



NXAMP_{MK2}

Powered TDControllers

<https://nexo-sa.com>

Thinking. Inside the box.

NEXO





NEXO and Yamaha collaborate to set new performance standards in power amplification

NEXO's expertise in DSP control for high-performance loudspeakers is unparalleled in the sound reinforcement industry. And Yamaha has an unrivalled heritage in developing highly efficient and reliable power amplification devices. So when the two collaborate to create a new range of powered controllers, the result is sure to be something special.



Joseph Carcopino

R&D Director, NEXO

A new version is always a challenge, especially when the original has been successful! But our Yamaha/NEXO mixed team of passionate engineers accepted this challenge, merging their know-how, culture, sensitivity, and finally delivering this NXAMP_{mk2} that, when coupled with our acclaimed NeMo software, offers one of the top powering and processing solution worldwide.



Ken Iwayama

Group Manager, PA Development Department, Yamaha

Our engineering team worked with NEXO R&D, implementing many new ideas to make this new generation of NXAMP deliver a significant improvement and upgrade on sound quality, power capability, efficiency, compactness, functionality, and reliability. We believe that the NXAMP_{mk2} superbly supports the NEXO sound, consistent with our passion for music.

Formidable power. Precision control. Flexible networking.

The perfect compact, light-weight power solution for NEXO systems

Available in 4 X 1300 Watts, 4 X 2500 Watts and 4 X 4500 Watts versions, the NXAMP_{mk2} combines advanced signal processing with four state-of-the-art Class D amplifiers to create a flexible, light-weight powering and control solution for NEXO loudspeaker systems.

Ideal for use in fixed installations and touring, these powered controllers are easy to set up and quick to deploy, with all essential parameters readily accessible via a large colour touch-screen on the front panel and a comprehensive range of control and networking facilities on the rear panel.

Most importantly, the new NXAMP_{mk2} achieves a whole new level of sound quality, partnering with NEXO speakers to deliver a whole new level of audience experience.



4.3" display



Tactile screen



Dual Ethernet Port
* Optional



4 X 4500 Watts from a 3U rack



The Nexo NXAMP_{mk2} ultra-low distortion Class D amplifiers combine 32-bit/96KHz converters and 64-bit signal processing to deliver significant advances in sound quality over the already highly regarded previous generation of NXAMPs. Bass is solid and high-end definition is particularly impressive in a sonic performance that is both articulate and rich with detail. Even at low volumes, the sound is noticeably transparent and pure. The amplifiers integrate three new multi core DSPs providing

a future-proofed hardware platform, equipped to host new algorithms and run next-generation firmware updates for years to come.

With a mains voltage range of 100 to 240 Volts it means the amplifiers can be used anywhere in the world and run on all types of power generators. Robust power supplies use PFC (Power Factor Correction) technology to ensure

maximum power conversion efficiency and that the current drawn is smoothed and free of spikes to limit the stress on the mains network at all times. A flexible audio input system encompasses four, high end analogue inputs using cascaded converters for low output noise. Four digital inputs are also available through the rear panel expansion card slot offering optional AES/EBU, EtherSound™, Dante™ or AES67 inputs, all with automatic analogue fall-back. A native dual Ethernet

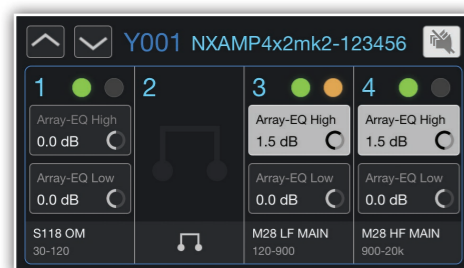
card facilitates remote control and daisy-chaining of amplifiers, and seamless integration with Nexo's NeMo amplifier management software. In addition to the expansion card slot, other rear panel connectivity includes RS232 serial and GPIO ports along with Speakon outputs for each of the four channels. Occupying only 2U of rack space, the NXAMP4X1_{mk2} and NXAMP4X2_{mk2} weigh in at just 15.7kg and 16.1kg respectively, while the 3U NXAMP4X4_{mk2} weighs 25kg.



