

NEXO

45^N
12

NEXO 45°N 12

Line Monitor

 *User Manual*

45°N-12 User Manual V1.01b
Date: 06/01/2011

PLEASE READ CAREFULLY BEFORE PROCEEDING**BASIC PRECAUTIONS**

Do not open the speaker system or attempt to disassemble the internal parts or modify them in any way. The speaker system contains no user-serviceable parts. If it should appear to be malfunctioning or damaged, discontinue use immediately and have it inspected by qualified NEXO service personnel.

Water exposure: Do not expose the speaker system to direct rain; do not use it near water or in wet conditions. Do not place containers with liquid on speaker system as they might spill into openings. If any liquid such as water seeps into the speaker system, have it inspected by qualified NEXO personnel.

SYSTEM DEPLOYMENT SAFETY RULES

Read User Manual before deployment. Before use of enclosed speaker system, please ensure that anyone involved in system deployment understands the rigging – stacking – pole mounting safety rules as described in the speaker system User Manual. Failure to do this exposes people to potential injury or death.

Always consult qualified NEXO personnel if the device installation requires construction work and make sure to observe the following precautions:

Mounting precautions

- choose mounting hardware and an installation location that can support the weight of the speaker system;
- do not use speaker system handles for suspended installation;
- do not expose speaker system to excessive dust or vibration, or extreme cold or heat to prevent possibility of component damage;
- do not place the speaker system in an unstable position from which it might fall accidentally;
- if speaker systems uses a stand, ensure that stand specifications are adapted, and that stand height does not exceed 1.40m/55"; never move the stand while the speaker is in position.

Connection and powering precautions

- remove all connected cables before moving the speaker system;
- turn off AC power of all power amplifier units before connecting the speaker system;
- when turning on the AC power to the audio system, always turn on the power amplifier last; when turning the AC power off, always turn off the power amplifier first;
- when used in cold conditions, a gradual power ramp up should applied to the system on an 5 mn period to allow the loudspeaker components to stabilize during the very first minutes of usage.

Inspect the speaker system periodically.





SAFETY INSTRUCTIONS FOR NEXO TD CONTROLLERS



NEXO ANALOGUE PSTDCONTROLLERS, NX242 DIGITAL CONTROLLER, NXAMP4x1 AND NXAMP4x4 POWERED CONTROLLERS ARE CLASS 1 APPARATUS AND MUST BE EARTHED.

THE GREEN AND YELLOW WIRE OF THE MAINS CORD MUST ALWAYS BE CONNECTED TO AN INSTALLATION SAFETY EARTH OR GROUND. THE EARTH IS ESSENTIAL FOR PERSONAL SAFETY AS WELL AS THE CORRECT OPERATION OF THE SYSTEM, AND IS INTERNALLY CONNECTED TO ALL EXPOSED METAL SURFACES.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. (US market)
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

 <p>The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.</p>	 <div style="border: 1px solid black; padding: 2px; display: inline-block; text-align: center;"> CAUTION <small>RISK OF ELECTRIC SHOCK DO NOT OPEN</small> </div> 	 <p>The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.</p>
<p>WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.</p>		
<p>To avoid electrical shock, do not remove covers. Dangerous voltages exist inside. Refer all servicing to qualified personnel only.</p>		

HIGH SOUND PRESSURE LEVELS



Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient period of time. The U.S. Government's Occupational and Health Administration (OSHA) has specified the following permissible noise level exposures: Sound Duration Per

Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	65
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Ear plugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

DISPOSAL OF OLD ELECTRICAL & ELECTRONIC EQUIPMENT

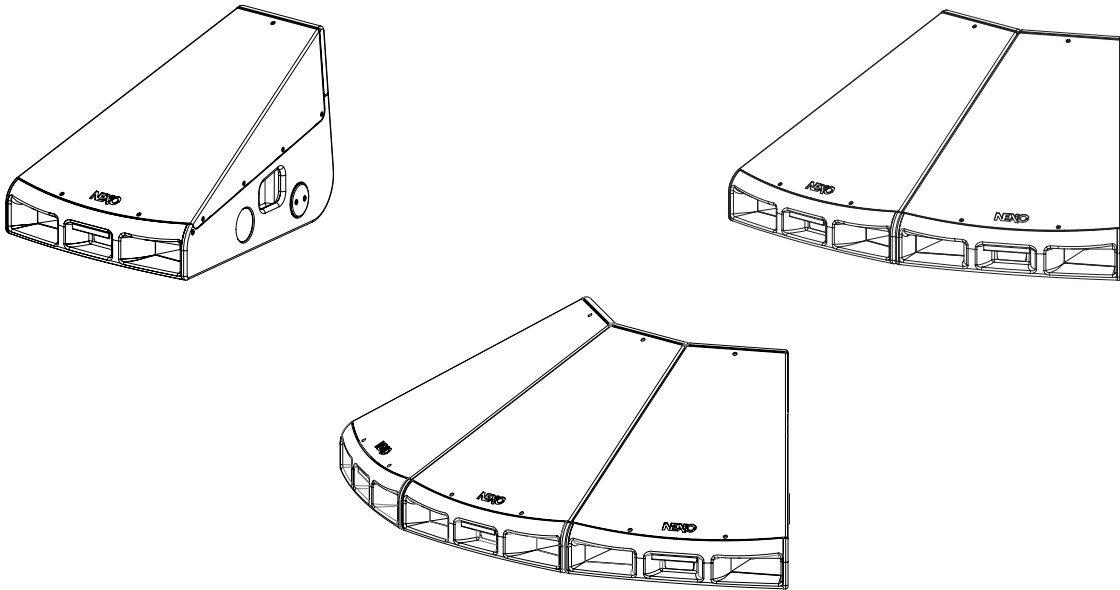


This symbol on the product or on its packaging indicates that it shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequence for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CONTENTS

1	Introduction	6
2	45N12 General Set-up Instructions	8
2.1	<i>Speaker connection</i>	8
2.1.1	45°N-12 Connector Panel	8
2.1.2	Configuring 45N12 for Passive or Active Mode	8
2.1.3	Cabling	9
3	Amplifier Selection for use with 45°N-12.....	11
3.1	<i>45N12 recommended amplification.....</i>	11
3.1.1	Current rating	11
3.1.2	Amplifier settings.....	11
3.2	<i>45°N-12 and NXAMP TDControllers.....</i>	13
3.2.1	NXAMP connectors.....	13
3.2.2	45°N-12 and NXAMP recommended configurations.....	13
4	Connection diagrams.....	14
4.1	<i>45°N-12 / NXAMP4x1 - Bridge Stereo – Active mode.....</i>	14
4.2	<i>45°N-12 / NXAMP4x1 - Bridge Stereo – Passive mode.....</i>	15
4.3	<i>45N12 / NXAMP4x4 - 4 Channels – Active Mode</i>	16
4.4	<i>45°N-12 / NXAMP4x4 - 4 Channels – Passive Mode.....</i>	17
4.5	<i>45°N-12 / NX242-ES4 – Active Mode</i>	18
4.6	<i>45°N-12 / NX242-ES4 – Passive Mode</i>	19
5	Application guidelines	20
5.1	<i>SAFETY FIRST</i>	20
5.2	<i>45°N-12 Coverage.....</i>	20
5.3	<i>Handling 45 N-12 on stage</i>	21
5.4	<i>Stage monitoring applications.....</i>	22
5.5	<i>Testing and Maintenance of the system</i>	23
6	45°N-12 Technical Specifications	24
6.1	<i>System specifications</i>	24
6.2	<i>Dimensions.....</i>	25
6.3	<i>Component List</i>	25
7	USER NOTES.....	26

1 INTRODUCTION



Thank you for selecting a NEXO 45°N-12 floor monitor.

NEXO's 45°N-12 monitor loudspeaker is the first product based on a radical new concept in stage sound – that of line monitoring.

The revolutionary NEXO 45°N-12 wedge monitor brings all the benefits of line-array technology to the stage.

It draws on NEXO's patented Hyperbolic Reflective Wavesource which is used throughout the GEO range of high-performance loudspeakers. The design works by wavesourcing, creating virtual acoustic sources behind the enclosure itself and below the stage, using reflection rather than coercion to determine the shape of the wavefront.

