

USER'S MANUAL

NEO

Configurator

VERSION: 2.30.0.0

CONTENT

• PART 1.....	9
• 1. INTRODUCTION.....	9
1.1. Installation.....	9
1.2. Login.....	10
• 2. OVERVIEW AND PREFERENCES.....	11
2.1. Default User Folders.....	11
2.2. User Interface Description.....	11
2.2.1. "Project" menu.....	13
2.2.2. "View" menu.....	14
2.2.3. "Tools" menu.....	15
2.2.4. "Help" menu.....	16
2.2.5. Main Tool Bar.....	17
2.3. Preferences.....	17
2.3.1. Language preferences.....	18
2.3.2. Time & Date preferences.....	19
2.3.3. Users preferences.....	19
a. Create e New User.....	20
b. Edit an Existing User.....	20
c. Delete an Existing User.....	20
2.3.4. Contact info preferences.....	21
a. Create a New Contact.....	21
b. Edit an Existing Contact.....	22
c. Delete an Existing Contact.....	22
2.4. Search Devices Tool.....	22
• 3. PROJECT SETUP.....	26
3.1. New project.....	26
3.2. Add devices.....	26
3.2.1. Controller.....	27
a. Add a Virtual Controller.....	27
b. Remove a Controller.....	28
c. Using Search Devices Tool.....	28
3.2.2. Extensions.....	29
a. Add a Virtual Extension.....	29
b. Remove an Extension.....	30

c. Using Search Devices Tool.....	30
3.2.3. PA Microphones.....	31
a. Add a Virtual PA Microphone.....	31
b. Remove a PA Microphone.....	32
c. Using Search Devices Tool.....	32
3.2.4. E Microphones.....	33
a. Add a Virtual Emergency Microphone.....	33
b. Remove an emergency Microphone.....	34
c. Using Search Devices Tool.....	34
3.2.5. PA Zone Controllers.....	35
a. Add a Virtual PA Zone Controller.....	35
b. Remove a PA Zone Controller.....	36
3.3. Assign devices.....	37
3.3.1. Assign the system controller.....	37
a. The project is blank and no controller was previously added.....	37
b. The project already had a controller.....	38
c. Unassigns a Controller.....	39
3.3.2. Assign an Extension.....	39
3.3.3. Assign PA or E microphones.....	39
a. A physical microphone shares the same ACSI address as a virtual microphone.....	39
b. A physical microphone has an unique ACSI address (not in the software project).....	39
c. A virtual microphone has an unique ACSI address (not in the physical system).....	40
3.4. Link System.....	40
3.4.1. Import System.....	40
3.4.2. Export System.....	41
3.4.3. Unlink system.....	44
3.5. Update devices firmware.....	44
a. Browse for firmware update files.....	45
b. Send firmware update to the selected devices.....	46
c. ACSI microphones firmware update.....	46
• 4. SYSTEM CONFIGURATION.....	48
4.1. System Devices View.....	49
4.1.1. System Devices Root.....	50
a. Power Amplifier Outputs.....	50
b. Logs.....	51
4.1.2. Microphones.....	53

4.1.3. Controller.....	54
a. Controller – Info.....	55
b. Controller – Audio Inputs.....	56
c. Controller – Power Amplifier Outputs.....	58
d. Controller – Cobranet Inputs.....	59
e. Controller – Cobranet Broadcast.....	61
f. Controller – Speaker Lines.....	62
g. Controller – Status Inputs and Outputs.....	66
h. Controller – GPIO.....	68
i. Controller – Serial Ports.....	68
j. Controller – FLEXNET.....	69
k. Controller - Access Control.....	69
l. Controller - PTT Configuration.....	69
m. Controller – Advanced Configuration.....	69
n. Controller - Logs.....	70
4.1.4. Extensions.....	71
a. Extensions general information.....	71
b. Extension - Info.....	73
c. Extension NEO4500LE – Live Sources.....	73
d. Extension – Power Amplifier Outputs.....	73
e. Extension NEO4500LE – Cobranet Broadcast.....	74
f. Extension – Speaker Lines.....	74
g. Extension – Status Inputs and Outputs.....	75
h. Extension – Prio Config.....	75
i. Extension – Advanced Configuration.....	76
j. Extension – Logs.....	76
4.1.5. Accessories.....	76
4.2. PA/VA System View.....	78
4.2.1. PA/VA System Root.....	78
a. VA General Configuration.....	78
b. Presets.....	79
c. Logs.....	80
4.2.2. Sources.....	80
a. Microphones.....	80
b. Messages.....	84
c. Audio Sources.....	88
4.2.3. Zones.....	89
a. Edit Amplified outputs zonal assignation.....	91

b. Edit Override Outputs assigned to a Zone.....	93
• PART 2.....	96
• 5. EVENTS.....	96
5.1. Triggers.....	97
5.1.1. Input Level.....	98
5.1.2. Condition.....	98
5.1.3. Command.....	98
5.1.4. Date.....	98
5.1.5. Event.....	99
5.1.6. GPIO Input.....	99
5.1.7. CIE Input.....	99
5.1.8. Time.....	100
5.1.9. ACSI.....	100
5.1.10. System Status.....	100
5.2. Conditions.....	100
5.2.1. Logic operations for conditions.....	102
5.3. Actions.....	102
5.3.1. Volume Level.....	103
5.3.2. Volume Change	104
5.3.3. Mute.....	104
5.3.4. Command.....	105
5.3.5. Delay.....	105
5.3.6. Execute Actions.....	105
5.3.7. GPIO.....	106
5.3.8. Override.....	107
5.3.9. Message.....	108
5.3.10. Route.....	109
5.3.11. Undo Changes.....	110
5.3.12. Start Emergency.....	110
5.3.13. Stop Emergency	110
5.3.14. Zonal EVAC.....	110
5.3.15. Zonal ALERT.....	111
5.3.16. Zonal EMG State.....	111
5.4. Event creation.....	111
5.5. Examples.....	114
5.5.1. Sequence of evacuation: alternating EVAC and ALERT.....	114
5.5.2. Integration with a Fire Alarm Panel.....	115

5.5.3. Scheduled announcements.....	116
5.5.4. Route sources and play messages from MPS-8Z.....	117

PART 1

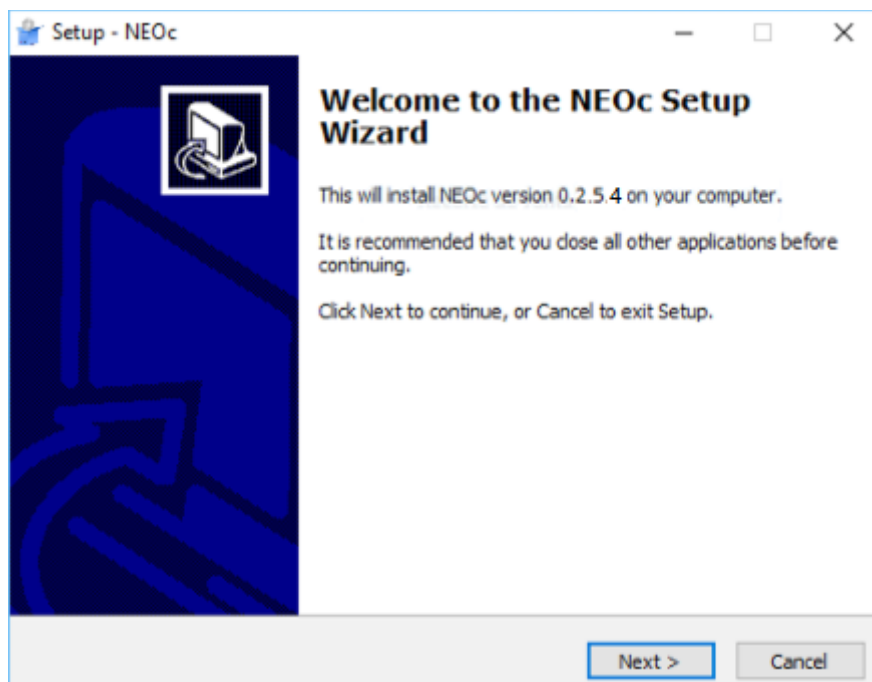
1. INTRODUCTION

NEO Configurator is a simple and intuitive computer interface that allows to configure the most advanced and powerful parameters of NEO system. NEO Configurator is intended mainly for installers and distributors, however, thanks to the possibility of configuring different user profiles, it is also a good tool for basic system operation from remote computers.

The instructions and screenshots included in this user's manual correspond to **NEO Configurator version 0.2.5.4**. This NEO Configurator version is suitable for NEO devices **up to firmware version v02.28.xx.30 (b2.1)**.

1.1. Installation

LDA Audio Tech provides the NEO Configurator installer in an executable file. Simply follow the instruction of the setup wizard to install the software in the computer.



Installer brings the opportunity to choose the language through the setup process. This will be also the default language when the installation is finished. The list of available languages are: Spanish, English, French, German, Italian, Turkish, Slovak and Russian. Compatible operating system:

- Windows 10

NOTE: It is possible that the software runs with previous versions of windows but some of the software configurations could not be available.

NOTE: It is recommended to run NEO Configurator always as *Administrator*.

1.2. Login

When NEO Configurator runs, a login screen will appear:



Introduce your user name and password and then click “Login”.

NOTE: The default user after a first installation is:

User: default

Password: 1234

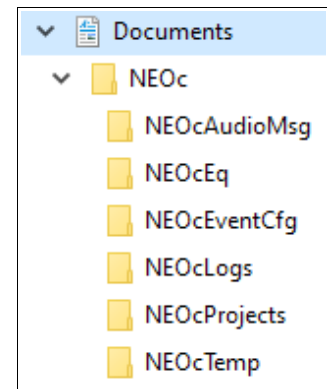
The profile for this default user is *Installer* (see **2.3.3. Users preferences**).

2. OVERVIEW AND PREFERENCES

2.1. Default User Folders

When the software runs, it creates some sub-folders on “**NEOc**”, if they don't exist yet; into the “**Documents**” Windows user path. Inside this one, the software uses some directories, due to information needs:

- **NEOcAudioMsg**: Default folder where audio files are saved at device downloads.
- **NEOcEq**: Default folder where equalization? files are saved, for audio inputs and amplified outputs.
- **NEOcEventCfg**: Default folder to save the system events configuration when file export occurs.
- **NEOcLogs**: Default folder to save the device log files.
- **NEOcProjects**: Default folder to save the project files.
- **NEOcTemp**: Default folder to save temporal files, necessary for software.



Those folders will not be erased at application deinstallation, so they should be done manually if necessary.

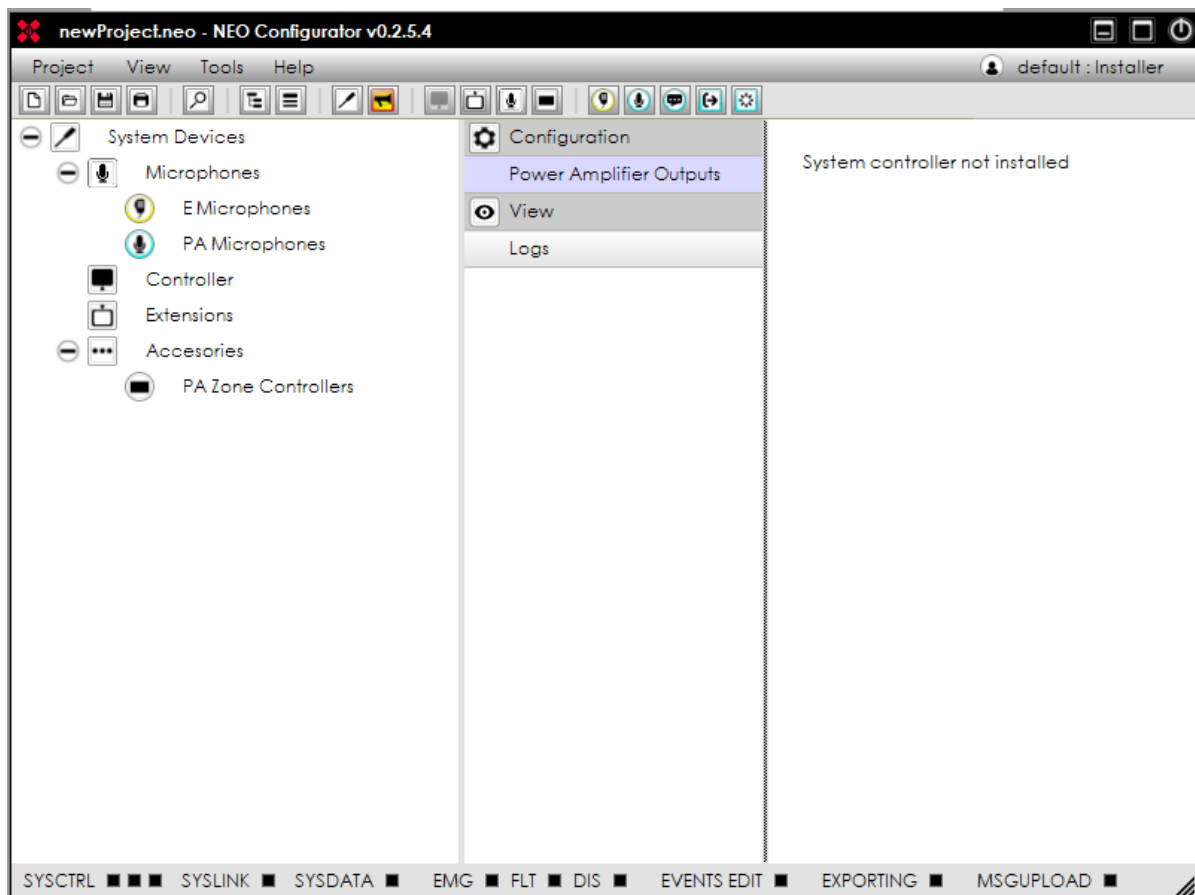
2.2. User Interface Description

When the user has been logged properly, the application main screen starts with a start-up dialogue box over it. From here it is possible:

- To start a new project (**NEW PROJECT**) from the list of available devices, clicking at “**Search Devices**”. See at 2.4.Search Devices Tool.
- To open a current project in work process, selecting between the recently used projects (**RECENT PROJECTS**) up to 10 and clicking at “**Open selected**” or searching for it in a browser at any storage facility at “**Browse files**”.
- To open the **FIRMWARE** update tool clicking at “**Update Devices Firmware**” (See more at section 3.5.Update devices firmware)

In case of closing this start-up windows without applying at one of the three commented actions, we will be at the application main display on a white canvas, with no previous project opened. At this point, one of the previous actions should be done using the menus or tool bar. Most of the features and tools may be disabled or out of sight.

In an opened project, most of the options and features will appear again and will be visible.



The **menu bar** at the top contains 4 menus: *Project*, *View*, *Tools* and *Help*. They are all described in the sections 2.2.1 to 2.2.4.

At the top right hand corner the **user name** and **user profile** are shown:



The **status bar** at the bottom includes the following status indicators:

- **SYSCtrl:** This status has 3 indicators:
 - **Indicator 1:** SYSCtrl [green square] [red square] [red square] The system (project in NEO Configurator) has a Controller.
 - **Indicator 2:** SYSCtrl [green square] [green square] [red square] The Controller in NEO Configurator is assigned to a physical controller.
 - **Indicator 3:** SYSCtrl [green square] [green square] [green square] NEO Configurator can communicate with the assigned physical controller in the network (so it is possible to *live link* to the device).

- **SYSLINK:** SYSLINK ■ The system (NEO Configurator) is *live linked* with the physical system. Every change made in NEO Configurator is updated instantly in the physical system and vice versa.
- **SYSDATA:** SYSDATA ■ The project in NEO Configurator is synchronized with the physical system, so all the parameters are the same in NEO Configurator and the devices (Controller and Extensions). NEO Configurator must be live linked (**SYSLINK** on) in order to check the synchronization status. After a change is made in either side, the indicator will turn black briefly until the change is updated in both ends (NEO Configurator and physical devices).

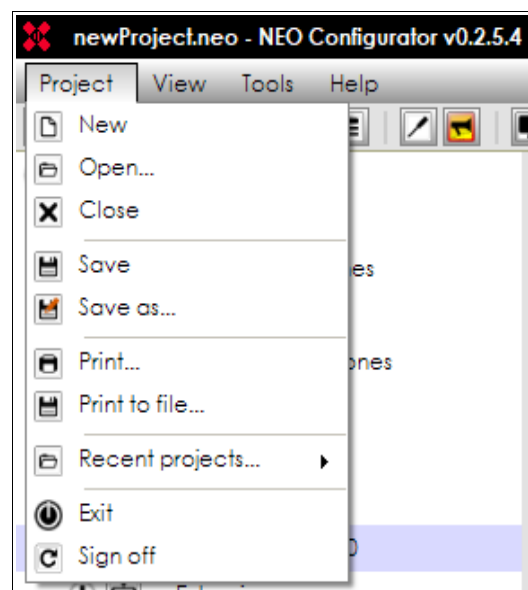
To sum up, it will be on green if every NEO (controller and extensions) devices are actually connected and the configuration parameters are synchronised with everyone (Extension devices also save part of the system configuration locally).

NOTE: Some short blinking of **SYSDATA** may happen during normal operation.

- **EMG:** EMG ■ It reports NEO is in emergency state.
- **FLT:** FLT ■ It reports NEO is reporting any fault.
- **DIS:** DIS ■ It reports one or many zones in NEO are disarmed.
- **EXPORTING:** EXPORTING ■ It indicates when NEO Configurator is sending data to the physical device when exporting a project (see **3.4. Link System**).
- **EVENTS EDIT:** EVENTS EDIT ■ Shows the events editor mode is currently active (see **5.EVENTS**)
- **MSGUPLOAD:** MSGUPLOAD ■ Indicates the current import or export audio files status between computer and system (see **b.Messages**).

2.2.1. "Project" menu

- **New** : Creates a new Project with its corresponding views (see **3.1. New project**). The default name for the new project is "*newProject.neo*".
- **Open...** : Opens an existing project. If the project already had added devices, they will appear in the "Devices view".
- **Close...** : Closes the current project.



- **Save** : Saves the complete project with the current name and path. For new projects the “**Save as...**” dialogue will appear instead.
- **Save as...** : Saves the complete project with a name and path chosen by the user.

NOTE: You can only save a project if your user profile is *Installer* (see **2.3.3. Users preferences**).

- **Print...** : Automatically generates a system report with all the configurations and parameters of the system and allows you to print it with a printer. The detail level of this report will depend on the user profile (see **2.3.3. Users preferences**).
- **Print to file...** : Automatically generates a system report with all the configurations and parameters of the system and allows you to save it as PDF in the computer. The detail level of this report will depend on the user profile (see **2.3.3. Users preferences**).
- **Recent projects...** : It develops a secondary menu where select recently open projects, up to 10, to directly open it.
- **Exit** : Exits the software.
- **Sign off:** Restates the application, coming back to the Login screen, due to possible user change.

NOTE: Project files will be saved using the “*.neo*” extension by default.

NOTE: *Adobe Acrobat Reader* is required to ensure the proper operation of the *PRINT* function.

2.2.2. “View” menu

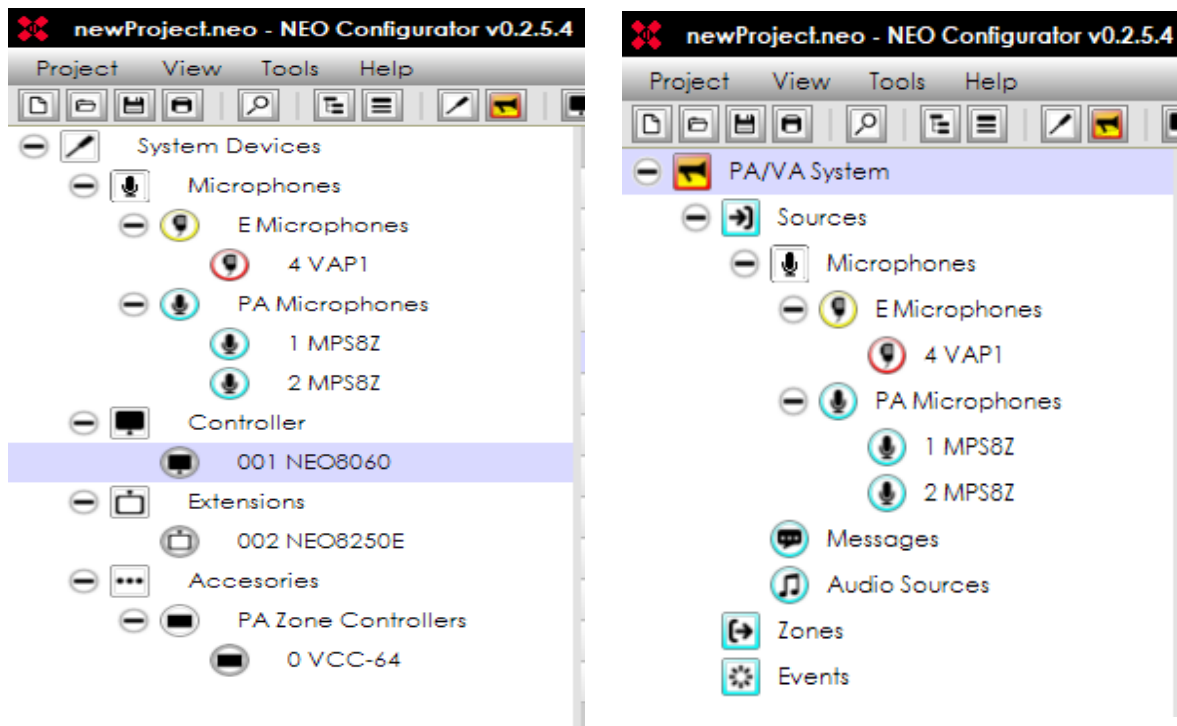
From this menu, you can select any of the 2 *System Views*:

- **PA/VA System**
- **System Devices**

It is possible to hide or show again some parts of the interface:

- **Hide/Show system tree:** Hide or show the selection view tree panel (left panel from main edition area).
- **Hide/Show selection filters:** Hide or show the visual selection panel or configuration (central panel from the main edition area).

The *System Views* allows to configure and set up all the parameters of the system. It is the main functional area of NEO Configurator. Each one of these views are shown in the left panel of the main window (see screenshots below).



A
detailed description of every System View is explained in chapter 4. **SYSTEM CONFIGURATION**.

NOTE: View menu is only active when there is an open project.

2.2.3. “Tools” menu

- **Import System / Export System / Unlink system** : These tools are used to *live link* and unlink NEO Configurator to the physical system (see 3.4. **Link System**).
- **Search Devices...** : Opens the NEO Discovery tool that allows to assign a NEO Configurator project to a physical system (as other features) (see 3.3. **Assign devices**).
- **Update Devices Firmware...** : Opens a tool to update the firmware of NEO devices (see 3.5. **Update devices**).

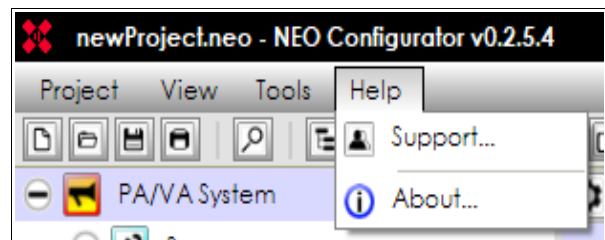


- **Events – Factory Reset:** Deletes all the items from the event manager; triggers, conditions, actions and events (see chapter **5. EVENTS**).
- **Upload Project Backup File :** Allows to upload a copy of the currently open project to the System Manager. The file must keep the same format than the other application saved files.
- **Download Project Backup File...** : Allows to download the previously updated backup of the project file, in case it exists, to the System Manager SD. Once the files are downloaded, it is possible to open it as any other project, with the same applications.
- **Preferences...** : Edits the general preferences of NEO Configurator software (see **2.3. Preferences**). These preferences are common to all the projects opened from the same computer.
- **Export / Import Preferences...** : Saves or loads the preferences of NEO Configurator software.

NOTE: Some tools may be restricted depending on your user profile (see **2.3.3. Users preferences**).

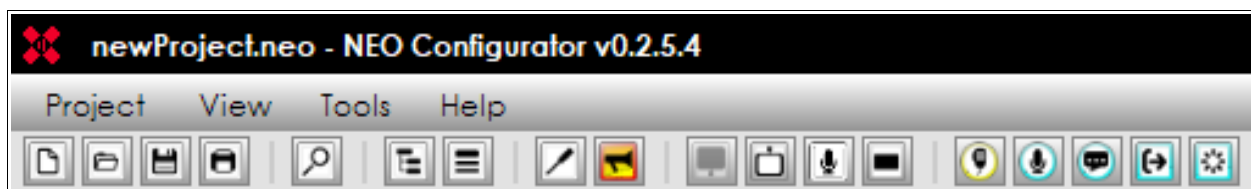
2.2.4. “Help” menu

- **Support** : Displays contact information on the screen. Additional support information can be added to this window from *Contact info preferences* (see **2.3.4**). Only the *Installer* can edit this information (see **2.3.3**).
- **About** : Displays version number and manufacturer information.



2.2.5. Main Tool Bar

















The tool bar located below the application main menu includes the direct access to many other features and configuration settings of the software:



New project



Open a project

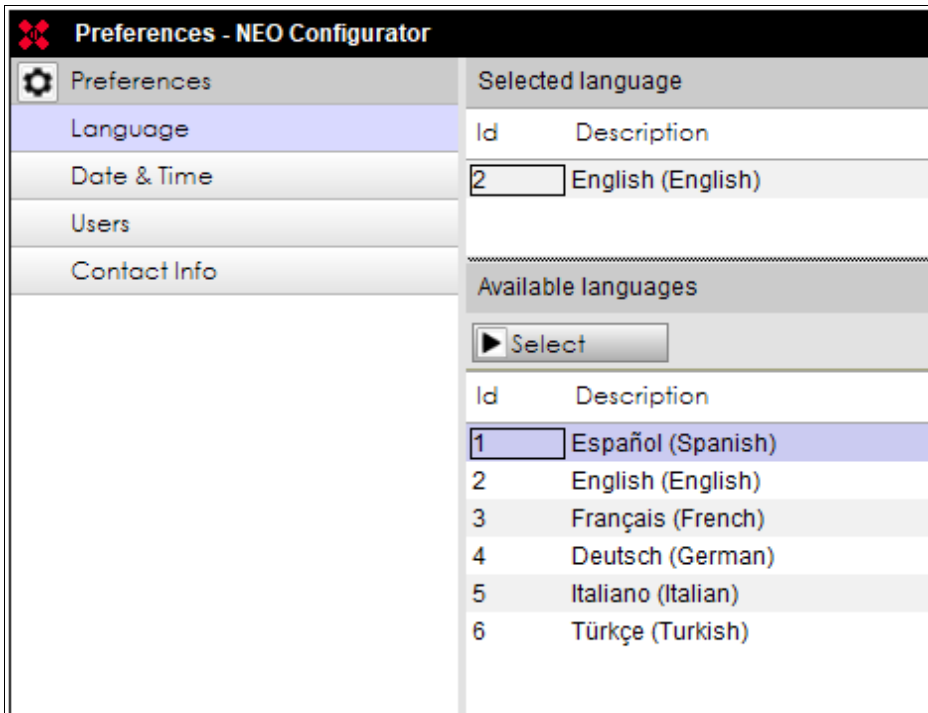
	Save project		Print project
	Open the search devices tool		Hide / Show the left panel (system dependencies tree)
	Hide / Show the central panel (visual filters and configurations)		Direct access to "System Devices" view
	Direct access to "PA/VA System" view		Direct access to system manager (System Devices) view
	Direct access to Extensions (System Devices)		Direct access to system microphones (System Devices)
	Direct access to PA Zone Controllers (System Devices)		Direct access to VA Microphones (PA/VA System)
	Direct access to PA Microphones (PA/VA System)		Direct Access to Pre-recorded Messages (PA/VA System)
	Direct Access to system Zones (PA/VA System)		Direct access to system Events (PA/VA System)

2.3. Preferences

From the *Tools* menu you can open the *Preferences* window to configure NEO Configurator software. This window contains 4 tabs: **Language**, **Date & Time**, **Users**, **Contact Info**.

NOTE: You can only access to *Preferences* if your user profile is *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

2.3.1. Language preferences



From this tab, you can change the **user interface language** of NEO Configurator:

1. Select the language from the panel “**Available languages**”:

- Spanish
- English
- French
- German
- Italian
- Turkish

2. Click on “**Select**”.

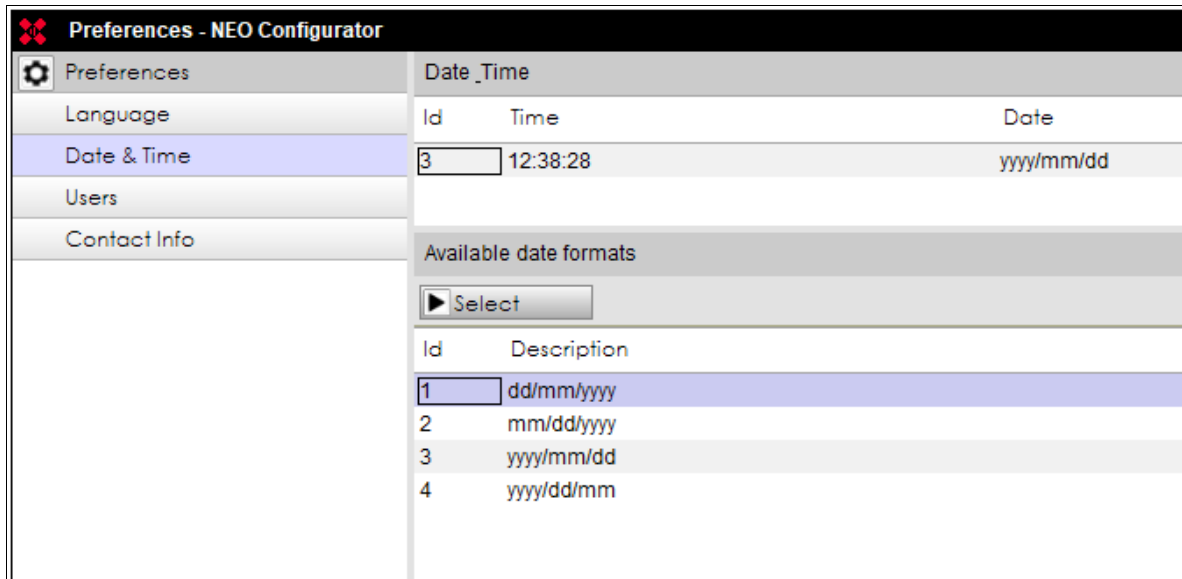
3. NEO Configurator will ask if the user wants to restart the application in order to apply the new language. Click “**Yes**”.

NOTE: All unsaved changes in the project will be lost. The application asks before restarting in order to save possible changes in the project. It is possible to accept or reject and cancel. In case of cancellation, the restart should be done manually after that, in order to apply the language change.

4. NEO Configurator will be closed.

5. The software automatically restarts. The new language will be applied.

2.3.2. Time & Date preferences



In this tab it is possible to change the time and date visual format in the software. It also displays the PC time.

To change the **date format**:

1. Select the desired date format from the panel "Available date formats".
2. Click on "Select".
3. NEO Configurator will ask if you want to restart the application in order to apply the new date format. Click "Yes".

NOTE: All unsaved changes in the project will be lost. The application asks before restarting in order to save the possible changes in the project. It is possible to accept or reject and cancel. In case of cancellation, the restart should be done manually after that, in order to apply the date change.

4. NEO Configurator will be closed.
5. The software automatically restarts. The new date format will be applied.

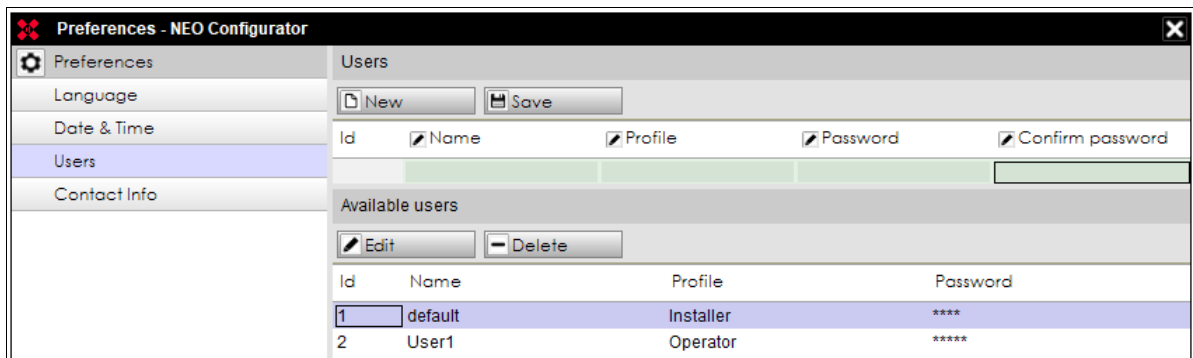
2.3.3. Users preferences

In this tab, you can add or edit many different users for NEO Configurator. Every user can optionally have a password.

Each user will have a **profile** assigned: *Reporter*, *Operator*, *Maintainer* or *Installer*. Every profile has different permissions for the *System Views* and for some *NEO Configurator Tools*:

		REPORTER	OPERATOR	MAINTAINER	INSTALLER
SYSTEM VIEWS	Voice Alarm	Only view	Only view	Only view	Configuration
	Public Address	Only view	Configuration	Configuration	Configuration
	Devices	Only view	Only view	Configuration	Configuration
NEO Configurator Tools	Save Project	Disabled	Disabled	Disabled	Enabled
	Preferences	Disabled	Disabled	Enabled *	Enabled
	Export / Import Preferences	Disabled	Disabled	Enabled	Enabled
	Export System	Disabled	Disabled	Enabled	Enabled

* *Maintainer* cannot create new users with *Installer* profile.



