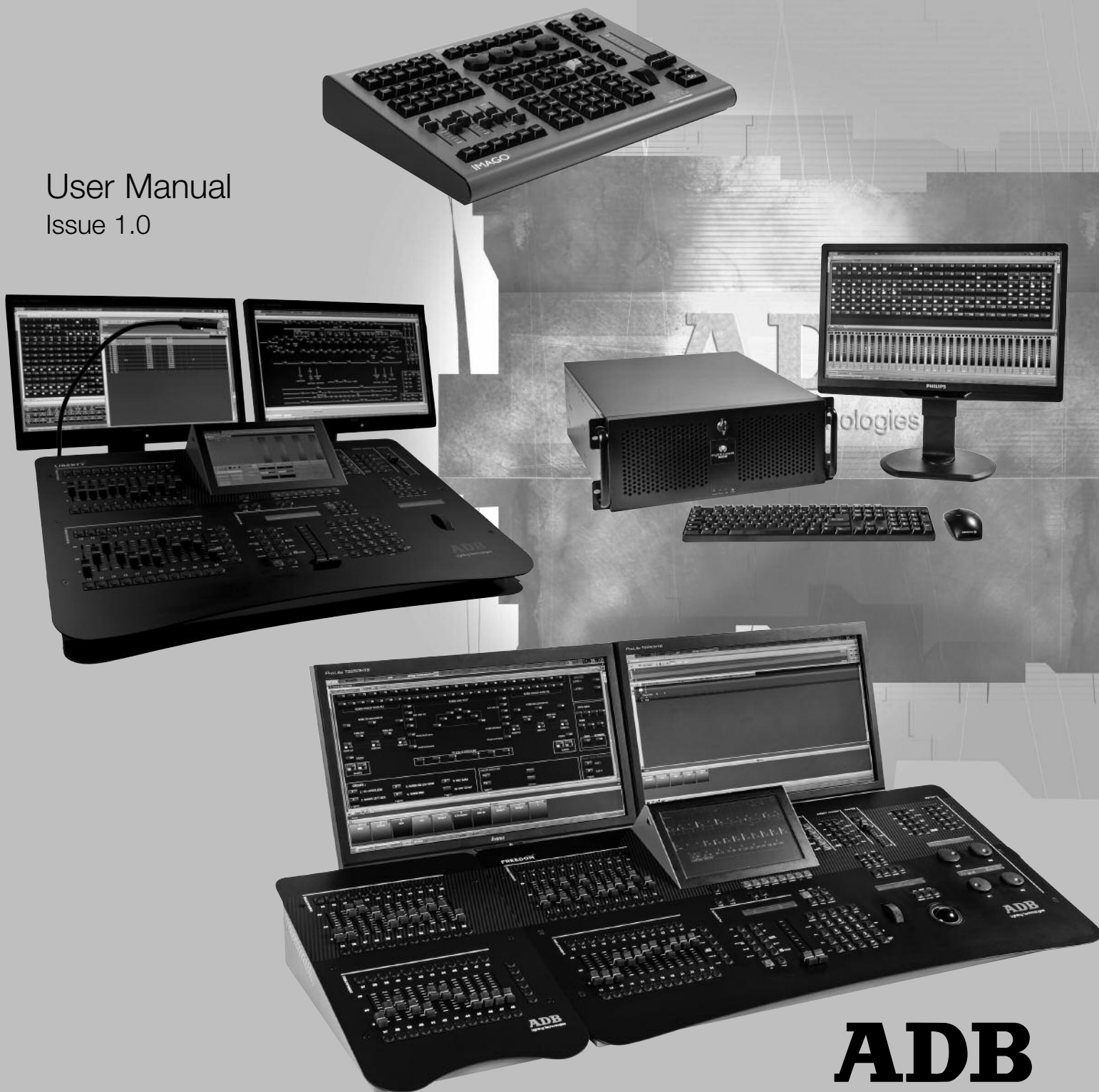


HATHOR Software (1.8.0.2)

User Manual
Issue 1.0



ADB
Lighting Technologies

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1. HATHOR SOFTWARE USER MANUAL

1.1 USING THE MANUAL

1.1.1 Introduction

1.1.1.1 Welcome to the HATHOR software User Manual

This manual is structured in different parts:

- The first part (Chapter 2) gives a general understanding of the software.
- The second part (Chapters 3 to 12) explains all about the basics functions.
- The third part (Chapters 14 to 18) explains all about the specific functions.

1.1.2 About this Manual

In every case where a Key software function does exist, it will be displayed between brackets, even if this physical key doesn't exist on any platform.

Example:

Access to main menu (HATHOR menu) is allowed via the software function "Menu". In every context where this function is usable, it will be displayed as following **[MENU]**.

In most of cases, related icons will be displayed.

Access:

The path to access to one element of the main menu (HATHOR menu) is, in most of cases, displayed as following:

HATHOR / Data / Gel Strings

Which means: click on HATHOR, then select Data, and then select Gel Strings, or open HATHOR menu with **[MENU]**, then, use arrows to select Data with arrows, and then Gel Strings.

In every window, column headers display is contextual, depending of the selected row.

This manual intends to explain all the software functionalities, nevertheless this lighting software is object oriented, which means there is never only one way to access to a function or to edit an object. Accesses are generally related to the context and obviously to the controller the operator is focused on.

For example it is possible to edit a Group.

From the Play Menu: Right Click on the dedicated Group

From the HATHOR Menu: Data / Groups / Right Click on the dedicated Group

From the Groups Direct Access Panel: Right Click on the dedicated Group

From the console: **#[EDIT] [GROUP]**

This manual doesn't intend to list all the ways to access to a feature or an Editor window, because as soon as the concept is understood, the operators will find, choose and adapt their way of working as they need.

1.2 TERMINOLOGY

1.2.1 Text Conventions

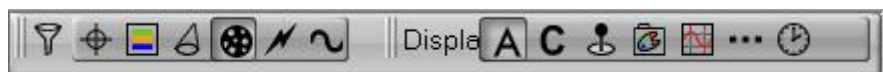
- A "Keyboard" is a standard computer keyboard, whether connected to a HATHOR desk/Rack PC, or on a laptop computer running HATHOR.
- Keyboard Keys are in brackets, **(CTRL)**.
- Software functions in menus are in brackets e.g. **{Browse File}** is a function in the File Menu. In this case the access path will be indicated as **MENU HATHOR>FILE> (Browse File)**.
- "Numeric Keypad" is part of a standard computer keyboard, or a standalone keypad connected to a computer, as above.
- "Console Keypad" is part of a standard desk.
- Panel keys, including the "Console Keypad" are displayed in square brackets, e.g. **[RECORD]** is a panel key.
- **[-----]&[-----]** means hold the first key then push the second key.
- **##** corresponds to a numerical entry.
- "**Console**" refers to various control surfaces that can have their keys mapped to specific functions within HATHOR software. These may connect to computers running HATHOR software by various means, including USB or MIDI. Such control surfaces include, and are limited to ADB consoles and X-keys button.
- "**Alpha Keys**" are functions available on a Keyboard, but only when a setting is checked under HATHOR's Setup/Preferences.

Note: generally key combinations do not work well on keyboards, as they execute the keystroke on the press of the key, and not on the release.

- "**Local Menu**" refers to a pop-up menu that is normally accessed by a right button mouse click while hovering over an item on the screen. HATHOR uses this extensively to provide specific features for that area of the software you are using. As a general rule, if you can't remember where a feature is accessed, check the local menu.
- "**Browser**" is a type of screen display used throughout HATHOR when you open anything to edit it, such as the Play, a Preset, Group, Actions, you are using a browser.

1.2.2 Editor Windows

1.2.2.1 Filters description



1.2.2.2 Attribute Groups:



FOCUS (POSITION): PAN, TILT...



COLOR: CYAN, MAGENTA, YELLOW, COLOR WHEEL ...



BEAM: FOCUS, IRIS, ZOOM ...



PATTERN: GOBO SHUTTERS ...



EXTRA: STROBE, PRISM



DYNAMIC

1.2.2.3 Display Filters:



AUTO



COMPRESSED



VALUES ONLY



PALETTES ONLY



DYNAMICS



TIME



DELAY

2. GETTING STARTED

2.1 INSTALLATION

2.1.1 Delivery and Unpacking

As soon as you receive your equipment, open the boxes and inspect the items received. If you discover any damage, contact the carrier immediately and make any necessary claim for the problems discovered.

2.1.2 Installing the console

The desk and the monitor(s) should be installed on a table or a console. The surface of your work area should be smooth, level and sturdy. Make sure that there is enough clearance around the desk to:

- open the desk
- access the rear connections
- allow air circulation around vents to prevent the desk from over-heating

Power Supply

The consoles have a universal power supply that will operate on voltages between 100 volts and 260 volts with a frequency range from 50 to 60 Hz.

Before powering up the desk or any of its peripherals, check that the existing voltages are within the limits defined.

THIS EQUIPMENT MUST BE EARTHED.

Note: all connections should be made with the power turned off; otherwise functioning may be affected and can even damage the equipment under certain conditions.

Electrical Connection

TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT OPEN THE DESK. THERE ARE NO USER SERVICEABLE PARTS WITHIN. REFER SERVICING TO QUALIFIED ENGINEERS ONLY. LETHAL VOLTAGES ARE PRESENT INSIDE! ALWAYS DISCONNECT FROM THE POWER SUPPLY BEFORE OPENING FOR INSPECTION.

Note: As all equipment used in computer systems, your system is sensitive to the characteristics of the network and in particular to variations and voltage peaks. Consequently, we advise you to use an appropriate line conditioner on this equipment.

2.1.3 Caring for your console

The consoles are manufactured from quality components and will give many years of service if you take some basic precautions.

- Do not allow any liquids or foreign objects to enter the desk.
- Do not apply excessive force to any of the controls. Spare parts and service are available from your ADB distributor, but prevention is better than cure.

- When connecting any devices to the desk, make sure that all connections are correct before switching on the power.

ADB lighting technologies has a policy of continuous improvement of its products. HATHOR software is subject to this policy as new features are added and existing features improved.

The current software version is displayed in the HATHOR menu (Upside Left corner) > **About**.

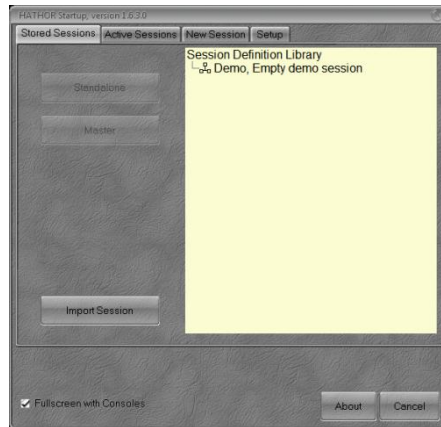
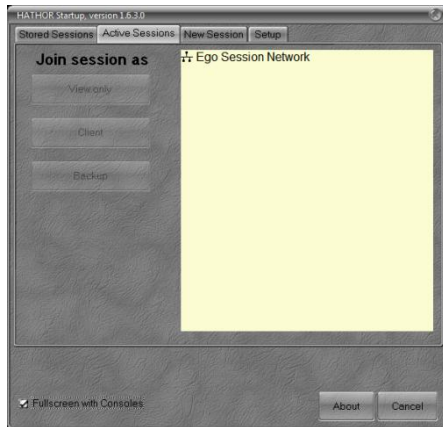
The latest version can be downloaded from the ADB website.

Whilst every care is taken in the preparation of this manual, ADB Lighting Technologies takes no responsibility for any errors or omissions.

2.1.4 Start with HATHOR

LIBERTY, FREEDOM and RACK PC UNIT: after 1 min, your system will display the default Layout on your monitor.

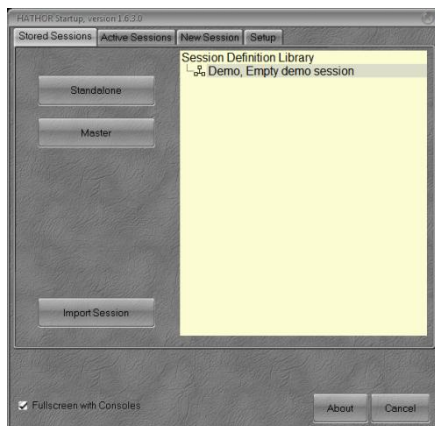
IMAGO: after 1 min, your computer will display the HATHOR Startup window.



Click on the **Stored Sessions** tab to display Stored Sessions.

In **Stored Sessions**, select the Demo, Empty demo session.

As soon the session is selected, it is possible to choose the role of the console: Standalone (no Backup or Client allowed) or Master / Master Ltd (Backup / Backup Ltd allowed, Client allowed if the license is 512 or more channels).



SCREEN LAYOUT

When starting HATHOR and IMAGO for the first time, all screens are empty (grey). To display the IMAGO dedicated screen, click on the HATHOR menu (Up left side of the main screen).

HATHOR / Setup / Consoles

Develop the USB Wings part, click on **ADB IMAGO, Enabled**, then click on the **Show Display** button. Then, dock this specific Display, and organize some controllers around that display.

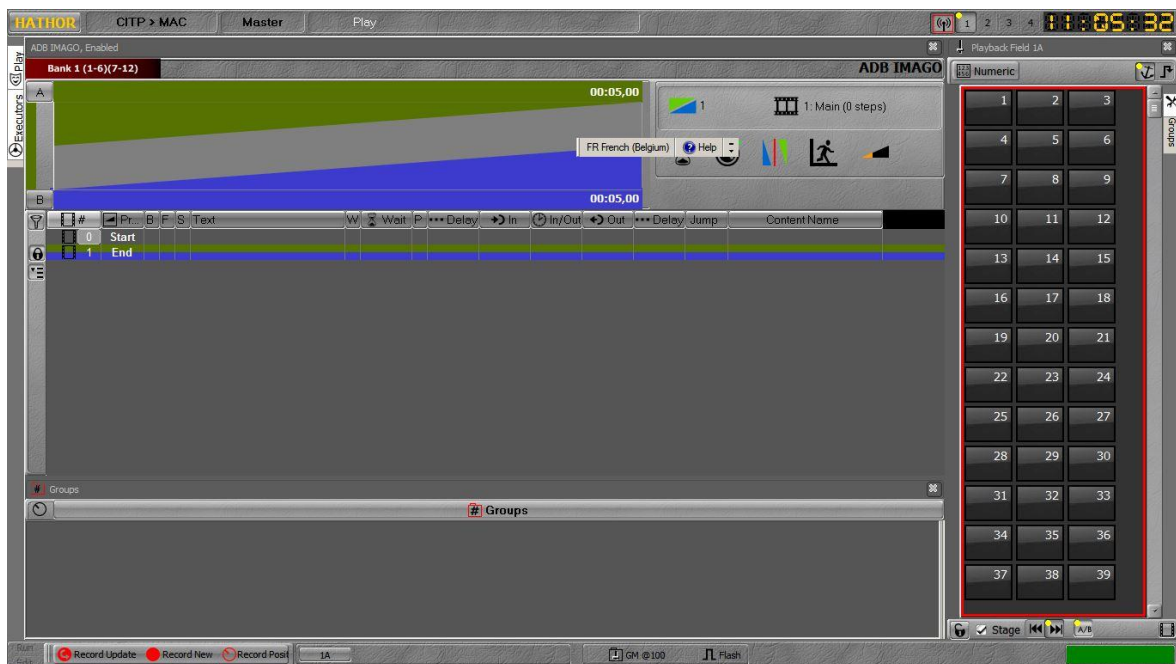
To display a basic configuration of screens and subscreens, load a Screen Layout (1 Screen.slo or 2 Screens.slo, or IMAGO Screen Layout.slo) corresponding to your system (only one monitor or two monitors).

To load a screen layout:

First insert the USB key delivered with the console in a USB port.

Click on the HATHOR menu (Up left side of the main screen).

HATHOR / Setup / Screen Layout / Load



To send a channel on stage, choose a number on the keypad, and simply turn the wheel, your channel will be selected (Red square around the channel box) and you will see its level in yellow.

To record your first memory: **[RECORD] [RECORD]**.

2.1.5 To shut down the system

HATHOR / Shutdown: {YES}

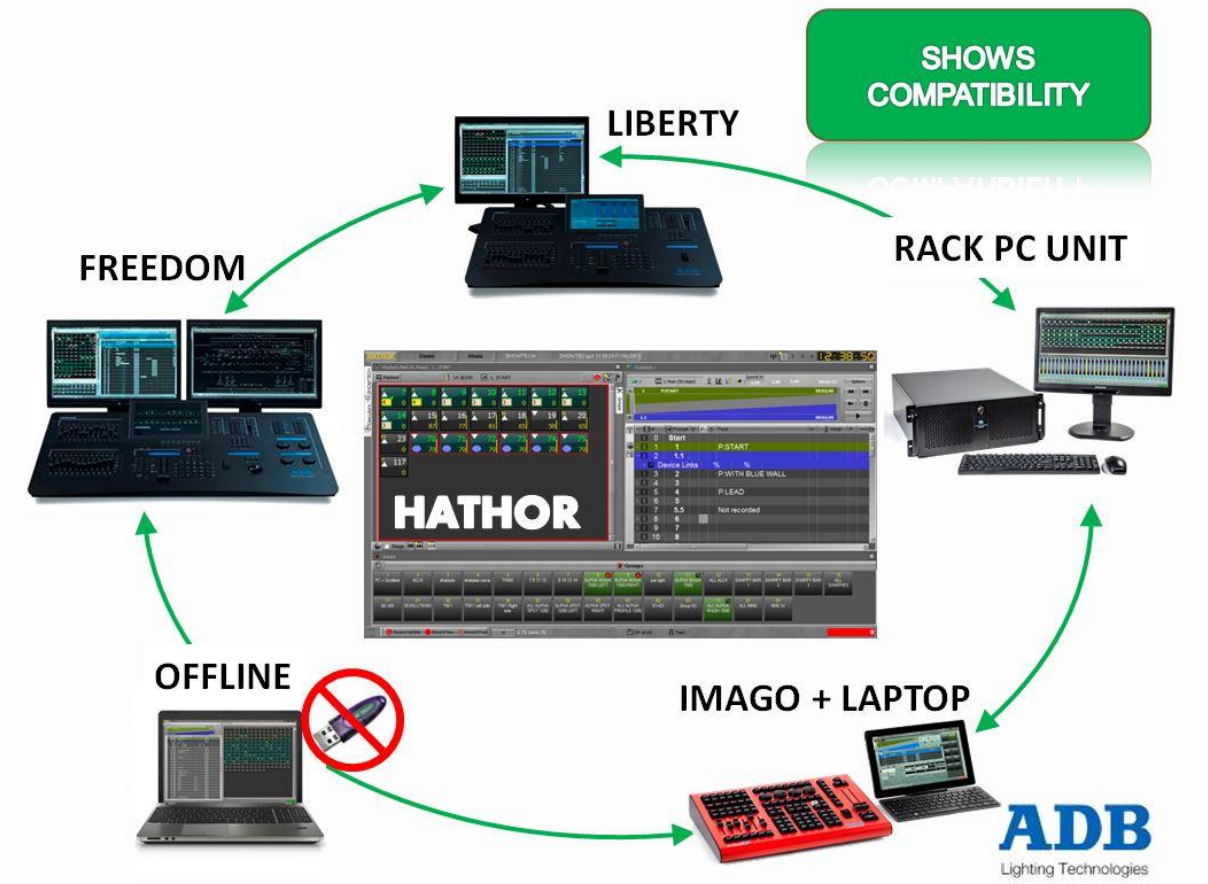
2.2 GENERAL INFORMATION

2.2.1 System overview

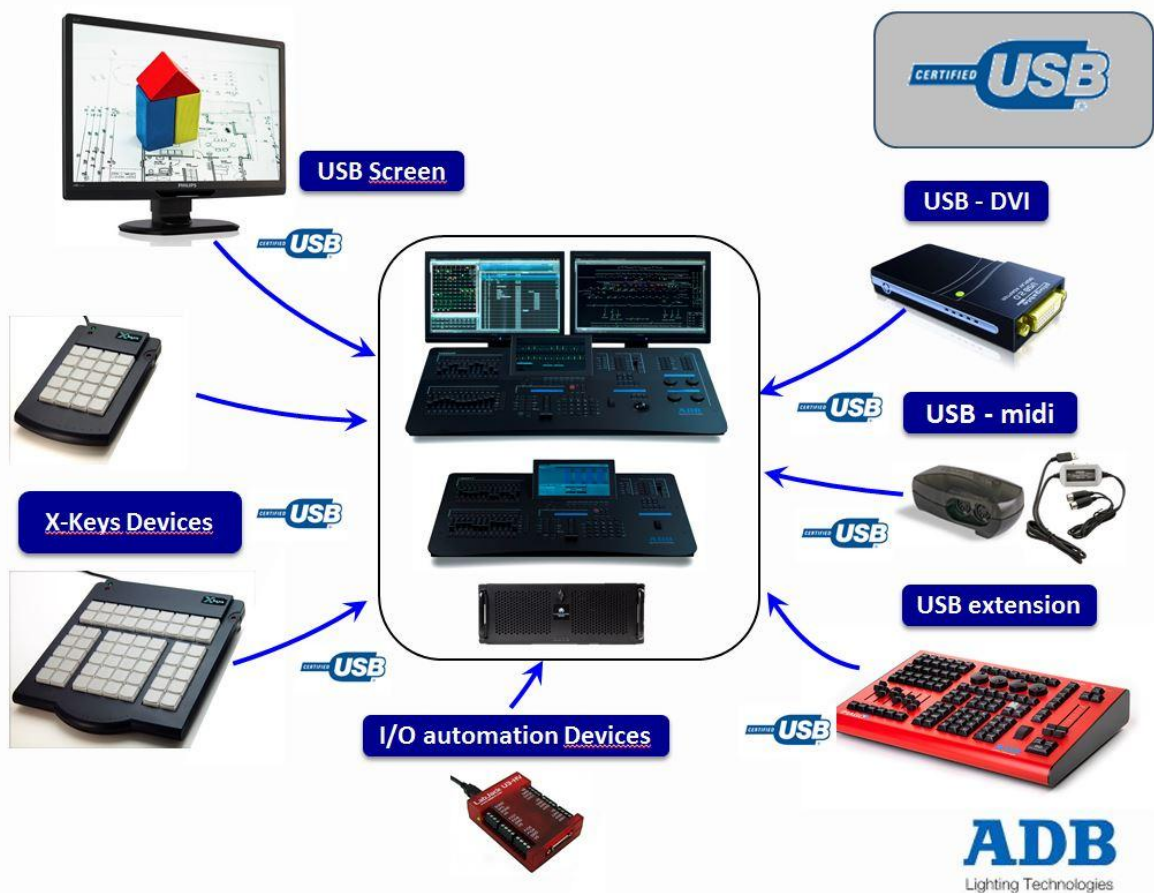
HATHOR range is a control system for conventional lights, moving devices, scrollers and media-servers. It controls up to 2048 channels (Instruments) and 16384 outputs (DMX channels).

2.2.1.1 Consoles and main accessories

1. LIBERTY
2. FREEDOM
3. RACK PC UNIT
4. 24 Subfaders Extension
4. IMAGO + computer
4. WI-FI Full remote system







2.2.2 Hardware

2.2.2.1 Computers specifications

HATHOR runs on Windows XP, Vista, Windows 7 and Windows 8.

Computers used to run HATHOR should be, at minimum, compliant with Microsoft's requirements for Windows7.

We would further suggest:

- Dual Core Processor with 2.9 GHz CPU (recommended: Intel i3 or higher)
- 2 GB RAM (recommended: 4 GB RAM)
- Hard-drive with minimum 64 GB (recommended type: SSD)
- Network card 10/100 Mbps
- USB 2.0 ports
- Graphics card: Use High-end graphic cards with high-speed memory and a graphic processing unit (GPU).
- Resolution : 1920x1080
- Operating systems: Microsoft Windows 7 (32 and 64 bits)
- If being used wireless: 802.11g wireless adapter
- Laptops with a full numeric keypad (for channel / level entry)

As with any software used for "mission critical" applications, we strongly suggest that HATHOR computers are only used to run HATHOR.

We strongly suggest that HATHOR computers only be connected to the internet when undergoing service and maintenance work, when there is sufficient time to properly assess and install updates.

All computers on the network must have the same version of HATHOR installed.

2.2.2.2 Video

Touchscreens

HATHOR can use touchscreens (especially useful for selecting Direct Access buttons such as Groups, Palettes and so on)

Touchscreens - resistive is acceptable.

Multi-Touch feature is supported by HATHOR.

Video graphic cards

HATHOR requires a fairly robust graphics card, especially if it is running under Windows 7 or 8. As a guideline, Microsoft's recommendations for an optimal Windows Vista with Aero graphics should be followed.

No special configuration is required for HATHOR.

2.2.2.3 Windows Configuration

Windows Colour Schemes

While HATHOR controls its own display of screen colours, there are some from Windows that "leak" through. To avoid problems we suggest the following Windows Colour scheme choices

- In XP use "Silver"
- In Vista use "Vista basic"
- In Windows 7 use "Windows 7 Basic"

HATHOR is compatible with Windows XP, Vista or 7, in 32 or 64 bit mode

The Windows 7 feature "Aero Snap" may interfere with docking of windows on the HATHOR desktop, so it may be useful to turn this off while arranging your HATHOR desktop. It can be turned back on again afterwards.

PC Sounds

Some Windows computers have a "beep" sound that is not controlled by the normal sound settings. This can be annoying when the PC is used in proximity to the stage or audience such as designer laptops, or PCs used in open booth.

To disable this:

In Windows XP, Vista or Windows 7/8

- Go to Control Panel/ System / Device Manager
- Select View menu / Show Hidden Devices
- Expand Non Plug and Play Drivers
- Select Beep, R-click and select Properties
- Select Driver tab
- Pull down Type menu and select Disabled

Restart PC for this to take effect

Window's font size

Use normal font scaling (96 dpi), because non-normal font scaling can cause problems with HATHOR's ability to properly display on the screen. This is most noticeable in Field Editors where the Channel / Instrument numbers appear to be cut off at the bottom.

2.2.3 Console Key Syntaxes

There are different kinds of keys in the system: keys with a simple function, keys with a double function (in combination with **[C/ALT]**), Touchscreen soft keys and Screen soft keys.

Combinations of keys offer also a lot of specific functions. These functions are described below.

Note: in a Key Syntax like "**[C/ALT]&[CHANNEL]**" "**&**" means holding the first key, and then pressing the second key.

2.2.3.1 [ASSIGN]

[##] [F/C/B/P/E/A]&[Assign] :

Load Palette ## in the Field.

[GROUP]&[Assign] :

Record the next available Group and load it in Field.

[##] [GROUP]&[Assign] :

Load Group ## in the Field, if the Field does exist.

If not, Record Group ##, and load it in the Field.

[##] [GROUP]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Load Group ## in the Field, then the next Group in the list in the following selected Field and so on.

[##] [Time]&[Assign] :

Set time to Field.

[##] [Time]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Set time (## seconds) to selected Fields.

[Start]&[Assign] :

Start Subfader with or without timed fade.

[##] [Start]&[Assign] :

Start Subfader timed fade(if any time) at level ##.

[C/Alt]&[Assign] :

Clear Field.

[C/Alt]&[Assign] &[Assign] &[Assign] &[Assign] &[Assign] :

Clear selected submasters consecutively.

[+]&[Assign] :

Add channels in field to current selection.

[-]&[Assign] :
Subtract channels in field from current selection.

[Edit]&[Assign] :
Open Field editor.

[C/Alt]&[ENTER] :
Exit

2.2.3.2 [LOAD] and [Assign]

[##] [Load]&[Assign] :
Load Preset ## in the Field.

[##] [Load]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :
Load Preset ## in the Field, then the next in the following field and so on.

[##] [.] [Load]&[Assign] :
Load Group ## in the Field, if the Field does exist.
If not, Record Group ##, and load it in the Field.

[Load]&[Assign] :
Load active (selected) channels in Field.

2.2.3.3 [GROUP]

[GROUP]&[Assign] :
Record the next available Group and load it in Field.

[##] [GROUP]&[Assign] :
Load Group ## in the Field, if the Field does exist.
If not, Record Group ##, and load it in the Field.

[##] [.]&[Thru] :
Group Thru, if previous was group selection.

[##] [.]&[+] :
Add channels in Group ## to selected channels.

[##] [.]&[-] :
Remove channels in Group ## from selected channels.

2.2.3.4 [LOOK]

[RECORD]&[LOOK] :
Record the next available Look.

[##] [RECORD]&[LOOK] :
Record Look ##.

[##] [UPDATE]&[LOOK] :
Update Look ##.

[LOOK]&[Assign] :

Record the next available Look and load it in Field.

[##] [LOOK]&[Assign] :

If Look ## exists ->Assign Look on fader.

If Look ## does not exist: Record new Look and assign to fader.

[##] [LOOK]&[F/C/B/P/E/A] :

Fetch corresponding positions from Look ##.

[##] [LOOK]&[Ch] :

Select Instruments in Look ##.

[Edit]&[LOOK] :

Open Groups editor.

[##] [Edit]&[LOOK] :

Open Look ## editor.

2.2.3.5 [PRESET]

[##] [Preset]&[At%] :

Select channels in Preset ##, and fetch levels.

[##] [Preset]&[Thru] :

Preset Thru, if previous was ## [Preset]/[Preset][+]/[Preset][-].

[##] [Preset]&[+] :

Add channels recorded in Preset ## to selected channels.

[##] [Preset]&[-] :

Remove channels recorded in Preset ## from selected channels.

2.2.3.6 [C/ALT]

[C/Alt] [Ch] or **[0]&[Ch]** :

Deselect all active channels.

[C/Alt]&[Ch] :

Clear Field (set all levels in active field to zero).

[C/Alt]&[-] :

Start entering a negative number.

[C/Alt]&[Intensity Wheel] : Zoom

[C/Alt]&[A] :

Clear A Field

[C/Alt]&[B] :

Clear B Field

[C/Alt]&[F/C/B/P/E/A] :

Clear palette references for selected channels (according to All/One).

[C/Alt]&[Assign] :

Clear Field.

[C/Alt]&[Assign]&[Assign]&[Assign]&[Assign]&[Assign] :

Clear selected Submasters consecutively.

[##] [C/Alt]&[+%] :

Increase levels with ## percent of actual value.

[##] [C/Alt]&[-%] :

Decrease levels with ## percent of actual value.

[C/ALT11]&[ENTER] :

To exit any window including an **Esc** soft button.

2.2.3.7 [RECORD]

[#] [Record] :

Record a new Preset as #, in a sequence Step.

[Record]&[GROUP] :

Record a new Group (the next available)

[##] [Record]&[GROUP] :

Record or update Group ##

[Record]&[LOOK] :

Record a new Look (the next available)

[##] [Record]&[LOOK] :

Record or update Look ##

[Record]&[F/C/B/P/E/A] :

Record a new [F/C/B/P/E/A] Palette.

[##] [Record]&[F/C/B/P/E/A] :

Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

[##] [F/C/B/P/E/A]&[Record] :

Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

[F/C/B/P/E/A]&[Record] :

Record a new Palette (the next available).

[##] [Page]&[Record] :

Record Submaster Page ##.

[Page]&[Record] :
Record a new Submaster Page # (the next available).

2.2.3.8 [UPDATE]

[##] [UPDATE]&[GROUP] :
Update Group ##.

[##] [UPDATE]&[LOOK] :
Update Look ##.

[##] [UPDATE]&[CHASER] :
Update Chaser ##.

[##] [F/C/B/P/E/D/A]&[UPDATE]:
Update Palette ##. Only existing channels in Palette ## are involved.
Others channels will be not added.

2.2.3.9 [EDIT]

[EDIT]:
To open any Editor according to the selected object

[EDIT]&[Assign] :
Open Field editor.

[EDIT]&[Group] :
Open Groups editor.

[##] [EDIT]&[Group] :
Open Group ## editor.

[EDIT]&[F/C/B/P/E/A] :
Open Palettes editor.

[##] [EDIT]&[F/C/B/P/E/A] :
Open Palette ## [F/C/B/P/E/A] editor.

[EDIT]&[LOOK] :
Open Groups editor.

[##] [EDIT]&[LOOK] :
Open Look ## editor.

[EDIT]&[Chaser] :
Open Chasers editor.

[##] [EDIT]&[Chaser] :
Open Chaser ## editor.

[EDIT]&[Pages] :
Open Pages editor.

[##] [EDIT]&[Page] :

Open Page ## editor.

[EDIT]&[Ch] :

Open the **Instrument** Setup window.

[##] [Ch]&[EDIT] :

Open the **Instrument** Info window for the selected channel.

[##] [EDIT]&[F/C/B/P/E/A] :

Open the Palette editor.

2.2.3.10 **[FETCH]**

The FETCH function allows copying of information from a Preset or a Device Link to the stage.

[##] [FETCH]:

To copy intensity from preset ## in the current selected field, for selected channel(s).

E .g: If channel 1 is recorded at 50% in cue 11. With channel 1 selected, **11 [FETCH]** will send channel 1 at 50%.

[##] [FETCH]&[F/C/B/P/E/D/A]:

To copy data corresponding to this group of attributes from preset/Device link ## in the current selected field, for selected channel(s).

E .g: 10 **[FETCH]&[C]** will copy colour information from device link associated to preset 10.

[##] [FETCH]&[Attribute wheel button]:

To copy data for this specific attribute from preset/Device link ## in the current selected field, for selected channel(s).

2.2.3.11 **[COPY ATT]**

[Copy Attributes]&[F/C/B/P/E/A] :

Copy corresponding parameters from focused Instrument.

[##] [Copy Attributes]&[F/C/B/P/E/A] :

Copy corresponding parameters from Instrument ## to the selected channel(s).

2.2.3.12 **[ROLLBACK POSITION]**

[ROLLBACK POSITIONS]:

Re-assign to all fixtures, parameters values corresponding to the current (A) step.

[##] [Ch]&[ROLLBACK POSITIONS]:

Re-assign to all previously selected fixtures only, parameters values corresponding to the current (A) step.

2.2.3.13 **[F/C/B/P/E/A]**

[##] [F/C/B/P/E/A]&[Ch] :

Select devices (channels) recorded in palette ##.

[##] [F/C/B/P/E/A]&[Assign] :
Load Palette ## in Field.

[##] [FETCH]&[F/C/B/P/E/A] :
Fetch group of attributes from Preset/Cue ## in current sequence. With popup.

[Edit]&[F/C/B/P/E/A] :
Open Palette editor

[##] [Edit]&[F/C/B/P/E/A] :
Open Palette ## [F/C/B/P/E/A] editor.

[Record]&[F/C/B/P/E/A] :
Record a new [F/C/B/P/E/A] Palette.

[##] [Record]&[F/C/B/P/E/A] :
Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

[##] [F/C/B/P/E/A]&[Record] :
Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

[F/C/B/P/E/A]&[Record] :
Record a new Palette (the next available).

[Copy Attributes]&[F/C/B/P/E/A] :
Copy corresponding parameters from focused Instrument.

[##] [Copy Attributes]&[F/C/B/P/E/A] :
Copy corresponding parameters from Instrument ## to the selected channel(s).

[##] [F/C/B/P/E/D/A]&[UPDATE]:
To UPDATE Palette ##. Only existing channels in Palette ## are involved.
Others channels will be not added.

[##] [TIME]&[F/C/B/P/E/D/A]:
To assign a parameter time to a group of attributes, for the selected channels, and to the A Device Link or to the B Device Link, according to the selected field (A or B).

[##] [DELAY]&[F/C/B/P/E/D/A]:
To assign a parameter delay to a group of attributes, for the selected channels, and to the A Device Link or to the B Device Link, according to the selected field (A or B).

2.2.3.14 **[NEXT] & [LAST]**

[Next]&[Last] :
Toggle All/One mode.

2.2.3.15 [TIME] & [DELAY]

[##] [Time]&[A] :

Set Out Time for focused sequence step. (A or B according to preferences)

[##] [Time]&[B] :

Set In Time for focused sequence step. (A or B according to preferences)

[##] [Delay]&[A] :

Set Out Delay for focused sequence step. (A or B according to preferences)

[##] [Delay]&[B] :

Set In Delay for focused sequence step. (A or B according to preferences)

[##] [Ch]&[Time] or ## [Time]&[Ch] :

Set ## as part fade time for selected channels. (A or B according to preferences).

[##] [Ch]&[Delay] or ## [Delay]&[Ch] :

Set ## as part fade delay for selected channels. (A or B according to preferences).

[##] [MoveTime] :

Set attributes time for selected channels already recorded in links.

[##] [Move Delay] :

Set attributes delay for selected channels already recorded in links.

2.2.3.16 [THRU]

[##] [Thru]&[All] :

Same as ## [Thru] except that only channels with level>0 will be selected.

[##] [.]&[Thru] :

Group Thru, if previous was group selection.

2.2.3.17 [AT%]

[At Level]&[All] :

Keep **only** channels with intensity selected

2.2.3.18 [SCREEN]

[SCREEN]&[↑]:

Move focus and mouse to next screen number

[SCREEN]&[↓]:

Move focus and mouse to previous screen number

[SCREEN]&[→]:

Move focus to next Subscreen number

[SCREEN]&[←]:

Move focus to previous Subscreen number

2.2.3.19 [TRACK]

[TRACK]:

Open the "Tracking Channel Selection" window.

[##] [Ch]&[Track] :

Open the "Tracking Channel Selection" window and displays selected channels.

[##] [Track]&[Parameter wheel] :

Open the "Tracking Parameter" window and displays all objects including that parameter.

2.2.3.20 [PREV] [NEXT]

[PREV]&[NEXT]:

Toggle between "All" mode and "One" mode

2.2.3.21 ARROWS

[↓]&[↑]:

Toggle maximized of focused floating window.

[↑]&[↓]:

Toggle Double Editor On/Off in browsers.

[↓]& [→]:

Toggle expand/collapse of focused mode

[→]&[←]:

Open local menu

[SCREEN]&[↑]:

Move focus and mouse to next screen number

[SCREEN]&[↓]:

Move focus and mouse to previous screen number

[SCREEN]&[→]:

Move focus to next Subscreen number

[SCREEN]&[←]:

Move focus to previous Subscreen number

[→]&[F/C/B/P/E/D/A]:

Open the corresponding Palette Fly Out window

2.2.4 Software philosophy

It can be easier to understand HATHOR if you are familiar with the philosophy of this software.

2.2.4.1 Introduction

"If you can see it, you can edit it"

With rare exceptions, in HATHOR, if you have data visible on the displays you can directly modify it, or open an editor to modify it. You do not need to change display format, switch to another screen, or "tunnel down" through menus. You can use the menu system if you choose, but for the vast majority of normal use, it is not needed.

Levels of data/configuration storage

HATHOR stores data at three different levels:

- **Session:** stored data specific to your current working environment, i.e. display configuration, what file is open, where you are in that sequence etc. This is used to restore HATHOR to the same state after a shut down. Session data is stored across the network on all PCs.
- **PC:** this data is unique to each PC such console configurations
- **Play file:** stores the data for that play, this file can be stored on multiple PCs at the same time, depending on settings in Setup/Preferences/File Storage.

Absolute or Relative device times

In the Sequence, Attributes (parameters) are recorded in Device links attached to a Sequence Step; Intensities are recorded in Preset attached to a Sequence Step.

The timing of these device links can either be Relative or Absolute. With Relative timing the Device Link timing is a percentage of the Sequence steps Time, so it changes when the Sequence steps timing changes.

With Absolute the Device links timing is a fixed time value and does not change with the Sequence steps.

Tracking

In the Sequence, Intensities are recorded in every Preset attached to a Step, Attributes are recorded as "Tracking", and only changed parameters are recorded in a Device Link attached to a Step.

Fields

Fields are playback controllers for lighting information. The term Field is used for various types of Fields, but the most common are the Playback Fields on the Sequence Controller, and the Subfader Fields (Submasters).

2.2.4.2 Basic Concepts

Data

Data is the information recorded in the show (the "play") for specific elements, organized into objects.

Data is stored in discrete objects so that it can be used in multiple ways. For example Channel levels are recorded in Presets which can then be "attached" to a sequence step and/or loaded to a Submaster.

The same Preset can be used multiple times in the same sequence, or multiple sequences.

Data objects, such as Presets can be dragged and dropped, with a mouse, to various target locations, such as sequence steps. This makes modifying show data very easy and intuitive.

Objects

Objects in the software contain Data. With rare exceptions, in HATHOR, if you have data visible on the displays you can directly modify it, or open an editor to modify it. You do not need to change display format, switch to another screen, or "tunnel down" through menus. You can use the menu system if you choose, but for the vast majority of common use, it is not needed.

Play

The play is the whole show, including all stored files (current and history versions of files) for that show. Each show has a "File name". Show file contains recorded objects.

Note: A new empty play contain no objects, except Dynamic Tables.

File

The File is either the current running version (.ppl), a history version, and in that cases a part of the Play, or an Autosave version.

Note: each time a manual save is executed, the previously saved version is saved as a history file with an extension of \$001, in a unique subdirectory created by HATHOR, for each play file.

Fields

Fields are playback controllers for lighting information. The term Field is used for various types of Fields, but the most common are Playback Fields on the Sequence Controller, and the Subfader Fields.

- (Submaster) **Fields:** Fields connected to Subfaders.
- **Playbacks** Fields: Sequence Field
- **Priority Fields (LTP):** Fields generated by LTP channels commands
- **Remote Fields:** Specific Fields Editors for remote control

Session

"Sessions" store various settings that are common to a HATHOR system, such as device control protocol (ARTNET, Streaming CAN ...), connections (CITP, UDP,...), remote controls and how the system handles physical control surfaces.

Different "Sessions" can be created, stored and recalled to meet different needs for your system. A facility that rarely changes its system topology may only use one Session, while a system that is frequently re-configured, such as on a tour, may have several sessions stored.

Controllers

Controllers are windows that access the shows data, and provide interfaces to operate the system.

The system can have multiples of all Controllers, each configured for different uses. Select a controller and it will open in a non-docked window on the current monitor. It can then be dragged to whichever monitor you wish, adjusted in size and/or docked.

Controllers are typically arranged on the HATHOR desktop by docking them on the virtual screens.

Controllers can also be opened for temporary needs and left floating on the desktop

Brief description of the different Controllers:

Field Editor: displays a grid of Instruments, used for selecting instruments, changing levels.

Fields: displays Submaster Fields in a high density format

Sequence Playback: displays a Sequence of steps, along with playback controls.

Device Control: displays controls and information for devices such as moving lights.

Device Control Browser: displays controls and information for devices such as moving lights.

Direct Access: displays buttons used to activate objects.

Priority Fields (LTP): displays information for a special type of Field used for LTP control.

Subfaders; displays Submaster information, virtual Subfaders and a Field Editor grid.

User Panels: displays panels with buttons used to directly activate Action Lists.

2.2.4.3 Channels (Instruments)

Terminology:

Instrument = channel = Device (if a Device Template is used)

Symbol:



A Channel (also named Instrument) is the control handle used to call anything controlled by HATHOR. Regardless if it is a dimmer channel, a moving device, a smoke machine or something else, it will always correspond to a channel number in the Patch.

Instruments are the individual elements of lighting equipment that HATHOR controls. These include dimmers, moving lights, LEDs, media servers etc.

Within HATHOR instruments are a combination of one or more elements. A typical example of an Instrument is a dimmer associated to a Scroller. This kind of Instrument is also listed as Device.

The total amount of instruments (or Channels) is composed of standard Channel (only dimmers) and Devices.

Standard Channels and Devices are controlled in the same way: **[1] [Channel] [20] [THRU] [50] [At level]**, regardless of their structure. There is no Device key.

Control

HATHOR generally uses Reverse Polish Notation (RPN) for data entry. In RPN you enter the data value first, and then tell the system what you are doing with that data.

Example:

[5] [Channel] [50] [At %] selects channel 5 and sets it to a level of 50 %.

“At mode” method is available as an option

HATHOR / Setup / Preferences / Channels

Check **At Mode** to enable this mode.

In At mode, the syntax is the following:

[Channel] [1] [THRU] [20] [At %] [50] [ENTER]

2.2.4.4 Attributes (and Device Links)

Terminology:

Attribute = Parameter

Symbol:



The control of non-intensity parameters, for example a moving device or a scroller, are called attributes or parameters. These are patched to the controls of HATHOR when the Template corresponding to that device is assigned to a control channel (Instrument) in the Patch.

In a sequence, all attribute's values are recorded in a specific area named DEVICE LINK. In a Look, all attribute's values are recorded directly in the Look

2.2.4.5 Objects

Dynamic Tables

The Dynamic Table is the primitive curve used to create a Dynamic Template or a Dynamic Effect.

Combining Dynamic Tables is a quick way to create complex Dynamic Templates or Effects.

Example: Create a circle by assigning **sine** to pan and **cosine** to tilt.

Dynamic Templates

The Dynamic template is the pattern of the effect, and is a mathematical function. HATHOR has several prepared templates. To give the operator further possibilities when creating effects, basic patterns such as sine, cosine, saw, and others are available.

Some templates only make sense when they are assigned to the pan and the tilt attributes (such as a circle template for instance), HATHOR will automatically assign both attributes to such templates. Some other templates are designed for use with colour attributes or Beam attributes. A different template can be applied to different attributes in the Dynamic Effect.

Palettes

A Palette is a user-programmed Attribute Library for all or some attributes of a Device. A Palette is used to load these parameters quickly, and stored as a reference in Device Links for Sequence. If the Palette content is changed any associated Sequence Step are automatically updated.

Groups

Frequently used combinations of channels can be stored in up to 2000 Groups, for quick recall from the keypad, the touch screen or a remote focusing system.

The system supports up to 2000 Groups.

Presets

This is a specific concept. Frequently used combinations of channels are stored in up to 15000 Presets, for playback in the Main Playback or Virtual Playbacks. The combination of a Preset and a Device Link in a Sequence Step is the equivalent of a "Cue" in many

other systems. The advantage here is that Presets can be re-used in any Sequence, with different times.

Looks

A look is a cue including channels with their intensity levels and their attributes, like a snapshot, without any time information and outside the Sequences.

Looks are primarily useful for "live" performances, when you wish to be able to bring up pre-recorded fixture settings, but in a non-sequential, spontaneous manner, such as for a musical concert.

Looks can also be useful as building blocks where you can store an idea for future use, but don't want to record it as a Sequence Step/ Preset (Looks are not usable in Sequence).

The system supports up to 1000 Looks.

Sequences

Lists of Steps including Presets, Device Links, Master Links and Action Links, are called Sequences, that can be cross faded or move faded in consecutive order from a Playback. The system supports up to 1000 Sequences.

Pages (Submasters Fields Pages)

A Page is a record of LINKS between Submasters Fields and content (object), and modes. Output levels of the fields are not recorded.

Chasers

Chasers can be intensity chasers, attributes chasers or intensity and attributes chasers

Patch (INSTRUMENT SET-UP)

Patch is where DMX outputs are assigned to channels, either directly in the case of dimmers or using a Template in the case of devices. All settings pertaining to outputs, channels and devices are also adjusted within the patch.

Dimmer Curve

A Dimmer Curve changes the relation between the control level (At %) and the Output level. By default 1% corresponds to 1%, 2% to 2% and so on. The default curve is linear then.

There are 1000 editable curves available.

There are ten basic curves in the "BASE 2013" show.

Device Templates

A Device Template maps the attributes of a Device to the controls and functions of HATHOR. Most common devices, moving lights and scrollers already have templates in the Fixture Library, ready to use.

Devices

A device (also named fixture) is a specific object corresponding to a complex instrument controlling more than one dimmer(s). Device will be automatically generated as soon as a Device template is patched on a channel.

Gel Strings = Rolls = Scrolls

A Gel String (also named Scroll) is a Scroller Roll designed to be used in combination with Scrollers.

The same Gel String can be used with several Scrollers, and also different types of Scrollers.

A Gel String is structured in Frames (Colours).

Device Layouts

"Device Layouts" are topographic layout of channel boxes.

Panels

"User Panels" (also known as "Softpanels") are used to create control buttons to activate Action Lists.

Events

Events are Interfaces between external triggers and "Actions" which allows you to have rules to determine if a Action can happen.

An Event consists of Triggers and Actions: when a Trigger is received, then the Event activates the corresponding Action.

The system supports up to 1000 Events.

Actions

Actions are control functions that have a priority structure.

The system supports up to 10000 Actions.

Strings ^{01FE}₁₇₀₄

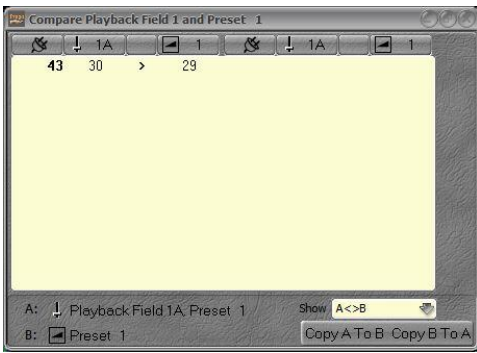
Used to create and save Serial and MIDI command string for local input/output

2.2.4.6 Compare Feature

The Compare feature allows comparing recorded channels levels to channels current levels, with different display options.

When updating an existing Preset, a "Compare" button appears in the Record window, allowing you to use the Compare function to look at what will be recorded in comparison with the original recording.

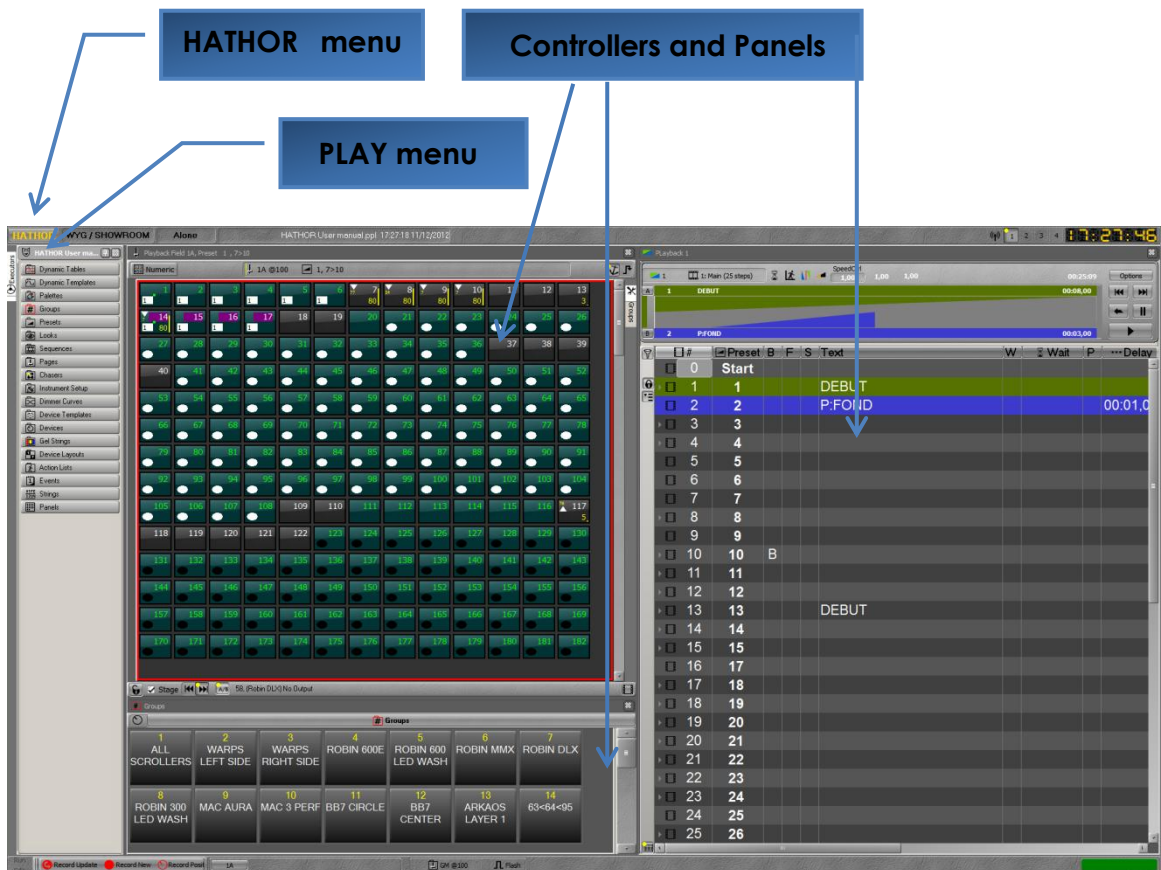
Use **[Compare]** before recording or the **Compare** soft button displayed in the Update window to open the Compare window.



2.2.5 Software organization

2.2.5.1 Introduction

From the software side, working with HATHOR is based on three basics parts:



2.2.5.2 HATHOR Menu

The HATHOR menu is the main menu. It is the backbone of the system. From this menu you would be able to access to all information needed to work with the software or the desk:

File

To save, load a play file as well as browse other play files.

Data

The part of the data specific to the Play file. **Data** is also accessible via the PLAY menu.

Controllers

The windows that provides interfaces to operate the system and access to the data.

Tools

Infrequently used resources, like Images library for gels, Sandboxes and RDM browser, and Printing tools.

Setup

To configure HATHOR interface.

About

Show current software version number, and Network option.

Shutdown

To exit the system and to shutdown the console if any.

2.2.5.3 Play Menu

A menu dedicated to the part of the data specific to the Play file.

2.2.5.4 Controllers and Panels

The windows that provide interfaces to operate the system, i.e Field Editor displays and provides control of channels.

The Direct Access Panels allows displaying, and accessing to the recorded data.

2.3 POWER UP PROCEDURE

2.3.1 Network Functions

2.3.1.1 Introduction

HATHOR comes in 3 different software levels:

1/ HATHOR **standard** is a Master/Backup Ltd (Backup becomes operational only if Master fails) system limited to 120\2048 channels and 32 universes (16384 DMX channels).

2/ HATHOR **Duo** option offers 1 Master and 1 Backup and allows working on both systems.

3/ HATHOR **Multi-User** option offers 1 Master and 1 Backup and any number of Clients.

- Clients can be full access or View only
- License is not required on Client to connect to session already on network.

Network Roles

Each device in a HATHOR system can be operated in a range of "Network Roles"

The options are:

- Master /Backup
- Client
- View Only Client
- Offline
- Offline with Network

HATHOR has two types of communication happening on the network at the same time. Depending on your Instrument control protocol uses, these two methods may be technically very different. The two types of communication are:

- Between HATHOR (Master to Backup, Master to Clients etc.)
- Instrument control protocols (i.e Artnet, Sandnet, Pathport, Streaming ACN)

Your network must be configured to optimize both types of communication.

HATHOR to HATHOR communication

Network switch requirements

- IGMP Snooping Support
- Multicasting optimized

Two main issues in general are that you must be able to disable or set the Multicast/Broadcast Storm.

Prevention threshold so that those packets don't get stopped and that you can disable IGMP snooping."

General Network notes

Use fixed I.P. address for all devices on the network.

We suggest 1Gb Ethernet between servers and "heavy use" nodes such as designer remotes.

100 Mb to output nodes is acceptable, especially since most nodes available at this time are only capable of 10 or 100 Mb.

Wireless Access Points maybe used for non-critical parts of the system, such as Designer remotes, or as mobile clients for service work. However be aware that wireless switches and routers tend to operate in 'Burst Mode' - they collect a lot of data and then broadcasts it as a big 'burst' to all the wireless devices in range. This 'bursting' makes it generally unsuitable for lighting control use, as it results in unpredictable latencies.

We suggest that all HATHOR systems (including wireless remotes) use a low range of subnet addresses, switches, and wireless nodes use a mid-range, and all nodes use higher addresses.

For example:

HATHOR systems: Addresses from 10.10.10.1 to 10.10.10.20
Switches 10.10.10.31 to 10.10.10.40
Nodes, fixtures etc. 10.10.10.51 to 10.10.10.256
All on same subnet mask i.e., 255.255.255.0

Pathport nodes have to have I.P address that is higher than the PCs that are providing Pathport data.

While this is a requirement only for Pathport nodes, it is a logical addressing structure to use for any type of nodes Pathport specific notes:

The following is specific to Pathway Pathport nodes, but is advisable for any type of nodes used.

It is highly recommended that all traffic management features be disabled on all switches with Pathport nodes connected, especially those related to managing broadcast storms.

Typical spikes in Pathport traffic can erroneously trigger broadcast storm management, causing undesirable results. If storm control cannot be disabled, it is important that the threshold be adjustable to a packet rate higher than 150 packets per second, per Pathport node on the system.

All features related to IGMP must be properly configured as the Pathport protocol relies heavily on multicast technology. Properly configured IGMP features can be an advantage as these can allow increased usage of the network infrastructure for non-Pathport applications. Conversely improperly configured IGMP features can completely disable the Pathport network. Features like "IGMP snooping" and "Multicast Filtering" should be enabled only by qualified personnel.

2.3.1.2 Master / Backup

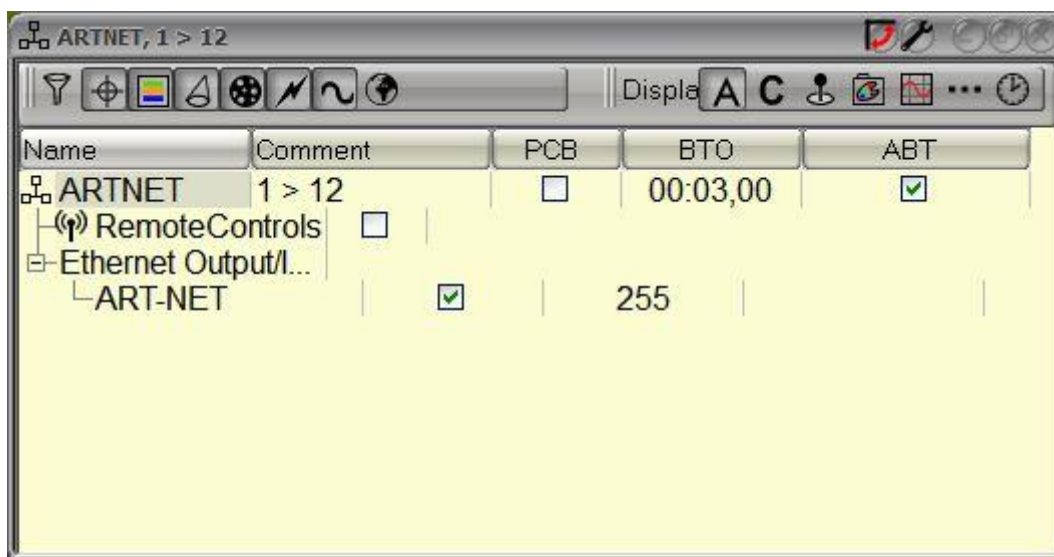
The MASTER is the main console, which means all data outputs from this desk. When the desk is alone on the Network, there is no difference between Standalone role and Master role.

When a MASTER console is alive on the Network, it allows other platforms (consoles or computers) to join the session while using another role (BACKUP or CLIENT). Only one MASTER by session is allowed, so MASTER means Session MASTER, in the sense that on a Network, there could be several sessions, therefore several MASTERS.

The BACKUP is a full tracking platform, totally and constantly synchronized. To use a system as BACKUP, a MASTER has to be declared on the Network in a first place.

A BACKUP can be passive or active, depending on the license (HATHOR **standard** is a Master/Backup Ltd, which means the Backup becomes operational only if Master fails) but also on personal choice when running a DUO or Multi-User system.

To force a BACKUP console to run as passive system, check the **PCB** mode in the session setup:



An active BACKUP offers the possibility to work on the same show, and at the same time, as the MASTER console.

It is always possible to switch from BACKUP to MASTER role:

On BACKUP console, right click on Backup button (right side of Session button), and select **Convert to Master**.

Note: It is not possible to switch from MASTER to BACKUP role.

2.3.1.3 Client & Multiple Users

As soon as a MASTER is declared on the Network, and if the License allows that, other systems can join the Session as Client.

In case of HATHOR Standard Licenses, and only from 512 Instruments till 2048, one CLIENT is allowed.

In case of HATHOR DUO Licenses, and only from 512 Instruments till 2048, one CLIENT is allowed.

In case of HATHOR MULTI-USER Licenses, there is no limit concerning the number of CLIENTS allowed (multiple Users).

In every case a CLIENT can be either passive ("View Only") or Active.

An active CLIENT offers the possibility to work on the same show, and at the same time, than the MASTER console.

2.3.2 The startup window

The Startup window is the first to open when the program is launched.

In FREEDOM and LIBERTY consoles, this window is displayed during **only 8 seconds**, and then the console starts automatically.

From it you select what role the desk or the computer will have in the system (i.e. Master, Master Ltd, Backup, Backup Ltd, Client) as well as which network session you are going to use.

Use the "Stored Session" tab to launch an existing session.

Use the "Active Session" tab to join a session on the network started by another computer.

Use the "New Session" tab to create a new session.

Use the "Setup" tab to configure how HATHOR runs on your video monitors.

At the bottom of these windows, regardless of which tab is selected, there is a checkbox for "**Fullscreen with consoles**": THIS OPTION IS DEDICATED TO COMPUTERS RUNNING HATHOR, NOT TO DESKS.

- If it is checked, HATHOR will run in a normal mode with a fully visible interface, with HATHOR "taking control" of the Windows desktop. Any control consoles will also be functional
- If is NOT checked, then HATHOR will run as a conventional Windows program, initially minimised.

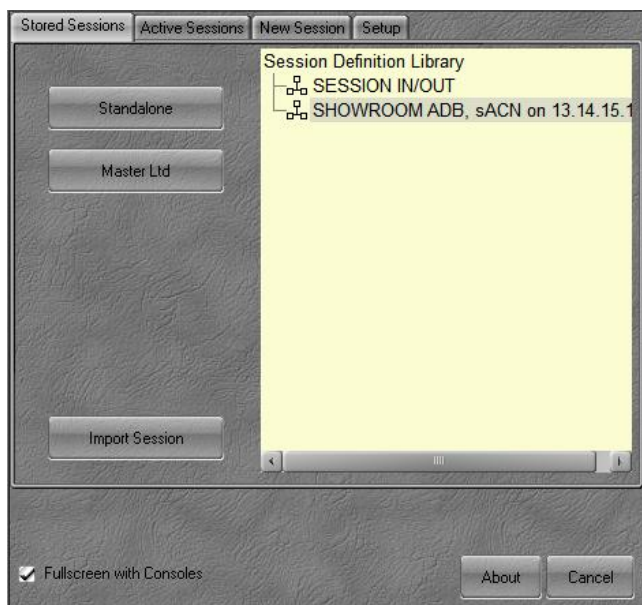
This is useful where HATHOR is running in the background with other applications such as architectural control. Any control consoles will NOT be functional.

2.3.2.1 What is a session

A session is an environment information interchange between two or more communicating devices. The session is set up at a certain point in time, either at startup or when HATHOR runs. An established communication session may involve more than one message in each direction. A session is typically, but not always, stateful, meaning that at least one of the communicating parts needs to save information about the session history in order to be able to communicate.

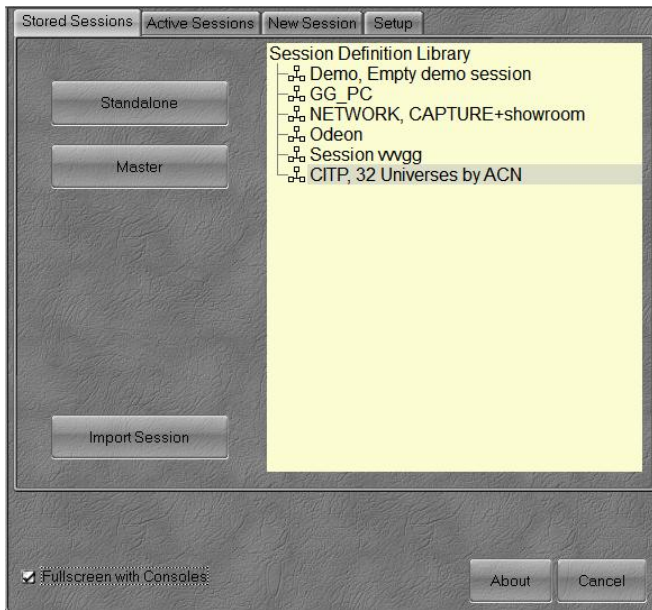
2.3.2.2 Stored sessions

This tab is used when this desk is the **1st** or if there is **only one desk**.



Standalone option: the desk is sending device data (i.e. DMX, APN etc.) on the network, but not data to communicate with other desks.

Master Ltd option includes desk to desk communication, as well as transmitting DMX data over the Network. Available roles for a second desk in this context would be **Backup Ltd**, or **Client** (if the Master Ltd runs 512 channels or more)



DUO and MULTI USER options

Master option includes desk to desk communication, as well as transmitting DMX data over the Network. Available roles for a second desk in this context would be Backup, or Client (**MULTI USER only**)

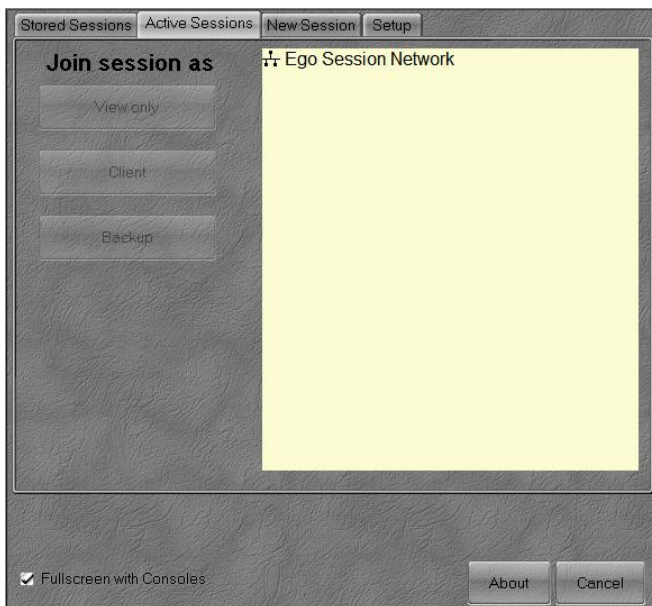
The "Session Definition Library" lists existing sessions that you have created. To launch HATHOR, select a session, then select "Standalone", "Master Ltd" or "Master" to start HATHOR. The local menu on a Stored Session allows to delete a session, or to edit it. The Import Session button allows importing a Session, from a USB key for instance.

2.3.2.3 Active sessions

This tab is to start the 2nd, or higher, device to join to an existing HATHOR "Master" or "Master Ltd" on the Network.

Select a Session that you wish to join from the right hand window, and then select which mode this console or PC will be run as: Backup Ltd, Backup, View Only Client or Client. These options will change depending on your HATHOR license.

The "Active session" links can be expanded to show the status of other PCs on network.

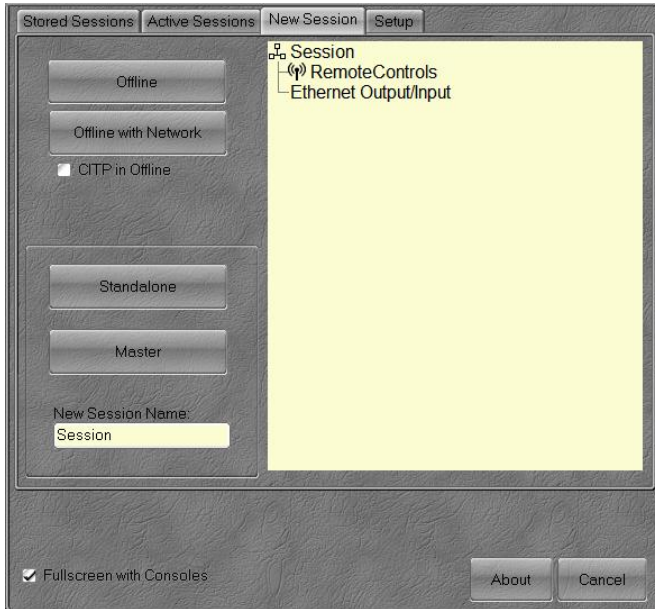


2.3.2.4 New session

The "New Session" tab is used to create new sessions.

Once you have created a new session, you can launch HATHOR from this tab by using the "Offline", "Offline with Network", "Standalone" or "Master".

See "Sessions Setup" for details.

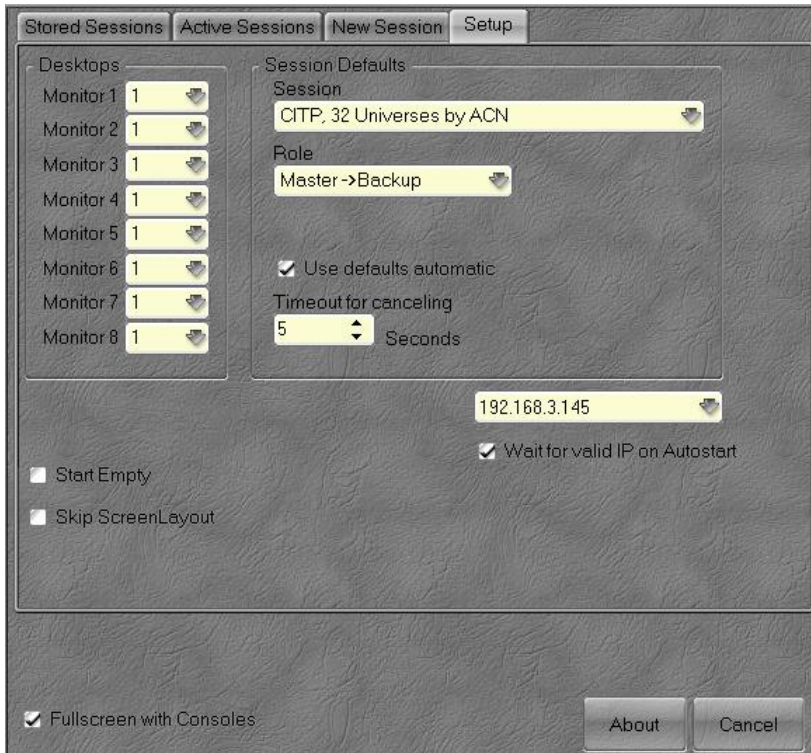


Offline mode: no data output

Offline with Network mode: Mode to use Offline version with Wysiywg.

CITP in Offline option: Mode to use Offline version with Capture.

2.3.2.5 Setup



Session Default

To assign a dedicated session used when HATHOR starts automatically.

Set the Role:

- **Master->Backup:** Master if first, Backup if there is a Master already
- **Backup:** always Backup
- **Client:** always Client
- **View Only Client:** always View Only Client
- **Offline:** always Offline
- **Alone:** always Standalone

Set the Network Session: select it from **Stored** sessions.

If "**Use Defaults**" is checked, when you launch HATHOR, it will **automatically start up** in the role and session selected.

"Timeout for cancelling" runs a countdown timer before starting HATHOR, to allow you to stop the automatic startup. Set to 8 seconds in LIBERTY and FREEDOM consoles.

Deskstops

This configures how HATHOR will be displayed on the video monitors connected to this HATHOR computer:

- Monitor set to "0" will not have HATHOR on it
- A monitor with a value of 2 or higher will have multiple HATHOR deskstops launched on it; this is for extra wide format monitors.

IP

Displays the last IP address set, and used by the system.

Note: this IP is recorded in the "ini" file.

Waiting for valid IP

If checked, the system will not start if the IP address is not a valid IP address.

Preferences

Direct access to software preferences. It offers the possibility to change preferences, as Network settings, by example, before to start HATHOR.

Start Empty

When working with the system, even if there is no show file name, no show file recorded, all modifications are stored in a status file before shutdown.

If "Start Empty" is checked, the system will not refer to this status file, and then will start empty, with a 1/1 patch.

TIP: sometimes the status file can be corrupted, generating some system issues. Use these feature to start from scratch, and then load the last version of your show.

Skip Screen Layout

When working with the system, even if there is no screen layout saved, the screens organization is stored in a status file before shutdown.

If “Skip Screen Layout” is checked, the system will not refer to this status file, and then will start with empty screens.

TIP: sometimes the screen status file can be corrupted, generating some system issues. Use these feature to start with empty screens, and then create a new screen layout or load an existing one.

2.4 SHUTDOWN PROCEDURE

HATHOR / Shutdown: {YES}



Shutdown: when you shut down the Console, it does not automatically save the show file. It does save a system status file, including the recorded show data.

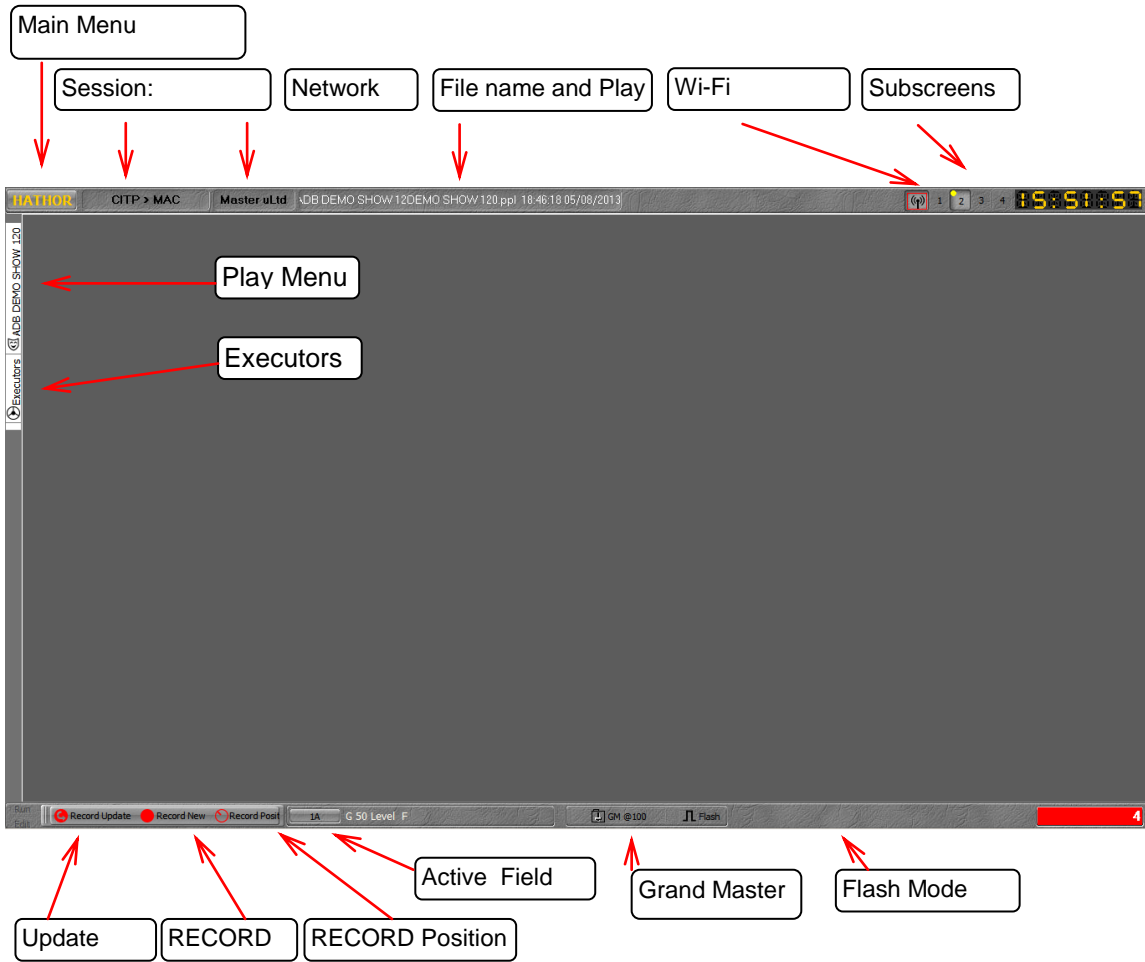
When you have a loaded play and then load a new play, HATHOR will make the transition as smooth as possible. Devices with attributes that exist in both plays will stay in their positions, from the first play, when the second play loads.

They will stay there until you ask them to move, for instance by running a sequence step.

Devices that did not exist in the first play will move to their default positions when the second play loads.

2.5 SOFTWARE OVERVIEW: NAVIGATING

2.5.1 HATHOR main window



2.5.1.1 Main menu

[Menu]



2.5.1.2 File

HATHOR / File

Introduction

The **File** menu offers options to save or open your Play file information as well as browse other Play files:

- **Save**
- **Save As**
- **Open Library**
- **Import**
- **Export**
- **New/Clear Play**
- **Browse Another**

General Notes about HATHOR show files

HATHOR saves play files in 3 ways:

- 1 the most current version (-----.ppl file extension)
- 2 history versions of existing play files(-----.\$0** file extension)
- 3 Auto save version (-----.ppl file extension, but in separate Auto save directory)

The software will create a "Library" subdirectory in the "HATHOR" directory, in the partition E, as the default storage location for play files.

This can be changed at: **Setup/Preferences/Filestorage**.

Each time you do a manual save, the previously saved version saved is saved as a history file with an extension of \$001, in a unique subdirectory created by HATHOR, for each play file. The new version is saved with the extension PPL. On each subsequent save the 001 file becomes 002, 002 becomes 003 etc. Each of these files has a time and date stamp, so you an "go back" to a previous version if needed.

Auto save automatically records a backup copy of the show file, in a separate directory, at a time interval set under HATHOR menu / Setup / Preferences / File Storage.

Autosaves:

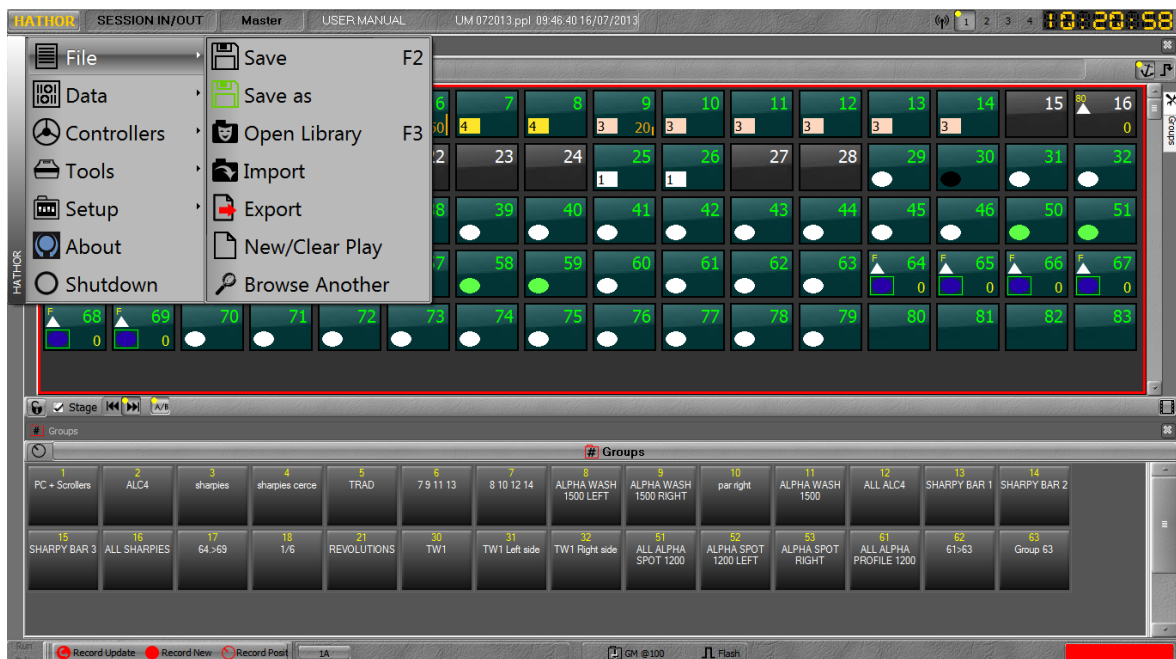
are recorded in the same manner as History files, with date/time stamps

are only executed if show data has changed

do not clear the "Changed Data Alert" indicator at the top of the screen

Each Play file has a "Play Name" (Name column), the Play file contains every files attached to this play (current file and history files). That Play name is separate from the "File name" (File column).

Note: When you have a loaded play and then load a new play, HATHOR will make the transition as smooth as possible. Devices with attributes that exist in both plays will stay in their positions, from the first play, when the second play loads. They will stay there until you ask them to move, for instance by running a sequence step. Devices that did not exist in the first play, will move to their default positions when the second play loads.



Save

To save the current play in current file:

[SAVE] (console)

or

(F2) keyboard key

or

Click on "Changed Data Alert" icon at top of screen (the red disk)

or

HATHOR menu / File / Save

TIP: do manual saves as frequently as possible, it takes less than 1 second, eats no room on the hard disk and offers the possibility to recover any data at any time.

Save as

To save the current play file under a new file name.

Note: editor allows you to also change the Play Name.

Open Library: (F3) keyboard key

Open Library allows you to delete, open or browse:

- the most current version (*.ppl file extension)
- history versions of existing play files (*.0** file extension)
- Auto save version (*.ppl file extension, but in separate Auto save directory)

From Local menu select a play file and right click on the selected file, you will be able to Delete the file with all history files or only the selected one, to Load the selected File, or to Browse it.

Browse allows you to access the data from a Play that you do not currently have loaded.

You can move content from the Browsed Play into the loaded play (i.e. import a Device Template).

See "Browse another" for details on importing data.

Import

The import option is basically designed to import files from an external storage device. Import allows you to import by default an HATHOR file.

Import offers also the possibility to select a non-HATHOR format play file, such as **ISIS**, **AVAB Safari** (.pla) and **ASCII** Light cues (.txt).

Import opens a Windows file browser to facilitate navigating to another drive, or network location.

Export

The export option is basically designed to export files to an external storage device, as on a USB memory stick. Export allows you to export by default a HATHOR file.

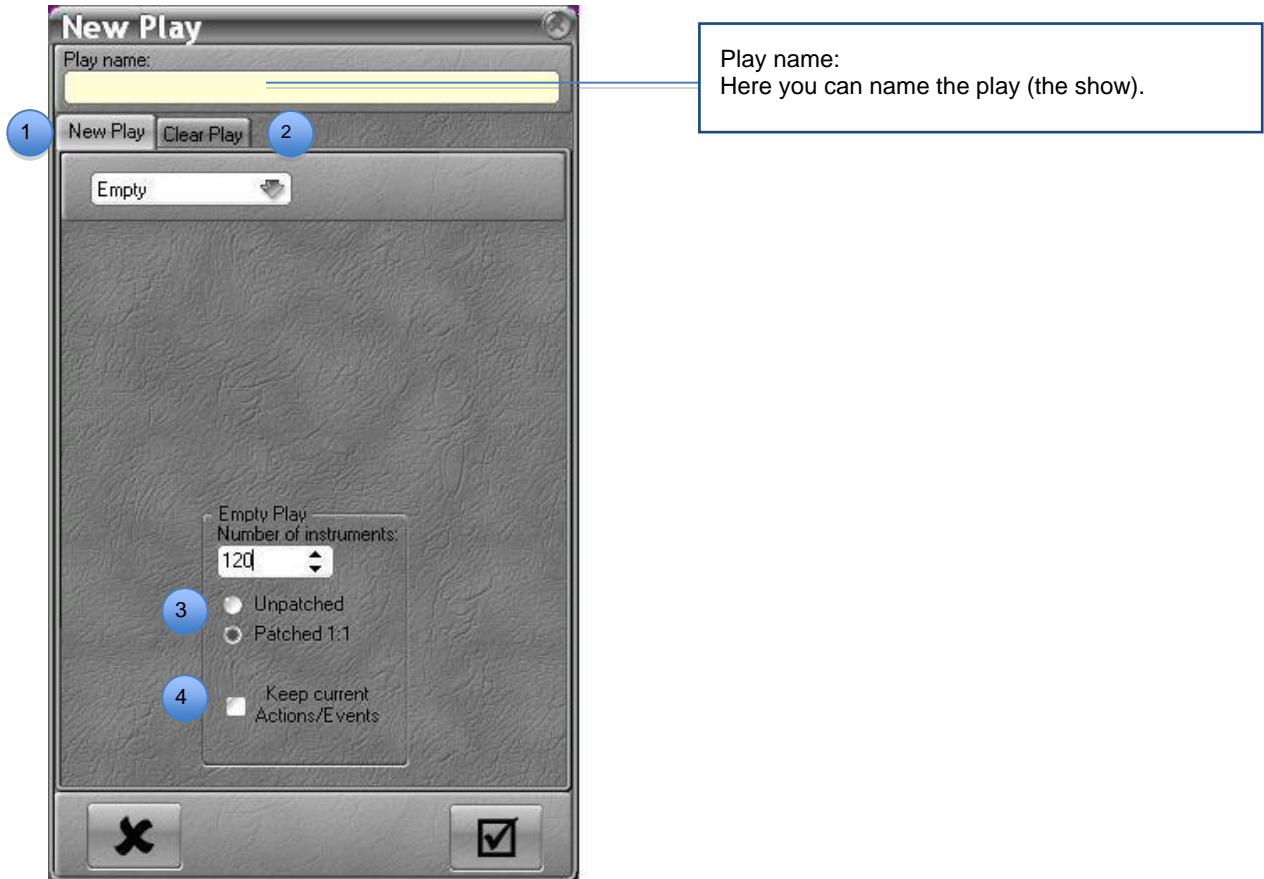
Export offers also the possibility to save in a non-HATHOR file format, such as AVAB Safari (.pla), ASCII Light cues (.txt) and ASCII Light cues as SAFARI, this format is designed to export shows to AVAB CONGO. ISIS format is not supported.

Export opens a Windows file browser to facilitate navigating to another drive as a USB memory stick, or network location.

Note: an "exported" save is independent of normal saves

New/Clear Play

New / Clear play is used to start a new playfile or clear data from an existing play file.



- 1 Choose new play to start with an empty play
“New Play” tab offers the choice of creating a new Empty play, or one “Based on Another” (pull down menu that defaults to “Empty”)
“Based on another” defaults to a play file that is set under Setup/Preferences/ File storage.
Browse icon at the end of the file name allows you to select any other play from your library.
“Based on another” menu allows you to filter what contents you wish to have imported from the file into your new file. These filter settings are retained.
- 2 Choose Clear play to start from your current play and select objects to clear in the menu (tab menu includes filter for what contents should be cleared).
- 3 Choose unpatched to start with a empty Patch or Patched 1:1 to start with a 1:1 patch
Please note: if you have Instruments with levels in a Play due to Action Lists, when you create a "new Play" those levels will remain active. If you do not wish to have these levels, you must turn them off from the initial Play before creating a New Play.
Alternatively you can import these Actions into the new play. 4

Browse another

Browse allows you to access the data from a Play that you do not currently have loaded. You can move content from the Browsed Play into the loaded play by dragging the object from the Browsed Play to the currently loaded play.

The following objects are involved:

- Dynamic Templates
- Dynamic Tables
- Device Templates
- Sequences
- Dimmer Curves
- Device Layouts
- Action Links
- Panels

To do this, open the object menu by clicking on the object Tab, in the Play menu, then drag the object from the Browsed Play on an existing object in the current play. Choose Copy.

The following elements have a local menu option (Right Click Import) in the browsed play, to Import to the current Play.

- Instruments Setup (auto creating missing Devices and Templates).
- Palettes (auto creating missing Instruments/Devices/Templates).
- Presets.
- Groups.

Use this with care, you can mess up your play totally if you try to import into a play containing a totally different setup.

2.5.1.3 Data

HATHOR / Data

Introduction

Data is the information recorded in the show (the “play”) for specific elements, organized into objects.

Data is stored in discrete objects so that it can be used in multiple ways. For example Channel levels are recorded in Presets, which can then be "attached" to a sequence step and/or loaded to a Submaster.

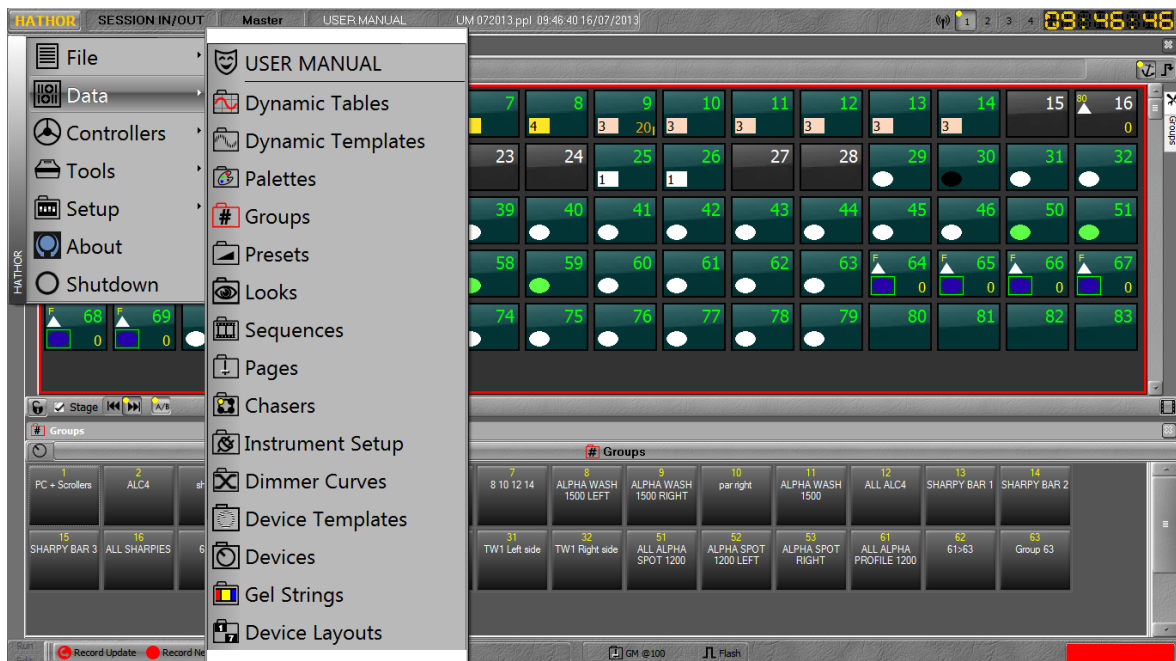
The same Preset can be used multiple times in the same sequence, or in multiple sequences.

Data objects, such as Presets can be dragged and dropped, with a mouse, to various target locations, such as sequence steps. This makes modifying show data very easy and intuitive.

Objects

Objects in the software contain Data. With rare exceptions, in HATHOR, if you have data visible on the displays you can directly modify it, or open an editor to modify it. You do not need to change display format, switch to another screen, or "tunnel down" through menus.

You can use the menu system if you choose, but for the vast majority of common use, it is not needed.



Dynamic Tables

The Dynamic Table is the primitive curve used to create a Dynamic Template or a Dynamic Effect.

Combining Dynamic Tables is a quick way to create complex Dynamic Templates or Effects.

Example: Create a circle by assigning **sine** to pan and **cosine** to tilt.

Dynamic Templates

The Dynamic template is the pattern of the effect, and is a mathematical function. HATHOR has several prepared templates. To give the operator further possibilities when creating effects, basic patterns such as sine, cosine, saw, and others are available.

Some templates only make sense when they are assigned to the pan and the tilt Attributes (such as a circle template for instance), HATHOR will automatically assign both attributes to such templates. Some other templates are designed for use with colour attributes or Beam attributes. A different template can be applied to different attributes in the Dynamic Effect.

Palettes

A Palette is a user-programmed Attribute Library for all or some attributes of a Device. A Palette is used to load these quickly, and stored as a reference in Device Links for Sequence. If the Palette content is changed any associated Sequence Step are automatically updated.

Groups

Frequently used combinations of channels can be stored in up to 1000 Groups, for quick recall from the keypad, the touch screen or a remote focusing system.

The system supports up to 2000 Groups.

Presets

This is a specific concept. Frequently used combinations of channels are stored in up to 15000 Presets, for playback in the Main Playback or Virtual Playbacks. The combination of a Preset and a Device Link in a Sequence Step is the equivalent of a "Cue" in many other systems. The advantage here is that Presets can be re-used in any Sequence, with different times.

Looks

A look is a cue including channels with their intensity levels and their attributes, like a snapshot, without any time information and outside Sequences.

Looks are primarily useful for "live" performances, when you wish to be able to bring up pre-recorded fixture settings, but in a non-sequential, spontaneous manner, such as for a musical concert.

Looks can also be useful as building blocks where you can store an idea for future use, but don't want to record it as a Sequence Step/ Preset (Looks are not usable in Sequence).

The system supports up to 1000 Looks.

Sequences

Lists of Steps including Presets, Device Links, Master Links and Action Links, are called Sequences, that can be cross faded or move faded in consecutive order from a Playback. The system supports up to 1000 Sequences.

Pages (Submasters Fields Pages)

A Page is a record of LINKS between Submasters Field, content (object), and modes. Output levels of the fields are not recorded.

Chasers

Chasers can be intensity chasers, attributes chasers or intensity and attributes chasers

Patch (INSTRUMENT SET-UP)

Patch is where DMX outputs are assigned to channels, either directly in the case of dimmers or using a Template in the case of devices. All settings pertaining to outputs, channels and devices are also adjusted within the patch.

Dimmer Curve

A Dimmer Curve changes the relation between the control level (At %) and the Output level. By default 1% corresponds to 1%, 2% to 2% and so on. The default curve is linear then.

There are 1000 editable curves available

There are ten basic curves in the "BASE 2013" show.

Device Templates

A Device Template maps the attributes of a Device to the controls and functions of HATHOR. Most common devices, moving lights and scrollers already have templates in the Fixture Library, ready to use.

Devices

A device (also named fixture) is a specific object corresponding to a complex instrument controlling more than dimmer(s). A Device will be automatically generated as soon as a Device template is patched on a channel.

Gel Strings

A Gel String (also named Scroll) is a Scroller Roll designed to be used in combination with Scrollers.

The same Gel String can be used with several Scrollers, and also different types of Scrollers.

A Gel String is structured in Frames (Colours).

Device Layouts

"Device Layouts" are topographic layouts of channel boxes.

Panels

"User Panels" (also known as "Softpanels") are used to create control buttons to activate Action Lists.

Events

Events are Interfaces between external triggers and "Actions" which allows you to have rules to determine if a Action can happen.

An Event consists of Triggers and Actions: when a Trigger is received, then the Even activates the corresponding Action.

The system supports up to 1000 Events.

Actions & Panels

Actions are control functions that have a priority structure.

