

Software Suite

Configure. Manage. Update.

nexo-sa.com

Thinking. Inside the box.

NEXO | A Yamaha Group Company



In the beginning.

NS-1

Whether or not you already know what NEXO system you intend to use in your venue, NS-1 is the entry point to your project, helping you to configure any line source or point source from NEXO's catalog, thanks to intuitive yet powerful tools applied to your own geometry. NS-1 not only assists in achieving the best SPL coverage, but also certifies that mechanical constraints are satisfied. Finally, NS-1 enables you to create and present robust sound design proposals, including the speaker list, and also gain and delay to apply in the amplification and control chain. NS-1 Version 4 also supports a wide range of Yamaha professional audio speakers and includes AFC Design Assistant, which works closely with Yamaha's AFC Image to deliver high end immersive audio.

Choosing and arranging NEXO speakers.

Using Digital TD Controllers (DTD)? You need Dory.

Dory

The perfect controller for small configurations of PS, GEO M and ID speakers, the DTD is really easy to configure, thanks to its USB remote control application: Dory.

From a mobile or a desktop platform, Dory enables you to keep your DTD updated to the latest LOAD, and also to configure your system by selecting presets, patching the inputs, applying gain, delay, EQ and compression. In addition, Dory provides real-time monitoring of input, output and user compression levels.

Updating DTD
Configuring DTD
Monitoring DTD

With you at every stage

A powerful set of free software tools for every step of your workflow, from sound design to final event monitoring.



Preparing your NEXO devices.

NeFu

Your NEXO Powered TD Controller (NXAMP) should always be updated with the latest LOAD, which includes the device's firmware, along with the presets required to achieve the best performance from your NEXO speakers. With NeFu, updating your NXAMPs, NXAMPmk2s and microNXAMPs is easy; when networked together, NEXO devices can be updated in parallel in a very short time.

Updating NXAMPs, NXAMPmk2s and microNXAMPs

Configuring and remote controlling your system.

NeMo

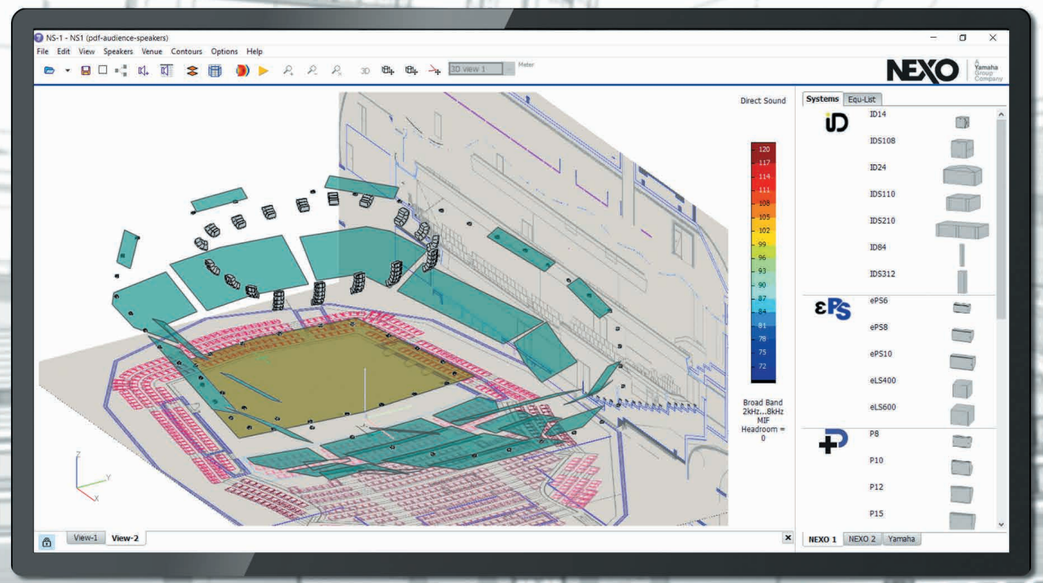
Native on NXAMPmk2, microNXAMP and nanoNXAMP and facilitated by extension cards on the NXAMPs and a Dante™ port on the DTD, NEXO's TD controllers and amplifiers are network-ready.

NeMo is a complete solution for controlling, monitoring and reviewing your system. Prepare your amplification and control chain offline, then remotely control and monitor the system online from a mobile or a desktop platform. Performance statistics from your NEXO devices can even be retrieved after a show.

