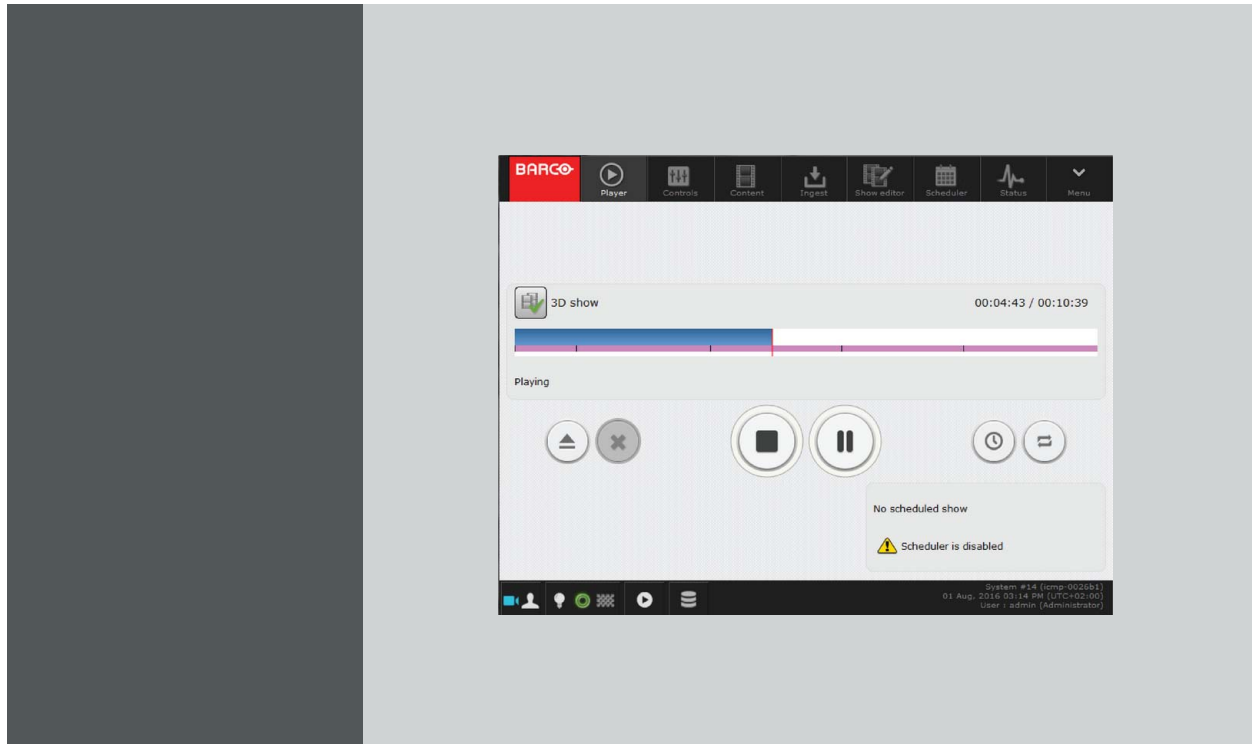


# Barco Commander



## User Guide Integrated Cinema Media Processor

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# 1. INTRODUCTION

## Overview

- General introduction
- About this manual

## 1.1 General introduction

### A software application

Commander is a software for PC provided by Barco to control ICMP (Integrated Cinema Media Processor), the integrated assembly that allows to load, manage and playback digital cinema content on a Barco projector.

### Installation and operation

An installation dedicated to each platform allows the deployment of this software tool so expected by the operators to facilitate their daily business. Based on clearly indicated tab pages, each module of Barco Commander is a step in the playback of digital cinema content. Depending on the user level, functions are enabled or disabled in the software.






For technical details on settings and maintenance of the ICMP, please refer to the ICMP installation manual and to Communicator, the Barco configuration software.

## 1.2 About this manual

### Layout issues

This manual is designed to be a reference tool in your everyday work with the Commander software.

The following icons are used in the manual :

	Caution
	Warning
	Info, term definition. General info about the term.
	Note, gives extra information about the described subject.
	Tip, gives extra advice about the described subject.

Images given in the manual are used as illustration. The content of the image can be slightly different with the real image on the screen, e.g. version numbers, projector name, installed modules, window position, etc. .

Typography:

- Menu items to click on or buttons are indicated in bold, e.g. **OK**
- Non clickable Menu items are indicated in italic.
- A dialog window is indicated in italic, e.g. *Make a new configuration*.
- Step related notes, tips, warnings or cautions are printed in italic.
- Procedure related notes, tips, warnings or cautions are printed in bold between 2 lines preceding by the corresponding icon.
- Image related indication which are repeated in the image and in a step are indicated between brackets, e.g. (1).





## 2. SOFTWARE INSTALLATION AND GENERAL APPLICATION BEHAVIOR

### Overview

- General requirements
- Free download of Commander
- Software installation
- Starting up
- Start up of the Commander via a batch file
- User interface presentation
- General menu
- About page
- Settings page
- Connect and login
- File System Check

### 2.1 General requirements

---

#### System requirements for Microsoft Windows

Minimum hardware specifications :

- PC Pentium III or equivalent, 1 GHz
- 512 MB RAM
- Free hard disk space: 200 MB
- XGA resolution (1024 x 768)
- Serial communication port and/or Ethernet connection

Software

- Windows 2000, Windows XP Home or Windows XP Professional, Windows Vista, Windows 7

Recommended hardware specifications :

- PC Pentium IV or equivalent, 2.4 GHz
- 512 MB RAM
- 400 MB hard disk free space
- SXGA resolution (1280 x 1024) with 32 MB video memory
- Serial communication port
- Ethernet connection

#### System requirements for Linux

Software

- Any Linux distribution (RedHat 9.0, SuSe 8.2, Debian/Ubuntu, Mandriva, ...)

Minimum hardware specifications

- PC Pentium III or equivalent, 1 GHz
- 512 Mb RAM
- Free hard disk space: 200 MB
- XGA resolution (1024 x 768)
- Ethernet connection (serial connection is not supported)

Recommended hardware specifications :

- PC Pentium IV or equivalent, 2.4 GHz
- 512 MB RAM
- 400 MB hard disk free space
- SXGA resolution (1280 x 1024) with 32 Mb video memory
- Ethernet connection

#### System requirements for MAC

Support for Intel based Macs (MacBook, MacBook Pro, iMac, Mac mini, Xserve)

No support for Power PC based Macs (G4 and G5 series)

## 2.2 Free download of Commander

---

### Overview

The program can be downloaded for free from Barco's website, (URL: <http://www.barco.com>). Click on *myBarco* and login to get access to secured information. Registration is necessary.

If you are not yet registered, click on *New to myBarco* and follow the instructions. With the created login and password, it is possible to login where you can download the Commander software.

It is not necessary to install any other software.

## 2.3 Software installation

---

### To install on Microsoft Windows

The process of installing your software involves the following steps

1. Browse to the directory where the install program is downloaded.
2. Double click on *Commander-x.x.x-windows-installer.exe* (with x.x.x that represents the last the version number).

The installation starts.

3. Follow the instructions given in the different install windows.
4. Complete installation is automatic.

**Note:** A restart of the computer is not necessary before the software can be used.

Barco → Commander → Commander item is added to the program list and new Barco Commander short cut is added on the desktop.

### To install on Linux

The process of installing your software involves the following steps:

1. Browse to the folder where the downloaded installer file (*Commander-1.0.2-linux-installer.run*) has been stored.
2. Check if the file is executable. This is done by right clicking on the file and selecting 'Properties' from the popup menu.
3. Select tab **Permissions** and check if *Is executable* is enabled.

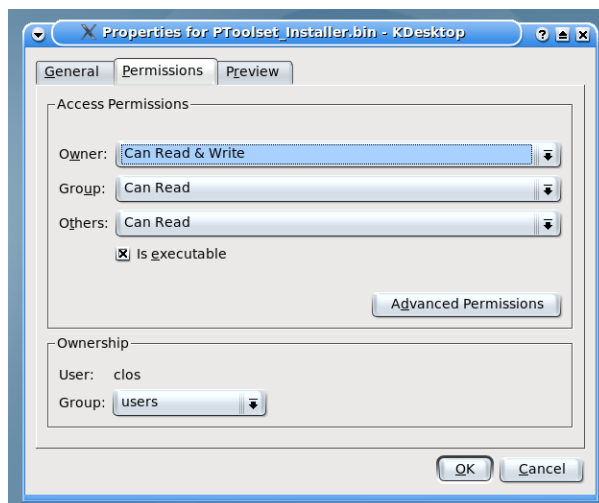


Image 2-1  
File properties

4. Double click on the (*Commander-1.0.2-linux-installer.run*) to start the installation.
5. Follow the instructions given in the different install windows.
6. The complete installation is done automatically.

### To install on MAC OS X

The process of installing your software involves the following steps:

1. Browse to the folder where the downloaded zip file is stored.

2. Double click on the zip file to unzip.
3. Double-click on the communicator application bundle to start communicator.

### Software updates

For new version of the Commander, download the installer file (Windows and Linux) or the zip file (MAC) and handle in the same way as for a first install. The new version will be installed on the same location and the files will be overwritten.

## 2.4 Starting up

### How to start up

1. Double click on the Commander icon on your desktop  
Or,  
click Start → All programs → Barco → Barco Commander → Barco Commander  
The software starts up with the same look and feel as when it was closed before.
2. **Connect and Login** window opens.  
If is not already done, identify a server in the network and used a correct login and password to access directly to the application.  
See the chapter concerning Login below.



The connection is automatically restored with the last server if it is still available.



Login and Password are always required. Previous session was automatically released when the software was closed before.



The look and feel of the software can be different between a Windows installation or Linux installation. Therefore the screenshots in this manual are made on a Windows installation and can be used on all environments as a reference.

## 2.5 Start up of the Commander via a batch file

### How to start up

1. Create a batch file to start up the Commander software by entering the exe file in the batch file.  
drive letter:\installation path\commander.exe -arguments

The Commander can be started with arguments.

Argument	Description
-h	ICMP host name (e.g. -h hostname)
-p	ICMP port (e.g. -p 43758)
-l	Language settings — Available languages are: en   de   pt   es   fr   kr   jp   cn (e.g.- l de)
-q	complete path of the qt style sheet file (e.g. -q path). Qt Style Sheets are a powerful mechanism that allows you to customize the appearance of the user interface.
-v	Version information (e.g. -v)
-r	Allows to set window size (e.g. -r 800X600)

Example: `commander.exe -r 1024X800 -l fr`

### 2.6 User interface presentation

#### Dedicated area

The user interface is organized around a bar (banner) at the top and a working area in the rest of the window, which varies depending on the current module in use.

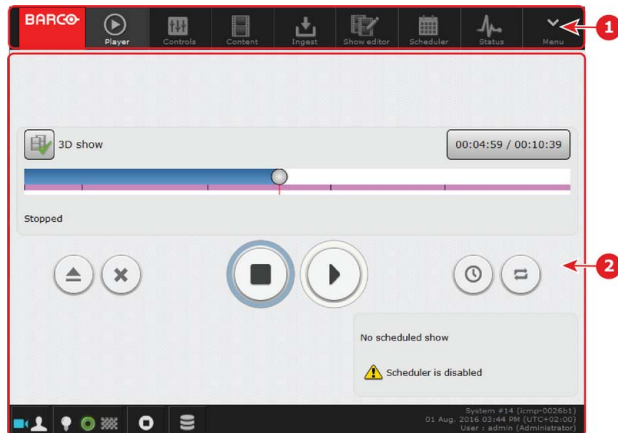


Image 2-2

- 1 Top bar.
- 2 Working area.

#### Top bar

In the Commander application, the top bar is always present regardless of the displayed module. Barco Logo (at left) and menu button (at right) are always present on the top bar. Seven buttons corresponding to seven modules available on Commander application are displayed between the logo and the menu button when an user is logged. Click on one of these buttons gives direct access to the corresponding module.

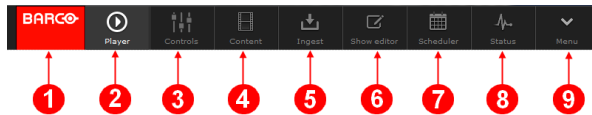


Image 2-3

- 1 **Barco logo**: No action is possible on this logo. Always displayed.
- 2 **Player** button: allows access to the Player module. Displayed only in user session.
- 3 **Controls** button: allows access to the Controls module. Displayed only in user session.
- 4 **Content** button: allows access to the Content module. Displayed only in user session.
- 5 **Ingest** button: allows access to the Ingest module. Displayed only in user session.
- 6 **Show editor** button: allows access to the Show editor module. Displayed only in user session.
- 7 **Scheduler** button: allows access to the scheduler module. Displayed only in user session.
- 8 **Status** button: allows access to the status module. Displayed only in user session.
- 9 **Menu** button: allows access to the general menu. Always displayed.

#### Working area

Except for the **Connect and Login** window, the working area is always organized in the same manner: a main area depending on the current module in use and a status bar on the bottom of the window.

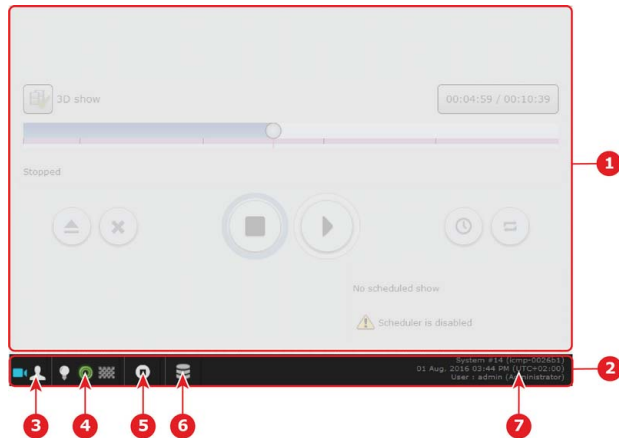


Image 2-4

- 1 Main area.
- 2 Status bar.
- 3 **Status** button: This button displays the hardware (projector/ICMP) status and the operational (invalid show ...) status. It could be also used to switch in the **Status** panel. Depending on the severity of the problem, errors reported here require the intervention of an operator or a technician.
- 4 **Control status** button: This button displays the current Lamp state (on/off) and the current dowsers state (open/close). It could be also used to switch in the **Controls** panel.
- 5 **Player status** button: Provides information on the current playback (player mode). It could be also used to switch in the **Player** panel.
- 6 **Storage status** button: Provides information on the local storage (error). It could be also used to switch in the **Status** panel.
- 7 Auditorium name, date and time, user information.

### Multi Projection option

Assuming the required HW & SW versions are installed, a multi-projection feature could be enabled by a license. An optional button is displayed to the right of the other buttons to indicate the multi-projection status:

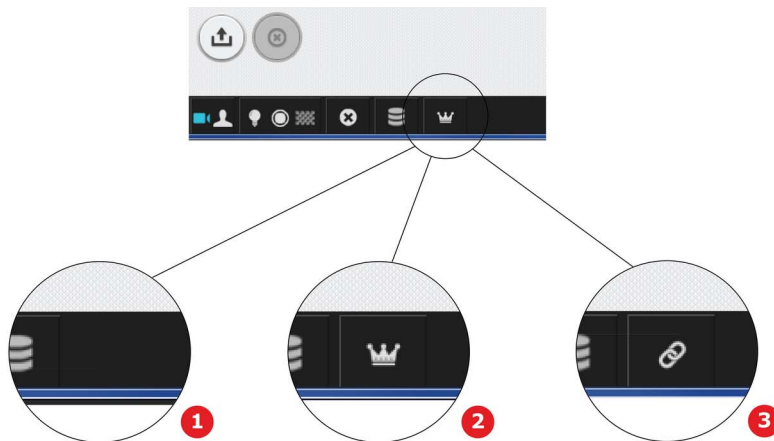


Image 2-5

- 1 No icon: Multi projection not used.
- 2 Crown icon: The projector currently controlled by the application is designated as Master in a multi-projector association.
- 3 Chain icon: The projector currently controlled by the application is designated as Slave in a multi-projector association.

### Immersive Sound option

Assuming the required HW & SW versions are installed, Immersive Sound feature could be used. For more details concerning immersive sound, please refer to chapter "Immersive Sound", page 61.

An optional icon is displayed to the right of the other buttons to indicate the Immersive Sound status:

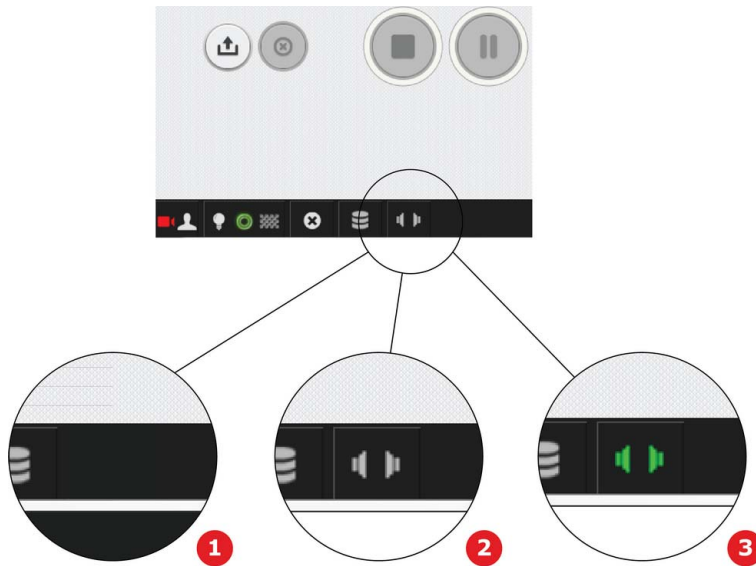


Image 2-6

- 1 No icon: Immersive Sound not configured.
- 2 Icon: Immersive Sound is configured.
- 3 Highlighted icon (green or red): Immersive Sound is in use. More details in the tab below.

The user can obtain more information (status message) by clicking on the icon.

Status	Status message	Icon status
Not configured		No icon
Configured, not connected, no content selected	Not connected	Gray
Configured, not connected, immersive sound content selected	Not connected	Red
Connected, no content selected	Connected	Gray
Connected, immersive sound content selected or playing	Active	Green
Connected, immersive sound content selected, error on content	In error	Red

## 2.7 General menu

### Overview

This menu allows several general actions on the behavior of the application. It is accessible via left click on the **menu** button.

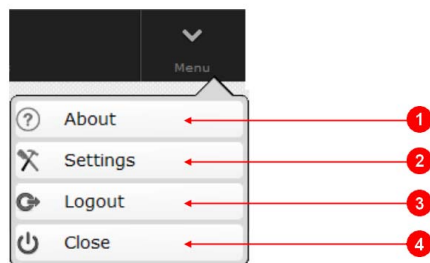


Image 2-7

- 1 **About** button: allows access to the **about** page. Always accessible.
- 2 **Settings** button: allows access to the **settings** page. Always accessible.

- 3 **Logout** button: Log Out the current user. The **Connect and Login** window will be displayed. This button is only accessible when a user is connected.
- 4 **Close** button: Allows to close Commander application. Always accessible.

## 2.8 About page

### Overview

This page contains information about the projector and Commander application. It is accessible via the **menu** button.

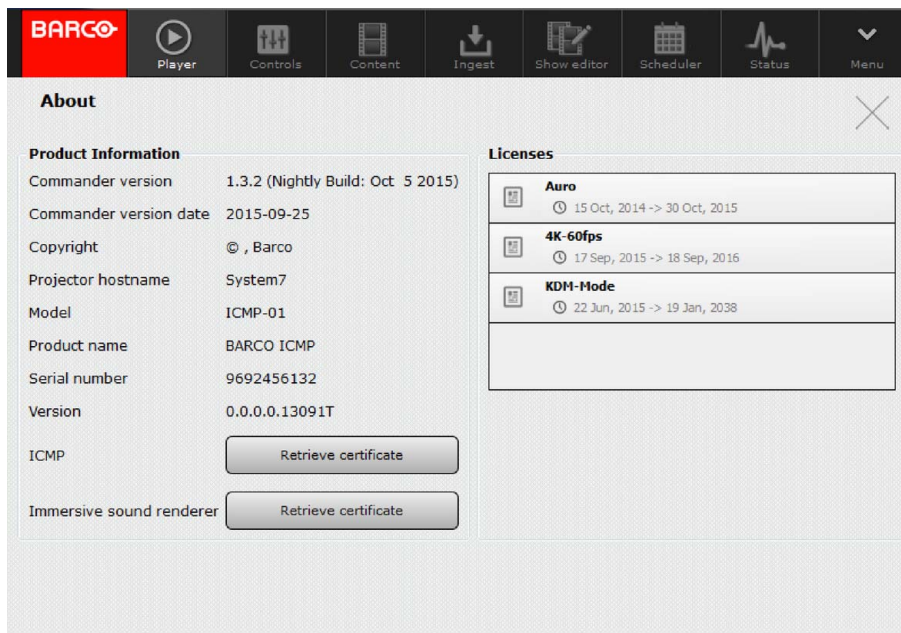


Image 2-8

### Product information

This section contains all information necessary to identify the Commander software and the ICMP product.

- Commander version: The Commander software version (the User interface software describe in this user guide).
- Commander version date: The Commander software distribution date.
- Copyright: © , Barco.
- projector hostname: The host name is the name assigned to the projector (ICMP) to identify the device in the theater network. For further details on installation, please refer to the Communicator user manual. This information is available only if Commander is connected to a server.
- Model: The ICMP is an ICMP-01 model type. This information is available only if Commander is connected to a server.
- Product name: BARCO ICMP. This information is available only if Commander is connected to a server.
- Serial number: Unique number to reference this ICMP. This information is available only if Commander is connected to a server.
- Version: ICMP Software Package version. This version change when a new software version is installed on the ICMP. For further details on installation, please refer to the Communicator user manual. This information is available only if Commander is connected to a server.
- ICMP: Click on this button allow you to retrieve (download) the ICMP certificate from the ICMP main board (BARCO-ICMP-xxxxxxxxxx.pem). An option in Communicator allows to hide this button.
- Immersive sound renderer (option): Click on this button allows you to retrieve (download) the "immersive sound certificate" from the sound renderer (BARCO-immersive\_sound\_renderer-xxxxxxxxxx.pem). This button is visible only if the immersive sound is configured in Communicator.

### Licenses

License files are sometimes necessary to playback some particular content on the player. This section contains the list of the License installed on the ICMP. If no license has been installed, the message 'No licenses found' is displayed!

The complete list of licenses that the user can install on the ICMP is available on the Barco web site [www.barco.com](http://www.barco.com), or on the secured Barco web site <https://www.barco.com/en/signin>. Click on *Products* to display the *All Product categories* page. Then click on *All products (A-Z)* at the right side of this page to display the *Alphabetical product listing* page. Select **Barco Alchemy ICMP**, the page dedicated to the ICMP will displayed. Click on the *option* tab to display the list of available licenses.



Installation of a license is made via Communicator, the Barco configuration software.

### How to obtain the Barco ICMP certificate

1. Click on the **Retrieve certificate** button.  
**Save as** window is displayed.
2. Specify a path where you want to save the file that contains the certificate and click **Save**.

### How to obtain the Immersive sound renderer certificate

Obtain the immersive sound renderer certificate requires that an immersive sound renderer is installed and correctly configured. For more details concerning immersive sound, please refer to chapter "Immersive Sound", page 61.

1. Click on the **Retrieve certificate** button.  
**Save as** window is displayed.
2. Specify a path where you want to save the file that contains the certificate and click **Save**.

### How to check the version number of the current software installed on the ICMP

Update the ICMP with the latest software version allows to receive maximum of functionality and recent bug fixes.

It is recommended to do comparison of the installed version of the ICMP and the latest version available on the Barco partner site:

1. Click on the **About** button on the Barco Commander application.
2. Locate and note the software version.
3. Use the Barco's Partner zone, (<https://www.barco.com>) to check the latest version of the ICMP available. Registration is necessary. If you are not yet registered, click on Partner zone registration and follow the instructions. With the created login and password, it is possible to enter in the partner zone where you can download the new software version. To update, please follow the procedure describe in Communicator user guide.

## 2.9 Settings page

### Overview

The configuration of the ICMP must be fully realized through the configuration software Communicator. However, some user interface settings are accessible via this settings page. It is accessible via the **menu** button.

