VariableDisplay

Manual

DIGITAL SIGNAGE – VERSION 3.40 – CALDERA 2017

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License Agreement

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What's VariableDisplay

VariableDisplay is a digital signage solution which integrates with digital printing output seamlessly to create point-of-sales material, retail signage, event graphics and a range of other applications.
VariableDisplay is a combination between several elements: screens and boxes on one hand and a user interface on the other hand.

The box

Each electronic display is driven by one box One box can only drive one screen.
The **VariableDisplay** cube is practical, unobtrusive and easy to carry. It can easily be mounted behind the monitor which it is connected to. It is sold with its power cable. It has two outputs: 15-pin D-Sub VGA and HDMI. In order to be often updated, the box has to be connected to the **VariableDisplay** server's network. However, the contents are downloaded on the box memory. So each box can work off-line if it uses only "file" contents. Stream contents (rss, twitter…), websites and some applications need a constant connection to the Internet.

The interface

There are two types of **VariableDisplay** interface: the manager software (see "**The VariableDisplay manager software interface**" *Page 1*) and the mobile software. The interface works on any kind of platform: **Windows**, **Mac** or **Linux** thanks to the **Adobe Air** technology. The machine where the interface is configured has to be connected to the network in order to drive the boxes.

The server

On each deployment site, possesses a server. On each deployment site, one of the boxes (if several are used) acts as the main server and all the other boxes have to connect to its IP address. Contents and playlists are saved directly on the server. Then the other boxes connect themselves on a regular basis in order to update. All the boxes need to be on the same network (local or web) and this network needs to have enough bandwidth and the correct admin rights for each box.
The server is updated by the software manager interface. All playlists and contents are updated by this interface: downloading new contents, deleting contents from the interface, loading new playlists, etc.
In the document, **<server>** means the server address on the network. It is an IP address (like **1.2.3.4**) with the ability to add a port number when a port mapping is used to permit communication by external hosts (like **1.2.3.4:8080**).

Installation

The **VariableDisplay** package contains the following components:
- the **VariableDisplay** box
- an international power supply
- a VESA mount bracket
- all the software applications to manage the screen

Box installation

Be careful, the **VariableDisplay** box must not be modified (software installation, date and location changes, etc.). The display's orientation and resolutions are the only parameters that can be changed.

If you have to modify the box for setup purposes, please contact your dealer or support before doing anything. These modifications can degrade the product.

Connect the box

The **VariableDisplay** box has an Ethernet integrated network adapter. With a RJ-45 connector, to connect to the network. On the other side, you have to connect the **VariableDisplay** box to the screen or projector you want to drive. The box has two connectors: a VGA and a HDMI so you will be able to drive directly all sort of screens or projectors available now. If for some purposes you have to drive a DVI screen, you will have to purchase a standard HDMI/DVI adapter.

An internal WiFi adapter exists as well. You can use it afterward to connect your box to the network. For the first use, we ask you to use the Ethernet adapter with the RJ-45 connector.

Switch on the box

After having connected the screen and the network you can switch on the **VariableDisplay** box.
Once the system has booted the player starts and shows the default contents. **VariableDisplay** is ready to use.
If you don't know the IP address of the box, two solutions are available to go to the resource page:
Plug a storage USB key on the box. The **Local Area Network** IP address is displayed on the screen. From the computer on which you want to set up your **VariableDisplay** box, open a web browser on the URL: **http://< Local Area Network>**.
It opens the **VariableDisplay** box's resource page.
If you are asked for a login and a password, use the same when you're asked to after changes.
- Login: **config**
- Password: **caldera**

If you have several boxes on a site, you have to set up one box as a master, and indicate to the others the master IP address or its name in the **Server hostname** field. The client boxes will automatically be on the master broadcast list.
For further information see **"VariableDisplay Resources"** *Page 1*

Manual network set up

To set up the network manually, please refer to the **"Advanced Settings"** *Page 1* part of **Resources Page**. Concerning the WiFi connection, plug a keyboard and a mouse to your box. Press the Windows key then click on **Control Panel** and **Network & Sharing center,** then click on **change Adapter settings** and double-click on **Wireless network connection**. The WiFi connection is activated. Please contact your reseller if you have any issue.

Interfaces installation
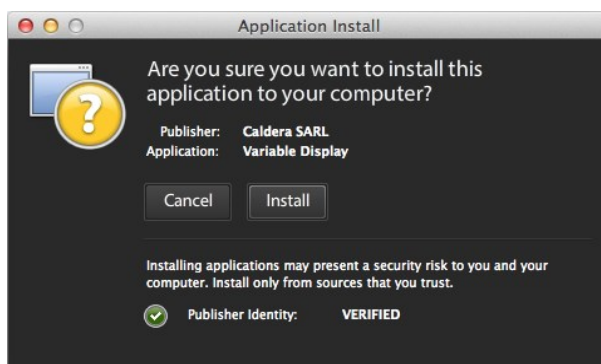
Adobe Air interface installation

Warning: please check that Adobe Air is installed on your system.

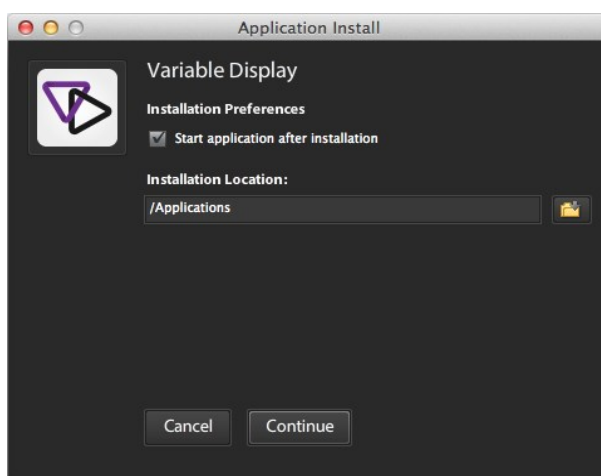The installation of the main Adobe Air interface is quick and simple.
1. Get the installer Package (on a resources page for example).

2. Double-click on it to launch the installation.

3. Then click on *Install*.

4. Then click on *Continue*. The installation begins, it takes a few seconds to complete. If you checked the two check boxes in the previous window, you will see the **VariableDisplay** interface start and a starter icon will appear on your desktop.
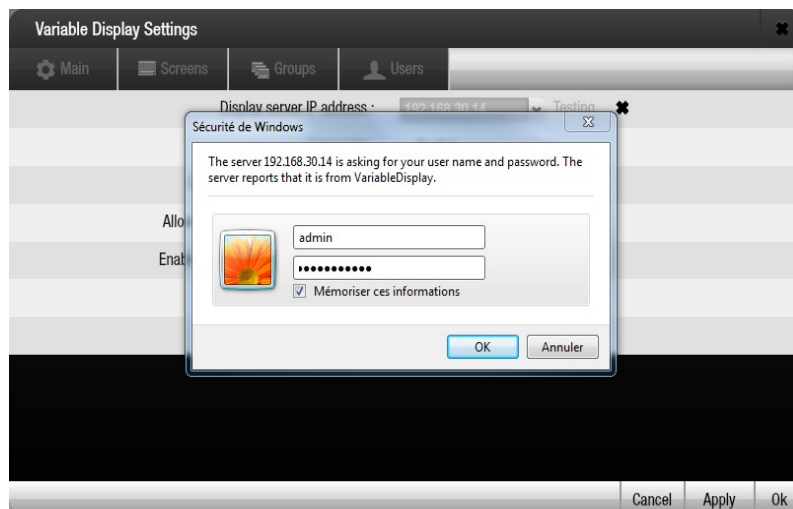
5. On first launch of VariableDisplay, you are prompted to accept the **license agreement**.
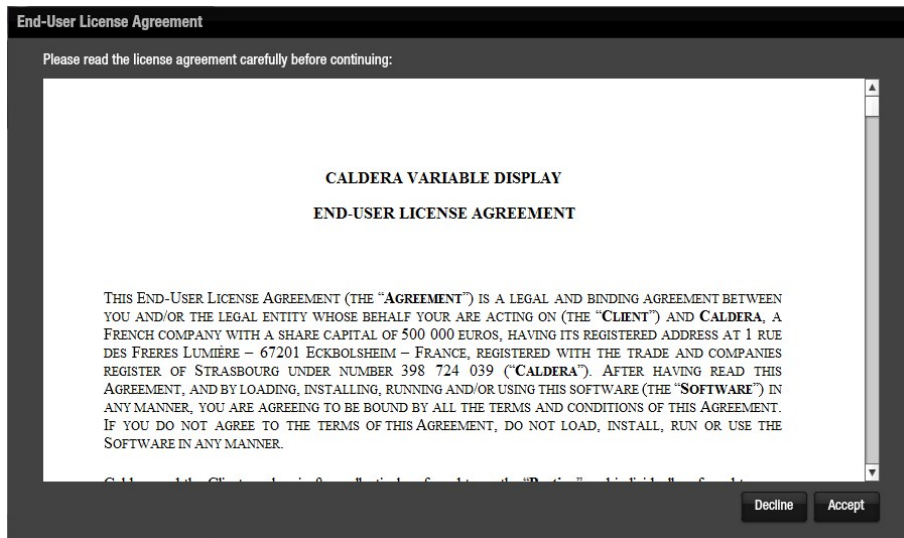
6. Then you access to the *VariableDisplay Settings*.
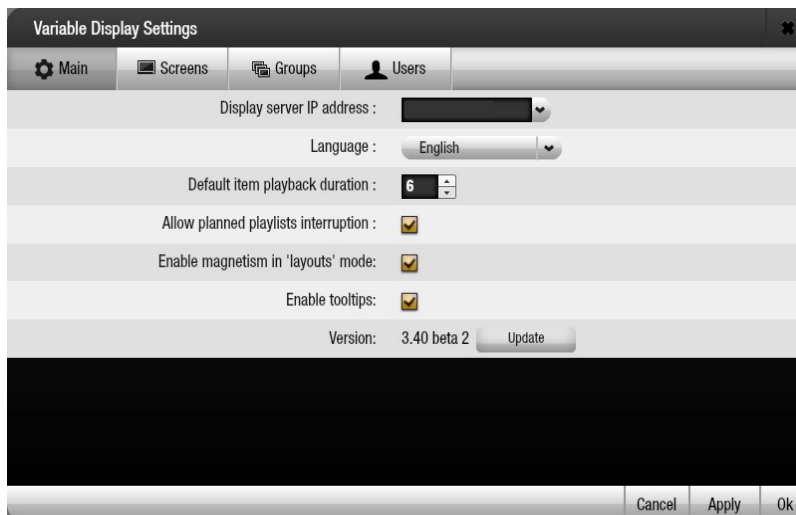
7. Enter the server **IP address** then click on *Ok*.

8. Use your login and password to connect. By default:
   - Login: **admin**
   - Password: **caldera**
9. Your interface is now installed on your workstation.

Android application installation

To install the Android application you can download it from the **Android Play Store** (**Google Play**).
https://market.android.com/details?id=com.caldera.variabledisplay

iPhone application installation

To install the iPhone application you can download it from the **App Store**.
http://itunes.apple.com/fr/app/variabledisplay/id459428904

The VariableDisplay manager software interface

Overviews

The **VariableDisplay** interface has four kinds of windows: the **playlist** mode, the **planning** mode, the **layout** mode and the **settings**.
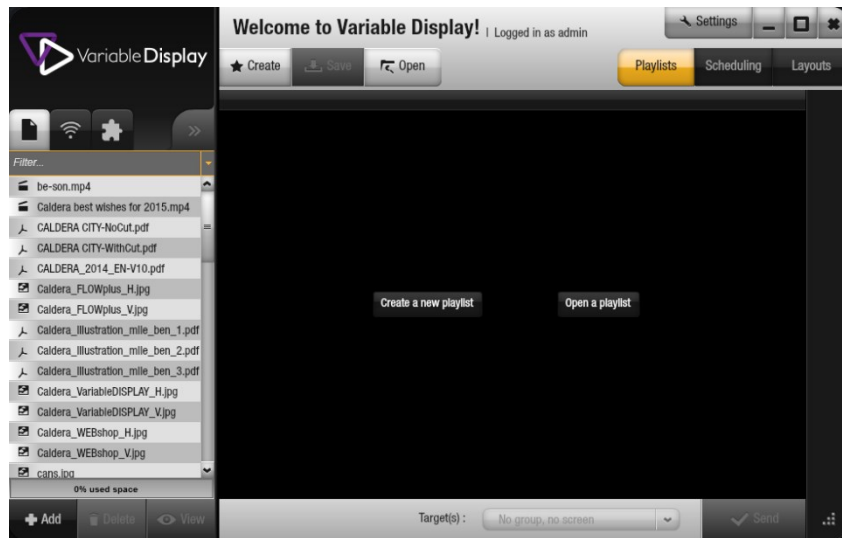
The following buttons and the tool at the bottom right of the window allow to resize it:

The window reduces to the task bar.

The window enlarges to the maximum size (full screen).

The window reduces to the default size.

The application closes.

The window is reduced or enlarged manually. *(This button is not available in full screen mode, you must go back to the default size before changing the size manually.)*

> The window can also be resized (maximum/default size) by double-clicking on its grey header at the top of the window.

On each mode, contents can be filtered by typing their names or part of them. An asterix can be used as a wildcard to replace any string in the middle of a title.
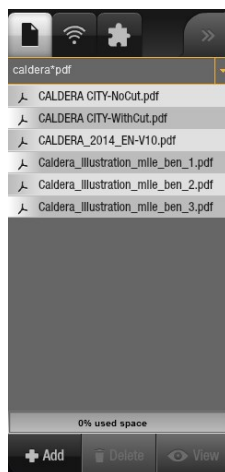
Filter example: we are looking for contents which name contain "caldera" and "pdf" with or without string between them.