Unlike a conventional high frequency waveguide in which the exit is rectangular, the NEXO monitor's waveguide enables cabinets to be linked together to form arrays without interferences between wavefronts.

Practical benefits for stage monitoring applications are:

- steady frequency in coverage area;
- higher SPL and feedback threshold;
- sharp side attenuation;
- coverage and SPL scalability.

This manual is intended to provide you with necessary and useful information about your NEXO 45°N-12 floor monitor system.

As for all NEXO systems, NEXO 45°N-12 is controlled, powered and monitored by dedicated NEXO TDControllers:

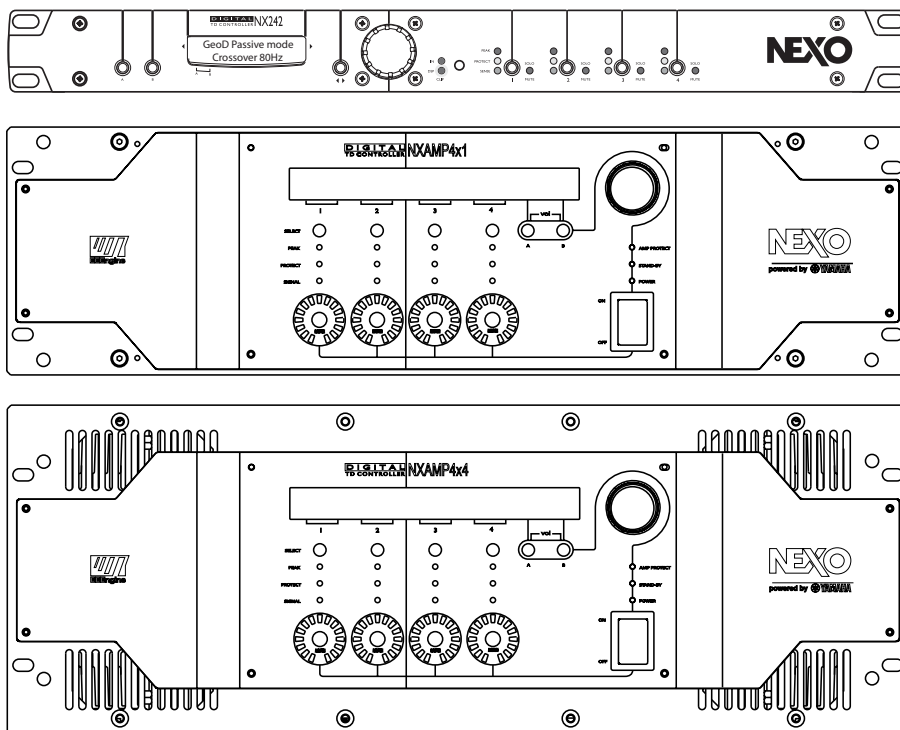
NX242-ES4 Digital TDController provides comprehensive control of N12 line monitors in multiple configurations. It allows Ethersound™ digital audio networking, as well as remote control for all units in the network. It has 2 analogue / 4 digital inputs and 4 analogue / 4 digital outputs.

IMPORTANT

NX242 must be equipped with NX-Tension Card (NX-ES4) to access N12 setups

NXAMP4x1 and NXAMP 4x4 are Powered Digital Controllers, providing full control and amplification for 45N12 in multiple configurations. Both devices feature 4 analogue inputs and 4 speaker outputs. When equipped with optional card, 4 digital inputs in Ethersound™ digital audio network format as well as remote control for all units in the network become available.

For a complete description of these controllers, please refer to User Manuals. The NX242 and NXAMP DSP algorithms and parameters are fixed in software and updated regularly: Please consult the NEXO web site (www.nexo.fr) for the latest software releases.



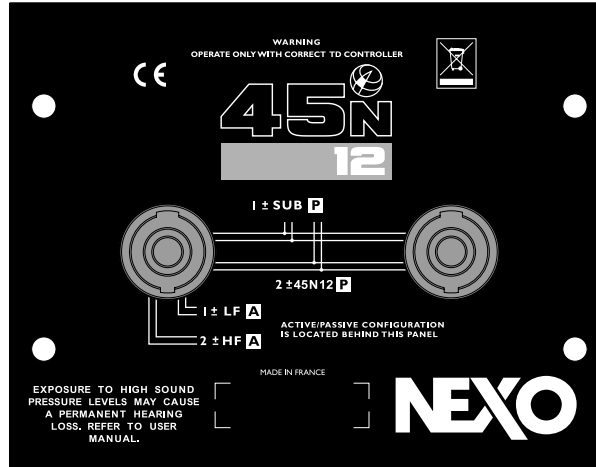
2 45N12 GENERAL SET-UP INSTRUCTIONS

2.1 Speaker connection

NEXO 45°N-12 are connected with Speakon NL4FC plugs (not supplied). A wiring diagram is printed on the connection panel located on the back of each cabinet. The 4 pins of the 2 Speakon sockets identified in / out are connected in parallel within the enclosure.

Either connector can be used to connect amplifier or to link to an additional 45N12 cabinet.

2.1.1 45°N-12 Connector Panel



Connectors are wired as follows:

Speakon Connector		Passive Mode	Active Mode
1(-)	⇒	Not Connected	45N12 LF (-)
1(+)	⇒	Not Connected	45N12 LF (+)
2(-)	⇒	45N12 (-)	45N12 HF (-)
2(+)	⇒	45N12 (+)	45N12 HF (+)

2.1.2 Configuring 45N12 for Passive or Active Mode

IMPORTANT

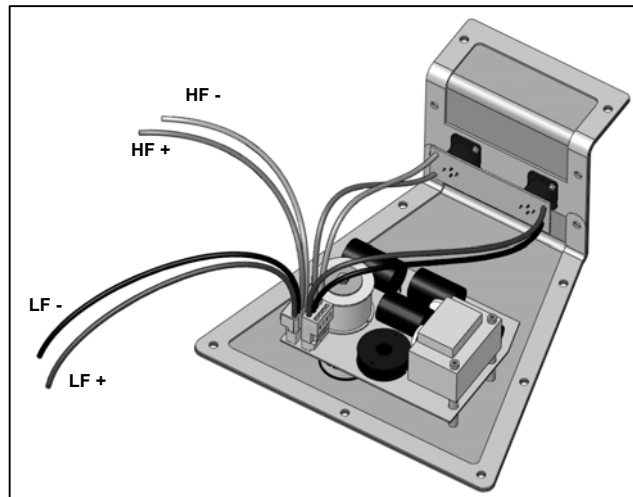
45N12 are factory configured in active mode

In order to change active or passive configuration:

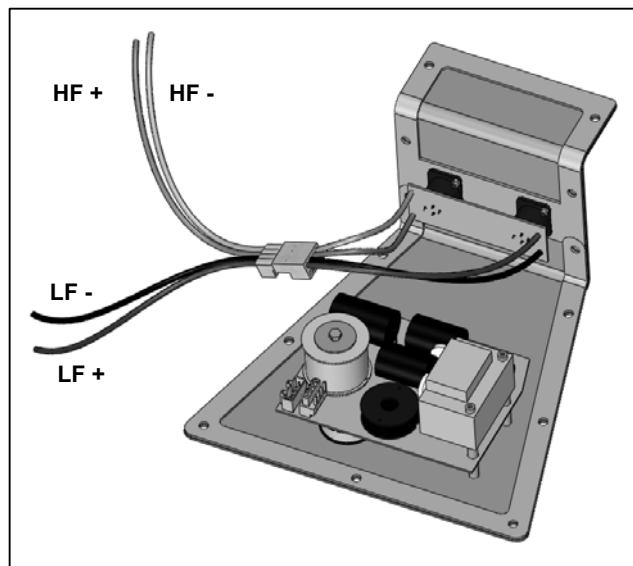
- remove the TORX screws that hold the rear/bottom metal panel;
- remove the rear/bottom metal panel to access passive network WAGO connectors.

In Passive Mode, WAGO connector should be inserted in "Passive In", and speakers WAGO connectors should be inserted in connector "Passive Out".

In Active Mode, WAGO Connector should be directly connected to speakers via speakers WAGO connectors (passive filter is then bypassed).



