

# Congo Manual

This is the manual for Congo (Rev 4.04 - 050906)

A theatre and moving light console for over 3000 control ch's and 6000 moving light attributes.



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## This Manual - Using the Help system

Action	Key	Feedback
Start Help	<span>?</span>	The help system is started in a tab.
Find topic for a key	<span>?</span> & <span>Key</span>	Hold the ? key and press any key in the console facepanel to jump to the chapter explaining that key .
Jump to page 1	<span>?</span>	Press ? to jump to page 1.

- Use the up and down arrow keys to browse the table of contents. The right arrow expands a topic and the left arrow jumps to the parent and closes.

## This Manual - Terminology

This manual is intended for use with the Avab Congo control system by ETC.

The on-line manual and the paper manual are the exact same document.

In order to be specific about where features and commands are found, the following naming and text conventions will be used


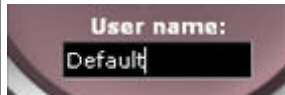
- Congo processor (hardware): the computer used to run the Congo applications.
- Congo Facepanel (hardware): the control console hardware. This is also referred to simply as the "Facepanel".
- Congo software: the application that gives you the functionality of the Congo system controlled from the Facepanel.
- Commands in the Browser Tab are indicated like this: Browser >Files >New.
- Console keys in general are indicated in all CAPS. For example RECORD.
- Console keys in tables are have a button outline like this:

RECORD

- When a key is held and another key is pressed at the same time is written like this: RECORD & MASTER
- References to other parts of the manual are indicated as underlined hyperlinks. When viewing this manual electronically, click on the reference to jump to that section of the manual.

# --Power-up Procedure

For best performance, power-up your system in the following order.

Action	Hardware	Feedback
1. Turn on external hub(s) or switch(es)	Power switches	
2. Turn on the console and monitor(s)	Power switch on console and monitors	<p>The displays will light up with the congo logo. The screens will load the login screen.</p> 
3. Start the Login	MODIFY	<p>You will get a login popup with the last used user name. If no name has been used it will be "default".*</p> 
4. Start the Congo software	MODIFY	<p>The software will load and the Live channel view will be active.</p>
5. Turn on any ETCNet2 Nodes and accessories such as Remote Focus units	Power switches	<p>You should be able to control the outputs now**</p>

\*The user login contains separate settings for the Direct Select tabs and Screen Layouts. Play data and all other settings are the same for all users.

\*\*See [Quick Start To Programming](#)

## NOTE

In a network with multiple Congo Systems online, allow the main system to fully startup before starting the other systems. This will ensure that your network configures correctly.

When you power-up your Congo System, the system will default to opening the show last saved in a proper shutdown.

## --Save And Load Information

**Make sure you save your information at all times. If the current Play has ben altered since it was last saved, the name is displayed in yellow instead of white.**


All file handling is done from the File node (BROWSER >File).

This system has a hard drive as the primary storage. You can also use a USB memory stick, an external USB drive, Floppy or a File Server on the network. For alternative Play Paths see [Login Settings - General Functions](#).

Function	Key	Feedback
New	<input type="button" value="MODIFY"/>	Opens a popup asking you to confirm. See <a href="#">Load a new (empty) Play</a> .
Open...	<input type="button" value="MODIFY"/>	See <a href="#">Open a Play</a> .
Save	<input type="button" value="MODIFY"/>	Saves the current play. Opens a popup asking you to press MODIFY to confirm.
Save as...	<input type="button" value="MODIFY"/>	See <a href="#">Save a Play</a>
Import from...	<input type="button" value="MODIFY"/>	See the <a href="#">Import Wizard</a> .
<b>NOTE</b> USB memory is the main external storage media. The Floppy drive is mainly an interface for importing shows from other systems using floppy such as Pronto, Safari, Expression, Strand 500-series etc.		

## Load a New (empty) Play

When you want to clear the console to start with a new play, you use the "New" command (Browser >Files >New).


Function	Key	Feedback
1. <i>Select the Browser</i>	<input type="button" value="BROWSER"/>	The Browser is selected on the left side of screen 1. NOTE If the Browser already was selected - it will be closed. Press Browser again to reopen. 
2. <i>Go to "Files" at the top</i>	Arrow keys	Files is marked in orange
3. <i>Open the File node</i>	Right arrow	Opens a subtree of functions.
4. <i>Select "New"</i>	Down arrow	New is marked in orange
5. <i>Load a new play</i>	<input type="button" value="MODIFY"/>	Opens a popup asking if you are sure.
6. <i>Confirm</i>	<input type="button" value="MODIFY"/>	Press MODIFY to confirm. A progress bar will appear as the new play is loaded. A popup will confirm that a new play is loaded and the Patch is set 1:1*

\*Confirmation popup



## Open A Play

When you want to open a play, you use the "Open..." command (Browser >Files >Open).

Function	Key	Feedback
1. <i>Select the Browser</i>	<input type="text" value="BROWSER"/>	The Browser is selected on the left side of screen 1* 
2. <i>Go to "Files" at the top</i>	Arrow keys	Files is marked in orange
3. <i>Open the File node</i>	Right arrow	Opens a subtree of functions.
4. <i>Select "Open"</i>	Down arrow	Open is highlighted.
5. <i>Open this node</i>	Right arrow	Opens a subtree of media choices.
6. <i>Select Media</i>	Down arrow	Selected media (Floppy, Play Archive (HD) or USB) is highlighted.
7. <i>Open media archive</i>	Right arrow	A subtree is opened with all plays in the selected Media
8. <i>Load the selected play</i>	<input type="text" value="MODIFY"/>	Opens a popup asking if you are sure.
9. <i>Confirm</i>	<input type="text" value="MODIFY"/>	A popup will ask if you want to save changes in the currently loaded Play.
10. <i>Confirm (or don't)</i>	<input type="text" value="MODIFY"/>	Use arrow key to select your choice and MODIFY to confirm it. The selected Play is loaded.

\*If the Browser already was selected, it will be closed. Press BROWSER again to reopen.

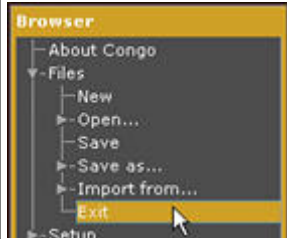

## Save A Play

You can also press CTRL-S on a keyboard to save the current show.

Function	Key	Feedback
1. <i>Open the Browser</i>	<input type="button" value="BROWSER"/>	If it was already selected it will be closed. Press again to open.
2. <i>Go to Files</i>	Down Arrow	Files is highlighted
3. <i>Open subnodes</i>	Right arrow	Subnodes are opened
4. <i>Select Save as</i>	Down Arrow	"Save as" is highlighted
5. <i>Open subnode</i>	Right Arrow	Subnodes are opened*
6. <i>Select Play Archive</i>	Down Arrow	Play Archive is highlighted
7. <i>Confirm Save As...</i>	<input type="button" value="MODIFY"/>	You will get a popup where you can name the play from the keyboard in master display 2.
8. <i>Select OK</i>	Down Arrow	OK is highlighted
9. <i>Confirm</i>	<input type="button" value="MODIFY"/>	The show is saved and the show name is displayed in the top left corner of the screens.

\*It is possible to set up a file server by specifying the play patch in the Login Settings. See [Login Settings, General Functions](#).

## --Exit and Shutdown

Always shut down your system correctly with the Exit function (BROWSER >File >Exit).		
Function	Key	Feedback
1. Open the Browser	<input type="button" value="BROWSER"/>	If it was already selected it will be closed. Press again to open.
2. Go to Files	Down Arrow	Files is highlighted
3. Open subnodes	Right arrow	Subnodes are opened
4. Select Exit	Down Arrow	Exit is highlighted 
5. Confirm Exit	<input type="button" value="MODIFY"/>	You will get a popup asking you to confirm, and exit to the login screen.
6. Select Shutdown	Right Arrow	Highlights the Shutdown symbol in the login screen 
7. Confirm Shutdown	<input type="button" value="MODIFY"/>	The system is shut down. You can power off now.
<b>NOTE</b> The current play will be saved to a temporary file called "SAVED.ASC". This file is loaded automatically the next time the Congo is powered up.  Always make sure to save a backup to an external media like a USB device. It is your only protection against an internal hardware failure.		

# --System Info

**This chapter describes what is included in a Congo system.**

This chapter contains the following sections

- [System Info - Installation Guidelines](#)
- [System Info - Software & Update](#)
- [System Info - Console Specification](#)
- [System Info - Interface Specification](#)



## System Info - Installation guidelines

### **Equipment required to run this system**

- Congo console & power cable
- Monitor(s) & power cable
- Monitor signal cable(s)
- DMX512 or Ethernet cable(s) to external equipment

Connect the monitor signal cable(s) from the back of the console to the monitor(s), and then connect the power cables to a 230/110V outlet and start all units. After approximately 30 seconds you should have this start screen on monitor 1.



If not then check:

- Is each monitor is set for VGA IBM compatible mode?
- Is each monitor cable is properly connected?
- Is each monitor power on?

See [Power-up Procedure](#).

## System Info - Software & Update

We constantly update the Congo software with new features, bug fixes and changes. Check [www.avabcontrol.com](http://www.avabcontrol.com) periodically to see if there's a more recent version that the one you are currently working with.

Software versions come in two types: Beta release and Official release. Beta releases are test versions, which are not meant for use on real Plays. Once Beta releases are tested and proven reliable, they become official releases.



The AVAB Congo software is owned and manufactured by ETC.

### Version Information

You can see which version you have in About Congo (Browser >About Congo).



## Upgrade Software

Function	Action	Feedback
Download latest software	<a href="http://www.avabcontrol.com">www.avabcontrol.com</a>	Save the file "congo.msi" on a USB memory stick in a folder named "Software".
Put USB in Congo		-
Go to login screen	See <a href="#">Exit &amp; Shutdown</a>	You will see the login screen 
Go to Settings	Right Arrow	Settings is highlighted 
Open Settings	<b>MODIFY</b>	The Settings popup is opened*
Go to Software Update	<b>TAB</b>	Software Update is highlighted. <i>(If not, Congo cannot find the file congo.msi)</i>
Confirm Upgrade Software	<b>MODIFY</b>	You will get an installation wizard to confirm all steps.
End upgrade	<b>ESC</b>	Pressing ESC exits to the login - where you can start as usual.

\*The Settings popup



When you are done you can check [New Software Version Information](#).

## New Software Version information

This information is opened from the Browser >Media >Documentaion.

You should always read the Version Info for any new update of software. New functions may be added and old ones may have been changed. There are three headers:

Bugs = These are bugs that have been discovered and fixed.

Changes = Features that have changed from previous software.

Features = New features that have been added in this software.

## System Info - Console Specification

Console data	Explanation
Control channels	<i>Maximum 3072 channels, numbering from 1 to 4999.</i>
Outputs	<i>Maximum 6144 outputs.</i>
Output protocols	<i>DMX512, ETCNET2 over Ethernet</i>
Dimmers	<i>Free proportional patch, unlimited per channel number</i>
Displays	<i>Up to three Monitors, graphical LCD-Display, LED-Displays.</i>
Channel selection	<i>RPN and At Mode (Direct Mode)</i>
Dynamics	999
Channel groups	999
Presets	9999
Sequences & Chases	999
Main Theatrical Style Playback	1
Master Playbacks	40
Backup media	<i>Harddisk, USB Memory, Floppy Disk</i>
Power	110 V/230 V, 47...63 Hz, ca. 270 VA
Dimensions (W x D x H)	xx mm x xx mm x xx mm
Weight approx.	xx kg

## System Info - Interface Specification

Interfaces	Explanation
Monitor	<i>Three VGA interface standard</i>
Mouse or trackball	<i>USB Interface</i>
Keyboard	<i>Integrated plus USB Interface</i>
DMX512	<i>Output 1 &amp; 2 for DMX512. RDM ready.</i>
Ethernet	<i>RJ 45 (Twisted Pair)</i>
Printer	<i>USB interface</i>
MIDI	<i>In/Out/Thru (2 connectors)</i>
APN	<i>For external panels or Lynx fader wing</i>
Radio remote control	<i>Radio control, able to penetrate an "iron curtain"</i>
External trigger inputs	
Console lighting	<i>Connections for 2 goose neck lamps</i>

# --Quick Tour

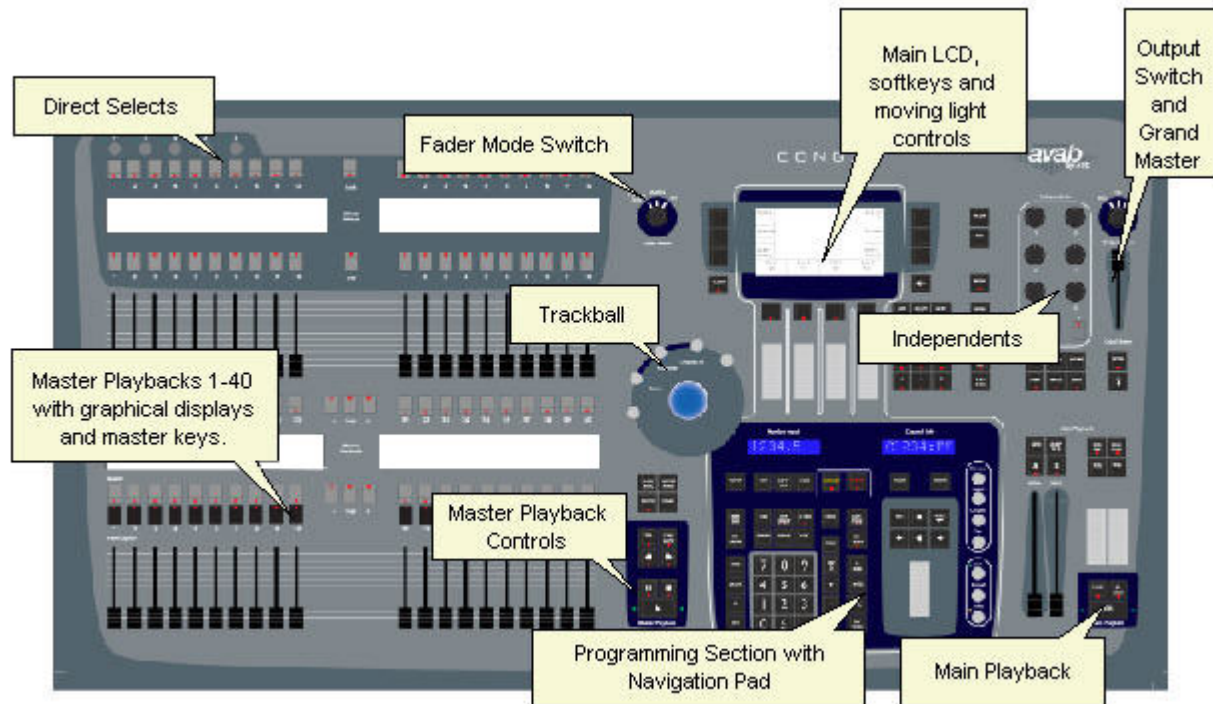
**This chapter describes the console facepanel, and basic software terminology.**

This chapter contains the following sections

- [Quick Tour - Congo Facepanel](#)
- [Quick Tour - Key Syntaxes](#)
- [Quick Tour - Software Terminology](#)
- [Quick Tour - Control Hierarchy](#)

## Quick Tour - Console Facepanel

The facepanel of Congo is divided into different sections.



**These sections are described in this chapter**

- [Facepanel - Programming Section](#)
- [Facepanel - Console Main Display](#)
- [Facepanel - Output Mode Switch](#)
- [Facepanel - Grand Master](#)
- [Facepanel - Trackball](#)

**These sections are described elsewhere in this manual**

- [Main Playback](#)
- [Master Playbacks](#)
- [Direct Selects](#)
- [Independents](#)



## Facepanel - Programming Section

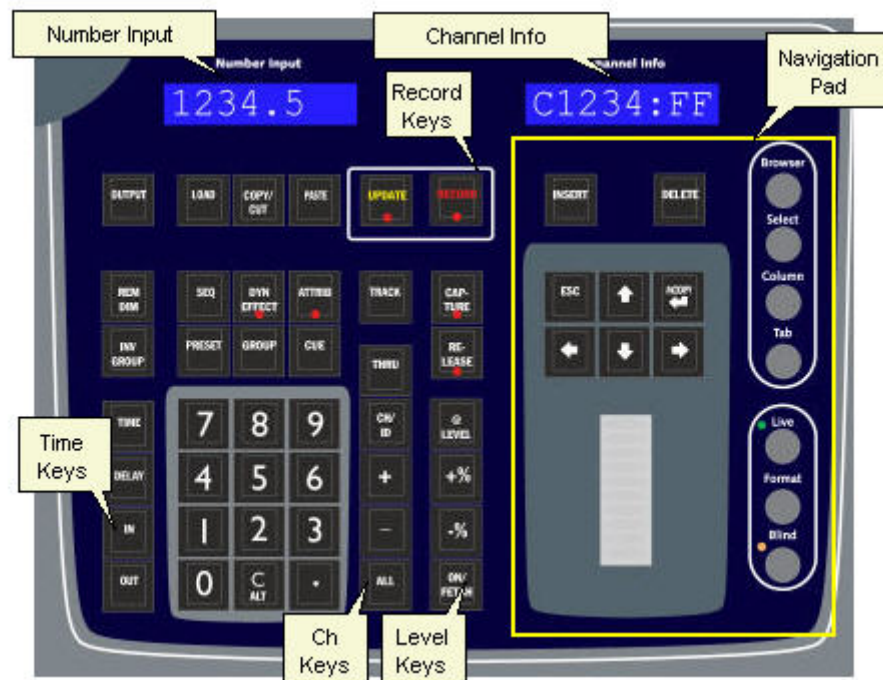
The keys in the programming section allow you to select and store channels, levels, moving light parameters and times.

### General Facts

- To the right of the numeric keypad there is a row with keys for selecting groups of channels, and to the right of that is a row with keys for setting levels in different ways.
- There are keys for setting times to the sequence in the Main Playback.
- There are keys for recording and updating the current preset.
- There are direct keys to open editors for play data (SEQ, PRESET, GROUP etc)
- The Navigation pad includes the round navigating keys, the arrow keys, the level wheel and ESC and MODIFY. See [Navigating In Congo](#)

### There are two small displays

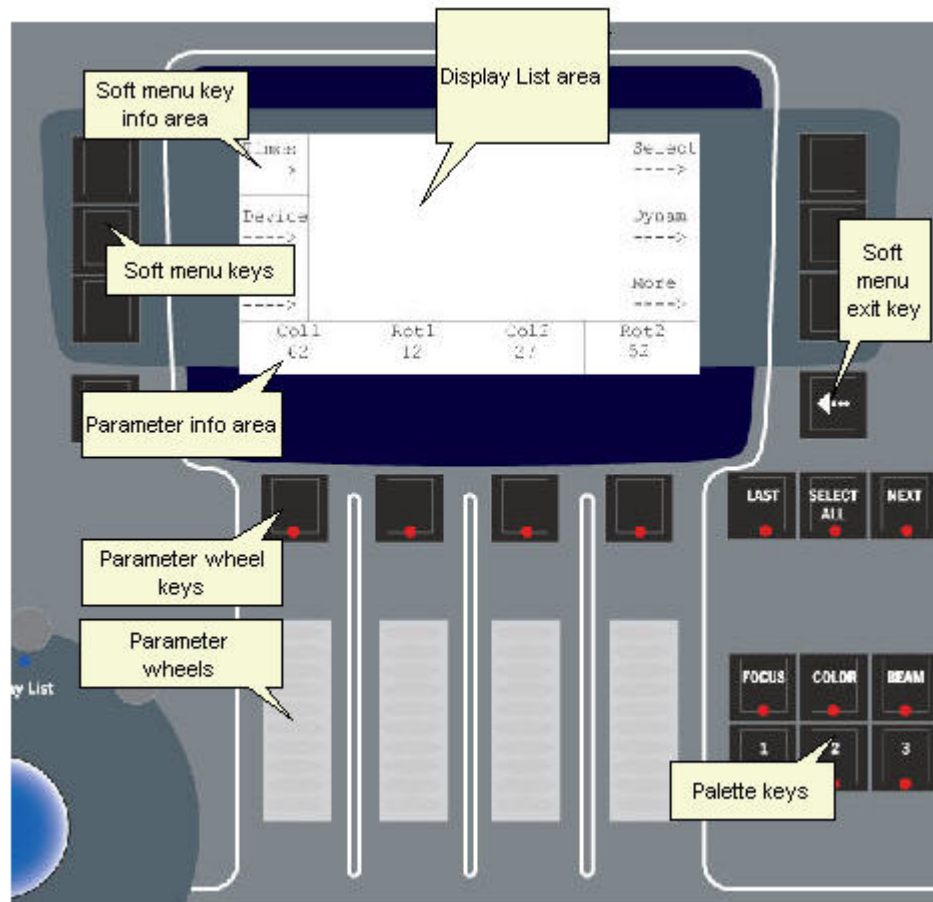
- Number Input (left) shows the last entered number input from the numerical keypad.
- Channel Info (right) shows the number and level of the last selected channel.



## Facepanel - Console Main Display

This section has three programming functions.

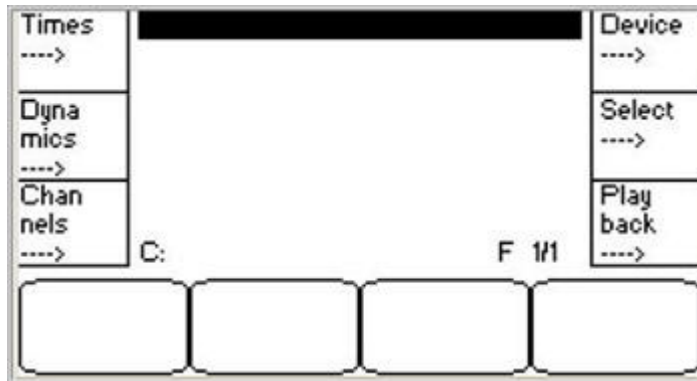
- The Display has soft menus with different sets of functions for the keys around it.
- There is a list section in the middle that is controlled by the Disp List function of the Trackball.
- The wheels can be used for any device parameter, as well as the trackball in Parameter mode.



## Main Display - Functions

The Soft Menu exit key (<-->) moves one step back up to the top menu level each time it is pressed.

These are the soft menu keys in the top menu



## Facepanel - Output Mode Switch

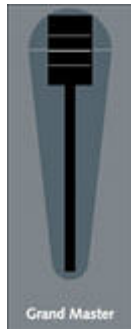
Output Mode is a three-position switch in the top right corner of the console facepanel.



Action	Feedback
B.O.	A Black Out of all outputs, except those controlled by the Independents in Exclusive mode. A red B.O. Indication will appear on the top of all screens.
ON	The mode for normal operation of the console
Freeze	The current output to stage is frozen. A blue FREEZE Indication will appear on the top of all screens. See <a href="#">Freeze Mode</a> .

## Facepanel - Grand Master

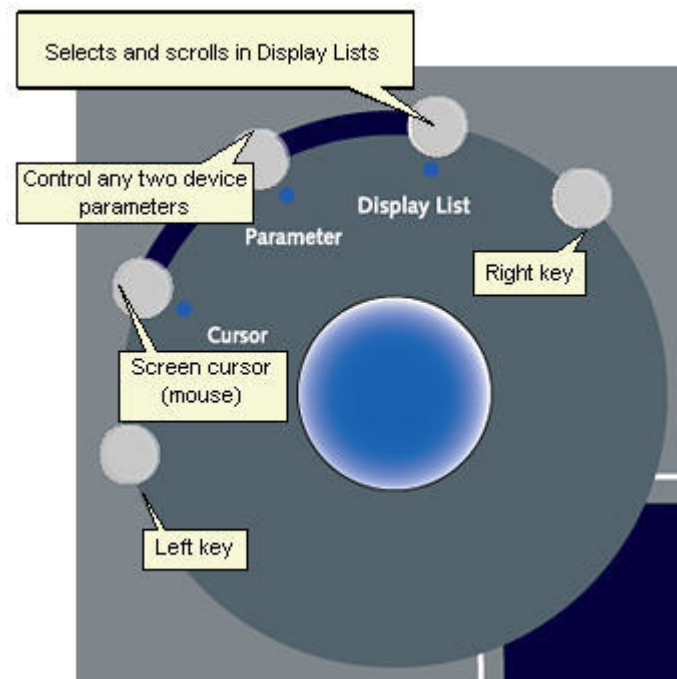
The Grand Master is located in the top right corner of the console facepanel.



Console	Feedback
Grand Master	Will scale the total output when below 100%, except channels controlled by the Independents in Exclusive mode. A red Level Indication will appear on the top of all screens.

## Facepanel - Trackball

The trackball has three different modes that are activated with the keys around it.



Key	Feedback
Cursor	The trackball controls the cursor in the software. This is mainly used for creating channel layouts.
Parameter	Controls Pan and Tilt of the selected Device(s)
Display List	Is used to select and scroll Display Lists. See <a href="#">Display Lists</a> .
<b>NOTE</b> It is possible to connect any USB mouse or trackball. See <a href="#">External Mouse Or Trackball</a>	

## Quick Tour - Key Syntaxes

There are mainly two kinds of keys in the console: keys with a fixed function, and the softkeys around the LCD Display.

Keys in the Congo can behave in the following ways

Function	Description	Example
Direct functions	<i>Will perform a function directly when it is pressed.</i>	GO and PAUSE in the Main Playback
Functions with a numerical prefix	<i>Requires a numerical entry (0-9) before it is pressed.</i>	(#) RECORD to store a preset with that number
Prefix functions (key combinations)	<i>Will change the function of another key if it is held down while pressing that key.</i>	Hold C/Alt and press PLAYBACK to clear the Main Playback

Some keys can combine all three ways of working. An example of this is the PRESET key

- Pressing PRESET with no numerical prefix opens the Preset List with all presets.
- A number (0-9) and PRESET opens the Preset List focused at that specific preset.
- A number (0-9) and holding PRESET while pressing a Master Key will load preset (#) to that Master.

### **NOTE**

**Hold down the ? (HELP) key, and press a key to jump to the page in the online manual that describes that function.**

## Quick Tour - Software Terminology

It can be easier to understand Congo if you are familiar with the basic terminology.

### **Channels (terminology)**

A Channel is the control handle used to call anything controlled by Congo. 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.

See [Channels](#)

### **Attributes (terminology)**

The control parameters of anything that isn't a dimmer, for example a moving device or a scroller, are called attributes. These are patched to the controls of Congo when the Template corresponding to that device is assigned to a control channel in the Patch.

See [Moving Devices](#)

### **Patch (terminology)**

The Patch is where you configure your outputs and devices. When you start a New play the default setting is 1:1.

See [Patch](#)

### **Output protocol (terminology)**

Congo supports a lot of output protocols through ethernet, and has two DMX512 outputs as well.

See [Input/Output Setup](#)

### **Groups (terminology)**

Frequently used combinations of channels can be stored in up to 999 Groups, for quick recall from the keypad or a remote focusing system.

See [Groups](#)

### **Presets (terminology)**

This is a specific "Avab" concept. Frequently used combinations of channels are stored in up to 9000 Presets (0.1-899.9), for playback in the Main or Master Playbacks. The combination of a Preset and 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.

See [Presets](#)

#### **Sequences (terminology)**

Lists of Presets are called Sequences, that can be crossfaded, move faded or lock faded in consecutive order from a Master or Crossfade Playback. A Sequence can be played back in Chase mode.

See [Sequence](#)

#### **Macros (terminology)**

A Macro is a combination of function keys stored together. Up to 999 Macros with 20 keys in each can be stored.

See [Macros](#)

#### **Dynamic Effects (terminology)**

Dynamic Effects are wave-forms that are applied to intensity or attribute parameters for a selection of channels to provide a Dynamic Effect, for example a circular movement or a ballyhoo.

See [Dynamics](#)



## Quick Tour - Control Hierarchy

Dimmer channels are treated as HTP, all other (moving device) parameters are treated as LTP. There is a Grand Master and Inhibit Masters that can subtract from the output.

### Playbacks - Introduction

Intensities and parameters can be played back from the following playbacks.

- The main playback and Live field
- The 40 master playbacks
- The Direct Selects
- The Independents
- The Blind field
- The Freeze field

The following functions can affect the playback of an intensity or parameter

- Capture Mode
- Exclusive Mode
- Inhibit Mode
- Balance Mode
- Park
- Scale

### Control Hierarchy - Master Playbacks

Light output from the Masters is added to the output on a Highest Takes Precedence basis. Device attributes are controlled by Last Takes Precedence.

A Master set to Inhibit Mode will subtract the assigned channels from the output similar to the function of the Grand Master.

See [Master Playbacks](#)

### Control Hierarchy - Main Playback

Light output from the Main Playback is added to the output on a Highest Takes Precedence basis. Device attributes are controlled by Last Takes Precedence.

The Main Playback consists of two faders, one for the active channels, and one for the channels in the next step. These also interact on a Highest Takes Precedence basis, with the addition that channels that exist in both faders exist in a third "invisible" fader that ensures all crossfades to be dipless. As a result you cannot get a blackout in the Main Playback with both faders at 0% unless this dipless function is inactivated by setting that step to Split.

See [Main Playbacks](#)

## Control Hierarchy - Highest Takes Precedence

You can output light from all Masters and the Main Playback at the same time. But what happens if you have faded in Preset 1 on the Main Playback and it's up on a Master too?

- The answer is that the highest level of a channel "takes precedence" whenever it's output from more than one place in the system.

If the "Highest" level for a channel is generated from one of the Masters it is displayed in yellow, if it is generated from the Main Playback it is white.

# --Quick Start to Programming

**This is a jump start if you want to get some lights on stage, store them and play them back from the Main and Master Playbacks.**

**If this is your first session with this product, we recommend you to browse this chapter - we guarantee it will save you more time than it takes to read.**

This chapter contains the following sections

- [Quick Start - Reset The System](#)
- [Quick Start - Conventional Lights](#)
- [Quick Start - Moving Devices](#)
- [Quick Start - Dynamic Effects](#)

## Quick Start - Reset The System

When you open a new (empty) Play, the patch is reset 1:1. This chapter is a checklist for resetting the frontpanel and checking the output.

This chapter contains the following sections


- [Reset The Console Facepanel](#)
- [Check The Output](#)

Before you start, make sure you have loaded a new (empty) Play. See [Load a New \(empty\) Play](#)


### Reset The Console Facepanel

To get light you have to make sure the console is reset properly.

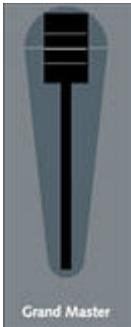
**There is an Output Mode switch in the top right corner of the console.**

Action	Console	Feedback
1. Enable output	Output Mode Switch to ON	


**The crossfaders are in the bottom right corner of the console.**

Action	Console	Feedback
2. Reset the crossfaders by moving the up and back down	A/B faders to bottom position	

The Grand Master is in the top right corner. It controls the total output of the console.

Action	Console	Feedback
3. <i>Reset the Grand Master</i>	Grand Master to 100%	

The Playback Fade mode switch is normally in Masters mode.

Action	Console	Feedback
4. <i>Reset the Playback Fader mode</i>	Fader Mode to MASTERS	

Check The Output

After loading a new Play the patch is set 1:1 and the output protocol will be set to DMX512 on both output connectors in the back of the console.

If you enter a number and move the level wheel, a dimmer should respond - providing there is one connected.

If nothing happens, see [Lights Are Not Responding](#).

## Quick Start - Conventional Lights

This is an introduction to working with conventional lights. You may want to complete the chapter [Reset The System](#) to reset the system first.

This chapter contains the following sections

- [Set Some Levels With The Wheel](#)
- [Record This To Master 1](#)
- [Record A Preset In The Main Playback](#)
- [Crossfade With Default Times](#)

### Set Some Levels With The Wheel

Press LIVE before you start the examples, to open the Live channel view and connect the channel controls to the A field.




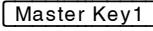
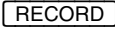
The wheel is in the Navigation Pad section of the console.



Function	Key	Feedback
1. Select channel 1 and set a level	<span>1</span> <span>Level Wheel</span>	Channel 1 is marked in orange as selected, and the level is set by the wheel.
2. Select channel 2 and set a level	<span>2</span> <span>Level Wheel</span>	Channel 1 is left at its level, channel 2 is selected and marked in orange. The level is set by the wheel.
3. Select both and set them to full	<span>ALL</span> <span>Level Wheel</span>	All channels with a level connected to the channel control are selected (1&2). The level is set by the wheel.

## Record This To Master 1


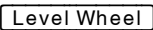

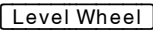


You can record the output of the selected channels to a Master Playback.

Function	Key	Feedback
1. Select the channels		All channels with a level in the channel control are selected. Should be 1 & 2 that you set a level to in the previous example.
2. Record to Master 1	  	Hold RECORD and press the grey key over Master 1. You will get a Record popup asking you to confirm.
3. Confirm		The preset is stored to Master 1, and the number is indicate in the graphical display over the master fader.
<b>NOTE</b> <b>The same light is still output from the Channel Control (A). Clear this by selecting all channels and fading to zero with the wheel.</b>		

Now test fading up Master fader 1. The channels should be fading up on stage and on the channel screen. Fade down the Master again so that there is no light on stage.

## Record A Preset In The Main Playback

Set some new levels and record as a Preset in the Main Playback.

Function	Key	Feedback
1. Select channel 3 and set a level	 	Channel 3 is marked in orange as selected, and the level is set by the wheel.
2. Select channel 4 and set a level	 	Channel 1 is left at its level, channel 4 is seleted and marked in orange. The level is set by the wheel.
3. Record as the next free Preset in the Main Playback		You will get a Record Popup asking you to verify your recording.
4. Confirm recording		The Preset is recorded as the next free Preset, in the Main Playback. Press PLAYBACK to see the Playback Tab.

## Crossfade With Default Times

You can fade to any Preset with GOTO using the default fade times (5 seconds)

Function	Key	Feedback
1. <i>Fade to Preset 0 (blackout)</i>	<input type="button" value="0"/> <input type="button" value="GOTO"/>	The light in the Main Playback is faded to zero in five seconds.
2. <i>Fade to Preset 2</i>	<input type="button" value="2"/> <input type="button" value="GOTO"/>	The light in the Main Playback is faded to the levels of Preset 2 in five seconds.
3. <i>Fade to Preset 1</i>	<input type="button" value="1"/> <input type="button" value="GOTO"/>	The light in the Main Playback is faded to the levels of Preset 1 in five seconds.



## Quick Start - Moving Devices

Any kind of device that isn't a dimmer, such as a scanner, a moving head or a scroller, has to be patched before you can use it.

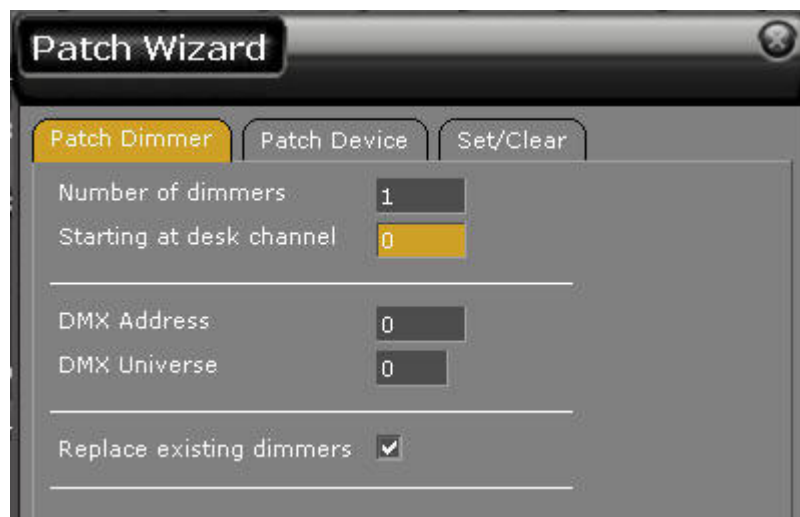
This chapter contains the following sections

- [Patch a Moving Device or scroller](#)
- [Test The Device](#)
- [Record a Moving Device To a Master](#)
- [Record a Moving Device in the Main Playback](#)

### Patch A Moving Device Or Scroller

A moving device or scroller has to be patched if you want to access it from the console.

1. *Open the Patch Wizard (BROWSER >Setup >Patch >Patch Wizard)*



2. Press TAB to select the Patch Device Tab



**Patch Wizard**

Patch Dimmer **Patch Device** Set/Clear

Number of devices 1

Type of device \*Mac 500 M2 ▼

Starting at desk channel 0

DMX Address 0

DMX Universe 0

Replace existing dimmers ☒

Scroller roll No Roll ▼

3. Enter the number of devices (# MODIFY).
4. Select type of device (MODIFY).
5. Select which desk channel you wish to start assign from (# MODIFY).
6. Enter the DMX address of the device (# MODIFY).
7. Enter the DMX universe for the device (# MODIFY).
8. Check "Replace existing dimmers" unless it is a scroller (MODIFY).
9. If it is a scroller you need to define a scroller roll. You can do this afterwards as well - just leave at No Roll.
10. Press EXECUTE (MODIFY)

The moving device is patched and shall now appear as a device in the channel view



## Test the Device

Function	Console	Feedback
1. Select the desk channel the moving device was assigned to.	# CH	This selects the device and connects all parameters to the controls of the console.
2. Set the device to full	@LEVEL @LEVEL	This should light the device. If there is some kind of ignition procedure you have to sort this out with the manual of that Device. If not, go back and check the address, DMX cable etc. You should, however, always be able to control pan and tilt if it has been set up properly (next step).
3. Activate Parameter mode for the trackball	PARAMETER	This connects pan and tilt to the trackball.
4. Move the device	Trackball	Moving the trackball should result in moving the device.

## Record A Moving Device to a Master

Function	Key	Feedback
1. Select the channel of the moving device(s)	# Level Wheel	The channel is marked in orange as selected.
2. Record to Master 1	RECORD & Master key 1	A popup will ask you to confirm that you are recording. The next free Preset number is automatically used.
3. Confirm recording.	RECORD	You have now recorded this to the Master.

You can test it like this

Function	Console	Feedback
1. Set the selected device to it's home position	<input type="text" value="0"/> <input type="text" value="FOCUS"/>	The zero palette will set the device to the default values of the template - straight down and open white.
2. Move master 1 from 0-100%.	Master 1	When you do so, the look you stored should be activated on stage (the Device attributes will not follow the fader down).

## Record A Moving Device In The Main Playback

Normally, only changed moving device parameters are recorded. Therefore it is recommended to save all parameters when you record a preset for the first time in a sequence.

1. Record all parameters of the selected devices to the next free preset (you will get a popup)

&



2. Choose Merge, then confirm by selecting MODIFY and pressing MODIFY. A message at the bottom of the screen will confirm that the attributes were recorded.

### NOTE

You can test by selecting the moving device and positioning in a new position, then crossfading to the preset you just recorded.

## Quick Start - Dynamic Effects






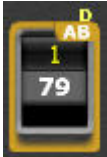
Dynamic Effects allow you to assign a Table (sine wave, saw wave etc) to an intensity or Moving Device parameter to create an Effect (fading up and down or moving in a circle).

This is a basic introduction to Dynamic Effects. See the [DYNAMICS](#) chapter for more details.


This chapter contains the following sections

- [Create a Dynamic Intensity Effect](#)
- [Control A Dynamic Effect](#)
- [Record A Dynamic Effect To A Master](#)
- [Stop A Dynamic Effect](#)
- [Record A Dynamic Effect For A Moving Device](#)


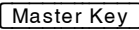


### Create a Dynamic Intensity Effect

Function	Console	Feedback
1. Select the LIVE view		The Live tab is selected and highlighted
2. Select channel 1		The number 1 will appear in the Numerical Input display
3. Set a level of around 50% with the wheel	Level Wheel	The level is set to around 50%
4. Activate Dynamic Effect 13 (smooth)	  	Dynamic Effect 13 (smooth) is started for channel 1. The Channel will start fading up and down. A small D over the channel will indicate that a Dynamic Effect is running. 

## Control a Dynamic Effect



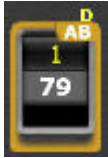


Function	Console	Feedback
1. Select the DYNAMICS soft key page in the Main Display		The soft key page for Dynamics is loaded to the main display of the console. Wheel 1 and 2 control size and rate.
2. Change rate and size with the wheel.	Wheel 1 and Wheel 2	The value of the wheels will change from 100% and affect the effect proportionally

## Record A Dynamic Effect To A Master





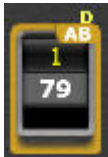
Function	Console	Feedback
1. Record to Master #	 	The recording popup will ask you to confirm
2. Confirm recording		The preset is recorded
3. Delete the effect from the Live view		The softkey Delete Dynamic will stop the effect from running in the Live view.
4. Fade it in on the Master	Move the Master Fader up	The Dynamic Effect will fade in/out with the fader.

## Stop A Dynamic Effect

To stop a Dynamic Intensity Effect you need to clear it. This is a shortcut.

Function	Console	Feedback
1. Select all channels with Dynamic Effects	 	Channel 1 is selected and highlighted 
2. Clear Dynamics	 	The Dynamics are cleared

## Create a Dynamic Device Effect

Function	Console	Feedback
1. Select the LIVE view		The Live tab is selected and highlighted
2. Select a moving device channel		The number # will appear in the Numerical Input display
3. Set a level of around 50% with the wheel	Level Wheel	The level is set to around 50%
4. Activate Dynamic Effect 1 (>circle)	 	Dynamic Effect 1 (>circle) is started for channel #. The Channel will start moving in circles. A small D over the channel will indicate that a Dynamic Effect is running.* 

\*If it is a moving head and pan and tilt are set to 50%, it will move in an eight.

See the previous pages in this chapter on how to control, record and stop the Dynamic Effect.

# --Navigating

You can control everything in the software from the Navigating pad.

Open and close windows, zoom, move tabs and edit in lists.



This chapter contains the following sections

- [Navigating - Introduction](#)
- [Navigating - Browser](#)
- [Navigating - Tabs](#)
- [Navigating - Channel Views](#)
- [Navigating - Lists](#)



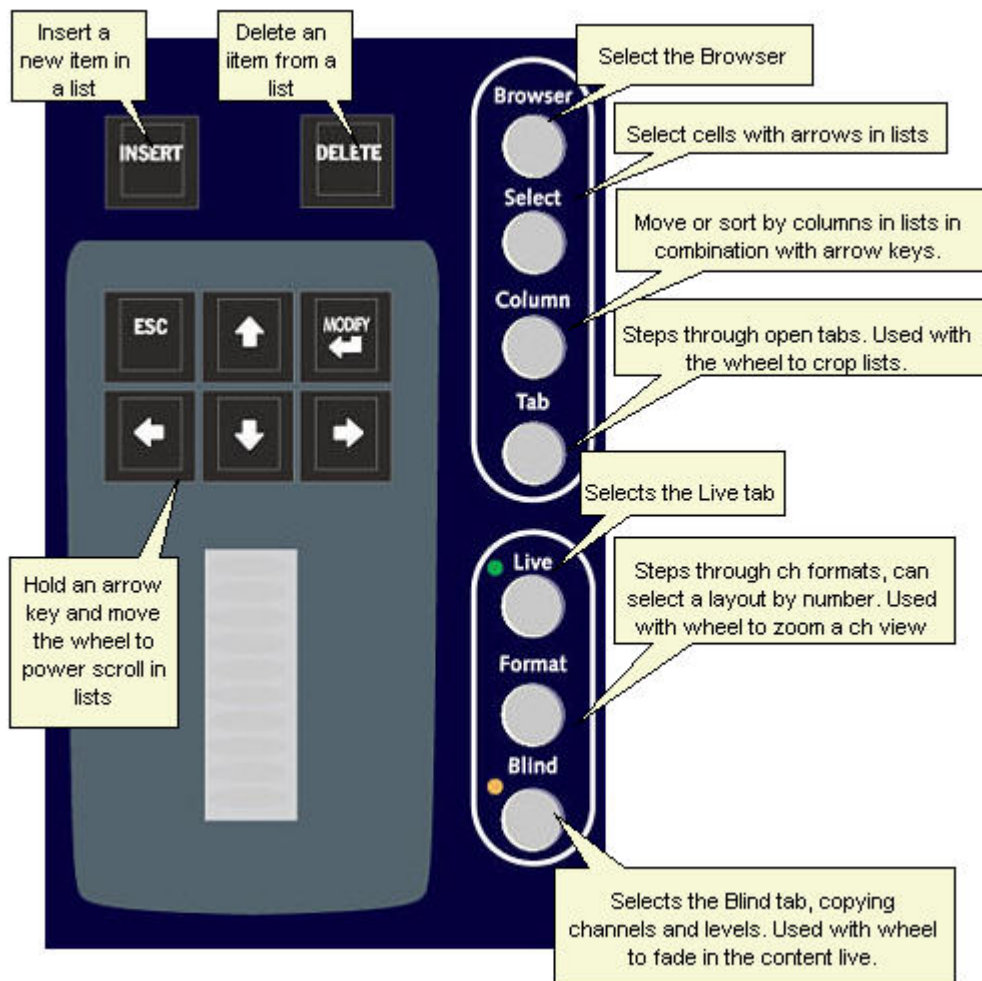
## Navigating - Introduction

The Navigation Pad is the centre of all programming in Congo. It makes it possible to open windows, move tabs, browse the software and zoom without the need to use a mouse or trackball.

The round navigation keys are described in other chapters.

- For BROWSER see [The Browser](#)
- For SELECT see [The Lists](#)
- For COLUMN see [The Lists](#)
- For TAB see [The Tabs](#)
- For LIVE see [The Live Tab](#)
- For FORMAT see [The Channel Views](#)
- For BLIND see [The Blind View](#)

### The Navigation Pad



## The ARROW Keys

The arrow keys are used for navigating in all directions. Hold an arrow key and use the level wheel to speed scroll in that direction.

## The ESC Key

The ESC Key is used to close Tabs and popups.

## The MODIFY Key

Modify is the "Enter" command wherever one is needed. It is used to enter values or toggle between options or open dropdown menus.

It is also used in combination with some keys for special functions.

- Hold MODIFY and press any playback key to open its editor
- Hold MODIFY and press certain keys to open an editor, for example CH to open the Channel List.

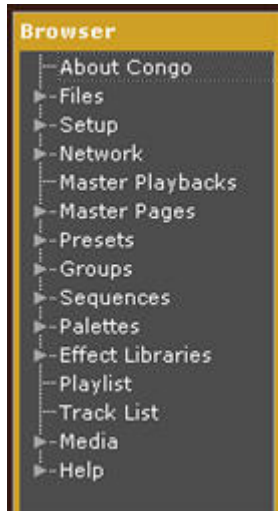
## The Level Wheel

The level wheel sets intensities. Together with the navigation keys it also has the following functionality.

- Hold any arrow key and use the level wheel to speed scroll in that direction
- Hold FORMAT and use the level wheel to zoom in channel views
- Hold BLIND and use the level wheel to add that content to the output
- Hold COLUMN and use the level wheel to scroll the column width

## Navigating - Browser

The Browser tab gives you a direct link to everything in Congo.



### Browser Controls

Action	Key	Feedback
Select the Browser	<b>BROWSER</b>	The Browser is focused. Press again to close or open it.
Move up/down in a list	<b>Arrow Keys</b>	Up and down arrows move in all open lists.
Open a sublist	<b>Right Arrow</b>	The right arrow opens a sublist under a closed node.
Jump to top and close a sublist	<b>Left Arrow</b>	The left arrow jumps to the top of a sublist, and then closes that node if pressed again.
Open an editor	<b>MODIFY</b>	Opens the editor of the object selected in the Browser.
Resize the Browser	<b>BROWSER</b> & <b>Wheel</b>	Moving the wheel while holding BROWSER will resize the Browser area.

## Browser Functions

Use MODIFY and LOAD to activate selected items from the lists in the Browser.

Action	Key	Feedback
Open an editor	MODIFY	Opens the editor of the object selected in the Browser.
Load a Group	LOAD	Loads the selected Group to the active Channel View.
Activate a palette	LOAD	Activates palette # for the selected channel(s).
Load a sequence to the main playback	LOAD	Loads the selected sequence to the Main Playback
Load a sequence to playback #	LOAD & Master Key	Loads the selected sequence to Playback #
Load a Preset to Playback #	LOAD & Master Key	Loads the selected Preset to Playback #
Activate a Dynamic Effect	LOAD & Master Key	Activates Effect library # for the selected channel(s).

## Navigating - Tabs

All data and editors are opened in a tab.

- There are direct keys for most tabs (PRESET, PLAYBACK etc)
- Tabs can also be opened from the Browser
- Two tabs are never closed: LIVE and MAIN PLAYBACK



### Navigating The Tabs

Function	Key	Feedback
Toggle open tabs	<span>TAB</span>	Steps through all open tabs in all screens
Select Tab #	<span>#</span> <span>TAB</span>	Selects the tab with that number
Split view	<span>TAB</span> <span>&amp;</span> <span>Down Arrow</span>	First press creates a vertical-, second press a horizontal split.
Reset view	<span>TAB</span> <span>&amp;</span> <span>Up Arrow</span>	Exits a split view.
Move a Tab	<span>TAB</span> <span>&amp;</span> <span>Right Arrow</span>	Moves the selected tab to the right (or left) screen.
Close Tab	<span>ESC</span>	Closes all tabs except Live and Playback.

## Navigating - Channel Views

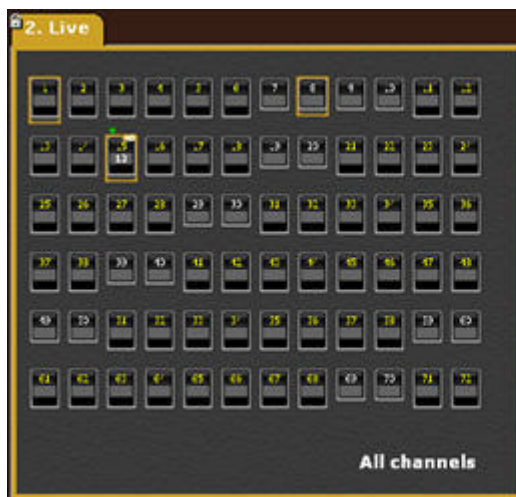
The Channel Views are easy to navigate with the navigation keys.

- Hold FORMAT and use the level wheel to zoom
- Press FORMAT to toggle channel formats
- Enter a number and press FORMAT to select a Channel Layout
- Hold CH and press Arrow keys to pan



### Channel View Zoom

Hold FORMAT and use the wheel to Zoom in/out.



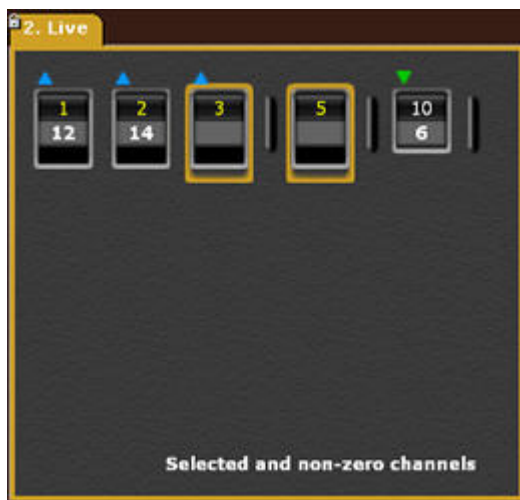
## Channel View Formats - Selected

Only selected channels are shown. (Pressing FORMAT toggles through the formats.)



## Channel View Format - Selected and non-zero

Selected and non-zero channels are shown. (Pressing FORMAT toggles through the formats.)



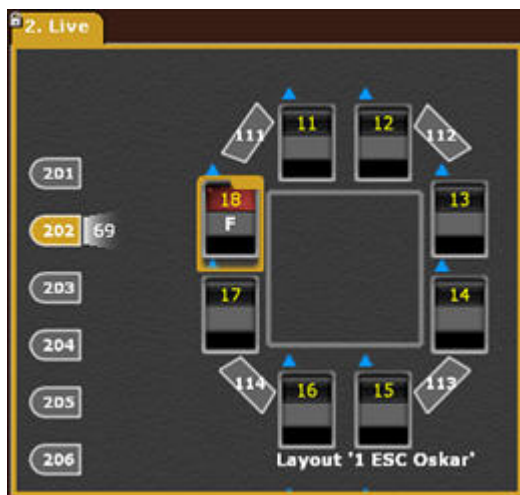
## Channel View Format - Selected And Captured

Selected and captured channels are shown. (Pressing FORMAT toggles through the formats.)



## Channel View Format - Layout

The last selected Channel Layout is shown. (# FORMAT selects Layout #.) If there are no Layouts stored in the show, this screen will not appear.





## Navigating - Lists

All editors are lists. They behave very similar to a standard spreadsheet.