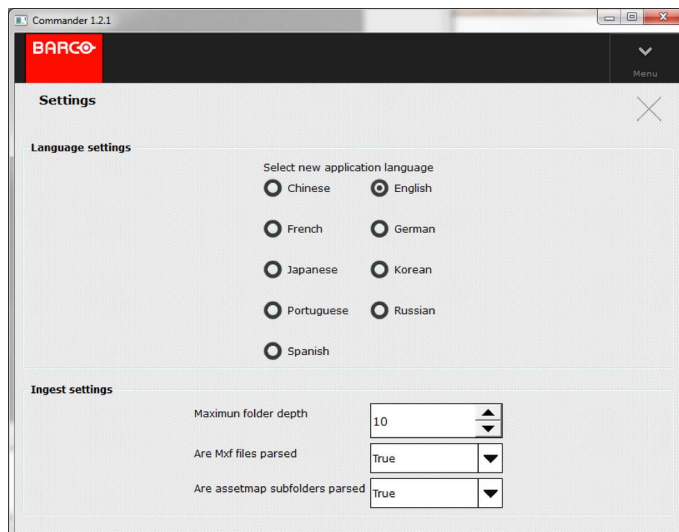


Image 2-9

### Language settings

This parameter allows the user to choose the language of the GUI. Change language require application restart. Confirmation panel is displayed: a user confirmation is needed.



**Close (or restart) Commander has no impact on the ICMP. The current actions continues to run normally (e.g. content playback or content ingest are not disturbed by this action).**



## Ingest settings

Parameters available here allow make balance between the amount of information and the response time during the content scan in the Ingest module. These parameters are to be used carefully. A wrong choice can hide information or slow down the functionality.

- **Maximum folder depth:** This parameter defines the maximum number of sub directories (depth) that could be scanned automatically when an user select a source of content in the Ingest module. The default value is 10.
- **Are Mxf files parsed:** When this parameter turned on (True), the Mxf files that contain information on sound and video are analyzed. The default value is False.
- **Are assetmap subfolders parsed:** When this parameter turned on (True), the folders referenced in the assetmap are scanned. The default value is False.

## 2.10 Connect and login

### Connect and login window overview

This is the first window displayed when Commander software starts. This window allow to the user to choose and to log on a server (ICMP) in the network .

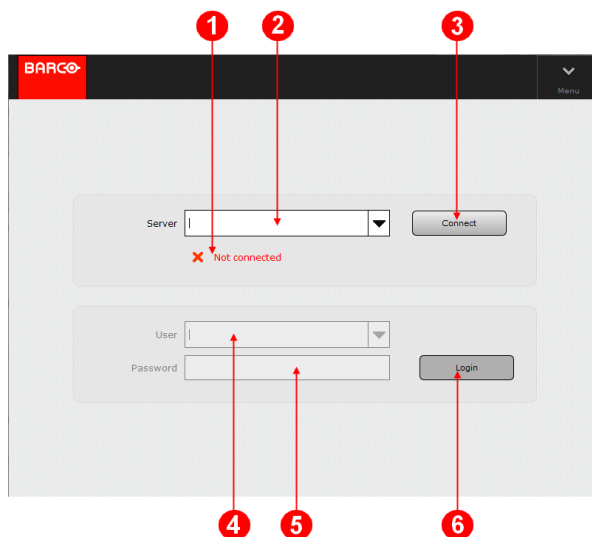


Image 2-10

- 1 **Connection status:** This field gives information on the current status of connection (e.g. connected to 10.241.82.200:43758, connecting to 10.241.82.200:43758, Not connected ... ).
- 2 **Drop-down box** used to choose IP of server (ICMP) connected on the local network (choose in the server list or give a new IP address)
- 3 **Connect** button: Allows to initiate connection on the server selected in the drop-down box.
- 4 **Drop-down box** used to choose the user. This field is accessible only if Commander is already connected to a server (ICMP). Users are defined in Communicator, the Barco configuration software.
- 5 **Field** used to gives the password corresponding to the user selected. This field is accessible only if Commander is already connected to a server (ICMP). Password are defined in Communicator.
- 6 **Login** button: Allows to initiate login on the selected server with the selected user. This button is accessible only if Commander is already connected to a server (ICMP).

### Server connection

Commander could be used to drive several ICMPs. So it is necessary to establish a connection with an ICMP before taking control (logon). The servers and the PC where Commander operates must be in the same LAN. Generally the servers shares the same IP address as their projector.

### Server settings

The modification of server IP address is performed via Communicator, the application dedicated to the settings. For further details on installation, please refer to the Communicator user manual.

### Login overview

Access to Commander is regulated by a principle of recognition of the user via a login. The user must be connected in order to perform any action (playback, load/modify/delete content ...). As specified in the SMPTE standard, there are several levels of rights conferred on the user types. A projectionist will not have the same action field than an administrator.

### User rights setting

The creation and modification of users is performed via Communicator, the application dedicated to the settings.

Access level:

- **Projectionist**: can use the **Dashboard**, **Player** and **Control** panel in Commander. He can load content to the player via the **Content** panel, but cannot add or delete. He has a partial access to the **Ingest** panel where he can use the *Play now* function (the function which allows to play content without ingest it). He can view but not edit other panels.
- The **Show Manager** and **Administrator** can access all panels in Commander.

For further details on installation, please refer to the Communicator user manual

### How to establish connection with an ICMP

1. Select a IP address in the drop-down box if this address has been already used.  
Or,  
give a new IP address corresponding to a server recently added in the LAN.
2. Click on the **Connect** button.

If the connection is established, the user has access to the login Fields.

### How to login

The login operation is done at the start of the application when a server is selected (connected), or after the current user logs off.

1. Select a user in the drop-down box.
2. Give the correct password.
3. Click on the **Login** button.

User is login and the Player page is displayed. The user now have access to the various modules of the software and he can make the all actions authorized (depending on the level of rights of the chosen login).

### How to log out

At any time the user can choose to logout in order to change user. To do this, simply select the **Logout** button in the General menu.

1. Click on the **Menu** button.  
General menu is displayed.
2. Click on the **Logout** button.

Current user is logged out and the **Connect and Login** window is displayed.

## 2.11 File System Check

---

### General

The system utility *File System Check* is a feature for checking the consistency of the file system in the ICMP. The check is run either automatically (see default parameters below), or manually by the user via Communicator, the Barco configuration software.



**Automatic *File System Check* provides only a checking of the file system, not restore. The restore (and other options) is accessible by using Communicator. For further details please refer to Communicator user guide.**

### When the File System Check is to be done?

Automatic *File System Check* is not made at each boot. The system need wait:

- 1 month since the last check before do the next *File System Check*.
- Or 35 reboots counted within the month.



**These default parameters cannot be adapted.**

### Consequences of a File System Check on the GUI (Commander)

Perform a *File System Check* can take few minutes. When this action is performed, the user interface is not accessible. No matter the module, the GUI is frozen and the following message is displayed:

**File system check in progress**

**Elapsed time x seconds**

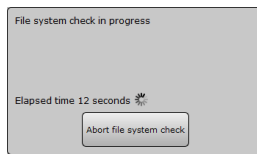


Image 2-11

The user can abort the *File System Check* by pushing on the Abort Button.



**Abort file system check requires special user rights (Administrator or Show Manager).**



**If canceled a maintenance message will be added in Communicator (and status panel), and the projector tail-light will turn blue.**

---



## 3. MODULES DESCRIPTION

### 3.1 Player

#### About player

The player is the module used to control the playback of shows and clips.

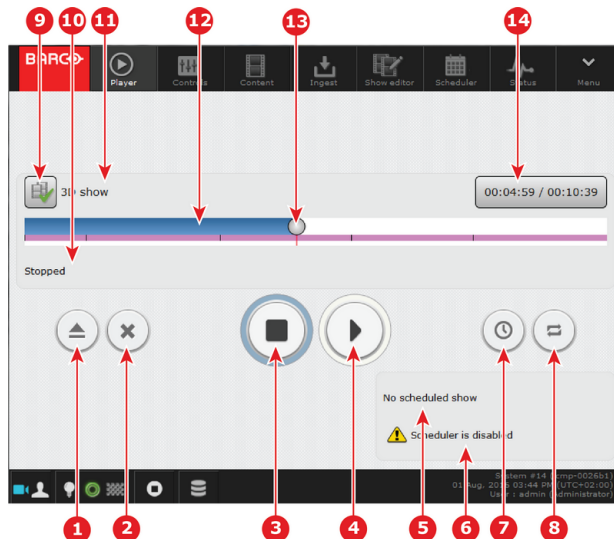


Image 3-1

- 1 **Open** a show or a clip: this button is used to select a show or clip to play in the **Clip selection** panel. Access to the **Clip selection** panel is always available but load a new show is not possible if the playback is not stopped.
- 2 **Clear player**: this button is used to remove the current show without selecting another one. Only available when the player is stopped.
- 3 **Stop** button. When a show is playing, this will stop the playback but retain the position in the show for a possible resume. New action on this button resets the position of the show. When Stop button is push, the screen turns black. When a show or a clip is loaded, the button is circled (highlighted) in blue until the start of the show.
- 4 **Play/Pause**: this button is used to start the playback of the selected show, to make a pause during the playback or to resume the playback after a pause. During pause, the screen remains frozen on the current picture.

Note: when the content loaded is a "clip" (this function is not available if the content type is a "show"), a positioning with the **position button**, or by introducing of a time code, is available. The frozen image corresponding to the new position is displayed after few seconds. This feature is very useful to identify accurately where introduce an intermission or an automatic action triggered by the projector.

- 5 This field is used to display the name and the start date of the next scheduled show. If no show is scheduled the following message is displayed: "No scheduled show".
- 6 Scheduler status. A message is displayed here if the scheduler is disabled.
- 7 **Scheduler on/off**: this button is used to activate or deactivate the schedule mode. The button is circled (highlighted) in green when schedule mode is active.
- 8 **Loop on/off**: this button is used to activate or deactivate the repeat mode. The button is circled (highlighted) in green when repeat mode is active.
- 9 **Open playlist**: If the content loaded is a Show, this button allows displaying a page with the current detailed play list.

Note: Image on this button shows two film pieces when the current content is a Show and a single piece of film if it is a clip. This button is displayed only if a show or clip is loaded.

In this mode, the user could access more easily to the show content because each clip that constitutes the show is displayed on a separate line:

- The user could display the properties of a clip, or chose a clip as starting position (fine twining in the clip is not possible), via a button that appear on the right side of the clip when it is selected.
- A greyed zone indicate the part of the Show already played: all clips positioned before the playback position are greyed. The position in the Clip itself is not available.

- 10 The **status** of the current show or clip (preparing to play, playing, preparing to stop, stopped ...). **Cleared** is displayed until a show or clip is loaded.
- 11 The **name** of the current show or clip. This field is blank until a show or clip is loaded.
- 12 **Progress bar**: displays the progress of the playback on a condensed view of the show or clip.

### 3. Modules description

- 13 Playback position / **Position** button: Display of the current playback position. A button is available here to change the playback position in the show. It is only available when the player is stopped (or during a pause if the content type is a "clip").
- 14 **Current time code and duration** of the loaded content. This button, that displays the time code of the current playback position and the duration of the loaded content, could be used to set the playback position. This functionality is only available when the player is stopped (or during a pause if the content type is a "clip").

When the user click on the **Current time code and duration** button (reference 14), the **Set position** panel is displayed:

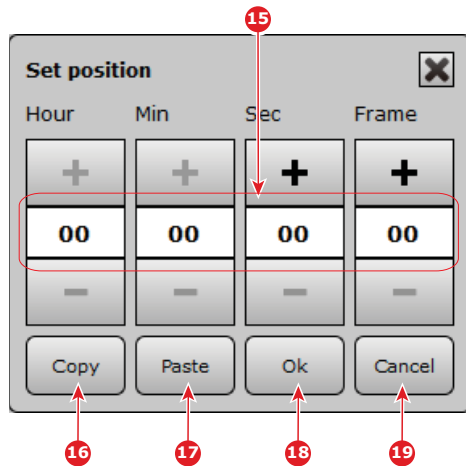


Image 3-2

- 15 **Time code** : Display the current time code of playback position and allows to choose a new time code.
- 16 **Copy** : This button can be used to copy the time code displayed above in a temporary buffer. This functionality allows to re-use this value in the show editor by example.
- 17 **Paste** : This button can be used to display in this panel (above) a time code previously saved in the temporary buffer.
- 18 **Ok** : This button is used to set the playback position with the time code defined above, then close the panel.
- 19 **Cancel** : This button is to used close the panel without modify playback position.

### Stop and Pause buttons behavior

In order to avoid an accident (unintentional stop of playback), the **Stop** and **Pause** buttons have a special behavior. The first click on these buttons start a short timer (more or less 3 seconds). The button is circled (highlighted) in yellow during this time. The action is triggered only if a second click on the button is made before the end of the timer.

### Clip Selection panel

This panel is displayed when the user click on the **Open** button. This panel allows to select a Clip or a Show in order to load it into the player. Access to this panel is always available but load a new show is not possible if the playback is not stopped.

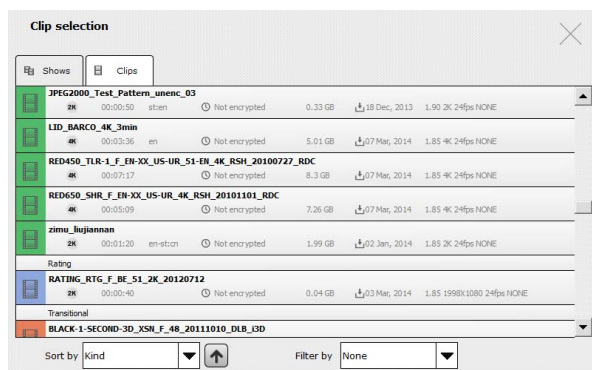


Image 3-3

When the user click on content item (Show or clip), this content is selected. The background color of the item is grayed and two buttons are displayed at the right of the item. The left button allows to load the show or the clip in the player, and the right button allows to display menu of actions available on the selected item.

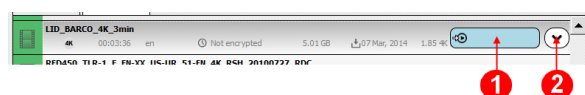


Image 3-4

- 1 **Open** in player button. Allows to load the content in the player.
- 2 **Menu** button. Allows to display menu of actions available on the selected item:
  - **Properties** button:
  - Depending on the type of content (Clip or Show), following information are available:
    - Title: title of the content (e.g. LID\_BARCO\_4K\_3min).
    - Annotation text \*: Human-readable annotation describing the content
    - Content version \*: e.g. urn:uuid:Ac45a96f-c15f-456e-4589-001c039s1ab4
    - Kind \*: Type of content (e.g. trailer). For further details see the chapter dedicated to the content kind in the annex.
    - Status: gives information on the playability of the content (e.g. **OK to play**)
    - Immersive sound status: gives info concerning immersive sound content (e.g. **Ok to play** or **Not playable - Missing asset**)
    - Immersive sound: specifies if immersive sound is used and which type is used (e.g. Dolby Atmos)
    - 3D: indicates if it is a 3D content
    - Resolution: size of the picture(e.g. 3996X2160)
    - Frame rate: Frame rate per second (e.g. 24)
    - Duration: total duration (e.g. 00:03:00)
    - Ingest date: date of ingest on the ICMP (e.g. 11 Apr, 2014)
    - Audio language \*: primary spoken language of the sound marerial (e.g. en)
    - Subtitle language \*: primary spoken language of the subtitle essence (e.g. en)
    - Caption language \*: (e.g. en)
    - Ratings: contains the list of ratings (agency) associated with the content
    - Time widows: list of available time widows
    - Standard \*
    - Encoding \*: e.g. JPEG2000
    - Sound format \*: Format of the sound (e.g. FORMAT\_5\_1)
    - Stereoscopic luminance \*
    - Active area \*
    - Aspect ratio \*: Aspect ration of the picture (e.g. 1024 429)
    - UUID \*: Unic Id of the Clip (e.g. 944faf94-e456-5fbf-9726-ac75ee9464d2)
    - Region \*
    - Distributor \*
    - Issuer \*: describes the person or the company who has created the content.
    - Issue date: indicates the date at which the content was issued (e.g. 17 feb, 2010)
    - Creator software \*: describes the system used to create the content (e.g. radford)
    - Signer \*: identifies the entity that digitally signs the content
    - Signature \*: digital signature to authenticating the content
    - Total size \*: Size of the content (e.g. 4.4 GB)
  - (\*) Available only with Clip content type.

### How to load show or clip

1. Click on **Open** button.  
the **Clip selection** panel is displayed.
2. Find and click on (select) the desired content. Various filters could be applied on the displayed content to help the user in his research (Shows, Clips, sort by ..., filter by ...)

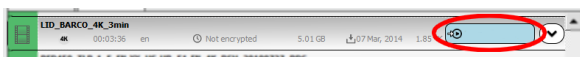


Image 3-5

An **Open in player** button is displayed on the selected content.

3. Click on this button.

The show will be loaded in the player.

### How to change playback position with Position button

1. Left click on the **Position** button (cursor) and hold the button of the mouse pressed.

### 3. Modules description

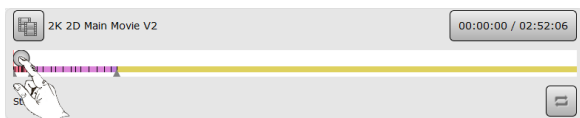


Image 3-6

2. Side to the desired position.



Image 3-7

The current time code on the **Current time code** button changes with cursor.

3. Release the button on the desired position.

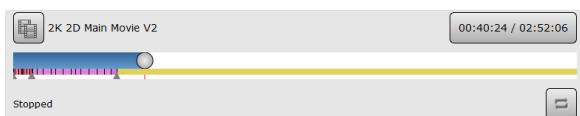


Image 3-8

A new start playback position is fixed.

#### How to change playback position with Set position panel

1. Click on the **Current time code and duration** button.

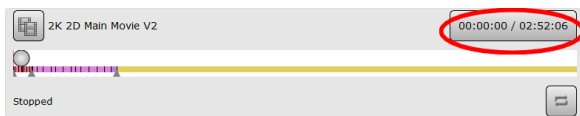


Image 3-9

Set **position panel** is displayed.

2. Enter desired start playback position.

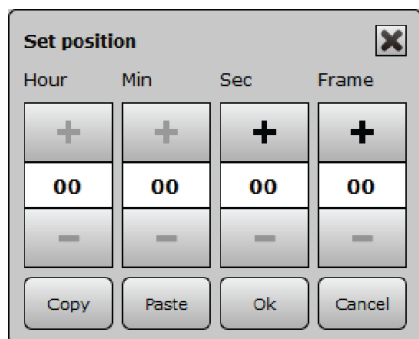


Image 3-10

3. Click **OK**.

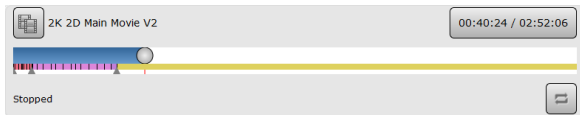


Image 3-11

A new start playback position is fixed.

#### How to change playback position with Open Playlist button

This functionality is available only if the content loaded is a show. If the content is a clip there is no playlist available.

1. Click on **Open playlist** button.

The playlist is displayed.

2. Select a clip in the playlist.



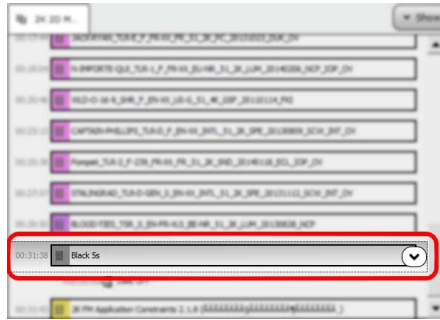


Image 3-12

The clip is selected and a menu button is displayed on the right edge of this clip.

3. Click on the menu button.

A menu is displayed.

4. Choose **Set start here** button in the menu.

A new start playback position is fixed.

### How to playback a show

The usual workflow for a manual show playback is as follow:

1. Load a show. Press the Open button, select the desired show in the list and validate your selection. For further details see above chapter concerning the load of a show or a clip.

The show will be loaded in the player.

2. Chose the start playback position (optional). Use the **position** button to manually set the playback position or set the position with the **Set position** panel accessible by clicking on the **Current time code** button. For further details see above chapters concerning the positioning in show.

3. Start playback. Once the playback position is set, press the **Play** button.

After a few extra verifications, the playback will start.

4. End of playback. The show stops automatically after the completion of its playback.

The timecode is reset (cursor is positioned at the beginning of the show) so that the show is ready to play again.

### How to stop and clear content in player

1. During playback, or during a pause, click on the **Stop** button.

The security timer is started and the button is circled (highlighted) in yellow.

2. Click again on the Stop button before the end of the timer.

The playback stops. The screen turns black.

3. Click **Clear player** button

The show is unloaded from the player.

### How to position the cursor in a clip during a pause.

When the loaded content is a "clip" (this functionality is not available if the loaded content is a "show"), the user can change the playback position by using the **position** button (reference 13 in the Player general view above) or by using the **Set position** panel accessible by clicking on the **Current time code** button (reference 14).

1. During playback click on the **Pause** button (reference 4).

The playback stops. The screen remains frozen on the current picture.

2. Use the **position** button (reference 13) to manually set the playback position.

Or,

click on the **Current time code** button (reference 14) to exactly set the playback position with time code in the **Set position** panel.

The **Set position** panel is displayed:

a) Select a time code (reference 15)

b) Valid the new time code and close the panel by clicking on the **OK button** (reference 18).

3. After short calculating (few seconds), the player use the new time code as playback position and display the frozen image corresponding to the new position.

4. The user can decide to modify again the playback position (repeat steps 2 and 3), or resume the playback.



This feature could be used to identify accurately where introduce an intermission or an automatic action triggered by the projector. In first time, the user could use the "position" button (reference 13) to move the cursor more or less in the desired area where he needs to add the intermission, then he make fine tuning via the "Set Position" panel. And finally, he copies the time code in the temporary buffer ("Copy" button - reference 16) to use it in the show editor in order to create an intermission in its show.

## Playback in scheduled mode

It is possible to automate playbacks of scheduled shows. The scheduling of the shows is done in the Scheduler module. See chapter "Scheduler", page 43.

In the player module, the **Scheduler on/off** button is used to activate or deactivate the schedule mode:

- When schedule mode is active (button circled in blue ), the player will automatically load the next show in advance and start playback at the scheduled time. Manual playback control is disabled.
- When schedule mode is inactive, the playback can be controlled manually but scheduled shows will be ignored.

Since the version 1.2.4 (or higher) of the ICMP software, new behaviors are available with scheduled shows:

- Play alternative input with activated scheduler:  
It is now possible to switch to an alternative input when the scheduler is active. To obtain more details, see below the section dedicated to "Playback while alternative input selected".
- Delay start of a scheduled show:  
When the option *MaximumPlayTriggerDelayInSeconds*, adjusted via Communicator, is greater than 0 (default value), a scheduled show will wait a maximum of X seconds before starting playback unless a *Play Scheduled Show* cue is received between the selection of the show by the scheduler and the configured maximum delay.  
Example:  
A user needs to play an HDMI pre-show before its scheduled show.
  - a) The user creates a show with a black clip at the beginning with a cue that executes a macro to switch to media player input.
  - b) The show is scheduled.
  - c) HDMI input is selected.
  - d) The HDMI device (or automation device linked to it) sends a *Play Scheduled Show* when the pre-show ends.
  - e) At scheduled time :
    - If the HDMI pre-show is not finished, the show will wait X seconds (defined via Communicator in *MaximumPlayTriggerDelayInSeconds* option).  
Note: If the delay is reached, show is started (see next chapter for playout specs).
    - If the HDMI pre-show is done before the schedule time and after the show selection time (defined via Communicator in *PreSelectionDelayInMinutes* option), the show will starts at scheduled time.
    - If the HDMI pre-show is done after the schedule time and before the maximum trigger delay, the show will directly starts.

## Playback while alternative input selected

The user has two possibilities:

1. He can load and play CPL/SPL while an alt. input is selected.  
Two behaviors are possible depending on the type of content currently playing:
  - Black clip: A black clip can be played when an alt. input is selected.
  - Other content: An error is triggered if the player try to play something else than a black clip.  
The error is cleared if the media player input is selected or if the user change position (error is triggered when trying to play and cleared when another action is done)  
Note: The ICMP cannot know which macro to execute in order to activate the media player. The user needs to put a cue in a black clip to switch to the media player before a CPL.
2. He can switch to an alt. input when a play is ongoing.  
Two behaviors are possible depending on the type of content currently playing:
  - Black clip: player is not stopped but error can be triggered if the player needs to play CPL (see section above).
  - CPL: Player is stopped and alternative input is selected.