PASSIVE MODE CONFIGURATION



ACTIVE MODE CONFIGURATION

2.1.3 Cabling

NEXO recommends the exclusive use of multi-conductor cables to connect the system: the cable kit is compatible with all the cabinets, and there is no possible confusion between LF and HF sections.

Cable choice consists mainly of selecting cables of the correct sectional dimension (size) in relation to the load resistance and the cable length. Too small a cable section will increase both its serial resistance and its capacitance; this reduces the electrical power delivered to the loudspeaker and can also induce response (damping factor) variations.

For a serial resistance less or equal to 4% of the load impedance (damping factor = 25), the maximum cable length is given by:

$$L_{\max} = Z \times S \quad S \text{ in mm}^2, Z \text{ in Ohm, } L_{\max} \text{ in meters}$$

The table below indicates these values, for 3 common sizes.

Load Impedance (Ω)	2	3	4	6	8	12	16
Cable section	Maximum Length (meters)						
1,5 mm ² (AWG #14)	3	4.5	6	9	12	18	24
2,5 mm ² (AWG #12)	5	7.5	10	15	20	30	40
4 mm ² (AWG #10)	8	12	16	24	32	48	64

IMPORTANT

Long speaker cables induce capacitive effects - up to hundreds of pF depending on the quality of the cable - with a low-pass effect on high frequencies. If long speaker cables must be used, ensure that they do not remain coiled while in use.

3 AMPLIFIER SELECTION FOR USE WITH 45°N-12

NEXO recommends high power amplifiers in all cases. Budget constraints are the only reason to select lower power amplifiers. A lower power amplifier will not reduce the chances of driver damage due to over-excursion, and may actually increase the risk of thermal damage due to sustained clipping. If an incident occurs on an installation without protection, the fact that amplifiers only generating half their rated output power (-3dB) are used will not change anything in respect of possible damage. This is due to the fact that the RMS power handling of the weakest component in the system is always 6 to 10 dB lower than the amplifier rating.

3.1 45N12 recommended amplification

Nexo recommends amplifiers in agreement with table below:

Recommended Amplifier#	Channel 1	Channel 2
	LF in Active Mode or LF+HF in Passive Mode	HF in Active Mode
45N12 Passive Mode	1200 to 2000 W / 8 Ohms	
45N12 Active Mode	1000 to 1500 W / 8 Ohms	250 to 500 W / 16 Ohms

3.1.1 Current rating

It is very important that the amplifier behaves correctly under low load conditions. A speaker system is reactive by nature: on transient signals like music it will require four to ten times more instantaneous current than its nominal impedance would indicate. Amplifiers are generally specified by continuous RMS power into resistive loads, however the only useful information about current capacity is the specification into a 2 Ohm load. It is possible to perform an amplifier listening test by loading the amps with twice the number of cabinets considered for the application (2 speakers per channel instead of one, 4 instead of 2) and running the amps up to the onset of clipping. If the signal does not noticeably deteriorate, the amplifier is well adapted (overheating after approximately ten minutes is normal but thermal protection must not operate too quickly after starting this test).

3.1.2 Amplifier settings

Gain value

Gain is the key to correct alignment of the system. It is especially important to know the gain of all amplifiers used in your set-up. The tolerance should be about ± 0.5 dB. In practice this can be difficult to achieve because:

Some amplifier brands have an identical input sensitivity for models of different power rating (this infers a different voltage gain for each model). For example, a range of amplifiers with different power outputs, all having a published input sensitivity of 775mV/0dBm or 1.55V/+6dBm, will have a wide range of actual gains – the higher the power, the greater the gain.

Various other brands may offer constant gain but only within a given product range, for example they may fit fixed input sensitivity only on their semi-professional amps.

Even if a manufacturer applies the constant gain rule to all models, the value selected will not necessarily be the same as that chosen by other manufacturers.

Some products can exhibit manufacturing tolerances for the same model of ± 1 dB or more. Some amplifiers may have been modified, possibly without any label indicating the new values. Others may have gain switches fitted internally where it is impossible for the user to verify the actual setting without opening the amplifier casing.

In cases where you don't know the gain of your amplifier (or want to check it) please follow this procedure:

- unplug any loudspeakers from the amplifier outputs
- feed a sine wave at 1000Hz at a known voltage (~ 0.5V) to the input of the amplifier under test

- measure the voltage at the output of the amplifier
- calculate the gain using the formula $\text{Gain} = 20 * \text{LOG}_{10}(\text{Vout}/\text{Vin})$.

Some examples:

Vin / Gain	20dB	26dB	32dB	37dB (1.4V sensitivity / 1350Wrms)
0.1 V	1 V	2 V	4 V	7.1 V
0.5 V	5 V	10 V	20 V	35.4 V
1 V	10 V	20 V	40 V	70.8 V

Remember that constant sensitivity settings will give a different gain value when the amplifier power is different.

NEXO recommends 26 dB gain amplifiers, as it is at the same time adequately low and quite common amongst amplifier manufacturers. This gain setting improves signal to noise ratio and allows all preceding electronic equipment, including the NX242-ES4 TDcontroller, to operate at optimum level. Using a high gain amplifier will raise the noise floor proportionally.

Operating Mode

Most two channel amplifiers available on the pro-audio market have the following operating modes:

Stereo: two fully independent channels deliver identical power into identical loads

NEXO recommends Stereo Mode for all amplifier channels feeding 45°N-12 monitors.

Bridge-Mono: the second signal channel processes the same input as the first channel, but with reversed phase. The (single) load is connected between the two positive channel outputs using a suitable connection. While the total output of the amplifier remains the same, the available output voltage, the minimum impedance that can be connected and the voltage gain are doubled as compared with stereo operation. Typically, only channel 1 input is active. Positive and negative output connections vary depending on amplifier manufacturers.

NEXO does not recommend Bridge Mono Mode unless amplifier power is clearly not sufficient.

IMPORTANT

When in Bridge-Mono mode, check your amplifier user manual for proper connection of outputs 1(+) and (2+) in relation to input phase.

Parallel-mono: the output terminals of the two channels are configured in parallel using an internal relay. The (single) load is connected either to the output of channel 1 or to that of channel 2 (as if in stereo). While the total output of the amplifier remains the same the output voltage level is also the same as in stereo mode. The minimum impedance that can be connected is reduced by half due to the fact that current capability is doubled. Typically, only channel 1 input is active.

NEXO does not recommend Parallel-Mono Mode for any PS Series speaker amplification.

Warning on amplifiers signal processing features

Some high-end amplifiers may include signal processing functions similar to those found in the NX242 TDcontroller ("loudspeaker offset integration", "limiter", "compressor," etc.). Moreover, when this processing is digital, computation latency time can introduce a few milliseconds delay from input to output. These functions are not adapted to specific system requirements and may interfere with the complex protection algorithms used in the NEXO TD Controllers.

NEXO do not advise using other protection systems in conjunction with the NEXO TD Controllers and they should be disabled.

IMPORTANT

For proper system protection, no latency time or non-linear devices should be introduced between the output of the NEXO TDcontroller and the input of loudspeakers through use of DSP modules such as internal amplifier signal processing.

3.2 45°N-12 and NXAMP TDControllers

NEXO Powered TDControllers NXAMP 4X1 & 4X4 are integrated solutions for Control and amplification for all NEXO speaker ranges.