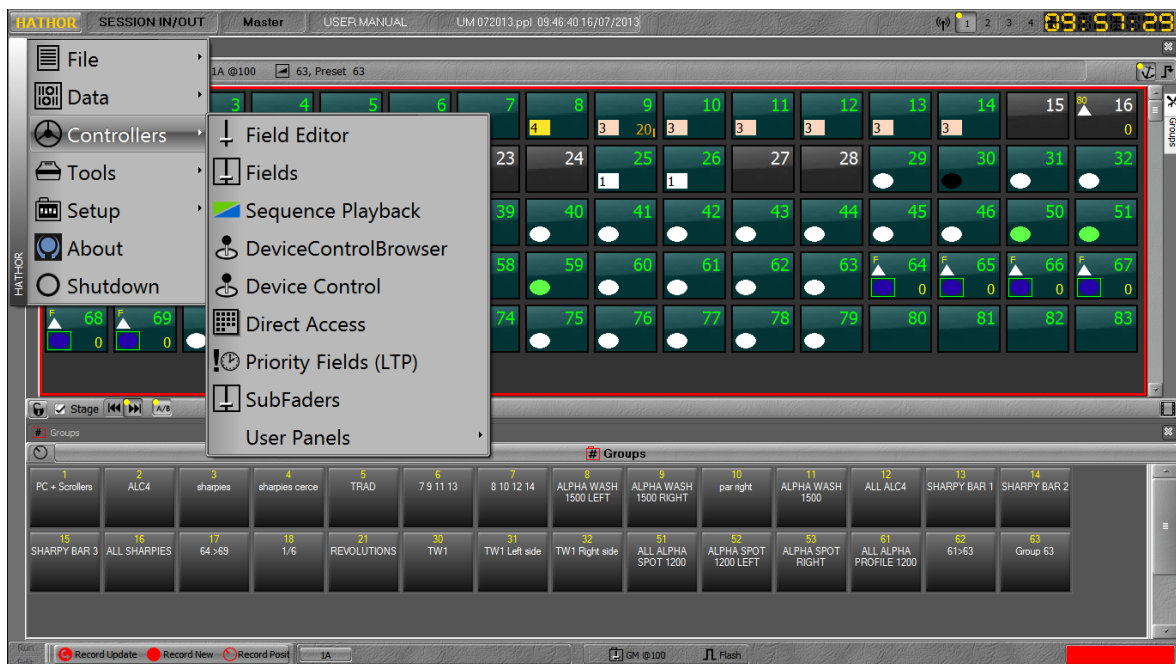
The system supports up to 10000 Actions.

Strings

Used to create and save Serial and MIDI command string for local input/output

2.5.1.4 Controllers

HATHOR / Controllers



Controllers are windows that access the shows data, and provide interfaces to operate the system.

The system can have multiples of all Controllers, each configured for different uses.

Select a controller and it will open in a non-docked window on the current monitor. It can then be **dragged** to whichever monitor you wish, adjusted in size and/or **docked**. Controllers are typically arranged on the HATHOR desktop by docking them on the Subscreens.

Controllers can also be opened for temporary needs and left floating on the desktop.

Brief description of the different Controllers:

Field Editor: displays a grid of Instruments used for selecting instruments, changing levels etc.

Fields: displays Submaster Fields in a high density format.

Sequence Playback: displays a Sequence of steps, along with playback controls (i.e., GO, Stop etc.).

Device Control: displays controls and information for devices such as moving lights etc that operate in a Last Takes Precedence (LTP) mode.

Device Control Browser: displays information for devices such as moving lights etc that operate in a Last Takes Precedence (LTP) mode, with zoom functionality, and colour information.

Direct Access: displays buttons used to activate Groups, Looks, Palettes and Pages.

Priority Fields (LTP): displays Information for a special type of Field used for LTP control (normally only used in architectural systems with external control inputs).

Subfaders: displays information from the same Submaster Fields as shown in "Fields" but includes a Field Editor grid and virtual faders.

User Panels: displays panels with buttons used to directly activate Action Lists.

FIELD EDITOR

HATHOR / Controllers / Field Editor



Introduction

The Field editor displays a grid of Instruments used for selecting instruments, changing levels and so on.

Concept

Selected fixtures have a red highlight box around their box.

Channels are selected so that you can adjust their levels.

Specifically for the following types of devices:

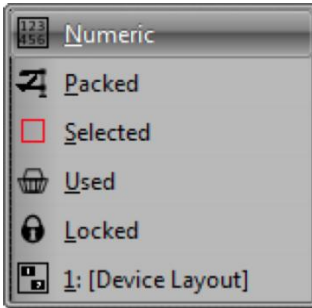
Intensity channels: you directly control the intensity level in the Filed Editor.

Scrollers: you can change their colour frame directly from the Field Editor, or from the Device Controls.

Channel grid display Zoom

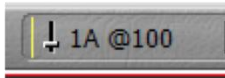
The size of the channel boxes can be adjusted by zooming the display area [Ctrl] or [Shift] & Mouse Scroll Wheel.

Channel grid display format



- Numeric = all channels
- Packed = channels that are: at a level in A Field + going to a level in B field + selected+ at a level
- Selected = Selected channels
- Used = Used in Play (includes at level and selected)
- Locked = prevents currently displayed channels from changing (i.e., select Packed, then Locked- displayed channels will not change even if criteria for "Packed" changes)
- Device Layouts- these are user created

Current Playback/ Field Identity and current level



- Shows what Playback/Field is being shown in the Field Editor
- Click on the level indicator to open a window listing other Playbacks & Fields available for editing

Content of Current Field



- displays what is currently loaded into the current Playback / Field .
- if a Playback is current you can select a different Preset-
- if Stage/Field mode is set to Stage, doing this loads the Preset live onstage .
- if a Submaster / Field is current you can select a different Preset/Group/Palette or Chaser

Record Preset Status

If shown, this indicates that the intensity levels in the current playback are different from those recorded in the current loaded preset. Typically shown when you have made level changes, but have not re-recorded the preset.

Anchors to Global Selection

This links multiple Field Editors (aka Channel Grids) together, so that they are active at the same time.

I.e. channels selected in Field Editor are active in all others that have "Follow" active.

Follow mode is active when the button is depressed.

Follow mode is only available on Field Editors that are docked.

The order that Filed Editors are selected is not relevant.

All Field Editors have to have "Follow" activated for them to be connected.

Fields set in Follow mode will all be showing the same Field Content (i.e. Playback, Preset, ...).

Different Fields set in Follow mode can have different Display modes.

A useful combination is to have one Field in "Packed" mode with another in "Selected".

Linked Mode

The Linked mode allows a large number of channels to span across multiple grids.

Linked mode is only available for Field Editors that are in "Follow" mode.

Linked mode is active when the button is depressed.

i.e.: the 1s Editor shows channel 1 through 100, then the 2nd Editor will show 101 and higher.

The sequence that the Field Editors have "Linked" activated determines which Editor has the lowest channel numbers

There may be overlap in the channels displayed depending on the size shape and zoom of the channel grids

Scrolling the display in one editor will scroll the other linked editors.

Previous / Next Mode

The indicators in the top left of each channel show either where the channel level **was** in the **previous** step, or where it **will be** going to in the **next** step.

Stage / Field Mode

When this box is checked then you are in Stage Mode.

In Stage mode, the Field Editor shows all current levels, including all Playbacks, Subfaders and Priority Fields.

Channel levels from Action Lists or Priority Fields will not be recorded.

In Field mode (box not checked), only channel with levels in the active field will be shown.

Use [\[Stage/Field\]](#) key to toggle between Stage and Field modes.

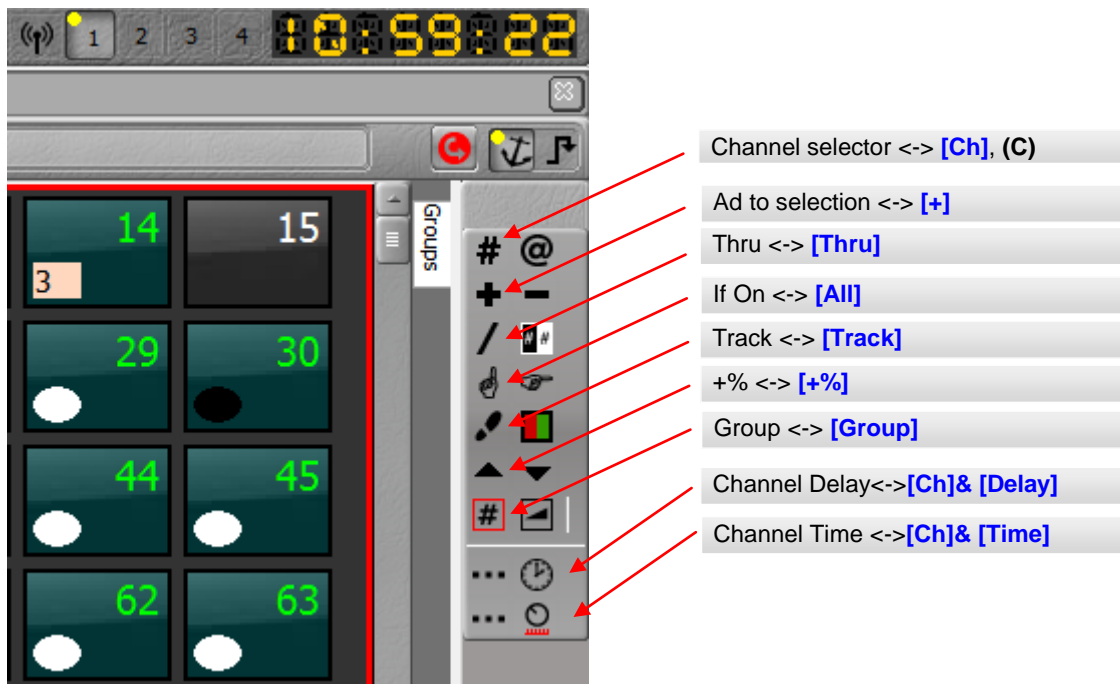
Note: If the lock icon is closed, then [\[Stage/Field\]](#) will not change this setting. Left click on the lock icon to toggle it between locked and unlocked

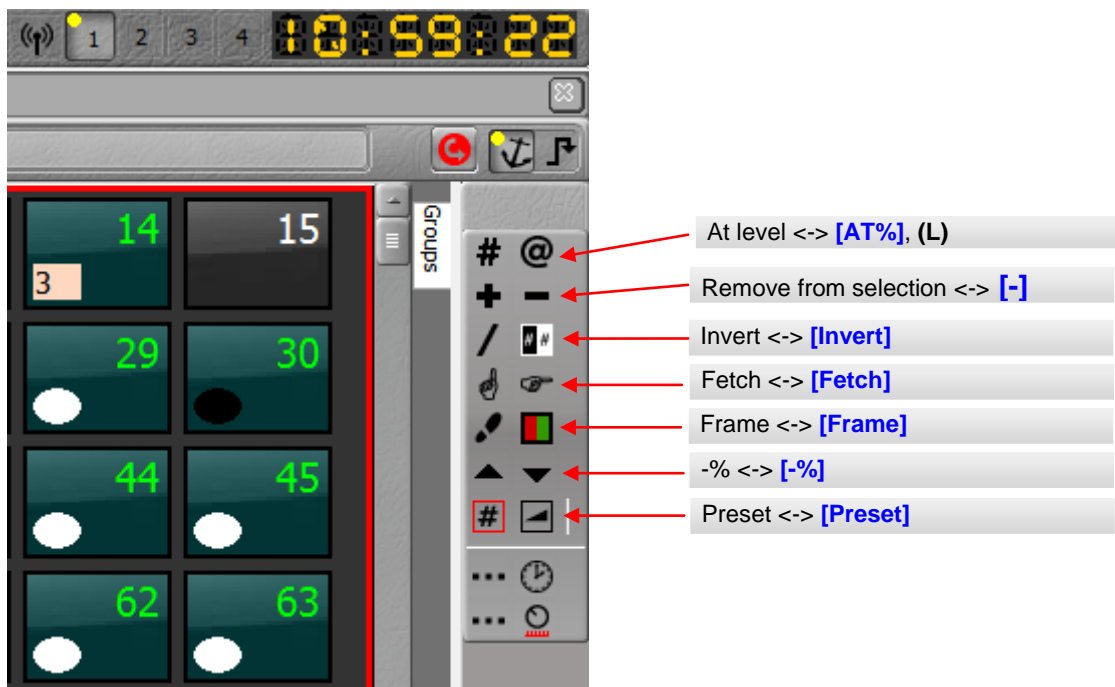
Tools



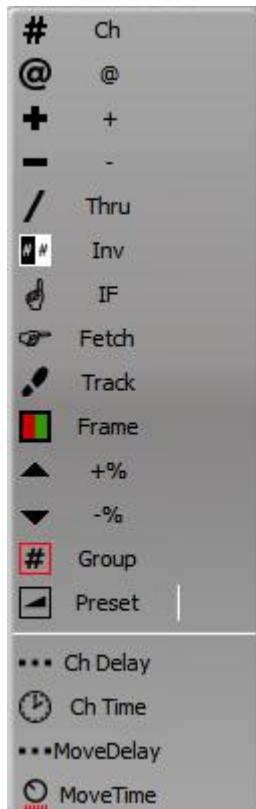
Click on this icon to open the specific FIELD EDITOR Tools set.

Once the Tool set is open, it is possible to dock it into the Field Editor window. Just click on the pin icon to dock it.





Note: Right Click on tools and select **Show Texts** to display tools names.



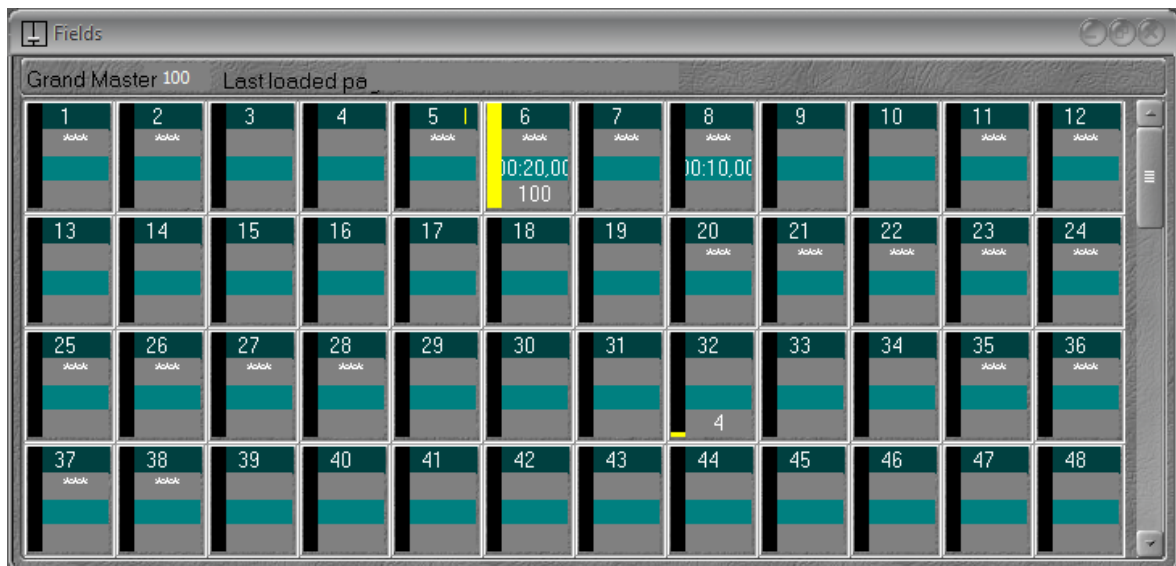
Right Click in the Field Editor allows to:

Choose the Intensity Format for channels (% , Decimal, Hexadecimal).
 Choose if Stage mode is managed by **[Stage/field]** key.
 Choose if A/B channels are displayed in Packed mode or not.



FIELDS

HATHOR / Controllers / Fields



Introduction

The Fields controller displays Submaster Fields in a high density format.

Concept

This controller is designed to display Submaster Fields Content.
A lot of features come either via Drag&Drop or through Right Click menu.

Drag&drop TO the Field Controller

TO LOAD objects in Fields
TO COMPARE with Field content
From the Play Menu
PALLETES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
PRESETS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
CHASERS (**Cancel** or **Load** options)
From Direct Access Panels
PALLETES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
From Controllers
DIRECT ACCESS:
PALLETES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)

FIELD EDITOR

CHANNEL (**Cancel**, **Load**, **Add** or **Record and Load Look** options)

FIELDS (From one window to another window or inside the Fields window):

PALLETES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
PRESETS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
CHASERS (**Cancel** or **Load** options)

SEQUENCE PLAYBACK

SEQ STEP: **Create Look from ... and Load to field** option)
PRESETS (**Cancel**, **Compare** or **Load** options)

SUBFADERS

PALLETES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
PRESETS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
CHASERS (**Cancel** or **Load** options)

Drag&drop FROM the Field Controller TO

To the Play Menu
PALLETES (**Cancel** or **Copy Image** options)
GROUPS (**Cancel** or **Compare** options)
PRESETS (**Cancel** or **Compare** options)
LOOKS (**Cancel** or **Compare** options)

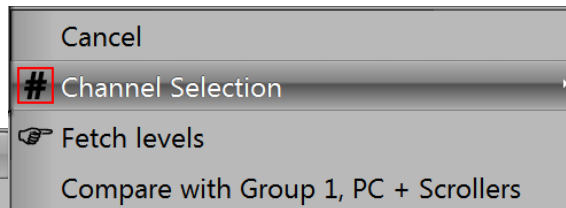
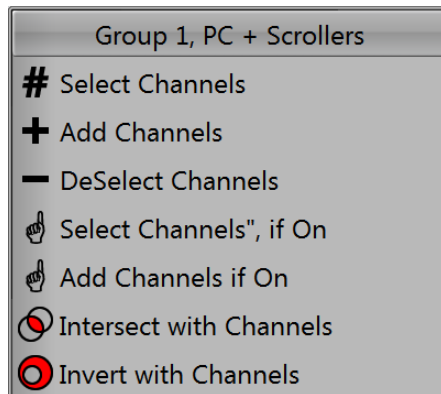
CHASERS (**Cancel** or **Copy To** options)
 To Direct Access Panels
 PALLETTES (**Cancel** or **Copy Image** options)
 GROUPS (**Cancel** or **Compare** options)
 LOOKS (**Cancel** or **Compare** options)
 To Controllers
To DIRECT ACCESS:
 PALLETTES (**Cancel** or **Copy Image** options)
 GROUPS (**Cancel** or **Compare** options)
 LOOKS (**Cancel** or **Compare** options)

To FIELD EDITOR (main)

GROUP

Cancel

Channel Selection



Select Channels: select GROUP channels and deselect others.
Add Channels: adds GROUP channels to the current selection.
DeSelect Channels: removes GROUP channels from the current selection.
Select Channels if On: select only GROUP channels with level > 0, and deselect others.
Add Channels if On: adds only GROUP channels with level > 0 to the current selection.
Intersect with Channels:
 Only selected channels matching with GROUP channels remain selected.
Invert with Channels:
Swap between selected channels matching with GROUP channels and unselected GROUP channels. Other channels are not involved.
Fetch Levels: set intensities recorded in the GROUP to the selection.
Compare

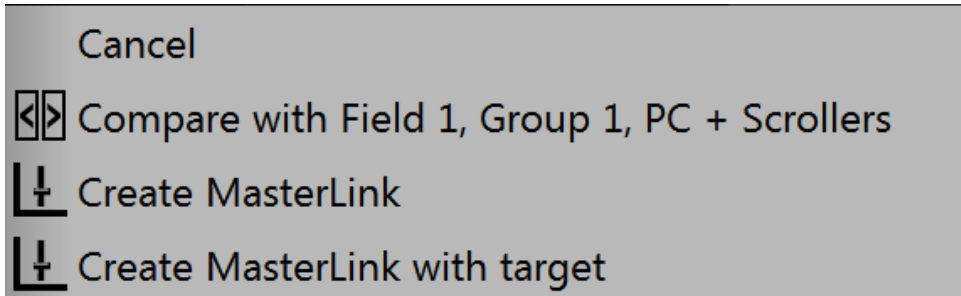
To SEQUENCE PLAYBACK

OBJECT TO SEQ STEP:

GROUPS (**Cancel** or **Compare** options)
 PRESETS (**Cancel** or **Compare** options)
 LOOKS (**Cancel** or **Compare** options)
 CHASERS (**Cancel** or **Copy To** options)

To FIELD TO SEQ STEP:

In every case, drag & drop a FIELD to a SEQUENCE STEP will offer two options in addition to Cancel and Compare features:



Create MasterLink:

Add a MasterLink to the selected Sequence Step

Create MasterLink with target:

Add a MasterLink to the selected Sequence Step and copy the current level of the Field.

To SUBFADERS

PALLETTES (**Cancel** or **Load** options)

GROUPS (**Cancel**, **Compare** or **Load** options)

PRESETS (**Cancel**, **Compare** or **Load** options)

LOOKS (**Cancel**, **Compare** or **Load** options)

CHASERS (**Cancel** or **Load** options)

RIGHT CLICK features

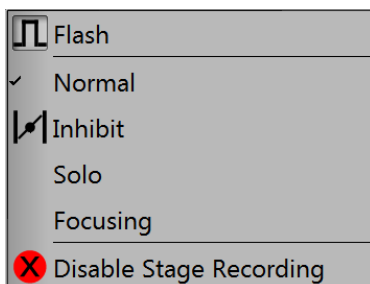
Right Click Pop-Up menu is contextual, and so, depends on CONTENT.

CONSTANT Features:

{**Clear Field #**}: to clear field. On consoles: [**C/ALT**]&[**ASSIGN Key**]

{**Mode**}

Please refer to 11.10.1 Subfader Modes for more information about Modes.



{**Edit Field #**}: to Edit the content of the field. On consoles: [**EDIT**]&[**ASSIGN Key**]

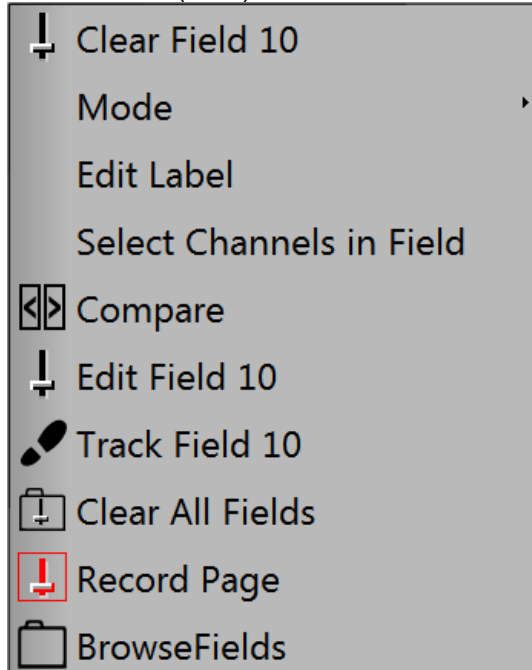
{**Track Field #**}: to clear the 192 fields. On consoles: [**0**]&[**PAGE**]

{**Clear All Fields**}: to clear the 192 fields. On consoles: [**0**]&[**PAGE**]

{Record Page}: to Record a Submaster Page. On consoles: **[REC]&[PAGE]**

{Browse Fields}: to open the field's editor window. No consoles equivalent.

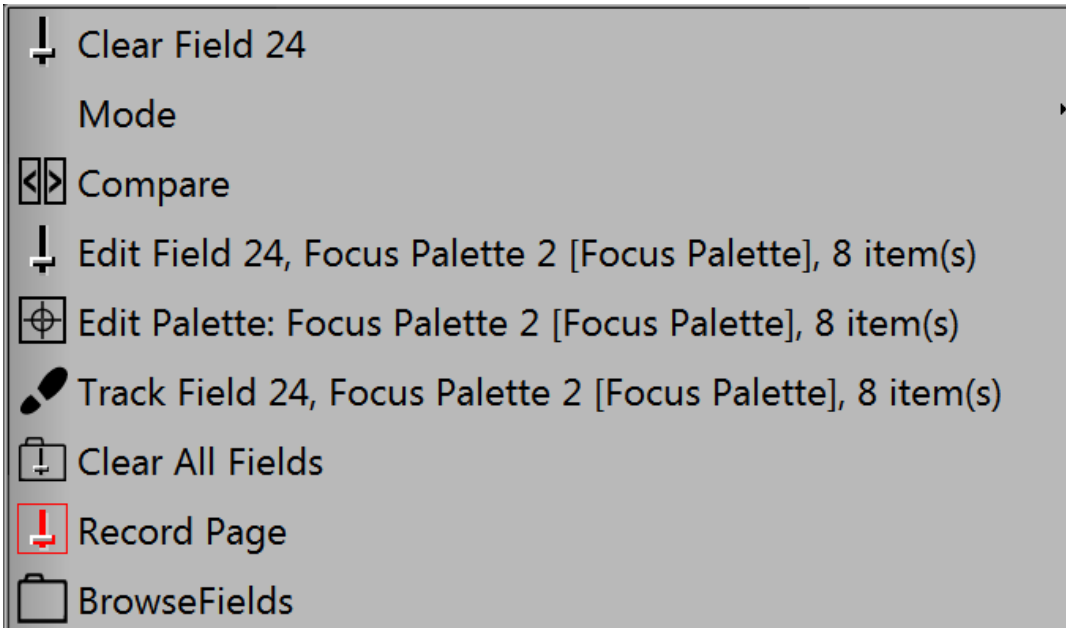
CHANNELS (****)



{Edit Label}: to enter a name, this name will be only displayed in the internal screen (Fields selection) on LIBERTY / FREEDOM, and in dedicated IMAGO display (see section IMAGO **dedicated** display) for more details.

{Select Channels in Field}: select FIELD channels and deselect others.

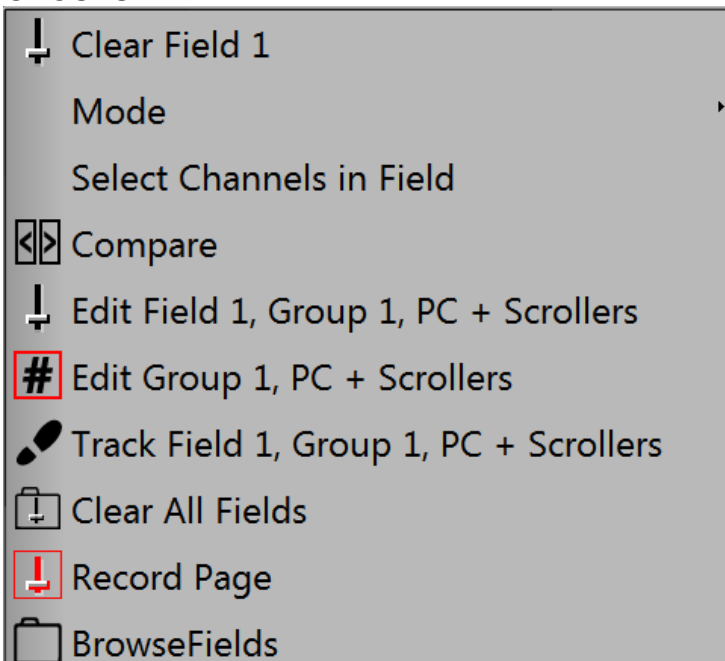
PALETTES



{Edit Field Field #, --- Palette #}:

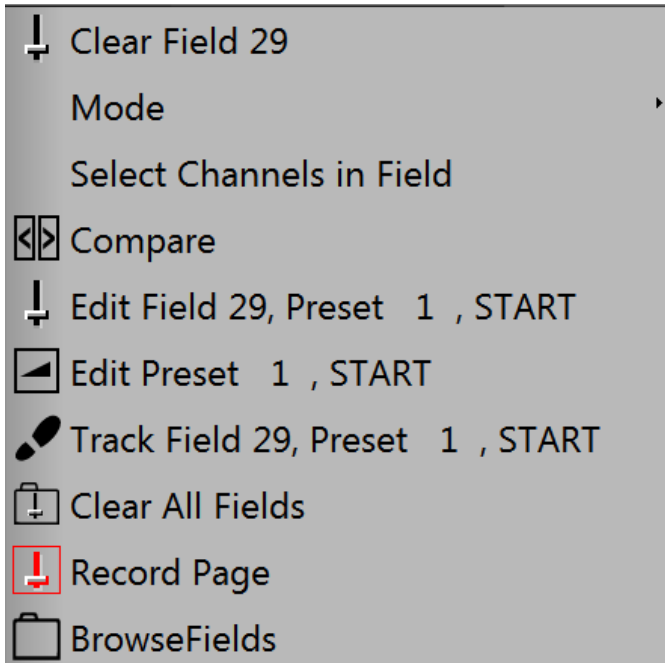
{Edit Palette: --- Palette #}: open Palette # Editor. On consoles: **[#] [EDIT]&[ATT group]**

GROUPS



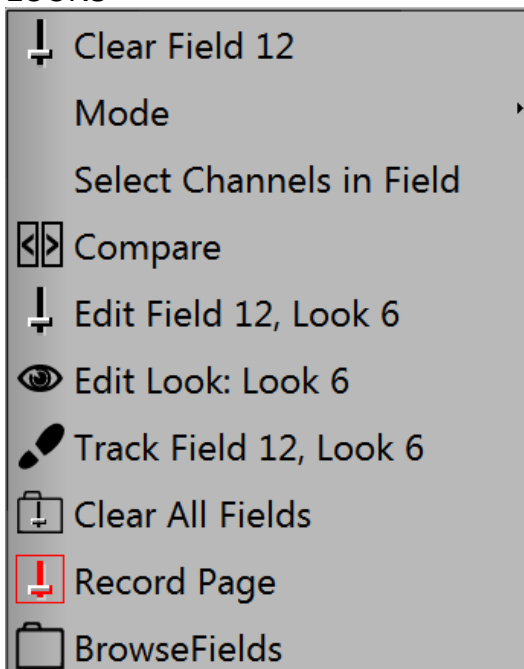
{Edit Group #}: open the Group # Editor. On consoles: **[#] [EDIT]&[GROUP]**.

PRESETS



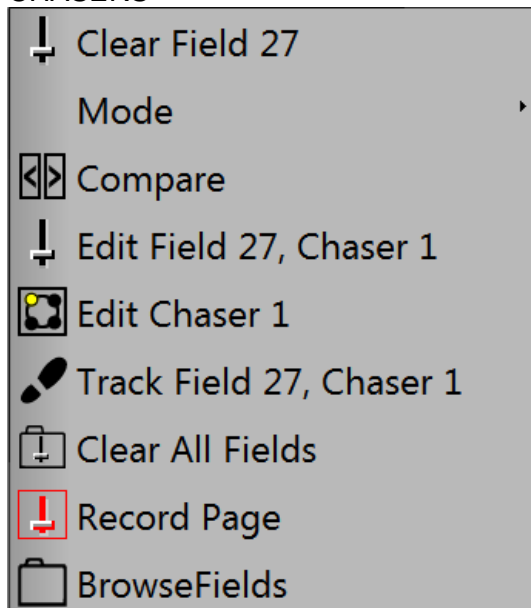
{**Edit Preset #**}: open the Preset # Editor; On consoles: **[#] [EDIT]**.

LOOKS



{**Edit Look: Look #**}: open the Look # Editor. On consoles: **[#] [EDIT]&[LOOK]**.

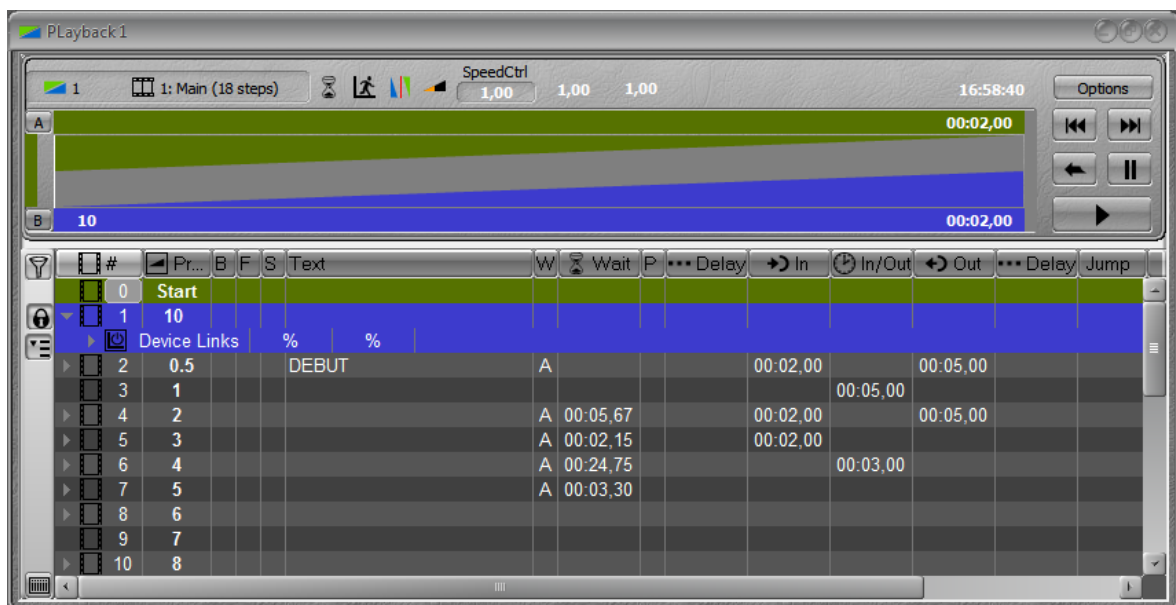
CHASERS



[Edit Chaser #]: open the Chaser # Editor. On consoles: **[#] [EDIT]&[CHASER]**.

SEQUENCE PLAYBACK

HATHOR / Controllers / Sequence Playback



Introduction

The Sequence Playback controller displays a specific Playback, associated to a specific Sequence.

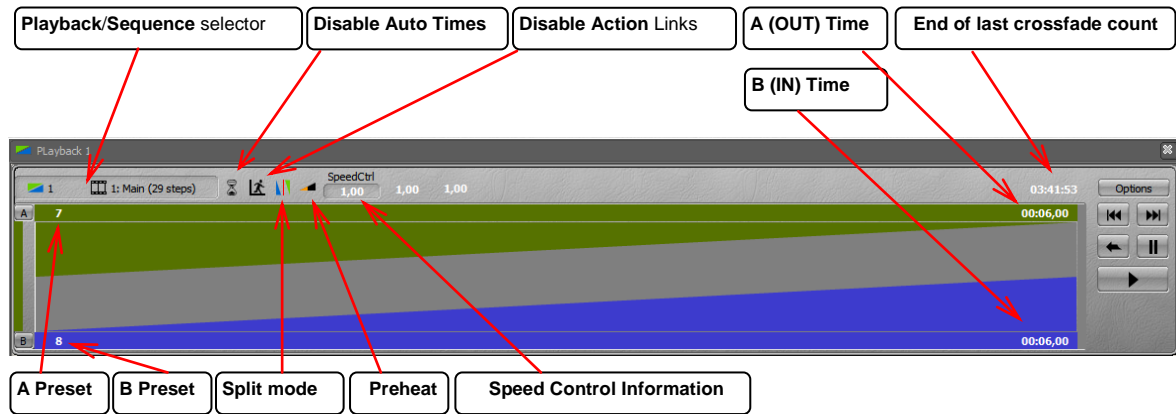
By default Playback 1 and Sequence 1.

There are 24 Playbacks in the system, which can be displayed at the same time if necessary.

These 24 Playbacks are linked by default to the 24 first sequences.

Any Sequence can be linked to any Playback.

The Crossfade part



Playback/Sequence selector: to select another playback or another sequence.

Disable Auto Times: to temporary disable wait times and follow times.

Disable Action Links: to temporary disable Action Links.

A (OUT) Time: displays Out Time

B (IN) Time: displays In Time

End of last crossfade count: displays time count since the end of the last crossfade

A Preset: displays the current Preset on Stage

B Preset: displays the next incoming Preset

Split mode: the logical behaviour of the crossfade mode in the system is to keep common levels between B Preset and A Preset on stage during the manual crossfade, in order to ensure that the crossfade is dipless.

The Split mode allows identical intensities to be controlled by Master Playback Fader.

It is useful and necessary to generate a (partial) blackout on stage with Master Playback Faders.

Important: the Split mode is action is temporary (reset after each crossfade).

To enable the Split mode for a step particularly, check the Split mode on that step (**S column**).

Preheat: when enabled, all preheat values entered in the Instrument Setup will be used during Sequence execution according to the following rule: for channel owning a preheat level, this level will be automatically active in the Preset preceding the Preset with recorded intensity.

Speed Control Information

Controls



Open **specific Playback functions** menu

Backward (SEQ -) and **Forward** (SEQ +) controls


Back and **Pause** controls

GO

Options

Channels: to display the Field Editor in the Playback Controller

Timeline: to display the Time Line part


 **Edit Playback:** to open a second Playback controller window


 **Rollback Positions of all channels:** recall recorded attributes values for all Devices

 **Rollback Positions of selected channels:** recall recorded attributes values for selected Devices

 **Disable AutoTimes**

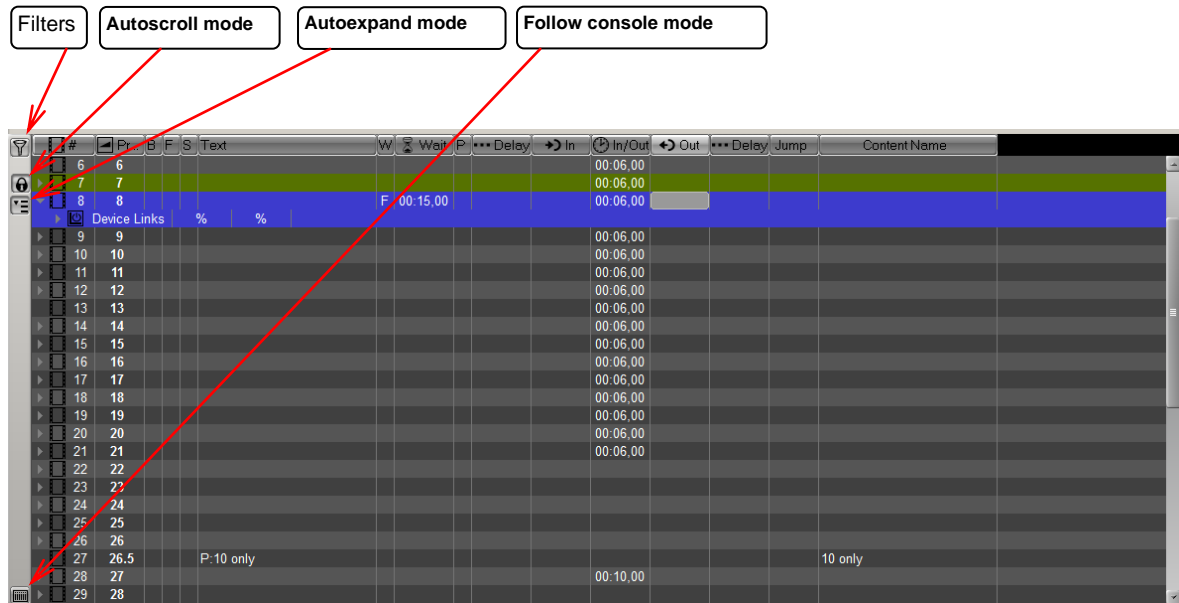
 **Disable Action Links**

 **Learn Alert:** to start the record of Alert Times

 **Learn Profile:** to start the record of movement of Playback faders in order to create a specific Crossfade. The Learn Profile feature records Playback faders movements including times and delays.

 **Use Preheat**

The Sequence Steps part



Filters:

Displays Attribute Groups filters and Display modes. See also 1.2.2.1 Filters description

Autoscroll mode:

Moves the sequence automatically, in order to fix A and B steps in the center of the window.

Autoexpand mode:

Expands automatically the incoming step, displaying Part Fade, Device Link, Page Links, Master Links, and Actions Links if any.

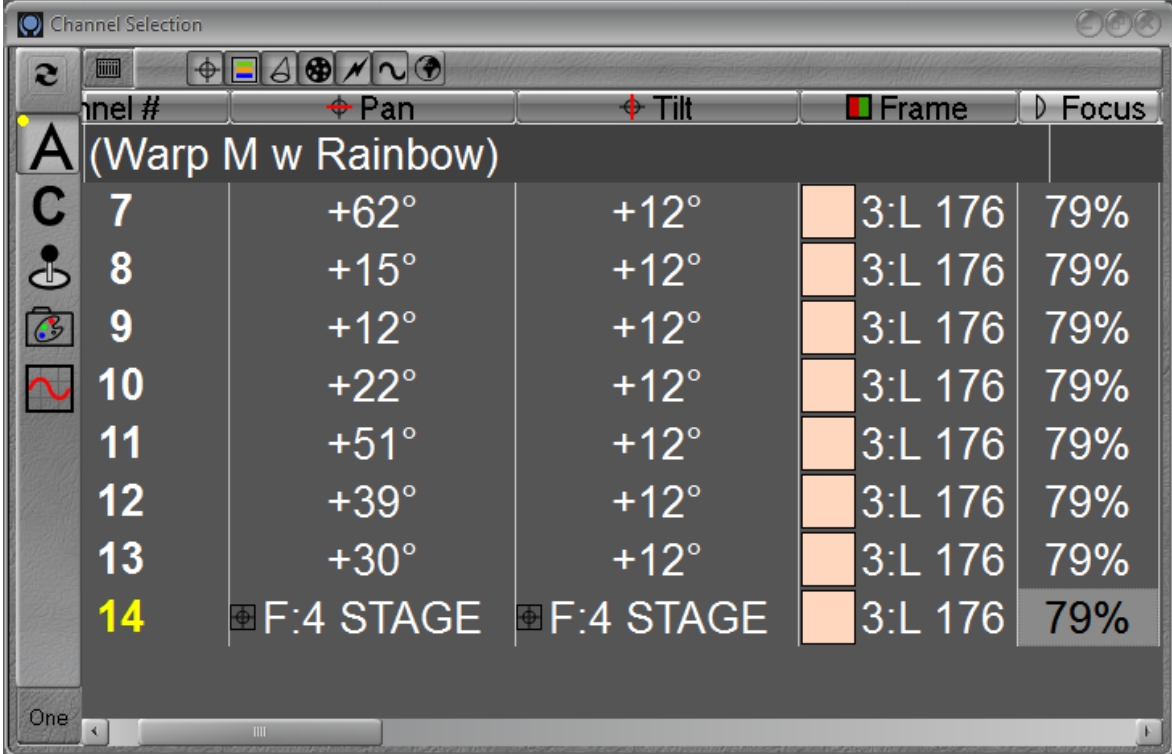
Follow console mode:

When enabled, the window will automatically display the selected main playback.

Note: use **[#] [SELECT PLAYBACK]** to assign playback # to the main Playback.

DEVICE CONTROL BROWSER

HATHOR / Controllers / Device Control Browser



The screenshot shows a software window titled "Channel Selection" with a toolbar at the top. Below the toolbar is a table with columns for Channel #, Pan, Tilt, Frame, and Focus. The table lists channels 7 through 14, with channel 14 highlighted in yellow. Channel 14 has a label "F:4 STAGE" under both the Pan and Tilt columns. The Frame column shows "3:L 176" and the Focus column shows "79%".

Channel #	Pan	Tilt	Frame	Focus
A (Warp M w Rainbow)				
C 7	+62°	+12°	3:L 176	79%
8	+15°	+12°	3:L 176	79%
9	+12°	+12°	3:L 176	79%
10	+22°	+12°	3:L 176	79%
11	+51°	+12°	3:L 176	79%
12	+39°	+12°	3:L 176	79%
13	+30°	+12°	3:L 176	79%
14	F:4 STAGE	F:4 STAGE	3:L 176	79%

Introduction

The Device Control Browser controller displays and allows controlling fixtures attributes. It is possible to zoom in and to zoom out in the size of the characters with the **(SHIFT)** key and the mini-wheel on the mouse, or, on the console, with the **[C/ALT]** key and the intensity wheel.

Left side options



AUTO mode, displays automatically Palettes References if any, if not, displays Values.



COMPRESS mode, displays Palettes Groups only.



VALUES, displays only values.



PALETTES mode, displays only Palettes.



DYNAMICS



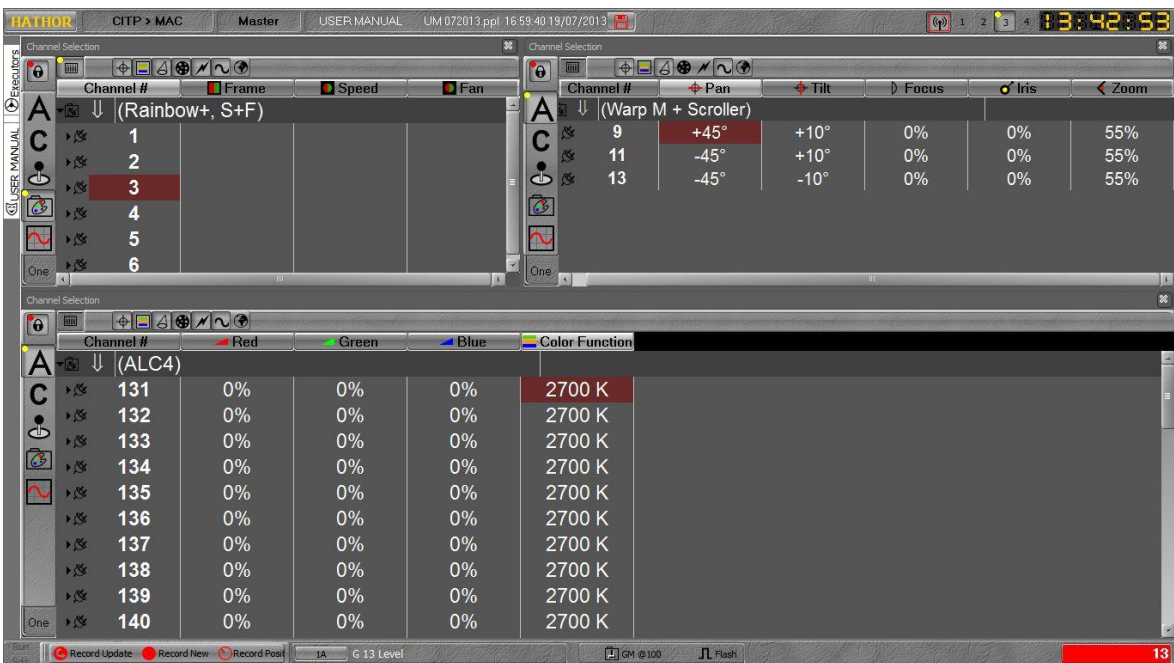
ALL/ONE mode



OPERATIONAL MODES:

One click to switch from **SLAVE** mode (current selected Devices in Field Editor are displayed) to **PRIVATE SELECTION** mode (Devices selected in the Device Browser Control window can be different as selected Devices in Field Editor). From **PRIVATE SELECTION** mode, click again to switch to **LOCKED** mode. In **LOCKED** mode, it is not possible to add or remove Devices.

The **LOCKED** mode is very useful to create several controllers for different specific Devices, offering then a very readable configuration. It is also useful to create a fixed display for every Device with all or only some attributes (see Filters). In locked mode, the follow console mode is still available, which means that it is possible to switch from one attribute group to another in all displays just while using Attribute Group keys on the console.



Top bar options



FOLLOW mode

When enabled, only selected **Attribute Group** parameters will be displayed.

ATTRIBUTE GROUPS Filters:



FOCUS (POSITION): PAN, TILT...



COLOR: CYAN, MAGENTA, YELLOW, COLOR WHEEL ...



BEAM: FOCUS, IRIS, ZOOM ...



PATTERN: GOBO SHUTTERS ...



EXTRA: STROBE, PRISM



DYNAMIC

Note: It is possible to combine Attribute Groups while using the SHIFT key. Select one Attribute Group: hold the SHIFT key, and then select a second one, and a third one if necessary.

Controlling Devices via the DEVICE CONTROL BROWSER

To control Devices attributes, use either the mouse or your finger and the keyboard if necessary.

For attributes with positions, as Color Wheels, Gobo Wheels, Color Frame, and so on, just **double click** on the position name and select a new one in the list. The change on stage will be immediate.

For attributes without position, as zoom, iris, pan & tilt, and so on, double click on the value, type the new value and confirm with (**ENTER**), or type the new value first and then **double click** on the value to replace.

Concerning Palette references, it generally makes sense to work in Compress mode, in order to modify all attributes from one Palette group in one go. To change a Palette reference, **double click** on the Palette Reference name and select a new one in the list.

DEVICE CONTROL

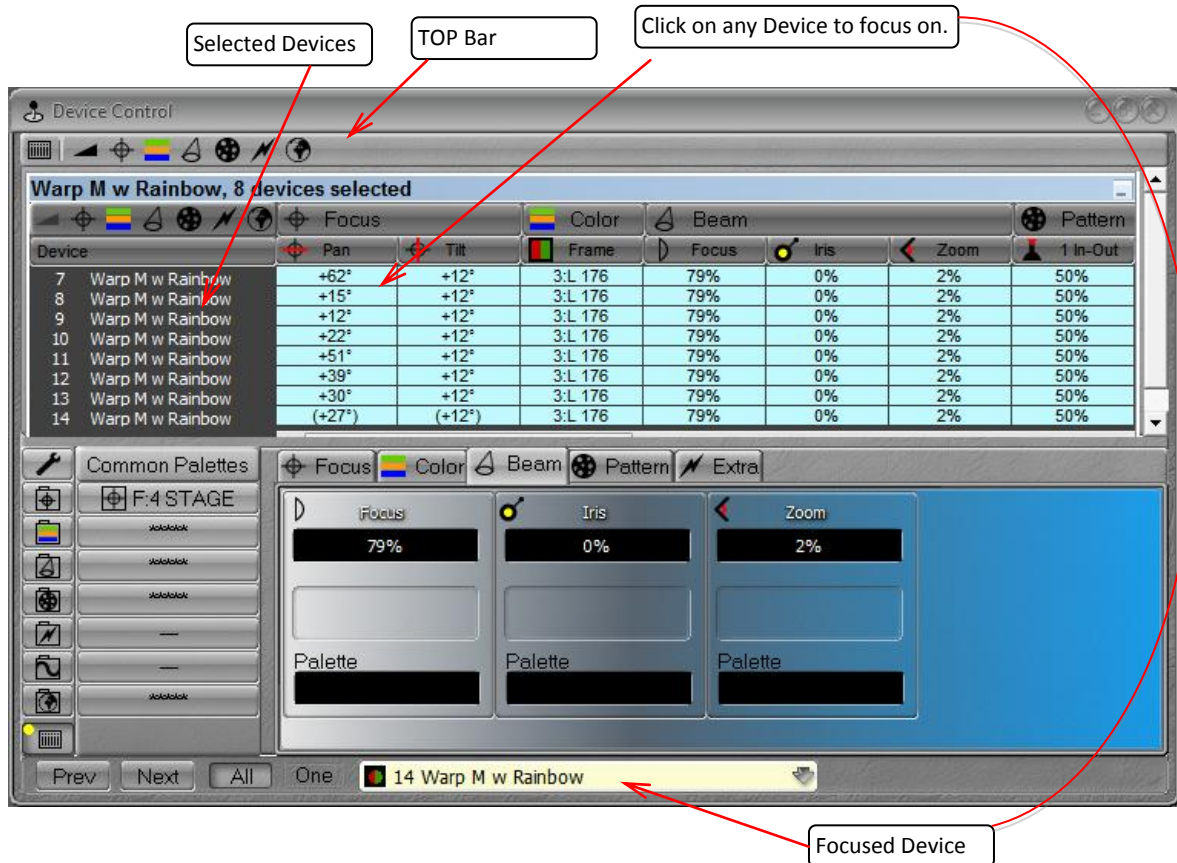
Introduction

The Device Control controller displays and allows controlling of fixture attributes.

It is not possible to zoom in and to zoom out in the size of the characters.

Attributes are displayed in the top of the window, and the bottom of the window is dedicated to display specific access to attributes, and specific access to Palettes.

HATHOR / Controllers / Device Control



Top part of the window: Top bar options



FOLLOW mode

When enabled, only selected **Attribute Group** parameters will be displayed.

ATTRIBUTE GROUPS Filters for all Devices:



FOCUS (POSITION): PAN, TILT...



COLOR: CYAN, MAGENTA, YELLOW, COLOR WHEEL ...



BEAM: FOCUS, IRIS, ZOOM ...



PATTERN: GOBO SHUTTERS ...



EXTRA: STROBE, PRISM



DYNAMIC

Note: It is not possible to combine Attribute Groups while using the SHIFT key for the general ATTRIBUTE GROUPS Filters. But each type of Device has also a dedicated Filters bar. Use this one to combine different groups of Attributes.

Controlling Devices in the Top part of the window

That part of the window is more dedicated to display than to control attributes. Nevertheless, it is possible to control Devices attributes, with either the mouse or finger.

For attributes with positions, as Color Wheels, Gobo Wheels, Color Frame, and so on, just **double click** on the position name and select a new one in the list. The change on stage will be immediate.

For attributes without position, as zoom, iris, pan & tilt, and so on, it is not possible to change the value there. It will be necessary to use the tools located at the bottom of the window.

It is always possible to alter any value by holding down the right mouse button and moving the mouse

Bottom part of the window: options

Tools menu

Click on this button to display the menu.

- **Edit Channel Selection:** obsolete
- **Track Channel Selection:** open the Track window for selected channels, **[TRACK]** on console.
- **Copy Attributes from ##:** to copy Attributes value from a source device to another, confirm with **(ENTER)** , **[COPY ATT]** **[COPY ATT]** on console.
- **Clear Palette References:** keep values without the Reference to the original Palette.
- Only values will be recorded in Device Link, instead of Palette references.

Palette Groups buttons: displays Palettes list and allows selecting a Palette.

Common Palettes button: displays **Used** Palettes the active Device. The active Device is displayed at the bottom of the window. To change for another Device, click on this device in the top part of the window.

Attribute Groups buttons: displays Attributes information and allows control.

- **Value:** type a value and double-click in this area to execute it.
- **Position:** double-click in this area will display the list of positions, and allows selecting a position in the list.
- **Palette:** displays the Palette Reference currently used, with double-click, display the list of Palettes and allows selecting a Palette in the list.

All/One Previous and Next buttons: allows to switch between All mode and One mode. All mode is the default mode, all fixtures are controlled, One mode offers the possibility to control fixtures one by one inside the selection. This mode is then very useful when recording Palettes, and Looks (in selected mode), since the selection is never lost.

Use Prev and Next to step forward and backward inside the selection.

Console:

- [ALL/ONE] and [PREV]&[NEXT] to switch between All mode and One mode.
- [PREV] and [NEXT] to step forward and backward inside the selection.

Focused Device window: allows selecting another Device in the list.

Click on the focused Device and pick another one in the list.

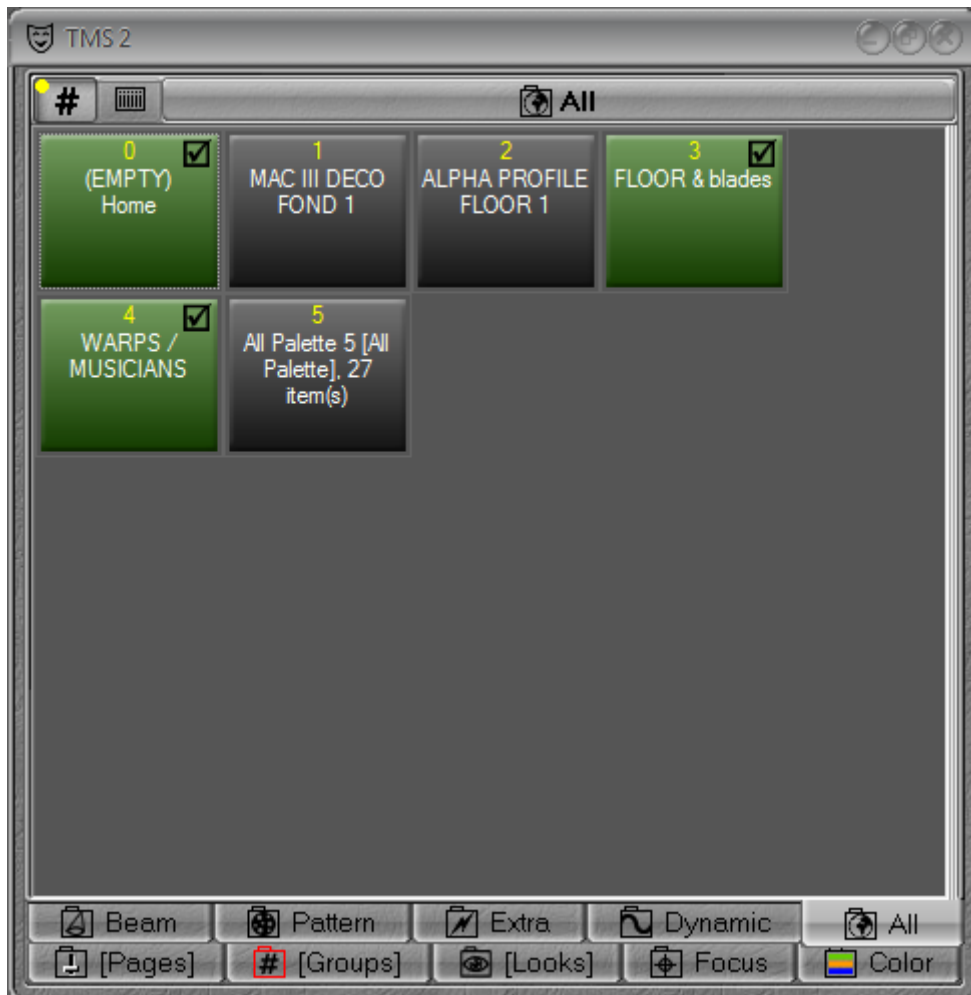
DIRECT ACCESS

Introduction

The Direct Access controller allows accessing to all object's Direct Access Panels in one window.

Objects involved: Palettes, Pages, Groups, and Looks.

HATHOR / Controllers / Direct Access



General features

Click on tabs to display the dedicated panel.


Right-click on the object name in the top bar, and select **Open Direct Access Panel** to open an individual Direct Access Panel for the selected object.

Use **(SHIFT)** to zoom in and zoom out Direct Access Soft Keys

Use **(CTRL)** to zoom in and zoom out Direct Access Soft Keys characters

Please refer to each individual object chapter for more details concerning Right-Click menus.

Note: Palettes Direct Access Panels have specific buttons:

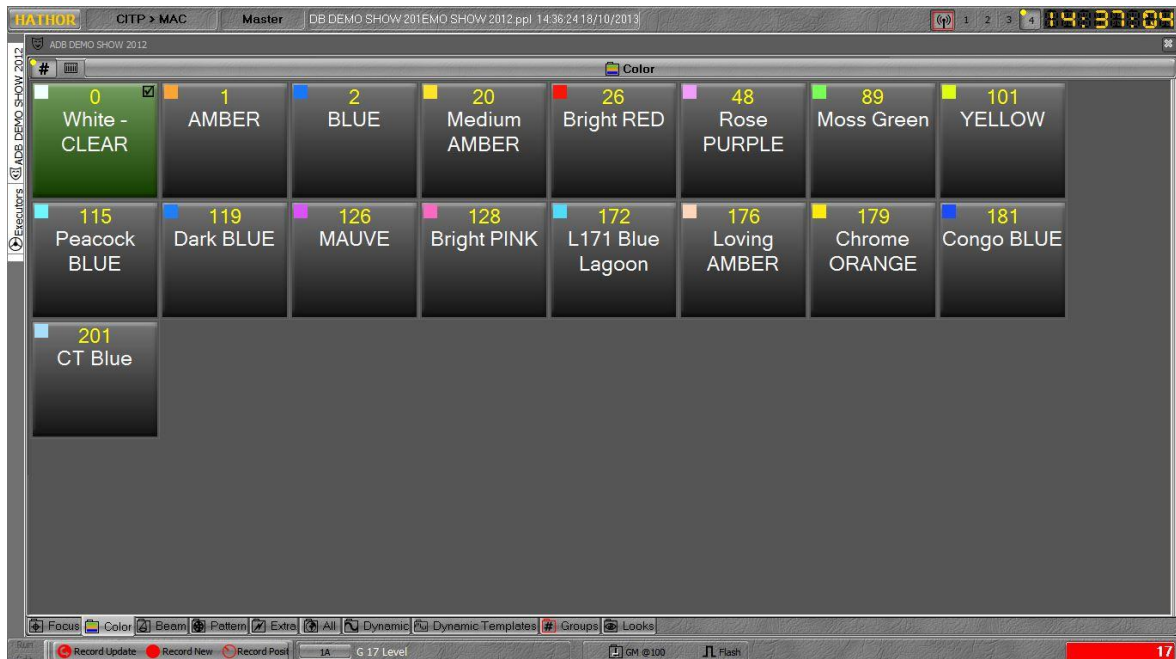
- **#**: allows using the Direct Access Soft Key as a **selector**
- : **Follow Console** mode

Layout Modifications

To modify a Panel Tab:

Click on the object name in the top bar to display the list of available objects to display. The current Panel will be replaced by the selected object.

TIP: to display Dynamic Templates in the Direct Access controller, select on the object Tab to be replaced, click on the object name in the top bar and select Dynamic Templates in the list. To reorganize the tabs, select the first tab, select the object to display in the list, select the second tab, and select the object to display in the list, and so on. See example below.



To delete a Tab:

Right-click on the Tab, and select **close Tab**.

To generate a Direct Access Panel for a specific object and remove the tab from the Direct Access Panel:

Right-click on the Tab and select **undock Tab**.
Save the modifications in the general Screen Layout.

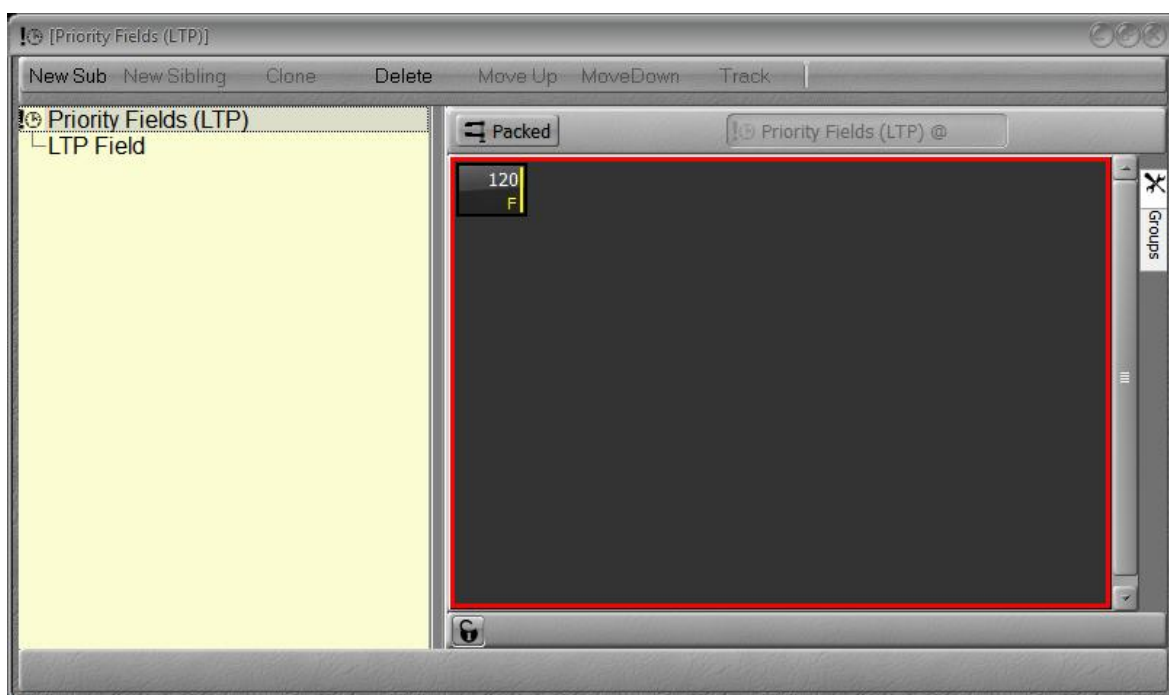
HATHOR / Setup / Screen layout → Store ScreenLayout

PRIORITY FIELDS

Introduction

The PRIORITY FIELDS controller displays LTP Fields generated with LTP commands via Actions, and allows modifying directly Priority channels in the Priority Fields Editor.

HATHOR / Controllers / Priority Fields



To add LTP channels, in the Priority Fields Editor:

Click on **Priority Fields (LTP)**

Select some channels

Set levels with the intensity wheel, the keypad or with the keyboard

LTP channels are displayed in white in the general Field Editor (*Stage mode enabled*).

LTP channels are independent from BLACKOUT.

LTP channels are independent from GRAND MASTER.

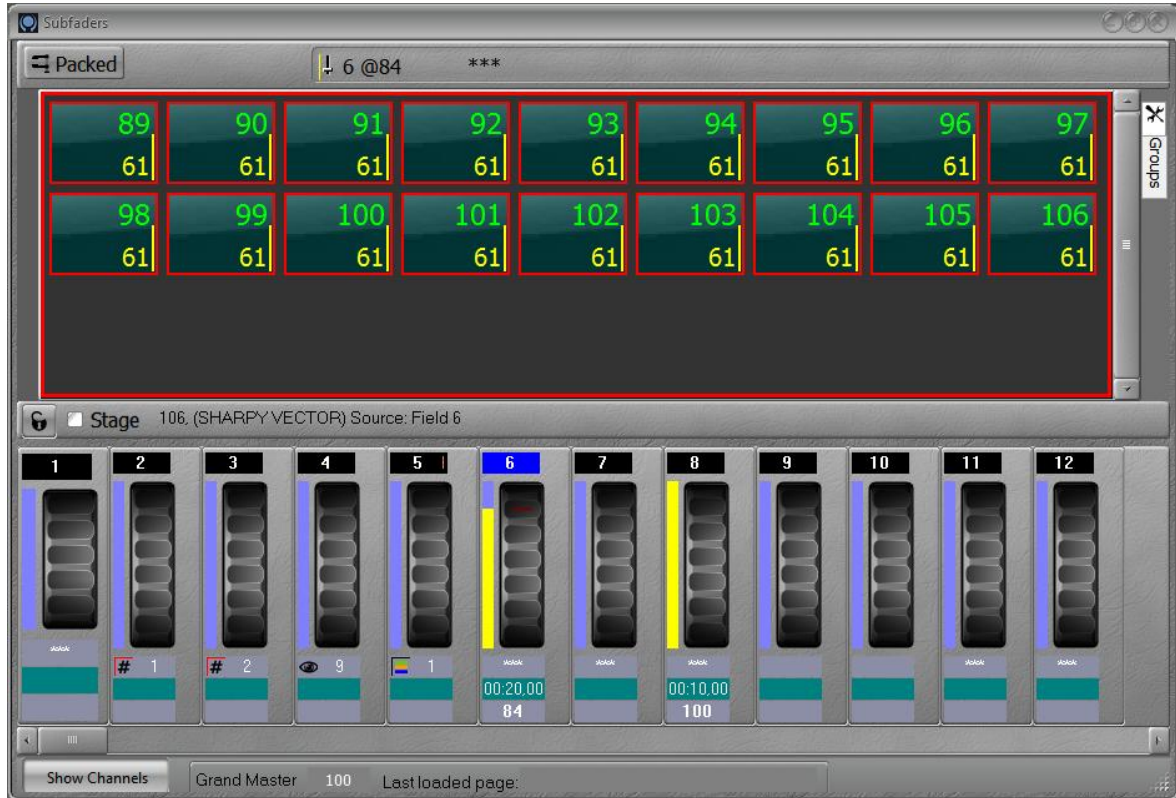
LTP channels levels can't be modified. The only possibility is then to use a Light Control command or to delete the corresponding LTP field.

LTP channels levels can be overridden by standard channel levels: select the channel in the Field Editor set a level higher than the LTP level.

Note: LTP channel level is not recorded, overridden level is recorded.

SUBFADERS

HATHOR / Controllers / Subfaders



Introduction

The Subfaders controller displays Submasters with virtual wheels.

Concept

This controller is designed to display Submaster Fields Content with the possibility to display the Field Editor, either the main one, or the Field Editor related to the selected Subfader.

A lot of features come either via Drag&Drop or through Right Click menu.

Drag&drop TO the Subfaders Controller

TO LOAD objects in Fields

TO COMPARE with Field content

From the Play Menu

PALLETTES (**Cancel** or **Load** options)

GROUPS (**Cancel**, **Compare** or **Load** options)

PRESETS (**Cancel**, **Compare** or **Load** options)

LOOKS (**Cancel**, **Compare** or **Load** options)

CHASERS (**Cancel** or **Load** options)

From Direct Access Panels

PALLETTES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)

From Controllers

DIRECT ACCESS:

PALLETTES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)

FIELD EDITOR

CHANNEL (**Cancel**, **Load**, **Add** or **Record and Load Look** options)

FIELDS (From one window to another window or inside the Fields window):

PALLETTES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
PRESETS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
CHASERS (**Cancel** or **Load** options)

SEQUENCE PLAYBACK

SEQ STEP: (**Create Look from ... and Load to field** option)
PRESETS (**Cancel**, **Compare** or **Load** options)

SUBFADERS

PALLETTES (**Cancel** or **Load** options)
GROUPS (**Cancel**, **Compare** or **Load** options)
PRESETS (**Cancel**, **Compare** or **Load** options)
LOOKS (**Cancel**, **Compare** or **Load** options)
CHASERS (**Cancel** or **Load** options)

Drag&drop FROM the Subfaders Controller TO

The Play Menu

PALLETTES (**Cancel** or **Copy Image** options)
GROUPS (**Cancel** or **Compare** options)
PRESETS (**Cancel** or **Compare** options)
LOOKS (**Cancel** or **Compare** options)
CHASERS (**Cancel** or **Copy To** options)

To Direct Access Panels

PALLETTES (**Cancel** or **Copy Image** options)
GROUPS (**Cancel** or **Compare** options)
LOOKS (**Cancel** or **Compare** options)

To Controllers

To DIRECT ACCESS:

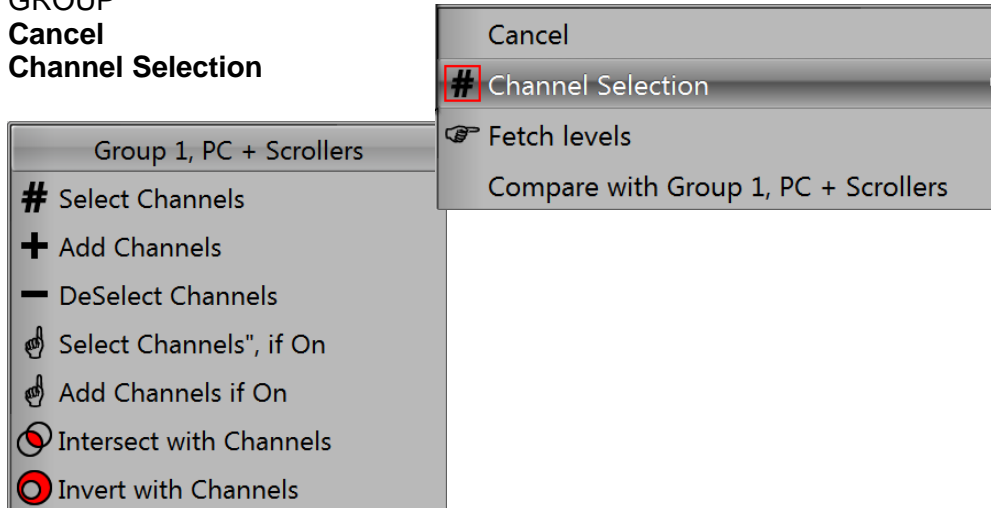
PALLETTES (**Cancel** or **Copy Image** options)
GROUPS (**Cancel** or **Compare** options)

LOOKS (**Cancel** or **Compare** options)

To FIELD EDITOR (main)

GROUP

Cancel
Channel Selection



Select Channels: select GROUP channels and deselect others.

Add Channels: adds GROUP channels to the current selection.

Deselect Channels: removes GROUP channels from the current selection.

Select Channels if On: select only GROUP channels with level > 0, and deselect others.

Add Channels if On: adds only GROUP channels with level > 0 to the current selection.

Intersect with Channels:

Only selected channels matching with GROUP channels remain selected.

Invert with Channels:

Swap between selected channels matching with GROUP channels and unselected GROUP channels. Other channels are not involved.

Fetch Levels: set intensities recorded in the GROUP to the selection.

Compare

To SEQUENCE PLAYBACK

OBJECT TO SEQ STEP:

GROUPS (**Cancel** or **Compare** options)

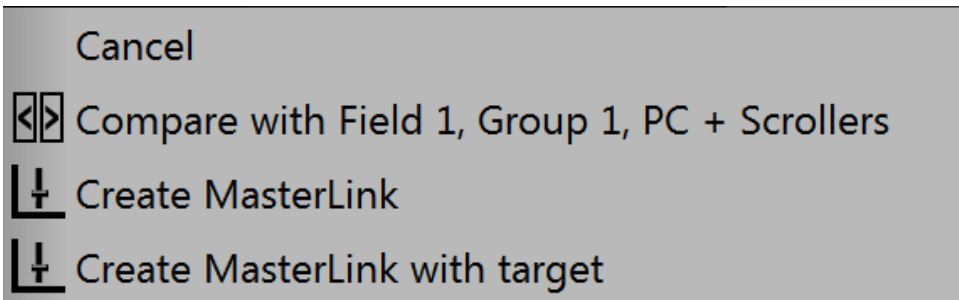
PRESETS (**Cancel** or **Compare** options)

LOOKS (**Cancel** or **Compare** options)

CHASERS (**Cancel** or **Copy To** options)

To FIELD TO SEQ STEP:

In every case, drag & drop a FIELD to a SEQUENCE STEP will offer two options in addition to Cancel and Compare features:



Create MasterLink:

Add a MasterLink to the selected Sequence Step

Create MasterLink with target:

Add a MasterLink to the selected Sequence Step and copy the current level of the Field.

To SUBFADERS

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- PRESETS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)
- CHASERS (**Cancel** or **Load** options)

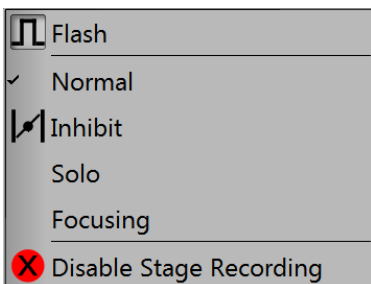
RIGHT CLICK features

Right Click Pop-Up menu is contextual, and so, depends on CONTENT.

CONSTANT Features:

{**Clear Field #**}: to clear field. On consoles: [**C/ALT**]&[**ASSIGN Key**]
{**Mode**}

Please refer to 11.10.1Subfader Modes for more information about Modes.



{**Edit Field #**}: to Edit the content of the field. On consoles: [**EDIT**]&[**ASSIGN Key**]

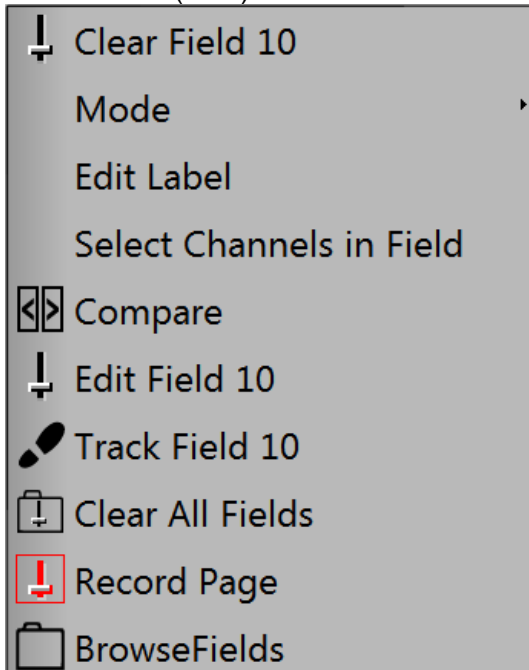
{**Track Field #**}: to clear the 192 fields. On consoles: [**0**]&[**PAGE**]

{**Clear All Fields**}: to clear the 192 fields. On consoles: [**0**]&[**PAGE**]

{**Record Page**}: to Record a Submaster Page. On consoles: [**REC**]&[**PAGE**]

{**Browse Fields**}: to open the field's editor window. No consoles equivalent.

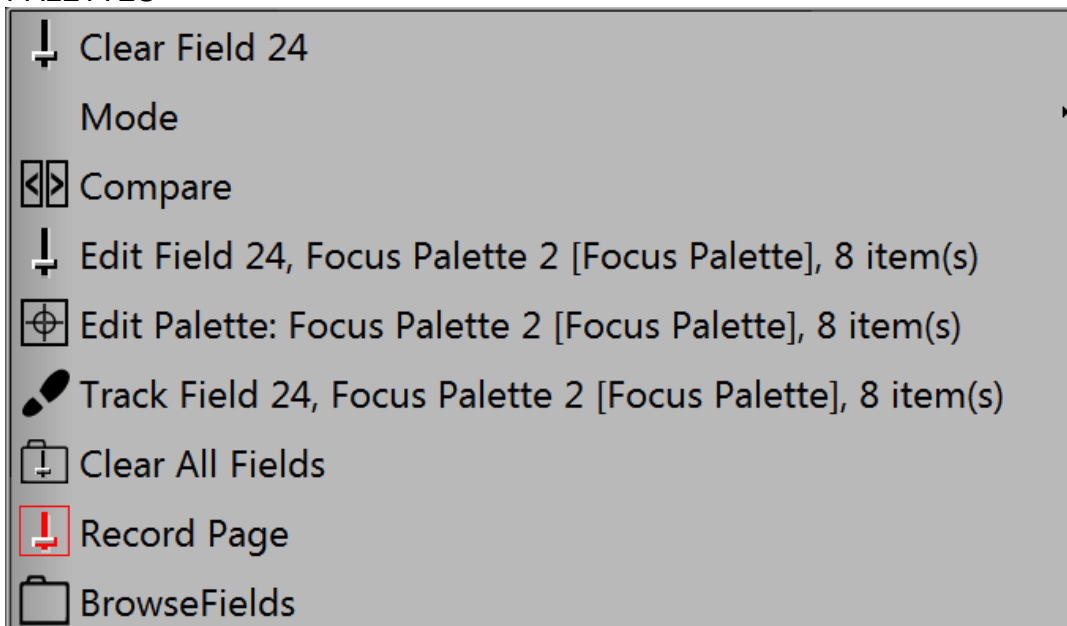
CHANNELS (****)



{Edit Label}: to enter a name, this name will be only displayed in the internal screen (Fields selection) on LIBERTY / FREEDOM, and in dedicated IMAGO display (see section IMAGO dedicated display) for more details.

{Select Channels in Field}: select FIELD channels and deselect others.

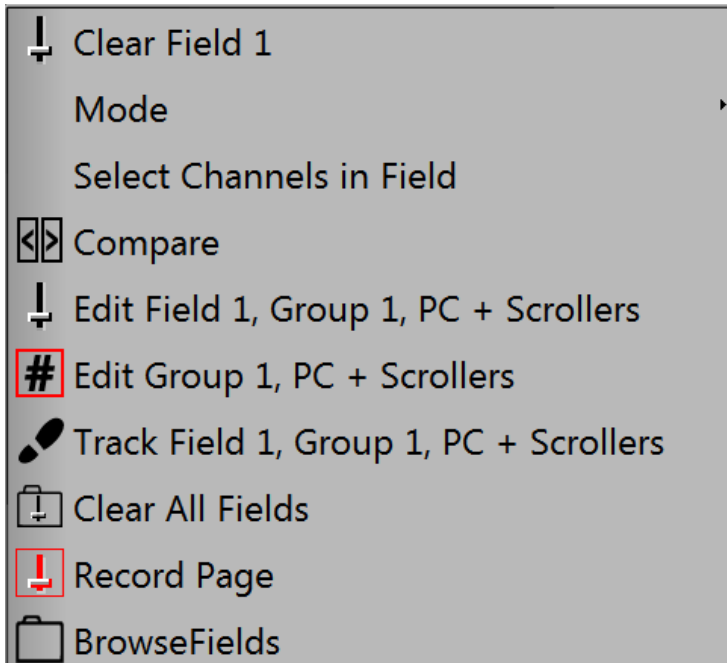
PALETTES



{Edit Field Field #, --- Palette #}:

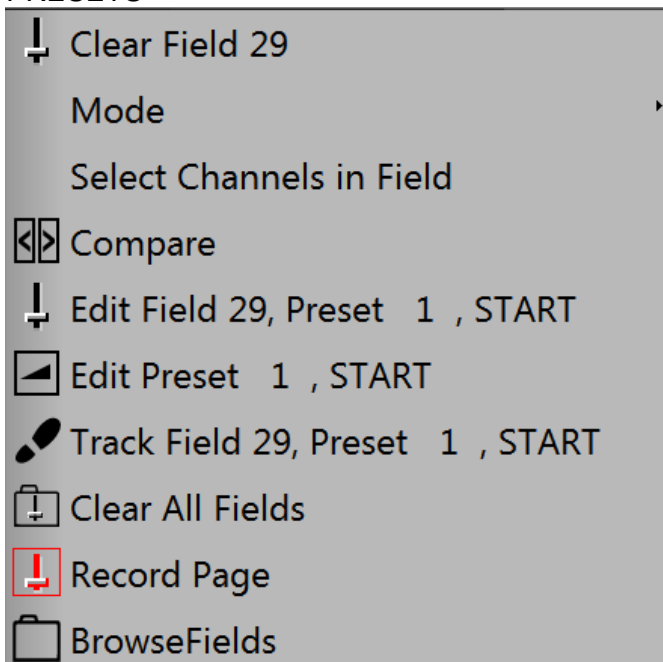
{Edit Palette: --- Palette #}: open Palette # Editor. On consoles: **[#] [EDIT]&[ATT group]**

GROUPS



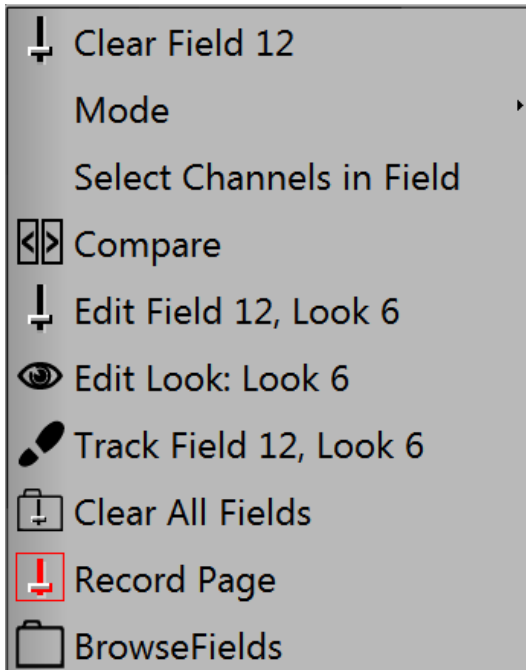
{**Edit Group #**}: open the Group # Editor. On consoles: **[#] [EDIT]&[GROUP]**.

PRESETS



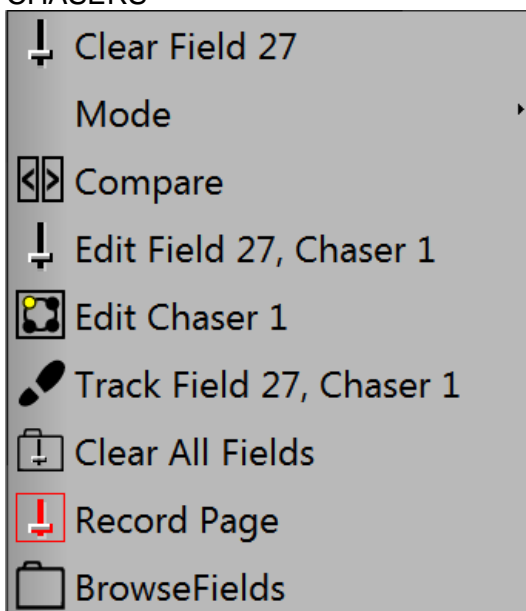
{**Edit Preset #**}: open the Preset # Editor; On consoles: **[#] [EDIT]**.

LOOKS



{Edit Look: Look #}: open the Look # Editor. On consoles: **[#] [EDIT]&[LOOK]**.

CHASERS



{Edit Chaser #}: open the Chaser # Editor. On consoles: **[#] [EDIT]&[CHASER]**.

USER PANELS

HATHOR / Controllers / User Panels

On the root editing line for the panel, there is a "Layout" column. There you can set either option of

Unisize or Individual:

- Unisize: you can set height and width that will be used for all buttons ("B Width" and "B Height") Panel will automatically array the buttons. You cannot adjust size or position of individual buttons
- Individual: you can set size and position, for each individual button.

Once you have created Action Lists:

Create a new Panel, and then use the lower editor to insert "Panel Item".

In the "Kind" column use the pull down menu to select an Action Button or a Load Button

An Action button can be assigned an Action List from the pull down menus for both the Press and

Release of the button

A Load button is used to open another User panel (nested Panels)

You can use a background image on a User Panel- under the Play/ Panels use the local menu on the specific User Panel - select "Set back Image"

If you are using a background image on the Use Panel, you can set individual Buttons to be transparent.

When a button is transparent, you can use the "Instrument Status" column to set an Instrument that you wish to monitor. For example, an Action Button could be used to activate an Action List that sets Instrument 27 to Full. Whenever Instrument 27 has a level above zero, a circular indicator will appear on that Action Button. Note that it will show up regardless of where its level is coming from, even if not from the Action List.

User panels can be duplicated or imported within a file or between files by drag and drop.

2.5.1.5 Tools

Images

HATHOR / Tools / Images

The Images Tool offers the possibility to drag and drop a colour from the grid on any available destination.

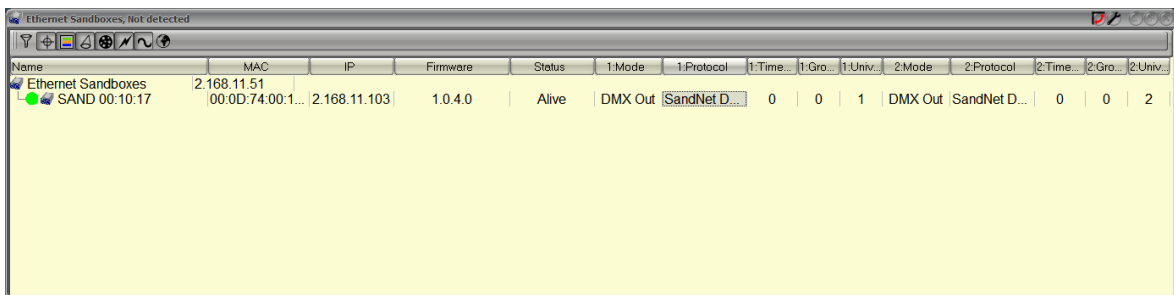
It is generally used to easily creating Gel String Frames, or to paste specific colour on Palette boxes in Direct Access Panels.



Browse Sandboxes

HATHOR / Tools / Browse Sandboxes

The Sandboxes browser is dedicated to browse through connected sandboxes, and allows changing Sandboxes settings.



Print

HATHOR / Tools / Print

All objects are printable:

- Dynamic Tables
- Dynamic Templates
- Palettes
- Groups
- Presets
- Looks
- Sequences
- Pages (Submasters Fields Pages)
- Chasers
- Patch (INSTRUMENT SET-UP)
- Dimmer Curve
- Device Templates
- Devices

Gel Strings
Device Layouts
Panels
Events
Actions & Panels
Strings

To select the object to print, click on Dynamic Tables, and pick the dedicated object in the list.

In order to preview or print, click on **Preview/Print**.

The print feature allows printing the list of recorded objects in the show, not the content of each object, except for Palettes, Sequences and Instrument Setup:

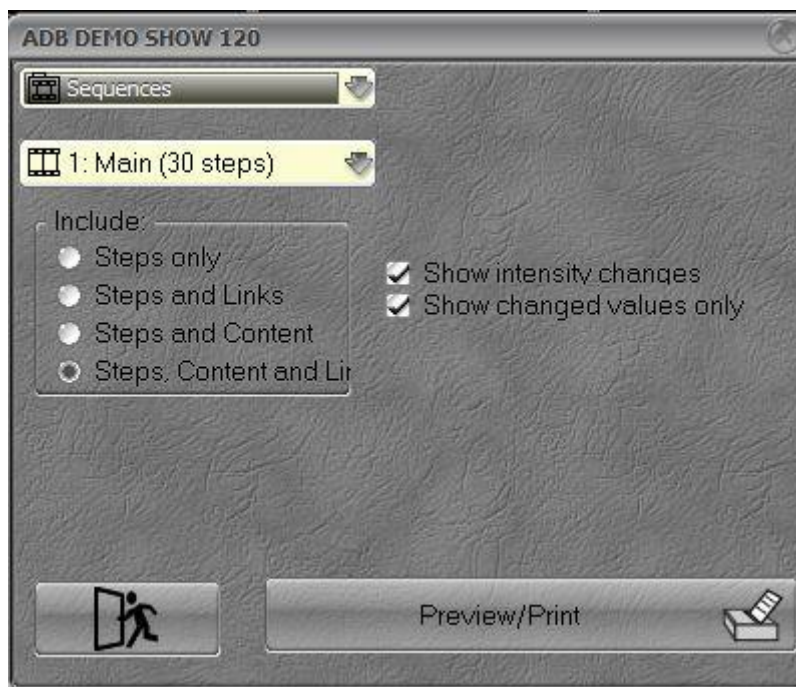
Palettes:

When selecting Palettes, a new list allows selecting the palette type.

Sequences:

When selecting Sequences, a new list allows selecting which sequence to print.

Specifics options (**Include**) allow selecting content details.



Show intensity changes enabled will display intensity changes with – and + symbols.

Show changed values only enabled will display only changed intensities instead of all channels.

Consoles are provided with PDF creator.

RDM Browser (in progress)

HATHOR / Tools / RDM Browser

2.5.1.6 Setup

Preferences

Please refer to Software settings (2.6.4)

Session Setup

Please refer to Session (2.6.2)

Consoles

Please refer to Console settings (2.6.3)

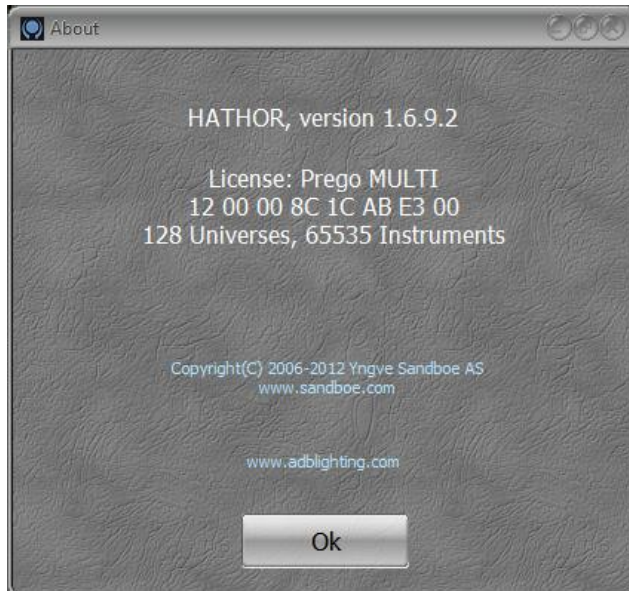
Local IO

Please refer to Local I/O (2.6.5)

Screen layout

Please refer to Screens (2.6.1)

About



HATHOR software version

HATHOR License type

HATHOR License serial number Control
Channels available
Universes available

Shutdown

Please refer to SHUTDOWN PROCEDURE (2.4)

2.5.2 Play Menu

General behaviour

To add a new Object:

Click on the Object tab

Right Click in empty yellow area and select **{Insert Sub: xxxxx}**

Example: to create a new Gel String:

Click on **Gel String** tab

Right Click in empty yellow area and select **{Insert Sub: Gel String}**



The primitive **curves** used to create a Dynamic Effect
 The **patterns** of Dynamic Effects
 User-programmed Parameter **Libraries** for parameters
Groups of channels with or without intensities
 Channels **intensity memories**, used in sequences
 Channels intensity and attributes **Cues**, not used in sequences
Sequence of Steps including Presets, Device Links, and so on
 Submaster content and settings recording
Chasers
 The **Patch** window
 Dimmer **laws**
Fixtures definitions
 The list of **complex channels** (using device Templates)
 User colour **Rolls** for Scrollers
Topographic layout of channels
Action Soft Key(s) user panels
 Editable Control functions with a priority structure
Interfaces between external triggers and “Actions”
 User Serial and MIDI **command strings** for local input/output

2.5.3 Executors

2.5.3.1 Introduction

Executors are **fields** where data is sent. If the Controller is the place to control, and send data, the Executor receives, and holds this data. That also means that clearing an Executor is another way to remove data.

2.5.3.2 Fields

Submaster Fields

2.5.3.3 Playbacks

Sequence Playbacks

2.5.3.4 Priority Fields

Priority Fields or LTP Fields are specific fields generated by LTP actions. LTP channels (Channel, Group, Look) are always sent via a specific LTP Field. See Actions / LTP objects for more information.

2.5.3.5 Remote Fields

Remote Fields are specific fields receiving data from Wi-Fi remotes running the Sandy software.

As soon as a Remote Control has a specific ID, it can have a specific Remote Field. Remote Fields can be displayed and docked.

Click on the Remote Field tab to display the existing Remote Fields.

Right Click on any existing remote Field and select **{Edit remote Field R#}** to display the Remote Field.

2.6 GENERAL SETTINGS

2.6.1 Screens Layout

2.6.1.1 Introduction

HATHOR system includes fully configurable screen layouts, over multiple monitors. It will display on as many monitors as your PC can support. HATHOR uses multiple types of windows, that can be arranged in any way required.

The system is organized in Screens and Subscreens. Each video monitor (**Screens**) that HATHOR is displayed on, has four different "virtual monitors" (**Subscreens**) allowing different desktop configurations, for different uses.

So, a Screen corresponds to a monitor, a Subscreen corresponds to a desktop in that monitor and each Screen has four Subscreens available, called 1, 2, 3 and 4.

At the top of each Screen, close to the clock, four soft buttons (1,2,3,4) are displayed, corresponding to the four Subscreens.

Each Subscreen can be customized by docking windows, setting size, and for some of them zoom inside the window. Once Screens and Subscreens are correctly set, it is possible to save the organization in a Screen Layout. Many different Screen Layouts can be saved, either in the computer or on an USB stick. Screen Layouts are all compatible between HATHOR platforms (LIBERTY / FREEDOM / RACK PC UNIT and IMAGO).

The dockable windows can be Controllers, Direct Access Panels or Editors.

Note: it is always better to work with docked windows instead of floating windows.