Dante is a registered trademark of Audinate Pty Ltd.

Preparing Amplifiers and TD controllers
Configuring NEXO devices
Monitoring speaker activity
Reviewing NEXO devices

NS-1



Your venue is just a click away

Drawing

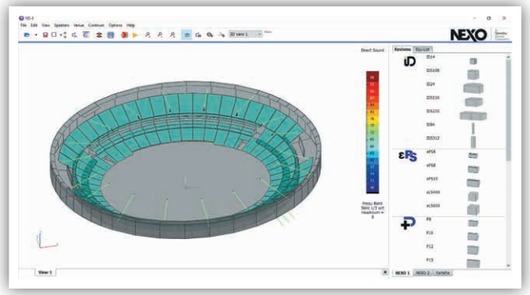
NS-1's drawing tools enable the user to design a venue very quickly. You can even import one or several images of 2D drawings such as plane or cross-section views, and design your 3D model accordingly.

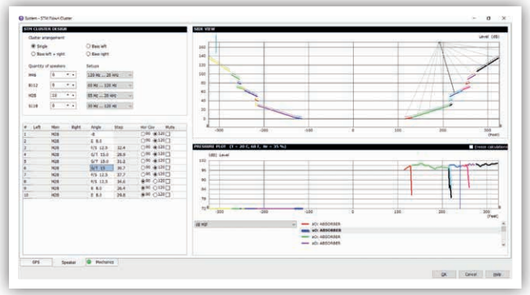
Imported venue

NS-1 supports many 3D formats to import a model of your venue including: Ease, SketchUp 3D via Collada, Google Earth and STL files.

A powerful and intuitive system configuration and simulation tool ensuring uniform SPL coverage in any venue with any NEXO system.

Perfect coverage made easy





All NEXO speakers on tap

Once the geometry is defined, loudspeakers can simply be dragged and dropped into the project, and configured into flown or stacked clusters.

Surfaces

Sound pressure can be received differently on the venue surfaces. Venue items can be:

- Simple surfaces
- Standing-up or seated audience areas
- No audience areas, simply taken into account as obstacles
- Hidden to calculation.

Line-source calculations

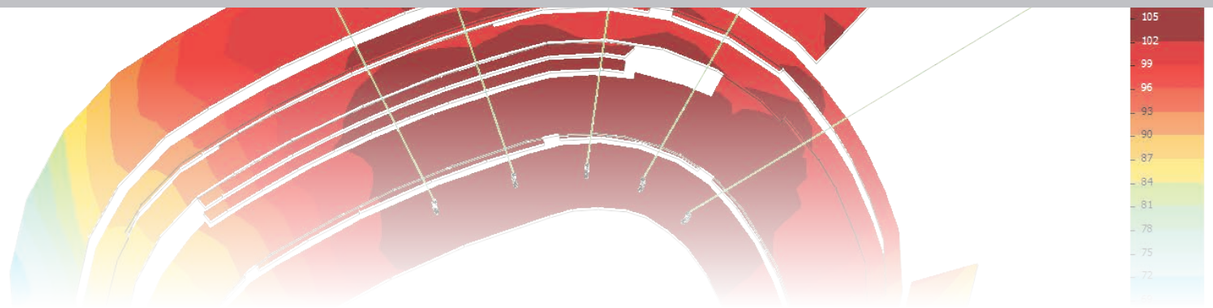
NS-1 helps you to find the perfect series of angles for your clusters, by calculating acoustic pressure on the surfaces. Results can be displayed using NEXO's meaningful dB MIF, or other metrics of your choice.

Direct sound and time coherency

NS-1 performs direct sound calculations on your geometry. They allow you to tend towards the best speaker ratio, gains and positions to match your target coverage.

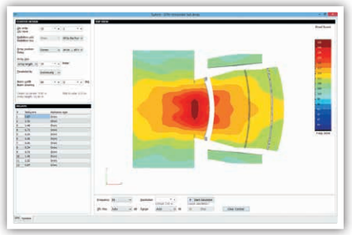
Furthermore, NS-1 makes it easy to align the delays of the speakers thanks to time-coherency calculations.

SketchUp is a registered trademark of Trimble in the United States. Ease is a registered trademark of AFMG Technologies GmbH. Collada is a trademark of the Khronos Group Inc. Google Earth is a trademark of Google.



