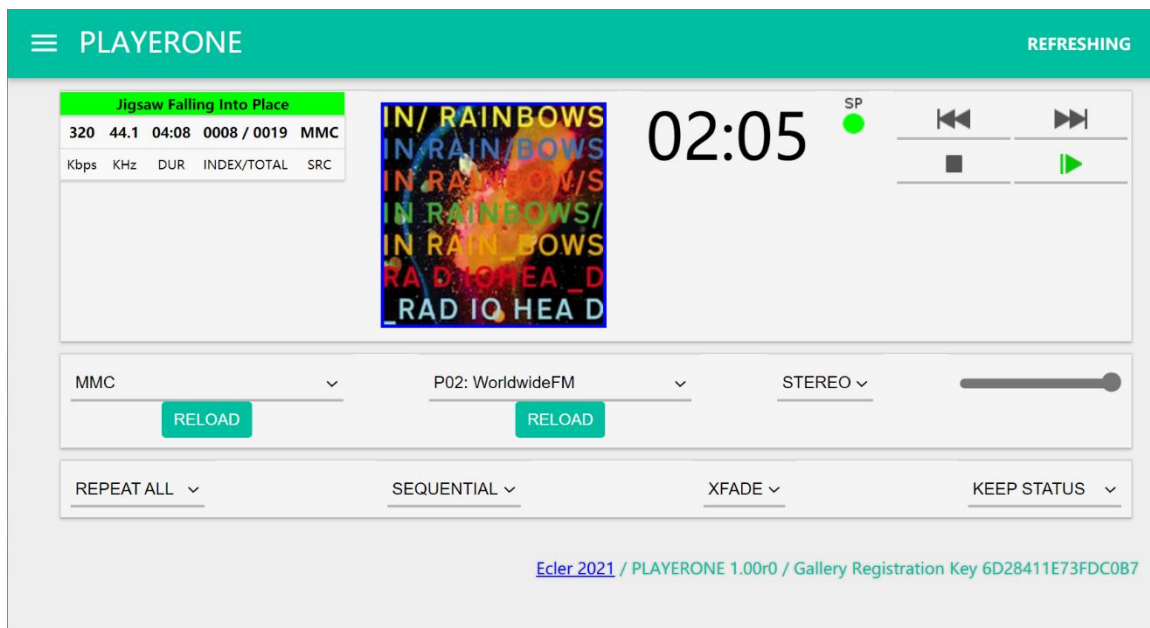


PLAYER ONE & PLAYER ZERO – Web GUI (v1.00r0)

AUDIO PLAYERS

Streaming and local media audio player



USER MANUAL

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1. INTRODUCTION

PLAYER ONE / PLAYER ZERO has a web application, embedded in the device itself, that allows you to configure it. It is not necessary to install any additional software. With this application, you can configure the device's advanced options, create playlists, schedule calendar events, create scripts or control basic functions remotely. The application can be accessed in a web browser from any device that is connected to the same local network, via Ethernet (wired) or WiFi.

2. FIRST STEPS

In order for the device to access the PLAYER ONE / PLAYER ZERO web application, it must be connected to the network, either via a cable (RJ -45 connector) or wirelessly (WiFi).

- Wired (Ethernet connection): By default, PLAYER ONE / PLAYER ZERO is set to DHCP mode. It will be assigned an IP address automatically.
 - Make sure that the static IP network parameters are compatible with your local network and the existing IP range of the system.

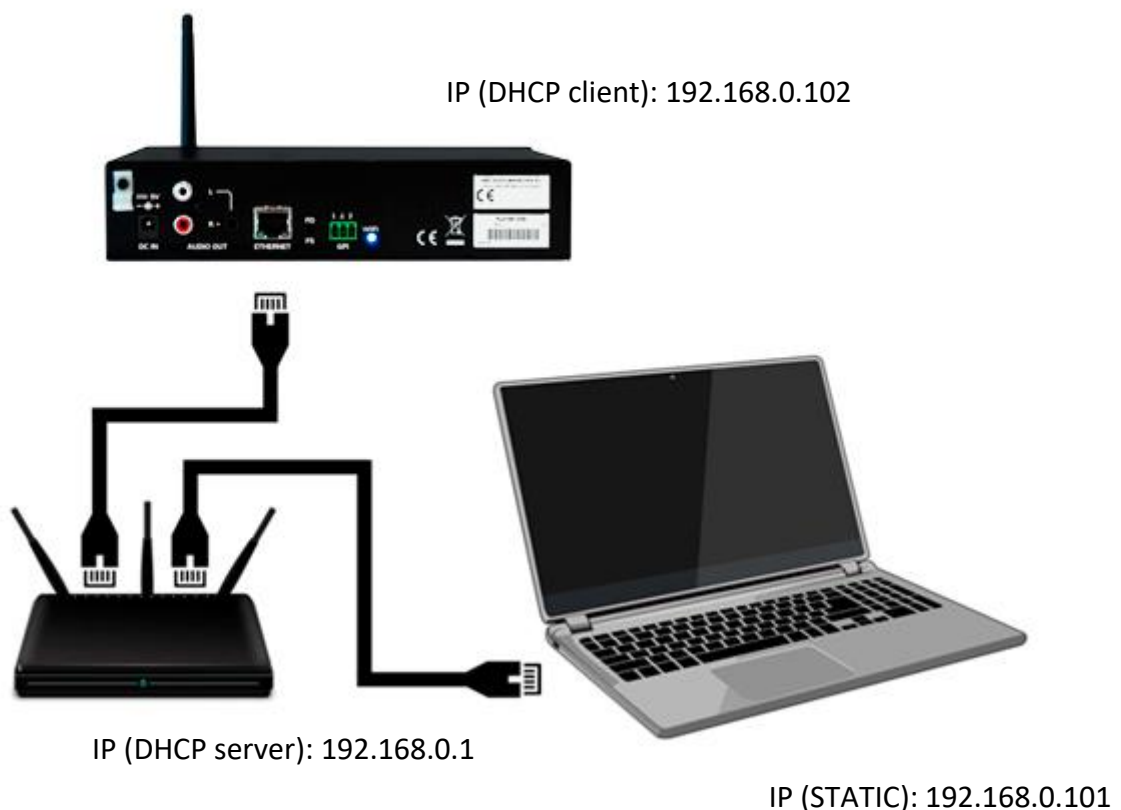


Figure 1: example of connection to a local network via the Ethernet network interface (wired)

- WiFi: PLAYER ONE / PLAYER ZERO has a WiFi network interface, which means that mobile devices can stream audio to the device. It can be configured wirelessly. There two modes of operation:
 - MASTER mode: point-to-point connection. The device's WiFi network interface is set to this mode by default. Connect your WiFi device (computer, smartpone, etc.) as a client of the device via your WiFi network wizard

(connect to the PLAYER-WIFI network, default SSID). The default password is: 0123456789.

Please Note: in this operating mode, no Internet connection is available. However, it will be useful when opening the web application for the first time and configuring the network parameters according to your needs.

- CLIENT mode: this connection mode allows the device to connect to your preferred WiFi network. Mobile devices must then be connected to the same network in order to be able to configure PLAYER ONE / PLAYER ZERO. If your WiFi network has an Internet connection, both PLAYER ONE / PLAYER ZERO and the mobile devices will have Internet access.

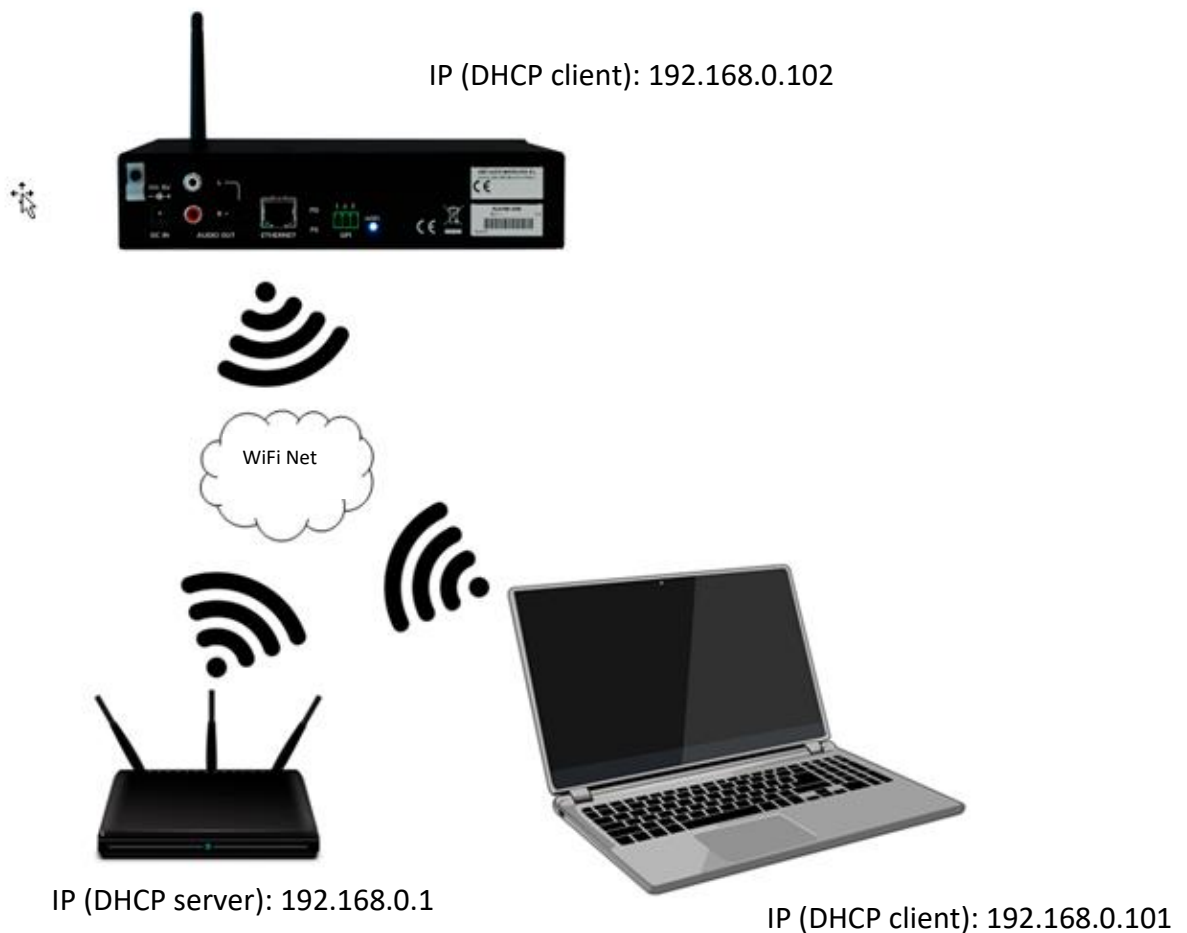


Figure 2: example of connection to a local network via WiFi network interface (wireless)

PLAYER ONE / PLAYER ZERO devices use the mDNS service so that they can be accessed intuitively through a web browser on the same local area network (LAN). To access the web application easily, enter device_name.local into the search bar of your browser. By default this is, "playerone.local" for PLAYER ONE, "playerzero.local" for PLAYER ZERO.

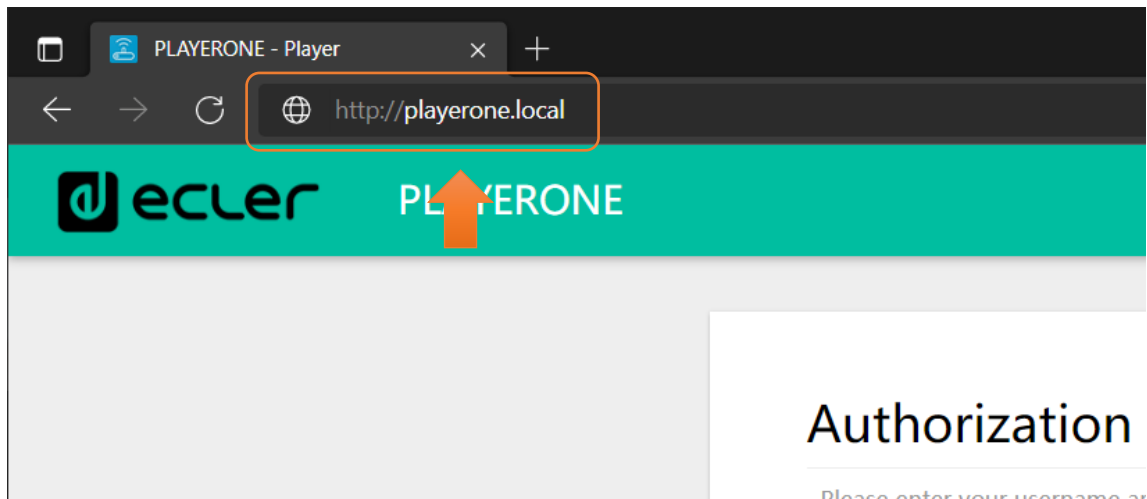


Figure 3: access via mDNS service

If you prefer (or if the mDNS service is not available), you can also access the device using the IP assigned to the PLAYER ONE / PLAYER ZERO:

- PLAYER ONE:
 - Press and hold the MENU button for a few seconds until the configuration menu appears.
 - Navigate by pressing the NEXT button, until the display shows WIFI or ETHERNET, depending on the chosen connection.
 - Press the rotary encoder (SELECT)
- PLAYER ZERO:
 - As there is no screen to show you the IP, you need to find it on the web GUI of the DHCP server (Switch/Router). Refer to the manufacturer's documentation.





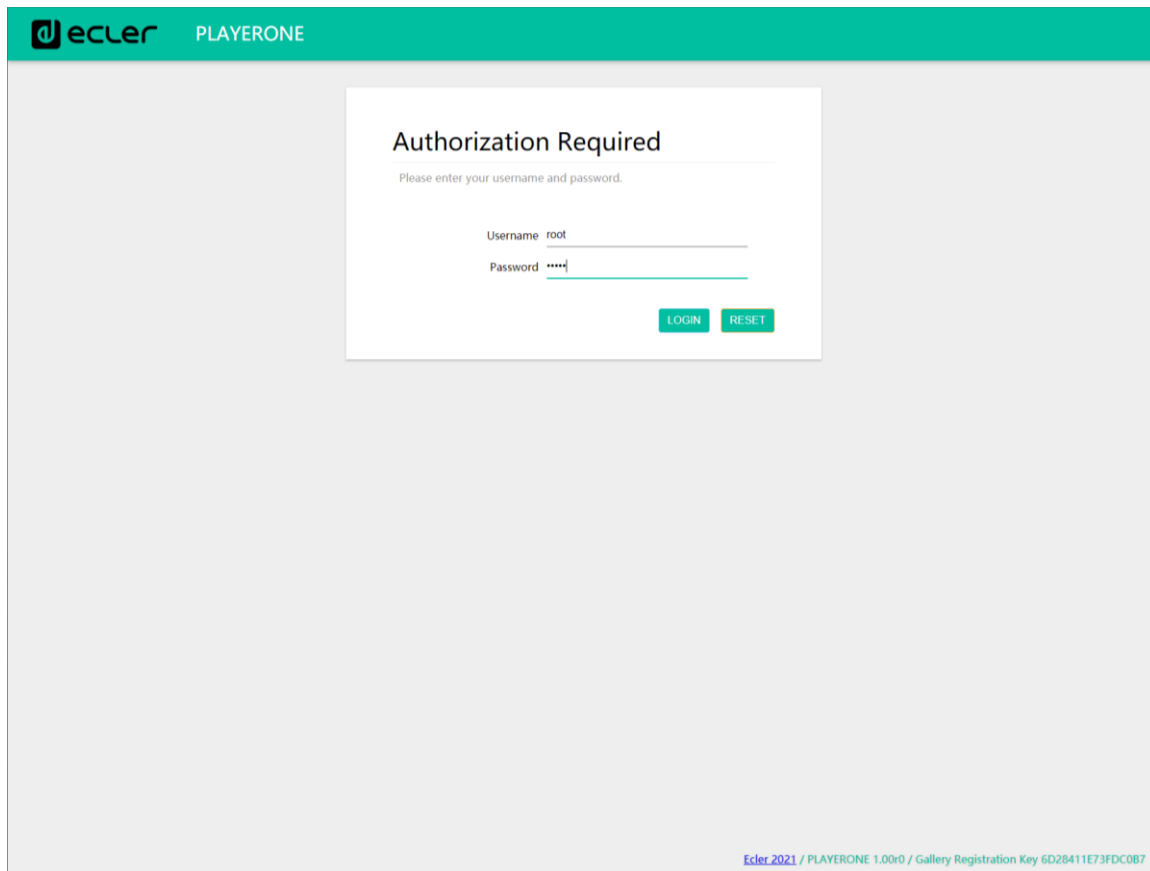
Icon	Device Name	IP Address	Protocol	MAC Address	Icon
	Player One	192.168.1.9	DHCP	0C:CF:89:21:E6:FD	
	Player Zero	192.168.1.146	DHCP	30:EB:1F:2B:CB:E0	

Figure 4: web GUI Router example

Type the IP address of the device into the navigation bar of your browser (the IP shown in Figure 5 does not have to match the one assigned to your device).

You will see the welcome screen. To access the application, the *username* and *password* are as follows (preset):

- Username: root
- Password: ecler



The screenshot shows a web application interface with a teal header containing the 'ecler' logo and the text 'PLAYERONE'. The main content area is a light gray background with a white central box titled 'Authorization Required'. Below the title, it says 'Please enter your username and password.' There are two input fields: 'Username' with the value 'root' and 'Password' with masked characters '*****'. Below the fields are two buttons: 'LOGIN' and 'RESET'. At the bottom right of the page, there is a small footer: 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 5: web application welcome page

2.1. Quick Guide for Ethernet Connection

- Connect the PLAYER ONE / PLAYER ZERO to a switch/router via the Ethernet interface (wired).
- Connect the computer/smart device to the same network.
- Enter "playerone.local" for PLAYER ONE, or "playerzero.local" for PLAYER ZERO, into your browser.

2.2. Quick Guide for WiFi Connection

- Connect the computer/smart device to the PLAYER-WIFI network.
Password: 0123456789
- Enter "playerone.local" for PLAYER ONE, or "playerzero.local" for PLAYER ZERO, into your browser.

3. DEVICE

3.1. Player

This page in the PLAYER ONE / PLAYER ZERO menu displays information about playback, *streaming tags* and detailed information about the audio content, and in addition, it shows the album art. It also allows basic functions to be controlled remotely, such as PLAY/PAUSE, STOP, PREV and NEXT; source selection and user presets; repeat, play, and fade modes; channels (stereo/mono), volume control; and reset mode. There is useful information at the bottom of the page as well, such as the firmware version and the [Ecler Gallery](#) registration key.

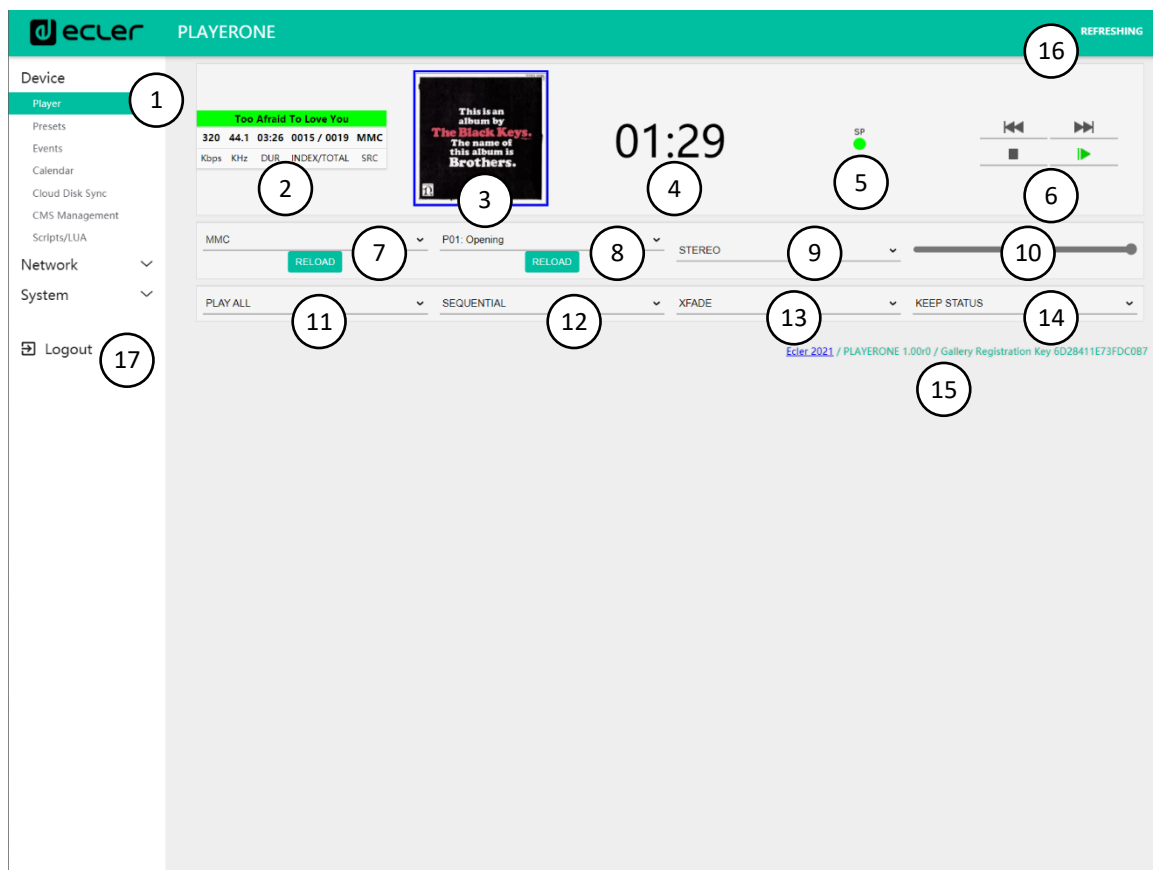
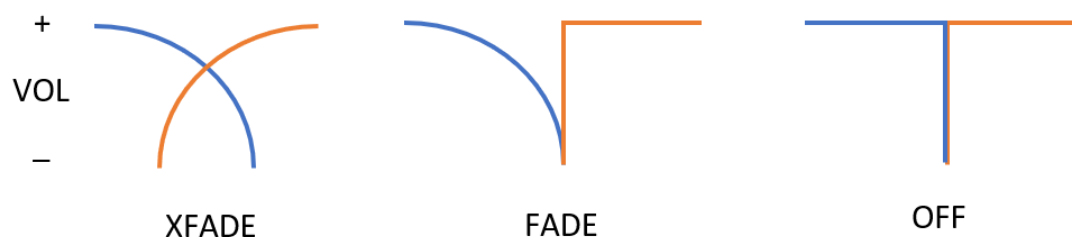


Figure 6: player page (Player)

1. Navigation menu: displays the web application's different navigation menus and submenus.
2. Streaming information: displays information about the stream or the audio file (depending on the way it is configured). If this information is not available, the default value is displayed, which is the URL.
 - ID3 Tags: title, artist, album, etc.

- Kbps: bit rate/s
 - KHz: sampling frequency
 - DUR: duration
 - INDEX/TOTAL: index or position within all the files
 - SRC: source (USB, MMC, NET, etc.)
3. Album art: displays the album art for the file. For the album art to be correctly displayed, the device needs to have an Internet connection. If the album art cannot be displayed, it will show a default image.
 4. Playback time: time elapsed since the start of playback of the URL or audio file.
 5. Signal presence: this will be green if the device has an audio signal at its output. If the device is not playing any audio, or if the volume level is too low, or the device is muted, it will be grey. This virtual LED will be the same colour as the SP LED on the front of the device. It is useful for dealing with issues when there is no audio signal.
 6. Playback controls: allow the device's playback controls to be operated remotely: PREV, NEXT, STOP, PLAY/PAUSE. *Please Note:* PLAYER ZERO has no playback controls on the front panel.
 7. Sources: allows one of the available sources to be selected. The RELOAD button allows the current source to be reloaded.
 8. Presets: allows one of the available presets to be selected. The RELOAD button allows the current preset to be reloaded. If changes are made to the current preset, a reload is required in order for the changes to be applied.
 9. Stereo-mono: selection of stereo output (left and right channels) or mono output (same signal on left and right channel).
 10. Volume: allows the volume to be controlled remotely. *Please Note:* PLAYER ZERO does not have a volume control on the front panel.
 11. Repeat mode:
 - PLAY ALL: Plays through the entire playlist once.
 - PLAY ONE: Only plays the first item in the playlist.
 - REPEAT ALL: Repeats the entire playlist on a loop.
 - REPEAT ONE: Only repeats the first item in the playlist.
 12. Play mode:
 - SEQUENTIAL: Plays through the entire playlist in alphanumeric order.
 - RANDOM: plays through the entire playlist in pseudo-random order.
 13. Transition mode, for transitions between audio files:
 - XFADE: The file that is playing fades out at the end of playback, as the next file increases in volume. There is a smooth transition between files (approx. 5 sec.). There is some overlap between tracks.
 - FADE: The file that is playing fades out at the end of playback (approx. 2.5 sec.). There is a smooth transition between files. There is no overlap between tracks.

- OFF: deactivated. There is an abrupt transition between files. There is no attenuation or overlap between audio files.



PLEASE NOTE: if the playback file is short (2-3 sec. tone, for example) and XFADE transition mode is used together with REPEAT ONE/ALL repeat mode, special attention must be paid to the playback times of the files, and the transitions. This may cause unexpected behaviour.

14. Reset mode:

- KEEP STATUS: when the device is reset, the playback status will be maintained: source, preset, playback (PLAY, STOP, etc.) repeat mode, etc.
- LOAD PRESET 1: when the device is reset, it automatically loads preset 1.

15. Information: this displays the following relevant information:

- Year of development
- Device firmware version
- Ecler Gallery platform registration key

16. Screen refresh: allows the screen refresh to be paused (SP, playback time, file information, etc.). It also shows the number of changes made to a configuration before it is saved.

17. Logout: this logs you out of the web application. You will be redirected to the welcome screen.

3.2. Presets

PLAYER ONE/ PLAYER ZERO allows up to 20 presets or user configuration memories to be created. If you recall a *preset* stored in the device at a later date, it will recall all the settings that are stored in that preset.

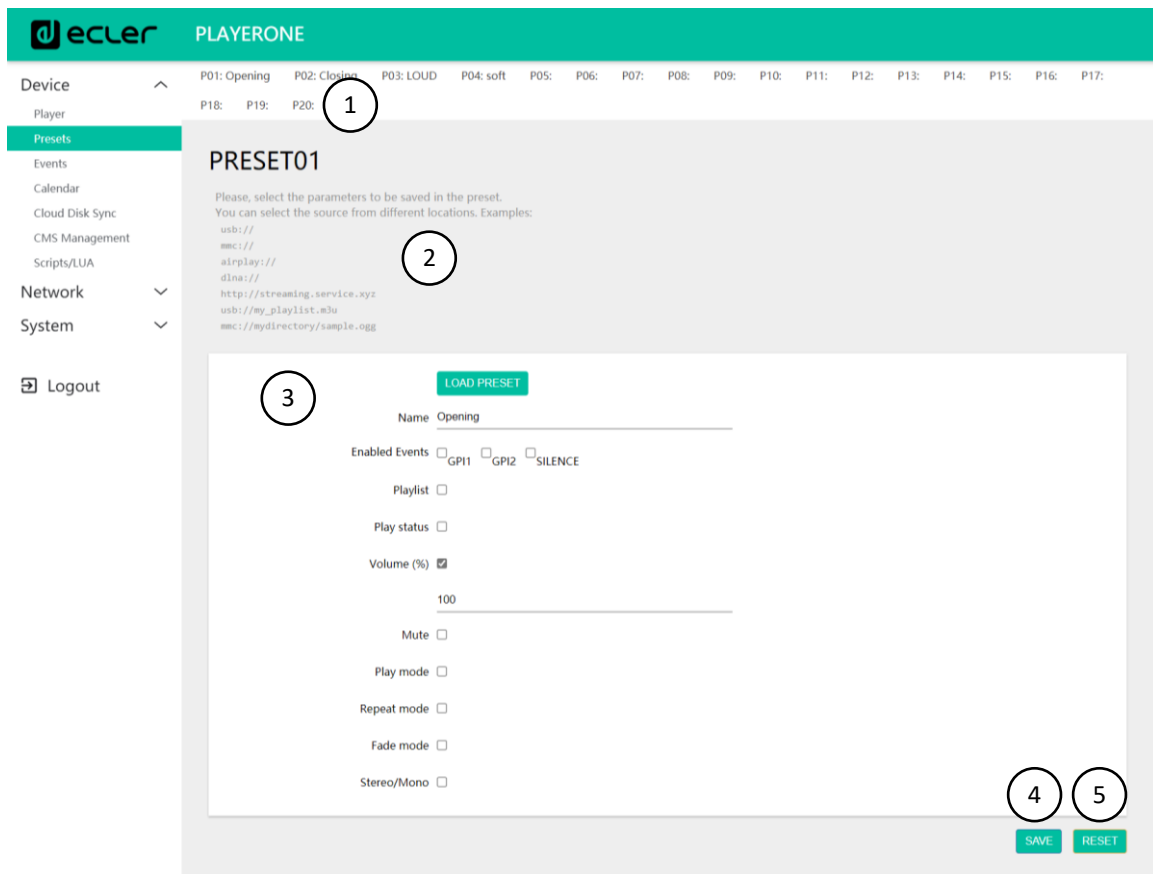
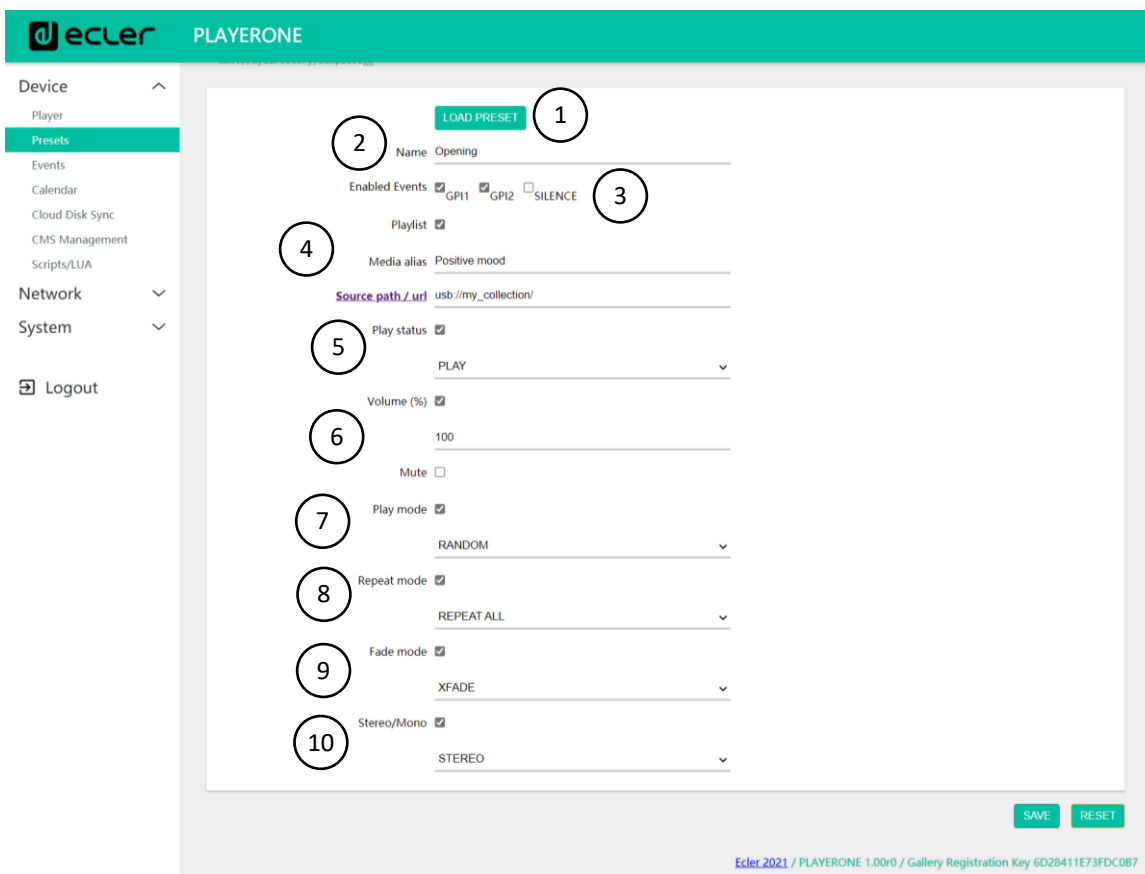


Figure 7: Preset configuration example

1. Page header: this will show the 20 *presets*. Their default names are: P01, P02... P20. When you click on the name, it will display the configuration for that *preset*. The names that appear for the *presets* can be edited within the preset configuration. After this setting is saved in the preset, you need to refresh the browser page (F5) in order to display the changes in the header.
2. Information: displays useful information for configuring the presets.
3. Configuration options for the selected preset.
4. Save button: saves the settings made to the *preset* that is being edited.
5. Reset button: resets the changes made to the last configuration that was saved in the *preset* that is being edited.



1. Load Preset button: loads the selected *preset*. This is useful as you can load the preset right after editing it, without having to change pages or handle the device.
2. Name: name of the *preset*. This is the name that will be displayed on the PLAYER ONE main menu/PRESETS (LCD screen), in the *preset* list on the Player page, in the *Presets* page header, and in the RePlayer application.
Please Note: PLAYER ZERO does not have an LCD screen.
3. Enabled Events: enables/disables events triggered by GPIs (General Purpose Input) and the silence detection event in the *preset*. The GPIs and the silence detection event must be configured on the Events page. See chapter 3.3. *Events* for more information.
Please Note: for the GPI event to work correctly it must be configured and enabled in the *preset*, and the preset must be loaded. If a *preset* is loaded when the GPIs are disabled, the GPIs will not work.
4. Playlist: if this option is enabled, when the *preset* is recalled, the *playlist* that is currently playing will be replaced by the source that is entered in the Source path/url field.

- Media alias: alias of the source that is hosted in the *preset* (Source path/url). This alias will be displayed on the PLAYER ONE main menu/SOURCE (LCD screen) as an available source, in addition to the default sources (USB, SD, etc.). It will also allow you to directly access that media from any preset, from the Player page or the RePlayer application.
- Source path/url: this stores a network or local address in the *preset*. This address must be a valid address for the correct playback of audio content on the device. We recommend reading the document "[how to identify audio stream URLs on the Internet](#)". You can refer to the application prompts for entering local addresses (USB, SD, AirPlay, etc.). You can click on "Source path/url" (blue) to open the address that is entered in this field in a new browser tab. This option is available on several pages within the application. It is useful for checking that an audio source (Internet radio, for example) is functioning correctly, or for copying the address to create *playlists* (.m3u file, for example). See technical information ([datasheet](#)) for audio and *playlist* formats that are supported by the player.

Please Note: Internet radios saved via the front panel of PLAYER ONE are stored in the Playlist field.

5. Play status: if this option is enabled, the status of the player will be overwritten when loading the preset.
6. Volume (%) /MUTE: if this option is enabled, the volume/MUTE of the player will be overwritten when loading the preset (in %).
7. Play mode: if this option is enabled, the play mode (sequential/random) will be overwritten.
8. Repeat mode: if this option is enabled, the repeat mode (play all, play one, repeat all or repeat one) will be overwritten.
9. Fade mode: if this option is enabled, the transition mode between tracks within a playlist (off/fade/*cross-fade*) will be overwritten.
10. Stereo/Mono: if this option is enabled, the mono or stereo output selection will be overwritten.

3.2.1. Examples of audio sources

Please Note: the addresses shown are examples, these Internet radio or local file addresses may not work on your player.

Media Path	Media Location	Items included in the play queue (just valid audio media)
usb://	USB storage device, root folder	Media stored in the USB root folder and up to the third level of sub-folders in it
mmc://	SD card storage device, root folder	Media stored in the SD card root folder and up to the third level of sub-folders in it
usb://musicfolder/jazz/	USB storage device, \musicfolder\jazz folder	Media stored in the USB device \musicfolder\jazz folder and up to the third level of sub-folders in it
mmc://musicfolder/jazz/	SD card storage device, \musicfolder\jazz folder	Media stored in the SD card \musicfolder\jazz folder and up to the third level of sub-folders in it
mmc://evacuation_message.mp3	SD storage device, root folder	mp3 single file named evacuation_message.mp3
usb://evacuation_message.mp3	USB storage device, root folder	mp3 single file named evacuation_message.mp3
usb://...path.../my_collection.m3u mmc://...path.../my_collection.m3u	Defined by the m3u playlist file	Media pointed by my_collection.m3u playlist ...path ... is the folder path where the m3u file is located
usb://...path.../my_songs.m3u8 mmc://...path.../my_songs.m3u8	Defined by the m3u8 playlist file	Media pointed by my_songs.m3u8 playlist ...path ... is the folder path where the m3u8 file is located
usb://...path.../best_of_rock.pls mmc://...path.../best_of_rock.pls	Defined by the pls playlist file	Media pointed by best_of_rock.pls playlist ...path... is the folder path where the pls file is located
http://www.ecler.com/music/party_songs/party.m3u	Defined by the m3u playlist file	Media pointed by party.m3u playlist, and located in a Internet url (corporate web, etc.)
http://www.ecler.com/music/party_songs/party.pls	Defined by the pls playlist file	Media pointed by party.pls playlist, and located in a Internet url (corporate web, etc.)
http://65.60.19.42:8040/	Real-time streaming	Media served by an Internet audio streaming service with url http://nnn.nnn.nnn.nnn:port (in the example http://65.60.19.42:8040/)

http://stream1.megarockradio.net:8240	Real-time streaming	Media served by an Internet audio streaming service with url http://url:port
http://208.92.53.90:443/LOS40_SC	Real-time streaming	Media served by an Internet audio streaming service with url http://url/folder
http://media.musicradio.com/channel01.m3u	Real-time streaming	Media served by an Internet audio streaming service, a playlist with url http://url/playlist.m3u

3.3. Events°

3 events are available: 2 of them are triggered by the GPI ports (by means of external, potential-free contact closures, which are connected to the GPI ports on the rear panel of the unit) and the other is triggered by silence detection. Both types of events can be configured on the Events page. By selecting the tab that corresponds to the event, you can access its configuration.

