DIGITAL TD CONTROLLER ηNXAMP4

DP7725-01a-JC

NEXO

ηNXAMP4 / ηNXAMP4-D POWERED TD CONTROLLER

AND NANORM POE REMOTE CONTROL DEVICES

STATUS
INPUT
OUTPUT
NETWORK
WIFI

DIGITAL TD CONTROLLER ηNXAMP4

NEXO

USER MANUAL (FIRMWARE V1.6.5)

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SAFETY PRECAUTIONS

<table>
<tr>
<td>
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.

The above warning is located on the top of the unit.
</td>
<td>
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not remove covers.
Dangerous voltages exist inside.
Refer all servicing to qualified personnel only.
</td>
<td>
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.
</td>
</tr>
</table>

SAFETY INSTRUCTIONS

Read this manual before using the nanoNXAMP4 or nanoNXAMP4-D.

Keep this manual available for further reference.

Observe all warnings and cautions.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation opening, 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 product heat.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized 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.

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.

Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Unplug this apparatus during lighting 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 spiller or exposed to rain or moisture, does not operate normally, or has been dropped.

Please check the NEXO Web site nexo-sa.com to get the most up-to-date version of this manual.

Ensure you are aware of the safety rules applying to rigging, stacking, or installing on tripod or speaker stand. Failure to observe these rules may expose persons to potential wounds or even death.

Only use the system with accessories specified by NEXO.

Please always consult a NEXO-accredited technician if the installation needs architectural works and observe following precautions:

> ⚠ **WARNING!**
>
> **TO REDUCE THE RISK OF FIRE OR ELECTIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.**
>
> **(UL60065_03)**

Please regularly check the system condition.

PRECAUTIONS

Please read carefully before proceeding. Please keep this manual in a safe place for future reference.

⚠ WARNING!

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

POWER SUPPLY/POWER CORD

Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.

Use only the included power cord if any. If you intend to use the device in an area other than the one you purchased, the included power cord may not be compatible. Please check with NEXO.

Do not use the included power cord for other devices.

Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock.

Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.

When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.

To disconnect this device from the mains, unplug the power cord.

Even when the Standby/On switch is in standby status (display is off), electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the power cord from the wall AC outlet.

Do not open the device, do not try to disassemble it neither to modify it in any way. The system doesn't include any user-serviceable parts. If the system seems to be malfunctioning or damaged, stop using it at once and have it repaired by a NEXO qualified personnel.

WATER WARNING

Do not expose the system directly to the rain, do not immerse it into fluids, do not place objects filled with liquid on the system. If a liquid gets into the device, turn off the power immediately and unplug the power cord from the AC outlet. Then have it inspected by a NEXO qualified technician.

Never insert or remove an electric plug with wet hands.

IF YOU NOTICE ANY ABNORMALITY

If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the device, or any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified NEXO service personnel.

If this device should be dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified NEXO service personnel.

LOCATION

Before moving the device, remove all connected cables.

When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.

If this device is to be mounted in an EIA-standard rack, leave the back of the rack open and make sure that it is at least 10 cm away from walls or surfaces. Also, if the device is to be mounted with devices that tend to generate heat, such as power amplifiers, be sure to keep an adequate gap between this device and the heat-generating devices or install ventilation panels to prevent high temperatures from developing inside this device.

Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.

Do not use in a confined, poorly ventilated location. If this device is to be used in a small space other than an EIA-standard rack, make sure that there is adequate space between the device and surrounding walls or other devices: at least 25 mm (1 in) from one of the two sides, 80 mm (3.1 in) behind and 40 cm above.

Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.

Do not place the device in a location where it may come into contact with corrosive gases or salt air. Doing so may result in malfunction.

Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.

Do not place the device in an instable position where it might accidentally fall over.

Do not block the vents. This device has ventilation holes at side and back to prevent the internal temperature from becoming too high. In particular, do not place the device on the side or the back. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.

Do not use the device in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Doing so may result in noise, both in the device itself and in the TV or radio next to it.

Keep the device out of reach of children, to keep them from putting their fingers into openings on the equipment and accidentally being injured.

CONNECTIONS

Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.

Use only speaker cables for connecting speakers to the speaker jacks. Use of other types of cables may result in fire.

Use only supplied Euroblock style connector for symmetrical input audio signal and GPIO connections.

Use only supplied Euroblock style connector for connecting Speakers.

MAINTENANCE

Inspect the ventilation holes and clean them periodically. Dust and dirt can seriously degrade the effectiveness of the cooling and result in malfunction or fire.

Remove the power plug from the AC outlet when cleaning the device.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified NEXO service personnel about replacing deflective components.

HANDLING CAUTION

When turning on the AC power in your audio system, always turn on the device LAST, to avoid speaker damage. When turning the power off, the device should be turned off FIRST for the same reason.

Do not insert your fingers or hands in any gaps or openings on the device (vents…).

Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device (vents, etc.) If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified NEXO service personnel.

Do not use the device for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches, or connectors.

Do not use this device for any purpose other than driving loudspeakers.

Rapidly turning the unit on and off in succession can cause it to malfunction. After turning the unit off, wait for more than five seconds before turning it on again.

⚠ WARNING!

This ⚡ mark indicates a dangerous electrically live terminal. When connecting an external wire to this terminal, it is necessary either to have "a person who have received appropriate guidance on handling" make the connection or to use leads or a cord that have been manufactured in such way that the connection can be made simply and without problem.
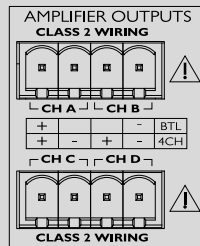
COMPLIANCE INFORMATION

FCC INFORMATIONS (U.S.A.)

IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by NEXO-SA may void your authority, granted by the FCC, to use the product.

IMPORTANT

When connecting this product to accessories and/or another product use only high-quality shielded cables. Cable(s) supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

NOTE

This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "A" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the user manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter(s).

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 Ohms ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you cannot locate the appropriate retailer, please contact the After Sales department of NEXO-SA, Parc d'Activité du Pré de la Dame Jeanne, B.P.5, 60128 PLAILLY, FRANCE.

Declaration of Conformity

We,	**NEXO SA**
	ZA DU PRE DE LA DAME JEANNE
	60128 PLAILLY – France
Declare under our sole responsibility that the product	**TD Controller**
Type	**nanoNXAMP4, nanoNXAMP4-D**
Serial number	**On the product**
Is in conformity with the provisions of the following directive including all applicable amendments:	**Safety of electrical equipment** **EN 62368-1:2014 + AC:2015-02 + AC:2015-05 + AC:2015-11+ AC:2017-03 + AII:2017**
	Radio equipment (RED) **EN 300 328 V2.2.2** **EN 301893 V2.1.1**
	Exposure of humans to electromagnetic fields (EMF) **EN 62479:2010**
	Electromagnetic Compatibility (EMC) **EN 301489-1V1.9.2** **EN 301 489-1V2.1.1** **EN 301 489-1V2.2.3** **EN 301 489-17 V3.1.1** **EN 301489-17 V3.2.4** **EN 55032:2015 + AC:2016 + AII:2020 + AI:2020** **EN 55035:2017 + AC:2019-11+ AII:2020** **EN 55103-2:2009** **EN 61000-3-2:2014** **EN 61000-3-3:2013 + A1:2019**
	Restricted substances in electrical products **EN IEC 63000:2018**
Plailly, April 1st, 2024	**Joseph CARCOPINO, R&D Director**

INFORMATON

European models

Purchaser/User information specified in EN55103-2:2009.

Conforms to Environments: E1, E2, E3 and E4.

The model number, serial number, power requirements, etc., be found on or near the name plate, which is at the top of the unit. You should note this serial number in the space provided below and retain this manual as a permanent record of your purchase to aid identification in the event of theft.
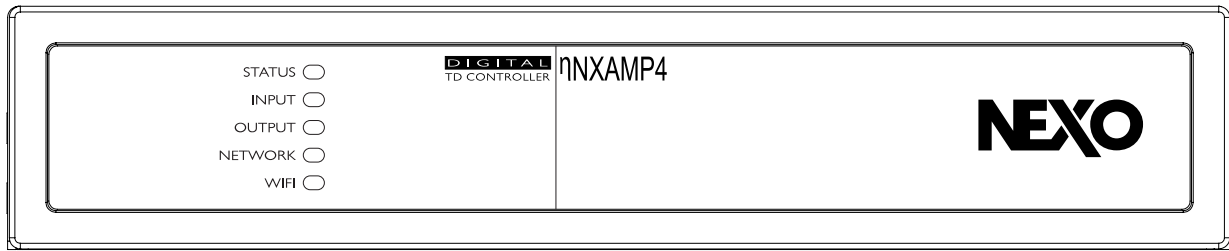
Model No

Serial No

PACKAGING

CONTENT

Open the box with care to prevent damage on the content. Inside you will find:

- 1 x nanoNXAMP4 or nanoNXAMP4-D Powered TDController.
- 1 x nanoNXAMP4 / nanoNXAMP4-D Quick Start guide
- 2x Euroblock type Input connector
- 2x Euroblock type Output connector
- 1x Euroblock type GPIO connector
- 4x Adhesive rubber feet

Welcome to the nanoNXAMP4 and nanoNXAMP4-D manual. Please take some time to read it and learn how to set up the device.

The nanoNXAMP4 or nanoNXAMP4-D are four-channel powered TD Controller developed to perfectly match several series of NEXO speakers.

A TD Controller is a highly sophisticated audio processing unit, design to enhance the sonic performances as well as to protect the NEXO speakers. This processor is coupled with four channels of power amplifier.

RACK INSTALLATION

The nanoNXAMP4 or nanoNXAMP4-D can be installed on a flat surface, including wall or ceiling (through dedicated accessory NANOWM) or can be mounted into a suitable rack unit (through dedicated accessory NANORK).
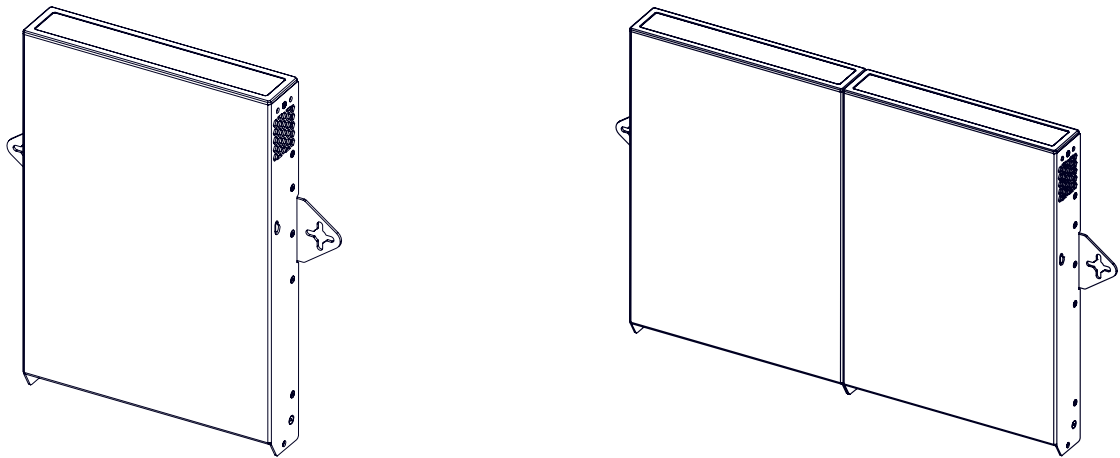
The above pictures show 1x nanoNXAMP4 or 2x nanoNXAMP4 mounted with NANOWM accessory.
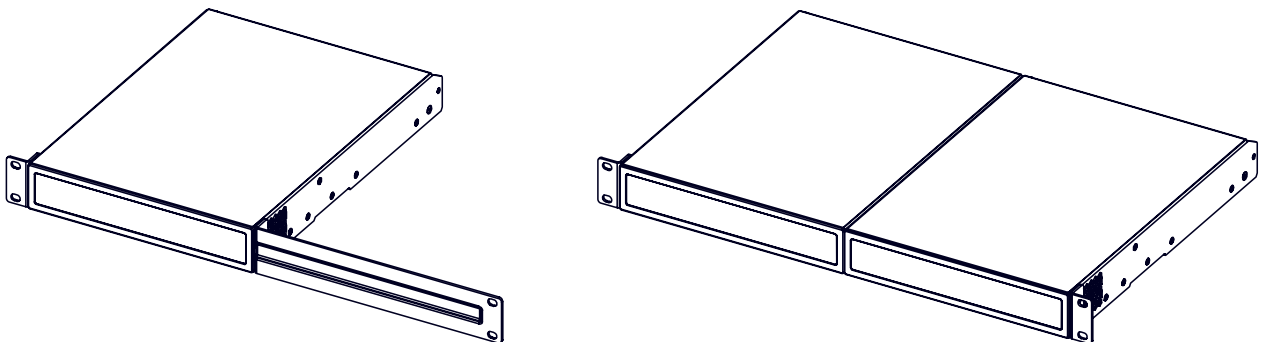
The above pictures show 1x nanoNXAMP4 or 2x nanoNXAMP4 mounted with NANORK accessory.

Air flow of the nanoNXAMP4 or nanoNXAMP4-D is from side to back, thus installation can mix DTDAMP (with DTD Controller), first generation NXAMP or NXAMPmk2 in the same rack, all using the same air flow direction.

SPEAKER CABLE CHOICE

⚠ WARNING!

High voltage can be present on the power amplifier output terminals. Use at least NEC (National Electrical Code) UL13 CL3 (under 300V) wiring cable to connect the nanoNXAMP4 or nanoNXAMP4-D to the NEXO speakers.

To minimize power and damping factor losses in speaker cable, use suitable gauges from the table below.

Load Impedance (Ohms)	2	2.6	4	8
Cable section	Maximum length in meters (feet)			
0.75 mm² (AWG #18)	5 (18)	8 (26)	11 (37)	23 (75)
1.5 mm² (AWG #15)	11 (36)	16 (52)	23 (75)	46 (150)
2.5 mm2 (AWG #13)	20 (66)	28 (92)	40 (130)	80 (260)
4 mm2 (AWG #11)	32 (105)	40 (130)	64 (210)	128 (420)
6 mm2 (AWG #9)	48 (160)	64 (210)	96 (315)	192 (630)

FRONT PANEL DESCRIPTION

The nanoNXAMP4 or nanoNXAMP4-D features five front panel indicators.
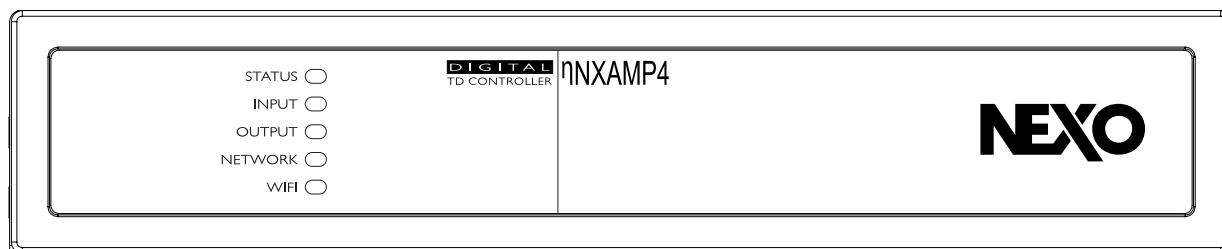
STATUS INDICATOR

There are four possible states for this led:

- Off: The nanoNXAMP4 or nanoNXAMP4-D is not powered / Mains not connected.
- Green: The nanoNXAMP4 or nanoNXAMP4-D is operational.
- Pulse Green: The nanoNXAMP4 or nanoNXAMP4-D is in Standby mode.
- Amber: The nanoNXAMP4 or nanoNXAMP4-D is triggered in Standby mode through the GPIO.

INPUT INDICATOR

There are three possible states for this led:

- Off: No input signal.
- Green: Signal is present on at least one input.
- Amber: Signal is limiting/clipping on at least one input.

OUTPUT INDICATOR

There are four possible states for this led:

- Off: No output signal.
- Green: Signal is present on at least one ouput.
- Amber: Signal is limiting/clipping on at least one output.
- Red: At least one channel pair is in protection because of overload.

NETWORK INDICATOR

There are two possible states for this led:

- Off: No Ethernet network detected.
- Green: Ethernet network detected.
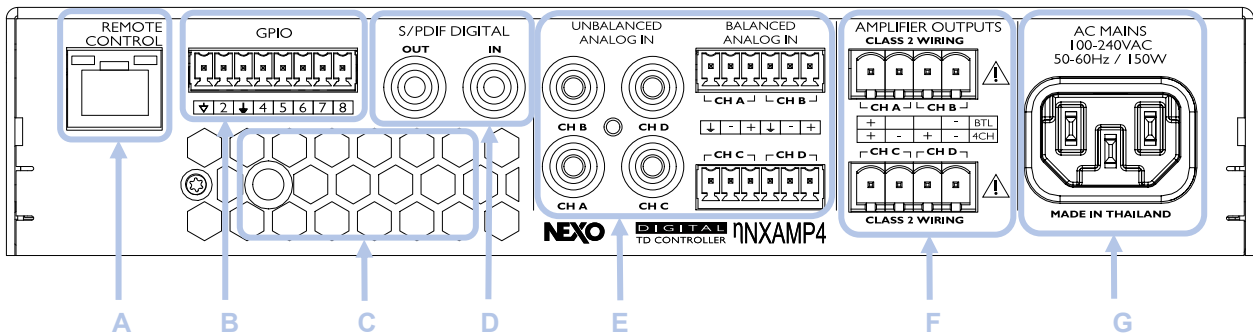
WIFI INDICATOR

There are two possible states for this led:

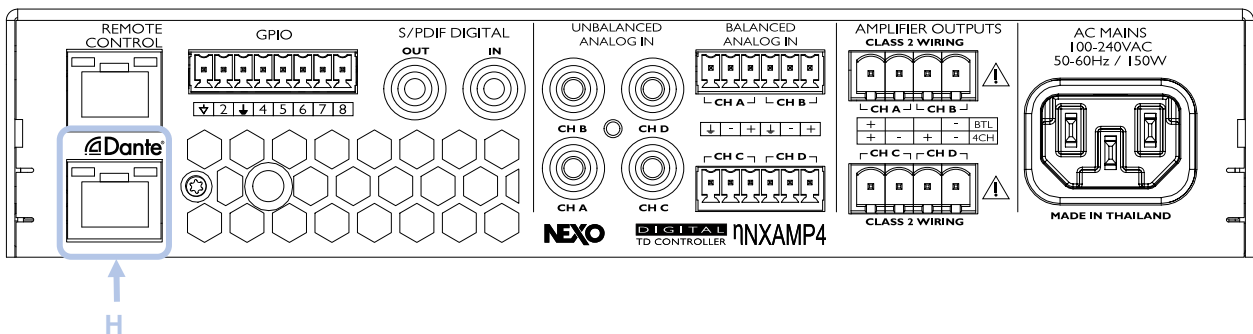- Off: Wi-Fi disabled.
- Green: Wi-Fi enabled.

NB: the nanoNXAMP4 or nanoNXAMP4-D Wi-Fi operates in the 2.4 GHz band. The maximum output power is 20 dBm (=100 mW).

BACK PANEL DESCRIPTION

The nanoNXAMP4 or nanoNXAMP4-D back panels are different, the nanoNXAMP4-D featuring an extra Dante (Audio over IP) port.