Playlists mode

The **Playlists** mode allows the user to create and manage playlists. It includes the following subchapters: "Content Management" on page 12 and "Playlist Management" on page 15. This mode is the first to be displayed when the software starts.
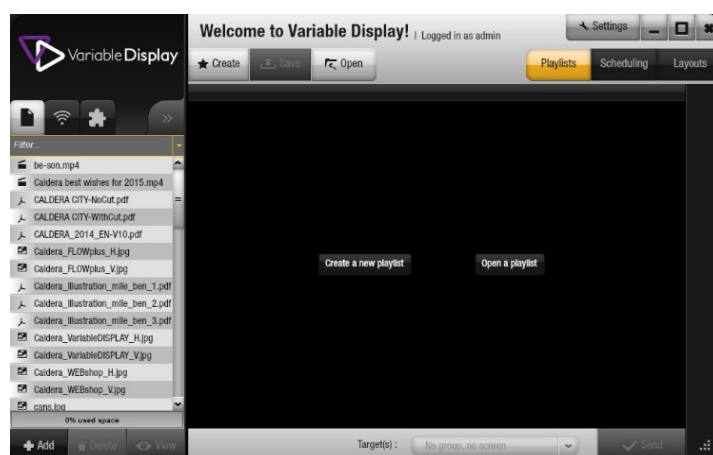
Planning mode

The **Planning** mode allows the user to schedule playlists on the calendar. You can specify day per day and second per second which playlist will be displayed on which screen(s). It includes the following subchapter: "Planning management" on page 19.
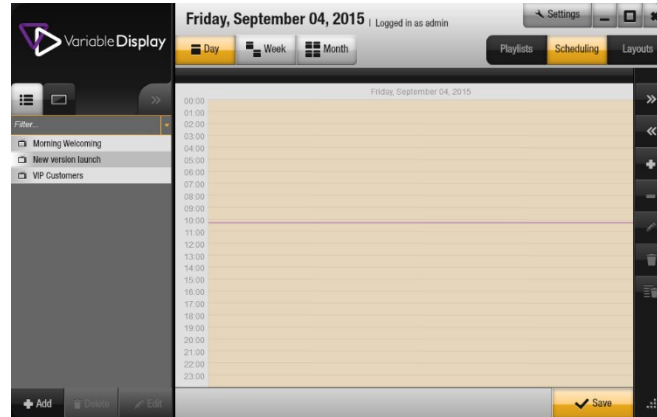

Layout mode

The **Layout** mode allows you to create compositions to reorganize your display surface. You can add fixed elements (background image) or dynamic elements (rss, website, scrolling text). These layouts can then be applied on screens or group of screens apart from the playlists. It includes the following subchapter: "**Layout management**" *Page 1*.
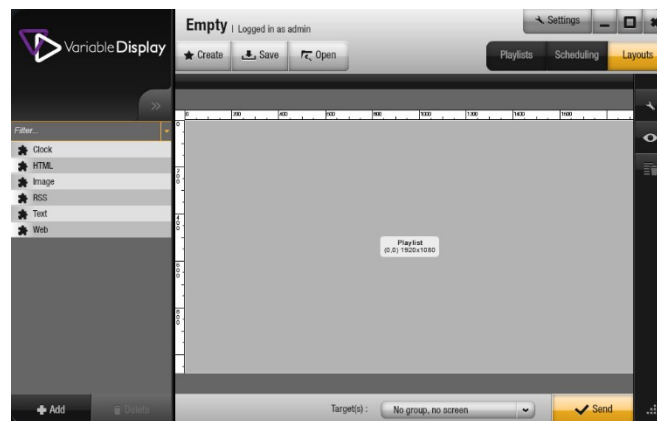
Settings

The settings part allows you to manage global settings, the screens, the groups of screens and the users. It includes the following sub-chapters: "Screen Management" on page 32, "Users management" on page 34 and "Advanced configuration" on page 36.
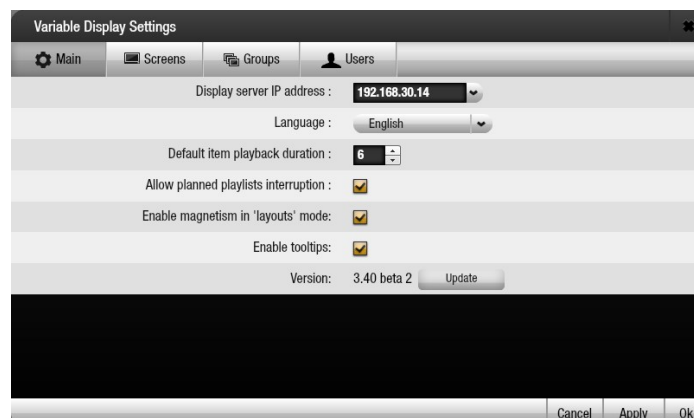
Content Management

The list of contents is divided in three categories: files, websites and applications.

These three tabs [icons] represent each category and have the same actions:

- **Add**: add content to the list.
- **Remove**: remove content from the list.
- [icon]: add content to the activated playlist. Contents can also be dragged and dropped. (See "Playlist Management" on page 15).

Contents can also be sorted by using the arrow next to the filter tool. The sorting options depend on each tab.

Above the action button, you can see a percentage. It indicates you the percentage of space used by the contents on your **VariableDisplay** server box (the box has a 120 Go hard disk).

Files

You can manage them through the first tab which is represented by a paper sheet. Files can be of many different kinds of content which are then downloaded and saved on disks:

- Images: JPEG, PNG, BMP, SVG, GIF and animated GIF
- Creative medias: Adobe Flash (SWF)
- Documents: multipage PDF
- Videos: AVI, DIVX, XVID, MP4, WMV, FLV, MKV, MOV, M4V, OGG, OGV, WEBM, 3GP *(when you add a video, it is converted into H264 if necessary. The progress bar shows you the conversion progress.)*

List of the requirements and recommendations:

- It is recommended to use images and files in RGB format which are dedicated to screen display.
- It is not recommended to use images, especially PDF, which possess a resolution disproportionately higher than the screen, so the rendering and the reading fluency are not altered.

[View icon] This button opens a view of your selected content. It opens it in your web browser.

Contents can be sorted by: name, upload date, type or size.
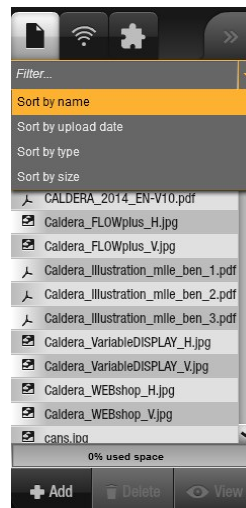
Add a file

In order to add a file you must be in the right tab (File Tab) and click on the **Add** button. There, a dialog box opens and you can search for the file you want to add in **VariableDisplay**. Several files can be selected at the same time they will be added one after another in the background. The files being transferred are visible in the interface and can be deleted from the upcoming list at any time.

Files can be dragged and dropped from the computer file system to the interface without using the **Add** button.

Boxes update

Add: The file is first uploaded on the server then added to a playlist which is assigned to one or more boxes. Then these boxes download it.
Only useful files are downloaded locally on the box.
Remove: When a file is removed from the server, it will be deleted on all the boxes connected to this particular server during the next update.
**Update**: During an update, the old file is overwritten by the new one. No link bounded these two files. So you need to relaunch the playlist for the update to be completed.

Websites

You can manage them through the second tab which is represented by a signal. Since these contents are linked to the Internet, the box needs to be connected to the network or these websites won't be visible (even if they are planned on a playlist).

This button allows you to edit website information.
Contents are sorted by: name or URL.
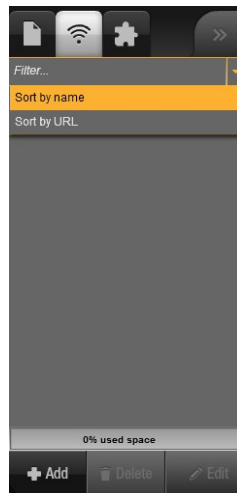
Add a website

In order to add a website click the *Add* button.

Contents are read using the **Google Chrome Version 43** browser, please ensure that your website are compatible with it.

You can specify a website address protected with an https protocol.

- **Title of the web site**: Write the title of the website, it will be recognized by this name in **VariableDisplay**.
- **Url of the web site**: Write the url of the website. The URL must be valid or the website won't work.
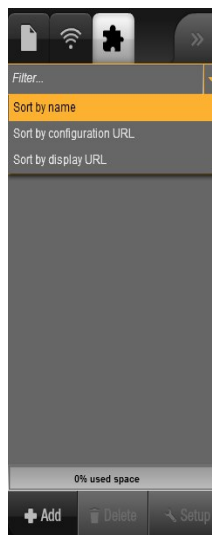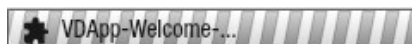
Applications

You can manage them through the third tab which is represented by a puzzle piece. Applications are in fact web applications. Since these contents are linked to the Internet, the box needs to be connected to the network or these streams won't be visible (even if they are planned on a playlist). Applications are red using a Google Chrome browser.

🔧 Setup This button opens the configuration of the Web Application. It uses your web browser to display it.
Contents are sorted by: name, configuration URL or display URL.

Add an application

In order to add an application you must be in the right tab (Application Tab) and click on the **Add** button.
Choose your application using your file browser then click on **Open**.
Wait until the application has been correctly sent and installed on your server.

Your application is then available. Click on **Setup** to configure it.

Playlist Management

A playlist is a non-stop playlist. The playlist will play again when it arrives to the end of the list.
A playlist is a list of contents (files or websites or applications). It can be seen in the middle of the right window during its creation/edition.
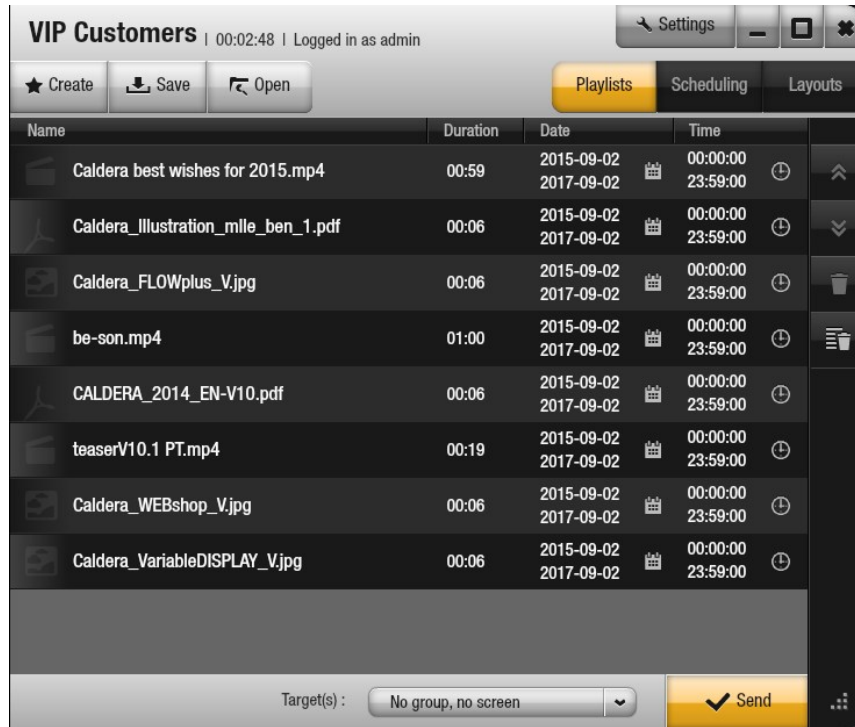
If a playlist is displayed when the interface is closed, it will be automatically loaded when the interface is reopened.

Elements of the playlists management:
- Playlist's duration
- Playlist's name
- Playlist's management buttons
- Contents management buttons
- Send

List of contents

Contents are listed and the following information is shown:
- **Name**: name of the content (with an extension if it is a file).
- **Duration**: duration of the display. The default duration is defined in the settings except for videos (it's the original duration of the file). The duration can be changed. For example, for a video, if the chosen duration is shorter than the original, the video will be shortened. For multipage PDF files, please be sure that you have set up enough time to show all pages. *(one page duration is calculated by dividing the global duration by the number of pages)*

When it is available, for SWF files and videos, the duration of play is automatically calculated and used as the content duration. If it is not available, the default duration is used.

- **Date**: start and end dates of the content broadcast.
- **Time**: time-slot during which the content is displayed. By default it will cover the entire day.

The buttons

Global playlist management:
- **New**: create a new playlist which is empty by default.
- **Save**: save the current playlist. If it is saved under the same name than another playlist (when you do an edit for example), current playlist will erase the old one.
- **Open**: open and post a saved playlist.

Playlist content management:

⏫ : bring up the selected contents. It moves them upward in the list.

⏬ : bring down the selected contents. It moves them downward in the list.

⏬ : bring down the selected contents. It moves them downward in the list.

🗑 : remove the selected contents from the playlist.

🗑 : remove the selected contents from the playlist.

🗑 : remove all contents from the playlist.

🗑 : remove all contents from the playlist.

See "Content Management" on page 12 to see how to add content to the current playlist.

To send the current playlist:
- **Target(s)**: allows selection of one or several targeted screens.
- **Send**: allows validation and launch the playlist.

See "Send a playlist" on page 18 for more details.

Create and save a playlist

To create a playlist:

1. Click on **New**.

2. Give a name to your playlist; you cannot use a name that already exists. In that case you will see the following pop-up:
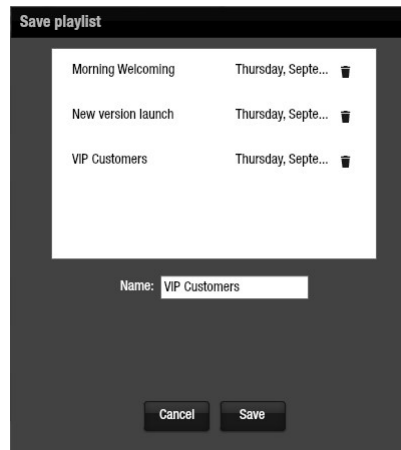

3. You must enter another name to create a new playlist and then click on **Add**.

4. The list is empty if another playlist was open.

It is possible to drag and drop contents from the lists on the left. The playlist management content allows then to move/remove them.

Warning: transitions between contents are automatically created by **VariableDisplay**. The display from one content to the next could be sudden.