Please Note: bear in mind that, for the events to work correctly, they must be enabled in the *preset* currently in operation.

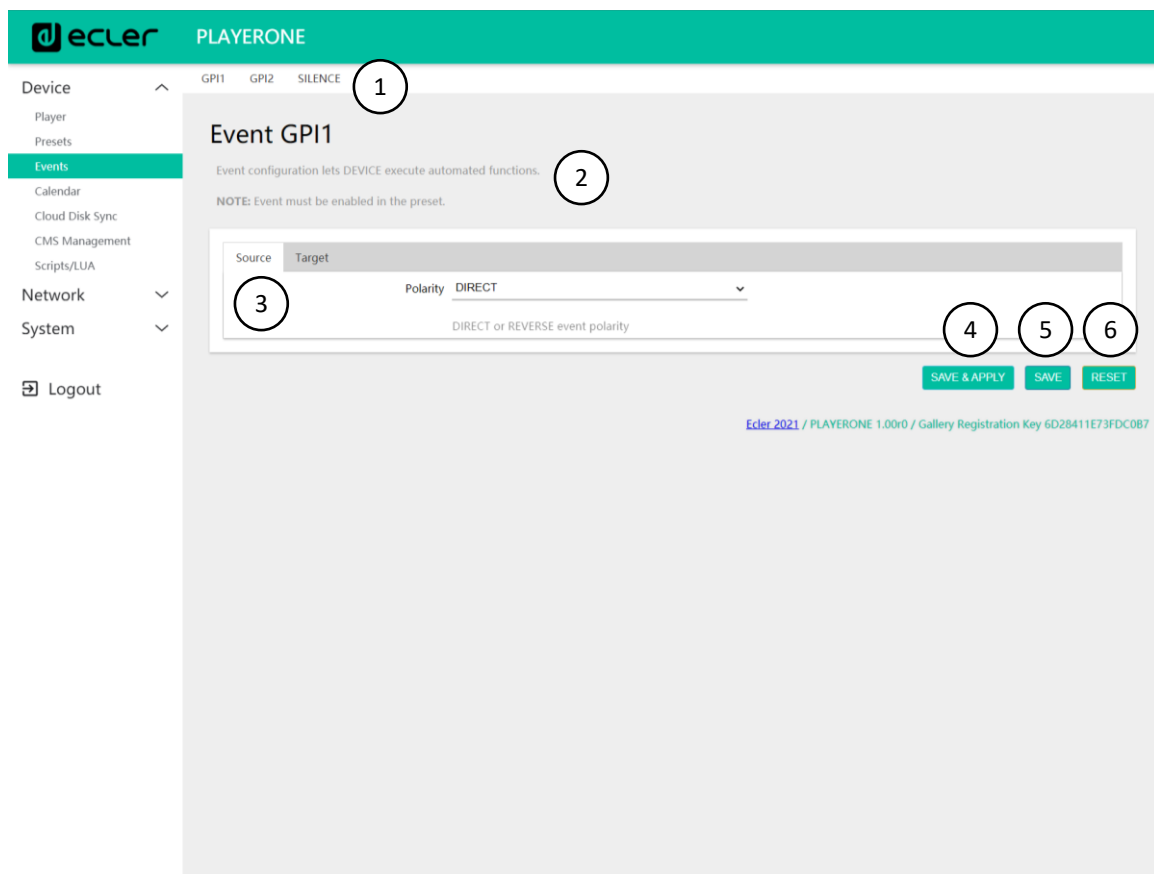


Figure 8: GPI event configuration example

1. Page header: displays GPI and silence events. When you click on the name, it will display the configuration for that event.
 2. Information: displays useful information for configuring the events.
 3. Configuration options for the selected event.
 4. Save & Apply button: saves the changes made to the GPI that is being edited and applies them. If the *preset* that is currently in operation has such an event enabled, it is not necessary to reload the *preset*.
 5. Save button: saves the changes made to the GPI that is being edited without applying them. In this way, if the *preset* that is currently in operation has such an event enabled, the changes will only be applied when the *preset* is reloaded.
 6. Reset button: resets the changes made to the last saved configuration in the event that is being edited.
- Please Note:* you can configure the different tabs (Source, Target) before saving, and the changes are retained.

3.3.1 GPI Events

There are 2 GPI events: GPI1 and GPI2. They can each be configured to trigger in different ways and perform independent actions.

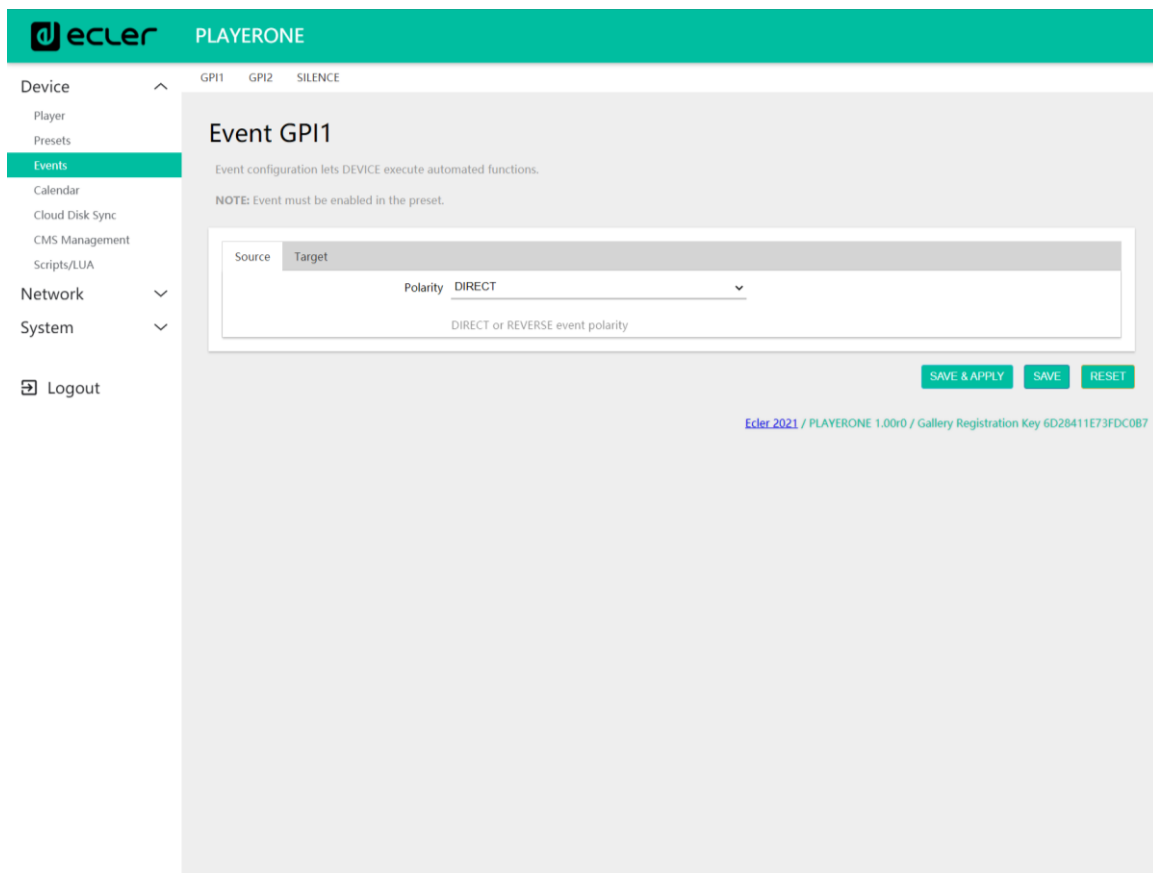


Figure 9: GPI configuration, Source

1. Source: source

- Polarity: polarity, direct or inverse; to define the trigger, by contact closure or contact release.

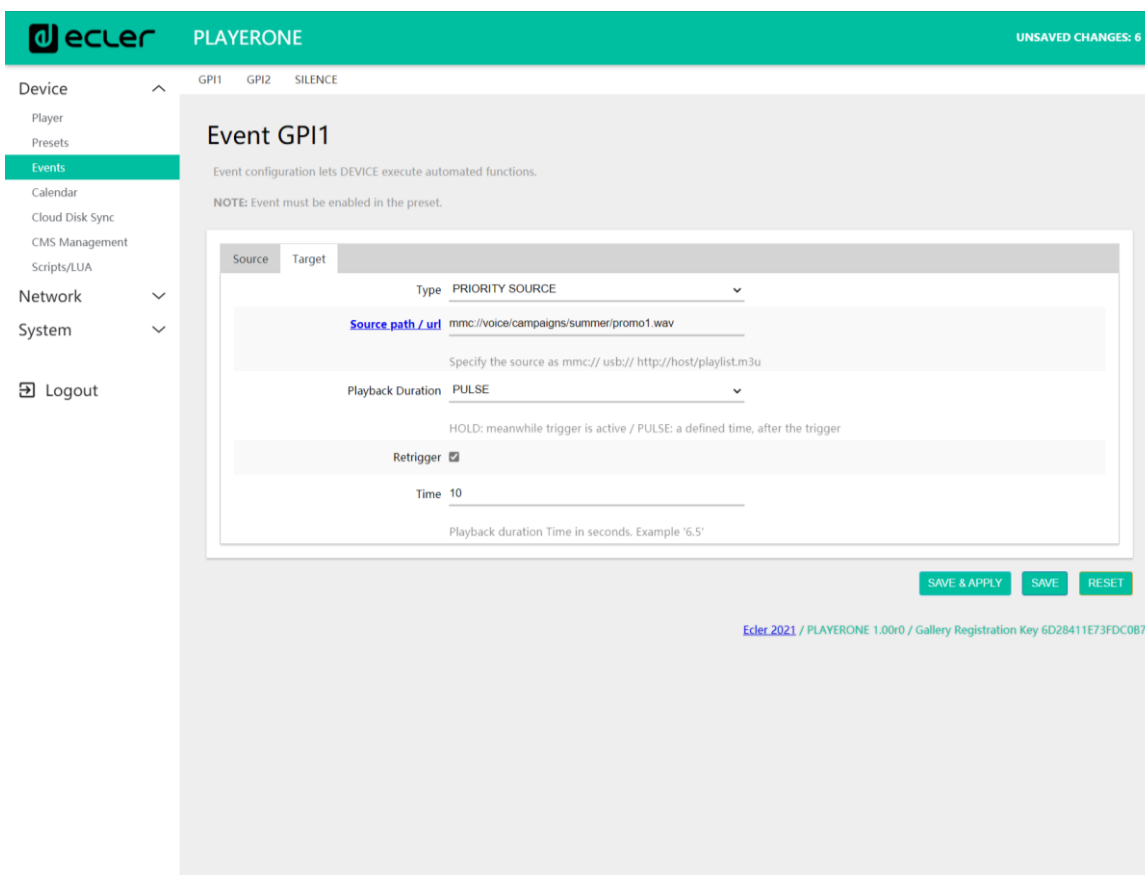


Figure 10: GPI configuration, Target

2. Target tab: an action that the device will perform after GPI activation.

There are several options or types of event (Type):

- Internal: internal stimulus. This is useful for triggering actions within a Script.
- Preset recall: loading a *preset*. Select the *preset* you want to load with the GPI activation.
- Transport control: control of current playback, play/pause, play, stop, next, prev.
- Load & Play Source: loading and playback of a source. The source must be specified in the "Source path/url" field.
- Priority Source: playback of a source with priority over programmed audio. The source specified in the "Source path/url" field attenuates the source that is playing (programmed audio). When the priority audio ends, the programmed audio resumes playing, gradually returning to its previous volume.
 - If the HOLD option is selected, the source specified in the "Source path/url" field will be given priority WHILE the

stimulus is held (GPI direct/reverse, as specified in the "Source" tab).

- If the PULSE option is selected, the source specified in the "Source path/url" field will be prioritized for the time (in seconds) specified in the Time field. The Retrigger option allows the priority event to be re-triggered without waiting for it to finish, and restarting the timer.

Please Note: a priority event can be useful for playing announcements, pre-recorded announcements, emergency announcements, etc. For more information on priorities see chapter [3.4.4. Regarding priorities.](#)

3.3.2. SILENCE detection event

PLAYER ONE/ PLAYER ZERO has a special event, the SILENCE detection event: absence of a real analogue audio signal at the unit's outputs. This allows the player to continue playing the media when the programmed audio that is being played ends, or is interrupted for any reason, which may sometimes happen due to certain problems that may arise (loss of Internet, accidental disconnection of the network cable, bad files, etc.): "The show must go on".

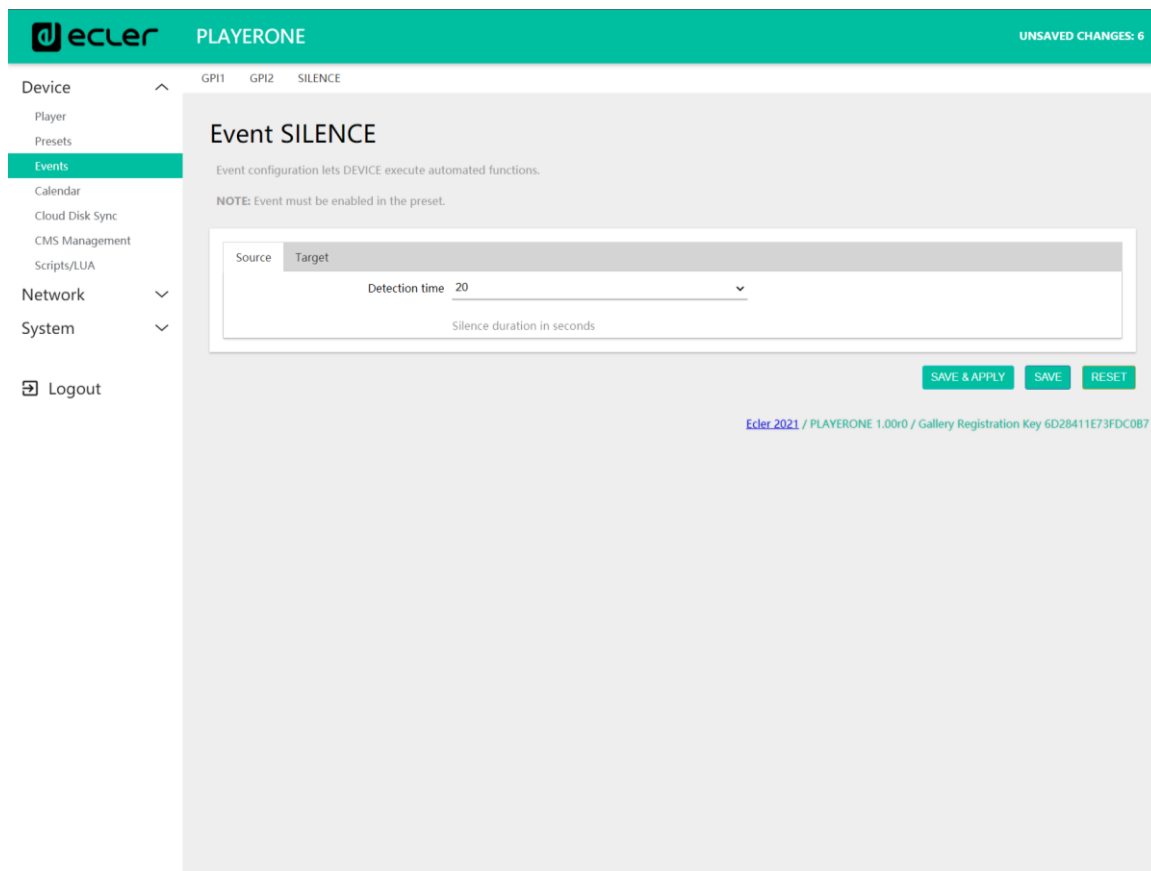


Figure 11: silence event configuration

1. Source tab: waiting time, or trigger threshold (detection time). Select the time allowed for silence (no audio signal) before the event is triggered.
2. Target tab: select the action that PLAYER ONE/ PLAYER ZERO will perform when the specified waiting time has elapsed.
 - Internal: internal stimulus. This is useful for triggering actions within a Script.
 - Preset recall: loading a *preset*. Select the *preset* you want to load when the silence event is activated.
 - Load & Play Source: loading and playback of a source. The source must be specified in the "Source path/url" field.

Tip: configure the uploading of local audio content (hosted on USB or uSD) as an action. This will ensure that you always have audio available, regardless of network connection issues that may occur outside of the player. Likewise, if you want to load a *preset*, ensure that the audio address stored in the selected preset is a local one (e.g. `usb://`) and that this preset has Play Status overwrite enabled, so that the PLAY option is selected. This will force the local medium to play, ensuring the continuity of the musical programme.

3.4. Calendar

The *Calendar* page allows calendar-triggered events to be configured.

A calendar event performs a certain action, such as loading a message with priority, in accordance with configurable parameters: date, time, repetitions, etc.

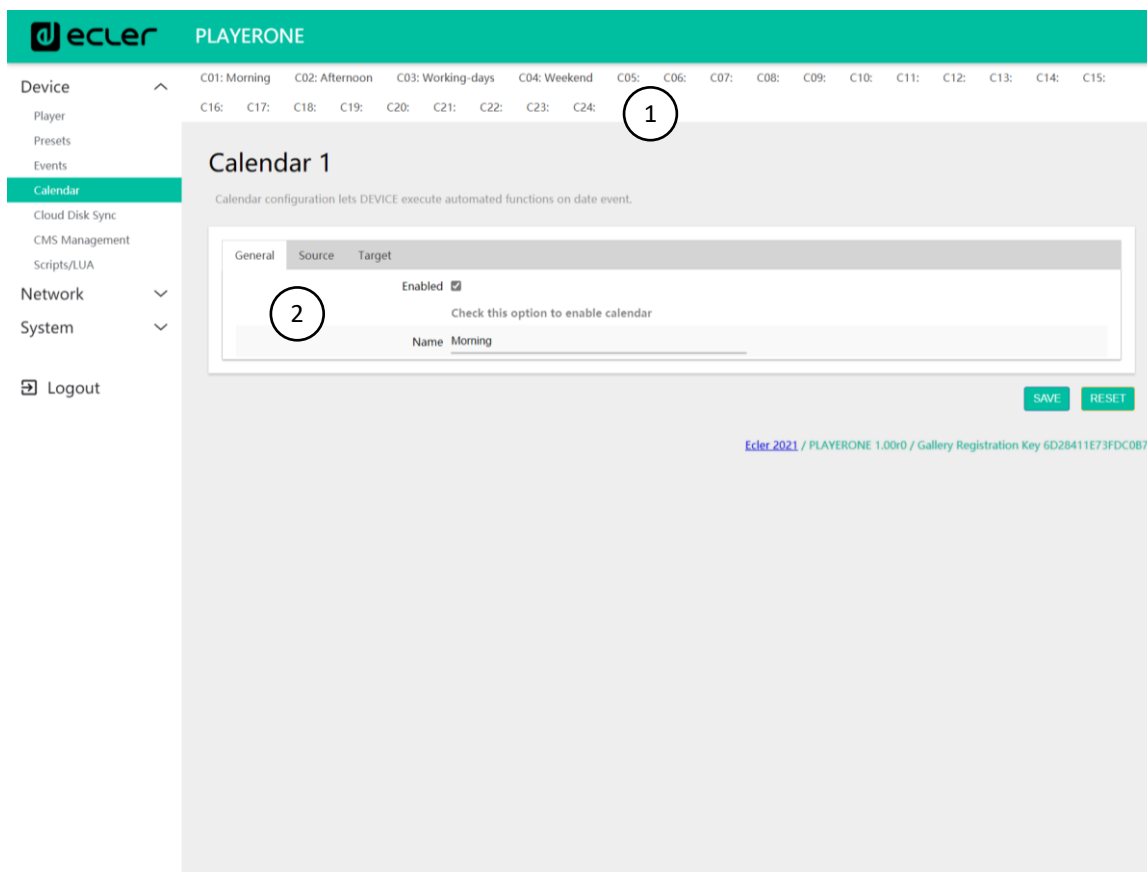
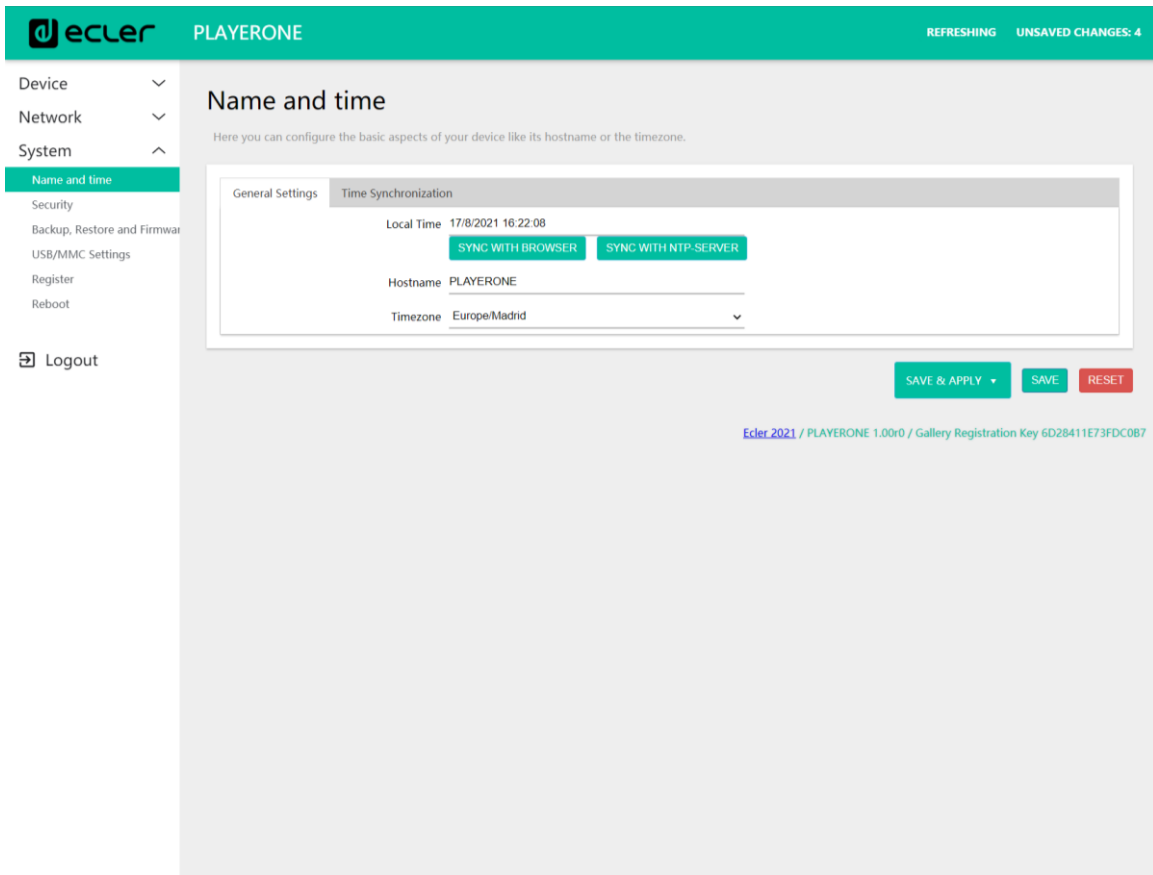


Figure 12: example of configuring a calendar event

1. PLAYER ONE/ PLAYER ZERO has 24 calendar events available, each of which are fully configurable. The default names are: C01, C02... C24. When you click on the name, it will take you to the configuration for that calendar event. The names that appear for the calendar events can be edited within the preset configuration. After this setting is saved in the calendar event, you need to refresh the browser page (F5) in order to display the changes.
2. The configurable parameters of each calendar event are grouped into 3 tabs:
 - General: activation/deactivation of calendar events and their name
 - Source: start/end date, start/end time, and event repeat conditions
 - Target: action to be performed when the event is triggered

Please Note: before configuring calendar events, make sure that the time zone is set correctly: System/Name and time.



The screenshot shows the 'Name and time' configuration page in the ecler PLAYERONE interface. The page has a teal header with the ecler logo, 'PLAYERONE', 'REFRESHING', and 'UNSAVED CHANGES: 4'. A left sidebar contains a menu with 'Device', 'Network', 'System', 'Name and time' (highlighted), 'Security', 'Backup, Restore and Firmwar', 'USB/MMC Settings', 'Register', 'Reboot', and 'Logout'. The main content area is titled 'Name and time' and includes a sub-header 'Time Synchronization'. Below this, there are three rows of configuration: 'Local Time' (17/8/2021 16:22:08) with 'SYNC WITH BROWSER' and 'SYNC WITH NTP-SERVER' buttons; 'Hostname' (PLAYERONE) with a text input field; and 'Timezone' (Europe/Madrid) with a dropdown menu. At the bottom right, there are 'SAVE & APPLY', 'SAVE', and 'RESET' buttons. A footer at the bottom right contains the text 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 13: Name and Time configuration

3.4.1. General

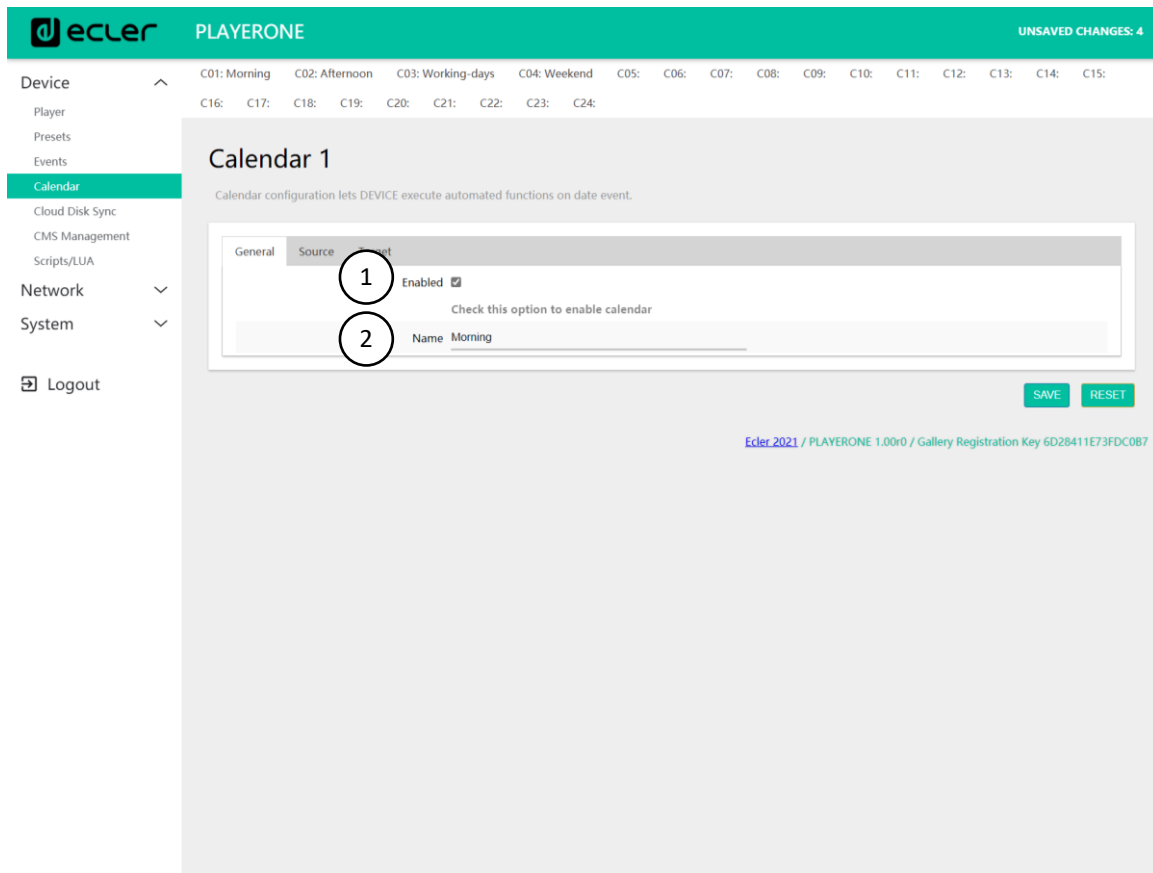


Figure 14: configuring a calendar, General

1. Enable: allows you to enable or disable the calendar. If the calendar is enabled (ready for activation by dates/times), it will be enabled in all *presets*.
2. Name: name of the calendar.

3.4.2. Source

In the SOURCE tab, the parameters for the triggering time/date and event replay conditions are configured.

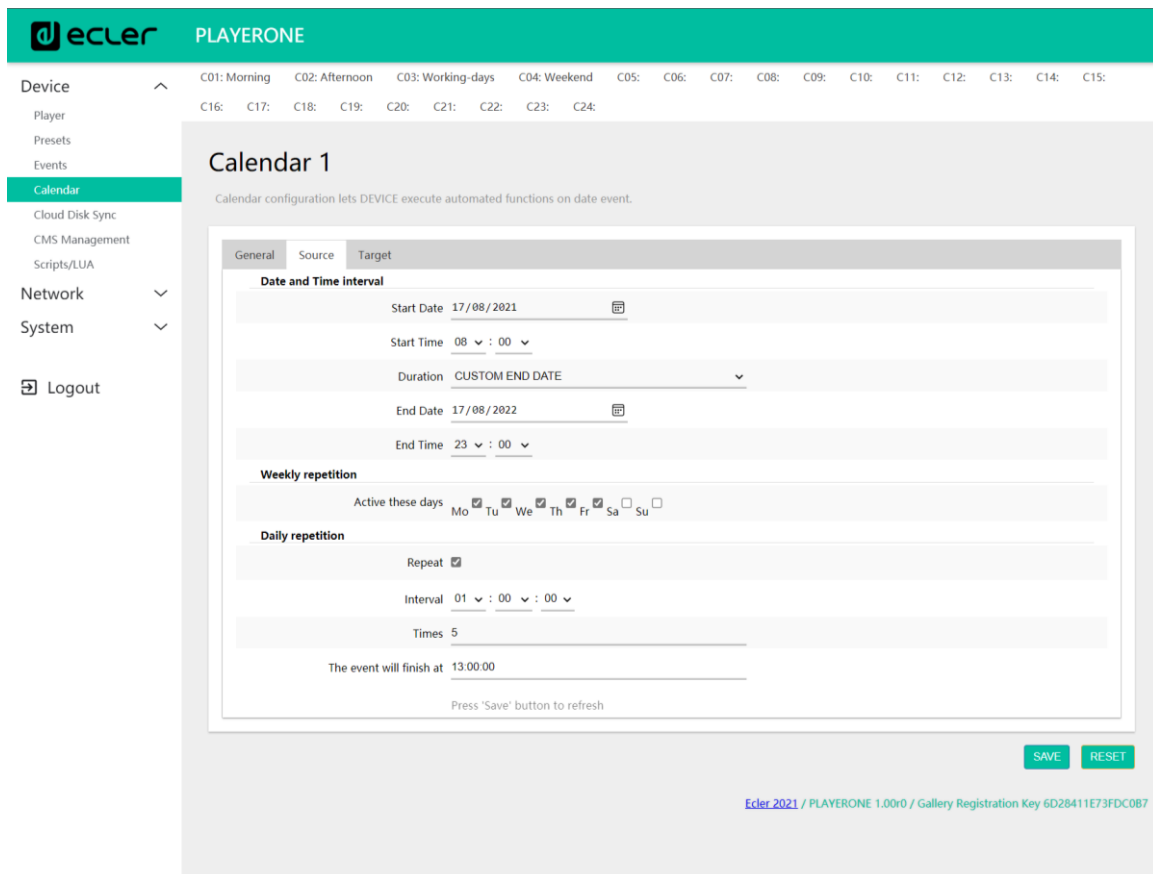



Figure 15: configuring a calendar, Source


3.4.2.1. Date and time interval


Defines the date and time when the event starts and the date and time when the event ends, if there is a specific end date and time.


1. Start date: start date for the event. This field is not mandatory. If no specific date is selected ("dd/mm/yyyy"), the event will start on the same day as the changes are applied. If you select a date that is before the current date, the event will be valid as of the day the changes are applied.
2. Start time: start time for the event. This field is mandatory. If there is a repeat condition, this will be the time at which the event is triggered for the first time each day.
3. Duration: duration or validity of the calendar event. This allows calendar event duration settings to be selected.
 - FOREVER: This option is selected by default. The calendar event will not have an end date.
 - CUSTOM END DATE: end of the calendar event. This allows you to set the date and time when the calendar event will be triggered for the last time, regardless of repeat conditions.

Date and Time interval

Start Date 17/08/2021 

Start Time 08 : 00 

Duration CUSTOM END DATE 

End Date 17/08/2022 


End Time 23 : 00 

Figure 16: interval example

3.4.2.2. Weekly repetition

Weekly mask, or days of the week on which the calendar event will be repeated, at the time indicated in "Start Time".

For example, if you select Monday to Friday (weekdays), the configured event will not be triggered on Saturdays and Sundays (weekends).

Weekly repetition

Active these days Mo Tu We Th Fr Sa Su

Figure 17: example of a weekly mask

Please Note: if you do not select at least one day of the week, the calendar event will never be triggered. Also, if you set an event to be triggered on a day of the week which is not selected in the weekly mask, it will never be triggered.

3.4.2.3. Daily repetition

Daily repetitions. This option is set to be deselected by default. Selecting it will open a drop-down menu where you can configure the repetition conditions:

1. Interval: repetition interval. This indicates how often the calendar event triggering is repeated, beginning at the Start Time.
2. Times: number of repetitions. This indicates the number of times that the calendar event will be repeated, with time in between as indicated by the value in "interval". The first time the event is triggered each day does not count as a repetition, so if you want an event to be triggered twice a day, "times" should be set to 1 (the first time + 1 repetition). This value must be equal to or greater than 1.

Daily repetition

Repeat

Interval 01 : 00 : 00

Times 5

The event will finish at 13:00:00

Press 'Save' button to refresh

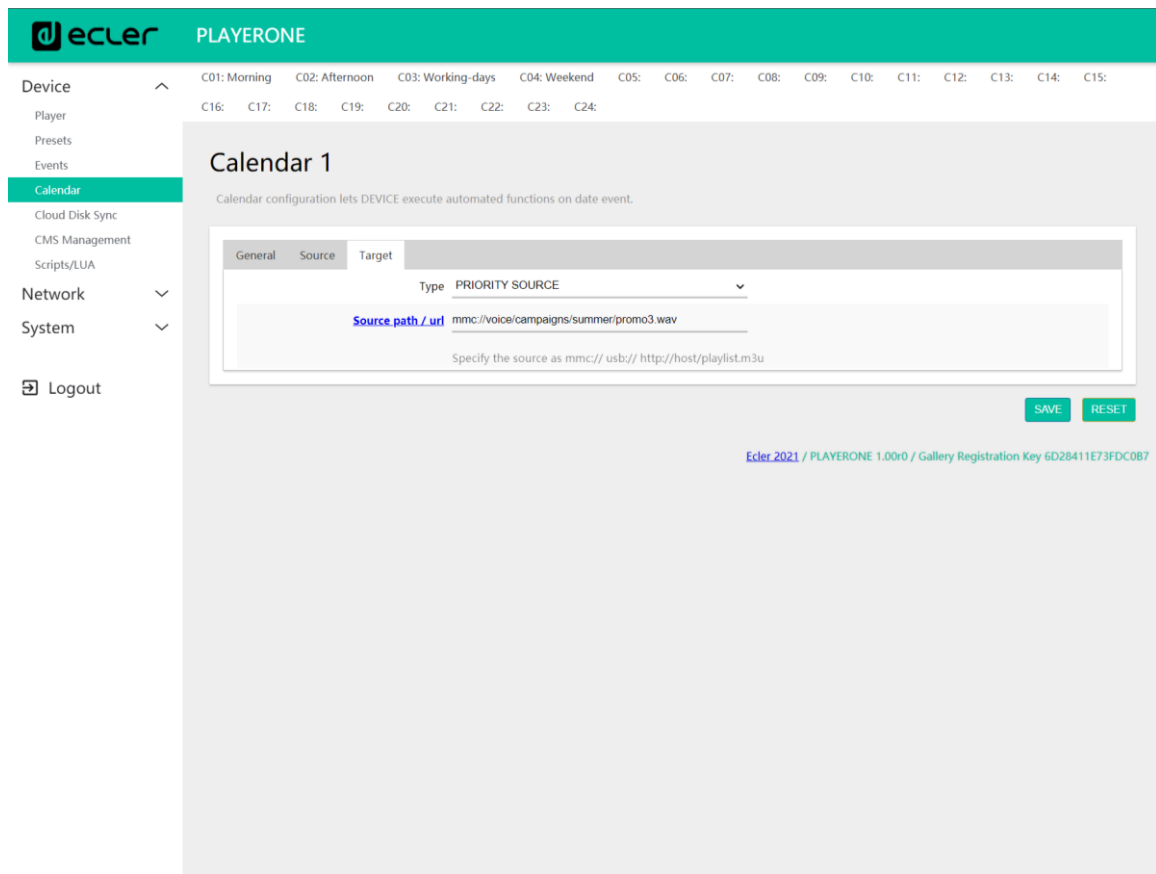
Figure 18: daily repetition example

3. "The event will finish at" indicates the time at which the calendar event will run for the last time each day. This parameter cannot be configured (read only). It is intended to help the user configure the "Interval" and "Times" parameters in a more efficient way.

1.

3.4.3. Target

An action that is executed each time the calendar event is triggered.



The screenshot shows the ecler PLAYERONE interface. On the left is a navigation menu with categories: Device (Player, Presets, Events, Calendar), Network, System, and Logout. The 'Calendar' section is active. The main content area is titled 'Calendar 1' and includes a sub-header 'Calendar configuration lets DEVICE execute automated functions on date event.' Below this is a configuration form with three tabs: 'General', 'Source', and 'Target'. The 'Target' tab is selected, showing a 'Type' dropdown menu set to 'PRIORITY SOURCE' and a 'Source path / url' text input field containing 'mmc://voice/campaigns/summer/promo3.wav'. A note below the field says 'Specify the source as mmc:// usb:// http://host/playlist.m3u'. At the bottom right of the form are 'SAVE' and 'RESET' buttons. The footer of the page reads 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 19: calendar event example, Target

This action may be:

1. Internal: internal stimulus (does not perform an action directly, but allows actions to be triggered via scripts)
2. Preset recall: loading a *preset*
3. Transport control: pressing a button on the transport bar; STOP, PLAY, PREV, NEXT, PLAY/PAUSE
4. Load & Play source: loading and playback of a source
5. Priority source: playback of a source with priority. The source with priority will overwrite the source that is currently playing. When the priority announcement/message ends, the source that was playing will start to play again.

