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GENELEC 4430A Two-way Active Loudspeaker User Guide

Contents

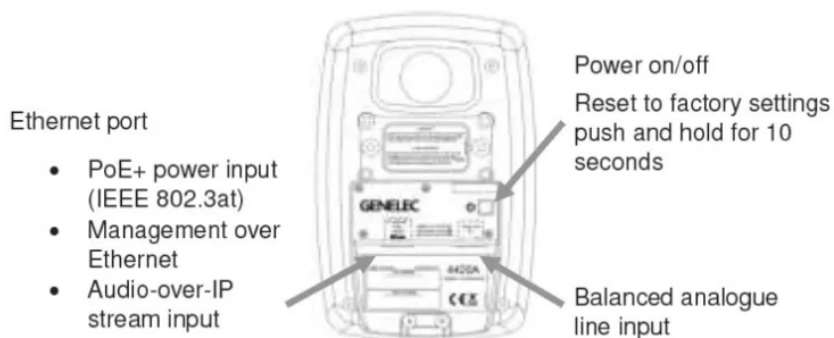# GENELEC 4430A Two-way Active Loudspeaker User Guide

REGISTER YOUR PRODUCT

Please register your loudspeaker at **www.community.genelec.com** and learn more about warranty. Consider joining the Genelec Community, as then you'll be able to ask questions, share experiences and participate in discussions with Genelec users globally. More information about service and technical support is available at **www.genelec.com/customer-service**.

PACKAGE CONTENT

- Genelec two-way active loudspeaker 4420A. This is PoE+ powered bi-amplified audio-over-IP capable loudspeaker for installed audio applications.
- Keyhole-type wall mount with screws.
- Three-pin Euroblock connector for balanced analogue line input (inserted in the loudspeaker).

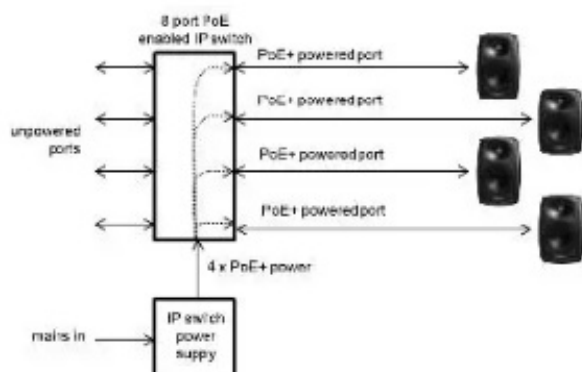## CONNECTORS

Ethernet port
- PoE+ power input (IEEE 802.3at)
- Management over Ethernet
- Audio-over-IP stream input

Power on/off
Reset to factory settings push and hold for 10 seconds
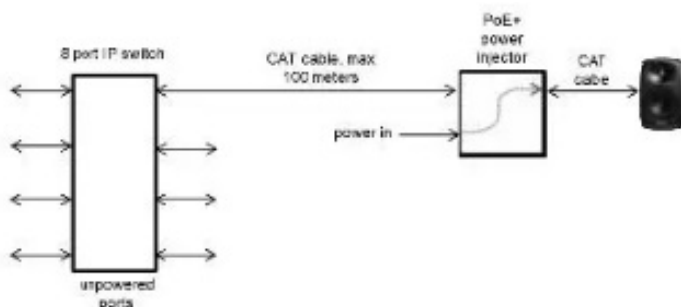
Balanced analogue line input

CONNECTING LOUDSPEAKERS

To get started, connect an Ethernet cable from the PoE+ output in an IP switch to the 4420A Ethernet port. Press the power switch to power up the loudspeaker. To create a working system, you will need

- IP switch with a PoE+ (802.3at) output for the 4420A loudspeaker or an IP switch with no PoE support and a PoE+ power injector
- CAT 5 or higher category Ethernet cable with RJ45 connectors
- AES67, ST2110 or Dante audio-over-IP stream source
- For 4420A setup and configuration, a computer running Windows 10 operating system
- Genelec Smart IP Manager software
- Dante Controller software

Example of powering the 4420A with a PoE+ enabled IP switch. With this method, the power budget available for all outputs connected to the IP switch must enable each 4420A to run at full PoE+ power. For 4 loudspeakers, the power supply must support 4 x PoE+ power level.

Example of powering the 4420A with a PoE+ power injector. This method enables the use of standard non-PoE IP switches. Each power injector must support full PoE+ power level into the device.

The 4420A supports automatic negotiation with the IP switch or IP power injector to set the PoE power level. However, in some cases it may be necessary to set the PoE power level in the switch manually.

