



# User Manual

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## 8700 Series



Document Release July 2007  
Revision A

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# 1. 8700 SERIES INTRODUCTION AND CONNECTIONS

## 1.1. 8700 SERIES

The models of the **8700 Series** cover a great range of necessities and have the same use philosophy. The shows of all models are compatibles.

		Dimmers / DMX-Out			Masters
GX:	8748 GX	2048	/	4	48
	8724 GX	2048	/	4	24
	8724 GXT (Tour)	2048	/	4	24
GS:	8748 GS	1024	/	2	48
	8724 GS	1024	/	2	24
	8724 GST (Tour)	1024	/	2	24
GL:	8724 GL	512	/	1	24
	8724 GLT (Tour)	512	/	1	24

Between the models 48 & 24 the unique difference is the master number. The models of 24 masters are more compacted & used in small spaces.

The difference between the models 24 & TOUR is that the TOUR models are assembled inside a suitcase with an integrated LCD monitor. More compact consoles for use in reduced spaces and for a frequent transport.

This console has been designed following the CE normative, on electromagnetic emission and electric security.

## 1.2. TECHNICAL CHARACTERISTICS

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### 1.2.1. GENERAL

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<b>CAPACITY &amp; INTERFACES</b>		
Control channels (maximum) Configurable as conventional channels or moving lights parameters.	GX	2048
	GS	1024
	GL	512
DMX Output	GX	4
	GS	2
	GL	1
DMX input channels to control channels, moving lights, macros...	All models	512
Special Crossfaders	GX, GS, GL	1
Crossfader Submaster	GX, GS, GL	1 dedicated + programmable
Masters with flash/assignation key. To execute channels, groups, cues, effects & sequences.	8748GX, 8748GS	48
	8724GL, 8724GX, 8724GS & Tour models	24
Auxiliary Submaster, configurable as Masters Control or DMX-IN Control.	All models	1
Grand Master & Black Out key	All models	1 (100% ó 200%)
Control of dimmer level	GX, GS, GL	Vertical Encoder
Track Ball (LED RGB illumination) configurable to control position or mouse	All models	1
Encoders to control parameters, libraries, times..	All models	3
Auxiliary Encoders	GX, GS, GL	2
DISPLAY	GX	240 x 320 <b>Touch</b>
	GS, GL	240 x 64
<b>FUNCTIONALITY</b>		
Groups	All models	2000
Cues	All models	2000.9
Effects	All models	2000
Pages	All models	2000
Macros	All models	2000
Shapes (moving lights & conventional channels)	All models	Yes

Palettes for edition	All models	Yes
Libraries for dimmer, position, color, gobo, beam y Xtra	All models	99 per category
Special function for moving lights	All models	FLIP, FAN, FINE, IGNITE, ORTO...
Moving lights configuration with libraries grouped by manufactures.	All models	Yes You can modify them & program new libraries.
Dimmer Curves	All models	5 preprogrammed + 3 user
Timings	All models	6 preprogrammed (editable)
Capture (simulator software)	All models	Run on separate PC
Multimedia & events list	All models	Yes
Software upgrade using floppy, Ethernet or USB memory.	All models	Yes
Compatible shows	All models	Yes
<b>HARDWARE</b>		
VGA For TOUR models, the main monitor (LCD) is included inside the suitcase, the rest are externals.	GX	2 + 2 optional
	GS	1 + 1 optional
	GL	1
HD (minimum)	GX	512M
	GS	256M
	GL	128M
Floppy Disk & internal keyboard	GX, GS	Yes
	GL, Tour models	-
Working light (littlite)	8748GX, 8748GS	2
	8724GL, 8724GX, 8748GS & all Tour models	1
Ethernet	All models	10/100
USB	All models	2 ports
RS232		
	GX, GS, GL	1
SMPTE MIDI	All models	1 IN
Audio Printer	GX, GS, GL	IN-OUT
	All models	1 IN
	GX, GS, GL	Txt file
Externals		
	GX, GS, GL	3
Mouse & Keyboard (externals)	All models	2 PS2

## 1.2.2. MULTI-PROCESSOR SYSTEM

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Main microprocessor: GEODE SC2200 (266MHz).

Secondary microprocessor: H8/3003.

## 1.2.3. ELECTRIC CHARACTERISTICS

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Main supply: 90-260V~ / 50-60 Hz.

Intensity: 0.8A.

Category: II

## 1.2.4. AMBIENT

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Temperature: -15°C to 45°C

Humidity: 80% without condensation.

## 1.2.5. SIZE

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8748GX, 8748GS:	1155 x 442 x 70..130 mm, 22 Kg.
8724GX, 8724GS, 8724GL:	920 x 442 x 73..126 mm, 18.8 Kg.
8724GXT, 8724GST, 8724GLT:	675 x 530 x 155 mm. 21.5 Kg.

## 1.3. TECHNICAL SERVICE

---

Leviton Lighting Management Systems Division

20497 SW Teton, Tualatin, OR 97062

Mailing Address:

PO Box 2210

Tualatin, OR 97062

Customer Service: (800) 736-6682

Technical Support: (800) 959-6004

Fax: (503) 404-5601

Internet: [www.lms.leviton.com](http://www.lms.leviton.com)

## 1.4. INSTALLATION & START UP


---

- Unpack the console set. You will find: the 8700 SERIES console, the main cable, this user manual, the control sheet and the guaranty sheet.

 **Note:**

If any irregularity is observed in the package, due to transportation, (blows, humidity...) not attempt to switch on the console and follows the process to solve this type of problems.

- Place the console in a plane surface.
- Connect the monitors to the VGA connectors (SUBD-15), with standard video cables. If only 1 monitor is connected, connected it to the VGA-1 output. (for TOUR models, monitor 1 is connected).
- Connect the DMX outputs.
- Connect the mains cable to IEC base of the console.

 **Tip:**

Connect the console to a SAI to avoid main supply problems.

- Switch on the console (in the IEC base switch in the rear panel).
- After some auto-test, the monitor shows us the stage page. The console is ready to work.
- Set the General Master, **GM** ↕, at 100% and the **BLKOUT** key disable (LED off).
- Read this user manual.

If these directions are not followed, no guarantee for the safety of the equipment is granted.

 **Note:**

The shut down process maintains the power supply some seconds before total disconnection. This is a normal process.

## 1.5. CONNECTIONS

---

**Main supply:** IEC base for 90-260V~ / 50-60 Hz. Always, used normalized cables (confirm the ground plug).

The main supply is protected by 2 fuses of 5 A, type F.

**DMX:**

4 Dmx-512 outputs with optical isolation. Connectors: Standard XLR-5 female.

1 Dmx-512 input with optical isolation. Connector: Standard XLR-5 male.

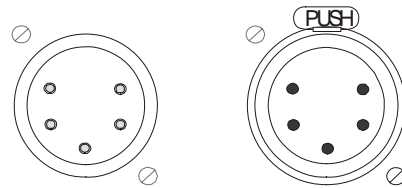
Code:

Pin 1 : Ground.


Pin 2 : Data –

Pin 3 : Data +

Pin 4&5 : NC.



Always use shielded and twisted pairs cables, with 120 ohms of characteristic impedance and low capacitance. Don't use audio cables. The Data- & Data + signal have to be in the same twisted pair.

 **Tip:**

Connect 32 loads maximum in a one DMX line.

Use cables with maximum long of 100 metres.

Use the 120 ohms terminal load, between the pins 2 & 3 of the last DMX THRU connector.

Use DMX Splitters to connect more DMX loads or large cables.

 **Note:**

The **8700 Series** DMX signal is defined with these Parameters:

PARAMETER	8700 Series medium values	DMX512-1990 NORMA
Break Length	95 $\mu$ s	Minimum 88 $\mu$ s
MAB Length	25 $\mu$ s	Minimum 8 $\mu$ s
Bytes/packet	512 channels	1-512 channels
Break to break	25.000 $\mu$ s	170 $\mu$ s – 3.000.000 $\mu$ s
Updates/s	40	1-44

**Audio input:**

Stereo jack for 1Vpp audio signals. The signal is computed like mono signal. Code:

1 – 0 V ref. {jack body}

2 – N.C.

3 – Signal (1Vpp) {jack live point}



**SMPTE input**

Stereo jack for 1V<sub>pp</sub> SMPTE signals. The SMPTE input responds to the formats: 24, 25, 30 & 30 drop frame without adjusts. Code:

- 1 – 0 V ref. or SMPTE - {jack body}
- 2 – NC
- 3 – SMPTE + {jack live point}

**External triggers.**

GX, GS & GL:

XLR-4 (female) for 3 external triggers. Code:

- 1 – Ext-1
- 2 – Ext-2
- 3 – Ext-3
- 4 – 0 V ref.

**Work Lights.**

XLR-3 plastic connectors for 12V-15V/5w lamps. The work light is dimmed by the System.

Code:

- Pin 1: 0 Vdc
- Pin 2: 12 Vdc
- Pin 3: 0 Vdc

### **Reset Pushbutton (RST)**

If by some circumstance your console did not switch off, it must be pushed this button to force a disconnection of the battery.

PC standard ports:

**RS-232 ports**

**VGA outputs** - standard & TFT monitors.

**KDB** - alphanumeric keyboard.

**MOUSE**

**MIDI**

**ETHERNET**

**2 USB**

### **NOTE:**

**ALWAYS CONNECT THE MOUSE OR THE EXTERNAL KEYBOARD WITH THE CONSOLE TURNED OFF.**

## 2. ABOUT THIS MANUAL

### 2.1. CONVENTIONS

Concepts and general functions are written as: X1/X2, BANKS,...

Console models are written as 8748GX.

The physical keys, , are identified by its name and are written as **MENU**

A click (press & release) of a key is written as the key: **ENTER**

The pressing of a key (without releasing) is written as **ENTER**▼

The releasing of a pressed key is written as **ENTER**▲

The soft keys of the touch panel are written as: **1:Text**

The master faders are identified by its name, and written as **M1**↕

The master keys are identified by its name, and written as **M1**

To name “any” master fader or key, a general name is used: **M#**↕ or **M3**

Vertical encoder to control dimmer level, is written as: **Level**↕

The Trackball is written as **TB**⊙

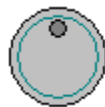
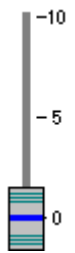
The parameters control encoders are written as **W1**⌚, **W2**⌚ y **W3**⌚

The rotation of the encoders as: **W1**⌚, **W2**⌚ y **W3**⌚

The pressing over the central zone of an encoder as: **W1**⊕, **W2**⊕ y **W3**⊕


Rest of encoders are written with its name, as **MONITOR**⌚ or **BANKS**⊕

The numerical data are written as: **0**, **9**, **8** **8**, etc. A generic number is written as **#**. The numeric data are entered using the numeric keyboard of the console.



The flags of the status line and text of the command line are written as: **8748GX**

The menu functions, and the editon cells of the editon-tables, are named with its names and written as: **Jump**

A mouse click over an edition zone is written as: **Edition\_Zone**

### 2.1.1. OTHERS SYMBOLS

---

 Notes,  warning messages,  tips, and  examples.



## 2.2. BANKS KEYS

---

The console has 10 programmable-numeric keys, the **BANKS**, numbered from 1 to 10.

To avoid confusions, these keys are written as **1<sub>B</sub>**, **2<sub>B</sub>**, **3<sub>B</sub>**, etc. To name “any” of them, a general name is used: **#<sub>B</sub>**

For GX models, these keys are placed in the touch screen, and they are written as **1<sub>B</sub>**, **2<sub>B</sub>**, **3<sub>B</sub>**, etc. To name “any” of them, a general name is used: **#<sub>B</sub>**

**BANKS** allow you to access to macros, groups, positions, colors, etc. They are configured from the **BANKS** encoder, and their contents are paged turning this same encoder: **BANKS**

## 2.3. EDITION TABLES

---






Some editions and menus are done in tables that the user can modify.

General:

The line that has the active cell is showed in a yellow field.

The active cell is in a red filed. When this active cell is been edited is in a light red field.

In the edition tables, select the cell for edition:

- A. Using the arrow keys to move the cursor, , ,  & 
- B. Using the mouse, clicking in the desired cell, **Jump**

The edited data are accepted moving the cursor or pressing **ENTER**





The edition tables are closed pressing **EXIT**.

The edition of the active cell depends of the cell type:

Cell type	Example	Edition
Numeric	Dmx, T↑	Using the console numeric keyboard
Text	Text, Title	Using the alphanumeric keyboard (internal or external)
Options	▼Command	Entered the index number of the desired option or clicking over this option with the mouse. (see following)

Most of tables have a column, in a gray field, in base to the one which are ordered. This column can not be edited and is used for automatic displacement:

Over one of these cells, pressing  , the cursor is placed over the line #.

Example for channels patch: If placed over the channel 3 (in a grey field), you press     the cursor jumps to the channel 128.

## 2.4. OPTIONS WINDOWS

---

During the edition process, in tables as well as in commands by keyboard, options windows can be opened (always in a red field) to help you to complete the edition or command. These windows present numbered options, and to select one of these options, as a rule, we can:

BANKS	
0:	Auto
1:	Macro
2:	Group
3:	POS
4:	DIM
5:	COL
6:	GOB
7:	BEAM
8:	XTRA
9:	FIG

a) Press   to select the option #.


b) Select using the mouse the option #, #:Option<sup>⌘</sup>

## 2.5. THE MOUSE


---

The external mouse can be used, with a simple click, to:

- Select any cell of the edition tables (cue list, patches, etc)
- Select a numeric option of the options red-windows (parameters, libraries, palettes, banks, etc)
- Select the desired menu from the menus-list.

It's possible to simulate the mouse using the console **TB**.

## 2-4 ABOUT THIS MANUAL

To set the **TB**  as mouse, activate **MOUSE**, now the trackball is illuminated in green, indicating that **MOUSE** mode is active. Move the pointer using the ball, and press **MOUSE** for the “click”.

To deactivate the **MOUSE** mode of the **TB**  and return to normal mode, press **TB**

### 3. SYSTEM CONFIGURATION

#### GX

Max. Parameters: 2048  
DMX outputs: 2048

#### GS

Max. Parameters: 1024  
DMX outputs: 1024

#### GL

Max. Parameters: 512  
DMX outputs: 512

The **8700 Series** console is a configurable system. You can select the number of masters, channels and fixture parameters.

Independently to the number of physical faders, the system can be configured with 24 or 48 masters. Normally, the master number is the same that the number the physical faders (except in connections master-slave).

The channels maximum is 2000, the parameters maximum varies according to models (maximum 512 fixtures), and the maximum of monitors, at present, is 2.

The total number of channels and fixture parameters used cannot be greater than the number of DMX outputs.

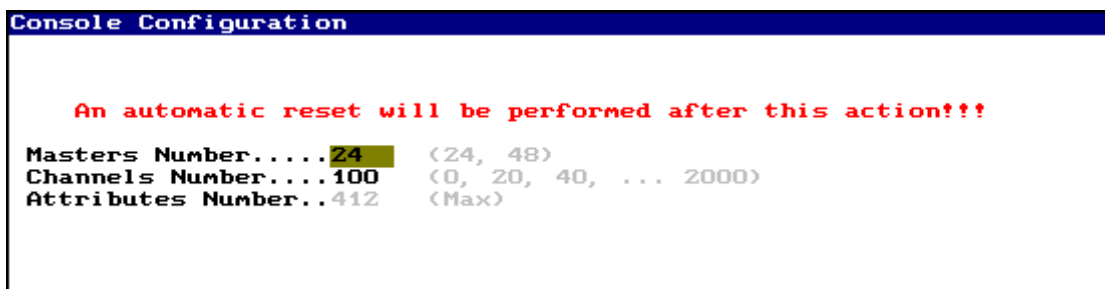


**8724GX:** If the system is configured with 340 channels, the rest (2048-340= 1708) will can be fixture parameters.

The system is configured in the menu **50: Console Configuration**



**MENU 5 0**



To edit the configuration options, move the cursor to the desired option and enter the number. Press **ENTER** to accept the entered data. To quit, press **EXIT**



If some option of **CONSOLE CONFIGURATION** is changed, the system is Reseted, and the show is deleted. Store your show!

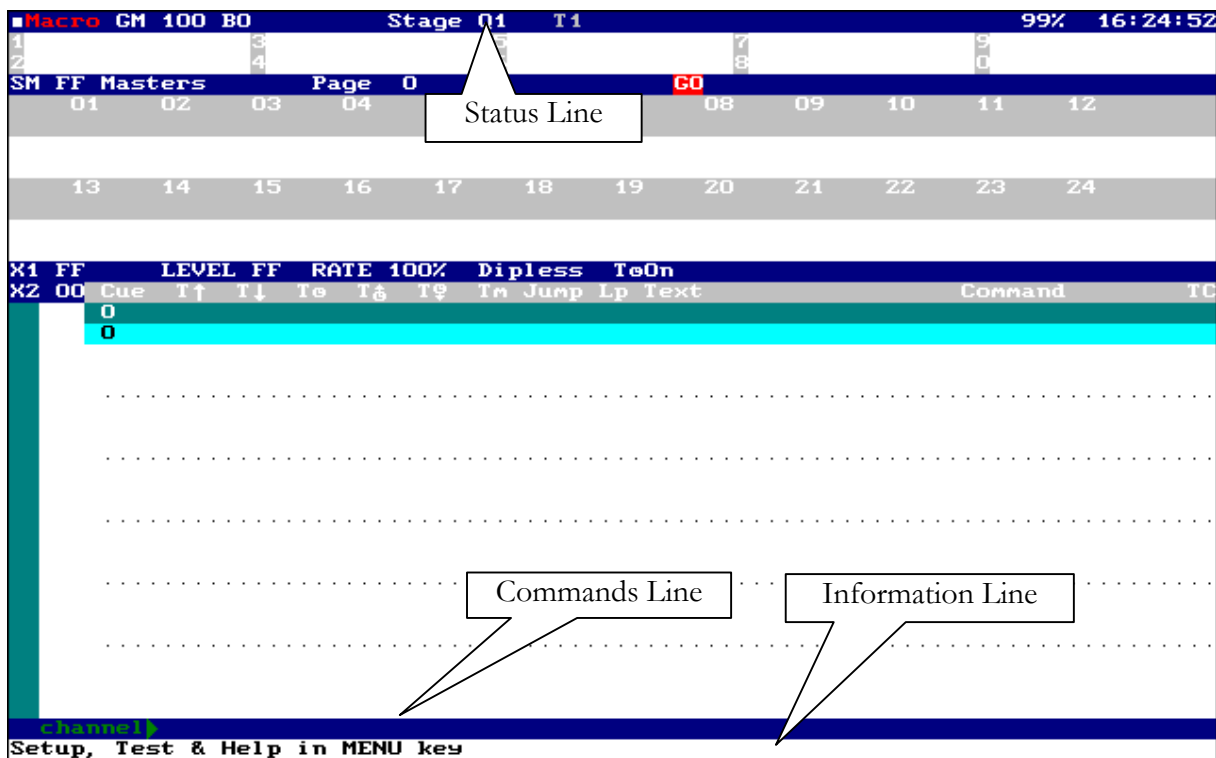
### 3.1. THE MONITOR SCREENS

In the monitors you can see:

- **Base screen**, with information and status about playbacks.
- **Auxiliary screens**, with information and status about editors and scene.

