User manual

sime

Model: SIMEv2

PA/VA systems control, configuration and management software platform

LDA audioTech

Index

1. INTRODUCTION

SIME Control is the control, configuration and management software for Public Address and Voice Alarm systems.

SIME is an app based in web services, that allows a centralized control of the system, gain control, routing of sources or prerecorded messages to the desired zones or group of zones, emergency functionalities management and system profiles.

The app allows to:

- Intuitive and simple system management.

- Distribution of audio resources through the network.

- Multi-platform access from anywhere.

- Access control and security.

- Integration with third-party technologies through standard protocols.

SIME application is divided into two parts:

- Client (web).

- Service.

This document develops the user manual for this application for the control and management of public address systems using SIME software platform and all its modules.

With this application the user will be able to control and monitor public address and evacuation systems from LDA and other manufacturers.

This application is custom designed to meet the requirements of each public address and evacuation system, so each application will have certain differences; in this manual all possible aspects and functionalities of the SIME software are presented.

This manual applies to SIMEv2.

1.1. SERVER REQUIREMENTS

The following are the minimum requirements of a public address server for the software to function correctly:

Component	Requirement
Processor	Intel(R) Xeon(R) CPU E3-1220v& @3.00Ghz 3.00Ghz
RAM Memory	2 GB
Free disk space	20 GB **Note:** Systems with over 16Gb of RAM memory will require higher free disk space for pagination.
Multimedia	Audio card 16bit 18Khz – 100 db SNR Stereo
Screen and peripherals	Super VGA (800 x 600) Keyboard Microsoft mouse or compatible pointer device.
OS	Windows Server 2016 Essentials de 64 bits Windows Server 2019 Essentials de 64 bits

NOTE: Since this is a critical system for certain installations, the use of dedicated servers without downtime is recommended.

1.2. INSTALLATION

1.2.1 INSTALLATION REQUIREMENTS

For the correct operation of the software, it is necessary to check that certain communication ports are free, since they will be occupied by the SIME service.

Communication ports are the following:

Port	Protocol	Function
80	HTTP	Connection with the web
8787	TCP	Connection between the web and service
8686	TCP	Communications between services
8585	TCP	Communications between services
5432	TCP	Connection with database management system
54321	UDP	Connection for third party integrations
5000	UDP	Connection with devices
32	TCP	Connection with devices
2000	UDP	Connection with devices
60000	UDP	Connection with devices
5522	TCP	Communications with backup server
161	UDP	Connection for third party integrations
62000	UDP	Connection with devices
443	---	TTS server validation
8765	---	Connection with TTS server

1.2.2 INSTALLATION WIZARD

The software has a wizard to facilitate its installation. The following are its features.

The installation wizard will first show a welcome window. Throughout the wizard we will click "Siguiente" if we want to continue with the installation, "Cancelar" if we want to cancel the installation, "Atrás" if we want to go back in the installation and "Finish" to complete the whole installation.
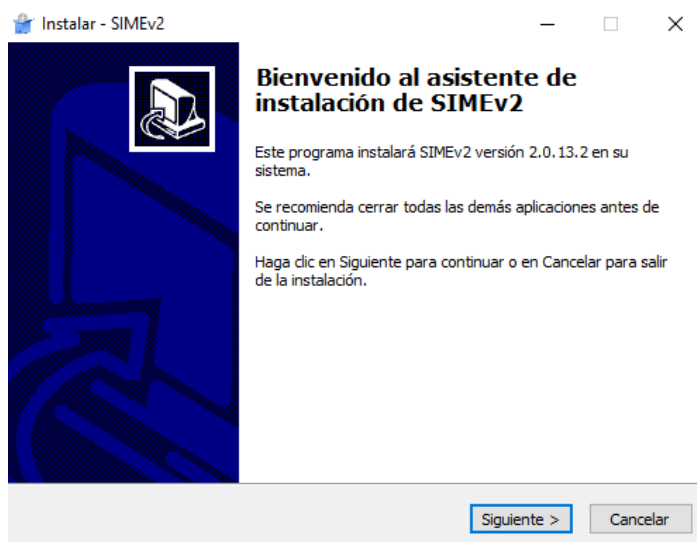
Picture 1: Installation wizard welcome

Next, the wizard displays the license agreement. It is necessary to read and check the acceptance of the agreement if you want to continue with the installation of the application.
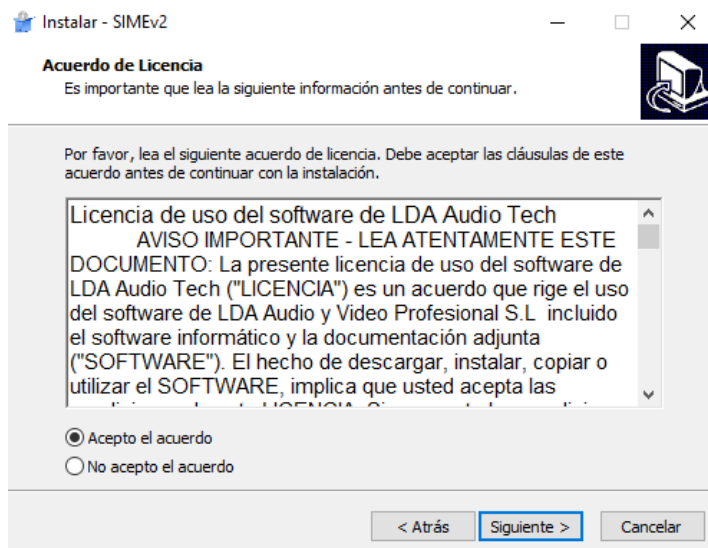
Picture 2: Agreement acceptance

In this wizard window you can select whether you want to create a SIME icon on the desktop at the end of the installation.
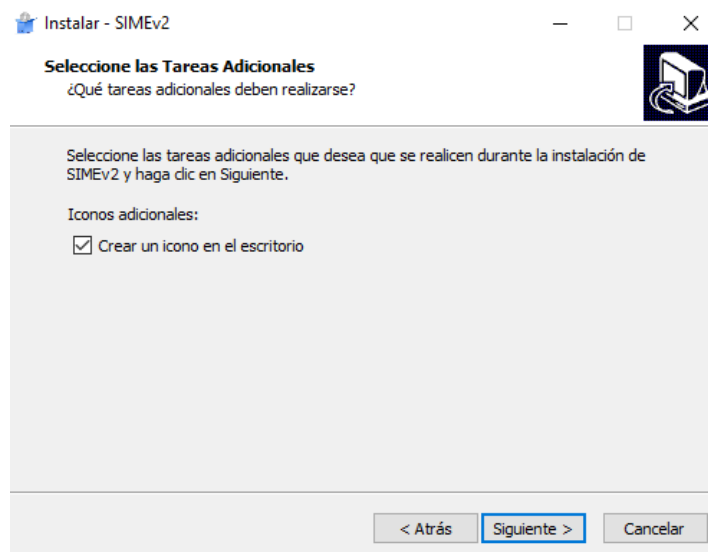
Picture 3: Desktop shortcut

At this point the wizard will provide a summary of the installation. If we click "Instalar" the installation of the software will start.
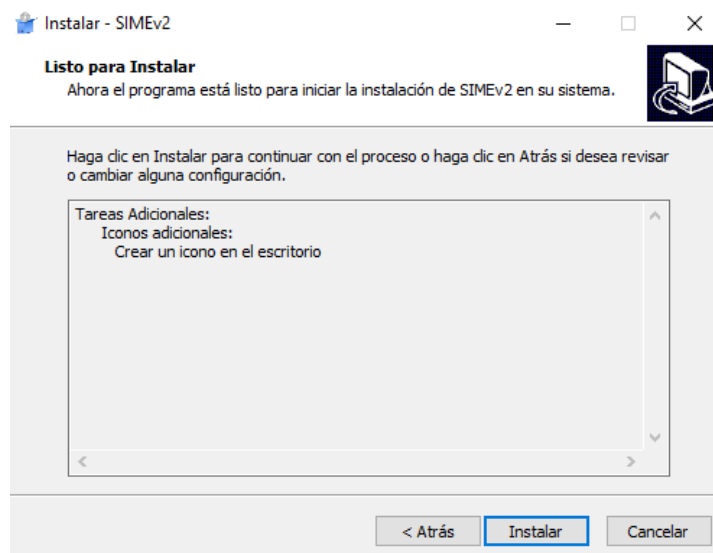
Picture 4: Installation summary

This window shows a progress bar in which we can observe the phases and status of the installation.
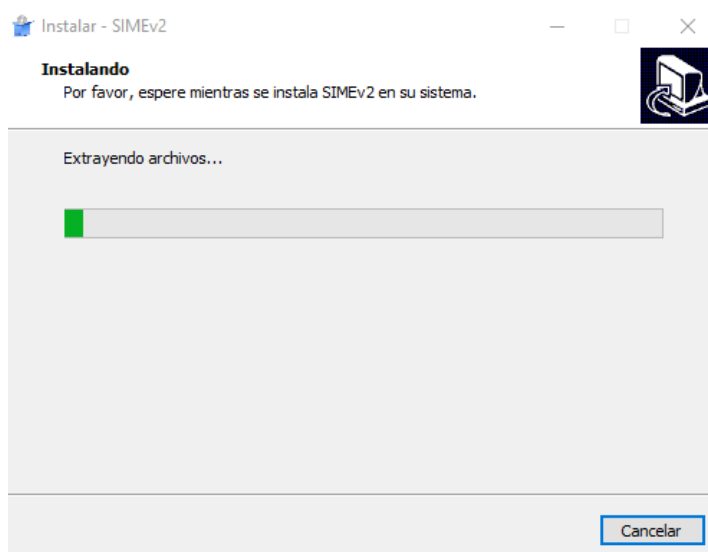
Picture 5: Installation progress

During the installation some problems may arise, the main one is the occupation of ports that must be free for the SIME service. If this problem occurs, the following error will be displayed in the installation wizard:
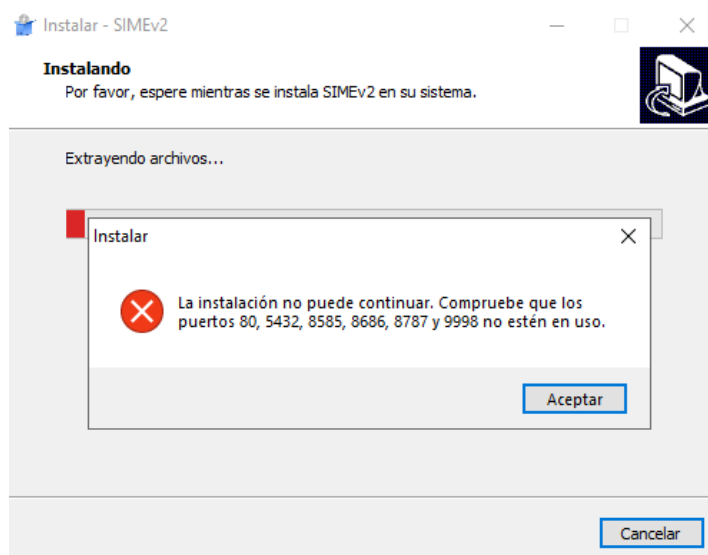
Picture 6: Ports in use

2. DEFINITIONS Y CONCEPTS

The following is a description of general aspects and concepts that should be known in order to clearly understand the rest of the manual.

2.1. BASIC DEFINITIONS

(a) ZONES

The public address system is divided into zones. Each zone corresponds to an area of the public address system. The audio inputs of the system will be assigned to these zones.

(b) SOURCES

These are the audio inputs of the system. They can originate from microphones, telephones, players of any kind or previously recorded messages.

(c) PRERECORDED MESSAGES

This is the name given to voice messages that have been recorded and stored in the public address server for later automatic or manual release. The recordings can be made with SIME's own recorder or simply by storing previously made recordings..

These messages are just another source in the system with the difference that they originate from the public address server.

(d) VOLUME OR GAIN

The volume setting is represented in a range between -100 and 0 as this is the normal operating range of professional audio equipment..

(e) VUMETER

It is the current audio signal level indicator.

(f) PRESETS

These are predefined system configurations, which can be loaded at any time by assigning the configuration stored in the preset.

(g) EMERGENCIES

These are events that can be triggered and activate the emergency status. These events can be configured as a fixed preset, e.g. to set the gains to maximum (for dynamic assignment see SIME EVAC module).

(h) MONITOR

This is the action of listening remotely to the sound being emitted by a source or by an area.

(i) PRIORITIES

There is a source priority system which is defined in the system configuration phase. These

priorities make it possible to discern which source has to be assigned to a zone in case of conflict, so that the one with the highest priority will be the one that is assigned.

(j) ROUTING

This is the name given to the action of assigning a specific audio input (source) to an output (zone).

(k) PERMISSIONS

Each user is assigned certain permissions. Depending on these permissions the user will have access to different functions of the system.

2.2. MODULES

SIME consists of several modules or extensions that can be added to provide functionality to the system.

(a) AUTOMATIC GAIN CONTROL (AGC)

This is a module that, based on noise levels collected by microphone sensors, adjusts the gain of the zone according to the level of ambient noise captured from that zone..

(b) TEXT TO SPEECH (TTS)

Module that enables the possibility of creating a voice-over or an audio file from a text.

(c) IP TELEPHONY (VoIP)

Through this module, IP telephony can be integrated into SIME. It allows you to assign an extension to SIME to call from any IP phone.

(d) EXTERNAL SOCKET

Extension that enables the ability to control SIME remotely via UDP commands.

(e) POWER CONTROL

Module that allows to control the power supply of a system via remote control interfaces. A typical scenario could be the public address system of a live concert, whose sound power exceeds that of the evacuation system; this module would allow to turn off the power supply of the concert's audio system and thus listen to the evacuation system.

(f) REPORTS

Module that allows to obtain in PDF format the activity logs of SIME.

(g) MONITORING

Module that enables the possibility of listening to the audio broadcasted by the system's zones and sources.

(h) E-MAIL NOTIFICATIONS

This module enables the reporting of incidences by e-mail through a web client.

(i) BACKUP

This is a module that, supported by another backup server, allows a hot swap of hardware in the event of a failure in the main server.

2.3. APPS

Applications are modules that are functional on their own. They have their own complete interface and are standalone.

(a) CONTROL

It provides the functionality to control the PA system zones, their gain and source routing. Its installation is mandatory for the correct operation of the software.

(b) CALENDAR

Allows to schedule events that play pre-recorded messages or load presets at the scheduled date and time in a calendarized format.

(c) EVAC

Allows to control and monitor the evacuation of a complete public address system.

(d) CENTRAL CONTROL STATION (PCC)

Allows to control and monitor the status of several Control type applications (slaves) from a centralized control station (master).

3. SIME CONTROL

SIME Control application allows to control and monitor the zones and sources of the public address system.