Back panel of nanoNXAMP4

Back panel of nanoNXAMP4-D with additional Dante port

A: REMOTE CONTROL PORT

This RJ45 features the 100 Mb Ethernet (100BASE-T) network connectivity of the nanoNXAMP4. It is mandatory to connect at least one time the unit to a properly configured wired or wireless network (WIFI) in orfer to select the correct NEXO speaker connected to each output.

Network connectivity can also be used to remote control the nanoNXAMP4 through the dedicated hardware remotre control with POE (Power Over Ethernet) named NANORM-EU (EU form factor) or NANORM-US (US form factor). See further in the manuel how to setup those external remote controls.

B: GPIO PORT

The GPIO port is used to interface the nanoNXAMP4 to external remote control or monitoring device, or to do some simple tasks like 12 Volts triggering, muting, going to stand-by mode or controlling the volume.


⚠ **WARNING!**

On the first batches of nanoNXAMP4 the silkscreen of the GPIO on the back panel is reversed. Please consider the GPIO orders as described in this manual.
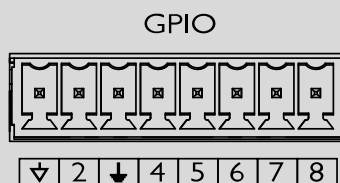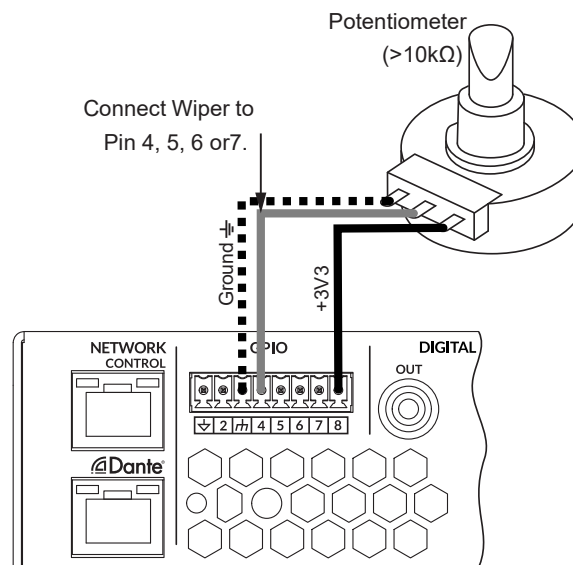
GPIO

- The GPIO connector must not be used for any unintended purpose. Amplifier damage may result from incorrect use of GPIO.

- Shielded cable must be used when connecting standby switches and potentiometers via GPIO.

- GPIO Pin 8 has a low output impedance and can supply a maximum current of 10 mA.

- GPIO Pin 1 and Pin 3 offer both ground connections: Pin 1 is connected directly to the amplifier chassis. Pin 3 is connected to the chassis via a 220 Ohm resistor. The "soft ground' connection of Pin 3 is potentially useful for managing ground loops that may cause audible hum.

The GPIO cable connection is done by stripping 5 mm of a typically 0.25 mm² (24 AWG) cable or multicore cable like depicted on the below illustration.
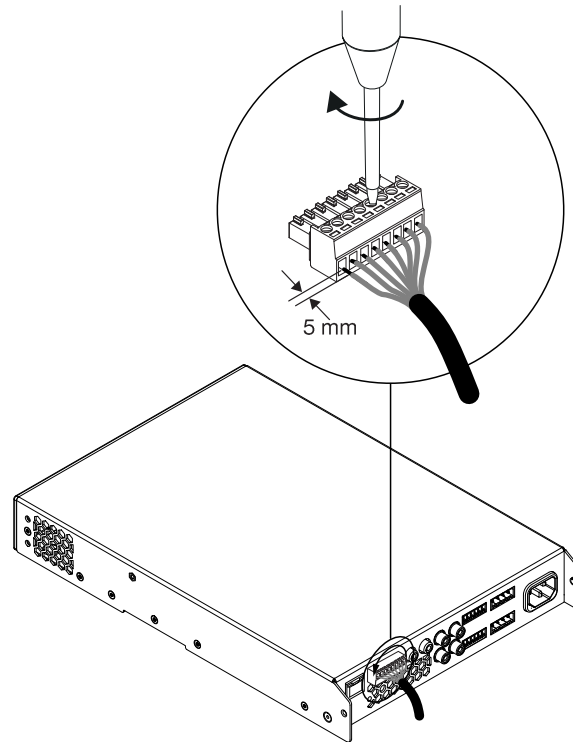
The below diagram shows a potentiometer connection for the remote volume control via GPIO. Note that Pin 4 to Pin 7 are available for volume control (see GPIO Settings Menu further in the manual).

The below diagram shows a switch connection for the stand-by or Mute of the unit via GPIO. Switch open or close toggles stand-by or Mute depending on options selected in the GPIO Settings Menu.
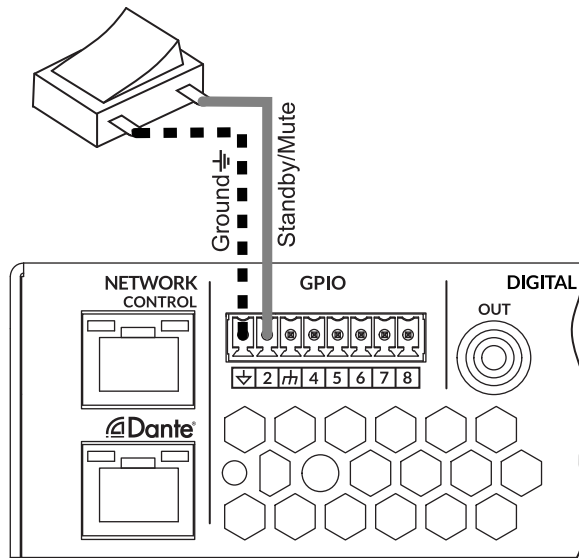
C: AIR EXHAUST

Do not obstruct the air exhaust at the back of the nanoNXAMP4 and leave at least 80 mm behind the unit for air flow. The air intakes are on both sides of the unit therefore a 25 mm clearance is needed on at least one of the two side of the unit.
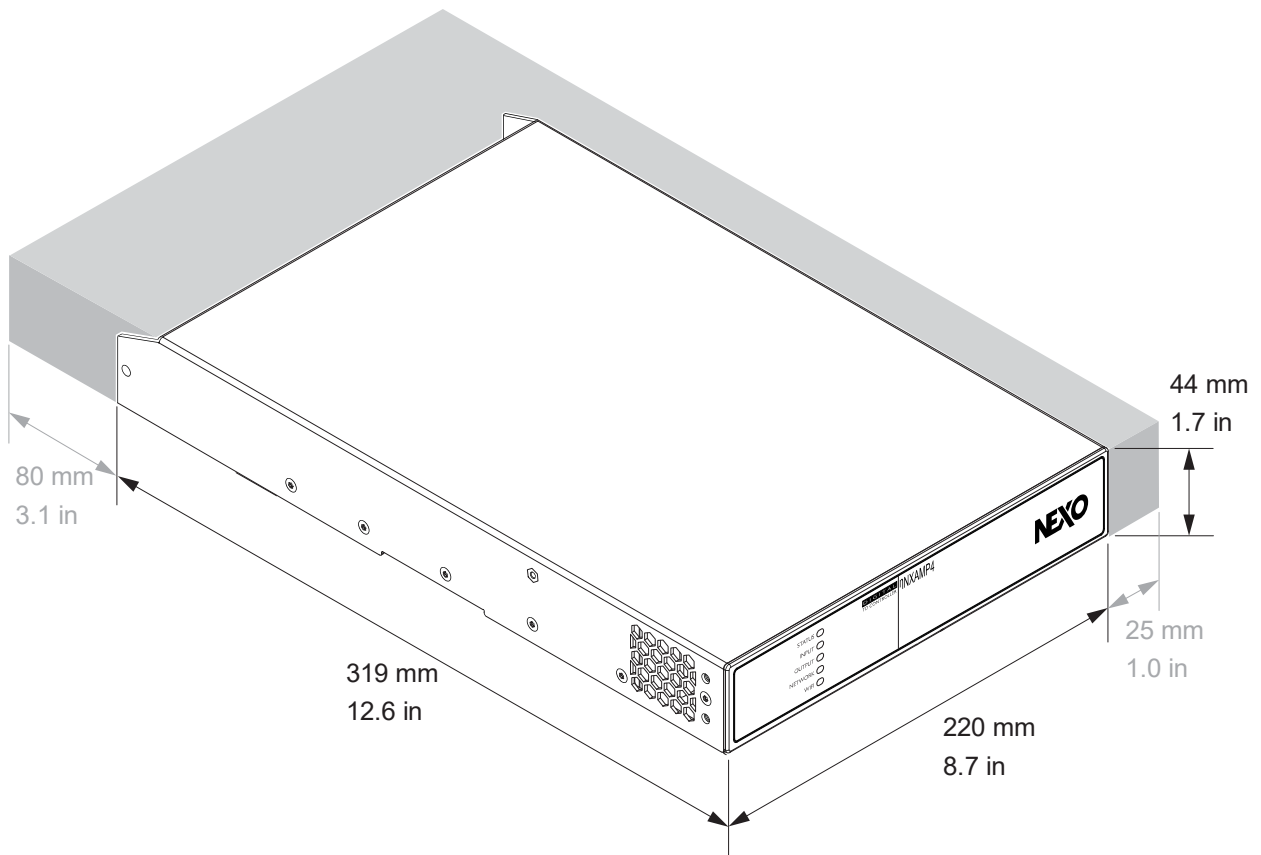
D: S/PDIF INTERFACE

The nanoNXAMP4 features a S/PDIF Input and Output interface on RCA Phono sockets that can be used to connect to digital audio sources (like TV receiver or network streamer) or output some of the nanoNXAMP4 Analog Inputs, Input Mix or Area Mix to other devices (like other nanoNXAMP4 units in daisy chain). Please configure the S/PDIF output source in the software.

75 Ohms RCA phono cables specifically intended for digital audio should always be used for S/PDIF connections. Standard Phono cables can be used by may not result in optimal performance.

The S/PDIF output level is by default set at -10 dB to reduce the possibility of downstream input clipping.

E: ANALOG INPUTS

There are four analog inputs on the nanoNXAMP4, each having a Euroblock connector for balanced connection and an RCA phono socket connected in parallel for unbalanced connection.
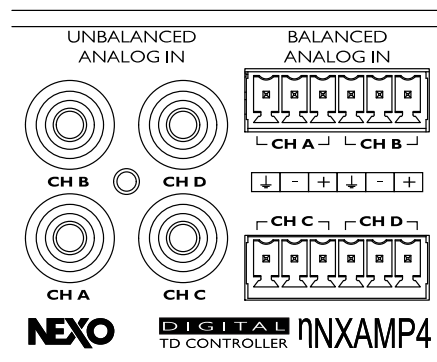
The analog sensitivity can be adjusted in the software, from microphone sensitivity to up to +24 dbU (for balanced connection).

An analog balanced connection is done by stripping 5 mm of a typically 0.25 mm² (24 AWG) cable or multicore cable like depicted on the below illustration.
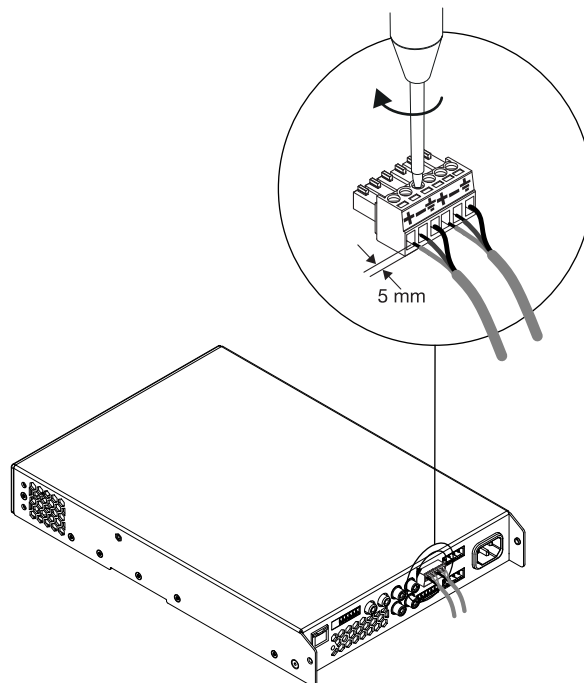
F: POWER AMPLIFIER OUTPUTS

There are four power amplifier outputs on the nanoNXAMP4, bridgeable (Bridge Tile Load : BTL) two by two to increase the power on the resulting output.

⚠ WARNING!

The exclamation point printed next to the output terminals of the amplifier is, in addition to the CLASS 2 WIRING test, intended to alert users to the risk of hazardous voltages. Output connectors that could pose a risk are marked with the exclamation point. Do not touch the output terminals while the amplifier is switched on. Make all connections with the amplifier switched off.
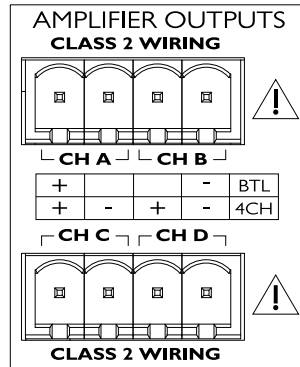

Depending on the selected NEXO speaker, the amplifier will automatically be configured in single amplifier channel mode or in BTL (2 amplifier channels bridged) mode.

In case a **Single amplifier channel mode** is recalled for the Channel A, the positive (+) amplifier terminal of the CH A should be connected to the positive speaker terminal and the negative (-) amplifier terminal of the CH A to the negative speaker terminal, and likewise for the Channels B, C and D.

In case a **Bridged (BTL) amplifier channels mode** is recalled for the Channel A (and therefore B) the two speaker cable conductors should be connected between the positive (+) terminal of the CH A and the negative (-) terminal of the CH B, and likewise for the Channels C and D.

Connecting cables to the supplied female output connector is illustrated below.
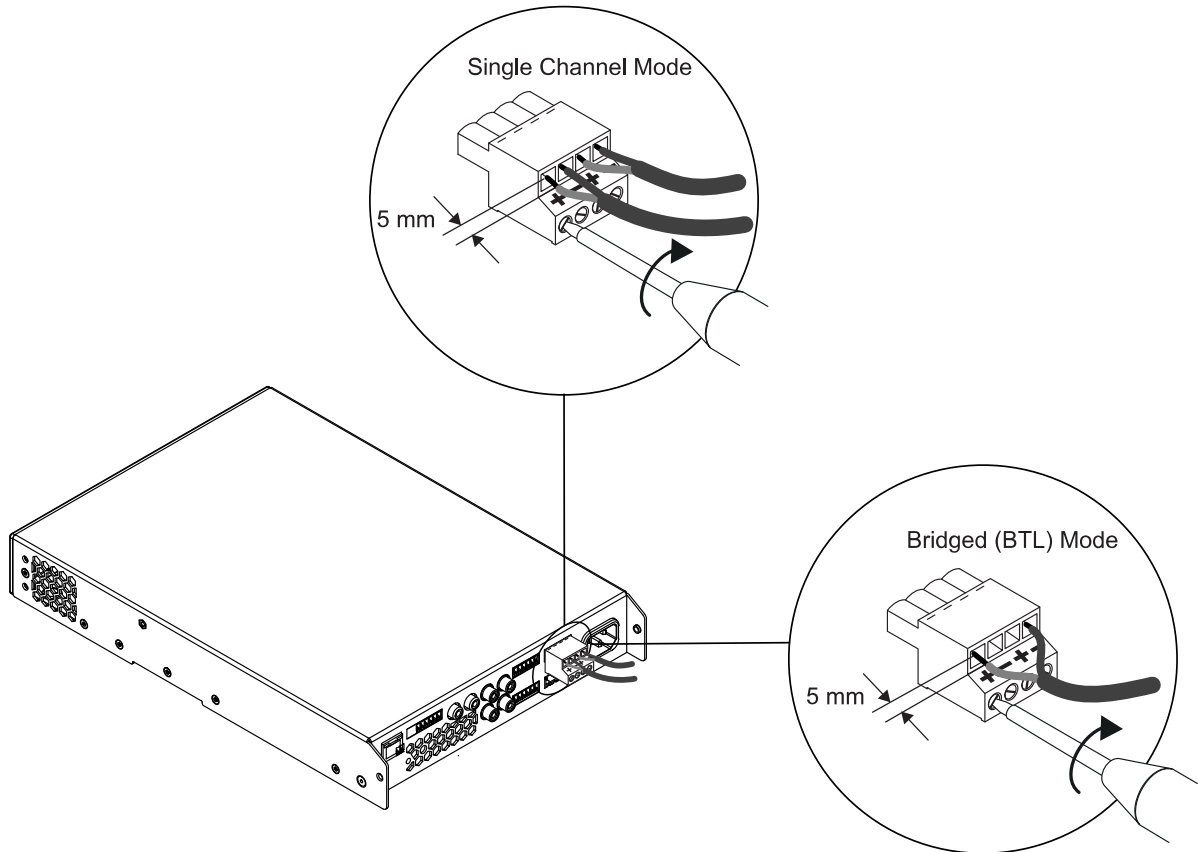
G: MAINS CONNECTORS

The nanoNXAMP4 can accept Mains from 100 to 240 Volts, both 50 to 60 Hz, thanks to its high efficiency active PFC (Power Factor Correction) system.

⚠ WARNING!

Check the local mains value and ensure that fits the needs of the nanoNXAMP4 before connecting.

Refer to the specification page of this document to know the main power requirement of the nanoNXAMP4 depending on the load connected.

The mains connection is done through standard IEC connector. Note that there is no mains power switch and so the nanoNXAMP4 is operational as soon as mains power is connected. Ensure that all signal, GPIO and output connections are made before connecting the amplifier to mains power.

H: DANTE INTERFACE (NANONXAMP4-D ONLY)

The nanoNXAMP4-D features an additional RJ45 connector to connect to a Dante (Audio over IP) network with a 100 Mb (100BASE-T) link. The Dante network can be routed and configured using the **Dante Controller** software available from Audinate website.

This Dante interface is totally independent from the nanoNXAMP4 remote control interface, with its own IP settings that can be set into the Dante Controller. Separate network can then be used for Dante on one side and Remote control on the other side. However, it is possible to connect both RJ45 to the same ethernet switch and use then a common network for both.

NANONXAMP4 SUPPORTED SETUPS LIST

The below list shows the NEXO cabinet supported by this version of the firmware (v1.6.5). Please go to nexo-sa.com to check for firmware updates to enable support for new cabinets.

