User's Manual

NEO

Configurator

NEO Configurator
v3.3.0.0

LDA audioTech

INDEX

1. INTRODUCTION

NEO Configurator is a desktop application designed for **Windows** that aims at **the configuration of systems based on LDA NEO computers**. This software is specially designed to be used by **installers** and **distributors** of **LDA NEO** equipment, also providing them with the ability to remotely perform specific maintenance, monitoring and basic control tasks of the system.

1.1. LDA NEO firmware support

NEO Configurator **v3.3.0.0** compatibility with LDA NEO device firmware versions:

- It does not support firmware versions lower than v02.40.XX.40.
- It supports firmware versions at least up to v03.03.XX.03.

It is not possible to ensure compatibility with firmware versions higher than v03.03.XX.03. In such a case, it is recommended to refer to the relevant firmware release notes to determine compatibility. If a new firmware version includes modifications or additions not contemplated in the v3.3.0.0 version of NEO Configurator, a new updated version of the application will be released to ensure compatibility with the new firmware.

1.2. Installation

The application is distributed with an **installer** in the form of **an executable file** and can be obtained from the **Support** section of the official LDA ***Audio Tech website.***

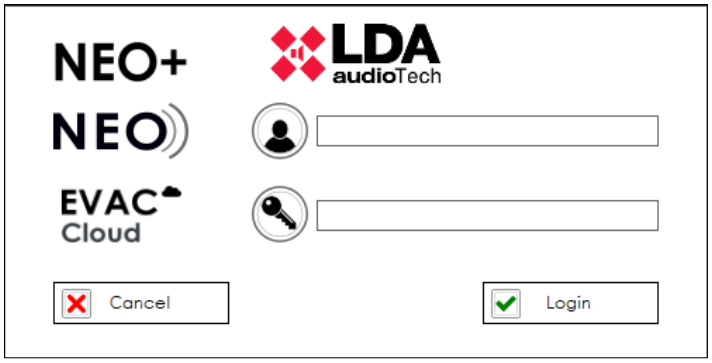
Installing the software is **quick and easy**. It will only be required to select the **installation folder** and decide if you want to create a **shortcut on the Windows desktop**. **When starting the installation process**, you will be provided with the option to **choose the language** in which it will be carried out, which **will also be the language used in the application** once installed.

> **NOTE:** This software is compatible with **Windows 10** and **Windows 11** operating systems in **local mode** and Windows **11** in **cloud mode**. The correct operation of the software with other versions of the operating system is not guaranteed.
>
> **NOTE:** Before installing NEO **Configurator** v3.3.0.0, it is recommended to uninstall any previous versions.
>
> **NOTE:** Version **v3.3.0.0** can coexist with installed **v2.3X.YY.ZZ versions** of the app, compatible with firmware versions v2.3X.
>
> **NOTE:** It is recommended to always run **NEO Configurator** as **an Administrator**.

2. OVERVIEW AND PREFERENCES

2.1. Access

When the **NEO Configurator** application is running, the following access dialog will immediately appear:



To access the main interface of the application, you have to enter a username, your password and then click on the "Login" **button**.

> **NOTE:** The newly installed app comes configured with a default user with the following credentials:
>
> **User:** *default*
>
> **Password:** *1234*
>
> This user will be assigned by default the profile **Installer**. See *2.4.3. Users*
>
> For security reasons, it is recommended that after installation this default user profile be modified or replaced.

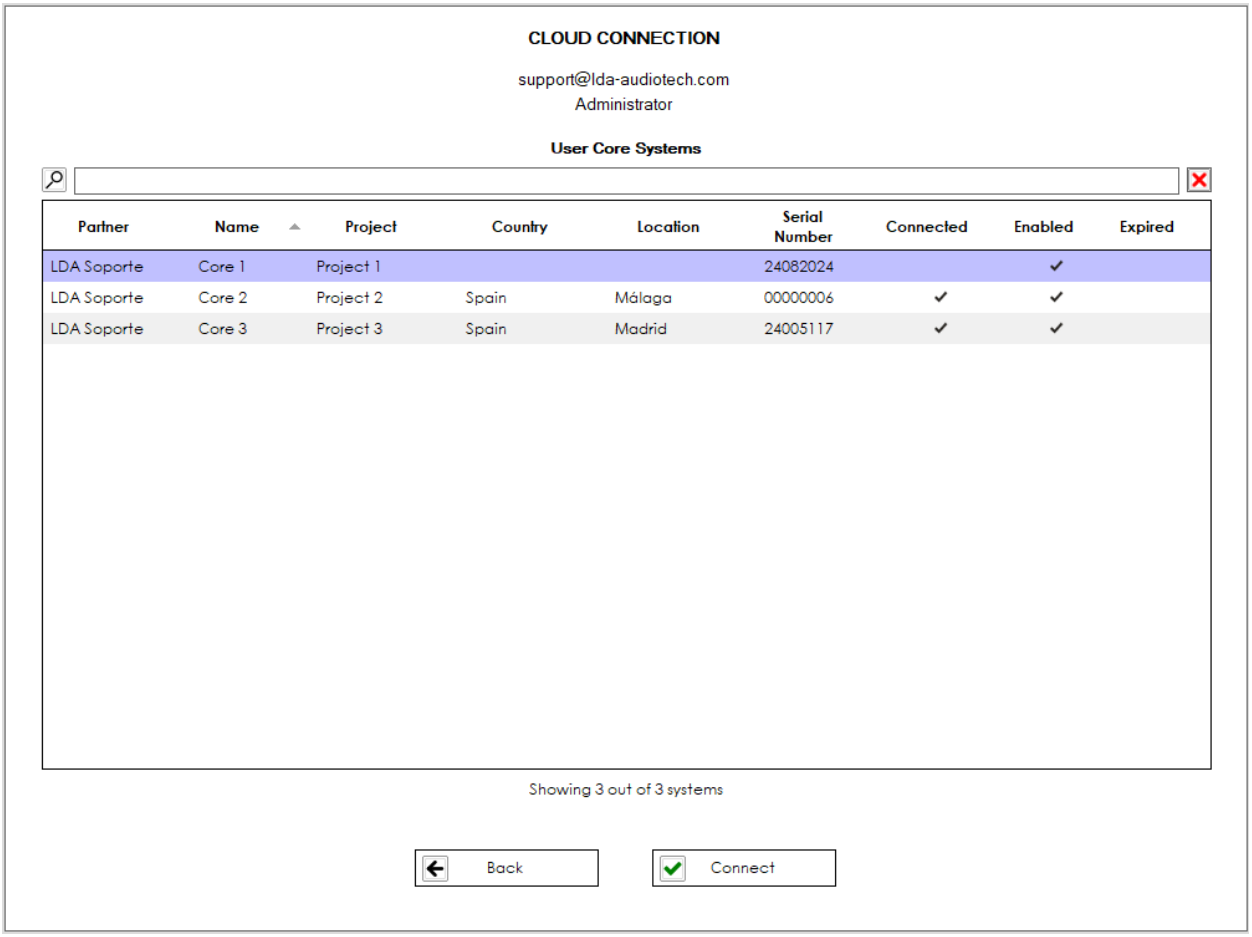
2.1.1. EVAC Cloud Connection

If the system is controlled by an EVAC Cloud device, it will be possible to access the configuration of that system through the cloud.

To do this, the credentials of a user registered in the EVAC Cloud platform (evaccloud.com) must be entered in the Login window.

If you do not have the credentials to connect to your Cloud system, please contact your administrator or LDA Audiotech's Technical Support team via the soporte@lda-audiotech.com email address.

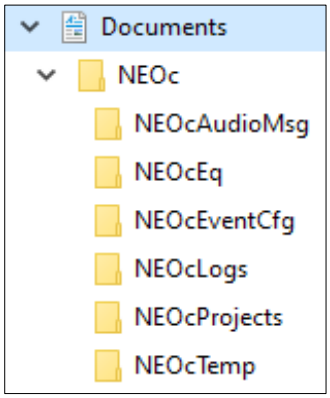
Once connected, the following window will open, where all the Evac Cloud devices to which the user is associated will be displayed. To access one of the systems, you must click on the desired Evac Cloud device and click on the **"Connect"** button.



After accessing the desired system, navigation and configuration through the application will be carried out in the same way explained throughout this manual.

2.2. Default User Folders

When the software is first launched the **"NEOc"** folder will be created, in case it does not already exist, inside the **"Documents" folder** in the Windows user path. Within this, a series of subfolders will be created that the application will use as the default location for different uses:



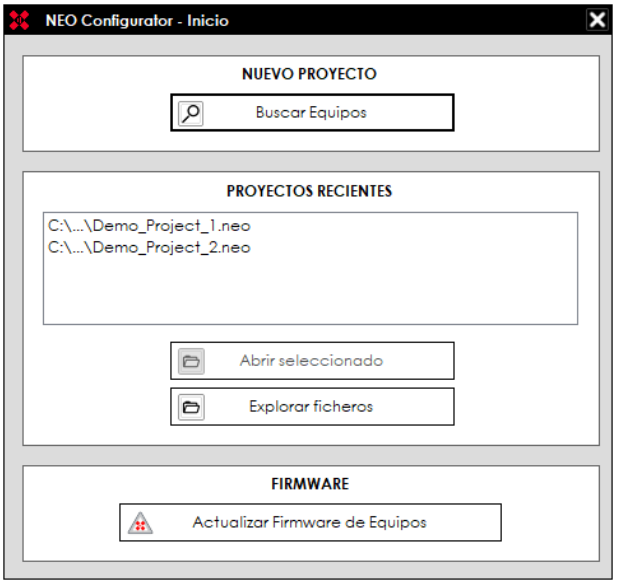
- **NEOcAudioMsg:** Default folder for saving audio files downloaded from a NEO computer.
- **NEOcEq:** Default folder for saving EQ files for audio inputs and amplification outputs.
- **NEOcEventCfg:** Default folder for saving system event settings when exported to file.
- **NEOcLogs:** Default folder for storing log files downloaded from computers.
- **NEOcProjects:** Default folder for saving **NEO Configurator project files**.
- **NEOcTemp:** Default folder to store temporary files necessary for the correct functioning of the software.

NOTE: These folders may not be automatically deleted when you uninstall the software, so they will need to be manually deleted if necessary.

2.3. Description of the main interface

2.3.1. Home window

Once the user has successfully authenticated in the application access window, the main interface will appear showing the startup window. It presents us with three sections that will allow us to carry out different actions:

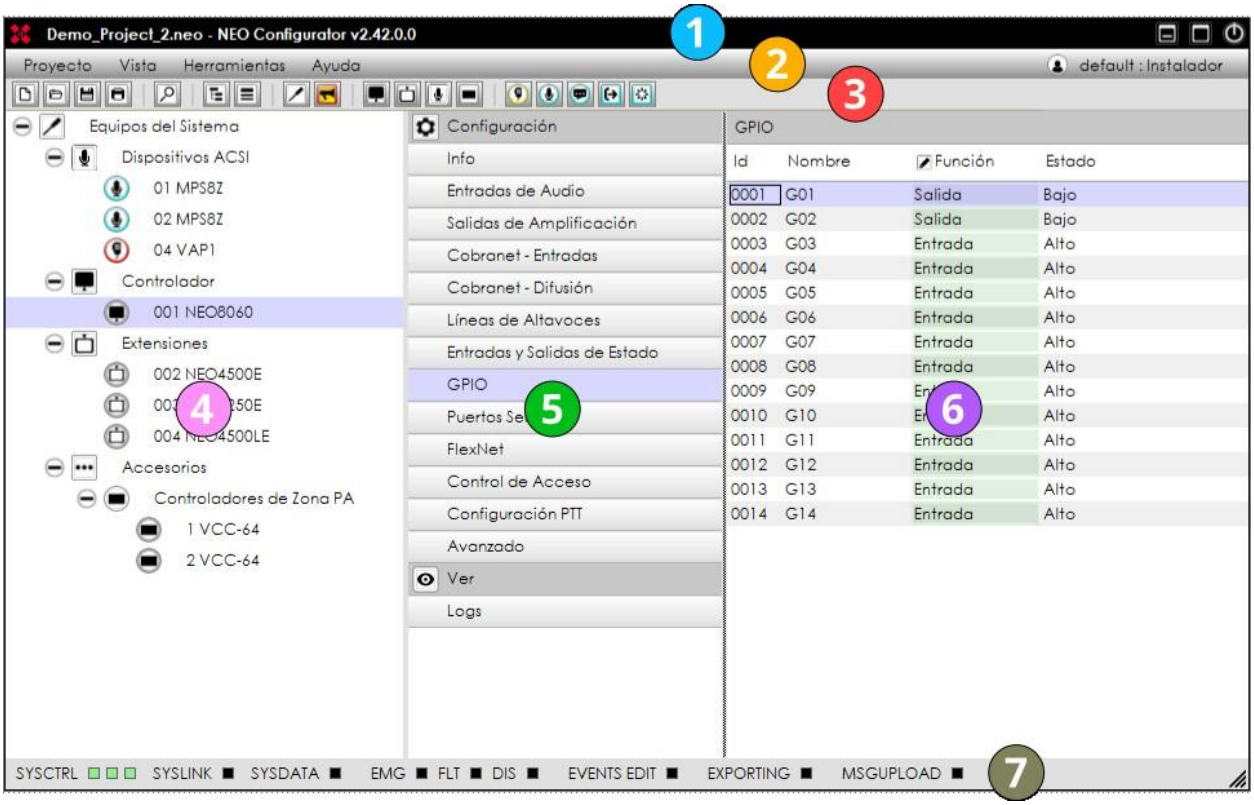


- **NEW PROJECT:** Clicking the "**Search Devices"** We can start a new project from scratch from the list of computers visible on the local network. See *2.5. Search Device Tool*
- **RECENT PROJECTS:** Shows a list of recently opened projects from which we can directly open one of them after selecting it and clicking "**Open selected**" below. If the project file you want to open does not appear in the list, clicking on "**Browse Files**" will open a standard dialog box with which it will be possible to locate it in the file system.
- **FIRMWARE:** By clicking on "**Update Firmware Teams**" The **Firmware update** of equipment **LDA NEO** and **ACSI**. See *2.6. Update Device Firmware*

If this window is closed without taking any action, we will be left with the **Blank application main window** and the following actions will have to be carried out through the **Main Menu** (see *2.3.3. Main Menu*) or the **Main toolbar** (see *2.3.4. Main toolbar*). As you don't have any projects loaded, many of the settings, menus, and tools will be disabled.

2.3.2. Main window

With a project open, configuration panels, menus, and tools will be enabled or not depending on the components that are added to the project or according to the interface elements that are selected. The following image shows the main window with an open project, which shows its main workspaces and information numbered:



1. **Title Bar**
2. **Main Menu**
3. **Toolbar**
4. **System View**
5. **Selection Filters**
6. **Main Settings Panel**
7. **Status Bar**

The **title bar** displays **the name and version of the app** next to the **name of the** currently open project.

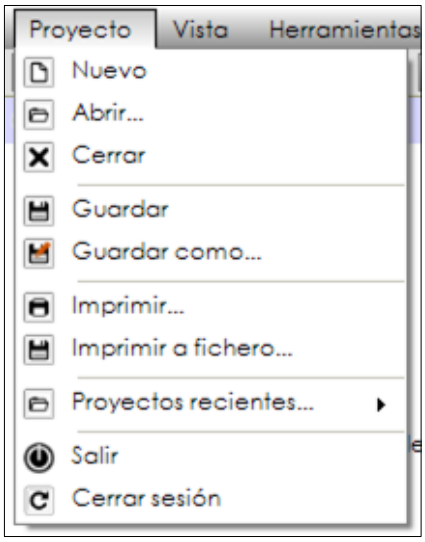
2.3.3. Main Menu

On the far right of the main menu, the **username** that has been authenticated is displayed along with the **type of profile** assigned to them.

The main menu is made up of the following submenus: **Project**, **View**, **Tools** and **Help**.

a. "Project" menu

In this menu you will find the basic functions for project file management for the configuration of **LDA NEO systems**:



- **New:** Create a new project for the configuration of a NEO **LDA** system. The new project will start blank, and the equipment search tool will open automatically in case you want to add equipment present on the local network to the project. The default name for a new project is **"newProject.neo".**
- **Open:** Opens an existing project file.
- **Close: Closes** the current project.
- **Save:** The project file with the current name and path is saved. If it is the first time, the standard "Save As" window **will be displayed** to set the name and path where the file will be saved.
- **Save As:** Save the project by always specifying the name and path.

> **NOTE:** Only users with a profile **Installer** can save project files. (See *2.4.3. Users*).
>
> Project files will be saved by default with the **". neo" extension**

- **Print:** Automatically generates a project report in PDF format with all settings and parameters set in the print-ready project. The level of detail of this report will depend on the user profile.
- **Print to file:** Automatically generates a system report with all the settings and parameters set in the project and allows you to save it as a PDF on your computer. The level of detail of this report will depend on the user profile.

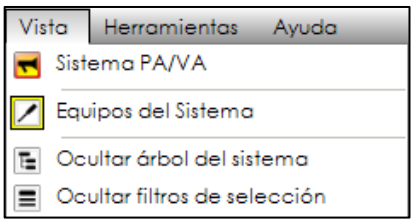
> **NOTE:** Adobe Acrobat Reader **is required** to ensure proper operation of the **Print** and **Print to File feature**.

- **Recent Projects:** Displays a list of recently opened project files up to a maximum of 10 in a submenu. Selecting one of them will open automatically.
- **Quit:** Close the app.

- **Log out:** Restart the application, returning to the initial access window in case you want to change users.

b. "View" menu

From this menu, you can select some of the 2 System Views (See *2.3.5. System View*):



- **PA/VA System:** Displays the view of the **PA/VA System** in the **System View panel**.
- **System Devices:** Displays the **System Devices** view in the **System View pane**.

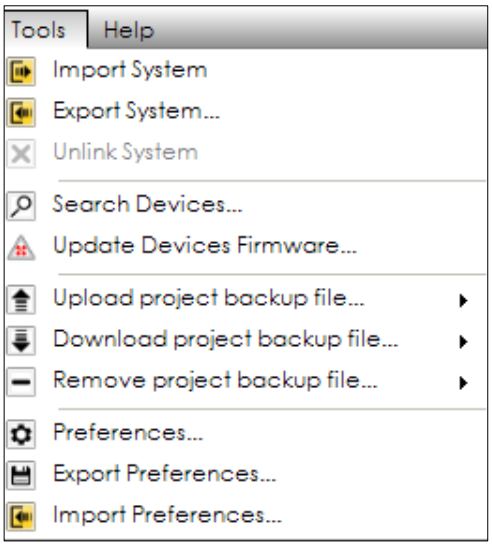
It is also possible to hide or show some components of the interface:

- **Hide/Show System Tree: The** System View **panel is hidden or shown alternatively**.
- **Hide/Show Selection Filters:** The panel is hidden or shown alternately **Selection Filters** (See *2.3.6. Selection Filters*).

> **NOTE:** The "View" **menu** will be enabled only when you have a project open.

c. "Tools" menu

The options available in this menu are:



- **Import System:** Import a System Configuration **LDA NEO** physical in the project of **NEO Configurator**. See *3.5.1. Import a System*
- **Export System:** Export a project configuration **NEO Configurator** to a system **LDA NEO** physical. See *3.5.2. Export a System*
- **Unlink system:** Switch to active offline work mode (**Offline mode**) from active connection mode (**Online mode**) after an Export or Import of the System. See *3.5.3. Unlink a System*
- **Search Devices:** Open the tool **Search Devices** that allows you to Search Devices **LDA NEO** on the local network, among other functions. See *2.5. Search Device Tool*
- **Update Equipment Firmware:** Open the tool for the **Firmware update** of equipment **LDA NEO** and **ACSI**. See *2.6. Update Device Firmware*
- **Upload Project Backup File:** Allows you **to upload a copy of the current project** to the NEO System Controller **device** assigned to the project. This file has the same format as the project files saved locally by the application. The **System Controller** can store **a single backup file**.

- **Download Project Backup File:** Allows you **to download the backup file**, if any, stored in the **System Controller** assigned to the current project. Once downloaded, the file can be opened with the application like any other project file.
- **Remove Project Backup File**: Allows you **to delete the backup file**, if any, stored in the System Controller assigned to the current project

  The project contained in **the backup file may not be consistent with the current system configuration**. In order to achieve such congruence, it is necessary to **Upload the backup file after a successful export of the system configuration**. This functionality is offered automatically at the end of the export process (see *3.5.2. Export a System*). It can also be done manually at any time using the previous entry in this menu.

  Any modification to the physical system configuration without updating the backup file stored in the System Controller **will cause the aforementioned inconsistency** between the current system configuration and that contained in the current backup file.

  On **NEO+ systems**, the **Upload/Download/Remove** options are available for both, the Main Controller and the Backup Controller.

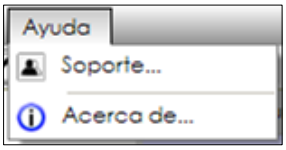
- **Preferences:** It will open the application preferences window. With it, it will be possible to edit the configuration of the users who can access the software, add contact information, set the language of the application or choose the format with which the dates will be displayed in the interface. See *2.4. Preferences*
- **Export Preferences: Save** NEO **Configurator preference settings in a file**.
- **Import Preferences**: **Load** NEO **Configurator preference settings from a file**. This action will cause **an automatic restart of the app**.

NOTE: Some tools may be restricted depending on the user profile. See *2.4.3. Users*

d. "Help" menu

This menu offers the following options:

- **Support:** It shows the **Contact Information** in a floating window. Information can be added Contact Details additional and Custom for this window in the **Preferences** of the application. See *2.4. Preferences*



- **About: Displays** relevant application information, such as software version number or manufacturer information, in a pop-up window.

2.3.4. Main toolbar

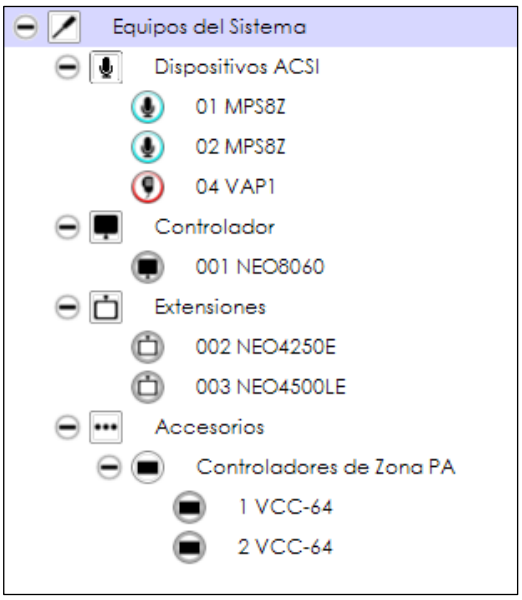
Located under the main menu of the application, it includes shortcuts to the most basic functions of the application, as well as the main configuration sections of the project:

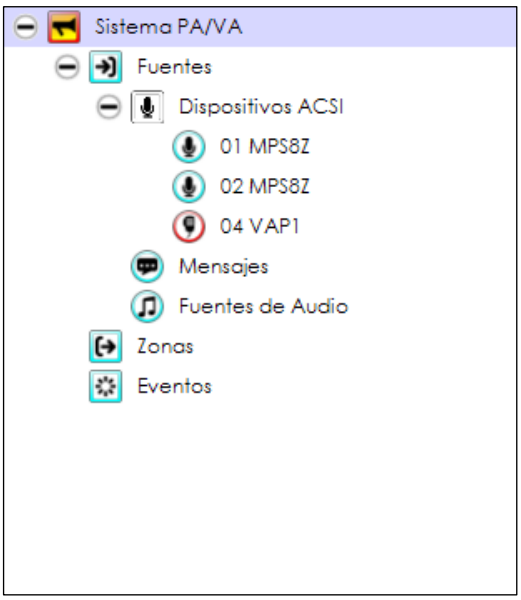
- **New project**
- **Open project**
- **Save project**
- **Print project**
- Open **Equipment Search Tool**
- **Hide** or **Show** System View **Panel**
- **Hide** or **Show** Selection Filters **panel**
- Direct access to the **"System Devices" view**
- Direct access to the **"PA/VA System" view**
- Direct access to the **"Controller"** node in the **"System Devices" view**
- Shortcut to the **"Extensions"** node in the **"System Devices" view**
- Direct access to the **ACSI Devices** node in the **System Devices view**
- Accessing the PA **Zone Controllers node** in the **System Devices view**
- Direct access to the **"ACSI Devices"** node in the **"PA/VA System" view**
- Direct access to the **"ACSI Devices"** node in the **"PA/VA System" view**
- Direct access to the **"Messages"** node in the **"PA/VA System" view**
- Direct access to the **"Zones"** node in the **"PA/VA System" view**
- Direct access to the **"Events"** node in the **"PA/VA System" view**

These icons may be enabled or disabled depending on the status of the application and the current project.

2.3.5. System View

The **System View** organizes the elements that make up an **LDA NEO** system in the form of a tree. By selecting each of these nodes you will be able to access the configuration of each of these elements, equipment, amplification outputs, audio sources, zones, etc. There are two views: **System Devices** and **PA/VA System**.





The **System Devices view** shows the organization of the system according to the devices that make up the system and is intended for the configuration of the specific parameters of each device and the physical system as a whole.

On the other hand, the **PA/VA System view** offers a more functional view of the system, focusing mainly on the configuration of the elements that define the behavior of the system in both PA and VA; **zones**, **audio inputs**, **pre-recorded audio messages**, **ACSI devices (PA and VA microphones), events**, etc.

For a more detailed description of the parameters and functions accessible through each of the views, see *4. SYSTEM CONFIGURATION*.

2.3.6. Selection Filters

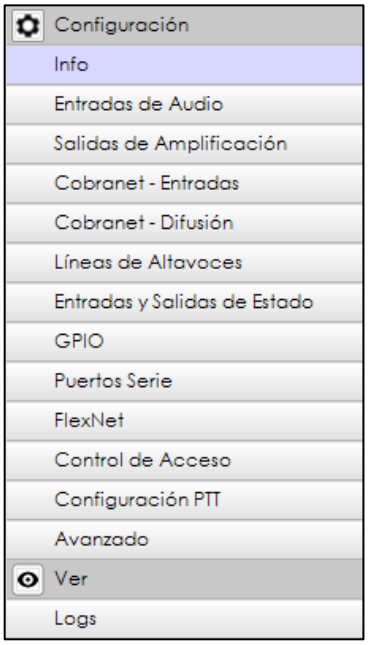
Depending on the node selected in the **Current System View** tree, different selection filters will be displayed on this panel. These selection filters are divided into two categories: **Settings** and **View**.

Configuration filters **will** give access in the Main Settings Area to the different categories of parameters and functions that the authenticated user in the application can edit and perform depending on their user profile.

Type filters **See** give access to read-only System functions and parameters or not editable by the user due to the permissions of the profile assigned to them. See *2.4.3. Users*

As an example, the image on the right shows the selection filters for the node corresponding NEO8060 to the System **Controller computer** with an **Installer profile**.

In the chapter *4. SYSTEM CONFIGURATION* all the selection filters for each of the nodes in the System Views are explained in detail.



2.3.7. Main Settings Panel

Through this panel you can monitor or edit the current configuration corresponding to the selection made through the **System View** and **Selection Filters** panels. In general, parameters are presented by lists or tables, where each row represents an element or property of the system and each column its value, monitoring information about it or actions that can be carried out. Configurable parameters can sometimes be displayed using separate controls or through pop-up windows. The following image shows as an example the configuration panel for the **Speaker Lines** configuration filter NEO8060 of **the Controller node** in the **System Devices view**:

Id	Nombre	Estado de línea	Entradas EOL (TFL1)	Medida de Impedancia (TFL2)	Sistema de Protección (TFL2)	Impedancia Nominal
0001	Salida #1		Ninguna	Ninguna	☐	166 ohm
0002	Salida #2		Ninguna	Ninguna	☐	166 ohm
0003	Salida #3		Ninguna	Ninguna	☐	166 ohm
0004	Salida #4		Ninguna	Ninguna	☐	166 ohm
0005	Salida #5		Ninguna	Ninguna	☐	166 ohm
0006	Salida #6		Ninguna	Ninguna	☐	166 ohm
0007	Salida #7		Ninguna	Ninguna	☐	166 ohm
0008	Salida #8		Ninguna	Ninguna	☐	166 ohm

When parameter tables are presented, columns that include cells with **editable content** display the **icon** **in their header**. Depending on possible dependencies between parameters or system states, it may happen that some editable cells and columns are temporarily unavailable for editing. In any case, **editable cells** will indicate their availability with a **green background**.

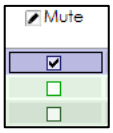
Some configuration panels include a **toolbar at the top** to perform **actions related** to the current configuration filter, which will sometimes require the selection of one or more items in the parameter tables. Selected items or **rows** are displayed with a **bluish background**. The cell highlighted with a **black rectangle** is the **active cell**, which can be changed using the arrow keys, tab keys, or by clicking a mouse on another cell.

Editing the value in an editable cell can be started in one of the following ways:

- With a **mouse click** if it is the **active cell**.
- With a **double mouse click** if **it is not the active cell**.
- By pressing the **space bar** on the **active cell**.
- **By directly typing the desired value** into the **active cell**.

Editing a cell will end when one of the following occurs:

- By pressing the Enter key: **Confirms the new value** entered, the next cell in the current column becomes the new active cell.
- By pressing the Tab key: **Confirms the new value** entered, the next cell in the current row becomes the new active cell.
- Pressing the Esc key: **Discards the new value** entered and recovers the value prior to editing the cell, remaining it as an active cell.
- Clicking **on another cell** also **confirms the new value**, further changing the active cell.

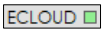


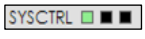
To change the value in **check box cells** that are used to represent binary values, a **mouse click** or press the **space bar** if it is the **active cell is sufficient**.

Sometimes some cells refer to **complex configuration parameters**. In these cases, a **specific pop-up window will appear for editing**.

2.3.8. Status Bar

At the bottom of the interface is the **status bar**, which includes a series of indicators that, like LEDs, indicate different configuration and operation states of the system:

- **ECLOUD**: 

Available only when connecting to the system via EVAC Cloud, see *2.1.1. EVAC Cloud Connection*. Indicates the status of connection to the cloud.
- **SYSCTRL:** It encompasses three indicators with the following meanings:
  - **Left indicator:** 

- The project contains a NEO System Controller **computer**.
  - **Central indicator:** 

- The **System Controller** of our project is **assigned** to a physical computer.
  - **Right indicator:** 

- The physical device assigned to the project is **visible on the local network**, so it will be available to export or import the system configuration and operate in online mode.
- **SYSLINK:** 

- It will appear on when you are working on **Online mode**. See *3.5. Link a System. Offline and Online Modes*
- **SYSDATA:** 

- Working in **online mode**, it will indicate when it is turned on that the parameters in the **physical system and project are synchronized**, that is, they will have the same values both in **NEO Configurator** and in the physical devices (**Controller** and **Extensions**). After making any parameter changes, either from **NEO Configurator**, from another application or produced directly on the computers, the indicator will turn off briefly until the changes have been synchronized in both software and hardware.

  When there is no connection through the local network with any of the **LDA NEO devices** of the project, this indicator will be turned off since in this case it is not possible to synchronize all the parameters of the system.

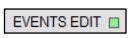
> **NOTE:** It should be noted that, depending on the system configuration, it is possible to observe sporadic flickering in this indicator due to changes induced through any of the inputs of the devices or due to the action of events programmed in the System Controller.

- **BACKUP**: 

Available only with **NEO+** systems with **Backup Controller** installed. In **online mode**, when it turns yellow, it indicates that the physical **NEO+ Main Controller** of the system is disconnected, turned off or hibernated, so that the NEO+ Backup Controller takes control of the system.
- **EMG:** 

- In **online mode** it indicates, when it turns **red**, that the NEO Controller physical device of the system has its general Emergency condition active.
- **FLT:** 

- In **online mode** it indicates, when turned on **yellow**, that the **NEO System Controller** physical device has its general Fault condition active.
- **DIS:** 

- In **online mode** it indicates, when it turns **on yellow**, that the NEO Controller physical device of the system has its general **Disarm condition active**, that is, one or more areas of the system are disarmed.
- **EVENTS EDIT:** 

- Indicates when it is turned on in **green** that the **Event Edit Mode is Active**. See *5. EVENTS*

- **EXPORTING:** EXPORTING - It will be displayed on in **yellow** during the **Export Process** of the Project Setup Towards physical devices. See *3.5.2. Export a System*
- **MSGUPLOAD:** MSGUPLOAD **-** In **Online mode** indicates, when turned on in **green** that a **sending audio files** to the System Controller is **current**. See *4.2.2. b. Messages*

On the **far left of the Status Bar** we will find a control that allows, when dragged with the mouse, to **change the size of the window** when it is not maximized.

2.4. Preferences

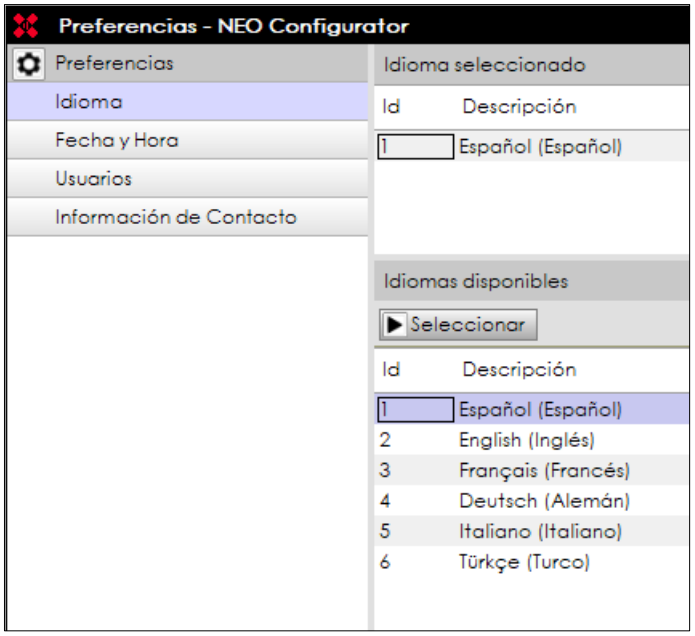
Within the **Tools** menu you can access the **NEO Configurator** Preferences **window**. This window contains four sections: **Language, Date and Time, Users,** and **Contact Information**.

> **NOTE:** Only users with an **Installer** or **Maintainer** profile have access to the **Preferences window**.

2.4.1. Language

In this section it is possible to change the **language of the NEO Configurator user interface**:

- Select the desired language in the **"Available Languages" panel**.
- Click "**Select".**
- **NEO Configurator** will ask if you want to restart the app immediately so that you can apply the new language settings.
- If yes, the software will automatically restart with the new language already set. If not, the application must be restarted manually to apply the change.



> **NOTE:** The application will ask before restarting if you want to save any pending changes to the project. From this dialog box it will be possible to cancel the restart, in which case the application will have to be manually restarted later to apply the language change.

2.4.2. Date format

In this section it is possible to change the format with which dates will be displayed in different sections of the application. The time shown as an example is the current time on your PC.

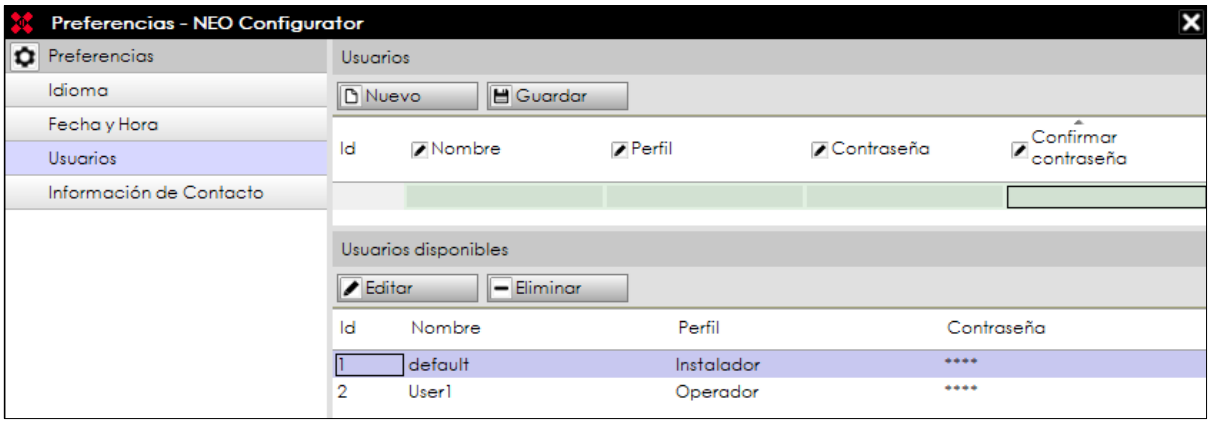
To change the **date format**:

- Select the desired date format in the **"Available Date Formats" panel.**
- Click "**Select".**
- **NEO Configurator** will ask if you want to restart the app immediately so that you can apply the new date setting.
- If yes, the software will automatically restart with the new date format set. If not, the application must be restarted manually to apply the change.

NOTE: Before the restart, the application will ask if you want to save any pending changes to the project. If the operation is canceled, the restart of the application must be done manually later for the date format change to be effectively applied.

2.4.3. Users

In this section, you can add, delete or edit the users who will have access to **NEO Configurator**.



At the top, the **"Users"** panel allows you to create new users or edit existing users.

At the bottom, the **"Available Users"** panel shows all users currently configured to access **NEO Configurator**.

Each user will have their **own password** and an assigned **profile**: **Informant, Operator, Maintainer** or **Installer**. Each of these profiles has different access and usage permissions for System **Views** and for the different **NEO** Configurator **Tools**:

		INFORMANT	OPERATOR	INSTALER	INSTALLER
SYSTEM VIEWS	**Voice Alarm (VA)**	Just watch	Just watch	You can edit	You can edit
	Public Address (PA) Systems	Just watch	You can edit	You can edit	You can edit
	Equipment	Just watch	Just watch	You can edit	You can edit
NEO Configurator Tools	**Save project**	Denied	Denied	Allowed	Allowed
	Preferences	Denied	Denied	Allowed	Allowed*
	Export/Import Preferences	Denied	Denied	Allowed	Allowed
	Export System	Denied	Denied	Allowed	Allowed

*Users with an **Administrator** profile will not be able to be created locally in the NEO Configurator application. They will be managed through the Evac Cloud platform. See *2.1.1. EVAC Cloud Connection.*

a. Create a new user

Steps for the creation of a new user:

- In the **"Users" panel,** click "New". All parameters in the panel, including the **Id** field, will be blank.
- Fill in the user's parameters in the "Users" panel **with the desired values**. The "Name" **and** "Profile" **parameters** are mandatory.
- Click "**Save".**
- The new user will appear in the **"Available Users" panel** with an automatically assigned ID. This field will be useful when you want to edit the parameters of this user.

b. Edit an existing user

Steps to edit an existing user's information:

- Select the user you want to edit **in the** "Available Users" panel.
- Click **"Edit"** to bring the user's parameters to the "Users" panel**.** The **Id** field should show the same identifier that the user has in the bottom pane, unlike when adding new users where this field will appear blank.
- Modify the desired parameters in the **"Users" panel**.
- Click "**Save"** and the user settings will be updated in the **"Available Users" panel**.

c. Delete an existing user

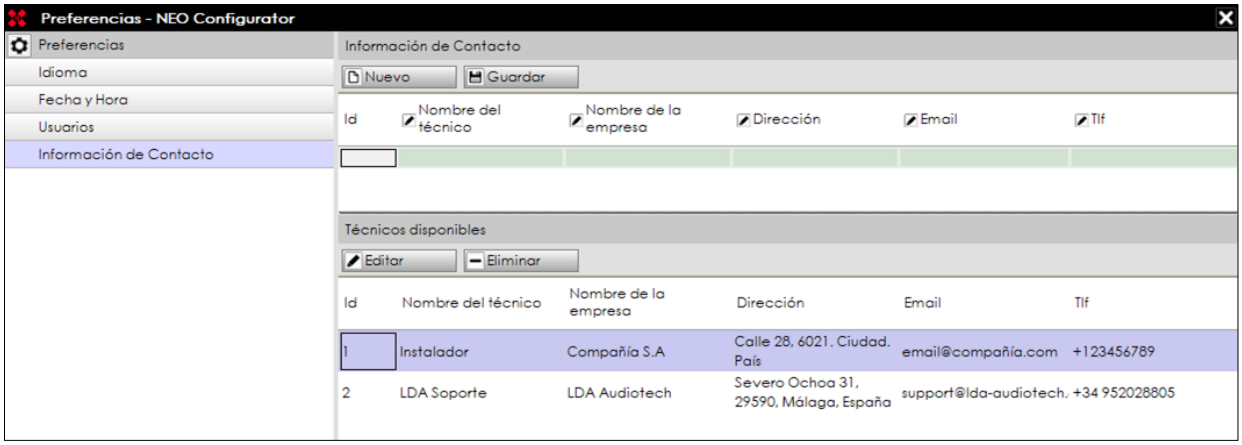
Steps to delete a user:

- Select the user you want to delete in the **"Available Users" panel**.
- Click **"Delete".** Confirmation will be requested to perform this action.

2.4.4. Contact Info

This section Allows Edit the support information that appears in the **"Support"** menu. See *2.3.3. d. "Help" menu*

This **Contact Info** also will be included in the project reports generated in format PDF. (See *2.3.3. a. "Project" menu*).



Through the **"Contact Info" panel** you can create new contacts or edit existing contacts.

The bottom "**Available Technicians" panel** displays the information of all contacts currently saved in **NEO Configurator**.

a. Create a new contact

Steps for creating a new contact:

- In the "**Contact Info**" panel, click "**New".** All parameters in the panel, including the **Id** field, will be blank.
- Fill in the required fields on the panel. The only mandatory field is "**Technician Name".**
- Click "**Save".**
- The new contact will appear in the "**Available technicians" panel** with an automatically assigned ID. This field will be useful when you want to edit the parameters of this contact.

b. Edit an existing contact

Steps for editing the details of an existing contact:

- Select one of the existing contacts in the "**Available technicians**" panel.
- By clicking on "**Edit",** the contact details will appear in the "**Contact Info**" panel. The **Id** field should show the same identifier that the contact has in the bottom panel, unlike when adding new contacts where this field will appear blank.
- Modify the desired parameters in the "**Contact Info**" panel.
- Click "**Save".**

c. Delete an existing contact

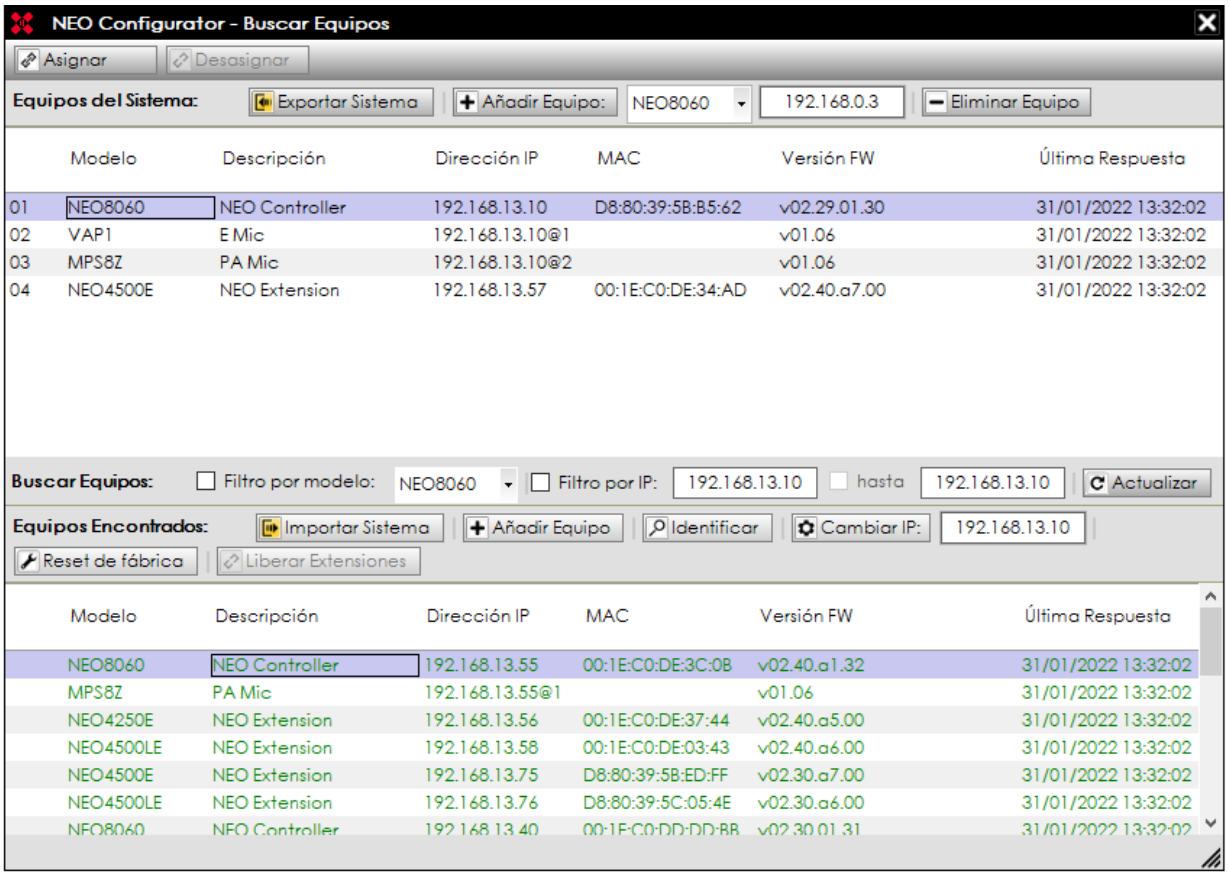
Steps to delete an existing contact:

- Select an existing contact in the "**Available technicians**" panel**.**
- Click on the "**Delete**" button. Confirmation will be requested for deletion.

2.5. Search Device Tool

There are several possible ways to access this tool:

- When launching the application, from the home window clicking on **"Search Devices"**
- Automatically when a **new project** starts.
- Selecting the **"Search Devices"** option from the **"Tools"** menu.
- Via the shortcut in the **toolbar**:
- Pressing **"Ctrl" + "F"** at the main window.



The upper bar list shows the current devices dedicated to the project: **Controller, Extensions, ACSI microphones and PA zone controllers (VCC-64):**

- The first column is the numeric identification who shows the relation between the **project devices** (upper panel) and the **available devices onto the network** (lower panel). This value only makes sense in this window (do not misunderstand with the ACSI or VCC-64 identifier).
- **Model**: Name of the device model
- **Description:** Device short description.

- **IP Address**: IP address of the devices. ACSI devices show the same IP address as the master System Controller. Followed by the "@" symbol and the local address at the ACSI bus. In case of a PA Zone Controller (VCC-64), it shows the IP address from the master Controller System, followed by the "#" symbol and finally the VCC-64 bus address.
- **MAC:** In case the device assigned to the project is accessible on the local network, it will show its MAC address (Only for NEO Controllers and Extensions).
- **FW Version:** If the project device is assigned to a physical device accessible on the local network, it will show its firmware version.
- **Last Seen:** if the project device is assigned to a physical device, it shows the last time when the software has an answer from it.

In the top panel, the found devices can appear in different colors, which mean:

- **Black:** Assigned to a physical device.
- **Green:** Not assigned to a physical device.

The bottom panel shows the list of devices found on the network: Controllers, Extensions, and ACSI devices connected to the Controller.

- If the physical device is assigned to a device in the project, the first column will show the same ID as the device assigned in the top panel. Otherwise, this parameter will appear blank.
- **Model:** Model of the device found.
- **Description:** Short description of the device.
- **IP Address:** The IP address of the device. ACSI devices display the same IP address as the system controller, followed by the "@" symbol and its address on the ACSI bus. The "Search Devices" tool does not detect PA Zone Controllers.
- **MAC:** MAC address of the device (Only for NEO Controllers and Extensions)
- **FW Version:** The firmware version of the device.
- **Last Seen:** last date the device was detected on the local network.

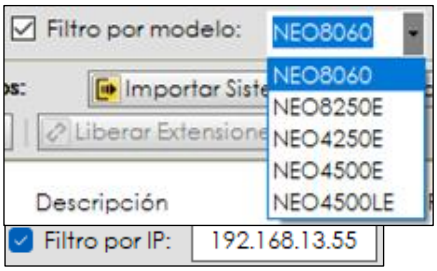
In this bottom panel, the meaning of the colors with which the devices can appear in the list is:

- **Black:** Devices already assigned to the project will also appear in the top panel of this window.
- **Green:** Unassigned Devices. Devices are available to connect.
- **Orange:** Devices that cannot be assigned, usually because the device and the computer running the application are configured on different subnets.
- **Gray**: Teams without response for more than 30 seconds.

The Search Devices tool allows you to:

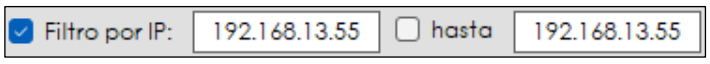
- **Find NEO devices and ACSI microphones connected to the NEO Main Controller.** This search can be done with the help of several types of filters; by model, by IP address or by IP address range:

- **Filter by model:** By checking the **"Filter by model"** box and selecting the specific model from the adjacent drop-down. Only for **NEO Controllers** or **Extensions**.



- **By IP address:** Checking the **"IP Filter"** box establishes a search only for a device with the address indicated in the adjacent text box. This option is useful with networks where it is not possible to perform a global search, such as Wi-Fi networks. To be able to use this filter, it is necessary to know the IP address configured on the computer itself.

- **By IP address range:** If you also tick the "**to"** box and enter a second IP address in the adjacent text box, the search will be restricted to the range defined by both IP addresses.



- **Add devices to the project locally** using the top panel. See *3.3. Add and remove devices from the System*
- **Remove devices from the project** Using Top Panel. See *3.3. Add and remove devices from the System*
- **Add to project devices found on the local network** from The Panel inferior. See *3.3. Add and remove devices from the System*
- **Assign** or **Unassign** devices found on the network to devices included in project. For more information on devices assignment, see *3.4. Assign*

- **Import** or **Export** the configuration of the System. For more information on import and export processes, see *3.5.1. Import a System* and *3.5.2. Export a System*

- **Identify NEO devices on the network:** To do this, it is necessary to select an **LDA NEO device** in the bottom panel and press the **"Identify" button**. This will send an identification command to the physical device, which **will cause the front and rear LEDs of the device to flash for about 30 seconds**.

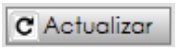
- **Change the IP address of NEO devices on the network:** Select a **NEO device** in the bottom panel, **specify the new IP address** in the text box next to the **"Change IP:"** button, and then click on it. A dialog box will ask for **confirmation** to perform this action. The computer will automatically restart to apply the IP address change.

