

IMAGO

Quick Start Guide
Issue 1.0

ADB
Lighting Technologies



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Lighting Technologies

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TEXT CONVENTIONS

- Panel Keys are under square brackets, e.g. **[RECORD]** is a panel key.
- Keyboard Keys are under brackets, **(CTRL)**.
- Software functions in menus are under 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)**.
- **[-----]&[-----]** means hold the first key then push the second key.

SOFTWARE PHILOSOPHY

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

Channels (INSTRUMENTS)

- A Channel (also named instrument) is the control handle used to call anything controlled by IMAGO. 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.

Attributes and DEVICE LINKS

- 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 IMAGO when the Template corresponding to that **device** is assigned to a control channel in the Patch.
- In a sequence all attribute's values are recorded in a specific area named DEVICE LINK.

Patch (INSTRUMENT SET-UP)

- Patch is where 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.

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.

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 reused in any Sequence, with different times.

Sequences

- Lists of Presets are called Sequences, that can be cross faded or move faded in consecutive order from a Playback. The system supports up to 1000 Sequences.

Looks

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

1. Installation and overview

1.1 First steps

1.1.1 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.

1.1.2 Installing the Desk

The desk and the monitor 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

1.1.3 Power Supply

The IMAGO has a universal power supply that will operate on voltages between 100 volts and 240 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.

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.

1.1.4 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. 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.**

1.1.5 Caring for your IMAGO

The IMAGO is 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 IMAGO.
- 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.

1.1.6 Connecting your IMAGO to peripherals



- 1 Connect the power cable from the 12 V Power supply
- 2 Connect the computer to this USB port with the USB cable delivered with the product

- 3 Connect any USB device in the USB ports
- 4 Connect the DMX 5 cable
- 5 Connect your desk lamp

1.1.7 Computer Specifications

IBM compatible PC minimum system requirements:

- 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).

Note: Microsoft Windows 8 is currently not supported

Please run HATHOR software with all administrator rights.

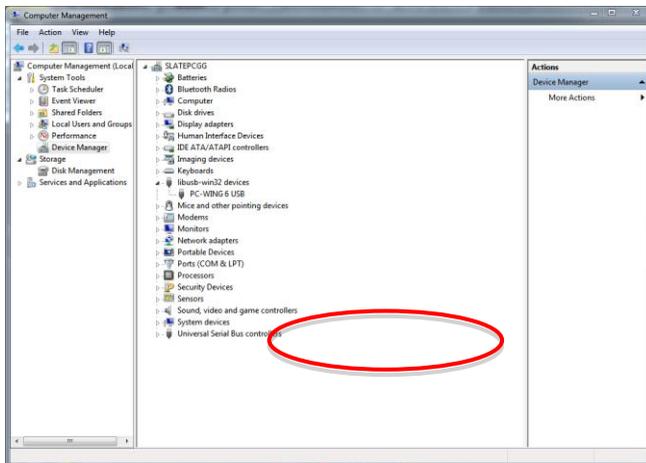
1.1.8 Drivers Installation

To use the IMAGO with your computer you need to install specific drivers.

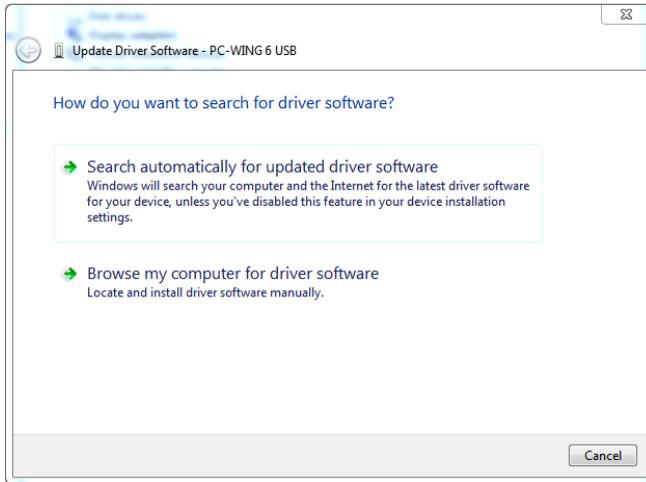
You will find the IMAGO drivers on the ADB website, in the download section.

- Download the IMAGO drivers
- Copy the drivers folder on a USB key if needed
- Start the computer dedicated to run HATHOR with IMAGO
- Power on the IMAGO

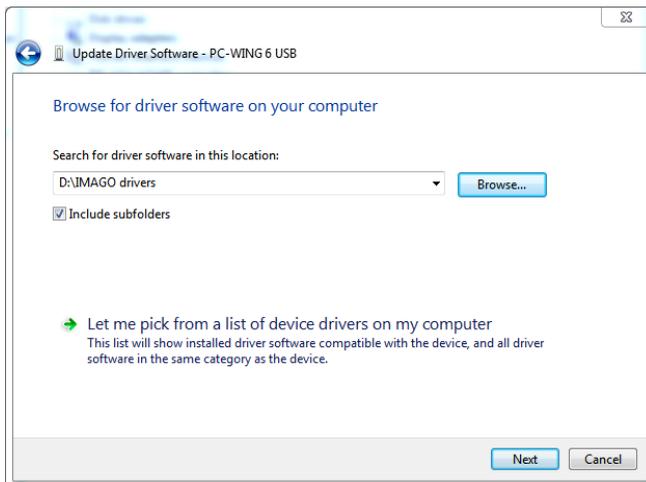
- Connect the IMAGO to the computer via the provided USB cable
- Windows 7 will automatically detect a new USB device and will request drivers for this device -> Point on the Imago drivers folder and confirm.
- In case of the driver's installation failure:
 1. Go to **Start** (Windows icon, or Windows key) and right-click on **Computer** and then select **Manag**This will bring the **Computer Management** window, now, on the left sidebar select **Device Manager** as shown in the screenshot below:



2. In libusb-win32 devices, right click on PC-WING 6 USB and choose **Update Driver Software**.
3. Once you are done. It will open a windows like the one shown below.



4. There are two options here, if you want to install a driver that came with your device or hardware, then select **Browse my computer for driver software**. It will then open a window similar like the one shown below:



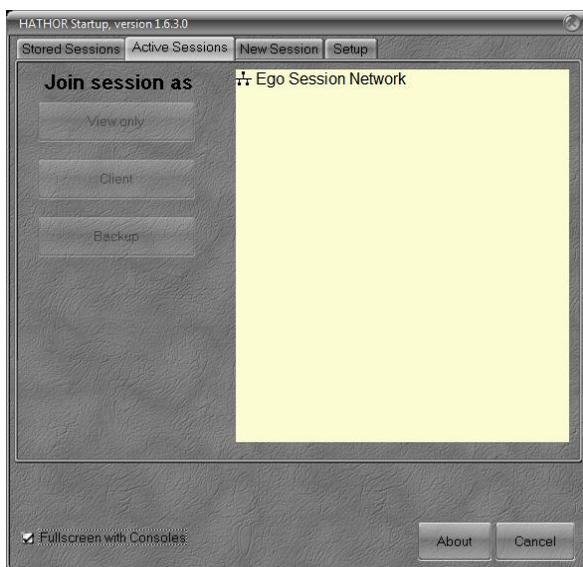
5. Choose the option **Browse my computer for driver software**, and point on the IMAGO drivers folder (use the **Browse** command)
6. Click on **Next** and **accept installation of drivers**.

1.1.9 To start the system

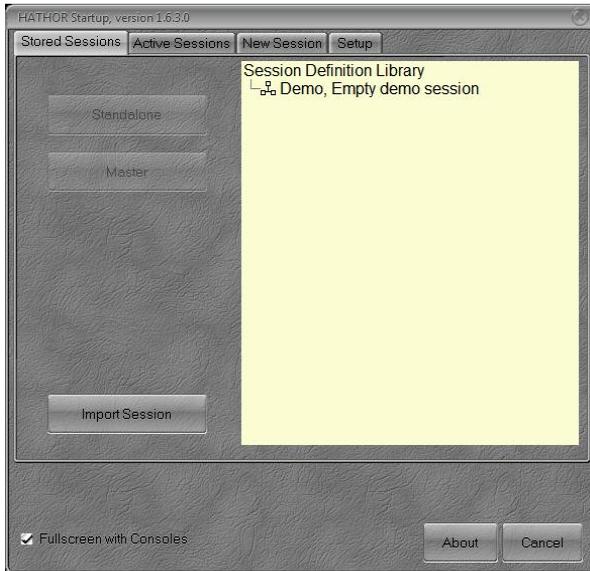
Note: for more information about POWER UP procedure, see P.

THE STARTUP WINDOW

After 1 min, your computer will display the HATHOR Startup window.

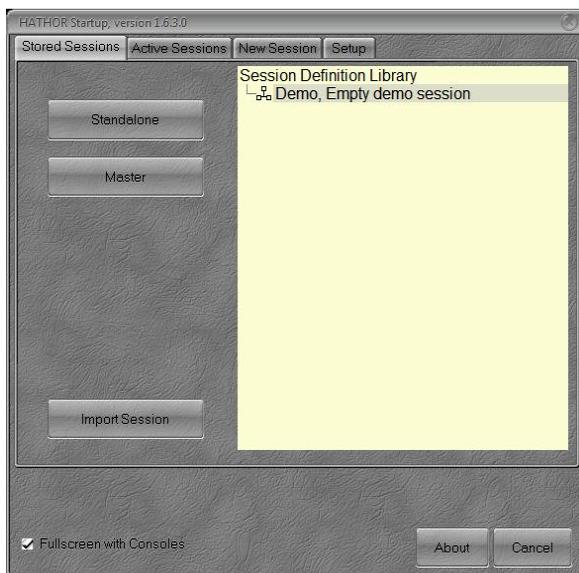


Click on the **Stored Sessions** tab to display Stored Sessions.



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 for the first time, all screens are empty (grey), to display a basic configuration of screens and subscreens, load a Screen Layout (1 Screen.slo or 2 Screens.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.

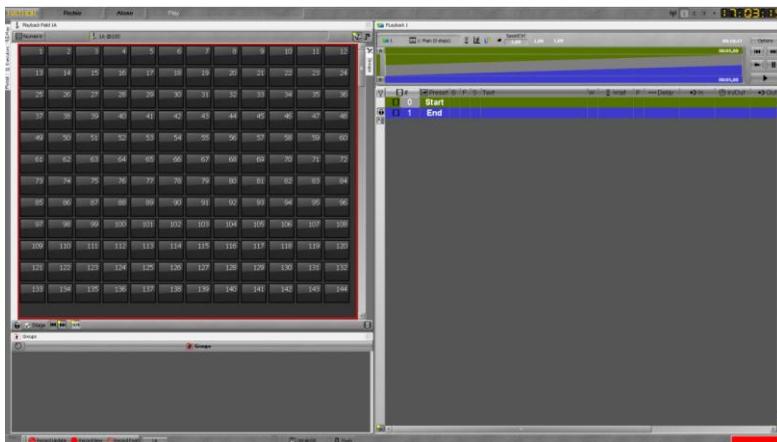
Click on the HATHOR menu (Up left side of the main screen).

HATHOR / Setup / Screen Layout / Load

Screenlayout

Select the correct Screen Layout.

In Screen 1, you will discover the channel grid on the left side, the Group window below and the Sequence window on the right side.



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]**.

1.1.10 To shut down the system

HATHOR / Shutdown: {YES}

1.2 Software

ADB lighting technologies has a policy of continuous improvement of its products. As the IMAGO is a computerized lighting desk, its software is subject to this policy as new features are added and existing features improved.

The current software version of your IMAGO 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.

1.2.1 Power Up procedure

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.

NETWORK FUNCTIONS

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 to work 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 collects 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, 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.

THE STARTUP WINDOW

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

From it you select what role the desk or the computer will have in the system (i.e. Master, Master Ltd, Backup, Backup Ltd, and 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.

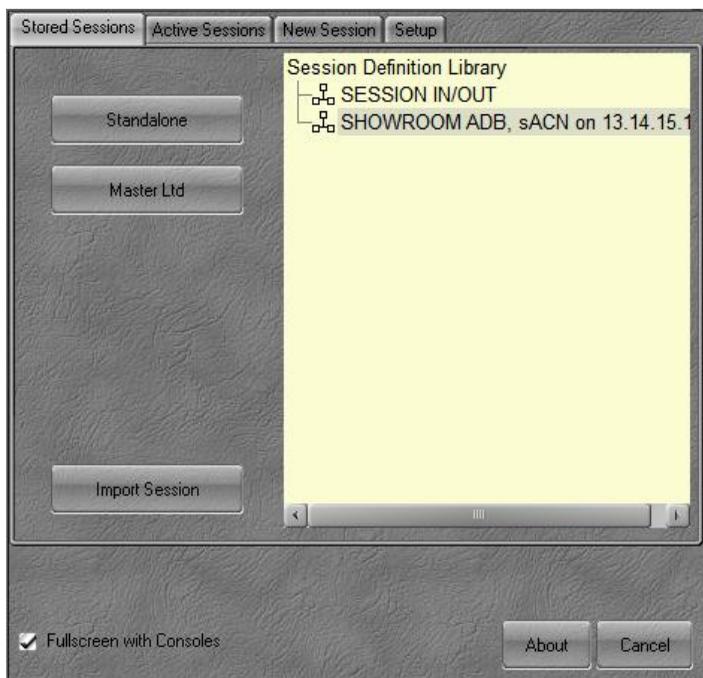
Use the "Setup" tab to configure how HATHOR runs on your video monitors

At the bottom of these windows, regardless of which tab is selected, there is a checkbox for "**Full screen 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 minimized. This is useful where HATHOR is running in the background with other applications such as architectural control. Any control consoles will NOT be functional.

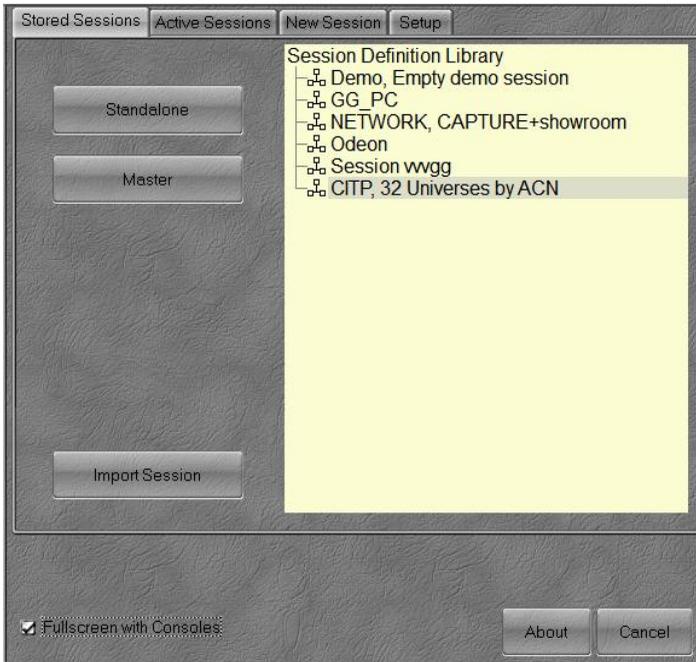
Stored sessions

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**.



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.

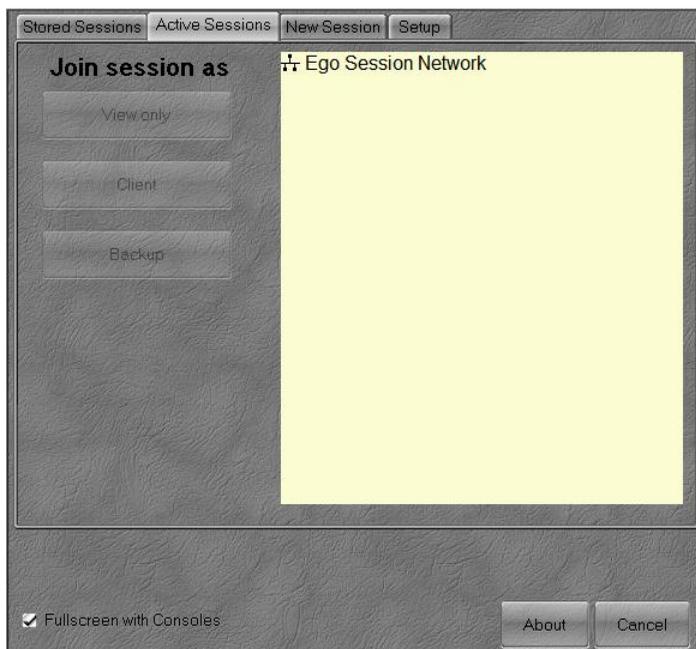
The local menu on a Stored Session allows to delete a session, or to edit it.

