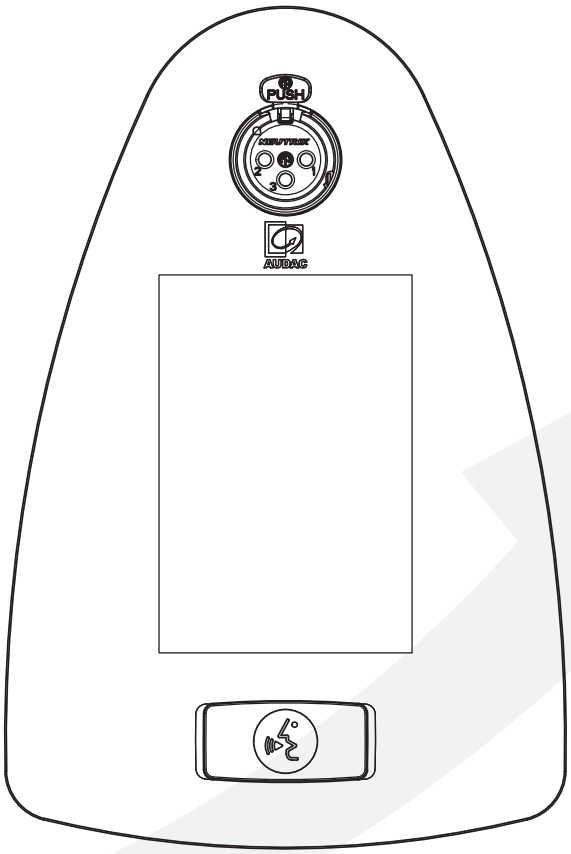
AUDAC

Hardware Manual

NPM200



ADDITIONAL INFORMATION

This manual is put together with much care, and is as complete as could be on the publication date. However, updates on the specifications, functionality or software may have occurred since publication. To obtain the latest version of both manual and software, please visit the Audac website @ audac.eu.



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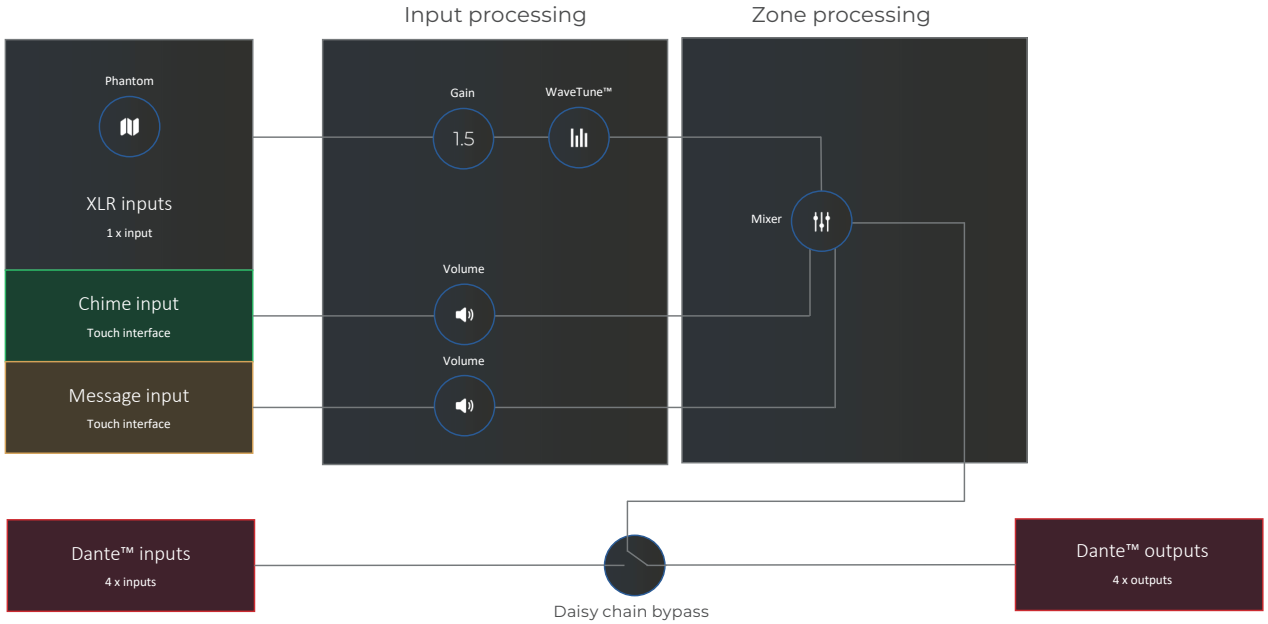
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Introduction

Networked audio in- & output wall panels

The NPM200 is a Dante™/AES67-enabled PoE paging console that lets you make announcements and send voice file messages over the network. With Power over Ethernet (PoE) technology, this console can be easily connected to your network without the need for additional power cables, making it the perfect solution for busy offices and other professional environments. Featuring a user-friendly interface and intuitive controls on a 3.5" touchscreen, the NPM200 allows you to easily manage audio paging and messaging. You can create and transmit pre-recorded messages or use the console's XLR input to make announcements in real-time.