- **Perform a factory reset on a NEO device on the network:** First select **a NEO device** in the bottom panel and then click on **"Factory reset".** A pop-up dialog box will prompt for **confirmation** to perform this action. After the factory reset, the computer will be configured with its **default IP address,** 192.168.0.3 for NEO systems and 192.168.0.7 for NEO+ systems. The latter must be considered to avoid duplication of IP addresses in the local network.

This option is not available for **NEO+ systems**.

- **Release the FlexNet link between Extensions and NEO Controllers:** Select in the bottom panel the **NEO Extension device** that you want to unlink from your **NEO Controller** and then press the **"Release Extensions" button**.

- The **"Update" button** clears the list in the bottom panel to update it again with the computers that are found on the network in the future.



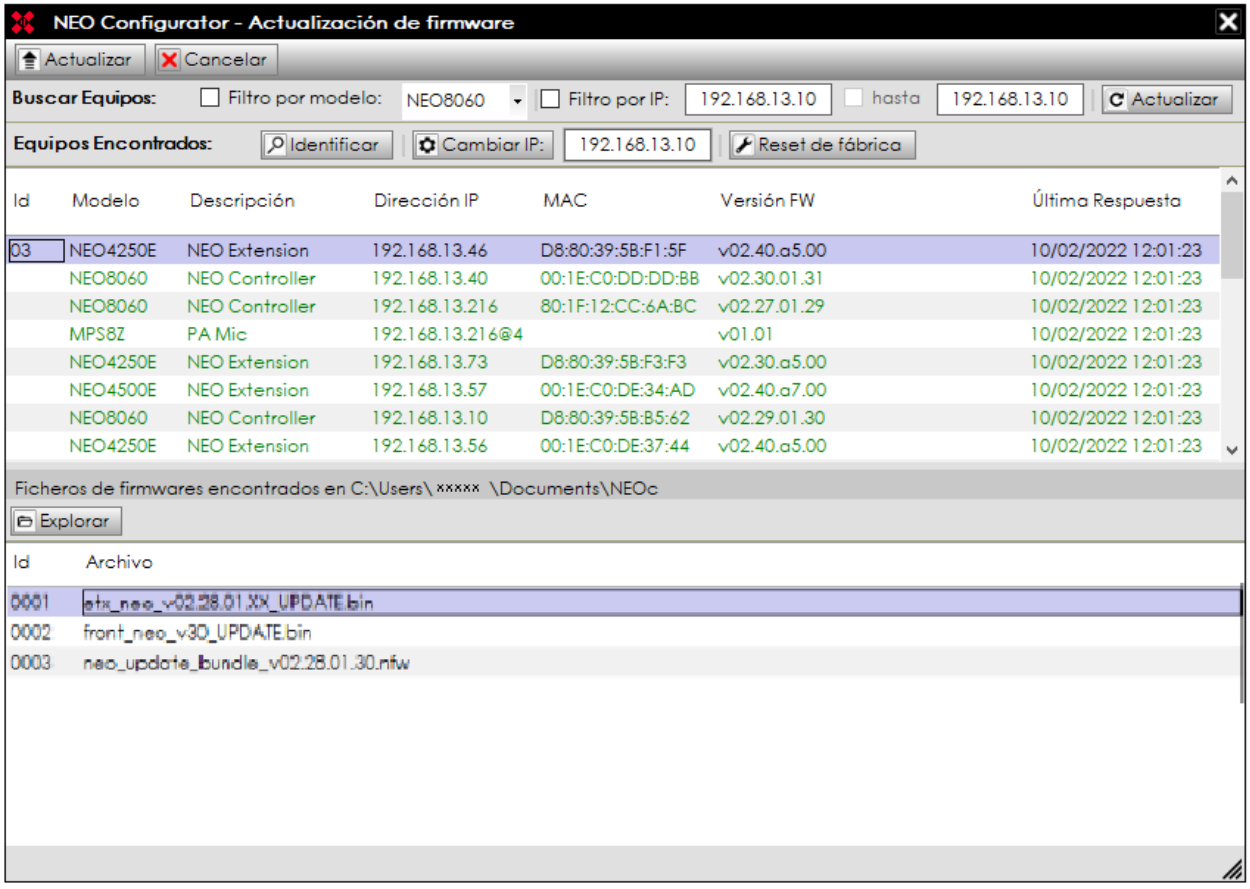
2.6. Update Device Firmware

The **"Update Device Firmware" tool** allows you to update the firmware of computers found on the local network, both **System Controllers** and **Extensions,** and also **ACSI** devices connected to any of these System Controllers.

It is not necessary to have a project open in **NEO Configurator** to make use of this tool. It can be accessed by one of the following ways:

- When launching the application, from the **Home Window** by clicking on **"Update Device Firmware".**
- Within the "**Tools**" menu, select the **option "Update Device Firmware".**
- By pressing the **Ctrl + U** key combination in the main window.

In either case, will open the window **Firmware update**, similar in appearance to the window **Search Device** Described in *2.5. Search Device Tool.*



The **top panel** lists the **devices found** on the local network. The **bottom panel** displays the **firmware update files** contained in the selected folder.

Like with the window **Search Devices** with the controls of the **Top Panel** will be possible to filter the **Search by model** of device, **IP address** unique or **IP address range**. Also includes the Tools **Devices Identification**, **IP address change** and **Reset of Factory**. See *2.5. Search Device Tool*

a. Firmware update files

Clicking the **"Browse"** button will open a dialog box to select the folder containing the firmware update files.

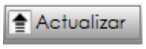
The firmware update files contained in the folder, as well as the name of the folder, will be displayed in the bottom pane of the window; **"Firmware files found in".**

Different types of firmware files can be found:

- Files with **an extension ".bin",** whose destination may be:
  - **ETX module** of a **NEO System Controller** or **Extension** device.
  - **Front Display** of a **NEO System Controller device**.
- **ACSI device**.
- Files with **".nfw**" extension, intended for **NEO System Controller device** and that combine in a single file the firmware for both the **ETX Module** and the **Front Display** of the device.

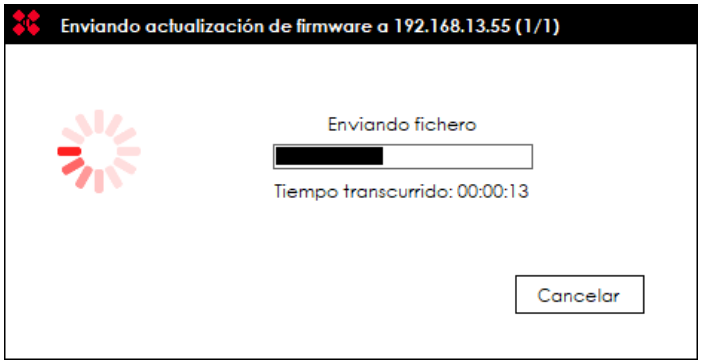
The firmware files that **LDA Audio Tech** distributes for its equipment will have a self-descriptive name, specifying the model for which they are intended, as well as the firmware version they contain.

b. Update NEO Device Firmware

- **Select the device** you want to update in the **top panel**. All selected devices must be of the **same model**.
- **Select the firmware file** in the bottom panel.
- Press the **"Update"** button. 

In case the selected file is invalid or intended for a different computer model than the selected one, an error message will be displayed.

If the file is valid, a dialog box will appear showing the progress of the submission and update. After the process is complete, the computer will restart with the new firmware version.



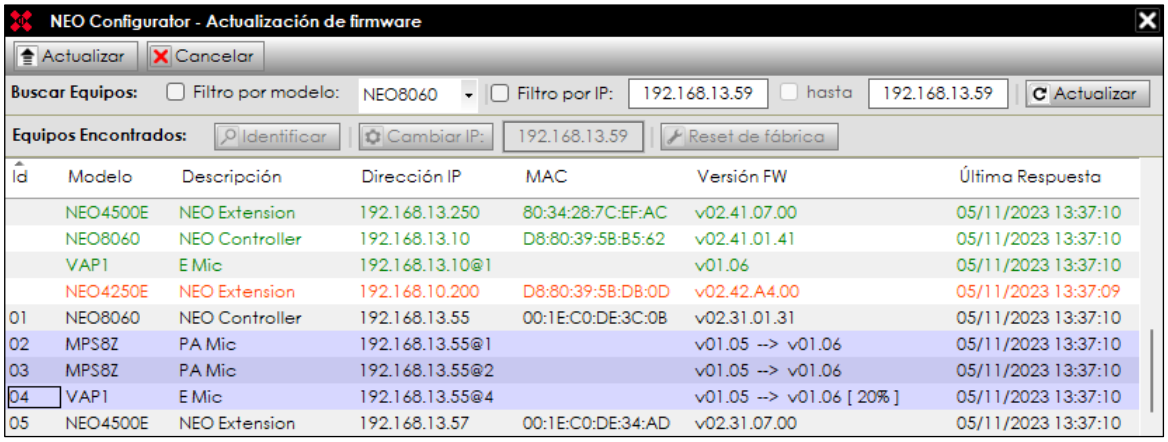
The shipment can be interrupted at any time by clicking the **"Cancel"** button in the shipping dialog.

When several devices are selected, the update file will be sent sequentially. The send dialog box shows at the top the IP address of the computer to which the file is currently being sent and how many sends have been made in relation to the number of devices selected. The contents of the dialog box show the progress of the current send along with the elapsed time.

c. Update ACSI device firmware

For the firmware update of ACSI devices, the following must be taken into account:

- Once the microphones to be updated have been selected, and the "**Update**" button has been clicked, the update file will be sent to the **NEO Controller** where the selected microphones are connected. Microphones connected to different NEO devices can be selected. In this case, the update file will be sent to each NEO Controller separately.
- When the update file is successfully submitted, each **NEO Controller** will sequence the firmware update of its microphones. Each microphone to be updated shows in the **"FW Version"** column the current firmware version and the version to be upgraded to. That device with an update in progress will show the progress of the update.



Id	Modelo	Descripción	Dirección IP	MAC	Versión FW	Última Respuesta
	NEO4500E	NEO Extension	192.168.13.250	80:34:28:7C:EF:AC	v02.41.07.00	05/11/2023 13:37:10
	NEO8060	NEO Controller	192.168.13.10	D8:80:39:5B:B5:62	v02.41.01.41	05/11/2023 13:37:10
	VAP1	E Mic	192.168.13.10@1		v01.06	05/11/2023 13:37:10
	NEO4250E	NEO Extension	192.168.10.200	D8:80:39:5B:DB:0D	v02.42.A4.00	05/11/2023 13:37:09
01	NEO8060	NEO Controller	192.168.13.55	00:1E:C0:DE:3C:0B	v02.31.01.31	05/11/2023 13:37:10
02	MPS8Z	PA Mic	192.168.13.55@1		v01.05 --> v01.06	05/11/2023 13:37:10
03	MPS8Z	PA Mic	192.168.13.55@2		v01.05 --> v01.06	05/11/2023 13:37:10
04	VAP1	E Mic	192.168.13.55@4		v01.05 --> v01.06 [20%]	05/11/2023 13:37:10
05	NEO4500E	NEO Extension	192.168.13.57	00:1E:C0:DE:34:AD	v02.31.07.00	05/11/2023 13:37:10

The firmware update can be interrupted at any time by clicking the **"Cancel"** button after selecting the microphone.

A microphone cannot be used while its firmware is being updated . The microphone will signal this circumstance as follows, depending on the model:

- **MPS8Z** and **MPS8Z+**: Zone LEDs off, **LNK** LEDs on, and **CW, BSY**, **EMG**, and **FLT** LEDs flashing.
- **VAP1**: All the LEDs on the equipment will be flashing.

Once the firmware update process is complete, the microphones will automatically re-link with your **NEO Controller** on the **ACSI bus**.

> **NOTE:** In either case, you must ensure that your devices remain connected to the local network and that the power supply is not interrupted throughout the firmware update process.

3. PROJECT SETUP

3.1. Start a new project.

A project in **NEO Configurator** contains an **LDA NEO system** consisting **of at least** one **NEO Controller device**. Additional devices can be added later depending on the needs of the project.

To start working on the configuration of an **LDA NEO system** from scratch with **NEO Configurator** you will need to:

- **Create a new project** in one of the following ways:
  - Since **Home Window** of the application. See *2.3.1. Home window*
  - Selecting the option **"New"** of the menu **"Project".** See *2.3.3. a. "Project" menu*
  - Through the **Shortcut** corresponding of the **Toolbar** main. See *2.3.4. Main toolbar*

In either case, the computer search window will open to start adding devices to the project, whether they are virtual devices or devices found on the local network. This is explained in detail in *3.3. Add and remove devices from the System*

3.2. Recover an existing project

It is possible **to recover a system's configuration** either **by opening a** previously saved project file or **by importing it from devices on an already operating system**. This will allow this configuration to be used as **a starting point for establishing a new** LDA NEO system, or for **upgrading, supervision or monitoring** on one that is already in operation.

3.2.1. NEO Configurator Project File

To start work on an **LDA NEO system** using a configuration previously saved in the corresponding **NEO Configurator** project file, you will have to open this file in one of the following ways:

- From **Home Window** of the application. See *2.3.1. Home window*
- Selecting the option **"Open"** of the menu **"Project".** See *2.3.3. a. "Project" menu*
- Through the **Shortcut** corresponding in the **Toolbar** main. See *2.3.4. Main toolbar*

3.2.2. Backup file hosted on System Controller

It is also possible **to get the backup file, if any, stored in the System Controller** of the current project. Once downloaded, this file will be available **open like any other NEO Configurator project**. See *3.2.1. NEO Configurator Project File*

3.2.3. System Devices

If you have a physical **LDA NEO system** running, but you do not have a corresponding **NEO Configurator** project file, or if it is not updated, you can **import the current system configuration** into a **NEO Configurator project** by following these steps:

- Create a **New Project**.
- **To find** in the **local area network** The Team **NEO Controller** of that system. See *3.3.1. c. Using the "Search Devices" tool*
- **Import the system**. See *3.5.1. Import a System*
- **Unlink the system.** See *3.5.3. Unlink a System*
- **Save the project.** See *2.3.3. a. "Project" menu* or *2.3.4. Main toolbar*

It should be noted that **importing a physical system will replace all the settings stored in the current project in NEO Configurator**.

If desired **Upload the obtained configuration to a different system**, with the configuration modifications deemed appropriate, it will be necessary to **change the assignment of NEO devices in the project.** See *3.4. Assign Devices*

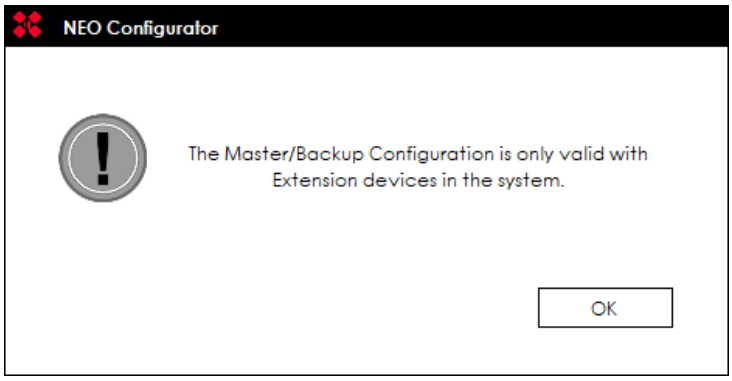
3.3. Add and remove devices from the System

Whether starting from a new blank project or an existing one, the application will allow us to add the necessary devices to configure the **LDA NEO system** according to the required specifications.

An **LDA NEO system** can include the following devices:

- **Controller:** The system shall consist **of at least** one **NEO8060** or **NEO8060+** System Controller and one **NEO Extension**.
  - In **NEO** systems there may not be more than one Controller in the System.
  - In **NEO+** systems there may be up to two Controllers for redundant systems. The first will adopt the role of **Main Controller** and the second that of **Backup Controller.**

    It will be necessary to add an **Extension** on NEO+ systems with **Backup Controller**, otherwise, when exporting a system composed only of Controllers, a message will appear indicating Master/Backup is only valid with Extension devices.



- **Extensions:** They expand the number of amplification outputs of the system, being able to add other characteristics to it depending on the model.
  - 8-channel extensions: **NEO8250E** for classic systems and **NEO8250+** for Plus systems.
  - 4-channel extensions: **NEO 4250E, NEO 4500E** and **NEO 4500LE** for classic and **NEO4250E+, NEO4500E+** and **NEO4500LE+** systems for Plus systems.
- **ACSI Devices:** They connect to the Controller's ACSI bus, up to a maximum of **8 or 32** depending on the **operate mode** of the bus (See *4.1.4. n. Controller: Advanced*), and enable voice messages to be broadcast through system zones according to configuration established for its button panels, as well as the launch of events scheduled in the Controller's event manager. The **ACSI devices** available are:
  - **MPS8Z** and **MPS8Z+:** Multi-zone microphones for **general public address** (**PA).**
  - **VAP1:** Multi-zone microphones for **voice evacuation** (**VA).**
  - **VAP1FES:** Multi-zone microphones for **voice evacuation** (**VA)** adapted to **German regulations**.
- **Accessories:**
  - **PA Zone or VCC-64 controllers**: These are devices that allow you to change the audio source and volume of a zone in PA mode.

There are 2 ways to add devices or devices to a system:

- Locally in the application as **virtual devices**.
- From a **physical system** accessible through the local network, using the **"Seach Device"** tool.

NOTE: For detailed **information** on the characteristics and operation of the listed devices, consult the corresponding **manuals** available in the Support section of the LDA website: ***http://www.lda-audiotech.com***

NOTE: To be able to **add** or **remove** system devices, the user profile must be **Installer** or **Maintainer** (See *2.4.3. Users*).

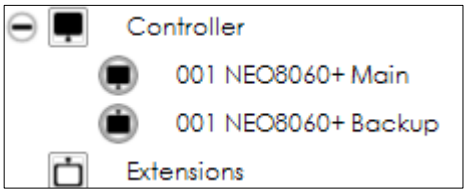
3.3.1. System Controller

The System Controller **NEO8060** or **NEO8060+,** is responsible for managing the system's audio inputs, both in emergency situations and in conventional use, and assigning them to the different existing areas. The Controller device complies with all the requirements of **EN54-16** and **EN60849** to ensure its compliance with the established standards.

NEO systems consist of a **single NEO Controller** device and at least one **NEO Extension** unit.

NEO+ systems can have up to a maximum of **two NEO Controller** devices and at least one **NEO Extension** drive on systems with **Backup Controller**. Each controller will adopt a different role:

- **Main NEO8060+:** This is the main controller of the system
- **Backup NEO8060+:** Provides redundancy to the system. If the main controller is disconnected, shut down or is in a state of hibernation, it will automatically take control of the system



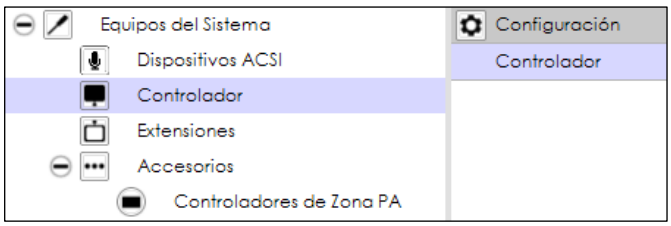
a. Add Virtual Controller

For NEO Systems, since **it is only possible to have one NEO Controller device** in the system, to add such a device, the project must be blank. Otherwise, the current Controller must be deleted.

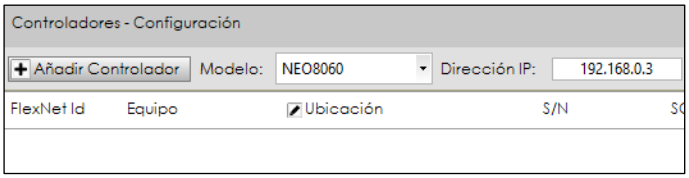
On **NEO+** systems, the first controller added will take on the role of Main NEO8060+ and the second will take on the role of Backup NEO8060+.

To add a **Virtual Controller,** follow these steps:

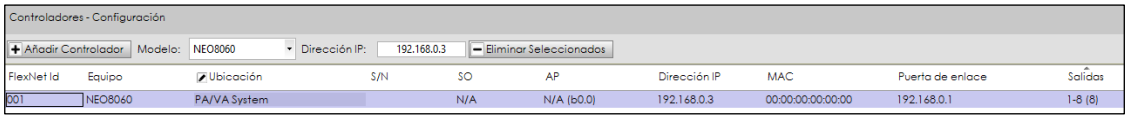
- Select the "**Controller**" node and the corresponding configuration filter in the **"System Devices"** view:



- Add the device using the **"Add Controller"** button after entering the desired values for the **"Model"** and **"IP Address"** parameters in the corresponding boxes:



- The new System Controller will be listed in the main settings panel:



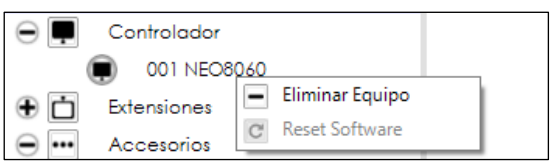
Similarly, a **Backup Controller** can be added to **NEO+ systems** in **offline** mode only.

Adding the equipment in this way will later need to be assigned to a physical device in order to perform export and import tasks.

b. Remove Controller

To remove the Controller from the system:

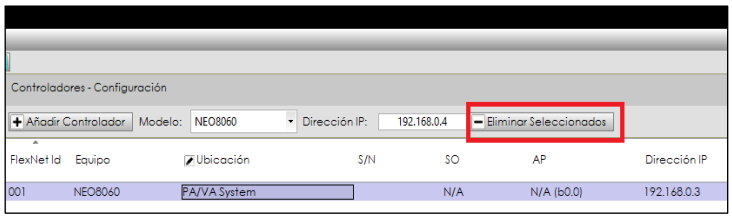
- In the **"System Devices"** view, expand the "**Controller**" node and then right-click on the **NEO8060/NEO8060+** device. In the pop-up context menu, select the **"Remove Device"** option:



Similarly, a **Backup Controller** can be added to **NEO+** systems in **offline** mode only.

- Having selected the "**Controller**" node in the "**System Devices**" view, it is also possible to delete the System Controller from the main configuration panel, selecting it from the list and clicking "**Remove Device**":

NOTE: Deleting the Main Controller will cause all previous project settings to be lost.

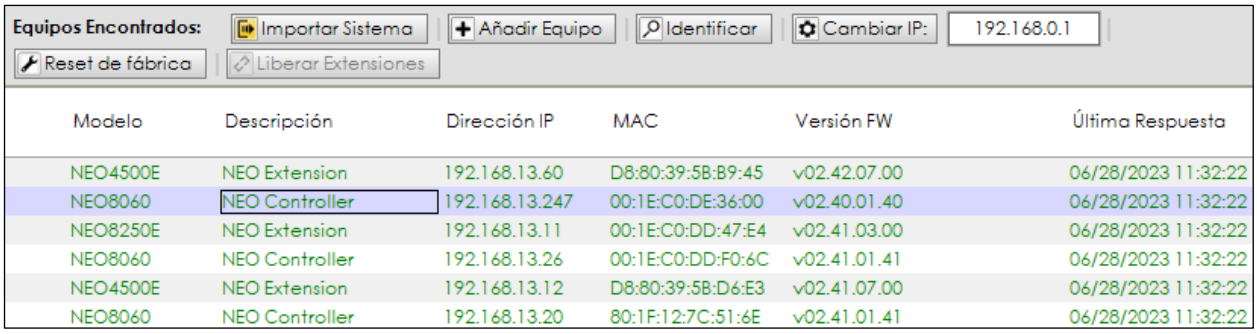


c. Using the "Search Devices" tool

The same controls and functionality for adding or removing a **Virtual System Controller** can be found in the upper panel of the "**Search Devices**" window, with which we can perform both tasks:

- **Add Controller:** Select model **NEO8060/NEO8060+**, enter the **IP address** and then click on "**Add Device**". The equipment must be assigned later to be able to carry out import and export tasks.
- **Remove Controller:** Select the **System Controller** from the "**System Devices**" list and then click on "**Remove Device**".

It is also possible to add a **System Controller** from among those that have been found on the local network and that are listed in the lower "**Discovered Devices**" panel:



- **Select** the desired NEO Controller device from the "**Discovered Devices**" list.
- Click on **"Add Device".**

The new **System Controller** will appear in the top "**System Devices"** panel.

Similarly, a **Backup Controller** can be added on **NEO+ systems**. The first controller added will take the role of **Main NEO8060+** and the second will take the role of **Backup NEO8060+.**

> **NOTE:** Adding the devices in this way will automatically assign it to the physical device and will not need to be done later.

3.3.2. System Extensions

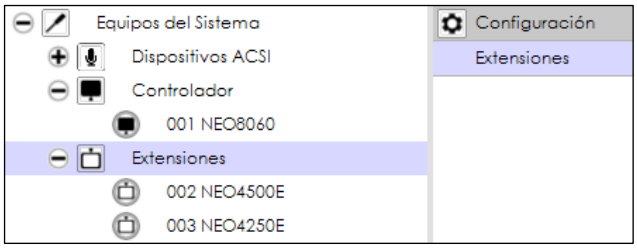
Various **NEO Extension models** are available for system expansion. These devices expand the number of amplifiers and speaker lines available, making it possible to add more zones to the system or expand its coverage. The Extension device is adapted to the **EN54-16** standards, thus ensuring its integration as certified elements of the system.

a. Add Virtual Extension

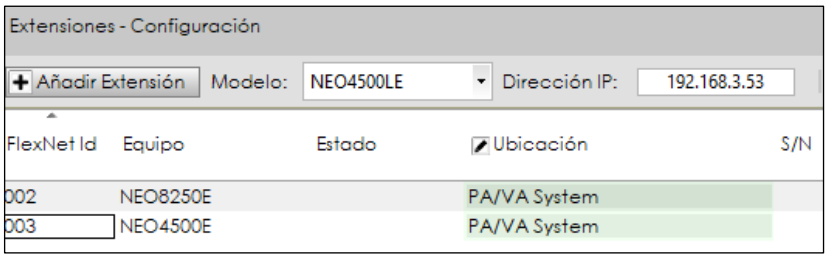
You need to have a **System Controller** device already added to your project to add new **Extension computers**.

To add a **Virtual Extension** from the main window:

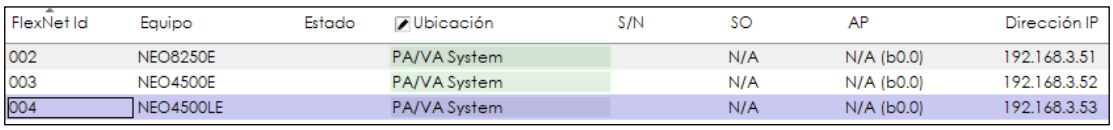
- Select the "**Extensions" node** and the corresponding configuration filter in the **"System Devices"** view:



- In the main configuration panel, specify the **model** and **IP address** that will be assigned to the new device and then click on **"Add Extension"**:



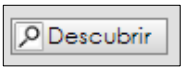
- The new **Extension** device will be listed in the main settings panel:



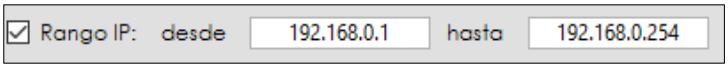
NOTE: It is not possible to have two devices, Controller or Extension, with the **same IP address** in the same project. The software will not allow this, displaying an error message in case you try to add a device with an IP address already used in the project.

b. Discover Extensions

Working in **online mode** (See *3.5. Link a System. Offline and Online Modes*), There is the possibility of **adding automatically** Extension devices that the System Controller discovers in the net and that no longer belong to another LDA NEO system. To do this, in the main settings panel of Extension Settings, click on "**Discover**".



It is possible **to restrict the search** for devices to a **specific IP address range**. To do this, before clicking on "**Discover",** you will have to activate the "**IP range**" option and enter the start and end IP addresses:



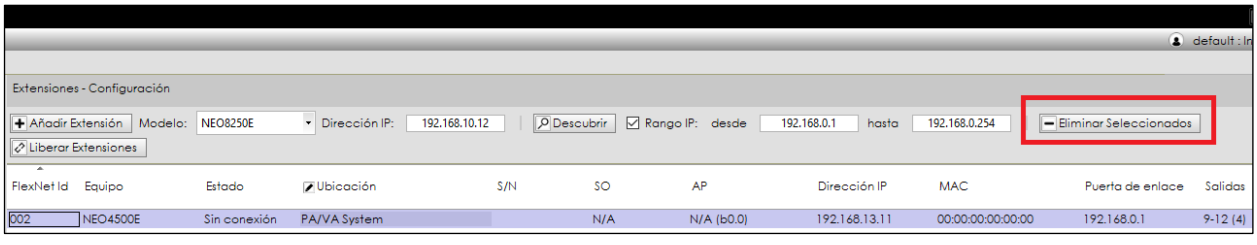
This makes it possible to speed up the configuration of the system if the NEO devices that will be part of the system are already connected to the local network.

c. Deleting an Extension

To remove a System Extension:

- In the "**System Devices**" view, expand the "**Extensions**" node and then right-click on the Extension device you want to delete. In the pop-up context menu, select the "**Delete Device**" option:

- Having selected the "**Extensions**" node in the "**System Devices**" view**,** it is also possible to delete a System Extension from the main configuration panel, selecting it from the list and clicking "**Remove Selected**":



NOTE: Removing an Extension from the system means that all of its amplification outputs with all their own configuration are removed from the project, including assigning them to the system zones. If the removal of an Extension causes a zone to run out of assigned amplification outputs, the zone will be automatically removed from the system.

d. Using the "Search Device" tool

Add or remove a device **Extension** Virtual is also possible from the **"Search Device"** of analogous to how it is done with the NEO System controller. Similarly, it is also possible to add Extension devices discovered on the local network. See *2.5. Search Device Tool*

3.3.3. ACSI Devices: PA and VA Microphones

ACSI devices fall into two categories: **VA** or **Emergency Microphones** and **PA Microphones** for conventional public address use. These devices are connected to the ACSI bus of the System Controller, **using its local source 5** for the transmission of the audio of voice messages, disabling the use of said source for other uses.

> **NOTE**: On **NEO+ systems** with **Backup Controller**, it is recommended to integrate ACSI devices into the system via the **ACSINet Domain.**

a. Add and Remove ACSI Devices

For a detailed look at how to add or remove ACSI devices in a project for NEO systems, see *4.1.2. b. Add and Remove ACSI Devices*

b. Using the "Search Devices" tool

As described above for Controller and Extensions, with the **"Search Devices"** tool it is also possible **to remove** any previously added **ACSI** devices, although **it will not be possible to add them** from that tool **as virtual devices**.

In addition, it is possible to add discovered ACSI devices on the local network as long as they are connected to the System Controller whose IP address matches that of the Controller in the NEO Configurator project, whether or not it is assigned.

3.3.4. PA Zone Controllers

PA Zone Controllers or **VCC-64** are devices that control the volume and source of audio that is routed in a zone.

PA Zone Controllers can be manually added as virtual machines, which will be automatically assigned to a physical VCC-64, if they both have the same address assigned on the PA integration serial port.

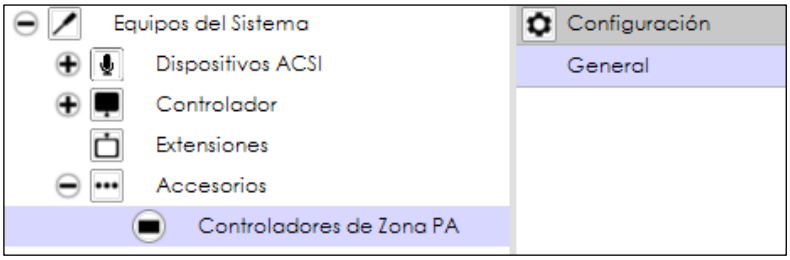
The **VCC-64** devices are connected to the **PA integration serial port**, located on the **ETX** module of the **System Controller** device. This port can also be managed through the event manager for sending and receiving commands. Both situations are mutually exclusive:

- In the case of using the PA integration serial port for **system events**, it will not be possible to install **VCC-64 devices.**
- On the other hand, if **VCC-64 devices are already connected and configured**, the port cannot be used for **system events.**

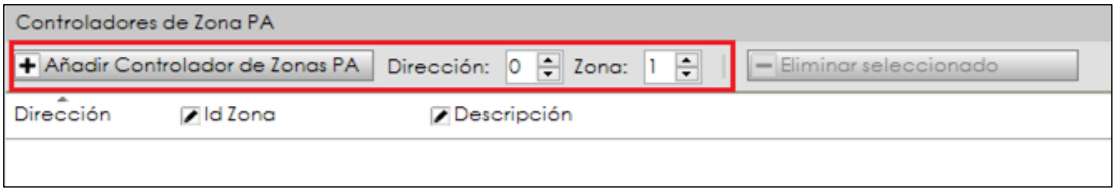
a. Adding a Virtual PA Zone Controller

It will only be possible to add **PA Zone Controllers** if a **Controller** already exists in the project. To add a PA Zone Controller:

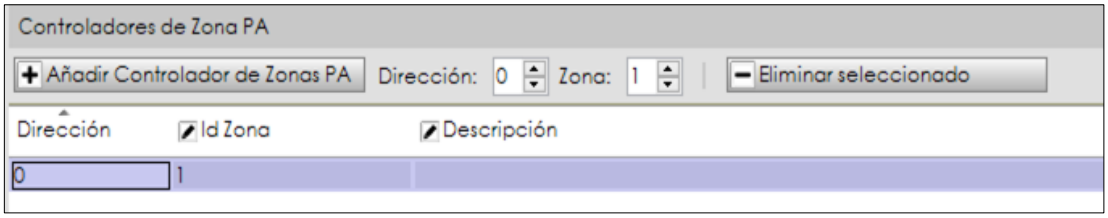
- In the System Devices view, select the **"PA Zone Controllers"** node, "**Accessories"** sub-node, and then select the **"General"** configuration filter:



- In the main configuration panel, after indicating the **address** of the device on the serial port and the **zone identification** of the system you are going to control, click on "**Add PA Zone Controller"**:



- The new **PA Zone Controller** will appear in the list of devices:



Editing the parameters of the PA Zone Controllers is detailed in *4.1.6. Accessories: VCC-64 PA Zone Controllers*

b. Remove a PA Zone Controller

To remove a **PA Zone Controller**:

- In the **System Device** view, display the **"PA Zone Controller"** node, sub-node of **"Accessories".**
- Right-click on the **PA Zone Controller device** you want to remove and in the pop-up context menu click on **"Remove Selected"**

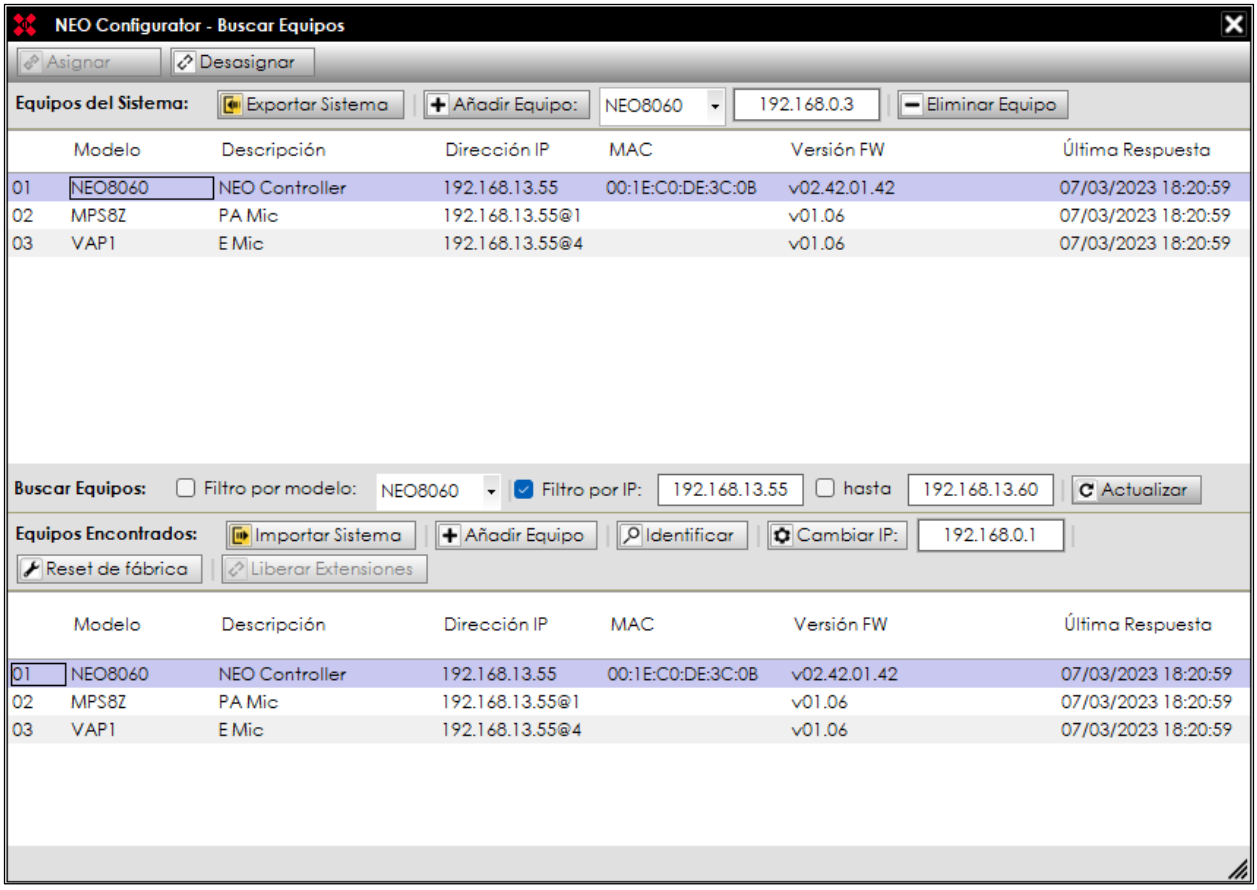
Having selected the **"PA Zone Controllers"** node and the **"General"** configuration filter, it is also possible to delete one of these computers as follows:

- Select the device you want to remove from the list of devices in the main settings panel.
- Click on the **"Remove selected"** button.

3.4. Assign Devices

Computer assigning consists of **linking** a **virtual device** from the NEO Configurator project with a **physical device** present on the **same local network** as the computer running the application.

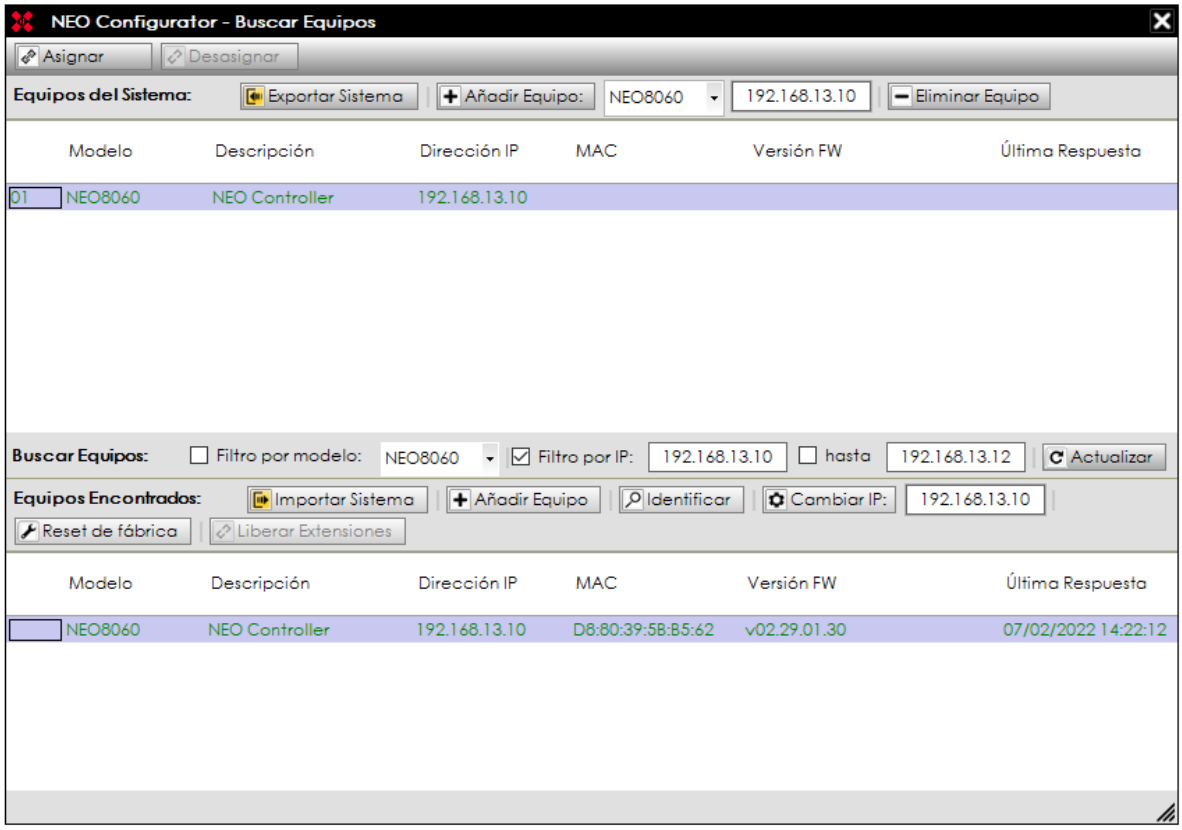
The assignment of devices in NEO Configurator to physical devices is done with the "**Search Devices**" tool, accessible through the "**Tools**" menu or its corresponding shortcut in the main toolbar.



With the tool **"Search Devices"** herself can detect all devices connected to the same local network than the computer where it runs NEO Configurator, except for the **PA Zone Controllers**. The controls for this functionality are described in detail at *2.5. Search Device Tool*.

In addition, the "**Assign**" and "**Unassign**" buttons appear in the "**System Devices**" panel to control devices assignment tasks.

System Controller and **Extensions** devices can **be assigned manually**. The assignment implies that the virtual machine in the project will take the same IP address as the physical device. This will determine which NEO devices the system configuration will be exported to. To do this, you will have to select the virtual computer in the "**System devices**" panel and the physical device in the "**Search Devices**" panel and then click on "**Assign**".



Unassigned devices will be shown in **green** on both panels. The **assigned devices** will be shown in **black**.

The **assigned devices** will show the same numeric identifier on the left in both panels:

The assignment is imperative for the System Controller, as the virtual device in the project will save an internal key that identifies the physical device, enabling the subsequent export of the system configuration in the NEO Configurator project to the physical system managed by the linked device. If the **Controller is not assigned**, the application will not allow the export of system settings.

It will also be necessary for the System Controller to be assigned to import the system configuration from the "**Tools**" menu of the main application window.

Importing from the **"Search Device" tool** window allows you to dump into the project the system configuration of any NEO Controller device found on the local network without the need for prior assignment.

ACSI Devices are **automatically** assigned whenever they appear in both the **"System Devices"** panel and the **"Search Devices"** panel connected to a Controller with the same IP address in both cases.

PA Zone Controllers do not appear in the **"Search Devices" panel**, so they are implicitly assigned when they are added to the project.

To see in detail the processes of **Import** and **Export** of setting up a **LDA NEO system** consult *3.5.1. Import a System* and *3.5.2. Export a System*

3.4.1. Assign a System Controller

In the case of a **NEO+ system**, follow the same steps to assign both the **Main Controller** and the **Backup Controller**.

a. Blank Project without System Controller

With the "**Search Device**" tool, when you add a System Controller discovered on the local network to a blank project, the new device in the project and the physical device will be automatically linked:

- In the "**Search Devices**" panel, select the **NEO Controller** device that you want to add to the project.
- In the "**Search Devices**" panel, click on "**Add Device**".
- The new **Controller** will appear in the top panel "**System Devices**", being automatically assigned to the selected physical device and with the same IP address.

The **3 indicators SYSCTRL** in the main status bar should appear **on** (The significance of these indicators is detailed in *2.3.8. Status Bar*)

b. Project that already includes a System Controller

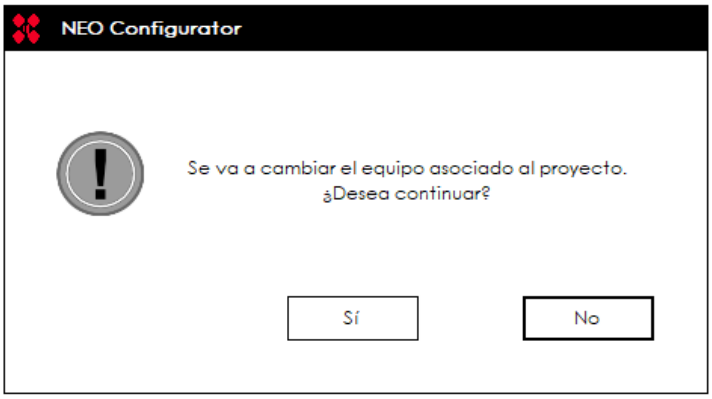
When assigning the Virtual System Controller included in the current project, two situations can occur:

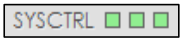
- The **Controller has not yet been assigned** to a physical device.
- The **Controller has already been assigned** to a physical device.

For the second case, it is possible to change the physical device assigned to the Virtual Controller of the project. In both cases, the procedure for assigning the Virtual Controller in the project with a physical device present on the local network is as follows:

- Within the "**Search Devices**" tool, in the list of devices in the "**System Devices**" panel, select the project's **NEO Virtual Controller** device.
- In the list of **the** "**Search Devices**" panel, select the **NEO Controller** device that you want to assign to the project's Virtual Controller.
- Click on "**Assign**".

- The following message will be displayed:



- Click "**Yes**" to continue.
- The selected physical device will be assigned to the project's Virtual Controller in NEO Configurator, which will be configured with the same IP address as the first one.
- The **SYSCTRL** indicators should be **on**: 

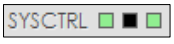
NOTE: When the project's **Virtual Controller is already pre-assigned**, **it does not need to be unassigned** before assigning a new physical device to it.

NOTE: Working in **online mode**, changing the System Controller assignment will automatically update all settings in the project with those contained in the new assigned physical device, overwriting the values of all parameters and replacing the rest of the devices in the project. This would be equivalent to performing an import of the Controller device selected for assignment.

Working in **offline mode**, the **Virtual Controller** in the project will be configured with the **IP address of the physical device**.

c. Unassign a Controller

In the "**Search Devices**" tool window, after selecting the **Project Controller** in the "**System Devices**" panel and the physical device it is linked to in the "**Search Devices**" panel, clicking "**Unassign**", the physical controller will be unassigned from the project.

The 3 indicators in **SYSCTRL** will appear like this: 

. This indicates that there is no physical computer assigned to the current project controller, but a physical computer with the same IP address is reachable on the local network.

In case the application is in **online mode**, it will automatically switch to **offline mode**. After unassigning the Controller, it will not be possible to export the system configuration, for this you will have to reassign the Virtual Controller with a physical device.

After unassigning, it will also not be possible to import from the "**Tools**" menu in the main window.

3.4.2. Assign an Extension

The same procedures are followed for the assignment of **Extension** devices as with the **System Controller**.

An **Extension** device added to the project from the **"Discovered Devices"** panel of the **"Search Devices" tool** will be automatically assigned.

Assigning a Virtual Extension device to a physical device will cause the former to be configured in the project with the IP address of the latter.

For assignment to be possible, the project's virtual device and physical device must belong to the same NEO Extension model.

> **NOTE:** If the assignment is done in **online mode**, all the configuration of the assigned Extension device will be automatically updated in the project with the values of the physical device.

3.5. Link a System. Offline and Online Modes

NEO Configurator allows you to link the virtual system represented in the project with a physical system in operation accessible on the local network, in this way the configuration parameters will be synchronized on both sides. Based on this, the application offers two working modes:

- **Offline Mode: Unlinked** system. Changes made to the system configuration will only be backed up locally in the project within the NEO Configurator. For the configuration to be applied to physical devices, a system export will have to be performed.
- **Online Mode: Linked** system. Changes made to the system configuration will be backed up both locally in the project and remotely on the **Main Controller** and **Extensions** physical devices, automatically staying in sync on both sides. This means that any modification to the configuration made externally to NEO Configurator will be reflected in the same way in the local project. This can occur if modifications are made to the system through the touchscreen of the NEO System Controller device or by using other applications that connect to the Controller or NEO Extension devices that are part of the system

These changes, however, will not be kept in sync with the **Backup Controller**. To update its configuration, it will be necessary to **export** the project again from **offline mode.**

In **online mode**:

- The panel with the system view will be displayed with a **light green** background**.**
- If at any point the connection to the NEO Controller device is lost, the background color of the panel will change to **light gray.**
- The **SYSLINK** indicator will appear green in the status bar.
- The **SYSDATA, EMG**, **DIS, FLT**, **EXPORTING** and **MSGUPLOAD** indicators can be alternated in status depending on the state of the physical system and the configuration operations carried out from the application.

In **offline mode**:

- The panel with the system view will be displayed with a **white** background.
- The **SYSLINK, SYSDATA, EMG, DIS, FLT, EXPORTING,** and **MSGUPLOAD** flags will appear muted in the status bar.

The status bar indicators are described in detail in *2.3.8. Status Bar*.

It should be noted that some configuration, maintenance or monitoring operations can only be carried out by working in online mode, such as uploading audio messages to the System Controller or calibrating and monitoring the speaker lines of each NEO device.

There are two ways to link the current NEO Configurator project to a physical system:

- **Import System:** This way, the configuration of the devices, Controller and Extensions will be downloaded into the current NEO Configurator project. This also means that, along with updating the system configuration parameters, devices can be deleted or new ones added to the project. In short, the previous configuration contained in the project will be overwritten.

- **Export System:** In this way, the system configuration contained in the NEO Configurator project will be transmitted to the system devices, Controller and Extensions, thus being configured as established in the project.

The choice of one way or another will be determined by the **configuration**, **monitoring** or **maintenance** tasks to be carried out.

Most of the system configuration parameters are stored in the NEO Controller, but also the NEO Extension contains a significant portion of its own configuration. It is therefore essential that, when linking a system by importing or exporting its configuration, all NEO devices that are or will be part of the system are accessible on the local network. Otherwise, it will not be possible to get a true picture of the physical system when importing, nor will it be possible to perform a full system configuration when exporting.

> **NOTE:** When performing both an **import** and an **export**, the application will check at the beginning of the process the current date and time of the NEO System Controller device. If a difference of more than **60 seconds** is detected from the date and time of the computer where NEO Configurator is running, the software will request confirmation to update the Controller with these values.

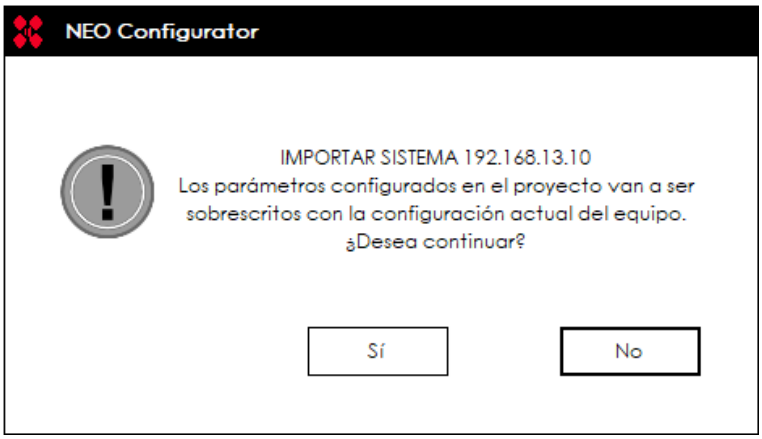
3.5.1. Import a System

System Import is the procedure by which **the current configuration** of a physical LDA NEO system is **downloaded** to the project currently open in NEO Configurator.