3.4.4. Regarding priorities

Calendar events have lower priority than events that are triggered by GPI. Therefore, different degrees of priority can be established. For example, in a shop, calendar-based events can be used to trigger voice messages indicating an offer, while GPI events can be used to trigger an evacuation message.

In addition, there is a higher level index that determines priority if it is the case that 2 calendar-based triggers occur at the same time. For example, CALENDAR02 is set to repeat a message every hour and CALENDAR03 is set to repeat a message every two hours (both events have the same start time). The messages will alternate every hour, as CALENDAR03 will take precedence over CALENDAR02.

If a calendar event is playing and then a second event comes in, the last event to arrive will overwrite the one that is playing, regardless of their indexes.

When a priority event is playing, it can be seen on the PLAYER ONE screen. The characters PC01 indicate: P, event with Priority; C, calendar event; and 01, calendar index, from 01 to 24.

If this is an event triggered by a GPI, PI01 or PI02 will be shown on the screen, indicating: P, event with Priority; I, GPI event; and 01, GPI input index, from 01 to 02.

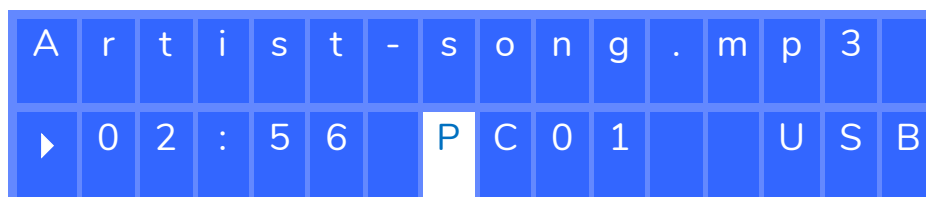


Figure 20

Please Note: PLAYER ZERO does not have an LCD screen.

3.4.5. Practical example of configuration of calendar events

An establishment whose business hours are 10:00 a.m. to 8:00 p.m., and which is open from Monday to Friday, requires background music, and will periodically make announcements to its customers.

- Background music: this will always be the same audio *stream*. It will start playing at 9:45 a.m., and it will play continuously until 8:00 p.m. At this time, there should no longer be audio playing in the establishment.
- Announcements: every day, the closing time of the establishment will be indicated (pre-recorded message) 15 minutes before closing. It will be recalled again 5 minutes before closing.
- Campaigns: there will be a special Christmas campaign from 15 December to 15 January indicating an offer (pre-recorded message). This message is to be repeated every day during this period, every 30 minutes.

Please Note: there may be several methods of meeting these requirements. This example attempts to illustrate the most relevant features of calendar events in a simple way.

3.4.5.1. Calendars for background music

2 calendar events will be created: one to load the *stream* and play it, and another to stop it.

The calendar is enabled, and it is given an identifying name.

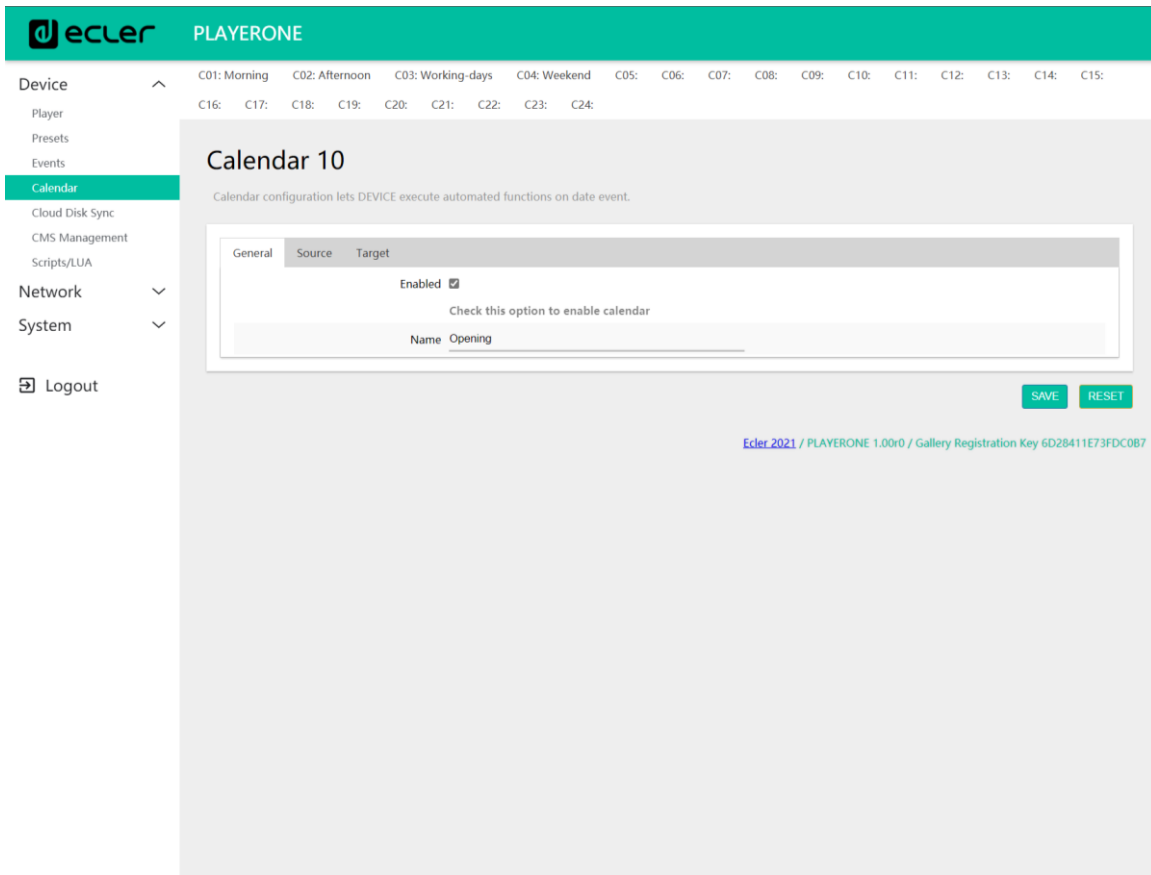
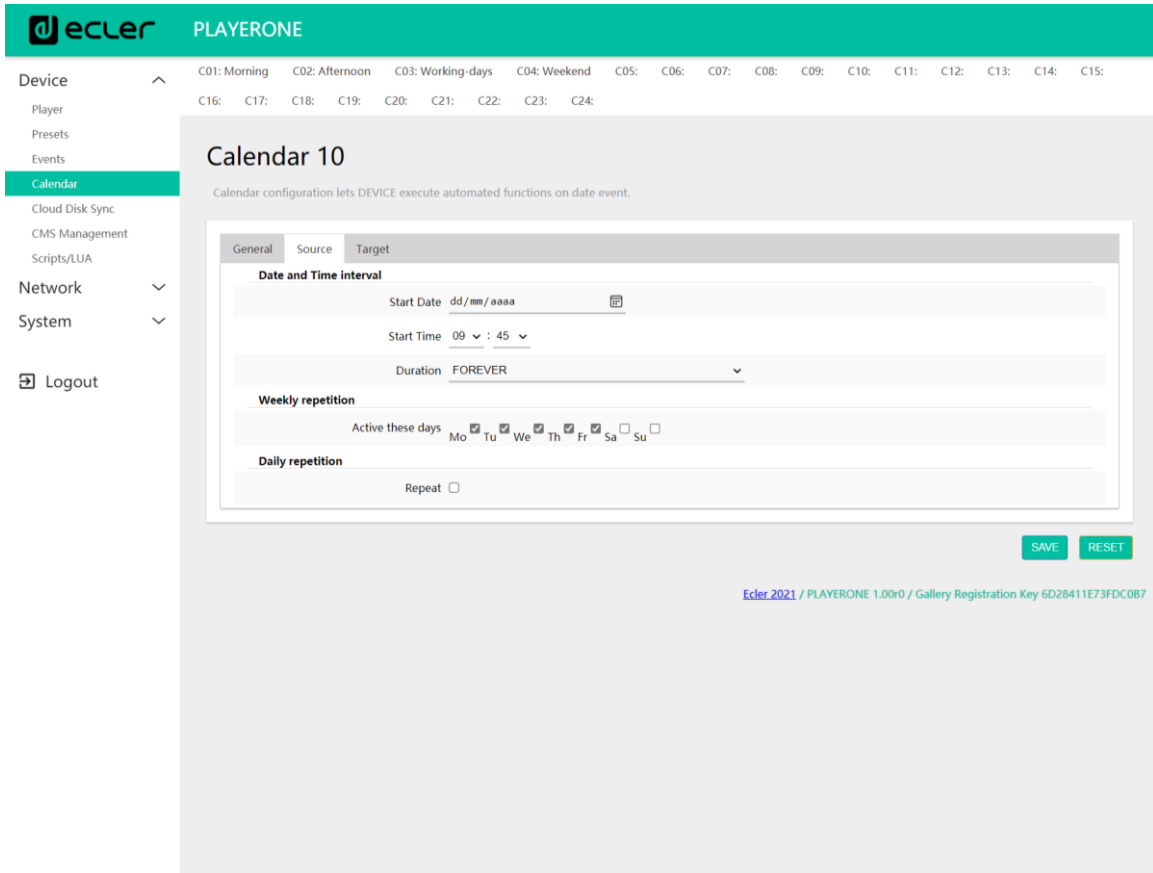


Figure 21

Since no start date is specified, "Start date" is left as the default value ("dd/mm/yyyy"). This means that the event is active from the day the changes are applied. The time is known (9:45 a.m.), and it is to be played every day, without an end date (FOREVER).

Since the event is to be repeated from Monday to Friday, the corresponding days are selected in the weekly mask.



ecler PLAYERONE

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: C11: C12: C13: C14: C15:
C16: C17: C18: C19: C20: C21: C22: C23: C24:

Calendar 10

Calendar configuration lets DEVICE execute automated functions on date event.

General	Source	Target
Date and Time interval		
Start Date	dd/mm/yyyy	
Start Time	09 : 45	
Duration	FOREVER	
Weekly repetition		
Active these days	Mo <input checked="" type="checkbox"/> Tu <input checked="" type="checkbox"/> We <input checked="" type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input checked="" type="checkbox"/> Sa <input type="checkbox"/> Su <input type="checkbox"/>	
Daily repetition		
Repeat	<input type="checkbox"/>	

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Figure 22

The action of loading and playing the specified *stream* is configured.

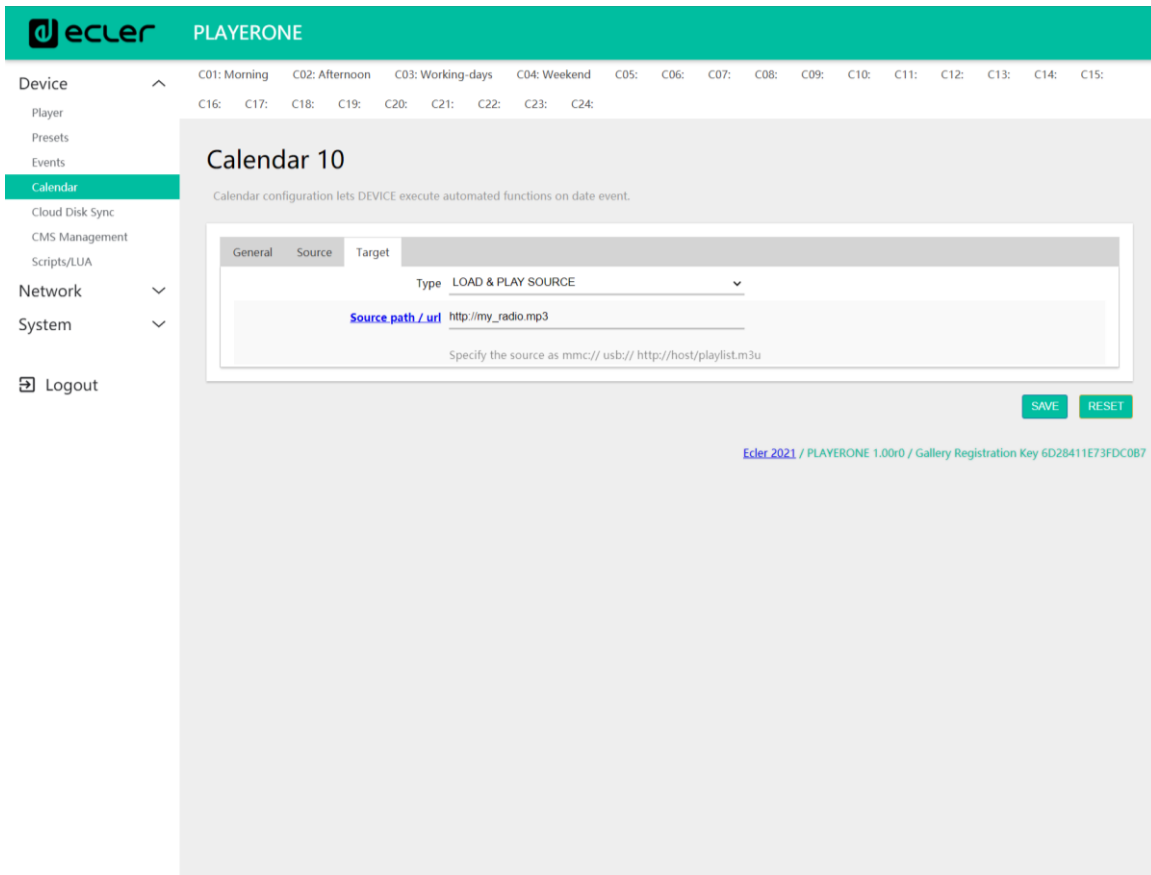


Figure 23

The calendar event that will stop the playback of the background music is configured in the same way as the last one. The only difference is that this time the action in question is to stop the playback; STOP. This calendar event will be given a different name and start time.

ecler **PLAYERONE**

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: Opening C11: C12: C13: C14:
C15: C16: C17: C18: C19: C20: C21: C22: C23: C24:

Device ^
Player
Presets
Events
Calendar
Cloud Disk Sync
CMS Management
Scripts/LUA
Network v
System v
Logout

Calendar 11

Calendar configuration lets DEVICE execute automated functions on date event.

General Source Target

Enabled

Check this option to enable calendar

Name

SAVE **RESET**

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Figure 24

ecler **PLAYERONE**

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: Opening C11: C12: C13: C14:
C15: C16: C17: C18: C19: C20: C21: C22: C23: C24:

Device ^
Player
Presets
Events
Calendar
Cloud Disk Sync
CMS Management
Scripts/LUA
Network v
System v
Logout

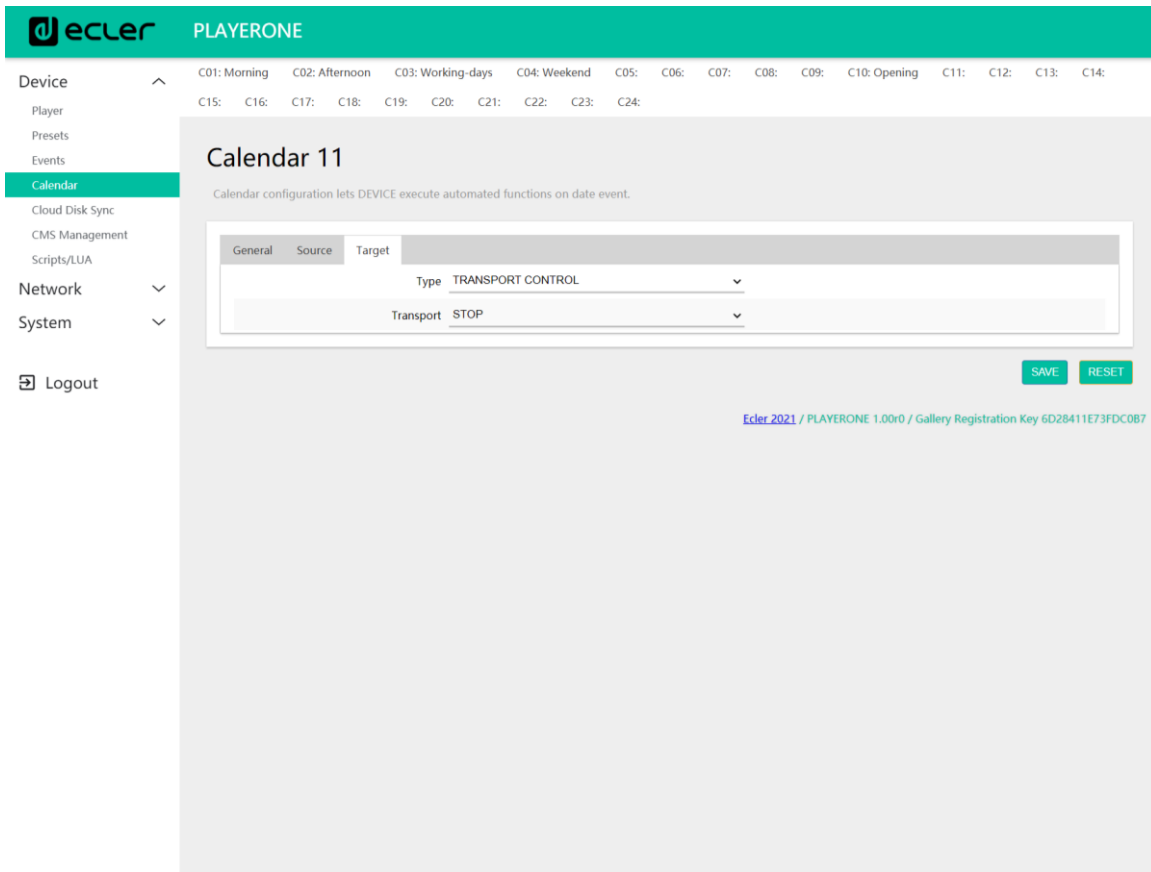
Calendar 11

Calendar configuration lets DEVICE execute automated functions on date event.

General	Source	Target
Date and Time interval		
Start Date <input type="text" value="dd/mm/yyyy"/>		
Start Time <input type="text" value="20"/> : <input type="text" value="00"/>		
Duration <input type="text" value="FOREVER"/>		
Weekly repetition		
Active these days <input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Tu <input checked="" type="checkbox"/> We <input checked="" type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su		
Daily repetition		
Repeat <input type="checkbox"/>		

[Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7](#)

Figure 25



The screenshot displays the ecler PLAYERONE web interface. At the top, there is a teal header with the ecler logo and the text 'PLAYERONE'. Below the header, a navigation bar lists various calendar slots from C01 to C24. A left sidebar contains a menu with categories like 'Device', 'Network', and 'System', with 'Calendar' highlighted in teal. The main content area is titled 'Calendar 11' and includes a sub-header 'Calendar configuration lets DEVICE execute automated functions on date event.' Below this is a configuration form with three tabs: 'General', 'Source', and 'Target'. The 'Target' tab is selected, showing a dropdown menu for 'Type' set to 'TRANSPORT CONTROL' and another dropdown for 'Transport' set to 'STOP'. At the bottom right of the form are 'SAVE' and 'RESET' buttons. A footer link at the bottom right reads 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 26

3.4.5.2. Calendar for closing announcements

Every day, the closing time of the establishment will be indicated (pre-recorded message) 15 minutes before closing. It will be recalled again 5 minutes before closing.

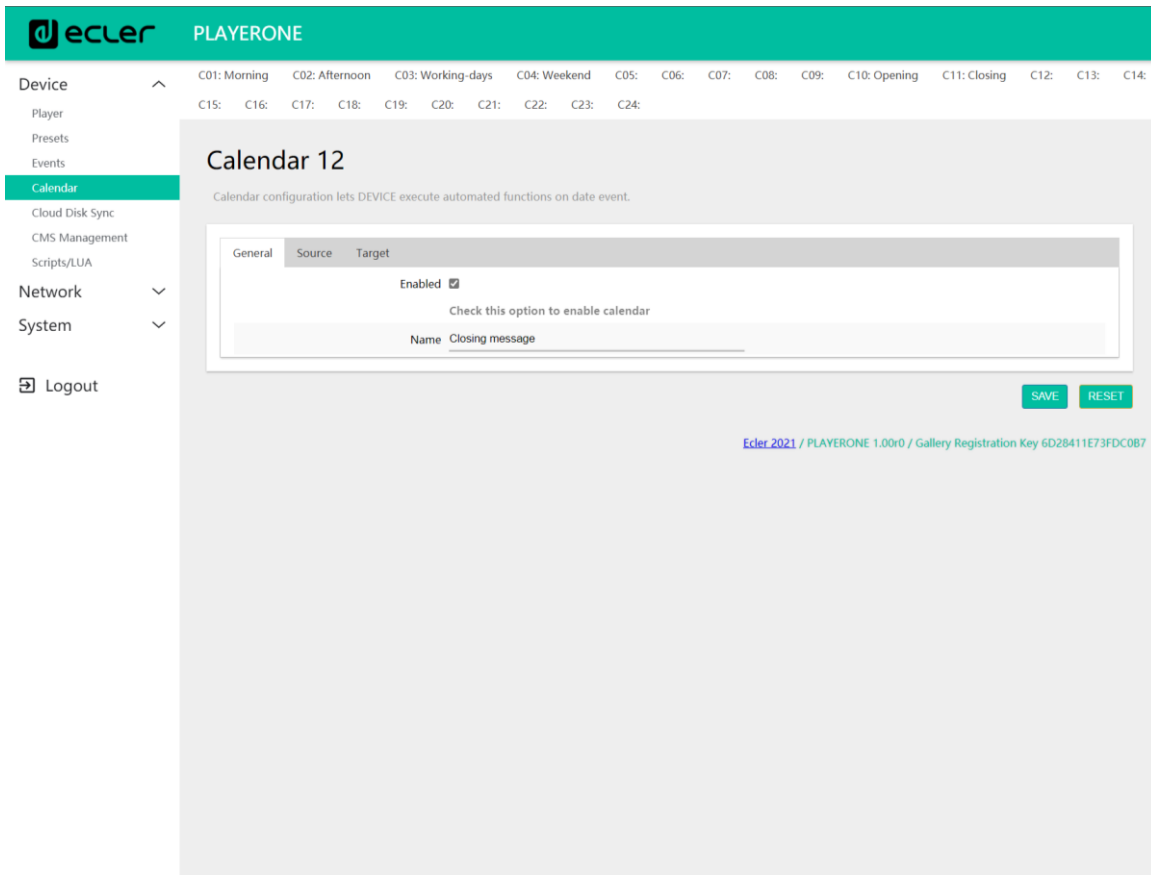


Figure 27

The message should be played twice a day: 15 minutes before closing (at 7:45 p.m.) and 5 minutes before closing (at 7:55 p.m.). Therefore, it will be necessary to configure a calendar event that repeats one time, 10 minutes after it is triggered for the first time. This is achieved by enabling *Repeat* and configuring the *Interval* and *Time* parameters correctly.

ecler PLAYERONE

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: Opening C11: Closing C12: C13: C14: C15: C16: C17: C18: C19: C20: C21: C22: C23: C24:

Device ^
 Player
 Presets
 Events
Calendar
 Cloud Disk Sync
 CMS Management
 Scripts/LUA
 Network v
 System v
 Logout

Calendar 12

Calendar configuration lets DEVICE execute automated functions on date event.

General	Source	Target
Date and Time interval		
Start Date <input type="text" value="dd/mm/yyyy"/>		
Start Time <input type="text" value="19 : 45"/>		
Duration <input type="text" value="FOREVER"/>		
Weekly repetition		
Active these days <input checked="" type="checkbox"/> Mo <input checked="" type="checkbox"/> Tu <input checked="" type="checkbox"/> We <input checked="" type="checkbox"/> Th <input checked="" type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su		
Daily repetition		
Repeat <input checked="" type="checkbox"/>		
Interval <input type="text" value="00"/> : <input type="text" value="10"/> : <input type="text" value="00"/>		
Times <input type="text" value="1"/>		
The event will finish at <input type="text" value="19:55:00"/>		
Press 'Save' button to refresh		

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Figure 28

Finally, the message located on the SD card ("mmc://...") will be announced with priority.

ecler **PLAYERONE**

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: Opening C11: Closing C12: Closing message
C13: C14: C15: C16: C17: C18: C19: C20: C21: C22: C23: C24:

Device ^
Player
Presets
Events
Calendar
Cloud Disk Sync
CMS Management
Scripts/LUA
Network v
System v
Logout

Calendar 12

Calendar configuration lets DEVICE execute automated functions on date event.

General Source Target

Type **PRIORITY SOURCE**

Source path / url mmc://closing.wav

Specify the source as mmc:// usb:// http://host/playlist.m3u

SAVE **RESET**

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Figure 29

3.4.5.3. Calendar for Christmas campaign

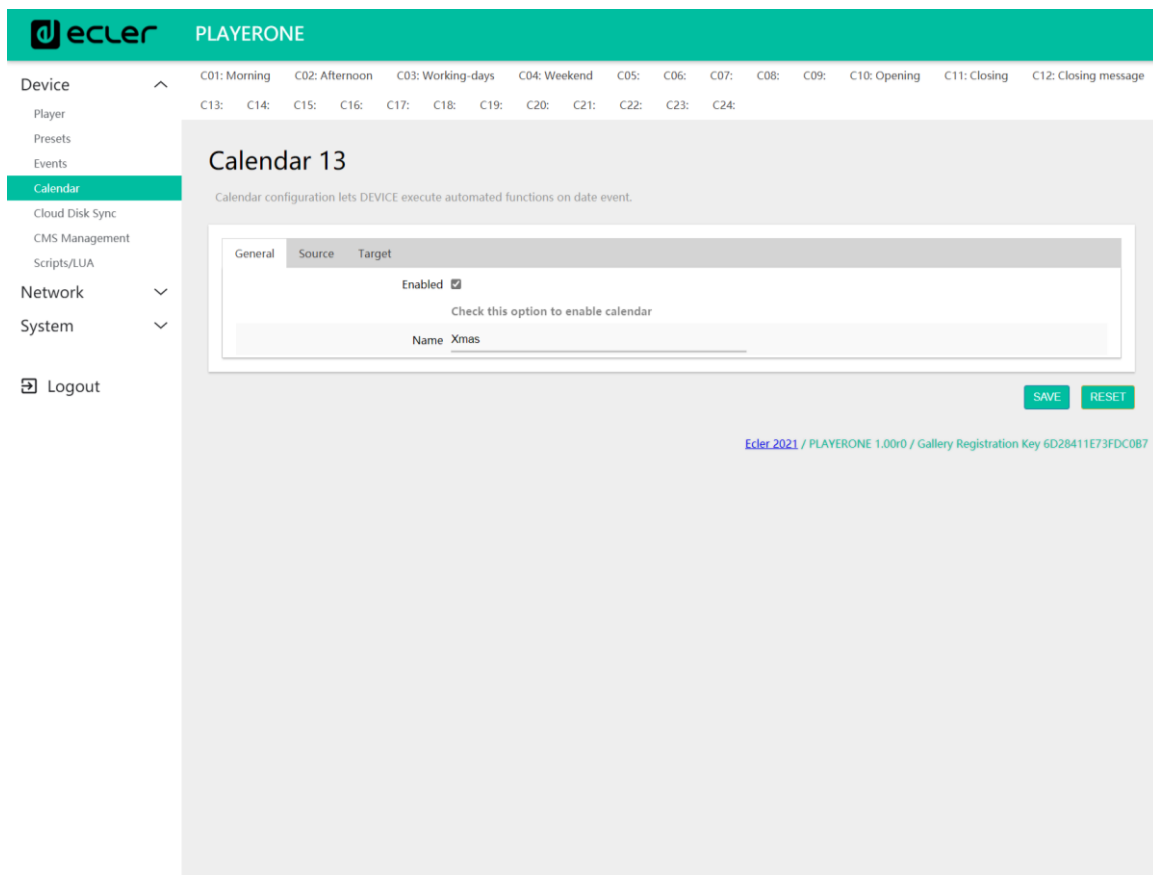


Figure 30

As this is for a specific calendar interval (15/12/21 to 15/01/22), an end date is set by choosing CUSTOM END DATE and setting the *End date* and *End time* parameters correctly.

Regarding repetitions, the message has to be played every 30 minutes, and it is known that the establishment closes at 8:00 p.m. As there will be no audio at 8:00 p.m., we will set the number of repetitions in such a way that the last time the event is triggered is 30 min before closing.

ecler PLAYERONE

Device ^

- Player
- Presets
- Events
- Calendar
- Cloud Disk Sync
- CMS Management
- Scripts/LUA

Network v

System v

Logout

C01: Morning
C02: Afternoon
C03: Working-days
C04: Weekend
C05:
C06:
C07:
C08:
C09:
C10: Opening
C11: Closing
C12: Closing message

C13:
C14:
C15:
C16:
C17:
C18:
C19:
C20:
C21:
C22:
C23:
C24:

Calendar 13

Calendar configuration lets DEVICE execute automated functions on date event.

General
Source
Target

Date and Time interval

Start Date

Start Time

Duration

End Date

End Time

Weekly repetition

Active these days Mo Tu We Th Fr Sa Su

Daily repetition

Repeat

Interval

Times

The event will finish at

Press 'Save' button to refresh

[Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7](#)

Figure 31

Finally, the message located on the USB device ("usb://...") will be announced with priority.

ecler **PLAYERONE**

C01: Morning C02: Afternoon C03: Working-days C04: Weekend C05: C06: C07: C08: C09: C10: Opening C11: Closing C12: Closing message
C13: Xmas C14: C15: C16: C17: C18: C19: C20: C21: C22: C23: C24:

Calendar 13
Calendar configuration lets DEVICE execute automated functions on date event.

General Source Target

Type **PRIORITY SOURCE**

Source path / uri usb://xmas.wav

Specify the source as mmc:// usb:// http://host/playlist.m3u

SAVE **RESET**

[Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7](#)

Device ^
Player
Presets
Events
Calendar
Cloud Disk Sync
CMS Management
Scripts/LUA
Network v
System v
Logout

Figure 32

3.5. Cloud Disk Sync

The Cloud Disk Sync module allows the device to download remote audio content to local storage media (USB/uSD). When it is active, it checks a remote location that hosts audio content on a daily basis, compares it to the current content stored on local media (USB/uSD) and, if necessary (if differences are detected), syncs the local content to make it an exact copy of the remote content. This is a safe method of playing content during the device's working hours (during the day), as it is stored on local media, and does not carry the same risks as receiving real-time *streaming*.

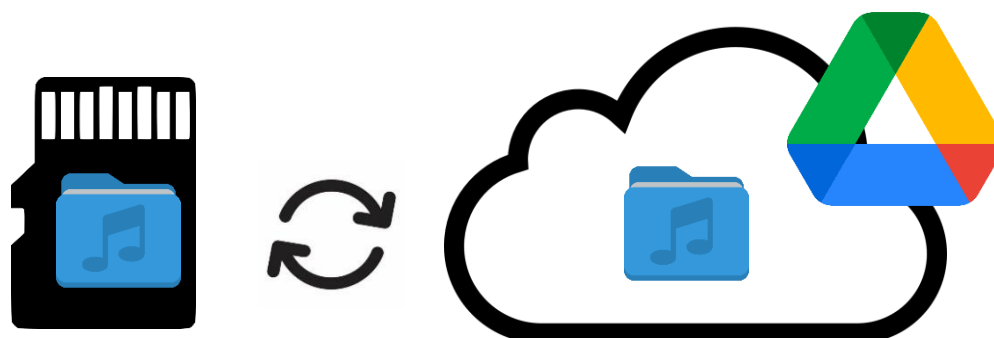


Figure 33: syncing folders with Google Drive

PLAYER ONE/PLAYER ZERO enables syncing through 2 services: Google Drive and Store and Forward (rsync). Both services are compatible, but we recommend only using one or the other, never both, because if there is an overlap between the services that are in operation, the sync with Google Drive may not run.

3.5.1. Google Drive

In the first tab on the Cloud Sync Storage page, Google Drive, you can configure the syncing with Google's cloud storage system.

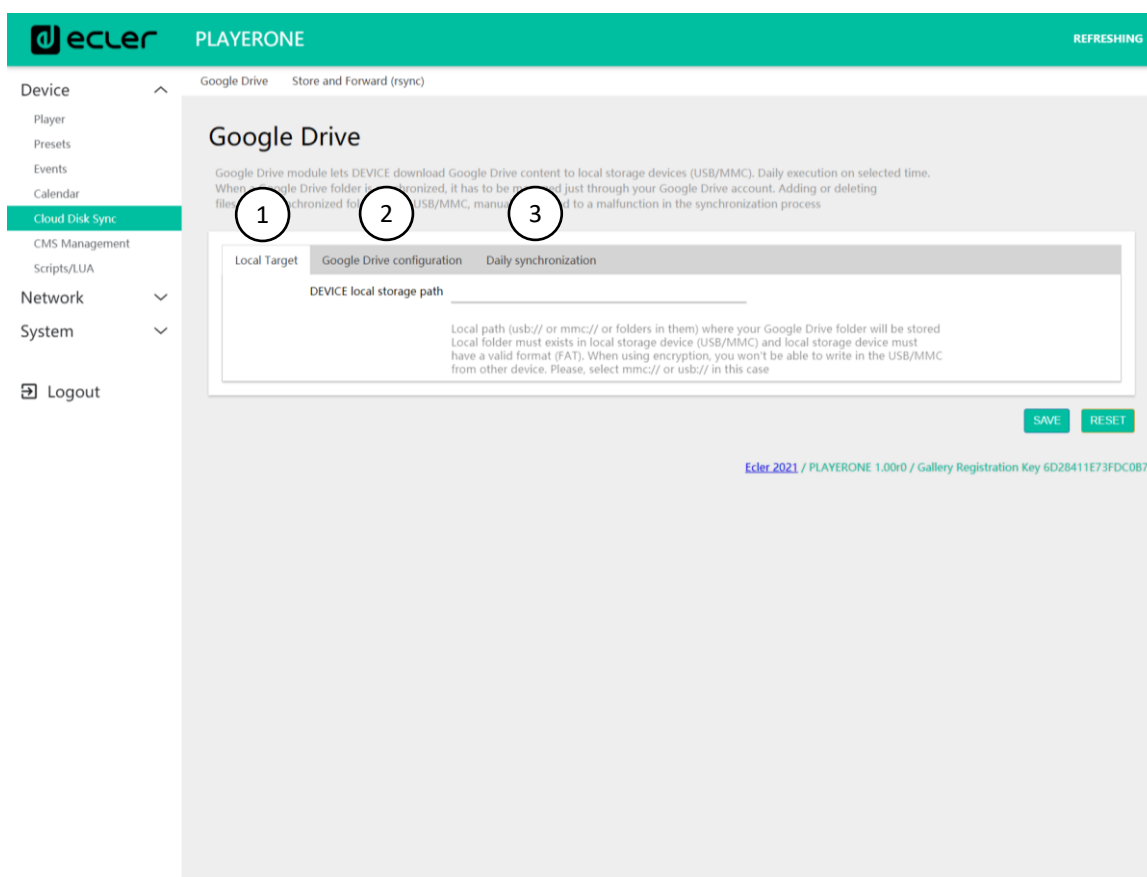


Figure 34: Google Drive configuration page

1. Local Target: local storage configuration, USB/uSD.
2. Google Drive configuration: Google account configuration and syncing.
3. Daily synchronization: activation/deactivation of the Google Drive syncing service, and time configuration.

Principle of operation: The Google Drive module allows the device to download content to local storage devices (USB/uSD) on a daily basis, at the selected time. When a Google Drive folder is synced to the device, it must only be managed through the Google Drive account. Manually adding or deleting files in the synced folder will cause the syncing process to malfunction.

Considerations:

- You will need to create a Google Account in advance in order to be able to use this service.
- Do not try to encrypt media after setting up syncing with remote content. The files will be lost and you will need to set up the service again. Encryption formats the media.
- For more information on encryption, see chapter 5.4. USB/MMC Settings.

3.5.1.1. Local target

Path that the contents will be downloaded to on the computer. This path must be a folder that was created in advance on your USB or uSD storage media, using a computer for example. The storage device (USB/uSD) must be in a valid format: FAT.

Please Note: the NTFS format supported by PLAYER ONE/PLAYER ZERO is "read-only". Write permissions are required to download and store content on the external USB or uSD media.

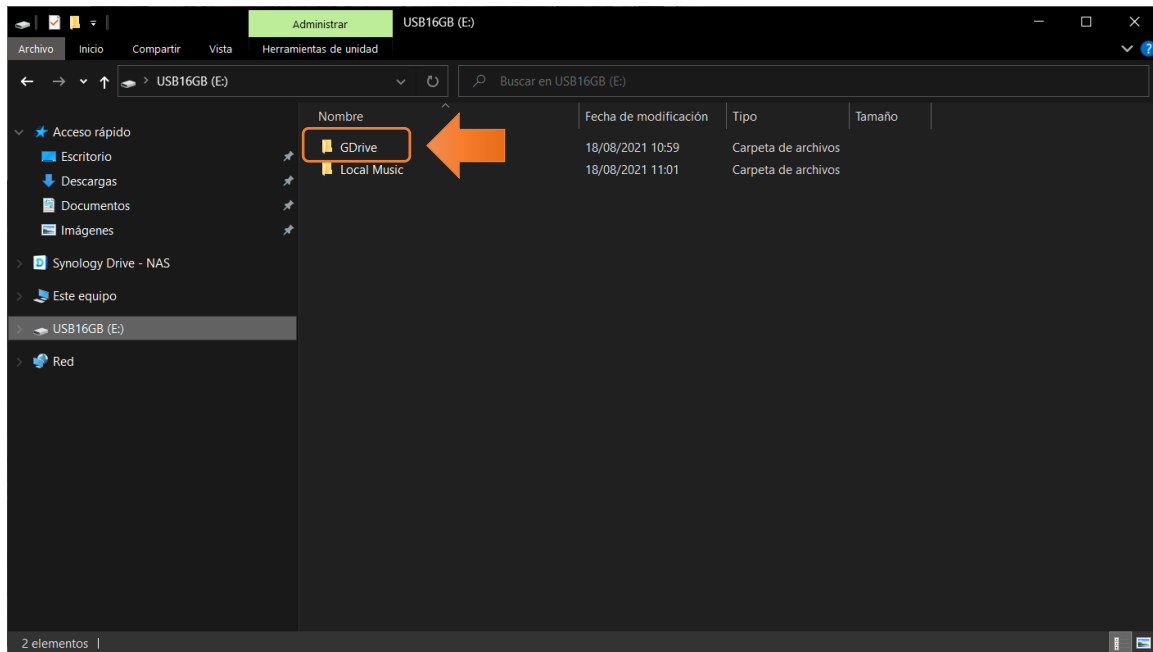


Figure 35: example of a local folder for content on Google Drive

Please Note: if you use storage media encryption alongside this, you will not be able to create a folder for the synced content, as the storage device will not be accessible to any device other than the device that has encrypted it. Use the root of the device as the Local Target: `usb://` or `mmc://`.