Fingertip control

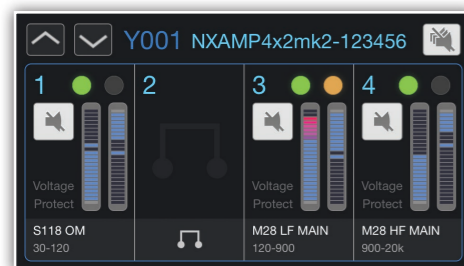
A large colour touchscreen makes set-up easy

With ease of use central to the NXAMP_{mk2} design philosophy, a large colour 4.3" LCD touch-screen provides access to all main functions directly from the amplifier front panel.



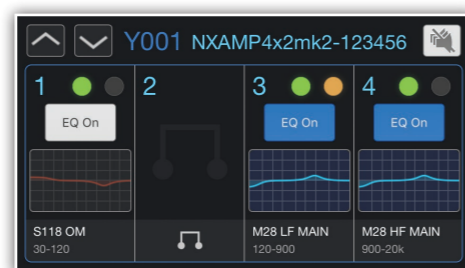
Array EQ

Two settings of Array-EQ allow for a better compensation of ground, stacking and line array effect, on Low and High frequencies.



Mute and Meters

NXAMP_{mk2} has two layers of mute: per-channel and overmute. Voltage and Protection Meters give relevant information on System Headroom.



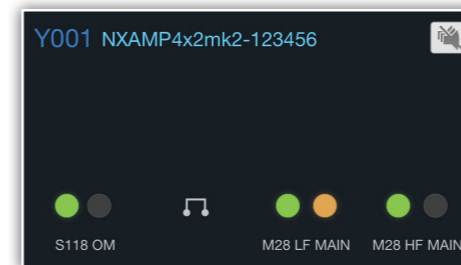
User EQ

In addition to cabinet-related EQ and Array EQ, User EQ provides up to 8 bands per channel, editable on one or several channels at once.



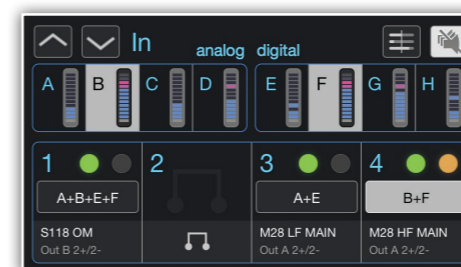
EQ Detail

User EQ is drawn in full screen for a better experience. The band type, frequency, gain, Q and on/off status can be easily edited.



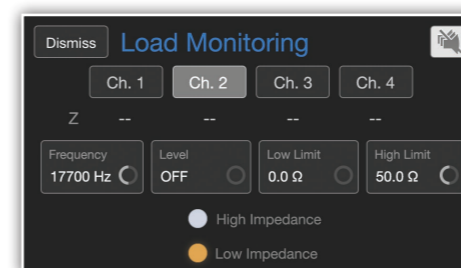
Inactive Screen

Displayed after a time interval of inactivity, this screen can be customised with a user image configured with NeMo.



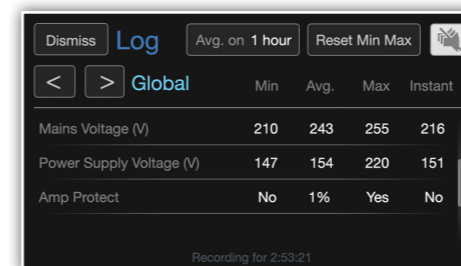
Inputs

The inputs view displays input levels and offers input alignment options. The input patch can be intuitively edited.



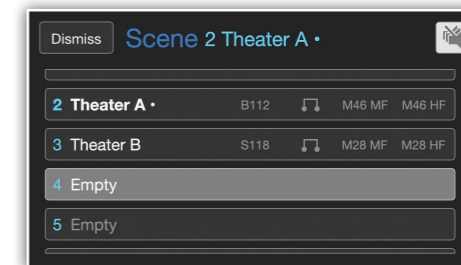
Load Monitoring

Load Monitoring can be enabled and configured on every channel, to ensure speakers are monitored in real time and ready to use.