2.6.1.2 Screen Setup (Menu HATHOR/Controllers; Menu Play/Direct Access Panels and Editors)

When you open a new window, it will initially be floating on the monitor that you opened it, from there you can work with it as it is. But you can also dock it. If it is not docked, it will remain in the foreground on that monitor, regardless of which virtual screen you are using.

It is very useful to dock different windows, according to the way you work, in different subscreens.

To Dock a window:

Right click on the top bar of the window, to the right of its label (i.e. Fields, Playback etc.), on the local menu that will open click on "Dock able" to check it.

Left click on the top bar and drag the window. If the screen is currently blank the window will dock and expand to full screen size when it is dragged near the top of the screen.

If the window already has content you will see a horizontal or vertical bar indicating where the new window will dock. While that bar is visible drop the window and it will dock.

The split between the windows can be adjusted by dragging the bar between them.

To Un-dock or remove a window:

Click on the upper border of the window. You will have the option to un-dock or close the window.

List of dockable windows:

Window	Type	Path	
Field Editor	Controller	Menu HATHOR/Controllers	Click on item
Fields	Controller	Menu HATHOR/Controllers	Click on item
Sequence Playback	Controller	Menu HATHOR/Controllers	Click on item
Device Control Br	Controller	Menu HATHOR/Controllers	Click on item
Device Control	Controller	Menu HATHOR/Controllers	Click on item
Direct Access	Controller	Menu HATHOR/Controllers	Click on item
Priority Fields (LTP)	Controller	Menu HATHOR/Controllers	Click on item
Subfaders	Controller	Menu HATHOR/Controllers	Click on item
Dynamic Templates	Access Panel	Menu PLAY: Right Click on item	Click on item
Palettes	Menu PLAY: Click on Palettes	Click on item	
Focus	Access Panel	Right Click on item	Open Direct Access Panel
Colour	Access Panel	Right Click on item	Open Direct Access Panel
Beam	Access Panel	Right Click on item	Open Direct Access Panel
Pattern	Access Panel	Right Click on item	Open Direct Access Panel
Extra	Access Panel	Right Click on item	Open Direct Access Panel
Dynamic	Access Panel	Right Click on item	Open Direct Access Panel
All	Access Panel	Right Click on item	Open Direct Access Panel
Instrument Setup	Editor	Menu PLAY: Right Click on item or [EDIT]& [Ch]	
Track Window	Editor	[TRACK]	

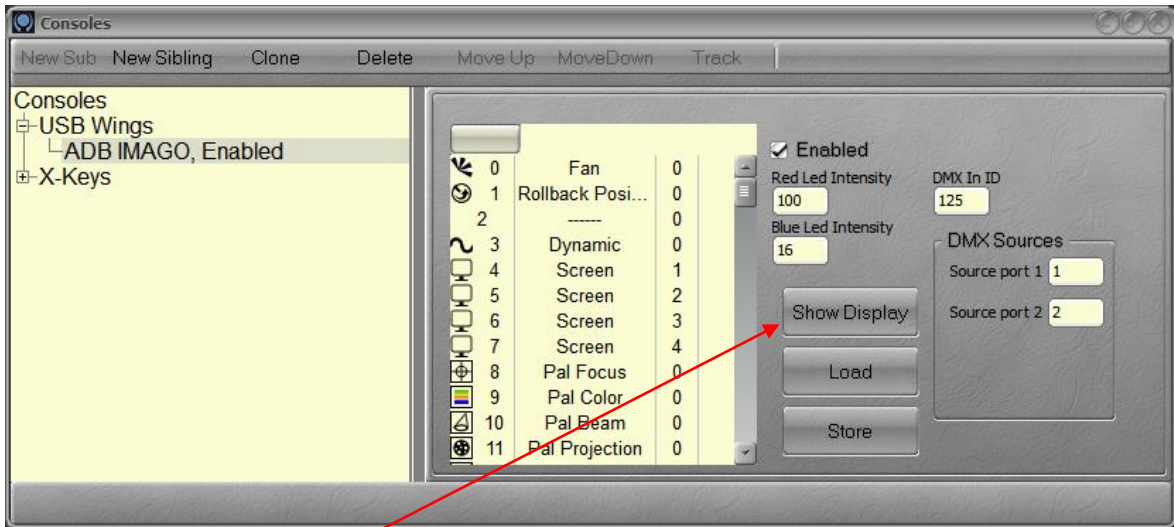
2.6.1.3 IMAGO dedicated display

There is a dedicated display for the USB control surface IMAGO.
To access to the IMAGO display:

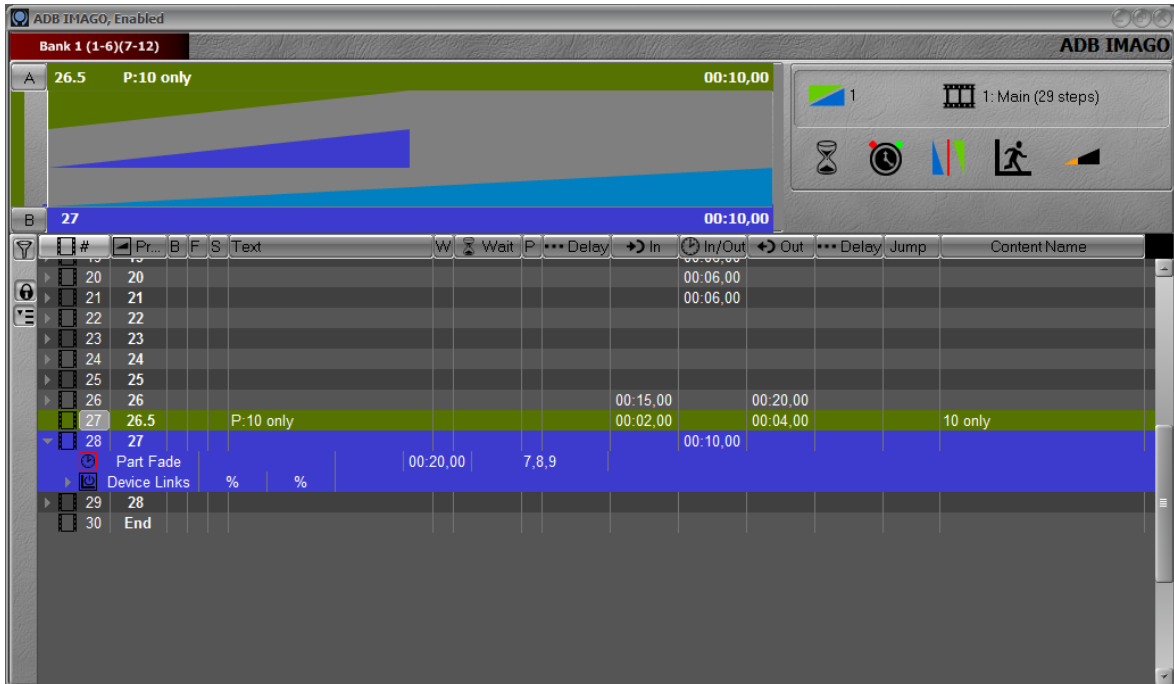
HATHOR / Setup / Consoles

Expand USB Wings

Click on ADB IMAGO



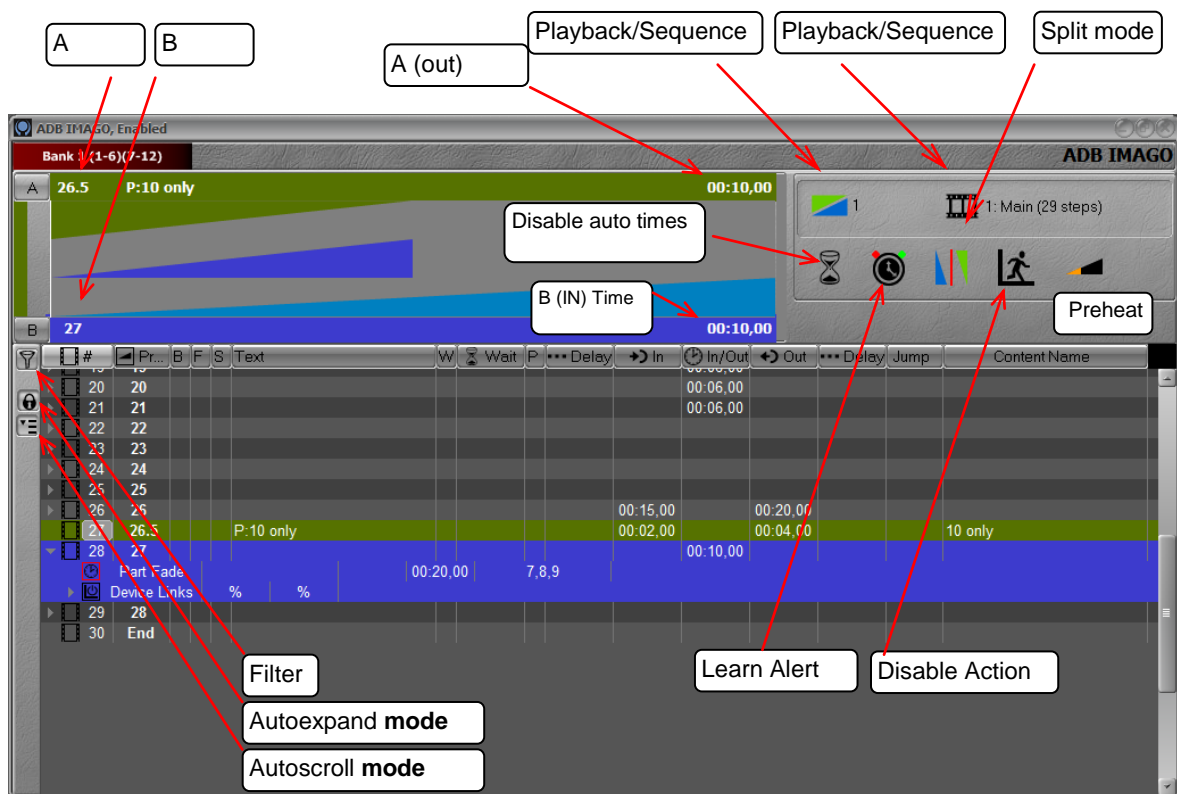
Click on Show Display



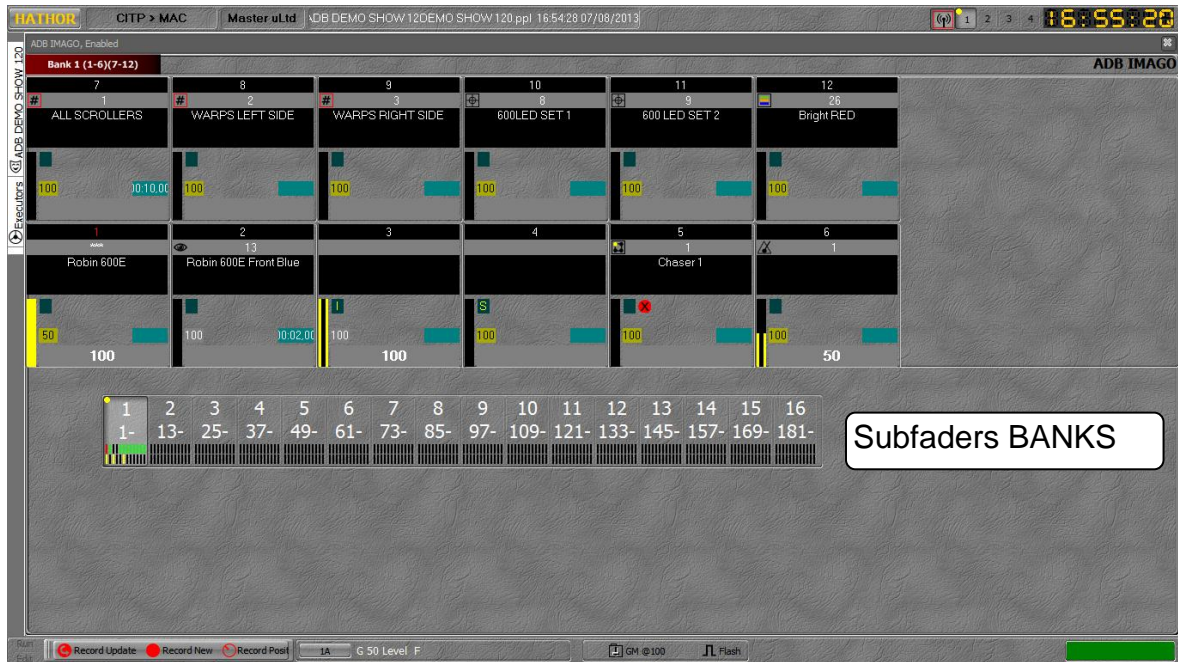
Dock that display in Subscreen 1, and restart the system.
 After restarting, the display will automatically match with the computer screen size.
 This display is dynamic; depending of what DISPLAYS key is selected on the IMAGO.

- [Sequence] displays specific Sequence Playback controller window
- [Fields] displays specific Fields controller window
- [Channels] displays Field Editor
- [Devices] displays Attributes information in the lower part of every screen, in addition of original screen information, if pressed once and displays specific Device Browser controller window if pressed twice.
- [User Screen] allows toggling between Subscreen 1 layout and IMAGO display.

Sequence Playback [Sequence]



Fields [\[Fields\]](#)



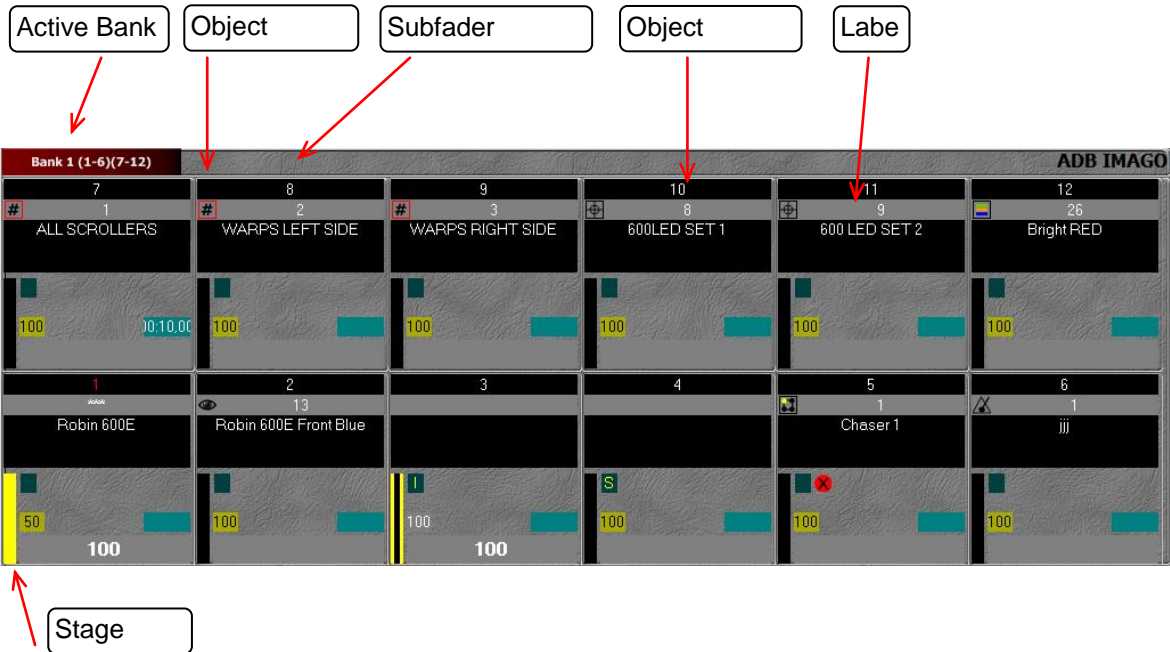
Introduction

The Fields window displays Submaster Fields in a high density format.

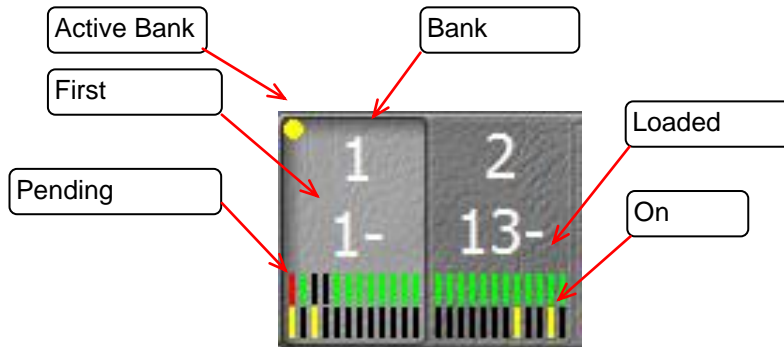
Concept

This controller is designed to display Submaster Fields Content. A lot of features come either via Drag&Drop or through Right Click menu.

Fields part



Banks part



Drag&drop TO the Field Controller

TO LOAD objects in Fields
TO COMPARE with Field content

From the Play Menu

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- PRESETS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)
- CHASERS (**Cancel** or **Load** options)

From Direct Access Panels

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)

- LOOKS (**Cancel**, **Compare** or **Load** options)

From Controllers:

DIRECT ACCESS:

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)

FIELD EDITOR

- CHANNEL (**Cancel**, **Load**, **Add** or **Record and Load Look** options)

FIELDS (From one window to another window or inside the Fields window):

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- PRESETS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)
- CHASERS (**Cancel** or **Load** options)

SEQUENCE PLAYBACK

- SEQ STEP: **Create Look from ... and Load to field** option)
- PRESETS (**Cancel**, **Compare** or **Load** options)

SUBFADERS

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- PRESETS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)
- CHASERS (**Cancel** or **Load** options)

Drag&drop FROM the Field Controller

To the Play Menu

- PALLETTES (**Cancel** or **Copy Image** options)
- GROUPS (**Cancel** or **Compare** options)
- PRESETS (**Cancel** or **Compare** options)
- LOOKS (**Cancel** or **Compare** options)
- CHASERS (**Cancel** or **Copy To** options)

To Direct Access Panels

- PALLETTES (**Cancel** or **Copy Image** options)
- GROUPS (**Cancel** or **Compare** options)
- LOOKS (**Cancel** or **Compare** options)

To Controllers

To DIRECT ACCESS:

- PALLETTES (**Cancel** or **Copy Image** options)
- GROUPS (**Cancel** or **Compare** options)

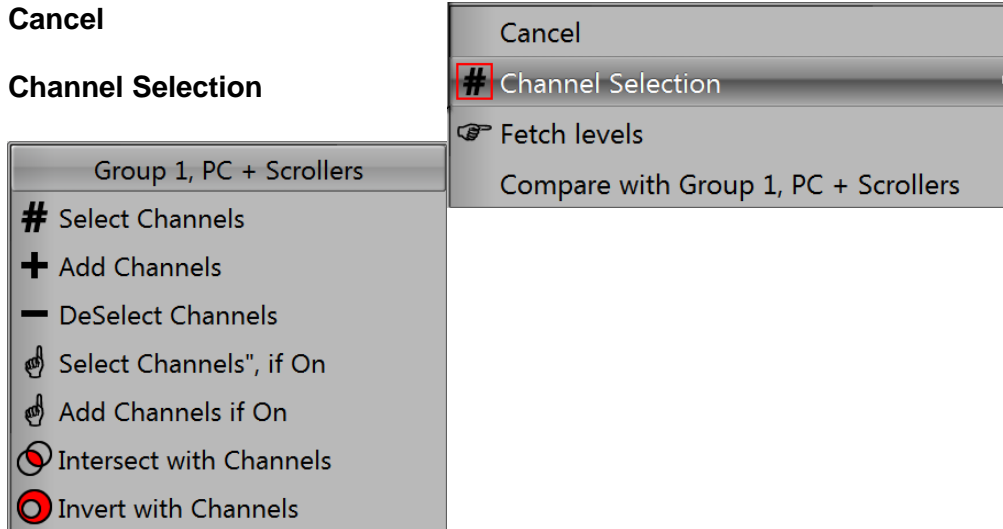
- LOOKS (**Cancel** or **Compare** options)

To FIELD EDITOR

- GROUP

Cancel

Channel Selection



- **Select Channels:** select GROUP channels and deselect others.
- **Add Channels:** adds GROUP channels to the current selection.
- **Deselect Channels:** removes GROUP channels from the current selection.
- **Select Channels if On:** select only GROUP channels with level > 0, and deselect others.
- **Add Channels if On:** adds only GROUP channels with level > 0 to the current selection.
- **Intersect with Channels:**
 - Only selected channels matching with GROUP channels remain selected.
- **Invert with Channels:**
 - **Swap** between selected channels matching with GROUP channels and unselected GROUP channels. Other channels are not involved.

Fetch Levels: set intensities recorded in the GROUP to the selection.

Compare

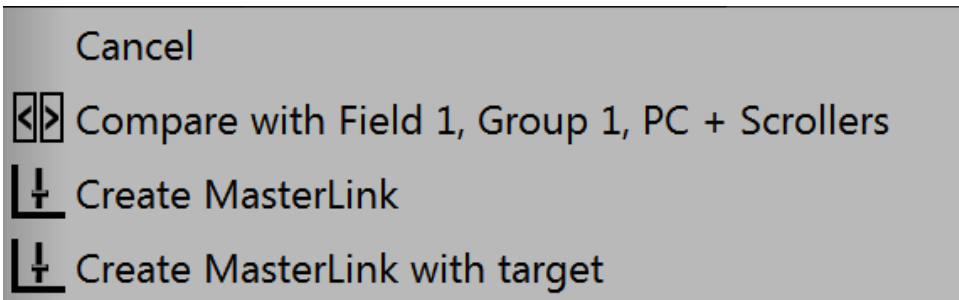
To SEQUENCE PLAYBACK

OBJECT TO SEQ STEP:

- GROUPS (**Cancel** or **Compare** options)
- PRESETS (**Cancel** or **Compare** options)
- LOOKS (**Cancel** or **Compare** options)
- CHASERS (**Cancel** or **Copy To** options)

FIELD TO SEQ STEP:

In every case, drag & drop a FIELD to a SEQUENCE STEP will offer two options in addition to Cancel and Compare features:



- **Create MasterLink:**
- Add a MasterLink to the selected Sequence Step
- **Create MasterLink with target:**
- Add a MasterLink to the selected Sequence Step and copy the current level of the Field.

To SUBFADERS

- PALLETTES (**Cancel** or **Load** options)
- GROUPS (**Cancel**, **Compare** or **Load** options)
- PRESETS (**Cancel**, **Compare** or **Load** options)
- LOOKS (**Cancel**, **Compare** or **Load** options)
- CHASERS (**Cancel** or **Load** options)

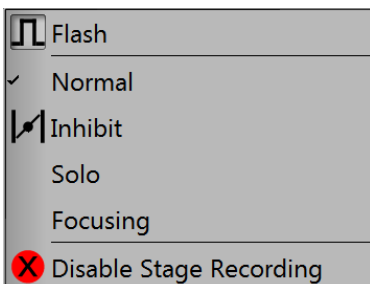
RIGHT CLICK features

Right Click Pop-Up menu is contextual, and so, depends on CONTENT.

CONSTANT Features:

{Clear Field #}: to clear field. On consoles: **[C/ALT]&[ASSIGN Key]**
{Mode}

Please refer to 11.10.1Subfader Modes for more information about Modes.



{Edit Field #}: to Edit the content of the field. On consoles: **[EDIT]&[ASSIGN Key]**

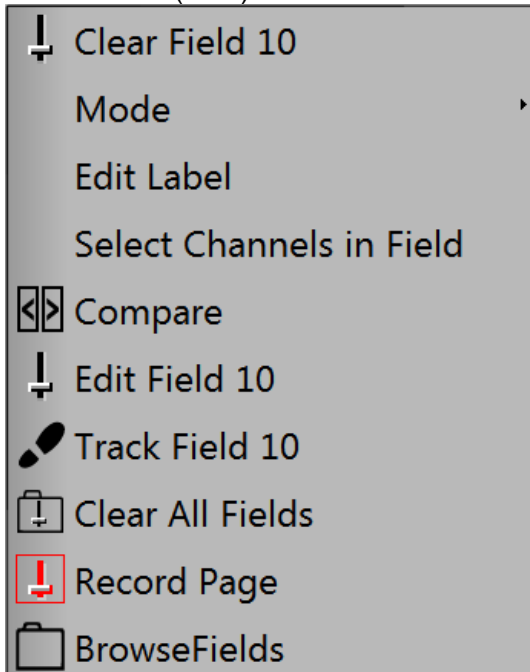
{Track Field #}: to clear the 192 fields. On consoles: **[0]&[PAGE]**

{Clear All Fields}: to clear the 192 fields. On consoles: **[0]&[PAGE]**

{Record Page}: to Record a Submaster Page. On consoles: **[REC]&[PAGE]**

{Browse Fields}: to open the field's editor window. No consoles equivalent.

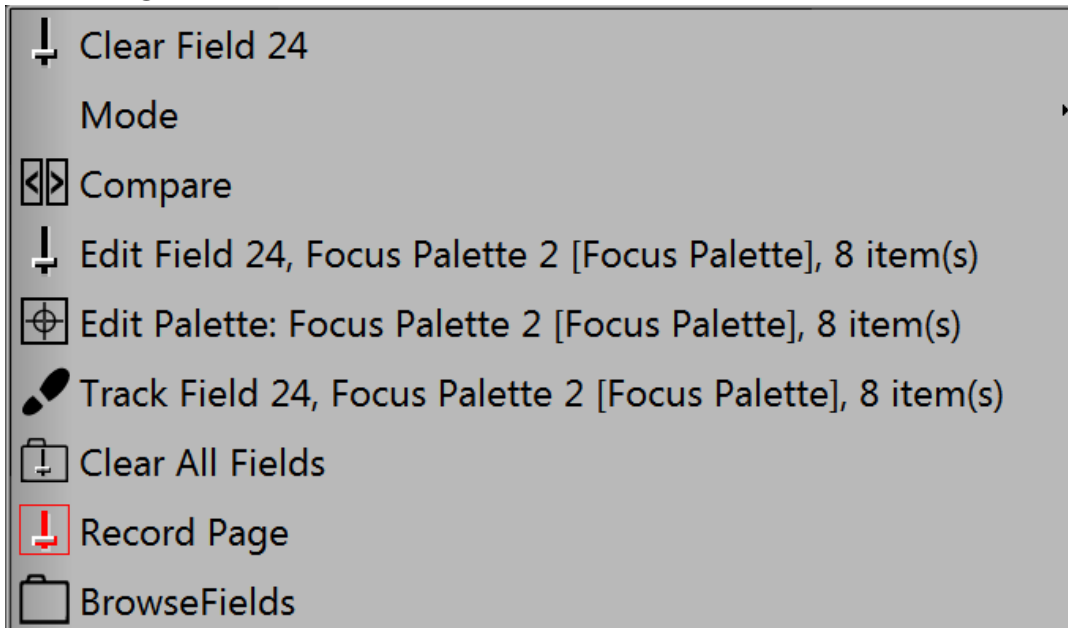
CHANNELS (*****)



{Edit Label}: to enter a name

{Select Channels in Field}: select FIELD channels and deselect others.

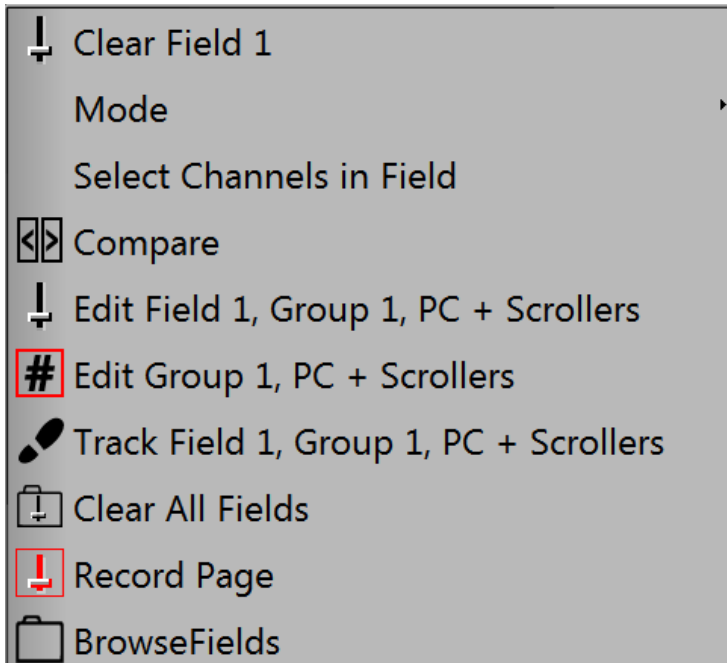
PALETTES



{Edit Field Field #, --- Palette #}:

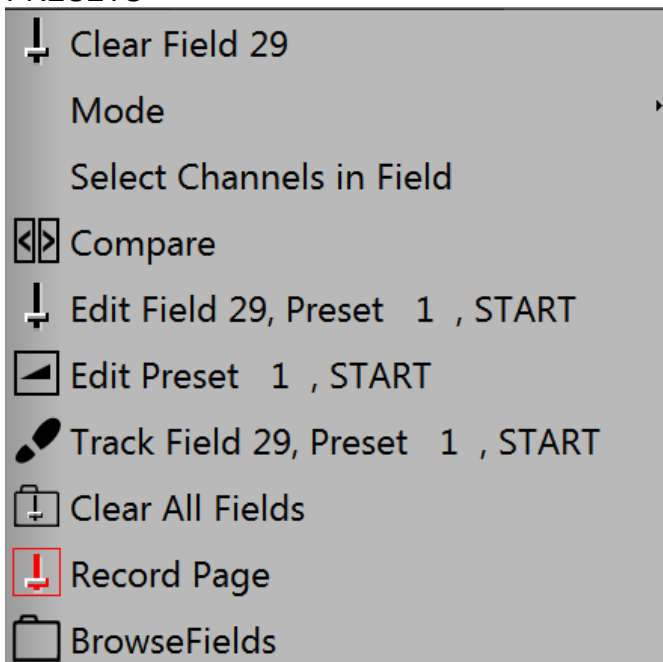
{Edit Palette: --- Palette #}: open Palette # Editor. On consoles: **[#] [EDIT]&[ATT group]**

GROUPS



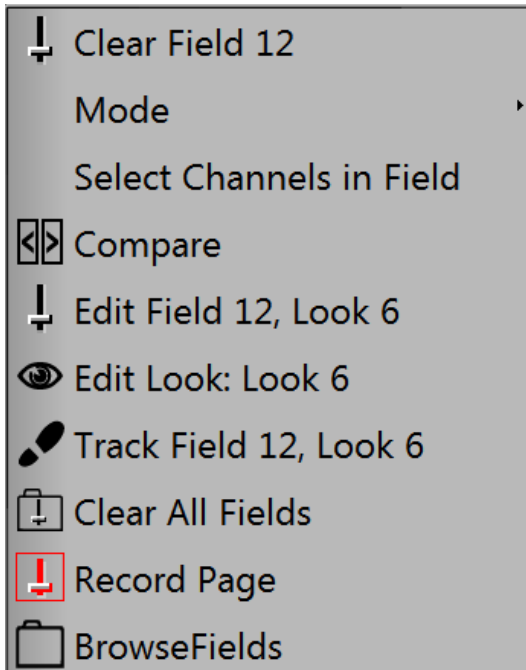
{**Edit Group #**}: open the Group # Editor. On consoles: **[#] [EDIT]&[GROUP]**.

PRESETS



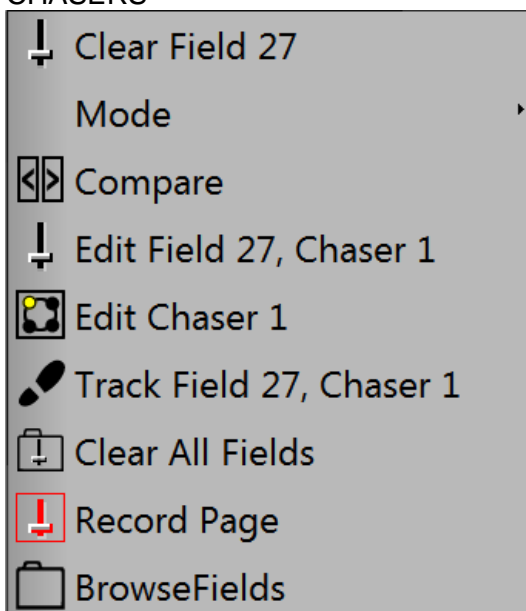
{**Edit Preset #**}: open the Preset # Editor; On consoles: **[#] [EDIT]**.

LOOKS



{Edit Look: Look #}: open the Look # Editor. On consoles: **[#] [EDIT]&[LOOK]**.

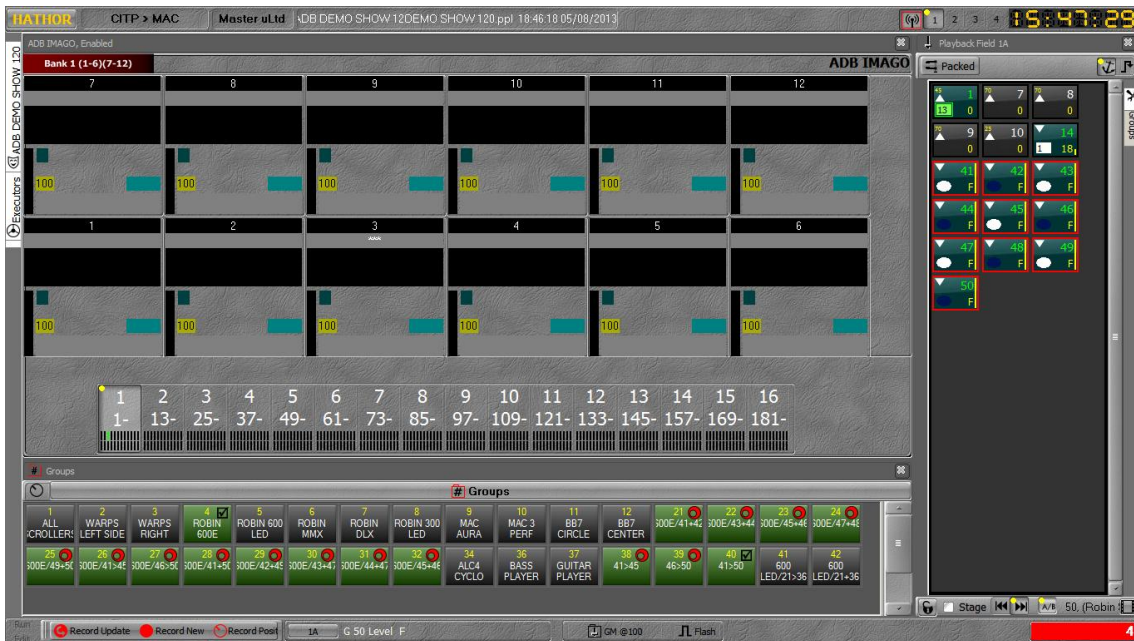
CHASERS



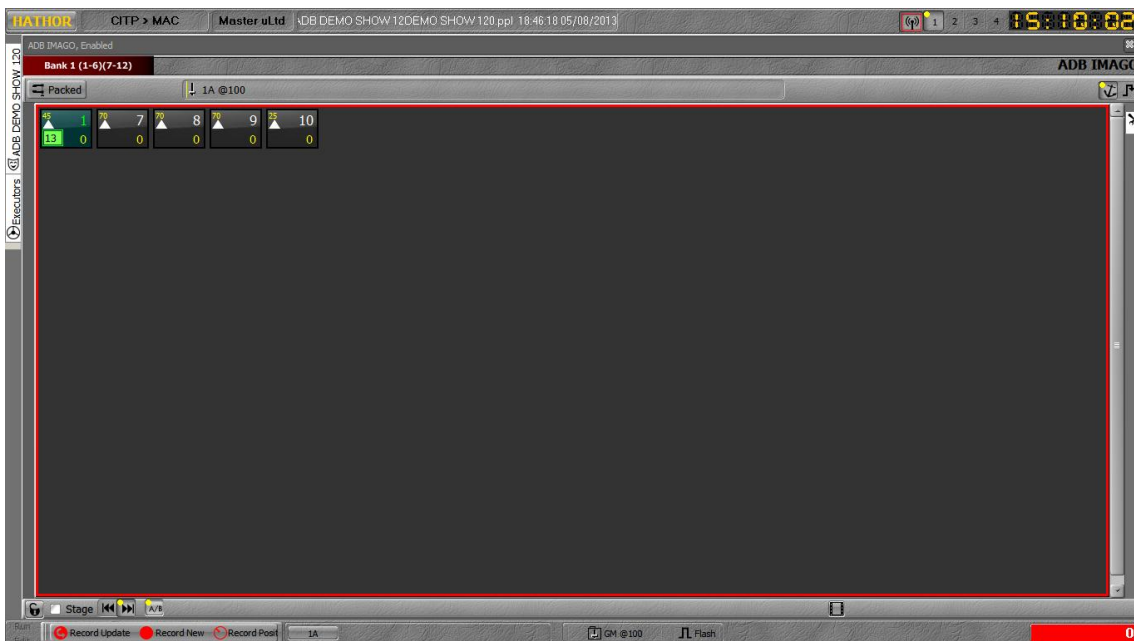
{Edit Chaser #}: open the Chaser # Editor. On consoles: **[#] [EDIT]&[CHASER]**.

Note: It is also possible to dock any controller or Direct Access Panels in the IMAGO display. As soon as you have customized that display as needed, you can save a new Screen Layout for the IMAGO.

TIP: use the fixed empty area displayed in the Fields window as a basis to re-organize the IMAGO Screen.



Channels [\[Channels\]](#)



Introduction

The Channels window displays the Field Editor with exactly same options as the Field Editor controller. See FIELD EDITOR (2.5.2.3).

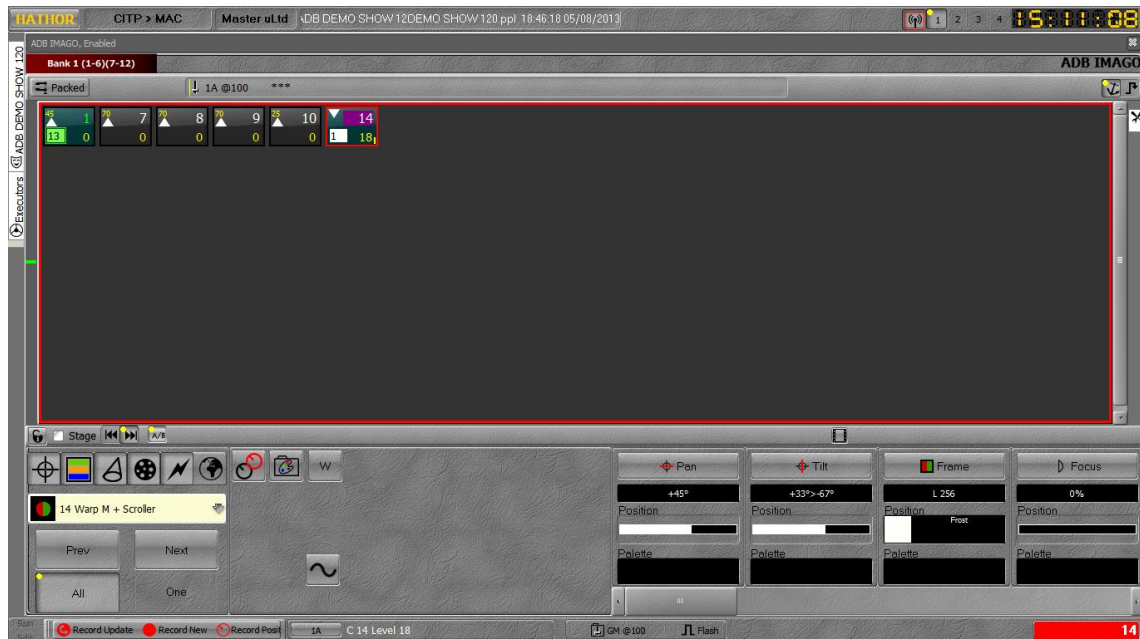
Concept

This channel window can be used with or without Device Browser window in the lower part.

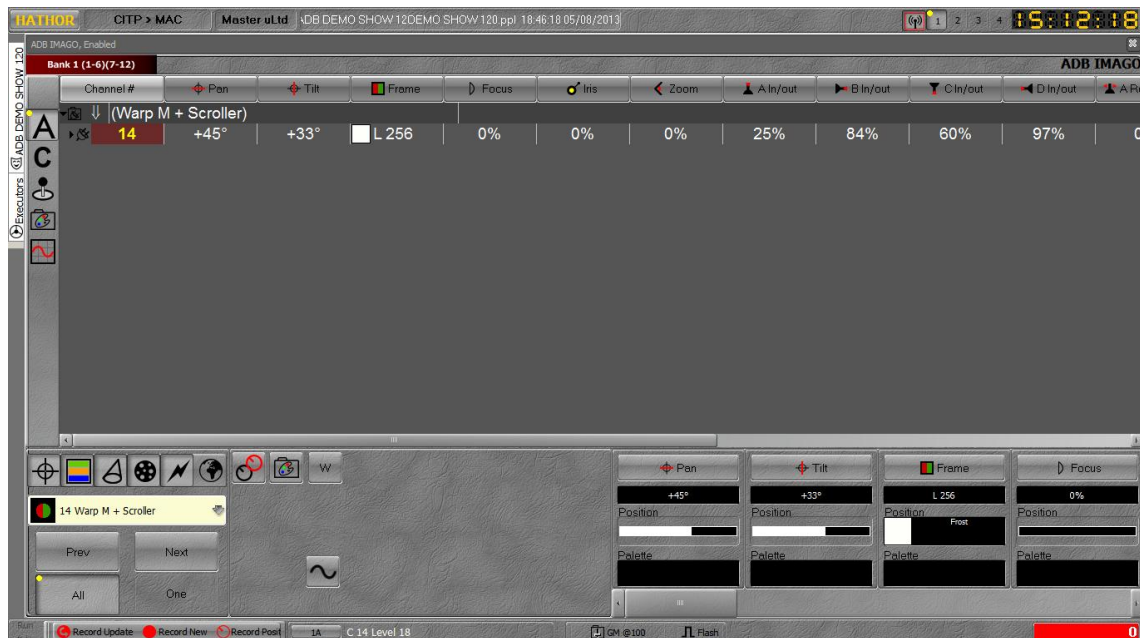
To display the Device Browser window, use the specific **Devices** DISPLAYS key.

Devices [\[Devices\]](#)

Lower part (attributes and tools)



Upper part



2.6.1.4 Storing Screen Layout

To save the current screens organization:

HATHOR / Setup / Screen Layout / Store ayout

2.6.1.5 Loading Screen Layout

To load a new screens organization:

HATHOR / Setup / Screen Layout / Load

2.6.2 Session settings

2.6.2.1 Session: introduction

"Sessions" store various settings that are common to the system, such as device control protocol, remote controls and how the system handles physical control surfaces. Different "Sessions" can be created, stored and recalled to meet different needs for your system. A facility that rarely changes its system topology may only use one Session, while a system that is frequently re-configured, such as on a tour, may have several sessions stored.

Configuration of Sessions can be accessed from several locations:

- Start-up window: New Sessions or Stored Sessions
- **HATHOR menu/Setup/Sessions Setup**
- Double click on the **Session name** indicator at top of any screen, i.e CAPTURE.
- Right click on the **Network mode** name indicator at top of any screen, i.e CAPTURE.



For HATHOR to control external devices, such as dimmers and moving lights, it must be configured to transmit data to these devices, using a data protocol that they can work with.

The most common are Ethernet based protocols for DMX, RDM and ACN data.

Examples of these protocols are Sandnet, Pathport, Artnet, and Streaming ACN (Note: Streaming ACN, final version E1.31-2009 is supported by HATHOR)

Each of these protocols have specific settings to be set in HATHOR as well as in the receiving device.

Additional data links are available for dimmer feedback, connections to industrial control protocols and connections to external control surfaces such as button stations and touch panels.

2.6.2.2 Remote Controls

Inserting a Remote Control

To insert a new Remote, right click on Remote Controls, and select **{Insert Sub: RemoteControl}**. To use the Remote, enable it, and enable also RemoteControls.

Target: allows selecting the field which will hold the data.

1A: data is sent in the main field

Remote Field: data is sent in a specific field, accessible in **Executors / Remote Fields**

2.6.2.3 Inserting/adding a Connection

Different kinds of connections can be added in a session.

To insert or add a new connection, right click on Ethernet Output/Input and choose either **{Insert}** or **{Add}**, and then the type of connection.

Be aware that some connection types are useless in the case of pure lighting console usage. That is the case for: Feedback Links, Modbus, Labjack Modules, Remote Panels, House Manager, Soft Panel manager.

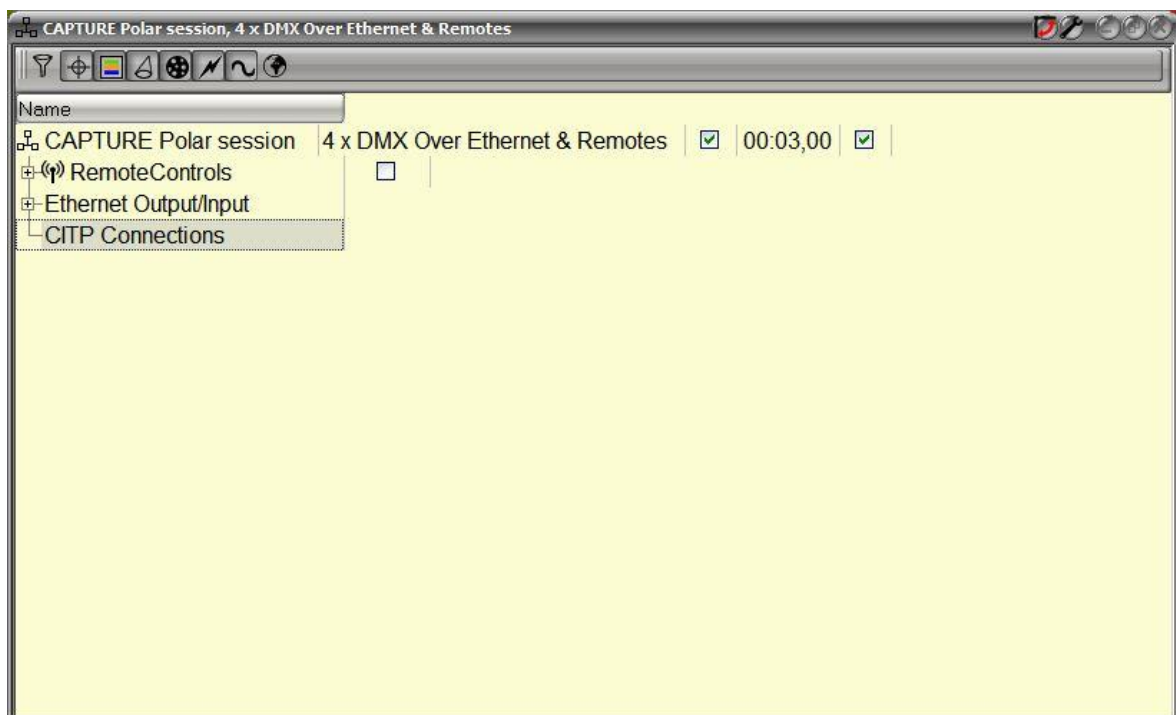
UDP connections and **TCPIP** connections can be used to connect the lighting system with an external computer using UDP or TCPIP communication to send messages.

CITP connections are dedicated to bi-directional communication with Mediaservers and Visualizers.

2.6.2.4 Adding a CITP connection with Capture Polar

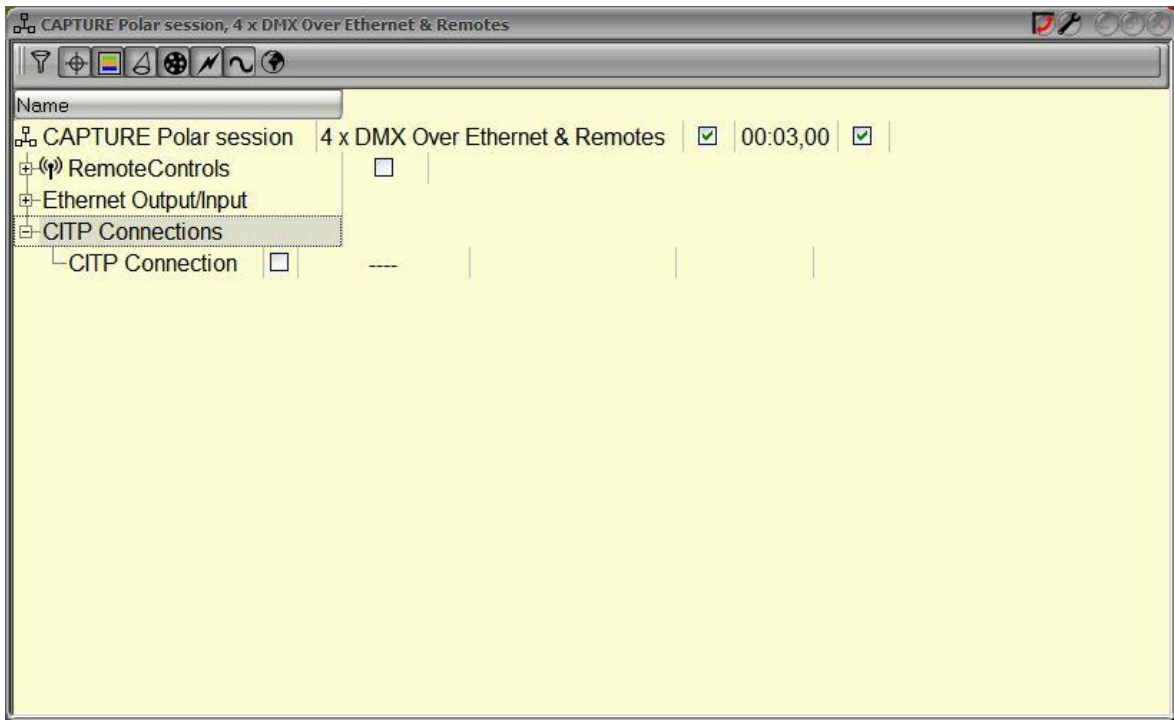
The visualization software Capture Polar can run either on a PC or a Macintosh computer. In both cases, Wi-Fi communication has to be set off, before starting HATHOR and Capture Polar. It will also be more useful to use specific IP address in both systems instead of automatic IP address.

To add a new CITP connection, right click on Ethernet Output/Input and choose **{Add}**, and then select **{CITP connection}**.

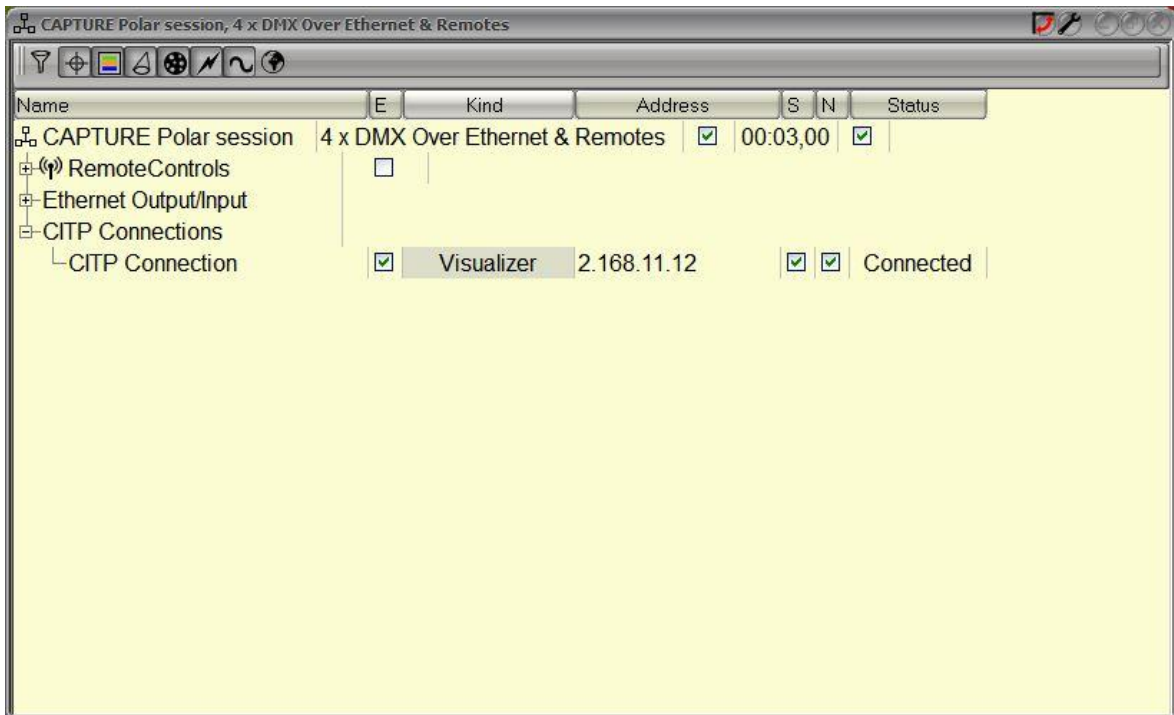


Right click on CITP connections and select **{Insert Sub:CITP connection}**.

Expand the CITP connections folder to display the CITP connection.



Enable (E) the Connection, and fill the fields.



Kind: select Visualizer

Address: IP address of the computer running Capture Polar

S: bidirectional selection mode

N: Names, CAPTURE will use Channels Names instead of Channels IDs

Status: this field displays the current status of the connection, **Alive** which means no connection, or **Connected**.

2.6.2.5 Adding a protocol

Different kinds of DMX over Ethernet protocols can be added in a session.

To insert or add a new protocol, do a right click on **Ethernet Output/Input** and choose either **{Add Protocol}**, and then the dedicated protocol.

Available DMX over Ethernet protocols:

- **Sandnet**
- **ART-NET**
- **AVAB UDP**
- **Pathport**
- **Streaming ACN**
- **Shownet**
- **SA Net**
- **ETC Net 2**

2.6.3 Console settings

2.6.3.1 Sound to Light function (ADB Consoles only)

This feature allows executing chasers steps with incoming sound signal via XLR3 connector located on the back panel of LIBERTY, FREEDOM and RPU. See CHASERS for more information.

2.6.3.2 48 Faders in console

This feature allows using a 24 Subfaders Extension with a 48 Subfaders horizontal layout.

2.6.3.3 Keys Mapping

Introduction

Every buttons of compatible control surface are by default linked (or if not, are linkable) to a software function.

Each button has a reference ID.

It is possible at any time, to assign a new function to a button.

Key Functions

There are different kinds of keys in the system: keys with a simple function, keys with a double function (in combination with **[C/ALT]**), Touchscreen Softkeys and Screen softkeys.

Combinations of keys offer also a lot of specific functions. These functions are described below.

Note: in a Key Syntax like "**[C/ALT]&[CHANNEL]**" "**&**" means holding the first key, then pressing the second key.

-

[-]

Empty

-%

[- %]

.

Dot

@

[At %]:

At level

[At %] [At %]:

Default level

[At %]&[All] :

Keep **only** channels with intensity selected

@ FULL

[At %] [At %]: Level 100%

@ ZERO

[At %] [At %] [At %]: Level 0%

+

[+]

+%

[+%]

A

[A]: A Field

[C/ALT]&[A]: Clear A Field

A/B

[A/B]: To toggle between A and B Fields

ACTION

[ACTION]: To recall any available action

AF FOCUS –

Decrease Focus attribute

AF FOCUS +

Increase Focus attribute

AF IRIS –

Decrease Iris attribute

AF IRIS +

Increase Iris attribute

AF PAN Left

Decrease Pan attribute

AF PAN Right

Increase Pan attribute

AF TILT Down

Decrease Tilt attribute

AF TILT Up

Increase Tilt attribute

AF ZOOM -

Decrease Zoom attribute

AF ZOOM +

Increase Zoom attribute

ALERT

Enable/Disable the Alert function

ALL/ONE

[ALL/ONE] or **[PREV]&[NEXT]**: to switch between All mode and One mode.

ARROWS

[⇅]&[↑]:

Toggle maximized of focused floating window.

[↑]&[⇅]:

Toggle Double Editor On/Off in browsers.

[⇅]& [→]:

Toggle expand/collapse of focused mode

[→]&[←]:

Open local menu

[SCREEN]&[↑]:

Move focus and mouse to next screen number

[SCREEN]&[⇅]:

Move focus and mouse to previous screen number

[SCREEN]&[→]:

Move focus to next Subscreen number

[SCREEN]&[←]:

Move focus to previous Subscreen number

[→]&[F/C/B/P/E/D/A]:

Open the corresponding Palette Fly Out window

ASSIGN

[##] [F/C/B/P/E/A]&[Assign] :

Load Palette ## in the Field.

[GROUP]&[Assign] :

Record the next available Group and load it in Field.

[##] [GROUP]&[Assign] :

Load Group ## in the Field, if the Field does exist.

If not, Record Group ##, and load it in the Field.

[##] [GROUP]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Load Group ## in the Field, then the next Group in the list in the following selected Field and so on.

[##] [Time]&[Assign] :

Set time to Field.

[##] [Time]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Set time (## seconds) to selected Fields.

[Start]&[Assign] :

Start Subfader with or without timed fade.

[##] [Start]&[Assign] :

Start Subfader timed fade(if any time) at level ##.

[C/Alt]&[Assign] :

Clear Field.

[C/Alt]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Clear selected submasters consecutively.

[+]&[Assign] :

Add channels in field to current selection.

[-]&[Assign] :

Subtract channels in field from current selection.

[Edit]&[Assign] :

Open Field editor

[LOAD] and [Assign]

[##] [Load]&[Assign] :

Load Preset ## in the Field.

[##] [Load]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :

Load Preset ## in the Field, then the next in the following field and so on.

[##] [.] [Load]&[Assign] :

Load Group ## in the Field, if the Field does exist.
If not, Record Group ##, and load it in the Field.

[Load]&[Assign] :

Load active (selected) channels in Field.

B

[B]:

B Field

[C/ALT]&[B]:

Clear B Field

BALANCE

[BAL]:

In the active field only, all channels except selected channels will have their intensities set temporarily to zero.

BLACKOUT

[B.O]

C

(C/ALT) [C/ALT]

[C/Alt] [Ch] or **[0]&[Ch]**:

Deselect all active channels.

[C/Alt]&[Ch]:

Clear Field (set all levels in active field to zero).

[C/Alt]&[-]:

Start entering a negative number.

[C/Alt]&[Intensity Wheel] : Zoom

[C/Alt]&[ENTER]:

To exit a window

[C/Alt]&[A]:

Clear A Field

[C/Alt]&[B]:

Clear B Field

[C/Alt]&[F/C/B/P/E/A]:

Clear palette references for selected channels (according to All/One).

[C/Alt]&[Assign]:

Clear Field.

[C/Alt]&[Assign]&[Assign] &[Assign] &[Assign] &[Assign] :
Clear selected submasters consecutively.

[##] [C/Alt]&[+%]:
Increase levels with ## percent of actual value.

[##] [C/Alt]&[-%]:
Decrease levels with ## percent of actual value.

CAPTURE

[CAPTURE]:
Switch to the Capture Field (RED background) and allows then to edit selected channels (channels have to be selected first).

[Ch]&[CAPTURE]:
Capture selected channels at current level.

[CAPTURE]&[ALL]:
Select captured channels.

CAPTURE NOW

Capture selected channels at current level, like **[Ch]&[CAPTURE]**.

Ch

[Ch]: to select Channels

[C/Alt] [Ch] or [0]&[Ch]:
Deselect all active channels.

[C/Alt]&[Ch]:
Clear Field (set all levels in active field to zero).

Ch TIME

To assign a specific Time to a selection of channels
Console syntax: **[TIME]&[Ch]** or **[Ch]&[TIME]**

Ch DELAY

To assign a specific Delay to a selection of channels
Console syntax: **[DELAY]&[Ch]** or **[Ch]&[DELAY]**

CHASER

[CHASER]: to record or load Chasers

CHASERS

To open the Chasers Editor window

COMPARE

[COMPARE]: Open a specific floating window displaying current levels and recorded levels.

The Compare feature allows comparing recorded channels levels to channels current levels, with different display options.

COPY ATTRIBUTES

[COPY ATT]

[COPY ATT]&[F/C/B/P/E/A] :

Copy corresponding attributes from focused Instrument.

[##] [COPY ATT]&[F/C/B/P/E/A] :

Copy corresponding attributes from Instrument ## to the selected channel(s).

DELAY

[DELAY]

[##] [DELAY]&[A] :

Set Out Delay for focused sequence step. (A or B according to preferences)

[##] [DELAY]&[B] :

Set In Delay for focused sequence step. (A or B according to preferences)

[##] [CH]&[DELAY] or ## [DELAY]&[CH] :

Set ## as part fade delay for selected channels. (A or B according to preferences).

DELETE

[DELETE]

DYNAMIC

[DYNAMICS]:

Open the Dynamic Templates floating window

[#] [DYNAMICS]:

Assign the # Dynamic Template to the selected channels

[0] [DYNAMICS]:

STOP the # Dynamic Template for the selected channels

DISABLE STAGE RECORDING

Toggle between DISABLE STAGE RECORDING mode On/Off.

To be used in combination with [ASSIGN key].

EDIT [EDIT]

[EDIT]:

To open any Editor according to the selected object

[EDIT]&[Assign] :

Open Field editor.

[EDIT]&[Group] :

Open Groups editor.

[##] [EDIT]&[Group] :
Open Group ## editor.

[EDIT]&[F/C/B/P/E/A] :
Open Palettes editor.

[##] [EDIT]&[F/C/B/P/E/A] :
Open Palette ## [F/C/B/P/E/A] editor.

[Edit]&[Look] :
Open Groups editor.

[##] [EDIT]&[Look] :
Open Look ## editor.

[EDIT]&[Chaser] :
Open Chasers editor.

[##] [EDIT]&[Chaser] :
Open Chaser ## editor.

[EDIT]&[Pages] :
Open Pages editor.

[##] [EDIT]&[Page] :
Open Page ## editor.

[EDIT]&[Ch] :
Open the **Instrument** Setup window.

[##] [Ch]&[EDIT] :
Open the **Instrument** Info window for the selected channel.

[##] [Edit]&[F/C/B/P/E/A] :
Open the Palette editor.

ENTER

[ENTER]:
To confirm an action (Record, Update, Load) in the corresponding open window

[C/Alt]&[ENTER]:
To exit an open window, instead of confirming

EVENTS

To open the Events Editor window

EXIT

[EXIT]:
To exit an open window, instead of confirming

FADER BANK -

[F/B-]:

To step backward to the previous bank of subfaders

FADER BANK

To recall a specific Subfaders bank of subfaders

Can be used in combination with any number: [#]&[FADER BANK #]

Can be also used with argument to create dedicated buttons

FADER BANK +

[F/B+]:

To step forward to the next bank of subfaders

FAN

[FAN]

FETCH

[FETCH]

The FETCH function allows copying information from a Preset or a Device Link to the stage.

[##] [FETCH]:

To copy intensity from preset ## in the current selected field, for selected channel(s).

E .g: If channel 1 is recorded at 50% in cue 11. With channel 1 selected, **11 [FETCH]** will send channel 1 at 50%.

[##] [FETCH]&[F/C/B/P/E/D/A]:

To copy data corresponding to this group of attributes from preset/Device link ## in the current selected field, for selected channel(s).

E .g: 10 **[FETCH]&[C]** will copy colour information from device link associated to preset 10.

[##] [FETCH]&[Attribute wheel button]:

To copy data for this specific attribute from preset/Device link ## in the current selected field, for selected channel(s).

FLASH

[FLASH] button:

To FLASH a specific FIELD

To be used with argument to create dedicated Flash buttons.

FRAME

[FRAME]

To recall a specific scroller colour frame

FREEZE ON/OFF

To temporarily freeze the output

GO

[GO]

GO BACK

[GO BACK]

GROUP

[GROUP]

[GROUP]&[Assign]:

Record the next available Group and load it in Field.

[##] [GROUP]&[Assign] :

Load Group ## in the Field, if the Field does exist.
If not, Record Group ##, and load it in the Field.

[##] [.]&[Thru] :

Group Thru, if previous was group selection.

[##] [.]&[+] :

Add channels in Group ## to selected channels.

[##] [.]&[-] :

Remove channels in Group ## from selected channels

GROUPS

To open the Groups Editor window

INFO

To display the Instrument Info window for the selected channel (only one channel)

INHIBIT

Toggle between INHIBIT mode On/Off.

To be used in combination with [ASSIGN key].

INSERT

[INSERT]

To insert an element in browsers, or in Sequence Playback, to insert a new Step

INSTRUMENT

Allows opening the instrument info window when used with [EDIT]

[#] [EDIT] [INSTRUMENT] = [#][INFO]

INSTRUMENTS

[PATCH]

Open the Instruments Setup. Also possible with **[Ch]&[EDIT]**.

INVERT

[INVERT]

To Invert the selection.

[INVERT] [INVERT] will keep only channels with level > 0% selected, like **[AT%]&[ALL]**.

JUMP

[JUMP]

LAYOUT

To access to a specific Device Layout.

Use **[#] [EDIT] [LAYOUT]** to open the Device layout # Editor.

LAYOUTS

To open the Device Layouts Editor window.

LIBRARY (F3)

To open the Library, equal to **File / Open Library**

LOAD

[LOAD]

To load channels or an object in a Field

LOCAL MENU

Open the local menu, equal to **Right Click**

LOOK

[RECORD]&[LOOK] :

Record the next available Look.

[##] [RECORD]&[LOOK] :

Record Look ##.

[##] [UPDATE]&[LOOK] :

Update Look ##.

[LOOK]&[Assign] :

Record the next available Look and load it in Field.

[##] [LOOK]&[Assign] :

If Look ## exists ->Assign Look on fader.

If Look ## does not exist: Record new Look and assign to fader.

[##] [LOOK]&[F/C/B/P/E/A] :

Fetch corresponding positions from Look ##.

[##] [LOOK]&[Ch] :

Select Instruments in Look ##.

[Edit]&[Look] :

Open Groups editor.

[##] [Edit]&[Look] :
Open Look ## editor.

MASK (under development)

MENU

To open the main menu (HATHOR menu)

MODIFY

Disable Auto Times

MOVING DELAY

[MOVE DELAY]

[##] [MOVE DELAY]:

Set attributes delay for selected channels already recorded in links

MOVING TIME

[MOVE TIME]

[##] [MOVE TIME]:

Set attributes time for selected channels already recorded in links.

NEXT

[NEXT]: in One mode, to step forward inside the selection.

[PREV]&[NEXT]: to switch between All mode and One mode.

PAGE

[PAGE]

Page access

PAGES

To open the Pages Editor window.

PAL ALL

[ALL]

PAL BEAM

[BEAM]

PAL COLOR

[COLOR]

PAL DYNAMIC

[DYN]

PAL EXTRA

[EXTRA]

PAL FOCUS

[FOCUS]

PAL HOME ALL

[HOME]

PAL PROJECTION

[PATTERN]

PALETTES

To open the Palettes Editor window

PARK (under development)

PAUSE

[PAUSE]

Pause on first press, Go on second press

PAUSE BACK

Pause on first press, Back on second press

PLAY

To open the Show (Play) browser

PREFERENCES

PRESET

[##] [Preset]&[At Level] :

Select channels in Preset ##, and fetch levels.

[##] [Preset]&[Thru] :

Preset Thru, if previous was ## [Preset]/[Preset][+]/[Preset][-].

[##] [Preset]&[+] :

Add channels recorded in Preset ## to selected channels.

[##] [Preset]&[-] :

Remove channels recorded in Preset ## from selected channels.

PRESETS

To open the Presets Editor window

PREVIOUS

[PREVIOUS]: in one mode, to step backward inside the selection.

[PREV]&[NEXT]: to switch between All mode and One mode.

PROFILE

RATE

[RATE]

RECORD

[UPDATE]:

Update the current Preset and Device Links, in a sequence Step.

[##] [UPDATE]&[GROUP] :

Update Group ##

[##] [UPDATE]&[LOOK] :

Update Look ##

[##] [UPDATE]&[F/C/B/P/E/A] :

Update [F/C/B/P/E/A] Palette ##

[##] [Record]&[F/C/B/P/E/A] :

Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

RECORD CHANGED TRACKING

Allows recording of all channel levels changed, in a suite of Presets with identical level (a Track) till the first Preset with a different level.

RECORD NEW [REC]

[#] [REC]:

Record a new Preset as #, in a sequence Step.

[REC]&[GROUP]:

Record a new Group (the next available)

[##] [REC]&[GROUP]:

Record or update Group ##

[REC]&[LOOK]:

Record a new Look (the next available)

[##] [REC]&[LOOK]:

Record or update Look ##

[REC]&[F/C/B/P/E/A]:

Record a new [F/C/B/P/E/A] Palette.

[##] [REC]&[F/C/B/P/E/A]:

Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing channels.

[##] [F/C/B/P/E/A]&[REC]:

Record a new ## [F/C/B/P/E/A] Palette or, if Palette ## already exist, update only existing

Channels

[F/C/B/P/E/A]&[REC]:

Record a new Palette (the next available).

[##] [Page]&[REC]:

Record Submaster Page ##.

[Page]&[REC]:

Record a new Submaster Page # (the next available).

RECORD POSITIONS

[REC POS]

RECORD SELECTED TRACKING

Allows recording of selected channel levels changed, in a suite of Presets with identical level (a Track) till the first Preset with a different level.

RELEASE

[RELEASE]

To release captured channels

RELEASE ALL

To release all captured channels **[RELEASE]&[ALL]**

RELEASE TO FIELD

To release selected captured channels without releasing the level

ROLLBACK POSITIONS

[ROLLBACK POSITIONS] :

Re-assign to all fixtures, attributes values corresponding to the current (A) step.

[##] [Ch]&[ROLLBACK POSITIONS] :

Re-assign to all previously selected fixtures only, attributes values corresponding to the current (A) step.

SAVE

[SAVE]

To save the current show into the library

SAVE AS

To save a copy of the current show with another name, into the library

SCALE

[SCALE]

SCREEN

[SCREEN]

[SCREEN]&[↑]:

Move focus and mouse to next screen number

[SCREEN]&[↓]:

Move focus and mouse to previous screen number

[SCREEN]&[→]:

Move focus to next Subscreen number

[SCREEN]&[←]:

Move focus to previous Subscreen number

SELECT PLAYBACK

[SELECT PLAYBACK]

SEQ -

[SEQ -]

SEQ +

[SEQ +]

SEQUENCE

To open the Sequences Editor window

SETUP

[SETUP]

SPEED CONTROL

Toggle the behaviour of the intensity wheel (Speed mode or Intensity mode)

STAGE/FIELD

[S/F]

START

[START]

SWAP

To swap intensities between to channels.

[#] [Ch] [##] [THRU] will swap intensities between # and ##.

TAB

THRU [THRU] (T) (/)

[##] [THRU]&[All]:

Same as ## **[Thru]** except that only channels with level>0 will be selected.

[##] [.]&[THRU] :

Group Thru, if previous was group selection.

TIME

[TIME]

[##] [TIME]&[A] :

Set Out Time for focused sequence step. (A or B according to preferences)

[##] [TIME]&[B] :

Set In Time for focused sequence step. (A or B according to preferences)

[##] [Ch]&[TIME] or ## [TIME]&[Ch] :

Set ## as part fade time for selected channels. (A or B according to preferences).

[##] [MoveTime] :

Set attributes time for selected channels already recorded in links.

[##] [Move Delay] :

Set attributes delay for selected channels already recorded in links

TIME IN

Set In Time for focused sequence step. (A or B according to preferences)

TIME OUT

Set Out Time for focused sequence step. (A or B according to preferences)

TRACK

[Track]:

Open the “Tracking Channel Selection” window.

[##] [Ch]&[Track] :

Open the “Tracking Channel Selection” window and displays selected channels.

[##][Track]&[Parameter wheel] :

Open the “Tracking Parameter” window and displays all objects including that parameter.

WAIT

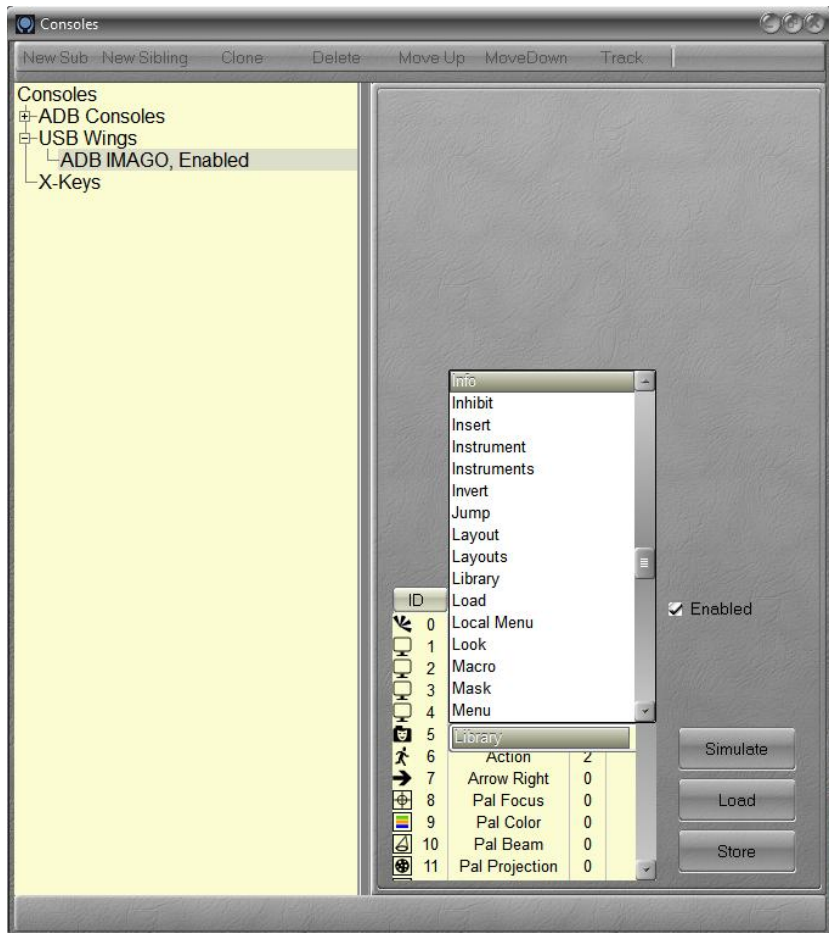
[WAIT]

IMAGO User Keys

To assign a function to an USER Key:

HATHOR / Setup / Consoles

Expand the USB Wings list and select IMAGO.



X-Keys

To assign a function to an USER Key:

HATHOR / Setup / Consoles

Open the X-Keys list and select the connected device.

Note: New version of X-Keys is automatically detected and supported.

Do not install any of the supplied drivers or software from PI Engineering. Plug X-Keys into computer, before launching HATHOR, and allow Windows to install its own driver.

Not all X-Keys units are supported:

X-keys Stick Panel is supported, Joystick for Pan/Tilt or Intensity.

X-keys Professional and Desktop are supported.

If X-Keys unit does not appear to be functioning correctly, you may need to run the "SPLAT" utility, to set it to "Splat Mode". The SPLAT utility is available from PI Engineering, or from the drier disk supplied with your X-Keys unit.

Keyboard

HATHOR / Setup / Preferences / User Interface

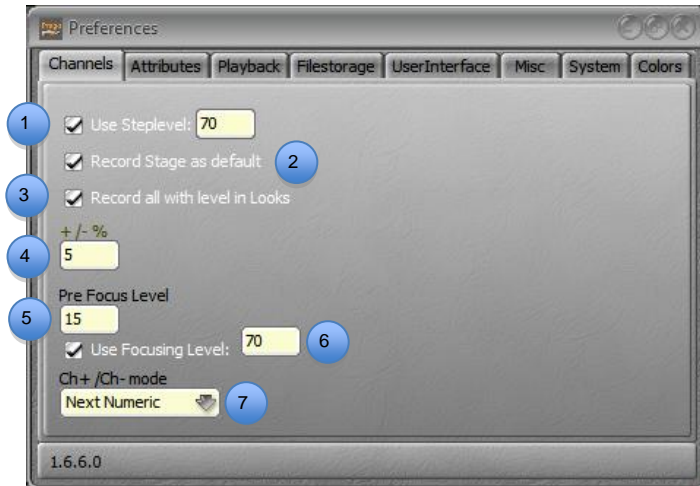
AlphaKeys ('A'-'Z') shortcuts

ALPHA Key	Function	Numeric Keypad
(C)	Channel	(-)
(Backspace)	Clear	
(A)	ALL	(SHIFT)(-)
(F)	FRAME	
(I)	INVERT	(SHIFT)(/)
(L)	AT LEVEL	(+)
(F2)	SAVE	
(F3)	OPEN LIBRARY	
(F8)	UPDATE	
(F7)	RECORD	
(+)	ADD CHANNEL	(*)
	SUBSTRACT CHANNEL	(SHIFT)(*)
(T)	THRU	(/)
(CTRL)(F4)	TRACK	
(CTRL)(G)	GO	
(CTRL)(P)	PAUSE	
(CTRL)(B)	GO BACK	
(CTRL)(S)	Stage/Field mode	
(CTRL)(F)	FETCH	(SHIFT)(+)
(C)	Channel	PATCH TOOLS
(M)	Connect to dimmer	
(D)	Dimmer	
(H)	Connect to Channel	
(N)	Connect to Channel	
(G)	Goto Next	
(V)	live mode	
(SPACE BAR)	Check or uncheck Channels /	
(←)(→)	dimmers in live mode.	

2.6.4 Software settings

HATHOR / Setup / Preferences

2.6.4.1 Channels



1

Checked:

[At Level] will bring selected Instruments to the level set here. E.g.: 70%.

Note: **[At Level] [At Level]** will bring selected Instruments to **Full**.

[At Level] three times will bring selected Instruments to **zero**.

2

Checked:

When **[Record]** or **[Update]** are used, all the levels currently coming out of the system will be recorded.

Unchecked:

[Record] or **[Update]** will record the levels from the currently active Playback Field only.

Note: Stage mode in a Field Editor in HATHOR is just a view mode that doesn't influence what is recorded. This means that you can activate Stage mode and still use Field mode when recording. If the user only works in the Playback and not with masters, it's more convenient to leave Record Stage as default unchecked.

3

Checked:

When **[RECORD]&[LOOK]** is used, it will automatically record all instruments that have a level greater than zero.

Note: if "Record Look" is used by dragging channels, this setting is irrelevant, as it will default to recording the selected instruments.

4

Sets the percentage that levels will be changed up or down by the **[+%)** and **[-%)** keys.

5

Prefocus Level: Base level used by a Submaster in Focusing mode (see Submasters for details).

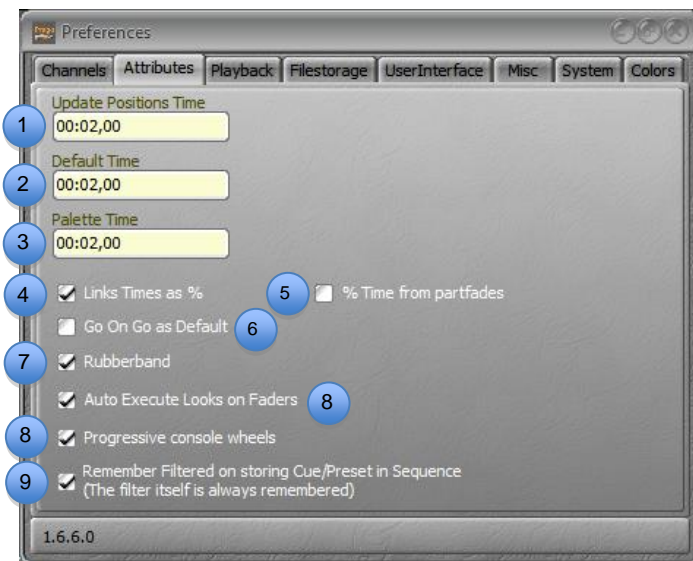
- 6 Focus Level: Level used by a Submaster in Focusing mode (see Submasters for details).
- 7 Settings for [-] and [+] keys behaviour

Next Numeric: to move to the previous or the next channel number.

Next with Level > 0: to move to the previous or the next channel with a level above zero in the active Field.

Next Visual: to move to the previous or the next visual channel regardless of the level.

2.6.4.2 Attributes



- 1 Parameter Times when Rolling back Positions.
- 2 Default Parameter Time in Device Links.
- 3 Time used when executing a Palette (not when recording a Preset/Device Link using a palette).
- 4 **Unchecked:** Parameter Times are not linked to Sequence Step In Time.
Checked: Parameter Times are proportional to Sequence Step In Time. Default is 100%.
- 5 **Unchecked:** Parameter Times are not linked to Channel Time (Partfade).
Checked: Device(s) Parameter Times are proportional to Device's Channel Time. Default is 100%.
- 6 Go On Go:
Unchecked: MOVE in DARK active.
Checked: MOVE in DARK inactive.
- 7 Rubberband:

Unchecked: when the subfader is lowered, only the intensities will restore to their previous values.

Checked: when the subfader is lowered, the intensity AND attributes will restore to their previous values.

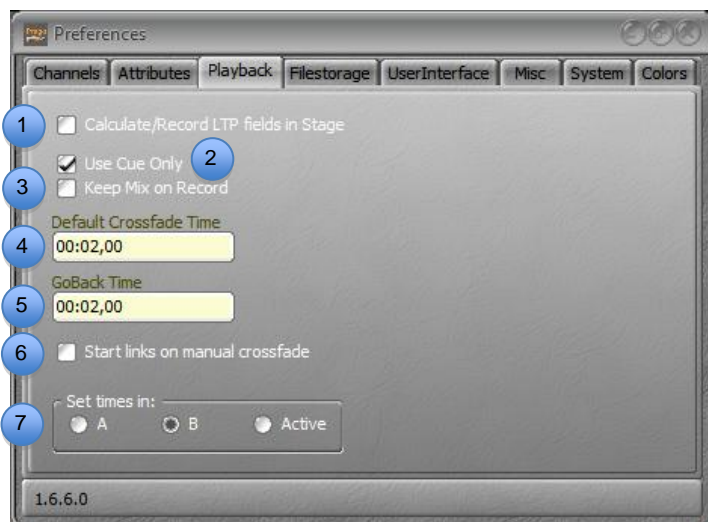
8

Auto Execute Looks on Faders.

Unchecked: the attributes and Intensity will follow the movement of the fader.

Checked: as soon as the fader moves above zero, the attributes will move to their positions- they will not fade with the movement of the fader.

2.6.4.3 Playback



- 1 **Calculate/Record LTP fields in Stage**
Unchecked: LTP channels are never recorded, and are independent from Grand Master and Blackout.
Checked: LTP channels can be recorded, and are controlled by the Grand Master and the Blackout function.
 - 2 **Cue Only**
This function appears in the Record window when it is appropriate. This setting box does not affect whether or not "Cue only" will appear.
Unchecked: the "Cue only" button will appear disabled. The user can then manually turn it ON if required.
Checked: the "Cue only" button will appear already activated. The user can then manually turn it OFF if required.
 - 3 **Keep Mix on Record**
Unchecked: the content of on the newly recorded preset is loaded into the active field. In this way Submaster do not have priority over the active Field.
Checked: if checked, this prevents the software from loading the content on the newly recorded Preset into the active field. In this way one can keep on using Subfaders for mixing the output for the next Preset.
- Tip:** Checked Keep Mix on Record if you want to work with Submasters as single channels.
- 4 **Unchecked:** links (attributes) only execute when a step is executed with [GO].
Checked: links (attributes) in Sequence steps will also execute when a Playback is **manually** crossfaded.
 - 5 **A:**
[x] [Time] (or [Delay]) will set time values on the Sequence Step currently in the A playback (the active step on stage).

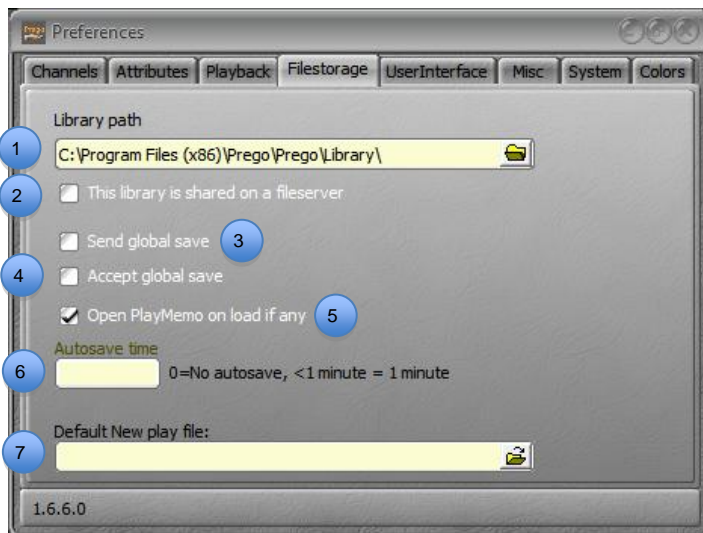
B:

[x] [Time] (or **[Delay]**) will set time values on the Sequence Step currently in the B playback (the next step to be loaded on stage).

Active:

[x] [Time] (or **[Delay]**) will set time values on the Sequence Step currently in the A or the B playback, depending on which Playback is active : **[A/B]** key and **[A]&[B]** switches between A and B playbacks.

2.6.4.4 Filestorage



- 1 The Library path determines the location of the system library. When using **Open Library** in the file menu, the system will open that folder.
- 2 A file server is an external device to the lighting software, like a PC or a NAS. The Library path has to define this server as the location for the library of the network.
Unchecked: the software assumes that the path is local only.
Checked: the software assumes that the path is shared by other systems (consoles) on the system.
- 3 Send Global save (Network system)
Unchecked: the Master, the Backup or the Clients save shows only on their local drives.
Checked: the Master, the Backup or the Clients save shows on their local drives and in other connected systems on the Network **if** they accept Global save.
- 4 Accept Global save (Network system)
Unchecked: the system doesn't accept savings from another connected system sending Global save on its local drive.
Checked: the system accepts savings from another connected system sending Global save on its local drive.
- 5 The Memo is a note linked to a Play (a show).

To record information in the Memo, Right Click on the Play name, located at the top of the main screen, choose **Edit Memo**, enter the text and click on Record Memo.

Unchecked: the system will not open Memo when loading a Play with a recorded Memo, except if the function Autoshow Memo is enabled for that Play (Right Click on the Play name, located at the top of the main screen, choose **Edit Play**, enable **Autoshow Memo**).

Checked: the system will always open Memo when loading a Play with a recorded Memo.

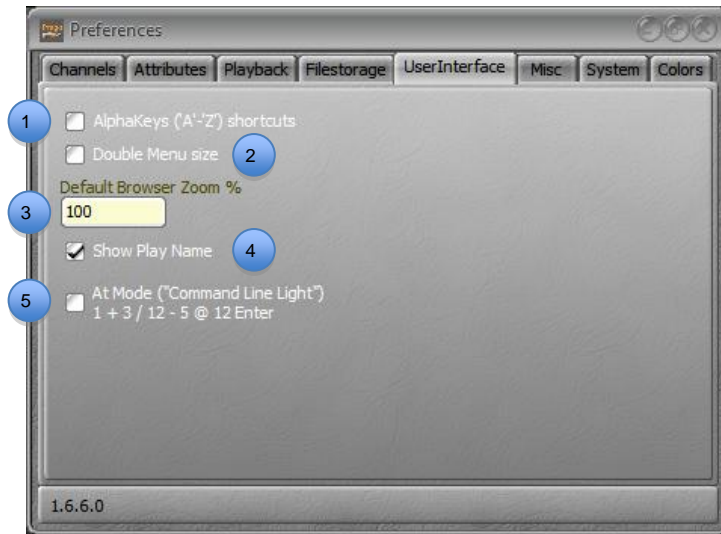
6

Autosave time

Time between two automatic Autosave File recordings. The system will record automatically a new file if there is some changes in the Play.

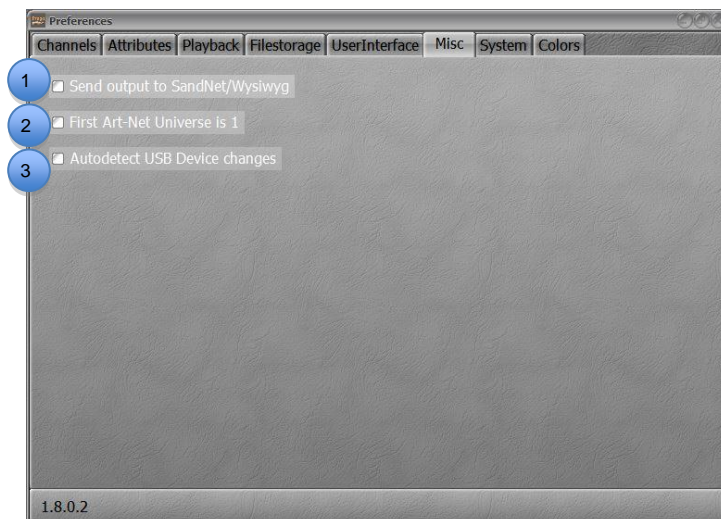
Note: to use Autosave file, go to **MENU HATHOR/File/Open Library**, open AutoSave menu, open corresponding play menu then Right Click and choose option **{LOAD play ----}** or **{BROWSE play ----}**.

2.6.4.5 User Interface



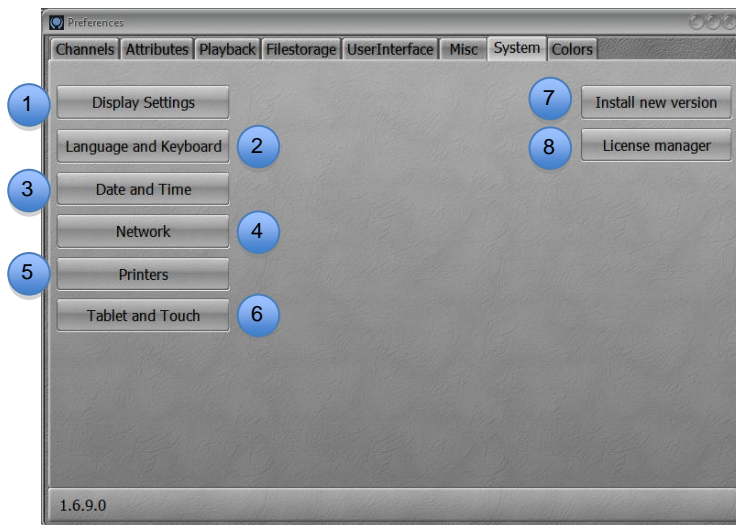
- 1 Tick the box to enable the KEYBOARD shortcuts.
- 2 Tick the box to enable the Double Menu size. Menus: HATHOR and Setup windows right click menus.
- 3 Enter a value to configure the size of Browser and Object Edit windows.
- 4 Unchecked:
Syntax is RPN
Checked:
Syntax is AT MODE

2.6.4.6 Misc



- 1 Tick the box to send data to Wysiwyg in Offline mode.
- 2 Tick the box to set first ART-NET Universe to start in 1.
- 3 In LIBERTY, FREEDOM and RPU, this option has to be always unchecked, except when connecting USB devices such as X-Keys, Imago or MIDI interfaces.

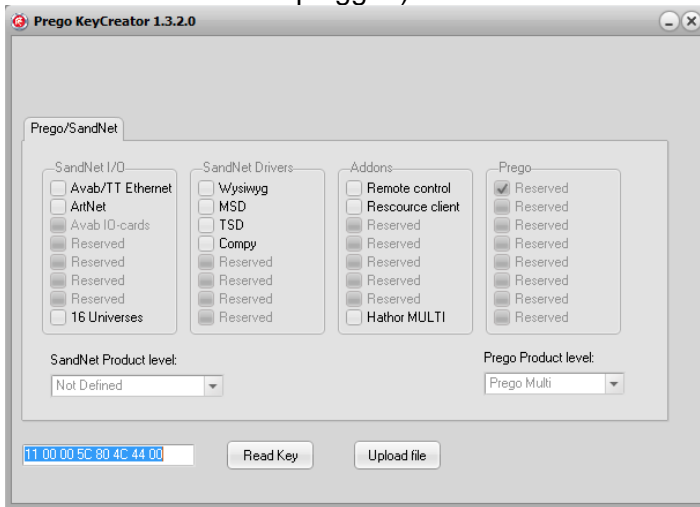
2.6.4.7 System



- 1 Direct access to Windows settings Display / “Display settings”.
- 2 Direct access to Windows settings “**Region and Language**”.
- 3 Date and Time
Direct access to Windows settings “**Date and Time**”.
- 4 Direct access to Windows settings “**Network Connections**”.
- 5 Direct access to Windows settings “**Devices and Printers**”.
- 6 Direct access to Windows settings “**Tablet PC Settings**” to calibrate the external Touch Screen.
(Please check that your external monitor is USB wired).
To calibrate the external Touch Screen:
{Configure}, touch the screen with your finger if this screen is the correct one or [ENTER] to step to the next, again if necessary and touch the correct screen to setup.
{Calibrate} touch the black cross upper left corner, then carry on, and validate calibration {OK}.
- 7 To install a new version (Please check that your USB stick with the new version of HATHOR is plugged):
choose the version in the Installer files window
{Install}
Terminate HATHOR and install version X.X.X.X: {OK}
Terminate HATHOR: {YES}
{Next>}
{Next>}
{Next>}
{Next>}
{Install}
{Finish}

8

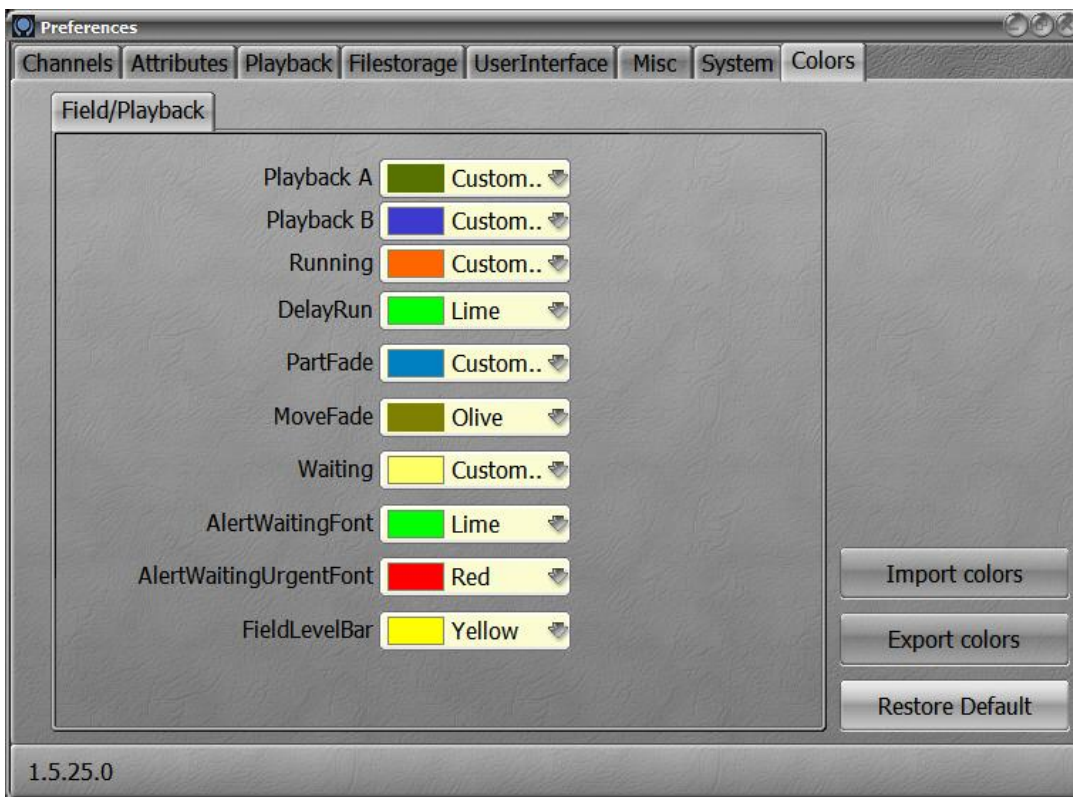
To upgrade the system (Please check that your USB stick with the new license key of HATHOR is plugged):



Press on **{Upload file}**
Point to the USB storage where the file is stored.
Confirm by **{Enter}**
Shutdown HATHOR, then restart.