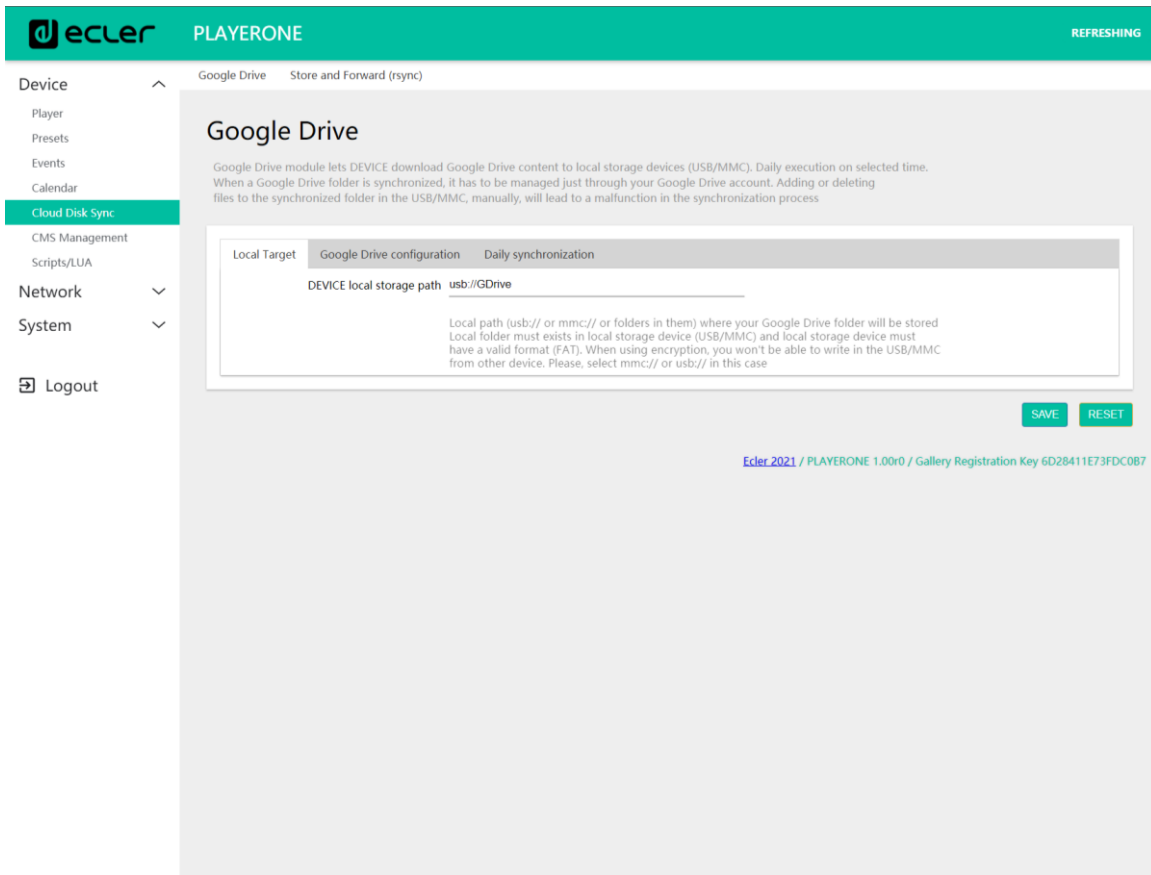


Figure 36: Local Target configuration

3.5.1.2. Google Drive configuration

Before configuring Google Drive on your device, make sure that the folder with the valid audio content that you want to sync is in your Google Drive account. Only one folder can be synced.

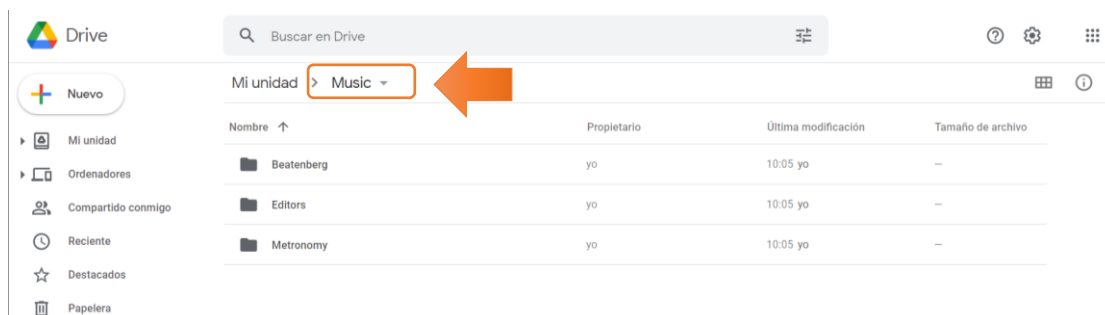


Figure 37: example of a folder in Google Drive

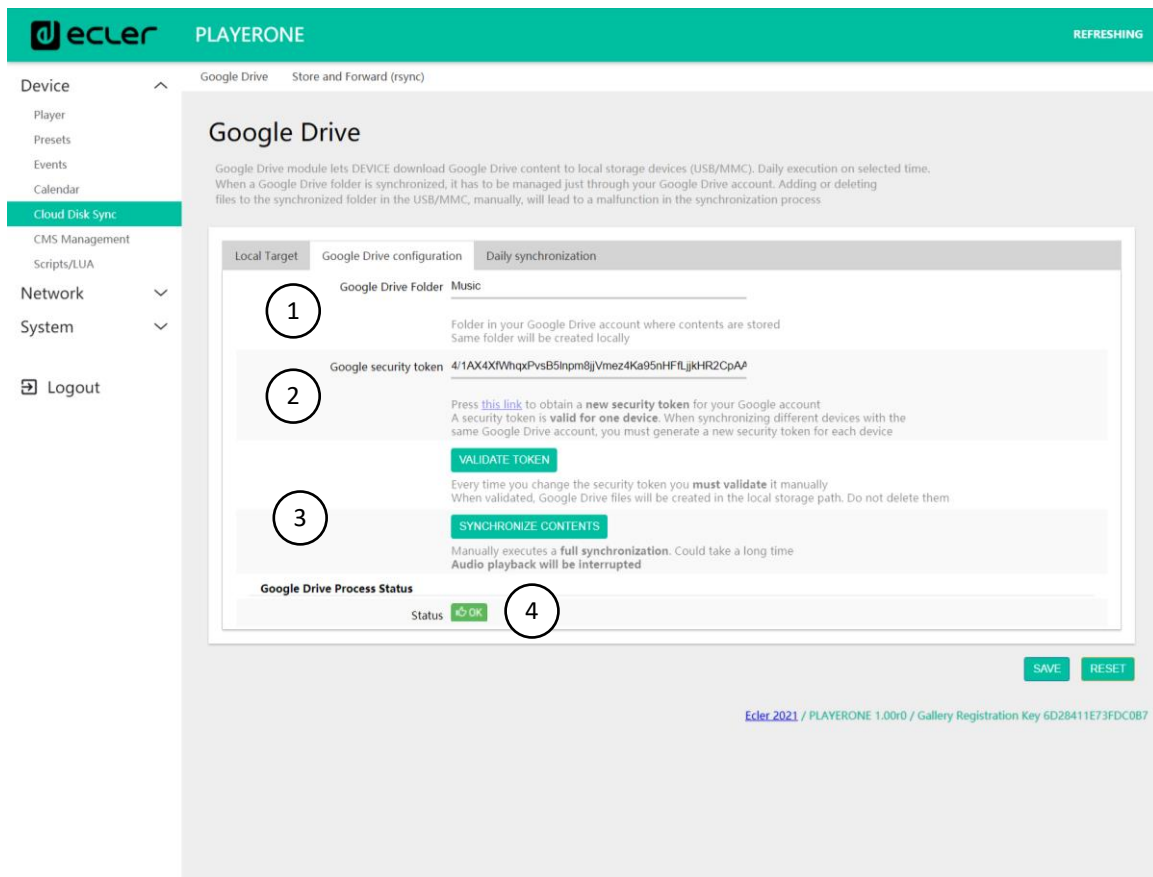


Figure 38: Google Drive configuration example

1. Google Drive folder: a folder that you want to sync with your PLAYER ONE/PLAYER ZERO device. This folder must contain valid audio files. Please bear in mind how much space that is available for content storage on your local storage device (USB/uSD). If the cloud folder you want to sync is larger than the space available on the storage media chosen on the device (USB/uSD), the files will be downloaded in alphabetical order until the memory (USB or uSD) is full.
Figure 37 shows the "Music" folder in the root of the example Google Drive. Therefore, you would need to type "Music" in the Google Drive Folder to sync it to the PLAYER ONE/PLAYER ZERO device.
2. Google security token: enter the security token of your Google account in this field.
To generate a new security token:
 - 1) Click on "this link"

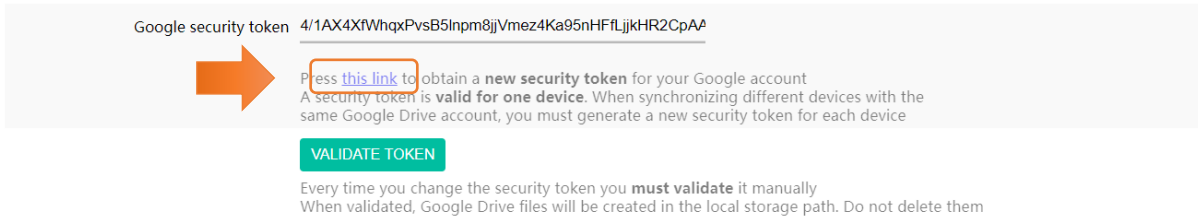


Figure 39

- 2) This will open a new tab in the Google application. Sign in with your Google Account

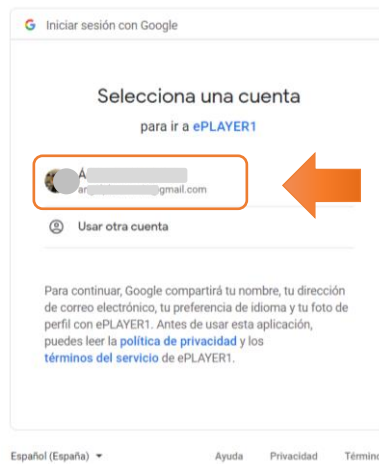


Figure 40

- 3) If the following warning message appears, ignore it. Click on "Advanced Settings" and then on "Go to ePLAYER1"

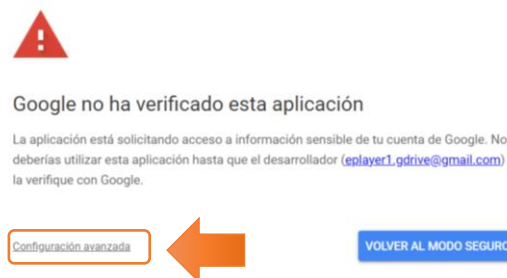


Figure 41

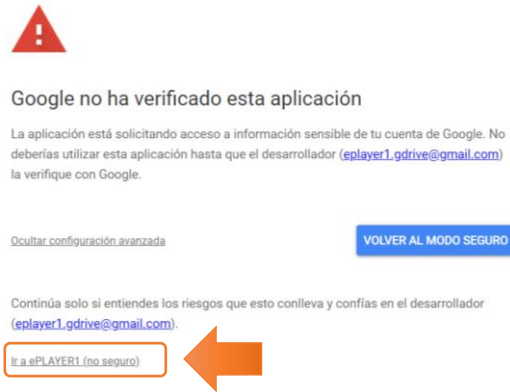


Figure 42

- 4) Accept the permissions required to view, modify, create and delete files, and click "Continue".

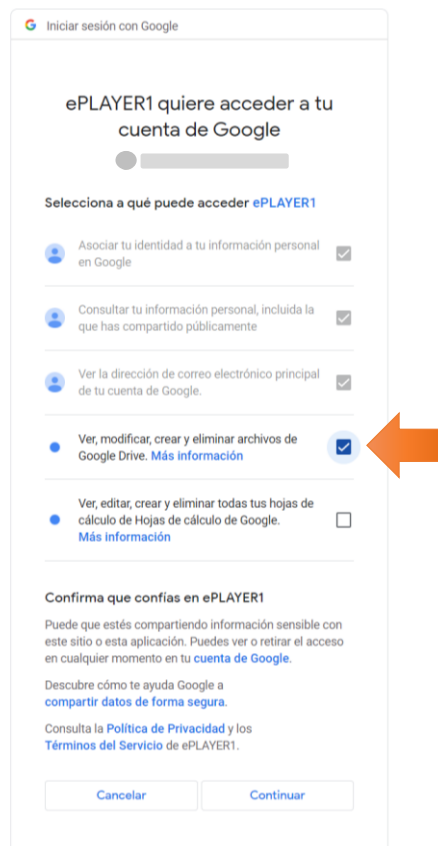


Figure 43

- 5) Copy the key that is generated.

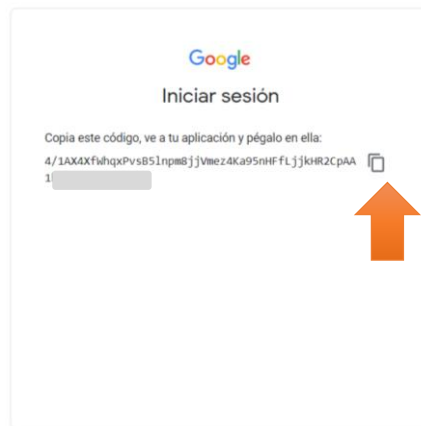


Figure 44

- 6) Paste it into the "Google security token" field and click on the VALIDATE TOKEN button.

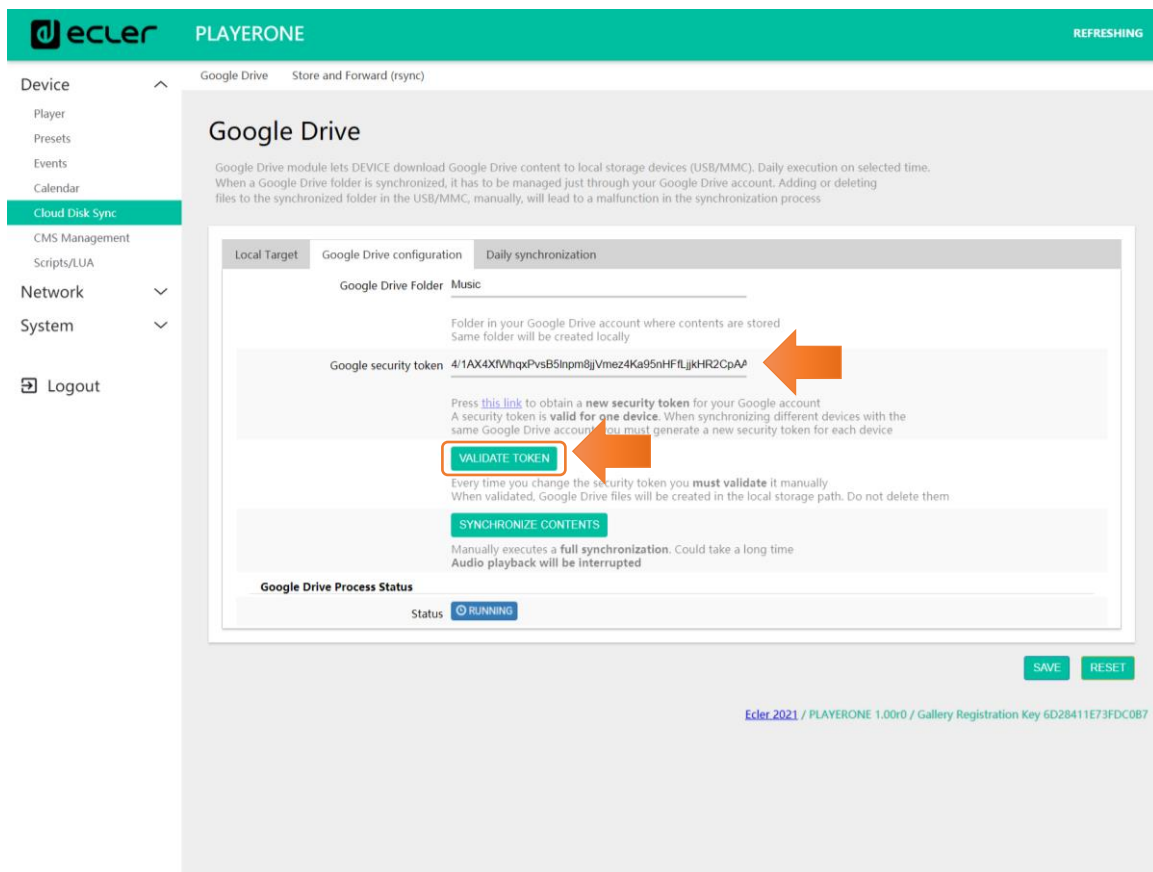


Figure 45

- 7) The process will start the validation of the service. The "Google Drive Process Status" field is displayed as RUNNING. This process takes a few seconds.

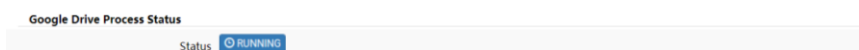


Figure 46

- 8) Once the validation process is finished, 2 possible messages may be displayed under "Google Drive Process Status":
- OK: validation successful. You can proceed to content syncing.

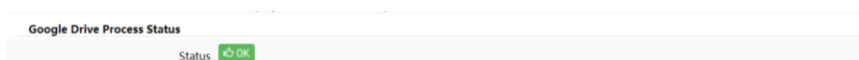


Figure 47

- FAILED: validation error.

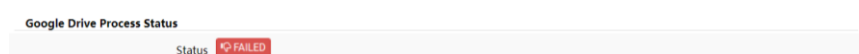


Figure 48

Perform the following validation troubleshooting checks before repeating the validation process:

- The device has an Internet connection
- Your network does not have any filters that prevent access to applications such as Google Drive
- The token is correct: it has been copied and pasted correctly
- The folder path entered in the "Google Drive folder" field matches the folder path in Google Drive.
- The USB/uSD folder has not been modified by adding or deleting files from a computer.
- The destination exists on the USB/uSD
- The USB/uSD storage media is in a valid format (FAT). NTFS is not a valid format for use with Google Drive (read-only support).
- The USB/uSD storage medium is not write protected

3. Synchronize contents: run the sync immediately (do not wait for the time set in the General tab). Recommended if it is the first time that the service is being run.

Considerations:

- This process can take a long time if it is the first time that it is being run, or if substantial changes are being made to your Google Drive folder. The time it takes depends on the number of audio files to be synced.
- Audio playback will be interrupted during syncing.

- Do not disconnect your device from the Internet or the mains during the syncing process.

4. Google Drive Process Status: indicates the status of content syncing.

- OK: validation/sync successfully completed.
- RUNNING: validation/sync process in progress.
- FAILED: validation/sync error.

3.5.1.3. Daily synchronization

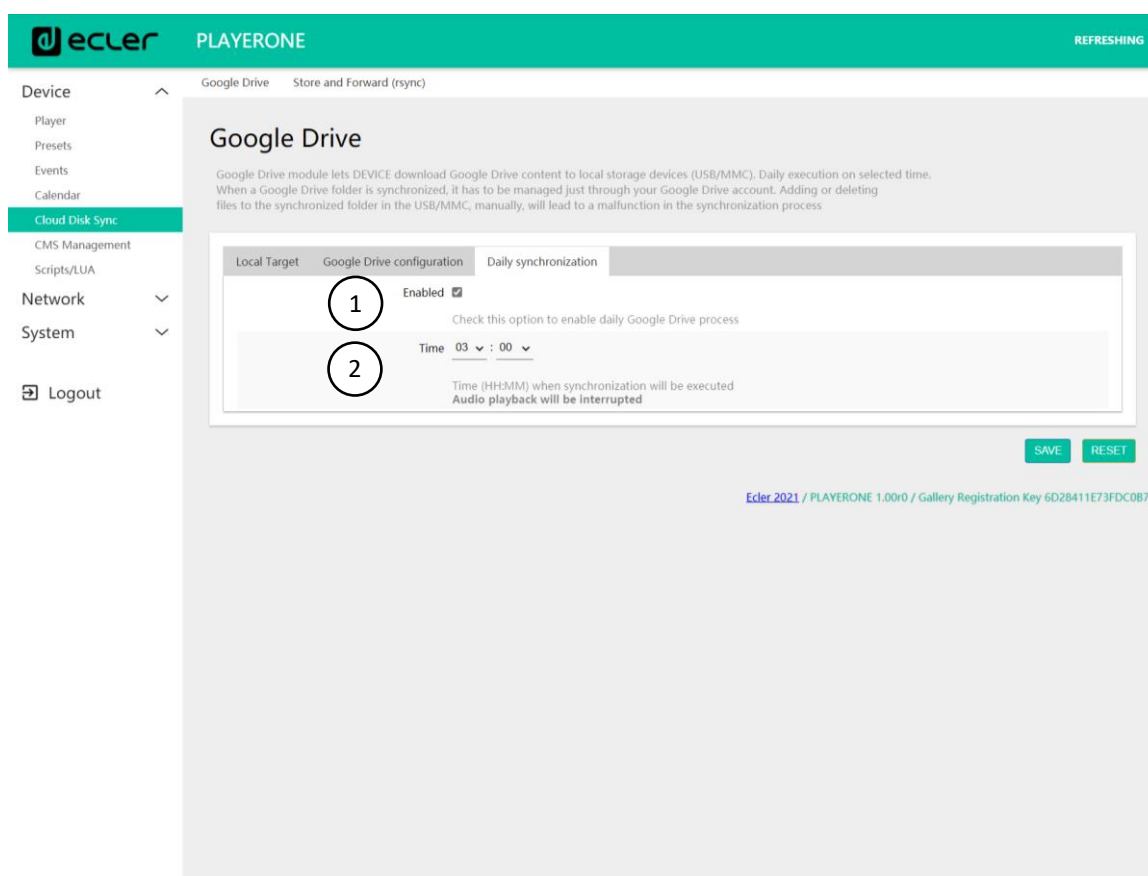


Figure 49. daily synchronization

1. Enable: enables/disables the sync service.
2. Time: daily sync time. Syncing with Google Drive will run every day at the specified time.

Tip: Select a sync time that is outside the operating hours of the player. Please note that the operation of downloading content from the cloud may take several minutes (depending on the size of the files, the number you need to download and the available Internet connection). Do not turn off the player during this operation or before it runs.

3.5.2 Store and Forward (rsync)

The Store & Forward module allows you to sync the content of the USB/uSD device with a folder that is hosted on a remote server on a daily basis. It also allows for automatic playback of this content, in combination with the *Load preset1* reboot mode. This service uses the *rsync* (Remote Sync) sync tool.

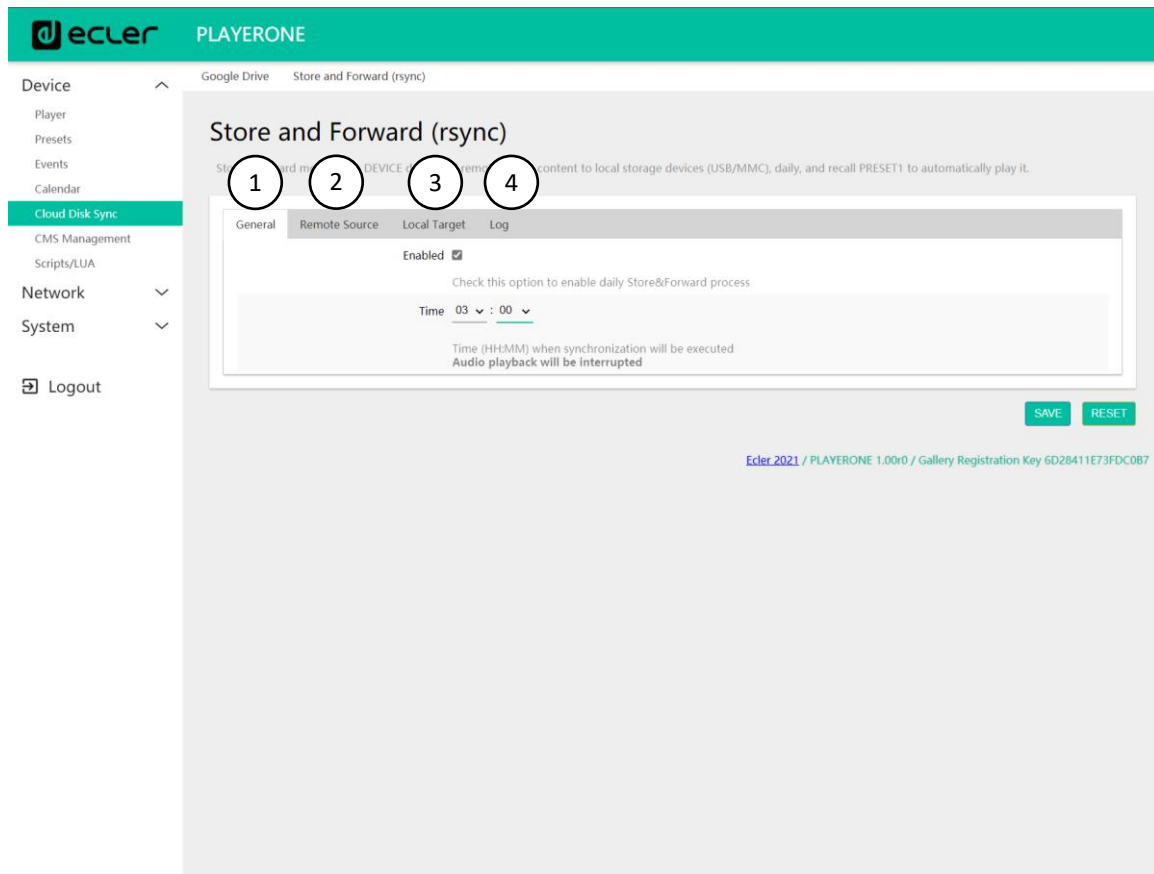
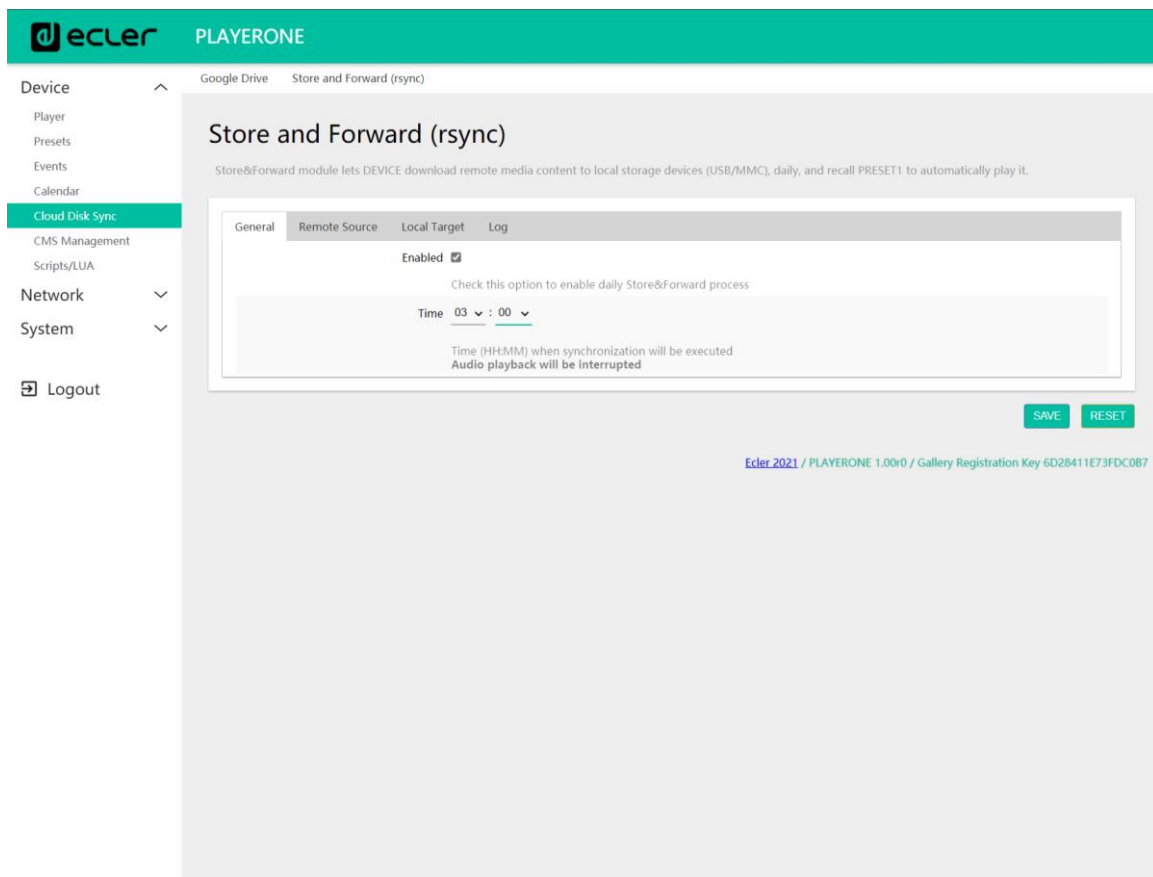


Figure 50: Store & Forward module

1. General: enables the S&F service and selects the sync time.
2. Remote source: remote server configuration.
3. Local target: configuration of the local folder where the content is stored.
4. Log: activity log for the S&F module

For more information on the Store & Forward service, please refer to [¡Error! No se encuentra el origen de la referencia..](#)

3.5.2.1. General



The screenshot displays the 'Store and Forward (rsync)' configuration page. The page title is 'Store and Forward (rsync)'. Below the title, there is a brief description: 'Store&Forward module lets DEVICE download remote media content to local storage devices (USB/MMC), daily, and recall PRESET1 to automatically play it.' The configuration is organized into tabs: 'General', 'Remote Source', 'Local Target', and 'Log'. The 'General' tab is active and contains the following settings:

- Enabled:** A checkbox that is checked, with the text 'Check this option to enable daily Store&Forward process' below it.
- Time:** A dropdown menu showing '03 : 00', with the text 'Time (HH:MM) when synchronization will be executed' and 'Audio playback will be interrupted' below it.

At the bottom right of the configuration area, there are 'SAVE' and 'RESET' buttons. At the bottom of the page, there is a footer: 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 51: S&F, General

- **Enabled:** This enables/disables the running of the daily sync.
- **Time:** time at which the daily sync is run.

3.5.2.2. Remote source

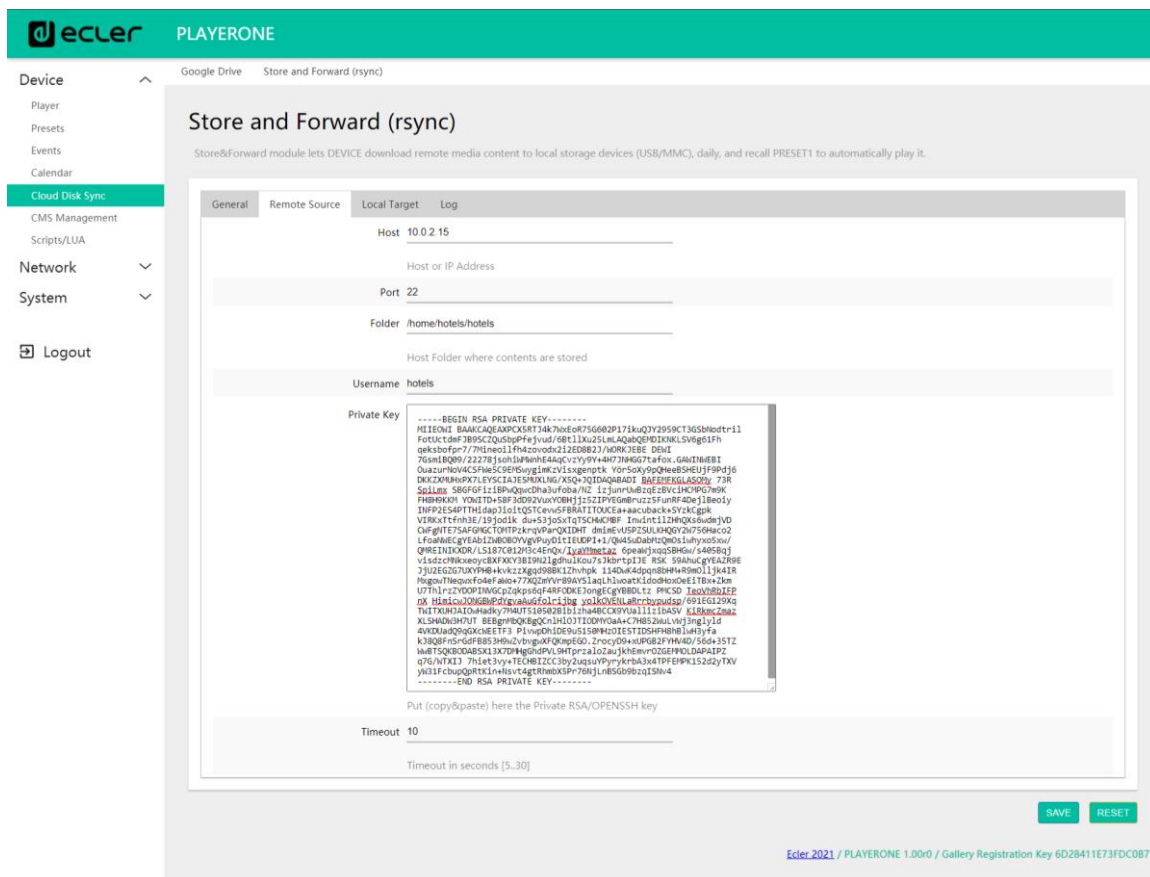


Figure 52: S&F, Remote source

- Host: host or IP address of the server.
- Port: server port, by default, 22
- Folder: directory within the server where the audio content that is to be synced is stored.
- Username: user or name of the content group
- Private key: private password generated for the indicated user or content group.

Please Note: for security and efficiency reasons, the remote server where the content is hosted must be SSH, and public and private passwords must be enabled and used.

3.5.2.3. Local target

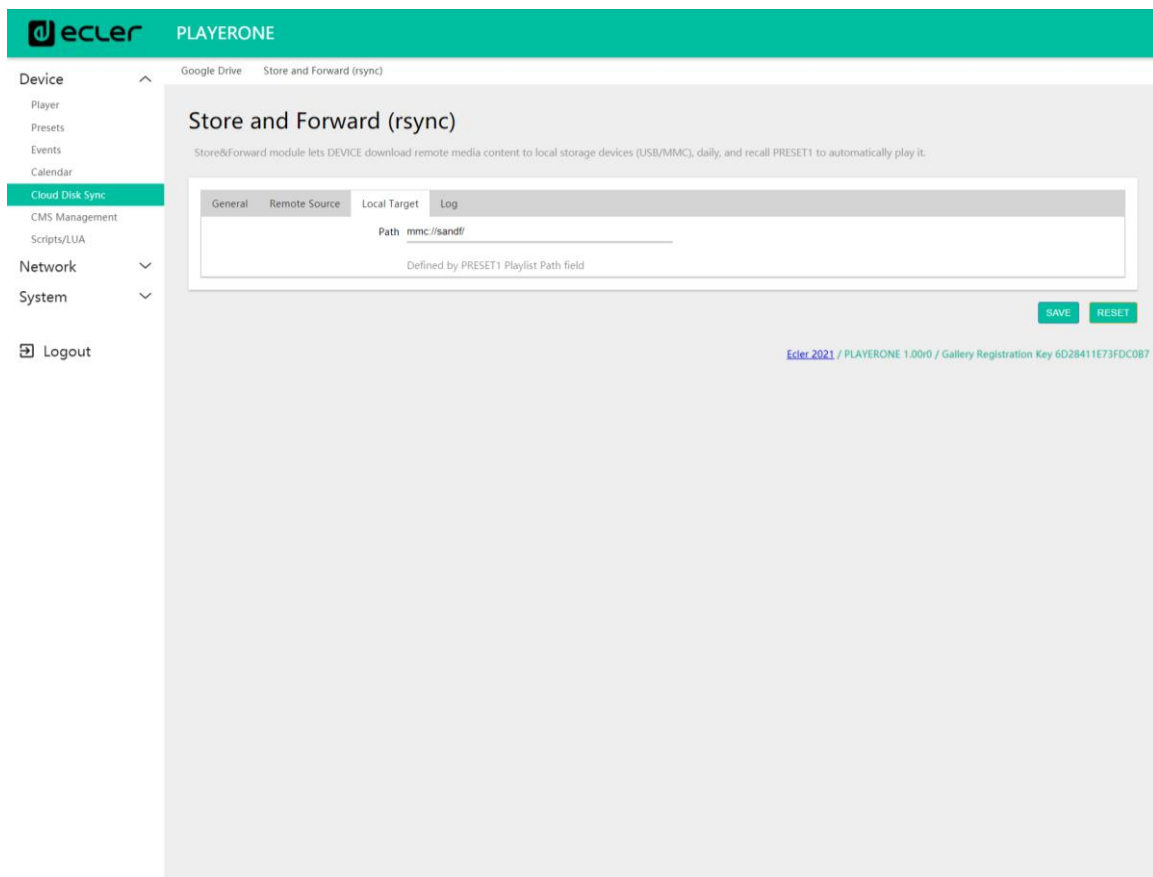


Figure 53: S&F, Local target

- Path: defined by the Playlist Path field for PRESET01. This can be changed in the *preset* settings.