NXAMP4x1 and NXAMP4x4 power capability is listed in the table below:

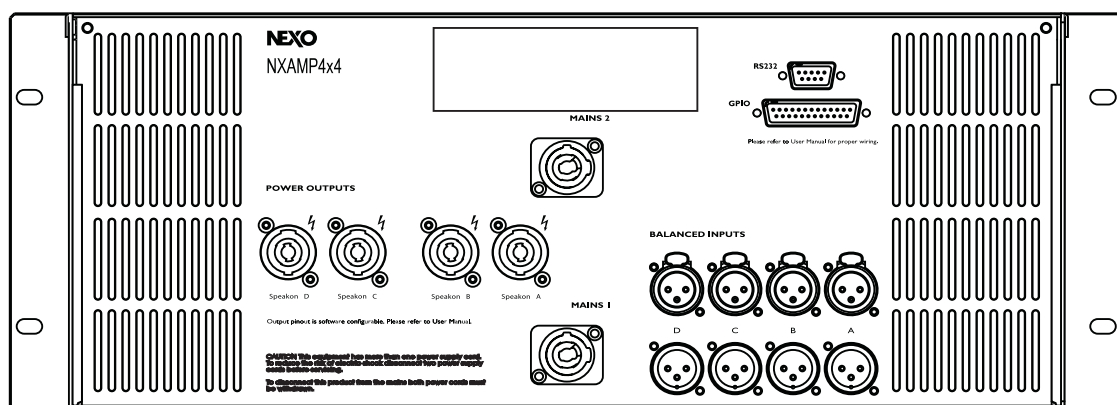
Mode	4 Channels	Bridge Stereo
NXAMP4x1	4 x 650 Watts / 8 Ohms	2 x 1800 Watts / 8 Ohms
	4 x 900 Watts / 4 Ohms	2 x 2600 Watts / 4 Ohms
	4 x 1300 Watts / 2 Ohms	
NXAMP4x4	4 x 1900 Watts / 8 Ohms	2 x 6800 Watts / 8 Ohms
	4 x 3400 Watts / 4 Ohms	2 x 8000 Watts / 4 Ohms
	4 x 4000 Watts / 2 Ohms	

3.2.1 NXAMP connectors

NXAMP4x1 and NXAMP4x4 rear panels feature:

- 4 analog inputs / outputs (links) on XLR3 connectors;
- 4 digital inputs / outputs on RJ45 connectors with optional card;
- 4 speaker level outputs on NL4FC connectors.

Figure below shows connectors implementation on the rear panel.



3.2.2 45°N-12 and NXAMP recommended configurations

Below table lists basic requirements for proper use of NXAMP TD Controllers in conjunction with 45°N-12:

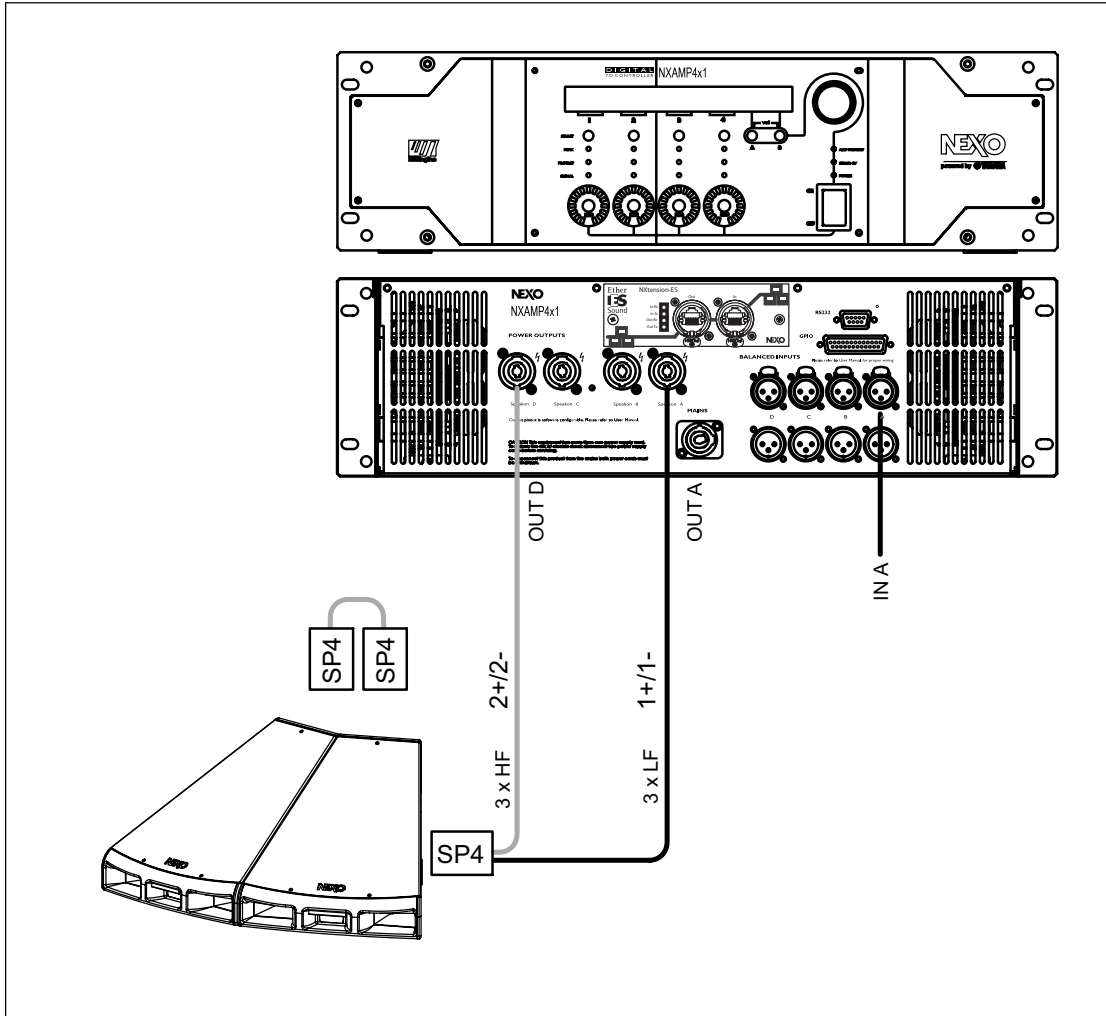
	Passive Mode	Active Mode
1 or 2 x 45°N-12	1 channel of NXAMP4x1 in Bridge Stereo Mode 1 channel of NXAMP4x4 in 4 channels Mode	2 channels of NXAMP4x1 in Bridge Stereo Mode 2 channels of NXAMP4x4 in 4 channels Mode
3 x 45°N-12	1 channel of NXAMP4x4 in 4 channels Mode	2 channels of NXAMP4x4 in 4 channels Mode

Please refer to following documents (available at www.nexo-sa.com) for detailed information on specific configurations:

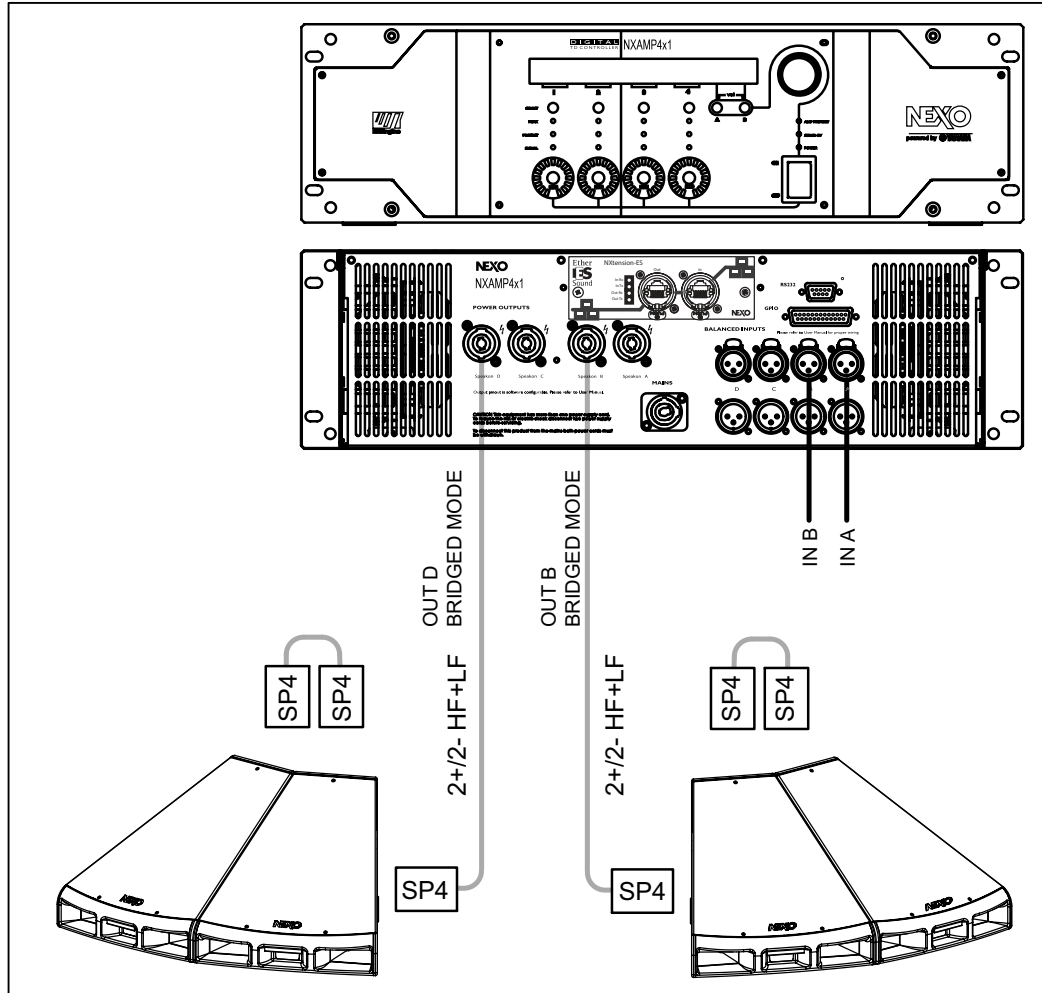
- NXAMP4x1 and NXAMP4x4 User Manual
- NXAMP Application Guideline
- NXAMP Load Setup list

