# MULTI PLAYOUT MANAGER
# USER MANUAL

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# Preface

Dear ***PlayBox*** customer,

Thank you for purchasing our product! We would like to assure you that you have chosen the most cost-effective and versatile TV automation system on the market. As always, we are trying to stay close to our customers' needs, making sure they all receive adequate support and satisfaction. Your opinion about our product is an exceptionally valuable source of information for us. The ease of working with the **PlayBox** products results mainly from the suggestions and comments of our current respected customers.

This manual is structured into several sequential chapters, each aiming to ease the installation, fine tuning, and use of our products. We hope that you will enjoy working with it, and we are anxiously looking forward to receiving your feedback.

Please, send your questions, suggestions, and assistance requests to:

support@playboxtechnology.com

General feedback:

info@playboxtechnology.com

# Style Conventions

- File names, software, documents or terms are written in *italics*
  - The data is written in the *settings.ini* file.
  - The file is located in *C:\Program Files\DMT**AirBox***
  - For further information read *Shortcuts* reference book.
  - The *VTR* is controlled via *RS-422*.
- Direct quotations from the computer screen are presented as follows:
  - **Menu Items and commands**
  - ***Tab/Page names***
  - **Column names (i.e. in a playlist or another grid)**
  - *Field names, check boxes*
  - ***Buttons***
  - Screen readings are written in [square brackets]
  - **The keyboard keys are enclosed in <> signs**
  - *Terms are defined in the Glossary at the end of the manual*
- The arrows, used in the setting procedures mean as follows:
  - ➔ A menu item follows;
  - ⇨ A page(tab) name follows;
  - → A field name, a check box name, or a value name follows.

Except for arrows, you can distinguish between the relevant menu categories also by the styles, listed above.

# Getting Started

The ***Multi Playout Manager*** (***MPM***) is web-accessible application, which allows monitoring and control of one or multiple ***AirBox*** instances. ***MPM*** provides a customizable, user-friendly interface, allowing users to monitor and control (locally or remotely) the playout process.

***MPM*** is a multi-user access system, with an unlimited (yet license-dependent) number of users. System managers can set access rights for users for one or multiple ***AirBox*** servers. Users can load, view, edit and save playlists, as well as send commands directly to ***AirBox*** by using the playback controls.

## PREREQUISITES

In order to activate the preview in the ***MPM*** Home page, you need to install the latest version of the VLC Media Player. When asked by the setup wizard which VLC Media Player components you wish to install, you should select all the available and optional features.

You also need to add and enable the following plug-ins in your browser:

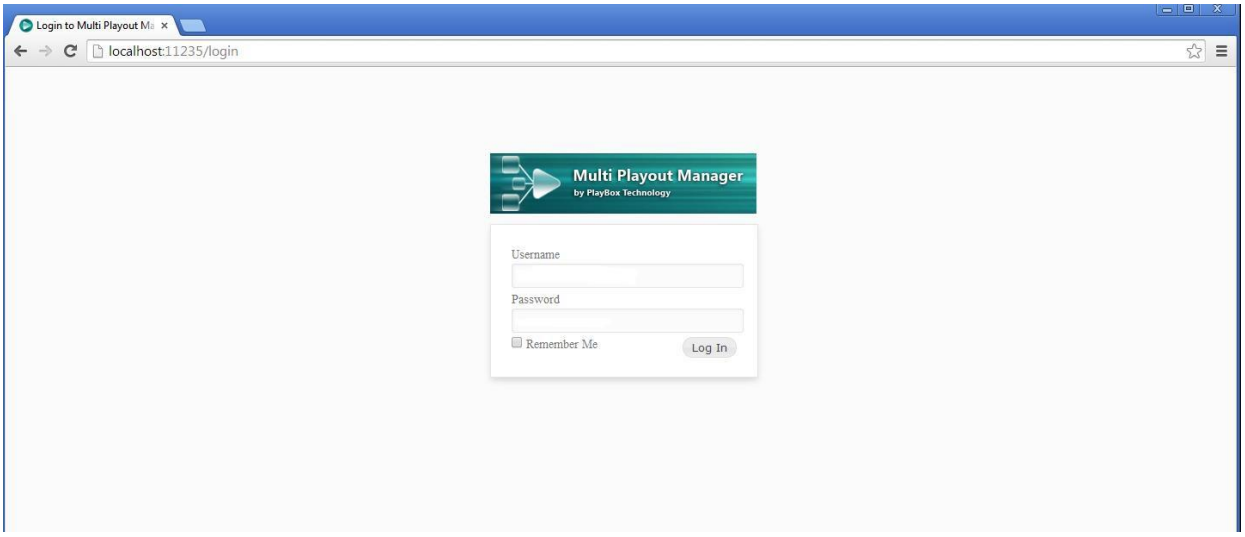
- VLC Capture;
- VLC Plugin.

## QUICK START

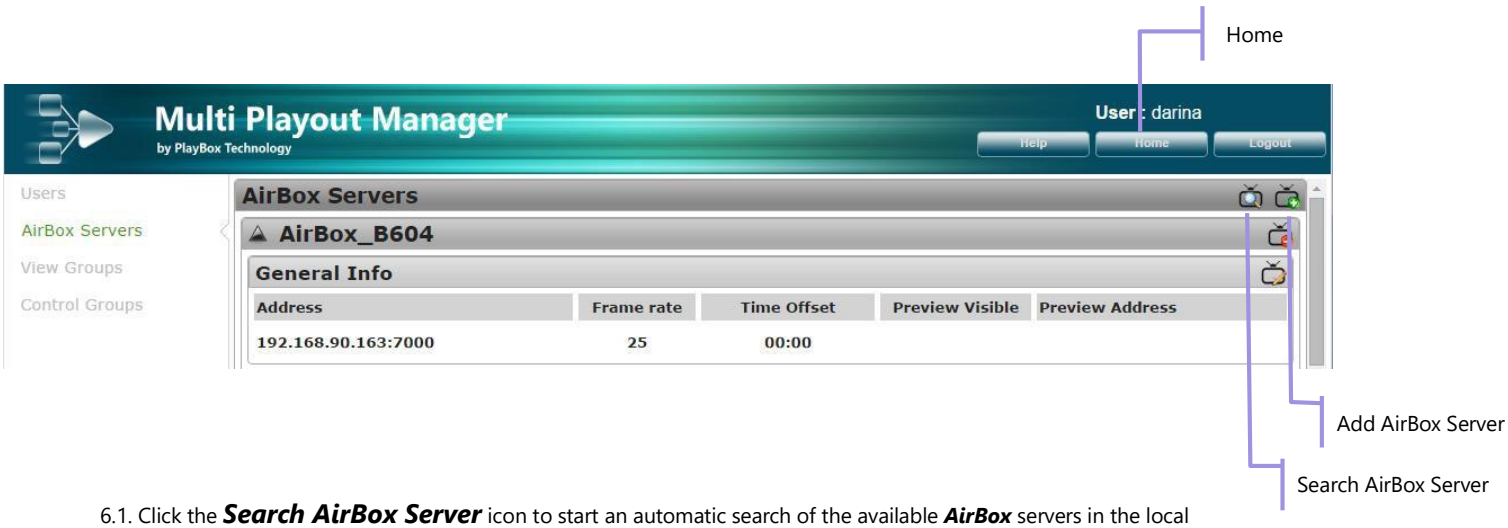
1. Verify all connections and start the server.
2. Launch the ***MPM*** server.
3. Open a web browser, type the IP address of the server where ***MPM*** is installed, followed by a colon (":"), and the ***MPM*** default port number 11235. Example: http://192.168.10.10:11235.
4. In the Login page enter the *Username* and the *Password* for the Administrator's account.

- Default *Username*: **administrator**;

- Default *Password*: **administrator**.




5. Navigate to the System Manager page by click the ***Manage system*** button in the top-right corner of the ***MPM*** Home screen.
6. Click *AirBox Servers* in the left pane of the System Manager to add ***AirBox*** server for monitoring.




6.1. Click the ***Search AirBox Server*** icon to start an automatic search of the available ***AirBox*** servers in the local network.

- In the dialog box, click the ***Scan*** button;

- A list of IP addresses of the available servers will open;

- Select an ***AirBox*** server(s) from the list and click the ***Register*** icon.

6.2. To add an ***AirBox*** server manually, click the ***Add AirBox Server*** icon. A dialog box will open.

- In the *Name* field type a unique user-friendly name, which will help you recognize the respective ***AirBox*** instance.

- In the *Server address* field type *the IP address* of ***AirBox*** server.

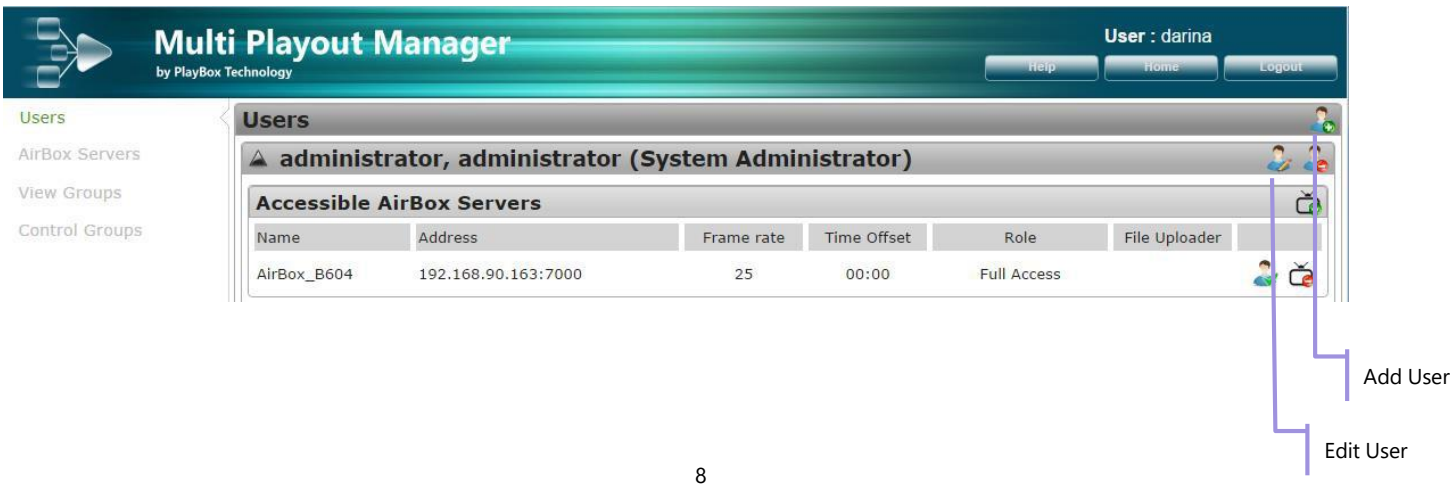
- In the *Port Number* field enter the port number of ***AirBox*** server. Note that the port number for controlling ***AirBox*** always starts from 7000.

- Use the *Time Offset* option to manage servers in different time zones. By default, the time offset is a zero value.

- In the *Frame Rate* field enter the proper frame rate. The default value is 25.

- Click the ***Create*** button.

7. Go to the *Users* section of the System Manager.



7.1. Click the *Administrator* user name to expand the section and then click the ***Edit user*** icon.

- In the **Edit user** dialog box click the ***Add*** button in the **AirBox Servers to operate** area;

- In the new dialog box select the desired ***AirBox*** server(s) from the list, and then click *Full Access* from the **Role** list.

- Click the ***Add*** button and then – in the **Edit user** dialog, click the ***Save*** button.

7.2. To create a new user, click the ***Add user*** icon.

7.3. In the **Create user** dialog box type the username, the full name of the user and the password in the respective fields.

7.4. Click the ***Add*** button to select the ***AirBox*** servers, which this user will be able to manage. An additional dialog box will open.

- Select one or more AirBox Servers from the list;
- From the Role drop-down list select the access rights, which the user will have for the selected server(s);

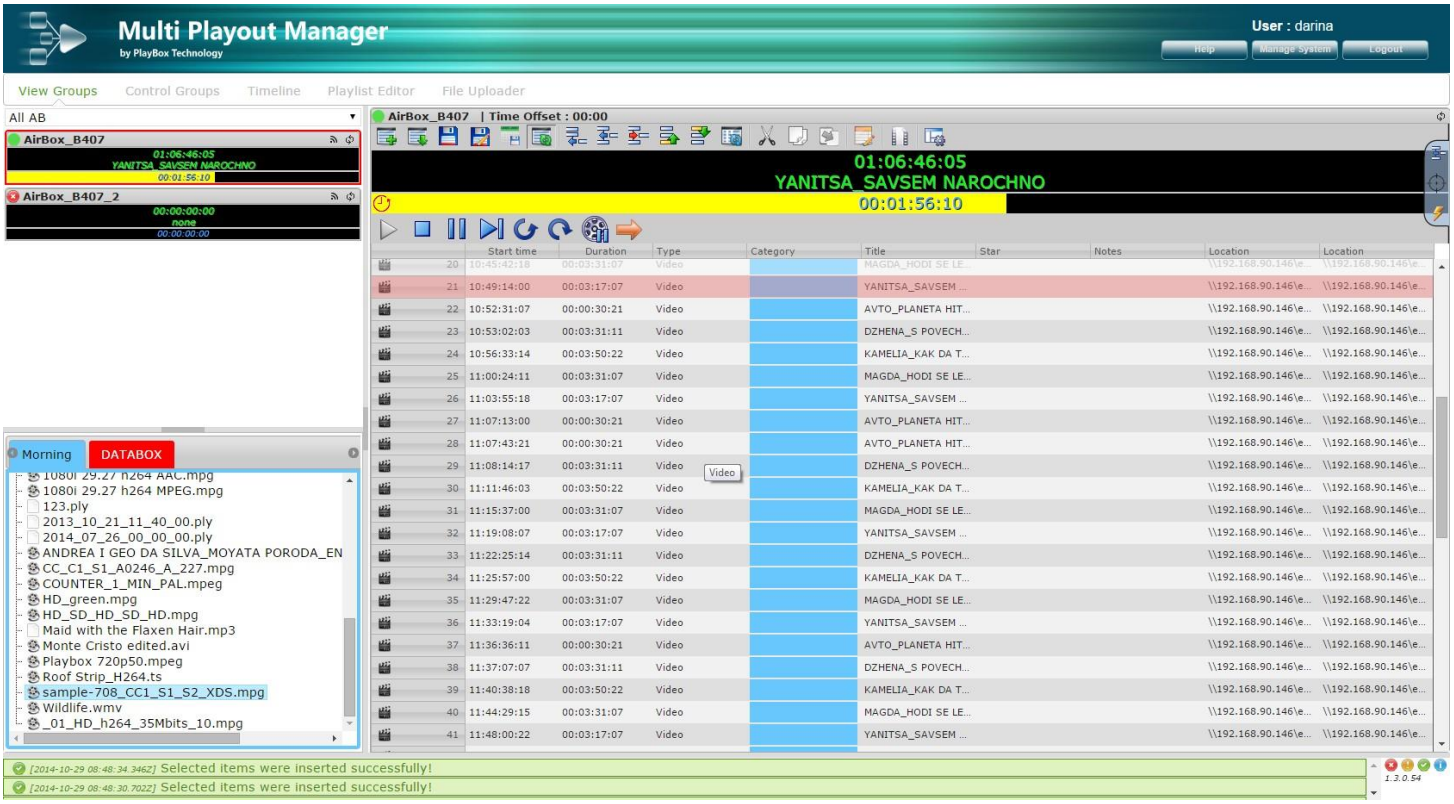
7.5. Click the ***Add*** button and in the **Create user** dialog box click ***Create***.