Note: in HATHOR menu / **About**, the new amount of channels will be displayed.

2.6.4.8 Colours



2.6.5 Local I/O

HATHOR / Setup / LOCAL IO

This menu is dedicated to In / Out communications with external devices.

Serial Ports allows configuring COM ports.

MIDI In and MIDI Out allows configuring MIDI Devices. See Events chapter for more information.

2.7 STARTING A NEW SHOW

HATHOR / File / New/Clear Play

Play name:
Here you can name the play (the show).

- 1 Choose **new play** to start with an empty play.
- 2 Choose **Clear play** to start from your current play and select objects to clear in the menu.

- 3 Choose **Unpatched** to start with an empty Patch or **Patched 1:1** to start with a 1:1 patch.

Please note: if you have Instruments with levels in a Play due to Action Lists, when you create a "new Play" those levels will remain active. If you do not wish to have these levels, you must turn them off from the initial Play before creating a New Play.

Alternatively you can import these Actions into the new play.

- 4
- 5 Choose **Clear all fields** to clear all existing fields.

3. INSTRUMENT SETUP

3.1 THE INSTRUMENT SETUP WINDOW

To open the Instrument Setup window:

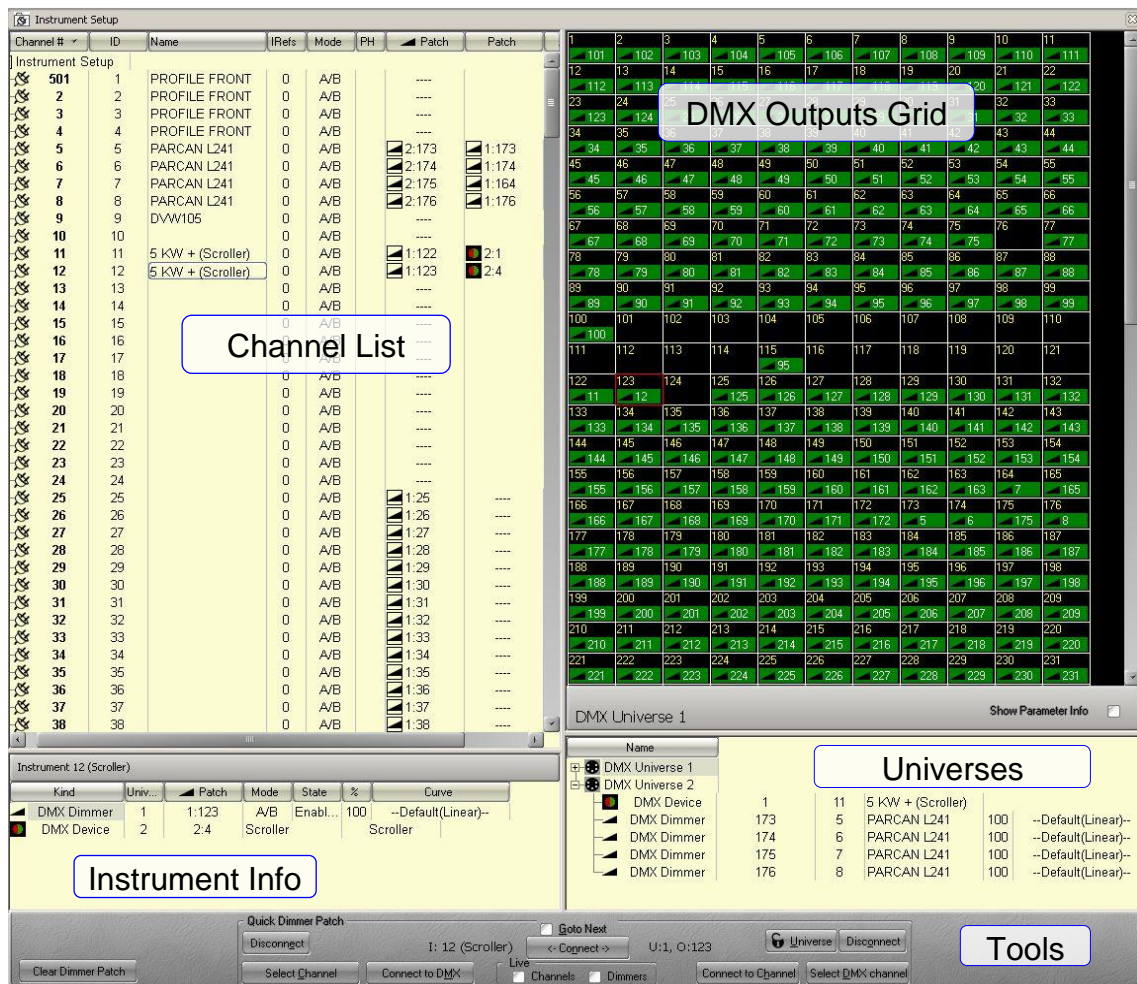
Open the Play menu, RIGHT click on “Instrument Setup” and select “Edit Instrument Setup”.

Use the following Key combination on console: **[EDIT]&[Ch]**.

Note: It is possible dock the “Instrument Setup” window in a Subscreen if necessary.

Overview

This window is divided in five parts:



3.1.1 Channel List

Channel...	ID	Kind	Name	iRefs	Mode	PH	Patch	Patch	Patch
1	1		(Rainbow+, S+F)	1	A/B		1:25	1:101-103	---
2	2		(Rainbow+, S+F)	1	A/B		1:26	1:104-106	---
3	3		(Rainbow+, S+F)	1	A/B		1:27	1:107-109	---
4	4		(Rainbow+, S+F)	1	A/B		1:28	1:110-112	---
5	5		(Rainbow+, S+F)	1	A/B		1:29	1:113-115	---
6	6		(Rainbow+, S+F)	1	A/B		1:30	1:116-118	---
7	7		(Warp M w Rainb...	0	A/B		1:141	14:135-...	---
8	8		(Warp M w Rainb...	0	A/B		1:142	14:164-...	---
9	9		(Warp M w Rainb...	0	A/B		1:143	14:193-...	---
10	10		(Warp M w Rainb...	0	A/B		1:144	14:222-...	---
11	11		(Warp M w Rainb...	0	A/B		1:145	14:251-...	---
12	12		(Warp M w Rainb...	0	A/B		1:146	14:280-...	---
13	13		(Warp M w Rainb...	0	A/B		1:147	14:309-...	---
14	14		(Warp M w Rainb...	0	A/B		1:148	14:338-...	---
15	15			0	A/B		1:31	---	---
16	16			0	A/B		1:32	1:33	---
17	17			0	A/B		---	---	---
18	18			0	A/B		---	---	---
19	19			0	A/B		1:49	---	---
20	20			0	A/B		1:50	---	---
21	21			0	A/B		1:51	---	---
22	22			0	A/B		1:301	1:304	1:309
23	23			0	A/B		1:302	1:303	1:305
24	24			0	A/B		---	---	---

- Channel:** Number used to select channels.
- ID:** Number used internally.
- Kind:** Text Information column.
- Name:** Text Information column.
- iRefs:** number of record(s) in the system for that channel.
- Mode:** see details below.
- Patch:** DMX address column.

3.1.2 DMX Outputs Grid

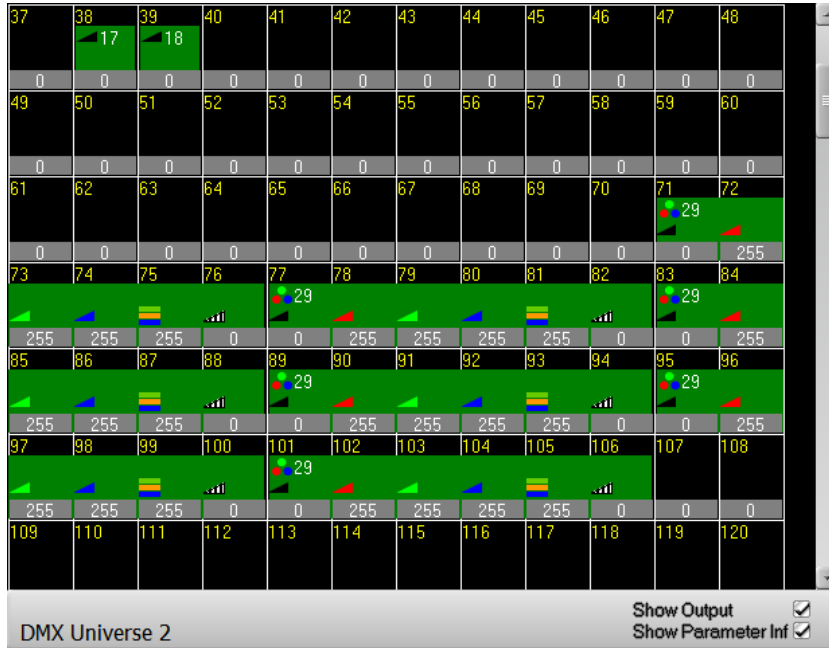
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168

DMX Universe 1

Show Output

Show Parameter Inf

Leftside down corner:
 Selected DMX Universe
Show Output :
 Output Levels
Show Parameter Info:
 Attributes icons



Leftside down corner:
 Selected DMX Universe
Show Output :
 Output Levels displayed
Show Parameter Info:
 Attributes icons displayed.
 To display Device Name, Channel Number (referenced to Name column in channel list) and parameter name, point the icon with the mouse.

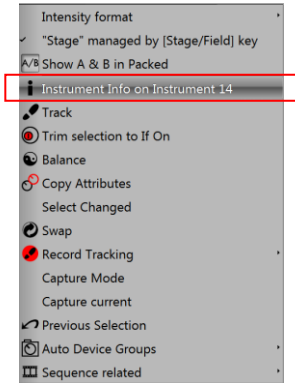
3.1.3 Universes Browser

ID	Name
DMX Universe 1	
DMX Universe 2	
DMX Universe 3	
DMX Universe 4	
DMX Universe 5	

That part of the instrument Setup allows the user to edit Universe Name, and if browsing through a universe, edit Dimmer Name, change proportional Output level, and Dimmer Curve. See section for more details.

3.1.4 Instrument Info

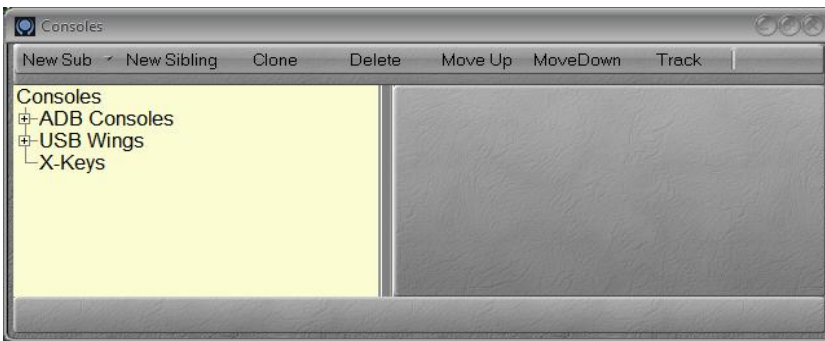
Instrument 14 (Warp M w Rainbow)							
Kind	Name	Univ...	Patch	Mode	State	%	Curve
DMX Dimmer		1	1:148	A/B	Enabl...	100	--Default(Linear)--
DMX Device	14	14:338-366	Warp M w Rai...	Warp M w Rai...			



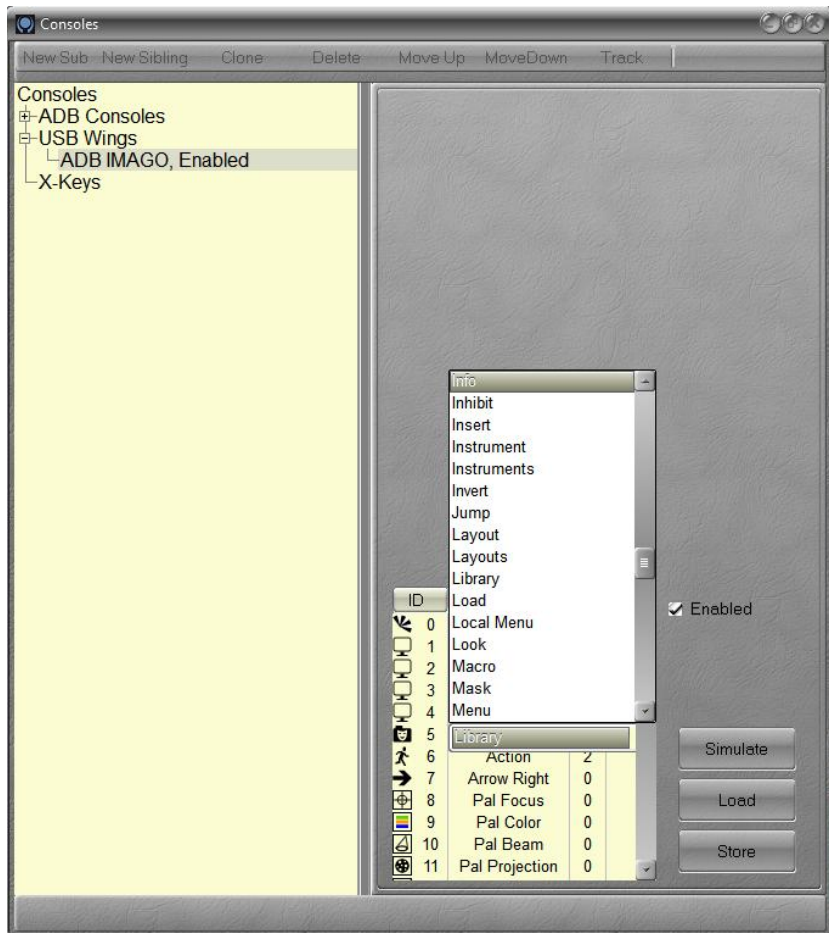
The Instrument Info window is dedicated to display specific selected Instrument (Channel) information. It is also possible to open only the Instrument Setup window from the Channel Grid, by Right Click on the involved channel:

Note: there is a software function corresponding to this feature. To assign this function to a key:

HATHOR / Setup / Consoles



Open USB Wings



Select ADB IMAGO.
 Press the key on the board (i.e. USER KEY), the ID of the key is then highlighted.
 Double click in the right to that ID number, in the column “Function”.
 Scroll the list and select **Info** in the list.
 Press **Store** to save settings.

3.2 PATCHING TRADITIONALS

There are different methods to patch channels:

1. Keypad
2. Mouse
3. Keyboard
4. Touch Screen
5. Wizard

3.2.1 Using the keypad Channels > Dimmers mode only

Replace feature: [#] [Ch][->] [->] (to the first Patch Column) [#] [Enter] > Channel # connected to dimmer # (existing dimmer replaced).

Add feature: [#] [Ch][->] [->] [->] (to the next free Patch Column) [#] [Enter] > Channel # connected to dimmer # in addition of existing dimmer.

To patch a channel range to a range of dimmers (e.g. Channels 101 thru 124 with dimmers 1 thru 24).

[101] [Ch] [124] [THRU] [ENTER] a popup will open, confirm with **[ENTER]**.

To unpatch a dimmer: select a dimmer with arrows, then **[0] [ENTER]**.

3.2.2 Using the mouse

Note: to check directly dimmers Live, check the dimmers box in the live area of Dimmer Patching Tools.

To connect a dimmer to a channel:

Select a dimmer in the dimmers window (right side of the screen) then drag and drop it to the channel of your choice.

To move a dimmer from one channel to another:

Select a dimmer in the Channel List (left side of the screen) then drag and drop it to the target channel.

To unpatch a dimmer:

Select a dimmer in the dimmers window or in the Channel List then Right Click on this dimmer, choose **{UnPatch}**.

To Name a Channel:

Go to the Name Column (Channel List), on the correct channel line then DOUBLE Click on cell, enter the name and **[ENTER]**.

To give a proportional level to a dimmer:

Expand the Channel, in the dimmer line, double click on 100, set the new value and confirm with **[ENTER]**.

To Rename Channels:

You can change the number used to access your instruments, without altering your Patch. This is useful when you want to keep your addresses and dimmer assignments as they are, but you want to change the numbering to fit the numbering of a Plot. Renaming is done in the Name column of the Channel window.

Go to the Channel # Column (Channel List), on the correct channel line then DOUBLE Click on cell, enter the name and **[ENTER]**.

To Clear all dimmers:

Go to the Dimmer Patching Tools area, choose Clear Dimmer Patch, a popup will open, confirm with **[ENTER]**.

3.2.3 Using the keyboard and the Dimmer Patching Tools

Note: please check first that Alpha keys Shortcuts are enabled:

HATHOR / Preferences / User Interface



When there is a conflict after an action, a popup will open, confirm with **(ENTER)**, or cancel with **(ESC)**.

DIMMER TO CHANNEL MODE

To connect a Dimmer to a Channel

(#) (D) (#) (H).

To connect a selection of Dimmers to a Channel

(#) (D) (#) (*) (#) (*) (#) (H).

To connect a range of Dimmers to a Channel

(#) (D) (#) (T) (#) (H).

e.g.: dimmer 1 thru 4 connect to Channel 1:

(D) (4) (T) (1) (H).

e.g.: dimmer 1 thru 4 + 7 and 11 connect to Channel 1:

(D) (4) (T) (7) (*) (11) (*) (1) (H).

e.g.: dimmer 1 thru 7 - 5 connect to Channel 1:

(D) (7) (T) (5) (Shift) (*) (1) (H).

To disconnect (Unpatch) a Dimmer

(#) (D) (O).

To disconnect (Unpatch) a selection of Dimmers

(#) (D) (#) (*) (#) (*) (O).

To disconnect (Unpatch) a range of Dimmers

(#) (D) (#) (T) (O).

CHANNEL TO DIMMER MODE

To connect a Channel to a Dimmer

(#) (C) (#) (M).

To connect a Channel to a Dimmer

(#) (D) (#) (T) (#) (H).

To disconnect (Unpatch) a Channel (Unpatch all dimmers connected to this channel)

(#) (C) (E).

To patch a channel range to a range of dimmers (e.g. Channels 101 thru 124 with dimmers 1 thru 24)

(101) (C) (124) (T) (ENTER).

3.2.4 Using the touch screen and the Patching Tools

TIP: first dock the Instrument setup window into the internal Touch screen and check the dimmers box in the live area of Dimmer Patching Tools.

DIMMER TO CHANNEL MODE

Select a Dimmer by touch in the DMX Output Grid.

Select a Channel by touch in the Channel List.

Choose **Connect** in the Dimmer Patching Tools area.

DIMMER TO CHANNEL MODE GOTO NEXT METHOD

Check the **Go to Next** mode in the Dimmer Patching Tools area.

Select a Dimmer by touch in the DMX Output Grid.

Select a Channel by touch in the Channel List.

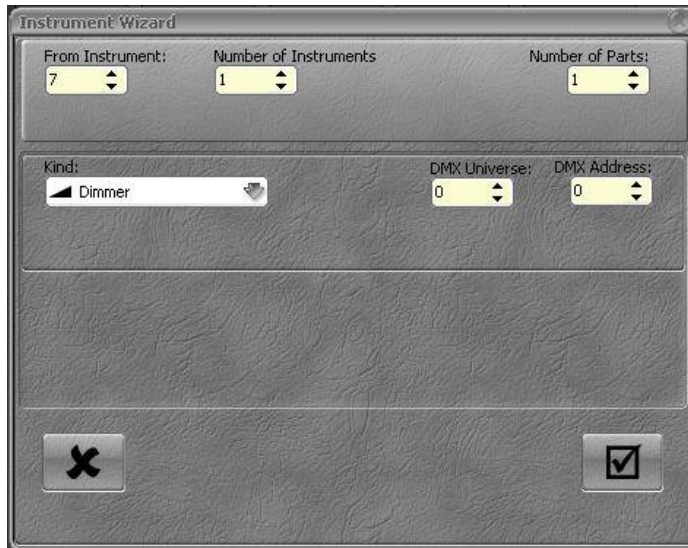
Choose **Connect** in the Dimmer Patching Tools area.

The next channel and the next dimmer in the list will be automatically prepared.

3.2.5 Using the wizard

PATCHING DIMMER(S)

Go to the Channel # Column (Channel List), RIGHT Click and choose {Instrument wizard} in the list.



- **From instrument:** to set the first channel of the range.
- **Number of Instruments:** how many channels do you want to patch.
- **Kind:** Dimmer.
- **DMX Universe:** choose the Universe means select the output (1 or 2 for the LIBERTY, 1, 2, 3 or 4 for the FREEDOM).

To validate, click on the check box.

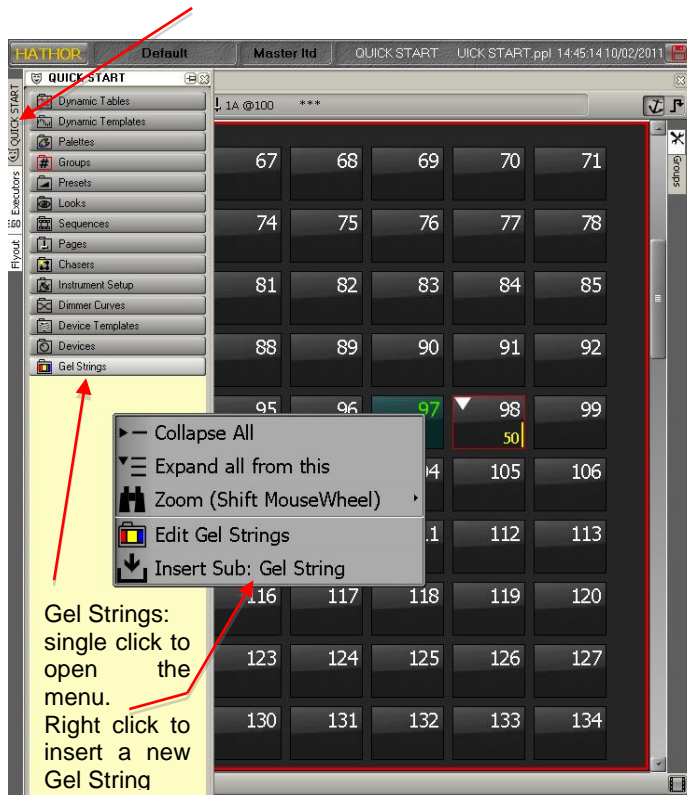
GEL STRINGS

In HATHOR a Scroller is always linked to a GEL STRING.

Before patching a Scroller with the Wizard you have to create a GEL STRING.

PLAY MENU / Gel Strings

PLAY MENU



Gel Strings:
single click to
open the
menu.
Right click to
insert a new
Gel String

Then you will see the Gel String 1 in the Gel String menu, Right Click on Gel String 1 and choose Edit Gel String 1.

Go to the Frames column and set the number of colours of the roll, then **[ENTER]**. The steps will be automatically created.

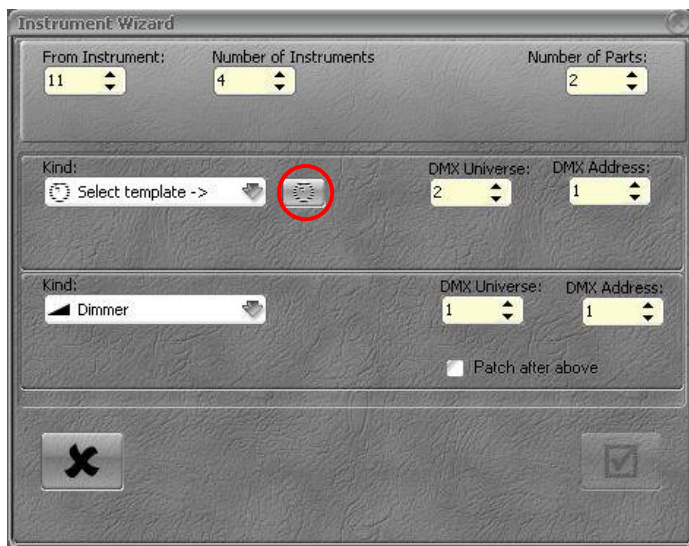
To use specific colours and names, go to **HATHOR / Tools / Images**

In the Images window open the Gel Colours menu, choose a manufacturer and drag and drop the colour needed in the Frames column, on the position of your choice (the cell becomes grey), then choose the option **{Copy color and names from _____}**.

When the Gel string is complete, close the window using the mouse or use the **[ESC]** key.

PATCHING DIMMER(S) AND SCROLLER(S)

Go to the Channel # Column (Channel List), Right Click and choose {Instrument wizard} in the list.



- Set the first instrument of the range in the **From Instrument** box (e.g.: Instrument 11).
- Set the number of instruments to create in the number of instruments box (e.g.: 4).
- Set two Parts in the Number of parts box (one for the dimmer and one for the scroller).
- Set Universes for the dimmer and for the scroller.
- In the Kind area, click on Dimmers and choose Select Templates, then click on the soft button at the right side of this box.

A popup will open:

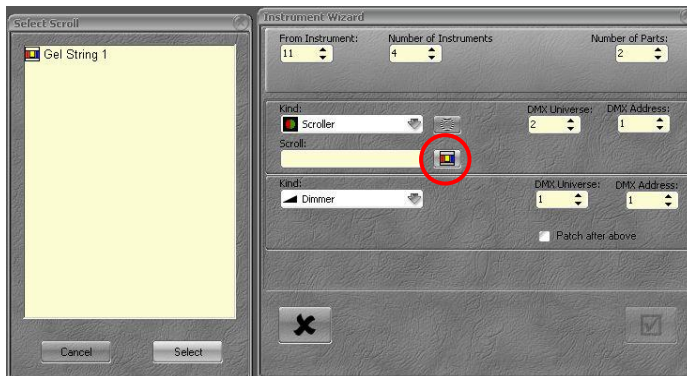


Choose the Scroller and click on Select.

Click on the Gel String ICON.

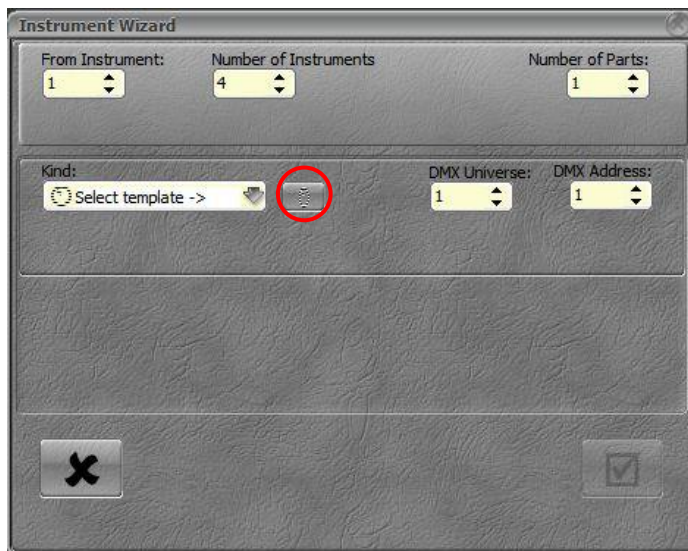
In the Select Scroll window, click on the Gel String of your choice then Select.

The selected gel String will appear in the Scroll box.



PATCHING MOVING LIGHTS

Go to the Channel # Column (Channel List), Right Click and choose **(Instrument wizard)** in the list.



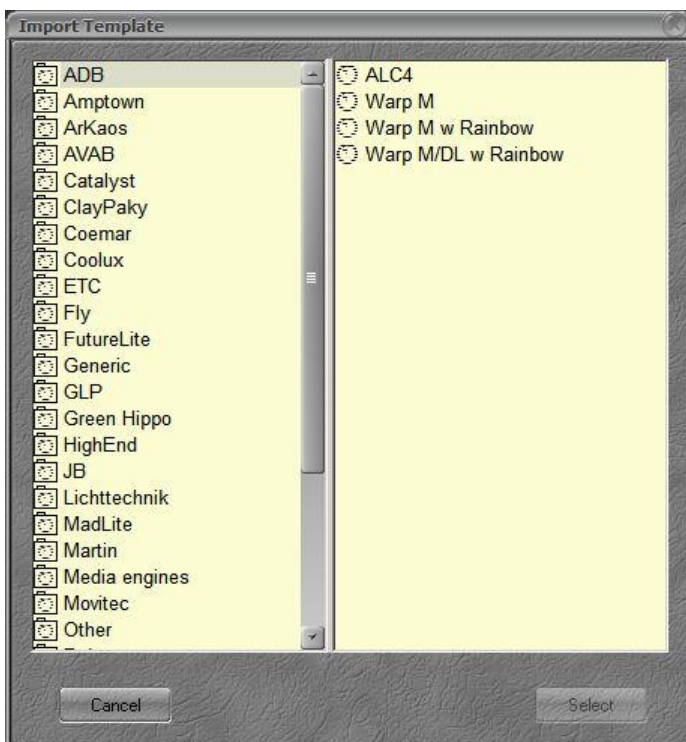
- Set the first instrument of the range in the **From Instrument:** box (e.g.: Instrument 1).
- Set the number of instruments to create in the **Number of instruments** box (e.g.: 4).
- Set DMX Universe for the first Device.
- In the “**Kind**” area, click on Dimmers and choose Select Templates, then click on the soft button at the right side of this box.

The select window will open:



- 1 Click on the manufacturer file to open the file.
- 2 Click on the Device template needed, then click on **{Select}**
- 3

Importing Device templates from the select window :



- To import a Device template from the Library:
- Click on {Import}, the Import template window will open.
- Click on the manufacturer file to open the list of device templates available.
- Click on the Device Template needed, and then click on {select}.
- The Device template is added in the Select Template window.

3.3 PATCHING MOVING LIGHTS

3.3.1 Before patching

3.3.1.1 Gel Strings and Scrollers

Introduction

In this system, as in the reality, Gel Strings and Scrollers are two independent elements. Since in any venue, mounting a scroller without roll on a luminaire makes no sense, it would make no sense neither to patch a Scroller if there is no Gel String ready to be installed.

That is the reason why it is necessary first to create Gel Strings.

Scrollers will be then associated to Gel String when patching.

The Gel String will correspond to the physical colour roll, with the same count of colours, sorted in the same order.

Adding a new Gel String

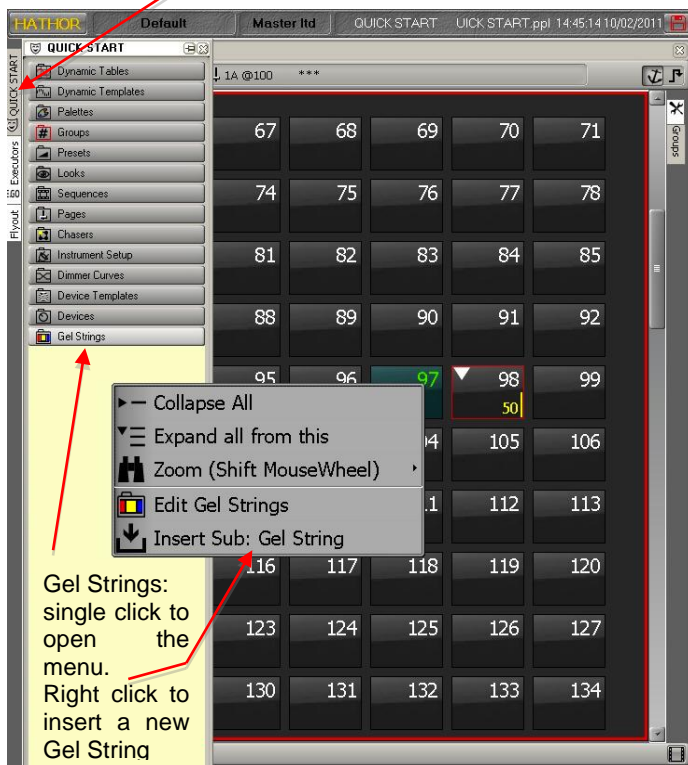
1/ to add a Gel String via the Play Menu:

Display the Play Menu

Click on Gel String tab

Right Click in empty yellow area and select **{Insert Sub: Gel String}**

PLAY MENU



2/ to add a Gel String via the main Menu:

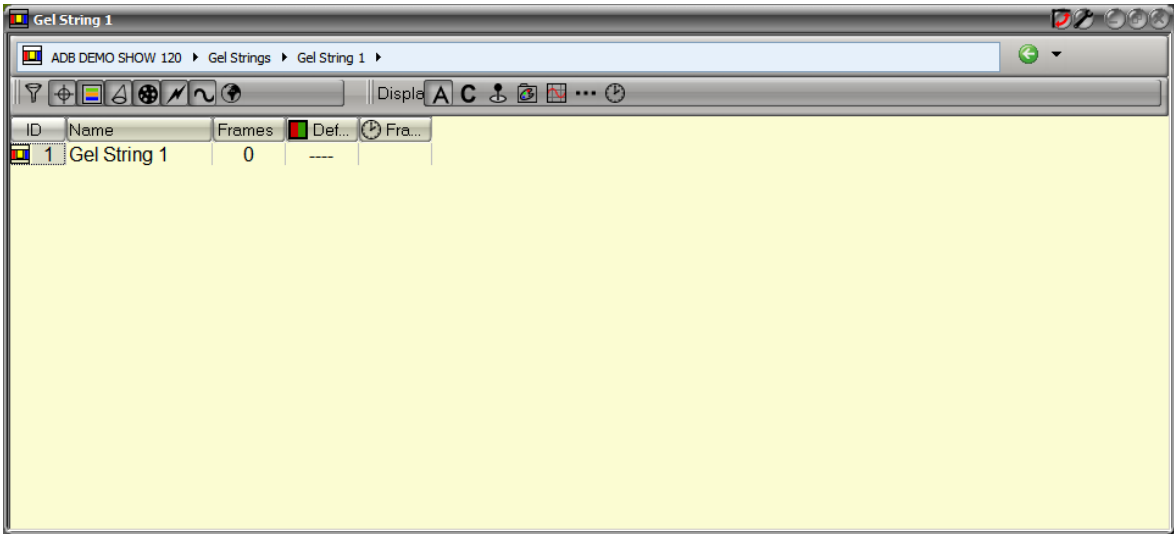
HATHOR / Data / Gel Strings

Note: it is possible to access to the Gel Strings editor, while using the mouse, or while using **[MENU]**, **arrows**, and **[ENTER]**

Right Click in empty yellow area and select **{Insert Sub: Gel String}**

Creating a new Gel String

Right Click on the new Gel String in the list (see above) and select **{Edit Gel String #}**

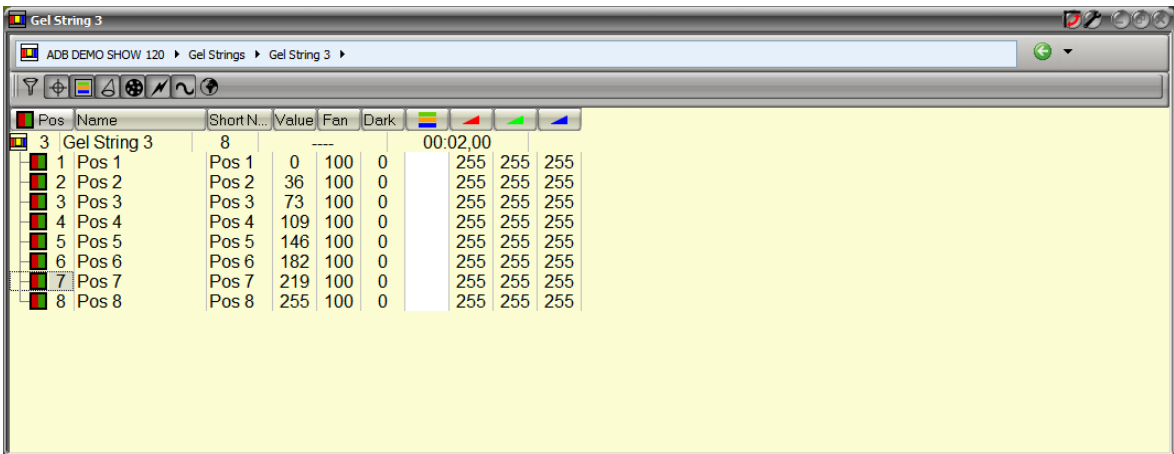


ID: this is the ID number of this Gel String. This ID is fixed.

Name: to enter a new name, double click on the current name “ Gel String 1”, tap the new name, and then confirm with **(ENTER)** / **[ENTER]**.

Frames: to enter the amount of colours, double click on the current name “0”, tap the new amount, and then confirm with **(ENTER)** / **[ENTER]**.

Example: 8



Default: it is possible to select a default Frame instead of the first one.

As soon as the Gel String is built, the list of Frames will be displayed when double clicking in the cell.

Frame Time: Default Time for this Gel String

Editing Frames (Colours)

Pos	Name	Short N...	Value	Fan	Dark	Color	Color	Color
3	Gel String 3	8	---	---	---	00:02,00		
1	Pos 1	Pos 1	0	100	0	255	255	255
2	Pos 2	Pos 2	36	100	0	255	255	255
3	Pos 3	Pos 3	73	100	0	255	255	255
4	Pos 4	Pos 4	109	100	0	255	255	255
5	Pos 5	Pos 5	146	100	0	255	255	255
6	Pos 6	Pos 6	182	100	0	255	255	255
7	Pos 7	Pos 7	219	100	0	255	255	255
8	Pos 8	Pos 8	255	100	0	255	255	255

Automatic method: the Images Tool

First set the amount of colours.

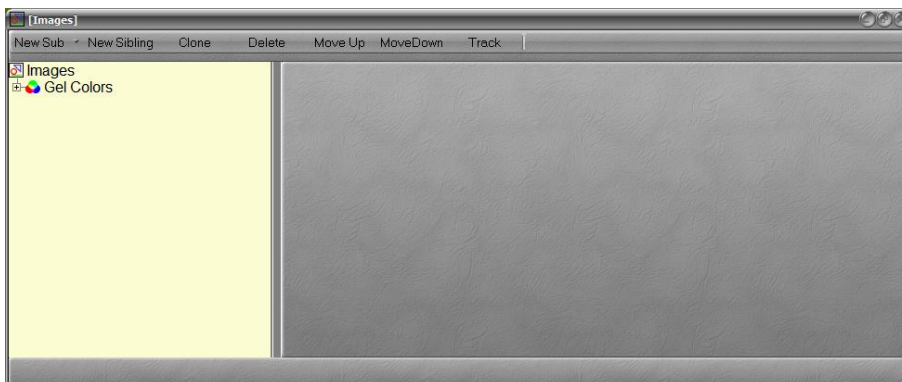
In **Frames**, double click on the current name "0", tap the new amount, and then confirm with **(ENTER)** / **[ENTER]** to set the amount of colours,

Example: 8

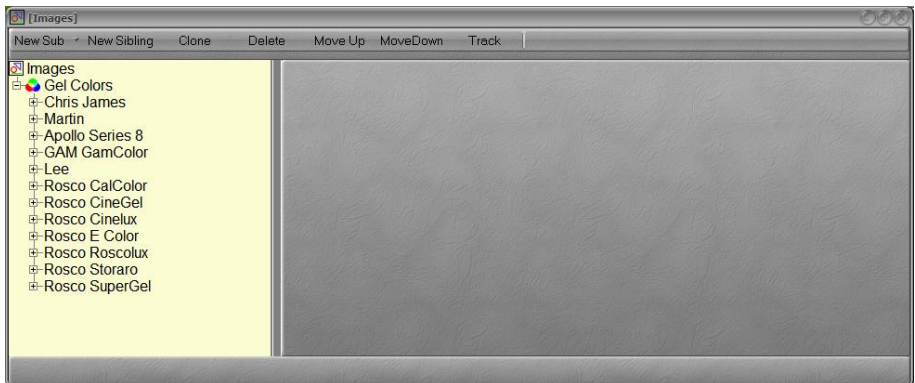
Then, The faster way to edit Frames with Name, Short Name Colour and values, is to use the **Images Tool**.

To display that Tool: **HATHOR / Tools / Images**

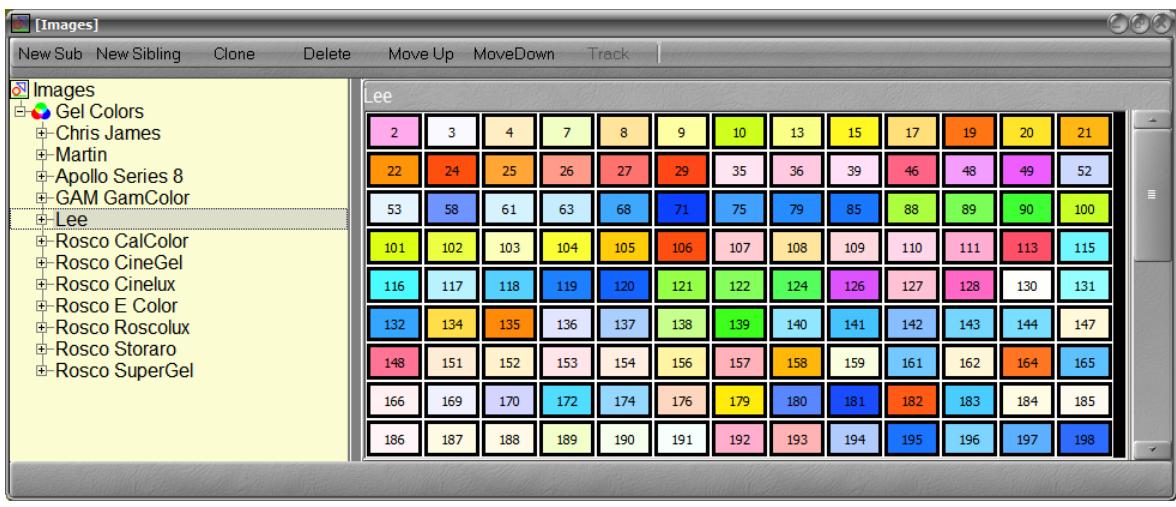
In the Images window open the Gel Colours menu, choose a manufacturer and drag and drop the colour needed in the Frames column, on the position of your choice (the cell becomes grey), then choose the option **{Copy color and names from _____}**. See below:



Click on the + to expand the menu.



Click on the Gel manufacturer to be displayed.



To modify the Frame in the Gel String, Drag and Drop the colour from the colour grid to the Frame position.
 Select **{Copy image}** to copy colour only, or select **{Copy image and names}** to copy colour, Name and Short Name.

Pos	Name	Short Name	Value	Fan	Dark	Color 1	Color 2	Color 3
1	TEST	10	00:02...					
1	Chrome Orange	L 179	0	100	0	255	236	12
2	Pos 2	Pos 2	28	100	0	255	255	255
3	Pos 3	Pos 3	57	100	0	255	255	255
4	Pos 4	Pos 4	85	100	0	255	255	255
5	Pos 5	Pos 5	113	100	0	255	255	255
6	Pos 6	Pos 6	142	100	0	255	255	255
7	Pos 7	Pos 7	170	100	0	255	255	255
8	Pos 8	Pos 8	198	100	0	255	255	255
9	Pos 9	Pos 9	227	100	0	255	255	255
10	Pos 10	Pos 10	255	100	0	255	255	255

Pos: this is the Frame number of the colour.
It allows recalling any colour with **[#] [FRAME]**.

Name: to modify the name, double click on the current name “ Chrome Orange”, tap the new name, and then confirm with **(ENTER) / [ENTER]**.

Frames: to change the amount of colours, double click on the current name “0”, tap the new amount, and then confirm with **(ENTER) / [ENTER]**.

Note: when changing the quantity of Frames, this is always the last one which is involved.

Positions are auto calculated when changing the amount of Frames, so there is no possibility to Insert or Delete a specific Frame.

Value: Auto calculated DMX values

Fan: useful for scrollers with FAN, it is possible to independently set a default Fan value for each Frame. The scroller’s Fan will then use automatically the associated value to the recalled Frame.

Example: 20% for a ¼ Ct Blue.

Pos	Name	Short N...	Value	Fan	Dark			
1	TEST	9	---	00:02...				
1	Chrome Orange	L 179	0	100	0	255	236	12
2	Pos 2	Pos 2	32	100	0	255	255	255
3	Pos 3	Pos 3	64	100	0	255	255	255
4	Pos 4	Pos 4	96	100	0	255	255	255
5	Congo Blue	L 181	128	100	10	25	77	255
6	Pos 6	Pos 6	159	100	0	255	255	255
7	Pos 7	Pos 7	191	100	0	255	255	255
8	Pos 8	Pos 8	223	100	0	255	255	255
9	1/4 Ct Blue	L 203	255	20	0	230	248	255

Dark: This feature makes the scroller moving back and forth around a centre position corresponding to the calibrated position as soon as the intensity is over zero. This colour will have to be cut wider.

The value corresponds to the steps used to move back and forth.

Note: the length of the wider colour is not taken into the automatic calculation. So it will be necessary to calibrate the Gel String manually with a scroller, to test if the amount of “Dark steps” are matching with the reality and then to update that gel String in order to make it usable with all physical scrollers using that roll.

Manual method

First set the amount of colours.

In **Frames**, double click on the current name “0”, tap the new amount, and then confirm with **(ENTER)** / **[ENTER]** to set the amount of colours,

Example: 8

Then edit each position (Frame) one by one.

Note: to create a colour, it is necessary to enter directly CMY value.

Editing a Gel String attached to Scroller(s)

Either Right Click on the dedicated gel String in the Gel strings list, or select one Channel with a scroller.

In the Device Control window, select the Attribute Group **Colour** 

Right Click on the Frame field and select **{Edit Scroll Gel String #}**.

The Gel String # Editor window will be displayed.

3.3.1.2 Device Templates

Introduction

A Device Template is, in other name, a Device definition. It is an organization of attributes (Template Part), including Parameter steps if necessary (Position), with specific settings. Each parameter corresponds internally to one (8 bit) or two (16bit) DMX Channels.

So the Device Template is the interface between the Control Channel and the physical fixture, or how to handle several attributes via one control channel.

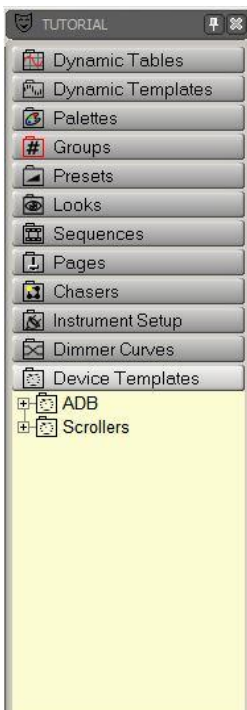
To be clear, to control a simple RGB fixture, it is possible, either to use three separate Instruments (one for RED, one for BLUE and one for GREEN), and in that case it will require three Channels, without any possibility to use Colour Picker, Palettes or other specific Moving Light features, **or** to use only one Instrument via a Template, and then it will require only one Channel (connected to 3 DMX Outputs), with the possibility to use Colour Picker, Palettes and all other specific Moving Light features.

In HATHOR, it is always possible to Import, Copy, and Edit Templates according to the needs of the operator, and mostly LIVE, on the fly. There is no "Template Builder" concept in the system, in the sense of there is no need to open a specific tool to modify Templates, and then to Repatch devices to update it. Fixtures will be automatically updated according to modifications in Templates.

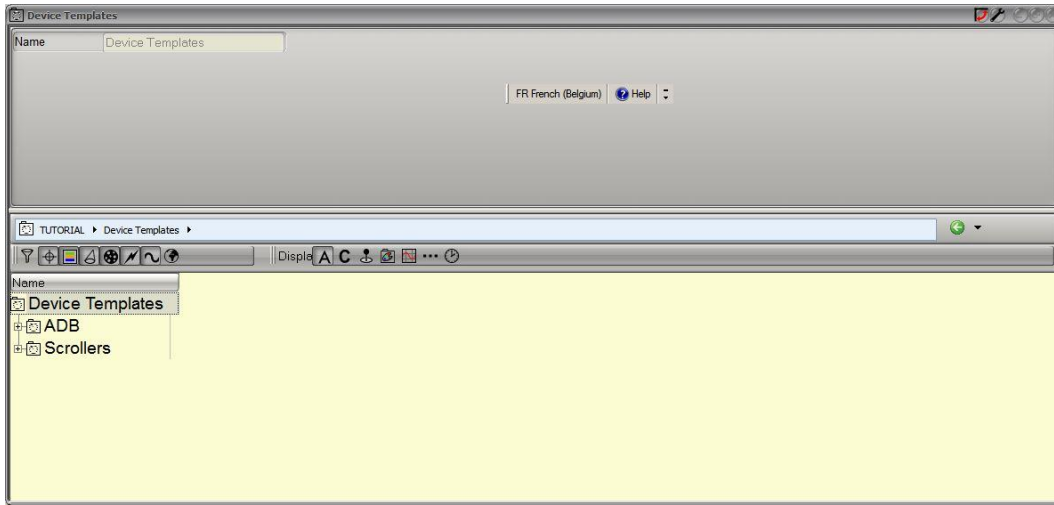
Access

PLAY MENU:

To access to the Device Templates folder, open the Play menu, then click on **Device Templates** to open the Device Templates folder.



Note: to display a specific used Device Template, in **Devices**, Right Click on the involved device and choose **Edit Device: xxxxxxxxxxxxxx** as option.



Importing Devices Templates

There are two possibilities for importing Device Templates:

From the Factory Templates

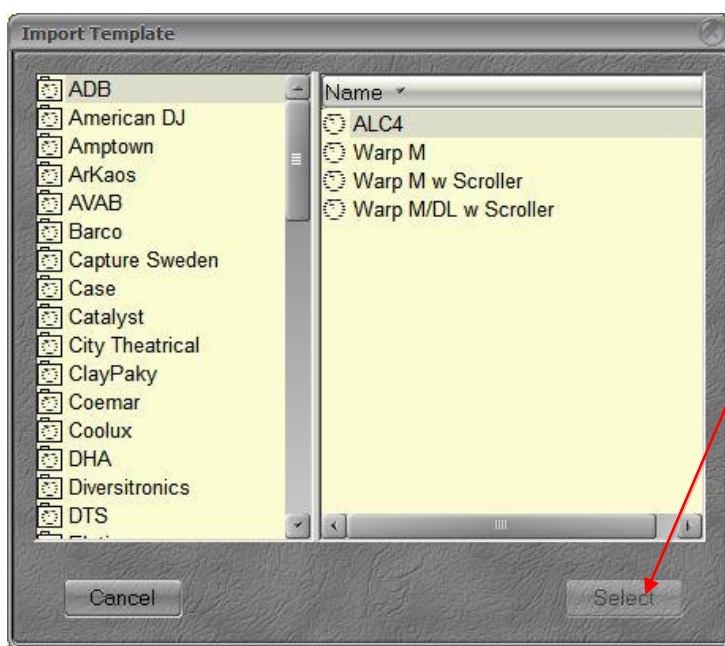
From another Play file (show)

Importing Devices Templates from Factory Templates

Right Click in the empty area, below manufacturers folders, and select **{Import from Factory Template}**.



Select a manufacturer, then select a Device Template, and click on the **Select** soft key to confirm.



Importing Devices Templates from another Play File

To import a Device Template from a Play File located on a USB key, use the **Browse Another** command:

HATHOR / File / Browse Another

Click on Computer to display all the storage devices, and select the USB key. Double click on the dedicated Play File to open it.

To import a Device Template from a Library Play File, use the **Open Library** command:

HATHOR / File / Open Library

Click on Computer to display all the storage devices, and select the USB key. **Right click** on the dedicated Play File, and select **{Browse Play xxxx }** as option.

As soon as the Play File browser is opened, expand the Device Templates folder, and **drag & drop the Manufacturer folder** to the Device Templates folder in the Play Menu.

Note: expand the dedicated manufacturer folder and drag & drop only the Device Template to the existing Manufacturer folder in the Play menu if needed.

Automatic Import of Device Templates

When importing Devices from another Play File, corresponding Device Templates and Manufacturer folders are automatically imported.

To import Devices from a Play File located on a USB key, use the **Browse Another** command:

HATHOR / File / Browse Another

Click on Computer to display all the storage devices, and select the USB key.

Double click on the dedicated Play File to open it.

To import a Device from a Library Play File, use the **Open Library** command:

HATHOR / File / Open Library

Click on Computer to display all the storage devices, and select the USB key.
Right click on the dedicated Play File, and select **{Browse Play xxxx }** as option.

As soon as the Play File browser is opened:

Right Click on Instrument Setup, and select **{Import}** as option. Double click in the **From** field to select the first Device to be imported, and double click in the **To** field to select the last Device to be imported.

Or

Expand the Instrument Setup, select the Devices to import with the **Shift** and the **CTRL** keys, then Right Click and **{Import}**.

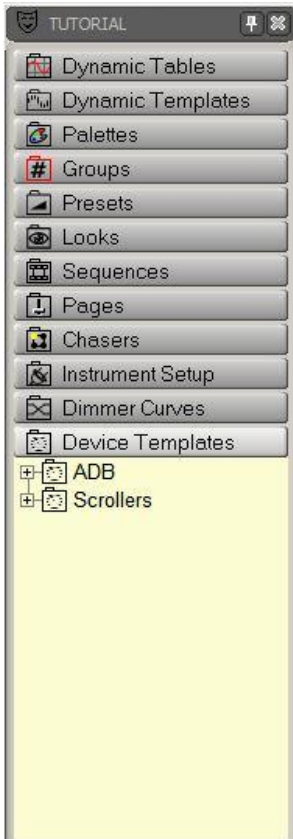
Creating a new Manufacturer folder

There is a possibility to add new Device Templates into an existing manufacturer file, or to add new manufacturer in the list before.

All Templates modifications, new Manufacturers and new Templates are always saved in the current show. There is no user Templates library.

The Factory Templates library is protected and can't be updated by users.

TIP: Create a specific Play File, to store user Templates (Factory Templates modified, and new Templates). See above to learn how to import Templates from that Play File.



To create a new Manufacturer folder :

- Open the Play Menu (Click on the tab located on the left side of the main screen. This tab indicates the name of the play).
- Eventually pin it (click on the pin close to the cross, upside right corner).
- click on « Device Templates » to display all the manufacturers.
- Right click in the empty space in that window, then choose **{Insert Sub : Manufacturer Group}** in the menu.

To edit a new Manufacturer :

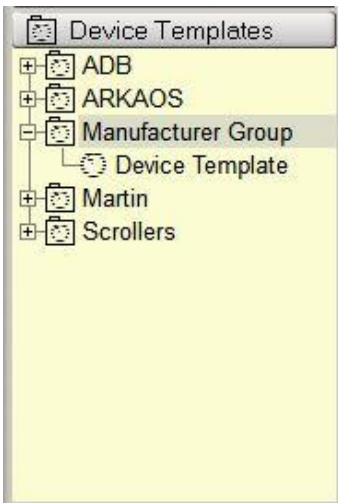
- Double click on « Manufacturer Group »
- In the « Manufacturer Group » window, double click on the **Name** field, then enter the new manufacturer name.

Creating a new template

There are two possibilities for creating a new Template, either from scratch, or while using a copy of an existing and very similar Template to the one to be created.

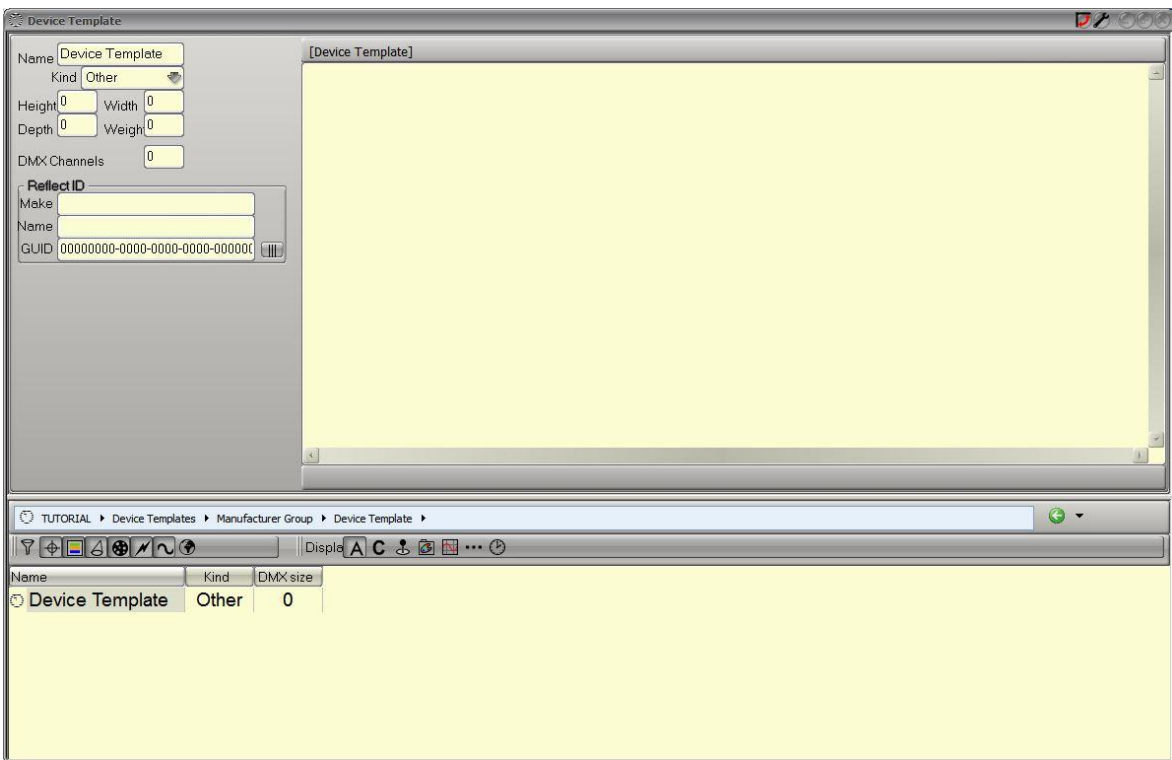
CREATING A TEMPLATE FROM SCRATCH

A Template belongs to a Manufacturer folder. To create a New Template, Right Click on the dedicated Manufacturer folder and select **{Insert Sub: Device Template}**. Expand the folder to access to the new Device template.



Double Click on the new Device Template to open the Device Template Editor.

THE DEVICE TEMPLATE EDITOR



When creating a Template from scratch, since there is no parameter (no Template part), the window looks as above.

By default the **Name** is “Device Template”, the **Kind** “Other” and the **DMX size** “0”.

These information are editable in the upper part and in the lower part of the Editor window.

Name: the Device Template name, that name will be also used by default for devices in the Instrument Setup Name column. To edit, double click in the Name field, modify and confirm with **(ENTER)**.

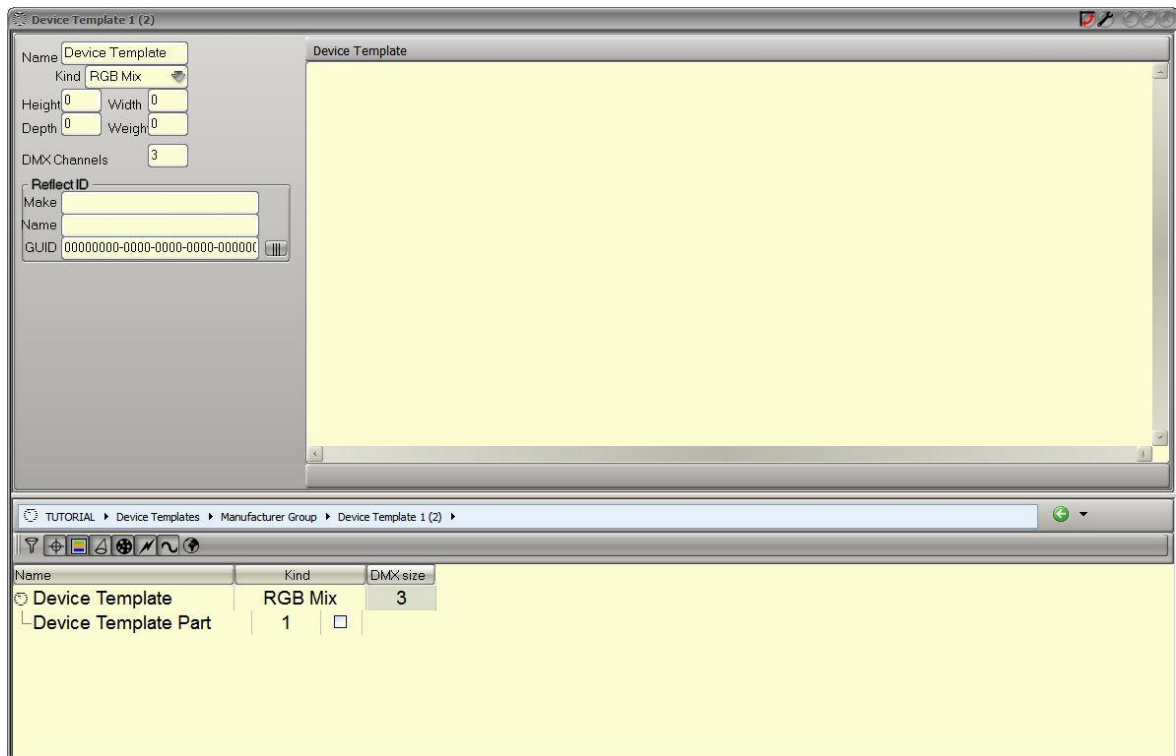
Kind: there are different kinds of Device Template, with specific behaviour for some of them.

- **Other**, no specific behaviour.
- **Scroller**, for Scrollers, generate an automatic link with a GEL STRING, and then allows use of the Frame key and features.
- **Scanner**, no specific behaviour, a dedicated symbol will be displayed, for information.
- **Moving Head**, no specific behaviour a dedicated symbol will be displayed, for information.
- **RGB Mix**, for RGB and CMY fixtures, allows use of the Color Picker, and enables the display of mixed colour inside the channel box.
- **Conventional**, no specific behaviour, a dedicated symbol will be displayed, for information.
- **Yoke**, no specific behaviour, a dedicated symbol will be displayed, for information.

DMX size: it corresponds to the number of DMX channels used by the fixture. To edit, double click in the DMX Size field, modify and confirm with **(ENTER)**.

Creating a Device Template Part

To add attributes (named Template Parts), Right Click on the Device Template Name, in the lower part of the Editor window, and select **{Insert Sub: Device Template Part}**.



Click on Device Template Part to display the parameter setting in the upper part of the Editor window.

Parameter Settings

Name is used in Device Control controllers and LCD screens.

Parameter Group: the choice will determine how the parameter will be handled by the system.

Parameter Type: the list of types is directly depending of the Parameter Group.

ID: the Identity number for the Parameter.

Default Palette group : The Palette group for this parameter.

Name	Offset	16Bit	RGB Mix	
Device Template	1	<input checked="" type="checkbox"/>	3	
Device Template Part	1	<input type="checkbox"/>		

List of defined Parameter Groups and corresponding Attributes:

System	Intensity	Focus	Color	Beam	Pattern	Extra
Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
System	Dimmer	Pan	Color Function	Focus	Gobo	Strobe
Speed		Tilt	Color Wheel	Frost	Gobo Index	Prism
Fan			Color Rotate	Iris	Gobo Rotate	Effect
			Cyan	Zoom	Pattern Function	Effect Index
			Magenta		Shutter A	Effect Rotate
			Yellow		Shutter B	Effect Function
			Red		Shutter In/Out	Scroller Speed
			Green		Shutter Angle	Scroller Fan
			Blue		Shutter Rotate	
			White		Barndoor	
			Hue		Barndoor Rotate	
			Luminance			
			Saturation			
			CTO			
			Scroller Frame			
		F Speed	C Speed	B Speed	P Speed	E Speed
UserDefined S	UserDefined I	UserDefined F	UserDefined C	UserDefined B	UserDefined P	UserDefined E

1 / System

This parameter Group is designed to handle system attributes, like **Power**, **Reset** and **Control** functions. There is no corresponding Palette, and then no access via Palette Group button, neither possibility to record those attributes in Palette. It is possible to define those parameters as belonging to Extra Palette Group, allowing an easy access and control.

2 / Intensity

This parameter Group is designed to handle intensity attributes, like **Dimmer**. There is no corresponding Palette, and then no access via Palette Group button, neither possibility to record those attributes in Palette.

3 / Focus

This parameter Group is designed to handle Pan & Tilt attributes. Focus attributes are generally used with Focus Palette group. Focus Speed, if not used, can be sorted in "none".

4 / **Colour**

This parameter Group is designed to handle Colour attributes. Colour attributes are generally used with Colour Palette group, except some attributes, which, if not used, can be sorted in “**none**”.

5 / **Beam**

This parameter Group is designed to handle Focus, Frost, Iris and Zoom attributes. These attributes are generally used with Beam Palette group. Beam Speed, if not used, can be sorted in “**none**”.

6 / **Pattern**

This parameter Group is designed to handle Gobo, Shutter and Barndoor attributes. These attributes are generally used with Pattern Palette group, except some attributes, which, if not used, can be sorted in “**none**”.

7 / **Extra**

This parameter Group is designed to handle Strobe and Prism attributes. These attributes are generally used with Extra Palette group. Extra1 Speed, if not used, can be sorted in “**none**”.

Note about Scroller Fan type: “**Scroller Fan**” Parameter Type, available when Parameter Group is Extra, will change its output level based on the Intensity channel of the device, in proportion to the fan speed set for each frame. The Fan speed will then change according to the selected Frame and to the current intensity level (if Follow Dimmer mode is enabled).
When recording a device link in a sequence, the fan speed is recorded into the link, like any other attribute. When editing the intensity or changing the Frame in a sequence step, the Fan speed is not automatically updated.

Identity number (ID)

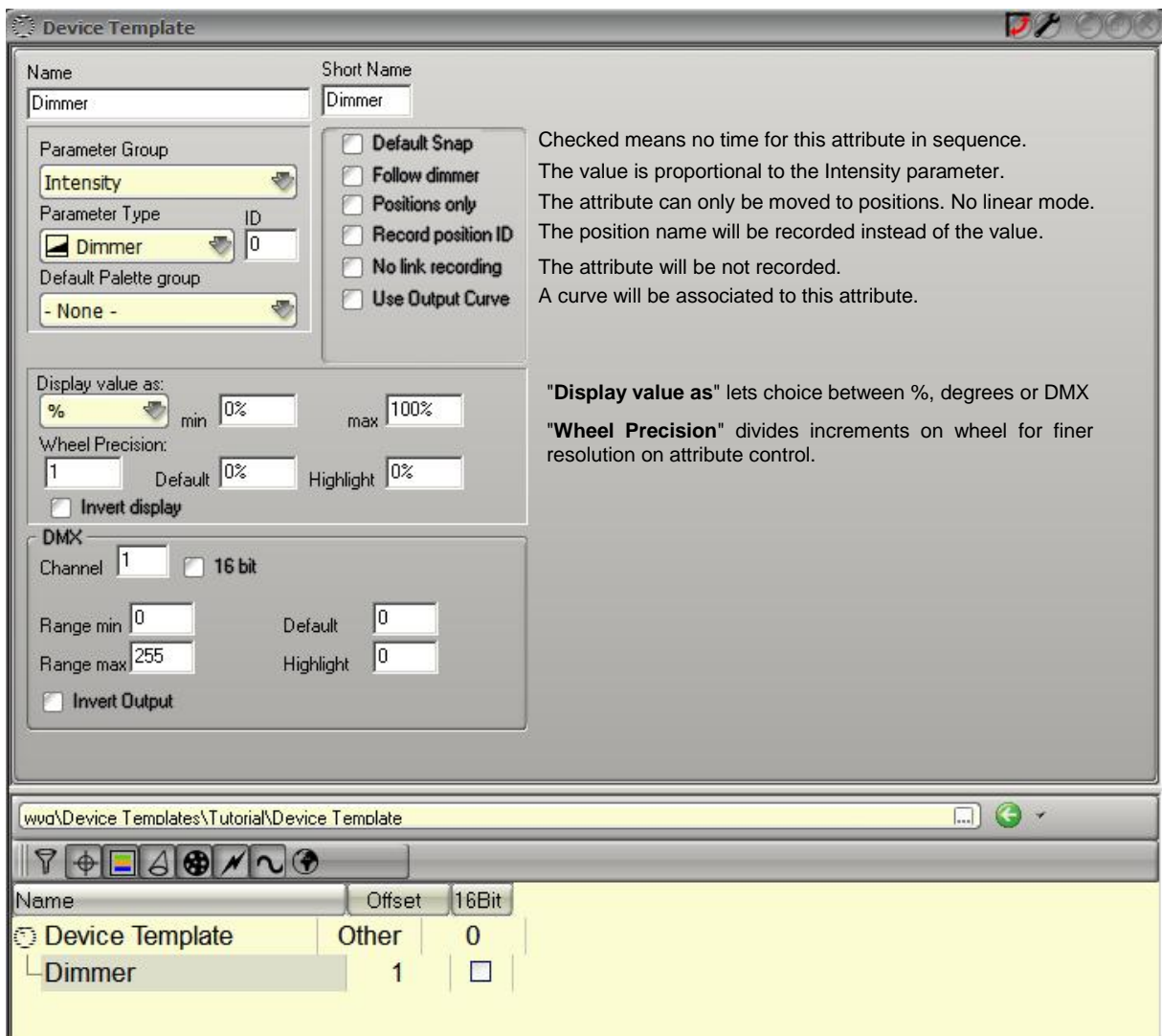
The Identity number of a Parameter allows the system to identify that parameter as it is. By default, the ID is always zero. As soon as a second identical parameter is added in the Template, its ID will be automatically incremented of 1.

The ID is necessary when same types of attributes are used in a Template.

A good example would be a Fixture with two Color Wheels. The only possibility to recognize the two colour wheels as two different colour wheels for the system, is that each colour wheel would have a specific ID number.

Note: the system also uses ID’s to sort attributes.

List of options:



"**Default snap**" if checked:

Device Part links in a Sequence will be recorded with "Snap" set to ON, it will not do a timed fade between positions.

This can be manually overridden in the Sequence.

"**Follow Dimmer**": if checked, the levels in Device Part will adjust in proportion to the Intensity parameter. Example use is for RGB fixtures - if the Red, Green & Blue Device parts are set to "Follow Dimmer", then changing the Intensity will change the RG&B levels together, maintaining colour balance.

"**Positions only**": if checked, this Device Part can only be moved to positions, as defined in the template, with no discrete values in between. Typically used for gobos wheels and Colour wheels.

"**Record Position ID** "- if checked the Parameter position name will be recorded instead of the DMX value. Useful for any attribute with fixed positions such as gobo or colour wheels. When modifying positions into a Device template that is already used in a show,

the result can be that gobos or colours no longer go to the correct position, if Raw DMX values were recorded in the Sequence. Using Position IDs prevents this problem because the Sequence step has a reference, rather than a raw value.

Using Position ID is also useful with Scrollers, since after recalibrating the Scroller Gel String, all Device Links in Sequence Steps will be updated.

"No Link recording" - if checked, this parameter will not be recorded on Sequence Attribute links or Palettes, which is very important for Intensity and System attributes.

"Use Output Curve": if checked then a menu is added to select a Curve. Example: used to change the fade curve of a mechanical dimmer on a moving light to match the fade curve of an electronic dimmer.

"Wheel Precision": Values greater than 1 will result in moving the same amount of wheel/joystick movement producing less movement of the attribute.

Values less than 1 are not accepted - you cannot decrease the precision of an attribute.

"Invert Display": if checked, the control of this parameter will be inverted, (Control level of 0% will produce output level of 100 %) **without any existing Data changes**. Example of use is a parameter such as PAN which need to be temporary inverted.

"Display value as":

degrees will use real world degrees (changes can be made to existing data) according to the PAN or TILT range of the fixture.

% will use a relative value of the PAN or TILT range of the fixture.

DMX will use a 0-255 value corresponding to the PAN or TILT range of the fixture.

"Default": corresponds to the value used by default for that Parameter, that value is also used in **0 Palettes**.

"Highlight": in progress.

"DMX" displays selected DMX channel, and **Fine channel** if **16 Bit** option is selected.

"Range min": Starting point for that parameter.

"Range max": Ending point for that parameter.

These two types of information can be used to limit the range of a parameter according to the needs of the operator.

"Invert Output": if checked, the DMX levels for this parameter will be inverted, (Control level of 0% will produce output level of 100 %) **including all recorded Data**. Example of use is a parameter such as Fan that stops the Fan at the 100%.

Example

In order to create a RGB fixture from Scratch.

1/ Create a Manufacturer folder named "USER LEDs"

2/ In that new folder, create a new Device Template named RGB 1

3/ Double Click on that Device template to rename it.

4/ Change the **kind** to **RGB mix** and a DMX size of **3**

5/ Add one Part, and select the first part:

- Name: RED / Short Name: Red
- Parameter Group: Color
- Parameter Type: Red, **ID=0**
- **Follow Dimmer: checked**

6/ Select the Part, and drag & drop it on the Device Template name just above. Select **{Copy Red to RGB 1}** as option. Do it twice.

7/ Change the Offset number for 2 for the second part and for three for the third part.

8/ Select the second Part:

- Name: GREEN / Short Name: Green
- Parameter Group: Color
- Parameter Type: Green, **ID=0**
- **Follow Dimmer: checked**

9/ Select the third Part:

- Name: BLUE / Short Name: Blue
- Parameter Group: Color
- Parameter Type: Blue, **ID=0**
- **Follow Dimmer: checked**

Creating a Template while modifying a copy of another Template

In order to copy a Template drag & drop it, either in the same Manufacturer folder or in a target Manufacturer folder. The following information will be displayed at the end of the Template name **(1)**.

Note: if a copy of this Template already exists, **(1)** will be replaced by **(2)**, and so on.

To modify the Template, in order to get a workable one, it is possible:

- To copy a Part inside the Device Template
- To copy a Part from another Device Template to the current Template
- To insert a new Part
- To Delete an existing Part

POSITIONS

A parameter can be a proportional parameter (linear), like PAN or a Step parameter, like GOBO or a mix of steps and proportional parts.

In the system Parameter steps are named **Positions**.

Creating a new Position

To **Add** a new Position, Right Click on a Part and select **{Insert Sub} Position**.

Or

Right Click on a Position and select **{Add} Position**.

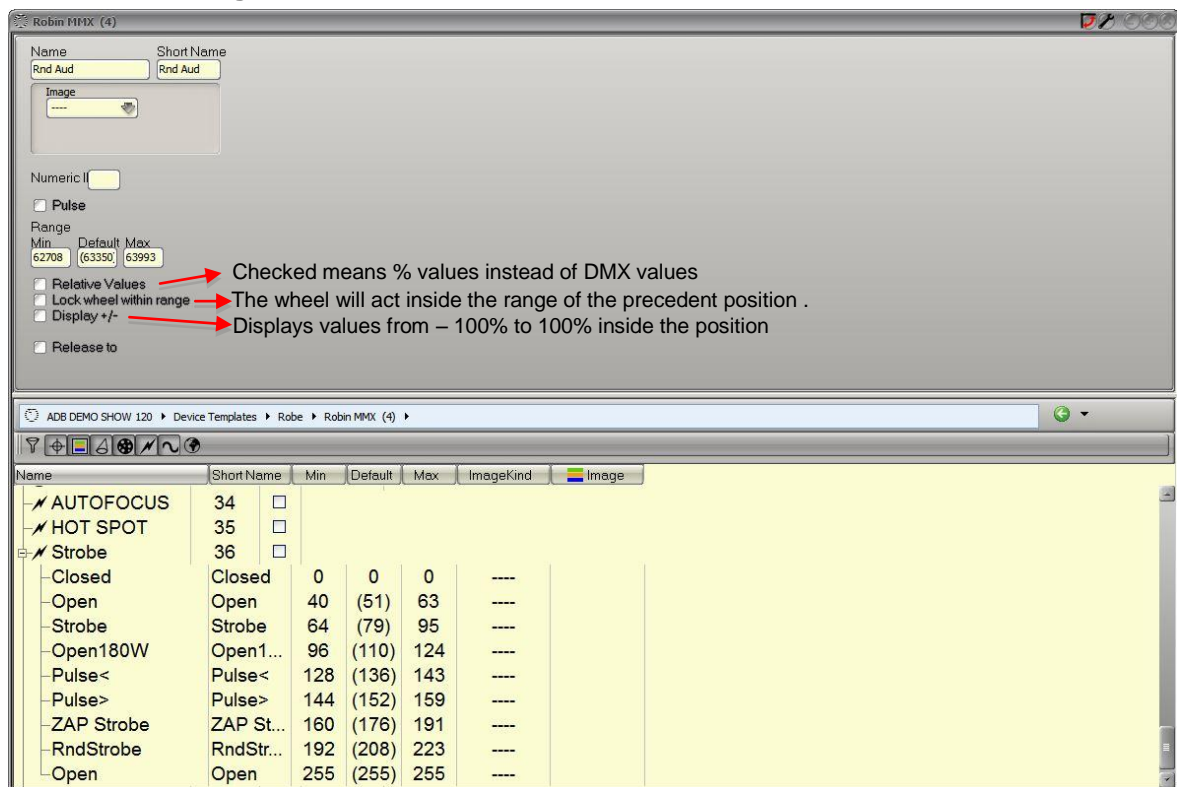
The new position will be added at the end of the list of positions.

To **Insert** a new Position, Right Click on a Position and select **{Insert} Position**
The new position will be added **before** the selected position.

To Delete a Position, Right Click on the Position and select **{Delete Position: xxxx}**

To Delete a selection of Positions (Selected with SHIFT & CTRL keys), Right Click on the Position and select **{Delete all selected items}**.

Positions Settings



Name: Position name

Short Name: Position Short name, used in Position lists

Min / Max: Position range DMX values. Default value between brackets, is automatically calculated.

Image Kind: Colour or JPEG image, used for Colour Wheel and Gobo Wheel.

Image: Displays the selected colour or image. To add a colour or an image, click in that field, then, at the top of the Editor window, click on the soft button to open a colour picker or to pick a jpeg picture in any folder.

Numeric ID: not used yet

Pulse: not used yet

Relative Values: Displays values in %

Lock wheel within range: prevents to step to the next position when using an encoder.

Display +/-: displays proportional values inside the position. Used with “proportional steps” as Strobe, Iris, Zoom and so on.

The default value (##) is then considered as the centre, the system will display – and + values. To display **only negative** values, copy the **max** value to the default value. To display **only positive** values, copy the **min** value to the default value.

Release to:

Typically used with DMX Channel handling two attributes, as for instance, DMX Channel 1 = Intensity (0-127) and Strobe (128-255).

Allows to exit from one parameter back to the other.

POSITION GROUP

The purpose of the Position Group feature is to create links between one parameter and others, in a context where behaviour of this parameter depends on the others.

Example: a Gobo wheel Rotation’s parameter which behaves differently if the selected gobo is in Index mode or rotating mode.

In Index mode the rotation’s parameter will work indexing from 0 to 255, and in Rotating mode the rotation’s parameter will work have four positions:

- 0: **No rotation**
- 1-127: **Gobo rotation** from fast to slow
- 128-129: **No rotation**
- 130-255: **Gobo rotation** from slow to fast

That means when selecting the Gobo 1 (Index) the rotation parameter will offer Indexing 0-100%, and when selecting the Gobo 1 (Rotation) the rotation parameter will offer the four possibilities above.

Important: Position Groups are parts of the parameter depending of the other, which is then considered as “controller”.

In the example above, Position Groups will be added in the rotation’s parameter; and each Position Group will refer to the Gobo wheel parameter.

Each Position Group has specific Positions which correspond to specific behaviour of the parameter for that Position Group reference.

In the Example above, Position Group Gobo 1 (Index) will have one position (indexing from 0 to 255) and Position Group Gobo 1 (Rotation) will have four positions:

- 0: **No rotation**
- 1-127: **Gobo rotation** from fast to slow
- 128-129: **No rotation**
- 130-255: **Gobo rotation** from slow to fast

Creating a new Position Group

To **Add** a new Position Group, Right Click on a Part and select **{Insert Sub} Position Group**.

Or

Right Click on a Position Group and select **{Add} Position Group**.

The new Position Group will be added at the end of the list of positions.

To **Insert** a new Position Group, Right Click on a Position Group and select **{Insert} Position Group**.

The new Position Group will be added **before** the selected Position Group.

To **Delete** a Position Group, Right Click on the Position Group and select **{Delete Position Group}**

To **Delete** a selection of Position Groups (Selected with SHIFT & CTRL keys), Right Click on the Position Groups and select **{Delete all selected items}**.

To **Add** a new Position inside the Position Group, expand the dedicated Position group, Right Click on a Position and select **{Add: Position}**.

To **Insert** a new Position inside the Position Group, expand the dedicated Position group, Right Click on a Position Group and select **{Insert: Position}**.

To **Delete** a Position, Right Click on the Position Group and select **{Delete Position}**

To Delete a selection of Position Groups (Selected with SHIFT & CTRL keys), Right Click on the Position Groups and select **{Delete all selected items}**.

3.3.2 Patching

The method to patch Fixture channels is based on Mouse (or Touch) and Keyboard, and is always done via the wizard.

3.3.2.1 Patching Scroller(s) and Dimmer(s)

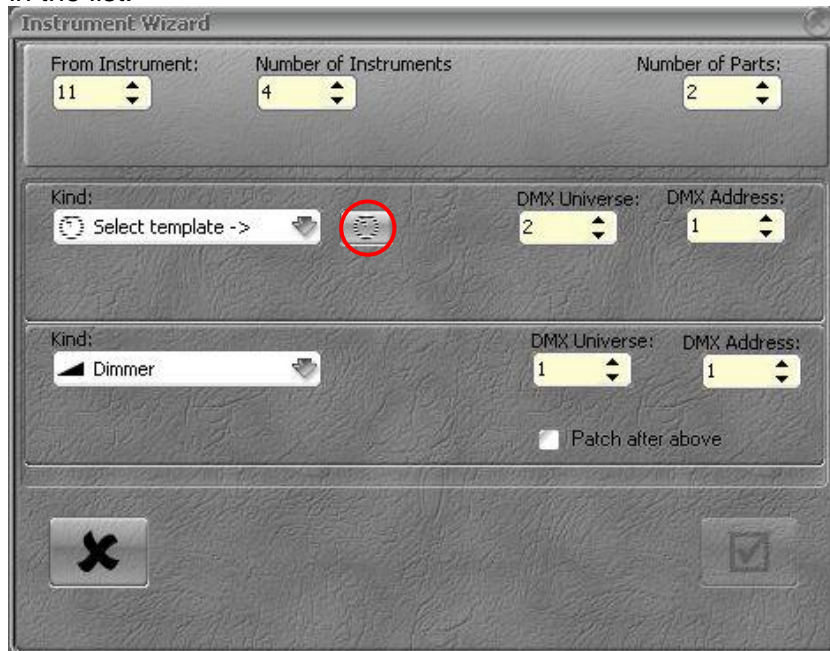
GEL STRINGS

In HATHOR a Scroller is always linked to a GEL STRING.

Before patching a Scroller with the Wizard you have to create a GEL STRING.

Please refer to 3.3.1.1 Gel Strings and for more details.

Go to the Channel # Column (Channel List), Right Click and choose **{Instrument wizard}** in the list.



Set the first instrument of the range in the From Instrument box (e.g.: Instrument 11).

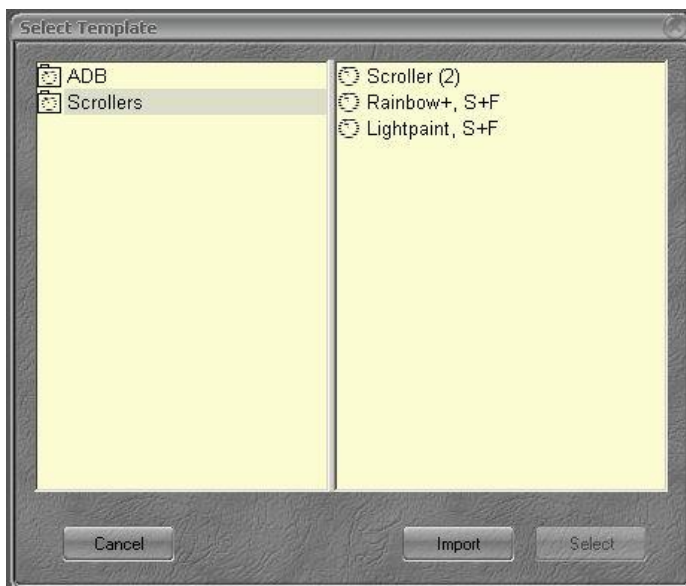
Set the number of instruments to create in the Number of instruments box (e.g.: 4).

Set two Parts in the Number of parts box (one for the dimmer and one for the scroller).

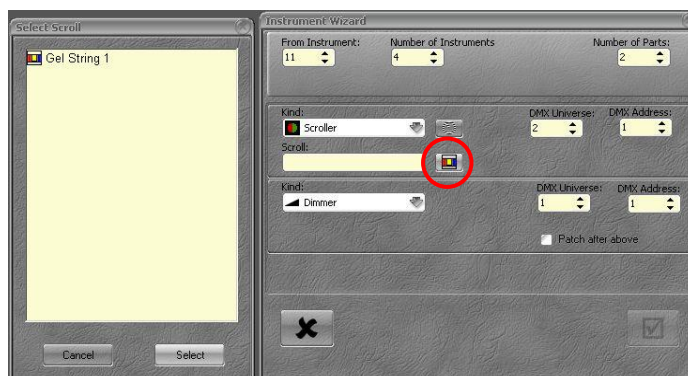
Set DMX Universes for the dimmer and for the scroller.

In the Kind area, click on Dimmers and choose {Select Templates}, then click on the soft button at the right side of this box.

A popup will open:



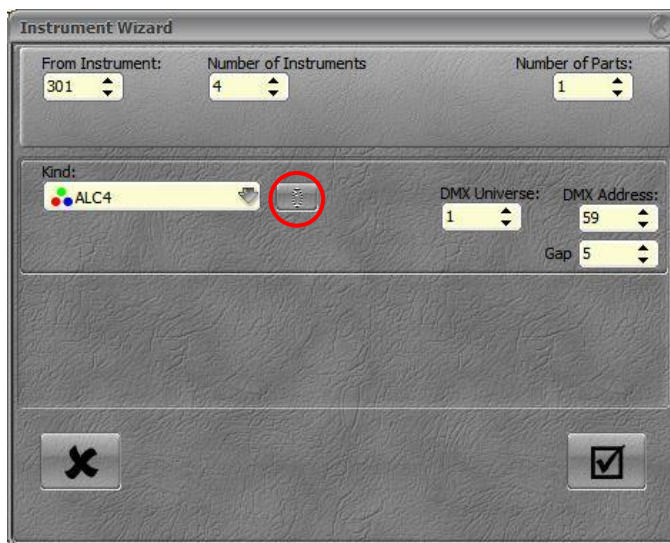
Click on the dedicated Scroller and click on Select.



Click on the Gel String ICON. In the Select Scroll window, click on the Gel String of your choice then {Select}. The selected gel String will appear in the Scroll box.

3.3.2.2 Patching Moving Lights

Go to the Channel # Column (Channel List), Right Click and choose {Instrument wizard} in the list.



Set the first instrument of the range in the **From Instrument** box (e.g.: Instrument 301).

Set the number of instruments to create in the **Number of instruments** box (e.g.: 4).

Set the **DMX Universe** and the DMX Address for the first Device.

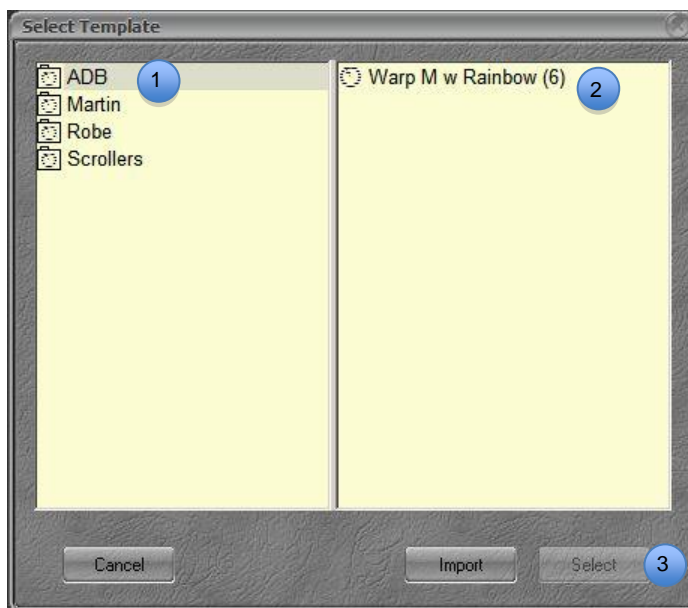
Set the Gap if needed

In the **Kind** area, click on Dimmers and choose **{Select Templates}**, then click on the soft button at the right side of this box.

Gap: the gap corresponds to the interval between the last DMX channel of a fixture and the first DMX channel of the following one. The **Gap number + the last channel number + 1 = next Fixture address**.

See also [5.3.5 Set New Template](#) for more details.

The Select Template window will be displayed:



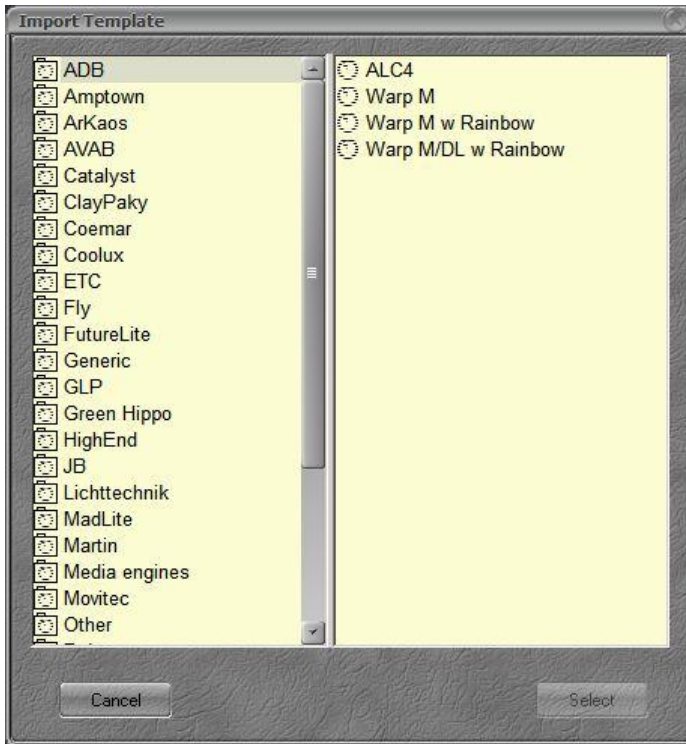
1 Click on the manufacturer file to open the file.

2 Click on the Device template needed, then click on **{Select}** 3

The Device Templates displayed in that window are the **Show Device Templates**. It is also possible to import new Templates from that window.

Importing Device templates from the select window

To import a Device template from the Library: Click on **{Import}**, the Import template window will be displayed:



Click on the manufacturer file to open the list of available Device Templates. Click on the Device Template needed, and then click on {select}. The Device template is added in the Select Template window.

TIP

To quickly patch a Fixture, first open the Play Menu, eventually pin it (click on the pin close to the cross, upside right corner), and click Device Templates tab open the folder. Expand the dedicated manufacturer (e.g. ADB).

Drag & Drop the Device Template to:

1/ A Channel **in the Channel List**, it will open the Wizard directly with the chosen channel number.

2/ A DMX address **in the DMX Outputs Grid**, it will open the Wizard directly with the chosen DMX Channel (Universe and address).

3.4 SPECIAL FUNCTIONS

3.4.1 Right Click on Instrument Setup

Edit Instrument Setup: To open a new Instrument Setup window.

In the Channel List, Right Click on Instrument Setup and choose **{Edit Instrument Setup}** in the list.

Insert Sub: Instrument: To insert a new Instrument in the list.

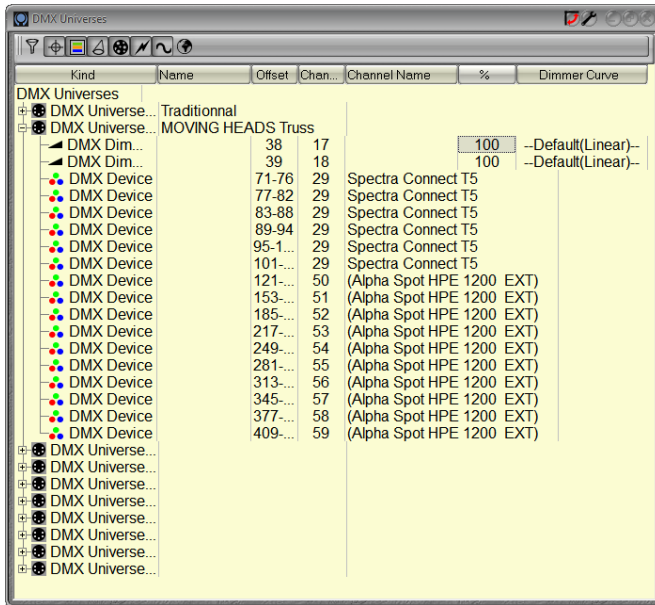
In the Channel List, Right Click on Instrument Setup and choose **{Insert Sub:Instrument}** in the list. In order to insert a new instrument, enter the Instrument number before to select the feature. E.g: **[121] {Insert Sub: Instrument}** to insert channel 121.

Note: it is also possible to use the insert key on the computer keyboard.