There are two ways to import an LDA NEO system:

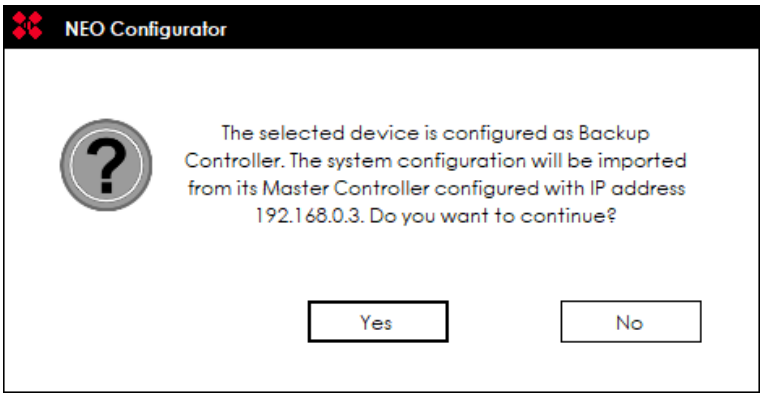
- From the **main menu** of the application, select the **"Import System"** option from the **"Tools"** menu. In this way, you must have a project open in which there is already a **NEO Controller device assigned to a physical device**, from which the system configuration will be imported.
- From the **"Search Devices"** tool window, which will allow us to import the configuration of any NEO Controller device accessible on the local network, **replacing the Controller included in the current project** and automatically assigning the device with the current project. You can import directly with a blank project, without adding or assigning a Virtual Controller beforehand.

In any case, before starting the import process, a message will be displayed warning that all the configuration of the current project will be lost, being overwritten by the configuration imported from the physical devices.



Clicking on **"Yes"** you will proceed with the **Import**.

In case the import is made from a **Backup Controller** on **NEO+ systems** through the "**Search Devices**" window, a message will be displayed indicating that the system configuration will be imported from your Main Controller.



As long as there is a connection with the NEO Controller device, the system in the current project and the physical system will be linked, leaving the application working in **online mode.**

In view of **"System Devices"** an indicator will appear green alongside the linked equipment in case of a correct and smooth connection. This indicator may show other colors depending on the device and the status of connection with it. This is explained in detail in *4.1. System* Devices

The Import can also be done from the **"Search Devices"** tool:

- Select in the **"Search Devices"** panel a NEO Controller device from the list of devices detected on the local network.
- Click on the **"Import System"** button.

In this way, a working physical system can be imported:

- To a **blank project**. This will add the new System Controller and all additional devices that are part of it to the project.
- To a project where a **NEO Controller** and other possible additional equipment already exists. The Project System Controller will be replaced by the device selected for import, as well as the rest of the devices in the project, which will be replaced by the devices belonging to the online system.

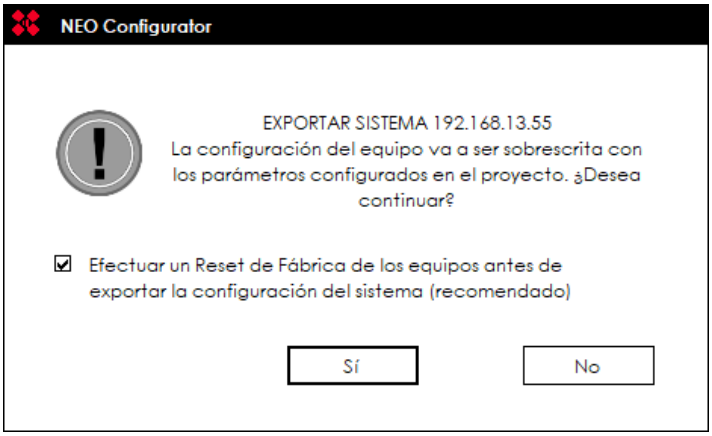
NOTE: It will not be possible to Import configuration from a system where devices have unsupported firmware versions. See *1.1. LDA NEO firmware support*

3.5.2. Export a System

System Export consists of **transmitting the configuration** of the current NEO Configurator project to the physical devices.

To be able to Export a system, the System Controller must have been assigned to a physical device (See *3.4.1. Assign a System Controller*).

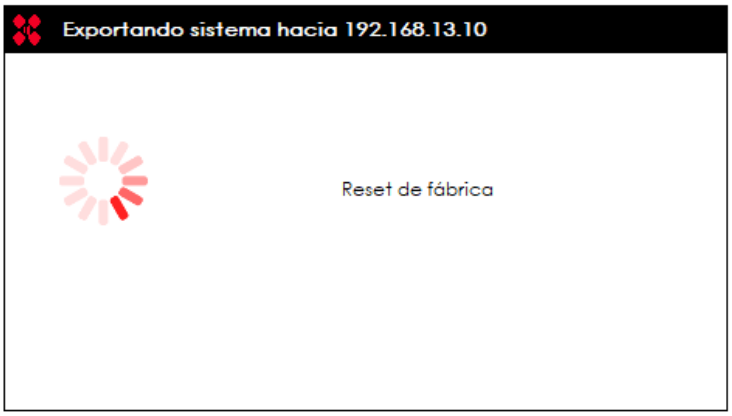
- Within the "**Tools**" menu, select "**Export System**".
- A message will be displayed warning that the physical system configuration will be lost, being overwritten by the current NEO Configurator project configuration:



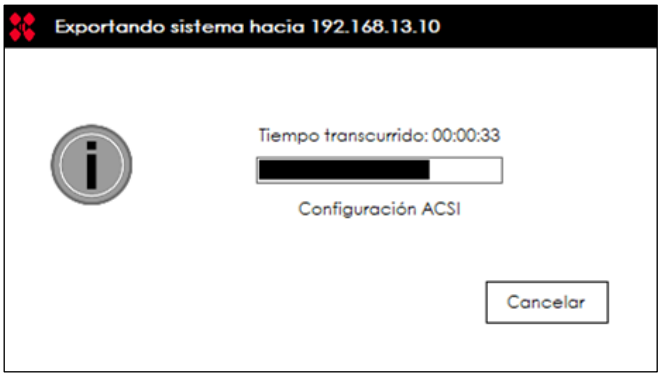
By default, the Export will perform a **factory reset** of NEO devices before transmitting the project configuration. In this dialog box, you can disable the initial factory reset. To do this, you must uncheck the checkbox that is shown and that will be marked by default. The factory reset of the devices is recommended to start the export on a clean system, with factory parameters and initial states. The factory reset is performed while preserving the network configuration of the devices.

- Click "**Yes**" to continue or "**No**" to cancel the Export.
- Before proceeding with the export, the following checks will be carried out:
  - There is a connection with all NEO devices in the system. If there is no connection to any of them, the application will request confirmation to continue with the Export. It should be noted that, if you continue, the System configuration may be incomplete if the connection to all devices is not restored.
  - The firmware version of the NEO Controller and Extensions devices is compatible with the present version of the application (See *1.1. LDA NEO firmware support*). In this case, it will not be possible to continue.
  - The firmware version of the NEO Controller and Extensions devices is the same. In this case it will not be possible to continue either.
- It will also check if the firmware version of the NEO devices is higher than expected for this version of the application. If so, there is the possibility of cancelling or continuing with the export. To be sure of what to do, it is recommended to visit the Support section of the *LDA Audio Tech* website to consult the firmware version notes of the devices or check if there is a new version of NEO Configurator.

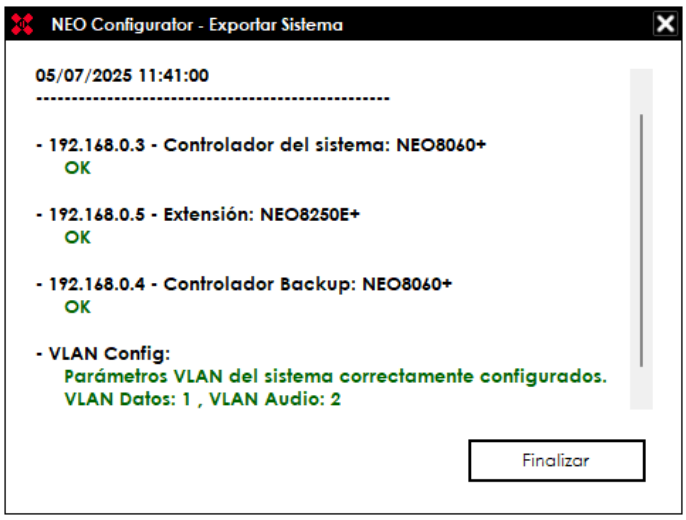
- Continuing with the export, if it was not previously disabled, the factory reset will be performed to the NEO Controller and NEO Extension devices.



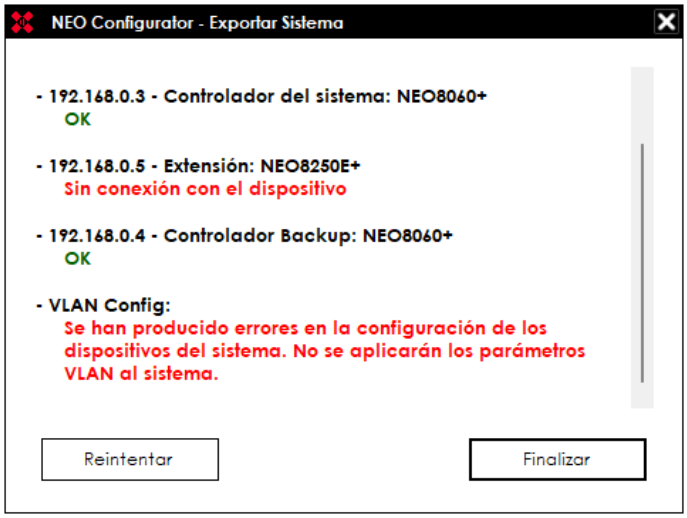
- The process of Exporting the system configuration to all NEO devices sequentially begins, starting with the System Controller. Setup process progress bars will be displayed successively for each device.



- At the end of the Export process, a results window will be displayed. If the process **is completed successfully**, the window will look something like this:



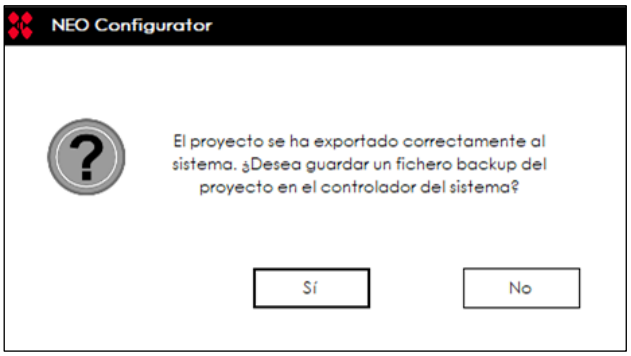
- If during the Export there is an **error** or the disconnection of a NEO device, an indication will be displayed in the results report window at the end of the process, detailing the errors produced. This window gives the option to finish immediately by clicking "**Finish**" or to retry the Export by clicking "**Retry**".



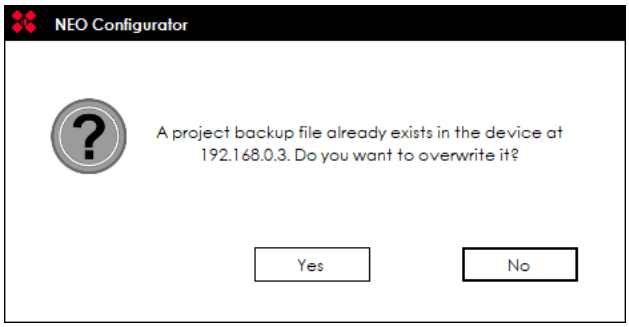
If a failed export is retried, it will only be performed on those devices that failed during the previous export attempt. Export retries will not perform a factory reset of the devices.

If you stop the export process by selecting the "Finish" option after a failed export, you should be aware that the physical system will not have been correctly configured according to the parameters set in the NEO Configurator project.

- In case the export process has been completed **successfully**, the application will ask if you want to save a **backup copy** of the project file on the SD memory card of the System Controller. It is only possible to save a single backup, so in case there is already a backup saved on the device, the software will request confirmation to replace it.

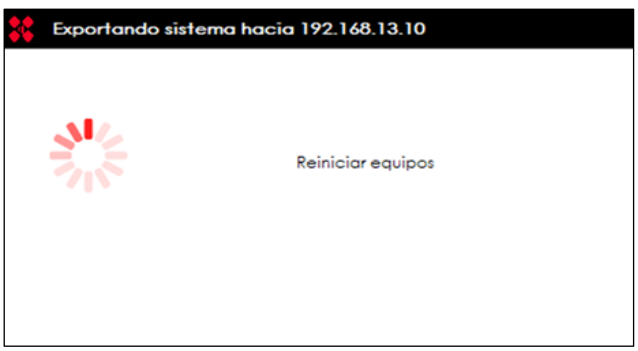


If the Controller already has a backup saved, a warning will appear and ask if you want to overwrite.



In the case of a **NEO+ system** with a **Backup Controller**, these same messages will be repeated to save a backup copy in the Backup Controller.

- If errors occur during the export and it is finished, the software will request confirmation to stay in online mode, with the warning that configuration parameters that have not been successfully exported to the physical devices may be modified in the project.
- If the export process has not been stopped or canceled in any previous step, a software restart of the NEO Controller and Extensions will be performed, thus the system will start operating from an idle state with the **new configuration**.



- The **NEO Configurator project** and the **physical system** will be **linked**, with the application working in **online mode**.

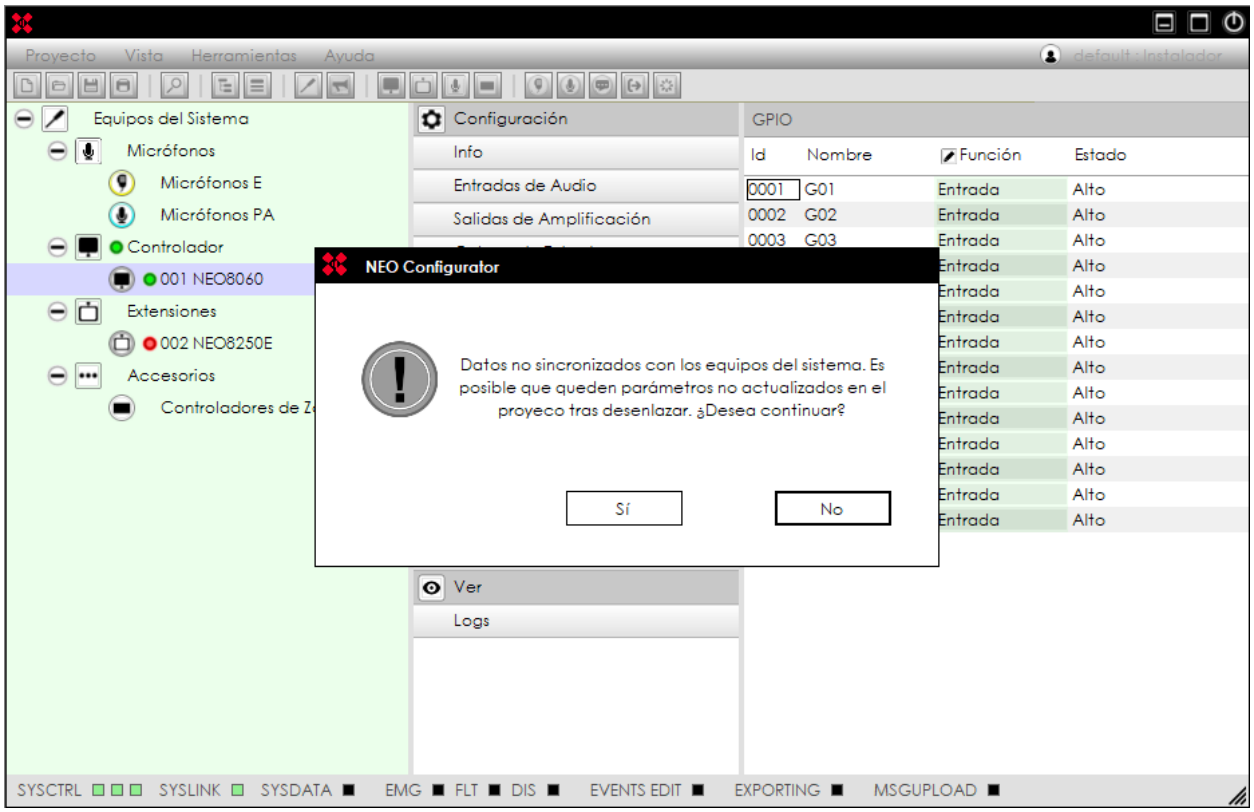
The export process can also be done from the **"Search Devices"** tool window, clicking on the **"Export System" button** in the "**System Devices**" panel.

> **NOTE:** If the LDA NEO system has its general Emergency condition active, it will not be possible to export a NEO Configurator project.

3.5.3. Unlink a System

To work in **offline mode** after importing or exporting a project, you will have to select the "**Unlink system**" entry in the "**Tools**" menu.

In the event that the **SYSDATA** indicator in the status bar is **turned off** before going into **offline mode**, either due to lack of data synchronized with the NEO devices (Controller or Extensions) or due to disconnection with any of them, the software will display a warning, requesting confirmation to continue with the active connection with the devices or not.



After **unlinking** the System, the application will be working in **offline mode**. Any changes to the system configuration will be reflected only locally in the NEO Configurator project.

For any modifications made in offline mode to be applied to the assigned physical devices, a System Export will need to be performed.

4. SYSTEM CONFIGURATION

The different sections of this chapter will provide exhaustive details of the operating parameters of the system and the devices that compose it, as well as the instructions for their configuration.

In **Offline mode**, any configuration changes will only be reflected in the project and will not be applied to the physical system until the corresponding Export process is performed. The detailed steps on how to carry out this operation are explained in *3.5.2. Export a System*.

In **online mode**, the configuration changes made will be reflected both in the project and in the physical system simultaneously. In addition, any external modifications made to the physical system via a path other than NEO Configurator will automatically update the corresponding values in the current project. These modifications may be made using the System Controller's touchscreen or through other software connected to the system devices.

4.1. System Devices

The **System Devices** view shows in its tree all the devices incorporated into the project and that conform an **LDA NEO system**. The devices are classified into 4 categories:

- **ACSI devices:** These are the emergency microphones (VA), and general public address (PA) connected to the ACSI bus of the System Controller.
  - VA models: **VAP1**, **VAP1FES**
  - PA Models: **MPS8Z, MPS8Z+**
- **Controller:** There will only be one in the system.
  - Models: **NEO8060, NEO8060+**
- **Extensions:** Allow you to expand the system by adding additional amplification outputs with their respective speaker lines, as well as additional features depending on the model.
  - Models: **NEO8250E, NEO4500E, NEO4250E, NEO4500LE, NEO8250E+, NEO4500E+, NEO4250E+, NEO4500LE+,**
- **Accessories**:
  - **PA Zone Controllers:**
    - Models: **VCC-64**

NOTE: The NEO8060 controller can only be extended with Extension models from the classic series. Similarly, NEO8060+ can only expand the system with Extension models from the plus series.

In the view nodes corresponding to the devices that conform the system, the numeric prefix that precedes the model name has different meanings depending on its main category:

- **Controller and Extensions:** FlexNet identifier of the device. The **System Controller** will always have identifier **1**. For **Extensions** it will be a value **from 2 to 128**. This identifier is automatically assigned and will always take consecutive values from the Controller identifier, automatically adjusting as devices are added or removed from the system.
- **ACSI Devices:** This identifier corresponds to the **address** assigned to the device in the **ACSI bus**. You will be able to take values **from 1 to 8** for **Version 1** of the ACSI protocol and **from 1 to 32** for **Version 2**. (See *4.1.4. n. Controller: Advanced*)
- **PA Zone Controllers:** It is the **address** physics configured for the device in the **serial port PA Integration** Controller. It will be a value **from 0 to 7** (See *4.1.6. Accessories: VCC-64 PA Zone Controllers*)

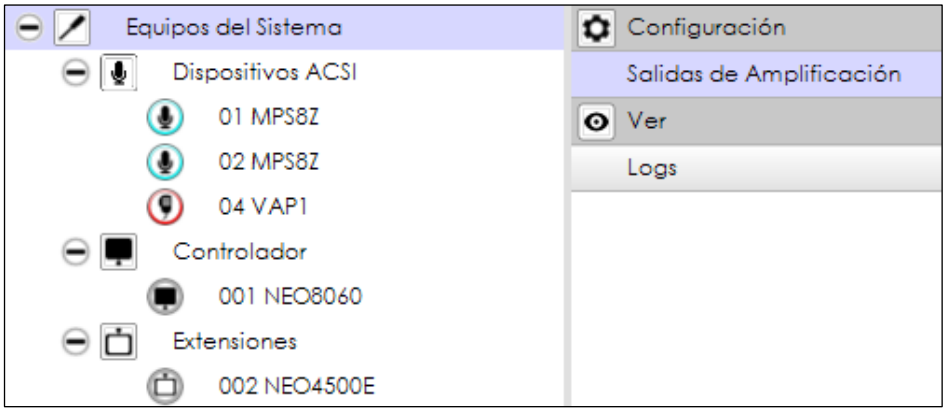
In addition, when working in **online mode**, the following indicators may appear next to the node of each team and the categories that group them:

- **Green** :
  - Next to a device node**,** it indicates that **there is a connection** to it.
  - Next to the node of a device **category**, indicates that **there is a connection to all devices** in that group. If there is no connection to any of them, or some other type of incident occurs, no indicator will be displayed on that node.
- **Red** :
  - Next to a device node, it indicates that **there is no connection to the device**.
  - If it is an **ACSI (microphone)** device, it indicates that **there is no physical device** connected to the ACSI bus of the Controller with the same ACSI address as the one configured in the project.
- **Yellow** :
  - Next to an **ACSI Extension** or **Microphone** it means that the model of the device in the project **does not match** the model of the physical device with the same IP address on the local network or with the same address on the ACSI bus.
- **Grey**
  - It will appear next to **Extensions** indicating that the physical device is currently linked to a System Controller **other than** the one in our project in NEO Configurator.
  - Next to a **Controller** indicates that the backup configuration indicated in the project does not correspond to the configuration saved in the Main Controller

The **VCC-64 PA Zone Controllers do not display any indicators** as it is not possible to actively determine their connection to the PA integration serial port.

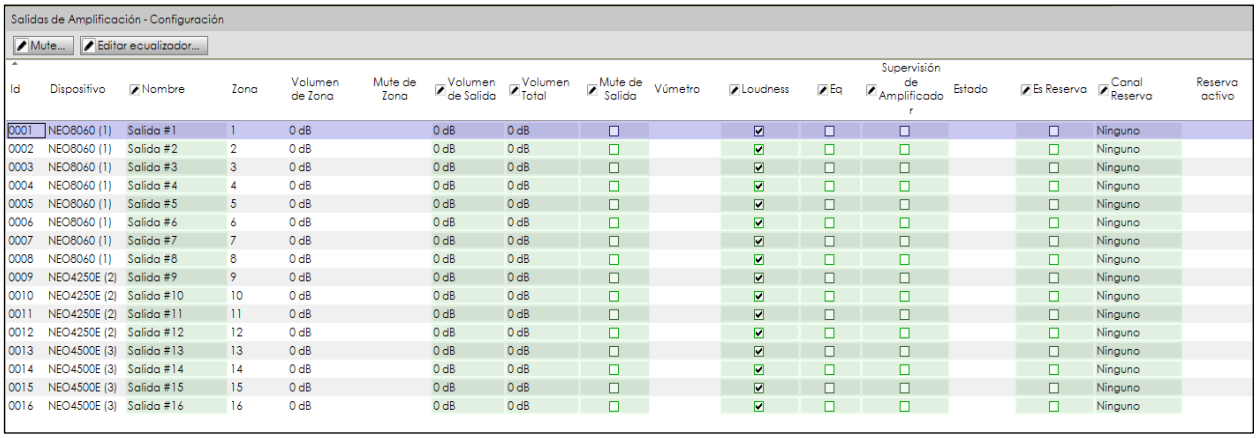
4.1.1. General Settings

Selecting The Root Node of the System Devices view, we have the following Selection filters:



a. Amplification Outputs

Selecting the "**Power Amplification Outputs**" configuration filter, the main configuration panel will show us all the amplification outputs of the system:


Salidas de Amplificación - Configuración

Mute... | Editar ecualizador...

Id	Dispositivo	Nombre	Zona	Volumen de Zona	Mute de Zona	Volumen de Salida	Volumen Total	Mute de Salida	Vúmetro	Loudness	Eq	Supervisión de Amplificador	Estado	Es Reserva	Canal Reserva	Reserva activo
0001	NEO8060 (1)	Salida #1	1	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0002	NEO8060 (1)	Salida #2	2	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0003	NEO8060 (1)	Salida #3	3	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0004	NEO8060 (1)	Salida #4	4	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0005	NEO8060 (1)	Salida #5	5	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0006	NEO8060 (1)	Salida #6	6	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0007	NEO8060 (1)	Salida #7	7	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0008	NEO8060 (1)	Salida #8	8	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0009	NEO4250E (2)	Salida #9	9	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0010	NEO4250E (2)	Salida #10	10	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0011	NEO4250E (2)	Salida #11	11	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0012	NEO4250E (2)	Salida #12	12	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0013	NEO4500E (3)	Salida #13	13	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0014	NEO4500E (3)	Salida #14	14	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0015	NEO4500E (3)	Salida #15	15	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0016	NEO4500E (3)	Salida #16	16	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	

The total number of amplification outputs will depend on the number and model of NEO devices that are part of the system, both **Controller** and **Extensions**.

On NEO+ systems with **Backup Controller**, the first eight outputs correspond to the currently **active controller**, either Main or Backup.

It is recommended to use only the Amplification Outputs of the Extension devices to ensure proper operation, in case of switching to Backup Controller.

The amplification outputs of the **Controller** will always be identified with the values from **1 to 8** (in the **"Id"** column). On the other hand, the identifiers of the outputs associated with the Extensions may change when adding or removing devices from the project, but it should be noted that the final assignment will follow the order of the FlexNet identifiers of the devices. In all cases, these identifiers will always follow **consecutive values** from 1 to the total number of amplification outputs in the system.

It should be noted that, in **online mode**, the editing of some parameters will be disabled on amplification lines belonging to NEO Extension devices with which there is network connection. If the device with which there is no connection is the NEO System Controller, it will not be possible to work in online mode.

The parameters of the amplification lines that cannot be edited in online mode without connection with your **NEO Extension** are:

- Amplifier Supervisor
- Is Spare
- Spare Channel
- EQ Parameters

The **Status** column will display the value **"Failed"** on these outputs.

For a detailed explanation of the various parameters of the amplification lines as well as their possible configuration values, see *4.1.4. c. Controller: Amplification Outputs*

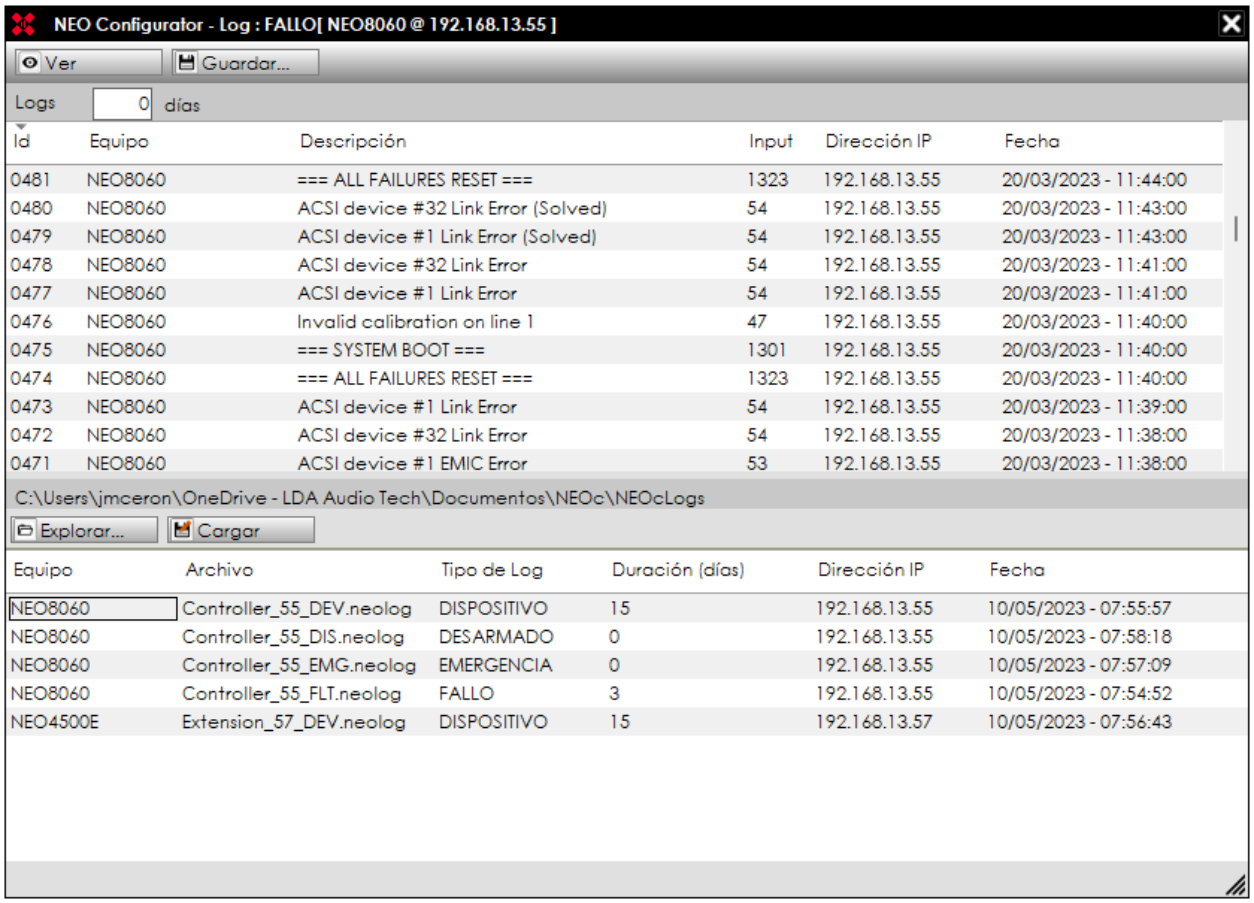
b. Logs

The configuration panel will show a list of all the **logs** that, in **online mode**, we can obtain from the LDA NEO devices that are part of the System:

Description of the contents of the different columns:

- **FlexNet Id:** FlexNet identifier of the NEO Controller or Extension device to which the log belongs.
- **Device:** Name of the device model.
- **Description:** Description of the log type.
- **Log Type:** the possible types of logs that we can download from the system are
  - **Emergency:** Complete emergency log of the System. **Only available on the Controller.**
  - **Fault:** Complete system fault log. **Only available on the Controller**.
  - **Disarmed:** Complete disarmed log of the System. **Only available on the Controller**.
  - **Device:** Detailed error log for each NEO device. **Available in both the Controller and Extensions**. Only users with an **Installer** profile have permission to view this log within the application, other profiles will be able to download it in a file.
- **Duration:** A value that indicates the number of days old, from the current date, of the log entries to be displayed. A value of **0** indicates that the **full log will be displayed**. This value can be edited to get the number of log entries you need.
- The last column shows an **action button** for each log type. Possible actions include:
  - **View:** Displays the log obtained in a pop-up window, with as many entries as determined based on the value specified in the **"Duration"** column.
  - **Download:** Directly downloads the log file from your computer. This action will appear if you do not have permission to view the log on the screen. The file obtained will have the extension **".bin".**

Pressing the **"View"** action button will bring up the log viewer; a pop-up window that will display as many entries as are determined based on the value previously specified in the **"Duration"** field. The title bar of the window indicates the type of log displayed, as well as the device from which it came (**model** and **IP address**).



The top panel displays the requested log entries and the actions available to perform with the contents of the dashboard. The columns in the log entry list provide the following information:

- **Id:** Sequential numeric identifier of the log entry. Determines the age of the downloaded log entries, the higher this value, the more recent the entry.
- **Device:** Model of the equipment from which the log has been obtained.
- **Description:** Descriptive text of the incident referred to by the entry.
- **Input:** Numerical identification code of the incident.
- **IP address:** The IP address of the computer from which the log was obtained.
- **Date:** Date and time set on the device when the log entry was recorded.

The bottom panel will display previously saved log files contained in the specified folder, which is displayed in the panel header. The contents of one of these files can be loaded to be displayed again in the top panel. The meaning of each column in this panel is:

- **Device:** Name of the device model to which the log file belongs.
- **File:** File name.

- **Log Type:** Type of log contained in the file.
- **Duration (days):** Maximum number of days old for log entries contained in the file from the date on which the file was obtained.
- **IP Address:** The IP address of the computer from which the log was obtained.
- **Date:** Date the file was saved.

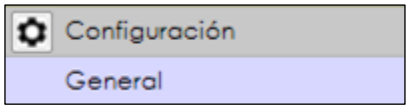
Available actions in the log viewer:

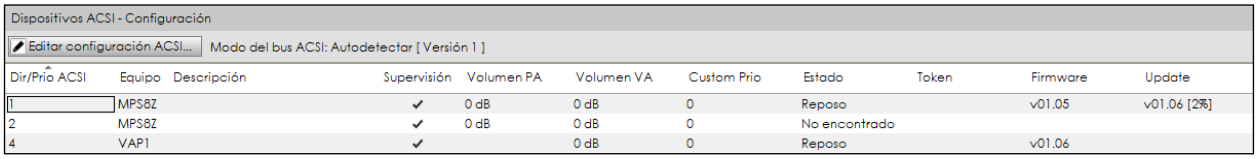
- **View:** Updates the logged entries shown in the top panel based on the number of days specified in the **"days"** text box. With this value equal to 0, the complete log will be displayed.
- **Save:** Saves the current log with the number of entries currently displayed in a file. Logs can be saved with two file formats:
  - **NEO Configurator format:** These are files, with the "**.neolog**" extension by default, which allow them to be loaded again later in the log viewer. This file includes information such as the type of log, model and IP address of the device from which the log was obtained and the date of saving.
  - **Plain text format:** It will save in a plain text file, with the extension "**.txt**" by default, the log entries currently shown in the top panel. A header with relevant information is added to the content of the file, version of the application, the model of the device, its serial number and firmware version or MAC address. This will make it possible to inspect the log obtained with any text processing software.
- **Browse:** Allows you to select a folder in the file system that contains log files in **NEO Configurator** format previously saved with the application. The log files found in the folder will be listed in the bottom panel.
- **Load:** This button will display the contents of the log file selected in the bottom panel in the top panel.

4.1.2. ACSI Devices: PA and VA Microphones

NOTE: This menu will be displayed for systems with a NEO8060 Controller. In case the system Controller is a NEO8060+, see *4.1.3. ACSI & ACSINet*

By selecting the **"ACSI Devices"** node in the **System Devices** view, we will have a single display filter or general configuration. Selecting this filter will present the list of microphones currently configured in the project, both PA and VA devices, in the main configuration panel.





The microphone list in the main settings panel is not editable. Depending on the user profile, the **"Edit ACSI Settings"** button in the toolbar will be enabled. This button will open the ACSI Devices Configuration Editor window. With this editor, you can add microphones to the system or remove them, as well as configure the routing of their zone buttons.

Next to the **"Edit ACSI Configuration"** An informative text will appear indicating the bus's operating mode **ACSI** currently configured. The configuration of the **ACSI bus operating mode** is described in *4.1.4. n. Controller: Advanced*

For each of the microphones listed in the main configuration panel, the following parameters are displayed:

- **ACSI Dir/Prio:** Specified when adding a microphone using the ACSI Configuration Editor. You can take values from 1 to 32. Indicates the **direction of the microphone on the ACSI bus**. It also determines the **default priority for speech granting**, which will be applied when more than one microphone requests to speak over the same zones, **unless** a custom priority is specified with the **"Custom Prio"** parameter. The lower the value, the higher the priority for giving the microphone the floor.
- **Devices:** Specified when adding the microphone. The microphone models available are:
  - **MPS8Z** and **MPS8Z+:** Microphones for **General Public Address** (**PA)**
  - **VAP1:** Emergency microphone (**VA).**
  - **VAP1FES:** Emergency microphone **(VA)** adapted to German regulations.
- **Description:** Displays the device's descriptive text.
- **Supervision:** Indicates whether device supervision is enabled.
- **PA Volume:** Only available for **PA microphones**. This is the volume that will be applied to the microphone's audio signal when it is given the floor with the system in PA (General **Emergency Condition Not Active**) mode.
- **VA Volume:** This is the volume that will be applied to the microphone's audio signal when it is given the word with the system in **VA** (General **Emergency Condition Active**) mode.

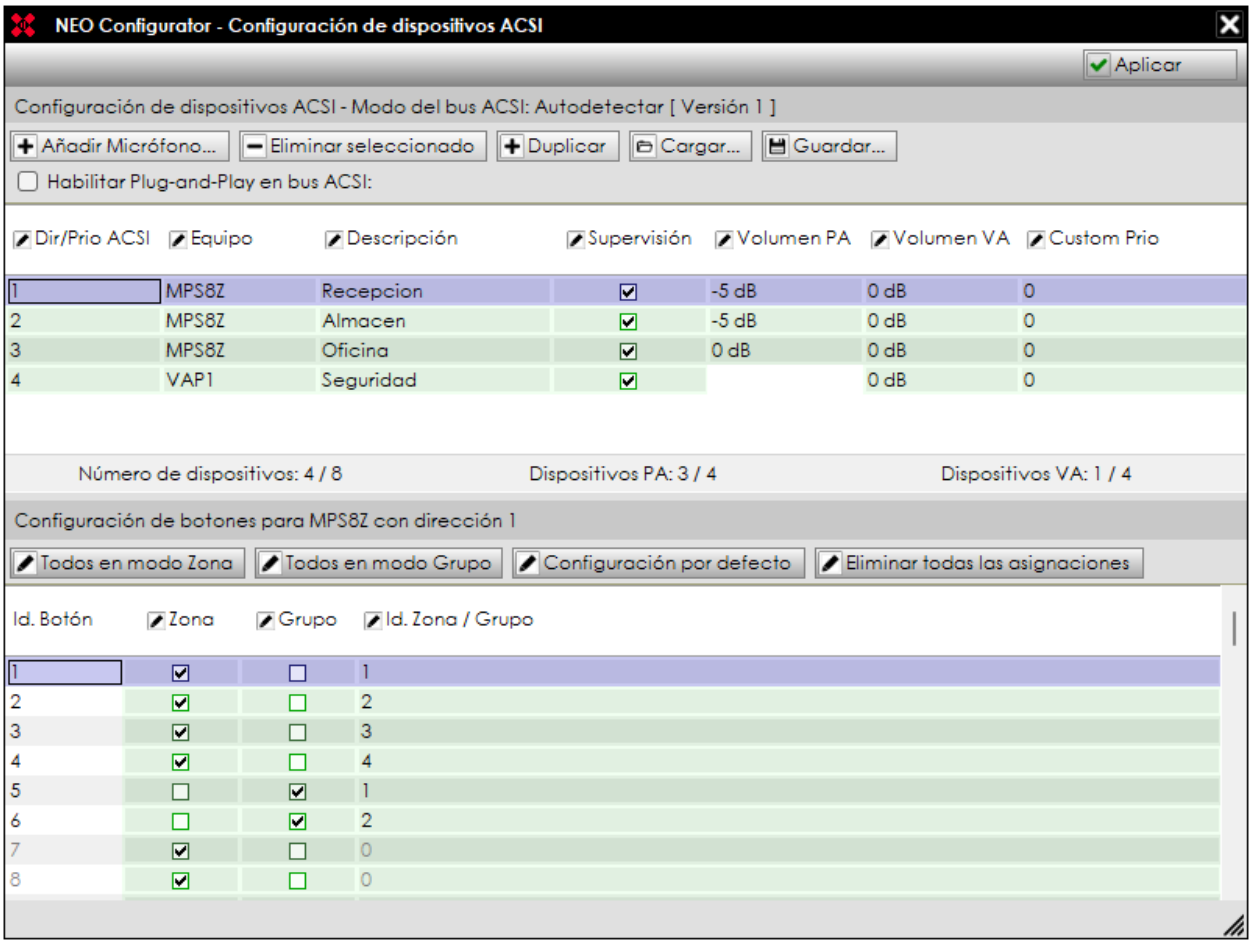
- **Custom Prio:** Allows you to set a custom priority. It supports values **from 0 to 255**. **A value of 0** indicates that the priority set with the parameter **"Dir/Prio ACSI" will continue to be taken into account**. Values **greater than 0** will be taken as the **new priority value** for the device on the ACSI bus, keeping in mind that the lower the value, the higher the priority.
- **State:** In offline mode they will appear blank. In **online mode** it will show one of the following statuses:
  - **Quiescence:** Microphone connected and working correctly.
  - **Missing: No physical device is found** in the ACSI address configured in the project.
  - **Incorrect Type:** The physical device model found at the specified ACSI address is different from the device model configured in the project.
- **Token:** In **online mode** it will show the text **"Talk"** when the microphone has **given the floor**. It will appear blank in any other case. Different microphones can be allowed to speak simultaneously as long as they do not try to speak in the same areas.
- **Firmware:** In online mode it will show the firmware version of the microphone.
- **Update:** In online mode, when there are **physical devices updating their firmware** or waiting for it, it will show which version they are going to be updated to. When the update process is in progress, the progress of the update process will also be indicated.

When the node for a specific microphone is selected in the System Devices view tree, the **"General"** and "**Buttons**" filters are displayed. Selecting the first one will see in the main panel the information described above only for the selected microphone. With the second filter we will see the configuration of the buttons of that microphone.

The parameters for button configuration are described in detail in the following section.

a. ACSI Device Configuration

As mentioned above, clicking on **"Edit ACSI Configuration"** will open edit the ACSI Device Configuration Editor window:



The top "**ACSI Device Configuration**" panel displays the list of microphones configured in the project. The top of this panel also indicates the operating mode configured for the ACSI bus. In online, if the mode set to **Autodetect**, the effective mode automatically configured by the System Controller will be shown in square brackets. The parameters shown for each microphone, which will be editable here, are:

- **ACSI Dir/Prio:** Indicates the default microphone direction and priority on the ACSI bus. It can take values **from 1 to 32**.

  It is important to note that **Version 1** of the ACSI protocol only supports addresses in the range **of 1 to 8**. Therefore, **in no case can a physical device with an address greater than 8 be detected** with the ACSI bus configured in **ACSI Version 1 mode**, even if it has been configured in the project.

  Version 2 of the ACSI protocol does support addresses from 1 to 32.

  For more information on the **ACSI bus operating modes** consult *4.1.4. n. Controller: Advanced*

- **Device:** Specifies the microphone model. The available models are:

  - **MPS8Z** and **MPS8Z+:** PA microphones. These models may be compatible with **Version 1** or **Version 2** of the ACSI protocol depending on their firmware version.
  - **VAP1:** VA microphone. This model may be compatible with **Version 1** or **Version 2** of the ACSI protocol depending on its firmware version.
  - **VAP1FES**: VA microphone. These devices are only compatible with **Version 2** of the ACSI protocol.

- **Description:** Descriptive text of the device. Up to a **maximum of 64** printable ASCII characters is supported.
- **Supervision:** Enables or disables device supervision. If supervision is **enabled**, the System Controller will report a fault if the physical device is not detected on the ACSI bus in the specified direction.
- **PA Volume:** Only available for **PA microphones**. This is the volume that will be applied to the microphone's audio signal when it is given the floor with the system in PA (General **Emergency Condition Not Active**) mode.
- **VA Volume:** This is the volume that will be applied to the microphone's audio signal when it is given the floor with the system in **VA** (General **Emergency Condition Active**) mode.
- **Custom Prio:** Allows you to set a **custom priority**. It supports values **from 0 to 255**. **A value of 0** indicates that the priority set with the parameter **"Dir/Prio ACSI" will continue to be considered**. **Values greater than 0** will be taken as the **new priority value** for the device on the **ACSI** bus, ignoring the priority indicated by the **"Dir/Prio ACSI"** parameter and keeping in mind that as with this, the lower the value, the higher the priority.

b. Add and Remove ACSI Devices

The top panel of the "**ACSI Device Configuration"** window also includes several controls that allow you to perform the following basic configuration actions:

- **Add Microphone:** When you press this button, a drop-down menu will appear that will allow you to choose the microphone model to add: **MPS8Z**, **MPS8Z+**, **VAP1** or **VAP1FES**. After selecting one of the models, the new microphone will be added to the list of devices in the editor window. The parameter **"Dir/Prio ACSI"** will take the **first free value from 1 to 32**.
- **Remove Selected:** By pressing this button, the selected microphones will be removed from the list.
- **Duplicate:** If you select a microphone and then press this button, a dialog will appear in which you will have to indicate the **number of copies** you want to make. After accepting the entered value, the number of copies indicated will be added. All copies will have the same values in their parameters **as the original microphone**, including the **"Dir/Prio ACSI"** parameter, so **this parameter will have to be edited** in the new microphones to eliminate errors due to duplication of ACSI addresses, as well as the rest of the parameters that are necessary.
- **Upload:** Allows you to retrieve ACSI device settings from a file.

- **Save:** Allows you to save the configuration of ACSI devices in a file, including the configuration of buttons for each microphone.

Below these buttons is the **"Enable ACSI Bus Plug-and-Play"** checkbox:

- **Enabled:** Any device connected to the ACSI bus will be able to emit voice messages on the system, even if it has not been configured in the NEO Configurator project. This is the default.
- **Disabled:** Only physical devices referenced in the project settings will be able to broadcast voice messages on the system.

c. ACSI Device Button Configuration

The bottom **"Button Configuration"** panel displays the button settings for the microphone selected in the top panel. To configure the routing of the buttons of an **ACSI** device, you can modify the editable parameters for each of them. The parameters shown for each button are:

- **Button ID:** Not editable. It is the specific identifier for each button that corresponds to the same indicator on the physical device. It will take values **from 1 to 64**, which is the maximum number of buttons possible for an ACSI microphone.
- **Zone:** Editable. Set the button to **address a zone**.
- **Group:** Editable. Set the button to **address a group**.
- **Zone/Group ID:** Indicates the **identifier** of the zone or group that the button will address. It supports values **from 0 to 255**, where **0 indicates that the button will be disabled** (it will not ask for a word to speak for a zone or group of zones).

The **Zone** and **Group** parameters are **mutually exclusive**, one button can only address a zone or a group.

Since there can be zones with identifiers greater than 255, for a button to address any of these zones it will have to be done through a group that includes them. For more information on Groups settings, see *4.2.3. d. Groups*

The bottom panel also includes a series of buttons to perform the following actions:

- **Set All in Zone Mode:** Configures all buttons to address zones.
- **Set All in Group Mode:** Configures all buttons to address groups.
- **Load Default Config:** Sets the default settings for all buttons; zone mode and with zone identifiers **from 1 to 64** equal to their corresponding button identifier.
- **Delete All Id Assignments**: Set **the Zone/Group ID parameter to 0** for all buttons. It can be useful as a starter in the configuration of buttons when the use of all possible buttons on an ACSI device is not required.

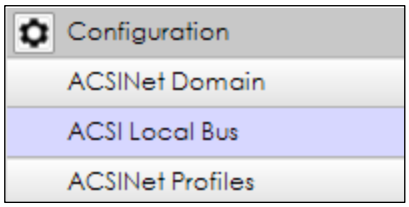
Once you have the desired **ACSI** device configuration, pressing the **"Apply"** button will add it to the project configuration. If there are any errors (duplicate ACSI addresses), the changes will not be allowed to be applied.

In **online mode**, the configuration will be immediately sent to the physical System Controller device. Once the new ACSI configuration is received, it will take a few moments for the computer to apply it, restart the ACSI bus, and rediscover the connected devices.

If you want to **discard the configuration** made, just click on the cross in the upper corner of the window, after which you will be asked to confirm the action before closing the ACSI configuration editor.

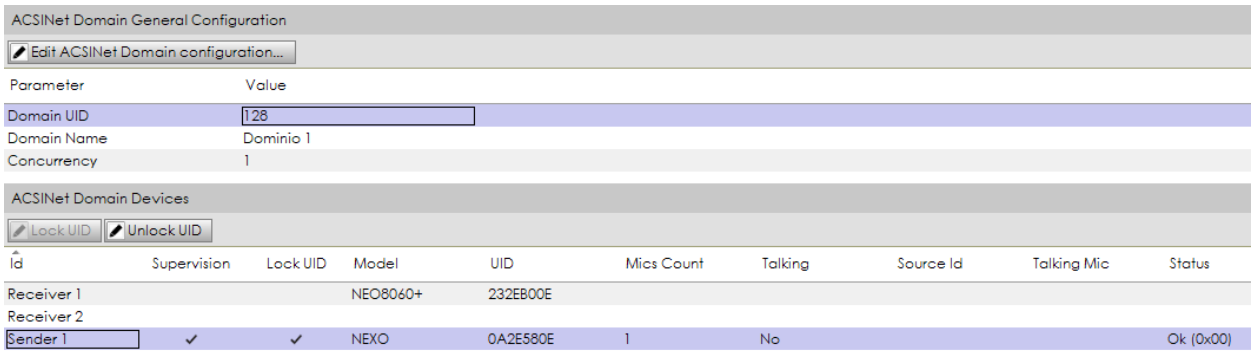
4.1.3. ACSI & ACSINet

By selecting the **"ACSI & ACSINet"** node in the **"System Devices"** view, we will have the following selection filters:



a. ACSINet Domain

This window provides information about the **ACSINet Domain** in which the system is located and the devices that compose it.