8. Click the ***Home*** button to return to the ***MPM*** Home page.

9. In the upper left corner you can see the ***Airbox*** servers, which you have selected for monitoring and control.

Congratulations! Now you have your ***MPM*** running!

# Interface Overview




***MPM*** user interface is customizable and easy to use. It includes two main pages – the **Home** page and the **System manager** page. These pages are accessible from the ***Home*** and ***Manage System*** buttons at the top right corner of the window.

The default starting page for ***MPM*** is **Home**. On the **Home** page you can monitor and manage the ***AirBox*** servers, accessible through ***MPM*** and configured according the permissions for your account, set by the system administrator. To manage ***MPM*** users, ***AirBox*** servers and control groups, navigate to the **System manager** page.

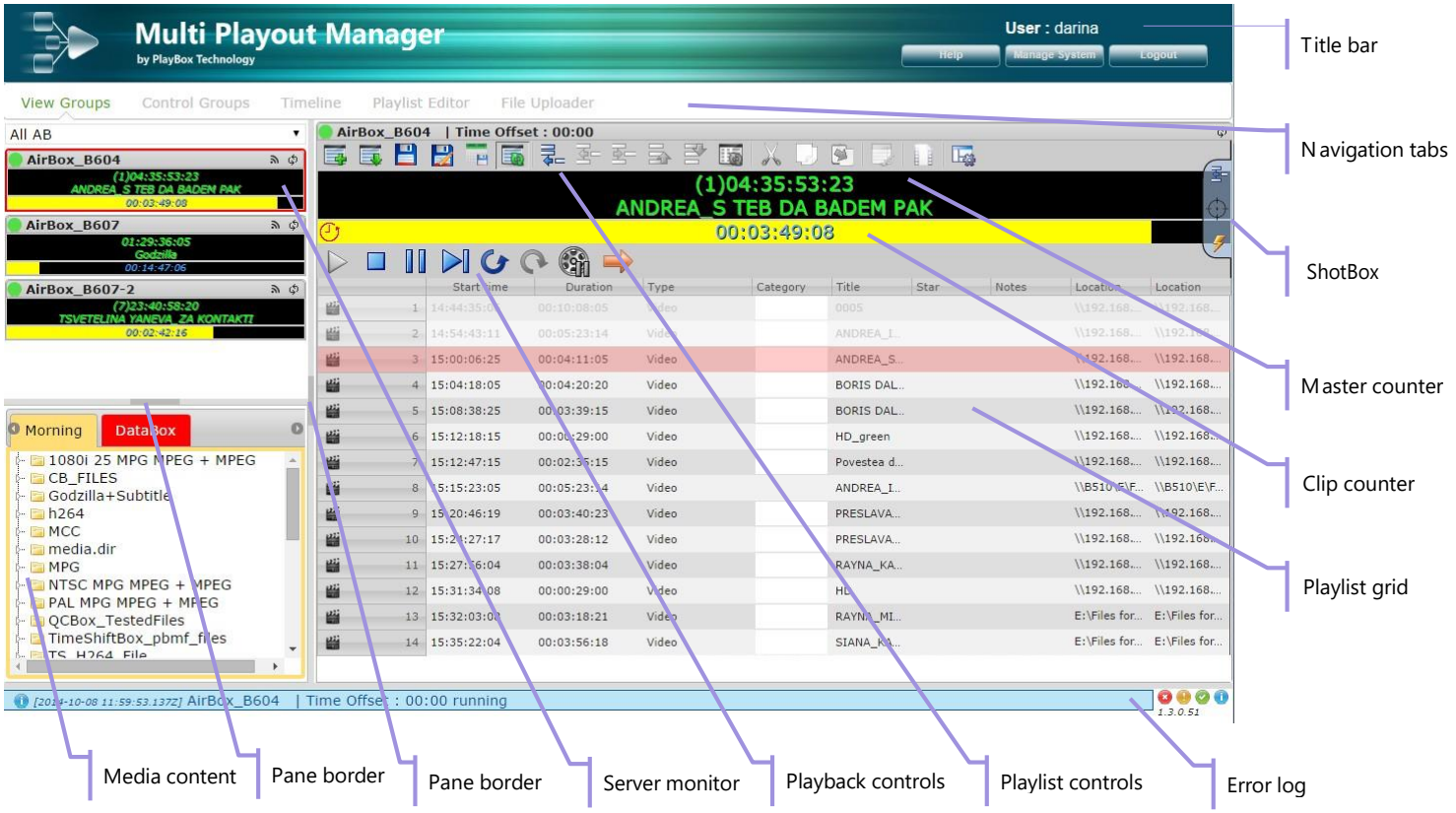
The ***Manage System*** button is located in the top-right corner of the ***MPM*** screen. Your user name is displayed above.

NOTE: The ***Manage System*** button is only visible if you are logged in with an administrator's account.

Refer to the Interface overview chapter for the Home page further in this manual for more details about each interface element.

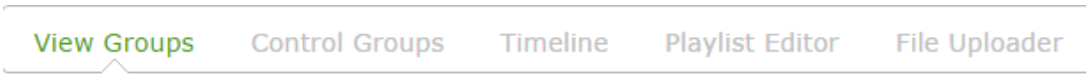
Go to Using MPM or Managing MPM for detailed feature descriptions and operation instructions.

# wiMPM Home




## NAVIGATION TABS

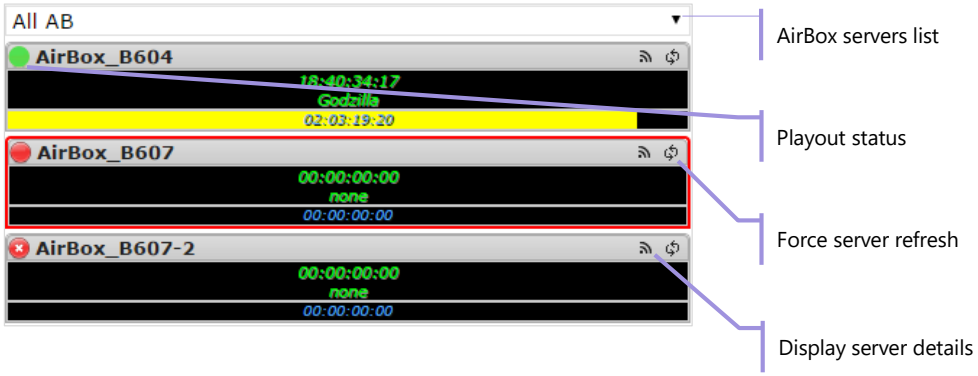
The navigation tabs provide quick access to the following ***MPM*** features: **View Groups**, **Control Groups**, **Timeline**, **Playlist Editor**, and **File Uploader**. The name of the current tab is colored in green.




## TITLE BAR

The title bar is situated at the topmost browser window's area. It displays the ***MPM*** logo to the left and the current user to the right. The navigation buttons are located below the name of the currently logged user. These include ***Help***, ***Manage system*** and ***Logout***. The ***Manage system*** button navigates to the **System manager** page of ***MPM***.

# SERVER MONITOR




This section is available when either the View Groups, or the Timeline tab is selected. It displays the ***AirBox*** instances which you are currently monitoring. The drop-down list on the top contains the name of each View Group, as well as an *All AB* option. Selecting a View Group from the list will show all ***AirBox*** servers, which are accessible to this group. If you select the *All AB* preset, you will be able to monitor all ***AirBox*** instances, to which you are granted access through ***MPM***.

The current playout status of the respective ***AirBox*** server is visible in the upper left corner:

- The playback in ***AirBox*** is started;

- The playback in ***AirBox*** is paused;

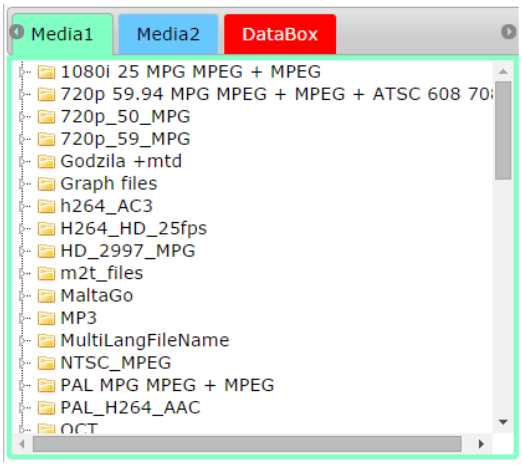
- The playback in ***AirBox*** is stopped; -

The ***AirBox*** application is not started.

In order to select a certain ***AirBox*** instance, click the ***Display server details*** button. You can refresh an instance to obtain its current status by clicking the ***Force server refresh*** button.

You can also view the counters of each ***AirBox*** instance. For more details, please refer to the Counters section further in this manual.

# MEDIA CONTENT




The Media content window provides quick access to the media folders and items available to the currently selected ***AirBox*** server. All media folders, assigned to a server by the system administrator can be accessed from this section. Each media folder is displayed in a different tab. When you link a ***DataBox*** server to ***MPM***, its database will be displayed in a separate tab, next to the media folders. Use the arrows in the top-left/top-right of the section to browse through the tabs. Tabs are color-coded with the category colors, set by the system administrator for each content category.

Media content is displayed in tree view. Different types of media item are marked with different icons. Nested media folders are closed by default. Click the white/black arrow before the icon of a nested folder to open/close it.

Click and drag a media item into the grid to add it to the playlist. Control + click titles to select multiple media files and drag them into the grid. Here, in the MPM browser window you can't view each file's duration value. However, once you drag and drop an item into the playlist grid, its details will be displayed on the screen. Once you have added an item, you could easily remove it by using the ***Remove item from playlist*** control button.

# WORK AREA

The work area of ***MPM*** consists of playlist grid, playlist controls, playback controls, counters and ShotBox. If you have set a preview, the preview window will also be visible in this area.

In the work area you can view, edit and save playlists, as well as send commands directly to ***AirBox*** by using the playback controls.

## Playlist Grid

The playlist grid is a basic playlist editor. It displays the items, included in a playlist, in color-coded rows. You can customize the columns of the table, as well as edit playlists quickly, by dragging and dropping media items directly into the grid. Grid icons and buttons are explained in detail in the Using MPM section further in this manual.

## Playlist Controls

The playlist control bar contains buttons for adding, saving and deleting clips, as well as for manipulating other media items. Unavailable options are grayed out.

***Clear playlist***

***Load playlist***

***Save playlist***

***Save as playlist***

***Save as daily playlist***

***Loop playlist***

***Append item to playlist***

***Insert item to playlist***

***Remove item from playlist***

***Move selected item(s) up***

***Move selected item(s) down***

***Loop selected item***

***Cut selected item***

***Copy selected item***

***Paste copied/cut item***

***Edit selected item properties***

***Clip trimmer***

***Settings***

All buttons and their functionality are described in detail in the Using MPM chapter further in this manual.

## Playback Controls

***Play***

***Stop***

***Pause***

***Next***

***Return***

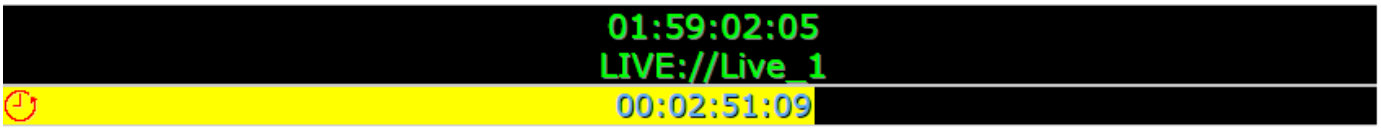
***Jump***

***Cue***

***Go To Current Item***

The playback controls allow you to apply all basic playout commands to the selected item(s) from the playlist.

## Counters



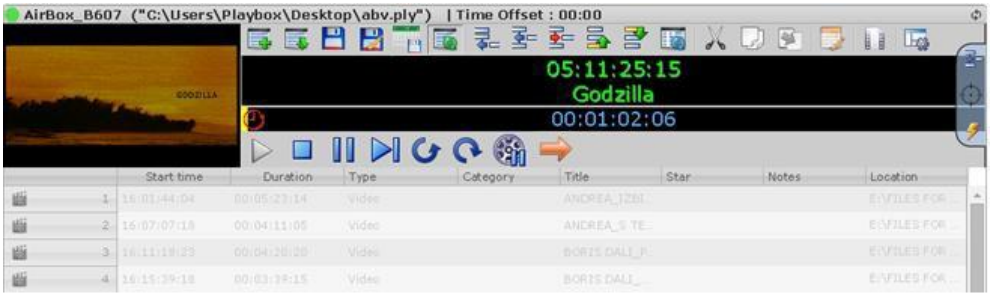

There are two counters, displayed in the Work area and in the Server monitor sections. The upper one is the Master counter, which shows the elapsed time of the current playout session. The title of the currently playing clip is displayed below the running time code. Clicking the ***Stop*** button resets the counter.