Log

Many parameters and alerts are always recorded into the log, providing valuable information on the NXAMP_{mk2} usage.



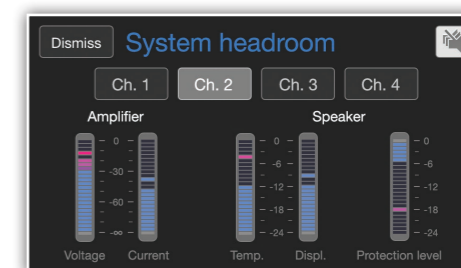
Scene

Parameters (volume, delay, gain, EQ, input patch, setup...) can be saved in one of the 32 scene slots, and can be copied and pasted.



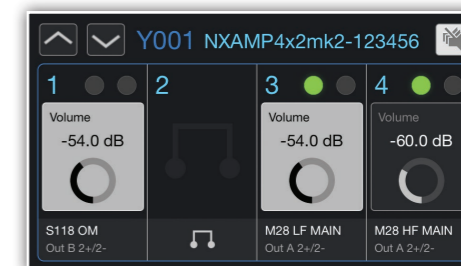
Setup

NEXO or Custom Setup can be edited on one or several channels. The cabinet name, its cross-over and output patch are always visible.



System Headroom

The System Headroom page gives real time information on amplifier levels and speaker temperature, displacement and protection levels.



Volume, Gain and Delay

Navigate through menus and edit volume, gain (-18 to +18 dB) and delay (up to 1 second) on one or several channels at once.

NeMo



Total system management control

For macOS and iOS

A large number of NXAMP_{mk2} amplifiers can be conveniently controlled via a wired or WiFi network from a Mac or iOS device using NEXO's system management software NeMo. Following the automatic 'discovery' of available amplifiers, sessions can be easily prepared by arranging devices on a map over a background image, and groups of devices and zones of channels can be created. Sessions can be prepared both online and offline.

NeMo enables editing of parameters of several devices or channels simultaneously, using groups and zones. A library of presets makes set-up quick and easy, and settings like Volume and Delay can be

changed absolutely or relatively. EQ can also be edited on several channels, enabling different layers of EQ, and parameters can be copied and pasted, and changes undone and redone, even online. A Quick Mute / Solo page makes it easy to check the system by soloing every channel and is perfect for checking settings and monitoring levels. Finally, a powerful Logging and Alerting system covers levels, protections, temperatures, currents, voltages and errors.

NeMo can be used via the optional extension cards, or via the included Remote Control card.

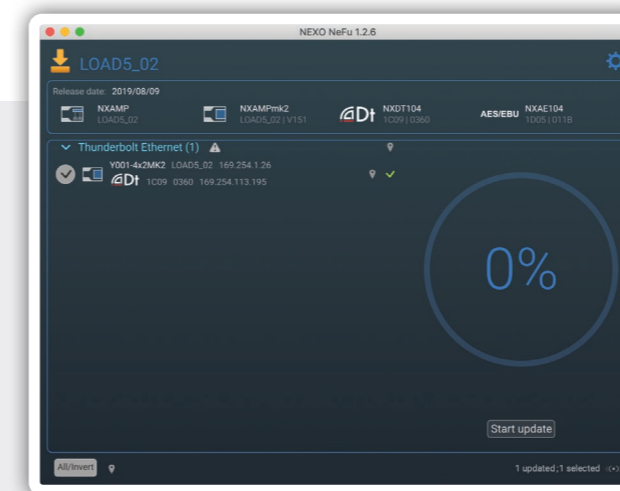
ProVisionaire

Customisable control panel software

Remote iOS control for Yamaha and NEXO installed sound systems

By simply dragging and dropping widgets such as faders and switches onto a screen, Yamaha's ProVisionaire software makes it possible to create an ideal original control panel dedicated to the applications and functions required for an installation project. No programming know-how or experience is necessary.

ProVisionaire can control a wide range of Yamaha PA equipment such as MTX/MRX series signal processors, CL/QL/TF series digital mixers and Rio series I/O boxes, alongside NXAMP_{mk2} powered TD controllers (ProVisionaire Control Version 3.0 or later) to provide a total Yamaha and NEXO control solution.