All monitors and screen (base & auxiliary) have:

- **Status line**, for the general status of the system (blue area).
- **Command line**, for the action in process (blue area).
- **Information line**, for the show name and general messages (white area).



### 3.2. MONITORS CONFIGURATION

Monitors configuration is done from menu 60: Monitors Configuration:

 **MENU 6 0**

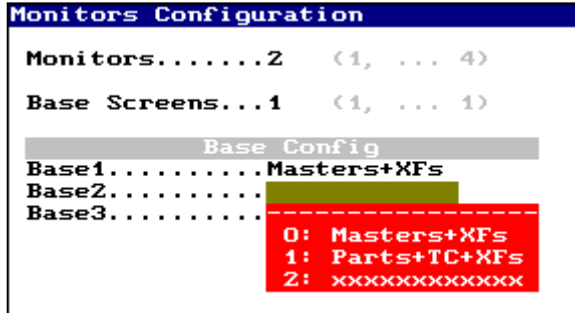
The edition inside this menu is done following these steps:

- Move the cursor to the desired data, and enter the option number.
- Press **ENTER** to accept the entered data. To quit of this menu press **EXIT**

The first options, of this menu, are set the monitors number to use, set how many will be base-screens (the rest of the monitors will be for auxiliary screens), and set the formats of the base-screens.



The monitors' number, `Monitors`, depends of the console hardware, and the model console, & this number can be from 1 monitor to 4 monitors.



The system needs, minimum, 1 base screen, `Base Screens`, and maximum, for configuration of 1 or 2 monitors, 1 base screen; for configurations of 3 monitors, 2 base screens; and for configurations of 4 monitors, 3 base screens.

Each base screen can be configured with the following formats:

Option	Shown information
0: <code>Masters+XF's</code>	Information about masters and crossfaders
1: <code>Parts+TC+XF's</code>	Information about crossfaders and detail about the progress of the parts in crossfade, plus, information about the events-list.
2: <code>xxxxxxxxxxxxxxxx</code>	Yet not available

The format auxiliary screens depend of the number of channels and fixtures. The user can personalize the order of visualization and behavior of these auxiliary screens.

The monitors' number for auxiliary screens is calculated in accordance with the total number of and the number of base screens configured:

$$\text{Monitors} - \text{Base Screen} = \text{Aux Screen}$$



Only, when the system is working with 1 monitor, this monitor shows us the base screen and the auxiliary screens.

The **Aux Config** options are:

**ORDER:** to select the visualization order for channels & fixtures, **1** is first place and **2** the last.

**NEW PAGE:** Option that permits us to force that the channels, or fixtures, begins in a new screen (**YES**) or follows from the end of the previous item (**NO**).

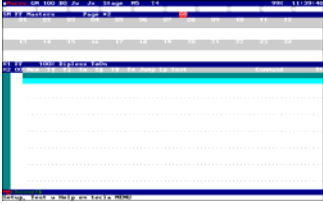
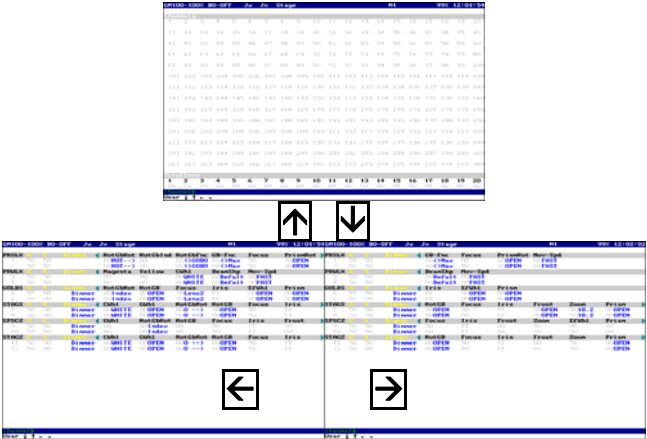
**Aux Fix:** When the system has more than 1 monitor dedicated to auxiliary screens, in this cell, you can select a number of monitors to fix them (without pagination).

If **Auto Scroll** option is **ENABLED**, the system jumps to the auxiliary screen, automatically, to show us the last channel or fixture selected. If this option is **DISABLED**, the user must select the desired screen pressing  or .

### 3.3. MOVING THE SCREENS

This process is in accordance with the monitors' number and system configuration.

#### 2 monitors, example:

<p style="text-align: center;"><b>MONITOR - 1</b> Base Screen</p>  <p style="text-align: center;">(Fixed Screen)</p>	<p style="text-align: center;"><b>MONITOR - 2</b> Auxiliary Screens</p>  <p style="text-align: center;">↑ ↓ ← →</p> <p style="text-align: center;">To page this screens press <b>↑</b> &amp; <b>↓</b> To page the fixtures information press <b>←</b> &amp; <b>→</b>, or select the desired parameters type in the screen, pressing: <b>DIM</b>, <b>POS</b>, <b>COL</b>, <b>GOB</b>, <b>BEAM</b> or <b>XTRA</b>.</p>
---	---

At any moment, it's possible to change the output of the base screen to the desired monitor pressing **MONITOR**  $\oplus$ . This command allows you to place the base screen in the desired monitor without to change the video cables.

		<b>MONITOR</b> $\oplus$		
---	---	-------------------------	--	---

#### 1 monitor, example:

In this case, base screen and auxiliary screens are showed in the same physical monitor, for this reason, to select the desired screen (base or auxiliary) press: **↑** & **↓**

To page the fixtures information, the process is the same that for 2 monitors.

### 3.3.1. THE SCREENS BACKGROUND

---



The screens background can be configured in dark (gray) or light (white). To configure this option, open the menu **32: System**, and edit the **MONITOR** option:  
 If **MONITOR** is **LIGHT** (white), the screens appear in white background.  
 If **MONITOR** is **DARK** (gray), the screens appear in gray background.

## 3.4. HELP ON-LINE

---

The help pages are in the menu **69: Help**, open this menu pressing:

 **MENU** **6** **9**

This menu presents us an index with the help items. To open the help about one item, enter its index number (with 2 digits) or scroll this pages pressing  & 



To consult the help-pages about the patches, press: **MENU** **6** **9** **0** **9**

Quit of this menu pressing **EXIT**

In other way you can request help about any function, pressing **HELP** and then, the function key about the help is needed.

## 3.5. INFORMATION ABOUT THE CURRENT SHOW

---

There is a screen that presets us a resume about the current show data.

 **EXAM** **EXAM**

In this screen you can see the number of the stored items (libraries, cues, groups, effects, pages, macros...), the number of channels & fixtures used, and others.

When a new show is loaded from the disk, the system presents this general exam screen. Press any key to close this general exam screen.

## 3.6. @USER

---

Allows us to access to a text page, in which you can write notes for the next working turn or thing to remember...

 **@USER** "text" **EXIT**

## RESUME

System configuration:

In menu 50: Console Configuration: **MENU 50**

Screens and monitors configuration:

From menu Monitors Configuration: **MENU 60**

Paging screens:

In auxiliary screens: **↑, ↓, ← & →**

Search fixture parameters: **DIM, POS, COL, GOB, BEAM, XTRA**

Help on-line:

**MENU 69  
HELP**

Current show exam: **EXAM EXAM**

Text Messages: **@USER “text” EXIT**

## 4. FIXTURES PATCH

The Fixtures Patch permits us to configure the type and number the fixtures to control. This configuration is a needed step to work with moving lights.

The maximum number of fixture to control is **512**. In no case, the parameters number can be highest that the number of attributes that appears in the menu **50: Console Configuration**

The fixtures Patch is in the menu **04: Fixtures**

☞ **MENU 0 4** (a: menu command)

☞ **FIXTURE FIXTURE** (b: quick command)

Fixtures Patch														
▼Edit Patch ▼Hard Disk ▼File Tools ▼Patch Tools														
Cache														
Is	Name	Ch	Name	Ch	Comment									
1	MC500	17	MC500	16	Mac500 Mode4									
2	MC600	14	Manuf Id	File	M X <sup>2</sup> Y <sup>2</sup>									
3	GOLDS	12	MARTIN	1001	MAC500M4.---	H	440	306						
4	STAGS	17	Num	Name	Ch+Fn	I	L	F	Hom	St				
5	SPSCZ	16	---	Control	1	---	---	---	0	3				
6	STAGZ	19	1	21	Shutter	1	d		49	8				
7	PPLUS	33	2	20	Dimmer	2	f	255	1	7				
8	CPRHX	9	3	47	Color1	3	c	f	0	23				
9	SBEAM	16	4	47	ColorZ	4	c	f	0	1				
10	SC575	16	5	60	RotGB	5	g	f	0	11				
11	SS575	24	6	61	RotGbRot	6	g	f	0	3				
12	XSPOT	38	7	60	GWhl	7	g	f	0	19				
13	PRSLX	16	8	80	Focus	8	f	128	1	13				
14	PRWLX	14	9	81	Iris	9	f	0	6	14				
15	M2000	24	10	101	Prism	10	x	f	0	12				
16	MC300	13	11	0	X	11	12	p	f	128	1			
17	PALFX	20	12	1	Y	13	14	p	f	128	1			
18	V2000	15	13	103	Mov-Spd	15			0	5				
19	VZ400	15	14	105	Speed	16			0	3				
20	VL5	11	15											
21	VL6	11	16											
22	SP575	16	17											
23	WH575	16	18											
24	SCR11	1	19											
20														
21														
22														

Patch														
Ext	Type	Dmx--dmx	X-Y	dm										
1	MC500	11	161	x-y↑										
2	MC500	171	321	x-y↑										
3	MC500	331	481	x-y↑										
4	MC500	491	641	x-y↑										
5	MC500	651	801	x-y↑										
6	MC500	811	961	x-y↑										
7	MC500	971	1121	x-y↑										
8	MC500	1131	1281	x-y↑										
9	MC600	1291	1421	x-y↑										
10	MC600	1431	1561	x-y↑										
11	MC600	1571	1701	x-y↑										
12	MC600	1711	1841	x-y↑										
13	MC600	1851	1981	x-y↑										
14	MC600	1991	2121	x-y↑										
15	MC600	2131	2261	x-y↑										
16														

Patch Tools														
▼Command	▼Item	From-To	->	▼Item	Target	[ENTER] execute, [EXIT] close								
channel	2													
Edition Page														

This screen has 3 zones:

**Cache** that is a list of the types (fixture definitions), you can use them in the Patch.

**Fixture Definition** that presents the fixture definition that it is selected in the **Cache** or **Patch** list.

**Patch** that has the fixtures configuration, and include the type of each fixture number, its Dmx direction, etc... After a Reset this Fixture Patch always is empty.

## 4.1. EDITING THE PATCH

Patch				
Fxt	Type	Dmx--dmx	X-Y	dm
1	MC500	11	101	x→y↑
2	MC500	171	321	x→y↑
3	MC500	331	481	x→y↑
4	MC500	491	641	x→y↑
5	MC500	651	801	x→y↑
6	MC500	811	961	x→y↑
7	MC500	971	1121	x→y↑
8	MC500	1131	1281	x→y↑
9	MC600	1291	1421	x→y↑
10	MC600	1431	1561	x→y↑
11	MC600	1571	1701	x→y↑
12	MC600	1711	1841	x→y↑
13	MC600	1851	1981	x→y↑
14	MC600	1991	2121	x→y↑
15	MC600	2131	2261	x→y↑
16				

Each **Patch** line has the configuration about a physical moving light. Each connected moving light (fixture) must be defined in this **Patch**.

Each time that you open this menu, the **Patch** list is active. At any moment you can active the **Patch** list pressing **FIXTURE** **FIXTURE**

Each Fixture is defined by:

<b>Fxt</b>	<b>Fixture number</b> This number is used by the system to select it.
<b>Type</b>	<b>Name of the fixture definition</b> This type is edited entering its index number (1 to 24) from the <b>Cache</b> list
<b>Dmx--dmx</b>	<b>DMX direction</b> Are the DMX directions used by the fixtures (only the first direction is editable).
<b>X-Y</b>	<b>Trackball movement</b> Permits to exchange or invert the movement parameters (Pan-Tilt), to obtain a homogeneous movement of each fixtures in the trackball, independently of its physical localization.
<b>dm</b>	<b>External Dimmer</b> If the fixture has an external dimmer, this is its DMX direction.

The selected fixture is in the **yellow** area, and its active data (cell) in the **brown** area. Use the arrow keys or the external mouse to select the desired data to edit.

Each time that a data is edited, its cell appears in **red** area and in this status, it is possible:

To accept the data: press **ENTER** or moving the cursor to other cell.

To discard the data: press **C**

If the active data is **Fix**:

From here you can search a fixture of the list. *Example:* To access to the fixture 10, at any **Fxt** cell press **1 0 →**

If the active data is **Type**:

To edit the desired type for this fixture, enter its index number that appears in the **Cache** list. *Example.* To edit a **XSPOT** type, enter the number **1 2**

Index	Name	Cl
1	MC500	12
2	MC600	14
3	GOLDS	12
4	STAGS	17
5	SPSCZ	16
6	STAGZ	19
7	PPLUS	33
8	CPRHX	9
9	SBEAM	16
10	SC575	16
11	SS575	24
12	XSPOT	38
13	PRSLX	14
14	PRULX	14

To delete the configured fixture, completely, press **DELETE** here.

To copy this fixture with the same **Type** that the previous fixture, press **INSERT**. If it is possible, the system assigns to this fixture the next DMX directions.

If the active data is **Dmx-dmx**:

Edit the DMX direction of the fixture that must be the same that the configured in the physical moving light. DMX direction has the next format: **DDD.L**

**DDD** is the DMX channel (**1 to 512**)

**.L** is the line number or DMX output (**1 to 4**), and the total number of DMX outputs is in accordance with the 8700 Series model.



Address a fixture in the DMX channel 252 of the line 2, pressing:

**2 5 2 . 2**

To edit the next DMX direction (in relation to the previous fixture) press **INSERT**.

To delete the DMX direction (only the direction) press **DELETE**.

The last DMX direction used by this fixtures is presented in gray and they cannot be edited.

If the active data is **X-Y**:

It is possible to configure the response of pan (**X**) and tilt (**Y**) of this fixture in the trackball. In this cell the options appear in a red window. Enter the index number of the option.

In many case it is necessary to check this response, for this reason, each time that the active data is **X-Y**, you can use the **TB** to move the fixtures and the **Level** to control the fixture dimmer.

If the active data is **dm**:

Only if the fixture type is defined with external dimmer, here you can edit the DMX direction for this dimmer.



Fixture 26 is controlling a VL5 that it is connected to the dimmer 12 in DMX-1, fixture 26 has the DMX direction 300 in DMX-3

22	mc252	216,3	226,3	x+y↑
23	pal12	227,3	250,3	x+y↑
24	pal12	251,3	274,3	x+y↑
25	pal12	275,3	298,3	x+y↑
26	VL5m3	300,3	308,3	x+y↑ 12,1
27				



Patch to control 5 Mac500 connected to the output DMX-3, & 2 Stage Zoom connected to the output DMX-4

1	MC500	13	163	x→y↑
2	MC500	173	323	x→y↑
3	MC500	333	483	x→y↑
4	MC500	493	643	x→y↑
5	MC500	653	803	x→y↑
6	STAGZ	14	194	x→y↑
7	STAGZ	204	384	x→y↑

The types have been charged from the **Cache** list, where:





The Stage Zoom type is the number **6 - STAGZ** (19 channels) & the Mac 500 type is the number **1 - MC500** (16 channels).

**Cache** list contents 24 types, with an index number (**Ty**), an identification name (**Name**) and the number of DMX channels that needs for its control (**Ch**).

## 4.2. LOADING A NEW FIXTURE DEFINITION

If you want use a type that is not in the **Cache** list, it is possible to load it from the types-library. This types-library can be placed in the hard disk, USB memory or floppy disk. To select where the desired type is, access to the Setup-line:



Using the functions keys	Using mouse
<ul style="list-style-type: none"> <li>• Access to the Setup-line pressing <b>MENU</b>.</li> <li>• Select the second option (arrow keys or mouse) and enter:  <div style="margin-left: 20px;"> <b>0</b> to select 0: Hard Disk  <b>1</b> to select 1: Floppy Disk  <b>2</b> to select 2: USB Disk                 </div> </li> <li>• Accept the option pressing <b>ENTER</b></li> </ul>	<p>Hard Disk </p> <p>0: Hard Disk </p> <p>1: Floppy Disk </p> <p>2: USB Disk </p>

To replace a **Cache** type, this must be not used in the **Patch**.

To access to the **Cache** list from the **Patch** list, you can use the mouse or press:



**MENU** **1** 

Select a not-used type, and execute the option **2: Load**, with the mouse or pressing:



**2** **ENTER**





The types-library appears, ordered by manufactures, to the right of the screen. Use the arrow keys or the mouse to select the desired library type. There is a search function by manufactures. This function is available in any **Manuf** cell; here, enter the index number of the desired manufacture to access to this part of the types-library.


Fixtures Patch									
▼Edit Cache		▼Hard Disk		▼File Tools		▼Patch Tools			
Cache		Load Hard Disk		559 Fixture Types					
Is	Name	Ch	Manuf	Id	Name	Ch	Comment	File	Date
1	MC500	16	MARTIN	1016	M250+	11	MAC 250+ mode2 (V 1, 3)	MAC250P-.M2-	19-09-06
2	MC600	14			M250+	9	MAC 250+ mode1 (V 1, 3)	MAC250P-.M1-	19-09-06
3	GOLDS	12			M250+	11	MAC 250+ mode3 (V 1, 3)	MAC250P-.M3-	19-09-06
4	STAGS	17			M250+	13	MAC 250+ mode4 (v 1, 3)	MAC250P-.M4-	19-09-06
5	SPSCZ	16		1017	M2000	31	Mac2000 Performance (16b)	MAC2000P.16B	19-09-06
6	STAGZ	19			M2000	28	Mac2000 Performance (8b)	MAC2000P.-8B	19-09-06
7	PPLUS	33		1018	MMACW	4	MiniMac Wash Mode 1	MINMACW-.M1	19-09-06
8	CPRHX	9			MMACW	6	MiniMac Wash Mode 2	MINMACW-.M2	19-09-06
9	SBEAM	16			MMACW	6	MiniMac Wash Mode 3	MINMACW-.M3	19-09-06
10	SC575	16			MMACW	8	MiniMac Wash Mode 4	MINMACW-.M4	19-09-06
11	SS575	24		1019	P-518	9	RoboScan Pro 518 Mode2	PRO-518-.--2	19-09-06
12	XSPOT	38			P-518	7	RoboScan Pro 518 Mode1	PRO-518-.--1	19-09-06
13	PRSLX	16			P-518	9	RoboScan Pro 518 Mode3	PRO-518-.--3	19-09-06
14	PRWLX	17			1020	R1004	5 RoboScan 1004 & 805 (5ch)	ROBS1004.---	19-09-06
15	M2000	24		1021	PALFX	18	Pal 1200 FX Mode2	PAL1200-.FX2	19-09-06
16	MC300	13			PALFX	20	Pal 1200 FX Mode4	PAL1200-.FX4	19-09-06
17	PALFX	20			PALFX	18	Pal 1200 FX Mode3	PAL1200-.FX3	19-09-06
18	V2000	15			PALFX	16	Pal 1200 FX Mode1	PAL1200-.FX1	19-09-06
19	V2400	15		1022	P1200	24	Pal 1200 Mode2	PAL-1200.-M2	19-09-06
20	VL5	11			P1200	22	Pal 1200 Mode1	PAL-1200.-M1	19-09-06
21	VL6	11			-----	24	Pal 1200 Mode3	PAL-1200.-M3	19-09-06
22	SP575	16			0: LOAD	26	Pal 1200 Mode4	PAL-1200.-M4	19-09-06
23	WH575	16		1023	RS812	7	RoboScan 812 Mode2	ROBSC812.-M2	19-09-06
24	SCR11	1			RS812	5	RoboScan 812 Mode1	ROBSC812.-M1	19-09-06
				1024	ACROB	7	Acrobat (Extended mode)	ACROBAT.---	19-09-06
				1025	ALIEN	7	Alien 2 Pendant	ALIEN2PT.---	19-09-06
				1026	EX200	7	Exterior 200	EXTERIOR.200	19-09-06

Patch Tools  
 ▼Command ▼Item From-To -> ▼Item Target [ENTER] execute, [EXIT] close  
 channel 10  
 Control de ficheros

To select the type to load, access to its cell ▼ and execute the option 0: Load, pressing:

 **0** **ENTER** (or use the mouse 0: Load )

Quit pressing **EXIT**

To return to Patch, you can use the mouse, press **MENU** **0**  or

**FIXTURE** **FIXTURE**

If the types-library has not the desired type, the user can edit it. More information about new types creation in Chapter 17.