- You can edit all cells which are not dimmed
- You can edit multiple cells
- You can sort information by column
- You can move columns
- You can resize a list by holding TAB and using the wheel

Preset	Text	Channels	Attributes	Dynamics	Mask	F-Time	C-Time	B-Time	F-Delay	C-Delay	B-Delay
1.0		0	0		F C B	100 %	30	30	30	30	100 %
2.0		0	0		F C B	3.0	3.0	3.0	3.0	3.0	100 %
3.0		0	0		F C B	100 %	100 %	100 %	100 %	100 %	100 %
4.0		0	0		F C B	100 %	100 %	100 %	100 %	100 %	100 %
5.0	ldöaskfjöldskjfr	0	0		F C B	100 %	100 %	100 %	100 %	100 %	100 %
6.0		45	0		F C B	3.0	3.0	3.0	3.0	3.0	100 %
11.0	rubber1	7	7		F C B	100 %	100 %	100 %	100 %	100 %	100 %
12.0	rubber2	7	7		F C B	100 %	100 %	100 %	100 %	100 %	100 %
13.0	rubber3	7	7		F C B	100 %	100 %	100 %	100 %	100 %	100 %
21.0	attr+dynam	7	7	1	F C B	100 %	100 %	100 %	100 %	100 %	100 %
22.0	attr+dynam	7	7	1	F C B	100 %	100 %	100 %	100 %	100 %	100 %
110.0		1	0		F C B	***	***	***	***	***	***
110.1		1	0		F C B	***	***	***	***	***	***

### Navigating In Lists

Function	Key	Feedback
Step or scroll around	Arrows and wheel	Use arrow keys, or hold an arrow key and use the level wheel to speed scroll in any direction
Jump to first cell	HOME (keyboard)	Jumps to the first cell in the selected column
Jump to last cell	END (keyboard)	Jumps to the last cell in the selected column
Scroll one page up	PAGE UP (keyboard)	Scrolls one page up
Scroll one page down	PAGE DOWN (keyboard)	Scrolls one page down

## Editing In Lists

Function	Key	Feedback
Edit the selected cells	MODIFY	Entering a value and press MODIFY. If it is a dropdown just press MODIFY. If it is a text cell, press MODIFY, enter a text and press MODIFY to exit.
Insert a new item	INSERT	Inserts a new item with the next free number. If you enter a number first, the inserted item will have that number.
Delete selected item(s)	DELETE	Deletes the selected items (cannot be undone).
Select all items in a column	COLUMN	Selects all cells in a column from the current cell down.*
Select multiple cells	SELECT & Arrow keys	Hold Select and use Right and Down arrows to select multiple cells.*
Select multiple cells in any column or order	CTRL and Click (Keyboard & trackball)	Hold CTRL and use the cursor to select multiple cells.*

\* When you enter a value and press MODIFY it is applied to all selected cells.

## Sort By Column

Function	Key	Feedback
Sort from low to high	COLUMN & Up Arrow	The list is sorted by this column from low to high.*
Sort from high to low	COLUMN & Down Arrow	The list is sorted by this column from high to low.*

\* These changes are temporary, they will be lost if the tab is closed and opened again.

## Change The List View

Function	Key	Feedback
Move a column	<div>COLUMN</div> & <div>Side Arrows</div>	The selected column is moved left/right depending on which arrow you press*
Resize the list part	<div>TAB</div> & <div>Wheel</div>	The list part is resized*

\* These changes are temporary, they will be lost if the tab is closed and opened again.

## --Live

**This chapter contains general information about selecting and controlling channels and devices live.**

This chapter contains the following sections

- [Live - Introduction](#)
- [Live - Live Tab](#)
- [Live - Playbacks](#)

## Live - Introduction

Press LIVE to view and control all channels and Devices live. The channel controls will be mapped to the A field of the Main Playback.

### **HTP**

Add any channel to the output by selecting it and raising the level. It is piled HTP on top of the output, from the A field of the main playback.

### **Capture Mode**

Subtract any channel, regardless of where it is output from, with Capture Mode. Capturing a channel is similar to using a programmer, which means that the channel has to be released back to the playbacks or it will stay at the captured level. See [Capture Mode](#).

### **Channel Control**

Channel Controls can be connected directly to any playback. See [Live Editing In Playbacks](#)

## Live - Live Tab

The Live Tab (press LIVE) focuses the Live tab.

The Channel View in the Live Tab shows all channel levels, no matter where they are output from. If you add channels they will be output from the Active field of the Main Playback (A). If you want to subtract channels that are output from any other Playback, activate CAPTURE Mode. See [Capture Mode](#).



**NOTE**  
The Live Tab cannot be closed.

## Live - Playbacks

If you select a Playback for editing it will be live if the playback is over 0%. In the main playback, the A field is normally at 100% and the B field at 0%.

Action	Key	Feedback
Edit a Master	<div>MODIFY &amp;</div> <div>Master Key</div>	The Master editor is opened positioned at this master, and the channel controls are mapped to this master.
Edit A	<div>A</div>	The A channel view tab is opened and the channel controls are mapped to the A field.
Edit B	<div>B</div>	The B channel view tab is opened and the channel controls are mapped to the B field.
Edit Live (A)	<div>LIVE</div>	The Live channel view tab is opened and the channel controls are mapped to the A field.

# --Blind

**This chapter contains information about controlling channels and devices blind, leaving levels on stage unaffected.**

This chapter contains the following sections

- [Blind - Introduction](#)
- [Blind - Blind Tab](#)
- [Blind - Freeze Mode](#)
- [Blind - Blind Output](#)



## **Blind - Introduction**

Press BLIND anytime you want to control channels and devices blind. All channel controls will be mapped to the BLIND field.

### **General Features**

- If you press BLIND when you are in Live, the channels in Live are automatically copied to Blind.
- Hold BLIND and use the level wheel to pile the content of Blind HTP to the output.
- Load the content of any playback to Blind, and load the content of Blind to any playback.
- Record the content of Blind

## Blind - Blind Tab

The Blind Tab (BLIND) allows you to edit any information without affecting the output.



### The Blind Tab - Functions

Action	Key	Feedback
Activate the Blind tab	<b>BLIND</b>	If closed, the Blind tab is opened, and the channels in the A field are copied into it. If already open the Blind tab is selected. All Channel controls are mapped to Blind.
Fade in Blind	<b>BLIND</b> & <b>Wheel</b>	The content of Blind is piled on top of the rest of the output.
Load Blind to A	<b>BLIND</b> & <b>A</b>	The content of Blind is loaded to the A field. It is immediately output.
Load Blind to B	<b>BLIND</b> & <b>B</b>	The content of Blind is loaded to the B field. Press GO to fade in.
Load Blind to a Master	<b>BLIND</b> & <b>Master Key</b>	The content of Blind is loaded to that Master Playback.
Record Blind	<b>RECORD</b>	A popup will ask you to confirm that the content of Blind is recorded to the next free preset.

## Blind - Freeze Mode

When the Output Mode switch is set to FREEZE, the output is "frozen" and will remain static until the switch is set back to ON.



The output or Freeze is loaded to the A field of the Main Playback. The Sequence will also reposition to where it was when you activated Freeze.

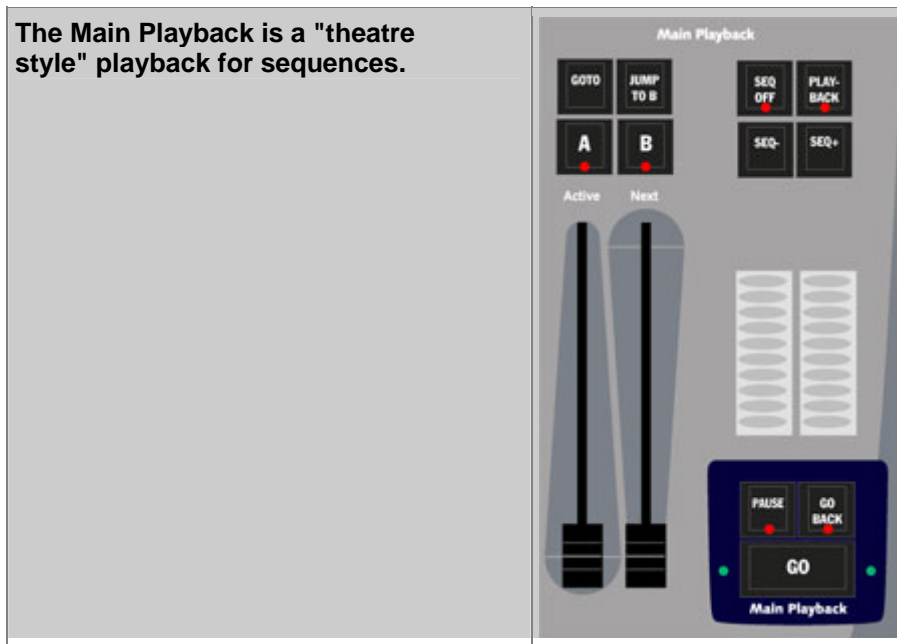
Action	Feedback
Activate Freeze	All outputs will be "frozen", including moving devices. You can work with all functions without affecting the output*
Deactivate Freeze	The "frozen" output of Freeze is loaded to the A field of the Main Playback**

\*The complete output, including all Master Playbacks is loaded to Freeze.

\*\*If all Masters are down when you exit Freeze, there is no change in the output on stage.

# --Main Playback

The Main Playback is a "theatre style" playback for sequences.



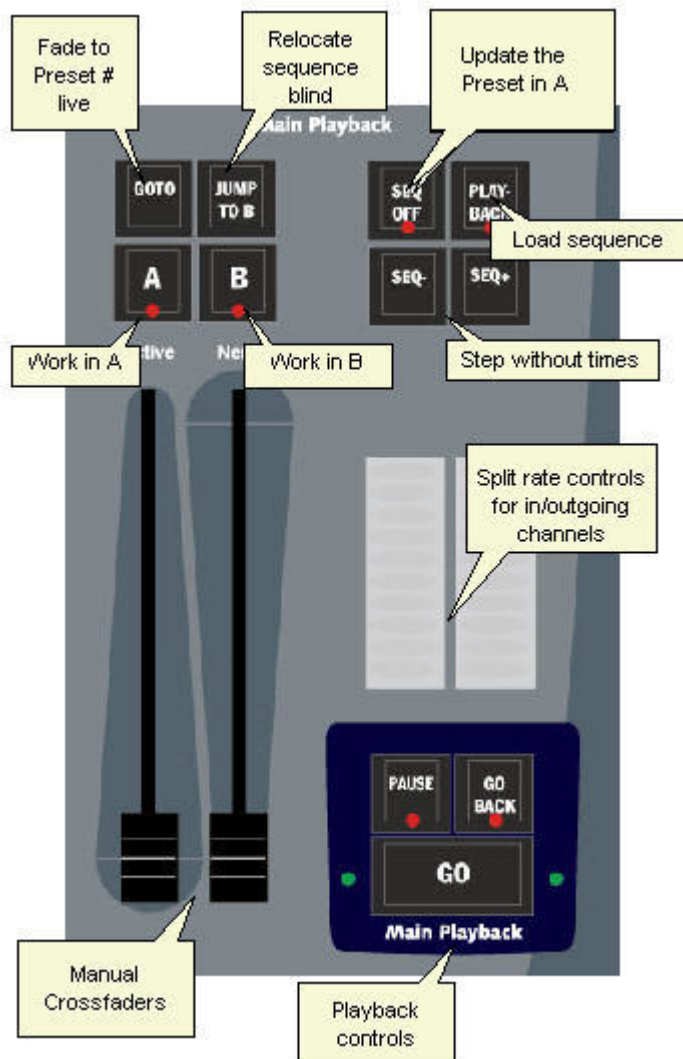
This chapter contains the following sections

- [Main Playback - Introduction](#)
- [Main Playback - Manual Crossfade](#)
- [Main Playback - Transport Keys](#)
- [Main Playback - Edit Keys](#)
- [Main Playback - Time Settings](#)
- [Main Playback - Default Settings](#)

## Main Playback - Introduction

The Main Playback can play back a Sequence, a chase or random presets. It has the following controls.

- Manual crossfaders.
- Transport keys for timed fades with default or preprogrammed times.
- Split speed controls for in and outgoing channels.
- SEQ OFF for disconnecting the sequence (to improvise).
- PLAYBACK for assigning sequences and selecting the Main Playback Tab.



## Main Playback - Default Settings

Hold SETUP and press PLAYBACK to open these settings.



These are the default settings for the functions of the Main Playback.

Setting	Feedback
<u>Modify Sequence</u>	When active, this mode will suppress all wait times and master links.
<u>Build Sequence</u>	When active (default) all presets recorded in A (Live) will be added to the sequence.
<u>Followon</u>	Wait times will be treated as Followon times, counting from GO instead of from the completion of the last fade.
<u>GOTO jumps to</u>	The default is PRESET, you can set it to STEP.
<u>Crossfade both ways</u>	The default setting for a manual crossfade is upwards. You can set it both ways.

## Main Playback - Manual Crossfades

Move the crossfaders from the down position to the up position to perform a manual crossfade. When both reach the top position the crossfade is terminated and the next sequence step is advanced.

### **General Facts**

- Take over a timed fades manually.
- Press GO during a manual fade.
- Set the crossfaders to fade in both directions in the Settings for the Playback (Hold SETUP and press PLAYBACK).
- When you make a manual crossfade to a step with attributes, the attribute values that are GoOnGo will follow the movement of the B-fader.

## Main Playback - Transport Keys

These are the transport keys of the Main Playback.

Function	Key
Start a crossfade	GO
Start a new crossfade during an ongoing crossfade	GO
Pause a crossfade	PAUSE
Crossfade to the previous step	GO BACK
Reverse an ongoing crossfade	GO BACK
Step (without times) to the next step	SEQ+
Step (without times) to the previous step	SEQ-
Open the GOTO list*	GOTO
Crossfade to any recorded preset on the stored or default times	# GOTO
Relocate the sequence from preset # in B (Next)	# JUMP TO B

\*See [The GOTO List](#)

### NOTE

Device parameters are executed as LTP, independent of the playback that once started them. This means that you cannot use (for example) PAUSE to stop attributes.

## The GOTO List

The GOTO List is a list of all Presets in the Sequence of the Main Playback. Open by pressing GOTO.

Select any preset with the arrow keys and press GOTO to fade to that preset.





## Main Playback - Edit Keys

These are the editing and mode keys of the Main Playback.

Function	Key
Connect the Active (A) field to the channel controls, and open the A Tab	<span>A</span>
Connect the Next (B) field to the channel controls, and open the B Tab	<span>B</span>
Load a sequence to the Main Playback	<span>#</span> <span>PLAYBACK</span>
Clear the Main Playback	<span>C/Alt</span> <span>&amp;</span> <span>PLAYBACK</span>
Activating the Playback Tab connects the A field to the channel controls	<span>PLAYBACK</span>
Update the Preset in A	<span>UPDATE PB</span>

## Main Playback - Time Settings

Hold SETUP and press TIME to open the Settings.



Setting	Feedback
<u>Set times to</u>	Times are set to the step in B (default). You can set them to the step in A as well.
<u>Time: Use % as default</u>	Times for FCB will be set in % of the main fade time.
<u>Default Go time</u>	The default time is set to 5 seconds.
<u>Default Go Back time</u>	The default time is set to 2 seconds.

## Main Playback - Default Settings

Hold SETUP and press PLAYBACK to open these settings.

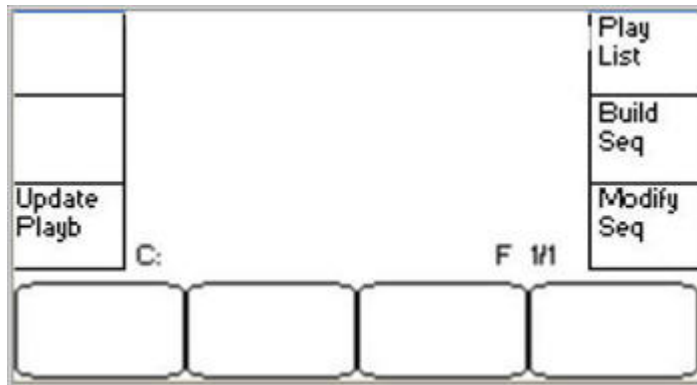


These are the default settings for the functions of the Main Playback.

Setting	Feedback
<u>Modify Sequence</u>	When active, this mode will suppress all wait times and master links.
<u>Build Sequence</u>	When active (default) all presets recorded in A (Live) will be added to the sequence.
<u>Followon</u>	Wait times will be treated as Followon times, counting from GO instead of from the completion of the last fade.
<u>GOTO jumps to</u>	The default is PRESET, you can set it to STEP.
<u>Crossfade both ways</u>	The default setting for a manual crossfade is upwards. You can set it both ways.

## Main Playback - Soft Key Page

The Playback Soft Key Page is selected with the soft key PLAYBACK in the Main Display of the console.



These are the functions

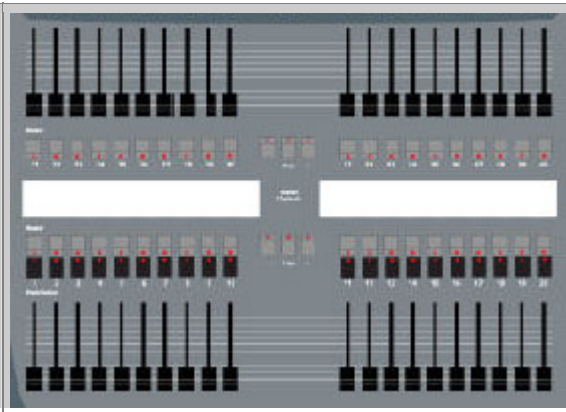
Function	Softkey	Feedback
Playlist mode	PLAYLIST	The Playlist is activated. See <a href="#">The Playlist</a> .
Disable auto-create sequence in Main Playback	BUILD SEQ	When on, (default) each preset recorded in Live or A will be inserted into the current sequence.
Suspend auto-times in Main Playback	MODIFY SEQ	When on, links and wait/followon times are not activated during playback.



# --Master Playbacks

There are 40 Master Playback faders.

Each of them can play back anything from a single channel to a complete sequence.



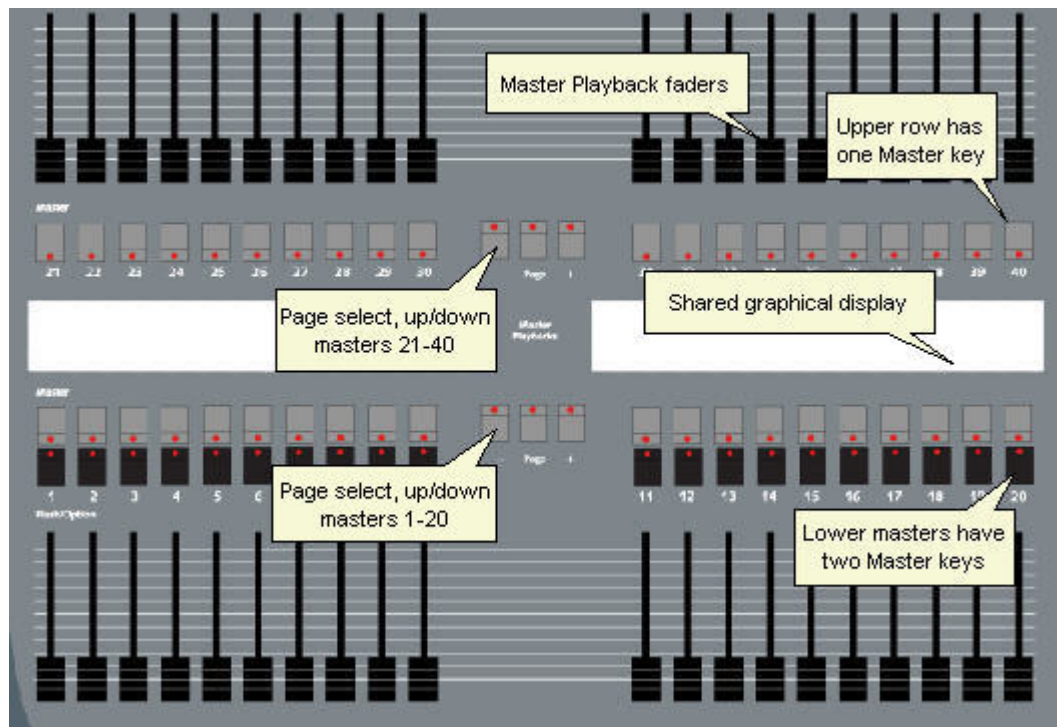
This chapter contains the following sections

- [Master Playbacks - Introduction](#)
- [Master Playbacks - Playback Keys](#)
- [Master Playbacks - Fader Mode Switch](#)
- [Master Playbacks - Load/Clear/Modify](#)
- [Master Playbacks - Start Fades](#)
- [Master Playbacks - Channel Selection](#)
- [Master Playbacks - Channels](#)
- [Master Playbacks - Presets](#)
- [Master Playbacks - Sequences](#)
- [Master Playbacks - Chase](#)
- [Master Playbacks - Groups](#)
- [Master Playbacks - Flash Mode](#)
- [Master Playbacks - Solo Mode](#)
- [Master Playbacks - Macros](#)
- [Master Playbacks - Dynamics](#)
- [Master Playbacks - Channel Layouts](#)
- [Master Playbacks - Palettes](#)
- [Master Playbacks - Rate](#)
- [Master Playbacks - Times](#)

## Master Playbacks - Introduction

Each fader has the following controls.

- A Master key to load content and select channels.
- Masters 1-20 have a Flash/Option key.
- Master content and modes are shown in the master displays between the master rows.



## Master Playbacks - Content

You can play back almost any kind of content from a Master Playback. The content can be loaded directly or from the Master List. See [Load/Clear](#).

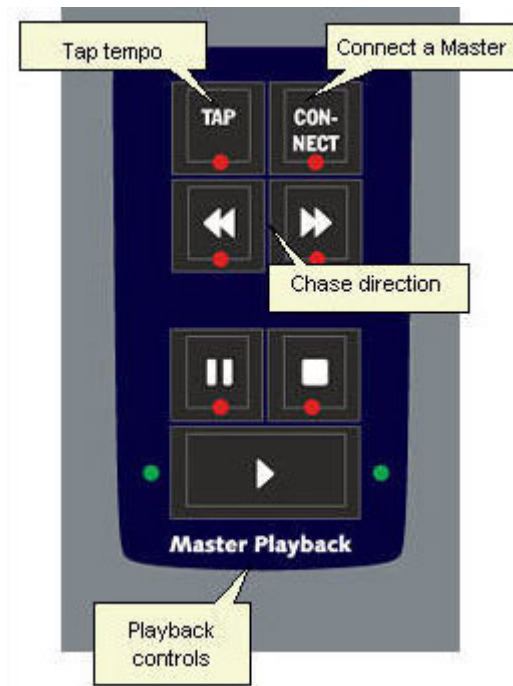
Content	Function
Channel(s)	Single channels or several channels as an unrecorded Grp.
Preset	Play back Preset from fader, select channels with Master key. Flash with Flash key.
Group	Play back Groups from fader, select channels with Master key. Flash with Flash key.
Sequence	Play back Sequences. The Master key is Go. The fader is a Grand Master for that Sequence. Connect to the Master Playback for more functions.
Chase	Play back Chases. The Master key is Go. The fader is a Grand Master for that Sequence. Connect to the Master Playback for more functions.
Dynamic Effect	Activate a Dynamic Effect for the selected channels.
Palette	Activate any kind of Palette (F, C, B, All) for the selected channels.
Moving Device Parameter	Any parameter of a moving device can be assigned to a Master Playback*

\*Can only be done from the Master List.



## Master Playbacks - Playback Keys

You can connect any master to the Master Playback controls to be able to pause, stop, reverse and start the chase or sequence in that master. You can also set a tempo by tapping the TAP key.



### Master Playback - Functions

Function	Key	Feedback
Start a chase (or crossfade)	GO	Starts a stopped Chase or a Crossfade for a Sequence
Pause a chase (or crossfade)	PAUSE	Pauses a running Chase or Crossfade
Reverse a fade	STOP	This key is the equivalent of GO BACK to the previous step of the Main Playback
Step without times	<< or >>	These keys are the equivalent of SEQ+ and SEQ- in the Main Playback.
Connect a Master Playback	CONNECT & Master Key	Start a chase (or crossfade)
Set a tap tempo to a Master Playback or Page.	TAP & Master Key	Hold TAP and press at least twice on a Master or Page key to set a BPM tempo.

## Master Playbacks - Fader Mode Switch

The Switch with three positions next to the masters sets the 40 Master playbacks into either of three modes.



Position	Function
<u>Channels Only</u>	Masters 1-40 will control the first 40 intensities in the system. Select range of channels with the Direct Selects.
<u>Masters</u>	The normal position. Masters 1-40 are Masters 1-40.
<u>Jam</u>	A special mode for busking a show with moving devices. See Jam Mode.

## Master Playbacks - Master Editor

You can insert and delete content in Masters, and change Flash modes in the Master Editor (MODIFY & Master Key).



### Master Editor - Columns & Functions

Column	Input	Function
<u>Master</u>		The number of this Master, cannot be edited.
<u>Content Type</u>	<input type="button" value="MODIFY"/>	Press MODIFY to open a dropdown with choices of content.
<u>Content</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets the number # for the content type.
<u>In</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Used by <i>START</i> , <i>Flash on time</i> , <i>Use Master Times</i> and <i>Master links</i> . If only an In time is set, it will function as an Out time as well.
<u>Wait</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Used by <i>START</i> and <i>Master links</i> . It is how long the master will stay up before the Out time fades out.
<u>Out</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Used by <i>START</i> and <i>Master links</i> . It is how fast the master fade out after a Wait time.
<u>Flash mode</u>	<input type="button" value="MODIFY"/>	Toggles Flash mode on/off.
<u>Flash level</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets flash level #
<u>Solo Fade</u>	<input type="button" value="MODIFY"/>	Toggles Solo mode on/off. See <a href="#">Solo Mode</a> .
<u>Page Time</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets a time in % that relates to Master Page times. See <a href="#">Master Page Times - Page Time</a> .

## Master Playbacks - Load/Clear/Modify

Function	Keys	Feedback
Clear a Master Playback	<input type="button" value="C"/> & <input type="button" value="Master Key"/>	The content of the Master Playback is cleared.
Clear all Master Playbacks	<input type="button" value="C"/> & <input type="button" value="PAGE"/>	The Master Playbacks are cleared.
Load an item from the Browser	<input type="button" value="LOAD"/> & <input type="button" value="Master Key"/>	Item # is loaded to the Master Playback.
Open the editor for a Master Playback	<input type="button" value="MODIFY"/> & <input type="button" value="Master Key"/>	The editor for the content of Master # is opened.

## Master Playbacks - Start Fades

You can start timed fades in Master Playbacks manually. If there is no fade time the Master will cut to 100% or 0% from where it is.

Function	Keys	Feedback
Start Fade	<div>START &amp;</div> <div>Master Key</div>	Master # will fade to 0/100% on the Master Fade Time*
Start a fade to a specific level	<div># START &amp;</div> <div>Master Keys</div>	Master # will fade to level #

\*it will fade up if is it is down, and down if it is up. If it has Up-Wait- Down times, it will make a complete fade up-wait-down.

## Master Playbacks - Channel Selection

Press a Master key to select all channels in the Preset or Group of that Master.

Function	Keys	Feedback
Select channels in Master #	<span>Master Key</span>	All channels in Master # are selected in the Channel Control.
Select all channels in Master # with a level in the Channel Control	<span>ALL</span> <span>&amp;</span> <span>Master Key</span>	All channels in Master # with a level in the Channel Control are selected.
Add channels in Master #	<span>+</span> <span>&amp;</span> <span>Master Key</span>	All channels in Master # are added to the selection in the Channel Control.
Subtract channels in Master #	<span>-</span> <span>&amp;</span> <span>Master Key</span>	All channels in Master # are subtracted from the selection in the Channel Control.

## Master Playbacks - Channels

You can load and play back single channels

Function	Keys	Feedback
Load channel(s) to Master #	<div>PRESET</div> & <div>Master Key</div>	The selected channel(s) with a level loaded with that level to the Master Playback
Load channels one by one from Master #	<div>CH</div> & <div>Master Key</div>	The selected channels are loaded one by one to the Master Playbacks starting at the first one pressed.

## Master Playbacks - Presets

A Preset is played back with intensities, attributes and dynamic effects. Press the Master Key to select all channels in the Preset as a group.

Function	Keys	Feedback
Load Preset # to a Master Playback	# PRESET & Master Key	Preset # is loaded to the Master Playback. The number and name are shown in the master display.
Load all recorded Presets from Preset # to the Master Playbacks	# PRESET & Master Keys	Hold Preset and keep pressing new Master keys to load the next stored Preset.
Record selected channels as Preset # to a Master Playback	# RECORD & Master Key	You will get the recording popup asking you to confirm this.
Record selected channels as the next free Preset to a Master Playback	RECORD & Master Key	You will get the recording popup asking you to confirm this.
<b>NOTE</b> <b>If you record a preset with dynamics to a master, the size of the dynamics will follow the master fader.</b>		



## Master Playbacks - Sequences

Hold MODIFY and press the Master Key to open the editor for that Sequence.

Function	Keys	Feedback
Load Sequence # to a Master Playback	# SEQ & Master Key	Sequence # is loaded to the Master Playback. The number and name are shown in the master display.
Load all recorded Sequences from Sequence # to the Master Playbacks	# SEQ & Master Keys	Hold SEQ and keep pressing new Master keys to load the next stored Sequence.
Start crossfade to the next step	Master Key	The Master Key now works exactly like the GO key in the Main Playback.
<b>NOTE</b> You can load a Sequence directly from the Sequences List as well. See <a href="#">Sequences List - Insert/Delete/Load</a> .		
<b>NOTE</b> Connect a Master to the Master Playback controls to get more control over the Sequence. See <a href="#">Master Playback</a> .		

## Master Playbacks - Chase

Hold MODIFY and press the Master Key to open the editor for that Chase. The Chase will start from the first step every time the fader is brought over 0%.

Function	Keys	Feedback
Load Chase # to a Master Playback	# SEQ & Master Key	Chase # is loaded to the Master Playback. The number and name are shown in the master display.
Load all recorded Chases and Sequences from # to the Master Playbacks	# SEQ & Master Keys	Hold SEQ and keep pressing new Master keys to load the next stored Sequence/Chase.
Start Chase	Master Key	The Master Key is a GO key.
<b>NOTE</b> You can load a Chase directly from the Sequences List as well. See <a href="#">Sequences List - Insert/Delete/Load</a> .		
<b>NOTE</b> Connect a Master to the Master Playback controls to get more control over the Chase. See <a href="#">Master Playback</a> .		

## Master Playbacks - Groups

A Group is played back with intensities. Press the Master Key to select all channels in the Group.

Function	Keys	Feedback
Load Group # to a Master Playback	#    GROUP    & Master Key	Group # is loaded to the Master Playback. The number and name are shown in the master display.
Load all recorded Groups from Group # to the Master Playbacks	#    GROUP    & Master Keys	Hold Group and keep pressing Master keys to load the next stored Preset.

## Master Playbacks - Flash Keys

The lower row (1-20) have fixed flash keys (the lower row).

Function	Keys	Feedback
Flash Master 1-20	Flash Key	The content of the Master is set to full (100%) as long as the Flash key is held.
Set Flash level	# FLASH MODE & Master Key	Flash level # is set to Master #
<b>NOTE</b> <b>Flashing a Master will activate the Attributes or Dynamic Effects of a Preset in that Master.</b>		

### Flash On Time

When Flash On Time is activated, the Master Playbacks will flash on the time assigned to each playback. See [Master Playbacks - Times](#).

Function	Keys	Feedback
1. <i>Open the Master Setup</i>	SETUP 6 Master Key	The Master Settings are opened
2. <i>Select Flash On Time</i>	Arrow keys	Flash On Time box is highlighted
3. <i>Activate</i>	MODIFY	Flash On Time box is checked
4. <i>Exit Settings</i>	MODIFY	Settings are closed

## Master Playbacks - Solo Fade Mode

A Master Playback in Solo Mode will fade all other masters proportionally to zero, as it is faded to full.

Function	Keys	Feedback
1. <i>Open the Master Editor</i>	<div>MODIFY</div> <div>6</div> <div>Master Key</div>	The Master Editor is opened, focused at Master #
2. <i>Select Solo Fade</i>	Arrow keys	Solo Fade is highlighted
3. <i>Set to ON</i>	<div>MODIFY</div>	MODIFY toggles on/off for each Master.
4. <i>Exit</i>	<div>ESC</div>	Master Editor is closed
<b>NOTE</b> If several masters have Solo Fade mode = On, the last Solo master that leaves its 0% position will have priority over the other Solo masters. To take control with another Solo master, move it down to 0% and up again.		

## Master Playbacks - Dynamics

A Dynamics is executed for the currently selected channels when you press the Master Key.

Function	Keys	Feedback
Load Dynamic Effect # to a Master Playback	# DYN EFFECT & Master Key	Dynamic Effect # is loaded with name and number. Press Master key to execute.

## Master Playbacks - Channel Layouts

The Master key will activate the Channel Layout when pressed.

Function	Keys	Feedback
1. <i>Open the View Masters tab</i>	<div>MODIFY &amp;</div> <div>Master Key</div>	The view masters tab is opened
2. <i>Go to the Content Type column</i>	Arrow keys	The cell is highlighted
3. <i>Open the selection</i>	<div>MODIFY</div>	A dropdown is opened
4. <i>Select Channel Layout</i>	<div>MODIFY</div>	Channel Layout is indicated
5. <i>Go to Content</i>	Arrow keys	The cell is highlighted
6. <i>Select Channel Layout #</i>	<div>MODIFY</div>	Channel Layout # is indicated

## Master Playbacks - Palettes

A Palette is executed for the currently selected channels when you press the Master Key. Fading the fader will move the selected channels to the palette.

Function	Keys	Feedback
Load Focus Palette # to a Master Playback	<div>#</div> <div>FOCUS</div> <div>&amp;</div> <div>Master Key</div>	Focus Palette # is loaded with name and number. You can do the same with COLOR, BEAM and ALL PALETTE's.
<b>NOTE</b> The fader will fade the attributes of the selected channels to the palette values when moved up. What happens when you move the fader down depends on the setting of Rubberband in the Master Setup. See <a href="#">Master Playbacks - Devices</a> .		



## Master Playbacks - Times

The fade time can be activated when you move the fader, or when you start a Master fade with the Flash On Time or START function.

Function	Keys	Feedback
Set an Up-Down time	# TIME & Master Key	The time # is assigned to the Master as an Up and Down fade time.
<b>NOTE</b> <b>How the time affects fading the Master manually depends on the settings of the Master. See Master Time Settings.</b>		

### Set Up-Wait-Down times for a Master

You can set a Up, Wait and Down time for each Master from the Master Editor.

Function	Keys	Feedback
1. Open the Master Editor	MODIFY & Master Key	The Master Editor is opened, focused at Master #
2. Go to IN time	Arrow Keys	IN time is highlighted
3. Set an IN time of # seconds	# MODIFY	An IN time of # seconds is set*
4. Set WAIT and DELAY in the same way	Step 2 and 3	WAIT and IN times are set**

\*The In time is used by **Flash On Time** and **Times For Masters** in the Master Settings (SETUP & MASTER KEY).

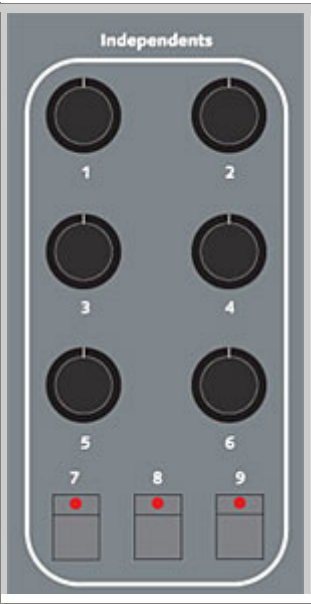
\*\*The WAIT and OUT times are used by **Flash On Time**.

# --Independents

There are six independent potentiometers, and three toggle keys.

They can be used for

- Adding light (HTP)
- Removing light (Inhibit)
- Independent lights (Exclusive)



## Using the Independents

Action	Console	Feedback
1. <i>Open the Setup</i>	Hold Setup and move the potentiometer or press a key*	A popup will appear with a channel view**
2. <i>Set channels, levels and attributes</i>		
3. <i>Select Mode</i>	<div>MODIFY</div>	See Independent Modes
4. <i>Select Execute</i>	Arrow key	Execute is highlighted
5. <i>Store</i>	<div>MODIFY</div>	The popup is closed

\*Keys have the option to be toggling on/off.

\*\*The Independent popup



## Independent Modes

Mode	Screen	Feedback
Exclusive	Blue level	Blackout, GrandMaster, Capture or any other channel function will not affect this channel(s).
Inclusive	No indication	Works as an additional Master Playback
Inhibit	Red level	Is an Inhibit Master - works as a Grand Master for the selected channel(s).*

\*If you have several Special Functions set to Inhibit and they have overlapping channels, the highest Special Function will be in control. The result on stage can be recorded.

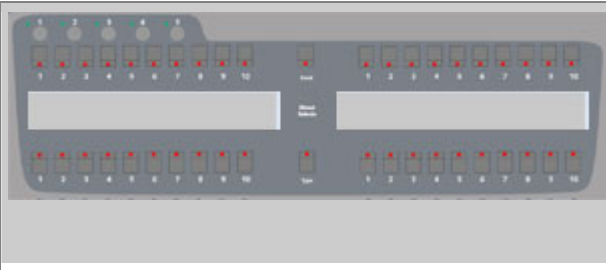
**NOTE**  
0% is shown as well so that you can see that the level is controlled by a Special function.

**NOTE**  
When you are in "exclusive" mode, the attributes will still be "stolen" back by any function calling them in the rest of the console, even if the intensity is "exclusive".

## --Direct Selects

**There are four sets with ten Direct Select keys for quick access to Palettes, Effects, Groups etc.**

**Select content type and bank.**



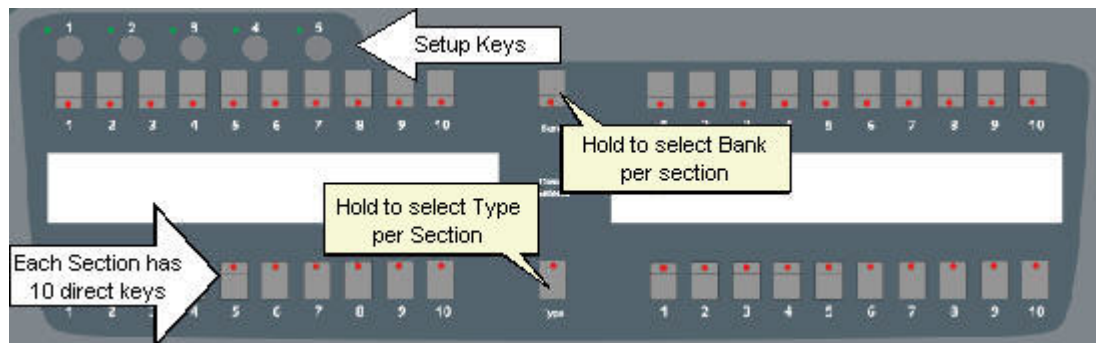
This chapter contains the following chapters

- [Direct Selects - Introduction](#)
- [Direct Selects - Content](#)
- [Direct Selects - User Setups](#)
- [Direct Selects - Save Screens](#)

## Direct Selects - Introduction

The Direct Selects give fast access to stored data such as groups, palettes, effects and screens.

- The Direct Selects have four sections with ten keys.
- You can select Type of content and bank for each section.
- You can store a complete setting of four sections to the five Setup keys.



## Direct Selects - Content

If you hold down the TYPE key you can see all the different types of content that can be loaded.

Hold BANK to select bank.

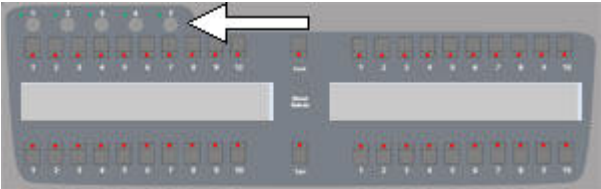
Action	Key	Feedback
Select Type	<div>TYPE &amp;</div> <div>Select Key</div>	When TYPE is held the different types are displayed over each section. Press the key corresponding to the Type you want.
Select Bank	<div>BANK &amp;</div> <div>Select Key</div>	When BANK is held the different banks are displayed over each section. Press the key corresponding to the Bank you want.
<b>NOTE</b> <b>A bank contains the content that has been stored to those numbers.</b> <b>For example Focus Palette 11 is in bank 11-20.</b>		

## Content Types

Type	Function	Read More
FOCUS	Press to activate a Focus Palette for the selected channel(s)	<a href="#">Moving Device - Palettes</a>
COLOR	Press to activate a Color Palette for the selected channel(s)	<a href="#">Moving Device - Palettes</a>
BEAM	Press to activate a Beam Palette for the selected channel(s)	<a href="#">Moving Device - Palettes</a>
PALETTE	Press to activate an all Palette for the selected channel(s)	<a href="#">Moving Device - Palettes</a>
DYNAMIC	Press to activate a Dynamic Effect	<a href="#">Dynamics</a>
GROUP	Press to select the channels in a Group	<a href="#">Groups</a>
MACRO	Press to activate a Macro (NOT IMPLEMENTED)	<a href="#">Macros</a>
SCREEN	Press to select the stored screens	<a href="#">Direct Select - Save Screens</a>
LEAVE	Deselects Content for this Section	-

# Direct Selects - User Setups

There are five User Setup "pages" for all settings in the Direct Selects. They are stored to the five round keys over the Direct Selects.



Action	Console	Feedback
1. Select User Setup	Setup key	The LED of that key is lit
2. Select Types and Banks		The current type and band can be recalled with this Setup key.

## Direct Selects - Save Screens

There are 100 definable memories for all screens including zoom, channel format and split tabs.

Action	Console	Feedback
1. <i>Select Type</i>	<span>TYPE</span> <span>&amp;</span> <span>SCREEN</span>	When TYPE is held you can press SCREEN in your choice of Direct Select Section.
2. <i>Record the current screen settings</i>	<span>TAB</span> <span>&amp;</span> <span>Section Key</span>	The current screen settings are stored to that key. A number will appear over the key.

When you press this key, all screens will default to the stored layout and format.





# --Troubleshooting

**When you run into a problem with this system there are few probable reasons.**

This chapter contains the following sections

- [Troubleshooting - Lights Are Not Responding](#)
- [Troubleshooting - You don't understand the function](#)
- [Troubleshooting - Crashes & Bugs](#)
- [Troubleshooting - Help from ETC Technical Services](#)

## Troubleshooting - Lights Are Not Responding

**If you have lights (dimmers, devices) connected and they are not responding check this list.**

- *Is the device powered properly?*
- *Is the device set to receive the protocol you have set the board to transmit?*
- *Is the device receiving a signal from the console?*
- *Is the device set to the right channel address?*
- *Is there a light source connected to the device?*
- *Is it a lamp failure?*
- *Is the device circuit breaker thrown?*

If nothing works you may want to use a DMX tester to check that there is DMX at the receiving devices.

## Troubleshooting - You don't understand a function:

Check this manual. We've put a lot of work into trying to make it as complete as possible. </TH< TR>

### **FAQ**

The [Frequently Asked Questions](#) part is constantly under construction as new issues come to our knowledge.

### **Version Info**

You should always read the Version Info for any new update of software. New functions may be added and old ones may have been changed. See [New Software Version Info](#).

## Troubleshooting - Crashes & Bugs

**All software-based products run the risk of a crash regardless of testing procedures. In the unlikely event it happens, please help us to eliminate problems with crashes and bugs by reporting them to us.**

### An Error Popup Appears...

If you get an error popup we have saved your show data and created a log file that is automatically saved to a USB memory if there is one connected to the console. Otherwise this file is in the Congo directory, and has to be copied using the Task Manager of Windows XP.

Mail this file to us. It can help us solve your problem very fast.

### What to do?

- If you got a popup you returned to the login screen, just login again.
- If you don't return to the login screen, *which is extremely unlikely* - Restart the console by turning the power off and back on.

### Making a crash or bug report

If you have the possibility, try to reproduce the problem by repeating your actions. If you can send us a description of how to repeat the problem reliably, we are much very likely to solve it rapidly.

Crash or bug report

Date =

Your Name =

Phone/fax/mail =

Congo Software version = "1.1 R0" (bottom left corner of the main screen, or About Congo in the Browser)

Description (example):

1. I was trying to edit a Preset on stage.
2. I started a crossfade
3. I got a crash with a message = "FILE main.cpp LINE 37" or "Offset: 12345678"
4. It is repeatable following 1 & 2.

Please fax the bugs reports to Congo BUG REPORT at +49 8024 990-300 or preferably e-mail them to [congo@avabcontrol.com](mailto:congo@avabcontrol.com)

## Troubleshooting - Help from ETC Technical Services

**Emergency service is available from all ETC offices outside of normal business hours.**

If you are having difficulties, your most convenient resources are the references given in this manual and the Help system. To search more widely, try the ETC website at <http://www.avabcontrol.com/>. If none of these resources is sufficient, contact ETC Technical Services directly at one of the offices identified below.

***When calling for help, please have the following information handy***

- Console model and serial number (located on back panel)
- Software version (is written in the lower right corner of the screens)
- Dimmer manufacturer and installation type
- Moving light information (manufacturer, mode, data cable type)
- Other components in your system (Unison®, other consoles, etc.)

### ETC Technical Services - Europe

ETC Europe Ltd.  
Technical Services Department  
5 Victoria Industrial Estate  
Victoria Road,  
London W3 6UU England  
+44 (0)20 8896 1000  
[service@etceurope.com](mailto:service@etceurope.com)



# --REFERENCE MANUAL

This is the reference section of the manual, where all functions are described in detail.

These are the chapters

- [Patch](#)
- [Channel Layouts](#)
- [Channels](#)
- [Groups](#)
- [Presets](#)
- [Sequences](#)
- [Chase](#)
- [Master Pages](#)
- [Devices](#)
- [Dynamics](#)
- [Copy, Cut & Paste](#)
- [Entering Texts](#)
- [The Import Wizard](#)
- [System Settings](#)
- [Display Lists](#)
- [Login Settings](#)
- [Network](#)
- [Media](#)





# --PATCH

**You assign channels to dimmer and moving device outputs/addresses in the Patch.**

This chapter contains the following sections

- [Patch - Introduction](#)
- [Patch - Patch Wizard](#)
- [Patch - Channel List](#)
- [Patch - Output List](#)
- [Patch - Device Settings](#)
- [Patch - Rename Channels](#)
- [Patch - Edit/Change A Moving Device](#)
- [Patch - Channel Database & Auto-groups](#)
- [Patch - Dimmer Curves](#)

## Patch - Introduction

In this system the default setting after opening a "new" play is that all channels are patched 1:1 to all outputs. If you want to control moving devices, or a different setting than 1:1 - you need to look in this chapter.

The Patch functions are found in the following lists

Description	List	Functions
The easiest way to patch or remove dimmers & devices	<a href="#">Patch Wizard</a>	Patch, Clear and Reset single or multiple devices or dimmers.
Channel settings. Also a patch summary.	<a href="#">Channel List</a>	Edit output, address, ch scale factor, constant level, rename.
Individual device settings. Patch, clear or edit single moving devices.	<a href="#">Device List</a>	Invert or swap pan/tilt. Sroller roll & calibration. Change template, channel or address.
Outputs and the assigned desk channels and output settings.	<a href="#">Output List</a>	Edit channel, scale factor, curve.
Assign up to four texts to each channel - creates auto-groups.	<a href="#">Channel Database</a>	Edit text ABCD
<b>NOTE</b> <b>As soon as a moving device is patched, the channel symbol in the channel views will get an extra field for moving device information.</b>		

## Patch - Patch Wizard

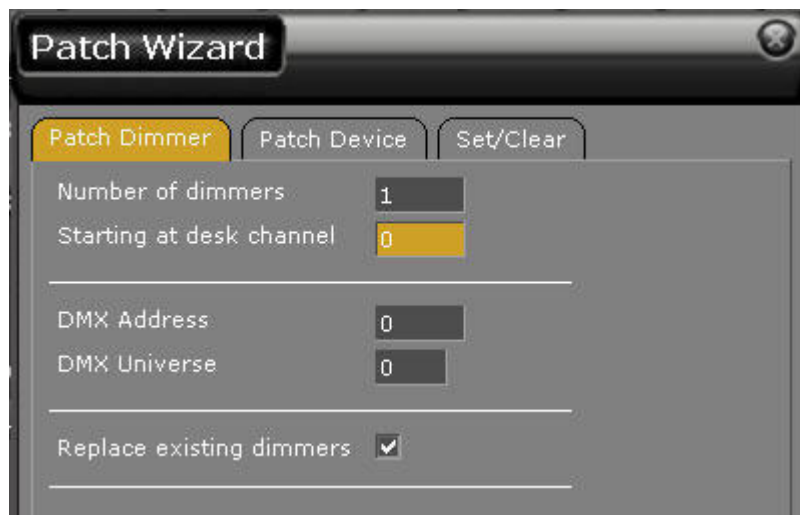
The Patch Wizard is opened from the Browser (Browser >Setup >Patch Wizard). See [Navigating - Browser](#).

### **There are three sections**

- Patch dimmer(s) - patch one, or a range of dimmers
- Patch Device(s) - patch one, or a range of devices
- Clear/reset - clear or reset a range/all outputs, devices or renaming.

### Patch Dimmer(s)

Enter the number of dimmers, the desk channel, DMX address and universe. If you check Replace existing dimmers, they will be unpatched automatically.



The screenshot shows the 'Patch Wizard' dialog box with the 'Patch Dimmer' tab selected. The dialog has a title bar with a question mark icon. Below the title bar are three tabs: 'Patch Dimmer' (highlighted in yellow), 'Patch Device', and 'Set/Clear'. The 'Patch Dimmer' section contains the following fields and controls:

- 'Number of dimmers' with a text input field containing the value '1'.
- 'Starting at desk channel' with a text input field containing the value '0'.
- A horizontal separator line.
- 'DMX Address' with a text input field containing the value '0'.
- 'DMX Universe' with a text input field containing the value '0'.
- Another horizontal separator line.
- 'Replace existing dimmers' with a checked checkbox.
- A final horizontal separator line at the bottom.

## Patch Moving Device(s)

Enter the number of devices, select template, desk channel, DMX address and universe. If you check Replace existing dimmers, they will be unpatched automatically. If you are patching scrollers, you can select a scroller roll. You can assign a scroller roll later as well, from the device settings list.



The screenshot shows the 'Patch Wizard' dialog box with the 'Patch Device' tab selected. The dialog has three tabs: 'Patch Dimmer', 'Patch Device' (highlighted), and 'Set/Clear'. The 'Patch Device' tab contains the following fields and controls:

- Number of devices:** A text input field containing the value '1'.
- Type of device:** A dropdown menu showing '\*Mac 500 M2'.
- Starting at desk channel:** A text input field containing the value '0'.
- DMX Address:** A text input field containing the value '0'.
- DMX Universe:** A text input field containing the value '0'.
- Replace existing dimmers:** A checkbox that is checked.
- Scroller roll:** A dropdown menu showing 'No Roll'.

### NOTE

To get light from recently patched device(s) you may want to do Home Attributes for them. See [Home Positioning](#).

## Clear/reset patch or rename

You can reset (1:1) or clear the dimmer patch, the moving device patch, or the renaming system for any channel range from x to x. If you check "Apply To All" you don't need to specify a range.



These are the options in the Clear wizard tab



See [Renaming Channels](#)

## Patch - Channel List

You can view and edit dimmer outputs, scaling and constant ch level in the Channel List (BROWSER >Setup >Patch >Channel List). There is a shortcut to open it: hold MODIFY and press CH.

See [Introduction To Patching](#) for more information.