The lower panel “**Available users**” indicates all the users that are currently logged in NEO Configurator.

The upper panel “**Users**” is used to create a new user or to edit an existing user.

a. Create e New User

1. Click “**New**” to clean the “**Users**” panel.
2. Edit every field in the “**Users**” panel. Both “**Name**” and “**Profile**” are mandatory fields.
3. Click on “**Save**”.
4. The new user will appear in the “**Available Users**” panel.

b. Edit an Existing User

1. Select the existing user from the “**Available users**” panel.
2. Click on “**Edit**”. The user details will appear in the “**Users**” panel.
3. Modify the corresponding fields in “**Users**” panel.

4. Click on **“Save”**.

c. Delete an Existing User

1. Select the existing user from the **“Available users”** panel.
2. Click on **“Delete”**.

2.3.4. Contact info preferences

This tab is intended to edit support information that will appear in the **“Support”** window (see 2.2.4. **“Help”** menu):



NEO Configurator - Support

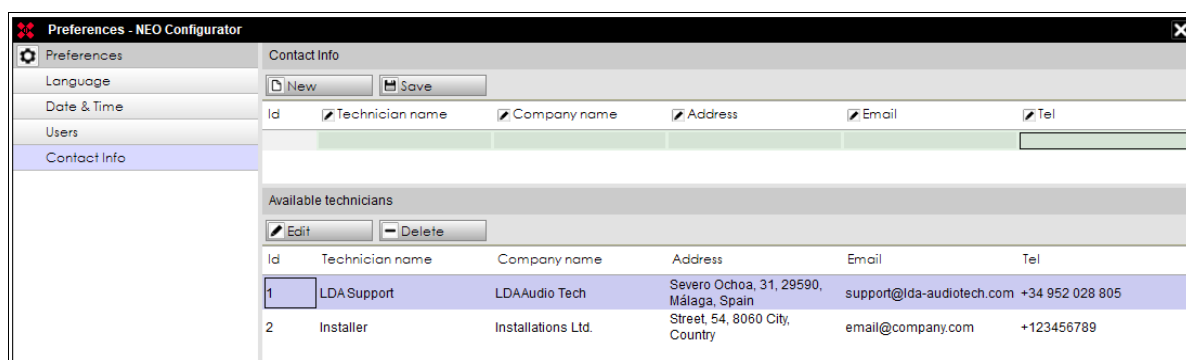
CONTACT INFO:

Name: LDA Support
Company name: LDA Audio Tech
Address: Severo Ochoa, 31. 29590, Malaga, SPAIN
Email: support@lda-audiotech.com
Teléfono: +34 952 028 805

Name: Installer
Company name: Instalations Ltd.
Address: Street, 54. 8060 City. Country
Email: email@company.com
Teléfono: +123456789

Ok

This **Contact Info** also appears in the PDF project report (see **Print** options in 2.2.1. **“Project”** menu).



Preferences - NEO Configurator

Contact Info

New Save

Id	Technician name	Company name	Address	Email	Tel
1	LDA Support	LDA Audio Tech	Severo Ochoa, 31, 29590, Málaga, Spain	support@lda-audiotech.com	+34 952 028 805
2	Installer	Installations Ltd.	Street, 54, 8060 City, Country	email@company.com	+123456789

Available technicians

Edit Delete

Id	Technician name	Company name	Address	Email	Tel
1	LDA Support	LDA Audio Tech	Severo Ochoa, 31, 29590, Málaga, Spain	support@lda-audiotech.com	+34 952 028 805
2	Installer	Installations Ltd.	Street, 54, 8060 City, Country	email@company.com	+123456789

The upper panel **“Contact Info”** is used to create a new contact or to edit an existing contact.

The lower panel **“Available technicians”** indicates all the contact details that are currently saved in NEO Configurator.

a. Create a New Contact

1. Click **"New"** to clean the **"Contact Info"** panel.
2. Edit every field in the **"Contact Info"** panel. The only mandatory field is **"Technician name"**.
3. Click on **"Save"**.
4. The new contact will appear in the **"Available technicians"** panel.

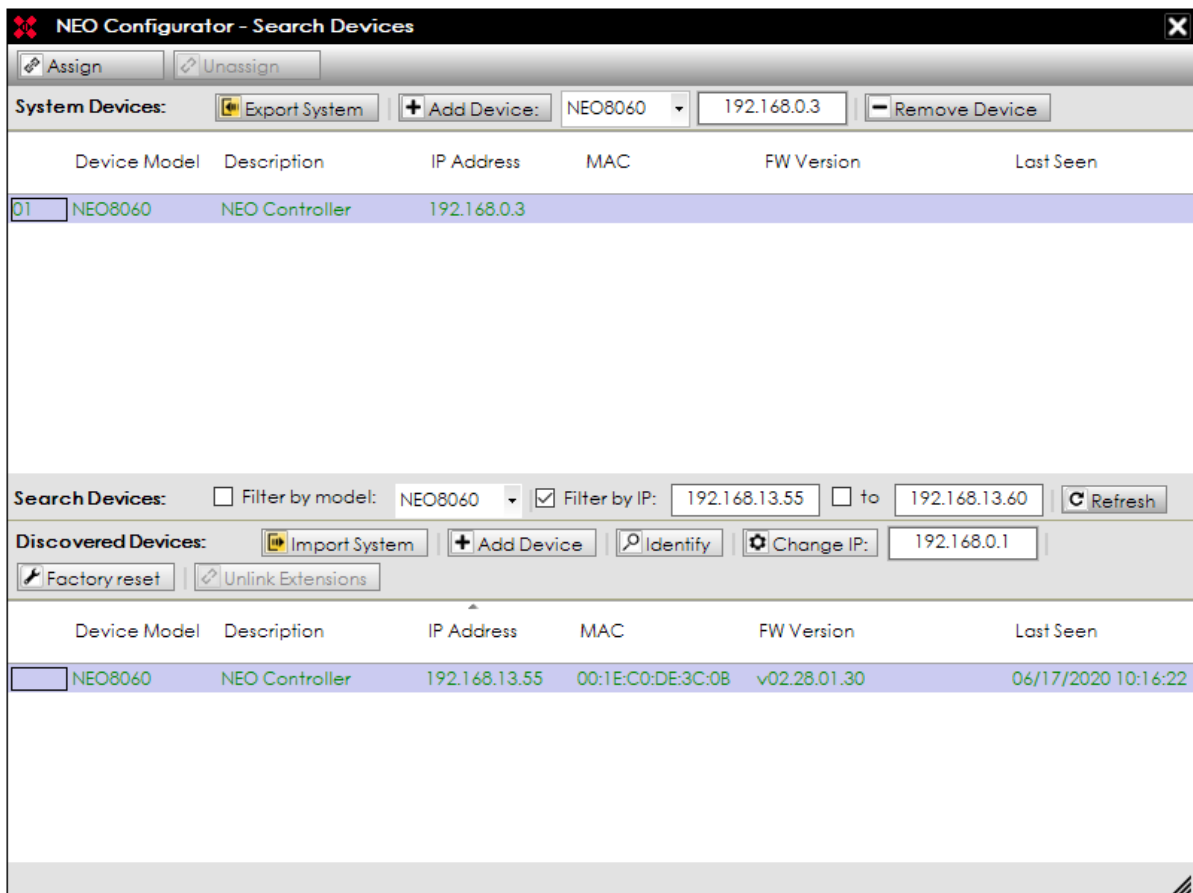
b. Edit an Existing Contact

1. Select the existing contact from the **"Available technicians"** panel.
2. Click on **"Edit"**. The contact details will appear in the **"Contact Info"** panel.
3. Modify the corresponding fields in **"Contact Info"** panel.
4. Click on **"Save"**.


c. Delete an Existing Contact

1. Select the existing contact from the **"Available technicians"** panel.
2. Click on **"Delete"**.

2.4. Search Devices Tool



Possible ways to access this tool:

- From the software start-up, at the start window (**Start**) → **“Search Devices”**
- Automatically when a new project starts.
- Through the main menu: **“Tools”** → **Search Devices**
- Through the direct access at the tool bar: 
- 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):

- 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 have sense into the Search Devices windows (do not misunderstood with Flexnet values or ACSI or VCC values).
- **Device Model:** model value of the devices at the project.
- **Description:** device short description.

- **IP Address:** IP address of the devices. At ACSI devices, it shows 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), it shows the IP address from the master Controller System, followed by the "#" symbol and finally the VCC bus series address.
- **MAC:** in case the project assigned device is a physical device and it is connected to the network, it also shows the MAC address (only for NEO Controller and Extensions).
- **FW Version:** in case the project assigned device is a physical device and it is connected to the network, it shows also the firmware version (only for NEO Controller, Extensions and ACSI microphones).
- **Last Seen:** if the project device is assigned to a physical system, it shows the last time when the software has an answer from it.

At the top panel, the found devices may appear at several colours; this means:

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

The button panel shows the device list found at the network: Controllers, Extensions and ACSI microphones physically connected to the Controllers:

- The first column is similar to the top panel described before.
- **Device Model:** found device model.
- **Description:** device short description.
- **IP Address:** device IP address. For ACSI devices, shows the IP address from the master System Controller followed by "@" symbol and finally the local address at the ACSI bus.
- **MAC:** device MAC address (only for NEO Controller and Extensions)
- **FW Version:** device firmware version.
- **Last Seen:** last date the device has been detected.

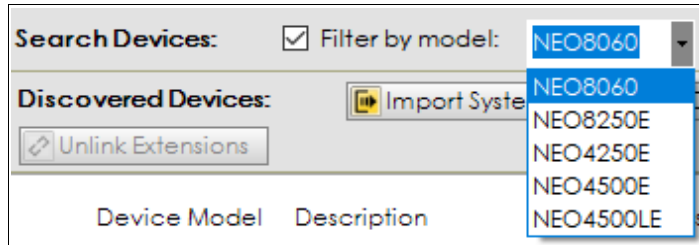
In the lower panel, the meaning of the colours of the device's' names is as follows:

- **Black:** Assigned devices to a project at the top panel window.
- **Green:** Not assigned devices. The devices are available to be connected.
- **Orange:** Not assigned devices with problems to connect, due to configuration parameters out of the current network from PC setup. In case of an NEO Controller, it is possible to didn't see also the connected ACSI microphones.
- **Grey:** Devices with no answer from more than 30 seconds ago.

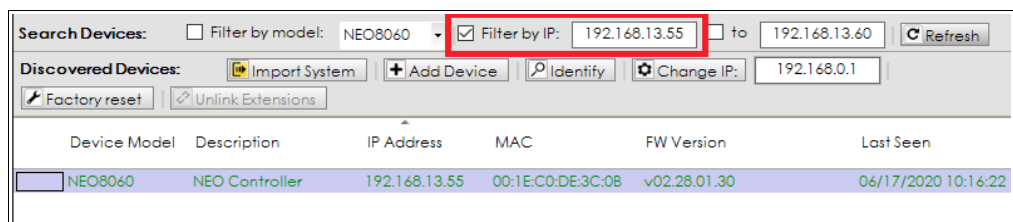
The Devices Search tool allows to:

- Search NEO devices and ACSI microphones connected to NEO System Controller. You can do the search through 2 type of filters, one by model and one by IP address filters:

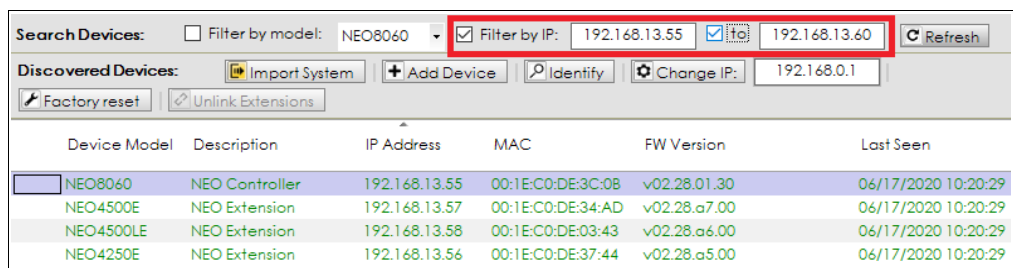
- **By Device Model:** Enables the “*Filter by model*” check box. Only for NEO Controllers or NEO Extensions.



- **By specific IP address:** Enables the “*Filter by IP*” box to develop an unicast search for an only device at the selected location instead of broadcast search. This will be useful at broadcast restricted networks. Requires to know previously the correct IP address.



- **By IP address range:** Enabled by the “*Filter by IP*” and “*to*” checkboxes marks, shows the devices found with IP address in this range, extreme values included.



- Add “virtual” devices to the project (only NEO Controller and Extensions) using the top panel controls (see at section 3.2.Add devices).
- Delete devices to the project using the top panel controls (see at section 3.2.Add devices).
- Add devices to the project found at the network using the lower panel controls (see 3.3.Assign devices)
- Assign or unassign found devices in the network to the correspondent devices currently at the project. (Assign / Unassigned) (See 3.3.Assign devices)

- Import / Export system configuration. (Import System / Export System) (See **3.4.1.Import System** see **3.4.2.Export System**)
- Identify NEO devices found at the network. To do this, it is necessary to select a NEO device on the lower panel and press "**Identify**". This action makes the frontal and rear leds at the physical device beep for 30 seconds.
- Change the NEO devices found in the network IP address. To do this, it is necessary to select the the correct NEO device at the lower panel, choose a new IP address (at the right field to the button) and press "**Change IP**" after that. A pop-up advice will ask for confirmation. This action does an automatic software reset to the ETX module on the device.
- Perform a factory reset of a NEO device found at the network. First select the NEO device at the lower panel and click on "**Factory Reset**". After that factory reset, the unit will take the default IP address 192.168.0.3. Kindly keep this in mind in case of several reset devices on the same network.
- Let the Flexnet link between a NEO Extension and a NEO Controller free. This action it's possible by selecting the NEO Extension at the lower panel and clicking on "**Unlink Extensions**".
- The "**Refresh**" button cleans the lower panel list in order to update it with the new devices found after that.

3. PROJECT SETUP

3.1. New project

In NEO Configurator, a project is a complete NEO system with all its parameters and event configurations.

In order to start using NEO Configurator, you should either:

- **Create a new project** (*Project -> New*).
- **Open an existing project** (*Project -> Open*).

If you have a previously installed NEO system, but you do not have the corresponding project file, you can import this system into NEO Configurator by following these steps:

1. Create a new project (*Project -> New*).
2. Search the main controller of that system (see **3.3. Assign devices**).
3. Add the controller to the NEO Configurator project (see **3.3. Assign devices**).
4. Import the system (see **3.4. Link System**).

3.2. Add devices

A NEO system is composed of at least one NEO Controller (NEO 8060). Additionally, a NEO system can include any of the following devices:

- **Microphones:**
 - MPS-8Z paging microphones (PA Microphones)
 - VAP-1 voice alarm panels (E Microphones)
- **NEO Extensions:**
 - NEO 8250E
 - NEO 4250E
 - NEO 4500E
 - NEO 4500LE
- **Accessories:**
 - VCC-64 volume and channel controller (PA Zone Controller)

NOTE: Every project can include just 1 single controller. If you have more than 1 controller, it means you have different systems. Each one of these systems will be a separate NEO Configurator project.

There are 2 ways of adding devices into a system:

- **Manually as virtual devices** (see sections **3.2.1** to **3.2.5**).

Extensions - Configuration									
+ Add Extension		Device Model	NEO8250E	IP Address:		192.168.0.4	Discover	IP range: from 192.168.0.1 to 192.168.0.254	
FlexNet Id	Equipment	State	Place	S/N	SO	AP	IP Address	MAC	Gateway
002	NEO8250E		PAVA System		N/A	N/A (b0.0)	192.168.0.4	00:00:00:00:00:00	192.168.0.1
								9-16 (8)	

- From an existing physical system connected to the same network as the computer (see 3.3. *Assign devices*).

NOTE: If you add virtual devices as described below, these virtual devices can later be assigned to physical devices (see 3.3. *Assign devices*) and thus export all the configurations to that system (see 3.4.2. *Export System*).

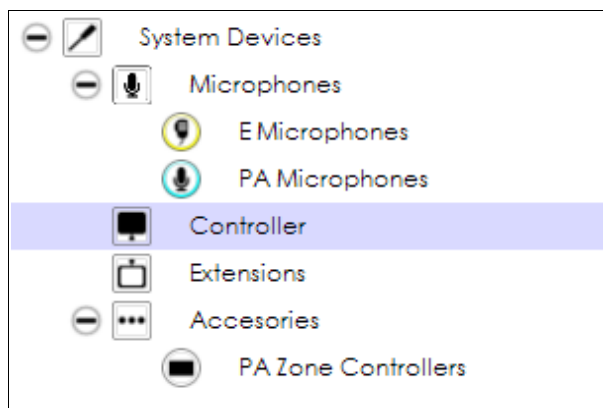
NOTE: In case of online works (live linked), to add or delete devices means to do it rather at the project or at the physical system configuration. See 3.4. *Link System*

3.2.1. Controller

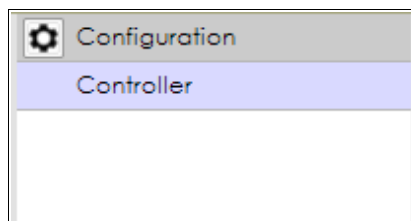
a. Add a Virtual Controller

Adding a “virtual” Controller:

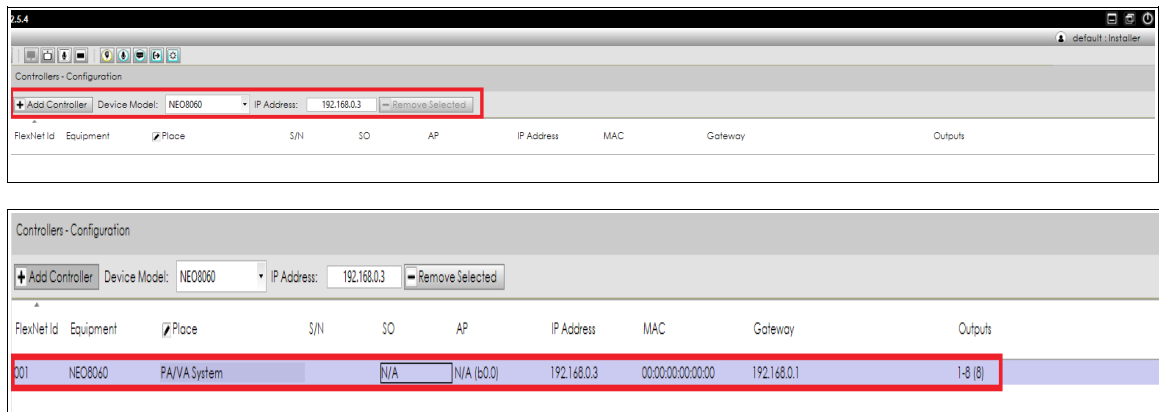
- Select “**Controller**” node at “**System Devices**” view:



- Select the appropriated configuration filter:



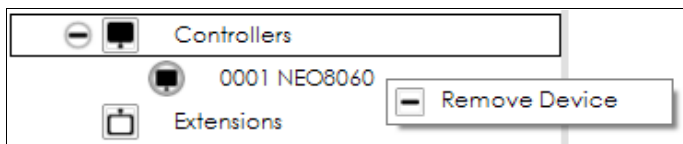
- Add the device using the main configuration panel controls:



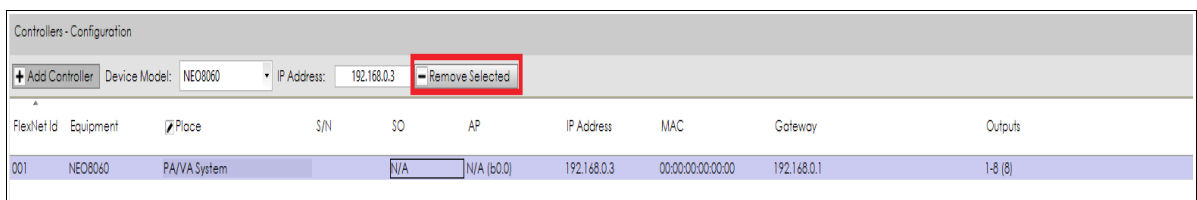
- You can optionally change the **“Place”** attribute of the NEO Controller by editing its corresponding field.

b. Remove a Controller

To remove a controller simply right-click on the added controller and then click on **“Remove Device”**:



It is also possible to delete the System Controller from the main configuration panel:

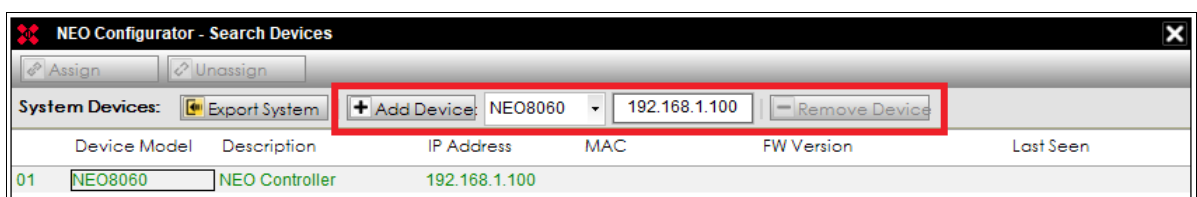


Delete the Controller makes the whole previous system configuration to be lost.

NOTE: In order to add or remove controllers your user profile must be *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

c. Using Search Devices Tool

It is also possible to delete or add a System Controller from the **“Search Devices”** window:

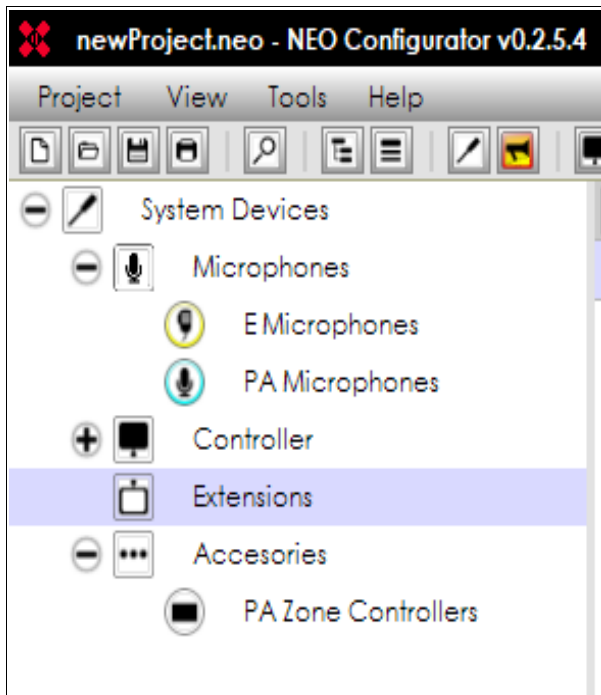


3.2.2. Extensions

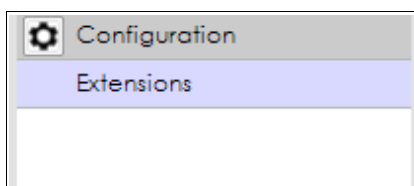
a. Add a Virtual Extension

It is necessary to have a System Controller at the project configuration before adding new Extensions units.

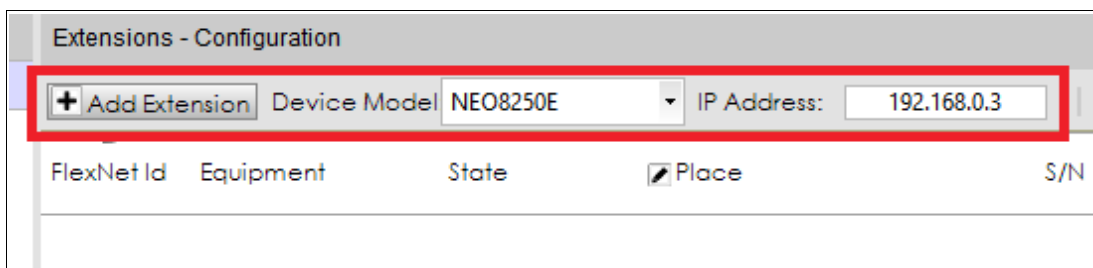
To add a “virtual” Extension from main window, select first the proper node at **System Devices**:

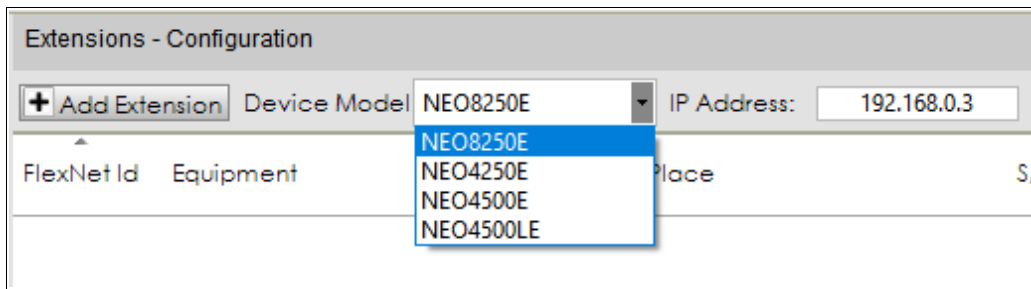


Then select their configuration section.:



At the main configuration panel specify the new device IP address and model, and add it clicking on “**Add Extension**”:

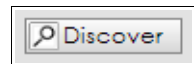




You can optionally change the **“Place”** attribute of the NEO Extension by editing its corresponding field.

NOTE: It is not possible to get two devices (Controller or Extensions) set with the same IP address at the same project. The software doesn't allow to do this, and sends an advise in case of issue.

In case of working online (live linked), we can add the Extensions found at the network into the system by using the Controller. To do that, simply click on the **Discover** button.



It is possible to limit the search to a specific IP address range. To do this, introduce the start and end IP addresses and enable this option:

☒ IP range: from 192.168.13.56 to 192.168.13.58

b. Remove an Extension

From system devices list tree main view, with a right-click at the requested device node, we can delete a device to the project. It is also possible from main configuration, selecting those devices and clicking on **“Remove selected”**.

c. Using Search Devices Tool

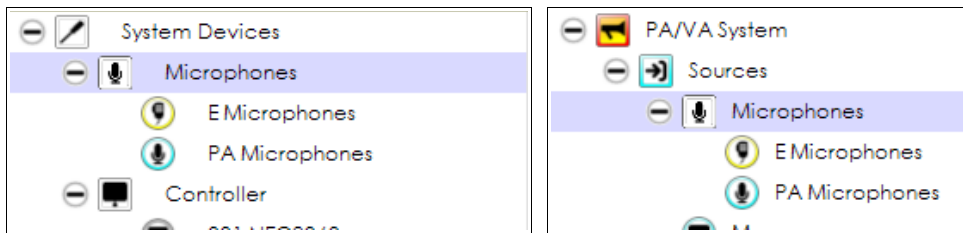
Adding or deleting “virtual” Extensions is also possible from the Search Devices window, as it is for the System Controller.

3.2.3. PA Microphones

a. Add a Virtual PA Microphone

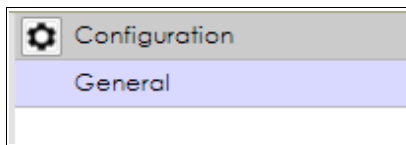
Before adding any microphone, the user needs to make sure that the system already has a controller . To add a virtual PA Microphone, follow the steps below:

1. In **PA/VA System** view or **System Devices** view, click on **“Microphones”**:

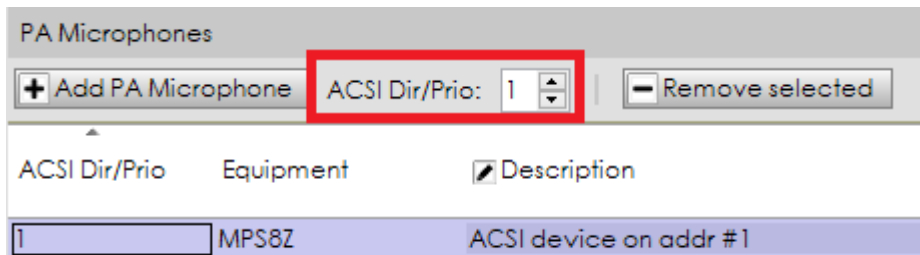


It is also possible to select the “**PA Microphones**” node at both views, so there is no need to choose a model later on in the main configuration panel.

2. In the *Tabs panel* (middle) click on “**General**”:

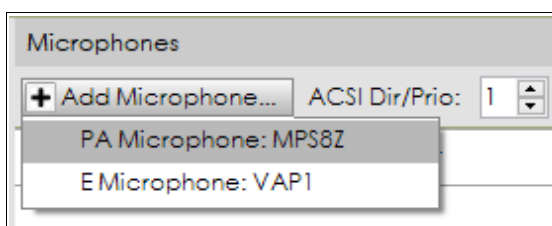


3. In the *Edition panel* (right) you can configure the **ACSI Direction** of the PA Microphone you want to add. Click on this field to select the desired **ACSI Address/Priority**:



NOTE: The ACSI Address or Priority corresponds to the priority level of the device compared to all the ACSI devices (MPS-8Z or VAP-1) of the system. See the devices user's manuals for further information at [LDA Support Website](http://www.lda-audiotech.com).

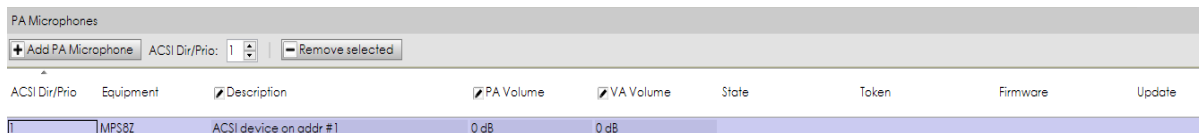
4. At the “**Microphones**” node, in the tree list view, a drop-down menu is displayed after clicking on the “Add Microphone” button. There, the user should choose the option “**PA Microphone: MPS8Z**”.



At “**PA Microphones**”, as shown on the illustration below, the user can also click on the “**Add PA Microphone**” button, clicking on it and adding the PA Microphone.



5. The new PA Microphone will be displayed as shown below:



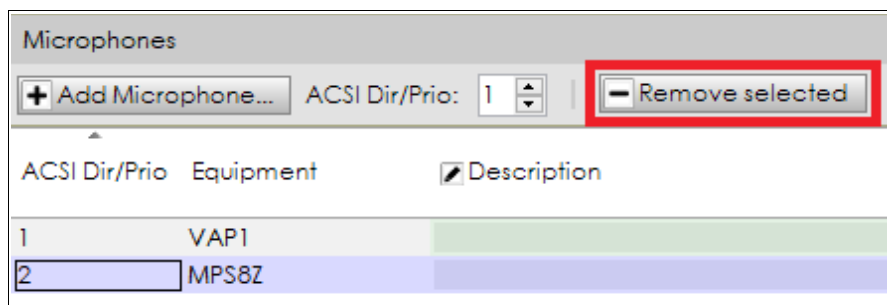
- It is possible to change **“Description”** of the PA Microphone by editing the corresponding field.

b. Remove a PA Microphone

Removing a PA Microphone can be done in 2 ways:

Option 1: From PA/VA System view

- In **PA/VA System** view, click on **“Microphones”** or **“PA Microphones”**.
- In the *Tabs panel* (middle) click on **“General”**.
- At the configuration panel, select the microphone to be deleted and click on **“Remove selected”**:



Option 2: From System Devices View

- In the **System Devices** view tree, right-click on the PA Microphone to be removed.
- Click on **“Remove Device”**.

c. Using Search Devices Tool

As seen before for the System Controller and Extensions, through the upper panel over the Search Device window we can remove any microphone previously added to the project, but it is not possible to add it as “virtual” devices.

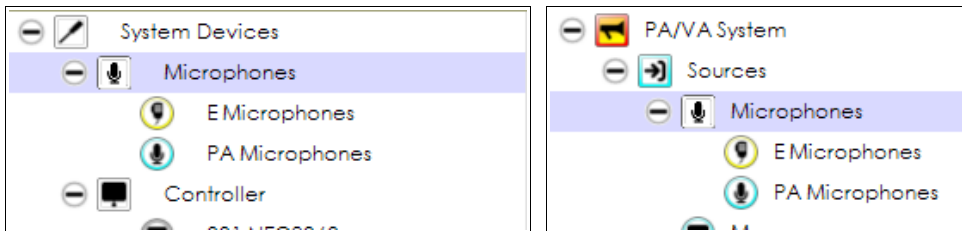
NOTE: In order to add or remove PA Microphones, the user profile must be *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

3.2.4. E Microphones

a. Add a Virtual Emergency Microphone

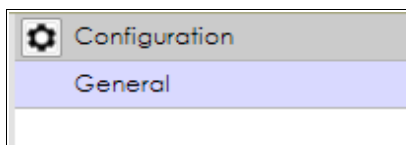
Before adding any emergency microphone, the user needs to make sure the system already has a controller. To add a virtual E Microphone, please follow the steps shown below:

1. In **PA/VA System** view or **System Devices** view, click on “**Microphones**”:



It is also possible to select the “**E Microphones**” item in both views. That path makes possible not to select the model at the configuration main panel

2. In the *Tabs panel* (middle) click on “**General**”:

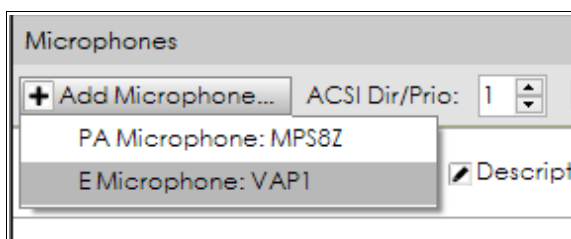


3. In the *Edition panel* (right), the user can configure the **ACSI Address** of the E Microphone that needs to be added. Click on this field to select the desired **ACSI Address/Priority**:

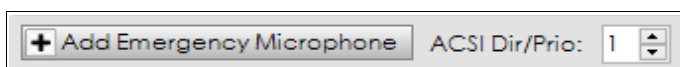


NOTE: The ACSI Address or Priority corresponds to the priority level of the device in relation to all the ACSI devices (MPS-8Z or VAP-1) of the system. See the devices user's manuals for further information.