5. Please adapt your display time of your previous content so the transition will be better and you'll avoid flashing effects.
6. Once all the parameters are set (contents, durations, dates and time), save your playlist. Click on *Save* then name your playlist accordingly.
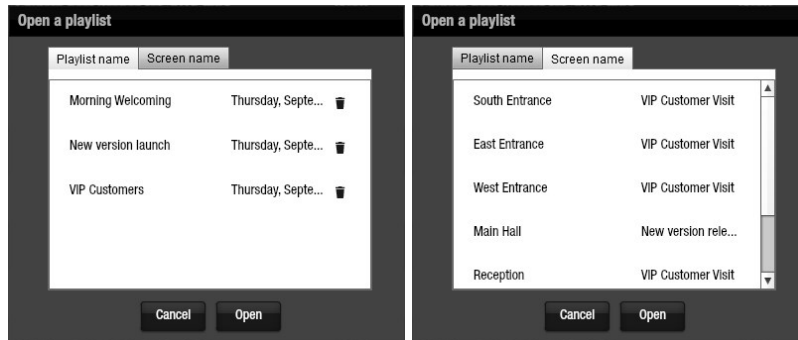
Load and edit a playlist

To load a playlist, click on *Open*. There, you can choose between two tabs:
- **Playlist list**: choose the playlist in the list; playlists are sorted by name.
- **Screen name**: You can choose a playlist by picking a screen on which the playlist is currently running.

To edit a playlist, load it, modify it then save it with the **Save** button; the name of the playlist is already filled in. While clincking on **Saved**, the *"Overwrite playlist"* pop-up opens and warns that the old playlist will be overwritten.
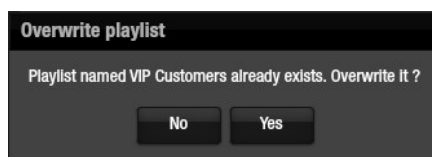

When the playlist you want to modify is playing on one or several screens, you will see a red alert message on the saving pop-up. Click on **Save** to save the modifications and report them to the screens.
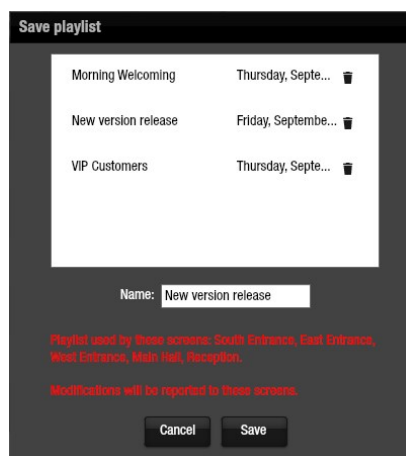
Send a playlist

Sending a playlist requires two steps:
- **Select the target(s)**: choose the screen(s)/group(s) the playlist will be displayed on. Click on the drop-down menu from **Target(s)** and select in the two tabs the groups and screens you want. (See "Screen Management" on page 32 for more screen and group details). You can see how many groups and screens are selected.
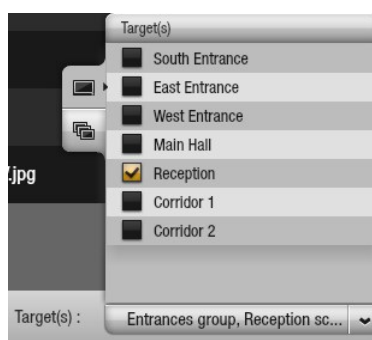
- Click on the button : when the playlist is set, the targets chosen, click on **Send** to initiate an update to the selected boxes. The new playlist will then be played on them.

Send progress
You can easily follow your playlist's send progress on your box. Indeed, in the bottom right corner of the screen, you can see these icons by turns.

 New: a new playlist is available and being analyzed. This step is very quick.

 Download: contents are downloading. The interior circle is the progress of the current content while the exterior circle shows you the progress of the whole playlist.

Loading: the playlist is loading in the background.

Ready: the loading was successful and the display of the new playlist starts.

You can eventually see one of these two icons:

Error: A content download or the playlist loading failed. VariableDisplay will still playing the old playlist while another try will be made.

Patch download: can be seen only on slave boxes. This icon means that an update VariableDisplay patch is being downloaded. Once it is done, the box will start the update.

Planning management

The **VariableDisplay** **Planning** mode allows the user to schedule playlists within a second and to choose the screen(s) on which they will be displayed. Playlists can be programmed several months in advance. So you can do both long-term and short-term planning.

Planning display

By default, the **Planning** mode opens with the <u>day</u> mode. Two other mode exist: <u>week</u> and <u>month</u>. The current day is shown with a colored background and the violet line shows the actual time.
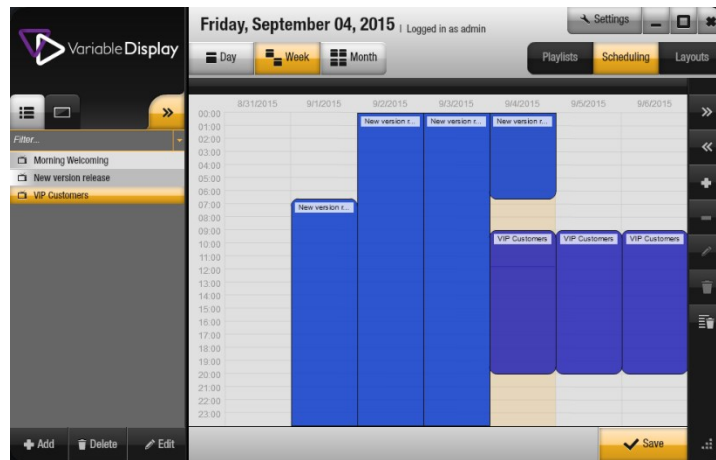
Day mode
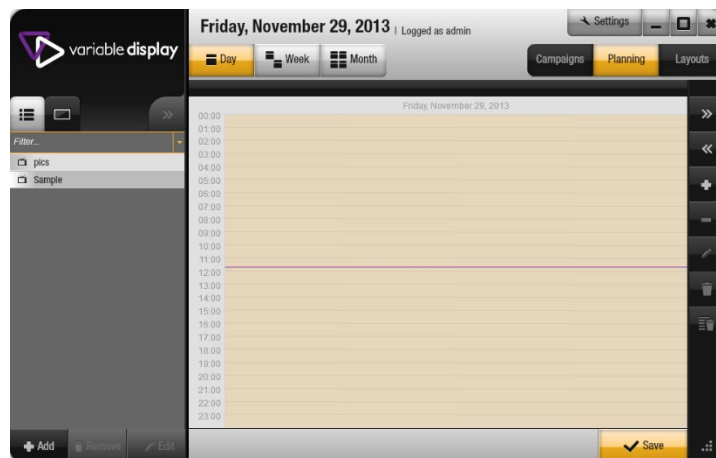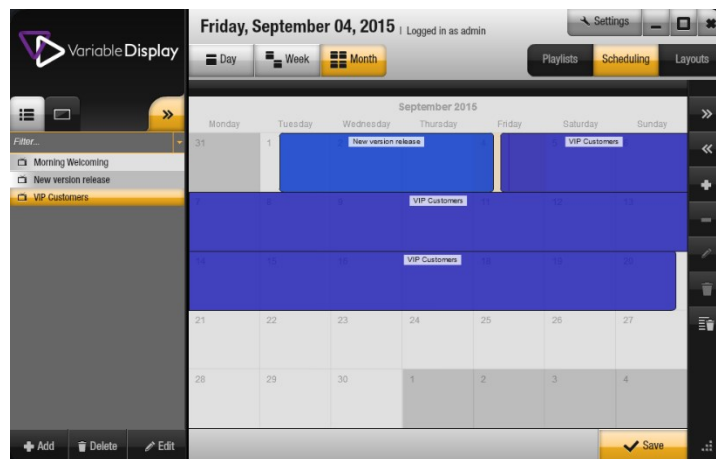

This mode displays all the day hour by hour.

Week mode

This mode displays all days of the week from Monday to Sunday.
Double-click on one day displays it in day mode.

Month mode

Days are placed from Monday to Sunday. Double-click on one day displays it in day mode.

Navigation buttons

These buttons belong to all display modes and do the following actions:

Activate the day mode.

Activate the week mode.

Activate the month mode.

Move forward in the time to the next date:
- Day mode: display the next day.
- Week mode: display the next week.
- Month mode: display the next month.

Move backward in time to the previous date:
- Day mode: display the previous day.
- Week mode: display the previous week.
- Month mode: display the previous month.

Zoom in. Two scroll-bars appear to help the user to move into the planning. When the maximal zoom is displayed this button becomes deactivated.

Zoom out. When the minimal zoom is displayed or when the default display is used this button becomes deactivated.

Playlist Management

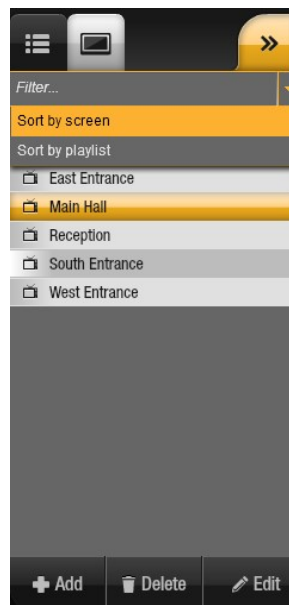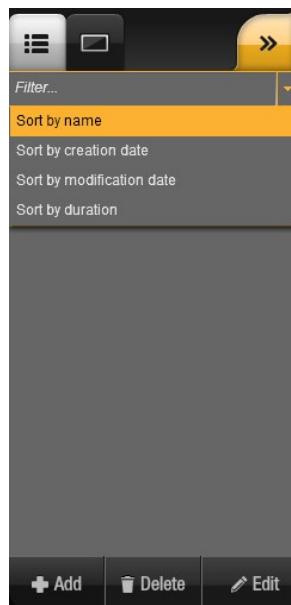On the left part belongs the list of the playlists saved on the server.
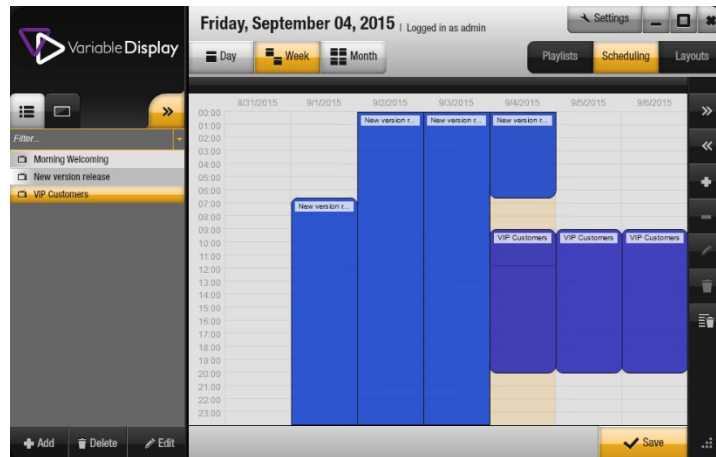
Two icons sort the playlists according to two criteria:

All saved playlists sorted in alphabetical order.
Playlists can be sorted by: name, creation date, modification date or duration.

Screen names. Each screen represents the playlist it is playing.
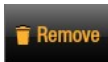Screens can be sorted by: screen or playlist.

Playlists can be picked up in both lists in order to be added to the planning. (See "Planning's playlist addition and modification" on the next page).
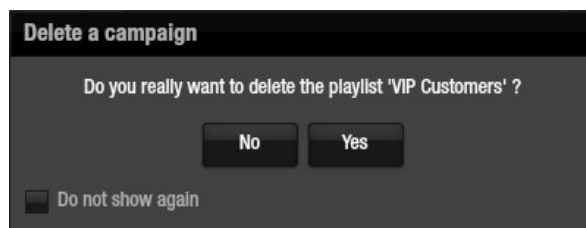
Actions available

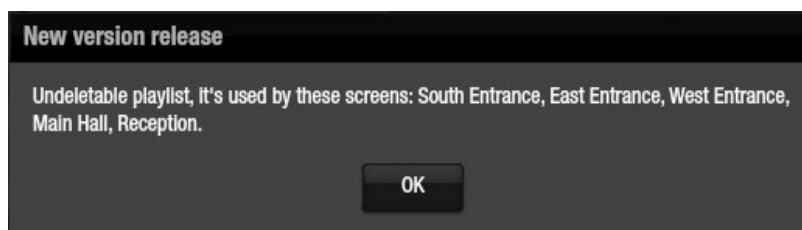Three buttons are available under the playlist lists:

+ Add Add a playlist to the list. It opens the Playlists mode with an empty playlist. (See "Create and save a playlist" on page 16).

🗑 Remove Remove a playlist from the list. The following pop-up shows up.

Delete a campaign

Do you really want to delete the playlist 'VIP Customers' ?

No   Yes

☐ Do not show again

Click on "**do not show again**" to activate the automatic removal without asking the confirmation to the user. Be careful, this is only for the current session. If the interface is reopen, the pop-up will reappear.

If the playlist is actually displayed on one or more screens it can't be removed; that's why you can't use this button on the screen list. If you still try to remove a playlist that is already playing, you'll see the following pop-up:
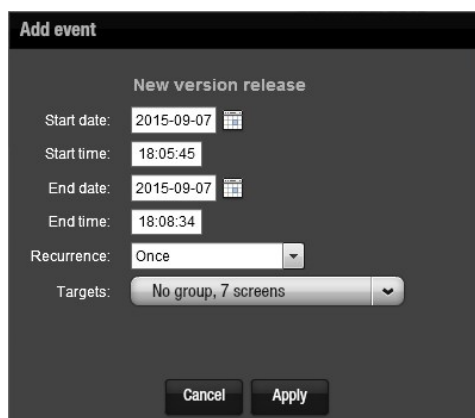
New version release

Undeletable playlist, it's used by these screens: South Entrance, East Entrance, West Entrance, Main Hall, Reception.

OK

✏ Edit Edit the selected playlist. It opens the **Playlist** mode with the selected playlist opened and ready for edition.

Planning's playlist addition and modification

Planning's playlist addition

To schedule a playlist, drag the playlist from one of the two lists then drop it on the calendar where you want it to begin. You can also click on **»** once the playlist has been selected.
The set up pop-up opens, fill it up:

Add event

New version release

Start date: 2015-09-07
Start time: 18:05:45
End date: 2015-09-07
End time: 18:08:34
Recurrence: Once
Targets: No group, 7 screens

Cancel   Apply

- **Start date and time**: by default the current date is used or the date selected on the calendar when the playlist was dropped.
- **End date and time**: by default the current date or the date selected on the calendar, plus the duration of the playlist is used.