In the upper half of the panel is the general information of the Domain:

- **Domain UID:** Domain identifier, its value can be between **1 and 128.**
- **Domain Name:** Identification label of the domain. This name will appear on all senders when they are configured with the associated domain.
- **Concurrency:** The number of senders that can transmit audio over the network on which the domain is located. **Maximum 16.**

The bottom half of the panel shows information about the devices that are part of the domain. These are divided into two depending on their role within the domain:

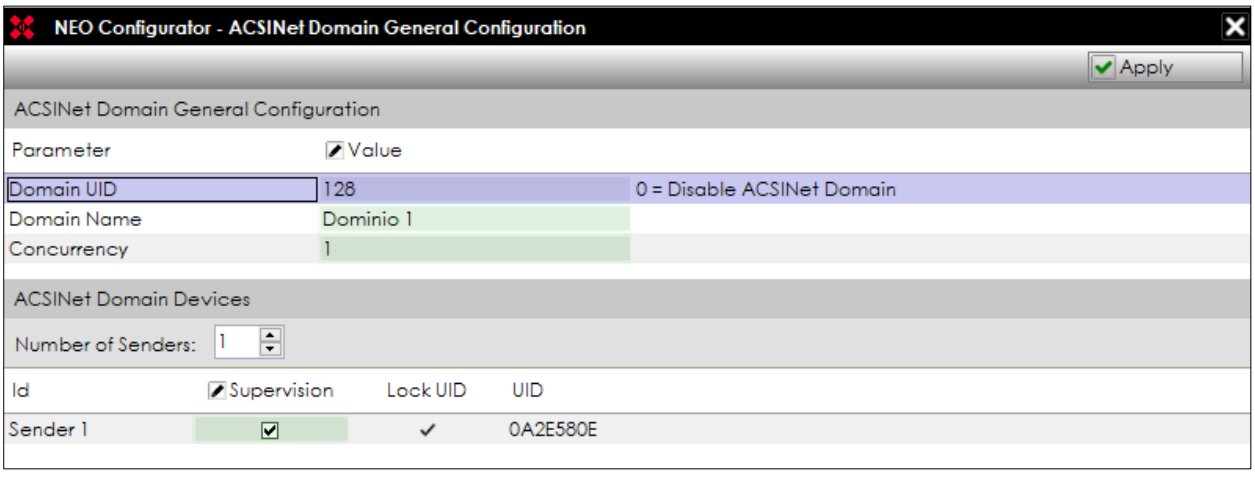
- **Receiver:** Each domain will have **a single receiver**, which is the system controller. It is the one that receives the information from the issuers and manages the domain. There is a possibility that the project will have two receivers when the system has a backup controller, but it will remain without information while it is in a hibernation state.

- **Sender:** for a domain to exist, at least one sender device will be required, otherwise it will remain disabled, even if it has the general parameters configured. Each domain supports up to a maximum of **128 devices.**

For each device, the following parameters are displayed in the table:

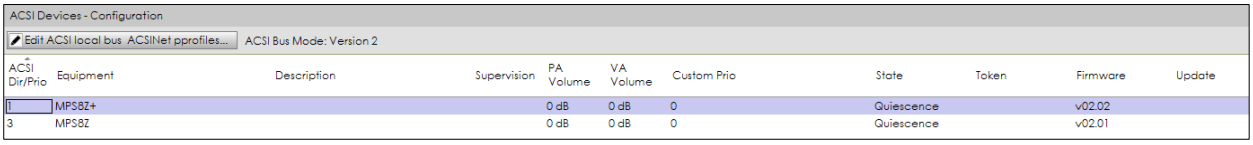
- **ID:** Computer identifier in the ACSINet device table
- **Supervision:** Turn on supervision for this device. Link problems with the device, its faults, and the faults of ACSIv2 microphones connected through it will be reported.
- **Lock UID:** Lock the UID of the device. Provide additional security by preventing any other device from connecting to the system using this identifier.
- **Model:** Model of the device currently connected to the system in this position.
- **UID:** Unique identifier of the device currently connected to the system in this position
- **Mics Count:** Number of ACSIv2 microphones connected to this device.
- **Talking:** indicates if there is a microphone speaking through this sender.
- **Source Id:** Identifier of the source that the device is using.
- **Talking Mic:** Identifier of the ACSIv2 microphone that is speaking through the sender.
- **Status:** Status of the sender (indicates if there is a binding error or some other failure with this sender)

To edit the parameters, the "**Edit ACSINet Domain Configuration**" button opens the following tab:

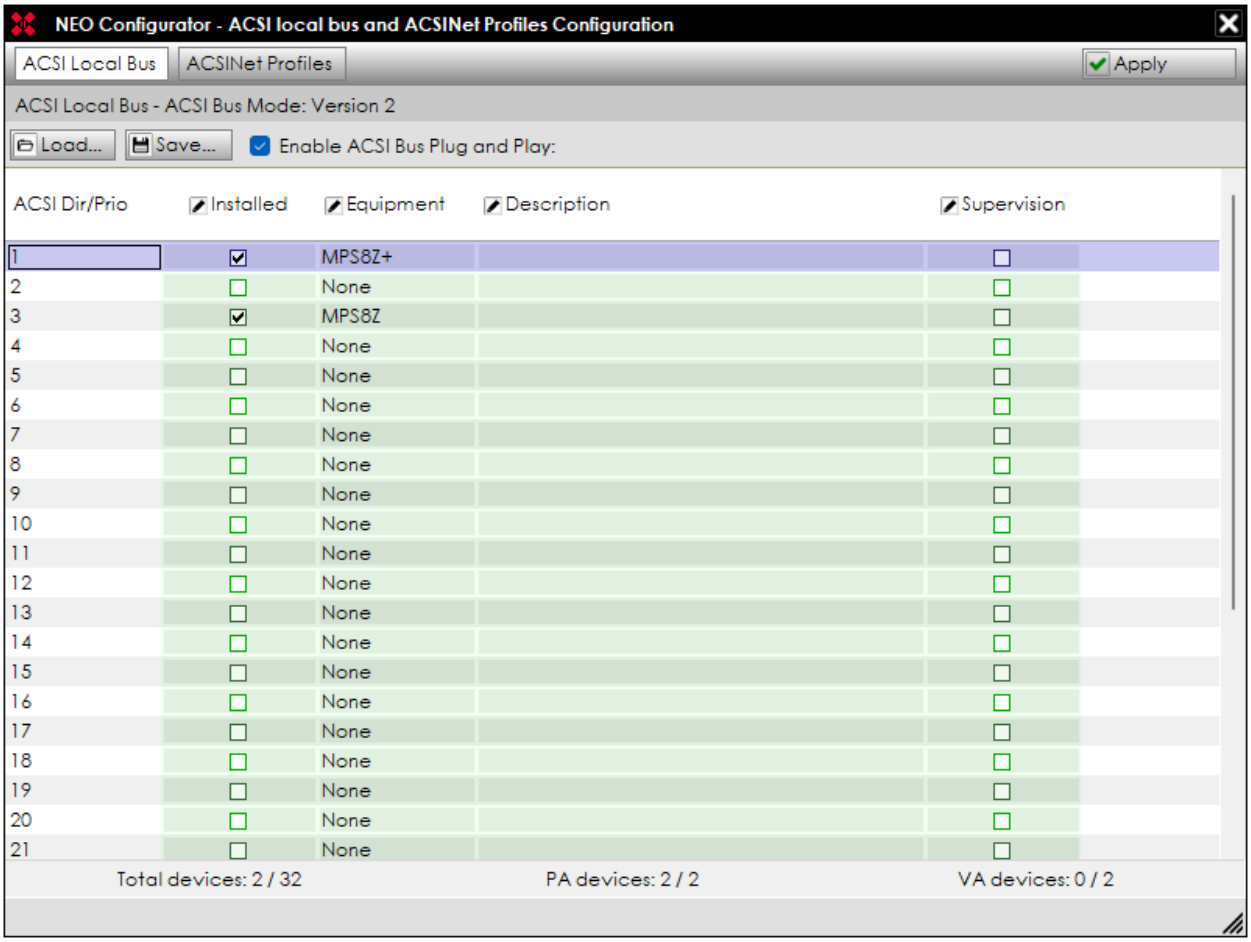


b. ACSI Local Bus

The panel shows the ACSI devices in the system in an identical manner to what has already been defined in the *4.1.2. ACSI Devices: PA and VA Microphones*.



In the panel "**Edit ACSI local bus ACSINet profiles**" a list of all available ACSI addresses is displayed. Next to the "**Edit ACSI Configuration**" an informative text will appear indicating the bus's operating mode **ACSI** currently configured. The configuration of the **ACSI bus operating mode** is described in *4.1.4. n. Controller: Advanced*



At the top of the **ACSI Local Bus** tab are the buttons:

- **Load:** Allows you **to retrieve** ACSI device settings from a file.
- **Save:** Allows you **to save** the configuration of ACSI devices in a file, including the configuration of buttons for each microphone.

Next to these buttons is the "**Enable ACSI Bus Plug and Play**" checkbox:

- **Enabled:** Any device connected to the ACSI bus will be able to emit voice messages on the system, even if it has not been configured in the NEO Configurator project. This is the default.
- **Disabled:** Only physical devices referenced in the project settings will be able to broadcast voice messages on the system.

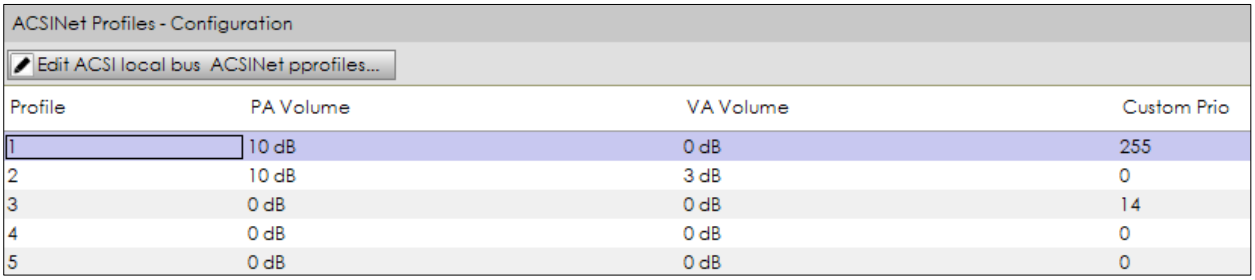
For each **ACSI Dir/Prio** address, the following parameters can be configured.

- **Installed:** Assigns this address to an ACSI device within the bus. By default, the device installed is an MPS8Z+. To remove the device from the system, simply deselect this checkbox.
- **Devices:** When you press this button, a drop-down menu will appear that will allow you to choose the microphone model to add: MPS8Z, MPS8Z+, VAP1 or VAP1FES.
- **Description**: Descriptive text of the device. Up to a maximum of 64 printable ASCII characters is supported.
- **Supervision:** Enables or disables device supervision. If supervision is enabled, the System Controller will report a fault if the physical device is not detected on the ACSI bus in the specified direction.

Press the **"Apply"** button to save the changes made.

c. ACSINet Profiles

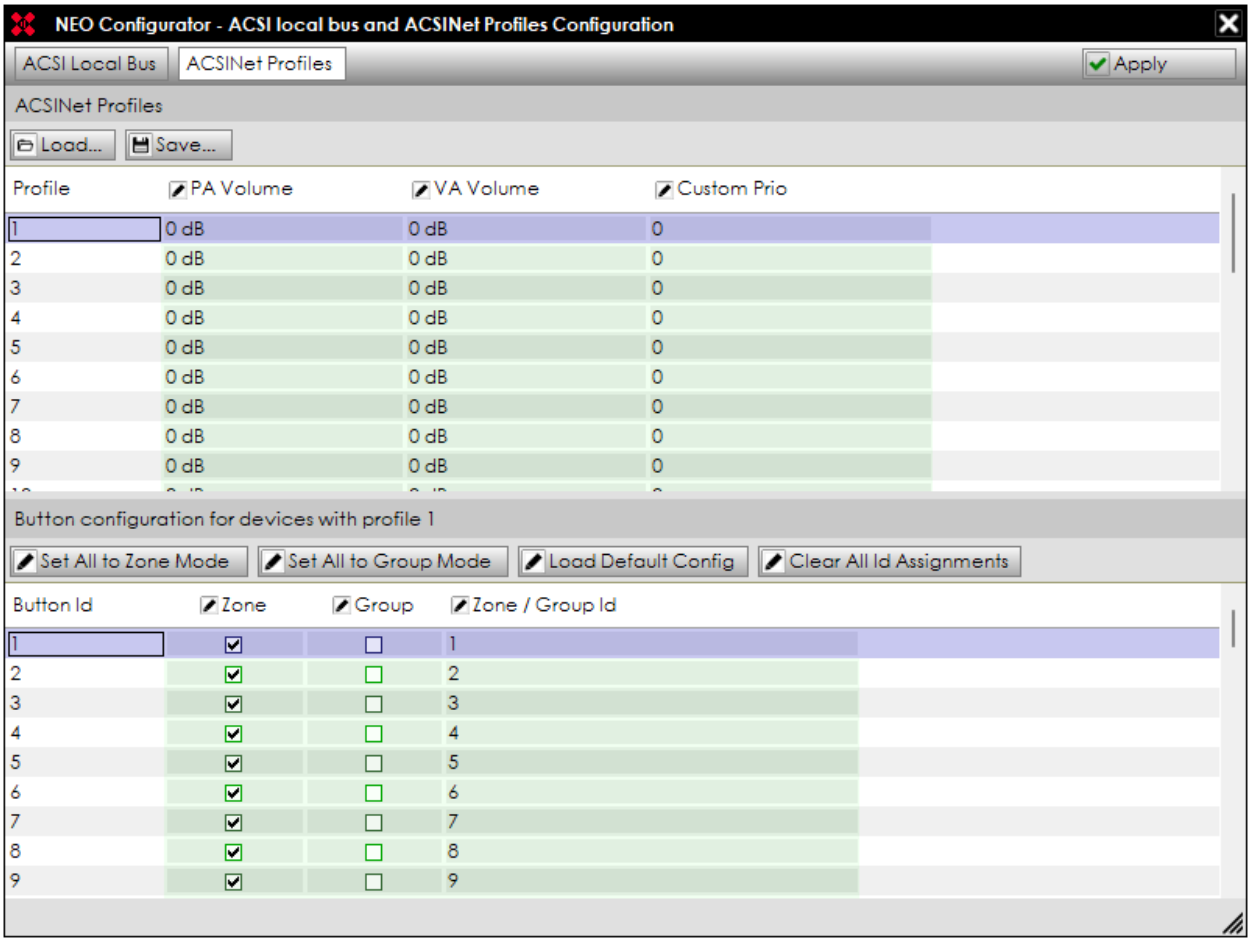
Within the ACSINet protocol it is possible to configure up to 32 ACSI profiles.



For each profile, the table shows the following information:

- **PA Volume:** Only available for **PA microphones**. This is the volume that will be applied to the microphone's audio signal when it is given the floor with the system in PA (**General Emergency Condition Not Active**) mode.
- **VA Volume:** This is the volume that will be applied to the microphone's audio signal when it is given the floor with the system in VA (**General Emergency Condition Active**) mode.
- **Custom Prio:** Allows you to set a **custom priority**. It supports values **from 0 to 255**. **A value of 0** indicates that the priority set with the parameter **" ACSI Dir/Prio"** will continue to be taken into account. Values greater than 0 will be taken as the new priority value for the device on the ACSI bus, ignoring the priority indicated by the **" ACSI Dir/Prio"** parameter and keeping in mind that as with this, the lower the value, the higher the priority.

The "**Edit ACSI local bus ACSINet profiles**" panel displays a list of all available ACSINet profiles. The parameters described above can be edited.

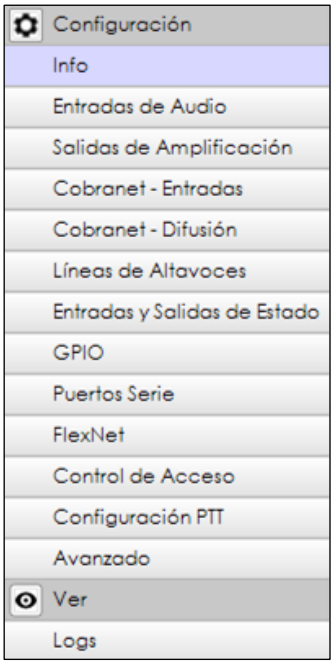


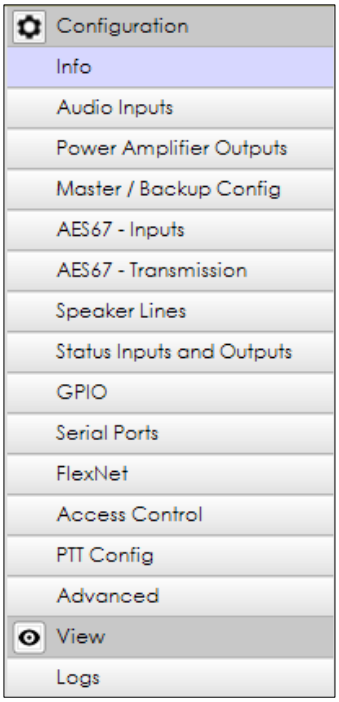
At the top of the **ACSINet Profiles** tab are the "**Load**" and "**Safe" buttons** explained in the previous section.

The bottom panel "**Button Configuration**" shows the button settings for the selected profile in the top panel. To configure the address of the buttons, see the section *4.1.3. c.*

4.1.4. Controller

Selecting the **System Controller** node in the **System Devices** view will display the following selection filters, depending on whether it is a **NEO (Cobranet)** or **NEO+ (AES67) system:**

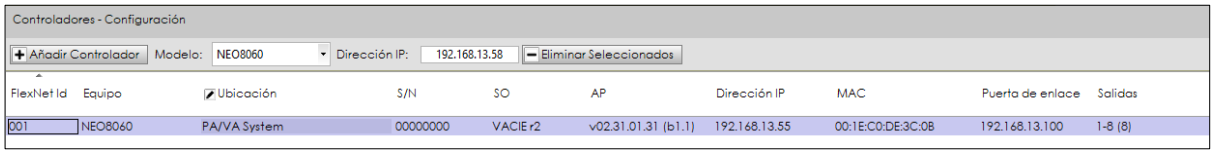




In **NEO+ systems** with **Backup Controller**, most of the configuration filters will be visible for consultation, but it will not be possible to modify them. Later on, the menus that are editable will be specified in each chapter. The **Backup Controller** will be loaded with a **copy of the project** configured in the Main Controller, so it does not need its own configuration.

> **NOTE:** These Configuration filters will be displayed only with user profile **Installer** or **Maintainer**. Except for the configuration filter **Advanced**, only available with profile **Installer**. See *2.4.3. Users*

a. Controller: Info



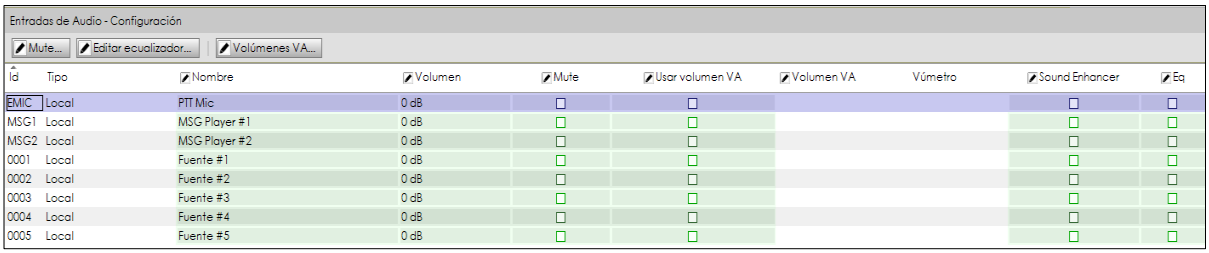
This section shows detailed information about the **System Controller**:

- **FlexNet ID:** Not editable. FlexNet identifier of the computer. The **System Controller** will always have the identifier **1.**
- **Device:** Not editable. Device model; **NEO8060** or **NEO8060+**.

- **Place:** Editable. Descriptive text of the LDA NEO system or its **location**. **Maximum 30** printable ASCII characters.
- **S/N:** Not editable. In online mode, it shows the **serial number** of the physical device.
- **SO:** Not editable. In online mode, it shows the **operating system version** of the physical device.
- **AP:** Not editable. In online mode it shows the **firmware version of** the physical device.
- **IP address:** Not editable. IP address of the device.
- **MAC:** Not editable. In online mode it shows the MAC address of the device.
- **Gateway:** Not editable. In online mode, it displays the gateway configured on the device.
- **Outputs:** Not editable. Indicates the range of identifiers of the amplification outputs of the equipment. The total number of outputs from the computer is shown in parentheses.

The top toolbar displays controls for adding or removing a System Controller. To see how to perform these actions, see *3.3.1. System Controller*

b. Controller: Audio Inputs



Displays **the audio inputs** belonging to the **System Controller**. Audio inputs can be of two types:

- **Local Sources:**
  - **EMIC:** PTT microphone **located** on the front panel of the System Controller.
  - **MSG1 and MSG2:** Internal System Controller pre-recorded message players.
  - **0001 to 0005:** These are the **five physical analog input sources** of the **NEO Controller** located on the back of the device.
- **Remote Sources:**
  - **0009 to 0064:** These are the **Cobranet/AES67 Sources,** depending on the version of the system Controller, configured in the **NEO Controller**, through which audio can be received from other devices on the network.

> **NOTE:** Local source **0005** will be used for ACSI microphone audio transmission **when at least one** ACSI microphone device is connected to the System Controller. Editing the **Volume**, **VA Volume**, **VA Volume,** and **Mute** parameters will be disabled for this source, and routing will be subject to the addressing configured for **ACSI devices**.

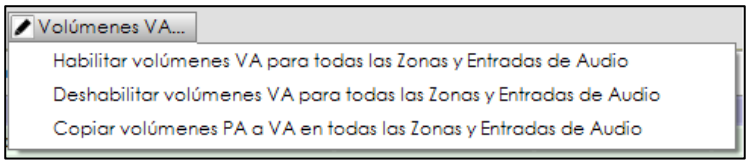
Audio Source Parameters:

- **Id:** This is the internal identifier assigned to the source.
- **Type**: There are three types of audio sources.
  - **Local:** These are the **physical inputs of the Controller**.
  - **Remote:** these are the **Cobranet/AES67** entries configured in the System.
  - **ACSI:** It can only be displayed on **input 0005,** which will indicate the presence of **ACSI microphones** connected to the system whose audio will be transmitted through this local source.
- **Name:** Editable. Descriptive name of the entry. **32 characters** maximum.
- **Volume:** Editable. Input audio volume. It supports values from **-100 dB** to **10 dB**.
- **Use VA Volume:** Editable. Enables a specific volume for the specific input in case the general System Emergency condition is active.
- **VA Volume:** Only editable when the above parameter is enabled. It will be the volume value that the entry will have when the General Emergency Condition is active in the system. It supports values from **-100 dB** to **10 dB**.
- **Mute:** Editable. Allows you **to mute** or not mute an audio input.
- **Vumeter:** Displays the current **signal level** of the audio input, with 0 dB being the maximum level and -100 dB being the minimum. It will only appear in online mode.
- **Sound Enhancer:** Editable. **Sound enhancer**, only applicable to **local sources**, which acts as an audio compressor that improves the ratio between loud and soft sounds. This way, the audio output is more uniform and has less distortion. The final effect is similar to that of an audio normalizer.
- **Eq: Enables or disables** the currently configured **EQ setting** for the input.

The toolbar for audio sources allows you to perform actions on multiple zones simultaneously or apply more specific settings:

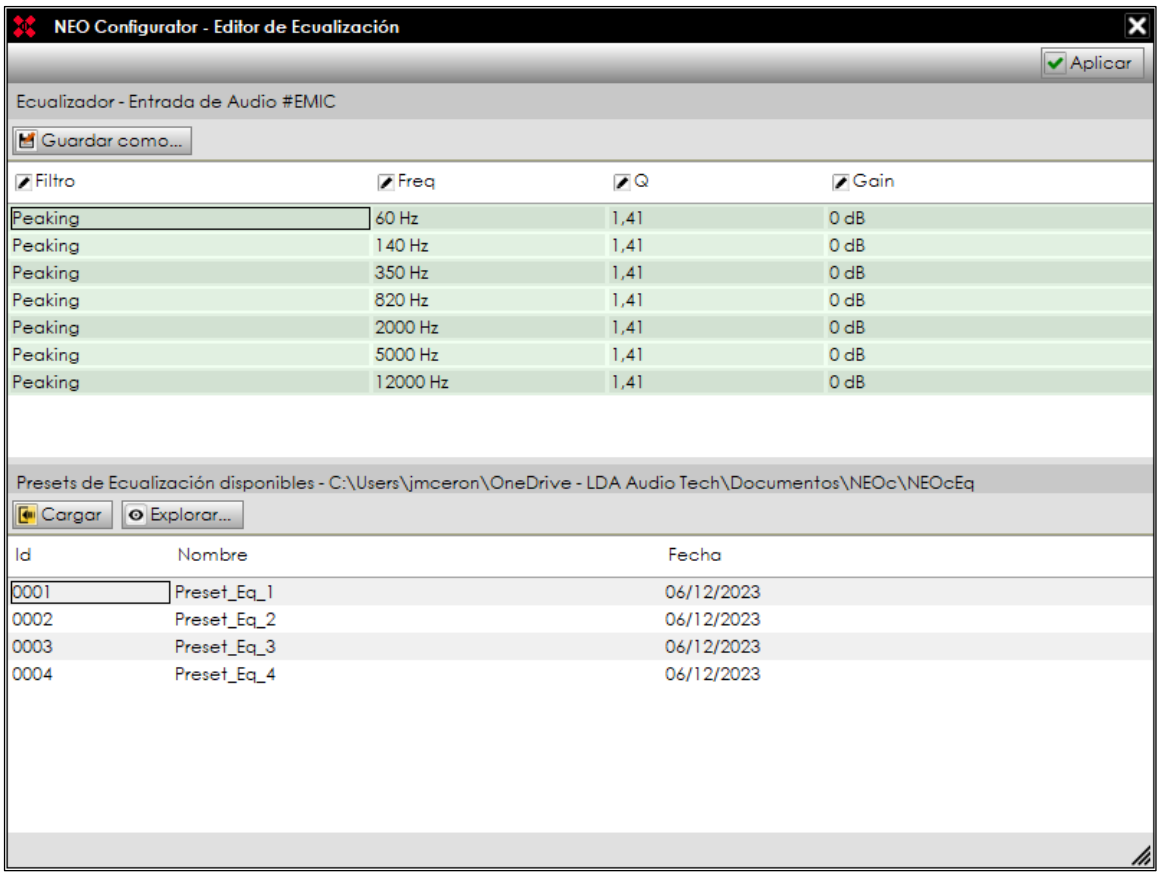
- **Mute:** Allows you to enable or disable Mute on selected entries.

- **VA Volumes: Global control of the VA volume** of sources and zones.



  - **Enable VA Volumes for All Zones and Audio Inputs:** Enables VA volume on all inputs and all zones**.**
  - **Disable VA Volumes for All Zones and Audio Inputs:** Disables the VA volume on all inputs and all zones.
  - **Copy PA Volumes to VA Volumes for All Zones and Audio Inputs:** Copies PA volumes to VA volumes on each input and in each zone that has VA Volume enabled.

- **Edit EQ:** For local system sources only. Opens a window to configure the EQ setting for the selected input:



EQ can be done in 7 bands. For each band the following parameters can be configured:

- **Filter:** Allows you to select one of the following EQ filters,

  None **Peaking** **Low Pass**

  High Pass **Low Shelf** **High Shelf**

  Low Pass Butterworth

  High Pass Butterworth

- **Freq: Center frequency**. It supports values from **3** to **20000 Hz**. It will default to the following values for all 7 bands: **60 Hz**, **140 Hz**, **350 Hz**, **820 Hz**, **2000 Hz**, **5000 Hz,** and **12000 Hz**.
- **Q: Q factor**. It supports values from **0.01** to **16**. It will take the value **1.41** by default.
- **Gain: Gain**. It supports values from **-10** to **10 dB**. By default, it will be **0 dB**.

The equalization settings set in this window can be saved in a file and retrieved later. This management is done using the buttons present in the window:

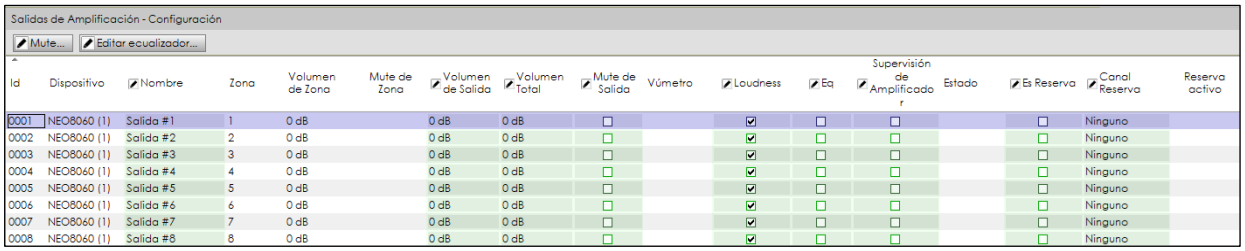
- **Save As**: Save the EQ settings as an EQ preset in a file. This file will have the "**.eq" extension** by default.

- **Browse:** In the bottom panel, it shows all the EQ files or presets contained in the folder that we select in the pop-up window that will be displayed after pressing the button
- **Load:** Loads the EQ settings contained in the EQ file or preset selected in the bottom panel into the edit window.

Once all the parameters of the equalizer have been configured with the desired values, the "**Apply"** button will close the editing window, setting the equalization for the selected input. **The EQ adjustment will be applied only if the audio input has the "Eq" parameter enabled**.

c. Controller: Amplification Outputs

This selection filter displays the amplification outputs of the Controller.


Salidas de Amplificación - Configuración

Mute... | Editar ecualizador...

Id	Dispositivo	Nombre	Zona	Volumen de Zona	Mute de Zona	Volumen de Salida	Volumen Total	Mute de Salida	Vúmetro	Loudness	Eq	Supervisión de Amplificador	Estado	Es Reserva	Canal Reserva	Reserva activo
0001	NEO8060 (1)	Salida #1	1	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0002	NEO8060 (1)	Salida #2	2	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0003	NEO8060 (1)	Salida #3	3	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0004	NEO8060 (1)	Salida #4	4	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0005	NEO8060 (1)	Salida #5	5	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0006	NEO8060 (1)	Salida #6	6	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0007	NEO8060 (1)	Salida #7	7	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	
0008	NEO8060 (1)	Salida #8	8	0 dB		0 dB	0 dB	☐		☑	☐	☐		☐	Ninguno	

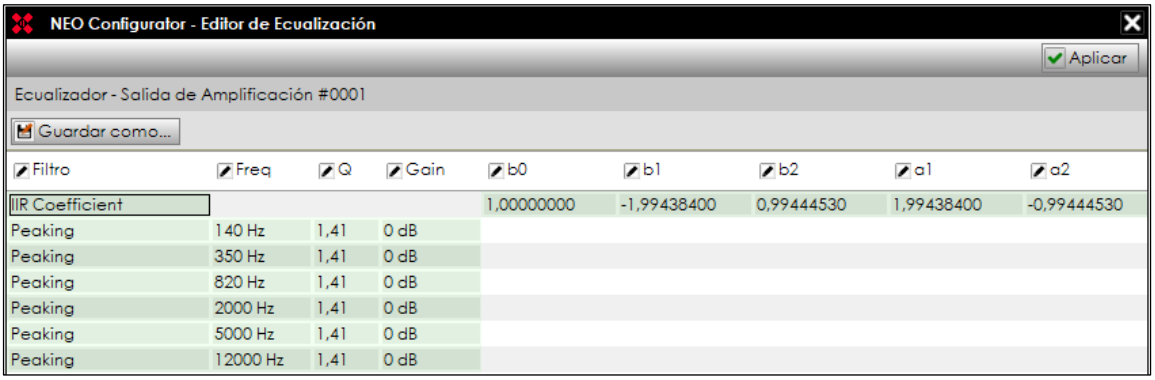
The meaning of the different parameters shown is as follows:

- **Id:** Not editable. **Internal identifier automatically assigned** to each amplification output. The amplification outputs of the Controller will always have identifiers **1** to **8**. Identifiers for outputs belonging to **Extensions may vary** when adding or removing teams from the project. In either case, they will always take **consecutive values from 1 to the total number of amplification outputs** in the system.
- **Device:** Not editable. **Device model** of the device to which the amplification output belongs with the FlexNet identifier of the same in parentheses (**1** for the **Controller**).
- **Name:** Editable. Identifying name for the amplification output. Allows a **maximum of 32** printable ASCII characters.
- **Zone:** Not editable. **Area to which has been assigned** the output. An exit may only belong to one zone, which may have one or more outputs assigned. The assignment of outputs to zones is done in the PA/VA System view. See *4.2.3. b. Assigning amplification outputs to a zone.*
- **Zone Volume:** Not editable. Volume configured for the zone to which the amplification output is assigned. See *4.2.3. a. Zones*
- **Zone mute:** Not editable. Displays the mute status of the zone to which the output is assigned. The zone mute takes precedence over the mute of the amplification outputs assigned to it. See *4.2.3. a. Zones*
- **Output volume:** Editable. If modified, the current value of the **total Volume** of the output will be updated. **It supports values from -100 to 0 dB**, considering that the **resulting Total Volume cannot be above 0 dB or below -100 dB**.

- **Total volume:** Editable. **Effective volume to be applied at output**. It is the **sum of the Zone Volume and the Output Volume**. If modified, the current value of the Output Volume **will be** updated to match the result of the sum of volumes. **It supports values between -100 and 0 dB**, considering that the **resulting Output Volume cannot be above 0 dB or below -100 dB**.
- **Output mute:** Editable. Allows you to enable the mute of the amplification output. The **Zone Mute** will always take precedence over the **Output Mute**. If **Zone Mute** is enabled, the output will always be muted. If **Zone Mute** is not enabled, muting the output will be determined by whether **Output Mute is enabled.**
- **Vumeter:** Not editable. Displays the **signal level of the amplification output**. It can take **values from -100 to 0 dB**. It will only be displayed in **online mode**.
- **Loudness:** Editable. Allows you to enable or disable dynamic equalization to adjust the level of the audio output and achieve a more uniform sound pressure level, compensating for possible oscillations of the input audio source.
- **Eq:** Editable. Enables or disables the **EQ setting** currently set for the output.
- **Amplifier supervision:** Editable. Enables or disables **output amplifier supervision**. When amplifier monitoring is enabled, if the device reports a fault with the output amplifier, you can switch to the backup amplifier if one has been defined for this output. By default, this parameter will be disabled. For installations certified by the EN54-16 standard, it must be enabled.
- **Status:** Not editable. In online mode you can display one of the following values:
  - **OK:** There are no faults related to the amplification output.
  - **FLT:** The system reports a fault related to the amplification output.
- **Spare:** Editable. **Enables or disables** the output so that it can be used as a backup channel by other outputs when the amplifier supervision reports a fault in them. When an output is configured as a backup channel, it will lose its zonal assignment, if any.
- **Spare Channel:** Editable. Allows you to select the spare channel from those outputs that have the **"Is Spare"** parameter enabled. In the event of an amplified channel failure, NEO will automatically switch from the failed amplifier to the backup amplifier to ensure that the audio continues to output.
- **Spare Active:** Not editable. **An output configured as a spare channel** will indicate that it is being used by another channel where the amplification supervision is reporting fault. On an output that is not configured as a spare channel, it will notify that you are using the spare channel that has been configured for it.

The toolbar contains the following actions to be performed on outputs:

- **Mute:** Allows you to **enable or disable** mute for selected outputs.
- **Edit Equalizer:** Opens a window to configure the Equalization of the selected output. Is analogous to the one used to configure the equalization of audio inputs. For outputs, in addition to the EQ filters described for inputs (See *b. Controller: Audio Inputs*), filter is included **IIR Coefficient**, for which instead of the parameters **Freq**, **Q** and **Gain** The parameters are used **b0**, **b1**, **b2**, **A1** and **A2** to specify the filter coefficients.



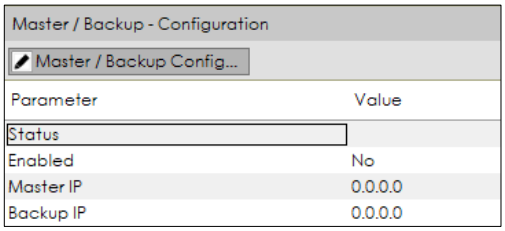
Filtro	Freq	Q	Gain	b0	b1	b2	a1	a2
IIR Coefficient				1,00000000	-1,99438400	0,99444530	1,99438400	-0,99444530
Peaking	140 Hz	1,41	0 dB					
Peaking	350 Hz	1,41	0 dB					
Peaking	820 Hz	1,41	0 dB					
Peaking	2000 Hz	1,41	0 dB					
Peaking	5000 Hz	1,41	0 dB					
Peaking	12000 Hz	1,41	0 dB					

As with audio inputs, the EQ set **will only be applied if the "Eq" parameter is enabled** for output.

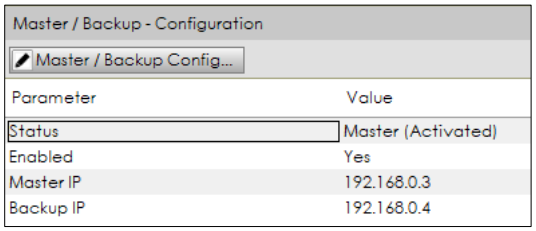
d. Controller: Master/Backup Config

The Master/Backup configuration selection filter will only be available for **NEO+ systems.**

It shows information about the two Controllers that make up the system and their current role.



Parameter	Value
Status	
Enabled	No
Master IP	0.0.0.0
Backup IP	0.0.0.0



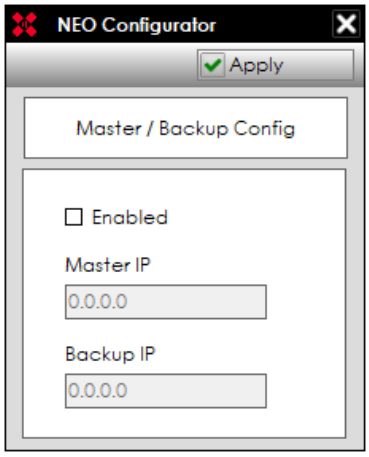
Parameter	Value
Status	Master (Activated)
Enabled	Yes
Master IP	192.168.0.3
Backup IP	192.168.0.4

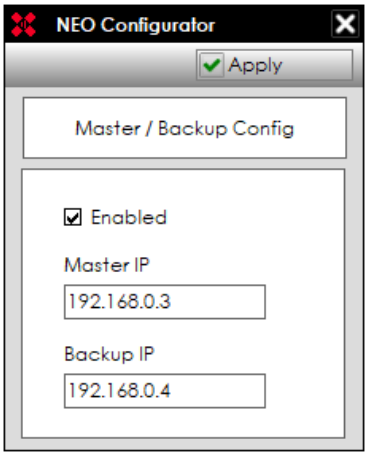
If your system consists of a single Controller, the parameters in this tab will appear unconfigured, as shown in the image on the left.

If the system is configured with a second Controller, these parameters will be **automatically completed** with the values designated for the Main Controller and the Backup Controller, as shown in the image on the right. See *3.3.1. c. Using the "Search Devices" tool* and *3.4.1. Assign a System Controller.*

- **Status**: Shows the role of the controller from which the configuration is being queried, Master or Backup, and its status in parentheses, Active or Hibernating.
- **Enabled**: Indicates whether the system has the Backup feature active. This is automatically activated when you add a Backup Controller to the system. Its value can be Yes, if the Backup function is active, or No, if the Backup function is not active.
- **Master IP**: IP address of the system's Main Controller.
- **Backup IP**: IP address of the system's Backup Controller.

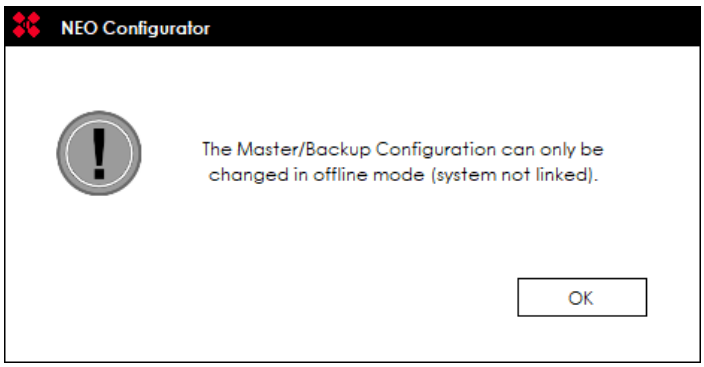
The top button **"Master / Backup config"** opens a new window, where it is possible to manually edit the IP addresses of the Controller with Master or Backup role.



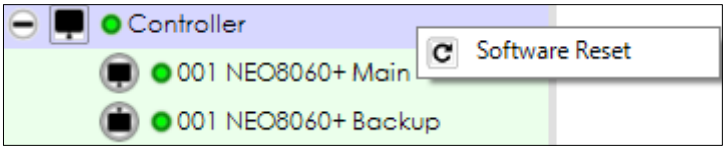


To save the changes, click the "**Apply**" button.

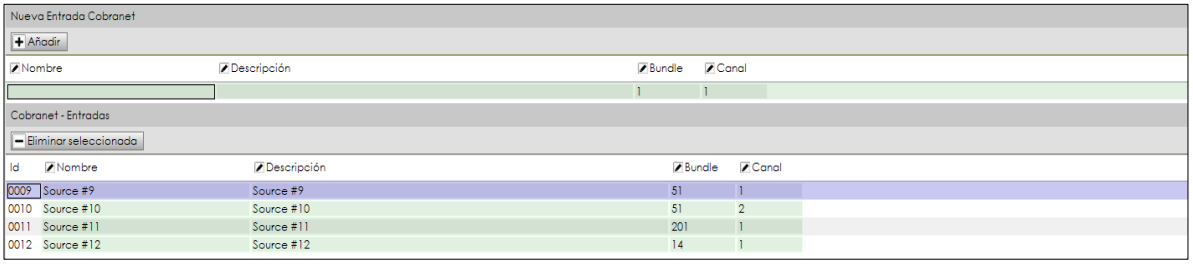
Any modifications to the Master/Backup configuration will be made exclusively in **offline mode**. If you otherwise try to edit in online mode, the following message will appear indicating that it is only possible to modify these parameters with the system not linked.



If the Main Controller is in a state of hibernation, but the system has already been restored to normal operation, a system reset will be necessary. To do this, just right-click on the "**Controller**" node and click on the "**Reset software**" option.



e. Controller: Cobranet/AES76-Inputs



The **Controller** allows you to configure **Cobranet/AES67** audio sources to be added to the system as **remote audio inputs**. It is necessary to know beforehand the **bundle/Stream Id** and the **channel** through which each **Cobranet/AES67 source** broadcasts.

In the top panel **"New Cobranet/AES67 Input"** you will set the configuration parameters for the new **Cobranet/AES67 sources** that you want to add to the system. These parameters are:

- **Name:** Name of the audio input. Maximum of **32 characters**.
- **Description:** Description of the entry. Maximum of **64 characters**.
- **Bundle/Stream Id:** Broadcast bundle of the **Cobranet/AES67** source. You can take **values from 1 to 65535** for **Cobranet** and from **1 to 255** for **AES67**.
- **Channel:** Broadcast channel of the **Cobranet/AES67** source. You can take **values from 1 to 8**.

Once the new input parameters have been configured, clicking **Add** will add the new input to the system.

No two entries can be identical.

The bottom panel **"Cobranet/AES67 – Inputs"** will display the list of sources already configured in the system. In addition to the parameters mentioned above, which can be edited directly in the list if you have the appropriate permissions, **a new parameter will appear in the list of Cobranet/AES67** sources:

- **Id:** Not editable. **Input identifier**. This value is automatically assigned and will take values **from 9 to 64**. This means that it is possible to configure up to a **maximum of 56** audio inputs.

You can delete an audio source by selecting it and clicking **Remove Selected.**

Source **IDs** are **always consecutive**, which means that when you remove a source from **Cobranet/AES67**, those with a larger identifier will automatically update the value of the identifier to fill the gap left by the removed source. These changes will automatically propagate to any place in the system that makes use of these sources.

f. Controller: Cobranet-Broadcast /AES67-Transmission

In this configuration section it is possible to set the way in which the system Controller transmits its local audio sources as **Cobranet/AES67** sources to the rest of the system devices (Extensions).

The configurable parameters are as follows:

- **Local Source Broadcast:** Enables or disabling the broadcast of the Controller's local sources over the audio VLAN. The options available for this parameter are:
  - **Disabled:** Disables broadcasting. Allowed **only when there are no Extensions** configured in the system.
  - **Enabled Dynamic:** Broadcasting will be dynamically enabled whenever an Extension is required to receive audio from the Controller.
  - **Enabled Always:** Dissemination will **always be enabled**.
- **Private Mode:** By enabling this mode, the **Cobranet bundle will not be transmitted through the X port** of any device on the system. This will reduce the traffic generated by the system to the network.
- **Streaming Bundle:** Indicates the bundle through which the 8 local sources will be transmitted.

In case the system controller is a **NEO8060+** with **AES67** transmission, new configurable parameters appear:

AES67 - Transmission

Parameter	Value	
Local sources broadcast	Enabled Dinamic	
Private Mode	Disabled	
Tx Stream Id	32	Stream IP Address: 239.125.1.100
Enable LDA Audio Encription	Disabled	
Enable AES67 SAP Announcement	Enabled	
Input 0001	Enabled	
Input 0002	Enabled	
Input 0003	Enabled	
Input 0004	Enabled	
Input 0005	Enabled	
Input EMIC	Enabled	
Input MSG1	Enabled	
Input MSG2	Enabled	

- **Tx Stream Id:** Indicates the Stream through which the 8 local sources will be transmitted. Each Stream corresponds to an IP address that will be detailed automatically.
- **Enable Audio Encryption:** Encrypts audio so that third-party computers do not receive the LDA audio stream.
- **Enable AES67 SAP Announcement:** Allows third-party computers to view the LDA audio source.

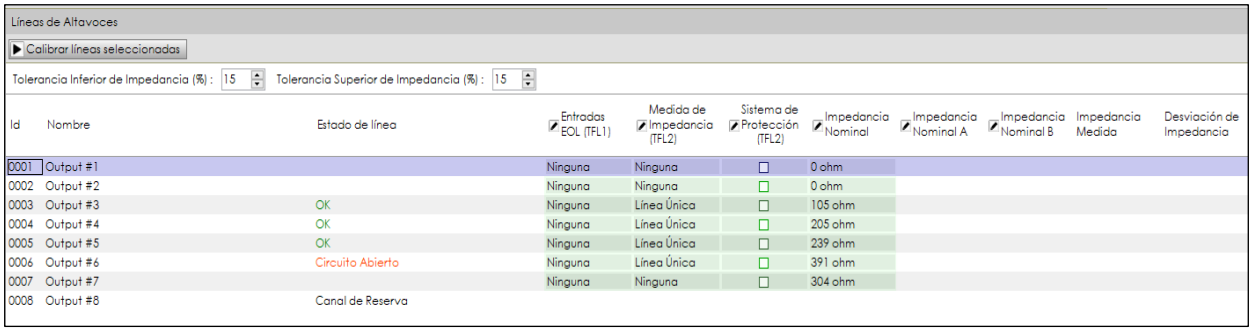
Each source will be broadcast on a different channel from the specified bundle/Stream Id. Whenever there are no Extensions configured in the system, it will be possible to individually enable or disable the broadcasting of the 8 local sources using the following parameters:

- **Input 1** to **Input 4:** These are the first 4 local audio inputs of the Controller. They will use **channels 1 through 4** of the **broadcast bundles**.

- **Input 5:** If there are ACSI devices connected to the Controller, the audio from the ACSI bus will be transmitted. Otherwise, the audio from local input 5 of the Controller will be transmitted. In both cases, **channel 5** of the **broadcast bundle will be used**.
- **Input EMIC:** This is the PTT microphone on the front panel of the NEO Controller. It will make use **of channel 6** of the **broadcast bundle**.
- **Input MSG1:** This is the first internal player of pre-recorded messages. It will use **channel 7** of the **broadcast bundle**.
- **Input MSG2:** The second internal player of pre-recorded messages. It will use **channel 8** of the **broadcast bundle**.

g. Controller: Speaker Lines

Each amplification output has **two associated speaker outputs marked A and B**. In this section you can configure the **supervision of the speaker lines** connected to these outputs. This configuration must be done in both the **Controller** and **System Extensions**.



Two methods are available for monitoring speaker lines:

- End of Line Devices (EOL)
- Impedance Measurement

For consistency and simplicity, **it is recommended to employ only one** of the monitoring methods throughout the system.

At the top of the configuration panel, you can set the value for two parameters that are only applicable when using the Impedance Measurement method:

- **Lower Impedance Tolerance (%):** Determines the tolerance, expressed as a percentage, applicable to the measured value when it is less than the calibrated nominal impedance. It supports values from 0 to 1000, with 15 being the default value.
- **Upper Impedance Tolerance (%):** Determines the tolerance, expressed as a percentage, applicable to the measured value when it is greater than the calibrated nominal impedance. It supports values from 0 to 1000, with 15 being the default value.

In the configuration panel, a list will be displayed where there will be **an input for each amplification output of the devices**. In the case of the Controller, we will have listed the eight amplification outputs of it. For each of them, the following information and configuration parameters will be displayed:

- **ID** and **Name:** Not editable. Identifier and name of the corresponding amplification output.
- **Line Status:** Not editable. In **online mode** it will indicate the status of the line when any of the monitoring methods have been configured. It will also indicate the progress and result of the line calibration process. The different values shown depending on the monitoring method or calibration process will be explained in detail below.
- **EOL Inputs (TFL1):** Editable. Allows you to configure the **supervision** method using **End of Lines Devices (EOLs).** This method of monitoring should be used when using LDA Audiotech's **TFL1** accessories. These accessories must be correctly installed so that supervision is carried out properly. The available options are:
  - **None:** Disables line monitoring using this method.
  - **Line A:** Enables monitoring on line A.
  - **Line B:** Enables monitoring on line B.
  - **Lines A & B:** Enables monitoring on lines A and B.
- **Impedance Measurement (TFL2):** Editable. Allows you to configure the supervision method using **Impedance Measurement**. This method can be used in conjunction with LDA Audiotech's **TFL2** accessories that allow for improved measurement accuracy in certain cases (see TFL2 accessory documentation in the support section of the ***LDA Audiotech*** website for more information). The options available for this method of monitoring are:
  - **None:** Disables line monitoring by impedance measurement.
  - **Single Line:** Enables impedance measurement monitoring in Single Line mode.
  - **Class A:** Enables impedance measurement monitoring in Class A mode.
  - **A + B:** Enables impedance measurement monitoring in A+B mode.

  For the supervision to be carried out correctly, it is essential that the topology and connection of the loudspeaker lines correspond to the selected supervision mode: **Single Line**, **A+B** or **Class A**.

  > **NOTE:** NEO equipment with **firmware versions prior to v02.28.xx.30 only** allows impedance monitoring in Single Line **mode**.

- **Protection System (TFL2):** Editable. In conjunction with the Impedance Measurement method of line monitoring, it is possible to enable the **line protection system**, whereby **those speaker lines in which a short circuit is detected will be deactivated**, thus protecting the amplifier from these.
- **Nominal impedance**: Editable. This is the impedance value that will be referenced for the set of branches AB using the impedance measurement line monitoring method in any of its modes. Supports values from **0** to **9999**. Default **value 166**.
- **Nominal Impedance A**: Editable. This is the impedance value that will be referenced for branch A with the impedance measurement line monitoring method in A+B and Class A modes. It supports values from **0** to **9999**. Default value **0**.