 **Note:**

If the selected type in **Cache** is been used in the **Patch**, this type cannot be substituted; the option 2: Load is not active.

### 4.2.1. THE FIXTURE DEFINITION INFORMATION

Fixture Definition is an interactive window. It is synchronized with the selected type (in Patch or Cache) and presets us the definition of each parameter of the fixture type.

Fixture Definition										Patch				
Name	Ch	Comment								Fxt	Type	Dmx--dmx	X-Y	dm
STAGZ	19	StageZoom	1200							1	MC500	11	161	x→y↑
	Manuf Id	File		M	X <sup>2</sup>	Y <sup>2</sup>				2	MC500	171	321	x→y↑
CPAKY	0111	STAGEZOO.---		H	450	252				3	MC500	331	481	x→y↑
	Num	Name	Ch+Fn	I	L	F	Hom	St+		4	MC500	491	641	x→y↑
	---	Control	17	-	-	-	0	2		5	MC500	651	801	x→y↑
1	81	Iris	1		b		255	1		6	MC500	811	961	x→y↑
2	47	CWhl	2		c	f	0	10		7	MC500	971	1121	x→y↑
3	82	Frost	3		b	f	0	1		8	MC500	1131	1281	x→y↑
4	20	Dimmer	4		d	f	139	2		9	MC600	1291	1421	x→y↑
5	0	X	5	18	p	f	128	1		10	MC600	1431	1561	x→y↑
6	1	Y	6	19	p	f	128	1		11	MC600	1571	1701	x→y↑
7	83	Zoom	7		b	f	128	1		12	MC600	1711	1841	x→y↑
8	80	Focus	8		b	f	128	1		13	MC600	1851	1981	x→y↑
9	101	Prism	9		x	f	0	5		14	MC600	1991	2121	x→y↑
10	102	PrismRot	10		x		0	10		15	MC600	2131	2261	x→y↑
11	60	CWhl	11		g	f	0	5		16	MC600	2271	2401	x→y↑
12	60	RotGB	12		g	f	0	5		17	STAGZ			x→y↑
13	61	RotGbRot	13		g		0	10		18				
14	40	Cyan	14		i	c	f	0	1					
15	41	Magenta	15		i	c	f	0	1					
16	42	Yellow	16		i	c	f	0	1					

More information in Chapter 17-Fixtures Definition.

## 5. EDITOR

The editor is used to select **channels** and **fixtures**, and to assign dimmer levels and parameter values, with the objective to set the desired scene and store it as cue or group. Also, it's possible to select **cues** and **groups**, as well as the outputs of any playback for editions more versatile. In cues and groups only are stored the editor contents.

The pictures can be edited in stage or in blind, because the **8700 Series** has 2 editors:  
The **Stage** editor works in live controlling totally the scene (including the playbacks outputs).  
The **Blind** editor doesn't affect to the scene output.

Only one of these editors is active. To toggle between the **Stage** and **Blind** editors, press **BLIND**. The activation of one editor doesn't affect to the contents of the other editor.

When **Blind** editor is active, the **BLIND** LED is lit, and in the status line, the flag **Blind** appears in a red field. The auxiliary screen presents only the editor contents when **Blind** is active; and the whole scene when the **Stage** is active.

Both editors use the same commands to do the same actions.

### 5.1 DEFAULT SELECTION

Each Item is selected for its function key and a number.



With the objective to decrement the keys number to press, at the beginning of the **command line** always is present the last item used, and it's the default selection. Example, if here appears **fixture▶**, to select the fixture 25 is enough press **2 5**, instead of **FIXTURE 2 5**



The default selection can be: **channel▶**, **fixture▶**, **group▶** or **cue▶**  
After a Reset the default selection always is **channel▶**

Besides this, the **command line** presents the last pressed keys. These pressed keys are cleared each time that an action is done.

To delete the last pressed key, that is presented in the command line, press **C**. This function is used to delete a bad entered number, and it doesn't affect to the editor contents. To clear completely the command line press **C C**

## 5.2 CHANNELS

---

The channels are used to control conventional dimmers. Their behavior is **HTP & No-Tracking**.

Inside editor a channel can be:

**Present:** The channel comes from a previous edition and it's presented in a brown field.

**Pre-selected:** The channel is in the editor waiting a level edition and presents its number in red.

**Selected:** The channel level is finished of editing and can be edited again, and it's presented in a red field.

Channels																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
50	50	50	50	50					FF	FF	FF	FF	FF	FF					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

### 5.2.1 HTP & NO-TRACKING

---

**HTP:** The channel takes the higher level among the playbacks that are controlling it. In other words, the playback that has the higher level is the playback that controls the channel.

As exception: Always that a channel is inside the **Stage** editor, the channel is controlled by this editor; since the **Stage** editor takes priority over any playbacks.

**No-Tracking:** When a channel isn't controlled for playbacks or editor, the channel is always at 0%.

### 5.2.2 SELECTING CHANNELS

---

The number of channels of the system is configured in the menu **50: Console Configuration**. The system can control from 0 to **2000 channels**.

Basic selections:

Select the **channel #**

 **CHANNEL #**

Select a range from the **channel # to #'**

 **CHANNEL # THRU #'**

Select a range from the **channel # to the last**

 **CHANNEL # THRU**

Select the **channel # and the channel #'**

 **CHANNEL # CHANNEL #'**

These basic selections can be combined as desired. **ENTER** can be used as “AND” function among basic selections.

 Some *examples*:

Select the channels 1 to 45 and 50 to 52:

**CHANNEL 1 THRU 45 CHANNEL 50 THRU 52**  
**CHANNEL 1 THRU 45 ENTER 50 THRU 52**

Select the channels 1, 45, and 58

**CHANNEL 1 CHANNEL 45 CHANNEL 58**  
**CHANNEL 1 ENTER 45 ENTER 58**

### 5.2.3 EXCLUDING CHANNELS


**EXCEPT** permits us to exclude channels of a selected range.

 Select the channels 1 to 57, except the channels 5, 7 and 10 to 15:


**CHANNEL 1 THRU 57 EXCEPT 5 EXCEPT 7 EXCEPT 10 THRU 15**

### 5.2.4 EDITING CHANNELS

After selecting channels, {channels}, it's possible to assign them a level using one of these methods:

{Channels} <b>Level</b> 	Continuous adjustment of level (moving the vertical wheel)
{Channels} <b>@ ##</b>	Level assignation with number using <u>2 digits</u> , from <b>00</b> to <b>99</b>
{Channels} <b>@ @</b>	Setting at 100% (FF)
{Channels} <b>CALL</b>	Setting at 100% in a fading of 2 seconds.
{Channels} <b>↑↑</b>	Increase the level a 5% (+%)
{Channels} <b>↓↓</b>	Decrease the level a 5% (-%)
{Channels} <b>@ .</b>	Assignation of the last level used from the numerical keyboard.

While the channels are selected, it's possible to edit it as many times as necessary.

 Examples for the channel 1:

**CHANNEL 1 Level**  Control of level manual.  
**CHANNEL 1 @ 05** Set its level at 5%.

<b>CHANNEL</b>	<b>1</b>	<b>@</b>	<b>@</b>	Set its level at 100% (FF)
<b>CHANNEL</b>	<b>1</b>	<b>CALL</b>		Set its level at 100% (FF) in a fading of 2 seconds.
<b>CHANNEL</b>	<b>1</b>	<b>↑↑</b>		Increase its level a 5%.

When these editions are done in the **Stage** editor, they are active in scene and take control over any other playbacks output.

 Note:

**Selected & pre-selected** channels are ready for edition. At the beginning of a new selection, the previous selected are as **presents**



### Menus

The level percentage of **+%** and **-%** se can be configured in the menu **30: Editor & Times**  
 These keys can be pressed and hold down pressed to go applying increments up to arrive the desired level/frame.

## 5.2.5 SELECTING ALL THE ITEMS IN THE EDITOR

If the editor has channels presents (in a brown field) and selected (in a red field), it's possible to select all the items as selected items (in a red field) for a same edition, pressing:

 **CHANNEL** **THRU**

After, it's possible to edit them, maintaining the proportionality: **Level** , , or setting the same value for all they: **@** **#** **#**

## 5.2.6 INVERT FUNCTION

**INVERT** toggles between the selected items and present items. This function is very used to return to the edition of the present items.



The channels 23 and 45 are selected, and the channels 1 to 5 and 8 are presents.

Channels																			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	6	7	<b>8</b>	9	10	11	12	13	14	15	16	17	18	19	20
FF	FF	FF	FF	FF			<b>10</b>												
21	22	<b>23</b>	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		75																	
41	42	43	44	<b>45</b>	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
				75															

To select the channels 1 to 5 and 8 to edit them, press **INVERT**

Channels																			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	6	7	<b>8</b>	9	10	11	12	13	14	15	16	17	18	19	20
FF	FF	FF	FF	FF			<b>10</b>												
21	22	<b>23</b>	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		75																	
41	42	43	44	<b>45</b>	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
				75															

## 5.2.7 OTHERS SELECTIONS

---

Select again the last selection of channels:

 **CHANNEL** 

Select all the channels in editor and scene:

 **CHANNEL** **THRU** **THRU**

Select the channels in scene & editor inside a range:

 **CHANNEL** **#'** **THRU** **THRU** **#''**

 *Examples.* The odd channels from 1 to 17 are in scene.

To select the channels 1, 3, 5 and 7:

**CHANNEL** **1** **THRU** **THRU** **7**

To select the odd channels from 1 to 17 (the scene channels)

**CHANNEL** **THRU** **THRU**

## 5.2.8 RELEASING ITEMS OF THE EDITOR

---

When it's needed to eliminate items of the picture in editor, these must be released. A released channel fades at 0%.

To release **only selected** channel (in a red field), use one of these options:


{channels} **RELEASE**                      The channels fade at 0% in 2 seconds

{channels} **RELEASE** **RELEASE**                      The channels jump at 0% suddenly

To release **all the items** (presents and selected), use one of these options:

**RST**                      The channels fade at 0% in 2 seconds

**RST** **RST**                      The channels jump at 0% suddenly

 **Menus:** The default time editor (2 seconds) used in the **RELEASE**, **CALL** and **RST** functions, can be edited inside the menu **30: Editor & Times**

## 5.3 FIXTURES

The fixture is an item that it permits to control a moving light. Each moving light is controlled for a fixture number, and from this fixture number we have access to all its parameters.

The first step is the configuration of the type and number of moving light to use. This configuration is done inside the menu **04: Fixtures** (See chapter 4 – Fixtures Patch)

The console can be configured to control a maximum of **512** fixtures. The configured fixtures cannot exceed the maximum number of attributes. The maximum number of attributes appears inside the menu **50: Console Configuration**.

In this chapter is based in the next fixtures configuration:

Fixtures 1 to 8 are configured as Mac 500 (**MC500**)

Fixtures 9 to 16 are configured as Mac 600 (**MC600**)

The auxiliary screen shows these fixtures as:

MC500	Dimmer	X	Y	Shutter	Color1	Color2	RotGB	RotGbRot	CWhl
1	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
2	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
3	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
4	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
5	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
6	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
7	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
8	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
MC600	Dimmer	X	Y	Mov-Type	Strobe	Cyan	Magenta	Yellow	CWhl
9	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
10	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
11	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
12	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
13	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
14	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
15	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE
16	%	50%	50%	00TRACK	19OPEN	00%	00%	00%	00WHITE

Fixture number

Fixtures type

Parameters values

Parameter name

### 5.3.1 THE FIXTURES IN THE EDITOR

It's possible to select one fixture, group or range to edit, at once, one or several of their parameters. A fixture is composed for parameters, and each one controls a function of the moving light.

In the editor, the **fixtures** can be:

**Present**, that is of a previous edition and it's marked with a **brown arrow** near its number.

**Selected**, that is been edited and it's marked with a **red arrow** near its number.

In the editor, a **parameter** can be:

**Present**, that is of a previous edition and it's showed in a **brown** field.

**Pre-selected**, that is waiting be edited and its value is showed in **red**.

**Selected** that is being edited and it's showed in a **red** field.



MC500	Dimmer	X	Y	Shutter	*CWhl	CWhl	RotGB	RotGbRot	GWhl
1	FF%	35%	44%	19OPEN	21MAGNTA	14%	00OPEN	00ROT-->	00OPEN
2	FF%	35%	44%	19OPEN	21MAGNTA	14%	00OPEN	00ROT-->	00OPEN
3	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
4	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
5	50%	55%	55%	26STROBE	15RED	51%	33GOB02	FFSTOP	17GOB04
6	50%	55%	55%	26STROBE	15RED	51%	33GOB02	FFSTOP	17GOB04
7	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
8	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN

The **Dimmer**, if exists, works as **HTP & No-Tracking**, the same as the channels (see pg. 5-2).  
The fixture parameters, except the **Dimmer**, work as **LTP & Tracking**.

### 5.3.2 LTP & TRACKING

**LTP**: The parameter takes the last value among the playbacks that are controlling it. In other words, the last playback activated is the playback that controls the parameter.

As exception: Always that a parameter is inside the **Stage** editor, it's controlled by this editor; since the **Stage** editor takes priority over any playbacks.

**Tracking**: When the playback that controls the parameter is deactivated or when the parameter is released of the **Stage** editor, the parameter maintains its value in **tracking** mode. The tracking value is maintained until a playback or editor changes it.

### 5.3.3 ABOUT THE FIXTURE PARAMETERS

The fixture parameters are grouped for functionality:

**Position** parameters: They control the movement of the mirror or moving head. The principals position parameters are **X** (pan) and **Y** (tilt), they have in special that can be edited using the Trackball (**TB**⊙) beside the control wheels.

**Dimmer** parameters: They control the intensity of the beam. The principal dimmer parameter is the **dimmer** that works as **HTP & No-Tracking**, and can be edited using the vertical wheel or Joystick (**Level**⬆) and in the control wheels.

**Color** parameters: They control the beam color and are edited using the control wheels.

**Gobo** parameters: They control the gobos and are edited using the control wheels.

**Beam** parameters: They control the beam shape and are edited using the control wheels.

**X-tra** parameters: They control the rest of the functions no included in the previous groups (as prism control, macro control, speed control, etc.) and are edited using the control wheels.









Each parameter has a **Home** value that is its neutral value. Example: The parameter **Color1**, has its **Home** value at **White** (white beam).

Each fixture parameter has defined one or more steps. Each parameter step identifies a concrete function of the parameter. Example: a color wheel with 8 colors will have defined 8 steps, one step per color.

### 5.3.4 SELECTING FIXTURES

---

Basic selections:

	<b>FIXTURE #</b>	Select the <b>fixture #</b>
	<b>FIXTURE # THRU #'</b>	Select a <b>range</b> from fixture # to #'
	<b>FIXTURE # THRU</b>	Select a <b>range</b> from fixture # to the last fixture
	<b>FIXTURE # FIXTURE #'</b>	Select the <b>fixture #</b> and the <b>fixture #'</b>
	<b>FIXTURE THRU</b>	Select all the fixtures that are in the editor as selected fixtures.
	<b>FIXTURE •</b>	Repeat the last selection done
	<b>FIXTURE THRU THRU</b>	Select all the fixtures that are in the editor & in the scene
	<b>FIXTURE # THRU THRU #'</b>	Select all the fixtures of the range that are in the editor & in the scene

These basic selections can be combined as desired. **ENTER** can be used as “AND” function among basic selections.



Select the fixtures 1 to 3 and the fixtures 5 to 8

**FIXTURE 1 THRU 3 FIXTURE 5 THRU 8**



Select the fixtures 1, 5, & 8

**FIXTURE 1 FIXTURE 5 FIXTURE 8**

To eliminate fixtures of a range in a selection, use **EXCEPT**



Select the fixtures 1 to 8 except the fixtures 4 to 6

**FIXTURE 1 THRU 8 EXCEPT 4 THRU 6**



### 5.3.5 SELECTING AND EDITING PARAMETERS

---

The selected fixtures are edited editing one, several or all their parameters.

Some parameters are accessible at the moment that the fixture is selected:

- **Dimmer** - Its control is always available in the **Level**⬆
- **X** and **Y** – Their control is always available in the **TB**⊖
- And the first 3 parameters are available in the control wheels **W1**⊖, **W2**⊖ and **W3**⊖

The rest of the parameters are available across the control wheels, but they must be searched changing the active bank in the control wheels, for example pressing  or 

In the auxiliary screen, the parameters names in the active bank (available in wheels) are showed in a yellow field. And the name of the selected parameters is marked with a \*


MC500	Dimmer	X	Y	Shutter	*Color1	Color2	RotGB	RotGbRot	GWhl
1	FF%	50%	44%	19OPEN	11BLUE	00%	00OPEN	00ROT-->	00OPEN
2	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
3	.....%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN

The parameters are showed always in the same order, from left to right, as special parameters, always appear **Dimmer**, **X & Y**; then, the rest of parameters ordered by functionalities, and follow the next order: Position, Dimmer, Color, Gobo, Beam and X-tra.

### 5.3.6 EDITING A PARAMETER


The first step to edit a parameter is its selection:

 {Fixtures}   

When  is pressed, a red window is opened to show us the index number of the parameters of the fixture. The selection can be done clicking with the mouse.