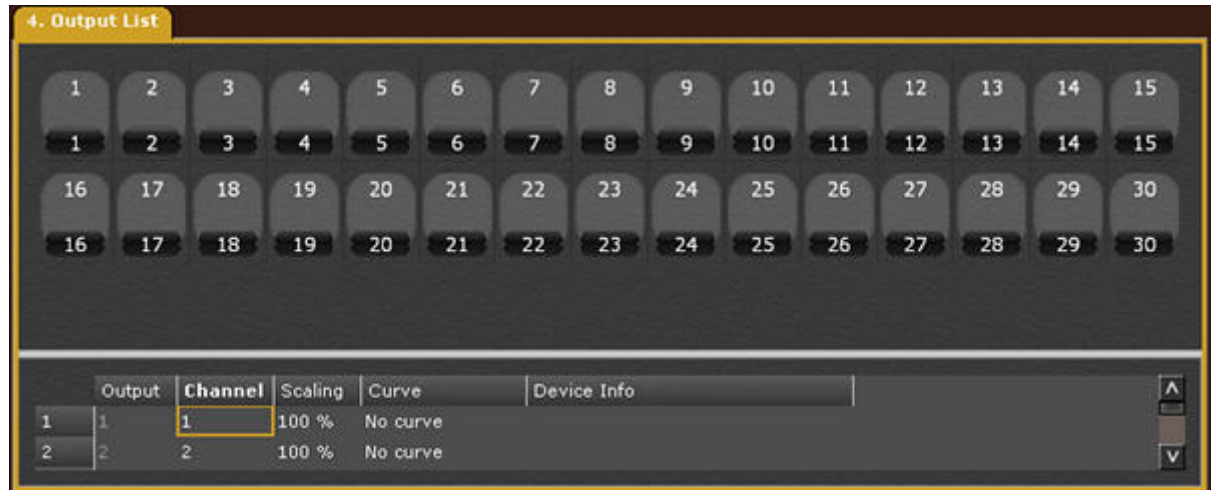
### Channel List - Columns & Functions

Column	Input	Function
<u>Channel</u>	No input	The number of this Channel - cannot be edited here (see <a href="#">Output List</a> ).
<u>Dimmer Address</u>	#.#	Enter the address, followed by decimal point and then DMX universe. You can change the universe by entering ".#"
<u>Device</u>	No input	Shows the device template - cannot be edited here (see <a href="#">Device Settings</a> ).
<u>Device Address</u>	No Input	Shows the device address - cannot be edited here (see <a href="#">Device Settings</a> ).
<u>Scale</u>	0-200%	Sets the scaling factor for the intensity of this channel.
<u>Constant</u>	0-100%	Sets a constant level for the intensity of this channel.
<u>Name</u>	0-9999	Enter the number and press MODIFY to change a channel name (see <a href="#">Renaming Channels</a> ).

## Patch - Output List

You can view and edit desk channel, scaling and curve for outputs in the Output List (BROWSER >Setup >Patch >Output List). There is a shortcut to open it: hold MODIFY and press OUTPUT.

See [Introduction To Patching](#)



### Output List - Columns & Functions

Column	Input	Function
<u>Output</u>	No input	The number of this Output - cannot be edited here (it is Dimmer and Device Address in the <a href="#">Channel List</a> ).
<u>Channel</u>	0-9999	Enter the number, followed by MODIFY.
<u>Scaling</u>	0-200%	Sets the scaling factor for the intensity of this output.
<u>Curve</u>	0-999	Shows the output curve. Enter number and press MODIFY. See <a href="#">Dimmer Curves</a> .
<u>Device Info</u>	No Input	Shows the moving device template and parameter assigned to this output.



## Patch - Device Settings

You can view and edit moving device settings in the Device Settings (BROWSER >Setup >Patch >Device Settings). There is a shortcut to open it: hold MODIFY and press DEVICE.

See [Introduction To Patching](#)



### Device Settings - Columns & Functions

Column	Input	Function
<u>Item</u>	No input	The number of this item - cannot be edited here.
<u>Channel</u>	0-9999	The number of the desk channel this device is assigned to.
<u>Template</u>	Dropdown menu	Shows the device template - dropdown to change.
<u>Device Address</u>	#. #	Shows the device address - change by address.universe. You can change universe by ".universe"
<u>Inv. Pan</u>	Off/On	Invert pan for this device.
<u>Inv. Tilt</u>	Off/On	Invert tilt for this device.
<u>Swap Pan/Tilt</u>	Off/On	Swap pan/tilt for this device.
<u>Scroller Roll</u>	Dropdown menu	Shows the assigned scroller roll - dropdown to change. See Scroller Rolls.
<u>Calibration Editor</u>	<input type="button" value="MODIFY"/>	Press MODIFY to open the Calibration Editor for this scroller roll.

## Patch - 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, but change the numbering to fit the numbering of a Plot. Renaming is done in the Name column of the Channel List (BROWSER >Setup >Patch >Channel List)



### Change a channel name

Function	Key	Feedback
Change a channel name	# MODIFY	Enter a new name and press MODIFY. If the name exists you will get a warning message about this.
Set a range of channel names	Select a range	Select a range and enter the first number, then press MODIFY.
Remove a channel from all channel views	0 MODIFY	If a Name is set to zero, the channel will disappear from all channel views and cannot be accessed until given a name.*
Clear all channel names	<a href="#">Patch Wizard</a>	All Channel Renames can be cleared from the Patch Wizard.
Set names 1:1	<a href="#">Patch Wizard</a>	The Rename function can be reset from the Patch Wizard.

\*It will not disappear from Channel Layouts.

## Patch - Edit/Change A Moving Device

You can exchange one moving device with another. All parameters that are similar will continue functioning.

Function	Where	Explanation
Change Device Type*	<a href="#">Device Settings</a> , Template column	Press MODIFY to get a dropdown with all templates. Select a new device template.
Change Device Address	<a href="#">Device Settings</a> , Device Address column	Enter a new device address with address.universe. You can change universe only by ".universe"
Change Device Channel	<a href="#">Device Settings</a> , Device Channel column	Enter a new device channel.
Delete Device	<a href="#">Device Settings</a>	Press DELETE in any row.

\* All play information that can be read by the replacement device template will be used. You can swap back to the first device at anytime later. This is useful if you have to replace one type/brand of Moving Device with another.

## Patch - Channel Database & Auto-groups

You can give each channel up to four text labels (ABCD). From these texts virtual "groups" are automatically created and available from the Name List in the Main Display (DISP MODE & CH CH).

Any moving device that is patched will automatically show up on the Name List as well, which allows you to select all "Stage Zooms" or "Scrollers" without creating any groups in advance.

	Channel	Text A	Text B	Text C	Text D	Template
11	11		PAR 64	Bar 1	Sidelights	Scroller
12	12		PAR 64	Bar2	Keylight	
13	13	Front of House	PAR 64	Bar 1	Sidelights	Scroller
14	14	Front of House	PAR 64	Bar2	Sidelights	Scroller
15	15	Front of House	PAR 64	Bar 1	Sidelights	Scroller
16	16	Front of House	PAR 56	Bar2		Scroller
17	17	Front of House	PAR 56	Bar 1		
18	18	Front of House	PAR 56	Bar2		
19	19			Bar 1		
20	20			Bar2		
21	21			Bar 1		
22	22					

### Set Channel Texts For The Database

Action	Key	Feedback
Set a text in a cell(s)	Select any cell(s) in the ABCD columns	Press MODIFY, enter a text and press MODIFY again to confirm.

## Display List - Auto Groups

This is the Display List for Auto Groups.



There are different ways of opening the Display list

Key	Feedback
<div>DISPLAY LIST</div> <div>CH CH</div>	You will get a list of all auto-groups.
Hold DISPLAY LIST and press AUTO GROUPS in the Direct Selects	When DISPLAY LIST is held you get all lists in the Direct Selects.

# --CHANNEL LAYOUTS

**A Channel Layout is a topographical custom view of your whole lighting rig, or part of it. It can also contain show data.**

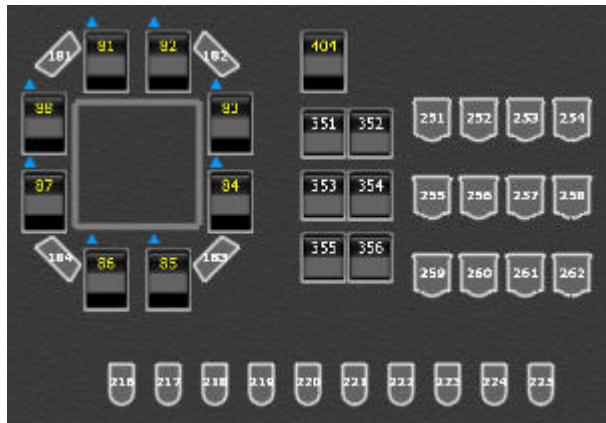
This chapter contains the following sections

- [Channel Layouts - Introduction](#)
- [Channel Layouts - List](#)
- [Channel Layouts - Editor](#)
- [Channel Layouts - Create](#)
- [Channel Layouts - Lines & Boxes](#)
- [Channel Layouts - Content](#)
- [Channel Layouts - Load](#)

## Channel Layouts - Introduction

You can have up to 999 custom Channel Layouts in addition to the normal channel views.

This is an example of some instrument symbols in a Channel Layout.



### **General Facts**

- Auto-select function by channel content
- The same channel can exist in several Channel Layouts
- There are USITT plot symbols for different light sources
- They can contain any type of data besides channels
- FORMAT is used to open a Channel Layout
- Channel Layouts can be assigned to Master Playbacks

## Channel Layouts - List

You can insert and delete Channel Layouts in the Channel layout list (Browser >Setup >Channel Layout).



### Channel Layout List - Columns & Functions

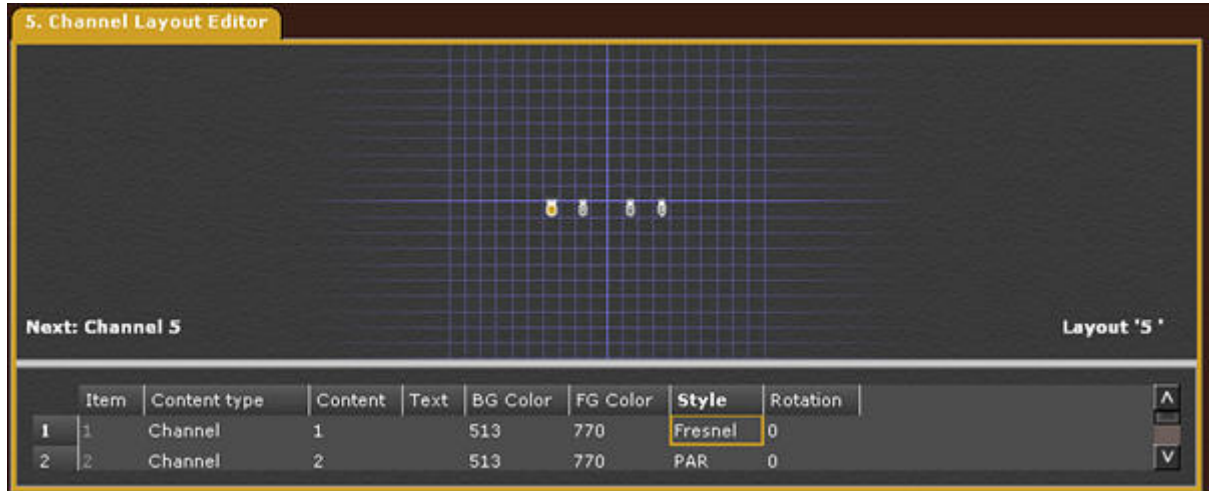
Function	Key	Feedback
<u>Channel layout</u>		The ID of each Layout. Cannot be changed.
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input. This text is shown in the lower right corner of the channel views.
Auto Selectable	<input type="button" value="MODIFY"/>	Enables Auto-Select*
Delete Layout	<input type="button" value="DELETE"/>	Deletes the currently selected Channel Layout. Cannot be undone.
Insert a new Channel Layout #	<input type="button" value="#"/> <input type="button" value="INSERT"/>	Inserts a new Channel Layout #.

\*If you select a channel that is included in a layout marked as "Auto-selectable", this layout will be selected. If the same channel is included in several layouts, the first Auto-Selectable one will be selected.



## Channel Layouts - Editor

This is where you create and edit a Channel Layout (Browser >Setup >Channel Layout >#).



### Channel Layout Editor - Functions

Function	Key	Feedback
Insert item #	# Mouse click	Item # is inserted at the cursor. The last content type is used.
Insert next item	Mouse click	The next item of the same type as the previous is inserted at the cursor.
Delete item	<div>DELETE</div>	The currently selected item(s) is deleted.
Edit item	<div>MODIFY</div>	Modify any item from the list part of the editor.

## Channel Layout Editor - Columns

Column	Key	Feedback
<u>Item</u>		The ID of each Layout item. Cannot be changed.
<u>Content Type</u>	<input type="button" value="MODIFY"/>	Press MODIFY to open the dropdown menu.
<u>Content</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Content #.
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input. This text is shown next to the item. (Currently only lines and bars)
<u>BG Color</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets background color # (Currently not implemented)
<u>FG Color</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets foreground color # (Currently not implemented)
<u>Style</u>	<input type="button" value="MODIFY"/>	Press MODIFY to open the dropdown menu with a selection of symbols.
<u>Rotation</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sets a rotation # to the selected item(s).

## Channel Layouts - Create

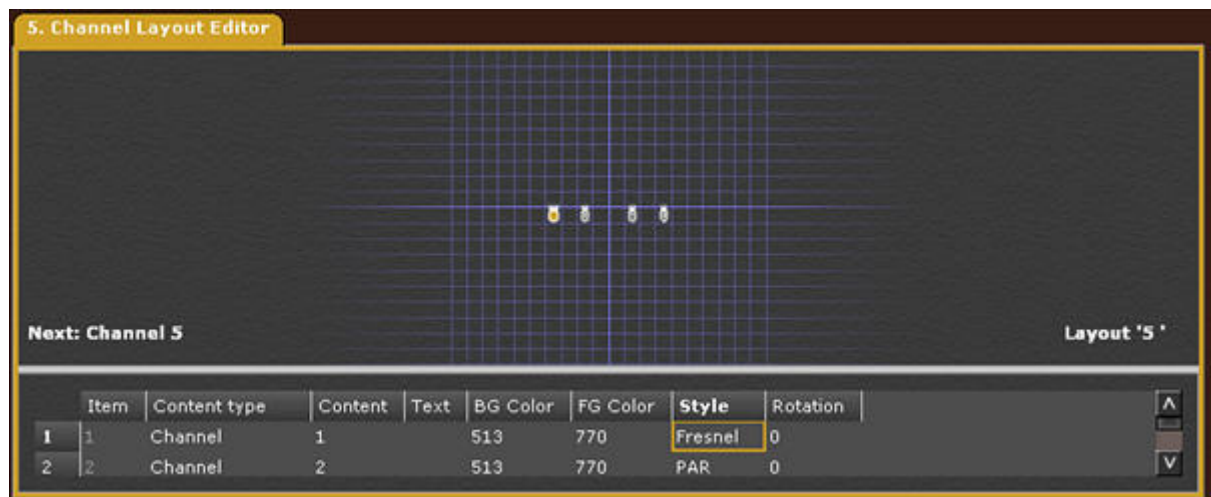
1. Start by inserting and naming a new Layout.

Function	Key	Feedback
Open the Channel Layout List.	Browser >Setup >Channel Layout	Opens the Channel Layout list.
Create a new layout	# INSERT	A new layout is inserted.
Name Layout	MODIFY	Move to TEXT cell and press MODIFY. Give a name.

2 Now open the Channel Layout Editor

Function	Key	Feedback
Select the Item cell of the new Layout	Arrow Keys	The cell is highlighted.
Open the Channel Layout Editor.	MODIFY	The Channel Layout Editor is opened.

3. This is what the Channel Layout Editor looks like



4. Now insert some channels by clicking with the cursor on the grid. You can enter the number of the first channel before starting.

5. If you want to set the symbols for the different lights, or rotate - go to Style and Rotation.

6. Exit with ESC.

To Load this Layout, see [Channel Layouts - Select](#).

## Channel Layouts - Lines & boxes

Hold the left mouse button and drag to create a box.



If you change the content to LINE you will be able to draw diagonal lines.



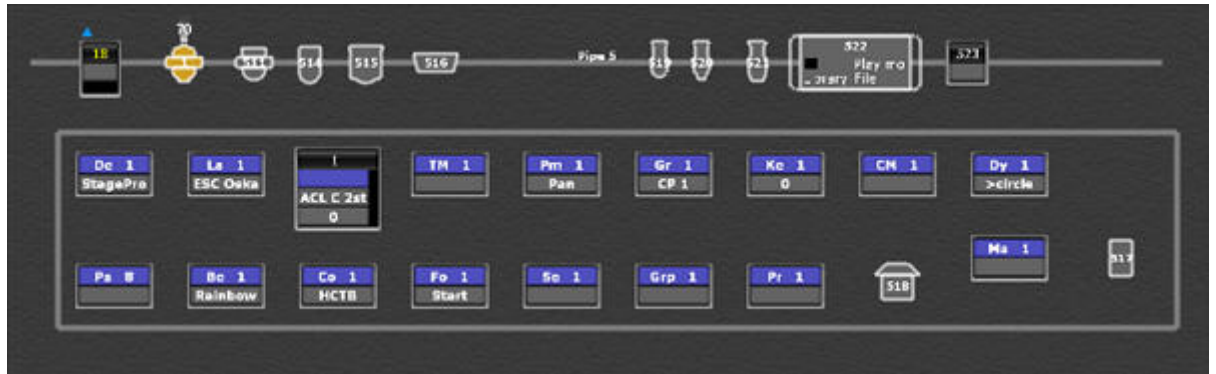
## Channel Layouts - Auto Select objects within Lines/Boxes

If you click on the frame of a rectangle (or line), you will select all channels that are inside or on top of it. If you double click on the frame, all other channels will be de- selected first.

If you click on the frame of an object, all Content objects that are within the frame will be executed. If you double click outside of an object, all channels will be de- selected.

## Channel Layouts - Content

To activate a Content, click on it when the layout is active in the Live tab.



Function	Key	Feedback
Insert a Focus palette	# FOCUS Click	Focus # is inserted at the cursor.
Insert a Color palette	# COLOR Click	Color # is inserted at the cursor.
Insert a Beam palette	# BEAM Click	Beam # is inserted at the cursor.
Insert an All palette	# PALETTE Click	Palette # is inserted at the cursor.
Insert a Preset	# PRESET Click	Preset # is inserted at the cursor.
Insert a Dynamic Effect	# DYN EFFECT Click	Dynamic Effect # is inserted at the cursor.
Insert a Device	# DEVICE Click	Device # is inserted at the cursor.
Insert a Group	# GROUP Click	Group # is inserted at the cursor. These types of content can be placed with a key shortcut.

## Channel Layouts - Load

Function	Key	Feedback
Load Channel Layout #	# <span>FORMAT</span>	Channel Layout # is loaded in the currently selected Channel View.
Hide channel symbols	<span>FORMAT</span> <u>&amp;</u> <u>Down Arrow</u>	All channel symbols are set to the standard symbol of Congo.
Show channel symbols	<span>FORMAT</span> <u>&amp;</u> <u>Up Arrow</u>	All channel symbols from the Channel Layout are shown.

# --CHANNELS

**Every dimmer or device controlled from Congo is selected and controlled by it's channel number.**

This chapter contains the following sections

- [Channels - Introduction](#)
- [Channels - Ch Only Mode](#)
- [Channels - Views](#)
- [Channels - Command Syntax](#)
- [Channels - 255 Bit Levels](#)
- [Channels - Capture Mode](#)
- [Channels - Clear All](#)
- [Channels - Check Mode](#)
- [Channels - Balance Mode](#)
- [Channels - Random Selection](#)
- [Channels - Constant Level](#)
- [Channels - Scale Level](#)
- [Channels - Used & Unused](#)
- [Channels - Group Wheel Mode](#)
- [Channels - Rem Dim](#)

## Channels - Introduction

A channel is the "handle" you call upon to control any dimmer or moving device connected to the system.

### **General Facts**

- Channel levels can be set with the faders in Channels Only Mode
- Channels can be selected and set with a Command Syntax from the keypad
- 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". The full resolution of DMX 512 is higher than 100 steps, it's 256 steps called bits. Therefore there are functions for setting and changing levels in increments of bits (0-255).
- Channels are always controlled directly in a playback or an editor, and the current one is indicated in the small display "Channel Control" at the bottom of all screens.



## Channels - Ch Only Mode

The idea of a Channels Only Mode allows a complete novice to get some lights on stage. The Channels Only Mode switch converts all 40 Playback faders to channel faders temporarily, actually turning the console into a single scene board.

See [Master Playbacks - Fader Mode Switch](#)

Action	Console	Feedback
1. Make sure the Grand Master is up	Grand Master	Otherwise there is no light output
2. Make sure the FREEZE switch is set to ON	Freeze Switch	Otherwise there is static, or no light output
3. Turn Channels Only Mode switch to "Channels Only"	Mode Switch	Channels 1-40 can be accessed from the Master faders now. Move fader 1 and you can see the value for channel 1 on the channel views.
You can select a channel range from the Direct Select keys.	Direct Select keys	The channels in each range are indicated in the displays.

The levels will remain when you exit Channel Only mode and can be used in the normal mode.

To exit Channels Only Mode move the switch back to Masters.

## Channels - Views

Channels are displayed graphically in channel views. The main channel view is the LIVE tab. Channel views are zoomable (hold FORMAT and move the LEVEL wheel) from 20 to over 500 channels in a full screen view.






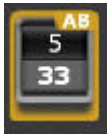

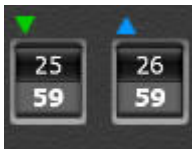
### Toggle Channel viewing format

You can toggle between these formats by pressing FORMAT

- All channels
- Selected channels
- Selected and non-zero channels
- Selected and captured channels
- Channel Layout (if there is one defined)

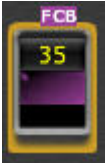




The currently selected format is indicated in the bottom right corner of each Channel View.

## Channel Information - basic

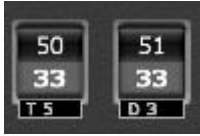
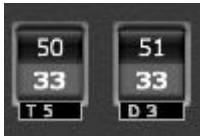


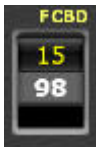
Function	Screen	Explanation
Dimmer Channel		Channel number (top) and level (under)
Moving Device or scroller		Channel number is yellow, there is an extra box for palette info.
Selected		Yellow frame indicates selected
Selected and source of highest level		Yellow frame and in the top right corner the source of the current highest level*
Captured		Red background for channel number
Fade direction		An arrow for down (green) and up (blue).

\*Masters are 1-40, Main Playback is AB and Independents are displayed as "I".

## Channel Information - detailed

Function	Screen	Explanation
Changed moving device parameters		Purple background for level, and a letter (FCB) to indicate what parameter group has changed.
Source is Master or Main Playback		Yellow level for master playback, white for main playback
Constant or Exclusive level		Constant and Exclusive level are indicated in blue
Scale Factor		A scaled channel level has a +/- sign after
Inhibit		Red level indicates an inhibit master

## Channel Information - Running Fades

Function	Screen	Explanation
Channel Times		Channel Time (T) and Delay (D) are indicated under the level
Move Fade		Channel Time (T) and Delay (D) are indicated under the level
Lock Fade		An "L" after the time indicates Lock Fade
Running Dynamics		A "D" over the channel symbol
Running moving device parameters		FCB and Dynamics running for this device

## Channels - Command Syntax

The default mode for entering commands in the system is the AVAB RPN mode. It is simple to learn, requires few keystrokes and applies to all functions in the system. Since RPN applies to everything in the system we recommend you spend the necessary 30 minutes to convert. There's one single rule: enter the number first and press the function key after.

At Mode (also called (Direct Entry) is different in the way that ch numbers are entered directly, followed by a function (@ LEVEL for example) and the value of that function.

You can select syntax in the [Setup](#).

### Select Channels

The fastest way to select a channel and set a level regardless of syntax is to enter the number of that channel and move the level wheel.

This is a table with the key entries for most channel commands.

Channel command	RPN	AT MODE
Select channel 1	[1] [CH]	[1]
Add channel 2	[2] [+]	[+] [2]
Add through 7	[7] [THRU]	[THRU] [7]
Subtract ch 3	[3] [-]	[-] [3]
Select all channels with a level in the channel control	[ALL]	[ALL]
Invert the current channel selection (of all channels with a level)	[INV GROUP]	[INV GROUP]
Step to the next ch	[+]	[+]
Step to the previous ch	[-]	[-]
<b>NOTE</b> In At Mode you can press @LEVEL after selecting channels, to see the channel selection.		

## Set Channel Levels

Seems the increase and diminish level by % does not work...

Level Command	RPN	AT MODE
Set to 50%	5 0 @LEVEL	@LEVEL 5
Set to 55%	5 5 @LEVEL	@LEVEL 5 5
Set to 100%	@LEVEL @LEVEL	@LEVEL @LEVEL
Set to 70%*	@LEVEL	@LEVEL 7
Set to 0%	C & -%	C & -%
Add 5%	+%	+%
Subtract 5%	-%	-%
Select ch # and add 5%	# +%	# +%
Select ch # and subtract 5%	# -%	# -%
Increase level by #%	# . +%	
Diminish level by #%	# . -%	

\*This is the Step Level value of the SETUP for the Level key. You can change it by holding SETUP and pressing @LEVEL.

## Channels - 256 Bit Levels

You can work with 256 bit levels directly.

Action	Key	Feedback
Set a 256 bit level	<div># . &amp;</div> <div>@LEVEL</div>	Holding the decimal while pressing @LEVEL sets the level in 256 bits
Increase a level by 1 bit	<div>. &amp; +%</div>	As long as the decimal point is held, pressing +% will add one bit to the selected channels
Increase a level by 1 bit	<div>. &amp; -%</div>	As long as the decimal point is held, pressing +% will subtract one bit from the selected channels

### EXPLANATION

Levels for channels controlling dimmers are traditionally set from 0-100%. The internal resolution of DMX 512 however, is almost 2.5 times higher. A DMX channel is output from 0-255 steps called bits. You may want to use this higher accuracy when you are setting values for mechanical dimming devices.

The board will display the %-value rounded off to the closest value. (1.4% will be displayed as 1% and 1.6% will be displayed as 2%)

If you want to find out what 0-100% level corresponds to a 0-255 bit level, you divide the % level with 0.39 ( $100/255=0.39$ ). For example:  $50\% / 0.39 = 128$  bits (actually 128.21)

If you want to find out what 0-255 bit level corresponds to a 0-100% level you multiply by the same factor of 0.39. Example:  $129 \times 0.39 = 50,31\%$

### NOTE


**256 bit levels cannot be displayed on the channel screen, but are stored with the show and exported in ASCII Light Cues.**



## Channels - Capture Mode

Capture Mode makes it possible to control any channel and level, regardless of where it is output from. The channel is kept at this level until released.

RECORD will store the captured level. It is similar to working with a programmer.

Action	Key	Feedback
Activate Capture Mode	<input type="button" value="CAPTURE"/>	<p>Capture will light up. All channels that are selected and changed will remain at that level until released. Captured channels will have a red background for the channel number.</p> 
Deactivate Capture Mode	<input type="button" value="CAPTURE"/>	<p>Capture light goes off. Captured channels remain captured until released. Captured channels will have a red background for the channel number.</p>
Release selected channel(s)	<input type="button" value="RELEASE"/>	<p>The selected channels are released, regardless if Capture is active or not.</p>
Release all captured channels	<input type="button" value="RELEASE"/> <input type="button" value="RELEASE"/>	<p>All captured channels are released, regardless if Capture is active or not.</p>

## Channels - Clear all

Hold C/ALT and press CH to clear all channels and levels in the channel view connected to the channel control.

Action	Key	Feedback
Clear all channels in a channel view*	<span>C/ALT</span> & <span>CH</span>	All channels in the channel view connected to the channel control are set to zero and deselected.

\*In the Live Tab, only channels in the A-field are cleared. Not the channels coming from the Master Playbacks. Captured channels are not cleared.

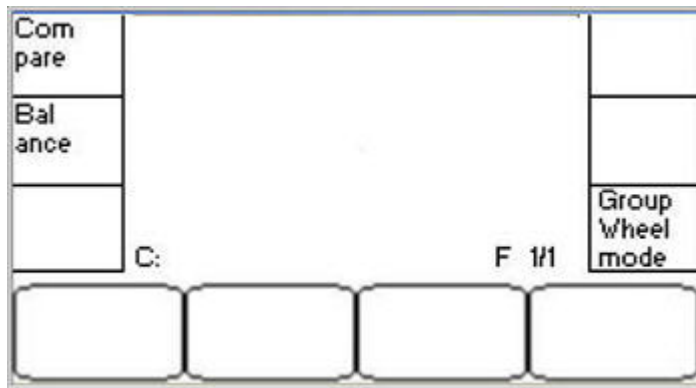
## Channels - Check Mode

There is a function for stepping through a series of channels at any selected level. If a channel is already set to a level when checked it will cut back to the previous level when the next channel is checked.

Action	Key	Feedback
1. <i>Select start channel and set a level</i>	<span>#</span> <span>Level Wheel</span>	This level will be used by check mode.
2. <i>Activate temporary check mode in up or down direction</i>	<span>C/Alt</span> <span>&amp;</span> <span>+</span>	As long as C/Alt is held the + and - keys will check the next or previous channel.
3. <i>Exit temporary check mode</i>		Let go of the C/Alt key.

## Channels - Balance Mode

The Balance makes it possible to temporarily set all channels to 0% except a selection. The original output of these channels is restored when Balance Mode is exited. This key is in the Channels Soft Key Page.

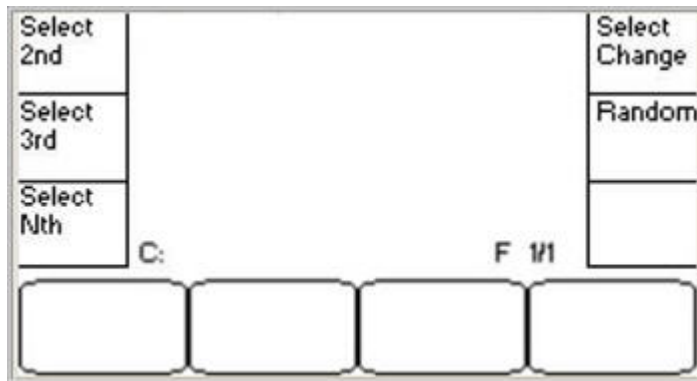


Action	Key	Feedback
1. Select the channels to work with		See <a href="#">Channel Command Syntax</a>
2. Activate Balance Mode	<input type="button" value="BALANCE"/>	All other channels in the channel view will be set to 0% temporarily. You can now work with the selected channels.
3. Exit Balance Mode	<input type="button" value="BALANCE"/>	The channel levels that were muted are restored.
<b>NOTE</b> It is not possible to use RECORD when Balance mode is active.		

## Channels - Random Select

It is possible to randomize the order of the channels within the current selection. This can be used to get a random order in a chase or with a Dynamic Effect.

These functions are keys in the Selects Soft Key Page



Action	Soft Key	Feedback
1. Select the channels you want to work with		See <a href="#">Channel Command Syntax</a>
2. Select the Selects Soft Key Page	<input type="button" value="SELECT"/>	This changes soft menu to the Select functions
3. Make a random selection	<input type="button" value="RANDOM"/>	A random order is applied, it can be used by the Chase Wizard.

You can use the numbering functions that allow you to select every 2nd, 3rd or Nth together with the random function.

Function	Soft Key	Feedback
Select every random 2nd	<input type="button" value="RANDOM"/> & <input type="button" value="SELECT 2nd"/>	Every random 2nd is selected.
Select every random 3rd	<input type="button" value="RANDOM"/> & <input type="button" value="SELECT 3rd"/>	Every random 3rd is selected.
Select every random Nth	<input type="button" value="RANDOM"/> & <input type="button" value="SELECT Nth"/>	Every random Nth is selected.

## Channels - Constant Level

You can set a channel at a constant level. It will not be affected by any other controls (including the Grand Master).

Action	Key	Feedback
1. Enter the ch number	1-9999	
2. Open the Channel List	<input type="button" value="MODIFY"/> <input type="button" value="CH"/>	The Channel List is opened and focused at the channel with that number.
3. Move to the Constant Level column	Arrow keys	
4. Set a constant level	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	The channel is set to this level, and the level is indicated in blue. Set 0% to remove the constant level.

## Channels - Scale Level

You can scale the output of each channel individually from 0-200%.

Scaling is mainly used in these situations:

- When the light source is too bright due to temporary change of hanging position (100-0%)
- When you need to brighten part of a rig temporarily to adapt it for camera footage (100-200%).

Action	Key	Feedback
1. Enter the ch number	1-9999	
2. Open the Channel List	<span>MODIFY</span> <span>&amp;</span> <span>CH</span>	The Channel List is opened and focused at the channel with that number.
3. Move to the Scale column	Arrow keys	
4. Set a Scale level	<span>#</span> <span>MODIFY</span>	All levels of this channel will be multiplied by the Scale factor. A +/- symbol will be shown next to the level. Set 100% to remove the Scale factor.

## Channels - Used & Unused

You can create a selection of channels based on if they are used or not in the sequence loaded to the Main Playback.

Action	Key	Feedback
1. <i>Open the Channel Selection Wizard</i>	<input type="button" value="WIZARD"/> & <input type="button" value="CH"/>	A popup with the Channel select wizard is opened.
2. <i>Select UNUSED or USED</i>	<input type="button" value="MODIFY"/>	This is a choice in the dropdown menu.
3. <i>Select the Start and Stop ranges</i>	Arrow keys	This is default set to the first and last step of the Sequence.
4. <i>Execute the selection</i>		Based on your choice all unused or used channels of the sequence loaded to the Main Playback are selected.



## Channels - Group Wheel Mode

In Group Wheel Mode you can assign a channel group to each wheel under the Main Display. All wheels interact inside the A field of the Live tab on a Latest Takes Precedence basis.

Action	Key	Feedback
1. <i>Select the Playback Soft Key Page</i>	<span>PLAYBACK</span>	The Playback Soft Key Page is selected in the Main Display of the Console.
2. <i>Load the selected channels to a wheel</i>	<span>PRESET</span> & <span>Wheel Key</span>	The selected channels are loaded as a channel group to the wheel.

## Channels - Rem Dim

Rem Dim will set all channels in the Channel Control to zero, except the currently selected channel(s)

Function	Key	Feedback
Rem Dim	<div>REM DIM</div>	All channels in the Channel Control are set to zero, except the current selection.

# --GROUPS

**Groups are a way of recalling a channel selection with a single number. They are often used to speed up programming.**

This chapter contains the following sections

- [Groups - Introduction](#)
- [Groups - Record](#)
- [Groups - Functions](#)
- [Groups - List](#)
- [Groups - Display List](#)

## 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, only the channels selected are stored regardless of how many other channels are active.

For editing groups see [Group List Functions](#).

Groups are accessible from the remotes. See [Remote Control](#).

### Group functionality

- Only selected channels are stored in a group.
- Each group will "remember" the order in which channels were selected to create the group.
- Groups are not automatically inserted into the Sequence in the Main Playback.
- 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 Master or a channel layout.
- Preset numbers 900-999 are reserved for Expert-style groups.

## Groups - Record

Only selected channels are recorded. The selected channels can have a level, but it is not necessary.

Function	Key	Feedback
Record a new Group with the next free number	<input type="button" value="RECORD"/> <input type="button" value="GROUP"/> <input type="button" value="&amp;"/>	You will get a popup where you confirm recording this group, and can write a text label.
Record a new Group with a specific number	<input type="button" value="#"/> <input type="button" value="RECORD"/> <input type="button" value="GROUP"/> <input type="button" value="&amp;"/>	You will get a popup where you confirm recording this group, and can write a text label.
<b>NOTE</b> The order in which the channels were selected is stored with the group.		

### Using 900-groups

If you rename channels 900-999 to zero you can use presets 900-999 like groups together with the channel functions.

See [Rename](#).

#### EXPLANATION

900 groups is a remnant from the eighties, when consoles often never had more than 900 channels. To be able to access user definable channel groups from a remote control for focusing, an exception was made for these presets.

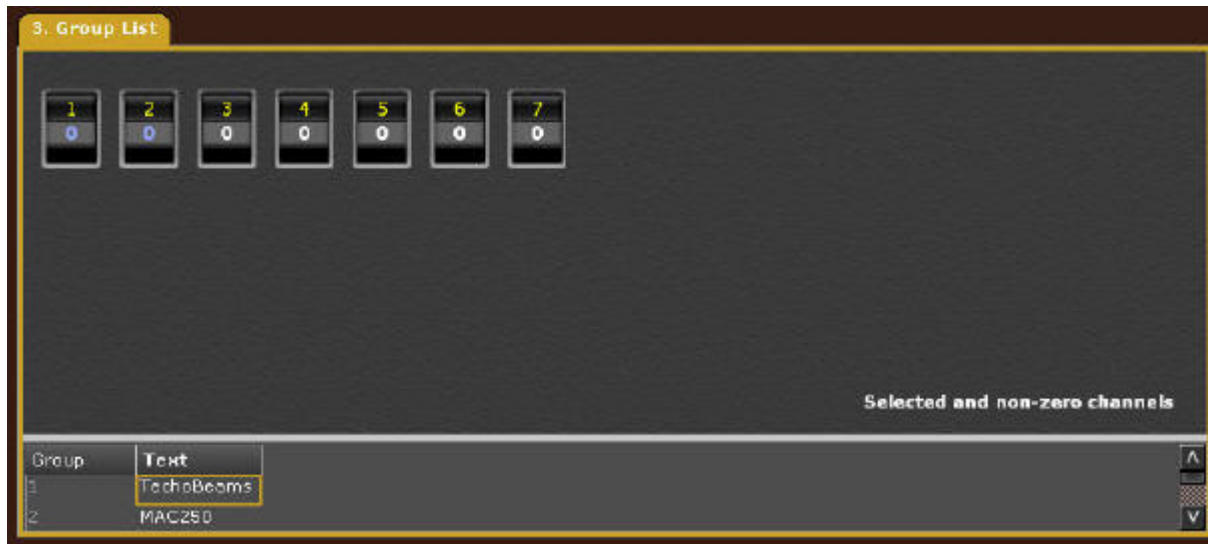
## Groups - Functions

You can use a group as a channel number with all channel select functions.

Function	Key	Feedback
Select all channels in a group	# . CH	Entering a decimal point after a group number allows you to use all channel functions.
Select all channels in a group to the level wheel	# . Wheel	The channels are selected and the levels are mapped to the wheel when it is moved.
Load a group to a master	# GROUP & Master Key	The group is loaded to the Master Playback.
Load all recorded groups from master #	# GROUP & Master Key	Hold GROUP and keep pressing new Master Keys to load the next recorded Group.

## Groups - List

You can view, edit and create new Groups directly in the Group List (GROUP or BROWSER >Group).



## Group List - Columns & Functions

These are the functions in the Group list

Function	Key	Feedback
Open the Group List	<input type="button" value="GROUP"/>	The Group List is opened.
Open the Group List focused at group #	<input type="button" value="#"/> <input type="button" value="GROUP"/>	The Group list is opened and focused at the specified group.
Update the selected Group	<input type="button" value="UPDATE"/>	Updates all changes in the current group.
Insert a new Group	<input type="button" value="INSERT"/>	Inserts a new group with the next free number, with the channels that were selected.
Insert a new Group with number #	<input type="button" value="#"/> <input type="button" value="INSERT"/>	Inserts a new group with this number, with the channels that were selected.
Delete selected Group	<input type="button" value="DELETE"/>	Deletes the selected group. Cannot be undone.
Set text to a Group	<input type="button" value="MODIFY"/>	Press MODIFY in the text cell, enter the text and press MODIFY to exit.



## Groups - Display List

You can use this list to view, select, add and subtract groups to the current channel selection.

Function	Console	Action
Open the Group list in the main display of the console	<div>DISPLAY LIST</div> & <div>GROUP</div>	Opens the Group List. Use the trackball in Display List mode to scroll.
Select a group	Trackball in Display List Mode	Select with the trackball and right- or leftclick.
Add a group (to the current selection)	Trackball in Display List Mode	Hold right- or leftclick and press +.
Subtract a group (from the current selection)	Trackball in Display List Mode	Hold right- or leftclick and press -.

# --PRESETS

**A Preset is used to store intensities, attributes or attribute times for playback in a Sequence, Main- or Master Playback.**

This chapter contains the following sections

- [Presets - Introduction](#)
- [Presets - Record](#)
- [Presets - Update](#)
- [Presets - List](#)
- [Presets - Load To Playbacks](#)
- [Presets - Copy](#)
- [Presets - Select Channels](#)
- [Presets - Fetch Intensities](#)
- [Presets - Display List](#)
- [Presets - Channel Editor Wizard](#)
- [Presets - Auto-Save](#)
- [Presets - Times](#)
- [Presets - Compare Mode](#)

## Presets - Introduction

The basic building block in Congo is a Preset.

### **General Facts**

- Channels, levels, attributes and Dynamic Effects are stored into Presets.
- Presets can be played back from the Master Playbacks, and the Main Playback one by one, or as part of a Sequence or Chase.
- You can store 9999 individual Presets using Preset numbers 0.1-999.9.
- 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.
- Presets can be added together to create new Presets
- 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.

#### **NOTE**

**A Preset is a memory that can be reused in several Sequences or Playbacks at the same time. To delete it completely you have to go to the source of all Presets: the [Preset List](#).**

**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.**

## Presets - Record

You can record the output on stage, or part of it, to a Preset. What you see in the active Channel View is what is recorded. Normally only changed moving device parameters are recorded.

Function	Key	Feedback
Record the content of the selected Channel View to a new Preset with the next free number	<input type="button" value="RECORD"/>	You will get a popup. See <a href="#">The Recording Popup</a>
Record a new Preset with a specific number	<input type="button" value="#"/> <input type="button" value="RECORD"/>	You will get a popup. See <a href="#">The Recording Popup</a>
<b>NOTE</b> You can define how moving device parameters are stored in the Record Settings. Hold <b>SETUP</b> and press <b>RECORD</b> .  A recorded Preset is always added to the Preset List (Browser >Presets).		

### The Recording Popup

The recording popup has a Basic and an Advanced section.

In the **Basic** part you can confirm recording a Preset (RECORD or MODIFY). You can also add a text label and define the fade type.



In the **Advanced** part you can set fade and moving device times and define the fade type.

The screenshot shows a software window titled "Record Preset". It has two tabs: "Basic" and "Advanced", with "Advanced" currently selected. The main heading is "Record new preset 16.0". Below this, it says "Next free preset number: 17.0". There is a "Text" label followed by a yellow input field. Below that is a "Fade Type" label followed by a dropdown menu showing "Crossfade". A horizontal line separates this section from the "Timing" section. The "Timing" section contains several labels and corresponding input fields: "Delay Out", "Out", "Delay In", "In", "F-Delay", "C-Delay", "B-Delay", "F-Time", "C-Time", and "B-Time". The percentage-based fields (F-Delay, C-Delay, B-Delay, F-Time, C-Time, B-Time) are all set to "100 %".

Timing	
Delay Out	
Out	
Delay In	
In	
F-Delay	100 %
C-Delay	100 %
B-Delay	100 %
F-Time	100 %
C-Time	100 %
B-Time	100 %


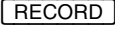


See [Preset Times](#)

See [Sequence Times](#)

See [Moving Device Times](#)

## Record Presets - Live Tab




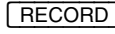

When the channel control is set to the Live Tab, you will record the complete stage output. The Preset is automatically added to the sequence in the Main Playback.

Action	Key	Feedback
1. Activate the Live tab		The Channel Controls are mapped to the A field.
1a. Record the complete stage output to a new Preset with the next free number		You will get a popup with the next free preset suggested. You can write a text label. The Preset is added to the sequence in the Main Playback.*
1b. Record a new Preset with a specific number	 	You will get a popup where you also can write a text label. The Preset is added to the sequence in the Main Playback

\*This depends on the BUILD SEQ mode (softkey in the Playback soft key page of the Main Display).

## Record Presets - Field A Only

There are a lot of options for recording presets. some are set in the Record Settings (hold SETUP and press RECORD). This is a summary of the rest.

Action	Key	Feedback
Record channels and changed moving device parameters in the A field to the next free preset.	 	No output from the Master Playbacks will be recorded. The Preset is added to the sequence in the Main Playback. See <a href="#">The Recording Popup</a> .
Record channels and changed moving device parameters in the A field to a specific preset.	  	No output from the Master Playbacks will be recorded. See <a href="#">The Recording Popup</a> . The Preset is added to the sequence in the Main Playback.

## Record All Attributes for selected channels

Normally only changed moving device parameters are recorded. You can record all parameters of the selected channels (similar to a block cue).

Setting	Key	Feedback
Record all attributes for the selected channels to the currently loaded Preset in the A field.	<b>RECORD</b> & <b>ATTRIBUTES</b>	You will get a popup where you can choose to merge or replace with the values stored already in that Preset.
Record all attributes for the selected channels to Preset #	<b>#</b> <b>RECORD</b> & <b>ATTRIBUTES</b>	You will get a popup where you can choose to merge or replace with the values stored already in that Preset.

This is the Record Attributes popup



## Record Directly To A Master

You can record the selected channels, or all channels with an intensity on stage directly to a Master. A preset will be created automatically if none is specified. If Attribute recording is set to Automatic, attributes will also be recorded.

Action	Key	Feedback
Record the selected channels to a Master Playback*	<b>RECORD</b> & Master Key	You will get a popup with the next free preset suggested. You can write a text label.
Record the selected channels with a specific Preset number to a Master Playback*	<b>#</b> <b>RECORD</b> & Master Key	You will get a popup confirming the recording.

\*If no channels are selected - all channels in A are recorded.

### NOTE

**For a Master with a Sequence or Chase, a new preset is recorded to that Sequence or Chase.**

**All attributes are recorded, except those Masked by the Global Mask.**

## Record Selected Channels To Any Preset

Record the selected channels, with attributes and dynamics, to a specified Preset. All moving device attributes for the selected channels will be recorded (not only changed attributes).

Setting	Key	Feedback
Record the selected channels to a new Preset.	<input type="text" value="CH"/> <input style="border: none; padding: 0 5px;" type="text" value=" &amp; "/> <input type="text" value="RECORD"/>	You will get a popup where you confirm recording this group, and can write a text label.
Record the selected channels to Preset #.	<input type="text" value="#"/> <input type="text" value="CH"/> <input style="border: none; padding: 0 5px;" type="text" value=" &amp; "/> <input type="text" value="RECORD"/>	You will get a popup where you confirm recording this Preset, and can write a text label.



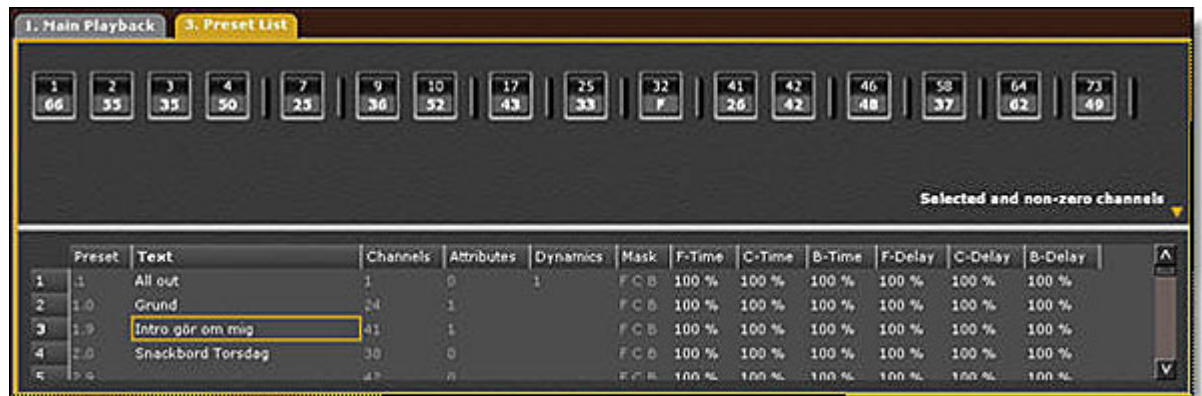
## Presets - Update

Updates the preset in the playback connected to the channel control. This can be Live, Blind, any Master Playback or a step in the Preset List.

Action	Key	Feedback
Update changed levels and attributes to the current ly loaded Preset	<input type="button" value="UPDATE"/>	You will get a simpler version of the Recording popup. See <a href="#">The Recording Popup</a>
<b>NOTE</b> If you are in the Live field the Preset loaded to the A field of the Main Playback will be updated.		

## Presets - List

You can view, edit and create new Presets (blind) in the Preset List (PRESET or Browser >Presets). See [Introduction to Presets](#).



### Preset List - Columns

Column	Input	Function
<u>Preset</u>	No input	The number of this Preset - cannot be edited.
<u>Text</u>	ABCDE...	Press MODIFY to activate and end text input. This text is shown also in the Playback views.
<u>Channels</u>	No input	Shows how many channels/devices that are stored with an intensity in this Preset
<u>Attributes</u>	<input type="button" value="MODIFY"/>	Shows how many moving devices are stored in this Preset. MODIFY opens the attribute editor.
<u>Dynamics</u>	<input type="button" value="MODIFY"/>	Shows how many Dynamics are stored in this Preset. MODIFY opens the Dynamics editor.
<u>Mask</u>	<input type="button" value="MODIFY"/>	Open the Mask editor where you can mask any parameter.
FCB-Time	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Hold C and press MODIFY to enter a time in seconds instead of % of the main fade times.
FCB-Delay	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Hold C and press MODIFY to enter a time in seconds instead of % of the main fade times.

## Preset List - Functions

These are the functions in the Preset list

Setting	Key	Feedback
Open the Preset List	<input type="button" value="PRESET"/>	The Preset List is opened.
Open the Preset List focused at Preset #	<input type="button" value="#"/> <input type="button" value="PRESET"/>	The Preset list is opened and focused at the specified Preset.
Update the focused Preset	<input type="button" value="UPDATE"/>	Updates all changes in the current Preset.
Copy a Preset to number #	<input type="button" value="#"/> <input type="button" value="RECORD"/>	Records a copy of the current Preset with this number.
Delete selected Preset	<input type="button" value="DELETE"/>	Deletes the selected Preset. Cannot be undone.
Insert a new Preset with number #	<input type="button" value="#"/> <input type="button" value="INSERT"/>	Inserts a new Preset #, with the channels and levels from Live (A).
Insert a new Preset with the next free number	<input type="button" value="INSERT"/>	Inserts a new Preset with this number.
Edit a cell with a numeric value	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Changes the value of the selected cell.

## Presets - Load To Playbacks

You can load Presets directly to any Playback.

Action	Key(s)	Feedback
Load Preset # to the Active field (A) of the Main Playback	# PRESET & A	The Preset is loaded to the A field, replacing the content of that field.
Load Preset # to the Next field (B) of the Main Playback	# PRESET & B	The Preset is loaded to the B field, replacing the content of that field.
Load Preset # to a Master Playback	# PRESET & Master Key	Preset # is loaded to the Master Playback

### Quick-load Presets to Masters

The direct functions allow you to load a series of recorded Presets to Masters, this is called quick-loading Presets to Masters.

1. Enter the number of the first Preset.
2. Hold down the PRESET key, and pull your finger over a range of Master Keys.

All existing consecutive Presets will be loaded.

## Presets - Copy

Copy a Preset by recording it with a different Preset number. This can be done in any Playback, or directly in the Preset List. See [Preset List](#)

Action	Key	Feedback
Copy the Preset in the channel view connected to the channel controls to a new number.	<input type="text" value="#"/> <input type="button" value="RECORD"/>	You will get a popup. See <a href="#">The Recording Popup</a>

## Presets - Select Channels

You can add and subtract channels that are stored in Presets to/from the current channel selection.

Function	Key	Feedback
Select all channels in a Preset	# PRESET & CH	All channels with a level in the specified Preset are selected.
Add all channels in a Preset to the current channel selection	# PRESET & +	All channels with a level in the specified Preset are added to the current channel selection.
Subtract all channels in a Preset from the current channel selection	# PRESET & [- ]	All channels with a level in the specified Preset are subtracted from the current channel selection.
Select all channels from a Preset that have a level in the channel control	# PRESET & ALL	All channels with a level in the channel control, that also have a level in the specified Preset, are selected.
Select all channels in a range of Presets	# PRESET & CH # PRESET & THRU	All channels stored in every Preset from # to # are selected.

## Presets - Fetch Intensities

Fetch intensities for all or specific channels from any Preset.

Function	Key	Feedback
Set last stored level	<input type="text" value="FETCH/ON"/>	All selected channels are set to their last stored levels.
Copy level from Preset #	<input type="text" value="#"/> <input type="text" value="FETCH/ON"/>	All selected channels are set to the levels stored in Preset #.
Copy levels and channels from Preset #	<input type="text" value="#"/> <input type="text" value="PRESET"/> <input type="text" value="&amp;"/> <input type="text" value="@LEVEL"/>	All channels in the specified Preset are selected and set to the levels in Preset #.

### **HINT**

You can fetch attribute values as well. See [Device Control - Fetch/Copy](#).

## Presets - Display List

Opens a list that shows all Presets in the Main LCD of the console.

Function	Console	Action
Open the Preset Display list in the main display of the console	<div>DISPLAY LIST</div> & <div>PRESET</div>	Opens a list of all Presets. Use the trackball in Display List mode to scroll.



## Presets - Channel Editor Wizard

The Channel Editor Wizard allows you to track level changes in all Presets with powerful arguments. Press WIZARD in any channel view to open the Channel Wizard.

Channel Editor Wizard

1 22 2 76 3 76 11 22 16 22 17 22 18 22

38.5 (Dekor tillbaka) Selected channels

Step 1: Select the channels/levels to operate on in the Channel View  
Step 2: Select options and Execute

Type of Change Set level  
Argument 0  
Change in Sequence  
Start at 1 .5 TOMT II TO  
Stop at 103 88.0 APPLÄD M 2  
Include all channels ☐

Execute

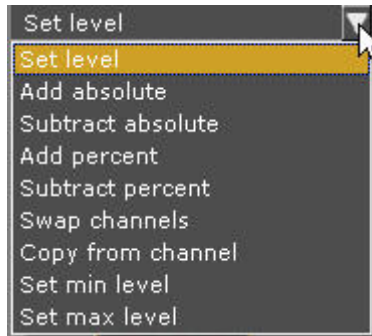
### NOTE

You cannot reverse or undo changes made with this Wizard. We therefore recommend you strongly to save your play before using this function.