4. From the “**Microphones**” node at the tree view, by clicking on “Add Microphone”, a drop-down menu displays. There, the user should select the option “**E Microphone: VAP1**”:



Otherwise, the user can also add the microphone inside the “**E Microphones**” node, as shown below, , by clicking on the button “**Add Emergency Microphone**”.



5. The new E Microphone will be displayed as shown below:

E Microphones							
+ Add Emergency Microphone		ACSI Dir/Prio: 1		- Remove selected			
ACSI Dir/Prio	Equipment	Description	PA Volume	VA Volume	State	Token	Firmware
1	VAP1	ACSI device on addr #1		0 dB			

- It is possible to change **“Description”** of the E Microphone by editing the corresponding field.

b. Remove an emergency Microphone

Removing an E Microphone can be done in 2 ways:

Option 1: From PA/VA System view

- In **PA/VA System** view, click on **“Microphones”** or **“E Microphones”**.
- In the *Tabs panel* (middle), click on **“General”**.
- At main configuration panel, select the microphone to be removed from the list and press the button **“Remove selected”**:

Microphones		
+ Add Microphone...		ACSI Dir/Prio: 2
- Remove selected		
ACSI Dir/Prio	Equipment	Description
1	VAP1	
2	MPS8Z	

Option 2: From System Devices View

- In **System Devices** view tree, right-click on the E Microphone to be removed.
- Click on **“Remove Device”**.

c. Using Search Devices Tool

As in system Controller and Extensions, through upper panel over Search Device window emergency microphones previously added to the project can be removed, but it is not possible to add it as “virtual” devices.

NOTE: In order to add or remove Emergency Microphones the user profile must be *Installer* (see 2.3.3. *Users preferences*).

3.2.5. PA Zone Controllers

PA Zone Controllers are devices that manage the volume level and the source routed in a single zone. When a VCC-64 Volume and Channel Controller is connected to the system, NEO automatically detects it and adds it as a PA Zone Controller (when it is used for the first time). This PA Zone Controller will appear in NEO Configurator when it is live linked or after importing the system.

NOTE: PA Zone Controllers cannot be added from the *Search device* window as described in **3.3. Assign devices**. They are added automatically by NEO after they are connected to the system and after their first use.

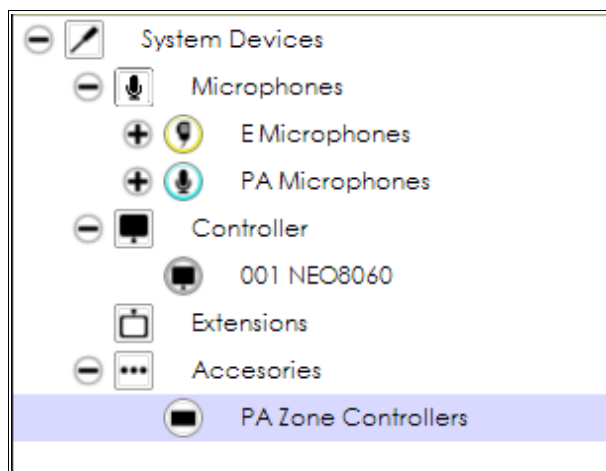
PA Zone Controllers can also be added manually as virtual PA Zone Controllers that will be automatically assigned to the physical VCC-64 for as long as they have the same physical address.

NOTE: VCC devices connect to the serial integrations port, or PA port, located at ATEX module. This port can also be managed by the event manager (to send or receive commands). Both situations are exclusive, and cannot be used simultaneously. In case of using the PA port, it is not possible to install VCC devices and vice-versa, if VCC are already installed at the systems, it makes not possible to use the PA port by the event manager. See more at *i.Controller – Serial Ports*

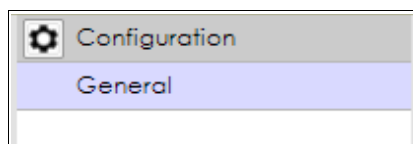
a. Add a Virtual PA Zone Controller

Before adding a PA Zone Controller, it is important to make sure there is already a controller in your system. To add a virtual PA Zone Controller, follow the steps below:

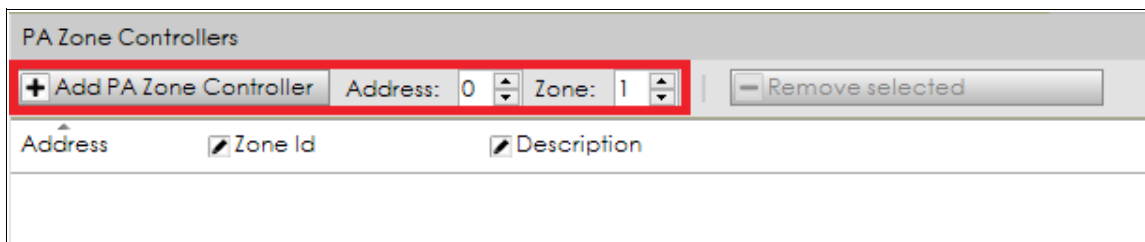
1. In the **System Devices** view, click on **“PA Zone Controllers”**:



2. In the *Tabs panel* (middle) click on **“General”**:

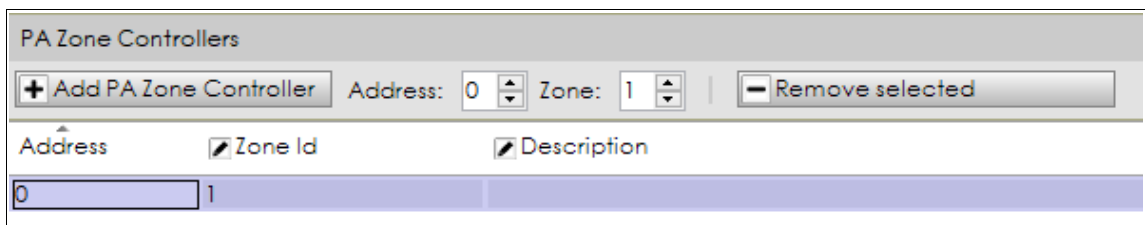


3. In the *Edition panel* (right) you can configure the physical **address** of the PA Zone Controller, as well as the system **zone** identifier that will be assigned to that physical address, as shown below. Edit these fields to select the desired values:



NOTE: The physical addresses 0 to 7 correspond with the 8 possible deep switch configurations you can select in the VCC-64. See *VCC-64 user's manual* for further information.

4. Click on **“Add PA Zone Controller”**.
5. The new PA Zone Controller will be displayed as below:



Address	Zone Id	Description
0	1	

6. The **“Description”** or **“Zone Id”** of the added PA Zone Controller can be changed by editing the corresponding field.

b. Remove a PA Zone Controller

Removing a PA Zone Controller can be done in 2 ways:

Option 1: From Edition panel (right)

1. In **System Devices** view, click on **“PA Zone Controller”**.
2. In the Tabs panel (middle), click on **“General”**.
3. Select the desired PA Zone Controller to be removed and click on the **“Remove Selected”** button.

Option 2: From System Devices tree

1. In the **System Devices** view tree (left panel), right-click on the PA Zone Controller you want to remove.
2. Click on **“Remove Device”**.

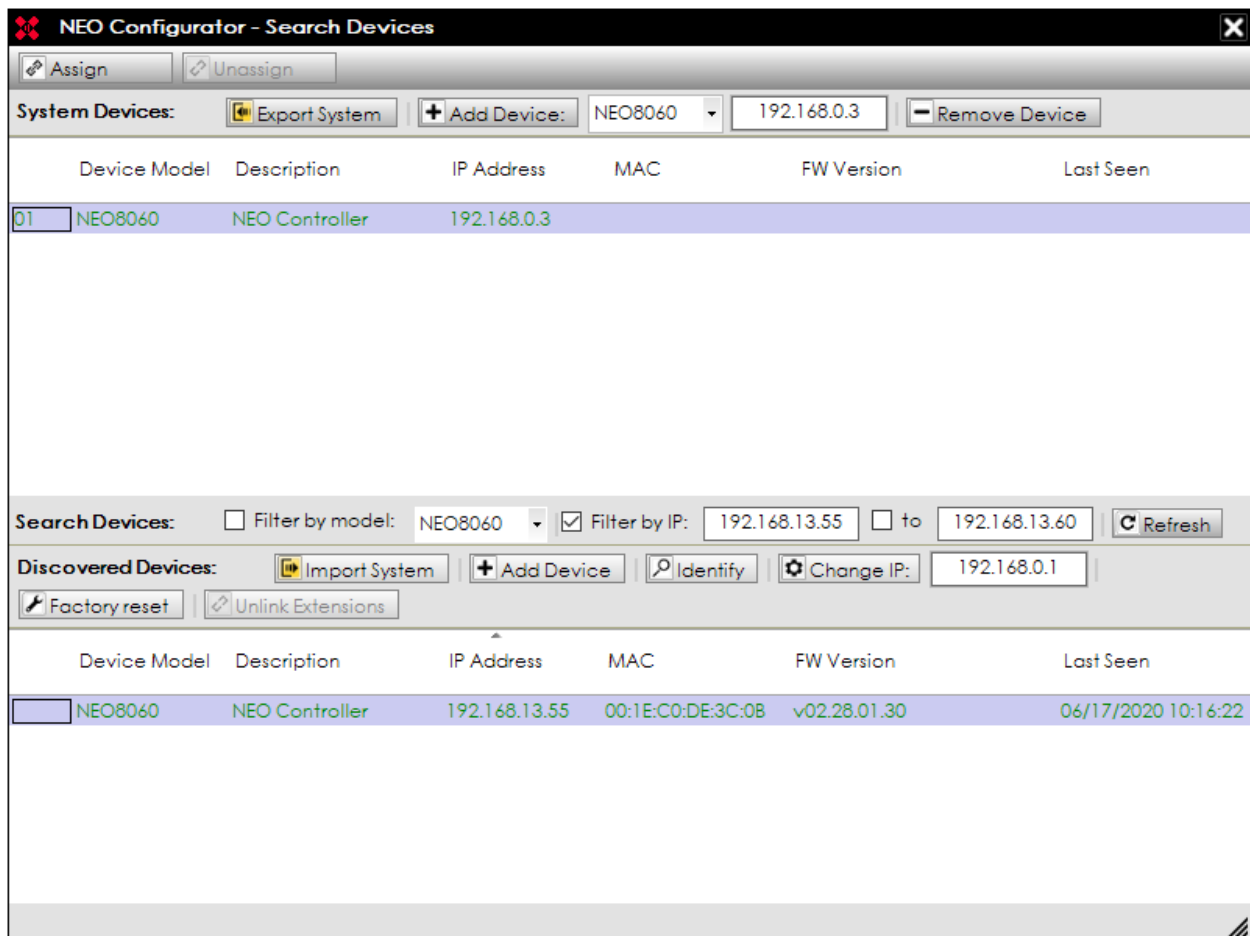
NOTE: In order to add or remove PA Zone Controllers your user profile must be *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

3.3. Assign devices

The devices in a NEO Configurator project can be assigned to physical devices connected to the same LAN network.

The assignation of NEO Configurator devices to physical devices is done with the **Search Devices** tool, located in the **Tools** menu:

Search Devices can search for all the devices connected to the same network as the computer running the software.



We can assign manually the system controller and the microphones. PA Zone Controllers are always assigned automatically as described in section 3.2.5.


3.3.1. Assign the system controller

a. The project is blank and no controller was previously added

From the **Search Devices** tool, we can add and assign a controller in one step, so there is no need to previously add a virtual controller as described in section 3.2.1.

1. In the lower part of the window, select the controller you would like to add and assign.
2. Click on **"Add Device"**.

3. The controller will appear in the upper panel "System Devices", and will automatically be assigned to your NEO Configurator project.

The 3 indicators in **SYSCTRL** will be on:  because NEO Configurator has a controller (1 ON), has a physical device assigned to that controller (2 ON) and that physical device is visible in the LAN (3 ON).

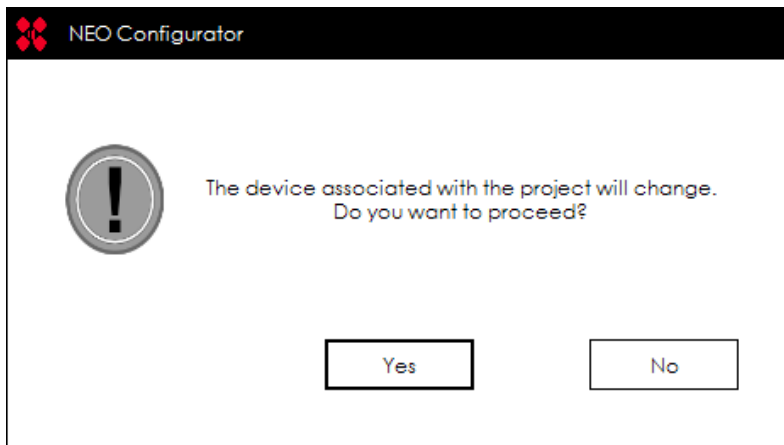
b. The project already had a controller

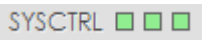
The previously added controller could be either virtual (not assigned to any device) or could have been assigned to another device (with a different MAC).

NOTE: It does not matter if the previously assigned device and the new one share the same IP address. As long as they have a different MAC, it is required to re-assign the controller to the new device.

A previously added controller (either virtual or already assigned) can be assigned to a particular physical device by following these steps:

1. In the upper panel of the window select the project NEO Controller.
2. In the lower part of the window, select the new physical NEO Controller you want to assign.
3. Click on "**Assign**".
4. The following window will be displayed:



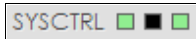
5. Click "**Yes**".
6. You will have the new device assigned to the NEO Configurator project. The **SYSCTRL** indicators will be displayed like this: .

NOTE: There is no need to unassign the previous device before assigning the new device.

NOTE: In case of online performance work flow (live linked), changing the system Controller assignation automatically imports to the project the new system Controller configuration, replacing all the parameters we had in the project with the previous Controller.

c. Unassigns a Controller

If you click on “**Unassign**”, the physical controller will be unassigned from the project.

Moreover, the 3 indicators in **SYSCTRL** will be displayed like this: , showing that (2 OFF) there is no physical device assigned to the controller in the current project, but (3 ON) the previously assigned device is still “visible” in the network. In the case the application was in online mode (live linked), it goes automatically to offline mode (unlinked).

3.3.2. Assign an Extension

It follows the same process as System Controllers, without the three green **SYSCTRL** indicators, that only refer to system controllers setup.

3.3.3. Assign PA or E microphones

Both PA microphones (MPS-8Z) and Emergency microphones (VAP-1) are ACSI devices, therefore the way they are assigned to a NEO Configurator project is the same.

ACSI microphones have the same IP address as the System Controller with an additional number, that indicates the ACSI address they have set. For example, *192.168.3.62@1* is a microphone connected to the NEO Controller *192.168.3.62* at the ACSI address number 1.

In any NEO system, it is only possible to have 1 microphone installed per ACSI address. The ACSI address of a physical microphone is set from the device itself (see MPS-8Z or VAP-1 User's Manual). In a virtual microphone the ACSI address is specified from the moment it is created (see sections 3.2.3 and 3.2.4).

After we assign a NEO Controller (see 3.3.1), we can have any of the following 3 cases:

a. A physical microphone shares the same ACSI address as a virtual microphone

In this case, the physical microphone will be automatically assigned to the virtual microphone.

b. A physical microphone has an unique ACSI address (not in the software project)

The physical microphone will remain unadded and unassigned in the NEO Configurator project. This means that NEO Configurator will not be able to configure or operate it.

In order to add and assign it, follow the steps below:

1. In the *Tools* menu click on *Search Devices*.
2. In the lower part of the window, select the physical microphone you want to add and assign.
3. Click on “**Add Device**”.
4. The device will be displayed in the upper panel “System Devices” and will automatically be assigned to your NEO Configurator project.

c. A virtual microphone has an unique ACSI address (not in the physical system)

The virtual microphone will remain in the NEO Configurator project and it will be possible to configure them virtually.

If a physical microphone with that same ACSI address is connected in the future, it will be automatically assigned to the system and will adopt the configurations from this virtual microphone.

NOTE: Microphones **cannot be unassigned** from a project. They just can be added or removed from the project.

3.4. Link System

NEO Configurator can be live linked to the physical system, and thus, all changes made in NEO Configurator are updated immediately in the physical devices and vice versa.

When the system is linked, the configuration we want to keep must be chosen, either: the current configuration in the physical device (import system) or the current configuration in the *NEO Configurator* project (export system).

It is mandatory to get live link with the complete system (Controller and Extensions) to perform any export or import configuration. The Controller stores most of the configuration memory, but the Extensions have their own memory as part of the system, so they must be kept linked.



NOTE: At every configuration Import or Export, the system checks the NEO Controller and PC data and time. In case of a difference of more than 60 seconds, the software asks for an update, to take the data and time for the computer, and to copy it to NEO Controller.

3.4.1. Import System

Import System downloads the current configuration from the physical system to the NEO Configurator project.

1. Before importing a system, we always have to assign the controller that we want to import the configuration from (see **3.3.1. Assign the system controller**).
2. In the “**Tools**” menu select “**Import System**”.
3. A message indicating that all the configuration in the current project will be lost and substituted by the configuration of the physical system will be displayed.
4. Click “**Yes**”.

NEO Configurator and the physical system will be **live linked**.

- The system view panel (left) background will turn green.
- Every NEO Extension, ACSI Microphone or PA volume Controller (VCC64) configured at the project will be substituted for those already present at the imported system, in addition to the System Controller setup.
- A green spot  will appear next to all the linked devices (in case of a successful connectivity and no conflicts. See **4.1. System Devices View**).
- The status bar indicator  will turn green.

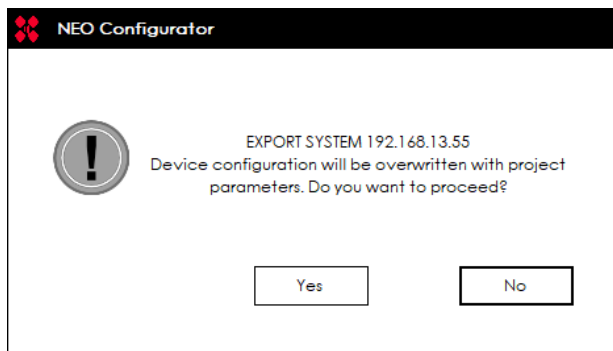
Import system could also be performed by the Search Device tool, selecting a NEO Controller found at the network and clicking then on “**Import System**”. That way the system can also be imported to an empty project, and we don't need to add a “virtual” Controller previously. It is just needed to select a NEO Controller found at the network and import that configuration. In the case there is a previous NEO Controller at the setup, we will replace it with the one selected at the lower panel on the Search Device tool.

Import System can be used to **load the current parameters of the physical devices in NEO Configurator** so we can simply check them or start to work with them. We can also continue working offline or unlinked as explained in **3.4.3. Unlink system**.

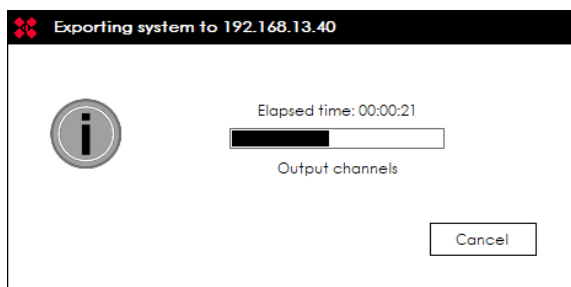
3.4.2. Export System

Export System uploads the current configuration from the NEO Configurator project to the physical system.

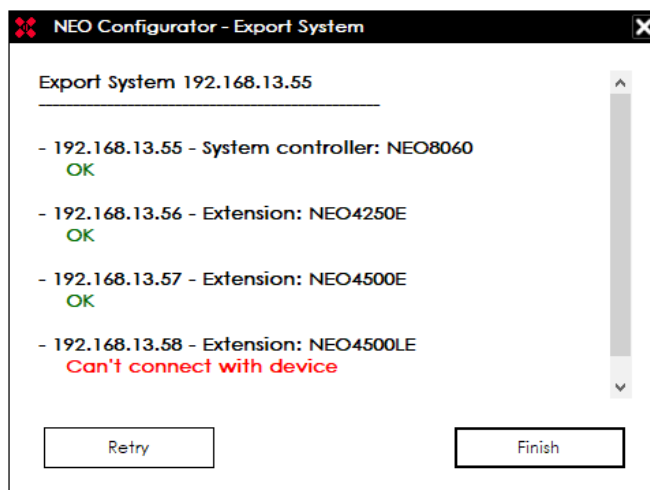
1. Before exporting a system, the controller that we want to export to must be assigned (see **3.3.1. Assign the system controller**).
2. In the “**Tools**” menu select “**Export System**”.
3. A message will indicating that all the configuration in the physical device will be lost and substituted by the configuration of the NEO Configurator project will be displayed.



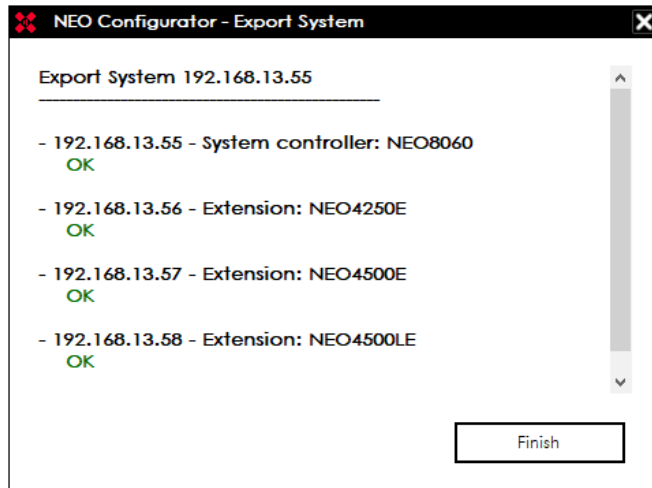
4. Click **"Yes"**.
5. Perform a **"Factory Reset"** at NEO Controller and Extensions devices, keeping the network configuration parameters.
6. Export the configuration to all NEO devices (Controller and Extensions) one by one. The export progress bar over each device will be displayed.



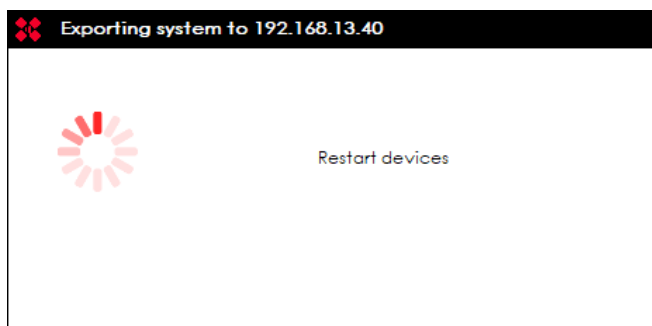
7. In case of an issue or disconnection of any NEO devices while the export process occurs, an indication at the end result report window will be displayed showing the specific errors. It brings the options to finish (clicking on **"Finish"** button) or retry (**"Retry"** button) the export process at those devices that had errors while exporting the configuration. This new export process does not perform another factory reset over the devices. In case of selecting the finish option with an issue, the physical devices will not have the project configuration properly.




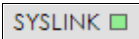
8. In case the exportation process is successful, the application asks to save a project configuration backup copy file at the System Controller SD memory card. It is possible to save just one backup copy. In case a previous backup exists, this feature will ask to override it.



9. In case an issue occurs during the export process and stops it, the software asks to keep the devices linked (live linked), advising it is possible that the configuration parameters of the already installed data at the devices issued will be overwritten.
10. If there is no cancellation, the process will restart the Controller and Extension devices (software reset) in order to restart the performance state of the system.



NEO Configurator and the physical system will be **live linked** (in case of no cancellation or a failed export with “no link” decision).

- The left panel background will turn green.
- A green spot  will appear next to all the linked devices. The devices are connected with no issues (see at **4.1.System Devices View**)
- The status bar indicator  will turn green.

Export process may also be done from the Search Device window; just click on the “**Export System**” button, while remaining at offline mode (unlinked).

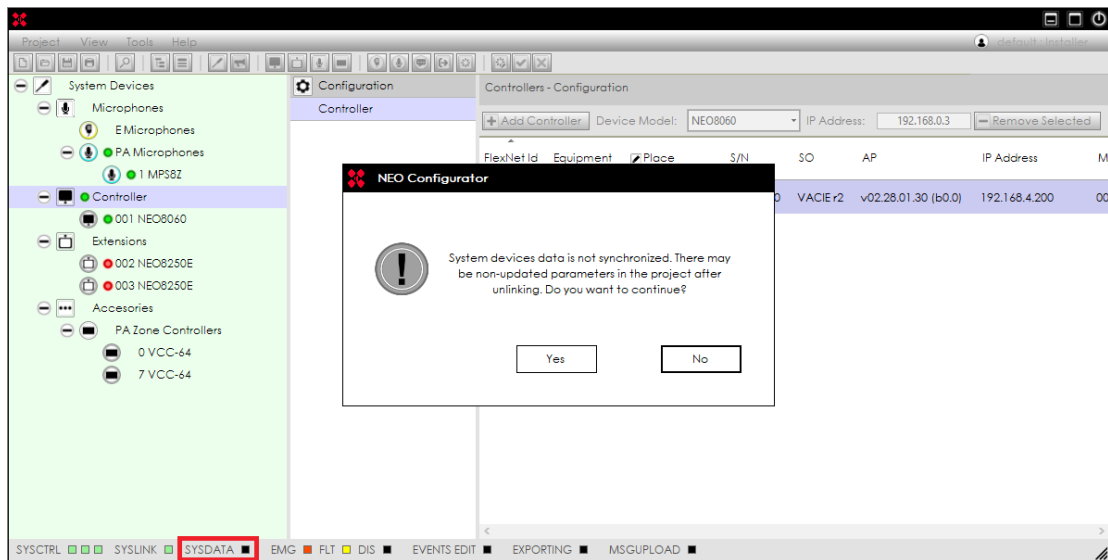
NOTE: If NEO system is in emergency state, it is not possible to export a NEO Configurator project to the physical system.

Export System can be used to **reset a system** to the Installer's custom configuration. In order to do this, open the project the Installer has created for the system (section 3.1), assign the physical system (section 3.3) and export the system as described above.

3.4.3. Unlink system

If the user wants to work offline after importing or exporting the system, the system can be unlinked by clicking on **“Unlink System”** within the **“Tools”** menu.

- In case the **SYSDATA** indicator at the status bar remains off before performing a disconnection (unlink), either when it is caused by no synchronized data through devices or when there is no connection between them (NEO Controller o Extensions), this software displays a warning. This warning asks the user whether to continue currently connected with the devices (live linked) or not (unlinked).



- The left panel green background will switch off.
- The green spot (or any other connection status indicator, see 4.1. System Devices View) next to the linked devices will disappear.
- The status bar indicator **SYSLINK** will turn black.

3.5. Update devices firmware

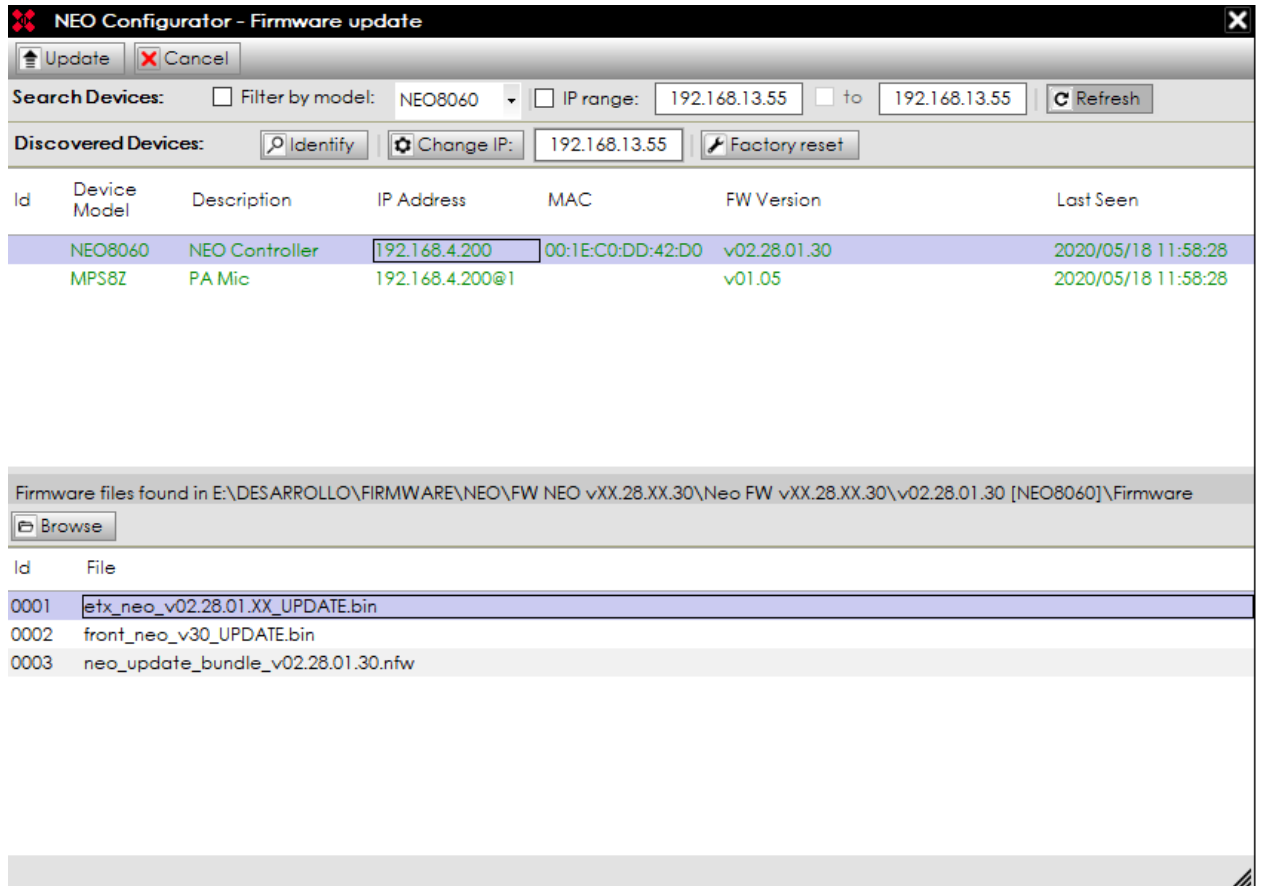
The **“Update Devices Firmware”** tool allows to update the firmware of any NEO device connected to the network. It also allows to update the microphone firmware currently connected to the NEO Controller.

The user can accede to this tool this way:

- At the software startup, from the Welcome window (Start) → **“Update Devices Firmware”**.
- Through the main menu: **“Tools”** → **“Update Devices Firmware”**

- Pressing Ctrl + U from main windows.

After clicking on this tool, a *Search Device* window similar to the one described in 2.4. Search Devices Tool will appear:



The upper half shows the network found physical devices. The lower half shows the current firmware update files located at the selected folder.

Similar to the Search Device window, here it is possible to filter the search by device model, specific IP address or IP address range. It also includes device identification tools, IP address change and factory reset options (see 2.4. *Search Devices Tool*)

Any device can be updated if it is in the same network IP ranges as the computer used to update it, even if the device belongs to a different system than the current NEO Configurator project. In fact, this is not mandatory to have an opened project to do a firmware update process.

a. Browse for firmware update files

1. Click on the **“Browse”** button.
2. Select the folder where the firmware update files are located in your computer.
3. The firmware update files and the file folder will appear in the lower part of the window **“Firmware files found in ...”**.

Firmware files are on **“.bin”** extensions. On NEO Controller series there are separated files , one for the ETX module and other for the frontal display control. It is possible to update both modules on the same device using a single integrated file. This integrated file uses the **“.nfw”** format.

On NEO Extension devices only ETX module update file is available, because there are not frontal display needs.

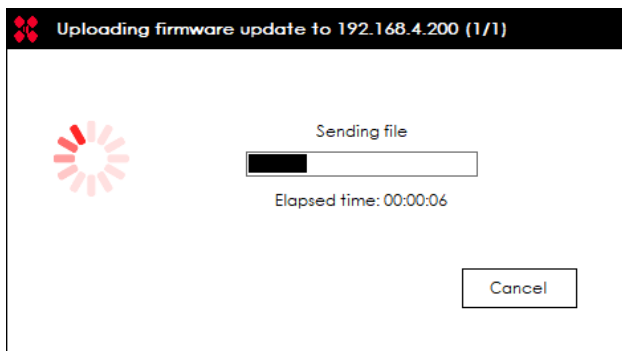
b. Send firmware update to the selected devices

1. Select the devices to update in the upper part. All selected devices must be the same model.
2. Click on the firmware file to update in the lower part.
3. Click **“Update”** button.

An error message will be displayed in the case that firmware files are not correct or belong to a different device model from the selected units.

The update file will be transferred to the NEO device and, when this transference is finished, the device will automatically restart with the new version of the firmware.

The process of sending firmware files can be stopped by clicking on **“Cancel”** at the dialogue box that shows the progress bar.