The Import Session button allows to import a Session, from a USB key for instance.

Active sessions

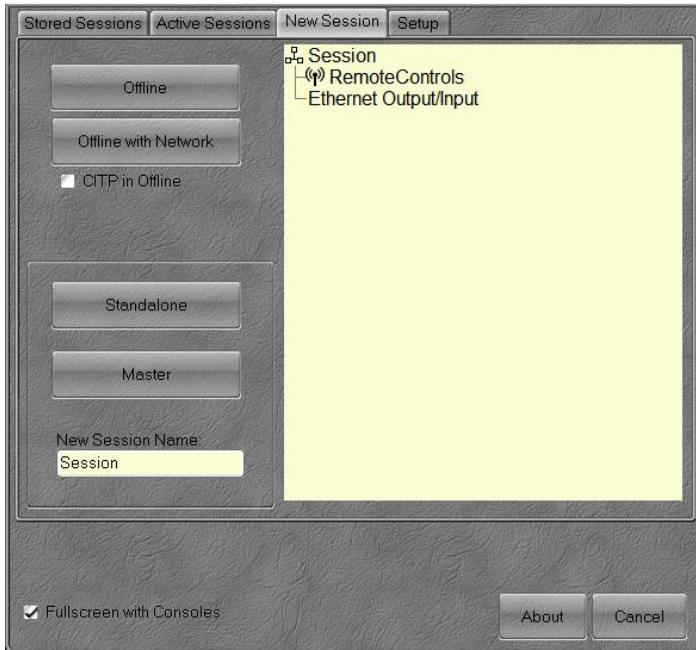
This tab is to start the 2nd, or higher, device to join to an existing HATHOR "Master" or "Master Ltd" on the Network. Select a Session that you wish to join from the right hand window, and then select which mode this console or PC will be run as: Backup Ltd, Backup, View Only Client or Client. These options will change depending on your HATHOR license.

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



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.

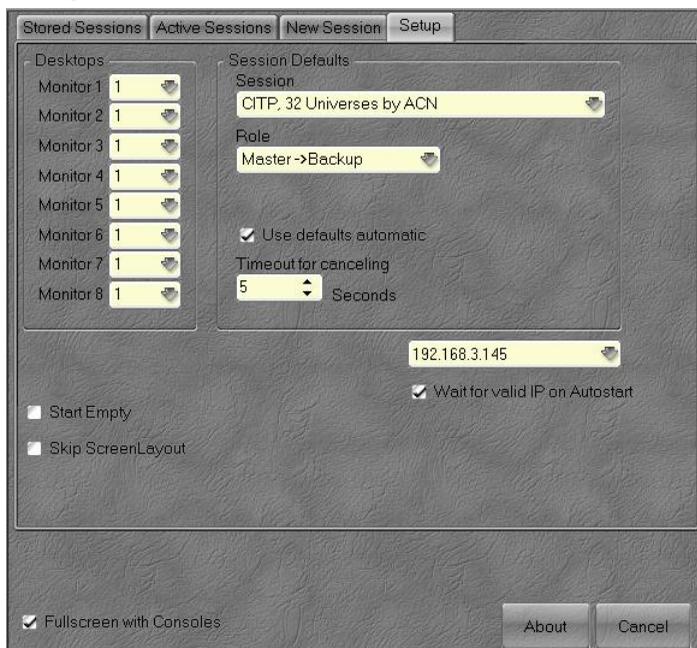


Offline mode: to start the system in Offline mode

Offline with Network mode: to start the system in Offline mode, allowing communication with WYSIWYG via Sandnet.

CITP in Offline option: to start the system in Offline mode allowing communication with Capture Polar via CITP.

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 running.
- **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.

1.2.2 Software Philosophy

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

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 common 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.

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 ACN ...), 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 Subfader 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.

CHANNELS

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 devices. A typical example of an Instrument is a dimmer Device with a Scroller device.

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

ATTRIBUTES (and DEVICE LINKS)

- 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.

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 Parameters (such as a circle template for instance), HATHOR will automatically assign both parameters to such templates. Some other templates are designed for use with color parameters or Beam parameters. A different template can be applied to different parameters in the Dynamic Effect.

Palettes

A Palette is a user-programmed Parameter Library for all or some parameters (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 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 (Submaster Fields Pages)

- A Page is a record of LINKS between Submaster Field, content (object), and modes.
- Output levels are not recorded in Pages.

Chasers

- Chasers can be intensity chasers, parameters chasers or intensity and parameters chasers

Patch (INSTRUMENT SET-UP)

Patch is where 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). 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 (Colors).

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 an 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 & Panels

- Actions are control functions that have a priority structure.
- The system supports up to 10000 Actions.

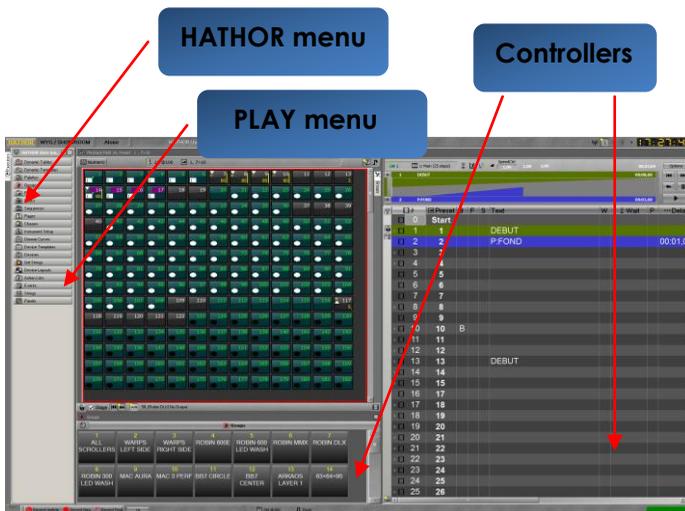
Strings

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

1.2.3 Software Organisation

INTRODUCTION

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



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, also accessible via the [PLAY menu](#).

Controllers

Windows providing interfaces to operate the system and access to the data.

Tools

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

Setup

To configure HATHOR interface.

About

Displays current software version number, and Network option.

Shutdown

To exit the system and to shut down the console if any.

PLAY MENU

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

CONTROLLERS

Controllers are specific dockable windows that provide interfaces to operate the system. I.e.: Field Editor displays and provides control of channels.

The Direct Access Panels that display and access to the recorded data.

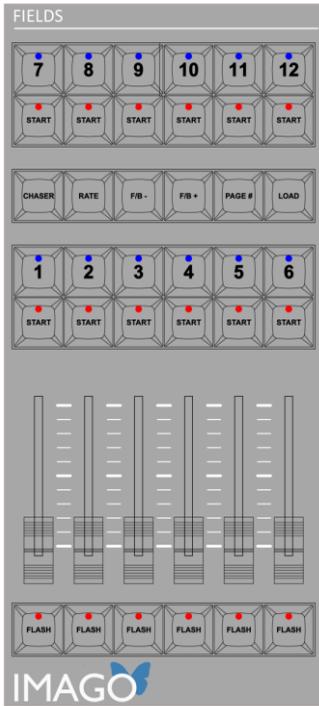
1.2.4 Shutdown procedure

When you shut down the SYSTEM, it does not automatically save the show file. It does save a system status file, including all settings and the show data. When there is a loaded play and then a new play is loaded, 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.

1.3 Front panel Control

1.3.1 Introduction

This section of the manual describes the controls and displays on the front panel of the IMAGO.



[ASSIGN] keys: upper keys (1 > 12) to load, select or record information or to assign a time to that Subfader.

Note: to clear the content of a Subfader, hold the **[CLEAR]** key and use the **[ASSIGN]** key to select the Subfader to clear.

[START] keys: below Assign keys. To execute a Subfader automatically regarding Time settings.

[FLASH] keys: lower keys to bump the content of the SUBFADERS

[LOAD], to load: selected Channels with levels, Looks, Groups, Presets, and Palettes

[RATE]: use these key in combination with the **[ASSIGN]** key (see above) of a Subfader with a running Chaser to adapt the BPM to the current Tempo.

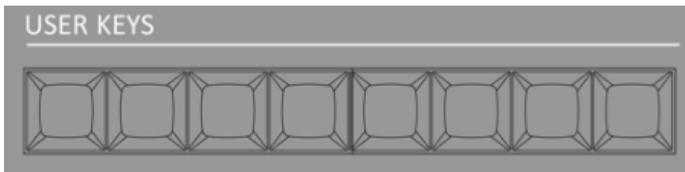
[CHASER]: to load or record a Chaser directly in the selected Subfader.

[F/B -], [F/B +]: Use this key to step thru the 16 banks of 12 subfaders.

[PAGE#]: to load a Subfaders Page

1.3.4 User Keys

[USER KEYS]: These keys are designed to assign any software function.



1.3.5 Control

PUSH WHEELS:

These encoders are designed to control fixture parameters. The Push function allows also assign directly a value to the parameter.

ATTRIBUTE GROUP KEYS:

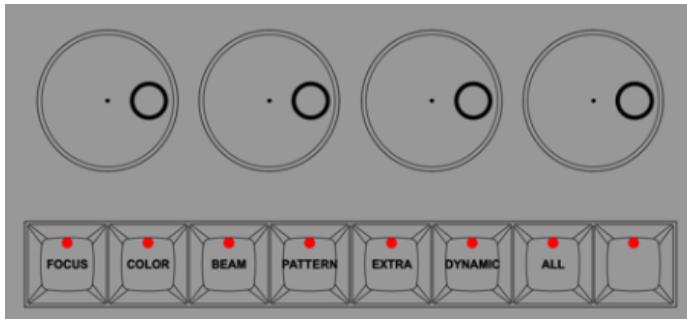
[FOCUS] for Pan & Tilt parameters

[COLOR] for Color parameters

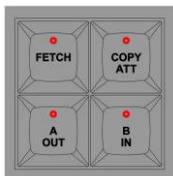
[BEAM] for Beam parameters

[PATTERN] for Gobo and shutters parameters

[EXTRA] for Control parameters



FETCH, COPY ATT, A and B KEYS:



[FETCH]: to copy intensity or parameter values for a selection of channels from a selected Preset, to stage.

[COPY ATT]: to copy attribute value(s) from a channel to target channel(s).

Select a channel, set parameters, add target channels to the current selected channel ([#] [+], [#] [+]), then **[COPY ATT] & [ALL]** to copy all settings to target devices.

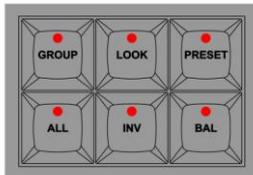
[A/OUT] and **[B/IN]**:

Pushing the both keys together switch between A (stage) and B (Preset).

Note: in combination with the [TIME] or the [DELAY] keys, [A] key corresponds to OUT and [B] to IN.

E.g.: to assign 6 seconds in-Time, **[6] [TIME] & [B/IN]**.

GROUP, LOOK, PRESET, ALL, INVERT and BALANCE KEYS:



[GROUP]: to record (or select) a selection of channels with levels.

[LOOK]: use these key in combination with the [RECORD] key (see above) or with the assign key of a Subfader to record a Look (levels and parameters).

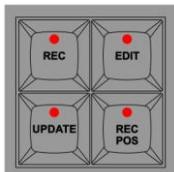
[PRESET]: use these key in combination with the [RECORD] key (see above) or with the assign key of a Subfader to record a Preset (only levels).

[ALL]: to select all channels with level above zero.

[INVERT]: to switch between selection of channels and other channels with level above zero (this channels become selected).

[BALANCE]: to isolate a selection of channels in the current Field.

REC, UPDATE, RECORD POSITION and EDIT KEYS:



[RECORD]: use these key to record:

Groups: [#] [RECORD]&[GROUP]

Presets: [#] [RECORD]

Looks: [#] [RECORD]&[LOOK]

Palettes: [#] [RECORD]&[COLOR] (e.g.)

Page: [#] [RECORD]&[PAGE]

[UPDATE]: use these key to update an existing Step/Preset on stage.

[RECORD POSITION]: to force the system to record attribute values filtered if necessary, independently of the history.

[EDIT]: to open objects Edit windows.

TIME KEYS:



[TIME]: to assign crossfade times (In/Out) and special channel or attribute times.

[DELAY]: to assign crossfade delays (In/Out) and special channel or attribute delays.

[WAIT]: to assign wait times.

[RECORD POSITION]: to force the system to record attribute values filtered if necessary, independently of the history.

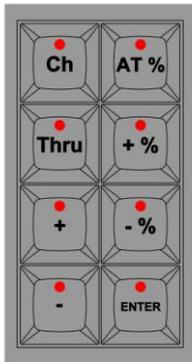
[TRACK]: opens a track sheet for the selected channels.

[NEXT]&[PREVIOUS]: to switch between ALL mode (standard behavior) and ONE mode. In ONE mode, [NEXT] and [PREVIOUS] will step through the current channel selection. The focused channel is mapped to intensity and parameter controls and is highlighted in Purple. The selection remains.

[MOVE TIME]: to assign Time values to all recorded attributes.

[MOVE DELAY]: to assign Delay values to all recorded attributes.

CHANNELS CONTROL KEYS:



[CHANNEL]: to select channels.

[+], [THRU] & [-]: channel selection tools.

[+%, [-%]: to increase or decrease level (absolute or proportional) of selected channels by a percentage.

[AT%]: to set a level to selected channels.

[AT%]: set channel level to 70%.

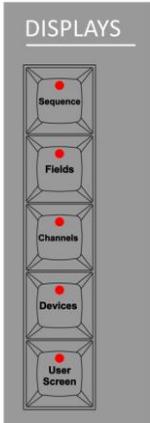
[AT%] [AT%]: set channel level to 100%.

[CLEAR/ALT]: to clear the selection.

[CLEAR] [CHANNEL] or to clear the current field **[CLEAR] & [CHANNEL]**.

[ENTER]: To valid any kind of action.

1.3.6 Displays



The first four keys are direct access to specific screens as labeled.

[Sequence]: Sequence Main Playback.

[Fields]: Submasters fields.

[Channels]: Field Editor.

[Devices]: Device Parameters.

With the **[USER DESKTOP]** key, the internal screen becomes a standard screen, exactly as external screens.

1.3.7 Playback



[BO]: Blackout Key

[SEQ -], [SEQ +]: to step backwards or forwards in the Sequence without crossfade times.

[GO BACK]: to go back to the precedent step using default times.

[GO] & [PAUSE]: standard crossfade keys

[JUMP]: to move inside the sequence directly to a selected Step or a selected Preset.

2. Setting Up the system

HATHOR menu > Setup > **Preferences**

2.1 General Settings

2.1.1 Screens Layout

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, had 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.

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 Subscreen you are using.

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

To Dock a window:

1. 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.
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.
4. 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
Color	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]	

STORING SCREEN LAYOUT

To save the current screens organization:

HATHOR / Setup / Screen Layout / Store Screenlayout

LOADING SCREEN LAYOUT

To load a new screens organization:

HATHOR / Setup / Screen Layout / Load Screenlayout

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 Subfader 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 that operate in a Last Takes Precedence (LTP) mode.

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

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 Field Editor.

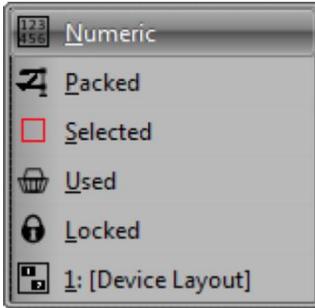
Scrollers: you can change their color frame directly from the Field Editor, or from the Device Controls.

Channel grid display Zoom

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

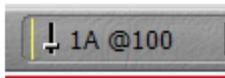
Channel grid display format

- 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 Field Editors are selected is not relevant.

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

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

Different Fields 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

Allows 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.

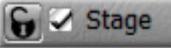
The sequence that the Field Editors have "Linked" activated determines which Editor has the lowest channel numbers.