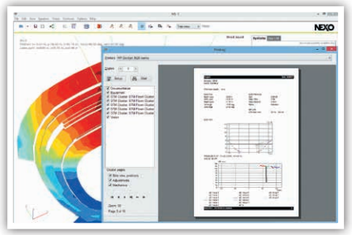
Complex calculations

NEXO enjoys close collaboration with the world's leading experts in electro-acoustic simulation programming. NS-1 models the radiating behaviour of the speakers by spatially sampling them into a large number of monopoles and dipoles. In every mesh point of the venue's surfaces, the contribution of all these sources is calculated for the frequency band of your choice. The simulation results are mapped to the surfaces, giving a 3D representation of the SPL coverage.



Sub design

NS-1 makes it easy to control the beam steering of horizontally arranged sub-arrays. Optimal electronic delays are calculated depending on the sub settings (omni/cardio,etc.), the beam width, and steering angle.



Report editing

A complete speaker list, with specified positions, angles, gains, delays and pressure plots, can be exported from NS-1.



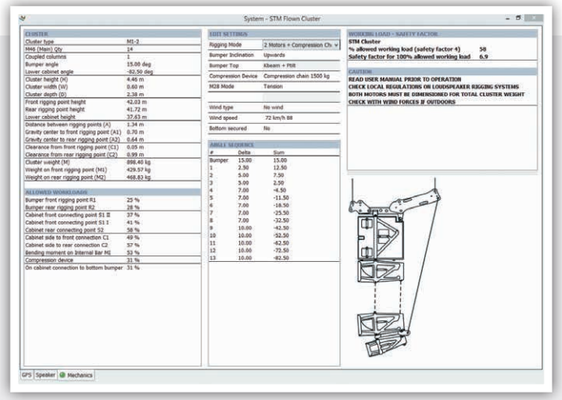
AFC Design Assistant

A shoebox model immersive design calculator which defines spacing and positions for Front of House, surround and top speakers based on venue dimensions and speaker coverage characteristics.

Fly safe

For NEXO, safety is the number one priority. Capable of so much more than acoustic predictions, NS-1 also calculates the working load of the flown clusters, and gives you the green light.

NS-1's mechanical database is always double-checked by an independent expert. The advanced algorithm takes into account the hanging points, the bumper type and, most importantly, the angles between the speakers, providing an accurate result that is certified according to Eurocode 3 "Design of Steel Structure" by TÜV, the world leading certification company.



Mechanics

Detailed Features

GENERAL

- Creating, opening, saving and duplicating NEXO NS-1 Project Files (.nexo, .nexo3). Project file includes speaker systems, venue items and simulated contours.
- Accessing NEXO technical documentation (System Manuals, Structural Analysis, TÜV Certificates).
- Importing venue as NEXO Venue (.nxv), Collada/Sketchup (.dae), 3D Systems (.stl), Google Earth (.kmz), Ease Audience/Face (.xar, .xfc), plain text (.txt).
- Exporting venue as NEXO Venue (.nxv), Ease Face (.xfc), or image.
- Configuring Air Absorption.
- Expressing distances in Metres or Feet.

AFC DESIGN ASSISTANT

- Shoebox model immersive design calculator.
- Defines spacing and positions for Front of House, surround and top speakers based on venue dimensions and speaker coverage characteristics.

PROJECT 3D VIEW

- Viewing a 3D representation of the venue's surfaces and speakers. Moving and rotating the camera.
- Moving the speakers systems, venue planes or vertices using the mouse, or through a dialog (translation, rotation and/or predefined transformation like mirroring).
- Selecting and editing speaker systems or venue items.
- Viewing or hiding the Direct Sound or Time Coherency contours mapped on the venue surfaces.

EDITING THE PROJECT

- Adding speakers from the library by dragging and dropping. Choosing between Horizontally or Vertically Flown or Stacked Cluster, or Single Unit.
- Naming and adding comments to speaker systems and venue items.
- Duplicating speaker systems and venue items one or several times, applying transformations (translation, rotation, flip,...) to duplicate.

EDITING VENUE ITEMS

- Creating surfaces as quadrangles (4 vertices) or polygons (custom number of vertices).
- Assigning audience type to surfaces (no audience, surface, seated, standing, disabled).
- Inserting side view or plane view drawing or any picture (.jpg, .png, .bmp) on a venue surface
- Entering vertices using a Range Finder device (e.g. TruPulse 360).