3.1. USER INTERFACE DESCRIPTION

The main screen of this application is described below:
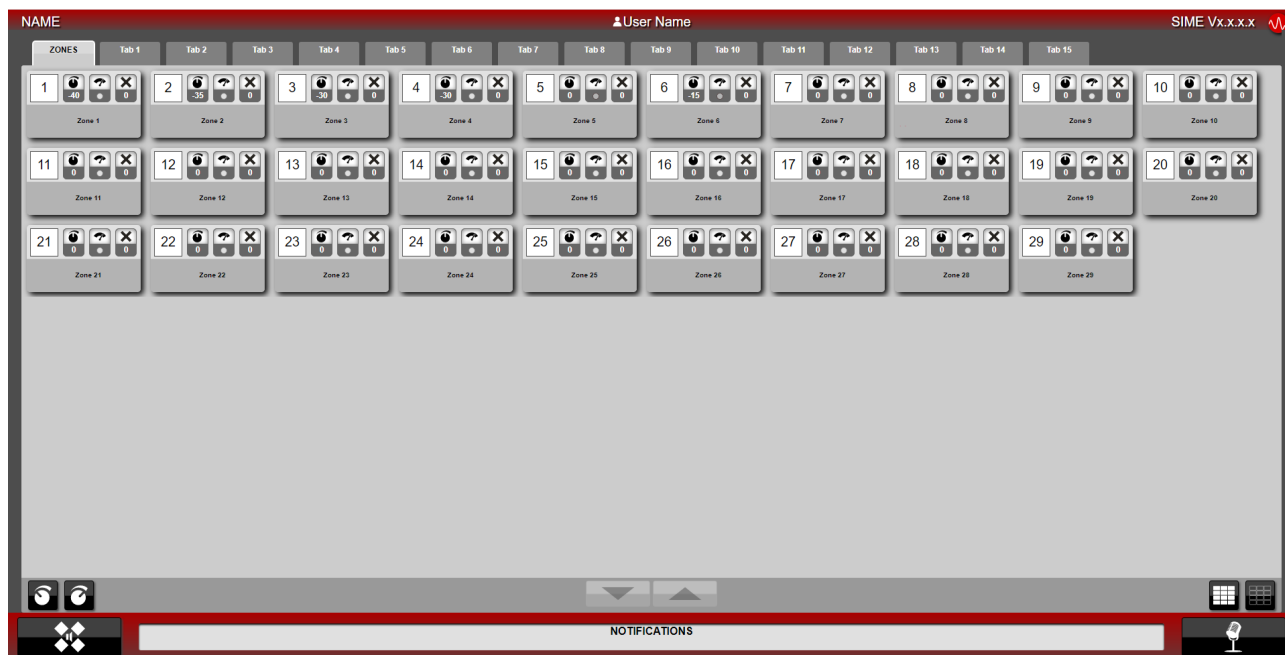
Picture 7: SIME Control main interface

The interface can be divided into five areas: top bar, central panel, control bar, bottom bar and right panel.

(a) TOP BAR

On the left will appear the name that has been assigned to the system, this name is personalized for each installation. In the center, the name of the user logged into the system. And on the right, SIME's version.

Picture 8: SIME Control Top Bar

(b) CENTRAL PANEL

The central panel can be divided into two parts, the upper part consisting of the tabs and the zone control area.

Top tabs

Zones can be organized in tabs that allow for an appropriate and customized grouping of the zone distribution.

Zone control area

Each zone has a box representation in the central panel of SIME Control. When the box is selected it will turn blue.

This box is divided in two halves:

Picture 9: Zone box

The upper area or controls area consists of four indicators. From left to right:

- Zone identifier. Unique number assigned to each zone.

- Zone gain value.

- Zone input vumeter. It can be found in 4 colors: "grey", without signal; "red", high intensity; "yellow", medium intensity; and "green" for optimum intensity.

- Routed source indicator, represented by it's identifier and it's source-kind icon.

The lower area is composed of the name of the zone and an icon in case of an incident in that zone.

(c) CONTROL BAR

In this bar we will find from left to right the following controls:

- Zone gain controls: we will be able to lower (left button) and raise (right button) the gain of the zones we have selected with these buttons.

- Absolute gain assignment: by entering a valid value in this control we will be able to assign an absolute gain value to the selected zones.

- Scroll: if in the central panel it is necessary to scroll the frame, this can be done with these buttons.

- Selection of all zones: with these two buttons you can select (left button) and deselect (right button) all the zones of the tab in which you are.

Picture 10: SIME Control controls bar

(d) BOTTOM BAR

In this bar we will find three controls, from left to right:

- Main menu: this button displays a menu where all SIME Control modules are shown. For more details, see section "3.2 Menus".

- Notifications bar: all SIME Control notifications and alerts will appear in this bar. For more details, see section "3.4.1 Notifications".

- Microphone indicator: it will function as a button for microphones without pushbutton and will function as an indicator when a microphone with pushbutton is used.

Picture 11: SIME Control Main interface

(e) RIGHT PANEL

This panel is specific for each SIME Control module. It is displayed on the right margin when we select a module in the main menu. In the following point 3.2 it will be discussed more precisely.

3.2. ICONS AND INDICATORS
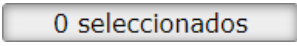
All SIME Control controls and indicators are listed below:

Icon or indicator	Name	Description
	Accept	Accepts the action that we are doing. It appears in several panels and menus.
	Cancel	Cancels the action that we are doing. It appears in several panels and menus.
	Minimize	Minimizes the window . It appears in the notifications window.
	Save	Saves the action. It opens a new window in which can be confirmed the saving action. It appears in several panels.
	Delete	Deletes the selected object. It always requires to confirm the action. It appears in several panels.
	Edit	Edits the selected object. It opens a window in which the object is edited.
	Main menu	Expands the main menu in which the panel of every each module can be opened.

	Routed source	Indicates the routed source in a zone. In the superior part shows the icon associated to the routed source. In the inferior part it appears the id oht the routed source (if it appears an asterisk the routed source is not registered in SIME).
	Vumeter	Indicates the state of the signal using three colors, "Green" means a correct level, "orange" means high levels and "red" means very high levels which can lead. The color "grey" means that it is no signal or the level of the signal is below the detection threshold.
	Gain value	Indicates the gain value of a zone or source. The values are relatives and are between 0 dB (maximum) and -100 dB (minimum).
	Preset identifier	Indicates the loaded or selected preset id.
	AGC Active	Indicates if the AGC module is activated in a specific zone.
	Play	Starts playing a prerecorded message. It appears in the lateral panel of playing prerecorded messages.
	Stop	Stops playing a prerecorded message. It appears in the lateral panel of playing prerecorded messages.
	Timer	Indicates the duration time of a record or a prerecorded message. It appears in the lateral panel of playing prerecorded messages and int he recording window.
	Record	Opens the recording manager window. It appears in the lateral panel of playing prerecorded messages.
	Load prerecorded message	Opens the uploading prerecorded messages window. It appears in the lateral panel of playing prerecorded messages.
	Absolute gain control	Gain value controller which assigns a gin value to one or several zones. Clicking the play button assigns the gain value.
	Increase gain	Increases the gain value in the selected zone or source by 1 dB.

	Lower profit	Decreases the gain value in the selected zone or source by 1 dB.
	Route source	Assigns a source to a zone. It appears in the source lateral panel.
	Unroute source	Deletes the assignation of a source to a zone. It appears in the source lateral panel.
	Start emergency	Starts a selected emergency (preset). It opens a window in which the user with permissions to start emergencies has to log in.
	Stop Emergency	Stops the emergency. It opens a window in which the user with permissions to stop emergencies has to log in.
	Exit	Exists the application. It appears in the exit application window.
	Load Preset	Loads a preset into the system. It asks for confirmation in a window.
	On-screen keyboard	Opens a on-screen keyboard.
	Scroll	It is used to come between the different lists of the side panels. As well as the center panel or windows. It will be disabled if scrolling is not needed.
	Information	Indicates the type of notification, in this case "information". It is displayed next to notifications of this type.
	Warning	Indicates the type of notification, in this case "warning". It is displayed next to notifications of this type and in zones that have warnings.
	Failure	Indicates the type of notification, in this case "failure". It is displayed next to notifications of this type and in zones that are in failure.

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	Emergency	Indicates the type of notification, in this case "emergency". It is displayed next to notifications of this type and in zones that are in emergency.
	Disarmed zone	Indicates that the zone on which it is displayed in disarmed.
	AGC Active	Indicates that in that zone the AGC module algorithm is acting.
	SIME EVAC	Control that directs to the SIME EVAC application. It is located in the Apps window if that application is configured.
	SIME Calendar	Control que dirige a la aplicación SIME Calendar. Se encuentra en la ventana de Apps si está configurada dicha aplicación.
	Musical or auxiliary source	An icon that is associated with music sources.
	Microphone source	An icon associated with microphone-type sources.
	Prerecorded messages player	An icon that is associated with prerecorded message sources.
	No source routed	Icon that we find in the zones that do not have any source routed.
	SIP / VoIP source	An icon that is associated with IP type sources.
	Auxiliary source	An icon that is associated with auxiliary sources. This icon is assigned to sources that are not controlled by SIME Control.
	Automated source	Icon that is associated with automatic type sources (traveler information) used, for example, in airport environments.
	Select all zones	Select all zones.

	Deselect all zones	Deselects all previously selected zones.
	Turn on device	Turn on the selected device.
	Turn off device	Turn off the selected device.
	Summary of device groups	From left to right indicates: devices found, devices on, devices off, group of devices in which there are connected devices, groups of devices with a state of emergency.
0 seleccionados	Selected groups	In the power control menu, indicates the number of devices selected.

3.3. MENUS

With main menu button we access to a drop-down menu that will allow us to access to all the modules and applications configured in the system, as well as to exit the application.

3.3.1 MAIN

From this menu we can access the different side panels and menus of the modules configured in SIME. This menu increases or decreases according to the number of these modules:

Picture 12: SIME Control Main menu

3.3.2 CONTROL PANELS AND MODULE MENUS

All module control panels have a similar structure, showing a list of the elements in the upper part and the controls of that module in the lower part.

The bottom part or control part always has the same structure in which first, attributes of the selected object are shown and then controls of that module.

All control panels associated with each module are listed below:

(a) SOURCE MANAGEMENT

The upper part of this control panel shows the list of sources that the public address system has. In the lower part is the source control.

Sources list

This list shows all the sources configured in the system. They are shown in ascending order of identifier. Next to the identifier, the name assigned to the source and the icon indicating the type of source are displayed.

Sources control

The upper part of this section shows a summary of the selected source, in this case the source with identifier number one and type "Pre-recorded".

In the central part, from left to right, the vumeter corresponding to that source is shown, then the gain level of that source and next to it the controls to modify the gain of the selected source.

Picture 13: Source panel

At the bottom, from left to right, there is a button for assigning the source to the selected zone and a button for releasing the source of the selected zone.

(b) PRERECORDED MESSAGES

The prerecorded menu contains two submenus, which give access to two side panels. One panel allows you to play the pre-recorded messages and the other allows you to manage them.

Playing prerecorded messages

In a similar way to the rest of the side panels, in its upper half we can find a list with the elements that we can manage in its lower half. This panel allows to filter the list of messages to be displayed in its upper part.

In its lower part there is a summary of the message being played, its identifier and full name.

Next, we can see three controls, the central control is a playback time indicator. On its right side, a control that allows to enable the looping of the message. On its left side, the recording button that we will review in the next point.

At the bottom, the pre-recorded message playback and stop buttons are located.
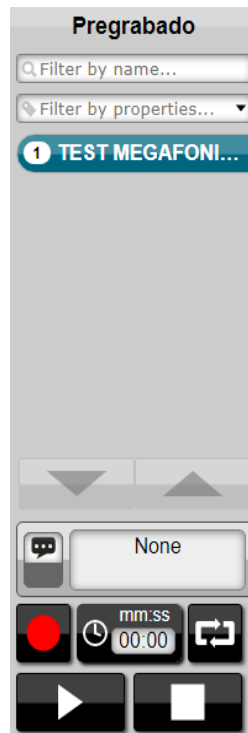
Picture 14: Prerecorded messages panel

Recording of prerecorded messages

SIME Control allows the recording of messages as well as their pre-listening. To access this menu, click on the recording button and the following window will be displayed.

Picture 15: Recording menu

From these controls we can name, record, save and pre-listen to the recording from the monitor output.

Management of prerecorded messages

Like the pre-recorded messages playback panel, this panel allows you to filter the list of pre-recorded messages currently loaded in the system.

In the control area, in the upper position and from left to right, there is a button to modify the name of the selected prerecorded message. To its right is the button to load a new prerecorded message; this menu will be reviewed later.

Just below and from left to right, we find the button that allows us to create a prerecord from a text (TTS) and then to modify it.

Finally, we find the button to assign a label to a prerecorded message and, next to it, the button to delete the prerecorded message.
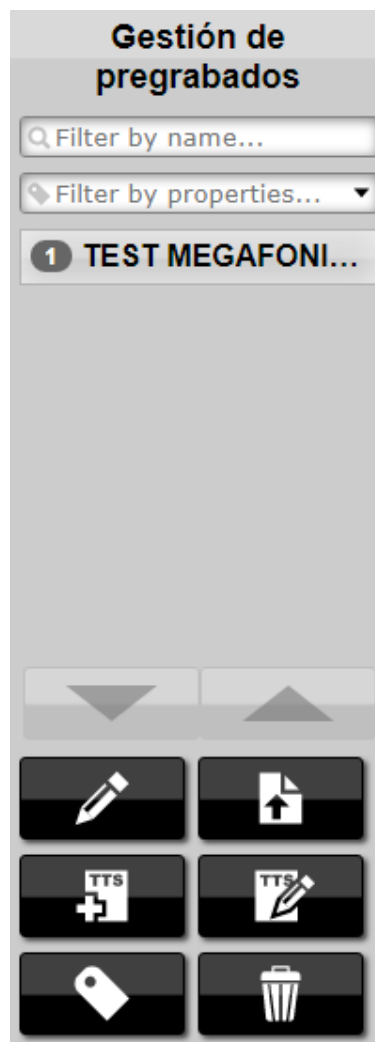
Picture 16: Prerecorded messages management menu

(c) PRESETS

At the top of this panel is the list of presets stored in the system. These presets can be configured at installation or the user can save presets as configuration states. At the bottom are the preset controls.

Presets list

This part shows the list of presets saved in the system. These presets are sorted in ascending order of identifier.

There is a special type of preset to control the state of GPIOs in the system. These GPIOs can drive different mechanisms and automatisms within the PA system such as priority routings in amplifiers. The status is represented by three colors:

- Red: the GPIOs are deactivated.

- Green: GPIOs are active.

- Yellow: some GPIOs are active and some are not.
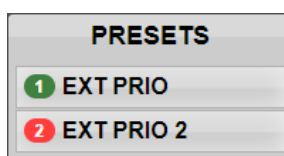
Picture 17: Presets panel

Preset management

In the upper part, the identifier of the selected preset is displayed together with its full name.

In the middle part from left to right appears the preset delete button, then the button to load the selected preset and finally the identifier of the last loaded preset.

In the bottom part there is a button with which you can save the current state of the system in a preset..

Picture 18: Presets panel

(d) POWER SUPPLY MANAGEMENT

At the top of this panel is the list of power supply management equipment. These devices are organized by groups for ease of use. At the bottom of this panel are the buttons to control and monitor the power supply of these devices.