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 what the channel level **was** in the **previous** step, or what 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.

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.

2.1.2 Session Settings

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 has 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.

2.1.3 Console Settings

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.

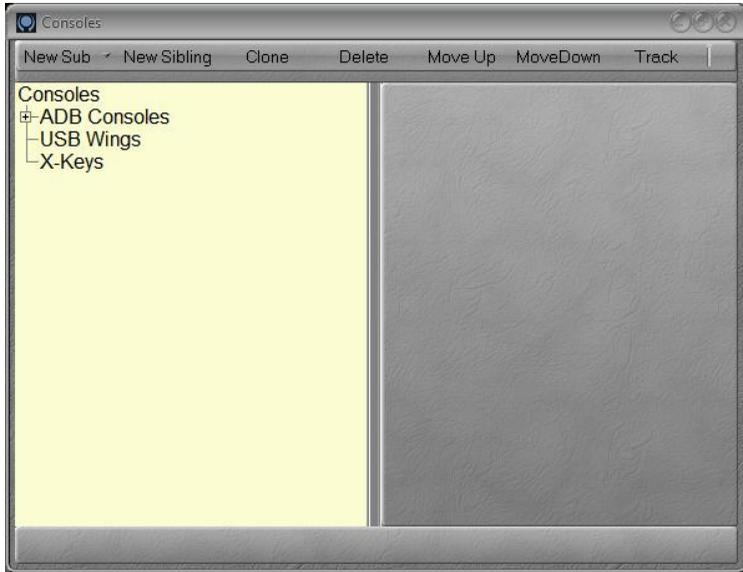
It is possible at every time, to assign a new function to a button.

IMAGO User Keys

To assign a function to an USER Key:

HATHOR / Setup / Consoles

Open 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.

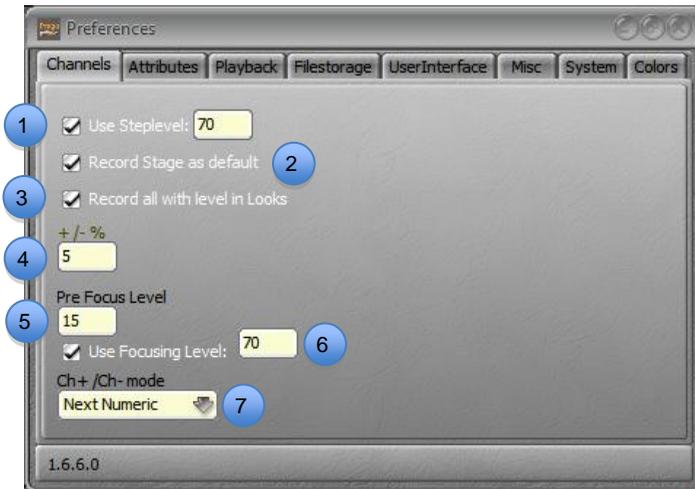
Not all X-Keys units are supported:

- 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.

2.2 Preferences (MENU HATHOR / Setup)

2.2.1 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 the 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

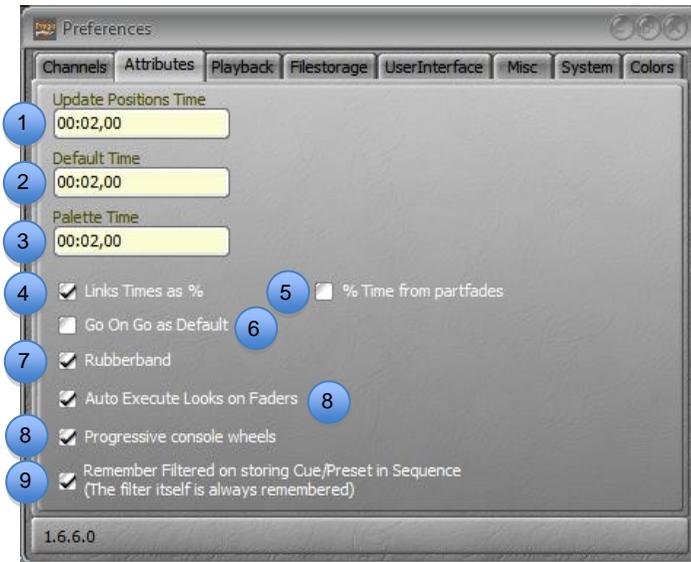
Focus Level: Level used by a Submaster in Focusing mode (see Submasters for details).

7

Settings for [-] and [+] keys behavior

- **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 above zero in the active Field.
- **Next Visual:** to move to the previous or the next visual channel regardless of the level.

2.2.2 Attributes



- 1 Parameter Times when Rollback Positions.
- 2 Default Parameter Time in Device Links.
- 3 Time used when executing a Palette (not when recording a Preset/Device Link using these palette).
- 4 **Unchecked:** Parameter Times are not linked to In Step Time.
Checked: Parameter Times are proportional to In Step 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.

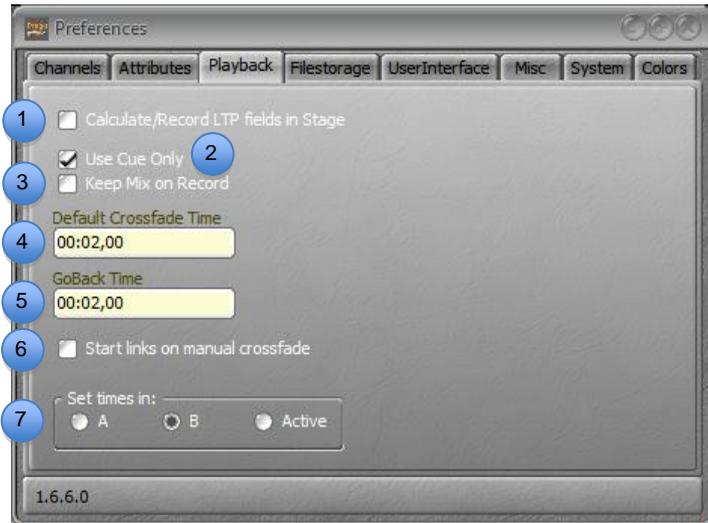
8

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.

2.2.3 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 Subfaders have not 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 subfaders as single channels.

4

Unchecked: links (parameters) only execute when a step is executed with [GO].

Checked: links (parameters) 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).

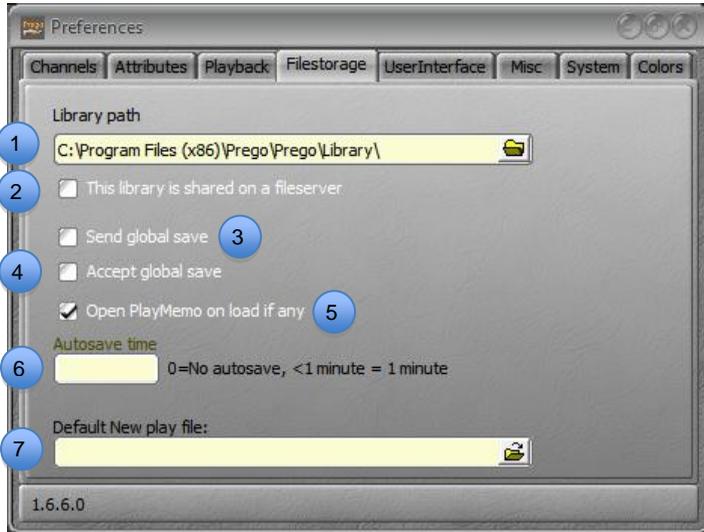
B:

[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.

2.2.4 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 changings in the Play.

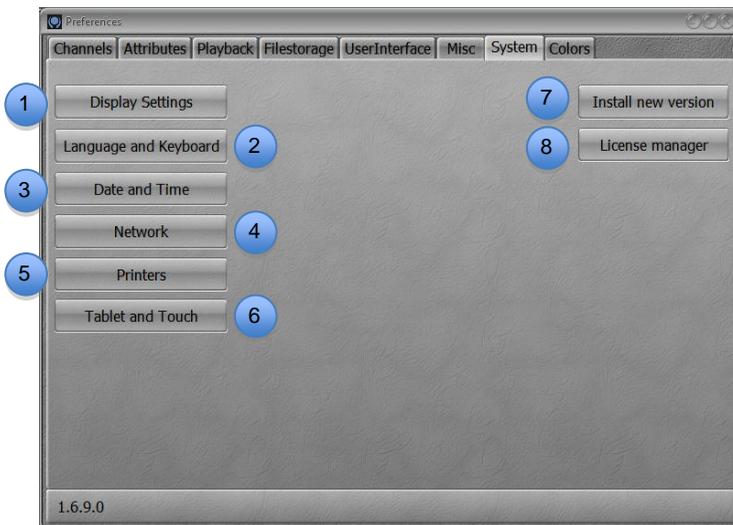
Note: to use Autosave file, go to MENU HATHOR/File/Open Library, open AutoSave menu, open corresponding play menu then Right Click and choose option **{LOAD play ----}** or **{BROWSE play ----}**.

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 the value concerning the size of Browser and Object Edit windows.
- 4 Unchecked:
Syntax is RPN
Checked:
Syntax is AT MODE

2.2.5 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:

1. **{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.
2. **{Calibrate}** touch the black cross upper left corner, then carry on, and validate calibration **{OK}**.

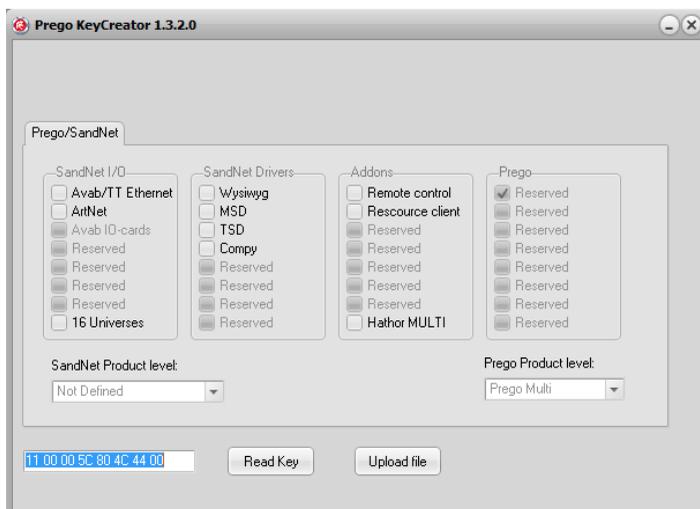
7

To install a new version (Please check that your USB stick with the new version of HATHOR is plugged):

1. choose the version in the Installer files window
2. **{Install}**
3. Terminate HATHOR and install version X.X.X.X: **{OK}**
4. Terminate HATHOR: **{YES}**
5. **{Next>}**
6. **{Next>}**
7. **{Next>}**
8. **{Next>}**
9. **{Install}**
10. **{Finish}**

8

To upgrade the system (Please check that your USB stick with the new license key of HATHOR is plugged):

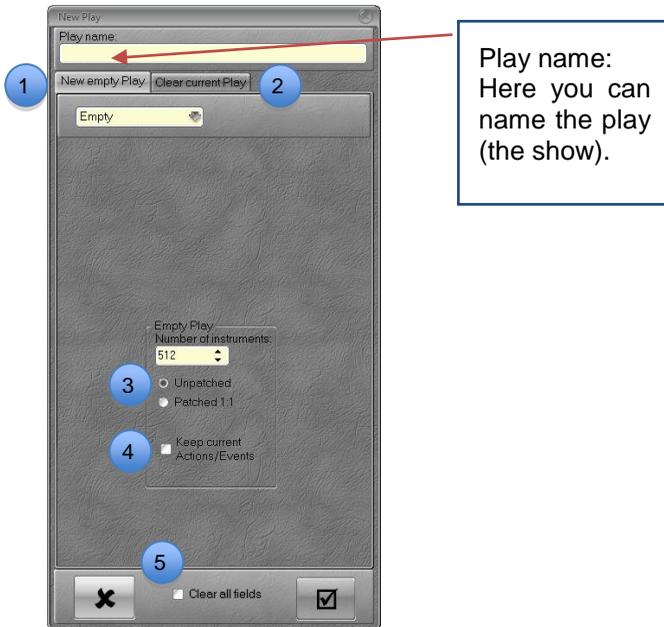


1. Press on **{Upload file}**
2. Point to the USB storage where the file is stored.
3. Confirm by **{Enter}**
4. Shutdown HATHOR, then restart.

Note: in HATHOR menu / about, the new amount of channels will be displayed.

3. Starting a new show (Play) & patching

3.1 Starting a new Show: HATHOR menu > File > New / Clear Play



- 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 a empty Patch or Patched 1:1 to start with a 1:1 patch.
- 4 Enable this option to conserve all Actions and Events from current loaded show.

Note: if you have Instruments with levels in a Play due to Action Lists (LTP Channels, LTP Groups for instance), when you create a "new Play" those levels will remain active in LTP Fields. If you do not wish to have these levels, you must turn them off from the initial Play before creating a New Play, or choose the below option.

- 5 By default, the system keeps all Field content active. Enable this option to clear all active fields, including sequence playbacks.

3.2 Patching: **[EDIT]&[Ch]** to open Instrument Setup

3.2.1 Introduction

Instrument Setup

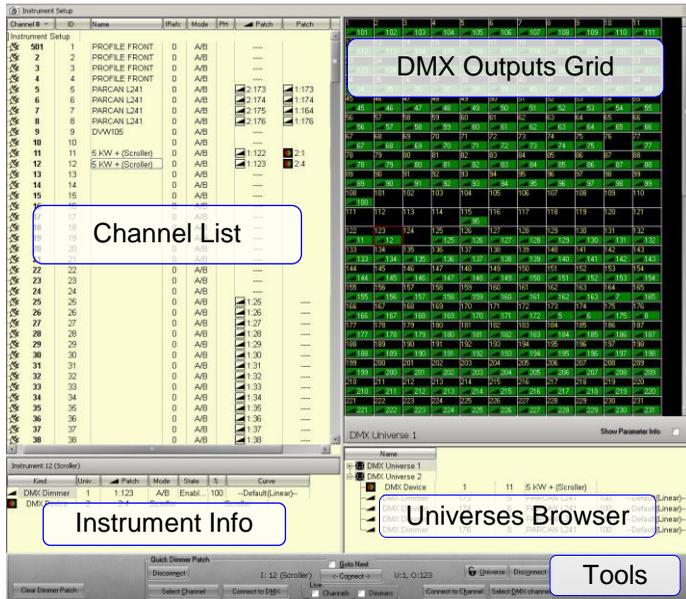
To open Instrument Setup:

1. Open Play menu, RIGHT click on "Instrument Setup" and select "Edit Instrument Setup".
2. Use the following Key combination: **[EDIT]&[Ch]**.

Note: It is possible dock the "Instrument Setup" window in a Subscreen if necessary.

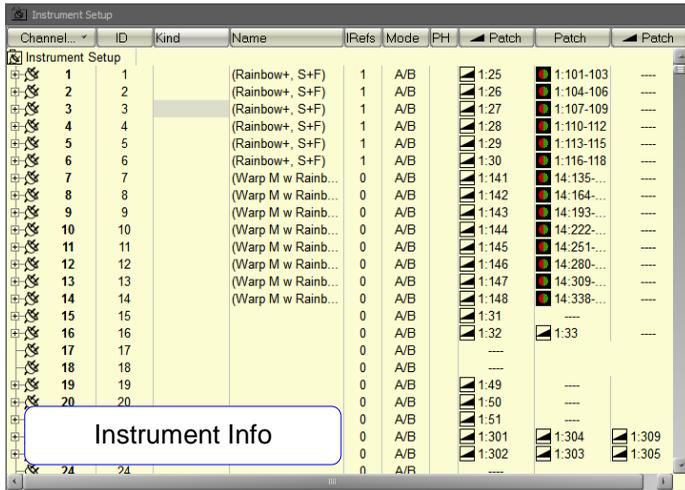
Instrument Setup window overview.