Precautions

READ FOLLOWING INSTRUCTIONS FOR YOUR OWN SAFETY

ALWAYS KEEP THESE INSTRUCTIONS. NEVER THROW THEM AWAY

ALWAYS HANDLE THIS UNIT WITH CARE

HEED ALL WARNINGS

FOLLOW ALL INSTRUCTIONS

NEVER EXPOSE THIS EQUIPMENT TO RAIN, MOISTURE, ANY DRIPPING OR SPLASHING LIQUID. AND NEVER PLACE AN OBJECT FILLED WITH LIQUID ON TOP OF THIS DEVICE

NO NAKED FLAME SOURCES, SUCH AS LIGHTED CANDLES, SHOULD BE PLACED ON THE APPARATUS

DO NOT PLACE THIS UNIT IN AN ENCLOSED ENVIRONMENT SUCH AS A BOOKSHELF OR CLOSET. ENSURE THERE IS ADEQUATE VENTILATION TO COOL THE UNIT. DO NOT BLOCK THE VENTILATION OPENINGS.

DO NOT STICK ANY OBJECTS THROUGH THE VENTILATION OPENINGS.

DO NOT INSTALL THIS UNIT NEAR ANY HEAT SOURCES SUCH AS RADIATORS OR OTHER APPARATUS THAT PRODUCE HEAT

DO NOT PLACE THIS UNIT IN ENVIRONMENTS WHICH CONTAIN HIGH LEVELS OF DUST, HEAT, MOISTURE OR VIBRATION

THIS UNIT IS DEVELOPED FOR INDOOR USE ONLY. DO NOT USE IT OUTDOORS

PLACE THE UNIT ON A STABLE BASE OR MOUNT IT IN A STABLE RACK

ONLY USE ATTACHMENTS & ACCESSORIES SPECIFIED BY THE MANUFACTURER

UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME

ONLY CONNECT THIS UNIT TO A MAINS SOCKET OUTLET WITH PROTECTIVE EARTHING CONNECTION

USE THE APPARATUS ONLY IN MODERATE CLIMATES

CAUTION - SERVICING

This product contains no user serviceable parts. Refer all servicing to qualified service personnel. Do not perform any servicing (unless you are qualified to)

EC DECLARATION OF CONFORMITY

This product conforms to all the essential requirements and further relevant specifications described in following directives: 2014/30/EU (EMC) and 2014/35/EU (LVD).

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

The WEEE marking indicates that this product should not be disposed with regular household waste at the end of its life cycle. This regulation is created to prevent any possible harm to the environment or human health.

This product is developed and manufactured with high quality materials and components which can be recycled and/or reused. Please dispose this product at your local collection point or recycling centre for electrical and electronic waste. This will make sure that it will be recycled in an environmentally friendly manner, and will help to protect the environment in which we all live.

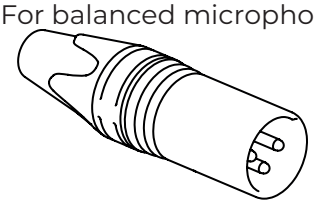
Connections

CONNECTION STANDARDS

The in- and output connections for AUDAC audio equipment are performed according to international wiring standards for professional audio equipment.

XLR

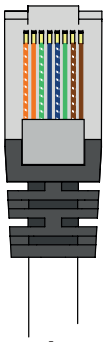
For balanced microphone input connections



PIN 1:	Ground
PIN 2:	Signal +
PIN 3:	Signal -

RJ45 (Network, PoE)

Network connections



Pin 1	White-Orange
Pin 2	Orange
Pin 3	White-Green
Pin 4	Blue
Pin 5	White-Blue
Pin 6	Green
Pin 7	White-Brown
Pin 8	Brown

Ethernet (POE):

Used for connecting the NPM200 in your Ethernet network with PoE (power over Ethernet). The NPM200 complies with the IEEE 802.3 af/at standard, which allows IP-based terminals to receive power, in parallel to data, over the existing CAT-5 Ethernet infrastructure without the need to make any modifications in it.