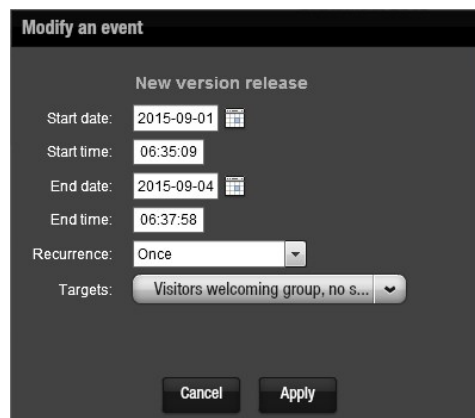You can use the calendars to help you pick the dates.

Inconsistencies between dates (end date older than start date, or date already ended) are automatically spotted and you won't be able to create the event until you put a correct date.

- **Recurrence**: choose the playlist recurrence:
    - *Once*: the playlist will be played only once
    - *Every day*: the playlist will be played every day at the same time
    - *Every week*: the playlist will be played every week at the same time (from Thursday to Sunday every week for example)
    - *Every month*: the playlist will be played every month at the same day and time
    - *Every year*: the playlist will be played every year at the same date.
- **Targets**: choose the targets (screens and/or screens groups) on which your playlist will be played. By default, all screens are selected.

Then click on *Apply* to add the playlist to the planning.

Planning's playlist edition

To edit a scheduled playlist, select it then click on the edit button: 🖉 or make a right-click on it. The editing pop-up appears with the current parameters already filled in. Modify them as you need.
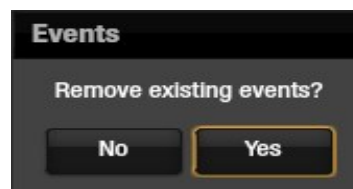

Once the modifications are done, click on *Apply* to save.

Planning's playlist removal

Two solutions are available to remove a playlist from the calendar:

- Select the playlist(s) to remove then click on 🗑. Warning: no confirmation will be asked.

- Click on 📇. All scheduled playlists will be removed. The following pop-up shows up. Click on *Yes* and the planning will be cleaned.


If a screen has been playing a removed playlist, it stops to display it and starts to play the latest playlist received from the **Playlist** mode (if no other scheduled playlist has been planned).

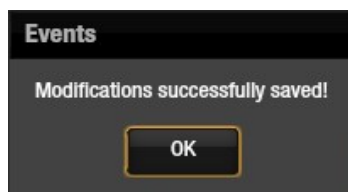Once a scheduled playlist is over, it disappears automatically from the planning.

Save the planning modifications

To save the planning modifications and send the schedule to the several **VariableDisplay** boxes: click on the *Save* button.
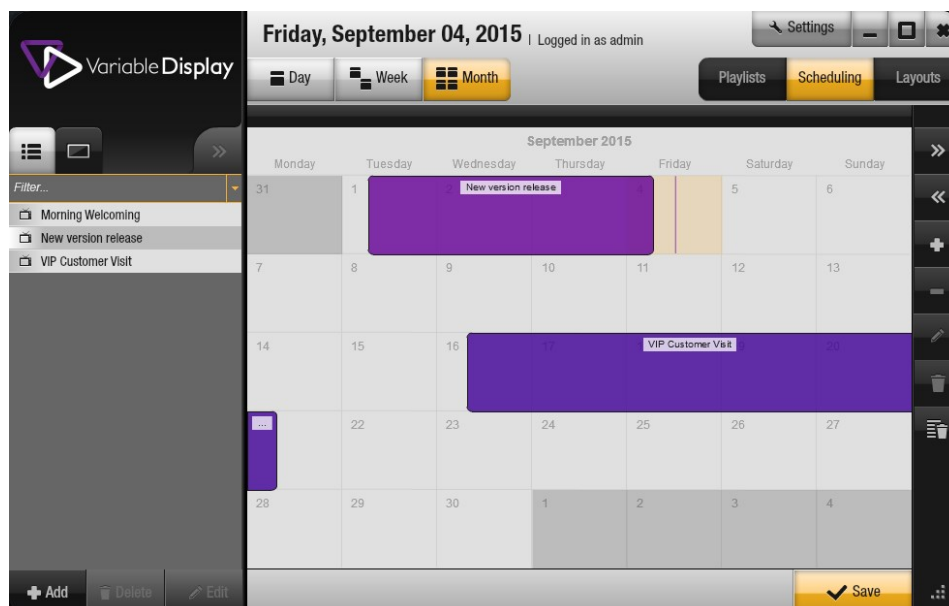

The following pop-up indicates you that the calendar has been properly saved.

Do not worry, when you save the planning, the event colors automatically change.

Layout management

VariableDisplay <u>Layout</u> mode allows you to create personalized screens in which the current playlist will be played. Those screens can be composed with elements such as images, text, rss feed, clock, website, etc.
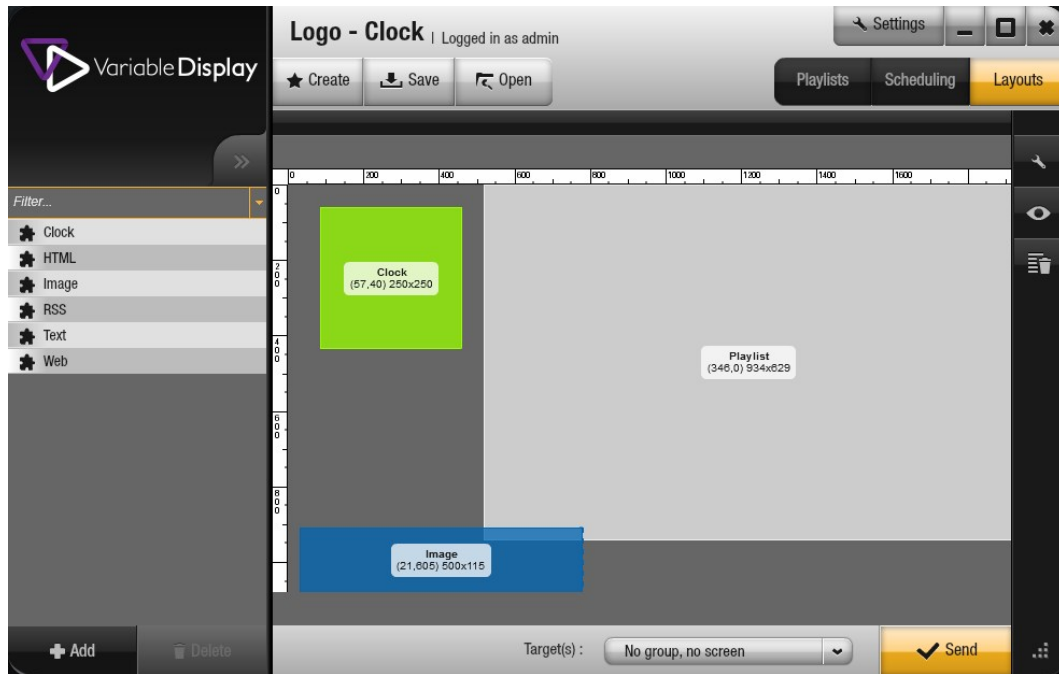
The window is divided into four parts:

- The buttons to manage the layouts
- The available elements and components of the layouts
- The screen area and the elements management
- The diffusion area

Layouts management

Those buttons allow you to respectively:

Create a new layout

The following pop-up opens to let you choose:

- Your layout's **name**
- The screen **resolution**. You can chose the preset or indicate a new one (the width and height fields appear then).

When a number is indicated into parenthesis, it indicates the number of connected screens that currently use the resolution.

You can see which screens have the resolution by looking at the tooltip linked to the number into parenthesis.

- The **color** that will be applied on the screen area in the background when no element cover it.
- The **scale mode** when the targeted screen doesn't have the layout's dimensions. You can choose to:
    - Deform the layout to fit the screen resolution.
    - Not deform the layout so it will only resize the layout without changing the ratio.
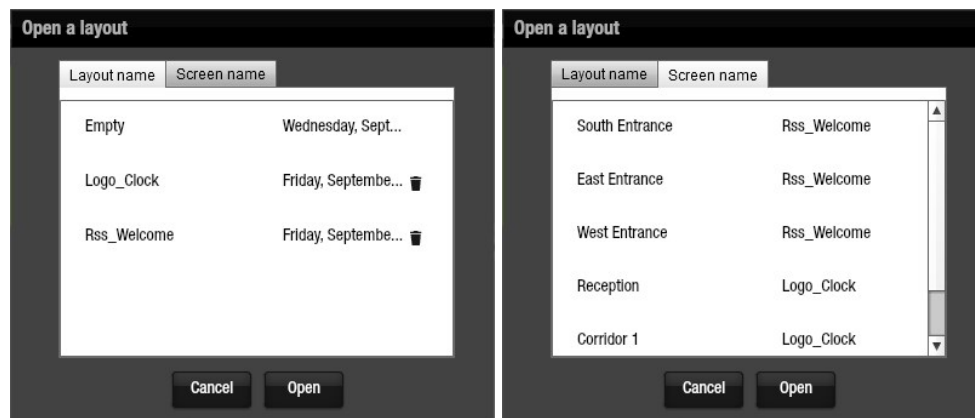   - Not scale the layout, the initial size will be kept.

Save the current layout

Here you can also delete saved layouts by clicking on the basket.
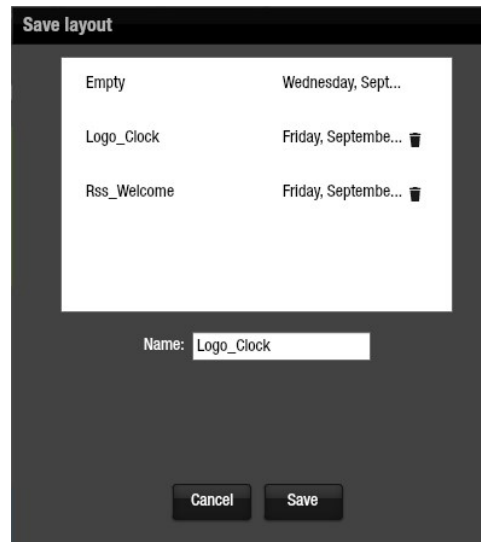
Open a saved layout

There are displayed in two different tabs: layouts by name or by screen on which the layouts are displayed.

The elements


On the left you can find the list of the elements that are installed by default in VariableDisplay. To add them to the screen area, just drag and drop your element then fill in the settings pop-up.

In addition of the VDgets available, you can add any other flash object .swf). Be careful, you will not be able to set it apart from its size and position on the screen.
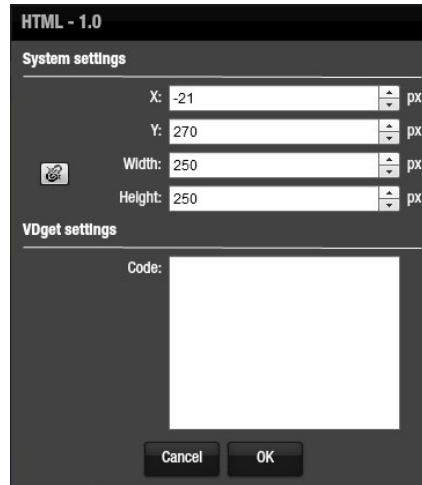
The elements available by default are:
- **Clock**: addition of an analog clock.
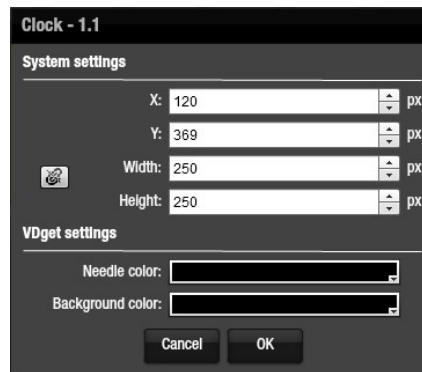
X and Y values are set with the mouse location on the screen area during the dropping movement. **Height** and **Width** are put at 250 by default. The clock is round and uses needles. You can set the **needles color** and the clock's perimeter color (**background**).
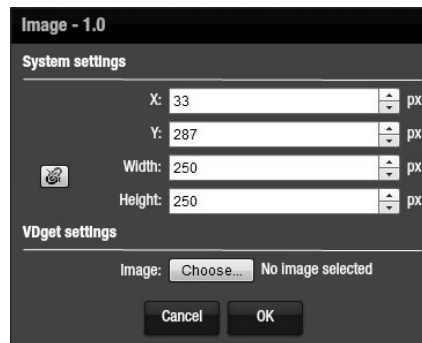
- **HTML:** addition of HTML code.

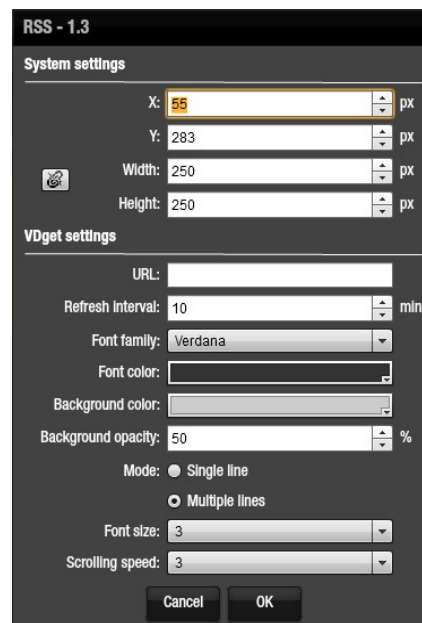System settings are similar to the clock's. You can then copy/paste your HTML **Code** in the field.

The tool is js, css compatible accordingly to this HTML5 Test: https://html5test.com/s/914e0f2520038992.html

- **Image:** addition of an image

X and **Y** values are set with the mouse location on the screen area during the dropping movement. **Height** and **Width** are put at 250 by default then there are automatically changed for the **image's** values when it is selected.

- **RSS:** display of an rss feed

System settings are similar to the clock's. In the VDget settings, you can indicate the **URL** of your rss feed and the **refresh interval** (in seconds), choose the **font,** the **size,** the **color of the font** and the **background** and the **background opacity**. You can also select the presentation of the text in a **single line** (horizontal scroll) or in **multiple lines** (vertical scroll) and its **scrolling speed**.