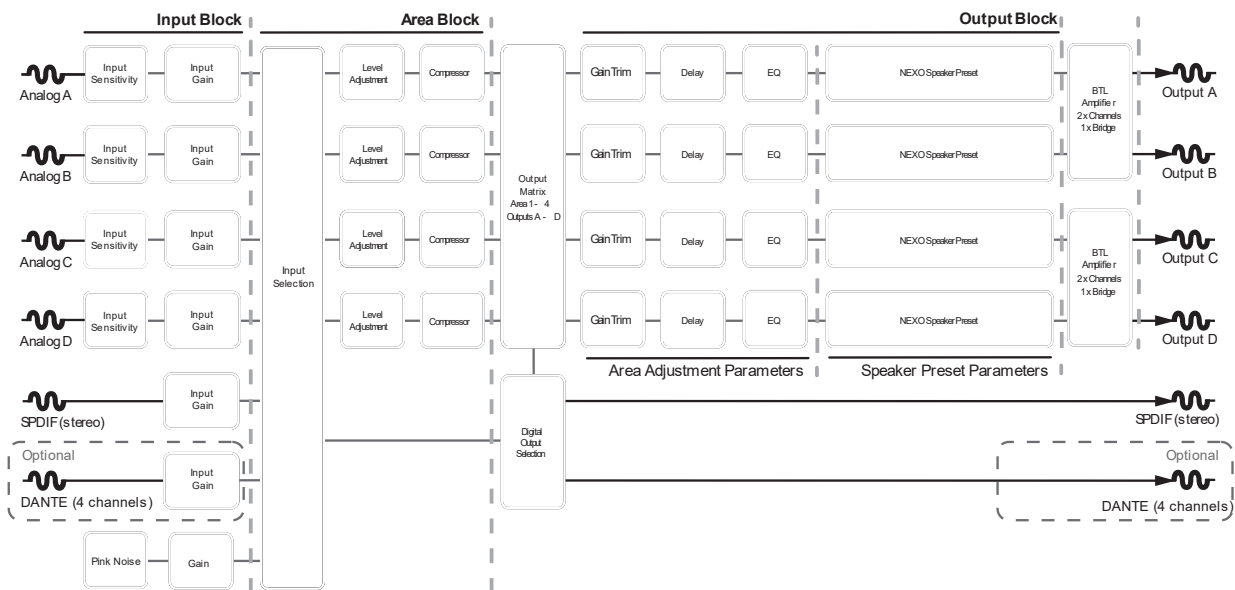| Family	Type	Cabinet	Mode	Crossover	nanoNXAMP4 mode
INSPACE DEFINITION	PASSIVE	ID14 100x100	Main	120-20k	Single Channel
				150-20k	
			Lounge	120-20k	
				150-20k	
		ID14 140x90	Main	120-20k	
				150-20k	
			Lounge	120-20k	
				150-20k	
	PASSIVE	ID24 120x40	Main	95-20k	Single Channel
				120-20k	
				150-20k	
			Front Fill	95-20k	
				120-20k	
				150-20k	
			Monitor	95-20k	
				120-20k	
				150-20k	
			Lounge	95-20k	
				120-20k	
				150-20k	
		ID24 120x60	Main	95-20k	
				120-20k	
				150-20k	
			Front Fill	95-20k	
				120-20k	
				150-20k	
			Monitor	95-20k	
				120-20k	
				150-20k	
			Lounge	95-20k	
				120-20k	
				150-20k	
		ID24 90x40	Main	95-20k	
				120-20k	
				150-20k	
			Front Fill	95-20k	
				120-20k	
				150-20k	
			Monitor	95-20k	
				120-20k	
				150-20k	
			Lounge	95-20k	
				120-20k	
				150-20k	
		ID24 60x60	Main	95-20k	
				120-20k	
				150-20k	
			Front Fill	95-20k	
				120-20k	
				150-20k	
			Monitor	95-20k	
				120-20k	
				150-20k	
			Lounge	95-20k	
				120-20k	
				150-20k	
	PASSIVE	ID84	Narrow	90-20k	Single Channel
				120-20k	
			Broad	90-20k	
				120-20k	
		ID84L	Narrow	90-1.5k	Single Channel
				120-1.5k	
			Broad	90-1.5k	
				120-1.5k	
INSPACE DEFINITION	SUB	IDS108	Omni	50-120	Single Channel
				50-150	
	SUB	IDS110	Omni or Cardio Front	40-85	Bridged Channels (BTL)
				40-95	
				40-120	
			Cardio Back	40-85	
				40-95	
				40-120	

Family	Type	Cabinet	Mode	Crossover	nanoNXAMP4 mode
εLS3	SUB	eLS400		45-85	Bridged Channels (BTL)
				45-120	
				45-150	
εPS3	PASSIVE	ePS6		90-20k	Single Channel
				120-20k	
				150-20k	
	PASSIVE	ePS8		80-20k	Single Channel
				85-20k	
				120-20k	
	PASSIVE	ePS10		70-20k	Single Channel
				85-20k	
				120-20k	

NANONXAMP4 DSP BLOCK DIAGRAM

Before entering the remote-control software description, it is important to understand the internal blocs of the Digital Audio Signal Processor (DSP), please see diagram below. There are three main successive logical blocs into the DSP structure:

- **Input Block**: This blocks deals with all the analog, digital, eventually network (nanoNXAMP4-D) Inputs or internal generator of the unit. The various inputs can be mixed in one of the four "Mix" available.

- **Area Block**: These four blocks are the heart of the unit, dealing with the input selection (direct of from on of the "Mix"), the priority input selection and the priority mode (Priority or Ducking).

- **Output Block**: These four outputs are related to the power amplifier modules and the DSP processing for the selected NEXO speaker. A Area output should be routed to each Output. In case of bridge (BTL) setup, two outputs (A+B or C+D) are used together as a pair to feed one speaker.

Input Block

Analog A — Input Sensitivity — Input Gain
Analog B — Input Sensitivity — Input Gain
Analog C — Input Sensitivity — Input Gain
Analog D — Input Sensitivity — Input Gain
SPDIF (stereo) — Input Gain
Optional DANTE (4 channels) — Input Gain
Pink Noise — Gain

Area Block

Input Selection
Level Adjustment — Compressor (×4)

Output Block

Output Matrix Area 1 - 4 Outputs A - D
Digital Output Selection

Area Adjustment Parameters

Gain Trim — Delay — EQ (×4)

Speaker Preset Parameters

NEXO Speaker Preset (×4)

BTL Amplifier 2x Channels 1x Bridge
BTL Amplifier 2x Channels 1x Bridge

Output A
Output B
Output C
Output D
SPDIF (stereo)
Optional DANTE (4 channels)

REMOTE CONTROL SOFTWARE DESCRIPTION

NANONXAMP4 START-UP

The nanoNXAMP4 startup is straightforward. Once all the wiring has been done and mains is present, the front panel STATUS LED is light up and the device is ready to be configured.

To do so you must access the embedded webpage through the network port of through the Wi-Fi connection (default mode for nanoNXAMP4 Wi-Fi connection being Access Point mode).

For a first configuration we recommend accessing the device through Wi-Fi and then eventually read back the wired network IP address or change the IP settings.

WIRELESS NETWORK CONTROL CONNECTION

A mobile, laptop or desktop device with Wi-Fi functionality and a web browser is required.

Follow the steps below.

1. Connect the nanoNXAMP4 amplifier to mains power and wait for the front panel Wi-Fi indicator to illuminate green.

2. Use a mobile, laptop or desktop device to search for available Wi-Fi networks. Connect to 'Nexo NANONXAMP4 [Product serial number]' using the password 'password'. The amplifier serial number can be found on its rear panel.

3. Open a mobile, laptop or desktop device web browser and enter the following IP address: 192.168.4.1. The amplifier configuration web interface page will open in the browser app to enable amplifier configuration as required.
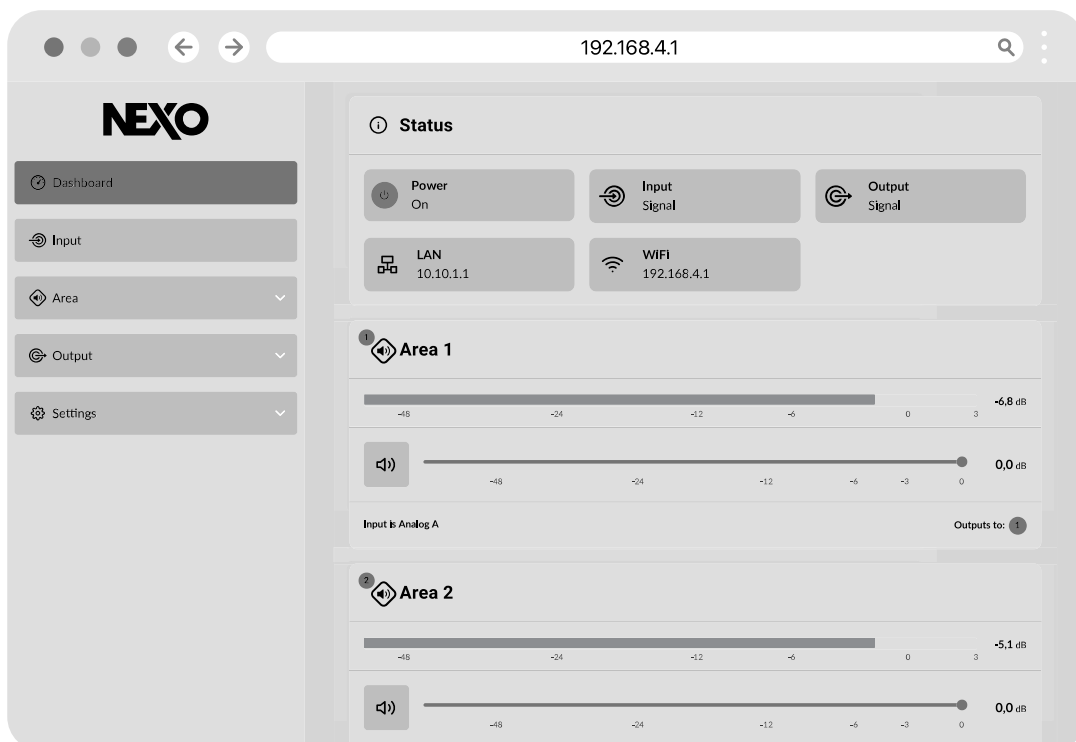
It is strongly recommended that the nanoNXAMP4 amplifier Wi-Fi password is changed following initial wireless connection.

From this welcome page you can read the wired network (LAN) IP address if connected. Alternatively, go to Settings > LAN and adjust the IP parameters to match your LAN criteria.

WIRED NETWORK CONTROL CONNECTION

A laptop or desktop device with Ethernet functionality, a web browser and eventually a network scanning app is required.

Follow the steps below.

1. Connect the nanoNXAMP4 amplifier Network Control socket to a free socket on a network router or network switch using an Ethernet cable.

2. Connect the nanoNXAMP4 amplifier to mains power and wait for the front panel Network indicator to illuminate green to indicate that the amplifier has been assigned an IP address.

3. Chek the LAN IP address as read from the Wi-Fi interface (see above) or alternatively use a network scanner app to identify the IP address assigned by the network router to the nanoNXAMP4 amplifier.

4. Open a laptop or desktop device web browser and enter the IP address identified in the Step 3 above. The amplifier configuration web interface page will open to enable amplifier configuration as required.
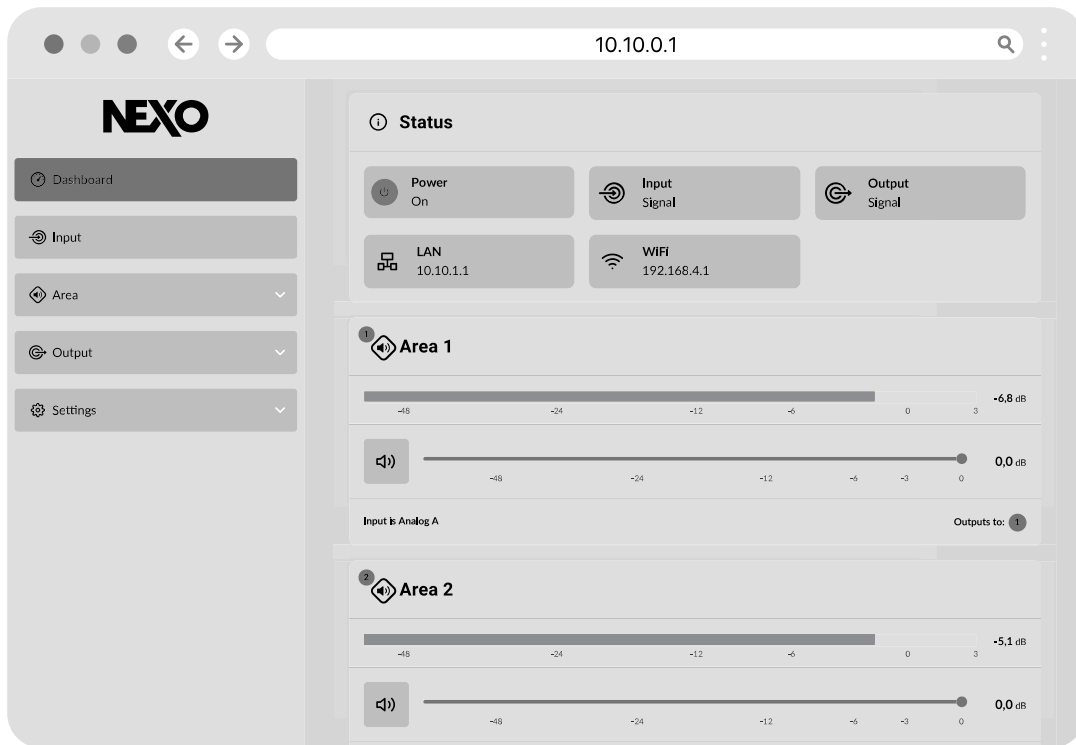
REMOTE CONTROL PAGE DESCRIPTION

From the above screenshot appear the five categories in the left bank of the remote-control webpage. Each of these categories will be detailed just after.

1. **Dashboard**: Give generic information like signal status, IP addresses for wired (LAN) and Wi-Fi network and level/mute for each Area.

2. **Input**: Allow to adjust input related parameters like level, gain, phase inversion, sensitivity (for Analog Inputs) and setup inputs mixes.

3. **Area**: The heart of the nanoNXAMP4 where the input (or inputs mixes) can be routed with priority input and compressor settings.

4. **Output**: The outputs of the Areas are then routed to the NEXO Speaker preset DSP and the power amplifier output. Depending on the NEXO Speaker preset two power amplifiers channels can be used in bridge (BTL) mode.

The Dashboard page groups some key information about nanoNXAMP4 like power status, input/output signal presence and IP address for both LAN and Wi-Fi connections.
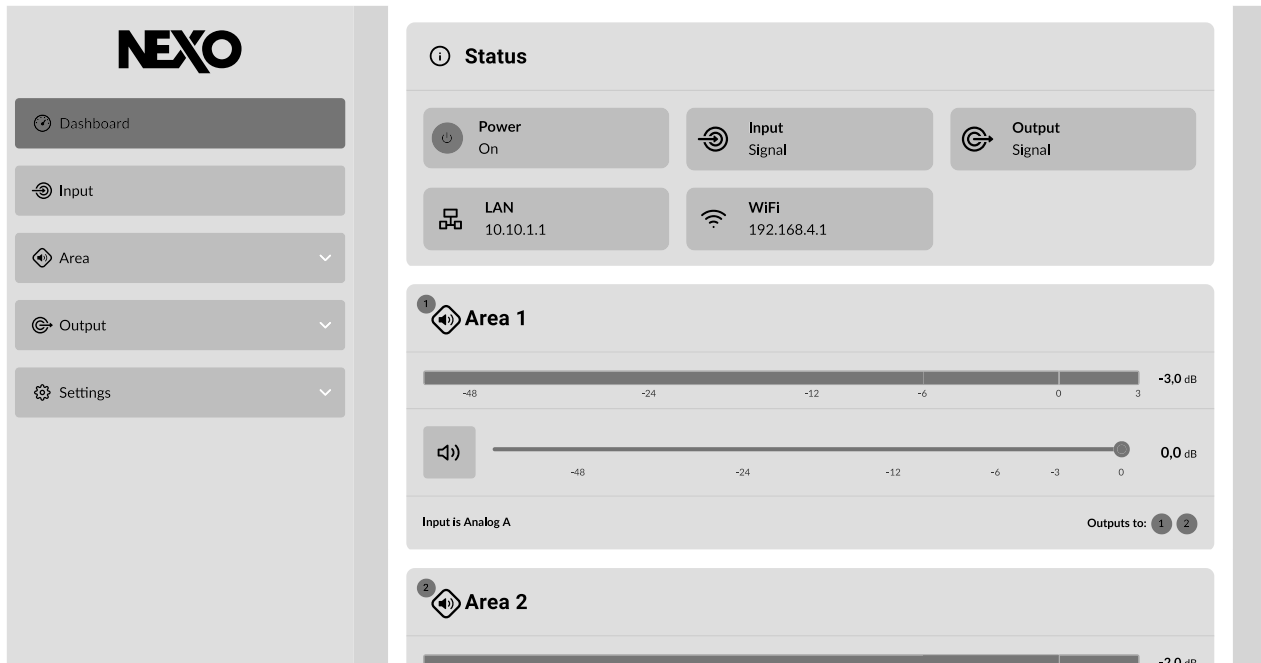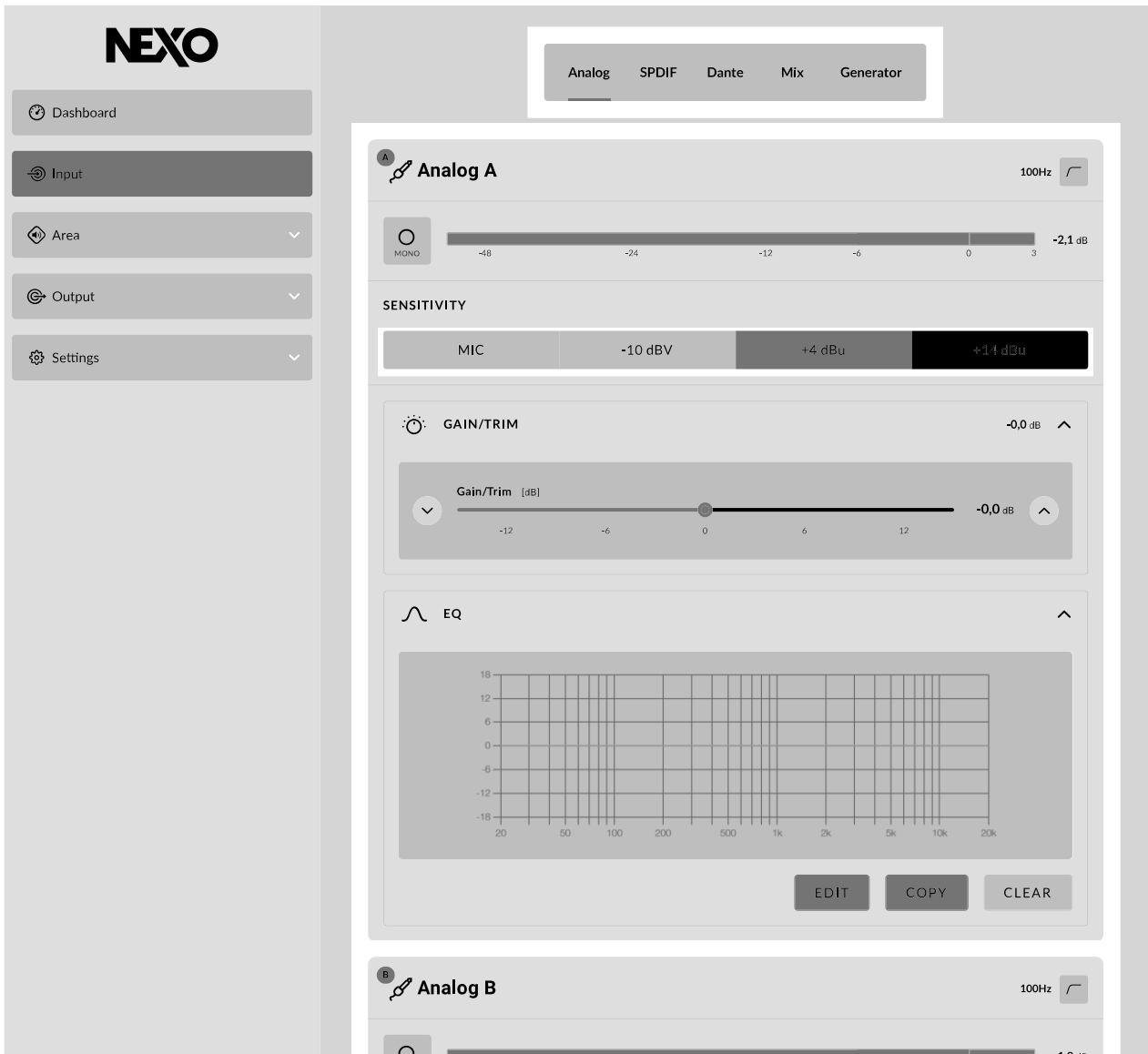

For each Area (see DSP block diagram for more information) a mute is available as well as an attenuator and a level meter. Selected input and amplifier output routing appears as well.