PoE integrates data and power on the same wires, it keeps the structured cabling safe and does not interfere with concurrent network operation. PoE delivers 48v of DC power over unshielded twisted-pair wiring for terminals consuming less than 13 watts of power.

The maximum output power is depending on the power delivered by the network infrastructure. In case the network infrastructure is not capable of delivering sufficient power, use a PoE injector to the NPM200.

While CAT5E network cable infrastructure is sufficient for handling the required bandwidth, it is recommended to upgrade the network cabling to CAT6A or better cabling to achieve the best possible thermal and power efficiency throughout the system when drawing higher powers over PoE.

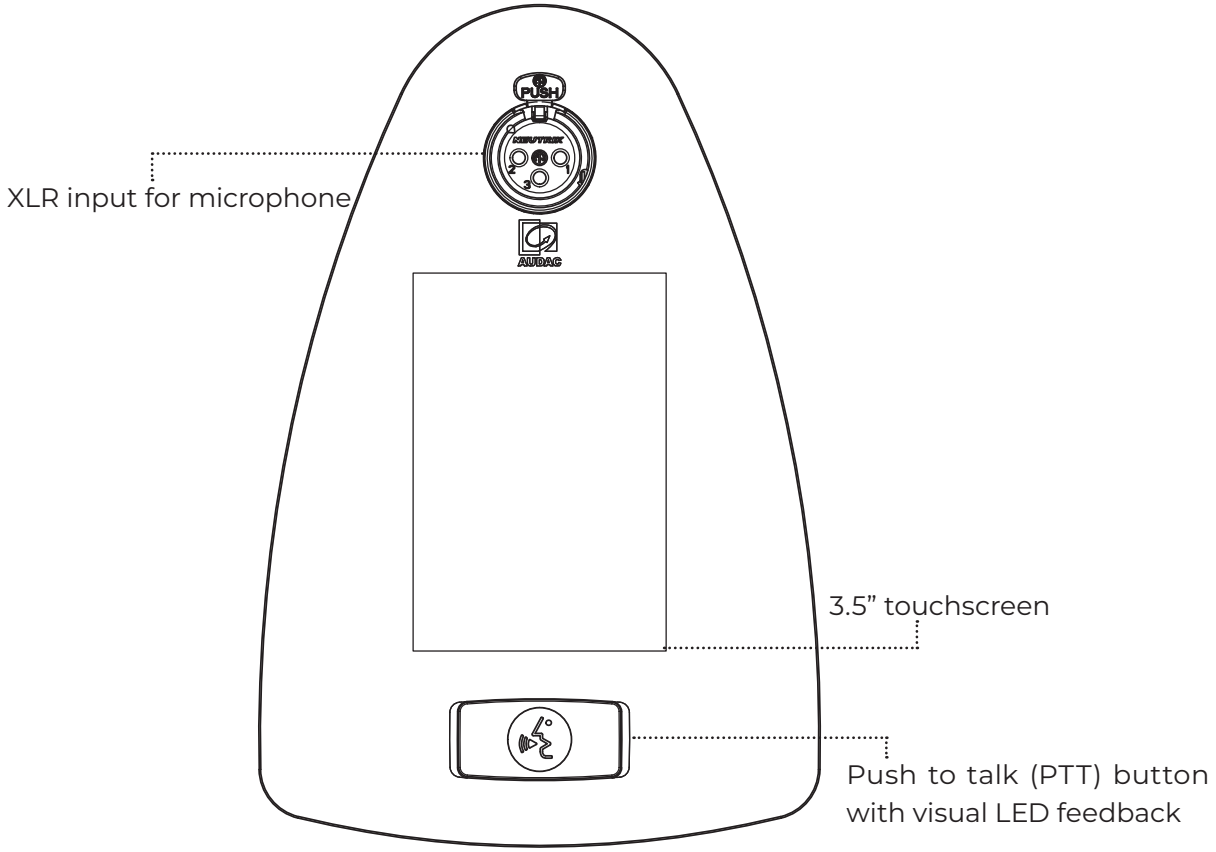
Network settings

STANDARD NETWORK SETTINGS
DHCP: **ON** IP Address: Depending on DHCP Subnet Mask: 255.255.255.0 (Depending on DHCP) Gateway: 192.168.0.253 (Depending on DHCP) DNS 1: 8.8.4.4 (Depending on DHCP) DNS 2: 8.8.8.8 (Depending on DHCP)

Chapter 2

Overview front panel

The front panel of the NPM200 is finished with elegant front panel glass with die-cast metal body construction features a PTT button with visual LED feedback, a 3.5” fully flexible and configurable touchscreen, and an XLR input that allows the use of various microphones with provided 48V phantom power.



