters	
Bessel & Butterworth Filters	12/18/24/48 dB/oct
Linkwitz-Riley Filter	12/24/48 dB/oct
Frequency	Off, 20Hz-20KHz
Delay: @ 48kHz Sampling Rate (Input Time, Distance & Temperature)	
Speaker Delay	0-21ms
Delay	0-682ms
Delay: @ 96kHz Sampling Rate (Input Time, Distance & Temperature)	
Speaker Delay	0-10.6ms
Delay	0-341ms

Audio Metering Tool	
Range	-60dBu to +20dBu
Increments	1dB
Peak Hold Indicator	Yes
Signal Generator Tool: Pink noise, White noise, Sine wave	
Signal Level	Off, -50dBu to +20dBu
Sine Wave Frequency	20Hz-12kHz
Matrix Mixer	
Gain (0.5dB increments)	Off, -50 to +12dB
Mute	Per channel
Enable Ducking at Mixer	Yes
Ducking LED	Per channel if enabled
Metering	Level, auto-mixer level
Processors	
Input A/D, Output D/A	24 bit
DSP Processors	32-bit floating point
Sample Rates	48kHz, 96kHz
Propagation Delay @ 48kHz:	1.42ms
Propagation Delay @ 96kHz:	0.71ms



# NE-800

## ARCHITECT & ENGINEERING SPECS

### ne800

The two-channel power amplifier shall deliver a minimum power of 225 Watts RMS per channel into 8 Ohms loads and 400 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 800 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne800**

The power amplifier with a factory installed AES option shall be an Ashly model **ne800d**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne800c**

### ne800 with DSP Option

The two-channel power amplifier shall deliver a minimum power of 225 Watts RMS per channel into 8 Ohms loads and 400 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 800 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier shall have an internal factory installed digital signal processing (DSP) option controlled using Protea (network enabled) software. Each amplifier input channel shall be configured with pluggable DSP blocks to have its own dynamics control, gain functions, graphic and/or parametric EQ, Hi-pass/Lo-pass filters, time delay, metering, and test signal generator. A mixer section with assignable routing shall allow any input to drive any or all amplifier outputs. Outputs shall have the same DSP functions as inputs, with the addition of a fast, automated crossover setup. Both inputs and outputs shall copy/paste their settings to other channels, or link with one or more other channels to track their settings. Presets shall be used to store and retrieve global parameters of an amplifier's control surface and DSP section from a file. Sub-Presets shall allow for a collection of individual DSP function parameters within and across both channels of an amplifier to be stored and recalled as a set, affecting only those parameters which have been tagged. Up to 35 presets/sub-presets shall be stored within the amplifier, and shall be recalled in real time via Ethernet from a computer using Protea software. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne800pe**

The power amplifier with a factory installed AES option shall be an Ashly model **ne800ped**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne800pec**



# NE-1600

## ARCHITECT & ENGINEERING SPECS

### ne1600

The two-channel power amplifier shall deliver a minimum power of 450 Watts RMS per channel into 8 Ohms loads and 800 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 1600 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB from 20Hz to 20kHz, unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne1600**

The power amplifier with a factory installed AES option shall be an Ashly model **ne1600d**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne1600c**

### ne1600 with DSP Option

The two-channel power amplifier shall deliver a minimum power of 450 Watts RMS per channel into 8 Ohms loads and 800 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 1600 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB from 20Hz to 20kHz, unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier shall have an internal factory installed digital signal processing (DSP) option controlled using Protea (network enabled) software. Each amplifier input channel shall be configured with pluggable DSP blocks to have its own dynamics control, gain functions, graphic and/or parametric EQ, Hi-pass/Lo-pass filters, time delay, metering, and test signal generator. A mixer section with assignable routing shall allow any input to drive any or all amplifier outputs. Outputs shall have the same DSP functions as inputs, with the addition of a fast, automated crossover setup. Both inputs and outputs shall copy/paste their settings to other channels, or link with one or more other channels to track their settings. Presets shall be used to store and retrieve global parameters of an amplifier's control surface and DSP section from a file. Sub-Presets shall allow for a collection of individual DSP function parameters within and across both channels of an amplifier to be stored and recalled as a set, affecting only those parameters which have been tagged. Up to 35 presets/sub-presets shall be stored within the amplifier, and shall be recalled in real time via Ethernet from a computer using Protea NE software. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5" high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne1600pe**

The power amplifier with a factory installed AES option shall be an Ashly model **ne1600ped**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne1600pec**

# NE-2400

## ARCHITECT & ENGINEERING SPECS

### ne2400

The two-channel power amplifier shall deliver a minimum power of 700 Watts RMS per channel into 8 Ohms loads and 1200 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 2400 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB from 20Hz to 20kHz, unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne2400**

The power amplifier with a factory installed AES option shall be an Ashly model **ne2400d**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne2400c**

### ne2400 with DSP Option

The two-channel power amplifier shall deliver a minimum power of 700 Watts RMS per channel into 8 Ohms loads and 1200 Watts RMS per channel into 4 Ohms loads with both channels operating. When switched into bridged-mono mode, the amplifier shall deliver at least 2400 Watts RMS into an 8 Ohms load. The power amplifier shall include XLR and Euroblock input connectors and Speakon plus Euroblock output connectors. It shall have balanced analog inputs and a selectable 80Hz high-pass filter. The power amplifier shall have a 26db/32dB/1.4V input sensitivity switch, remote standby for power up, and DC remote level control. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, and swept-sinewave speaker load analysis. It shall have balanced and buffered analog aux outputs on XLR and Euroblock connectors. Frequency response shall be 20Hz to 20kHz + 1.0dB. Signal-to-Noise shall be greater than 107dB from 20Hz to 20kHz, unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohms load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier shall have an internal factory installed digital signal processing (DSP) option controlled using Protea (network enabled) software. Each amplifier input channel shall be configured with pluggable DSP blocks to have its own dynamics control, gain functions, graphic and/or parametric EQ, Hi-pass/Lo-pass filters, time delay, metering, and test signal generator. A mixer section with assignable routing shall allow any input to drive any or all amplifier outputs. Outputs shall have the same DSP functions as inputs, with the addition of a fast, automated crossover setup. Both inputs and outputs shall copy/paste their settings to other channels, or link with one or more other channels to track their settings. Presets shall be used to store and retrieve global parameters of an amplifier's control surface and DSP section from a file. Sub-Presets shall allow for a collection of individual DSP function parameters within and across both channels of an amplifier to be stored and recalled as a set, affecting only those parameters which have been tagged. Up to 35 presets/sub-presets shall be stored within the amplifier, and shall be recalled in real time via Ethernet from a computer using Protea NE software. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 21 pounds (10kg) or less.

The power amplifier shall be an Ashly model **ne2400pe**

The power amplifier with a factory installed AES option shall be an Ashly model **ne2400ped**

The power amplifier with a factory installed CobraNet option shall be an Ashly model **ne2400pec**