E.g: **[121] (Insert)** to insert channel 121.

Browse Universes: To open universes Editor window.

In the Channel List, Right Click on Instrument Setup and choose **{Browse Universes}** in the list. That Editor allows user to edit Universe Name, and if browsing through an universe, edit Dimmer Name, change proportional Output level, and Dimmer Curve.



To edit the Universe Name:
Double click in the Name cell.
Enter the label with the keyboard.
(Enter).

To edit the Dimmer Name:
Develop the Universe involved.
Click on the DMX dimmer.
Double click in the Name cell.
Enter the label with the keyboard.
(Enter).

To edit the Proportional Output Level:
Develop the Universe involved.
Click on the DMX dimmer.
Double click in the % cell.
Enter the value with the keyboard.
(Enter).

To select a Dimmer Curve:
Develop the Universe involved.
Click on the DMX dimmer.
Double click in the Dimmer Curve cell.
Select a curve in the list.

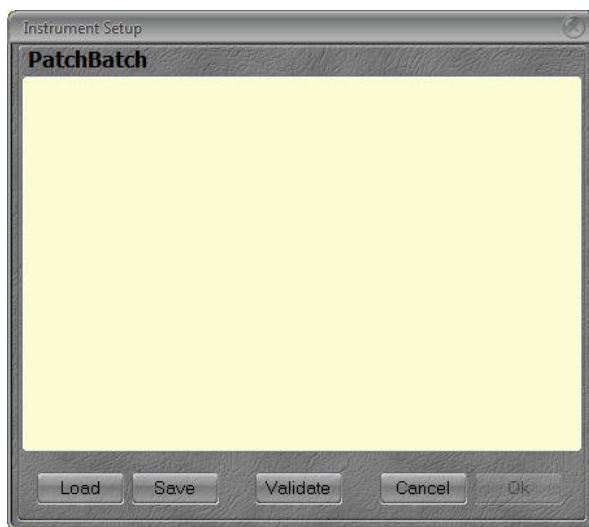
Instrument Wizard

In the Channel List, Right Click on Instrument Setup and choose **{Instrument Wizard}** in the list. See Section **Error! Reference source not found.** Using the Wizard.

Batch Repatch

The Batch Repatch feature allows moving a batch of **DMX channels** from one Universe to another, with or without offset.

In the Channel List, Right Click on Instrument Setup and choose **{Batch Repatch}** in the list. The Batch Repatch window opens



Use the following syntax to specify original Universe / DMX channel and target Universe / DMX channels: **(#) - (#) (=) (#).(#).**

E .g 1:



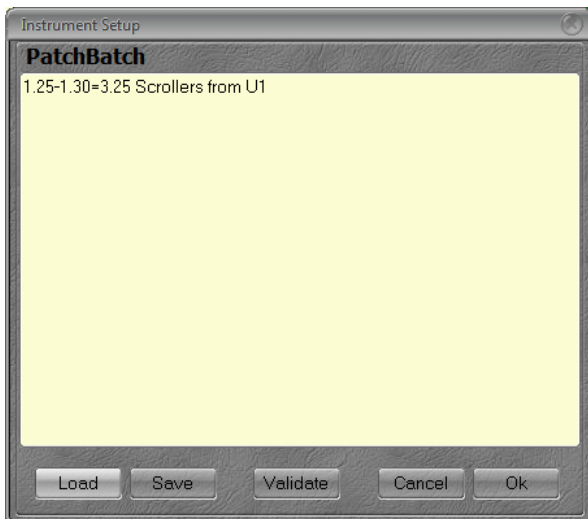
- 1.25-1.30: corresponds to DMX channels to be replaced, DMX channels 25 thru 30 Universe 1.
- 3.25: corresponds to the first target DMX, DMX channels 25 Universe 3.

In this example DMX channels 25 thru 30 in Universe 1 will be replaced by DMX channels 25 thru 30 in Universe 3, without any offset.

To add an offset, use a different target number than the source number.

In the previous example, 1.25-1.30 = 3.26 will replace DMX channels 25 thru 30 in Universe 1 by DMX channels 26 thru 31 in Universe 3, without an offset of 1.

Enter a name at the end of the command line will add this name to the target Universe.



Scrollers from U1: New name for Universe 3.

Note: there can be several command lines in order to repatch non consecutive DMX channels, different Universes and so on.

As soon as all command lines are entered, it is possible to test it with **Validate**

If the command lines are correct, a popup window will appear, click on OK to exit. Then you can execute the Batch Repatch, or Save it if necessary.

To **save** the Batch Repatch script click on **Save.**

To **execute** the Batch Repatch script click on **Ok**

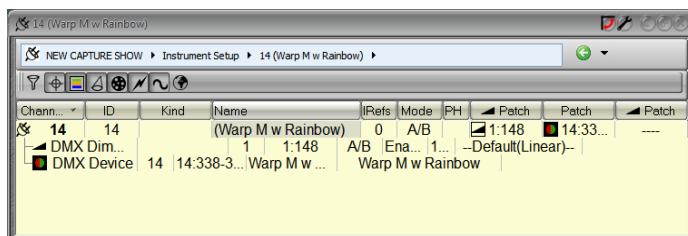
To load a Batch Repatch script click on **Load**

Right Click on a specific instrument.

Edit Instrument: To open the Instrument window.

In the Channel List, Right Click on one channel / Instrument in the list and choose **{Edit Instrument}**, it will open the corresponding Instrument window.

E.g: Right Click on Channel 14.



Insert Sub > DMX dimmer: To add a dimmer without any address to the selected channel.

In the Channel List, Right Click on one channel / Instrument in the list and choose **{Insert Sub DMX dimmer}**, it will add a new empty dimmer to that channel.

Insert Sub > DMX device: To add a device without any address to the selected channel.

In the Channel List, Right Click on one channel / Instrument in the list and choose **{Insert Sub DMX device}**, it will open the Device Templates window, choose the device and click on Select. The new device will be added to that channel.

Insert Instrument: To insert a new Instrument in the list

In the Channel List, Right Click on Instrument Setup and choose **{Insert Instrument}** in the list.

In order to insert a new instrument, enter the Instrument number before to select the feature.

Delete Instrument: To delete an Instrument

In the Channel List, Right Click on Instrument Setup and choose **{Delete Instrument}**.

Browse Universes: To open universes Editor Window

In the Channel List, Right Click on Instrument Setup and choose **{Browse Universes}** in the list. That Editor allows user to edit Universe Name, and if browsing through a universe, edit Dimmer Name, change proportional Output level, and Dimmer Curve.

See [Browse Universes: To open universes Editor window](#) in the previous section for details.

Instrument Wizard

In the Channel List, Right Click on Instrument Setup and choose **{Instrument Wizard}** in the list. See Section **Error! Reference source not found.** Using the Wizard.

4. TRADITIONNAL CHANNELS (INSTRUMENTS)

4.1 INTRODUCTION

A channel is the "handle" you call upon to control any dimmer or moving device connected to the system. Channels are selected in the Field Editor (channel Grid), which controls the channel function of the programming section. The Channel Control functions are mapped to any section of the console at any time - for example pressing [A/B] swaps between the A field of the Main Playback and the B field (Blind field) corresponding to the incoming step in the sequence.

General Facts

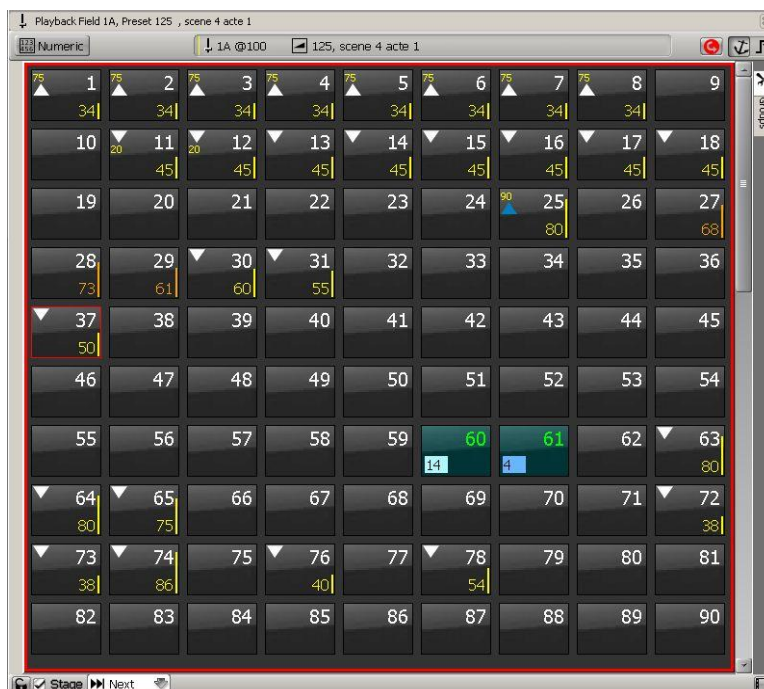
Channels can be selected and set with a Command Syntax from the keypad.

Channels can be selected and set with the mouse or your finger.

Channel levels are set from 0-100%. 0% values are not displayed on the channel screen and 100% values are displayed as **F**, standing for "Full".

4.2 THE FIELD EDITOR

- At the top of this window are displayed:
 - The selected Playback and its field (e.g.: Playback 1, field A) with the number and the name of the loaded Preset, or the selected Field.
 - Left side: the display format (Simple click to open a menu).
 - Middle: the selected Playback, its field and the Level (normally 100 for A field and zero from B field) the loaded Preset (number and name).



- At the bottom of this window the status stage option:
 - Checked: the channel grid displays the Output.

White Number: generic light
Green Number: channel with DEVICE (e.g.: scroller) or Moving Light
Channel box with a red square: selected channel
In Yellow / Downside Right corner: channels LEVELS coming from the selected Field
In Yellow / Upside Left Corner: incoming LEVELS
White triangle: with In/Out Sequence step time
Blue triangle: with particular time
In Orange/Downside right corner: Stage Channels LEVELS
- Colored Square with number: FRAME number

Unchecked: the channel grid displays only the content of the selected Field.

4.3 SELECTING INSTRUMENTS AND SETTING VALUES

4.3.1 Console: using the Keypad

4.3.1.1 Using [Ch] [At%] [+] [-] [Thru] Keys and the intensity wheel

select one channel and use the intensity wheel

[#] + Intensity wheel

select one channel and use the [At%] key

[#] [Ch] [#] [At%]: Channel # at # %

[#] [Ch] [At%]: Channel # at **Steplevel** (defined in Preferences/Channels/ « Use Steplevel »)

[#] [Ch] [At%] [At%] > Channel # at Full

select several channels and use the [At%] key

[#] [Ch] [#] [+] [#] [+] [#] [+] [#] [+] [#=level] [At%] (or [At%] or [At%] [At%])

select a range of channels and use the [At%] key

[#] [Ch] [#] [Thru] [#=level] [At%] (or [At%] or [At%] [At%])

select a range of channels except some of them and use the [At%] key

[#] [Ch] [#] [Thru] [#] [-] [#] [-] [#=level] [At%] (or [At%] or [At%] [At%])

select a range of channels and add some others channels and use the [At%] key

[#] [Ch] [#] [Thru] [#] [+] [#] [+] [#=level] [At%] (or [At%] or [At%] [At%])

4.3.1.2 Using [+%] and [-%]

select one channel or several channels ALREADY with intensity upper than zero in the active Field and use the [+%] and [-%] keys to increase or decrease the level

[#] [Ch] [#] [+] [#] [-] [+%] > Level of selected channels increased of 5% (If 5 is the value in the +/-% field in Preferences/Channels)

[#] [Ch] [#] [+] [#] [-] [-%] > Level of selected channels decreased of 5% (If 5 is the value in the +/-% field in Preferences/Channels)

4.3.1.3 Using [All] and [Invert] key

The **[All]** key is designed to select every channel with an intensity greater than zero in the active Field.

The **[invert]** key is designed to select unselected channels with an intensity greater than zero.

e.g.:

first select some channels and give them some intensity values

[1] [Ch] [3] [+] [5] [+] [60] [At%]

Then select other channels and give them some intensity values

[13] [Ch] [24] [THRU] [At%] [At%]

To select again channels 1, 3 and 5 press **[INVERT]**

4.3.1.4 Clear Functions

To clear all selected channels without resetting levels to zero

[C/ALT] [Ch]

To clear all selected channels and reset all levels to zero

[C/ALT] & [Ch]

4.3.1.5 **Software: using the mouse**

Same as with the keypad, but instead of using [CH] key, simply select the channel with ONE click to add it to the selection DOUBLE click to deselect others and keep only this channel selected. Then use the intensity wheel, [At%], [%+] and [%-] keys to set levels. You can also Hold the mouse's Right button and move the mouse to change levels.

Clear Functions

To clear all selected channels; DOUBLE LEFT Click in the channel grid (empty space).

4.3.1.6 **Software: using the Touch screen facilities**

Same as with the keypad, but instead of using [CH] key, simply select the channel with ONE touch to add it to the selection DOUBLE touch to deselect others and keep only this channel selected. Then use the intensity wheel, [At%], [%+] and [%-] keys to set levels.

Clear Functions

To clear all selected channels; DOUBLE LEFT Click in the channel grid (empty space).

4.3.1.7 **Specific Selecting Tools**

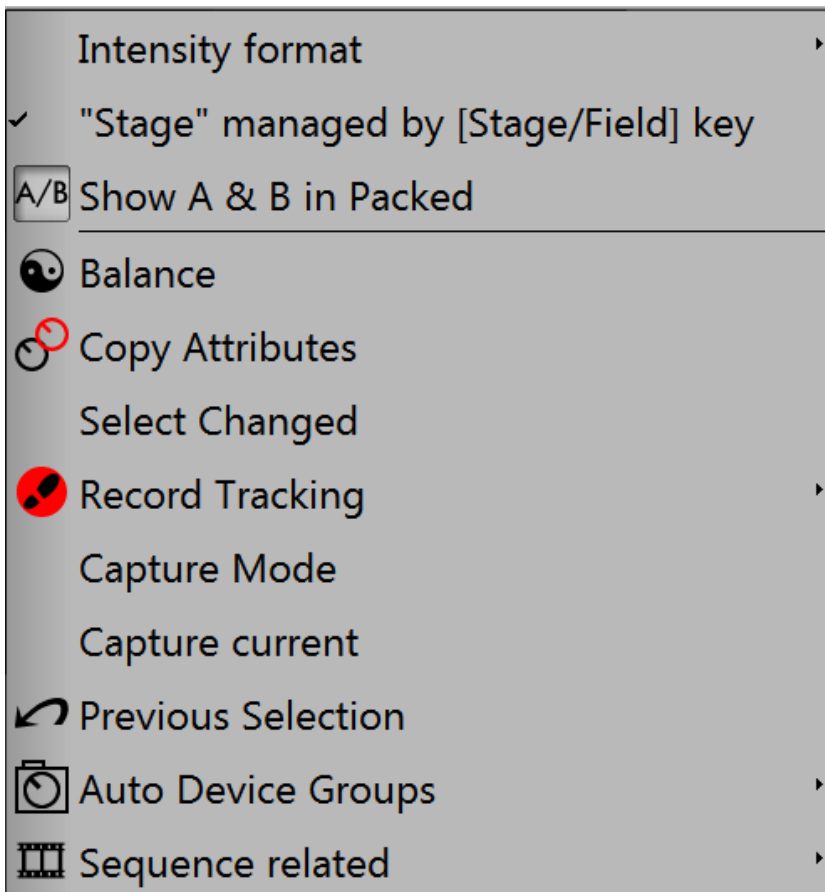
Right Click in the Field Editor displays a specific pop-up menu offering a lot of non-contextual or contextual options.

4.3.1.8 **Non contextual specific tools**

Please refer to:

CONTROLLERS / FIELD EDITOR “ Right Click in the Field Editor allows to:”

4.3.2 Contextual specific tools, no channel selected

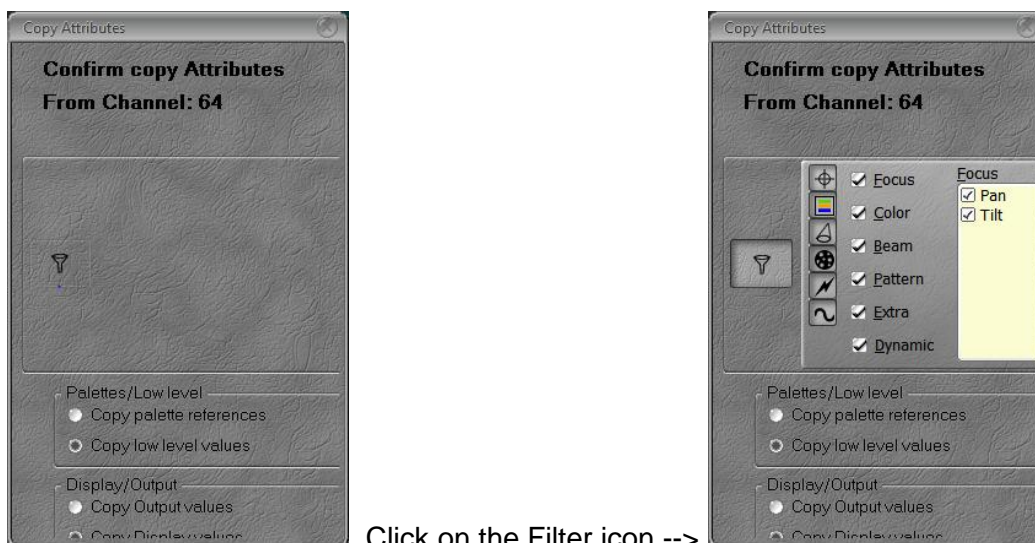


4.3.2.1 Balance

To set all unselected channels to zero.
Console equivalent **[BAL]**, see 4.3.7 for more information.

4.3.2.2 Copy Attributes

To copy attributes values from one source device to target device(s).
First selected channel is the source. Attributes copied depends on filters.



4.3.2.3 Select Changed

This function will be displayed only if some channel's level has been modified. It allows selecting only intensity changed channel(s).

4.3.2.4 Record Tracking

This function will be displayed only if some channel's level has been modified. It will update the channel(s) with the new level(s), not only in one Preset, but over a consecutive range of Presets with similar level for that channel(s), that is to say a **Track**. Record Tracking offers two options when selected:

Record Tracking Selected:

Only selected channel(s) will be involved.

Console function: [\[Record Selected Tracking\]](#)

Record Tracking Changed

All changed channel(s) will be involved.

Console function: [\[Record Changed Tracking\]](#)

4.3.2.5 Capture Mode

Enter in Capture mode. The Field Editor background colour temporarily changes for **RED**. Changing selected channel levels will automatically capture these channels with their current level.

Important: Select channel(s) before using this mode.

Console function: [\[Capture\]](#).

4.3.2.6 Capture Current

Capture automatically selected channel(s) with their current level.

Important: Select channel(s) and set level(s) before using this mode.

Console function: [\[Capture NOW\]](#).

Console Syntax: [\[Ch\]&\[Capture\]](#).

4.3.2.7 Previous Selection

Select previously selected channel(s), and deselect others.

4.3.2.8 Auto Device Groups

Displays Auto Device Groups.

As soon as a new Device Template is used in the patch, the new devices are added in the Devices list, and an Auto Device Group is generated.

Note: there is no key to select Auto Device Groups, but there is a direct access in the GROUP Direct Access Panel.

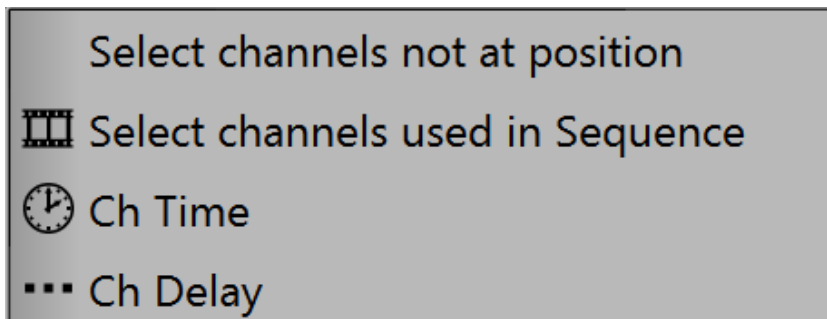
Click on the icon  to open the Auto Device Groups part.



4.3.2.9 Sequence Related

Sequence Related functions are context relevant.

NO CHANNEL SELECTED, or only conventional CHANNEL(S) SELECTED



Select channels not at position:

Only channels with some attributes changed in comparison with recorded values or historical values in the current Step will be selected. Other channels) will be deselected.

Select channels used in Sequence:

Only used channels in the current Sequence will be selected. Other channels) will be deselected.

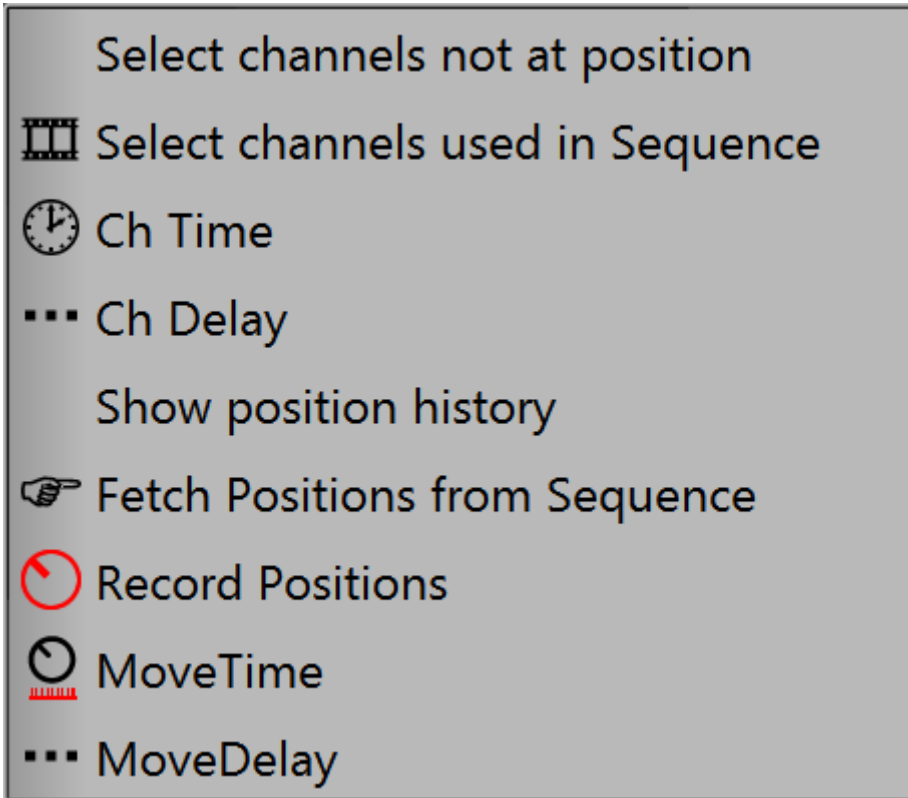
Ch Time:

Select some channel(s), enter a value, and then choose Ch Time to create a new Partfade with time settings in the current Step.

Ch Delay:

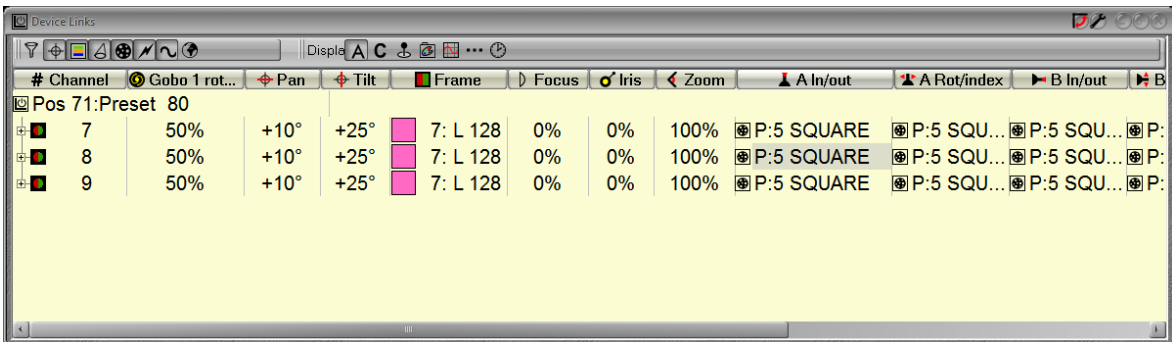
Select some channel(s), enter a value, and then choose Ch Delay to create a new Partfade with delay settings in the current Step.

DEVICE CHANNEL(S) SELECTED



Show position history:

Open a specific Editor window.



Values or Palettes correspond to reality, regardless if they are recorded or if they are tracked from another Sequence Step. Then it is possible to directly edit it in that window. Double click on a “position step” parameter as Frame for instance and pick a new position in the list, or double click in the cell corresponding to the parameter value to modify, enter the new value, and then confirm with **{enter}**.

The parameter value will be modified where it was originally recorded (source).

To see all details and source Sequence Steps, develop the device link (click on the little cross left side of the channel number).

Owned by...	Parameter	Snap	Delay	(Delay)	Time	(Time)	Palette	Position
7 50% +10°	+25°	<input type="checkbox"/>	1: L 130	0%	10%	100%	0%	0°
Seq 1\Pos 50 Preset 53 \Ch 7	Gobo 1 rotation	<input type="checkbox"/>		%	%		---	50%
Seq 1\Pos 70 Preset 70 \Ch 7	Pan	<input type="checkbox"/>		%	%	00:02,00	---	+10°
Seq 1\Pos 15 Preset 13 \Ch 7	Pan					Clear Dynamic		
Seq 1\Pos 70 Preset 70 \Ch 7	Tilt	<input type="checkbox"/>		%	%	00:02,00	---	+25°
Seq 1\Pos 15 Preset 13 \Ch 7	Tilt					Clear Dynamic		
Seq 1\Pos 70 Preset 70 \Ch 7	Frame	<input type="checkbox"/>		%	%	00:02,00	---	1: L 130
Seq 1\Pos 15 Preset 13 \Ch 7	Frame					Clear Dynamic		
Seq 1\Pos 50 Preset 53 \Ch 7	Focus	<input type="checkbox"/>		%	%	00:03,00	---	0%
Seq 1\Pos 15 Preset 13 \Ch 7	Focus					Clear Dynamic		
Seq 1\Pos 50 Preset 53 \Ch 7	Iris	<input type="checkbox"/>		%	%	00:03,00	---	10%
Seq 1\Pos 15 Preset 13 \Ch 7	Iris					Clear Dynamic		
Seq 1\Pos 65 Preset 54 \Ch 7	Zoom	<input type="checkbox"/>		%		00:03,00	---	100%
Seq 1\Pos 15 Preset 13 \Ch 7	Zoom					Clear Dynamic		
Seq 1\Pos 70 Preset 70 \Ch 7	A In/out	<input type="checkbox"/>		%	%	00:02,00	---	0%
Seq 1\Pos 15 Preset 13 \Ch 7	A In/out					Clear Dynamic		
Seq 1\Pos 65 Preset 54 \Ch 7	A Rot/index	<input type="checkbox"/>		%	%	00:08,00	---	0°
Seq 1\Pos 15 Preset 13 \Ch 7	A Rot/index					Clear Dynamic		
Seq 1\Pos 70 Preset 70 \Ch 7	B In/out	<input type="checkbox"/>		%	%	00:02,00	---	0%
Seq 1\Pos 15 Preset 13 \Ch 7	B In/out					Clear Dynamic		
Seq 1\Pos 50 Preset 53 \Ch 7	B Rot/index	<input type="checkbox"/>		%	%	00:03,00	---	0°
Seq 1\Pos 15 Preset 13 \Ch 7	B Rot/index					Clear Dynamic		
Seq 1\Pos 70 Preset 70 \Ch 7	C In/out	<input type="checkbox"/>		%	%	00:02,00	---	0%
Seq 1\Pos 15 Preset 13 \Ch 7	C In/out					Clear Dynamic		
Seq 1\Pos 65 Preset 54 \Ch 7	C Rot/index	<input type="checkbox"/>		%	%	00:08,00	---	0°

For every parameter are displayed:

- the original sequence step (**Owned by**)
- the Parameter
- Snap mode, and, if checked, the Snap Position
- Absolute Delay and Time
- Relative Delay and Time
- the Palette
- the value (**position**)

Note: it is always possible to use attributes filters to display only selected group(s) of attributes.

Just click on the filter to enable it. Use the **(SHIFT)** key to select several filters.

# Channel	Pan	Tilt	Frame
Pos 71: Preset 80			
7	+10°	+25°	7: L 128
8	+10°	+25°	7: L 128
9	+10°	+25°	7: L 128

Fetch Positions from Sequence:

Offers the possibility to select a position (a step) in the list, to choose, via filters, what attributes will be involved in the FETCH process for the selected channel(s).

Record Positions:

Offers the possibility to record parameter values for the selected channel(s), with filters option, by default in the active step (A), or in any step in the list.

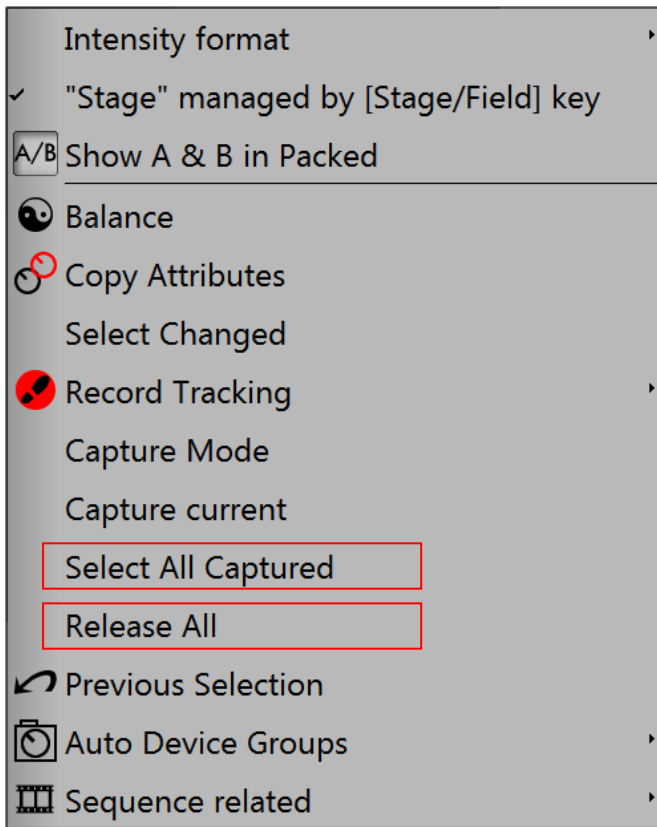
Move Time:

To assign a Parameter Time to the selected channels. All attributes for that channel are involved.

Move Delay:

To assign a Parameter Delay to the selected channels. All attributes for that channel are involved.

4.3.3 Contextual specific tools some Channels Captured



4.3.3.1 Select all Captured

To select all captured channels.

Console Syntax: **[CAPTURE]&[ALL]**

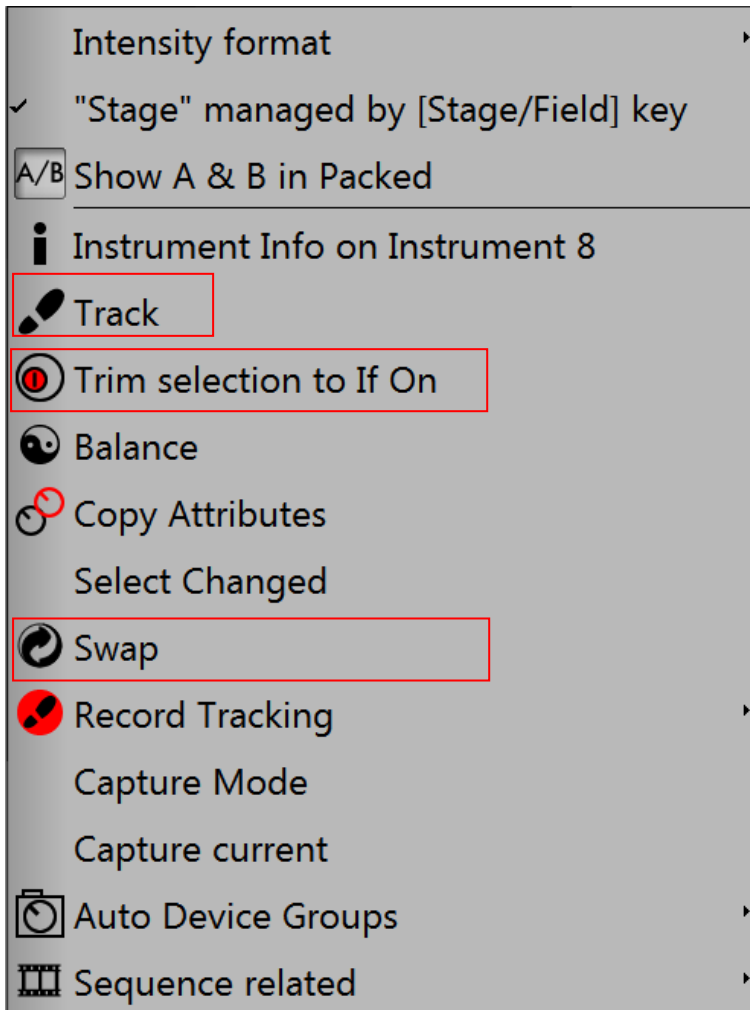
4.3.3.2 Release all

To release all captured channels.

Console Function: **RELEASE ALL**

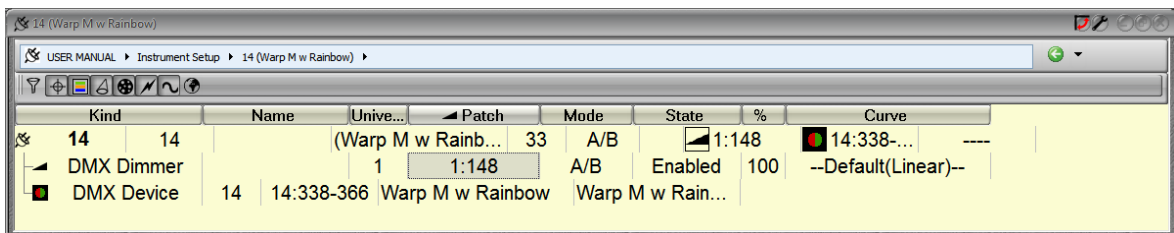
Console Syntax: **[RELEASE]&[ALL]**

4.3.4 Contextual SpecificTools: Channels selected



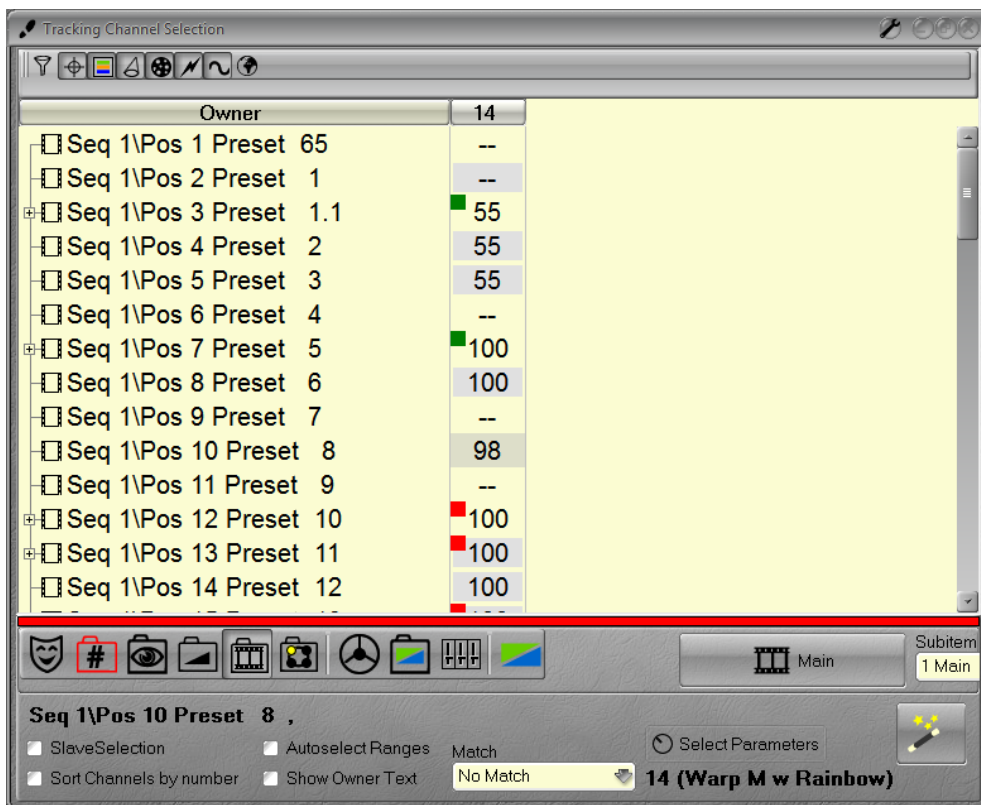
4.3.4.1 Instrument Info

To open the Instrument Info for the selected channel.



4.3.4.2 Track

To open the Track window for the selected channel(s). See also: The TRACK WINDOW [TRACK] / Ctrl F4 (Chapter 12)



4.3.4.3 Trim selection to if On

To keep **only channels with level > 0** selected.

4.3.4.4 Swap

To exchange intensities from one channel to another over all sequence steps.

Select source channel first, then enter the target channel number with the keypad, and select **{Swap}**. Click on **Yes** to confirm.

Console function: **[Swap]**.

4.3.5 Focus Mode (Console mode)

First set all channels to focus at a preheat level

[1] [Ch] [24] [THRU] [5][At%] which set channels 1 thru 24 at 5%

Then select the start channel for focusing

[1] [Ch] [70] [At%]

hold the **[C/ALT]** key and use the **[+]** key to step to the next channel.

The level used for focusing depends of the Step level defined in the settings (MENU HATHOR/Setup/Preferences/Channels)

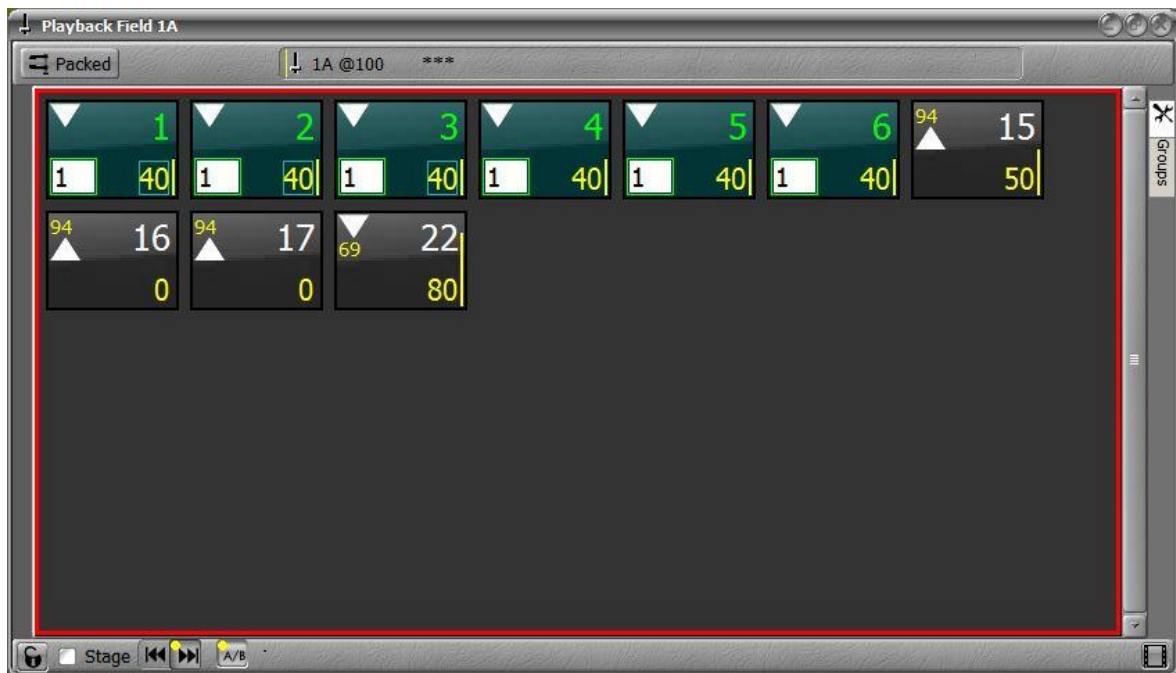
TIP: this method is also useful to check Channels

4.3.6 Scale function

The scale function allows mastering a selection of channels. When 100%, channels are played back at recorded levels. Scale settings below 100% will inhibit the channel intensity, scale settings above 100 % will boost the channel intensity.

- Select channels first
- Hold the Scale Key to enter in Scale mode.
- Set a proportional level with the intensity wheel, or with the keypad and **[At%]**

Scaled channels intensities are displayed with a purple square.



To clear scale values:

- Select channels
- Hold the Scale Key to enter in Scale mode.
- **[1] [0] [0] [At%]**

4.3.7 Balance mode

The Balance function allows to temporarily set all channels at 0% except selected channels. Original levels will be restored when Balance mode is exited.

- Select channels
- **[BAL]** to activate Balance mode
- **[BAL]** again to exit Balance mode

Note: Only channels with intensities (Balanced) will be recorded if you use **[REC]** when Balance mode is active

5. DEVICES (SCROLLERS AND MOVING LIGHTS)

5.1 SCROLLERS

5.1.1 Using the console Keypad

5.1.1.1 Using [FRAME] key

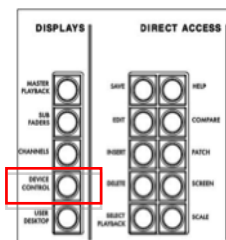
[#] [Ch] [#] [FRAME]: load the frame # for the channel #

5.1.1.2 Using [COLOR] key

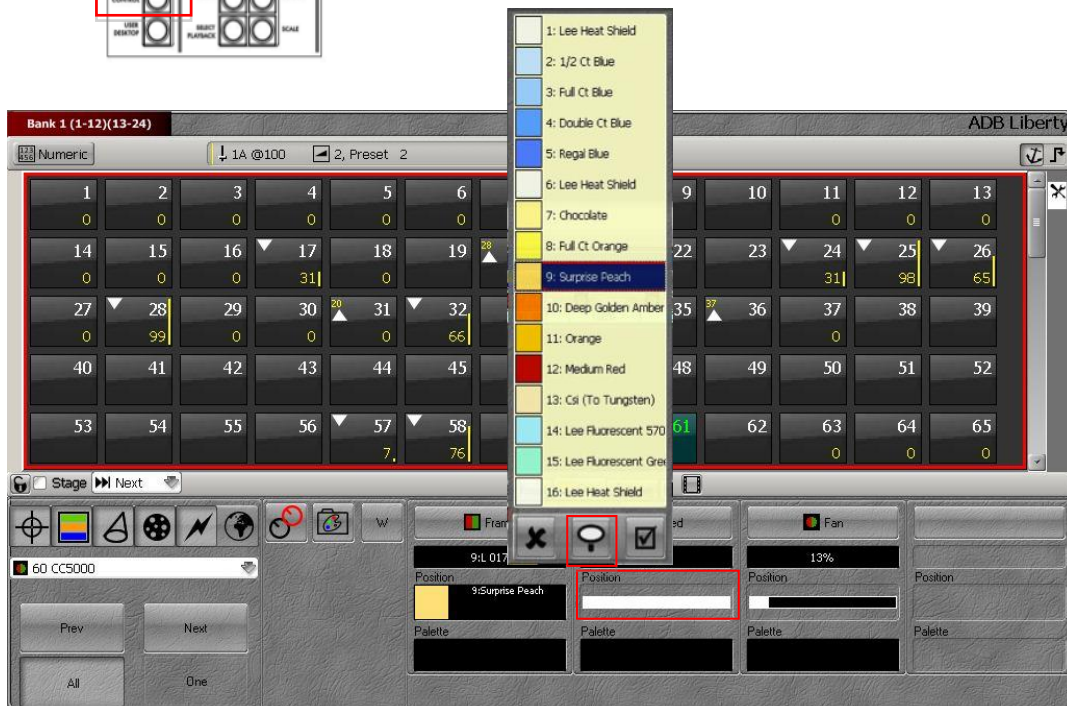
[#] [Ch] [0] [COLOR]: load the default frame, position 1 by default (Home Colour Frame) for the channel #

5.1.2 Using the mouse or the Touch Screen facilities

First select the DEVICE CONTROL SCREEN



Select Channel(s) with Scroller (e.g. Ch 60).
Select the Colour Attribute Group: [COLOR].



With the mouse, or your finger, click on the colour in the Frame part.
A list of Gels will appear: choose the colour you need. The list will close automatically.

Note: If you need to navigate in the list to check colours, use the « Pin » icon to lock the window, to confirm your choice click on the check mark icon.

5.1.3 Using the Push wheel

Select Channel(s) with scroller (e.g.: Ch 60).

Select the Colour Attribute Group: **[COLOR]**

Push on the Wheel displaying « FRAME »

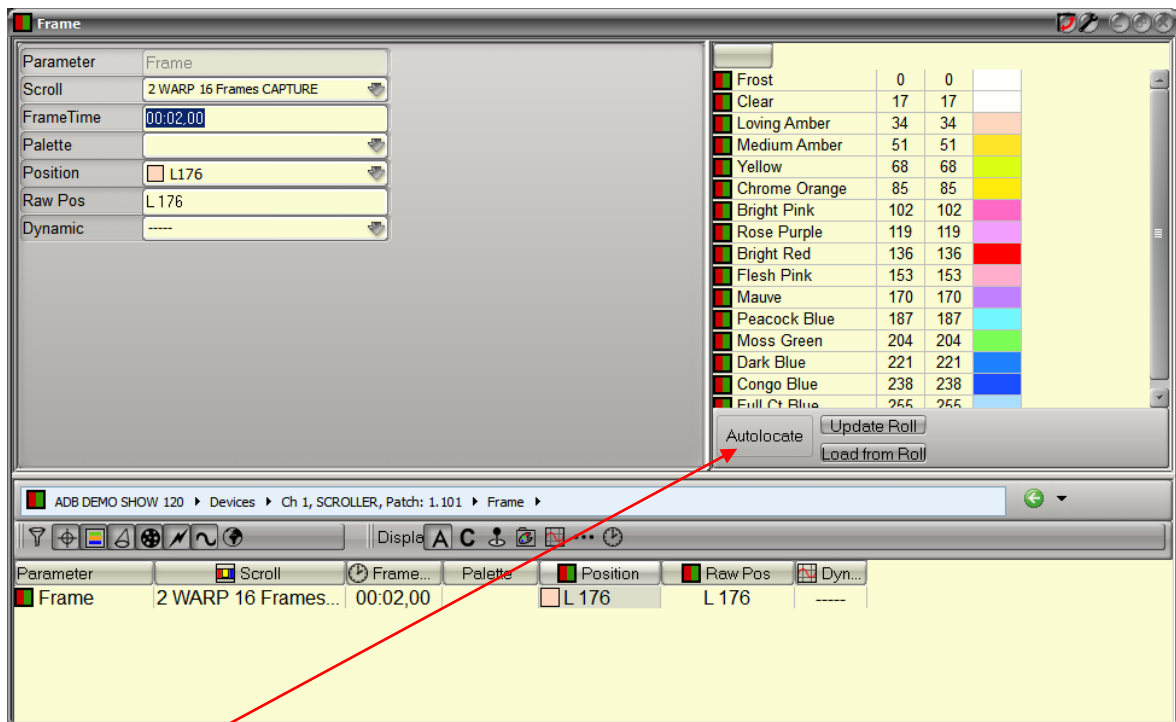
The list of Frames will appear: turn the wheel to scroll in the list, push to select the colour.

5.1.4 Calibrating a Gel String

Select one Channel with scroller.

In the Device Control window, select the Attribute Group **Colour**

Right Click on the Frame field and select **{Edit Device Part: Frame}**



Click on **Autolocate** to enable the LIVE mode.

In the second column of numbers, double click on the position to calibrate, the scroller will go to that Frame.

Enter a new number, or change the value with the mouse mini-wheel, the roll will move step by step.

When the new calibration is correct, confirm with **(ENTER)**, and if necessary use the keyboard arrows and ENTER again to select the next position to calibrate.

As soon as all the Gel String is calibrated, there is no need to record or update. The Gel String is automatically updated for that channel only.

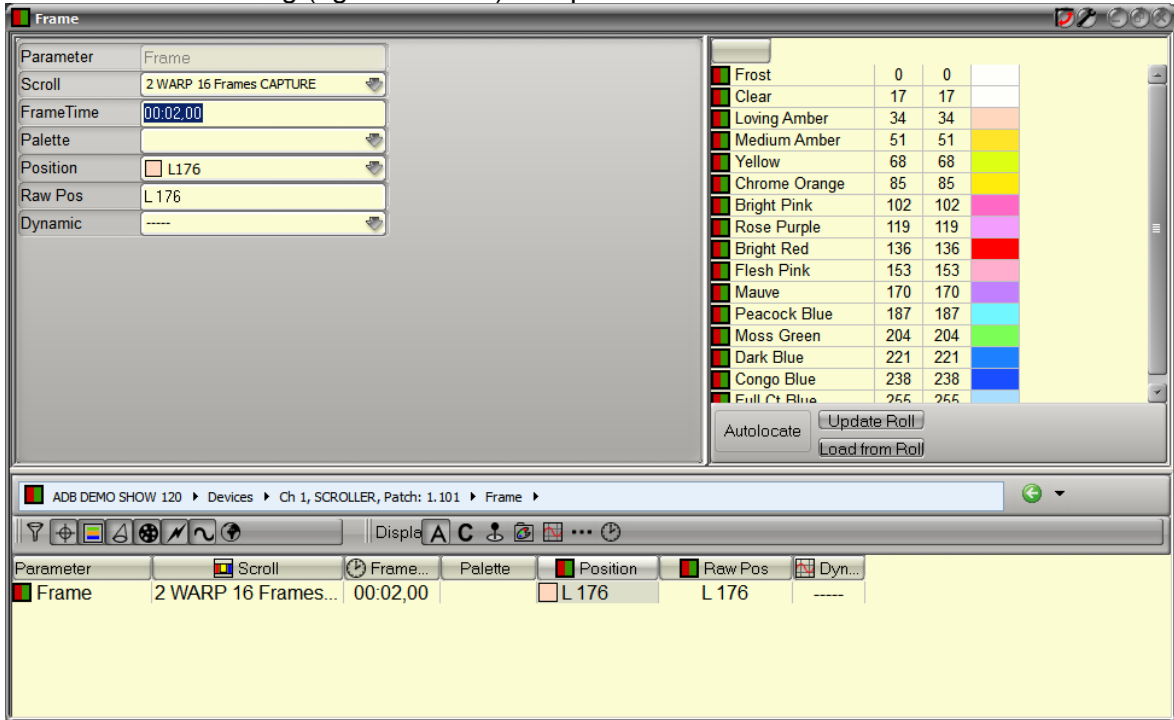
It is possible to update the original Gel String with these new settings with the **Update Roll** soft key. After this, the original Gel String is updated **but** the channels (scrollers) originally linked to that Gel String are still using the original version, not the updated version.

To link a channel (scroller) with the updated version, select the channel, Edit the Device part Frame, and then select **Load from Roll**.

5.1.5 Replacing a Gel String by another

Select one Channel with scroller.

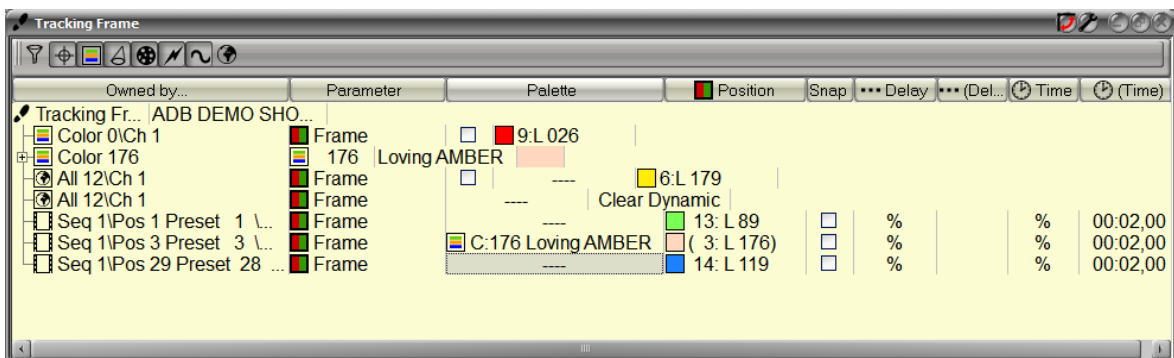
In the Device Control window, select the Attribute Group **Colour**
 Right Click on the Frame field and select **{Edit Device Part: Frame}**.
 Click on the Gel String (right to **Scroll**) and pick the new one in the list.



5.1.6 Tracking a Gel String

Select one Channel with scroller.

In the Device Control window, select the Attribute Group **Colour**
 Right Click on the Frame field and select **{Track Frame}**.



This window displays:

Owned by: the object containing the Frame

Parameter: Frame

Palette: Recorded Palette in the Sequence Step

Position: Frame number
Snap: Parameter Timed or not (snap)
Delay: Relative Delay / Crossfade Time, % = 100%
(Delay): Absolute Frame Delay
Time: Relative Time / Crossfade Time, % = 100%
(Time): Absolute Frame Time

This window allows modifications, **objects are automatically updated:**

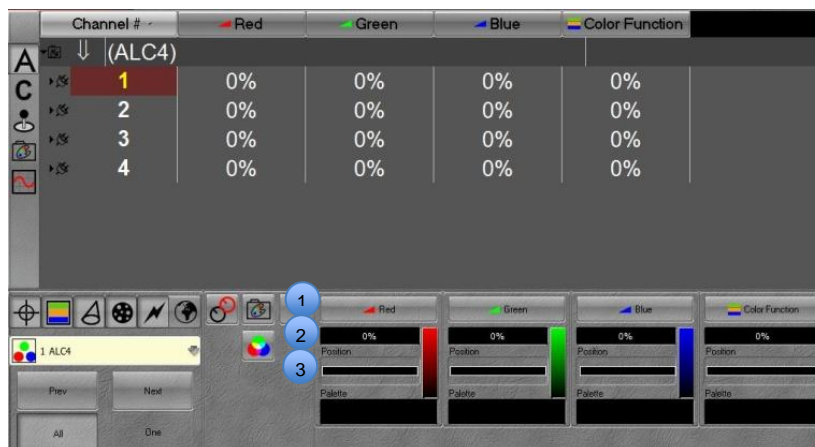
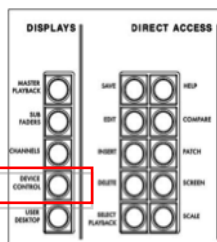
Palette: it is possible to pick any available Palette in the list.
Position: it is possible to pick any available Frame position in the list.
Snap: enable or disable the snap mode as needed
Delay: Relative Delay can be modified
(Delay): Absolute Frame Delay can be modified


Time: Relative Time can be modified
(Time): Absolute Frame Time can be modified

5.2 MOVING LIGHTS


5.2.1 Using the Touch Screen facilities

First select the DEVICE CONTROL SCREEN [\[DEVICE CONTROL\]](#)




Select Channel(s) corresponding to Moving Light (green numbers).
 Select the Attribute group corresponding to the parameter(s) to control either with a console key (e.g.: [COLOR]) or with a Touch Screen Softkey (e.g. : )

5.2.1.1 With the keypad

To set a value to a parameter, enter the value with the keypad then double click on the black area just under the parameter. 

5.2.1.2 With the Touch screen

To use predefined parameter steps:

In the bottom part of the DEVICE CONTROL SCREEN, click on the position black area under the parameter to open the list of predefined steps (e.g.: lamp on, lamp off, shutter open, etc...). 

Click on the predefined step, the list will close automatically after selecting.

To use recorded palettes:

In the bottom part of the DEVICE CONTROL SCREEN, click on the palette black area under the parameter to open the list of recorded palettes. 

Click on the palette, the list will close automatically after selecting.

TIP: to check different gobos, different colours of a colour wheel, or different palettes, click on the pin icon at the bottom of the list, step through the list, then confirm by clicking in the checkmark box.

To use the COLOR PICKER 

Click on the RGB soft key, the Color Picker will appear, simply pick the colour of your choice.

To use the GEL PICKER  → 

Click on the RGB soft key, click on the swatch book icon, the GEL PICKER will appear, choose the manufacturer, then the color.

To copy a value from a source channel to target channel(s).

Select a channel, set a value to a parameter (e.g. 30% zoom).

Add target channels to the current selected channel **([#] [+], ([#] [+])**

Click on the Black & Red circles icon soft key

The Copy Attributes window appears.

Confirm with **[ENTER]**.



5.2.1.3 With the virtual wheels

In the bottom part of the DEVICE CONTROL SCREEN, press on the **w** softkey to display the virtual wheels.

Turn the virtual wheel corresponding to the parameter to control with your finger

To close the virtual wheels, just click on the red cross.

5.2.1.4 With the Intensity Wheel

In the bottom part of the DEVICE CONTROL SCREEN, select with your finger the parameter to control, a red square around these parameter will appear and the LCD screen above the Trackball will display the parameter name and the current value.

Turn the Intensity wheel to adjust control the parameter

5.2.2 Using the Push Wheels

Note: Push wheels are in progressive mode by default, which means it's following the movement of your finger. Turn simply the wheel very slowly to get a fine adjustment. Attributes belonging to the Attribute Group selected will appear in the LCD displays located under the wheels.

To adjust the parameter:

Turn the wheel

To give a numeric value to the parameter:

[##] and press on the wheel

To give the same numeric value to several attributes:

[##], hold [C/ALT] and press on the wheels

5.2.3 Using the Trackball

Note: Because the trackball is only designed to control focus attributes (PAN and TILT), it is not necessary to select [FOCUS] to control PAN and TILT with the Trackball.

First check that PREVIOUS and NEXT LEDS are OFF. If these LEDS are on, the trackball is in **Mouse mode**.

To toggle between the **Mouse mode** and the Trackball mode:

[ALL/ONE] & [NEXT] or **[ALL/ONE] & [PREVIOUS]**

To control PAN & TILT: move the Trackball.

To get fine adjustment of PAN & TILT:

Hold [C/ALT] while using the Trackball

5.2.4 Using the dedicated keys

5.2.4.1 Using the Copy att key to copy a value from a channel to target channel(s)

Select a channel, set a value to a parameter (e.g.: 30% zoom).

Add target channels to the current selected channel (**[#] [+]**, (**[#] [+]**)

[COPY ATT]&[BEAM], the Copy Attributes window appears, with only beam attributes selected.

Confirm with **[ENTER]** or with **[COPY ATT]**.

Note: HATHOR always remember last attributes activated in the Copy Attributes window. If you carry on working with the same attributes, you don't need to link the Attribute Group to the COPY ATT key every time.

5.2.4.2 Using the Fetch key to copy value(s) from a Sequence step to the stage

Select one or several channel(s).

Select the source preset, then copy value for the Attribute Group of your choice (e.g.: COLOR).

[#] [FETCH] & [COLOR]

A window appears, displaying the list of sequence steps on the left side and the values for the channel's selection related to the selected step, on the right side.

Check if values are consistent, then confirm with **[ENTER]**.

5.2.4.3 Using the Previous, all/one and Next keys

In ONE mode, NEXT and PREVIOUS will step through the current channel selection, in the order they were selected. The focused channel is mapped to intensity and parameter controls and is highlighted in Purple. The selection remains.

Note: ONE mode and Balance Mode are often used in combination for focusing single channels within a channel selection.

5.2.5 Using specific key functions

[AF FOCUS -] **[AF FOCUS +]**

[AF IRIS -] **[AF IRIS +]**

[AF PAN Left] **[AF PAN Right]**

[AF TILT Down] **[AF TILT Up]**

[AF ZOOM -] **[AF ZOOM +]**

5.2.6 Tracking a parameter

Select the involved Device.

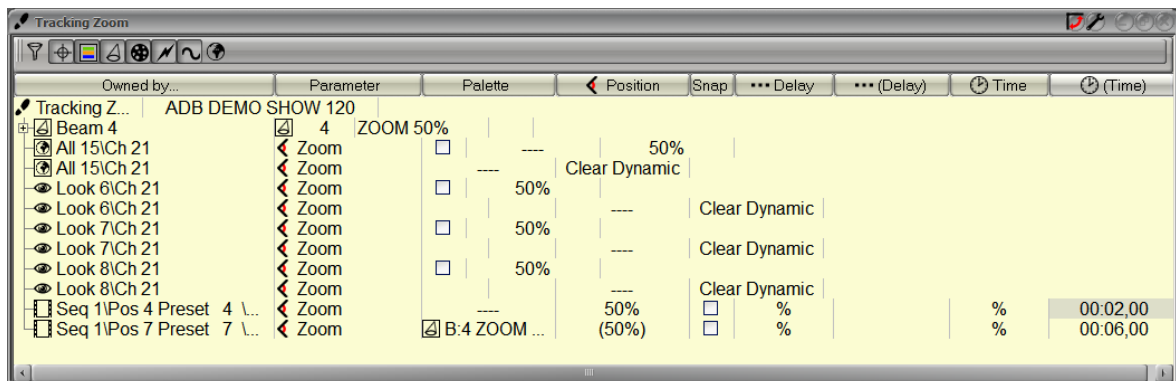
Software method: in the Device Control window, select the Attribute Group which includes the parameter.

Right Click on the value field and select **{Track xxx}**.

Console method: select the correct Attribute Group, then **[TRACK]&[PUSH WHEEL]**

Example: select a Device with a zoom. In the Device Control window, select the Attribute Group Beam and then Right Click on the value field and select **{Track Zoom}**.

Or **[BEAM] [TRACK]&[PUSH WHEEL : ZOOM]**



This window displays:

Owned by: the object containing the Frame

Parameter: Zoom

Palette: Recorded Palette in the Sequence Step

Position: Zoom value in %

Snap: Parameter Timed or not (snap)
Delay: Relative Delay / Crossfade Time, % = 100%
(Delay): Absolute Frame Delay
Time: Relative Time / Crossfade Time, % = 100%
(Time): Absolute Frame Time

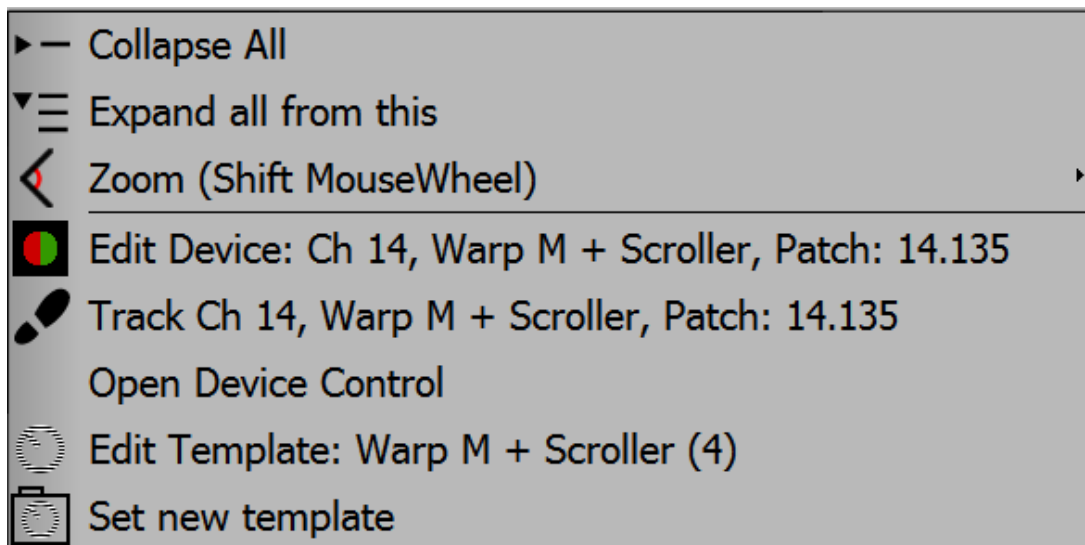
This window allows modifications, **objects are automatically updated:**

Palette: it is possible to pick any available Palette in the list.
Position: it is possible to edit the value in %
Snap: enable or disable the snap mode as needed
Delay: Relative Delay can be modified
(Delay): Absolute Frame Delay can be modified
Time: Relative Time can be modified
(Time): Absolute Frame Time can be modified

5.3 DEVICES MENU: FEATURES

To access to the Devices menu, open the Play menu, then click on **Devices**.

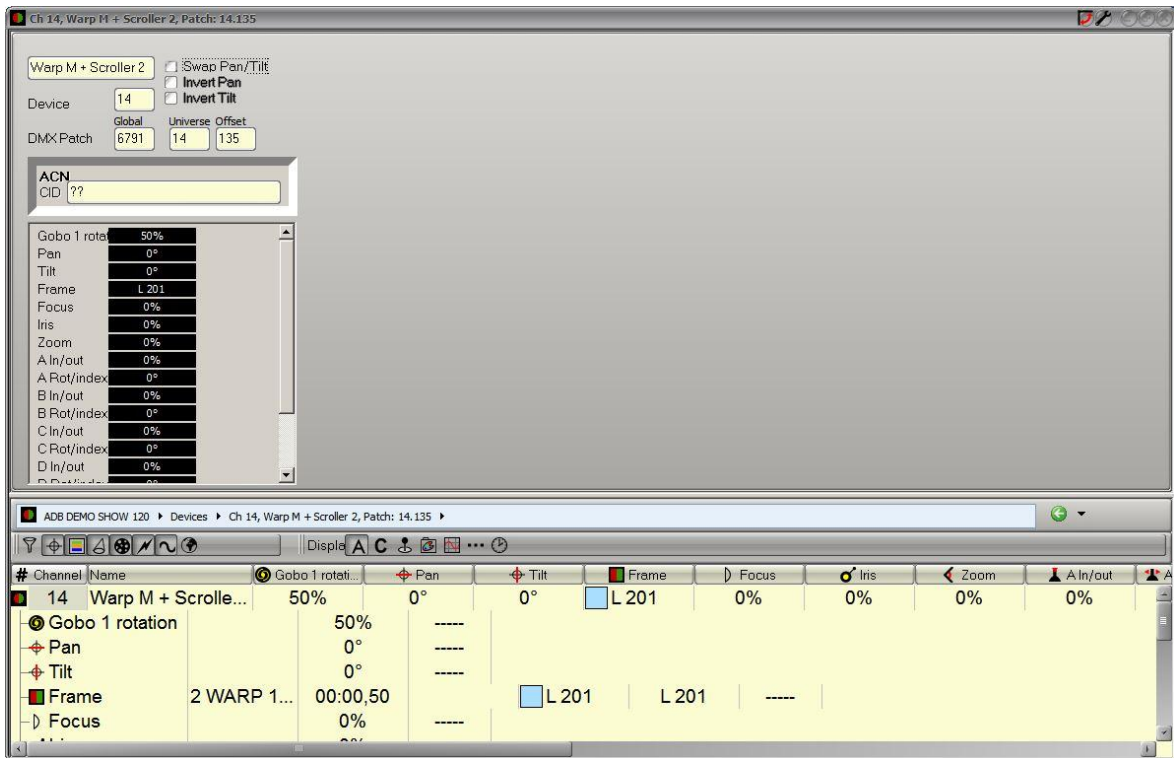
Note: Right Click on Devices allows displaying the Devices Editor window.
Right Click on a specific Device will display the following menu:



5.3.1 Editing a Device

At any moment it is possible to modify parameter values LIVE, via the Device Control Browser and the Device Control controllers, or while using console controllers (Trackball, Push-wheels), but also through that Device # Editor. The "Device # Editor" window can be used to:

- directly view and control devices
- assign Gel strings to a Scroller device
- calibrate a scroller



Select a parameter, change the value, or pick a new Frame in the list, the changes are LIVE.

At the top of this Editor window are displayed:

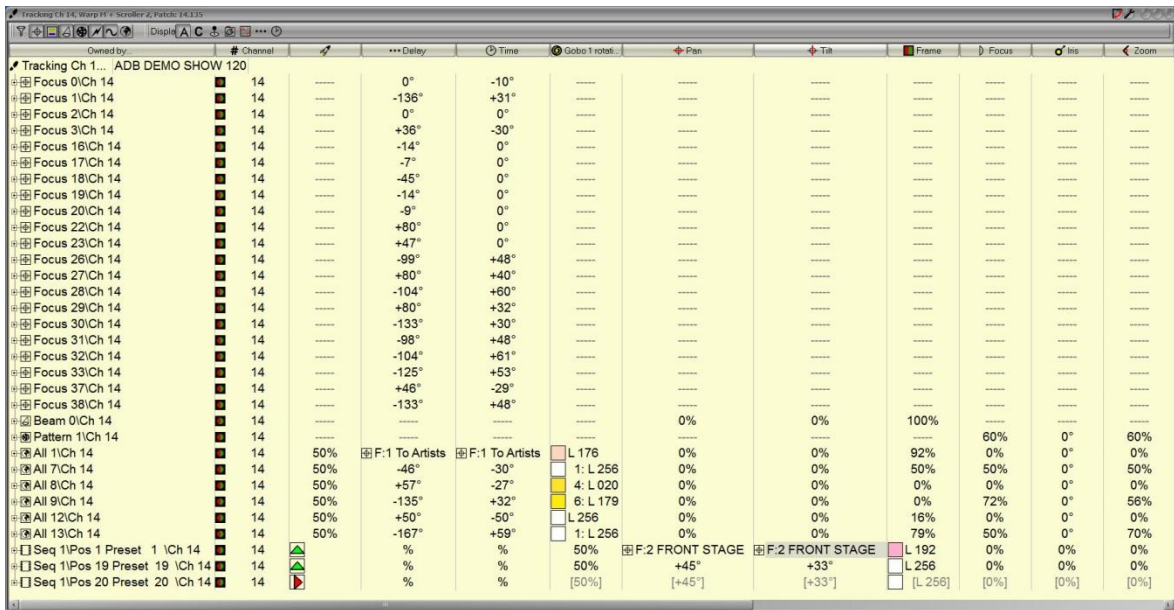
- The name of the Device, which is editable
- The number of the Device, which corresponds to the Channel number. Changing that number for another one is like moving the device from one location to another, in the instrument setup. In that case all references to the old number can be moved too.
- The DMX channel, the Universe, the DMX Address in that Universe (Offset) (all editable)
- **Swap Pan/Tilt** option: this feature allows exchanging Pan&Tilt roles. Generally used when a fixture is placed in a 90° angle, on a vertical truss for instance.
- **Invert Pan** option: useful to harmonize or to work symmetrically with some fixtures (Up / Down, Left / Right)
- **Invert Tilt** option: useful to harmonize or to work symmetrically with some fixtures (Up / Down, Left / Right)

5.3.2 Tracking a Device

Select that option to open the **Device # Tracking window**.

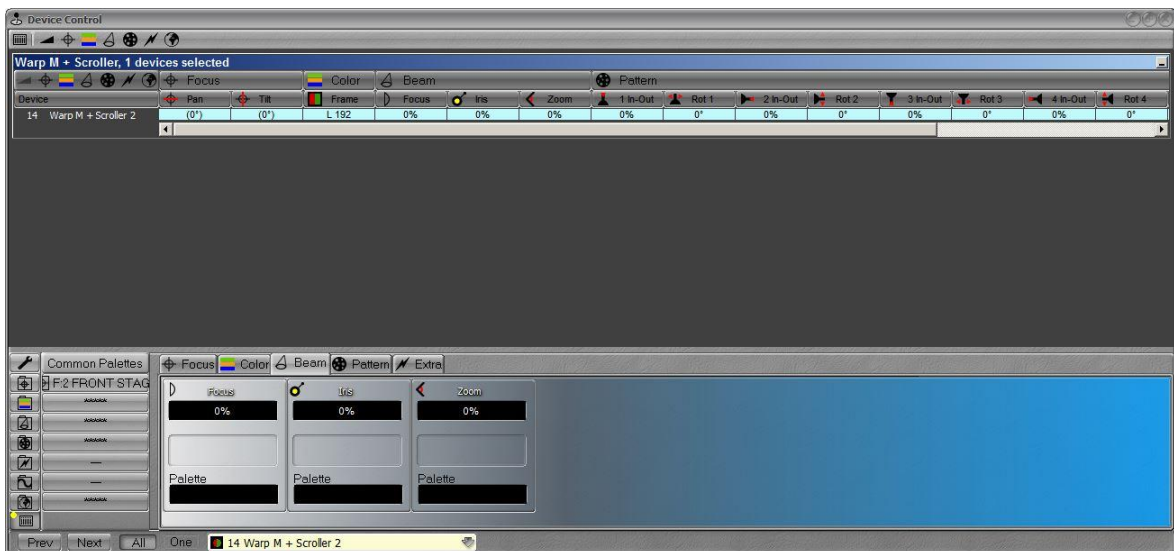
That window displays all objects (Palettes / Looks and Sequence Steps) with recorded parameter(s) or Palette reference for that selected Device.

It is also possible to modify directly and instantly any parameter value or Palette reference, for one or several objects (with Shift and CTRL to select).



5.3.3 Open Device Control

Select that option to open the **Device Control** Controller, with that Device directly selected.



5.3.4 Editing the Template of the Device

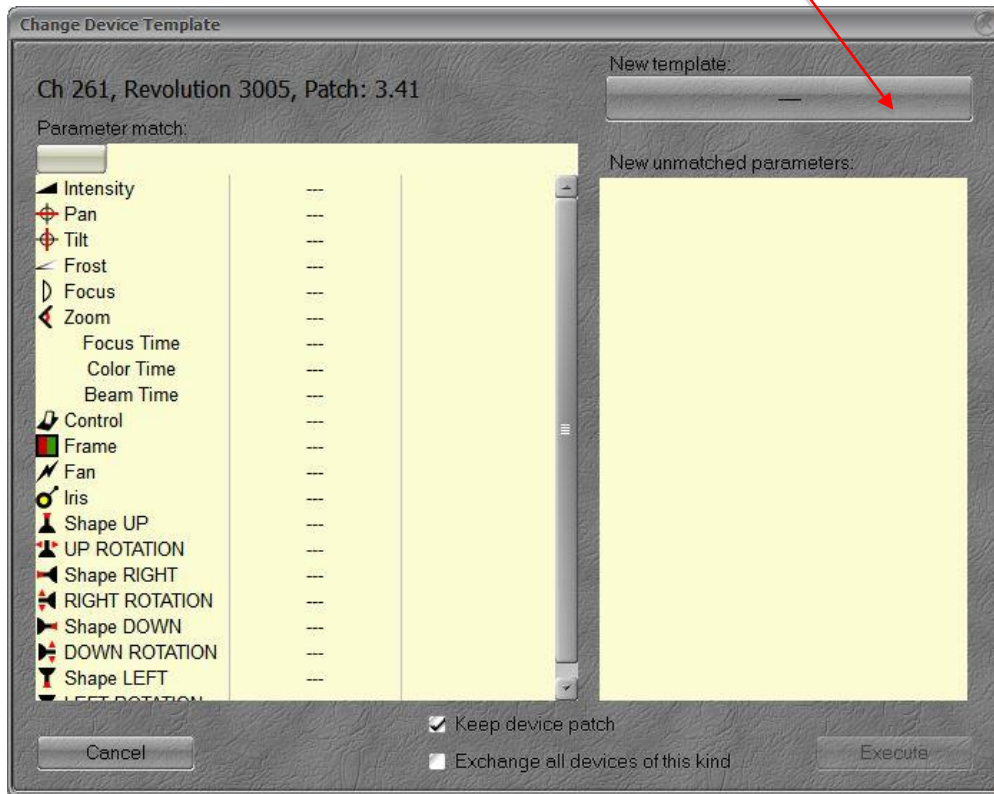
Select that option to open the Device # Template Editor.

5.3.5 Replacing one Device by another type of Device: Set New template

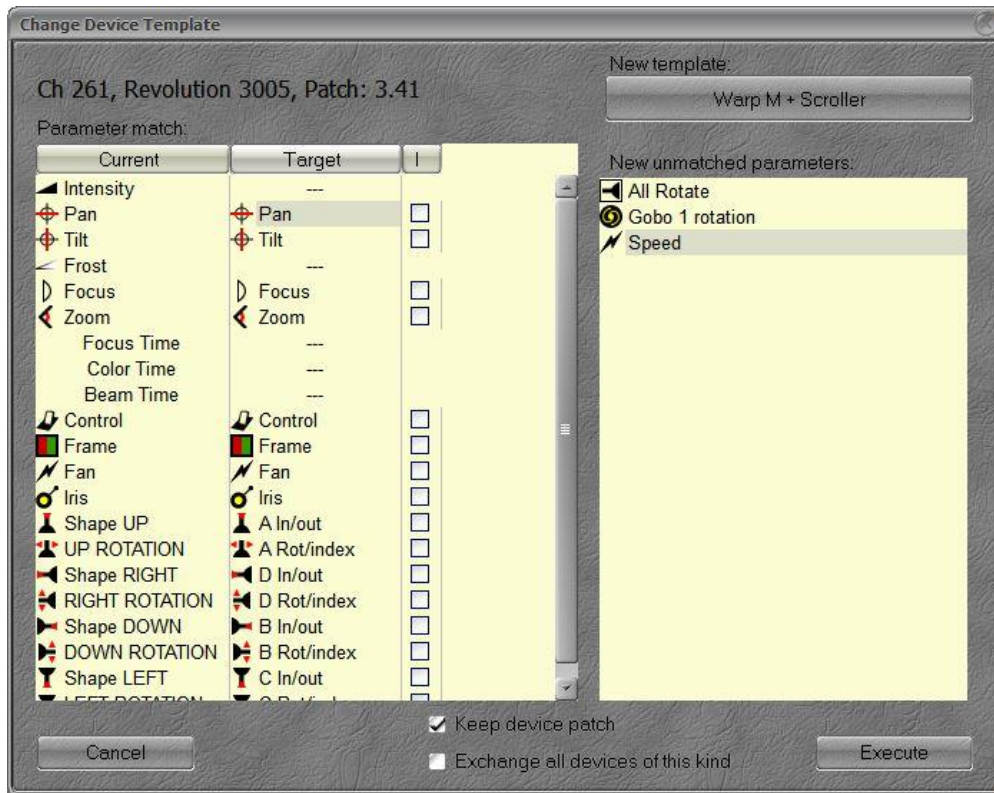
This feature allows replacing a Device Template with another one. Select Set New Template as option.

Note: it is necessary to import the "New Template" from Factory Template or from another Play File before.

Click on the New Template soft button to open the Device Templates browser.



Browse in the Device Template folder to select the New Template.



Matching attributes will be automatically associated.

Unmatched attributes will be displayed in the dedicated window.

To associate an unmatched parameter with a current parameter, drag&drop it to the current parameter and select **{Fetch Reference}**.

In the example above, Speed could be associated to Colour Time.

Unmatched attributes will be not automatically added in existing Device Links.

Keep device patch: if checked, the New Template will replace the old one while using the same DMX address.

Important: If the number of attributes for the new Template exceeds the current one, there will be an overlap with the following Device. In order to avoid it, it is necessary to use a gap between fixtures when patching fixtures the first time, before encoding the show.

Exchange all devices of this kind: if checked, the selected New Template will replace the old one in all Devices involved.

5.3.6 Clearing all Palettes references for that Device

This feature deletes all Palette references for the selected Device and replaces it by raw values.

The Device is then unlinked.

6. GROUPS

Groups are a quick way of selecting channels.

6.1 INTRODUCTION

You can store channel combinations into groups. The difference between a Group and a Preset is that a group does not necessarily need levels for the channels involved; by default, only the **selected** channels are stored. Groups also do not contain moving light attributes.

6.1.1 Group functionality

By default only selected channels are stored in a group.
Channels can be recorded in the group with levels.
Each group will "remember" the order in which channels were selected.
Each group can have a text label.
A group can be selected in the same way as a single channel
A group can be loaded to a Submaster.

6.1.2 Recording Groups

By default only selected channels are recorded, with or without level.

6.1.3 Using the Keypad

To record a group with the next free number:

[#] [Ch] [#] [+] [#] [+] [#] [+] [#] [+] [#] [At%]
[RECORD]&[GROUP] or **[RECORD]&[.]** or **[.]&[RECORD]**

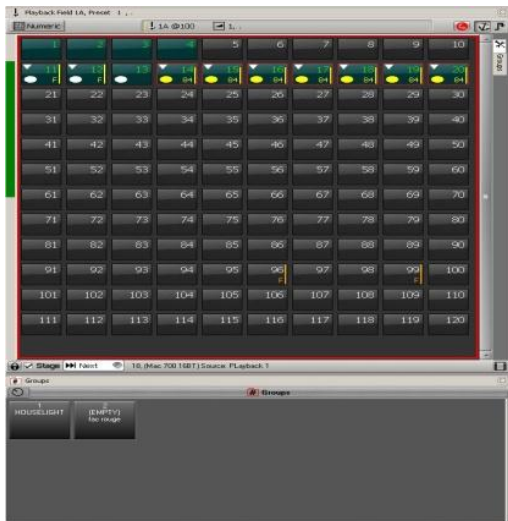
You will get a popup where you confirm recording this group, and can write a text label.

To record a group with a specific number:

[#] [Ch] [#] [+] [#] [+] [#] [+] [#] [+] [#] [At%]
[#] [RECORD]&[GROUP] or **[#] [RECORD]&[.]** or **[#] [.]&[RECORD]**

You will get a popup where you confirm recording this group, and can write a text label.

6.1.4 Using the mouse: Drag & drop facilities



First select channels with the mouse, then drag the selection into the Groups window, a popup will appear:

Choose **{Record new Group}**, then you will get a popup where you can write a text label and confirm recording this group.

{Record} to confirm.

6.1.5 Using the Touch screen facilities

First select channels with your finger, then drag the selection into the Groups window, a popup will appear:

Choose **{Record new Group}**, and then you will get a popup where you can write a text label and confirm recording this group.

{Record} to confirm.

6.2 WORKING WITH GROUPS

You can add and subtract channels that are stored in Groups to/from the current channel selection.

You can select several consecutive or non consecutive groups at the same time.

6.2.1 Using the Keypad

To select all channels in a Group and deselect others

[#] [GROUP] or [#] [.] [Ch]

To add all channels in a Group to the current channel selection

[#] [.] [+]

To subtract all channels in a Group from the current channel selection

[#] [.] [-]

To select several non consecutive Groups

[#] [.] [Ch] [#] [.] [+] [#] [.] [+]

To select a range of Groups

[#] [.] [Ch] [#] [.] [Thru]

6.2.2 Using the mouse or your finger and the keyboard

Note: Use the **[GROUP]** key to open the Fly Out window in the internal Touch Screen.

After one click in the window, use the SHIFT key on your keyboard, hold it and use the mouse wheel to zoom in the window.

To select all channels in a Group and deselect others

Click directly on the Group in the Groups window.

To add all channels in a Group to the current channel selection

If there is some channels selected, hold the Ctrl key then click on another Group

Select several non-consecutive Groups

Click directly on the Group in the Groups window, hold the Ctrl key then click on another Group

Select a range of Groups

Click directly on the Group in the Groups window, hold the SHIFT key then click on another Group

6.2.3 Using the mouse or your finger and the keypad

To add all channels in a Group to the current channel selection

If there is some channels selected, hold the [+] key then click on another Group

To subtract all channels in a Group from the current channel selection

If there is some channels selected, hold the [-] key then click on another Group

To select several non-consecutive Groups

Click directly on the Group in the Groups window, hold the [+] key then click on another Group

To select a range of Groups

Click directly on the Group in the Groups window, hold the [THRU] key then click on another Group.

6.3 USING RECORDED LEVELS: FETCH FEATURE

If Channels were recorded with levels, you can copy these levels from the group to the matching selection.

You can fetch intensities for all or specific channels from any Group.

To copy levels from Group # for all channels of the Group

[#] [GROUP] & [AT LEVEL]

[#] [.] [Ch]: to select all channels of Group #, [#] [FETCH] to set channels to their levels in Group #.

To copy levels from Group # for a selection of channels existing in the Group select some channels of Group #, **[#] [FETCH]** to set those channels to their recorded levels in Group #.

6.4 DIRECT ACCESS PANEL/FLY OUT PANEL: FEATURES



A simple click on that button will display automatic Devices Groups.

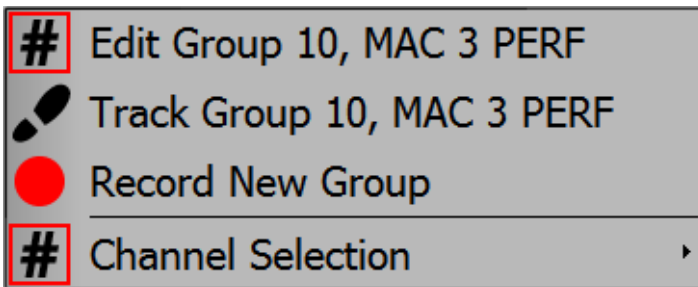


Groups

Right Click on that allows opening the Groups Editor window **{Edit Groups}**, to open another Group Direct Access Panel **{Open Direct Access Panel}** and to record a new Group **{Record New Group}**.

Note: Right Click directly inside the panel, in an empty area offers the same menu.

6.4.1 Right Click on a Group Button – Context: no Channels selected



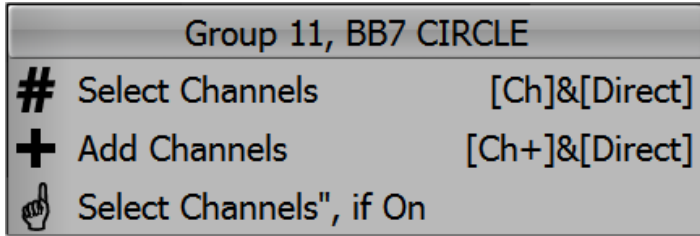
Edit Group #: to edit a specific Group

Console syntax: **[#] [.] [EDIT], [#] [GROUP] [EDIT]**

Track Group #: to display the specific Group # Track window.
This window will display all Submaster Fields containing that Group.

Record New Group

Channel Selection:



Select Channels:

Select Group # Channels. Other channels will be deselected.

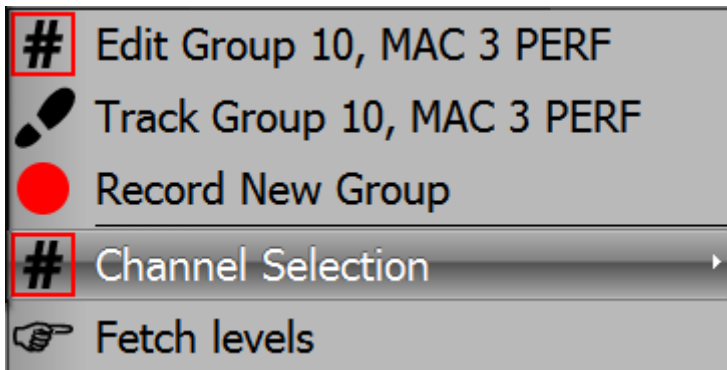
Add Channels:

Add Group # Channels to the current selection.

Select Channels, if On





Select **only** Group # Channels with level above zero (**On**). Other channels will be deselected.

6.4.2 Right Click on a Group Button – Context: Channels are selected



Fetch Levels: to fetch intensities for all or selected channels from Group #

Channel Selection:

Group 10, MAC 3 PERF		
#	Select Channels	[Ch]&[Direct]
+	Add Channels	[Ch+]&[Direct]
-	DeSelect Channels	[Ch-]&[Direct]
	Select Channels", if On	
	Add Channels if On	
	Intersect with Channels	[All]&[Direct]
	Invert with Channels	[Invert]&[Direct]

Select Channels:

Select Group # Channels. Other channels will be deselected.

Console syntax: **[Ch]& Direct Group Button**

Add Channels:

Add Group # Channels to the current selection.

Console syntax: **[+]& Direct Group Button**

Deselect Channels:

Remove Group # Channels from the current selection.

Console syntax: **[-]& Direct Group Button**

Select Channels if On

Select **only** Group # Channels with level above zero (**On**). Other channels will be deselected.

Add Channels if On

Add **only** Group # Channels with level above zero (**On**). Other channels will be deselected.

Intersect with Channels

Select **only** Group # Channels with level above zero (**On**). Other channels will be deselected.

Console syntax: **[ALL]& Direct Group Button**

Invert with Channels

Select **only** Group # Channels with level above zero (**On**). Other channels will be deselected.

Console syntax: **[INV]& Direct Group Button**

6.5 PLAY MENU: FEATURES

6.5.1 Right Click on a Group

In addition to Edit Group, Track Group, Channel selection and Fetch features, there are two specific options:

Delete Group: to delete the selected Look.

Open Direct Access Panel: to open a Looks Access Panel

6.5.2 Drag & Drop a selection of channels to a Group

Dragging a channel selection to a Group in the Play menu offers the same options as to a Group button in the Direct Access Panel.

6.6 DATA MENU / GROUPS: FEATURES

6.6.1 Right Click on a Group

In addition to Edit Group, Track Group, and Channel selection, there are three specific options:

Insert Group: to add the next available Group in the list.

Delete Group: to delete the selected Group.

Open Direct Access Panel: to open a Group Access Panel

6.6.2 Drag & Drop a selection of channels to a Look

Dragging a channel selection to a Look in the **Data** menu offers the same options as to a look button in the Direct Access Panel.

If a Group is selected, its channels will be displayed in the editor. Dragging a channel selection to that channel grid offers three options.

Copy Selection: to add the selected channels in the Group editor, without intensities.

Load Channels: to replace the current channels with the selected channels with intensities.

Add Channels: to add the selected channels with intensities to the current channels.

6.7 EDITING GROUPS

6.7.1 The Groups Editor window

You can view, edit and create new Groups directly in the Group List:

Right Click on Groups at the top of the Group Access Panel, or right click on the Group Tab in the Play menu, and choose **{Edit Groups}**.

Console syntax: **[EDIT]&[GROUP]**.

To move in the list of Groups: use arrows and Enter keys.

To delete a Group, move to the group in the list: **{DELETE} {ENTER}**, or **{ESC}** to cancel.

To add a Group: **{INSERT}**, select channels, add levels and click on the Update icon located at the top right corner of the window, on console: **[UPDATE] [UPDATE]**.

To give a name to a Group: Go to the Name column, **{ENTER}**, fill the field **{ENTER}**.

To change the number (ID) of the group: Go to the ID column, **{ENTER}**, enter a new number then **{ENTER}**.

To close the window: **{ESC}**.

6.7.2 The Group # Editor window

To edit a group:

In the Group Access Panel: Right Click on the dedicated Group, and choose **{Edit Group #}**.

In the menu PLAY, click on the Group tab, then Right Click on the dedicated Group, and choose **{Edit Group #}**.

Console syntax: **[#] [.] [EDIT]**

Select channels, change levels, then **[UPDATE] [UPDATE]**.

6.7.3 To add a selection of channels to an existing Group

Drag the selection to the Group to modify and choose **{Merge Levels into Group #}**.
This feature allows also updating levels for recorded channels.

6.7.4 To remove a selection of channels from an existing Group

Drag the selection to the Group to modify and choose **Remove Channels from Group #}**.

6.7.5 To replace current content by a selection of channels

Drag the selection to the Group to modify and choose **{Replace Channels in Group #}**.

6.8 GROUPS AND SUBFADERS

You can load Groups directly to any Playback.

6.8.1 Loading a group in a Subfader

Select Group 1 and load it directly to Subfader 13 with the keypad **[1] [.] [LOAD] & [Assign Key 13]**.

Select Group 1 and load it directly to Subfader 13 with the mouse or your finger
Click directly on the Group in the Groups window, Drag it to the Subfader Field and choose Load Group #.

6.8.2 Editing a group Loaded in a subfader

6.8.2.1 Using the keys

Hold the assign key of the Subfader, edit channels and levels, then while holding the assign key, press **[UPDATE]**. You will get a popup where you confirm recording this Group, and can write or edit a text label.

Then **[UPDATE] [UPDATE]**.

6.8.2.2 Using the mouse

Right Click on the Subfader Field (FIELDS Controller), choose **Edit Field ## Group ##**
Select channels, change levels, then [UPDATE] [UPDATE].

Note: In this way, changing levels in the Edit window of the group will be « LIVE » if the fader is above zero.

7. LOOKS

7.1 INTRODUCTION

Looks are a recording of channels including their intensity levels and their attributes. They are similar to Groups, but with attribute data also included. Channels that do not have intensity levels can be included in a Look, just as with a Group.

There is no Time concept in Looks.

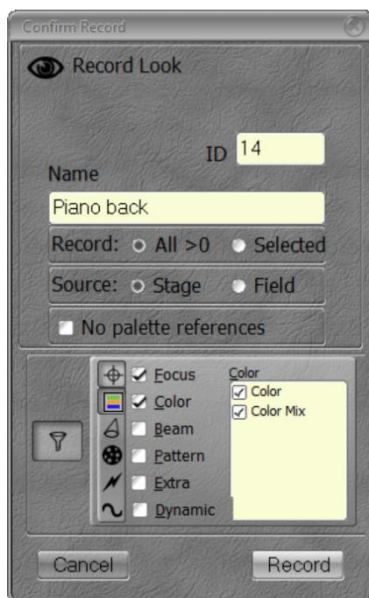
They are primarily useful for "live" performances, when you wish to be able to bring up pre-recorded fixture settings, but in a non-sequential, spontaneous manner, such as for a musical concert.

Looks can also be useful as building blocks where you can store an idea for future use, but don't want to record it as a Sequence Step/ Preset.

For "live" use, Looks are usually loaded to subfaders, where they can be faded in or out. They can be accessed from a Direct Access Panel, where there are special function buttons.

Looks can be recorded in variety of methods, but a pop-up window gives you options about what is to be recorded.

7.2 RECORD



When recording, you can choose between different options:

All > 0: Every channel with level > 0:

- Stage
- Field

Selected: only selected channels

Note: you can choose working by default in one of this mode.

[SETUP] (Channels)

« Record all with level in Looks » **checked** = All > 0

« Record all with level in Looks » **unchecked** = Selected

No Palette References: if selected, attribute values are recorded instead of Palette references.

Attribute FILTERS: simply use Attribute Group buttons (below the internal Touch Screen) to uncheck Attribute Groups in the Filter window.

7.2.1 Using the Keypad

To Record a Look with the next free number:

[RECORD] & [LOOK], enter a name if needed, change options if necessary then [RECORD] or [ENTER] or [LOOK].

To Record a Look with the next free number DIRECTLY in a Subfader:

[LOOK] & [Assign Key] enter a name if needed, change options if necessary then [RECORD] or [ENTER] or [LOOK].