INPUT PAGE DESCRIPTION

The Input page gives access to all settings regarding analog and digital inputs. Click on the input type in the header (Analog, SPDIF, ….) to adjust the parameters of:

1. **Analog**: For the four analog inputs A, B, C, D (connected either through the Euroblock connectors for balanced sources including dynamic microphones or through the RCA phono sockets for unbalanced sources) an input level meter allows to check signal presence and adjust the sensitivity selectable from microphone to +14 dBu). A Gain/Trim function allows to adjust the input gain from -15 dB to +15 dB in 0.1 dB steps. Finally, a high pass filter and five bands of parametric EQs are available for each analog input. Two inputs can be linked together as a stereo in by toggling the MONO / STEREO button. Simply click the input name to rename it.

2. **SPDIF**: The SPDIF input uses an RCA phono socket connector for two channels of digital audio. Thanks to the integrated sample rate converter (SRC), sample rates of 44.1 kHz or 48 kHz are accepted. An input level meter allows to check signal presence, and the Gain/Trim function allows to adjust the input gain from -15 dB to +15 dB in 0.1 dB steps. The two channels can be considered as dual mono or stereo signal, toggled by pressing the MONO / STEREO button.

3. **Dante**: Four Dante inputs are available only on the nanoNXAMP4-D through the dedicated network port marked with the Dante logo. An input level meter allows to check signal presence, and the Gain/Trim function allows to adjust the input gain from -15 dB to +15 dB in 0.1 dB steps. The two channels can be considered as dual mono or stereo signal, toggled by pressing the MONO / STEREO button.

4. **Mix**: Four Mix are available if several hardware inputs must be sent to an Area. For each mix, the four analog inputs, the SPDIF input and the four Dante inputs can be used as sources with a level adjustment from -infinity to 0 dB in 0.1 dB step. The Mix are available as a source input for each Area, just like the individual hardware inputs.

5. **Generator**: Internal generator can produce Sinewave (with adjustable frequency) or Pink Noise (with optional high-pass and low-pass filters). Output level is adjustable from -48 dB to 0 dB.

AREA PAGE DESCRIPTION

The Area is the central block of the nanoNXAMP processing, between the Input block and the Output block of the unit (see DSP block diagram for more information). Click on the Area number in the head (1, 2, ..) to adjust the parameters of the selected Area. Area can be renamed (clicking the name) grouped in stereo pairs (clicking the Mono/Stereo button) and output volume is adjustable between mute and 0 dB in 0.1 dB steps. Click on the speaker logo to toggle the mute function for a specific Area. The Area page is divided into four sections:

1. **Source:** Select the *Primary Input* and eventually the *Priority Input* connected to the chosen Area. The *Primary Input* is usually used for the selected Area, whereas the *Priority Input* will overtake only when signal is present.

   Two modes of overtaking are available. "Priority" mode will simply mute the *Primary Input* when *Priority Input* is above the adjustable Threshold (eventually overriding the Area Volume by a new setting), "Ducking" will reduce the level of the *Primary Input* when *Priority Input* is above the adjustable Threshold.

2. **Volume:** This page allows to adjust the minimum and maximum volume that can be reached through the GPIO control of through the external NANORM volume controller (see further in the manual for detailed specs). GPIO volume control is setup from this page as well.

3. **Restrictions:** Select which input is allowed to be routed on this specific area. Useful to limit the input list available from the NANORM volume controller. *Primary Input* and *Priority Input* cannot be restricted. Move the switch to "Allowed" or "Restricted" to change the source status.

4. **Compressor:** This page allows to tune the output compressor of each Area. This compressor can be setup by the user and does not override the protection of the NEXO Speaker Setup.

In "Default" mode only the Threshold is adjustable, the "Manual" mode gives access to every parameter of the compressor.


OUTPUT PAGE DESCRIPTION

The output page gives access to all parameters of the selected physical amplifier output (A, B, …) of the nanoNXAMP4 or nanoNXAMP4-D. Depending on the Speaker Preset the nanoNXAMP4 will automatically switch to bridge mode, reducing the total number of amplifiers output available, two channels being tied together in case of bridge mode.

The chosen amplifier channel should be selected in the header by clicking the appropriate letter before adjusting the parameters. Like on the Area page, a level meter and a volume/mute control are available for each output.

The output page is divided into four sections.

1. **Routing:** This page allows to select which Area is routed to the selected Amplifier Output. Only one Area can be selected (with Left / Right / Sum channels selection in case of stereo Area) but the same Area can be routed to several amplifier outputs.
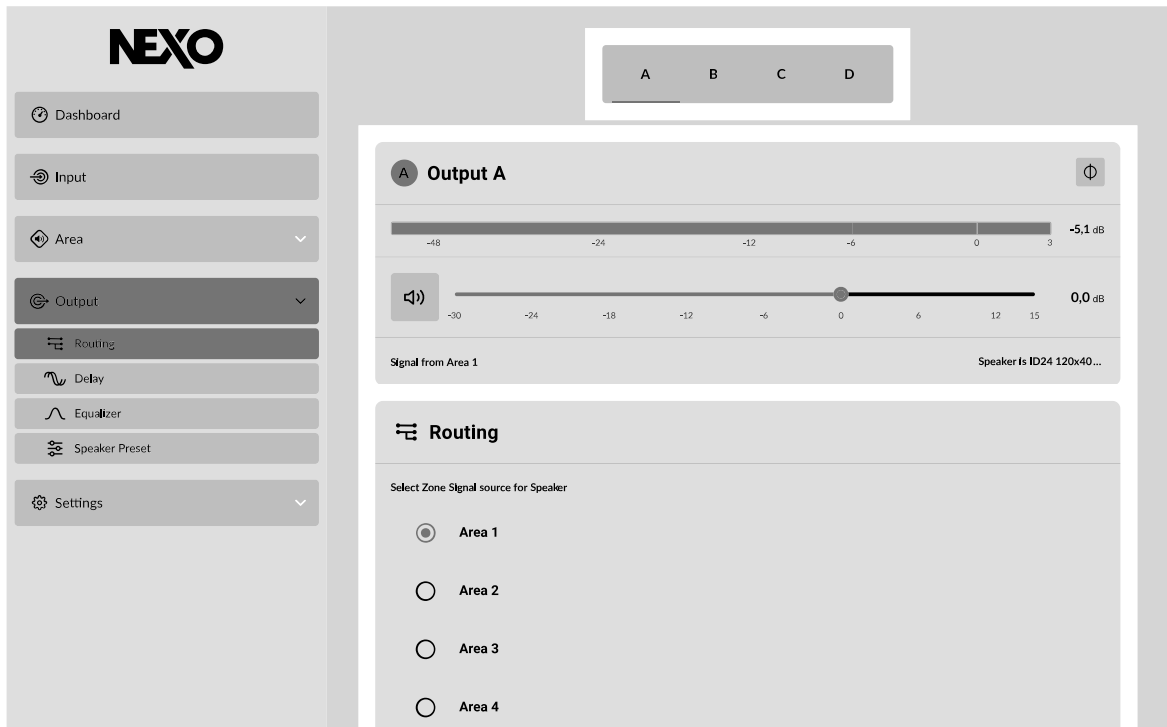

2. **Delay:** Adjust the delay added to the selected output to guarantee a good time alignment of the speaker output depending on the physical placement of the speaker. Delay can be entered in Samples, Ms, Feet or Meter with a maximum of 4800 samples / 100 ms / 112.50 feet / 34,3 meters.

3. **Equalizer:** This page controls the 10-band parametric EQ to adjust the output frequency response depending on the physical implantation of the speakers and to compensate for the room acoustic up to a point. 15 different EQ type can be selected (Low/High shelves with 6 dB, 12 dB slopes or adjustable Q, Low/High pass with 6 or 12 dB slopes, First and Second order All-pass, Parametric, Band-pass and Notch).
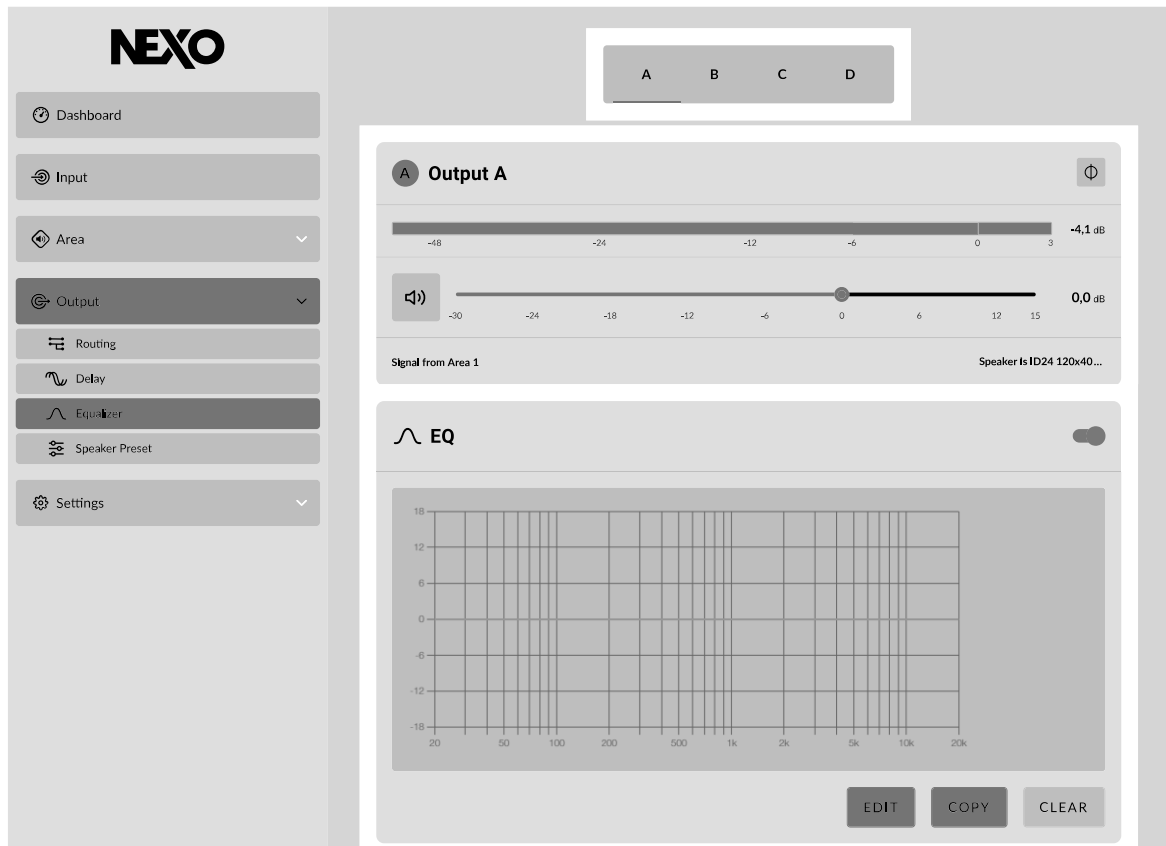
4. **Speaker Preset:** This page controls the selection of a NEXO Speaker Preset to be attached to the selected amplifier output. The Preset must be selected from the Speaker Library (Click on the "Select Preset from library" button). Regularly check for nanoNXAMP4 firmware updates from our website to add new or updated Speaker Preset. Speaker preset can be cleared using the "Clear Preset" button leading to a FLAT amplifier output.
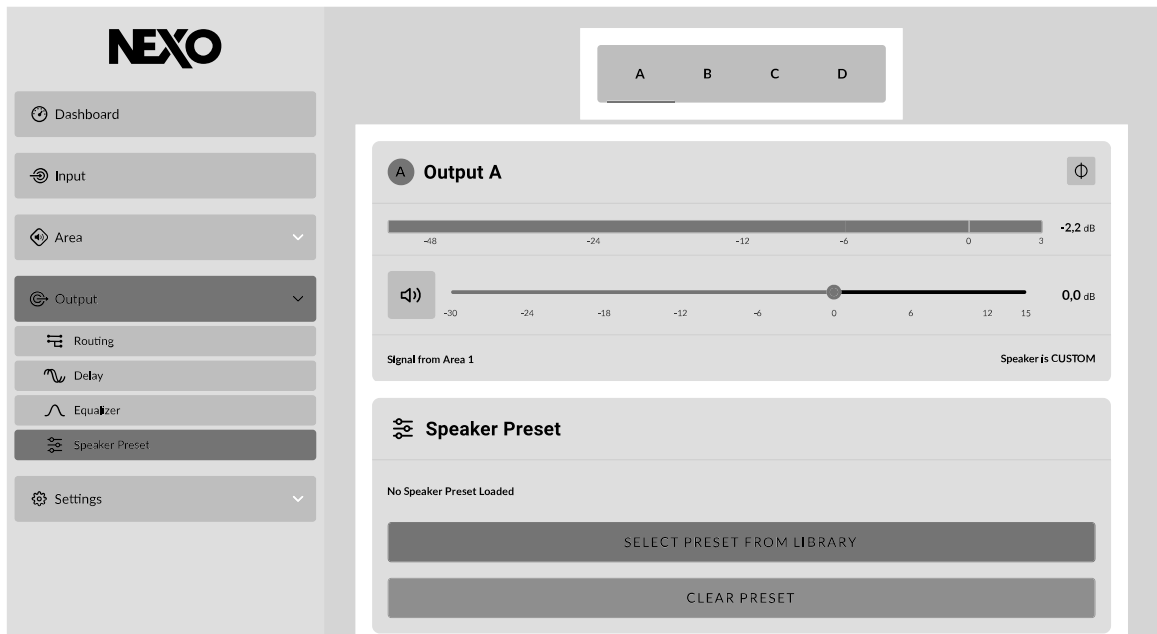
SETTINGS PAGE DESCRIPTION

The settings page gives access to all other settings that are not used on a regular basis but only during setup for example. The subpages are described here.

1. **System Information:** This page regroups some editable text field useful to identify the device, such as Device Name, Venue Name, Customer Name, Asset Tag Number, Installer Name with contact info, Date of installation and Installation Notes.
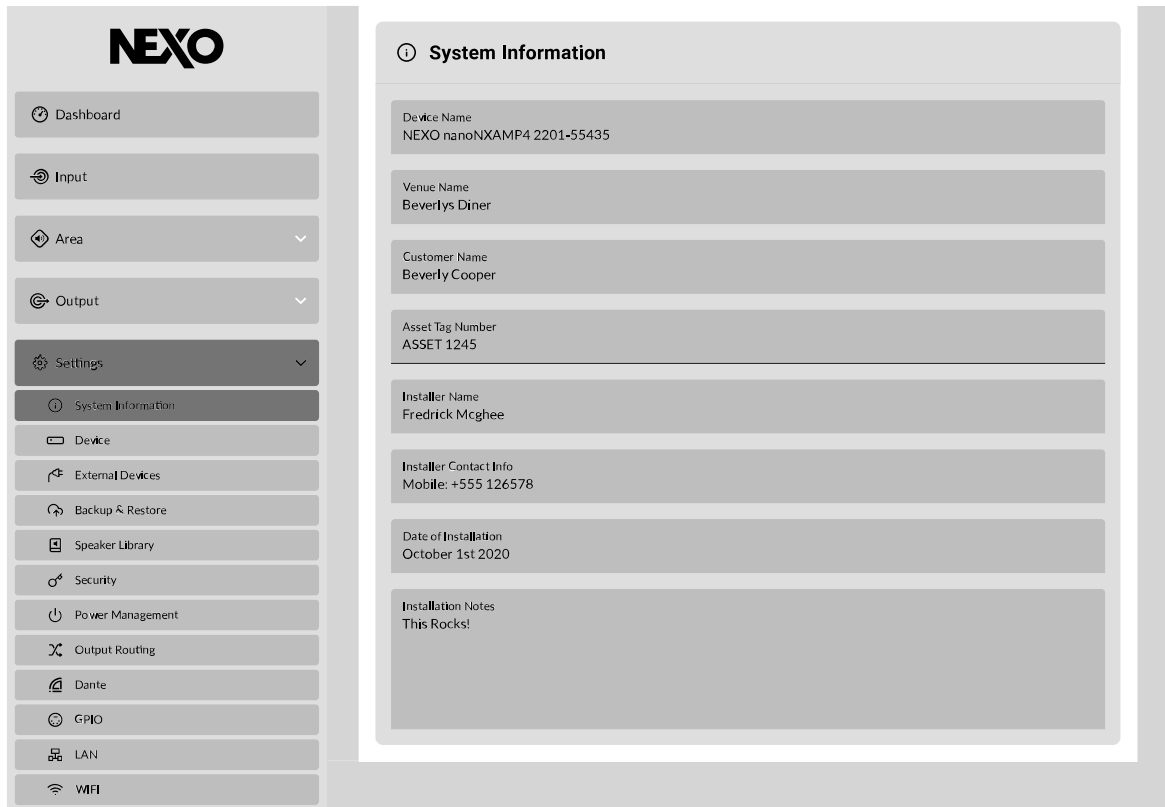
2. **Device:** Here can be found information about the nanoNXAMP4 or nanoNXAMP4-D such as Serial number, Firmware version and mac addresses (both LAN and Wi-Fi), except the mac address for the Dante network port than can be read back from the Dante Controller software.