EDITING SPEAKER SYSTEMS

- Editing cluster arrangement and processing presets (setup on NXAMP), gains, delays and mute.
- Creating speaker groups and zones.
- Specifying rig angle, angle sequence, steps between speakers, horizontal coverage, front/rear sub configuration, etc.
- Viewing the side-view for the cluster (with radiation rays) and the venue surfaces (as well as audience levels). Viewing the sound pressure field in this cross-section.
- Populating a pressure plot (sound pressure along distance on the surfaces), with various settings (dB MIF, dB A, dB Peak, SPL or fixed frequency).
- Adding measure points, and viewing sound pressure dB level along with frequency as curve or bar graph, at this point.
- Controlling beam-steering of horizontal or vertical sub-arrays. Calculating electronic delays depending on the steering angle and beam width.
- Checking mechanical computations (dimensions, weight, forces, working load and safety factor) with various settings (bumper type, rigging point, wind,...).

SIMULATING

- Calculating direct sound pressure field at audience level. Calculation is optimized depending on the selected frequency range, with surface shadowing options.
- Calculating time coherency (i.e. time alignment quality), at low frequencies (subs to mains) or high frequencies (between mains).
- Calculations on ISO frequency bands or broadband (Z, dB A, B, C or dB MIF), with user defined resolution, band-width, and SPL range (optional headroom).
- Choosing between fast or slow calculation time, for rough or precise simulation.

REPORT EDITING

Printing or exporting a configurable PDF containing:

- The equipment list (speakers and quantities).
- For each cluster, a side view, pressure plot and/or mechanics (angle sequence, electronics, horizontal coverage details,...).
- A picture of the venue with calculated contours.

NeMo

Prepare the show from the best seat in the house

A complete system management and remote control solution for networked NEXO Powered TD Controllers (NXAMP, microNXAMP and nanoNXAMP), and Digital TD Controllers (DTD).



One session, multiple functions

NeMo saves everything from the devices, groups and zones that you have created offline or online into a session. You can share this document with other NeMos, running on Windows, Mac, iPhone or iPad.





Prepare your session offline

Creating and arranging devices

Offline device prototypes (NXAMP, NXAMPmk2, microNXAMP, nanoNXAMP and DTD) can be created and grouped together in groups of devices, or zones of channels. All are represented on a map where they can be moved and stacked together, with a customizable background picture.

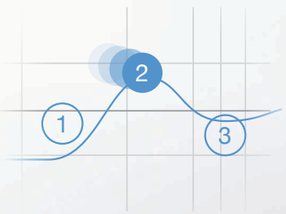


and match with online devices

Intelligent matching

NeMo suggests a matching between online and offline devices, that you can customize. NEXO devices can be easily identified thanks to flashing screens or LEDs. NeMo allows you to choose the synchronization direction: data is taken from or sent to the online devices.





Full control at your fingertips

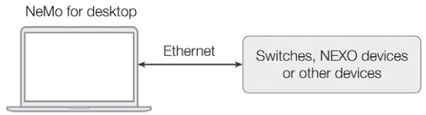
Thanks to intuitive and secure UI controls, many parameters can be edited while devices are offline or online, including preset selection, input patch, gains, delays and EQ.

Several devices can be edited at once, and everything can be undone, even online.

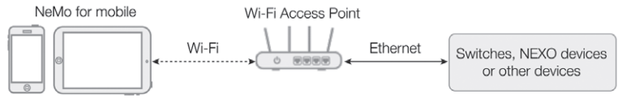
Easy to set up

NEXO introduces Direct Control: with your NXAMPs and NXAMPmk2s equipped with NXAEDT, NXDT104, NXAE104 or NXRM104, and your DTD-Ns, microNXAMPs and nanoNXAMPs, you can simply connect your NEXO Devices to NeMo with Ethernet and/or Wi-Fi, and they are automatically discovered.