The bottom counter is called the Clip counter. It displays the elapsed time of the currently playing item. The Clip counter can operate in two modes, count-up and count-down mode. To switch between modes, click the small red clock at the Clip counter line.

## Preview

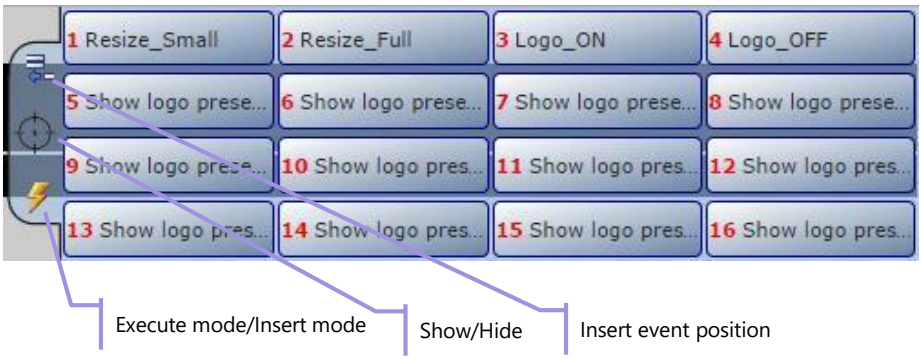
The preview window displays the currently playing clip. When set, it will be displayed above the playlist grid and next to the counters.

To enable the preview, navigate to the AirBox Servers section of the System Manager.




NOTE: You need to install the latest version if the VLC Media Player, in order to activate the preview.

## ShotBox




**ShotBox** is an additional ***MPM*** tool, which provides fast switching and insertion of custom events in the playlist. It consists of 16 buttons (events) and operates in two modes - *Execute mode* and *Insert mode*, which can be switched by clicking the respective icon.

When selecting the *Execute mode*, the event assigned to it, will be executed immediately. If a live stream is assigned to this button, a live stream row will be inserted in the playlist, and the playback will jump to it.

When selecting a **ShotBox** preset while in *Insert mode*, the event will be inserted in the playlist, but won't be executed.

You can choose the position of the item in the playlist by clicking the respective icon - ***Insert item at the end of the playlist*** or ***Insert as next playing item***. Selecting one of these icons allows also switching between the two modes. The *Insert as next playing item* option will apply the event after the currently playing clip.

If the playlist is in stopped or paused, the event will be executed after resuming the playback.

You can show/hide **ShotBox** from the playlist grid by clicking the ***Show/Hide*** button.

To configure **ShotBox** events for each ***AirBox*** server navigate to System Manager > AirBox Servers > ShotBox.

# ERROR LOG

The error log is located at the bottom of the ***MPM*** window and shows the log information of the currently selected ***AirBox*** instance. It displays four types of system messages – errors, warnings, successful operations and information messages. Each message is listed on a separate row, preceded by the date and time at which the described event has occurred. Messages are color-coded. The ***MPM*** version is displayed in the top-right corner of the window.

Use the icons to the left of the error message log to select which types of messages are displayed. Click an icon to show/hide messages. When a message type is disabled, the icon will turn grey. You can select from the following types of system messages:

Error messages (cannot be turned off)

Warning messages

Successful operation messages

Info messages

# Using MPM

## CUSTOMIZING VIEW

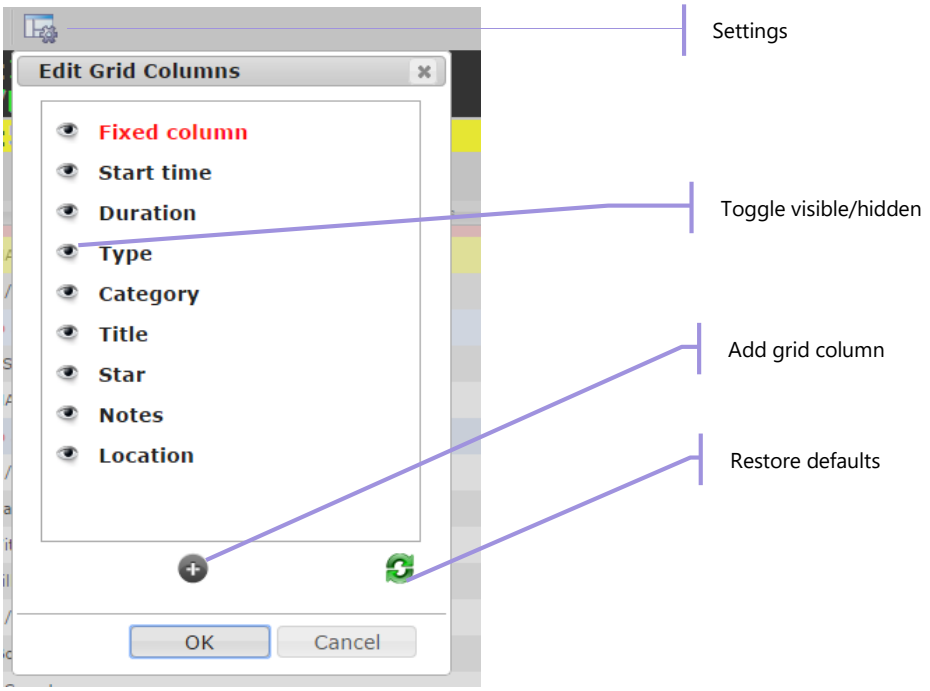
***MPM*** provides several options for customizing the workspace. To

change pane height/width, click on the pane border and drag.

To collapse/expand a pane, click the dark-grey marker in the middle of the pane border.

TIP: When you point your mouse at the marker, it will turn yellow and an Open/Close callout will appear.

To customize the playlist grid, click ***Settings*** in the MPM controls bar. Click the eye icon/empty space before each column to toggle View/Hide. Click and drag titles to change column order. Click the ***Add column*** button at the bottom of the dialog to add a custom column to the grid.




To change pane height/width, click on the pane border and drag.

To collapse/expand a pane, click the dark-grey marker in the middle of the pane border.

NOTE: Only system administrators can customize category/status colours. For more information, go to Managing MPM.

# VIEW GROUPS

When selected, the View Groups tab in ***MPM*** allows you to monitor and manage the list of ***AirBox*** servers, to which users are granted access. View Groups are defined by the user in the respective section of the System Manager.

NOTE: One ***AirBox*** instance can be added to an infinite number of View Groups.

The View Groups tab is a part of the ***MPM*** Home page and consists of the same sections and buttons, described earlier in this manual.

On the View Groups page you can easily create a playlist manually, by dragging and dropping files into the ***MPM*** grid. For playlist creation, you can also use the ***MPM*** Playlist Editor. Furthermore, you can load and edit an already configured playlist.

Playlists can be edited and controlled by using the various playlist and playback control buttons.

When you start the playback, the items, included in the playlist, are displayed in color-coded rows. When the playlist is paused or stopped, all the items, which were played, will be grayed out.

NOTE: The Start Time column and the counters show the time, which has passed between the current playing clip and the paused/stopped item.

By using the playlist controls you can apply simple editing to the playlist: loop a playlist or a currently selected item; append, insert or delete items from the playlist; move item's position up and down in the playlist; cut, copy and paste items in the playlist.

NOTE: Some of the playlist controls are active only when a certain item from the playlist is selected. Otherwise, they are grayed out.

## Loading playlists

The ***MPM*** playlist contains video clips and events (commands).

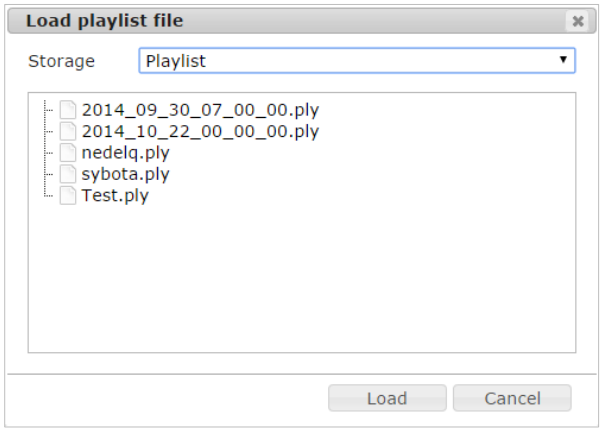
There are two types of playlists, which ***MPM*** supports: ordinary and daily. Daily playlists are loaded automatically at an assigned day and time, while the ordinary playlists should be loaded manually.

Daily playlists require specific naming structure in order to be played on a specific date and time automatically: YYYY_MM_DD_HH_MM_SS, where YYYY stands for year, MM-month, DD-date, HH-hour, MM-minutes and SS-seconds.

To insert a playlist in the grid, which will be played by the selected ***AirBox*** server, click the ***Load playlist*** button.

WARNING: If there is another active playlist in ***MPM***, the playback will be terminated, if you load a new playlist.

Click ***Load playlist*** to open a list of playlist folders, in which ***AirBox*** playlists are saved and are accessible to ***MPM***. Playlist folders are configured from System Manager > AirBox Servers > Playlist folders.



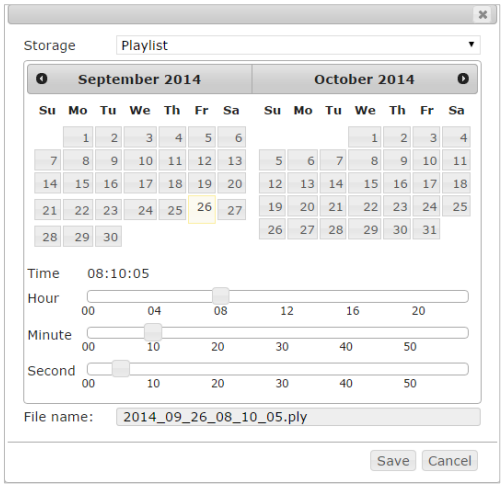

In order to remove the currently loaded playlist, click the ***Clear playlist*** button.

NOTE: Any changes you have applied to the current playlist in ***MPM***, will be lost.

## Saving playlists

You can save and save as your playlist by clicking the respective buttons.

When you select the ***Save as daily playlist*** icon, the following dialog will open:

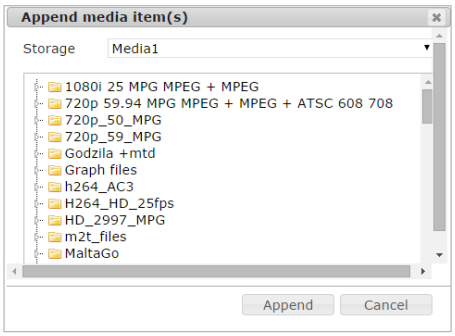



Select a day from the calendar to set a date, when the daily playlist to be loaded. Use the *Hour,* the *Minute* and the *Second* scroll bars to specify the playout start time. When set, the name of the daily playlist will be formed automatically and will be displayed in the *File Name* field. From the *Storage* drop-down list select the playlist folder, specified in the *AirBox Servers* section of the System Manager.

## Adding playlist items

Click the ***Append/Insert item to playlist*** button to select from a list of playlist items. Selecting ***Append item to playlist*** will add the item in the end of the playlist, and the ***Insert item to playlist*** - after the currently selected item. The following playlist items are available for appending/inserting:

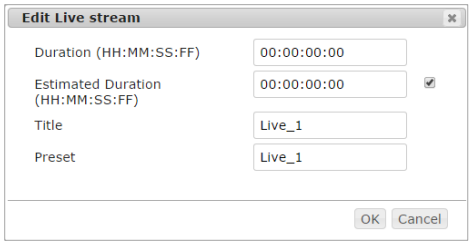
## Media File




This command opens a browser, from where you can select and add a new media file to the playlist.

NOTE: You can browse through uploaded files only! For more information about file upload, go to File Uploader further in this manual.

## Live Stream

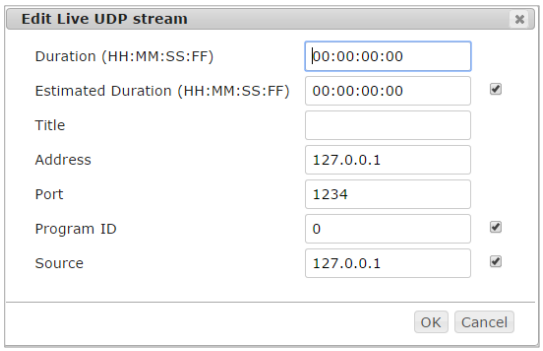



In the *Duration* field enter the Duration of the live stream, which will be set in the playlist. You can also add an *Estimated Duration* (check the option first).

In the *Title* field type the name of the live input, as defined in the Live Inputs editor, used by all your ***AirBox*** instances (e.g., Live_1). The ***Live Inputs editor*** is accessible from the ***AirBox*** Settings menu > Live Inputs. Any live input that is defined there can be added via this option of the ***MPM***.

NOTE: The name of the Live Input is case sensitive.

## Live UDP Stream



Selecting this event allows you to add a UDP stream in the playlist of the currently selected ***AirBox***. Enter the *Duration* and optionally the *Estimated Duration* of the stream in the relevant fields. Use the *Title* field to type the name of the live UDP stream, as defined in the **Live Inputs editor**, used by all ***AirBox*** instances (e.g., Live_1). To access the **Live Inputs editor** navigate to ***AirBox*** > Settings > Live Inputs. The output settings should also be specified (from ***AirBox*** > Settings > Output). For more details about Live UDP streams and settings, please refer to the AirBox User's Manual, available at www.playboxtechnology.com.