## Channel Editor Wizard - Type Of Change

You can do the following commands through any range of Presets.

The parameter "Include All Channels" will affect channels with no level (0%) as well, and is necessary in some cases.



Function	Explanation
Set Level	Set level #
Add Absolute	Add #% to all levels.
Subtract Absolute	Subtract #% from all levels.
Add percent	Increase with #% of current levels
Subtract percent	Diminish current levels with #%
Swap channels	Change levels between the selected channel and the channel # in Argument.
Copy from channel	Copy all levels from the selected channel to channel # in Argument
Set min level	Sets a minimum level HTP with the current levels.
Set max level	Sets a maximum level to the current levels.

## Channel Editor Wizard - Argument

Depending on the type of change - the number here is the Argument used. It can be a level or a channel number.

## Channel Editor Wizard - Include All Channels

This parameter will allow the change to affect also channels with no level (0%).

## Presets - Auto-Save

Each time you record a preset or a group all changes to the play since the last RECORD or Save are stored in a play called AUTOSAVE.ASC.

This play is stored in the Play Archive (Browser >File >Open >Play Archive) and can be opened like any play.

Function	Console	Feedback
Open the Auto Save setting	<div>SETUP &amp;</div> <div>RECORD</div>	Opens a popup where you can set Auto-Save to ON.
<b>NOTE</b> This is a feature that we recommend you to use with caution. Saving a large show can slow down the system temporarily.		

## Presets - Times

FCB times for moving device parameters are stored with the Preset.

- The default setting for FCB times is 100% of the main In time
- The default setting for FCB delay times is 100% of the Delay main In time

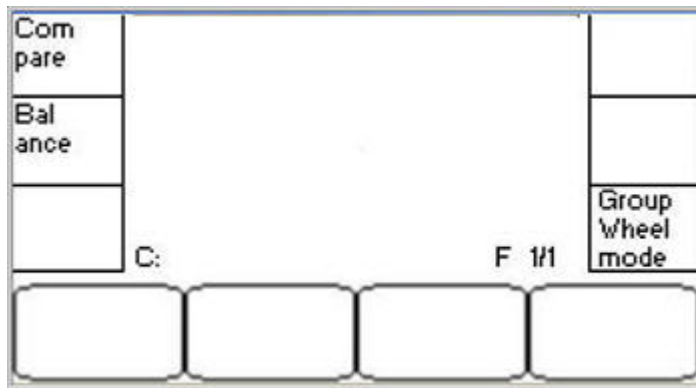
These times are executed when played back from a Sequence or from a Master Playback.

You can set them in % or as absolute times in seconds. You can select what to default to in the Time Settings (SETUP & TIME). Hold C/Alt and press MODIFY to set the opposite of what is currently selected.

## Presets - Compare Mode

The Compare function allows you to compare the current light in the active field with the recorded version of the preset in the active field.

This key is in the Channels Soft Key Page.



Action	Key	Feedback
Compare recent changes in a channel view with the last stored version.		The last stored version will be loaded. Press COMPARE to exit Compare mode.
Compare the content of a channel view with any preset.		The selected preset will be loaded. Press COMPARE to exit Compare mode.
Compare the content of a channel view with any group.		The selected group will be loaded. Press COMPARE to exit Compare mode.

# --SEQUENCES

**A sequence is a list of presets that can be played back manually, with fade times, and as a chase.**

This chapter contains the following sections

- [Sequences - Introduction](#)
- [Sequences - In The Main Playback](#)
- [Sequences - Playback Views](#)
- [Sequences - List](#)
- [Sequences - Sequence List](#)
- [Sequences - Crossfade Movefade, Lockfade](#)
- [Sequences - Times](#)
- [Sequences - Insert Step](#)
- [Sequences - Delete Step](#)
- [Sequences - Links](#)
- [Sequences - Load](#)
- [Sequences - Track List](#)
- [Sequences - Playlist](#)
- [Sequences - Build & Modify Modes](#)

## Sequences - Introduction

A sequence is a list of sequence steps. Each step always contains a preset. Each time a Preset is recorded in the Live tab a new Sequence step is created with that Preset.

A Sequence Step consists of two main components

Item	Contains	Read More
Sequence Step Data	Fade Times, Auto Times, Text, Master Link, Master Page Link, Macro Link, GoOnGo flag for Attributes.	See <a href="#">Sequence List</a>
Preset	Intensities, Dynamics, Attributes and Attribute Times.	See <a href="#">Preset List</a>

### **General Facts**

- You can rearrange the order in a Sequence at anytime.
- The same Preset can exist in several sequence steps, and sequences.
- You can set times to every channel and parameter in a sequence step.
- Sequences can be played back from the Main playback, or any Master Playback.
- You can create up to 999 sequences.
- You can link any Master Playback to a sequence step.
- You can trig a Sequence with MIDI and Time Code.
- You can play back any Sequence in Chase (looped) mode with BPM and rate.
- There is always a default sequence in the Main Playback.

## Sequences - In The Main Playback

When you open a new play there is a default sequence (1) in the Main Playback.  
When you record a Preset in the Live field it will be added to the sequence in the Main playback.

These are the sequence functions for the Main Playback

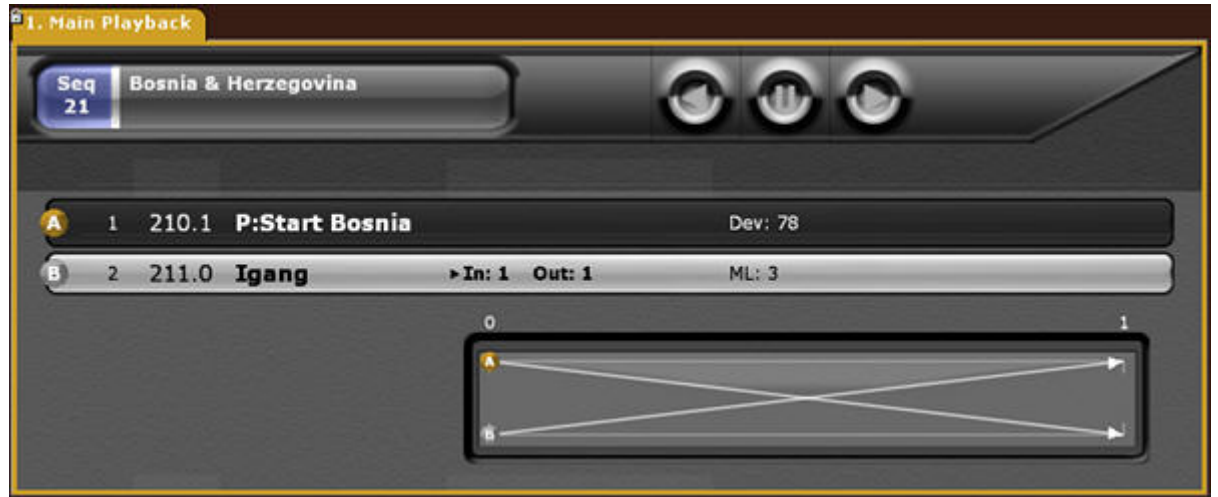
Function	Key	Feedback
Record a new Preset and create a new step	# RECORD	Each time a Preset is recorded in Live it is added as a new step to the sequence loaded to the Main Playback*
Edit a Sequence Step	MODIFY & PLAYBACK	Opens the Sequence List for the sequence in the Main Playback. See <a href="#">Sequence List</a> .
Navigate in the Sequence of the Main Playback		See <a href="#">Main Playback</a> .

\*Unless the mode Build Sequence is off. See [Playback Soft Key Page](#).



## Sequences - Playback views

The Playback views look like this



It provides information in blue about the current step, in yellow and with a graphical time representation the next step.

Standard Times are described like this:

In: #  
Out: #  
Time: #  
Delay In: #  
Delay Out: #

Channel Times

- are summarised as ChT: #. The # indicates how many different time groups there are in a step.

Moving Devices

- are summarised as Dev: #. The # indicates how many moving devices are affected by the step.

Master Links

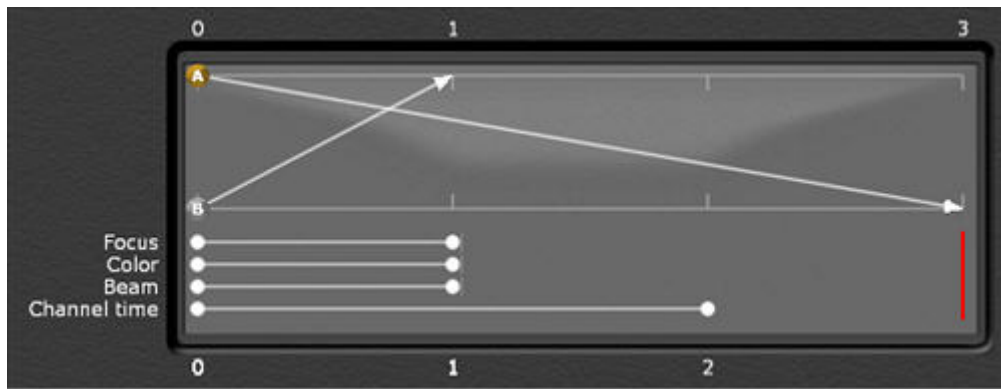
- are indicated as ML: #. The # indicates how many Masters are linked to the step.

Master Pages

- are indicated as MP: #. The # indicates which Master Page is linked to the step.

## Sequence Playback Views - The Graphical Representation

The graphical representation of the next crossfade is very simple.



It shows the in and outgoing fade times as arrows, and FCB times and channel times as progress bars.

You can toggle this view on/off by holdin FORMAT and pressing the UP or DOWN arrow.

## Sequences - List

You can insert and delete sequences, and change playback modes (chase) in the Sequences list (SEQ or BROWSER >Sequence).

3. Sequences								
	Sequence	Text	Mode	Rate	Bounce	Reverse	Single shot	BPM
1	1	Main	Normal	100 %	Off	Off	Off	0
2	2		Normal	100 %	Off	Off	Off	0
3	11	Chase 1-7	Chase	100 %	Off	Off	Off	0
4	12	Chase 11-17	Chase	100 %	Off	Off	Off	0
5	13	Chase 21-27	Chase	100 %	Off	Off	Off	0
6	14	Seq 31-37	Normal	100 %	Off	Off	Off	0
7	21	Song Sweden	Normal	100 %	Off	Off	Off	0
8	22	Song UK	Normal	100 %	Off	Off	Off	0
9	23	Song Germany	Normal	100 %	Off	Off	Off	0
10	24	Song Finland	Normal	100 %	Off	Off	Off	0

### Sequences List - Insert/Delete/Load

Function	Key	Feedback
Insert a new sequence	# INSERT	Sequence # is inserted into the list
Delete a sequence	DELETE	The selected sequence is deleted*
Load a sequence	Master Key	The selected sequence is loaded to this Master Playback.

\*The Sequence is deleted, and all timing and text information. The Preset still exists in the Preset list and can be used again.

## Sequences List - Columns

Column	Input	Function
<u>Sequence</u>	<input type="button" value="MODIFY"/>	The number of this Step- cannot be edited. Press MODIFY to open the Sequence List.
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input. This text is shown in the top of the Playback views.
<u>Mode</u>	<input type="button" value="MODIFY"/>	Toggles between Normal and Chase mode.
<u>Rate</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Speeds up the playback by #% (Chase mode).
<u>Bounce</u>	<input type="button" value="MODIFY"/>	Sets playback to alternate continuously between forward and reverse (Chase mode).
<u>Reverse</u>	<input type="button" value="MODIFY"/>	Sets Playback in the reverse direction only (Chase mode).
<u>Single Shot</u>	<input type="button" value="MODIFY"/>	Sets Playback to one time (Chase mode).
<u>BPM</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Supresses fade times and sets step time (wait) to BPM # (Chase mode).

## Sequences - Sequence List

You can view, edit and delete sequence steps in the Sequence list (# SEQ or BROWSER >Sequence >#).



### NOTE

You can open the Sequence List for the Main Playback by holding **MODIFY** and pressing **PLAYBACK**.

## Sequence List - Functions

Function	Key	Feedback
Open the Sequence List	# SEQ	The Sequence List is opened.
Go to the selected Step	GOTO	Fades in the Main Playback to the selected step.
Update the current Step	UPDATE	Updates level changes in the current step.
Insert a new Step and a Preset with number #	# INSERT	Inserts a new step, with Preset #.
Edit Text in a step.	MODIFY	Opens the text cell for editing. The Congo keyboard is activated in Master Playback display four.
Delete selected Step(s)	DELETE	Deletes all selected Step(s). Cannot be undone.
Edit any value	# MODIFY	Enter a new value and press MODIFY.

## Sequence List - Columns

Column	Input	Function
<u>Step</u>	<input type="button" value="GOTO"/>	The number of this Step- cannot be edited. Press GOTO to fade to this step.
<u>Preset</u>	No input	This is the number of the Preset in this step. Cannot be edited.
<u>DelayOut</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Edit the delay out time.
<u>Out</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Edit the Out time.
<u>DelayIn</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Edit the Delay In time.
<u>In</u>	<input type="button" value="MODIFY"/>	Edit the In time.
<u>Wait *</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Edit the Wait time.
<u>Mode</u>	<input type="button" value="MODIFY"/>	Change fade mode. Select between crossfade (x) movefade (m) and lockfade (l).
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input. This text is shown in the Playback views.
<u>GoOnGo</u>	<input type="button" value="MODIFY"/>	Toggle between GoOnGo and GoInB. Controls if moving devices will move on GO or when the step is loaded in B (next).
<u>ChTime</u>	<input type="button" value="MODIFY"/>	Shows the number of channel times in this step. Opens the channel time editor.
<u>MastLink</u>	<input type="button" value="MODIFY"/>	Shows the number of master links in this step. Opens the master link editor.
<u>MastPage</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Shows or edits which Master Page is linked.
<u>Macro</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Shows or edits which Macro is linked.
<u>LinkTo</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Shows or edits which step this step is linked to.
<u>TimeCode</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Shows which time code that will trig this step. See <a href="#">Time Code Trig</a> .

\*In the Congo Setup you can change how the Wait time works, so that it starts counting from the start of the previous crossfade instead. This is called Followon Times.

## Sequences - Crossfade Movefade & Lockfade

When you record a new Preset to a Sequence you will get the option to store it as a Crossfade, a Movefade or a Lockfade. Each of these modes affects how channels in that Preset will be played back when a the next crossfade is started.

Function	Shortcut	Feedback
Record a crossfade	<span>RECORD</span>	Normally a crossfade (x) is recorded. This means that all channel values are replaced when a new crossfade is started.
Record a Move Fade	<span>+</span> <span>&amp;</span> <span>RECORD</span>	When a movefade (m) is followed by another movefade, only channels with new levels will be affected.
Record a LockFade	<span>-</span> <span>&amp;</span> <span>RECORD</span>	When a lockfade (l) is started, the channels involved will not be affected by anything until they have finished the fade they started.  Stepping in the sequence will stop ongoing lock fades.

### HINTS

- When you jump in the sequence with GOTO, the history of all fades will be executed to recreate the correct state after the jump.
- GOTO & B updates the current state (scanning backwards in the sequence accumulating Move/Lock fades).
- For a Lock fade, it is not possible to press PAUSE or GO BACK, since the nature is to "lock" the fade regardless of other playback controls.
- Stepping through the sequence with SEQ+/SEQ- or using GOTO will stop current Lock fades.
- If you start a move or lock fade on top of a crossfade, the crossfade now continues to run in the background and is also available for speed control on the display.
- Move and Lock fades are indicated with M and L in the Channel Views.

## Sequences - Times

You can set times to a sequence step, and all channels and moving device parameters will follow that time. You can also set individual times in seconds, or as a percentage of the in- and delay times for each channel and moving device parameter in a sequence step. Times are set from 0.1seconds to 49.59 minutes (0.1- 4959).

When no time is set to a sequence step, the default time (5seconds) will be used. Change this setting by holding SETUP and pressing A.

### **NOTE**

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

**To edit the times for a step open the Sequence List.**

### Sequence Times - Main Times (in/out/delay/wait)

Times are set to the step in A (Active) or B (Next) depending on the setting for times (SETUP & TIME).

Function	Key	Feedback
Set an In time	# IN	A time is set for the incoming channels.
Set an Out time	# OUT	A time is set for the outgoing channels.
Set In- and Out time	# TIME	A time is set for the in- and outgoing channels.
Set a Delay In time	# DELAY & IN	A delay time is set for the incoming channels.
Set a Delay Out time	# DELAY & OUT	A delay time is set for the outgoing channels.
Set a Wait or Followon time *	<a href="#">Sequence List</a>	Enter the time in the Wait column of the Sequence List. You can set Wait to behave as Followon in the Congo Settings (SETUP).

\* A Wait or Followon time will automatically execute a crossfade to the Step it is assigned to. The difference is that a Wait time starts counting down after the END of the previous crossfade, while the Followon time starts counting down from the START of the previous crossfade. Wait times is the default setting.

See [Times Soft Key Page](#).

You can view/edit the main times in the [Sequence List](#).



## Sequence Times - Channel Times

Times are set to the step in A (Active) or B (Next) depending on the setting for times (SETUP & TIME).

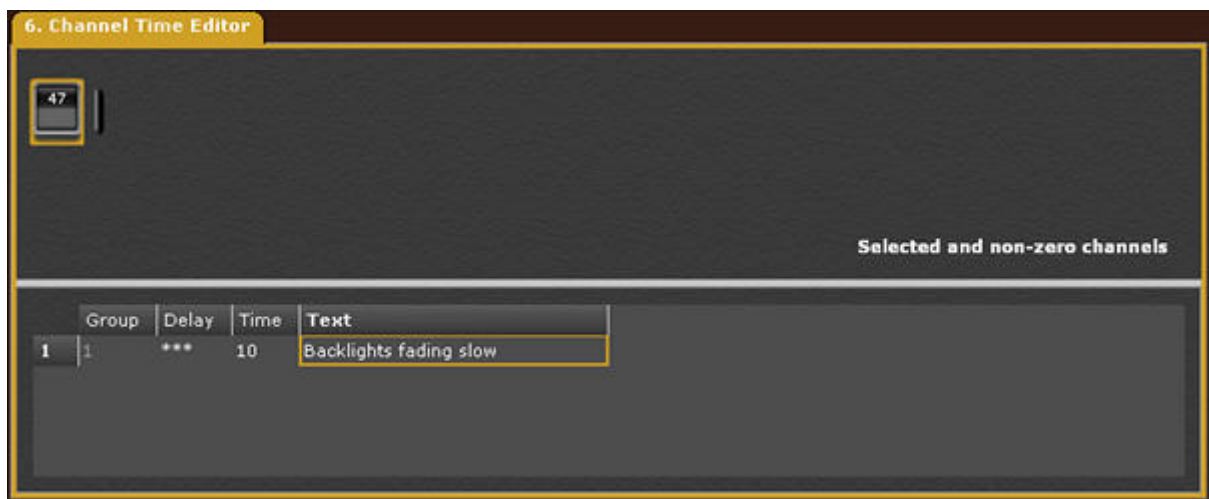
Function	Soft Key	Feedback
1. Select the TIME soft menu page	TIMES (soft key)	The time soft key page is selected in the main display.
Set a channel time for the selected channels	# CH TIME	A time is set for the selected channels.
Set a channel delay time for the selected channels	# CH DELAY	A time is set for the selected channels.

You can set channel times with a shortcut as well.

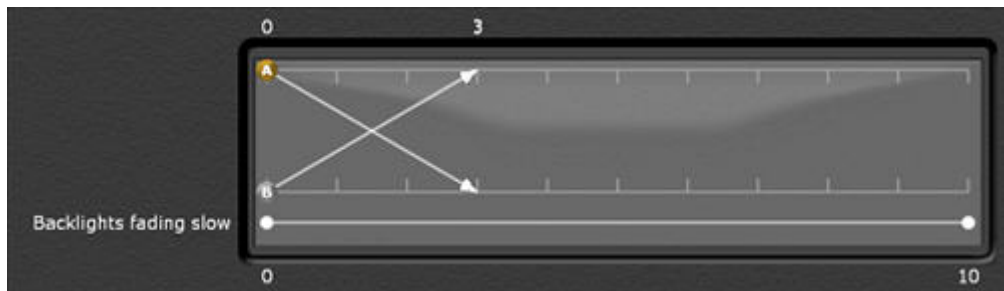
Function	Key Shortcut	Feedback
Set a channel time for the selected channels	# CH & TIME	A time is set for the selected channels.
Set a channel delay time for the selected channels	# CH & DELAY	A time is set for the selected channels.

Channel Times are edited in the Channel Time List (press MODIFY in the ChTime column of the Sequence List). See [Sequence List](#).

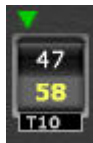
This is where you can add a text to each channel time group. This text is shown in the graphical time line view of the Playback list.



This is what it looks like in a playback view



This is how the time is indicated in the live channel view, under the level.




**NOTE**

When Channel Times are activated, the first four Channel Times are shown on the Main Display over the 4 wheels. The status for each Channel Time is displayed over each wheel. Rate for each channel can be adjusted with the corresponding wheel and the Channel Time can be started/stopped with the corresponding wheel key.

## The Time Editor Popup

The Time Editor (also part of the Record popups Advanced tab) allows you to edit the main times of a sequence step from a popup.

Press MODIFY and TIME to open the Time Editor popup.



The Time Editor popup window has a title bar labeled "Time Editor". It contains a list of parameters with corresponding input fields:

Parameter	Value
Wait	
Delay Out	
Out	8
Delay In	
In	6
F-Delay	100%
C-Delay	100%
B-Delay	100%
F-Time	100%
C-Time	100%
B-Time	100%

### NOTE

The Time Editor follows the setting of the "Times in A/B" parameter in the Congo Setup (SETUP or F12).

## The Times Soft Key Page

The Time Soft Key Page is selected with the soft key TIMES in the Main Display of the console.

These are the functions available. All times are set to the Main Playback.

Function	Softkey	Feedback
Set a channel time	# CH TIME	Sets a channel time (#) to the selected channels.
Set a channel delay time	CH DELAY	Sets a channel delay time (#) to the selected channels.
Set a wait time	WAIT	Sets a Wait time (#) to the Preset in A (or B).
Set an out time	OUT	Sets an out time (#) to the Preset in A (or B).
Set a delay out time	DELAY OUT	Sets a Delay Out time (#) to the Preset in A (or B).
Set a delay in time	DELAY IN	Sets a Delay In time (#) to the Preset in A (or B).
Set an in time	IN	Sets an In time (#) to the Preset in A (or B).
Set an attribute time	ATTR TIME	Sets an Attribute time (#) to the selected channels.
Set an attribute delay time	ATTR DELAY	Sets an Attribute Delay time (#) to the selected channels.

## Sequence Times - FCB Times

FCB Times are set to the Preset of a Sequence Step. See [Moving Device Times - FCB Time](#)

## Sequence Times - Device Times

Device Times are set to the Preset of a Sequence Step. See [Moving Device Times - Device Time](#)

## Sequence Times - Parameter Times

Individual Moving Device Parameter times are set to the preset of a Sequence Step. See [Moving Device Times - Parameter Time](#).

## Sequences - Insert Step

There are two ways of inserting a sequence step between two existing ones.

- Record a preset with a (decimal) number that fits between
- Insert any preset in the Sequence List (See [Sequence List](#))

### Insert A Sequence Step - In A Playback

When you are working directly in a Playback and record a new preset, it is inserted numerically into the sequence of that Playback.

Function	Shortcut	Feedback
Insert a Step between step 1 and 2	<input type="text" value="1"/> <input type="text" value="."/> <input type="text" value="5"/> <input type="button" value="RECORD"/>	A popup will ask you to confirm recording preset 1.5
Confirm recording	<input type="button" value="RECORD"/>	The preset is recorded between 1 and 2.

### Insert A Sequence Step - In The List

Function	Shortcut	Feedback
1. <i>Open the Sequence list</i>	<input type="text" value="#"/> <input type="button" value="SEQ"/>	The List for sequence # is opened.
2. <i>Move to the step you wish to insert a new step after</i>	Arrow Keys	The selected step is highlighted in yellow.
3. <i>Insert Preset #</i>	<input type="text" value="#"/> <input type="button" value="INSERT"/>	The preset is inserted after the selected step*
<b>NOTE</b> The Preset does not bring sequence texts, fade times or links from other sequence steps if it has been used earlier.		

## Sequences - Delete Step

Function	Shortcut	Feedback
1. <i>Open the Sequence list</i>	# SEQ	The List for sequence # is opened.
2. <i>Select the step you wish to delete</i>	Arrow Keys	The selected step is highlighted in yellow.
3. <i>Delete the selected step</i>	DELETE	The selected step is deleted
<b>NOTE</b> When you delete a Sequence Step all assigned times, links and texts are lost. The Preset of that step will still exist in the Preset List, and can be used again.		

## Sequences - Links

A sequence step can have a link to Master fades, a Master Page, a different sequence step, and a Macro.

All links are done in the Sequence List (# SEQ or BROWSER >Sequences >#).

### Sequence Step Links - Master Playbacks

Master Links are loaded when the Sequence step is loaded to the B field. They are faded when GO is pressed or the crossfade faders are moved.



Function	Key	Feedback
Select the MastLink column*	Arrow keys	The column is highlighted
Open the Master Link List	MODIFY	The Master Link List is open.
Insert a link to Master #	# INSERT	Master # is linked, with it's current content, and a target level of 100%.

\*In the [Sequence List](#).

#### NOTE

All functions in the Master Link list are the same as in the View Masters list. The only differing one is Target, which is the level the Master will fade to. To load a Master for manual operation, set the target level to 0%.

For the other functions, see [Master View List](#).

## Sequence Step Links - Master Pages

Function	Key	Feedback
Select the MastPage column*	Arrow keys	The column is highlighted
Insert a link to Master Page #	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Master Page # is linked. It will be loaded when this step is loaded to the B (Next) playback.

\*In the [Sequence List](#).

## Sequence Step Links - Another Step

Function	Column	Feedback
Select the LinkTo column*	Arrow keys	The column is highlighted
Insert a link to Sequence Step #	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Sequence Step # is linked. When this step is faded in, the next step will be Step #.

\*In the [Sequence List](#).

## Sequence Step Links - Macro

Function	Column	Feedback
Select the Macro column*	Arrow keys	The column is highlighted
Insert a link to Macro #	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Macro # is linked. It will be executed when this step is loaded to the B (Next) playback.

\*In the [Sequence List](#).



## Sequences - Load

A Sequence can be loaded to the Main Playback, or any Master Playback. For information on how to control a Sequence once it is loaded, see [The Playbacks](#).

Function	Keys	Feedback
Load Sequence # to the Main Playback	# SEQ & PLAYBACK	Sequence # is loaded to the Main Playback. The light in A (Active) and B (Next) is not affected.
Load Sequence # to a Master Playback	# SEQ & Master Key	Sequence # is loaded to the Master Playback.
<b>NOTE</b> Loading a non-existent Sequence to Playback will open a window asking if you wish to create that Sequence.		

You can load a sequence directly from the Browser as well

Function	Keys	Feedback
Load the selected sequence to the Main Playback	LOAD & PLAYBACK	Sequence # is loaded to the Main Playback. The light in A (Active) and B (Next) is not affected.
Load the selected sequence to a Master Playback	LOAD & Master Key	Sequence # is loaded to the Master Playback.

## Sequences - Track List

The Track List allows you to edit levels for a channel selection through any sequence loaded to the Main Playback.

Function	Column	Feedback
Select channels	See <a href="#">Select Channels</a>	The selected channels are highlighted in the Live tab.
Open the Track List	<input type="button" value="TRACK"/>	The Track List is opened for the selected channels and the sequence in the Main Playback.

This is the Track list. You can select any level(s) and enter a new value with MODIFY.

	Step	Preset	Mode	Attributes	1	2	3	4	5	6	7	8	9	10
1	1	0.5	X	Yes										
2	2	1.0	X	Yes										
3	3	2.0	X	No										
4	4	3.0	X	Yes								10		
5	5	3.5	X	No								79		
6	6	4.0	X	No										
7	7	4.1	X	No										
8	8	5.0	X	Yes										
9	9	6.0	X	Yes		91	87	72		87	87		69	
10	10	7.0	X	No		91	87	72		87	87		69	
11	11	8.0	X	No		87	83	68		83	83		65	
12	12	8.5	X	No		5	83	68		83	83		65	

### Track List - Functions

Column	Action	Feedback
<u>Step</u>	<input type="button" value="MODIFY"/>	Opens the Sequence List focused at this Step.
<u>Preset</u>	<input type="button" value="MODIFY"/>	Opens the Preset List focused at this Preset.
<u>Mode</u>	<input type="button" value="MODIFY"/>	Opens the Preset List focused at this Preset.
<u>Attributes</u>	<input type="button" value="MODIFY"/>	Opens the Attribute List for this Preset.
<u>Channels</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Sets a level for the selected cells.

## Track To Wizard

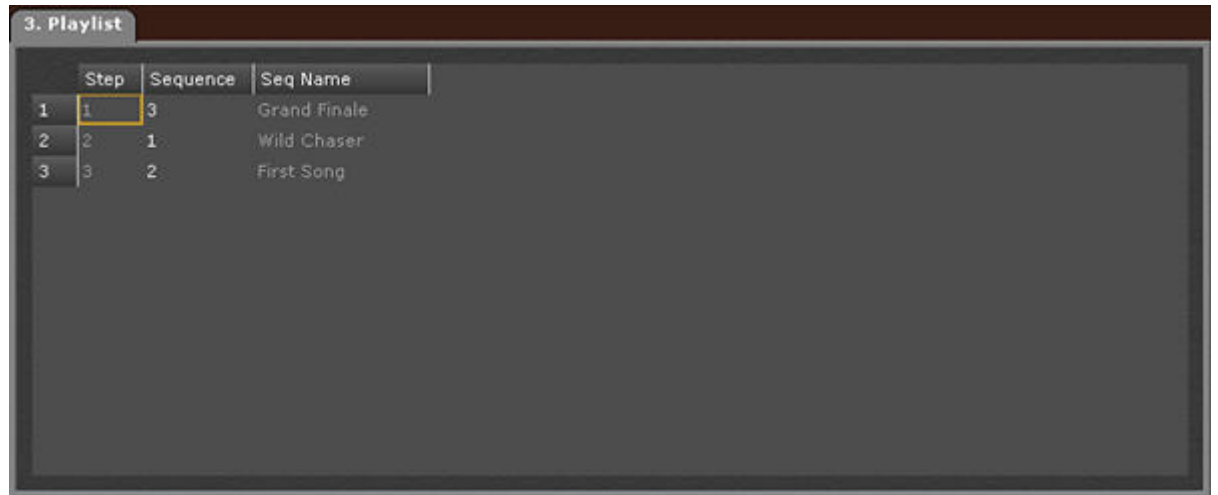
If you press WIZARD on a level in a sequence step, you will get a popup where you can select up to which Sequence Step the same level should be changed (= Tracked To).



## Sequences - Playlist

You can arrange the order in which sequences are played back in a Playlist.

The Playlist is opened from the BROWSER> Playlist (press MODIFY).

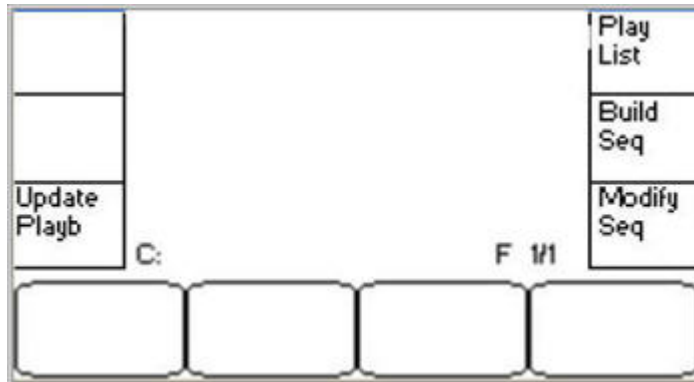


These are the functions in the Playlist.

Function	Column	Feedback
Insert Sequence #	# INSERT	Sequence # is inserted into the Playlist
Delete a Sequence	DELETE	Sequence # is inserted into the Playlist
Load a Sequence	GOTO	Loads the selected Sequence to the Main Playback from the next fade.

## The Playlist - Mode

Playlist mode is activated by the softkey PLAYLIST in the Playback Soft Key Page.



When it is active all Sequences in the Playlist will be loaded when the previous is finished, until the end. Every time a new Sequence is loaded this will be notified with a message on the main screen.

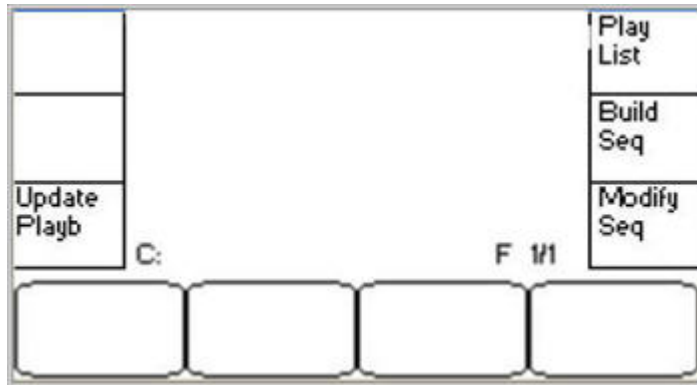
## The Playlist - Console Display

Hold <--- and press the softkey PLAYLIST to activate the Playlist in the Main Display of the console.

You can select any sequence with the trackball in DispList mode by clicking on it.

## Sequences - Build & Modify Modes

There are two modes that affect recording and playback of Sequences. Build Sequence and Modify Sequence. Both are accessed from the **Playback** Soft Key Page in the Main Display of the console.



### Sequence - Build Seq mode

The default setting for this mode is ON. When ON every Preset recorded in the Live or A tab will automatically be added to the Sequence in the Main Playback (in numerical order). The only reason to set this mode to OFF is when a Preset recorded in Live or A should NOT be added to the sequence in the Main Playback.

### Sequence - Modify Sequence Mode

The default setting for this mode is OFF. When turned ON all crossfade in Sequences will disregard Wait and Followon Times, Master Links, Master Pages, Links and other linked information. It is a mode created for rehearsals where only the main lighting changes are advanced manually.

# --CHASE

**A chase is a sequence set to chase mode, which means it will constant loop during playback. See [Sequences](#).**

This chapter contains the following sections

- [Chase - Introduction](#)
- [Chase - Playback View](#)
- [Chase - Playback Modes](#)
- [Chase - Set Rate](#)
- [Chase - BPM & Tap Tempo](#)
- [Chase - Wizard](#)

## Chase - Introduction

A Sequence can be set to run in Chase mode. This means the Sequence will chase endlessly through all Steps on the predefined times. There are several parameters that can affect how it will run in Chase mode.

### **General Facts**

- Chases are edited in the same way as Sequences.
- In addition to Sequences they have Rate and BPM.
- BPM can be set with TAP from the Master Playback.
- A Chase has playback modes such as Revert, Bounce, Single Shot.
- You can link any chase to a sequence step.
- You can play back a chase from any playback, including the Main Playback.



## Chase - Playback View

The Chase playback view is the same as the Sequence Playback view with some added functionality.



The added chase functionality appears under the sequence name display in the top of the Playback view. The functions are described in [The Sequences List Columns](#) as well as the rest of this chapter.

## Chase - Playback Modes

There are three modes that affect the playback of a chase.

Mode	Where	Function
Reverse	Set in <a href="#">The Sequences List Columns</a>	Reverses the chase direction.
Bounce	Set in <a href="#">The Sequences List Columns</a>	Makes the chase reverse direction every second time.
Single Shot	Set in <a href="#">The Sequences List Columns</a>	The chase will run one time and stop.

## Chase - Set Rate

You can set a rate 1-1000% for a Chase. It will scale all times proportionally.

Action	Keys	Feedback
1. <i>Open the Sequences list</i>	<input type="button" value="SEQ"/>	The Sequences List is opened.
2. <i>Step to the Rate cell for a chase</i>	Arrow Keys	The cell is highlighted.
3. <i>Enter a new Rate</i>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	The Rate # is assigned to this Chase. All fade times are proportionally scaled.

## Chase - BPM & Tap Tempo

You can set the tempo/speed to a chaser in BPM. This can be set numerically in the Sequences window (Play Menu) or using the Tap Tempo function.

### Set BPM Numerically

Action	Keys	Feedback
1. Open the Sequences list	<span>SEQ</span>	The Sequences List is opened.
2. Step to the BPM cell for a chase	Arrow Keys	The cell is highlighted.
3. Enter a new BPM	<span>#</span> <span>MODIFY</span>	The BPM # is assigned to this Chase. *

\*The BPM parameter is only used for sequences in Chase mode. When the BPM parameter is set, it will override all programmed times. The In and Out times will be 0 s and the Wait time will be set according to the BPM parameter.

### Set BPM using Tap Tempo

Action	Keys	Feedback
1. Assign the chaser to a Master	<span>#</span> <span>SEQ</span> <span>&amp;</span> <span>Master Key</span>	The Chase is assigned to the Master Playback.
2. Tap the Tempo	<span>TAP</span> <span>&amp;</span> <span>Master Key</span>	Hold TAP and tap the Master Key at least twice.*

\*You have to tap at least 2 times in a row before the new tempo is activated. The tapping speed is translated to, and stored as the BPM parameter in the Sequence List. You can easily change it afterwards.

## Chase - Wizard

The Chase Wizard can create a chase sequence from a channel selection. It is activated from within the Sequences List.

Action	Keys	Feedback
1. Open the Sequences list	<input type="button" value="SEQ"/>	The Sequences List is opened.
2. Open the Chase Wizard	<input type="button" value="WIZARD"/>	The Chase Wizard is opened. The next free Sequence number is suggested.
3. Select channels and set levels	Channel functions	The current channel selection from Live is automatically loaded. Change if wanted to.
4. Fill in the Chase Wizard	Arrow Keys	See <a href="#">Chase Wizard - Functions</a>
5. Execute the Chase Wizard	<input type="button" value="EXECUTE"/>	The Wizard is closed, and the new Chase is added to the Sequences List.

This is the Chase Wizard



## Chase Wizard - Functions

Column	Input	Function
Number of steps	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	The number of steps the Chase shall have.
Channels per step	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	The number of channels you wish to have in each step
Step time	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	Default wait time for each step. Can be edited after.
Chase number	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	The number this Chase till have. Next free is suggested.
Start at preset	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	The Preset number this Chase will use for the steps.
Increment	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	You can set the Chase to use Presets with an increment of .1 here.
Build	<input type="button" value="MODIFY"/>	Check if you want the Sequence Steps to continue adding new channels in each step to the previous ones.
<b>NOTE</b> <b>If you want to make changes in the Chase Sequence you just created, use the Sequence and Preset editors. It is a "normal" Sequence that has been created by the Chase Wizard.</b>		

# --MASTER PAGES

**Master Pages store all content for 20 masters and can be used in the lower (1-20) or upp (21-40) row of Master Playback faders.**

This chapter contains the following sections

- [Master Pages - Introduction](#)
- [Master Pages - Record](#)
- [Master Pages - Functions](#)
- [Master Pages - List](#)
- [Master Pages - Editor](#)
- [Master Pages - Times](#)
- [Master Pages - Auto-update Mode](#)
- [Master Pages - Display List](#)

## Master Pages - Introduction

You can store all content of 20 Master Playbacks into a Master Page. Master Pages can be stepped through, or loaded.

### **General Functionality**

- Master Pages are stored for 20 Master Playbacks.
- You can store up to 999 Master Pages.
- Each Page can have a text label.
- A Page can be Transparent - meaning empty Master Playbacks are not cleared when this page is loaded.
- Each Page can have a Time and BPM affecting all chasers, presets and palettes.

#### **NOTE**

**Loading a new Master Page puts the new content in a pending state if the master is above 0%. When the Master is faded to 0% the new information is loaded.**



## Master Pages - Record

All content in the affected Master Range (1-20 or 21-40) is recorded.

Function	Key	Feedback
Record to the currently loaded Master Page	<span>RECORD</span> <span>&amp;</span> <span>PAGE</span>	You will get a confirmation in the message window at the bottom of the screens.
Record to Master Page #	<span>#</span> <span>RECORD</span> <span>&amp;</span> <span>PAGE</span>	You will get a confirmation in the message window at the bottom of the screens.

## Master Pages - Functions

You can load a Master Page to either row (1-20 or 21-40) of Master Playbacks.

Function	Key	Feedback
Load Master Page #	<input type="text" value="#"/> <input type="text" value="PAGE"/>	Master Page # is loaded.
Step to next Master Page	<input type="button" value="+"/>	Loads the next Master Page.
Step to previous Master Page	<input type="button" value="-"/>	Loads the previous Master Page.
<b>NOTE</b> <b>PENDING - If a master fader is over 0% when new content is loaded - it will load the new content after fading to 0%.</b>		

## Master Pages - List

You can view, edit and create Master Pages directly in the Master Page List (BROWSER >Master Pages).



### Master Pages List - Columns

Column	Input	Function
<u>Page</u>	No input	The number of this Preset - cannot be edited.
<u>Text</u>	ABCDE...	Press MODIFY to activate and end text input.
<u>Transparent</u>	<input type="button" value="MODIFY"/>	When ON this Master Page will only load the stored masters.
<u>Time</u>	<input type="button" value="MODIFY"/>	This time can be set to affect all percent times in this Master Page. See <a href="#">Master Page Times</a> .
<u>BPM</u>	<input type="button" value="MODIFY"/>	This value can be set to affect all chase rates in this Master Page. See <a href="#">Master Page Times</a> .

## Master Pages List - Functions

These are the functions in the Master Pages List

Function	Key or column	Feedback
Insert Master Page #	# INSERT	Inserts a new Master Page #
Delete the selected Master Page	DELETE	Deletes the selected Master Page. Cannot be undone.

## Master Pages - Editor

The Master Page Editor is where you can view and edit the content and times of Master Pages. Open in BROWSER> Master Pages> Master Page #.

3. Master Page: 1 Front Groups

24 1   25 1   26 1

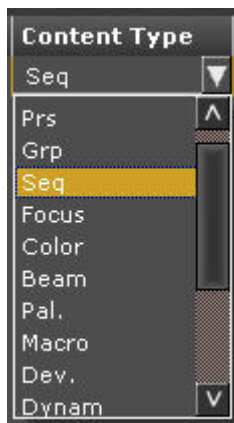
Selected and non-zero channels

	Master	Content Type	Content	In	Wait	Out	Flash Mode	Flash Level
6	20	Dynam	21	***			On	100%
7	21	Prs	87.0	4			On	100%
8	23	Group	40	***			On	100%
9	26	Group	24	***			On	100%

## Master Page - Columns

Column	Input	Function
<u>Master</u>	No input	The number of this Master - cannot be edited.
<u>Content Type*</u>	<input type="button" value="MODIFY"/>	Opens a dropdown where you can choose content.
<u>Content</u>	<input type="button" value="MODIFY"/>	Sets the number ID of the content in the previous column.
<u>In</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Sets an In time. If there is no other time it is also an out time.
<u>Wait</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Sets a wait time
<u>Out</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Sets an out time
<u>Flash Mode</u>	<input type="button" value="MODIFY"/>	Toggles Flash Mode on/off
<u>Flash Level</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Sets # as the Flash level of a Master Playback.

\*Content dropdown



## Master Pages - Times

Master Playback times can be stored in Master Pages. Times are set from 0.1seconds to 49.59 minutes (0.1- 4959).

### General Facts

- A Master Playback can have an in/wait/out time.
- A Master Page can have a general time used for all Palettes and Presets.
- A Master Page can have a BPM time for all Chases.

### Master Page Times - In, Out, Wait

Fade times for a Master Playback can be stored in a Master Page.

The times are activated in the following situations

- When the master is linked from a Sequence Step.
- When you hold START and press the Master Key.
- When Flash On Time is active (SETUP & Master Key).

Function	Keys	Feedback
1. <i>Activate the Master Page List</i>	Browser >Master Pages	The Master Page List is opened.
2. <i>Go to In-Wait-Delay Times</i>	Arrow keys	Each selected cell is highlighted
3. <i>Set a time*</i>	#    MODIFY	A time of # is set.

### Master Page Times - Page Time

The Master Page Time is used for Palettes (content= palette) and master faders with In times set in %.

Function	Keys	Feedback
Set Master Page Time*	#    TIME    & PAGE	A Master Page Time # is set to the currently loaded Master Page.

\*The Master Page Time can be set from the Master Page List as well.

## Master Page Times - BPM

The Master Page BPM will affect all chasers running in that Master Page.

Function	Keys	Feedback
Set Master Page BPM*	<span>TAP</span> <span>&amp;</span> <span>PAGE</span>	Tap at least two times to set a BPM. You can edit it in the Master Page List.

\*If chases have a rate, it will be scaled by the BPM.



## Master Pages - Auto-update Mode

This mode stores all changes to the current Master Page.

Function	Keys	Feedback
1. <i>Open the Master Page Settings</i>	<input type="button" value="SETUP"/> & <input type="button" value="PAGE"/>	The Master Page Settings popup is opened.
2. <i>Set Auto-update to on</i>	<input type="button" value="MODIFY"/>	MODIFY will toggle this parameter on/off.
<b>NOTE</b> Without this mode, Master Pages have to be recorded manually. See <a href="#">Record Master Pages</a> .		

## Master Pages - Display List

The Display lists are shown in the main display of the console. The trackball has to be in DISP LIST mode.

Function	Keys	Feedback
1. <i>Open the Master Page Display List</i>	<span>DISP</span> & <span>PAGE</span>	The Master Page Display List for a Master Row (1-20, 21-40).
2. <i>Select a Master Page</i>	Trackball	The selected item is highlighted with >arrows<.
3. <i>Load the selected Master Page</i>	Right (or left) click and press PAGE	The Master Page is loaded

# --DEVICES

**A channel with other attributes (parameters) than intensity is treated as a moving Device.**

This chapter contains the following sections

- [Devices - General](#)
- [Devices - Control](#)
- [Devices - Views](#)
- [Devices - Times](#)
- [Devices - Palettes](#)
- [Devices - Play Back](#)
- [Devices - Recording](#)
- [Devices - Templates](#)

# Devices - General

A moving Device has to be Patched. See [Patch Moving Device\(s\)](#).

## **Devices - Controls**

- Select a channel to get control of a Moving Device.
- The Main Display of the console has wheels and keys for controlling Moving Device parameters.
- Position pan/tilt with the trackball or wheels.
- There is a special Device mode for testing.
- Load and change templates at any time
- There is a soft key page for lamp strike.
- Select odds and evens at any time with the Selection tool.
- Fan and align any kind of parameter
- Mask any parameter or group of parameters
- Special functions for scrollers with rolls and calibration.

## **Devices - Views**

- The Live Attribute View shows all parameters for selected moving devices.

## **Devices - Palettes**

- Store reference Palettes for Focus, Color and Beam (or All).
- Select all active devices using a palette - "all blue" or "all centre stage".
- Store palettes for "all of the same type" and reuse (for color mixing).
- Palettes are quickly accesible from the Direct Selects.
- Load Palettes to Masters and fade selected channel(s).

## **Devices - Playing Back**

- Play back Moving Devices from any playback.
- Parameters can follow the fader.
- Any device parameter can be assigned to a Master Playback
- There is a GoOnGo or GoInB function (Move while dark)
- Times can be set to follow In, to groups (FCB), devices or single parameters.

## **Devices - Focusing Mode**

- Next & Last Mode
- Highlight Mode
- Palette Focusing Mode

## **Devices - Effects**

- Use Dynamic Effects to create patterns such as circles or fly-outs.
- Define your own Dynamic Effects

## **Devices - Templates**

- Edit a template at any time
- Create your own templates
- Change a template (device) for another

# Devices - Control

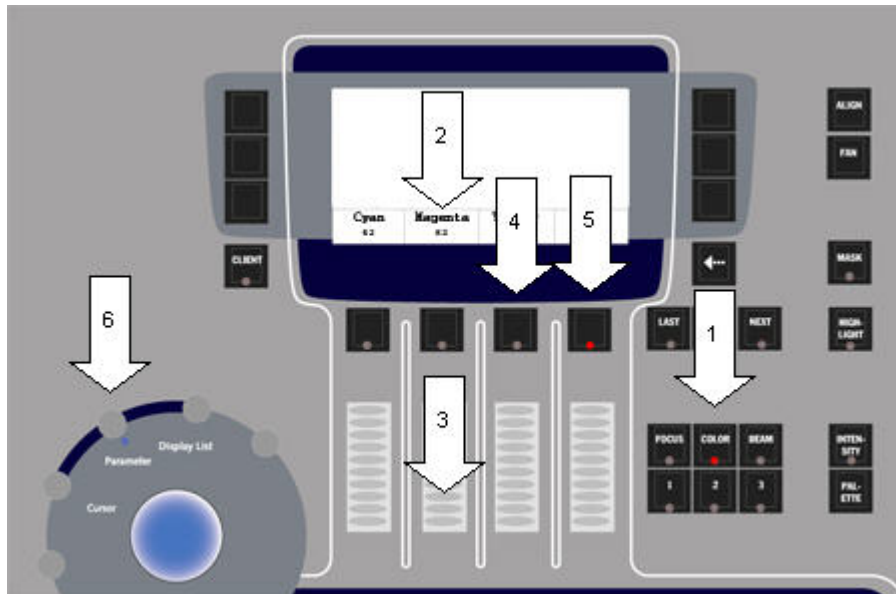
**The Main Display section of the console is optimized for working with functions in moving devices.**

These are the sections in this chapter

- [Device Control - Introduction](#)
- [Device Control - Lamp Strike & Reset](#)
- [Device Control - Home Positioning](#)
- [Device Control - U1-U2-U3](#)
- [Device Control - Mask](#)
- [Device Control - Select](#)
- [Device Control - Align](#)
- [Device Control - Fan](#)
- [Device Control - Fetch/Copy](#)
- [Device Control - Next & Last Mode](#)
- [Device Control - Highlight Mode](#)

## Device Control - Introduction

When you select the channel(s) of a moving device(s) - all controls are automatically mapped to this section.



## Moving Device Controls - Explanation

Number	Function	Explanation
1	Parameter Groups*	Parameters are divided into three categories, Focus, Color and Beam. Select category by pressing one of these keys. All available Moving Device Parameters within this category are mapped to the Wheels and shown in the display above them (2). If there are more than four parameters, press the category key again for the next set.
2	Wheel Content	Each wheel has a section of the display dedicated to it. In this section the parameter type is displayed on top, and the current value (or Palette name) under. If there is a range number it is displayed.
3	Parameter Wheel	Move the parameter wheel to set a value. For 16-bit control move slowly, for 8-bit control move fast.
4	Wheel key with value	Press to toggle between zero and full. Enter a number and press the key to set a value.
5	Wheel key with list	Hold wheel key to get the sublist in the display. Use the wheel to select, and let go to activate. Enter a number and press the key to select a range.
6	Parameter mode	In Parameter mode the trackball controls pan and tilt of the selected channel(s).

\*All parameters of a moving device are grouped into four groups of functions.

Focus = *Pan and tilt*

Color = *all color functions such as CMY, color wheels etc*

Beam = *everything else*

Intensity = *is stored in Presets*

## Device Control - Lamp Strike & Reset

In Control Soft Key Page there are functions for lamp ON/OFF and RESET for moving devices (which are defined in the template of that device).

1. Go to the top menu for the Main Display in the console facepanel by pressing <-- until you have this page.

Times ---->		Device ---->
Dyna mics ---->		Select ---->
Chan nels ---->		Play back ---->
C:		F 1/1

2. Press DEVICE to select the Device Soft Key page.

Home Attrib		Cont rol ---->
Update Palett		Select ---->
Focus Mode		Set Chnged
C:		F 1/1

3. Press Control to get the Control Soft Key Page

Enable		Lamp On
		Lamp Off
Lamp Idle		Lamp Reset
C:		F 1/1



## Control Soft Key Page - Functions

<b>NOTE</b> <b>These functions are Device and Template Specific. Check the manual and template of each moving Device.</b>		
Action	Soft Key	Feedback
Enable	ENABLE	This key has to be pressed together with Lamp On/Off/Reset to activate them (as a safety measure).
Lamp Idle	ENABLE & Lamp Idle	The Device is set to it's Lamp idle value
Lamp On	ENABLE & Lamp On	A lamp strike is set to the selected channel(s)
Lamp Off	ENABLE & Lamp Off	A lamp off is set to the selected channel(s)
Reset	ENABLE & Reset	A lamp reset is set to the selected channel(s)

## Device Control - Home Positioning

Home positioning of a device means setting all parameters (or part of them) to the default values defined in the template of this device. See Templates.