Handling controls and power supply supervision

A summary of the status of the devices is shown at the top. From left to right they indicate: devices found, devices on, devices off, group of devices in which there are connected devices and groups of devices with emergency status.

The number of selected devices is then displayed. Just below are four controls with which the upper list can be filtered and controlled. From left to right these controls indicate: select the whole list, deselect the whole list, group all groups and ungroup all groups and display the devices.

The two main controls of this side panel are shown at the bottom, from left to right: turn on equipment and turn off equipment.

Picture 19: PSU Management panel

(e) EMERGENCIES

Emergency list

At the top of this panel appears the list of static emergencies, in ascending order of identifier. Its identifier appears next to its assigned name and a check icon indicating that this emergency is the favorite one.

Emergency management

A summary of the emergency preset currently selected is displayed at the top of the screen.

Static emergencies always have a pre-recorded emergency message associated with them, so just below it there is a timer of the pre-recorded message, on the left side a button to save the current emergency preset or change its name and on the left side a button to add as favorite one of the static emergency activations (there can only be one).

At the bottom level are the buttons to start and stop the emergency in the system

And finally, at the bottom, the button to delete the selected emergency.

Picture 20: Emergency panel

(f) MONITORING

Sources and zones

The monitoring side panel allows us to monitor both sources and zones. In its upper part we can find the list of sources that can be monitored. To monitor a zone, select that zone in the central panel.

Microphones can be monitored from SIMEv2.0.24 in advanced.

Monitoring management

In the upper part we find the information panel, which shows information of the zone or source being monitored. In this case the source with the identifier number eleven and with the name "Pre-recorded 2".

Next, from left to right, we find the VU meter control of the monitoring output, the gain assigned to that output and the gain up and gain down controls.

Finally we have the controls that allow you to monitor or stop monitoring the selected source or zone.
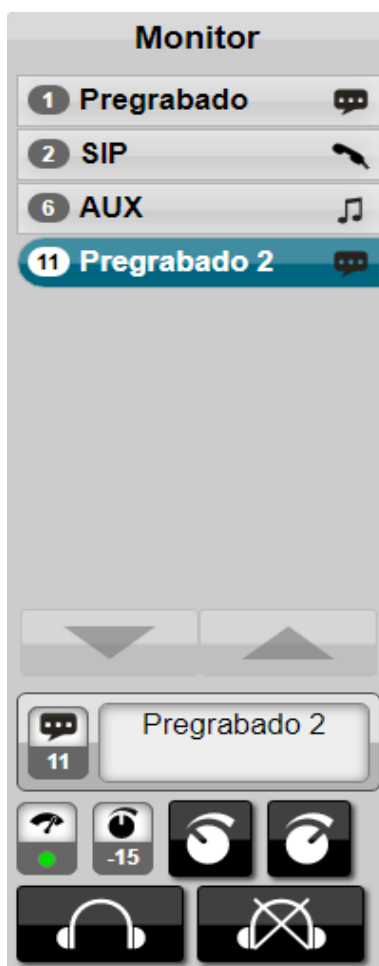
Picture 21: Monitoring panel

(f) AGC

The automatic gain control is not placed in a side panel due to the complexity of its control, but in a separate menu, although the access path is still through the main menu, as for all modules.
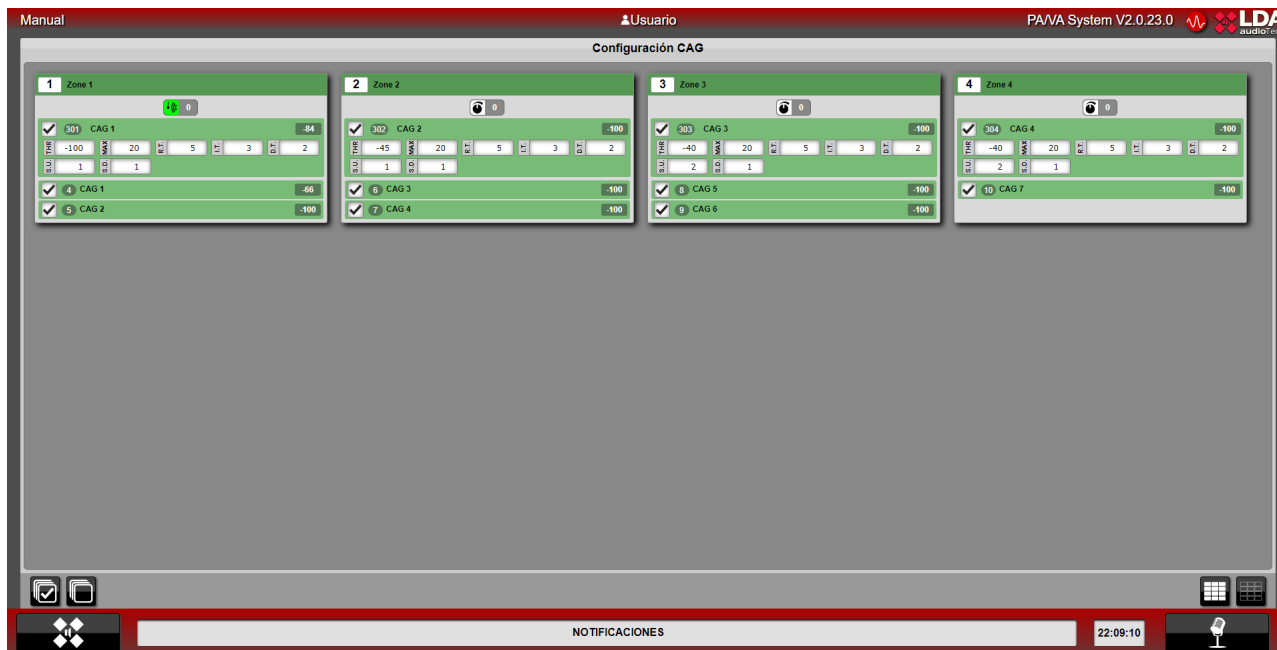
Picture 22: AGC Interface

The structure of this menu is different, it is not a side panel, but a central panel just like the main zone panel. This central panel shows all the zones together with their gain control modules and their sources. One zone is analyzed below in representation of the rest of them:
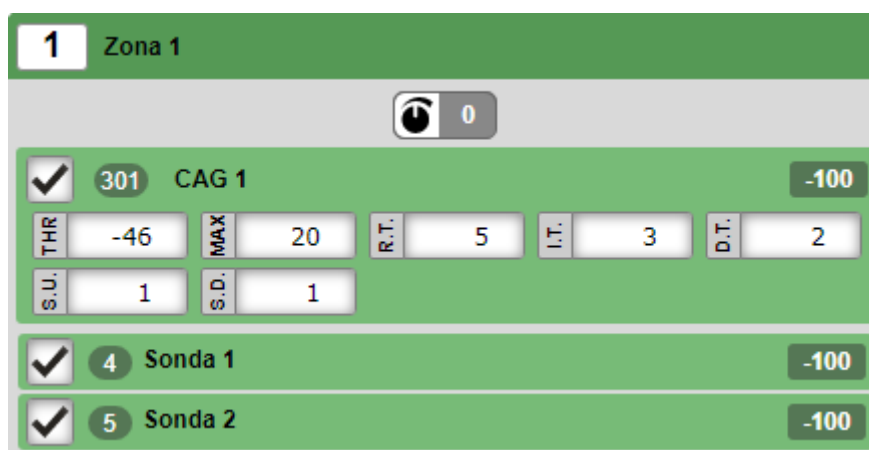
Picture 23: AGC module zone

To explain each part of the zone we will divide it into three areas.

The upper part is occupied by the zone identifier, its associated name and the module's activity indicator in that zone.

Picture 24: AGC zone name and activation

Just below we find the AGC module configuration area for this zone. This field can be unchecked and the AGC module is disabled.
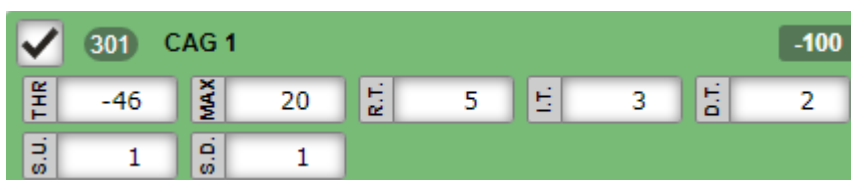
Picture 25: AGC module parameters

These parameters can be modified by the user, and their meaning is shown below:

Parameter	Description	Default value
Threshold	Threshold level to be reached for activation	-28 dB
Maximum	Maximum increase in signal level	10 dB
Response time	Time that the level must be maintained above the threshold for the algorithm to start.	3 seconds
Increase time	Time between steps up	5 seconds
Decrease time	Time between steps down	5 seconds
Step up	Value rising with each upward step	2 dB
Step down	Value decreasing with each step down	1 dB

Finally, we find the sensors associated with that zone along with the value they are collecting. Like the AGC module of the zone, the sensors of each zone can be disabled.

Picture 26: AGC module sensors

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(g) REPORTS

Like the automatic gain control, this module is not placed in a side panel but in a central panel where the user logs can be read. This module is divided into two parts, an upper control part and a lower part to display the logs.
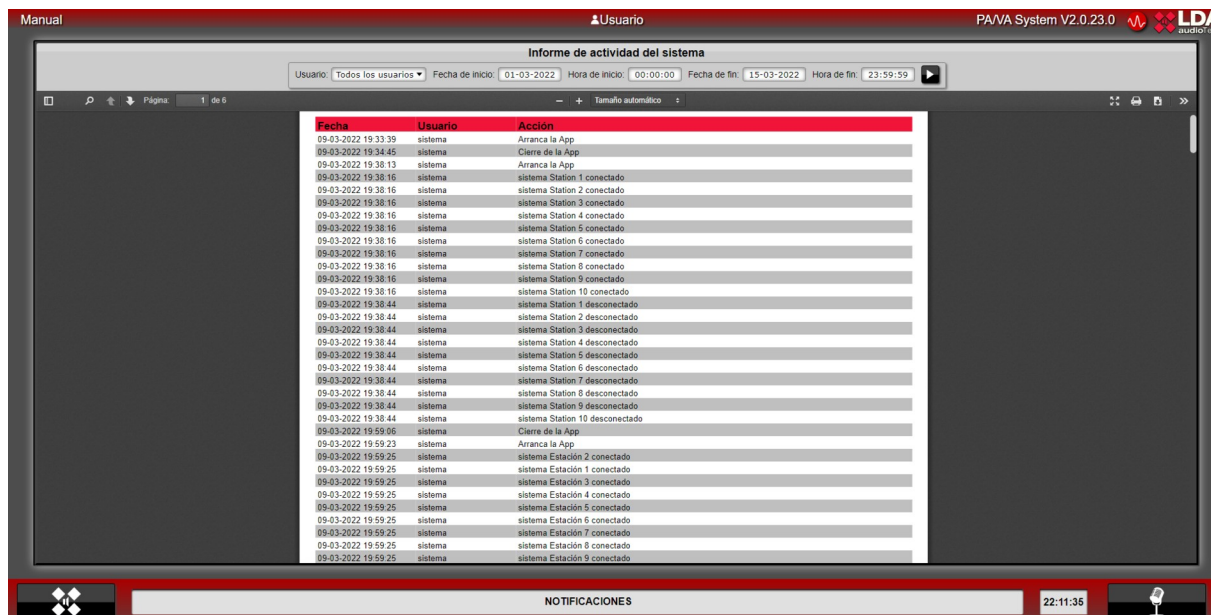
Picture 27: Reports User's interface

At the top we have six controls, which allow us to select the user from whom we want to read the logs, as well as the start and end date and time of the logs to be displayed. Finally we find the "play" button, with which we can download the logs in the same format that is shown at the bottom in the file that is configured.
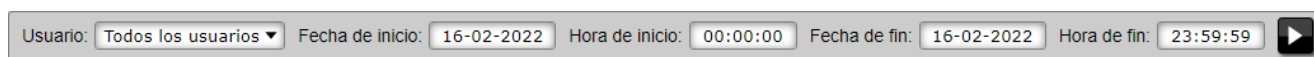
Picture 28: Reports menu

In the bottom part we can visualize the system logs. The following is an example of log visualization:

Picture 29: Reports

We can see how from left to right we show date and time of the action, followed by the user who originates the action and the action that has been stored.

3.4. TYPICAL ACTIONS

3.4.1 SELECT ZONES

The zones are selected in the central panel of SIME Control. Once the zone is selected, it will be colored blue (picture 3), and the tab to which the zone is associated will also be colored blue. There are three possible ways to select zones:

- Select the zone by clicking on its box.

- By clicking and dragging on the central panel, you can select several zones.

- Click on the "select all zones" button to select all zones and on the "deselect" button to deselect all zones.

Picture 30: Selection of all zones

3.4.2 ROUTE A SOURCE

To route a source, we will access through the main menu to the sources side panel (Picture 6). Select the source we want to route and then select the zone (or set of zones) to which we want to route the source. Click on the assign source to zone button.

To unroute a source from a zone, select the zone to which you want to unassign the source and click on the "unroute" button.

Picture 31: Route/Unroute sources

3.4.3 GAIN CHANGES

There is the possibility to change the gain to both sources and zones.

Zone gain change

To change the gain of a zone we must select that zone or set of zones. Once selected we can assign an absolute gain value or increase/decrease the gain value in steps of one value.

To assign an absolute gain value, enter a value in the absolute gain assignment control and then press the "play" button to assign the value.

Picture 32: Absolute gain assignation

To increase or decrease the gain to a zone use the gain up and gain down controls.

Picture 33: Increase/decrease gain values

Change of gain in a source

To change the gain of a source, access the source control side panel. Select the source to which you want to change the volume and use the gain up and gain down controls.

3.4.4 PLAY/STOP A PRERECORDED MESSAGE

To play a prerecorded message in a zone, the prerecorded message playback side panel is displayed from the main menu.

Select the zone/s for which you want to play the pre-recorded message and select the pre-recorded message you want to play. Once the message and zone have been selected, press the "*play*" button.

Once the pre-recorded message is playing, the stop button will be enabled and the "*play*" button will become "*pause*". By clicking on them we can perform their associated actions.

Picture 34: Play / Stop

3.4.5 RECORDING OF PRERECORDED MESSAGES

To record a pre-recorded message, access the pre-recorded message playback side panel from the main menu. Click on the record button and a pop-up window will open.

Picture 35: Record button

First we will assign a name to the new message we are going to record. Then we can start recording by clicking on the record button. Once the recording is finished we stop the message and we can save it.

Picture 36: Recording menu

In this case we have recorded a two-second message as a test.

If there is a monitor configured we can pre-listen the recording. When we have recorded the message, before saving it we can click on the "play" button and it will be played through the monitor output.

Picture 37: Recording and pre-listen menu

By clicking on the "play" button and adjusting the gain as needed we will listen to the audio we have recorded before saving it. The recording will be heard through the monitor output.