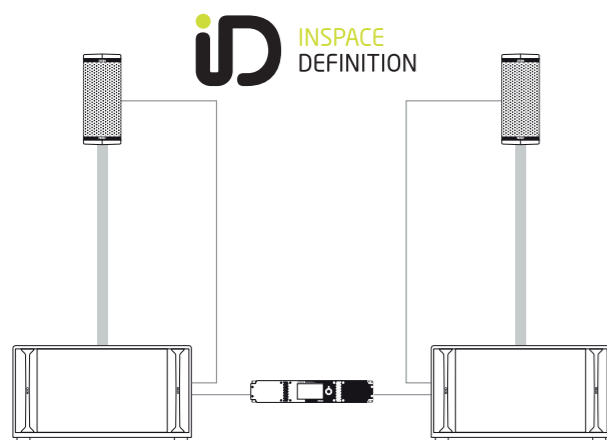


Firmware Updates

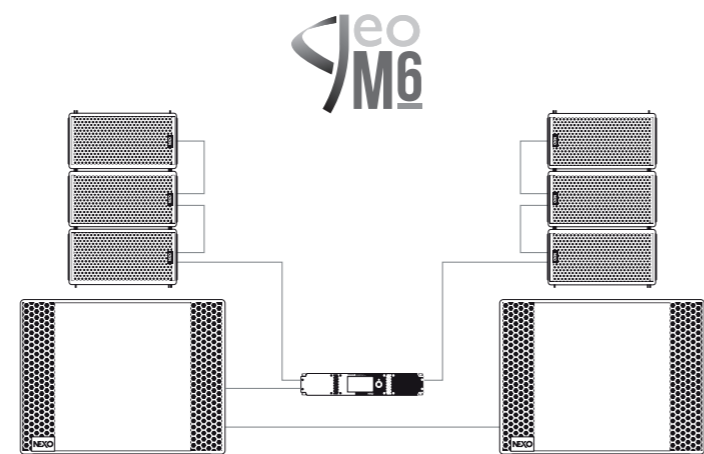
Firmware updates can be downloaded from the NEXO website and installed via the RJ45 port on the Remote Control card. Firmware update software can run on both Windows and Mac and can download both first generation and MK2 NXAMP firmware simultaneously, its multithread architecture allowing downloading to multiple amplifiers to save time. There's a dedicated Firmware Update screen in the user interface which also displays the current Firmware version.

Typical Systems

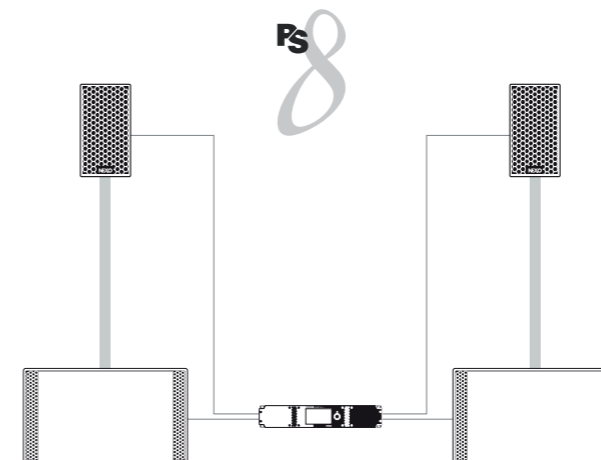
ID Series, PS8 and GEO M6 systems powered by a single NXAMP4X1_{mk2}



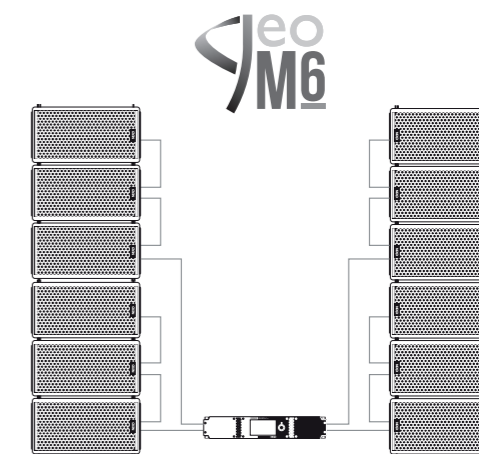
NXAMP4X1_{mk2} powering 1 X ID24 and 1 X IDS110 Sub per side