- **Nominal Impedance B**: Editable. This is the impedance value that will be referenced for branch B with the impedance measurement line monitoring method in A+B and Class A modes. It supports values from **0** to **9999**. Default value **0**.
- **Measured Impedance:** Not editable. In **online mode** it will display the **last impedance measurement taken** live based on the topology of the speaker lines and the status of the speaker lines. It will only be displayed if any of the impedance measurement line monitoring modes have been configured.
- **Impedance Deviation:** Not editable. Percentage deviation of the measured impedance value from the corresponding nominal impedance value. It will only be displayed if any of the impedance measurement line monitoring modes have been configured.

> **NOTE:** The **End of Line** (**EOL**) and **Impedance Measurement** supervision methods are **mutually exclusive**. Enabling Impedance Measurement monitoring disables EOL monitoring and vice versa.

Nominal impedance values can be **calculated automatically** when the application is in **online mode**. This is done using the device **calibration** function, which can only be performed on **outputs** where one of the impedance supervision modes has **been configured**.

To calibrate the speaker lines, you will first need to select the desired amplification **outputs** and then press the **"Calibrate Selected Lines"** button to start the calibration process. When multiple outputs have been selected, calibration will be done one by one sequentially.

Line calibration shall also be performed **automatically** by the device whenever any of the impedance supervision modes are enabled or modified or when the line protection parameter or nominal impedances are changed.

The **Line Status** column will indicate the **progress and result of the calibration**. The possible values that will be displayed during the calibration process are:

- **In progress:** Line calibration is being carried out.
- **Waiting:** Waiting for another line to be calibrated.

Once the process is complete, the **possible results of the calibration are**:

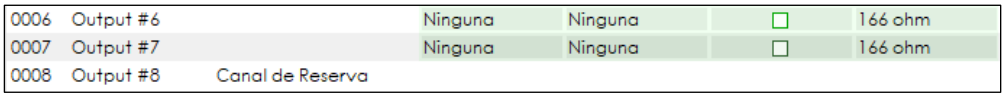
- **Ok:** Correct calibration.
- **Incoherent Measure:** The measured values are not consistent with the indicated monitoring mode.
- **Out of Range V – I:** Low voltage or current levels.
- **Out of Range Branch A:** Impedance out of range in branch A of the speaker line.
- **Out of Range Branch B:** Impedance out of range in branch B of the speaker line.
- **Out of Range Branches A+B:** Impedance out of range in branches A and B of the speaker line.

The **calibration results** will be displayed for about **20 seconds**. After this period of time, the **line status** will be displayed depending on the configured monitoring method.

> **NOTE:** Calibrations are done at **20 kHz**. The calibration process should always be carried out after proper **installation of the speaker lines**.

Outputs **with no monitoring method** configured will display a blank **"Line Status**" field.

When an **amplification output** is set as a **spare channel**, the line status will display **the value "Backup channel**", with the rest of the parameters blank and disabled.



The line status will depend on the configured monitoring method and mode:

- **EOL Inputs** Method – Depending on the mode, one of the following statuses may be displayed:
  - **OK:** All right.
  - **Fault A:** Fault detected in branch A.
  - **Fault B:** Fault detected on branch B
  - **Fault A+B:** Fault detected in **both branches**.
- Impedance **Measurement Method** – Possible states for Single **Line mode:**
  - **Unknown:** The status is not yet known.
  - **OK:** All right.
  - **Not valid:** Voltage or current out of range.
  - **Short circuit.**
  - **Open Circuit.**
  - **Bad calibration:** Impedance measured out of range.
  - **Protected: Short-circuit line protection has been activated**.
- **Impedance Measurement** Method – Possible states for **A+B mode:**
  - **Unknown:** The status is not yet known.
  - Common statuses for both branches:
    - **Bad calibration:** Impedance measured out of range or inconsistent between branches.
    - **Undetermined Error:** Inconsistency between the joint measurement of branches A and B and the independent measures for each branch.
    - **Not valid:** Voltage or current out of range.
  - Independent states for each branch (it will be specified in which branch the state is given; **"Branch A:"** or **"Branch B:")**
    - **OK:** All right.
    - **Short Circuit.**

- **Open Circuit.**
- **Protected: Short-circuit line protection has been activated**.

- **Impedance Measurement Method** – Possible states for **Class A mode:**
  - **Unknown:** The status is not yet known.
  - **OK:** All right.
  - **Not valid:** Voltage or current out of range.
  - **Short Circuit.**
  - **Open Circuit.**
  - **Bad calibration:** Impedance measured out of range or inconsistent between branches.
  - **Undetermined Error:** Inconsistency between the joint measure of branches A and B and the independent measures for each branch.
  - **Protected:** Active short-circuit line protection. It will be specified in which branch; "Branch A:" and/or "Branch B:".
  - **Backup Active:** Additional status for Class A mode that will be displayed when switching to Branch B as a backup has occurred.

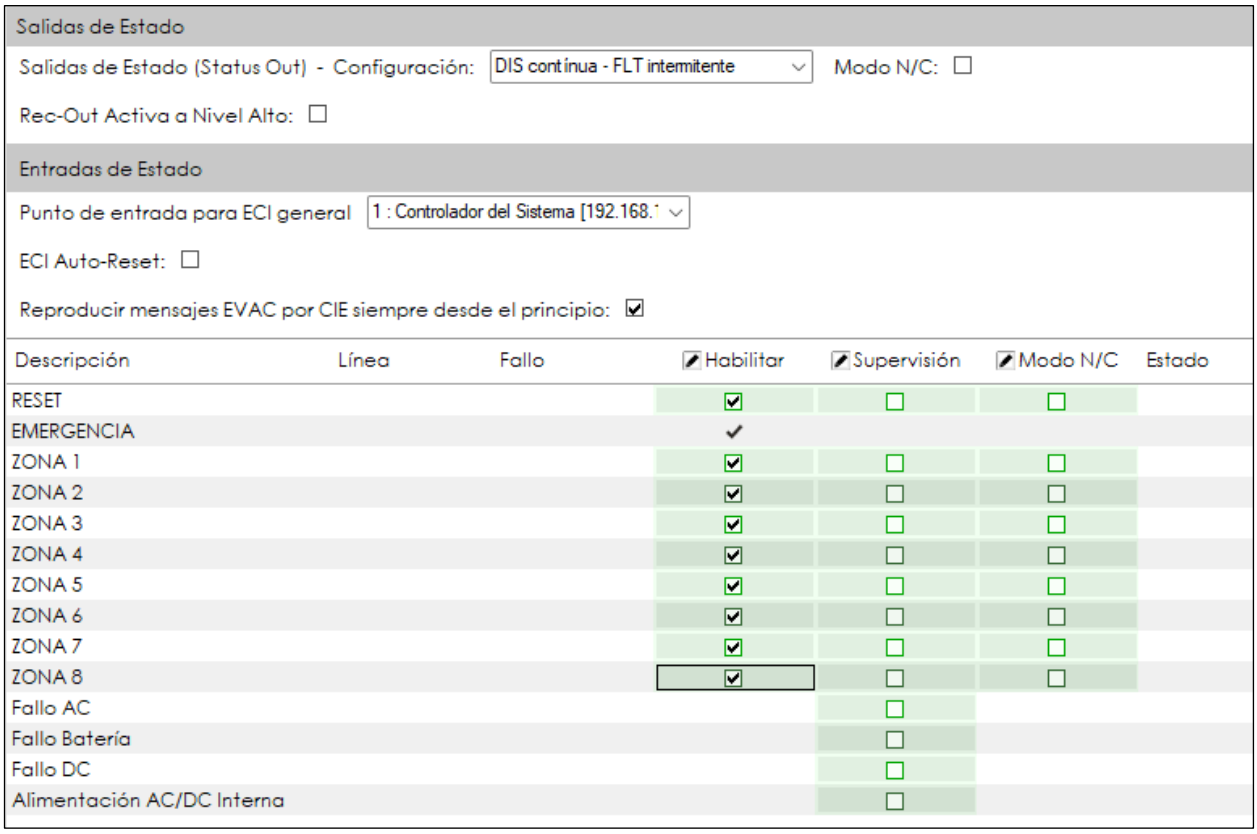
If the **impedance measurement monitoring method is not active** on an output, **the measured impedance value and its deviation are not displayed**. The same will happen if the output has **short-circuit protection active.**

Line states can display different colors:

- **Green:** Successful monitoring (**OK)** and no other issues are reported on the speaker lines.
- **Orange:** Indicates an error or fault in the speaker lines.
- **Black:** Used for neutral or transient states, such as **"Backup Channel",** "**Unknown**" or calibration process states; "**In Progress**" and "**Waiting".**

h. Controller: In-state inputs and outputs

This selection filter gives access to the configuration of different parameters related to the status inputs and outputs of the devices; **Status Out** (**EMG** and **FLT**), **Rec Out**, **Status Inputs** (**RST, EMG** and **Zones**) and **Batt Charger**. Refer to the NEO Series user manual for more detailed information on these status inputs and outputs and their relationship to **EN54** standard).



Configuring **Status Outputs**:

- **Status Out - Configuration:** Allows you to set the way in which the **Fault** (**FLT**) and **Disarm** (**DIS)** states of the system are notified through the **FLT** signal of the **Status Out** output port. The available options are:
  - **DIS steady – FLT blink** (default)
  - **DIS steady - FLT off**
  - **FLT steady –DIS blink**
  - **FLT steady – DIS off**
- **Status Out - N/C Mode:** Enables or disables the "**Normally Closed**" mode on the **Status Out** output port. By default, it will be disabled.
- **Rec Out – Active High:** Enables or disables high level activation of the maneuver on the **Rec Out** port. By default, it will be disabled.

Configuration of **Status Entries:**

- **General CIE entry point:** Allows you to **select the NEO device** of the system (Controller or Extension) whose **RST** and **EMG** ports (**Status Inputs**) will be responsible for the **activation and deactivation of the general emergency** condition by **ECI**. RST and EMG ports will be disabled on the rest of the NEO devices in the system. In case none of these ports are to be used, it is recommended to select the **"None"** option**,** to avoid any possible accidental activation of these entries. By default, the NEO System Controller will be configured.
- **ECI Auto-Reset:** Enables or disables the **automatic reset (RESET) mode of the general system emergency state**. In this way, when the general and zonal ECI status inputs are disabled, the system will exit the general emergency state automatically. This reset will only be carried out in case the general state of emergency has been initiated by any of the emergency, zonal or general activation ports. By default, it will be disabled.
- **CIE EVAC messages playback always from start:** Enabling this option will mean that when activating a zonal emergency by ECI, if the message that is going to be broadcast by the area is already being played in other areas, there will be a wait for the new emergency zone to start **broadcasting the message from the beginning and not partially**. By default, it will be enabled.
- The **Status Inputs** panel also shows a list of the **Status Inputs** (**EMG**, **RST** and **Zones**) and **Batt Charger** (**Emergency Power Monitor)** ports, where you can configure their operation and monitor their status in online mode. The meaning and function of each column is as follows:
  - **Description**: Not editable. Descriptive text of each status input.
    - **RESET**, **EMERGENCY:** These are the general **EMG** and **RST Status Inputs.**
    - **ZONE 1 – 8:** Status **Inputs – Zones**.
    - **AC Fault:** Input for monitoring fault in the main power supply **(Batt Charger).**
    - **Battery Fault**: Input for battery failure monitoring (**Batt Charger**).
    - **DC Fault:** Input for fault monitoring in one of the emergency power outlets **(Batt Charger).**
    - **Internal AC/DC Power:** Supervision of Main Power (AC) and Emergency (DC) inputs.
  - **Line**: Not editable. In online mode it shows the monitoring status
    - **OK:** No bug detected.
    - **Fault:** Failure detected.
  - **Fault**: Not editable. In online mode it will indicate, in case of failure it can be shown:
    - For **RESET, EMERGENCY** and **ZONE 1 – 8** status entries:
      - **Open:** Open Circuit.
      - **Short:** Short Circuit.
    - For **AC Fault, Battery Fault** and **DC Fault** status inputs:
      - **Fault**

- For **Internal AC/DC Power Supervision**:
  - **AC fault:** Main Power Fault.
  - **DC fault:** Emergency Power Fault.
  - **AC/DC Fault:** Main and Emergency Power Fault. This fault should never be displayed under normal conditions. If you do, it will be a symptom of a breakdown in the device.

- **Enable:** Allows you to enable or disable the **EMERGENCY**/**RESET** and **Zonal status** inputs. The **EMERGENCY** input will always take the same value as the **RESET** input. By default, they will be enabled.
- **Supervision:** Editable. Enable or disable input monitoring. If it is disabled, the system will not report any fault in the input. By default, it will be disabled. The **EMERGENCY** input will always take the same value as the **RESET** entry. By default, they will be disabled.
- **N/C Mode:** Editable. Enables or disables **the "Normally Closed"** mode for Status Input ports **(EMG, RST,** and **Zones).** The **EMERGENCY** input will always take the same value as the **RESET** input. By default, they will be disabled.
- **State:** Not editable. Activation status of the **EMERGENCY** / **RESET** and **Zonal status entries**. Possible values: **On** and **Off.**

i. Controller: GPIO

In this section, you can configure the operating mode of the **14** general purpose ports (**GPIOs**). They can be set as **Input** or **Output**. It also shows the signal's activation status in the **State** column: it can be **High or Low.**

The parameters shown for each port are:

- **Id:** Not editable. Numeric identifier of the port.
- **Name:** Not editable. Port identification text.
- **Function:** Editable. Allows you to set the port as **Input** or **Output**.
- **State:** Not editable. In online mode it indicates the signal level in the port; **High** or **Low**.

NOTE: If the **GPIO port** is being **used by a trigger or action** on the event handler, **it will automatically be set as input or output respectively**. In both cases**, their function cannot be modified** manually.

j. Controller: Serial Ports

In this section, you can configure the operating parameters of the PA and VA integration serial ports.

Puertos Serie	
Parámetro	Valor
Puerto Serie PA (ETX) Modo Especial VCC	
Puerto Serie PA (ETX) Velocidad de transmisión (baudios)	19200
Puerto Serie PA (ETX) Paridad	Par
Puerto Serie PA (ETX) Bits de parada	1
Puerto Serie PA (ETX) Modo	RS-485
Puerto Serie VA Velocidad de transmisión (baudios)	19200
Puerto Serie VA Paridad	Par
Puerto Serie VA Bits de parada	1
Puerto Serie VA Modo	RS-485

- **PA serial port (ETX) VCC special mode:** Not editable. Indicates whether **VCC special mode** is enabled on the port. This mode will be activated whenever the port is not in use by the event handler and VCC.64 zone controller devices have been configured. With this mode active, the port will be automatically configured by the device to work with VCC-64 devices and will ignore the configuration parameters of this panel. This mode will be active by default, even if there are no VCC-64 devices installed.

  In case of there are no devices **VCC-64** and the event manager make use of this port, the **VCC Special Mode** will be automatically disabled, which means that no **VCC-64** can be installed in the system and the configuration parameters of this panel will be taken into account. See *4.1.6. Accessories: VCC-64 PA Zone Controllers*

- **PA Serial Port (ETX) Baud rate (baud):** Editable. Possible values:

  300 **600** **1200** **2400** **4800** **9600**

  14400 **19200** **38400** **57600** **115200** **230400**

- **PA Serial Port (ETX) Parity:** Editable. Possible values:

  No **Even** **Odd**

- **PA Serial Port (ETX) Stop Bits:** Editable. Possible values:

  1 **2**

- **PA Serial Port (ETX) Mode:** Editable. Possible values:

  RS-485 **RS-232**

- **VA Serial Port (ETX) Baud Rate:** Editable. Possible values:

  300 **600** **1200** **2400** **4800** **9600**

  14400 **19200** **38400** **57600**

- **VA Serial Port (ETX) Parity:** Possible Values:

  No **Even** **Odd**

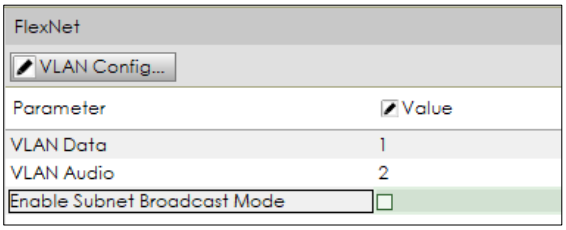
- **VA Serial Port (ETX) Stop Bits:** Editable. Possible values:

  1 **2**

- **VA Serial Port Mode:** Not editable. This port always operates in **RS-485** mode.

k. Controller: FlexNet

In this section, you can configure operating parameters of the **FlexNet protocol**, which is the one used by the Controller and the Extensions to transmit audio and data to each other.

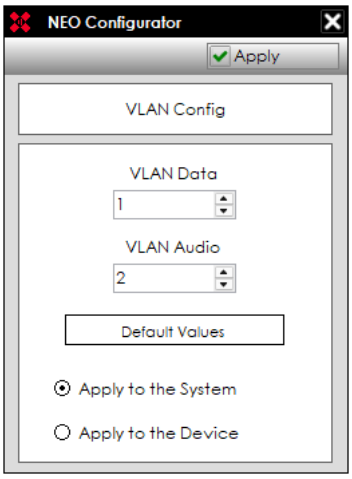


The configurable **FlexNet** parameters are as follows:

- **VLAN Data:** Editable. **Identifier** for the **FlexNet** protocol data **VLAN**. Supports values from **1** to **4095**.
- **VLAN Audio:** Editable. **Identifier** for the **audio VLAN** (**Cobranet/AES67**) of the **FlexNet protocol**. Supports values from **1** to **4095**.
- **Enable Subnet Broadcast Mode:** Communication between a Controller and its Extensions is done via broadcast to the global broadcast address 255.255.255.255. Enabling this parameter will cause such communication to be done using the broadcast address of the Ethernet subnet configured on the devices. This may be required in certain network configurations due to the existence of advanced traffic filters.

In **NEO+ systems** Data and Audio traffic can be configured to use the same VLAN.

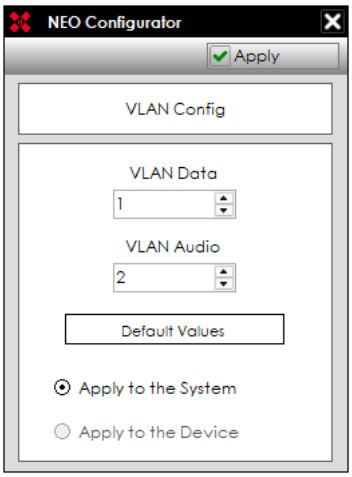
The "**VLAN Config**" button displays the window that allows you to configure the parameters of the Audio and Data VLANs.



- **Defaults Values:** Returns Audio and Data VLAN parameters to their factory defaults In **NEO Systems** the parameters are **1** and **2** respectively. In **NEO+ systems** the parameter for both VLAN is **1**.
- **Apply to the System**: Applies settings to the entire system.
- **Apply to the Device**: Applies the settings only to the selected device.

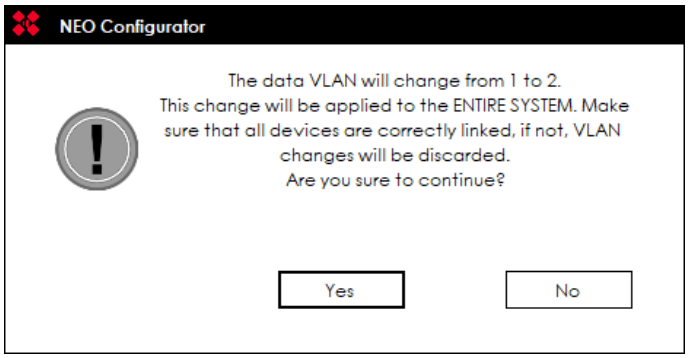
Press the "**Apply**" button to save the settings.

If the system is in **offline mode**, it will only be possible to configure the configuration from the Main Controller and it applies to the entire system.

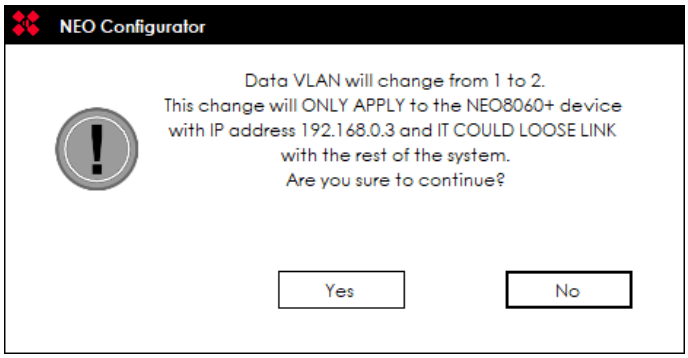


The configuration of all the values will be available in **online mode**.

When the Data VLAN configuration is modified for the entire system, this will only be done if the Controller has a connection with all the NEO/NEO+ devices that make up the system. The app will notify with the message shown below. Otherwise, the previous values will be maintained.



If you want to apply Data VLAN changes only to the Controller, the Controller might lose connection to the other computers in the system. The app will display a message warning of possible link loss.



l. Controller: Access Control

Here you can configure the access mode to the **Level 2 and 3 configuration menus** on the **touchscreen** on the front of the **NEO System Controller**.

Control de Acceso		
Nombre	Control de Acceso	Número Pin
Nivel de Acceso 2	Confirmar	
Nivel de Acceso 3	Pin	3333

- **Access Level 2:**
  - **Access Control -** There are two options:
    - **Confirm:** Access will be granted by a **tap on the touchscreen**.
    - **Pin:** Access will be granted upon **entering a 4-decimal digit code**.
  - **Pin Number: 4 decimal digit code** for use with **PIN access control**.
- **Access Level 3**:
  - **Access Control** and **PIN Number:** Same options and requirements as access level 2.

The access level will be configured with the **"Confirm"** option. For **EN54-16** installations, a pin access control must be set for each access level.

Access **levels** are described in detail in the NEO **Series User Manuals**.

m. Controller: PTT Configuration

By default, the **frontal PTT microphone of the NEO Controller** device is supervised and does not emit any **'ding dong'** or acoustic signal prior to the emission of the voice message. This is a requirement of EN54-16. Optionally, these settings can be modified in this section.

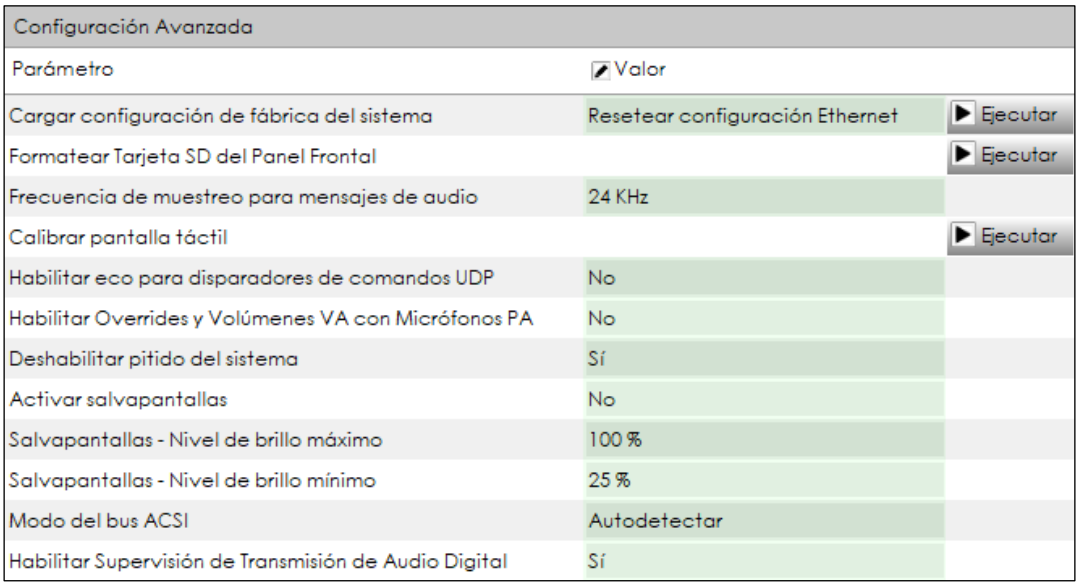
Configuración PTT	
Nombre	Valor
Habilitar ding-dong PA	No
Habilitar ding-dong VA	No
Deshabilitar supervisión del micrófono PTT	No
Habilitar All-Call PTT en modo PA	Sí
Habilitar All-Call PTT en modo VA	Sí

- **PA ding-dong enabled:** Editable. Enables the issuance of a **'ding dong'** prior to the granting of a word for the emission of a voice message with the **PTT microphone** when the system is in **PA** (general non-active emergency) mode. Options: **Yes** or **No**.
- **VA ding-dong enabled:** Editable. Enables the issuance of a **'ding dong'** prior to the granting of a word for the emission of a voice message with the **PTT microphone** when the system is in **VA** (active general emergency) mode. Options: **Yes** or **No**.

- **Disable PTT mic supervision:** Allows you to disable PTT microphone supervision. This will cause the system not to report a failure of the PTT microphone (not being connected, for example). Options: **Yes** or **No**.
- **Enable All-Call PTT in PA Mode:** Enables the **All-Call** feature when using the Controller's PTT microphone **when the system is not in emergency**. This means that the **PTT microphone will automatically speak to all zones** of the system **if no specific zone routing is established** through the device's touchscreen menu. If **the** All-Call function is disabled, it is always **necessary to set a zone routing** for the **PTT microphone**.
- **Enable All-Call PTT in VA Mode:** Enables the **All-Call** function when using the **PTT** microphone on the Controller **when the system is in emergency**.

n. Controller: Advanced Configuration

Advanced configuration options are only available to users with **an Installer** profile.



Configuración Avanzada		
Parámetro	Valor	
Cargar configuración de fábrica del sistema	Resetear configuración Ethernet	Ejecutar
Formatear Tarjeta SD del Panel Frontal		Ejecutar
Frecuencia de muestreo para mensajes de audio	24 KHz	
Calibrar pantalla táctil		Ejecutar
Habilitar eco para disparadores de comandos UDP	No	
Habilitar Overrides y Volúmenes VA con Micrófonos PA	No	
Deshabilitar pitido del sistema	Sí	
Activar salvapantallas	No	
Salvapantallas - Nivel de brillo máximo	100 %	
Salvapantallas - Nivel de brillo mínimo	25 %	
Modo del bus ACSI	Autodetectar	
Habilitar Supervisión de Transmisión de Audio Digital	Sí	

- **Load system factory configuration:** Online mode only. With this action, the NEO device will restart by loading its factory settings. By default, this factory reset will also apply to the Ethernet configuration (IP, Gateway, and Subnet Mask), so the IP address will also be modified, which will default to **"192.168.0.3"** for **NEO systems** and **"192.168.0.7"** for **NEO+ systems**, as well as the gateway and subnet mask, which will default to **"192.168.0.1"** and **"255.255.255.0"** respectively. However, it is possible to indicate before performing the action that the Ethernet configuration is preserved after the factory reset. This is set for this case by using the Value parameter, which offers two options:
  - **Reset Ethernet config**
  - **Don't reset Ethernet config**

  Finally, for the action to be carried out, you will have to press the "**Execute**" button located on the right.

  This option is available in the **Backup Controller**.
- **Format Front Panel SD Card:** Online mode only. It is possible to format the SD memory card located on the front panel of the device. Audio files are stored on this SD memory card, so they will be lost upon formatting. To perform this action, simply click on the **"Execute"** button on the right.

This option is available in the **Backup Controller.**

- **Audio messages sample rate:** Allows you to set the sample rate that audio files loaded on your device will have. The possible values are **24 KHz** and **48 KHz**. This will be applied to audio files before they are sent to the system Controller. The available values for this parameter are:
  - **24 KHz:** Default.

- **48 KHz:** Higher quality. Playing messages with a sample rate greater than 48 KHz may reduce device performance.

This parameter is volatile, it will not be saved in the project, nor in the application, nor in the computer, resetting its value to 24KHz when the application is started again.

- **Touch screen calibration:** Only in online mode. Clicking **"Execute"** will start the Controller touchscreen calibration process.

This option is available in the **Backup Controller.**

- **Enable echo for UDP command triggers**: Enables '**echo**' mode for event handler UDP command-type triggers, i.e. the device will respond with a command with the same text or byte sequence that it has received. This parameter will be saved with the project. Available options: **Yes** or **No**.
- **Enable Overrides and VA Volumes with PA Mics:** Enables the activation of Override outputs (used for attenuator cancellation) for **PA microphones** according to the selection of areas where speech is granted. The configured VA lumens will also be applied to these **zones**. This parameter will be saved with the project. Available options: **Yes** or **No**.
- **Disable system beep:** Disable the beep emitted by the front of the device in case of emergency or failure. This parameter will be saved with the project. Available options: **Yes** or **No**.
- **Activate screensaver:** Activate the power saving mode for the front screen of the device, reducing its brightness. When activated, brightness dimming is applied after 5 minutes of inactivity. This parameter will be saved with the project. Available options: **Yes** or **No**.
- **Screensaver – Higher brightness level:** The maximum brightness level for the front screen, in case the screensaver is not activated. This parameter will be saved with the project. It allows brightness level values from **50%** to **100%,** which may not be lower than the minimum brightness.
- **Screensaver – Lower brightness level:** The minimum brightness level for the front screen, if the screensaver is activated. This parameter will be saved with the project. It allows brightness level values from **10%** to **100%,** which can not be higher than the maximum brightness level.
- **ACSI Bus Mode:** This parameter allows you to configure the ACSI bus operating mode of the System Controller. Possible values are:
  - **Autodetect**
  - **Version 1**
  - **Version 2**

  With the **Autodetect option,** the System Controller will automatically set the mode based on the devices it detects on the bus. **It will first check if any device compatible with Version 2** of the ACSI protocol is connected, in which case it will establish that mode of operation for the bus. **Otherwise, the bus will be configured for Version 1** of the **ACSI protocol**.

  The **firmware of ACSI devices will only be compatible with one of the two versions** of the protocol, therefore there can be devices with both versions running simultaneously on the bus.

When you change the operating working mode at online mode, it will take a few moments for the bus to restart and rediscover the devices.

- **Enable Digital Audio Link Supervision:** Disabling this parameter (enabled by default) will not report audio streaming failures between the Controller and the Extensions.

In case the system driver is a **NEO8060+,** the new configurable parameter appears:

- **Enable Loop Link supervision (Port B):** Enables System Controller's Port B supervision, when it acts as a redundant connection to the FlexNet ring. Available options: **Yes** or **No**.

o. Controller: Logs

Here the list of logs that we can obtain directly from the System Controller will be displayed.

Logs

FlexNet Id	Equipo	Descripción	Tipo de Log	Duración	
001	NEO8060	Log de emergencia	Emergencia	0	Ver
001	NEO8060	Log de fallo	Fallo	0	Ver
001	NEO8060	Log de desarme	Desarmado	0	Ver
001	NEO8060	Log de equipo	Dispositivo	0	Ver

The handling of logs is described in detail in the section *4.1.1. b. Logs*

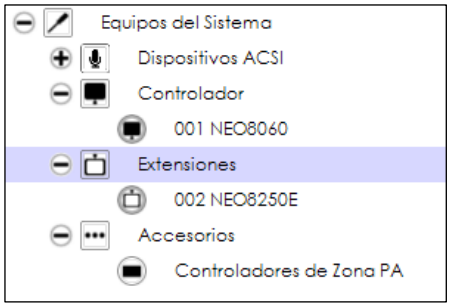
4.1.5. Extensions

It is important to know that most of the configuration parameters of a NEO Extension that will be described in the following sections are stored in the Extension device itself. It is therefore vital to ensure the connection from the application with all the NEO devices included in the project so that the export or import of the system configuration can be carried out satisfactorily. Otherwise, it will not be possible to export the system configuration in its entirety, nor to import its entire configuration.

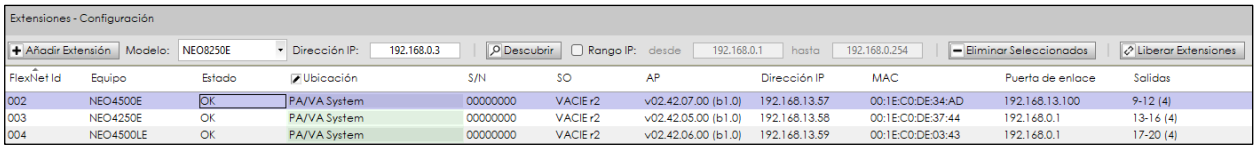
a. Extensions: Overview

From the view **System Devices**, selecting the **Extensions** we will access the list of devices Extension configured on the system or project.

For any Extension show the same general parameters as for the System Controller. This is explained in detail in *4.1.4. a. Controller: Info*



In addition to this information, Extensions include the Status parameter. When working in online mode, this parameter will indicate the current state of the device configured in the project in relation to the physical device.

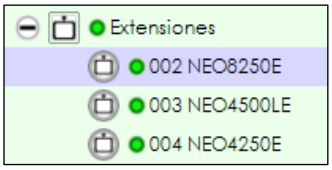


The possible values that the **State** parameter can display are:

- **OK:** All right. Connection available to the Extension from the application and from the Extension to the System Controller.
- **FLT:** Failure in the connection between the Extension and the System Controller.
- **Offline:** There is no connection to this device from the app. It will not be possible to configure any specific parameters of the device.
- **Taken:** The NEO Extension is linked to a different System Controller than the one existing in the current project.
- **Device model mismatch:** The physical device model does not correspond to the model set in the system configuration.
- **Unknown device model:** The connected device model is not recognized.

If the current state of the device is "**Taken**", it is possible to re-link the Extension with the project's System Controller. To do this, you will have to select the Extension and then click on **"Unlink extensions".**

To configure the specific parameters of each Extension, you will need to select its corresponding node in the tree of the **"System Devices"** view and then choose the desired configuration filter.

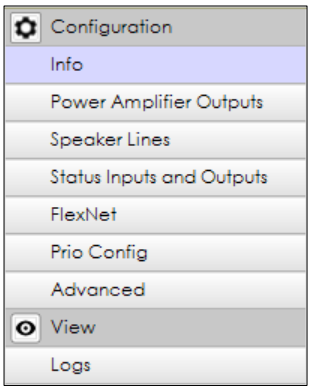


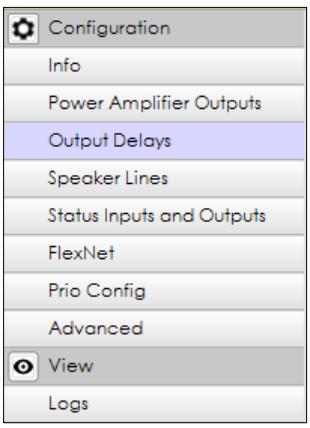
For NEO4500LE Extensions, you'll see two additional model-specific configuration filters: **Live Sources** and **Cobranet-Diffusion/AES67-Transmission.**

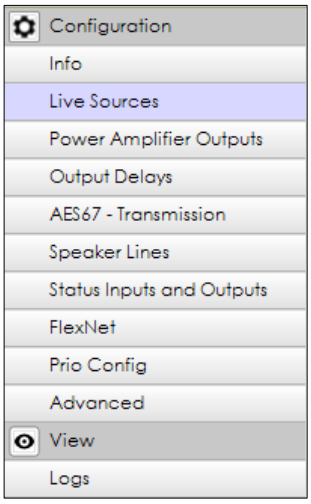
The **four-channel device** also has the **"Output Delays"** selection filter that allows you to configure audio delays on the amplification outputs.

b. Extension: Info

The same information will be displayed here as with the configuration filter available for the **Extensions** node. In this case only the information for the selected device will be displayed. This is explained in detail in the section *4.1.4. a. Controller: Info*

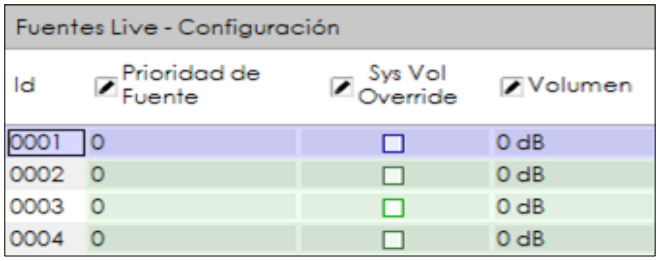






c. Extension NEO4500LE: Live Sources

In this section it is possible to configure the four **"Live"** sources of the **NEO4500LE** models.



- **Id:** Not editable. Source identifier. Assigned internally.
- **Source Prio:** Editable. Sets the routing priority of the input to its corresponding output. From highest to lowest priority value, these are the possible values:

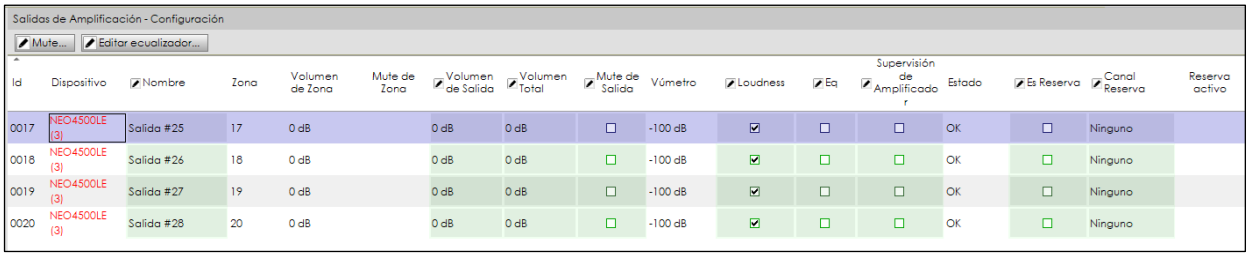
- **0** – **Disabled**. It will not be routed at any time.
- **1** – It will be routed only **if there are no other sources routed** to the exit.
- **2** – Priority over **PA** sources.
- **3** – Priority over **SIME** sources
- **4** – Priority over **pre-recorded Controller players**.
- **5** – Priority over **ACSI sources** in **PA** (No Active Emergency) state.
- **6** – Priority over **PTT microphones**.

When the Emergency state is active in the system, **Live inputs will be routed** to their outputs only **if the zone they belong to is not in Emergency**.

- **Sys Vol Override:** If enabled, the total volume (channel + zone) will be ignored in the designated output. The volume applied will be the one specified with the Volume parameter.
- **Volume:** Volume that will be applied to the associated output in case the **Sys Vol Override parameter is enabled**.

d. Extension: Power Amplifier Outputs

In this section, it will be possible to **monitor** and **edit** the configuration of the corresponding parameters of the **NEO Extension amplification outputs**. The **Interface and operation are identical** to those previously seen for the **System Controller**. Consult *4.1.4. c. Controller: Amplification Outputs*



NOTE: Please note that the **Amplifier Supervisor**, **Is Spare, Spare Channel,** and **EQ settings** for the output (not enabling it) are set directly **in the Extension, not in the System Controller**. The rest of the parameters are saved by the System Controller.

e. 4-channel extension: Output Delays

This selection filter accesses the delay settings **for amplification outputs on 4-channel devices**.

Delays are applied to outputs in **blocks of 24 milliseconds**, up to a **maximum of 6 blocks or 144 milliseconds**. It is not essential that the entire 24 milliseconds of each block be used, but it should be borne in mind that the milliseconds that remain unused in one block cannot be used in another output delay.

For example, if a delay of **10** milliseconds is assigned to one output and **25** milliseconds to another, **three** blocks of **24** milliseconds will have been consumed, leaving **72** milliseconds available to assign more delays.

The parameters displayed in the main settings panel for each output are:

- **Id:** Identifier of the amplification output in the system.
- **Name:** Name of the amplification output in the system.
- **Delay (ms):** Total in milliseconds of the delay applied to the amplification output.
- **24ms blocks:** 24-millisecond blocks used.

To configure the delay that will be applied to the outputs, you have to click on the **"Audio Output Delay Configuration"** button, after which the following editing window will appear. There will be a numerical field where the delay in milliseconds for each output will be indicated. To the right of these, there will be a counter indicating the number of 24-millisecond blocks needed to apply the specified delay for each output.

When all blocks are assigned, only milliseconds can be added until the blocks of each output are fully used.

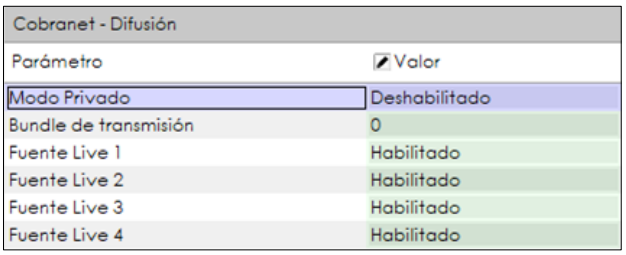
When an output can no longer increase the value of its delay because there are no blocks of 24 milliseconds left free, the corresponding numeric field will appear on a gray background.

At the bottom of the window, the total milliseconds used in the delays are displayed, as well as the total 24-millisecond blocks used.

Once the desired delays have been configured, clicking on "Apply" will save the configuration in the project.

f. Extension NEO4500LE: Cobranet - Broadcast

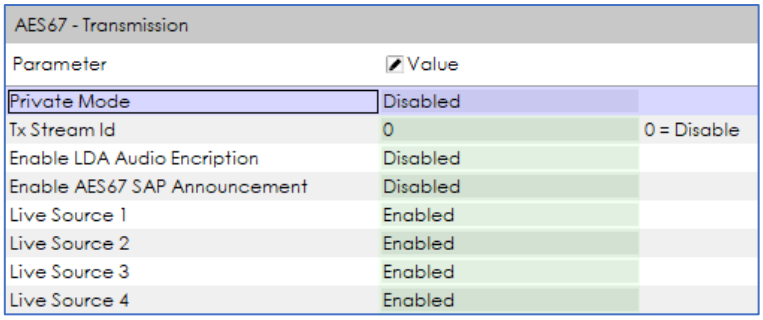
Here you can configure the **Cobranet broadcast** for Live sources in the NEO4500LE Extension, just as the System Controller does with its local sources.



Here are the parameters that can be configured:

- **Private Mode:** When you enable this mode, the streaming bundle will not be transmitted through the X port of the device. This will reduce the traffic generated to the network.
- **Transmission Bundle:** Identifier of the **Cobranet bundle** that will be used for streaming Live sources.
- **Live Feed 1 - 4:** Enable or disable streaming of live feeds. The sources are transmitted univocally on the respective channels 1 to 4 of the broadcast bundle.

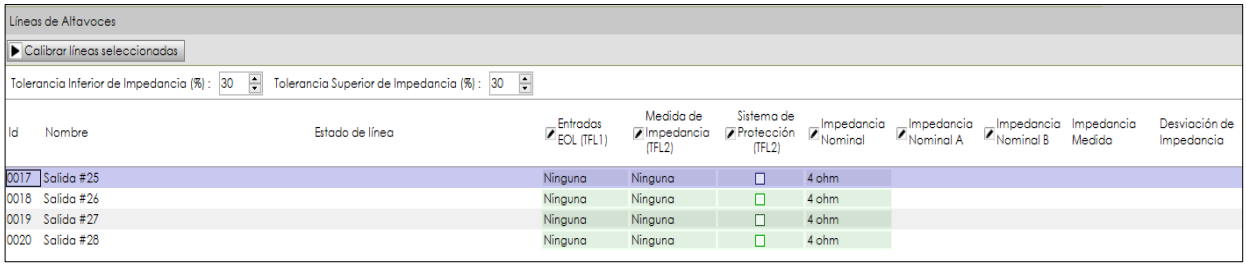
In case it is an Extension **NEO4500LE+** with **AES67** transmission, new configurable parameters appear:



- **Tx Stream Id:** Indicates the Stream through which the 8 local sources will be transmitted. Each Stream corresponds to an IP address that will be detailed automatically.
- **Enable LDA Audio Encryption:** Encrypts audio so that third-party computers do not receive the LDA audio stream.
- **Enable AES67 SAP Announcement:** Allows third-party computers to view the LDA audio source.

g. Extension: Speaker Lines

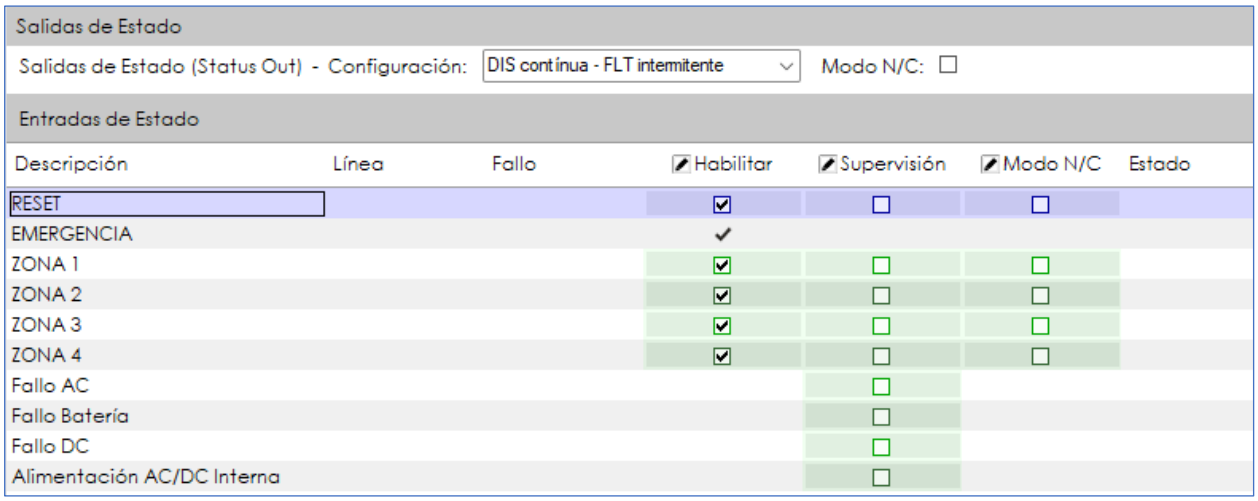
Here it will be possible to monitor and set the monitoring settings for the speaker lines connected to the Extension. The interface and parameterization are analogous to those discussed in the corresponding section for the System Controller. See *4.1.4. g. Controller: Speaker Lines*



NOTE: Settings for speaker line monitoring are stored on Extension devices. The System Controller only saves settings for monitoring its own speaker lines.

h. Extension: Status Inputs and Outputs

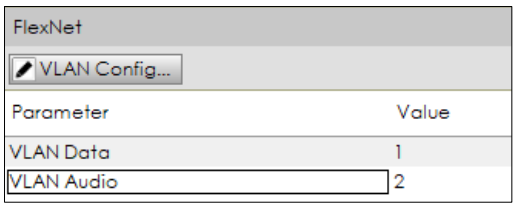
The configuration of the state inputs and outputs is similar to the one seen above for the System Controller.



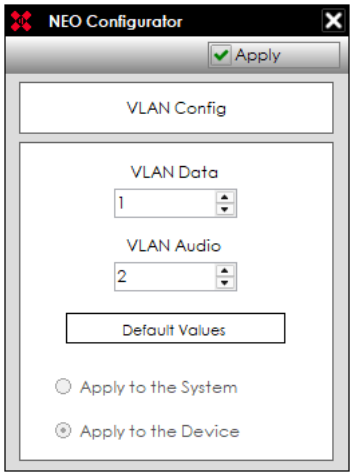
In an Extension we can only configure the **Status Out** and **Status Input** (**Reset**, **Emergency** and **Areas**), **Batt Charger** (**AC Fault**, **Battery Fault** and **DC Fault**) and **Internal AC/DC Power**. For a detailed explanation of monitoring and configuring these parameters, see *4.1.4. h. Controller: In-state inputs and outputs*

i. Extension: Flexnet

The interface and configuration of the VLAN parameters of the selected device are equivalent to what has already been explained in the corresponding section for the System Controller.

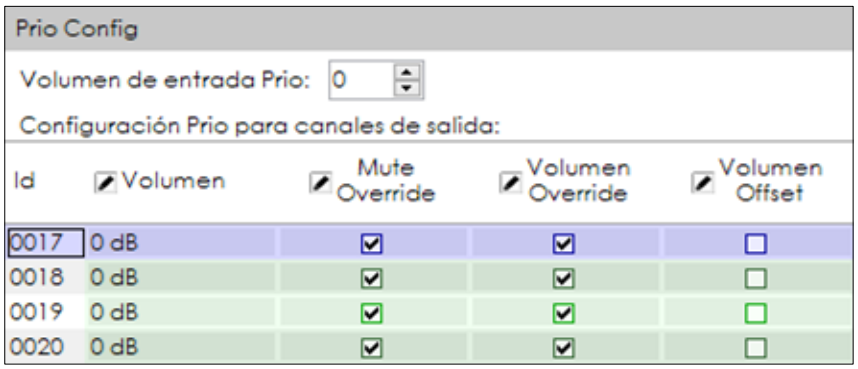


Modifying VLAN parameters in an extension applies only to the selected device. Never to the system.



j. Extension: Prio Config

This section allows you to configure the behavior of the **PRIO IN** input of the **Extension** devices.



You have a single common parameter for this configuration.

- **Prio input volume: Sets the volume level for the Prio input**. It supports values from **12** to **-100 dB**.

In addition, for each amplification output of the device we have the following parameters.

- **Id:** Not editable. Identifier of the amplification output in the system.

- **Volume:** Editable. A value that will be used to modify the total volume of the amplification output. It supports values from **-100** to **100 dB**.
- **Mute Override:** Editable. If enabled, any system mutes for this output will be ignored.
- **Volume Override:** Editable. If enabled, the Volume value replaces the total volume of the output.
- **Volume Offset:** Editable. If enabled, the Volume value is added to the total volume of the output.

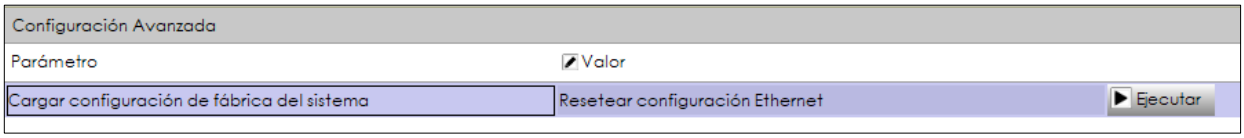
The **Volume Override** and **Volume Offset** parameters are mutually exclusive. If one of them is enabled, the other will automatically be disabled.

It should be remembered that the **maximum and minimum total volume allowed** for an amplification output is **0 dB and -100 dB** respectively. This means that **any volume change that exceeds one of these limits will automatically be adjusted to the limit value**.

When the system is **in a state of Emergency**, **the PRIO IN input will be disabled**, regardless of whether its maneuver signal is active.

k. Extension: Advanced

As with the System Controller, this section will only be available with an **Installer profile**.



- **Load system factory configuration:** Online mode only. With this action, the NEO device will restart by loading its factory settings.
- **Enable Digital Audio Link Supervision:** Disabling this parameter (enabled by default) will not report audio streaming failures between the Controller and the Extensions.