 Note:

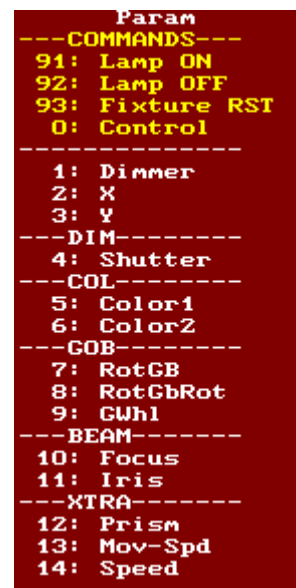
If the selected fixtures are the several types (MC500 and MC600) the **PARAM** window only shows the parameters of the fixtures of the first type (MC500).

 *Example.* To select the Iris of the fixtures 1 to 3 and 5 press:



         

or

       11:Iris 







The selection of a parameter implicates:

- Its localization in the auxiliary screen to see it.
- Its selection in **W1** , to control it using this control wheel.
- Its activation to can apply it a numeric edition, pressing 

### 5.3.7 NUMERIC EDITION

To edit the selected parameter numerically, press:

-  {fixtures} **PARAM # @ #'** To set the parameter # at value #' (2 digits)
-  {fixtures} **PARAM # @ @** To set the parameter # at full (FF)
-  {fixtures} **PARAM # ↑↑** Set the parameter # at its next step. If the parameter only has 1 step, this command increases the parameter at %.
-  {fixtures} **PARAM # ↓↓** Set the parameter # at previous step. If the parameter only has 1 step, this command decreases the parameter at %.

In these commands, when **@** is pressed, the system shows us a red window with the values of the parameter to select the desired value easily. The selection can be done using the external mouse.

**Remember:** The #’ value is always entered in 2 digits.










Example: Select the parameter 5 (Color1) of the fixture 1 and set it at BLUE: **FIXTURE 1 PARAM 5 @ 0 6**

00-06:	WHITE
06-12:	BLUE
13-18:	RED
19-25:	MAGENTA
25-31:	GREEN
31-37:	YELLOW
38-44:	PURPLE
44-50:	BLUE
50-56:	PINK
56-56:	CYAN
57-58:	CYAN
58-60:	PINK
60-61:	BLUE
62-63:	PURPLE
63-64:	YELLOW
65-66:	GREEN
66-67:	MAGENTA
68-69:	RED
69-71:	BLUE
71-72:	WHITE
73-84:	SPN-->
85-96:	<--SPN
96-FF:	CU2_ON

### 5.3.7.1 DIMMER

The **Dimmer** of the selected fixtures {fixtures} can be edited pressing:

 {fixtures} <b>Level↑</b>	Manually, moving the vertical wheels or the joystick.
 {fixtures} <b>@ # #</b>	Directly, assigning a numeric level entered in <u>2 digits</u> ( <b>00</b> to <b>99</b> )
 {fixtures} <b>@ @</b>	Directly at 100% ( <b>FF</b> )
 {fixtures} <b>CALL</b>	At 100% ( <b>FF</b> ) with a fading of 2 seconds.
 {fixtures} <b>↑↑</b>	Increase the level a 5% (+%)
 {fixtures} <b>↓↓</b>	Decrease the level a 5% (-%)
 {fixtures} <b>@ .</b>	Assigning a level as the last numeric level used.

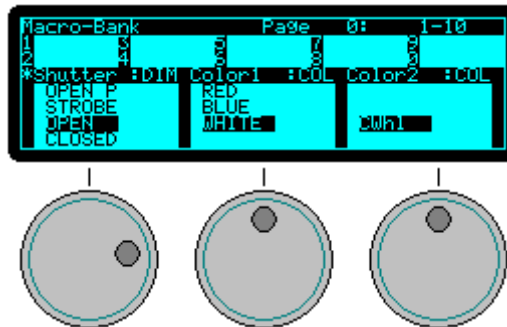
**Dimmer** is the default parameter, since it's not necessary to select it to edit it. Even so can be selected and edited as the rest of the parameters.

 **FIXTURE 1 PARAM 1 @ @** is the same that **FIXTURE 1 @ @**

### 5.3.8 EDITION IN THE CONTROL WHEELS

Moving **W1**, **W2** or **W3**, the parameters in active bank are edited. To change the active bank to control other parameters, it's possible use one of these options:

- Press **→** to access to the next 3 parameters.
- Press **←** to access to the previous 3 parameters.
- Press **POS**, **COL**, etc. to access to the first parameter of position, color, etc. respectively.
- Select the parameter to control in **W1** pressing {fixtures} **PARAM** **#** **ENTER**



The parameters in the active bank are showed in the display; each parameter shows its selected step in a dark field. Moving the wheel is possible to scroll all the steps of the parameter.

The selected parameter is marked with a \* near its name. The selected parameter also can be edited pressing **↑↑** to access to the next step, or pressing **↓↓** to access to the previous step.

The selected parameter (marked with \*) can be changed moving its wheel (**W#**) or pressing it (**W#**).

#### Exceptions:

When a parameter step has defined a **Stop (s)** will be needed press **↑↑** or **↓↓** to select its next or previous step, since this selection is forbidden moving the wheel. The **Stop** is very used in parameters that control more than one utility, for example, gobo + rotation, and it avoids that editing the gobo with the wheel we can access to macros (or vice versus). When using the wheel we arrive the **Stop (s)**, the symbol \* changes to #, and we must press **↑↑** or **↓↓**

### 5.3.9 WHEEL KEY

When a parameter is being edited with its wheel, it's possible to press and hold down pressed **WHEEL** **▼** to do this edition in blind. After when **WHEEL** **▲** is released, the edition is updated.

If the same parameter of several fixtures is to different values, select it (marked with \*) and press **WHEEL** **WHEEL** to copy to all the fixtures the value of the parameter of the first fixture.

### 5.3.10 FUNCTIONAL EDITION - PALETTES

---

It's possible to exam/select/edit parameters in accordance with its functionality.

To exam or select in the active bank the parameters of the desired functionality press:

Functionality	Key	Comments
Position	<b>POS</b>	The auxiliary screen shows the parameters of the selected functionality (except <b>Dimmer</b> , <b>X</b> and <b>Y</b> that always are), and if there are selected fixtures, besides: <ul style="list-style-type: none"> <li>The parameters are activated in the wheels. In concrete, the first parameter of the functionality is loaded in <b>W1</b>, the next parameter in <b>W2</b>, and the next parameter in <b>W3</b>.</li> <li>If <b>BANKS</b> is in <b>AUTO</b> mode, we have access to the palettes.</li> </ul>
Dimmer	<b>DIM</b>	
Color	<b>COL</b>	
Gobo	<b>GOB</b>	
Beam	<b>BEAM</b>	
X-tra	<b>X-TRA</b>	

The palettes are pre-programmed values that permit a edition quick. The edition using palettes can be done in 3 basic modes: Numeric selection, from the control wheels and from the keys **1B** to **10B**

Remember that to have access automatically to the palettes, we must select fixtures. For example, to access to the color palettes press:

 {fixtures} **COL**

- A palette can be applied to any selection of fixtures (including stops of different types).
- The palette is a help to the edition, but its values are no references.
- After to apply a palette we can edit any parameter to modify parameters.

#### 5.3.10.1 NUMERIC SELECTION OF A PALETTE

---

To apply a palette, for example a color palette, to the selected fixtures, press:

 {fixtures} **COL @ # ENTER**

When **@** is pressed, the system show us the list of the color palettes to help us to select the **#**. The selection can be done using the mouse.

#### 5.3.10.2 SELECTING PALETTES FROM THE CONTROL WHEELS

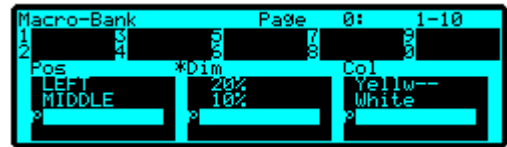
---

To apply a palette from the control wheels, press **EDT+**

**EDT+** toggles between the visualization the parameters or functionalities. When the functionalities are presented, **EDT+** active, the control wheels are palettes control:

To apply a palette, move the associated wheel, or:

- Change the active bank pressing **←** or **→**
- Access to the functionality; in example color, pressing **COL**
- Select the palette pressing **↑↑** and **↓↓**



If necessary, change the active wheel pressing in it (**W#**⊕).

- Move a wheel is blind edition during that **WHEEL**⏚ is pressed.
- Put the same active palette in all the selected fixtures pressing **WHEEL** **WHEEL**

Remember that the active wheel is marked with a \* in the monitor and in the display.

MC500	Bank	Pos	Col	*Gob	Beam	Xtra	Fig
1	FF%	Home	Amber	GOBO 4	01fondo1	Prism 1	None
2	%	Track	Track	Editor	Play	Track	
3	FF%	Home	Amber	GOBO 4	Home	Prism 1	None

In the visualization for functionalities, are showed their status and you can see:

- Text** When this functionality is edited from a palette.
- Track** When its parameters are all in **Tracking** mode.
- Play** When some of its parameters are controlled in any **Playback**
- Editor** When some of its parameters are edited in individually.
- 01Text** When this functionality is edited from a library, in the example the library **01**.

### 5.3.10.3 SELECTING PALETTES FROM THE BANKS KEYS


The keys **1B** to **10B** are configured as direct access to different items pressing **BANKS**⊕, and are paged turning this wheel: **BANKS**⏚.

Pressing **BANKS**⊕, a windows appears with the configuration options for **1B** to **10B**

The option **0** sets **1B** to **10B** in auto mode, changing with the edition process. This is the mode by default.

The current configuration of the keys **1B** to **10B** is showed in the display.

For the next commands, configure the keys **1B** to **10B** in **Auto** mode, pressing:

 **BANKS**⊕ **0** Or using the mouse **BANKS**⊕ **0:Auto**⏚

In this way, to apply palettes, for example of color and gobo, press:

 {fixtures} **COL #<sub>B</sub> GOB #<sub>B</sub>**

And **#<sub>B</sub>** is the key associated to the desired palette, from **1<sub>B</sub>** to **10<sub>B</sub>**. It's possible to press more than one **#<sub>B</sub>**, the last pressed will be the active.



Example with **BANKS** as 0:Auto

Select the fixture 1 and 3 and assign them the color palette 2: Yellow--, the gobo palette 4: Gobo4 and the dimmer palette 1: 10%:

**FIXTURE 1 THRU 3 COL 2<sub>B</sub> GOB 4<sub>B</sub> DIM 1<sub>B</sub>**

If **BANKS** is in a fixed mode, for example as 3: POS, only the position palettes can be applied, but in this case it's no necessary to press **POS** to do it.



Set to position Middle the fixtures 1 and 3: **FIXTURE 1 THRU 3 1<sub>B</sub>**

#### 5.3.10.4 OTHER FUNCTIONAL SELECTIONS

**ENTER** and **RELEASE** can be used for the parameters of the selected functionality.

To release of the editor all the gobo parameters:

 {fixtures} **GOB RELEASE**

To call to the editor all the parameters of position:

 {fixtures} **POS ENTER**

#### 5.3.11 THE HOME VALUES

The **Home** value is the neutral value of the parameter.

Set at **Home** all the parameters of the selected fixtures pressing:

 {fixtures} **HOME**

Set at **Home** only the position parameters (for example), pressing:

 {fixtures} **POS HOME**



### 5.3.12 LIBRARIES

---

The libraries are exposed in the chapter 7. The console has libraries of each one of the functionalities. The methods to apply libraries are similar as palettes. The most difference between libraries and palettes is that the library values are references and these values can be edited.

### 5.3.13 THE PARAMETER OF CONTROL

---

Some moving lights have a parameter to control some special functions of the moving light from the console. The console has direct control of some of these special functions, as are turn-on the lamp, turn-off the lamp and moving light reset.

To turn-on the lamps of the selected fixtures (ON), press:

 {fixtures} **PARAM 9 1**

To turn-off the lamps of the selected fixtures (OFF), press:

 {fixtures} **PARAM 9 2**

To reset the selected fixtures (RST), press:

 {fixtures} **PARAM 9 3**

 Note:

Each time that a lamp is turned-off, in accordance with the type lamp, is equivalent to 2-3 hours of use, and normally will be necessary to wait a time to can turn-on it again.

Some fixtures have more special functions that these 3, to access to the rest of the special functions, select the parameter of **Control** pressing:

**FIXTURE 1 PARAM 0 @ #**

When **@** is pressed the red window shows us all the special functions (**#**).

This command works only with the fixtures of the first selected type.

The parameter of **Control** is not accessible in wheels.

### 5.3.14 INVERT

---

**INVERT** toggle between the present items (brown) and the selected items (red) inside editor. Examples for an editor that has channels and fixtures:

Editing some channels & dimmers, press **INVERT** to edit the other channels and dimmers

Channels									
1	2	3	4	5	6	7	8	9	10
FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
21	22	23	24	25	26	27	28	29	30
41	42	43	44	45	46	47	48	49	50
MC500*		Dimmer	X	Y	Shutter		CWhl		
1	84%		61%	59%	19	OPEN	54	PIN	
2	FF		50%	50%	19	OPEN	00	WHI	
3	FF		50%	50%	19	OPEN	00	WHI	

**INVERT**

Channels									
1	2	3	4	5	6	7	8	9	10
FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
21	22	23	24	25	26	27	28	29	30
41	42	43	44	45	46	47	48	49	50
MC500*		Dimmer	X	Y	Shutter		CWhl		
1	84%		61%	59%	19	OPEN	54	PIN	
2	FF		50%	50%	19	OPEN	00	WHI	
3	FF		50%	50%	19	OPEN	00	WHI	
4	%		50%	50%	19	OPEN	00	WHI	

Editing the fixtures, press **INVERT** to edit the channels

Channels									
1	2	3	4	5	6	7	8	9	10
FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
21	22	23	24	25	26	27	28	29	30
41	42	43	44	45	46	47	48	49	50
MC500*		Dimmer	X	Y	Shutter		CWhl		
1	87%		61%	59%	19	OPEN	54	PIN	
2	FF		50%	50%	19	OPEN	00	WHI	
3	FF		50%	50%	19	OPEN	00	WHI	
4	%		50%	50%	19	OPEN	00	WHI	


**INVERT**

Channels									
1	2	3	4	5	6	7	8	9	10
FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
21	22	23	24	25	26	27	28	29	30
41	42	43	44	45	46	47	48	49	50
MC500		Dimmer	X	Y	Shutter		CWhl		
1	87%		61%	59%	19	OPEN	54	PIN	
2	FF		50%	50%	19	OPEN	00	WHI	
3	FF		50%	50%	19	OPEN	00	WHI	
4	%		50%	50%	19	OPEN	00	WHI	

### 5.3.15 RELEASING ITEMS OF THE EDITOR

When fixtures are released of the **Stage** editor, only the **Dimmer** parameters fade at 0%, since that the **Dimmer** has the same behavior as channels. The rest of the fixture parameters maintain its scene value in tracking mode.

To release all the parameters of the selected fixtures, press one of these options:

 {fixtures} **RELEASE** Their Dimmers fade out editor in 2 seconds.

 {fixtures} **RELEASE RELEASE** Their Dimmers jump at 0% suddenly.


To release only a parameter, press:


 {fixtures} **PARAM # RELEASE**


To release all the parameters of a functionality (example of beam) press:

 {fixtures} **BEAM RELEASE**

To release all the channels and fixtures that are in editor, press:

 **RST** Dimmers & channels fade out editor in 2 seconds.

 **RST RST** Dimmers & channels jump to 0% suddenly

 **Menu:** The editor default time (2 seconds) used for **RELEASE**, **CALL** and **RST**, can be changed inside menu 30: Editor & Times



## 5.4 THE TRACKBALL

---

The Trackball, **TB**, has several function keys associated:





### **FINE**

Used to set the sensibility of trackball and control wheels. Press **FINE** as many times as necessary to set the sensibility:

Sensibility	<b>FINE</b> LED	Comments
Normal	Off	
High	On	To change a value will be needed a large displacement of the <b>TB</b>  , or the control wheels, obtaining a better precision.
Low	Blinking	To change a value will be needed a small displacement of the <b>TB</b>  , or the control wheels, obtaining an inferior precision but more agility.

### **TB**

Used for configuration of the **TB**. Press **TB** as many times as necessary to set the behavior:

Behavior	<b>TB</b> LED	Comments
Normal	Off	The <b>TB</b>  controls the parameters <b>X</b> (pan) and <b>Y</b> (tilt)
None	On	The <b>TB</b>  is inactive
Orthogonal	Blinking	The <b>TB</b>  only controls one of these parameters, only <b>X</b> or only <b>Y</b> . The parameter that the <b>TB</b>  is controlling will be the parameter that corresponds with the direction that has mayor displacement.


\* If **TB** is at **MOUSE** mode, the first click in **TB** returns to **TRACKBALL** mode.


### **FLIP**

Editing the position of a fixture, sometimes, it's not possible to arrive the desired point. In these cases, press **FLIP** for that the system edits a complementary values for **X** and **Y** with the objective to arrive the same point from other perspective. Moreover **FLIP** can be used as special effect, since that gets a movement quick and clear.

**FLIP** can be applied to the parameters **X** and **Y**, only to **X**, or only to **Y**.

 **FIXTURE 1 FLIP** The parameters **X** and **Y** of fixtures 1 change their values.

 **FIXTURE 1 PARAM 2 FLIP** Only the parameter **X** of fixtures 1 changes its value.

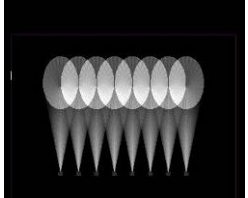
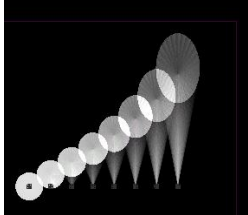
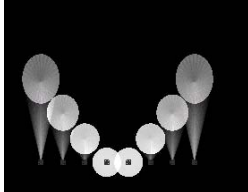
 **FIXTURE 1** **PARAM 3** **FLIP** Only the parameter Y of fixtures 1 changes its value.

**FAN-OUT**

This function permits the edition, in a selection of several fixtures, of values for X &/or Y parameters in relative mode.

This edition can be done using the **TB** or using **W2** &/or **W3**.

Mainly, this function has 3 basic modes, and we select one of these modes pressing **FAN-OUT** as many times as will be necessary. The **FAN-OUT** LED shows us its current mode:

FAN-OUT LED	Function mode	
Off	Fan-Out inactivated X &/or Y edition isn't affected for this function. Example: Increase of Y of the fixtures 1 to 8	
On	Fan-Out activated in <u>lineal mode</u> . X &/or Y edition has a relative value, in lineal mode, between the first and last fixtures. Example: Increase of Y of the fixtures 1 to 8	
Blinking	Fan-Out activated in <u>symmetrical mode</u> . X &/or Y edition has a relative value, in symmetrical mode, between the first and last fixtures. Example: Increase of Y of the fixtures 1 to 8	

**MOUSE**

This function permits set the trackball in **MOUSE** mode to use it as the external mouse. In this mode when **MOUSE** is pressed is as a mouse click.

In this mode the trackball is lit in green.

Quit of this mode pressing **TB**

## 5.5 THE STATUS LINE

---

The status line shows us flags about the editor contents. These flags are **cf**◀▶

**c** appears always that the editor has channels

**f** appears always that the editor has fixtures.

◀▶ appears always that the editor has shapes



■ Macro GM 100 B0 Stage Q1 T1 cf▶ 99% 17:27:18

 Note:

These same flags, **cf**◀▶, also appear in the exam of groups and cues.