This window is divided in five parts:



3.2.2 Instrument Setup window

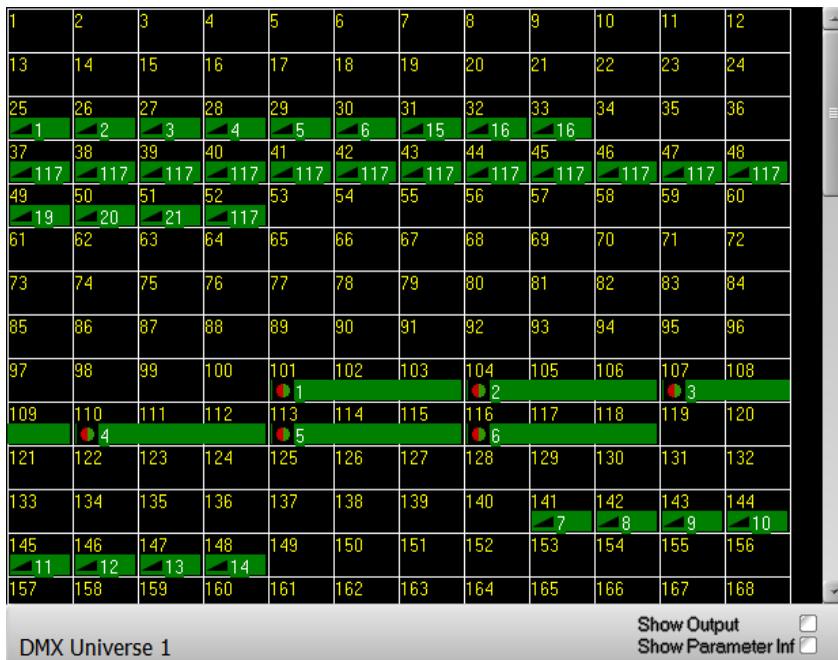
Channel List



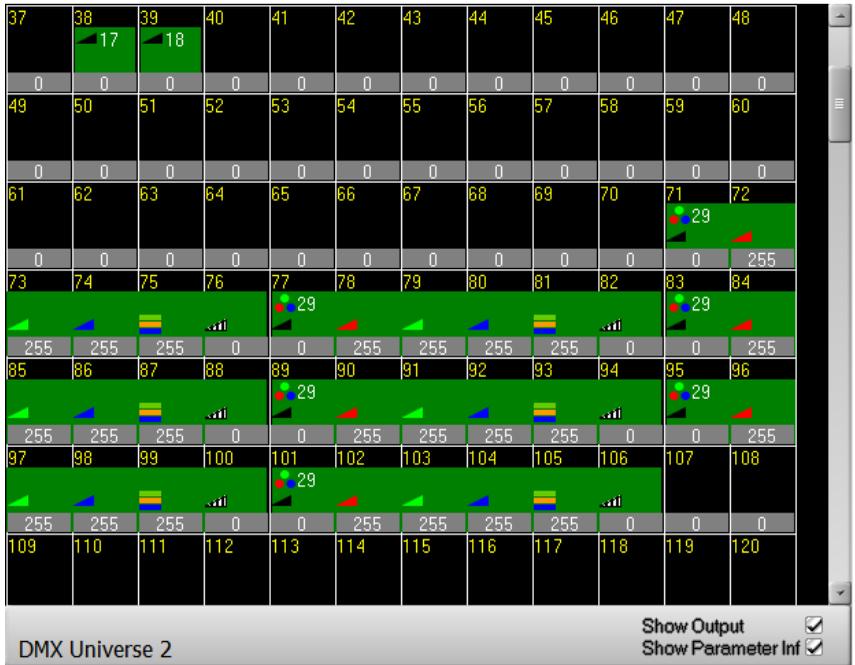
Channel...	ID	Kind	Name	iRefs	Mode	PH	Patch	Patch	Patch
1	1		(Rainbow+, S+F)	1	A/B		1:25	1:101-103	---
2	2		(Rainbow+, S+F)	1	A/B		1:26	1:104-106	---
3	3		(Rainbow+, S+F)	1	A/B		1:27	1:107-109	---
4	4		(Rainbow+, S+F)	1	A/B		1:28	1:110-112	---
5	5		(Rainbow+, S+F)	1	A/B		1:29	1:113-115	---
6	6		(Rainbow+, 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		1:49	---	---
19	19			0	A/B		1:50	---	---
20	20			0	A/B		1:51	---	---
				0	A/B		1:301	1:304	1:309
				0	A/B		1:302	1:303	1:305
				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.

Dimmer Grid

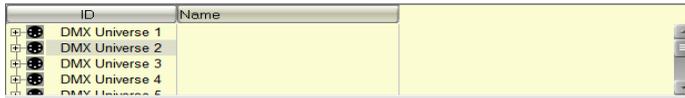


- **Leftside down corner:**
- Selected DMX Universe
- **Show Output :**
- Output Levels
- **Show Parameter Info:**
- Parameters icons



- **Leftside down corner:**
- Selected DMX Universe
- **Show Output :**
- Output Levels displayed
- **Show Parameter Info:**
- Parameters icons displayed.
- To display Device Name, Channel Number (referenced to Name column in channel list) and parameter name, point the icon with the mouse.

Universes Browser

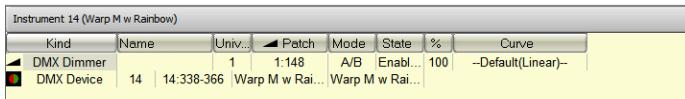


ID	Name
DMX Universe 1	
DMX Universe 2	
DMX Universe 3	
DMX Universe 4	
DMX Universe 5	

That part of the instrument Setup allows user to edit Universe Name, and if browsing through a universe, edit Dimmer Name, change proportional Output level, and Dimmer Curve. See

Universes Browser section for more details.

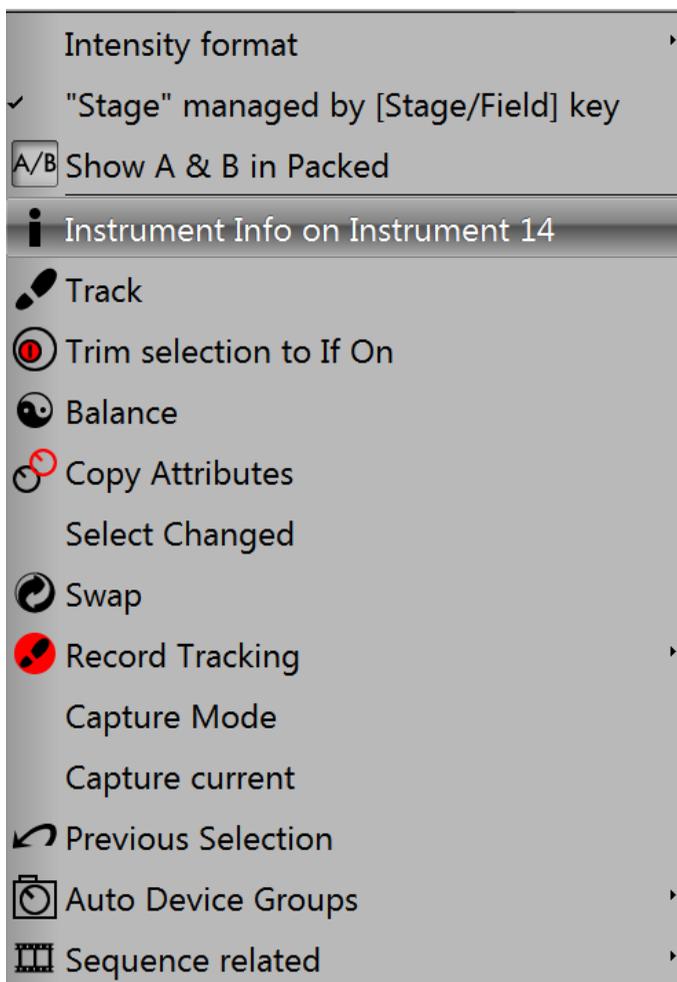
Instrument Info



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.

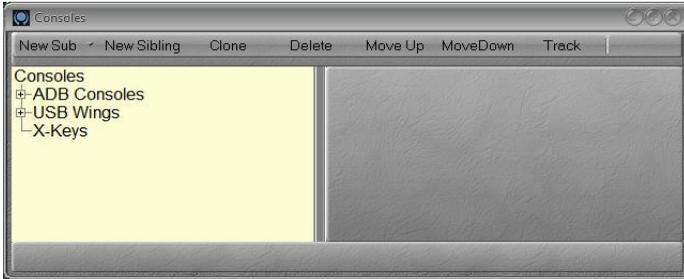
It is also possible to open only the Instrument Setup window from the Channel Grid, by Right Click on the involved channel:



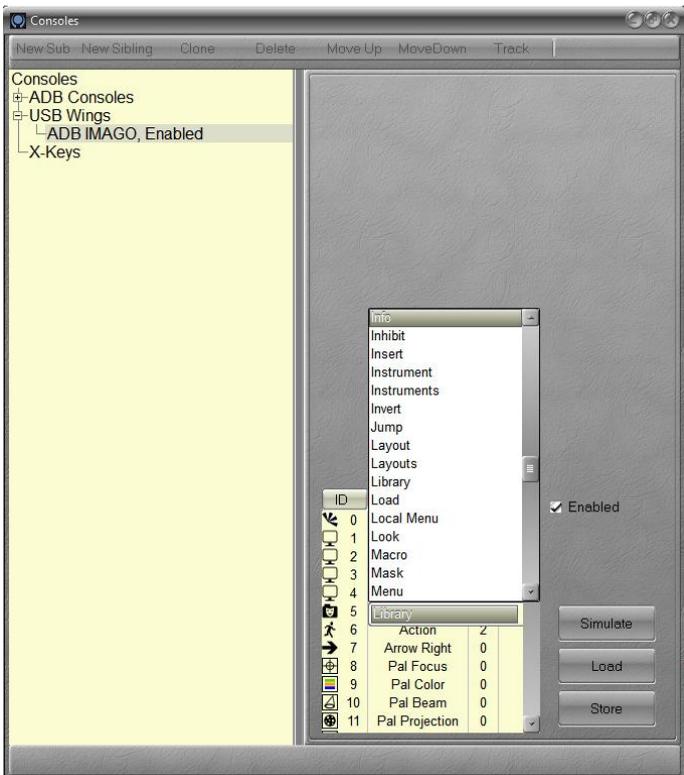
Note: there is a software function corresponding to this feature.

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.

3.2.3 Methods

There are different methods to patch channels:

1. Keypad
2. Mouse
3. Keyboard
4. Touch Screen
5. Wizard

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].

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:
Select a dimmer in the dimmers window or in the Channel List then Right Click on this dimmer, choose **{UnPatch}**.

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/ Using the keyboard and the Dimmer Patching Tools

Note: please check first that **Alpha keys Shortcuts** are enabled:

HATHOR / Preferences / User Interface



Every times 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).

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

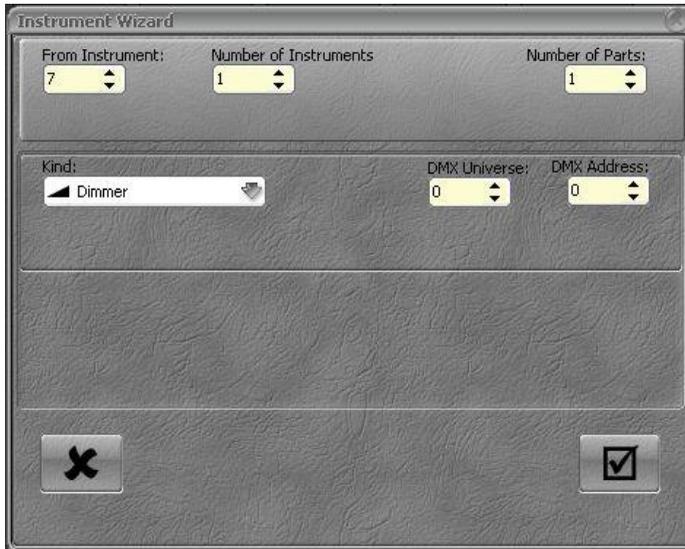
Check the **Goto Next** mode in the Dimmer Patching Tools area.

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.

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).

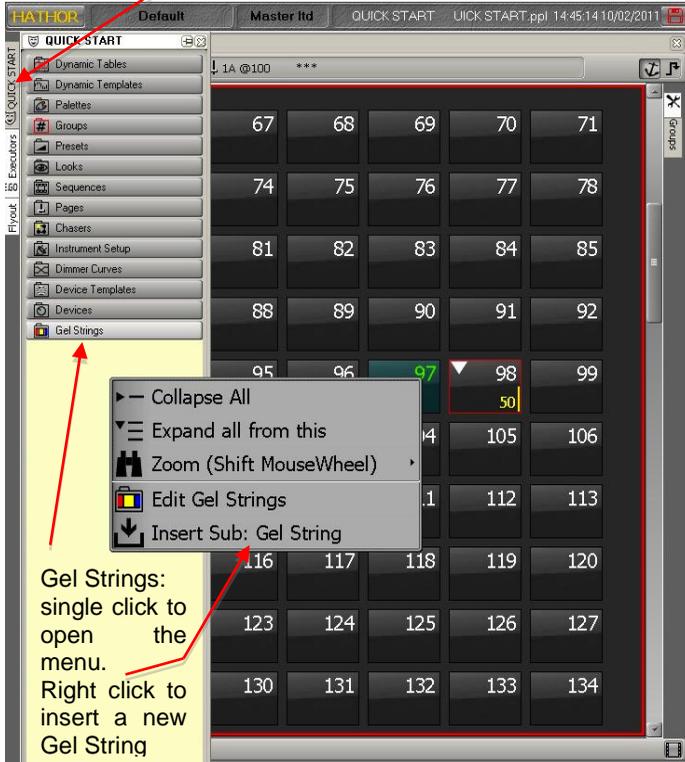
To validate, click on the check box.

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



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 colors of the roll, then **[ENTER]**. The steps will be automatically created.

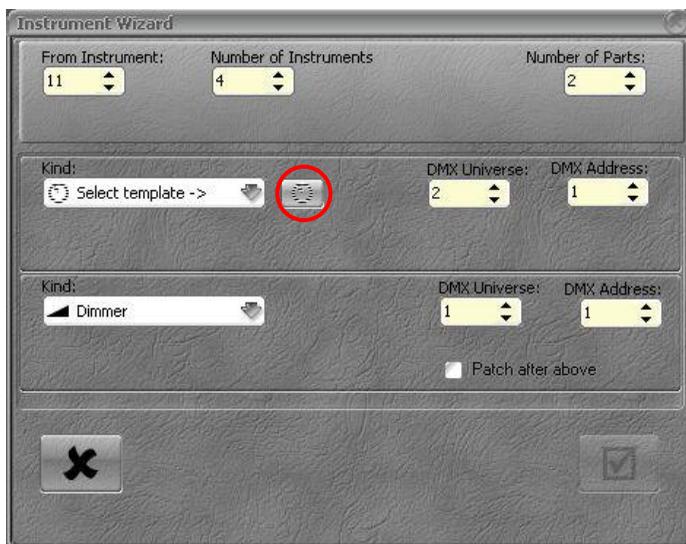
To create specific colors and names usable and visible, go to **HATHOR / Tools / Images**

In the Images window open the Gel Colors menu, choose a manufacturer and drag and drop the color 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 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 :

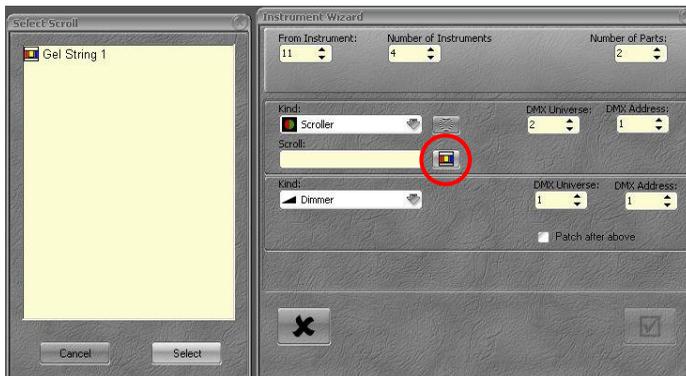


Choose the Scroller and click on Select.

Click on the Gel String ICON.