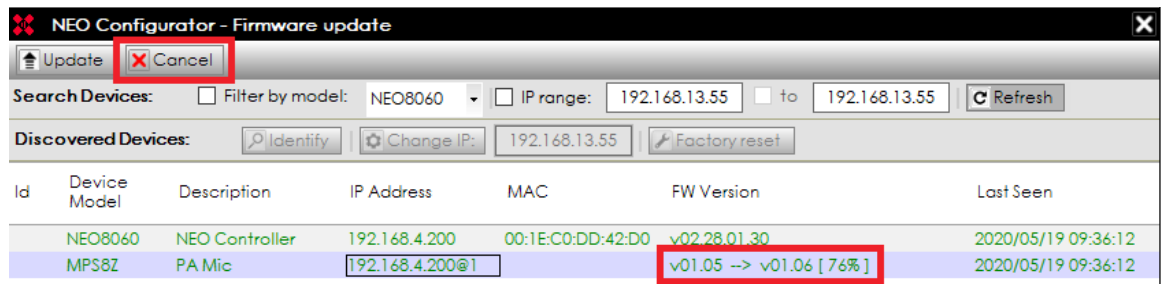


NOTE: Make sure the devices are not disconnected or powered off while the update process is being applied.

c. ACSI microphones firmware update

At the ACSI microphones firmware update, kindly keep in mind:

- Once the microphones to be updated are selected and the user clicks on the **“Update”** button, the update file will be launched to NEO Controller where the microphones are connected. It is also possible to select microphones connected at several NEO devices. In this case, the update file will be sent to each NEO8060 device separately.
- When this sending process is properly finished, each NEO Controller will manage the microphones sequential firmware update. Every microphone to be updated shows the current version at the **“FW Version”** column, and will display also the new version once it is updated. Microphones will display the progress bar while the update process occurs.
- The microphone firmware update can be stopped by pressing **“Cancel”** after selecting the proper microphone.



- A microphone cannot be used while the firmware update occurs. The microphone displays this status itself:
 - **MPS:** zone LEDs off , **LINK** LED on and the rest blinking.
 - **VAP1:** all zone status LEDs blinking.
- Once the firmware update process finishes, the microphones will link again automatically. It takes a few moments to recover the previous system operative status.

4. SYSTEM CONFIGURATION

NEO Configurator has 2 different *System Views*:





- **System Devices**
- **PA/VA System**

These *System Views* allow configuring and setting up all the parameters of the system. This display is the main functional area of NEO Configurator.

Every NEO Configurator *System View* is divided into 3 panels:

- **Tree Panel (Left):** The tree represents all the devices in the system (for *System Devices* view) or the function families (for *PA/VA System* view).
- **Tabs Panel (Middle):** This panel includes tabs that show different parameters of the item selected in the tree panel. These tabs are divided in 2 categories:
 - **“View” filter:** These tabs allow to check and verify the current configuration and status of the selected item.
 - **“Configuration” filter:** These tabs allow to edit the configuration of the selected item. These tabs are only shown in the user profiles with the appropriate permissions (see **2.3.3. Users preferences**).
- **Edition Panel (Right):** In this panel you can either see the current configuration (with “View” tabs) or edit the configuration (with “Configuration” tabs). Every row represents an item and every column represents the attributes of that item. The last columns may include some buttons with more editable parameters or extra functions.

The colour code of the icons in the System Views is as follows:

- **Grey edge** : System devices (except those with exclusive PA or VA functionality).
- **Blue edge** : PA System functions and exclusive PA devices.
- **Yellow edge** : VA System functions and exclusive VA devices.
- **Red edge** : Voice Alarm Panels.

Right configuration panel normally shows the list of parameters. Some of those could be editable depending on the user profile permission.

Columns with editable content cells display that status on the header icon. According to dependences or system status, some of the editable cells at editable columns may not be changed temporarily.

In any case, an editable cell shows this status with a green background colour. Simply double click and type any valid value to overwrite the cell parameter.

The new introduced value could be confirmed by pressing ENTER. Focus will change to the cell below. Pressing TAB also confirms an edited cell, but moves to the next right cell in this case.

Edited cell parameters may be cancelled pressing ESC, recovering the previous parameter value. Focus remains at the same cell.

The focused cell will be remarked with a back rectangle.

Arrow keys can also be used to move across the cells.

A cell value may also be edited by using:

- Space bar press. This enables the edit mode, but the previous value doesn't disappear, and could be modified:
- Typing a new value directly. The old value disappears.

Some cells may refer to complex configuration parameters. In that case, a pop-up window appears instead of changing the value when it is edited, and the configuration could be changed.

4.1. System Devices View

The *System Devices* view shows all the devices in a system. There are 4 families of devices:

- *Microphones*
- *Controllers*
- *Extensions*
- *Accessories*

The numerical prefix of any device has different meanings:

- **Controller and Extensions:** Flexnet identifier. The System Controller will always have the value 1.
- **Microphones:** ACSI bus address. (see 3.2.3 y 3.2.4)
- **PA Zone controllers:** Physical address at the serial port. (see 3.2.5)

When the NEO Configurator project is *live linked* to a physical system (see **3.4. Link System**):

● - The **green** indicator means a good connection with the device. In case of a group node (as in Extensions node), this means a proper connection with every single device in that group. In case one or more devices are not connected, or that any other issue in the group devices takes place, no indicator will be displayed at the group node.

● - The **red** indicator means there is no connection with the device. In case of an ACSI microphone, means that there is no device connected physically at the ACSI bus using the specified address.

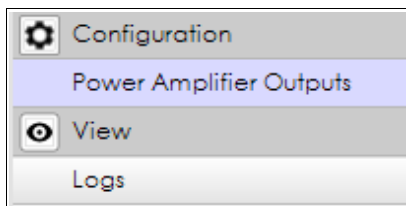
● - The **yellow** indicator on an Extension or ACSI Microphone means the model of the listed device at the current project does not correspond with the device that is physically connected to that IP address (Extension) or ACSI (Microphone).

● - The **grey** indicator means that the Extension physical device is currently configured to be managed with another System Controller different from the one in this project.

The PA Zone Controllers (VCC64) do not show any indicator because it is not possible to monitor their status, and it is only detected when they are used. (see 3.2.5)

4.1.1. System Devices Root

When you click over the root of the *System Devices* view, you get these tabs:



a. Power Amplifier Outputs

The right panel shows all the amplifier outputs of the system:

Power Amplifier Outputs - Configuration																
Mute... Edit equalizer...																
Id	Device	Name	Zone	Zone Volume	Zone Mute	Output Volume	Total Volume	Output Mute	Vumeter	Loudness	Eq	Amplifier Supervisor	State	Is Spare	Spare Channel	Spare active
0001	NEO8060 (1)	Output #1	1	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0002	NEO8060 (1)	Output #2	2	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0003	NEO8060 (1)	Output #3	3	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0004	NEO8060 (1)	Output #4	4	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0005	NEO8060 (1)	Output #5	5	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0006	NEO8060 (1)	Output #6	6	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0007	NEO8060 (1)	Output #7	7	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0008	NEO8060 (1)	Output #8	8	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0009	NEO4250E (2)	Output #9	9	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 12	
0010	NEO4250E (2)	Output #10	10	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 12	
0011	NEO4250E (2)	Output #11	11	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 12	
0012	NEO4250E (2)	Output #12				0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input checked="" type="checkbox"/>		
0013	NEO4500E (3)	Output #13	12	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 16	
0014	NEO4500E (3)	Output #14	13	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 16	
0015	NEO4500E (3)	Output #15	14	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	Channel 16	
0016	NEO4500E (3)	Output #16				0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input checked="" type="checkbox"/>		
0017	NEO4500LE (4)	Output #17	15	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0018	NEO4500LE (4)	Output #18	16	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0019	NEO4500LE (4)	Output #19	17	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0020	NEO4500LE (4)	Output #20				0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input checked="" type="checkbox"/>		

The overall quantity of amplifier outputs depends on the quantity and model of NEO devices (Controller and Extensions) that make part of it

It is important to know that, in case of online devices working (live linked), some output parameters edition will be disabled if their respective Extension devices are not connected to the general list. On other words, it is possible to work online on a project with a System Controller (live linked) and no Extensions physically connected. These parameters are:







- **Amplifier Supervisor**
- **Is Spare**
- **Spare Channel**
- **Equalization parameters**

The status column will show “Fault” on those outputs. The **Device** column indicates which device each amplifier outputs belong to.

See Controller – Power Amplifier Outputs for more details about the amplifier outputs configuration.

b. Logs

The right side panel shows a system logs to download or check.

Logs					
FlexNet Id	Device	Description	Log Type	Duration	
001	NEO8060	Emergency log file	Emergency	1	 View
001	NEO8060	Fault log file	Fault	1	 View
001	NEO8060	Disarmed log file	Disarmed	1	 View
001	NEO8060	Device log file	Device	1	 View
002	NEO4250E	Device log file	Device	1	 View
003	NEO4500E	Device log file	Device	1	 View

The items on this tab are the following system logs:

- **Emergency log file**
- **Fault log file**
- **Disarmed log file**
- **Device log file** (device errors log)

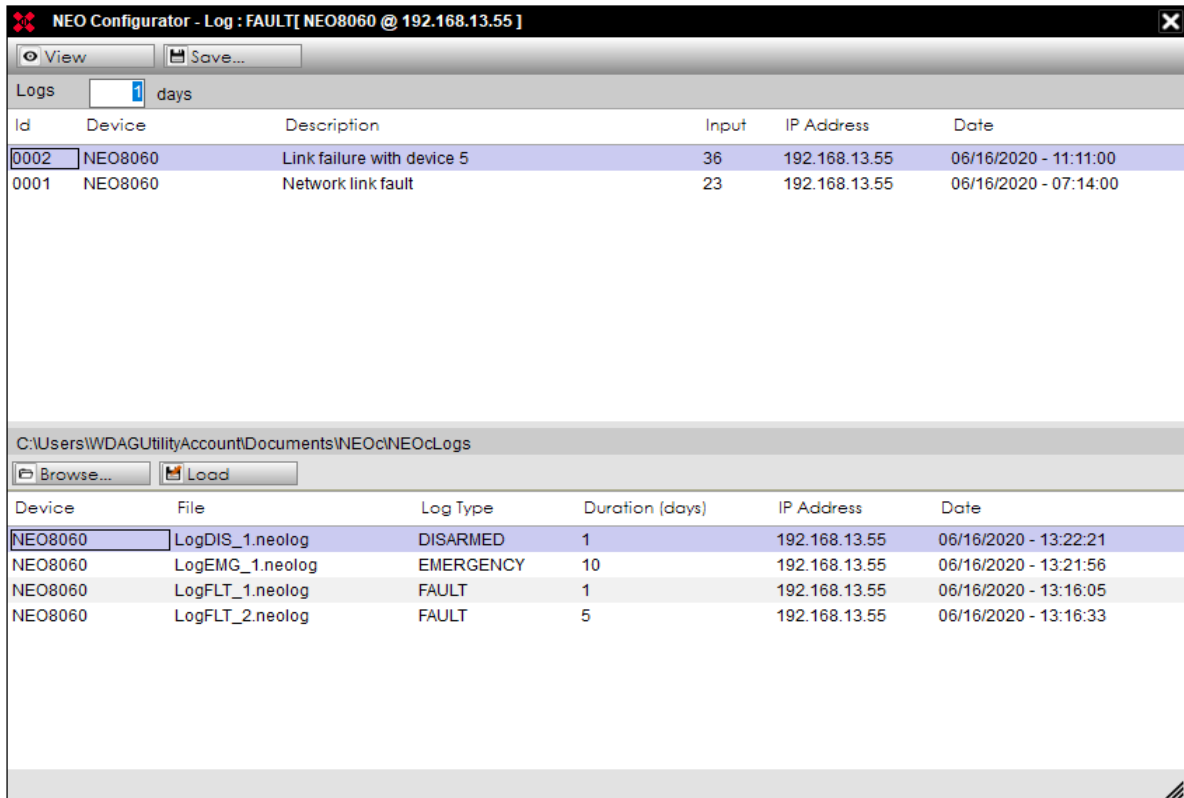
The “**Device log file**” can be viewed only from installer user profile.

All the listed logs at the main node from Controller comes from NEO System Controller device. Instead, at System Controller module, other device logs are also reachable.

Attributes and actions description:

- **FlexNet Id:** numerical sequential identifier of device at system.
- **Device:** device model name that the logs belongs to.
- **Description:** log type.
- **Duration:** indicates the number of log days that will be shown when clicking on “**View**” button. Value 0 means full log.
- **Download button:** direct download of the log file from the device, used in case of no viewing permission.
- **View button:** shows the corresponding log in an emerging window. Shows the entry lines according to the Duration selected box, countdown starts from current date.

The title bar at the window “logs view” shows the current log type used, and also which devices it comes from (model and IP address). This name is also displayed at the downloaded file rows.



The upper panel displays the log entries and the available action to be done on it. Columns description is as follows:

- **Id:** issue entry numerical sequential identifier
- **Device:** device model name what issue entry belongs to.
- **Description:** entry type.
- **Input:** numerical issue code.
- **IP Address:** device IP address what entry belongs to.
- **Date:** issue start date.

The lower panel displays the previous saved log files. It is possible to reload one of those logs to be referenced from this view. The meaning of this listed columns on the lower panel are described as follows:

- **Device:** device model name that the issue entry belongs to.
- **File:** file name.
- **Log Type:** saved log type from file.

- **Duration (days):** shows the entry days number according to the Duration of the loaded log. The countdown starts from the log file saving date.
- **IP address:** device IP address that file entries belongs to
- **Date:** file saving date.

Available action to perform from this view:

- **“View”:** refreshes the log entries displayed at the upper panel from device, according to the selected **days** quantity: Logs days. Value 0 means full log.
- **“Save”:** save the current displayed log, but with the selected days quantity entries. This information will be stored at the downloaded file attached that includes the log type label, the device where logs belong to, IP address of that device and saving date.
- **“Browse”:** allows to browse from massive external storage folders from a previously saved log file. Those logs in the same folder will be displayed. It also displays the storage information: device model, file name, quantity log entries, IP address that the device model belongs to and original save date.
- **“Load”:** This button loads the selected log file at the lower panel to the selected file at the upper panel

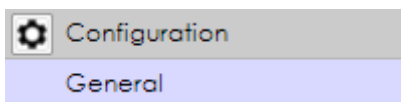
Log files stored through NEO Configurator software will be labelled with **“.neolog”** extension by default. The only difference is the error log download files, that will be labelled as a **“.bin”**. Extension. Also, logs may be saved at a file with a **“.txt”** extension.

4.1.2. Microphones

Clicking on “Microphones”, “E Microphones” or “PA Microphones” in the *System Devices* View will show this tab in case the user profile does not allows to configure the devices (see 2.3.3):



In case the user profile permission allows to make the device configuration, it displays:



This tab shows some information about the microphones:

Microphones						
+ Add Microphone...		ACSI Dir/Prio: 1		- Remove selected		
ACSI Dir/Prio	Equipment	Description	State	Token	Firmware	Update
1	MPS8Z	ACSI device on addr #1	Quiescence		v01.05	v01.06 (6%)

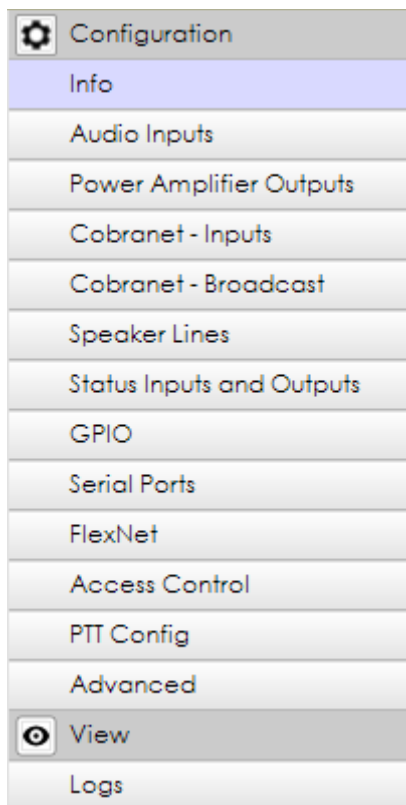
From each microphone the system shows the following information:

- **ACSI Dir / Prio:** ACSI bus microphone address.
- **Device Model:** microphone model. Possible values:
 - **MPS8Z:** PA microphone
 - **VAP1:** emergency microphone.
- **Description:** description text. Editable with device configuration permission user profile.
- **State:** blank status indicates that the physical link with the system is missing . In case the system is linked, it displays one of the following values:
 - **Quiescence:** properly connected microphone.
 - **Missing:** no physical device found at the specified ACSI address.
 - **Type Conflict:** the physical device found at the specified ACSI address does not correspond with the specified one in the configuration.
- **Token:** in a system linked status, displays the label **"Talk"** when a microphone has the word conceded. Blank label at any other case.
- **Firmware:** current microphone firmware version of the linked device.
- **Update:** if link status and microphone firmware version are currently been updating, it shows the new number version to be updated and the progress status of the installation between brackets. In case progress is not displayed, the microphone keeps waiting for the update.

In case the user profile allows to set the devices configuration, it shows the controllers to add or delete microphones. See at 3.2.3 y 3.2.4.

4.1.3. Controller

Every NEO system allows only 1 Controller. When you click on the controller, the following tabs are displayed:



NOTE: The configuration tabs of this section will only be shown if your user profile is *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

a. Controller – Info

Controllers - Configuration									
<div> + Add Controller Device Model: NEO8060 IP Address: 192.168.0.3 Remove Selected </div>									
FlexNet Id	Equipment	Place	S/N	SO	AP	IP Address	MAC	Gateway	Outputs
001	NEO8060	PA/VA System	00000000	VACIEr2	v02.28.01.30 (b0.0)	192.168.4.200	00:1E:C0:DD:42:D0	192.168.0.1	1-8 (8)

It shows detailed information of the System Controller:

- **Flexnet ID:** Flexnet device identifier. The identifier number **1** will always be assigned to the System Controller.
- **Equipment:** Device model.
- **Place:** Writeable label used as system description or location.
- **S/N:** Devices serial number.
- **SO:** VACIE operative system version.
- **AP:** PA utility device version.
- **IP Address:** Device IP address.
- **MAC:** Device MAC address.

- **Gateway:** Devices access gateway.
- **Outputs:** System amplifier output identifiers range. The total quantity of amplifier outputs the system are displayed between brackets.

b. Controller – Audio Inputs

Audio Inputs - Configuration									
<input type="button" value="Mute..."/> <input type="button" value="Edit equalizer..."/> <input type="button" value="VA Volumes..."/>									
Id	Type	Name	Volume	Use VA volume	VA Volume	Mute	Vumeter	Sound Enhancer	Eq
EMIC	Local	PTT Mic	-5 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	-100 dB	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MSG1	Local	MSG Player 1	0 dB	<input type="checkbox"/>		<input type="checkbox"/>	-100 dB	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MSG2	Local	MSG Player 2	0 dB	<input type="checkbox"/>		<input checked="" type="checkbox"/>	-100 dB	<input type="checkbox"/>	<input type="checkbox"/>
0001	Local	Source #1	0 dB	<input type="checkbox"/>		<input checked="" type="checkbox"/>	-100 dB	<input type="checkbox"/>	<input type="checkbox"/>
0002	Local	Source #2	10 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	-84 dB	<input type="checkbox"/>	<input type="checkbox"/>
0003	Local	Source #3	0 dB	<input type="checkbox"/>		<input type="checkbox"/>	-96 dB	<input type="checkbox"/>	<input type="checkbox"/>
0004	Local	Source #4	0 dB	<input type="checkbox"/>		<input type="checkbox"/>	-95 dB	<input type="checkbox"/>	<input type="checkbox"/>
0005	ACSI	Source #5	0 dB				-86 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0009	Remote	C01	0 dB	<input type="checkbox"/>		<input type="checkbox"/>			

In this tab you can check all the currently loaded audio inputs of the system Controller and configure their parameters. The audio inputs are one of these types:

- Built-in PTT Microphone in the frontal panel of NEO Controller (*Local*): **EMIC**.
- Internal pre-recorded messages players of NEO Controller (*Local*): **MSG1** and **MSG2**
- Analog input sources (*Local*) of NEO Controller: **0001 to 0005**.
- Digital Cobranet sources (*Remote*) configured in the NEO Controller: **from 0009 to 0064**.

NOTE: Local Source 0005 is disabled if an ACSI device is connected to the system (at least a PA Microphone or an Emergency Microphone). At this case, Volume, Use VA Volume, VA volume and Mute are disabled.

Attributes:

- **Id:** Internally assigned identifier.
- **Type:** possible values:
 - Local: Device own physical inputs.
 - Remote: Cobranet inputs.
 - ACSI: Only at local input 0005. There are microphones linked at the system from the System Controller.
- **Name:** Editable. Input label name. Maximum of 32 characters.
- **Volume:** Editable. Input audio volume (between -100dB and 10dB).
- **Use VA volume:** Editable. Enables specific input volume in case the system status starts an emergency state.

- **VA volume:** Only editable in case of USE VOLUME VA enabled. Specific input volume level used in case the system is in emergency state.
- **Mute:** Editable. To mute or not an input.
- **Vumeter:** shows the current audio input level (0 dB is the maximum level). It is shown only if the system is *live linked*.
- **Sound Enhancer:** Dedicated LDA Sound Enhancer. LSE is only used in input sources and acts as an audio compressor that improves the relation between loud and soft sounds. This way the audio output is more uniform and has less distortion. The final effect is similar to an audio normalizer.
- **Eq:** enables or disables the current equalization setting in that input.

Buttons:

- **Mute...** : allows to enable or disable MUTE status at selected inputs.
- **Edit equalizer:** opens a window to configure the equalization setting for the selected input:

The equalization can be made in 7 bands. For each band, it can be configured:

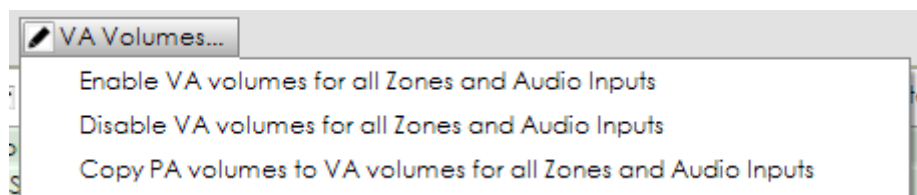
- **Freq:** central frequency.(from 3 to 20000 Hz)
- **Q** factor. (from 0.01 to 16)
- **Gain** level (from -10 to 10 dB).

The equalization setting can be managed using the window buttons:

- **“Save as”** saves the equalization settings as a file in your computer.
- **“Browse”** recovers all the equalization files from a computer folder and shows them in the lower part of the window “Equalization Presets Available”.
- **“Load”** loads the equalization preset selected in the lower part of the window.
- **“Apply”** applies the new equalization setting and closes the window.

By default, the preset equalization files are stored with the **“.eq”** extension.

- **VA Volumes...** : VA volume global controls.



- **Enable all VA volumes for all Zones and Audio Inputs:** Enables VA volume at **every input and every zone**.
- **Disable all VA volumes for all Zones and Audio Inputs:** Disables VA volume at **every input and every zone**.
- **Copy PA volumes to VA volumes for all Zones and Audio Inputs:** Copy the PA volume to VA volume at **every input and every zone** with VA Volume activated.

c. Controller – Power Amplifier Outputs

Id	Device	Name	Zone	Zone Volume	Zone Mute	Output Volume	Total Volume	Output Mute	Vumeter	Loudness	Eq	Amplifier Supervisor	State	Is Spare	Spare Channel	Spare active
0001	NEO8060 (1)	Output #1	1	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0002	NEO8060 (1)	Output #2	2	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0003	NEO8060 (1)	Output #3	3	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0004	NEO8060 (1)	Output #4	4	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0005	NEO8060 (1)	Output #5	5	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0006	NEO8060 (1)	Output #6	6	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0007	NEO8060 (1)	Output #7	7	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	
0008	NEO8060 (1)	Output #8	8	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>	None	

This tab shows the amplifier outputs of the Controller. These are not necessarily the system zones, but the physical outputs of the system. Many outputs can be grouped in a single zone as explained in section **4.2.3. Zones**.

ATTRIBUTES:

- **Id:** Internally assigned identifier.
- **Device:** Device that the amplified input belongs to and Flexnet identifier of it between brackets
- **Name:** Editable. Name label given to the amplified output. It allows a maximum of 32 characters.
- **Zone:** Zone that the amplified output belongs to.
- **Zone Volume:** Volume on decibels of the outputs zone.
- **Zone Mute:** Mute status check of the zone that this Amplifier Output belongs to.
- **Output Volume:** Editable. Volume of the amplified output. Allows values between -100 y 0 dB. If modified, it updates the current value on **Total Volume**.
- **Total Volume:** Editable. Effective volume for any amplified output, sum of the zone volume and the own output volume (**Zone Volume + Output Volume**). Allowed values between -100 and 0 dB. In case of modification, it updates the **Output Volume** value.
- **Output Mute:** Editable. Silences the amplified output.
- **Vumeter:** Shows the current audio output level (0dB is the maximum level). It is shown only if the system is *live linked*.

- **Loudness:** The standard Loudness Compensation equalization. It is used in the output sources and follows the Equal-Loudness Contour in order to make the recorded music sound more natural when played at a lower sound pressure level.
- **Eq:** enables or disables the current equalization setting in that input.
- **Amplifier supervision:** Enables or disables the amplifier supervision. When the amplifier supervision is enabled, if NEO reports a fault in an amplifier it will be able to switch to the backup amplifier (if there is a backup channel configured for this output). By default this attribute is disabled. For EN54-16 certified installations it should be switched to enabled.
- **State:** In case of online mode, connected to the devices (live linked), shows:
 - **OK:** there are no faults related to the amplifier output.
 - **FLT:** the system notifies an issue related to this amplified output or an issue with the impedance on this speaker line.
- **Is Spare:** Enables or disables the spare utility for this amplified output as backup channel.
- **Spare Channel:** Allows to select the spare channel between those that have been configured as **Is Spare** on the same device.

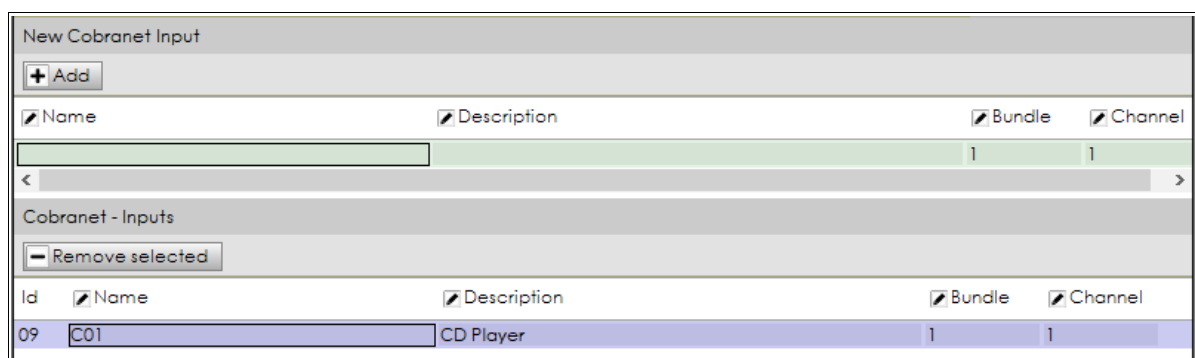
In case of failure of the amplifier channel, NEO will automatically switch from the failed amplifier to the selected amplifier to grant that the audio keeps broadcasting.

- **Spare Active:** In case of a backup channel (**Is Spare** enabled), shows the other failure channels that are currently using it. If it is not a backup channel (**Is Spare** disabled), it indicates that the backup channel is currently used as well as the configuration on **Spare Channel**.

BUTTONS:

- **Mute... : Allows** to silence or not every amplified output selected.
- **Edit Equalizer:** Opens a window to configure the equalization setting for the selected output. It is similar to that seen on 4.1.3. b. Controller – Audio Inputs

d. Controller – Cobranet Inputs



New Cobranet Input			
+ Add			
Name	Description	Bundle	Channel
		1	1

Cobranet - Inputs

- Remove selected

Id	Name	Description	Bundle	Channel
09	C01	CD Player	1	1

Cobranet Sources can be manually added or deleted from this tab. It is needed to know before the bundle and channel where each Cobranet source is being broadcasted.

At the upper "**New Cobranet Input**" panel it is possible to add new Cobranet inputs to the system, choosing the parameters:

- **Name:** Input label. Maximum of 32 characters.
- **Description:** Input description. Maximum of 64 characters.
- **Bundle:** Cobranet source bundle. Allowed values between 1 and 65535.
- **Channel:** Cobranet source channel. Allowed values between 1 and 8.

Once the new input parameters has been configured, it will be possible to create it clicking on **Add**.

It is not possible to add a new Cobranet source with the same Bundle and Channel as other different source previously configured at the system.

At the lower "**Cobranet – Inputs**" panel, a list of already added Cobranet sources list will be displayed:

- **Id:** Identifier automatically assigned by the system, with possible values between 9 and 64. That means, it is possible to set up a maximum of 56 Cobranet audio inputs.
- **Name, Description, Bundle, Channel:** Editable Similar to the correspondence at upper panel

It is possible to delete a Cobranet audio source by selecting it and clicking on **Remove selected**.

The Cobranet source identifiers are always consecutive starting from 9, so an erased Cobranet source will update the higher identifier values automatically (and decrease according with the deleted source quantity). Those changes will automatically be extended to any place in the system that works with those Cobranet identifier updated sources.

e. Controller – Cobranet Broadcast

Cobranet - Broadcast	
Parameter	Value
Local sources broadcast	Enabled Dinamic
Private Mode	Disabled
Transmission bundle	100
Input 0001	Enabled
Input 0002	Enabled
Input 0003	Enabled
Input 0004	Enabled
Input 0005	Enabled
Input EMIC	Enabled
Input MSG1	Enabled
Input MSG2	Enabled

This menu allows to set the system controller way to transmit their own audio sources through a Cobranet bundle to the rest of devices at the system (Extensions).

This tab shows the following items:

- **Local sources broadcast:** Allows to enable or disable the transmission of the local sources from NEO to the Cobranet VLAN. The available options for this parameter are:
 - **Disabled:** Disables the transmission. Only allowed in case that there are no Extensions in the system.
 - **Enable Dynamic:** Automatically enables the bundle in case an Extension needs to use a Controller source.
 - **Enable Always:** The transmission bundle will be always activated.
- **Private Mode:** Bundle will not be transmitted through the X port of any device at the system. That limitate the traffic generated by the system to the network.
- **Transmission bundle:** It selects the bundle where all the 8 local sources will be broadcasted. Each source will be broadcasted in a different channel which can be independently enabled or disabled. The user is only allowed to disable those sources in case there are no Extensions at the system.
- **Source 1 to Source 4:** They are the 4 analog audio sources directly connected to the NEO Controller.
- **Source 5:** It corresponds with the ACSI Bus (all the PA Microphones or Emergency Microphones). If there is no ACSI device connected, it will be the analog audio source #5.
- **Source EMIC:** It is the PTT microphone in the frontal panel of NEO Controller.

- **Source MSG1:** The first internal pre-recorded message player.
- **Source MSG2:** The second pre-recorded message player

f. Controller – Speaker Lines

This tab manages the supervision of the speaker lines and the internal amplifiers. This module is available for each device of the system tree scheme.

Speaker Lines										
▶ Calibrate selected lines										
Impedance Lower Tolerance (%):		15	Impedance Upper Tolerance (%):		15					
Id	Name	Line status	<input checked="" type="checkbox"/> EOL Inputs (TFL1)	<input checked="" type="checkbox"/> Impedance Measure (TFL2)	<input checked="" type="checkbox"/> Protection System (TFL2)	<input checked="" type="checkbox"/> Nominal Impedance	<input checked="" type="checkbox"/> Nominal Impedance A	<input checked="" type="checkbox"/> Nominal Impedance B	Measured Impedance	Impedance Deviation
0001	Output #1		None	None		166 ohm				
0002	Output #2		None	None		166 ohm				
0003	Output #3		None	None		166 ohm				
0004	Output #4		None	None		166 ohm				
0005	Output #5		None	None		166 ohm				
0006	Output #6		None	None		166 ohm				
0007	Output #7		None	None		166 ohm				
0008	Output #8		None	None		166 ohm				

There are 2 modes of speaker lines supervision:

- EOL device
- Impedance Measurement

It is recommended to use only one mode of speaker line supervision. Also, both have common parameters, according to the affordable tolerance measurements gap.

That type of configuration is set on the following cells.

- **Impedance Lower Tolerance (%):** Lower admissible value for speaker line supervision. Given on percentage from nominal.
- **Impedance Upper Tolerance (%):** Upper admissible value for speaker line supervision. Given on percentage from nominal.

NOTE: Default tolerance is 15%.

If supervised, the current status is displayed at the Line Status column; according to the other columns setup.

ATTRIBUTES

- **ID** and **NAME:** they are the same as specified in the 4.1.1. a. Power Amplifier Outputs. They cannot be modified in this tab.
- **EOL Inputs (TFL1):** Configures the output lines to be supervised with EOL (stands for “End of line”) devices. Every Amplifier Output has 2 output lines available, and the devices must be properly installed, returning to NEO devices EOL ports.

Options to choose:

- None (*it disables EOL device line supervision*)

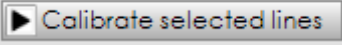
- Line A
- Line B
- Lines A & B

NOTE: EOL input and impedance measurement supervision modes are mutually exclusive. EOL input may be configured if no impedance measurement is enable.

That parameter is configurable directly from each device, System Controller or Extension. It is important to check every device link to the master connection (live linked) before exporting a system configuration, because the System Controller only stores it owns speaker lines setup.

- **Impedance Measure (TFL2):** Sets the impedance measurement supervision mode. Options to choose:
 - None
 - Single line
 - Class A
 - A + B

NOTE: NEO devices with firmware version previous to v02.28.xx.30 only allow Single Line impedance measure feature.

