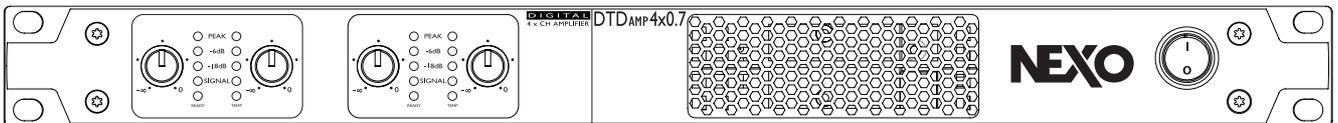


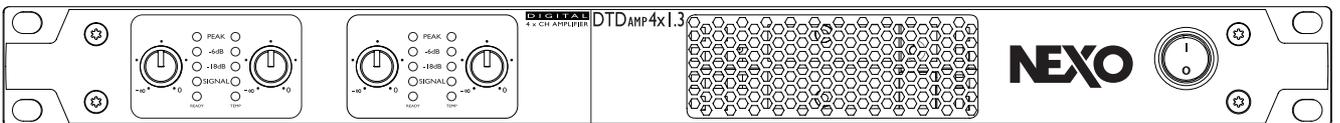


# DTDAMP Amplifiers

## DTDAMP4x0.7



## DTDAMP4x1.3



User Manual v1.3

## FCC information (U.S.A.)

### 1. 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.

### 2. 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.

### 3. NOTE:

This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" 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's 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. If this product is found to be the source of interference, 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.

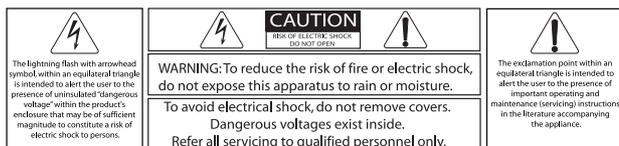
Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm 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.

The above statements apply ONLY to those products distributed by NEXO-SA or its subsidiaries.

\* This applies only to products distributed in the United States of America.



## Important safety instructions

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Clean only with dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

- 11 Only use attachments/accessories specified by the manufacturer.
- 12 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## 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.
- 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.
- Always turn the power off when the device is not in use.

### Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified NEXO-SA service personnel.
- NEXO-SA cannot be held responsible for damage caused by improper use or modifications to the device or data that is lost or destroyed.

### Water warning

- Do not expose the device to rain; use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- If any liquid such as water seeps into the device, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified NEXO-SA service personnel.
- 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 if 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-SA 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-SA 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. Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC 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 this 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 the device 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 10 cm at the sides, 15 cm behind and 40 cm above. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in 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 unstable position where it might accidentally fall over.
- Do not block the vents. This device has ventilation holes at front and back to prevent the internal temperature from becoming too high. In particular, do not place the device on the front 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.

**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.
- XLR-type connectors are wired as follows (IEC60268 standard): pin 1: ground, pin 2: hot (+) and pin 3: cold (-).
- Use only SP4 plugs for connecting SP connectors.

**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-SA service personnel about replacing defective 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-SA 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.

**Important notice for the United Kingdom**

**Connecting the Plug and Cord**

 **WARNING! THIS APPARATUS MUST BE EARTHED. IMPORTANT:**  
The wires in this mains lead are colored in accordance with the following code:  
GREEN-AND-YELLOW: EARTH  
BLUE: NEUTRAL  
BROWN: LIVE

WARNING: As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug proceed as follows:

- The wire which is colored GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or colored GREEN or GREEN-and-YELLOW.
- The wire which is colored BLUE must be connected to the terminal which is marked with the letter N or colored BLACK.
- The wire which is colored BROWN must be connected to the terminal which is marked with the letter L or colored RED.

This applies only to products distributed in the United Kingdom.

**Compliance information statement (Declaration of conformity procedure)**

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received including interference that may cause undesired operation. See user manual instructions if interference to radio reception is suspected.

This applies only to products distributed in the United States of America.

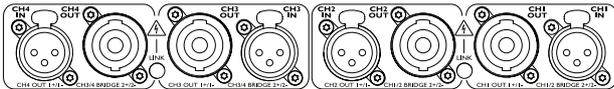
**Important notice for Europe**

Purchaser/User Information specified in EN55103-1 and EN55103-2.

