



DIGITAL TD CONTROLLER DTD-T

DIGITAL TD CONTROLLER DTD-I

Digital TD Controller for NEXO PS Speakers and LS Subs.

The new generation of NEXO Digital TD Controllers offers the same sound quality and processing algorithm than our high end NXAMP range at a very competitive price.

DTD mains features

- Speaker controller for PS and LS range, provides digital processing issue from the NXAMP technology (Crossover, EQ, time alignment and speaker protections).
- High-end Balanced Stereo Analog inputs, AES input, USB input and optionally Dante™.
- High-end Balanced Analog outputs for PS (Stereo) and LS (mono sum).
- Automatic Amplifier Sensing with no setting required from user.
- Simple control from the front panel (Sub Gain, Main Gain, Crossover mode) or advanced control using USB port.

The DTD is a unique tool, combining advanced signal processing, inherited from the NXAMP, with an unmatched easyness of use.

Flexible Inputs system

The DTD offers efficient speaker processing with unmatched input flexibility : On top of the High-end Stereo balanced inputs, an AES input and a USB input (driverless USB audio playback from many OS) will allow the DTD to be connected quickly in any situation. Dante™ input is also available as an option (see ordering information).

State of the Art signal processing

Despite its easyness of use, the DTD is hiding state of the art audio processing, offering high precision EQ and Lienear Acoustic Phase algorithm, phase compatible with other Nexo speakers, inherited from our NXAMP range of powered TDcontroller.

The DTD uses high-end AD and DA converters, 64 bits / 96 KHz DSPs, and finally an analog IN to analog OUT dynamic range of more than 112 dB, while distortion is keep under 0.001%.

Installation or Touring versions

The Digital TDcontroller range is composed of two models, both housed in a rugged low depth steel 19" case and featuring a universal power supply.

The **DTD-T** is the Touring version, with its analog input and output connectors (XLR and Speakons) on the front pannel, thus saving the cost and room for an extra patch panel unit. Front panel display shows the current PS/LS setup, two hardware knobs for Sub/Main output gain, and a switch for selecting Wideband, Crossover or User (i.e. custom) mode.

The **DTD-I** is the Installation version, with all connectors (except mini-USB) at the back on barrier strip. No hardware control , everything is set up from a PC/Mac computer connected on the USB port, allowing the settings to be locked and thus prevent any accidental changes.

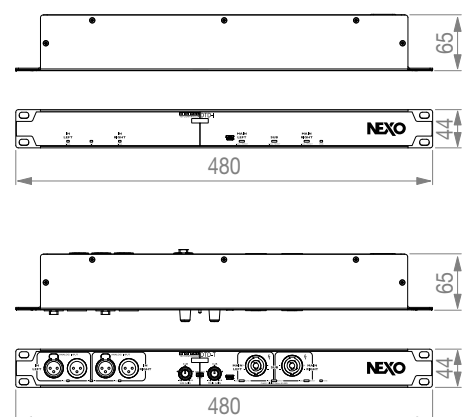
User Mode

While front panel switch and knobs allows basic setup of the DTD-T without the need of a computer, the User Mode that can be set up through the USB port offers more possibility like:

- Speaker and Sub model selection.
- Crossover Frequency selection.
- Delay on mains and sub outputs.
- Gain control for each output.
- Input/Output meters, including protections.
- User EQ (2x 8 bands parametric EQ)
- User limiters.
- Settings lock with password.

Updatable firmware

The USB port allows also to update the unit firmware, to add new functions or to download new NEXO speakers presets.



DIGITAL TD CONTROLLER DTD

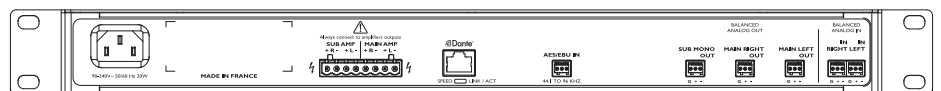
NEXO is one of the world's leading sound reinforcement loudspeaker manufacturers. Founded in 1979, the company is dedicated to crafting practical solutions with solid engineering. Each new design begins with a proprietary sophisticated computer simulation process that allows every parameter to be extensively modeled and simulated, leading to breakthrough cost and performance gains. NEXO's comprehensive product line includes loudspeakers, analogue and digital control electronics and amplification; all designed to deliver consistent sound quality and long term reliability for a broad range of applications.