The use of this function is described in detail in the *4.1.4. n. Controller: Advanced*

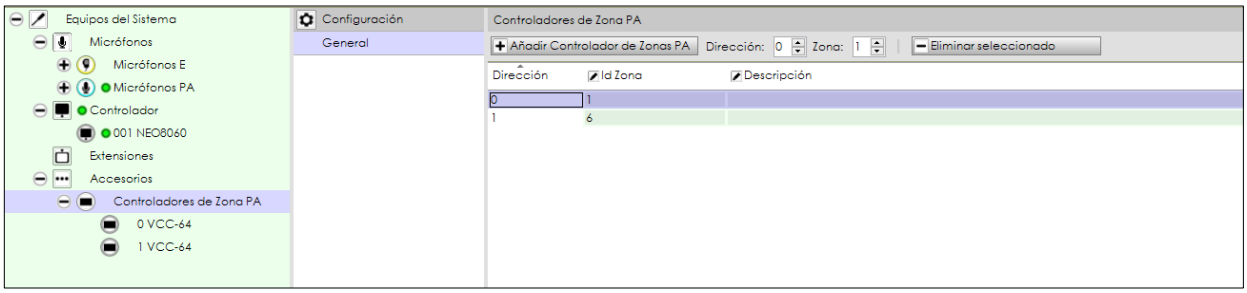
l. Extension: Logs

On **Extension** devices, only the **Device log** is available.

The description of log types and their management are explained in detail in the section *4.1.1. b. Logs*

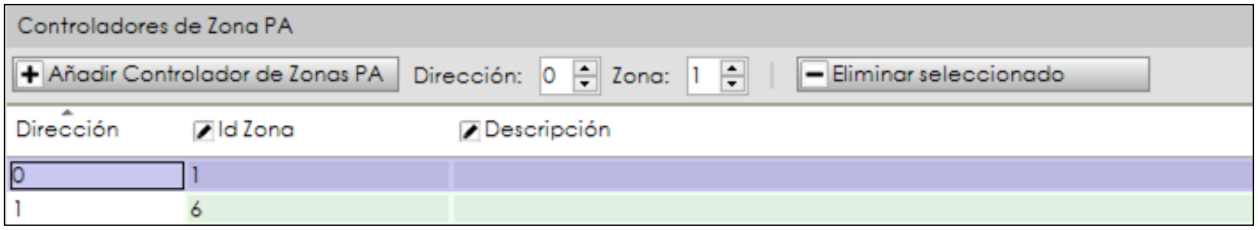
4.1.6. Accessories: VCC-64 PA Zone Controllers

In the **Accessories** node of the **System Devices** view, you will find the **PA Zone Controllers.** Clicking on that last node will obtain the list of **PA zone controller** devices (**VCC-64**) already installed.



NOTE: The Configuration Filter **General** for PA zone controllers will only be displayed with user profile **Installer** or **Maintainer** (See *2.4.3. Users*)

With the permissions suitable for configuration, may be add or remove devices and modify the editable parameters of those already added to the project. To see in detail How to add or remove devices **VCC-64** See the section *3.3.4. PA Zone Controllers*.



The parameters shown in the listing for each device are:

- **Address:** Not editable. Address of the device on the serial port. Specified when adding a new device.
- **Zone Id:** Editable. Numerical identifier of the System Zone on which the device will act. Supports values from 1 to the total number of zones in the system.
- **Description:** Editable. Description of the device. Supports up to **a maximum of 64** printable ASCII characters.

4.2. PA/VA System

The **PA/VA System** view shows three main functional groups: **Sources**, **Zones,** and **Events**.

In turn, within the **Sources** there are three other categories: **ACSI Devices**, **Messages** and **Audio Sources**.

The configuration of the **Events** is described in detail in chapter *5. EVENTS*

The configuration of the rest of the sections of this view will be detailed below.

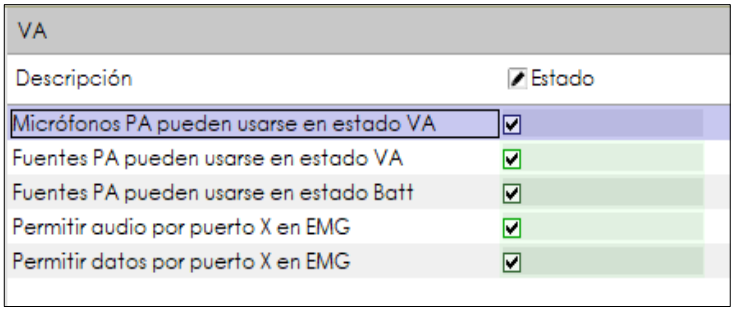
4.2.1. General Settings

When you click the root node in the **PA/VA System view**, the following configuration filters are displayed:

NOTE: The filters settings in this section will only be displayed with profile **Installer**, **Maintainer** or **Operator** (See *2.4.3. Users*)

a. VA Configuration

In this section, you can configure general parameters of the VA mode (Active General Emergency).



- **PA Mics can be used in VA state:** Enabling this option will allow routing of PA microphones when the system is in Emergency.
- **PA Sources can be used in VA state:** Enabling this option will allow routing of PA audio sources when the system is in Emergency.
- **PA Sources can be used in Batt state:** Enabling this option will allow routing of PA audio sources when the system is in battery mode.
- **Enable port X audio on EMG:** Enabling this option will allow the transmission of audio data through the X port when the system is in Emergency.
- **Enable port X data on EMG:** Enabling this option will allow the transmission of control data over port X when the system is in Emergency.

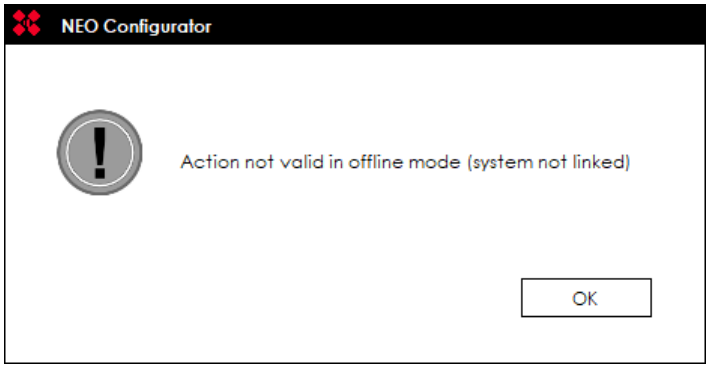
b. Presets

In this section, you can manage the presets of the NEO system. Presets are memories where the specific state of certain system operating parameters is saved:

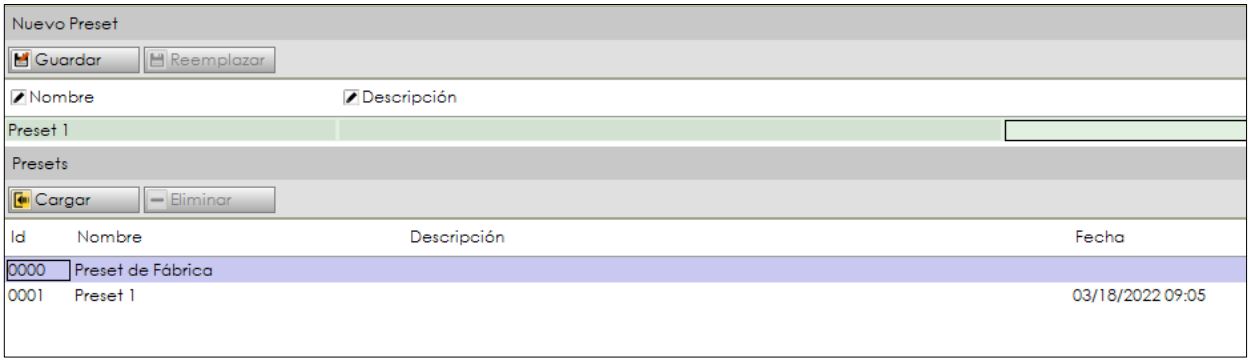
- **Audio Inputs**: Volume, Mute, Sound Enhancer and EQ Enablement
- **Zones**: Volume and Mute
- **Amplification Outputs**: Volume, Mute, Loudness and EQ Enablement
- **Source Routing Status to Zones**

The presets do not store other configuration parameters such as assigning outputs to zones, microphone configuration, or events.

The presets are saved by the NEO System Controller device, this means that they are not stored in the project and that, therefore, the list of saved presets can only be accessed when working in **online mode**.



If the NEO+ system has a **Backup Controller**, a second configuration window will appear within the "Presets" filter just like the **Main Controller**. The management of the presets will be done identically and independently on each controller



To reconfigure the system with the parameters stored in a preset, simply select it from the list in the "**Presets**" panel and then click on "**Load**".

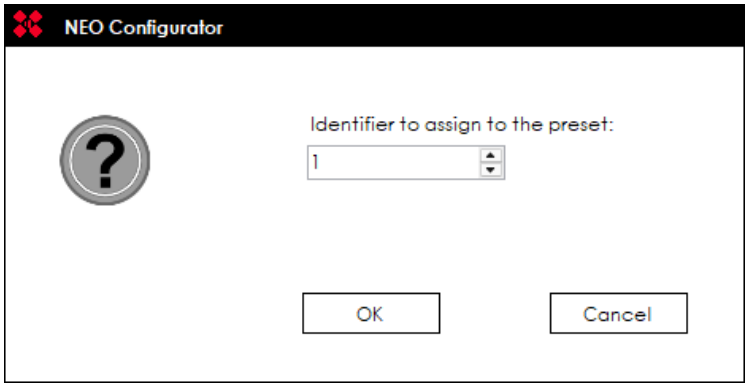
To create a new preset with the current operating parameters, you will have to fill in the Name and Description fields in the "**New Preset**" panel and then click on **"Save".** The maximum length for the name is 32 printable ASCII characters and 64 for the description.

To delete a preset, select it from the list in the Presets panel and then click "**Delete**".

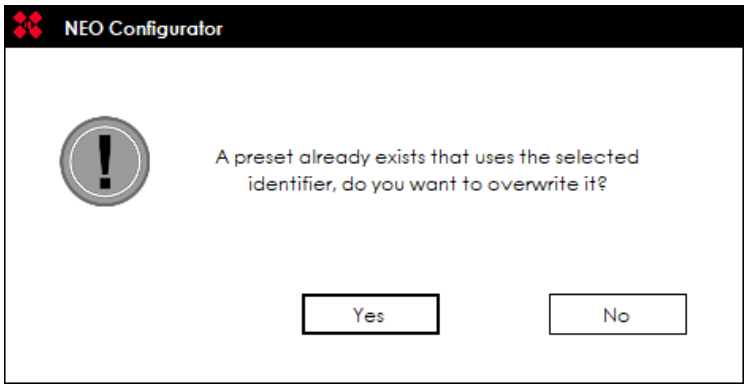
A copy of the presets stored in the Controller can be exported and imported from a stored file.

To export a preset to a file, you must first select a stored preset, other than the "Factory Default" and click on the "**Export preset to file**" button. The "Save As" window will open to select the path where you want to save the .pre file.

To import a preset, click the "**Import preset from file**" button. A dialog box appears in which the numeric identifier for the preset must be assigned. After pressing "OK" a window will open to select the import path.



If the numeric identifier is already assigned to a preset loaded into the Controller, it will be notified by the following message



NOTE: Export and **Import** features are available starting with **firmware version v3.03.XX.03.**

The columns in the preset list have the following meanings:

- **Id**: Not editable. An identifier automatically assigned when the preset is created.
- **Name**: Not editable. Name given to the preset in its creation.
- **Description**: Not editable. Description given to the preset at its creation.
- **Date**: Not editable. Date of preset creation.

The Factory Preset will always be available on the list. This preset will set the factory value for the parameters specified above. These factory values are:

- **Volumes**: All volumes at 0 in fountains, outlets and areas.
- **Mute**: All mutes disabled in fountains, exits, and zones.

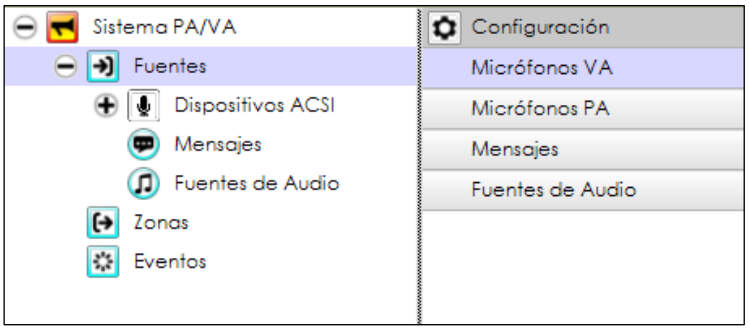
- **Routes from sources to zones**: All routes are eliminated.
- **Sound Enhancer**: Disabled on all sources except the PTT microphone.
- **Loudness:** Enabled on all amplification outputs.
- **EQ:** Disabled on all sources and outputs.

c. Logs

The logs available from the root node of the PA/VA System view are the same as in the node of the System Devices view. See *4.1.1. b. Logs*

4.2.2. Sources

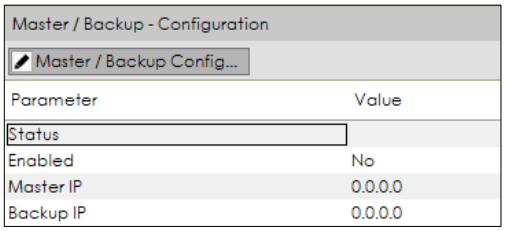
The **Sources** section is divided into 3 families: **ACSI Devices**, **Messages** and **Audio Sources**. Selecting the **Sources** node in the view tree will display the following selection filters:

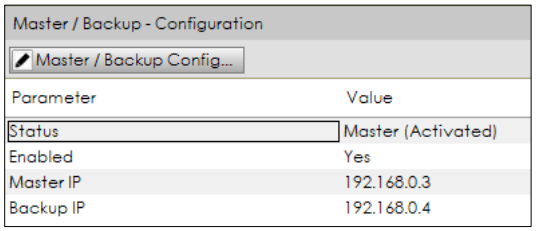


- **VA Microphones**: Will display in the main settings panel the list of emergency microphones (**VAP1** and **VAP1FES**) added to the project. From here they can add or remove microphones and edit their general parameters.
- **PA Microphones:** It will display in the main settings panel the list of **PA microphones** (**MPS8Z** and **MPS8Z+**), added to the project. From here, you can add or remove microphones and edit their general parameters.
- **Messages:** In online mode it will show in the main settings panel The list of Messages currently stored in the System Controller. From here you can manage the list of messages as explained in *b. Messages*
- **Audio Sources:** It will display in the main configuration panel the list of audio sources available to be routed to the system zones:
  - **First 5 local inputs** of the System Controller. See *4.1.4. b. Controller: Audio Inputs*
  - **Sources Remote** (**Cobranet**) configured in the system. See *4.1.4. d. Controller: Master*/Backup Config

The Master/Backup configuration selection filter will only be available for **NEO+ systems.**

It shows information about the two Controllers that make up the system and their current role.



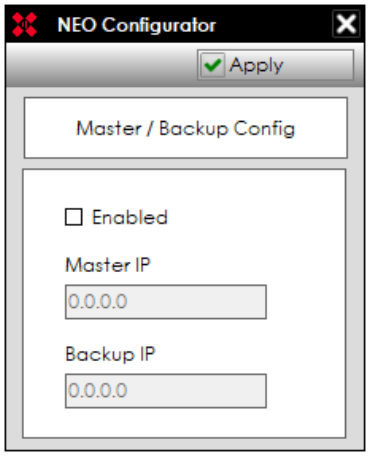


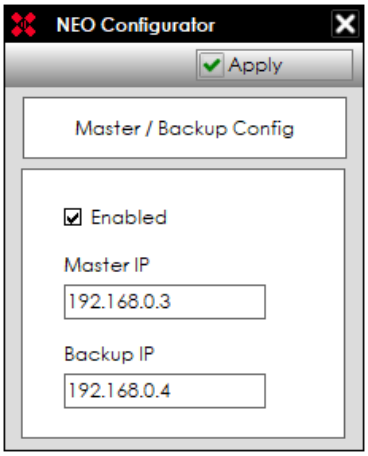
If your system consists of a single Controller, the parameters in this tab will appear unconfigured, as shown in the image on the left.

If the system is configured with a second Controller, these parameters will be **automatically completed** with the values designated for the Main Controller and the Backup Controller, as shown in the image on the right. See *3.3.1. c. Using the "Search Devices" tool* and *3.4.1. Assign a System Controller.*

- **Status**: Shows the role of the controller from which the configuration is being queried, Master or Backup, and its status in parentheses, Active or Hibernating.
- **Enabled**: Indicates whether the system has the Backup feature active. This is automatically activated when you add a Backup Controller to the system. Its value can be Yes, if the Backup function is active, or No, if the Backup function is not active.
- **Master IP**: IP address of the system's Main Controller.
- **Backup IP**: IP address of the system's Backup Controller.

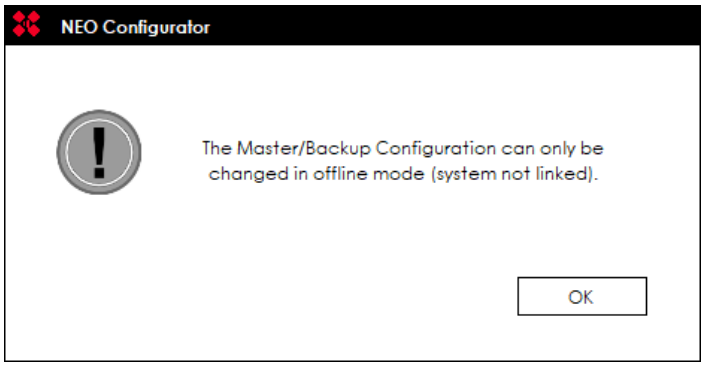
The top button "**Master / Backup config**" opens a new window, where it is possible to manually edit the IP addresses of the Controller with Master or Backup role.



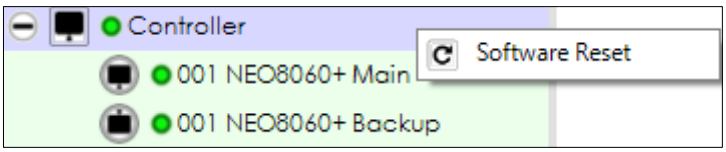


To save the changes, click the "**Apply**" button.

Any modifications to the Master/Backup configuration will be made exclusively in **offline mode**. If you otherwise try to edit in online mode, the following message will appear indicating that it is only possible to modify these parameters with the system not linked.



If the Main Controller is in a state of hibernation, but the system has already been restored to normal operation, a system reset will be necessary. To do this, just right-click on the "**Controller**" node and click on the "**Reset software**" option.



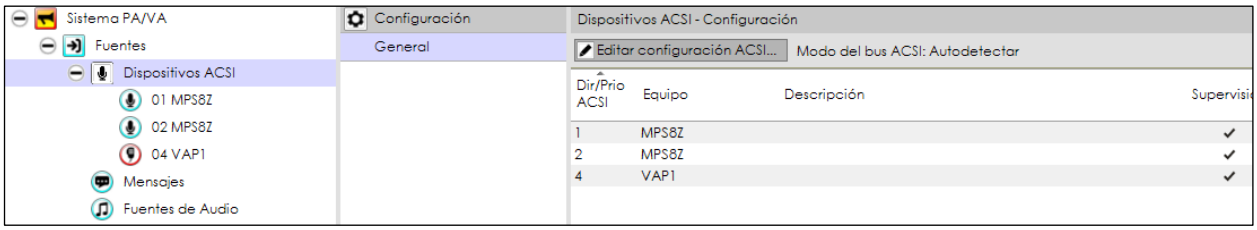
- Controller: Cobranet/AES76-Inputs

  Here only the identifier, type and name of the sources will be displayed, the latter being able to be edited.

In the event that the user profile does not have the corresponding permissions, the equivalent display filters will be displayed, and no configuration can be made.

a. ACSI Devices: PA and VA Microphones

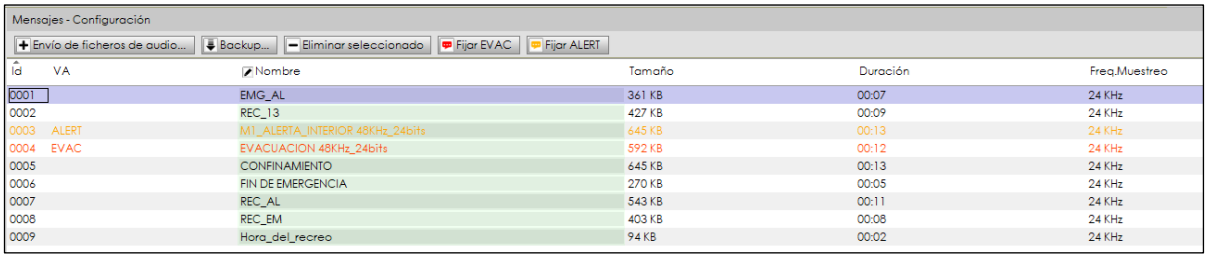
Selecting the "**ACSI Devices**" node in the system tree will display the General configuration filter. Through this filter, the list of all microphones configured in the system, both general public address (**PA)** and emergency (**VA),** will be displayed in the main configuration panel.



The parameters shown, as well as their configuration are identical to those described for the node "**ACSI Devices**" in view "**System Devices**". For a detailed description of all this, see the section *4.1.2. ACSI Devices: PA and VA Microphones*

b. Messages

By selecting the **Messages** node, you can access the list of audio files stored in the System Controller. If the user profile does not allow any configuration related to audio messages, instead of the **"Message Transfer"** configuration filter**,** the "**Status**" filter will appear, with which we can only display the list of messages.



Id	VA	Nombre	Tamaño	Duración	Freq.Muestreo
0001		EMG_AL	361 KB	00:07	24 KHz
0002		REC_13	427 KB	00:09	24 KHz
0003	ALERT	M1_ALERTA_INTERIOR 48KHz_24bits	645 KB	00:13	24 KHz
0004	EVAC	EVACUACION 48KHz_24bits	592 KB	00:12	24 KHz
0005		CONFINAMIENTO	645 KB	00:13	24 KHz
0006		FIN DE EMERGENCIA	270 KB	00:05	24 KHz
0007		REC_AL	543 KB	00:11	24 KHz
0008		REC_EM	403 KB	00:08	24 KHz
0009		Hora_del_recreo	94 KB	00:02	24 KHz

> **NOTE:** The display of the list of audio messages, as well as their management, can only be done in **online mode**.

If the NEO+ system has a **Backup Controller**, a second configuration window will appear within the "Message Transfer" filter equal to that of the Main Controller. Message handling will be done identically and independently on each controlle

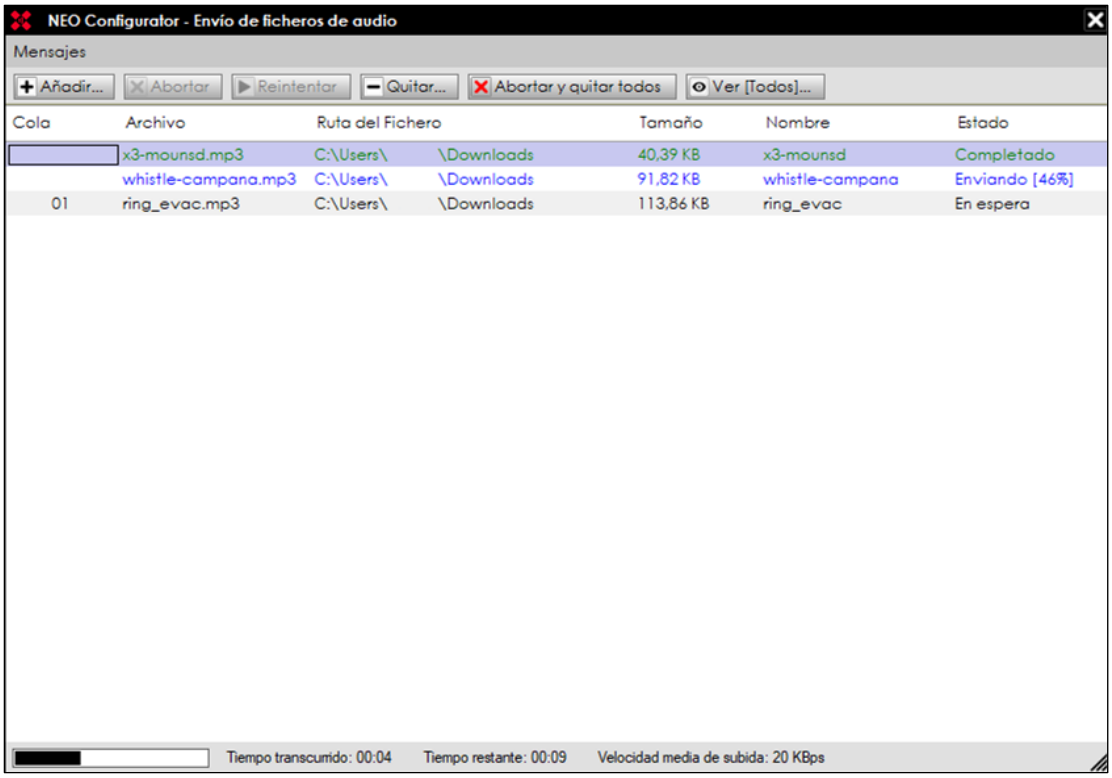
The parameters displayed for each message are:

- **Id:** Identifier assigned internally to the message by the device.
- **VA:** It will display **"EVAC"** for the message configured for Evacuation, which will appear in red, and **"ALERT"** for the message configured for Alert, which will appear in yellow. For the rest of the messages this parameter will appear blank.
- **Name:** Editable. Name of the message. Maximum of 31 printable ASCII characters.
- **Size:** File size.
- **Duration:** Duration of the file.
- **Freq.Sampling:** Sample Rate. It can be 24KHz or 48KHz. This Sample rate can be specified in the advanced options of the NEO System Controller, as details in ***4.1.4. n. Controller: Advanced***

Using the buttons on the top toolbar, you can perform various actions to manage the message list:

- **Sending audio files:** Opens a new window in which you will select the audio files that you want to send to the device, also being able to monitor the progress of the sending and the possible incidents that may occur. Its interface and operation will be described later.
- **Backup**: Allows you to download the selected audio file from the system Controller and save it to the desired location.
- **Remove Selected**: Deletes the selected audio files in the System Controller. It is not allowed to delete the files of the "**EVAC"** and **"ALERT"** messages. When deleting files, their identifiers will be free, the files that are uploaded later will make use of those identifiers sequentially.
- **Set EVAC:** Sets the selected file as the new "**EVAC**" message.
- **Set ALERT:** Sets the selected file as the new "**ALERT"** message.

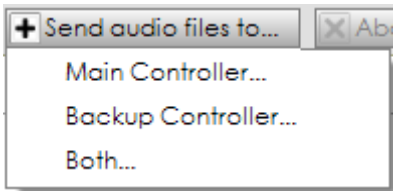
The window for sending audio files looks like this:



The upper toolbar will allow us to manage the sending of audio files using the following buttons:

- **Sending audio files...:** Opens a dialog box to search for and select the audio files you want to send to your computer. Once selected, they will be added to the shipping list.

Audio files can be sent to the Main Controller, Backup Controller or both at the same time.



- **Abort:** It will abort the sending of those selected files whose transfer is in progress or are on hold.
- **Retry:** Retry the sending of those selected files whose transfer has failed.
- **Clear:** A drop-down submenu will open where you can select which files to remove from the list according to their status; **Selected**, **Finished**, **Aborted**, **Failed**, **Not Sent**, **Not Valid**.
- **Abort and Clear all:** It will abort any shipments that are in progress and remove all files from the sending list.
- **View [...]:** Opens a submenu that allows you to filter which files will be seen in the mailing list; **All**, **Sending**, **Waiting**, **Finished**, **Aborted**, **Failed**, **Not Sent**, **Not Valid**.

The NEO System Controller can store a maximum of 99 messages. The maximum capacity for all messages is 2GB (more than 6 hours of audio).

When files are added, they are checked to see if they are valid audio files (**wav** or **mp3**) and converted to the NEO valid audio format (**16-bit single-channel PCM and 24 or 48 kHz**). If the file is invalid or there is an error in its conversion, it will be added to the list indicating the error. If the file is correct and there are no errors in the conversion, it is added to the list and will be sent or will remain in the queue if there is already another shipment in progress. The **maximum size for audio files**, once converted to **the NEO-friendly** format, is **62 Mb**.

The parameters displayed for each message in the sending list are:

- **Queue:** Position in the send queue. Files can only be sent one at a time. When several files are selected to send, the first one is sent, and the rest are queued.
- **Target:** Indicates the target device of the file, Main Controller or Backup Controller.
- **File:** Name of the selected local file.
- **FilePath:** The path where the selected local file is located.
- **Size:** File size.
- **Name:** Name with which the file will be displayed in the list of stored files once uploaded to the device. It is the same as the name of the local file by removing the extension. Since the maximum length for the name is 31 characters, those that exceed that length will be disregarded.
- **State:** Shows the submission status of the file. Possible errors when opening or converting the file are also indicated. Possible values:
  - **Completed:** File sent successfully.
  - **On hold:** File waiting to be sent.
  - **Sending [%]:** File that is currently being sent and sending progress expressed as a percentage.
  - **Aborted:** Aborted shipment. A shipment can be aborted from the app. The shipment can also be aborted by the team (when entering a state of emergency, for example).
  - **Invalid: very large:** The file size exceeds the maximum allowed (62Mb).
  - **Invalid: Formatting error:** The local file format is invalid.
  - **Invalid: Format error or lost encoding:** The local file format is invalid, or some codec is missing to convert the file to the clear format for NEO. It usually occurs if an mp3 codec is not installed and you are trying to convert an mp3 file of this format.
  - **Invalid: File does not exist:** The local file does not exist in the specified path.
  - **Not Sent: Offline:** No connection to the System Controller.
  - **Not sent: EMG ON:** The system is in Emergency, sending files is not allowed.
  - **Not sent: The maximum number of audio files allowed has been reached:** The file cannot be sent as the maximum number of files allowed has been reached.
  - **Not sent: Maximum storage allowed reached:** The file cannot be sent as the maximum storage space reserved for audio files has been filled.

- **Unknown error:** Error due to unknown causes.

At the bottom of the file submission window, the overall progress of the submission is displayed, the time elapsed since the current file submission was initiated, the estimated time for the transfer of pending files to be completed, and the average upload speed.

The file submission window can be closed at any time without cancelling the pending file submission. Pressing the **"Sending audio files"** button again will open the window again and we will be able to continue monitoring the progress of the current sending, add more files for sending or cancel any transfer in progress.

Whenever the Messages node is selected in the System PA/VA view and the application is in online mode, the status bar in the NEO Configurator main window will display the total storage capacity used and available for pre-recorded messages in the System Controller:

The **MSGUPLOAD** indicator indicates if an audio file submission is in progress. If yes, the status bar will also show the progress of the file sending:

A shortcut node will also **open the audio file transfer window** and automatically select the Messages node in the **PA/VA System view**.

If there is an audio file submission in progress, if you try to switch to offline mode, close the project or exit the application, a warning message will be displayed warning of such a circumstance, since the aforementioned actions will immediately abort any sending in progress or pending to be made.

c. Audio Sources

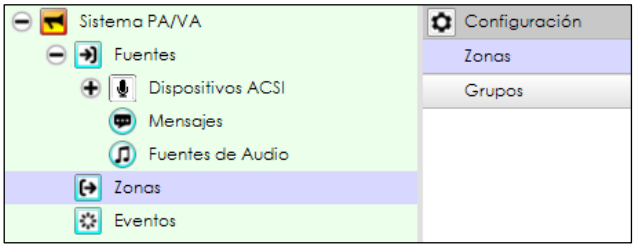
Selecting the **"Audio Sources" node** in the "**PA/VA System**" view, you can access the list of the System Controller's audio inputs, i.e. its five local physical inputs and the **Cobranet/AES67** remote sources that have been configured in the system. If the user profile does not allow any configuration related to audio sources, instead of the "**Audio Sources**" configuration filter, the "**Status**" display filter will appear, with which we can only display the list of audio sources.

Selecting the configuration filter will display the list of sources. Only the **Id, Type** and **Name parameters** of the sources will be displayed, with only the latter being editable.

The rest of the parameters of the audio sources, as well as their complete configuration, are accessed from the configuration filter **Audio Inputs** of the **Controller** system in view **System Devices** (See *4.1.4. b. Controller: Audio Inputs*).

4.2.3. Zones and Groups

Selecting the Zones node, the list of zones of the system is accessed. If the user profile does not allow any configuration related to zones, instead of the configuration filter **"Zones"** and **"Groups",** the corresponding display filters will appear, with which we can only display the lists of zones and groups of zones in the system.



a. Zones

By selecting the **"Zones"** configuration filter, we will obtain in the main configuration panel the list of all the zones of the system.

Each zone will be assigned one or more amplification outputs. By default, there will be as many zones in the system as there are amplification outputs. This can be customized in this configuration section according to the requirements of the project as will be seen later.

The parameters shown for each zone are

- **Id:** Not editable. Internally assigned numerical identifier.
- **Name:** Editable. Name of the area. Supports up to a maximum of 32 printable ASCII characters.
- **Description:** Editable. Description of the area. Supports up to a maximum of 64 printable ASCII characters.
- **Power Amplification outputs:** Editable. Identifiers of the amplification outputs that make up the zone.

  Editing this cell will open the output channel edit window for the zone, the interface and operation of which is described in *b. Assigning amplification outputs to a zone.*
- **Disarmed:** Editable. Enables or disables the unarmed state of the zone.

- **State:** Not editable. In online mode you can display any of the following values:
  - **Emergency:** When the area is in emergency mode.
  - **Fault:** When a failure is reported in the supervision of a speaker line or amplifier of any of the amplification outputs in the area.
  - **Disarmed:** When the disarm state has been enabled in the area.
  - **Quiescence:** When none of the other states is active, that is, the zone is operating normally in PA mode.
- **Volume:** Editable. Volume of the area. It can support values from -100 to 100.

  This parameter is independent of the volume of the amplification outputs that make up the zone, being applied as a group as a modifier of these. A zonal volume shall be valid as long as the final volume of each of the outputs is kept within the established valid limits (from -100 dB to 0 dB) after adding the volume of the zone to the volume configured for the output. Otherwise, the volume will not be assigned to the zone, and an error message will be displayed.
- **Use VA Volume:** Editable. Enables VA volume for the zone. The specified VA volume will be applied only when the zone is in Emergency.
- **VA Volume:** Editable. In case the **"Use VA Volume"** option is enabled in this zone, this will be the value of the volume applied when the zone is in emergency.

  The same value constraints apply to this parameter as the Volume parameter.
- **Mute:** Editable. Enables or disables zone mute. Muting a zone also mutes all amplified outputs assigned to it, regardless of whether or not output-specific mute is enabled.
- **Override:** Editable. Displays the activation status of the override outputs assigned to the zone. Override outputs are typically triggered by events or via ECI (Status Inputs) interface ports.

  The possible statuses that can be displayed in this cell are:
  - **Yes:** There are active override rides.
  - **No:** There are no active overrides.
  - **N/A:** The zone has no assigned override outputs.

  Editing this cell will open the override edit window for the zone, the interface and operation of which is described in ***c. Assigning override outputs to a zone.***
- **Source:** Editable. Displays the routed permanent source currently to an area, allowing you to change sources or not to route any. Permanent sources herself described in the ***4.2.2. c. Audio Sources***.

The buttons on the top toolbar allow you to perform the following actions:

- **Add Zones:** A dialog box will open to indicate the number of zones to be added to the system. The final number of zones cannot be greater than the number of amplified outputs in the system.
- **Delete Selected Zones**: Will remove the selected zones from the system. There must be at least one area left in the system.

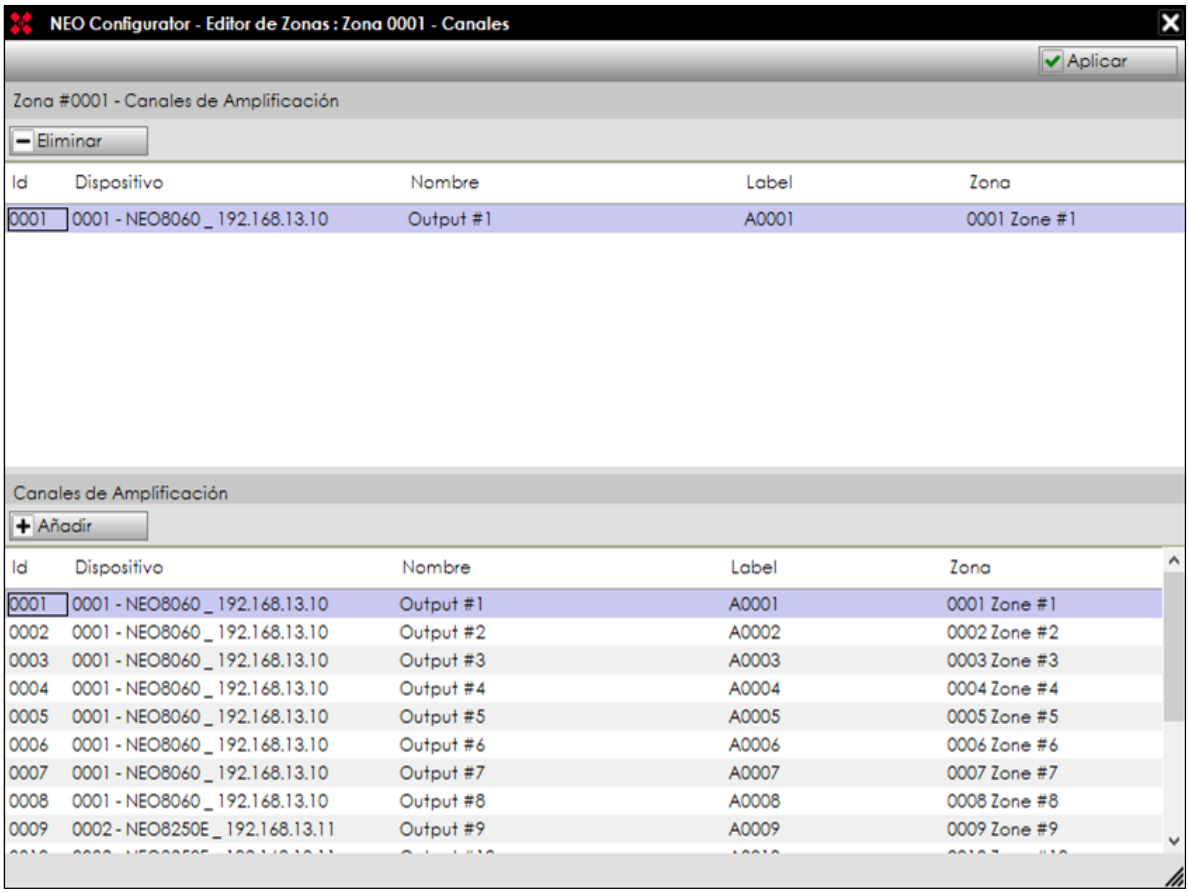
- **Route:** A drop-down menu will open where you can choose which Source will be routed to the selected zones. If you want no source to be routed in the selected areas, you will have to select the option **"0: None".**
- **Mute:** Opens a drop-down menu to enable (**On**) or Disable (**Off**) mute in the selected zones.
- **Edit Output Channels:** Open the output channel edit window for the selected zone, the interface and operation of which is described in *b. Assigning amplification outputs to a zone.*
- **Edit override:** Open the override exit edit window for the selected zone, the interface and operation of which is described in *c. Assigning override outputs to a zone.*
- **VA Volumes:** Global control of VA volumes. Functionality analogous to that described in *4.1.4. b. Controller: Audio Inputs*

b. Assigning amplification outputs to a zone.

The window for configuring the assignment of amplification outputs to a zone can be accessed in two different ways:

- Selecting the area and then pressing **"Edit Output Channels".**
- Double-clicking the **Power Amplification Outputs** column in the zone

This edits window looks like this:



The upper panel shows the list of amplification outputs currently assigned to the area, while the lower panel will have the list with all the amplification outputs of the system.

The parameters shown in both cases are the same:

- **Id:** Numerical identifier of the amplification output in the system.
- **Device:** Information about the device to which the amplification output belongs; the FlexNet identifier of the device, its Model and its IP address.
- **Name:** Name given to the output in the system.
- **Label:** Identification label of the output.
- **Zone:** Zone to which the exit is currently assigned. It will appear blank if it is not assigned to any zone.

Multiple outputs can be assigned to an area, so that this group of outputs can cover a common area with their speaker lines.

Each audio output can only be assigned to one zone, or in other words, it is not possible to assign an audio output to several zones.

To assign amplification outputs to a zone:

- Select the outputs in the bottom panel **"Amplifier Channels".**
- Click on **"Add".**

An output can also be added by double-clicking directly on it.

> **NOTE:** If a previously assigned audio output is added to a different zone, the output will be automatically removed from that other zone.

To remove amplification outputs from a zone:

- Select the outputs in the top panel **"#XXXX Zone – Amplifier Channels".**
- Click on **"Delete".**

> **NOTE:** When you delete an audio output assigned to a zone, this output will remain unassigned, not belonging to any zone. If you want to use this newly released output, you will need to ensure that it is allocated to another area according to the project specifications.

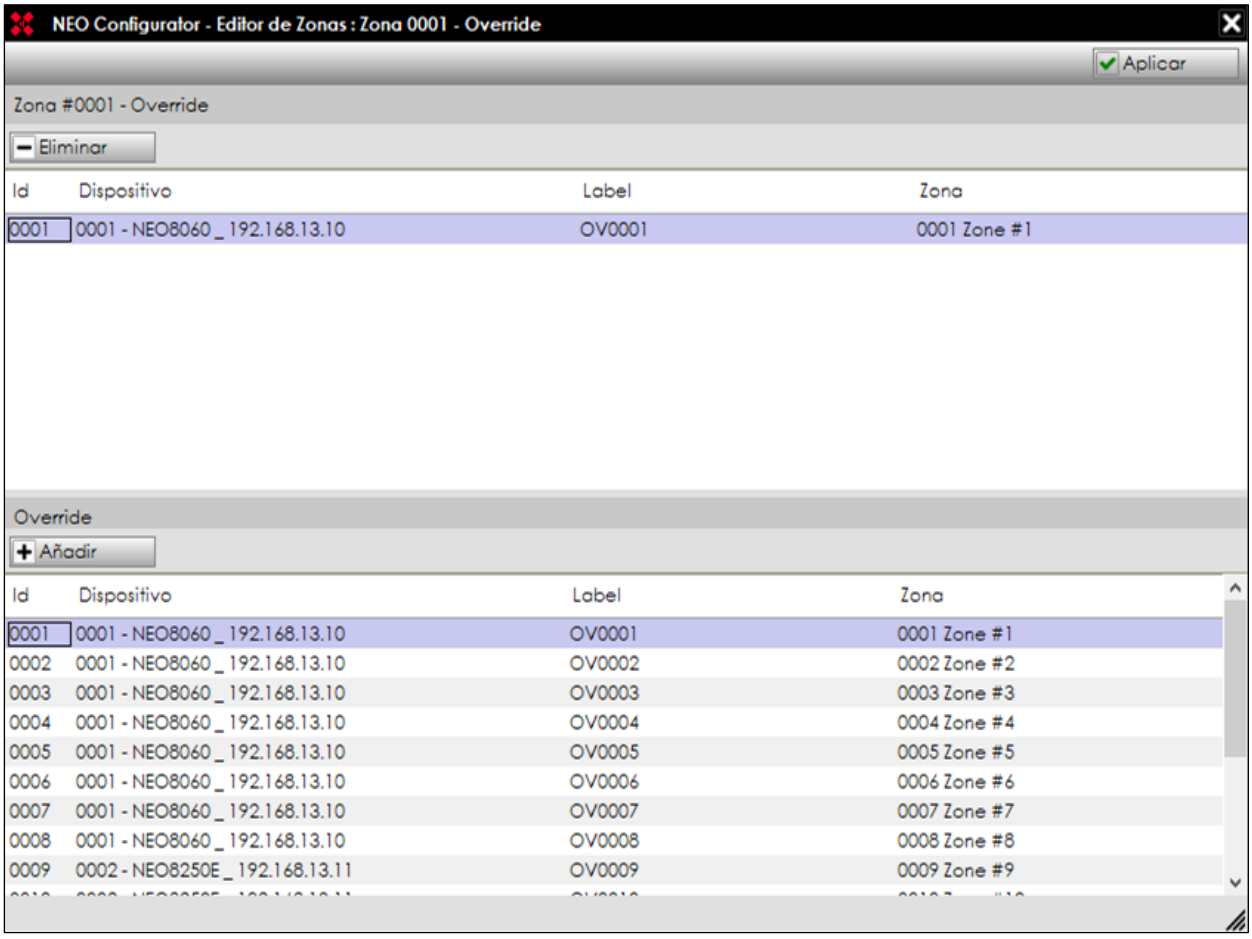
Once you have the desired selection of amplification outputs, clicking on **"Apply"** will save the assignment set for the area.

c. Assigning override outputs to a zone.

The window to configure the assignment of override outputs to an area can be accessed in two different ways:

- Selecting the area and then pressing **"Edit override".**
- Double-clicking on the **"Override"** cell in the zone

This edits window looks like this:



The upper panel shows the list of override departures currently assigned to the area, while the lower panel will have the list with all the override outputs of the system.

The parameters shown are the same in both cases:

- **Id:** Numeric identifier of the system's override output.
- **Device:** Information about the device to which the override output belongs; the device FlexNet identifier, its Model and its IP address.
- **Label:** Identification label of the exit.
- **Zone:** Zone to which the exit is currently assigned. It will appear blank if it is not assigned to any zone.

Override outputs can be activated in 2 ways:

- By activation of EMG or zonal status entries.
- Using Override actions in the event manager.

In this window you can configure the override outputs that each zone will activate when the first case occurs. By means of events it is possible to activate each override output individually.

The assignment of override outputs to a zone can be done independently of the amplification outputs assigned to that same zone. For example, a zone might be assigned amplification outputs 3, 5, and 6 and at the same time have outputs or override 2, 3, 4, and 6 assigned. It is also possible to have s-zones in the system without assigned override starts. In either case, it will all depend on the specific requirements of each project.

Each override output can be assigned to a single zone, i.e., it is not possible to assign the same override output to more than one zone.

To assign override rides to a zone:

- Select the override outputs from the bottom "**Override**" panel.
- Click on **"Add".**

It is also possible to add an output by double-clicking directly on it.

> **NOTE:** If an already assigned override ride is added to a different zone, the ride will be automatically removed from that other zone.

To remove exits overrides from a zone:

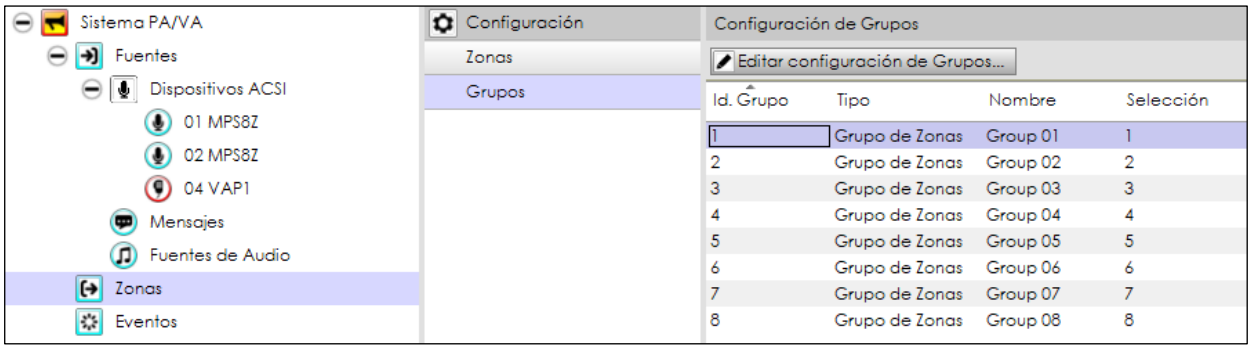
- Select the override outputs in the top panel **"Zone #XXXX – Override".**
- Click on **"Delete".**

> **NOTE:** When an override assigned to a zone is deleted, this output will be released into the system, not belonging to any zone.

Once you have the desired selection of override departures, clicking on **"Apply"** will save the assignment established for the area.

d. Groups

By selecting the **"Groups"** configuration filter, we will get in the main configuration panel the list of all the zone groups configured in the system.

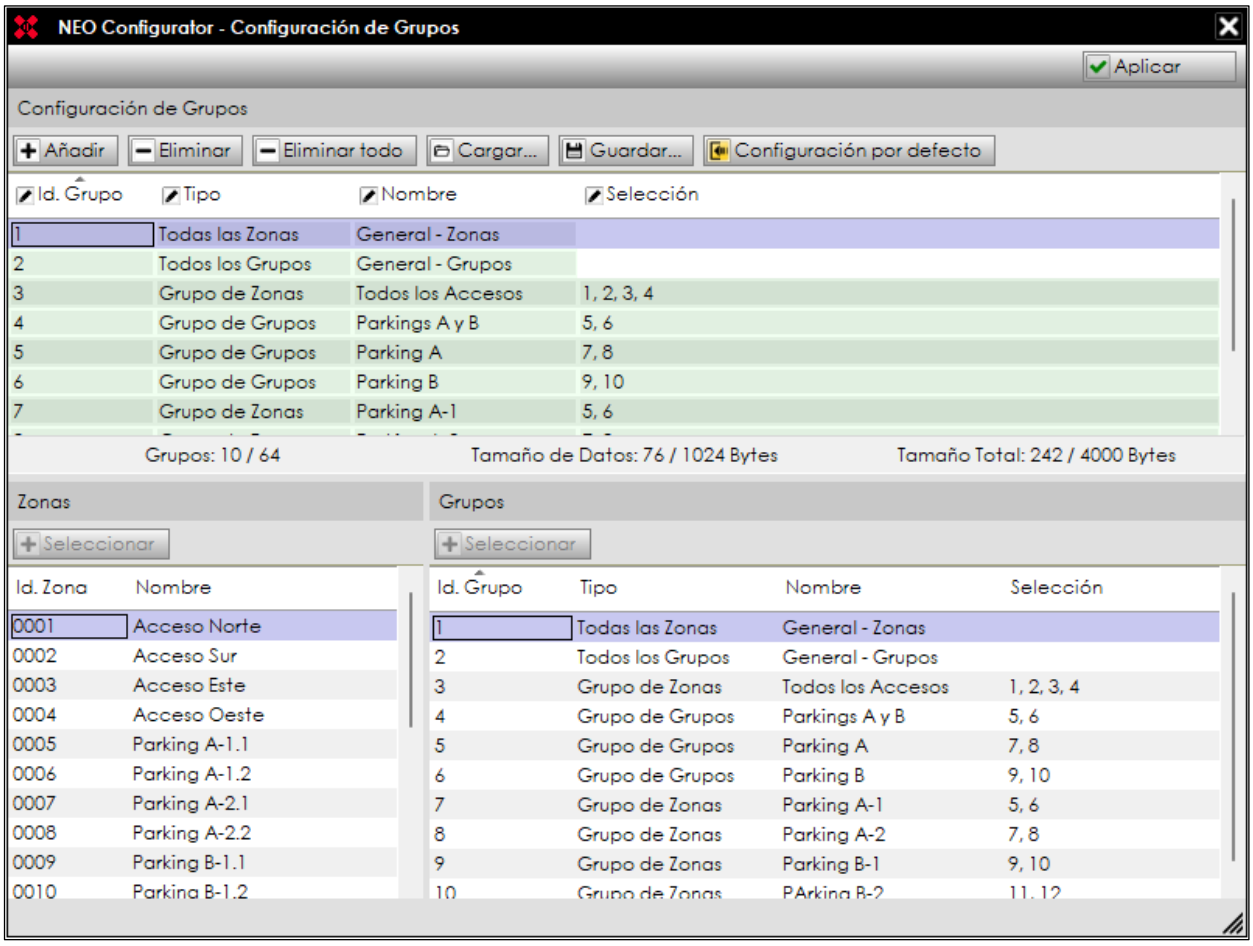


Groups are entities designed to provide greater flexibility and capacity to address the buttons of ACSI devices, both VA microphones and PA microphones. See *4.1.2. c. ACSI Device Button Configuration*

The parameters listed for each group in the general settings panel are:

- **Id:** Not editable. Group identifier.
- **Type:** Non-editable. Indicate what type of the group is.
- **Name:** Not editable. Identifying text of the group.
- **Selection:** Not editable. Identifiers of the elements (groups or zones) that make up the group.