To Record a Look with a specific number:

[#] [RECORD]&[LOOK], enter a name if needed, change options if necessary then [RECORD] or [ENTER] or [LOOK].

To Record a Look with a specific number DIRECTLY in a Subfader:

[#] [LOOK]&[Assign Key] enter a name if needed, change options if necessary then [RECORD] or [ENTER] or [LOOK].

7.2.2 Using the mouse

Drag & drop a selection of channels from the Field Editor to the Look direct access panel and choose {Record New Look} in the local menu.

Drag & drop a selection of channels from the Field Editor to a Submaster Field and choose {Record and load Look} in the local menu.

Drag & drop a Sequence step a Subfader Field and choose {Create New Look from Pos #: Preset # and load to field}.

Note: the recorded look will be the intensities from the Cue/Preset in the sequence step, and all positions for those with intensity based on their history in the sequence.

Right Click in the Direct Access panel and choose {Record New Look} in the local menu.
Right Click on a Sequence step and choose {Create New Look from this} in the local menu.

Note: the recorded look will be the intensities from the Cue/Preset in the sequence step, and all positions for those with intensity based on their history in the sequence.

7.2.3 Using the Touch screen facilities

Drag & drop a selection of channels to the Look direct access panel and choose {Record New Look} in the local menu.

Drag & drop a Sequence step a Subfader Field and choose {Create New Look from Pos #: Preset # and load to field}.

Note: the recorded look will be the intensities from the Cue/Preset in the sequence step, and all positions for those with intensity based on their history in the sequence.

Right Click (Let the finger 2 seconds on the Touch Screen) in the Direct Access panel and choose {Record New Look} in the local menu.

Right Click (Let the finger 2 seconds on the Touch Screen) on a Sequence step and choose {Create New Look from this} in the local menu.

Note: the recorded look will be the intensities from the Cue/Preset in the sequence step, and all positions for those with intensity based on their history in the sequence.

7.3 WORKING WITH LOOKS

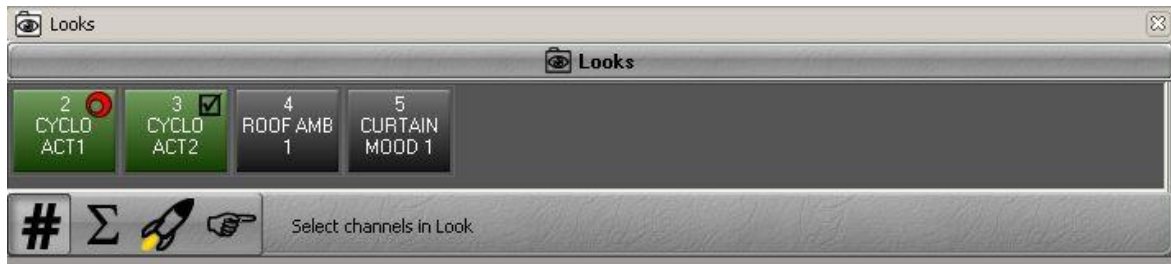
7.3.1 Select Channels

Look in Subfader: [ASSIGN Key].

Direct Access Panel / # mode:

Click on the Look box or touch it to select channels recorded in this look.

Note: selects the channels stored in that Look, but does not change Intensity levels, or load attributes and de-select all selected channels.



7.3.2 Playback Looks

Look in Subfader: **[START]&[ASSIGN Key]** or raise the Subfader Fader.

Note: Looks on subfaders handle Intensity levels as HTP (Highest Takes Precedence) and attributes as LTP (Last Takes Precedence).

If you a Look raised on a subfader, then raise another, the attributes will move to the positions in the 2nd Look. When you lower the 2nd Look, the attributes will restore to those in the first Look.

If **"Auto execute Looks on Faders"** has been checked (**Setup/Preferences/Attributes**): as soon as the fader moves above zero, the attributes will move to their positions, they will not fade with the movement of the fader. The Intensity will follow the movement of the fader.

If **"Auto execute Looks on Faders"** has NOT been checked: the attributes and Intensity will follow the movement of the fader.

If **"Rubber band"** has been checked (**Setup/Preferences/Attributes**):

When the subfader is lowered, the intensity AND attributes will restore to their previous values.


If **"Rubber band"** has NOT been checked: -when the subfader is lowered, the only intensities will restore to their previous values.

Keypad: **[#] [LOOK]** will execute the Look #.

It doesn't de-select any selected channels. It changes Intensity and attributes for the channels stored in the Look · It doesn't select channel stored in Look.


Direct Access Panel / Σ mode: click on the Look box or touch it to execute Look without clearing the active field.

Note: changes Intensity levels, and load attributes for the channels recorded in that look and de-select all selected channels.

Direct Access Panel /  mode: click on the Look box or touch it to execute Look and clear the active field.

Note: changes Intensity levels, and load attributes for the channels stored in that look but doesn't de-select all selected channels.

7.3.3 Using recorded values / Fetch

Direct Access Panel /  mode: click on the Look box or touch it to FETCH attribute data from Look for selected channels only.

Right Click on a Look Box, in addition to the normal options there is:

To copy intensity levels from use **{Fetch Levels from Look}**.

To copy attribute values from use **{Fetch Positions from Look}**, with an additional sub-menu to allow you to filter to a specific attribute group (i.e. Colour, Beam etc.).

7.4 DIRECT ACCESS PANEL/FLY OUT PANEL: FEATURES



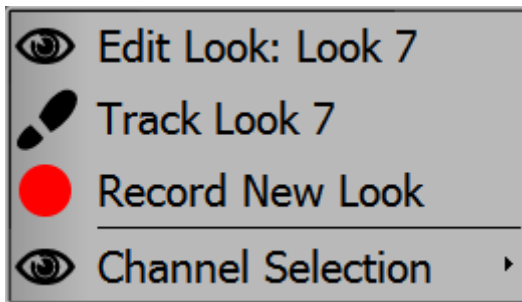
Looks

Right Click on that allows opening the Groups Editor window **{Edit Looks}**, to open another Group Direct Access Panel **{Open Direct Access Panel}** and to record a new Look **{Record New Look}**.

Note: Right Click directly inside the panel, in an empty area offers the same menu.

7.4.1 Right Click on a Look button

7.4.1.1 Right Click on a Look button – Context: no Channels selected



Edit Look #: to edit a specific Look

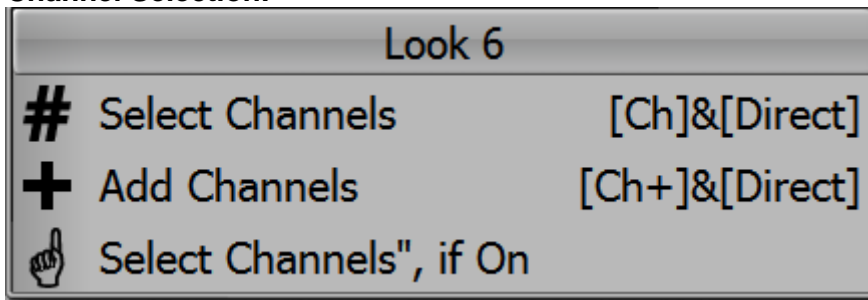
Console syntax: **[#] [Look] [EDIT]**

Track Look #: to display the specific Look # Track window.

This window will display all Submaster Fields containing that Group.

Record New Look: to record the next available Look in the list.

Channel Selection:



Select Channels:

Select Look # Channels. Other channels will be deselected.

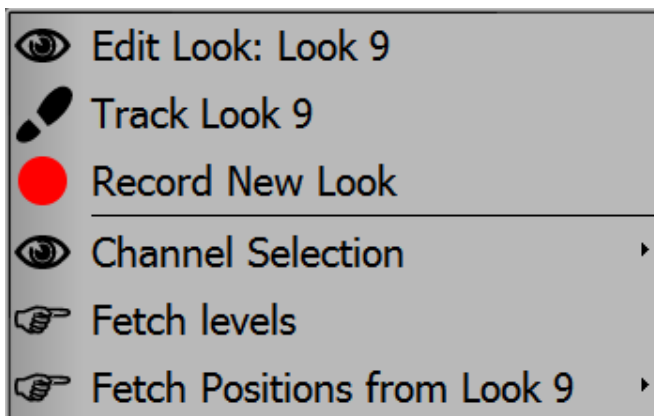
Add Channels:

Add Look # Channels to the current selection.

Select Channels, if On





Select **only** Look # Channels with level above zero (**On**). Other channels will be deselected.

7.4.1.2 Right Click on a Group Button – Context: some Channels are selected



Fetch Levels: to fetch intensities for all or selected channels from Group #.

Channel Selection:

Look 8		
#	Select Channels	[Ch]&[Direct]
+	Add Channels	[Ch+]&[Direct]
-	DeSelect Channels	[Ch-]&[Direct]
	Select Channels", if On	
	Add Channels if On	
	Intersect with Channels	[All]&[Direct]
	Invert with Channels	[Invert]&[Direct]

Select Channels:

Select Look # Channels. Other channels will be deselected.
Console syntax: **[Ch]& Direct Look Button**

Add Channels:

Add Look # Channels to the current selection.
Console syntax: **[+]& Direct Look Button**

Deselect Channels:

Remove Look # Channels from the current selection.
Console syntax: **[-]& Direct Look Button**

Select Channels if On

Select **only** Look # Channels with level above zero (**On**). Other channels will be deselected.

Add Channels if On

Add **only** Look # Channels with level above zero (**On**). Other channels will be deselected.








Intersect with Channels

Select **only** Look # Channels with level above zero (**On**). Other channels will be deselected.
Console syntax: **[ALL] & Direct Look Button**

Invert with Channels

Select **only** Look # Channels with level above zero (**On**). Other channels will be deselected.
Console syntax: **[INV] & Direct Look Button**

Fetch Positions from Look #: These options allow to Fetch only selected attributes.

	Fetch All
	Fetch Focus
	Fetch Color
	Fetch Beam
	Fetch Pattern
	Fetch Extra
	Fetch Dynamic

Fetch All: all parameters – console	[FETCH] [ALL]
Fetch Focus: PAN&TILT– console	[FETCH] [FOCUS]
Fetch Colour: Colour parameters – console	[FETCH] [COLOR]
Fetch Beam: Beam parameters – console	[FETCH] [BEAM]
Fetch Pattern: Pattern parameters – console	[FETCH] [PATTERN]
Fetch Extra: Extra parameters – console	[FETCH] [EXTRA]
Fetch Dynamic: Dynamic parameters – console	[FETCH] [DYNAMIC]

7.4.2 Drag & Drop a selection of channels to a Look button

In addition to Record New Look, Channel selection and Fetch features, there are three specific options:

To add a selection of channels to an existing Look

Drag the selection to the Look to modify and choose [{Merge Levels into Look #}](#).

This feature allows also updating levels for recorded channels.

To remove a selection of channels from an existing Group

Drag the selection to the Group to modify and choose [{Remove Channels from Look #}](#).

To replace current content by a selection of channels

Drag the selection to the Group to modify and choose [{Replace Channels in Look #}](#).

7.5 PLAY MENU: FEATURES

7.5.1 Right Click on a Look

In addition to Edit Look, Track Look, Channel selection and Fetch features, there are two specific options:

Delete Look: to delete the selected Look.

Open Direct Access Panel: to open a Looks Access Panel

7.5.2 Drag & Drop a selection of channels to a Look

Dragging a channel selection to a Look in the Play menu offers the same options as to a look button in the Direct Access Panel.

7.6 DATA MENU/LOOKS: FEATURES

7.6.1 Right Click on a Look

In addition to Edit Look, Track Look, and Channel selection, there are three specific options:

Insert Look: to add the next available Look in the list.

Delete Look: to delete the selected Look.

Open Direct Access Panel: to open a Looks Access Panel

7.6.2 Drag & Drop a selection of channels to a Look

Dragging a channel selection to a Look in the **Data** menu offers the same options as to a look button in the Direct Access Panel.

If a Look is selected, its channels will be displayed in the editor. Dragging a channel selection to that channel grid offers three options.

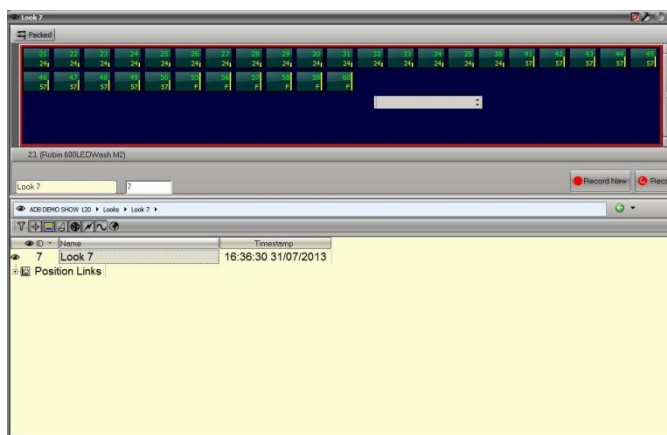
Copy Selection: to add the selected channels in the Look editor, without intensities.

Load Channels: to replace the current channels with the selected channels with intensities.

Add Channels: to add the selected channels with intensities to the current channels.

7.7 EDITING

7.7.1 The Look # Editor window



To edit a specific LOOK:

- In Direct Access Panel Right Click on a Look button.
- In Play Menu Right Click on a Look.
- On Console: [#] [EDIT]& [LOOK].

Click on the Look to open the Channel Grid.

Open a Position Link to change directly parameter values.

Change the Label in the label field.

7.7.1.1 To edit Look name

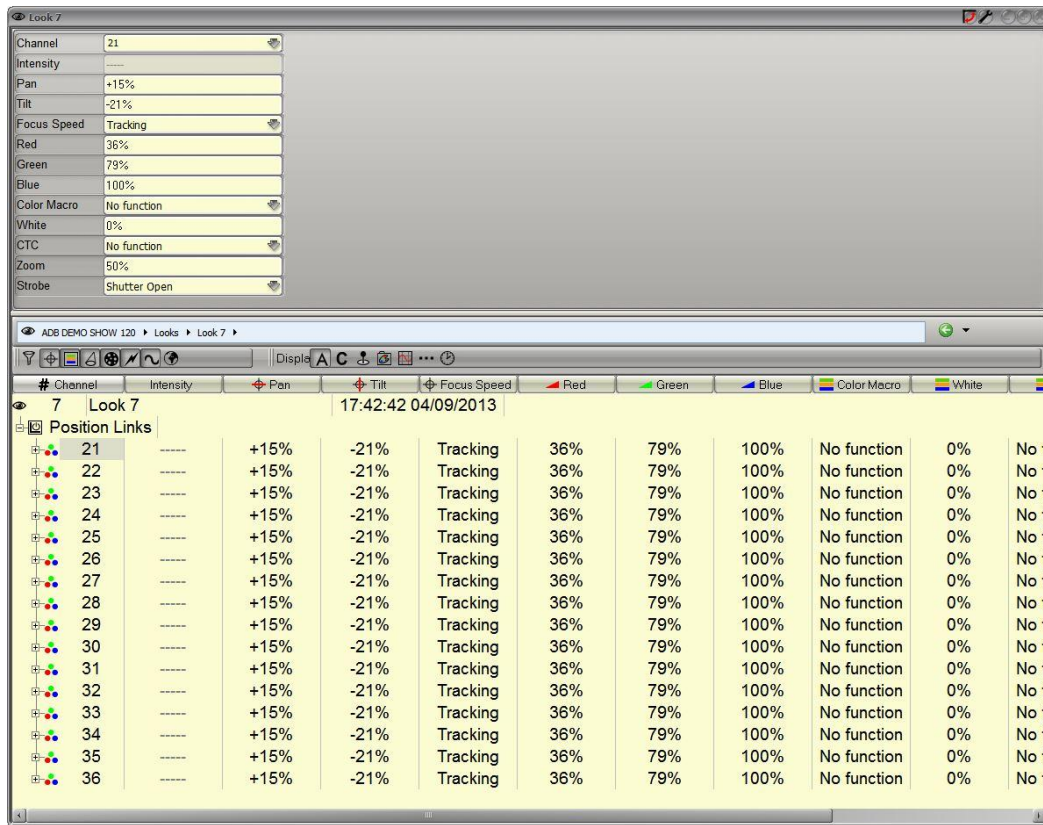
Double Click on existing name, modify the name and then confirm with **{ENTER}**.

7.7.1.2 To modify Channel levels

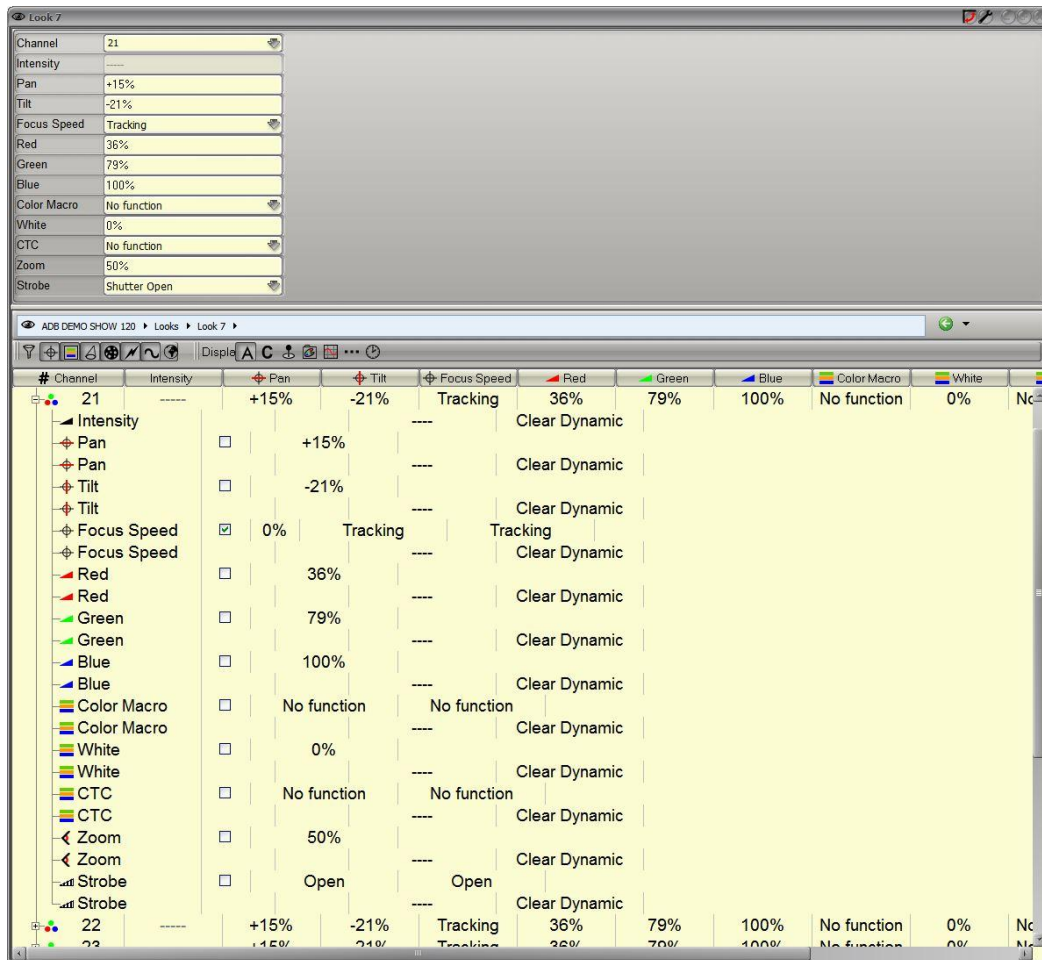
As soon as the Look Editor window is open, it is possible to work like in the Field Editor. Select Channels, modify intensities, and then use either the Record soft key or **[UPDATE]** to update the modifications.

7.7.1.3 To modify Channel Attributes values

Expand the Position Links to display Devices and attributes. Then click on any Device line to display attributes headers and filters options.



Attributes values are then displayed in a horizontal way, and editable.
 To display Snap information and Dynamic information, expand the dedicated device.



Snap mode

The **Snap** feature, when enabled, excludes attributes involved from Time management. That means they will move in 0 second.

When enabled, a new column **Spos** (Snap position) will be displayed; it corresponds to the relative position (%) where the parameter will jump to the recorded value during the execution of the Look, related to Submaster Time.

Example

Load a look in a Submaster, assign 10 seconds to that Submaster, and start the Submaster.

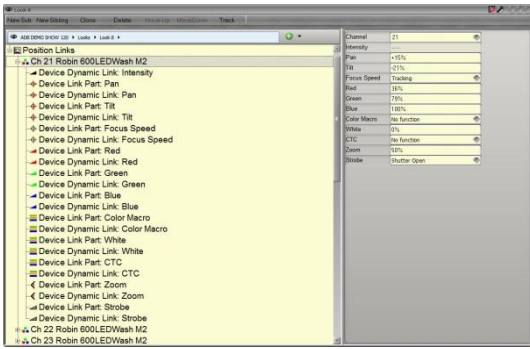
0%: the parameter will jump at start.

50%: the parameter will jump when the execution will reach 50% of the Submaster Time (5 seconds after start).

100%: the parameter will jump at the end (10 seconds after start).

TIP:

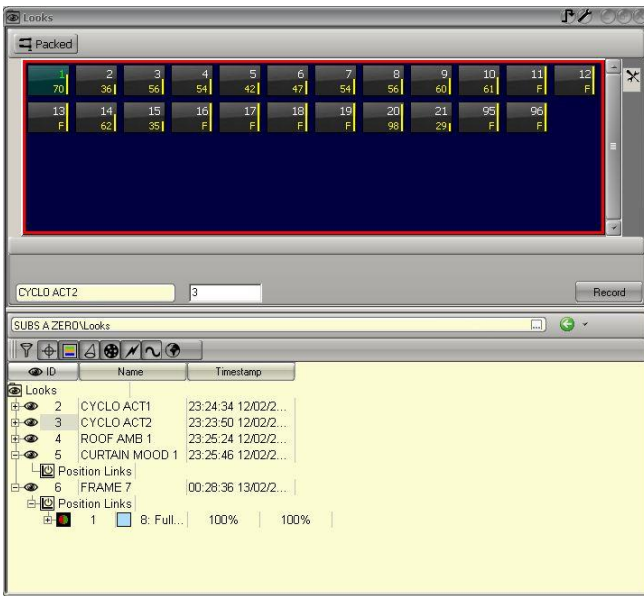
Click on the Red phone icon to swap to vertical display mode.



Click on the device to display all parameters in the right part of the window.

Expand any Dedicated Device, and click on one parameter to display specific information for that parameter in the right part of the window.

7.7.1.4 The Looks Editor window



To open the LOOK Edit window
 Direct Access Panel: Right Click on a Look button.
 Play Menu: Right Click on a Look Console: **[EDIT]& [LOOK]**.
 Click on a Look to open the Channel Grid.
 Open a Position Link to change directly parameter values.
 Change the Label in the label field.

See 7.4 The Look # Editor window for more information about editing Looks.

7.8 LOOKS AND SUBFADERS

7.8.1 Loading a Look in a Subfader

To load a Look:

Using the keypad: **[#] [LOOK]&[ASSIGN Key]**

Using the mouse or the Touch screen:

Drag & Drop the Look to a Subfader Field from the Direct Access Panel, the Play menu or the Data menu.

7.8.2 Working with Looks loaded in Subfaders

To execute a Look loaded in a Subfader: **[START]&[ASSIGN Key]** or raise the Subfader Fader.

Note: Looks on subfaders handle Intensity levels as HTP (Highest Takes Precedence) and attributes as LTP (Last Takes Precedence).

If "**Auto execute Looks on Faders**" has been checked (**Setup/Preferences/Attributes**): as soon as the fader moves above zero, the attributes will move to their positions, they will not fade with the movement of the fader. The Intensity will follow the movement of the fader.

If "**Auto execute Looks on Faders**" has NOT been checked: the attributes and Intensity will follow the movement of the fader.

If "**Rubber band**" has been checked (**Setup/Preferences/Attributes**):

When the subfader is lowered, the intensity AND attributes will restore to their previous values.

If "**Rubber band**" has NOT been checked: when the subfader is lowered, the only intensities will restore to their previous values.

7.8.3 Editing a Look loaded in a Subfader

To edit a Look loaded in a Subfader:

Hold the assign key of the Subfader, edit channels and levels, then while holding the assign key, press **[UPDATE]**.

Hold the assign key of the Subfader and press **[ENTER]**, (the Subfader field will be locked as soon as the **[A/B]** is pressed), edit channels and levels, and then press **[UPDATE]**.

Use **[EDIT]&[ASSIGN Key]**, edit channels and levels, and then press **[UPDATE]**.

Right Click on the Subfader Field (FIELDS Controller), choose **Edit Field ## Group ##**, edit channels and levels, and then press **[UPDATE]**.

You will get a popup where you confirm recording this Look, and can write or edit a text label. Before confirming, check filters:

If **All > 0** and **Field** are the current options, the Look will be updated with channels with level in that look only.

If **Selected** and **Field** are the current options, the Look will be updated with selected channels only.

If **All > 0** and **Stage** are the current options, the Look will be updated with all active channels on stage.

Then **[UPDATE] [UPDATE] or (ENTER)**

Note: In any case, changing levels in the Edit window of the look will be « LIVE » if the fader is above zero.

8. PALETTES

8.1 INTRODUCTION

A Palette is a kind of specific memory for all or some attributes of a Moving Light.

A Palette is mostly designed to record and organize attributes values in order to be used to create Looks and Sequence Steps. In that way, Looks and Sequence Steps are linked to the original Palette used for the recording, and they will be then automatically updated if the Palette itself is modified.

So, to save time during the production and on tour, it is important to start recording Palettes first, before Looks or Sequence Steps.

Typically, in the context of theatre and opera productions, for instance Focus palettes are first recorded, and then some of will be used to create either ALL Palettes or Sequence Steps. In case of moves of elements of scenery or fixtures, and also on tour, updating the involved Focus Palettes will update all the sequence steps, so all the show. ALL palettes can contain references to the other palette types, if one of these palettes is modified the ALL palette will also be updated.

8.2 RECORD

Only attributes of selected channels are recorded, intensities are never recorded.

By default all Palettes are in **Reference** mode (Record as reference checked in Record Confirm window), **except FOCUS** and **ALL** palettes. In reference mode the palette will be recorded for all devices using the same template otherwise the palette only records the actually selected devices

8.2.1 Attribute Groups

There are seven kinds of Palettes

- FOCUS Palettes: Position attributes like PAN and TILT
- COLOR Palettes: Colour attributes like CYAN, MAGENTA, YELLOW
- BEAM Palettes: Beam attributes like ZOOM, IRIS, FOCUS
- PATTERN Palettes: PROJECTION attributes like GOBO, SHUTTER
- EXTRA Palettes: CONTROL & FUNCTION attributes like Lamp on, Lamp off, Strobe, Colour Time
- DYNAMIC Palettes: Dynamic Attributes
- ALL Palettes: ALL Attributes

8.2.2 Using the Keypad to record Palettes

To record a palette with the next free number:

First set parameter's values for selected channels (e.g: PAN & TILT)

[RECORD]&[FOCUS]

You will get a popup where you confirm recording this palette, and can write a text label.

To record a palette with a specific number:

First set parameter's values for selected channels (e.g: COLOR WHEEL)

[#] [RECORD]&[COLOR]

You will get a popup where you confirm recording this group, and can write a text label.

To record a ALL palette with the next free number:

First set parameter's values for selected channels (e.g: PAN & TILT, ZOOM, COLOR WHEEL)

[RECORD]&[ALL]

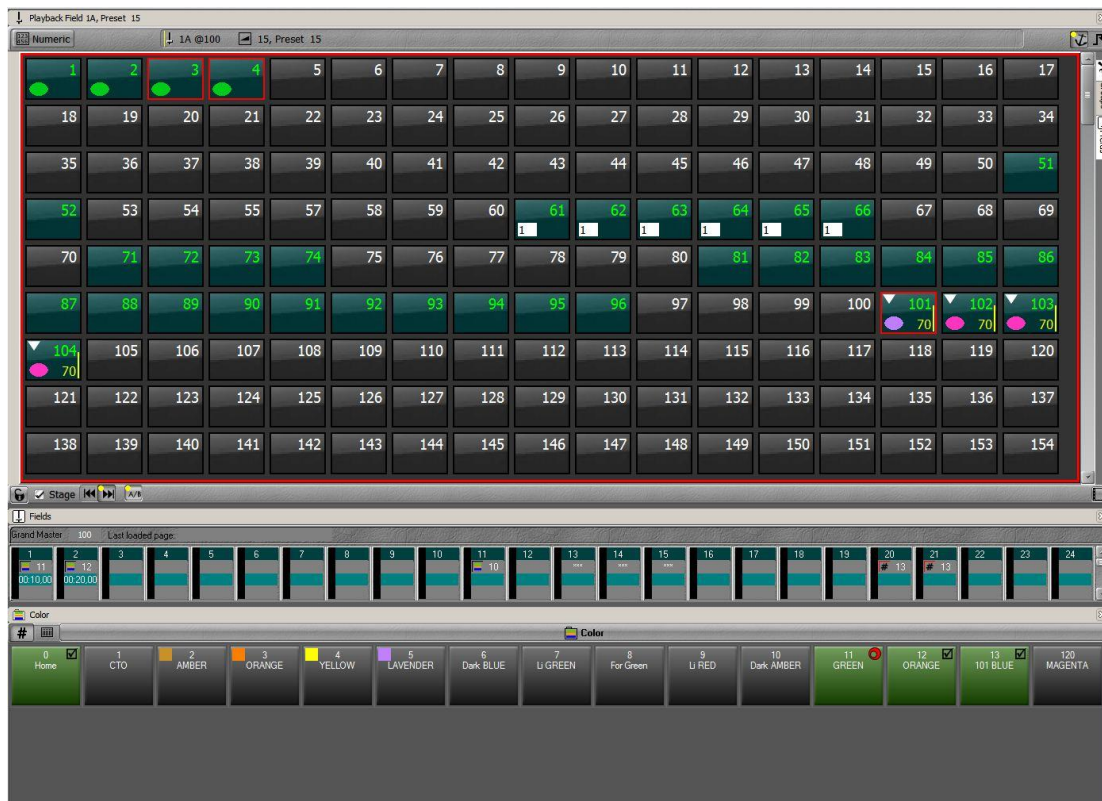
You will get a popup where you confirm recording this group, and can write a text label.

TIP: before to confirm, there is the possibility to filter inside the attribute group.

JUST press the Attribute Group key(s) corresponding to the attributes you want to exclude from recording.

[RECORD]&[ALL] then **[COLOR]**, will exclude all Colour attributes from the recording.

8.2.3 Using the mouse: Drag & drop facilities



Select channels with the mouse first, set attributes values (e.g PAN & TILT), then drag the selection into the FOCUS Palette Direct Access Panel or Right Click in the Direct Access Panel , a popup will appear: choose **{Create new Focus Palette}**, then you will get the Confirm Record window where you can write a text label and confirm recording this palette, press **{Record}** to confirm.

8.2.4 Using the Touch screen facilities

First select channels with your finger, set attributes values (e.g. CYAN), then drag the selection into the COLOR Palette window or inside the Direct Access Panel, touch the empty area during more than 2 seconds and then release, the Confirm Record window will appear: choose **{Create new Colour Palette}**, and then you will get a popup where you can write a text label and confirm recording this palette.

{Record} to confirm.

8.3 UPDATE

To **UPDATE** a palette:

- Use [#] [UPDATE]&[COLOR]
- Right Click on the Palette button and choose {Update / Add to ### Palette}.
- Drag the selection into the Palettes window on a Palette button, and choose {Update / Add to ### Palette}.

The Confirm Record window will appear.

- Choose **Update** to update only original content (Channels and Attributes)
- Choose **Update/Add** to add Channels or Attributes to original content

8.4 WORKING WITH PALETTES (SELECT CHANNELS FIRST)

Palettes are only working for **selected** channels if these channels are **included** into the Palette. In that case the Palette box is **green** with a black checkmark. If there are more selected channels as included in the palette, a **little red icon** will appear in the upright corner of the palette box.

- Zero Palettes are predefined palettes (it makes reference to the default value set for the parameter in the Device template).
- A zero Palette can be updated, e.g. [0] [RECORD]&[COLOR] (check that Record as reference is checked).
- By default, Zero palettes are not referenced to zero ALL palette, which means if you update a zero palette, the zero ALL Palette will not be updated. If you update the zero ALL palette while using other zero palettes, then the zero ALL palette will be linked with these palettes.
- The HOME palette is the same as the zero ALL palette

Note: to use palette to select channels, first check that the # icon located in the up left corner is highlighted, if not, click on to activate the function. Just click on the palette of your choice to select the channels included in this palette.
If it is a Reference palette, all devices of the same type will be selected.

8.4.1 Using the Keypad

To select a FOCUS Palette

[#] [FOCUS]

To select a COLOR Palette

[#] [COLOR]

To select a BEAM Palette

[#] [BEAM]

To select a PATTERN Palette

[#] [PATTERN]

To select a EXTRA Palette

[#] [EXTRA]

To select a DYNAMIC Palette

[#] [DYNAMIC]

To select a ALL Palette

[#] [ALL]

Note: when working with ALL palettes, there is still a possibility of filtering, while holding the **[ALL]** key and selecting the Attribute Group for valid attributes.

e.g.: in palette ALL 3, you just need Colour information.

[3] [ALL]&[COLOR]

To reset all FOCUS attributes to default values

[0] [FOCUS]

Note: use same syntax for other group of attributes

To reset all attributes to default values

[HOME] or [0] [ALL]

8.4.2 Using the mouse or your finger and the keypad

To open a palette window: Menu Play > Palettes > Right Click on Focus

Choose **{Open Direct Access Panel}**

To “dock” this window:

- 1 Right click on the top bar of the window, to the right of its label (i.e. Fields, Playback etc...), then on the local menu that will open check "Dockable".
- 2 Left click on the top bar and drag the window, if the screen is currently blank the window will dock and expand to full screen size when it is dragged near the top of the screen.
- 3 If the window already has content you will see a horizontal or vertical bar indicating where the new window will dock, while that bar is visible drop the window and it will dock.

To open a COLOR Palette fly-out window with the console keys:

[→]&[COLOR]

To open a COLOR Palette fly-out window with the touch screen soft keys:

[COLOR]

and then click on the palette softkey



To select a palette

Click on the palette in the Palette window

8.5 DIRECT ACCESS PANEL/FLY OUT PANEL: FEATURES



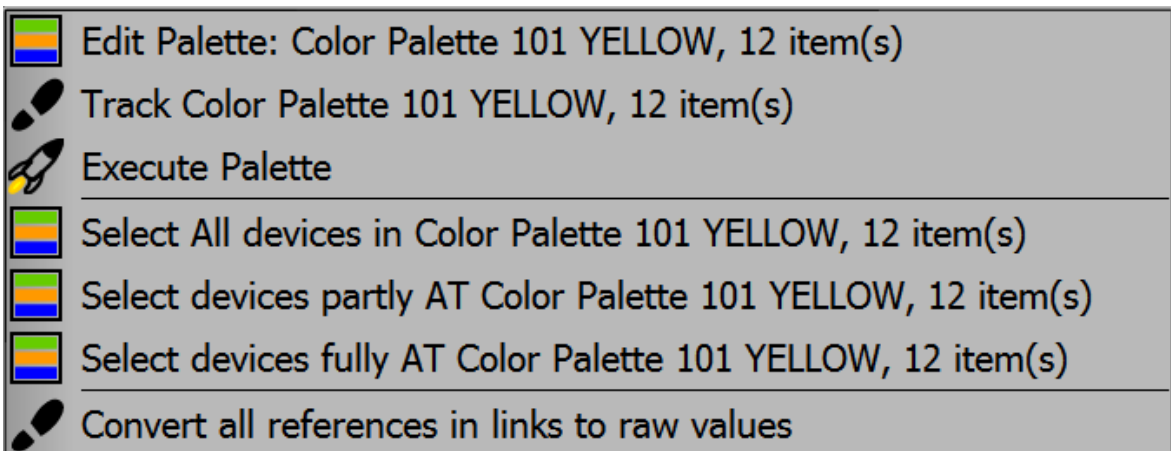
Palettes

Right Click on that allows opening the Colour Palettes Editor window **{Edit Palette Group Colour}**, to open another Colour Palettes Direct Access Panel **{Open Direct Access Panel}** and, if some channels are selected, to record a new Palette **{Create New Colour Palette}**.

Note: Right Click directly inside the panel, in an empty area offers the same menu.

8.5.1 Right Click on a Palette Button

Context: no Channels selected



Edit Palette: Color Palette #: to edit a specific Palette

Console syntax: **[#] [EDIT] [COLOR]**

Track Color Palette #: to open the specific COLOR Palette # Track window.

This window will display all objects (Sequence Steps, Looks, Palettes ALL) containing that Palette.

Execute Palette: execute the Palette for recorded channels regardless the channel selection. This feature doesn't work with Reference Palettes.

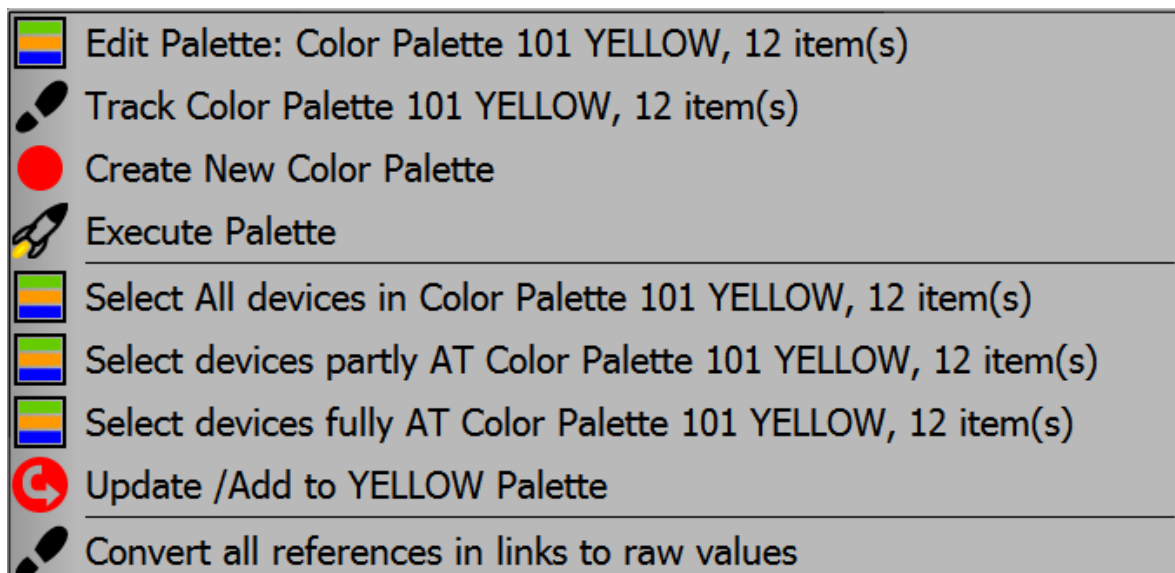
Select All devices in Color Palette #: to select all channels recorded in Colour Palette #.
Select devices partly AT Color Palette #: to select channels at less with one parameter matching with attributes recorded in Color Palette #. That feature is useful with ALL Palettes partly used.

Select devices fully AT Color Palette #: to select channels with attributes matching 100 % with attributes recorded in Color Palette #.

Convert all references in links to raw values: as explained in the introduction, ALL Palettes, Sequence Steps and Looks are linked to the original palette used for recording. This feature unlinks the Palette and the object by replacing Palette references with parameter values.

8.5.2 Right Click on a Group Button

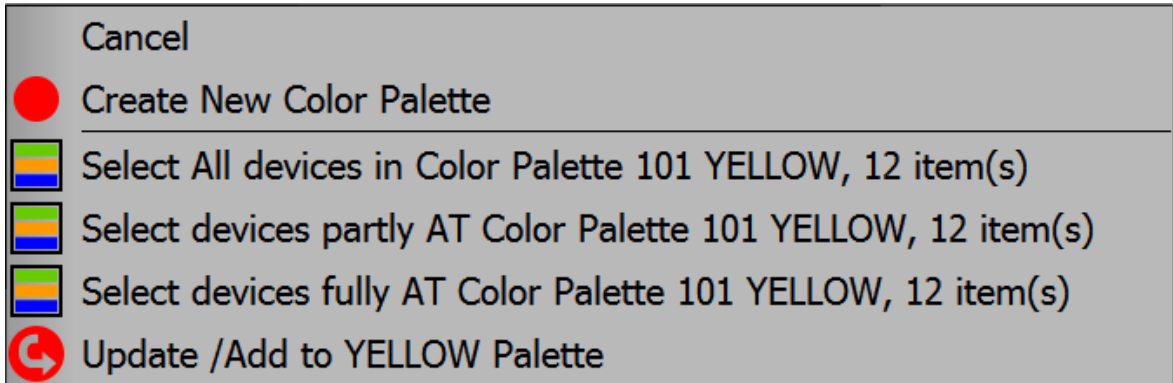
Context: some Channels are selected



Create New Colour Palette: to record a new Palette.

Update / Add to --- Palette: to update the Palette.

8.5.3 Drag & Drop a selection of channels to a Palette button



Create New Colour Palette: to record a new Palette.

Select All devices in Colour Palette #: to select all channels recorded in Color Palette #

Select devices partly AT Colour Palette #: to select channels at less with one parameter matching with attributes recorded in Colour Palette #. That feature is useful with ALL Palettes partly used.

Select devices fully AT Colour Palette #: to select channels with attributes matching 100 % with attributes recorded in Colour Palette #.

Update / Add to --- Palette: to update the Palette.

8.6 PLAY MENU AND DATA MENU: FEATURES

8.6.1 Right Click on a Palette

In addition to Edit Palette, Track Palette, and Execute Palette, there are two specific options:

Insert Palette: to add the next available Palette in the list.

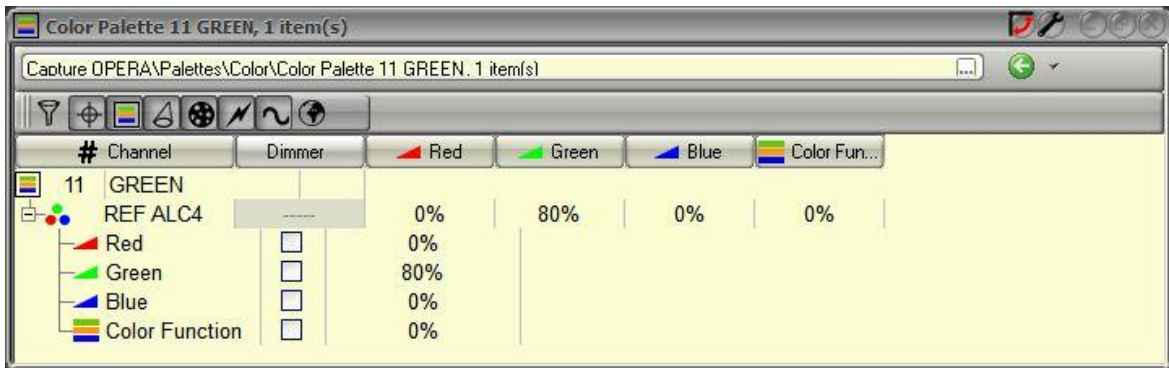
Delete Palette: to delete the selected Palette.

Open Direct Access Panel: to open a Palettes Access Panel

8.6.2 Drag & Drop a selection of channels to a Look

Dragging a channel selection to a Look in the Play menu offers the same options as to a Palette button in the Direct Access Panel.

8.6.3 The Palette # Editor window



To edit a specific Palette:

In Direct Access Panel Right Click on a Palette button and choose **{Edit Palette: xxx Palette #}**.

In Play Menu Right Click on a Palette and choose **{Edit Palette: xxx Palette #}**.

On Console: for instance **[#] [EDIT]&[COLOR]**.

Use arrows to go to the parameter value to edit, then **(ENTER)**, tap the new value, then confirm with **(ENTER)**. Expand the row, to display the **Snap** column. **Snap** enabled means 0 second for the parameter when executing this Palette.

If a Palette was recorded as a standard Palette, displaying all separate channels, it is possible to change it for a Reference. Double click on the channel number, and choose REF at the top of the list.

Then select all other same type of channels, while holding the Shift key, Right Click and choose the option **Delete all selected items**.

It is possible to mix independent channels and References. It is indeed useful when in a group of identical fixtures; some fixture's lamps and then their colour temperature are different. In that case, it will be necessary to record first the COLOR Palette as a Reference Palette, then to modify the colour for the fixtures which are not matching 100%, and to update (**update / Add**) the Palette as standard (Record as Reference unchecked).

8.6.4 The Palettes Editor Window

You can view, edit and delete palettes directly in the Palette List, e.g.: **[EDIT] & [COLOR]**.

To move in the list of Palettes: use arrows and Enter keys.

To delete a Palette, move to the palette in the list: **[DELETE] [ENTER]**, or **[ESC]** to cancel.

To give a name to a Palette: Go to the Name column, **[ENTER]**, fill the field **[ENTER]**.

To change the number (ID) of the palette: Go to the ID column, **[ENTER]**, enter a new number then **[ENTER]**.

To close the window: **[ESC]**.

8.7 PALETTES AND SUBFADERS

You can load Palettes directly to any Subfader.

8.7.1 Loading a Palette in a Subfader

Select FOCUS palette 1 and load it directly to Subfader 13 with the keypad:
[1] [FOCUS] & [Assign Key 13].

Select FOCUS Palette 1 and load it directly to Subfader 13 with the mouse or your finger:
Click directly on the Palette in the FOCUS palette window, drag it to the Subfader Field and choose {Load Focus Palette 1}.

8.7.2 Working with palettes Loaded in Subfaders

Note: to use palettes loaded in subfaders and FLASH keys, the **Rubberband mode** should be **unchecked** (**[SETUP] / Attributes**)

To select a palette, **first, select channels**, then use the **FLASH key** to execute the palette for the selected channels.

TIP: to make the assign key usable as selector, select Palette channels (**[##] [FOCUS]&[Ch]**), drag & drop the selection to the Submaster Field and select **{Add Channels}**.

To execute a palette in time, first assign time to the subfader (**[##] [TIME] & [ASSIGN KEY]**), then use the Start key and the Assign key, e.g. with subfader 13:
[START] & [Assign Key 13] or **[START 13]** if that key does exist on the console.

8.7.3 Editing a palette Loaded in a Subfader

Right Click on the Subfader Field (FIELDS Controller), choose **{Edit Palette: ## Palette ##}**
Select channel(s) and parameter(s), change values, then (ESC) to close the window.

9. SEQUENCES AND PRESETS

9.1 PRESETS

9.1.1 Introduction

A Sequence is structured in Steps which consists of Presets and Device links. Instruments levels are stored into Presets, attributes and dynamic Effects are stored into Device Links. Presets can be arranged in a list called a Sequence, with predefined fade times.

Presets can be modified blind or live.

Presets can be copied.

You can retrieve individual channel levels from recorded Presets with Fetch.

When a Preset is recorded in the A playback, it is automatically placed in numerical order in a step of the Sequence in that playback.

When a Preset is recorded in a Field, it is not placed in a step of the Sequence but recorded in the Preset List directly.

Note: A Preset is a memory that can be reused in several Sequences or Playbacks at the same time. To delete it completely you have to go to the source of all Presets: the Preset List (Menu Play/Presets).

This does NOT mean that the Preset number will disappear from the Sequence or from Master Pages, but it means that it will be an empty Preset with no channels or levels stored. It also means that the number of the Preset will be regarded as an unused Preset in the system.

When deleting a Preset in the Preset List you will get a checkbox option of deleting all related Sequence Steps.

9.1.2 Record

9.1.2.1 Recording a Preset in the sequence, in A mode

You can choose to record the complete Stage Output or **only** the A Field content, either by default in the SETUP (Preferences/Channels), or directly in the Record Preset window.

To record a Preset with the next free available number: **Press [RECORD] or (F7).**


You will get a popup where you confirm recording this Preset, and can write a text label. Then **[RECORD] or (F7)** again or **[ENTER]** or click on the Record Soft Button, (See next page).

To record a Preset with a specific number, use the same syntax as above but specify the number before: **[#] [RECORD] or (F7).**

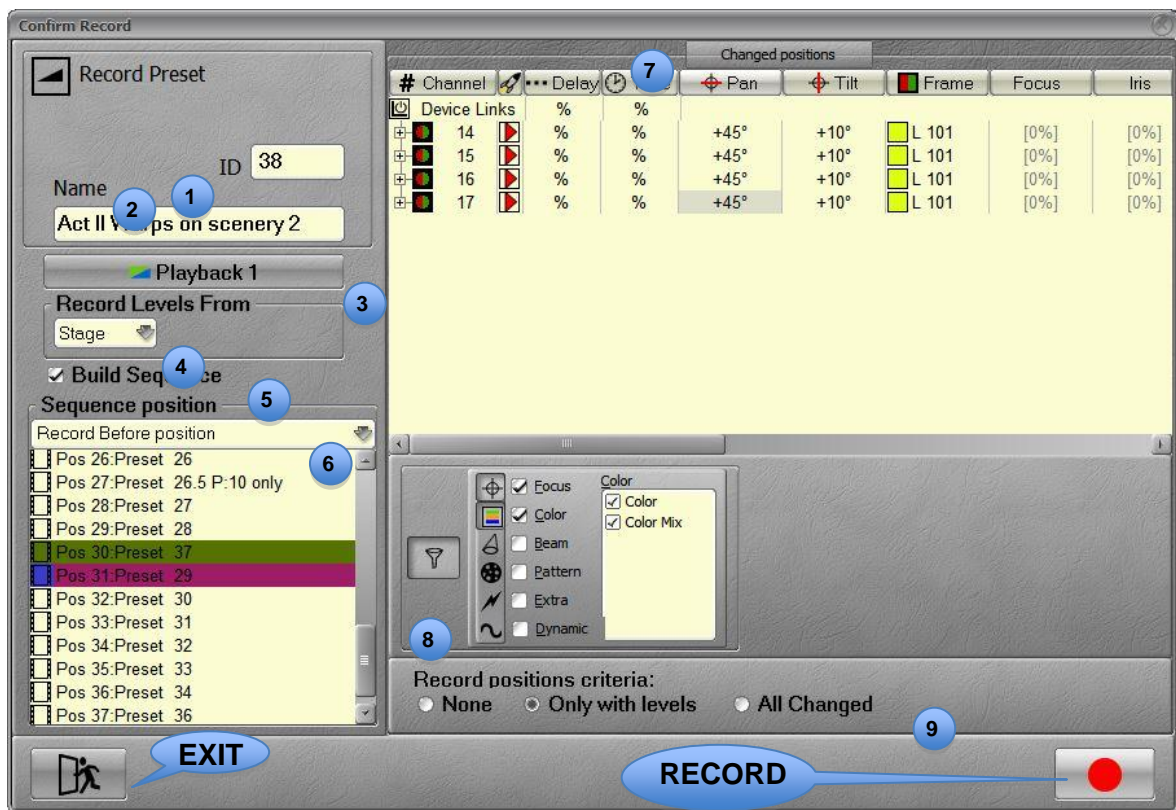
Note: Preset and Moving Lights in the sequence

Attributes are recorded in Device Links.

Attributes are by default recorded **only** if channel level is above 0% (“**Only with Levels**”)

Only changed attributes (“Changed positions”) are recorded (these attributes are displayed in the Changed Positions window). 

Unchanged attributes are tracking from the source.



- 1 Preset ID
- 2 Preset Name
- 3 Playback selector: click on the button and pick another Playback in the list if needed
- 4 Records Levels From:
Click on the button to choose between **Stage** or **Field** or use the **[S/F]** key.
In Field mode you can choose between **A** field (Live) or **B** field (Blind).
- 5 **Build Sequence** mode: checked by default, Presets are recorded and loaded in the Sequenced attached to the selected Playback.
- 6 **Record before Position** where "Position" corresponds to the End is the default option when building the Sequence. That Position can be changed by clicking on any other step in the Sequence list.
Click on Record before Position, select **Record At Position** and choose any other step in the Sequence list to **Update** the **Preset** attached to this step.
- 7 **Changed Positions** (attributes) are displayed in black in that window. Tracked Positions (attributes) are displayed in grey and between square brackets.
By default, all changed attributes are displayed, and then will be recorded. To display and record only some of attributes, use filters. See below.

8 **Filters:** to enable or disable filters, click on the Filters soft button, and then select filters to disable or use **[ALL]** attribute group key to disable all filters, and then any other attribute group key to enable the dedicated group of attributes.
Inside each group of attributes, it is possible to disable or enable specific attributes.

9 Recording options:

- **None:** no parameter recorded.
- **Only with levels** (default mode): **only channel with level above 0%** will get their attributes recorded.
- **All Changed:** all changed attributes, regardless of channels intensities, will be recorded.

To **cancel**, click on the **Exit icon**, use **(ESC)**, **[ESC]** or **[C/ALT]&[ENTER]**.

9.1.2.2 Recording a Preset not included in the sequence

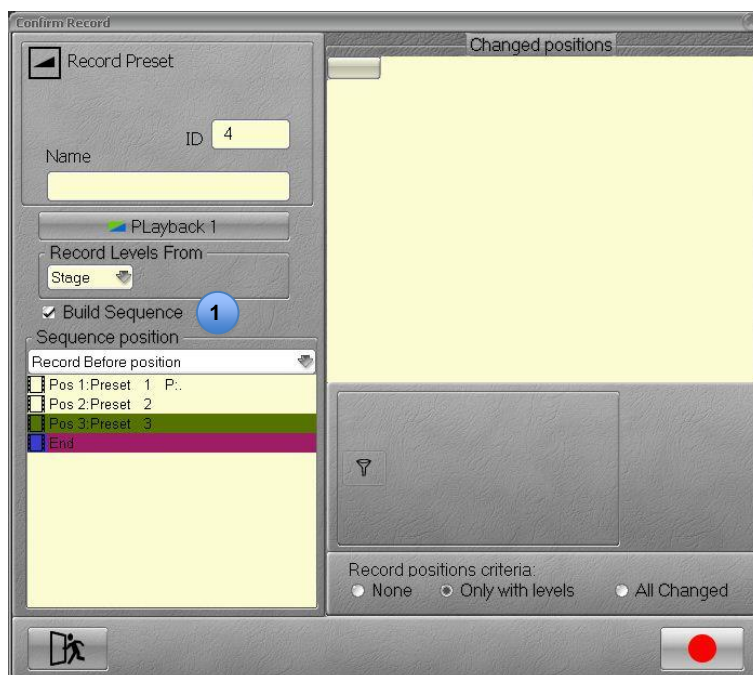
Working in the A playback

To record a Preset with the next free number:

[RECORD] (You will get a popup where you confirm recording this Preset, and can write a text label), **unchecked Build Sequence**. 1

Then **[RECORD]** again or **[ENTER]** or click on the icon in the down right corner.

To record a Preset with a specific number, use the same syntax as above but specify the number before: **[#] [RECORD]**.



9.1.2.3 Working in a Subfader Field

Note: to record Preset directly from a field with only the content of this field, « Record Stage as default » in the SETUP (Preferences/Channels) should be Unchecked. If « Record Stage as default » is checked the Stage content will be recorded.

To record a Preset:

Hold the assign key of the Subfader, edit channels and levels, then while holding the assign key, press [#] [RECORD]. You will get a popup where you confirm recording this Preset, and can write a text label.

Then [RECORD] again or [ENTER] or click on the icon in the down right corner.

Note: the Preset will be automatically loaded in the Subfader.

9.1.3 Update

9.1.3.1 Updating a Preset in the sequence in A mode

To update a Preset in the playback #A connected to the selected Field Editor: [UPDATE] You will get a popup where you confirm recording this Preset, and can write or edit a text label. Then [UPDATE] again or [ENTER] or click on the icon in the down right corner.

9.1.3.2 Updating a Preset in the sequence in B mode

Change for B mode first (click on the 1A soft button at the bottom of the main window, or use console keys as [A/B] and [A]&[B].

Modify channel intensities.

Important: Device's attributes are not involved with B mode, which means that they will change on stage.

To update a Preset in the playback #B connected to the selected Field Editor: [UPDATE] You will get a popup where you confirm recording this Preset, and can write or edit a text label.

Record Level from will be automatically in **Field** mode, #B.

Then [UPDATE] again or [ENTER] or click on the icon in the down right corner.

9.1.3.3 Updating any Preset in the Sequence Playback List

Due to the Drag&Drop facilities, it is easy to update any Preset in the Sequence Playback list, from Stage.

Suppose that Step 10/Preset10 in A (Stage)

Select some Channels and set a level

With the above methods it is easy to update either Preset 10 (A) or Next Preset (B)

With the D&D method, drag the channel selection to any Step/Preset and select **Merge Levels into Preset #**.

To remove this channels from any Step/Preset, drag the channels to the Step/Preset and select **Remove Channel From Preset #**.

To replace the existing Preset channels with the selection, drag the channels to the Step/Preset and select **Replace Channel in Preset #**.

9.1.3.4 Working in a Subfader Field

To load an existing Preset into a Subfader:

[#] [LOAD]&[Assign Key ##].

To update a Preset in the Field Editor of a Subfader:

Hold the assign key of the Subfader, edit channels and levels, then while holding the assign key, press **[UPDATE]**. You will get a popup where you confirm recording this Preset, and can write or edit a text label. Then **[UPDATE]** again or **[ENTER]** or click on the icon in the down right corner.

Note: In this way, changing levels in the Field Editor of the Subfader will be « LIVE » if the fader is raised above zero.

9.1.3.5 Editing a Preset (BLIND mode)

To edit a Preset:

[#] [EDIT], select channels and edit levels then **[UPDATE]**. Use **[ESC]** to close the edit window.

To rename a Preset:

[#] [EDIT] and type your text in the field located in the left down corner. Then press **[ESC]** to close the Edit window.

To Copy levels from Preset # to selected channels referencing to this Preset:

[#] [FETCH].

9.2 SEQUENCE

9.2.1 Introduction

A sequence is a fixed list of steps that can be played back manually or with fade times. Each step contains a Preset and Device links if some Devices were recorded. Instruments levels are stored into Presets, attributes and dynamic Effects are stored into Device Links.

A sequence Step consists of three components:

- **Preset:** Channels levels only
- **Device Links:** Attributes values, Attribute Times, Go On Go flags
- **Data:** Fade Times, Wait Times, Channel Times (Part Fade), Master Link, Page Links and Action Links

The same Preset can exist in several sequence steps, and several sequences.

In a sequence step, each channel and each parameter can have a particular time.

Sequences can be played back from the Master Playback, or any virtual Playback.

A Sequence is an object; a maximum of 1000 sequences can be recorded.

It is possible to import or to export a Sequence from/to another show.

It is possible to copy a Sequence inside the Sequence list.

9.2.2 Master Playback

When you start a new play (HATHOR menu > File > New / Clear Play) there is a default sequence (Seq 1) in the master Playback.

After selecting some channels with levels, press **[RECORD]** to record the first Step/Preset.

By default it will be the first free Preset in the Preset list (Preset 1). Enter a text label for this first Preset in the text field, then **[RECORD]**.

Note: in the Sequence Playback window, you will see this text displayed twice, in the Text column as Step Text and in the Content column as Preset Text.

9.2.2.1 Recording a new Preset

To record a Preset with the next available free number:

[RECORD].

Note: The next available free number is contextual, depending of the position in the sequence.

Suppose that a sequence was built with Presets 1 thru 10, 101 thru 110 and 201 thru 210, if a cue between 1 and 10 is in 1A (on stage) the next available number will be 11, if a cue between 101 and 110 is in 1A (on stage), then the next available number will be 111.

You will get a popup where you confirm recording this Preset, and can write a text label: then **[RECORD]** again or **[ENTER]** or click on the icon in the down right corner.

To record a Preset with a specific number, use the same syntax as above but specify the number before:

[#] [RECORD].

To record a Preset with a specific number and a comma, in order to insert this Preset between others, use the same syntax as above:

[#] [,] [#] [RECORD].

Note: The system allows only one digit after the coma.

9.2.2.2 Times

Fade times of a Sequence Step are related to that step, not to the Preset linked to the Step. This offers the possibility to use the same Preset with different fade times in other Steps or in the Subfaders.

To use console keys to assign Times to Steps, it is necessary to be located on the correct Step either in A or in B. On the other hand, using the mouse offers the possibility to assign Times everywhere in the Sequence. Both methods have advantages, depending of the context.

Mouse facilities: generalities

To assign In/out, In, Out, Delay and Wait times to one Step:

Click on the cell, type the time and **(ENTER)**.

To assign In/out, In, Out, Delay and Wait times to a range of Steps:

Click on the first cell, hold the **(SHIFT)** key, then click on the last cell, type the time and **(ENTER)**.

To assign In/out, In, Out, Delay and Wait times to a selection of Steps:

Click on the first cell, hold the **(CTRL)** key, then click on the last cell, type the time and **(ENTER)**.

To delete all assigned times, select all the steps (SHIFT method), type **(0)** and **(ENTER)**.

To Copy a time value, first, click on the cell, type the time and **(ENTER)** to assign a time value, then hold the **(ALT)** or **[C/ALT]** key and double click on dedicated cells or use arrows to move from step to step then hold **(ALT)** and press **(ENTER)**.

In & Out Times

First check that in [SETUP] Preferences/Playback the « Set Times mode » is on Active. Use the [GO] button, (CTRL) (G) or the GO softkey to execute the Preset on stage, check that you see the content of this Preset in your field Editor (means you're working in the A Field). Times used for the crossfade are default Times.

To set the new same value (#) for In & Out Times:

[#] [TIME].

To set a new value (#) for In Time:

[#] [TIME] & [B].

To set a new value (#) for Out Time:

[#] [TIME] & [A].

Note: to change Times for the incoming Step, swap to B field with the [A/B] key, and use the same syntax.

Delay Times

Use the [GO] button, (CTRL) (G) or the GO softkey to execute the Preset on stage, check that you see the content of this Preset in your field Editor (means you're working in the A Field). Times used for the crossfade are default Times.

To set a new value (#) for Delay In Time:

[#] [DELAY] & [B].

To set a new value (#) for Delay Out Time:

[#] [DELAY] & [A].

Note: to change Times for the incoming Step, swap to B field with the [A/B] key, and use the same syntax.

Wait Times

When you want to execute automatically a crossfade between two steps, the Wait Time is always to set on the second step.

Use the [GO] button, (CTRL) (G) or the GO softkey to execute the Preset on stage.

The Wait Time starts counting down after the END of the first crossfade. That means if you want the second step to start immediately after the end of the first step, you should set a value of 0.1 sec.

The Wait Time generates an Auto GO and is always set on the second Step.

To set a Wait Time:

[#] [WAIT].

Note: to change Times for the incoming Step, swap to B field with the [A/B] key, and use the same syntax.

Follow Times

When you want to execute automatically a crossfade between two steps, the Follow Time is always to set on the second step.

Use the [GO] button, (CTRL) (G) or the GO softkey to execute the Preset on stage.

The Follow Time starts counting down after the BEGINNING of the first crossfade. That means if you want the second step to start immediately after the end of the first step, you should set a value of # sec, where # is equal to the longer time of the first step:

- For a Step with In/Out time: 6 sec, Follow = 6 sec

- For a Step with In time 6 sec and Out time : 8 sec, Follow = 8 sec
- For a Step with In/Out time: 6 sec, and a Delay in: 3 sec, Follow = 9 sec
- For a Step with In/Out time: 6 sec, Channel Time: 10 sec, Follow = 10 sec
- For a Step with In/Out time: 6 sec, Channel Time: 10 sec, Channel Delay: 3 sec, Follow = 13 sec

The Follow Time generates an Auto GO and is always set on the second Step.

To set a Follow Time:

[#] [WAIT] and select Follow in the W column.

Note: to change Times for the incoming Step, swap to B field with the **[A/B]** key, and use the same syntax.

Alert Times

Alert Times are records of Time between two GO.

The purpose of this function, is not only to display a time information in the Sequence list and during the crossfade (as an Alert), but also to offer the possibility to use Alert values as Wait Times.

Recording Alert Times

To record Alert Times, enable the Learn Alert while clicking on the Learn Alert Soft-key:



As soon as the function is enabled the count starts, therefore the first Alert Time will be the time between the start of the count and the first GO. Then, for the following Step, the Alert Time will correspond to the count between the end of the crossfade and the next GO.

In the W column, an **A** will be displayed.

Using Alert Times

Alert Times are automatically displayed in the Wait column, and in the W column, an **A** will be displayed by default meaning that this time is used as **Alert Time**.

Alert count is displayed during crossfade, in green till 10, and in Red between 9 and 0. This is only information, at 0, the system will wait for a manual GO.

Alert Times can be used as Wait Times:

Double-click in the A column

Select Wait instead of Alert

Note: it makes no sense to use Follow Times in this context since the recorded Time doesn't include the time between the Go and the end of the crossfade.

Channel Time and Channel delay (Partfades)

Channel Time and Channel Delays are sorted as **Partfades** inside the Sequence Step.

A **Partfade** can be modified, labelled, copied or moved. See Mouse facilities for more details.

To set a particular Time for one or several channels:

Select Channels

[#] [CH] & [TIME].

To set a particular Delay for one or several channels:

Select Channels

[#] [CH] & [DELAY].

Note: to change Times for the incoming Step, swap to B field with the **[AB]** key, and use the same syntax.

Mouse facilities:

To set a particular Time for one or several channels:

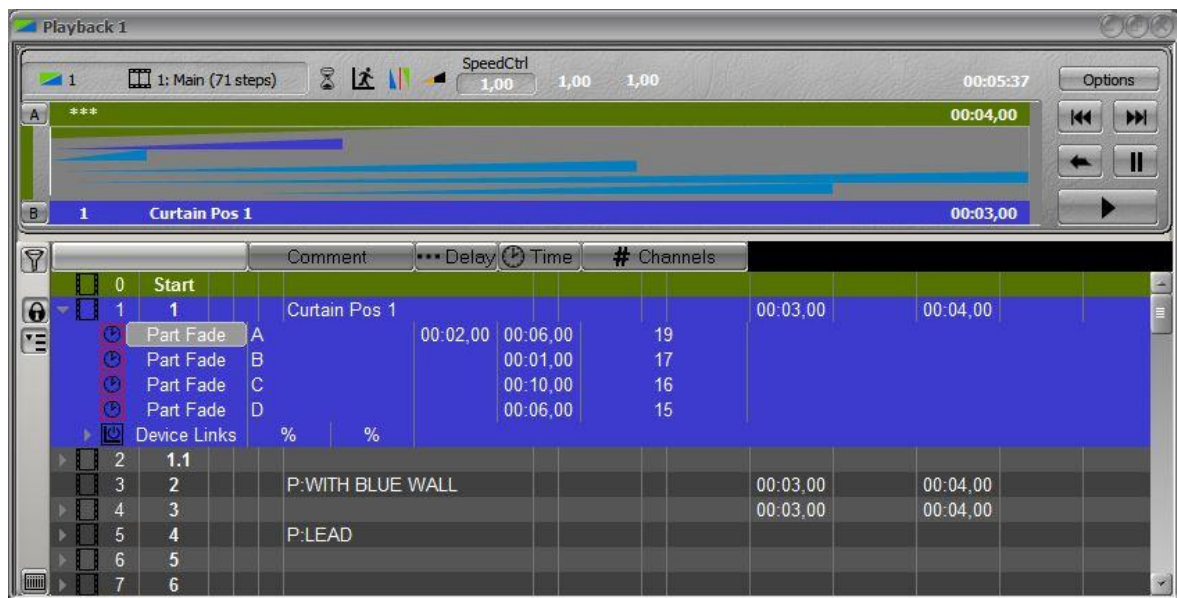
Select Channels

Drag&drop the selection to the Sequence Step

Select **Create New Partfade** in the list

A new Partfade will be added.

TIP: this method is useful to create a Partfade in any dedicated step, regardless of the current position in the Sequence (A and B).



- Double Click in the Comment column to add a label
- Double Click in the Delay column to assign a Delay
- Double Click in the Time column to assign a Time

To **Copy** or **Move** a Partfade from one step to another:

- Drag&drop the Partfade to the dedicated Sequence Step
- Select either **Copy xx to Pos #** (Pos = Step) or **Move xx to Pos #**

Parameter Time and Parameter delay

To set a particular Time for one or several channels and for one attribute Group (e.g. COLOR):

Select Channels with Scroller

[#] [COLOR]&[TIME].

To set a particular Delay for one or several channels and for one attribute Group (e.g. COLOR):

Select Channels

[#] [COLOR]&[DELAY].

Note: to change Times for the incoming Step, swap to B field with the **[A/B]** key, and use the same syntax.

9.2.2.3 To insert a Sequence Step

Since the system is using a fixed list of Steps, inserting a step will correspond to insert a new **“Not recorded”** Preset on this selected Step.

Click on the Step and use **(insert)** on the keyboard.

The system will automatically inserting a “Not recorded” Preset #,5 on the selected Step.

To Edit the Preset, Right Click on the Step, and select **{Edit Sequence Step: xxxx}**.

9.2.2.4 To delete a Sequence Step

Note: When you delete a Sequence Step the Preset of that step still exist in the Preset List but all assigned times, links and texts are lost.

With the mouse or your finger, go to the step to delete, in the Sequence Playback window. Right click or let your finger few seconds on the cell.

In the menu choose **{Delete Sequence Step}**.

9.2.2.5 Replace and Rename Preset

With the mouse or your finger, go to the Preset to replace in the Sequence Playback window. Double click on the Preset Number, tap the new number then **[ENTER]**.

A popup window will appear with different options:

{Replace Preset} is the default option, confirm with **[ENTER]**.

{Copy Preset to new number}: to copy existing content of selected Preset to another one without deleting the target selected Preset.

Note: if the new number is corresponding to an existing Preset, check the option “Replace if new number exists” to replace. If unchecked the existing target Preset will be not overwritten.

{Rename Preset to new number}: to copy existing content of selected Preset to another one but with deleting the target selected Preset.

Note: if the new number is corresponding to an existing Preset, check the option “Replace if new number exists” to replace. If unchecked the existing target Preset will be not overwritten.

9.2.2.6 Drag & drop a step

To Copy or Move a step to a new location, click on the Step number, drag and drop it to the step to insert, choose Copy or Move.

A popup message “Copy with History and Cue Only” will appear. This information refers only to attributes (Device Links). Select **YES** to copy, or **Cancel** to exit.

9.2.2.7 To edit a Sequence Step

Right Click on any Sequence Step in the sequence and select **Edit Sequence Step: Pos #: Preset #**.

Modify channels levels: the Update button appears in the upper right corner, click on this button and confirm with **(ENTER)**, or use **[UPDATE] [UPDATE]**.

9.2.3 Sequence and Moving Lights

All details relative to moving lights are located into **Device Links**:

- Attribute information (values or palettes)
- Attribute Times
- Go on Go flags.

9.2.3.1 General Facts

Attributes are recorded into Device Links.

Attributes are, by default, recorded only if channel level is above 0%.

Only changed attributes ("Changed positions") are recorded (all attribute values for channels with intensity will be recorded in the first sequence step).

Unchanged attributes are tracking from the source.

TIP: to record a start cue with every parameter but no intensities, you can enter the decimal value 1: **[.] [1] [AT%]** which correspond almost to zero%.

9.2.3.2 Recording a Preset/Step including attributes values

To record Preset 1 including attributes:

Select Devices, set levels and set attributes

Press [1] [RECORD]

You will get a popup where you confirm recording this Preset.

Features:

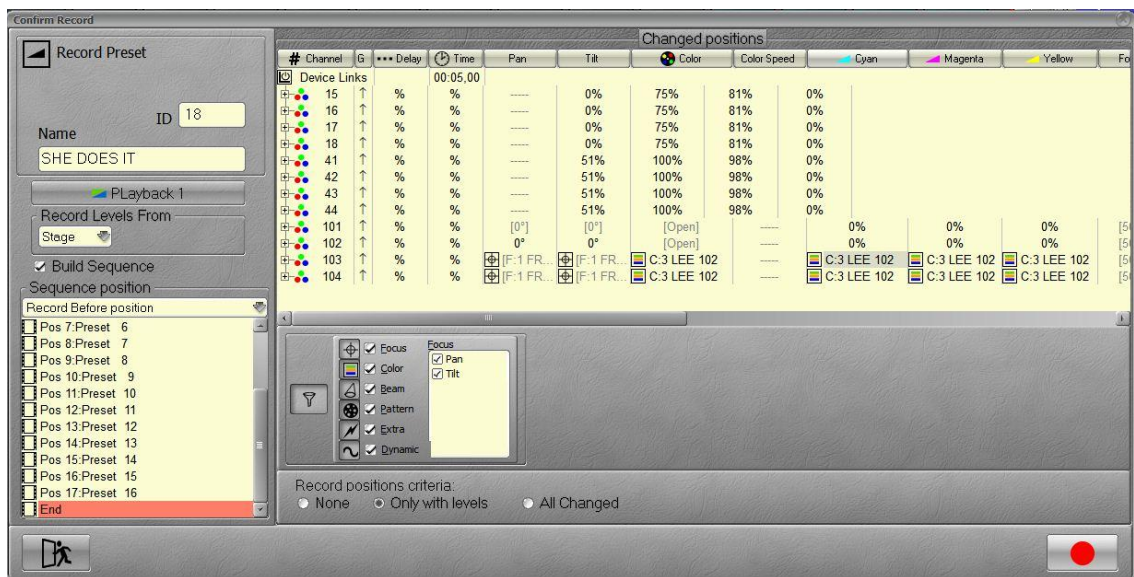
ID: here you can change the Preset number

Name: Preset Label

Records Level From: Stage or Field

Possibility of filtering by group of attributes and by attributes

Possibility of recording only channels with levels, all changed or none



To confirm press **[RECORD]** again or **[ENTER]** or click on the icon in the down right corner.

Using filters:

By default all changed parameters of channels with levels are recorded.

To select specific parameters to be recorded: just uncheck the parameters to exclude while using the Attribute Group Key corresponding to those parameters. e.g.: **[EXTRA]**.

Record Positions Criteria: default is **Only with Levels**

To Record only intensities, select **None**

To Record all changed parameters, select **All Changed**

Tip: to record only some channels attributes instead of all with levels, select the range of channels to remove, Right Click and select **{Delete all selected items}** directly in the Changed positions part of the Record window.

9.2.3.3 Cue only feature

Introduction:

This function may appear when recording a step in the middle of a series of steps, and if Device parameters are tracking through those steps.

The Cue Only feature allows modifying a Sequence Step while preserving the following Sequence Step.

The Cue only mode can be enabled or disabled in Preferences.

- If Use Cue Only is **disabled**, the Cue Only soft-key will be **only displayed** if Cue Only mode is relevant.
- If Use Cue Only is **enabled**, the Cue Only soft-key will be not only **displayed** if Cue Only mode is relevant, but **activated**.
- If "Cue Only" is **activated**, the system will copy all historical values to the following Sequence/Step before modifying the current Sequence/Step with new values.
- If Cue Only is **not activated**, the system will not copy historical values to the following Sequence/Step, modifications in the current step will therefore seen as

historical values in all following Sequence/Steps till a recorded value stops this "track".

Example:

In Step 1, Device 1 has a scroller set to frame 1.

For steps 2 through 4, there are no values recorded for Device 1, so its scroller remains in Frame 1

In Step 5, Device 1 has its scroller set to frame 4.

Then Step 3 is modified, with Device 1 scroller at frame 2

When Update, the "Cue Only" button is included in the record confirmation window.

If "Cue only" is **activated** (button pushed) then Step 3 will be recorded at Frame 2, AND Step 4 will be recorded with the scroller at frame 1.

If "Cue only" is **not activated** (button not pushed) then Step 3 will be recorded at Frame 2, and no further changes will be recorded. The scroller will remain in frame 2, until Step 5 when it will change to frame #4.

9.2.3.4 The Record Position feature

The Record Position feature is dedicated to **update** parameters in **existing** Sequence Steps, for **selected channels only**.

The Record Position feature allows to record parameters for selected channels even without intensities.

The Record Position feature allows to record parameters even if these parameters were not modified regarding the previous Step.

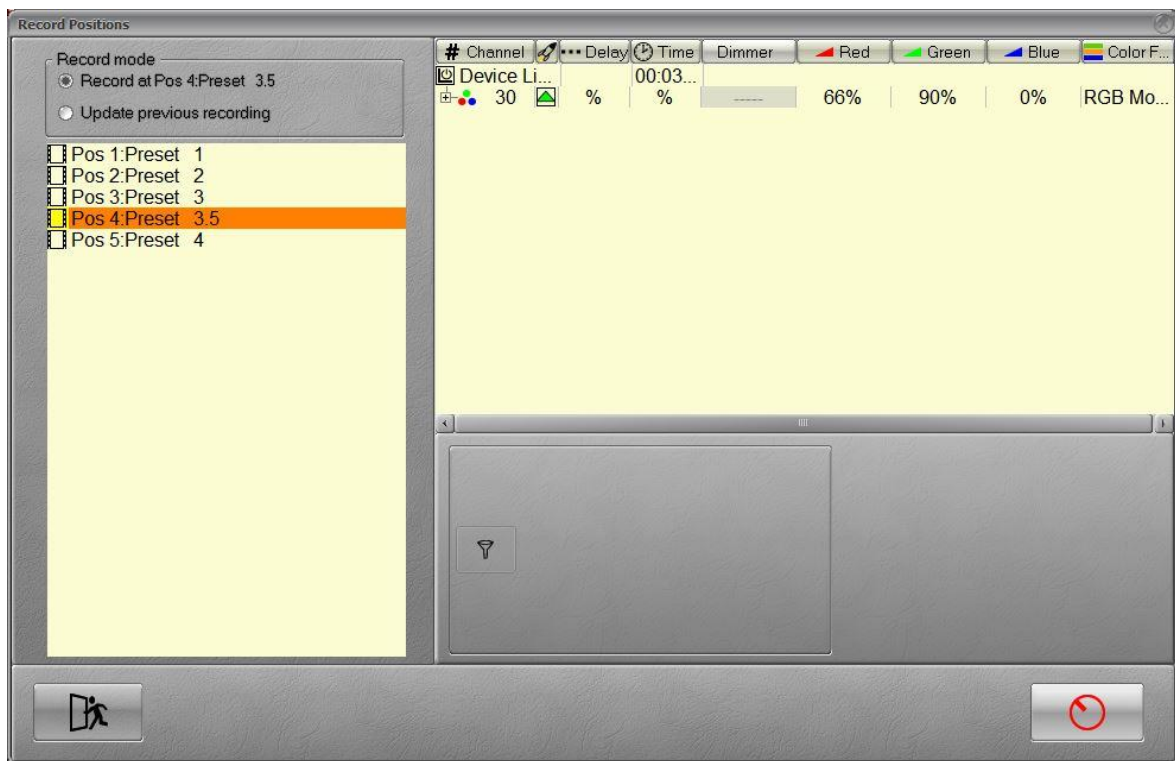
The Record Position feature allows to update parameters in source Steps.

There is **no CUE ONLY** mode when using Record Position.

It is not possible to Record a new Sequence Step with Record Position.

To update a Sequence Step Device Link:

- Use the **[GO]** button, **(CTRL) (G)** or the GO soft-key to execute the Step/Preset on stage
- Select the Devices to modified
- Modify some parameters
- **[REC POS]**



The Position in the Sequence will be automatically the current one.

- To update this Sequence Step: **[REC POS]**
- To update only some parameters, click on the Filters icon, and uncheck parameters or **[ALL]** attribute Group to disable all parameters, and then **[FOCUS]** to enable Pan & Tilt parameters, **[COLOR]** to enable Colour parameters, and so on. Parameters removed from recording will disappear from the Device Links window.

To update all sources, regardless of their position in the Sequence, select **Update Previous Recording**

TIP: you can use the record Position feature to force the system to record parameters in a Sequence Step, even if these parameters inherit from previous Steps. This Step will therefore behave as a **Blocking Cue** for parameters. Since parameter's values are recorded, any change in a source cue will stop at this point, even if the value is identical.

9.2.3.5 Drag&Drop facilities

Due to the Drag&Drop facilities, it is easy to update any Preset levels in the Sequence Playback list, from Stage.

Drag the channel selection to any Step/Preset and select:

Merge Levels into Preset # to add channels selection with levels to the Step/Preset.

Remove Channel From Preset # to remove this channels from the Step/Preset.

Replace Channel in Preset # to replace the existing Preset channels with the selection.

To update or Record new Parameters in any Step/Preset, drag the channel selection to any Step/Preset and select **Record Position**, confirm with **(ENTER)**.

9.2.3.6 Attribute Times

General Facts

Attribute Times are defined by default in SETUP / Preferences / Attributes / Default Time. This default Times are used while Recording if the option **{Links Times as %}** is **unchecked**.

When the option **{Links Times as %}** is **checked**:

A/ Attribute Times are linked to In/Out Times, but not default crossfade Times, only changed crossfade Times (see 8.3.2.1 In & Out Times).

e.g.: for channels 1 to 4:

- 1 Set CYAN to 100%
- 2 Record the next free Preset
- 3 Set 6 seconds In & Out Time for this preset (**[6] [TIME]**) Attribute Times will be automatically set to 6 seconds (100%).

Note: To toggle between % or absolute, click on the Device Links line, Right click on the cell in the Time column, and choose **{Toggle %/Abs}** in the menu.

B/ The option **{% Time from Part fade}** is operational: if checked, after creating a Part fade while using **[#] [CHANNEL] [##] [TIME]**, all parameters Times will be automatically updated with the Time used for this Part fade.

e.g.: for channels 1 to 4:

set YELLOW to 35%

Record the next free Preset **[RECORD]**

Select Channel 1 and set a special Time for this channel **[1] [CHANNEL] [12] [TIME]**

The Time for the parameter YELLOW will be automatically 100% of the channel Time.

Parameter Times: Keypad and Push wheels

Times are set only for the selected channels. **Always select channel(s).**

A/ Times and Delays for every parameters

To set the same Time value to all recorded parameters:

[##] [MOVE TIME]

To set the same Delay value to all recorded parameters:

[##] [MOVE DELAY]

B/ Times and Delays for a group of parameters

To set a new value to ALL recorded parameters:

[#] [TIME] & [ALL]

[#] [DELAY] & [ALL]

To set a new value to a group of parameters (FOCUS/COLOR/BEAM ...), use directly the corresponding key in the syntax, e.g. for FOCUS parameters:

[#] [TIME] & [FOCUS]

[#] [DELAY] & [FOCUS]

C/ Times and Delays for specific parameters, using PUSH WHEELS

To set a new value to one recorded parameter:

First activate the corresponding group of parameters. The four push wheels will display assigned parameters. E.g. to assign 4 seconds to parameter “zoom”:

[BEAM], have a look to the wheels parameter mapping; let’s say that zoom is controlled by wheel 3.

[#] [TIME] & [W3] will assign 4 seconds of time to parameter “zoom”

[#] [DELAY] & [W3] will assign 4 seconds of delay to parameter “zoom”

To set a new value to several recorded parameters:

[#] [TIME] & [W1] & [W2] & [W3]

Note: to change Times for the incoming Step, swap to B field with the **[AB]** key, and use the same syntax.

Parameter Times: Editing in the Sequence window

You can use the mouse to change Times values in every Times fields in the Sequence window.

Reminder: To toggle between % or absolute, click on the Device Links line, Right click on the cell in the Time column, and choose **{Toggle %/Abs}** in the menu.

Level 1: General Device Links Times

You can edit the general Times of the Device Links, either in % or in absolute value.

To change Times:

Enter a new value with the keypad and double click in the Time cell (Device Links line).

E.g. in %: 50 for 50%

E.g. in Abs: 6 for 6 seconds

Note: % Times are referenced to the crossfade (**in**) time.

Level 2: Particular Device Times

You can edit the Times Device by Device, either in % or in absolute value.

To change Times:

Enter a new value with the keypad and double click in the Time cell (Device ## line).

E.g. in %: 50 for 50%

E.g. in Abs: 6 for 6 seconds

Note: % Times of Devices are referenced to Device Links Times (Level 1).

If the Device Links Time value is different from the Crossfade Time value, the Device Times will listen to the Device Links Times.

Level 3: Particular Parameter Times

You can edit the Times Parameter by Parameter, either in % or in absolute value.

To change Times:

Enter a new value with the keypad and double click in the Time cell (Parameter line).

E.g. in %: 50 for 50%

E.g. in Abs: 6 for 6 seconds

Note: % Times of Devices are referenced to Device Time (Level 2).

9.2.3.7 Using the mouse: Drag & drop a Device links

Note: This function is extremely powerful and let you choose between Copy or Move, not only a Device Links, but also a part of the Device Link, which can be one or some devices or even one or some parameters of these devices.

9.2.3.8 Move

To move a complete Device Links:

Drag & drop the Device Links to the target step and choose **{Move Device Links to Pos##: Preset ##}** in the local menu.

To move one Device with all recorded parameters:

Open the Device Links

Drag & drop the Device to the target step and choose **{Move Device Links to Pos##: Preset ##}** in the local menu.

To move one parameter:

Open the Device Links

Open the Device

Drag & drop the parameter to the target step and choose **{Move Device Links to Pos##: Preset ##}** in the local menu.

9.2.3.9 Copy

To copy a complete Device Links:

Drag & drop the Device Links to the target step and choose **{Copy Device Links to Pos##: Preset ##}** in the local menu.

To copy one Device with all recorded parameters:

Open the Device Links

Drag & drop the Device to the target step and choose **{Copy Device Links to Pos##: Preset ##}** in the local menu.

To copy one parameter:

Open the Device Links

Open the Device

Drag & drop the parameter to the target step and choose **{Copy Device Links to Pos##: Preset ##}** in the local menu.

9.2.3.10 Delete Device links

Note: When you delete a Device Link all parameter information is lost.

To delete a complete Device Links:

With the mouse or your finger, in the Sequence Playback window, go to the Device Links to delete.

Right click or let your finger few seconds on the cell.

In the menu choose **{Delete Device Links}**.

To remove a Device from a Device Links:

With the mouse or your finger, in the Sequence Playback window, open the Device Links which contains the Device to delete.

Right click or let your finger few seconds on the Device ## number.
In the menu choose **{Delete Device Links: Ch ##}**.

To delete a Device parameter from a Device Links:
With the mouse or your finger, in the Sequence Playback window, open the Device Links which contains the Device to delete.
Open the Device
Right click or let your finger few seconds on the parameter.
In the menu choose **{Delete Device Part: ----}**.

9.2.3.11 To edit a Sequence Step with Device Links

Right Click on any Sequence Step in the sequence and select **Edit Sequence Step: Pos #: Preset #**.

To modify linear parameters values:

- Expand the Device Links
- Select the Parameter cell
- Enter a new value
- **(ENTER)**

To modify parameters position:

- Expand the Device Links
- Double click on the Parameter cell
- Select a new position in the list

To modify parameters Times:

- Expand the Device Links
- Expand the Device
- Select the cell
- Enter a new value for Delay or Time
- **(ENTER)**
- or enable/disable the snap mode

Note: to modify consecutive parameters in one go, select the range of parameters with **(SHIFT)** or **[THRU]**, and then, use the same method. To modify non consecutive attributes in one go, select the range of parameters with **(CTRL)** or **[+]**, and then, use the same method.

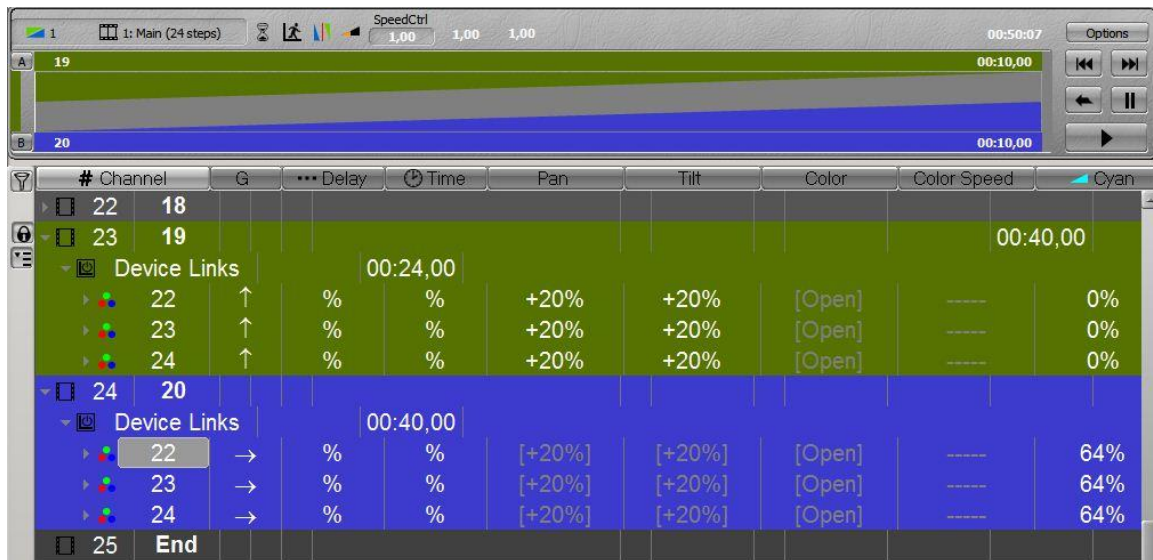
9.2.3.12 Move while Dark feature (Go on Go)

The default behaviour can be set in HATHOR menu > Setup > **Preferences (or [SETUP]): Attributes**

- Unchecked: MOVE while DARK is active. Recorded Parameters will change automatically in the previous Step if levels are 0%.
- Checked: MOVE while DARK is inactive. Recorded Parameters will change on stage (on GO).

The Go on GO feature can be edited Device by Device in Device Links.

Vertical arrow means Move in Dark
 Horizontal arrow means Go on Go



To change the behavior double clicks on the arrow symbol.

9.2.3.13 Fetch feature

Use Fetch to copy either intensities or parameter values for channels from any Sequence Step.

Fetching from Steps in the Main Sequence will copy the intensities, or the parameters values of those channels including any tracked values from a source Step in the Sequence.

To copy **intensities** for selected channels from any Sequence Step:

- Select one or several channel(s) you wish to copy values to
- Select the source Preset
- **[#] [FETCH]**

To copy **parameter values** for selected channels from any Sequence Step:

- Select one or several channel(s) you wish to copy values to
- Select the source Preset, then copy value for the Attribute Group of your choice (e.g. : COLOR)
- **[#] [FETCH]&[COLOR]**

A window appears, displaying the list of sequence steps on the left side and the values for the channel's selection related to the selected step, on the right side.

Check if values are consistent, then confirm with **(ENTER)** or **[FETCH]**.

To copy ALL parameter values from a Step:

[#] [FETCH]&[ALL] [FETCH]

To copy ONE parameter values from a Step:

[#] [FETCH]&[Parameter WHEEL] [FETCH]

DRAG&DROP facilities:

To copy **intensities** for selected channels from any Sequence Step:

- Select one or several channel(s) you wish to copy values to
- Drag the channel selection to any Step/Preset and select **Fetch Levels**.

To copy parameter values for devices from any Sequence Step:

- Select one or several channel(s) you wish to copy values to
- Drag the channel selection to any Step/Preset and select **Fetch Positions**.

The position History window will appear, check that the source Step/Preset is correct, then confirm with **(ENTER)** or **[FETCH]**.

9.2.3.14 Copy/Move a Step with history of parameters

To Copy or Move a step to a new location, click on the Step number, drag and drop it to the step to insert, choose Copy or Move.

A popup message “Copy with History and Cue Only” will appear. This information refers only to parameters (Device Links).

Choose **YES** to copy all parameters information from that step to the target one, including also tracked values (“History”). The result will be then exactly the same as the original step, and the following step will be not changed due to the “Cue Only” feature.

Choose **No** to copy only recorded values.

Choose **Cancel** to exit.

9.2.4 Master Links

9.2.4.1 Introduction

MASTER Links are links between Sequence Steps and Submaster Fields.

9.2.4.2 Creating a Master Link

To create a Master link, drag and drop the dedicated Field from the Fields controller to the dedicated Sequence Step, and select **{Create MasterLink}** or **{Create MasterLink with Target}** to use the current output level of the field.

The object will be always loaded in the linked field when executing the cue **before** the one containing the Master Link.

The Submaster will be executed when executing the cue holding the Master Link.

All Field options can be modified directly in the Master Link.

9.2.5 Action Links

9.2.5.1 Introduction

ACTION Links are links between Sequence Step and Submaster Fields.

9.2.5.2 Creating an Action Link

To create an Action link, drag and drop the dedicated Action list from Play Menu / **Action Lists** to the dedicated Sequence Step, and select **{Create Action Link}**.

The Action list will be executed when executing the cue **before** by default.

The Action list will be executed when executing the cue holding the Action Link if Go On Go option is enabled (checked).

9.2.6 Page Links

9.2.6.1 Introduction

PAGE Links are links between Sequence Step and Submaster Fields.

9.2.6.2 Creating an Page Link

To create a Page link, drag and drop the dedicated Page from Play Menu / **Pages** to the dedicated Sequence Step, and select **{Create Page Link}**.

The Page will be loaded when executing the cue **before** the one containing the Page Link.

10. CHASERS

10.1 INTRODUCTION

A Chaser is a specific object, used to build multi-step effects and always executed while loaded in a Subfader. A Sequence can't be set to run as Chaser, but Sequence Steps can be used to create a Chaser.

General Facts

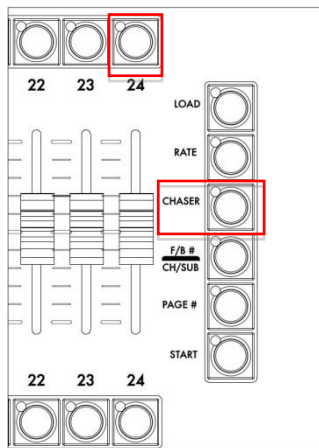
- Chasers have Rate and BPM (BPM can be set with TAP).
- A Chaser has playback direction's modes such as Normal, Random, Reverse, Bounce and Build mode.
- You can limit any Chaser to a number of loops.
- You can link any Chaser to a sequence step.
- You can play back a Chaser from any Subfader and use the next following Subfader as Speed master.