3.4.6 LOAD PRERECORDED MESSAGES

To load a pre-recorded message first access the pre-recorded message management panel from the main menu. Click on the pre-recorded message upload button and a pop-up window will appear.
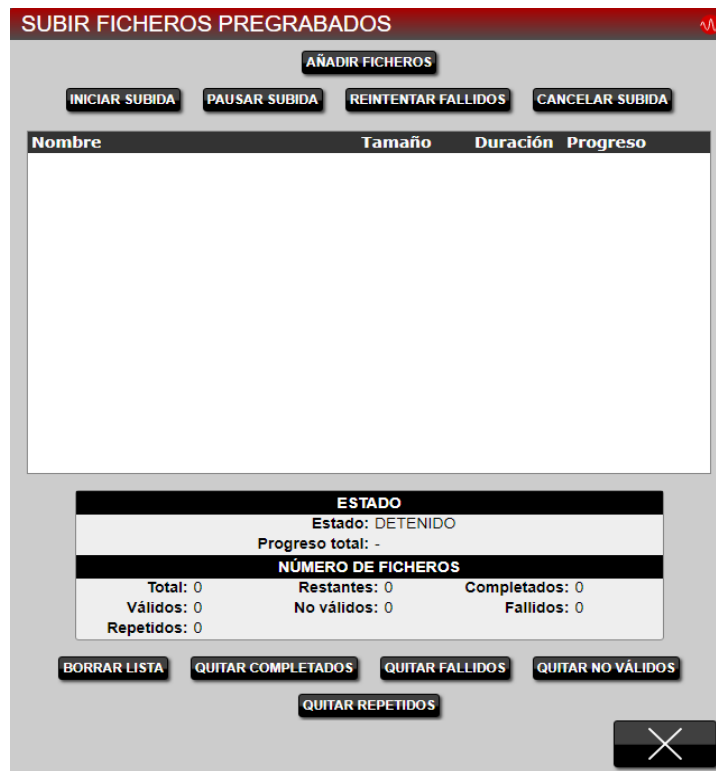
Picture 38: Upload prerecorded message

In this window we will click on the add files button to select the messages we want to upload to SIME. Once selected, we can start uploading them to SIME. We will have full control over the upload, being able to stop, retry or cancel it.

3.4.7 LABEL PRERECORDED MESSAGES

We can classify the pre-recorded messages loaded in SIME by adding labels that we can create ourselves. To add a label we access the pre-recorded messages management side panel from the main menu, select the message to which we want to add the label and click on the "add labels" button.

A window will be displayed in which we can assign one or several labels or create another
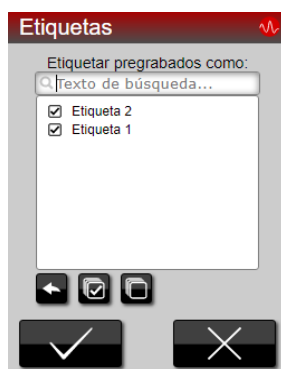
Picture 39: Labels

one in case it is not already created.

3.4.8 SPEAK VIA MICROPHONE TO ZONES

There are two ways to assign the microphone source to a zone in SIME: statically and dynamically.

Dynamic routing

Select the zones you wish to speak in and press the microphone button.

Static routing

Simply press the microphone button and the microphone will be routed to the zones that have been configured.

3.4.9 SOURCE AND ZONE MONITORING

To monitor a source or a zone, access the monitoring side panel from the main menu. From this panel we can monitor a source or a zone..

Select the source or zone that you want to monitor and click on the "monitor" button. If you want to stop monitoring simply click on the "stop monitoring" button.

Picture 40: Start/Stop monitoring

3.4.10 STATIC EMERGENCY LAUNCH

To launch an emergency preset, we access the emergency side panel through the main menu.

In this panel we can select the emergency we want to launch, and once selected we will click on the "launch emergency" button. Emergencies must always be launched by an administrator user, so a username and password will be requested to start the launch.

Picture 41: Start/Stop emergency

3.4.11 LOAD A PRESET

To load a preset, access the preset side panel through the main menu.

In this panel we can select the preset we want to load, once selected, click on the "load preset" button.

Picture 42: Load a preset

3.4.12 SAVE A PRESET

We can save the current status of the system (routing, gains...) as a preset, for when we want to assign that configuration. To do this we access the preset menu through the main menu.

In this panel we will click on the "save preset" button (it will ask us to assign a name to the new preset).
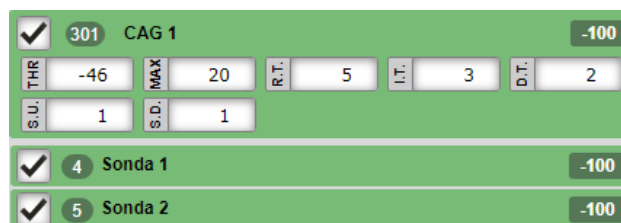
Picture 43: Save

3.4.13 AGC CONFIGURATION

The AGC module must be configured according to the needs of each installation and once configured it is not recommended to change its parameters. Even so, there may be certain situations in which, for example, it is necessary to deactivate the module, a sensor or change the module activation threshold. It is important to understand that the AGC module is independent in each zone, so the configuration of a zone is not related to the configuration of another zone.

To deactivate both sensors and the AGC module we can select the check boxes attached to each section.

Picture 44: AGC Configuration

To modify the module parameters, it is recommended to consult the meaning of each one, as well as to study its repercussion on the behavior of the zone gain.

Parameter	Description	Default Value
Threshold	Threshold level to be reached for activation	-28 dB
Maximum	Maximum increase in signal level	10 dB
Response time	Time that the level must be maintained above the threshold for the algorithm to start.	3 seconds
Increase time	Time between steps up	5 seconds
Decrease time	Time between steps down	5 seconds
Step up	Value rising with each upward step	2 dB
Step down	Value decreasing with each step down	1 dB

3.4.14 ACCESS ANOTHER APPLICATION

To access another application we will have to exit the current one we are in. To do this, access the main menu and click on "exit".

A window will be displayed in which we will be able to see the rest of the applications configured. The applications can be SIME Calendar on the left and SIME EVAC.

Picture 45: App menu

If there are no other applications configured in SIME, we will only be allowed to exit the application.

Picture 46: App menu

3.4.15 READING OF NOTIFICATIONS

To view SIME notifications, click on the notifications bar and a window will appear in which you can view all SIME notifications.

To delete these notifications, click on them and press the "accept" button. The pop-up window will close and the notifications you have selected will have been removed.

Picture 47: Notification bar

3.4.16 READING SYSTEM LOGS

In order to view the system logs we will have to access the reports module, once there we will be able to select user, date and time of log reading and we will be able to view them.

We can also download the logs to a previously configured folder by clicking on the play button.
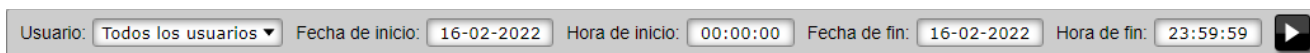
Picture 48: AGC Interface zone

3.5. SYSTEM SUPERVISION

3.5.1 NOTIFICATIONS

In the notification bar we can see the last notification launched by the system. Clicking on the notification bar will open a window in which the complete list of SIME Control notifications will be displayed.
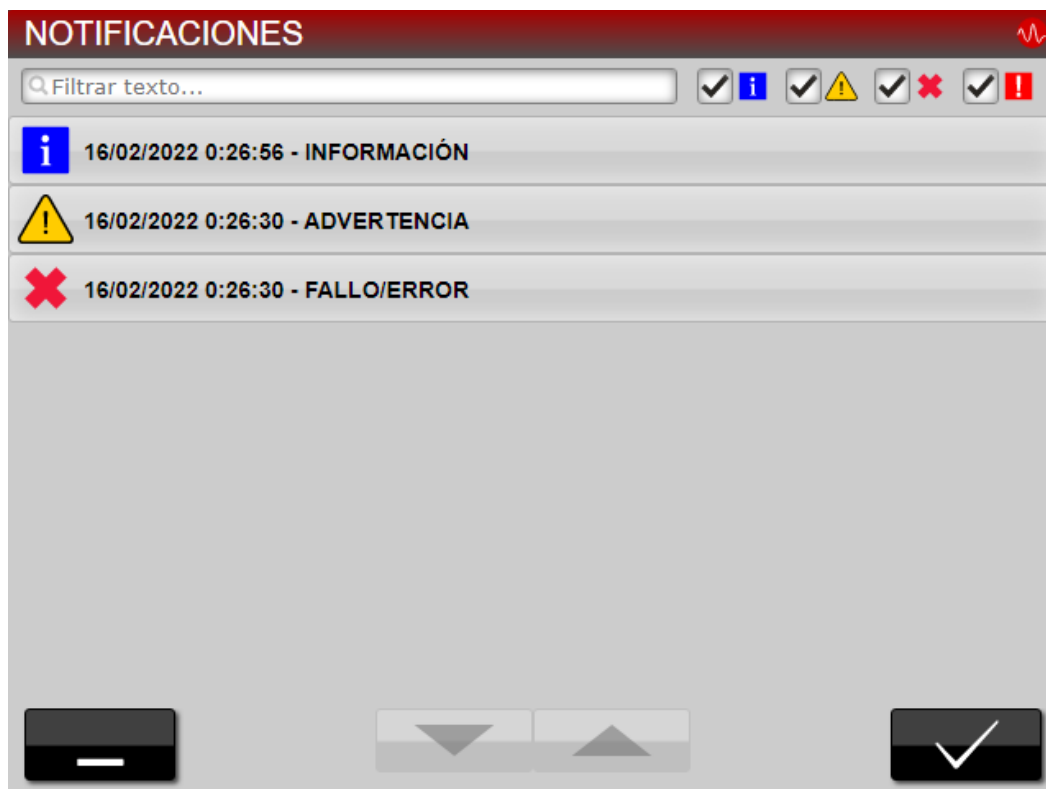
Picture 49: SIME Control notifications window

Notifications are listed in order of occurrence, with the most recent notification occurring first and the oldest notification appearing last. The scheme in which they are always displayed is an icon classifying the type of notification, the date and time and a text clarifying the origin of the notification..

There are four types of notifications:

(a) INFORMATION

These are notifications that inform the user about system circumstances. These notifications have no relevance to the operation of the system.

These notifications are associated with the blue square icon with the letter "i".

Picture 50: Information icon

Notifications of this type and their meaning are as follows:

- **Operation rejected. Higher priority event in progress:** it is shown in multiple cases, the clearest example being when you want to route a lower priority source where a higher priority source is already routed.

- **Emergency status:** as its name indicates, is displayed when there is an emergency status in SIME Control. This occurs when the emergency is triggered from the emergency module.

- **NEO Wrong Channel Configuration:** this notification is displayed in cases where a NEO system does not have the same configuration as the one loaded in SIME.

- **NEO system emergency initiated:** this notification is displayed when the emergency has been initiated from a NEO system. In zones belonging to the NEO system, the emergency icon shall be added.

- **NEO system zone disarmed:** is displayed next to the zone name and zone identifier. It means that the zone is disarmed.

- **NEO System fault:** is displayed when there is a fault in the NEO system associated with that notification.

(b) WARNING

These are notifications of medium severity that may prevent the system from functioning correctly. These notifications must be reported to the maintenance service.

These notifications are associated with the yellow triangular icon with exclamation mark.

Picture 51: Warning icon

Notifications of this type and their meaning are as follows:

- **Incident in zone:** is displayed when there is an incident in that area. The source of the incident shall be reviewed by the maintenance team..

- **NEO System fault in zone:** is displayed when there is an incidence in that zone and that zone is from a NEO system. The source of the incident shall be reviewed by the maintenance team..

- **NEO System fault:** is displayed when there is a general failure in the NEO system associated with that notification.

(c) ERROR OR FAILURE

These are very serious notifications that prevent the correct functioning of the system. These notifications must be reported to the maintenance service..

These notifications have a red cross icon associated with them.

Picture 52: Error or failure icon

Notifications of this type and their significance are as follows:

- **Device offline:** is displayed next to the devices that are currently disconnected.

- **No service in zone X:** a zone is out of service due to a fault in the equipment associated with that zone.

(d) EMERGENCY

These are notifications that are triggered when any equipment in the system is in emergency. They generally block the use of SIME Control.

These notifications are associated with the red square icon with an exclamation mark.

Picture 53: Emergency icon

4. SIME CALENDAR

SIME's Calendar application allows you to create and schedule events that will broadcast pre-recorded messages or a certain configuration (preset) on the public address system.

In order to schedule these events, it is necessary to understand the concepts that govern the logic of the Calendar application:

- Content: pre-recorded messages or groups of messages to be played at the event..

- Destinations: zones or groups of zones of the public address system in which the content will be played. They also describe the configurations to be loaded in case the event does not play content.

- Calendars: dates and times at which events will take place.

- Events: combination of a date and time (calendar), a zone group or presets (destination) and a pre-recorded message (content) in case a certain configuration is not loaded.

We will name these concepts as objects that form an event.

4.1. INTERFACE DESCRIPTION

The main screen of this application is described below.
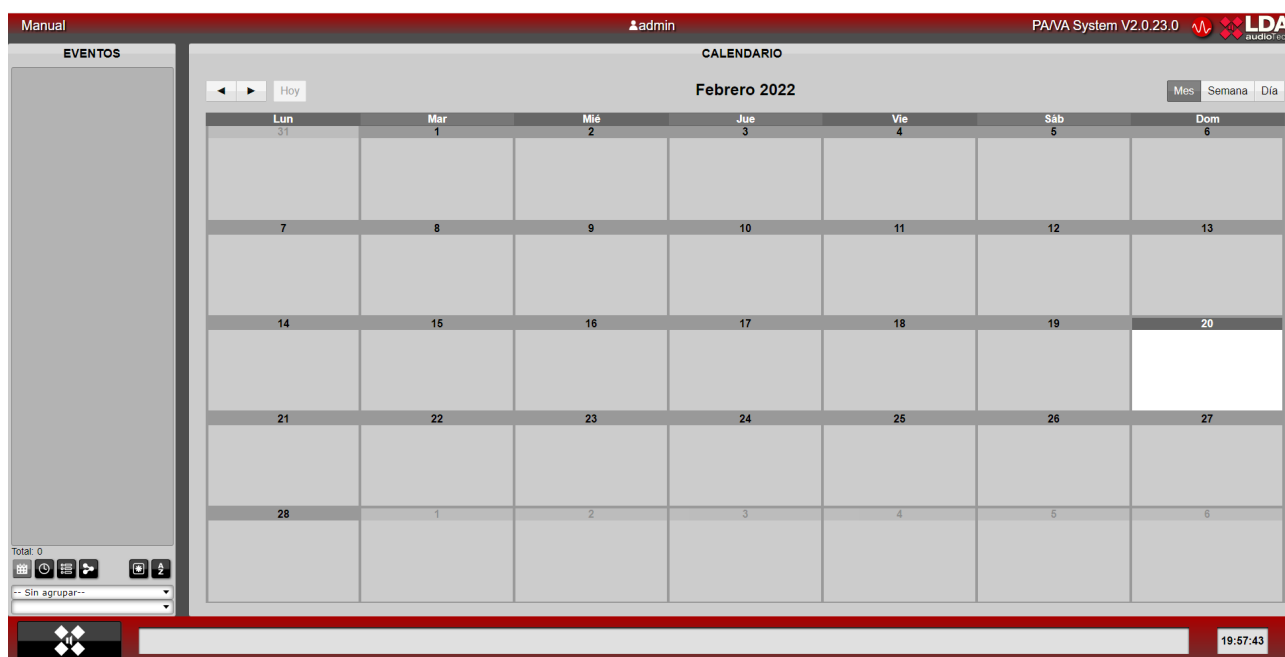
Picture 54: SIME Calendar main interface

We can divide the interface of this application into four parts.