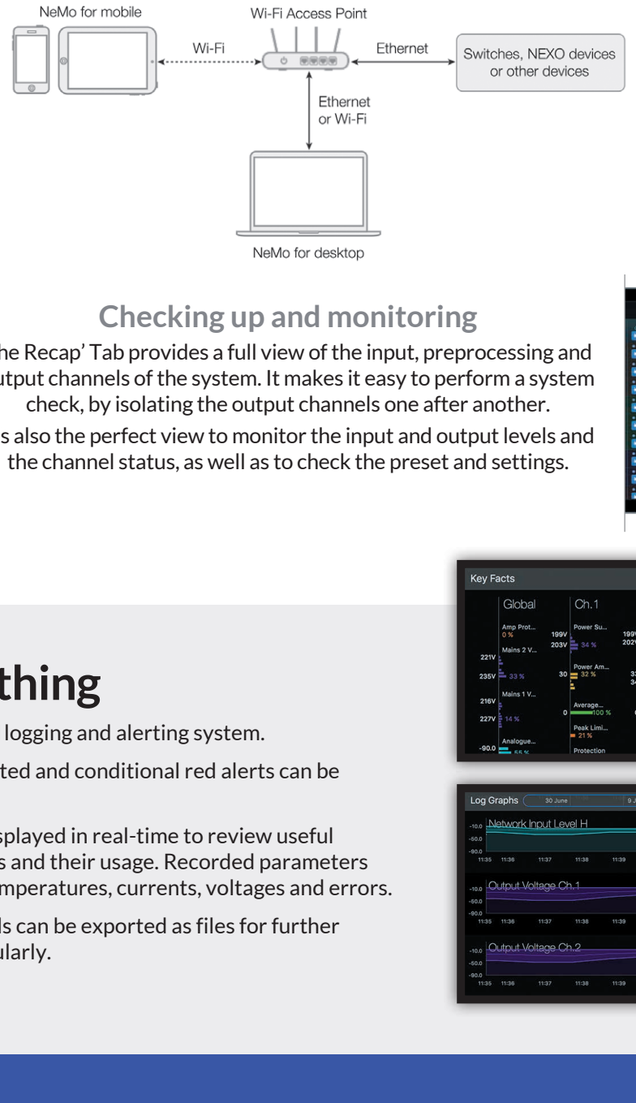
NXAMPs equipped with NXES104 can be remote controlled with AVS-Service and AVS-Monitor (Windows) or NeMo v2 (macOS and iOS)



Simple configuration with NeMo for mobile



Recommended configuration with NeMo for mobile and NeMo for desktop





Checking up and monitoring

The Recap' Tab provides a full view of the input, preprocessing and output channels of the system. It makes it easy to perform a system check, by isolating the output channels one after another.

It's also the perfect view to monitor the input and output levels and the channel status, as well as to check the preset and settings.



Never miss a thing

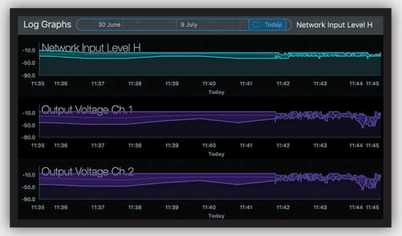
NeMo comes with a powerful logging and alerting system.

When online, alerts are reported and conditional red alerts can be activated.

A Log can be recorded and displayed in real-time to review useful information about the devices and their usage. Recorded parameters include levels, protections, temperatures, currents, voltages and errors.

Alert Reports and Log Records can be exported as files for further analysis, or even emailed regularly.





Detailed Features

GENERAL
Creating, saving and sharing sessions (.nemo), containing devices and their parameter values, as well as groups and zones.
Connecting to the network using one or several network adapters (wired or Wi-Fi). Automatic discovery of compatible devices.
Muting, soloing and locating the devices and channels from almost anywhere in the application (Selector, Network Tab, Recap Tab and Control Tab).
Accessing a fully configurable Live mode, where user interaction is limited.
Undo/redo and copy/paste on most functions, offline and online.
Presets library can be automatically downloaded from the internet or from the online devices.
Demo mode to test the application.
Supported plateforms : Windows 7 or later, macOS 10.13 or later, IOS 12.0 or later
Pricing : available for free at www.nexo-sa.com/nemo and the App Store

COMPATIBLE DEVICES (DIRECT CONTROL)	Maximum number of remote control sessions
NXAMPmk2 with NXAEDT, NXAE104, NXDT104**, NXDT104mk2 or NXRM104	2
NXAMP with NXAE104, NXDT104 or NXDT104mk2	2
DTD-T-N, DTD-I-N	1
microNXAMP4-T, microNXAMP4-I	
nanoNXAMP4 and nanoNXAMP4D (using Remote Control port)	
Recommended maximum number of devices NeMo for Windows and macOS: 128 NeMo for iOS: 8	

COMPATIBLE DEVICES (AVS-SERVICE)	Maximum number of remote control sessions
NXAMP with NXAE104, NXDT104, NXDT104mk2 or NXES104	32
NXAMPmk2 with NXAE104, NXDT104**, NXDT104mk2, NXRM104 or NXES104**	32
Recommended maximum number of devices NeMo for macOS v2 only: 128 NeMo for iOS v2 only: 128	

**limited control

MATCHING
Automatic matching based on history, or custom matching; viewing devices ID and previews. Device IDs can be edited while offline.
Matching from NeMo to online devices or reversely, on a common or individual device basis.