NXAMP4X1_{mk2} powering 3 X GEO M6 per side and 2 X LS18 in mono bridge



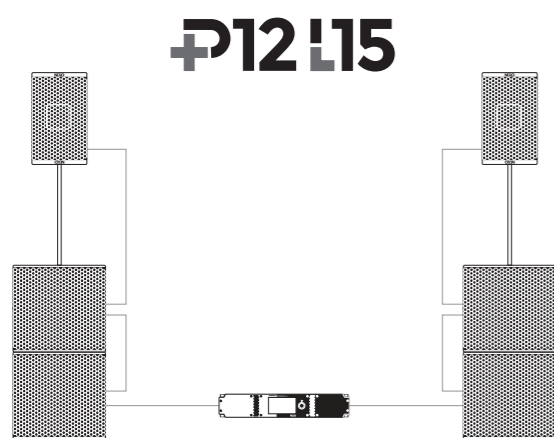
NXAMP4X1_{mk2} powering 1 X PS8 and 1 X LS400 Sub per side



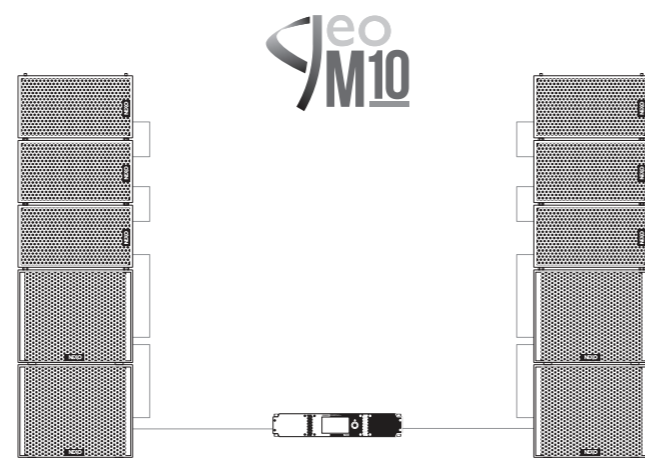
NXAMP4X1_{mk2} powering 6 X GEO M6 per side

Typical Systems

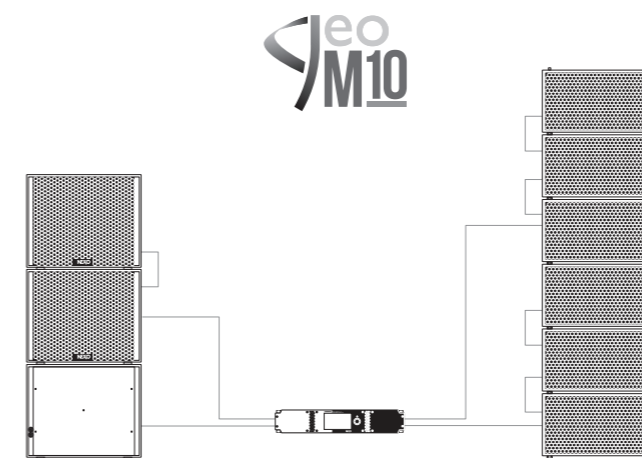
P12/L15 system and GEO M10 systems powered by a single NXAMP4X2_{mk2}