(a) TOP BAR

In this bar we can see, from left to right, the name of the system, the name of the user and the SIME version.
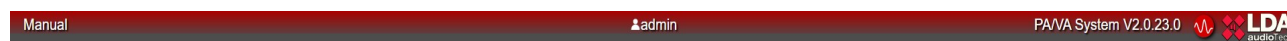
Picture 55: SIME Calendar top bar

(b) SIDE PANEL

In this panel we get a summary in the form of a list of all the events, calendars, destinations and contents that we have created.

The "event" section has the peculiarity of showing in different colours the current status of the events, being grey a deactivated event (it will not be launched even if the time of its calendar arrives), yellow for an activated event (if the time of its calendar arrives, the event will take place) and green for a currently active event.
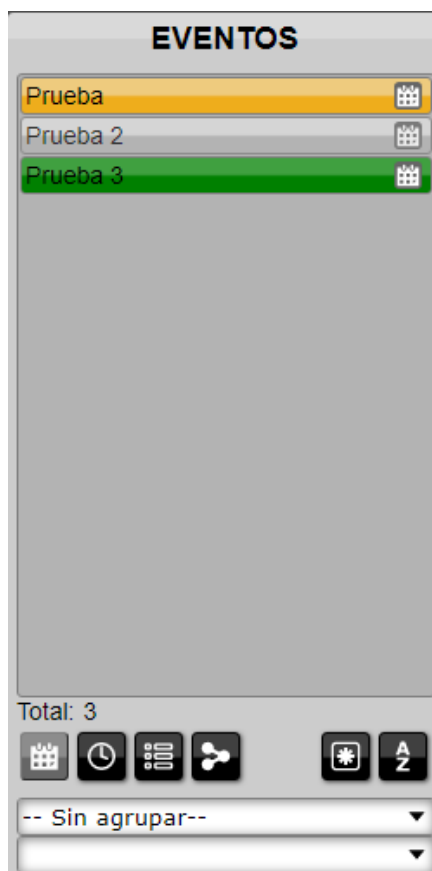
Picture 56: SIME Calendar side panel

Right-clicking on the events, calendars, destinations or contents will display a menu in which we can view their details or modify them (section 4.4 of this manual explains how to modify them).

Picture 57: Details window

To change the list view use the controls at the bottom, from left to right the following controls: event list, calendar list, contents list, destination list, filter by usage and sort alphabetically.

Picture 58: SIME Calendar filters

(c) CENTRAL PANEL

In this panel, the events that are scheduled are shown in calendar form. Like the side panel, the events are shown in different colors according to their status, being grey for event deactivated, yellow for event activated and green for event active.

We can switch between month, week and day views with the controls in the top right corner and move between them with the controls in the top left corner..
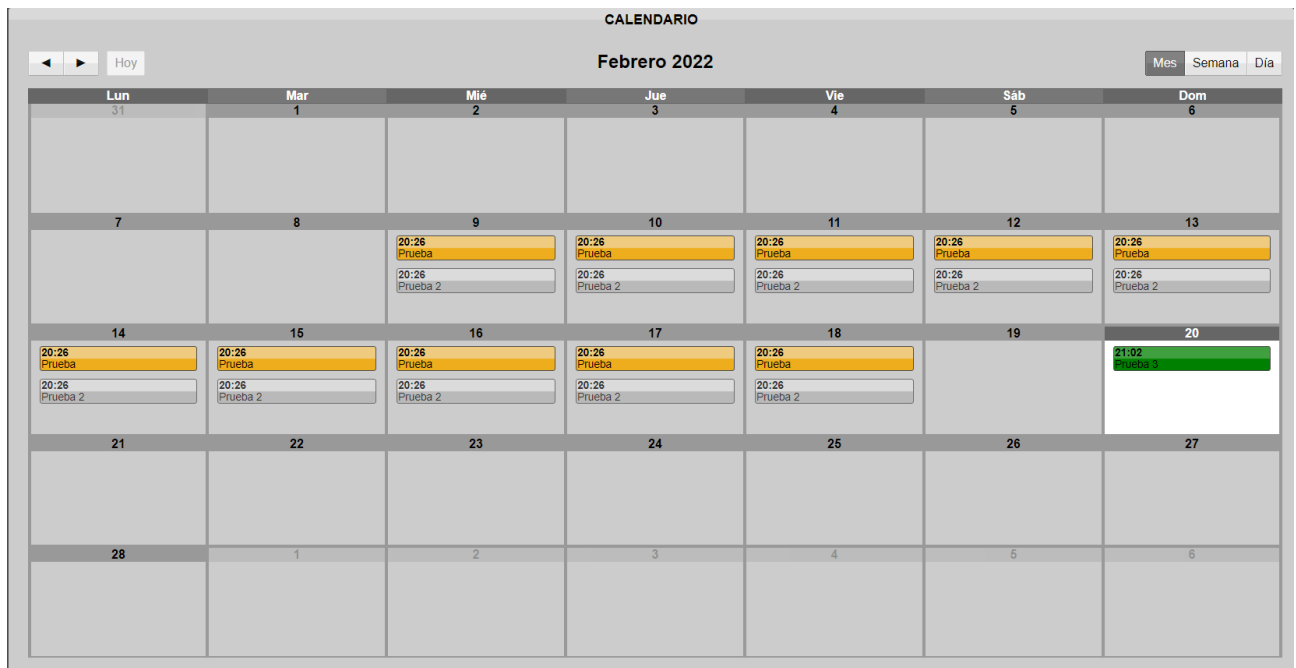
Picture 59: SIME Calendar central panel

(d) BOTTOM BAR

This bar provides access to the main menu, notification control and system time.
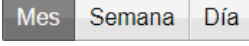
Picture 60: SIME Calendar bottom bar

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4.2. ICONS AND SIGNALS

Below is a list of all the icons and signs of this application.

Icon or signal	Name	Description
	Main menu	Open the main menu.
	Delete	Delete the selected object.
	Edit	Enable the menu to edit the object.
	Ok	Accept the action we are carrying out.
	Cancel	Cancel the action we are carrying out.
	Save	Save the change we have made.
◄ ►	Back/Next	Move to earlier or later dates.
Mes Semana Día	Switch view	Change the calendar view between month, week or day view.
	New	Create a new content, calendar, destination or event.
	Save new	Save the selected configuration in a new object.
	Back	Go back.

	Exit	Exit the application. You are in the pop-up window to exit the application.
	Calendar	Display the calendar view in the side panel. Also represents the calendars in the other menus.
	Content	Show the contents view in the side panel. Also represents the contents in the other menus.
	Destination	Show the destinations view in the side panel. It also represents the destinations in the rest of the menus.
	Events	Show the events view in the side panel. Also represents the events in the other menus.
	Sort alphabetically	Sort the list alphabetically.
	Unused objects	Filter in the side panel by objects that are not used in events.
	Used objects	Filter in the side panel by objects that are being used in events.
	All objects	Show all objects in the panel.
	Add	In the content menu, add the content.
	Select all	Select all contents.
	Deselect all	Deselect all contents.

	Toggle selection	Toggle between selected and unselected objects.
	Down	Move the message down, changing the order of the content.
	Up	Upload the message, changing the order of the content.
	Information	Indicates the type of notification, in this case information. It is displayed next to the notifications. It is displayed next to the notifications.
	SIME EVAC	Control that directs to the SIME EVAC application. It is found in the Apps window if this application is configured in the system.
	SIME Control	Control that directs to the SIME Control application. It is located in the Apps window if this application is configured in the system.
	SIME PCC	Control that directs to the SIME PCC application. It is located in the Apps window if this application is configured in the system.

4.3. MENUS

By clicking on the "main menu" button, you will access the main menu itself, where the different objects included in SIME Calendar will appear.

Picture 61: SIME Calendar main menu

All menus follow the same structure. On the right-hand side is a list of the objects already created for the menu type. On the left side of the list are the different types of controls that each menu has. Another common feature of all the menus is that in all of them you can classify the created object in groups or categories and add a description to it.

4.3.1 CALENDARS

We call the date and time at which an event is to take place a "calendar".

This menu is divided into different tabs with different functions:
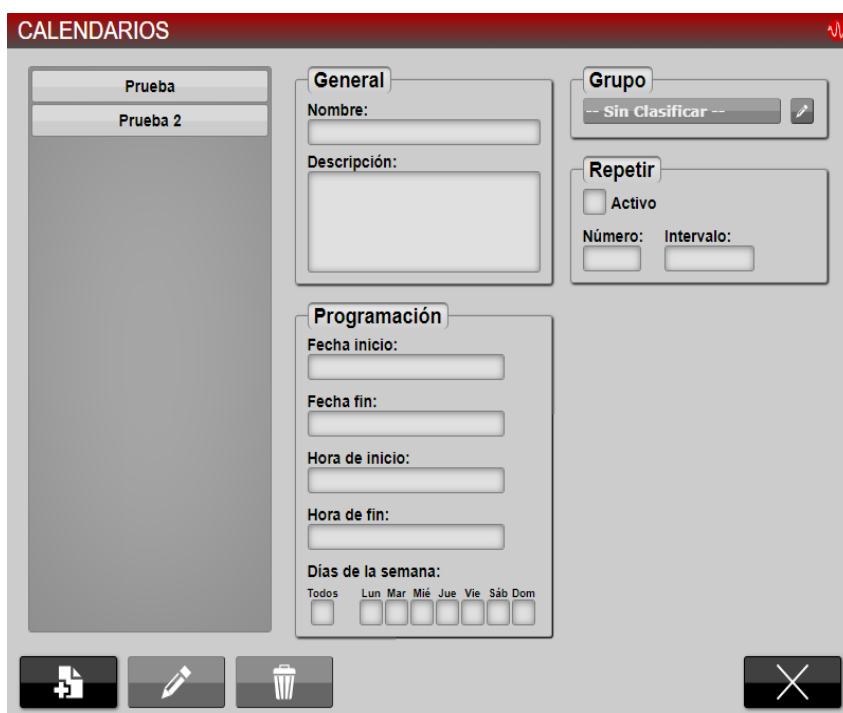
- General: in this tab we can enter a name (mandatory) and a description of the calendar.

- Group: we can classify the calendars by groups. We can create a new group by clicking on the create new control. The following window will appear:
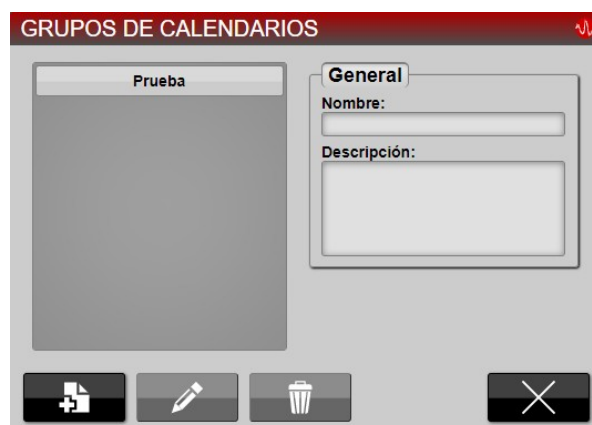
Picture 62: Calendar groups window

Here we can generate, delete and modify groups. This operation is the same for events, destinations, contents and calendars.

- Repeat: section in which we activate whether the event will be repeated, how many times it will be repeated (number) and how often (interval).

- Schedule: section in which we can indicate the start date and time, as well as the end date and time. We can also filter by the day of the week.

Picture 63: Calendars window

4.3.2 DESTINATIONS

We call "destinations" the zones on which the event will act in case of playing pre-recorded messages or loading a certain configuration (preset).

This menu is divided into different tabs with different functions:

- General: in this tab we can enter a name (mandatory) and a description, as well as set whether a pre-recorded message or a preset will be launched.

- Group: this is the same operation as in all the menus. See point 4.3.1.

- Destination selection: in this tab you can select the zones or groups of zones in which the content will be played in the case of pre-recorded messages. If the event loads a specific configuration, the presets will be selected in this tab.

Picture 64: Destinations window

4.3.3 CONTENT

We call "contents" the messages that will be triggered in case messages are triggered in the event (this option is not reflected for preset loading).

This menu is divided into different tabs with different functions:

- General: in this tab we can enter a name (compulsory), as well as a description of the contents.

- Category: this is the same operation as in all the menus. See point 4.3.1.

- Selection of pre-recordings: this tab has two different parts, on the left side we can see the pre-recordings that are stored on the server and on the right side those that make up the content. With the different controls we can upload and download messages of the selected content.

Picture 65: Contents window

4.3.4 EVENTS

We call the conjunction of calendar, destination and content, if any, an "event".

This menu, like all menus, is divided into tabs with different functionalities:

- General: in this tab we can add a name (mandatory) as well as a description to the event. We can select whether the event will play content ("Msg") or load a certain preset configuration ("Pst").

  ○ By selecting "Enqueue" we indicate that the event will be queued after a higher priority event that is being triggered.

  ○ By selecting "Restart" we indicate that the event, in case it is interrupted by a higher priority event, will restart from the beginning.

  ○ By selecting "Activate" we activate the event and we can assign it a priority, with 1 being the highest priority and 3 the lowest.

- Content: select the content of the event in this tab in case the event plays pre-recorded messages.

- Calendar: select in this tab the calendar with which this event will be activated.

- Destination: select the destination of the event in this tab.
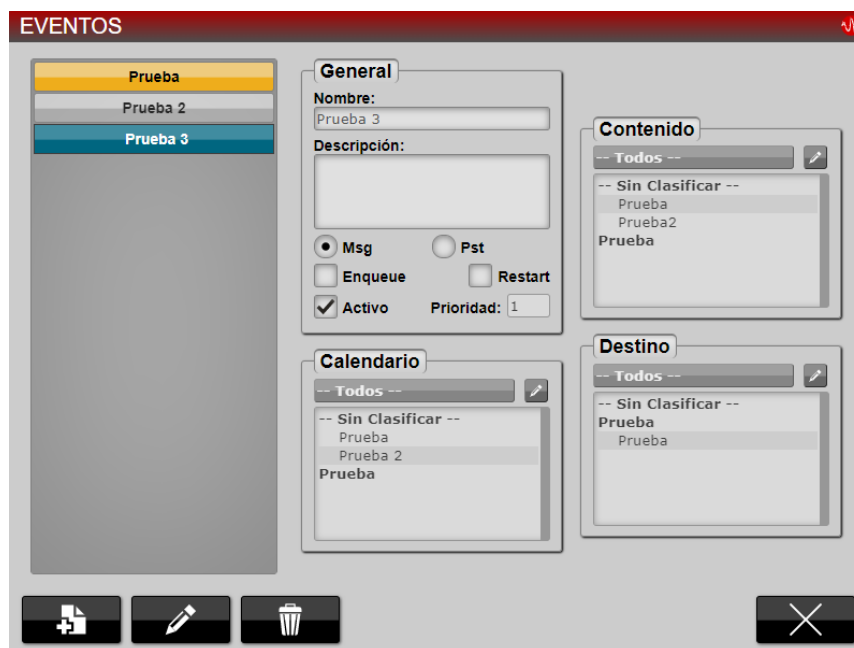
Picture 66: Events window

4.4. TYPICAL ACTIONS

Typical actions specific to this application are defined below. Actions that are shared by all applications such as exiting the application can be found in the section "Typical SIME Control actions" (section 3.4).