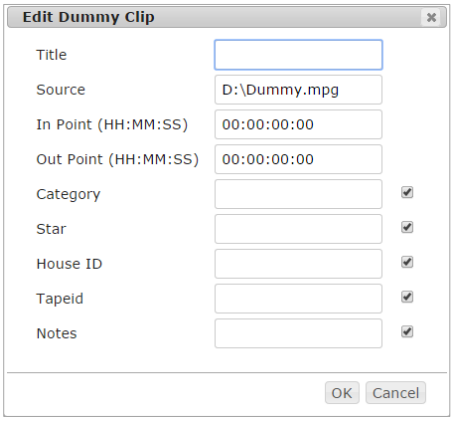
Enter the IP *Address* of the source station and the number of the *Port*, which receives the input.

There are two additional fields here, which are optional:

*Program ID* – if you check this box, you can choose which program to be output by ***AirBox***, in case the stream has more than one channel.

*Source* – in case the source broadcasts more than one stream, use this field to enter the source address of the stream.

## Dummy Clip




Dummy clips are virtual clips in the playlist. Adding a dummy clip allows you to create your playlist before receiving a clip, whose properties are already known.

In order to add a dummy clip, you need to enter the following properties of the clip in the respective fields: *Title, Source* (could be a network path) and an *In/Out Point*, which will mark the start and end time of the newly created dummy clip. You can also fill in additional metadata: *Category*, *Star*, *House ID*, *Tape ID*, and *Notes*. If you do not want to add metadata in the respective field you can disable its check box.

NOTE: Be aware that each dummy clip will appear as a missing playlist item until the actual file is present in the designated folder. For more information about dummy clips, please check the AirBox User Manual, available at www.playboxtechnology.com.

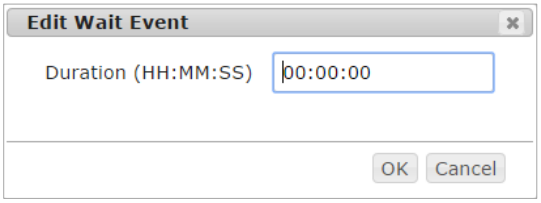
## Stop Event

Inserting such an event in the playlist will stop the playback automatically at reaching this point of the playlist. This function is useful for news and other interactive sessions.

## StopCue Event

Automatically stops the playback upon reaching this point of the playlist and shows the first frame of the next clip.

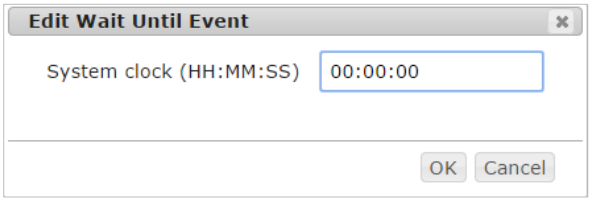
## Wait Event




Temporarily stops the playback and postpones it for a certain period. In the dialog box that opens specify the *Duration* of the waiting (in HH:MM:SS).

EXAMPLE: Typing 00:01:00 means that the playback will be on standby for 1 minute.

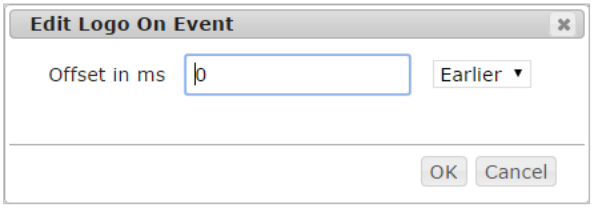
## Wait Until Event




Temporarily stops the playback and automatically resumes it at a defined time. In the dialog box that opens specify the *System Clock* (in HH:MM:SS).

EXAMPLE: Typing 14:00:00 means that the playback will start at 14:00:00 o'clock.

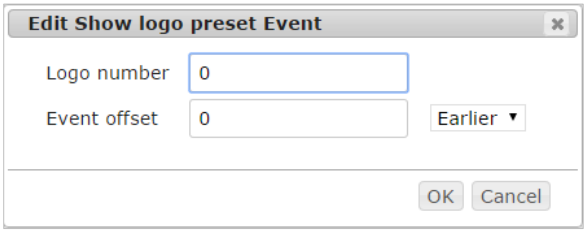
## Logo On/Off Event




The Logo On event starts displaying the logo, set in the preceding Logo Preset event. If there is no preceding Logo Preset event, the first logo preset from the list in ***AirBox*** (in Settings 〉 Logo 〉 Logo Presets) will be displayed. Use the *Offset in ms* field if you would like to offset the event execution. Use the list to the right to set when the logo to be displayed – before or after the beginning of the next clip.

The Logo Off event stops displaying the logo.

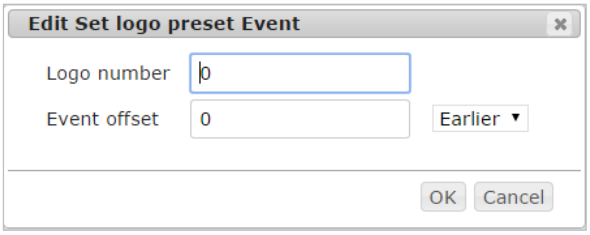
## Show Logo Preset Event




Sets a logo preset, depending on the number you enter in the *Logo number* field. The logo displayed will coincide with the preset with the same number in the corresponding ***AirBox***.

Here you can also add an *Event offset*, which will activate the logo before or after the beginning of the next clip with the corresponding number in milliseconds.

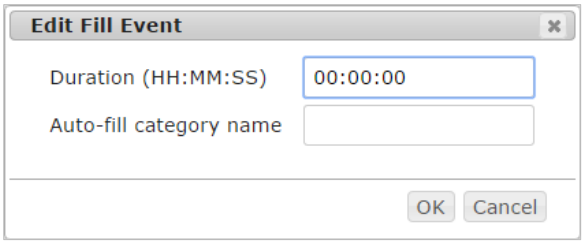
## Set Logo Preset Event




Sets a logo preset to be used in the next Logo On event. The Logo number will coincide with the preset with the same number in the corresponding ***AirBox***.

Here you can also add an *Event offset*, which will activate the logo before or after the beginning of the following clip with the corresponding number in milliseconds.

## Fill Event




Opens a dialog, which allows you to insert a Fill event. Here you can set the Duration of the fill event in seconds and an Auto-fill category name. The category name is optional and it depends on the categories, set in the corresponding ***AirBox*** in the Settings menu > Auto-fill dialog.

## Return Event

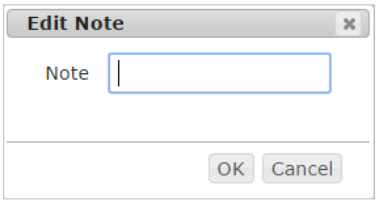
This event will return the playback at the position before a previously executed Jump.

EXAMPLE: There is a movie in your playlist, which is currently running. At a certain time you select a block of commercials in the playlist and jump on it. Then, you want to go back to the same position in the movie. You can insert a Return event after the commercials, in order the movie playback to resume after the end of the commercial break (from the point before the Jump).

## Automation On/Off Event

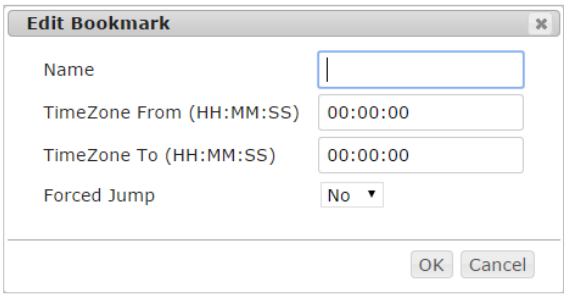
This event allows you to enable/disable the incoming external triggers (GPI input, DTMF tones) in the corresponding ***AirBox*** instance. When Automation is Off, the incoming commands will be ignored.

## Note




Enter a note in the provided field and click ***OK***. The note will be displayed in the Notes column of the Playlist Grid.

## Bookmark




Bookmarks are virtual items in the playlists, used as markers for DTMF/GPI triggers, or to execute jump commands in case expected triggers do not arrive on time. In the Edit Bookmark dialog fill in the following fields:

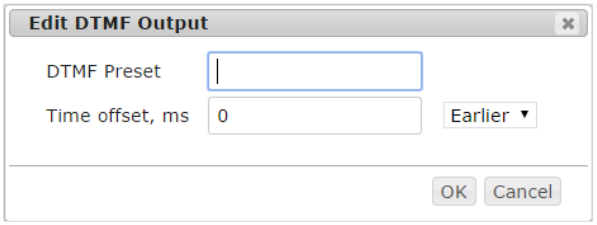
*Name* of the bookmark.

*Time zone from/to* - the period for which the bookmark is valid.

The *Forced jump* option provides that ***AirBox*** will jump to the bookmark at the defined time. Select *Yes/No* from the list to enable/disable this command.

NOTE: Be careful when using bookmarks with forced jumps as they affect the playout directly. For more information about bookmarks please refer to the AirBox User's Manual, available at www.playboxtechnology.com.

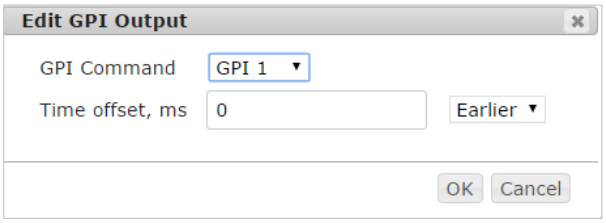
## DTMF Output




This command inserts a line in the block to activate the DTMF signal. In the dialog that opens enter a DTMF Preset as it is defined in the Modules > Remote Control > DTMF output section of ***AirBox***.

In the Time Offset field enter how many milliseconds earlier or later to execute this event.

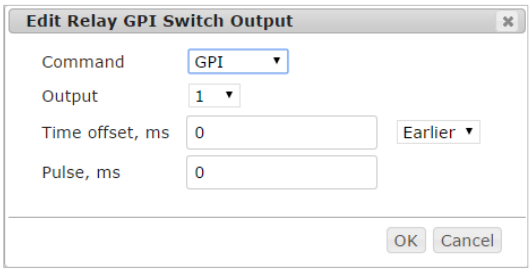
## GPI Output




This command inserts a line in the block, which activates the GPI Output. In the dialog select the desired output GPI command, as set in the AirBox Settings >Modules > Remote Control tab >GPI Output configurations.

The time for execution of a GPI event is defined via the surrounding items in the playlist. You could configure a time offset via the respective field. Simply enter how many milliseconds earlier or later to execute this event.

## Relay GPI Switch Output



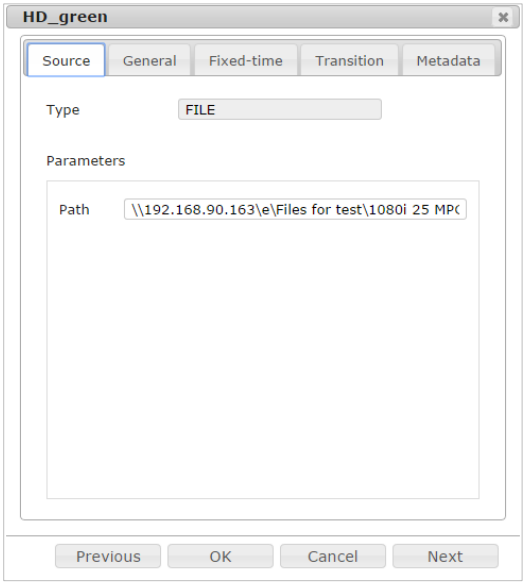

This event inserts a line in the playlist to activate the GPI Relay Output. In the dialog that opens, select the desired *command* - GPI, Tally On/Off or Pulse. In the *Output* field enter the number of the desired GPI output, as set in the ***AirBox*** Settings > Modules > Remote Control tab > GPI Output configurations. In the *Time Offset* field enter how many milliseconds earlier or later to execute this event.

Use the *Pulse offset* field in case you have selected a Pulse command. Enter the length of the pulse in milliseconds in this field.

## Editing playlist items

Clicking the ***Edit selected item properties*** button opens a dialog with clip properties for the currently selected playlist item. It contains the following tabs:

### Source




The Source tab contains a basic clip description information. The *Type* field shows whether the selected item is a File, a Live, or a UDP source.

If the input is a File, the Parameters field shows the file *Path*.

If it is a Live source, then the Address of the source is indicated in the field below. This Address corresponds to the Name of the live stream, as it is defined in the Settings > Live Inputs in ***AirBox***.

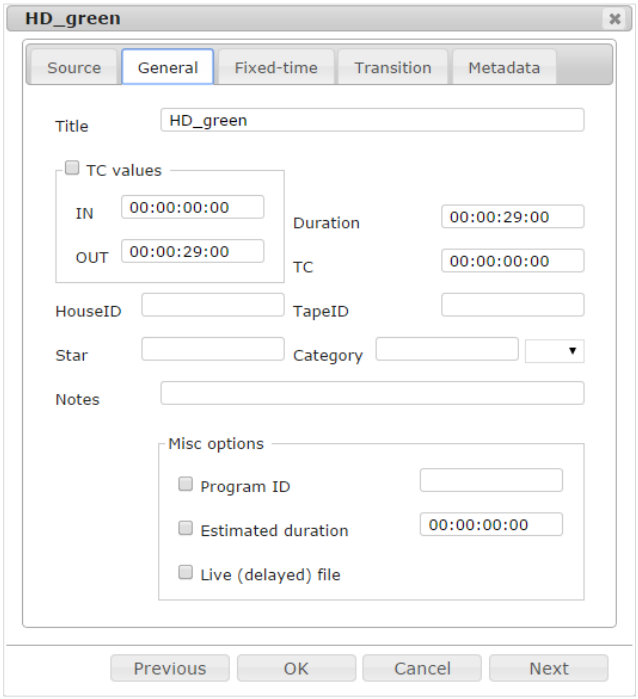
When the Type of the source is UDP, by default, and the user can enter the IP Address of the source station and the number of the Port, which receives the input. There are also two additional options for this type of input:

*Program ID* – if you check this box, you can to choose which program to be output by ***AirBox***, if the stream has more than one channel.