- **Protection System (TFL2):** Available if the previous cell is active. Enables the speaker line protection in case of short circuit.
- **Nominal Impedance:** Given value for a speaker line. Allows to introduce it manually. It also updates the measurement when the user clicks on  . When the impedance supervision becomes active, the calibration process starts automatically. Also, it starts after nominal impedance or speaker line protection parameter modifications.

NOTE: Calibrates are made at 19 kHz. That should be done after an appropriate installation of the speaker lines.

- **Nominal Impedance A:** Allows to manually set the impedance value for the A branch of the speaker line. Only available on A+B mode.
- **Nominal Impedance B:** Allows to manually set the impedance value for the B branch of the speaker line. Only available on A+B mode.
- **Measured Impedance:** Last impedance measured. Only in online mode.
- **Impedance Deviation:** Deviation percentage from the nominal value to the last measure. Only at online mode, with any impedance supervision mode enabled.

LINE STATUS

Line Status may have several values, according to current performance mode

- Speaker line as a **spare output**: Status cell shows "Spare channel", and the rest of items will be blank and its edition disabled.
- **No supervised** line configuration: Blank cell.
- **EOL Input (TFL1)** speaker line supervision mode: Status may be:
 - **OK**: Correct speaker line.
 - **Fault A**: Issue detected at EOL branch A.
 - **Fault B**: Issue detected at EOL branch B.
 - **Fault A B**: Issue detected at both speaker line branch.
- **Impedance measure (TFL2)** speaker line supervision mode: Status according to each particular case:
 - **Single Line**:
 - Unknown: Status not recognised yet.
 - OK: All correct.
 - Not valid: Voltage or current out of range.
 - Short circuit.
 - Open circuit.
 - Bad calibration: Impedance measured out of range.
 - Protected: Speaker line protection active due to short circuit reasons.
 - **A+B Line**:
 - Unknown: Status not recognised yet.
 - Bad calibration: Impedance measured out of range or incoherent between branches. Referred to both branches.
 - Undetermined Error: Inconsistent measurement of the A and B speaker lines sum.. Referred to both branches.
 - OK: All correct. For branch A or B separately.
 - Short circuit. For branch A or B separately.
 - Open circuit. For branch A or B separately.
 - Not valid: Voltage or current out of range. For branch A or B separately.

- Protected: Speaker line protection active due to short circuit reasons. For branch A or B separately. Also displayed with **Not Valid** and **Bad calibration** status.
- **Class A:**
 - Unknown: Status not recognised yet.
 - OK: All correct.
 - Not valid: Voltage or current out of range.
 - Short circuit.
 - Open circuit.
 - Bad calibration: Impedance measured out of range, or incoherent between branches.
 - Undetermined Error: Inconsistent measurement of the A and B speaker lines sum. In that case, the Protection System (TFL2) column may set the Protection state to the amplifier (only in case the Amplifier supervision is active).

In case of backup activation onto this performance mode (B branch), this information will be added to any other status: "Backup active".
- **While a speaker line is calibrating:** The system displays the calibrating process status step. Line calibration may be launched only when the impedance supervision mode is active.
 - In progress: Calibration performing.
 - Waiting...: Stopped, because other speaker lines are under calibration process.

The calibration results will be displayed for 20 seconds. After that, the proper supervision status will be shown. Possible result reports:

- Ok: Properly calibrated.
- Incoherent Measure: Given values are not compatible with the indicated supervision mode.
- Out of Range V – I: Low voltage or current level.
- Out of Range Branch A: Impedance measured not covered by hardware, so the value is not adequate for the A speaker line branch.
- Out of Range Branch B: Impedance measured not covered by hardware, so the value is not adequate for the B speaker line branch.
- Out of Range Branch A B: Impedance measured not covered by hardware, so the values are not adequate for both A and B speaker line branches.

If the impedance measure supervision mode is not active on the current configuration, the value and deviation will be blank cells. Value is not displayed either if, after an impedance supervised active configuration, protection is active (on A+B branches and A Class).

Line Status may be displaying this colour code:

- **Green:** Supervision is correct (OK) and no other issue from the speaker line is notified.
- **Orange:** Indicates an error or issue at the speaker line.
- **Black:** Indicates neutral states, as **Spare channel**; or temporal as **Unknown**. The same for **Calibration in progress** or **Waiting**.

g. Controller – Status Inputs and Outputs

Status Outputs

Status Outputs (Status Out) - Configuration: DIS steady - FLT blink N/C Mode: ☐

Rec-Out Active High: ☐

Status Inputs

General CIE entry point 1 : System Controller [192.168.4.200]

CIE Auto-Reset: ☐

Description	Line	Fault	<input checked="" type="checkbox"/> Supervision	<input checked="" type="checkbox"/> N/C Mode	State
RESET			<input type="checkbox"/>	<input type="checkbox"/>	
EMERGENCY					
ZONE 1			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 2			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 3			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 4			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 5			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 6			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 7			<input type="checkbox"/>	<input type="checkbox"/>	
ZONE 8			<input type="checkbox"/>	<input type="checkbox"/>	
AC fault			<input type="checkbox"/>		
Battery fault			<input type="checkbox"/>		
DC fault			<input type="checkbox"/>		

This tab manages the supervision and configuration of the ECI dry contact ports (Fire Alarm status inputs) and the Battery Charger dry contacts, as per EN54-16 standard. Please, check NEO User's Manual for further details on connecting

On this section the emergency activation interface port status and supervision performance will be set up, as well as the power supply monitor. Also, the configuration of the system device that will be setted as ECI general input and the status monitor and record performance will be revealed. Kindly check the NEO User's Manual to get more details about those interfaces.

STATUS OUTPUTS

- **Status Out - Configuration:** Allows to set the way to notify the **FLT** and **DIS** status though the output **STATUS OUT** port, with the values:

- **DIS steady - FLT blink** (default value)
- **DIS steady - FLT off**
- **FLT steady – DIS blink**
- **FLT steady – DIS off**
- **Status Out - N/C Mode:** Enables or disables the Normally Closed port performance at the **STATUS OUT** output.
- **Rec-Out Active High:** Enables or disables the high level manoeuvrer at the record **REC OUT** port, set by default at low level.

STATUS INPUTS

- **General CIE entry point:** Allows to select the device whose RST/EMG port will be in charge of the general emergency activation. The RST/EMG port will be disabled at the rest of system devices. In case any of the RST/EMG port at the system are not used, it is recommended to select the “None” option, in order to avoid any possible accidental activation of the disabled ports.
- **CIE Auto-Reset:** Enables or disables the automatic reset mode in the general emergency system when any of the general emergency input interfaces at the system are currently activated. This reset performance works only in case that the general emergency status has been activated by one of the emergency activation ports, zonal or general, emergency activation interface input ports or emergency power supply monitor.
 - **Description:** internally assigned.
 - **RESET / EMERGENCY:** General emergency activation input. Mode N/C configuration and supervision enabling are common to both signals and determine the RESET line indicated values. Supervision of the status and reset signal activation are independent.
 - **Z1 ... Z8:** Zonal emergency trigger inputs.
 - **AC Fault:** Main power supply fault indication input.
 - **Battery Fault:** Batteries failure indicator input.
 - **DC Fault:** This input indications show any emergency power supply output failure.
 - **Line:** It shows the supervision status (only at online mode):
 - **OK:** No failure detected.
 - **Fault:** Fault detected.
 - **Fault:** It indicates the type of fault (only available at online mode):
 - **Open:** Open circuit.

- **Short:** Short circuit.
- **Disabled:** Disabled input.
- **Read error:** Reading error fault.
- **Supervision:** Editable. Enables or disables the supervision.
- **N/C Mode:** Editable. Enables or disables the Normally Close input mode. Only for emergency activation input interface.
- **State:** Input activation status. Only available for emergency interface inputs. Allowed values: **On / Off**

h. Controller – GPIO

This tab manages the operation mode of GPIO dry contacts. They can be set as **Input** or **Output**. It also shows the signal activation status at the column **State**: may be **High** or **Low**.

NOTE: If a GPIO port is used by the event manager as a trigger, it will be set up automatically as an input and his functionality can't be modified manually.

NOTE: If an GPIO port is used by the event manager on an action, it will be set up automatically as an output and his functionality can't be modified manually.

i. Controller – Serial Ports

On this section the performance of the serial ports of the device will be configured:

- **PA Serial Port (ETX) VCC Special Mode** - Not editable. Indicates whether the **Special VCC** mode is activated or not over the port. At this mode the port will be set automatically by the device in order to work with VCC-64 devices, and ignore the rest of parameters. This mode will be active by default, also in case there are no VCC-64 devices installed.

In case there are no VCC-64 devices installed and the event manager needs to use this port, VCC Special Mode will be disabled, and VCC-64 devices could not be installed on the system. See at 3.2.5.

- **PA Serial Port (ETX) Baud rate** – Transmission speed. Possible values: 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 230400
- **PA Serial Port (ETX) Parity** - Possible values: *None, Even, Odd*
- **PA Serial Port (ETX) Stop bits** - Possible values: 1, 2
- **PA Serial Port (ETX) Mode** - Possible values *RS-485, RS-232*
- **VA Serial Port Baud rate** – Transmission speed. Possible values: 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600

- **VA Serial Port Parity - Possible** values : *None, Even, Odd*
- **VA Serial Port Stop bits - Possible** values: *1, 2*
- **VA Serial Port Mode** - Not editable. Always works on **RS-485** mode.

j. Controller – FLEXNET

NEO operates with 2 VLANs for transmitting Data and Audio (using Cobranet protocol). By default the addresses of these VLANs are set as:

- **VLAN Data:** 1
- **VLAN Audio:** 2

The VLAN addresses can be modified to adapt them to the network configuration.

The communication between a System Controller and its Extensions is made through broadcast, to the broadcast global address 255.255.255.255. The **Enable Subnet Broadcast Mode** parameter enables the broadcast communication to every broadcast address on the devices configured Ethernet subnetwork. This may be necessary at determinate networks configuration due to the existence of advanced traffic filters.

k. Controller - Access Control

This tab allows to specify and modify the PIN numbers that allow access to the different levels of the menus in NEO touch screen. These access levels are described in the NEO User's Manual.

By default, no PIN is requested to access any level. For EN54-16 installations a PIN should be set for every access level.

l. Controller - PTT Configuration

By default, NEO frontal PTT microphone is supervised and doesn't produce any ding-dong or chime before broadcasting the voice. This is an EN54-16 requirement. Optionally, these settings can be modified from this tab.





m. Controller – Advanced Configuration

Advanced configuration options are only available for users logged in as **installers**.

- **Load system factory configuration** - NEO can be hard reset and load all the factory configurations. This can be done by clicking on the button **“Execute”**. By default, this reset will apply as well to the Ethernet configuration too, and thus the IP address of the device will be set back to 192.168.0.3. In order to save the Ethernet configuration of the device, it is necessary to switch the Value attribute to **“Don't reset Ethernet config”**. The IP address, Network Mask and Gateway parameters will be saved while the rest of the device configuration will be reset to factory defaults.

- **Format Front Panel SD Card:** It is possible to format the device frontal SD memory card. Audio files are stored in this SD memory card. To perform the format, simply click on **“Execute”**.
- **Audio message sample rate:** Allows to set the sample frequency that will have the uploaded audio files. This parameter is volatile, it will not be saved in the project or devices, and resets at 24KHz when the application starts. Possible values:
 - *24 KHz:* By default.
 - *48 KHz:* Higher quality. The higher 48 KHz sample rate message reproduction may reduce the device performance.
- **Touch screen calibration:** Clicking on **“Execute”** runs the touch screen calibration process of that device. Alternatively touching the physical screen squares as requires to properly calibrate the frontal interface.
- **Enable echo for UDP command triggers:** Enables echo mode at event manager triggers that are activated via UDP command (answers the receive command to origin).
- **Enable Overrides and VA Volumes with PA Mics:** Enables Override output activation (used for attenuator cancelling) for PA microphones (ACSI or PTT), according to the zone selection were the word is conceded. Those zones also get VA Volumes.
- **Disable system beep:** Disables the frontal beep signal for emergency or failure.
- **Enable screensaver:** Enables saving energy mode for the frontal display, decreasing the brightness. When it is enabled, brightness attenuation applies after 5 minutes with no activity.
- **Screensaver – Higher brightness level:** Maximum brightness level for the frontal display, in case the screensaver is not activated. Allows values between 50% and 100%. It cannot be lower than the minimum brightness.
- **Screensaver – Lower brightness level:** Minimum brightness level for the frontal display, in case the screensaver is activated. Allows values between 10% and 100%. It cannot be higher than the maximum brightness level.

n. Controller - Logs

Logs					
FlexNet Id	Device	Description	Log Type	Duration	
001	NEO8060	Emergency log file	Emergency	0	 View
001	NEO8060	Fault log file	Fault	0	 View
001	NEO8060	Disarmed log file	Disarmed	0	 View
001	NEO8060	Device log file	Device	0	 View

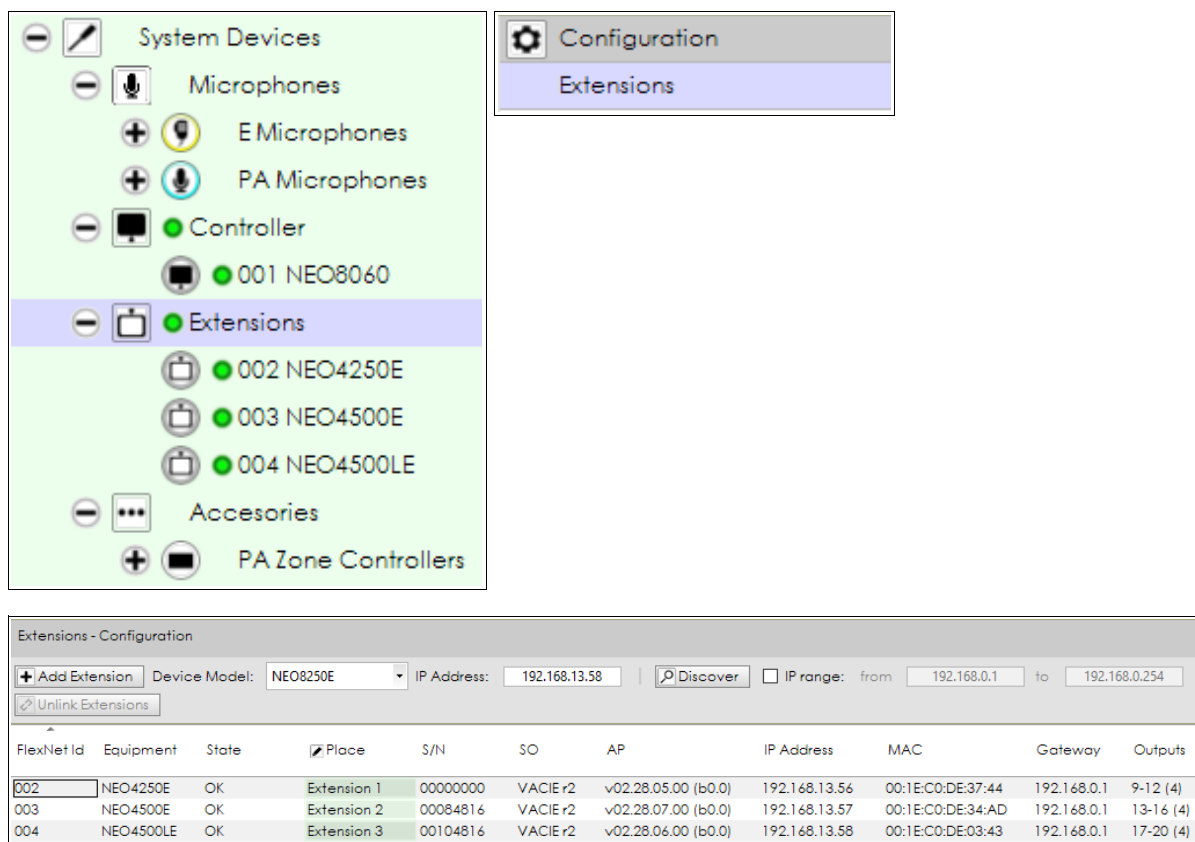
It is the same log file list as the one appearing in the System Devices root **4.1.1.** and the PA/VA System root **4.2.1.** Detailed jobs with logs on section **4.1.1**

4.1.4. Extensions

It is important to know that most part of the configuration parameters for a NEO Extension are stored at the NEO Extension device. Because of this, it is mandatory to ensure the connection between NEO devices at the system in order to export a project or import any configuration for them. In any different case, it will not be possible to finish the whole system configuration exporting it, or also to create a backup for that configuration import process.

a. Extensions general information

From the **Extensions** main node it is possible to accede to the Extensions device list configuration in the system or project.



The screenshot shows the NEO Configurator interface. On the left, a tree view under 'System Devices' includes 'Microphones', 'E Microphones', 'PA Microphones', 'Controller', 'Extensions' (highlighted), and 'Accessories'. The 'Extensions' node is expanded, showing a list of devices: '001 NEO8060', '002 NEO4250E', '003 NEO4500E', and '004 NEO4500LE'. On the right, a 'Configuration' window is open, showing the 'Extensions' tab. This window contains a table of extension configurations.

FlexNet Id	Equipment	State	Place	S/N	SO	AP	IP Address	MAC	Gateway	Outputs
002	NEO4250E	OK	Extension 1	00000000	VACIE r2	v02.28.05.00 (b0.0)	192.168.13.56	00:1E:C0:DE:37:44	192.168.0.1	9-12 (4)
003	NEO4500E	OK	Extension 2	00084816	VACIE r2	v02.28.07.00 (b0.0)	192.168.13.57	00:1E:C0:DE:34:AD	192.168.0.1	13-16 (4)
004	NEO4500LE	OK	Extension 3	00104816	VACIE r2	v02.28.06.00 (b0.0)	192.168.13.58	00:1E:C0:DE:03:43	192.168.0.1	17-20 (4)

On this window it is possible to add or delete Extension devices for a project. See at 3.2.2.

Any Extension shows the same information from the System Controller Info Tab. See at a.Controller – Info

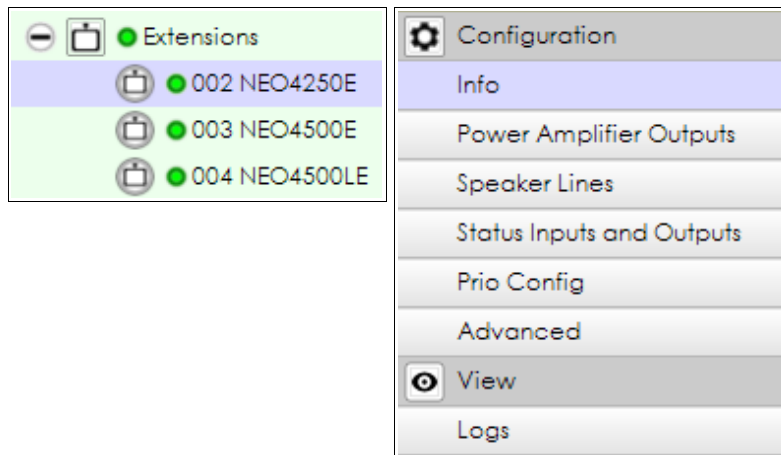
On addition to this information, when it works on online mode (live linked), at the **State** column; the current system device status is displayed. Possible values are:

- **OK:** Everything fine. Available connectivity with the Extension from the application and from the Extension to the System Controller.
- **FLT:** Connection failure between the Extension and the System Controller.

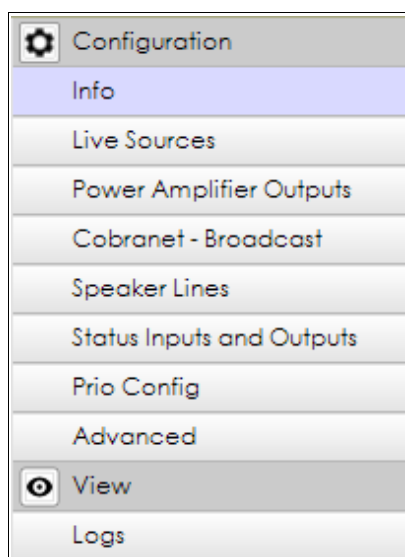
- **Offline:** There is not connectivity with this device from the application. It is not possible to set any parameters configuration from the application.
- **Taken:** This NEO Extension has been already connected to another System Controller, different from the one searched at the current project.
- **Device model mismatch:** The physical device does not correspond with the one set up at the system configuration.
- **Unknown device model:** Connected device model is not recognised.

If the current device status is “**Taken**”, it is possible to try to set the control by selecting it and clicking on **Unlink Extensions**.

To specifically set up every Extension it is necessary to select its node at the system tree and then select its configuration filters.



In case of **NEO4500LE** model, there are two more files: **Live Sources** and **Cobranet-Broadcast**:






b. Extension - Info

The same information from the Extension node will be displayed here, but just for the selected device. See Extensions general information.

c. Extension NEO4500LE – Live Sources

At this file (tab) it is possible to configure the input **Live** for **NEO4500LE** models.

Live Sources - Configuration			
Id	 Source Prio	 Sys Vol Override	 Volume
0001	0	<input type="checkbox"/>	0 dB
0002	0	<input type="checkbox"/>	0 dB
0003	0	<input type="checkbox"/>	0 dB
0004	0	<input type="checkbox"/>	0 dB

- **Id:** Input identifier. Internally assigned.
- **Source Prio:** Priority input routed to its output. From higher to lower priority value:
 - **0** – Disabled. It will not be routed anytime.
 - **1** – Only routed if no other sources are routed to the output.
 - **2** – Priority over PA source.
 - **3** – Priority over SIME source.
 - **4** – Priority over Controller pre-record players.
 - **5** – Priority over ACSI source on PA.
 - **6** – Priority over PTT microphone.

When Emergency state is active at the system, the Live input will be routed to its output only in case that zone is not on Emergency.

- **Sys Vol Override:** If it enables, total volume (channel + zone) will be ignored at the designed output. Specified volume will be applied with the parameter **Volume**.
- **Volume:** Volume to be applied at any associated output in case of **Sys Vol Override** is enabled.

d. Extension – Power Amplifier Outputs

This section sets up the amplified outputs for NEO Extension devices, as well as at for the System Controller. See Controller – Power Amplifier Outputs

Power Amplifier Outputs - Configuration														
<input type="button" value="Mute..."/> <input type="button" value="Edit equalizer..."/>														
Id	Device	Name	Zone	Zone Volume	Zone Mute	Output Volume	Total Volume	Output Mute	Vumeter	Loudness	Eq	Amplifier Supervisor	State	Is Spare
0009	NEO4250E (2)	Output #9	9	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>
0010	NEO4250E (2)	Output #10	10	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>
0011	NEO4250E (2)	Output #11	11	0 dB		0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input type="checkbox"/>
0012	NEO4250E (2)	Output #12				0 dB	0 dB	<input type="checkbox"/>	-100 dB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OK	<input checked="" type="checkbox"/>

It is necessary to keep in mind that the parameters **Amplifier Supervisor**, **Is Spare**, **Spare Channel** and the equalization of the output (not the enabling check) are stored into the own Extension device. Rest of the parameters are stored in the System Controller.

e. Extension NEO4500LE – Cobranet Broadcast

Space to configure the Cobranet bundle transmission for the Live sources on NEO Extension **NEO4500LE**.

Cobranet - Broadcast	
Parameter	Value
Private Mode	Disabled
Transmission bundle	0
Live Source 1	Enabled
Live Source 2	Enabled
Live Source 3	Enabled
Live Source 4	Enabled

- **Private Mode:** If enabled, the configured bundle will not be transmitted through the X port to any device on the system. That simplifies the traffic limitation generated from the system to the environment.
- **Transmission bundle:** Bundle identifier to be used for Live transmission of Live sources.
- **Live Source X:** Enables or disables the Live transmission for the audio source number X, through the channel number X of the configured bundle.

f. Extension – Speaker Lines

This tab sets the speaker line supervision configuration for each speaker line connected to Extension. It needs the same entries as the System Controller speaker lines. See on section Controller – Speaker Lines.

Speaker Lines									
<input type="button" value="Calibrate selected lines"/>									
Imp. Lower Tol. (%) :		15	Imp. Upper Tol. (%) :		15				
Id	Name	Line status	Imp. Meas.	Protect	Nominal Impedance	Nominal Impedance A	Nominal Impedance B	Impedance	Imp. Dev.
0009	Output #9	Branch A: OK Branch B: OK	A+B	<input checked="" type="checkbox"/>	100 ohm	195 ohm	195 ohm	92.5 ohm	-8%
0010	Output #10		None		40 ohm				None
0011	Output #11	OK	Class A	<input checked="" type="checkbox"/>	85 ohm	90 ohm	90 ohm	85.0 ohm	+1%
0012	Output #12		None		40 ohm				None

Speaker lines supervision setup is also stored at the Extension devices, as the System Controller only saves its own speaker lines configuration.

g. Extension – Status Inputs and Outputs

Inputs and outputs of the Extension speaker lines configuration.

Status Outputs					
Status Outputs (Status Out) - Configuration: DIS steady - FLT blink					N/C Mode: <input type="checkbox"/>
Status Inputs					
Description	Line	Fault	<input checked="" type="checkbox"/> Supervision	<input checked="" type="checkbox"/> N/C Mode	State
RESET	Fault	Open	<input type="checkbox"/>	<input type="checkbox"/>	Off
EMERGENCY	Fault	Open			Off
ZONE 1	Fault	Open	<input type="checkbox"/>	<input type="checkbox"/>	Off
ZONE 2	Fault	Open	<input type="checkbox"/>	<input type="checkbox"/>	Off
ZONE 3	Fault	Open	<input type="checkbox"/>	<input type="checkbox"/>	Off
ZONE 4	Fault	Open	<input type="checkbox"/>	<input type="checkbox"/>	Off
AC fault	OK		<input type="checkbox"/>		
Battery fault	OK		<input type="checkbox"/>		
DC fault	OK		<input type="checkbox"/>		

Also the Status Outputs configuration for emergency activation interface input and emergency power supply monitoring ports for Series NEO Extension devices are set the same way as before, on System Controller. See on Controller – Status Inputs and Outputs.

h. Extension – Prio Config

PRIO IN input configuration for Extension devices.

Prio Config				
Prio input volume: 5				
Prio Config for output channels:				
Id	<input checked="" type="checkbox"/> Volume	<input checked="" type="checkbox"/> Mute Override	<input checked="" type="checkbox"/> Volume Override	<input checked="" type="checkbox"/> Volume Offset
0013	0 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0014	0 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0015	0 dB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0016	0 dB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- **Prio input volume:** **PRIO IN** input volume setup. Allowed values between 12 and -100 dB.
- **Volume:** Value that changes the volume applied to an specific output. Allowed values between -100 and 10.
- **Mute Override:** If enabled, any system mute for this output will be ignored.
- **Volume Override:** If enabled, the **Volume** value replaces the total output volume.
- **Volume Offset:** If enabled, **Volume** value will be added to the total output volume.


The **Volume Override** and **Volume Offset** parameters are both mutually exclusive. If one of them is enabled, this action disables the other automatically.

Also remind the maximum volume for an output is 0 dB, and -100 dB is the minimum. This means any volume change that exceeds those limits will be automatically adapted to the volume limit as correspondent.

In case of Emergency state of a System, the **PRIO IN** input will be disabled, no matter whether the manoeuvre signal was activated or not.

i. Extension – Advanced Configuration

This section shows the factory reset features and functionality.



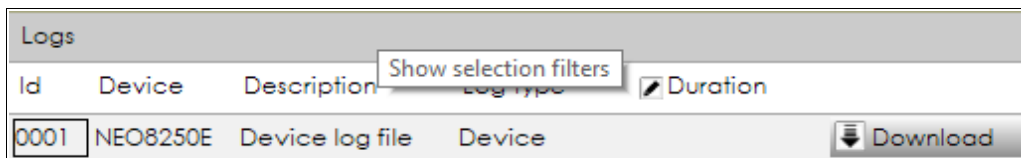
Parameter	Value
Load system factory configuration	Reset Ethernet config

Execute

The **Value** field checkbox enables the option “**Don't reset Ethernet config**” to make possible the factory reset process remaining in the previous Ethernet configuration for this device. Clicking on “**Execute**” runs the factory reset, which recovers the original status as a brand new device.

j. Extension – Logs

At Extension devices, only the device logs are available for download.



Id	Device	Description	Log type	Duration
0001	NEO8250E	Device log file	Device	

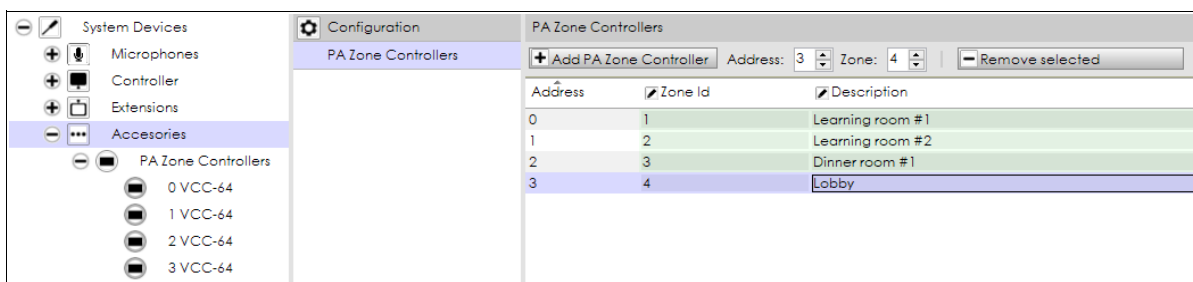
Download

More info about system logs at section 4.1.1.

4.1.5. Accessories

In *Accessories*, **PA Zone Controllers** can be found.

The complete list of PA Zone Controller (VCC) devices already installed is available from the nodes **Accessories** and **PA Zone Controllers** at the system tree schematic:



System Devices

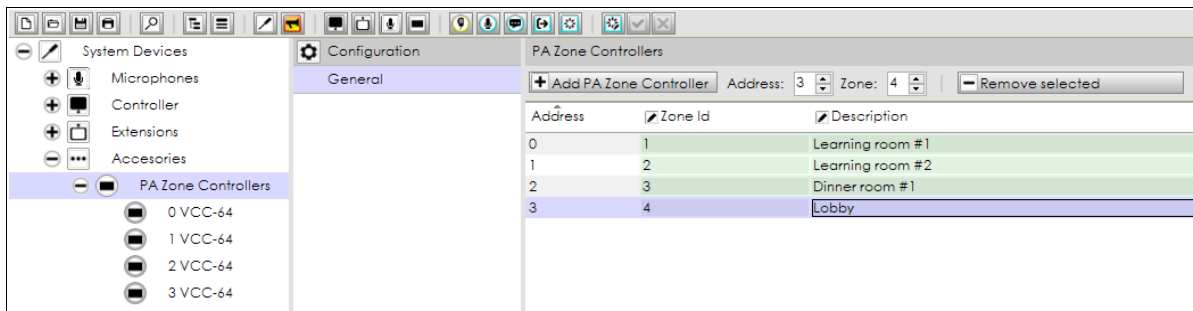
- Microphones
- Controller
- Extensions
- Accessories
 - PA Zone Controllers
 - 0 VCC-64
 - 1 VCC-64
 - 2 VCC-64
 - 3 VCC-64

Configuration

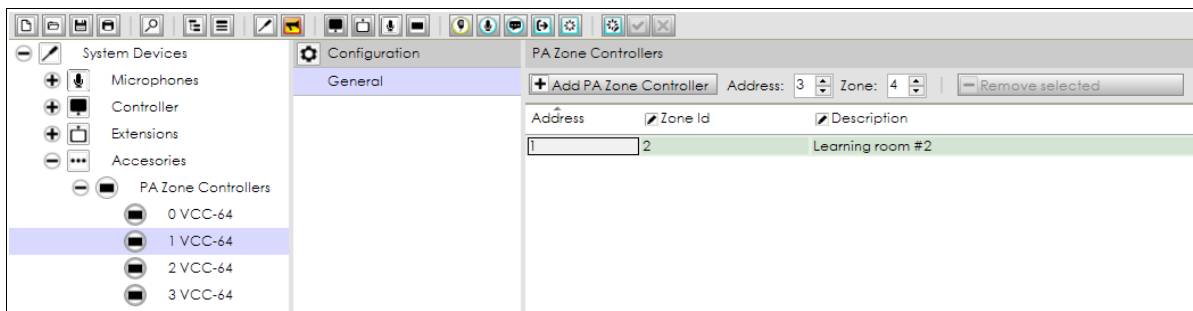
PA Zone Controllers

+ Add PA Zone Controller Address: 3 Zone: 4 Remove selected

Address	Zone Id	Description
0	1	Learning room #1
1	2	Learning room #2
2	3	Dinner room #1
3	4	Lobby



Selecting a **PA Zone Controller** or **VCC-64** node narrows the window view for that device's parameter:



NOTE: The configuration tabs of this section will only be shown if your user profile is *Installer* or *Maintainer* (see **2.3.3. Users preferences**).

If configuration permission is valid for the current user profile, it is possible to add, delete or modify some editable parameters for those devices included at the project. See 3.2.5 for more information about adding VCC-64 devices.

Parameters:

- **Address:** New serial port device address. Not editable, just indicated for a new included device.
- **Zone Id:** System zone assigned to the device. This parameter is editable.
- **Description:** Device description. Editable.

4.2. PA/VA System View

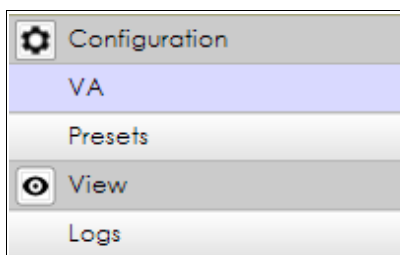
The PA/VA System view shows the following function families:



Events configuration is described in **5.EVENTS**.