4.4.1 CREATE/MODIFY/DELETE CONTENTS

To create, modify or delete content, access the content menu through the main menu. In this menu you can create, modify or delete all the contents of the application.

(a) CREATE CONTENTS

To create content, click on the "create new" button

Picture 67: Create button

The control of the different menu tabs (explained in point 4.3.3) will be enabled. Once enabled, it will only be necessary to fill in these tabs; we suggest the following steps:

1. Fill in the general section: we must assign a name to the new content and we could assign a description if we see fit.

Picture 68: Contents general tab

2. Fill in the general section: we must assign a name to the new content and we could assign a description if we consider it appropriate.

Picture 69: Category window

3. Add to the selection the pre-recorded messages that we want to be played. They are added to the list by selecting them and clicking on the "add" button. In this case we have added three messages by way of example:

Picture 70: Prerecords selection window

4. Finally, save the created content by clicking on the button "save new".

Picture 71: Save new button

(b) MODIFY CONTENT

To modify a content, select the content you want to modify in the sidebar. And click on the "edit" button:

Picture 72: Modify button

Controls will be enabled and we will be able to modify in the same way we create content.

(c) DELETE CONTENTS

To delete content, select the content you want to delete and click on the delete button:

Picture 73: Delete button

We should be aware that it does not ask for confirmation of deletion.

4.4.2 CREATE/MODIFY/DELETE DESTINATIONS

To create, modify or delete a destination, access the destination menu via the main menu. In this menu you can create, modify or delete all the destinations in the application.

(a) CREATE DESTINATIONS

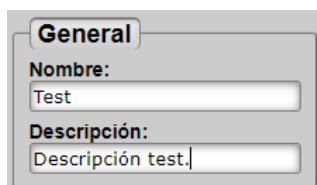To create a destination, access the destinations window through the main menu. Once there, click on the "create new" button to create a new destination.

Picture 74: Create button

The control of the different menu tabs (explained in point 4.3.2) will be enabled. Once enabled, it will only be necessary to fill in these tabs, we suggest the following steps:

1. Fill in the general section: you must assign a name and a description to the new destination. Then choose whether the destination will receive a pre-recorded message or load a configuration (preset).

Picture 75: General destinations tab

2. It is not necessary to create a group for each destination but it is advisable. How to create a group is explained in section 4.4.1(a).

3. 3. Select destination: if "pre-recorded messages" has been selected in the general tab, the list of zones of the system that we will have to select in which the message will be played will appear. If the "preset" option has been selected in the general tab, the list of system presets will appear to choose which one will be loaded.

Picture 76: Destination selection tab

4. Finally, save the created content by clicking on the "save new" button.

Picture 77: Save new button

(b) MODIFY DESTINATIONS

To modify a destination, select the destination to be modified in the sidebar and click on the "edit" button:

Picture 78: Modify button

Controls shall be enabled to modify in the same way as a destination is created.

(c) DELETE DESTINATIONS

To delete a destination, select the destination to be deleted in the sidebar and click on the "delete" button:

Picture 79: Delete button

Confirmation of deletion is requested.

4.4.3 CREATE/MODIFY/DELETE CALENDARS

To create, modify or delete a calendar, access the calendar menu via the main menu. In this menu you can create, modify or delete all the calendars in the application.

(a) CREATE DESTINATIONS

To create a destination, access the destinations window through the main menu and click on the "create new" button to create a new destination.
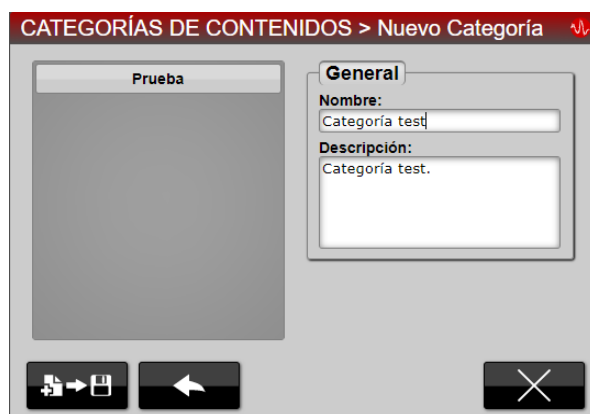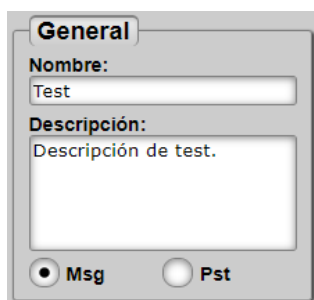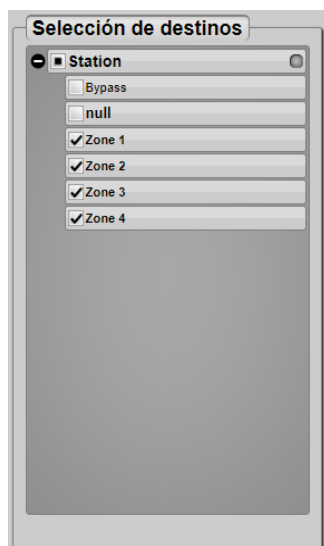

Picture 80: Create button

The control of the different menu tabs (explained in point 4.3.1) will be enabled. Once enabled, it will only be necessary to fill in these tabs, following the steps below:

1. Fill in the "General" section: give the new calendar a name and a description.

Picture 81: Destinations general tab

2. 2. It is possible to create a group or assign a group.

3. Fill in the "Schedule" tab: assign a start date and time and an end date and time. It is possible to filter by days of the week. An example of a schedule is shown below:

Picture 82: Destination programming tab

4. Fill in the "Repeat" tab: an example of a calendar that repeats twice every hour is shown below:

Picture 83: Repeat destinations tab

5. Finally, click on the "save new" button to save the created calendar:

Picture 84: Save new button

(b) MODIFY DESTINATIONS

To modify a calendar, select the calendar to be modified in the sidebar and click on the "edit" button:

Picture 85: Modify button

The controls will be enabled to modify in the same way as a calendar has been generated.

(c) DELETE DESTINATIONS

To delete a destination, select the calendar to be deleted in the sidebar and click on the "delete" button:

Picture 86: Delete button

Confirmation of deletion is requested.

4.4.4 CREATE/MODIFY/DELETE EVENTS

To create, modify or delete an event, access the events menu through the main menu. In this menu you can create, modify or delete all the events of the application.
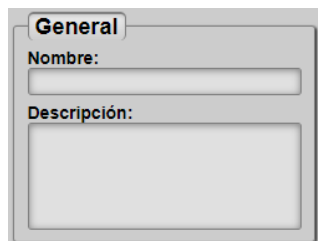
(a) CREATE EVENTS
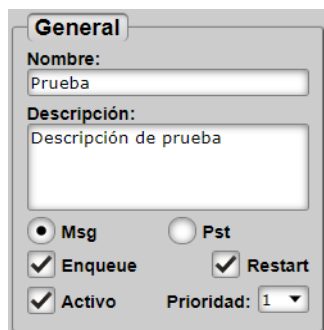
To create an event, access the events window through the main menu and click on the create new button to create a new event.
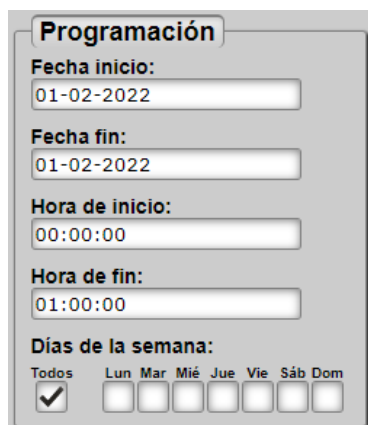

Picture 87: Create button

The control of the different menu tabs (explained in point 4.3.4) will be enabled. Once enabled, it will only be necessary to fill in these tabs, following the steps below:

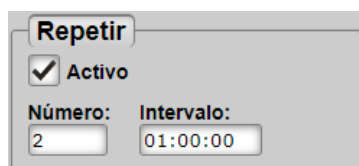1. 1. Fill in the general tab: assign a name and a description to the event. Then assign whether a preset (Pst) will be loaded or a pre-recorded message (Msg) will be triggered. Then indicate if the message will be queued after another one and if it will be restarted each time it is launched. As well as whether it is active and its priority.

Picture 88: Events general tab

2. 2. Finally, we simply have to select a destination, a calendar and a content in case it is a pre-recorded message. And click on the save new button.

Picture 89: Save new button

(b) MODIFY EVENTS

To modify an event, select the calendar you want to modify in the sidebar. And click on the edit button:

Picture 90: Modify button

Controls shall be enabled to modify in the same way as when creating an event.

(c) DELETE EVENTS

To delete a destination, select the calendar to be deleted in the sidebar and click on the delete button:

Picture 91: Delete button

Confirmation of deletion is requested.

4.4.5 FILTER IN SIDE PANEL

The side panel can be filtered in several ways, which can be complemented by each other. The filtering control appears at the bottom of the panel.
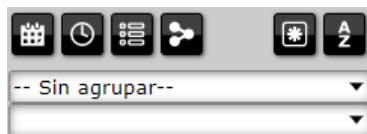
Picture 92: SIME Calendar filters

For ease of explanation, they will be grouped into three groups:

(a) FILTER BY USE

Filtering by usage is the simplest of all, it is possible to distinguish between displaying all objects, those that are being used in events or those that are not being used in events in the corresponding panel.

This filtering only applies to destination, calendar or content panels. And it has three possible filters: "is being used in an event", "is not being used in an event" or "show all".

To handle this filter the filter by use button is used, which has three possible states:

Picture 93: Filter by use

From left to right the filters applied would be: show all objects, show objects that are being used in events and show objects that are not being used in events.

(b) FILTER BY TYPE

With the filtering by type we can choose whether to show the list of events, content, calendars or destinations.

To filter by type, use the buttons assigned to each type.

Picture 94: Filter by type button

From left to right, the buttons indicate: show events, show calendars, show content and show destinations.

(c) FILTER BY GROUPS OR CATEGORIES

With the filtering by groups or categories it is possible to divide the different events, calendars, contents and destinations into different groups, which the user has to have created beforehand.

To filter by groups, two controls are available: the upper one to select the type of object to filter, and a second one at the lower level to select the group or category.
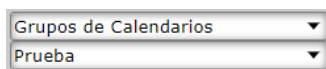
Picture 95: Filter by group

In the example above, the calendars whose group is called "Prueba" are filtered out.

4.4.6 CHANGE THE DATE FORMAT

To change the date format, access the "preferences" window via the main menu.

Once opened, it is possible to change the date format as well as the first day of the week. The current selection will be marked and the other selection can be marked.
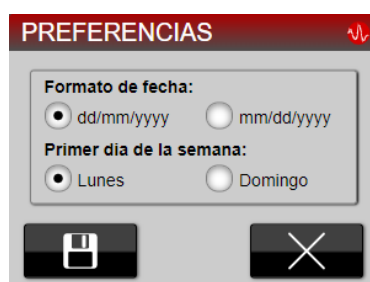
Picture 96: SIME Calendar preferences

4.4.7 READING OF NOTIFICATIONS

Notifications in the Calendar application are informational in nature. No notifications for emergencies or failures specific to the Control application will not be presented.

To read the notifications, simply click on the notification bar and a window will pop up showing the notifications from the Calendar application.
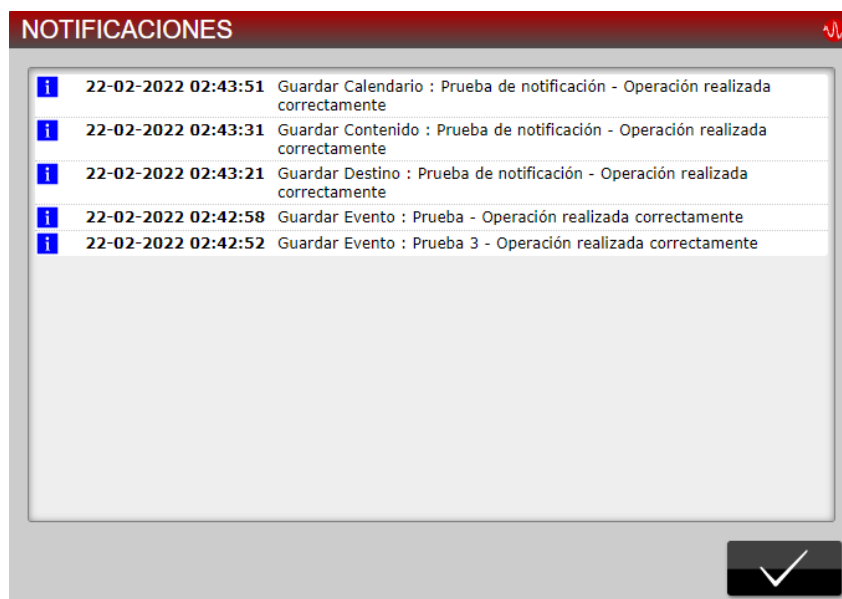
Picture 97: SIME Calendar notifications window

4.5. SYSTEM SUPERVISION

4.5.1 NOTIFICATIONS

Notifications in the Calendar application are always informative. Do not warm of failures or emergencies in the system.

The notifications have the following structure:

Date and time of notification - Action to be taken - Name of object - Operation successfully completed

5. SIME EVAC

The SIME EVAC application allows the emergency management of a complex NEO system via Ethernet communication, as well as direct monitoring of the status of equipment and zones in the system.

To understand how this application works, we must describe two concepts that are unique to this SIME application: to understand how this application works, we must describe two concepts that are unique to this SIME application:

- Evacuation zones: this is a set of zones or groups of zones in the system (those that are registered in the SIME Control application). Evacuation commands can be assigned to these zones.

- Evacuation commands: actions to be performed by the system assigned to evacuation zones (e.g. triggering evacuation messages).