3.5.2.4. Log

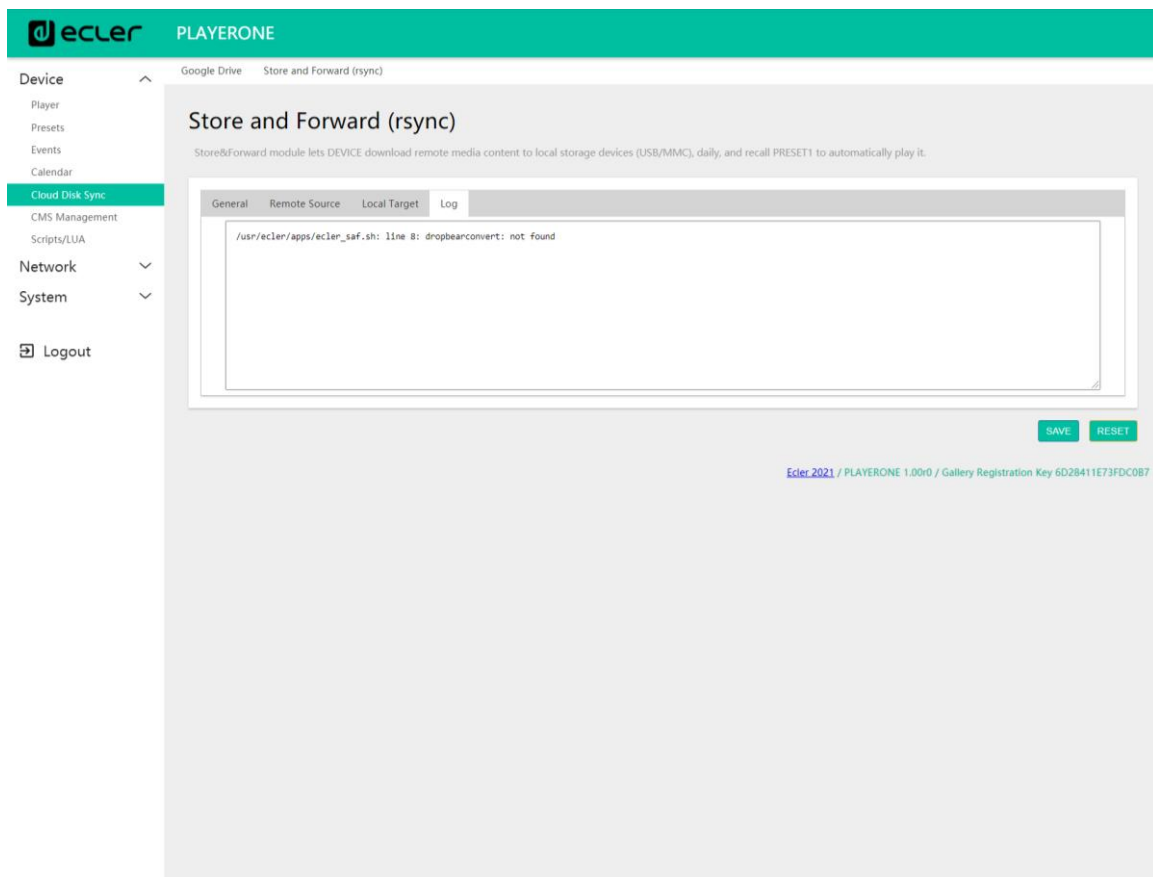


Figure 54: S&F, Log

- This displays information and activity in relation to the *rsync* syncing process. It is useful for debugging possible server or device configuration problems.

3.6. CMS Management

CMS stands for *Content Management System*.

In this mode, PLAYER ONE/PLAYER ZERO can be configured to behave as a client of a content management platform, obeying a schedule (calendar events, playlists, announcements, etc.) that is managed by the CMS company via the Internet.

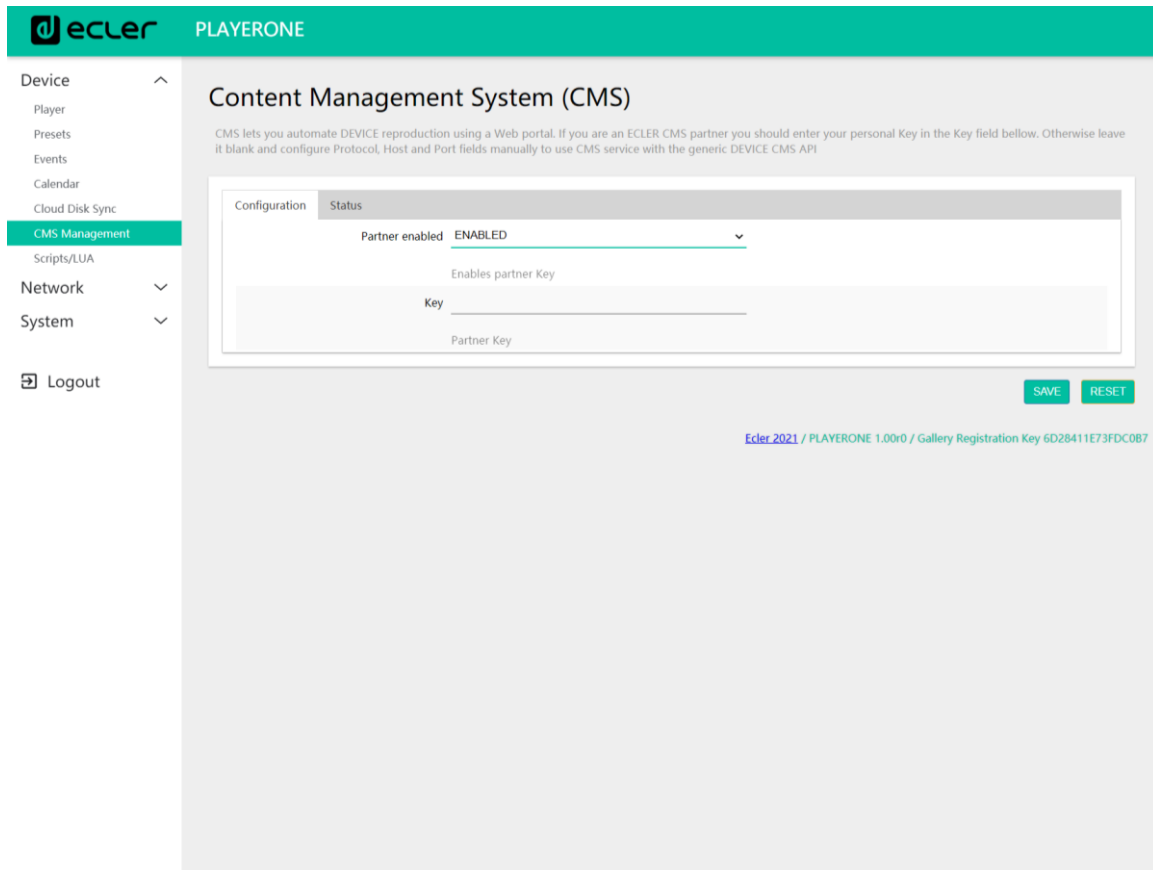


Figure 55: CMS

This page is available to provide support for CMS companies that used this functionality in the past. For further information please contact your supplier, distributor or fill in the contact form on our website in the Support/Technical Queries section.

3.7. Scripts/LUA

A *script* is a simple program; a file of instructions written by the user in LUA language (<https://www.lua.org/>).

Each *script* can be thought of as a script that the player runs; a series of pre-programmed tasks that are run when a certain stimulus is received.

The screenshot displays the Ecler PlayerONE interface. At the top, there's a navigation bar with the Ecler logo and 'PLAYERONE' text. Below it, a list of scripts (S01 to S16) is shown, with 'S20' circled in red and labeled '1'. The main content area is titled 'SCRIPT20' and contains instructions: 'Define here your LUA scripts. You can test it with the "Start" button. Try it, it's simply just write something like `print("Hello world")`'. A circled '2' points to the 'Start' button. Below this is a configuration form with a 'Name' field (circled '3'), an 'Enabled' checkbox, and a 'Trigger' dropdown set to 'ON BOOT'. A note says 'After changing the Source Code always validate it clicking "Save & Apply"'. The 'Source Code' field (circled '4') contains the following Lua code:

```

require "ePLAYER1"
ep = ePLAYER1.new()
ep.FINDER_set(true)
times=0
while true do
  for i=1,10,1 do
    ep.PLAYER_decvolume()
    sleep(0.5)
  end
  print(times)
  for i=1,10,1 do
    ep.PLAYER_incvolume()
    sleep(0.5)
  end
  times=times+1
end
ep.FINDER_set(false)

```

Below the code editor are 'START', 'STOP', and 'STOPPED' buttons. A note states: 'Clicking the "Start" button executes the script once (to test it)'. At the bottom, there are 'SAVE & APPLY' and 'RESET' buttons. The footer contains the text: 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 56: Script example

- PLAYER ONE/ PLAYER ZERO has 20 scripts available, each of which is completely configurable. The default names are: S01, S02... S20. When you click on the name, it will take you to the configuration for that script. The name that appears here for the script can be edited within the script configuration. After this setting is saved in the script, you need to refresh the browser page (F5) in order to display the changes.
- Useful information for script configuration and Lua reference manual.
- Parameters of each script that can be configured:
 - Name: name given to the script by the user. This name will appear in the header of the Scripts/LUA page.
 - Enable: enables or disables the script.
 - Trigger: stimulus that triggers the execution of the script. There are different ways to trigger a script or automate tasks:

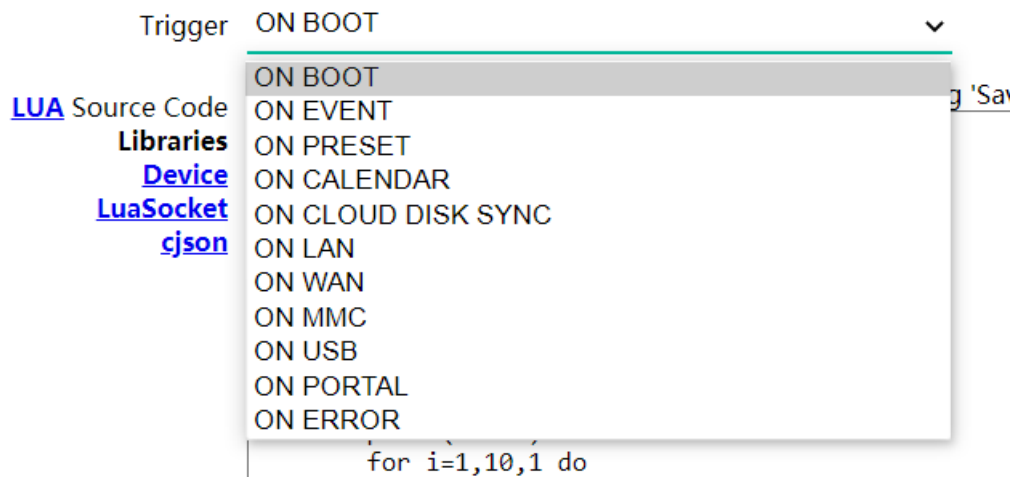
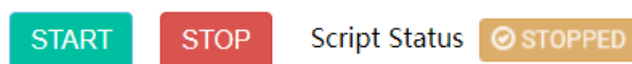


Figure 57: available stimuli

- ON BOOT: when the device boots up. Start-up tasks can be configured.
- ON EVENT: when a GPI event (GPI1 or GPI2), or the silence detection event (SILENCE), is triggered
- ON PRESET: after loading a *preset*. One of the 20 *presets* has to be selected, and when it is recalled the *script* will be triggered.
- ON CALENDAR: when a calendar event is triggered. One of the 24 calendar events has to be selected, which will, in turn, trigger the script.
- ON CLOUD DISK: when syncing with a remote server is successfully completed (with sync result "OK"). It must indicate which of the servers it synced with: Google Drive or *rsync*
- ON LAN: when detecting whether the LAN (local network) is available or not.
- ON WAN: when detecting whether the WAN (Internet access) is available or not.
- ON MMC: when a uSD card is connected or disconnected, and recognized correctly by the device.
- ON USB: when a USB device is connected or disconnected, and recognized correctly by the device.
- ON PORTAL: when syncing with the Ecler Gallery is successfully completed (with sync result "OK").
- ON ERROR: when the error indicated in "Error code" with a code occurs. A table of error codes can be found in the PLAYER ONE PLAYER/ZERO programming library (programmer's appendix).
- LUA Source Code: the text of the *script* must be entered in this field.

- Execution buttons: script execution and stop buttons. The START button runs the *script* immediately, without the need for the programmed stimulus to occur. The *script* must be saved before you click on this button in order for the changes to be applied. This is useful for testing. The STOP button stops the running of the *script*. These functions are especially useful during *script* programming, as they allow you to check the actions executed by each *script* and debug the code.



Clicking the 'Start' button executes the script once (to test it).

Figure 58: script execution buttons

- Status: shows the status of the *script*: RUNNING (flashing) the *script* is running, or STOPPED (steady), the *script* has finished or stopped.
- Script output: output/return value of the *script*. You can write output messages that will appear on this screen. This is useful for debugging scripts.



Figure 59: example of a script return value

- Documentation for programmers: links (blue) available on the device for consultation (Internet connection required):
 - LUA: LUA programming language manual
 - Device: PLAYER ONE/PLAYER ZERO LUA library (programmer's annex). Details the objects, functions, and parameters of the library. Interface between LUA and the firmware of the device using the JSON protocol.
 - LuaSocket: LuaSocket library documentation.
 - cJSON: LUA cJSON module documentation. Provides JSON support for LUA.

The following chapters show a number of examples of simple *scripts*. Keep in mind that this PLAYER ONE/PLAYER ZERO programming and customization tool is very powerful, as the same *script* can execute several tasks which can be linked together, depending on various circumstances, and thus implement an entire logic and intelligence in the way it works.

The only limit is your imagination!

3.7.1 Example Script01:

Write messages on the LCD screen

The following is an example of how to write a message on the LCD. This message has been configured so that, when the player starts up, the message "Hello Ecler" is displayed on the screen for 10 seconds.

Please Note: this is only available for PLAYER ONE. PLAYER ZERO does not have an LCD screen.

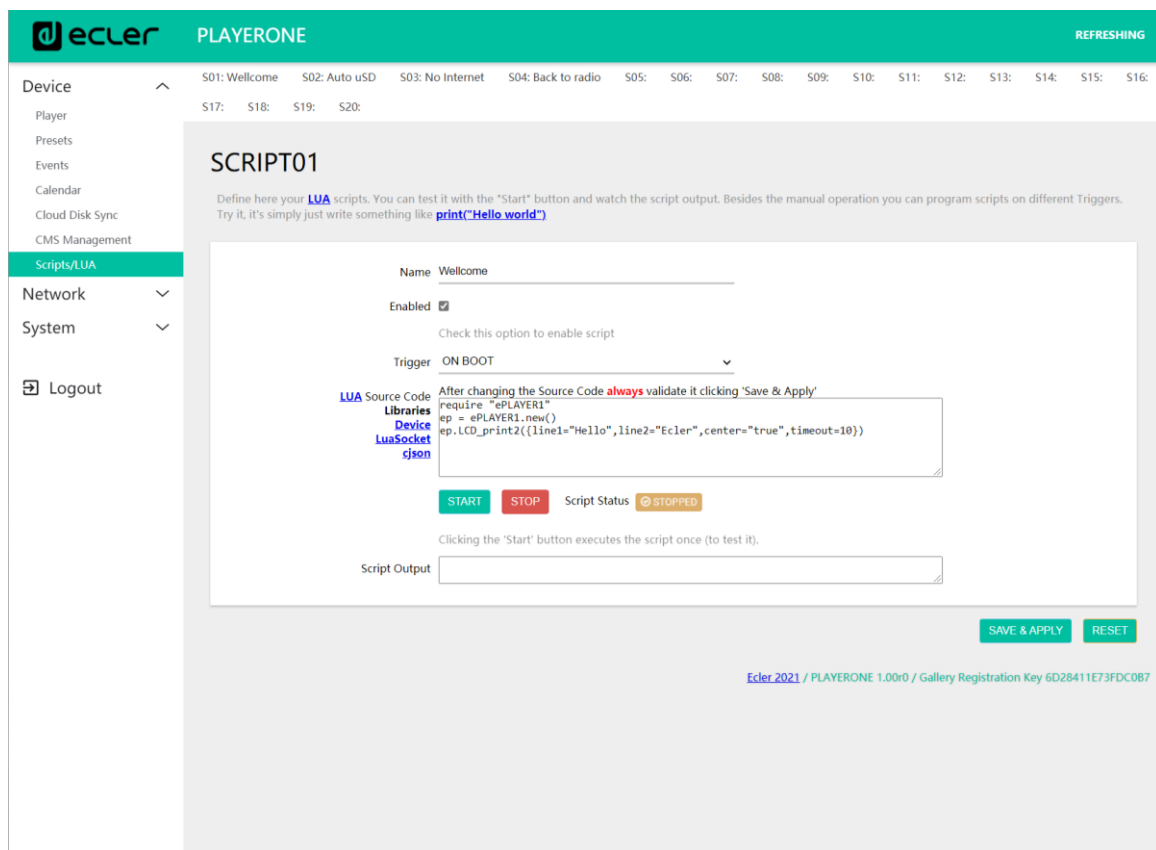


Figure 60

```
require "ePLAYER1"
ep = ePLAYER1.new()
ep.LCD_print2({line1="Hello",line2="Ecler",center="true",timeout=10})
```

3.7.2. Example Script02:

Automatically play uSD cards when inserted

There are applications in which the local storage medium will change depending on the user. For example, an activity room in a gym where, for each session, different instructors will change the music. In other words, they will connect their USB device or uSD card to play their content. This can be automated so that users simply have to insert their device into the device, and playback starts automatically. This avoids unauthorised tampering and/or saves them from having to read the manual for the device.

So, the following example *script* automatically plays the uSD card as soon as it is inserted. You could create a *script* to do the same thing with the USB device, by simply changing the trigger and the URL.

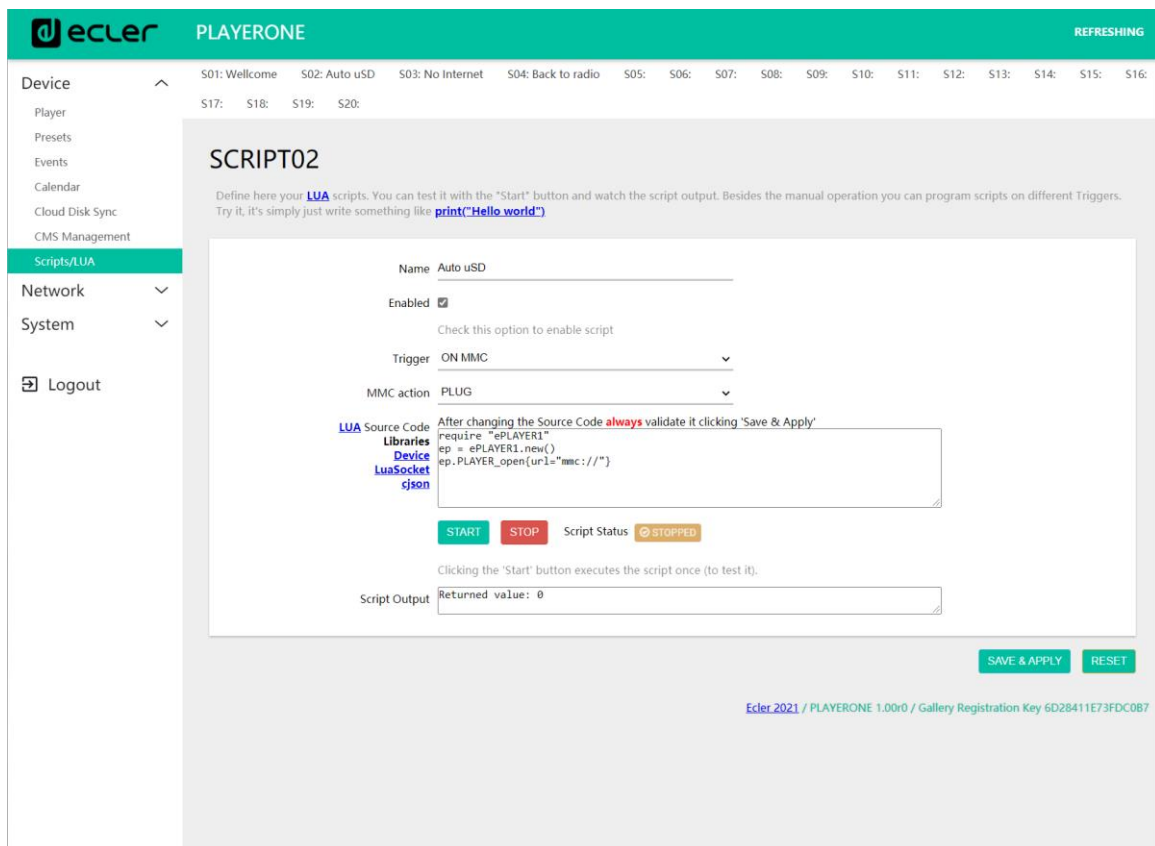


Figure 61

```
require "ePLAYER1"
ep = ePLAYER1.new()
ep.PLAYER_open{url="mmc://"}

```

3.7.3. Example Script03:

Messages can be configured for practical uses. The following *script* displays a "NO INTERNET" message that flashes when the Internet (WAN) connection is lost. It has also been written in such a way that we can use the "blink" function multiple times within the same *script*. In addition, it loads *preset1*, which has local audio content stored and set to play (PLAY) when loaded, in order to ensure continuity of the music program.

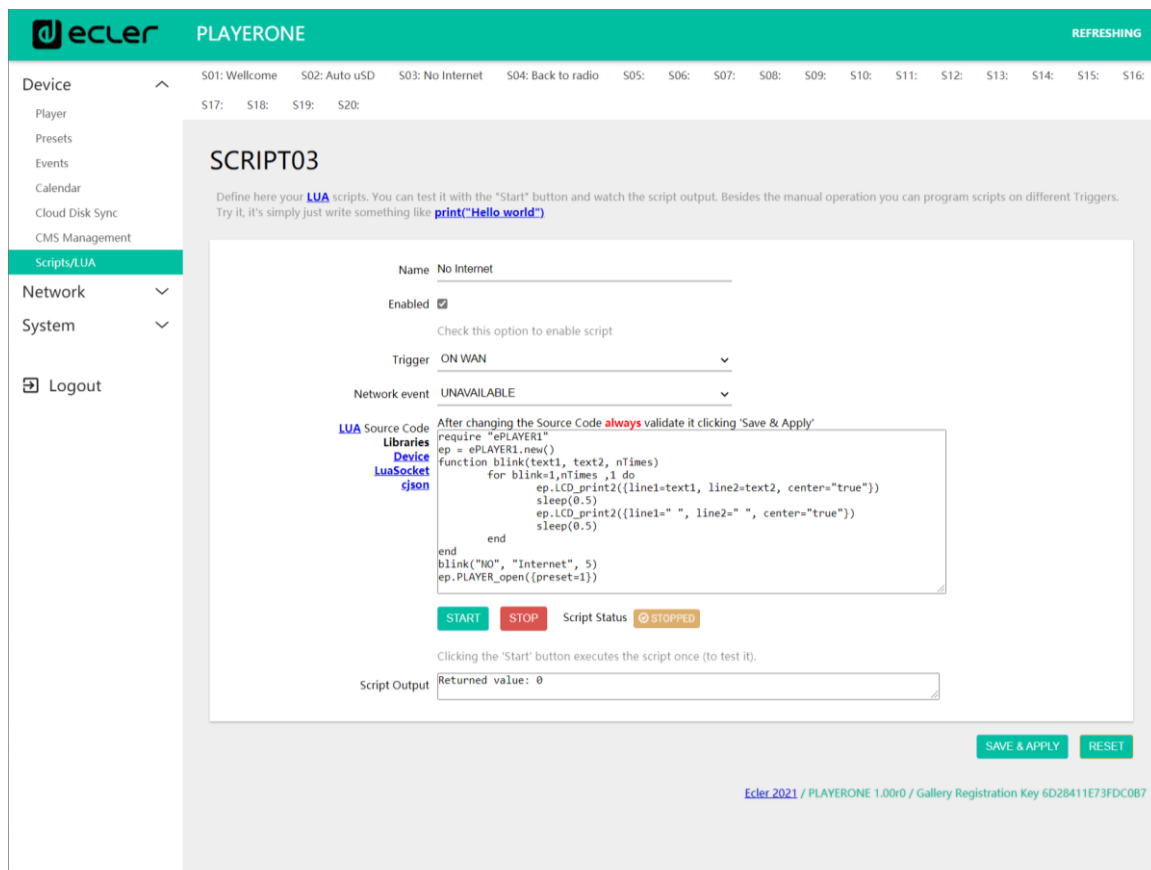


Figure 62

```
require "ePLAYER1"
ep = ePLAYER1.new()
function blink(text1, text2, nTimes)
    for blink=1,nTimes ,1 do
        ep.LCD_print2({line1=text1, line2=text2, center="true"})
        sleep(0.5)
        ep.LCD_print2({line1=" ", line2=" ", center="true"})
        sleep(0.5)
    end
end
blink("NO", "Internet", 5)
ep.PLAYER_open({preset=1})
```

end

end

blink("NO", "Internet", 5)

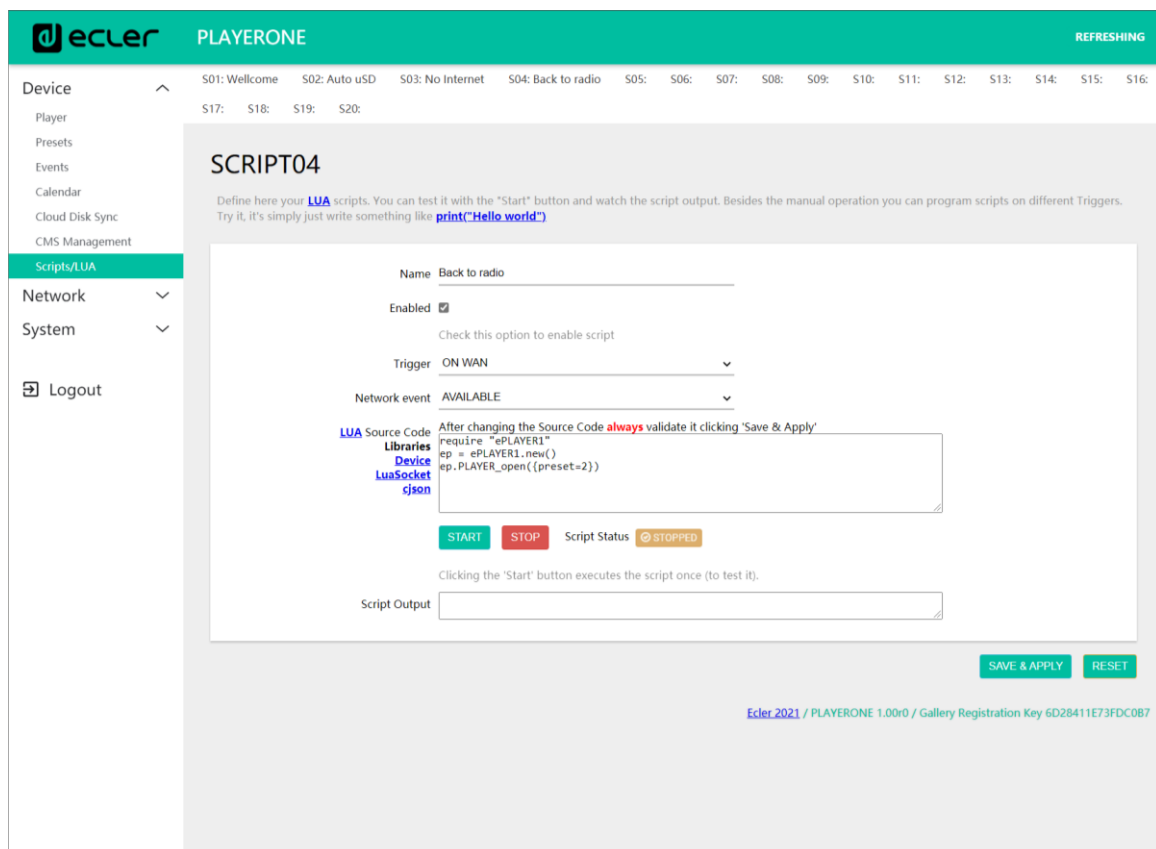
ep.PLAYER_open({preset=1})

3.7.4. Example Script04:

Play an Internet radio station when the Internet connection is restored

The following *script* loads a *preset* when an available Internet connection (WAN) is detected. It can be good to use this in combination with the silence detection event:

The device is playing an Internet radio station, however, due to a network problem, it no longer has access to the radio. After a few seconds without audio, the silence detection event is triggered, and the device starts playing content from the uSD card (back-up music). However, you want the radio that was playing to start up again automatically once the Internet connection is available again.



The screenshot shows the ecler PLAYERONE interface. The top navigation bar includes the ecler logo, the text 'PLAYERONE', and a 'REFRESHING' indicator. A sidebar on the left lists various system components like Device, Player, Presets, Events, Calendar, Cloud Disk Sync, CMS Management, Scripts/LUA, Network, System, and Logout. The main content area is titled 'SCRIPT04' and contains configuration options for a Lua script. The script name is 'Back to radio', it is enabled, and its trigger is set to 'ON WAN' with a network event of 'AVAILABLE'. The source code field contains: `require 'ePLAYER1'`, `ep = ePLAYER1.new()`, and `ep.PLAYER_open({preset=2})`. Below the code are 'START', 'STOP', and 'Script Status' buttons, with the status currently showing 'STOPPED'. A 'Script Output' field is at the bottom. The footer of the interface displays 'Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7'.

Figure 63

```
require "ePLAYER1"  
ep = ePLAYER1.new()  
ep.PLAYER_open({preset=2})
```


4. NETWORK

Allows you to configure the Ethernet and WiFi network interfaces.

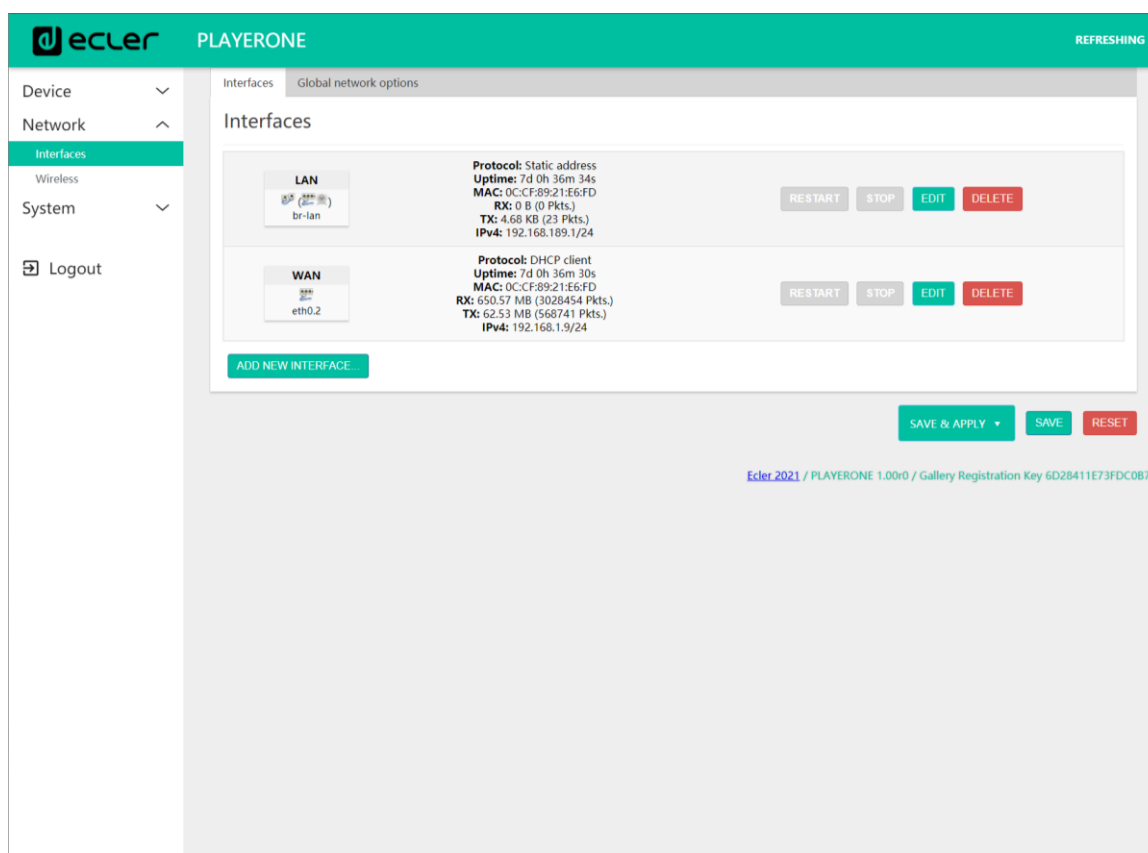


Figure 64: Network, Interfaces

- Interfaces: allows parameters to be edited for the wired connection, RJ 45 Ethernet port (LAN/WAN).
- Wireless: allows parameters to be set for the wireless connection, WiFi interface.

Please Note: for detailed information on all network parameters, click on this [link](#).

4.1. Connection via RJ45 cable

By default, PLAYER ONE/PLAYER ZERO has automatic network addressing (DHCP). To change to manual addressing (editing network parameters), access the web application and go to the Network/Interfaces menu.

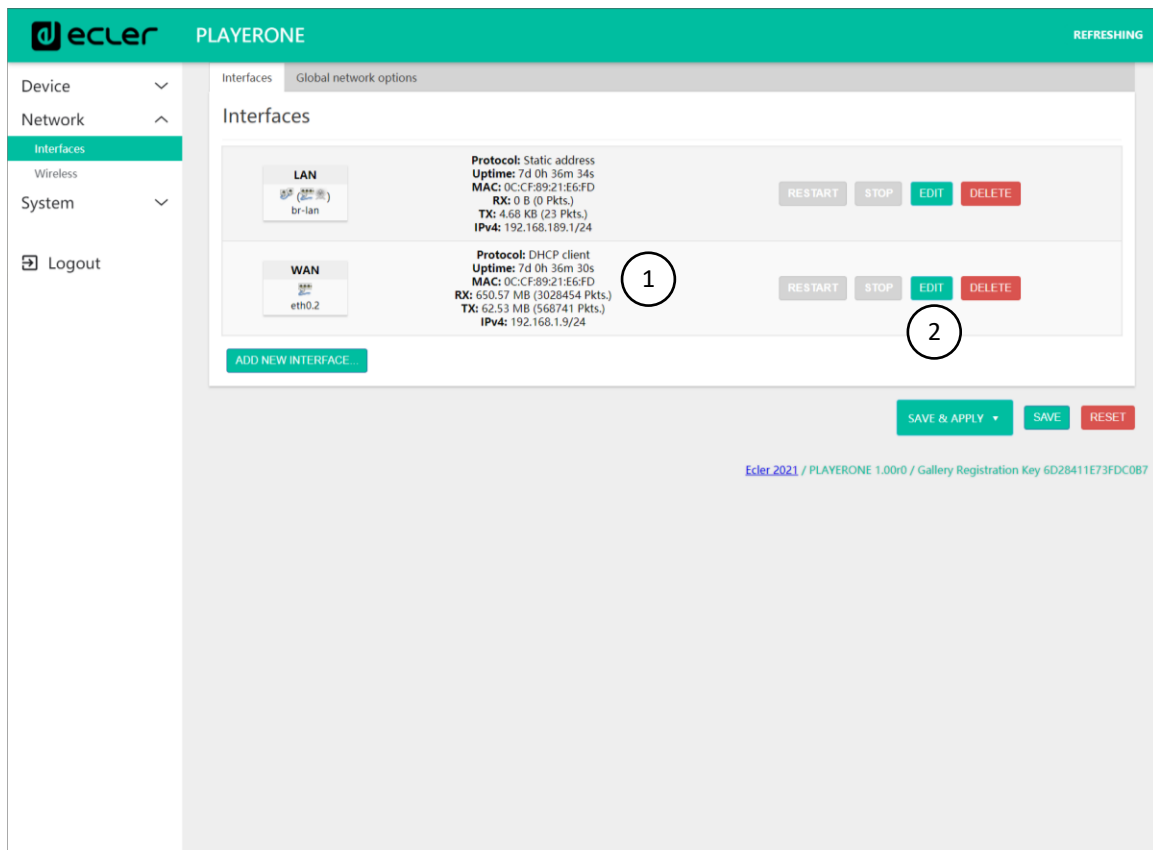


Figure 65

1 Network information: checking network parameters and network information

- Protocol: DHCP client/static address
- Uptime: connection time
- MAC: MAC address of the device
- RX: amount of data received
- TX: amount of data transmitted
- IPv4: IP address of the device

2 Edit network parameters: accesses the Ethernet interface configuration

Press the EDIT button to access the Ethernet interface configuration.