## RESUME

---

Activate/deactivate Blind editor: **BLIND**

Selecting channels & fixtures. Examples for channels:

A channel: **CHANNEL #**  
 A range: **CHANNEL # THRU #**  
 Several ranges: **CHANNEL # THRU # CHANNEL # THRU #**  
 A group: **CHANNEL # CHANNEL # // CHANNEL # ENTER # ...**  
 The editor channels: **CHANNEL THRU**  
 The scene channels: **CHANNEL THRU THRU**  
 The last selection: **CHANNEL •**  
 Unselect channels: **EXCEPT # EXCEPT # THRU #**

Level for dimmers and channels:

Manual: {channels, fixtures} **Level**↕  
 Numerical: {channels, fixtures} **@ #**  
 At 100%: {channels, fixtures} **@ @**  
 At 100%, in 2 sc: {channels, fixtures} **CALL**  
 The last used: {channels, fixtures} **@ •**

Fixtures parameters:

Edit x/y: {fixtures} **TB**⊙  
 Edit a parameter: {fixtures} **PARAM # @ #**  
 Edit a parameter using wheels, stage or blind mode: {fixtures} **W#**⊙ or **WHEEL**↘ **W#**⊙ **WHEEL**↗  
     Access to the next or previous step: {fixtures} {parameter\*} **↑↑** or **↓↓**  
     Access to the next or previous parameter: {fixtures} {parameter\*} **←←** or **→→**  
     Parameter of selected fixtures at the same value: {fixtures} {parameter\*} **WHEEL WHEEL**  
 Using palettes (example color): {fixtures} **COL @ # ENTER**  
 All parameters at **HOME**: {fixtures} **HOME**

Select or release several parameters (example color): {fixtures} **COL ENTER /RELEASE**

Control commands: On, Off & Reset: {fixtures} **PARAM 91 /92 /93**

Releasing channels and parameters:

{Selection} **RELEASE (RELEASE)**  
 The whole editor **RST (RST)**

Delete command line: **C (C)**

Trackball

**FINE**, set the desired sensibility (normal, high, low)

**ORTO**, set the TB behavior (normal, none, orthogonal)

**FLIP**, search the same point with other values of x/y.

**FAN-OUT**, Edition of values for x/y in relative mode (lineal and symmetric)

## 6. CUES & GROUPS

The console stores, in cues and groups, the channels and fixture parameters active in the editor (red or brown). Cues are used to playback them in effects, masters and crossfaders. The groups are used as help in the selections and can be to playback in the masters & effects.

An organized store processing saves efforts at the time of configure the system playbacks.

**Cues** are numbered from 1 to 2000, admitting decimal numbers, example: 55.5, 1.9, etc.

**Groups** are numbered from 1 to 2000.

The number of cues and groups that can be stored in the system are in accordance with their contents and the amount of free data memory:



Before to store cues and groups, configure the console inside the menu **50: Console configuration** and edit the needed Patch (menus **01**, **02** y **04**), since they affect to the scene.

### 6.1 STORING CUES & GROUPS

To store a cue edit in the editor the desired picture:

- Select channels and edit them a level.
- Select fixtures and edit their parameters.

This scene is named: **{editor}**

The cues need that the channels and/or fixtures are edited (level & values).

To store a group edit in the editor the desired picture or select the desired items:


- Select channels and optionally edit them a level. If no level is edited the channels are stored at 100%.
- Select fixtures and optionally edit their parameters. If no parameters are edited the fixtures are stored only with their dimmers at 100%. Exception: If a fixture hasn't **Dimmer** will be needed to edit some parameter to store it in a group.

The result of this edition is named: **{selection/editor}**

To store the cue **#** press:


 {editor} **CUE # REC**

To store the next cue press:

 {editor} **CUE REC**

 {editor} **REC**

To store the group **#** press:

 {selection /editor} **GROUP # REC**

To store the next group press:

 {selection /editor} **GROUP # REC**

To store the next group loading a master press:

 {selection/editor} **LOAD** **M#**

The next cue (or group) number is the **last cue number used +1**.

In case of cues, the next cue number is showed in the command line as **Q1**

If the number of cue (or group) that is been stored exists, the system requests us confirmation.

Press **REC** to confirm, or press **C # REC** to store it in other number.

When a cue or group has been stored, the editor is maintained. Now it's possible use this editor as start point for the next cue or group, or empty the editor pressing **RST**



Store a group to select the fixtures 1, 5, 7, and 10:

**FIXTURE** **1** **FIXTURE** **5** **FIXTURE** **7** **FIXTURE** **10** **GROUP** **REC**



Store the group 100 to set the position of the fixtures 1 & 3:

**FIXTURE** **1** **TB** **FIXTURE** **3** **TB** **GROUP** **100** **REC**



Commands as **GROUP** **1** **@** **5** **0** or **GROUP** **1** **Level** **↕** allow to use groups directly in the editor.

## 6.1.1 CALLING TO THE EDITOR OF PLAYBACKS & DATA

The console only stores the editor contents, for this reason, there are commands to call into editor to some scene items (playbacks) that we want that they form part of editor.

### Pre-select (select without levels/values) into the editor, some scene items.

To pre-select all the channels or fixtures that are in scene, press:

 **CHANNEL** **THRU** **THRU**

 **FIXTURE** **THRU** **THRU**

To pre-select a range of channels or fixtures that are in scene, press:

 **CHANNEL** **#** **THRU** **THRU** **#'**

 **FIXTURE** **#** **THRU** **THRU** **#'**


To pre-select the whole scene, press:

 **ENTER** **ENTER**



To pre-select the outputs of one or several masters, press:

 **ENTER** **M#**

 **ENTER**▼ **M#** **M#** **M#**... (As many keys as necessary) **ENTER**▲

Remember: ▼ makes that the key is hold down pressed  
▲ makes that the key can be released

To pre-select the outputs of crossfader, press:

 **ENTER** **ASSIGN**

### Pre-select the contents of a cue, a group or a range.

---

To pre-select the contents of a cue or group press:

 **CUE** **#** **ENTER**

 **GROUP** **#** **ENTER**

To pre-select the contents of a range of cues or groups press:

 **CUE** **#** **THRU** **#'** **ENTER**

 **GROUP** **#** **THRU** **#'** **ENTER**

### Call (select with levels/values) into the editor, some scene item:


---

To call the whole scene (channels and fixtures) press:

 **CALL** **CALL**

To call the outputs the one of several masters, and/or crossfaders press:

 **CALL** **M#**

 **CALL**▼ **M#** **M#** **M#**... (As many keys as necessary) **CALL**▲

 **CALL** **ASSIGN**

### Call into the editor to a cue, group or range:

---

Call a cue, group or range using a fade-in of 2 seconds:

 **CUE** **#** **CALL**

 **GROUP** **#** **CALL**

 **CUE** **#** **THRU** **#'** **CALL**

 **GROUP** **#** **THRU** **#'** **CALL**

Call a cue, group or range suddenly:

 **CUE** **#** **CALL** **CALL**

 **GROUP** **#** **CALL** **CALL**

Call a cue or group controlled by the user:

 **CUE #** Level↕

 **GROUP #** Level↕

### Call into the editor, a channel fixture or parameters, as are stored in a cue or group. Examples

---

Call to the channel 8, as is stored in cue 1, fading in 2 seconds:

 **CUE 1 CHANNEL 8 CALL**

Call the fixture, as is stored in the group 1, suddenly:

 **GROUP 1 FIXTURE 8 CALL CALL**

Call to the parameter 10 of the fixture 8, as it is stored in cue 1:

 **CUE 1 FIXTURE 8 PARAM 1 0 CALL**

Call to the editor all fixtures, as stored, of cue 1:

 **CUE 1 FIXTURE THRU CALL**

The editor controls a channel or fixture called into the **Stage** editor.

### 6.1.2 STORING THE SCENE IN THE NEXT CUE

---

There is a special command to store the whole scene as the **next cue**, directly with use the editor. This command is:

 **{scene} CALL REC**

This command is a short cut of the command: **CALL CALL REC RST RST**

### 6.1.3 EXAM OF CUES & GROUPS

---

It's possible to exam a cue, a group, or list.

To exam the cue list press:

 **CUE EXAM**

To exam the cue #, press:

To exam the groups list press:

 **GROUP EXAM**



To exam the group #, press:





 **CUE # EXAM**

 **GROUP # EXAM**

The cue list or the groups list shows us all the cues or groups with their associated texts and other general parameters, and also shows for each element a flag under the label **cf** ◀▶:

**c** that has channels, **f** that has fixtures and ◀▶ that has shapes.

To page a list press  or 



The exam screen of a cue or group shows us the contents of this cue or group, its text and general parameters. To see more about this cue (or group) or to see the next or previous cue (or group), press    

To close any exam screen, press **EXIT**

## 6.1.4 ASSOCIATE A TEXT TO A CUE OR GROUP

To associate a text to a cue or group access to its edition list pressing:

For cues (2 options):

 **CUE CUE**  
 **CUE MDFY**

For groups (2 options):

 **GROUP GROUP**  
 **GROUP MDFY**

Select the **Text** cell of the cue or group to edit, and type the desired text from the alphanumeric keyboard.

Close this screen pressing **EXIT**

## 6.1.5 DELETE CUES OR GROUPS

To delete a cue press:

 **CUE # DELETE**

To delete a cues range press:

 **CUE # THRU #' DELETE**

To delete **all** the console cues press:

 **CUE DELETE**

To delete a group press:

 **GROUP # DELETE**

To delete a groups range press:

 **GROUP # THRU #' DELETE**

To delete **all** the console groups press:

 **GROUP DELETE**

The system requests confirmation. Confirm pressing **DELETE** or abort pressing **C**

## 6.1.6 MODIFY A CUE OR GROUP

---

The contents of a cue or group can be modified at any moment. To modify it:

- Select the adequate editor, **Stage** or **Blind**, pressing **BLND**
- Empty the editor pressing **RST**
- Select the cue or group to modify it, using one of these options:
  - ☞ **CUE # MDFY**
  - ☞ **GROUP # MDFY**
  - ☞ **MDFY M#** To modify the cue or group loaded in master #

The selected cue or group fades in the editor in 2 seconds.

The status line shows us one of these flags:

**Modify Q#** in a red field, when we are modifying the cue #

**Modify G#** in a red field, when we are modifying the group #

- Modify it adding, editing or releasing channels and/or fixtures, {modifications}
- Store the modification pressing **REC** or abort the modification pressing **RST**

At any case, the flag **Modify Q#** disappears and the editor is emptied fading out in 2 seconds.

Resume:

- ☞ **RST CUE # MDFY {modifications} REC**
- ☞ **RST GROUP # MDFY {modifications} REC**
- ☞ **RST MDFY M# {modifications} REC**

## 6.1.7 COPY CUES OR GROUPS

---

It's possible to copy a cue (or group) in other cue (or group), coping the contents, the text and in case of cues times & commands.

Copy cue # to cue #'

- ☞ **CUE # COPY #' ENTER**

Copy a cues range in other range:

- ☞ **CUE # THRU #'**  
**COPY #' ENTER**

Copy the group # to the group #'

- ☞ **GROUP # COPY #' ENTER**

Copy a groups range in other range:

- ☞ **GROUP # THRU #'**  
**COPY #' ENTER**



Copy the cue 1 as cue 25. **CUE 1 COPY 2 5 ENTER**  
 If the cue 25 exists, it will be modified, if not, it will be created.



Copy the cue 1 to 10, as cues 21 to 30.  
**CUE 1 THRU 1 0 COPY 2 1 ENTER**

The copy of ranges keeps the original numbers. Suppose that in the previous example the cue 1.5 is stored. After the exchange, will exists the cue 21.5


### 6.1.8 EXCHANGE CUES OR GROUPS

It's possible to exchange 2 cues (or 2 group), exchanging their contents, texts and in case of cues, their times & commands.

Exchange 2 cues

 **CUE #**  
**COPY COPY #' ENTER**

Exchange 2 groups

 **GROUP #**  
**COPY COPY #' ENTER**

Exchange 2 cues ranges

 **CUE # THRU #'**  
**COPY COPY #' ENTER**

Exchange 2 groups ranges

 **GROUP # THRU #'**  
**COPY COPY #' ENTER**



Exchange the cues 1 & 25.  
**CUE 1 COPY COPY 2 5 ENTER**  
 If the cue 25 doesn't is, will be created and the cue 1 will be deleted.



Exchange the cues 1 to 10 with the cues 21 to 30.  
**CUE 1 THRU 1 0 COPY COPY 2 1 ENTER**  
 The exchange of ranges keeps the original numbers.

## 6.2 CUE TIMES

---

The times programmed in a cue are used to execute this cue in crossfaders and masters. These times are:

$T\uparrow$	Fade-in time. It's the time that the cue uses to fade from 0% to 100%.
$T\downarrow$	Fade-out time. It's the time that the scene uses to fade from 100% to 0%. When the cue is executed in a crossfade, its $T\downarrow$ is applied to the previous cue (scene cue). When the cue is executes in a master, its $T\downarrow$ is applied to this cue.
$T\odot$	Wait time or auto time. It's the time that the cue remains at 100% before begin its output process automatically. When the cue is executed in a crossfade, after this wait time, the next crossfade is started <u>automatically</u> . When the cue is executes in a master, after this wait time the master begins its output process <u>automatically</u> .
$T\uparrow\odot$	Wait-in time. It's the time that the cue waits before to fade from 0% to 100%.
$T\downarrow\odot$	Wait-out time. It's the time that the cue waits before to fade from 100% to 0%. When the cue is executed in a crossfade, its $T\downarrow\odot$ is applied to the previous cue (scene cue). When the cue is executes in a master, its $T\downarrow\odot$ is applied to this cue.

These times can be programmed or not. Any times combination is possible.

### Note:

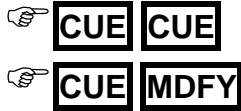
The fade times,  $T\uparrow$  and  $T\downarrow$ , only are applied to channels and fixture **Dimmers**. The fixtures parameters only are affected by these times if they are defined as **Fade**, inside the menu **04: Fixtures** (See chapter 17).

Each time that a cue is stored, it's stored with the default times. These default times are  $T\uparrow=T\downarrow=3$  sec. and  $T\odot =\infty$  (infinite); but these can be edited in menu **30** or in **CUE CUE** screen.

The admitted times are 0.1 to 2000.9 sec. When a time is greater than 100 seconds, the decimal point isn't represented but is computed by the system.

## 6.2.1 PROGRAMMING TIMES FROM THE CUE LIST

It's possible to program any time for any cue inside the cue list. To open the cue list press one of these options:



Cue list:31		1-31										↑↑↑↑ ↓↓↓↓	
Cue	T↑	T↓	Te	T <sub>0</sub>	T <sub>1</sub>	T <sub>n</sub>	Jump	Lp	Text	Command	TC	cf↕	
1	3	3	∞			T1						c	
2	3	3	∞			T1						c	
3	3	3	∞			T2			cue text			cf↕	
4	3	3	∞			T1						cf↕	
5	3	3	01			T1			texto del cue			cf↕	
6	3	3	∞			T1						cf↕	
7	3	3	2			T3						cf↕	
8	3	3	∞			T1						cf↕	
9	3	2	∞			T1						cf↕	
10	3	3	∞			T1						cf↕	
11	3	3	∞			T1						cf↕	


The cue in edition is marked in a yellow cursor, and the data in edition is a red field.


Select the cue to edit it pressing  and  (or using the mouse).



Select the data to edit it pressing  and  (or using the mouse).

To edit this list, select the cue data, and enter its value. To accept the entered data press **ENTER** or select other data. Close this screen pressing **EXIT**

The cue list shows us the default times in gray, and these times will be changed if the corresponding default time is changed.

The default times are showed in this screen in its setup line. It's possible to access to this setup line to change any of these times pressing **MENU** or using the mouse. Return to the cue list pressing **MENU** again, or pressing , or using the mouse.

To page the cue list turn **MONITOR**  wheel

-  Direct access to a cue in the list:  
Access to any **Cue** cell (in gray field)  
And press **#**  to select the cue #

### Menus

The cues default times can be changed inside the menu **30: Editor & Times**. See chapter 14.

## 6.3 TIMING

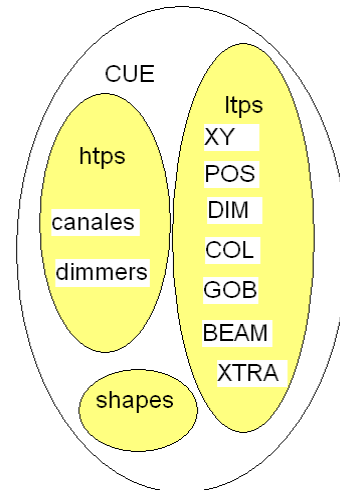
The console has 6 different timings (**T1** to **T6**). The timing sets the cue & group behavior in playbacks.

At any moment, the cue timing can be edited.

Groups answer to the default timing.

The timing divides the cue (or group) contents in accordance with the item types (https, ltps, channels, gobos, colors, etc.) with the objective that each items type goes in scene, fading or not, in the desired moment.

When timing is applied to a cue (or group), its behavior depends of the timing and of the own cue (or group). For example, the timing 2 (**T2**) forces the **ltps** to jumps in scene just when the master is activated.



About the timings definition (menu **06: Define Timings**):

**T1:**

T1	Type	Beg	End
1			
2			
3			
4			
5			
6			
7			
8			

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), as a whole; there are not separations. As unique exception, only the **NO FADE** parameters jump to their target values.

**T1** is the timing by default, timing that always is applied after a system Reset.

**T2:**

T2	Type	Beg	End
	LTP	00	00
1			
2			
3			
4			
5			
6			
7			
8			

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

**ltps** ( **1** ) that are forced to jump in scene at the beginning of the master travel (**Beg=00**). They jump in scene because **End = Beg**

Use **T2** to avoid **ltps** fade in scene, jumping to their target values at the beginning of the master travel.

**T3:**

T3	Type	Beg	End
	LTP	FF	FF
1			
2			
3			
4			
5			
6			
7			
8			

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

**ltps** ( **1** ) that are forced to jump in scene at the end of the master travel (**Beg=FF**). They jump in scene because **End = Beg**

Use **T3** to avoid **ltps** fade in scene, jumping to their target values at the end of the master travel.



**T4:**

Type	Beg	End
LTP	00	00
XY	00	FF

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

**ltps** ( 1) that are forced to jump in scene at the beginning of the master travel (**Beg=00**). They jump in scene because **End = Beg**

**X & Y** parameters ( 2) that are forced to fade in scene at the beginning of the master travel (**Beg=00**). Their fading begins in **00** and ends in **FF**.

Use **T4** to avoid **ltps** fade in scene, jumping to their target values at the beginning of the master travel; except **X & Y** that fades in the fade-in time or in accordance with the fader movement. This timing is similar to **T2**, but permits to control the change of one position to other.

**T5:**

Type	Beg	End
LTP	FF	FF
XY	00	FF

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

**ltps** ( 1) that are forced to jump in scene at the end of the master travel (**Beg=FF**). They jump in scene because **End = Beg**

**X & Y** parameters ( 2) that are forced to fade in scene at the beginning of the master travel (**Beg=00**). Their fading begins in **00** and ends in **FF**.