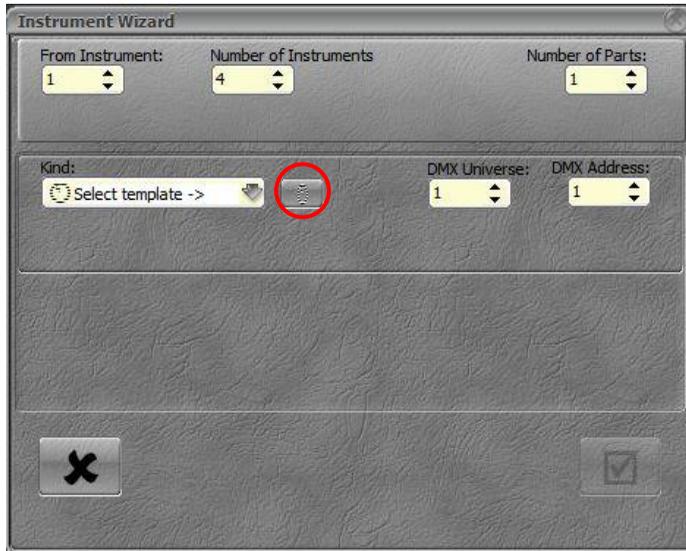
In the Select Scroll window, click on the Gel String of your choice then Select.

The selected gel String will appear in the Scroll box.



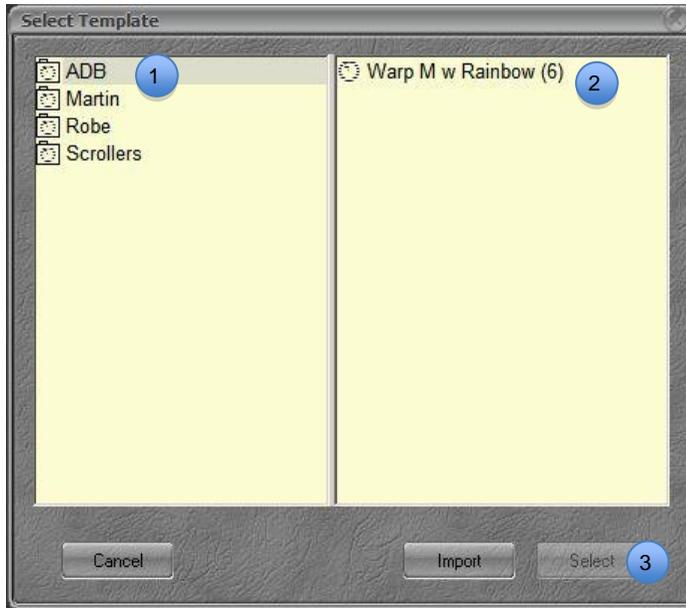
PATCHING MOVING LIGHTS

Go to the Channel # Column (Channel List), Right Click and choose **{Instrument wizard}** in the list.



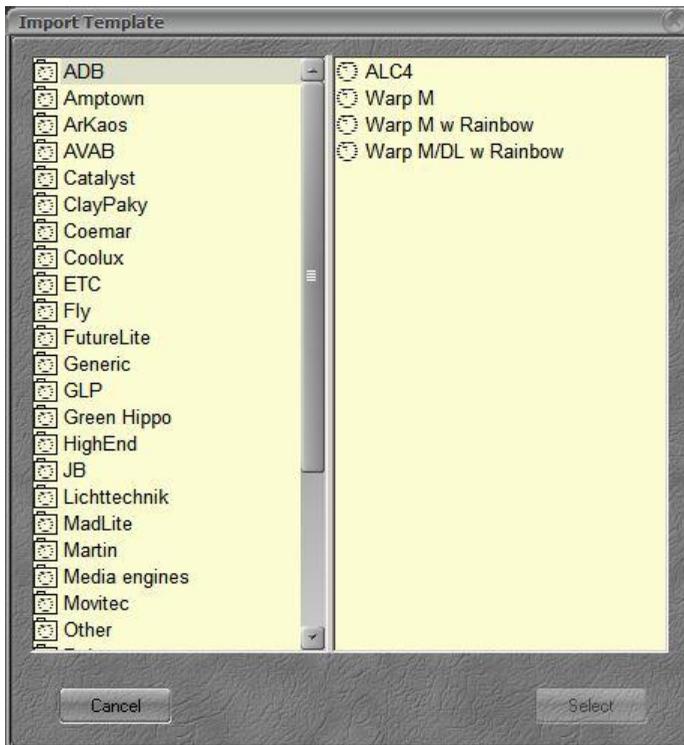
- Set the first instrument of the range in the **From Instrument:** box (e.g.: Instrument 1).
- Set the number of instruments to create in the **Number of instruments** box (e.g.: 4).
- Set DMX Universe for the first Device.
- In the “**Kind**” area, click on Dimmers and choose Select Templates, then 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.

3.2.4 Special functions

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.

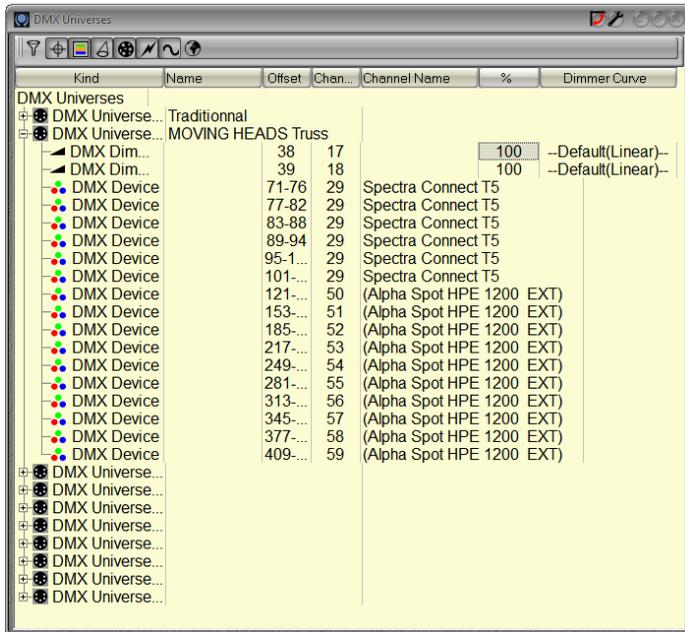
E.g: **[121] {Insert Sub: Instrument}** to insert channel 121.

Note: it is also possible to use the insert key on the computer keyboard.

E.g: **[121] (Inser)** 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.

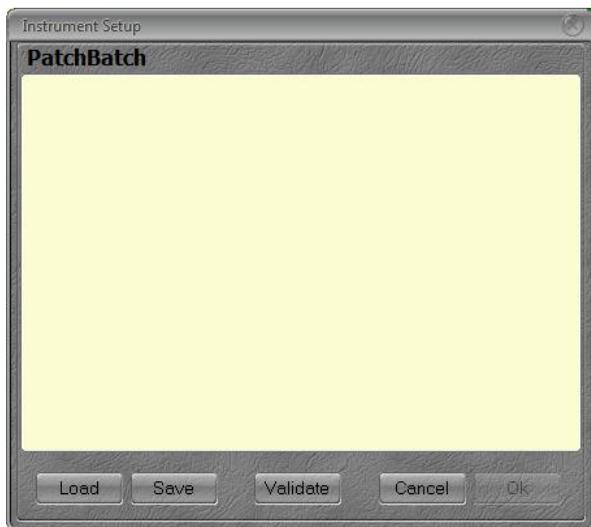
Instrument Wizard

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

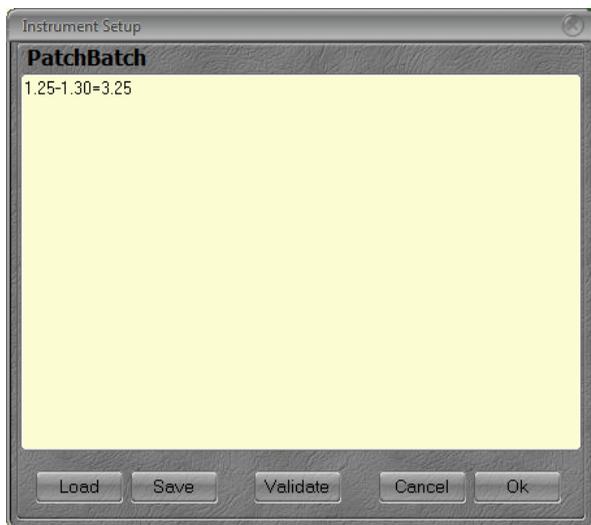
The Batch Repatch feature allows moving a batch of **DMX channels** from one Universe to another, with or without offset.

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:



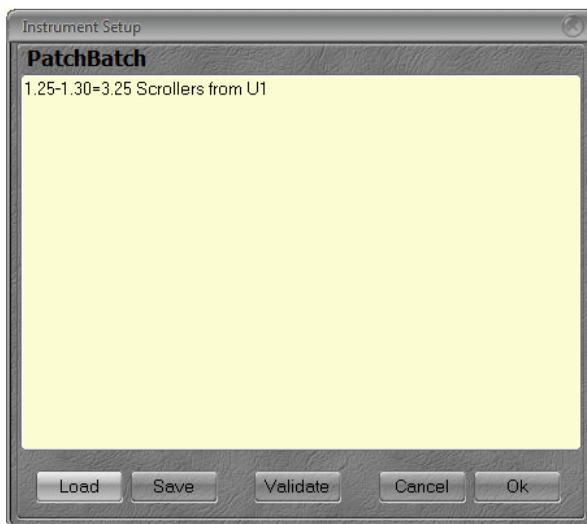
- 1.25-1.30: corresponds to DMX channels to be replaced, DMX channels 25 thru 30 Universe 1.
- 3.25: corresponds to the first target DMX, DMX channels 25 Universe 3.

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

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

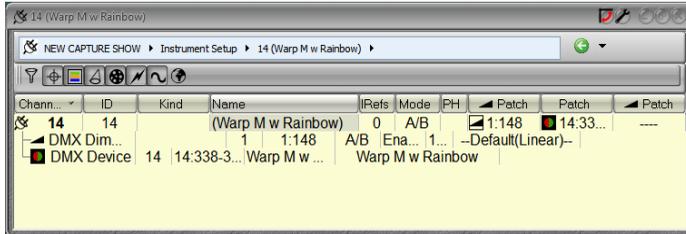
To load a Batch Repatch script click on

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. Instruments (Channels)

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 Editor field (channel Grid), which is the channel functionality 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.

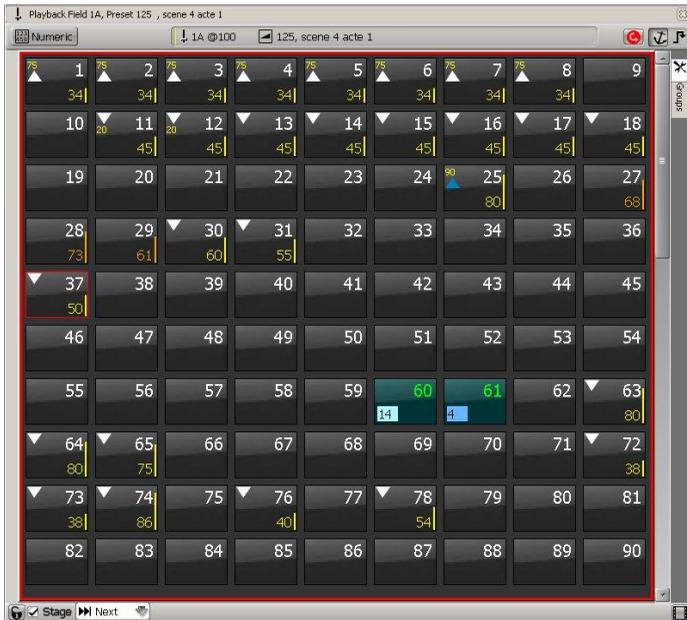
Channels can be selected and set with the mouse or your finger.

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 Channel grid

- 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 Preset loaded, or the Field selected.
 - 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 for 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.

- **Unchecked:** the channel grid displays only the content of the selected Field.



- 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.

4.3 Selecting Instruments and setting values

4.3.1 Using the Keypad

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 **Stoplevel** (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%]).

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).

Using **[All]** and **[Invert]** key.

The **[All]** key is designed to select every channels with an intensity upper than zero in the active Field.

The **[invert]** key is designed to select unselected channels with an intensity upper 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]**.

4.3.2 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.

4.3.3 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.

4.4 Clear Functions

4.4.1 Using the Keypad

To clear all selected channels **without** reset levels to zero
[C/ALT] [Ch] or **[0] [Ch]**.

To clear all selected channels **and** reset all levels to zero
[C/ALT]&[Ch].

4.4.2 Using the mouse

To clear all selected channels; DOUBLE Left Click in the channel grid (empty space).

4.4.3 Using the Touch screen facilities

To clear all selected channels, DOUBLE Touch in the channel grid (empty space).

4.5 Focus Mode

First set all channels to focus at a preheat level
[1] [Ch] [24] [THRU] [5] [At%] to set channels 1 thru 24 at 5%.

Then select the start channel for focusing

[1] [Ch] [70] [At%]

And use the **[C/ALT]** key holded and the **[+]** key to step to the next channel.

Note: the level used for focusing depends of the Step level defined in the settings:

HATHOR / Setup / Preferences / Channels

TIP: this method is also useful to check Channels.

4.6 Instruments with Scroller

4.6.1 Using the Keypad

Using [FRAME] key

[#] [Ch] [#] [FRAME]: load the frame # for the channel #.

Note: there is no [FRAME] key on the IMAGO, to assign the Frame function to an USER Key, go to

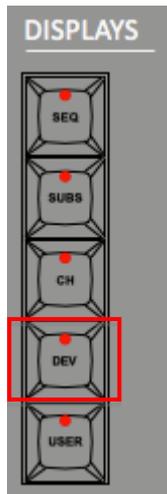
HATHOR / Setup / Consoles

Using [COLOR] key

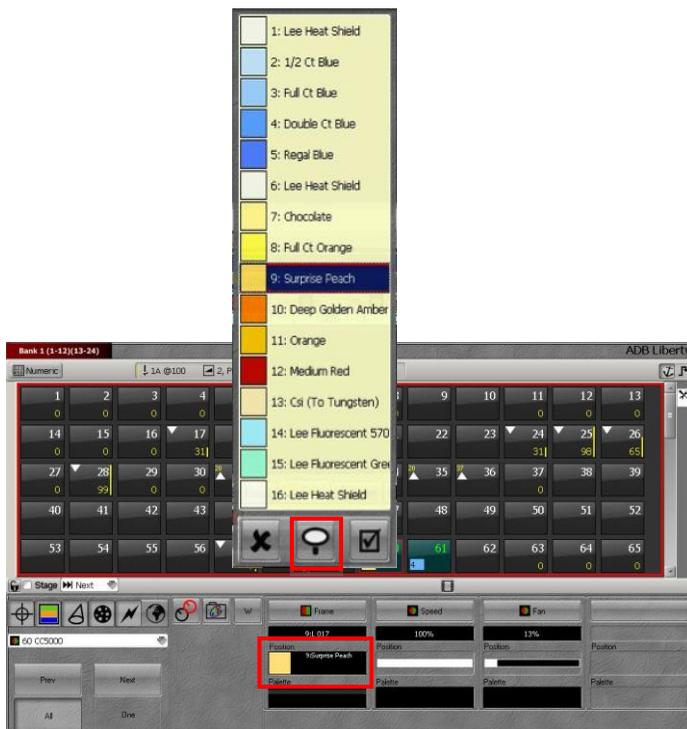
[#] [Ch] [0] [COLOR]: load the frame 1 (Home Color Frame) for the channel #.

4.6.2 Using the mouse or the Touch Screen

First select the DEVICE CONTROL SCREEN **[Devices]**.



Select Channel(s) with Scroller (e.g. Ch 60).
Select the Color Attribute Group: [COLOR].



With the mouse, or your finger, click on the color in the Frame part.

A list of Gels will appear: choose the color you need. The list will close automatically.

Note: If you need to navigate in the list to check colors, use the « Pin » icon to lock the window, to confirm your choice click on the check mark icon.

4.6.3 Using the Push wheels

Select Channel(s) with scroller (e.g: Ch 60).
Select the Color Attribute Group: [COLOR]

Push on the Wheel corresponding to the parameter « FRAME ».

The list of frames will appear:

Turn the wheel to scroll in the list, push to select the color.