4.2.1. PA/VA System Root

When you click on the root of the *PA/VA System* view, you get these tabs:



NOTE: The configuration tabs of this section will only be shown if your user profile is *Installer, Maintainer* or *Operator* (see **2.3.3. Users preferences**).

a. VA General Configuration

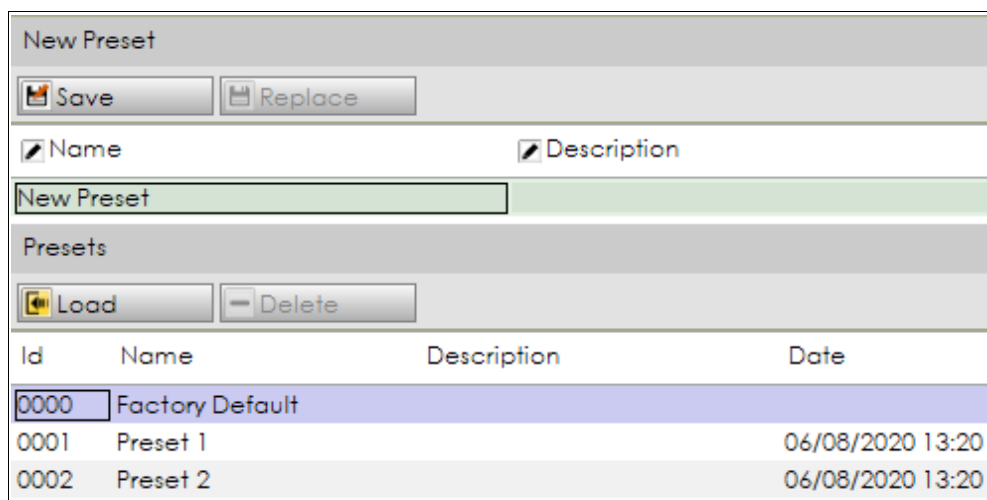
VA	
Description	State
PA Mics can be used in VA state	<input checked="" type="checkbox"/>
PA Sources can be used in VA state	<input type="checkbox"/>
PA Sources can be used in Batt state	<input checked="" type="checkbox"/>
Enable port X audio on EMG	<input type="checkbox"/>
Enable port X data on EMG	<input checked="" type="checkbox"/>

This section allows to set general parameters at VA:

- **PA Mics can be used in VA state:** Enables the PA microphones routing in case the system is currently on Emergency mode.

- **PA Sources can be used in VA state:** Enables the PA audio sources routing in case the system is currently on Emergency mode.
- **PA Sources can be used in Batt state:** Enables the PA audio sources routing in case the system currently is on Battery mode.
- **Enable port X audio on EMG:** Enables the audio data transmission through X port in case the system currently is on Emergency mode.
- **Enable port X data on EMG:** Enables the control data transmission through X port in case the system currently is on Emergency mode

b. Presets



Id	Name	Description	Date
0000	Factory Default		
0001	Preset 1		06/08/2020 13:20
0002	Preset 2		06/08/2020 13:20

The items in this tab are NEO presets. The preset includes the configuration of the following items:

- Input sources: Volume, Mute, Sound Enhancer, EQ enabling
- Zones: Volume, Mute
- Amplifier Outputs: Volume, Mute, Loudness, EQ enabling
- Routing state of zones and sources.

Presets do not save other parameters like zoning, microphone settings, messages or events.

These presets can be **loaded** either from this tab or from the physical NEO Controller touch screen. You can also create (**save**) new presets from NEO Configurator and **replace** or **delete** old presets. The maximum name length is 32 characters. The maximum description length is 64 characters.

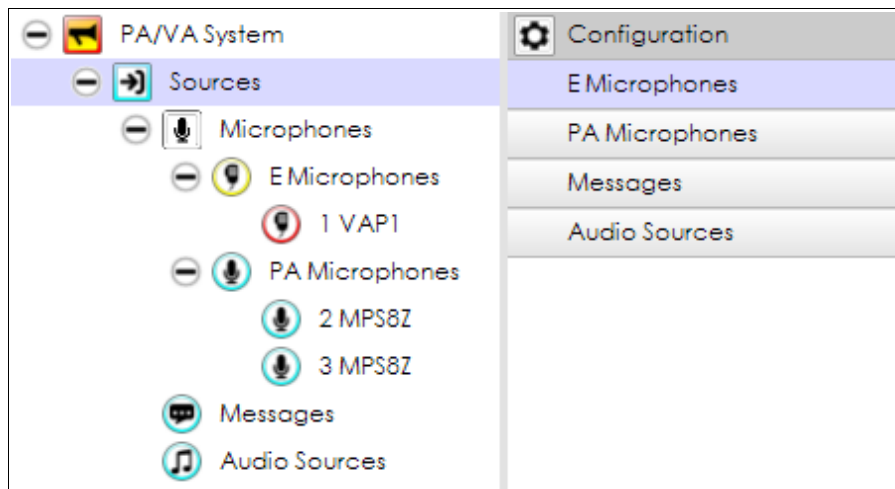
Factory Default establishes the factory value for those specified parameters and will always be at this list, it is not possible to delete.

c. Logs

The same logs as the ones from System Devices root view. See it on Logs section.

4.2.2. Sources

The *Sources* function family is divided in 3 subfamilies: **Microphones**, **Messages** and **Audio Sources**. Microphones are also subdivided in **E Microphones** and **PA Microphones**. By selecting the **Sources** node at the system tree scheme the next filters configuration are displayed:



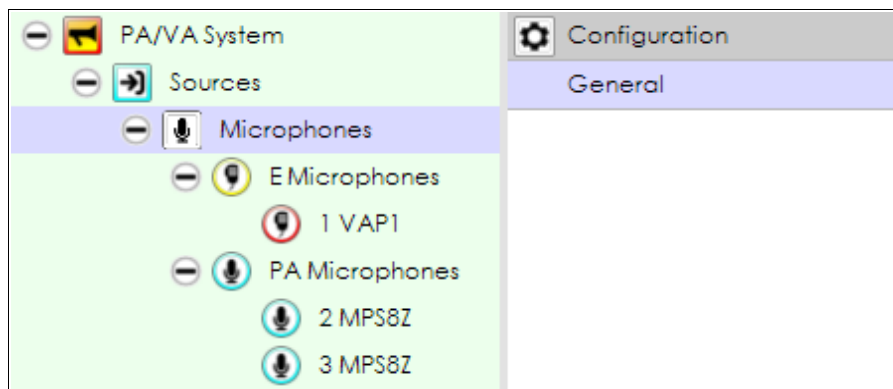
This makes possible to select the different lines (tabs):

- **E Microphones:** Shows the list of Emergency Microphones (VAP-1) at the right panel, set for the project or system.
- **PA Microphones:** Shows the list of PA Microphones (MPS-8Z) at the right panel, set for the project or system.
- **Messages:** Shows the audio files list already stored at the System Controller.
- **Audio Sources:** Shows the list of available audio sources on the right panel:
 - The 5 System Controller physical inputs.
 - Cobranet Sources already configured. See Controller – Cobranet Inputs.

In case the user profile used has not permission, the display shows visualization filters instead of the Configuration.

a. Microphones

Selecting the **Microphone** node on the system tree scheme access to the complete list of microphones, also for PA and Emergency:



Microphones						
+ Add Microphone...		ACSI Dir/Prio: 3	- Remove selected			
ACSI Dir/Prio	Equipment	Description	State	Token	Firmware	Update
1	VAP1	ACSI device on addr #1	Quiescence		v01.05	v01.06 (0%)
2	MPS8Z	ACSI device on addr #2	Quiescence	Talk	v01.06	
3	MPS8Z	ACSI device on addr #3	Missing			

Similar to System Devices view, here it is possible to add or delete microphones for the project or system using the controls, located on the upper panel. This was explained in detail in sections 3.2.3 and 3.2.4.

If the user selects the nodes **E Microphones** or **PA Microphones** at system tree scheme view, only the specified type (VAP-1 or MPS-8Z correspondent models) will be listed.

The displayed attributes are:

- **ACSI Dir/Prio:** It indicates the direction of that microphone in the ACSI bus. This direction also corresponds with the this microphone's priority. A NEO system can contain a maximum of 8 ACSI devices, each of them with a unique ACSI address/priority.

NOTE: It is not possible to have a PA Microphone and an Emergency Microphone with the same ACSI address/priority, because they both use the same ACSI bus.

The ACSI address/priority within NEO Configurator must correspond to the ACSI address/priority configured in the physical device (see *MPS-8Z or VAP1 User's Manual*).

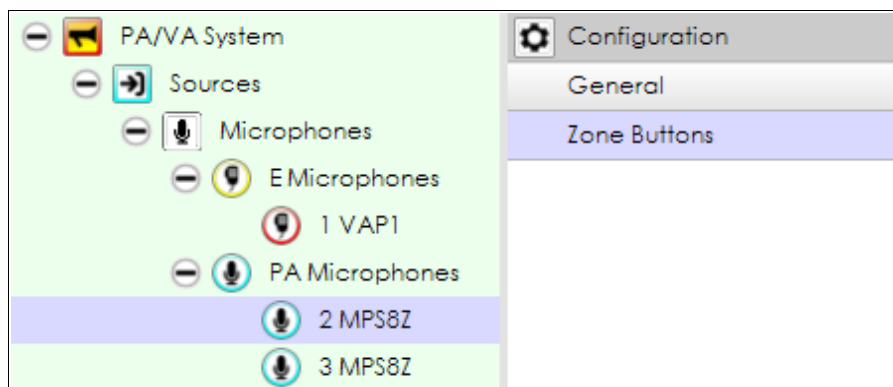
- **Description:** Microphone description text. Editable. Up to 64 characters.
- **State:** Displays the microphone status. Possible status:
 - **Quiescence:** Microphone properly configured.
 - **Missing:** Physical device not found at the indicated ACSI address.
 - **Type conflict:** Physical device found at the indicated ACSI address, but does not match with the configured model.

- **Token:** Displays the “**Talk**” advisor to the microphone that currently has conceded word. Others remain the blank field. It only performs at online mode (live linked).
- **Firmware:** Microphone firmware version. It only performs at online mode (live linked).
- **Update:** If the System Controller is currently updating the microphone firmware version, this field displays the version number of the firmware and the progress status of that process. It only performs at online mode (live linked).

NOTE: It is not possible to change the ACSI Direction/Priority of a PA Microphone from NEO Configurator after it has been added to the project.



NOTE 2: If you manually change the ACSI Direction/Priority from a physical MPS-8Z, it will be disconnected from the NEO project: a new PA Microphone with the new ACSI direction/priority should be added to NEO Configurator and the old one (with the old ACSI direction/priority) will be removed.

Selecting any microphone node at the system tree scheme, the software accedes to specific configuration of its particular parameters



- **General:** Displays the same information from the microphone general list, just referred to the selected microphone.
- **Zone Buttons:** Shows the zone assignment of the microphone buttons.

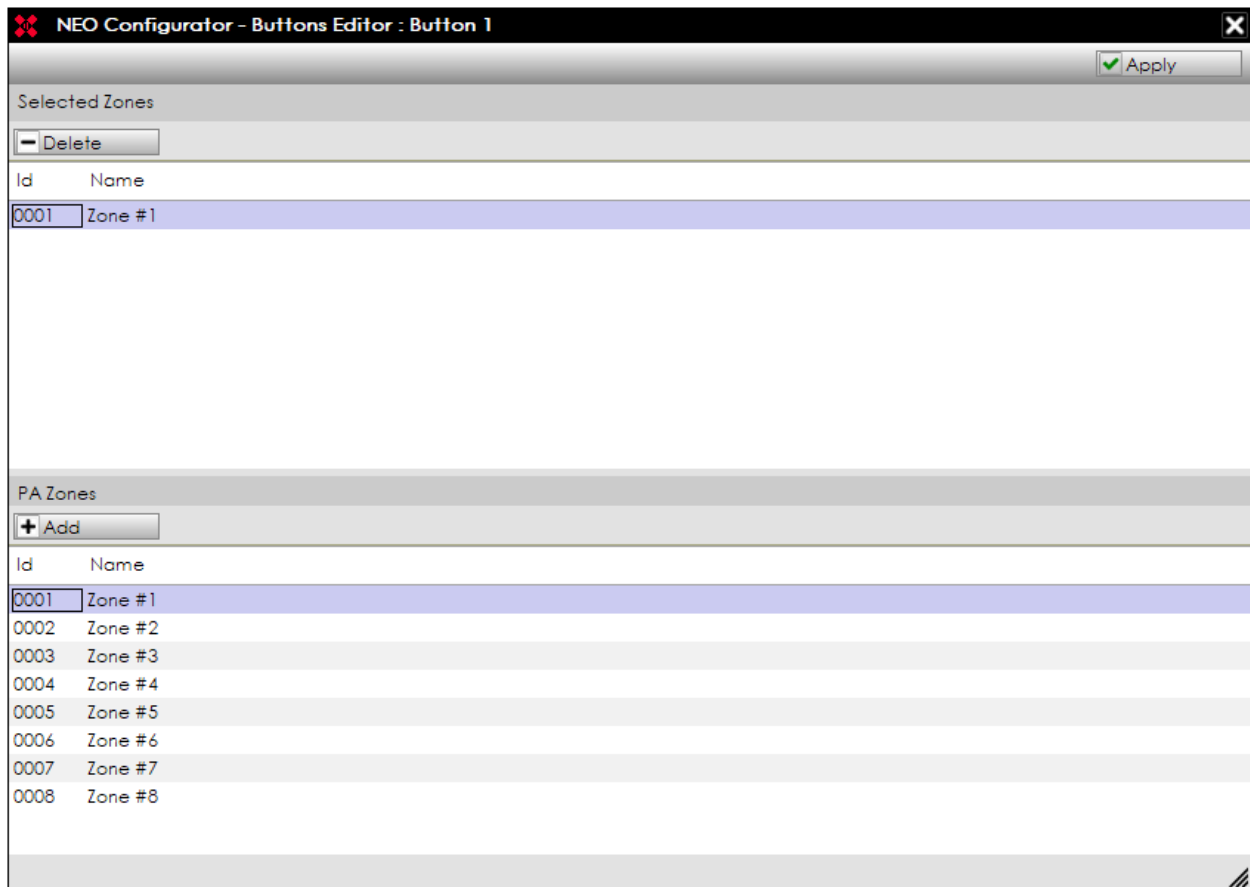
If the currently used profile allows it, it is possible to modify the configuration of the zones assigned to each microphone button.

Buttons			
 Edit Zones...			
Id	Button Panel	Name	 Zone Id
1	Main	Zone #1	0001
2	Main	Zone #2	0002
3	Main	Zone #3	0003
4	Main	Zone #4	0004
5	Main	Zone #5	0005
6	Main	Zone #6	0006
7	Main	Zone #7	0007
8	Main	Zone #8	0008
9	Extension 1		
10	Extension 1		
11	Extension 1		
12	Extension 1		
13	Extension 1		
14	Extension 1		
15	Extension 1		
16	Extension 1		
17	Extension 2		
18	Extension 2		

- **Id:** This identifier corresponds to the ordered buttons of the physical device. Values are from 1 to 64, the maximum quantity of buttons for an ACSI microphone.
- **Button Panel:** Displays the device that the button belongs to.
 - **Main:** Main **MPS8Z** physical buttons
 - **Extension 0:** First possible extensions added to the **VAP-1**.
 - **Extension 1..7:** Other possible button extensions, also for **VAP-1** and for **MPS-8Z**.
- **Name:** Automatically generated label. In case a single zone has been assigned to a button, it shows the name of that zone. In other case it shows the “**Group of Zones**” text.
- **Zone Id:** Editable. Identifier label for zones assigned to a button.

In case of online jobs (live linked) the physical microphone button extensions detected will be displayed on green colour. The software makes possible to edit and set up the zonal assignation for any available button, no matter if they are physically connected or not to the system.

To edit the button zone assignation, first select a button on the list and then click on “**Edit zones...**”. It is also possible to edit it directly by clicking on the “**Zone Id**” cell. After that, a button editor windows will open, and the current zone assignation can be modified there.



The editor window shows, in its upper half, the current zones assigned to a button. To erase a zone assignment, first select it and then press on “**Delete**”.

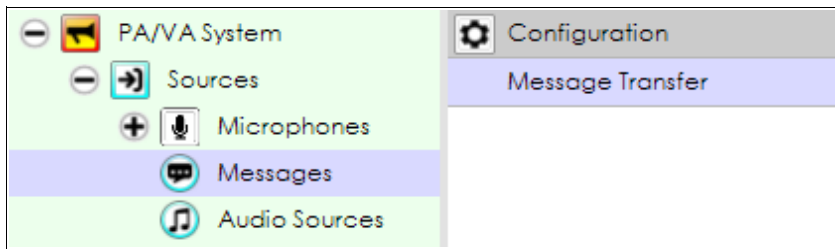
The editor window displays, in its lower half, the system zones list. To add some zones to a button first select those zones and then press “**Add**”. It is possible to assign a maximum of 8 zones to a button.

Once the zones assignment list is ready, click on “**Apply**” to save the changes and close the assignment editor.

To discard the zone assignment done, just close the editor windows clicking on **Esc** or the window right upper “**x**” button.

b. Messages

Selecting the **Messages** node access to the list of stored audio files on the System Controller. In case no current user profile has configuration permissions, “**State**” visualization filter will appear instead of the “**Message Transfer**”, just for list monitoring for those messages.



Messages - Configuration					
<div> + Sending audio files... Backup... - Remove selected Set EVAC Set ALERT </div>					
Id	VA	Name	Size	Duration	Sample Rate
0001	EVAC	MSG EVAC	1086 KB	00:11	48 KHz
0002	ALERT	MSG ALERT	806 KB	00:08	48 KHz
0003		MSG 1	94 KB	00:01	24 KHz
0004		MSG 2	94 KB	00:01	24 KHz

NOTE: The content of these tabs (i.e. the list of messages) can only be shown when the system is live linked.

Attributes:

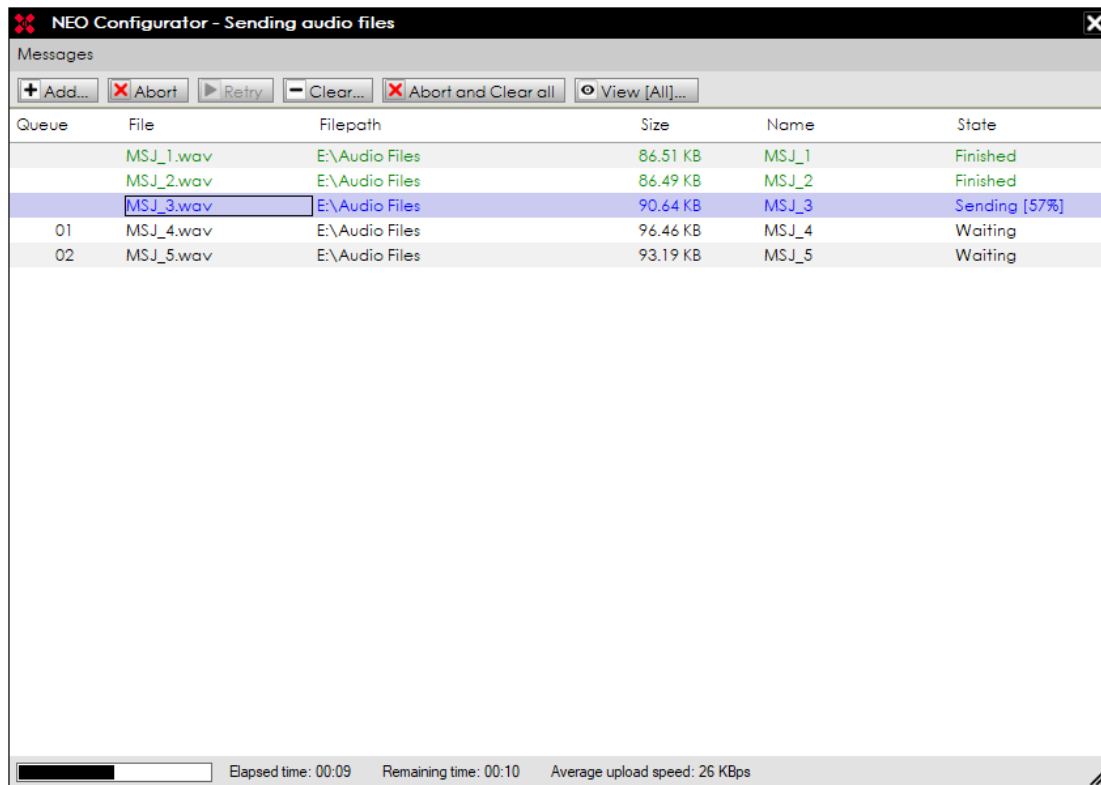
- **Id:** System identifier (internally assigned).
- **VA:** This column cells display “**EVAC**” at the entries that the message has currently been configured for Evacuation use, and marks it on orange colour. Similarly, the “**ALERT**” display indicates the message currently selected for Alert use, coloured at yellow. Other messages have a blank attribute at this column.
- **Name:** Editable. Message name, maximum of 31 characters.
- **Size:** File size.
- **Duration:** File time length.
- **Sample Rate:** Frequency reproduction attribute. Sample rate may be selected at advanced options for NEO System controller, as seen on Controller – Advanced Configuration.

Buttons:

- **Sending audio files...** : Opens a new window where the audio files that will be sent to the device are selected, and also monitors the update progress and any possible issue during the process.
- **Backup...** : Downloads the file from NEO Controller and stores it on the connected PC.
- **Remove selected:** Erases the selected files. It is not allowed to delete the files currently marked as “**EVAC**” y “**ALERT**”. Deleting a file frees the Id used on those messages, to use it at the next message upload sequentially.

- **Set EVAC:** The selected message becomes the new “**EVAC**” message.
- **Set ALERT:** The selected message becomes the new “**ALERT**” message.

The dedicated windows to send audio files is displayed in the following way:



Buttons:

- **Add..** : Opens a new window where the audio files to be sent to the device are selected. Once selected, they should be added to the sending list.
- **Abort:** Abort the preselected file sending when the transfer is in progress or waiting.
- **Retry:** Retries an upload process dedicated to the files selection whose transfer failed previously.
- **Clear..** : Opens an expandable submenu where any file to remove from the list is selected; *Selected, Finished, Aborted, Failed, Not sent, Not valid.*
- **Abort and Clear all:** Aborts any sending process currently on progress, and removes those files from the available list.
- **View...** : Opens a submenu where the files displayed at the list are selected; *All, Sending, Waiting, Finished, Aborted, Failed, Not sent, Not valid.*

NEO Controller can store a maximum of 99 pre-recorded messages. The maximum capacity for all the messages is 2GB (over 6 hours of audio).

When adding new files, the software checks automatically those audio files and recognises they as valid (wav or mp3) or not, and transforms it for NEO (PCM mono-channel 16 bits 24 or

48 kHz). In case of a not valid audio format, or that any issue appears during the conversion process, those messages are added on the list with that issue is indicated. In case of a good conversion process with no errors, the messages are added to the list and sent or queued to unfinished previous uploads. The maximum length for audio files, once converted to NEO format is 62 Mb.

Attributes for uploading message list:

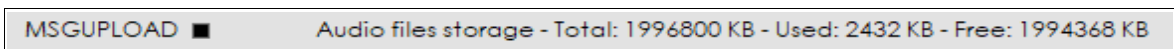
- **Queue:** Queue position at the upload file list. Files are sent one by one. When several files are selected, only the first is truly sent, the others create that queue.
- **File:** Local selected file name.
- **File path:** Storage path for any local selected file.
- **Size:** Load file size.
- **Name:** Name used to display the file at any archive list stored once they were loaded to the device. It is the same local file name, but without the extension. Given a maximum length of 31 characters, those with higher length will be rejected.
- **State:** Displays the upload process status. It also indicates any possible issue when the files are converted or open. Values:
 - **Finished: Successfully** upload.
 - **Waiting:** Queued file waiting for upload.
 - **Sending [N%]:** Progress status for a file currently being sent.
 - **Aborted:** Aborted file upload. An upload may be aborted manually from the software. System also may abort any upload in case an Emergency state occurs
 - **Not valid: too large:** File size is bigger than the maximum size allowed (62 Mb).
 - **Not valid: wrong format:** Local file format is not valid for conversion.
 - **Not valid: wrong format or missing codec:** Local file format not valid or codec not valid for his conversion to a NEO file. It usually appears in case no mp3 codec is installed, when NEO tries to work with it.
 - **Not valid: file doesn't exist:** Local file does not exist at the specified path.
 - **Not sent: Offline: It is** not possible to connect with the computer.
 - **Not sent: EMG ON:** System is already on Emergency Mode, so it is not allowed to apply this action.
 - **Not sent: Maximum allowed audio files reached:** Maximum quantity of files already in use, it is not allowed to add more.
 - **Not sent: Maximum allowed storage reached:** maximum reserved storage space has been reached, it is not possible to add more.

- **Unknown Error:** Error due to unknown reasons.

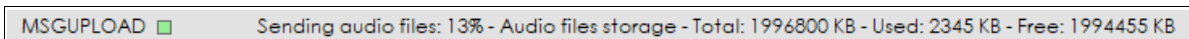
The lower half of the files upload window displays the progress status of the upload, the transfer time from the beginning of the transfer, the time estimation to finish the upload transfer for the rest of the files and the average transfer speed.

The files upload window may be closed at anytime and this will not cancel the rest of the transfer process in progress. Clicking again at “**Sending audio files...**” opens the window again to recover the previous view and also the previous process, and makes possible to add more files to upload or cancel the current transfer.

The lower part of NEO Configurator main window displays the total storage capacity used and available for pre-recorded messages:

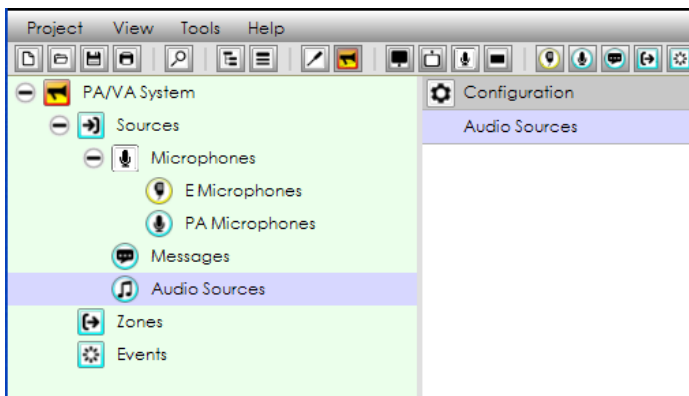


The **MSGUPLOAD** parameter indicates there is a current audio files transfer. If it is taking place, the status bar also shows that transfer process.



c. Audio Sources

Clicking on the **Audio Sources** node at the system tree scheme accedes to the audio input list of the System Controller. That is his own five physical inputs and the Cobranet audio inputs configured previously. In case the user profile does not allow the configuration according to the audio messages, a “**State**” view filter is displayed in this window instead of the “**Message Transfer**” configuration filter. That way only the audio input list is monitored.



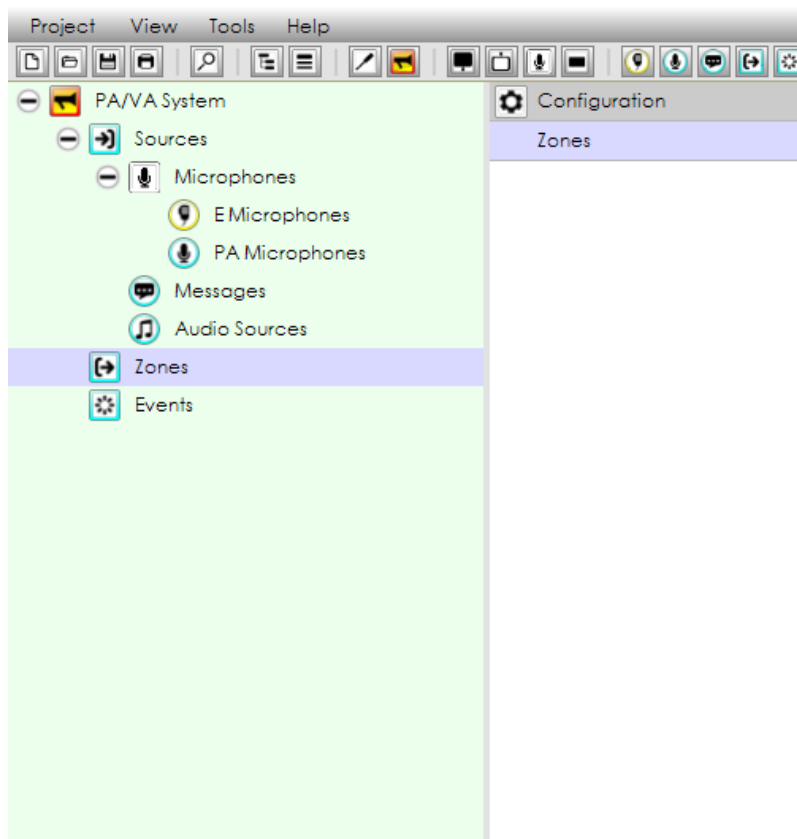
Audio Sources - Configuration		
Id	Type	Name
0001	Local	Source #1
0002	Local	Source #2
0003	Local	Source #3
0004	Local	Source #4
0005	ACSI	Source #5
0009	Remote	Music Stream

This tab shows all the **local analog audio** sources (see **Controller – Audio Inputs**) as well as the **remote** Cobranet inputs (see Controller – Cobranet Inputs).

Id, **Type** and **Name** are the same as the ones shown in the System Devices tab Controller – Audio Inputs.

4.2.3. Zones

Clicking at the **Zones** node on the system tree scheme accedes to the system configured zone list. In case of the user profile used it does not allow any related configuration for this section. The “**State**” visualization filter is displayed instead of the configuration “**Zones**” filter.; which means only the monitor is available.



Zones - Configuration											
<div> + Add zones... - Delete selected zones Route... Mute... Edit output channels... Edit override... VA Volumes... </div>											
Id	Name	Description	Power Amplifier Outputs	Disarmed	State	Volume	Use VA volume	VA Volume	Mute	Override	Source
0001	Zone #1	Zone #1	0001	<input type="checkbox"/>	Quiescence	-5 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	No	1:Source #1
0002	Zone #2	Zone #2	0002	<input type="checkbox"/>	Quiescence	-5 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	No	1:Source #1
0003	Zone #3	Zone #3	0003	<input type="checkbox"/>	Quiescence	-10 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	No	9:Music Stream
0004	Zone #4	Zone #4	0004	<input type="checkbox"/>	Quiescence	-10 dB	<input checked="" type="checkbox"/>	0 dB	<input type="checkbox"/>	No	9:Music Stream
0005	Zone #5	Zone #5	0005	<input type="checkbox"/>	Quiescence	-5 dB	<input type="checkbox"/>		<input type="checkbox"/>	No	2:Source #2
0006	Zone #6	Zone #6	0006	<input type="checkbox"/>	Quiescence	-5 dB	<input type="checkbox"/>		<input type="checkbox"/>	No	2:Source #2
0007	Zone #7	Zone #7	0007	<input checked="" type="checkbox"/>	Disarmed	-12 dB	<input type="checkbox"/>		<input type="checkbox"/>	No	0:None
0008	Zone #8	Zone #8	0008	<input type="checkbox"/>	Fault	-12 dB	<input type="checkbox"/>		<input type="checkbox"/>	No	4:Source #4

Every zone is a group of power amplifier outputs. By default, 1 output = 1 zone, but this can be modified as per the project requirement within this tab.

Attributes:

- **Id** - Internally assigned numeric identifier.
- **Name** - Editable. 32 characters max.
- **Description** - Editable. 64 characters max.
- **Power Amplifier Outputs** – Editable. Amplified output identifiers (Power Amplifier Outputs) for the zone components.
- **Disarmed** - Editable. Enables or disables the disarmed state of any zone,
- **State** – It can have the following values:
 - **Emergency**: when that zone is in emergency mode (i.e. it is broadcasting an *EVAC/ ALERT* message or an Emergency Microphone).
 - **Fault**: when a speaker line or amplifier within that zone reports a fault (see Controller – Power Amplifier Outputs and Controller – Speaker Lines).
 - **Disarmed**: when that zone has been manually disarmed.
 - **Quiescence**: when none of the other states is active (i.e. that zone is operating normally in PA mode).
- **Volume** - Editable. This parameter is modified independently from the volume level of the outputs that belong to a zone. This adjustment affects to all the outputs within the zone as a group. A zonal volume will be valid in case of keeping the total value of any line between the established limits (-100 dB to 0 dB) after adding this value and the particular output zonal value. Otherwise, a warning message will be displayed.
- **Use VA volume** - Editable. Allows to enable the VA volume for a selected zone. VA volume will be applied in case of Emergency state.
- **VA volume** - Editable. In case “**Use VA volume**” is currently enable at this zone, this will be the total volume value applied in case of Emergency mode.
- **Mute** - Editable. Enables or disables the zonal mute. Muting a zone to mutes all the amplified outputs already at that specific zone. It is not possible to disable the individual mute for any of the amplified outputs affected while zonal mute is activated.
- **Override** - Editable. Shows whether the override function associated to that zone is activated or not. Overrides are usually activated from an event (see chapter 5. *EVENTS*).
 - **Yes**: Override outputs activated.
 - **No**: Override outputs deactivated.
 - **N/A**: This particular zone has no Override outputs signed.