*Source* – check this box if the source broadcasts more than one stream, to be able to enter the Source

*Address* of your desired stream.

## General




The first uppermost filed in the General tab contains the *Title* of the selected playlist item. The *IN*, *OUT* and *Duration* fields contain the IN point, OUT point, and clip duration data. You can change these values in order to make your clips shorter.

The *Duration* is calculated automatically from the IN and OUT values. If you change the Duration, the OUT point will adjust accordingly.

If there is information about the time codes of the first and last frame in the clip, you can enter them in the *TC* field. This data is necessary if subtitles will be shown along with the clip, as the time code is the reference for displaying them. If you change the TC value, it will be saved in the playlist for future use. When you use subtitles, you should also enter a *TapeID* value.

NOTE: For more information, please refer to the in the SubtitleBox section in the AirBox User Manual, available at www.playboxtechnology.com.

You can view and edit the *HouseID*, *Star*, and *Category* information in the relevant fields. Use the list next to the *Category* field to select a color, which will be displayed in the Category column of the playlist.

Use the *Notes* field to type some additional information about the clip.

NOTE: Content metadata fields, like *Category, Star, Notes*, can be filled directly in the ***AirBox*** playlist. In this case, the information is saved only for the current playlist. If you use the same file in the new playlist, you have to enter metadata again, unless you have saved it via the Settings preset field.

The *Program ID* check box should be selected when the stream is MPTS (it could be a live MPEG-2 stream coming from the network or a file). Type the *Program ID* (i.e., 12060), not the number of the program (i.e., not 1, 2 or 3).

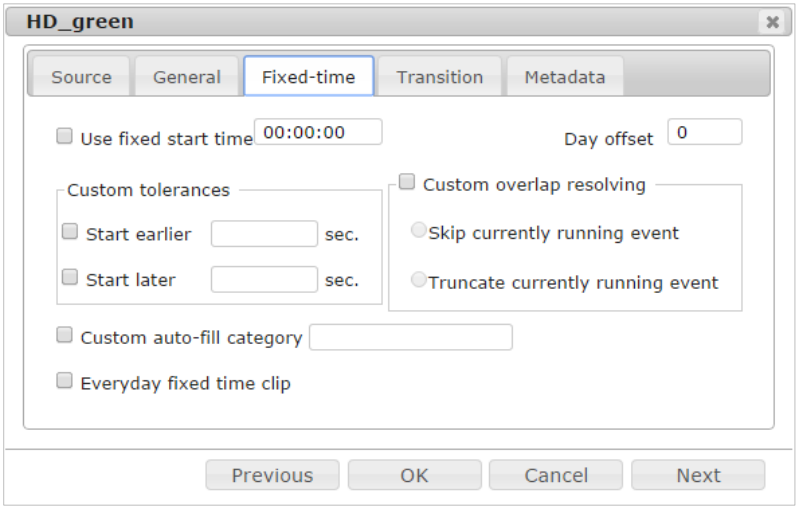
If you are going to playback a clip while it is being captured, select the *Live (delayed) file* check box. If necessary, specify the *Estimated duration* of this live playback.

NOTE: Enable the *Estimated duration* option only if the source video is live stream. Otherwise, an error will most likely occur in ***AirBox***.

Most of the properties in this window will be displayed in the playlist grid. For more details, please refer to the Clip Properties section in the AirBox User Manual, available on our website: www.playboxtechnology.com.

NOTE: Clicking ***Previous***, ***OK*** or ***Next*** will apply all changes you have made to the current clip properties. If you want to discard them, click ***Cancel***.

## Fixed-time




The Fixed-time tab allows for setting an exact start time for the particular clip.

NOTE: If you do not choose any of the Custom settings for the fixed time event, the Default settings of AirBox will apply. A detailed description of the default settings is available in the Fixed Time event Settings section in the AirBox User Manual, available on our website: www.playboxtechnology.com.

WARNING: When using fixed time events, the playlist should start and end within the same calendar day (i.e., the playlist should not go beyond midnight). Otherwise, we cannot guarantee the proper operation of the fixed-time logic.

Check the *Use fixed start time* box and enter the time. In the *Day offset* field, enter the number of days to go prior to executing the fixed time event. Day offset "0" means the date of the ***AirBox*** startup.

When using fixed start times, two types of time conflict might occur – overlapping of playlist items or gap in the playlist. In the first situation there is not enough time to playout all clips in the playlist before the fixed time event starts. Therefore, you can choose between two Custom overlap resolving options:

*Skip currently running event* – when this option is selected, ***AirBox*** will skip all clips that cannot be played out as a whole.

EXAMPLE: The time remaining until the fixed start is 2 minutes and all preceding clips are longer. ***AirBox*** will skip these clips and the 2-minute gap will be filled with Custom auto-fill category.

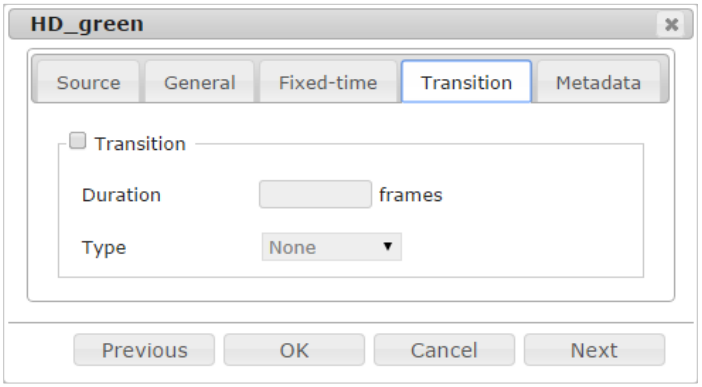
*Truncate currently running event* – ***AirBox*** will playout as many clips before the fixed time event as possible. The currently playing clip will be truncated when the fixed time comes.

In the second situation, when there is a gap in the playlist (either because the content is not enough or you have selected to skip the currently running events) you will need a Custom auto-fill category. Enter the name of the desired category to be used. Be aware that a category with the name that you enter has to be created in ***AirBox***. Check the Auto-fill settings section of the ***AirBox*** chapter.

To set a tolerance of the fixed time, enter the time in seconds in the *Start earlier/ Start later* fields.

Check the *Everyday fixed time clip* box in case you loop your playlists. If you leave the check box empty, the fixed time will be executed only during the first loop.

## Transition



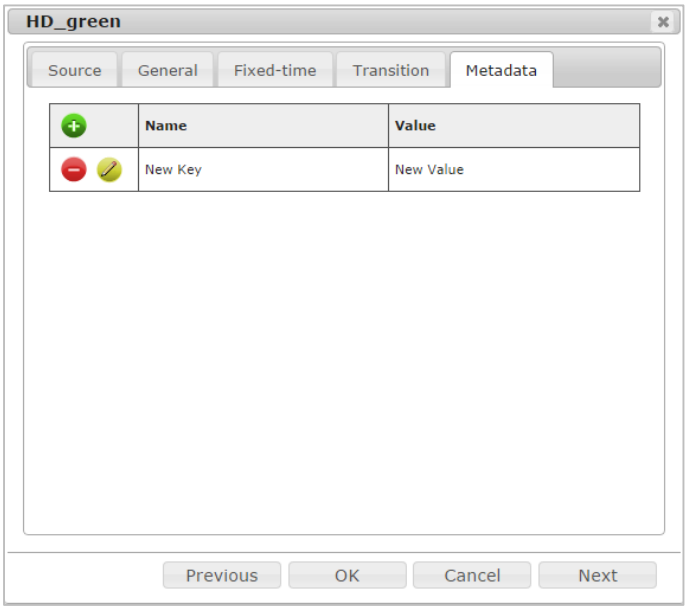

The Transition tab contains settings, related to transitions between clips in the ***AirBox*** playlist. The transition settings apply to the beginning of the currently selected clip.

Check the *Transition* box to enable the transition.

Specify the transition *Duration* (in frames) in the field below.

The *Type* drop-down list contains all currently supported transitions.

## Metadata



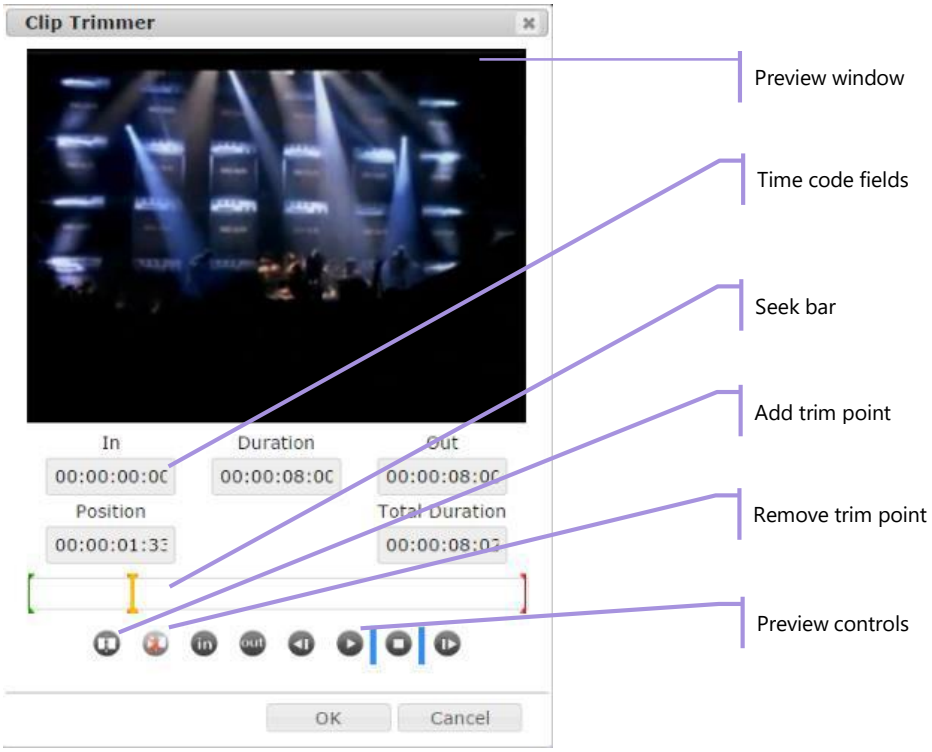

The Metadata tab provides room for additional information fields related to the currently selected clip. You can include additional metadata, related to the content of the clip. This information can be entered manually.

EXAMPLE: The Name of a metadata category is [Producer] and the Value is [a person/ a company]. Thus, if you have the producer's name in ***DataBox*** [Person] and map it to ***AirBox*** [Producer], that information will be transferred automatically when you drag clips from ***DataBox*** to the playlist grid.

WARNING: Make sure not to use tab characters in the metadata fields! Otherwise, the saved metadata will not be interpreted correctly.

## Clip Trimmer

The **Clip Trimmer** is a simple tool for editing the duration of clips. To start the **Clip Trimmer**, select an item from the playlist and click the **Clip Trimmer** icon in the toolbar above the playlist grid.




NOTE: To use the clip trimmer, you need proxy files (in MPEG format) of your original content.

All trimming operations are time code-based. In the *In*, *Out* and *Duration* fields below the preview window, you will see the default time code values for the selected clip. If you change the *In* value, *Duration* and *Out* will be calculated accordingly. If you change the *Out* value, the *Duration* value will be calculated accordingly and vice-versa.

Position indicates the current position of the marker in the clip. It will be set to 00:00:00:00 when you start **Clip Trimmer**.

Click a place in the Seek bar below to see the position value. Click and drag to move the yellow marker to an exact time code. To set the current position as an In (i.e. start) point, click the ***In*** button below. The marker position will be fixed.

You can click ***OK*** to accept changes and return to the playlist. In playout, the clip will start from the new In point.

After setting a new *In* point, click a place further in the Seek bar and click ***Out***. The clip will be played out from the new *In* point to the new *Out* point.

Split the clip into several parts using the ***Add trim point*** button. Each section will be displayed as a separate item in the playlist.

Use the ***Play/Stop*** and ***One frame back/forward*** buttons to preview and make precise selections.

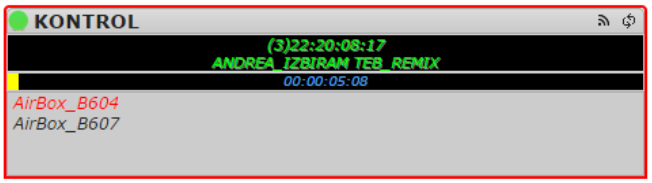
*Total Duration* displays the original untrimmed duration of the clip.

## CONTROL GROUPS

A Control Group is a specific group of ***AirBox*** servers, which is defined by the user in the corresponding section of the System Manager. Control Groups allow users to monitor and manage several ***AirBox*** servers simultaneously. Each Control Group has one Commander, through which the user can control the other ***AirBox*** instances in the group.

NOTE: One ***AirBox*** instance can belong to one Control Group only.

The Control Groups tab is a part of the ***MPM*** Home page and consists of the same sections and buttons, described earlier in this manual.




The Server monitor section contains a list of ***AirBox*** servers, which belong to a particular Control Group. The Commander is marked in red. The counters are displaying information about the playout time of the Control Group Commander. For more details about Counters please refer to the Counters section earlier in this manual.

Each Control Group is displayed by its name, defined by the user.

In the upper left corner you can see the current playout status of the respective Control Group Commander.

In order to send commands to a certain Control Group, click the ***Display server details*** button. You can also refresh an instance by clicking the ***Force server refresh*** button.

NOTE: The Display Server Details option here shows the details of the group's Commander. If you want to view the details of the other ***AirBox*** instance in the group, you should select the desired instance in the Server monitor section of the Home page. You can change the Commander of the Control Group from the relative section in the System Manager.

You can also view the media folders, which are predefined for the currently selected ***AirBox*** server.

Media folders are set in the AirBox Servers section of the Server monitor. Once a media folder is added to a certain server, you can upload files in it via the File Uploader in the Home page.

More than one media folder can be defined per server. Use the tabs to select the desired folder and the arrows to navigate.

You can easily add a file from the media folder to the currently displayed playlist in the playlist grid by dragging and dropping it.