## Insert Show cue

The user could use an **Insert Show** cue to insert a show playlist in the main show. This functionality is used to create an intermission, or to insert a dynamic playlist for pre-show. For more details concerning setting up of this special action cue, please refer to the chapter "Show editor", page 37.

Once the **Inserted Show** cue was added in a main show, this part of the playlist is displayed in negative in the Player module.

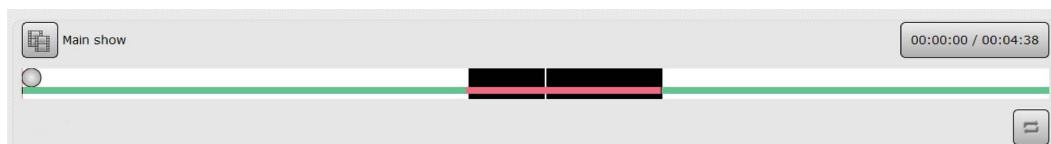


Image 3-13

### Multi Projection option

A slight difference should be noted when projectors are setup in multi-projector mode (Dual-projector, Escape). A new button is displayed on the Player module if the projector controlled by the software is the slave. This button is not displayed on the master projector.

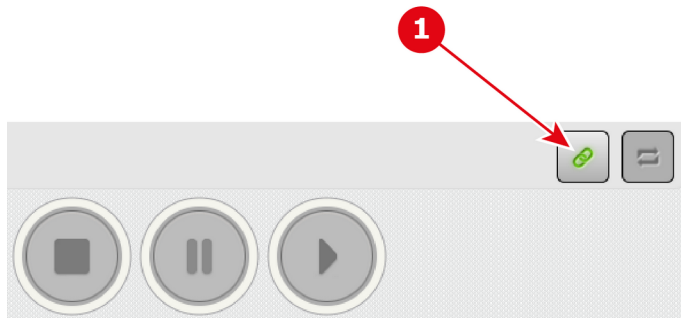


Image 3-14

This button could be used to disengage the slave mode on this projector. When the user pushes on this button, he recovers the access to all player buttons (play, stop, open, ....).

The Slave mode is recovered when the user pushes again on this button or if the projector is restarted.

## 3.2 Control

### About Control module

The control is the module used to manually trigger (outside of a show) automation cues, projector preset formats and projector commands.

Upper tabs allows to reach the different types of controls and settings:

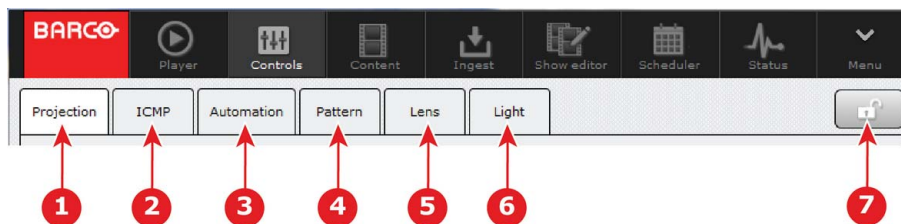


Image 3-15

- 1 Projection
- 2 ICMP
- 3 Automation
- 4 Pattern
- 5 Lens
- 6 Light
- 7 Lock button. In order to avoid an accident, a lock feature allows you to block access to the GUI.

Please, refer to the sections below to obtain more details concerning each type of control and setting.

### Projection

The **Projection** submenu allows to initiate manually some projector commands as open / close dower, turn lamp on / off . This submenu allows also to apply presets projector formats. Used to manually set specific formats for the projector, thus overriding automatic settings.

### 3. Modules description

---

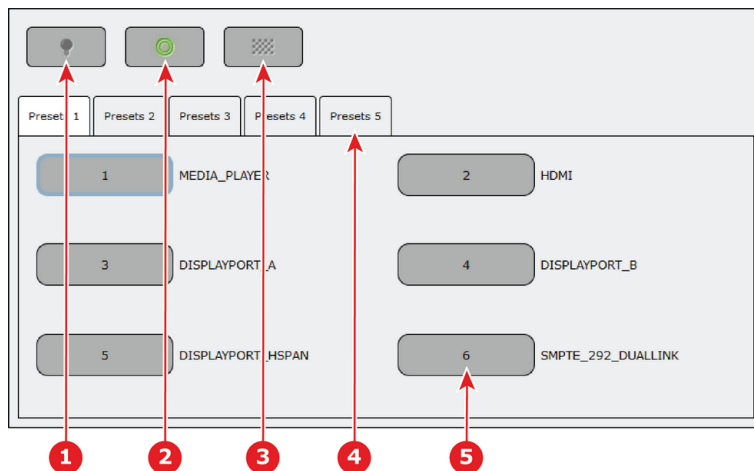


Image 3-16

- 1 Projector macro (command) to manually turn on/off the projector lamp.
- 2 Projector macro (command) to manually open/close the dower.
- 3 Projector macro (command) to display the test pattern. The choice of the test pattern displayed is set in the settings page via the Choose pattern parameter.
- 4 Group of preset formats.
- 5 Button used to set the projector picture to a specific (Macro) setting.

#### How to create modify cue

The projector presets mapping settings (creation, collection in groups ...) are performed via Communicator, the Barco configuration software. For further details on installation, please refer to the Communicator user manual.

#### ICMP

Recently added in this module, the **ICMP** submenu allows to initiate manually some ICMP commands.

The only available command until now is:

- Reboot media server. This command allows to reset the ICMP without completely restart the projector.



Image 3-17

When you push on this button, a message is displayed to inform the user that the media server will be restarted and all active processes will be killed. A confirmation is needed.



**The behavior could be different depending the projector type. Please, refer to the projector manual to obtain more details.**

---

#### Automation

The **Automation** submenu allows to triggered manually automation cues normally used in shows.

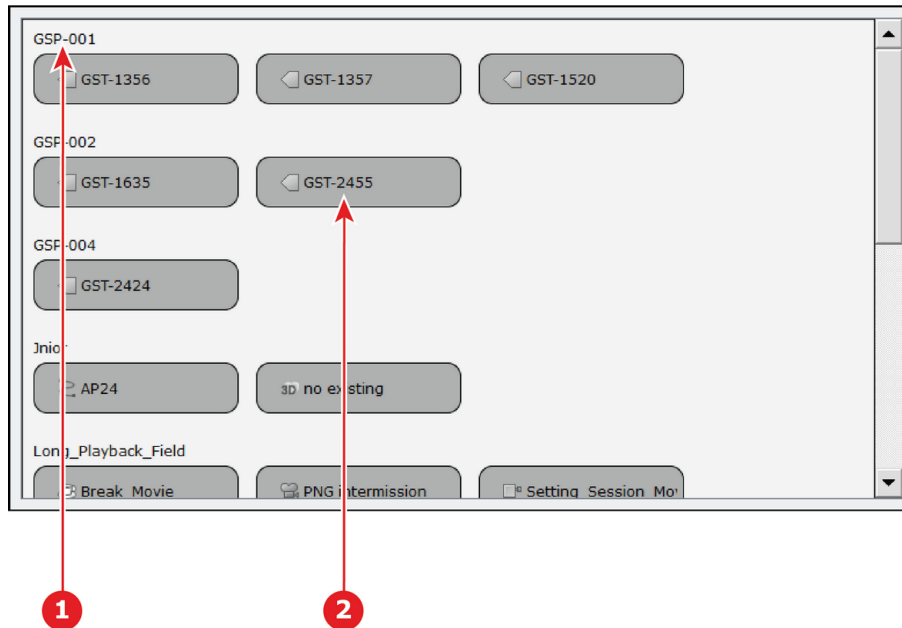


Image 3-18

- 1 Group of automation cues. Cues are listed by group. Each group contains buttons for the various cues of that group.
- 2 Automation cue. Button used by the user to manually trigger automation cues.

#### How to create modify cue

The automation cues settings (creation, collection in groups ...) are performed via Communicator, the Barco configuration software. For further details on installation, please refer to the Communicator user manual.

#### Pattern

The **Pattern** submenu allows to select test patterns. These patterns have been created to provide an easily available means of quickly checking display performance.

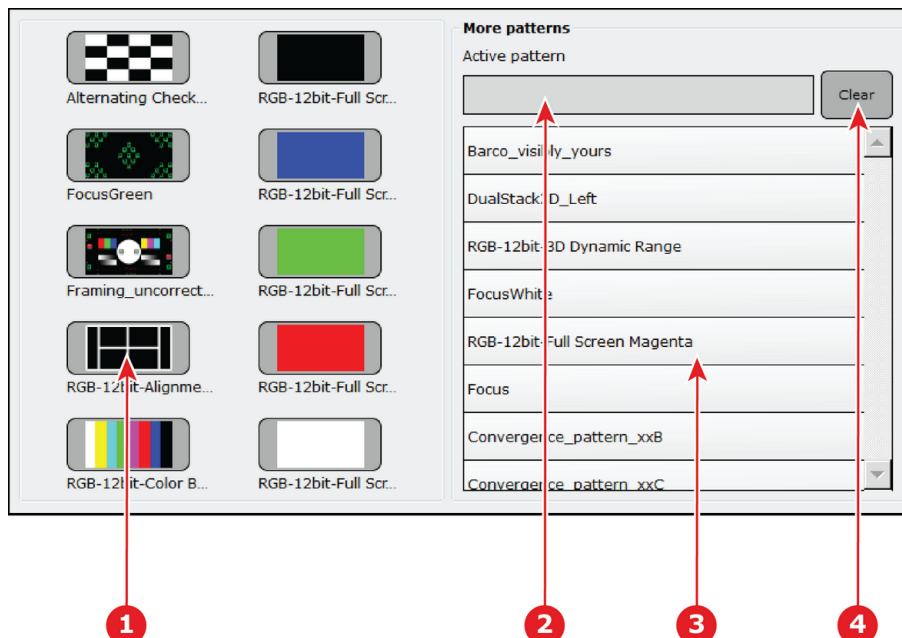


Image 3-19

- 1 10 predefined patterns can be quickly selected via the shortcuts.
- 2 Name of selected pattern.

### 3. Modules description

- 3 List of available patterns.
- 4 Clear Pattern. Allows to clear current selected pattern.



The patterns behind the pattern shortcuts are always displayed in the RGB color space. When the projector is using a different color space at the moment the pattern is activated, it will switch to the RGB color space. When the pattern is cleared, everything will be set back to the original settings except masking, resizing and anamorphic lens factor.

#### How to select predefined pattern

10 predefined patterns can be quickly selected via the shortcuts.

1. Click on one of the 10 predefined pattern shortcuts.  
The selected pattern will be displayed and the name of the selected pattern is displayed.  
Note: The pattern is always displayed in the RGB color space even when the projector was using a different color space at the moment the pattern was activated.

#### How clear selected pattern

1. Click on the **Clear pattern** button.  
The currently displayed pattern is removed and the settings are set back to the previous setting with the exception of masking, resizing and anamorphic factor.

#### How to selected pattern in the list

1. Select a test pattern out of the list.  
A **Select** Button is displayed.
2. Click on **Select** button.  
The selected pattern will be displayed and the name of the selected pattern is displayed.

### Lens

The **Lens** submenu allows to adjust the lens shift, focus and zoom.



Only possible for projectors equipped with motorized lenses.

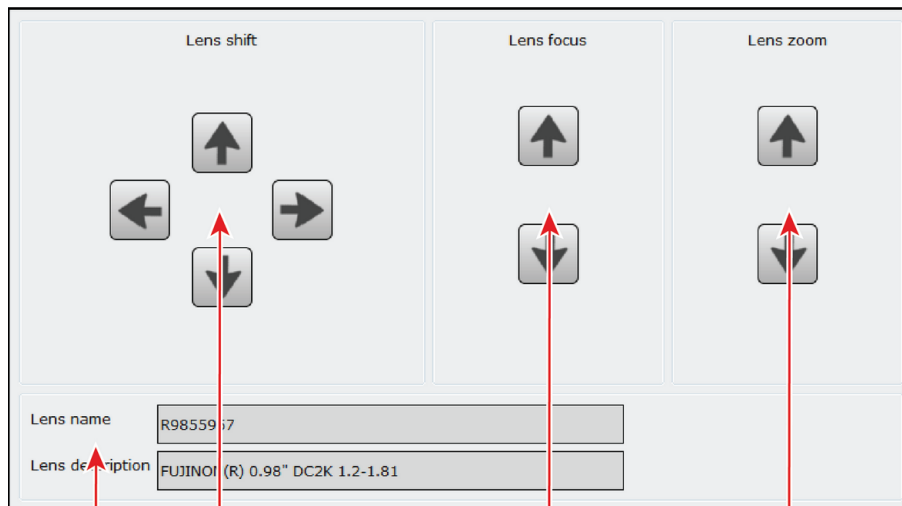


Image 3-20

- 1 Lens information. Name and Description of the current Lens.
- 2 **Lens Shift.** Allows adjust the Lens position.
- 3 **Lens Focus.** Allows adjust the Lens focus.
- 4 **Lens Zoom.** Allows adjust the Lens zoom.

#### How to adjust the lens

To shift the image, click on the **arrow** buttons under Lens shift.

To zoom the image, click on the **arrow** buttons under Lens zoom.

To focus the image, click on the arrow buttons under Lens focus.

## Light

The **Light** submenu allows to adjust the light output.

There are two methods to adjust the light output:

- Normal : The lamp is directly dimming by the user.
- CLO (Constant Light Output) : The user adjust a parameter (CLO) that will be use to fix a target and correct the light output differences in the lamp. The target is reached each time the lamp is switched off and is ignited again.

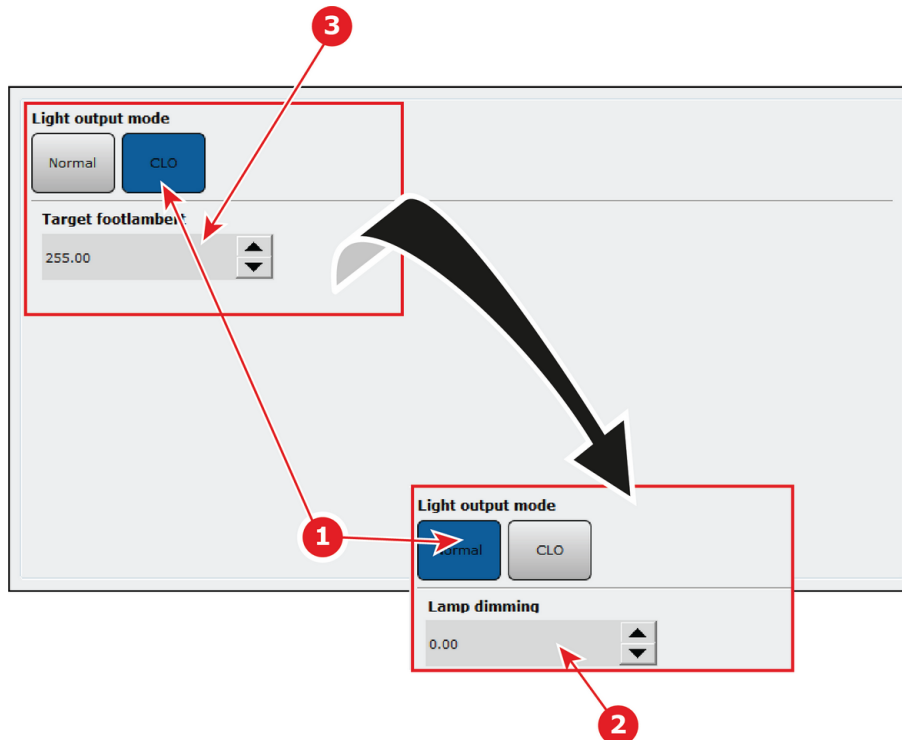


Image 3-21

1 Light output mode. Menu with two buttons. Allows direct access to the desired type:

- Normal: the lamp dimming value can be set directly in the input box.
- CLO (Constant Light Output): a target footlambert value can be entered in the input box and apply each time the lamp is switched off and is ignited again.

2 Text box Lamp dimming. Displayed only when Normal Light output mode is chose. Allows to set the lamp dimming value.

3 Target footlambert. Displayed only when CLO Light output mode is chose. Allows to enter a value in footlamber.

### How to setup in normal mode

Click on the up down control of the spin box until the desired value is reached.

Or, click inside the text box and enter a new value with the keyboard.

The Current lamp output and Lamp power will change accordingly.

### How to setup in CLO mode

Click on the up down control of the spin box until the desired value is reached.

Or, click inside the text box and enter a new value with the keyboard.

The lamp power will change accordingly between maximum and minimum until the entered light output is reached each time the lamp is switched off and is ignited again.

When the entered value is to high, the lamp power goes to its maximum. When the value is to low, the lamp power goes to its minimum.

## 3.3 Content

### About Content

The content is the module used to manage the content stored on the ICMP.



Image 3-22

- 1 Tabs to select a content type. Actually 3 types of content are available:
  - **Shows:** assembly of clips and automation cues. You could download the shows on the ICMP via the "ingest" module or you could manufacture them into the Show Editor module.
  - **Clips:** Digital Cinema Packages (set of files) that contain all picture, sound, subtitle and metadata necessary to playback content such as movie or trailer, advertisement ... You could download these packages, or "Clips" on the ICMP via the "ingest" module
  - **Keys:** set of data files, also called KDM, those unlock the Digital Cinema Package for playback on a specific server during a certain time period. For security reason, the keys are delivered to the theater separately from the Clips. You must download keys on the ICMP via the "ingest" module.
- 2 General menu. Set of buttons for various actions on the content:
  - Refresh: Allows to refresh content list.
  - Select: allows to select several contents in order to perform grouped actions.
  - Delete: allows to delete selected contents.
  - Cancel: allows to deselect selected contents.
- 3 Storage: gives information about the remaining space on the hard drives of the ICMP.
- 4 List of content of the selected type. Each element contains some details depend on the type of content (title, validity, duration, format ...) If a content is selected a menu button is displayed on the right of the element. Some actions are available on the content if the user push on this button. See section below for further details concerning the action list.
- 5 Drop-down box used to sort contents according to various parameters. The available parameters are:
  - Title
  - Ingest date
  - Duration
- 6 Button used to reverse the sort result.
- 7 Drop-down box used to filter the displayed content. The available filters are:
  - None
  - Title \*
  - Validity \*

(\*) Select this option triggers the display of an additional field that will be used to fine-tune the filtering (Validity), or enter the title (title option).

### Informations displayed on the content item

The information displayed on the content item (depend on the content kind), give an overview on the characteristics of this content. The entire information on the content are available in the properties panel. See below for further details.



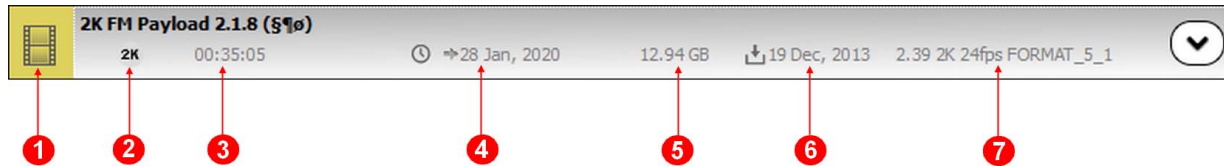


Image 3-23

- 1 Icon of the content. The icon depends the category, type and validity of the content. For further details see the chapter dedicated to the content icons in the annex.
- 2 Set of symbols that give information on the resolution (2K/4K/HD), frame rate (HFR), 2D/3D...
- 3 Duration of the content.
- 4 Validity. Gives an overview on the validity of the content. This field could indicate if the content is encrypted or not, if the key is missing, the end date of the time windows (end of validity) ...
- 5 Size of the content.
- 6 Ingest date.
- 7 Informations on the video and sound format.

### Select a content

When the user click on content item (Show, clip or key), this content is selected. The background color of the item is grayed and a button is displayed at the right of the item. This button allows to display menu of actions available on the selected item.

### Actions available on the selected content

If you push on the button placed to the right edge of a selected element, a menu with actions available for the type of the content selected is displayed.

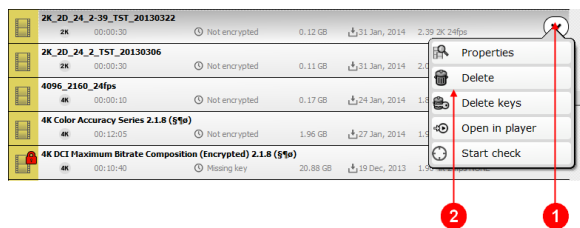


Image 3-24

- 1 Menu button
- 2 Action menu

The actions available on the content depend on the type of content:

### 3. Modules description

- **Shows** content type:

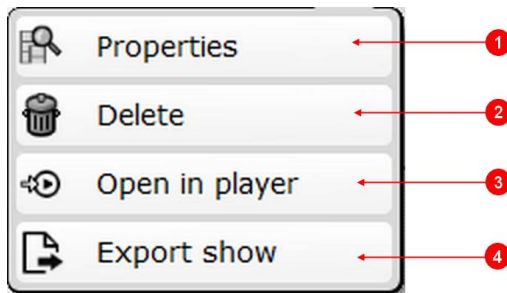


Image 3-25

- 1 **Properties:** Display a panel with all information (predefined by DCinema standards) available on the concerned show.
  - Title: title of the content (e.g. LID\_BARCO\_4K\_3min)
  - Show Status: gives information on the playability of the content (e.g. OK to play)
  - Immersive sound status: gives info concerning immersive sound content (e.g. **Ok to play** or **Not playable - Missing asset**)
  - Immersive sound: specifies if immersive sound is used and which type is used (e.g. Dolby Atmos)
  - 3D: indicates if it is a 3D content
  - Resolution: size of the picture (e.g. 3996X2160)
  - Frame rate: frame rate per second (e.g. 24)
  - Duration: total duration (e.g. 00:03:00)
  - Creation date: indicates the date at which the content was created
  - Ingest date: date of ingest on the ICMP (e.g. 11 Apr, 2014)
  - Issue date: indicates the date at which the content was issued
  - Ratings: contains the list of ratings (agency) associated with the content
  - Time Window: list of available time windows. Note: when Immersive sound option is used, you can find here a Media-server (ICMP) time window and a time window dedicated to immersive sound renderer.
  - Creator: describes the person or the company who has created the content
- 2 **Delete:** Deletes the show. Depending the situation, several confirmation windows are displayed. For more details concerning these messages, please refer to chapter "Delete content messages", page 73.
- 3 **Open in player:** Allows loading the show in the player.
- 4 **Export Show:** Displays a Export Panel. The user need choose a file name and a path to export a show (in XML format), and finally click on **OK** button.