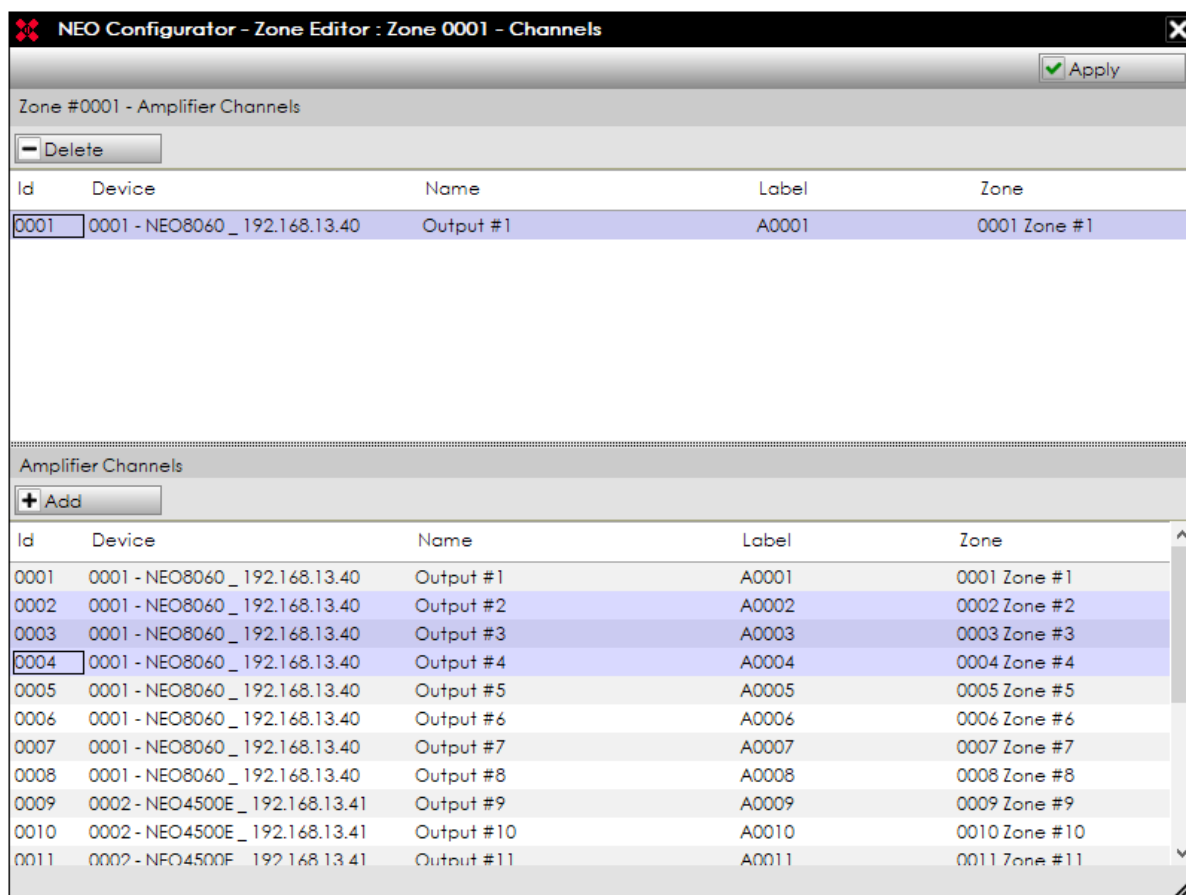
- **Source** – Editable. Shows the permanent source routed to a zone. Permanent sources were described at c.Audio Sources.

Buttons:

- **Add zones...** : Opens a dialogue box to indicate the quantity of zones to be added to the system. That zone quantity cannot be higher than the system amplified output quantity.
- **Delete selected zones:** Remove selected zones from the system. At least one zone must remain at the system.
- **Route...** : Opens an expanded menu where the user can choose which Source will be routed to the selected zones. To remove the current routed selection for that zones, just select the “**0: None**” option.
- **Mute...** : Opens an expanded menu to enable or disable mute in the current zone selection.
- **Edit output channels...** : Opens a zonal editor window where it is possible to modify the **amplifier output assignment** for the particular selected zone. Details on section 4.2.3. a.
- **Edit override...** : Opens a zonal editor window where it is possible to modify the **override output assignment** for a selected zone. More details at 4.2.3. b.
- **VA Volumes..** : Global control of VA volumes. Similar to the item at Controller – Audio Inputs.

a. Edit Amplified outputs zonal assignment.

Clicking on the edition window opened at “**Edit output channels...**” allows to edit individually the amplified outputs assignment for a selected zone, as shown on the following picture.



On the upper side the window shows the amplified outputs currently assigned to that zone. At the lower half, It shows the list with all available amplified outputs already installed at the system.

Attributes are, in both cases, the same:

- **Id:** Numerical identifier for amplified outputs in the system.
- **Device:** Information according to the device that each amplified output belongs to; identifier, Flexnet, model and IP address.
- **Name:** Name label given to the output.
- **Label:** Internal identification label.
- **Zone:** Zone where the outputs are currently assigned.

Several Audio Outputs can be added to one zone, so that a group of outputs will operate as a single zone. Each Audio Output can only be included in one zone; it is not possible to include the same Audio Output in more than one zone.

Add Power Amplifier Outputs to a Zone:

1. Select the power amplifier outputs from the lower "Amplifier Channels" panel.
2. Click on "Add".
3. Click on "Apply" to save the changes.

NOTE: If you add an Audio Output previously assigned to a different zone, that output will be removed from that zone.

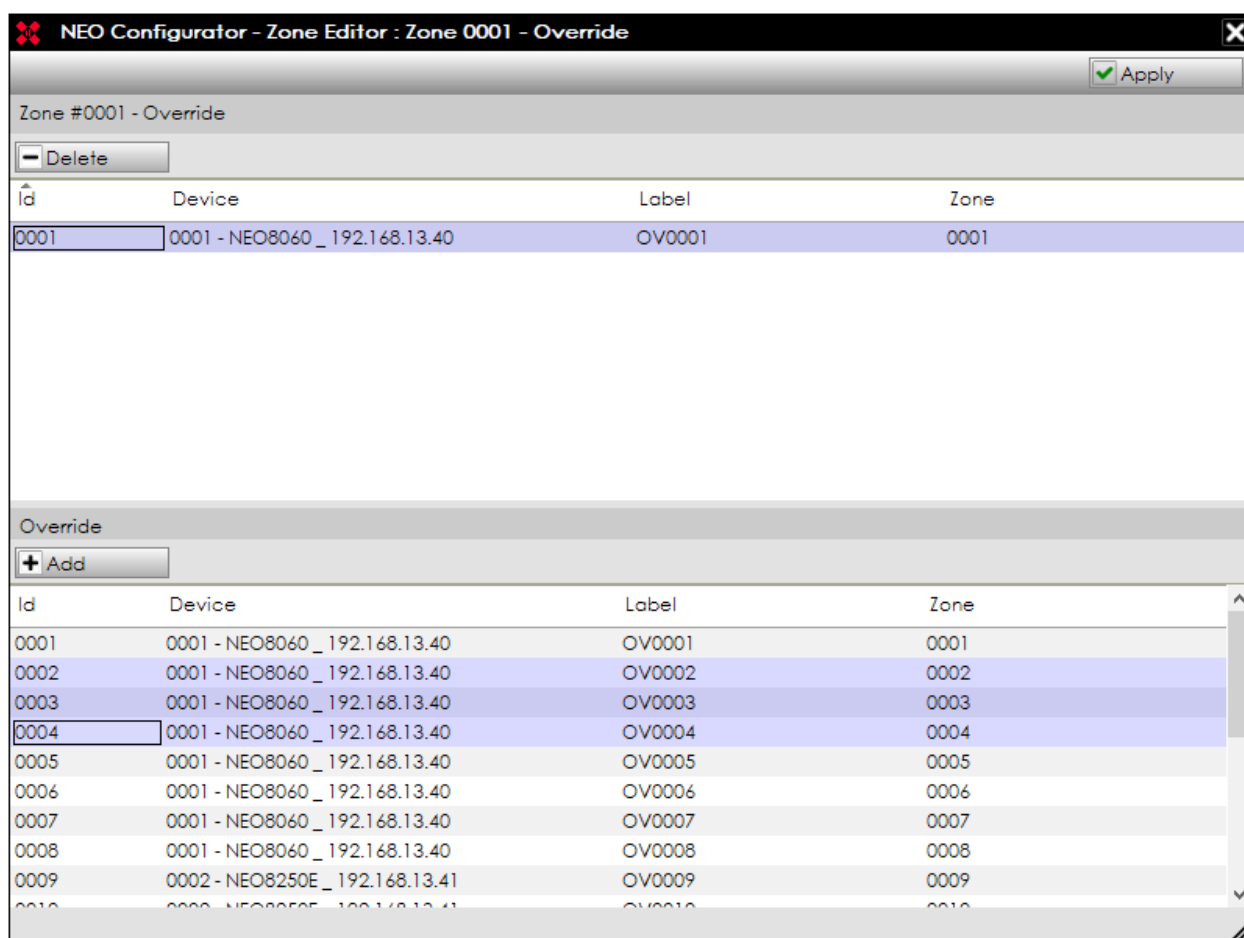
Remove Power Amplifier Outputs from a Zone:

1. Select the Audio Output from the upper "Zone #000X - Amplifier Channels" panel.
2. Click on "Delete".
3. Click on "Apply" to save the changes.

NOTE: When you remove an Audio Output already assigned to the zone, that output will become unassigned and will not belong to any zone. In order to ensure that the audio channel can be used, make sure that the unassigned output is headed to another zone.

b. Edit Override Outputs assigned to a Zone

The zonal edition window opens when the user clicks on the button "**Edit override...**". It allows to edit the override assignment for a selected zone.



At the upper panel, the current list of amplified outputs to be override is displayed, and linked to the selected zone. The lower panel displays the list with all available amplified outputs already installed at the system.

Attributes are the same in both panels:

- **Id:** Numerical identifier for amplified outputs in the system.
- **Device:** Information according to the device that each override outputs belongs to; identifier, Flexnet, model and IP address.
- **Name:** Name label given to the output.
- **Label:** Internal identification label.
- **Zone:** Zone where the outputs are currently assigned.

The Override Outputs in NEO can be launched under two conditions:

- (a) When NEO receives a dry contact in one of the Status Inputs for the Fire Alarm (ECI 1-8 or Z1-Z8).
- (b) When it is launched by an event (see chapter **5. EVENTS**).

In this window it can be configured which Override Outputs are activated when NEO receives the Fire Alarm dry contact in a specific zone (case a).

The assignation of Override Outputs to a specific zone can be made independently of the Audio Outputs assigned to that zone. For example, Zone 3 can have *Audio Outputs #3, #5 and #6* and at the same time have *Override Outputs #2, #3, #4, #5 and #6*.

It is also possible to have a zone with no Override Output or a zone *only* with Override Outputs and no Audio Outputs.

Each Override Output can only be included in one zone. It is not possible to include the same Override Output in more than one zone.

Add Override Outputs to a Zone:

1. Select the override outputs from the lower "Override" panel.
2. Click on "Add".
3. Click on "Apply" to save the changes.

NOTE: If you add an Override Output previously assigned to a different zone, that output will be removed from that zone.

Remove Override Outputs from a Zone:


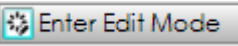
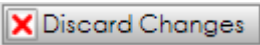
1. Select the output from the upper "Zone #000X - Override" panel.
2. Click on "Delete".
3. Click on "Apply" to save the changes.



NOTE: When you remove an Override Output already assigned to the zone, that Override Output will become unassigned and will not belong to any zone.

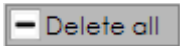
PART 2

5. EVENTS

NEO Series has a lot of flexibility to adapt the system to plenty of requirements thank to the Event module. The Event module is a creation center to automatize some feature modifications, according to the individual system performance needs.

To access at the Event module, click on the  button, located at the *Main Tool Bar* and *System View*. There, the button  is used to create new items or edit any item previously created. The buttons  and  apply or undo any modifications made from the current edition season (since last *Enter Edit Mode*).

The button  loads all the events created in the system from a file, and  saves into a file all the events created in the system.

Button  launches an utility to erase all existing event dependence items (Triggers, Conditions, Actions and Events).

The Events module bases its performance on this four dependences: Triggers, Conditions, Actions and Events. When the user clicks on the *Enter Edit Mode*, the following tabs are displayed:




- Triggers: Used as logical inputs to work with.
- Conditions: Combination of triggers used, mixed with boolean operators
- Actions: Item to be performed by NEO.
- Events: Merges the previous items to perform the designed automatization.

Options and parameters for that items will be described in the following chapters, available after clicking on each button.

This edition mode will be available also online (live linked), as well as offline. Offline mode does not send any information to the device when changes are confirmed. Those will be applied at the next system project export; but it is useful to import or export events to a file or check what is actually imported before confirming a new configuration. In case of online events validation, those will be sent to the device as a block.

Similar to the rest, any cell with green background is editable by clicking on it or simply typing once it is selected. Press ESC to discard any changes or press ENTER or click out of the cell to apply the changes.

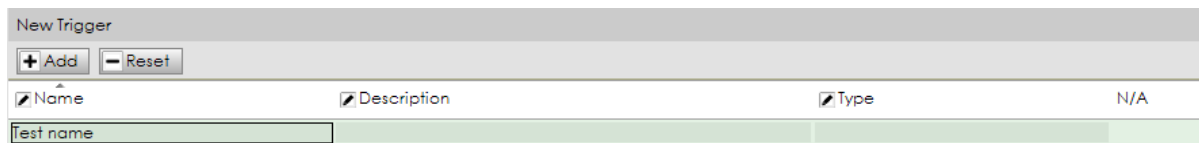
While the user stays at *Edit Mode*, the indicator **EVENTS EDIT**  will be active. That means changes have not been confirmed or rejected yet. That indicator is also visible from other views, because *Edit mode* remains open.

5.1. Triggers

Triggers are the primal inputs, physical or not; for every event. In these sections each type of trigger will be described on detail.

Each trigger just may have one of this logical states: Active or Not active.

To create a new trigger, first complete the cells Name, Description, Type and other possible parameters (N/A at the picture), depending on the the trigger type used. Then, click on **+ Add**. Press **- Reset** to remove all the data inside these cells.



At the trigger created list, press **- Remove selected** to delete the selection. Click on **Duplicate** to copy the selected trigger at new trigger creation cells.

NOTE: If a trigger is being used to create a condition for an event, even if the event is not active, it will not allow you to remove that trigger, you must first remove the condition that restricts it.

Modifying any parameter of a trigger previously created, that the changed trigger, previously used on a condition, will be replaced (see 5.2. Conditions).

Once the *Edit Mode* is closed, the added triggers will be displayed like this:

Triggers											
Id	Code	Name	Description	Type	Argument1	Argument2	Argument3	In use	Active	VA	PA
01	I01	Trigger 1	Input level trigger	Input Level	1:Source #1	-10 dB				✓	✓
02	D01	Trigger 2	Data trigger	Date	Single	01/01/2021		✓		✓	✓
03	G01	Trigger 3	GPIO trigger	GPIO Input	G01: GPIO Input #01				✓	✓	✓
04	A01	Trigger 4	Microphone button trigger	ACSI	MPS8Z	4 (Address)	4 (Button)			✓	✓

Where column's meaning is:

- Id: Numerical identifier of each trigger.
- Code: Label of the trigger, useful to reference it from other sections.
- Name: Trigger user editable name.
- Description: Brief description, editable.

- Type: Trigger type. Each individual type will be described at the following sections. Depending on the used type on, two or three Arguments will be needed. Editable.
- Argument: Trigger parameters, different from each type.
- In use: Indicates that this triggers are currently being used for a condition.
- Active: Indicates an already activated trigger. This trigger will also be marked on orange colour.
- VA: This trigger is valid for being used on VA mode.
- PA: This trigger is valid for being used on PA mode.

5.1.1. Input Level

This trigger type will activate when the selected audio input gets a value exceeding the target level, given by the argument.

- Argument1 - Input: Input source. May be any individual audio source already installed at the system or all of them as a block. Audio sources will be listed as "Audio input Id" + "Input label name". Only local sources (inputs 1 to 5, PTT microphone and message players) are available.
- Argument2 - Level: Target level to activate the trigger when it is exceeded. Allowed values between -100 to 0 dB.

5.1.2. Condition

Activates when the selected Conditions are active. Useful to concatenate groups of triggers.

- Argument1 - Condition: List of the available conditions previously created.

5.1.3. Command

This trigger waits for a specific command to be activated. Useful to integrate with third parties.

- Argument1 - Type: Select the command interface used. May be Ethernet (UDP) or Serial (RS-485 PA Port or RS-485 VA Port).
- Argument2 – Format: ACSII or Hexadecimal (HEX).
- Argument3 – Command: Command text. Maximum of 64 characters.

5.1.4. Date

Trigger active when an specific date occurs. The trigger remains active during that day (or time period). To get precision, consider to combine with *Time* trigger type.

- Argument1 - Type: Trigger may be on a Single date or Period. Period entry is for a closed time space. Period items for Yearly, Monthly or Weekly are also available.
- Argument2 and Argument3 : In case of a single Date type, it will be just one day. On periodic, it needs a start and an end day. For Yearly, Monthly or Weekly periods, Argument2 requests just the starting set point.

5.1.5. Event

Similar to *Condition* trigger type, this trigger types are active when the selected Event is active. It is useful to concatenate several events separately.

- Argument1 - Event: List of the available conditions previously created.
- Argument2 – State: Selected when the trigger activates. Options are: Execution start, Execution ends, In execution and Idle (rest of the time). Start and end refers to a pulse activation, and, then, the trigger will be active for a few seconds.

5.1.6. GPIO Input

GPIO stands for General Purpose Input Output. It is a generic port that could be used as input as a Trigger, or as an output as an Action (see 5.3.7. GPIO for Action feature).

This port is active in case of have nothing connected to it. It takes an input control from external voltage of 5 V for deactivated.

This trigger type is useful to integrate third party devices through event module. It is necessary to know the current configuration of the GPIO port, because this port may be used as an input or output (see 4.1.3. h. Controller – GPIO) from the NEO Configuration side.

Argument1 – GPIO: GPIO input number port to use.

NOTE: CIE 1 to 8 are also included as Argument1 options, due to legacy reasons. It is also functional, but it is recommended to use trigger type *CIE* instead.

NOTE: In case a GPIO has not been previously configured as an input, it will be considered as an output automatically after applying (unless an Action uses the same port previously)

5.1.7. CIE Input

Use the CIE interfaces ports as an input trigger.

NOTE: To use a CIE as a trigger disables the default performance as a zonal EMG input of the port. That occurs also in case of creating the CIE trigger, even if it is not in use.

Argument1 – CIE Input: GPIO input number port to use. This value is as high as the total CIE quantity at the system. The CIE identifiers are correlative for the NEO devices order at the system.

5.1.8. Time

The trigger will be active when an specific date occurs. The trigger remains active while that time period still occurs, which means a pulse activation for a punctual time trigger.

- Argument1 - Type: Trigger may be on a Single time or on a Period. Period entry is for a closed time space.
- Argument2 and Argument3: In case of a single Time type, it will be the designed moment. In case of periodic timing, it needs a start and an end time.

5.1.9. ACSI

Use the designed buttons from microphones interfaces as a trigger, launched through the ACSI port. To perform with them, it requires a correct link with the microphone; but also to have the microphone installed. The trigger will be activated for a few moments as a pulse.

- Argument1 – Device Model: Select the microphone interface used. May be MPS-8Z, VAP-1 or Any.
- Argument2 – Address: ACSI address for the desired microphone. Values from 1 to 8.
- Argument3 – Button: Designed microphone button for this trigger launcher. Values from 1 to 64.

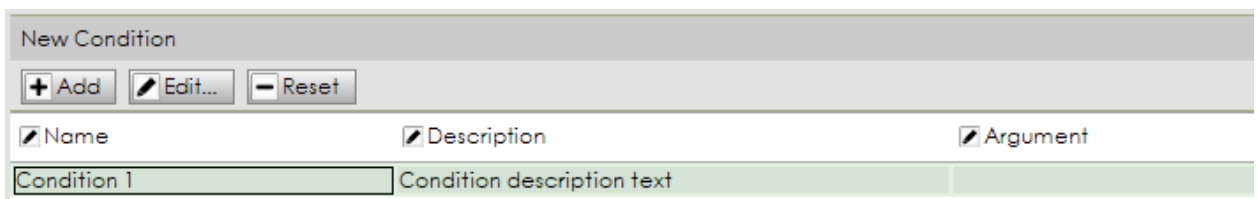
5.1.10. System Status

Trigger according to the status of the system or any disturbance of it.

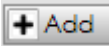
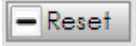
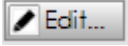
- Argument1 – State: Option list includes PA, VA, FLT (fault status) and DIS (disarmed).
- Argument2 – Action: May be Enter, Exit, Active and Inactive. For the options Enter and Exit, trigger will be activated for a few moments as a pulse.

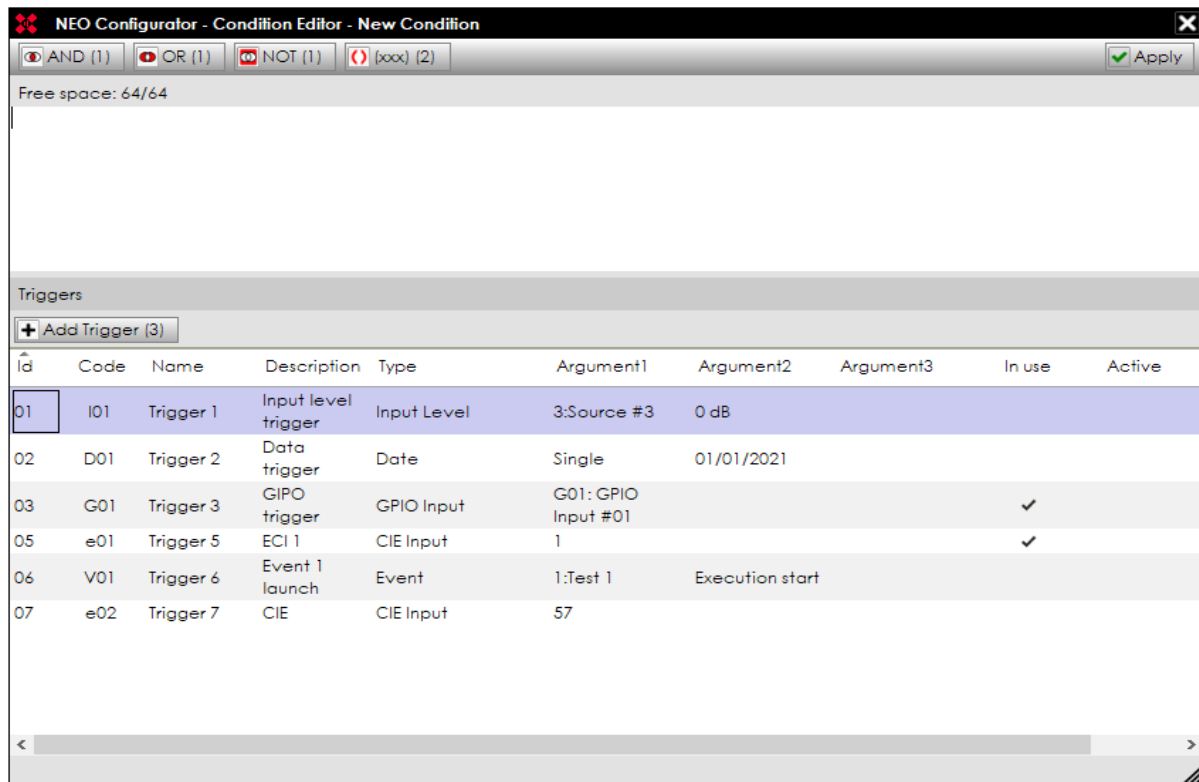
5.2. Conditions

Conditions combine logical triggers onto an unique event requirement, to start or finish it. As other components of the events module, it is mandatory to stay into the *Edit Mode*.



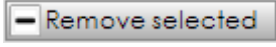
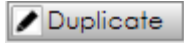
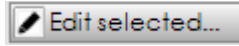
Name	Description	Argument
Condition 1	Condition description text	

To create a new condition, it is important to complete the cells Name, Description and Argument. Then, clicking on , the condition is set and can be used for future events. Press  to remove all the data in these cells. The  button opens a command window, where the created triggers to combine with are previewed. This window is also reachable by clicking at the Argument cell.



The upper side of that window includes a text box where the trigger themselves can be combined, using the logical operations described on 5.2.1. Logic operations for conditions.

The lower half of the *Condition Editor* window displays the same list of created triggers .

At the conditions created list, press  to delete the selection. Click on  to copy the selected condition at the new condition creation cells. Press  to open a condition editor window, similar to the command windows shown before.

Modifying any parameter of a condition previously created will replicate also those changes at the conditions used on an Event (see 5.4. Event creation).

Once the *Edit Mode* is closed, added conditions will be displayed like this:

Conditions							
Id	Name	Description	Argument	In use	Active	VA	PA
01	Test 1	EC1 1 and GPIO 1 Active	e01 AND G01	✓		✓	✓
02	Test 2	Noise gate on input 3	I01			✓	✓
03	Test 3	GPIO 1 release	NOT G01			✓	✓
04	Test 4	GPIO 1 active	G01		✓	✓	✓

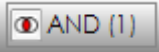
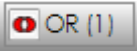
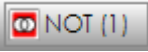
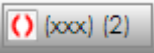
Where the columns meaning is:

- Id: Numerical identifier of each condition.
- Name: Condition user editable name.
- Description: Brief description, editable.
- In use: Indicates if a condition is currently being used on an event.
- Active: Indicates whether a condition is already activated. Also, this condition will be marked on orange colour.
- VA: The condition is valid for being used on VA mode.
- PA: The condition is valid for being used on PA mode.

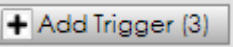

5.2.1. Logic operations for conditions

Based on Boolean logic, the result of any condition could only be “Active” or “Not Active”. That way, equations may be deployed without considering explicit values for the variables.

Only admitting those operators are allowed, and may be included as text with their own buttons:

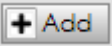
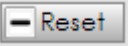
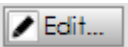
-  for **AND** (conjunction) operator: Satisfies **TriggerXX AND TriggerYY** = “**Active**” if TriggerXX = TriggerYY = “Active”. Otherwise, the result is “Not Active”.
-  for **OR** (disjunction) operator: Satisfies **TriggerXX OR TriggerYY** = “**Not Active**” if TriggerXX = TriggerYY = “Not Active”. Otherwise, the result is “Active”.
-  for **NOT** (negation) operator: Satisfies **NOT TriggerXX** = “**Not Active**” if TriggerXX = “Active”. Otherwise, the result is “Not Active”.
-  for **prioritizing** (parenthesis) can be used to build a combination of operations. Operations in parentheses will be executed before any other external operation. Also, parentheses could be concatenated (ones inside the others).

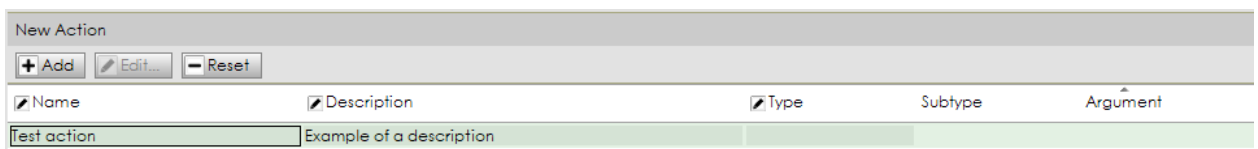
Those commands use “TriggerXX” and “TriggerYY” as examples instead of the real Code label for each Trigger. Also, the described terms are the required operations syntax.




Trigger may be added by double-clicking on it at the triggers list or by selecting and pressing . In case of typing any syntax error, a warning message appears when clicking on .

5.3. Actions

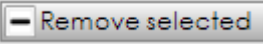

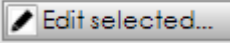
Opposite to Triggers, Actions are outputs deployed by the NEO device. They may be physical or logical, using several interfaces or features depending of the Action type.

To create a new Action, first complete the cells Name, Description, Type (those types will be detailed at the following sections.), Subtype and Argument, according to the requirements. Then, click on . Press  to remove every data inside these cells. Press  to open an arguments Action Editor window, different for each action Type.



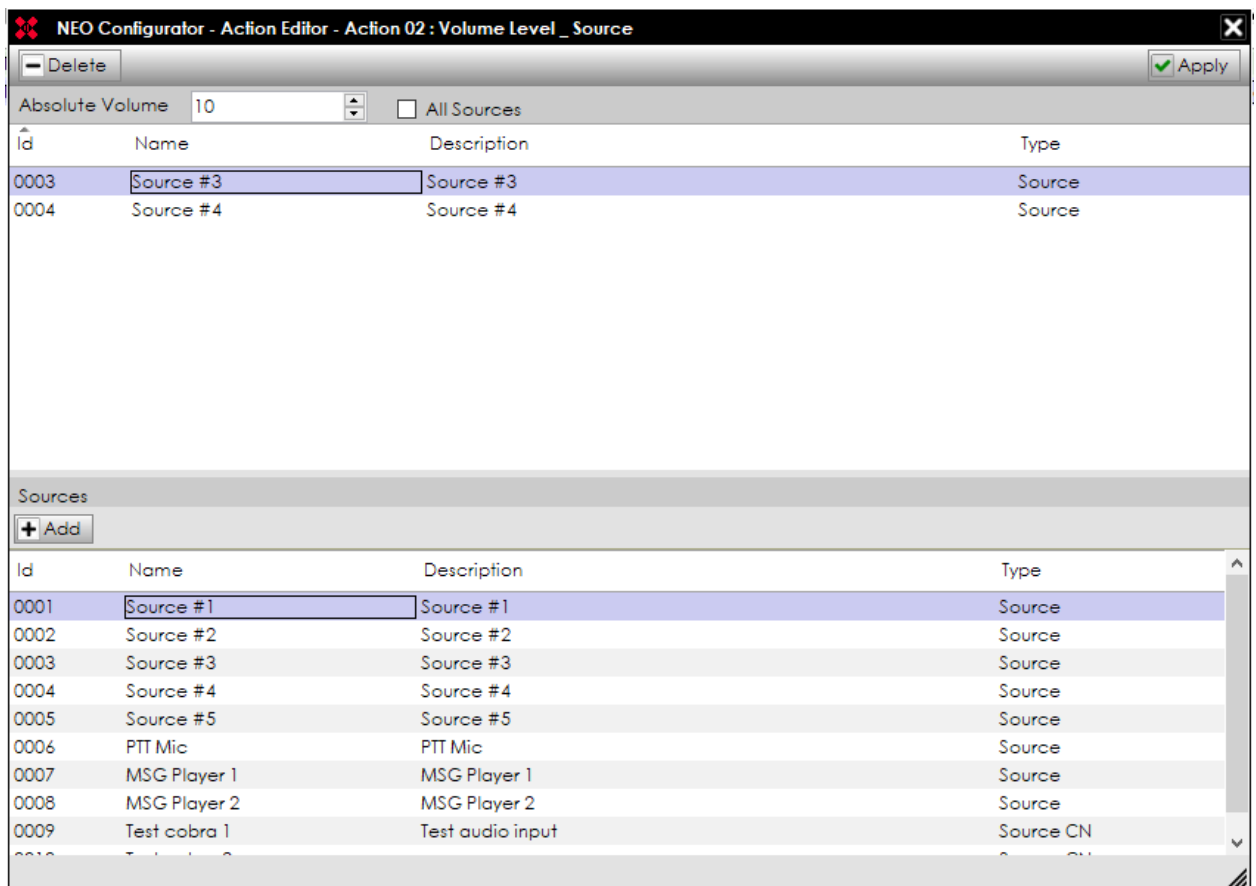
The 'New Action' dialog box contains a header with three buttons: , , and . Below the header is a table with five columns: Name, Description, Type, Subtype, and Argument. The first row of the table contains the text 'Test action' in the Name column and 'Example of a description' in the Description column. The other columns are empty.

Name	Description	Type	Subtype	Argument
Test action	Example of a description			

At the actions created box, press  to delete the selected items. Click on  to copy the selected actions parameters at the new action creation cells. By clicking at , the selected arguments Action Editor window opens.

5.3.1. Volume Level

This action type sets a certain absolute volume level to items selection. Subtypes may be Sources or Zones. The argument will be those items selected, from one to all. Also, the arguments Action Editor allows the "All Sources" (or "All Zones") selection in a checkbox.



As seen before, This editor displays the current selection on the upper half and the available items list on the lower. Double click in the items or select and **+ Add** to include it. Opposite to that, **- Delete** removes the item preselection. Finally, use **✓ Apply** to confirm those changes.