Normally it means setting pan and tilt to 50%, color to white and all other parameters to neutral.

**These functions apply to the currently selected channel(s)**

Action	Key	Feedback
Home all attributes*	HOME ATTRIB	All parameters are set to home
Home FOCUS	HOME ATTRIB & FOCUS	Focus parameters are set to home
Home COLOR	HOME ATTRIB & COLOR	Color parameters are set to home
Home BEAM	HOME ATTRIB & BEAM	Beam parameters are set to home
Home single parameters	HOME ATTRIB & Wheel Key	Parameter # is set to home

\*HOME ATTRIBUTES is a softkey in the Device soft key page of the console Main Display

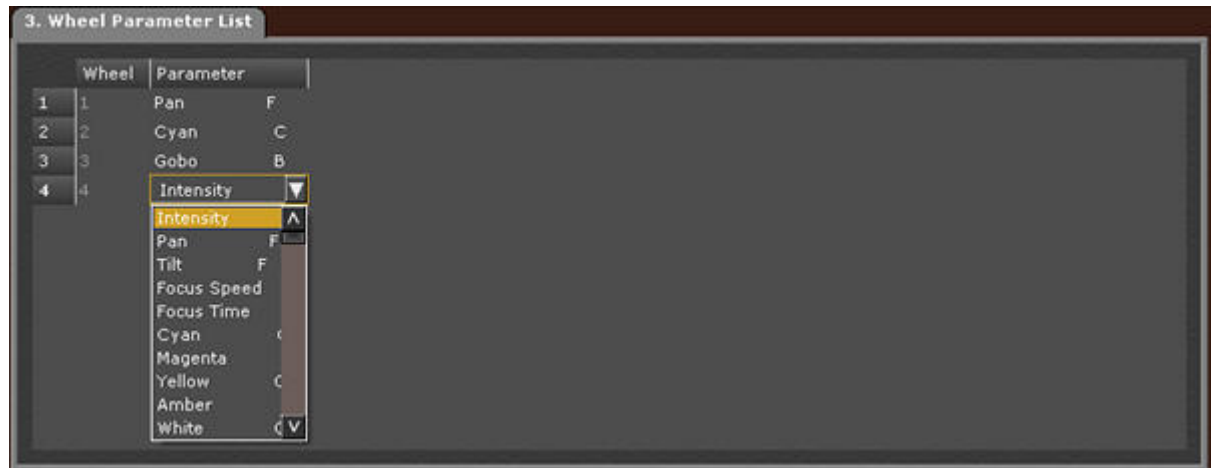
**Another way of doing the same thing**

Action	Key	Feedback
Home FOCUS	0 FOCUS	Focus parameters are set to home
Home COLOR	0 COLOR	Color parameters are set to home
Home BEAM	0 BEAM	Beam parameters are set to home
Home all attributes	C/ALT & ATTRIBUTES	All parameters are set to home

## Device Control - U1-U2-U3

The parameter group keys U1-U3 can be set up with any mix of moving device parameters. Each of them have three sub-pages. This makes a total of nine user definable parameter pages.

This editor is opened by holding MODIFY and pressing a Wheel key when a bank (U1-U3) is selected.



### U1-U3 - Setting Up Parameters

Column	Function	Feedback
<u>Wheel</u>	No function	This is the number of the Wheel, and cannot be changed.
<u>Parameter</u>	<input type="button" value="MODIFY"/>	Opens a dropdown with all parameters. Select one and press MODIFY to confirm*

\*The letter (FCB) after a parameter indicates it's parameter group.

#### NOTE

Parameters in U1-U3 are still stored in the original palette types (Focus, Color, Beam).

## Device Control - Mask

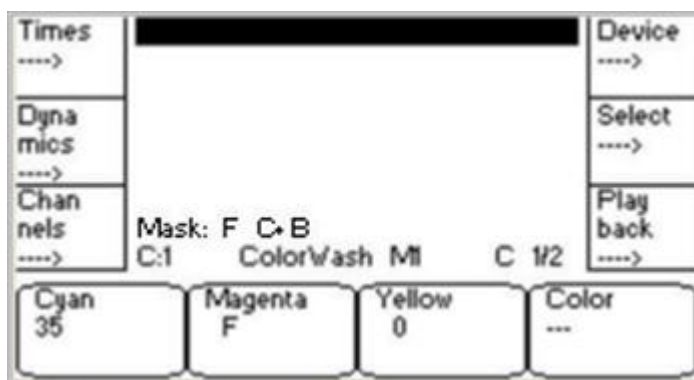
You can mask whole groups of parameters (FCB) or single parameters in a group with the MASK key.

- When mask is active it is indicated in the LED of the MASK key.
- The mask is used when recording Presets, Palettes and Dynamics.
- When you record Attributes to a Preset with a MASK enabled, the masked values will NOT be recorded. They will be indicated like this "---"

### Mask - Functions

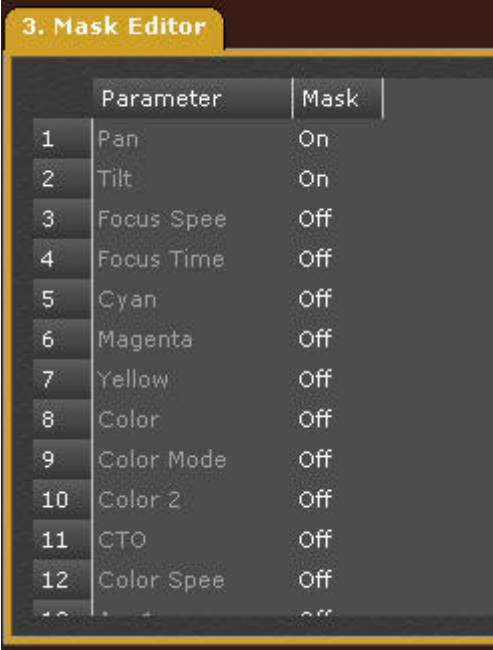
Function	Key	Feedback
Toggle Mask on/off	<span>MASK</span>	The LED in MASK is lit. In the Main Display you can see "Mask: FCB" and a "+" sign after a masked parameter group.
Mask FOCUS	<span>MASK</span> & <span>FOCUS</span>	Toggles the Mask for the all FOCUS parameters
Mask COLOR	<span>MASK</span> & <span>COLOR</span>	Toggles the Mask for the all COLOR parameters
Mask BEAM	<span>MASK</span> & <span>BEAM</span>	Toggles the Mask for the all BEAM parameters
Mask single parameters	<span>MASK</span> & <span>Wheel Key</span>	Toggles the Mask for any single parameter
Open the Mask editor	<span>MODIFY</span> & <span>MASK</span>	Opens the Mask editor (see below).

The + indication indicates that one, two, several or all params in a param group is masked. The Mask editor gives a comprehensive list of masked parameters. See Mask - Editor.



## Mask - Editor

In the Mask Editor single parameters can be toggled on/off by pressing MODIFY in the Mask column. Hold MODIFY and press MASK to open the editor.



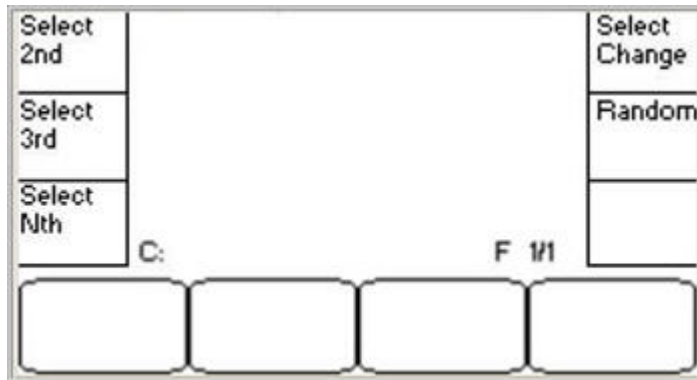
The screenshot shows a software interface titled "3. Mask Editor". It contains a table with two columns: "Parameter" and "Mask". The table lists 12 parameters, each with a corresponding mask status. The parameters are numbered 1 through 12 in the first column. The mask status for each parameter is shown in the second column, with "On" for parameters 1 and 2, and "Off" for parameters 3 through 12.

	Parameter	Mask
1	Pan	On
2	Tilt	On
3	Focus Spee	Off
4	Focus Time	Off
5	Cyan	Off
6	Magenta	Off
7	Yellow	Off
8	Color	Off
9	Color Mode	Off
10	Color 2	Off
11	CTO	Off
12	Color Spee	Off

## Device Control - Select

The Select Soft key page has functions for creating a sub-selection of the current channel selection, by numbers or random.

Open by pressing SELECT (softkey) from the top menu in the Main Display of the console facepanel. See [Main Display - Functions](#).



### Select - Sub-selection Functions

In all cases below - Press SELECT ALL to return to the original selection.

Function	Soft Key	Feedback
Every 2nd	Select 2nd	Every second channel from the current channel selection is selected. Use NEXT/LAST to step.
Every 3rd	Select 3rd	Every second channel from the current channel selection is selected. Use NEXT/LAST to step.
Every # th *	# Select Nth	Every # th channel from the current channel selection is selected. Use NEXT/LAST to step.
Random 2nd	RANDOM & Select 2nd	Two random selections are created from the current selection. Use NEXT/LAST to step.
Random 3rd	RANDOM & Select 3rd	Three random selections are created from the current selection. Use NEXT/LAST to step.
Random Nth	RANDOM & Select Nth	Nth random selections are created from the current selection. Use NEXT/LAST to step**

\*If no number is entered, the last used number will be used.

\*\*The last used Random selection # is used.

### Select - Change (softkey)

Function	Soft Key	Feedback
Select changed channels	Select Change	Selects all device channels that have been changed manually since the current Preset was loaded to the A field.

## Device Control - Align

The Align key copies parameters from one Moving Device to others.

Action	Key	Feedback
1. Select the moving device you want to copy from	Channel select functions	The selected channel is highlighted
2. Add the channels of all devices you want to copy to	Channel select functions	The selected channels are highlighted

Hold ALIGN and then press the key corresponding to the parameter or parameter group you want to copy

Function	Key	Feedback
Align FOCUS	<span>ALIGN</span> & <span>FOCUS</span>	All Focus parameters are copied*
Align COLOR	<span>ALIGN</span> & <span>COLOR</span>	All Color parameters are copied*
Align BEAM	<span>ALIGN</span> & <span>BEAM</span>	All Beam parameters are copied*
Align single parameters	<span>ALIGN</span> & <span>Wheel Key</span>	The parameter assigned to the wheel is copied.

\*If Palettes are used, the palettes will be aligned, not the values.

### NOTE

If you are using NEXT/LAST the currently focused channel is the one you will copy from - to the rest.



## Device Control - Fan

FAN is used to distribute values of a parameter evenly around a centre point. There are four different shapes of fan:

Linear

S = S shaped

V = V shaped

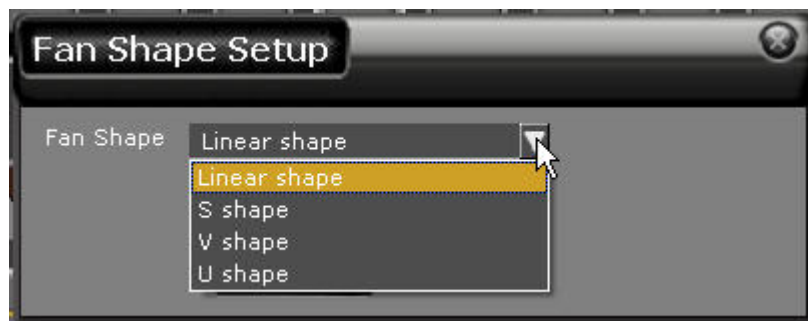
U = U shaped

Function	Key	Feedback
1. <i>Select channels</i>	Channel Select functions	Selected channels are highlighted in the Channel View
2. <i>Select base channel*</i>	<input type="button" value="NEXT"/>	The focused channel is highlighted in red
3. <i>Fan parameter #</i>	<input type="button" value="FAN"/> & <input type="button" value="Wheel"/>	Parameter # is fanned according to the shape in the Settings, around the channel focused by NEXT/LAST.

\*If no base channel is selected, the centre channel of the selection is used.

### Fan Settings

Hold SETUP and press FAN to open the Fan Settings



Select with arrow keys, and press MODIFY to confirm.

## Device Control - Fetch/Copy

Use FETCH to copy parameter values for moving devices from any Preset.

First select the devices you wish to copy values to.

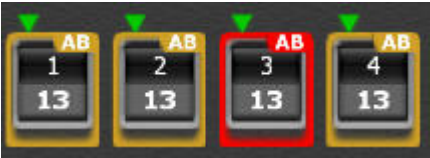
Function	Key	Feedback
Fetch FOCUS values from Preset #	# <span>FETCH</span> <span>&amp;</span> <span>FOCUS</span>	Focus values from Preset # are copied to the selected channel(s).
Fetch COLOR values from Preset #	# <span>FETCH</span> <span>&amp;</span> <span>COLOR</span>	Color values from Preset # are copied to the selected channel(s).
Fetch BEAM values from Preset #	# <span>FETCH</span> <span>&amp;</span> <span>BEAM</span>	Beam values from Preset # are copied to the selected channel(s).
Fetch single parameter values from Preset #	# <span>FETCH</span> <span>&amp;</span> <span>Wheel Key</span>	Parameter values from Preset # are copied to the selected channel(s).

# Device Control - Next & Last Mode

Next/Last will step through the current channel selection, in the order they were selected. The focused channel is mapped to intensity and parameter controls.

Action	Key	Feedback
Activate Next/Last	<span>NEXT</span>	The first channel in the current channel selection is marked as red, and mapped to the level and device controls. LAST can be used as well.
Step forward	<span>NEXT</span>	Channels are focused in the order they were selected. The focused channel is highlighted in red in the active Channel View*
Step backwards	<span>LAST</span>	Same as above, but backwards.
Leave Next/Last mode	<span>SELECT ALL</span>	All channels are selected again

\*Focused channel is highlighted in red.



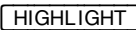


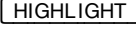
**NOTE**

Next/Last and Highlight Mode are often used in combination for focusing single channels within a channel selection. See [Highlight Mode](#)

When you focus a channel with NEXT/LAST, it will be shown with number and name in the Information area (middle) of the LCD Display.

## Device Control - Highlight Mode

Highlight is a temporary mode. It will set all intensity channels to a predefined level (Step Level in Congo Settings, default 70%) and all moving device channels to the values defined in their templates, with the highlighted device to white.

Action	Key	Feedback
Activate Highlight		All channels in the current selection are highlighted. The LED in the key is lit.
Step forward		Channels are focused, and Highlighted in the order they were selected.
Step backwards		Channels are focused, and Highlighted in the order they were selected.
Leave Highlight mode		Highlight mode is deactivated. The LED in the key is off. All Devices return to their last CB values.
<b>NOTE</b> Highlighted Intensity channels are indicated in the channel views with a highlighted background.		

# Devices - Views

**There are two Moving Device Attribute Views, one for editing Attributes Live, and one for Attributes and Times in Presets.**

This chapter contains the following sections

- [Device Views - Introduction](#)
- [Device Views - Live](#)
- [Device Views - Filtering](#)
- [Device Views - Editing](#)
- [Device Views - Presets](#)

## Device Views - Introduction

There are two device attribute views, Live Attributes and Preset Attribute Editor. They are edited in the same way. The Preset Attribute Editor has the possibility to edit/set times as well.

### **General Facts**

- Devices are listed by type
- You can set attribute values directly (depending on the Attribute Setup)
- Live Attribute Views have different formats
- You can set Palettes directly (depending on the Attribute Setup)
- You can filter parameter groups
- Changed values are shown with a purple background

## Device Views - Live

You can view and edit all moving device parameters in the Live Attribute Editor (ATTRIBUTE).

ColorWash M	Pan	Tilt	Focus Speed	Cyan	Magenta	Yellow	Color	Color 2	CTO	Color Speed
1	50	50	0	0	0	0	(O/W)	(O/W)	0	0
2	50	50	0	0	0	0	(O/W)	(O/W)	0	0
3	50	50	0	0	0	0	(O/W)	(O/W)	0	0
4	50	50	0	0	0	0	(O/W)	(O/W)	0	0
5	50	50	0	0	0	0	(O/W)	(O/W)	0	0
6	50	50	0	0	0	0	(O/W)	(O/W)	0	0
7	50	50	0	0	0	0	(O/W)	(O/W)	0	0
8	50	50	0	0	0	0	(O/W)	(O/W)	0	0
9	50	50	0	0	0	0	(O/W)	(O/W)	0	0
10	50	50	0	0	0	0	(O/W)	(O/W)	0	0

Selected devices

### Live Attributes - Columns

These are the different Moving Device parameters that are displayed for each with their current values. For editing see [Device Views - Editing](#)

Function group	Parameters	Explanation
Channel & Level	No input	The number of the device is highlighted when selected, and red when focused with NEXT/LAST. The level is indicated to the right.
FOCUS parameters	<i>Pan, Tilt, Focus Speed</i>	The parameters that exist for the selected device are shown with their values.
COLOR parameters	<i>Cyan, Magenta, Yellow, Color, Color2, CTO, Color speed etc...</i>	The parameters that exist for the selected device are shown with their values.
BEAM parameters	<i>Focus, Iris, Zoom, Strobe, Gobo, Gobo &lt;&gt;, Gobo rot, etc...</i>	The parameters that exist for the selected device are shown with their values.
CONTROL parameters*	<i>Aux 1, Control, Dummy ch's etc...</i>	The parameters that exist for the selected device are shown with their values.

\*Control parameters can be edited, but will not be stored.

## Live Attributes - Formats

You can toggle between these formats by pressing FORMAT

- All devices
- Selected devices
- Selected and changed devices

The currently selected format is indicated in the bottom right corner of each Channel View.



## Device Views - Filtering

Hold the FORMAT key and press FOCUS, COLOR or BEAM to select which parameter group to hide/show in a Moving Device View.

3. Live Attributes				
ColorWash M	Pan	Tilt	Focus Spee	Control
1	50	50	0	Idle
2	50	50	0	Idle
3	50	50	0	Idle
4	50	50	0	Idle
5	50	50	0	Idle
6	50	50	0	Idle
7	50	50	0	Idle
8	50	50	0	Idle
9	50	50	0	Idle
10	50	50	0	Idle

Selected and changed devices

## Device Views - Editing

The Live and Preset Attribute Editors are very similar. You can enter a value or a Palette reference, depending on the Attribute Editor Default Settings. The default setting is Palette. See [Attribute Settings](#).

This is how you can enter values for the selected cell(s)

Function	Key	Feedback
Enter a value*	# MODIFY	The Palette # is assigned to the selected cell(s)
Open a dropdown	MODIFY	All available Palettes (FCB) for the selected cell(s) are opened in a dropdown
Set an absolute value	# C/Alt & MODIFY	The absolute value is set to the selected cell(s)

\*Changed values get a purple background in the Live Attributes View

ColorWash M	Pan	Tilt	Focus Spec	Control
1	50	50	0	Idle
2	*F Tr Home	*F Tr Home	0	Idle
3	50	50	0	Idle

### NOTE

If the Attribute Editor Default Setting is set to Absolute, you can select Palettes in the same way as setting absolute values in Palette mode: enter the number, hold C/ALT and press MODIFY.

## Device Views - Presets

You can view and edit all moving device parameters for a Preset in the Preset Attribute Editor (# PRESET & ATTRIBUTE).

4. Preset Attribute Editor: 802.0										
1200 Colors	Time	Delay	GoOnGo	Pan	Tilt		Focus Time	Cyan	Magenta	Yellow
71	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
72	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
73	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
74	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
75	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
76	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
77	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
78	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
79	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
80	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
81	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0
82	---	---		*F Tr Home	*F Tr Home		*F Tr Home	0	0	0

### NOTE

Select channel(s) to filter this view. Press ALL to show all stored channels again.

## Preset Attribute Editor - Columns

These are the different Moving Device parameters that are displayed for each with their current values. For editing see [Device Views - Editing](#).

Function group	Parameters	Explanation
<u>Channel</u> & <u>Level</u>	No input	The number of the device is highlighted when selected, and red when focused with NEXT/LAST. The level is indicated to the right.
<u>Time</u> & <u>Delay</u>	Time per Device	Time and delay for all parameters of a Device here. This time will override the In time of the fade and the FCB times of the Preset.
<u>GoOnGo</u>	GoOnGo or GoInB per Device	Sets the flag if this Device shall move on GO, or when the Device is loaded to the B field. The value is toggled. No value will follow this flag for the Sequence Step.
FOCUS parameters	<i>Pan, Tilt, Focus Speed</i>	The parameters that exist for the selected device are shown with their values.
COLOR parameters	<i>Cyan, Magenta, Yellow, Color, Color2, CTO, Color speed etc...</i>	The parameters that exist for the selected device are shown with their values.
BEAM parameters	<i>Focus, Iris, Zoom, Strobe, Gobo, Gobo &lt;&gt;, Gobo rot, etc...</i>	The parameters that exist for the selected device are shown with their values.
CONTROL parameters	<i>Aux 1, Control, Dummy ch's etc...</i>	The parameters that exist for the selected device are shown with their values.

## Preset Attribute Editor - Times

You can toggle the format of the Preset Attribute Editor to show Times and Delays by pressing FORMAT. The current Format is shown in the bottom right corner. See [Device Times - Attribute Time Editor](#)

# Devices - Times

**Times for Moving Devices can be set in seconds or as a percentage of the Sequence Step In-times.**

This chapter contains the following sections

- [Device Times - Introduction](#)
- [Device Times - Percent or Seconds](#)
- [Device Times - FCB Time](#)
- [Device Times - Device Time](#)
- [Device Times - Attribute Time](#)
- [Device Times - Editor](#)
- [Device Times - Default Attribute Time](#)

## Device Times - Introduction

**A Moving Device can have Times and Delays in the following ways.**

- **No time** - follows the Sequence Step In-time.
- **Parameter group times** - an attribute time for FOCUS, COLOR or BEAM parameters.
- **Device times** - A time for all attributes of one Moving Device
- **Device parameter times** - A time for each attribute of a Moving Device.

### **NOTE**

**All times are set to the Preset in the A or B field depending on the setting of the parameter "[Set Times To Field](#)" in the Congo Settings.**

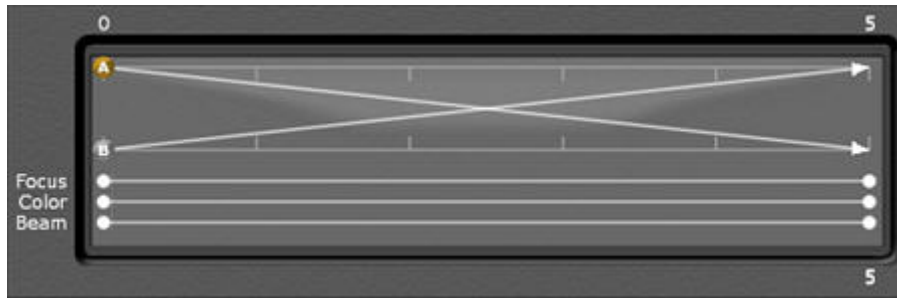
**All attribute times are stored with a Preset.**

There is a default Attribute Time that is used when Moving Devices are positioned manually or with GoInB. See [Moving Device Times - Default Attribute Time](#).

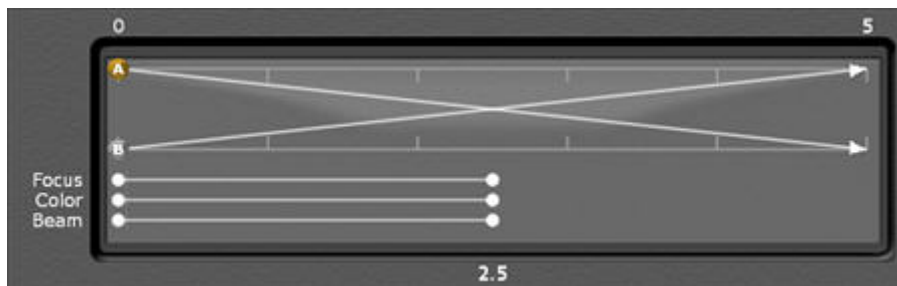
## Device Times - Percent or Seconds

Times for Moving Devices are set in seconds (absolute) or as a percentage of the IN and DELAY IN times of a Sequence Step.

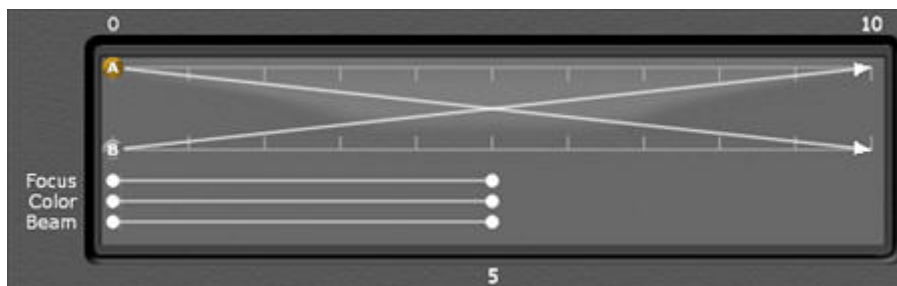
The default setting is percent. This means that all FCB-Times will follow the IN time of a Sequence Step, and all FCB-Delay Times will follow the Delay-In times of a Sequence Step.



If the FCB Times are set to 50% of the IN-time they will be 2.5 seconds at an in time of 5 seconds.



If the In-time is changed to 10 seconds, the FCB-times will be 50% of 10 (= 5 seconds).



## Device Times - FCB Time

FCB times are defaulted to run in 100% of the main In and Delay times for a step. You can change this % or set a time in seconds. FCB times are overrun by [Device/Parameter times](#).

You can set these times directly in the Advanced tab of the [Recording Popup](#) or with key shortcuts.

Function	Key Shortcut	Feedback
Focus time	# [TIME] & [FOCUS]	A Focus time is set for the selected channels.
Color time	# [TIME] & [COLOR]	A Color time is set for the selected channels.
Beam time	# [TIME] & [COLOR]	A Beam time is set for the selected channels.
Focus delay time	# [DELAY] & [FOCUS]	A Focus delay time is set for the selected channels.
Color delay time	# [DELAY] & [COLOR]	A Color delay time is set for the selected channels.
Beam delay time	# [DELAY] & [COLOR]	A Beam delay time is set for the selected channels.

You can edit FCB times in the [Preset List](#).

### **NOTE**

**There is a shortcut for setting both F, C and B-Times to the same value. Enter the time and hold TIME or DELAY and press ATTRIBUTE.**



## Device Times - Device Time

Device Times affect all parameters of a Device (except parameter times). Device Times take precedence over FCB-Times for the same Preset.

Times are set to the step in A (Active) or B (Next) depending on the setting for times (SETUP & TIME).

Function	Key shortcut	Feedback
Device time	# TIME & DEVICE	A device time is set for the selected channels.
Device delay time	# DELAY & DEVICE	A device delay time is set for the selected channels.

See also [The Times Soft Key Page](#)

### **NOTE**

The Attribute times for a Device can be viewed/edited in the Preset [Attribute Time Editor](#).

## Device Times - Attribute Time

Attribute times take precedence over all other times for Moving Devices.

Times are set to the step in A (Active) or B (Next) depending on the setting for times (SETUP & TIME).

Function	Key shortcut	Feedback
Attribute time	<div>#</div> <div>TIME</div> <div>&amp;</div> <div>Parameter key</div>	An attribute time is set for the selected channels.
Attribute delay time	<div>#</div> <div>DELAY</div> <div>&amp;</div> <div>Parameter key</div>	An attribute delay time is set for the selected channels.

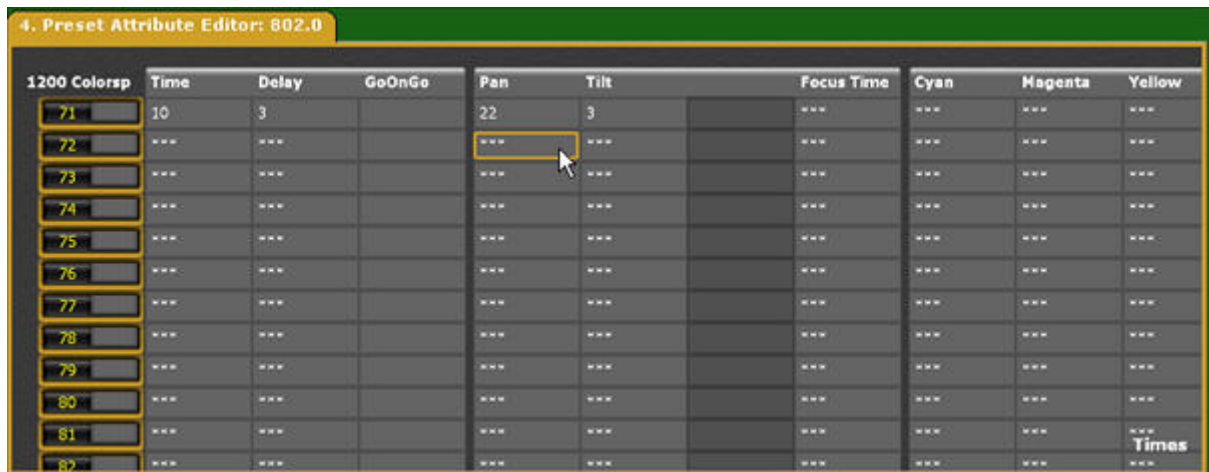
See also [Times Soft Key Page](#)

### **NOTE**

The Attribute times for a Device can be viewed/edited in the Preset [Attribute Time Editor](#).

## Device Times - Attribute Time Editor

Enter a Preset number, hold PRESET and press ATTRIBUTE to open the Preset Attribute Editor.



In this editor press FORMAT to toggle between

- Attribute values
- Attribute times
- Attribute delay times

The current format is indicated in the lower right corner ("Times" in the example above).

**NOTE**  
Times can be set default as % or in seconds. See [Device Times - Percent Or Seconds](#).

### Attribute Times

Action	Key	Feedback
1. Open the Attribute Editor for Preset #	<input type="button" value="#"/> <input type="button" value="PRESET"/> & <input type="button" value="ATTRIBUTE"/>	The Attribute editor for preset # is opened
2. Toggle to Time format	<input type="button" value="FORMAT"/>	Time format is selected and indicated in the bottom right corner of the tab
3. Select an Attribute time cell	Arrow keys	The cell is highlighted
4. Set time #	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	The time # is set to the selected cell(s)

## Attribute Delay Times

Action	Key	Feedback
1. Open the Attribute Editor for Preset #	# PRESET & ATTRIBUTE	The Attribute editor for preset # is opened
2. Toggle to Delay format	FORMAT FORMAT	Delay format is selected and indicated in the bottom right corner of the tab
3. Select an Attribute delay cell	Arrow keys	The cell is highlighted
4. Set delay time #	# MODIFY	The delay time # is set to the selected cell(s)

## **Device Times - Default Attribute Time**

The Default Attribute Time (3 seconds) is used when a Moving Device is positioned manually or with GoInB. The main objective is to keep noise and unnecessary mechanical friction down.

To change this time see [Attribute Settings](#).

# Devices - Palettes

Moving Device values can be stored in Palettes, that are used to recall these values. Palettes can be stored in Presets, as references to the stored values. Palettes are organized in parameter groups (Focus, Color, Beam, All).

This chapter contains the following sections

- [Device Palettes - Introduction](#)
- [Device Palettes - Record](#)
- [Device Palettes - Update](#)
- [Device Palettes - Edit](#)
- [Device Palettes - Lists](#)
- [Device Palettes - Activate By Number](#)
- [Device Palettes - Direct Mode](#)
- [Device Palettes - In Masters](#)
- [Device Palettes - Select Active Channels](#)
- [Device Palettes - Select Stored Channels](#)
- [Device Palettes - Display List](#)
- [Device Palettes - Focusing Mode](#)

## Device Palettes - Introduction

A Palette is a memory for all or some parameters of a Moving Device. A Palette is used to load these parameters quickly, and stored as a reference in Presets for playback.

Direct selects are important for accessing Palettes. See [Direct Selects](#).

### There are four kinds of Palettes

Type	Parameters	Key
Focus Palettes	<input type="text" value="FOCUS"/>	<b>Position</b> parameters like <i>pan, tilt...</i>
Color Palettes	<input type="text" value="COLOR"/>	<b>Color</b> parameters like <i>cyan, magenta, yellow, color wheel...</i>
Beam Palettes	<input type="text" value="BEAM"/>	<b>Beam</b> parameters like <i>gobo, shape, shutter, focus, iris...</i>
All Palettes	<input type="text" value="PALETTE"/>	<b>All</b> parameters

### "All of same type" or "All Devices"

Palettes usually store individual values for all devices. Color and Beam Palettes can be stored for one device, and reused for all devices of the same type. This choice is available in the recording popup.

### Palettes in Presets

When a Palette is used to position a Device before recording a Preset - the Palette is referenced, not the individual values for each Device. This means that changing the Palette will update this reference in the whole Play.

### Palettes in Direct Selects

- Palettes can be accessed from the Direct Selects

## Device Palettes - Record

Palettes are stored to the currently selected channel(s). To re-record a Palette, store it with the same number again.

In the recording popup for Palettes there is a Text field to label each Palette. This is displayed every time the Palette is used.

### Each Device or Each Device Type

In the Palette recording popup there is a choice to store the values individually for **Each Device**, or for **Each Device Type**.

- Positions (FOCUS) are best stored for Each Device, since they always are unique.
- Color and Beam values are best stored for a Each Device Type, since color and beam parameters are the same, and can be reused.

#### **NOTE**

**If several Device Types are selected, the highest selected channel of each type will be recorded.**

**An Each Device Type Palette will override an Each Device Palette.**

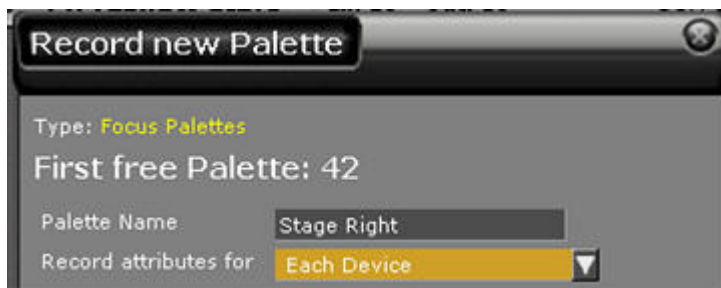


## Record A Focus Palette

1. *Select channel(s)*
2. *Initiate recording of next free Palette or Palette #*

Function	Key	Feedback
Record next free Focus Palette	<input type="button" value="RECORD"/> <input type="button" value="FOCUS"/>	You will get a popup*
Record Focus Palette #	<input type="button" value="#"/> <input type="button" value="RECORD"/> <input type="button" value="FOCUS"/>	You will get a popup*

\*Popup



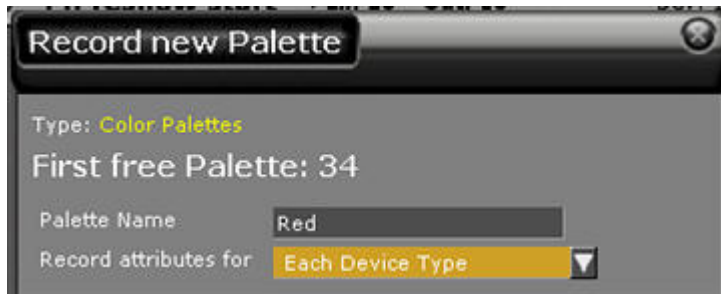
3. *Enter a text (optional)*
4. *Select Recording mode. For Focus Palettes this is usually "Each Device". See [Each Device or Each Device Type](#).*
5. *Press MODIFY to confirm recording.*

## Record A Color Palette

1. *Select channel(s)*
2. *Initiate recording of next free Palette or Palette #*

Function	Key	Feedback
Record next free Color Palette	<input type="button" value="RECORD"/> <input type="button" value="COLOR"/>	You will get a popup*
Record Color Palette #	<input type="button" value="#"/> <input type="button" value="RECORD"/> <input type="button" value="COLOR"/>	You will get a popup*

\*Popup



3. *Enter a text (optional)*
4. *Select Recording mode. For Focus Palettes this is usually "Each Device Type". See [Each Device or Each Device Type](#).*
5. *Press MODIFY to confirm recording.*

## Record A Beam Palette

1. Select channel(s)
2. Initiate recording of next free Palette or Palette #

Function	Key	Feedback
Record next free Beam Palette	<input type="button" value="RECORD"/> <input type="button" value="BEAM"/>	You will get a popup*
Record Beam Palette #	<input type="button" value="#"/> <input type="button" value="RECORD"/> <input type="button" value="BEAM"/>	You will get a popup*

\*Popup



3. Enter a text (optional)
4. Select Recording mode. For Focus Palettes this is usually "Each Device Type". See [Each Device or Each Device Type](#).
5. Press MODIFY to confirm recording.

## Record An All Palette

1. *Select channel(s)*
2. *Initiate recording of next free Palette or Palette #*

Function	Key	Feedback
Record next free All Palette	<input type="button" value="RECORD"/> <input type="button" value="PALETTE"/>	You will get a popup*
Record All Palette #	<input type="button" value="#"/> <input type="button" value="RECORD"/> <input type="button" value="PALETTE"/>	You will get a popup*

\*Popup

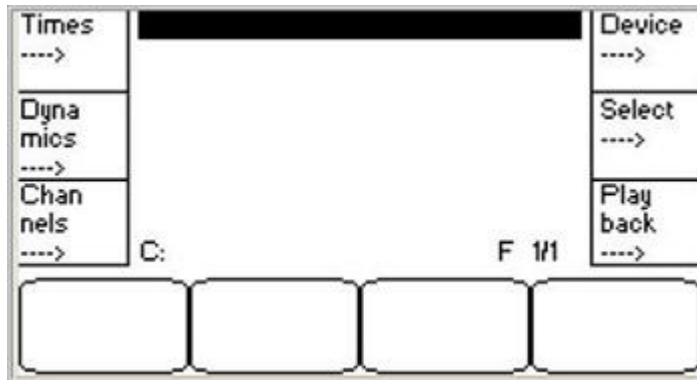


3. *Enter a text (optional)*
4. *Select Recording mode. For All Palettes this is usually Each Device. See [Each Device or Each Device Type](#).*
5. *Press MODIFY to confirm recording.*

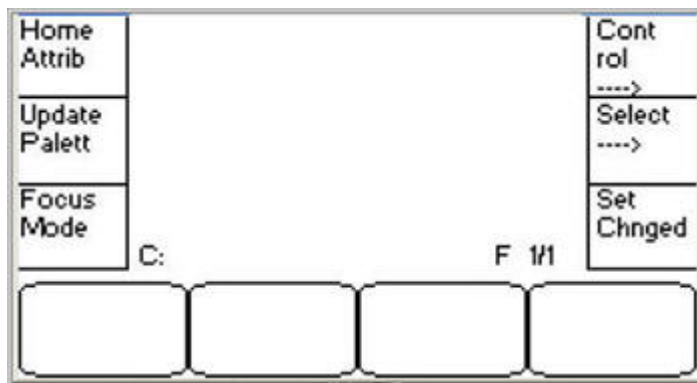
## Device Palettes - Update

The UPDATE PALETTE (softkey) in the Device Soft Key page is the fastest way to update all changed Palettes.

1. Go to the top menu for the Main Display in the console facepanel by pressing <-- until you have this page.



2. Press DEVICE to select the Device Soft Key page.



3. Press UPDATE PALETTE to update all changed Palettes for the selected channel(s). You will get a popup confirming which ones are involved.

## Re-record A Palette

When you re-record a preset or palette where attribute information already exist, you will get a choice of merging or replacing the existing attributes.



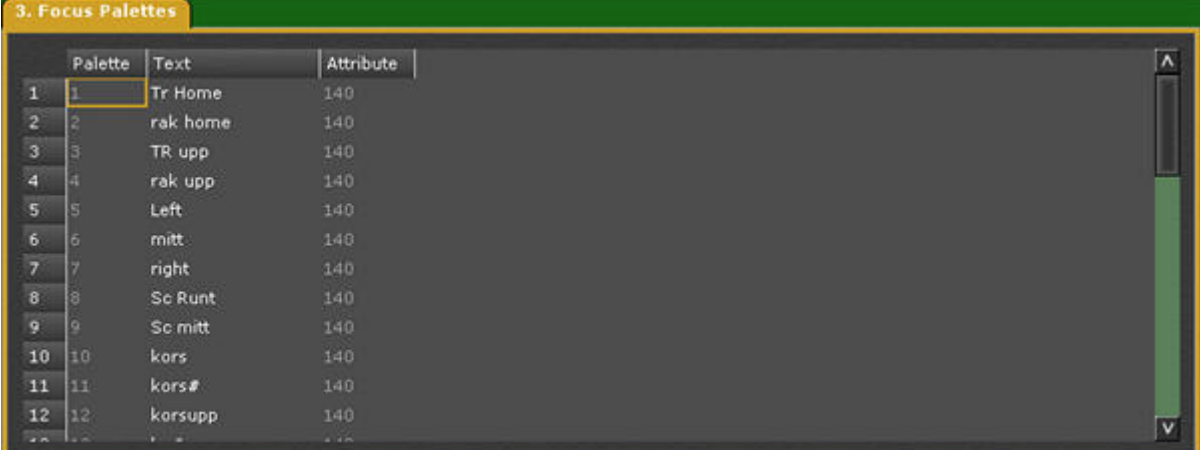
- **Merge with existing** will add the changes for the selected channel(s)
- **Replace existing** will replace all values in this Palette with those of the selected channel(s)

## Device Palettes - Edit

Device Palettes can be edited and filtered in the same way as the [Live Attributes](#) and [Preset Attribute views](#). See [Device Views - Editing](#) and [Device Views - Filtering](#).

## Device Palettes - Lists

The Palette Lists are opened from the Browser (Browser >Palettes >Focus Palettes). You can open them directly by holding MODIFY and pressing FOCUS, COLOR, BEAM or PALETTE.



The screenshot shows a window titled "3. Focus Palettes" with a green header bar. Below the header is a table with three columns: "Palette", "Text", and "Attribute". The table contains 12 rows of data. The first row is highlighted with a yellow background. The "Palette" column contains numbers 1 through 12. The "Text" column contains various labels like "Tr Home", "rak home", "TR upp", "rak upp", "Left", "mitt", "right", "Sc Runt", "Sc mitt", "kors", "kors#", and "korsupp". The "Attribute" column contains the number 140 for all rows. A vertical scrollbar is visible on the right side of the table.

	Palette	Text	Attribute
1	1	Tr Home	140
2	2	rak home	140
3	3	TR upp	140
4	4	rak upp	140
5	5	Left	140
6	6	mitt	140
7	7	right	140
8	8	Sc Runt	140
9	9	Sc mitt	140
10	10	kors	140
11	11	kors#	140
12	12	korsupp	140

### Device List - Columns & Functions

Function	Key	Feedback
<u>Palette</u>		The ID of each Palette. Cannot be changed.
<u>Text</u>	MODIFY	Press MODIFY to activate and end text input.
<u>Attribute</u>	MODIFY	Opens the Palette Attribute Editor. The number indicates how many Devices are stored in this Palette.



## Device Palettes - Activate By Number

Activate a Palette for the selected channel(s) by number.

Function	Key	Feedback
Focus Palette #	# FOCUS	Values are set from Palette #.
Color Palette #	# COLOR	Values are set from Palette #.
Beam Palette #	# BEAM	Values are set from Palette #.
All Palette #	# PALETTE	Values are set from Palette #.
<b>NOTE</b> Only selected channel(s) that are referenced in Palette # will be affected.		

## Device Palettes - Direct Mode

When a Palette key (FOCUS, COLOR, BEAM, PALETTE) is held the first 40 Palettes can be activated from the Direct Select keys.

Function	Key	Feedback
1. <i>Activate Direct Mode</i>	Hold a Palette key	Direct Select display shows the first 40
2. <i>Select Palette</i>	Direct Select key	When the key is pressed that Palette is activated.

## Device Palettes - In Masters

Device Palettes can be played back from Master Playbacks. [See Master Playbacks - Palettes.](#)

## Device Palettes - Select Active Channels

All channels currently referencing a Palette can be selected using the Direct Select keys for Palettes (FOCUS, COLOR, BEAM, PALETTE), in combination with CH and ALL.

Palettes are selected from the Direct Selects for this function. See [Direct Selects](#).

Function	Key	Feedback
Channels in Palette #	<div>CH &amp;</div> <div>Direct Select#</div>	All channels stored in Palette # are selected in the active Channel View.
Channels in Palette # with a level in the Channel View	<div>ALL &amp;</div> <div>Direct Select#</div>	All channels with a level in the active Channel View are selected .

## Device Palettes - Select Stored Channels

You can Select all channels that are stored in a Palette as Each Device.

<b>NOTE</b> <b>This is not possible for palettes stored as "Each Device Type", since no specific channels are stored with them.</b>		
Function	Key	Feedback
Channels in Focus Palette #	# CH & FOCUS	All channels stored in Palette # are selected in the active Channel View.
Channels in Color Palette #	# CH & COLOR	All channels stored in Palette # are selected in the active Channel View.
Channels in Beam Palette #	# CH & BEAM	All channels stored in Palette # are selected in the active Channel View.
Channels in All Palette #	# CH & PALETTE	All channels stored in Palette # are selected in the active Channel View.

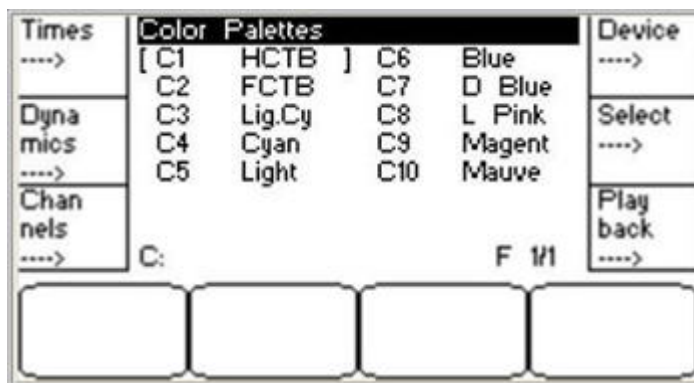
## Device Palettes - Display List

All Palettes can be activated from the Display Lists in the Main Display of the console facepanel.

When the Trackball is in DISPLAY LIST mode you can use it to select/activate palettes by pressing RIGHT/LEFT click.

Function	Key	Feedback
Focus Palette List	Display List & FOCUS	The Focus Palette list is opened in the Main Display.
Color Palette List	Display List & COLOR	The Color Palette list is opened in the Main Display.
Beam Palette List	Display List & BEAM	The Beam Palette list is opened in the Main Display.
All Palette List	Display List & PALETTE	The All Palette list is opened in the Main Display.

This is an example of the Color Palette list in the main display.



## Device Palettes - Focusing Mode

Focusing mode is designed for quickly focusing and updating palettes. It works together with the List section of the LCD Display. It is activated from the FOCUS MODE soft-key in the DEVICE Soft page.

Action	Key	Feedback
1. <i>Select the DEVICE soft page</i>	<b>DEVICE</b> (Softkey)	The Device soft functions are selected in the Main Display of the console.
2. <i>Activate Focus Mode</i>	<b>FOCUS MODE</b> (Softkey)	"Focusing mode" is shown on the Main Display. The Focus Palette list is automatically activated.
3. <i>Select Palette from the list</i>	Use the Trackball Disp List function to select a Palette	The corresponding channels are selected and displayed in the Channel Display list. The palette is activated and Highlight mode is turned on.
4. <i>Focus one by one with NEXT/LAST</i>	<b>NEXT</b> <b>&amp;</b> <b>LAST</b>	Each focused channel is mapped to the channel controls.
5. <i>Update the Palette</i>	<b>UPDATE PALETTE</b> (Softkey)	The Palette is updated and you are returned to the Focus Palette list to select a new Palette.
6. <i>Exit Focus Mode</i>	<b>FOCUS MODE</b> (Softkey)	Focusing mode is exited.

# Devices - Play Back

**When moving Devices are played back from the Main Playback and the Master Playbacks there are different modes for when and how attributes are triggered.**

This chapter contains the following sections

- [Device Play back - Introduction](#)
- [Device Play back - Attributes Follow Faders](#)
- [Device Play back - GoOnGo or GoInB](#)



## Device Play back - Introduction

Attributes will be triggered during playback in the following situations

- A Preset is faded in a Sequence or Chase
- A Preset is faded in on a Master Playback fader
- A Preset is faded out on a Master Playback fader
- A Master is flashed
- A Dynamic effect is started

In a Sequence Step attributes can be set to GoOnGo (live) or GoInB (move while black, preposition).

## Device Play back - Attributes Follow Faders

Attributes will follow the manual movement of masters and the crossfaders of the Main Playback.

- They start moving at 1%.
- Snap parameters also trig at 1%.

Master Playbacks behave different from the crossfaders of the Main Playback.

### Masters And Attributes - General

When a master leaves its 0% position, the corresponding attribute parameters are triggered and follow the fader.

During a timed fade in a Master, attributes will follow the FCB-times of the Preset in that Master.

If another master with overlapping attribute parameters is activated, (leaves 0%), it will take control of the corresponding attributes. To re-gain control from any Master, move it to 0% and up again.

How attributes behave when moving the Master fader down depends on the setting of Rubberband. See [Masters And Attributes - Rubberband](#).

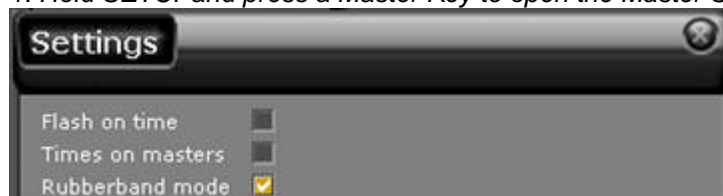
### Masters And Attributes - Rubberband

Rubberband mode sets if attributes will follow a Master fader down as well as up.

- If set to "On", moving a fader down will fade back attributes to the previous values.
- If set to "Off", moving a fader down does nothing with attributes.

By holding the C/Alt key pressed while you move down, you can temporarily reverse either of these settings. This way you can select if you want the rubberband behavior or not when you fade a master down.

*1. Hold SETUP and press a Master Key to open the Master Settings popup.*



*2. Select Rubberband mode (MODIFY).*

*3. Exit with ESC.*

## Crossfaders And Attributes

When a manual crossfade is made, the attribute positions will follow the B fader. If the fader is moved slower than the time assigned to the attributes, the fader has control. If the fader is moved faster than the assigned time, the time will take control to make a smooth movement.

## Device Play back - GoOnGo or GoInB

This parameter sets if Attributes will be executed when the step is faded in live (GoOnGo) or when the Step is loaded to be faded in (GoInB). This function is edited in the [Sequence List](#).

There is a default setting for GoOnGo or GoInB in the Attribute Settings.

- In a theatre situation GoInB is most common.
- In a show situation GoOnGo is most common.

See [System Settings - Attribute](#).

# Device - Recording

**Attributes are stored in Presets just like intensities. There are different recording modes.**

This chapter contains the following sections

- [Device Recording - Introduction](#)
- [Device Recording - Modes](#)

## Device Recording - Introduction

Only changed Device parameters are recorded. This means that it is important to record all parameters in the beginning of a Sequence. This is done manually by holding RECORD and pressing ATTRIBUTES.

### **General Facts**

- There are three recording modes (automatic, popup, manual)
- It is possible to record all attributes manually
- It is possible to record selected device(s) only
- It is possible to record selected device(s) to any Preset
- It is possible to set all or selected parameters to Changed.

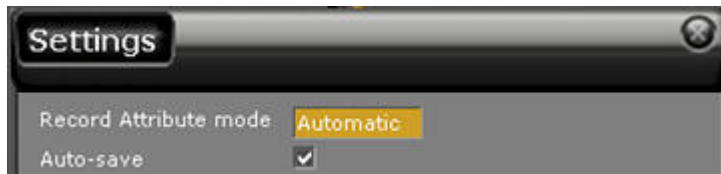
#### **NOTE**

The SET CHANGED softkey in the Devices soft key page of the Main Display allows you to force the flag changed for any parameter or parameter group. See [Device Control - Select](#).

## Device Recording - Modes

There are three different Recording modes for recording Device attributes.

They are set in the RECORD SETTINGS (Hold SETUP and press RECORD). You will get this popup



These are the three modes

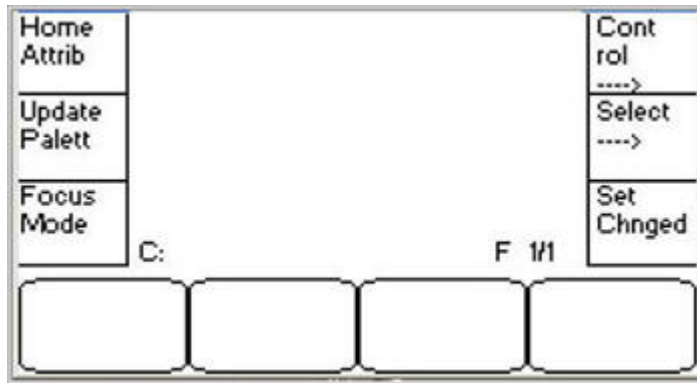
Function	Description
<u>Automatic</u> (default)	All changed attributes are recorded automatically*
<u>Popup</u>	A popup is provided to confirm recording all changed attributes
<u>Manual</u>	No attributes are recorded

\*This means that it is necessary to record all attributes for the first step in a Sequence manually. See [Record All Attributes for selected channels](#)

## Only "Changed" are recorded

Attributes are tagged as Changed when they have been altered since they were last recorded. This indication is a purple background in Channel and Attribute views.