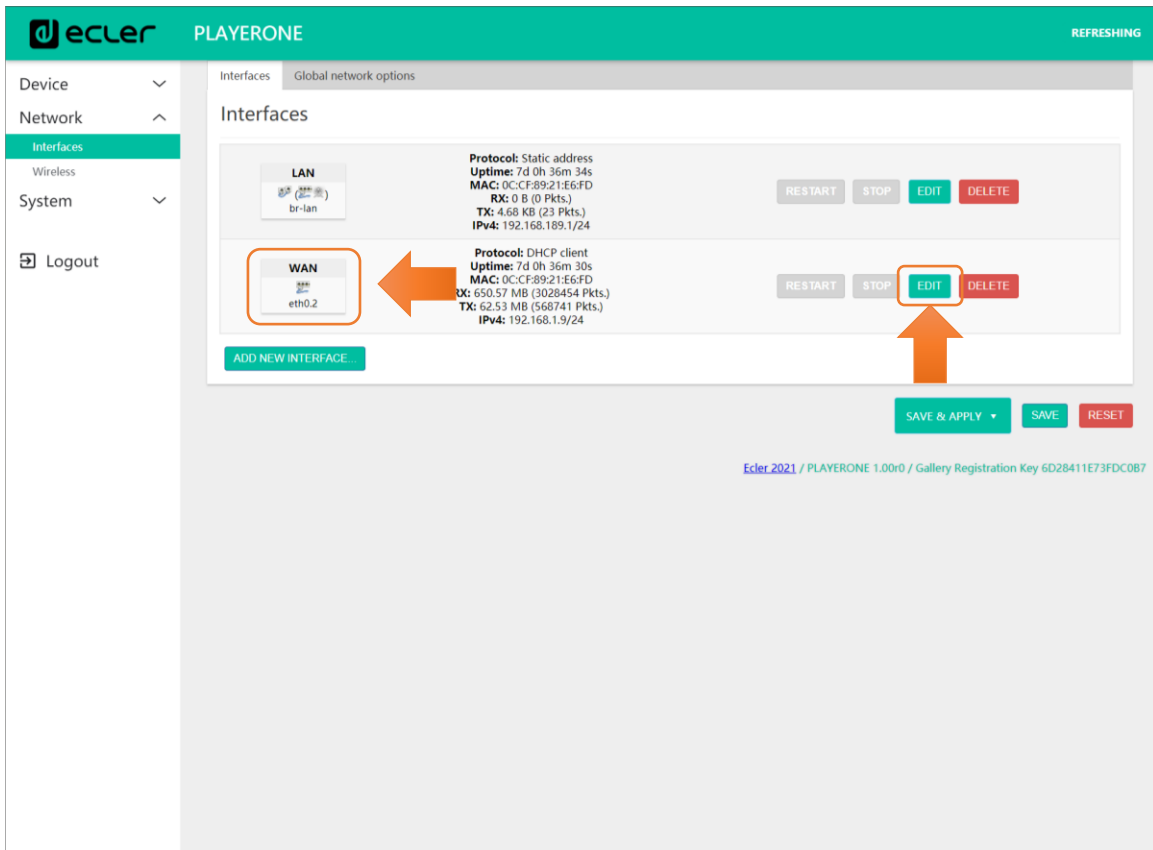


Figure 66: accessing the network configuration

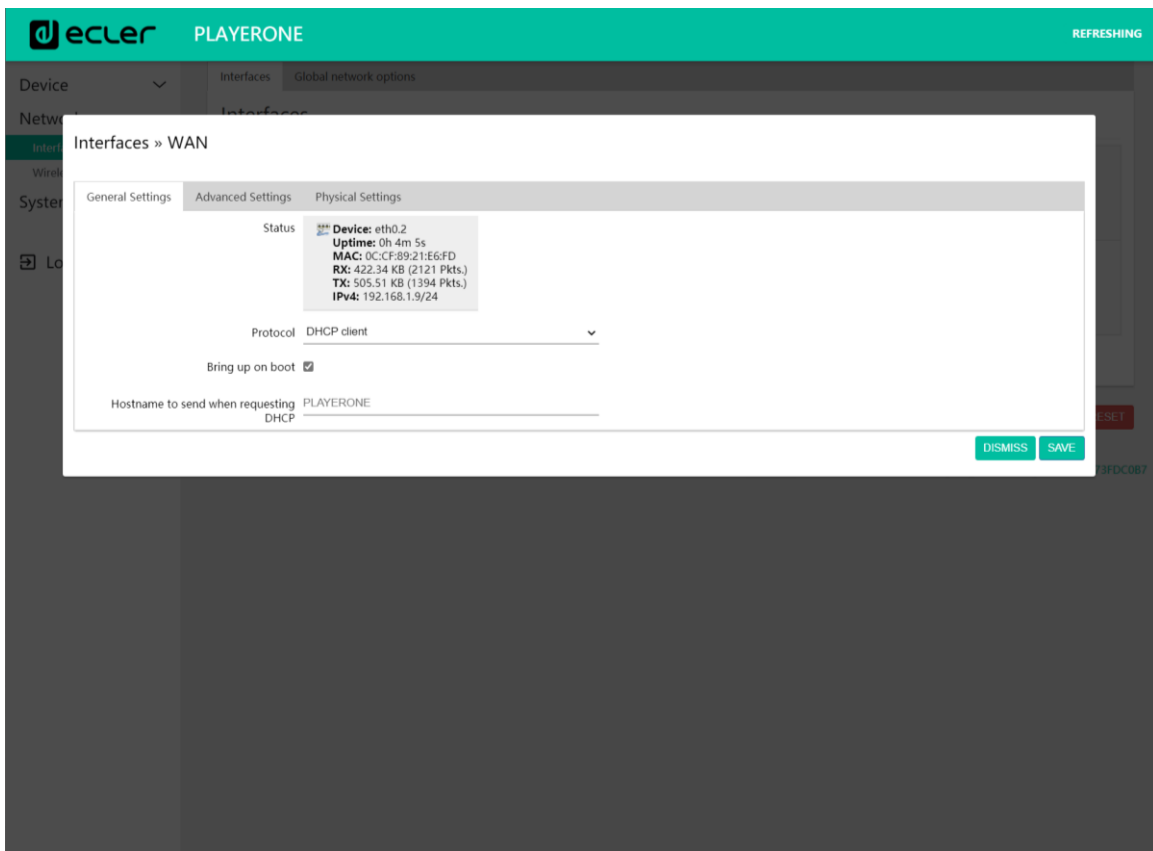


Figure 67: editing network parameters

Select *Static address* mode and press the SWITCH PROTOCOL button to edit the network addressing manually.

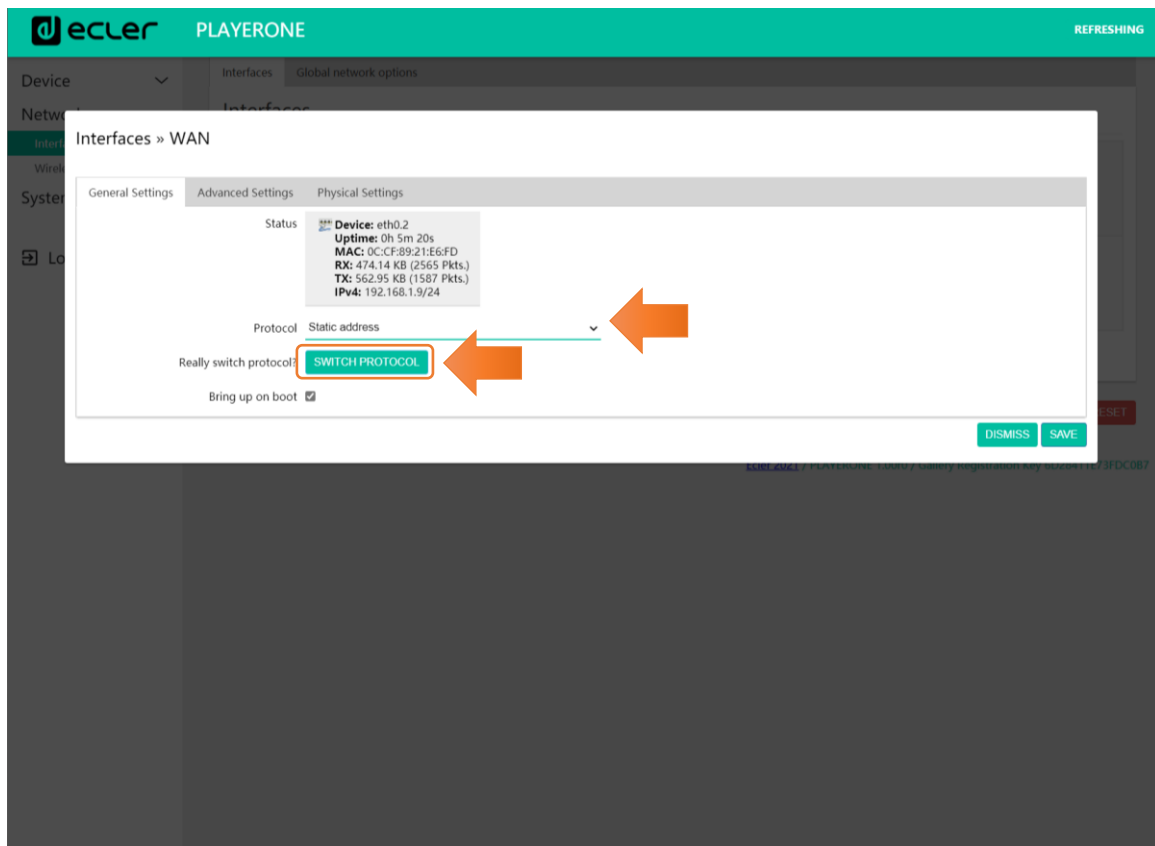


Figure 68

Configure the network parameters according to your infrastructure:

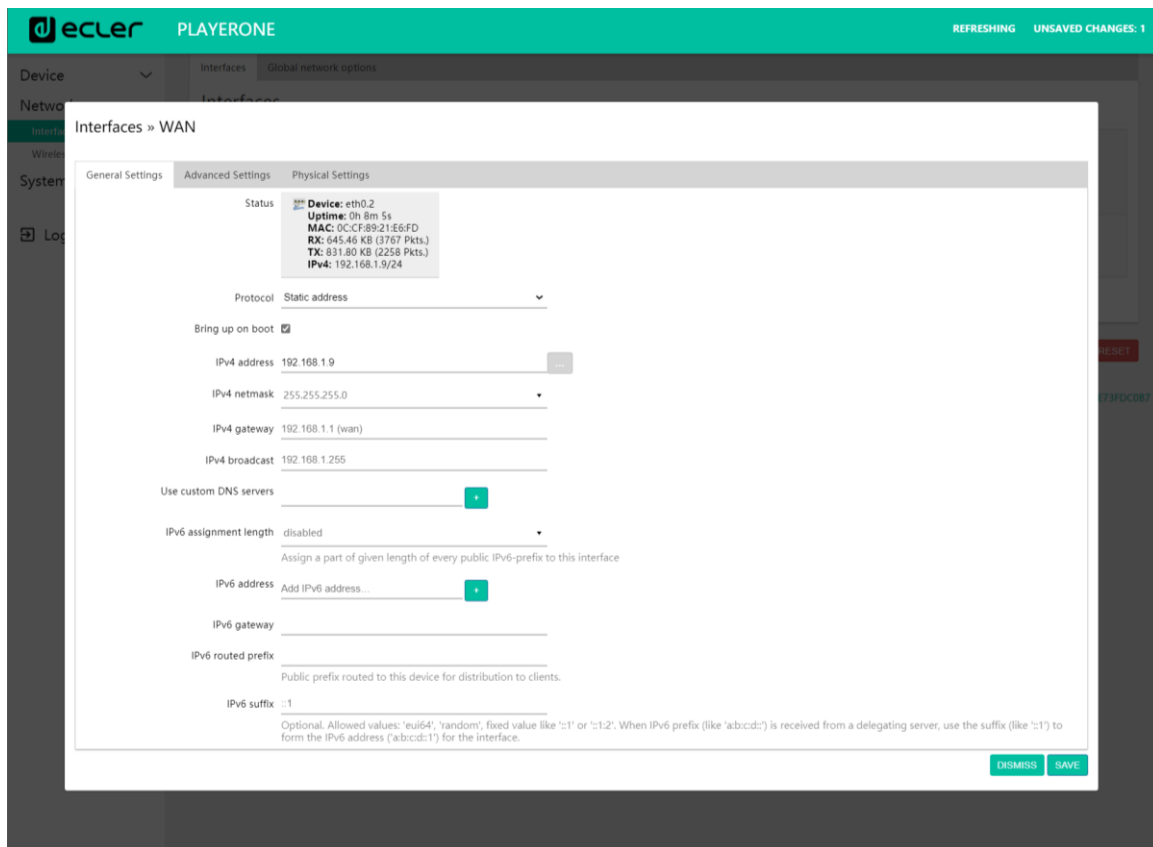


Figure 69

- IPv4 address: device network address
- IPv4 netmask: subnet mask
- IPv4: gateway (switch/router with Internet access)
- DNS1: Domain Name System 1 (optional)
- DNS2: Domain Name System 2 (optional)

Save the changes on the Edit page, and apply them on the Network/Interfaces page.

4.2. Point-to-point wireless connection

PLAYER ONE/PLAYER ZERO can establish a point-to-point wireless connection with a WiFi interfaced device (PC, *smartphone*, *tablet*, etc.), either for accessing the web application or for *streaming* via AirPlay/DLNA.

Make sure that the wireless connection is enabled and the device is set to MASTER (Access Point) mode.

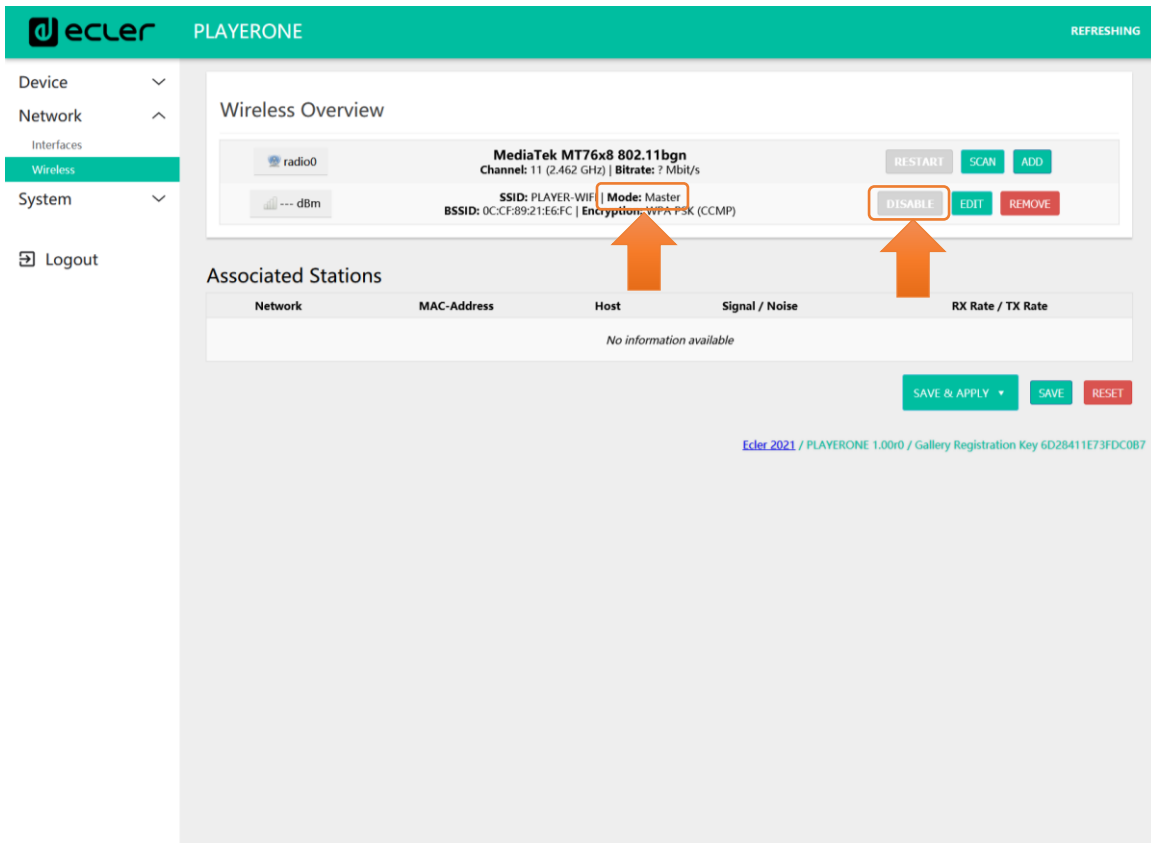


Figure 70: WiFi interface configuration

In your device's WiFi settings, select your device's WiFi network (factory default: PLAYER-WIFI), and enter the password (0123456789). A point-to-point wireless connection will be established.



Figure 71: WiFi settings on a smartphone

If you have more than one Ecler player in the same system, or you simply want to customize the parameters with which the network is displayed, we recommend changing the SSID and password of the WiFi network of your device(s). To do this, click on the EDIT button and adjust the WiFi network parameters according to your needs. When you have made the changes, save and apply them.

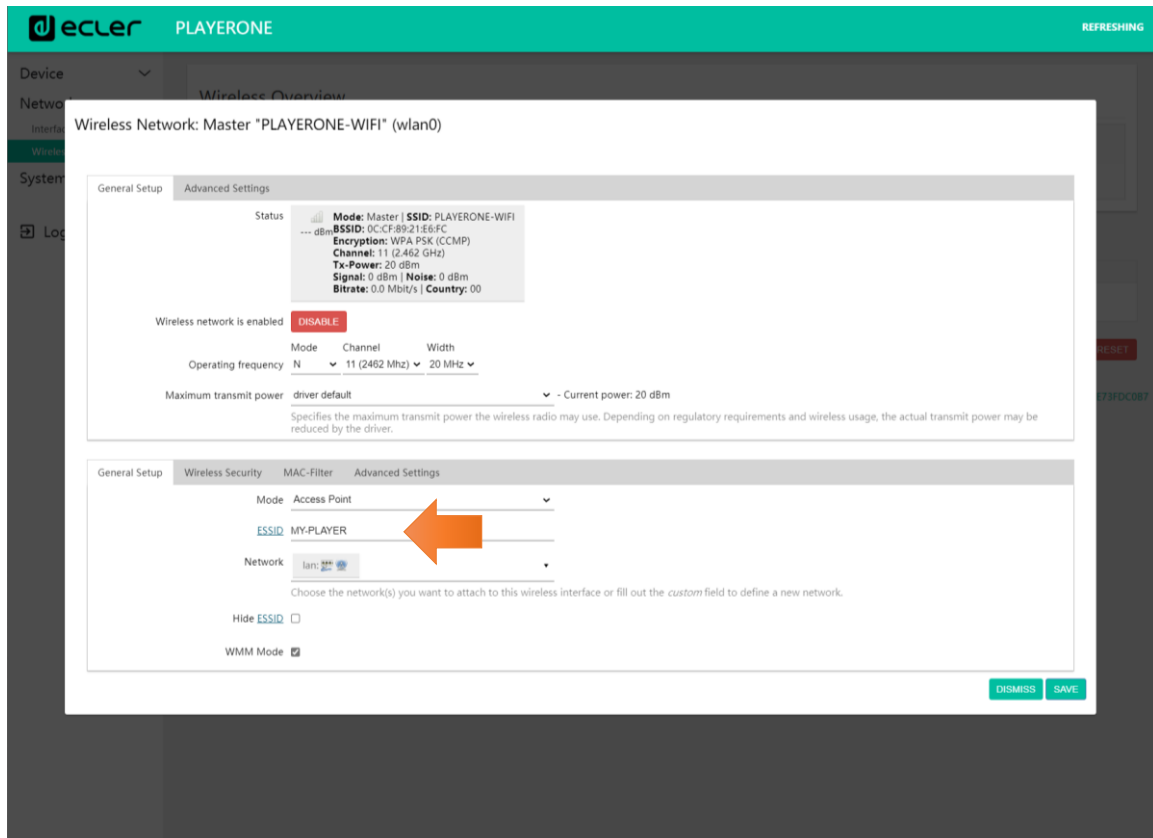


Figure 72: editing WiFi network SSID

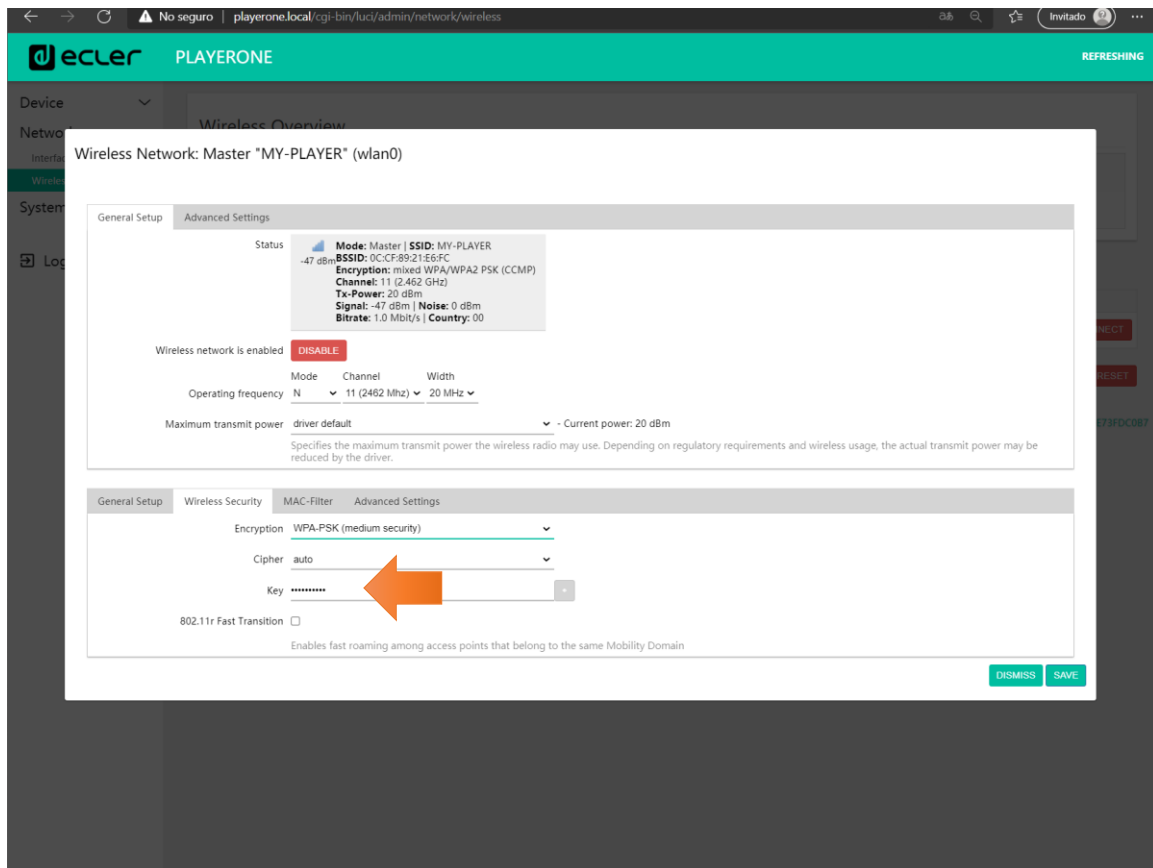
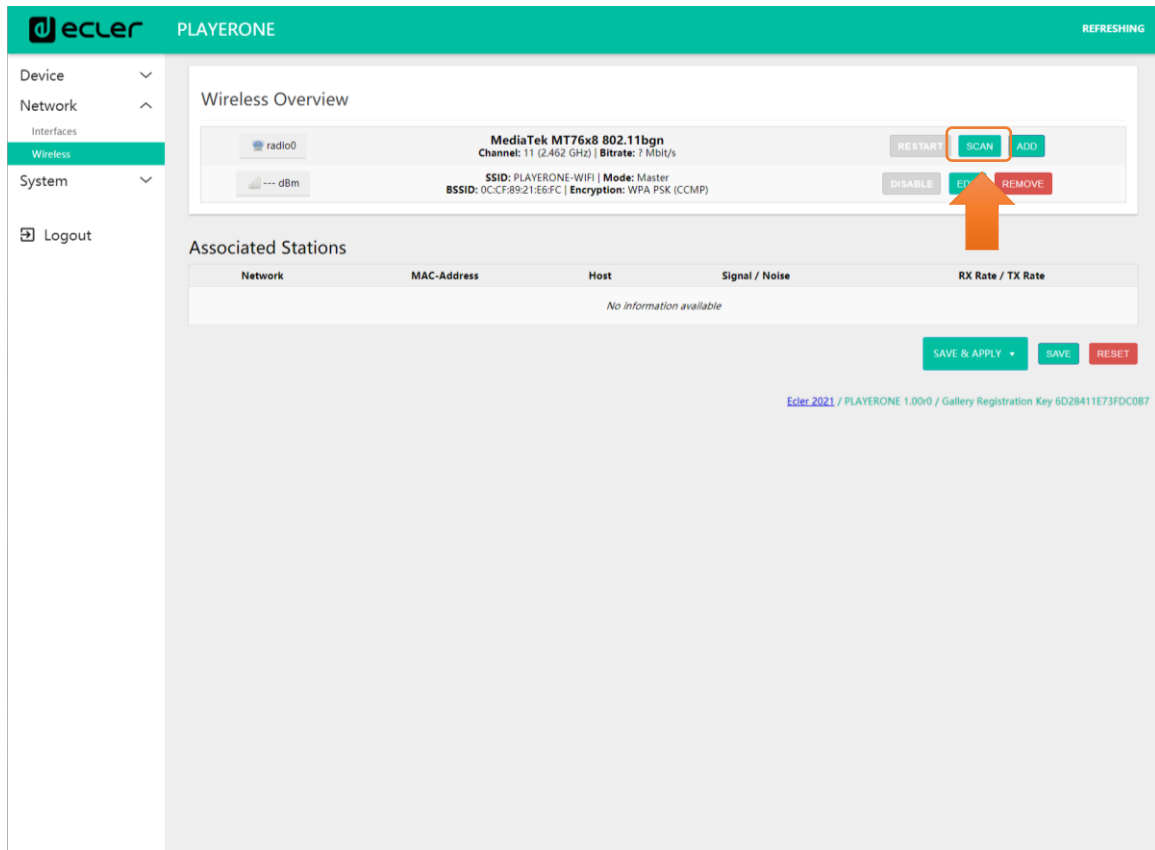


Figure 73: editing WiFi password

4.3. Connecting to a WiFi network

PLAYER ONE/PLAYER ZERO can connect to the Internet via a home WiFi network to access network addresses, such as Internet radios or remote file syncing services, such as Google Drive.

On the WiFi interface configuration page, click SCAN.



The screenshot displays the ecler PLAYERONE web interface. The top navigation bar includes the ecler logo, the text 'PLAYERONE', and a 'REFRESHING' indicator. A left sidebar contains a menu with 'Device', 'Network', 'Interfaces', 'Wireless' (highlighted), and 'System', along with a 'Logout' button. The main content area is titled 'Wireless Overview' and features two interface cards. The top card, for 'radio0', shows 'MediaTek MT76x8 802.11bgn' with details for Channel, Bitrate, SSID, Mode, and Encryption. It includes buttons for 'RESTART', 'SCAN' (highlighted with a red box and an orange arrow), and 'ADD'. The bottom card, for '--- dBm', shows 'SSID: PLAYERONE-WIFI | Mode: Master' and 'BSSID: 0C:CF:89:21:E6:FC | Encryption: WPA PSK (CCMP)', with buttons for 'DISABLE', 'EDIT', and 'REMOVE'. Below these cards is the 'Associated Stations' section, which contains a table with columns for Network, MAC-Address, Host, Signal / Noise, and RX Rate / TX Rate. The table is currently empty, displaying 'No information available'. At the bottom right of the interface are 'SAVE & APPLY', 'SAVE', and 'RESET' buttons, and a footer with version and registration information.

Figure 74

Select your home WiFi network.

Please Note: PLAYER ONE/PLAYER ZERO is only compatible with 2.4GHz wireless networks.

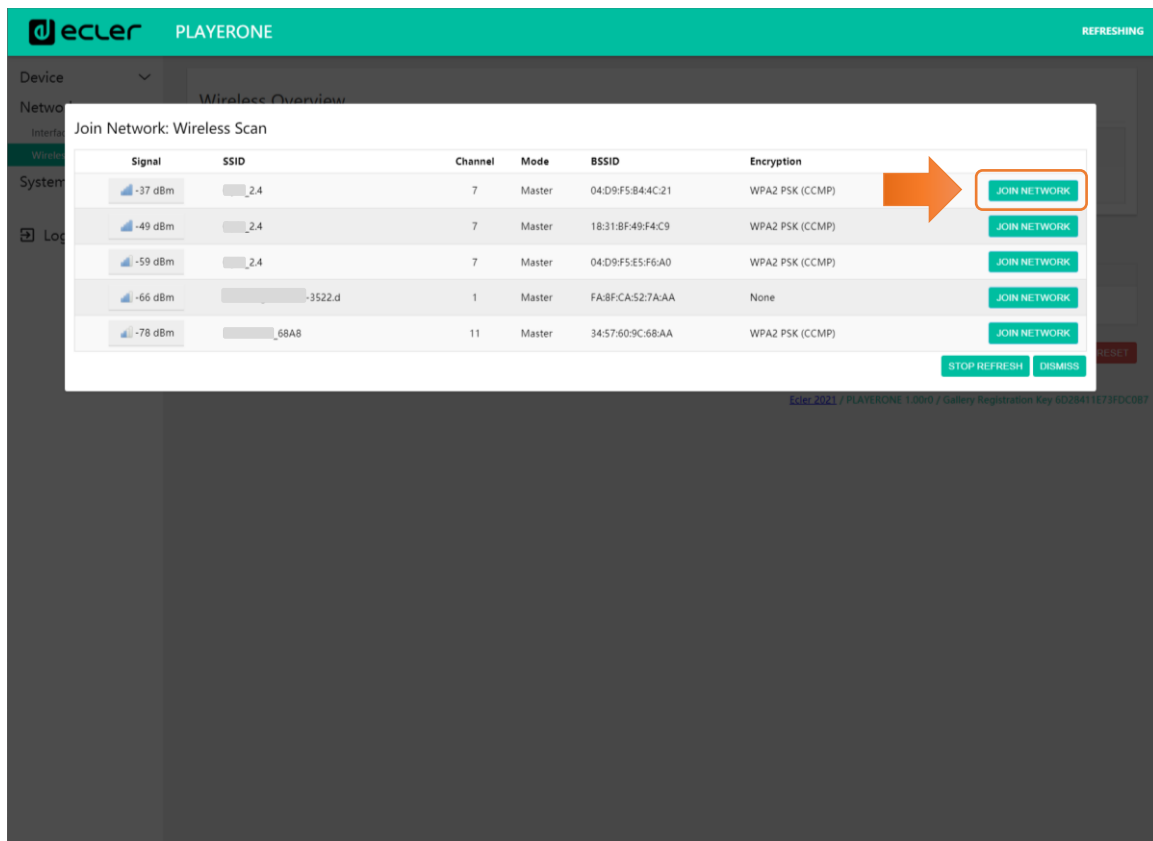


Figure 75

Enter the password of the WiFi network you want to connect to and press the SUBMIT button.

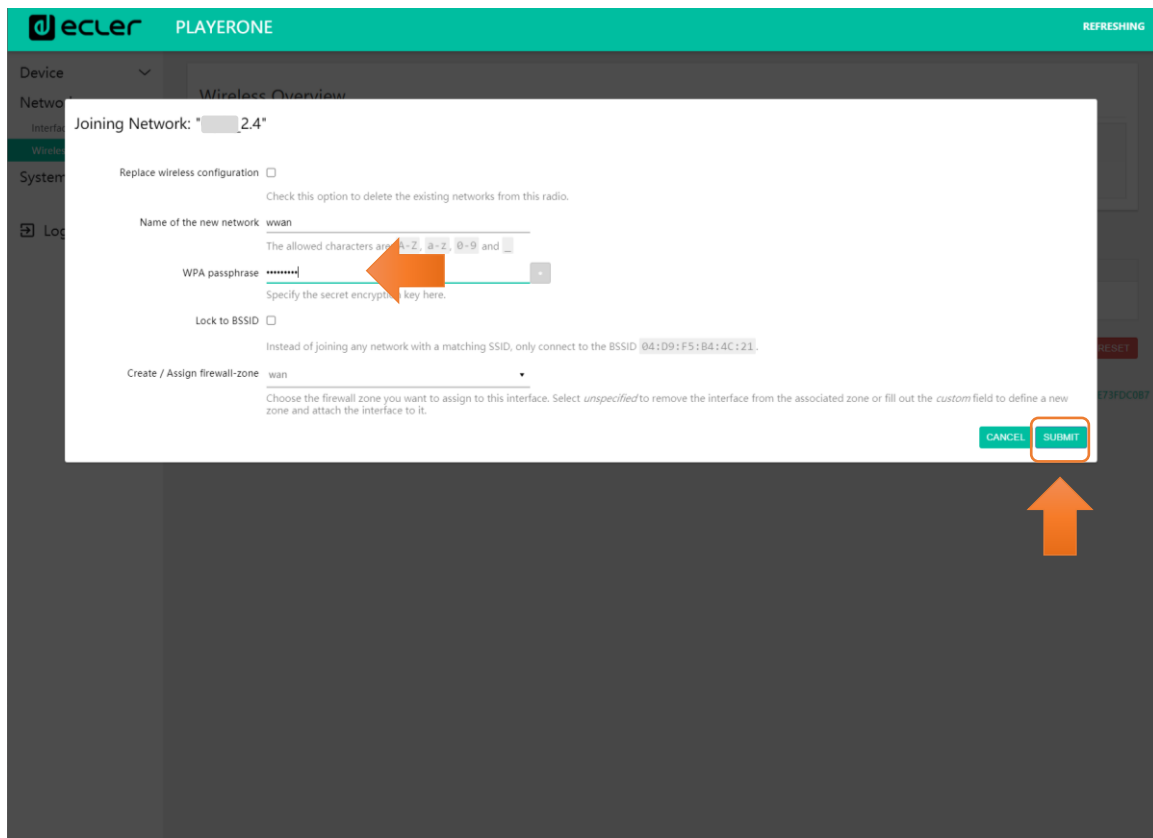


Figure 76

The WiFi network settings are shown below. Press the SAVE button if you do not need to make any additional changes.

Please Note: the operating mode has changed to Client.

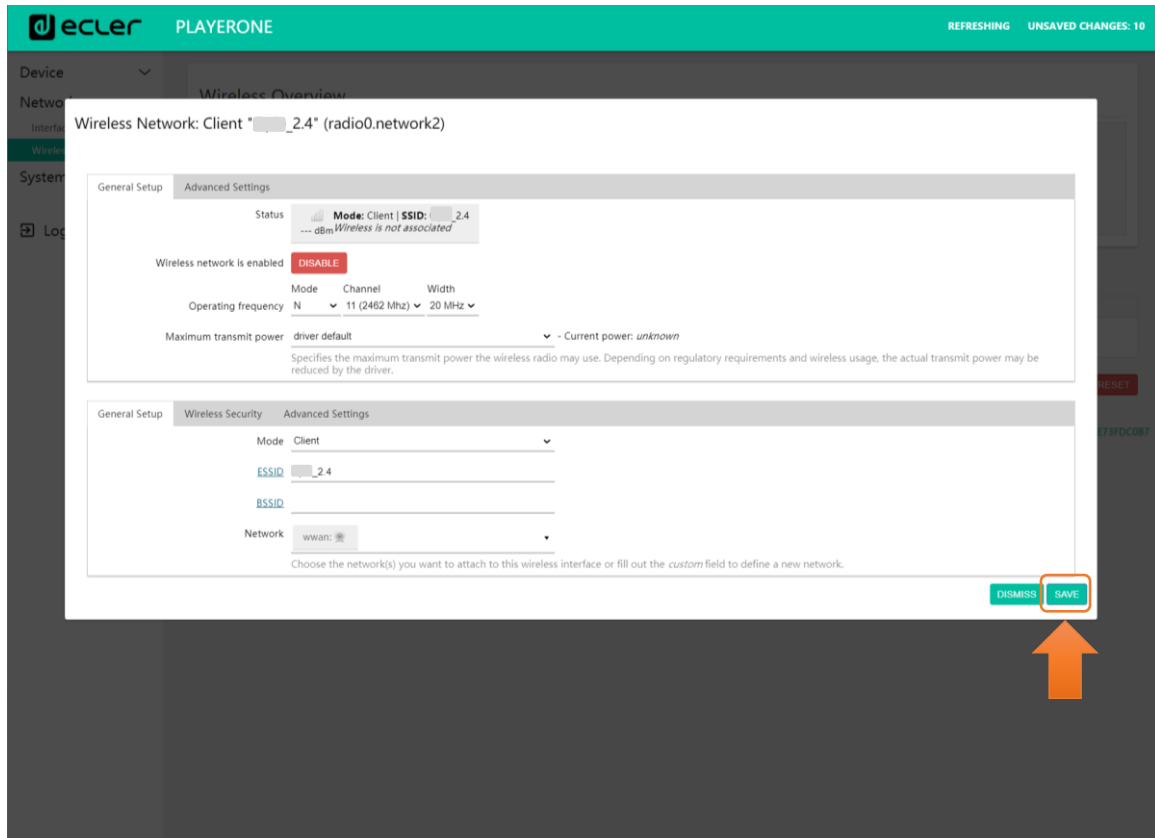
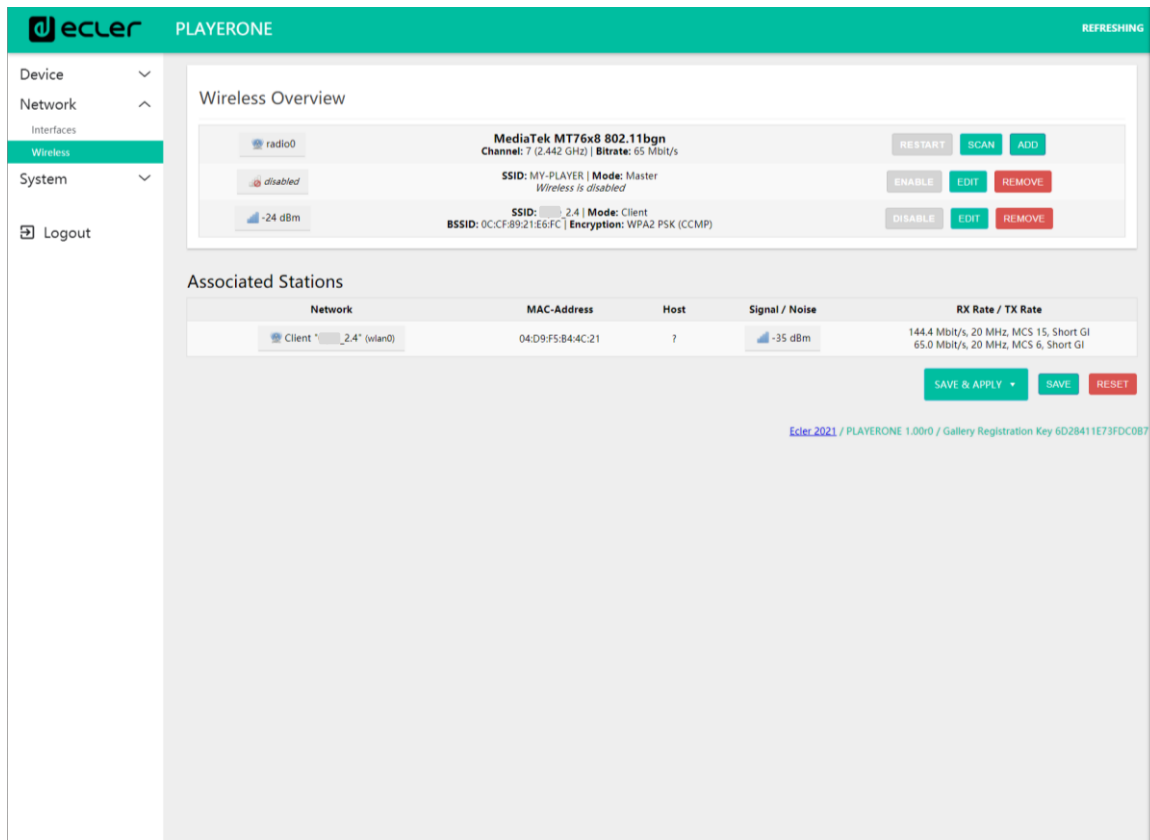


Figure 77

A wireless connection to your WiFi network will be established.