Front panel description

Push to Talk (PTT) Button

After the desired zone, zones, or group is selected from the touchscreen, announcements can be made either by pressing and holding the Push to talk’ button or by using the button as a toggle switch. When the flows are occupied by another paging station (orange LED blinking), no announcements can be made.

3.5” Touchscreen

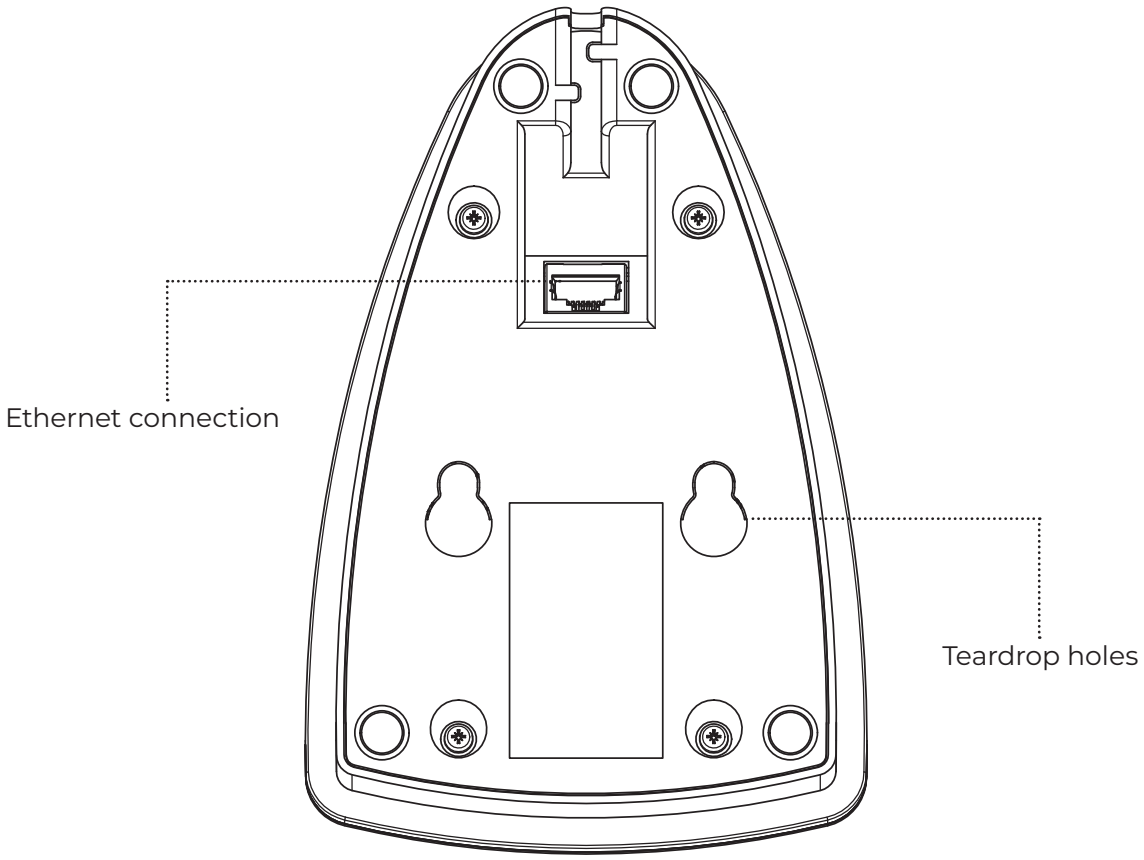
With a 3.5” touchscreen, the NPM200 allows you to easily manage audio paging and messaging. In addition, any function on NPM200 can be controlled and triggered from AUDAC Touch™.

XLR Input for Microphone

An XLR input that allows the use of various microphones with 48V phantom power. Microphone input can be tailored by using integrated WaveTune™.

Overview rear panel

The rear of the NPM200 contains an ethernet connection port which is used to connect the paging microphone to the RJ45 connector. As the NPM200 is a Dante™/AES67-enabled PoE paging console, all data flow and powering are done through this single port.



Rear panel description

Ethernet connection

The Ethernet connection is the essential connection for the NPM200. Both audio transmission (Dante/AES67), as well as control signals and power (PoE), are distributed over the Ethernet network. This input shall be connected to your network infrastructure.