Use **T5** to avoid **ltps** fade in scene, jumping to their target values at the end of the master travel; except **X & Y** that fades in the fade-in time or in accordance with the fader movement. This timing is similar to **T3**, but permits to control the change of one position to other.

**T6:**

Type	Beg	End
LTP	00	00
XY	00	FF
COL	00	FF
GOB	00	00
BEAM	00	FF
XTRA	00	00

The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement)...

Included:

**X & Y** parameters ( 2), **COL** parameters ( 3) & **BEAM** parameters ( 5):

Where **Beg=00** & **End=FF**.

Excluded:

The rest of the **ltps** ( 1), **GOB** ( 4) and **XTRA** ( 6) are forced to jump in scene at the beginning of the master travel (**Beg=00**). They jump in scene because **End = Beg**

Use **T6** to avoid **ltps**, especially **GOB** y **XTRA**, fade in scene, jumping to their target values at the beginning of the master travel. Permits that **COL**, **BEAM**, **X & Y** parameters fade in scene in accordance with the fade-in time or the fader movement.

This timing is very used to divide a cue in these 6 basic types...

Graphically:

The time, in which a type is activated, **Beg**, equivalent to a  $T \uparrow$ , is represented with a gray bar if greater than 00.

The fading of each type, **End - Beg**, equivalent to a  $T \downarrow$ , is represented with a cyan bar if greater than 00.

Example for T5:




The timings are edited in the menu 06: Define Timings.



This screen has 2 zones:

- Setup line.
- Edition table.

Toggle between these zones using the mouse or **MENU**.

Also, from the Setup line, it's possible to change to the edition table pressing .

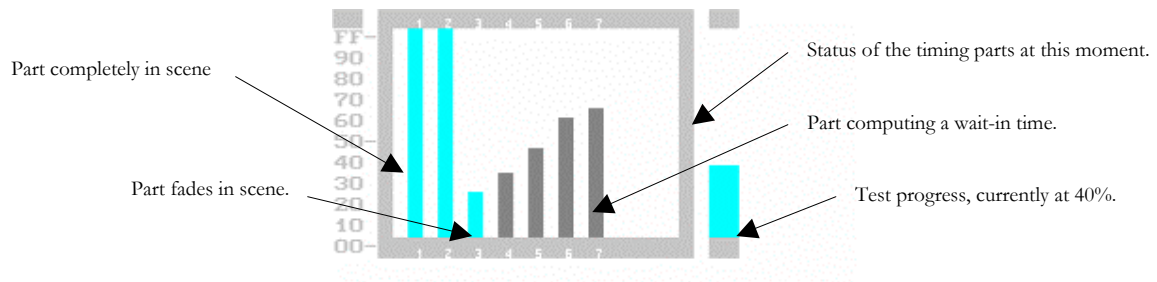


In the Setup line, select the desired timing (▼T1 a ▼T6), in example T2, for:

▼T2

0: Set Default	Set T2 as default timing to be associated to new cues
1: Restore	Restore the initial values programmed in T2
2: Test Slow	These options permit us to do a dynamic test of the T2 behavior.
3: Test Middle	This test is showed dynamically in the Test window. The test can be
4: Test Fast	Slow, Middle or Fast.

In **Test** window, dynamically, it's possible to observe:



To edit timing, toggle to the edition table:

T1			T2			T3			T4			T5			T6		
Type	Beg	End	Type	Beg	End	Type	Beg	End	Type	Beg	End	Type	Beg	End	Type	Beg	End
			LTP	00	00	LTP	FF	FF	LTP	00	00	LTP	FF	FF	LTP	00	00
									XY	00	FF	XY	00	FF	XY	00	FF
															COL	00	FF
															GOB	00	00
															BEAM	00	FF
															XTRA	00	00

Timing is divided in several parts (maximum 9), and each part is defined as:

<b>Type</b>	The items type that are grouped in this part ( <b>htps, ltps, colors...</b> )
<b>Beg</b>	<b>Begin:</b> The point where the fading of this part must be started. This point is edited as percentage (0-100%) of the cue fade-in time and is equivalent to a $T \uparrow$
<b>End</b>	<b>End:</b> The point where the fading of this part must be ended. This point is edited as percentage (0-100%) of the cue fade-in time. The <b>End</b> value must be equal or greater that the begin value. If <b>Begin=End</b> the part jumps in scene (equivalent to a $T \uparrow = 0.1$ )

About the items type, always the more detailed **Type** has the priority. In example, if a part is defined as **HTP** and other part as **Dimm** (that also is htp), the dimmers are placed in the **Dimm** part that has the priority.

In concrete, this situation is between the types:

- HTP & Dimm/CHAN
- LTP & XY/POS/DIM/COL/GOB/BEAM/XTRA
- POS & XY

### 6.3.1 SET THE DEFAULT TIMING

---

The default timing is the timing associated to each new cue if other timing isn't specified.

There are 3 ways to set up the default timing:

- From the Setup line of the menu **06: Define Timings**
- From the **Timing** option of the menu **30: Editor & Times**
- From the Setup line of the cue list, **CUE CUE**

### 6.3.2 EDITION OF THE CUE TIMING

---

The cue timing (T1 to T6) can be edited from the editor or from the cue list.

From the editor:

When a cue is being edited, it's possible to change its timing pressing:



**PART PART #**

Where # is the desired timing number.

The selected timing stays in the editor, until **RST** is pressed (returning to the default timing).

In the system status line the active timing is showed. If the active timing is the default timing, this appears in gray color:



### 6.3.3 CONVERT TIMINGS TO CUES PARTS

---

It's possible to personalize a cue with an associated timing, editing the timing values as cue parts that can be edited manually (items and times).

The cue parts also can be created in the editor (manually).

A cue with parts hasn't timing. Editing it timing, the parts are overwritten.

A cue with timing hasn't parts. Editing parts, the timing is overwritten.

Editing a cue, it's possible to convert its timing values to cue parts (editables), pressing:



**PART PART 7**

{to select the option 7:TO PART}

Note that in the system status line, the timing flag (in example T3) is overwritten with a parts flag: P

Timing and cue parts have the same structure, and only timing or only parts can be actives in a cue.

## 6.4 CUE PARTS

One cue can have 9 parts in addition to the base cue. Each part can have its contents and times ( $T\uparrow$  and  $T\uparrow\oplus$ ) with values totally free.

The cue parts permit us that the cue items fade-in scene with different speeds, speeds controlled for the cue times and the parts times, similar to the timing, but with absolutes values for contents and times.

Each channel and parameter stored in the cue can be controlled for the times of the base cue (**P0**) or for the times of one cue part (**P1** to **P9**).

For that one part exists, must have at least one channel or parameter.  
The base cue exists always including if it's empty.

In resume, one cue can be divided in:

CUE	
Base cue = Part 0 + Times of input, output and wait + Text + Jump + Command	Part 1 (optional) + input times
	Part 2 (optional) + input times
	Part 3 (optional) + input times
	Part 4 (optional) + input times
	Part 5 (optional) + input times
	Part 6 (optional) + input times
	Part 7 (optional) + input times
	Part 8 (optional) + input times
	Part 9 (optional) + input times

### 6.4.1 EDITION OF PARTS

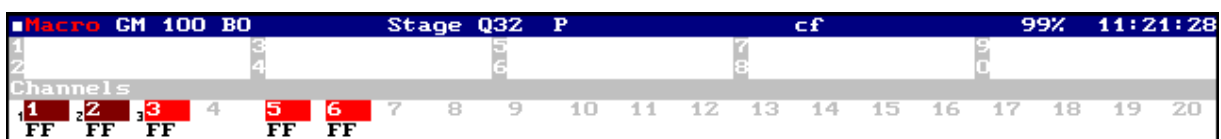
The parts can be edited when the cue is been edited or modifying the cue to divide it in parts. In both cases, the same method is used:

To include channels and/or parameters in a part, select them and press:

 {Selection} **PART** **#** Where **#** is the part number (1 to 9).

Repeat this step as many times as necessary.

The auxiliary screen presents near each item its part number. Note that the timing flag is overwritten with the parts flag (**P**) in the status line.





Edit the cue 10 including the channels 1 to 10 at 50%, the part 1 including the channels 11 to 12 at 35%

```
RST
CHANNEL 1 THRU 10 @ 50
11 THRU 12 @ 35 PART 1
CUE 10 REC
```

Empty the editor if is needed

Edition of the channels 1 to 10

Edition of the part 1

And store the editor as cue 10



Modify the cue 10 (of the previous example) including the channel 1 in part 1, changing the channel 12 from part 1 to the 2, and adding the channel 15 at 80% in part 3.

```
RST CUE 10 MDFY
CHANNEL 1 PART 1
12 PART 2
15 @ 80 PART 3
REC
```

Select the cue 10 to modify it

Set the channel 1 in part 1

Set the channel 12 in part 2

Edit the part 3

And accept the modification of the cue 10



*Use example of parts in Theater:*

Suppose a scene with a slowly nightfall, where at the end of the nightfall a street lamp will be lit.

The street lamp is the channel 25, and the nightfall lights are the channels 10 to 15.

Store these channels at full in the cue 1 and the channel 25 in the part 1

```
CHANNEL 10 THRU 15 ENTER 25 @ @ 25 PART 1 CUE 1 REC
```


Now, open **CUE CUE** screen to edit the cue 1 with  $T\uparrow=35$  sc and its part 1 with  $T\uparrow\oplus = 35$  &  $T\uparrow=0,1$  seconds.

In this way, when the cue 1 fades in scene, all these channels fades in scene, slowly, except the channel 25 (street lamp) that waits 35 seconds and then fades in scene in a cut time.

In the next scene dawns slowly, and after the dawn the street lamp will be at off. The dawn is done using the channels 30 to 40, and the street lamp is the channel 25.


```
CHANNEL 30 THRU 40 @ @ 25 @ 0 1 PART 1 CUE 2 REC
```

Edit the cue 2 with  $T\uparrow=10$  sc, and its part with times as  $T\uparrow=0,1$  &  $T\uparrow\oplus = 10$  seconds.

 Note: Example of cue 2 is done using a dipless crossfade in mode  $T\uparrow$  (See option Dipless Mode inside menu 31: Playbacks)

## 6.4.2 RETURN A ITEM TO THE BASE CUE

To return channels, scrollers, or parameters in a part, to the base cue, select them and press:

 {Selection} **PART 0**

If all the items of one part are eliminated, the part is deleted.



In the cue 10, return the channel 1 to the base cue.

**RST CUE 1 0 MDFY** Select the cue 10 to modify it  
**CHANNEL 1 PART 0** Set the channel 1 in the base cue (part 0)  
**REC** And accept the modification of the cue 10



Remember: To delete an item of one cue (is or not in a part) use the **RELEASE** function.

## 6.4.3 EDIT TIMES FOR THE CUE PARTS





Each cue part can have programmed its input times: **T↑** and **T↑⊙**

To edit these input times, press **CUE CUE**

Cue	T↑	T↓	T <sub>e</sub>	T <sub>⊙</sub>	T <sub>⊙</sub>	T <sub>n</sub>	Jump	Lp	Text	Command	TC	cf⊕
1	3	3	∞						PZ			cf
+P1	01			01								c
+P2	23			03								c

The times of each part are presented in one line (**T↑** & **T↑⊙**). To edit one of these times, select it and enter its value. In this example, the cue 1 has 2 parts (+P1 & +P2).

## 6.4.4 OTHERS ACTIONS WITH PARTS


-  **CUE # PART #' LOAD M#** Loads in **M#**, the part **#'** of the cue **#**
-  **CUE # PART #' ENTER** Selects in the editor the part **#'** of the cue **#**
-  **CUE # PART #' CALL** Call in the editor the part **#'** of the cue **#**
-  **CUE # PART #' RELEASE** Releases of the editor the part **#'** of the cue **#**


Remember that **CALL** & **RELEASE** execute these commands fading in 2 seconds; and **CALL CALL** & **RELEASE RELEASE** execute these commands suddenly.

## 6.5 MODIFY A RANGE OF CUES OR GROUPS

---

It's possible to modify a range of cues or groups.

 **RST** **CUE** **#** **THRU** **#'** **MDFY** {modifications} **REC** **#<sub>1</sub>** **#<sub>2</sub>** **REC**

 **RST** **GROUP** **#** **THRU** **#'** **MDFY** {modifications} **REC** **#<sub>1</sub>** **#<sub>2</sub>** **REC**

When **MDFY** is pressed, only the first cue (or group) of the selected range is loaded in the editor to modify it. In the status line appears the flag **Modify CUEs** (or **Modify GRPs**) in a red filed.

After the modifications, press **REC** to store them over all the cues of the range. When **REC** is pressed, red window appears with the options of mode (**#<sub>1</sub>**) and attribute (**#<sub>2</sub>**). After that the options **#<sub>1</sub>** and **#<sub>2</sub>** have been entered, press **REC** again to modify the range.

MODIFY OPTIONS		# <sub>1</sub> , # <sub>2</sub>	(REC to confirm)
# <sub>1</sub>	HTP/LTP Mode	# <sub>2</sub>	Attributes
1:	ABSOLUTE/ABSOLUTE	0:	Normal
2:	RELATIVE/BASE	1:	+News
3:	BASE /BASE	2:	Not ↓ HTPs @FF
		3:	+News & Not ↓ HTPs @FF

### 6.5.1 The mode options (**#<sub>1</sub>**)

---

#### 1: ABSOLUTE/ABSOLUTE

The modifications are applied to the range cues in absolute mode. So, the editor value is the value to apply in the modifications.

#### 2: RELATIVE/BASE

**HTP=RELATIVE:** Mode where each value that has been modified, takes the relative value for the modification. Example: If a channel modifies its level from 45 to 50%, relative value +5%, in all the cues this channel increments its level in 5%.

**LTP=BASE:** The parameters modifications are applied to the range cues in absolute mode only in case of that the source value coincide with the value of the first cue before the modification. Example, if a color parameter is modified from **Red** to **Green**, in the rest of the range cues only when this parameter is at **Red** will be modified to **Green**.

#### 3: BASE/BASE

The modifications are applied to the range cues in absolute mode only in case of that the source value coincides with the value of the first cue before the modification.



Examples of modification for a cues range:



Modification: **Channel 1@60 Fixture 1 red**

Mode 1: ABSOLUTE/ABSOLUTE

**CUE 1 TRHU 3 MDFY {modifications} REC 1 0 REC**

Cue	Source cue	Modified cue
1	Channel 1@50 2@30, Fixture 1 Blue	<b>Channel 1@60 2@30, Fixture 1 red</b>
2	Channel 1@60 2@30, Fixture 1 Yellow	<b>Channel 1@60 2@30, Fixture 1 red</b>
3	Channel 1@30 Fixture 1 Blue	<b>Channel 1@60, Fixture 1 red</b>

Modification: **Channel 1@60 (+10%) Fixture 1 red** (from Blue a red)

Mode 2: RELATIVE/BASE

**CUE 1 TRHU 3 MDFY {modifications} REC 2 0 REC**

Cue	Source cue	Modified cue
1	Channel 1@50 2@30, Fixture 1 Blue	<b>Channel 1@60 2@30, Fixture 1 red</b>
2	Channel 1@60 2@30, Fixture 1 Yellow	<b>Channel 1@70 2@30, Fixture 1 Yellow</b>
3	Channel 1@30 Fixture 1 Blue	<b>Channel 1@40, Fixture 1 red</b>

Modification: **Channel 1@60 (de 50% a 60%) Fixture 1 red** (from Blue a red)

Mode 3: BASE/BASE

**CUE 1 TRHU 3 MDFY {modifications} REC 3 0 REC**

Cue	Source cue	Modified cue
1	Channel 1@50 2@30, Fixture 1 blue	<b>Channel 1@60 2@30, Fixture 1 red</b>
2	Channel 1@60 2@30, Fixture 1 yellow	Channel 1@60 2@30, Fixture 1 yellow
3	Channel 1@30 Fixture 1 blue	Channel 1@30, <b>Fixture 1 red</b>

## 6.5.2 The attribute options (#2)

### 0: Normal

The modification of an item only is applied in the cues where this item exists.

### 1: +News

The modification of an item is applied always; in the cues where this item doesn't exist the item is **added**.

### 2: Not ↓ HTPs @FF

The modification of an item only is applied in the cues where this item exists, **except** when this item is a channel or dimmer at **FF** (100%).

### 3: + News & Not ↓ HTPs @FF

The modification of an item is applied always; **except** when this item is a channel or dimmer at **FF** (100%). In the cues where this item doesn't exist the item is **added**.



Examples of modification for a cues range:

All the modifications are done in mode 1: ABSOLUTE/ABSOLUTE

Modifications: **CHANNEL 1 @ 6 0 2 @ 5 0 REC 1 0 REC**

Attribute 0: Normal

Cue	Source cue	Modified cue
1	channel 1@ 50, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
2	channel 1@ 60, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
3	channel 1@ FF	<b>channel 1@ 60</b>

Modifications: **CHANNEL 1 @ 6 0 2 @ 5 0 REC 1 1 REC**

Attribute 1: +News

Cue	Source cue	Modified cue
1	channel 1@ 50, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
2	channel 1@ 60, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
3	channel 1@ FF	<b>channel 1@ 60, channel 2 @ 50</b>

Modifications: **CHANNEL 1 @ 6 0 2 @ 5 0 REC 1 2 REC**

Attribute 2: Not ↓ HTPs @FF

Cue	Source cue	Modified cue
1	channel 1@ 50, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
2	channel 1@ 60, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
3	channel 1@ FF	channel 1@ FF

Modifications: **CHANNEL 1 @ 6 0 2 @ 5 0 REC 1 3 REC**

Attribute 3: + News & Not ↓ HTPs @ FF

Cue	Source cue	Modified cue
1	channel 1@ 50, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
2	channel 1@ 60, channel 2 @ 30	<b>channel 1@ 60, channel 2 @ 50</b>
3	channel 1@ FF	channel 1@ FF, <b>channel 2 @ 50</b>



The exam screen of channels and fixtures (for example **CHANNEL # EXAM**) is used to exam the result of these range modifications.

## 6.6 THE FIXTURES IN CUES & GROUPS

The fixture parameters that are in scene in **tracking** mode or controlled by some playback, affect to the scene but they are not included in the cue (or group) if they are not in the editor (red or light red).

This characteristic permits us to store the cues (or groups) in several modes, depending of the result that we want to obtain. Some examples:

Starting with empty editor. Select the fixture 1, edit its dimmer and position, and from here, there are several possibilities:

MCS00	Dimmer	X	Y	*Shutter	CWhl	CWhl	RotGB	RotGbRot	GWhl
▶ 1	50%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
2	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN

- Store a cue. This cue only has the X, Y and Dimmer parameters of the fixture 1. When this cue is executed from a master or crossfade, **it's possible** to control the color (Cwhl,...) or gobo (RotGB...), etc, of the fixture 1 with other master or crossfade.

This mode is used to store cues that will be executed sequentially, storing only the changes from current cues to the next cue.

- Store a cue including the current values in scene of the color, gobo, etc, of the fixture 1, pressing **PARAM** **ENTER**. When this cue is executed from a master or crossfade, all the fixture parameters are controlled.