4 CONNECTION DIAGRAMS

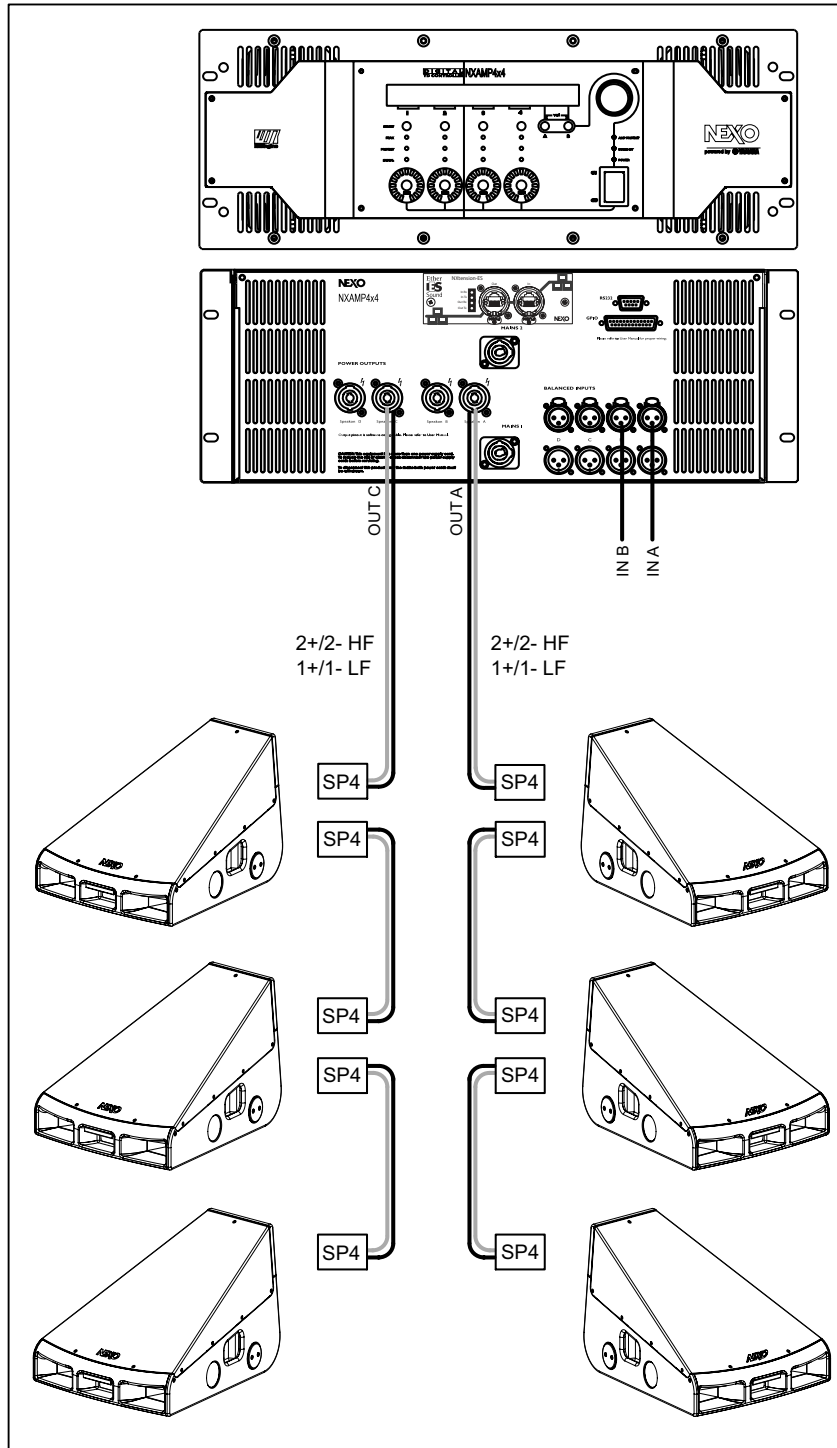
4.1 45°N-12 / NXAMP4x1 - Bridge Stereo – Active mode



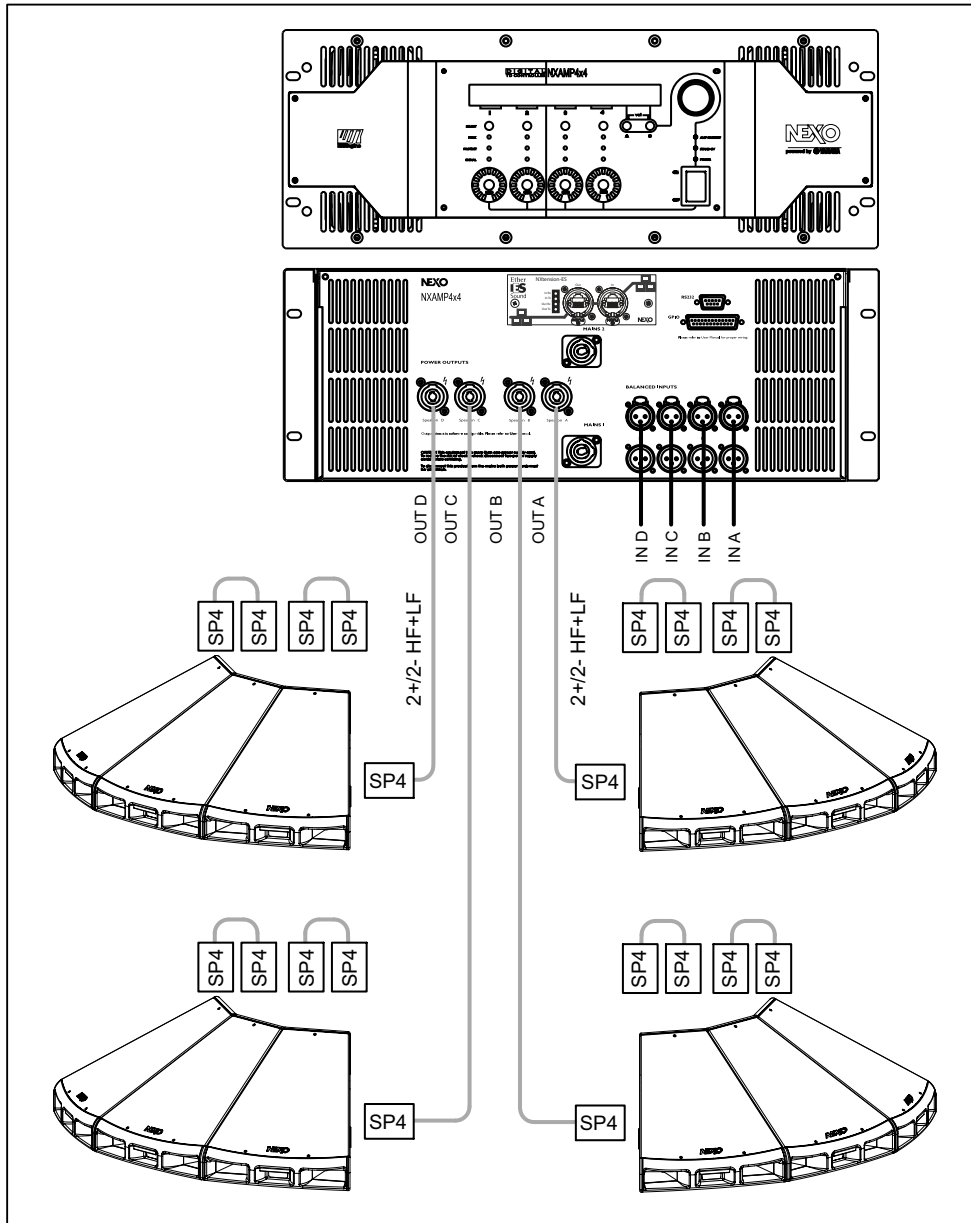
4.2 45°N-12 / NXAMP4x1 - Bridge Stereo – Passive mode