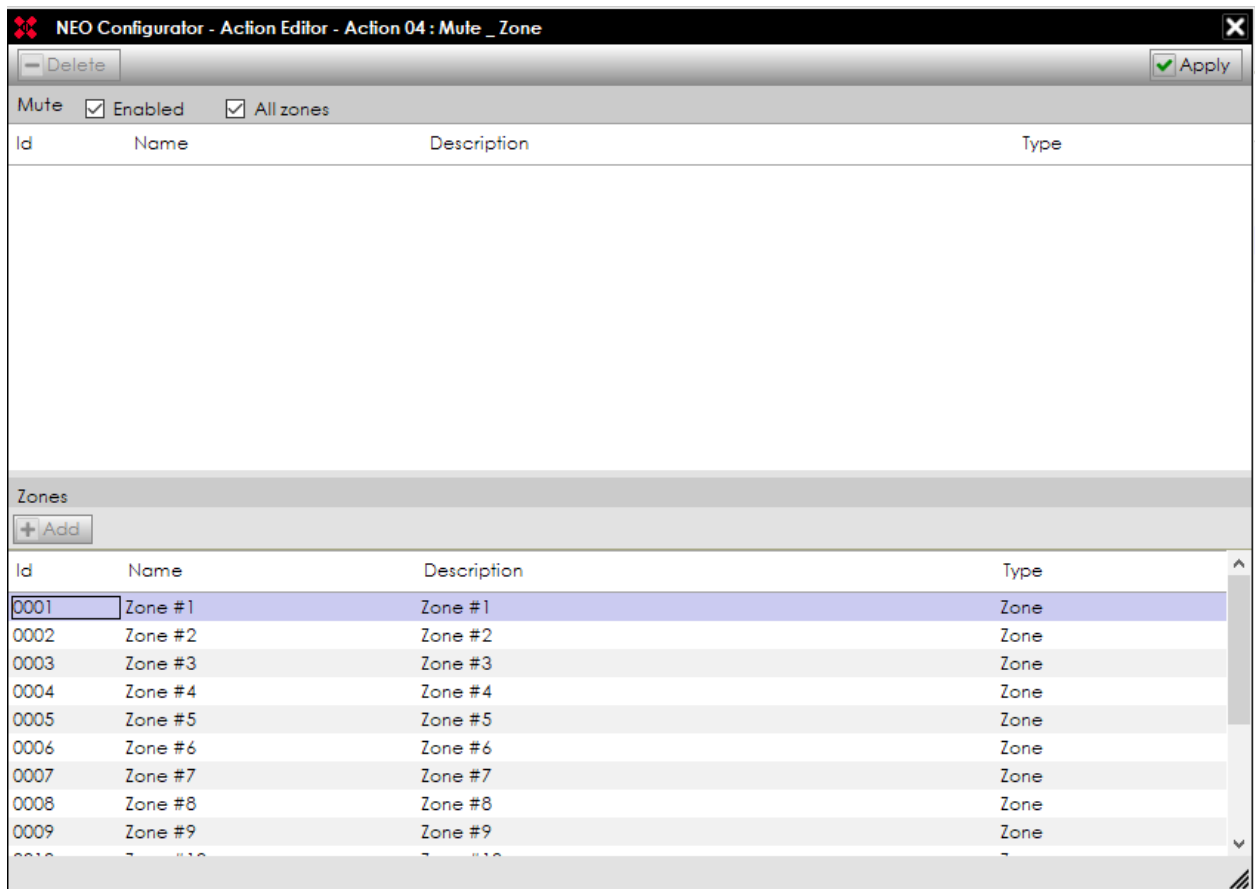
5.3.2. Volume Change

Referenced volume changes from the previous status. That means this action starts on a previous value and adds (or subtracts) a quantity from it. Similar to *Volume Level*, the subtypes may be Source or Zone, and the combination of those will be the Argument.

Arguments Action Editor is also similar to *Volume Level*, including the display and the buttons actions.

5.3.3. Mute

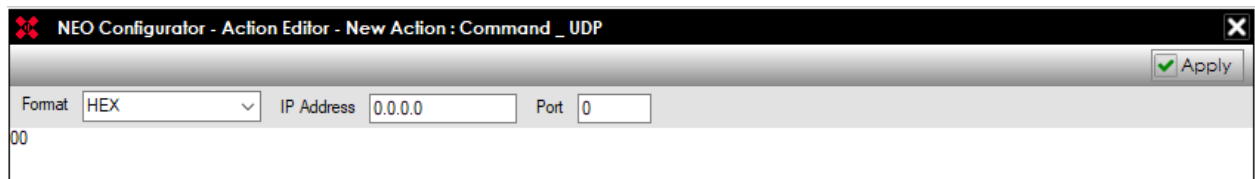
This action silences the selected items selection, but may also be used to recover the previous volume status. The action inputs cells are Name, Description, Subtype (Source or Zone) and Argument.



To mute an items selection, active the Enable check-box. When disabled, this action clears the mute status at the selection. All Zones (or All Sources) box gets the whole bunch of items of the list, no matter what zones are included in the upper window. The button to include an item is, **+ Add** and **- Delete** is the button to remove an item **✓ Apply** is used to confirm those changes.

5.3.4. Command

This action sends a command as an output to a third device. It is useful for any integration, because it can send UDP or RS-485 messages (PA or VA port) through its physical port interface. Those are also the requested subtype parameters. This action output type corresponds to the Command type trigger input (5.1.3. Command). The arguments Action Editor looks like this:



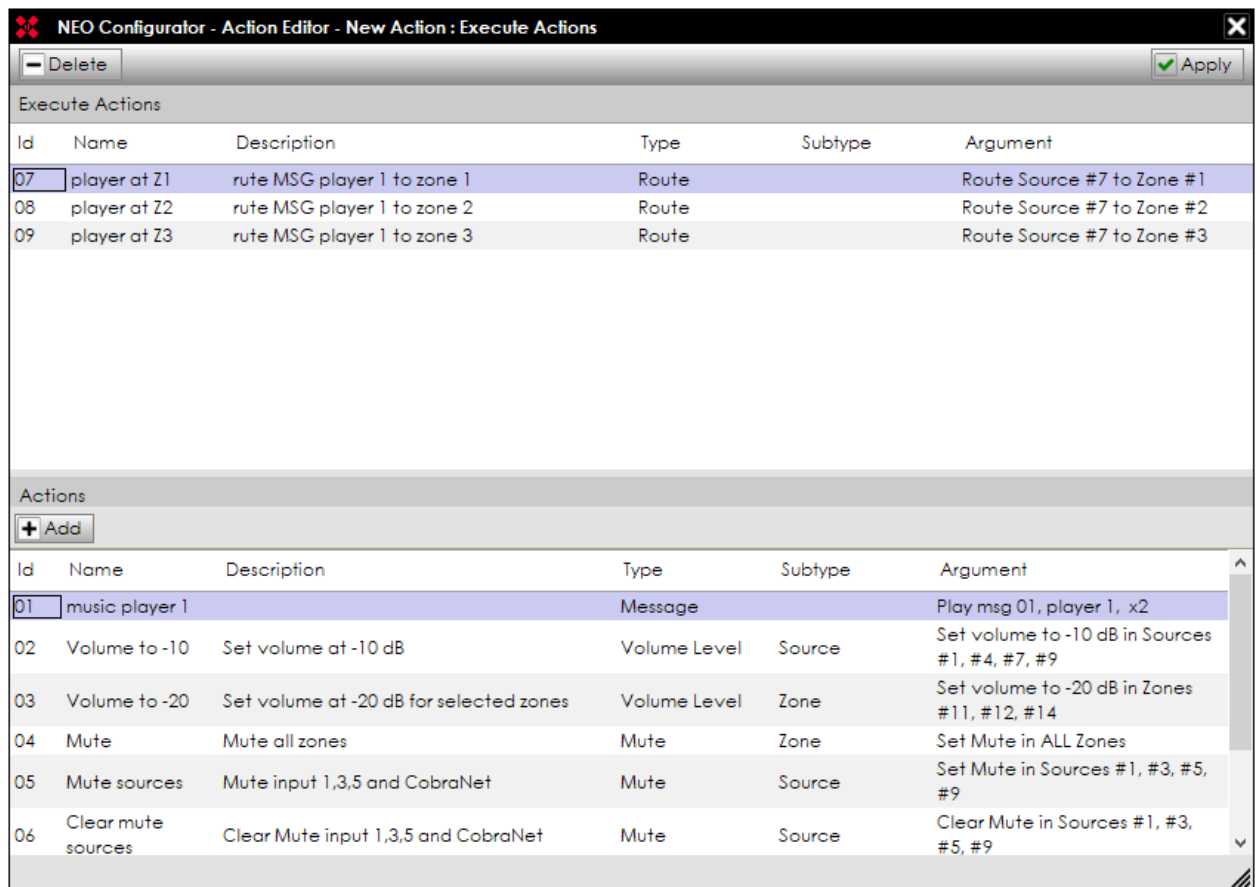
On UDP mode, the receiver IP Address and Port are also requested. Both UDP or RS-485 format may be hexadecimal (HEX) or ACSII characters. Maximum of 64 characters.

5.3.5. Delay

During a delay action the system performs a time making no actions. It is useful to combine with other actions, setting a delay for it. It does not need a subtype parameter, but only a time quantity as argument. Maximum delay time is 23 Hours, 59 min and 59 sec.

5.3.6. Execute Actions

This action type refers to a bunch of actions. Those actions, selected as an argument parameter; will be launched simultaneously when the activation occurs. Arguments Action Editor has an interface similar to the previous. It is also useful to concatenate other actions.

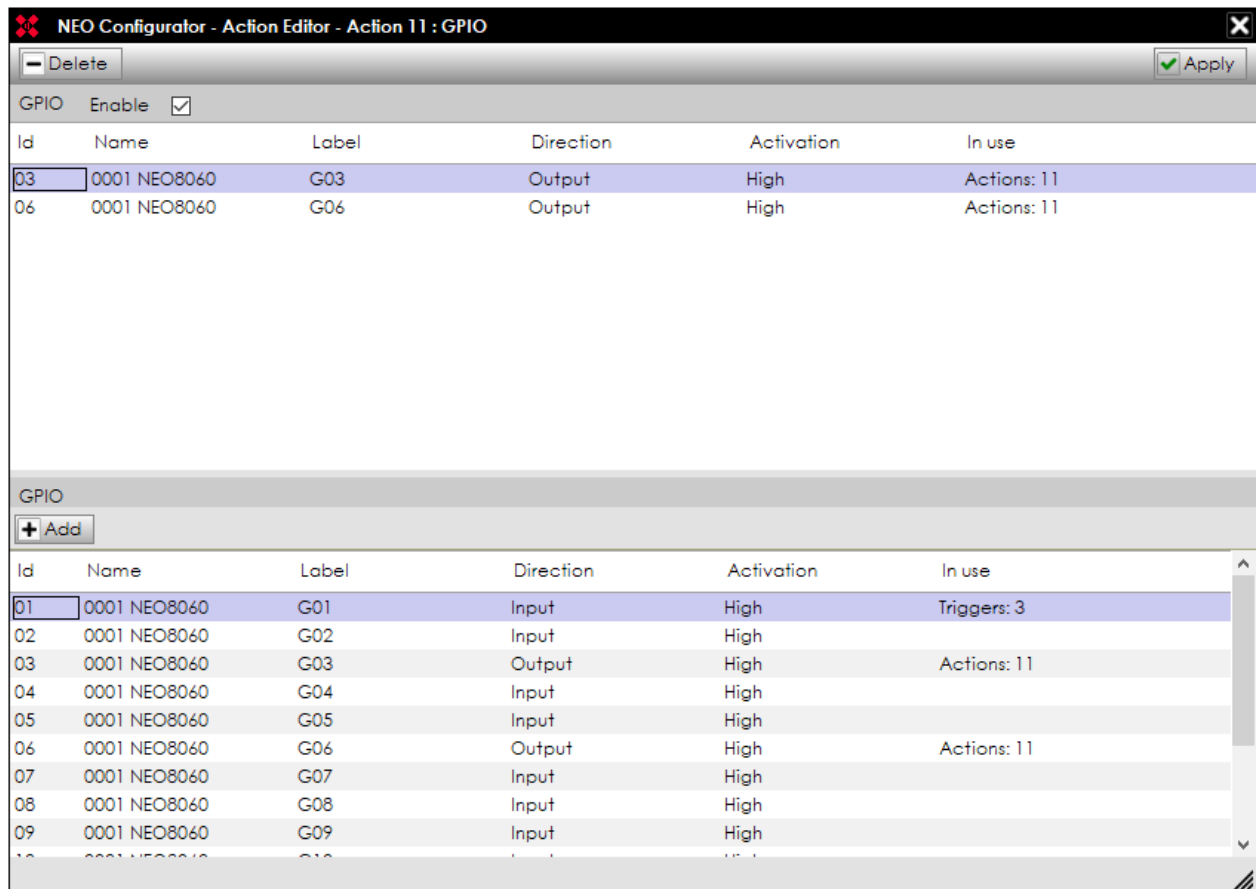


Id	Name	Description	Type	Subtype	Argument
07	player at Z1	rute MSG player 1 to zone 1	Route		Route Source #7 to Zone #1
08	player at Z2	rute MSG player 1 to zone 2	Route		Route Source #7 to Zone #2
09	player at Z3	rute MSG player 1 to zone 3	Route		Route Source #7 to Zone #3

Id	Name	Description	Type	Subtype	Argument
01	music player 1		Message		Play msg 01, player 1, x2
02	Volume to -10	Set volume at -10 dB	Volume Level	Source	Set volume to -10 dB in Sources #1, #4, #7, #9
03	Volume to -20	Set volume at -20 dB for selected zones	Volume Level	Zone	Set volume to -20 dB in Zones #11, #12, #14
04	Mute	Mute all zones	Mute	Zone	Set Mute in ALL Zones
05	Mute sources	Mute input 1,3,5 and CobraNet	Mute	Source	Set Mute in Sources #1, #3, #5, #9
06	Clear mute sources	Clear Mute input 1,3,5 and CobraNet	Mute	Source	Clear Mute in Sources #1, #3, #5, #9

5.3.7. GPIO

Parallel to GPIO trigger input (5.1.6. GPIO Input), GPIO Action type sets the activation level at the proposed output port. This arguments Action Editor has an “Enable” check-box to select the Active or Not Active status of the output port signal.



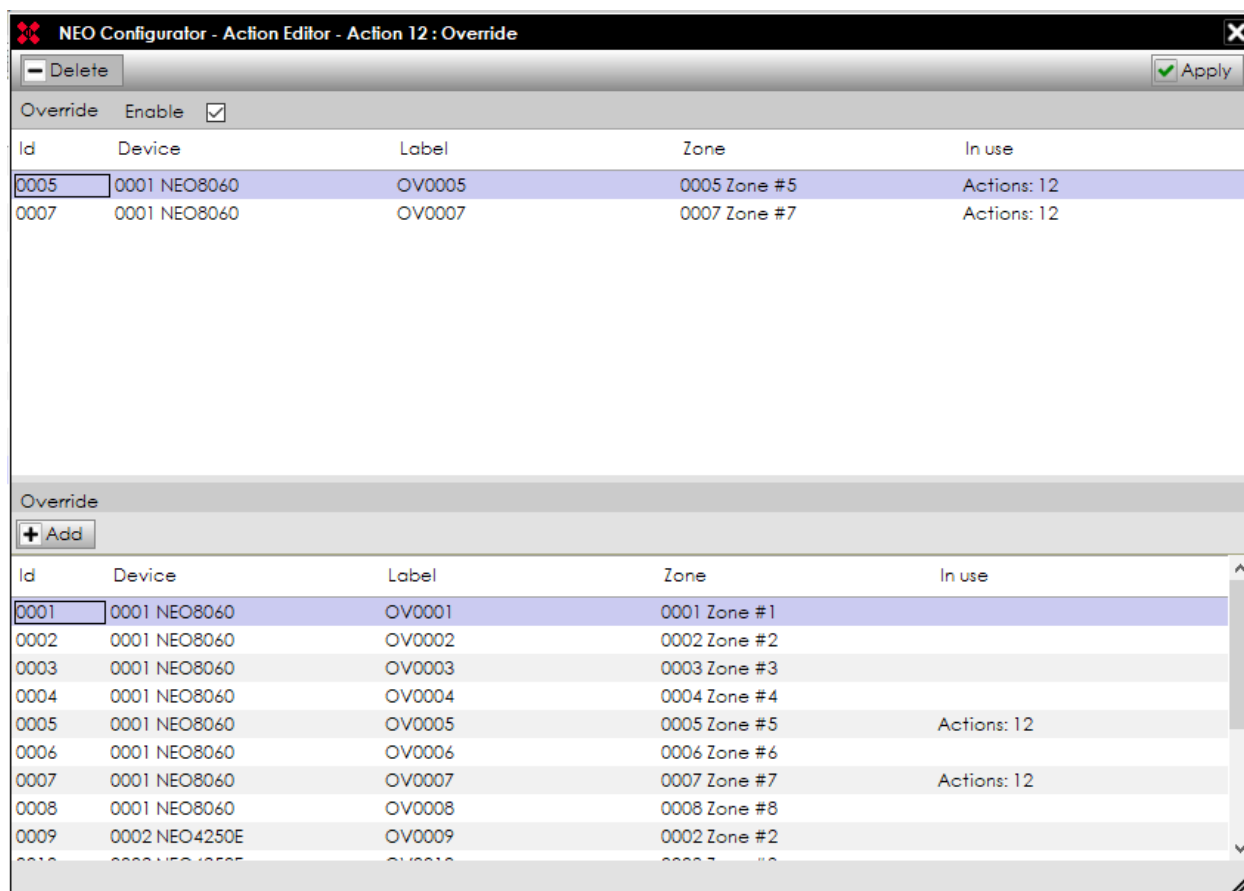
Added GPIO ports on the upper list will perform as outputs when applies.

NOTE: In case a GPIO has not been previously configured as input, it will be configured as an output automatically after applying (unless an Action uses the same port as previously)

In the lower half, the list of available GPIOs at the system. At *Direction* column, the current performance for each port, as an input or an output. That performance refers to 4.1.3. h. Controller – GPIO Only outputs can be used on actions. At the *In Use* column, detail the reference to each GPIO done from the Trigger or Action module side.

5.3.8. Override

This Action type sets active the signal to override attenuators output port. This arguments Action Editor has an “Enable” check-box to set the status of the output port signal as Active or Not Active.



5.3.9. Message

This Type of action plays a recorded message on the desired player. The arguments Action Editor needs to choose which message will be played (EVAC, ALERT or other, selected by ID, according to the list below), the player to use and the amount of repetitions (or using the Loop Mode, marking the check-box).

NOTE: Any message played would be substituted in case of a higher priority message needed to use the same player, also in the case of using it with the EMG or ALERT message.

NEO Configurator - Action Editor - Action 01 : Message

Message : ☐ EVAC ☐ ALERT ☒ ID: 4 Player : ☒ 1 ☐ 2 Repetitions : 2 ☐ Loop Mode

Id	VA	Name	Description	Label
04		MSJ_2		MSG04

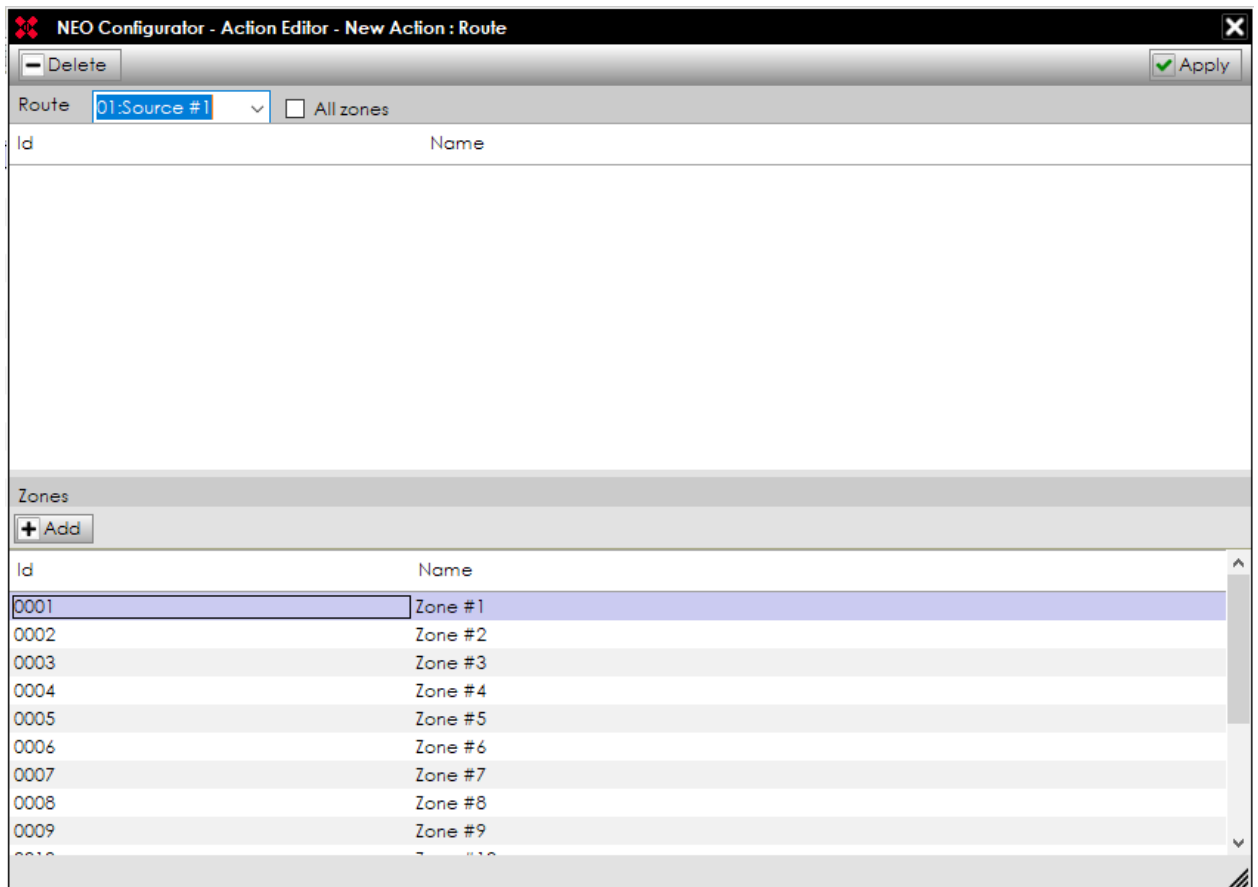
Messages

Id	VA	Name	Description	Label
01	EVAC	MSG EVAC		MSG01
02	ALERT	MSG ALERT		MSG02
03		MSJ_1		MSG03
04		MSJ_2		MSG04
05		MSJ_3		MSG05
06		MSJ_4		MSG06
07		MSJ_5		MSG07

5.3.10. Route

This Action Type selects which audio source is routed to a Zone . That could be chosen at the arguments Action Editor. The Route expandable cell allows the user to select an input, from all the inputs in the system. The lower panel displays the list of selectable Zones currently installed. To route to all zones simultaneously, the user can mark the checkbox. Click on

or to make select the desired zones, and click on to confirm.



5.3.11. Undo Changes

This Action Type does not need any argument, but simply reverting the previous actions on an Event action list. It is useful to combine with other actions.

5.3.12. Start Emergency

This Action Type needs no argument. It starts the Emergency mode at the system. Kindly keep in mind those action are not allowed to override at VA mode. Requires an equal or higher priority interface command to stop. That could be the *Stop Emergency* Action Type.

5.3.13. Stop Emergency

Opposite of *Start Emergency*. This Action Type needs no arguments. It exits the Emergency mode at the system and recovers the PA features.

5.3.14. Zonal EVAC

Launches EVAC message at the designed zone. This action requires to stay at the Emergency mode previously. Due to that, it is useful to use combined with the *Start Emergency* Action Type.


It allows to select the Enable state and All Zones as checkboxes on Arguments Action Editor.

5.3.15. Zonal ALERT

Similar to Zonal EVAC, this item sends the dedicated Alert message to the zones selected. It also has Enable and All Zones checkboxes. Requires the Emergency Mode to be set on the system.

5.3.16. Zonal EMG State

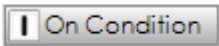
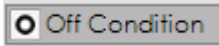
This Action Type controls the EMG State, but just for the selected zones. That action does not send any message, just to set the status.

Similar to previous, Arguments Action Editor only requires to include the selected zones from the list below and click on . Enabling the checkbox will active that status and vice-versa.

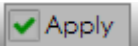
5.4. Event creation

Finally, the Event module congregates the previously created items (from Action and Condition) to set a new automatized feature. To modify anything, it is necessary to stay in the *Edit Mode*. A new Event has the following parameters:

New Event											
<input type="button" value="+ Add"/> <input type="button" value="Edit conditions..."/> <input type="button" value="Edit actions..."/> <input type="button" value="Reset"/>											
Name	Description	Enabled	VA	Evac	I/O	Actions	Priority	Stackable	Timeout	Override	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		10	<input type="checkbox"/>	00:00	Complete	

- Name and Description: Short label and text to denote the proper event.
- Enabled: Current status of the event, ready to work when it is checked.
- VA: That checkbox enables the feature of this event to be used on VA mode.
- EVAC: That checkbox allows the event to use EVAC (and ALERT) message. This permission requires also the VA checkbox marked.
- I and O (Input → On Condition and Outputs → Off Condition): Opens the Condition Event Editor window, where the conditions to be used to launch and to stop the new event can be selected. At the lower half, the list of the created conditions is displayed. The user should select one of them and click on  or  to set the conditions as desired.

There are also two virtual items to select as Off conditions by default: "Release On Condition" and "End of Actions". Those conditions check the input condition and the future selected Actions corresponding.

To properly set those conditions, both conditions should be designed. Then click at  to confirm the changes.

NEO Configurator - Event Editor : Conditions - New Event

Apply

Event Conditions

Id	Name	Description	Argument	VA
01	Test 1	ECI 1	e01	✓
O V2	Virtual Off Condition 2	End of Actions	All Actions Ended	✓

Conditions

☒ On Condition ☐ Off Condition

Id	Name	Description	Argument	VA
V1	Virtual Off Condition 1	Release On condition	NOT On Condition Active	✓
V2	Virtual Off Condition 2	End of Actions	All Actions Ended	✓
01	Test 1	ECI 1	e01	✓
02	Test 2	not GPIO active	NOT G01	✓

- Actions: Opens an Actions arguments Event Editor where the sequence of action is selected.

NEO Configurator - Event Editor : Actions - Event 03

Event Actions(4 / 16) - Repetitions Loop Mode ☐ Undo Changes ☒


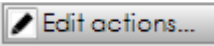
Id	Name	Description	Type	Subtype	Argument	PA
15	EMG	Emergency state into	Start Emergency		Enter EMG	✓
17	evac 1 3 and 6	zonal evac at 1 3 and 6	Zonal EVAC		Activate evac in Zones #1, #3, #6	✓
18	5sec	5 sec delay	Delay		Delay 0 h, 0 min, 5 sec	✓
16	exit EMG	Emergency state out	Stop Emergency		Exit EMG	✓

Actions

Id	Name	Description	Type	Subtype	Argument	PA
01	msg 5	msg5 on player 1	Message		Play msg 05, player 1, x2	✓
02	Volume to -10	Set volume at -10 dB	Volume Level	Source	Set volume to -10 dB in Sources #1, #4, #7, #9	✓
03	Volume to -20	Set volume at -20 dB for selected zones	Volume Level	Zone	Set volume to -20 dB in Zones #11, #12, #14	✓
04	Mute	Mute all zones	Mute	Zone	Set Mute in ALL Zones	✓
05	Mute sources	Mute input 1,3,5 and CobraNet	Mute	Source	Set Mute in Sources #1, #3, #5, #9	✓
06	Clear mute sources	Clear Mute input 1,3,5 and CobraNet	Mute	Source	Clear Mute in Sources #1, #3, #5, #9	✓

- That action order may be changed, with the buttons and . Also, the events action may be repeated (up to 100 times) or be set as a loop (infinite repetitions) just by marking the checkbox. Another checkbox option is to Undo the Actions after finishing it. Every change will be confirmed after clicking on .
- Priority: Assigns a priority order in case several events start simultaneously, independently of the PA or VA Event is. Values allowed are [01,99]. Two events may have the same priority. At this case, the one that started before resolves first.
- Stackable: Indicates the option to set a queue for an event (or more) launched while the required resources are busy. If the event is not marked, it will be discarded in case of no priority.
- Timeout: Time to keep an event on the waiting list. That means an event will be discarded when the timeout finishes (from the On Condition) and the event does not start yet. That may happen due to a queue.
- Override (Complete or Partial): Indicates that the event will be executed meanwhile every required resource is available, or discarded. If it is partial, it means that it uses only the available resources requested.

Once that cells are completed, click on button to create it. Press to remove every data in this cells.

The  and  buttons open a command windows, where the corresponding inputs and outputs can be selected. This windows are also reachable by clicking at the Argument cells.

Lower side represents the created action list. Also, displays a column with the current events In Use and other with the Last Execution date.

After confirming the modifications, an event will be marked at green color when it is currently running. In case of a queue or a stack, the event line will be represented in red color while it waits to start. Otherwise, the event lines are written in black. That is the “waiting to be launched” or “already finished” state. Also, finished events have the *Last Exec* date indicated at last column.

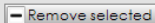
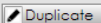
5.5. Examples

This chapter shows some combinations as an example of typical situations used as events. To explain them, caption of any module will be reproduced.

5.5.1. Sequence of evacuation: alternating EVAC and ALERT


External Emergency state entry, the event automatically performs a designed combination of EVAC and ALERT messages, played at zone 1. Both messages will be reproduced twice.


- Triggers:


Triggers						
						
Id	Code	Name	Description	Type	Argument1	Argument2
01	S01	EMG entry	EMG State starts from external interface	System Status	PA	Enter





- Conditions:

Conditions

 Edit selected...

 Remove selected

 Duplicate

 Id	 Name	 Description	 Argument
01	EMG entry	EMG entry active	S01

- Actions:

Actions

Edit selected...

Remove selected

Duplicate

Id	Name	Description	Type	Subtype	Argument
01	EVAC message	EVAC msg at player 1	Message		Play msg EM, player 1, x1
02	ALERT message	ALERT msg at player 1	Message		Play msg AL, player 1, x1

- Events:

Events							
<input type="button" value="Edit conditions..."/> <input type="button" value="Edit actions..."/> <input type="button" value="Enable..."/> <input type="button" value="Remove selected"/> <input type="button" value="Duplicate"/>							
Id	Uid	Name	Description	Enabled	VA	Evac	I O
01	01	EVAC and ALERT twice	EVAC and ALERT twice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	01 V2
Actions	Priority	Stackable	Timeout	Override	In use	Last Exec	
01 02	10	<input type="checkbox"/>	00:00	Complete		1/1/2000 12:00:00 AM	

NOTE: After finishing the messages, the Emergency State remains. At this example, waiting for the same interface that setted it before.

5.5.2. Integration with a Fire Alarm Panel

At this example, an external Fire Alarm Panel will execute separate Zonal EVAC for each connected zone. Let's suppose 3 zones apart.

NOTE: This event performance is similar to ECI ports normal use, seen at 4.1.3. g. Controller – Status Inputs and Outputs. Anyway, the example may be used that way with any other input.

- Triggers:

Triggers						
Id	Code	Name	Description	Type	Argument1	
01	e01	ECI 1	ECI 1 active	CIE Input	1	
02	e02	ECI 2	ECI 2 active	CIE Input	2	
03	e03	ECI 3	ECI 3 active	CIE Input	3	

- Conditions:

Conditions			
Id	Name	Description	Argument
01	ECI 1	ECI 1 cond	e01
02	ECI 2	ECI 2 cond	e02
03	ECI 3	ECI 3 cond	e03

- Actions:

Actions					
Id	Name	Description	Type	Subtype	Argument
01	EVAC z1		Zonal EVAC		Activate evac in Zone #1
02	EVAC z2		Zonal EVAC		Activate evac in Zone #2
03	EVAC z3		Zonal EVAC		Activate evac in Zone #3
04	EMG mode	entry at EMG mode	Start Emergency		Enter EMG

- Events:

Events								
Id	Uid	Name	Description	Enabled	VA	Evac	I	O
01	01	EVAC 1		✓	✓	✓	01	V1
02	02	EVAC 2		✓	✓	✓	02	V1
03	03	EVAC 3		✓	✓	✓	03	V1

Actions	Priority	Stackable	Timeout	Override	In use	Last Exec
04 01	10		00:00	Complete		10/07/2020 8:21:00 AM
04 02	10		00:00	Complete		01/01/2000 12:00:00 AM
04 03	10		00:00	Complete		01/01/2000 12:00:00 AM

5.5.3. Scheduled announcements

As an example of a periodical announcement, on a determinate moment of the week. At this case, the same announcement will be sent to 2 different zones, sequentially, using the same message player. That routine will be done twice, and recover the previous state after that. A 5 minutes timeout will discard the event on stackable situations.

- Triggers:

Triggers						
Id	Code	Name	Description	Type	Argument1	Argument2
01	D01	Day of the week		Date	Weekly	Wed
02	T01	Time	Time of the day	Time	Single	09:00:00

- Conditions:

Conditions			
Id	Name	Description	Argument
01	Correct moment	Specified moment of the week	D01 AND T01

- Actions:

Actions					
Id	Name	Description	Type	Subtype	Argument
01	Message 5	MSG 5 to player 1	Message		Play msg 06, player 1, x1
02	Player 1 to zone 3	Route player 1 to zone 3	Route		Route Source #7 to Zone #3
03	Player 1 to zone 6	Route player 1 to zone 6	Route		Route Source #7 to Zone #6

- Events:

Events								
Id	Uid	Name	Description	Enabled	VA	Evac	I	O
01		Announcement	Announcement at 9:00 am Wednesday	✓			01	V2

Actions	Priority	Stackable	Timeout	Override	In use	Last Exec
02 01 03 01	10	✓	05:00	Complete		10/07/2020 9:00:00 AM

5.5.4. Route sources and play messages from MPS-8Z

That use allows to perform an event from the microphone panel side trigger, using the first microphone address from the operator side. This event will not be stackable, but consider partial override, in order to send the message to 3 zones at the same time.

- Triggers:

Triggers							
Id	Code	Name	Description	Type	Argument1	Argument2	Argument3
01	A01	MPS-8Z button 1	MPS-8Z Event	ACSI	MPS8Z	1 (Address)	1 (Button)

- Conditions:

Conditions			
Id	Name	Description	Argument
01	MPS-8Z button	MPS-8Z event launches, address 1, button1	A01

- Actions:

Actions					
Id	Name	Description	Type	Subtype	Argument
01	Message 5	MSG 5 to player 1	Message		Play msg 06, player 1, x1
02	Player 1 to zone 1,2 and 3	Route Player 1 to zone 1,2 and 3	Route		Route Source #7 to Zones #1, #2, #3

- Events:

Events								
Id	Uid	Name	Description	Enabled	VA	Evac	I	O
01		Announcement from MPS-8Z	Announcement	✓			01	V2

Actions	Priority	Stackable	Timeout	Override	In use	Last Exec
02:01	10	✓	05:00	Partial		01/01/2000 12:00:00 AM