Press the "Find Me" button to make the front panel LED blink and use the "Update" button to upgrade the firmware of the device (Check NEXO website for firmware upgrade).
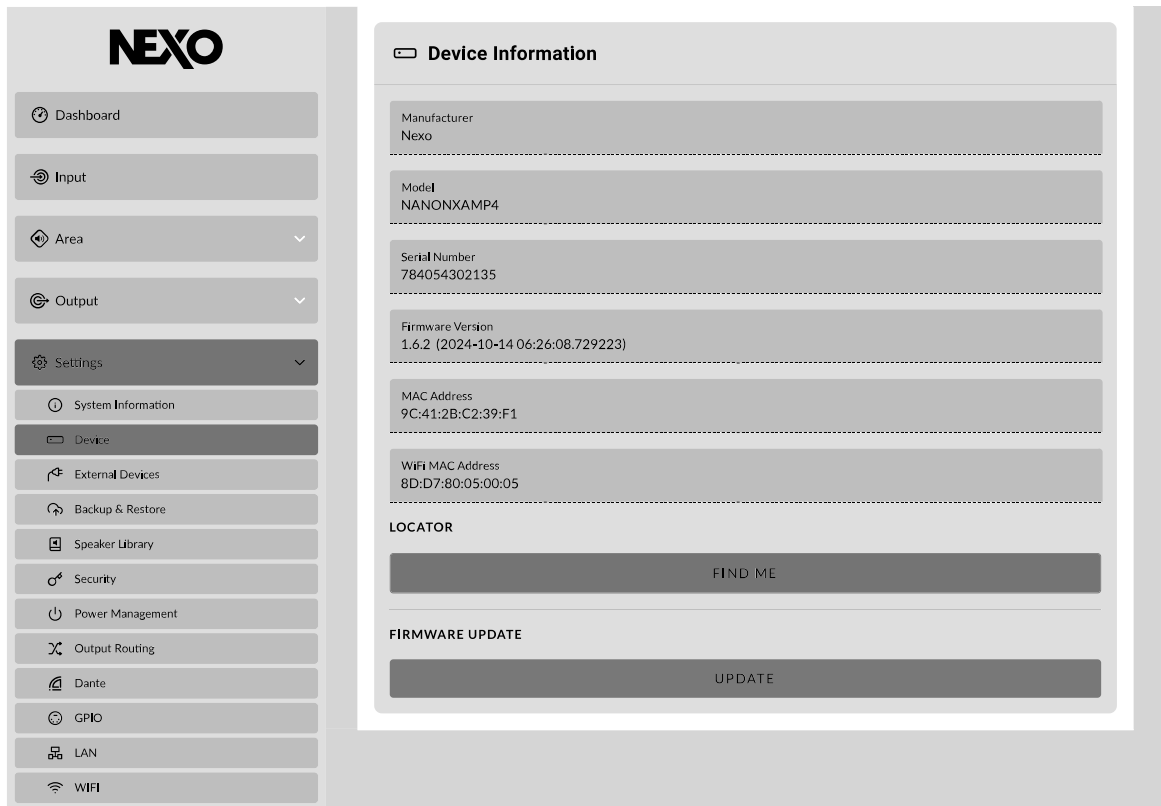
3. **External Devices:** The available NANORM remote control devices found on the local network (connected through the LAN port of through the Wi-Fi) will be listed here. Manual addition using IP address can be used as well.

Click on the "Pair" button to pair a NANORM remote control device to the nanoNXAMP4 or nanoNXAMP4-D. Once paired you can select which Area of the amplifier will be remote controlled by the NANORM.

The NANORM allows to adjust the output volume of an Area and to select the source currently selected as the Primary source. Only the Allowed sources will be available in the input list (see Area Page Description > Restrictions).

To adjust the output volume of an Area, turn the knob of the NANORM clockwise (increase) or counterclockwise (decrease). The volume is always displayed on the NANORM screen on a scale between 0 and 100. The actual volume range can be set up, see Area Page Description > Volume.

To select a primary input source for the selected Area, push the encoder of the NANORM and select the proper audio input. Note that Audio Input name can be changed, see Input Page Description.

Some other options are available like to possibility to turn the amplifier ON and OFF from the remote control, upgrade the NANORM firmware, adjust the network settings, the visual aspect (screen brightness, Button backlight, …) or restrict the access with a PIN code.
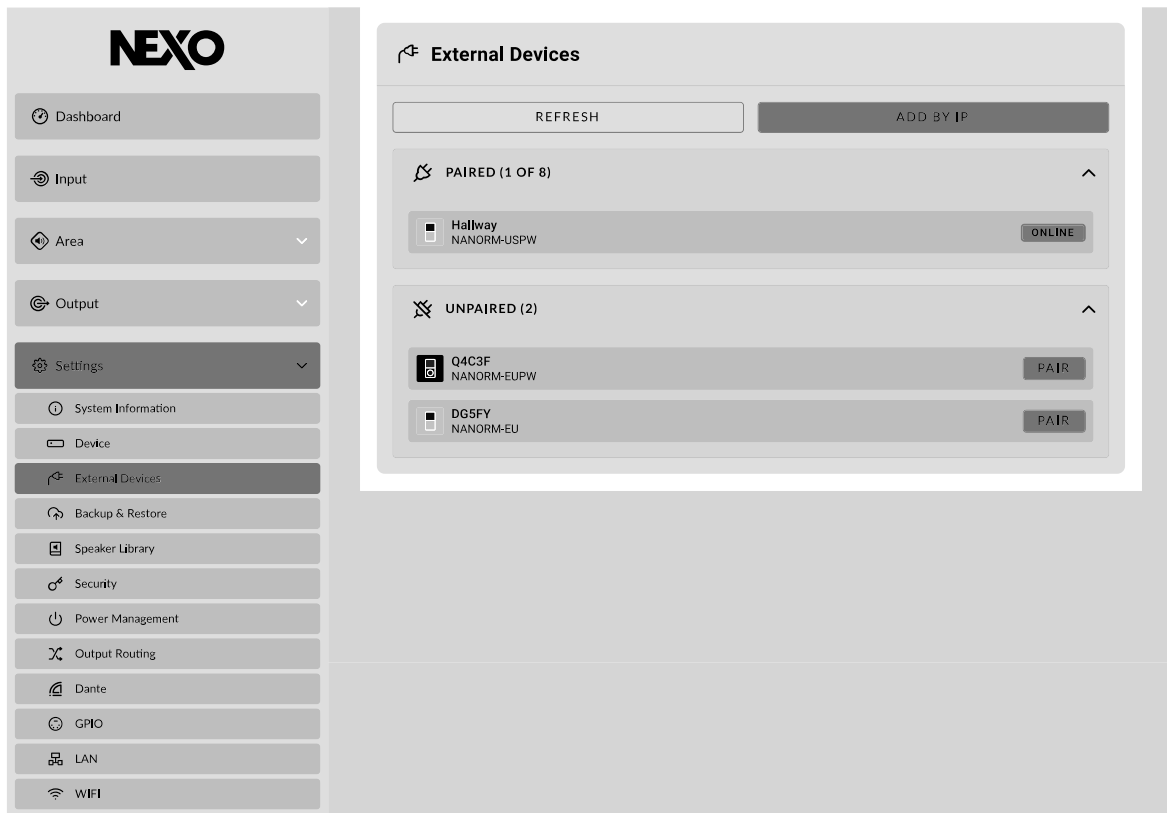
4. **Backup and Restore**: The settings of the nanoNXAMP4 can be backup and restore from this page by clicking the proper button. Restarting the unit or reset it is available as well.
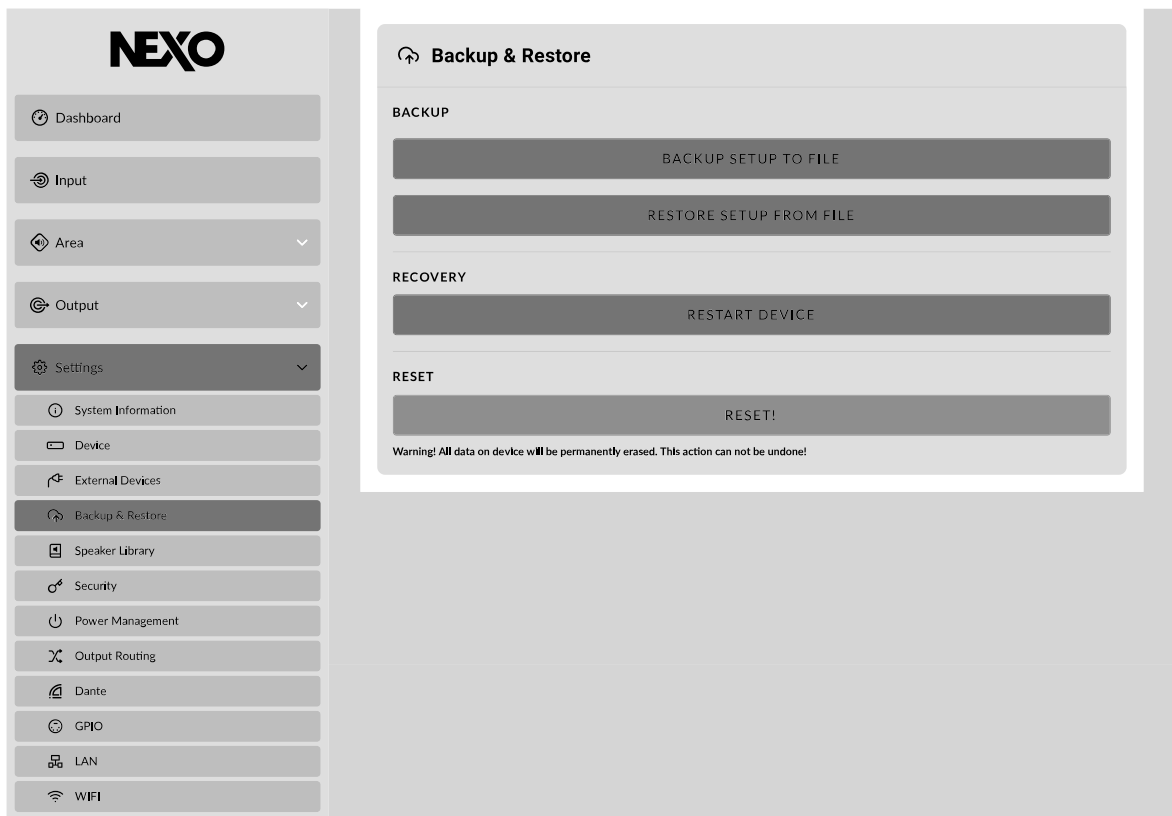
5. **Speaker Library:** The list of the embedded presets for NEXO Speakers can be displayed here.
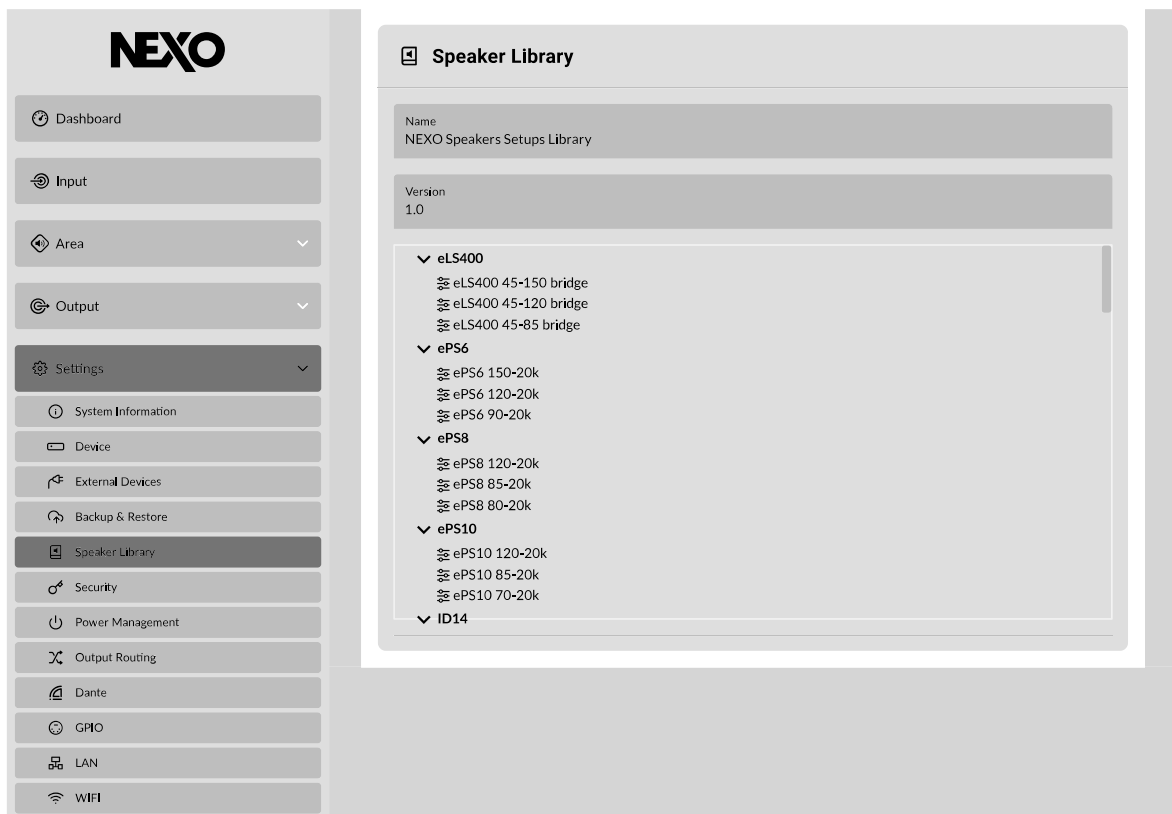
6. **Security:** Access to the unit can be password protected by switching the "Password Protection" to Enabled and entering a password twice.
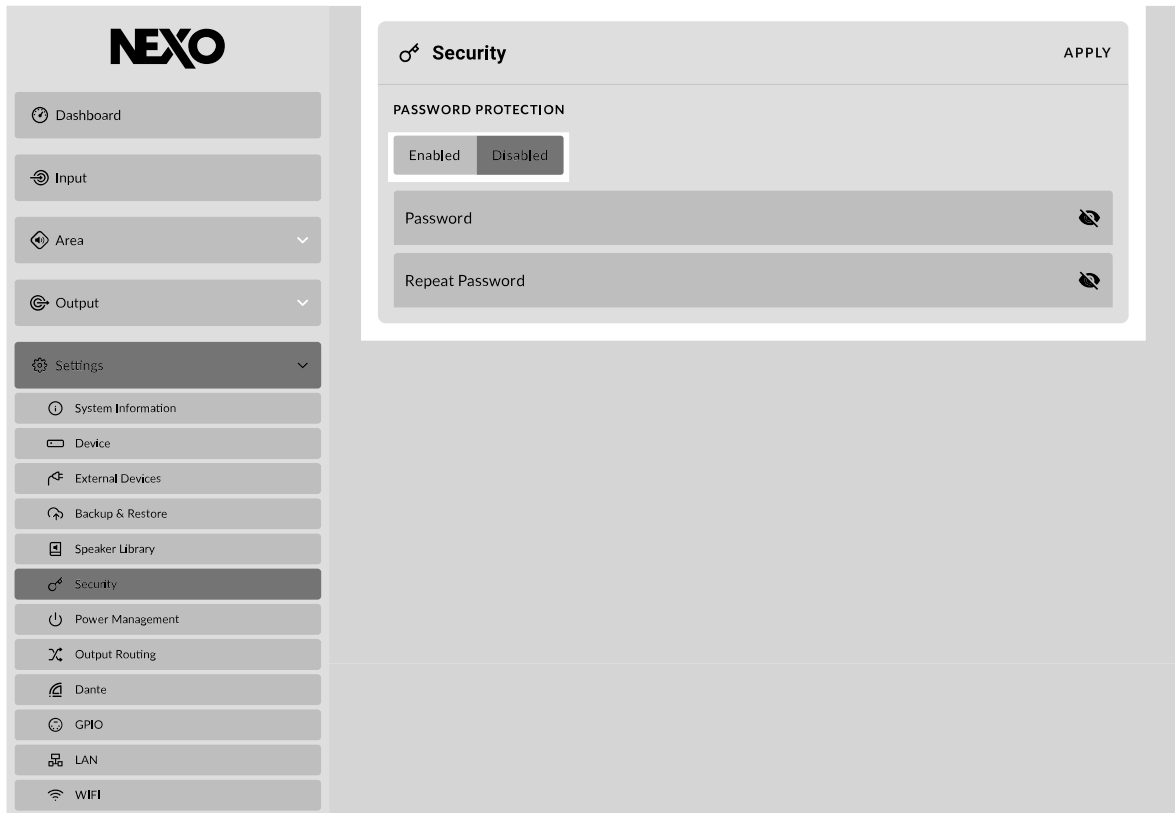
7. **Power Management:** Please devote some time to understand and set up carefully the Power management. Several modes of operation are possible depending on the use case. Each mode is clearly described. Take care not to trigger a mode when remote control is not available when you are setting up the unit as you can fall into Stand-by mode and will not be able to wake up the amplifier from the network. In that case, please reboot the unit to have access to the remote control before the amplifier goes to stand-by again or reset the unit.

Mute time and Stand-by time can be selected from OFF to respectively 10 and 60 minutes.

8. **Output Routing:** This page controls the audio routing from the nanoNXAMP4 to the digital output of the devices (2 channels on the SPDIF output for both models and 4 channels of Dante on the nanoNXAMP4-D only). For each digital output the source can be chosen among the analog inputs, the SPDIF input, the Dante input, the Mix output (mix of input sources, see Input Page Description) or the Area output (see Area Page Description).

    Thus, if a unique source or a mix or sources with some settings should be distributed to multiple nanoNXAMP4 units the SPDIF in/out could be a good solution for cost effective digital distribution, or the Dante output (on nanoNXAMP4-D only) for longer distances across a LAN network.

9. **Dante:** The Dante page displays basic information about the Dante module like clocking status, mac and IP address, firmware revision and AES67 mode.
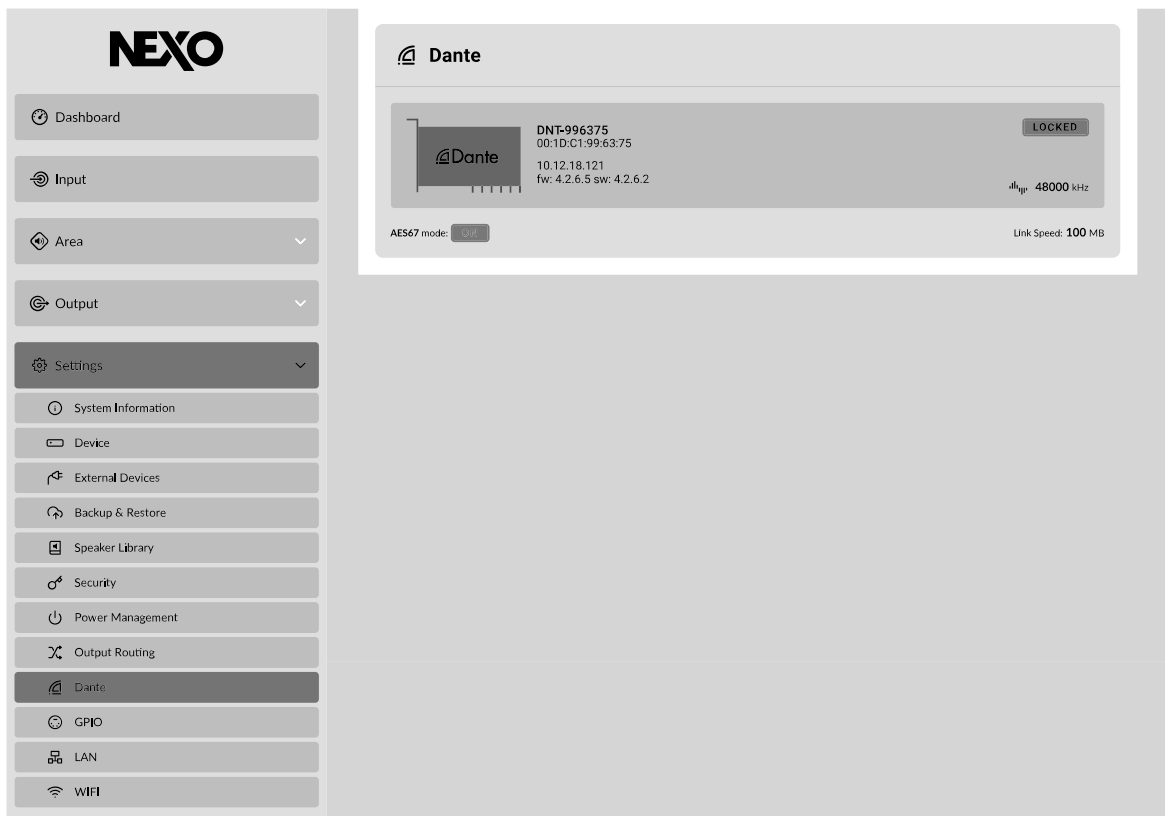
10. **GPIO:** This page controls the functions linked to every GPIO Pins. The explanation is directly written on the control page. See Back Panel Description above in the manual for hardware description of the GPIOs of the nanoNXAMP4 and nanoNXMAP4-D.