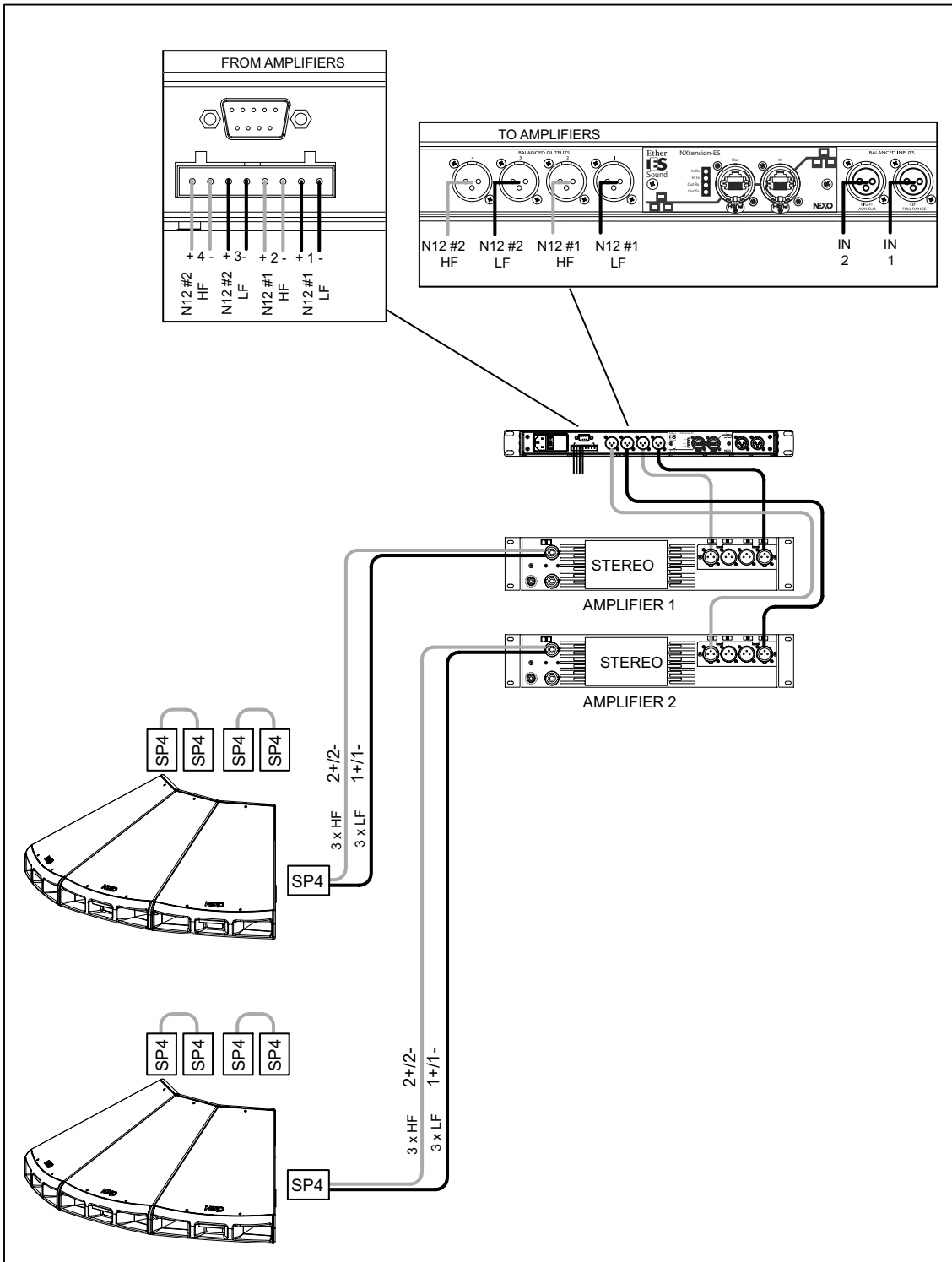
4.3 45N12 / NXAMP4x4 - 4 Channels – Active Mode



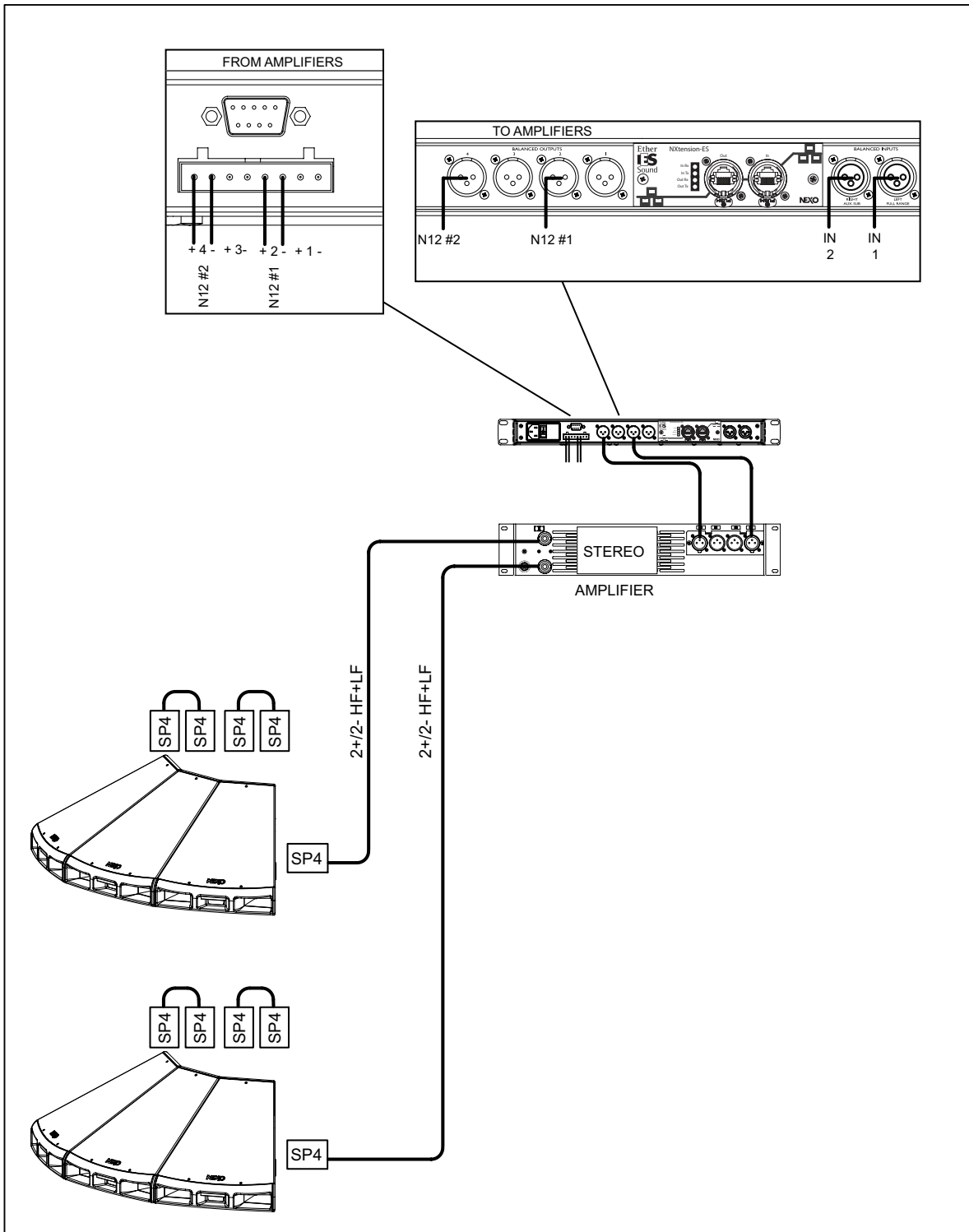
4.4 **45°N-12 / NXAMP4x4 - 4 Channels – Passive Mode**



4.5 45°N-12 / NX242-ES4 – Active Mode



4.6 45°N-12 / NX242-ES4 – Passive Mode



5 APPLICATION GUIDELINES

5.1 SAFETY FIRST

Before proceeding with installation of 45°N-12, please ensure that the components are present and undamaged. In the event of any shortage, please contact your supplier.