You can force this flag manually with the soft key SET CHNGED in the **Devices** soft key page of the console Main Display.



All commands are executed to the currently selected Devices.

Function	Key	Feedback
Set all parameters to changed	<input type="button" value="Set Chnged"/>	All parameters are flagged as changed (purple background).
Set Focus parameters to changed	<input type="button" value="Set Chnged"/> & <input type="button" value="FOCUS"/>	Focus parameters are flagged as changed (purple background).
Set Color parameters to changed	<input type="button" value="Set Chnged"/> & <input type="button" value="COLOR"/>	Color parameters are flagged as changed (purple background).
Set Beam parameters to changed	<input type="button" value="Set Chnged"/> & <input type="button" value="BEAM"/>	Beam parameters are flagged as changed (purple background).
Set a specific parameter to changed	<input type="button" value="Set Chnged"/> & <input type="button" value="Wheel Key"/>	Specific parameters are flagged as changed (purple background).

The changed device indication is cleared when you fade or step in the Sequence. You can clear them manually by holding C/ALT and pressing FOCUS, COLOR and BEAM.

See [Channel Information - Detailed](#)

For more information see [Presets - Record](#)



# Devices - Templates

A Template maps the functions of a Moving Device to the moving light controls of Congo  
This chapter is about creating and editing Templates.

This chapter contains the following sections

- [Device Templates - Introduction](#)
- [Device Templates - List](#)
- [Device Templates - Editor](#)
- [Device Templates - Create](#)
- [Device Templates - Parameter](#)
- [Device Templates - Type LTP or HTP](#)
- [Device Templates - Type 8/16 Bit Control](#)
- [Device Templates - Snap Or Fade](#)
- [Device Templates - Ranges](#)
- [Device Templates - Mode Tables](#)
- [Device Templates - Fade With Intensity](#)
- [Device Templates - Scroller Rolls](#)

## Device Templates - Introduction

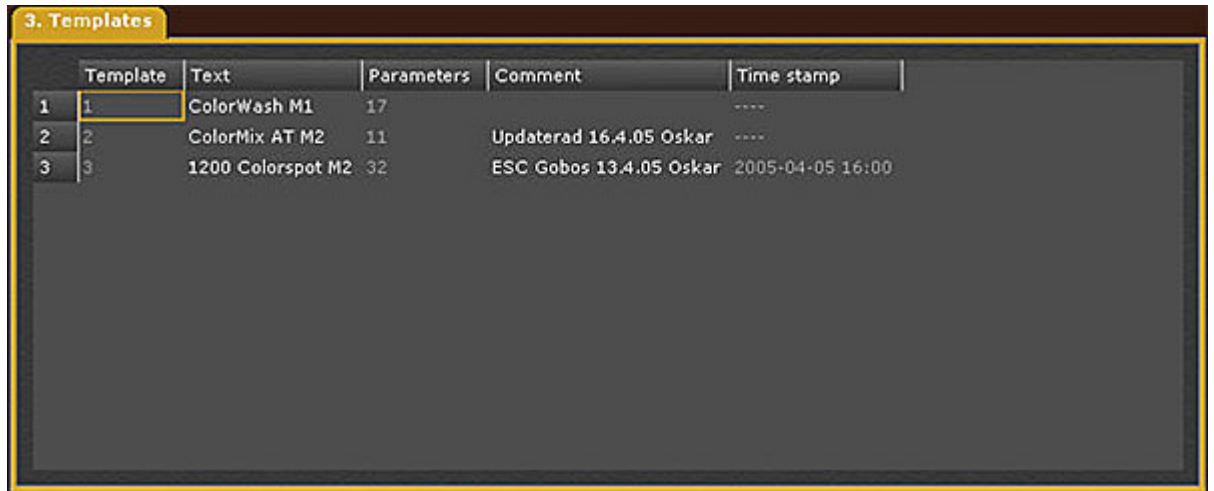
A template maps the attributes of a moving Device to the controls and functions of Congo. Most common devices and scrollers already have templates in the library, ready to use.

### **General Facts**

- Templates can be edited or created at any time.
- Templates are stored with the Play.
- Change a Template during a show and all similar parameters will continue functioning.
- Table ranges can be set to control modes in devices such as the Xsport from High End.
- Color mix can follow intensity to dim mixing devices such as the Nesys Quadra.
- Trim the 16bit resolution to finetune control of 16bit parameters.
- Extensive scroller handling with roll libraries and individual calibration per unit.
- Assign any device parameter to a Master and store in a Master Page.

## Device Templates - List

The Template Lists are opened from the Browser (Browser >Setup >Templates). Open it directly by holding MODIFY and pressing DEVICE.



	Template	Text	Parameters	Comment	Time stamp
1	1	ColorWash M1	17		----
2	2	ColorMix AT M2	11	Updaterad 16.4.05 Oskar	----
3	3	1200 Colorsport M2	32	ESC Gobos 13.4.05 Oskar	2005-04-05 16:00

### Template List - Columns & Functions

Function	Key	Feedback
<u>Template</u>	<input type="button" value="MODIFY"/>	The ID of each Template. Press MODIFY to open the Editor
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input.
<u>Parameters</u>	<input type="button" value="MODIFY"/>	The number of DMX channels it uses. Press MODIFY to open the Editor.
<u>Comment</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input.
<u>Time Stamp</u>		Date and time

## Device Templates - Editor

The Template Editor is opened from the Item or Parameter cell in the Template List (Browser >Setup >Templates). Open an existing one directly in this node as well (Browser >Setup >Templates >xxxx).

	Parameter	DMX	Type	Default	Highlight	Snap	Invert	Ranges	Tables	Low DMX	Fine step	Fade
1	Pan	1	LTP16	128	128	Off	Off			2	4	Off
2	Tilt	3	LTP16	128	128	Off	Off			4	4	Off
3	Focus Speed	5	LTP8	0	0	On	Off			---	4	Off
4	Control	6	LTP8	0	0	On	Off	15		---	4	Off
5	Color	7	LTP8	0	0	On	Off	19		---	4	Off
6	Color 2	8	LTP8	0	0	On	Off	19		---	4	Off
7	Cyan	9	LTP8	0	0	Off	Off			---	4	Off
8	Magenta	10	LTP8	0	0	Off	Off			---	4	Off
9	Yellow	11	LTP8	0	0	Off	Off			---	4	Off
10	CTO	12	LTP8	0	0	Off	Off			---	4	Off
11	Color Speed	13	LTP8	0	0	On	Off			---	4	Off
12	Shape 1	14	LTP8	0	0	Off	Off			---	4	Off

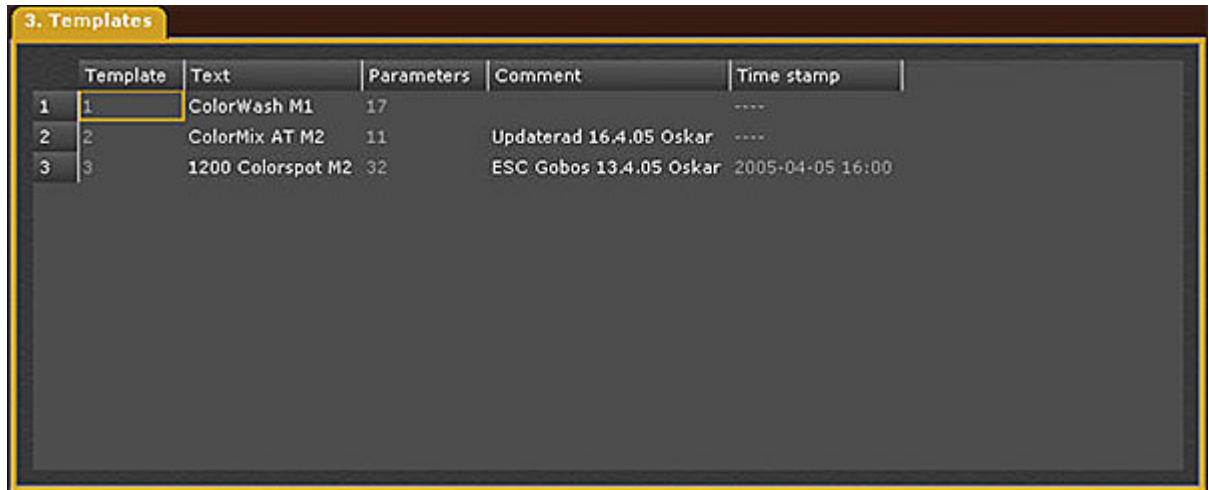
### Template Editor - Columns & Functions

Press INSERT to insert a new Parameter. These are the functions in the columns.

Function	Key	Feedback
<u>Parameter</u>	<input type="button" value="MODIFY"/>	Opens a dropdown. Select parameter.
<u>DMX</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Set DMX offset (1-256).
<u>Type</u>	<input type="button" value="MODIFY"/>	Set LTP/HTP 8/16bits.
<u>Default</u>	<input type="button" value="MODIFY"/>	The default value that is used when patched, and by HOME ATTRIB.
<u>Highlight</u>	<input type="button" value="MODIFY"/>	The value used in Highlight mode.
<u>Snap</u>	<input type="button" value="MODIFY"/>	Set Snap or Fade.
<u>Invert</u>	<input type="button" value="MODIFY"/>	Invert the values of a parameter.
<u>Ranges</u>	<input type="button" value="MODIFY"/>	Opens the Range Editor for subranges such as gobo positions.
<u>Tables</u>	<input type="button" value="MODIFY"/>	Opens the Table Editor for table functions.
<u>Low DMX</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Set the low resolution DMX offset for 16 bit parameters
<u>Fine Step</u>	<input type="button" value="MODIFY"/>	See <a href="#">16 Bit Control - Fine Step</a>
<u>Fade with int</u>	<input type="button" value="MODIFY"/>	The parameter will follow the intensity of this Device.

## Device Templates - Create

1. Open the Template List from the Browser (Browser >Setup >Templates)

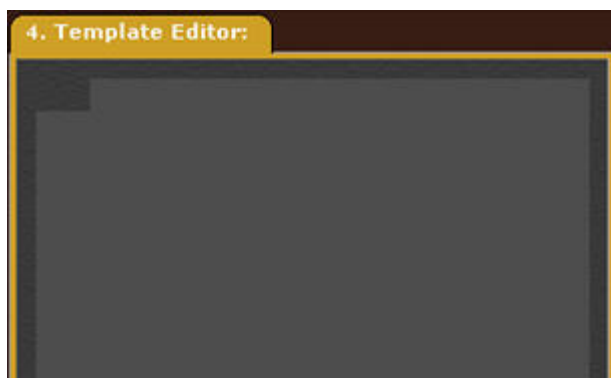


	Template	Text	Parameters	Comment	Time stamp
1	1	ColorWash M1	17		----
2	2	ColorMix AT M2	11	Updaterad 16.4.05 Oskar	----
3	3	1200 Colorsport M2	32	ESC Gobos 13.4.05 Oskar	2005-04-05 16:00

2. Go to the end of the list and press *INSERT* to select a new Template.

3. Enter a name in the text column (press *MODIFY* to activate and *MODIFY* to store).

4. Press *MODIFY* in the first column. This will open the Template Editor, which will be empty.



5. Use *INSERT* to create as many steps as the Moving Device has control channels.

6. Edit the columns for each step to fit the specification of the Moving Device.

## Device Templates - Parameter

Parameter types are defined in the first cell or the Template Editor.

Each parameter is used differently. For example, Pan and Tilt automatically belong to Focus Palettes, and are mapped to the trackball in Parameter mode.

Press modify in the Parameter cell to open the dropdown. Select with arrow keys and press MODIFY to confirm.



The Parameters are picked from the Parameter Definition Editor. Parameters can be added to this list if necessary. See [Parameter Definition Editor](#).

## Parameter Definition Editor

The complete Parameter Definition Editor contains all to this point known parameters.



The screenshot shows a window titled "5. Parameter Definition Editor". It contains a table with four columns: "Parameter", "Name", and "Palette". The "Parameter" column has a list of numbers from 1 to 9. The "Name" column lists parameters: Intensity, Pan, Tilt, Focus Speed, Focus Time, Cyan, Magenta, Yellow, and Amber. The "Palette" column lists groups: INT, FOCUS, FOCUS, FOCUS, FOCUS, COLOR, COLOR, COLOR, and COLOR. A vertical scrollbar is on the right side of the table.

Parameter	Name	Palette
1	Intensity	INT
2	Pan	FOCUS
3	Tilt	FOCUS
4	Focus Speed	FOCUS
5	Focus Time	FOCUS
6	Cyan	COLOR
7	Magenta	COLOR
8	Yellow	COLOR
9	Amber	COLOR

Function	Description
Parameter	Parameter ID - cannot be changed.
Name	The name is used for controlling the parameter. Changing an existing name could alter the complete functionality of all Templates
Palette	The Group defines which Palette and parameter group a parameter will belong to*

\*Palette and parameter Groups

Group	Description
INT	All intensities belong to INT.
FOCUS	Focus parameters
COLOR	Color parameters
BEAM	Beam parameters
AUX 1	Control parameters - are never recorded.
AUX 2	Control parameters - are never recorded.

## Device Templates - Type LTP or HTP

Each parameter in a Template can be set to LTP (Latest Takes Precedence) or HTP (Highest Takes Precedence).

- HTP8 is used for intensity parameters
- LTP8 is used for 8 bit parameters
- LTP16 is used for 16 bit parameters\*



This is set in the Template Editor. See [Device Templates - Editor](#).

\*Observe that the DMX offset of a parameter has to be incremented by 2, if the previous parameter is set to 16-bit resolution.

See [Device Templates - 16 bit Control](#)



## Device Templates - Type 8/16 bit control

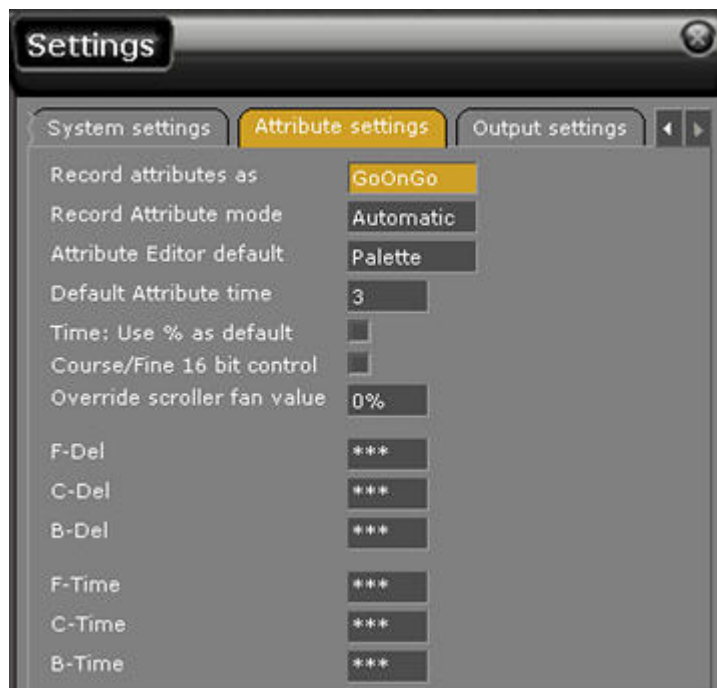
Some Devices have parameters that require 16 bit control. Usually this is Pan or Tilt. This is set in Type cell of the Template Editor.

- LTP 8 bit - normal 8 bit control
- LTP 16 bit - 16 bit control



### 16 Bit Control And Wheel Behaviour

The functionality of "*Course/Fine 16 bit control*" is set in the Attribute Setup. Hold SETUP and press ATTRIB.



- On = The wheel controls the Course part of the 16-bit value. Hold the wheel key down and move the wheel to control the Fine part of the 16-bit value.
- Off (default) = The wheel will control Course when moved fast, and Fine when moved slowly.

## 16 Bit Control - Fine Step

Devices with 16 bit control rarely use all 16 bits. Therefore it is possible to fine tune the resolution of this parameter in the cell **Fine Step** in the Template Editor.



The image shows a small window titled "Fine step" with a dark background. Inside the window, the number "1" is displayed above a text input field. The input field contains the number "4" and is highlighted with a yellow border.

Full 16 bit control, which few Devices use (Catalyst is one) require this value to be set to 1 (default = 4).

## Device Templates - Snap or Fade

Snap or Fade is defined in the Template Editor.



When set to Snap (ON) it will not be affected by times. It will move at the beginning of each repositioning.

When Snap is Off - the parameter will fade on times. See [Devices - Times](#).

Press modify in the Parameter cell to toggle On/Off.

## Device Templates - Ranges

The Template Range Editor makes it possible to define (and edit) ranges, subranges and positions (for colors, gobos etc) in Templates.

This editor is opened by pressing MODIFY in the Range column of the Template Editor.



	Min	Max	Min%	Max%	Text	Centered
1	0	0	0%	0%	Idle	Off
2	55	55	21%	21%	P/T Speed	Off
3	65	65	25%	25%	P/T Time	Off
4	75	75	29%	29%	On Black Move	Off
5	85	85	33%	33%	Off Black Move	Off
6	95	95	37%	37%	On Black Color	Off
7	105	105	41%	41%	Off Black Color	Off
8	135	135	53%	53%	Lamp On	Off
9	145	145	57%	57%	Pan/Tilt reset	Off
10	155	155	61%	61%	Color Reset	Off
11	165	165	65%	65%	Zoom/Shape Reset	Off
12	175	175	69%	69%	Dimmer/Strobe reset	Off

There is a Range Wizard to create ranges. See [Template Range Wizard](#).

## Template Range Editor - Columns

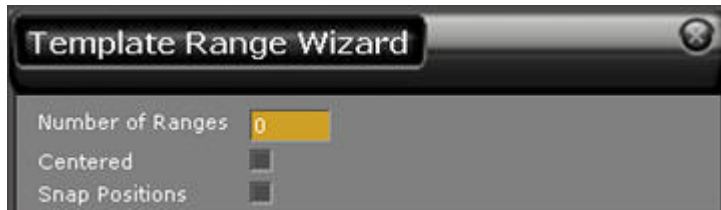
Function	Value	Feedback
<u>Min</u>	0-255	This is the start value for a <b>subrange</b> *. The same value for Min and Max will be treated like a <b>position</b> (for a color or gobo for example). The Min value can be entered in the Min% column as well.
<u>Max</u>	0-255	This is the end value for a <b>subrange</b> *. The Max value can be entered in the Max% column as well.
<u>Min%</u>	0-100	The Min value can be entered as % here instead of bits (0-255) in Min.
<u>Max%</u>	0-100	The Max value can be entered as % here instead of bits (0-255) in Max.
<u>Text</u>		This text is displayed in all editors, and in with the Parameter Wheels.
<u>Centered</u>	On/Off	<p>When On, selecting a range will set the output to the middle of the given range. Parameter values are displayed relative to this center position with +/- steps.</p> <p>This can be useful for speed, rotation or index parameters for wheels, with a stop position in the middle.</p>

\*Values between positions (start=stop) cannot be set with the wheel, unless they are specified as subranges.

## Template Range Wizard

Press WIZARD in the Template Range Editor. This Wizard simplifies entering a number of evenly spread ranges, for example frames, between 0-255. This is useful to create positions for a scroller, or a gobo/color wheel.

1. *Open the Template Range Editor. See [Device Template - Ranges](#).*
2. *Press WIZARD.*



3. *Enter the number of ranges you wish to create and press MODIFY.*
4. *Step to Centered and Snap Positions with arrow keys. Use MODIFY to toggle.*
  - *Centered = The middle value of a range is always output when selected*
  - *Snap Positions = Fixed positions (Start = Stop)*
6. *Select EXECUTE and press MODIFY (previously existing ranges will be overwritten).*

## Device Templates - Mode Tables

Range Tables make it possible to control multiple mode devices such as, for example, the High End X-spot.

- A set of ranges (=Range Tables) are defined for a parameter.
- The table that will be used in every moment depends on the level of another parameter.

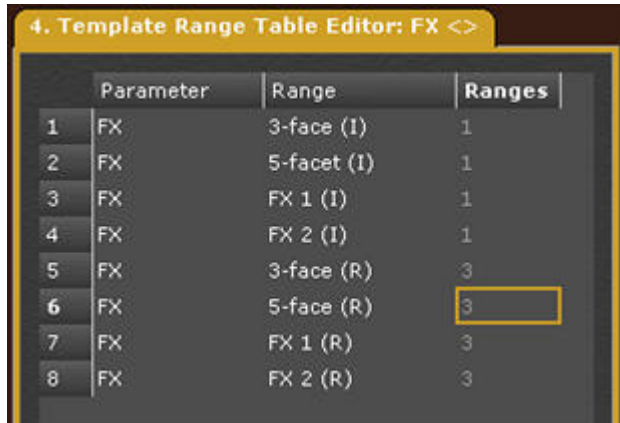
In the High End Xspot there are Mode parameters (color mode) that affect the function of another parameter (color wheel). When a mode is set by selecting a Range on one function, the corresponding Table Range will be assigned to the other parameter.

If there are both Range Tables and Ranges defined for a parameter, the Range Table will be used if there is a corresponding range, otherwise the normal Ranges will be used.

## Define A Range Table

1. Define the ranges for the different "modes" of the Device. See [Device Templates - Ranges](#).

2. Define Range Tables for these modes in the corresponding function parameter. Start by opening the Range Table editor by pressing MODIFY in the Tables column of the Template Editor.



3. Use INSERT\* to create a Range Tables. These are the options.

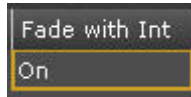
Function	Key	Feedback
<u>Parameter</u>	<input type="button" value="MODIFY"/>	Opens a dropdown. Select the mode <i>parameter</i> that activates this Range Table.
<u>Range</u>	<input type="button" value="MODIFY"/>	Opens a dropdown. Select the range <i>position</i> in the mode parameter that activates this Range Table.
<u>Ranges</u>	<input type="button" value="MODIFY"/>	Opens the Range Editor for defining these ranges.

\*When you make INSERT for additional Range Tables, the parameter will be copied from the first defined Range Table.



## Device Templates - Fade With Intensity

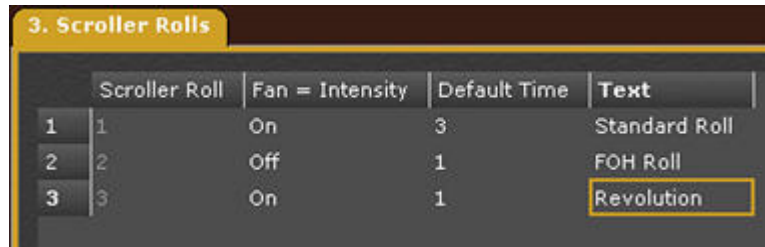
Fade with Intensity can be set in the Template Editor.



When On, the parameter will be scaled through the intensity channel of the device. This is useful for controlling a softlight with color mix coming from colored flourescents, that also are light sources. It makes it possible to mix a color and fade the intensity of the result without changing the Hue (color mix result).

## Device Templates - Scroller Rolls

Scroller Rolls are defined in the Scroller Roll Editor. It is opened from the Browser (Browser >Setup >Scroller Rolls)



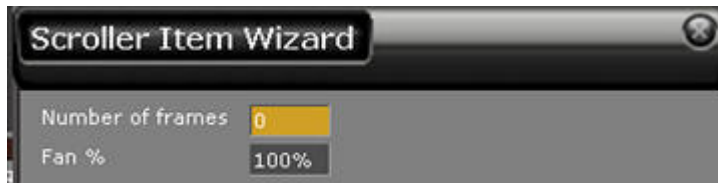
	Scroller Roll	Fan = Intensity	Default Time	Text
1	1	On	3	Standard Roll
2	2	Off	1	FOH Roll
3	3	On	1	Revolution

### Scroller Rolls Editor - Columns

Function	Value	Feedback
<u>Scroller Roll</u>	1-999	The ID of each Template. Press MODIFY to open the Editor
<u>Fan = Intensity</u>	On/Off	Press MODIFY to toggle if Fan should follow intensity channel of the scroller Device to keep down noise when not in use.
<u>Default Time</u>	0s-45min	This is the default time <b>per frame</b> the scroller will use when changed manually, to keep down noise, and save the gel string.
<u>Text</u>		Press MODIFY to activate and end text input.

## Create a Scroller Roll

1. Open the Scroller Rolls List from the Browser (Browser > Setup > Scroller Rolls).
2. Press **INSERT** to create a new Roll.
3. Set **Fan=Intensity**, **Default Time** and **TEXT** for this roll.
4. Press **MODIFY** in the Scroller Roll cell to pen the Scroller Roll Editor. A Wizard is opened where you can define the number of frames and the default Fan value (can be edited later).



5. This is what the scroller roll editor looks like with five frames defined

	Position	Text	Fan%	AutoMove	Value
1	1		100%	0	25
2	2		100%	0	76
3	3		100%	0	127
4	4		100%	0	178
5	5		100%	0	229

You can define the following functions

Function	Value	Feedback
<u>Position</u>	1-999	The ID of each Position. Cannot be changed.
<u>Text</u>		Press MODIFY to activate and end text input.
<u>Fan %</u>	0-100%	It is possible to set a Fan value for each color (to keep noise down).
<u>AutoMove</u>	0-10bits	The scroller will move slowly forth and back when the corresponding color is selected. It will not take individual calibration into account.
<u>Value</u>	0-255	This is the 8 bit value (0-255) that will be output when this frame is selected.

6. Exit with **ESC**.

## Assign A Scroller Roll

Scroller Rolls can be assigned from the Device Settings. They can also be assigned when a scroller is patched, from the Patch Wizard.

1. Open the Device Settings (Browser >Setup >Device Settings). (You can also hold MODIFY and press DEVICE).



2. Use arrow keys to select the ScrRoll Cell for a channel.

3. Press MODIFY to get a dropdown with all defined Rolls.

4. Select a roll with arrow keys.

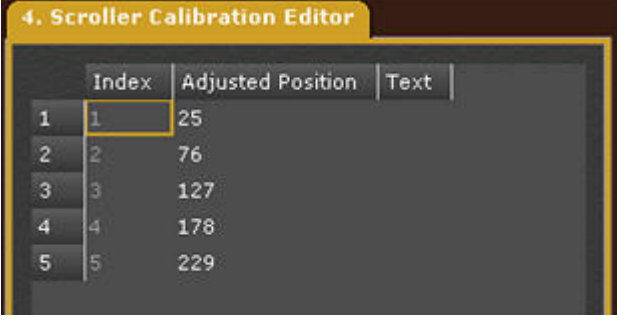
5. Press MODIFY to confirm.

The currently selected color will be shown in the black box under the level in the Channel Views.

## Calibrate Individual Scroller Rolls

Each scroller roll can be calibrated individually. This is done in the Scroller Calibration Editor that is opened from the Device Settings.

1. Open the Device Settings (Browser >Setup >Device Settings).
2. Use arrow keys to select the Calibration Editor cell to the far right.
3. Press MODIFY to open the Calibration Editor for the selected channel.



4. Scroller Calibration Editor

	Index	Adjusted Position	Text
1	1	25	
2	2	76	
3	3	127	
4	4	178	
5	5	229	

4. Select Adjusted Position, enter a new value (confirm with MODIFY). It is updated live.
5. Press ESC to exit. Changes are stored automatically.

## Scroller Fan override

In the Attribute setup (SETUP & ATTRIBUTE) it is possible to specify an Override value for all Scroller Fans. If you set a value > 0%, this value will be used instead of the Fan values programmed in the Scroller Roll. This is useful for making a temporary and absolute override of all fans, for example during long rehearsals when heat is higher than during a performance.

# --DYNAMICS

The effect generator assigns wave-forms (tables) to intensities or attribute parameters. The result is called Dynamic Effects and can be effects like a "circle" or a "ballyhoo".

This chapter contains the following sections

- [Dynamics - Introduction](#)
- [Dynamics - Start](#)
- [Dynamics - Control](#)
- [Dynamics - Edit Live Dynamic Effects](#)
- [Dynamics - Stop](#)
- [Dynamics - Record](#)
- [Dynamics - Effect Library](#)
- [Dynamics - Preset Dynamic Effects](#)
- [Dynamics - Base Value](#)
- [Dynamics - Size & Rate](#)
- [Dynamics - Relations & Distance](#)
- [Dynamics - Loop Count](#)
- [Dynamics - Fade](#)
- [Dynamics - Form](#)
- [Dynamics - Fetch From A Preset](#)
- [Dynamics - Playing Back](#)
- [Dynamics - Store Running To Library](#)
- [Dynamics - Tables](#)

## Dynamics - Introduction

Dynamics are a way of creating effects by assigning *waveforms* (sinus, saw etc) to intensity, color, movement or any other parameter. See [Dynamics - Tables](#).

The waveform will "run" the parameter it is assigned to, but you can still move the "*base value*" of the parameter that the Dynamic is working with.

Dynamics are stored in Presets, and channels can be added or subtracted at a later point.

### General Facts

- Dynamic Effects are created in the **Effect library** (Browser)
- **Size** and **Rate** can be set in the Dynamics Soft Key page
- **Offset-** and **Delay Relation** can be set in the Live Dynamic Effects list
- **Distance** can be set in the Live Dynamic Effects list
- **Loop Count** can be set in the Live Dynamic Effects list
- Dynamic effects can be **stored** and **played back** from all Playbacks

### Effect Library

- A number of common Dynamic Effects are included in the Effect Library of the Browser. It is possible to create new ones as well.

### Intensity and Attributes

- Intensity Dynamics require a **Stop Dynamic**.
- All Dynamics in a Master Playback will stop when a Master is faded to zero
- Attribute Dynamics will stop when new attribute values are played back

### Dynamic Views

- There is a Live Dynamics Editor
- There is a Preset Dynamics Editor

#### NOTE

To create a movement, like a "Circle" for a moving Device, two sinus waves are applied to pan and tilt, and one of them is offset 25%.

## Dynamics - Start

Dynamics are activated for the currently selected channel(s). The current attribute and intensity values are used as the **Base Value** for the Dynamic Effect.

A "D" will appear in the top right corner of the channel symbol.



### **NOTE**

Activating a Dynamic Effect will "lock" the attributes and intensities of the selected channels to the Dynamic Effect.

See [Dynamics - Stop](#).

### Start Dynamics By Number

Function	Key	Feedback
Start Dynamic Effect #	<input type="text" value="#"/> <input type="text" value="DYN EFFECT"/>	Dynamic Effect # is activated for the currently selected channel(s).

### Start Dynamics From The Effect Library Tab

Action	Key	Feedback
1. Open Effect Library	<input type="text" value="DYN EFFECT"/>	The Effect Library tab is opened.
2. Select Effect	Arrow Keys Up/Down	The selected Effect is highlighted.
3. Start Effect	<input type="text" value="MODIFY"/>	The selected Effect is activated for the currently selected channel(s).
4. Exit Effect Library	<input type="text" value="ESC"/>	The Effect Library tab is closed.



## Start Dynamics From The Effect Library Node In The Browser

Action	Key	Feedback
1. Select the Browser	<b>BROWSER</b>	The Browser is selected and highlighted. If it was already selected it is closed. Press again to open.
2. Go to the Effect Library node	Arrow keys Up/Down	The Effect Library node is highlighted.
3. Open the Effect Library node	Right arrow	The Effect Library node is opened.
4. Select an Effect	Down arrow	The selected Effect is highlighted
5. Start the Effect	<b>LOAD</b>	The selected Effect is activated for the currently selected channel(s).

## Start Dynamics From The Direct Selects

Action	Key	Feedback
1. Select Dynamics for a section	<b>TYPE</b> & <b>Dynamics</b>	When TYPE is held you can select Dynamics for a section. The first ten dynamics are displayed in the section immediately.
2. Activate a Dynamic	Section keys 1-10	The selected Effect is activated for the currently selected channel(s).

See [Direct Selects](#).

## Start Dynamics With Direct Mode

1. Hold DYN EFFECT (don't let go until the Dynamics are started).

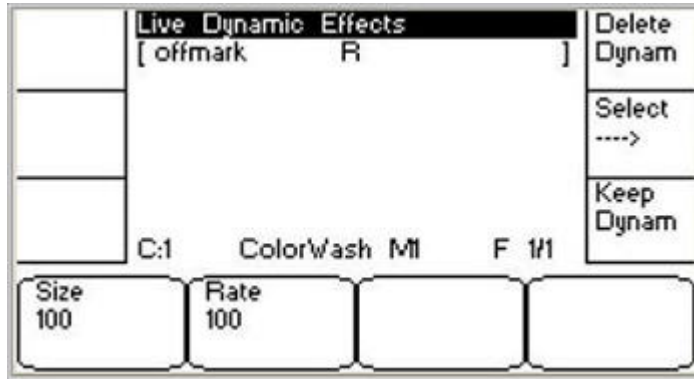
- When this is held, the first 40 Dynamic Effects in the Effect Library are displayed on the Direct Select keys.

2. Activate a Dynamic by pressing the corresponding key

3. Let go of DYN EFFECT.

## Dynamics - Control

The Dynamics Soft Key Page in the Main Display of the console facepanel is opened by pressing DYNAMIC in the top menu soft key page.



It has the following functions for controlling live Dynamics

- Set Size & Rate for Live Dynamics
- Delete Live Dynamics

### Dynamic Wheels - Size & Rate

Wheels 1 and 2 are used to set Size and Rate for Live Dynamics.

- Select channels and set values.
- Set numerical values with # and Wheel Key.
- Can be used in combination with Fan. See [Devices - Fan](#).

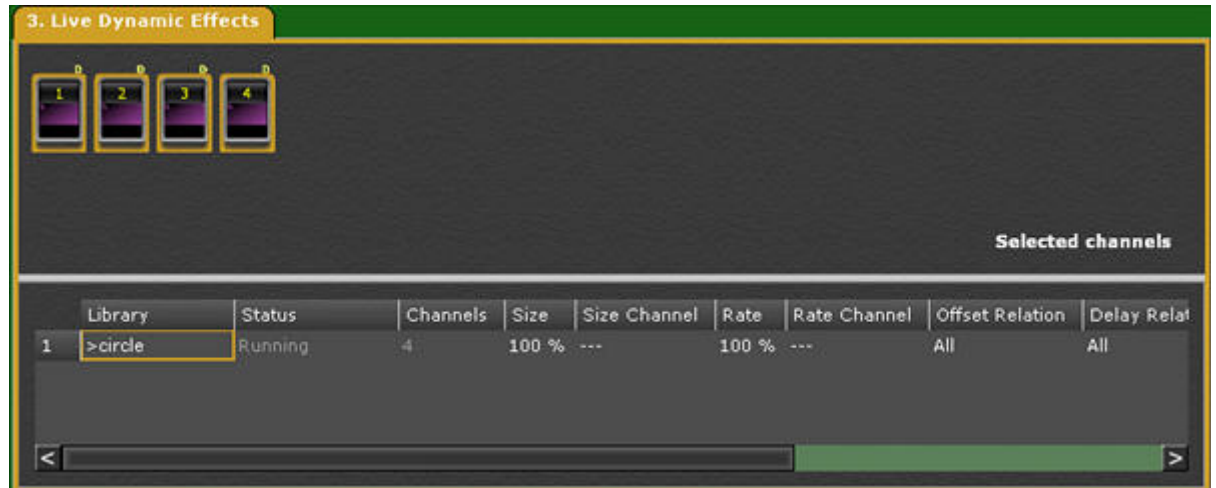
### Live Dynamic Effects Display List

All live Dynamic Effects are shown in this list.

- Use the Trackball in Display List mode to select (click) a running dynamic
- Use DELETE DYNAM to delete the currently selected Dynamic from this list

## Dynamics - Edit Live Dynamic Effects

All parameters of running Dynamic Effects can be edited in the Live Dynamic Effects tab. Hold MODIFY and press DYN EFFECT to open it.



## Live Dynamic Effects - Columns

Column	Input	Function
<u>Library</u>	<input type="button" value="MODIFY"/>	Opens a dropdown to select a Dynamic Effect from the Effect Library.
<u>Status</u>	No input	Running status. Cannot be edited.
<u>Channels</u>	No input	The amount of channels assigned to this Dynamic Effect.
<u>Size</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Set the size from 1-1000%. See <a href="#">Size &amp; Rate</a>
<u>Size Channel</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Assign a size channel. See <a href="#">Size &amp; Rate</a>
<u>Rate</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Set the rate from 1-1000%. See <a href="#">Size &amp; Rate</a>
<u>Rate Channel</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	Assign a rate channel. See <a href="#">Size &amp; Rate</a>
<u>Offset Relation</u>	<input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>
<u>Delay Relation</u>	<input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>
<u>Distance</u>	<input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input.
<u>Fade</u>	<input type="button" value="MODIFY"/>	See <a href="#">Fade</a>
<u>Loop Count</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	See <a href="#">Loop Count</a>
<u>Form</u>	<input type="button" value="MODIFY"/>	See <a href="#">Form</a>

## Dynamics - Stop

Dynamic Effects can be stopped in the following ways.

- Stop Dynamics manually
- Activate A Dynamic Stop Table
- Delete the Dynamic from Live Dynamic Effects
- Delete the Dynamic using the Dynamics display
- Fade in a Preset in the Main Playback
- Load a new Sequence to the Main Playback

Moving Device attributes are stopped automatically when a new value is played back from any Playback or Master. Intensity Dynamics can only be stopped with the Stop Dynamics table of the manual stop functions.

### **NOTE**

**Dynamics act like Attributes - they are executed in A or B depending on the GoOnGo or GoInB flag of the step.**  
See [Device Play back - GoOnGo or GoInB](#).

### Stop Dynamics Manually

Action	Key	Feedback
1. <i>Select channels</i>	Channel functions	The selected channels are highlighted in the Channel View
2. <i>Stop Dynamics</i>	<div>C/ALT &amp; DYN EFFECT</div>	All Dynamics are cleared for the selected channel(s)

This is a shortcut to select all channels with Dynamics assigned to them.

Function	Key	Feedback
Select all channels with dynamics	<div>CH &amp; DYN EFFECT</div>	All selected channels are highlighted in the Channel View

## Activate A Dynamic Stop Table

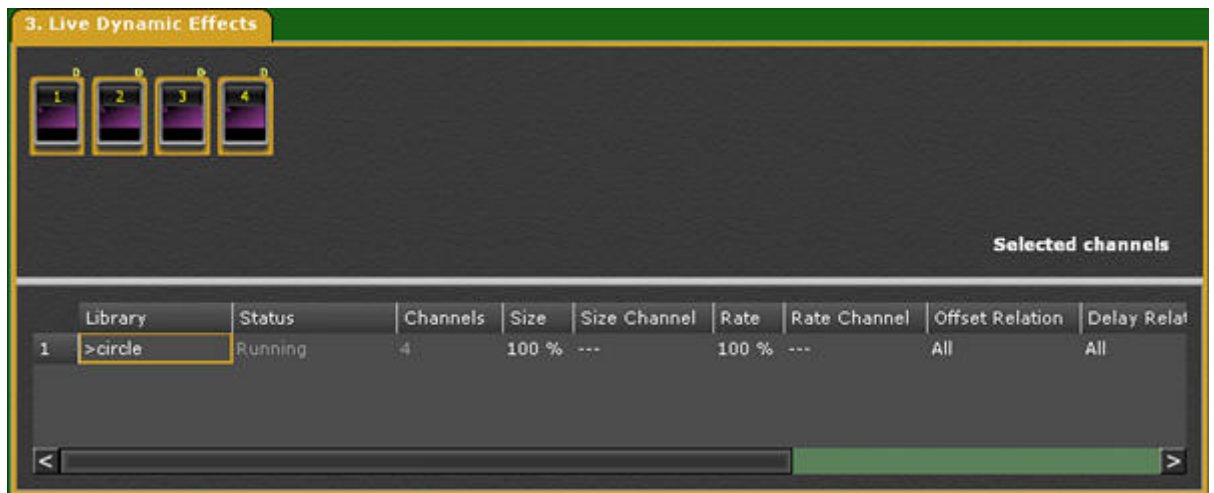
Intensity Dynamics can only be stopped by assigning a Stop Intensity Table. There is a STOP I Dynamic in the Effect Library for this.

1. *Select the channels*
2. *Assign the "**STOP I**" Effect (See [Dynamics - Start](#))*

You can record this to the Preset in the A field of the Main Playback. When the Preset with this Stop Table is activated, the Intensities will fade the size of the Dynamic Effect using the IN time of this Preset.

## Delete A Dynamic From Running Dynamics

1. *Open the Live Dynamic Effects Tab by holding MODIFY and pressing DYN EFFECT.*



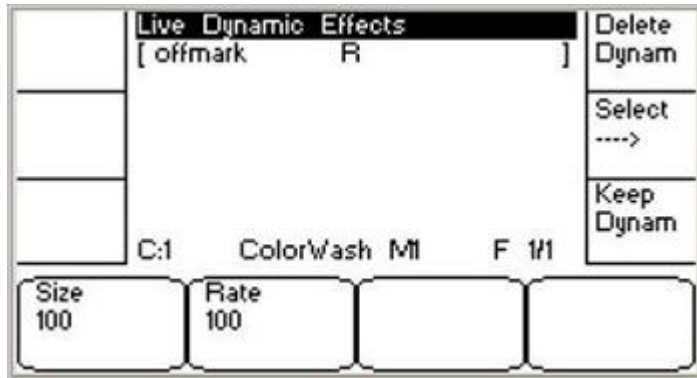
2. *Select a Dynamic effect with the arrow keys*
3. *Press DELETE to stop (a popup will ask for confirmation)*



4. *Press MODIFY to confirm.*

## Delete A Dynamic Using The Dynamics Display

1. Select the Dynamics Soft Key Page in the Main Display of the console facepanel by pressing DYNAMICS in the top menu.



2. Activate Display list mode for the trackball (DISPLAY LIST). The Trackball will turn greenish.

3. Select a Dynamic in the Live Dynamic Effects list using the trackball.

4. Press DELETE DYNAM to delete

## Fade In A Preset In The Main Playback

When a Preset with new attribute values is faded in the Main Playback, any active Dynamics for those attributes will be stopped.

## Load a new Sequence to the Main Playback

When a new Sequence is loaded to the Main Playback, all running Dynamics are stopped the next time GO is pressed.

## Dynamics - Record

Dynamic Effects are recorded in Presets for playback.

- Only Dynamics that have changed or are started since you last pressed RECORD will be stored.
- Record Mode should be set to AUTOMATIC for attributes.
- A Dynamic can be stored with a "Keep Dynamic" flag. This will allow the Dynamic to move to new base values without stopping the Dynamic.

### Record Changed Dynamics

Function	Key	Feedback
Record* Dynamics to Preset #	# RECORD	All channels are recorded including all running Dynamics to Preset #

\*Record Mode has to be set to Automatic for Attributes - See [Devices - Recording Modes](#).

### Record Dynamics To Another Preset

Function	Key	Feedback
Record* Dynamics to Preset #	# RECORD & DYN EFFECT	All channels are recorded including running Dynamics to Preset #

\*Record Mode has to be set to Automatic for Attributes - See [Devices - Recording Modes](#).

### Record Dynamics To A Master

Function	Key	Feedback
Record* Dynamics to Master #	RECORD & Master Key	Selected channels are recorded including running Dynamics to Master # as the next free Preset.

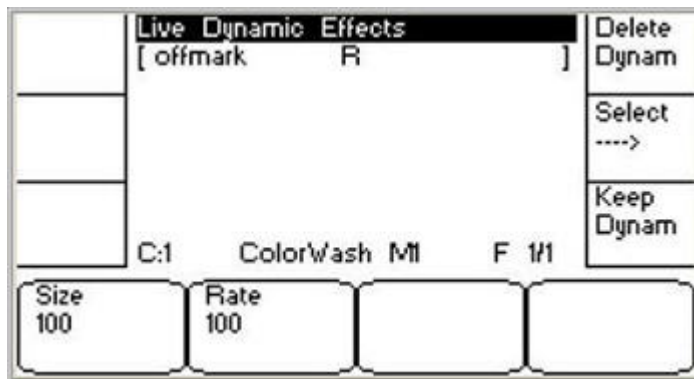
\*Record Mode has to be set to Automatic for Attributes - See [Devices - Recording Modes](#).



## Record Keep Dynamics (New Base Value)

**Keep Dynamics** makes it possible to set a Keep Dynamics flag to an existing Preset. When this Preset is played back in a Sequence it will change the Base Values for a running Dynamic Effect without stopping it.

1. Select the Dynamics Soft Key Page in the Main Display of the console facepanel by pressing DYNAMICS in the top menu.



2. Press KEEP DYNAM.

The Currently running dynamics are stored with a Keep Dynamics flag in the Preset active in the A field of the Main Playback.

You can store to a different Preset by entering a number before Keep Dynam. The Preset has to be recorded first.

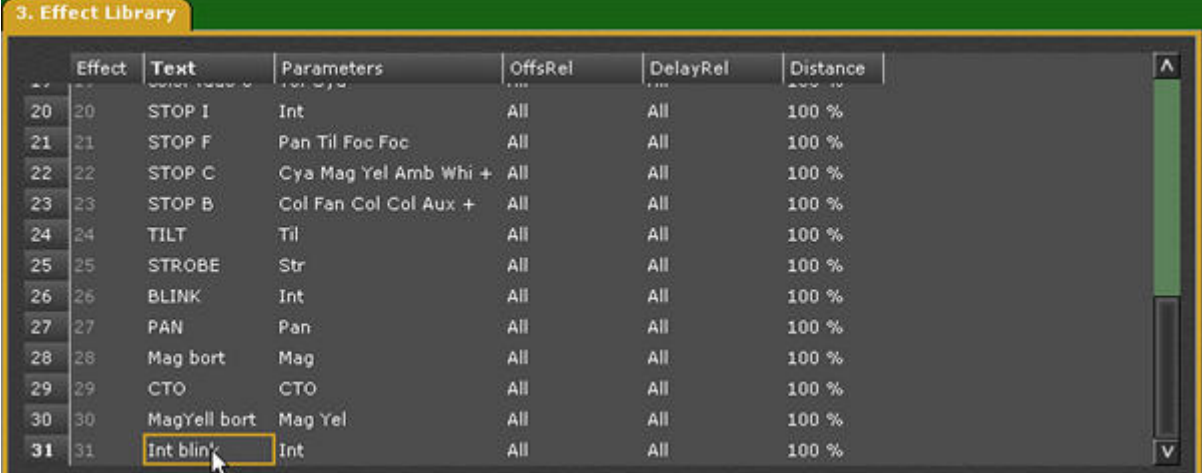
### NOTE

You can set a Keep Dynamics flag for a parameter group (Focus, Color, Beam) by holding KEEP DYNAM and pressing either of these keys.

## Dynamics - Effect Library

The Effect Library is a library of predefined Dynamic Templates that are used to start Dynamic Effects.

Open by pressing DYN EFFECT (or Browser >Effect Library).



	Effect	Text	Parameters	OffsRel	DelayRel	Distance
20	20	STOP I	Int	All	All	100 %
21	21	STOP F	Pan Til Foc Foc	All	All	100 %
22	22	STOP C	Cya Mag Yel Amb Whi +	All	All	100 %
23	23	STOP B	Col Fan Col Col Aux +	All	All	100 %
24	24	TILT	Til	All	All	100 %
25	25	STROBE	Str	All	All	100 %
26	26	BLINK	Int	All	All	100 %
27	27	PAN	Pan	All	All	100 %
28	28	Mag bort	Mag	All	All	100 %
29	29	CTO	CTO	All	All	100 %
30	30	MagYell bort	Mag Yel	All	All	100 %
31	31	Int blin'	Int	All	All	100 %

### Dynamic Effect Library - Columns & Functions

Column	Input	Function
<u>Effect</u>	<input type="button" value="MODIFY"/>	Starts the selected Effect for the currently selected channel(s).
<u>Text</u>	<input type="button" value="MODIFY"/>	Press MODIFY to activate and end text input.
<u>Parameters</u>	<input type="button" value="MODIFY"/>	Opens the Dynamic Template editor. See <a href="#">Dynamic Template Editor - Create</a> .
<u>OffsRel</u>	<input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>
<u>DelayRel</u>	<input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>
<u>Distance</u>	<input type="button" value="#"/> <input type="button" value="MODIFY"/>	See <a href="#">Relations &amp; Distance</a>

## Dynamic Template Editor - Create

1. Open the Effect Library by pressing *DYN EFFECT*
2. Go to the last step using the arrow keys
3. Press *INSERT* to create a new Template
4. Go to **TEXT** and press *MODIFY* to enter a name. Press *MODIFY* again to confirm.
5. Go to **Parameters** and press *MODIFY* to open the Template Editor.
6. Press *INSERT* to create a step



The screenshot shows a window titled "4. Dynamic Template Editor: New". Inside, there is a table with the following columns: Ch.Index, Parameter, Table, Delay, Offset, Size, Rate, and Wait. The first row contains the values: 1, 0, Not defined, Stop, %, %, 100%, 100 %, and %.

	Ch.Index	Parameter	Table	Delay	Offset	Size	Rate	Wait
1	0	Not defined	Stop	%	%	100%	100 %	%

See [Dynamic Template Editor - Functions](#).

## Dynamic Template Editor - Functions

Column	Input	Function
<u>Ch.Index</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	0 means all selected channels are affected by this step. For numbers >0 only channels that match this index number will be activated. For example "2" means that only every second channel will be affected (of the selected channels).
<u>Parameter</u>	<input type="button" value="MODIFY"/>	Opens a dropdown. Select which parameter this step shall affect.
<u>Table</u>	<input type="button" value="MODIFY"/>	Opens a dropdown. Select which table this step should apply. See <a href="#">Dynamics - Tables</a> .
<u>Delay</u>	<input type="button" value="MODIFY"/>	A delay in % before the step starts to move
<u>Offset</u>	<input type="button" value="MODIFY"/>	An Offset in % where in the table this step starts
<u>Size</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	See <a href="#">Size &amp; Rate</a>
<u>Rate</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	See <a href="#">Size &amp; Rate</a>
<u>Wait</u>	<input type="text" value="#"/> <input type="button" value="MODIFY"/>	A wait time, in percent (1- 1000%) for this step before it is repeated. The Wait time is relative to all other steps.

# Dynamics - Preset Dynamic Effects

The Preset Dynamics Editor is identical to the Live Dynamics Editor. All editing functions are the same. See [Dynamics - Edit Live Dynamic Effects](#) .



Function	Key	Feedback
Open Preset Dynamics Editor for Preset #	<div>#</div> <div>PRESET</div> <div>&amp;</div> <div>DYN EFFECT</div>	Dynamic Editor for Preset # is opened.
<b>NOTE</b> You can open this editor in two more ways <ul style="list-style-type: none"> <li>• Double-click on "Dyn:#" in the Sequence Playback View</li> <li>• Press MODIFY in the Dynamics Column of a Preset List</li> </ul>		

## Dynamics - Base Value

When a Dynamic Effect is activated, it will run with the current position of the corresponding attribute or intensity as a Base Value.

If you change this Base Value, the Dynamic Effect will follow.

If a pan/tilt effect such as *Circle* is running for a moving Device, you can change the Base Value by moving Pan and Tilt, or by selecting a Focus Palette.

### **NOTE**

**If the Base Value is too small, some effects will not be visible, for example color mix and intensity effects. Set the Base Value to 50% for maximum effect.**

## Dynamics - Size & Rate

Each Dynamic Effect has a Size (amplitude) and Rate (frequency) value. It is possible to assign an intensity channel to each of them.

You can set Size and Rate for running Dynamic Effects with the wheels in the [Dynamics - Soft Key Page](#).

### Size

Sets the size (amplitude) of the waveforms in a Dynamic Effect. It is set from 0-1000%.

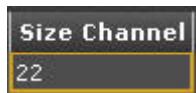


This can be set with the first parameter wheel in the Dynamics Soft Key Page of the Main Display in the Congo facepanel. (DYNAMICS softkey)

It can also be set in the Preset- and Live Dynamic Effects tabs.  
See [Live Dynamic Effects](#) and [Preset Dynamic Effects](#)

### Size Channel

Any channel can be set to control the Size of a Dynamic Effect. At 50% it does not affect the Size at all.



The channel is marked with SIZE in the Channel Views.



## Rate

Sets the rate (frequency) of the waveforms in a Dynamic Effect. It is set from 0-1000%.



You can also change this parameter with the second parameter wheel in the Dynamics Soft Key Page (press DYNAMICS in the Index Page).

It can also be set in the Preset- and Live Dynamic Effects tabs.  
See [Live Dynamic Effects](#) and [Preset Dynamic Effects](#)

## Rate Channel

Any channel can be set to control the Rate of a Dynamic Effect. At 50% it does not affect the Rate at all.