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	DTD-T-U	DTD-T-N	DTD-I-U	DTD-I-N
ELECTRICAL SPECIFICATIONS				
Sampling frequency and resolution	96 KHz, 64 bits internal processing precision			
Signal delay	Less than 1 ms (analog in to out) on flat setup, compatible with NXAMP latency			
Frequency response	20 Hz to 20 KHz, +/-0.5 dB (mains out)		20 Hz to 2 KHz +/-0.5 dB (sub out)	
Total harmonic distortion	Less than 0.003% (mains out)		less than 0.02% (sub out)	
Dynamic range	112 dB (unweighted, mains out)		107 dB (unweighted, sub out)	
Crosstalk / Channel separation	-100 dB (1KHz)			
Indicators	Analog in signal/peak (green/red), sense in signal (yellow), speaker protect (yellow)			
Display	White backlight graphical OLED display 96 x 16 pixels			
Switch and rotary knobs	3 position switch + 2 x rotary knobs			
ANALOG INPUTS CHARACTERISTICS				
Number of channels	2 electronically balanced analog inputs			
Connectors	2 x XLR-F with link on XLR-M		2 x terminal block (3-pin / 2.54 mm pitch)	
Sampling frequency and resolution	96 KHz / 24 bits			
Max. input level / Input impedance	+22 dBu / 20 KOhms			
ANALOG OUTPUTS CHARACTERISTICS				
Number of channels	3 electronically balanced analog outputs			
Connectors	3 x XLR-M		3 x terminal block (3-pin / 2.54 mm pitch)	
Sampling frequency and resolution	96 KHz / 24 bits			
Max. output level / Output impedance	+ 22 dBu / 200 Ohms			
AMPLIFIER SENSING INPUTS				
Number of channels	4 floating electronically balanced high voltage analog inputs			
Connectors	2 x 4 pole SP connectors		1 x terminal block (8-pin / 5.08 mm pitch)	
Sampling frequency and resolution	96 KHz / 24 bits			
Max. input level / Input impedance	+50 dBu (8000 Watts / 8 Ohms) / 364 KOhms			
AES INPUTS CHARACTERISTICS				
Number of channels	1 AES/EBU stereo digital input			
Connectors	1 x XLR-F		1 x terminal block (3-pin / 2.54 mm pitch)	
Sampling frequency and resolution	44.1 to 96 KHz /		16, 20 or 24 bits	
DANTE™ INPUT CHARACTERISTICS				
Number of channels	2 x Dante™ channels		2 x Dante™ channels	
Connector	1 x ruggedized RJ45		1 x RJ45	
Sampling frequency and resolution	48-96 KHz / 24 bits		48-96 KHz / 24 bits	
USB INPUT CHARACTERISTICS				
Type	2 channels of asynchronous USB audio			
Connector	Female mini USB connector type B			
Sampling frequency and resolution	48 KHz / 16 bits			
REMOTE CONTROL				
Connector	Mini USB	Mini USB + RJ45	Mini USB	Mini USB + RJ45
PHYSICAL SPECIFICATIONS				
Dimensions (W x H x D)	480 (W) x 44 (H) x 65 (D) mm, 1U			
Weight	1.3 Kg			
Power supply voltage	90 V - 240 V 50/60 Hz			
Power consumption	20 W max.			
Heat dissipation (per hour)	20 Kcal max.			
Operating temperature range	0°C - 40 °C			
Storage temperature range	-20 °C - 60 °C			
Included items	Owners's manual		Owners's manual + terminals plugs	
ORDERING INFORMATION				
Ordering code	NX.DTD-T-U	NX.DTD-T-N	NX.DTD-I-U	NX.DTD-I-N