As you can see, groups are not editable directly in the general settings panel, to do so you will have to click on **"Edit Group Settings",** which will open the group editing window:



At the top of the window, the **"Group Configuration"** panel shows again the list of currently configured groups, here allowing you to edit their parameters:

- **Id:** The group ID supports values from 1 to 255. There cannot be two or more groups with the same identifier.
- **Type:** Groups can be of four types,
  - **All Zones:** Grouping of all zones of the system.
  - **All Groups:** Grouping of all the groups in the system.
  - **Group of Zones:** Grouping of zones.
  - **Group of Groups:** Grouping of groups.
- **Name:** Identifying text of the group. Supports up to a maximum of 64 printable ASCII characters.
- **Selection:** Editable for **Zone Group** and **Group of Group** types. Allows you to enter the list of **zone or group identifiers**, according to the type you set, **separated by commas, by keyboard**. In this regard, the following restrictions must be complied with:

- **Group of Zones:**
  - Only **valid zone identifiers** are allowed, i.e. **from 1 to 1024**.
- **Group of Groups:**
  - Only **valid group identifiers** are allowed, i.e. **from 1 to 255.**
  - Group references of the All Zones and All Groups types are not allowed.
  - A group reference nesting level greater than 5 is not allowed.
  - **Cyclical references are not allowed**, i.e. a group cannot reference itself or other groups that include a reference to itself.

It is also possible to configure the selection of zone or group identifiers using the **"Zones"** or **"Groups"** panels located in the lower half of the window. These two panels include the list of all currently configured zones and groups. To do this, the following steps will have to be taken:

- Select the group whose zone or group selection you want to edit. Only one of the **"Zones"** or **"Groups"** panels will be enabled to configure the selection.
- Choose from the list in the corresponding panel the items you want to set as the selection of the group.
- Press the related **"Select"** button and the chosen items will appear in the **"Selection"** field of the group, replacing any other previous values.

In addition, using the buttons on the toolbar in the **"Group Settings"** panel**,** you can perform the following actions:

- **Add:** Add a new group. The new group will have as its identifier the first free value starting from 1. Up to a **maximum of 64 groups** can be added.
- **Delete:** Deletes the selected group or groups.
- **Delete All:** Deletes all groups.
- **Load:** Retrieves group settings from a file.
- **Save:** Saves group settings to a file.
- **Default configuration:** Sets the default group configuration, i.e. as many Zone Group groups as there are zones in the system, with consecutive identifiers starting from 1 and referencing only the zone with the same identifier.

There is a maximum size to hold all **the group configuration**, that **maximum size** is **4000 bytes** and is divided into data and text. The data is composed of the identifiers, type, and information about the identifiers of the referenced elements. **For data,** the maximum size available is **1024 bytes**. **For text**, which refers to the name given to each group, the **rest of the 4000** bytes mentioned will not be used for data.

At the bottom of the **"Groups Settings"** panel, **information** about the **total number of groups** configured, the **total bytes used for data,** and the **total bytes used** of the maximum available for the group configuration is displayed.

When you have the desired group configuration, you will have to click on **"Apply"** so that the configuration is saved in the project. In online mode it will also be sent directly to the System Controller.

It will not be possible to apply the group configuration if there is an error in it. Errors are indicated at the top of the editing window, with white text on a red background:

The displayed error may incorporate additional information with the group IDs related to the error, in which case they will be highlighted in red in the list of groups.

Here are the **possible errors** that can be reported in the edit window:

- **Cyclic dependency detected in Group selections:**

  When in a group of type **"Group of Groups"** the selection of referenced elements contains a reference to the group itself. The identifiers of the affected groups are indicated.

- **Ids detected. Group duplicates:**

  When multiple groups have the same ID configured. Duplicate identifiers are indicated.

- **Ids detected. Invalid in Group Selections:**

  When a group selection contains invalid identifiers. This can happen, for example, when switching from the **"Zone Group"** type to the **"Group of Groups"** type, because zones can have values for their identifiers that are higher than those allowed for groups. The identifiers of the affected groups are indicated.

- **Indirect reference to 'All Groups' detected:**

  When a group of type **"Group of Groups"** contains an unauthorized reference to a group of type **"All Groups".** The identifiers of the affected groups are indicated.

- **Indirect reference to 'All Zones' detected:**

  When a group of type **"Group of Zones"** contains an unauthorized reference to a group of type **"All Zones".** The identifiers of the affected groups are indicated.

- **Exceeding the maximum level of nesting of Groups:**

  When a group of type **"Group of Groups"** contains references with a nesting level greater than **5**.

- **The maximum size for the Groups configuration has been exceeded:**

  When the data size of the group configuration exceeds the maximum allowed size of **1024 bytes**.

- **Exceeds maximum size for configuration data and texts from Groups:**

  When the data and text size of the group configuration exceeds the maximum allowed size of **4000 bytes**.

5. EVENTS

The LDA NEO series offers great flexibility to adapt the system to a multitude of requirements thanks to its event management system. The event manager module allows you to centralize the automation of many of the system's functions according to the specific needs of each facility.

The Event Module settings can be accessed in two different ways:

- In the **PA/VA System** view, click the Events node.
- Through the main toolbar, clicking on the **shortcut** to said node: 

The Event Management module bases its operation on four basic entities: **Triggers**, **Conditions**, **Actions** and **Events**.

- **Triggers:** They represent states or parameters of system operation that can be summarized in a Boolean logical value.
- **Conditions:** Combine one or more Triggers using logical operators to construct a logical expression that will determine the activation or termination of an event.
- **Actions:** These are the operations that the event will perform when it is executed.
- **Events:** It is the final entity that relates Conditions and Actions for the desired operation to be carried out.

Once you are in the Events node of the PA/VA System view, you will see selection filters to access the configuration of each of the basic entities of the event manager module.

After accessing any of these four sections, the Event Editing Mode toolbar will appear at the top of the main settings panel, which will initially show the following appearance:

To configure events, you must first start Event Edit Mode, after which the Event Edit Mode toolbar will appear as follows:

The actions that we can carry out through this toolbar are:

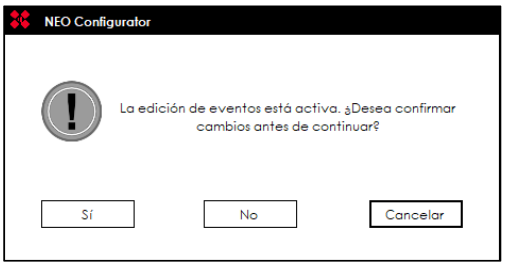
- **Enter Edit Mode:** Starts event edit mode.
- **Confirm Changes:** End the event edit mode by saving all changes that have been made.
- **Discard Changes:** Ends the event editing mode by discarding any changes made since the last start of the mode.

- **Load events from file:** Load from a file all the configuration of triggers, conditions, actions and events.
- **Save events to file:** Saves all the configuration of triggers, conditions, actions and events in a file.
- **Delete all:** Clear all triggers, conditions, actions, and events.

The Event Edit Mode will be available in both online and offline modes. As always, when working in offline mode, no information will be sent to the physical system, everything will be stored in the Neo Configurator project.

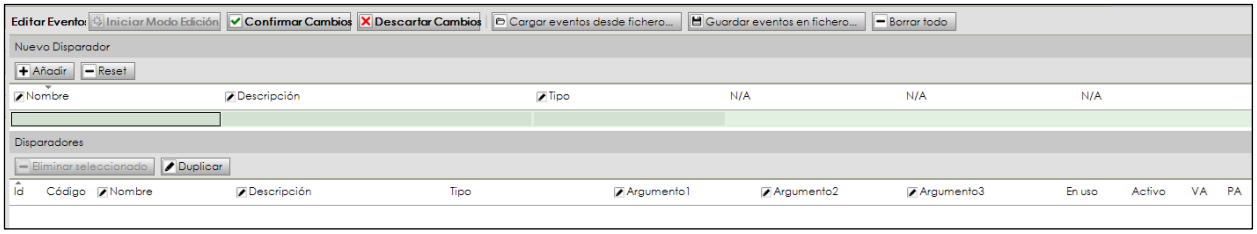
Working in online mode, when exiting Event Edit Mode committing changes, the entire event manager configuration (triggers, conditions, actions and events) will be sent in bulk to the System Controller.

If the user remains in Event Edit Mode, the indicator EVENTS EDIT will be active in the main status bar. This means that any changes made will not have been confirmed or ruled out yet. This indicator, when located in the main status bar, will always be visible in the application. In any case, when any project saving or opening operation is going to be carried out or the system configuration is going to be imported or exported, if the Event Edit Mode is active, a warning message will be displayed requesting confirmation or not of possible pending changes.



When Event Edit Mode is not active, the Triggers, Conditions, Actions, and Events settings panels will only show a list of all items of each type already created. When the Event Edit Mode is active, a panel will appear above that list for the creation of new elements or the modification of existing elements.

5.1. Triggers



Triggers are the primary logical units that determine the execution or completion of an event. To create a new trigger, once inside the trigger configuration panel and with the Event Editing Mode active, you will have to fill in the editable fields of the "New Trigger" panel that appears above the list of triggers; **Name**, **Description**, **Type** and the rest of the possible parameters, which will depend on the type of trigger chosen. Clicking the "**Add**" button will add the new trigger to the current event list displayed in the bottom panel. Pressing the **"Reset"** button deletes all the information written in the editable cells to start from scratch the creation of a new trigger.

The configurable fields for a new trigger are:

- **Name:** Name of the trigger. Maximum 31 printable ASCII characters.
- **Description:** Descriptive text of the trigger. Maximum 63 printable ASCII characters.

- **Type:** Type of trigger. Once created, it is not possible to modify the type of trigger.
- **Arguments:** Depending on the type of trigger chosen, one, two, or three new specific configurable parameters (the columns that initially appear with the N/A header) will appear.

There cannot be two triggers with the same values for the **Type**, **Subtype,** and **Arguments** parameters. If you try to add a trigger with identical parameters as an existing one, an error message is displayed.

In the list of triggers, clicking on **"Duplicate"** the parameters of the selected trigger will be copied to the **"New Trigger"** panel, allowing you to create a new trigger from them.

By clicking on the **"Remove Selected"** button**,** the selected items in the trigger list will be removed.

With Event Edit Mode active, it is possible to modify some parameters of the items displayed in the trigger list.

The meaning of each column in the trigger list is:

- **Id**: Not editable. Internal numeric identifier assigned to each trigger.
- **Code:** Not editable. Trigger identification label, used to reference the trigger in the creation of Conditions.
- **Name:** Editable. Name of the trigger. Maximum 31 printable ASCII characters.
- **Description:** Editable. Descriptive text of the trigger. Maximum 63 printable ASCII characters.
- **Type:** Non-editable. Type of trigger. Once created, it is not possible to modify the type of trigger.
- **ArgumentN:** Editable. Specific parameters for each type of trigger.
- **In use:** Not editable. Indicates whether the trigger is being used for one or more conditions.
- **Active:** Not editable. In online mode it indicates that this trigger is active, in which case it will be highlighted in orange.
- **VA:** Not editable. The trigger is valid for use in VA mode.
- **PA:** Not editable. The trigger is valid for use in PA mode.

Each trigger can only have a single logical state: **Active** or **Not Active**.

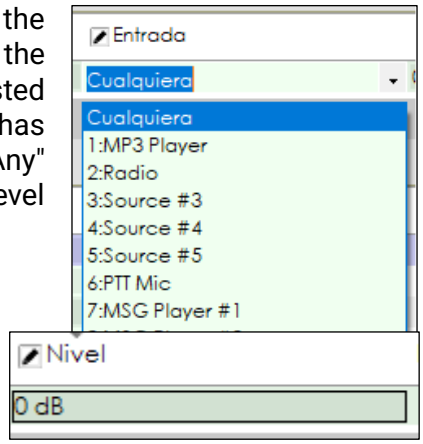
> **NOTE:** If a trigger is in use, it will not be allowed to be removed, first those conditions that make use of it must be removed.
>
> **NOTE:** No two triggers can be with identical types and arguments.

The different types of triggers available will be described below, as well as their configuration parameters.

5.1.1. Input level

These triggers are triggered when the volume level of an audio input on the System Controller exceeds a specified value. Their arguments are:

- **Input:** Audio source input. Only the physical sources of the System Controller (inputs 1 to 5, PTT microphone and the two message players) can be selected. Fonts will be listed with their numeric identifier followed by the name that has been set to them in the Controller. By selecting the "Any" option, the shutter release will activate if the volume level indicated on any of the 8 inputs is exceeded.



- **Level:** Level that must be passed at the selected input to activate the trigger. It supports values between -100 and 0 dB.

5.1.2. Condition

This type of trigger will activate when a specified Condition is triggered in turn. Arguments:

- **Condition:** One of the previously created available Terms will have to be selected.

5.1.3. Command

The activation of this type of Trigger will be determined by the receipt of a specific ASCII or Hexadecimal command through the Ethernet network or one of the integration serial ports. These triggers are intended for third-party integrations. Their arguments are:

- **Type:** There are three possible options depending on the receiving interface used:
  - **UDP:** Ethernet
  - **RS-485 - PA Port:** PA Integration Port
  - **RS-485 - VA Port:** VA Integration Port
- **Format:**
  - **ACSII:** Allows commands of up to 64 printable ASCII characters.
  - **HEX:** Allows commands of up to 64 bytes with their values expressed in hexadecimal digits (two digits per byte).
- **Command:** Text or sequence of bytes in hexadecimal that defines the command.

NOTE: UDP Command type triggers will only be activated when commands are sent to **port 62000** of the **NEO System Controller device**.

5.1.4. Date

Date-type triggers are activated on specific days determined by their configuration parameters. They can be combined with "Time" type triggers for greater temporal accuracy when launching events.

- **Type:** Date-type triggers can be of the following types:
  - **Single:** Activated on a specific date defined by a day, month, and year.
  - **Period:** Activated for a period of days that will be defined by a start date and an end date.
  - **Yearly:** Activated each year during a day in a specific month.
  - **Monthly:** Activated on the same day of each month.
  - **Weekly:** Activated on one or more days of each week.
- **Arguments:** The number of arguments will vary depending on the previous parameter:
  - **Single:** An argument; the activation **Date**.
  - **Period:** Two arguments; **Start** Date and **End** Date.
  - **Yearly:** An argument; **Day** and **Month**.
  - **Monthly:** An argument; **Day** of the Month.
  - **Weekly:** A storyline; list of selected **Days** of the Week.

5.1.5. Event

This type of trigger will be triggered based on the execution state of the referenced event. Event triggers can be used to concatenate the sequential execution of multiple events. Its configuration parameters are:

- **Event:** A reference to one of the currently configured events.
- **State:** The status of the execution of the referenced event that will determine the trigger's trigger. The options available for this parameter are:
  - **Execution Start:** The trigger will fire the instant the event starts its execution.
  - **Execution End:** The trigger will activate the instant the event finishes its execution.
  - **In Execution:** The trigger will be active while the event is running.
  - **Idle:** The trigger will be active while the event is not running.

5.1.6. GPIO Input

This type of trigger is used to integrate third-party devices through the events module. Knowledge of the current GPIO port configuration is necessary on the System Controller, since this port can be used alone as an input by this type of trigger (See *4.1.4. i. Controller: GPIO*).

The configurable argument for this type of trigger is:

- **GPIO:** Number of the GPIO input port to use.

> **NOTE:** Although ECI zonal ports 1 through 8 are also included as Argument 1 options, it is recommended to use the specific type of ECI trigger instead.
>
> **NOTE:** In case the chosen GPIO port is not previously configured as input, it will be set as such when applying the trigger settings.

5.1.7. CIE Input

These triggers use the **zonal state inputs of** the **ECI** interfaces of the **NEO System Controller** device and its **Extensions**.

ECI Input: Number of the **ECI input port** to be used. This value can be as high as the total number of zonal state entries in the system. ECI identifiers are correlative obeying the order of NEO device in the system's **FlexNet** configuration.

> **NOTE:** Using an **ECI zonal state entry** as a trigger **disables its default behavior** as a zonal **EMG** entry on the computer.

5.1.8. Time

This trigger uses the time in the System Controller as the trigger source. It can be used to launch messages or other actions at certain times.

- **Type:** This trigger is subdivided into two types
  - **Single:** The trigger will activate briefly at a specific time.
  - **Period:** The trigger will remain active for a defined period by a start time and an end time.
- **Arguments:** The number of arguments will vary depending on the previous parameter
  - **Single:** A single argument; activation **time**.
  - **Period:** Two arguments; **start** time and **end** time of the activation period.

5.1.9. ACSI

This trigger will use the buttons on the ACSI microphones as triggers. For proper operation, the referenced microphone must be installed and configured in the system and in line with the Controller. This trigger will be activated briefly in the form of a pulse when the corresponding button on the specified microphone is pressed.

The arguments for its configuration are:

- **Model:** Specifies the expected microphone model. The options are:
  - **MPS8Z** and **MPS8Z+:** PA microphones.
  - **VAP1:** VA microphone.
  - **Any: Any** model will be valid for activation.
- **Address:** ACSI address that the microphone should have. Supports values between 1 and 8.
- **Button:** Microphone button designed for this shutter release. It supports values between 1 and 64.

5.1.10. System Status

This type of trigger is activated based on the operating states of the LDA NEO system. Its configuration parameters are as follows:

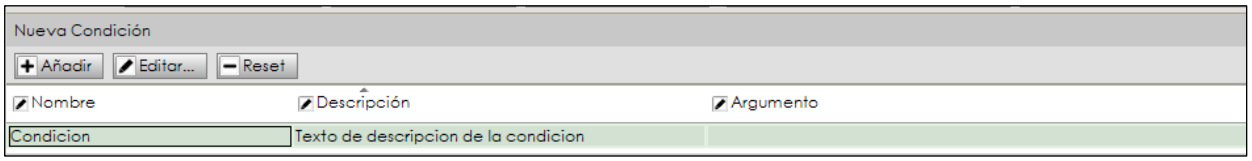
- **State:** The state of the system that will determine activation. The options are:
  - **PA:** General public address status (State of Emergency not active).
  - **VA:** State of Emergency.
  - **FLT:** Fault Status.
  - **DIS:** Disarmed State.
- **Action**: Determines the instant or period of activation based on the previous parameter. Possible values:
  - **Enter:** Activation will occur briefly when the system enters the specified state.
  - **Exit:** Activation will occur briefly when the system exits the specified state.
  - **Active:** The trigger will be active while the system is in the specified state.
  - **Inactive:** The trigger will be active while the system is not in the specified state.

The **PA and VA states are mutually exclusive**, the system can only be in one of them at any given time. The **FLT and DIS states could be activated independently at any time**.

5.2. Conditions

Conditions allow you to combine triggers using logical operators and determine the timing of event execution. This includes when they start, how long they stay running, and when they end.

As with triggers, **you need to enter edit mode** and select the Conditions selection filter in the Events node of the **PA/VA System** view before you can edit them. This will display the panel for creating new Conditions:

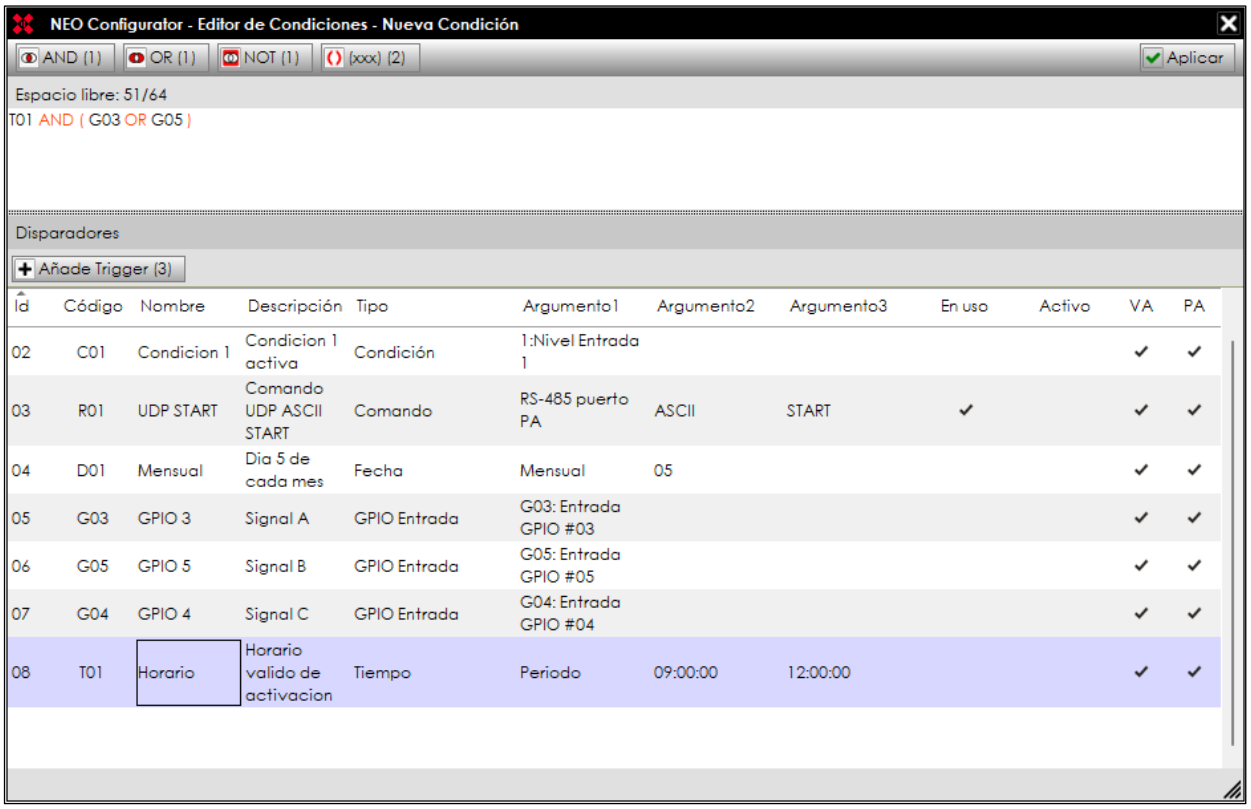


The parameters for creating a new condition are:

- **Name:** Name of the condition. Maximum 31 printable ASCII characters.
- **Description:** Descriptive text of the condition. Maximum 63 printable ASCII characters.
- **Argument:** An expression constructed using related triggers using logical operators. To edit this expression, the Conditions Editor will be used, which will be displayed as a pop-up window.

Clicking on **"Add"** will save the new Condition, which will be added to the list of conditions. Clicking on **"Reset"** will delete the content of the arguments, allowing you to create a new condition from scratch.

There cannot be two conditions with the same value for the Argument parameter. If you try to add a condition with the same **Argument** as an existing one, an error message will be displayed.



The **"Edit"** button opens the Condition Editor window. This window can also be accessed by editing the Argument cell in the **"New Condition"** panel. At the bottom of the Condition Editor is the list of current triggers, which can be selected to be added to the logical expression of the condition. To do this, you will have to press **"Add Trigger"** and the trigger code will be added to the top text box.

The top text box is where **the logical expression of the Condition** will be built. The buttons above this text box can be used to add logical operators to the expression:

- **AND:** Logical operation **And**; between two Triggers means that both must be active for the expression to be affirmative. Example:
  - ***T01 AND G01*** - True when both triggers are active.
- **OR:** Logical operation **OR**; between two Triggers means that one or both of the two must be active for the expression of affirmative result. Example:
  - ***T01 OR G01*** - True when at least one of the two triggers is active.
- **NOT:** Logical operation **Not**; preceding a Trigger means that it must be inactive for the expression to be affirmative. Example:
  - ***T01 AND NOT G01*** - True when the T01 trigger is active and G01 is not.
- **():** The parentheses allow the expression to be constructed by establishing the order of application of each operation, organized into sub-expressions. Examples:
  - ***(T01 OR T02) AND (G01 OR G02)*** – True when at least one of the T01 and T02 triggers are active and at least one of the G01 and G02 triggers are active.

The maximum size for the logical expression is 64 bytes. Above the text box of the condition editor is a label with the currently free space in relation to that maximum. The size used by operators and triggers is as follows:

- **3 bytes** for each **trigger**.
- **1 byte** for each **logical operator**.
- **1 byte** for each **parenthesis**.

This is indicated in parenthesis next to the text of the buttons in the Conditions editor.

The logical expression of the condition can be typed directly with the keyboard. In this case, the following restrictions must be respected:

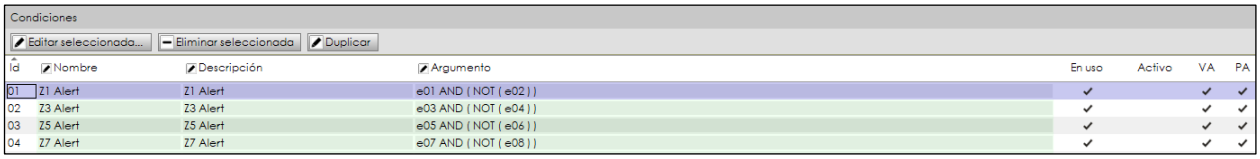
- The **codes of the Triggers** written must correspond to existing Triggers. They are **differentiated between upper and lower case**.
- **Logical operations** must be written **in capital letters**: **AND, OR, NOT**
- **Parentheses** should always be used in pairs, with the **opening bracket always preceding the closing bracket.**
- Spaces can be used if desired for greater clarity of expression while editing. The spaces **do not affect the size of the expression** as they will be discarded in the end.

Failure to comply with any of the constraints or using characters not used for triggers or operators will result in an **invalid expression**.

Editing with the **Conditions Editor** can be canceled at any time by clicking on the blade in the upper right corner of the window.

When you have the desired logical expression, you will have to click on **"Apply".** If the expression is not correct, an error message will be displayed, and the Conditions Editor will remain open for further corrections. If the expression is correct, the Condition Editor will close, and the edited logical expression will appear in the Argument cell of the **"New Condition"** panel.

Under the **"New Condition" panel** is the panel with the list of the **Conditions** already created:



The meaning of each column is as follows:

- **Id:** Not editable. **Numerical identifier** automatically assigned to each condition.
- **Name:** Editable. **Name for the condition**. Up to a maximum of 31 printable ASCII characters.
- **Description:** Editable by the user. **Text description of the condition**. Maximum of 63 printable ASCII characters.
- **Argument:** Editable. **Logical expression constructed from triggers** related to each other by logical operators.
- **In use:** Not editable. Indicates whether the condition is **currently being used in any event**.
- **Active:** Not editable. **In online mode** it indicates when a condition is active, that is, **the evaluation of its logical expression gives a positive result**. In addition, it will be marked in **orange** if yes.
- **VA:** Not editable. Indicates whether the condition is valid for use with **VA events**.
- **PA:** Not editable. Indicates whether the condition is valid for use with **non-VA events**.

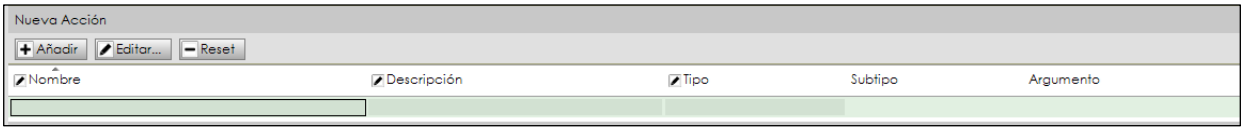
In the toolbar of the Conditions list, clicking on **"Remove selected"** will delete the selected conditions. Clicking **"Duplicate"** will copy **the editable parameters of the** selected condition to the **"New Condition"** panel to create a new item from them. Finally, clicking on **"Edit selected"** will open the **Conditions Editor** to modify the logical expression of the selected Condition in place.

5.3. Actions

Actions are those operations that an **Event** will perform when triggered by its **Start Condition**.

As with **Triggers** and **Conditions**, editing **Actions** enables Event **Editing Mode** and selects the Actions selection filter from the **Events** node in the **PA/VA System view**. In this way we will have the panel visible for the creation of new Actions:

The configurable fields for a new action are:



- **Name:** Name of the action. Maximum 31 printable ASCII characters.
- **Description:** Descriptive text of the action. Maximum 63 printable ASCII characters.
- **Type:** Type of action. Once created, you can't change the type of action.
- **Subtype:** Subtype of action. Once created, it is also not possible to modify the subtype of an action.
- **Argument:** Depending on the type and subtype of the action, it will require the specification of certain values to complete its task. As will be seen later, some types will allow editing directly in the cell, while others will require a special editing window. In any case, once its editing is finished, the contents of this cell will show a text describing the operation that the action will carry out.

Once all the parameters for the new action have been defined, clicking on **"Add" will** save it, adding it to the list of Actions located under the **"New Action"** panel.

Clicking **"Reset"** will delete the contents of the cells so that you can create a new action from scratch.

With some types of Actions, the **"Edit"** button will be enabled, which means that editing the argument will open an edit window specific to the chosen action type and subtype.

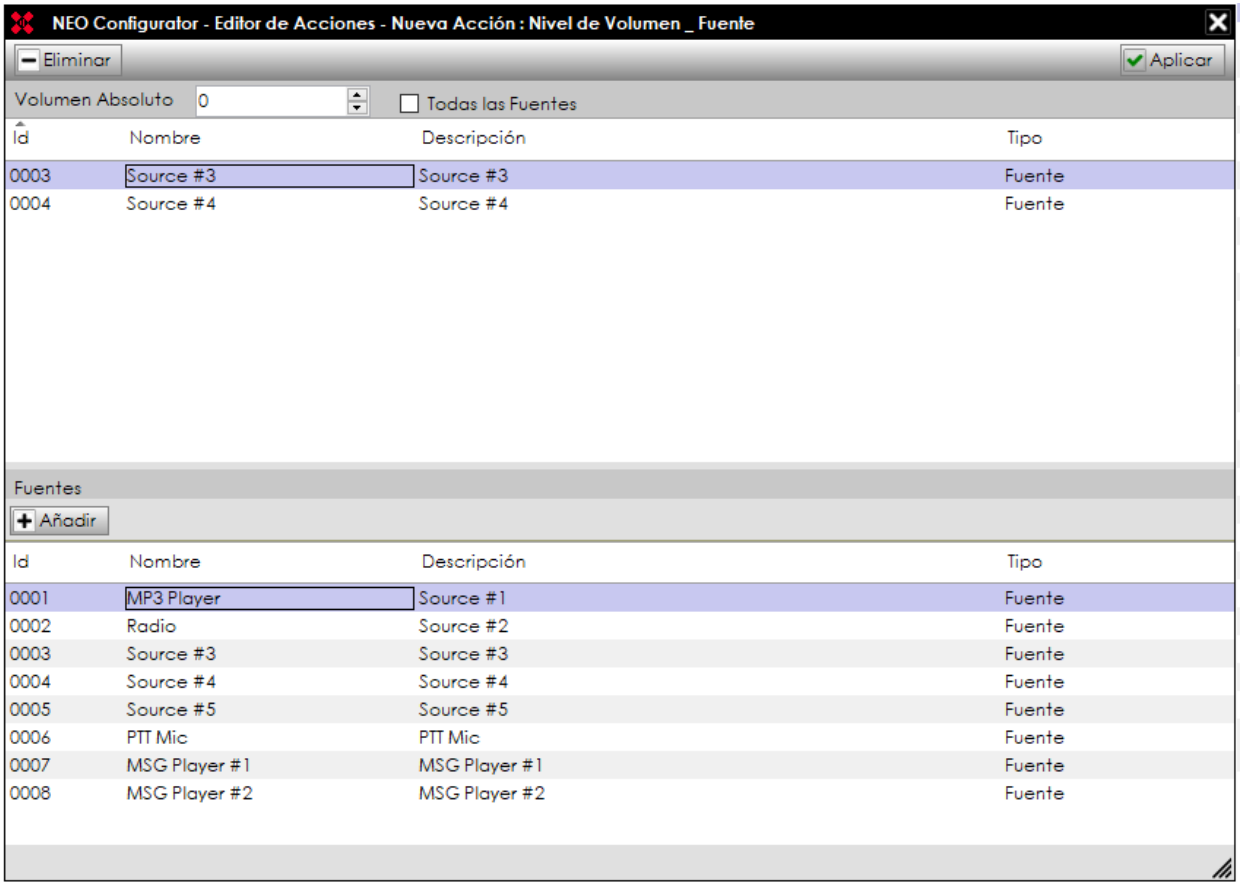
There can't be two actions with the same values for the **Type**, **Subtype,** and **Argument** parameters. If you try to add an action with identical parameters as an existing one, an error message is displayed.

In the list of created actions, clicking on **"Remove selected"** will delete the selected actions. With the **"Duplicate" button**, the configuration parameters of the selected action will be copied to the **"New Action"** panel, allowing you to create a new action from them. Clicking on the **"Edit Selected"** button will open the specific editing window for the selected action type and subtype.

The following sections will describe in detail the types and subtypes of existing actions.

5.3.1. Volume Level

This type of action allows you to set an **absolute volume level**. The **subtype**, which can be **Sources** or **Zones**, determines which elements the volume level will be applied to. Specifying the argument requires a special editing window where the volume level and which Zones or Sources it will be applied to will be specified.



This editor shows in its **lower panel** a list with **all the Sources or Zones of the system**, where you can select one or more elements to add them with the **"Add"** button to the **upper panel**, where those **items to which the action will be applied** are displayed. You can also add elements to the selection in the top panel by double-clicking on them.

If you want to **remove** an element added to the top panel, you will first have to **select it** and then click on the **"Delete"** button.

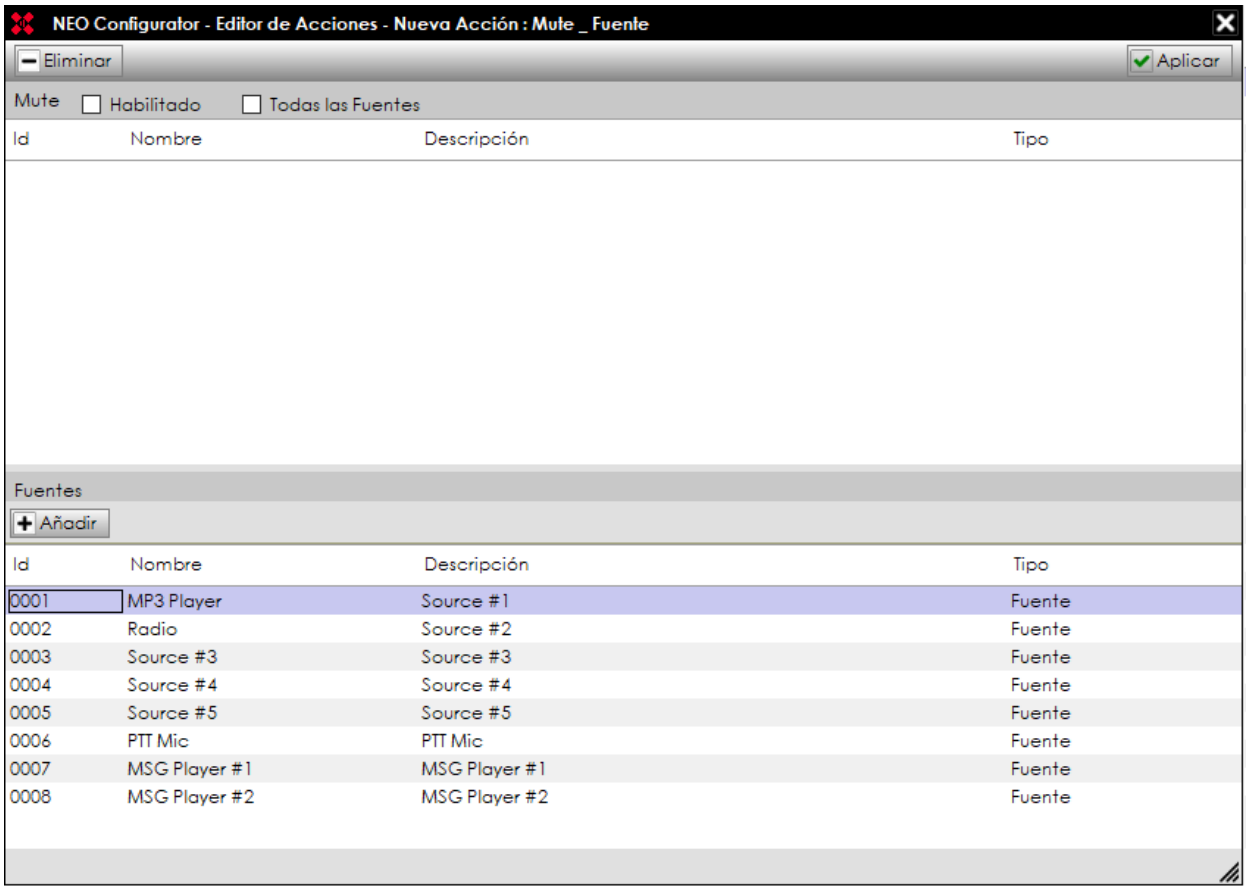
The desired volume level is specified in the "**Absolute Volume**" numeric field in the top panel. If the volume level is to be applied to all sources or zones, the "**All Sources**" or "**All Zones**" box must be checked. Finally, once everything has been configured as desired, you will have to press "**Apply**" to confirm the new argument for the action.

5.3.2. Volume Change

Similar to the action described in the previous point. In this case, what will be applied will be a **change in relative volume**, which will be defined by a positive or negative value that will be added to the current volume of the sources or areas chosen. With in the Volume Level action, the **subtype** determines whether the action will act on **Sources** or **Zones** in the system. To define the argument, an editing window similar to the one used for the **Volume Level action will open**, where in this case we will have the numeric field **"Relative Volume"** to specify the volume variation that the action will apply.

5.3.3. Mute

This action is very similar to the Volume Level and Volume Change actions. In this case, what will be done is a **mute** of the selected elements. Again, the **subtype** will indicate the type of element on which action will be taken, **Sources** or **Zones**. Editing will be done through a window similar to that of the actions described above.



This time instead of a numeric field to specify a volume value, we will have the **"Enabled"** box that will determine when checking or unchecking it if what you want is to enable or disable muting.

To enable muting in all sources or zones, you will have to check the box **"All Sources",** or **"All Zones"** as the case may be. If, on the other hand, you want to determine a smaller set of sources or areas to which the action can be applied, these can be added or removed from the top panel by using the "**Add**" or "**Delete**" buttons, previously selecting the desired items in the corresponding panel.

5.3.4. Command

This action will send a command as output to a third device via Ethernet (**UDP**) or one of the integration serial ports (**RS-485**). The latter will be determined by the subtype:

- **UDP**
- **RS-485 PA port**
- **RS-485 VA port**

In either case, editing the storyline will require a special editing window. For the **UDP** subtype it will be like the one shown below:

The **Format** field allows you to choose between the options:

- **ASCII:** The message will consist of a sequence of printable ASCII characters.
- **HEX:** The message will consist of a sequence of bytes specified by pairs of hexadecimal digits (two digits per byte).

The command must be written in the central area of the window, considering that the **maximum length** will be:

- **54 bytes** for **UDP commands.**
- **60 bytes** for **RS-485 command**.

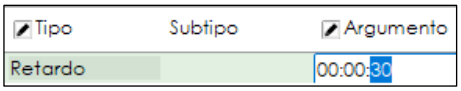
For **UDP commands**, you will also have to indicate the **IP address** and the **destination port** in the corresponding fields in the upper panel.

The window for editing **RS-485 commands** is similar, except that it will not include the fields for IP address and port.

Once everything is configured with the desired values, you will have to click on **"Apply"** so that all the parameters are added as an argument for the action.

> **NOTE:** Command-type actions that make use of the **RS-485 PA** integration port cannot be added if **VCC-64** devices **(**PA Zone Controllers) have been configured on the system.

5.3.5. Delay

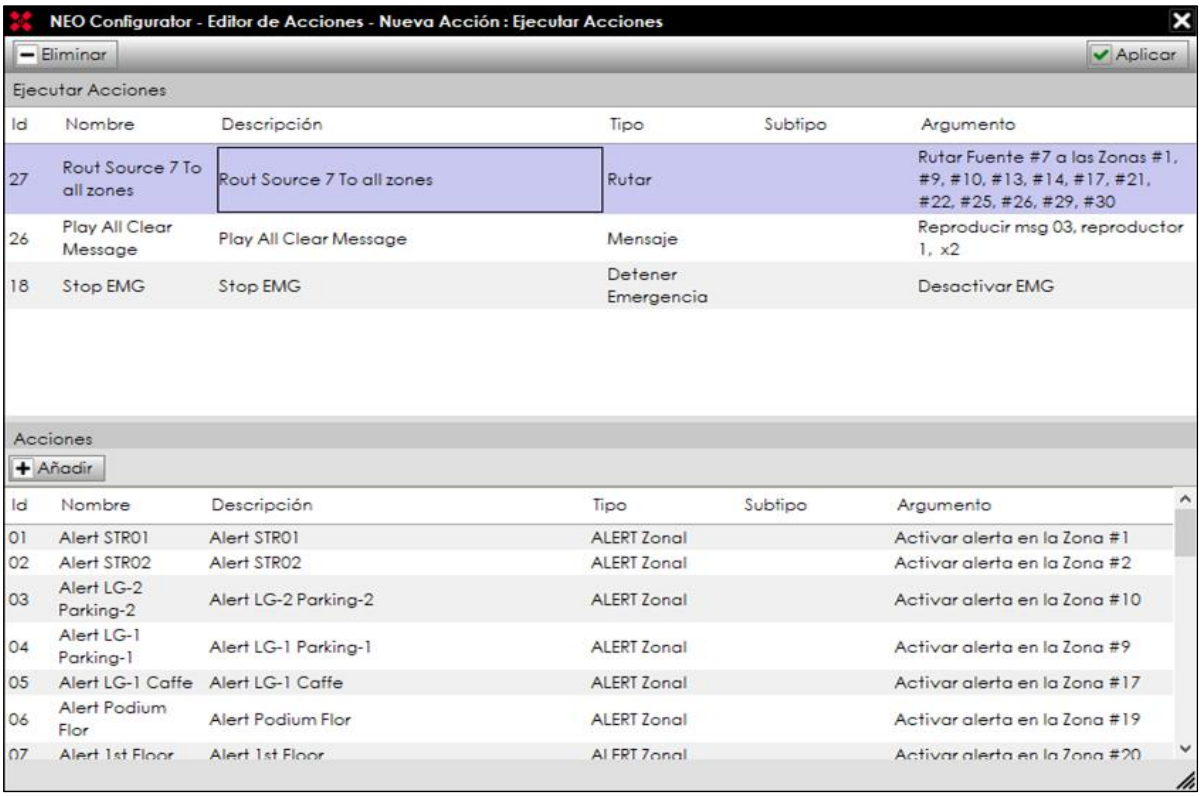


Delay actions set a period of time during which the event will remain running, but without performing any action on the system. This action has no subtype, nor does it require a special editing window, you will simply have to enter in the cell a time value for the delay specified in **hours**, **minutes** and **seconds**, with two digits for each magnitude and separated by a colon.

This action allows you to set a period of idle or waiting between two other actions in the sequence of execution of an event, or at the start or end of the sequence.

5.3.6. Execute Actions

This type of action allows other actions to be executed sequentially. The argument for this action will be edited using the following edit window:



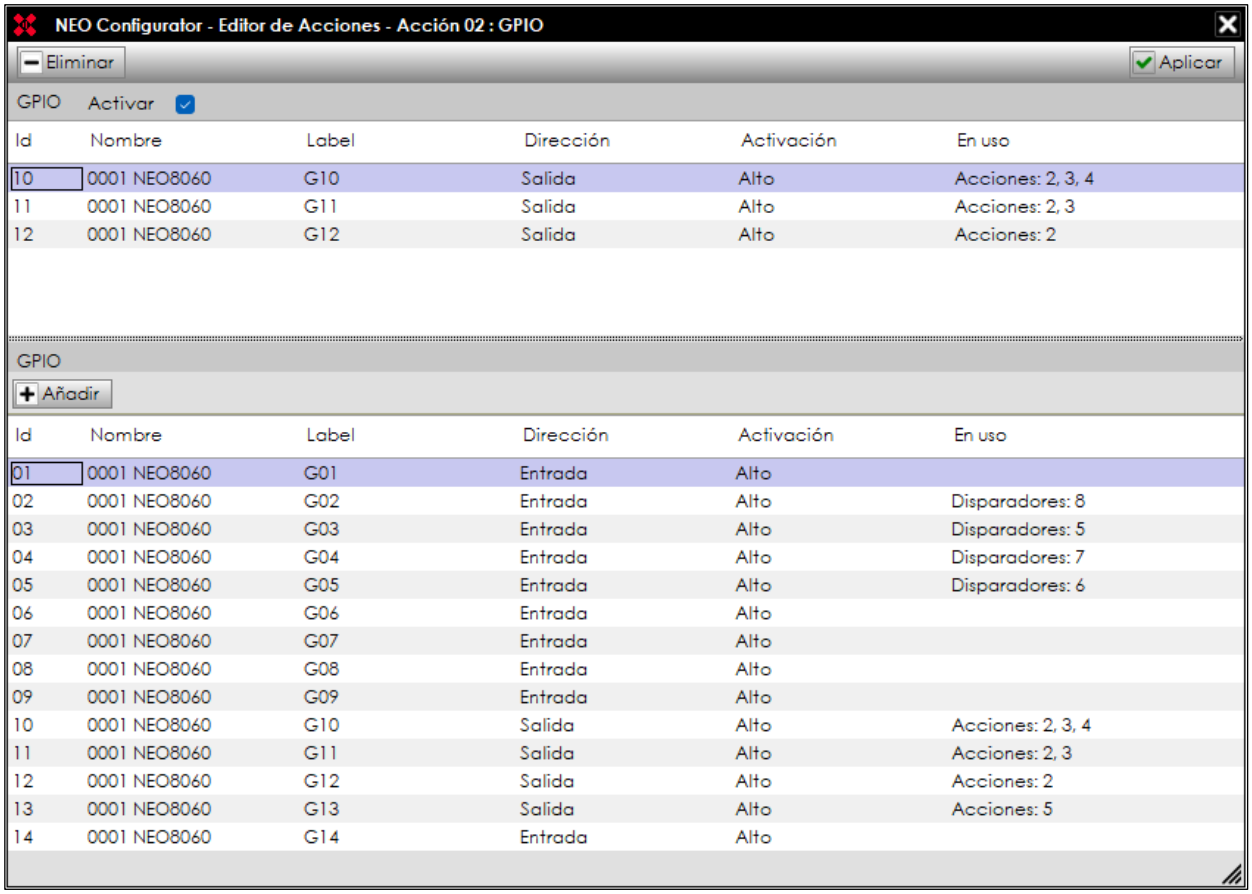
The bottom panel shows a list of all the **Actions** currently available, where we can select those that will be executed by the new action and add them by clicking the **"Add"** button to the top panel. In the top panel, you can remove previously added actions by selecting them and pressing **"Delete"** below.

Finally, clicking on **"Apply"** will end the editing by adding the list of selected actions to the argument of the new action.

> **NOTE:** The **maximum number of actions** that can be added is **30**.

5.3.7. GPIO

GPIO actions allow you to enable or disable selected GPIO output ports. Editing your argument is done through the following editing window:



The bottom pane displays the list of system GPIO ports, from which you can select one or more ports and add them to the action using the "**Add**" button. The top panel shows the ports already added to the action. With the "**Delete**" button, remove the ports you want from the top panel by selecting them previously. Checking the **"Enable"** box indicates that the action will activate the selected ports, if you want the action to do is to disable them, you will have to uncheck that box.

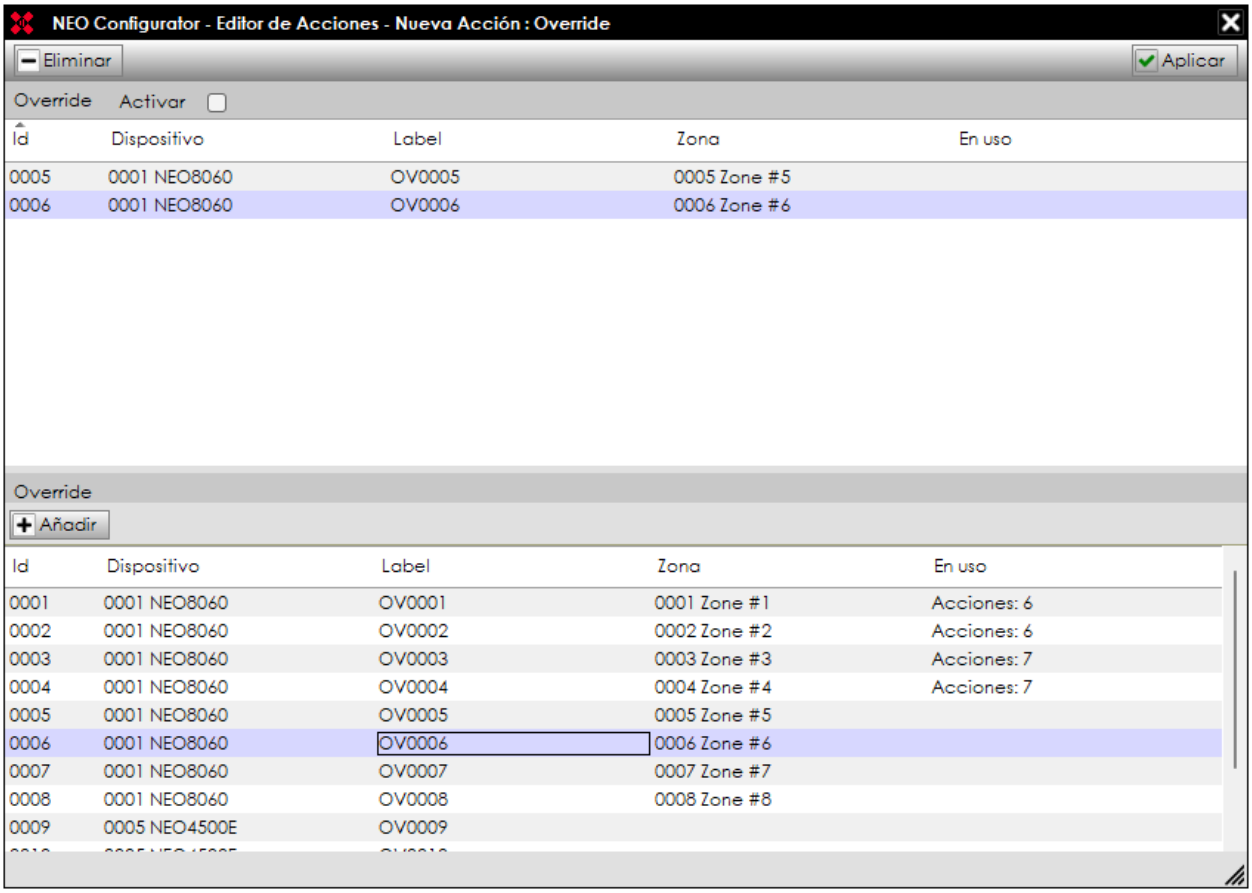
In **GPIO** port listings, the columns are interpreted as follows:

- **Id:** Numeric identifier of each port in the system.
- **Name:** Device to which the port belongs.
- **Label:** Port identification label.
- **Direction:** Indicates whether the port is set to **Input** or **Output**.
- **Activation:** Indicates whether the port is active at a **high** or **low** level.
- **In Use:** Shows if the port is being used by other actions or triggers and what they are.