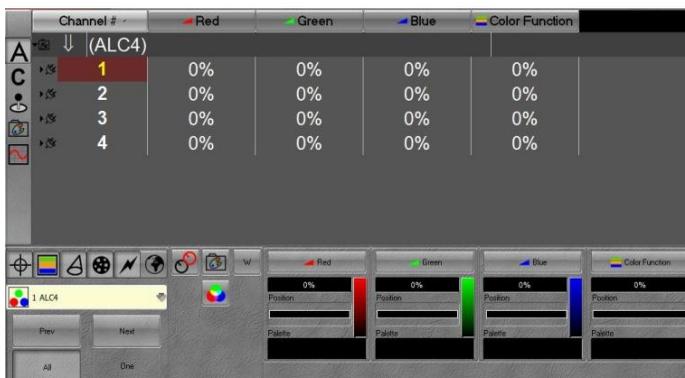
4.7 Moving Lights

4.7.1 Using the Touch Screen facilities

First select the DEVICE CONTROL SCREEN [Devices].

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. ).



Using 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.

Using 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 colors of a color 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 softkey, the Color Picker will appear, simply pick the color of your choice.



To use the GEL PICKER

Click on the RGB softkey, 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 softkey

The Copy Attributes window appears.

Confirm with **[ENTER]**.





Using 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 virtuals wheels, just click on the red cross.

Using 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.

4.7.2 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. Parameters 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 parameters:

[##], hold [C/ALT] and press on the wheels.

4.7.3 Using the dedicated keys

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 parameters selected. Confirm with **[ENTER]** or with **[COPY ATT]**.

Note: HATHOR always remember last parameters activated in the Copy Attributes window. If you carry on working with the same parameters, you don't need to link the Attribute Group to the COPY ATT key every time.

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]**.

Using the **PREVIOUS**, **ALL/ONE** and **NEXT** keys

To toggle between the **ALL mode** and the **ONE mode**:

[PREVIOUS]&[NEXT].

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. Groups [Group], [.]

Groups are a quick way of recalling a selection of channels.

5.1 Groups - 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 channels **selected** are stored. Groups also do not include moving-light parameters.

5.1.1 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 Subfader.

5.1.2 Groups - Record

Only selected channels are recorded, with or without level.

5.1.3 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.

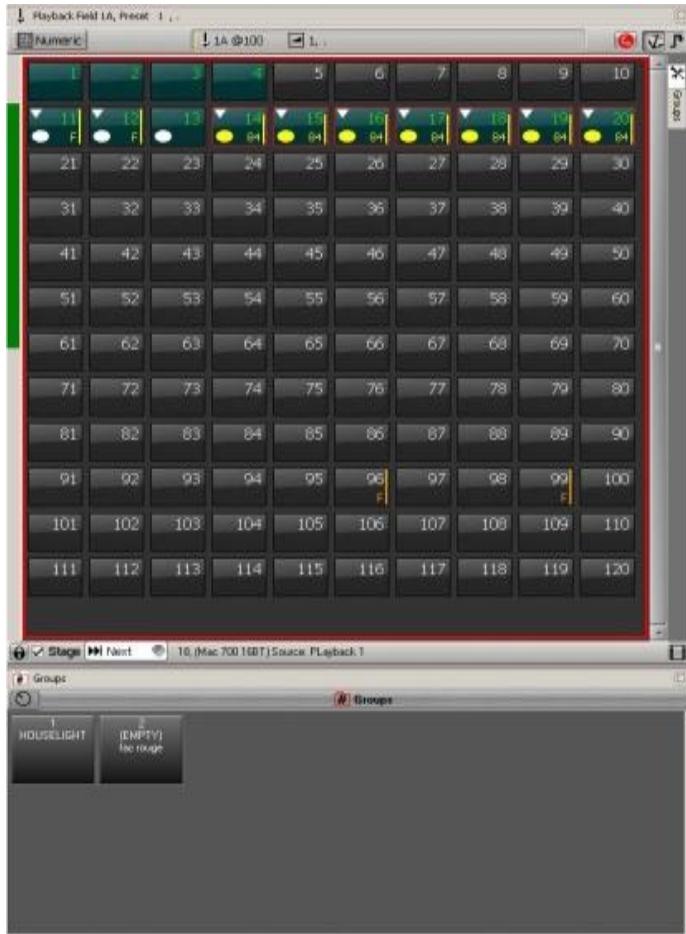
To record a group with a specific number:

[#] [Ch] [#] [+] [#] [+] [#] [+] [#] [+] [#] [At%]

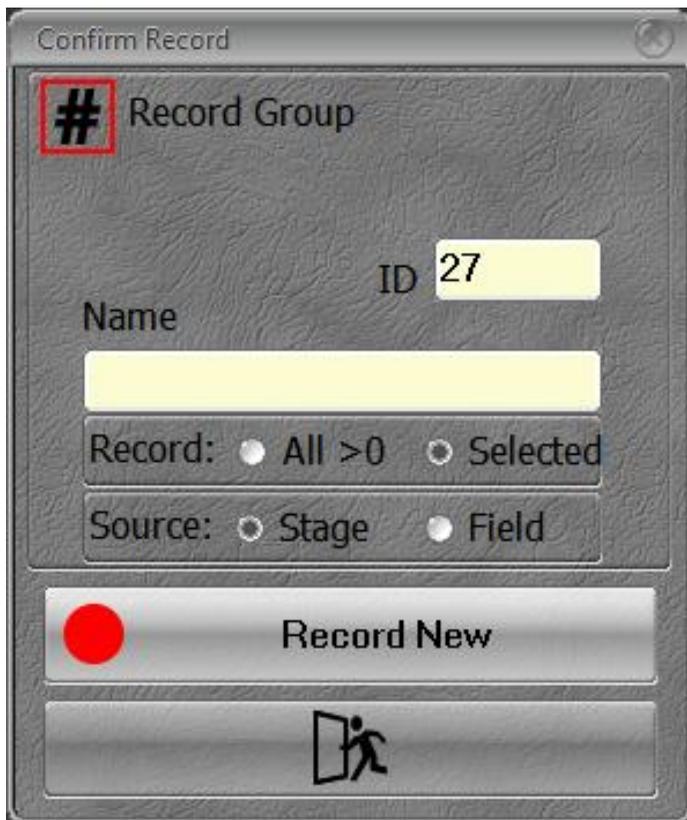
[#] [RECORD]&[GROUP] or **[#] [RECORD]&[.]** or **[#] [.]&[RECORD]**.

You will get a popup where you confirm recording this group, and can write a text label.

5.1.4 Using the mouse: Drag & drop facilities



To record a new Group: first select channels with the mouse, then drag the selection into the Groups Direct Access Panel, then choose **{Record new Group}** as option. The Group Record window will be displayed:



Change the ID number of the Group if needed.
Enter a label for that Group if needed.
To confirm, click on **{Record New}**.

5.1.5 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}**.The Group Record window will be displayed.

Change the ID number of the Group if needed.

Enter a label for that Group if needed.

To confirm, **{Record New}**.

5.2 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.

5.2.1 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].

5.2.2 Using mouse/your finger/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.

5.2.3 Using mouse/ your finger/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.

5.3 Groups - Using recorded levels [FETCH]

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 the Group #.
[#] [.] [FETCH] to set those channels to their recorded levels in Group #.

5.4 Groups Edit Window **[EDIT]&[GROUP]**

You can view, edit and create new Groups directly in the Group List: **[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 **[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)**.

5.5 Editing a Group

To edit a group: **[#] [.] [EDIT]**.
Select channels, change levels, then **[UPDATE] [UPDATE]**.

5.6 Groups and Subfaders

You can load Groups directly to any Playback.

5.6.1 Loading a group in a subfader

If a Group does exist, select this Group and load it directly to a Subfader with the keypad:
[1] [.] [LOAD]&[Assign Key 13].
[1] [GROUP]&[Assign Key 13].

Select any existing Group and load it directly to any Subfader with the mouse or your finger.

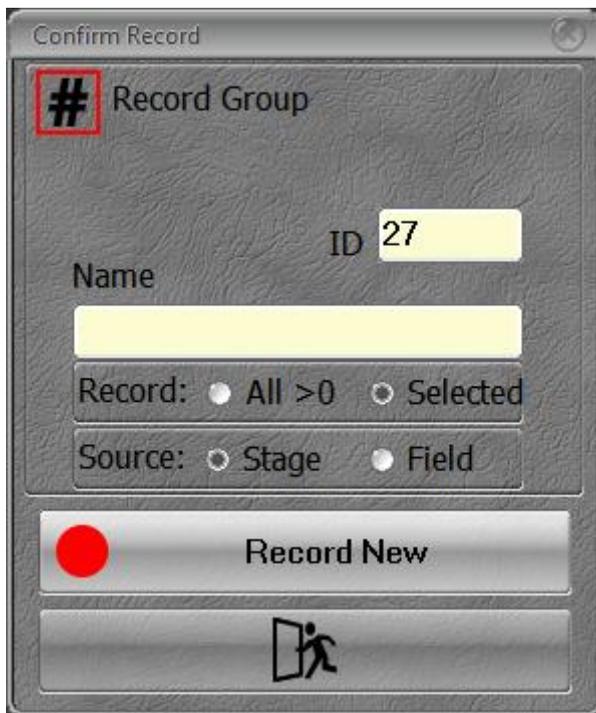
Click directly on the Group in the Groups window, Drag it to the Subfader Field and choose Load Group #.

5.6.2 Recording/loading group in a Subfader

To record and load a Group in a Subfader simultaneously, select the Group and load it directly to a Subfader with the keypad:

[27] [GROUP]&[Assign Key ##].

The Group Record window will be displayed:



Change the ID number of the Group if needed.
Enter a label for that Group if needed.

To confirm, click on **{Record New}**, press **[ENTER]** or **[GROUP]**.

5.6.3 Editing a group Loaded in a subfader

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]**.

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.

6. Palettes: [FOCUS], [COLOR], [BEAM], [PATTERN], [EXTRA], [ALL]

6.1 Palettes - Introduction

A Palette is a kind of specific memory for all or some attributes of a Moving Light.

6.1.1 Palette functionalities

- There are 7 Attribute (Parameter) groups of Palettes.
- Only non-intensity parameters are stored in a palette.
- There is two types of palette: **Reference** Palette (all moving light of same type) and Palette (individual values for selected devices).
- If a palette is used to set parameters for selected channels, when recording a new object (Sequence step, Look, Palette) these palette is referenced. It means that updating the Palette will update all recorded objects linked to this Palette (Sequence Steps, Looks, ALL Palette).
- Each palette can have a text label.
- A Palette can be loaded to a Subfader.
- A Palette can be used as a group to select Device channels.

6.2 Palettes - Record

Only parameters of selected channels are recorded, intensities are not recorded.

By default all Palettes are in Reference mode (Record as reference checked in Record Confirm window) when all selected channels have the same parameters settings, except FOCUS and ALL palettes.

6.2.1 Attribute Groups

There are seven kinds of Palettes

- FOCUS Palettes:
Position parameters like PAN and TILT
- COLOR Palettes:
Color parameters like CYAN, MAGENTA, YELLOW
- BEAM Palettes:
Beam parameters like ZOOM, IRIS, FOCUS
- PATTERN Palettes:
PROJECTION parameters like GOBO, SHUTTER
- EXTRA Palettes:
CONTROL & FUNCTION parameters like Lamp on,
Lamp off, Strobe, Color Time
- ALL Palettes: ALL Parameters

6.2.2 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].

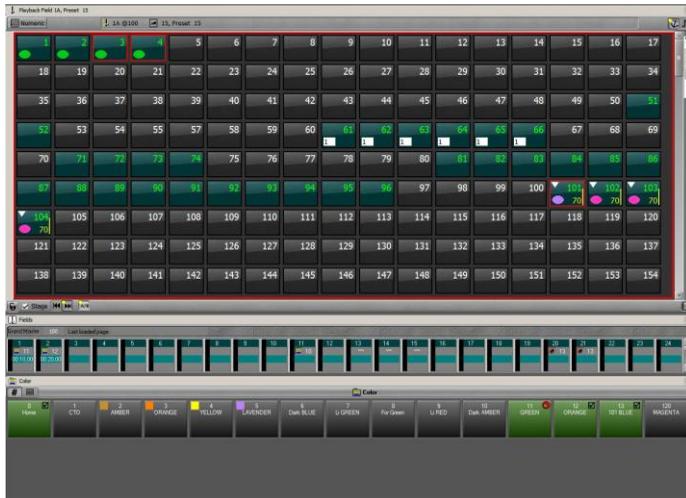
You will get a popup where you confirm recording this group, and can write a text label.

TIP: before to confirm, it is possible to use filters inside the attribute group.

JUST press the Attribute Group key(s) corresponding to the parameters you want to exclude from recording.

[RECORD]&[ALL] then **[COLOR]**, will exclude all Color parameters from the recording.

6.2.3 Using the mouse: Drag & drop facilities



First select channels with the mouse, set parameters values (e.g PAN & TILT), then drag the selection into the FOCUS Palette window, 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.

6.2.4 Using the Touch screen facilities

First select channels with your finger, set parameters values (e.g: CYAN), then drag the selection into the

COLOR Palette window, the Confirm Record window will appear:

Choose **{Create new Color Palette}**, and then you will get a popup where you can write a text label and confirm recording this palette.

{Record} to confirm.

To **UPDATE** a palette:

Drag the selection into the Palettes window, the Confirm Record window will appear:

Choose **{Update ### Palette}**.

6.3 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 is 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.

6.3.1 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 parameters.

E.g: in palette ALL 3, you just need COLOR information.

[3] [ALL] & [COLOR].

To reset all FOCUS parameters to default values

[0] [FOCUS].

Note: use same syntax for other group of parameters

To reset all parameters to default values

[HOME] or [0] [ALL].

6.3.2 Using mouse/your finger/keypad

To open a palette window:

Play menu > 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]

Note: if the key [→] don't exist yet on your Imago, you can create it. See chapter 2.1.3 for more information.

To open a COLOR Palette fly-out window with the touch screen softkeys:

[COLOR]

and then click on the palette softkey.



To select a palette

Click on the palette in the Palette window.

6.4 Palettes Edit 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.

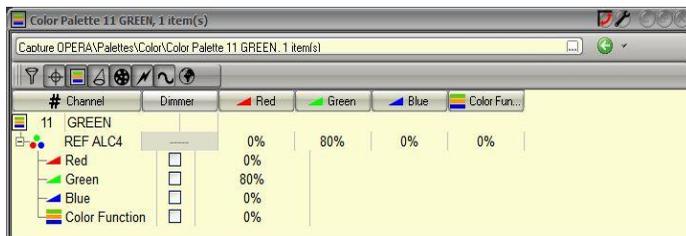
To delete a Palette, move to the palette in the list: **[DELETE] [ENTER]**, or **[ESC]** to cancel.

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]**.

6.5 Editing a Palette



Example: to edit a COLOR palette: **[#] [EDIT] & [COLOR]**. Use arrows to go to the parameter value to edit, then **[ENTER]**, tap the new value, then confirm with **[ENTER]**.

6.6 Palettes and Subfaders

You can load Palettes directly to any Subfader.

6.6.1 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.

6.6.2 Working palettes Loaded in Subfaders

Note: to work with palettes loaded in subfaders, the Rubberband mode should be unchecked (**[SETUP] / Attributes**).

To select a palette, **first select channels**, then use the **FLASH key** to select the palette.

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]**.

6.6.3 Editing a palette Loaded in a Subfader

Using the mouse

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.

7. PRESETS

7.1 Introduction

General Facts

- A Sequence is structured in Steps which consists of Presets and Device links. Instruments levels are stored into Presets, parameters 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 and Playbacks at the same time. To delete it completely it is necessary 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.