Inrush Current: 26 A (DTD<sub>AMP4x0.7</sub>) 34 A (DTD<sub>AMP4x1.3</sub>)

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

 **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.



## DTDAMP introduction

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

The DTDAMP is an audio power amplifier developed to perfectly match the NEXO DTD Controller.

It is a pure power amplifier, without any audio processing, thus ensuring a negligible latency in the feedback loop feeding the DTD Controller.

## Rack installation

The DTDAMP should be mounted into a suitable rack unit, ensuring both front and rear mounting holes are used in order to protect the amp from mechanical damage.

Air flow of the DTDAMP is from front to back, thus installation can mix both DTDAMP (with DTD Controller) and NXAMP in the same rack, both using the same air flow direction.

## Speaker cable choice

**WARNING!** High voltage can be present on the power amplifier output terminals. Use at least Class 2 wiring cable to connect the DTDAMP to the speakers or to feedback to the DTD.

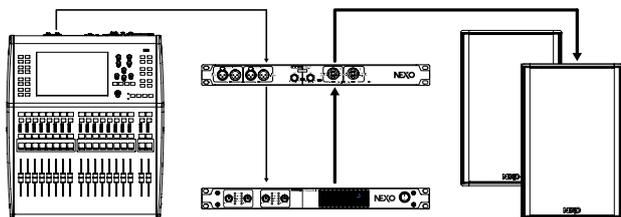
To minimize power and damping factor losses in speaker cable use suitable wire gauges from the table below.

Load Impedance (Ohms)	4	8
Cable Section	Maximum Length (meters)	
1.5 mm <sup>2</sup> (AWG #14)	6 m	12 m
2.5 mm <sup>2</sup> (AWG #12)	10 m	20 m
4 mm <sup>2</sup> (AWG #10)	16 m	32 m

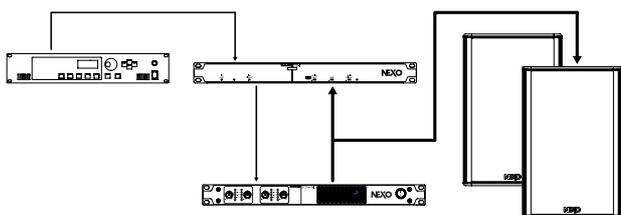
## Audio Input and Output connections

### How to integrate into the audio chain?

Place the DTDAMP in the audio chain just before the speakers, typically at the output of the DTD Controller.



Typical installation for a touring system (using DTDAMP with a DTD-T)



Typical installation for a fixed installation (using DTDAMP with a DTD-I)

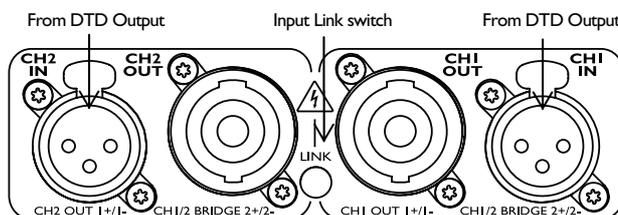
Note that the outputs of the DTDAMP are connected to the DTD-T, while its integrated front panel patch is used to connect to the speakers. With the DTD-I, power output of the DTDAMP will have to be split in two (one side used for DTD-I feedback, the other one going to the speakers).

**WARNING!** Unplug the device from mains before connecting or disconnecting any cable to it.

### Connecting the DTDAMP audio inputs

Use the back panel female XLR3 connectors to connect the balanced analog input signal, typically from a DTD Controller output.

For each pair of amplifier channels, a LINK switch on the back panel allows you to use the same input signal (from the lowest channel number input XLR3) to feed the two amplifier channel. This is useful when connecting the DTD Controller Mono Sub output to two amplifiers channels for example.



Up to ten DTDAMP channels can be connected in parallel on one DTD output.