The channel is marked with RATE in the Channel Views.



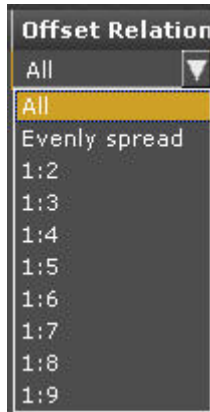


## Dynamics - Relations & Distance

Offset Relation, Delay Relation and Distance set all channels to perform a Dynamic one after the other, or overlapping.

### Offset Relation

Specifies when channels start in relation to the table assigned to them

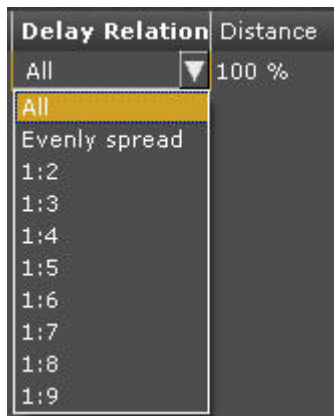


Offset is set in the Dynamic Effect views (Live and Preset). Press MODIFY in either for a dropdown with the following options

Action	Description
<u>All</u>	All devices start at the same point in the table.
<u>Evenly Spread</u>	The starting point (offset) is evenly spread.
<u>1:2-1:9</u>	The selected devices are divided in # groups (1:#).

## Delay Relation & Distance

Specify when channels start in relation to each other.



Delay Relation and Distance are set in the Dynamic Effect views (Live and Preset). Press MODIFY in **Delay Relation** for a dropdown with the following options

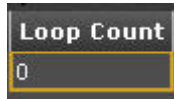
Action	Description
<u>All</u>	All devices start at the same time.
<u>Evenly Spread</u>	The starting time is evenly delayed.
<u>1:2-1:9</u>	The selected devices are divided in # groups (1:#).

**Distance** specifies the time (in percent) between the starting point of each channel when the Delay Relation is used.

## Dynamics - Loop Count

A Dynamic Effect can be set to run a specific number of loops and then stop automatically. If set to 0 it will run forever.

This is done in the *Loop Count* column of the Dynamic Effects tabs.

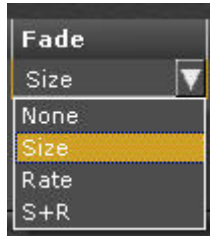


See [Dynamics - Live Dynamic Effects](#) and [Dynamics - Preset Dynamic Effects](#)

## Dynamics - Fade

A Dynamic Effect can fade in size, rate or both when played back in a Sequence. When faded manually in a Master Playback, size will follow the fader (0-100%).

The Fade parameter is set in the Live and Preset Dynamic Effect tabs in the Fade column.



Action	Key	Feedback
<u>Size</u> (default)	<input type="button" value="MODIFY"/>	Size will fade in (and out) on the time for the corresponding attribute.
<u>Rate</u>	<input type="button" value="MODIFY"/>	Rate will fade in (and out) on the time for the corresponding attribute.
<u>S &amp; R</u>	<input type="button" value="MODIFY"/>	Size & Rate will fade in (and out) on the time for the corresponding attribute.
<u>None</u>	<input type="button" value="MODIFY"/>	Activating a new attribute value will stop a corresponding dynamic directly.

### Intensity Dynamics

When a Stop Table is activated, the Dynamic Effect will fade out on the in time of the corresponding sequence step. If the Stop Table is assigned manually, the default attribute time will be used.

### Attribute Dynamics

When new attribute values are played back from the Sequence, they will fade from the Dynamic in the attribute time of that Sequence Step. When they reach zero the Dynamic is deleted automatically.

See [Dynamics - Live Dynamic Effects](#)

See [Dynamics - Preset Dynamic Effects](#)

## Dynamics - Form

Form specifies the relation between the size for the Pan and Tilt parameters. It is used to control the behaviour of Pan/Tilt combinations like a Circle.

Normal value is 100 (displayed as "F:F") which means that both Pan and Tilt are equal in size.

- If you enter a value between 0 and 99, this will be used as the size for the Pan parameter showed as "0:F" to "99:F".
- If you enter a value between 101 and 200, this will be used as the size for the Tilt parameter showed as "F:99" to "F:0".

Think of it as a continuous scale from a vertical movement through the full circle to a horizontal movement.

This is done in the Form column of the Live- and Preset Dynamic Effects tab.



See [Dynamics - Live Dynamic Effects](#)

See [Dynamics - Preset Dynamic Effects](#)

## Dynamics - Fetch From A Preset

Dynamics can be copied from any Preset. All channels with Dynamics in that Preset will be copied.

Function	Key	Feedback
Fetch Dynamics from Preset #	<div>#</div> <div>ON/FETCH</div> <div>&amp;</div> <div>DYN EFFECT</div>	Dynamics in Preset # are activated. A "D" will appear next to the involved channels in the Channel View.

## Dynamics - Playing Back

A Preset with Dynamic Effects can be played back in any of these ways:

- The Preset is faded in on a Sequence Step
- A Master with the Preset is faded up (size follows the Master fader).
- A Master with the Preset is Flashed

### **General Facts**

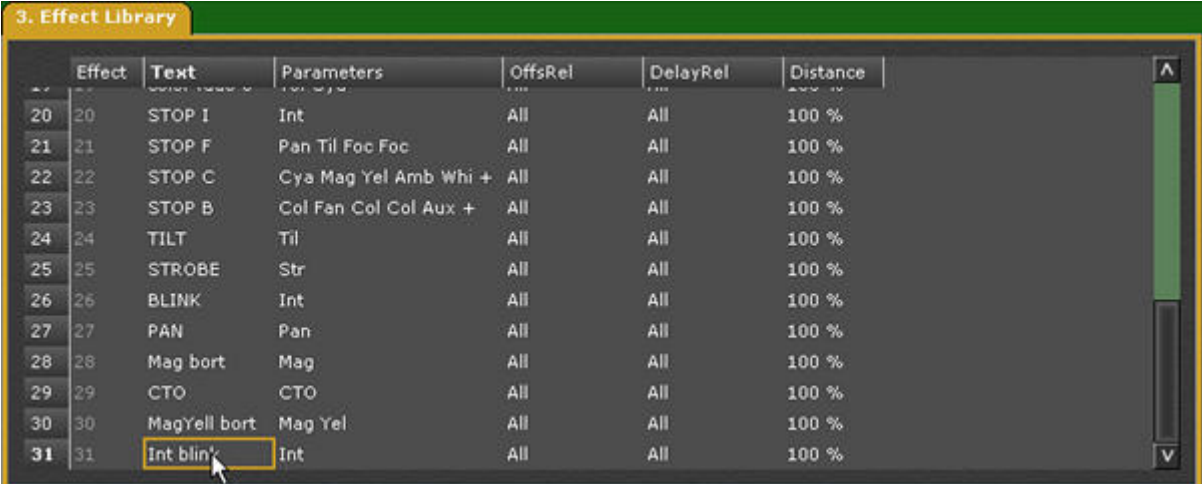
- When activated, Dynamic Effects fade to the initial value including the Offset.
- If the attributes are masked, the Dynamic will not start
- Dynamics run until Deleted or Size is set to zero.
- Device Dynamics will stop if new attributes are faded in a Sequence Step.

See [Dynamics - Stop](#).

## Dynamics - Store Running To Library

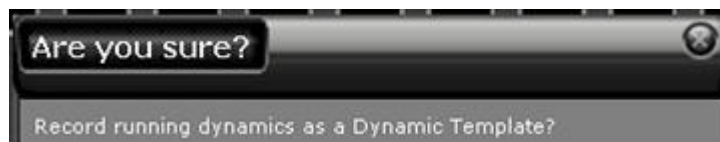
Running Dynamics can be stored as a Dynamic Template in the Effect Library and be reused with different channels.

1. Open the Dynamic Effect Library by pressing *DYN EFFECT*, or from the Browser (*Browser >Effect Libraries*)



	Effect	Text	Parameters	OffsRel	DelayRel	Distance
20	20	STOP I	Int	All	All	100 %
21	21	STOP F	Pan Til Foc Foc	All	All	100 %
22	22	STOP C	Cya Mag Yel Amb Whi +	All	All	100 %
23	23	STOP B	Col Fan Col Col Aux +	All	All	100 %
24	24	TILT	Til	All	All	100 %
25	25	STROBE	Str	All	All	100 %
26	26	BLINK	Int	All	All	100 %
27	27	PAN	Pan	All	All	100 %
28	28	Mag bort	Mag	All	All	100 %
29	29	CTO	CTO	All	All	100 %
30	30	MagYell bort	Mag Yel	All	All	100 %
31	31	Int blink	Int	All	All	100 %

2. Go to the end of the list (arrow keys).
3. Press *INSERT*. You will get the question "Record running dynamics as a Dynamic Template?".



If you answer OK, the dynamics for the currently selected channels (in the selection order) will be used as a base for creating the new Dynamic Template.

4. Enter a name in the text column (press *MODIFY* to activate, enter text and press *MODIFY* to confirm).
5. Exit by pressing *ESC*.



## Dynamics - Tables

The basic element of a Dynamic effect is a wave-form, or "table", that is assigned to the intensity or any other attribute parameter of a channel.

A Sine wave, for example, will fade a parameter up/down continuously over/under the current Base Value.

By changing the Rate and Size of this Sine Wave, you will affect the speed and value range of the result.

Although the idea of tables is very technical, it really requires little technical understanding: most designers prefer to experiment with different tables and parameters to understand - the effect of a Sine Wave is too different on a color parameter, compared to pan or intensity, to explain in detail here.

### **These are the tables**

Table	Description
Stop	A "Stop Dynamics" table
Sine	A normal sinus wave
Step	An "on-off" wave
Sawtooth	A linear "fade up - fade down" wave
Ramp	A "fade up-cut down" wave
RampInv	A "cut up - fade down" wave
MarkOn	"On-longer-than-off" used for fly-in or fly- outs
MarkOff	"Off-longer-than-on" used for fly-in or fly- outs
Spiral	A sinus wave with varying amplitude
Tangent	A sinus wave with a "sharp top"
Random1	Random curve 1
Random2	Random curve 2
Random3	Random curve 3
<b>NOTE</b> If you are used to working with for example WholeHog (tm) Tables, a Sine + 90 degrees is a Sine with an offset of 25% here.	

## --COPY, CUT & PASTE

Copy, cut and paste Texts, Sequence Steps, Groups and Presets.

Action	Key	Feedback
Copy	<input type="button" value="COPY/CUT"/>	The currently selected object is copied.
Cut	<input type="button" value="COPY/CUT"/> <input type="button" value="COPY/CUT"/>	The currently selected object is cut.
Paste	<input type="button" value="PASTE"/>	The last copied or cut object is pasted.

### NOTE

When you paste a Sequence step in the Sequence Editor, it will be inserted before the currently focused step.

When you paste a Preset in the Preset Editor, you will overwrite the content of the currently focused preset.

# --ENTERING TEXTS

**Almost every item in a Play can be labelled with a text.**

The texts are entered from a keyboard, and there is a special TEXT key that can be used to quickly edit the text of a Sequence Step, or a Preset/Group in a Master.

## The TEXT Key

Press TEXT to convert the master display over masters 11-20 into a qwerty keyboard. The master keys correspond to the key in the display.

Action	Key	Feedback
Set text to the Preset in A	TEXT	A popup for setting text to the step in A appears.
Set text to the Preset in B	TEXT & B	A popup for setting text to the step in B appears.
Set text to the content in a Master	TEXT & Master Key	A popup for setting text to the preset in Master # appears.
Set text to a text cell in a spreadsheet	MODIFY	Text entry is activated for the text cell.

## Text From The Keyboard

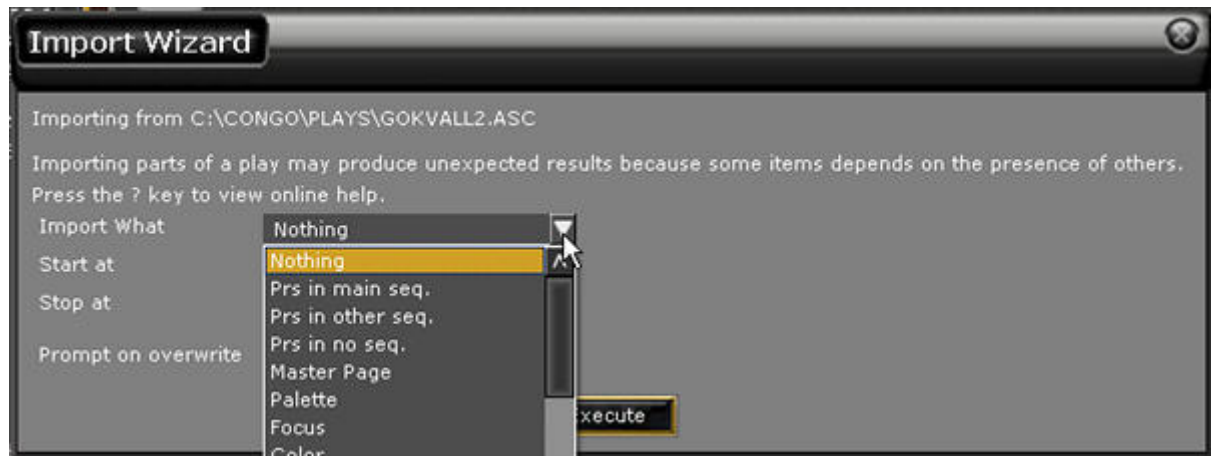
Pressing MODIFY in the text cell or a Preset activates text input, since the text keys simulate functions keys of the console.

See [Accessories - Ext. Keyboard](#)

## --IMPORT WIZARD

**You can import part of another play, and plays from Safari, Expert, Pronto or any other system, providing they are in ASCII play format.**

This is done in the Import Wizard (BROWSER >File >Import from... >Floppy/Play Archive(HD)/USB/File Server).



### CAUTION

We strongly advice you to save your Play before using the Import Wizard, since it can alter your Play greatly.

### Import Wizard - Functions

Function	Console/screen	Feedback
1. Open the Import Wizard for the play or media type	<input type="button" value="MODIFY"/>	The Import wizard is opened.
2. Select type of information	Dropdown	Opens the dropdown with the available data that can be imported for the selected play. The first and last available item of the selected kind is displayed in the start and stop boxes.
3. Select start item	Start at	Select first item
4. Select end item	Stop at	Select last item
5. Decide if prompt on overwrite	Checkbox	When checked you will get a warning if you are overwriting existing data with the same id.
6. Execute the import	<input type="button" value="EXECUTE"/>	Performs the import.

## Import Wizard - Limitations (show data)

A major natural limitation is that you can't import anything regarding a moving device unless you import the template first, then the device settings. After this the show data such as Palettes.

Item	Description	Limitation
Presets	<p>You have to choose from one of three methods:</p> <ul style="list-style-type: none"> <li>- Presets In Main Sequence = Imports all presets in the main Sequence (1).</li> <li>- Presets in Other Sequence = Imports all presets in the other Sequences</li> <li>- Presets in No Sequence = Imports all presets that are not assigned to a Sequence</li> </ul> <p>Dynamic Effects that are stored in these Presets will be imported as well.</p>	It won't make sense to import Presets with Attributes unless you Import the Templates and Device List settings these are referring to first.
Groups	Yes	No
Master Pages	Yes	If the Page contains references to Palettes, Sequences or Presets that don't exist, they will still be assigned to the Page.
Sequences & chases	Main Sequence	You can currently only import the main sequence (1)
Palettes	Yes (All, Color, Focus, Beam)	Import the Templates and Device List settings these are referring to first.
Dynamic Templates	Yes. They will be added to the end of your Dynamic Templates List.	Make sure you have the same tables for wave-forms, or this might not work.

### Import Wizard - Limitations (Patch)

To import the complete Patch you need to import first Templates, then the Channel List, then Device Settings.

Item	Description	Limitation
Templates	Yes	To import a complete Patch import Templates, Channel List and Device Settings.
Channel List	Yes	Import the Templates first.To import a complete Patch import Templates, Channel List and Device Settings.
Device Settings	Yes	To import a complete Patch import Templates, Channel List and Device Settings.

### Import Wizard - Limitations (Setup)

Your Pronto/Congo Settings from a different Play can be imported, with all your settings for the Input/Outputs, record functions etc.

# --SYSTEM SETTINGS

The Settings define default times and values, the behaviour of recording functions, and attribute behaviour in faders during playback.

This chapter contains the following sections

- [System Settings - Introduction](#)
- [System Settings - Output](#)
- [System Settings - Attribute](#)
- [System Settings - System](#)
- [System Settings - Master](#)
- [System Settings - Crossfade](#)
- [System Settings - Channel](#)

## System Settings - Introduction

The system settings are opened with SETUP. You can also open a local settings popup for any key by holding SETUP and pressing that key (for example GO and RECORD)

**The system settings popup contains the following sections**

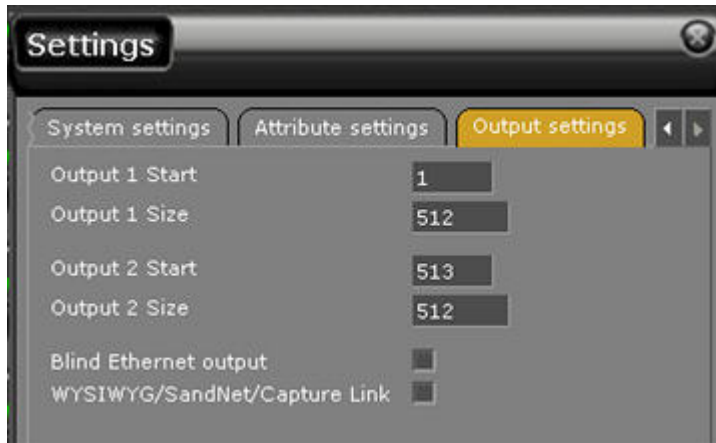
- [OUTPUT](#) >Configure the DMX outputs of the console and visualisation.
- [ATTRIBUTE](#) >Configure default times and recording modes.
- [SYSTEM](#) >Configure Auto-save, rubberband, beep, remote etc.
- [MASTER](#) >Configure Flash and fade on time and Auto-save master pages.
- [CROSSFADE](#) >Configure default times, fader modes and fade direction.
- [CHANNEL](#) >Configure default values and select Command Syntax.



## System Settings - Output

Press SETUP and use the right/left arrows to select the **Output Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY or # MODIFY to change values.



### Output Settings

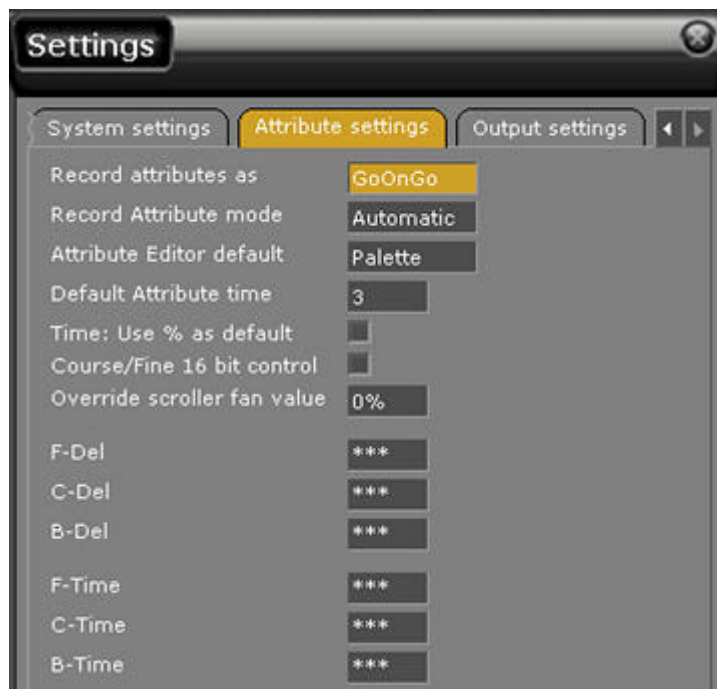
There are two output ports that can transmit DMX512. Both can transmit the same data. For more than 1024 outputs, use Ethernet output.

Function	Explanation	Default value
<u>Output 1 Start</u>	Output connector 1	1
<u>Output 1 Size</u>	The amount of channels output. Can be downscaled from 512-1.	512
<u>Output 2 Start</u>	Output connector 2	513
<u>Output 2 Size</u>	The amount of channels output. Can be downscaled from 512-1.	512
<u>Blind Ethernet Output</u>	Activates preview and blind output to third party visualisation tools such as WYSIWYG, SandNet or Capture.	-
<u>WYSIWYG/SandNet/Capture Link</u>	Activates bi-directional communication with third party visualisation tools.	-

## System Settings - Attribute

Press SETUP and use the right/left arrows to select the **Attribute Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY or # MODIFY to change values.



## Attribute Settings

The Attribute settings affect recording and control of moving device parameters.

Function	Explanation	Default
<u>Record Attributes as</u>	Record attributes to move "live" (GoOnGo) or to move when the positions are loaded for the next Crossfade (GoInB).	GoOnGo*
<u>Record Attribute mode</u>	There are three different modes for recording Attributes. See Recording Attributes.	Automatic
<u>Attribute Editor default</u>	The default setting for entering values in the Attribute Editors: Palettes or %.	Palette
<u>Default Attribute time</u>	Sets a time for all moving device changes during programming.	3 seconds
<u>Time: Use % as default</u>	Times are set as % of the In-time of a crossfade, or in seconds.	Off (seconds)
<u>Course/Fine 16 bit control</u>	Moving parameter wheels slowly gives 16 bit control. See <a href="#">Device Templates - 16 bit control</a> .	Off (8 bits)
<u>Override scroller fan value</u>	Override the fan of all patched scrollers with fan control.	0%
<u>F-Del</u>	A default delay time in seconds or % (of the In time), used when recording Preset with Attributes.	100%**
<u>C-Del</u>	See above	100%**
<u>B-Del</u>	See above	100%**
<u>F-Time</u>	A default time in seconds or % (of the In time), used when recording Preset with Attributes.	100%**
<u>C-Time</u>	See above	100%**
<u>B-Time</u>	See above	100%**

\*You can change this separately for each Sequence Step in the [Sequences - Sequence List](#).

\*\*100% of the In time is displayed as "\*\*\*\*"

## System Settings - System

Press SETUP and use the right/left arrows to select the **System Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY to toggle a setting.



### System Settings

The System Settings are general for the behaviour of the console.

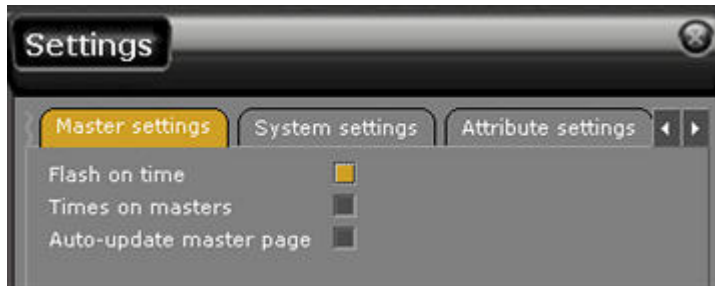
Function	Explanation	Default value
<u>Beep</u>	An audio "beep" warning when illegal commands are performed	On
<u>Remote Control</u>	Activate Radio remote focusing.	Off
<u>Include Masters in play</u>	Everything loaded to the Masters at Shutdown or Save Play is automatically restored along with the Play.	On*
<u>Auto-Save</u>	Saves the Play after each time you press RECORD.	Off
<u>Rubberband Mode</u>	Moving Device parameters will follow a master fader down (as well as up).	Off
<u>Auto-stop Dynamics in PB</u>	Loading a new Sequence to Playback 1 stops all running Dynamics started from the current Sequence.	Off

\*When "Include masters in Play" is OFF, the currently selected Master Page is loaded when re-loading the play.

## System Settings - Master

Press SETUP and use the right/left arrows to select the **Master Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY to toggle a setting.



### Master Settings

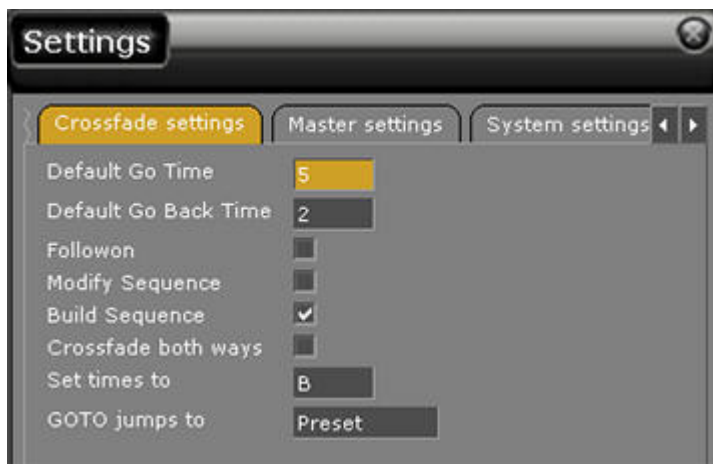
The Master Settings are general for the Master Playbacks.

Function	Explanation	Default value
<u>Flash on time</u>	Press FLASH will activate a fade following the fade times assigned to a Master	Off
<u>Times on Masters</u>	Manual fading will follow fade times assigned to a Master.	Off
<u>Auto-Update master page</u>	Changes to a Master Page are stored automatically.	Off

## System Settings - Crossfade

Press SETUP and use the right/left arrows to select the **Crossfade Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY or # MODIFY to change values.



## Crossfade Settings

The Crossfade Settings are general for the Main Playback.

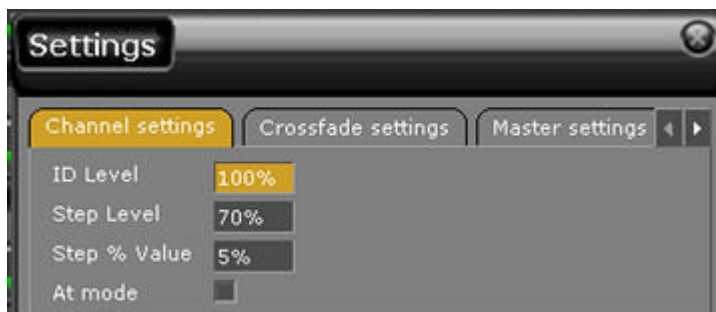
Function	Explanation	Default value
<u>Default GO Time</u>	The Time used by the GO key when no times have been assigned to a crossfade	5
<u>Default Go Back Time</u>	The Time used by the GO BACK key when pressed independent of any ongoing fades.	2
<u>Followon</u>	Wait times will count down from the start of the previous crossfade, before starting the next crossfade automatically	Off
<u>Modify Sequence</u>	Deactivate all Auto-times, Master Links and other Autostart items for all Sequences.	Off
<u>Build Sequence</u>	Presets recorded in LIVE will automatically be stored in the Sequence of the A/B Playback. They will always be stored in the Preset List	On
<u>Crossfade both ways</u>	Crossfaders make a crossfade both up and down (instead of only up).	Off
<u>Set times to</u>	Times are set directly to the Sequence Step in the A field, or the B field	B*
<u>GOTO jumps to</u>	GOTO fades to <b>Preset</b> numbers, or <b>Sequence Step</b> numbers	Preset

\*An arrow in the Main Playback view next to the times of A/B indicates where times are set to.

## System Settings - Channel

Press SETUP and use the right/left arrows to select the **Channel Settings** tab.

- Use the down arrow to select a cell.
- Use MODIFY or # MODIFY to change values.



### Channel Settings

The Channel Settings are general for all Channel Views.

Function	Explanation	Default value
<u>ID Level</u>	The level used by the ID function (hold CH and press @LEVEL)	100%
<u>Step Level</u>	The Level applied when pressing @LEVEL without any value	70%
<u>Step % Value</u>	The Level applied when pressing the +/-% keys	5%
<u>At Mode</u>	Activate the Channel Command Syntax of At Mode (Direct Mode)	Off*

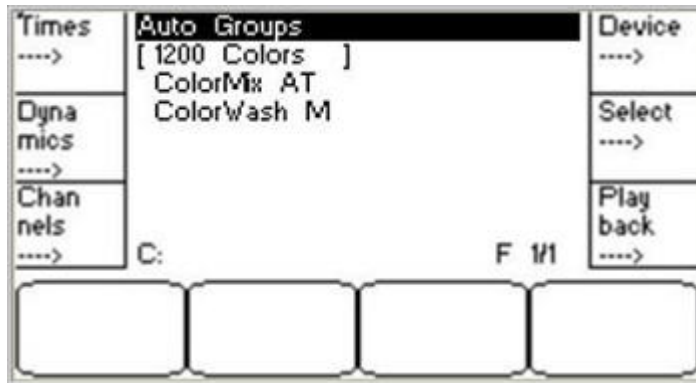
\*See [Channels - Command Syntax](#)



## --DISPLAY LISTS

The main display of the console handles a number of data lists in the mid section. You can use the trackball to access information in these lists in the Display List mode.

- The lists can be opened by holding DISPLAY LIST and pressing a function key
- The lists can be opened by holding DISPLAY LIST and selecting from the Direct Selects



These are the lists. Select an item with the trackball and right- or left click to activate it.

List	Shortcut	Description
All List	<span>DISPLAY LIST</span> & <span>ALL</span>	This is a list of all lists.
Preset List	<span>DISPLAY LIST</span> & <span>PRESET</span>	All presets.
Group List	<span>DISPLAY LIST</span> & <span>GROUP</span>	All groups. Click to select.
Channel List	<span>DISPLAY LIST</span> & <span>CH</span>	All selected channels and names.
Auto Group List	<span>DISPLAY LIST</span> & <span>CH</span> <span>CH</span>	All auto groups from the channel database. Click to select.
Playback List	<span>DISPLAY LIST</span> & <span>PLAYBACK</span>	Shows the sequence steps and times in the Main Playback.
Parameter List	<span>DISPLAY LIST</span> & <span>WHEEL KEY</span>	Shows all ranges of the selected parameter.
Dynamic Effect List	<span>DISPLAY LIST</span> & <span>DYN EFFECT</span>	All dynamic effects. Click to activate.
Sequence List	<span>DISPLAY LIST</span> & <span>SEQ</span>	All sequences.
PlayList	<span>DISPLAY LIST</span> & <span>PLAYLIST</span>	The Playlist. See Playlist.
All Palette List	<span>DISPLAY LIST</span> & <span>PALETTE</span>	All Palletes. Click to activate.
Focus Palette List	<span>DISPLAY LIST</span> & <span>FOCUS</span>	All Focus Palettes. Click to activate.
Color Palette List	<span>DISPLAY LIST</span> & <span>COLOR</span>	All Color Palettes. Click to activate.
Beam Palette List	<span>DISPLAY LIST</span> & <span>BEAM</span>	All Beam Palettes. Click to activate.
Master Page List	<span>DISPLAY LIST</span> & <span>MAST PAGE</span>	All Master Pages. Click to activate.
Master List	<span>DISPLAY LIST</span> & <span>MASTER</span>	All Master Playbacks.
Channel Layout List	<span>DISPLAY LIST</span> & <span>Direct</span> <span>Select</span>	All Channel Lists. Click to activate.

# --LOGIN SETTINGS

**The Login Settings make it possible to configure system features like time, nationality, network and software update/upgrade.**

This chapter contains the following sections

- [Login Settings - Introduction](#)
- [Login Settings - Editing](#)
- [Login Settings - General Functions](#)
- [Login Settings - Time Settings](#)
- [Login Settings - International](#)
- [Login Settings - Software Update](#)
- [Login Settings - Software Upgrade](#)
- [Login Settings - Networking](#)

## Login Settings - Introduction

The Login Settings are opened from the Login Screen (See [Login Settings - Editing](#)). This is where you set the following items.



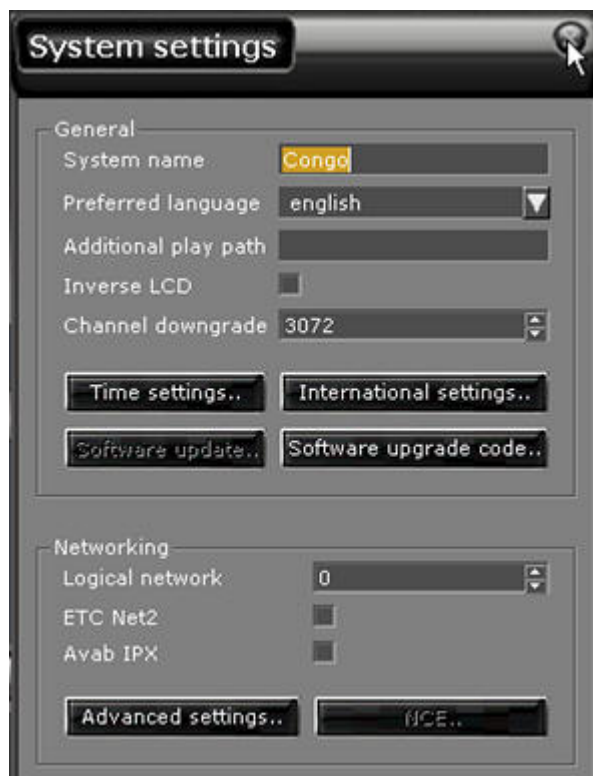
- System name
- Preferred language
- Additional Play path
- Inverse LCD
- Channel Downgrade
- Time Settings
- International Settings
- Software update
- Software upgrade code
- Logical network
- ETCNET2
- IPX
- Advanced Settings

## Login Settings - Editing

The Login Settings are opened from the Login Screen, which automatically is shown after powering up the console. Selecting this option using the arrow keys and press MODIFY.



This popup is opened. Use TAB to move around and click to activate/enter information. ESC will close. The settings are explained in the following pages.



## Login Settings - General Functions

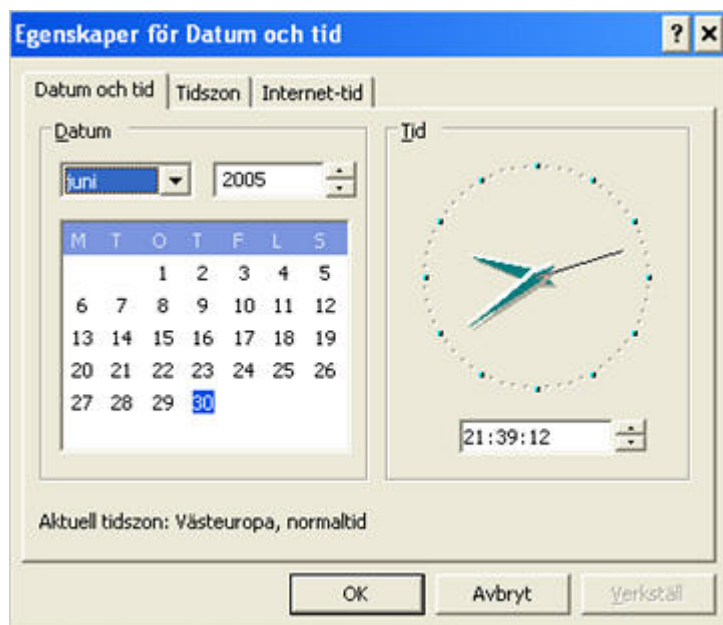
These are the general functions



Function	Feedback
<u>System Name</u>	Any system name (main, backup, foh) can be used. It is displayed at the top of each screen.
<u>Preferred Language</u>	Select a language with MODIFY and confirm with MODIFY.
<u>Additional Play Path</u>	<p>If you are using a file server define the complete play path following window play path standards here.</p> <p><b>Example:</b> <i>D:\congo\backup (internal path/folder)</i> <i>\\anders\playfolder (external server name/folder)</i> <i>\\192.168.1.1\plays (external IPaddress/folder)</i></p>
<u>Inverse LCD</u>	Inverts the Maset and Direct Select LCD's in the console facepanel.
<u>Channel Downgrade</u>	Select less channels to optimize the system (not very common)

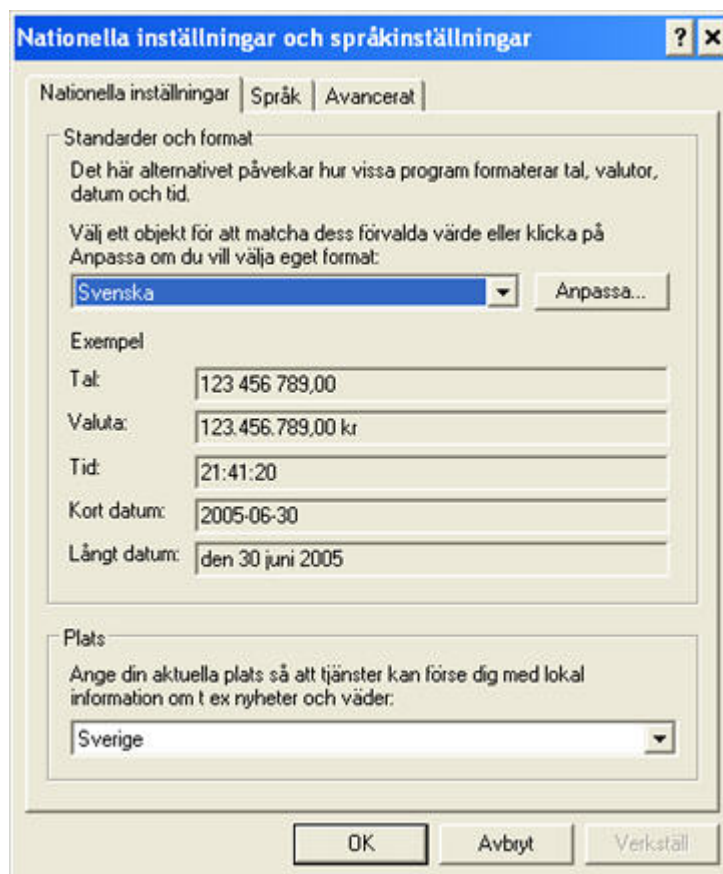
## Login Settings - Time Settings

Selecting TIME SETTINGS and pressing MODIFY (or click) opens the embedded XP Time Settings. They are displayed in the language of the installation.



## Login Settings - International

Selecting INTERNATIONAL and pressing MODIFY (or click) opens the embedded XP International Settings. They are displayed in the language of the installation.





## Login Settings - Software Update

Selecting SOFTWARE UPDATE and clicking opens the software update dialog. A USB memory stick with the latest congo.msi file from [www.avabcontrol.com](http://www.avabcontrol.com) should be inserted in a USB port before activating this.



How to update the software is described step by step in [System Info - Software & Update](#).

## Login Settings - Software Upgrade

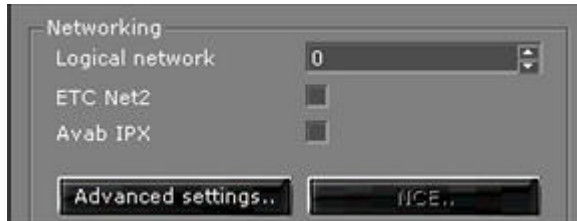
You can upgrade the outputs of a system with a code that you buy from your dealer. Selecting **Software Upgrade** and pressing MODIFY (or click) opens a software upgrade dialog.



Enter the code and press MODIFY to confirm.

## Login Settings - Networking

The Networking features set there are these



Function	Feedback
<u>Logical Network</u>	This is the logical network used to transmit all output from this system.*
<u>ETC Net2</u>	Check this feature if you are using devices or nodes receiving ETC Net2.*
<u>Avab IPX</u>	Check this feature if you are using devices or nodes receiving AVAB IPX.
<u>Advanced Settings</u>	Opens the embedded windows XP network settings.
<u>NCE</u>	Currently not used

\*The settings of the Logical Network can affect the ETCNet2 settings. Check the documentation for your ETCNet2 devices on this.

# --NETWORK

**Congo has client/server networking with multiple operators. It is possible to send and fetch a play between Server and Backup. There is backup sync for running shows.**

This chapter contains the following sections

- [Network - Introduction](#)
- [Network - Connecting](#)
- [Network - Fetch & Send Play](#)
- [Network - Convert To Server/Backup](#)
- [Network - Backup Sync](#)

## Network - Introduction

The Congo network can have a server with any number of Clients.

### **General Facts**

- The first system to boot (Server/Backup) becomes Server
- Only the Server transmits output data
- Transfer Plays between Main and Backup system
- Tracking Backup
- Convert any system to Server/Backup

## Network - Connecting

A network with only two systems can be connected with a "crossed" Ethernet cable. In any other case we recommend to use a Router with a proper DHCP server configuration. The same router can communicate with ETC Net2 nodes.

The first system to boot will become the Server.

An information popup is shown on the Server system when a Backup or Client is started. The system that is started as Backup now displays an information message about this.

When the contact is lost between two linked Congos a popup is shown, and the Backup Congo is automatically converted to Server.

## Network - Fetch & Send Play

Play data is not replicated automatically - for security reasons. Always send or fetch the most current play before running a show. This can be done from either system.

1. *Select the Browser by pressing BROWSER (if it was selected it will be closed, press again to open).*
2. *Use the down and right arrow keys to open the NETWORK node.*



3. *Select the appropriate action (Send/Fetch Play). You will get a confirmation message in the bottom of the screens.*

Once the Play is transferred you have the same Play information in both consoles. The Play file name is transferred, and the playbacks in the receiving system will position to the same steps as in the main system. If you make changes in either console, you have to transfer the Play to update the other console. This guarantees that a programming crash in one system won't bring down the other system.

### **NOTE**

**The Play is transferred, but not saved. You have to save it manually.**

## Network - Convert To Server/Backup

The Server system is the system that transmits output. The Backup system will start doing so when it is converted to Server. This will happen automatically in case of a crash. It can be done manually at anytime.

The top of each screen indicates if a system is running as Server or Backup.



Changing manually is done like this

1. *Select the Browser by pressing BROWSER (if it was selected it will be closed, press again to open).*
2. *Use the down and right arrow keys to open the NETWORK node.*



3. *Select the appropriate action (Convert to Server/Backup). You will get a confirmation message in the bottom of the screens.*

A message will indicate that your system is converted.



## Network - Backup Sync

The link between the two consoles is activated from the Network node of the Browser. This can only be done from the Server .

The following things are synchronized

- Loading new content into a Master.
- Activating content from a Master with the Master key.
- Changing the level of a Master fader.
- Loading new content into playback 1 or 2.
- Starting a playback with the GO, GOTO, GO BACK and PAUSE keys. GO commands include the current Sequence and position to make sure that the playbacks are at the same position.
- Jumping in the Sequence with SEQ+/- or # GOTO.
- Activating a new Master Page.
- Manual Crossfades: when starting a manual crossfade, a GO command is sent to the backup system to make sure that crossfade-related things are started.

1. *Select the Browser by pressing BROWSER (if it was selected it will be closed, press again to open).*

2. *Use the down and right arrow keys to open the NETWORK node.*



3. *Select Backup Sync.*

You will get a confirmation message in the bottom of the screens. Also, the background color of the screens in the Backup System will change to a brighter color.

## --MEDIA

The Media node of the Browser has three nodes. Each of them represent a folder with the same name in the CONGO folder at the root of the system. Information dropped in these folders can be viewed in the Tabs of Congo.

Function	File Types	Explanation
<u>Movies</u>	<i>wmv</i>	Movies are played when a movie node is selected.
<u>Images</u>	<i>jpg</i>	Images are loaded in a Tab when an image node is selected.
<u>Documentation</u>	<i>htm</i>	Documentation is loaded in a Tab when a documentation node is selected.

# Accessories

**This Chapter is about accessories and options, such as remote control, networking, printer, fader wing panel, keyboard etc.**

This chapter contains the following sections

- [Accessories - Ext. Keyboard](#)
- [Accessories - Ext. Mouse Or Trackball](#)
- [Accessories - Printer](#)
- [Accessories - Lynx Fader Wing](#)
- [Accessories - Remote Control](#)

## Accessories - Ext. Keyboard

**An external keyboard will simulate most keys of the console. See the Console Functions Table below.**

This is simple to work with, since the keyboard works exactly like the console. For example pressing R is the same as pressing RECORD, and pressing 1 is the same as pressing Master key 1.

### Keyboard - Level Wheel

You can use a mouse wheel to emulate the level wheel for setting levels and navigating. See [Ext. Mouse Or Trackball](#).

### Keyboard - CH Step

You can hold CTRL and use the left/right arrows to emulate CH+ and CH-.

### Keyboard - Standard Functions

Standard keyboard functions available in all situations are:

ESC = Escape, closes open windows and exits choices.  
INSERT = Inserts data in all lists.  
DELETE = Deletes data in all lists.  
NUMBERS (in the numeric keypad) = Numeric entries.  
HOME = Jumps to the first line of the list or editor.  
END = Jumps to the last line of the list or editor.  
PAGE UP = Page Up in lists.  
PAGE DOWN = Page Down in lists.  
ARROW KEYS = Arrow keys.

### Keyboard - Console Functions

Most functions in the console have direct keys in an external keyboard. Hold ? and press a key to see the shortcut. See [Console Keys](#)

## Accessories - Ext. Mouse or Trackball

You can use an external USB mouse or trackball in the same way as the built in trackball. Connect it to the USB port.		
Function	Key	Feedback
Select channels	left click	Selects and deselects channels
Set channel levels	mouse wheel	Same as the Level wheel of Congo
Open Browser objects	left doubleclick	Opens the corresponding editor tab
Select a cell in a list for editing	left click	Like a mouse in any pc environment
Position a moving device	press PARAMETER next to the trackball	Any parameters of the selected moving devices are controlled by the mouse. Default is pan/tilt.

## Accessories - Printer

Printint is done from the Printer Wizard to a text (txt) file. This file can be auto-loaded to a USB memory stick, to be printed from a standard computer of any kind.

1. Select the Browser by pressing **BROWSER** (if it was selected it will be closed, press again to open).
2. Use the down and right arrow keys to open the **SETUP** node.
3. Select **Printer Wizard** and press **MODIFY**.

This popup will appear



These are the options

Function	Explanation
<u>Type of printout</u>	Select what kind of data. Sequence will always print the sequence in the Main Playback.
<u>Start</u>	First item of the selected type of printout.
<u>Stop</u>	Last item of the selected type of printout.

4. Press **EXECUTE** to confirm.

This popup will appear



5. Confirm with **MODIFY**.

## Accessories - Lynx Fader Wing

**The Lynx is a Master fader wing with 24 extra faders and a crossfade playback.**

It is connected to the APN port in the back of the console and can be used to get a remote control for Masters 1-24, the A/B Crossfade Playback, and five keys (from left to right).

Key	Function	Feedback
Key 1	Flash Mode	Toggles Flash modes for the Masters
Key 2	Start	Starts a Master fade
Key 3	Not implemented	-
Key 4	Seq -	Steps to the previous Sequence step
Key 5	Seq +	Steps to the next Sequence step

## Accessories - Remote Control

**This system can connect an optional remote control for controlling channels and levels. There are two options, phone remote and radio remote.**

This chapter contains the following sections

- [Remote Control - Introduction](#)
- [Remote Control - Phone](#)
- [Remote Control - Radio](#)



## Remote Control - Introduction

There are two kinds of wireless remote controls.

- ETC RRFU
- The Phone Remote

They are both connected in the back of the console.

### CRRFU Radio Remote - Pro's & Con's

- + You can transmit to a receiver out of sight
- May cause disturbances with sound equipment

### Phone Remote - Pro's & Con's

- + Extremely simple, use any phone
- Limited functionality

## Remote Control - Phone

**The Phone Remote option allows you to use a standard phone - with or without a phone line - to remote control channels and levels.**

### **Wireless Remote (no phone line)**

Connect the base station of a wireless phone directly to get a low-level remote control solution. Activate the handset for an internal call (depends on the system how this is done) and use the numeric keypad to control channels and levels directly.

### **Phone Line**

Connect the console to a phone line. Call the corresponding phone number and use the numeric keypad to control channels and levels when the console connects.

### Phone Remote - Functions

UR-1	1	2	3
Shift (*)	RECORD	CH	100%
	4	5	6
Shift (*)	PRESET	@ LEVEL	CHECK +
	7	8	9
Shift (*)	GOTO/GO	THRU	CHECK -
	*	0	#
Shift (*)	Shift	ALL	0%

Once is point  
Twice is CLEAR

## **Remote Control - Radio**

All instructions for connecting and operating the ETC CRRFU Radio Remote control are packaged and delivered with this unit.

# APPENDIX

**The Appendix contains information about control interfaces, fuses, key shortcuts ect.**

This chapter contains the following sections

- [Appendix - Console Keys](#)
- [Appendix - Shortcuts - By Function](#)
- [Appendix - Connectors](#)
- [Appendix - Frequently Asked Questions](#)
- [Appendix - Console & System Settings](#)

## Appendix - Console Keys

**Hold ? and press a key to get help. This chapter is a summary of all key help texts, to make the online help more efficient.**

This chapter contains the following sections

- [Console Keys - Alphabetical Order](#)
- [Console keys - Keyboard Equivalents](#)

## Console Keys - Alphabetical Order

These are the Console Keys and the online help text connected to those without a direct chapter.

### Console Key - ? (F1)

- **Function** = Open the HELP tab. See [This Manual](#).
- **Xtra** = Hold and press any key to get Help for that key.
- **Xtra** = Press after opening an editor to get Help for that editor.
- **Location** = Top right corner, under the Grand Master.

### Console Keys - <-- DISP MODE (N/A)

- **Function** = Step up one level in the menu system of the console Main Display. See [Main Display - Functions](#).
- **Location** = Under the Main Display, to the right. See [Facepanel - Console Main Display](#).

### Console Key - @LEVEL (Num Lock +)

- **Function** = Set Level #. See [Set Channel levels](#).
- **Xtra** = Press without # and get Step Level (70%). See [System Settings - Channel](#).
- **Xtra** = Press twice to get 100%
- **Location** = Programming Section, bottom. See [Facepanel - Programming Section](#).

### Console Key - A (A)

- **Function** = Open the A tab and connect A to the Channel Control. See [Main Playback - Edit Keys](#).
- **Location** = Main Playback section. See [Main Playback - Introduction](#).

### Console Key - ALIGN (Alt A)

- **Function** = Align device parameters to the first selected device. See [Device Control - Align](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

### Console Key - ALL (Num Lock, Shift -)

- **Function** = Select all channels with a level in the Channel Control. See [Select Channels](#).

- **Location** = Programming Section, bottom. See [Facepanel - Programming Section](#).

#### Console Keys - Arrow Keys (arrow keys)

- **Function** = Move around in Browser, Lists and Popups. See [Navigating - The Arrow Keys](#).
- **Xtra** = Arrow keys are used in combination with TAB and FORMAT.
- **Location** = Navigation Pad, right. See [Facepanel - Programming Section](#).

#### Console Key - ATTRIB (I)

- **Function** = Open the Live Attribute List. See [Device Views - Live](#).
- **Xtra** = Open the Preset Attribute Editor. See [Device Views - Presets](#)
- **Xtra** = Record Attributes. See [Record All Attributes For Selected Channels](#)
- **Location** = Programming Section, next to DYN EFFECT. See [Facepanel - Programming Section](#).

#### Console Key - ATTRIB DELAY (Softkey N/A)

- **Function** = Sets an Attribute Delay Time to the selected devices. See [Device Times - Attribute Time](#).
- **Location** = In the TIMES soft key page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - ATTRIB TIME (Softkey N/A)

- **Function** = Sets an Attribute Time to the selected devices. See [Device Times - Attribute Time](#).
- **Location** = In the TIMES soft key page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - B (B)

- **Function** = Open the B tab and connect B to the Channel Control. See [Main Playback - Edit Keys](#).
- **Location** = Main Playback section. See [Main Playback - Introduction](#).

#### Console Key - BANK (N/A)

- **Function** = Hold to select Bank for each Direct Select section. See [Direct Select - Content](#).
- **Location** = In the middle of the Direct Select Section. See [Direct Selects - Introduction](#).

### Console Key - BEAM (Alt-B)

- **Function** = Activate Beam # for the selected channels. See [Devices - Palettes](#).
- **Xtra** = Hold RECORD and press BEAM to record a new palette. See [Record A BeamPalette](#).
- **Xtra** = Hold BEAM to activate Direct Select Mode. See [Device Palettes - Direct Mode](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

### Console Key - BLIND (F3)

- **Function** = Activate the Blind Tab. See [Blind - Blind Tab](#).
- **Xtra** = Hold BLIND and use the level wheel to fade in BLIND.
- **Xtra** = Hold BLIND and press a Master or Playback key to load the content.
- **Location** = Navigation Pad, right. See [Facepanel - Programming Section](#).

### Console Key - BROWSER (F10)

- **Function** = Activate/hide the Browser. See [Navigating - Browser](#).
- **Xtra** = Hold BROWSER and use level wheel to resize the Browser.
- **Location** = Navigation Pad, top right. See [Facepanel - Programming Section](#).

### Console Key - BUILD SEQ (Softkey N/A)

- **Function** = Deactivates auto-creation of a new Sequence step when a Preset is recorded in the Live or A Tab. See [Sequences - Build & Modify Modes](#).
- **Location** = Softkey under the PLAYBACK page of the Main Display. See [Facepanel - Console Main Display](#).