7.2 Record

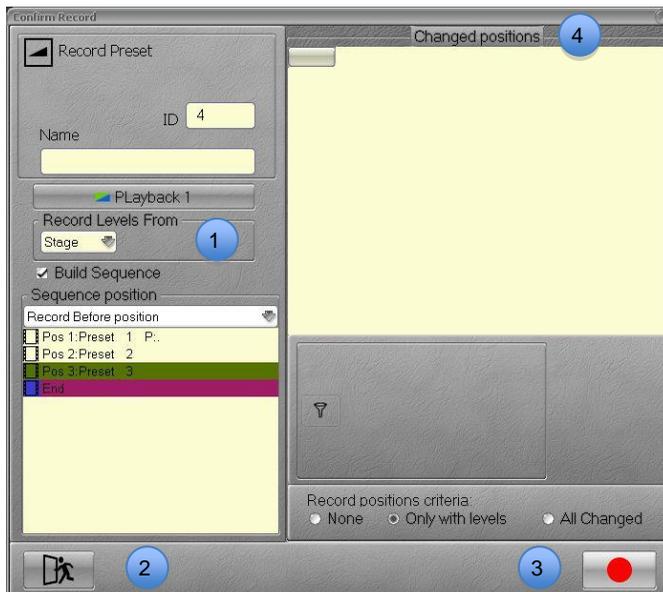
7.2.1 Recording a Preset in the sequence

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 number:

Press **[RECORD]**, the Record window will appear, where you can confirm the recording of this Preset, and where you can enter a text label. Then **[RECORD]** again or **[ENTER]** or click on **3**

To record a Preset with a specific number, use the same syntax as above but specify the number before: **[#] [RECORD]**.



1

Records Levels From:

Choose between Stage or Field

In Field mode you can choose between A field (Live) or B field (Blind).

2

To cancel, click on this icon or use **(ESC)** on your keyboard.

Note: Preset and Moving Lights In the sequence Attributes are recorded in Device Links. Attributes are recorded only if channel level is above 0%

4

Only changed parameters (“Changed positions”) are recorded (these parameters are displayed in the Changed Positions window).

Unchanged parameters are tracked from the source.

7.2.2 Recording a Preset not in the sequence

Working in the A playback

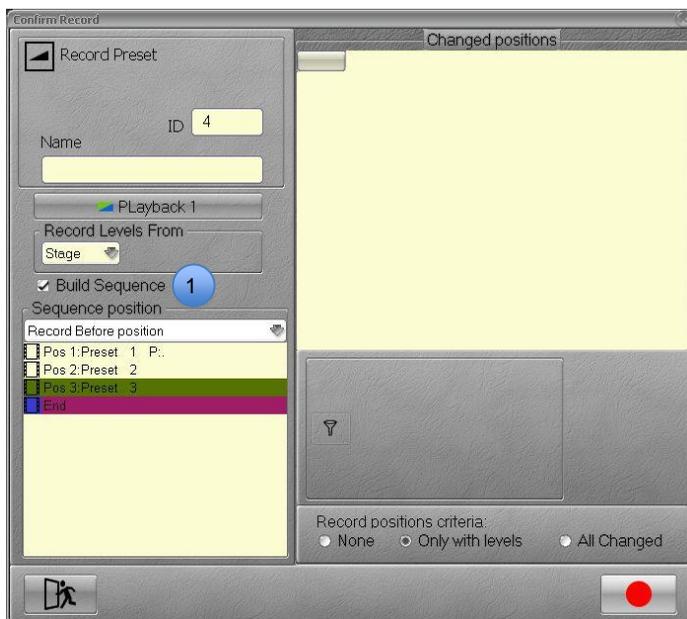
To record a Preset with the next free number:

[RECORD] the Record window will appear, 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].



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]**. The Record window will appear, where you can confirm the recording of this Preset, and where you can enter a text label.

Then press **[RECORD]** again or **[ENTER]** or click on the icon in the down right corner.

Note: the Preset will be automatically loaded in the Subfader.

7.3 Update

Working in the A playback

To update a Preset in the playback connected to the Field Editor selected:

[UPDATE].

The Record window will appear, where you can confirm the update of this Preset, and where you can write or edit a text label. Then **[UPDATE]** again or **[ENTER]** or click on the icon in the down right corner.

Working in a Subfader Field

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]**.

The Record window will appear, where you can confirm the update of this Preset, and where you 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 above zero.

7.4 Edit

7.4.1 Edit a Preset (BLIND mode)

To Edit a Preset:

[#] [EDIT], select channels and edit levels then **[UPDATE]**. Use **[ESC]** to close the edit window.

7.4.2 Rename a Preset

To Rename a Preset:

[#] [EDIT] and type your text in the field located in the left down corner. Then **[ESC]** to close the Edit window.

7.5 Copying levels from a preset to channels

To Copy levels from Preset # to selected channels referencing to this preset:

[#] [FETCH].

7.6 Loading a Preset in a Subfader

To load an existing Preset into a Subfader:

[#] [LOAD]&[Assign Key ##].

8. SEQUENCES

8.1 Introduction

General Facts

A sequence is a list of steps that can be played back manually or with fade times. Each step contains a Preset.

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.

8.2 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, just **[RECORD]** your first Preset. By default it will be the first free Preset in the Preset list (Preset 1). Write 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.

8.2.1 Recording a new Preset

To record a Preset with the next free number:
Press **[RECORD]**.

The Record window will appear, where you can confirm the recording of this Preset, and where you can enter a text label: then press **[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].

8.2.2 Times

Fade times of a Sequence Step are related to that step, not to the Preset linked to the Step. This makes it possible to use the same Preset with different fade times in other Steps or in the Subfaders.

In & Out Times

First check that in [SETUP] Preferences/Playback the « Set Times mode » is on Active.

Use the [GO] button 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]** keys, and use the same syntax.

Delay 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.

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.

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.

Channel Time and channel delay

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 **[A]&[B]** key, and use the same syntax.

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 with Scroller

[#] [COLOR]&[DELAY].

Note: to change Times for the incoming Step, swap to B field with the **[A]&[B]** key, and use the same syntax.

8.2.3 Insert a Step

Record a Preset with a decimal number:

[#] [.] [#] [RECORD].

8.2.4 Delete a 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}.**

8.2.5 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.

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.

8.3 Moving Lights

All information relative to moving lights are located into **Device Links**:

- Attribute informations (values or palettes)
- Attribute Times
- Go On Go flags.

General Facts

Attributes are recorded into Device Links.

Attributes are recorded only if channel level is above 0%.

Only changed parameters (“Changed positions”) are recorded (all attribute values for channels with intensity will be recorded in the first sequence step).

Unchanged parameters 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%.

8.3.1 Recording a Preset/Step including parameters values

To record Preset 1 including parameters:

Select Devices channels, set levels and set parameters

Press **[1] [RECORD]**.

The Record window will appear, where you can confirm the update of this Preset, and where you can write or edit a text label.

Features:

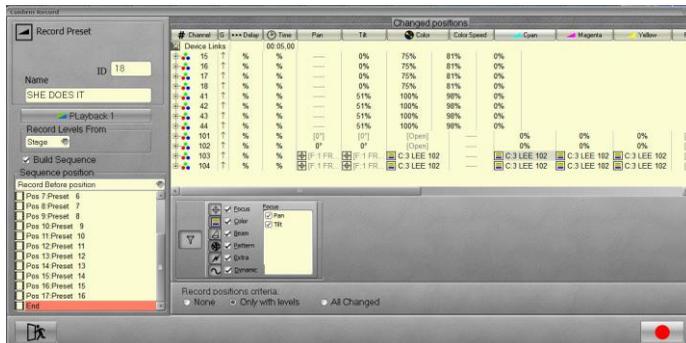
ID: here you can change the Preset number

Name: Preset Label

Records Level From: Stage or Field

Possibility of filtering parameters by group and by parameter

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}**.

8.3.2 Times

Note: before to start working with Times, check that option « set Times » is **Active** (see Chapter 2 for more details).

Parameters 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] [Ch] [12] [TIME]**.

The Time for the parameter YELLOW will be automatically 100% of the channel Time.

Parameter Times: Keypad and Push wheels

Times are regarding channels selection. **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 **[A]&[B]** 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

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).

8.3.3 Using the mouse: Drag & drop

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.

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.

Copy

To copy 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 copy 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 copy 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.

8.3.4 Delete Device links

Note: When you delete a Device Links all parameters information are 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: ----}**.

8.3.5 MOVE while DARK feature (Go on Go)

The default behavior can be set in HATHOR menu > Setup > **Preferences (or [SETUP]): Attributes**

- Unchecked: MOVE while DARK is active.
Recorded Parameters will change

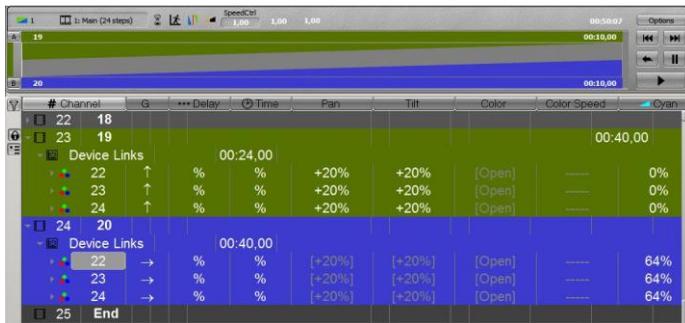
automatically in the previous Step if levels are 0%.

- 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.

8.3.6 FETCH feature

Use Fetch to copy parameter values for devices from any Sequence Step.

Fetching from Steps in the Main Sequence will copy the parameters values of those devices including any tracked values from a source Step in the Sequence.

First select the devices you wish to copy values to.

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]**
or **[FETCH]**.

To copy ALL parameter values from a Step:
[#] [FETCH]&[ALL]

To copy ONE parameter values from a Step:
[#] [FETCH]&[Parameter WHEEL]

9. LOOKS

9.1 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.

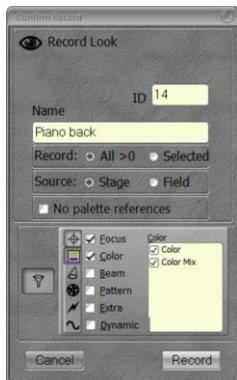
They are primarily useful for "live" performances, when you wish to be able to bring up pre-recorded fixture settings, but in a non-sequential, spontaneous manner, such as for a musical concert.

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.

9.2 Record



When recording, you can choose between different options:

1/ 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. In Preferences / Channels, select:

« **Record all with level in Looks** » *checked* = All > 0

« **Record all with level in Looks** » *unchecked* = Selected

2/ No Palette References: if selected, attribute values are recorded instead of Palette references.

3/ Attribute FILTERS: simply use Attribute Group buttons (below the internal Touch Screen) to uncheck Attribute Groups in the Filter window.

9.2.1 Using the Keypad

To Record a Look with the next free number:

[RECORD]&[LOOK], enter a name if needed, change options if necessary then confirm with [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 confirm with [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 confirm with [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 confirm with [RECORD] or [ENTER] or [LOOK].

9.2.2 Using the mouse

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 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.

9.2.3 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.

9.3 Working with Looks

9.3.1 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.



9.3.2 Playback Looks

Look in Subfader: **[START]** or raise the Subfader Fader.

Autoexecute Looks and Rubber band mode: Looks on subfaders handle Intensity levels as HTP (Highest Takes Precedence) and attributes as LTP (Last Takes Precedence). If there is a Look raised in 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 (under 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 and clear 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 but not 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.

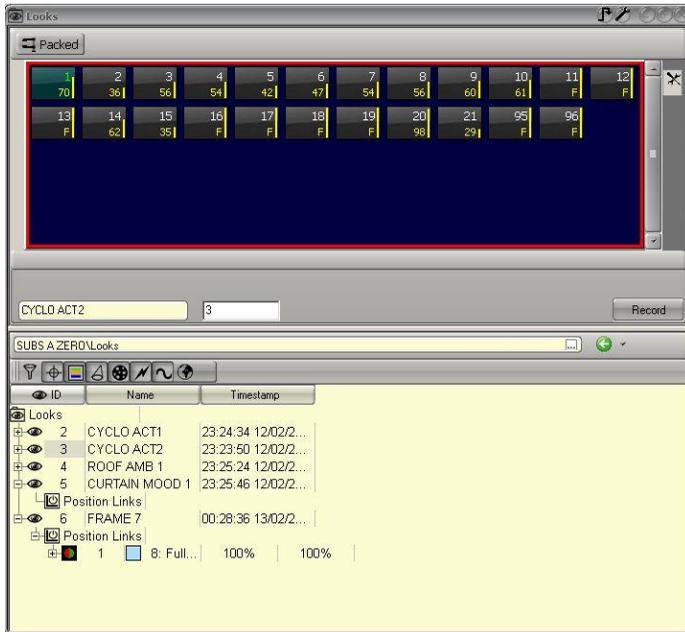
9.3.3 Using recorded values / Fetch

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. Color, Beam etc.).

9.4 Editing

9.4.1 The Edit window



To open the LOOK Edit window: **[EDIT]&[LOOK]**.
 Left 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.

9.4.2 Editing a Look

To Edit a LOOK: **[#] [EDIT]&[LOOK]**.
 Left 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.

9.5 Loading To a Subfader

To load a Look:
 Using the keypad: **[#] [LOOK]&[ASSIGN Key]**
 Using the mouse or the Touch screen:
 Drag&Drop the Look from the Direct Access Panel to a Subfader Field.

10. SUBFADERS

10.1 Introduction

Subfaders and Fields are different controllers to 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 Subfader is only a controller (Field), not a content (object).

So the concept is to load content in a controller and to record the main organization of every Subfaders in a PAGE.

Note: because Subfaders 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 Subfaders will be still there and that means these Subfaders are not recorded in the Play.

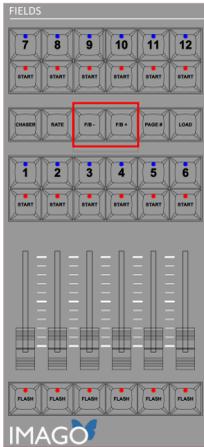
To save the main organisation of the Subfaders in the Play, Record a Page.

10.2 Fader Banks

There are a limitless number of Subfader Fields available, with 192 available at a time.

These 192 Subfaders are organized in 16 Banks of 12 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 **[Fields]** is selected.

10.3 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 Submasters, **(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.

10.4 Assign Keys

Each Subfader has a assign key. This is used to load, select, record or edit content to that Subfader.

The master key is referred to in this manual simply as a **[ASSIGN key]**.

There are three keys for a master, the assign key is the upper key, the key below is the start key and the lower key is a flash key that will bump the content of the master, depending on the settings.

10.5 Flash Keys

There are 6 Flash keys above the 6 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 1-6.

By default, all Subfaders are set in Flash mode.

To turn off Flash mode for a Subfader:

In the SUBFADER SCREEN **[Fields]**, Right click on the field just below the subfader 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 **[Fields]**, Right click on the field just below the subfader 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]**.

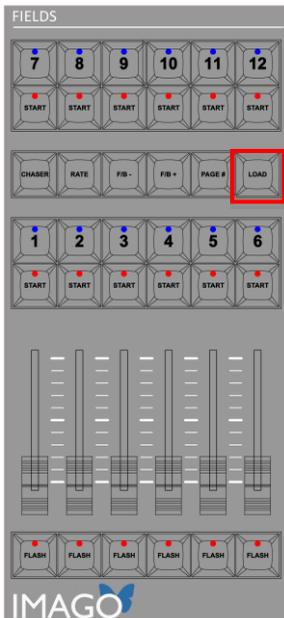
10.6 Start Keys

There are 12 Start keys above the 12 assign keys.

Press the **[START]** key to execute the Subfader in Time if there is Time information or in 0 second if there is no Time information.

During the execution, pressing **[START]** a second time will have no effect if the level is below 50%. From 50 % to 100% it will invert the execution (back to zero %).

10.7 Load / Clear

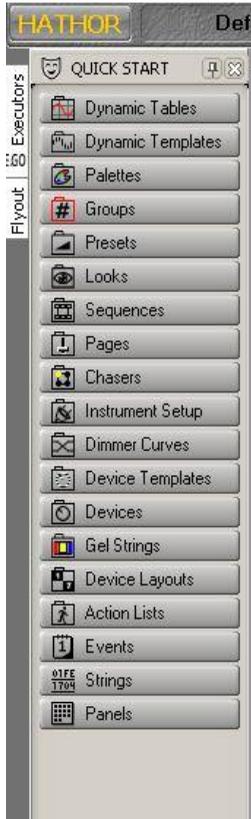


To load channels with levels in a Subfader:
Select Channels, and set intensities, then
[LOAD]&[ASSIGN Key].

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 to open the Groups pane.
From the list, 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}**

10.8 Channel Selection

Press an 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.