### Connecting the DTDAMP power outputs

The DTDAMP uses four SP4 outputs to connect the speakers. The pin out is the following:

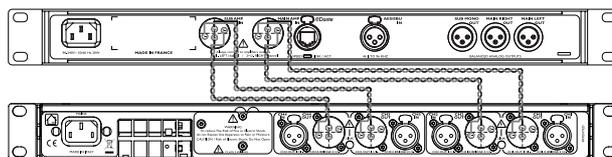
- Amplifier CH1 outputs on SP4 CH1 1+/1-
- Amplifier CH2 outputs on SP4 CH2 1+/1-
- Amplifier CH3 outputs on SP4 CH3 1+/1-
- Amplifier CH4 outputs on SP4 CH4 1+/1-

DTDAMP outputs can be bridged two by two. Note that there is no switch to use the amplifiers in bridge mode, bridge being always available with the following pinout:

- Amplifier CH1+CH2 (bridge) outputs on SP4 CH1 2+/2-
- Amplifier CH1+CH2 (bridge) outputs on SP4 CH2 2+/2-
- Amplifier CH3+CH4 (bridge) outputs on SP4 CH3 2+/2-
- Amplifier CH3+CH4 (bridge) outputs on SP4 CH4 2+/2-

**WARNING!** Use only the CH1 input (for Bridge CH1 + CH2) or CH3 input (for Bridge CH3 + CH4) and use the corresponding back panel LINK switch to use the amplifier in bridge mode.

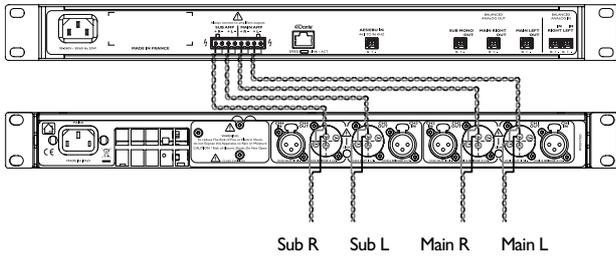
When used with a DTD-T, DTDAMP SP4 outputs are connected to the DTD-T back panel SP4, while the DTD-T front panel SP4 is connected to the speakers and subs.



See further for bigger view of the wiring.

When used with a DTD-I, DTDAMP SP4 outputs are split into:

- The DTD-I back panel (Sub sensing connector), to ensure proper feedback of the DTDAMP output to the Controller for speaker protections.
- The NEXO speakers and subs, as shown on the picture below.



Please check the speaker impedance before connecting to the DTDAMP.

**WARNING!** The DTDAMP works with output load down to 4 Ohms in four channels mode or down to 8 Ohms in bridge mode.

### Connecting the DTDAMP mains input

The DTDAMP can accept only 100 ~ 120 Volts Mains or 220 to 240 Volts Mains, both 50 to 60 Hz, depending on its internal configuration. This configuration is set into the factory and the selected value can be read from the DTDAMP top panel sticker.

**WARNING!** Check the local mains value and ensure that it fits the need of your DTDAMP before connecting.

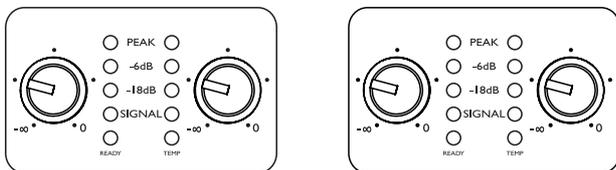
Refer to the specification page of this document to know the mains power requirement of the DTDAMP depending on the DTDAMP model and the load connected.

The mains connection is done through a standard IEC-C14 connector. Check that the mains switch is OFF before connecting the mains socket.

### DTDAMP setup

The DTDAMP setup is straightforward. Once all the wiring has been done, set the volume control to the minimum position (-infinity) power ON the DTD Controller and switch the DTDAMP mains switch to the ON position.

Wait a few seconds that the two "READY" indicators light up and turn the volume for each channel in use to the first as show below.



Send some audio signal into the DTDAMP and check that each speaker or sub is outputting a non-distorted sound.

Once this has been checked, turn the audio source down and set up the volume control to the 0 dB position.

**WARNING!** When used in bridge mode, set the two volume control knobs of the channels bridged to the same position (0 dB for example).