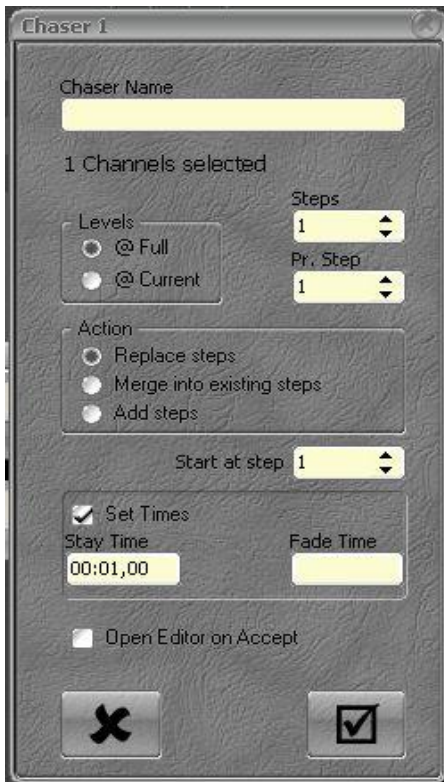
10.2 CREATING A CHASER (INTENSITIES)

10.2.1 Using the console

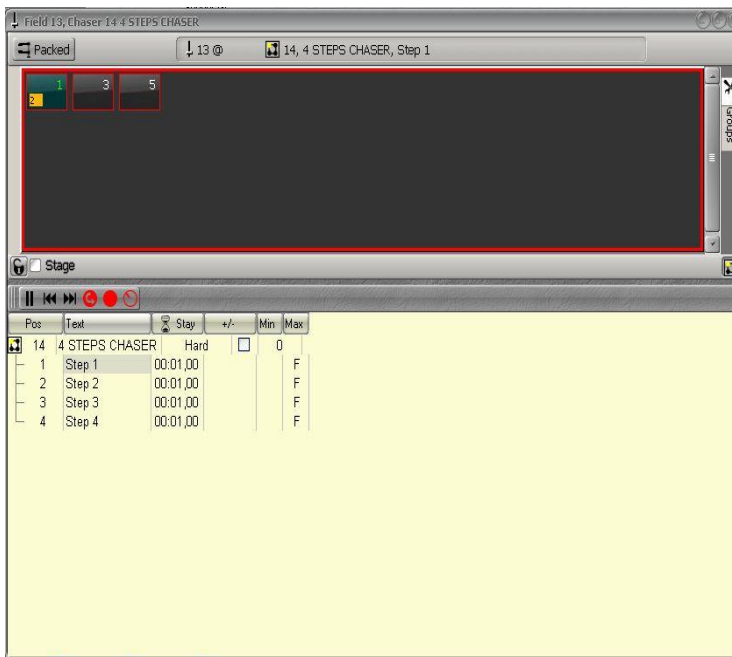
NO CHANNEL SELECTED

To Record a Chaser with the next free number (for a specific number, just add [#] before): **[CHASER]&[Assign Key]** and raise the Subfader at **100%**.





- Enter the Name of the Chaser
- In the Channels selected area: just enter the number of Steps needed.
- Tick the Set Times box to set times, enter the Stay and the Fade Times if needed.
- The Open Editor on Accept option is checked by default. If Unchecked, the editor won't open automatically.
- **Click on the checkmark virtual button to validate or [CHASER]: the EDITOR window appears.**

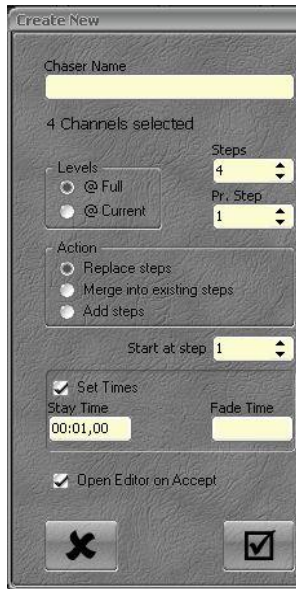


1. Click on the **Pause** virtual button
2. Click on the Step 1
3. Select Channel(s) and set level(s)
4. Press **[UPDATE]** to store the Step 1
5. Go to Step 2 with the **[Down]** key
6. Repeat steps 1 to 4
7. Go to Step 3 with the **[Down]** key
8. Repeat steps 1 to 4
9. Go to Step 4 with the **[Down]** key
10. Repeat steps 1 to 4
11. **[ESC]** close the Editor window (changes will be stored automatically). A popup appears, **{YES}** will **start the Chaser**.

Note: to use the next boarding Subfader as Speedmaster: go in the Subfader Screen **[SubFaders]**, Right click on the number area, select **{As Speed master for chaser in Field #}**.

CHANNELS SELECTED

To Record a Chaser with the next free number (for a specific number, just add [#] before): **[CHASER]&[Assign Key]** and raise the Subfader at 100%.



- Enter the Name of the Chaser
 - In the Channels selected area: **the number of Steps** depends on the number of channels selected. You can change it.
 - Pr. Step: quantity of channels by Step, by default set in 1.
- Note:** setting 2 Channels by Step will create 4 Steps, Step 1 with Channel 1 and 2, Step 2 with Channel 3 and 4, Steps 3 and 4 will be exactly the same as 1 and 2.
- Levels : Full or levels on stage
 - Tick the Set Times box to set times, enter the Stay and the Fade Times.
 - The Open Editor on Accept option is checked by default. If Unchecked, the editor won't open automatically.
 - **Click on the checkmark virtual button to validate: the EDITOR window appears.**
 - Click on the **Pause** virtual button
 - Use navigation keys **[Up]** and **[Down]** to move from step to step
 - If the result doesn't suit to you, use the above method to Edit Steps.
 - **[ESC]** close the Editor window (changes will be stored automatically). A popup appears, **{YES}** will **start the Chaser**

10.2.2 Using keyboard and mouse (no Channel selected)

Play Menu

Click on the Chaser Tab

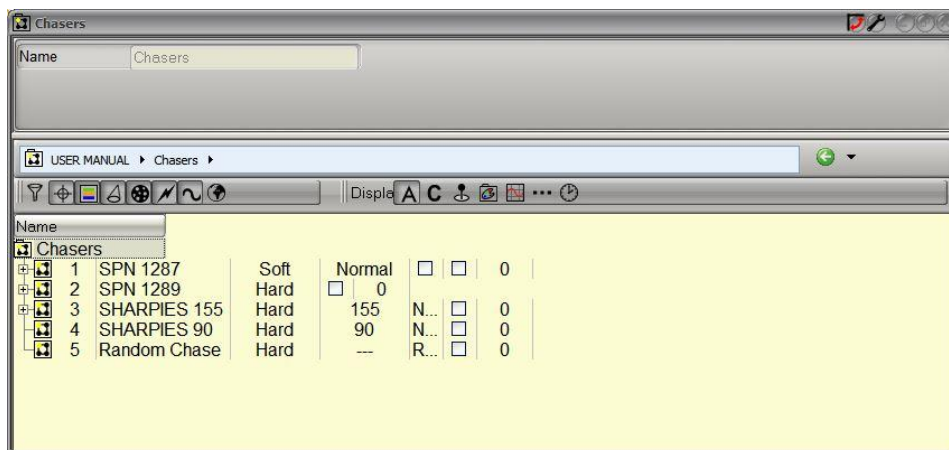
Right click in the empty part (yellow) and select **{Insert Sub:Chaser}**

Double click on the new Chaser and select **{Wizard}**

Data Menu

HATHOR / Data / Chasers

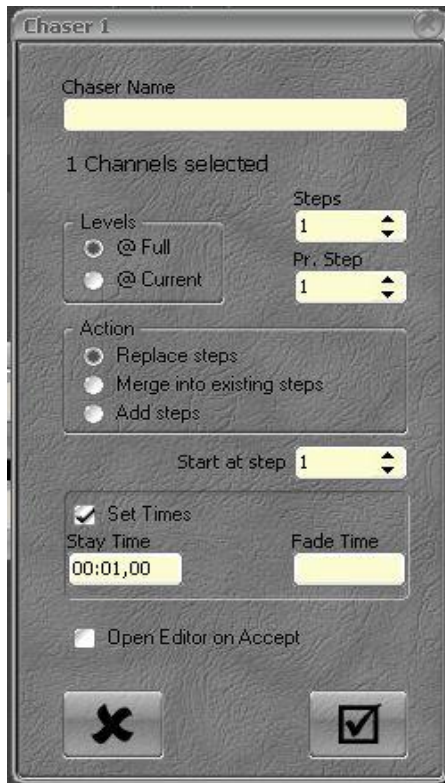
or **[EDIT]&[CHASER]**



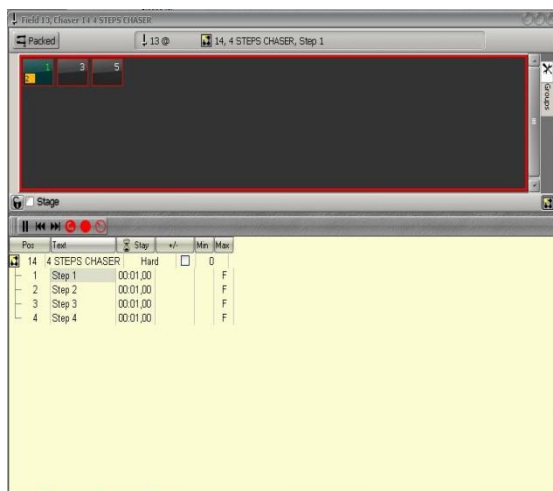
Right click in the empty part (yellow) and select **{Insert Sub:Chaser}**

Right click on the new Chaser and select **{Wizard}**

Wizard



- Enter the Name of the Chaser
- In the Channels selected area: just enter the number of Steps needed.
- Tick the Set Times box to set times, enter the Stay and the Fade Times if needed.
- The Open Editor on Accept option is checked by default. If Unchecked, the editor won't open automatically.
- **Click on the checkmark virtual button to validate or [CHASER]: the EDITOR window appears.**



- Click on the **Pause** virtual button
- Click on the **Step 1**
- Select Channel(s) and set level(s)
- Press **[UPDATE]** to store the Step 1
- Go to **Step 2** with the **[Down]** key
- Repeat steps 1 to 4
- Go to **Step 3** with the **[Down]** key
- Repeat steps 1 to 4
- Go to **Step 4** with the **[Down]** key
- Repeat steps 1 to 4
- **[ESC]** close the Editor window (changes will be stored automatically). A popup appears, **{YES}** will **start the Chaser**.

Note: to use the next boarding Subfader as Speedmaster: go in the Subfader Screen **[SubFaders]**, Right click on the number area, select **{As Speed master for chaser in Field #}**.

Changing modes and editing Times and levels in the EDITOR window.

10.2.3 Using keyboard and mouse (Channels selected)

Play Menu

Pin the Play Menu in the main window

Click on the Chaser Tab to open the Chaser menu

Drag&drop the selection to the empty part of the Chaser menu

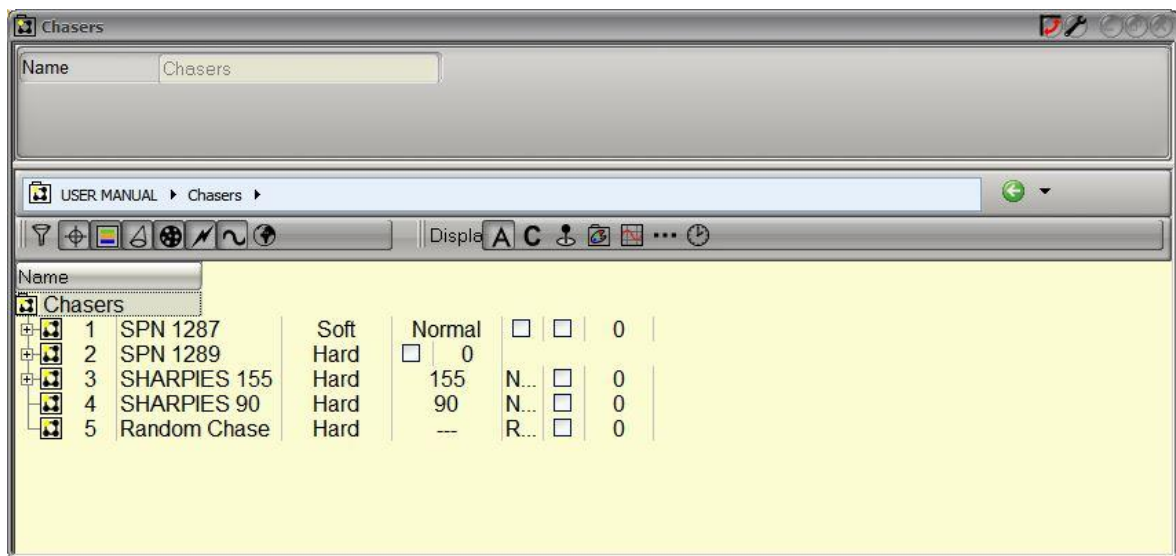
Select **{Create new Chaser wizard}**.

Data Menu

HATHOR / Data / Chasers

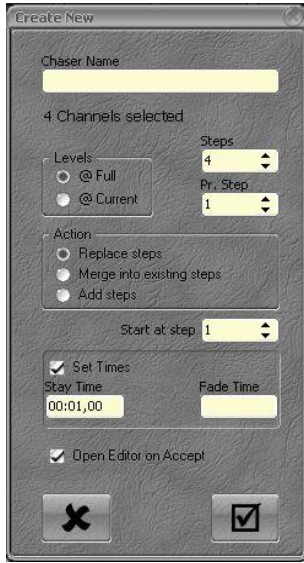
or **[EDIT]&[CHASER]**

Drag&drop the selection to **Chasers**



Select **{Create new Chaser wizard}**.

Wizard



- Enter the Name of the Chaser
 - In the Channels selected area: **the number of Steps** depends on the number of channels selected. You can change it.
 - Pr. Step: quantity of channels by Step, by default set in 1.
- Note:** setting 2 Channels by Step will create 4 Steps, Step 1 with Channel 1 and 2, Step 2 with Channel 3 and 4, Steps 3 and 4 will be exactly the same as 1 and 2.
- Levels : Full or levels on stage
 - Tick the Set Times box to set times, enter the Stay and the Fade Times.
 - The Open Editor on Accept option is checked by default. If Unchecked, the editor won't open automatically.
 - **Click on the checkmark virtual button to validate: the EDITOR window appears.**
 - Click on the **Pause** virtual button
 - Use navigation keys [**Up**] and [**Down**] to move from step to step
 - If the result doesn't suit you, use the above method to Edit Steps.

10.2.4 Creating a Chaser with Sequence Steps

Play Menu

Pin the Play Menu in the main window

Click on the Chaser Tab to open the Chaser menu

Right click in the empty part (yellow) and select **{Insert Sub:Chaser}**

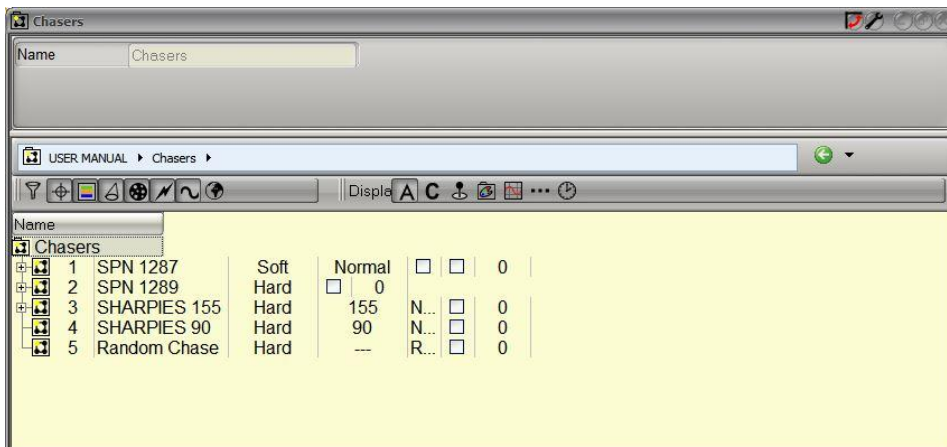
Drag&drop the selection of Sequence Steps, from the Sequence Playback to the new Chaser

Select **{Copy Collection of ## Sequence Steps to Chaser #}**.

Data Menu

HATHOR / Data / Chasers

or **[EDIT]&[CHASER]**



Right click in the empty part (yellow) and select **{Insert Sub:Chaser}**

Drag&drop the selection of Sequence Steps, from the Sequence Playback to the new Chaser

Select **{Copy Collection of ## Sequence Steps to Chaser #}**.

10.2.5 Modes

By default the Chaser is in **Hard** mode, which means only the Stay Times will be used as set in the Wizard and if « Set Times » was checked.

To switch to a Crossfade mode, go to the column Mode, double-click on Hard and select **{Soft}**, in this mode Fade Time will be used as set in the Wizard and if « Set Times » was checked.

To switch between different modes:

Normal: go to the column Direction, double-click on XXXX (Current mode) and select **{Normal}**

Bounce: go to the column Direction, double-click on XXXX (Current mode) and select **{Bounce}**

Reverse: go to the column Direction, double-click on XXXX (Current mode) and select **{Reverse}**

Random: go to the column Direction, double-click on XXXX (Current mode) and select **{Random}**

Build mode: go to the column Build, tick the box.

To determine a count: go to the column Loops, click on the cell, **[ENTER]**, tap a number then **[ENTER]**. A new column will appear where you can choose the action at the end of the count, between OFF or ON.

Note: In Hard mode you can set a BPM value: go to the column BPM, click on the cell, **[ENTER]**, tap a number then **[ENTER]**.

10.2.6 Times

To Edit Times for one Step:

Go to the column In/Out (other choices are In, Out and Stay) with the **[DOWN]** key then the other navigation keys, **[ENTER]**, tap a value then **[ENTER]**.

To Edit Times for a range of Steps:

Go to the column In/Out (other choices are In, Out and Stay) on the line corresponding to the first step, with the **[DOWN]** key, then use the other navigation keys, hold the shift key on the keyboard, use the **[DOWN]** key to select the next steps, tap a value then **[ENTER]**.

10.2.7 Changing Intensity Levels

To Edit channel level for one Step:

go to the column corresponding to the channel and on the line corresponding to the step to edit with the **[DOWN]** key then the other navigation keys tap new level then **[ENTER]**.

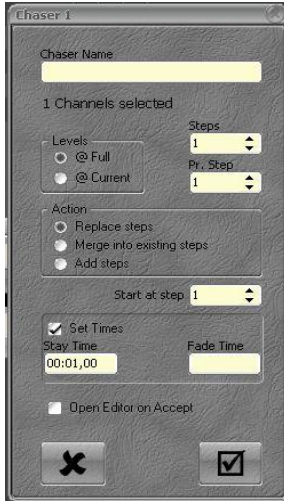
To Edit channel level for a range of Steps:

go to the column corresponding to the channel and on the line corresponding to the first step to edit with the **[DOWN]** key then the other navigation keys hold the shift key on the keyboard, use the **[DOWN]** key to select the next steps, tap new level then **[ENTER]**.

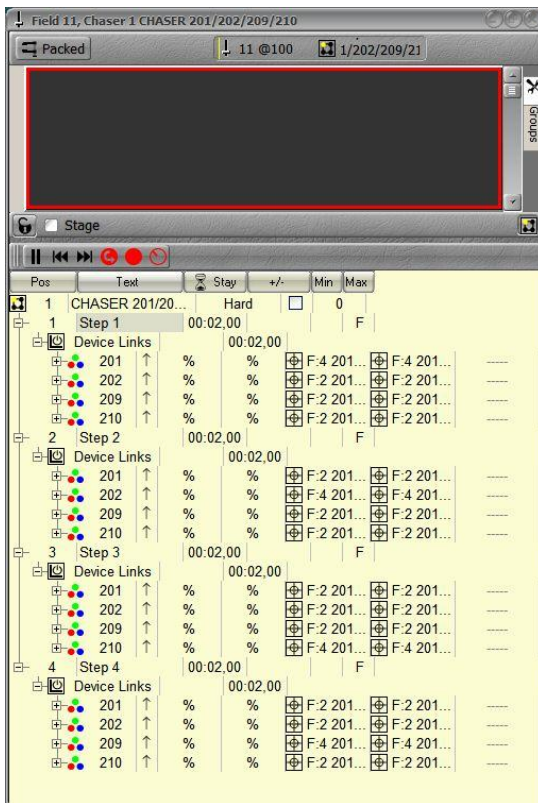
10.3 RECORDING A CHASER (ATTRIBUTES)

10.3.1 No Channel selected

To Record a Chaser with the next free number (for a specific number, just add [#] before): **[CHASER]&[Assign Key]** and raise the Subfader at 100%.



- Enter the Name of the Chaser
- In the Channels selected area: just enter the number of Steps needed.
- Tick the Set Times box to set times, enter the Stay and the Fade Times.
- The Open Editor on Accept option is checked by default. If Unchecked, the editor won't open automatically.
- **Click on the checkmark virtual button to validate: the EDITOR window appears.**



Click on the **Pause** virtual button

1. Click on the Step 1
2. Select Channel(s) and set parameter(s)
3. Press **[RECORD POSITION]** to store attribute value(s) into the Step 1
4. With the mouse choose the Attribute Groups to Record
5. Confirm with **[ENTER]**
6. Go to Step 2 with the **[Down]** key
7. Repeat steps 1 to 4
8. Go to Step 3 with the **[Down]** key
9. Repeat steps 1 to 4
10. Go to Step 4 with the **[Down]** key
11. Repeat steps 1 to 4
12. Check Times values (Stay Times & Attributes Times)
13. **[ESC]** close the Editor window (changes will be stored automatically). A popup appears, **[YES]** will start the Chaser.

10.4 LOADING A CHASER IN A SUBFADER

To Load a Chaser in a Subfader:

[#] [CHASER]&[ASSIGN Key]

Note: to use the next following Subfader as Speedmaster: go in the Subfader Screen [\[SubFaders\]](#), Right click on the number area, select [{As Speedmaster for chaser in Field #}](#).

10.5 EDITING A CHASER

10.5.1 The Chaser Editor

To Edit a Chaser in the Play Menu:

Go to the Play Menu, to open the Chasers menu click on the Chasers Tab,
Right click on the chaser to edit select [{Edit Chaser #}](#).

To Edit a Chaser in the Data Menu:

Go to the Data Menu/Chasers or [\[EDIT\]&\[CHASER\]](#)

Right click on the dedicated Chaser and select [{Edit Chaser #}](#)

To Edit a specific Chaser directly:

[\[#\] \[EDIT\]&\[CHASER\]](#)

To Edit a Chaser from a Field:

Right click on the Field and select [{Edit Chaser #}](#).

Here you can change Modes, Times values, and levels, following exactly the same method as in paragraph 10.2.2.

10.5.2 Adding Sequence Steps to a Chaser

Play Menu

Pin the Play Menu in the main window

Click on the Chaser Tab to open the Chaser menu

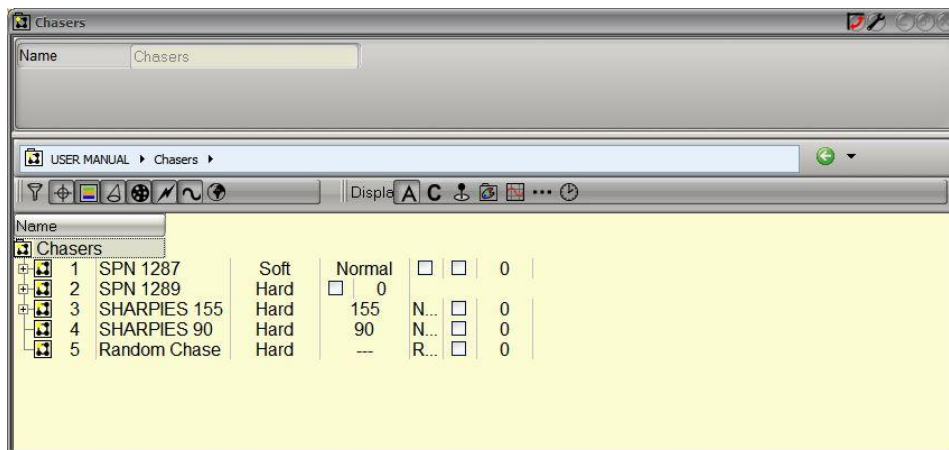
Drag&drop the selection of Sequence Steps, from the Sequence Playback to the dedicated Chaser

Select [{Copy Collection of ## Sequence Steps to Chaser #}](#).

Data Menu

HATHOR / Data / Chasers

or [\[EDIT\]&\[CHASER\]](#)



Drag&drop the selection of Sequence Steps, from the Sequence Playback to the dedicated Chaser

Select [{Copy Collection of ## Sequence Steps to Chaser #}](#).

10.5.3 Editing a Chaser Live

First load the chaser in the Subfader, [#] [CHASER]&[ASSIGN Key]:

Using the console

[EDIT]&[ASSIGN Key]

Click on the Chaser icon to display the Chaser Editor part
STOP the chaser with the virtual pause button.

Use keyboard or keypad arrows to step inside the Chaser

Use standard selection tools and intensity wheel or [AT%] key to modify

Use [UPDATE] to update an existing Step

Use [RECORD] to add a new Step at the end of the list

Use [INSERT] to insert a new Step and then [UPDATE] to update this Step

Here you can change Modes, Times values, and levels, following exactly the same method as in paragraph 10.2.2.

10.6 START A CHASER

Raise the Subfader at 100%: the Chaser will start at Step 1.

You can also use the [START] key: [START] & [ASSIGN Key].

Note: if you set a time to this Subfader, with this method the Chaser will fade in with the Time set to the Subfader.

When a Chaser is running, you can change the Rate:

- Use the next following Subfader as Speedmaster
- Use the [RATE] key hold it and TAP the tempo on the [ASSIGN Key]

11. SUBFADERS

11.1 INTRODUCTION

Subfaders and Fields are different controllers for the same data.

The Subfader controller includes a Field Editor channel display (hold down 2 seconds the [ASSIGN] key), so that you can see and edit its content directly.

A Submaster is only a controller (Field), not content (object).

So the concept is to load content in a controller and to record the main organisation of every Submasters in a PAGE.

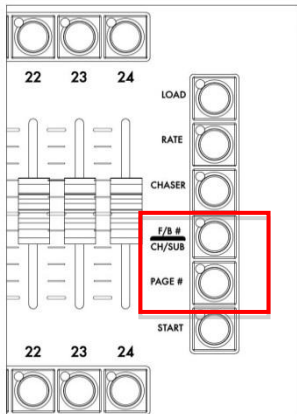
Note: because Submasters are controllers, they are linked to the Software and the Desk and not to the « Play ». That means every time you will load a Play, the precedent Submasters will be still there and that means these Subfaders are not recorded in the Play. **To save the main organisation of the Subfaders in the Play, Record a Page.**

11.2 FADER BANKS

There are a limitless number of Subfader Fields available, with 192 available at a time.

These 192 Subfaders are organized in 8 Banks of 24 physical Subfaders.

To select a bank: [#] [F/B #].



To move from one bank to another: [F/B -] and [F/B +]

Note: The bank number is displayed in the Internal Touch Screen / up left corner, if Subfader Screen [Subfader] is selected.

11.3 PAGES

The information for each set of 192 Subfaders is stored on a "Page".

To Record a Page with the next free number:

[RECORD] & [PAGE#]

To Record a Page with a specific number:

[#] [RECORD] & [PAGE#]

You can switch between Pages:

To switch to the page 0: **[0] [PAGE#]** a popup will open « Clear all Fields? », **[ENTER]** to confirm if you want to clear all the 192 subfaders, **[ESC]** to cancel.

To switch to the page #: [#] **[PAGE#]**

Or press directly **[PAGE#]** a Fly out window will appear in the Internal Touch Screen, select the page of your choice.

Note: Loading a new Subfader Page puts the new content in a pending state if the Subfader is above 0%. When the Subfader is faded to 0% the new information is loaded.

11.4 ASSIGN KEYS

Each Subfader has a assign key. This is used to load, select, record or edit content to that Subfader.

In combination with the **[START]** key hold, the assign key becomes a start key, which executes the content on Time if a Time value does exist for this Subfader.

The master key is referred to in this manual simply as a **[ASSIGN key]**.

There are two keys for a master, the assign key is the upper key, the lower key is a flash key that will bump the content of the master, depending on the settings.

11.5 FLASH KEYS

There are 24 Flash keys above the 24 faders.

[FLASH] key: The content of the Master is set to the flash level as long as the Flash key is held.

Flash mode is toggled individually for each Master 1-24.

By default, all Subfaders are set in Flash mode.

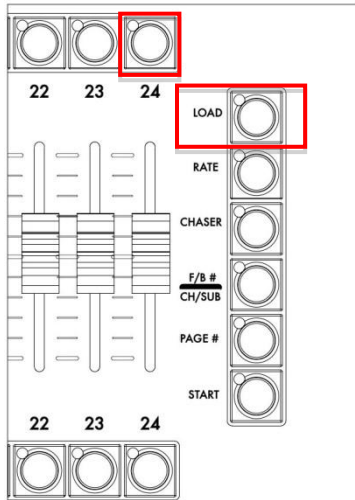
To turn off Flash mode for a Subfader:

In the SUBFADER SCREEN **[SUBFADERS]**, Right click on the field just below the Subfader's number , choose the last option {Browse Fields}, click on the line regarding the Subfader to edit, in the FIMo column uncheck the box.

To set the Flash level for a Subfader:

In the SUBFADER SCREEN **[SUBFADERS]**, Right click on the field just below the Subfader's number , choose the last option {Browse Fields}, click on the line regarding the Subfader to edit, in the FILEv column click in the cell, tap the value on the keypad, then confirm with **[ENTER]**.

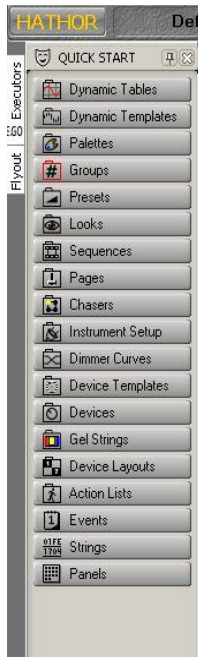
11.6 LOAD / CLEAR



To Clear a Subfader
[C/ALT] & [ASSIGN Key].

To Clear all Subfaders
[0] [PAGE #] confirm with [ENTER].

To Load an object from the Menu Play.
Open the object menu, drag & drop the object to the Field/number area and choose (Load XXXX).
E .g: in the Menu Play, click on the Tab.



E .g.:
in the Menu Play, click on the Tab Groups.
Drag & drop the Group 1 to the number area of the Field 1 (in the Fields window or in the SUBMASTER screen) and choose the option {Load Group 1}

11.7 CHANNEL SELECTION

Press a Assign key to select all channels in the content of that Subfader, except for Palettes.

Precedent selected channels will be deselected.

To work with several Subfader's channels, hold the **[+]** while selecting Subfaders.

Note: precedent selected channels won't be deselected by an empty Subfader.

11.8 EDITING

"Direct Edit Subfader Field":

Hold down **[ASSIGN key]**, after 2 seconds the Field Editor will switch display to that Subfader.

While holding the assign button you can edit directly the Subfader Field content.

Release the assign key to finish.

Note: this method only edits the content of the Subfader, not the object loaded to the Subfader

To Edit the Object loaded in the Subfader and the content at the same time:

Hold down the **[ASSIGN key]**, after 2 seconds the Field Editor will switch display to that Subfader.

While holding the **[ASSIGN key]** you can edit directly the Subfader Field content, still holding the **[ASSIGN key]** press **[UPDATE]**: a popup concerning the object will open press **[UPDATE]** again.

11.9 TIMES

[#] [TIME] & [ASSIGN KEY]

Hold down the **[START]** key and press the **[ASSIGN KEY]** to execute the Subfader in Time.

Parameter Time and Fader:

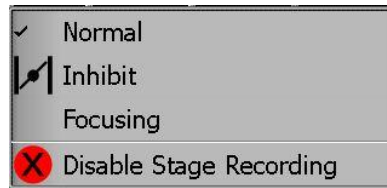
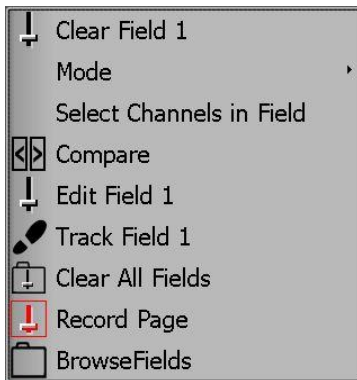
If some parameters such as Colour Frame exist as content in the Subfader (Look or Palette), since fader is above zero%, they will jump to the recorded value, if **Auto Execute Looks on Faders > [SETUP] / (Attributes)** is checked. If unchecked the attributes and Intensity will follow the movement of the fader.

11.10 SETTINGS

11.10.1 Subfader Modes

To change a subfader mode:

In the SUBFADER SCREEN **[SUBFADERS]**, Right click on the field just below the Subfader's number, choose the last option {Mode},



Choose between the four modes in one click.

11.11 SUBFADERS AND MOVING LIGHTS

11.11.1 Subfaders and Groups

Loading groups of devices into subfaders let you select quickly devices.

If channel levels are recorded in groups, device intensities will be always available with faders. It is possible to add groups while holding the **[+]** key and using assign keys.

11.11.2 Subfaders and Palettes

Loading Palettes into subfaders let you quickly work with essential palettes, such as ALL or FOCUS, just by using the Flash keys (select channels first).

Note: to work with palettes loaded in subfaders, the Rubberband mode should be **unchecked** (**[SETUP]** / Attributes).

It is also possible to use the fader to change the value in a linear mode. Simply move the fader and the value will follow the physical level of the fader.

11.11.3 Subfaders and Looks

Looks are a very useful way to play moving lights cues.

Flash keys let you set parameters values recorded in the Look (Rubberband **unchecked**).

TIP: don't record intensities in looks if you want to use Flash keys to set parameters values.

It is also possible to use the fader to control the execution of the Look on stage.

e.g.: record a Look with only FOCUS parameters (**[RECORD]&[LOOK] [ALL] [FOCUS] [RECORD]**).

In **[SETUP] / {Attributes}**, uncheck **{Auto Execute Look on Fader}**.

Then you can use the fader to control the movement.

To use the subfader as a trigger, check **{Auto Execute Look on Fader}**.

Since the subfader level is above zero, all parameters will be set to their recorded values.

11.11.4 Subfaders and Presets

Note: to record Preset directly from a field with only the content of this field, « Record Stage as default » in the SETUP (Preferences/Channels) should be Unchecked. If « Record Stage as default » is checked the Stage content will be recorded.

To record a Preset:

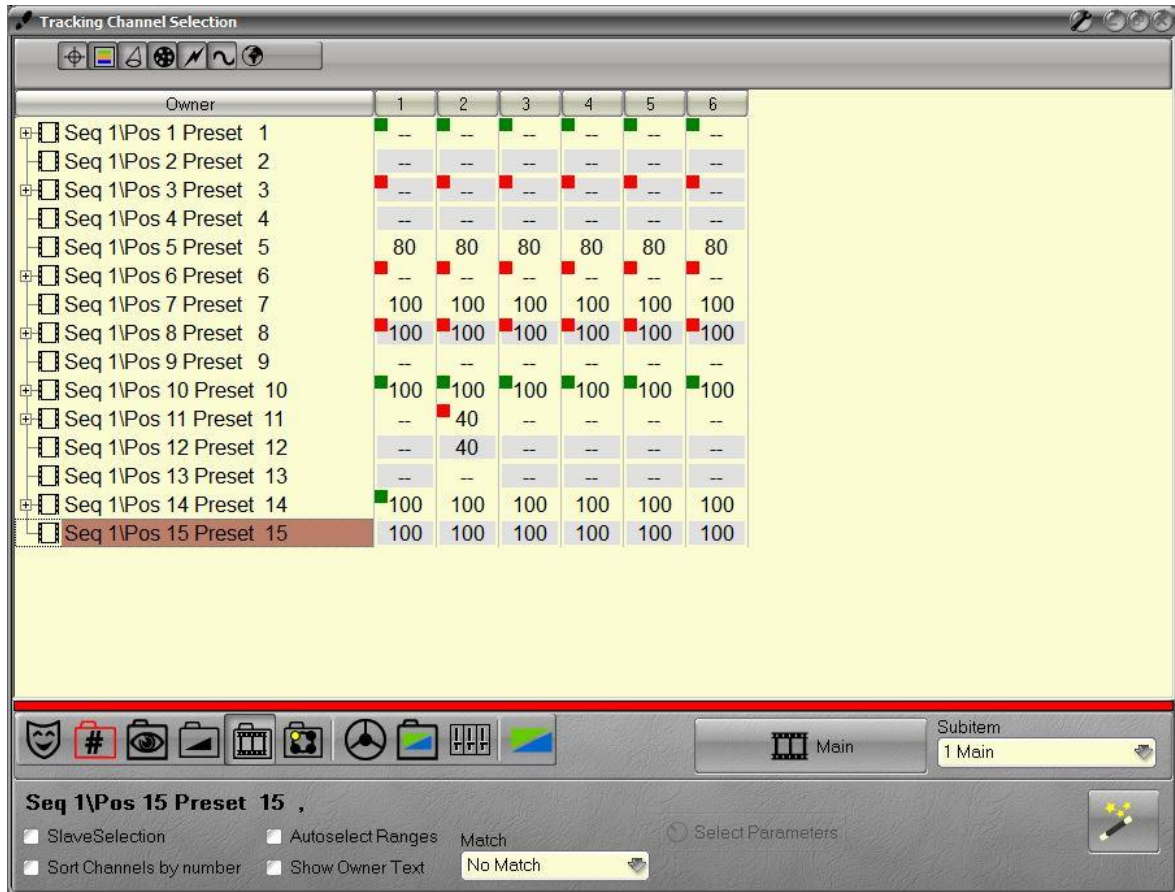
Hold the assign key of the Subfader, edit channels and levels, then while holding the assign key, press [#] [RECORD]. You will get a popup where you confirm recording this Preset, and can write a text label.

Then [RECORD] again or [ENTER] or click on the icon in the down right corner.

Note: the Preset will be automatically loaded in the Subfader.

12. The TRACK WINDOW [TRACK] / CTRL F4


12.1 INTRODUCTION




To open the track window:


[TRACK].


The Track window always displays Sequence as default object.

To select the whole show click on the corresponding icon: 

To select Groups: 

To select Looks: 


To select Presets: 

To select Sequences: 

To select Chasers: 

To select all Executors: 

To select only Playbacks: 

To select only Fields: 

To activate the follow Playback mode: 

Note: if some channels are selected, those channels will appear in the Track window.

To display a selection of channels

Just select channels with the usual selecting tools [Ch] [THRU] [+] [-].

To add or remove channels

[#] [+] / [#] [-].

To edit level for a channel and one object (Preset, Group, Look).

Use the mouse, your finger or navigation keys, enter the value on the keypad then **[ENTER], [#] [+] / [#] [-].**

To Edit level for a channel on a range of objects (Preset, Group, Look).

Use the mouse, your finger or navigation keys, select the first cell (Channel column / First Object Line), HOLD the Shift key on the Keyboard, select the last cell (Channel column / Last Object Line), enter the value on the keypad then **[ENTER].**

To add specific parameter column(s) to Channel Intensity Columns.

Focus on a channel column and press **Select Parameters.**

Choose parameter(s) in the list. This will add columns for ALL channels.

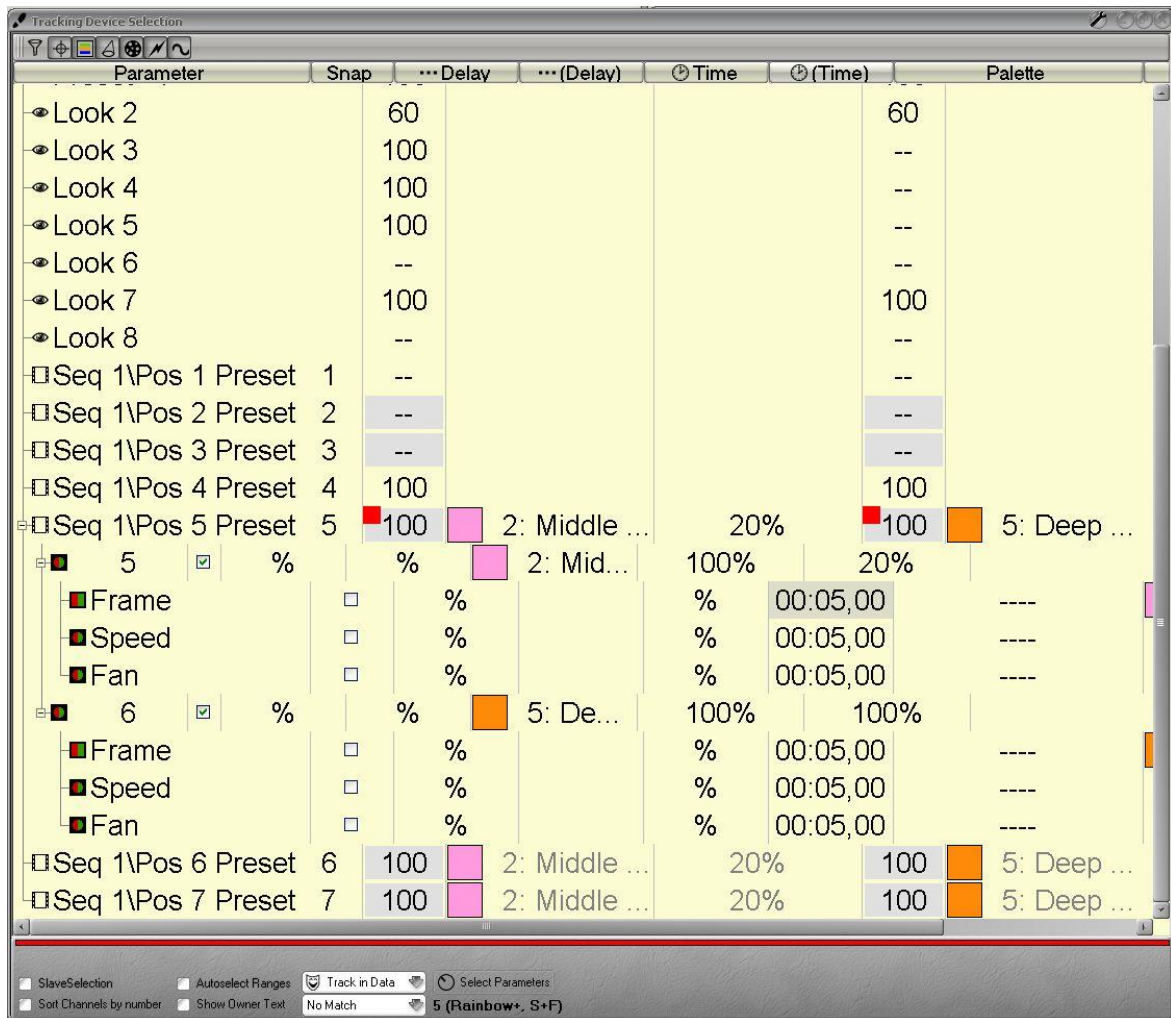
Note: historical parameters are displayed in grey, and cannot be edited.

Actual position recordings can be edited, and dragged:

To change a value: double click on a cell or **[ENTER]**, set the new value and **[ENTER]** to confirm.

To change a Frame: double click on a cell or **[ENTER]**, pick the new Frame in the list using the mouse or navigation keys, and **[ENTER]** to confirm.

To change a Time value: open the Sequence Step (+ box left side of the sequence icon)
Double click on a cell or **[ENTER]**, set the new value and **[ENTER]** to confirm.



12.2 OPTIONS

12.2.1 SlaveSelection

Channels displayed in the track window will follow console channel selection.

12.2.2 Sort Channels by number

Channels Submaster in the track window will be sorted by number.

12.2.3 Autoselect Ranges

Selecting a Channel in a suite of identical levels will automatically select following identical levels (a track), allowing modification for all the range.

12.2.4 Show Owner Text

Activating this option adds an "Owner Text" column displaying Step Text (not Content Name).

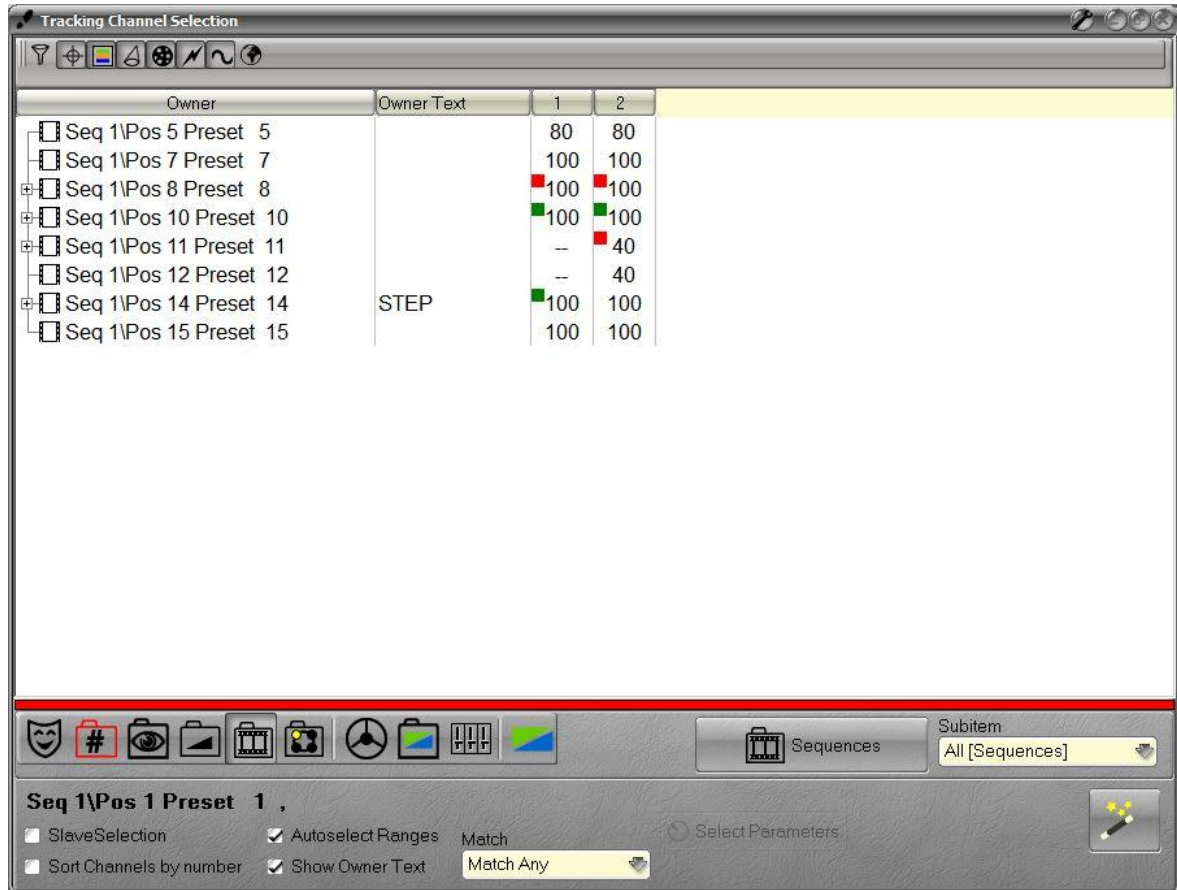
12.2.5 Match (Object ↔ Channel)

No Match is the default mode: all Objects are displayed independently of selected Channels records in these objects.

Example: Sequences, all Sequence steps will be displayed even if channels 1 to 6 are not recorded in some steps (see first screenshot).

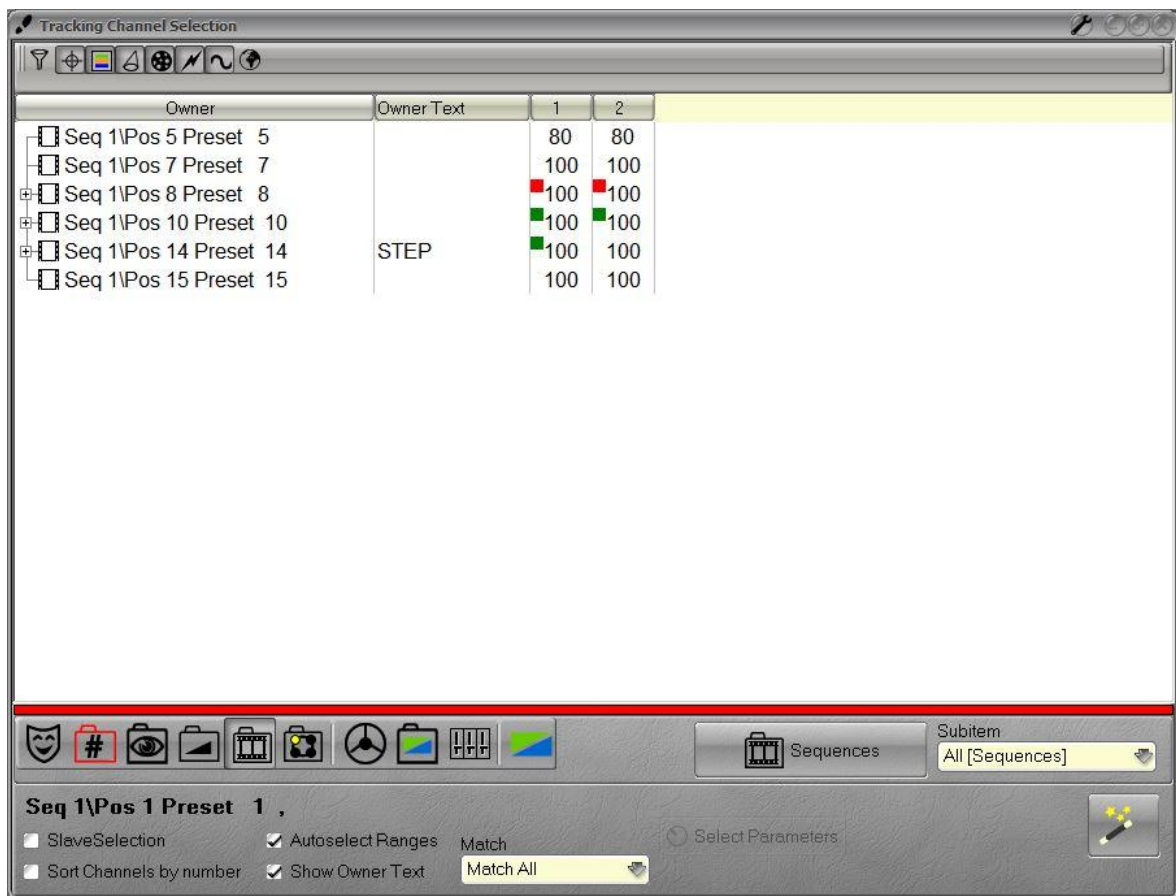
Match any: will display only Objects owning, at less, one channel in the current selection with a level > 0%.

In the example below, only some Sequence Steps are displayed, and Sequence Step 11 and 12 are displayed because one of the two selected channels has a level of 40%.



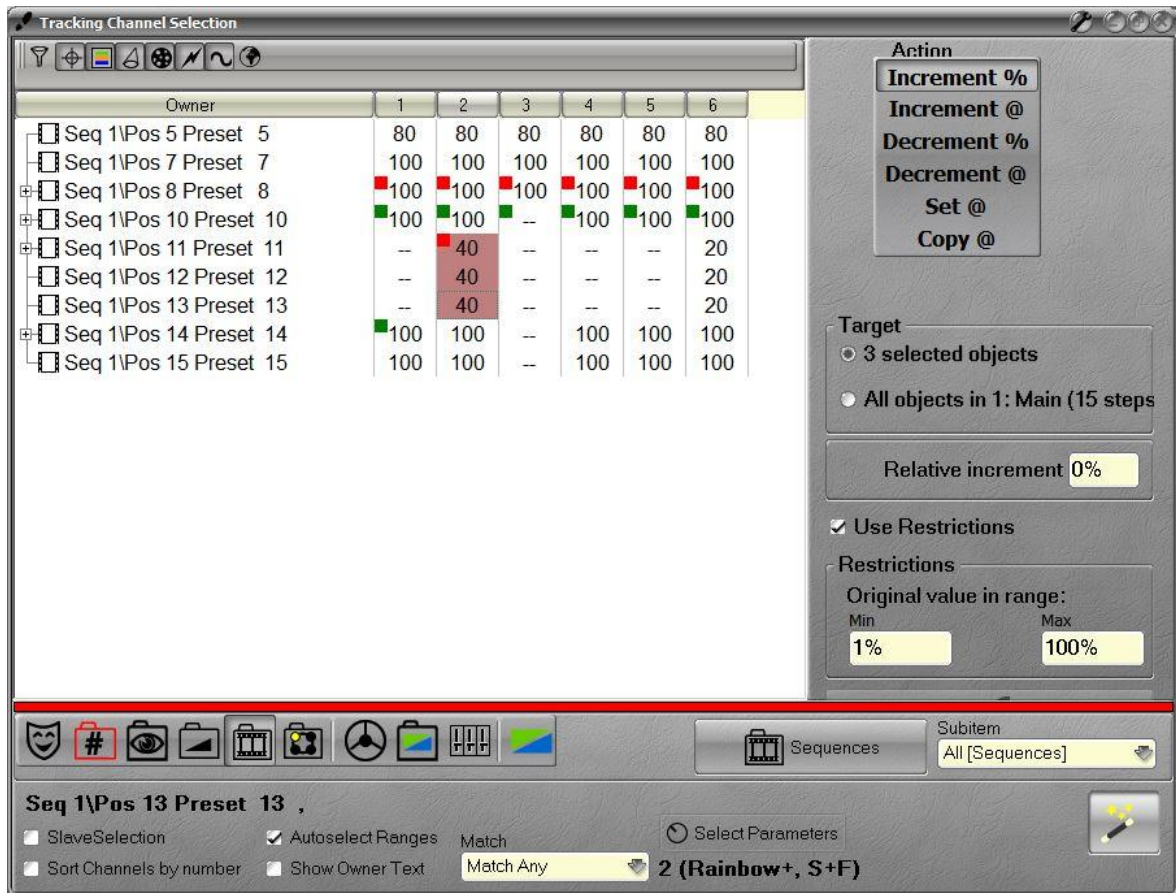
Match all: will display only Objects owning all channels in the current selection with a level > 0%.

In the example below, only some Sequence Steps are displayed, and Sequence Step 11 and 12 are not displayed because one of the two selected channels has a level of 0%.



12.2.6 Wizard

The wizard is a very powerful tool allowing modifications over a selection of objects for a selection of channels.



Always select objects to be modified first, with **(Shift)** and **(CTRL)** keyboard keys. The count of objects will be displayed in the **Target** area. To modify all objects, select **“All objects in ---”** option in the **Target** area.

12.2.6.1 Increment %

Relative increment in % will increase **proportionally** all levels according to the Relative increment value.

12.2.6.2 Increment @

Absolute increment in % will add the increment value to all levels.

12.2.6.3 Decrement %

Relative decrement in % will decrease **proportionally** all levels according to the Relative decrement value.

12.2.6.4 Decrement @

Absolute decrement in % will deduct the increment value from all levels.

12.2.6.5 Set @

Set @ will set all channels at the Set Absolute value.

12.2.6.6 Copy @

In addition to Target objects, this feature requires to select a source.
Click in any Channel column to select the source.
Source levels will copied to other selected channels.

12.3 THE FOLLOW PLAYBACK MODE

This mode is a live mode, quite similar to the Sequence Playback window because it uses same colours for A and B status, but in a different way since it displays only selected channels, without any time information, but with levels and parameters if necessary. Channels are displayed as tracks, which is very useful to trace specific channels over the sequence.

The window will follow the sequence, moving from step to step.

TIP: use the “Center current” option to focus on A & B steps. Then the window will scroll, and A&B Presets will always stay in the middle of the window.

13. DYNAMICS (EFFECTS)

13.1 INTRODUCTION

DYNAMICS feature is dedicated to generate dynamic effects for moving lights.

Effects are continuously running fades of parameter values, directly in the selected working LIVE field (Master Playback or Submaster), spread among a number of fixtures. Common effects on PAN & TILT such as "Circle", "Figure 8", "Sweeping wave", can be easily created, effects running on COLOUR parameters can be used to create rainbow, or specific mix of two colours on a range, the only limit will be your imagination. Dynamic Effects can be programmed for all fixture types and for all parameters.

DYNAMICS work with a "base position", which is taken as the initial setting for each instrument, and manipulates all or some of the base parameters according to a Dynamic Template.

HATHOR includes a large number of Dynamic Templates in the Base show file, some are optimized for movement, and others are designed for Colours or for all instrument parameters, these templates can be copied, edited, deleted.

Dynamic Effects can be recorded in Dynamic Palettes, in Looks and in Sequence Device Links.

13.1.1 Dynamic Tables and Dynamic Templates

Dynamic Tables are the basic mathematical curves.

Assigning a Dynamic table to a parameter will directly create an Effect.

HATHOR comes with 10 Dynamic Tables.

Dynamic tables can be copied, edited, deleted.

Dynamic Templates are Dynamic Patterns which can be considered like prebuilt Effects.

A Dynamic Template consists of one or several Parameters, associated to a Dynamic Table with Dynamic attributes.

A Dynamic Template can be assigned to a selection of fixtures. HATHOR includes a large number of Dynamic Templates in the Base show file, which can be considered like prebuilt Effects.

Note: Some Dynamic Templates only make sense when they are assigned to the pan and the tilt parameters (such as the Circle).

13.2 DYNAMIC TABLES

13.2.1 Organization

Dynamic Tables are Objects.

Access: First Tab in the Play Menu and first item in the data list (HATHOR / **Data**).

To Edit Dynamic Table: click on the Tab to open the list and Right Click on the Table to edit or select Dynamic Tables in the Data list to open the Editor, then choose the table to Edit.

Note: there is no Direct Access Panel for Dynamic Tables.

13.3 DYNAMICS ATTRIBUTES

It is important to understand the various settings and attributes available within the Dynamic Generator. The simplicity of the engine will be obvious once the five basic functions are understood.

13.3.1 Absolute

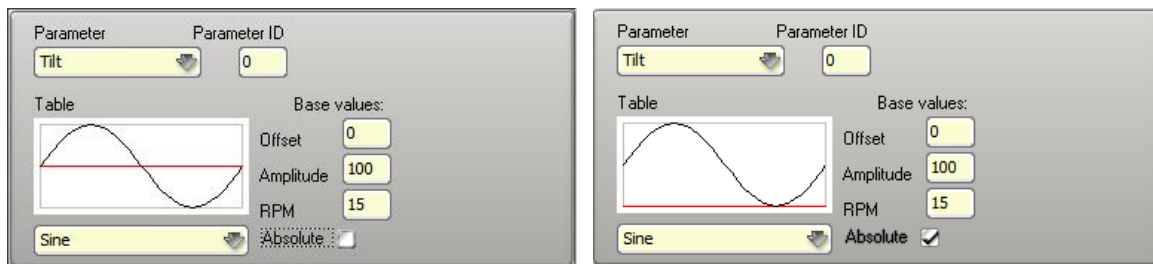
The absolute mode works regardless of the base value. That exactly means that when using the absolute mode, setting parameter values is useless.

The behaviour of the Absolute attribute is depending of the kind of parameter.

In general it makes no sense with PAN&TILT.

By default this mode is disabled.

Explanation with a SINE curve



For a parameter with positive values (which are not oscillating around a zero position), like ZOOM, for instance, and if the Size is set to 100%, with the base value corresponding to zero %, the sine curve will oscillate between -50% / 0 / 50%, which means that during half of a cycle nothing will change on stage (values between -50% and 0% are out of range). If the Size is set to 50%, and with the base value corresponds to zero %, the sine curve will oscillate between -25% / 0 / 25%.

If now the base value corresponds to 50%, 50% is considered as the centre, so the sine curve will oscillate between 0% and 100%.

In Absolute mode, the value will always oscillate in positive values, between 0 and ## %, where ## corresponds to the size. If the size is set to 50%, the value will oscillate between 0 and 50%, regardless of the base value, regardless of the base value.

For parameter with values oscillating around a zero position, like PAN & TILT, and if the Size is set to 100%, with the base value corresponding to zero ° the sine curve will oscillate between -##° and + ##° (according to the degree values in the Device Template), there is no difference if the base value corresponds to the centre position (zero position) and if the Size is set to 100%. The values are oscillating between - ##° and + ##°.

In Absolute mode, if the size is set to 50%, the centre position is moved up to the middle upper part of the range values. Then the mathematic sine curve works only in that part. If the size (amplitude) is set to 10%, the mathematic curve will work only on the last 10% of the values, which makes no sense, (example 140° > 112°, if the amplitude of TILT is 240°).

Before creating Dynamic templates it is essential to understand the behaviour of the Absolute attribute.

Absolute mode allows generating some specific dynamics effects independently of the parameters settings.

For PAN & TILT parameters the centre for oscillation corresponds to

(amplitude in degrees / 2) – Size x amplitude in degrees / 2 :

140 (280 / 2) – 14= 126 (10% of 280) / 2

For other parameters the centre for oscillation corresponds to **0% + Size/2.**

13.3.2 Speed and RPM

When assigning a Table, the **Speed** is by default at **100% of RPM 15.**

RPM (Revolution Per Minute) corresponds to 4 seconds for one cycle.

In a Device template, RPM can be set to a specific value.

Changing % Speed corresponds to a rate of the original RPM value.

E.G:

RPM 60 = 1 Seconds for 1 cycle Speed set to **50%** = RPM 30 means **2 Seconds** for 1 cycle

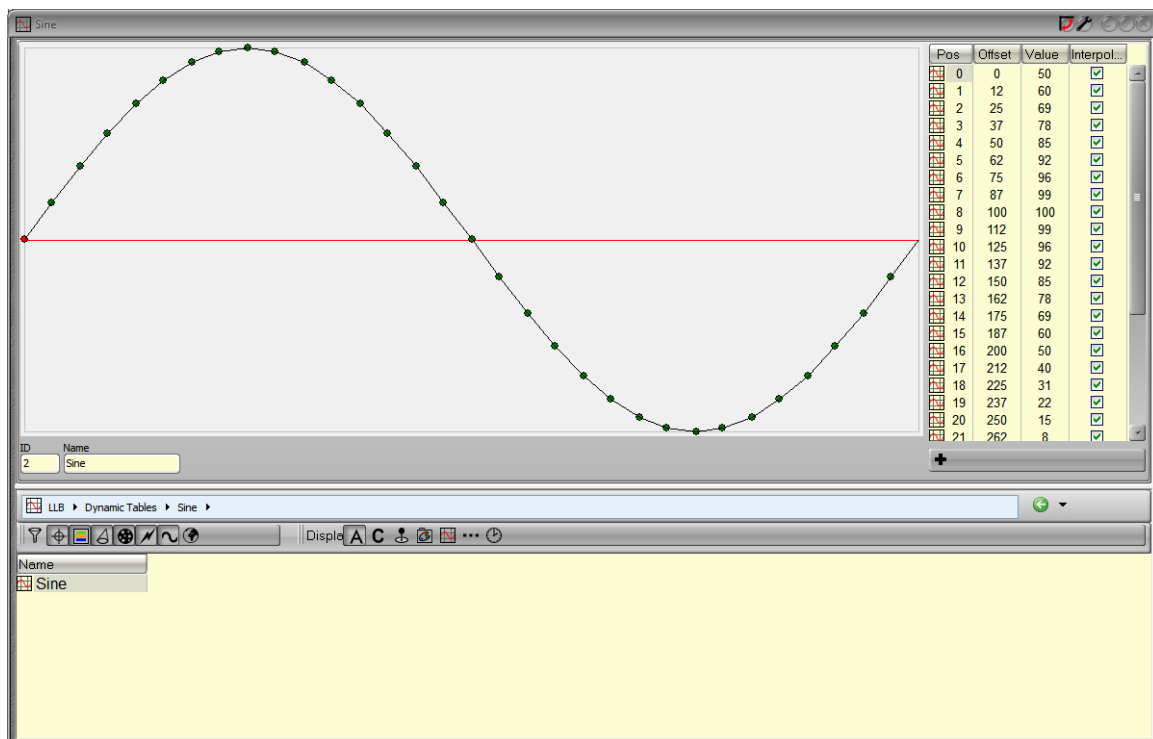
RPM 15 = 4 Seconds for 1 cycle Speed set to **50%** means **8 Seconds** for 1 cycle

RPM 10 = 6 Seconds for 1 cycle Speed set to **10%** means **60 Seconds** for 1 cycle

RPM 1 = 60 Seconds (1 min) for 1 cycle

A cycle corresponds to a full revolution, which also related to the amplitude.

With an amplitude of 100% (default value), the cycle of a Sine curve starts at the base value, goes to the max value, then the base value then the minimum value and ends at the base value.



Example: the TILT amplitude of a ROBIN 600E is 280°.

The result of assigning a Sine Curve to this fixture, if the base value is 0°, will be:

0° > +140° > 0° > -140° > 0° in 15 seconds.

When the base value is set to zero, the sine is executed in the exact corresponding range (-140 / 140° in our example), if the base value is changed for another value, then a part of the curve will be running out of the range of the parameter, during this time, the parameter don't change (the fixture don't move) till the curve comes back in the physical working part of the range.

$$30^\circ > 140^\circ > -30^\circ > 170 (= 30^\circ \text{ out of range}) > -30^\circ$$

During the 30 degrees virtual movement the fixture doesn't move.

Changing the size (or the amplitude) corresponds to modify the range, and then if there is no value out of the range, the fixture always moves.

13.3.3 Size and Amplitude

When assigning a Table, the **Size (the amplitude)** is set by default at **100%**. That means that the curve covers the total range of values negatives and positives.

Changing the % size will modify the range of values proportionately to the size's rate.

In the previous example 280° (-140 / 140°), with a size of 50% will change for 140° (-70 / 70°).

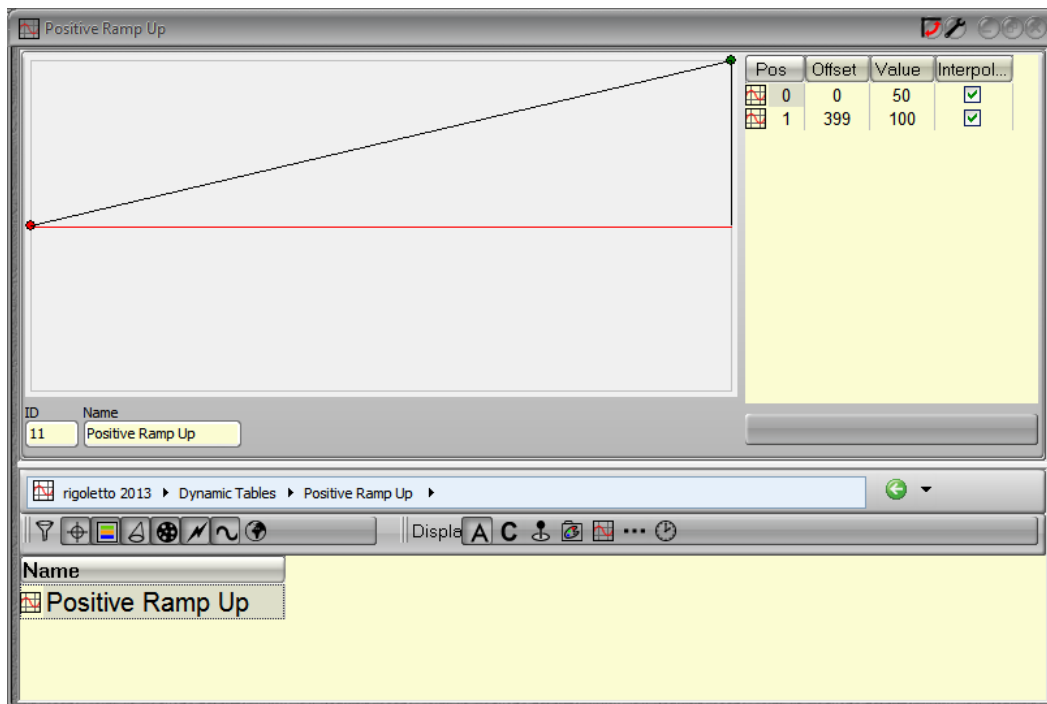
In tables, values from 0 to 50 are negative values. For PAN & TILT it corresponds to negative degrees, but for other parameters like CYAN by example it corresponds to "out of range values".

That means to see parameters always changing; either use a base value minimum 50 %, or use the Absolute mode.

Since **Absolute** mode will execute the curve in the positive range but **always from zero**.

To create an effect oscillating between a specific value and another value, it is necessary to create a specific table without any negative value and to assign this table to the parameter.

Example: Create a **Positive Ramp Up**



Select Moving Heads, Beam, assign this table to the Zoom.

Set the zoom to 20%.

The zoom size will change for 70% slowly, then for 20% cut, and so on.

13.3.4 Offset

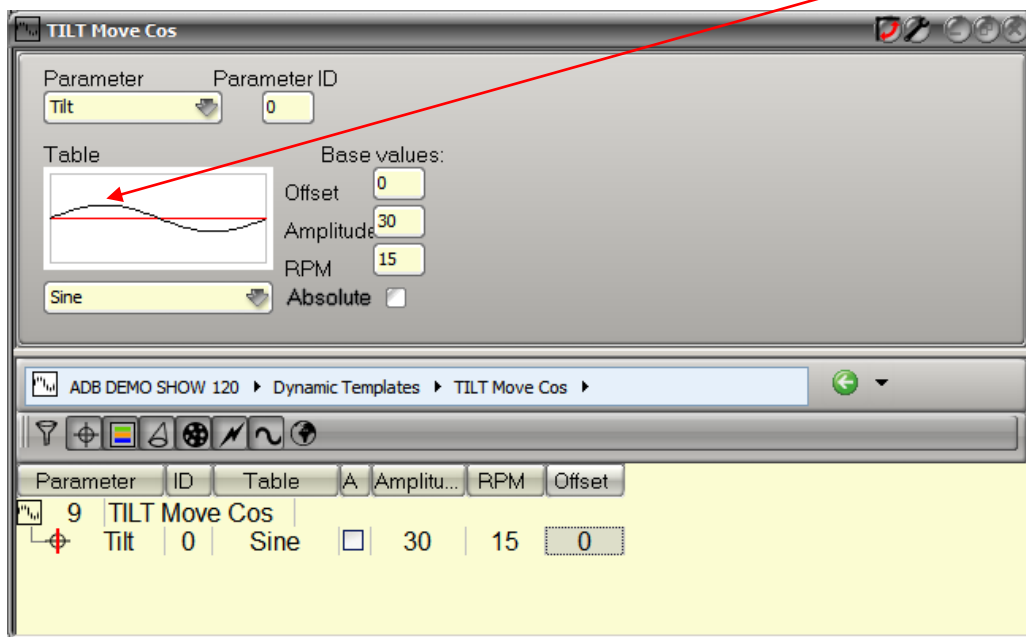
Offset between different parameters inside a Template, example: to create a Circle, it is necessary to have an offset between PAN and TILT.

Offset between fixtures corresponds to the starting point of each fixture.

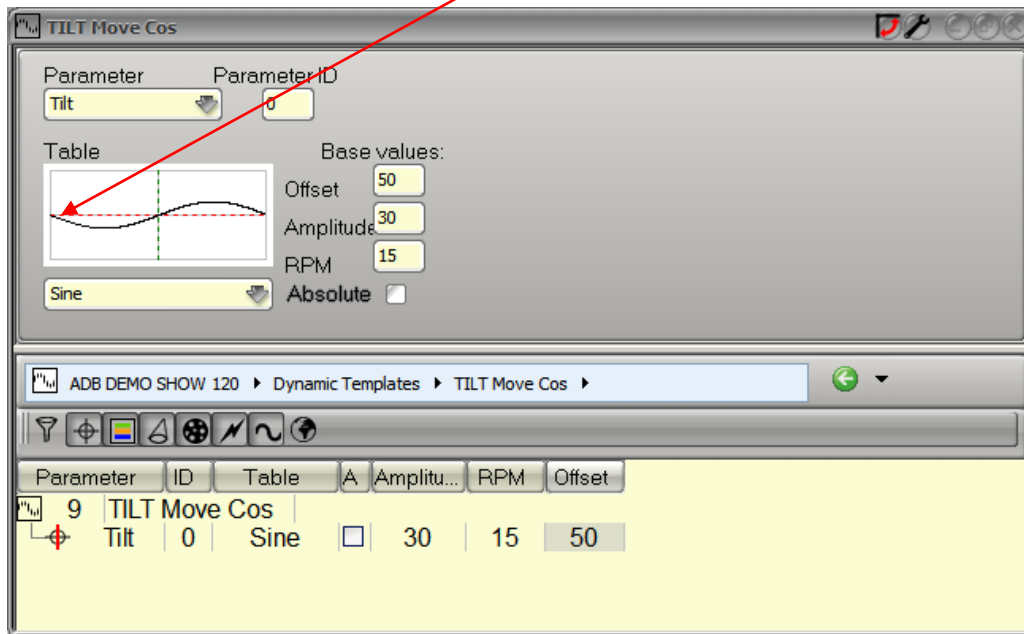
That attribute can be used directly in a Device Template, to force the effect to start precisely somewhere instead of zero, or when an effect is running to spread the fixtures.

13.3.4.1 Device Template edit

When executing a Template, for instance TILT MOVE with a sine wave, with an Offset value of zero, all fixtures will start moving in one direction on stage corresponding to positive values.



If for any reason the fixtures should start moving in the opposite direction, use an Offset value of 50 corresponding to negative values.



13.3.4.2 Live Dynamic Effect Edit

An **identical Offset** value for all fixtures means **no Offset** between fixtures. All fixtures will move together. That setting can be used as explained above.

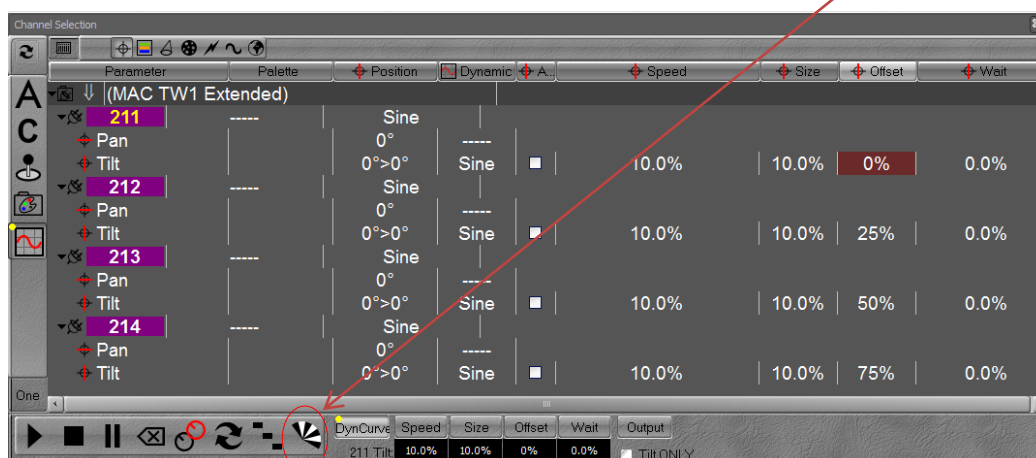
Offset is displayed in %, and then relative to the number of fixtures. Fixtures can either all start from the same point or be spread among the curve.

Consider that 100% represents a complete cycle, dividing 100% by the number of fixtures will spread all fixtures equally among the cycle.

Example: 4 fixtures corresponds to 25% each, 5 fixtures to 20%, 6 to 16,7%.

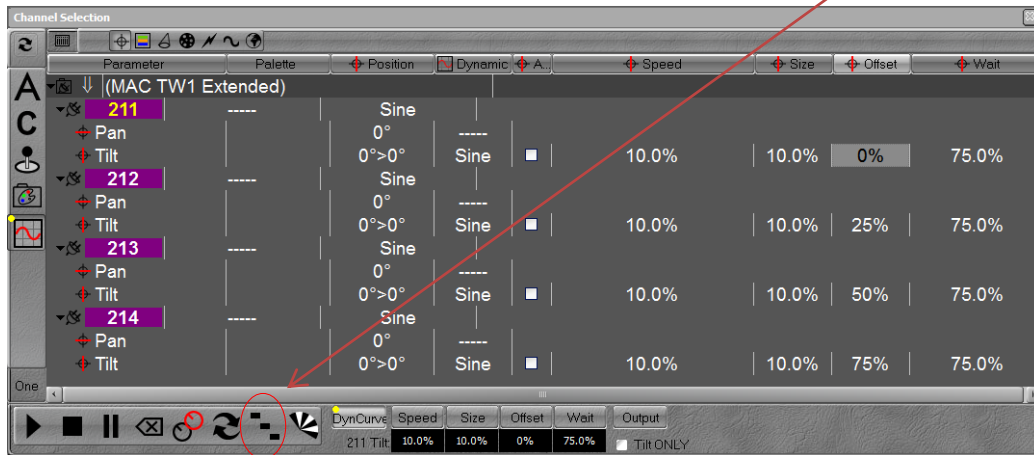
Assign a value of 0% to the first, 25% to the second, 50% to the third and 75% to the fourth to spread the four fixtures. See below explanations about the Wait attribute to create a One by One effect.

To create directly that kind of effect, just click on the dedicated soft button.



13.3.5 Wait

Wait is time information in %. So it is relative to the number of fixtures. Each fixture is a part of a full effect revolution. So, divide 100% by the number of fixtures gives the part for each fixtures, e.g. 4 fixtures corresponds to 25% each, 5 fixtures to 20%, 6 to 16,7%. Setting the Wait at 0% means that all fixtures move together, setting the Wait at 100 - ##% where ## corresponds to the value of one fixture, means that every fixture will wait a full cycle of every others before moving. To create a ONE by ONE effect for four fixtures use the Offset value as described above, assign set a Wait of 75%. To create directly that kind of effect, just click on the dedicated soft button.



13.4 DYNAMICS TEMPLATES

13.4.1 Introduction

Dynamic Templates are objects corresponding to Prebuild Effects, based on combinations of Tables and Dynamic Attributes.

Dynamic Templates are general, not specific to types or references of fixtures.

There is no reference to specific devices (instruments) neither in Dynamic Templates.

So Dynamic Templates can be used with every Device, depending of parameters included in the Template. Example: it is not possible to use a TILT MOVE template with a Color Changer!

Access: Second Tab in the Play Menu and second item in the data list (HATHOR / **Data**).

Key / Function: **[DYNAMICS]** / **Dynamic**

Note: there is a Direct Access Panel for Dynamic Templates. To open Direct Access for Dynamic Templates: Right click on the Tab and select **Open Direct access Panel** in the list.

13.4.2 Creating a Dynamic Template

To Create a Dynamic Template:

In the Play Menu: click on the Tab to open the list, Right Click in empty part (yellow) and select **{Insert: Dynamic template}**.

Double Click on the new template and select **{Insert: Dynamic template Part}**.

or

In the Device Templates Editor: select Dynamic Templates in the Data list to open the Editor, Right Click in empty part (yellow) and select **{Insert: Dynamic template}**.

Right Click on the new template and select **{Edit: Dynamic template}**.

In the dedicated Dynamic Template Editor, Right Click on the new template and select **{Insert: Dynamic template Part}**.

13.4.3 Editing a Dynamic Template

To Edit Dynamic Template:

click on the Tab to open the list and Right Click on the Template to edit

or

select Dynamic Templates in the Data list to open the Editor, then choose the Template to Edit

or

Right Click on the Device Template to edit in the Direct Access Panel and choose **{Edit: Dynamic template xxx}**.

13.4.4 Assigning a Dynamic Template

To assign a Dynamic Template after selecting some devices:

click on the Tab to open the list and Right Click on the Template to execute and choose **{Execute xxxxxx}**

or

select Dynamic Templates in the Data list to open the Editor, then choose the Template to execute and choose **{Execute xxxxxx}**

or

Click on the dedicated Device Template to execute in the Direct Access Panel

or on any console

[#] [DYNAMICS] to execute Dynamic template #

13.5 DYNAMIC ATTRIBUTES CONTROLS

13.5.1 Introduction

The Dynamic Attributes Controls are dedicated to control Dynamic Effects LIVE, via the Push Wheels or while assigning one of these parameters to the intensity wheel.

13.5.2 Access

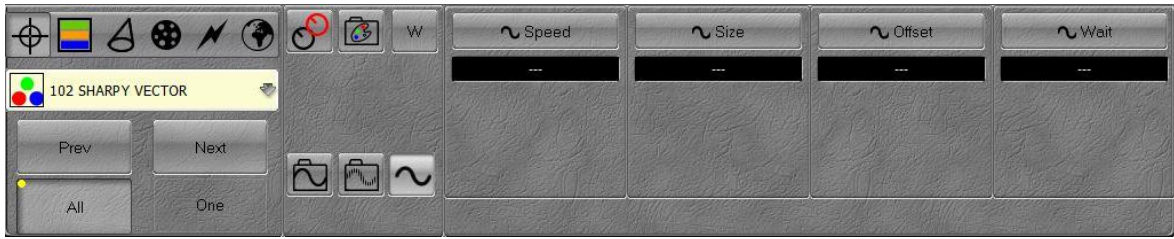
To access to the Dynamic Attributes Controls, select Devices part with the specific DISPLAYS key.

Select the Attribute Group (Focus / Colour / Beam / Pattern / Extra) involved in the running Dynamic Effect, and then click on the Dynamic icon to map the Dynamic Attributes Controls to the wheels.



13.5.3 Controlling

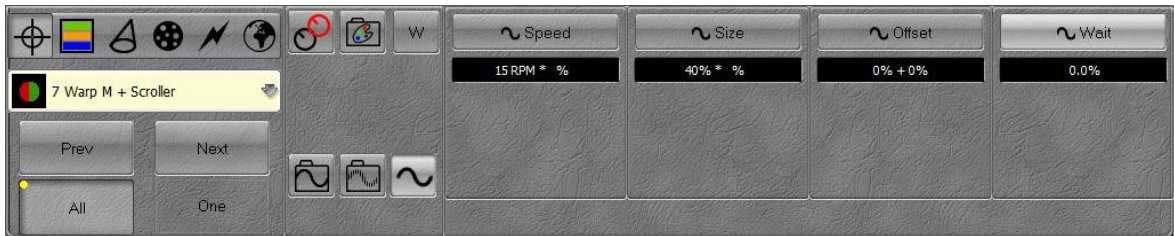
As soon as the Dynamic Attributes Controls are mapped to the wheels, and **if there is some channels selected**, the type of the Dynamic Attribute are displayed.



If, for selected channels, a Dynamic Effect is running, then Attributes values will be displayed on the left side. These Attribute values correspond to the recorded values in the Dynamic Template.

The right side information corresponds to the modification rate of the recorded template value.

Note: the Wait attribute is never recorded in Template, and then has only one value, in %.



Controlling Speed:

The Speed value is in RPM.

In the example above, the value is **15**, so **4 seconds for one cycle**.

Changing the % Speed corresponds to a rate of the original RPM value.

Use the wheel to modify the Speed rate, or enter the value with the keypad and push on the Speed wheel.

In the example above: RPM 15 = **4 Seconds** for 1 cycle

Speed set to **50%** will mean **8 Seconds** for 1 cycle

13.6 DYNAMIC PALETTES

13.6.1 Introduction

A Dynamic Palette is a Palette dedicated to record Dynamic Attributes with the same options as others palettes: Reference or not, and via filters, to include or exclude specific Dynamic Effects by Parameter type.

Parameters positions are not recorded in Dynamic Palette.

To include parameters positions it will be necessary to record an ALL Palette..

A Dynamic Palette records all Dynamic settings of Dynamic Attributes.

13.7 RECORD

Only attributes of selected channels are recorded, channels intensities are never recorded, but intensities as Attributes are recorded.

By default Dynamic Palettes are in **Reference** mode.

Important: to save Effect with different wait or offset values by fixtures, like Spread Effects, **don't use Reference Palette**.

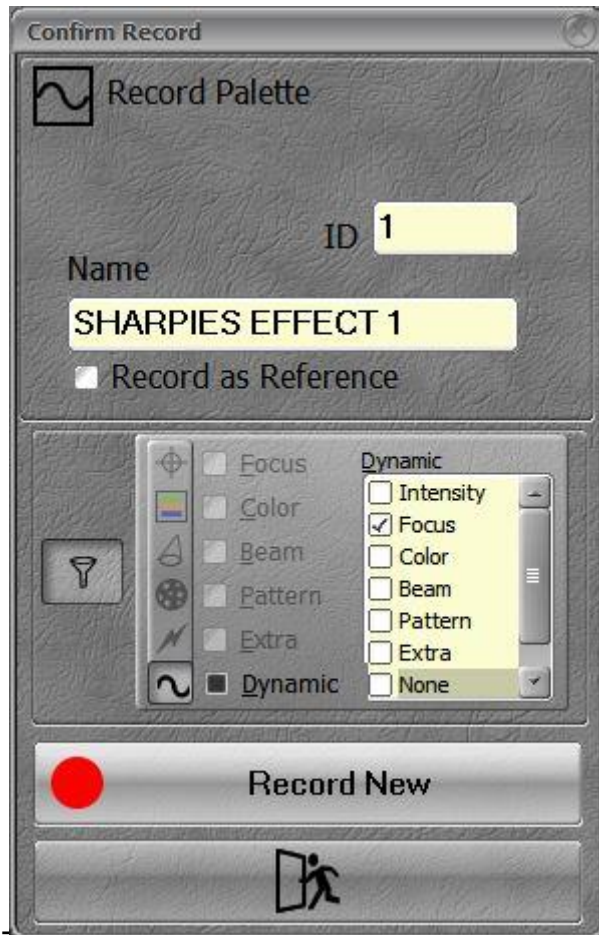
13.7.1 Using the Keypad to record Palettes

To record a palette with the next free number:

First set Dynamic Attributes values for selected channels.

[RECORD]&[DYNAMIC]

You will get a popup where you confirm recording this palette, and can write a text label.



Click on the Filter to open filtering options.

Select which Attributes Dynamic settings will be recorded in the Palette.

To record a palette with a specific number:

[#] [RECORD]&[DYNAMIC]

13.7.2 Using the mouse: Drag & drop facilities

Select channels with the mouse first, and then drag the selection

into the Dynamic Palette Direct Access Panel or Right Click in the Direct Access Panel, a

popup will appear: choose **{Create New Dynamic Palette}**, then you will get the Confirm

Record window where you can write a text label and confirm recording this palette, press

{Record} to confirm.

13.8 UPDATE

To **UPDATE** a Dynamic Palette:

- Use **[#] [UPDATE]&[DYNAMIC]**
- Right Click on the Palette button and choose **{Update / Add to ### Palette}**.
- Drag the selection into the Palettes window on a Palette button, and choose **{Update / Add to ### Palette}**.

The Confirm Record window will appear.

- Choose **Update** to update only original content (Channels and Attributes)
- Choose **Update/Add** to add Channels or Attributes to original content

13.9 WORKING WITH PALETTES (SELECT CHANNELS FIRST)

Palettes are only working for **selected** channels if these channels are **included** into the Palette. In that case the Palette box is **green** with a black checkmark. If there are more selected channels as included in the palette, a **little red icon** will appear in the upright corner of the palette box.

13.9.1 Using the Keypad

To select a DYNAMIC Palette

[#] [DYNAMIC]

To Stop a DYNAMIC effect

[0] [DYNAMIC]

14. ACTION LISTS

14.1 INTRODUCTION

An Action List corresponds to a string of characters forming a line of commands. These commands can be used to trigger internal Actions (Go, Pause and so on) or external devices with serial commands. There are several types of Action, and for each type a lot of predefined Actions.

Predefined Actions are regularly updated, but there is no user Action (user can't write their own Actions).

14.2 ACTIONS

14.2.1 Concept

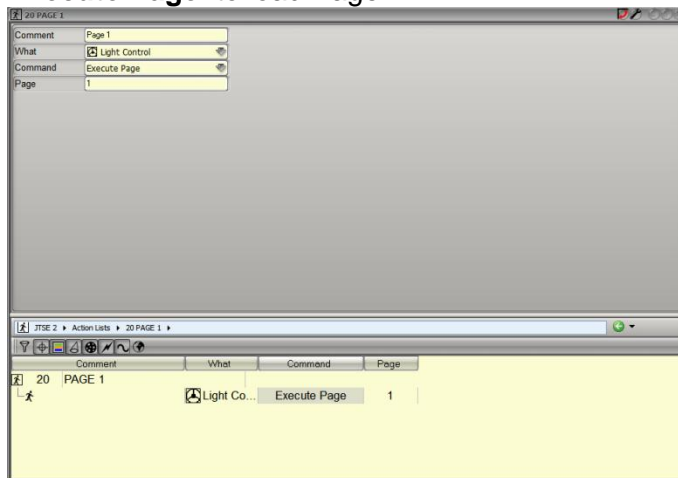
Because Actions are predefined and tested, there are very reliable and stable. Behaviour of Actions is totally depending on Type and Action itself.

14.2.2 Types

14.2.2.1 Light Control

This type allows creating specific Lighting Control Action Lists. Find below the list of available LIGHT CONTROL Actions:

Execute Page: to load Page #

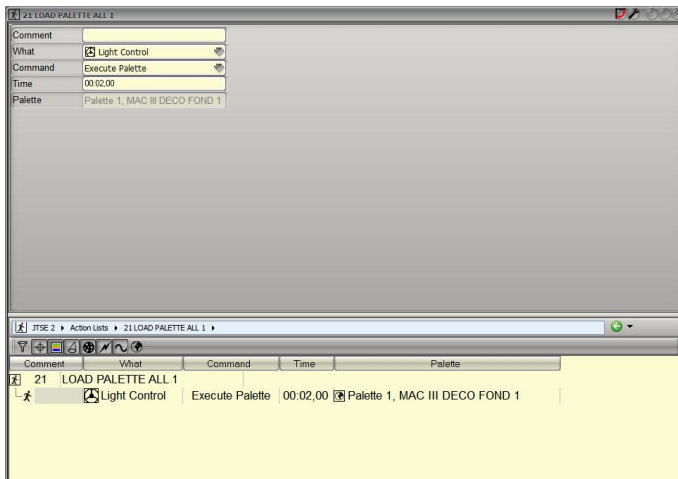


Page: Page to be loaded

TIP:

To create a Clear All Fields page, clear all fields first with **[0] [PAGE]**, record a Page, for instance Page 999, give it a name like "Empty field", edit that page with **[999] [EDIT]&[PAGE]** and change the mode for Clear All. Then use Page 999 in the Action.

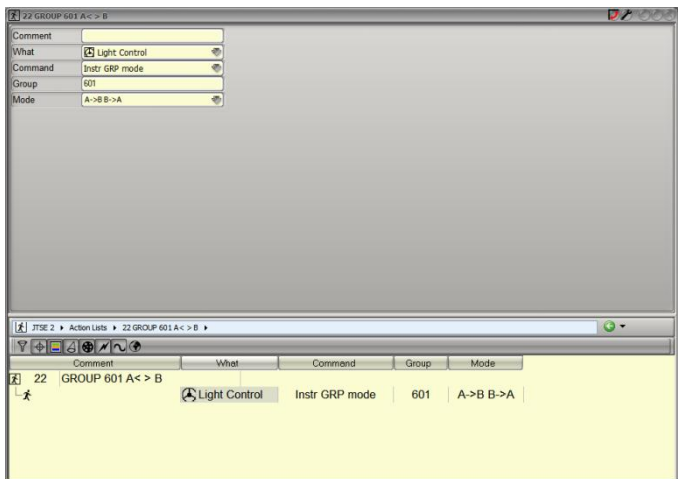
Execute Palette: to execute Palette #



Time: Palette time
Palette: Palette to be executed

Note:
 Only non reference Palettes can be used with this feature.
 All recorded independent channels recorded in the Palette will be involved.

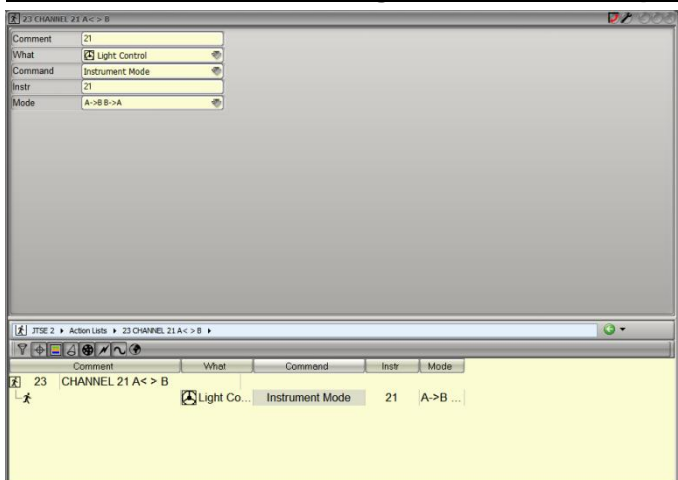
Instr GRP Mode: to manage AB mode for a group of channels



Group : group involved

- Mode**
- A/B: both A & B dimmers connected
 - A: only A dimmers connected
 - B: only B dimmers connected
 - A->B B->A : toggle mode

Instrument Mode: to manage AB mode for a specific channel

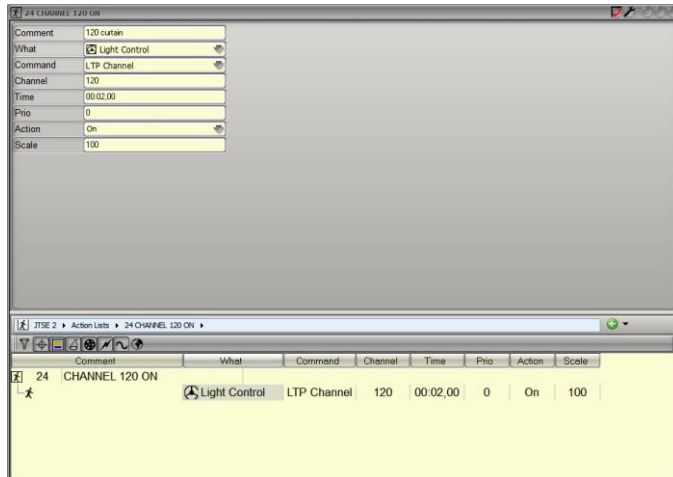


Instr : Channel involved

- Mode**
- A/B: both A & B dimmers connected
 - A: only A dimmers connected
 - B: only B dimmers connected
 - A->B B->A : toggle mode

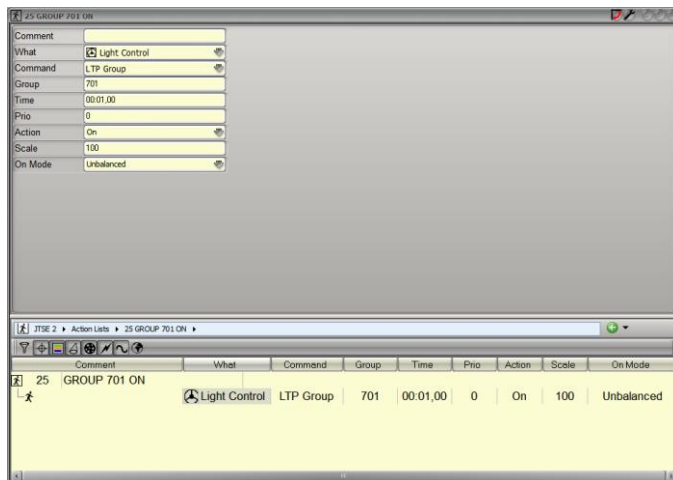
LTP objects: LTP Channel, LTP Group and LTP Look
 LTP channels (Channel, Group, Look) are always sent via a specific LTP Field.
 LTP concept works only between LTP fields, and is HTP towards other fields.
 A priority system allows a hierarchic behaviour between same LTP channels.
 Two identical channels with the same priority will use LTP rule.