10.9 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 edit 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.

10.10 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 Color 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 > Preferences / Attributes** is checked. If unchecked the attributes and Intensity will follow the movement of the fader.

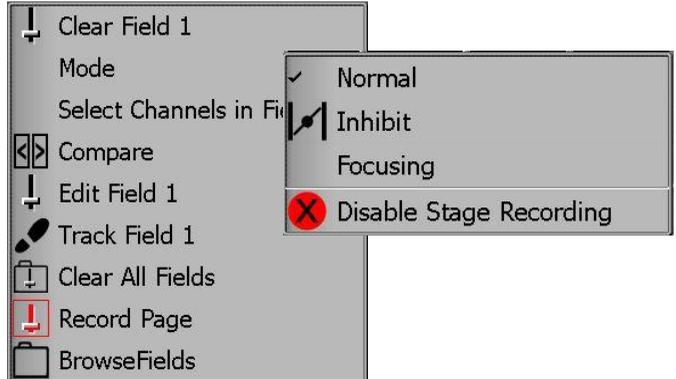
10.11 Settings

10.11.1 **Subfader Modes:**

Normal/Inhibit/Focusing/Disable Stage Recording

To change a subfader mode:

In the SUBFADER SCREEN [Fields], Right click on the field just below the Subfader's number, choose the last option {Mode}.



Choose between the four modes in one click.

10.12 Subfaders and Moving Lights

10.12.1 Subfaders and Groups

Loading groups of devices into subfaders let you select devices quickly.

If channel levels are recorded in groups, device intensities will be always available with faders. It is possible to add groups to selection while holding the [+] key and using assign keys.

10.12.2 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 ([Preferences / 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.

10.12.3 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 or Start 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 **Preferences / 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.

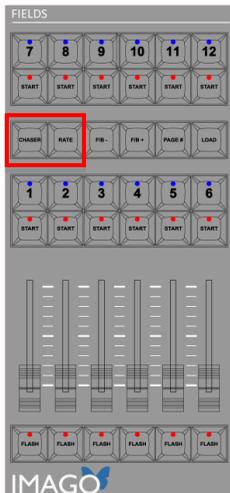
11. CHASERS

11.1 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.

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 Speedmaster.

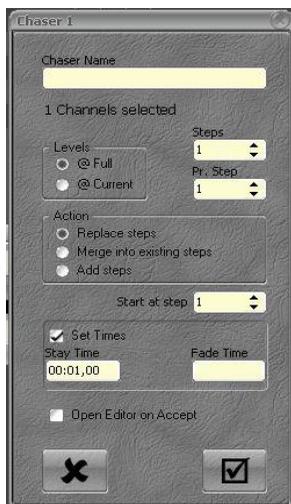


11.2 Recording a chaser (intensities)

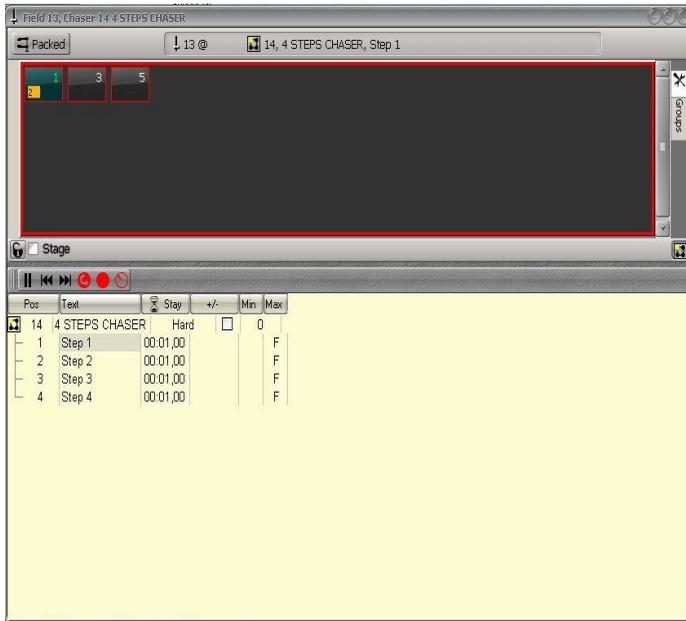
11.2.1 Using the keyboard

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.**



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 **[Fields]**, Right click on the number area, select **{As Speed master for chaser in Field #}**.

CHANNELS SELECTED

E .g. Channels 1 thru 4 are selected with 70% as level 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%.

Chaser Name

4 Channels selected

Levels

@ Full

@ Current

Steps

4

Pr. Step

1

Action

Replace steps

Merge into existing steps

Add steps

Start at step 1

Set Times

Stay Time 00:01,00

Fade Time

Open Editor on Accept

- 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**.

11.2.2 Changing modes and editing Times and levels in the EDITOR window

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]**.

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]**.

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]**.

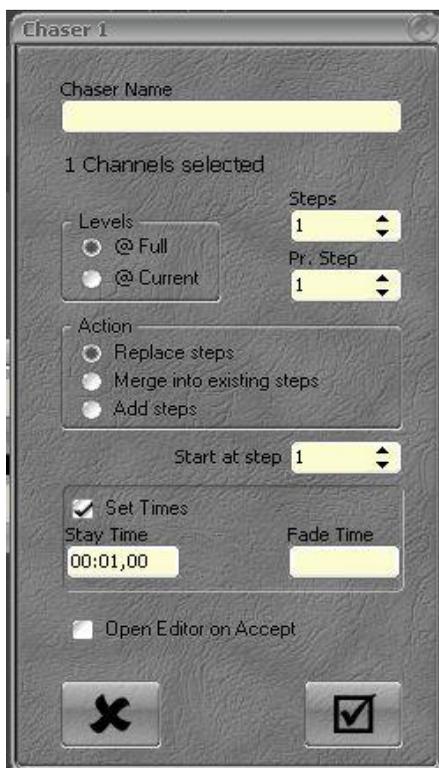
To Edit channel level for a range of Steps:

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]**.

11.3 Recording a chaser (Attributes)

NO CHANNEL SELECTED

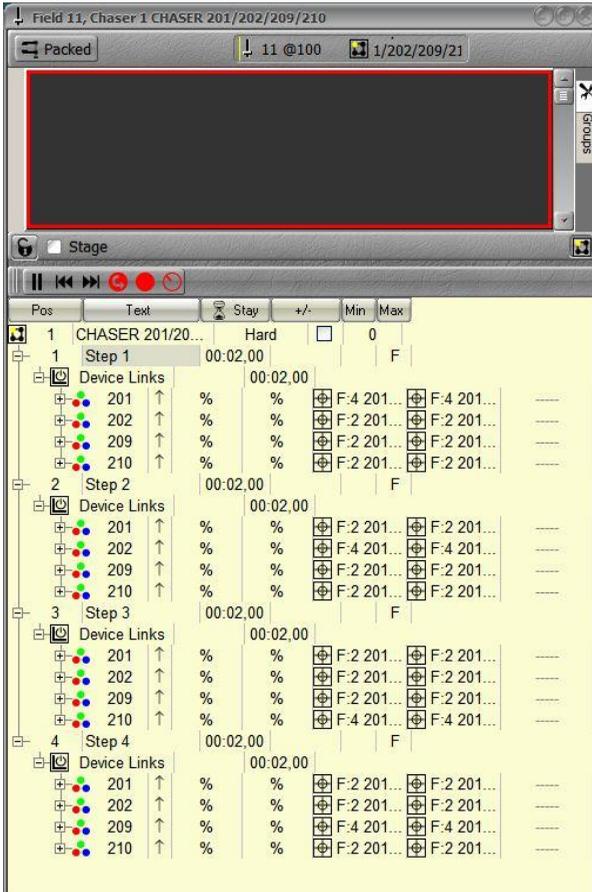
To Record a Chaser with the next free number (for a specific number, just add [#] before): **[CHASER]&[Assign Key]** and raise the Subfader at 100%.



- 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**.

11.4 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 **[Fields]**, Right click on the number area; select **{As Speedmaster for chaser in Field #}**.

11.5 Editing a Chaser

11.5.1 BLIND mode

To Edit a Chaser in BLIND mode:

go to the Play Menu, to open the Chasers menu Left click on the Chasers Tab,

Right click on the chaser to edit select **{Edit Chaser #}**.

Here you can change Modes, Times values, and levels, following exactly the same method as in paragraph 10.2.2.

11.5.2 LIVE mode

First load the chaser in the Subfader, **[#] [CHASER] & [ASSIGN Key]**:

[EDIT]&[ASSIGN Key].

STOP the chaser with the pause virtual button.

Here you can change Modes, Times values, and levels, following exactly the same method as in paragraph 10.2.2.

11.6 Start a Chaser

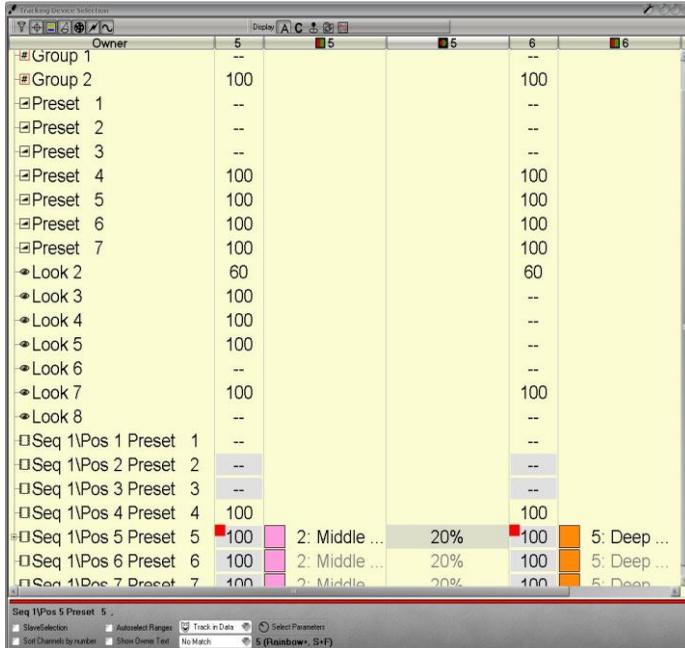
Raise the Subfader at 100%: the Chaser will start at Step 1.

You can also use the [START] key corresponding to the Field involved: **[START]**

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]**.

12. The TRACK WINDOW [TRACK]/Ctrl F4



To open the track window:
[TRACK].

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 common 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 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 gray, and cannot be edited.

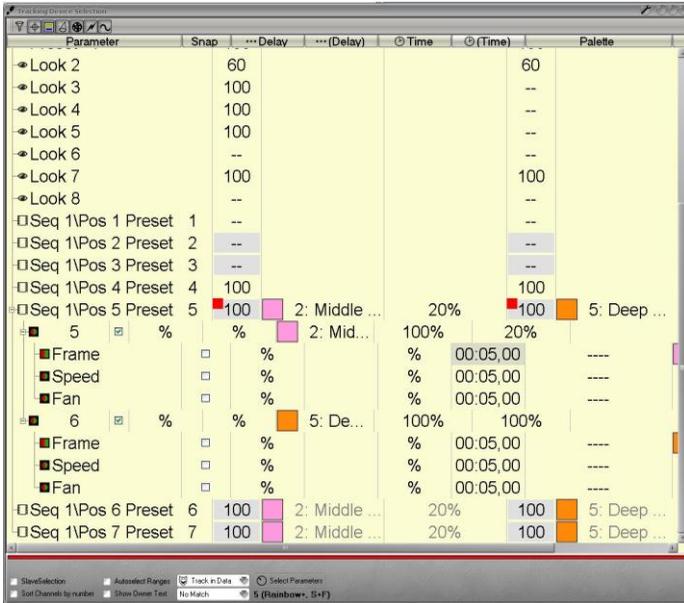
Actual position recordings can be edited, and dragged:

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.

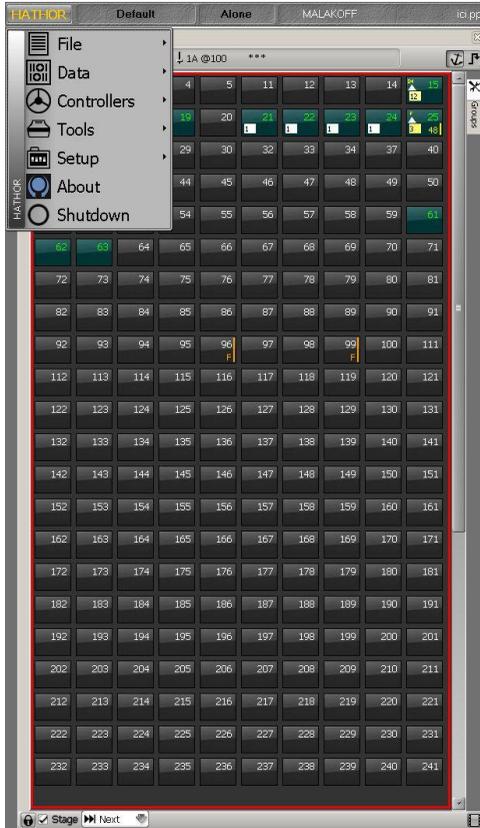
To change a Time value: open the Sequence Step (+ box left side of the sequence icon)

Double click on a cell or **[ENTER]**, set the new value and **[ENTER]** to confirm.



13. Utilities

13.1 File



13.1.1 Introduction

In this section you will find tools to save, import, export and open your Play file information as well as browse other Play files.

The system has a hard drive as the primary storage. The Play library is located on the partition E. You can also use a USB memory stick, an external USB drive, Floppy or a File Server on the network.

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).

Prego 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/File storage.

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 Prego, 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 can "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 Prego 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.
- Does 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).

13.1.2 **Save**

To save the current play in current file:

(F2) keyboard key

or

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

or

HATHOR menu / File / Save.

13.1.3 **Save as**

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

Note: editor allows you to also change the Play Name

13.1.4 **Open Library**

Open Library allows you to 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 you can Load the File, or 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.

13.1.5 **Import**

Import allows you to select a non-HATHOR format play file, such as Avab Safari (.pla) or ASCII Light cues (.txt).

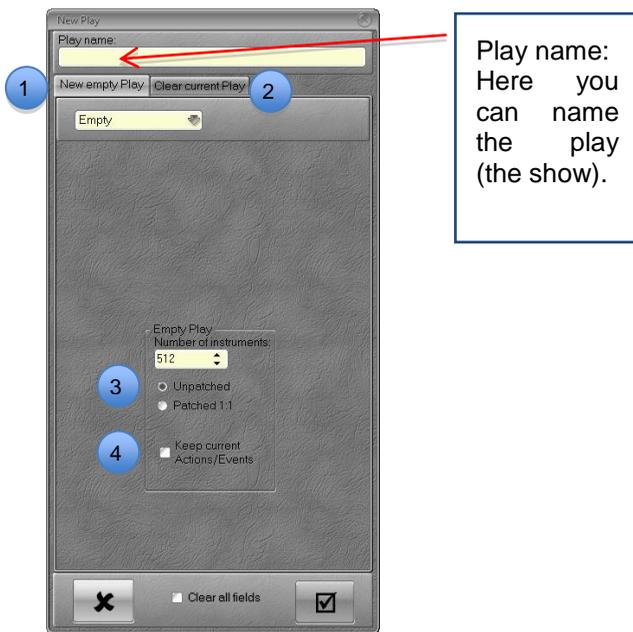
Import opens a Windows file browser to facilitate navigating to another drive, or network location.

13.1.6 Export

Export allows you to save in a non-HATHOR file format, such as Avab Safari (.pla) or ASCII Light cues (.txt). Export opens a Windows file browser to facilitate navigating to another drive as a USB memory stick, or network location. "Export" is also for storing the play file to somewhere outside the normal library, as on a USB memory stick. An "exported" save is independent of normal saves

13.1.7 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

13.1.8 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.

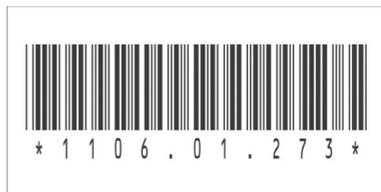
- Instruments Setup (auto creating missing Devices and Templates).
- Palettes (auto creating missing Instruments/Devices/Templates).
- Presets.
- Groups.

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

Notes

Notes

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