- **Text**: display text

System settings are similar to the clock's. In the VDget settings, you can enter the **text,** choose the **font,** the **size,** the **color** of the font and the **background** and the **background opacity**. You can also select the presentation of the text in a **single line** (horizontal scroll) or in **multiple lines** (vertical scroll) and its **scrolling speed**.
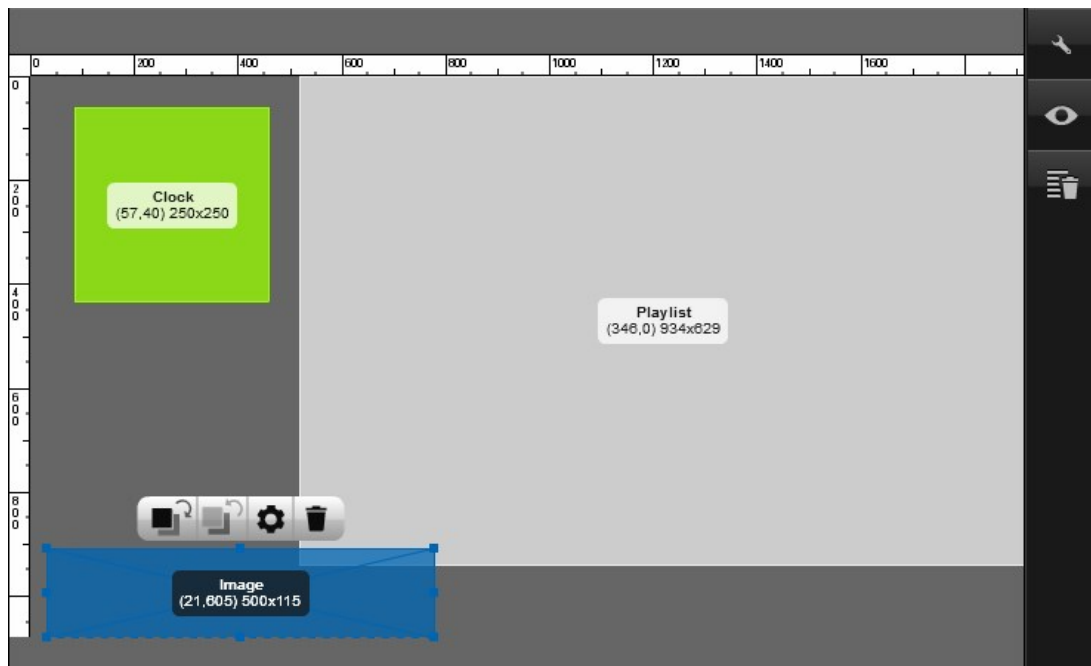
- **Web**:

System settings are similar to the clock's. In the VDget settings, you can enter the **URL** and if you want to show the **scrollbars** or not.

Screen area

Here you will find a diagram of the screen with graduate scales on the side to give you an idea of the final placement of the elements. Each element can be manually moved or resized and there possess their own settings buttons.

: put the element one layer backward

: put the element one layer forward

: reopen the pop-up to set the element

: delete the element from the layout

Even if the playlist can be resized and moved like any other object, it cannot be deleted from the layout. It will also always be in the background behind the elements.

To select an element, just click on it. If you want to select an element located in the background, do a long-click on it. You will also find three buttons on the right of the window to help you creating the layout:

: open the layout settings pop-up

: open a new window with a preview of the layout as it will be displayed on the screen. The black area with the cross corresponds to the playlist.
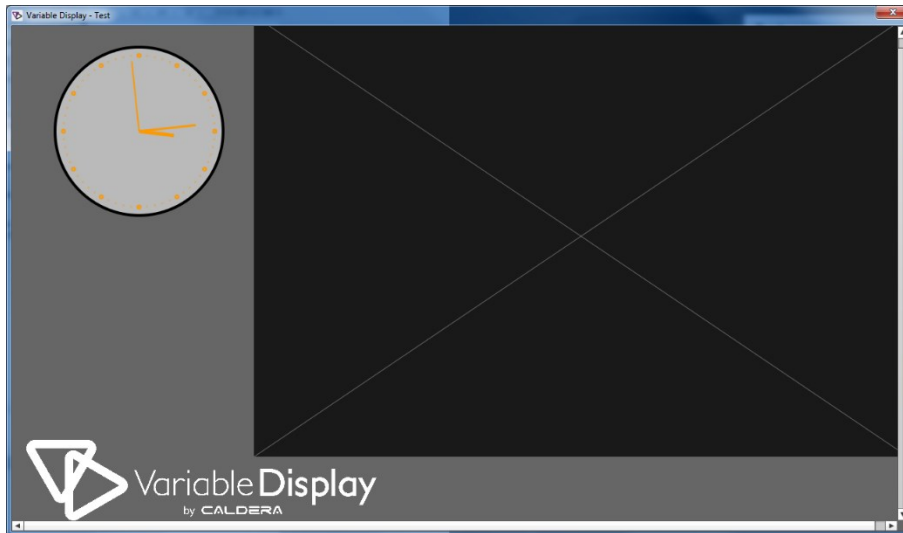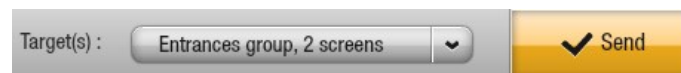
Example of a layout preview.

: delete all the elements from the layout. The playlist is the only one to stay.

Diffusion area

Here, like for the playlist, the diffusion requires two steps:

- Select the target(s): choose the screen(s)/group(s) the layout will be displayed on. Click on the drop-down menu from **Target(s)** and select in the two tabs the groups and screens you want. (See "Screen Management" on the next page) for more screen and group details). You can see how many groups and screens are selected.
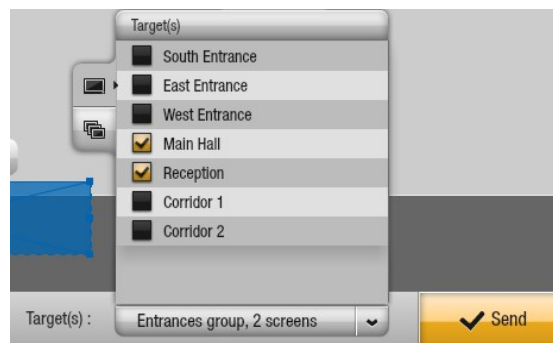
- Click on the button : when the layout is set, the targets chosen, click on **Send** to initiate an update to the selected boxes. The disposition will then be played while the current playlist continues. The current playlist will not be removed, however, it will be resized to fit in your layout template.

Screen Management

Screen management is done from the system Settings. There are two useful tabs: <u>Screens</u> and <u>Groups</u>.

Screens
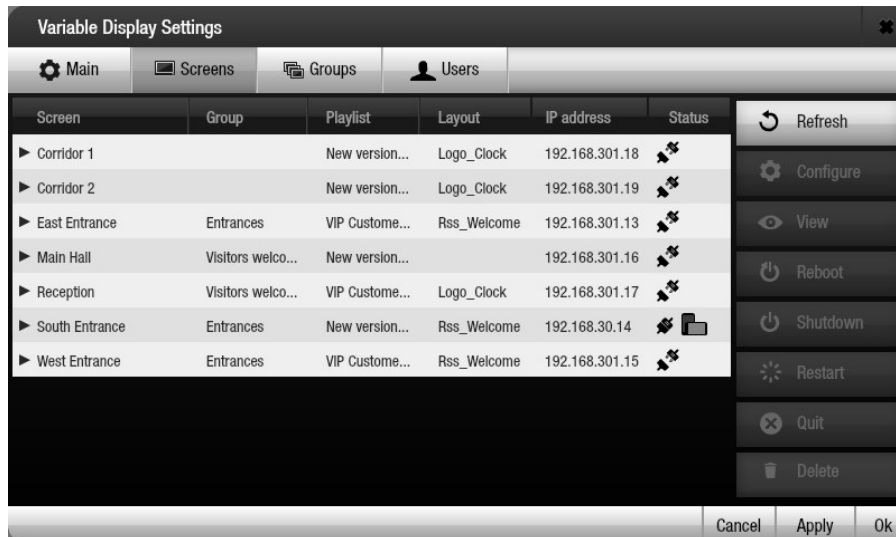
Here, you can control screens individually. The screens are sorted by name in alphabetic order. You can click on each column header and sort the screen by group, playlist or status.
The following elements are displayed for informational purpose:

- The **name** of the screen
- Its **group**
- The current **playlist** that is displayed/scheduled
- The current **layout** if there is any for the screen
- The screen **IP address**
- The **state** of the screen: ![on line icon] (on line) ![off line icon] (off line) ![searching icon] (the server searches it on the network).
- Its **orientation**: portrait or landscape

The little arrow in front of the screen name opens the following panel to show statistics about the use of the box and gives you ideas about your box statement.

On the right hand side panel, buttons are available to help you manage the selected screen:

- *Refresh*: update the screen box information (state, orientation, statistics, playlist, etc.).
- *Configure*: open the page settings in a web browser (see resource page).
- *View*: if VNC is present on the workstation, displays the screen in real time.
- *Reboot*: reboot the screen box.

- **Shutdown**: shutdown the screen box.
- **Restart**: restart the player and the useful applications to play the playlists.
- **Quit**: shutdown the player and the useful applications to play the playlists

The screen goes black but the box is not off, it just displays the system black background without showing the Windows bar. If you plug a keyboard and a mouse on the box you can control the system. It also works if you use VNC.

- **Delete**: remove the screen from the list. It is used to remove boxes that have been disconnected from the server (linked to another server or removed from the network).

If you remove a box that is still connected to the server it will automatically reappear is the list within 20 seconds.

Groups

Here you can manage screens groups. The groups are used to select several screens at the same time. A screen can only be in one group at a time. However, it can always be selected individually.
The Groups window is divided in three parts:
- The header, which contains:
    - The list of existing groups.
    - The **rename** button.
    - The **add** button to create a new group.
    - The **delete** button to delete the selected group.
- The list of the screens and the group each screen belongs to.
- The selected group composition.

To add a screen in a group, just drag and drop it from the left list to the right. You can use the arrow as well. To remove a screen from the group, click on the bin icon.

Warning: if you create an empty group, it will be automatically deleted when you will click on **Cancel**, **Apply** or **Ok**. It will be the same for a group without any screen.

You can only use alphanumerical, space and "_" characters to name your group.

Users management

The user management is done from the **System Settings**. Two kinds of user are possible: the **administrators** who get all rights on all **VariableDisplay** features, and the <u>users</u> whose rights are restricted:

- They can't manage content (add or remove content from the database).
- They can't create or remove a playlist.
- They can't manage the screens groups.
- They can't manage users.
- They can't switch off or reboot a screen from distance.
- They can't add tools for the dispositions or remove a disposition from the list.

Also a user can only have access to the screen that has been assign to him. (See "Add/Edit a user" below).
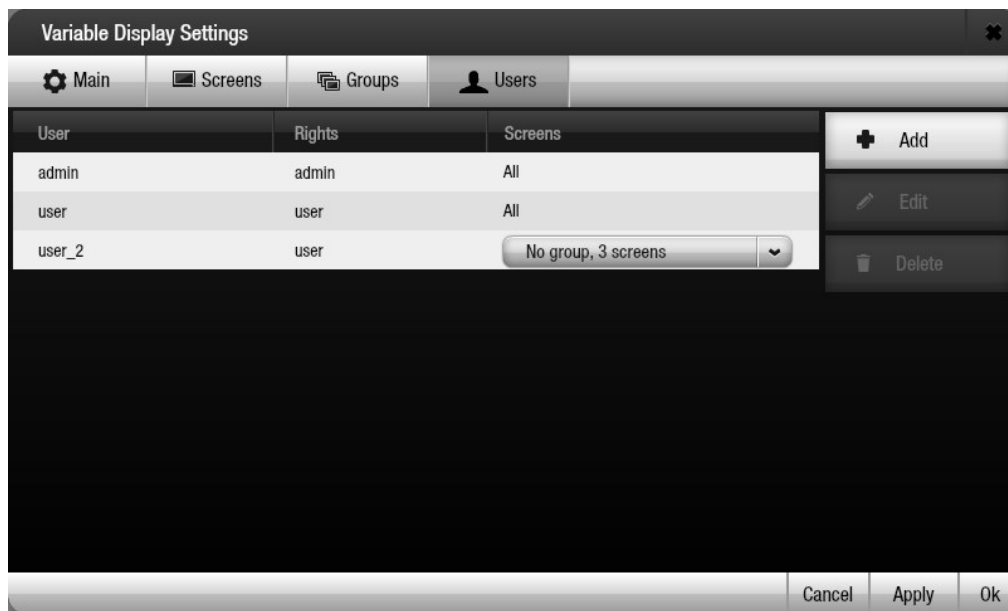
Users are lined up in a tab, ordered in alphabetical order. Their type (admin or user) and the groups and screens they have rights on are displayed.

Three buttons allows the user management:

- **Add**: create a new user.
- **Edit**: allow to modify user's settings.
- **Remove**: remove the user from the list.

Only <u>admin</u> users can use these buttons.
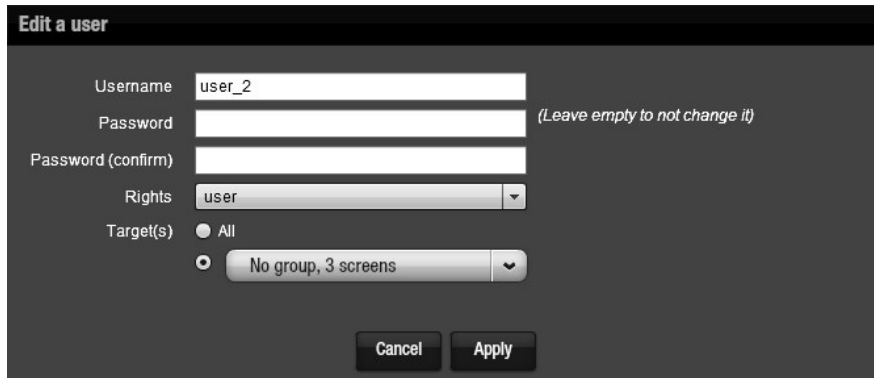
Add/Edit a user

To add a user click on the **Add** button, the following pop-up is displayed.