5.1. DESCRIPTION OF THE INTERFACE

The interface of this application is described below:
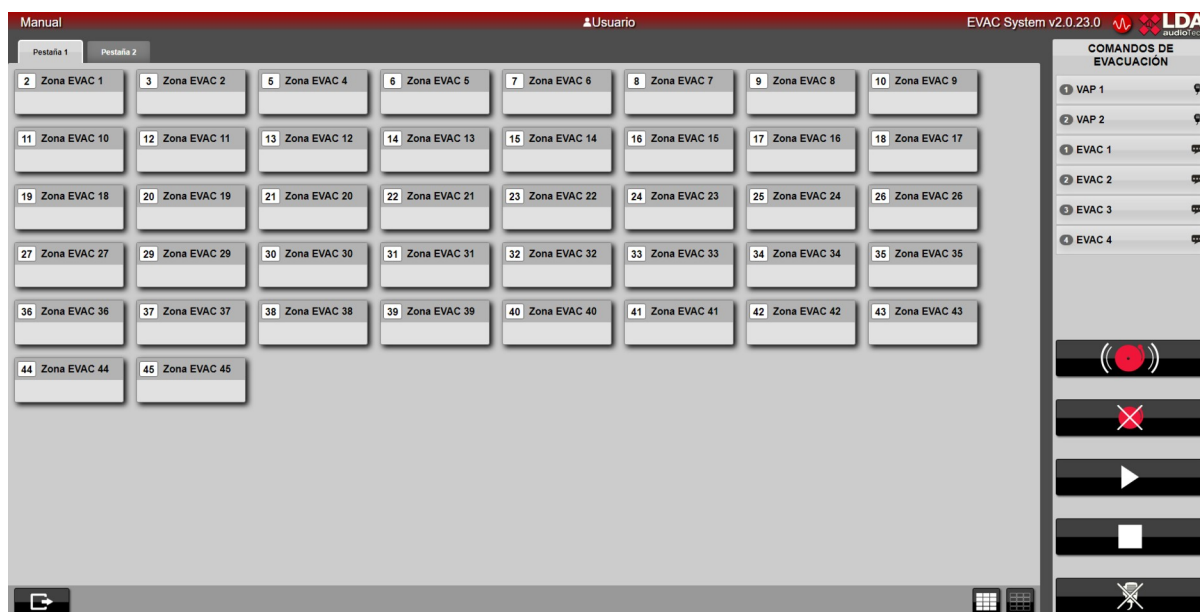
Picture 98: SIME EVAC interface

The interface of this application is divided into three parts, the top panel being the same as in all SIME applications. The main changes are presented in the central panel and the side panel.

(a) CENTRAL PANEL

The central panel is divided into three parts. At the top level are the different tabs grouping the evacuation zones; at the middle level, the evacuation zones; and at the bottom level, the controls for selecting all the zones and for exiting the application.

Picture 99: SIME EVAC Central panel

(b) EVACUATION ZONE BOXES

These boxes represent one or more zones of the public address system, their structure is as follows:

- At the top, the identifier of the evacuation zone next to its name.

- Icons representing the status of the evacuation zone will be displayed at the bottom. See "Icons and Signs" for more details (section 5.4.1).

Picture 100: Evac zones

Like the zones in the SIME Control application, they are colored blue when selected.

(c) SIDE PANEL

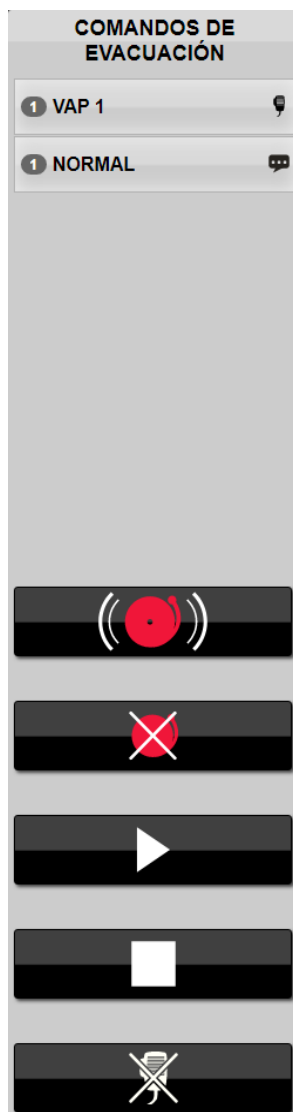The side panel of this application is fixed, unlike the side panels of the SIME Control application. This panel shows a list of the evacuation commands to be launched at the top, as well as the controls for assigning these commands.

Picture 101: SIME EVAC Side panel

5.2. ICONS AND SIGNALS

All SIME EVAC controls and signals are listed below:

Icon or signal	Name	Description
	Start emergency	Starts the state of emergency in the selected evacuation zones.
	Stop emergency	Stops the emergency state in the selected evacuation zones.
	Start emergency message	Starts the selected emergency message in the selected evacuation zones.
	Stop emergency message	Stops the selected emergency message in the selected evacuation zones.
	Unassign emergency microphone	Deassigns the emergency microphone of the selected evacuation zone.
	Exit	Exits the application. Is in the pop-up window for exiting the application. It is located int the window to exit the application.
	Emergency	Indicates emergency status in the evacuation zones in which it appears.
	Evacuation message playing	Indicates that the evacuation message with identifier "x" is being played in that zone.
	Evacuation message not played	Indicates that the evacuation message with identifier "x" cannot be played in that zone.
	Evacuation message not played completely	Indicates that the evacuation message with identifier "x" could not be played completely in all zones of the system.
	Emergency microphone assigned	Indicates that the emergency microphone with identifier "x" has been assigned to that zone.
	Emergency microphone not assigned	Indicates that the emergency microphone with identifier "x" cannot be assigned to that zone.
	Emergency microphone not correctly assigned	Indicates that the emergency microphone with identifier "x" could not be fully routed.

	SIME Control	Control that directs to the SIME Control application. It can be found in the Apps window if this application is configured in the system.
	SIME Calendar	Control that directs to the SIME Calendar application. It is located in the Apps window if this application is configured in the system.
	SIME PCC	Control that directs to the SIME PCC application. It is located in the Apps window if this application is configured in the system.
	Select all zones	Selects all evacuation zones.
	Deselect all zones	Deselects all selected evacuation zones.

5.3. TYPICAL ACTIONS

Typical actions specific to this application are defined below. Other actions that are shared by all applications, such as exiting the application, can be found in the section "Typical SIME Control actions" (section 3.4).

5.3.1 START EMERGENCY

The following steps are necessary to initiate emergency mode in an evacuation zone:

1. 1. Click on the "start emergency" control on the side panel.

Picture 102: Start emergency button

2. 2. If the zones have been set to emergency mode correctly, the zone in emergency icon will be added to the bottom of the zone box.
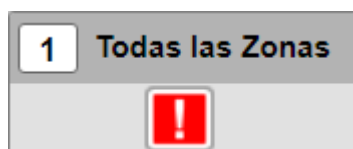
Picture 103: Evacuation zone box with emergency status

5.3.2 STOP EMERGENCY

The following steps shall be taken to stop the emergency mode in one or more evacuation zones:

1. 1. Press the "emergency stop" control on the side panel.

Picture 104: Emergency stop button

2. 2. If the zones have been successfully emergency deactivated, the emergency icon at the bottom of the zone box will disappear.
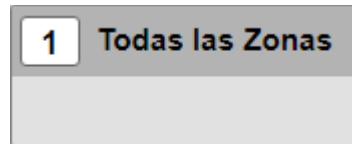
Picture 105: Evac zone box

5.3.3 PLAY EVAC MESSAGE

To initiate an evacuation message in one or more evacuation zones, follow the steps below:

1. 1. Select the evacuation zone or group of evacuation zones (the emergency must be activated in these zones beforehand). When selected, they should be coloured blue.

2. 2. Select the evacuation message you wish to launch in the right-hand side panel.

Picture 106: Selected EVAC command

3. 3. Click on the "start evacuation message" control.

Picture 107: Start EVAC message button

4. 4. If the evacuation message has been successfully assigned and is being played, an icon indicating that an evacuation message is being played and a number indicating the ID of the evacuation message being played shall be added to the

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bottom of the evacuation zone box.

Picture 108: Evacuation zone box with assigned message

5.3.4 STOP EVACUATION MESSAGE

To stop an evacuation message being played in an evacuation zone, follow the steps below:

1. 1. Select the evacuation zone or group of evacuation zones from which the evacuation message is to be stopped.

2. 2. Click on the "stop evacuation message" control.

Picture 109: Stop evacuation message button

3. 3. If the evacuation message has been de-assigned correctly, the message icon shall not appear in these zones.
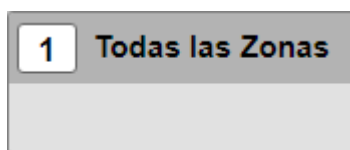
Picture 110: EVAC Zone box

6. SIME PCC

The application SIME PCC, or Central Control Station, allows the control and monitoring of several SIME Control type applications distributed on different servers. Its functionality is similar to SIME Control, with the difference that the different actions (changing gain or routing, loading presets or playing pre-recorded messages) are performed on other SIME Control applications. In other words, it is a master-slave system that allows the control of different off-site systems from a centralized control station.

To understand how this application works, it is necessary to understand two concepts:

- Central Control Station: this is the PCC application from which the subsystems will be controlled.

- Station or subsystem: these are the different SIME Control applications to be controlled from the Central Control Station.

6.1. INTERFACE DESCRIPTION

The interface of this application is similar to SIME Control, with the exception of the central panel, a new side panel on the left side and different buttons on the control bar. The rest of the panels are detailed in the section describing the SIME Control interface (see section 3.1).
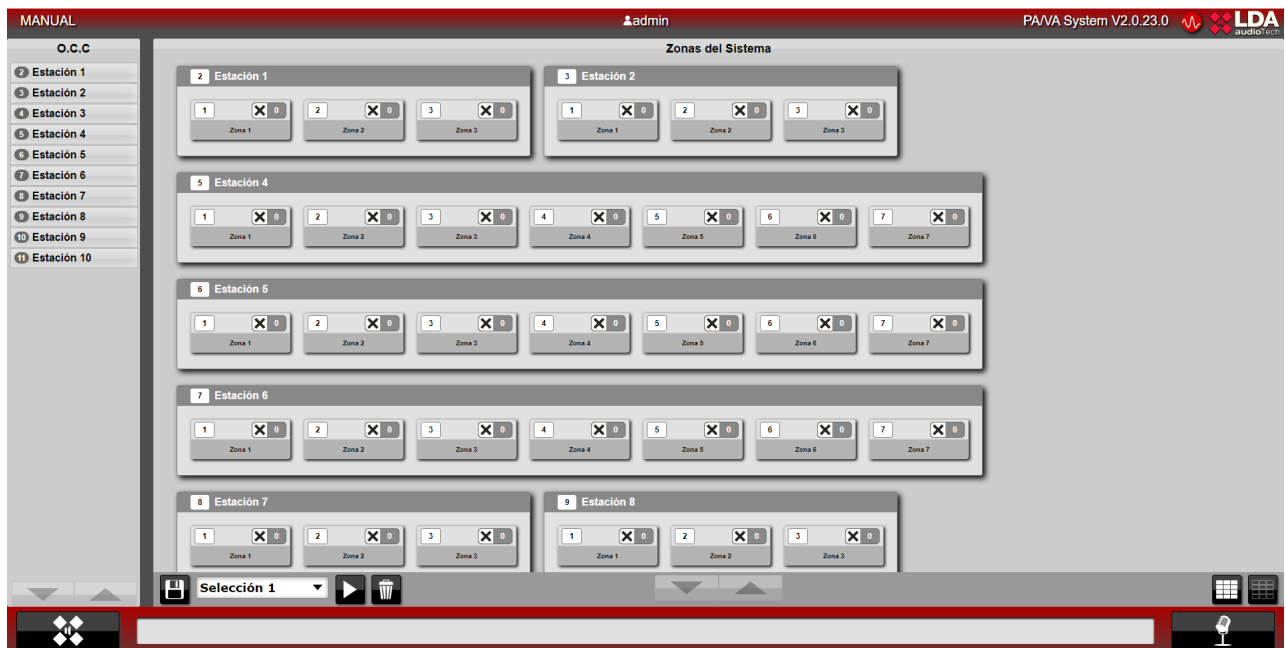
Picture 111: SIME PCC Interface

(a) LEFT SIDE PANEL

In this side panel, the subsystems controlled by the application can be displayed.
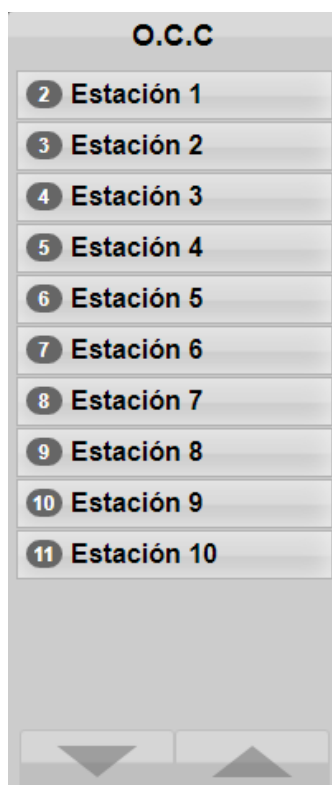
Picture 112: SIME PCC Station list

The subsystems shall be displayed in descending order of identifier next to their name. In case of connection failure in a subsystem, the subsystem shall be disabled and an error signal shall be displayed (see section 6.4.2).

If a subsystem is clicked on, its zones flash blue on the side panel.

(b) SIME PCC CENTRAL PANEL

The central panel of this application shows the different subsystems as if they were zones in the SIME Control application. Each subsystem is represented as a box inside which there are other boxes, representing each zone of that subsystem (the size of the box will depend on the number of zones in each subsystem).

Picture 113: SIME PCC Central panel

Within the zone boxes of each subsystem, the zone identifier is shown at the top of the box along with the routed source icon and the routed source identifier, and the name assigned to the zone is shown at the bottom.

(c) CONTROL PANEL

The control panel removes the gain control, as this can only be modified from the SIME Control application, and adds zone pre-selection control.

Picture 114: SIME PCC Control panel

This control allows you to save zone selections to make it quicker and easier to assign sources (similar to presets but only used at the selection level).

6.2. ICONS AND SIGNS

The icons and signals that appear in SIME PCC are the same as those shown in SIME

Control, so they can be consulted in that section.

6.3. MENUS

Certain menus of this application are the same as those of the SIME Control application, so only changes or menus specific to this application will be detailed.

MAIN MENU

From this menu we can access the different side panels and menus of the configured modules. This menu increases or decreases depending on the number of modules configured.

SIME PCC has two new menus:

- The remote access menu.

- The calendar menu.

There are also modifications to the emergency side panel.

Picture 115: SIME PCC Main menu

6.3.2 CONTROL PANELS AND MODULE MENUS
(a) (a) REMOTE ACCESS

The remote access menu allows direct access to the interface of the SIME Control applications of the subsystems. To access it, simply click on "remote access" in the main menu and the following interface will appear in the central panel:

Picture 116: Remote access window

Clicking on a subsystem in the left side panel will take you to the SIME Control interface of that subsystem.

(b) CALENDAR

The calendar menu gives access to the Calendar module of the PCC application, this module is the same as the SIME Calendar application.

(c) EMERGENCY

The static emergency side panel controls have been modified in this application with respect to SIME Control. In this application only two buttons will appear, to launch an emergency and to stop the emergency.

Picture 117: Start/Stop Emergency

The emergency launched shall be the one defined in the SIME Control application of the subsystem as the favourite emergency (emergency preset).

6.4. TYPICAL ACTIONS

Typical actions specific to this application are defined below. Actions that are shared by all applications, such as exiting the application, can be found in the section "Typical SIME Control actions" (section 3.4).