Wireless Overview

radio0 **MediaTek MT76x8 802.11bgn**
Channel: 7 (2.442 GHz) | Bitrate: 65 Mbit/s

SSID: MY-PLAYER | Mode: Master
Wireless is disabled

SSID: | 2.4 | Mode: Client
BSSID: 0C:CF:89:21:E6:FC | Encryption: WPA2 PSK (CCMP)

Associated Stations

Network	MAC-Address	Host	Signal / Noise	RX Rate / TX Rate
Client "MY-PLAYER" (wlan0)	04:D9:F5:B4:C2:1	?	-35 dBm	144.4 Mbit/s, 20 MHz, MCS 15, Short GI 65.0 Mbit/s, 20 MHz, MCS 6, Short GI

Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7

Figure 78

5. SYSTEM

In the Settings menu you can make changes as an administrator, such as changing the device name, or the password for accessing the web application, or local media encryption, resetting the device to factory settings, saving backups, updating firmware, etc.

5.1. Name and Time

Device name and time sync settings.

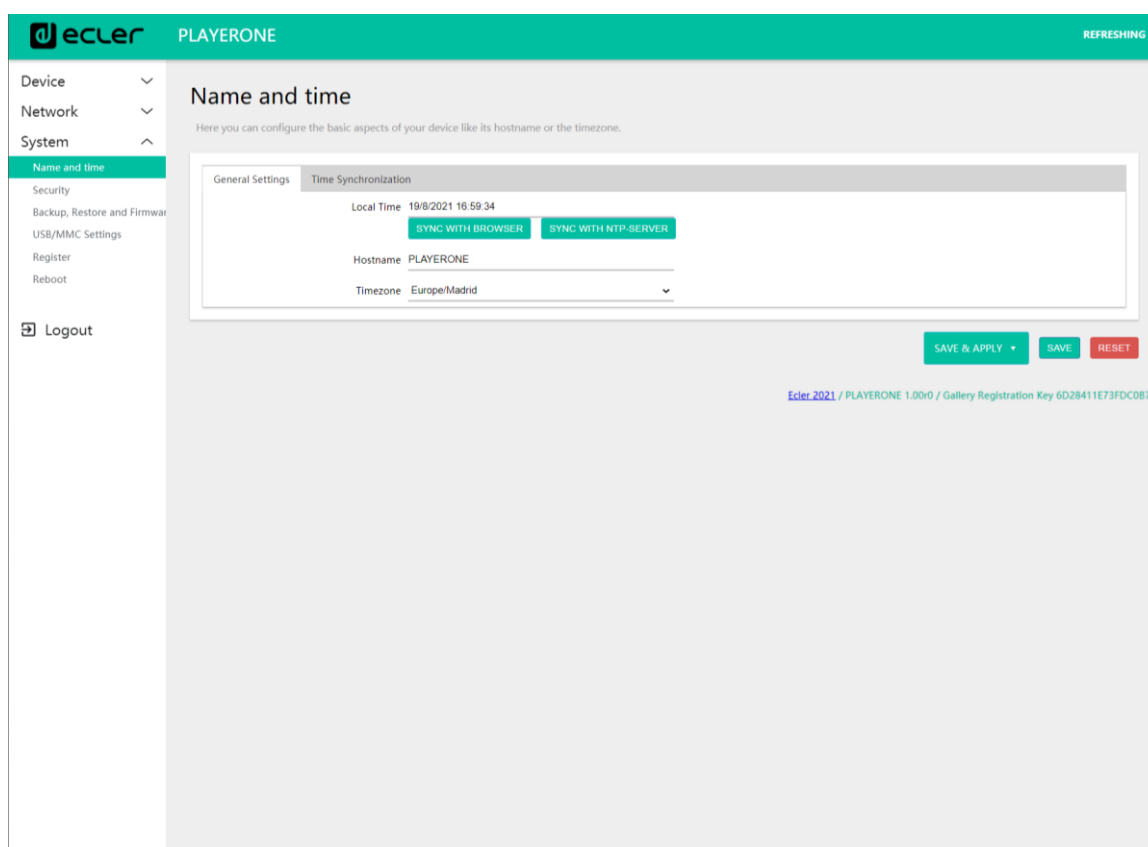


Figure 79: Name and Time, General settings

5.1.1. General settings

- 3 Local Time: setting the time on the device. You can sync it with the browser time (Sync with Browser), and/or you can sync it via NTP server: recommended if you have an Internet connection and you are using calendar-triggered events.
 - **Please Note:** syncing with an NTP server means you don't have to worry about summer and winter time changes.

- 4 Hostname: device name. Name that will be displayed on other services such as AirPlay, RePLAYER control application or mDNS. By default, this is "playerone" for PLAYER ONE and "playerzero" for PLAYER ZERO. Enter "hostname.local" in your browser's search bar to access the device's web GUI: playerone.local or playerzero.local, by default.
- 5 Timezone: setting the time zone. It is important to set this correctly if you are managing calendar events.

5.1.2. Time synchronization

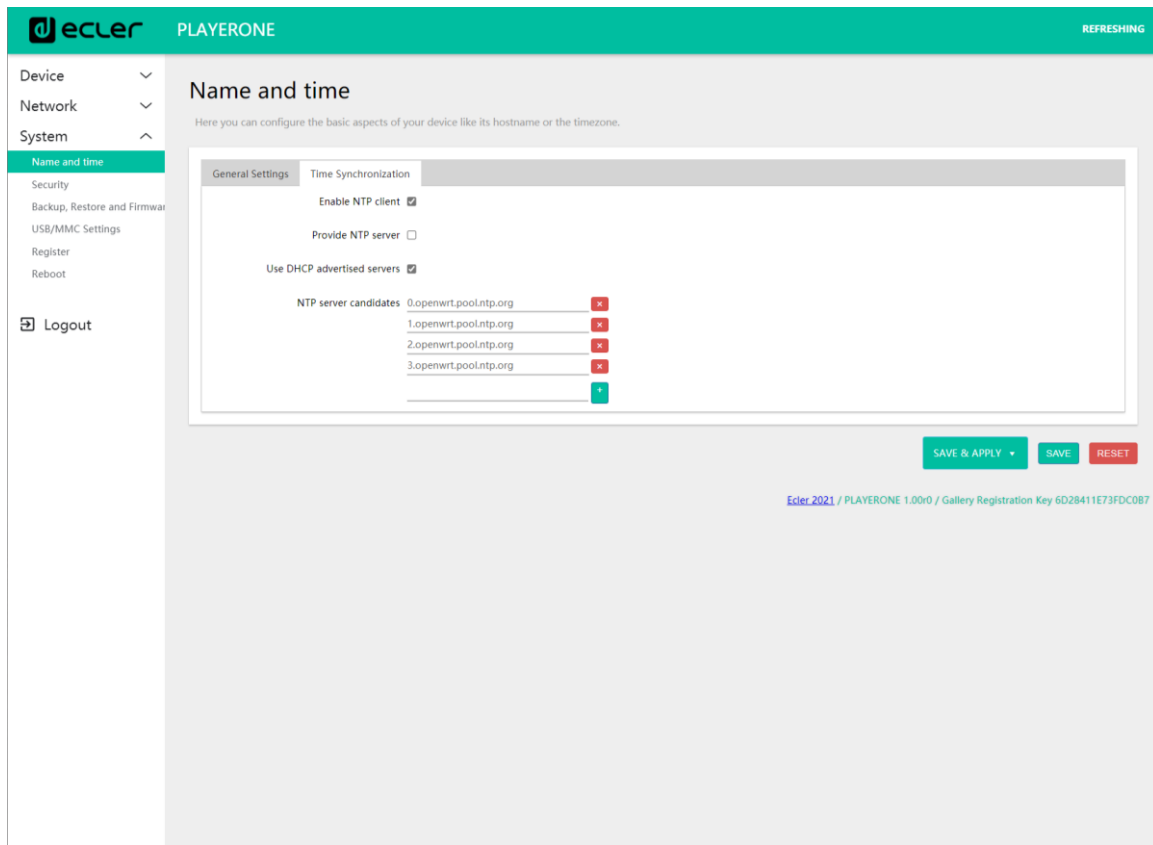


Figure 80: Name and time, Time synchronization

Enable/disable time syncing with an NTP server. This also allows you to manage the candidate servers for syncing.

Please Note: PLAYER ONE/PLAYER ZERO has an internal clock that means that you won't lose the time setting if it is not connected to the mains or not synced with an NTP service. However, please note that this clock has an accuracy of ± 1 minute/month.

5.2. Security

On this page, changes can be made to prevent unauthorized personnel from tampering with the player.

5.2.1. Web password

Password for accessing the web application. By default, ecler.

Please Note: the user is always root. This cannot be changed.

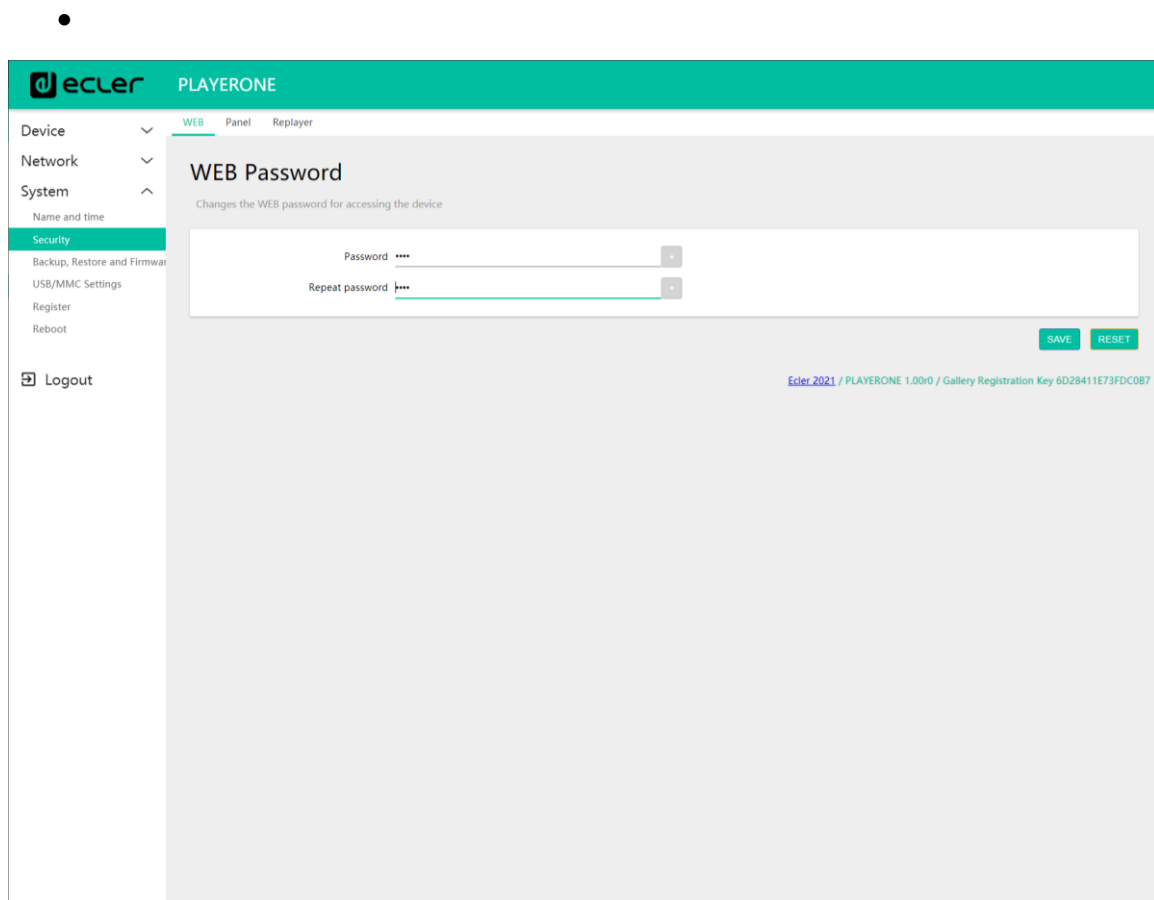


Figure 81

5.2.2. Front panel functions

Setting the front panel button lock to prevent unauthorised tampering or changing of administrator settings. Only available on PLAYER ONE.

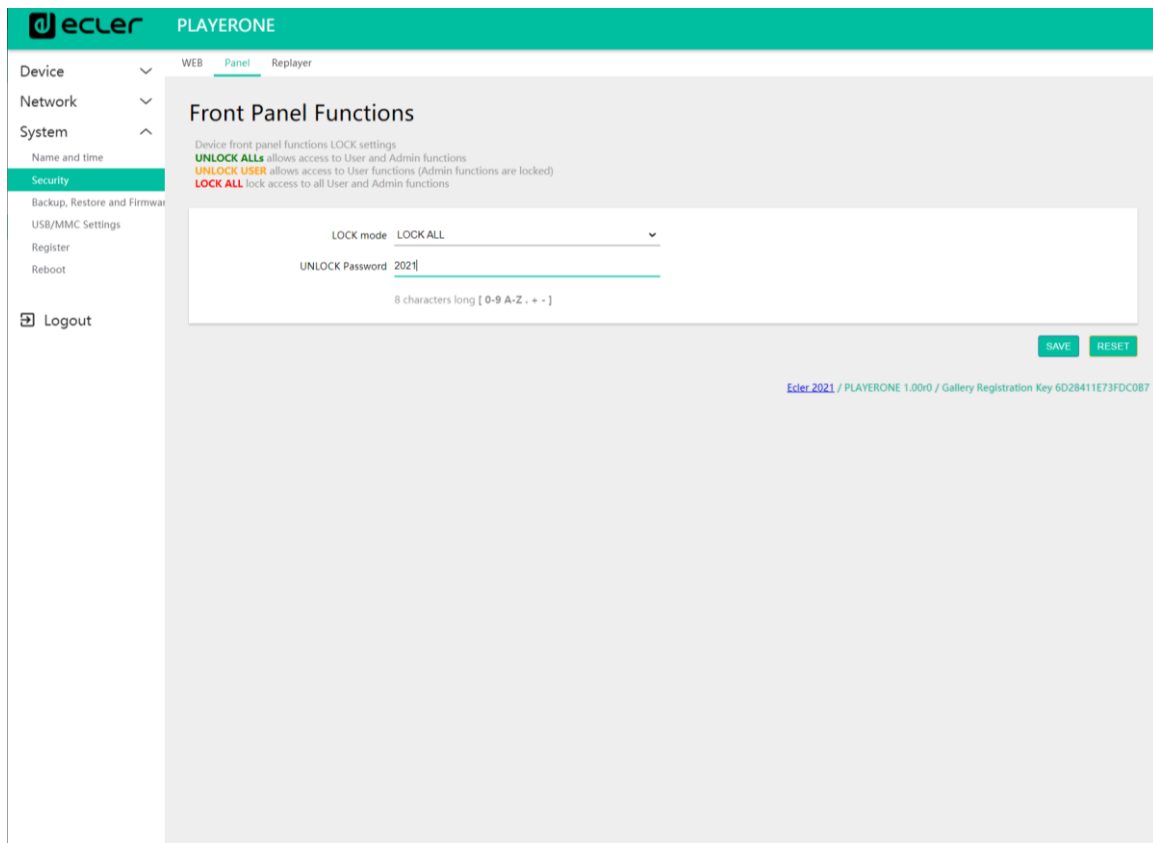
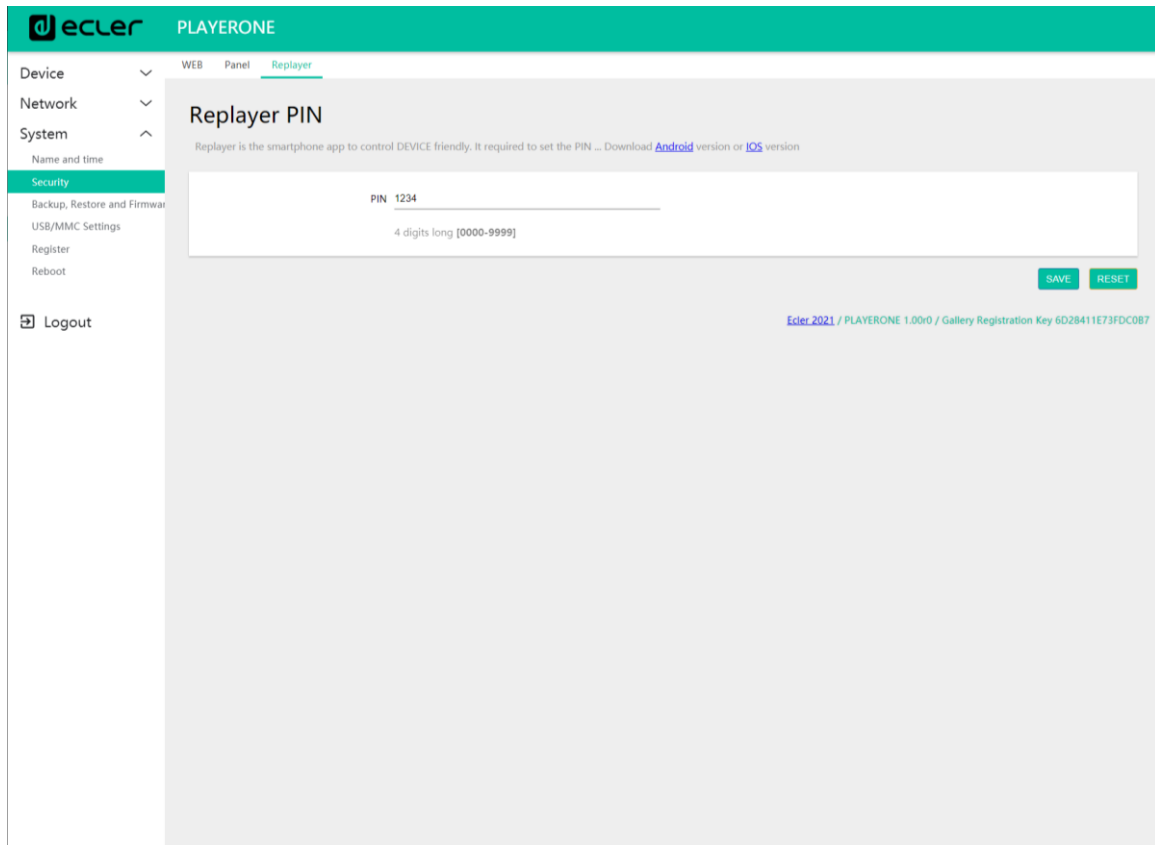


Figure 82

- LOCK mode: selection of the lock mode
 - UNLOCK ALL: unlocks all buttons on the front panel.
 - UNLOCK USER: locks access to the device configuration menu (administrator functions), allowing the use of all other functionalities.
 - LOCK ALL: locks all buttons on the front panel.
- UNLOCK Password: Password for unlocking. If the device is in lock mode, once you have entered the password, you will have a window of time in which to use the device. After you stop using it, the device will automatically lock the controls again.

5.2.3. RePlayer

4-digit PIN for accessing the device via the RePLAYER control application. Click on this [link](#) to find all the information and documentation related to the control application.

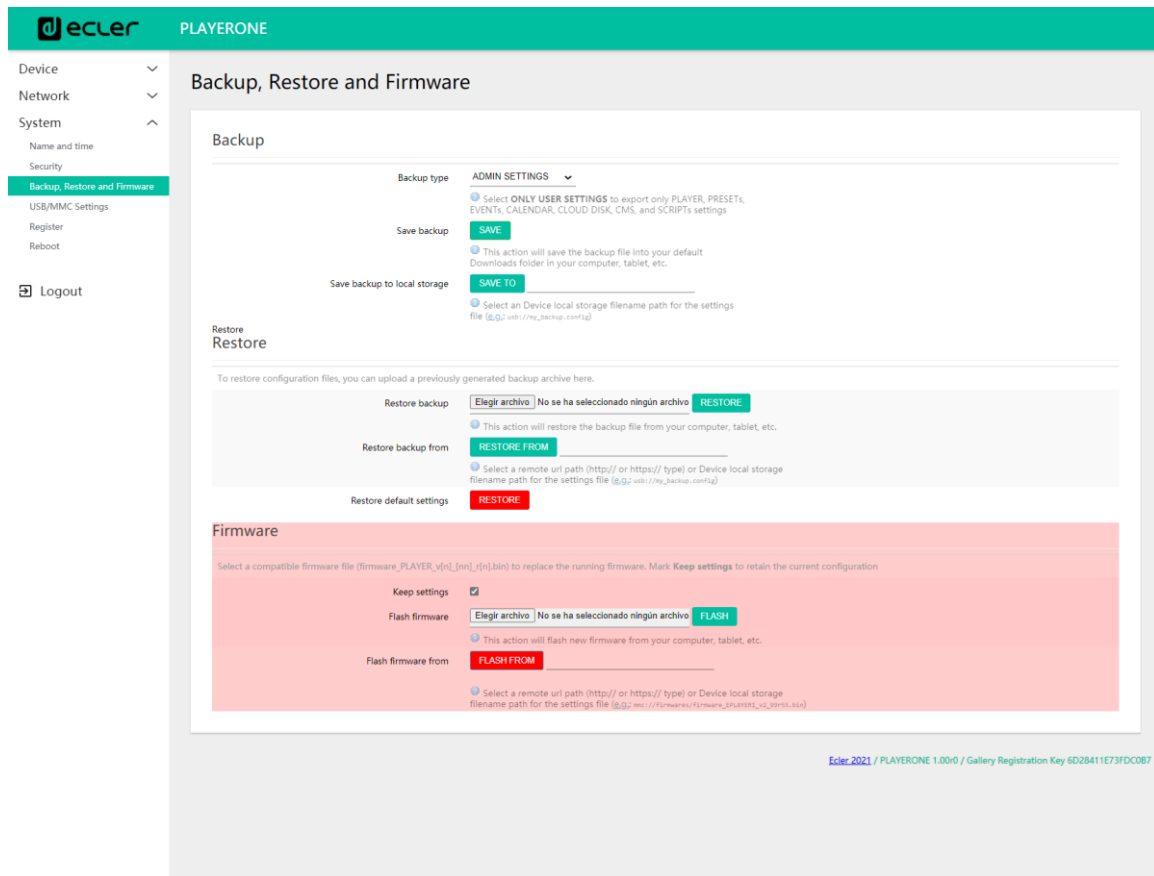


The screenshot shows the ecler PLAYERONE web interface. The top navigation bar is teal with the ecler logo and the text "PLAYERONE". Below this, there are tabs for "WEB", "Panel", and "Replayer", with "Replayer" being the active tab. On the left side, there is a vertical menu with categories: "Device", "Network", and "System". Under "System", there are sub-items: "Name and time", "Security" (highlighted in teal), "Backup, Restore and Firmwar", "USB/MMC Settings", "Register", and "Reboot". At the bottom of the menu is a "Logout" button. The main content area is titled "Replayer PIN" and contains a text input field with the value "1234". Below the input field, it says "4 digits long [0000-9999]". To the right of the input field are two buttons: "SAVE" and "RESET". At the bottom right of the page, there is a footer with the text "Ecler 2021 / PLAYERONE 1.00r0 / Gallery Registration Key 6D28411E73FDC0B7".

Figure 83

5.3. Backup, Restore and Firmware

Manage backups of your device and retrieve configuration files, and also update the firmware version.



The screenshot shows the 'Backup, Restore and Firmware' settings page. The interface is divided into three main sections: Backup, Restore, and Firmware.

Backup Section:

- Backup type:** ADMIN SETTINGS (dropdown menu). A note indicates: "Select ONLY USER SETTINGS to export only PLAYER, PRESETs, EVENTS, CALENDAR, CLOUD DISK, CMS, and SCRIPTs settings".
- Save backup:** SAVE button. A note: "This action will save the backup file into your default Downloads folder in your computer, tablet, etc."
- Save backup to local storage:** SAVE TO button. A note: "Select an Device local storage filename path for the settings file (e.g.: usb://my_backup.conf.gz)".

Restore Section:

- Restore backup:** Elegir archivo | No se ha seleccionado ningún archivo | RESTORE button. A note: "This action will restore the backup file from your computer, tablet, etc."
- Restore backup from:** RESTORE FROM button. A note: "Select a remote uri path (https:// or https:// type) or Device local storage filename path for the settings file (e.g.: usb://my_backup.conf.gz)".
- Restore default settings:** RESTORE button.

Firmware Section:

- Keep settings:** checkbox.
- Flash firmware:** Elegir archivo | No se ha seleccionado ningún archivo | FLASH button. A note: "This action will flash new firmware from your computer, tablet, etc."
- Flash firmware from:** FLASH FROM button. A note: "Select a remote uri path (https:// or https:// type) or Device local storage filename path for the settings file (e.g.: usb://firmware/firmware_binaries_v4_0908.apk)".

At the bottom right of the page, there is a footer: "Ecler 2021 / PLAYERONE 1.00-0 / Gallery Registration Key 6D28411E73FDC087".

Figure 84: System. Backup, restore and firmware

5.3.1. Make backups

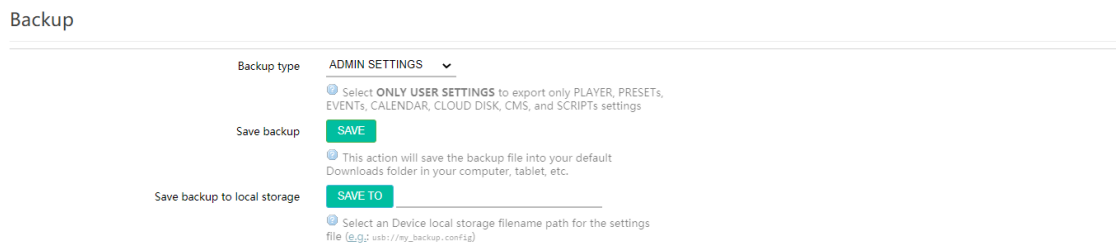


Figure 85: Backup

6 Backup type: type of backup.

- ADMIN SETTINGS: saves all settings (both administrator and user settings).
- USER SETTINGS: only saves the user settings.
- GALLERY SETTINGS: saves the settings that are compatible with the Ecler Gallery platform.

	ADMIN SETTINGS	USER SETTINGS	GALLERY SETTINGS
Player	✓	✓	✓
Presets	✓	✓	✓*
Calendars	✓	✓	✗
Events	✓	✓	✓
Scripts	✓	✓	✓
Google Drive	✓	✗	✓
Store and Forward	✓	✗	✓
Front panel lock settings	✓	✗	✗
Network settings	✓	✗	✗
System: Name, Time & NTP	✓	✗	✗
Player Profile	✓	✗	✗
Encryption	✓	✗	✗
Web password	✓	✗	✗

*Partial: no playlist

Figure 86: types of backup or configuration files

- 7 Save Backup: generates a backup that will be stored in the download folder which is configured in your browser.
- 8 Save backup to local storage: generates a backup that will be saved to the specified local storage address, with the specified name. For example, "mmc://backups/copy1.config" (example of a folder on a uSD card inserted in the player)

5.3.2. Restore backups and factory settings

Restore

To restore configuration files, you can upload a previously generated backup archive here.

Restore backup No se ha seleccionado ningún archivo

This action will restore the backup file from your computer, tablet, etc.

Restore backup from

Select a remote url path (http:// or https:// type) or Device local storage filename path for the settings file (e.g.; usb://my_backup.config)

Restore default settings

Figure 87: Restore backup

- 9 Restore backup: restores a configuration file (or backup) hosted on your computer, *tablet*, server, etc.
- 10 Restore backup from: restores a configuration file hosted on one of the device's storage media, USB or uSD. You can also restore a file hosted in a remote location, URL address.
- 11 Restore default settings: restores the device to factory defaults. Administrator and user settings will be lost.
 - **Please Note:** if encryption is being used and you restore it to factory settings or restore an administrator file, the content on the storage media will not be able to be recovered.

5.3.3. Firmware Update

Firmware

Select a compatible firmware file (firmware_PLAYER_v[n]_[nn]_r[n].bin) to replace the running firmware. Mark **Keep settings** to retain the current configuration

Keep settings

Flash firmware No se ha seleccionado ningún archivo

This action will flash new firmware from your computer, tablet, etc.

Flash firmware from

Select a remote url path (http:// or https:// type) or Device local storage filename path for the settings file (e.g.; mmc://Firmwares/Firmware_PLAYER_v2_99955.bin)

Figure 88: Firmware

- 12 Keep Settings: keeps the device's current settings. If you want to return to factory settings after updating the firmware, deselect this box. It is selected by default.
- 13 Flash Firmware: updates via a firmware file hosted on your computer, *tablet*, server, etc.
- 14 Flash Firmware from: updates via a firmware file hosted on one of the device's storage media, USB or uSD. You can also use a file hosted in a remote location with a URL address.

5.4. USB/MMC Settings

This allows you to view the space used on the local storage media and manage the encryption function, if desired: for reasons of security, data protection, to protect the music content stored on the uSD card or USB device, etc. In this way, if the local storage media is removed without authorisation, the data will still be protected, as it will only be readable by the device that encrypted it.

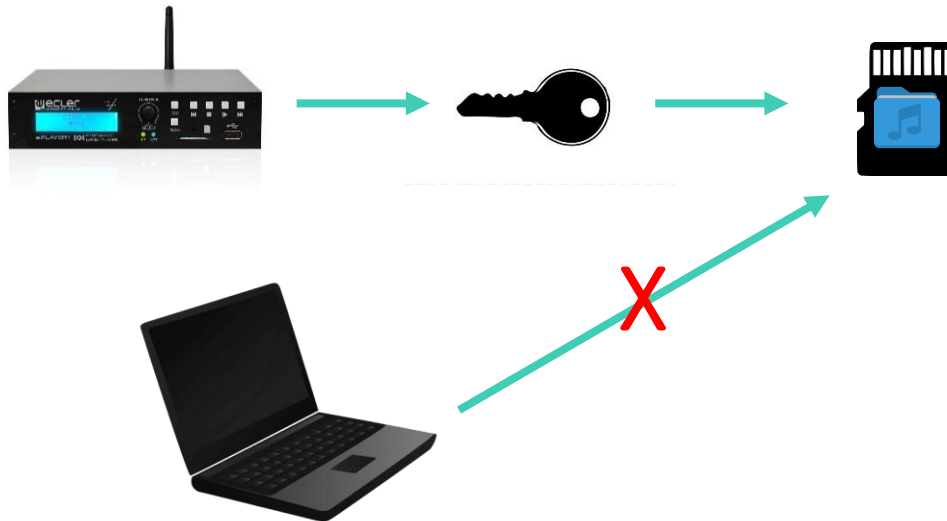


Figure 89: encryption concept

It operates as follows:

1. The device encrypts the media, formatting the external drive. This process deletes all content from the memory of the uSD or USB device.
2. This process may take several minutes. "FORMATTING..." is displayed on the LCD screen for the duration of the process (PLAYER ONE only).
3. At the end of the process, "NO FILES" will be displayed on the LCD screen, indicating that it has been formatted correctly and there are no audio files on the external media (PLAYER ONE only).
4. The external drive is now ready to download content using the "Cloud disk sync" tools - Store and Forward (rsync) and Google Drive -.

Please Note: once this feature is disabled, if you re-enable it, you will need to restart the process described above.

Some considerations with regards to the encryption function:

- The encryption process is destructive, as formatting the external drive deletes all the files on it.

- Once this function is enabled, any other external device (uSD or USB) that is inserted into the corresponding port, and which does not contain the encryption keys, will be encrypted and therefore all files will be deleted. As a result, it will not be able to play content other than that which is hosted on the media that the device itself has encrypted.
- The external storage media cannot be read by any other device (including other PLAYER ONE/PLAYER ZERO) that does not have the encryption keys.
- The content can be read by the device that encrypted it, as long as the encryption option is not changed. That is, if the encryption function is disabled, the device will stop using this function and therefore will be able to read any external storage media. However, it loses the keys to the previously encrypted external media, and you will therefore not be able to play the content stored on them.

Please Note: encryption is a tool that is designed to be used in conjunction with other content syncing tools: "Store and Forward" (rsync) and "Google Drive". The external storage media, as it is encrypted, cannot be read or written to (copy contents) by any device, such as a computer. Therefore, the only device capable of copying content onto the media is the player that encrypted it. The "Store and Forward" (rsync) and "Google Drive" tools make this possible.

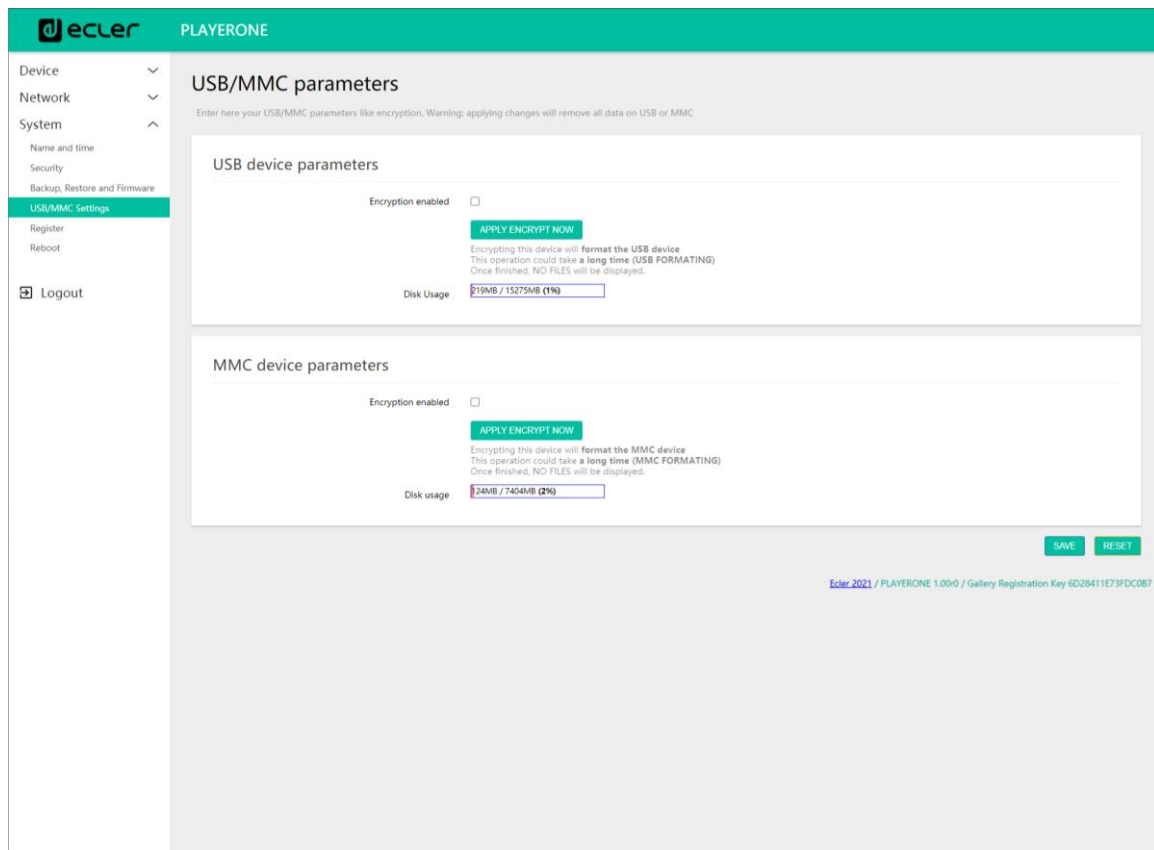


Figure 90: USB/MMC Settings

- 15 Encryption enabled: enables/disables media encryption, USB or uSD. If you save this setting, the device will encrypt the disk the next time the drive is mounted, either when the media is inserted or when the device is rebooted.
- 16 Apply Encrypt now: immediately encrypts the media.
- 17 Disk Usage: capacity of the storage media in MB, and percentage of the storage media that is in use (%), uSD card and USB device respectively. If no media is found, "NO DISK" will be displayed on the LCD screen (PLAYER ONE only)

5.5. Register

The register allows you to keep a detailed record of the device's activity. This information can be useful for troubleshooting, monitoring device activity, checking for correct programming, etc.

The lines in the register contain information about actions performed by the device, errors and/or announcements, along with time information (when different events occur). The register page displays a list of the register lines reported by the device.

The device register is updated daily, and also when it is rebooted. The previous register lines are deleted. However, a copy of each day's register can be kept

on local storage media. This feature allows you to view the register for several days.