NEXO

- Dashboard
- Input
- Area ⌄
- Output ⌄
- Settings ⌄
  - System Information
  - Device
  - External Devices
  - Backup & Restore
  - Speaker Library
  - Security
  - Power Management
  - Output Routing
  - Dante
  - GPIO
  - LAN
  - WIFI

GPIO

PIN 1

Soft Ground
Use for 12V trigger and standby/mute input reference

PIN 2

○ **Off**
Pin has no functionality (Default)

○ **Standby (NO)**
Amplifier will enter standby when Pin 2 is connected to GND.

○ **Standby (NC)**
Amplifier will enter standby when Pin 2 is unconnected (floating).

○ **Mute (NO)**
All amplifier outputs are muted when Pin 2 is connected to GND.

○ **Mute (NC)**
All amplifier outputs are muted when Pin 2 is unconnected (floating).

PIN 3

Ground
Use as reference for Volume Control and Trigger Out.

PIN 4

○ **Volume Control**
When selected the pin is used for external volume control (Default).

○ **Off**
Pin has no functionality.
GPIO4 Bound to Volume Control

PIN 5

○ **Volume Control**
When selected the pin is used for external volume control (Default).

○ **Off**
Pin has no functionality.

PIN 6

○ **12V Trigger In**
Amplifier will operate when 12V signal is applied to Pin 6 - will enter standby when no signal applied. Requires Trigger-Mode selected in Power-Mode Section (Default).

○ **Volume Control**
When selected the pin is used for external volume control.

○ **Off**
Pin has no functionality.

PIN 7

○ **12V Trigger Out**
12V Output Trigger (Default).

○ **Volume Control**
When selected the pin is used for external volume control.

○ **Off**
Pin has no functionality.

PIN 8

Power 3.3V
3.3V Power for Volume Controls

11. **LAN:** Controls the IP settings of the LAN interface. DHCP and Static addressing are available. On top of IP address, Network mask, Gateway and two DNS servers' addresses can be entered for more complex networks integration.
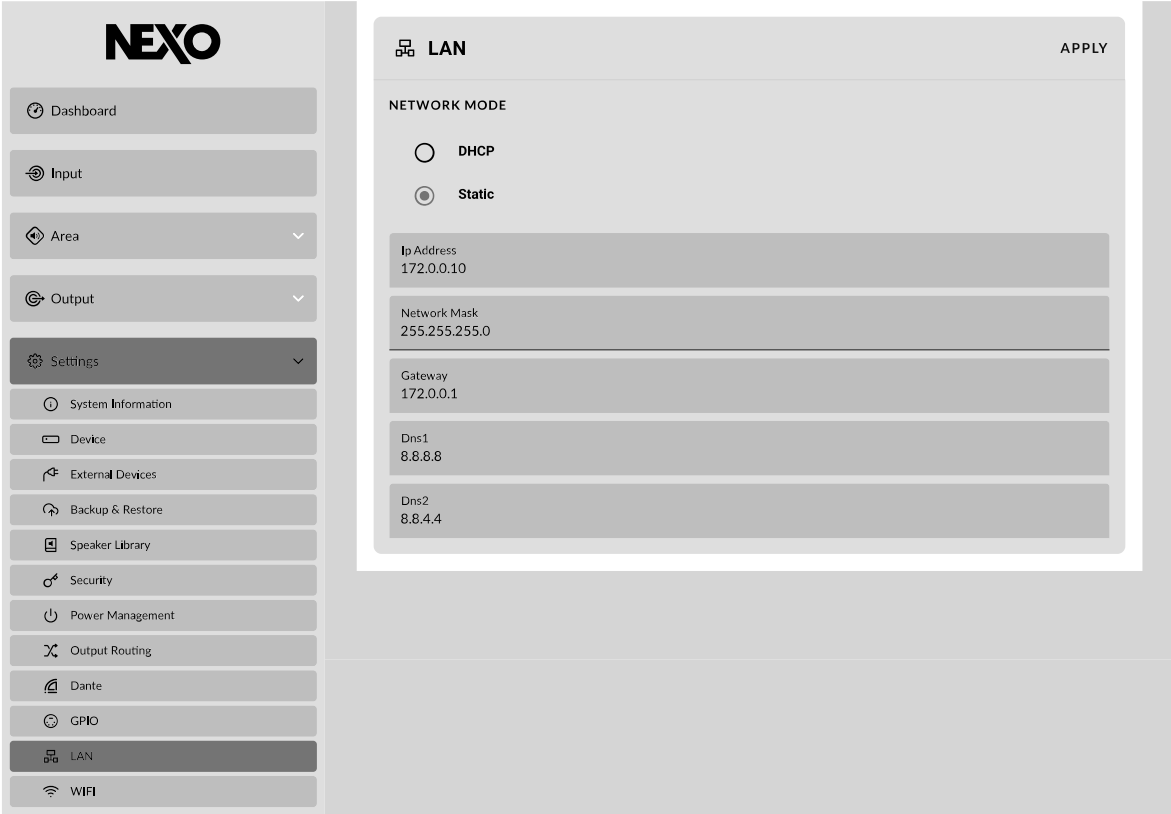
12. **Wi-Fi:** The wireless network interface can be turned on or off from this page with the top switch. Moreover, it can be automatically turned off when the LAN is connected or disabled after some time allowing configuration or system check just after bootup without polluting the installation for a normal use.

Note that Wi-Fi mode can be "Access Point" for direct connection from client (default mode) of as a client to join an already existing Wi-Fi infrastructure (SSID and password should be provided then).
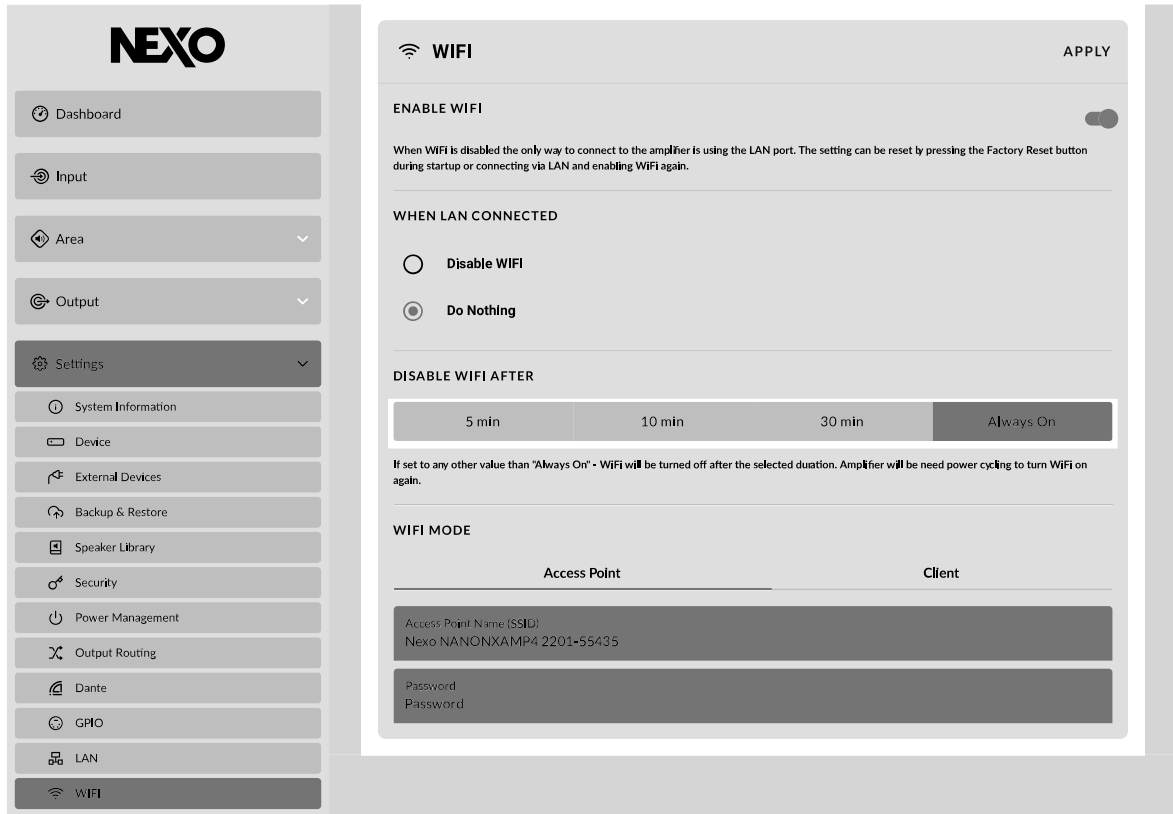
NANORM POE REMOTE CONTROL DEVICES

NANORM are wall-mounted controller able to select source and adjust volume for a certain Area of a nanoNXAMP4 or nanoNXAMP4-D. They are available in four versions:

- NANORM-EU   Wall-mounted controller EU form factor, black
- NANORM-EUPW   Wall-mounted controller EU form factor, white
- NANORM-US   Wall-mounted controller US form factor, black
- NANORM-USPW   Wall-mounted controller US form factor, white
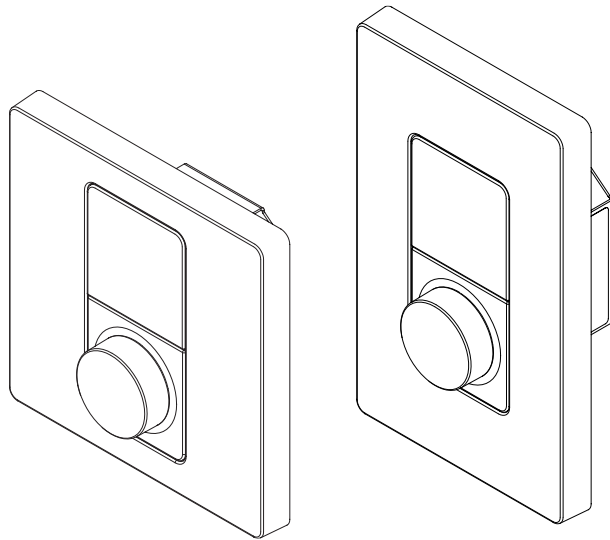
Each NANORM device can control one Area only but that one Area can be routed to several or all the nanoNXAMP4 output and routed through SPIDF or Dante output to other nanoNXAMP4 devices as well (see Settings Page Description > Output routing). On the other hand, the remote control of four Areas would require four NANORM devices, each assigned to one of the 4 individual Area.

Multiple NANORM devices can be assigned to the same Area, although it is not recommended to connect more than eight (8) NANORM devices per nanoNXAMP4 or nanoNXAMP4-D amplifier.

Power is supplied to the NANORM device with the use of a standard PoE Switch (or PoE injector) and Cat5 cable (or above).

NANORM CONNECTION TO NANONXAMP4

The illustration below outlines how to connect multiple NANORM devices to a nanoNXAMP4 amplifier, via the use of a standard PoE network switch and Cat5 cable.
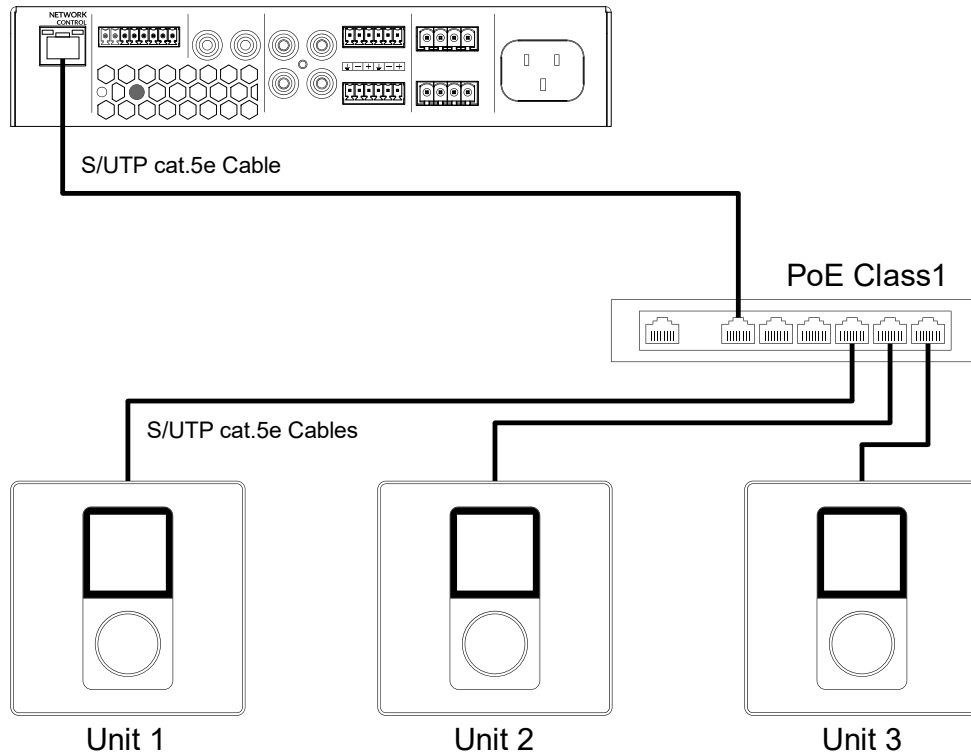
NANORM DEVICE MOUNTING

Please note that this product does not include the in-wall mounting electrical box and installation screws required to install the NANORM.

Use a commercially available in-wall mounting electrical box and installation screws suitable for the specific wall material and installation situation.

1. Feed the ethernet cable through the electrical box.
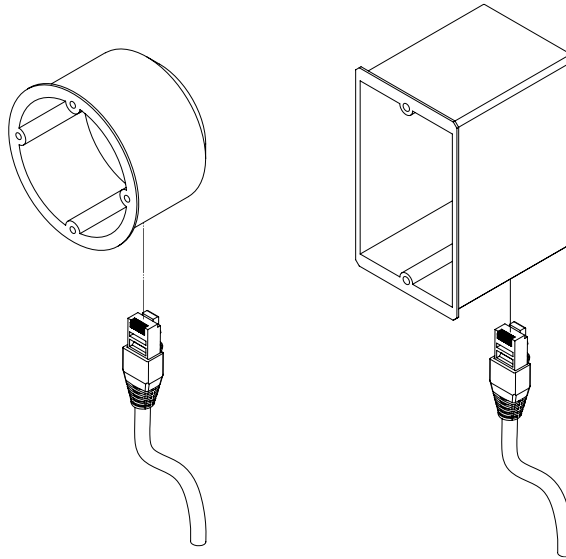
2. Mount the electrical box into the wall
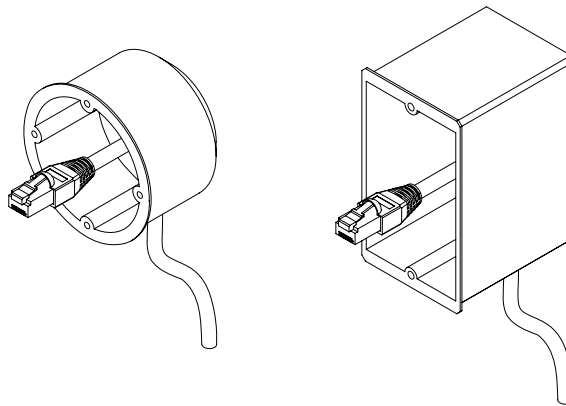
3. Connect the Ethernet cable to the NANORM unit.
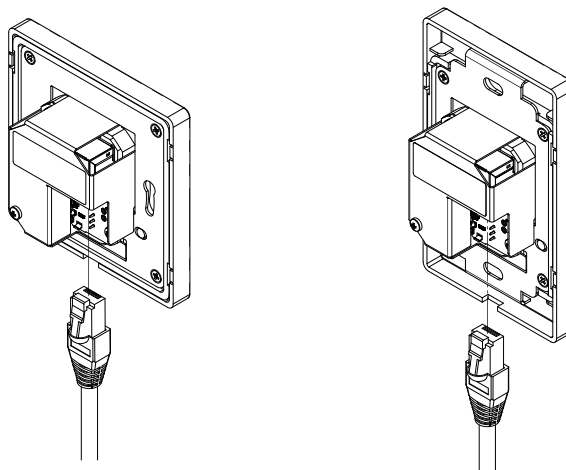
4. Screw the NANORM unit into the electrical box. Put the front panel on and click it into place.

NANONXAMP4 USER MANUAL
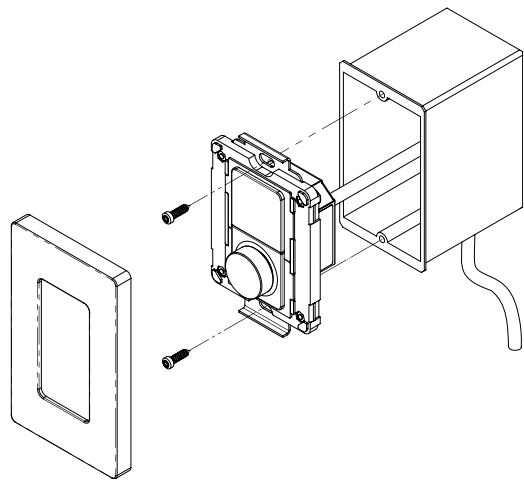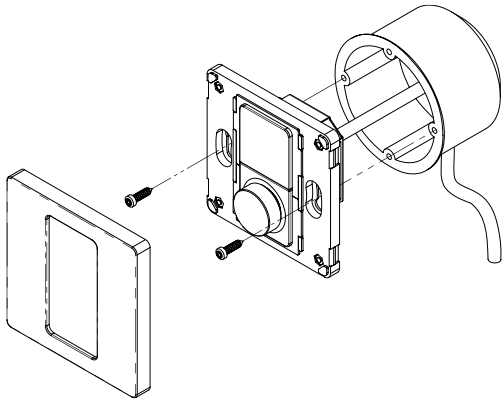
NANORM DEVICE OPERATION

NANORM has been designed for easy and intuitive operation. Once installed and configured, the user operates all the device's functions via a highly tactile rotary encoder dial, with all relevant information presented via a high-resolution colour display screen.

The three primary functions of the device are operated as outlined below.

1. **Twisting the rotary encoder** allows the user to adjust volume and navigate menu options.

   Twisting the rotary encoder to the left (anticlockwise) turns down the volume and twisting it to the right (clockwise) turns up the volume.

2. **Tapping the rotary encoder** allows the user to change input source.

   Switching between input sources is performed by tapping the rotary encoder dial, twisting the rotary encoder to view the sources inputs available; and confirming the desired choice by tapping the rotary encoder once more.