Statistically, many more injuries occur due to unstable ground set systems than those associated with flown systems. There are several reasons for this fact, however the message is clear:

Always survey the supporting structure upon which 45°N-12 is to be set. Inspect stage support and if necessary ask for the stage scrims and dressings be removed to allow access.

If the stage surface slopes, as it does in some theatres, ensure that the system is prevented from sliding forwards due to vibration. This may require the fitting of timber battens to the stage floor.

For outdoor systems ensure that the system is protected from wind forces which might cause the monitor system to become unstable. Wind forces can be huge, especially upon large systems, and should never be underestimated. Observe meteorological forecasts, calculate the “worst case” effect upon the system prior to erection and ensure that the system is secured appropriately.

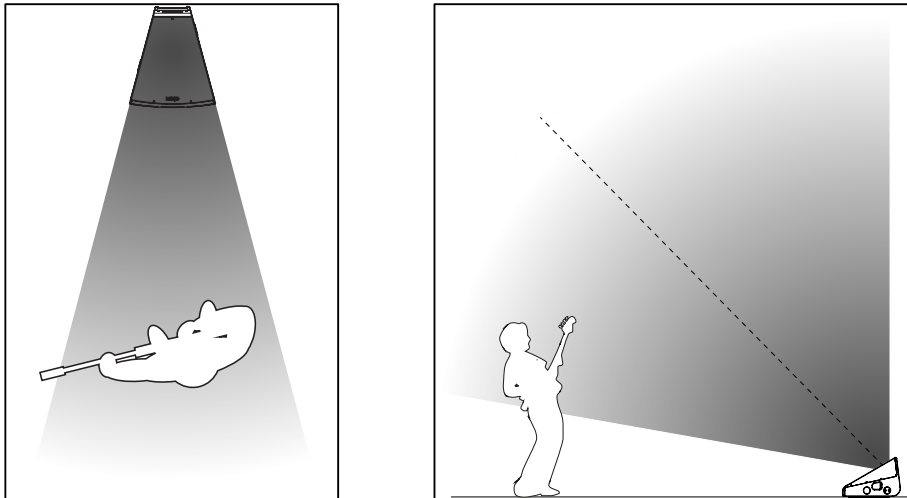
Be aware that safety procedures are as important in the truck and in the warehouse as they are at the venue.

5.2 45°N-12 Coverage

Below figures illustrate 45°N-12 horizontal and vertical coverage behavior.

Main coverage features are:

- 30° horizontal coverage, scalable by 30° steps by arraying units;
- Asymmetrical vertical coverage, defined so that frequency response level within +/-3 dB from 0 to 2 meters.



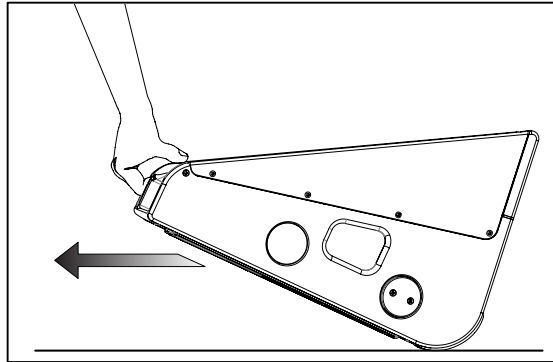
HORIZONTAL AND VERTICAL COVERAGE

5.3 Handling 45 N-12 on stage

Moving cabinets

In order to move 45°N-12 quickly on stage:

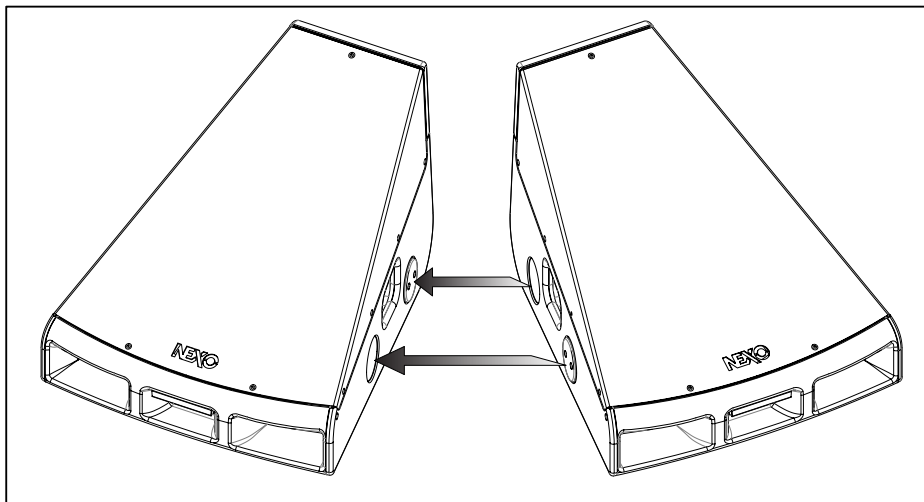
- lift the cabinet from the front handle
- slide it on the rounded rear skids
- drop it at its new position.



Locking cabinets

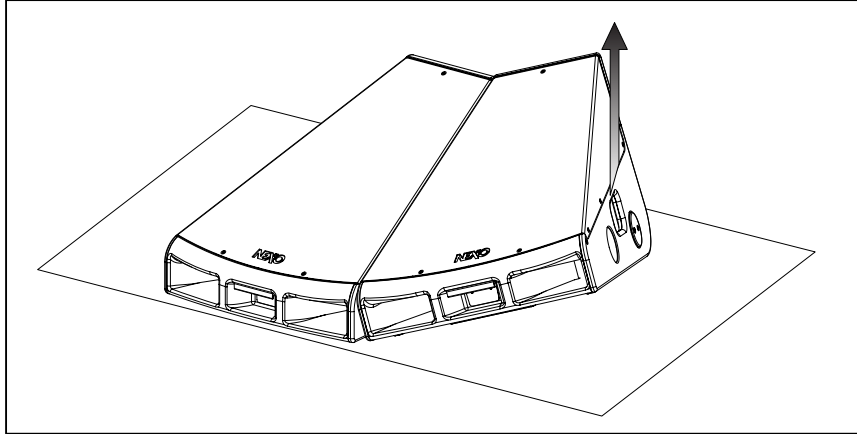
An integrated magnetic locking system allows connecting multiple monitors together without requirement for additional parts.

Locking is achieved by simply adjusting cabinets side by side.