LTP Channel: to output a specific channel in a specific LTP field



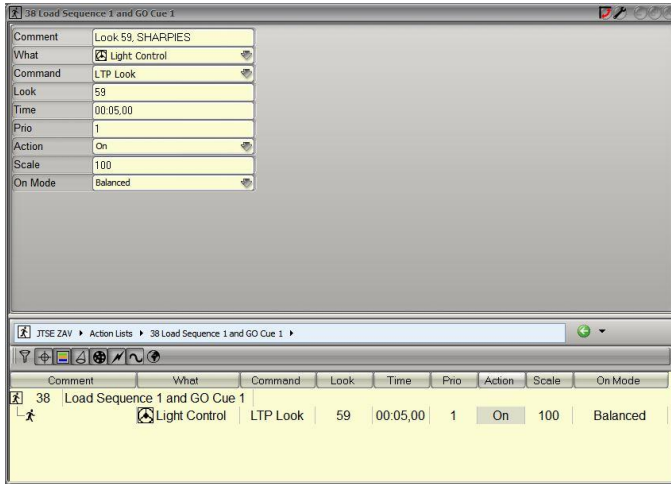
Channel: Channel involved
Time: Time
Prio : from 0 to 255, the highest takes priority over others.
Action
 On/Off: toggle mode on press
 On
 Off
 On/Off release: toggle mode on release
 Off release: Off on release
 -%/+%:
 decrementation/incrementation

LTP Group: to output channel's Group in a specific LTP field



Group: Group involved
Time: Time
Prio : from 0 to 255, the highest takes priority over others.
Action
 On/Off, On, Off, On/Off release, Off release, -%/+%
On Mode
 - **Unbalanced:** channels level = scale level
 - **Balanced :** proportional level of recorded channels levels = scale level

LTP Look: to output channel's Look in a specific LTP field

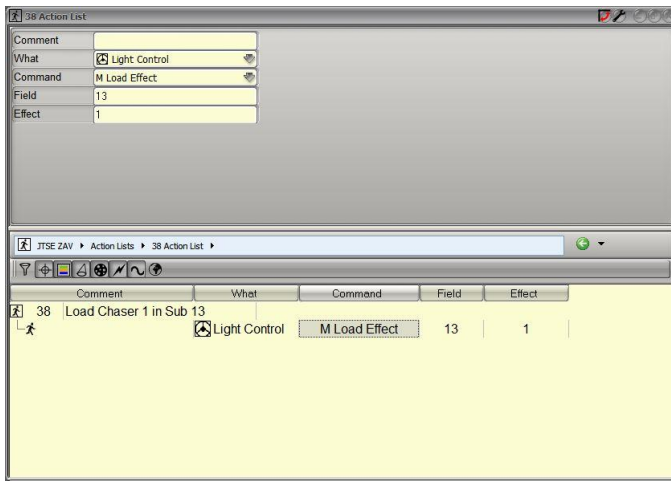


Look: Look involved
Time: Time
Prio : from 0 to 255, the highest takes priority over others.
Action
 On/Off, On, Off, On/Off release, Off release, -%/+%

On Mode

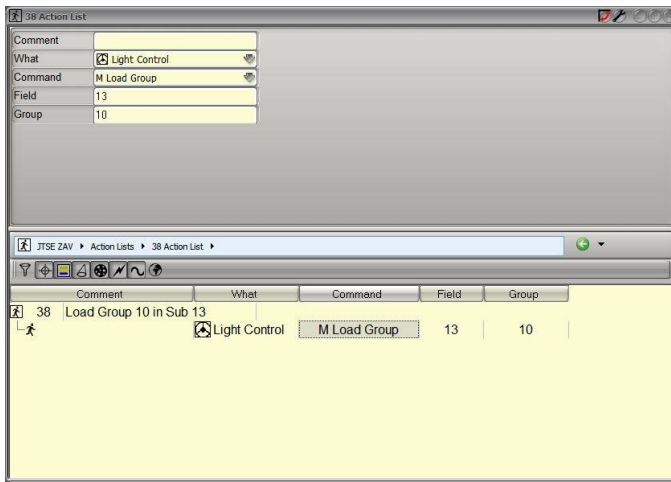
- **Unbalanced:** channels level = scale level
- **Balanced :** proportional level of recorded channels levels = scale level

M Load Effect: to load a Chaser in a Submaster Field



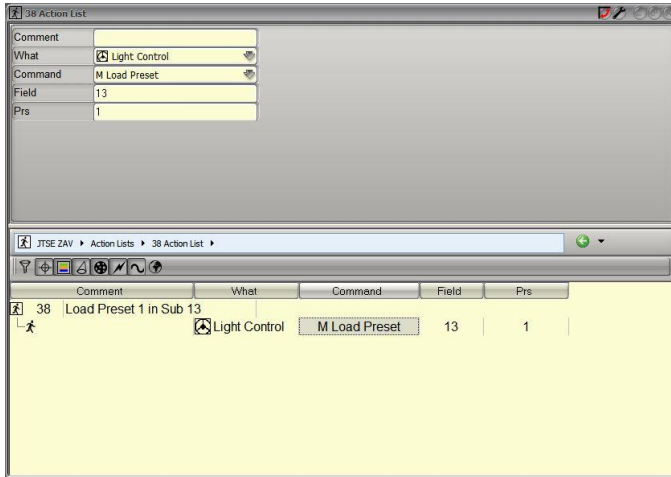
Field: Field in which the Chaser will be loaded.
Effect: Chaser loaded in field #.

M Load Group: to load a Group in a Submaster Field



Field: Field in which the Group will be loaded.
Effect: Group loaded in field #.

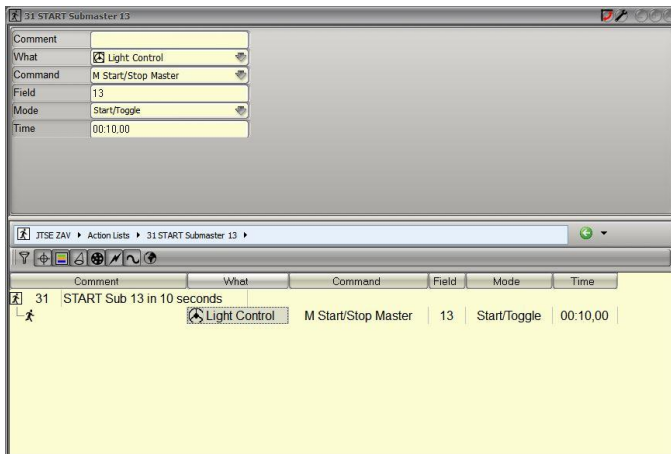
M Load Preset: to load a Preset in a Submaster Field



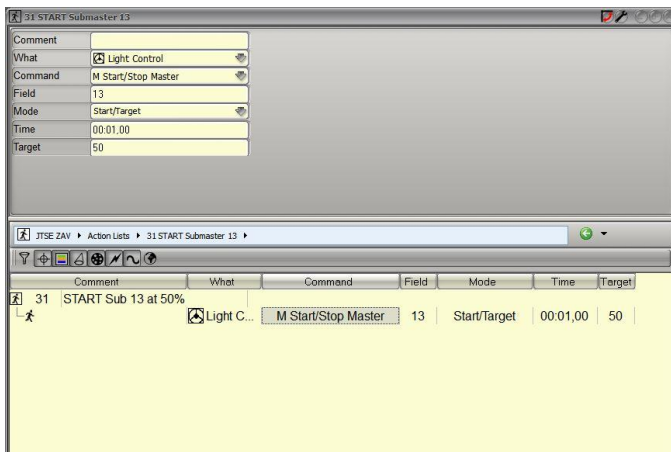
Field: Field in which the Preset will be loaded.

Effect: Preset loaded in field #.

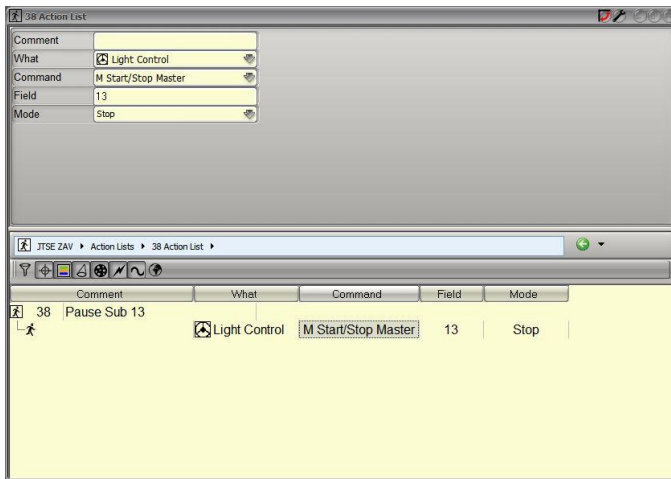
M Start/Stop Master: to control a Submaster



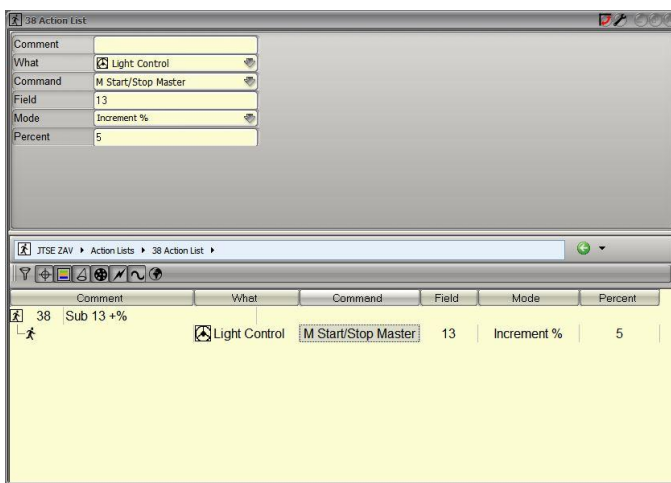
Field: Submaster controlled
Mode: Start/Toggle is a toggle mode executing the Submaster both ways. Like a Start button on console.



Field: Submaster controlled
Mode: Start/Target
 The subfader will be executed in time at a specific target level.

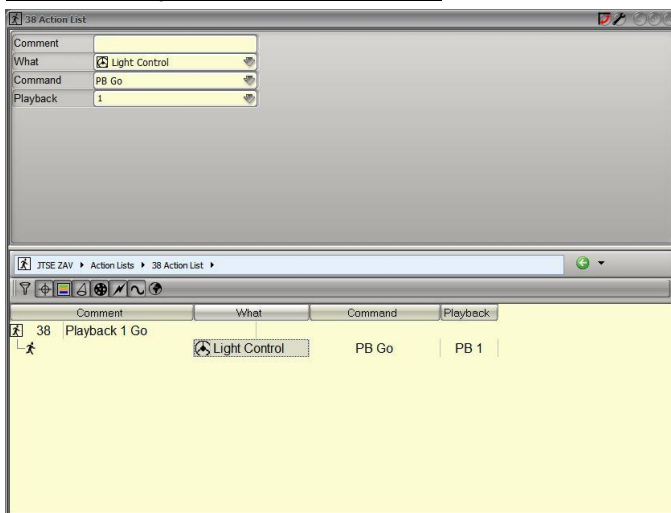


Field: Submaster controlled
Mode: Stop = Pause



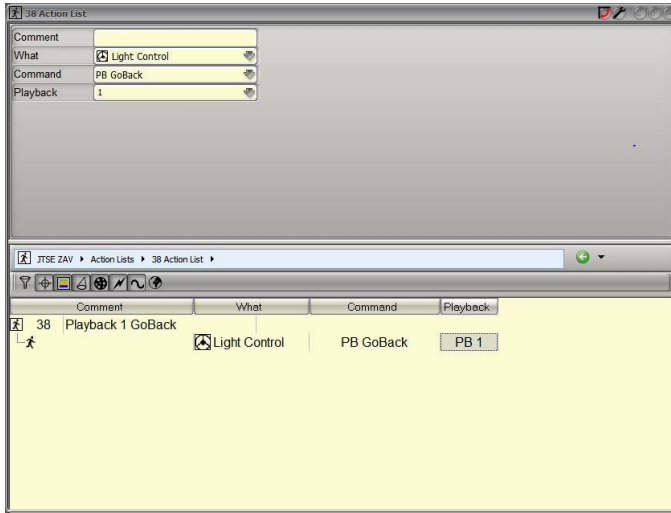
Field: Submaster controlled
Mode: Increment % / Decrement %
 Allows executing the Submaster, step by step, according to the increment or decrement % value.
Percent: % value

PB Go: Playback GO command



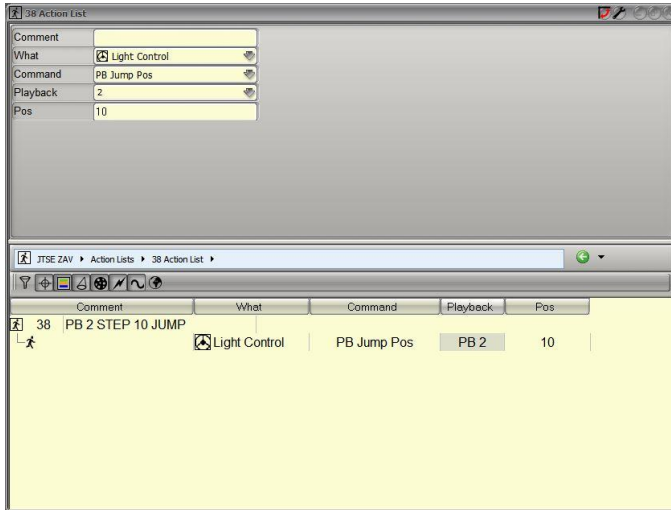
Playback: the Playback to be executed.

PB GoBack: Playback Go Back command



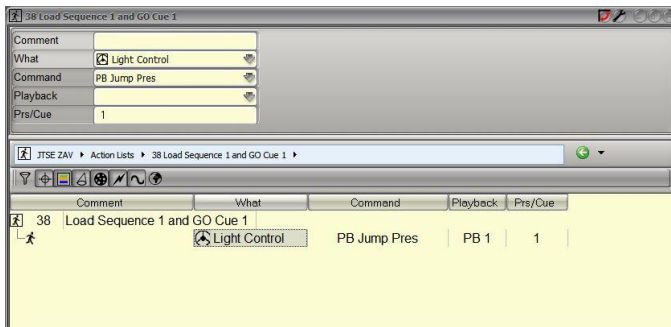
Playback: the Playback to be executed.

PB Jump Pos: Playback Jump to Step command



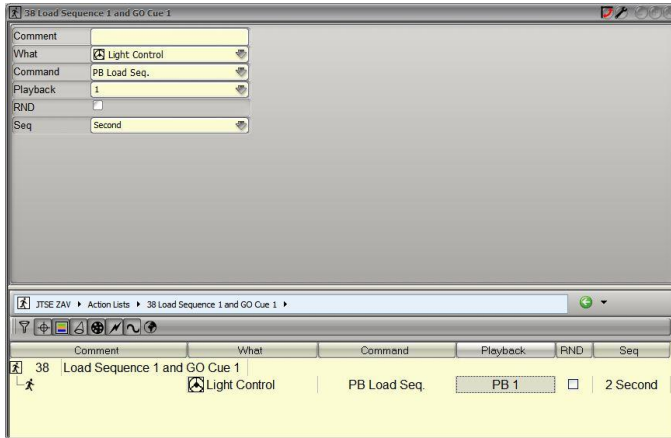
Playback: the Playback to be executed.
Pos: Step

PB Jump Pres: Playback jump to Preset command



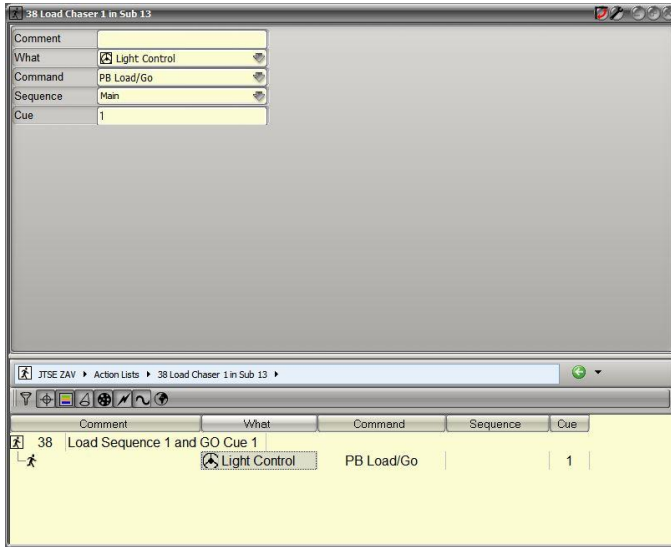
Playback: the Playback to be executed.
Prs/Cue: Preset

PB Load Seq: to load a Sequence in a Playback



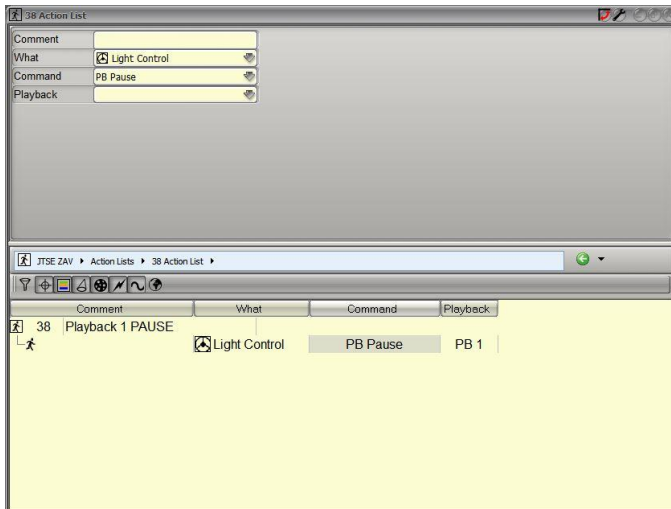
Playback: the Playback in which the Sequence will be loaded.
RND: Random mode. This mode will randomly select Sequences to be loaded between from and to.
Seq: the Sequence loaded.

PB Load/Go: to load a Sequence in a Playback and Preset GO command



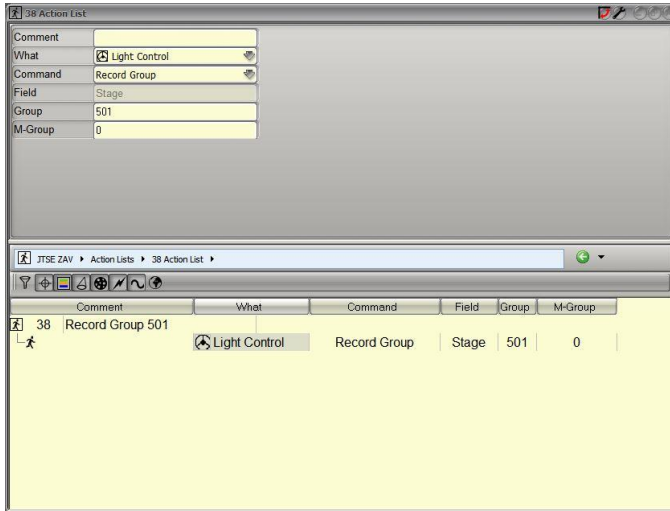
Playback: the Playback in which the Sequence will be loaded.
Sequence: the Sequence loaded.
Cue: Preset executed.

PB Pause: Playback Pause command



Playback: the Playback to be executed.

Record Group: Record Group command



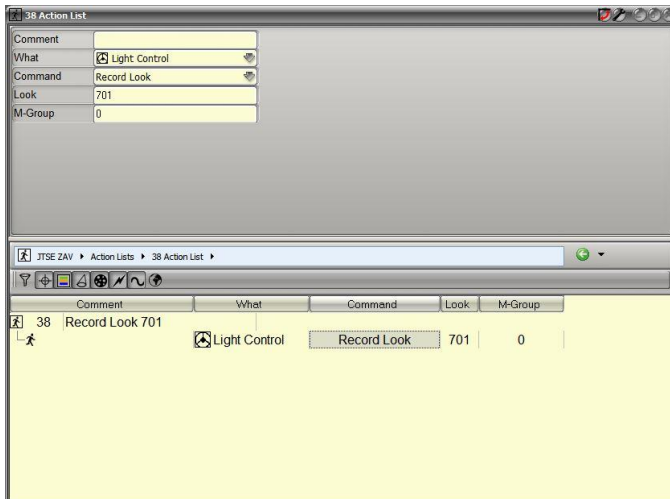
Field: Field source for the recording: Stage or specific field.

Group: predefined ID for the Group to be recorded.

MGroup: 0 means that all channels will be recorded in the Group. It is also possible to use any available Group as a filter.

Example: if Group 1 corresponds to channels 1 to 12. Then using 1 as MGroup will mean that only channels between 1 and 12 will be recorded in the Group involved (501 for instance).

Record Look: Record Look command

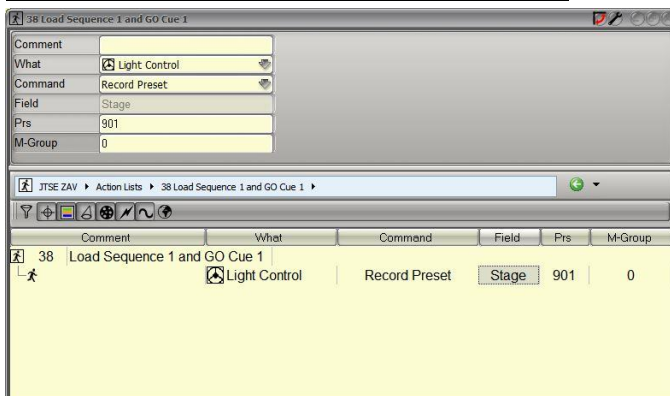


Look: predefined ID for the Look to be recorded.

MGroup: 0 means that all channels will be recorded in the Group. It is also possible to use any available Group as a filter.

Example: if Group 1 corresponds to channels 1 to 12. Then using 1 as MGroup will mean that only channels between 1 and 12 will be recorded in the Group involved (701 for instance).

Record Preset: Record Preset command



Field: Field source for the recording: Stage or specific field.

Preset: predefined ID for the Preset to be recorded.

MGroup: 0 means that all channels will be recorded in the Group. It is also possible to use any available Group as a filter.

14.2.2.2 **Cd**

Not available yet.

14.2.2.3 **Serial**

SERIAL type allows sending messages (Commands) via serial ports.

14.2.2.4 **Midi**

MIDI type allows sending messages (Commands) via MIDI.

14.2.2.5 **Action List**

ACTION allows executing another Action list

14.2.2.6 **Condition**

CONDITION allows to enable or disable an Event Mask

14.2.2.7 **House Light**

Not used in lighting systems

14.2.2.8 **Execution**

EXECUTION is dedicated to insert specific Commands in between a list of Actions, as a **Delay** for instance.

14.2.2.9 **Digital Out**

Not used in lighting systems

14.2.2.10 **System**

Allows to send system Commands such as Reboot, or MIDI On/Off, Ethernet On/Off

15. PANELS

15.1 ADDING A NEW PANEL

1/ to add a Gel String via the **Play Menu**:

Display the Play Menu

Click on Gel String tab

Right Click in empty yellow area and select **{Insert Sub: Panel}**

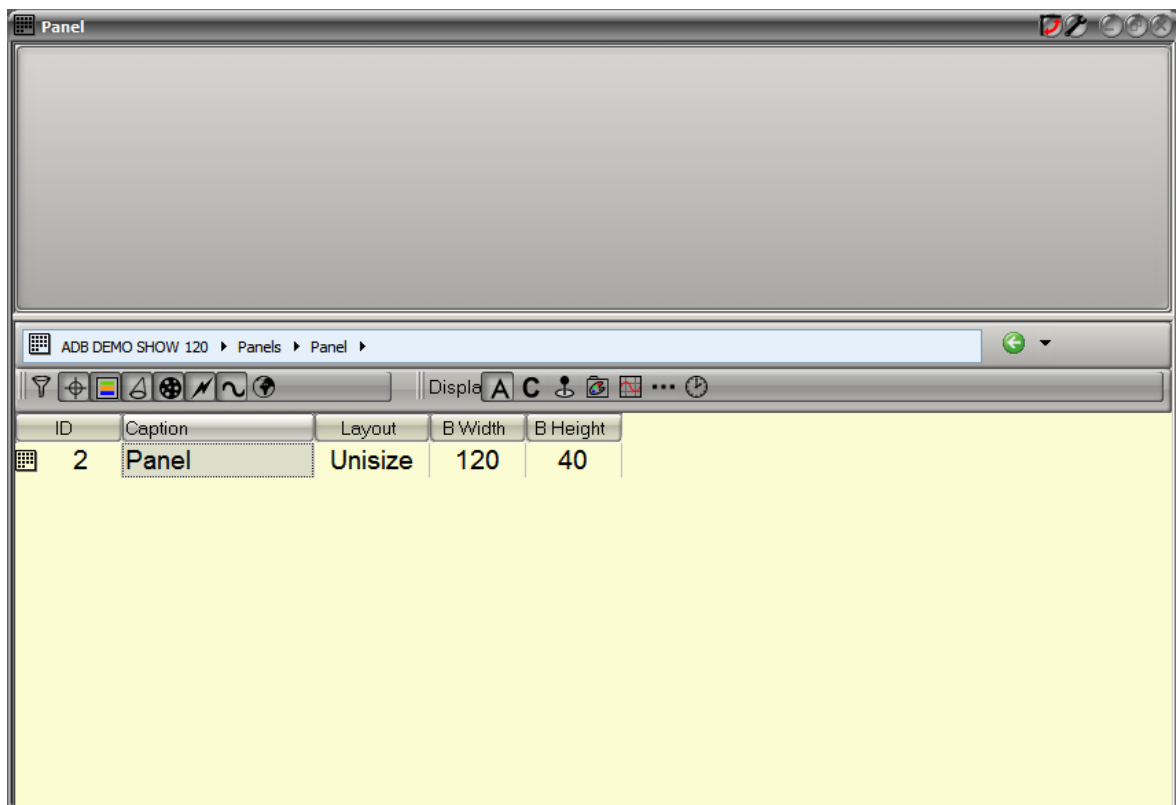
2/ to add a Gel String via the main Menu:

HATHOR / Data / Panels

Right Click in empty yellow area and select **{Insert Sub: Panel}**

15.2 CREATING OR EDITING A PANEL

1/ Right Click on the new Panel in the list (see above) and select **{Edit Panel #}**



ID: this is the ID number of this Panel. This ID is fixed.

Caption: Panel **Name**, to modify the name, double click on the current name " Panel", tap the new name, and then confirm with **(ENTER)** / **[ENTER]**.

Layout:

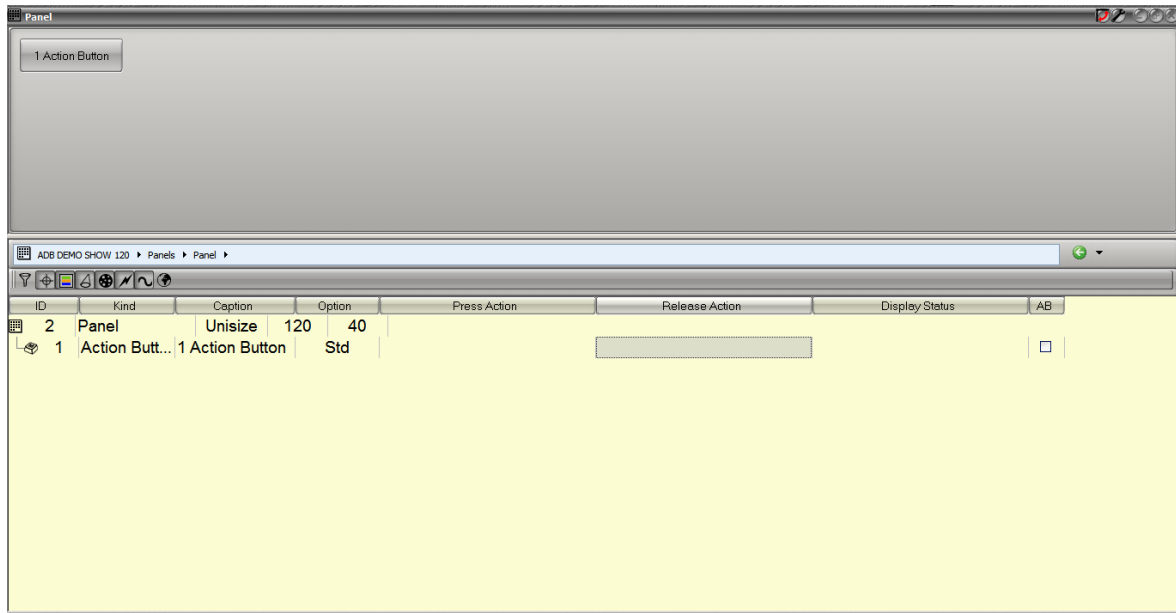
Unisize: all soft buttons will have the same size (“B Width”, “B Height”)

Individual: each button has a specific size (“B Width”, “B Height”)

2/ Right Click on Panel row and select **{Insert Sub: Panel Item}** to insert a soft button.

Tip: maximize the window to display all columns. Then click on the soft button row to display column headers.

UNISIZE mode



Kind: Action Button or Load Button

Action Button option allows to assign any Action List to this specific soft Button

Load Button allows to assign any Panel to this specific soft Button, the loaded Panel will replace the current Panel.

Option:

Press Action: Execute the Action when pressing the button

Release Action: Execute the Action when releasing the button

Display Status: add a status info to the button, if a referenced to the Action object is selected for this function. Status info will be yellow if the object is on, and white is the object is off.

AB: add a status info to the button, according to A/B mode status.

16. EVENTS

16.1 INTRODUCTION

An Event is a combination of a Trigger and an Action.

Action:

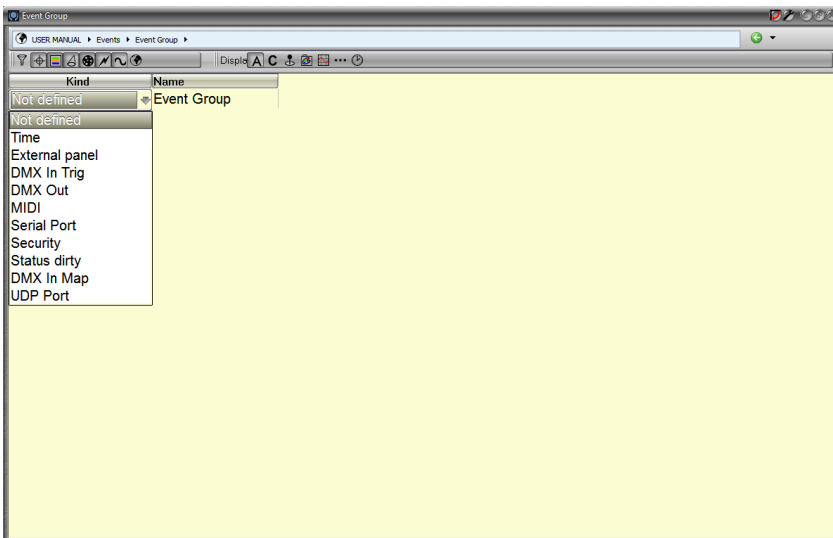
An Action consists of a string of characters forming a line of commands. These commands can be used to trigger internal actions (Go, Pause and so on) or external devices with serial commands.

Trigger:

A Trigger is used only to trigger an Action.

There are different kinds of Event (default kind is “**Not Defined**”):

- Time
- DMX In Trig and DMX In Map
- DMX Out
- MIDI
- UDP port



16.2 TRIGGER INFORMATION

E: Enabled / Disabled

D: to use date mask or not.

M: Use Global Mask.

Start

Delta

Stop

Next

16.2.1 Date Mask

D = DATE MASK

Enable DATE MASK to display management options of date and schedule.

StartDate: use the calendar to set a date.

The Event will start at these date.

Use E: use the calendar to set a date.

The Event will finish at these date.

Schedule: use this function to schedule the Event. Options will be:

- Daily
- Every#: frequency of days
- Weekly
- Every#: frequency of weeks
- Weekdays: choose the week
- Monthly
- At Startup

16.2.2 Global Mask

M = GLOBAL MASK

Enable Global Masks to display management options of date and schedule.

To display Global Masks list, in the Events Editor window, click on Events on the top of the list, then click on the spanner to open the hidden part of the Editor

E: Enabler

B: Disabler (blocking)

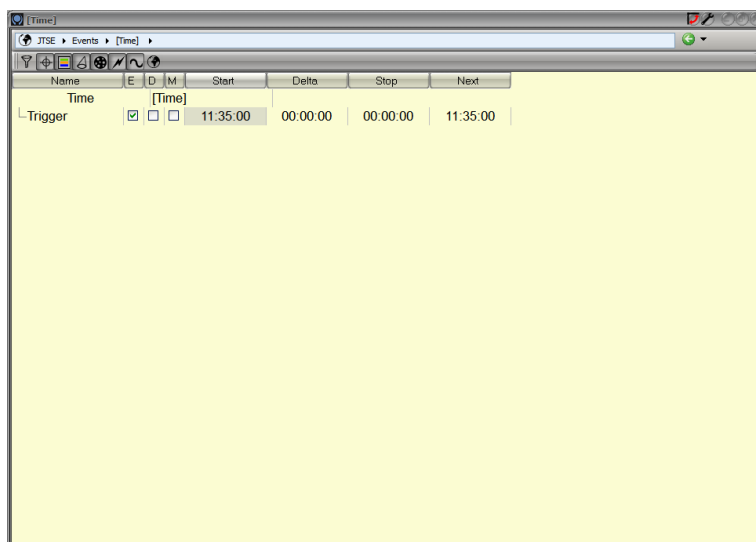
Use an action to set the Enabler On or Off

16.3 TIME

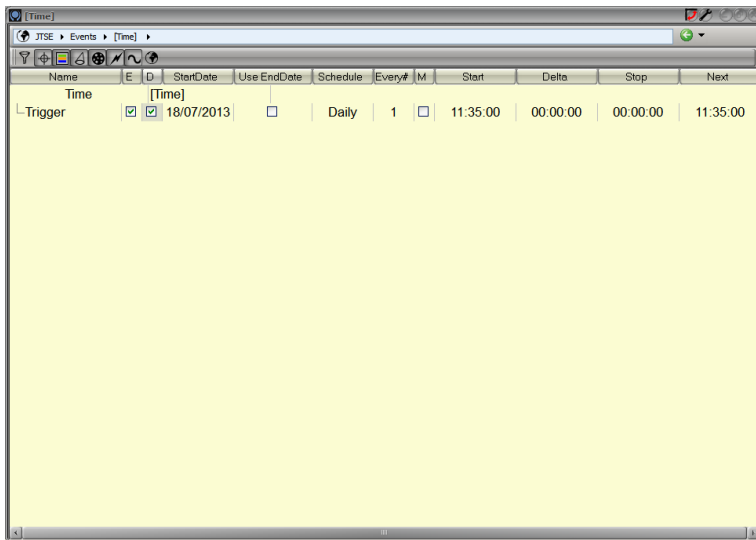
16.3.1 Introduction

Use a Time trigger to execute an Action.

To enter the execution hour in the Start field, double click in the cell, and then use numbers and (:) between hours, minutes and seconds.



To add day, week or month information, use the Date mask (**D**). See Date mask information above (Date Mask).



16.4 DMX IN

16.4.1 Introduction

The DMX In data is always entering via an Input port, either physical (DMX In port) or on Ethernet.

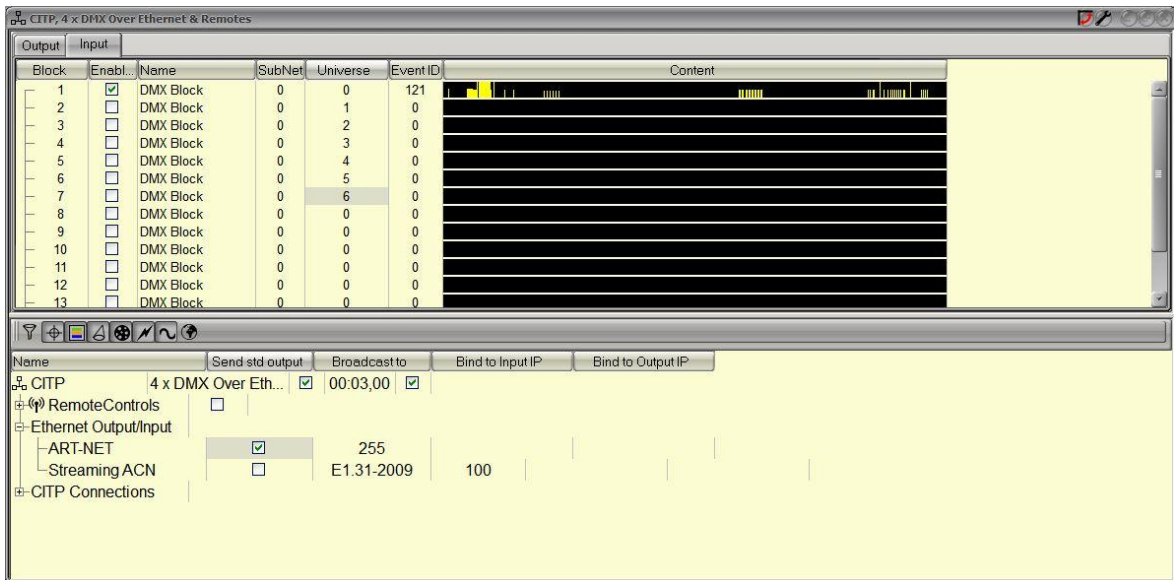
An Input port has to hold an ID.

Physical DMX In port ID on Freedom is 123.

Physical DMX In port ID on Imago is 125.

Ethernet Input port has ID 0 by default. It is necessary to enable the Input block, and to assign an ID to this port.

See Art-Net example below, with Input Block 1 with 121 ID.

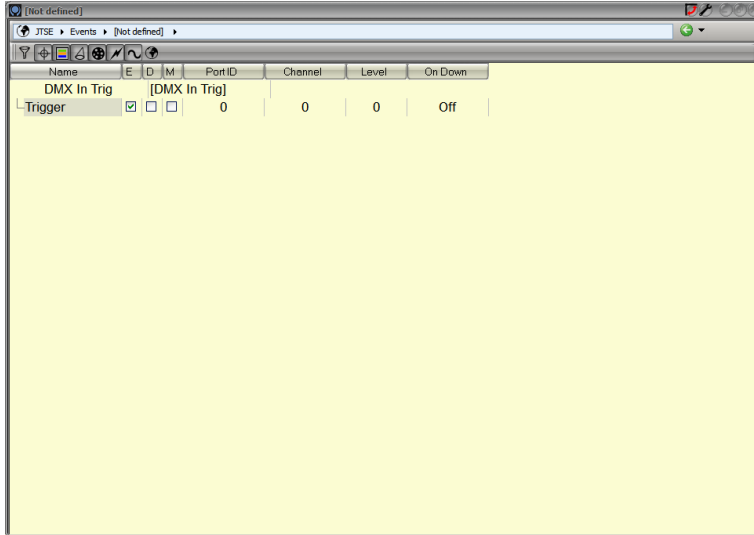


The DMX In data is always depending on the Instrument Setup.

DMX In Channels <---> Instruments connected to Dimmers

16.4.2 DMX In Trig

Use DMX In Trig feature to execute any Action.
In the new Event, select DMX In Trig as mode.
Right click on DMX In Trig and select **{Insert Sub: Trigger}**
Click on Trigger to display relevant columns headers
Enable the trigger (**E**) if necessary



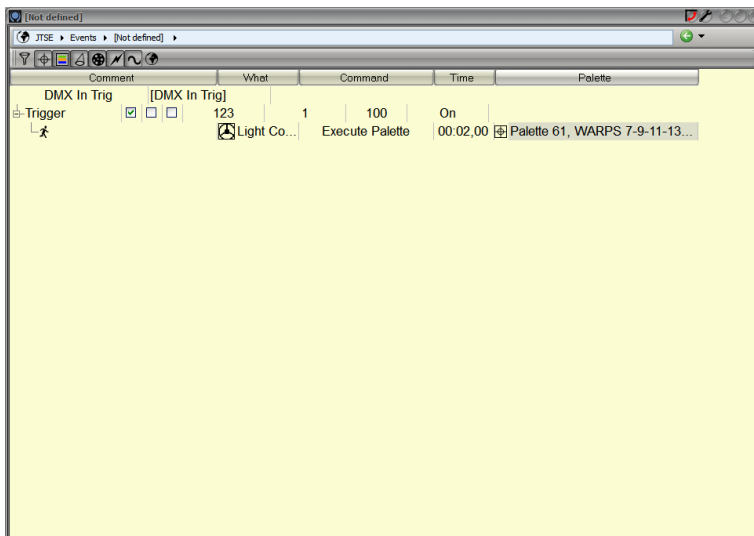
Port ID: the DMX In port ID, e.g. **123** for a FREEDOM

Channel: the external console channel

Level: the triggering target level

On Down: if **On**, the action will be executed when the level changes from an higher value to the **Level** value, if **Off** the action will be executed when the level reaches the **Level** value.

Right Click on Trigger, and select **{Insert Sub: Action}** to add the Action(s) to be triggered.



16.4.3 DMX In Map

Use DMX In Map feature to control the DMX in data via a Submaster (**Field Content** mode) or to map incoming channels to Submasters (**Subfader** mode).

In the new Event, select DMX In Map as mode.

Right click on DMX In Map and select **{Insert Sub: Trigger}**

Click on Trigger to display relevant columns headers

Enable the trigger (**E**)

In **Map Kind**: select **Field content**

Port ID: the DMX In port ID, e.g. **123** for a FREEDOM

DMX Ch: the start Channel, it corresponds to the offset between the external console channel and the internal HATHOR channel. Default value is 1. When set in 2, external console channel 1 is not mapped, and external console channel 2 is mapped to internal HATHOR channel 1.

Field: the Submaster Field handling the DMX In data

Field Offset: offset between the received channels and the Field channels. Default value is 1. When set in 2, external console channel 1 is mapped to internal HATHOR channel 2.

Count: number of channels handled

Example

To receive and send 512 DMX channels via Subfader 24:

Instrument Setup 1 to 1

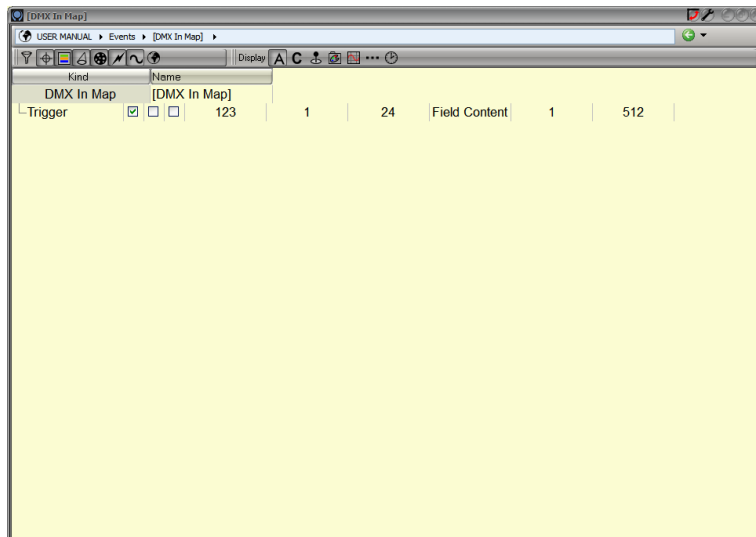
Port ID: 123

DMX Ch: 1

Field: 24

Field Offset: 1

Count: 512



To use DMX In channels to control Submasters:

In **Map Kind**: select **Subfader**

Port ID: the DMX In port ID, e.g. 123 for a FREEDOM

DMX Ch: the DMX In Channel controlling the Submaster Field

Field: the Submaster Field controlled

16.5 DMX OUT

16.5.1 Introduction

The DMX Out data is always sent by the system, either via physical DMX ports, or via Ethernet.

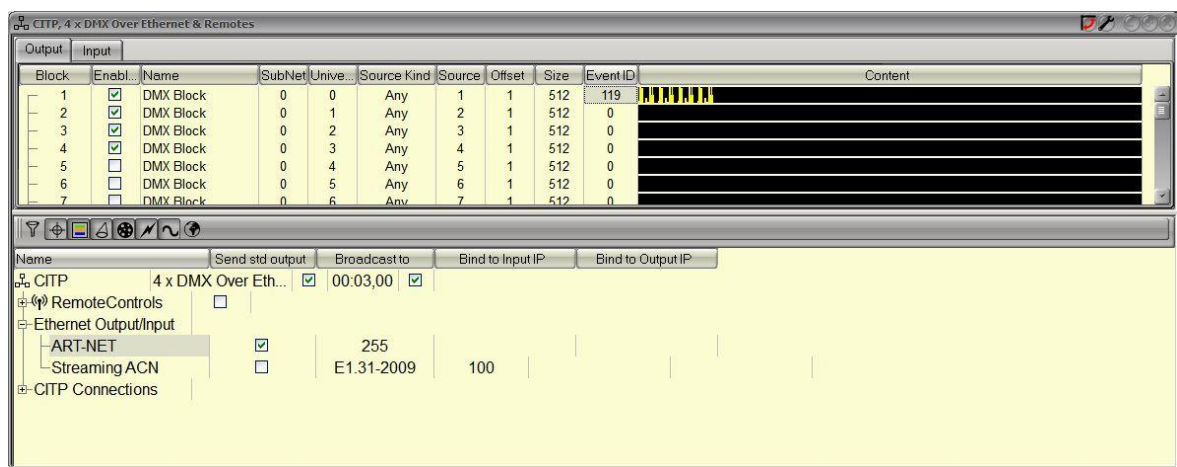
An Output port has to hold an ID.

There is no physical DMX Out port ID.

To use the DMX Out feature it is then necessary to add a Ethernet protocol in the current session, to enable an Output and to assign an ID.

Ethernet Output port has ID 0 by default. It is necessary to enable the block, and to assign an ID to this port.

See Art-Net example below, with Output Block 1 with 119 ID.



16.5.2 DMX Out feature

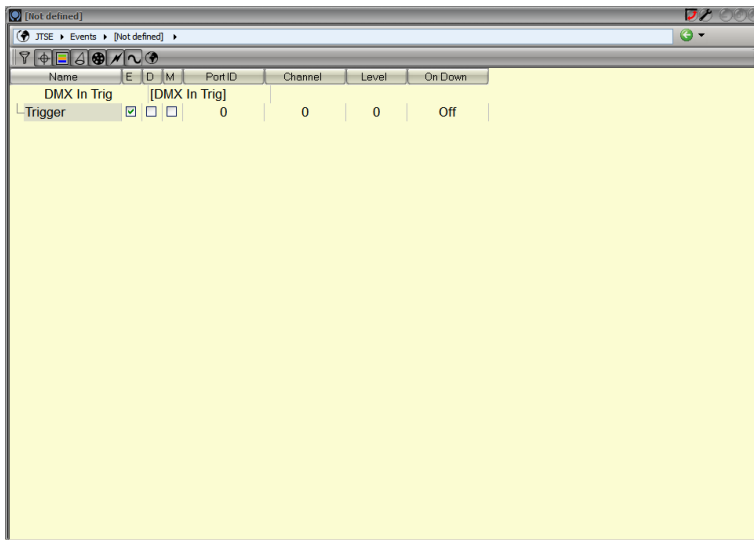
Use DMX Out feature to execute any Action.

In the new Event, select DMX Out as mode.

Right click on DMX Out and select **{Insert Sub: Trigger}**

Click on Trigger to display relevant columns headers

Enable the trigger (**E**) if necessary



Port ID: the DMX Out port ID, e.g. enable Artnet in the session, enable Block 1 and enter **119** as ID.

Channel: the internal console Channel

Level: the triggering target level

On Down: if **On**, the action will be executed when the level changes from an higher value to the **Level** value, if **Off** the action will be executed when the level reaches the **Level** value.

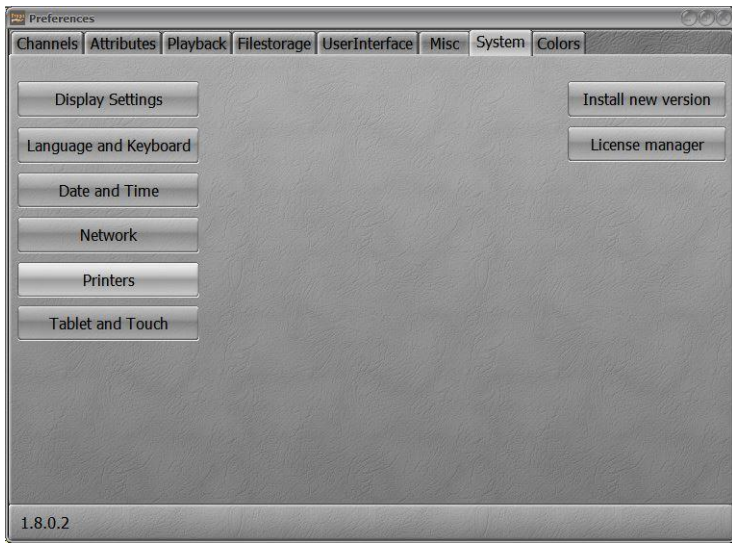
Right Click on Trigger, and select **{Insert Sub: Action}** to add the Action(s) to be triggered.

16.6 MIDI

16.6.1 Introduction

The MIDI data is entering generally via a MIDI-USB adaptor. There are several MIDI-USB devices on the market. As soon as your USB device is connected, and recognized by the system it will be displayed in Printers and Devices Windows menu.

To access to this menu, use the **Printers** button in Setup / Preferences / Printers



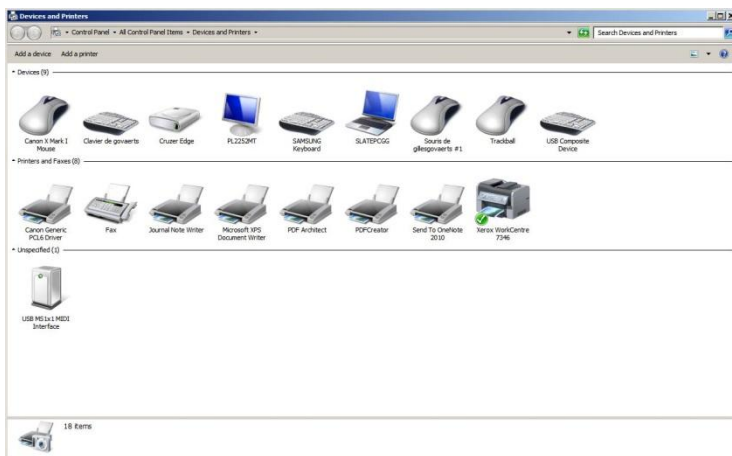
The new USB Device will be displayed in this window.
 If the new device is not recognized as MIDI interface, it will be necessary to install drivers.

To install drivers:

Right Click > **Properties**

In Properties, select Hardware, and click on the properties button

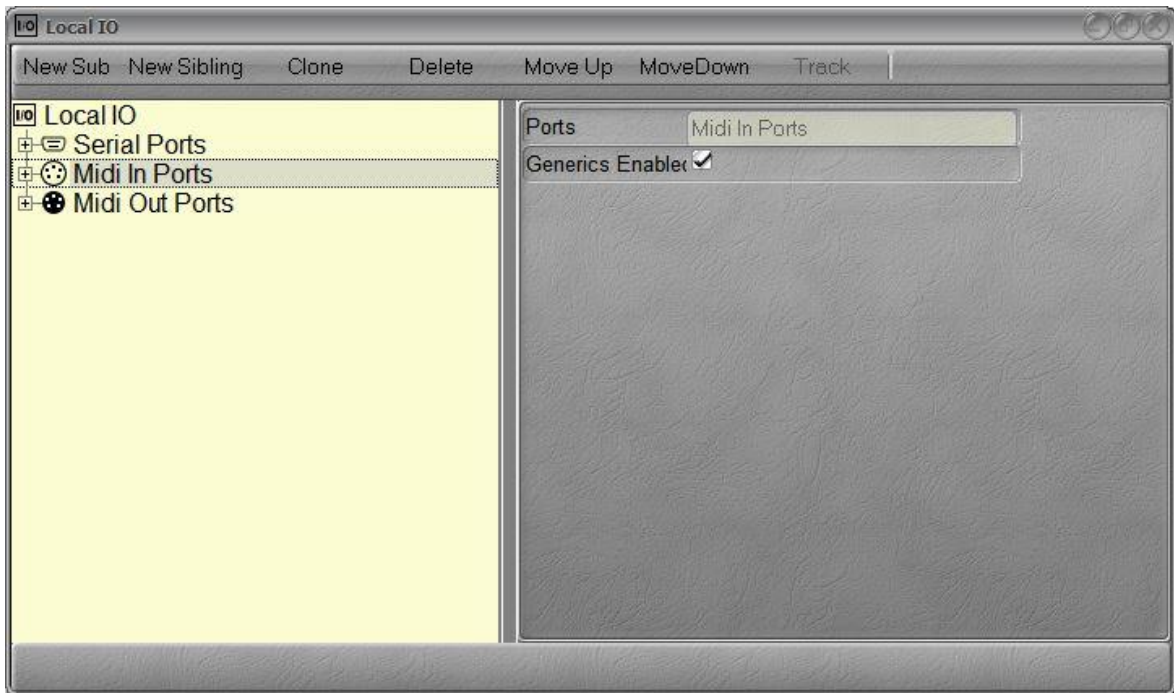
In Device Properties, select Driver and Update Driver.



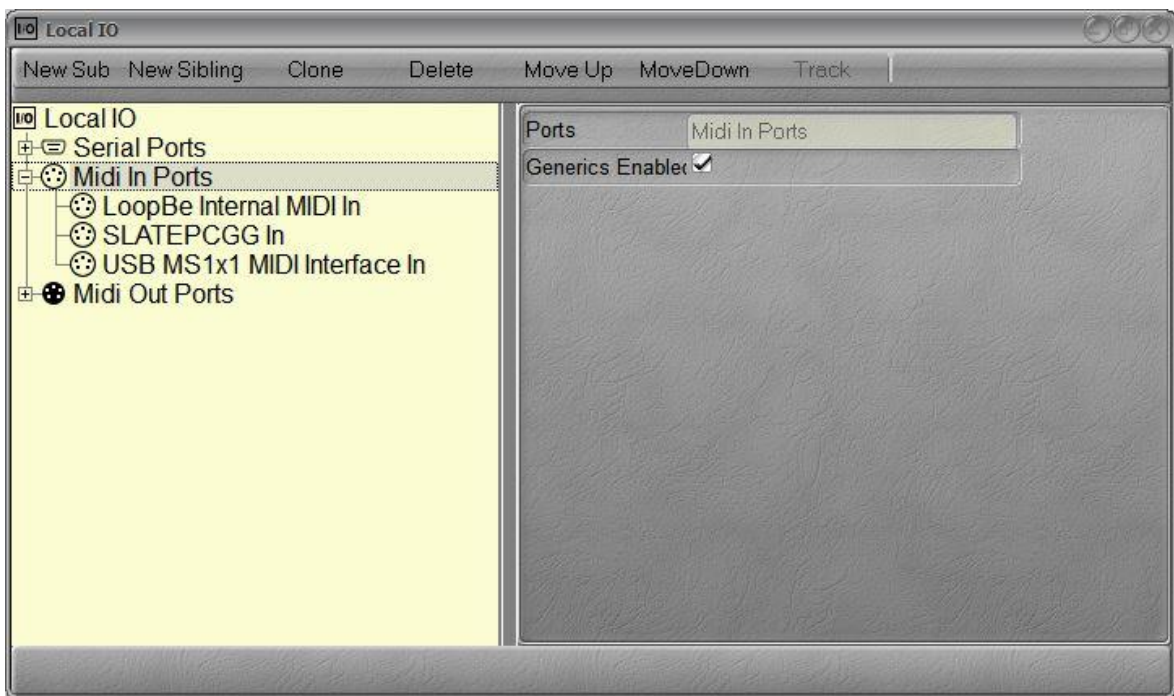
16.6.2 Connectivity

MIDI devices are manageable via the Local I/O menu.

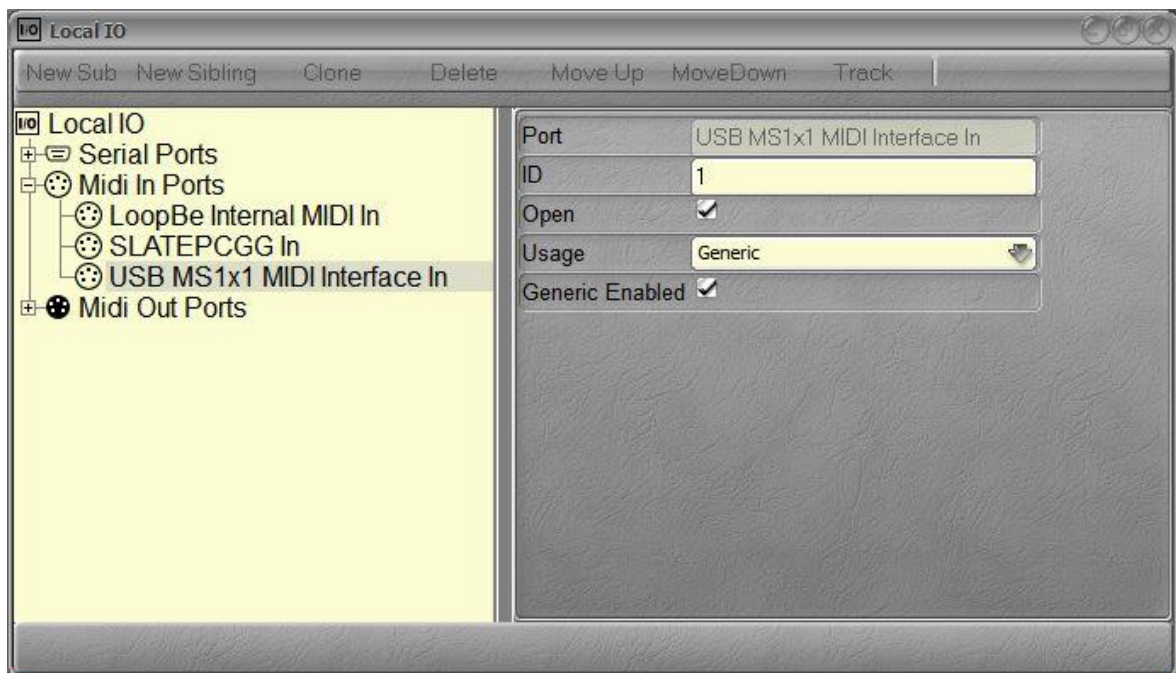
HATHOR / Setup / Local IO



Expand the MIDI In Ports menu to see the MIDI-USB adaptor.



Select the USB-MIDI device in the list.



In the right part of the window, set the ID, Open the communication, and select Device as Usage, then enable the device.

The system is now receiving MIDI data via this USB-MIDI device, owning ID 1.

16.6.3 Functions

In the new Event, select MIDI as kind.

Right click on MIDI and select **{Insert Sub: Trigger}**

Click on Trigger to display relevant columns headers

Enable the trigger (**E**) if necessary

Port ID: the ID corresponding to the MIDI device

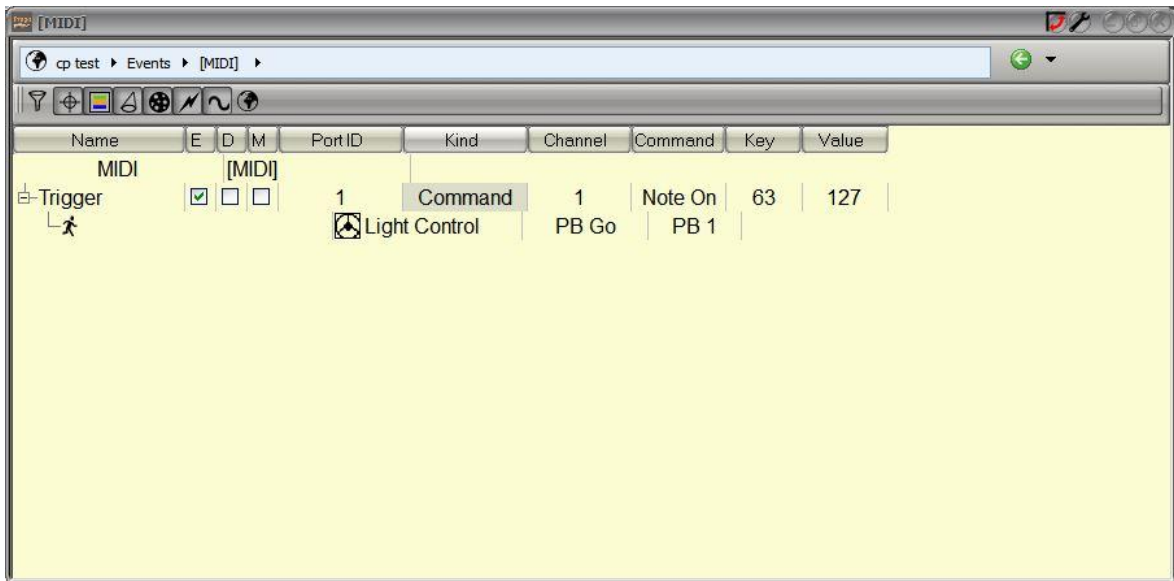
Kind: command

Channel: MIDI channel

Command: type of command

Key: MIDI key

Value: MIDI key value



Right click on Trigger and select **{Insert Sub: Action}**

In the example above, The PB 1 will be executed when receiving the MIDI Note 63 at full.

16.7 UDP PORT

16.7.1 Introduction

UDP (User Datagram Protocol) is a communications protocol where messages are exchanged between computers in a network that uses the Internet Protocol (IP). The UDP messages are entering via Ethernet.

16.7.2 Connectivity

Add a UDP connection in the session.

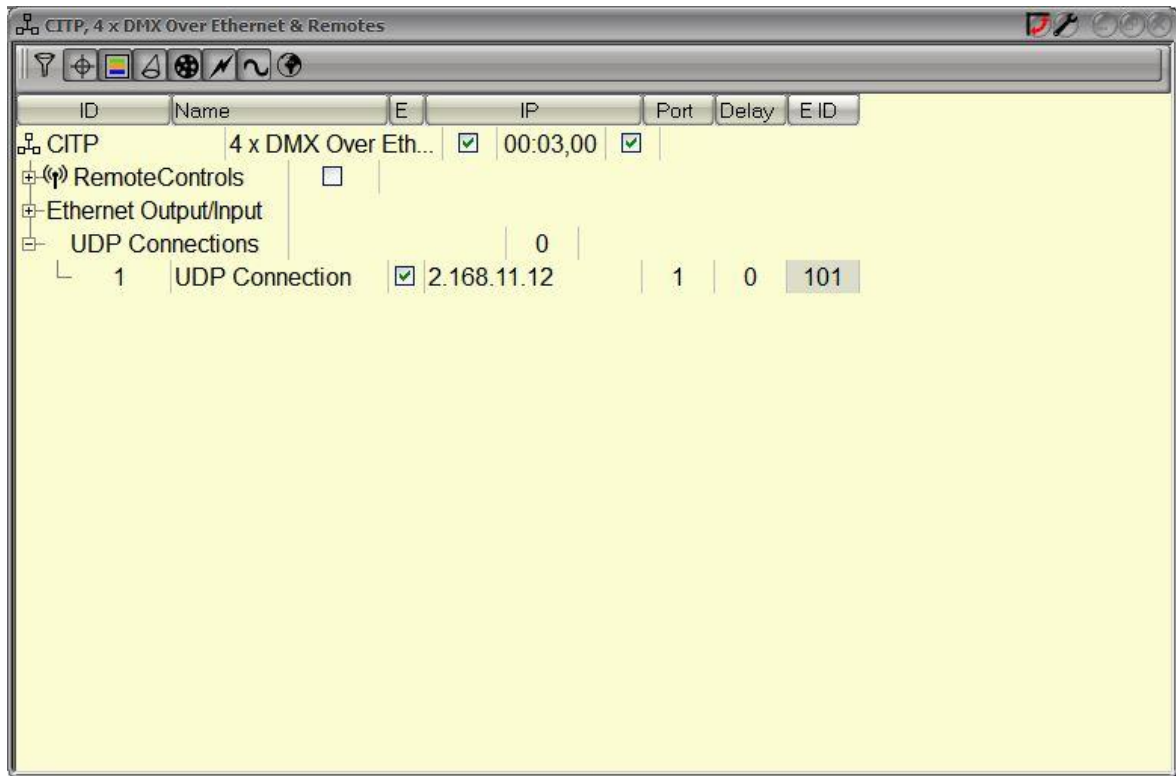
Double click on the session name at the top of the main window, to open the session Editor.

Right Click on the session name, select **{Insert Sub:}** and pick **UDP connections** in the list.

Right Click on UDP connections and select **{Insert Sub: UDP connection}**

Expand UDP Connections menu to display content.

Note: binding is useless when working with only one Network card. It is dedicated to bind the connection to a specific Network card, when using several cards.



Enable the UDP connection

IP: to set the **IP** of the computer sending the UDP messages

Port: to set the Port used to send UDP message

E ID: to set the Event Port ID referred in the Event

16.7.3 Functions

In the new Event, select UDP Port as kind.

Right click on UDP Port and select **{Insert Sub: Trigger}**

Click on Trigger to display relevant columns headers

Enable the trigger (**E**) if necessary

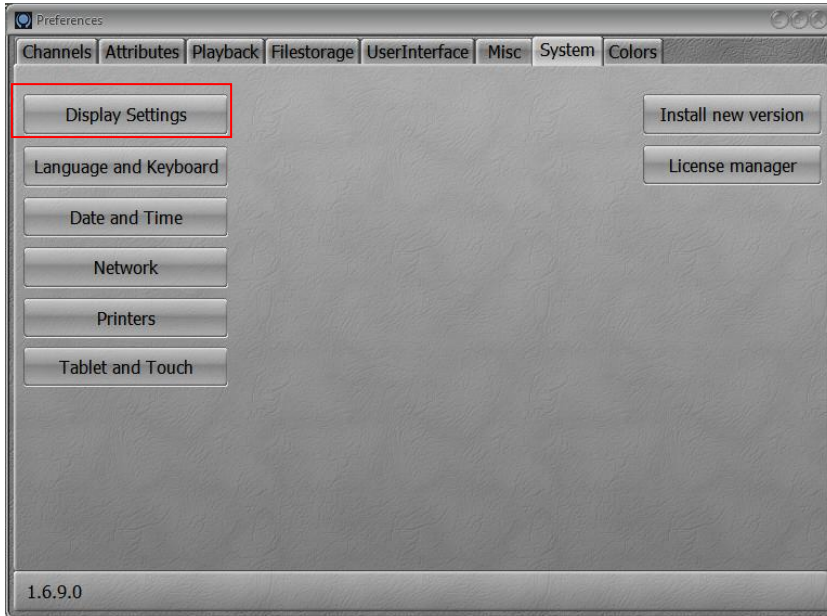
Port ID: the ID referenced in the UDP connection

Kind: User string or Ref string

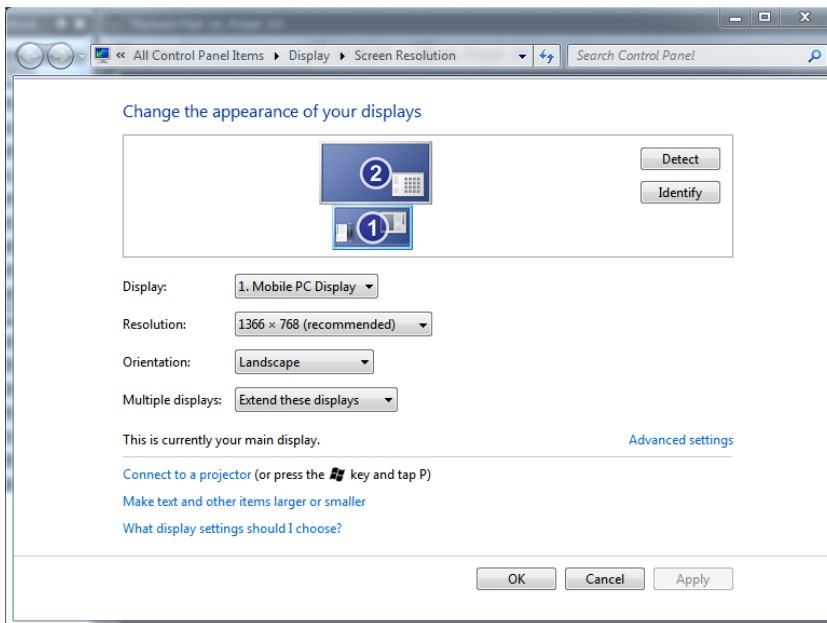
- **Ref:** the Reference string to use
- **HEX:** the string in hexadecimal

17. UTILITIES

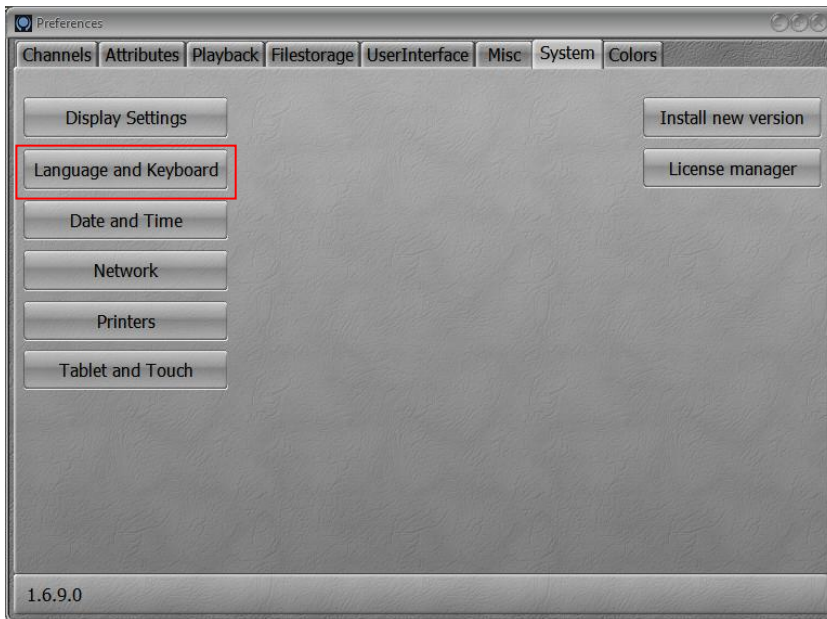
17.1 DISPLAY SETTINGS



Display Settings: Direct access to Windows settings Display / “Display settings”.

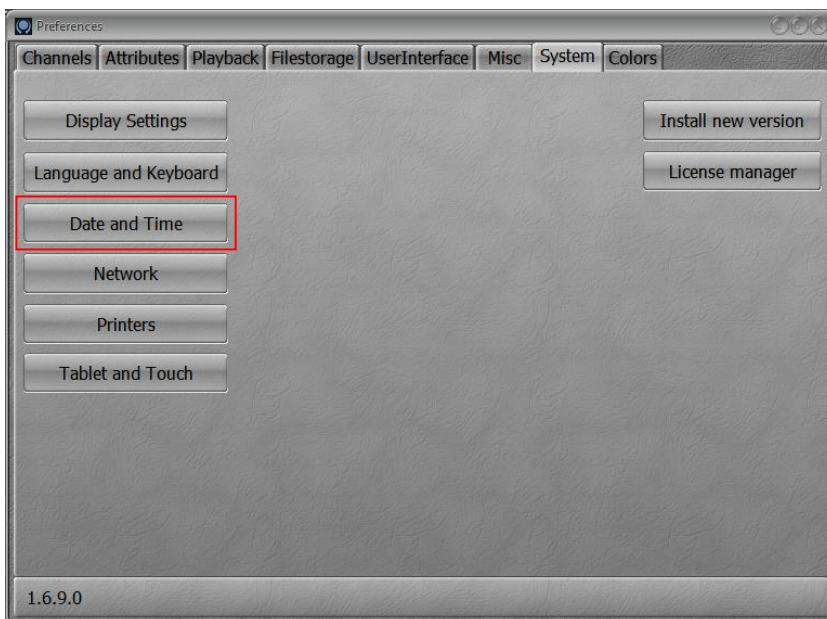


17.2 LANGUAGE AND KEYBOARDS

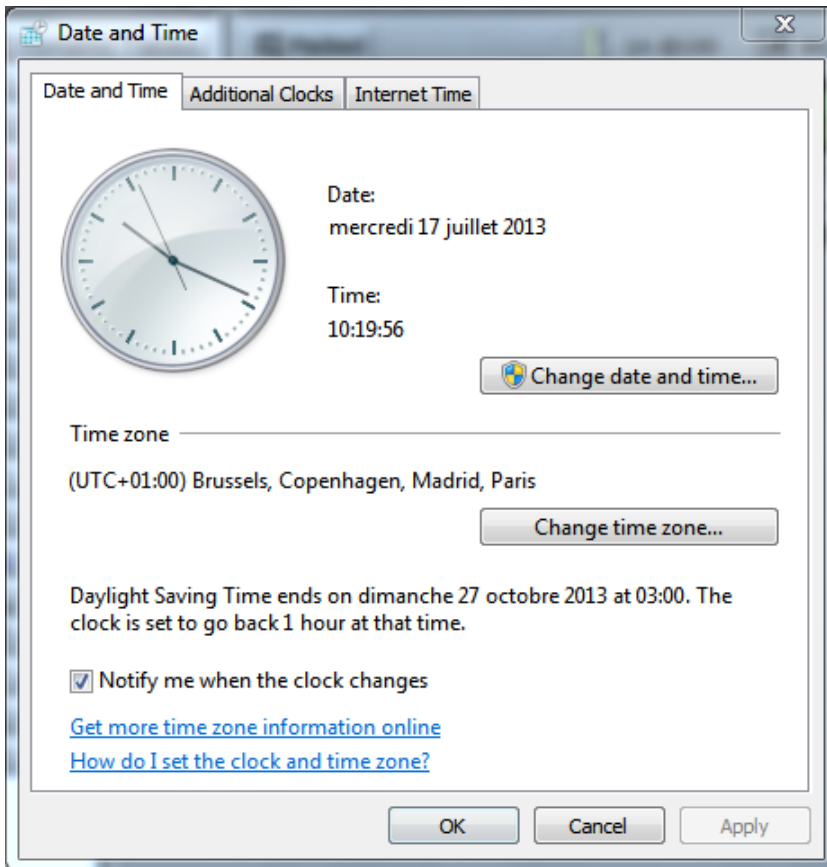


Language and keyboard: Direct access to Windows settings “**Region and Language**”.

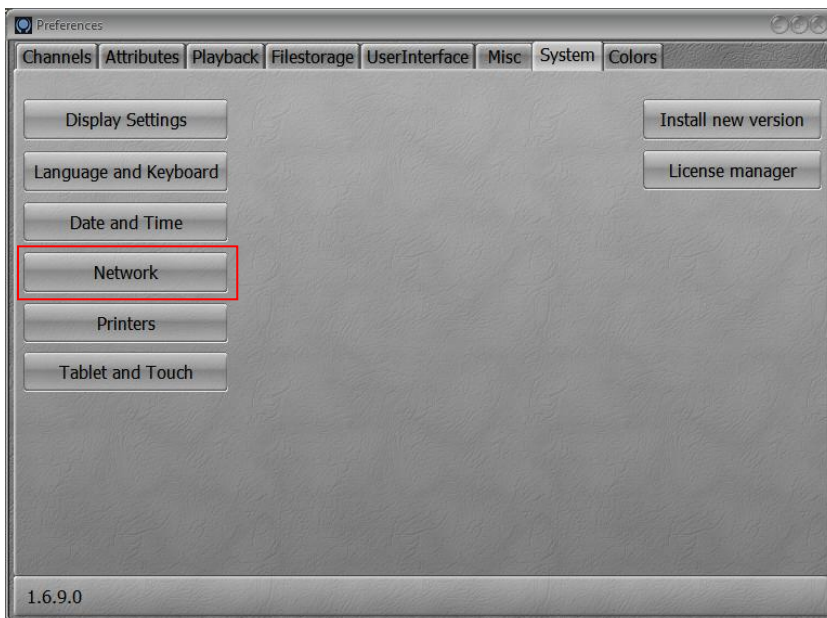
17.3 DATE AND TIME



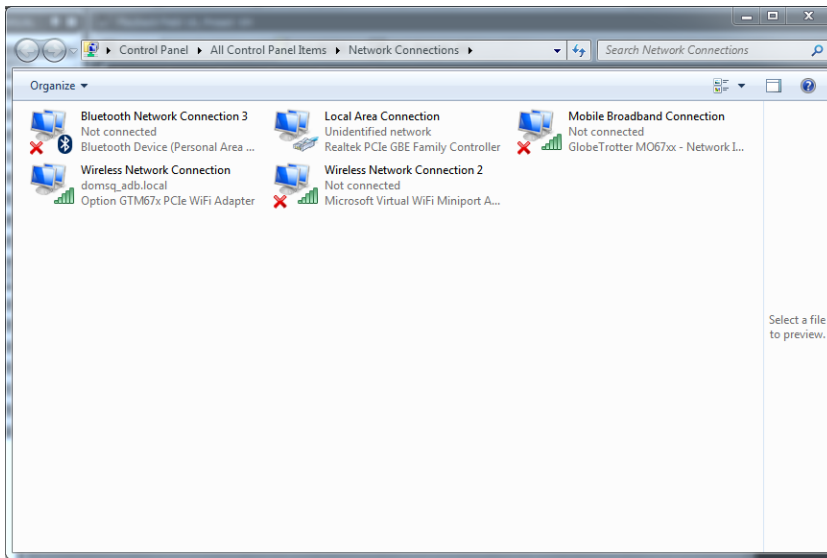
Date and Time: Direct access to Windows settings “**Date and Time**”.



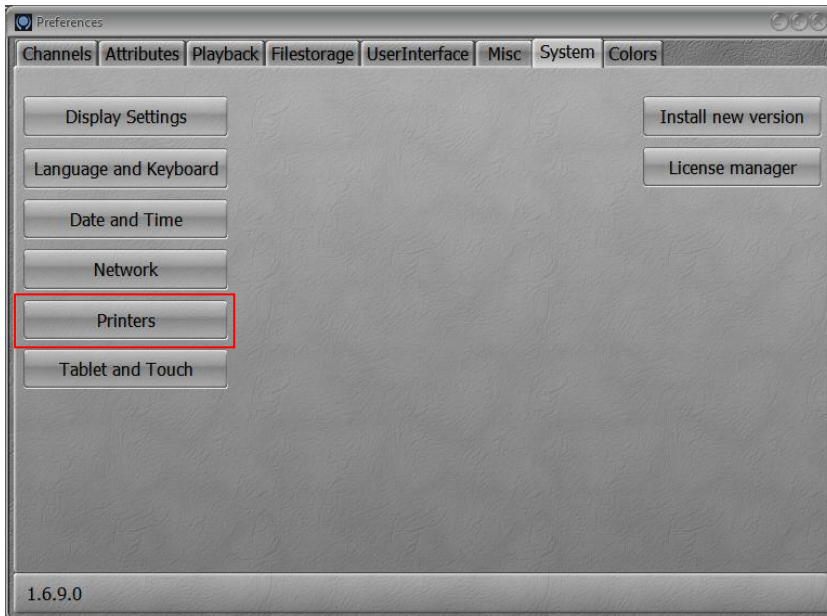
17.4 NETWORK



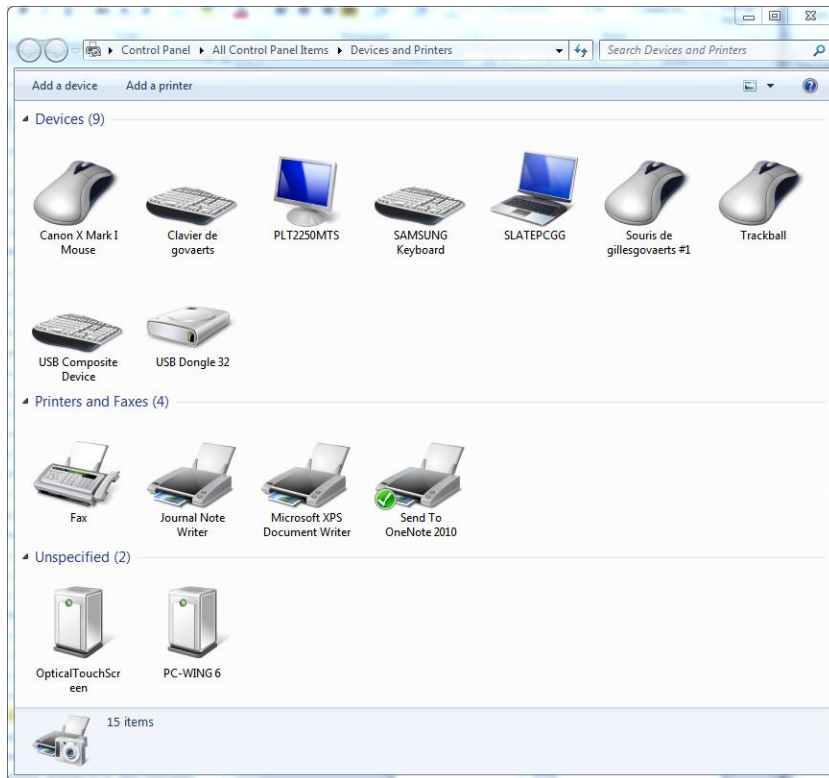
Network: Direct access to Windows settings “**Network Connections**”.



17.5 PRINTERS



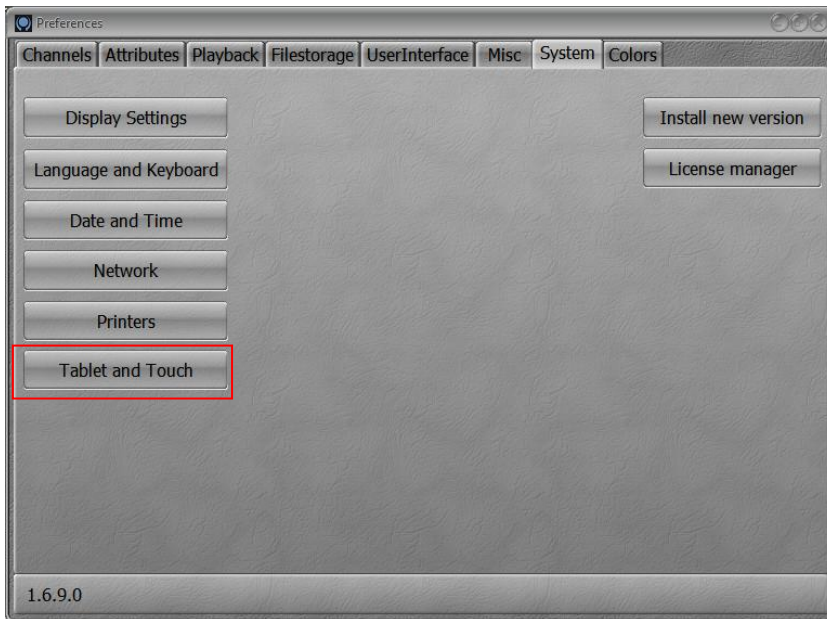
Printers: Direct access to Windows settings “**Devices and Printers**”.



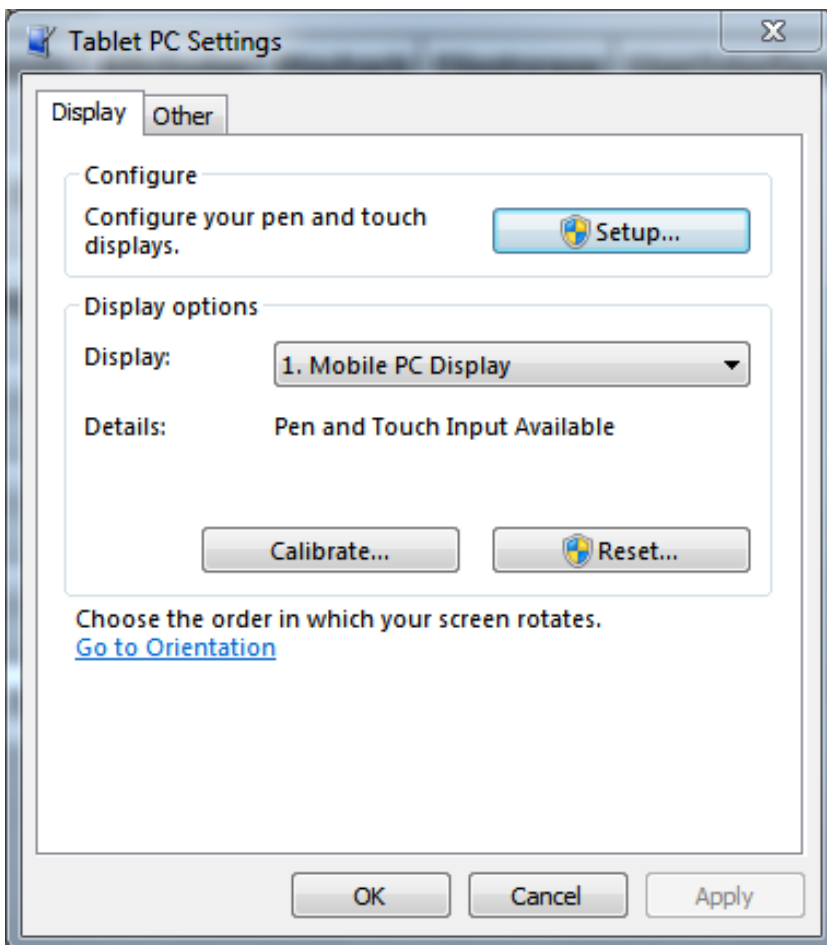
To copy a file, or to install a driver from a USB flash drive:

- Right Click on your USB flash drive and select Browse Files
- Click on your USB flash drive label
- Locate the file or the driver installer
- Copy the file or double click on the installer

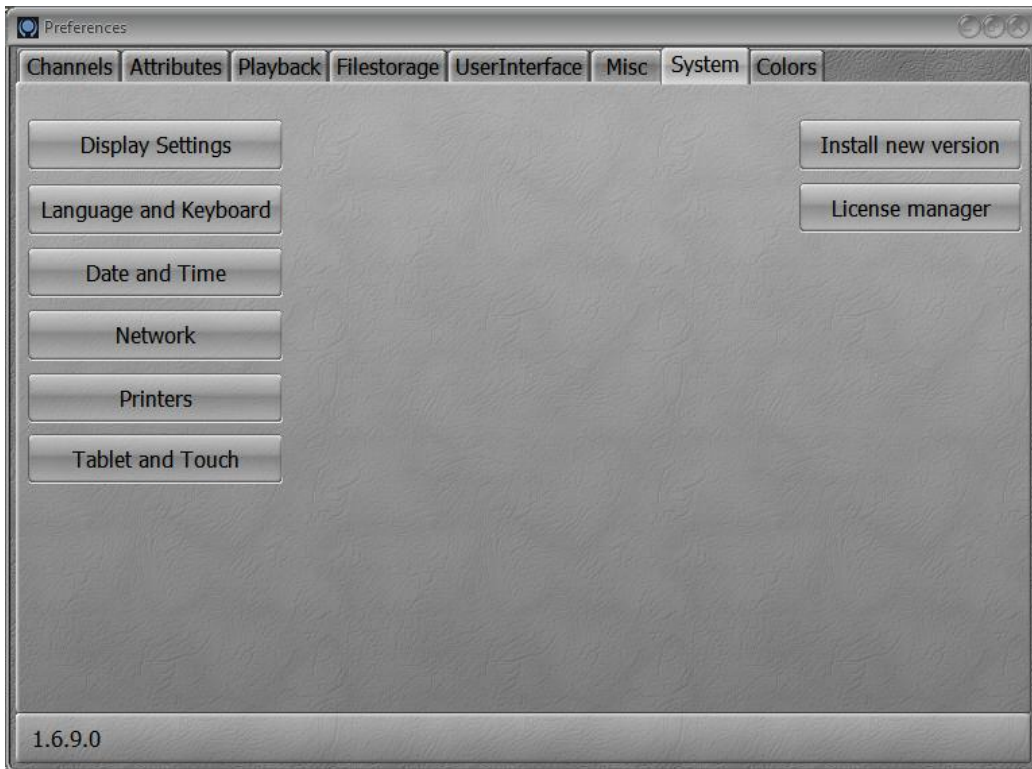
17.6 TABLET AND TOUCH



Tablet and Touch: Direct access to Windows settings “**Devices and Printers**”.



17.7 SOFTWARE UPDATE



Install new version:

Install new version (Please check that your USB stick with new HATHOR version is plugged)

choose the version in the Installer files window

{Install}

Terminate HATHOR and install version X.X.X.X: **{OK}**

Terminate HATHOR: **{YES}**

{Next>}

{Next>}

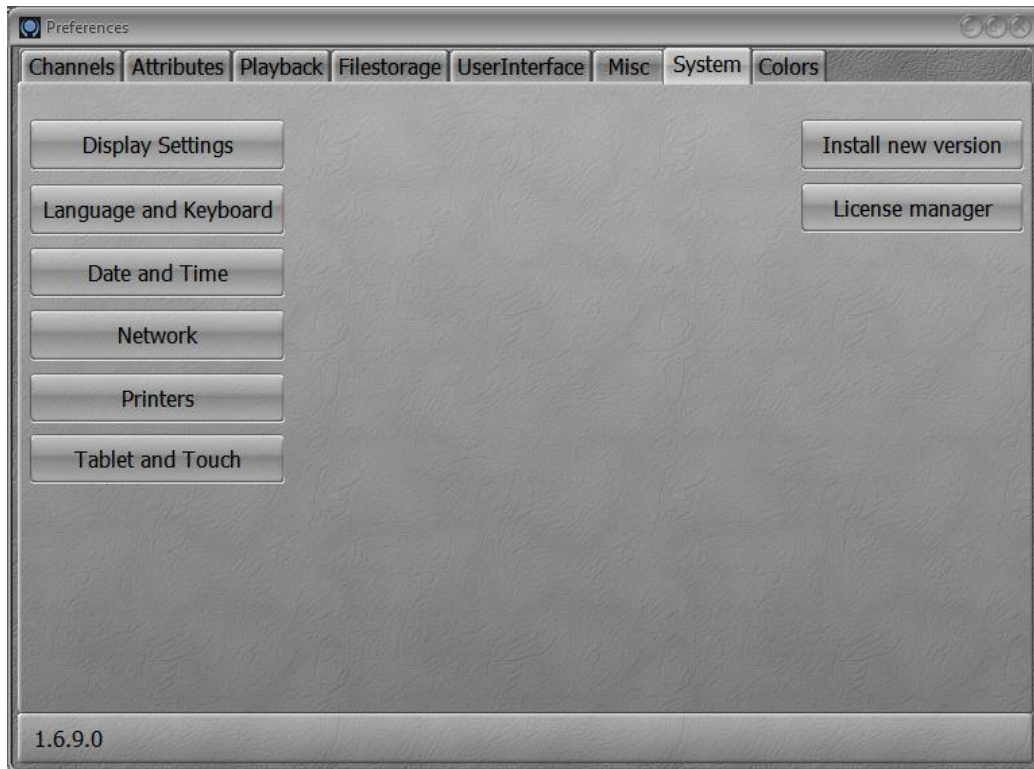
{Next>}

{Next>}

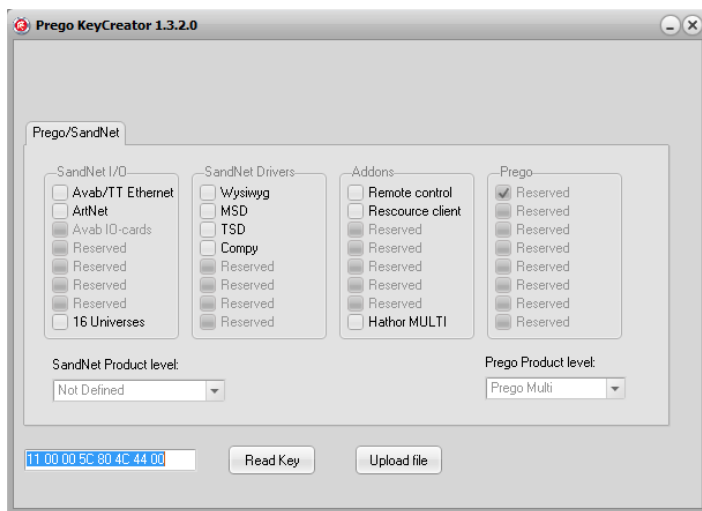
{Install}

{Finish}

17.8 LICENCE UPGRADE



To upgrade the system (Please check that your USB stick with the new license key of HATHOR is plugged):



Press on **{Upload file}**
Point to the USB storage where the file is stored.
Confirm by **{Enter}**
Shutdown HATHOR, then restart.

Note: in HATHOR menu / about, the new amount of channels will be displayed.

17.9 CONSOLES: SYSTEM RESTORE (KEYBOARD & MOUSE NEEDED)

The HATHOR system restore routine allows reinstallation of the software from an internal DOM SATA device.

All external devices should be removed before starting.

The Desk includes a system restore routine that can restore the original software and Windows image on the console.

A specific DOM SATA device included stores the files needed to create a clean restore of the desk software.

The C partition on the hard drive will be completely restored, be sure before anything that all play files were stored on the D partition: SETUP/PREFERENCES/FILESTORAGE.

In case of your desk is completely crashed:

Shutdown the desk with the keyboard: **(Ctrl)&(Alt)&(Del)**

In the low right corner of the screen you will see a RED icon: click on it to Shutdown

Choose **{Forced shutdown}** and confirm.

Start the desk normally, but press alternatively F12 (or F8 if the serial number of the console starts with **10 before /: ##10/###**), while starting till « Boot menu » appears.

Use the keyboard down arrow to go to Hard Disk then **(ENTER)** (keyboard).

Use the keyboard down arrow to go to xxxxx SATADOM then **(ENTER)** (keyboard).

The message «Windows is loading file» appears, wait about ten minutes.

At the end of the process the message «wait Reboot» appears then HATHOR restart.



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