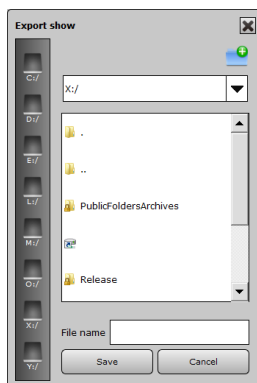


Image 3-26

- **Clips** content type:

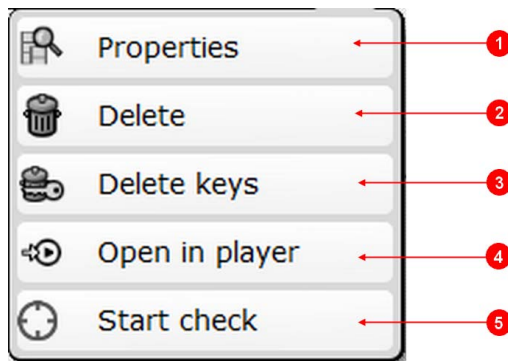
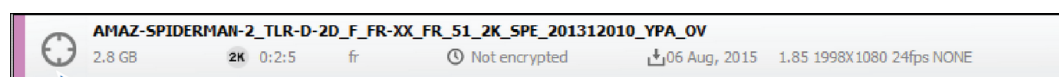


Image 3-27

- 1 **Properties:** Display a panel with all information (predefined by DCinema standards) available on the concerned clip.
  - Title: title of the content (e.g. LID\_BARCO\_4K\_3min)
  - Annotation text: Human-readable annotation describing the content
  - Content version: e.g. urn:uuid:Ac45a96f-c15f-456e-4589-001c039s1ab4
  - Kind: Type of content (e.g. trailer). For further details see the chapter dedicated to the content kind in the annex
  - Clip Status: gives information on the playability of the content (e.g. **OK to play**)
  - Immersive sound status: gives info concerning immersive sound content (e.g. **Ok to play** or **Not playable - Missing asset**)
  - Immersive sound: specifies if immersive sound is used and which type is used (e.g. Dolby Atmos)
  - 3D: indicates if it is a 3D content
  - Resolution: size of the picture (e.g. 3996X2160)
  - Frame rate: Frame rate per second (e.g. 24)
  - Duration: total duration (e.g. 00:03:00)
  - Ingest date: date of ingest on the ICMP
  - Audio language: primary spoken language of the sound material (e.g. en)
  - Subtitle language: primary spoken language of the subtitle essence (e.g. en)
  - Caption language: Caption language: (e.g. en)
  - Ratings: contains the list of ratings (agency) associated with the content
  - Time window: list of available time windows. Note: when Immersive sound option is used, you can find here a Media-server (ICMP) time window and a time window dedicated to immersive sound renderer.
  - Standard
  - Encoding: e.g. JPEG2000
  - Sound format: Format of the sound (e.g. FORMAT\_5\_1)
  - Stereoscopic luminance
  - Active area
  - Aspect ratio: Aspect ration of the picture (e.g. 1024 429)
  - UUID: Unic Id of the Clip (e.g. 944faf94-e456-5fbf-9726-ac75ee9464d2)
  - Region
  - Distributor
  - Issuer: describes the person or the company who has created the content
  - Issue date: indicates the date at which the content was issued (e.g. 17 feb, 2010)
  - Creator software: describes the system used to create the content (e.g. radford)
  - Signer: identifies the entity that digitally signs the content
  - Signature: digital signature to authenticating the content
  - Total size: size of the content (e.g. 4.4 GB)
- 2 **Delete:** Deletes the clip. Depending the situation, several confirmation windows are displayed. For more details concerning these messages, please refer to chapter "Delete content messages", page 73.
- 3 **Delete:** Deletes the clip and its keys. Depending the situation, several confirmation windows are displayed. For more details concerning these messages, please refer to chapter "Delete content messages", page 73.
- 4 **Open in player:** Allows loading the clip in the player
- 5 **Start Check:** Performs an integrity checking of the clip. Sometimes, this action can take several minutes. In this case, an icon informs the user that a checking action is on going.



1

### 3. Modules description

- **Keys** content type:



Image 3-28

- 1 **Properties:** Display a panel with all information (predefined by DCinema standards) available on the concerned key
  - CPL title: title of the CPL concerning by this key
  - Key annotation text: Human-readable annotation describing the key
  - Kind: type of KDM (e.g. immersive\_sound\_renderer)
  - Status: gives information on the playability of the content with this key (e.g. OK to play)
  - Ingest date: date of ingest on the ICMP (e.g. 11 Apr, 2014)
  - Audio language: primary spoken language of the sound material of the concerning content (e.g. en)
  - Subtitle language: primary spoken language of the subtitle essence of the concerning content (e.g. en)
  - caption language: (e.g. en)
  - Time window: list of available time widows.
  - Sound format: Format of the sound of the concerning content (e.g. FORMAT\_5\_1)
  - UUID: Unic Id of the key (e.g. 944faf94-e456-5fbf-9726-ac75ee9464d2)
  - Issuer: describes the person or the company who has created the key.
  - Issue date: indicates the date at which the key was issued (e.g. 17 feb, 2010)
  - Creator software: describes the system used to create the key (e.g. Wailua v0.8.50)
  - Signer: identifies the entity that digitally signs the content
  - Signature: digital signature to authenticating the key
- 2 **Delete:** Deletes the key. Depending the situation, several confirmation windows are displayed. For more details concerning these messages, please refer to chapter "Delete content messages", page 73.

#### Multiple delete

When the user switches on the "multiple delete" mode (reference 1), the **delete** button appears (reference 2) and a column with checkboxes is displayed on the left of the panel (one box per element) (reference 3) by clicking on the checkboxes. He could delete his selection in only one action by pushing on the **delete** button (reference 2).

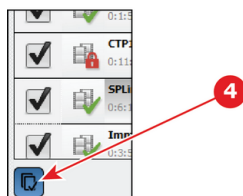
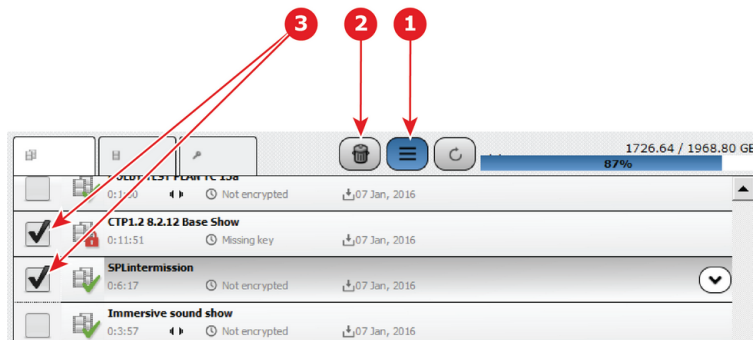


Image 3-29

On the lower right corner, the select all button (reference 4) allows to select all elements. Click once again on this button allows to unselect all selected elements.

#### Immersive sound (option)

Assuming the required HW & SW versions are installed, Immersive Sound feature could be used. For more details concerning immersive sound, please refer to chapter "Immersive Sound", page 61.

Use encrypted content with immersive sound requires to ingest two KDMs on the ICMP:

- one KDM for the IMB (Barco ICMP).
- one KDM for the OMB (Immersive Sound Renderer).



**When an encrypted content with immersive sound will be loaded in the player, the ICMP will automatically transfer the correct KDM to the Immersive Sound Renderer.**



**Load an encrypted content with immersive sound can take a few extra seconds compared to the classic content (connection with the Immersive Sound Renderer and certificate checking).**

A special Icon (see ref 2 in the picture below) indicates if the content uses immersive sound:

- Keys

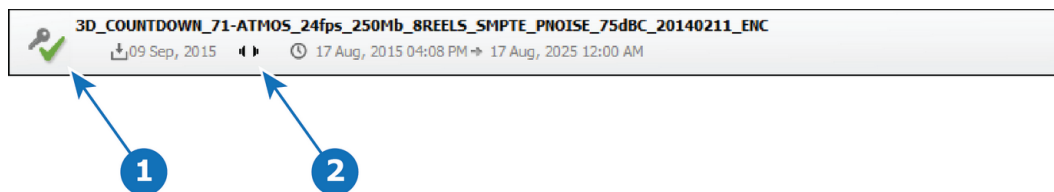


Image 3-30

- 1 Icon assigned to KDM validity
- 2 Immersive sound icon

- Clips

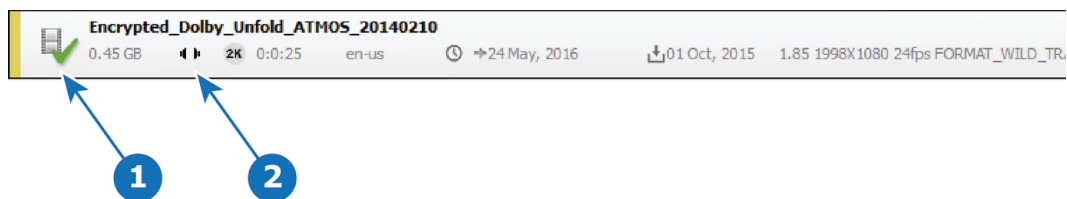


Image 3-31

- 1 Icon assigned to Clip validity
- 2 Immersive sound icon

- Shows

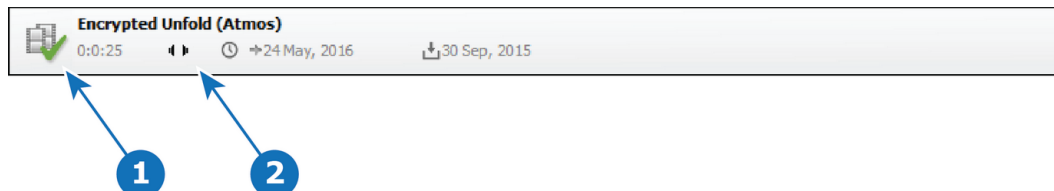


Image 3-32

- 1 Icon assigned to Show validity
- 2 Immersive sound icon



**For further details concerning the validity Icons, please refers to chapter "Content types and validity", page 69.**



**An additional filtering option is available to filter the immersive sound content.**

## 3.4 Ingest

### About ingest

The ingest module is used to import content (storage tab) from an external source to the ICMP and check the status of ingest jobs (ingest jobs tab).

### 3. Modules description

#### Ingest jobs tab

Tab allows the user to manage ingest jobs.

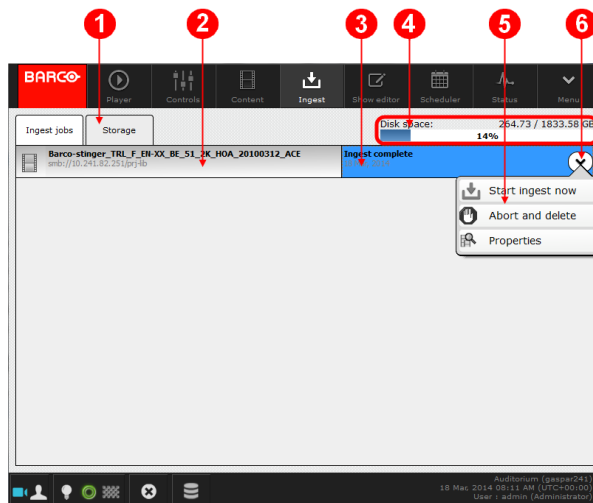


Image 3-33

- 1 Tabs to select the list of ingest jobs or the list of the available content (shows, clips or keys) on the various media (network or USB).
- 2 List of the current ingest jobs.
- 3 Status of the job (Complete, failed, pending, in progress ...).
- 4 Disk space: gives information about the remaining space on the hard drives of the ICMP.
- 5 Menu with actions available on the selected job:
  - Start ingest now. Allows to restart an ingest job unfinished.
  - Abort and delete. Allows stop and remove a job in progress.
  - Properties. Display a panel with all information available (Title, External storage URL, Ingest State, Size, Issuer...) on the job.
- 6 **Menu** button. Allows to display the menu of actions available on the selected job.

#### Storage tab

Tab allows the user to choose the source and begin to ingest.

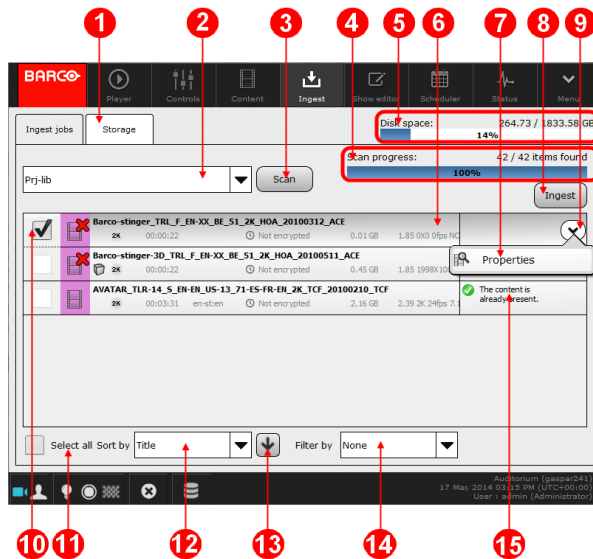


Image 3-34

- 1 Tabs to select the list of ingest jobs or the list of the available content (shows, clips or keys) on the various media (network or USB).
- 2 Drop-down box allowing the user to choose the source (location) of the available content that will be displayed in the content list.  
 Note: It is possible to choose all the locations available (Scan all sources) but this choice may cause a long waiting time depending on number and size of sources.
- 3 **Scan** button: Button to refresh the content list.
- 4 Scan progress: Sometimes refresh the list of content from an external lib may take several minutes. This progress bar gives information on this operation.
- 5 Disk space: gives information about the remaining space on the hard drives of the ICMP.
- 6 List of the available content on the media selected in the Drop-down box.
- 7 Menu with actions available on the selected content. The available actions are:
  - Display properties: a panel with properties of the content are displayed.
  - Open in player: the content is directly loaded in the player module without being ingested. See section dedicated to the "Play now" feature below.
- 8 **Ingest** button: allows to starting an ingest of the selected content.
- 9 **Menu** button. Allows to display the menu of actions available on the selected content.
- 10 Check-boxes: Allows to select the available content. Note: Content already loaded on the ICMP is not selectable.
- 11 Checkbox: Allows to select all the available content in one action.
- 12 Drop-down box used to sort contents according to various parameters. The available parameters are:
  - Title
  - Issue date
- 13 Button used to reverse the sort result.
- 14 Drop-down box used to filter the displayed content. The available filters are:
  - None
  - Shows
  - Clips \*
  - Keys \*
  - Title \*

(\*) Select this option triggers the display of an additional field that will be used to fine-tune the filtering (Clips or Keys option), or enter the title (title option).
- 15 Message that indicates the content is already present on the ICMP.

### Quick Scan (optimization)

When the user chooses a content source, the scanning could take few moments. For the purpose of optimization, the software is calibrated to parse only a part of the data available on the target.

By default, the following setup is apply:

- Mxf files are not parsed. Information on sound and video contained in these files are not available.
- Assetmap subfolders are not parsed.
- Maximum of subfolder depth is limited.

It is possible to remove this choice by deselecting the checkbox at the top left of the panel, located just under drop-down box allowing the user to choose the source.

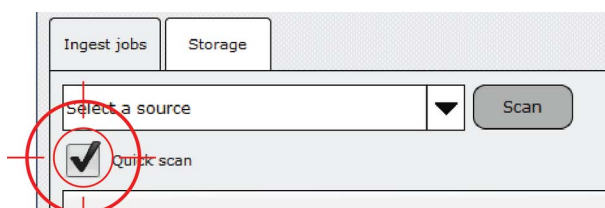


Image 3-35

### How to ingest content

1. Click on the tab **Storage**. This part of the Ingest module is dedicated to import all kind of content from an external source to the ICMP
2. Choose the source (location) where the content is located in the Drop-down box (reference 2 in the storage tab).

### 3. Modules description

---

CPLs available on the targeted source are displayed.

3. Use the check-boxes positioned at the left of each content to select the desired content (reference 10 in the storage tab).  
Or,  
Use the **select all** checkbox to select all available content (reference 11 in the storage tab).

Contents are selected and the Ingest button available (reference 8 in the storage tab).

4. Click on the **Ingest** button.

One job is created for each selected content.

5. Click on the tab **Ingest Jobs**.

News jobs are added to the list of current jobs. Jobs status could be:

- pending: The job will start in few moments.
- ingest ongoing: The job is under progress.
- ingest completed: The job is completed.

6. After few moments (depending the size of the content) all jobs are indicated as completed.



---

**Sometimes ingest failed for unknown reason (HDD overflow , loss of connection). In this case the job remains in ingest failed status. It will be necessary to restart the ingest job by pushing on the Start ingest now button in the menu available when the user select the job (button displayed on the right edge of the job).**

---



---

**Choose all the locations available (Scan all sources) in the step 2 may cause a long waiting time depending on number and size of sources. For optimization purposes, it is recommended the user to be more accurate in its choice.**

---

### About Play now



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**"Play now", procedure allowing you to play content without having to perform ingest, must remain an exceptional method. It is an emergency measure which involves risks in terms of performance and which can alter the quality of the show.**

---

"Play now" is a feature allowing you to play content without having to ingest it before. With this method it is possible to play directly content from an ethernet source (NFS only) or local connected sources (USB 3.0). The capacity of the network, or the quality of the connection with the local source, are very important to guarantee the playout robustness. Issues concerning streaming performance are handled by an "auto pause" mechanism: the show pauses automatically when the data is no longer sufficient. The show will restart as soon as the content is available again (NFS only).

With the "Play now" feature, integrity check of the content, normally detected during the ingest step, is limited.

The following rules must be considered:

- Content integrity checks cannot be performed remotely and content integrity is assumed.
- Only the presence of the assets is verified ("Missing assets") and may invalidate the "Play now" feature.
- Works with non encrypted and encrypted CPLs (encrypted CPLs will always be marked as "Missing Key", even if the KDM is present on the system).

When ICMP is in a Multi projector setup (Escape mode, Dual mode ...), the playback will occur in fallback mode:

- Escape CPL will only render the center screen.
- 3D CPL will play in 2D if Dual 3D is configured for one eye.
- 3D CPL will play in 3D if Dual 3D is configured for both eyes.

### How to play without ingest (Play now)

1. Click on the tab **Storage**. This part of the Ingest module is dedicated to import all kind of content from an external source to the ICMP
2. Choose the source (location) where the content is located in the Drop-down box (reference 2 in the storage tab).  
CPLs available on the targeted source are displayed.
3. Click on the button (reference 7) located at the right side of the concerned content.



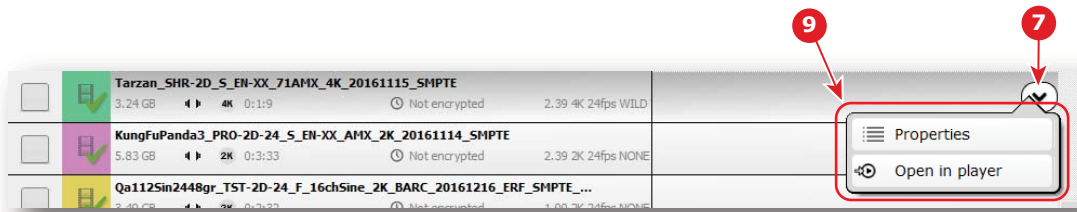


Image 3-36

A menu (reference 9) with actions available for this content is displayed.

4. Click on "Open in player" button.

The content is directly loaded in the player module without being ingested.



The button "Open in player" could be greyed if the content is not available ("missing assets").

### 3.5 Show editor

#### About show editor module

The show editor module is used to assemble clips and automation cues to create a show. The workspace is divided in two parts: on the left, the Content Browser and on the right, the current edited show.

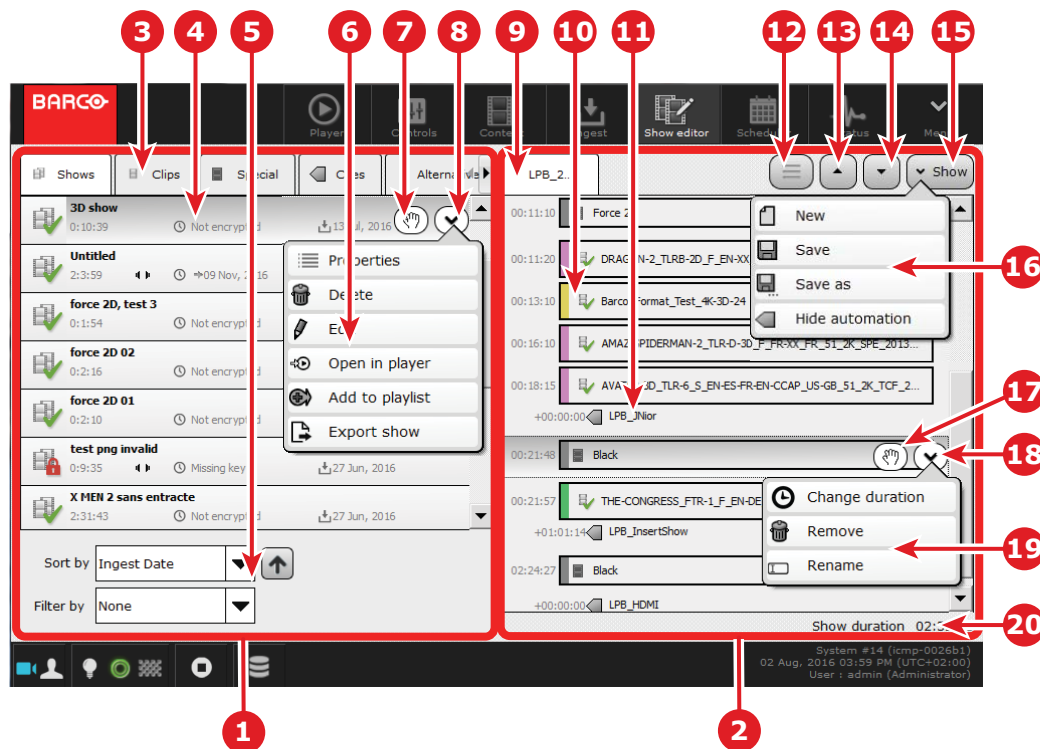


Image 3-37

- 1 Content browser where the operator could choose the elements of content that he can drag and drop on the show currently edited.
- 2 Show editor with the current edited show.
- 3 Tabs to select the content type that will be displayed in the content browser (**Shows, Clips, Special Clips, Cues, Alternative inputs**).
- 4 Selected content in the content browser. When a item is selected, buttons (**Drag & Drop** button and **Menu** button) are displayed to the right edge of item. See details below (Reference 7 and 8).

### 3. Modules description

---

- 5 Filters. Options to filter the displayed content in the content browser based on various parameters such as title, type, validity status, duration...
- Note: Filter are available only on **Show** and **Clip** content types.
- 6 Menu with actions available on the selected content. Actions varies depending on the type of content:
- Shows:
    - **Properties**: Display a panel with all information available (title, duration, time window ...) on the concerned show.
    - **Delete**: Allows to remove the selected Show. A confirmation window is displayed.
    - **Edit**: Allows to load the selected show in the Show editor.
    - **Open in the player**: Allows loading the show in the player
    - **Add to playlist**: Allows to add the selected show to the currently edited show in the Show editor.
    - **Export show**: Displays a Export Panel. The user need choose a path to export a show in XML format.
  - Clips:
    - **Properties**: Display a panel with all information available (title, duration, time window ...) on the concerned clip.
    - **Open in the player**: Allows loading the clip in the player
    - **Add to playlist**: Allows to add the selected clip to the currently edited show in the Show editor.
  - Special Clips:
    - **Add to playlist**: Allows to add the selected clip to the currently edited show in the Show editor.
  - Cues:
    - **Add to playlist**: Allows to add the selected Cue to the currently edited show in the Show editor.
  - Alternative Input Clips:
    - **Properties**: Display a panel with all information available (title, duration ...) on the concerned clip.
    - **Edit**: Allows to display the *Edit alternative content* window in order to modify the clip parameters.
    - **Delete**: Allows to remove the selected clip. A confirmation window is displayed.
    - **Add to playlist**: Allows to add the selected clip to the currently edited show in the Show editor.
- 7 **Drag & Drop** button: Allows to add the selected content to the currently edited show in the Show editor via Drag & Drop.
- 8 **Menu** button: Allows to display the menu of actions available on the selected content.
- 9 Name of the currently edited **show**. When the show is edited and not saved an asterisk (\*) is displayed before the name.
- 10 Element not selected (e.g. clip) in the **show**.
- 11 Element selected (e.g. Special clip) in the **show**. When a item is selected, buttons (**Drag & Drop** button and **Menu** button) are displayed to the right edge of element. See details below (Reference 16 and 17).
- 12 **Multiple selection** button: allows to switch in multiple select mode.
- 13 **Up** button: switches the selected element with the previous element. This button is not available if the selected element is in first position in the show.
- 14 **Down** button: switches the selected element with the next element. This button is not available if the selected element is in last position in the show.
- 15 **Show** button: Allows to display the menu of actions available on the currently edited show.
- 16 Menu with actions available on the currently edited show:
- **New**: Allows releasing the show being edited from the editor and create a new show (Untitled). Of course, if the previous show was edited, a confirmation panel asks if the user want to save this show before the swap.
  - **Save**: Click on this button allows saving the current edited show in the local storage device (ICMP hard disks)
  - **Save as**: Click on this button allows saving the current show (edited or not) in the local storage device (ICMP hard disks) with another name.
  - **Hide automation / Show automation**: Allows to show or hide automation cues in the edited show.
- 17 **Drag & Drop** button: allows to move the selected element anywhere in the show.
- 18 **Menu** button: Allows to display the menu of actions available on the selected element in the edited show.
- 19 Menu with actions available on the currently selected element in the edited show. Actions varies depending on the type of content:
- Clips:
    - **Properties**: Display a panel with all information available (title, duration, time window ...) on the concerned clip.
    - **Remove**: Allows to remove the selected element from the show.
  - Special Clips:
    - **Change duration**: allows to change the name of the special clip.
    - **Rename**: allows to change the name of the special clip.
    - **Remove**: Allows to remove the selected element from the show.
    - **Change kind** (Placeholder only): Sometime it is necessary to use **Placeholder** to replace momentarily some content which not already loaded on the ICMP in order to prepare a show in advance. This button allows change the kind of the **Placeholder** (Feature, advertisement, rating ...).