MCS00	Dimmer	X	Y	*Shutter	CWhl	CWhl	RotGB	RotGbRot	GWhl
▶ 1	50%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN
2	%	50%	50%	19OPEN	00WHITE	00%	00OPEN	00ROT-->	00OPEN

This mode is very interesting for the first cue of a crossfaders, or when the cue will be executed in a master to set a whole scene.

- ① It's possible to store a cue including any parameters type, for example including the gobo parameters, pressing: **GOB** **ENTER**

Also it's possible to exclude any parameter or type of the editor before to store the cue to avoid that they be stored in the cue. In example, to store the cue without the Dimmer, pressing **PARAM** **1** **RELEASE**

**RESUME**STORE CUES OR GROUPS:

A cue // group                    {editor} **CUE # REC // {editor/selection} GROUP # REC**  
 The next cue // group            {editor} **CUE REC // {editor} REC**  
 The next group in a master {editor/selection} **GROUP REC // {editor/selection} LOAD M#**

Store the scene in the next cue: CALL REC

Modifications:

General:            **CUE CUE // GROUP GROUP**  
 Contents:         **RST CUE # MDFY {modifications} REC**  
                       **RST GROUP # MDFY {modifications} REC**  
                       **RST MDFY M# {modifications} REC**  
                       {modifications} **MDFY M#**  
                       **RST CUE # THRU #' MDFY {modifications} REC #1 #2 REC**  
                       **RST GROUP # THRU #' MDFY {modifications} REC #1 #2 REC**

Exam cues or groups:

The list:                 **CUE EXAM // GROUP EXAM**  
 A cue or group:         **CUE # EXAM // GROUP # EXAM**  
 A channel in cues & groups: **CHANNEL # EXAM**  
 A fixture in cues & groups: **FIXTURE # EXAM**

Delete:

A cue or group:                 **CUE # DELETE // GROUP # DELETE**  
 A range:                         **CUE # THRU #' DELETE // GROUP # THRU #' DELETE**  
 All the cues or groups:         **CUE DELETE // GROUP DELETE**

Copy & exchange (examples for cues):

Copy:                         **CUE # (THRU #' ) COPY #' ENTER**  
 Exchange:                    **CUE # (THRU #' ) COPY COPY #' ENTER**

Selection:

A cue or group:                 **CUE # ENTER // GROUP # ENTER**  
 A range:                         **CUE # THRU #' ENTER // GROUP # THRU #' ENTER**  
 The master content:             **ENTER M#**  
 The masters contents:         **ENTER▼ M# M# M# ... ENTER▲**  
 The scene:                       **ENTER ENTER**

Call:

A cue or group:                 **CUE # CALL (CALL) // GROUP # CALL (CALL)**  
 A range:                         **CUE # THRU #' CALL (CALL) // GROUP # THRU #' CALL (CALL)**  
 Several masters:               **CALL M# // CALL▼ M# M# M# ... CALL▲**  
 Scene:                           **CALL CALL**

Call to channels & parameters of a cue or group (examples for cues):

**CUE # CHANNEL #' CALL (CALL)**  
**CUE # FIXTURE #' (PARAM #' ) CALL (CALL)**

Parts & timings in the editorEdition: **{selection } PART # ... {selection } PART #'**Deleting: **{selection} PART 0**Edit with Timing #: **{editor} PART PART #**Convert timing to Parts: **{editor} PART PART 7**

Commands that use parts:

**CUE # PART #' ENTER****CUE # PART #' CALL (CALL)****CUE # PART #' LOAD M#****CUE # PART #' RELEASE**



## 7. LIBRARIES

The **8700 Series** consoles have 6 library categories:

99 libraries of **position** -

**POS POS**

99 libraries of **dimmer** -

**DIM DIM**

99 libraries of **color** -

**COL COL**

99 libraries of **gobos** -

**GOB GOB**

99 libraries of **beam** -

**BEAM BEAM**

99 libraries of **x-tra** -

**XTRA XTRA**

When cues and groups are edited using library values, the edition is more conceptual, and their modifications are easier. Suppose that several cues has been stored using the color library **red**, if after it's needed change this color in the show, will be enough to modify the color library **red**, for that the whole show will be updated with the new color.

The library behavior depends of its category.

The fixture parameters that are included in each category are defined (and can be edited) in each fixture definition, inside the menu **04- Fixtures**.

Then, the category of each parameter and if this is included (or not) in the libraries is showed in the **Fixture Definition** window, concretely in the **L** column.

Fixture Definition										
Name	Ch	Comment								
STAGS	17	StageScan								
Manuf Id	File	M	X <sup>2</sup>	Y <sup>2</sup>						
CPAKY	04	STAGESCA	----	M	150	110				
Num	Name	Ch+Fn	I	L	F	Hon	St			
---	Control	17	---	---	---	0	2			
1	81 Iris	1		b	f	255	1			
2	47 CWhl	2		c	f	0	10			
3	82 Frost	3		b	f	0	5			
4	20 Dimmer	4		d	f	139	2			
5	0 X	5		p	f	128	1			
6	1 Y	6		p	f	128	1			
7	83 Zoon	7		b	f	128	1			
8	80 Focus	8								
9	101 Prism	9								
10	102 PrismRot	10								
11	60 CWhl	11								
12	60 RotGB	12								
13	61 RotGbRot	13								
14	40 Cyan	14		i						
15	41 Magenta	15		i						
16	42 Yellow	16		i	c	f	0			

### 7.1 POSITION LIBRARIES

The position libraries collect the **positions** used frequently in the show.

The position libraries are stored from the editor and take the values of the position parameters (as **X** and **Y**) of all fixtures in the editor.

Each library can store the position of one, several or all the fixtures.

After, this position can be applied to one, several or all the fixtures stored in the library.

**To store** a position, select the desired fixtures and place their beams in the desired position (or positions):


{fixture} **TB**⊙ {fixture} **TB**⊙ {fixture} **TB**⊙ ...

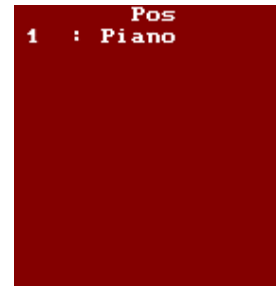
When all needed fixtures are edited, to store the position #, press:

 **POS POS # REC**

Or to store the next position, press:

 **POS POS REC**

When **POS POS** is pressed, the system opens a selection window with the positions list to help us to select the desired number. This window has the numbers and texts of the position libraries. If needed, to page this window use **MONITOR** 



To associate a text to a position library press:

 **POS POS MDFY** {text edition} **EXIT**

To modify a position and in this way, update all the cues and groups those use this position:


 **RST POS POS # MDFY** {modifications in editor} **REC**

## 7.2 DIM, COL, GOB, BEAM & X-TRA LIBRARIES

---

These libraries collect parameters configurations of dimmer, colors, gobos, beam and x-tra, frequently used, that can be used in cues & groups.

These libraries are stored in the editor, using the **first fixture of each type**; type that will be included in the library. Each library can have information about one type, several or all the types in the show. After these libraries can be applied to any stop of included type.

 Example: The fixture 1 to 8 are **MC504**, the color for the fixture 1 is edited in the editor and is stored as color library. Then, this color can be applied to any fixture from 1 to 8.

These 5 categories (dimmer, color, gobo, beam & x-tra) are stored, modified and applied in the same way.


**To store** a library, for example of color:

Select the first fixture of a type and edit the desired color (adjusting its color parameters). If needed, repeat this step for each type to store in the library, and press:

 **COL COL # REC** To store the color #

 **COL COL REC** To store the next color



When **COL COL** is pressed, the system opens a selection window with the positions list to help us to select the desired number. This window has the numbers and texts of the position libraries. If needed, to page this window use **MONITOR** 

To associate text to a library, for example of color, press:

 **COL COL MDFY** {text edition} **EXIT**

To modify on these libraries, for example of color, (and with this update all the cues and groups where the library is used), press:

 **RST COL COL # MDFY** {modifications in editor} **REC**

These commands are the same for the rest of categories, only you must replace **COL COL** (of color) for:

**DIM DIM** for dimmer,  
**GOB GOB** for gobos,  
**BEAM BEAM** for beam, and  
**X-TRA X-TRA** for x-tras

## 7.3 COPY & EXCHANGE

---

The next commands can be applied to any library category.

Copy a library, for example of position, pressing:

 **POS POS # COPY #' ENTER**

Exchange 2 libraries, for example of position, pressing:

 **POS POS # COPY COPY #' ENTER**

Copy a libraries range, for example of position, pressing:

 **POS POS # THRU #' COPY #' ENTER**

Exchange 2 libraries ranges, for example of position, pressing:

 **POS POS # THRU #' COPY COPY #' ENTER**

## 7.4 EXAM

---

The next commands can be applied to any library category

To exam the list of all the libraries, for example of position, press:

 **POS POS EXAM**

To exam one library, for example one position, press:

 **POS POS # EXAM**

## 7.5 DELETE

---

The next commands can be applied to any library category.

To delete a library or range, for example of positions, press:

 **POS POS # DELETE**

To delete the position #

 **POS POS # THRU # DELETE**

To delete the positions from # to #'

To delete all the libraries of one category, for example of position, press:


 **POS POS DELETE** To confirm press **DELETE**

## 7.6 EDITING WITH LIBRARIES

To apply libraries in the editor, of any category, there are 3 methods that can be combined:

- Numeric selection
- Selection in control wheels (activated **EDIT+**)
- Selections using the **BANKS**.

The libraries, always, are applied to the fixtures in the editor (if proceed) and over all the parameters included in the library.

 If, after a library is applied, a library parameter is modified, the library reference is losing, remaining only the absolute values of these parameters in the editor.

### 7.6.1 NUMERIC SELECTION

Select the fixtures to apply the library, {fixtures}

Select the category of the library, for example, **POS POS**

Select the library number,

Pressing **# ENTER**

Or using the mouse #:Text<sup>⌘</sup>.

Resume:

 {fixtures} **POS POS # ENTER**

In the monitor, the parameter edited with library presents a blue character:

MC500	Library	Shutter	CWh1	CWh1	RotGB	RotGbRot	GWh1
1	%	62% 47%	19OPEN	00WHITE	00%	00OPEN	00ROT--> 00OPEN
2	%	62% 47%	19OPEN	00WHITE	00%	00OPEN	00ROT--> 00OPEN
3	%	62% 47%	19OPEN	00WHITE	00%	00OPEN	00ROT--> 00OPEN



### 7.6.2 SELECTION IN CONTROL WHEELS




To take control of the libraries with the control wheels, activate **EDIT+**



When **EDIT+** is activated, the fixtures present their categories and no their parameters. This screen, more conceptual, is thought to edit directly with libraries & palettes.




MC500	Library	*Pos	Dim	Col	Gob	Beam	Xtra
1	%	01piano	Track	Track	Track	Track	Track
2	%	01piano	Track	Track	Track	Track	Track
3	%	01piano	Track	Track	Track	Track	Track





Note that in this screen applied libraries are showed with its number in a blue field and its text.

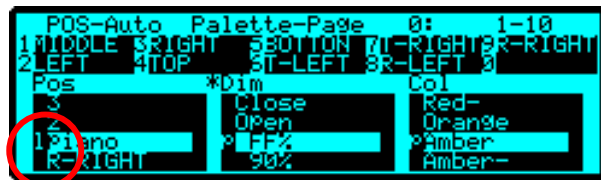
In this mode, the control wheels allow you to edit, directly, palettes & libraries of each category, all organized in 2 banks that are paged pressing  & .

In the Display (or touch panel for GX models), the contents of each wheel are presented, where: Moving the wheels, **W1**, **W2** & **W3**, you select the library/palette in continuous mode.





Pressing  or  you select the library/palette of the active wheels (marked with a \*).

Pressing in each wheel, **W1**, **W2** y **W3**, you change the active wheel, marked with a \*.

In each wheel, you have access to the **palettes & libraries** of the associated category. It's possible to scroll all the palettes (or libraries) moving the wheel or pressing  and ; but to jump from palettes to libraries (or vice versus) is needed to press  or .



In the display, if the selection is a palette, a **p** appears, and if is a library, a **l** appears.

-  If when the wheel is being moved, **WHEEL** is pressed; the edition is done in blind. Only when **WHEEL** is released, the edited value is effective.
-  The command **WHEEL** **WHEEL** allows you to set the same value for the selected fixtures, taking as reference the value of the first selected fixture, and avoiding the relative difference between them.

### 7.6.3 SELECTION IN BANKS KEYS


**BANKS** allow you to execute macros directly when are configured as **Auto** or as one of the fixed modes of category (**POS**, **DIM**, **COL**, **GOB**, **BEAM**, **XTRA**).


The mode of **BANKS** appears to the left of the status line, in example, to access to positions:


- **POS** in a blue field, if mode is **POS**
- **POS** in a red field, if mode is **Auto**. In **AUTO** mode is needed press **POS** to access to the positions, since this configuration is interactive with the edition process.

### 7.6.3.1. GX Models

If needed, configure the **BANKS**, in example for selections of positions:

**BANKS**  **0** **POS** To set mode: Auto (POS)

**BANKS**  **3** To set mode: POS.

Access to the desired palette (or library), paging **BANKS** with **BANKS** 

In the touch panel there are the contents of the active page of the **BANKS** - **1<sub>B</sub>** to **10<sub>B</sub>**

To select a library (or palette), is enough press:



If **BANKS** is set as **Auto**, but now aren't as **POS**, to select a position, press:



Example, to select the position 1:Piano for the fixtures 1 & 3, press:


<b>FIXTURE</b> <b>1</b>	<b>FIXTURE</b> <b>3</b>	<b>1<sub>B</sub></b>	For <b>BANKS</b> in mode <b>POS</b>
<b>FIXTURE</b> <b>1</b>	<b>FIXTURE</b> <b>3</b>	<b>POS</b> <b>1<sub>B</sub></b>	For <b>BANKS</b> in mode <b>AUTO</b>

### 7.6.3.2. GS and GL Models

If needed, configure the **BANKS**, in example for selections of positions:

**BANKS**  **0** **POS** To set mode: Auto (POS)

**BANKS**  **3** To set mode: POS.

Access to the desired palette (or library), paging **BANKS** with **BANKS** 

In the display, under **BANKS** keys - **1<sub>B</sub>** to **10<sub>B</sub>** - you can see the active page and its contents.

To select a library (or palette), is enough press its associated key:




If **BANKS** is set as **Auto**, but now aren't as **POS**, to select a position, press:



Example, to select the position 1:Piano for the fixtures 1 & 3, press:








<b>FIXTURE</b> <b>1</b>	<b>FIXTURE</b> <b>3</b>	<b>1<sub>B</sub></b>	For <b>BANKS</b> in mode <b>POS</b>
<b>FIXTURE</b> <b>1</b>	<b>FIXTURE</b> <b>3</b>	<b>POS</b> <b>1<sub>B</sub></b>	For <b>BANKS</b> in mode <b>AUTO</b>

### 7.6.3.3. General

 A configuration very easy to edit with libraries & palettes is to configure the **BANKS** at mode **2:GROUP** and edit the palettes & libraries using the wheels, activating **EDIT+**. In this mode, you can select the desired group and edit from the wheels with values of libraries and palettes, repeating this process as many times as necessary.



Example

- 1<sub>B</sub>** **W1**  **W2**  **W3**       Group 1 selection & edition of: position, dimmer and color.
- 5<sub>B</sub>** **W1**  **W3**       Group 5 selection & edition of: position and color
- 9<sub>B</sub>**  **W1**       Group 9 selection & edition of gobo

Remember that:




<b>1<sub>B</sub></b>	is the same that	<b>GROUP</b>	<b>1</b>	<b>ENTER</b>
<b>1<sub>B</sub></b> <b>1<sub>B</sub></b>	is the same that	<b>GROUP</b>	<b>1</b>	<b>CALL</b>

## RESUME

Libraries of position, color, gobo beam or xtra (examples for positions)

Store a library:	<b>POS POS # REC</b>
Select a library:	<b>POS POS # ENTER</b>
Modify a library:	<b>POS POS # MDFY</b>
Associate a text to a library:	<b>POS POS MDFY</b>
Copy a library (or range):	<b>POS POS # (THRU #') COPY #' ENTER</b>
Exchange libraries (or ranges):	<b>POS POS # (THRU #') COPY COPY #' ENTER</b>
Exam a library:	<b>POS POS # EXAM</b>
Exam the libraries list:	<b>POS POS EXAM</b>
Delete a library (or range):	<b>POS POS # (THRU #') DELETE</b>
Delete all the libraries:	<b>POS POS DELETE</b>

**Edition of palettes & libraries using the control wheels:**

**EDIT+ W1** , **W2** , **W3** 

**Edition of palettes & libraries using BANKS keys:**

**(POS) #<sub>B</sub>**

7-10  LIBRARIES



## 8. MASTERS AND PAGES

### 8.1 MASTERS

A master is a playback, and this playback can have:

- A **Group** (normal, Absolute or Inhibit)
- A **Cue** (normal, Absolute or Inhibit)
- A **Cue List** (See Chapter 10)
- An **Effect** with rate or level control (See Chapter 9)
- A **Channel**

Each master has a key **M#** and a fader **M#⇅**

**M#** is any key from **M1** to **M24** or **M48**

**M#⇅** is any fader from **M1⇅** to **M24⇅** or **M48⇅**

There is a fader to control the masters output, **SM⇅**, and some dedicated function keys, as:

**FLMT**, **LOAD**, **PRIO**, **STEP** & **PAUSE\_B**

The first needed step is to load the items in each master:

☞ {Select the item} **LOAD** {Select the option & master}

In general, when **LOAD** is pressed, an options window is opened. In this window:

The options in gray aren't available for the current load.

The options in white are available for the current load. You can select some of them pressing

**LOAD** as many times as will be necessary or entering its index number (**#**), or using the mouse.

The option in yellow is the selected option.

#### 8.1.1 LOADING GROUPS IN MASTERS

LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
-----	
3:	CUE
4:	CUE Absolute
5:	CUE Inhibit
6:	CUE List
-----	
7:	EFFECT Rate
8:	EFFECT Level
-----	
9:	CHANNEL

To load a group in master, normal mode, press:

☞ **GROUP** **#** **LOAD** **M#**



Load the group 5 in master 8

**GROUP** **5** **LOAD** **M8**

To load a groups range, in several masters, there are 2 options:

 **GROUP # LOAD ▾ M# M# ... LOAD ▲**

 **GROUP # THRU #' LOAD M#**



Load the groups 6, 7 & 8, in masters 6, 15 & 17

**GROUP 6 LOAD ▾ M6 M15 M17 LOAD ▲**



Load the groups 1 to 5, in master 11 to 15

**GROUP 1 THRU 5 LOAD M11**

Loading ranges:

If the last group of the range is omitted, the console assumes that is the last stored.



Load from group 1 to last stored, in masters from 11:

**GROUP 1 THRU LOAD M11**

If the first and last groups of the range are omitted, the console assumes those are the first and last stored respectively.