Fill in the fields, all are necessary:

- **Name**: Indicate a user name.
- **Password**: Enter the password to be used by the user.
- **Password (confirm)**: Enter the password again to confirm it.
- **Rights**: Choose between "admin" (administrator rights) and "user" (standard rights).
- **Target(s)**: Choose between "all" (all groups and screens) or the other option which allows you to select one or several groups and one or several screens. If you choose "admin" as rights, no choice is available; **all** is automatically selected.

The user edition window is quite the same. If you don't fill in the password fields, you just keep the current password.
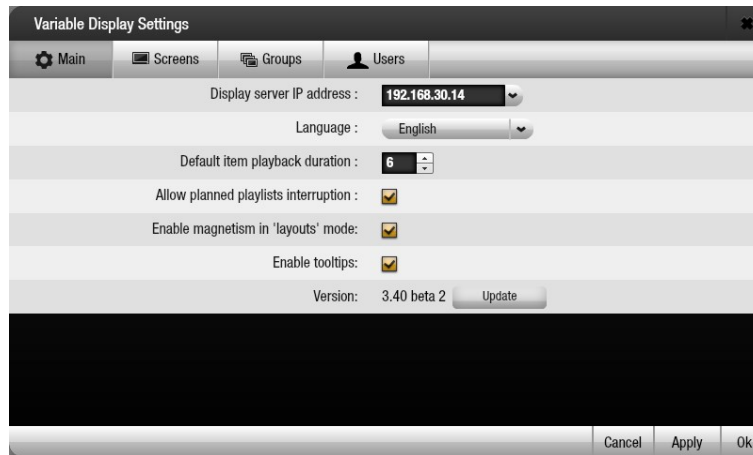

Once all fields are filled in or modified, click on *Apply* to save the user or its modifications. If you click on *Cancel* you will go back to the user management without any change or additions.

Advanced configuration

The advanced configuration is managed from the system **Settings**.

Main

In this tab, you can:
- Fix the server **IP address** and switch between all your **VariableDisplay** servers. To facilitate the switch from one server to the other, the list of all IP addresses already used is saved. You can remove one of the addresses at any time by clicking on the dustbin icon (except for the current one).

When the **IP server** address is changed, a cross appears next to the **Testing** message. It allows you to stop the process (in case of an error in the address for example).
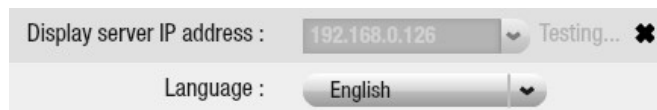
You can stop the connection by pressing the Escape key as well.

If you try to connect to a slave box, an error message will inform you that it cannot be reach.

- Change the interface **language,** choose between: English, French, German, Italian, Spanish or Chinese.

If your system currently uses once of the above mentioned language then the software will pick the same one by default. If else, interface will be in English. When you close the interface or when you update, the chosen language is saved.

- Change the default **duration**. It is indicated in seconds and is set up at 6 during the installation.
- It is up to the user to determine the sequence of the displayed playlists. So if "**Interrupt playlist when a new one is sent**" is checked and a screen is getting a new playlist, the new playlist will be displayed right away. If the checkbox is unchecked, the current playlist ends before the new one is displayed.
- **Activate** or deactivate **magnetism in layout mode**. Magnetism can help you to place your elements, to align them together.
- **Enable tooltips**: it displays additional information to the user and explains buttons that have no text.

VariableDisplay update

The **VariableDisplay** update takes a few steps; you must follow them only for your server box.

Be sure that you saved the update patch on your computer before launching the update. You can download the patch from **Caldera**'s online platforms: extranet.caldera.com (resellers) or usernet.caldera.com (customers).

1. Go to **Settings**, <u>Main</u> tab and click on the ***Update*** button. There, select the patch to apply.
2. Wait until **VariableDisplay** is successfully updated. If the patch is quite big, please wait until the entire patch has been successfully applied.

During the update, the percentage is indicated and a cross allows you to stop the process right away. You can stop the connection by pressing the Escape key as well.
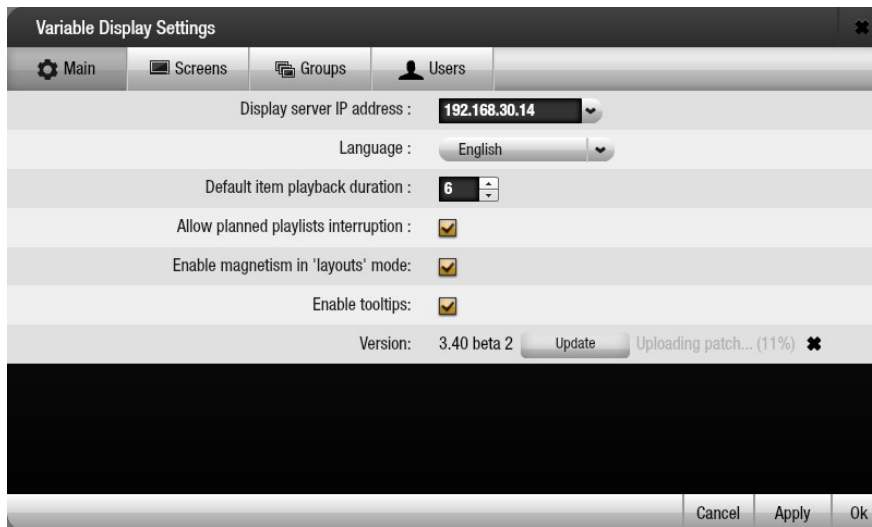
3. The sever box will automatically restart after the update.
4. Close the Interface and restart it. The air interface detects automatically if a new version of the interface is available and asks the user to install it.
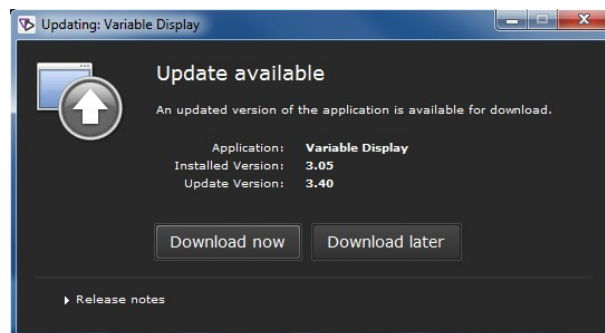
For the client boxes there is no need to do something. They will automatically update.

Be careful, when updating a box to the 3.40 version, all the videos in the content list will be re-encoded. This step can take several minutes depending on the contents.

Besides, the current playlist diffusion will be hold until all the playlist's videos are encoded.

Mobile interfaces

These interfaces have been simplified comparatively to the Air one. You cannot download or delete content for example. You cannot create playlist or access to the users, screen groups or screens management either.
The **Android** **VariableDisplay** interface is only available in English.
The main window opens on the last playlist loaded (or on an empty playlist if there is no playlist playing).

<center>Android   iOS</center>

On the **Android** interface, there is a button named **OK** which allows the user to save the current changes. If the user clicks on back without clicking on **Ok** before, the changes won't be saved.

On the **iOS** interface, changes are automatically saved.

## Playlist Management

From the playlist display user can:
- Refresh the current playlist:
  - Click on *menu* then *Refresh* on **Android**.
  - Slide your finger to the bottom of the screen on **iPhone**.
- Open the settings page on **Android**: click on *menu* then *Settings*.
- Change the screens
- Send a playlist

- Change the current playlist (click on the playlist name to open the playlist list).

<table>
<tr><td align="center">Android</td><td align="center">iOS</td></tr>
</table>
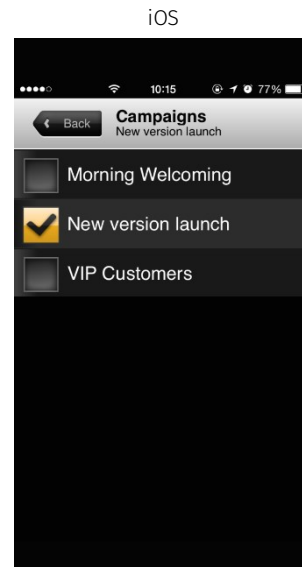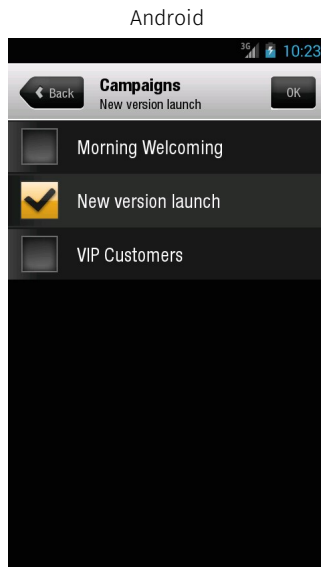
- Add content to the playlist: click on the **+** on the playlist's page. You will have access to the files categories. To add content to the playlist just click on the **+**.
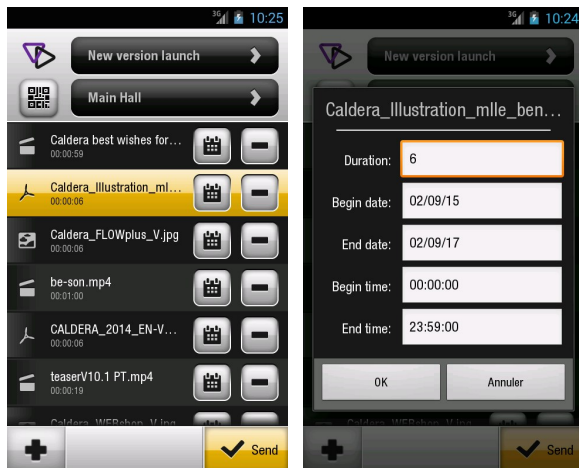
<table>
<tr><td align="center">Android</td><td align="center">iOS</td></tr>
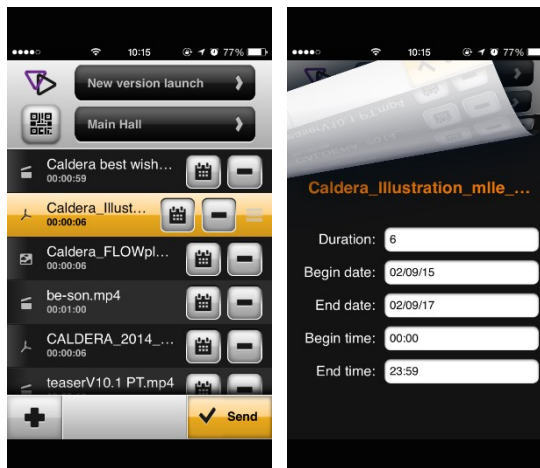</table>
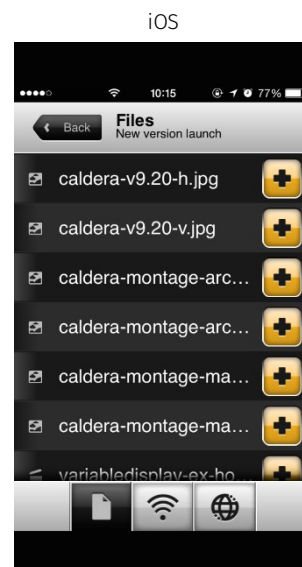
The three tabs at the bottom will sort content by type.

- Change duration of the content display:
    - Select the content then click on the **calendar**. Fill in the several fields: **Duration**, **Begin date**, **End date**, **Begin time** and **End time**.
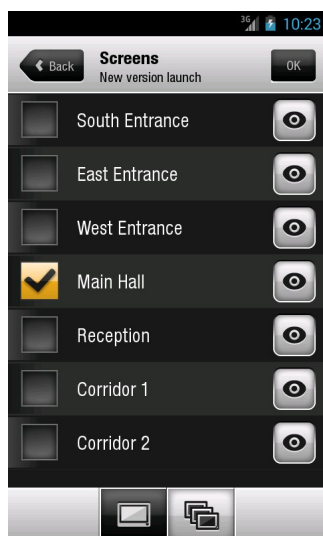
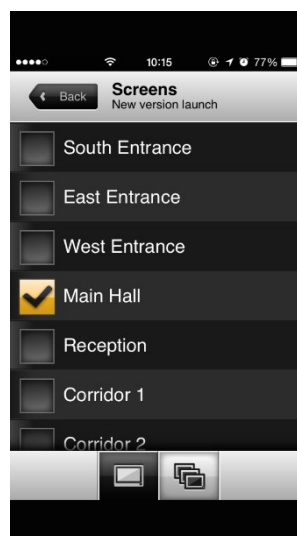Android   iOS

Send a playlist

Before being sent, a playlist must be properly set up (see "Playlist Management" on page 38 on the previous page) and the screens and screens groups have to be selected. Click on the second button from the top where the number of screens and groups are indicated. The list of screens opens. Touch a screen name to select or unselect it.

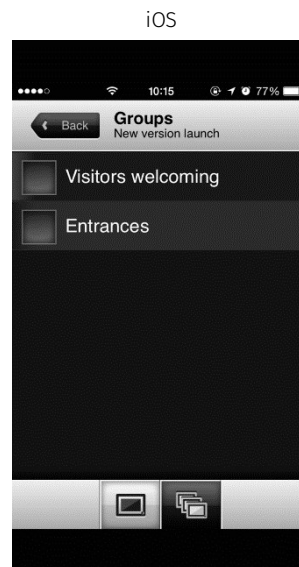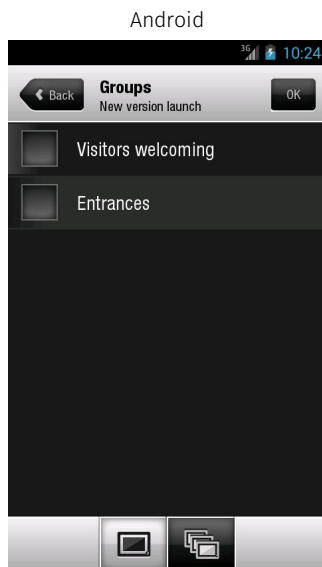Android   iOS

On Android you can see the actual content that is displayed on the screen by clicking on the eye. A VNC client has to be installed (free app).

To open the screen groups, click on the corresponding icon at the bottom of the page: . The group selection is identical to the screen selection: touch a group to select or unselect it.