- Cues:
  - **Change offset:** Cues are always attached to a clip and they are triggered after an offset (fixed at zero by default). This button allows to change this offset.
  - **Remove:** Allows to remove the selected element from the show.
- Alternative Input Clips:
  - **Properties:** Display a panel with all information available (title, duration ...) on the concerned clip.
  - **Remove:** Allows to remove the selected element from the show.
  - **Edit:** Allows to display the *Edit alternative content* window in order to modify the clip parameters.

20 Duration of the show.

## Content browser

The user will find the material to create playlists (shows) in the content browser. It is organized in tabs (on top) to allow a sort by content types:

- **Shows:** assembly of clips and automation cues. You could download the shows on the ICMP via the "ingest" module or you could manufacture them into the Show Editor module (The module in which we are).
- **Clips:** Digital Cinema Package (set of files) that contain all picture, sound, subtitle and metadata necessary to play back content such as movie or trailer, advertisement etc... You could download clips on the ICMP via the "ingest" module.
- **Special clips:** There are a series of special clips: Black clips used to insert black content in the show, Placeholder clips used to replace momentarily some content which not already loaded on the ICMP in order to prepare a show in advance. These clips are provided during the ICMP installation.
- **Automation Cues:** preset events triggered by the server to execute actions on peripherals. The setting of the "automation cues" is made during the ICMP installation via the configuration software Communicator.  
Note: Automation cues are sorted by groups. These groups are defined during the setup of the Cues.

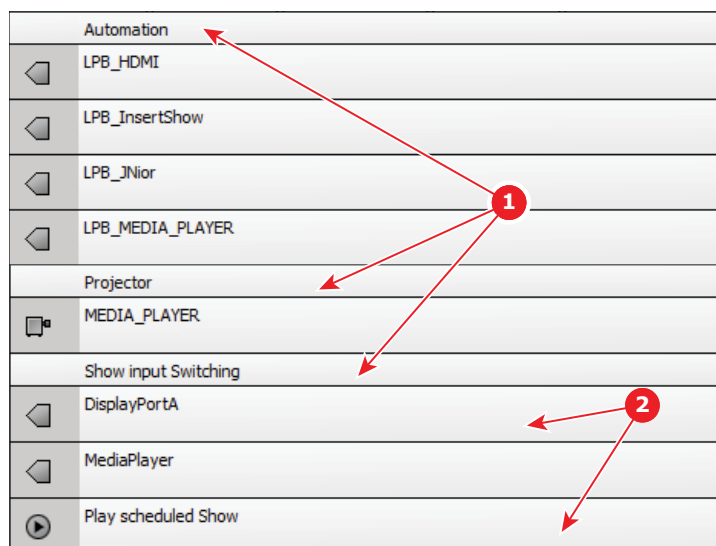


Image 3-38

- 1 Groups
- 2 Cues in group

- **Alternative input clips:** Special Clips for alternative media inputs (HDMI, HDSDI, DP). These clips are created directly in the Tab dedicated to the Alternative clips via the **Add** button. For further details see the section dedicated to the Alternative input clip below.

The following actions are allowed in the content browser:

- Use the **Sort by** drop-down box and/or the **Filter by** drop-down box at the bottom of the content browser for filtering content. It is sometimes difficult to find one element and this feature saves time when there is a lot of content stored in the ICMP.
- Click on content element to select it: buttons (**Drag & Drop** button and **Menu** button) are displayed to the right edge of the element.
- Use one of the available actions proposed in the content menu: actions varies depending on the type of content (delete, edit or add in the show editor, open in the player, properties...).

### 3. Modules description

- Drag and drop the selected content on the current edited show with the **Drag & Drop** button:
  - a) Left click on the **drag & drop** icon and hold the button of the mouse pressed (A).
  - b) Drag the content on the Editor area (B). Note: A proposed drop zone is highlighted in the edited show if there is already some content in the show.
  - c) Release the button to drop the content (C).
  - d) The content appears in the edited show (D).

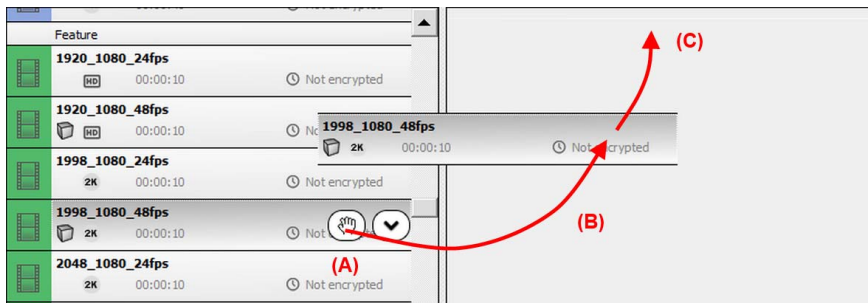


Image 3-39

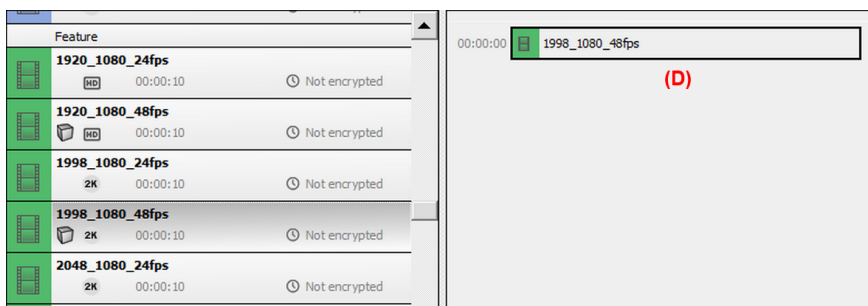


Image 3-40



Show could directly load in the show editor by clicking on the Edit button in the content menu. If a show was already edited, a confirmation popup asks if the user want to save this show before the swap.

### Manage alternative input clips

The rightmost tab in the content browser allows to manage **alternative input** clips. You can create, modify or delete these special clips dedicated to the alternative media inputs (HDMI, HDSDI, DP).

#### How create a new alternative input clip

In the **alternative input** clips tab, follow this procedure to add a new clip:

1. Click on the **Add** button to display the *Create alternative content* window.

The screenshot shows the 'Create alternative content' dialog box. It has a 'Description' text field, 'Duration' fields for Hours, Minutes, and Seconds (all set to 0), and a 'Macro' dropdown menu. At the bottom are 'OK' and 'Cancel' buttons.

Image 3-41

2. Fill in the required information:
  - Description: add a short description or name of the clip (e.g. Alternative advertising).
  - Duration: enter the duration during which the alternative input will be displayed (e.g. 20 minutes).
  - Macro: in the scroll down menu, chose a macro. A macro can have several effects like enable an input (e.g. activate the HDMI input or one DisplayPort input), change the Player module configuration (2D/3D) or simply change the color space. The name and the content of the macros are defined during the ICMP installation via the configuration software Communicator. For more details concerning macros, please refer to the Communicator user guide.
3. Click **OK** to validate and add the new clip in the clip list in the content browser.

#### How modify an alternative input clip

In the **alternative input** clips tab, follow this procedure to modify a clip:

1. Click on the **Menu** button, situated on the right side of the clip, to display the menu of actions available on the input clip. The menu with actions available on the selected content is displayed.
2. Click on the **Edit** button in this menu to display the *Edit alternative content* window.
3. Change the settings that you want modify. All the parameters available in the creation step are editable. For more details concerning these parameters see above, in the section dedicated to the alternative input clip creation.
4. Click **OK** to validate the clip modifications.

#### How remove an alternative input clip

In the **alternative input** clips tab, follow this procedure to remove a clip:

1. Click on the **Menu** button, situated on the right side of the clip, to display the menu of actions available on the input clip. The menu with actions available on the selected content is displayed.
2. Click on the **Delete** button.
3. Click **YES** into the confirmation window to validate the clip removing. The clip disappears from the content browser.

#### Rules and remarks concerning the alternative input clips:

- Each alternative input clip added in a show is a specific instance. That means if the user modifies a clip in a show (e.g. increase the duration), the instances used in the other shows are not impacted.
- For the same reasons, if the user modifies or removes a clip in the content browser, the instances already used in the shows are not impacted.

### The show editor

This is the tool to edit (create, modify) the assembly of clips and automation cues which constitutes the playlist of a show.

In the top bar, there is the title of the show (preceded by an asterisk if the show contains unsaved changes) and a set of button that allows doing action on the show. From left to right:



Image 3-42

- 1 **Multiple select** button. Click on this button allows to switch in multiple select mode. In this mode the user could select several Clips in the edited Show in order to remove them in one operation. For further details, please refer below to the section dedicated to the removing of a clip in a show.
- 2 **Up** button (reference 12): switches the selected element with the previous element. This button is not available if the selected element is in first position in the show.
- 3 **Down** button (reference 13): switches the selected element with the next element. This button is not available if the selected element is in last position in the show.
- 4 **Show** button (reference 14): Click on this button displays a sub menu with all actions available on the current edited show (New, Save, Save as, Hide/Show automation).

The rest of the "Show Editor" panel is dedicated to the show components (clips and automation cues) handling. Each box in the list represents a consecutive clip in the show. Time codes are listed on the left.

The following actions are allowed in the show editor:

- Create a new show via the **Show** button (menu).
- Save the current edited show in the local storage device (ICMP hard disks) via the **Show** button (menu).
- Save the current edited show in the local storage device (ICMP hard disks) with another name via the **Show** button (menu).
- Show or hide automation cues in the edited show via the **Show** button (menu).
- Drag & drop or add a new content (clip or automation cue) from the content browser.
- Delete content from the edited show via the content menu accessible via the button displayed to the right edge of element.
- Change the position of a selected component of the edited show with the **Drag & drop** button displayed to the right edge of element (concerned content), or by used **Up** and **Down** buttons situated in the top of the Show editor.
- Display a panel with all information available (title, duration, time window ...) on the selected component of the edited show via the button displayed to the right edge of element.

### 3. Modules description

In the show editor, automation cues are always linked to the clip where they are dropped. The time code associated to automation cue is an offset. This offset could be change (edited) via the menu button displayed to the right edge of selected automation cues. It is also possible to act (change position, delete) on automation cue as if it were a classic content.



The duration of the show is calculated in real time and displayed at the bottom of the Show editor (reference 19).

#### How remove several Clips from the Show

The user could remove several Clips from the Show in one operation via the **multiple select tool**. Follow this procedure to remove clips from the Show:

1. Click on the button to switch in multiple select mode.

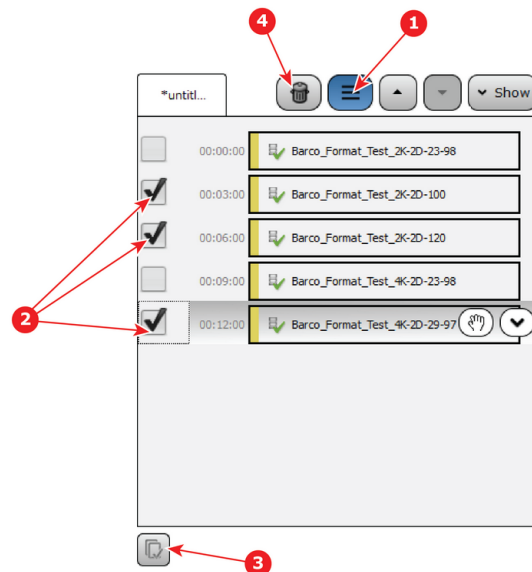


Image 3-43

2. Select some clips.
3. Or select All clips with the **Select All** button.
4. Click on the **Delete** button to remove all selected clips.

#### Insert show Action

##### Description:

The **Insert Show** action is a special cue that can be used to insert a show playlist inside the main show playlist when selected in the player. It can be done between clips or to create an intermission during a movie. It can be added to a user cue in the Automation settings like any other cue. The resulting **Insert Show** cue should be created inside a group that allows placement in the playlist but does not allow manual trigger of the cue (this cue should not be seen in the Control panel of the Commander application).

##### Settings:

Three parameters have to be provided during the **Insert Show action** setup in Communicator:

- Show Title (exact title of the inserted show)
- Rewind Offset in Seconds (this parameters allows to restart the interrupted movie x seconds before the position where it was interrupted)
- Resume Clip Duration in Seconds (Set the duration of the black clip inserted by the player during the setting of the correct format - e.g. transition from 2D to 3D)

For more details on **Insert Show** cue settings, please refer to the user guide of Communicator, the Barco configuration software.

##### Format Management:

The inserted show can run in a different format or automation status than the main show. For instance the 3D movie can be interrupted by a 2D intermission. The user will have to insert the cues at the beginning of the intermission to switch to 2D. The user can also insert cues to switch back to 3D at the end of the intermission but then has to make sure this same intermission will not be used inside a 2D movie.

The Resume Clip parameter of the Insert Show action can be used to let the Player decide which cues have to be executed after the intermission.

##### Intermission Usage:

The Insert Show cue will be placed at the desired offset in the main movie and is seen by the user as any other cue. Once the main show is selected, the player will create a playlist where the main movie is divided in two parts and will insert the intermission show in between.

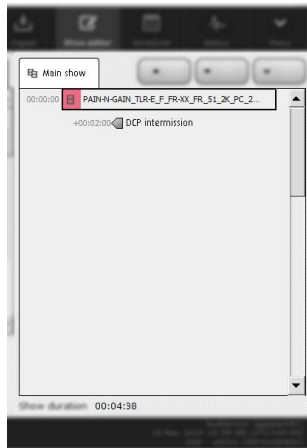


Image 3-44

The resulting playlist can be viewed in the Player panel.

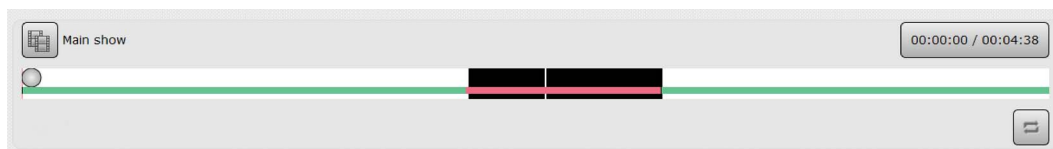


Image 3-45

#### Pre-Show Usage:

While initially designed for intermission, the Insert Show cue can be used to insert dynamic playlist of adverts for pre-show.

The Insert Show cue will be placed at the offset 00:00:00 of a clip in the main show. Once the main show is selected, the player will create a playlist where the pre-show is inserted before that clip.

The resulting playlist can be viewed in the Player panel.

#### Rules and remarks:

- The viewed duration of the main show in the Content Browser, Show Editor and Scheduler panels does not take into account the duration of the inserted show(s).
- It is possible to insert multiple intermission cues during the same movie and that movie will be divided in more than two parts.
- User cues with an Insert Show action should not contain other actions.
- If a user places multiple Insert Show cues at same offset, the result may be unexpected.
- Insert Show cues cannot be placed at offset that would create movie parts lesser than 1 seconds. Some of the Insert Show cues will be ignored if so.
- In case of intermission Security logs will not contain a 'Playout Complete' entry for the movie as this one is played in two parts.
- If the inserted show contains Insert Show cues, the Player will resolve them. However, to avoid issues, there's a maximum of 3 level of show 'indentation'.
- Skipping the intermission: there's no possibility to do so else than stopping the playback and changing the position to start at the second part of the movie.

## 3.6 Scheduler

### About scheduler Module

The Scheduler module is where the user can plan show playbacks. The user can choose between two views to edit the scheduler: one week view (overview on one entire week) and one daily view where the user could drag & drop the shows on a selected day.

### One day view

This view allows to display one selected day.

### 3. Modules description

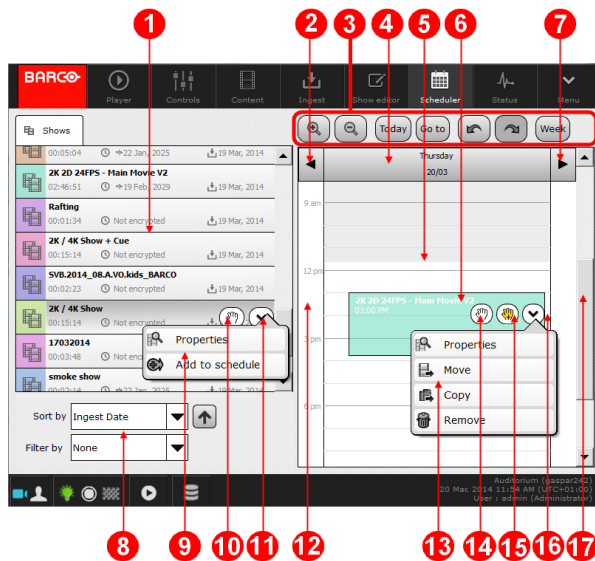


Image 3-46

- 1 Content browser where the operator could choose the show that he want to drag and drop on the day currently edited in the schedule.
- 2 Left arrow: Press "left arrow" button allows shifting the day view for a day towards the left (previous day).
- 3 Action buttons: A set of buttons allow actions (zoom, undo, redo...) on the Scheduler view. See chapter below for further details.
- 4 Selected day is displaying on a column. Click on the top of the day gives access to available actions on the entire of the day via a menu. For further details see the section concerning the actions available on the entire of the day below.
- 5 A line indicates the current time. The area located before this line is grayed. No further action is possible on shows located in the grayed area (in the past).
- 6 Shows are represented by colored rectangles. The user can add, delete or move shows in the not grayed part of the day view (in all zones that are after the current date).
- 7 Right arrow: Press "right arrow" button allows shifting the day view for a day towards the right (next day).
- 8 Filters. Options to filter the displayed shows in the content browser based on various parameters such as title, ingest date, duration, validity...
- 9 Menu with actions available on the selected element (show) in the content browser.
  - **Properties:** Display a panel with all information available (title, duration, time window ...) on the concerned show.
  - **add to schedule:** Allows to add the selected show into the schedule. A **Show time** window is displayed to select a targeted date and hour.
- 10 **Drag & Drop** button: Allows to add the selected show into the not grayed part of the scheduler view via Drag & Drop.
- 11 **Menu** button: Allows to display the menu of actions available on the selected show.
- 12 The vertical axis is graduated in hours.
- 13 Menu with actions available on the selected element (show).
  - **Properties:** Display a panel with all information available (title, duration, time window ...) on the concerned show.
  - **Move:** Allows to move the selected show into the not grayed part of the week view.
  - **Copy:** Allows to copy the selected show and put this copy anywhere into the not grayed part of the week view.
  - **Remove:** Allows to delete the selected show from the schedule. A confirmation window is displayed.
- 14 **Drag & Drop** button: Allows to move the selected show into the not grayed part of the scheduler view via Drag & Drop.
- 15 **Copy and Drag & Drop** button: Allows to put a copy of the selected show anywhere into the not grayed part of the scheduler view via Drag & Drop.
- 16 **Menu** button: Allows to display the menu of actions available on the selected element.
- 17 A vertical scroll bar allows displaying the rest of the day, if the level of zoom is not adequate to display an entire day.

#### Week view

This view allows an overview on one entire week.



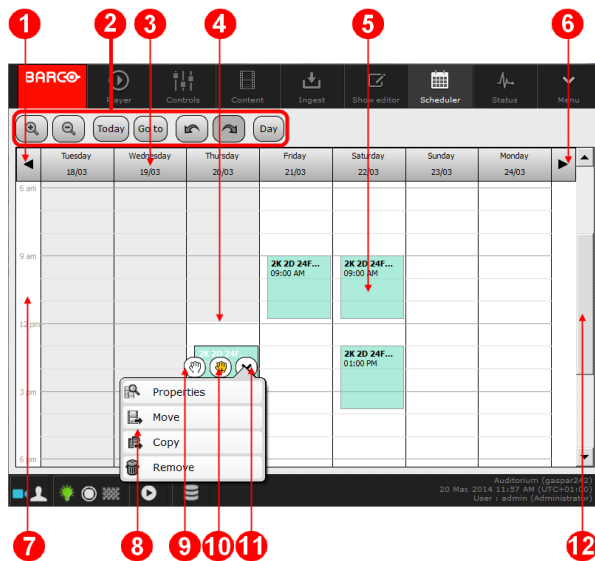


Image 3-47

- 1 **Left arrow:** Press **left arrow** button allows shift the week view for a day towards the left.
- 2 **Action buttons:** A set of buttons allow actions (zoom, undo, redo...) on the Scheduler view. See chapter below for further details.
- 3 A column represents a day of the week. Click on the top of the day gives access to available actions on the entire of the day via a menu. For further details see the section concerning the actions available on the entire of the day below.
- 4 A line indicates the current time. The area located temporally before this line is grayed. No further action is possible on shows located in the grayed area (in the past).
- 5 Shows are represented by colored rectangles. The user can add, delete or move shows in the not grayed part of the week view (in all zones that are after the current date).
- 6 **Right arrow:** Press "right arrow" button allows shift the week view for a day towards the right.
- 7 The vertical axis is graduated in hours.
- 8 Menu with actions available on the selected element (show).
  - **Properties:** Display a panel with all information available (title, duration, time window ...) on the concerned show.
  - **Move:** Allows to move the selected show into the not grayed part of the week view.
  - **Copy:** Allows to copy the selected show and put this copy anywhere into the not grayed part of the week view.
  - **Remove:** Allows to delete the selected show from the schedule. A confirmation window is displayed.
- 9 **Drag & Drop** button: Allows to move the selected show into the not grayed part of the week view via Drag & Drop.
- 10 **Copy and Drag & Drop** button: Allows to put a copy of the selected show anywhere into the not grayed part of the week view via Drag & Drop.
- 11 **Menu** button: Allows to display the menu of actions available on the selected element.
- 12 A vertical scroll bar allows displaying the rest of the day, if the level of zoom is not adequate to display an entire day.

### Action buttons

A set of buttons, common to both views, allows actions on the Scheduler view. From left to right:

- 1 **Zoom in:** vertical "zoom in" on the hours. This button allows decreasing (less densely) the range of the hours on the vertical axis of the scheduler.
- 2 **Zoom out:** vertical "zoom out" on the hours. This button allows increasing (densify) the range of the hours on the vertical axis of the scheduler.
- 3 **Today:** allows to display a view of the scheduler centralize on the current day.
- 4 **Go to:** allows displaying a view of the scheduler centralizes on a specific day.
- 5 **Undo:** undo button reverses the most recent editing command.
- 6 **Redo:** redo button reverts the effects of the undo action.
- 7 **Day view / Week view:** allows displaying the scheduler in "one day view" or "week view".

### How to add show in the week view

It is not possible to add a show on the **week view**! Only a copy or a move of already existing show is available in this view. If you want to add new show in the schedule, you must use the **day view**.

#### How to add show in the day view

1. Select a show in the content browser.

The show is selected and buttons are displayed to the right edge of element.

2. Click on the **Drag & Drop** button on the selected show, and hold the button of the mouse pressed. Note: this is the button that represents a free hand.

3. Move the show to his location.

The show is displayed in a lighter color during the displacement and the current time is displayed on the top to give information on the location. Note: it is not possible to drop the show in the past (before the current date).

4. Release the button of the mouse when the location is correct.

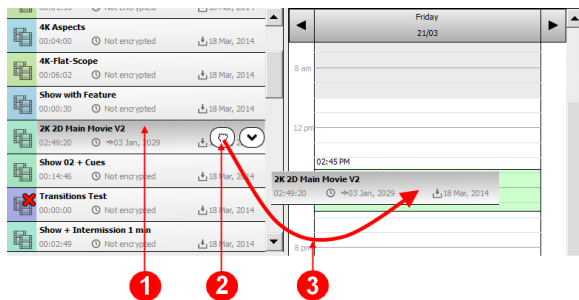


Image 3-48

#### How move a show manually

Move manually a show is available in the both view types (**Day** view and **Week** view).

1. Select a show.

The show is selected and buttons appear.

2. Click on the **Drag & Drop** button on the selected show, and hold the button of the mouse pressed. Note: this is the button that represents a free hand, without a plus sign.