3. **Pressing and holding the rotary encoder** allows the user to access the settings menu.

   Note that access to the settings menu can also be restricted via use of optional PIN code protection – activated and configured via the settings of the nanoNXAMP4 or nanoNXAMP4-D web interface.

NANORM DEVICE SETUP

Note: When connecting multiple Wall-S1 devices to a single amplifier, we recommend completing all stages of the setup process, before connecting and configuring a subsequent device.

1. **Step 1: Start Up Device.**

   Once the Wall-S1 device is receiving power via the connected Ethernet cable, the product will power up and display the NEXO logo for a few seconds. The NEXO logo will disappear and be replaced by the setup screen. The setup screen displays the following:
   - Device pairing code
   - Option to change IP address ["Edit IP Settings"]

2. **Step 2: Edit the Device's IP Setting (if required)**

When the device is connected to a nanoNXAMP4 or nanoNXAMP4-D amplifier via a network router, the NANORM device will be automatically assigned an IP address (dynamic DCHP) - this is the default setting, and in this situation, there is no need to edit the IP settings.

However, if the device is connected to a nanoNXAMP4 or nanoNXAMP4-D via a network switch, you must edit the IP settings to static IP.

On initial set-up, this can only be done via the device itself and is performed by following the steps outlined below.

1) Tap the rotary encoder to confirm the action to "Edit IP Settings".

2) On the display you will be presented with a set of options.

Twist the rotary encoder one click to the left (anticlockwise) and tap the rotary encoder to confirm the selection of the option labelled "MODE".
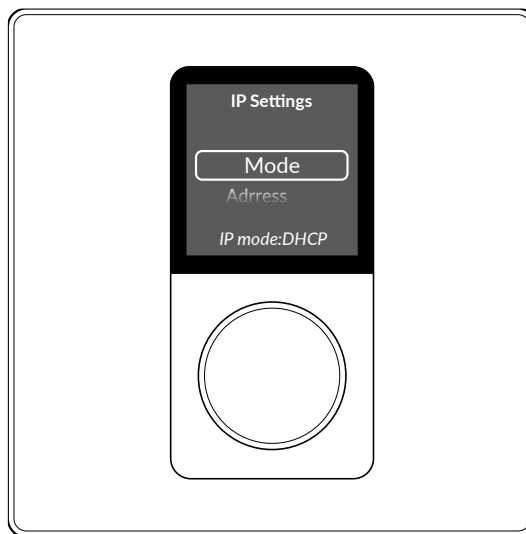
3) Tap the rotary encoder to confirm the selection of the option labelled "Static".
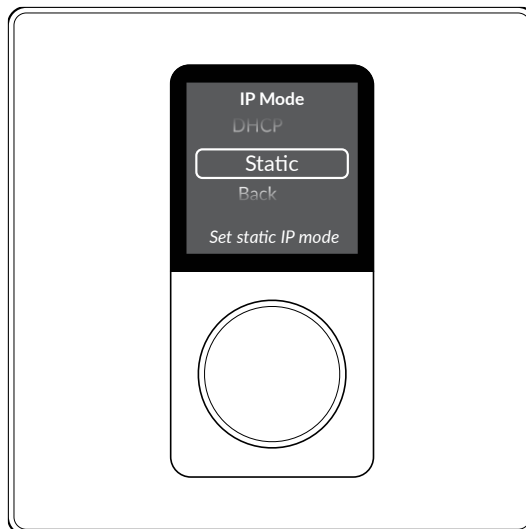
4) You will be automatically returned to the previous menu.

IMPORTANT - Jump to Step 12 if this is not the first device you are connecting to the same amplifier!

5) Twist the rotary encoder 4 clicks to the right (clockwise) to navigate to the option labelled "Back".

6) Tap the rotary encoder to confirm the selection of the option "Back".

7) You will be presented with the question "Apply IP Changes?"

8) Tap the rotary encoder to confirm the selection of the option labelled "Yes"

9) You will now be presented with the exact same display as at the beginning of the process, showing a pairing code - like that shown in the image below.

10) You have now completed the necessary steps for editing the IP settings required when configuring the first device to be connected to the amplifier.

   IMPORTANT - When connecting >1 devices to the same amplifier, additional actions, as described below, must be taken after Step 5 to ensure each device has a unique IP address.

11) Twist the rotary encoder one click to the right (clockwise) and tap the rotary encoder to confirm the selection of the option labelled "Address".

12) Tap the rotary encoder multiple times until the last digit as of the IP address is selected.

13) Twist the rotary encoder right (clockwise) to change the final digit of the IP address for this device - so it is not matching those of any other device also linked to the same amplifier. (e.g., for the second device change the final digit to #2; for the second device change the final digit to #3, and so forth).

14) Tap the rotary encoder to confirm the change and exit (as advised on the screen).

15) Twist the rotary encoder 3 clicks to the right (clockwise) to navigate to the option labelled "Back".

16) Push the rotary encoder to confirm the selection of the option "Back".

17) You will be presented with the question "Apply IP Changes?"

18) Twist the rotary encoder one click to the left (anticlockwise) and tap the rotary encoder to confirm the selection of the option labelled "Yes".

19) You will now be presented with the exact same display as at the beginning, showing a pairing code.

20) You have now completed the necessary steps for editing the IP settings required when configuring the first device to be connected to the amplifier.

3. **Step 3: Connect to the nanoNXAMP4 using the Control webpage.**

If you haven't already, connect now to the nanoNXAMP4 or nanoNXAMP4-D amplifier via your phone, tablet or computer using the Control webpage. Refer to the Remote-Control Software Description above in the manual to do so.

IMPORTANT - After connecting to the nanoNXAMP4, we strongly recommend changing the Power Management setting to "Network Only".

There are two main reasons for this recommendation:

- The default setting labelled "Audio" can potentially block the (optional) function of being able to successfully power down the amplifier directly from the wall controller.

- Setting Power Management to one of the Eco modes ["Audio (Eco)" or "Trigger (Eco)"] is also not recommended, as under these settings the amplifier can easily lose connection with the networked devices.
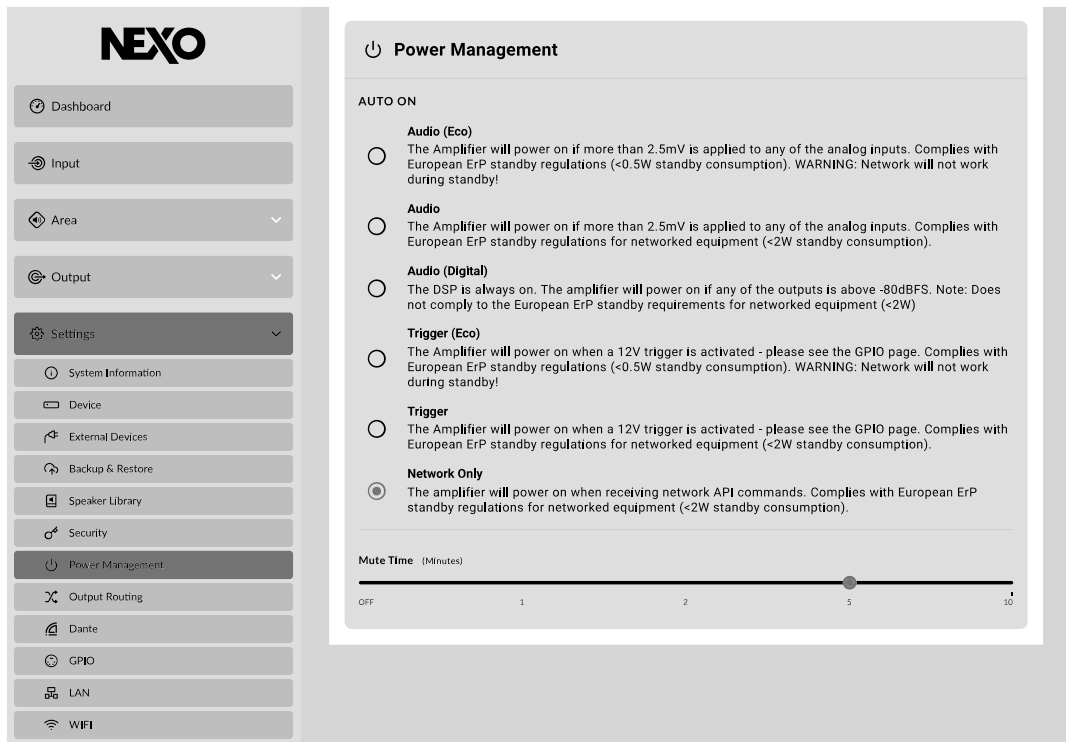
IMPORTANT - If accessing the Control webpage by connecting to the nanoNXAMP4 via a wired (Ethernet) network connection, we strongly recommend changing the WIFI settings as outlined below.

- Under the 'Settings Menu', go to 'WIFI' settings and select the option "Disable WIFI" when LAN connected. Then click "APPLY" in the upper right-hand corner.

Making this adjustment to the WIFI settings will not only avoid any potential IP address conflict, but also better secure access to the amplifier and its networked devices.
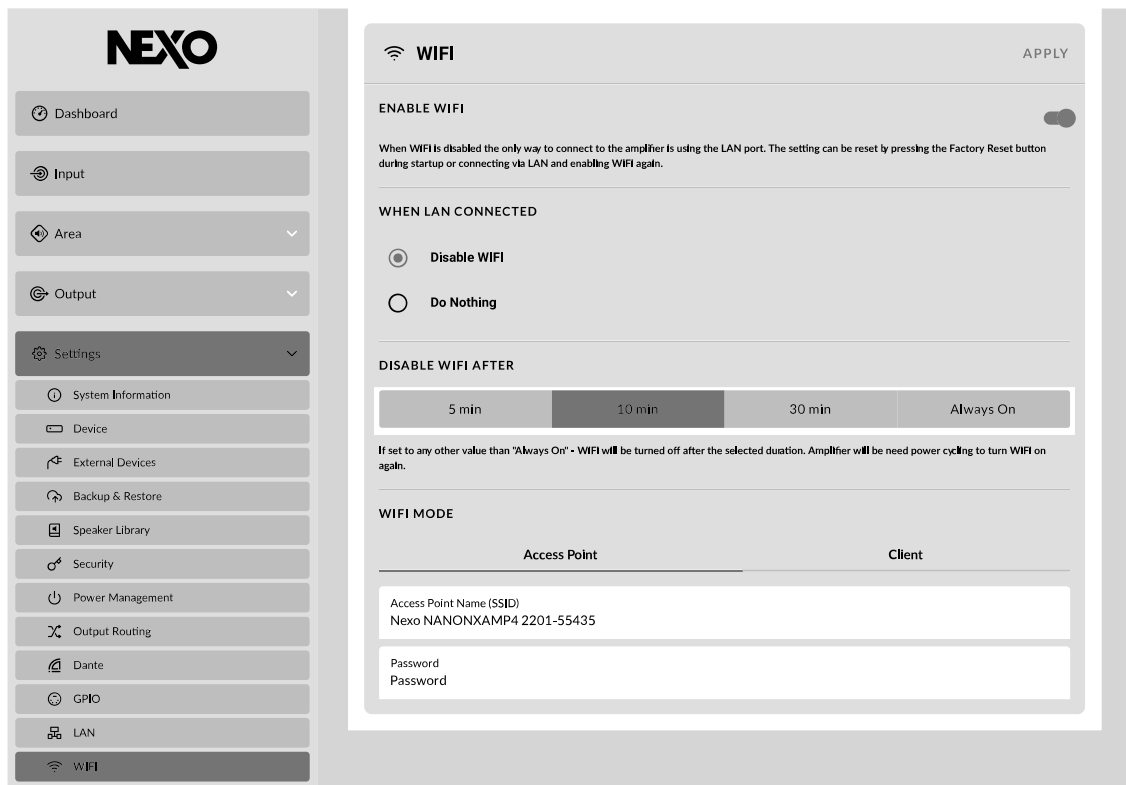
4. **Step 4: Pair the device with the nanoNXAMP4 or nanoNXAMP4-D.**

   To pair the NANORM device with the nanoNXAMP4 or nanoNXAMP4-D amplifier, navigate to the menu 'Settings' > 'External Devices' in the control webpage.
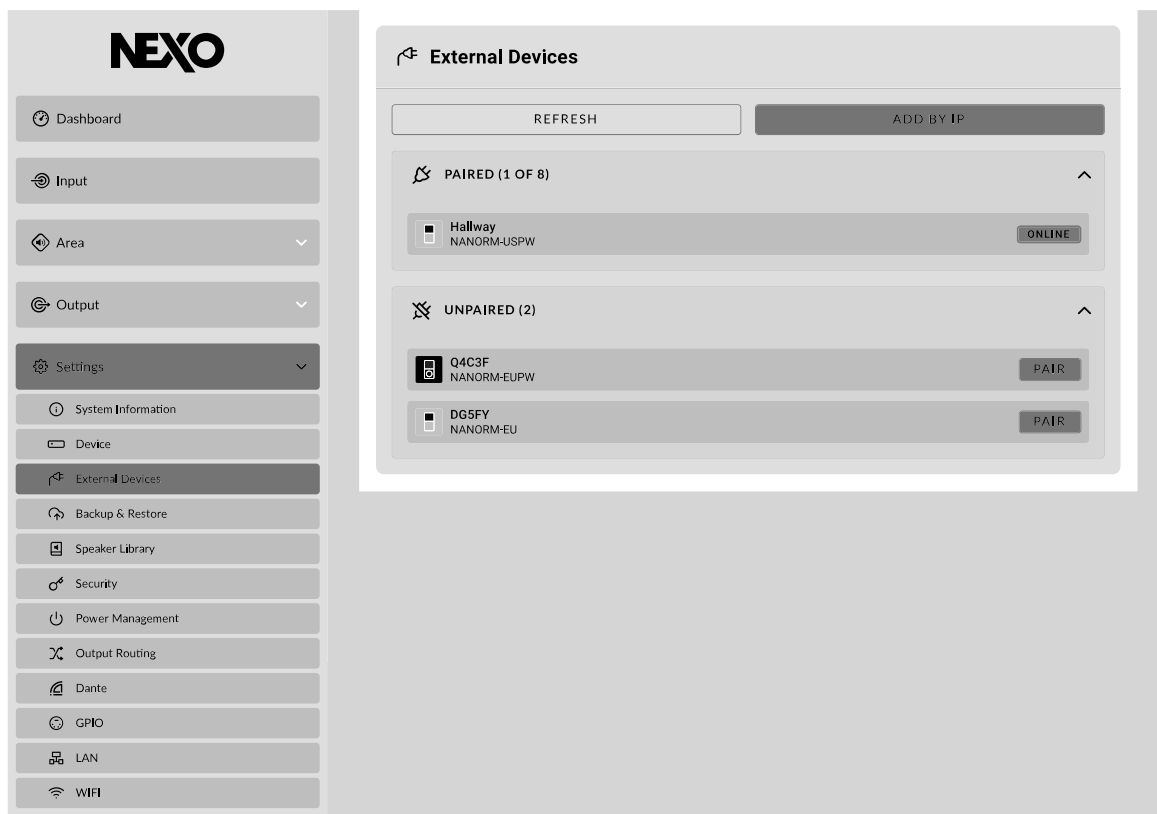
   The NANORM device you are configuring will be displayed under 'Unpaired' devices. Pair the device by clicking the button labelled "PAIR" next to the respective NANORM device. The process of pairing the NANORM device with the nanoNXAMP4 or nanoNXAMP4-D amplifier takes just a few seconds.

   Once pairing is successful, the device will be shown under 'paired devices' in the control webpage, and the green "ONLINE" icon will be displayed alongside it.

5. **Step 5: Select the audio Area the device is intended to control.**

    In the nanoNXAMP4 control webpage, click on the device shown within the paired devices menu and navigate to the tab labelled "General".
   Assign the device to a specific audio area, selecting the desired area from the drop-down menu (e.g., Aera A) that the device is intended to control.

   Notice how the new name of the Area associated with the wall controller is instantly displayed at the top of screen of the NANORM device.

   Notice how the new name of the Area associated with the wall controller is instantly displayed at the top of screen of the NANORM device.
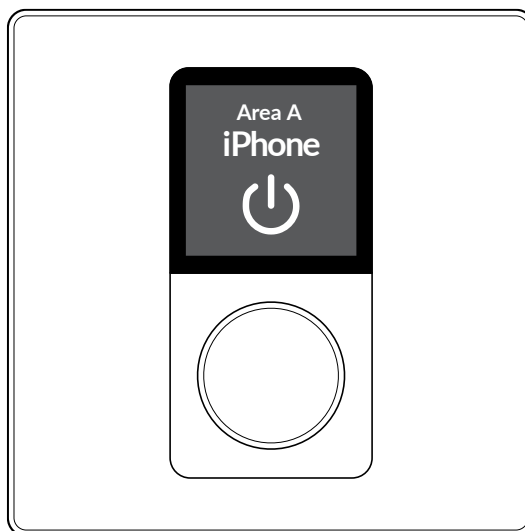
6. **Step 6: Name the device**

   Under the tab labelled "General" you are now recommended to type in a name for the device. We recommend using a name that describes the device's point of installation or usage (e.g., 'Basement Bar').

   Click "APPLY" to activate the name change.

   The NANORM device is now configured and able to remotely control the volume and source input of the Area it is associated with.

   Individual NANORM device identification can be established by selecting the Find Me option in the 'Settings'> 'External Devices' in the nanoNXAMP4 or nanoNXAMP4-D control webpage. The display and rotary encoder illumination of the connected device will flash.

As described above, see the Settings Page Control > External devices to have the list of functions that can be associated with the NANORM device.

REMOTE CONTROL – NEXO NEMO

IP BASED REMOTE CONTROL PROTOCOL

nanoNXAMP4 and nanoNXAMP4-D can be remote control through an Ethernet network, using remote control port at the back of the unit.

Remote control is IP based. The IP address should be set up correctly on all devices of the network to ensure a proper functioning. Both DHCP mode and static IP address mode are available for the nanoNXAMP4 and the nanoNXAMP4-D. See Settings Page Description / LAN for more details.

NB: nanoNXAMP4-D has two RJ45 ports, one for remote control and one for Dante connection. Be sure to use the Remote-Control port to connect the unit to the remote-control software.

NEMO (NEXO REMOTE): NANONXAMP4 CONTROL SOFTWARE

NEXO NeMo is the remote-control app of a set of NEXO products (NXAMP with compatible extension board, NXAMPmk2, DTD Digital TD-controllers with Dante, nanoNXAMP4 and nanoNXAMP4-D). It allows you to control from a Mac or PC through a wired or Wi-Fi network one or many NEXO devices.

Managing and positioning amplifiers, monitoring their parameters (levels, etc.), and setting new values (preset, volume, delay, EQ, etc.) is made possible thanks to an attractive and intuitive user interface. NEXO NeMo also comes with a powerful engine for logging, alerting and emailing.

Its main functionalities include:

- Creating and editing offline sessions and matching to real NEXO devices when going online.
- Intelligent matching of online and offline devices and a way of locating the online devices.

- Visualizing and positioning the connected NEXO devices within a 2D space.

- Adding custom background pictures and editing their brightness and blurriness.

- Grouping devices or channels for multi-device control, and visualizing groups and zones on the 2D space.

- Quickly muting, soloing, and monitoring the status of devices, groups or zones, including peak and protect, for the entire network.

- Selecting setups from the standard library and building custom setups.