Android	iOS

The *Back* button restores the playlist management page on the current playlist.

Once all settings have been set up, the playlist can be sent. Click on **Send** at the bottom of the page. The playlist is first saved then sent to the server that will apply changes to the boxes.

Settings

The settings sections allows the user to change the currently connected box and user.

To access settings:

- On **Android**: click on **Menu** then *Settings*.
- On **iPhone**: open Settings; you'll find the **VariableDisplay** set up tool.

On the settings page you'll see the following fields:

- **User name**: change the current user.
- **Password**: enter the password linked to the user to connect.
- **Server**: enter the IP address or the network name of the server box.
- **Confirm deletion**: if this box is checked, a pop-up will appear every time content will be removed from a playlist to ask for confirmation.

| Android	iOS

MOBILE INTERFACES
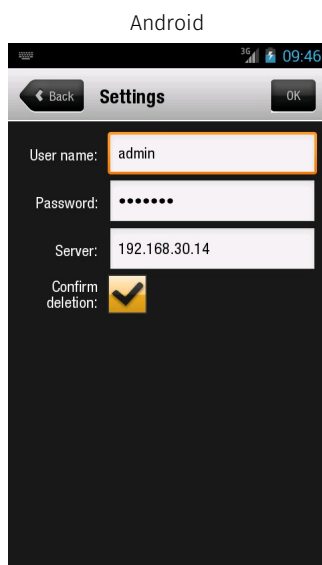
QRCodes

 This button activates QrCode detection when it is touched. It scans a particular code identifying a box. The **VariableDisplay** application then automatically downloads the box's current playlist.

QrCodes must contain the following information to be correctly read by the application; the data must be plain text: **<server>**/**<box_name>** («**1.2.3.4/caldera0001**» or « **VDMaster/caldera001** » for example).

QRCodes can be generate by any QRCode generator available on the Internet.

VariableDisplay Resources

This page is automatically generated when a box is connected to the network. It allows the user to change the box's information. The page can be launched from any web browser with the box IP address. To access this page a login + password is required. By default the login is "config" and the password is "caldera".
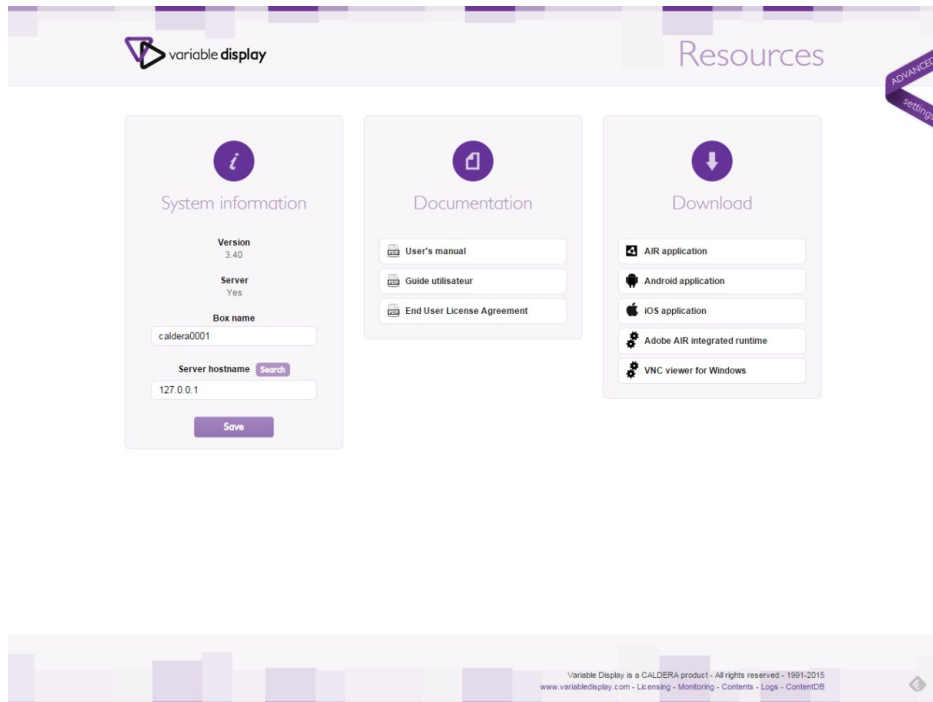
The resource page is divided into two pages:
- Resources where you'll find global information and documentation.
- Advanced Settings where you can modify parameters linked to the screen or to the network connection.

To switch from one page to the other just click on the ribbon on the top right of the page.

You will find, at the bottom of the page, links to additional tools:

- **Licensing**: your license details. **Player key** for your material identification for example.
- **Monitoring**: your box's activities. This is the same information you can find in the screen management window of the **VariableDisplay** interface.
- Contents: your content's activity (start time and duration)

You also have access to:
- Your **Logs** files
- Your database using the **ContentDB** link

Resources

The page displayed by default. It is divided into three parts: **System information**, **Documentation** and **Download**.

System information


Information displayed about the system and the box:

- **Version**: This field shows the box's version number.
- **Server**: This field tells you if the box is turned as master (server).
- **Box name**: This field allows you to change the box name. This name is used for all **VariableDisplay** interfaces. It is necessary to use distinct names for each box in order to differentiate between them.
- **Server hostname**: This field allows you to change the server hostname. Normally the IP address of the master. If the current box is the server, you can use either the local IP address or "localhost".
- The *Search* button allows you to automatically detect **VariableDisplay** masters on the network. To choose a master, click on its IP address. You can also choose to define the current box as the master (*Set itself as a server*).

Depending on the network configuration, the *search* button might not find your master. In that case, put its IP address directly in the **Server hostname** field.

Save the current changes by clicking on *Save*. You're then asked to restart the box. Changes will only apply after restarting.
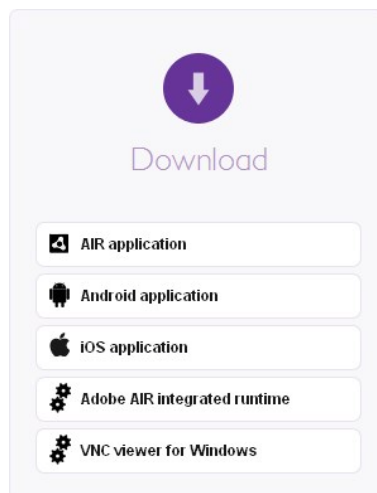
Documentation
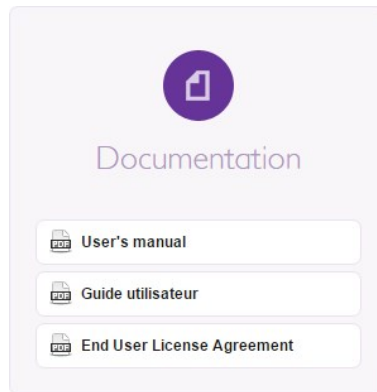
Here you can find **VariableDisplay** documentation. They are both in English and French.
- The **User's manual** (**Guide utilisateur** for the French version): the current document.
- The **VariableDisplay** **End User License Agreement**

Download

Here you can download one of the three interfaces for installation:
- **Air application** will allow you to drive all the features of your software from one application. It's a multi-platform application using Adobe Air technology that runs on Microsoft Windows, macOS and Linux operating systems.
- **Android application**: link to download the **Android** mobile application from the **Android Play Store** (**Google Play**) platform.
- **IOS application**: link to download the **Apple** mobile application for **iPhone** and **iPad** from the **App Store** platform.
- **Adobe AIR integrated runtime** is needed to run the AIR application. You can download it directly from the Adobe website as well.
- **VNC viewer for Windows** is used on your Windows computer to see the playlists played on the screens. (See **"Screen Management"** *Page 1*).

Be careful, a VNC server is already installed on the **VariableDisplay** box. <u>**Do not install additional software on the box**</u> to use VNC viewer.
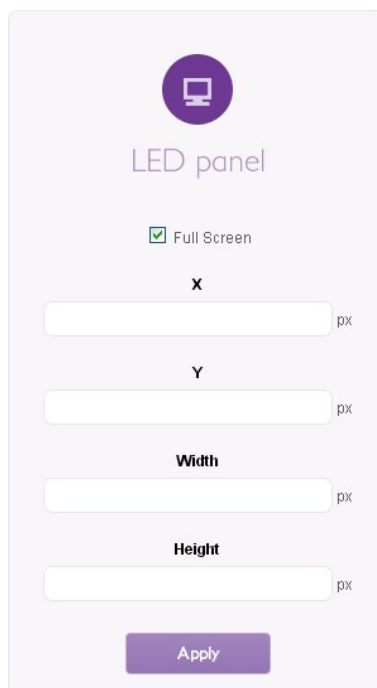
See "Interfaces installation" on page 6 for more information about the interface installation.

Advanced Settings

This page is divided into four parts: **LED panel**, **Network**, **Date/Time** and **Tools**.
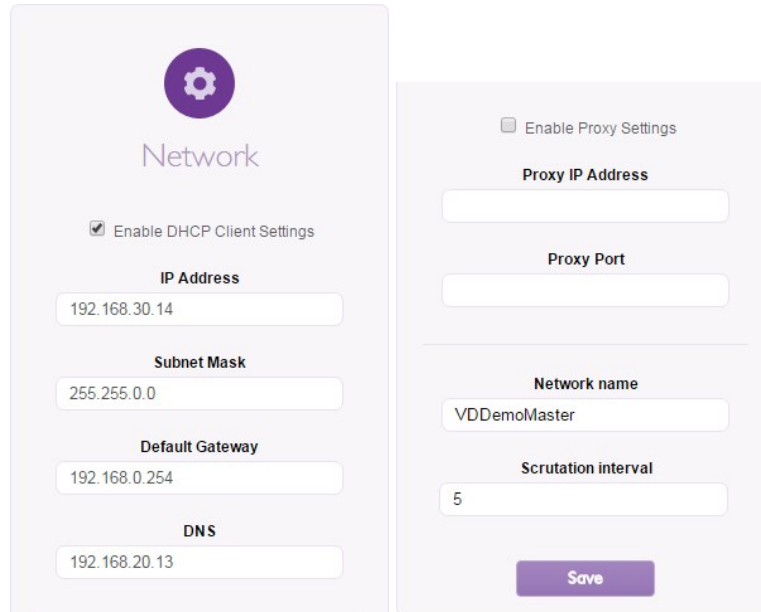
LED panel

Here you can manually set up the screen size of your LED panel.
Click on **Full Screen** to use a full screen display. By default this box is checked.
If you want to personalize your display, choose a **Width** and a **Height**. These dimensions are in pixels and their origin is the point defined with the **X** and **Y** coordinates.
Then click on *Apply* to save the changes.

Network Settings

This form allows the user to define the network settings:

- By default the box **Enable DHCP Client Settings** is checked. It is the default connecting behavior of the box. Several addresses are automatically filled in the following fields.
- The **IP Address**, **Subnet Mask**, **Default Gateway** and **DNS** can be changed if a manual network set up is chosen. In this case the automatic connection box must be unchecked.
- If you want, you can use a Proxy. To activate it, select: **Enable Proxy Settings**. Then enter the Proxy **IP Address** and its **Port**.

Only Proxies without authentication can be used.

- The **Network name** is "VDMaster" by default for each box. This name can easily be updated: change the text field and click *Save*.
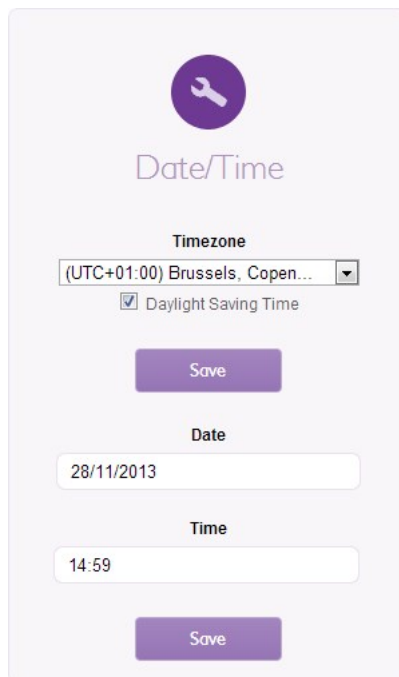- The **scrutation interval** is the duration between two checks of the messages sent by the server.

Click on *Save* to save any change. You will then be asked to restart the box:
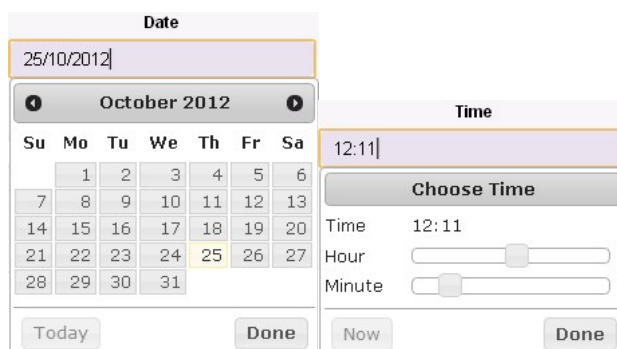
Date/Time

This form allows you to define the box's time and date parameters. Set up:
- The **timezone**. Allows you to choose the timezone and enable **daylight saving time**.
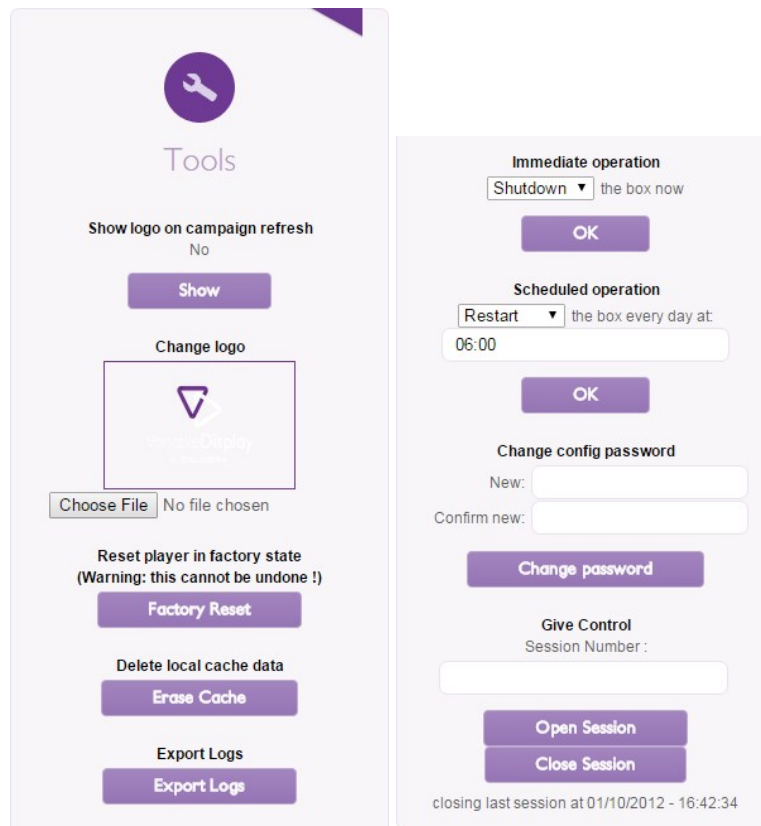- The **date** and **time** can be manually configured. A calendar and a time tool open to help you.