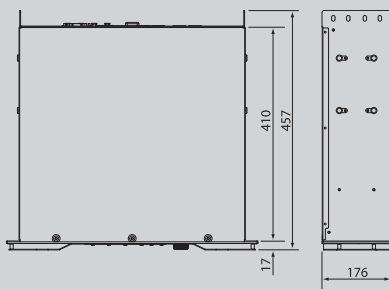
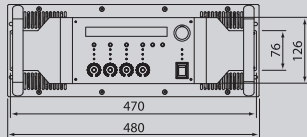
LIMITED WARRANTY

NEXO loudspeakers and electronics are covered against defects in workmanship or materials for a period of two (2) years from the original date of purchase. At the option of NEXO the defective item will be repaired/replaced with no charge for materials/labour. The item is to be adequately packaged and dispatched, pre-paid, to a NEXO authorised distributor/service centre. Unauthorised repair shall void the warranty. The NEXO warranty does not cover cosmetics or finish and does not apply to any items which in NEXO's opinion have failed due to used abuse, accidents, modifications or any type of misuse. All images and text herein are the property of NEXO SA, and deemed accurate, although specifications are subject to change without notice.

NXAMP 4x1 & 4x4 Powered TDcontrollers

NEXO

DIGITAL NXAMP TD CONTROLLER



NX AMP Advantages

- NXAMP 4x4 is among the industry's most powerful amplifiers
- Cost effective integration of command, control, protection and amplification of all NEXO loudspeaker systems
- Lighter and requires less rack space than conventional amplifier-processor systems
- Eliminates unnecessary A/D conversion
- Optional EtherSound Networking

NX AMP Advantages

- Power-on protection (smooth start-up with in-rush limitation)
- Power-off protection (clean shut-down procedure)
- Peak Voltage limiter (clip limiting)
- Peak Current limiter
- VHF protection
- Integrate current limiter
- DC offset protection
- Short circuit protection
- Fan speed control
- Power Amp overheat protection
- SMPS overheat protection
- SMPS fault protection
- Power cable monitoring



NXAMP technology is far more complex than a bundled power amplifier and loudspeaker controller. More than two years of research yielded significant DSP innovations which allow multiple voltage/current/temperature sense lines, from the amplifier's output, to protect both the amplifier and power supply.

Robust, Rugged Power Supplies

NXAMP power supplies are full resonance types with half bridge converters. This exceptional design minimizes noise is via (Zero Current Switch (ZCS) technology. NXAMP4x4 employs four times the structure of a monaural amplifier to present very high power with low load drive.

This requires four converters, four transformers and of course four power supplies. In addition, on both NXAMP models, two converters work synchronize the opposite phase, thus cancelling noise. The benefits include unrivalled sonic performance and low EMC.

Clean and Cool EEEngine

Both NXAMP amplifiers employ YAMAHA's EEEngine technology. This technology offers the sonic purity of conventional class AB, but with a heat dissipation equaling class D technology. In fact, NXAMP rails constantly follow the output signal needs, minimizing the required headroom (and wasted energy).

Ferocious Final Stage (with Protection)

NXAMP's final stage output transistor is customized for these devices via thin chip technology, with minimized thermal resistance, to reach 300 Volts. NXAMP4x4's final stage uses nine such transistors in parallel, to supply 135Amp output current capacity.

Even though DSP protection is already used on both NXAMP models, an Area of Safety Operation (ASO) limiter circuit is also included. ASO limiting is done in analog, as the limiter attack required is too fast for digital protection and converter latency.