### Console Key - CAPTURE (C)

- **Function** = Activate/deactivate Capture Mode. See [Channels - Capture Mode](#).
- **Location** = Programming Section, under RECORD. See [Facepanel - Programming Section](#).

### Console Key - CH (Num Lock -)

- **Function** = Selecting channels. See [Select Channels](#).
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).



#### Console Key - CH DELAY (Softkey N/A)

- **Function** = Sets channel time # to the selected channels. See [Sequence Times - Channel Times](#).
- **Location** = In the TIMES soft key page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - CH TIME (Softkey N/A)

- **Function** = Sets channel delay time # to the selected channels. See [Sequence Times - Channel Times](#).
- **Location** = In the TIMES soft key page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - CLIENT (N/A)

- **Function** = Controls Client functionality.
- **Location** = To the left of the Main Display section. See [Facepanel - Console Main Display](#).

#### Console Key - COLOR (Alt C)

- **Function** = Activate Color # for the selected channels. See [Devices - Palettes](#).
- **Xtra** = Hold RECORD and press COLOR to record a new palette. See [Record A Color Palette](#).
- **Xtra** = Hold COLOR to activate Direct Select Mode. See [Device Palettes - Direct Mode](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

#### Console Key - COLUMN (F9)

- **Function** = Select all cells in a column of a list. See [Navigating - Lists](#).
- **Xtra** = Hold COLUMN and use the level wheel to resize a Column.
- **Xtra** = Move columns. See [Change The List View](#).
- **Xtra** = Sort by column. See [Sort By Column](#).
- **Location** = Navigation Pad, upper right. See [Facepanel - Programming Section](#).

#### Console key - CONNECT (N/A)

- **Function** = Connect a Master to the Master Playback. See [Master Playback - Playback Keys](#).
- **Location** = See [Master Playback - Playback Keys](#).

#### Console Key - COMPARE (Softkey N/A)

- **Function** = Activates COMPARE mode - comparing a Preset with the last recorded version. See [Presets - Compare Mode](#).
- **Location** = Softkey under the CHANNELS page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - COPY/CUT (Ctrl C)

- **Function** = Copy an item in a List. See [Copy, Cut & Paste](#).
- **Xtra** = Press COPY twice to cut an item in a list.
- **Location** = Programming Section, next to PASTE. See [Facepanel - Programming Section](#).

#### Console Key - CURSOR (N/A)

- **Function** = Sets the trackball to trackball/mouse mode. See [Facepanel - Trackball](#).
- **Location** = See [Facepanel - Trackball](#).

#### Console Key - DELAY (Ctrl D)

- **Function** = Set a delay time in the Sequence of the Main Playback. See [Sequences - Times](#).
- **Location** = Programming Section, left. See [Facepanel - Programming Section](#).

#### Console Key - DELETE (Del)

- **Function** = Deletes selected item in Lists. See [Editing In Lists](#)
- **Location** = In the Navigation Pad. See [Facepanel - Programming Section](#).

#### Console key - DEVICE (D)

- **Function** = Hold MODIFY and press to open the Device Settings. See [Patch - Device Settings](#).
- **Location** = Over the Master Playback key section. See [Master Playback - Playback Keys](#).

#### Console Key - Direct Select Tabs (N/A)

- **Function** = Each of these five round keys activate a tab in which you can preselected content for all Direct Selects. See [Direct Select - User Setups](#).
- **Location** = See [Direct Selects - Introduction](#).

### Console Key - DISPLAY LIST (J)

- **Function** = Sets the trackball to Display List mode. See [Display Lists](#).
- **Xtra** = Hold DISPLAY LIST to get all display list options in the Direct Selects.
- **Location** = See [Facepanel - Trackball](#).

### Console Key - DYN EFFECT (E)

- **Function** = Open the Effect Library List. See [Dynamics - Effect Library](#).
- **Xtra** = Enter a number and press DYN EFFECT to start a Dynamic Effect. See [Dynamics - Start](#)
- **Xtra** = Hold to get Direct Mode in Direct Selects. See [Start Dynamics With Direct Mode](#).
- **Location** = Programming Section, next to SEQ. See [Facepanel - Programming Section](#).

### Console Key - ESC (Esc)

- **Function** = Close popups and tabs.
- **Location** = In the Navigation Pad. See [Facepanel - Programming Section](#).

### Console Key - FAN (Ctrl F)

- **Function** = Fan any parameter within the current channel selection. See [Device Control - Fan](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

### Console Key - FLASH (N/A)

- **Function** = Flash keys for the lower row of Master Playbacks. See [Master Playbacks - Flash Keys](#)
- **Xtra** = Can be used in combination with FLASH MODE to set flash levels.
- **Location** = Over the lower row of master faders. See [Master Playbacks - Introduction](#).

### Console Key - FLASH MODE (F)

- **Function** = Sets flash level # to the flash keys for the lower row of Masters. See [Master Playbacks - Flash Keys](#).
- **Location** = Over the Master Playback key section. See [Master Playback - Playback Keys](#).

### Console Key - FOCUS (Alt F)

- **Function** = Activate Focus # for the selected channels. See [Devices - Palettes](#).
- **Xtra** = Hold RECORD and press FOCUS to record a new palette. See [Record A Focus Palette](#).
- **Xtra** = Hold FOCUS to activate Direct Select Mode. See [Device Palettes - Direct Mode](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

### Console Key - FORMAT (F4)

- **Function** = Change Format in Channel and Attribute views. See [Navigating - Channel Views](#).
- **Xtra** = Hold FORMAT and use the level wheel to zoom in Channel and Attribute Views.
- **Xtra** = Hold FORMAT and press arrow keys up/down to change detail level in views.
- **Location** = Navigation Pad, right. See [Facepanel - Programming Section](#).

### Console Key - GO (Ctrl G)

- **Function** = Start a crossfade in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - GO in Master Playback (N/A)

- **Function** = Start a crossfade in the Master Playback. See [Master Playback - Playback Keys](#).
- **Location** = Next to the Master Playbacks. See [Master Playback - Playback Keys](#).

### Console Key - GO BACK (Ctrl B)

- **Function** = Crossfade to the previous step in the Main Playback. See [Main Playback - Transport Keys](#)
- **Xtra** = Reverse the ongoing crossfade in the Main Playback
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - GO BACK in Master Playback (N/A)

- **Function** = Crossfade to the previous step in the Master Playback. See [Master Playback - Playback Keys](#).
- **Xtra** = Reverse the ongoing crossfade in the Master Playback
- **Location** = Next to the Master Playbacks. See [Master Playback - Playback Keys](#).

### Console Key - GOTO (G)

- **Function** = Crossfade to Preset # in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - HIGHLIGHT (F6)

- **Function** = Set the current selection to Highlight mode. See [Device Control - Highlight Mode](#).
- **Location** = In the Main Display Area. See [Facepanel - Console Main Display](#).

### Console Key - IN (Ctrl-I)

- **Function** = Set an in Time in the Sequence of the Main Playback. See [Sequences - Times](#).
- **Location** = Programming Section, right. See [Facepanel - Programming Section](#).

### Console Key - INDEPENDENTS 7,8,9 (N/A)

- **Function** = Independent key functions. See [Independents](#)
- **Location** = In the Independent area (top right corner). See [Independents](#).

### Console Key - INSERT (Ins)

- **Function** = Insert items in Lists. See [Editing In Lists](#)
- **Location** = In the Navigation Pad. See [Facepanel - Programming Section](#).

### Console Key - INV GROUP (Num Lock, Shift /)

- **Function** = Select all channels in the Channel control with a level, except the current selection. See [Select Channels](#).
- **Location** = Programming Section, next to PRESET. See [Facepanel - Programming Section](#).

### Console Key - JUMP TO B (N/A)

- **Function** = Positions Preset # in the sequence to the B field of the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - LAST (L)

- **Function** = Select the previous channel within the current selection. See [Device Control - Next & Last Mode](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

### Console Key - LIVE (F2)

- **Function** = Activate the Live tab. See [Live](#).
- **Location** = Navigation Pad, right. See [Facepanel - Programming Section](#).

### Console Key - LOAD (N/A)

- **Function** = Load items from the Browser. See [Browser Functions](#).
- **Location** = Programming Section, next to COPY/CUT. See [Facepanel - Programming Section](#).

### Console Key - MASK (K)

- **Function** = Used in combination with other keys to toggle the mask functions that mask device parameters from recording. See [Device Control - Mask](#).
- **Location** = Navigation Pad, right. See [Facepanel - Console Main Display](#).

### Console Key - MASTER KEYS (0-9)

- **Function** = Load content to the Master Playbacks. See [Master Playbacks - Load/Clear/Modify](#)
- **Xtra** = Can be pressed to select the channels in a Group or Preset to the Channel Control.
- **Location** = Over the lower row of master faders, and under the upper row. See [Master Playbacks - Introduction](#).

### Console Key - MASTERS (N/A)

- **Function** = Opens the Master View tab.
- **Location** = Over the Master Playback key section. See [Master Playback - Playback Keys](#).

#### Console Key - MINUS (Ctrl <)

- **Function** = Subtract a channel from a selection. See [Select Channels](#).
- **Xtra** = Step to the previous channel.
- **Xtra** = Can be held together with Master Key to subtract those channels from the current selection.
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).

#### Console Key - MINUS PERCENT (N/A)

- **Function** = Subtract Level 5%. See [Set Channel levels](#).
- **Xtra** = Hold C/ALT and press MINUS PERCENT to set 0%
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).

#### Console Key - MODIFY SEQ (Softkey N/A)

- **Function** = Deactivates all auto-times and links to all Sequences. See [Sequences - Build & Modify Modes](#).
- **Location** = Softkey under the PLAYBACK page of the Main Display. See [Facepanel - Console Main Display](#).

#### Console Key - NEXT (N)

- **Function** = Select the next channel within the current selection. See [Device Control - Next & Last Mode](#).
- **Location** = To the right of the Main Display section. See [Facepanel - Console Main Display](#).

#### Console Key - Numerical Keypad (Num Lock)

- **Function** = This is where numbers are input. This is also where you have the decimal point, and the C/ALT key (clear numerical entry).
- **Xtra** = The C/ALT key is also a prefix key for clearing Playbacks, and for some console Macros.
- **Location** = Programming Section, bottom. See [Facepanel - Programming Section](#).

#### Console Key - ON/FETCH (Num Lock, Ctrl +)

- **Function** = Sets the last stored level for the selected channel(s). See [Presets - Fetch Intensities](#)
- **Xtra** = Fetch levels from Preset #. See [Presets - Fetch Intensities](#)
- **Xtra** = Fetch attributes from Preset #. See [Device Control - Fetch/Copy](#).
- **Location** = Programming Section, bottom. See [Facepanel - Programming Section](#).

### Console Key - OUT (Ctrl U)

- **Function** = Set an Out Time in the Sequence of the Main Playback. See [Sequences - Times](#).
- **Location** = Programming Section, left. See [Facepanel - Programming Section](#).

### Console Key - OUTPUT (O)

- **Function** = Enter a number and press to control an Output directly on the level wheel.
- **Location** = Programming Section, next to LOAD. See [Facepanel - Programming Section](#).

### Console Key - PAGE (N/A)

- **Function** = Load a page to this row of Master Playbacks. See [Master Pages](#).
- **Location** = In the middle of each row of master faders. See [Master Playbacks - Introduction](#).

### Console Key - Page+ (N/A)

- **Function** = Load the next page to this row of Master Playbacks. See [Master Pages](#).
- **Location** = In the middle of each row of master faders. See [Master Playbacks - Introduction](#).

### Console Key - Page- (N/A)

- **Function** = Load the previous page to this row of Master Playbacks. See [Master Pages](#).
- **Location** = In the middle of each row of master faders. See [Master Playbacks - Introduction](#).

### Console Key - PAUSE (Ctrl P)

- **Function** = Pause an ongoing crossfade in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - PAUSE in Master Playback (N/A)

- **Function** = Pause an ongoing crossfade in the Master Playback. See [Master Playback - Playback Keys](#).
- **Location** = Next to the Master Playbacks. See [Master Playback - Playback Keys](#).



### Console Key - PALETTE (Alt P)

- **Function** = Activate All palette # for the selected channels. See [Devices - Palettes](#).
- **Xtra** = Hold RECORD and press PALETTE to record a new palette. [See Record An All Palette](#).
- **Xtra** = Hold PALETTE to activate Direct Select Mode. See [Device Palettes - Direct Mode](#).
- **Location** = Navigation Pad, right. See [Facepanel - Console Main Display](#).

### Console Key - PARAMETER (N/A)

- **Function** = Sets the trackball to Parameter mode. See [Facepanel - Trackball](#).
- **Location** = See [Facepanel - Trackball](#).

### Console Key - PASTE (Ctrl V)

- **Function** = Paste a copied item in a List. See [Copy, Cut & Paste](#).
- **Location** = Programming Section, next to COPY/CUT. See [Facepanel - Programming Section](#).

### Console Key - PLAYBACK (X)

- **Function** = Activates the Playback Tab and connects the A field to the channel controls. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - PLUS (Ctrl >)

- **Function** = Add a channel to a selection. See [Select Channels](#).
- **Xtra** = Step to the next channel.
- **Xtra** = Can be held together with Master Key to add channels from that Master to the current selection.
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).

### Console Key - PLUS PERCENT (N/A)

- **Function** = Add Level 5%. See [Set Channel levels](#).
- **Xtra** = Hold C/ALT and press PLUS PERCENT to set 100%
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).

#### Console Key - REM DIM (N/A)

- **Function** = Dim all channels except those selected. See [Channels - Rem Dim](#).
- **Location** = Programming Section, next to SEQ. See [Facepanel - Programming Section](#).

#### Console Key - RECORD (R)

- **Function** = Record Presets. See [Presets - Record](#).
- **Xtra** = Press RECORD together with keys to record directly to a playback.
- **Xtra** = Press RECORD together with keys to record specific data (GROUP, DYNAMIC, ATTRIBUTE)
- **Location** = Top of Programming Section, next to UPDATE. See [Facepanel - Programming Section](#).

#### Console Key - RELEASE (Ctrl R)

- **Function** = Release selected channel(s) from Capture Mode. See [Channels - Capture Mode](#).
- **Xtra** = Press twice to release all captured channels.
- **Location** = Programming Section, next to CAPTURE. See [Facepanel - Programming Section](#).

#### Console Key - SELECT (Shift)

- **Function** = Used with arrow keys to select cells in lists. See [Navigating - Lists](#).
- **Location** = Navigation Pad, top right. See [Facepanel - Programming Section](#).

#### Console Key - SELECT ALL (F7, Ctrl N or Ctrl L)

- **Function** = Select all channels within the current selection. See [Device Control - Next & Last Mode](#).
- **Location** = The right side of the Main Display area. See [Facepanel - Console Main Display](#).

#### Console Key - SETUP (F11)

- **Function** = Open the System Settings. See [System Settings](#).
- **Xtra** = Press SETUP together with keys to open Local Settings
- **Location** = top right corner, under the Grand Master. See [Quick Tour - Console Facepanel](#).

### Console Key - SET CHANGED (softkey N/A)

- **Function** = Sets all selected devices flagged as Changed. See [Devices - Recording](#).
- **Location** = Softkey under the DEVICE page of the Main Display. See [Facepanel - Console Main Display](#).

### Console Key - SEQ (S)

- **Function** = Open the Sequences List. See [Sequences - List](#).
- **Xtra** = Enter a number and press SEQ to open a Sequence List. See [Sequences - Sequence List](#)
- **Xtra** = Enter a number, hold and press a Playback key to load Sequence #. See [Sequences - Load](#).
- **Location** = top right corner, under the Grand Master. See [Quick Tour - Console Facepanel](#).

### Console Key - SEQ + (X-UpArrow)

- **Function** = Next step of the sequence in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - SEQ+ (>>) In Master Playback (N/A)

- **Function** = Next step of the sequence in the Master Playback. See [Master Playback - Playback Keys](#).
- **Location** = See [Master Playback - Playback Keys](#).

### Console Key - SEQ - (X-DownArrow)

- **Function** = Previous step of the sequence in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - SEQ- (<

- **Function** = Previous step of the sequence in the Master Playback. See [Master Playback - Playback Keys](#).
- **Location** = See [Master Playback - Playback Keys](#).

### Console Keys - Softkeys (N/A)

- **Function** = The three keys on either side of the Main Display are softkeys with menus and functions. The four keys under the Main Display are parameter keys for the functions of the wheels. See [Facepanel - Console Main Display](#).
- **Location** = Around the Main Display area. See [Facepanel - Console Main Display](#).

### Console Key - START (N/A)

- **Function** = Start a fade in a Master Playback. See [Master Playbacks - Start Fades](#).
- **Location** = Over the Master Playback key section. See [Master Playback - Playback Keys](#).

### Console Key - TAB (Tab)

- **Function** = Activate next Tab, or Tab #. See [Navigating - Tabs](#).
- **Xtra** = Hold TAB and use the level wheel to resize the lower part of a List.
- **Xtra** = Hold TAB and use arrow keys to split and move Tabs.
- **Location** = Navigation Pad, right. See [Facepanel - Programming Section](#).

### Console Key - TAP (N/A)

- **Function** = Hold TAP and set BPM tempo by tapping a master key with a chase loaded to that Playback. See [Master Playback - Playback Keys](#).
- **Location** = See [Master Playback - Playback Keys](#).

### Console Key - TEXT (ALT T)

- **Function** = Activate text input from the QWERTY keyboard (console display over Masters 11-20) for the step in the A field of the Main Playback. See [Entering Texts](#).
- **Xtra** = Hold TEXT and press a Master och Direct Select key to activate text input for a Group or Preset.
- **Location** = Top right corner, under the Independent section.

### Console Key - THRU (Num Lock /)

- **Function** = Select a range of channels. See [Select Channels](#).
- **Location** = Programming Section, middle. See [Facepanel - Programming Section](#).

### Console Key - TIME (T)

- **Function** = Set an in/out Time in the Sequence of the Main Playback. See [Sequences - Times](#).
- **Xtra** = Set a time to a Preset in a Master Playback. See [Master Playbacks - Times](#).
- **Xtra** = Hold MODIFY and press TIME to open the Time Editor Popup. See [The Time Editor Popup](#)
- **Location** = Programming Section, left. See [Facepanel - Programming Section](#).

### Console Key - TRACK (F12)

- **Function** = Open the Track List for the selected channel(s). See [Sequences - Track List](#).
- **Location** = Programming Section, under UPDATE. See [Facepanel - Programming Section](#).

### Console Key - TYPE (N/A)

- **Function** = Hold to select Type for each Direct Select section. See [Direct Select - Content](#)..
- **Location** = In the middle of the Direct Select Section. See [Direct Selects - Introduction](#).

### Console Key - UPDATE (U)

- **Function** = Update currently active Preset. See [Presets - Update](#).
- **Location** = Top of Programming Section, next to RECORD. See [Facepanel - Programming Section](#).

### Console Key - UPDATE PB (N/A)

- **Function** = Updates changes to stored values in the Main Playback. See [Main Playback - Transport Keys](#)
- **Location** = In the Main Playback. See [Main Playback - Introduction](#).

### Console Key - WAIT (Softkey N/A)

- **Function** = Sets Wait time # to the A or B step of the Main Playback. See [Sequences - Times](#).
- **Location** = In the TIMES soft key page of the Main Display. See [Facepanel - Console Main Display](#).

### Console Key - Wizard (W)

- **Function** = Activate the Wizard function (if appropriate) for the current editor.
- **Location** = Top right corner, under the Independent section.

#### Console Key - (Left) (mouse left)

- **Function** = Left key in Trackball mode. See [Facepanel - Trackball](#).
- **Xtra** = Activets selected item in Display List Mode .
- **Location** = See [Facepanel - Trackball](#).

#### Console Key - (Right) (mouse right)

- **Function** = Right key in Trackball mode. See [Facepanel - Trackball](#).
- **Xtra** = Activets selected item in Display List Mode .
- **Location** = See [Facepanel - Trackball](#).

## Console Keys - Keyboard Equivalents

These are the keyboard equivalents of the console keys. If you are using an offline editor they allow you to access most of the functionality directly, as if you had a console.

Console Key	Keyboard Key
-	Keypad Ctrl *
-	Ctrl Left Arrow
+	Keypad *
+	Ctrl Right Arrow
A	A
ALIGN	Ctrl A
ALL	Keypad Ctrl -
AT LEVEL	Keypad +
ATTRIBUTE	I
B	B
BEAM (B)	Alt B
BLIND	F3
BROWSER	F10
C/ALT	Backspace
CAPTURE	C
CH	Keypad -
COLOR (C)	Alt C
COLUMN	F9
COPY	Ctrl C
CUT	Ctrl X
DELAY	Ctrl D
DELETE	DELETE
DEVICE	D
DISPLAY LIST	J
DYNAMICS	E
ESC	ESC
FAN	Ctrl F
FOCUS (F)	Alt F
FETCH/UNDO	Keypad Ctrl +
FLASH MODE	F
FORMAT	F4

Console Key	Keyboard Key
GO	Ctrl G
GO BACK	Ctrl B
GOTO	G
GROUP	Alt G
HELP (?)	F1
HIGHLIGHT	F6
HOME ATTR (softkey)	F5
IN	Ctrl I
IND 7	Ctrl F7
IND 8	Ctrl F8
IND 9	Ctrl F9
INSERT	INSERT
JUMP TO B	N/A
LAST	L
LIVE	F2
LOAD	N/A
MACRO	Q
MASK	K
Master Keys 1- 10	1-0
MODIFY	Enter
NEXT	N
OUT	Ctrl O
OUTPUT	O
PAGE (lower)	M
PAGE (upper)	Ctrl M
PALETTE	Alt P
PASTE	Ctrl V
PAUSE	Ctrl P
PLAYBACK	X
PRESET	P
RECORD	R
RELEASE	Ctrl R



Console Key	Keyboard Key
SELECT	Shift
SELECT ALL	F7, Ctrl N or Ctrl L
SEQ	S
SEQ -	X & Down
SEQ +	X & Up
SETUP	F11
START	N/A
TAB	TAB
TEXT	Alt T
THRU	Keypad /
TIME	T
TRACK	F12
U1	N/A
U2	N/A
U3	N/A
UPDATE	U
UPDATE PB	N/A
UPDATE PALETTE (softkey)	N/A
WIZARD	W

## Appendix - Shortcuts By Function

**This is a summary of all keys and shortcuts, organised by the type of function.**

This chapter contains the following sections

- [Shortcuts - Select Channels](#)
- [Shortcuts - Channel Levels](#)
- [Shortcuts - Channel Modes](#)
- [Shortcuts - Select Nth Functions](#)
- [Shortcuts - Channel Views](#)
- [Shortcuts - Dynamics](#)
- [Shortcuts - HELP](#)
- [Shortcuts - Channels Only Mode](#)
- [Shortcuts - General Editing Keys](#)
- [Shortcuts - Navigation Keys](#)
- [Shortcuts - Master Playbacks](#)
- [Shortcuts - Masters & Channels](#)
- [Shortcuts - Master Pages](#)
- [Shortcuts - Devices To Home Position](#)
- [Shortcuts - Device Attribute Editors](#)
- [Shortcuts - Device Masking](#)
- [Shortcuts - Device Palette Recording](#)
- [Shortcuts - Device Palette Activating](#)
- [Shortcuts - Device Palette Specials](#)
- [Shortcuts - Device Palette Views](#)
- [Shortcuts - Device Palettes In Masters](#)
- [Shortcuts - Device Align & Fetch](#)
- [Shortcuts - Patch & Outputs](#)
- [Shortcuts - Main Display, General](#)

## Shortcuts - Select Channels

These are the keys and shortcuts for selecting channels. Some of them assume the Command Syntax is set to RPN - see [Channels - Command Syntax](#).

DESCRIPTION	SYNTAX
Select a channel	<input type="button" value="#"/> <input type="button" value="CH"/>
Add channel to the channel selection	<input type="button" value="#"/> <input type="button" value="+"/>
Subtract channel from the channel selection	<input type="button" value="#"/> <input type="button" value="-"/>
Select a range of channels	<input type="button" value="#"/> <input type="button" value="THRU"/>
Step to the next channel	<input type="button" value="+"/>
Step to the previous channel	<input type="button" value="-"/>
Select all channels with a level	<input type="button" value="ALL"/>
Clear channels and levels in current field	<input type="button" value="C/ALT"/> <input type="button" value="̄"/> <input type="button" value="CH"/>
Invert the channel selection	<input type="button" value="C/ALT"/> <input type="button" value="̄"/> <input type="button" value="THRU"/>
Enter Next/Last mode for the next channel within the channel selection	<input type="button" value="NEXT"/>
Enter Next/Last mode for the previous channel within the channel selection	<input type="button" value="LAST"/>
Leaves Next/Last mode and focuses all selected channels	<input type="button" value="ALL CHANNELS"/>
Open the Channel Select wizard	<input type="button" value="WIZARD"/> <input type="button" value="̄"/> <input type="button" value="CH"/>

## Shortcuts - Channel Levels

These are keys and shortcuts for setting levels to the currently selected channels. Some of them assume the Command Syntax is set to RPN - see [Channels - Command Syntax](#).

DESCRIPTION	SYNTAX
Set the selected channels to 70%, second press sets 100%	<span>@LEVEL</span>
Set a level to the selected channels	<span>#</span> <span>@LEVEL</span>
Set 100%	<span>C/ALT</span> <span>&amp;</span> <span>+%</span>
Set 0%	<span>C/ALT</span> <span>&amp;</span> <span>-%</span>
Increase the level of selected channels 5%	<span>+%</span>
Decrease the level of selected channels 5%	<span>-%</span>
Increase the level of a specific channel	<span>#</span> <span>&amp;</span> <span>+%</span>
Decrease the level of a specific channel	<span>#</span> <span>&amp;</span> <span>-%</span>
Set level in internal resolution (0-255)	<span>#</span> <span>.</span> <span>&amp;</span> <span>@LEVEL</span>
Fetch values to the selected channels from a preset	<span>#</span> <span>ON/FETCH</span>
Increase level in 1 bit steps	<span>.</span> <span>&amp;</span> <span>+%</span>
Decrease level in 1 bit steps	<span>.</span> <span>&amp;</span> <span>-%</span>
Undo the last level change made with the wheel	<span>ON/FETCH</span>

## Shortcuts - Channel Modes

Functions for capturing, scaling & comparing channels.

DESCRIPTION	SYNTAX
Capture selected channels	<span>CAPTURE</span>
Select a channel and capture it	<span>#</span> <span>CAPTURE</span>
Releases the selected ch from Capture Mode	<span>RELEASE</span>
Release all Captured channels	<span>RELEASE</span> <span>RELEASE</span>
Compare* the light in the Channel Control with its recorded version	<span>COMPARE</span>
Compare* the light in the Channel Control with preset #	<span>#</span> <span>COMPARE</span>
Toggle Balance* mode on/off	<span>BALANCE</span>
Step with Check mode to the next channel	<span>C/ALT</span> <span>&amp;</span> <span>+</span>
Step with Check mode to the previous channel	<span>C/ALT</span> <span>&amp;</span> <span>-</span>

\*COMPARE and BALANCE are soft keys in the Channels Soft Key Page of the Main Display of the console. See [Channels - Compare Mode](#) and [Channels - Balance Mode](#).

## Shortcuts - Select Nth Functions

Functions for selecting every Nth channels **from the current channel selection**. All these functions are Soft Keys in the [Channels - Random Select](#) Soft Key Page of the Main Display in the console.

DESCRIPTION	SYNTAX
Select the SELECT Soft Key Page in the Main Display	<span>SELECT</span>
Select every # nth channel	<span>#</span> <span>Select Nth</span>
Select every 2nd channel	<span>Select 2nd</span>
Select every 3rd channel	<span>Select 3rd</span>
Select channels randomly	<span>RANDOM</span>
Select every 2nd channel randomly	<span>RANDOM</span> <span>&amp;</span> <span>Select 2nd</span>
Select every 3rd channel randomly	<span>RANDOM</span> <span>&amp;</span> <span>Select 3rd</span>
Select every Nth channel randomly	<span>RANDOM</span> <span>&amp;</span> <span>Select Nth</span>
Select devices that have changed.	<span>SELECT CHANGE</span>

## Shortcuts - Channel Views

These shortcuts control the channel views.

DESCRIPTION	SYNTAX
Scroll in the active channel view	<span>CH</span> <span>&amp;</span> <span>Arrow Keys</span>
Toggles Channel View formats.	<span>FORMAT</span>
Selects Channel Layout #.	<span>#</span> <span>FORMAT</span>
Zooms the Channel View.	<span>FORMAT</span> <span>&amp;</span> <span>Wheel</span>
Sets format details for the Playback View.	<span>FORMAT</span> <span>&amp;</span> <span>Arrow Keys</span>
Sets the Channel Control to the A field of the Main Playback, and focuses the Live tab.	<span>LIVE</span>
Sets the Channel Control to the Blind field and focuses the Blind Tab.	<span>BLIND</span>
Adds the content of the Blind field to the total output.	<span>BLIND</span> <span>&amp;</span> <span>Wheel</span>

## Shortcuts - Dynamics

These Dynamics functions can be used to start/stop and control Dynamic Effects. Many of them are soft keys in the Dynamics Soft Key Page. See [Dynamics - Control](#).

DESCRIPTION	SYNTAX
Select the DYNAMICS Soft Key Page in the Main Display	<b>DYNAMICS</b>
Activate the Dynamic Template or Dynamic Table list.	<b>DISPLAY LIST</b> & <b>DYN EFFECT</b>
Open the Dynamic Template List	<b>DYN EFFECT</b>
Activate an Dynamic Template for the selected channels	<b>#</b> <b>DYN EFFECT</b>
Select channel whith a running dynamic	<b>CH</b> & <b>DYN EFFECT</b>
Clear running dynamics for the selected channels	<b>C/ALT</b> & <b>DYN EFFECT</b>
Load a Dynamic Template to a master	<b>#</b> <b>DYN EFFECT</b> & <b>Master key</b>
Open the Dynamics Editor for a preset	<b>#</b> <b>PRESET</b> & <b>DYN EFFECT</b>
Delete the selected Dynamic from the Display List	<b>DELETE DYNAM</b>
Delete all dynamic groups	<b>ALL</b> & <b>DELETE DYNAM</b>
Activate Direct Select for Dynamics (hold key for 2secs to get display)	<b>DYN EFFECT</b>
Fetch dynamics for the selected channels from a preset	<b>ON/FETCH</b> & <b>DYN EFFECT</b>
Open the Dynamics Editor for the current preset	<b>PRESET</b> & <b>DYN EFFECT</b>
Open the Running Dynamics window	<b>MODIFY</b> & <b>DYN EFFECT</b>

## Shortcuts - HELP

These are the keys and shortcuts used for the online HELP function.

DESCRIPTION	SYNTAX
Open the help index. If a menu or editor is open it will open help for that.	<b>?</b>
Opens help for that key	<b>?</b> & <b>Any Key</b>
Scroll the Help window content	<b>Down arrow &amp; Wheel</b>

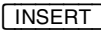

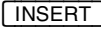
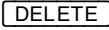



## Shortcuts - Channels Only Mode

Channels Only Mode is activated by the three position Fader Mode switch in the top middle of the console. It turns the console into a single field manual desk.

DESCRIPTION	SYNTAX
Switch Direct Ch mode on/off.	Fader Mode Switch
Select a channel range for the manual faders	Direct Select keys

## Shortcuts - General Editing Keys

These keys are central in the general editing functions of the console. They are mostly used in combination with the navigation keys.

DESCRIPTION	SYNTAX
Will insert a new entry in most window lists	
Will insert the entry # in most window lists	 
Will delete the focused entry in most window lists	
Clears numerical input, and is used in combination with other keys as an ALT key.	
The arrow keys are used to navigate in a spreadsheet or list, but also in combination with all the other navigation keys for different functions.	Arrow Keys
Closes popups and tabs without executing.	
Works as an ENTER key for popups and in spreadsheet cells. Is used in combination with a lot of keys to open editors.	



## Shortcuts - Navigation Keys

The top four Navigation keys are central in the Navigating functions of the console. They are mostly used in combination with the General Editing keys.

DESCRIPTION	SYNTAX
Focuses the Browser. If the Browser is already focused, it will be closed.	<code>BROWSER</code>
Scrolls the size of the Browser.	<code>BROWSER</code> & <code>Wheel</code>
Scrolls the size of the Browser.	<code>TAB</code> & <code>Wheel</code>
Splits the tab view in two formats.	<code>TAB</code> & <code>Up/Down</code> Arrow Keys
Sends the selected Tab to the next/previous screen.	<code>TAB</code> & <code>Left/Right</code> <code>arrow</code> keys
Selects all items (down) in the column of a spreadsheet.	<code>COLUMN</code>
Scrolls the size of a column.	<code>COLUMN</code> & <code>Wheel</code>
Sorts by the content of a column.	<code>COLUMN</code> & <code>Up/Down</code> Arrow
Moves a column.	<code>COLUMN</code> & <code>Left/Right</code> Arrow
Toggles through all open tabs.	<code>TAB</code>
Focuses Tab #.	<code>#</code> <code>TAB</code>
Scrolls the split in a spreadsheet tab.	<code>TAB</code> & <code>Wheel</code>
Splits the tab view in two formats.	<code>TAB</code> & <code>Down</code> Arrow
Removes a split tab view.	<code>TAB</code> & <code>Up</code> Arrow

## Shortcuts - Master Playbacks

These are the main keys and shortcuts for managing content in the Master Playbacks.

DESCRIPTION	SYNTAX
Activate the Master Playback list*	<b>MAST MODE</b>
Open the Master Editor.	<b>MODIFY</b> & <b>Master Key</b>
Load Preset # to a master	<b>#</b> <b>PRESET</b> & <b>Master Key</b>
Load Sequence # to a master	<b>#</b> <b>SEQ</b> & <b>Master Key</b>
Clear a master	<b>C/ALT</b> & <b>Master Key</b>
Set an individual flash level (in flash mode)	<b>#</b> <b>FLASH MODE</b> & <b>Master Key</b>
Toggle a master on/off	<b>START</b> & <b>Master Key</b>
Toggle master # on/off	<b>#</b> <b>START</b>
Fade a master to a specific level	<b>#</b> <b>START</b> & <b>Master Key</b>
Toggle Flash/Solo on/off	<b>FLASH MODE</b>
Toggle individual flash mode on/off	<b>FLASH MODE</b> & <b>Master Key</b>
Connect a master playback to the Master playback	<b>CONNECT</b> & <b>Master Key</b>
Tap tempo for sequence on a master	<b>TAP</b> & <b>Master Key</b>
Set text to preset or group in a master field	<b>TEXT</b> & <b>Master Key</b>

\*You can also click on the **Master View** node in Browser.

## Shortcuts - Masters & Channels

Functions for selecting channels to and from Master Playbacks.

DESCRIPTION	SYNTAX
Select the channels of a Preset/Group in a Master Playback.	<b>Master Key</b>
Add channels of a Preset/Group in a Master Playback to the channel selection	<b>+</b> & <b>Master Key</b>
Subtract channels of a Preset/Group in a Master Playback from the channel selection	<b>-</b> & <b>Master Key</b>
Select channels of a Preset/Group in a Master Playback which are active on stage	<b>ALL</b> & <b>Master Key</b>
Load the selected channels one by one to Master Playbacks.	<b>CH</b> & <b>Master Key</b>

## Shortcuts - Master Pages

Main keys and shortcuts for handling Master Pages. Master pages are recorded/loaded separately for masters 1-20 and 21-40.

DESCRIPTION	SYNTAX
Load a Master Page #	[#] [PAGE]
Clear masters	[C/ALT] & [PAGE]
Record changes to current Master Page*	[RECORD] & [PAGE]
Record master content to Master Page #	[#] [RECORD] & [PAGE]
Load next Master Page	[+]
Load previous Master Page	[-]
Tap tempo for a Master Page	[TAP] & [PAGE]
Set a Master Page time	[#] [TIME] & [PAGE]
Activate the Master Page List in the Main Display**	[DISPLAY LIST] & [PAGE]

\*Depends on the Master Page Settings. See [System Settings - Master](#).

\*\*It is also possible to hold DISPLAY LIST and press the Direct Select key Mast Page.

## Shortcuts - Devices To Home Position

Functions for recording & setting Home positions to the selected Devices.

DESCRIPTION	SYNTAX
Set Home All	[C/ALT] & [ATTRIBUTE]
Set Home All (soft key)	[HOME ATTRIB]
Set Home Focus	[HOME ATTRIB] & [FOCUS]
Set Home Color	[HOME ATTRIB] & [COLOR]
Set Home Beam	[HOME ATTRIB] & [BEAM]
Set Home Focus	[0] [FOCUS]
Set Home Color	[0] [COLOR]
Set Home Beam	[0] [BEAM]
Record current attribute values as the home position for the selected channels	[RECORD] & [HOME ATTRIB]

## Shortcuts - Device Attribute Editors

Keys and shortcuts for opening Attribute Editors for Devices.

DESCRIPTION	SYNTAX
Open Live Attribute Editor for selected Devices	<b>ATTRIB</b>
Open Attribute Editor for the Preset in field A	<b>ATTRIB</b> & <b>A</b>
Open Attribute Editor for the Preset in field B	<b>ATTRIB</b> & <b>B</b>
Open Attribute Editor for a Preset on a Master	<b>ATTRIB</b> & <b>Master Key</b>
Open Attribute Editor for the current Preset	<b>PRESET</b> & <b>ATTRIB</b>
Open Attribute Editor for Preset #	<b>#</b> <b>PRESET</b> & <b>ATTRIB</b>

## Shortcuts - Device Masking

Keys and shortcuts for masking Device Attributes from recording.

DESCRIPTION	SYNTAX
Clear global Mask	<b>C/ALT</b> & <b>MASK</b>
Toggle global Mask on/off	<b>MASK</b>
Toggle Focus parameters in global Mask	<b>MASK</b> & <b>FOCUS</b>
Toggle Color parameters in global Mask	<b>MASK</b> & <b>COLOR</b>
Toggle Beam parameters in global Mask	<b>MASK</b> & <b>BEAM</b>
Toggle single parameter in global Mask	<b>MASK</b> & <b>Wheel Key</b>
Open the Mask Editor window	<b>MODIFY</b> & <b>MASK</b>

## Shortcuts - Device Palette Recording

Keys and shortcuts for handling Device Palettes.

DESCRIPTION	SYNTAX
Record selected Devices to the first free Focus Palette	<span>RECORD</span> & <span>FOCUS</span>
Record selected Devices to the first free Color Palette	<span>RECORD</span> & <span>COLOR</span>
Record selected Devices to the first free Beam Palette	<span>RECORD</span> & <span>BEAM</span>
Record selected Devices to the first free All Palette	<span>RECORD</span> & <span>PALETTE</span>
Record selected Devices to Focus Palette #	<span>#</span> <span>RECORD</span> & <span>FOCUS</span>
Record selected Devices to Color Palette #	<span>#</span> <span>RECORD</span> & <span>COLOR</span>
Record selected Devices to Beam Palette #	<span>#</span> <span>RECORD</span> & <span>BEAM</span>
Record selected Devices to All Palette #	<span>#</span> <span>RECORD</span> & <span>PALETTE</span>

## Shortcuts - Device Palette Activating

Keys and shortcuts for activating values in Device Palettes.

DESCRIPTION	SYNTAX
Activate values from a Focus palette	<span>#</span> <span>FOCUS</span>
Activate values from a Color palette	<span>#</span> <span>COLOR</span>
Activate values from a Beam palette	<span>#</span> <span>BEAM</span>
Activate values from an All palette	<span>#</span> <span>PALETTE</span>
Activate a single parameter from a Focus palette	<span>#</span> <span>FOCUS</span> & <span>Wheel Key</span>
Activate a single parameter from a Color palette	<span>#</span> <span>COLOR</span> & <span>Wheel Key</span>
Activate a single parameter from a Beam palette	<span>#</span> <span>BEAM</span> & <span>Wheel Key</span>
Activate a single parameter from an All palette	<span>#</span> <span>PALETTE</span> & <span>Wheel Key</span>

## Shortcuts - Device Palette Updating

Keys and shortcuts for updating Device Palettes.

DESCRIPTION	SYNTAX
Toggle Focusing mode on/off (soft key)	<input type="button" value="FOCUSING MODE"/>
Toggle Highlight mode on/off	<input type="button" value="HIGHLIGHT"/>
Update the current palettes for the selected channel(s) (soft key)	<input type="button" value="UPDATE PAL"/>

## Shortcuts - Device Palette Specials

Keys and shortcuts for special Device Palette functions.

DESCRIPTION	SYNTAX
Select channels recorded in a Focus palette	# CH & FOCUS
Select channels recorded in a Color palette	# CH & COLOR
Select channels recorded in a Beam palette	# CH & BEAM
Select channels recorded in an All palette	# CH & PALETTE
Direct Select mode for Focus Palettes (as long as the key is held)	FOCUS
Direct Select mode for Color Palettes (as long as the key is held)	COLOR
Direct Select mode for Beam Palettes (as long as the key is held)	BEAM
Direct Select mode for All Palettes (as long as the key is held)	PALETTE

## Shortcuts - Device Palette Views

Keys and shortcuts for Device Palettes views and lists.

DESCRIPTION	SYNTAX
Open the Focus Palette Editor	MODIFY & FOCUS
Open the Color Palette Editor	MODIFY & COLOR
Open the Beam Palette Editor	MODIFY & BEAM
Open the All Palette Editor	PALETTE
Activate the Focus Palette Display List (console main display)	DISPLAY LIST & FOCUS
Activate the Color Palette Display List (console main display)	DISPLAY LIST & COLOR
Activate the Beam Palette Display List (console main display)	DISPLAY LIST & BEAM
Activate the All Palette Display List (console main display)	DISPLAY LIST & PALETTE

## Shortcuts - Device Palettes In Masters

Keys and shortcuts for handling Device Palettes in Master Playbacks.

DESCRIPTION	SYNTAX
Load a Focus palette to a master*	# FOCUS & Master Key
Load a Color palette to a master*	# COLOR & Master Key
Load a Beam palette to a master*	# BEAM & Master Key
Load an All palette to a master*	# PALETTE & Master Key

\*If you keep the Palette key pressed and continue pressing Master keys, you will continue loading the next recorded Palette of each kind to the following Masters.

## Shortcuts - Device Align & Fetch

Functions for aligning & fetching values for the selected Devices. Align uses the first selected Device, or the Device focused with NEXT/LAST as the argument.

DESCRIPTION	SYNTAX
Align parameters for Focus	ALIGN & FOCUS
Align parameters for Color	ALIGN & COLOR
Align parameters for Beam	ALIGN & BEAM
Align a single Parameter	ALIGN & Wheel Key
Fetch Focus values from a preset	# ON/FETCH & FOCUS
Fetch Color values from a preset	# ON/FETCH & COLOR
Fetch Beam values from a preset	# ON/FETCH & BEAM
Fetch Parameter values from a preset	# ON/FETCH & Wheel Key
Fetch all attributes from a preset	# ON/FETCH & ATTRIB



## Shortcuts - Patch & Outputs

Keys and shortcuts for patch and output functions.

DESCRIPTION	SYNTAX
Select an output for temporary direct control	[#] [OUTPUT]
Clear Patch	[C/ALT] & [OUTPUT]
Open the Channel Setup window	[MODIFY] & [CH]
Open the Device List window	[MODIFY] & [DEVICE]
Open Modify Output window	[MODIFY] & [OUTPUT]

## Shortcuts - Main Display, General

These are the keys and shortcuts used to operate the functionality of the Main Display in the console.

DESCRIPTION	SYNTAX
Go back to the previous soft key page, then top.	<--
Clear the LCD-display List	[C/ALT] & [DISPLAY LIST]

## Appendix - Connectors

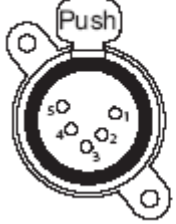
**These are the connectors in the back of the console.**

This chapter contains the following sections

- [Connector - DMX512](#)
- [Connector - VGA Monitor](#)
- [Connector - Phone remote](#)
- [Connector - Remote Radio](#)
- [Connector - MIDI](#)
- [Connector - APN](#)
- [Connector - External 1-9](#)
- [Connector - Ethernet](#)
- [Connector - Keyboard, Printer & Mouse](#)
- [Connector - Desk Light](#)

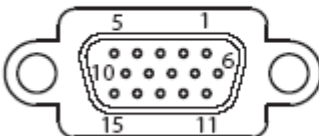
Connector - DMX512

- Pin 1 Gnd
- Pin 2 Data-
- Pin 3 Data+

DMX512 pinout for five-pin XLR female		
	1	Common
	2	Data (-)
	3	Data (+)
	4	not connected
	5	not connected

## Connector - VGA Monitor

Pin 1 Red  
 Pin 2 Green  
 Pin 3 Blue  
 Pin 5 Gnd  
 Pin 6 Red Gnd  
 Pin 7 Green Gnd  
 Pin 8 Blue Gnd  
 Pin 10 Sync Gnd  
 Pin 13 Horizontal  
 Pin 14 Vertical

VGA Monitor connector pinout (HD-DB15 female)			
	1	Red video	9 not connected
	2	Green video	10 Ground
	3	Blue video	11 Ground
	4	Ground	12 not connected
	5	Ground	13 Horizontal (H/V) sync
	6	Red ground	14 Vertical sync
	7	Green ground	15 not connected
	8	Blue ground	

## Connector - Phone Remote

Pin 4 Data+  
 Pin 5 Data -

## Connector - Remote Radio

Pin 1 CD  
 Pin 2 RD  
 Pin 3 TD  
 Pin 4 DTR  
 Pin 5 Gnd  
 Pin 6 DSR  
 Pin 7 RTS  
 Pin 8 CTS  
 Pin 9 RI

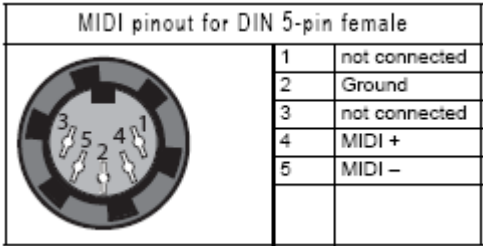
Connector - MIDI

**MIDI In**

Pin 4 Data +  
Pin 5 Data -

**MIDI Out, Thru**

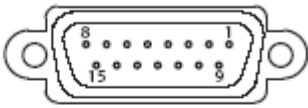
Pin 2 Gnd  
Pin 4 +5V  
Pin 5 Data



Connector - APN

Pin 4 Data+  
Pin 5 Data -

## Connector - External Trig 1-9

Pin	Express (DB-15 female)
Connector Face	
1	+ Macro 1,901
2	- Macro 1,901
3	+ Macro 1,902
4	- Macro 1,902
5	+ Macro 1,903
6	- Macro 1,903
7	+ Macro 1,904
8	- Macro 1,904
9	Remote Trigger - normally closed (30V 1 amp max)
10	Remote Trigger - normally open (30V 1 amp max)
11	Remote Trigger - common (30V 1 amp max)
12	Ground
13	Ground
14	+ 12 Vdc fused
15	+ 12 Vdc fused

## Connector - Ethernet

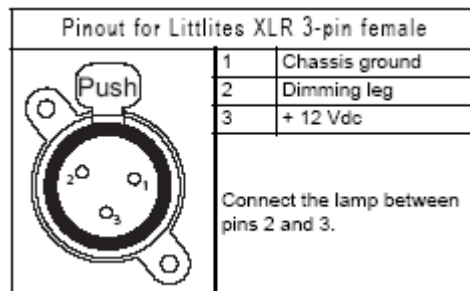
Pin 1 TX+  
 Pin 2 TX-  
 Pin 3 RX+  
 Pin 4 NC  
 Pin 5 NC  
 Pin 6 RX-  
 Pin 7 NC  
 Pin 8 NC

## Connector - Keyboard, Printer and Mouse

Keyboard and mouse are connected to the USB ports in the back of the console.

## Connector - Desk Light

You can connect a standard desk light to the connectors in the top corners of Congo.



## Appendix - Frequently Asked Questions

UNDER CONSTRUCTION

### FAQ - Import Show Data From Other Systems?

Q: Can I import show data from other systems?

A: Yes. You can import from any system that can export as ASCII Light Cues. Normally you get cues (presets) with channels, levels and times. Sequence and texts. Patch.

#### ***There are limitations to ASCII Light Cues***

- You may not get any attributes or scroller data.
- Effects are usually not compatible.
- Time Groups are rarely compatible.

U.S. 050601

### FAQ - Channel keypad in notebook?

Q: How can I get the channel keypad when I work with the offline editor in a notebook computer?

A: In most notebooks, when you hold down the Fn key, you will get a temporary numeric keypad that is incorporated from numbers 7, 8, 9 and down over the text keys. This keypad can be activated with "num lock" as well, but it gets tedious to jump in and out of this mode since any function keys are shared with the normal keyboard.

U.S. 050601



## Appendix - Console & Sound Settings

There are settings for console displays and worklights, and for sound.

This chapter contains the following sections

- [Console Settings](#)
- [Sound Settings](#)

### Console Settings

The Console Settings are set from the node Console Settings in the Setup node of the Browser. (Browser >Settings >Console Settings).

You can set the values from 0-100%. They will take effect immediately and are NOT related to different play files.



## Sound Settings

The volume of the internal speaker is set by holding SETUP and moving the level Wheel. You will see the result in the value next to the loudspeaker symbol in the top right corner of the monitor screens.



This will take effect immediately and are NOT related to different play files.

# --Congo - The Story

**Congo is the result of ETC and AVAB efforts combining over 30 years of experience in lighting control. Here is some of the story.**

When Fred Foster of ETC acquired the Avab brand his aim was to maintain it and continue development. The Avab core team were given the possibility of a lifetime to hand pick people in the industry with the experience they wanted, and work together with the resources of ETC to create Congo.

If there is a better crossover between dedicated moving light console and a true traditional theatre or television console in this price range - please let us know!

Best regards, from the Congo Development Team

Anders Ekvall - Concept & Software  
Ulf Sandström - Concept & Help System  
Bullen Lagerbielke - Concept & Field Testing  
Lars Wernlund - Graphical Interface Programming  
Peppe Tannemyr - Graphical Interface Design  
Magnus Anuell - Mechanical Design  
Nikolaus Frank - Industrial Design  
Cecilia Frank - Graphical Console Design

## Congo - The Avab Heritage

Back in the seventies Avab was a leading Scaninavian lighting console manufacturer that held one of the worlds two existing 999 channel consoles, the Viking. The other one was Strands Galaxy. Both were state of the art in their own way. Viking could talk (speech module) and had very exclusive thumbwheels with tactile feedback.

Most of the functions for conventional lighting existed at this point in either or both of these systems. If you want to sum up what has happened since the answer would be

- Moving Lights
- Media Servers
- Networking
- System prices have gone down 1000%

## Congo - Creating the specification

During the years before Congo the development team made an extensive survey to lighting control operators and lighting designers in all paths and backgrounds of the industry. Over 200 people were interviewed.

- What is your favourite hardware?
- What are your favourite functions?
- What is vital to you with a lighting control hardware?
- Which is your favourite console?
- Why is it your favourite console?
- Etc...

There were over 100 questions. And the most important feedback for the Congo Team was this

***"We want to be able to operate the console, with our concentration focused on the performance"***

This may seem simple, but it implicated a lot of things we had to take in consideration.

- Vital functions should have direct keys
- Navigation should be possible without looking at the screens
- The user interface should be tactile (physical keys)

## Congo - Designing The Screens

Moving to a graphical interface opened a lot of possibilities. Color, graphics, local menus, toolbars...

Interviews led us quickly in a different direction. The main input we got from all roads of experience was

***"Don't clutter the screens. We want only the necessary information at a glance, and only colors for important stuff."***



True enough. Local menus, toolbars and colors were skipped for the simple concept of the Browser. We took aboard graphical designer wiz Peppe Tannemyr from Beacon to create an environment that used color only when necessary, that had nothing to do with office computer environments, and everything to do with lighting.

## Congo - Designing The Hardware

We knew we wanted the following

- Our navigation solution made physical
- High quality faders and keys.
- Graphical displays next to the Playbacks.
- Simple access for service
- Ergonomical key layout
- Screen holders for standard screens, that allow free view over the console.



We also wanted someone with a lot of experience of the lighting industry to put it together, so we took aboard Magnus Anuell, the engineer behind the successful Rainbow Color Scrollers.

## Congo - The Eurovision

The very first show run on the Congo was the Eurovision Song Contest final. The most prestigious annual live broadcast in Europe with over 250 million viewers.



*"It was a fantastic experience to see how four operators with completely different backgrounds handled the system, and how well it responded. It worked past our initial expectations." (Ulf Sandström)*

Four Congo operators controlled 37 universes of lighting including

- Over 300 moving lights
- A large amount of conventional lights
- 16 Catalyst media servers

The systems were networked, and all shows saved on a mutual File Server. Every system had a synchronised backup.

**Lets put it this way. Congo is capable.**