3. Move the show to the new location.

4. The show is displayed in a lighter color during the displacement.

5. The current time is displayed on the top to give information on the location.

6. It is not possible to drop the show in the past (before the current date).

7. Release the button of the mouse when the location is correct.

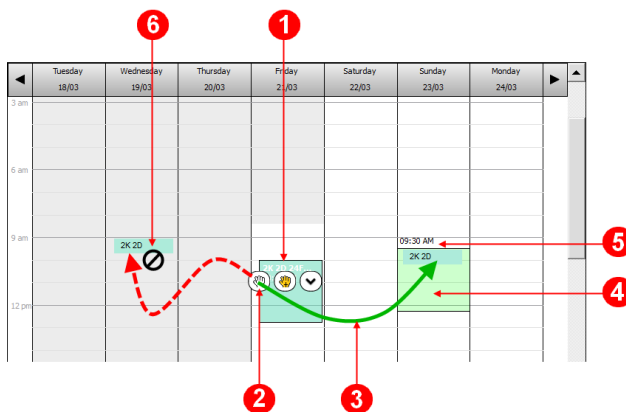


Image 3-49

#### How to copy and move a show manually

Copy and move manually a show is available in the both view types (**Day** view and **Week** view).

1. Select a show.

The show is selected and buttons appear.

2. Click on the **Copy and Drag & Drop** button that appear on the selected show, and hold the button of the mouse pressed. Note: this is the button that represents a orange hand with a plus sign.

3. Move the show to a new position.

The show is duplicated. An instance remains in original place.

4. It remains to drop the new show in the desired location and release the button of the mouse. A location in the past (before the current date) is not allowed.

### How to copy a show on a definite place

Copy a show on definite place is available in the both view types (**Day** view and **Week** view).

1. Select a show.

The show is selected and buttons appear.

2. Use the **Menu** button to display the menu of available actions on this show. Note: this is the button that represents a down arrow.

The menu with available action is displayed.

3. Click on **Copy** button.

The **Show Time** panel is displayed.

4. Use the **Show Time** panel to define the exact day and hour of the location of the duplicated show. A location in the past (before the current date) is not allowed.

5. Click on **OK**.

The duplicated show is displayed on his new location.

### How remove a show

Remove a show is available in the both view types (**Day** view and **Week** view).

1. Select a show.

The show is selected and buttons appear.

2. Use the **Menu** button to display the menu of available actions on this show. Note: this is the button that represents a down arrow.

The menu with available action is displayed.

3. Click on **Remove** button.

### Actions available on the entire of a day

The following actions are available on the entire of the day in the both view types (**Day** view and **Week** view) via a menu (click on the top of the considered day) :

- **Move day**: Allows to move the entire of the day in another location. In the **Week** view a manually displacement is available via **Drag & drop** button.
- **Copy day**: Allows to copy the entire of the day in another location. In the **Week** view a manually displacement is available via **Copy and Drag & drop** button.
- **Clear day**: Allows to remove all the shows in the considered day.

## 3.7 Status

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### About status

The Status is the module dedicated to health status of the ICMP.

- **Projector** tab is use to have an overview of the current errors and warnings encountered on the projector and the ICMP.
- **Storage** tab gives an overview on the RAID (Local storage on the ICMP).
- **Sound** tab gives information (status) concerning the Immersive Sound option.

### Projector tab

Operational errors and hardware errors are grouped in the same list. Hardware errors reported here are generally resolved by a technical intervention. Operational errors are easier to solve and generally requires just an operator intervention. This last category of error is more common and is often due to problems with invalid content.

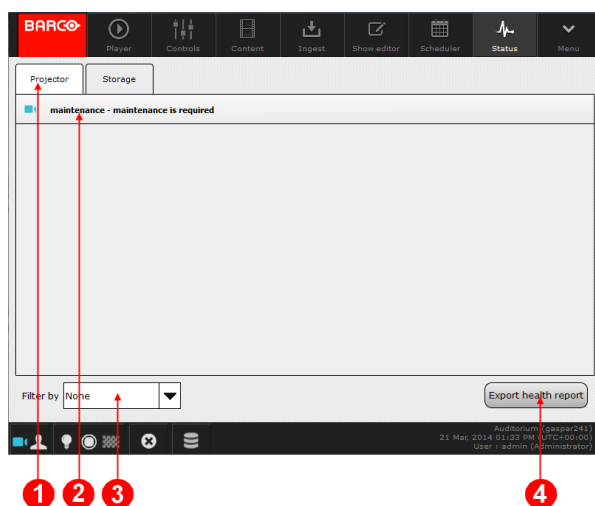


Image 3-50

- 1 Menu with buttons corresponding to tabs available on the **Status** panel.
- 2 List of errors, warning and maintenance message.
- 3 Filters. Options to filter the displayed error list based on various parameters such as description, severity, category...
- 4 Export health report: allows to export the error list in a XML file.

#### Storage tab

The following information on the ICMP local storage are available:

- Storage status: Status of the RAID. See below for further details.
- Used size: Actual size of the content loaded on the local storage of the ICMP in GB.
- Total size: Maximal size of the local storage in GB.
- Error: Current error encountered by the RAID controller.

Local storage in the ICMP is based on three HDDs setup in RAID 5 configuration. This storage technique manages enough redundancy to continue to operate properly after the loss of one HDD. For further details please refer to the chapter concerning the HDDs in the installation manual of the ICMP.

It is recommended to verify the status of the RAID regularly because, if the loss of one disk causes no serious consequences, the loss of second disk will make the RAID system inoperative.

A failed HDD must be replaced with a HDD that has the same storage capacity. See label on top of the HDD in order to know the storage capacity.

The following statuses may be encountered:

RAID Status	Description
Healthy	No problem. The RAID is completely operational.
Healthy – HDD mismatch	The RAID is completely operational, but one of the HDDs has a capacity larger than the expected size. The HDD is used in the RAID but not to its full capacity.
Degraded	The RAID is degraded. One HDD has failed.
Degraded – HDD mismatch	The RAID is degraded. One HDD has failed, and one of the HDD has a capacity lower than the expected size. The HDD cannot be added to the RAID.
Warning	The integrity of the RAID is compromised. Double check with error messages in the status module and the LEDs status directly available on the HDDs.
Error	The RAID is no longer available.
Rebuilding (x,xx%)	A new HDD was detected by the RAID controller to replace a failed HDD. The recovery procedure is started automatically.



**WARNING:** Immediate intervention is required when problems are observed on the RAID to preserve data integrity.



LEDs placed directly on the hard drives may help confirm a diagnosis of failure. For further details please refer to the chapter concerning the ICMP HDD status LEDs in the installation manual of the ICMP.

### Sound tab

Assuming the required HW & SW versions are installed, the Immersive Sound feature could be used. The status of this optional feature is displayed here.

For more details concerning the Immersive Sound feature and its status, please refer to the section dedicated to the Immersive Sound in the chapter "User interface presentation", page 8.

### How export health report

Export report in an XML file is an operation which can be performed at any time. The export may take few seconds but there are no constraints concerning the projector or the player during export (playback is not disturbed by exportation).

1. Click on the **Export health report** button.

The **Export logs** panel is displayed.

2. Choose a file name and a path where you when to save the file, and finally click Save.

XML file is saved in the desired location.



## 4. GENERAL OPERATION EXAMPLES

### About this chapter

This chapter outlines high level procedures for setting up and configuring the ICMP in several use cases. All situations cannot be discussed here, but some details will definitely help you in setting up your system.

### Overview

- 2D/3D Clone and Drop modes
- Dual Projection
- Escape System
- Immersive Sound
- DCP Publishing

### 4.1 2D/3D Clone and Drop modes

---

#### General

Sometimes it is useful to force the projector in order to play some 2D content like a 3D content: this content type inserted into a 3D show requires to remove the 3D glasses because it induces an unpleasant sensation. As, it is sometime necessary to play 3D content as 2D content: by example if a theater is not equipped with a 3D system, it's still possible to play the movie in 2D.

The system offers the possibility to play a 2D clip in 3D (Clone Mode) or a 3D clip in 2D (Drop Mode).

This can be done by adding a Special clip (Force 2D, Force 3D or Auto 2D/3D) in the Show Playlist.

#### Description

- **Force 2D (Drop mode)**  
When a Force 2D special clip is placed in a Show playlist, all clips placed below in the show playlist will be played in 2D. Only the frames for the left eye will be played.
- **Force 3D (Clone mode)**  
When a Force 3D special clip is placed in a Show playlist, all clips placed below in the show playlist will be played in 3D. All frames will be duplicated for left and right eyes (no stereoscopic effect).
- **Auto 2D/3D** (This is the default mode of the ICMP)  
When this clip is placed after a Force 2D or Force 3D, it disables the Clone or Drop mode. There's no use to put this special clip in a Show Playlist when there's no Force 2D or Force 3D special clip in the same playlist.

#### Adding Special clip in the Show Playlist

In Commander, use the following steps to add Special Clips (Force 2D, Force 3D, Auto 2D/3D):

1. Use the login and password to log on Commander.
2. Click on *Show editor* tab. The *Show editor* Panel is displayed.
3. In the right hand side of this module select the *Special* tab. The list of Special clip is displayed.
4. Select and put in the show the clip you want added (Drag and drop).
5. Click on the save icon to save the show.

### 4.2 Dual Projection

---

#### General

The dual projector configuration is used to increase the brightness of the 3D shows. One projector is dedicated to one eye, that means than 100% of the light provided by the projector is dedicated to an eye. In a classic 3D projection with only one projector, the light must be shared between the images dedicated to the two eyes!

One projector is configured (with Communicator) as a Master, the other as a Slave. The user can choose whether the Master plays the Left image (typically) or the Right one, and same for the Slave: Right (typical) or Left.

In this configuration the content and KDMs are required on the both projectors (on the Master and on the Slave).

Both Slave and Master projections need to have macros and automation cues with the exact same names, so that they can be automatically called from a playlist. The content of these macros may be different on Master and Slave.

#### 4. General operation examples

The configuration is only done on the master side. It is sufficient to enter the IP address of the Slave and when playing in dual projector mode the slave projector will automatically be configured by the master.

All show building and scheduling is done on the Master projector. There is no need to create or copy shows, or schedules on the Slave projector. Scheduling on the Master is also automatically active on the Slave. The schedule is done on the Master (when not using a TMS). Upon loading of a show on the Master by the scheduler, the same show is automatically loaded on the Slave as previously. When a show is loaded on the Master projector, it is also automatically created and loaded on the Slave projector. This does require that the Slave projector has all the CPLs, KDMs and automation cues required (present on the SPL on the Master).



Projector calibration are not addressed here. For further details on the screen calibration, please refer to the projector manuals.

## Application Diagram

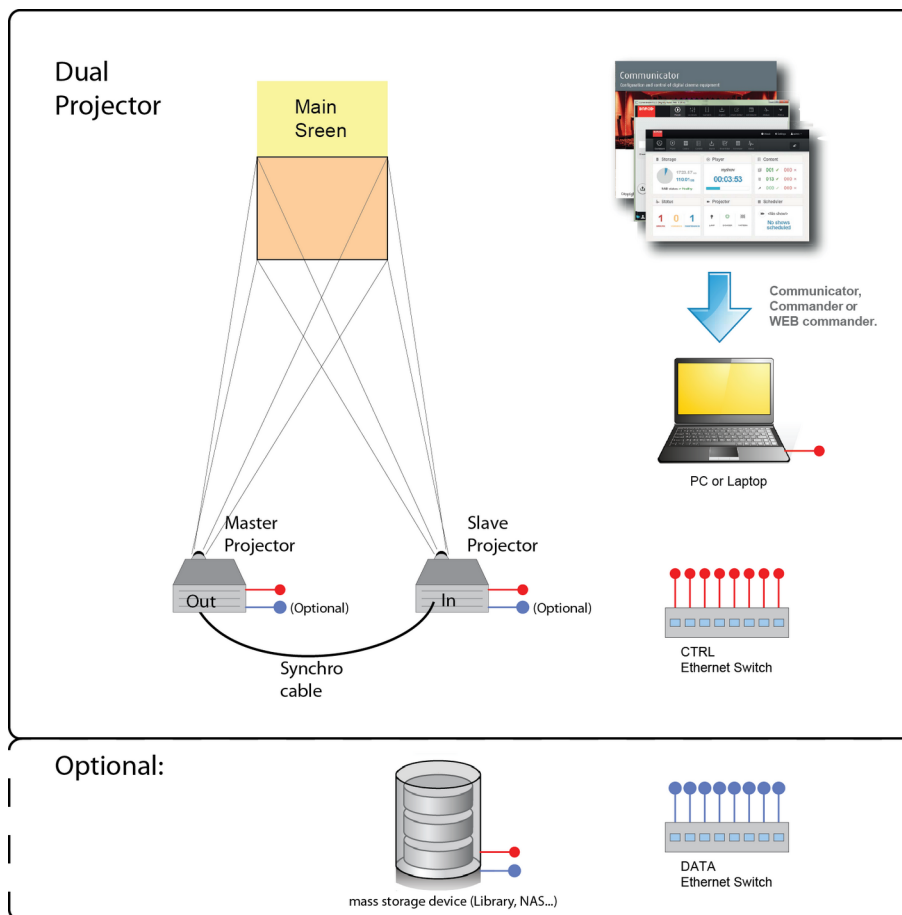


Image 4-1

### Description

The 2 projectors (1 master, 1 slave) are equipped with the latest revision of the ICMP board. The two projectors are linked to ensure the synchronization.



**Use a 50 Ohm coaxial cable to connect the sync signal from projector to projector.**

A laptop (or PC) equipped with Communicator (the Barco configuration software) and Commander software allows set up and control the projectors.

Each device (Projectors, laptop) is added to the CTRL (control) LAN (Local network: red links on the application diagram). These devices could have a fix IP address or not (DHCP). It does not matter. In the most of the cases, the CTRL LAN will be the LAN already present in the theater.

**Optional:**

A mass storage device as a library or a NAS (Network Attached Storage) could be added in the system in order to ensure the storage of a large amount of movies.



A dedicated Data network (blue links on the application diagram) could be added to ensure a high speed data transfer. An Ethernet switch with fixed addresses are enough (DHCP Manager is not required).



**It is strongly recommended to use a dedicated Data network to optimize the data transfer. Use the LAN (CTRL) already present in the theater in order to transfer a large amount of data significantly increases the transfer times (x 20). Furthermore, response times between devices connected to this network will be greatly expanded during these data transfers.**

## Wiring

Both Master and Slave projectors need to be on the same projector control network. The Master projector has the IP address of the Slave projector configured from communicator.

The "Sync In" input on the Slave projector is connected to the "Sync Out" output on the Master. Connection is done with a BNC cable.



**Use a 50 Ohm coaxial cable to connect the sync signal from projector to projector.**

A dedicated data network could be used to ensure a high speed data transfer.

- **Master projector:**

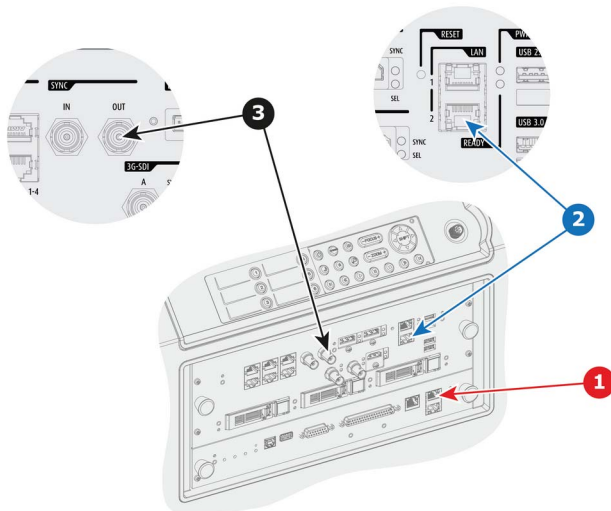


Image 4-2

- 1 Ctrl Network
- 2 Data Network (optional)
- 3 Synch link out

## 4. General operation examples

- **Slave projector:**

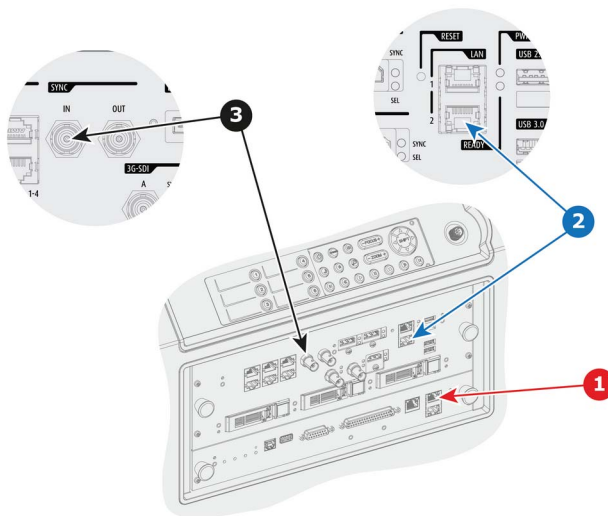


Image 4-3

- 1 Ctrl Network
- 2 Data Network (optional)
- 3 Synch link in

### Versions and licenses

- **Hardware version:**  
The latest hardware revision of the ICMP boards is required (v22 or later of assembly R781061).
- **Software version:**  
ICMP v1.1.5 software version is needed to support this feature. In this v1.1.5 only dual-passive projection is supported: one projector always projects the left eye, the other the right eye. Dual-active projection (e.g. active Dolby wheel kits from Barco) is supported since ICMP v1.2.3.
- **License:**  
Assuming the required HW & SW versions are installed, the dual-projection feature is enabled by a license. Installation of the license is done through Communicator. The license only needs to be generated and installed on the master projector (one single dual-projector license per setup).

### Set up two projectors in Dual-Projection mode

Use the following steps to configure and use the projectors in dual projector mode:

1. **Switch in Dual mode.** This step will be performed only on the master side. The slave projector will automatically be configured by the master via the CTRL network. This step will be done via Communicator, the Barco configuration software. Ensure that you are familiar the section that concern the configuration of the Media server (ICMP) in the user manual of this software. In Communicator, follow the next steps to reach Master-Slaver mode:
  - a) While in *Media Server/Installation*, click on *Multi projectors settings* tab. The *Multi projectors settings* window is displayed.
  - b) Click *Edit*. The *Multi projectors settings* adjustment panel is displayed.
  - c) Check the check box next to *Master*. The drop down box *Played frames* become available.
  - d) Click on the drop down box *Played frames* and select the master projector position (e.g. LEFT).
  - e) Click on *Add* to open the *Add slave* window. The *Add Slave* window is displayed.
  - f) Click in the *Hostname/IP* input field and enter the IP address of the slave projector (Hostname not yet supported).
  - g) Click on the drop down box *Played frames* and select the slave projector position (e.g. RIGHT).
  - h) Click *OK*. The *Add Slave* window is closed. The slave projector is now added in the slave list.
  - i) Click *OK*. The *Multi projectors settings* adjustment panel is closed.
2. **Master projector Data network configuration (optional).** This optional step could be performed on the master projector to configure the Data network parameters. The data transfer between a mass data storage as libraries (or NAS) and the projector could be ensured by the CTRL network, but it is strongly recommended to use a dedicated Data network to optimize the data transfer (faster).  
In Communicator, use the following steps to configure the network parameters:
  - a) While in *Media Server/Installation*, click on *Global settings* settings tab. The *Global settings* window is displayed.
  - b) Click on the corresponding *Edit button* in Board IP address 2 (We arbitrarily choose IP slot 2 for the Data network). The *Board IP address* window opens with its current settings.
  - c) Uncheck the check box next to *obtain an IP address automatically (DHCP)*. The *IP settings* become available.
  - d) Fill the parameters to configure a fix IP address in the DATA network.

- e) Click *OK* to validate and close the *Board IP address* window. The new fixed address is displayed in the *Global settings* window.
3. **Slave projector Data network configuration (optional).** This optional step could be performed on the slave projector to configure the Data network parameters.  
Please follow the same procedure as the Master to configure the network parameters on the slave projector in order to add it in the DATA network.
  4. **Mass data storage device configuration (optional).** This procedure is not intended to the description of all type of mass data storage devices (library, NAS...), so please refer to the installation manual of the used device to configure the Data network.
  5. **License settings.** This step will be performed only on the master side. The slave projector will automatically be configured by the master via the CTRL network.  
In Communicator, follow the next steps to add license:
    - a) While in *Media Server/Installation*, click on *License* settings tab. The *License* window is displayed with the list of all licenses already installed on the projector.
    - b) Click on *Add*. A browser window opens.
    - c) Browse to the license file (e.g. ICMP-License-Dual-Projector-9999....999.xml) and click *Open*. The file is uploaded on the projector, then the new license is added in the list of all licenses already installed on the projector.
  6. **Configure Mass data storage device as Server Source (optional).** This step will be performed on the both projectors, on the master and on the slave. Remember that the content will be loaded on the both projectors.  
In Communicator, follow the next steps to add server source:
    - a) While in *Media Server/Installation*, click on *Server* settings tab. The *Server* window is displayed with the list of all servers already installed on the projector.
    - b) Click on *Add device*. The *Server device configuration* window opens.
    - c) Fill server name field (e.g. NAS\_01).
    - d) Choose a communication protocol via the drop down box (e.g. FTP).
    - e) Enter the needed parameters to allow the communication with the device via the chosen protocol (IP address, login, password, path, parameters ...)
    - f) Click *OK* to add the device. The new device appears in the devices list.
  7. **Ingest content.** This step will be performed on the both projectors, on the master and on the slave. Remember that the content will be loaded on the both projectors.  
Note: The following steps will be done via Commander, the Barco software used to control the ICMP. Ensure that you are familiar with this software and do not hesitate to refer to the manual to clarify doubts.  
In Commander, follow the next steps to ingest content:
    - a) Use the login and password to log on Commander.
    - b) Click on *Ingest* tab. The *Ingest* Panel is displayed.
    - c) In this module, select the *source* tab then choose the source (location) of the content (DCP) in the Drop-down list. If you have correctly configured the Mass data storage device in the previous steps, it is available in the list of content (e.g. NAS\_01). When you have selected a source, the DCPs available on the targeted source are displayed.
    - d) Choose your content and click on the *ingest* Button. An ingest job is created.
    - e) Click on the *Ingest Jobs* tab to display the list of ingest Jobs.
    - f) After few moments (depending the size of the content) the job is indicated as completed!
  8. **Create show.** This step will be performed only on the master side. When a show is loaded on the Master projector, it is also automatically created and loaded on the Slave projector. Of course, this does require that the Slave projector has all the CPLs, KDMs and automation cues required (present on the SPL on the Master).  
In Commander, follow the next steps to create show:
    - a) Use the login and password to log on Commander.
    - b) Click on *Show editor* tab. The *Show editor* Panel is displayed.
    - c) In this module, select and put in the show all the clips and the cues you want added.
    - d) Click on the save icon to give a name and save the show.
  9. **Play.** This step will be performed only on the master side. When a show is loaded on the Master projector, it is also automatically loaded on the Slave projector.  
In Commander, follow the next steps to play the show:
    - a) Use the login and password to log on Commander.
    - b) Click on *Player* tab. The *Player* Panel is displayed.
    - c) In this module, select a show. Press the *Select* button, select the desired show in the list and validate your selection. Show is displayed in the Player panel.
    - d) Click on *Play* button to play out the show. The show is played on the two projectors.

## 4.3 Escape System



Only the steps involved in configuring of the projection systems (projector + ICMP) will be addressed in detail here. Escape System will be the subject of a specific documentation which will resume all the necessary explanations to install a complete system.

### General

This procedure describes how to install and set up the "ESCAPE" system, the new Barco project that will take you in a fully immersive cinema experience. This system is based on 3 projectors. One projector is configured (with Communicator) as a Master, the others as Slaves. The Master projector plays the movie on the main screen and the two slave projectors play the left part and the right part of the movie on the side screens.

Escape need specific content. The movie is remastered to take into account the side screens (and in particular the angle formed with the main screen). Only one single package of content is manipulated by the user. This package contains all parts of the movie (center, left or right). If the system is configured correctly, the end user doesn't have to take care about the destination screen. The allocation of content on the corresponding screen is automatic during the ingest of the content.

Both Slaves and Master projections need to have macros and automation cues with the exact same names, so that they can be automatically called from a playlist. The content of these macros may be different on Master and Slaves.

The configuration is only done on the master side. It is sufficient to enter IP addresses of the Slaves and when playing in Escape mode the slave projectors will automatically be configured by the master.

All show building and scheduling is done on the Master projector. There is no need to create or copy shows, or schedules on Slave projectors. Scheduling on the Master is also automatically active on Slaves. The schedule is done on the Master (when not using a TMS). Upon loading of a show on the Master by the scheduler, the same show is automatically loaded on Slaves as previously. When a show is loaded on the Master projector, it is also automatically created and loaded on Slave projectors. This does require that Slave projectors have all the CPLs, KDMs and automation cues required (present on the SPL on the Master).