NEXO

www.nexo.fr

NXAMP 4x1 & 4x4 Powered TDcontrollers

NEXO

DIGITAL TD CONTROLLER NXAMP



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POWER SPECIFICATIONS FOR NXAMP4x1

POWER SPECIFICATIONS FOR NXAMP4x4

Number of amplifiers channels	4x channels, 2 by 2 bridgeable	4x channels, 2 by 2 bridgeable
Max. output voltage (no load)	4 x 105Volts	4 x 200Volts
Max. output power (8Ω)	4 x 600W	4 x 1900W
Max. output power (4Ω)	4 x 900W	4 x 3300W
Max. output power (2Ω)	4 x 1300W	4 x 4000W
Power consumption (Standby)	10W	20W
Power consumption (Idle)	100W	150W
Power consumption (1/8 Power)	1100W	3000W

COMMON NXAMP SPECIFICATIONS FROM ANALOG IN TO POWER OUT

Analog Inputs channels	4x channels, analogue inputs on XLR 3 with a second XLR 3 for linking
Frequency response	±0.5dB from 10Hz to 20KHz
Input Impedance	20KΩ
Max Input Level	+28dBu
Dynamic Range	All Channels = 105dB unweighted
THD + Noise	Typical 0.1% flat setup
Latency time	500us on a flat setup
Power Supply	Dedicated version for 100 ~ 120Volts or 220 ~ 240Volts

COMMON NXAMP FEATURES

Audio Inputs	<ul style="list-style-type: none"> • 4x balanced analogue inputs on XLR3 with a second XLR3 for linking, using 24bit converters. • 4x digital inputs via the optional network card slot at the back.
Power Outputs	4x Speakon outputs using internal power relay for automatic output assignment regarding setup.
RS232 port	Allow firmware upgrade for software improvement and new cabinet setups.
GPIO port	5x Global Purpose Inputs and 8x Global Purpose Outputs for simple remote control and monitoring.
Processing	Two DSPs, 24bit data with 48bit accumulator. 700MIPS.
Front Panel	On/Off Mains switch, Select Wheel, Menu A and Menu B buttons, 40 characters by 2 lines display. Amp protect, Stand-by and power LED's. Then for each channel: volume indicator (15x LEDs), Individual Mute buttons and red LED, output current signal green led, Speaker Protection yellow LED, Amp. Peak red LED.
Rear Panel	1 (NXAMP4x1) or 2 (NXAMP4x4) mains socket; RS232 serial communications connector; GPIO port, Expansion slot for networking audio extension card, 4 XLR inputs with link and 4 Speakon 4 outputs.
Dimensions & Weight	NXAMP4x1: 3U 19" Rack - 457 mm (18") Depth - 16.5kg (33lbs) net NXAMP4x4: 4U 19" Rack - 457 mm (18") Depth - 24.5kg (49lbs) net

NXAMP USER CONTROLS

System Selection	Allows control across all NEXO ranges.
System Set-up	Within the selected range, if possible, allows cabinets to be set for passive or active mode, wideband or crossover mode, choose among available crossover point, cardioid or supercardioid mode.
Protection	Multiple Peak Limiters fitted for both selected cabinet and amplifier. Multiple Acceleration, Displacement and Temperature protections on every channel. Inter-channel regulation.
Delay	Up to 150m (330 ft.) of delay in 10cm (.4in) steps
Input Patching	Allows any of the 4x analogue (or digital) inputs combination to be routed on each output.
Output Gain	Global and inter-channel gain ±6dB in 0.5dB steps.
Volume control	Each channel with 16x steps from - inf dB to 0dB.
Save/Recall	Set-up Stores up to 40x user set-ups; On- the-fly recall, without mute or glitches for instant comparison.
Array EQ	LF or HF shelving filters to compensate ground or stacking effects, ±6dB, frequency factory tuned.
Security Mode	Password protected for Read-Only or Remote-Only Mode.
Remote control	Full remote control via the Ethersound protocol and ESmonitor software.
Certification	UL, SEMKO (CE), CCC, KOREA, TSS, PSE
Green status	Compliant with ROHS and WEEE directive

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

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NEXO

NeMo

Version 1.4

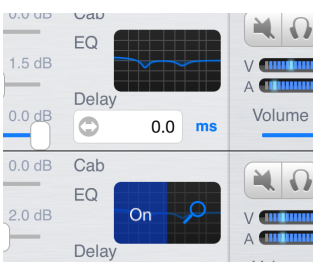
Introducing NXAMP EQ

EQing Your System, Easier Than Ever

With up to eight bands per channel, NXAMP EQ allows you to tune your entire system with an optimal precision, directly from your NXAMPs.