NXAMP4X2_{mk2} powering 1 X P12 and 2 X L15 per side



NXAMP4X2_{mk2} powering 3 X GEO M10 and 2 X MSUB15 per side



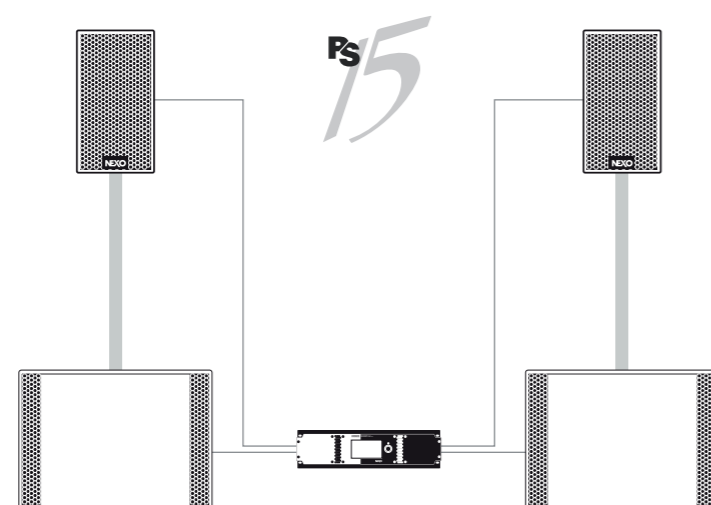
NXAMP4X2_{mk2} powering 3 X MSUB15 (one in cardio mode) and 6 X GEO M10



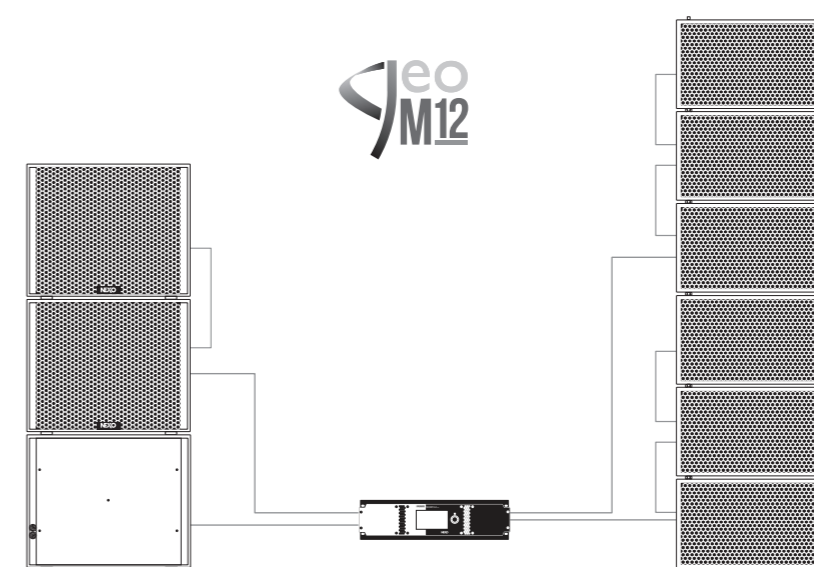
NXAMP4X2_{mk2} powering 6 X GEO M10 per side

Typical Systems

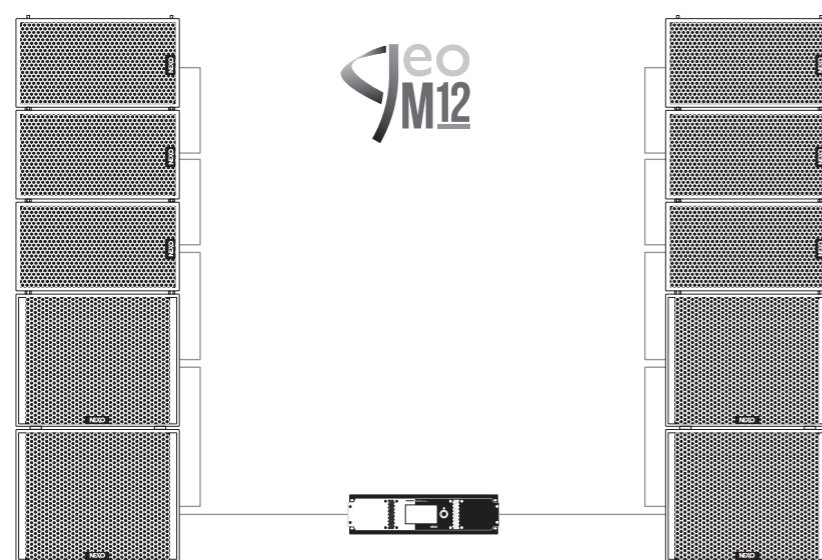
PS15 and GEO M12 systems powered by a single NXAMP4X4_{mk2}