### Application Diagram

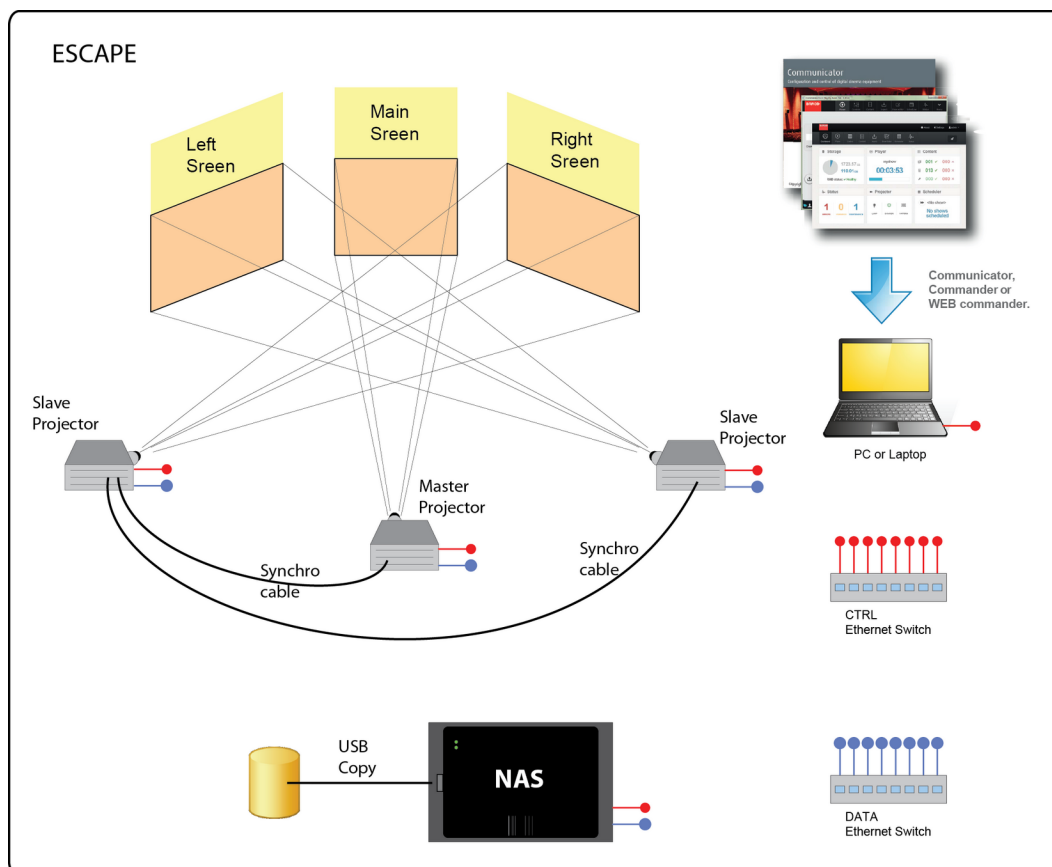


Image 4-4

### Description

The 3 projectors (1 master, 2 slaves) are equipped with the latest revision of the ICMP board. The three projectors are linked to ensure the synchronization. The link is assumed by 50 ohm coaxial cable. The projectors form a chain that begins with Master, followed by two Slaves.

A laptop (or PC) equipped with Communicator (the Barco configuration software) and Commander software allows set up and control the projectors.

Each device (Projectors, laptop) is added to the CTRL (control) LAN (Local network: red links on the application diagram). These devices could have a fix IP address or not (DHCP). It does not matter. In the most of the cases, the CTRL LAN will be the LAN already present in the theater.

A NAS (Network Attached Storage) could be added in the system in order to ensure the storage of a large amount of movies.



**The two slave projectors are suspended from the ceiling of the theater, so it is impossible to upload content on these devices via a local USB storage device.**

In the use case described here we will upload the content on the NAS via an USB storage device (e.g. Removable Hard Disk Drive).

A dedicated Data network (blue links on the application diagram) must be added to ensure a high speed data transfer. An Ethernet switch with fixed addresses are enough (DHCP Manager is not required).

## Wiring



**Use 50 Ohm coaxial cables to connect the sync signal between the three projectors.**

### • Master projector:

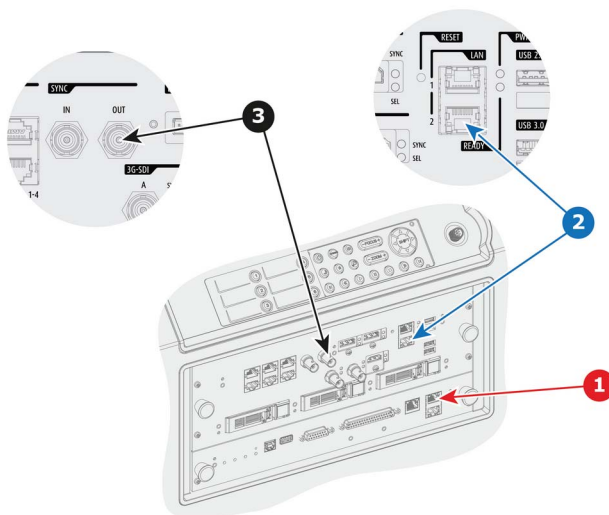


Image 4-5

- 1 Ctrl Network
- 2 Data Network
- 3 Synch link out

#### 4. General operation examples

- **Slave projector 1:**

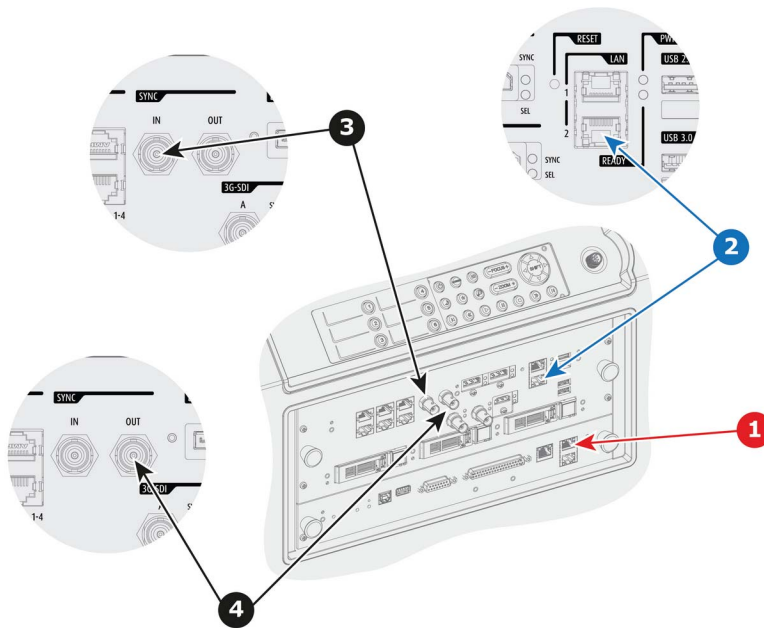


Image 4-6

- 1 Ctrl Network
- 2 Data Network
- 3 Synch link in
- 4 Synch link out

- **Slave projector 2:**

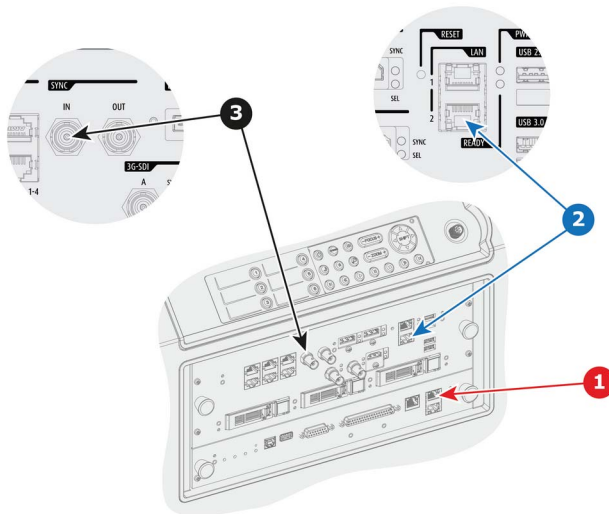


Image 4-7

- 1 Ctrl Network
- 2 Data Network
- 3 Synch link in

#### Versions and licenses

- **Hardware version:**  
The latest hardware revision of the ICMP boards is required (v22 or later of assembly R781061).
- **Software version:**  
ICMP v1.2.0 software version or higher is needed to support ESCAPE.  
ICMP v1.2.4 software version or higher is recommended to support all ESCAPE features (USB ingest on the master projector).
- **License:**  
Assuming the required HW & SW versions are installed, the ESCAPE feature is enabled by a license. Installation of the license is done through Communicator. The license only needs to be generated and installed on the master projector (one single ESCAPE license per setup). No license is needed on Slave projectors!

## Set up Escape System

Use the following steps to configure and use the projectors in Escape configuration:

1. **Switch in Escape mode.** This step will be performed only on the master side. The slave projectors will automatically be configured by the master via the CTRL network. This step will be done via Communicator, the Barco configuration software. Ensure that you are familiar the section that concern the configuration of the Media server (ICMP) in the user manual of this software. In Communicator, follow the next steps to reach Master-Slaver mode:
  - a) While in *Media Server/Installation*, click on *Multi projectors* settings tab. The *Multi projectors settings* window is displayed.
  - b) Click *Edit*. The *Multi projectors settings* adjustment panel is displayed.
  - c) Check the check box next to *Master*. The drop down box *Played frames* become available.
  - d) Click on the drop down box *Played frames* and select *BOTH*.
  - e) Click on *Add* to open the *Add slave* window. The *Add Slave* window is displayed.
  - f) Click in the *Hostname/IP* input field and enter the IP address (Hostname not yet supported) of the first slave projector (e.g. right screen).
  - g) Click on the drop down box *Played frames* and select *BOTH*.
  - h) Click on the drop down box *Extended screen* and select *RIGHT*.
  - i) Click *OK*. The *Add Slave* window is closed. The slave projector is now added in the slave list.
  - j) Click on *Add* to open again the *Add slave* window. The *Add Slave* window is displayed.
  - k) Click in the *Hostname/IP* input field and enter the IP address (Hostname not yet supported) of the second slave projector (e.g. left screen).
  - l) Click on the drop down box *Played frames* and select *BOTH*.
  - m) Click on the drop down box *Extended screen* and select *LEFT*.
  - n) Click *OK*. The *Add Slave* window is closed. The second slave projector is now added in the slave list.
  - o) Click *OK*. The *Multi projectors settings* adjustment panel is closed.
2. **Master projector Data network configuration.** This step must be performed on the master projector to configure the Data network parameters.  
In Communicator, use the following steps to configure the network parameters:
  - a) While in *Media Server/Installation*, click on *Global settings* settings tab. The *Global settings* window is displayed.
  - b) Click on the corresponding *Edit button* in Board IP address 2 (We arbitrarily choose IP slot 2 for the Data network). The *Board IP address* window opens with its current settings.
  - c) Uncheck the check box next to *obtain an IP address automatically (DHCP)*. The *IP settings* become available.
  - d) Fill the parameters to configure a fix IP address in the DATA network.
  - e) Click *OK* to validate and close the *Board IP address* window. The new fixed address is displayed in the *Global settings* window.
3. **Slave projector Data network configuration.** This step must be performed on the two slave projectors to configure the Data network parameters.  
Please follow the same procedure as the Master to configure the network parameters on the slave projectors in order to add them in the DATA network.
4. **NAS Synology DSM installation and configuration.** This procedure is not intended to the description of installation of the NAS, so please refer to the installation manual of this device to configure it.  
You must take care to install the following:
  - a) Install the DSM software on the NAS. This step requires to install the *Synology Assistant* on the laptop (latest version: 5.1).
  - b) Use the DNS software to log in on the NAS for the first time (Quick start guide) and run automatic updates.
  - c) Create a shared folder named *EscapeContent* on the NAS. To perform this operation you need use the DSM web application provided by the NAS via an Internet Browser on the Laptop.
  - d) Configure an FTP server on the NAS. To perform this operation you need use once again the DSM web application provided by the NAS via an Internet Browser on the Laptop. You need enable the FTP service then create an FTP User (Name e.g. "ftpnas"+ password). Do not forget to set the shared directory (created in the step before) as the reference folder (read only).
  - e) Configure the Data network. To perform this operation you need use for the last time the DSM web application provided by the NAS via an Internet Browser on the Laptop. You need select the *LAN2* in the network interface then use the manual configuration to fix IP and network data.
5. **License settings.** This step will be performed only on the master side. Slave projectors will automatically be configured by the master via the CTRL network.  
In Communicator, follow the next steps to add license:
  - a) While in *Media Server/Installation*, click on *License* settings tab. The *License* window is displayed with the list of all licenses already installed on the projector.
  - b) Click on *Add*. A browser window opens.
  - c) Browse to the license file (e.g. ICMP-License-Escape-9999....999.xml) and click *Open*. The file is uploaded on the projector, then the new license is added in the list of all licenses already installed on the projector.

#### 4. General operation examples

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6. **NAS as Server Source.** This step will be performed on the 3 projectors, on the master and on the two slaves. Remember that the content will be loaded on the 3 projectors.  
In Communicator, follow the next steps to add server source:
  - a) While in *Media Server/Installation*, click on *Server* settings tab. The *Server* window is displayed with the list of all servers already installed on the projector.
  - b) Click on *Add device*. The *Server device configuration* window opens.
  - c) Fill server name field (e.g. NAS\_01).
  - d) Choose a communication protocol via the drop down box (e.g. FTP).
  - e) Enter the needed parameters to allow the communication with the device via the chosen protocol (IP address, login, password, path, parameters ...)
  - f) Click *OK* to add the device. The new device appears in the devices list.
7. **Copy content from USB storage to NAS .** This step will be performed on the NAS. To perform this operation you need use the DSM web application provided by the NAS via an Internet Browser on the Laptop. Please refer to the device user guide to obtain more information concerning copy on the NAS.  
The content must be copied on the shared folder named *EscapeContent* create above.
8. **Ingest content.** This step will be performed only on the master projector. Content will be loaded automatically on the slave projectors.  
Note: The following steps will be done via Commander, the Barco software used to control the ICMP. Ensure that you are familiar with this software and do not hesitate to refer to the manual to clarify doubts.  
In Commander, follow the next steps to ingest content:
  - a) Use the login and password to log on Commander.
  - b) Click on *Ingest* tab. The *Ingest* Panel is displayed.
  - c) In this module, select the *source* tab then choose the source (location) of the content (DCP) in the Drop-down list. If you have correctly configured the NAS in the previous steps, it is available in the list of content (e.g. NAS\_01). When you have selected a source, the DCPs available on the targeted source are displayed.
  - d) Choose your content and click on the *ingest* Button. An ingest job is created on each projector corresponding to the appropriate part of the content (left, center and right).
  - e) You can click on the *Ingest Jobs* tab to display the list of ingest Jobs.
  - f) After few moments (depending the size of the content) jobs are indicated as completed!
9. **Create show.** This step will be performed only on the master side. When a show is loaded on the Master projector, it is also automatically created and loaded on Slave projectors. Of course, this does require that Slave projectors have all the CPLs, KDMs and automation cues required (present on the SPL on the Master).  
In Commander, follow the next steps to create show:
  - a) Use the login and password to log on Commander.
  - b) Click on *Show editor* tab. The *Show editor* Panel is displayed.
  - c) In this module, select and put in the show all the clips and the cues you want added.
  - d) Click on the save icon to give a name and save the show.
10. **Play.** This step will be performed only on the master side. When a show is loaded on the Master projector, it is also automatically loaded on Slave projectors.  
In Commander, follow the next steps to play the show:
  - a) Use the login and password to log on Commander.
  - b) Click on *Player* tab. The *Player* Panel is displayed.
  - c) In this module, select a show. Press the *Select* button, select the desired show in the list and validate your selection. Show is displayed in the Player panel.
  - d) Click on *Play* button to play out the show. The show is played on the 3 projectors.

#### Alternative method to load content on Escape System

The previous ingest method (see previous section) could be used for all network ingest protocols (FTP, SMB, NFS). With the version 1.2.4 or higher of the ICMP software, a new method of USB ingest is available.

In Commander, on the master projector, follow the next steps to ingest content:

1. Plug the USB media on the Master projector.
2. Use the login and password to log on Commander.
3. Click on *Ingest* tab. The *Ingest* Panel is displayed.
4. In this module, select the *source* tab then choose the "usb" media as source.  
The DCPs available on the targeted source are displayed.
5. Choose your content and click on the *ingest* Button. An ingest job is created on each projector corresponding to the appropriate part of the content (left, center and right).
6. You can click on the *Ingest Jobs* tab to display the list of ingest Jobs. To monitor the upload progression on the slave projectors, you obviously need to connect you to these devices.
7. After few moments (depending the size of the content) jobs are indicated as completed!





Due to the three ingest jobs (launched simultaneously), the USB ingest speed will be divided by 3.

## 4.4 Immersive Sound

### General

Immersive sound is a term used to describe all OBAE (Object-Based Audio Essence) sound formats. Immersive sound includes more audio channels to augment the listening experience.

ICMP currently supports several models of Immersive Sound Renderers:

Immersive Sound Renderer	ICMP (minimum required version)	Sync Signal Type	Default Sync signal input channel
Dolby Atmos CP850 renderer	V1.2.3	Use the audio sync signal embedded in AES	AES Input 14
Barco AuroMax APx renderer	V1.2.7	Use the audio sync signal generated by the ICMP	AES Input 13

### Application Diagram

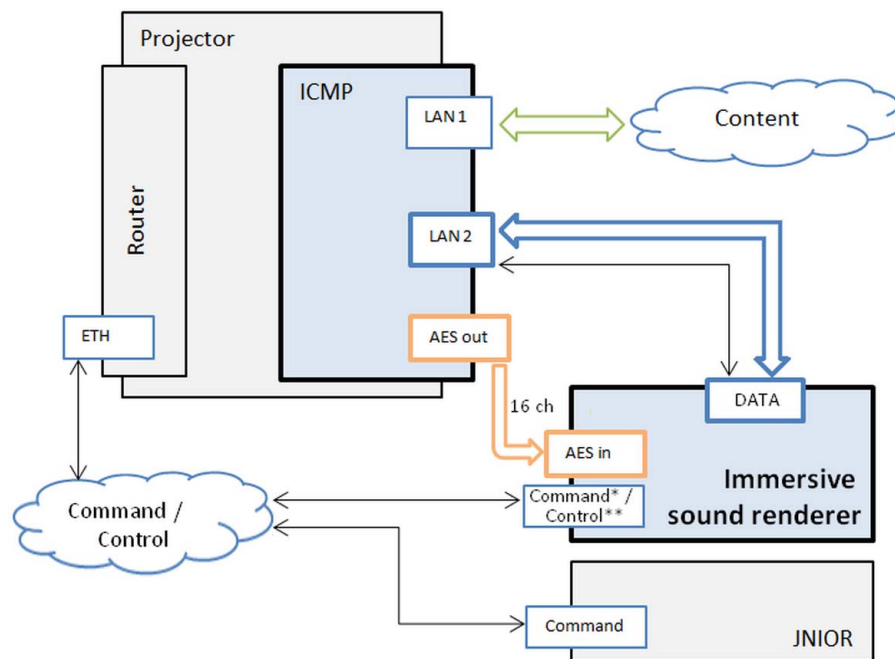


Image 4-8

\* Dolby CP850

\*\* Barco AuroMax APx

### Description

Based on a typical installation (Projector/ICMP equipped with sound processor), an immersive sound installation need an additional link that allows the ICMP to manage the Immersive Sound Renderer and upload corresponding KDMs.

The Immersive sound renderer must be connected as follows:

- Blue connection (Lan2) can be used as secured connection for meta data and specific Immersive sound data.
- Orange connection (AES) is used for basic sound data (non Immersive sound). For example, this connection is always used for the 5.1 sound or 7.1 (channels from 1-8 and 9-16, AES sync channel).  
Note: Depending the model of Immersive Sound Renderers (See table above), the Sync signal input channel could be different and must be settled in the ICMP. The procedure to modify the Sync signal channel on the ICMP is available in the procedure below.

Command / Control connection (Ethernet connection) is optional. This connection could be used to send direct commands (automation cues) to the Immersive Sound Renderer (Mute, fader levels, ...).

### Set up Immersive sound system

Use the following steps to configure and use the projectors in Immersive sound configuration:

1. **Wiring.** Realize the wiring of the immersive sound renderer as described in schema above.
2. **Immersive Sound Renderer configuration.**

In Communicator, use the following steps to configure the connection with the immersive sound renderer:

- a) While in *Media Server/Installation*, click on *Immersive sound settings* tab. The *Immersive sound settings* window is displayed.

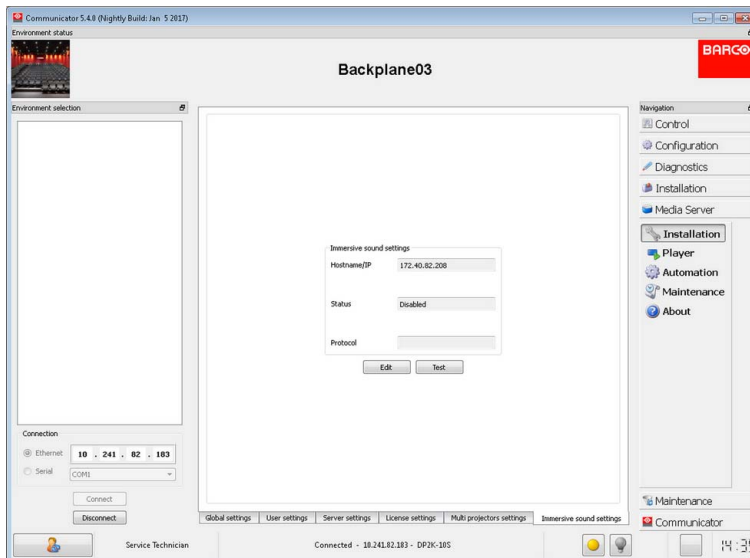


Image 4-9  
Communicator – Media Server/Installation

- b) Click Edit. The *Immersive sound settings* adjustment panel is displayed.

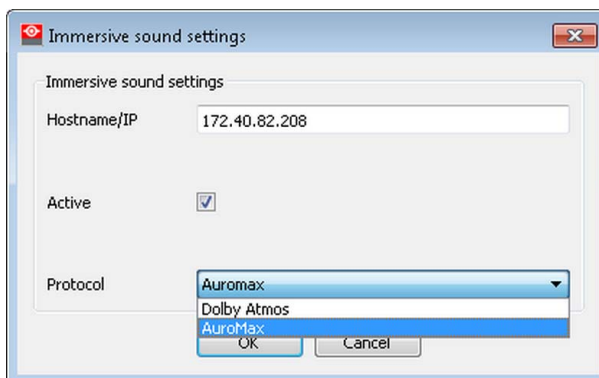


Image 4-10

- c) Give the immersive sound renderer IP address.
  - d) Check the check box next to *Active*.
  - e) Select Protocol (e.g. AuroMax)
  - f) Click OK to validate and close the *Immersive sound settings* adjustment panel.
  - g) (option) Use *Test* button to check if the communication with the sound renderer is correct.
3. **Sync signal channel configuration.**  
By default the Sync signal channel is not settled in the ICMP. Please go directly to the next step of this procedure if the Immersive Sound Renderer use the audio sync signal embedded in AES (e.g. Dolby CP850) because it is not necessary to set the Sync signal channel. However, the Immersive Sound Renderer use a Sync signal that must be generated by the ICMP (e.g. Barco AuroMax APx), Sync signal channel must be configured.  
In Communicator, use the following steps to configure the Sync signal channel:
    - a) While in *Media Server/Player*, click on *Audio channels* tab.
    - b) Click Edit. The *Audio channel setting* edit box is displayed.
    - c) Modify the configuration (please refer to the Communicator user manual) in order to use the AES output 13 as SMPTE Sync signal channel.  
Note: the channel 13 should be assigned explicitly to the "SMPTE Sync" label, not the "Sync" label which also exist and is by default on channel 14.
    - d) Click OK to activate the modification and close the *Audio channel setting* edit box.

4. **Ingest content.** This step will be done via (Web)Commander, the Barco software used to control the ICMP. Ensure that you are familiar with this software and do not hesitate to refer to the manual to clarify doubts.  
In (Web) Commander, follow the next steps to ingest content:
  - a) Ingest a content that use Immersive sound via the Ingest Module.
  - b) Ingest the KDM for the ICMP.
  - c) Ingest the KDM for the OMB (Immersive Sound Renderer).
 Note: At this step, two KDMs are displayed in the content module concerning the content that use Immersive sound. Please refer to the chapter dedicated to the content management in the (Web)Commander user manual.
5. **Create show.** The Show editor module in (Web)Commander is used to create a show with the content previously ingested.
6. **Play.** In (Web)Commander, load the show previously created and click on *Play*.  
Note: Load encrypted content with immersive sound can take a few extra seconds compared to the classic content (connection with the Immersive Sound Renderer and certificate checking).