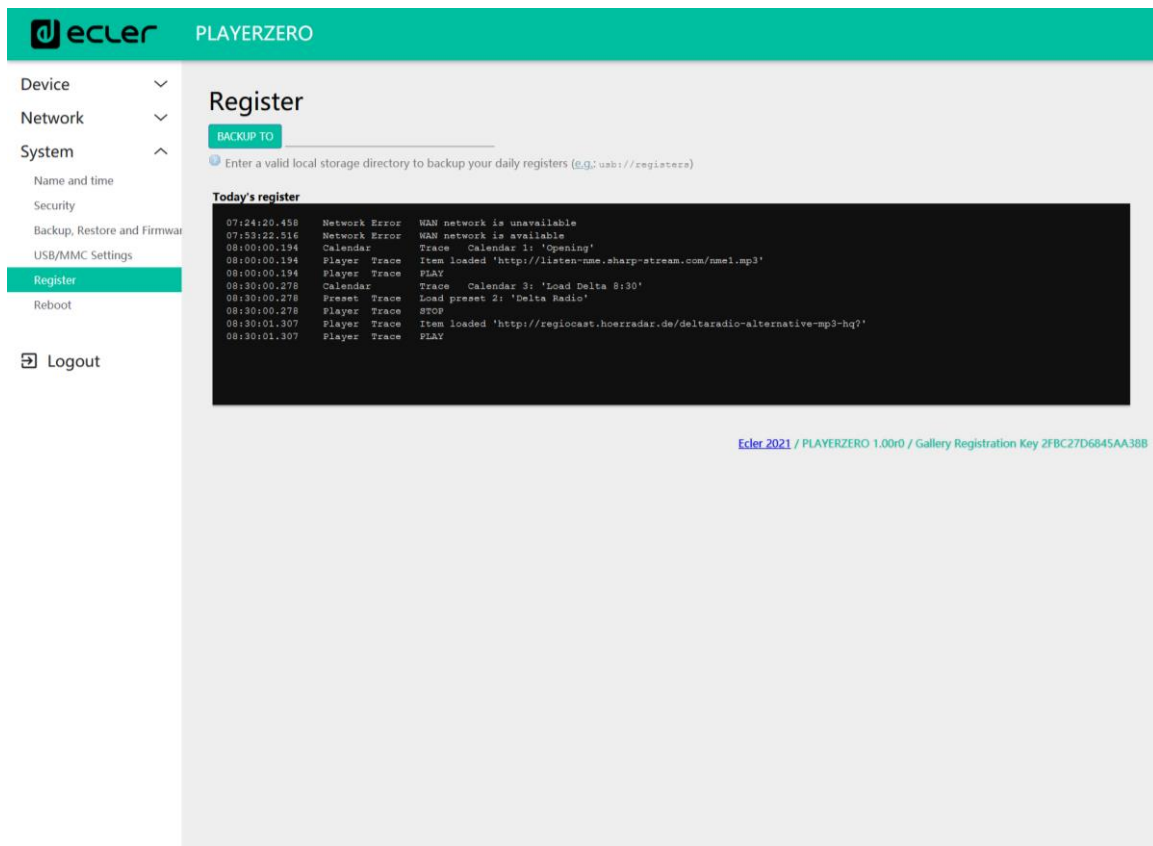


Figure 91: Register

18 Backup to: allows you to save a copy of the register file for each day to a local storage medium. The path must be specified ("usb://registers", for example).

5.6. Reboot

Allows you to reboot the device from the web application. Click the PERFORM REBOOT button to force the player to reboot.

6. Annex I: SSH server configuration for Store & Forward

The Cloud Disk Sync module, Store and Forward, on the PLAYER ONE/PLAYER ZERO allows the device to download remote audio content to local storage media (USB/uSD). When active, it daily checks a remote location that hosts audio content, compares this content with the current content stored on its local media (USB/uSD) and if necessary (if differences are detected), synchronises the local content so that it is an exact copy of the remote content. This is a safe method of playing content with the device during working hours (during the day), storing it on a local media without the risks associated with real-time streaming.

Store and Forward utility for synchronizing music content remotely uses rsync (Remote Sync) tool for it.

In this guide, it is shown an example of how to configure a SSH server using Linux (Ubuntu Desktop 18.04.2 LTS). It is important, that all machines, server and clients, are connected to the same network (LAN/Intranet).

Important note: for configuring Store and Forward cloud-based, would be necessary to hire a VPS (Virtual Private Server) service in order to get a Public IP and access to the SSH server over the Internet.

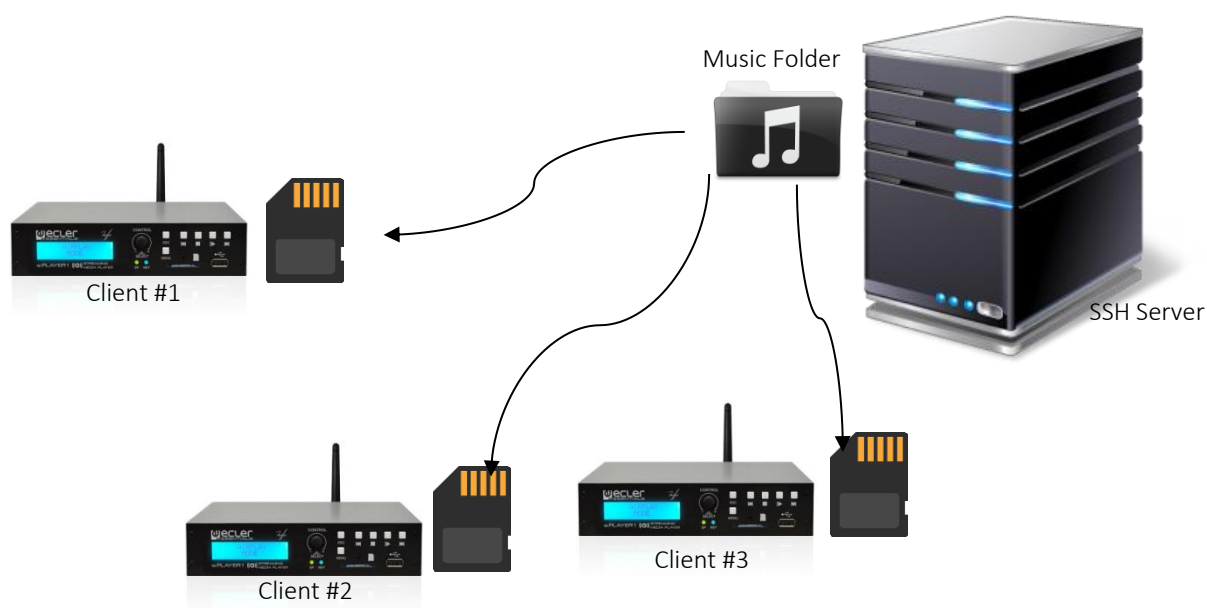


Figura 92: S&F synchronization

6.1. Content groups

A content group is a group of devices that synchronize the same audio content using the Store and Forward utility. It is necessary to create a different user for each content group. Thus, a device assigned to a content group can access only to the content assigned to that group, and not to other content. This procedure states for security. Each content group will manage its private key to access assigned content in the server that hosts all the music, advertisements, voice messages, etc.

Each content group, or user, can have associated multiple connections at the same time. The maximum number of simultaneous connections will depend on the power of the hardware (server).

So, we will be creating as many content groups, or users on Linux, as contents (music folder e.g.) we want to manage.

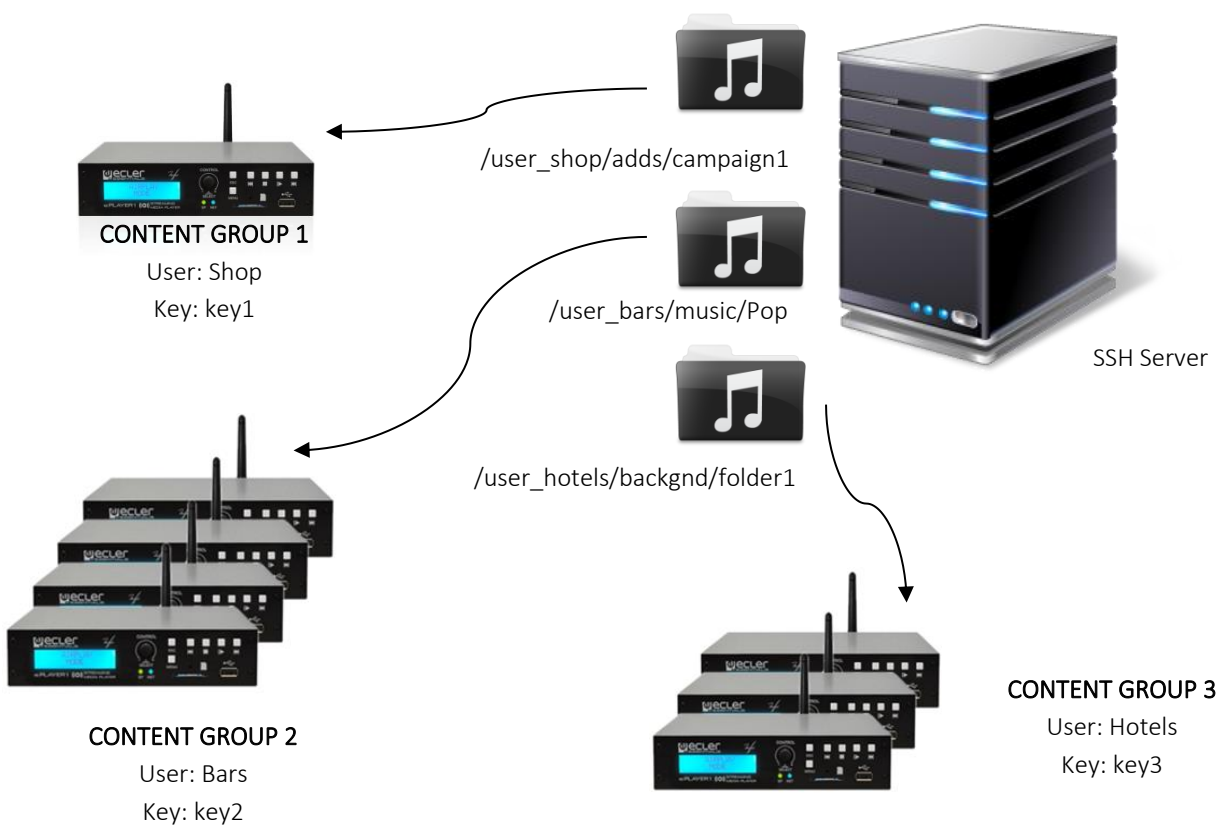


Figura 93: content groups

For a simple configuration, it is possible to create a single user, so, every device can access to its content using the same user and key. It is skipped security level in this configuration. A skilled user could configure the Store and Forward using the embedded web server in the player (changing the folder assigned to it), in order to access to any content in the SSH server, since the key is known.

It is recommended to create a user per content group for professional applications in which the same SSH server hosts content for different companies. However, if the final user is generating its own content, a single user would be enough.

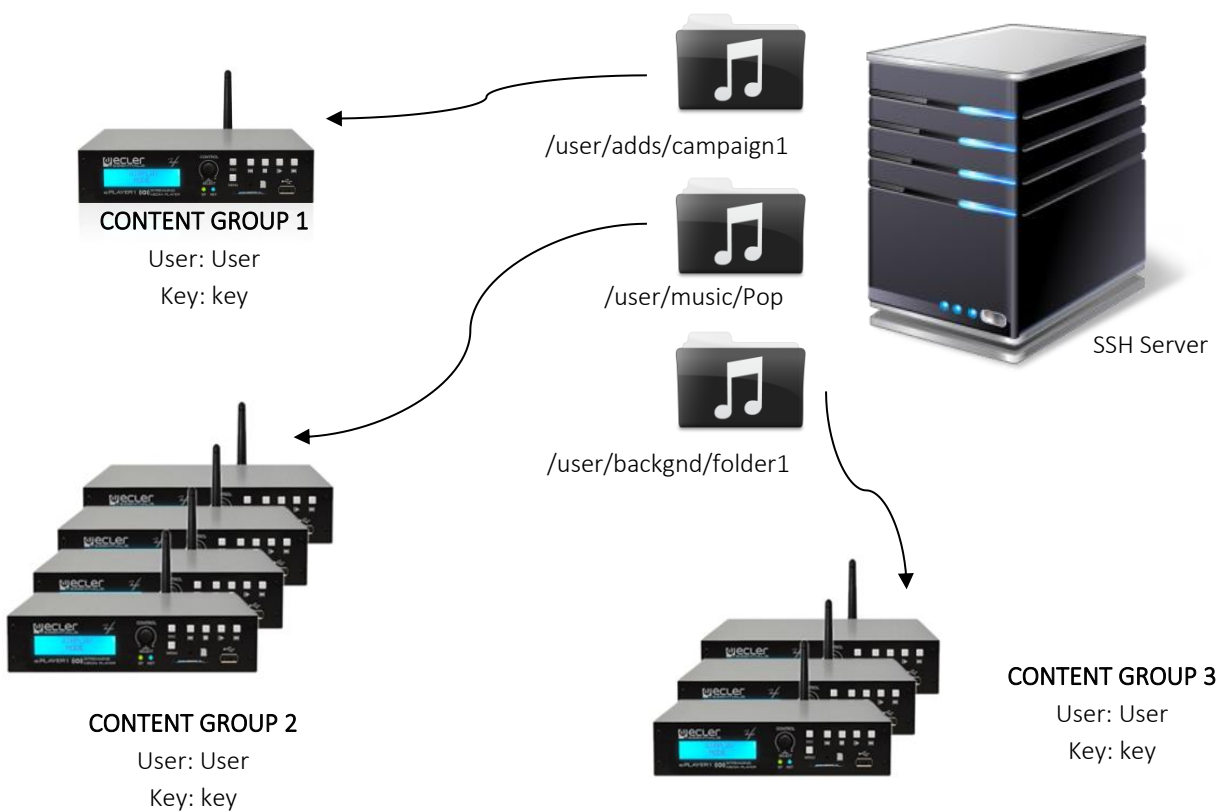


Figura 94: single user

6.2. Installing SSH on Linux

First of all it is necessary to install the SSH package on Linux. Open a terminal and type:

```
sudo apt-get install ssh
```

NOTE: you can open a terminal by using the shortcut {ctrl + alt + T}.

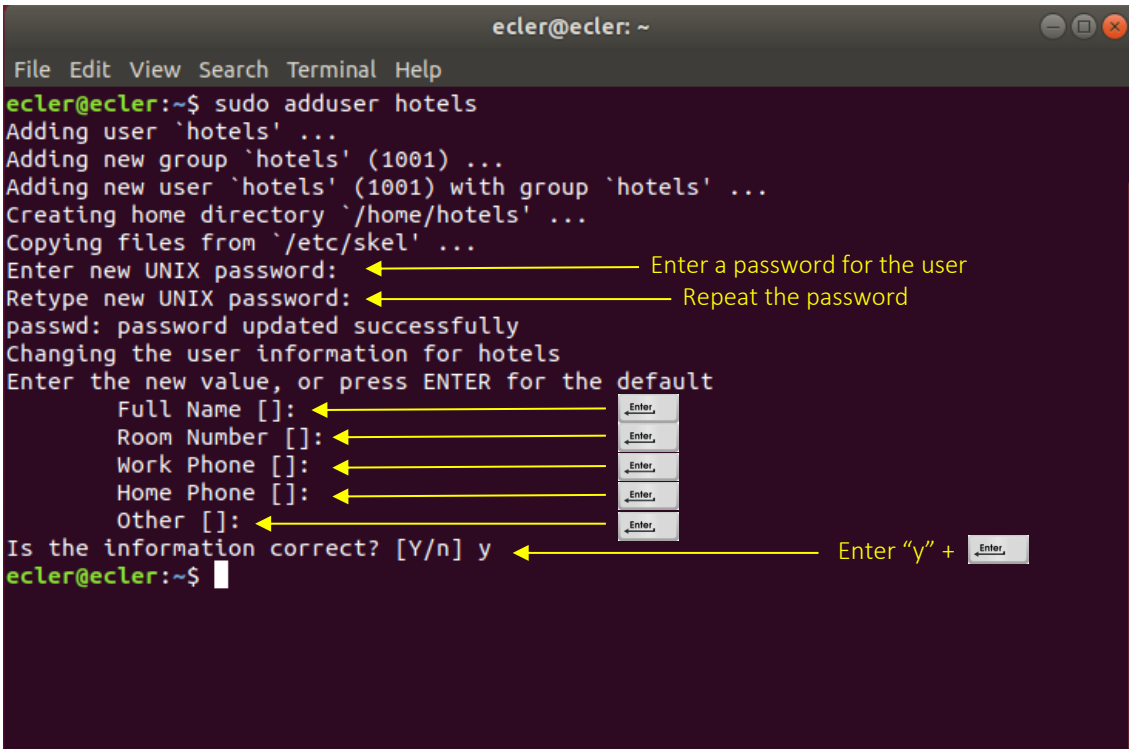
6.3. Creating users on Linux

There will be created as many users as content groups have to be managed. To add a new user, type:

```
sudo adduser <new_user_name>
```

Where <new_user_name> stands for the name you want to give to the content group, for example:

```
sudo adduser hotels
```



```
ecler@ecler: ~  
File Edit View Search Terminal Help  
ecler@ecler:~$ sudo adduser hotels  
Adding user `hotels' ...  
Adding new group `hotels' (1001) ...  
Adding new user `hotels' (1001) with group `hotels' ...  
Creating home directory `/home/hotels' ...  
Copying files from `/etc/skel' ...  
Enter new UNIX password:  Enter a password for the user  
Retype new UNIX password:  Repeat the password  
passwd: password updated successfully  
Changing the user information for hotels  
Enter the new value, or press ENTER for the default  
Full Name []:  Enter,  
Room Number []:  Enter,  
Work Phone []:  Enter,  
Home Phone []:  Enter,  
Other []:  Enter,  
Is the information correct? [Y/n] y Enter "y" + Enter,  
ecler@ecler:~$
```

Figura 95

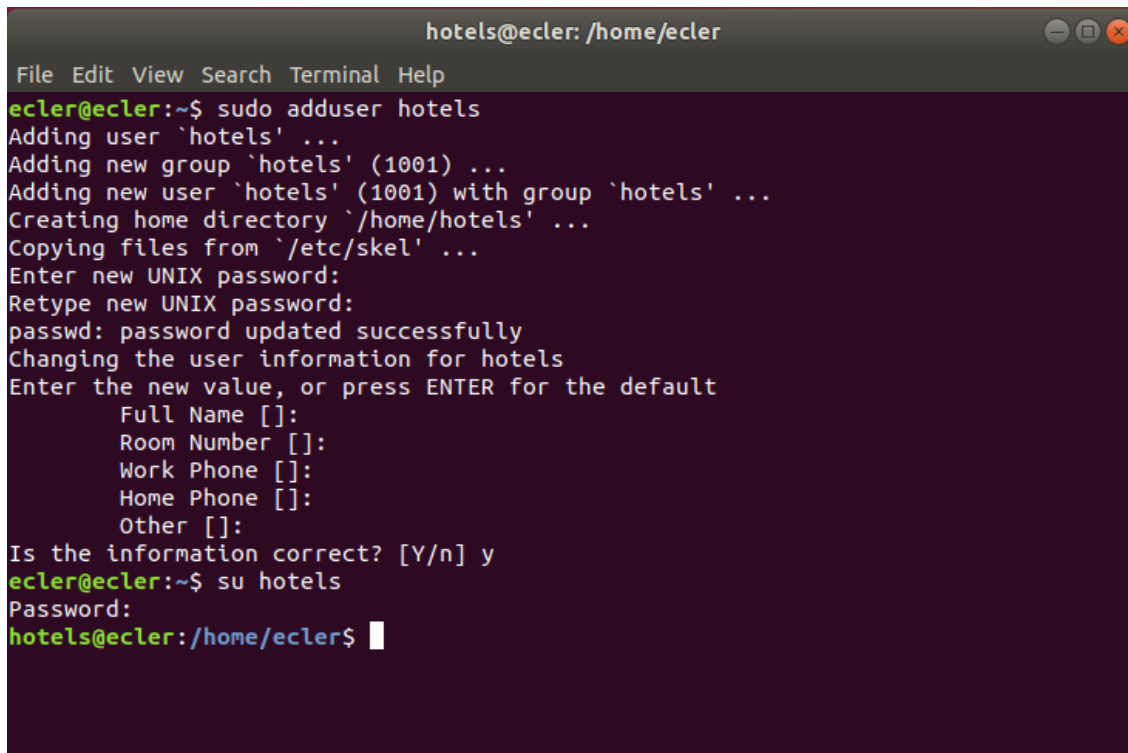
Now, login as the new user:

```
su <user_name>
```

And enter the password introduced in the step before.

In this example:

```
su hotels
```



```
hotels@ecler: /home/ecler
File Edit View Search Terminal Help
ecler@ecler:~$ sudo adduser hotels
Adding user `hotels' ...
Adding new group `hotels' (1001) ...
Adding new user `hotels' (1001) with group `hotels' ...
Creating home directory `/home/hotels' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for hotels
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
ecler@ecler:~$ su hotels
Password:
hotels@ecler: /home/ecler$
```

Figura 96

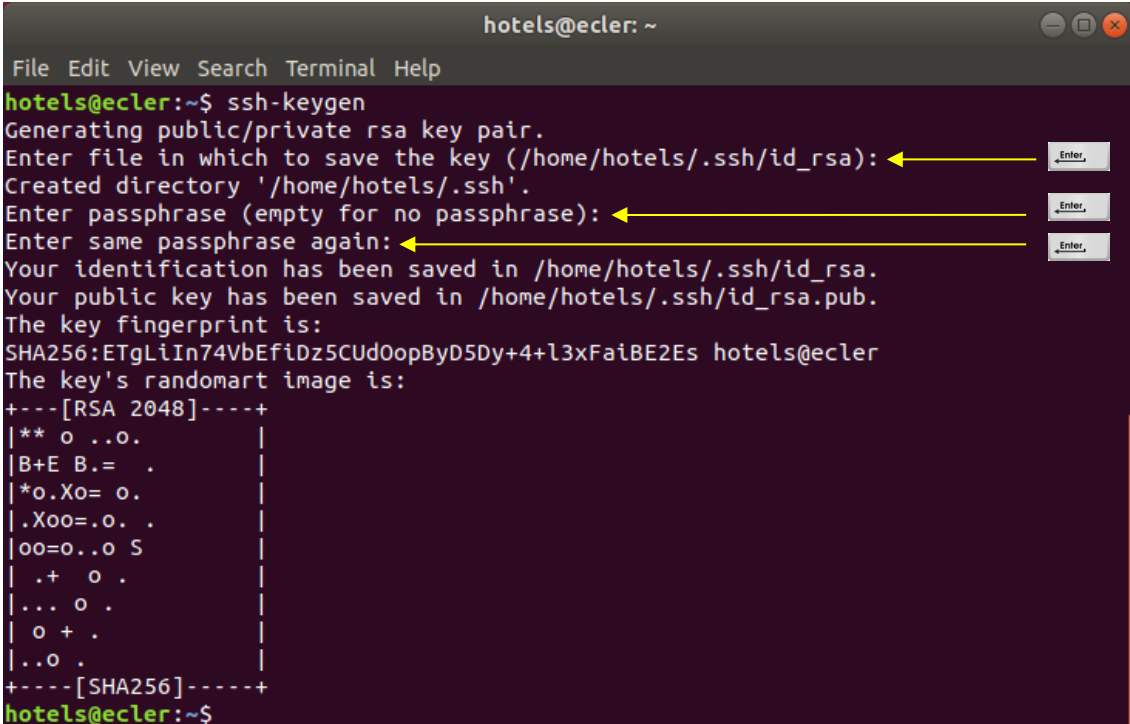
6.4. Generating SSH keys

Before generating the SSH keys, it is necessary to go first to the home folder of the new user. To do this:

```
cd
```

Then use the following command to generate the keys and press enter to each question showed up:

```
ssh-keygen
```



```
hotels@ecler: ~  
File Edit View Search Terminal Help  
hotels@ecler:~$ ssh-keygen  
Generating public/private rsa key pair.  
Enter file in which to save the key (/home/hotels/.ssh/id_rsa):   
Created directory '/home/hotels/.ssh'.  
Enter passphrase (empty for no passphrase):   
Enter same passphrase again:   
Your identification has been saved in /home/hotels/.ssh/id_rsa.  
Your public key has been saved in /home/hotels/.ssh/id_rsa.pub.  
The key fingerprint is:  
SHA256:ETgLiIn74VbEfiDz5CUd0opByD5Dy+4+l3xFaiBE2Es hotels@ecler  
The key's randomart image is:  
+---[RSA 2048]---+  
|** o ..o. |  
|B+E B.= . |  
|*o.Xo= o. |  
|.Xoo=.o. . |  
|oo=o..o S |  
|. + o . |  
|... o . |  
| o + . |  
|..o . |  
+---[SHA256]-----+  
hotels@ecler:~$
```

Figura 97

Add the public keys to the authorized keys. Use the following command:

```
cat .ssh/id_rsa.pub >> .ssh/authorized_keys
```

Display the private key you will need to introduce in the ePLAYER1's Store and Forward configuration page:

```
cat .ssh/id_rsa
```


Copy from
here

```
hotels@ecler: ~  
File Edit View Search Terminal Help  
hotels@ecler:~$ cat .ssh/id_rsa.pub >> .ssh/authorized_keys  
hotels@ecler:~$ cat .ssh/id_rsa  
-----BEGIN RSA PRIVATE KEY-----  
MIIEowIBAAKCAQEAp9ZG6QXw2Q1kwvaE0gFBCC6Dw7ScqG5yARq0bg4ntmzhM1t  
VyD+l/gnaapM2MTSmXwk1Cl0q2fkync8z8daIf3Edv5cm1jRp0CrX69p0KowK4r6  
QTrC0vUiziTE/YS1Q+qA7IhSNCfruh2sSTg3KyYbk58ul10HVMVtSLVZHzeSByeL  
5kLqAp2Ye8Y4N3iW5LYN0ht9IiEoDZ5gpKkozBU13iY7oob+EaFhKs+Z+P0u2Ww4  
xeA4Jl0I9JnImVqtRBD1aEdQkoApBBVUW4IK2CzbfBU0VAQS2WsREqGi/BKSC1o  
bYOrG08q1F2njDVtXEaT1CSPc2vdg2VaK0cWzQIDAQABAoIBAFsANaZ3ECW9kCKd  
o1pyT55uCGd80EwKxkm0/zGE/0dMNatXzacmPqSLamNCcTQ/U6jgxN88MwQU6tpU  
WGaYQmIXvYR/Whrox5LMNpeopoj7He8eBZ6Ei8nyHBMFoMGMyP0wHIMjTt70nj1l  
hVqV3mPI377k2lA2e/Qcr6tUJ2RizjAUm+DgaxgpRIInUycJBzzi9mZkJvov1Tj+  
iF2jKwvoVm/l35Mo3bWijR69a0dfLF1XpKXbntt8+CCSr4pu0PhWMPkJD4C7otr4  
W6U1jsyQKnjY+fH83tilYTQ/wkSmUJsqBCpA2VMs6+N+53HZLLqTm4Ko14gEkfBl  
hN13v0kCgYEA10zJK1lC1r3MLHA2/JSP9FRW2v1ZkXFzS9z6+9JRIUPz4WL2shCT  
dgfAgnNlDuqceTE8NTsAWFicNX40gRd9Ehv8Hp/1E0xf0yLRpsyqPFQo6t+uRNyh  
VOXL4Eb4RJCzyIsmRTfkwGtZki/TrzeGuSmbnJkgp0Q2R+b4b8mjk+sCgYEAycps  
WpqK2JpVdlW8o88VqQ4KS82QktNEWz2BzBosvZtxPQWmwLGVlIcAgZGwt18k8H3I  
V9KgyaKMfds1KvDuFW/2UA4jG0dp5xoGvhj6lAU30bZjDU1GE0ssa9QM0kFftnMF  
J2o0kaHEddBV9k7iusyFmm+0mZQc6r7LT/1lKicCgYEA9GBFyXcB6TkcEcYePky  
FaLAc1LwuJ76QwBNyivVLMXH6fl84+aR0mU7LC/GEfHa0ZLeCQpaAUJcMeTyjG78  
xjVyF575BSDKUBPYwKgpwKdGowzj09TJHKpwjA1bRpTarLxUBWjD0nZrFbNzDT1  
hxx3eansZLZ7rP+HokjE558CgYBOyU4NAhH8BaZsvmTswEoAu46hkh1Ee0oFhbpL  
6lxVm39XCAHYF0qGFz/HVw7cSbwugC3cvEwy7dhUu2XC4lbS3+gX0a07VWKv7KV9  
S1tqt67XnpKF+wnFNrCdWSL9BVFNdXMoFHT580M37KPji2FS9c+kQME0xZmUvfG7  
xX/e0QKBgBYw83m4k8HEdmgNCdt9nBuVMDL4Vk/IGfYwbFxC0iLDakFarQWEX8eU  
h3vaI+rTs++jne0Dex7xwmC8Luh05lFgOCUD82cMwZTMHNptLqYDhrfwdxQSCqIH  
X0m34GVnrgqiGv14WuzY8bs6y4saG9KF3/EkMEVivPc4lCeCjElh  
-----END RSA PRIVATE KEY-----  
hotels@ecler:~$
```

To here

Figura 98

6.5. Adding audio content to the SSH server

The next step is to place the correct audio content in the SSH server for each specific user or content group. Thus, it will be created a folder inside the home directory of each content group:

```
sudo cp -r <path_with_content> <path_to_place_it>
```

In this example, it will be copied the audio content in directory

```
sudo cp -r /home/ecler/sandf/hotels /home/hotels
```

Notice that in directory `/home/ecler/sandf/` it is storage all the different audio content, for each content group or user, organized in folders.

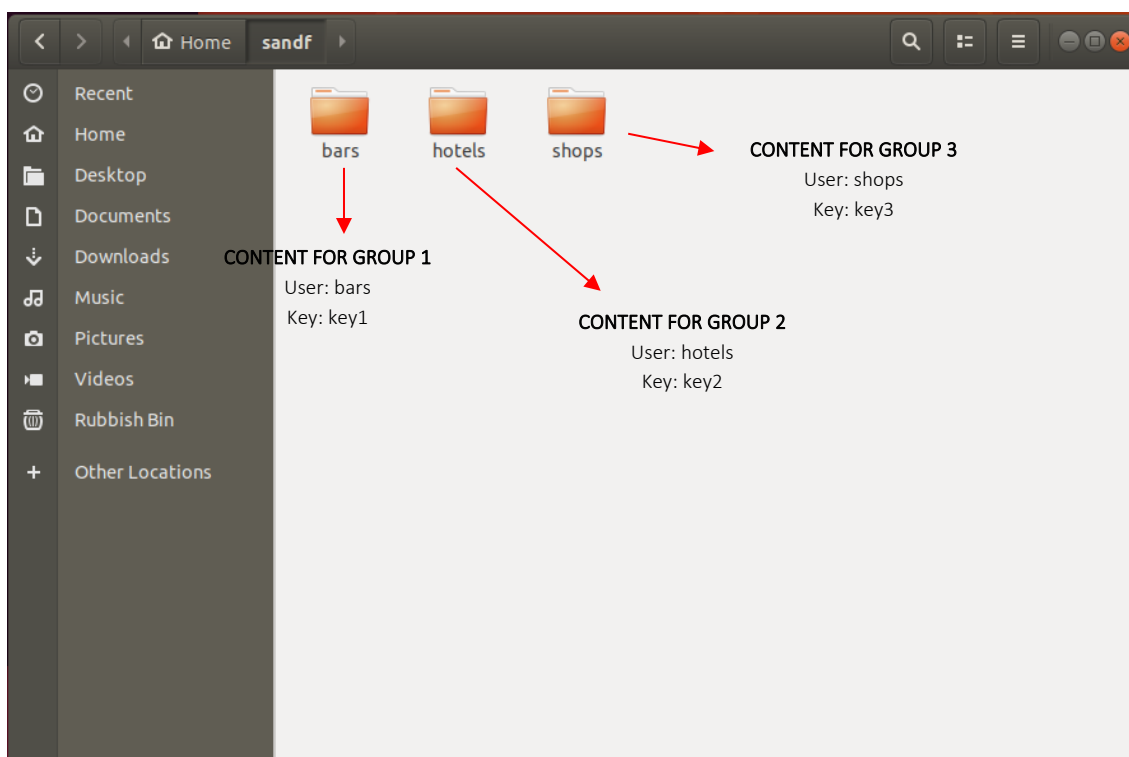


Figura 99

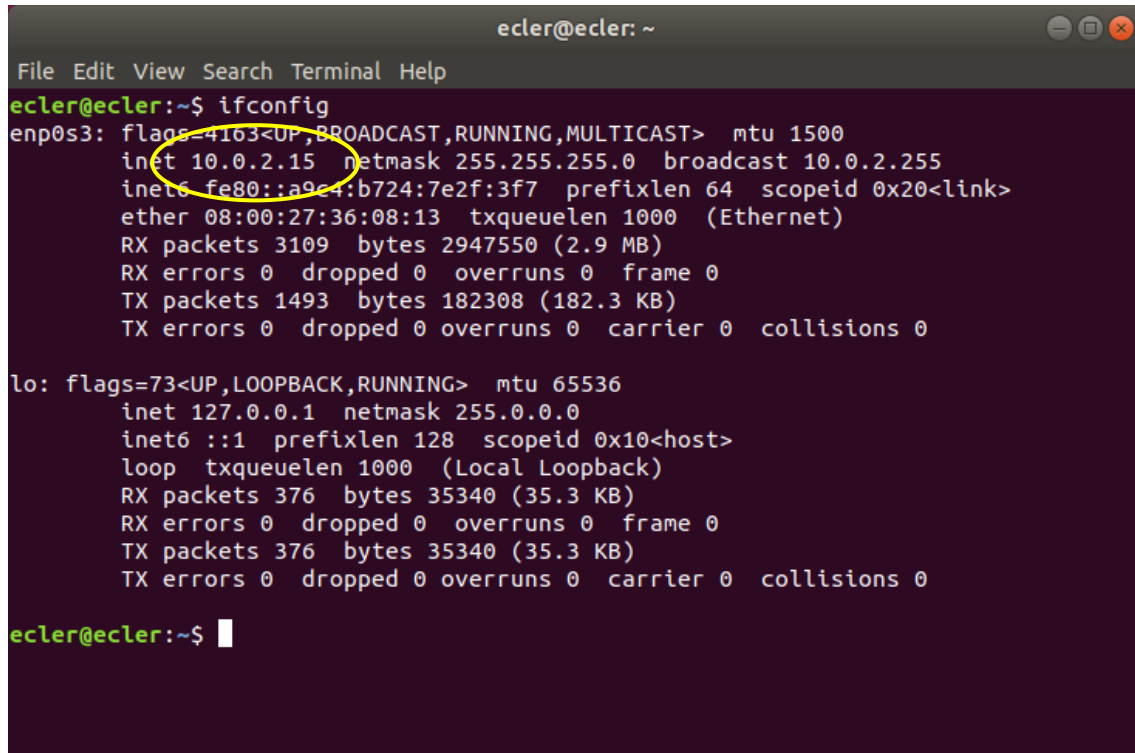
Copy the new directory created `/home/hotels/hotels`. It is the folder where audio contents are storage in the host and need to be copied into PLAYER ONE/PLAYER ZERO S&F's configuration page.

6.6. Configurind the remote source in the player

Finally, it can be configured the remote source (SSH server) in the S&F application.

- Host: is the IP of the SSH server. To check it you can type on the Terminal:

ifconfig



```
ecler@ecler: ~  
File Edit View Search Terminal Help  
ecler@ecler:~$ ifconfig  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255  
    inet6 fe80::a9c4:b724:7e2f:3f7 prefixlen 64 scopeid 0x20<link>  
    ether 08:00:27:36:08:13 txqueuelen 1000 (Ethernet)  
    RX packets 3109 bytes 2947550 (2.9 MB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 1493 bytes 182308 (182.3 KB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 376 bytes 35340 (35.3 KB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 376 bytes 35340 (35.3 KB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
ecler@ecler:~$
```

Figura 100

- Port: Port of the SSH server. 22 (by default)
- Folder: the directory inside the SSH server with the audio content to sync
- Username: user or name of content group
- Private key: key generated for the user or content group

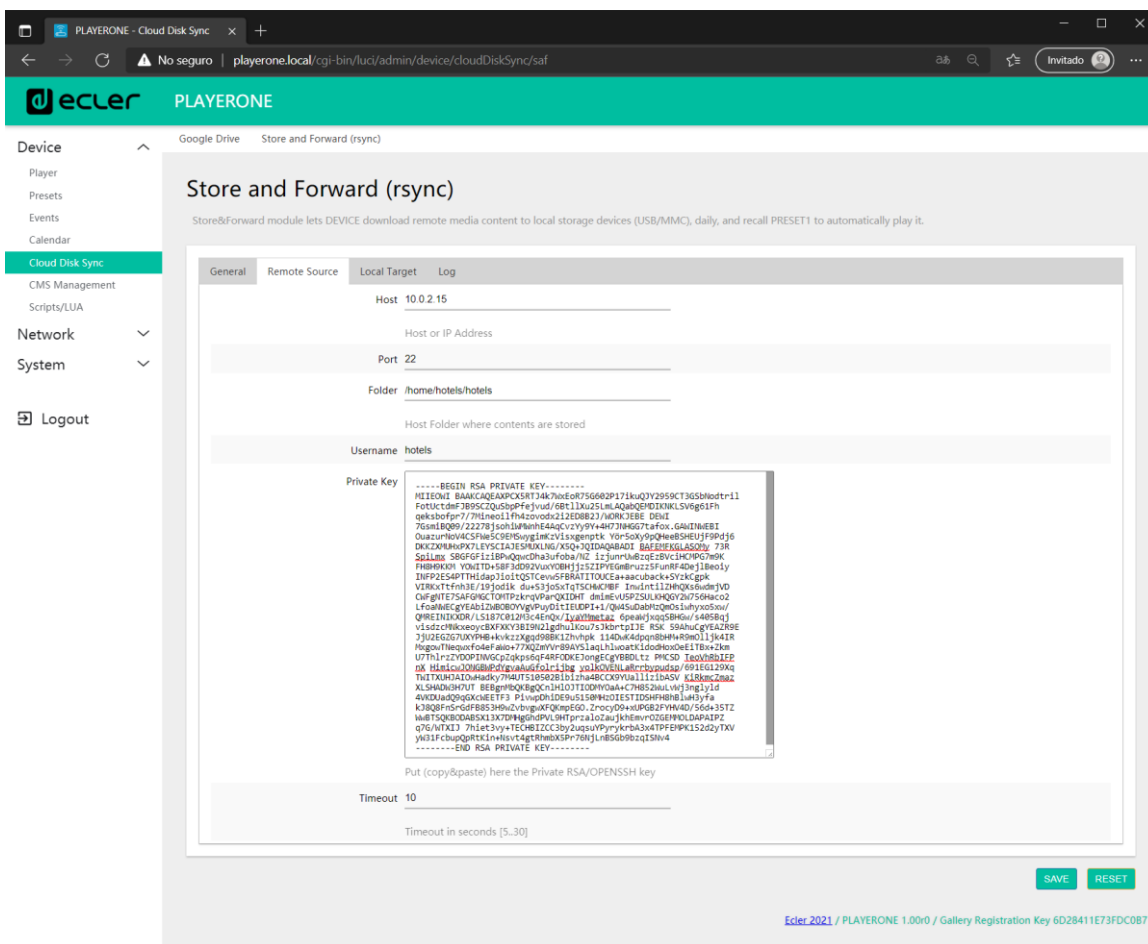


Figura 101

This configuration is the same for every device in the content group.

Repeat steps 3 to 6 for every content group you want to configure for Store & Forward.

All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

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