The EQ is fully configurable from the NXAMP's front panel and from NEXO NeMo.

It comes in addition to the Array-EQ functionality, that remains available.



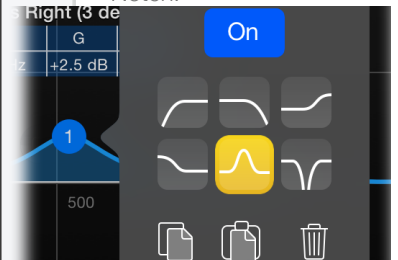
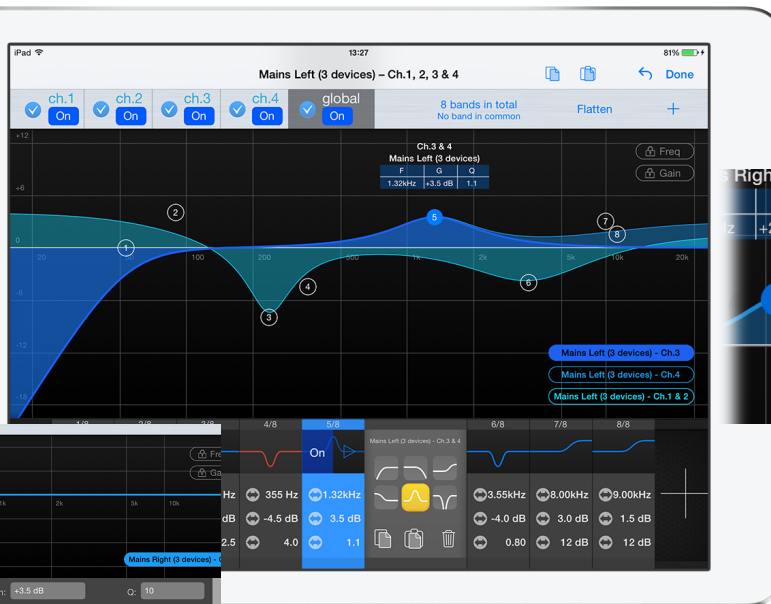
Preview and access EQ Editing from the Control Tab

On/Off global and per channel.

For each band, choose between:

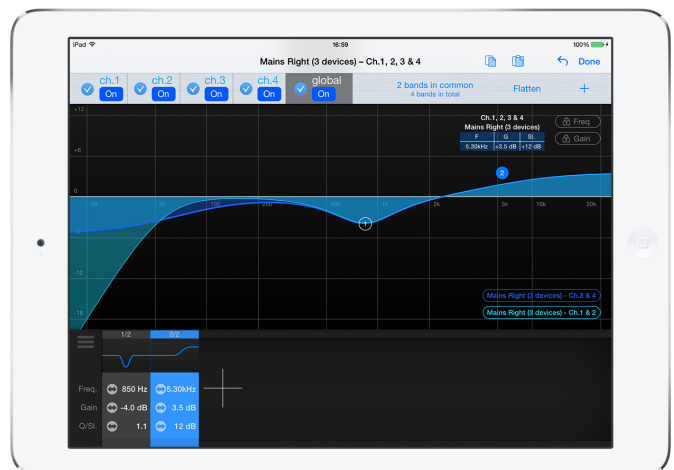
- High/low pass (only flat mode),
- High/low shelf,
- Bell,
- Notch.

Accurate editing with intelligent gestures and by using the keyboard.

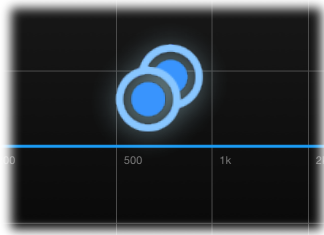


Edition on several devices or groups, for one or many channels at once.