### Front panel LEDs display

20 LEDs will report the status of the DTDAMP to the user.

- For CH1 & CH2 on one side and CH3 & CH4 on the other side, two READY Green LEDs will light once the channel is ready for use.
- For CH1 & CH2 on one side and CH3 & CH4 on the other side, two TEMP Yellow LED will :
  - Stay OFF if amplifier heatsink is below 75 °C.
  - Blink if amplifier reaches 75 °C, meaning that the output level is reduced to protect the unit.
  - Turn ON if amplifier reaches 85 °C, meaning that the output is muted due to over temperature.
- For each Channel, three green LEDs indicate the channel level.
  - SIGNAL will light when input signal is fed.
  - -18 dB will light when output level is 18 dB from max.
  - -6 dB will light when output level is 6 dB from max.
- For each Channel, one PEAK red LED indicates that the maximum output voltage is reached for a channel, thus triggering the DTDAMP peak limiter.

### Maintenance

**WARNING!** Always unplug the DTDAMP from the mains before cleaning it.

Check regularly the dust level of the air intakes of the DTDAMP. If some dust is inserted into the cooling tunnel of the amplifier, use compressed air to remove dust from the amplifier.

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

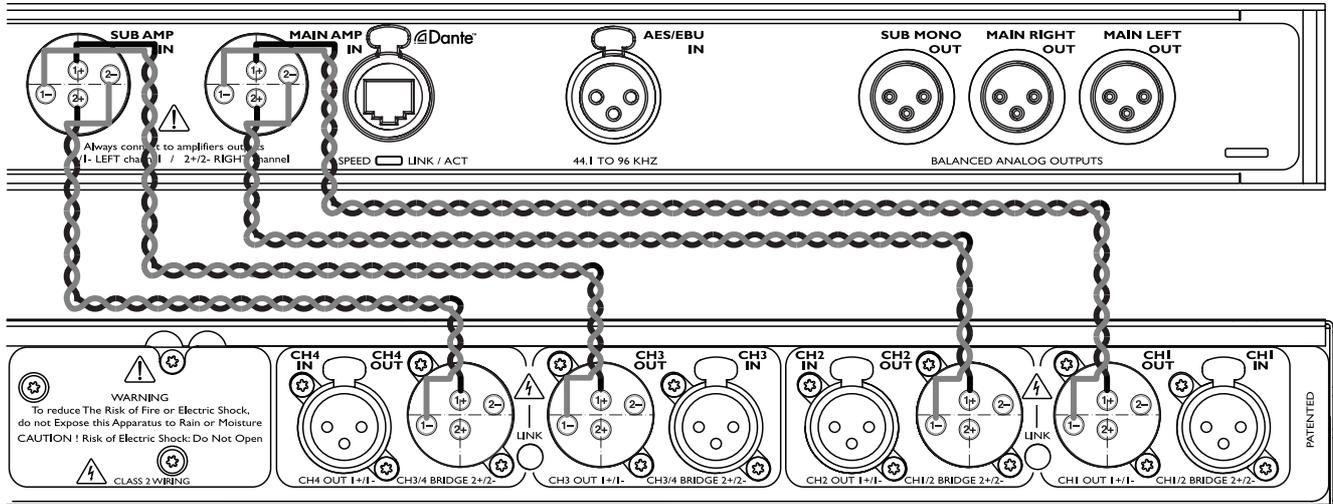
### Thermal dissipation and current drawn

DTDAMP4x0.7 with 4 Ohms load on each channel					
	Line Current (A)		Watts Dissipated	Thermal Dissipation	
	120 V	230 V		BTU/h	kcal/h
Idle	1.0 A	0.5 A	65 W	215	55
1/8 Max power	7.5 A	3.8 A	580 W	785	200
1/4 Max power	13 A	6.5 A	1100 W	1250	315