The **Today** and **Now** buttons reset the date and time to the current date of the chosen time zone.

Click on **Save** to save any change. If you change the time zone, the time will update automatically.

Tools

Several tools are available in this section:

- **Show logo on playlist refresh**: deactivation of the logo display when sending a new playlist.
- **Change logo**: by default, the logo used when starting the application is the VariableDisplay logo. Here you can upload your own logo.
- **Reset player in factory state**: reinstall the box with the factory settings.

Be careful, this action cannot be undone and you will lose all your content, playlists, planning, configurations… If it is a slave box, you will have to respecify the master.

- **Delete local cache data**: remove all content from the box cache.

If a scheduled playlist has been playing, its content will be downloaded again from the server before the display continues. If a non-scheduled playlist has been playing, it'll stop and the user must send a new playlist from the interface before the display continues.

- **Export Logs**: allows you to download the log files, where all the operations done on the box (content download, content played, updates, etc.) are kept.
- **Immediate operation**: box's immediate **shutdown** or **restart**.
- **Scheduled operation**: schedule an automatic **shutdown** or **restart** of the box that will be done every day.

Previously, an automatic restart was made every night at 4. An automatic start of the box can be scheduled every day, see the following chapter to learn how.

- **Change config password**: set a new password for the settings page access. Just enter the new password twice (**new** and **confirm new**) then click on *Change password*.
- **Give Control**: enter a two-number **session number** to give control to Caldera support.
- *Open session* gives control while *close session* ends it.

Additional settings

Starting the VariableDisplay box at given times

It is possible to set up **VariableDisplay** boxes to start at given times as long as they are properly shut down.
Here are the instructions:
1. Plug a keyboard in the box already turned off.
2. Turn on your box while keeping the *Delete* key pressed. It will display the BIOS menu.
3. In the <u>Power</u> tab then in **APM Configuration** you'll see:
   - **Power On PME** on *Enabled*
   - **Power on RTC Alarm**
   - **AC Power Loss** on **[Power On]**
4. Go to **Power on RTC Alarm**, set it to <u>**Enable**</u>, leave **Alarm date** on <u>**0**</u> to run it every day then set the <u>**hour**</u>, <u>**minute**</u> and <u>**second**</u> at the time you want.
5. Click on *F10* to save changes and quit.

The box is now set to automatically start every day at the chosen time. Warning: the box needs to be correctly turned off and then powered on.

Manual configurations

Only four actions that can be done on the box are allowed by **VariableDisplay** Support: changing the resolution, setting up the WiFi, stopping and starting the player.

The actions presented below can also be done through a remote connection (VNC).

Changing the resolution

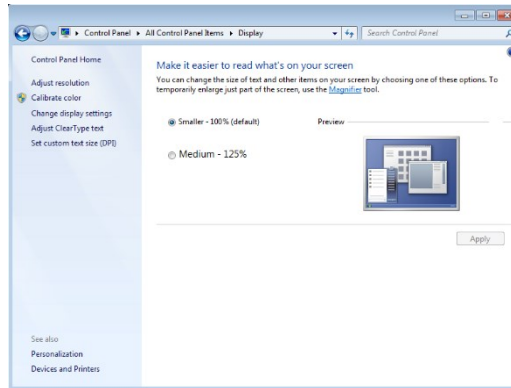Follow the steps below to manually configure the resolution:
1. Connect a keyboard and a mouse to the box.
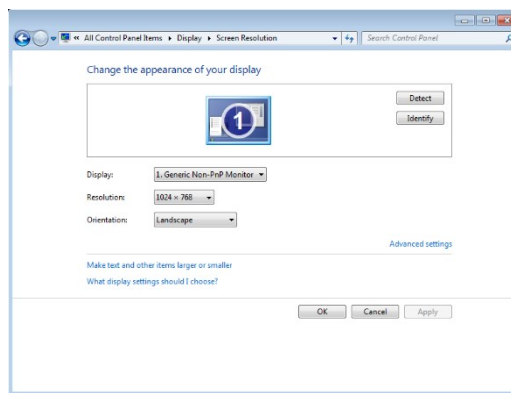2. Open the menu with the *Windows* key of the keyboard or by pressing Ctrl+Echap.
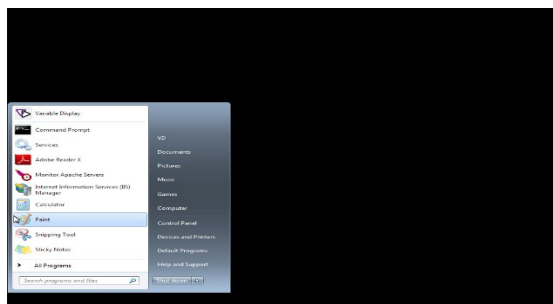
3. Select **Control Panel**.

4. Double-click on **Display**.

**5.** Then select **Adjust resolution** on the left side of the window.

6. Here you can change the resolution and the display orientation.
Don't forget to click on *OK* before closing to save the changes. You can then unplug the keyboard and the mouse and let **VariableDisplay** run with the new resolution.

Manually set the WiFi

Follow the steps below to manually configure the WiFi:
  1. Connect a keyboard and a mouse to the box.
  2. Open the menu with the *Windows* key of the keyboard or by pressing Ctrl+Echap.
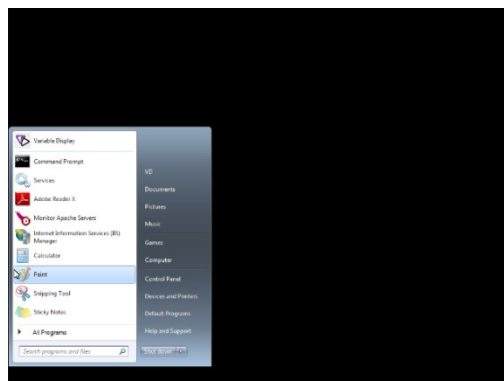
3. Select **Control Panel**.

4. Double-click on **Network and Sharing Center**.
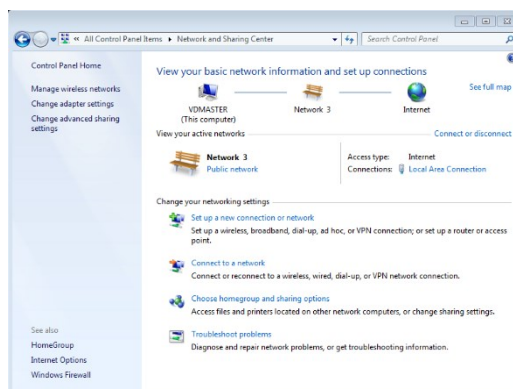
5. Click on **Connect to a network** to display the list of available WiFi networks.


6. Select your network and connect.

If you are having connection issues, please contact your network administrator.

Stopping the player

Be careful, the player can be stopped under certain conditions only: Doing the procedures described above or If the support team asks you to do so (for maintenance for example)
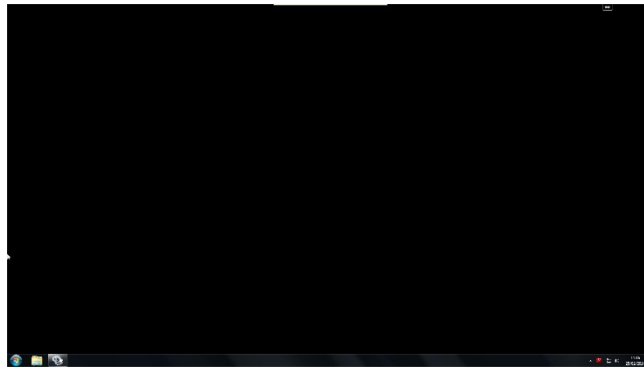
Follow the steps below to stop the player:
1. Connect a keyboard and a mouse to the box
2. Open the menu with the *Windows* key of the keyboard or by pressing Ctrl+Echap
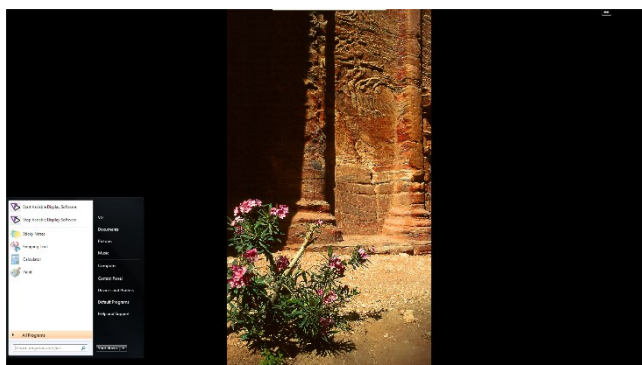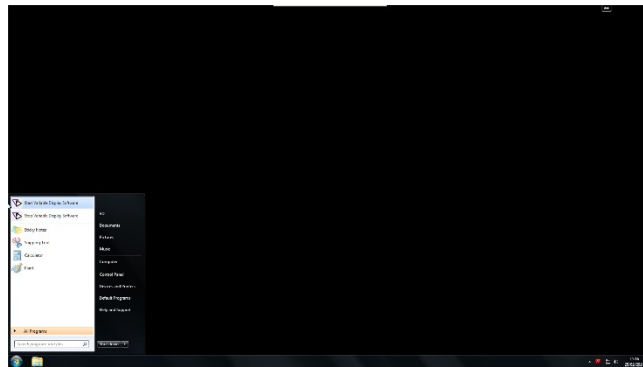
3. Double-click on the **VariableDisplay Stop** icon to stop the player (the Windows menu bar stays visible)

Starting the player

Follow the steps below to start the player:

1. Connect a keyboard and a mouse to the box.
2. Open the menu.

3. Double-click on the **VariableDisplay Start** icon to start the player (the Windows menu bar will hide and the playlist will begin).
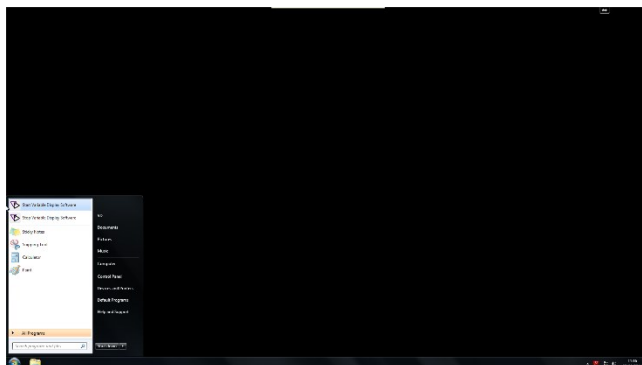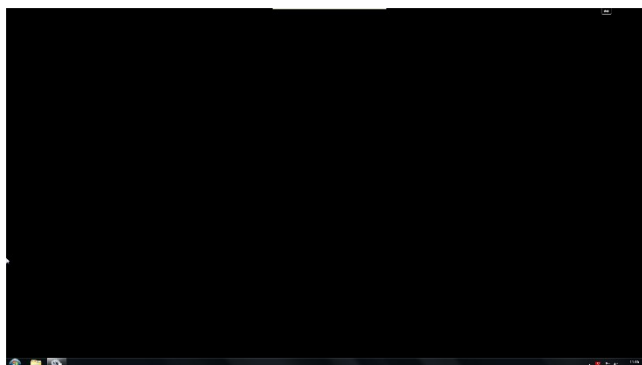
Factory Reset

To format your **VariableDisplay** box and reinstall it with the factory settings, follow these steps:

Be careful, this involves the definitive destruction of all user data recorded on the player.
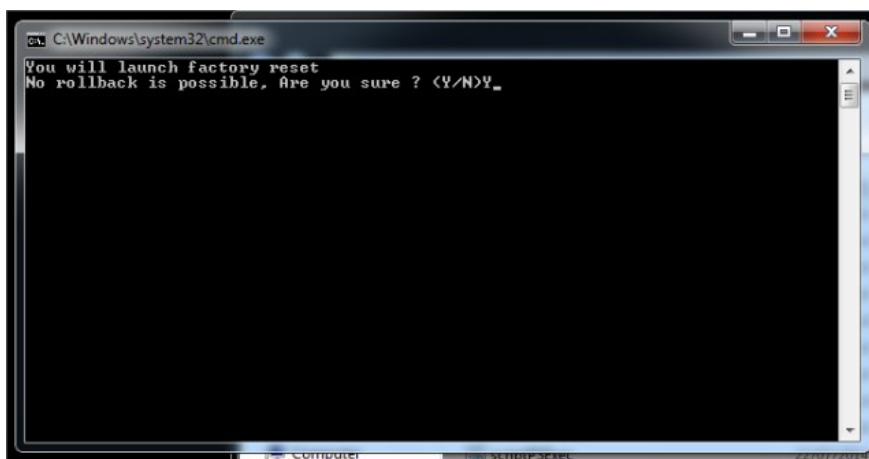
1. Connect a keyboard and a mouse to the box.
2. Open the menu.

3. Double-click on the **VariableDisplay Stop** icon to stop the player (the Windows menu bar stays visible)

4. Open the file explorer and go to c:\scripts
5. Double click on **factoryReset**
6. A prompt opens. On the prompt type **Y** and press **Enter**

7. The system will restart, format the Hard drive and perform an automated complete re-installation of **Windows** and **VariableDisplay**.

Share your Caldera experience and discover our online help on:
calderadesk.caldera.com