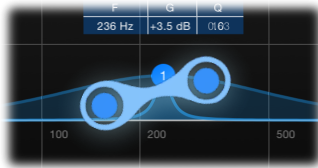
View and edit only common bands, or all the bands of the selected channels.



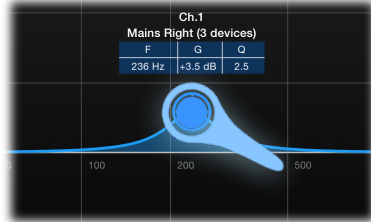
Intelligent gestures



Smart double-tap to add bands.

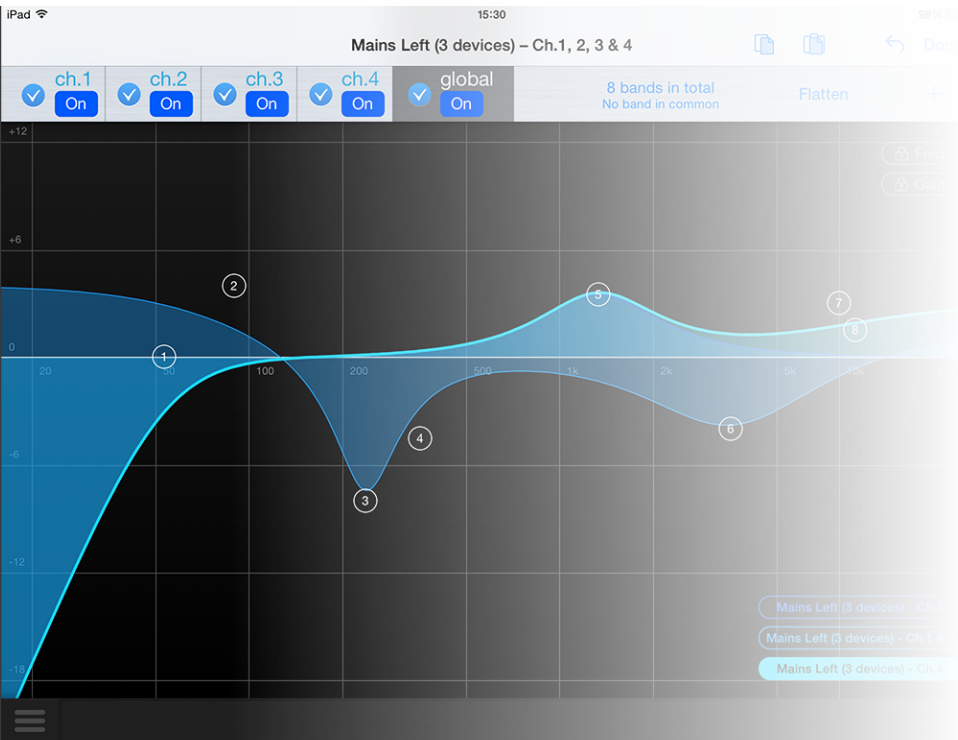


Pinch to edit Q.



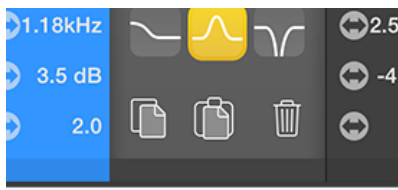
Dragging to edit frequency and gain (possibility to lock).

Smart-resolution sliders.

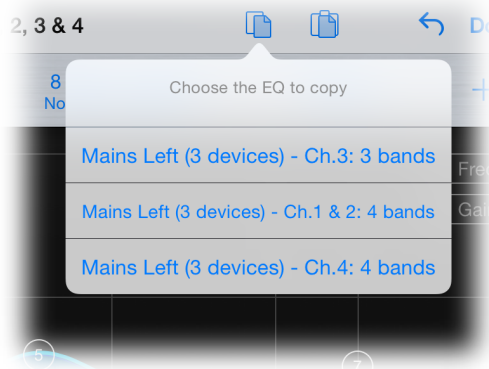


Enjoy full-screen editing

Copy and paste



Copy and paste single EQ bands



Copy and add/replace entire EQs.