In principle only ports configured as output can be used for GPIO actions, although if a port configured as input is added that is not in use (by a trigger, for example), it will automatically be configured as output when the event configuration is applied.

5.3.8. Override

Override actions allow you to activate Override outputs (or attenuator override for PA lines). Its editing window is similar in appearance and functionality to the editing window for **GPIO actions**:



The bottom panel displays the list of the system's **Override** ports. You can select one or more and add them to the action using the "**Add**" button. The top panel shows the ports already added to the action. With the "**Delete**" button, you can remove already added ports by selecting them in advance in the top panel. You will have to check the **"Enable"** box if you want the action to activate the selected ports or uncheck it otherwise.

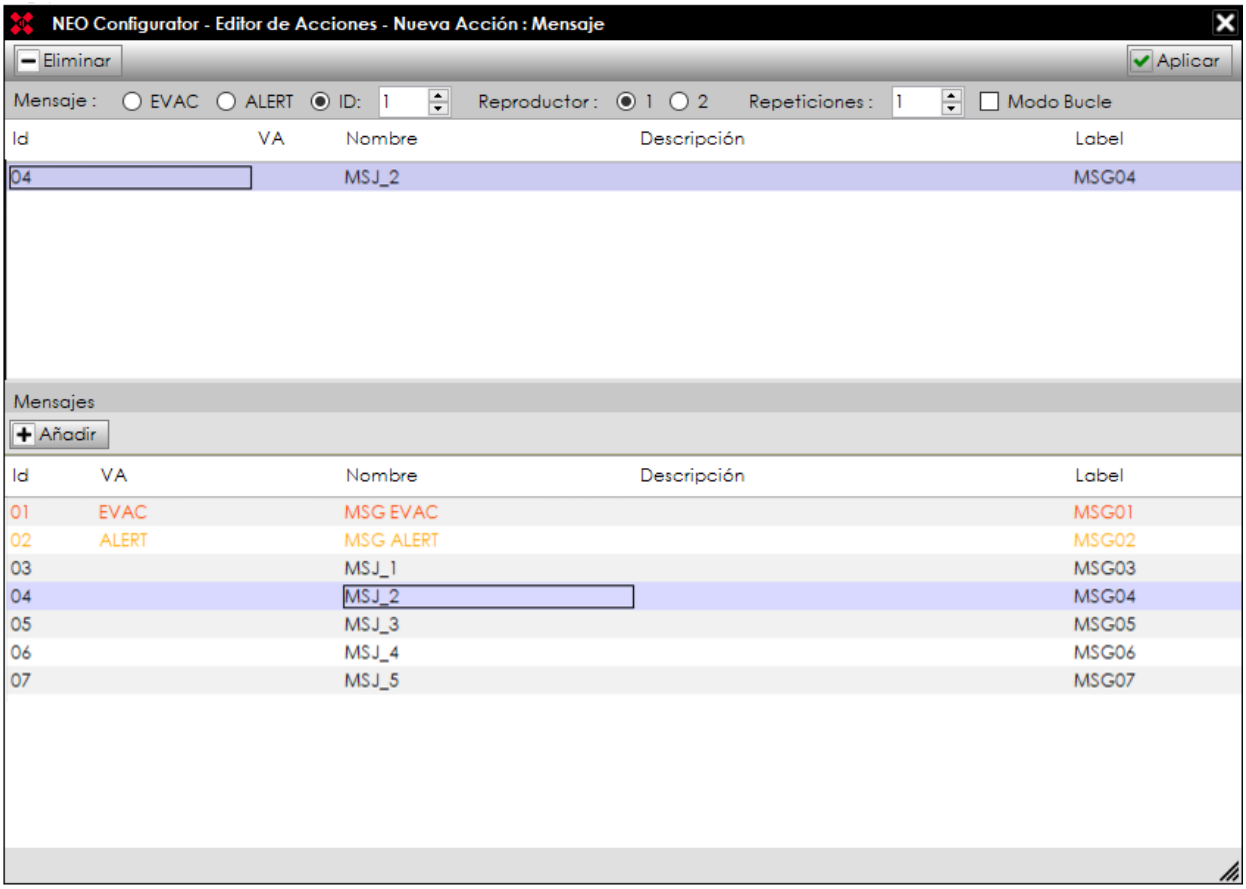
In **Override** port listings, the columns are interpreted as follows:

- **Id:** Numeric identifier of each port in the system.
- **Device:** The Device to which the port belongs.
- **Label:** Port identification label.
- **Zone:** Informs which zone of the system the Override port is assigned to.
- **In Use:** Shows if the port is being used in other actions and what they are.

5.3.9. Message

This type of action allows the playback of any pre-recorded messages stored in the System Controller, including the messages Specific for Evacuation and Alert. For more information on handling this type of message, see *4.2.2. b. Messages*

The window for editing Message-type actions is as follows:



The controls in the top panel define which message the action will play and how it will be done. These controls are divided into three sections:

- **Message:** Determines which message to play. There are three options:
  - **EVAC:** Evacuation Message
  - **ALERT:** Alert Message
  - **ID:** Any message specified by its numeric identifier in the adjacent numeric cell.
- **Player:** This indicates which of the two internal pre-recorded players in the System Controller will play the message with:
  - **1:** First pre-recorded player, which corresponds to the **Local Audio Input 7 of the System Controller**.
  - **2:** Second pre-recorded player, which corresponds to the **Local Audio Input 8 of the System Controller**.

- **Repetition:** Here you can set the number of times the message is to be played using the adjacent numeric field. This value will be ignored if the **"Loop Mode"** box is checked, which will cause the message playback to repeat indefinitely.

With the application working in online mode, the bottom panel of the window will display the list of pre-recorded messages currently stored in the System Controller. By selecting one of them and then clicking on the "**Add**" button, or by double-clicking, the message will be added to the top panel and the **ID** option will be selected automatically, updating its numerical box with the selected message ID. The added message can be removed by using the "**Delete**" button after selecting it in the top panel**.**

In the message list, columns have these meanings:

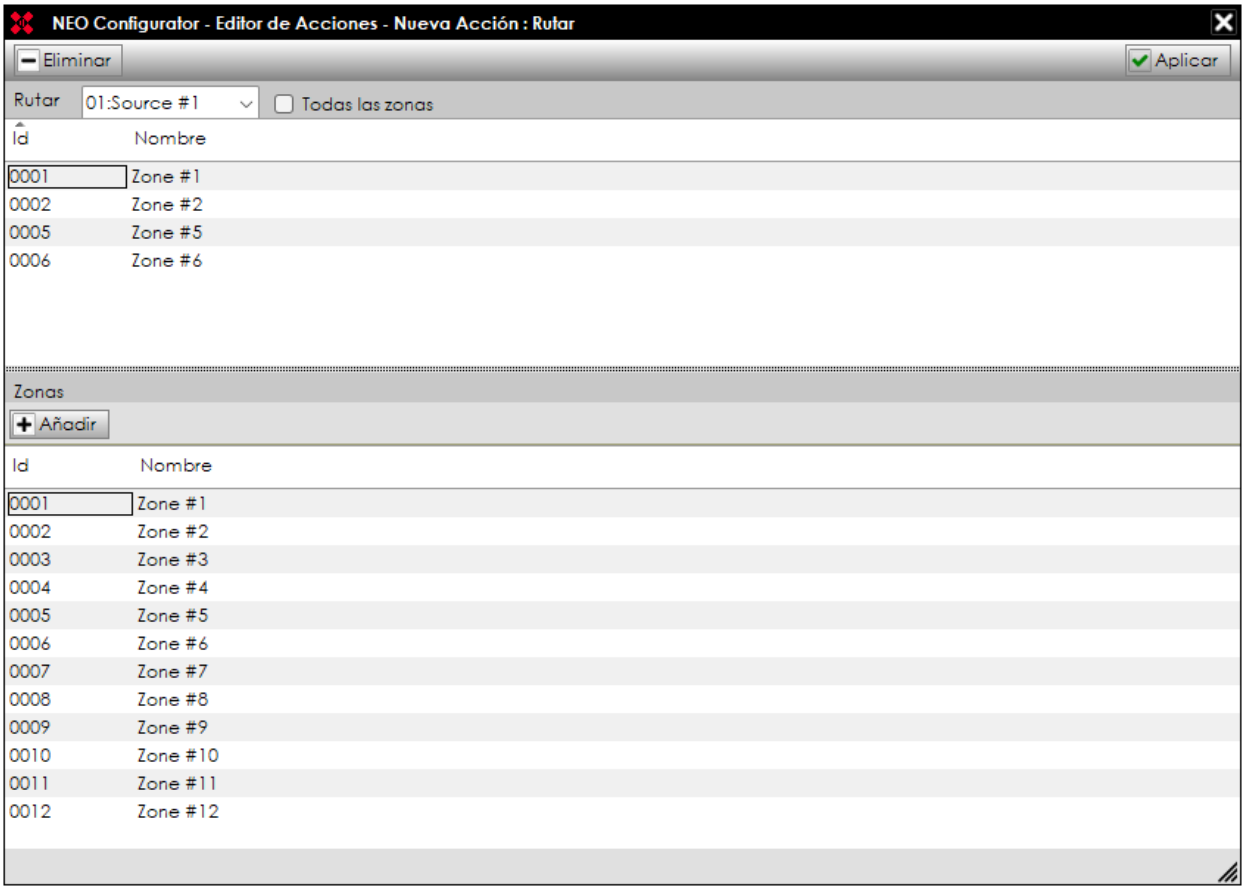
- **Id:** Numeric identifier of the message.
- **VA:** Indicates whether it is the Alert (**ALERT)** or Evacuation (**EVAC)** message. With any other message, the cell will appear blank. The **Alert** message is highlighted in **orange** and the **Evacuation** message in **red**.
- **Name:** Name of the message.
- **Description:** Descriptive text of the message.
- **Label:** Identification label of the message.

As always, after having properly configured all the parameters, you will have to click on **Apply** so that everything is saved as an argument of the Message action.

> **NOTE:** If a Message action refers to a prerecorded message ID that does not exist in the System Controller, it will do nothing.

5.3.10. Route

These actions allow you to route a Local or Remote audio source to one or more zones of the system. This is your editing window:



In the top panel, the "**Route**" drop-down list allows you to select one of all the Local and Remote input sources in the system. By checking the "**All Zones**" box, the action will route the selected source to all zones in the system. If you only want to route to specific zones, the bottom panel will show a list of all the zones in the system that can be selected and added to the top panel with the "**Add**" button. They can also be added directly by double-clicking on each of the desired zones. To remove areas previously added to the top panel, you must first select them in the top panel and then click "**Delete".**

If you want there to be no routed fonts in the selected zones, you will need to choose the "**None**" option from the source drop-down list.

Once you have the desired routing configuration, clicking on "**Apply**" will save everything as an argument for the action.

5.3.11. Undo changes

This type of action **does not require an argument**. Its function is **to revert the changes made by other actions previously executed** by an event, recovering the configuration values for all those parameters modified by those previous actions.

Only one such action can be created in the system, and it can be used in as many events as necessary and as many times as necessary in the sequence of actions of an event.

> **NOTE:** The action **"Undo changes"** can only be used at events with the **"Undo Changes"** enabled. See *5.4. Event Creation*

5.3.12. Start Emergency

The "**Start Emergency**" action also doesn't require any argument. Its function is to **activate the General Emergency condition** in the system.

There can only be one such action in the system, which can be used in as many events as necessary.

5.3.13. Stop Emergency

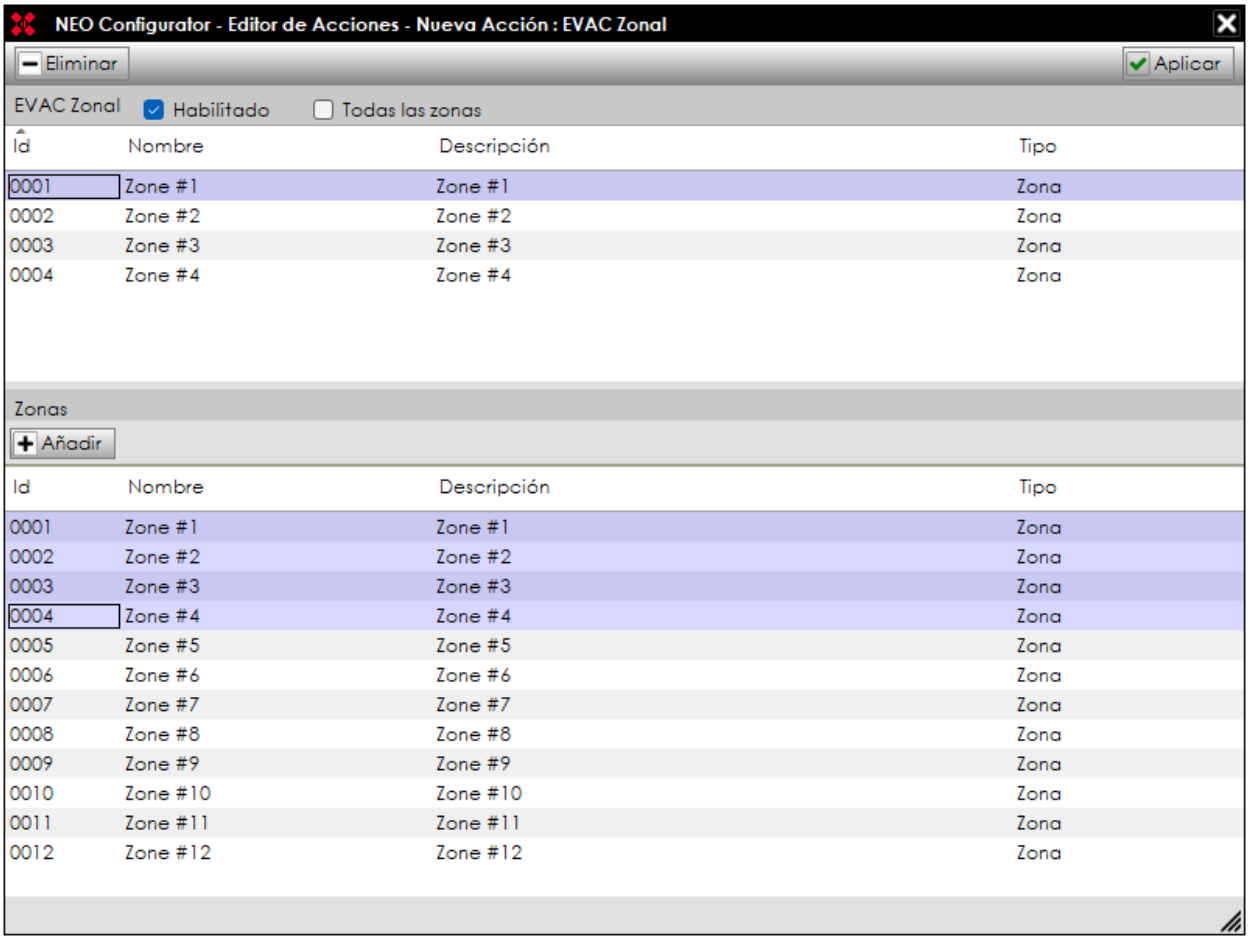
The "**Stop Emergency**" action disables the **General Emergency condition** in the system. This type of action also does not need an argument.

There can only be one such action in the system, which can be used in as many events as necessary.

> **NOTE:** The Event Manager module will not be able to disable the general Emergency condition if emergency actions have been performed from VA microphones, ECI status inputs, or from the front panel of the System Controller.

5.3.14. EVAC Zonal

This action will enable or disable the playback of the evacuation message (**EVAC)** in the specified areas. The configuration of your argument will be done using the following editing window:



Checking the **"Enabled"** box will cause the evacuation message to play in the selected areas. Unchecking the **"Enabled"** box will stop the playback of the evacuation message in the selected areas, if applicable.

The areas where the playback of the message will start or stop can be added or removed from the top panel using the **"Add"** and **"Delete"** buttons, selecting these previously in the corresponding panel.

Checking the **"All zones"** box will ignore any selection made and the action will be applied to all zones in the system.

This action requires that the general Emergency condition has been activated beforehand. Therefore, it is advisable to use it in combination with the "**Start Emergency**" action.

The action is executed immediately, once the playback of the message in the zones is started or stopped, the corresponding event will continue to execute the next scheduled actions if any.

5.3.15. ALERT Zonal

The **"Zonal ALERT" action** will play or stop the alert message (**ALERT)** in the selected zones. Its editing and behavior are analogous to those of the **"Zonal EVAC"** action.

5.3.16. Zonal EMG State

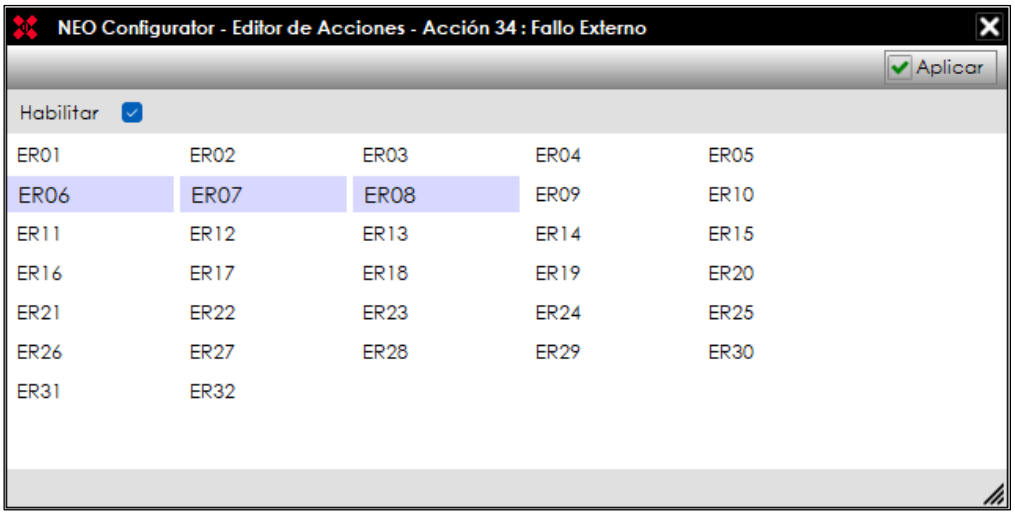
The **"Zonal EMG"** action activates or deactivates the Zonal Emergency state in the selected zones. This action will not initiate the playback of any message by itself. It can be combined with routing actions and message playback to create custom evacuation sequences. Its editing window is analogous to that of the **"EVAC Zonal"** and **"ALERT Zonal" actions**.

5.3.17. External Failures

This action allows you to add up to **32 custom faults** to the system that can be enabled and disabled based on the system inputs and their operating states using the necessary Triggers.

By enabling these external faults, the LDA NEO system will activate its General Fault Condition (**FLT**). Likewise, in the **System Fault Log** (**FLT**) **will be recorded** both, his **habilitation** as his **Disabling**, always indicating the numerical identifier of the error. All this can be viewed both in the **Front Screen System Controller** as in the **Fault log files (FLTs)** that are downloaded from it (See *4.1.1. b. Logs*).

The configuration of its argument will be done through the following editing window:



In the **middle** panel of the window, the **32 possible errors** that we can enable or disable are displayed. To select an error, simply **click** on it. Holding down the **Ctrl key** will allow you **to add other errors to the selection or remove them** if they are already selected.

The "**Enable**" checkbox will indicate whether you want to **enable** or **disable** the selected errors.

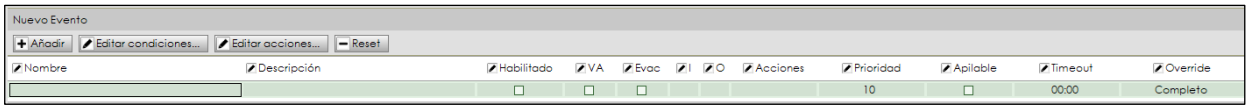
As always, once the desired configuration has been established, clicking on **"Apply"** will close the window, saving the established configuration in the action argument.

5.4. Event Creation

Events is where previously defined conditions and actions are combined to incorporate a new automation feature into the system. To create it, as in the other entities that make up the **NEO event manager**, it is essential to start the event **Edit Mode.**

With the Edit Mode active, the following parameters can be configured in the "**New Event**" panel:

- **Name:** Name of the event. **Maximum 31 printable ASCII characters**.



- **Description:** Descriptive text of the event. **Maximum 63 printable ASCII characters**.
- **Enabled:** Checking this box will enable the event to run when its entry condition is triggered. Unchecking this box will disable the event and will not run even if its start condition is triggered.
- **VA:** Enabling this option will be **VA** (**Emergency**), allowing conditions and actions compatible with **VA mode**. Disabling this option will make the event **PA** (**Public Address**), allowing conditions and actions compatible with **PA mode**.
- **Evac:** Checking this box will cause the event to appear as an evacuation sequence within the **EMG** menu on the front panel of the **System Controller** device and can be manually executed from there. Enabling this property will automatically enable the **VA parameter**.
- **I:** Specifies the **start or input condition**; it is the one that when activated **will start the execution of the event**. Once defined, the identifier of the condition will be displayed in the cell.
- **O:** Specifies the **end or output condition**; it is the one that when activated **will end the execution of the event**. Once defined, the identifier of the condition will be displayed in the cell.
- **Actions:** Specifies the **actions that the event will execute**. Once defined, the IDs of the actions will be displayed in the cell.
- **Priority:** A numerical parameter that determines the **priority in the order in which events are executed**. It supports values from **1 to 99**, taking into account that **the lower the value, the higher the priority**.

  With an event already running, if a new, higher-priority event tries to run, the first one will be interrupted, and the incoming event will start executing. If the incoming event is of equal or lower priority than the running event, it will be placed on hold if its "**Stackable**" parameter is enabled, otherwise discarded. It is important to note that **VA events will always have higher priority than PA events**.

  When an event finishes its execution **with multiple events waiting, the one with the highest priority will be executed first**. If two or more **events with equal priority coincide in this situation**, the order of execution will be determined by the **order of entry in the queue.**

- **Stackable: By enabling this parameter, an event will remain on hold if it cannot be executed** because another event of greater or equal priority is already running or does not have all the resources necessary for the execution of all its actions available. Conversely, if this parameter is **disabled**, **the event will be discarded if it cannot be executed** for any of the reasons stated, until the activation of its input condition determines a new execution attempt.
- **Timeout:** This parameter determines the **maximum time that an event will remain running**. After that time, the execution of the event will be interrupted, even if its output condition has not been triggered.
- **Override:** The actions that an event will execute will sometimes require the exclusive use of certain system resources to perform them. These resources are;

  Audio Sources **Zones**

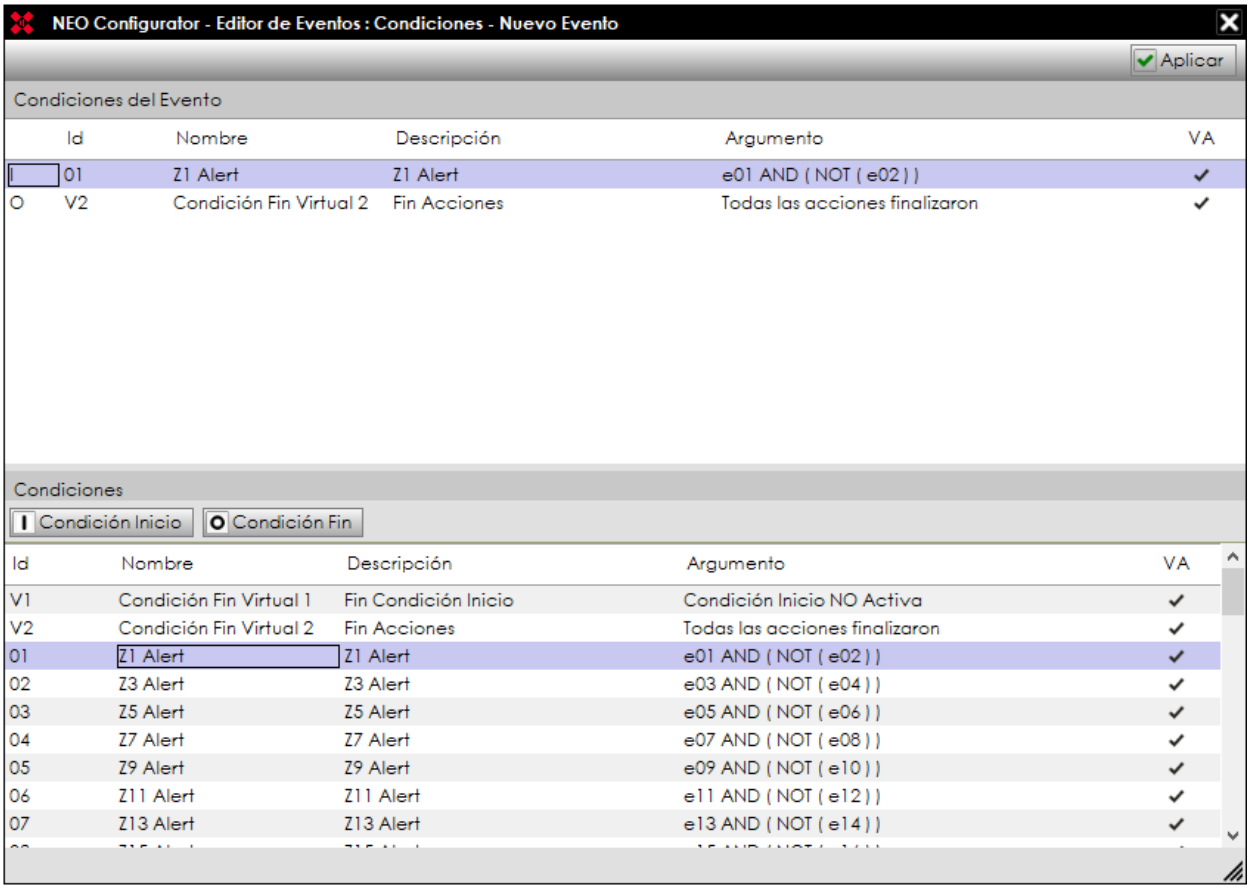
  GPIO output ports **Override Output Ports**

  Message players.

  When any of these resources are used in the actions of a running event, only when the execution of the event is completely completed will they be free to be used by other events that need them. The **Override** parameter determines **how an event is executed** based on the **availability of the mentioned resources**. Its possible values are:

  - **Complete -** The event will run only if all system resources required for the execution of its actions are available. Otherwise, the event will be queued or discarded based on the value of the "**Stackable**" parameter.
  - **Partial -** The event will be executed using those system resources available at the time of starting the execution, this implies that some actions may be partially executed or not at all. If none of the resources required by the event actions are available, the event will be discarded without running.

To determine what the Start and End conditions of an event will be, you will have to edit the **I** and **O** parameters of the event or click the "**Edit conditions"** button in the "**New Event**" panel. This will open the Event **Start and End Conditions** editor window:



In the lower panel you will see the list with all the available Conditions. In this list, the columns have the following meanings:

- **Id:** Identifier assigned to the Condition.
- **Name:** Name given to the Condition.
- **Description:** Descriptive text of the Condition.
- **Argument:** Logical expression of the Condition.
- **VA:** Indicates whether the condition is compatible for use by VA type event or Evacuation Sequences.

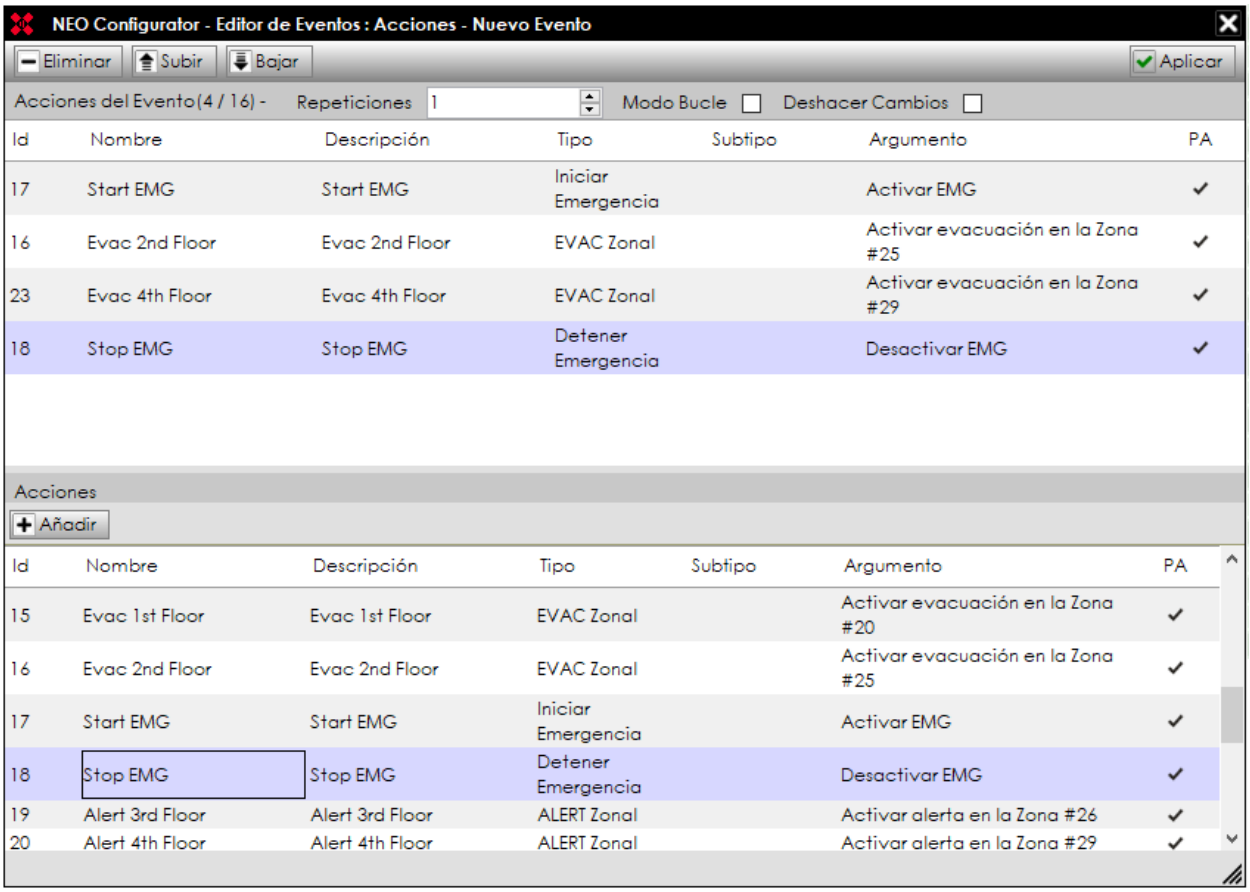
In the list of available Conditions, we will see two **Virtual End Conditions** that we will always have available to use as an end condition of an event:

- **V1 – Start Condition End:** Will cause the event to end its execution when the Start Condition is no longer active.
- **V2 – End Actions:** It will set the end of the event when all its actions have been executed.

It is mandatory to specify both the **Start** and **End conditions**. To do this, you will have to select one for each case and then add them to the top panel using the "**Start Condition**" and "**End Condition**" buttons respectively.

Once both conditions have been established, by clicking "**Apply**" the identifier of each of them will be displayed correspondingly in parameters **I** and **O**.

To configure the actions that an event will execute, you will have to edit the Actions parameter or click on the "**Edit actions**" button in the "**New Event**" panel. Doing this will open the editor window of the **actions that will execute the event**:



The top panel shows the sequence of actions that the event will execute. The bottom panel shows the list of all currently configured actions. To add them to the top panel, select them and click "**Add**" below. They can also be added by double-clicking on them.

To delete an action from the top panel, you will have to select it, and press "**Delete**" later.

The **order of execution of the actions** will be the same as the one shown in the upper panel, this **order can be modified** by using the "**Up**" and "**Down**" buttons after selecting in the sequence of actions the one you want to change position.

In addition, you can set the following execution parameters for the sequence of actions in the top pane:

- **Repetitions**: Indicates the number of times the sequence of actions is going to be executed. It supports values from **1** to **100**, where **1** indicates that the sequence of actions will be executed only once.
- **Loop mode:** If you want the sequence of actions to repeat its execution indefinitely, you will have to check this box.
- **Undo Changes:** Check this box Will what, when it finishes running, the event restores those system parameters that you have modified. It also allows you to make use of the action "**Undo changes**" (See *5.3.11. Undo changes*).

Once the sequence of actions and their execution parameters have been defined, pressing **"Apply"** will add all the information to the event configuration.

When all the parameters of the event are configured, clicking " **Add"** will create the new event, adding it to the list of the main configuration panel.

In the **"New Event" panel**, clicking **"Reset"** deletes the contents of the edit cells in case you want to start the creation of a new event from scratch.

The main configuration panel **"Events**", in addition to the parameters configured for each event in its creation, displays the following additional information:

- **Id:** An identifier automatically assigned to the event.
- **Uid:** Identifier automatically assigned to events configured as **Evacuation Sequence**. This number is the one that will be displayed on the System Controller screen when the EMG menu is accessed to manually initiate evacuation sequences directly from the computer.
- **In Use:** Indicates whether the event is being referenced by any **Event triggers**.
- **Last Exec:** In online mode it will show the date and time of the last time the event was executed. Events that have not been executed at all will show the default value **"01/01/2000 00:00:00".** Modifying any parameter of an event will cause this parameter to be reset to the default value.

With the **Event Edit Mode active**, you can modify the editable parameters of the events already created in the list of the **"Events"** panel. This panel features the following buttons on its toolbar:

- **Edit Conditions:** Opens the conditions edit window for the selected event.
- **Edit Actions:** Opens the action editing window for the selected event.
- **Enable:** Opens a drop-down that will allow us to enable or disable the selected events.
- **Remove Selected:** Deletes the selected events.
- **Duplicate:** Copy the parameters of the selected event in the **"New Event"** panel in case you want to create a new event from them.

With **Event Edit Mode** closed and working in **online mode**, listed events can display the following colors depending on their **execution status**:

- **Green:** The event is currently **running**.
- **Orange:** The event is **in the execution queue** waiting for a higher priority event to release the required resources.

5.5. Examples

This chapter describes several basic event configuration examples that complement the automation of an LDA NEO system for certain use cases.

5.5.1. Evacuation sequence: alternation of EVAC and ALERT

In this example you will see how to successively play the **Alert** (**ALERT)** and **Evacuation** (**EVAC)** **messages** through **an area** when the **system enters a state of General Emergency**. Both messages will be played **twice** using **Message Player 1**.

- **Triggers**

  A **System Status** type Trigger is created that activates when you enter **a General Emergency** (VA) State.

Disparadores

Id	Código	Nombre	Descripción	Tipo	Argumento1	Argumento2	Argumento3	En uso	Activo	VA	PA
01	S01	Entrada en EMG	Inicio del estado de Emergencia	Estado del Sistema	VA	Entrar		✓		✓	✓

- **Conditions**

  A condition is created whose argument is the Trigger created earlier.

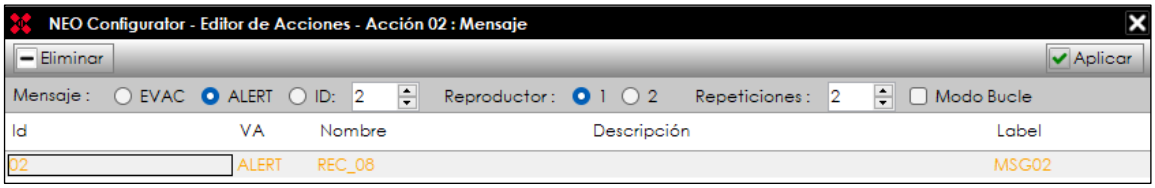
Condiciones

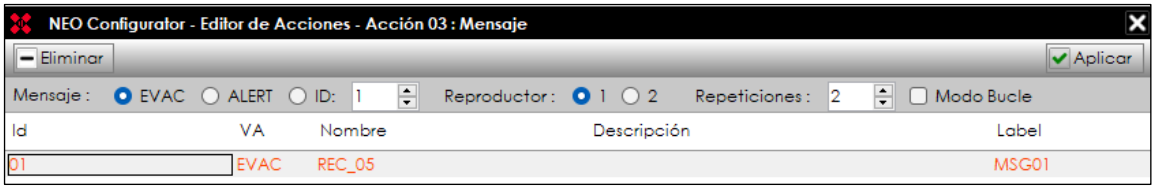
Id	Nombre	Descripción	Argumento	En uso	Activo	VA	PA
01	Entrada en EMG	Inicio del estado de Emergencia	S01	✓		✓	✓

- **Actions**:

  Three actions are created. The first action will be of type **Route**, which will route message player 1 (local source 7 of the System Controller) to zone 1. The other **two** actions will be of type **Message**, one to play the **Evacuation message** (**EVAC)** and another to play the **Alert message** (**ALERT),** both will use player 1 and will broadcast each message twice

  To select the **ALERT** and **EVAC** messages, in the edit window for the argument of the two **Message** type actions, you must check the **EVAC** or **ALERT** boxes alternately for each action. In both cases, **player 1** will be selected, indicating that they are repeated 2 times:





  The three actions once created:

- **Events**

  An event is created with the following properties:

- The **starting condition** (**I**) will be **"EMG entry",** with identifier **01**.
- The **end condition** (**O**) will be the virtual condition **V2** (**End Actions**), i.e. the **event will end** when the playback of the **ALERT** and **EVAC messages has finished**.

Acciones

Id	Nombre	Descripción	Tipo	Subtipo	Argumento	En uso	VA	PA
01	Rutar PL1 a Z1	Rutar Reproductor de Mensajes 1 a Zona 1	Rutar		Rutar Fuente #7 a la Zona #1	✓	✓	✓
02	Reproducir ALERT con PL1	Repriducir mensaje de Alerta con Reproductor 1	Mensaje		Reproducir msg AL, reproductor 1, x2	✓	✓	✓
03	Reproducir EVAC con PL1	Repriducir mensaje de Evacuacion con Reproductor 1	Mensaje		Reproducir msg EM, reproductor 1, x2	✓	✓	✓

- The **sequence of actions** will be as follows: **01**, **02** and **03**
- **Override complete;** The event will only run if all the required resources are available.
- Since Emergency **(VA)** actions are to be performed, the VA parameter must be enabled for events.
- Enabling the **Evac** parameter, events can also be **launched from the System Controller touchscreen** as **evacuation sequences**.

The event will be configured as follows:

Eventos

Id	Uid	Nombre	Descripción	Habilitado	VA	Evac
01	01	ALERT y EVAC en Z1	Emitir Alerta y Evacuacion por Zona 1	✓	✓	✓

5.5.2. Integration with a fire alarm panel

In this example, an external fire panel will be able to trigger three zonal ECI status entries to initiate Evacuation in three zones of the system.

I	O	Acciones	Prioridad	Apilable	Timeout	Override
01	V2	01 02 03	10		00:00	Completo

NOTE: The operation of the events in this example is **similar** to the **default operation** of the **zonal ECI state entries** of the **LDA NEO** devices. However, the example can be used with any other entry.

- **Triggers**

  Three **ECI-type triggers** are created to be triggered by **zonal status inputs 1**, **2,** and **3**.

Disparadores

Id	Código	Nombre	Descripción	Tipo	Argumento1
01	e01	ECI 1	ECI 1 Activo	ECI Entrada	1
02	e02	ECI 2	ECI 2 Activo	ECI Entrada	2
03	e03	ECI 3	ECI 3 Activo	ECI Entrada	3

- **Conditions**

  Three conditions are created for each of the **ECI triggers**.

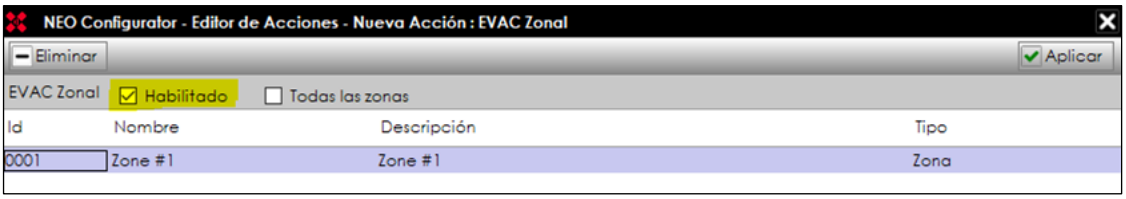
Condiciones

Id	Nombre	Descripción	Argumento	En uso	Activo	VA	PA
01	ECI 1	ECI 1 activo	e01			✓	✓
02	ECI 2	ECI 2 activo	e02			✓	✓
03	ECI 3	ECI 3 activo	e03			✓	✓

- **Actions**

  Three actions of the **Zonal EVAC type** are created so that the emergency is activated, and the Evacuation message is issued for **zones 1**, **2** and **3**. An action of type **"Start Emergency"** is also created to activate the general State of Emergency in the system.

  When editing the argument for these three actions, the "**Enabled**" parameter must be enabled for the action to trigger **the zonal emergency** in the selected zone.



  The four actions once created:

Acciones

Id	Nombre	Descripción	Tipo	Subtipo	Argumento	En uso	VA	PA
01	EVAC Z1	Evacuacion de la Zona 1	EVAC Zonal		Activar evacuación en la Zona #1		✓	
02	EVAC Z2	Evacuacion de la Zona 2	EVAC Zonal		Activar evacuación en la Zona #2		✓	
03	EVAC Z3	Evacuacion de la Zona 3	EVAC Zonal		Activar evacuación en la Zona #3		✓	
04	Activar EMG	Activar estado de Emergencia general	Iniciar Emergencia		Activar EMG		✓	

- **Events**

  Three events are created, one for each of the zones in which the evacuation message is to be issued when the corresponding zonal ECI status entry is activated. These three events will have the following properties:

  - The **start condition (I)** will be one of the three previously created for each event:
    - Evacuation of zone 1: **01**

- Evacuation of zone 2: **02**
- Evacuation of zone 3: **03**

- The **end condition (O)** will be virtual condition **V1 (End Start Condition)**, i.e., each event will end when the corresponding zonal ECI state entry is no longer active.
- The sequence of actions will be as follows for each event:
  - Evacuation of zone 1: **04**, **01**
  - Evacuation of zone 2: **04**, **02**
  - Evacuation of zone 3: **04**, **03**
- **Override complete**; The event will only run if all the required resources are available.
- **Emergency (VA)** actions are to be performed, so the VA parameter must be enabled for events.
- Enabling the **Evac parameter**, events can also be launched from the **System Controller touchscreen** as evacuation sequences.

Events will be configured as shown below:

Eventos

Id	Uid	Nombre	Descripción	Habilitado	VA	Evac	I	O
01	01	EVAC 1		✓	✓	✓	01	V1
02	02	EVAC 2		✓	✓	✓	02	V1
03	03	EVAC 3		✓	✓	✓	03	V1

Acciones	Prioridad	Apilable	Timeout	Override	En uso	Ultima Ejecución
04 01	10		00:00	Completo		01/01/2000 0:00:00
04 02	10		00:00	Completo		01/01/2000 0:00:00
04 03	10		00:00	Completo		01/01/2000 0:00:00

5.5.3. Scheduled announcements

This example will set up the **periodic playback of a prerecorded message** on a certain **day of the week** and at a **specific time**. The message will be emitted by **two zones** of the system **consecutively** using **the same System Controller message player**. The sequence of actions will be **repeated twice**, **returning to the previous state of the system** after each playback and at the end of the execution of the event. In addition, the event will be scheduled with a **timeout** of **5 minutes** to avoid too long waits in the event execution queue.

- **Triggers**

  Two triggers are created; a **weekly Date** trigger that will be activated on Wednesdays and a **Period Time** trigger that will be activated every day at 9 a.m.

Disparadores

Id	Código	Nombre	Descripción	Tipo	Argumento1	Argumento2
01	D01	Miercoles	Dia de la semana	Fecha	Semanal	mi.
02	T01	9 A.M.	Hora del dia	Tiempo	Único	09:00:00

- **Conditions**

  A **condition** is created that will be activated when the activation of the two triggers created coincides, i.e. every **Wednesday at 9 am**. Therefore, the expression of the condition must **combine both triggers** with the logical operation **AND**.

Condiciones

Id	Nombre	Descripción	Argumento
01	Miercoles - 9 A.M.	Activacion los miercoles a las 9 de la manana	D01 AND T01

- **Actions**

  Four actions **will be used**:

  - Two to **route** the **pre-recorded player 1** to **zones 3** and **6** respectively.
  - Another to **play message 5** with the **pre-recorded player 1**.
  - The **Undo Changes** action will also be necessary to undo the pre-recorded player paths at the end of each playback of the message.

Acciones

Id	Nombre	Descripción	Tipo	Subtipo	Argumento
01	PL1 a Z3	Reproductor 1 a Zona 3	Rutar		Rutar Fuente #7 a la Zona #3
02	PL1 a Z6	Reproductor 1 a Zona 6	Rutar		Rutar Fuente #7 a la Zona #6
03	MSJ5 con PL1	Mensaje 5 con Reproductor 1	Mensaje		Reproducir msg 05, reproductor 1, x1
04	Deshacer cambios		Deshacer Cambios		Deshacer Cambios

- **Events**

  An event is created with the following properties:

  - Starting condition **(I)** will be the one created previously; "**Wednesday – 9 A.M**" with identifier **01.**
  - The end condition **(O)** will be virtual condition **V2 (End Actions).**
  - The **Undo Changes** option is **enabled** for the event's **sequence of actions.**
  - The **sequence of actions** will be as follows: **01**, **03**, **04**, **02**, **03**, **04**
  - The sequence of actions is indicated to be repeated twice.
  - **Override Complete**; the event will only run if all the required resources are available.
  - The **Stackable** parameter is **enabled** for the event to queue if it cannot start its execution when it is activated.
  - The **timeout** is set to **5 minutes**.

The event is configured as below:

Eventos

Id	Uid	Nombre	Descripción	Habilitado	VA	Evac	I	O
01		Mensaje de Apertura Miercoles	Mensaje de apertura para las miercoles a las 9 de la manana	✔			01	V2

Acciones	Prioridad	Apilable	Timeout	Override
01 03 04 02 03 04	10	✔	05:00	Completo

5.5.4. Route sources and play messages from MPS8Z

This example will show you how to **launch an event using the buttons on an ACSI device**. The event will be configured to be **triggered** by pressing **button 1** on an **MPS8Z** microphone located at **ACSI address 1** and when executed will play a pre-recorded message through **zones 1**, **2**, and **3** of the system. The event **will not be queued** and will be allowed to **be partially executed** if any of the zones are not available at the time of execution.

- **Triggers**

  An ACSI trigger **is created** to be activated by an **MPS8Z microphone** with address **1** and on which **button 1** must be pressed.

Disparadores

Id	Código	Nombre	Descripción	Tipo	Argumento1	Argumento2	Argumento3
01	A01	Boton 1 MPS-8Z	Evento para MPS-8Z	ACSI	MPS8Z	1 (Dirección)	1 (Botón)

- **Conditions**

  A condition is created which unique argument is the **ACSI trigger**.

Condiciones

Id	Nombre	Descripción	Argumento
01	Boton MPS-8Z	Lanza un evento desde el Boton 1 y la direccion 1 del MPS-8Z	A01

- **Actions**

  Two actions are created; a **Message action** to play **pre-recorded 5** with pre-recorded **player 1** and another action of type **Route** to route **local source 7**, corresponding to pre-written **player 1**, to **zones 1, 2 and 3** of the system.

Acciones

Id	Nombre	Descripción	Tipo	Subtipo	Argumento
01	Mensaje 5	MSG 5 al reproductor 1	Mensaje		Reproducir msg 05, reproductor 1, x1
02	Reproductor 1 a las zonas 1,2,3	Rutar el reproductor 1 a las zonas 1,2,3	Rutar		Rutar Fuente #7 a las Zonas #1, #2, #3

- **Events**

  An event is created with the following properties:

  - Starting condition **(I)** will be the one created previously; "**MPS-8Z button**" with identifier **01.**
  - The end condition **(O)** will be virtual condition **V2 (End Actions).**
  - The **Undo Changes** option is **enabled** for the event's **sequence of actions.**
  - The **sequence of actions** will be as follows:
  - **Partial Override**: The event can be executed if any of the zones is not available, and the message will be broadcast by those that are, provided that the pre-recorded player 1 is available.

- The **Stackable** parameter is **disabled** so that the event does not queue if it cannot start running when triggered because none of the zones are available or the pre-recorded player 1 is busy.

6. Annex

6.1. Printable ASCII characters

Printable ASCII characters									
32	Blank	51	3	70	F	89	Y	108	l
33	!	52	4	71	G	90	Z	109	m
34	“	53	5	72	H	91	[	110	n
35	#	54	6	73	I	92	\	111	o
36	$	55	7	74	J	93	]	112	p
37	%	56	8	75	K	94	^	113	q
38	&	57	9	76	L	95	_	114	r
39	‘	58	:	77	M	96	`	115	s
40	(	59	;	78	N	97	a	116	t
41	)	60	<	79	O	98	b	117	u
42	*	61	=	80	P	99	c	118	v
43	+	62	>	81	Q	100	d	119	w
44	,	63	?	82	R	101	e	120	x
45	-	64	@	83	S	102	f	121	y
46	.	65	A	84	T	103	g	122	z
47	/	66	B	85	U	104	h	123	{
48	0	67	C	86	V	105	i	124	|
49	1	68	D	87	W	106	j	125	}
50	2	69	E	88	X	107	k	126	~