6.4.1 SAVING A PRE-SELECTION OF ZONES

To save a zone preselection, first select the zones to be included in the selection. Then click on the "save" button on the control panel, which will open a pop-up window in which the name of the preselection will be indicated in order to save the preselection.

Picture 118: Save zone selection window

6.4.2 SELECTING ZONES WITH PRE-SELECTION

To use this action, a pre-selection must first be created using the selection control.

Picture 119: Zone selector menu

Once selected, click on the "play" button to select these zones.

6.4.3 ACCESSING A SUBSYSTEM BY REMOTE ACCESS

To access a subsystem via remote access, it is necessary to first access the remote access screen via the main menu.

Subsequently, select the subsystem to which you want to connect by clicking on it in the left-hand sidebar.

6.5. SYSTEM SUPERVISION

6.5.1 NOTIFICATIONS

As in the other applications, access to the list of notifications is via the notification bar. In this application, notifications are only of the error type, so only notifications related to offline devices will be displayed.

Picture 120: SIME PCC Notifications window

The notification format is the same as in the other applications. To delete a notification, click on it and on the "accept" button and it will be deleted.

7. SIME SERVICE

It is important to understand that although we can access the user interface of any SIME application through the web browser, SIME is always running on a server. On that server there will be a service running called "PAVA Service", which has a small graphical interface through which we can carry out some actions.

Once started, the service is represented by the LDA icon in the icon tray. Right-click on it to access a menu with several options, as shown in the following image:
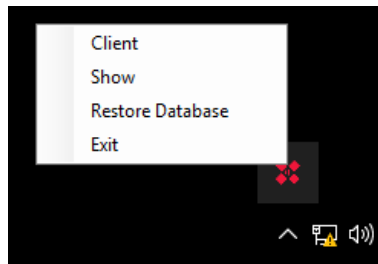
Picture 121: SIME Service menu

7.1 CLIENT

Opens a SIME (web) client in full screen.

7.2 SHOW

Clicking on this option will open a pop-up window in which it is necessary to enter the access password (consult the system administrator). Once entered, a new window will open in which relevant system information is displayed:
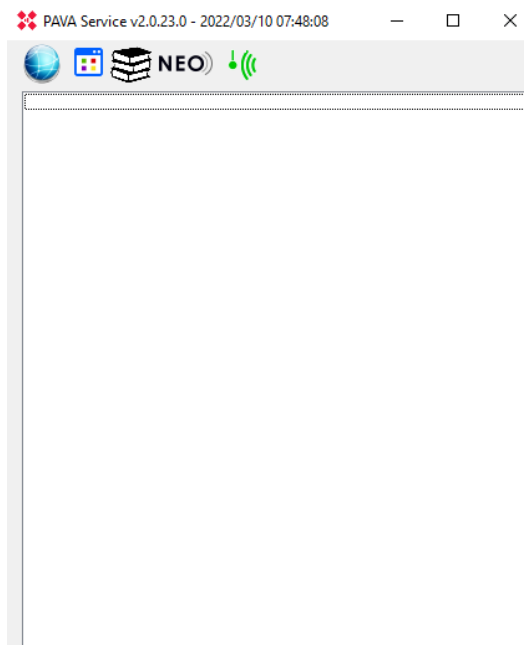
Picture 122: Service status window

At the top you can see the version of the installer software as well as the date and time at which the service was started. Next, you can see several icons, which are not always visible; one or the other will appear depending on the devices configured in the database:

Icon	Name	Description
	WebSocket	If it is blue, it means that the service connects correctly with the web; if it is grey, it does not connect correctly. If we click on this icon, SIME will open the window of clients connected to the service.
	SNMP	It does not change status. If you click on this icon, a .txt file is downloaded with a summary of the SNMP variables of the system.
	Client	Does not change status. Clicking on the icon opens a SIME client (web).
NEO⟩	Reset NEO	It does not change status. If we click on this icon, the installation version of the NEO equipment is reloaded (in case it has changed).
	Activate/De-activate AGC	If it is green it means that the CAG module is active, if it is grey it means that it is inactive. We can click on the icon to change the status (more information in the sections on the CAG module).

If we click on the WebSocket icon, a window will appear in which we can see the IP addresses that are connected to the service and with which user.
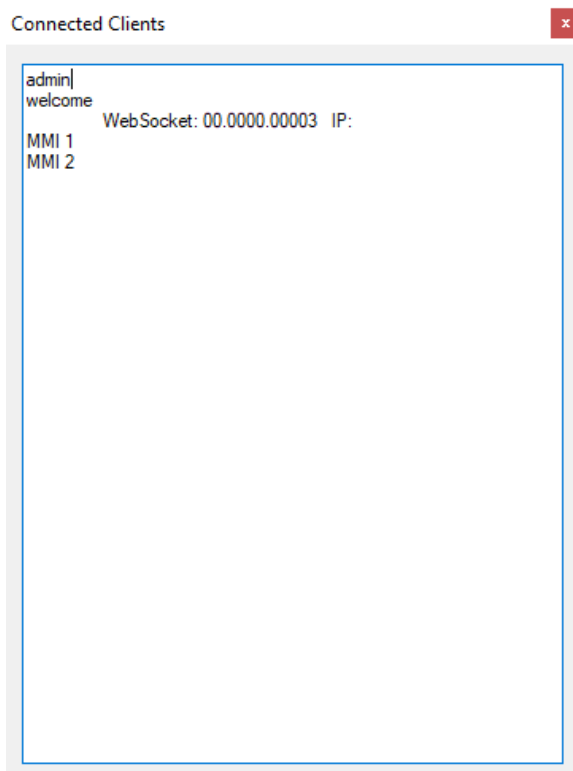
Picture 123: Connected clients window

The "welcome" user is a user of the service itself; if the application is correctly connected,

this user should appear logged in.

A list of the status of the configured devices (online/offline) is then displayed; this list will change depending on the system.
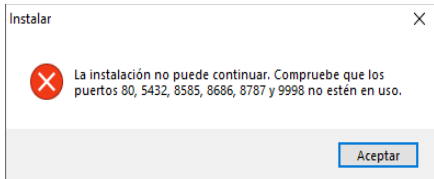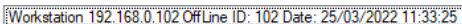
7.3 EXIT

This menu option stops the SIME service. Clicking on this option will open a window in which the access password must be entered (consult the system administrator) before closing the SIME service.

NOTE: If SIME service is closed, the connection with the rest of the applications and modules of the system will be lost.

8. FREQUENT PROBLEM RESOLUTION

The problems detailed below will always originate from an alteration in the configuration of the equipment or software. The installation of SIME implies that the equipment and software are configured and tested so that the system is stable.

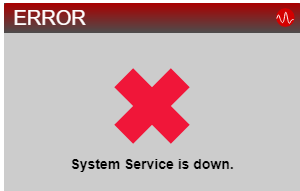| Detected fault	Origin	Solution
System service is down	This notification appears when the SIME service is not properly started on the server.	It is necessary to launch the SIME service and verify that the IP address of the server is correct.
SIME Service doesn't open	There can be several reasons for this. The most common is that another SIME service is running. Other reasons may be that the server's firewall or antivirus is interrupting the service.	It will be necessary to check that there is no other SIME service started. It will also be necessary to check the firewall rules corresponding to the SIME service.
Installation can not continue	If the ports required to run the service are not released during installation, SIME will report an error indicating that the ports are busy.	Check the occupied ports on the server and free them before restarting the installation.
Device offline Workstation 192.168.0.102 OffLine ID: 102 Date: 25/03/2022 11:33:25	This message will appear in the notification window along with the name, machine identifier and configured IP address. The loss of connection may be due to a change of IP address of the equipment in question, equipment disconnected from the network or even equipment shut down.	If the computer is not off, check the network infrastructure, that the IP address of the computer is correct and verify the connection to the computer from the server (use the ping command pointing to the computer in question).
Web client doesn't appear	The IP address of the server does not match the one configured in the SIME database.	Verify that the IP address is correct and initially configured in SIME. Check the correct IP address in the browser.

Detected fault	Origin	Solution
NEO System Wrong Channel Configuration	It has its origin in the change of the configured NEO system, either in the number of zones or in the physical change of some equipment for another.	Set up the same zones in the NEO system as indicated in SIME. NEO)) To reset the value, click on the icon in the SIME service show window.
No connection to matrix type equipment	There may be multiple reasons for the error, among them may be that the configured model of the matrix type equipment does not match.	Check that the ZES-22 matrix type units have the correct model configured (4x0, 2x2, etc).
Zone gain cannot be changed	Mainly it can be caused by the intervention of the AGC module in that zone or by disconnection of the equipment associated with that zone.	Check that the AGC module is not active in that zone, consulting the respective AGC menu or in the box of that zone. Check that the equipment associated with that zone is connected, by consulting the notifications window.
Unable to assign a source to zone	It may originate in the user permissions. It can also originate from the zone being occupied by another source with higher priority.	Check that the user has routing permissions for that source and zone. Check that there is no higher priority source routed in that zone.
Pre-recorded messages do not work	It usually originates in the server's sound card.	Check that the sound card is functional, consulting the operating system's playback menu, where the installed playback devices will appear. Verify correct operation by playing a test message.

Detected fault	Origin	Solution
The app is in use by another user	Another user with the specified IP address is connected to this application.	If the other user is not logged out, the application cannot be accessed.
Zones are not represented in SIME EVAC	NEO system configuration change.	Check that all zones have channels assigned in the NEO system.
HTTP ERROR 404	HTTP port 80 has been occupied or the configuration of the web server has been changed.	Release the indicated port. If the error persists, it will be necessary to reinstall the SIME service.
It Works" message appears in place of SIME website	The Apache service has been modified.	Reinstall the SIME application to reconfigure the service.
TTS module does not work	A possible error is that the TTS server is not running.	Check the connection to the TTS server.
SIP module does not work	A possible error is that the IP telephony server is not running.	Check the connection and correct operation of the IP telephony server.
No signal present in an area	The origin can be multiple (disconnected equipment, failure in the audio network, failure in the audio source or in the connection cabling), but it is usually due to a gain below the detection threshold (-40dB).	Check the equipment and cabling of the system, as well as the network. Increase the gain of the input source and/or amplifier output.
The SIME service crashes and slows down.	The origin can be multiple, network failures or server equipment failures.	An administrator user must restart the SIME service.

9. THIRD PARTY INTEGRATIONS

The SIME application has several protocols for integration with third-party systems. These

protocols must be configured by an LDA technician in order to be used.

It is important to emphasize that integrations with third parties can be made only with the SIME Control application and its modules, and that SIME control via graphical interface and third-party integration protocols can coexist.

9.1. UDP COMMANDS

This is a protocol based on UDP commands. With this protocol it is possible to both control and monitor SIME Control by sending UDP commands to the configured port.

Some of these actions include:

- Source routing control.

- Zone gain control.

- Monitoring of the AGC module.

- Etc.

The document containing these commands is customized for each system and is therefore not included in this manual (consult your system administrator).

9.2. SNMP PROTOCOL

This is a protocol based on the publication of SNMP variables. With this protocol the status of SIME Control can be monitored, however it cannot be controlled. An example of the list of variables:

```
OID: 1.3.6.1.2.1.2.0.0 Name: System Name Type: OctetString Read Only: True Value:Station
OID: 1.3.6.1.2.1.2.0.1 Name: System Type Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.2 Name: Master system name Type: OctetString Read Only: True Value:PCO
OID: 1.3.6.1.2.1.2.0.3 Name: Master system ID Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.4 Name: Master system connection Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.5 Name: Emergency status Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.6 Name: Name of zone 1 Type: OctetString Read Only: True Value:Zone 1
OID: 1.3.6.1.2.1.2.0.7 Name: Status of zone 1 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.8 Name: Route of zone 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.9 Name: Gain of zone 1 Type: Integer32 Read Only: True Value:-40
OID: 1.3.6.1.2.1.2.0.10 Name: Signal of zone 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.11 Name: Using the backup channel Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.12 Name: Name of zone 2 Type: OctetString Read Only: True Value:Zone 2
OID: 1.3.6.1.2.1.2.0.13 Name: Status of zone 2 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.14 Name: Route of zone 2 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.15 Name: Gain of zone 2 Type: Integer32 Read Only: True Value:-55
OID: 1.3.6.1.2.1.2.0.16 Name: Signal of zone 2 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.17 Name: Using the backup channel Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.18 Name: Name of zone 3 Type: OctetString Read Only: True Value:Zone 3
OID: 1.3.6.1.2.1.2.0.19 Name: Status of zone 3 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.20 Name: Route of zone 3 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.21 Name: Gain of zone 3 Type: Integer32 Read Only: True Value:-50
OID: 1.3.6.1.2.1.2.0.22 Name: Signal of zone 3 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.23 Name: Using the backup channel Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.24 Name: Name of zone 4 Type: OctetString Read Only: True Value:Zone 4
OID: 1.3.6.1.2.1.2.0.25 Name: Status of zone 4 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.26 Name: Route of zone 4 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.27 Name: Gain of zone 4 Type: Integer32 Read Only: True Value:-50
OID: 1.3.6.1.2.1.2.0.28 Name: Signal of zone 4 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.29 Name: Using the backup channel Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.30 Name: Name of zone 5 Type: OctetString Read Only: True Value:Bypass
OID: 1.3.6.1.2.1.2.0.31 Name: Status of zone 5 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.32 Name: Route of zone 5 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.33 Name: Gain of zone 5 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.34 Name: Signal of zone 5 Type: Integer32 Read Only: True Value:3
OID: 1.3.6.1.2.1.2.0.35 Name: Using the backup channel Type: Integer32 Read Only: True Value:2
OID: 1.3.6.1.2.1.2.0.36 Name: Name of Audio Input 1 Type: OctetString Read Only: True Value:OCC Prerecorded
OID: 1.3.6.1.2.1.2.0.37 Name: Status of Audio Input 1 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.38 Name: Gain of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.39 Name: Signal of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.40 Name: Name of Audio Input 1 Type: OctetString Read Only: True Value:Prerecorded
OID: 1.3.6.1.2.1.2.0.41 Name: Status of Audio Input 1 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.42 Name: Gain of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.43 Name: Signal of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.44 Name: Name of Audio Input 1 Type: OctetString Read Only: True Value:OCC Mic
OID: 1.3.6.1.2.1.2.0.45 Name: Status of Audio Input 1 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.46 Name: Gain of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.47 Name: Signal of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.48 Name: Name of Audio Input 1 Type: OctetString Read Only: True Value:BCC Mic
OID: 1.3.6.1.2.1.2.0.49 Name: Status of Audio Input 1 Type: Integer32 Read Only: True Value:1
OID: 1.3.6.1.2.1.2.0.50 Name: Gain of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.51 Name: Signal of Audio Input 1 Type: Integer32 Read Only: True Value:0
OID: 1.3.6.1.2.1.2.0.52 Name: Name of Audio Input 1 Type: OctetString Read Only: True Value:BCC Prerecorded
```

Picture 124: SNMP Variables

As with the previous protocol, the document containing all the SNMP variables, their type and value is customized for each project. Although it can be accessed through the "Show" menu of the SIME service (when it is active).

9.3. INTEGRATIONS UNDER DEDICATED STUDY

SIME allows integration with other protocols on request. These integrations are to be reviewed by SIME's software development team (consult your service provider).

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