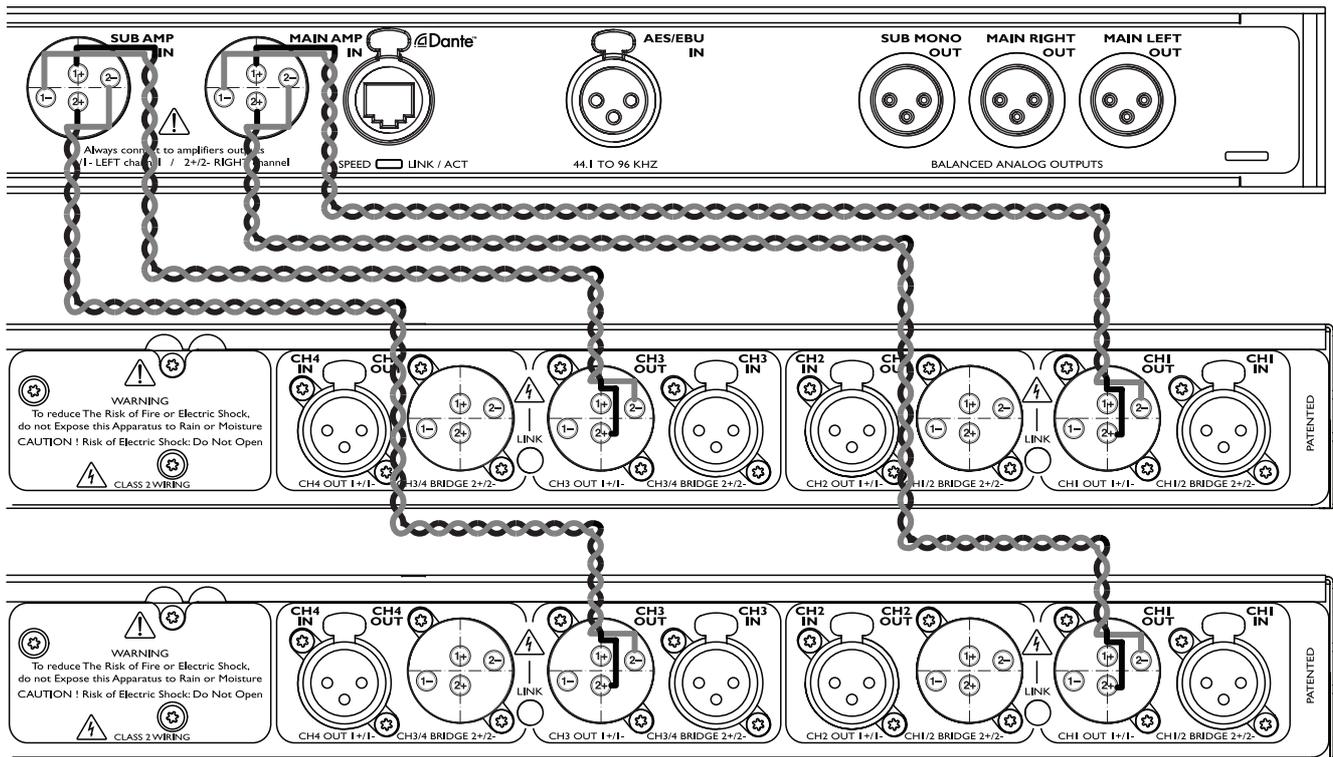
DTDAMP4x1.3 with 4 Ohms load on each channel					
	Line Current (A)		Watts Dissipated	Thermal Dissipation	
	120 V	230 V		BTU/h	kcal/h
Idle	1.0 A	0.5 A	65 W	220	55
1/8 Max power	12 A	6 A	900 W	955	240
1/4 Max power	22 A	11 A	1800 W	1780	450

DTDAMP Output wiring

DTDAMP 4 x channel mode to DTD-T



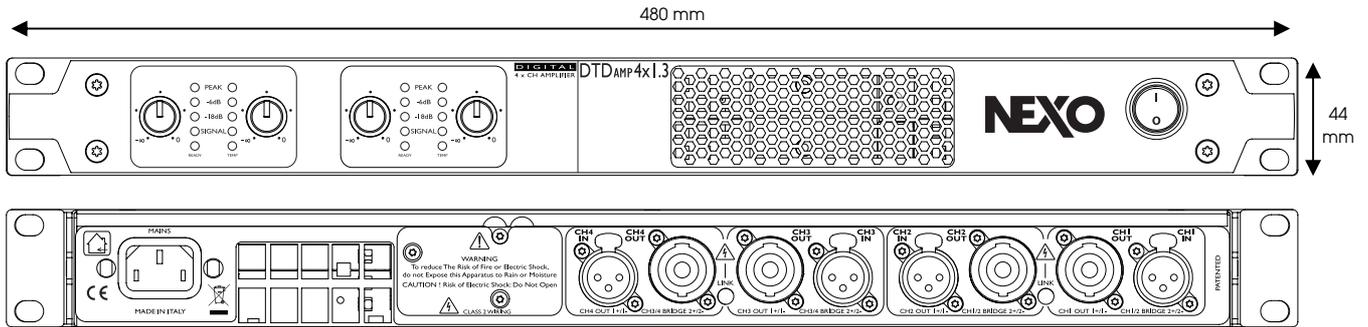
DTDAMP 2 x bridged channel mode to DTD-T