### No license needed

Immersive sound system is not protected by a license. When an immersive sound renderer is configured in Communicator, the Barco configuration software, the functionality will become available in (Web)Commander.

### DCI-compliant dual KDM

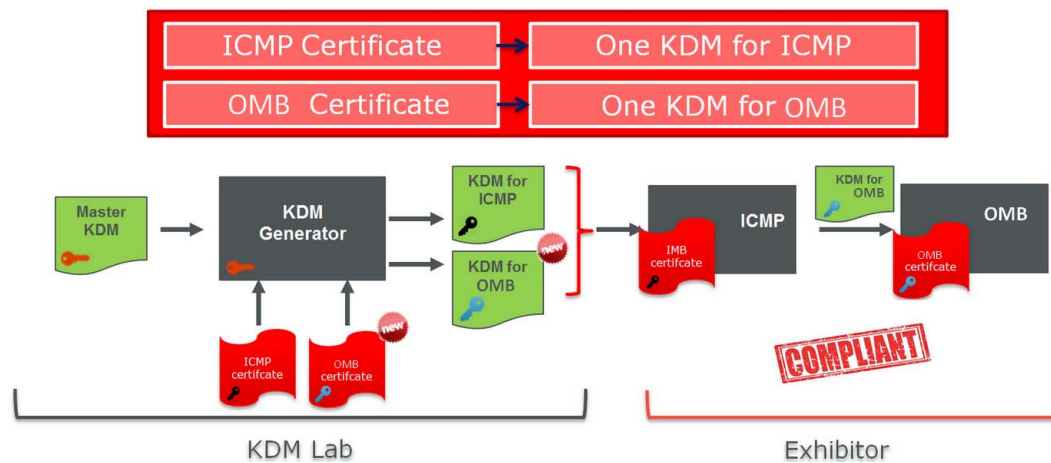


Image 4-11

The implementation follows the DCI approach that requires the use of 2 KDMs for the same content: one KDM for the IMB (Barco ICMP) and one KDM for the OMB (Immersive Sound Renderer). Both KDMs have to be ingested on the ICMP which will upload the correct KDM on the Immersive Sound Renderer when loading the content in the player. An invalid or a missing immersive sound KDM shall be reported as a warning and playback shall be possible without the immersive sound. The main integrity of a CPL is not impacted by the immersive sound assets. A new immersive sound integrity is reported through the API. A bad integrity for immersive sound shall be reported as a warning and playback shall be possible without the immersive sound.

### Specific cases

Some specific cases must be considered depending the configuration of the installation (Network, device type/mark, software versions ...)

#### Barco AuroMax APx v1.0 + Barco AP24:

In version 1.0 of the Barco AuroMax APx, some features (Analog inputs, HDMI, ...) are not yet available. It is recommended to continue to use the AP24 in parallel. The following schema indicates the recommended wiring to use these both devices correctly. The direct AES sync channel (channel 13-14) is needed because these channels are filtered and not directly transmitted (direct path through) by the AP24.



To obtain more details concerning these devices, please refer to the AuroMax APx and AP24 user manuals.

#### 4. General operation examples

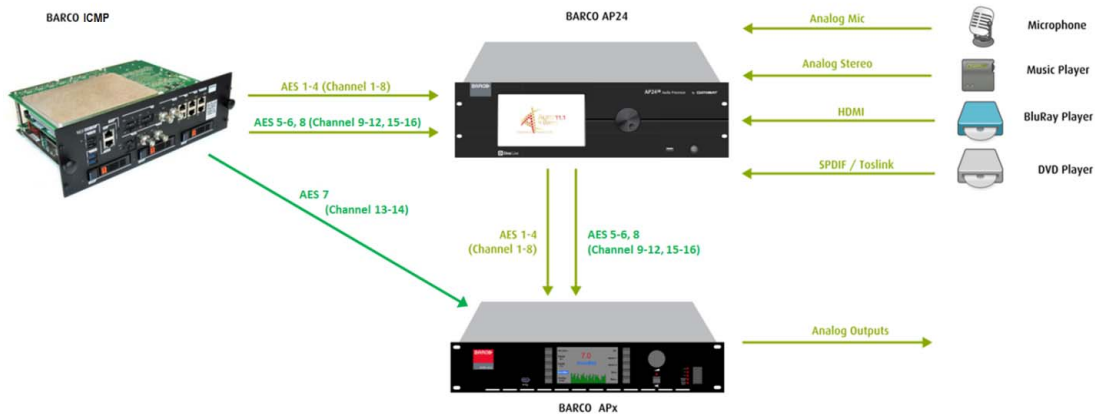


Image 4-12

#### Dolby CP850:

Dolby company strongly recommends using the CP850 *Command* port for both the control and OBAE data transfer. That implies the ICMP LAN 2 should be connected and configured on the same network range (same network switch) as the projector.



It is recommended using a 1Gb network switch, and set LAN MTU (maximum transmission unit) values to 1500 on both ICMP and CP850.

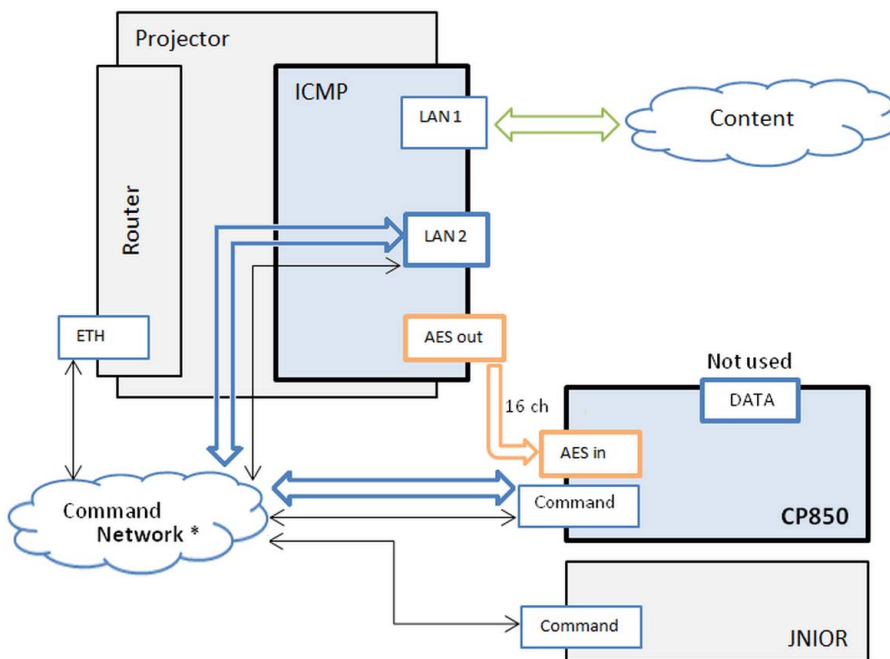


Image 4-13

\* Use only 1Gb network switch.



To change the MTU value for the connection on the ICMP use Communicator, the Barco configuration software. Select Media Server/Installation/Global settings and edit the board IP address related to the LAN2. The MTU value is accessible in the advanced settings panel. Use the Communicator user guide to obtain more details.



To change the MTU value for the connection on the Dolby CP850, please refer to the CP850 user manual.

## 4.5 DCP Publishing

### General

Until now, the FTP server allowed to access content but all CPLs are grouped together in a single DCP and exposed at the FTP root.

From version 1.2.3, with the new DCP publishing feature, ICMP exposes also a new asset structure (1 complete and standalone DCP per CPL) on its FTP server to ease external ingest (e.g. via FTP client or from an SMS) or content transfers to LMS.

### Application Diagram

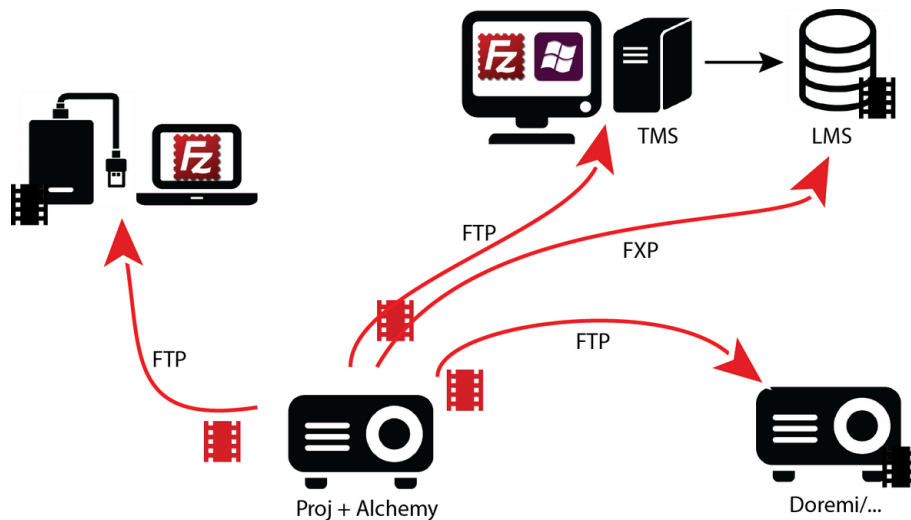


Image 4-14

### Description

With the DCP publishing feature, content is still stored in the same way as before on the ICMP hard drives (with the same data base management), only the exposure on FTP server has changed: one DCP per CPL.

FXP data transfer is also available to transfer content from the ICMP to another client without routing the data through the client's connection. For example, in an installation that uses one TMS and several LMSs, the TMS initiates the transfer between the server (ICMP) and a client (LMS), then lets the server and the client finish the transfer.



**In the case of FXP data transfer, you need configure the FTP client to transfer one file at a time.**

### Content validity

DCP publishing is a feature based on a FTP server. The File Transfer Protocol manages files. It can't check whether some files are missing or if the DCP is corrupted. For instance, an Escape CPL will never be complete because only assets of one screen (MAIN, LEFT or RIGHT) are actually ingested on the ICMP.

### Login and Passwords

Type	Login	Password	Asset structure
FTP Content	ftpcontent	icmp	All CPL in a single DCP
DCP Publishing	ftpdcps	icmp	1 DCP per CPL

Port number: 43750.

### How to transfer content via FTP client

In this example, a Windows Explorer is used as FTP client.

1. In a typical cinema installation (Projector + ICMP, 1x LAN for Ctrl, 1x LAN for Content/Data), plug and configure a computer to the LAN dedicated to content transfer (Data).
2. Open Windows Explorer (e.g. Windows key + E).
3. In the address bar of the Windows Explorer, type "ftp://" and the address (Ip) of the ICMP where the DCPs are stored (e.g. ftp://172.30.82.107).
4. Hit the **Enter** key

A new window ("Log On As") will pop up asking for the user name and password for the FTP account.

#### 4. General operation examples

---

5. Type the user name (e.g. **ftpdcps**) and the password (e.g. **icmp**) just where required.

6. Click on **Log On** button.

You will immediately see the list of all contents available on the server (ICMP).

**Note:** With the new DCP publishing feature, the names of the folders are the UUIDs of the DCP. If you want retrieve an human readable DCP title you need click on each folder.

**Tip:** Browse each folders can be tedious, so it's more easy to identify the CPL and its ID via the (Web)Commander. In the Content module, search the clip in the content browser and click on the properties. One of them is the ID of the CPL.

---

ID 0a1bdbbe-23fe-4a94-80e9-c7eb7e166b03

---

Image 4-15

7. Now download the files as usual. You can use the keyboard shortcut to copy the files from the server to the local computer (local hard disk, USB devices). You can also drag-and-drop to transfer the files.



**Upload files on the server is not allowed. The only way to transfer contents on your ICMP is to ingest it.**

---



**If you use dedicated software as FTP server (e.g. FileZilla), please take care to configure the default transfer type to Binary.**

---

# A. SPECIFICATIONS

## About this annex

This chapter gives an overview of the specifications of the ICMP concerning input and communication ports, storage capacity and content formats.



A complete description of the ICMP ports is available in the Installation manual. For further detail please see in this Manual.



The information given in this chapter are for guidance only. An update is always possible with the installation of a new version of the ICMP. Please consult Barco's website, (URL: <http://www.barco.com>) to obtain the last update of these information.

## A.1 Specifications of ICMP

### Overview

<b>Integrated Cinema Media Processor</b>	DCI 4K 2D up to 60fps* DCI 4K 3D (24 or 30 fps per eye)* DCI High Frame Rates 2K 3D up to 120fps (60fps per eye) JPEG 2000 bit-rates up to 625Mbps Dual-channel color-correction MPEG-2 (4:2:0 and 4:2:2 up to 60fps) 2x HDMI2.0a (up to 4K 2D 60fps) 2x 3G-SDI inputs 16x AES/EBU audio channels (2x RJ45) 8x GPI, 8x GPO (4x RJ45) 2x Gbe for content connectivity & ingest 2x front-accessible USB 3.0 for fast ingest 2x front-accessible USB 2.0 Video and audio watermarking: Civolution NexGuard Closed captioning devices: Support for SMPTE 430-10 * 4K 24fps is standard. For 4K 60 fps / 4K 3D on ICMP upgrade modules a license is required. Newly-built 4K Barco Alchemy projectors have the license standard included.
<b>Barco Web Commander</b>	Projector dashboard Projector control board Show player/editor/scheduler Automation, 3D, Ingest Smart projector status Via HTML5 web browsers including iOS & Android tablets Compatible with free Barco CineMate iOS & Android app
<b>Barco Commander (for touch panel controller)</b>	Projector control board Show Player/Editor/Scheduler Automation, 3D, ingest Dynamic DCP playlists & intermission Smart projector status

## A. Specifications

---

<b>Barco Communicator</b>	Projector installation & configuration Projector update & maintenance Barco CineMate App (iOS & Android) - free
<b>Integrated storage</b>	1.9TB effective storage (RAID-5) / 3x 1TB Hot-swappable 2.5" hard-drives 3.9TB effective storage (RAID-5) / 3x 2TB Hot-swappable 2.5" hard-drives
<b>Options</b>	ICMP License for 4K 3D/4K 60p - Upgrade Kit ICMP License for HDMI2.0 HDR ICMP License for live IP Licence for Dual Projector
<b>TMS support</b>	Barco Alchemy is supported by the following Theater Management System (TMS) brands: AAM Screenwriter, Ymagis Melody, CFG-Barco, Unique RosettaBridge, ADDE, CinéDigital Manager, GDC, Proyecson, Real Image, Sony, Hollywoodsoftware/Comscore TCC, Kinoton



## B. CONTENT ICONS AND MESSAGES

### Overview

- Content kind
- Content types and validity
- Delete content messages

### B.1 Content kind

#### About content kind

Several modules are based on content management (content browser, show editor, ingest, scheduler). All content material match one value predefined by DCinema standards (trailer, short, feature, advertisement ...) This categorization of content provides a significant added value to content management.

#### Colors assignment

The kind of a content item is identified with the background color of its icon.

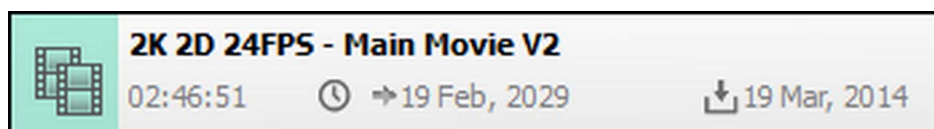













Image B-1

The assignment of colors is as follows:

-  **Trailer:** Short (2 to 3 minutes) content promoting an upcoming theatrical feature.
-  **Teaser:** Very short (typically less than 1 minute) content promoting an upcoming theatrical feature.
-  **Advertisement:** Content promoting a product or service other than an upcoming feature.
-  **PSA:** Public service announcement.
-  **Policy:** Content defining the code of conduct for patrons.
-  **Transitional:** Extremely short content (1 to 15 seconds) separating unrelated compositions.
-  **Rating:** Slate/still picture indicating the recommended age group permitted to view the content to follow. This rating is generally unique per country.
-  **Feature:** A theatrical feature.
-  **Short:** Non advertising/promotional content (3 to 15 minutes) typically before a theatrical feature.
-  **Test:** Content used to test, calibrate or setup d-cinema exhibition equipment.
-  **Break:** Content used to indicate a pause in the show.

### B.2 Content types and validity

#### About content types

In the Digital Cinema world, content is all the material loaded, manipulated and played on the projector. To facilitate its handling, content is separated in several types.

In the Commander software the available content types are:

- **Clip:** Composition Play List (CPL) that contains all assets (picture, sound, subtitle and metadata) necessary to play content such as movie, trailer, advertisement ...
- **Placeholder:** Default Clip to replace momentarily some content which not loaded yet on the ICMP in order to prepare a show in advance.
- **Show:** assembly of clips also called Show Play List (SPL) that instructs which Clips are to be played, and in what order, for a Show.
- **Template:** show that contains at least one placeholder.







### About validity

To protect the Digital Cinema content from piracy, a data encryption system is used on the majority of films. Digital keys, with periods of validity (time window), are required to allow content playback. Content is valid if all assets are present and for encrypted content, a key is valid and within its time window.

In the Commander software the relevant validity issue types are:





- Missing clip or asset: the Composition Play List is not complete.
- Missing Key: A valid protection key (KDM) must be loaded for this content.
- Before time windows: a KDM is present but the validity period for this content is not yet begun.
- Out of time window: a KDM is present but out of its validity period.
- Near end of time window: the validity period for this content is almost finished.






### KDM validity

Validity	Icon assignment
Valid	
Future valid	
Invalid	
Near expiration	
Board invalid	
Corrupted	










### CPL validity

Main table:

CPL validity	Audio validity	Icon assignment
Invalid	ANY	
Future valid	ANY	
Valid	See CPL details table below.	
Missing asset	ANY	










CPL validity	Audio validity	Icon assignment
Missing key	ANY	
Near expiration	ANY	
Not encrypted	See CPL details table below.	
Corrupted	ANY	
Board Invalid	ANY	

Details table:











CPL validity	Audio validity	Icon assignment
Valid or Not encrypted	Invalid	
Valid or Not encrypted	Future valid	
Valid or Not encrypted	Valid	
Valid or Not encrypted	Missing asset	
Valid or Not encrypted	Missing key	
Valid or Not encrypted	Near expiration	
Valid or Not encrypted	Not encrypted	
Valid or Not encrypted	Corrupted	
Valid or Not encrypted	Board Invalid	









**SPL validity**

Main table:

SPL validity	Audio validity	Icon assignment
Invalid	ANY	
Future valid	ANY	
Valid	See SPL details table below.	
Missing asset	ANY	
Missing key	ANY	
Near expiration	ANY	
Not encrypted	See SPL details table below.	
Corrupted	ANY	
Board Invalid	ANY	

Details table:

SPL validity	Audio validity	Icon assignment	Template Icon assignment
Valid or Not encrypted	Invalid		
Valid or Not encrypted	Future valid		
Valid or Not encrypted	Valid		
Valid or Not encrypted	Missing asset		
Valid or Not encrypted	Missing key		

SPL validity	Audio validity	Icon assignment	Template Icon assignment
Valid or Not encrypted	Near expiration		
Valid or Not encrypted	Not encrypted		
Valid or Not encrypted	Corrupted		
Valid or Not encrypted	Board Invalid		

### B.3 Delete content messages

#### About delete content messages

Depending the situation (loaded in player, scheduled, obsolete ...) and the type of content (Key, clip, show...) the messages displayed during the remove action could be different.

#### Removing key

When the user will delete a key, depending the situation, the following messages will displayed:

Situation	Messages	Description
Key not valid	(No message)	The key is deleted without confirmation message.
Valid key	<ol style="list-style-type: none"> <li><b>[First message: ]</b> Delete confirmation: Do you really want to delete selected key(s)? Delete/Cancel</li> <li><b>[Second message: ]</b> Key still valid. Delete/Cancel</li> </ol>	<ol style="list-style-type: none"> <li>The user need confirm his choice.</li> <li>The user need confirm his choice. Result (if Delete) : <ul style="list-style-type: none"> <li>- Key is deleted.</li> <li>- Clip concerned by this key becomes invalid.</li> </ul> </li> </ol>
Valid key of a clip loaded in the player	<ol style="list-style-type: none"> <li><b>[First message: ]</b> Delete confirmation: Do you really want to delete selected key(s)? Delete/Cancel</li> <li><b>[Second message: ]</b> Content selected in player - cannot delete content. Cancel</li> </ol>	<ol style="list-style-type: none"> <li>The user need confirm his choice.</li> <li>The user need click on Cancel button. Result : <ul style="list-style-type: none"> <li>- Key is not deleted.</li> </ul> </li> </ol>

#### Removing clip

When the user will delete a clip, depending the situation, the following actions will happen:

Situation	Messages	Description
Clip not referenced in a show	<ol style="list-style-type: none"> <li><b>[First message: ]</b> Delete confirmation: Do you really want to delete selected Clip(s)? Delete/Cancel</li> </ol>	<ol style="list-style-type: none"> <li>The user need confirm his choice. Result (if Delete) : <ul style="list-style-type: none"> <li>- Clip is deleted.</li> </ul> </li> </ol>
Clip referenced in a show	<ol style="list-style-type: none"> <li><b>[First message: ]</b> Delete confirmation: Do you really want to delete selected Clip(s)? Delete/Cancel</li> <li><b>[Second message: ]</b> Clip referenced in a show Delete/Cancel</li> </ol>	<ol style="list-style-type: none"> <li>The user need confirm his choice.</li> <li>The user need confirm his choice. Result (if Delete) : <ul style="list-style-type: none"> <li>- Clip is deleted.</li> <li>- Show concerned by this Clip becomes invalid.</li> </ul> </li> </ol>

Situation	Messages	Description
Clip loaded in the player	<ol style="list-style-type: none"> <li>1. <b>[First message: ]</b> Delete confirmation: Do you really want to delete selected Clip(s)? Delete/Cancel</li> <li>2. <b>[Second message: ]</b> Content selected in player - cannot delete content. Cancel</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice.</li> <li>2. The user need click on Cancel button. Result : - Clip is not deleted.</li> </ol>
Multiple delete : (n Clips are selected for delete)	<ol style="list-style-type: none"> <li>1. <b>1x [First message: ]</b> Delete confirmation: Do you really want to delete selected Clip(s)? Delete/Cancel</li> <li>2. <b>n x [message: ]...</b> One message is displayed depending the situation for each selected Clip (see previous cases above in this array)</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice.</li> <li>2. <b>n x</b> The user need confirm his choice. Result : see previous cases above in this array (depending the situation, some can be erased and others not. Each case is treated separately).</li> </ol>

### Removing show

When the user will delete a show, depending the situation, the following actions will happen:

Situation	Messages	Description
Show not scheduled and not loaded in the player	<ol style="list-style-type: none"> <li>1. <b>[First message: ]</b> Delete confirmation: Do you really want to delete selected show(s)? Delete/Cancel</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice. Result (if Delete) : - Show is deleted.</li> </ol>
Show Scheduled	<ol style="list-style-type: none"> <li>1. <b>[First message: ]</b> Delete confirmation: Do you really want to delete selected Show(s)? Delete/Cancel</li> <li>2. <b>[Second message: ]</b> Show scheduled Delete/Cancel</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice.</li> <li>2. The user need confirm his choice. Result (if Delete) : - Show is deleted. - Show is removed from the schedule.</li> </ol>
Show loaded in the player	<ol style="list-style-type: none"> <li>1. <b>[First message: ]</b> Delete confirmation: Do you really want to delete selected Show(s)? Delete/Cancel</li> <li>2. <b>[Second message: ]</b> Content selected in player - cannot delete content. Cancel</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice.</li> <li>2. The user need click on Cancel button. Result : - Show is not deleted.</li> </ol>
Multiple delete : (n Shows are selected for delete)	<ol style="list-style-type: none"> <li>1. <b>1x [First message: ]</b> Delete confirmation: Do you really want to delete selected Show(s)? Delete/Cancel</li> <li>2. <b>n x [message: ]...</b> One message is displayed depending the situation for each selected Show (see previous cases above in this array)</li> </ol>	<ol style="list-style-type: none"> <li>1. The user need confirm his choice.</li> <li>2. <b>n x</b> The user need confirm his choice. Result : see previous cases above in this array (depending the situation, some can be erased and others not. Each case is treated separately).</li> </ol>

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