Name	Standard	Power to 4420A
PoE	IEEE 802.3af-2003	13 W
PoE+	IEEE 802.3at-2009	25.5 W

There are several Power-over-Ethernet standards. The 4420A loudspeaker supports the PoE+ standard but also works with the lower power PoE standard. When the 4420A also works with lower PoE power, the duration of high SPL output is shortened, and long continuous output signals play at smaller sound level than when the PoE+ power level is used. Genelec recommends using PoE+ power level with 4420A.

SETTING UP AUDIO STREAMS

Audio stream setup is done by using Dante Controller software. Download
from **https://www.audinate.com/products/software/dante-controller**
4420A can receive up to two audio channels in a stream. Assign a channel in the Transmitters list for each 4420A
input listed in the Receiver list.

INSTALLING GENELEC SMART IP MANAGER

Acoustic calibration, zone setup and loudspeaker management is done using Genelec Smart IP Manager
software. Download Smart IP Manager at https://www.genelec.com/smart-ip-manager and follow screen
instructions to install.

USING SMART IP MANAGER

Launch Smart IP Manager. Click
Settings | Audio Network menu.

Select a Network interface connected to the same network with 4420A loudspeakers.

Click Continue button.Smart IP Manager software scans the network every 5 seconds to find and show unallocated Genelec Smart IP products in the Default zone.

Unallocated Smart IP devices are listed under "Default" zone.

Zone can be muted and level controlled with '–' and '+' buttons.

Turn on audio inputs:

mix → stream in → analogue in → no input → mix.

EDITING ACOUSTIC SETTINGS

Select a Smart IP loudspeaker. Click the 'Acoustics' tab on the right pane. To set several loudspeakers simultaneously, select all speakers (left side) and then adjust.

Set 'delay' and 'sensitivity' as needed.

Click on a filter button, select 'filter type' and adjust parameters.

Select 'preset' to assign all parameters for selected speaker.

APPLICATION PROGRAMMING INTERFACE (API)

4420A Smart IP loudspeaker has a set of API commands that can be used to enable control of 4420A using a house automation system or similar IP network connected device. The document describing the API command and how to use them is available from Genelec. Please visit **www.genelec.com**.

MOUNTING

The two primary mounting points are on the rear side. They have metric M6 x 10 mm holes (thread type is metric M6, thread depth is 10 mm). Use these for mounting brackets or the keyhole wall mount adapter.
On the base of the loudspeaker carries a 3/8 in UNC-threaded hole compatible with a certain standard microphone stands. This can be used for additional support. The UNC thread is not compatible with metric threads.
Pay attention to mounting screw lengths. Do not use long screws exceeding the depth of the hole as this can destroy the threads in the mounting points. Do not over-tighten. Do not use very short screws as the thread length is not enough to hold the weight of the speaker.
See Genelec Accessories Catalogue on **www.genelec.com** for a complete list of mounting hardware options.

MORE DETAILED INFORMATION

More detailed information is available on the Genelec web site.
Please visit the 4420A product page to download the 4420A Operating Manual with measurements and detailed loudspeaker performance specifications **https://www.genelec.com/4420a**
The Smart IP Manager software product page at **https://www.genelec.com/smart-ip-manager** enables you to download a detailed Operating Manual for the Smart IP Manager, with examples of how to use the software for different applications.

SAFETY CONSIDERATIONS

The 4420A has been designed in accordance with international safety standards. The following warnings and cautions must be observed to ensure safe operating conditions:

- Servicing and adjustment may only be performed by qualified service personnel.
- The loudspeaker must not be opened.
- Do not expose the loudspeaker to water or moisture.
- Do not place objects filled with liquid, such as vases, on the loudspeaker or near it.
- This loudspeaker can produce sound pressure levels in excess of 85 dB, which may cause permanent hearing damage.
- Free flow of air behind the loudspeaker is necessary to maintain sufficient cooling. Do not obstruct airflow around the loudspeaker.
- The loudspeaker is not disconnected from the power supply unless the CAT cable carrying the PoE power is removed from the loudspeaker. Powering down the speaker using the power switch does not disconnect power.
- Ensure that mountings for example to walls or ceilings are able to carry the full weight of the loudspeaker in all circumstances, the installations have been designed and are implemented according to the local safety regulations and follow principles of good workmanship.
- The Genelec products and accessories can come with instructions on the proper methods of installation and use. Follow these instructions.

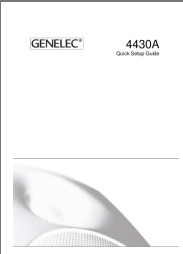**International enquiries Genelec, Olvitie 5**
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References

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- G **World Leader in Studio Monitors - Genelec.com**
- G **Customer Service - Genelec.com**
- ⊿ **Dante Controller, Pro AV Networking Software from Audinate | AV's Leading Technology**
- G **4430A - Genelec.com**
- G **Smart IP Manager - Genelec.com**