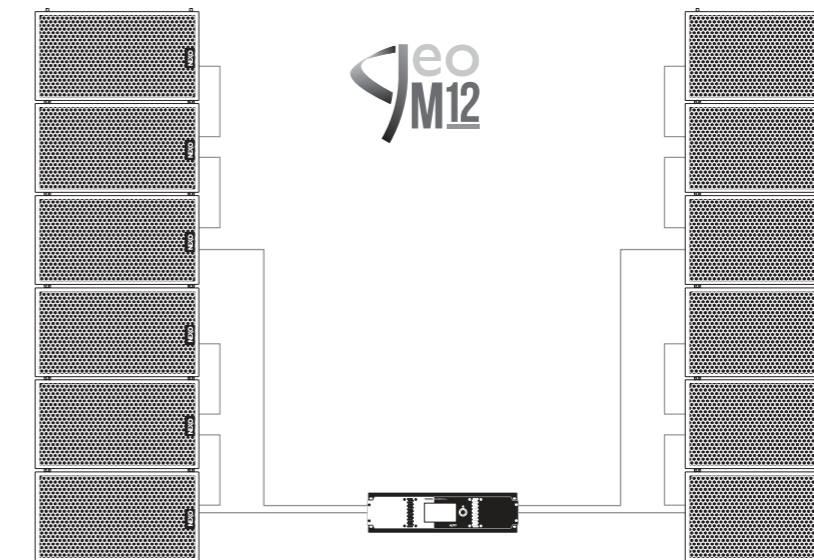
NXAMP4X4_{mk2} powering 2 X PS15 + 2 X LS18 per side



NXAMP4X4_{mk2} powering 3 X MSUB18 (one in cardio mode) and 6 X GEO M12



NXAMP4X4_{mk2} powering 3 X GEO M12 and 2 X MSUB18 per side



NXAMP4X4_{mk2} powering 6 X GEO M12 per side

Specifications

POWER SPECIFICATIONS	NXAMP4x1 _{mk2}	NXAMP4x2 _{mk2}	NXAMP4x4 _{mk2}
Number of amplifiers channels	4 x amplifiers channels, 2 by 2 bridgeable		
Max. output voltage (no load)	4 x 105 Volts	4 x 140 Volts	4 x 180 Volts
Max. output power (4 channels mode/8 Ohms load per channel)	4 x 600 Watts	4 x 1200 Watts	4 x 1900 Watts
Max. output power (4 channels mode/4 Ohms load per channel)	4 x 900 Watts	4 x 1900 Watts	4 x 3300 Watts
Max. output power (4 channels mode/2 Ohms load per channel)	4 x 1300 Watts	4 x 2500 Watts	4 x 4500 Watts
Max. output power (2 channels mode/8 Ohms load per channel)	2 x 1800 Watts	2 x 3800 Watts	2 x 6600 Watts
Max. output power (2 channels mode/4 Ohms load per channel)	2 x 2600 Watts	2 x 5000 Watts	2 x 9000 Watts
Power consumption (Standby)		10 Watts	
Power consumption (Idle)		200 Watts	

INPUT TO POWER OUT SPECIFICATIONS			
Frequency response	+/-1 dB from 20 Hz to 20 kHz		
Impedance / Input Sensitivity	20 K Ω / 13 dBu	20 K Ω / 16 dBu	20 K Ω / 18 dBu
Dynamic Range / TDH + N	110 dB unweighted / Typical 0.1% on a flat set up		
Latency	550 us on a flat setup		
Audio AD and DA Converters	32 bits @ 96 KHz		
Processing	3 x multicore 64 bits processing DSPs		

BACK PANEL FEATURES	
Analogue audio inputs	4 x balanced analogue inputs on XLR3
Power outputs	4 x Neutrik Speakon NL-4 outputs
RS232 port	1 x DB-9 connector dedicated for DPU connection
GPIO port	1 x DB-25 connector with 5 x inputs and 8 x outputs or for DMU connection
Expansion slot	For networking and digital audio cards, 4 x digital audio inputs and remote control
Mains sockets	1 x Neutrik Powercon NAC3 (1 x 20 A)