In the work area of the Control Groups tab you can control the selected ***AirBox*** instances from the Server monitor section. The work area consists again of playlist grid, playlist controls, playback controls, counters and ShotBox.

NOTE: Clicking any of the playback controls while in the Control Groups section will send a command to all ***AirBox*** instances, which belong to the corresponding Control Group.

# TIMELINE

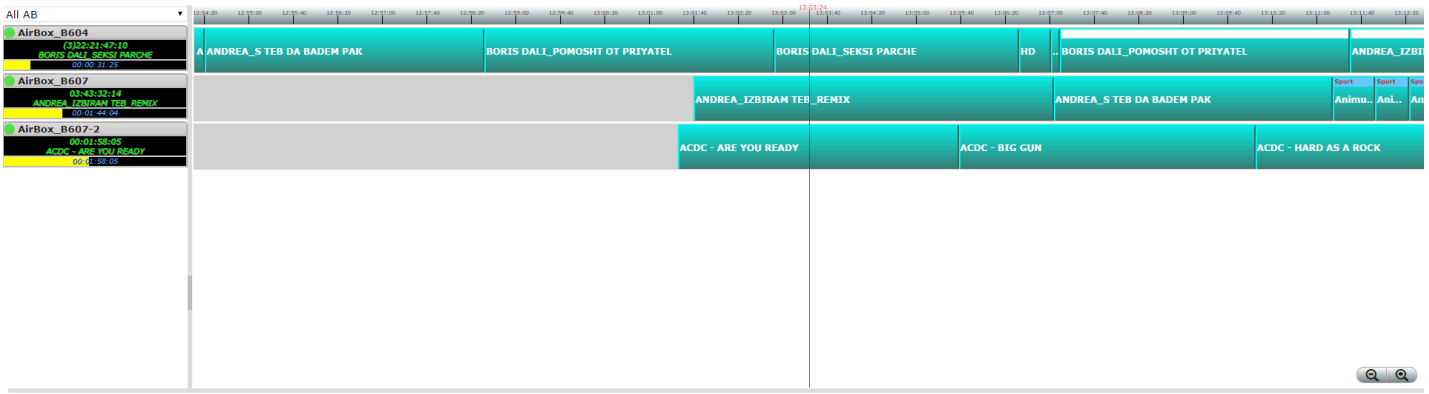
The Timeline is a list of all playlist items from all or some ***AirBox*** servers, available in ***MPM***, merged in a single view and ordered by time and channel. The Timeline allows you to monitor the currently playing items in several ***AirBox*** instances in real-time, simultaneously.

The left pane of the ***MPM*** Timeline page contains a list of ***AirBox*** instances that are currently shown in the timeline in the right pane. Notice the drop-down list on top. It contains all the pre-defined View groups, as well as an *All AB* option. Selecting a View Group will open a list of all ***AirBox*** servers, which are assigned to this View group and will display the timeline of the corresponding group to the right. If you select the *All AB* preset, a timeline for all ***AirBox*** instances, which are currently visible by your ***MPM***, will be displayed.

Each separate instance is designated by its name, given by the user.

For further details, please refer to the Server monitor and to the Counters section earlier in this manual.

The right pane of the timeline displays each ***AirBox*** instance, corresponding to a respective timeline row. The uppermost row of the timeline shows the time in a HH:MM:SS format. The red marker shows the current playing position of all the channels. It also displays the current time in red. The length of the Timeline is defined by the start of the earliest and the end of the last playing clips. You can adjust the timeline length by clicking the row of the respective ***AirBox*** instance and rotating the mouse wheel forward and backward to zoom in and zoom out. You can also use the zoom in and zoom out buttons in the lower right of the page.




If there is a category defined for a certain clip, it will appear above the item's name and will be shaded in the respective color of the category. Files that are missing will appear in red.

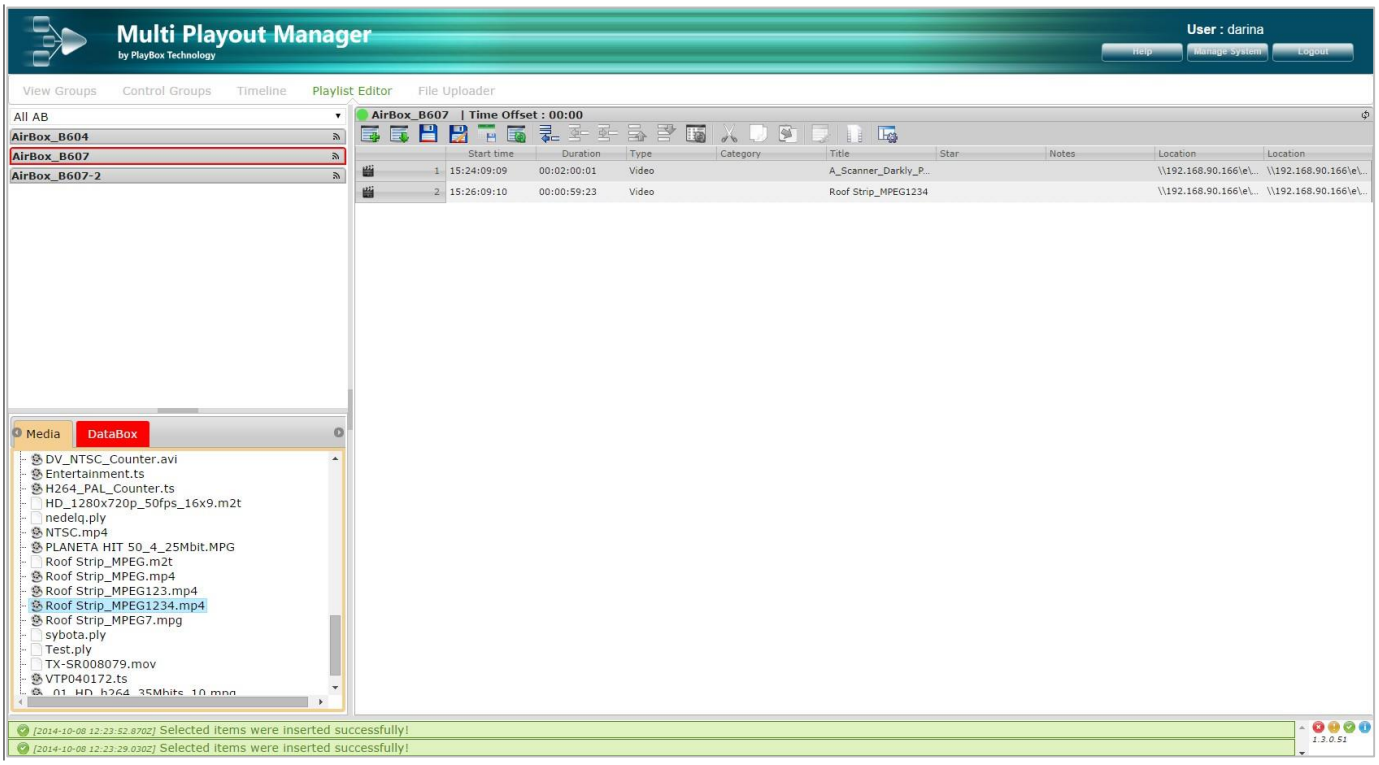
# PLAYLIST EDITOR

In the Playlist Editor you can create, edit and save playlists for an AirBox server without broadcasting them.

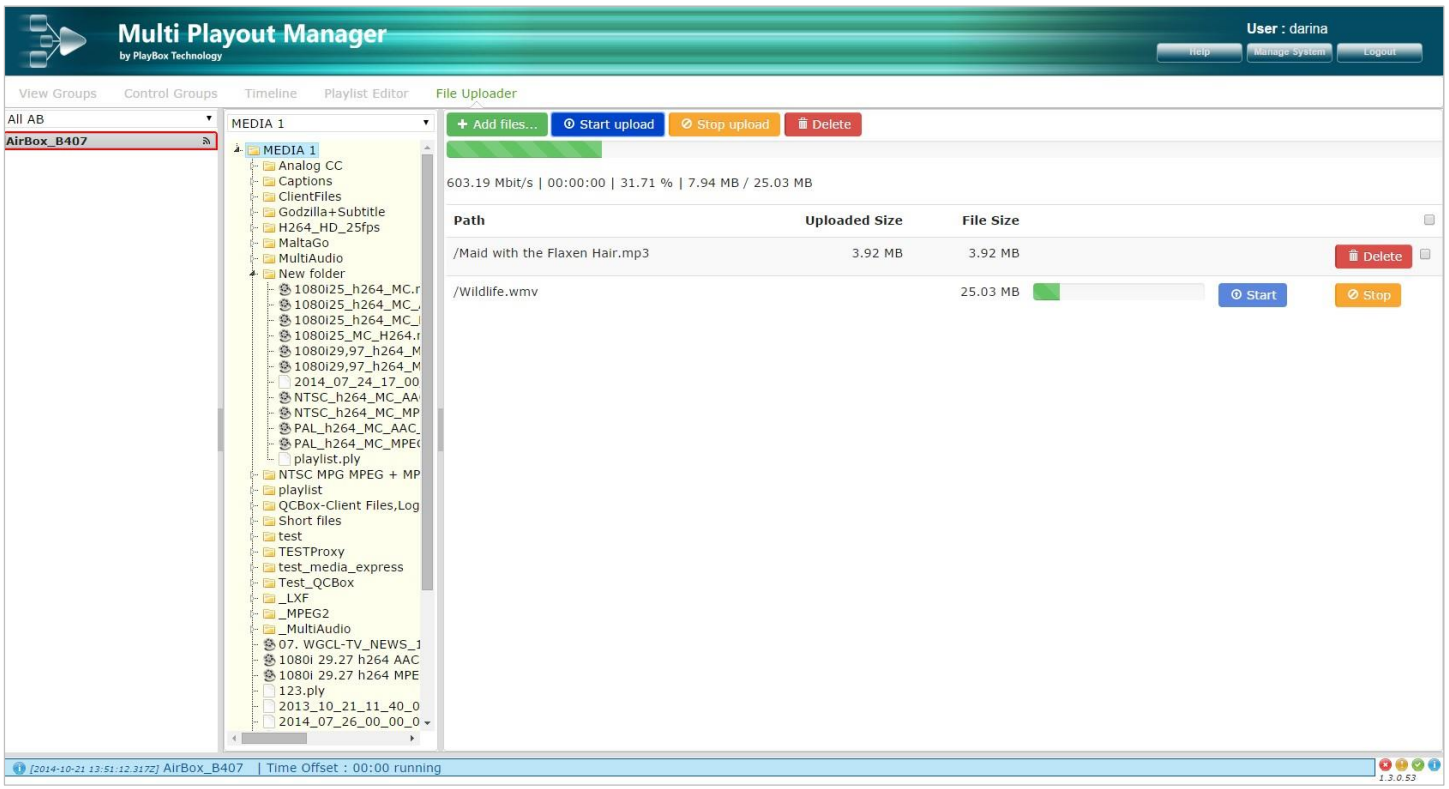
To create a new playlist, select an ***AirBox*** server by clicking the respective ***Display server details*** button and start dragging and dropping files from the media folders into the grid. Control + click titles to select multiple media files and drag them into the grid. When you drag and drop media files into the grid, the start time value displayed in the respective column is calculated by the system time, based on the current real-time clock. When you upload the playlist into the grid of the Home page, about to be played by the selected ***AirBox*** server, the start time will automatically adjust to the current time of playing; and every next item in the list will be calculated accordingly. When creating a daily playlist the media content will be automatically played out at the user defined date and time displayed in the daily playlist name. However, you can play any daily playlist at any time, once you manually load it.

Notice that only the start time and duration values are displayed in the respective columns. The end time is not shown, however, the end time value matches with the start time of the next item in the list.

Use the playlist controls to add, remove and edit media items, as well as to save the created playlist.



# FILE UPLOADER




The File Uploader allows you to upload files to the ***MPM*** media content.

NOTE: Access to individual media folders is configured separately for each ***AirBox*** in the AirBox Server section of the System Manager.

At the top left of the File Uploader, select an ***AirBox*** server to operate by clicking the respective ***Display server details*** button. Next to the AirBox servers list, you will see a drop-down list with available media folders, and a list of the contents of the currently selected one.

Notice that each media folder can contain sub-folders. You can expand and shrink the contents of each sub-folder by clicking on the arrows to the left.

At the top right of the File Uploader window, you will see the control buttons. Click the ***Add files*** button and browse for media files to upload. Media files will be displayed in a list below. To upload the files one by one, click the ***Start*** button next to the file size. To start uploading all files simultaneously, click ***Start upload*** above.

Use ***Stop***/***Stop upload*** to cancel item upload.

Select a check box next to each and click ***Delete*** to delete a single item. To select all items, check the uppermost box to the right and then click ***Delete***.

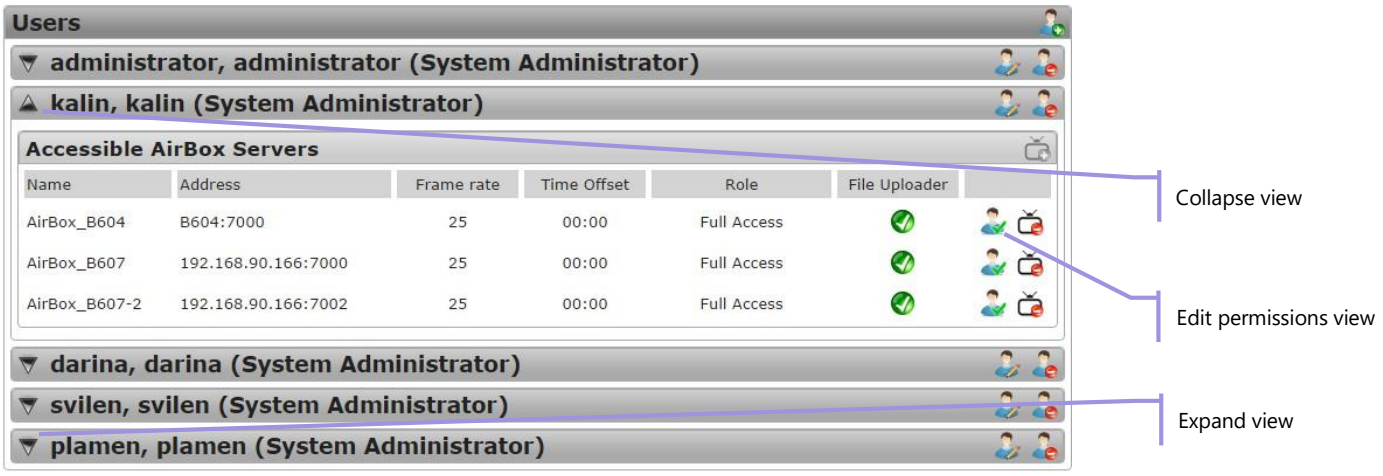
WARNING: The deleted file(s) from the File Uploader will also be removed from the respective Media Folder(s).