NETWORK TAB
Grouping devices or channels into groups and zones, for multi-device control.
Visualizing and positioning devices, groups of devices and zones of channels on 2D maps.
Adding custom background pictures, editing pictures' position, blurriness and opacity.
Muting, soloing or locating devices, groups and zones, monitoring input or output levels, and channel status (sense, peak, protect).

RECAP TAB/QUICK MUTE SOLO
Muting, soloing and locating individual channels. Solo can be exclusive or cumulative.
Monitoring levels, status (sense, peak, protect) and parameter values (volume, delay, EQ…) of individual channels.
Configurable list of displayed parameter values.

CONTROL, SETUP AND SCENE TABS
Editing parameters of one or several device(s), channel(s), group(s) or zone(s), in absolute or relative way.
Selecting presets from NEXO factory setups, or per-channel custom setups.
Patching input channels to preprocessing channels and to output channels.
Viewing and editing parameters including volume, gain, delay, headroom and array-EQ.
Viewing and editing device options (screen appearance, sleep settings, network configuration, GPIO).
Locking and unlocking front panel or remote control of NEXO devices.
Viewing and editing EQ and user compressor. EQs can be saved in the EQ Library, that can be exported and imported (.nxeq).
Saving and recalling scenes. Scenes can be saved in the Scenes Library, as well as copied, pasted, exported and imported (.nxscenes).

LOG AND ALERTS
Recoding, visualizing and exporting a log of all the values of the online NEXO devices (including temperatures, voltages, currents, warnings...).
Viewing and exporting alerts (connections, disconnections, alerts and errors).
Configuring red alerts with value and time thresholds on many parameters of NEXO devices.
Periodically emailing log and alert reports.



Dory

Because every hero needs a sidekick

Selecting preset

Take full advantage of NEXO's advanced speaker processing by using Dory to select the correct preset for the system you are using with the DTD.

Choosing audio sources and patching

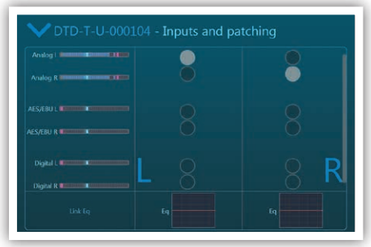
A wide range of audio sources can be selected for the stereo inputs: analog, AES/EBU, Dante, or even USB.

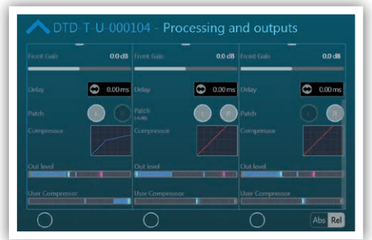
Preprocessing EQ can be applied independently to L and R inputs.

Configuring output channels

The R and L inputs can be independently patched to Main L, Main R or Sub output channels, on which gain and delay can be edited. A user compressor can be applied in addition to NEXO protection and compression layer.





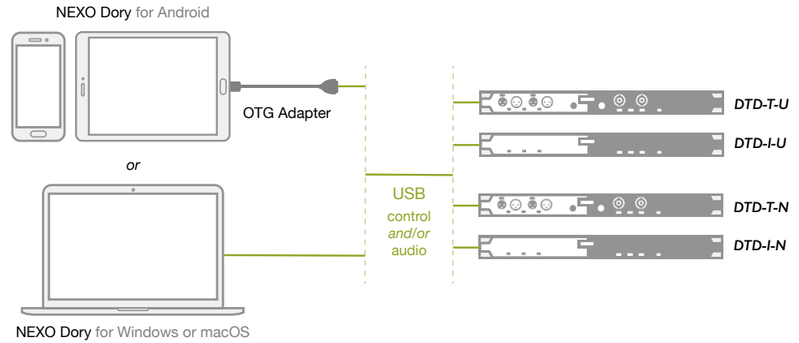


Download Dory Here
www.nexo-sa.com/software

A highly intuitive remote control solution for any NEXO Digital TD Controller (DTD) over USB, available on desktop and mobile platforms.