- Monitoring and controlling simultaneously parameters of several NEXO devices, among which mute-solo, input and output levels, and volume, delay, gain, array-EQ and headroom of each output channel.

- Patching input channels to output channels.

- Viewing and editing EQ and compressor. EQs can be saved in an EQ Library.

- Saving and recalling scenes.

- Undoing and redoing every control step.

- Copying and pasting parameters and scenes from one-to-many NEXO devices.

- Saving and sharing user configurations, thanks to Sessions (.nemo documents).

- A configurable way of managing alerts of different levels.

- Visualizing and exporting a log of all the values of the NEXO devices (including temperature, voltage, current…) that you can record when NeMo is online.

- A fully configurable Live mode.

- A Demo mode to test the app.

MAINTENANCE

HARDWARE MAINTENANCE

> ⚠ WARNING!
> Always unplug the nanoNXAMP4 from the main before cleaning it.

Regularly check the dust level of the air intakes of the nanoNXAMP4. If some dust is inserted into the cooling tunnel of the amplifier, use compressed air to remove it from the amplifier.

The chassis and the front panel can be cleaned using a dry cloth.

DEFAULT RESET

nanoNXAMP4 and nanoNXAMP4-D can be returned to their default settings via either the Control Web page (see Settings Page Description > Backup & Restore) or the hardware reste pinhole button. The reset pinhole button is located on the underside panel of the amplifier.

To reset the amplifier using the pinhole button, follow the steps below:

- Disconnect the amplifier from mains power.
- Use an appropriate tool to press and hold the reset pinhole button while simultaneously reconnecting mains power.
- Continue to hold the reset pinhole button for 5 seconds as the amplifier restarts.

The amplifier will restart with all settings at their default state. Any previous configured settings will be deleted.
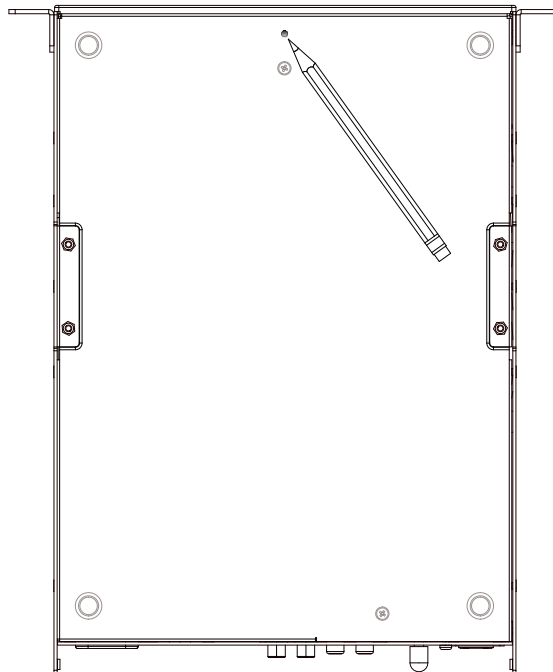
TECHNICAL SPECIFICATIONS NANONXAMP4 & NANONXAMP4-D

POWER SPECIFICATIONS FOR nanoNXAMP4

Number of channels	4x amplifiers channels, 2 by 2 bridgeable
Max. output power (4 channels mode /8 Ohms load per channel)	4x 200 Watts
Max. output power (4 channels mode /4 Ohms load per channel)	4x 250 Watts
Max. output power (4 channels mode /2 Ohms load per channel)	4x 250 Watts
Max. output power (2 channels mode /8 Ohms load per bridged channels)	2x 200 Watts
Max. output power (2 channels mode /4 Ohms load per bridged channels)	2x 350 Watts
Power consumption (Idle)	20 Watts
Power consumption (Standby)	<2 Watts
Power consumption (Standby without network)	<0.5 Watts

INPUT TO POWER OUT SPECIFICATIONS

Frequency response	+0/-0.25 dB from 20 Hz to 20 kHz
Input impedance / Input Sensitivity	20 KΩ / +13 dBU
Dynamic range / THD + N	>106 dB A-weighted / <0.05% on a flat setup
Latency	1 ms on a flat setup
Audio AD and DA Converters	24 bits @ 48 kHz
Processing	64 bits processing DSPs

BACK PANEL FEATURES

Analog audio inputs	4x balanced analogue inputs on Euroblock 3.5 mm pitch or unbalanced on RCA
Power outputs	4x Euroblock 5 mm pitch outputs
Digital audio input/output	1x SPDIF 2ch input/output on RCA + 1x Dante 4ch input (nanoNXAMP4-D only)
GPIO port	1x Euroblock with 4x Global purpose Inputs and 1x Global purpose Output
Network inputs	1x 100 Mb Ethernet port (Remote control)
Mains sockets	1x IEC C14 socket

FRONT PANEL AND REMOTE CONTROL

Front panel LEDs	5x LEDs (WiFi / Network / Output / Input / Status)
Remote control	Through 100 Mb Ethernet port or through integrated WiFi (Access Point or Client)

MAINS REQUIREMENTS

Mains voltage	Universal Power Supply with Active PFC 100 - 240 Volts (50/60 Hz)
Power consump.1/8 max. 2 Ohms	250 Watts

DIMENSIONS AND CERTIFICATIONS

Dimensions and weight	1U, 1/2 19" Rack, 44.5 x 220 x 296 mm (1.75 x 8.66 x 11.65"), 2.8 kg (6.2 lbs)
Electrical safety certification	IEC62368-1 2nd edition and UL62368-1
EMC certification	FCC Part 15 Class B, CAN/CSA-CISPR 22-10, EN55032/CISPR32, EN61000
Green status	Compliant with ROHS & Reach directive

TECHNICAL SPECIFICATIONS NANORM

Model	NANORM-EU	NANORM-EUPW	NANORM-US	NANORM-USPW
COMPATIBILITY				
Amplifier Compatibility	nanoNXAMP4 and nanoNXAMP4-D			
MECHANICAL SPECIFICATIONS				
Colour	Black (RAL9005)	White (RAL9003)	Black (RAL9005)	White (RAL9003)
External dimensions	87 x 87 mm (3.42 x 3.42")		115 x 71 mm (4.53 x 2.78")	
Depth (from rear side of mounting plate to outer side of shield box)	24 mm (0.93")		23 mm (0.91")	
Depth (from tip or rotary encoder dial to outer side of shield box)	43 mm (1.68")		43 mm (1.68")	
Mounting Holes, Distance (Center to center)	60 mm (2.36")		84 mm (3.29")	
Weight	120 g (4.2oz.)		120 g (4.2oz.)	
Operating temperature	0-40° C (32-104°F)			
DISPLAY SPECIFICATIONS				
Display Dimensions	28 x 28 mm			
Display Screen Area	768 mm²			
Display Screen Resolution	240 x 240 mm			
Display Screen Type	RGB, Transmissive / Normaly Black			
Display Screen Material	High gloss polished transparent acrylic			
MATERIAL SPECIFICATIONS				
Exterior & Mechanical parts	Plastic (ABC-PC)			
Base & shield material	Pre-galvanized Steel			
IP Rating	IP30			
ELECTRICAL SPECIFICATIONS				
Power Consumption	PoE Class 1 / 3.84 Wmax			
Power Supply	Through RJ45 ethernet port using CAT5e cable with standard PoE Switch or PoE injector			
Standby Modes	6 settings available : 30 secs, 2 mins, 5 mins, 15 mins, 30 mins, 60 mins			
Connection	RJ45 with CAT 5e (of faster STP)			
Maximum Cable Length	100 m (328ft) with CAT 5e			

THERMAL DISSIPATION AND CURRENT DRAWN

For these measurements, the test signal is a pink noise with bandwidth limited 22 Hz to 22 kHz, all channels driven.

1 BTU = 1055.06 J = 0.252 kcal.

(W) x 860 = cal/h

NANONXAMP4 (PINK NOISE, 100 V/50 HZ MAINS)

	MODE	Output/ch		Line Current (A)	Power consumption (W)	Watts Dissipated (W)	Heat Dissipation	
		Power(W)	Volt(V)				Btu/h	kcal/h
Standby	Audio (Eco)	0	0	0.1	0.4	0.4	1	0
	Audio	0	0	0.1	1.3	1.3	4	1
	Audio (Digital)	0	0	0.3	10	10	34	9
	Trigger (Eco)	0	0	0.1	0.4	0.4	1	0
	Trigger	0	0	0.1	1.4	1.4	5	1
	Network Only	0	0			0	0	0
idle		0	0	0.2	15	15	51	13
1/8 output power	8ohms/ch	25	14	1.5	140	40	137	34
	4ohms/ch	31	11	2.0	178	54	184	46
	2ohms/ch	31	8	2.3	207	83	283	71
1/4 output power	8ohms/ch	51	20	3.0	266	62	212	53
	4ohms/ch	63	16	3.9	342	90	307	77
	2ohms/ch	63	11	4.4	386	134	457	115

NANONXAMP4 (PINK NOISE, 120 V/60 HZ MAINS)

|	MODE	Output/ch		Line Current (A)	Power consumption (W)	Watts Dissipated (W)	Heat Dissipation	
		Power(W)	Volt(V)				Btu/h	kcal/h
Standby	Audio (Eco)	0	0	0.1	0.4	0.4	1	0
	Audio	0	0	0.1	1.3	1.3	4	1
	Audio (Digital)	0	0	0.3	10	10	34	9
	Trigger (Eco)	0	0	0.1	0.4	0.4	1	0
	Trigger	0	0	0.1	1.4	1.4	5	1
	Network Only	0	0			0	0	0
Idle		0	0	0.2	15	15	51	13
1/8 output power	8ohms/ch	25	14	1.3	139	39	133	34
	4ohms/ch	31	11	1.7	177	53	181	46
	2ohms/ch	31	8	2.0	204	80	273	69
1/4 output power	8ohms/ch	51	20	2.5	260	56	191	48
	4ohms/ch	63	16	3.3	335	83	283	71
	2ohms/ch	63	11	3.7	376	124	423	107

NANONXAMP4 (PINK NOISE, 230 V/50 HZ MAINS)

	MODE	Output/ch		Line Current (A)	Power consumption (W)	Watts Dissipated (W)	Heat Dissipation	
		Power(W)	Volt(V)				Btu/h	kcal/h
Standby	Audio (Eco)	0	0	0.1	0.4	0.4	1	0
	Audio	0	0	0.1	1.3	1.3	4	1
	Audio (Digital)	0	0	0.3	10	10	34	9
	Trigger (Eco)	0	0	0.1	0.4	0.4	1	0
	Trigger	0	0	0.1	1.4	1.4	5	1
	Network Only	0	0			0	0	0
Idle		0	0	0.2	16	16	55	14
1/8 output power	8ohms/ch	25	14	0.7	138	38	130	33
	4ohms/ch	31	11	0.9	174	50	171	43
	2ohms/ch	31	8	1.0	200	76	259	65
1/4 output power	8ohms/ch	51	20	1.3	253	49	167	42
	4ohms/ch	63	16	1.7	319	67	229	58
	2ohms/ch	63	11	1.8	356	104	355	89

DRAWINGS AND DIMENSIONS

44 mm
1.7 in

319 mm
12.6 in

220 mm
8.7 in
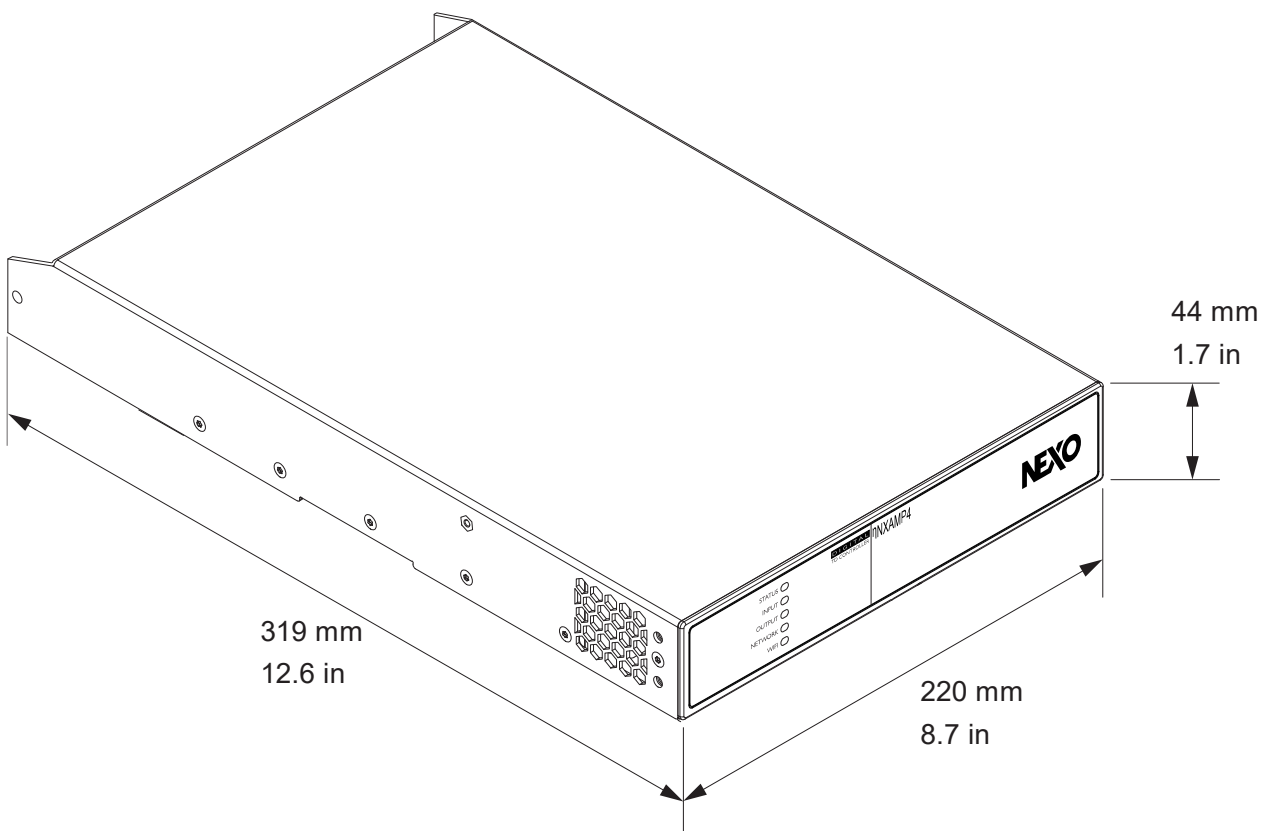
WEEE INFORMATION

INFORMATION FOR USERS ON COLLECTION AND DISPOSAL OF OLD EQUIPMENT:

This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points, in accordance with your national legislation.

By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

For business users in the European Union:

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union:

This symbol is only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

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VERBRAUCHERINFORMATION ZUR SAMMLUNG UND ENTSORGUNG ALTER ELEKTROGERÄTE:

Befindet sich dieses Symbol auf den Produkten, der Verpackung und/oder beiliegenden Unterlagen, so sollten benutzte elektrische Geräte nicht mit dem normalen Haushaltsabfall entsorgt werden.

In Übereinstimmung mit Ihren nationalen Bestimmungen bringen Sie alte Geräte bitte zur fachgerechten Entsorgung, Wiederaufbereitung und Wiederverwendung zu den entsprechenden Sammelstellen.

Durch die fachgerechte Entsorgung der Elektrogeräte helfen Sie, wertvolle Ressourcen zu schützen, und verhindern mögliche negative Auswirkungen auf die menschliche Gesundheit und die Umwelt, die andernfalls durch unsachgerechte Müllentsorgung auftreten könnten.

Für weitere Informationen zum Sammeln und Wiederaufbereiten alter Elektrogeräte kontaktieren Sie bitte Ihre örtliche Stadt- oder Gemeindeverwaltung, Ihren Abfallentsorgungsdienst oder die Verkaufsstelle der Artikel.

Information für geschäftliche Anwender in der Europäischen Union:

Wenn Sie Elektrogeräte ausrangieren möchten, kontaktieren Sie bitte Ihren Händler oder Zulieferer für weitere Informationen.

Entsorgungsinformation für Länder außerhalb der Europäischen Union:

Dieses Symbol gilt nur innerhalb der Europäischen Union. Wenn Sie solche Artikel ausrangieren möchten, kontaktieren Sie bitte Ihre örtlichen Behörden oder Ihren Händler und fragen Sie nach der sachgerechten Entsorgungsmethode.

(weee_eu_de_02)

INFORMATIONS CONCERNANT LA COLLECTE ET LE TRAITEMENT DES DECHETS D'EQUIPEMENTS ELECTRIQUES ET ELECTRONIQUES

Le symbole sur les produits, l'emballage et/ou les documents joints signifie que les produits électriques ou électroniques usagés ne doivent pas être mélangés avec les déchets domestiques habituels.

Pour un traitement, une récupération et un recyclage appropriés des déchets d'équipements électriques et électroniques, veuillez les déposer aux points de collecte prévus à cet effet, conformément à la réglementation nationale.

En vous débarrassant correctement des déchets d'équipements électriques et électroniques, vous contribuerez à la sauvegarde de précieuses ressources et à la prévention de potentiels effets négatifs sur la santé humaine qui pourraient advenir lors d'un traitement inapproprié des déchets.

Pour plus d'informations à propos de la collecte et du recyclage des déchets d'équipements électriques et électroniques, veuillez contacter votre municipalité, votre service de traitement des déchets ou le point de vente où vous avez acheté les produits.

Pour les professionnels dans l'Union européenne :

Si vous souhaitez vous débarrasser des déchets d'équipements électriques et électroniques, veuillez contacter votre vendeur ou fournisseur pour plus d'informations.

Informations sur la mise au rebut dans d'autres pays en dehors de l'Union européenne :

Ce symbole est seulement valable dans l'Union européenne. Si vous souhaitez vous débarrasser de déchets d'équipements électriques et électroniques, veuillez contacter les autorités locales ou votre fournisseur et demander la méthode de traitement appropriée.

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INFORMACION PARA USUARIOS SOBRE LA RECOGIDA Y ELIMINACION DE LOS EQUIPOS ANTIGUOS
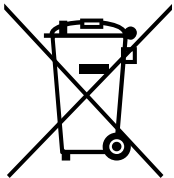
Este símbolo en los productos, embalajes y documentos anexos significa que los productos eléctricos y electrónicos no deben mezclarse con los desperdicios domésticos normales.

Para el tratamiento, recuperación y reciclaje apropiados de los productos antiguos, llévelos a puntos de reciclaje correspondientes, de acuerdo con la legislación nacional.

Al deshacerse de estos productos de forma correcta, ayudará a ahorrar recursos valiosos y a impedir los posibles efectos desfavorables en la salud humana y en el entorno que de otro modo se producirían si se trataran los desperdicios de modo inapropiado.

Para obtener más información acerca de la recogida y el reciclaje de los productos antiguos, póngase en contacto con las autoridades locales, con el servicio de eliminación de basuras o con el punto de venta donde adquirió los artículos.

Para los usuarios empresariales de la Unión Europea:

Si desea desechar equipos eléctricos y electrónicos, póngase en contacto con su vendedor o proveedor para obtener más información.

Información sobre la eliminación en otros países fuera de la Unión Europea:

Este símbolo solo es válido en la Unión Europea. Si desea desechar estos artículos, póngase en contacto con las autoridades locales o con el vendedor y pregúnteles el método correcto.

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USER NOTES

NEXO