# Managing MPM

Clicking the ***Manage system*** button in the Home page opens the System manager, as shown above. It allows you to define and edit the ***AirBox*** servers, which are currently monitored by ***MPM***. You can also manage Users, AirBox Servers, View Groups, and Control Groups.

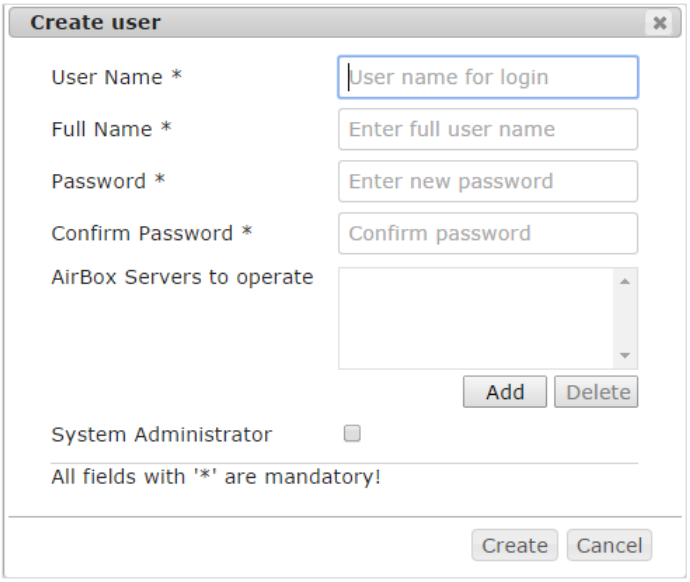
The ***Home*** button is located in the top-right corner of the ***MPM*** screen. Your user name is displayed above. Here you can also access the ***MPM*** help and log out of the system.

## USERS




The Users section allows you to add, remove, and edit ***MPM*** users. The system supports different user permissions. Two types of users - view only users and commanders. The view only users can only observe the system without making any changes in it neither in the Home page, nor in the System Manager.

To add a new user, click on the relevant ***Add new user*** button in the top right corner. The following dialog will open:




Fill in the *User Name*, *Full Name* of the user and the *Password*.

Click the ***Add*** button to select the ***AirBox*** servers, which this user will be able to operate. An additional dialog will be invoked:

Select one or more ***AirBox*** servers from the list. To select multiple servers press the Shift or the Control button. From the *Role* drop-down list select the access rights, which the user will have for the selected server(s). The following access types are available:

**View Only** - This role allows the user to only access the view groups and the timeline. Users cannot command ***AirBox***, nor use the ShotBox with view only rights.

**Playlist Editor** - This role is the same as the view only user one with an additional playlist editor module.

**Control Operator** - This role allows the user to view and control the ***AirBox*** server(s) and use the ShotBox.

**Full Access** - This role enables all of the above mentioned user rights.

In addition to the user *Role* you can enable/disable the File Uploader module for the selected server(s).

The last option in the Create User dialog is the System Administration module. If this option is enabled the user will be able to access the System Manager of ***MPM***.

NOTE: The default User name and Password for the Administrator account are administrator/administrator. You can change the administrator password but you cannot remove the administrator user from the ***MPM***.

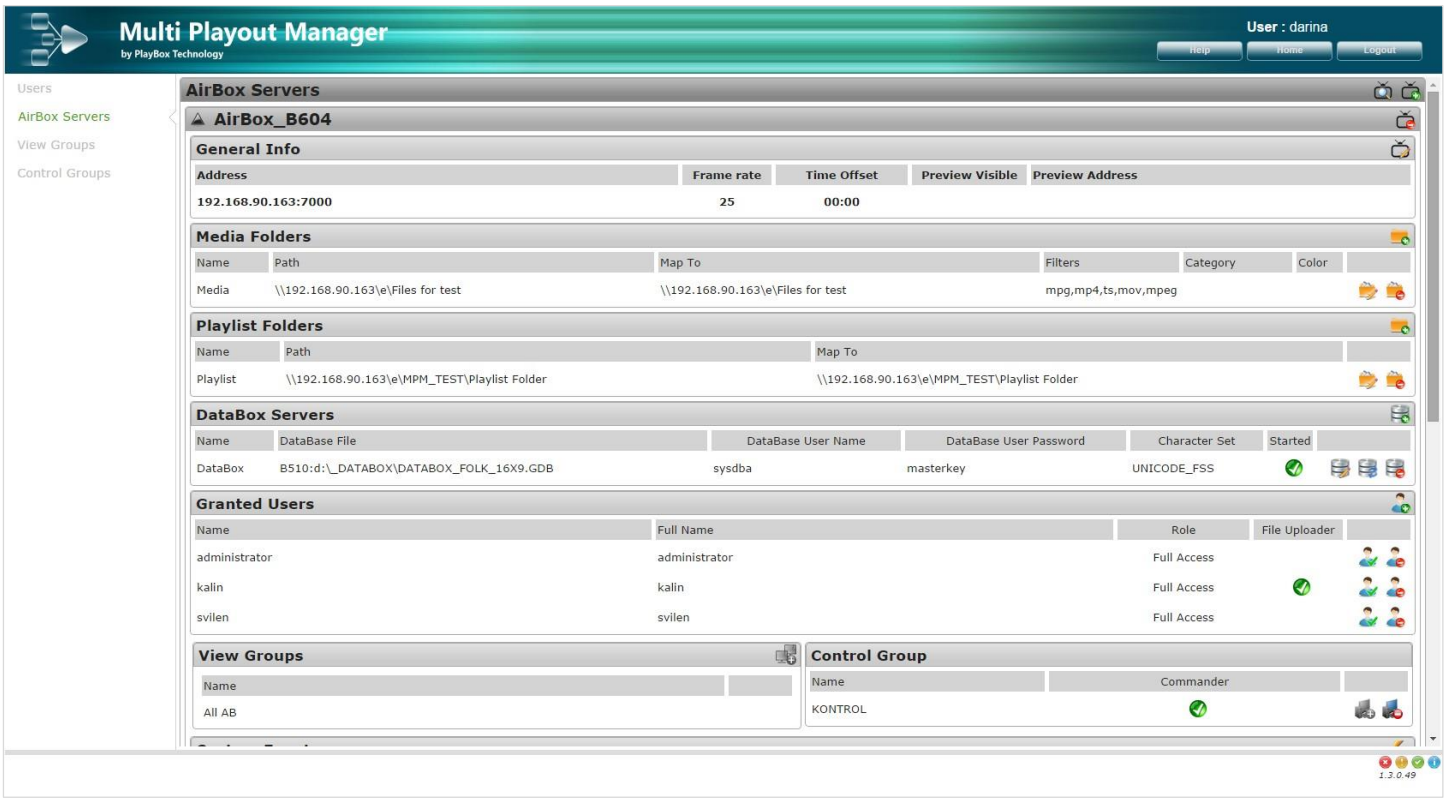
You can also ***Edit*** and ***Remove*** users via the respective buttons.

Use the arrows to the left of each existing user in order to expand the view and see additional user options. Once a user is expanded, you can see and edit the list of ***AirBox*** servers, which this user operates.

You can add a new server by clicking the ***Add AirBox Server*** button. The same dialog will open, as the one used for adding servers to new users.

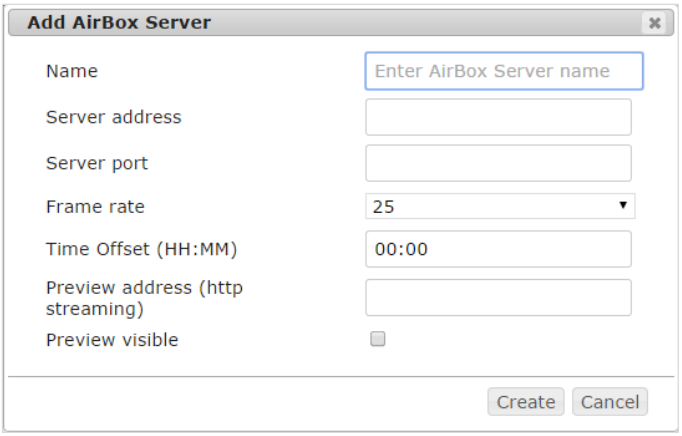
To edit the access permissions, which the user has for one of the ***AirBox*** servers he already commands, click the ***Edit User Permissions*** button next to the respective ***AirBox*** server. A dialog will appear, where you can select the desired Role for the user and enable/disable the File Uploader module. User roles are described above.

# AIRBOX SERVERS




The AirBox Servers section contains a list of all available ***AirBox*** servers. To add a new ***AirBox*** server click the ***Add AirBox Server*** button.

In the following dialog enter the ***AirBox*** server *Name*, *Server address* and *Server port*. For *Server address* enter the IP address, where the respective ***AirBox*** instance is installed. For *Server port* type the port number of the server.




NOTE: Each name of an ***AirBox*** instance which you add, needs to be unique.

NOTE: Port numbers used by ***AirBox*** always start from 7000. The port number of every next ***AirBox*** instance has to be an even number, greater than the previous by 2. The maximum number of ***AirBox*** instances per one station is 15.

EXAMPLE: In order to configure 5 ***AirBox*** instances on a single IP address, the port numbers for ***AirBox*** Instance #1 through #5 would be as follows: 7000, 7002, 7004, 7006, and 7008.

From the Frame rate drop-down menu select the rate, at which the ***AirBox*** in question is working. This depends on the corresponding video standard (PAL, NTSC, etc.). Once you are done entering the necessary details, click ***Save***, and the new ***AirBox***.

In the Time Offset field you can enter an offset for the respective server in a HH:MM format. By default, the time offset is zero. Use this option to manage servers in different time zones.

To set a preview for a particular ***AirBox*** instance, select the *Preview visible* check box. If the output of the ***AirBox*** application is located and processed on a different server, enter its path in the *Preview address (http streaming)* field.

***AirBox*** servers can be automatically searched for via the ***Search AirBox Server*** button. It invokes the following dialog:

To find online ***AirBox*** servers choose one of the options:

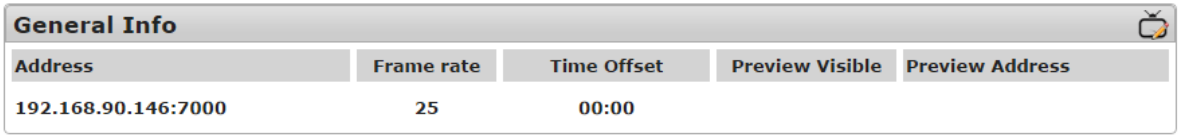
**Search entire network** - If you select this option the system will search for all ***AirBox*** servers, which are available in your local network.

**Search by IP or subnet** - If you select this option you have to fill in the IP address or Subnet Mask of the ***AirBox*** server you wish to find in the empty field.

To start the search click ***Scan***. The list of discovered ***AirBox*** servers will be displayed at the bottom. You can add any server from this list.

You can also edit or remove a given server. For this purpose, simply click the ***Remove AirBox Server*** or the ***Edit AirBox Server*** button next to the name of the respective ***AirBox*** server. Use the arrows to the left of each existing server in order to expand the view and see additional user options. Once a user is expanded, you can see and configure the following:

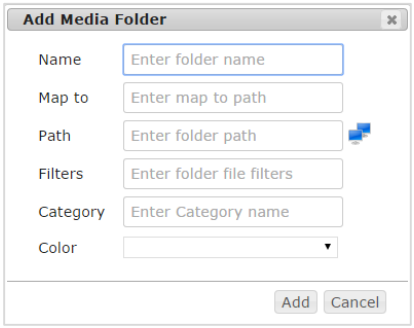
## General Info




To edit on or more of the entries in the General Info click the ***Edit General Info*** button. The dialog that appears is the same as the one for adding a new AirBox server. Enter your desired changes and click ***Save***.

## Media Folders

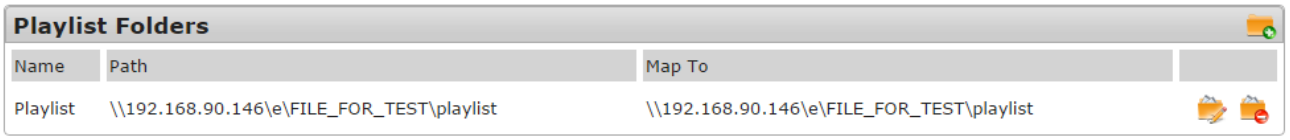
This field allows you to add media folders to be used by the respective ***AirBox*** server. To add a new click the ***Add Media Folder*** button. A dialog will open, where you have to enter some parameters.



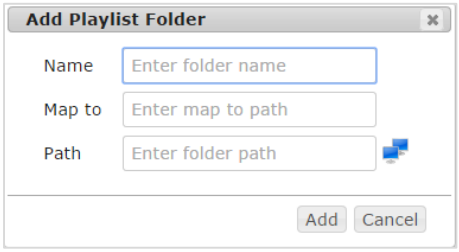

In the Name field enter a unique user-friendly name to designate the folder. The Map to field contains the folder path, as viewed by the station, where the respective ***AirBox*** instance is installed. In the Path field, on the other hand, you need to enter the folder path as it is viewed by the ***MPM*** server.