Teardrop holes

These teardrop holes makes it possible to mount the NPM200 to a surface or wall with the included brackets.

Installation

This chapter guides you through the setup process for a basic setup where an NPM200 paging console should be connected to a system with a wired network. Provide a twisted pair cable (CAT5E or better) from the network switch to the wall panel. The maximum distance between the PoE switch and the wall panel should be 100 meters.

When you want to create a setup where multiple NPM200's can work simultaniously, you should have your Dante routing in a star topology. If one-by-one priority-based paging is required, Dante routing should be done with daisy chain topology.

Chapter 3

Quick start guide

This chapter guides you through the setup process for a NPM200 Dante™/AES67-enabled PoE paging console as a Dante source connected to the network. The control of the system is done through the NPM200 or Audac Touch™.

Connecting the NPM200 series

1) Connecting the NPM200 to your network

Connect your NPM200 paging console to a PoE-powered Ethernet network with a CAT5E (or better) networking cable. In case the available Ethernet network is not PoE compatible, an additional PoE injector shall be applied in between. The operation of the NPM200 paging console can be monitored through the touchscreen on the front panel of the unit.

2) Connecting the XLR

Various microphones can be connected to the XLR connector on the top panel. When using condenser microphones 48V phantom power can be activated from AUDAC Touch™.

Configuring the NPM200

1) Dante controller

Once all connections are made, and the NPM200 paging console is operational, the routing for the Dante audio transfer can be made.

For the configuration of the routing, the Audinate Dante Controller software shall be used. The use of this tool is extensively described in the Dante controller user guide which can be downloaded from both Audac (www.audac.eu) and Audinate (www.audinate.com) websites.

In this document, we quickly describe the most basic functions to get you started. Once the Dante controller software is installed and running, it will automatically discover all the Dante-compatible devices in your network. All devices will be shown on a matrix grid with on the horizontal axis all the devices with their receiving channels shown and on the vertical axis all the devices with their transmitting channels. The shown channels can be minimized and maximized by clicking the '+' and '-' icons.

Linking between the transmitting and receiving channels can be done by simply clicking the cross points on the horizontal and vertical axis. Once clicked, it only takes a few seconds before the link is made, and the cross point will be indicated with a green checkbox when successful.

To give custom names to the devices or the channels, double-click the device name and the device view window will pop up. The device name can be assigned in the 'Device config' tab, while the transmitting and receiving channel labels can be assigned under the 'Receive' and 'Transmit' tabs.

Once any changes are made to linking, naming, or any other, it is automatically stored inside the device itself without requiring any save command. All settings and linkings will be automatically recalled after power off or re-connection of the devices.

Besides the standard and essential functions described in this document, the Dante Controller software also includes many additional configuration possibilities that might be required depending on your application requirements. Consult the complete Dante controller user guide for more information.

2) NPM200 paging console settings

Once the Dante routing settings are made through the Dante Controller, other settings of the NPM200 paging console itself can be configured using the Audac Touch™ platform, which can be freely downloaded and operated from various platforms. This is very intuitive to be operated and automatically discovers all available compatible products in your network. Available settings include gain, input filter, and output mapping, as well as advanced configurations such as WaveTune™ and much more

Technical specifications

Microphone		Optional (not included)
Indicators		Fully configurable touchscreen interface
	Touchscreen interface (3.5”) + RGB LED (PTT)	VU, Clipping
		Audio status (recording, playback, paging, ...)
		Device status
		Bus / priority status
		Zones / functions overview
Configuration		Audac Touch™
Configurable settings	Fully configurable user interface	Group selection
		Message selection
		Zones selection
		PTT (toggle & press & hold)
		IP settings
		Device name
		Gain
		Phantom power
		Pilot tone
		DSP (EQ, Filters)
Pre-recorded messages		Yes
Pre-programmed events		Yes
Integrated DSP		Yes (EQ, Filters, ...)
Integrated chime		Yes (Programmable)
Phantom power		+48 V DC
Power Supply		PoE powered (IEEE 802.3af/at)
Power consumption		3W (nominal), 3.7W (when booting)
Connectors		XLR Female (mic in)
		RJ45 (network + PoE), 2 meters long connection cable is included.

Dimensions	(W x H x D)	110 x 58 x 166 mm
Weight		0.5 Kg (Approx.)
Construction		Die-cast metal
Colours		Black (RAL9005)
Front finish		Elegant front panel with glass
Accessories		Mounting bracket (included) for teardrop holes
Compatible devices		All Dante compatible devices
		CMX215
		CMX230

Notes



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