Truly 'Plug and Play'

Simply link your computer or Android device to the USB port of a DTD to take full control over it, and even stream audio.



Detailed Features

GENERAL
Connecting to a DTD using USB serial port (OTG adapter must be used on Android mobile devices).
Presets library is already included in the application bundle.
Updating firmware when DTD is not up-to-date. Recovering if needed.
Offline mode to test the application.

COMPATIBLE DEVICES (SERIAL CONTROL)	Number of devices
Digital TD Controller (DTD-T-U, DTD-I-U, DTD-T-N, DTD-I-N)	1

MAIN VIEW
Viewing active preset and monitoring output and user compression levels.
Selecting a preset for Main L/R and Sub: choosing product series, model and cross-over.
Locking and unlocking DTD with PIN code.

INPUTS AND PATCHING
Monitoring levels and patching audio sources (Analog, AES/EBU, Digital — Dante or USB) to preprocessing channels L and/or R (one or several sources per channel).
Adding up to 8 EQ bands to each preprocessing channels. Possibility of linking the channels.

PROCESSING AND OUTPUT CHANNELS
Patching preprocessing channels to output channels Main L, Main R and/or Sub.
Editing gain, delay and user compressor.

NeFu

The easy way to keep your NXAMP, NXAMPmk2 and microNXAMP Powered TD Controllers up to date.



Download NeFu Here
www.nexo-sa.com/software

Simple. Fast.



Updating in parallel

Now several NXAMPs can be updated at the same time, making the update process much faster. You can even start updating some devices while others are already being updated. NeFu has advanced upload mechanisms that enhance reliability.

Straight to the point

When connected over network or from a serial port, NEXO devices are automatically discovered. NeFu updates only the parts (NXAMP or extension card) needing to be updated to the selected LOAD version.



Detailed Features

GENERAL
Opening a LOAD file (.dld) and reviewing its content (included firmware versions for NXAMP and extension cards).
Automatic discovery of NEXO devices on a network. Filtering the available network interfaces.
Selecting one or several NEXO devices and, if needed, starting to update them and/or their extension cards, in parallel.
Emailing log report to NEXO.

COMPATIBLE DEVICES	COMPATIBLE LOADS
NXAMP with NXAE104, NXDT104 or NXDT104mk2	Starting from LOAD3_23
NXAMPmk2 with NXAEDT, NXAE104, NXDT104*, NXDT104mk2 or NXRM104 *only extension card can be updated	Starting from LOAD4_19
microNXAMP4-T and microNXAMP4-I	Starting from LOAD5_39

More software for NEXO systems

NEXO NXWin

Compatibility application to update NXAMP with NXES104, NX241 and NX242.
Latest version : 4.2.1.8
Supported platform: Windows
Pricing: available for free, download link in NXAMPs LOAD Packages.
www.nexo-sa.com/software

AuviTran AVS-Monitor

Remote control application for NXAMP and NXAMPmk2 over network.
Supported platform: Windows
Pricing: available for free on AuviTran's website www.auvitran.com

What do I need?

Discover the software tools you need for your project

Prediction and configuration	NS-1
DTD -T and -I -U and -N *Update and control*	Dory
-N only *Control*	NeMo
ηNXAMP4 and ηNXAMP4-D *Update and control*	**Web interface** via embedded Wi-Fi access point
Control	NeMo
μNXAMP4 -T and -I *Update*	NeFu
Control	NeMo

	NXRM104 (no audio)	NXAEDT	NXDT104 mk1 & mk2	NXAE104	NXES104
NXAMP 4x1 and 4x4 — *Update*			NeFu		NXWin
Control			NeMo		(NXES104 requires AVS-Service and NeMo v2)
			AVS-Monitor		
NXAMPmk2 4x1, 4x2 and 4x4 — *Update*	NeFu (NXDT104mk1: only to update the card, not the NXAMPmk2)				NXWin (only to update the card, not the NXAMPmk2)
Control	NeMo (NXDT104mk1: limited control)				(NXES104 requires AVS-Service and NeMo v2)
	AVS-Monitor (limited control)				

Online Documentation

Download our Software QuickGuides at nexo-sa.com or contact us at technical@nexo.fr if you have a question.



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