USER INTERFACE AND CONTROLS	
Front panel buttons and knobs	Rotary Encoder with push and backlight, tactile screen
Display	4.3 inches diagonal colour display, WQVGA, 480 x 272, LCD touch screen

MAINS REQUIREMENTS			
Mains voltage	Universal Power Supply with Active PFC 100 - 240 Volts (50/60/Hz)		
Power consumption (Idle)	165 Watts	190 Watts	270 Watts
Power consumption 1/8 max. / 2 Ohms	1050 Watts	1850 Watts	3300 Watts
Power consumption 1/4 max. / 2 Ohms	1900 Watts	3500 Watts	6350 Watts

DIMENSIONS AND CERTIFICATIONS			
Dimensions	2U 19" Rack	2U 19" Rack	3U 19" Rack
Depth		502 mm (20")	
Weight	15.7 Kg (33.1 lbs)	16.1 Kg (35.3 lbs)	24.9 Kg (54.8 lbs)
Electrical safety certification	cULus, CB (CE), CCC, PSE, KC		
EMC certification	EN55032 / EN55103-2 / FCC		
Green status	Compliant with ROHS directive		

EXTENSION CARDS CERTIFICATIONS	NXES104	NXDT104 _{mk2} (*)	NXAE104
Audio format	Ethersound™	Dante™	AES/EBU
Remote control	Ethersound™ based	IP based	IP based
Number of input channels	4	4	4
Resolution / Sample rate	24 bits / 48 KHz	24 bits / 48 KHz	24 bits / 44.1 - 96
Audio Connectors	2 x Ethersound™	2 x Ethercon™	3 x XLR
Additional port	1 x RJ45	1 x RJ45	2 x RJ45
Power supply	2 W from NXAMP	3W from NXAMP	2 W from NXAMP
Dimensions & weight	120 x 160 x 40 mm (NXAMP slot) - 200 g		
EMC certification	CE, FCC, ICES	CE, FCC	CE, FCC
Green Status	ROHS and REACH		

*NXDT104 can be used as well, except that it is not possible to upgrade the NXAMP_{mk2} firmware. Default NXRM104 card should be put back for firmware update.
As part of a policy of continual improvement, NEXO reserves the right to change specifications without notice.

Accessories



DMU

The DMU enables easy monitoring of all activity on the NXAMP_{mk2}'s audio inputs, with signal and power supply coming from the amplifier's GPIO port. Front panel features include four analogue XLR inputs plus links, three RJ45 ports for digital audio networking and LED VU meters.



DPU

The DPU optimises the NXAMP_{mk2}'s channel by channel preset selection by automatically routing its outputs to any of six output connectors on the DPU front panel. Cabinet names and bridging status are displayed alongside each output, making it easy to wire the system.

Network Cards

Dante™ NXDT104_{mk2}



The optional Dante card enables seamless integration of NXAMP_{mk2} into Dante audio networks. It receives 4 audio streams (24-bits / 48kHz) in the Dante or AES67 formats and allows remote control from any computer on a LAN using TCP/IP commands. Its unique 3-port design can be used as an integrated 3 port gigabit switch or as two Dante redundant ports plus an optional third port for additional remote control.

Ether Sound™ NXES104



The optional EtherSound card extracts 4 audio streams (24-bits / 48kHz) from the 2 X 64 channels of an ES100 EtherSound stream and features In and Out ports for easy daisy-chaining without an external switch and a third port for remote control and ASIO streaming.

AES/EBU NXAE104



The optional AES/EBU card receives 4 audio channels (24-bits / 44.1 - 96kHz) in AES/EBU format and features 2 X AES/EBU stereo XLR inputs; one with an AES/EBU buffered output on XLR with fail-safe relay. 2 X switched RJ45 ports enable remote control and easy daisy chaining.

Remote Control NXRM104



Supplied as standard with the NXAMP_{mk2}, the Remote Control card features 2 X RJ45 ports for remote control and easy daisy-chaining of amplifiers, while also facilitating firmware updates.



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