**Specifications**

	<b>DTDAMP4x0.7</b>	<b>DTDAMP4x1.3</b>
<b>Power specifications</b>		
Number of channel	4 x amplifiers channel, 2 by 2 bridgeable	
Max. output voltage (no load)	4 x 85 Volts	4 x 135 Volts
Max. output power (4 x 8 Ohms)	4 x 360 Watts	4 x 750 Watts
Max. output power (4 x 4 Ohms)	4 x 700 Watts	4 x 1300 Watts
Max. output power (2 bridge x 8 Ohms)	2 x 1400 Watts	2 x 2600 Watts
<b>Audio characteristics</b>		
Frequency Response	+/- 0.5 dB from 20 Hz to 20 kHz	
Input Impedance	10 kOhms	
Input Sensitivity	+5 dBU	+8 dBU
Nominal Gain	32 dB	
Dynamic Range (A-weighted)	> 110 dB	
THD+N	Typical 0.01 %	
<b>Back panel features</b>		
Analog audio input	4 x balanced analog inputs on XLR3	
Power output	4 x SP4 outputs	
Link switch	To use same XLR input for 2 x adjacent channels	
Mains sockets	IEC C14 inlet with secure lock	
<b>Front panel features</b>		
Switch and knobs	Mains On/Off switch and volume control knob per channel	
View Meters	4 x LEDs (Signal / -18 dB / -6 dB / Peak) per channel	
Amplifier status	Amp Ready and Temperature indicator per channel pair	
<b>Mains Requirements</b>		
Mains Voltage	Factory set for 120 volts or 230 volts mains operation	
Power consumption (Idle)	65 Watts	
Power consumption 1/8 max. / 4 Ohms	580 Watts	900 Watts
Power consumption 1/4 max. / 4 Ohms	1100 Watts	1800 Watts
<b>Physical specifications</b>		
Dimensions (W x H x D)	480 (W) x 44 (H) x 370 (D) mm, 19 inches / 1U	
Weight	7.5 kg	
Operating temperature range	0° C – 45 ° C	
<b>Certifications</b>		
CE conformity	2006/95/CE (Low voltage) 2004/108/CE (EMC) 2002/95/CE (RoHS)	
Electrical safety certification	CSA, CB, EN60065	
EMC certification	EN55103-1 / EN55103-2 / FCC	
<b>Ordering information</b>		
Pre-configured for 230 volts mains	DTDAMP4x0.7C	DTDAMP4x1.3C
Pre-configured for 120 volts mains	DTDAMP4x0.7U	DTDAMP4x1.3U

## Drawings and dimensions



## Declaration of conformity (DoC)

We,

**NEXO S.A.**  
**ZA du Pre de la Dame Jeanne**  
**60128 Plailly**  
**France**

Declare under our sole responsibility that the products  
 Professional Audio Equipment

**Model:** DTDAMP4x0.7, DTDAMP4x1.3  
**Manufacturer name:** NEXO S.A.  
**Manufacturer address:** ZA du Pre de la Dame Jeanne, 60128 Plailly, France  
**CE Mark first affixed in:** 2016

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

**CE Directives 2006/95/EC (Low Voltage) 2004/108/EC (EMC) 2002/95/EC (RoHs)**

**EN 55103-1:2009 + A1:2012 / EN 55103-2:2009 + IS :2012**

**FCC Part 15:2013**

**EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011**

**IEC60065 (ed.7) + AM1 + AM2, including national differences for EU, AU, CA, JP, US**

**CSA and CCC Certification**

Plailly, France

Date: July 6, 2016

Joseph CARCOPINO  
 R&D Director, NEXO