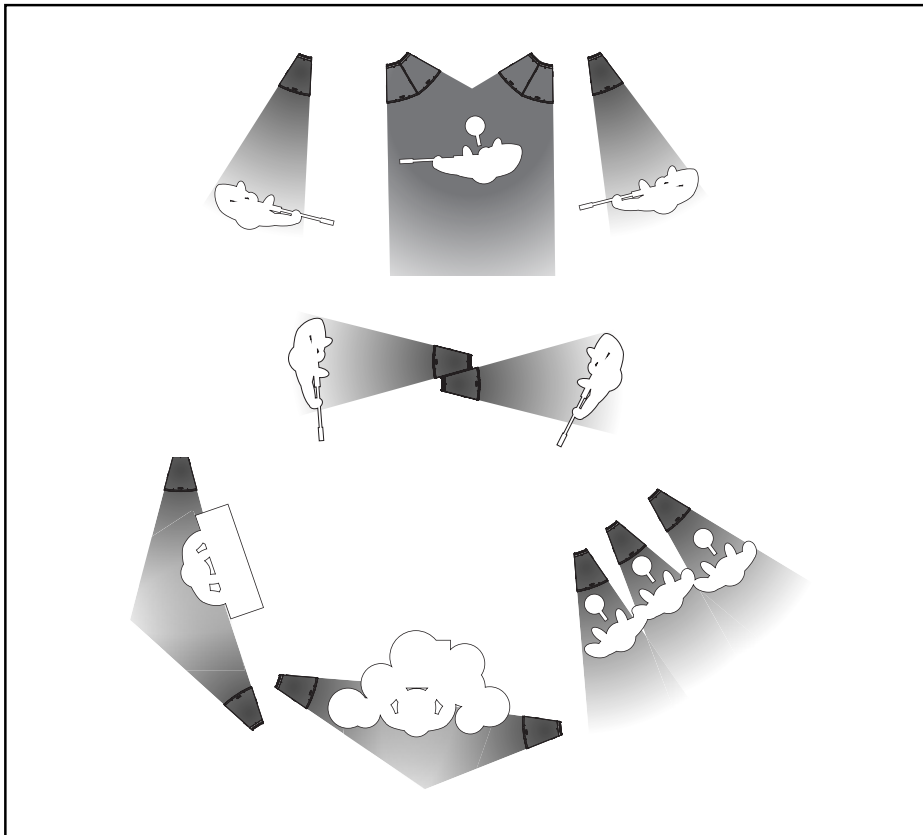
Unlocking cabinets

To unlock cabinets, simply lift one of the side handles: cabinets will unlock with almost no effort.



5.4 Stage monitoring applications

Below figures indicate various possible usages for 45°N-12 line monitor.



5.5 Testing and Maintenance of the system

Cleaning: The exterior of the cabinet can be cleaned with a damp cloth soaked in mild soapy water.

On no account use solvent based cleaners, which may damage the finish of the cabinet.

After cleaning, the 45°N-12 front grid must be treated with a suitable lubricant to prevent rusting.

NEXO recommends the use of Scottoil FS365 which is a water-based lubricant with a mixture of machine oil, surfactant and anti-rust treatment.

6 45°N-12 TECHNICAL SPECIFICATIONS

6.1 System specifications

SYSTEM SPECIFICATIONS	45N12 with TDcontroller
Frequency Response [a]	55 Hz - 19 kHz \pm 3dB
Usable Range @-6dB [a]	50 Hz – 20 kHz
Sensitivity 1W @ 1m [b]	106 dB SPL Nominal - 104 dB SPL Wideband
Nominal Peak SPL @ 1m [b]	1 unit: 137 to 140dB Peak / 2 units: 140 to 143dB Peak
HF Dispersion [c]	30° Horizontal - Scalable 30° steps when arrayed. 22.5° Diagonal (Coupling Plane) - Scalable 22.5° steps when arrayed. 60° Vertical (Asymmetrical -45° / +15°).
Crossover Frequencies	LF-HF: 1kHz Active or Passive (internally configurable).
Nominal Impedance	Active LF 8 Ω , HF 16 Ω . Passive 8 Ω .
Recommended Amplifiers	Active LF 1000 to 1500 W 8 Ω / HF 250 to 500 W 16 Ω . Passive 1200 to 2000 W 8 Ω .
SYSTEM OPERATION	
Electronic Controller	The NEXO TDcontroller's presets are precisely matched to the 45N Series cabinets and include sophisticated protection. Using 45°N-12 cabinets without a properly connected NEXO TDcontroller will result in poor sound quality and can damage components.
Dispersion configuration	Internally mounted magnets allow 45°N-12 inter-cabinet locking for coverage / SPL scalability.
Subbass	LS600 extends system low frequency response down to 38 Hz.
Speaker Cables	Active: 1-/1+ :LF; 2-/2+ : HF. Passive: 1-/1+ : Not Connected; 2-/2+ :LF + HF.
PRODUCT FEATURES	
Components : LF [VLF] HF	LF 1 x 12" (30 cm) high excursion Neodymium 8 Ω driver. HF 1 x 3" voice coil, 1.4" throat Neodymium 16 Ω compression driver on a 22.5° hyperboloid reflective wavesource.
Height x Width x Depth	392 x 492 x 576 mm (15.43" x 19.37" x 22.67").
Weight : Net	24 kg (53 lbs).
Connectors	2 x NL4MP SPEAKON 4 pole
Construction	Main structure: Baltic Birch Ply finished with structured black coating. Rear lower and bottom section: Steel with dark grey coating. Front vents and rear upper section: Injected polyurethane front vents, black coating.
Fittings:	4 handles (2 side metal recessed, 2 front and rear moulded).
Front finish	Perforated dark grey metal grille.
Locking Elements	Integrated magnets for mechanical locking.

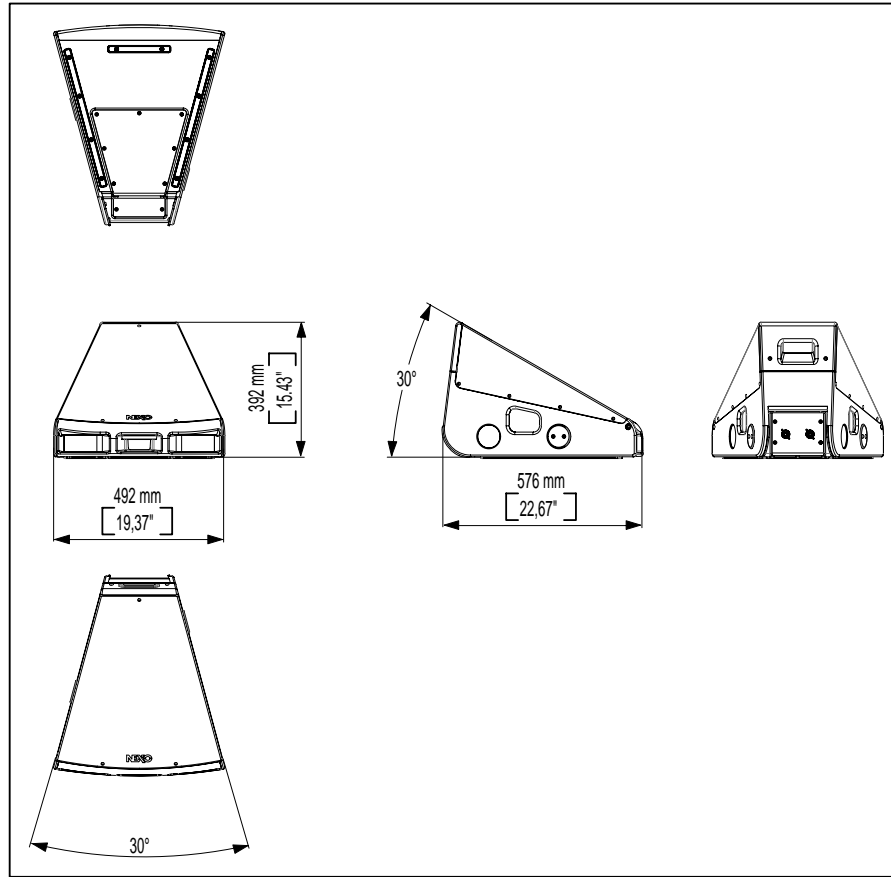
As part of a policy of continual improvement, NEXO reserves the right to change specifications without notice.

[a] Response curves & data : Half-Space Far Field for the 45°N-12 + NXTD Controller.

[b] Sensitivity & Peak SPL data : these will depend on spectral distribution and crest factor of program material. Measured with band limited Pink Noise. Nominal refers to Voice Decade (300Hz - 3kHz), Wideband to the specified \pm 3dB range. Data are for speaker + processor + recommended amplifier combinations. Peak SPL is at clipping of recommended amplifier.

[c] Directivity curves & data : obtained by computer treatment on off axis response curves.

6.2 Dimensions



6.3 Component List

MODEL	DRAWING	DESCRIPTION
45N12		45N12 speaker
NX 242-ES4		Digital TDcontroller
NXAMP4x1		Digital Powered Controller 4x1300W
NXAMP4x4		Digital Powered Controller 4x4000W

7 USER NOTES

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