EXAMPLE: Folder name = Video Materials, Map to = E:\Video Materials\, Path =\\192.168.60.246\e\Video Materials, and Filter = mpg

## Playlist Folders




This field allows you to add playlist folders to be used by the respective ***AirBox*** server. To add a new one click the ***Add Playlist Folder*** button. A dialog will open, where you need to enter the following information:




In the *Name* field type a unique user-friendly name of designate the folder. The *Map to* field contains the folder path, as viewed by the station, where the respective ***AirBox*** instance is installed. In the *Path* field, on the other hand, you need to enter the folder path as it is viewed by the ***MPM*** server.

EXAMPLE: Folder name = Video Materials, Map to = E:\Video Materials\, Path =\\192.168.60.246\e\Video Materials, and Filter = mpg

The Filter field here is optional. You can enter a file extension here if you want the ***MPM*** to only display a certain type of files in this folder. This option is useful when the folder you are configuring contains a large number of files of various types.

If you are trying to add a shared folder from your network, click the ***Login data*** button. A new dialog will appear. In the Domain name field enter the name of the computer, where the desired folder is located. Use the Username and Password fields to enter your credentials.

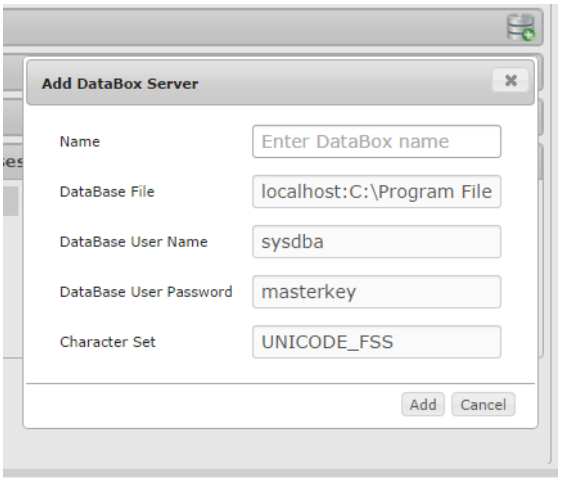
Finally, use the Color drop-down list if you would like the folder to be marked with a particular color in the Home page.

You can add as many folders, as you wish. You can also remove and edit existing folders by clicking the and the button respectively.

## DataBox Servers

In the *DataBox Servers* section, you will see a list of ***DataBox*** servers, where ***MPM*** will search for filenames, titles, and metadata. Each entry in this list links ***MPM*** to a storage database already existing in ***DataBox***.

To link a new ***DataBox*** server, click ***Add DataBox Server***. In the following dialog, enter server name, database file, username, password and character set.




For *Database File*, enter the folder path, where the ***DataBox*** database file is located. This can be a network path if ***MPM*** and ***DataBox*** are installed to different servers.

*For Character Set*, enter the character set, used by the database.

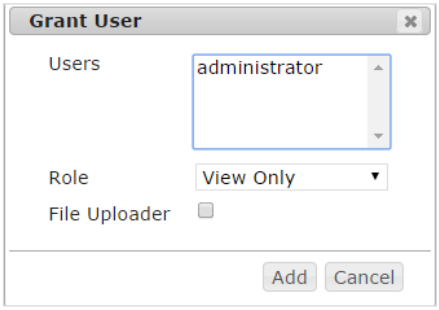
TIP: To find the character set, used by a database, go to Options > Database > Charset in DataBox. For additional information about DataBox databases, please refer to the DataBox User Manual, available at www.playboxtechnology.com.

When you successfully link a ***DataBox*** database to ***MPM***, you will see a green tick in the Started column of the DataBox servers list. If ***MPM*** and the server are not properly connected, a red cross will be displayed. Point that sign with your mouse to see the error message.

Use the buttons to the right to edit, refresh or delete a database from the list.

## Granted Users

Here you can view a list of all users, which have access to the selected ***AirBox*** server. You can grant access to another user by clicking the ***Add User*** button. The following dialog will open:




From the *Users* list select a user, to which you will grant rights. From the *Role* drop-down list select the access rights, which the user will have for the selected server(s). The following access types are available:

**View Only** - This role allows the user to only access the view groups and the Timeline. Users cannot command ***AirBox***, nor use the ShotBox with view only rights.

**Playlist Editor** - This role is the same as the view only user one with an additional Playlist Editor module.

**Control Operator** - This role allows the user to view and control the ***AirBox*** server(s) and use the ShotBox.

**Full Access** - This role enables all of the above mentioned user rights.

In addition to the user *Role* you can enable/disable the File Uploader module for the selected server(s).

You can also edit the access permissions of the existing users in the list by clicking the ***Edit User Permissions*** button, which invokes the same dialog, as the one described above.

You can remove a user from the list by clicking the ***Delete User*** button.

## View and Control Groups

This field displays the View Groups and Control Groups, of which the selected ***AirBox*** server is a member. To add the selected ***AirBox*** server to a new view group, click the ***Add View Group*** button. In the dialog that appears select the desired group from the drop-down list and click ***Add***.

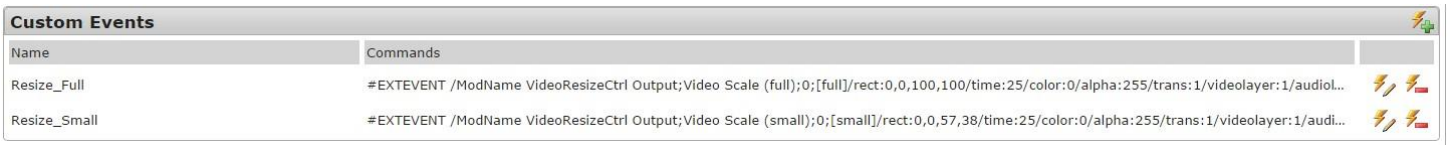
You can also remove the server from any control groups by clicking the ***Reset Control Group*** button.

To change the control group of the selected ***AirBox*** server click the ***Set Control Group*** button. In the dialog that appears select the desired group from the drop-down list and click ***Add***. If the server is a commander of the currently set control group a tick sign will appear below the Commander column.

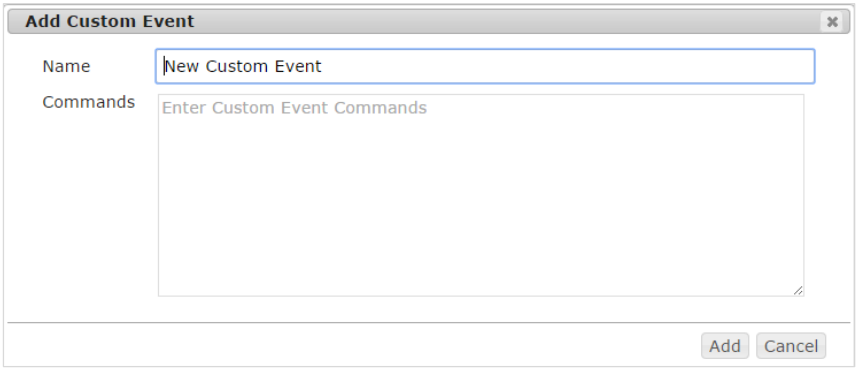
NOTE: An ***AirBox*** server can belong to only one control group.

You can also remove the server from any control groups by clicking the ***Reset Control Group*** button.

## Custom Events

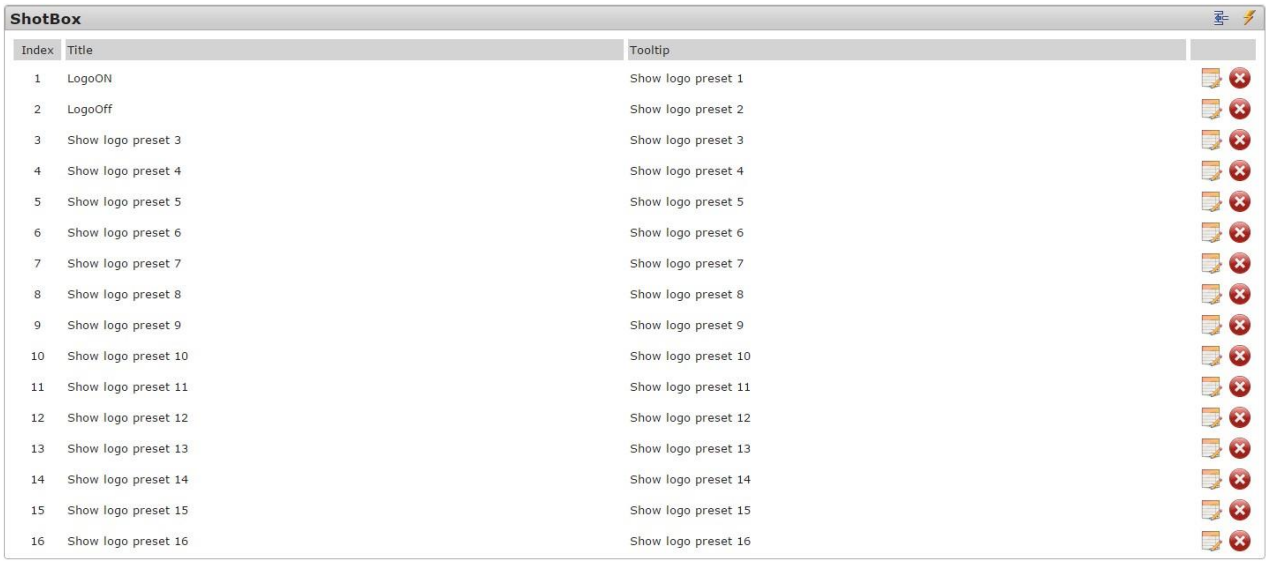



Under custom events, you can write custom commands, which will be executed in ***AirBox*** as external events. To add a new custom event for the current channel, click ***Add custom event*** and in the following dialog, enter a name to the custom event, followed by the event command script from the original AirBox playlist (*.ply file).



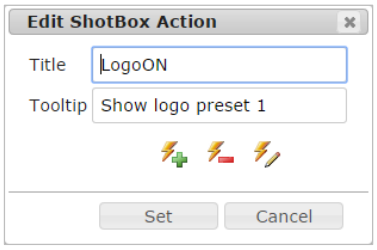

NOTE: For additional information about external events in AirBox, please refer to the AirBox User Manual, available at www.playboxtechnology.com.

## ShotBox




The ***ShotBox*** field allows you to configure the buttons to be displayed by the ShotBox for this particular ***AirBox*** server.

To set a command for a button, click the ***Edit*** button for the respective button number. The following dialog will appear:




Enter the Title and the Tooltip to be displayed for the selected button. Click the ***Assign Event*** button to add a new event and select the desired event to be executed by the button. To edit the selected event properties click the ***Edit Event*** button. You can also remove the selected event by clicking the ***Unassign Event*** button.

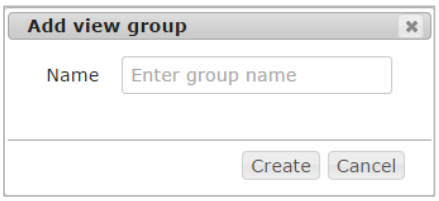
Once you are done configuring the desired event for the selected button, click ***Set***.

You can also unassign an event from a ***ShotBox*** button by clicking ***Clear*** next to each event. Finally, you can configure the default appearance of the ***Insert*** and the ***Execute*** buttons of the ***ShotBox*** by clicking the respective buttons in the top right corner of the ***ShotBox*** field.

# VIEW GROUPS

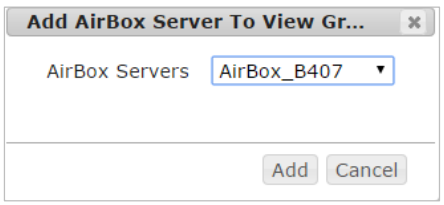
The View Groups section allows you to add, remove, and edit ***MPM*** View Groups.

To add a new View Group, click on the ***Add new view group*** button. The following dialog will open, where you have to enter a name for the new View Group:




The list in the View Groups management section displays the currently created View Groups. You can change a View Group name by clicking the relevant ***Edit view group*** button. In the dialog that appears enter a new name for the View Group and click ***Rename***. You can also delete a View Group by clicking the ***Remove view group*** button in the respective row.

To assign an ***AirBox*** server to a View Group, click the ***Add AirBox Server*** button. The following dialog will open, in which you have to select the desired server to be added from the drop-down list:




To remove a server from the selected group, click the corresponding ***Remove From Group*** button.

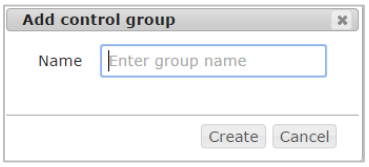
NOTE: The All AB View Group refers to all ***AirBox*** instances, available in the ***MPM***. This group cannot be removed, neither can servers be removed from it.

# CONTROL GROUPS

The Control Groups management section allows you to add, remove, and edit ***MPM*** Control Groups.

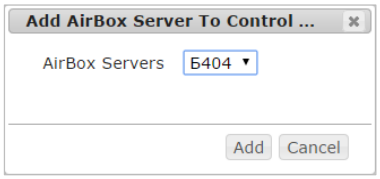
To add a new Control Group, click on the relevant ***Add new control group*** button in the Control groups section.

The following dialog will open, where you have to enter a name for the new Control Group:




The list in the Control Groups management section displays the currently created Control Groups. You can change a Control Group name by clicking the relevant ***Edit Control Group*** button. In the dialog that appears enter a new name for the Control Group and click ***Rename***. You can also delete a Control Group by clicking the ***Remove control group*** button in the respective row.

To assign an ***AirBox*** server to a Control Group, use the relevant ***Add AirBox Server*** button. The following dialog will open, from which you have to select the desired server to be added:




NOTE: One ***AirBox*** server can belong to one Control Group ONLY!

The first ***AirBox*** server, added to the Control Group automatically becomes the group commander. The commander can be changed by click the ***Set As Group Commander*** button next to the desired server from the list.

You can also remove a server from the group by clicking the ***Remove Server*** button next to the respective list entry.

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