Load from first to last stored groups, in masters from 11:

**GROUP THRU LOAD M11**

To load groups range, using all masters from the master 1 and the selected group:

 **GROUP # LOAD FLMT**

Remember. Also a master can be loaded with the editor content (avoiding the necessity of store it previously). In this process, the system stores a new group with the editor content and loads it in the selected master:

 {edit or select channels and/or fixtures} **LOAD M#**



Load a new group in the master 14 with the channels from 1 to 5

**CHANNEL 1 THRU 5 LOAD M14**



A group, always, is loaded with its default fade time, **Group/Ch T↑**, and this time can be changed in the menu **30** or in the masters edition page (see bellow). Groups adopt the behavior of the timing by default.

## 8.1.2 LOADING CUES IN MASTERS

LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
<hr/>	
3:	CUE
4:	CUE Absolute
5:	CUE Inhibit
6:	CUE List
<hr/>	
7:	EFFECT Rate
8:	EFFECT Level
<hr/>	
9:	CHANNEL

To load a cue in master, normal mode, press:

 **CUE # LOAD M#**



Load the cue 5 in master 8

**CUE 5 LOAD M8**

To load a cues range, in several masters, there are 2 options:

 **CUE # LOAD M# M# ... LOAD**

 **CUE # THRU # LOAD LOAD M#**



Load the cues 6, 7 & 8, in masters 6, 15 & 17

**CUE 6 LOAD M6 M15 M17 LOAD**



Load the cues 1 to 5, in master 11 to 15

**CUE 1 THRU 5 LOAD LOAD M11** or  
**CUE 1 THRU 5 LOAD 3 M11**

If the selection is a “cues range”. When **LOAD** is pressed, the selected option is **6: CUE List** (used to load the cues in only one master); the desired option is **3: CUE**; select it pressing **LOAD** or **3**

<b>LOAD</b>	<table border="1"> <tbody> <tr> <td>3:</td> <td>CUE</td> </tr> <tr> <td>4:</td> <td>CUE Absolute</td> </tr> <tr> <td>5:</td> <td>CUE Inhibit</td> </tr> <tr> <td>6:</td> <td>CUE List</td> </tr> </tbody> </table>	3:	CUE	4:	CUE Absolute	5:	CUE Inhibit	6:	CUE List	<table border="1"> <tbody> <tr> <td><b>LOAD</b></td> </tr> <tr> <td>or</td> </tr> <tr> <td><b>3</b></td> </tr> </tbody> </table>	<b>LOAD</b>	or	<b>3</b>	<table border="1"> <tbody> <tr> <td>3:</td> <td>CUE</td> </tr> <tr> <td>4:</td> <td>CUE Absolute</td> </tr> <tr> <td>5:</td> <td>CUE Inhibit</td> </tr> <tr> <td>6:</td> <td>CUE List</td> </tr> </tbody> </table>	3:	CUE	4:	CUE Absolute	5:	CUE Inhibit	6:	CUE List
3:	CUE																					
4:	CUE Absolute																					
5:	CUE Inhibit																					
6:	CUE List																					
<b>LOAD</b>																						
or																						
<b>3</b>																						
3:	CUE																					
4:	CUE Absolute																					
5:	CUE Inhibit																					
6:	CUE List																					

Loading ranges:

If the last cue of the range is omitted, the console assumes that is the last stored.



Load from cue 1 to last stored, in masters from 11:

**CUE 1 THRU LOAD LOAD M11**

If the first and last cues of the range are omitted, the console assumes those are the first and last stored respectively.




Load from first to last stored cues, in masters from 11:

**CUE THRU LOAD LOAD M11**

To load a cues range, using all masters, from the master 1 and the selected cue:

 **CUE # LOAD FLMT**

 Cues are loaded and controlled in accordance with their stored times, including their timings or parts, and all these times can be changed in the edition page **CUE CUE**

### 8.1.3 LOADING CHANNELS IN MASTERS

A channel or channels can be loaded in masters as individual channels (no as group).

To load the channel # in master M#, press:

 **CHANNEL # LOAD 9 M#** or  
 **CHANNEL # LOAD LOAD LOAD LOAD M#**

This process is done selecting the option 9: CHANNEL

**LOAD**


LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
-----	
3:	CUE
4:	CUE Absolute
5:	CUE Inhibit
6:	CUE List
-----	
7:	EFFECT Rate
8:	EFFECT Level
-----	
9:	CHANNEL

**LOAD LOAD LOAD**

or

**9**

or

9:Channel 

LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
-----	
3:	CUE
4:	CUE Absolute
5:	CUE Inhibit
6:	CUE List
-----	
7:	EFFECT Rate
8:	EFFECT Level
-----	
9:	CHANNEL


To load a channels range in consecutive masters, from M#, press:

 **CHANNEL # THRU #' LOAD LOAD LOAD LOAD M#**

To load several channels, from M#, press:

 **CHANNEL # CHANNEL # ... LOAD LOAD LOAD LOAD M#**

 Pressing **CHANNEL 1 THRU 3 LOAD 9 M1**, you load the channel 1 in M1, 2 in M2 and channel 3 in M3.







 A channel, always, is loaded with its default fade time, **Group/Ch T↑**, and this time can be changed in the menu 30 or in the masters edition page (see below).

### 8.1.4 MODES

A cue or group loaded in a master can be several modes:

<b>Normal</b>	The master controls the output to scene of its cue or group.
<b>Inhibit</b>	The master inhibits the output to scene, from others playbacks, of its channels & dimmers (https). A inhibit cue or inhibit group never has output to scene.
<b>Absolute</b>	The master controls the output to scene of its cue or group, while the rest of the masters output is forced to 0% progressively.

To load a cue or group in one of these modes, use the next commands:

<b>Mode</b>	In these commands it's possible to use any of the options of mode selection ( <b>LOAD</b> , mouse, index number...)
GROUP	 <b>GROUP # LOAD 0 M#</b>
GROUP Absolute	 <b>GROUP # LOAD 1 M#</b>
GROUP Inhibit	 <b>GROUP # LOAD 2 M#</b>
CUE	 <b>CUE # LOAD 3 M#</b>
CUE Absolute	 <b>CUE # LOAD 4 M#</b>
CUE Inhibit	 <b>CUE # LOAD 5 M#</b>

The mode also can be selected when we load several masters at the same time;



Load cues from 1 to 5 in inhibit mode in the masters from 1 to 5 pressing:

**CUE 1 THRU 5 LOAD 5 M1**

### 8.1.5 MASTER IN MONITOR

<b>SM</b>	<b>FF</b>	<b>Masters</b>	<b>Page</b>	<b>*0</b>	<b>GO</b>
0100	0200	03FF<	04FF<	0500	0600 0700 08
text1	text2	text3	GrpA	GrpB	
1	*2	*3	G 1	G* 2	G* 10 c 1
↑3	↑3	e1,1	↓3	↑3	↑3

- ← Masters status line.
- ← Master number & output level.
- ← Group text or cues text.
- ← Master content & mode.
- ← Time information.

The masters status line shows us, from left to right:

- The level of the masters general fader, **SM**↑, from **0** to **FF**. If **SM**↑ is under **FF** its level appears in a red field. If its blackout key is active (LED at on), the **SM** flag appears in a red field.

- After, you can see the **SM** configuration as **Masters** (when controls the masters output) or **Dmx In** (when controls the Dmx input).
- After, the page number loaded appears. When some masters is modified (content) near the page number a \* appears. After the page number, if proceed, the page text appears.
- At the end, the current status of the **M#** keys appears, always in a red filed. This current mode, for masters with groups, cues or channels, can be: **GO**, **FLASH** or **SOLO**.

Master number & output level:

Each master is identified by its number (00 to 24 or 48). This number appears in white when the master isn't active in scene (**M#** LED at 50%), and appears in yellow when the master is active in scene (**M#** LED at 100% or blinking). Near the master number appears its output level (00 to FF) in black.

When the master output level isn't the same that the fader level (physically), the master is locked and the flag < appears in red near the level.

Group text or cues text:

Under the master number, if proceed, the text of the loaded cue/group appears.

Master content & mode:

Under the text zone, the master content appears, and:

A normal cue is showed with its number:

1

An absolute cue is showed with its number preceded with an <sup>A</sup> in red:

<sup>A</sup>2

An inhibit cue is showed with its number preceded with an <sup>I</sup> in red:

<sup>I</sup>3

A normal group is showed with its number preceded with a G in red:

G 1

An absolute group is showed with its number preceded with a G<sup>A</sup> in red:

G<sup>A</sup> 2

A inhibit group is showed with its number preceded with a G<sup>I</sup> in red:

G<sup>I</sup> 10

A channel, always normal, is showed with its number preceded with a c in red:

c 1

Time information:

Under master content, its time information appears. This time is the time that is being temporized (if master is active) or the first time to temporize (if master is inactive).

### 8.1.6 EMPTYING MASTERS

Empty a loaded master or several masters

 **DELETE** **M#**

 **DELETE** **M#** **M#** ... **DELETE** 

Empty all the masters:

 **DELETE** **FLMT**

## 8.1.7 EXAMINING MASTERS

Exam a master content:

 **EXAM** **M#**

Exam all the masters:

 **EXAM** **FLMT**

## 8.2 MASTERS EDITION TABLE

All the functions of load in masters can be done from the masters edition table. Access to this table pressing

 **MDFY** **FLMT**

Masters											
Group/Ch	T	3									
01	02	03	04	05	06	07	08	09	10	11	12
scene	scene	black	CORO	CORO	M8.5						
<b>1</b>	<b>*2</b>	<b>*3</b>	<b>G 1</b>	<b>G* 2</b>	<b>G* 10</b>	<b>c 1</b>					
<b>0: GROUP</b> <b>1: GROUP Absolute</b> <b>2: GROUP Inhibit</b>			17	18	19	20	21	22	23	24	scene
<b>3: CUE</b> <b>4: CUE Absolute</b> <b>5: CUE Inhibit</b> <b>6: CUE List</b>											
<b>7: EFFECT Rate</b> <b>8: EFFECT Level</b>											
<b>9: CHANNEL</b> <b>10: RATE</b> <b>11: LEVEL</b>											

To load a master from this table, access to the desired master (using the arrows keys or the external mouse) and select the load type amongst all the options of the options window (entered its index number or click it with the mouse), and then, move the cursor to the right and enter the number of cue, group, channel, etc, pressing **→** **#**

From the setup line it's possible to change the default fade time assigned to groups and channels (**Group/Ch T**). To access to the setup line press **MENU**. To return to the edition table press **MENU** or **↓**

In this master edition table there are 2 options that only can be done from here. These options are 10: RATE & 11: LEVEL. About them:

10: RATE Load a rate control to control the speed of the desired playbacks (**Ra**)

11: LEVEL Load a level control to control the output level of the desired playbacks (**Le**)

8-8  MASTERS AND PAGES

A master set as **RATE** or **LEVEL** permits us to configure the playbacks (masters and sequences) over which this master has control. The next example is for a **LEVEL** master:

01	02	03	04	05	06	07	08	09	10	11	12
text1	text2	text3	GrpA	GrpB							
<b>1</b>	<b>*2</b>	<b>*3</b>	<b>G 1</b>	<b>G* 2</b>	<b>G* 10</b>	<b>c 1</b>	<b>Le XY</b>		<b>Ra XY</b>		
13	14	15	16	17	18	19	20	21	22	23	24
									<b>0: NONE</b>	<b>01-24</b>	
									<b>1: X</b>		
									<b>2: Y</b>		
									<b>3: XY</b>		

When the master is configured, the first option permits us to set if this master controls the sequence **X**, or not (**NONE**).

The next options (in the lower line) permit us to set the masters range that will be controlled for this master. In the previous example, **1-24**, masters form **M1** to **M24**.

To close this masters edition table press **EXIT**



## 8.3 MASTERS IN SCENE

The master behavior depends of its content:

- **Normal:** When a channel, group or cue in normal mode is controlled with a master, its contents appear in a **yellow** field in the auxiliary screens.
- **Absolute:** When a group or cue in absolute mode is controlled with a master, its content (channels and/or fixture parameters) appears in a **yellow** field in the auxiliary screens. In this case, at the same time that the output level of this master is increased, the output levels of the rest of the masters are forced to 0% (progressively).
- **Inhibit:** When a group or cue in inhibit mode is controlled with a master, this master hasn't scene output. At the same time that the master level is increased, the output (coming from other playbacks) of its htp contents (channels & dimmers) is forced, progressively, at 0%. In this case, the output level of channels & dimmers appears in a black field.



Channels 6 to 8 are controlled in masters. Channel 6 is inhibited.

Channels																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
					34	FF	FF												



Dimmers of the fixtures 1 to 4 are controlled in masters, also the parameters X & Y of the fixtures 3 & 4 are controlled in masters. The dimmer of the fixture 3 is inhibited.

MCS00	Dimmer	X	Y	Shutter	Color1	Color2	RotGB	RotGbRot	GWbl
1	FF%		46%	74%	19OPEN	34YELLOW	00%	00OPEN	00ROT--> 00OPEN
2	FF%		55%	67%	19OPEN	34YELLOW	00%	00OPEN	00ROT--> 00OPEN
3	34%		54%	78%	19OPEN	34YELLOW	00%	00OPEN	00ROT--> 00OPEN
4	FF%		65%	75%	19OPEN	34YELLOW	00%	00OPEN	00ROT--> 00OPEN

## 8.4 CONTROLLING A MASTER

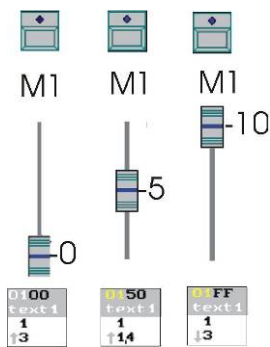
A master loaded with a channel, group or cue can be controlled in the next modes:

- Manual
- Automatic
- Flash

### 8.4.1 MANUAL CONTROL

Manual control of a master is done moving its fader, **M#↑**. The fader position controls the master output level (00-FF).

If **M#↑** is over its 0, active master, the **M#** LED is at 100%.



In this example, the master 1 has loaded the cue 1, and it is represented in 3 status:

- a) Inactive, its output at 0%.
- b) Active, its output at 50%.
- c) Active, its output at 100%.

Under each master, the corresponding information just as appears in monitor is showed.

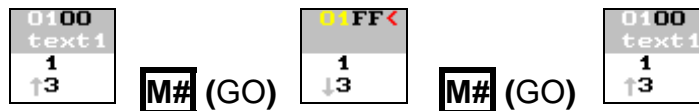
### 8.4.2 AUTOMATIC CONTROL

The cues are controlled using their programmed times, and their timing or parts. Groups and channels are controlled using its general fade time, **Group/Ch T↓**, groups, also, are controlled in accordance with the default timing.

To control a master automatically, set the **M#** keys in **GO** mode, pressing **FLMT** as many times as will be necessary to set **GO** mode (**FLMT** LED at off).

Initially, the master is inactive at 0% (00). Press **M#** (GO) to fade in 100% (FF) in the fade-in time (example: ↑3).

When the master is active at 100% (FF), press **M#** (GO) to fade out 0% (00) in the fade-out time (example: ↓3).



During these fades, the **M#** LED blinks (the master is temporizing), and it's possible:

- Press **M#** to **pause** the fade in progress.
- Move **M#↑** to arrive the master output level (i.e. 50< and take its control manually with the fader.

If a cue has wait-in time (↑Ⓢ), this time is computed before that the fade-in time.

If a cue has **auto time** (Ⓢ), this time is computed after the fade-in time and before the fade-out time, and all these times are computed automatically, one behind other. In other words, the master is activated, remains a time in scene, and then is deactivated automatically.

If a cue has wait-out time (↓Ⓢ), this time is computed before that the fade-out time.

#### 8.4.2.1 LTPs

Fixture parameters defined as **FADE** fades following the programmed times and timing. Parameters defined as **NO FADE** jump to stored level and never fade.

Always that the master doesn't arrive to its 100%, LTP's can return to their starting values. If master has been activated in manual mode, and the **Setup** option, **Manual Track** is **ENABLE**, LTP's can return to their starting values including if the master arrives its 100%, in other cases, the LTP values will remain in scene in **tracking** mode.

**SM**↕ & **GM**↕ don't affect to the LTPs parameters.

In accordance with the LTP behavior, the last active master (manual or automatically) is the master that take the control of these parameters.

#### 8.4.2.2 MANUAL PRIORITY CONTROL

To change this priority order, use the **PRIO** function. Any active master takes priority again, over its LTPs, pressing:



#### 8.4.3 FLASH CONTROL

To do a master flash, set the **M#** keys in **FLASH** mode, pressing **FLMT** as many times as will be necessary to set **FLASH** mode (**FLMT** LED at on).

While that **M#**▼ is held down pressed, the master is at 100% in scene. It's possible to press as many **M#**▼ as will be needed.


To do a master flash-solo, set the **M#** keys in **SOLO** mode, pressing **FLMT** as many times as will be necessary to set **SOLO** mode (**FLMT** LED blinking).

While that **M#**▼ is held down pressed, the master is at 100% in scene, at the same time that the rest of the masters are forced at 0%.

The **SOLO** function can influence to the crossfaders outputs. The level the Flash or Flash-Solo (by default at 100%) can be changed. Both options are modified in menu **32: Masters**. See Chapter 14 - MENUS

## 8.5 MODIFICATION OF THE MASTERS CONTENTS

It's possible to modify the scene (in the editor) and after to store this modification in the desired group or cue that is loaded in a master.

 Master at 100% that has the cue 1. The cue 1 has the channels 1-5 at 50%.


Channels					
1	2	3	4	5	6
50	50	50	50	50	

- Modify the desired items in the editor (**Stage** or **Blind**).  
Example, edit the channel 4 at 30% and add the channel 6 at 100%.
- To store this modification in the cue 1 in the master #,  
pressing **MDFY** **M#**  
The editor content is **added** to the cue content. The editor is emptied in 2 seconds.

Channels					
1	2	3	4	5	6
50	50	50	30	50	FF

Channels					
1	2	3	4	5	6
50	50	50	30	50	FF

Resume:

 {modifications} **MDFY** **M#**



The master can be modified when is active at any level, or when is deactivated (at 00).

If the modifications are done in the **Blind** editor, they will be effectives in scene the next time that the master is activated. In other words, the master content is maintained in scene until the master arrives its 00.

## 8.6 THE MASTER OF MASTERS

---

The fader **SM**↕, by default, is the general master of the output of all the masters.

**SM**↕ can be configured as master of masters or as general master of the DMX input. This configuration is done inside menu **03: Dmx In** or menu **31: Playbacks**. See chapter 14.

## 8.7 PAGES

---

The console has 2000 pages (1-2000). These pages collect the contents of all the playbacks (masters and crossfaders).

The information stored in the pages can be recovered at any moment, in a way quick and easy.

### 8.7.1 STORING OF A PAGE

---

The first step to store a page, it's to load all the masters & the crossfader. It's possible to load all playbacks or only some. Store the page pressing:

 **PAGE** **#** **REC**

 **PAGE** **REC**

**#** is the page number to store. If this number is omitted the next page will be stored.

If the page **#** exists, the system requests us confirmation. Press **REC** to confirm, or enter a new page number to try it again.

### 8.7.2 PAGE TEXT

---

To associate a text to a page, press:

 **PAGE** **MDFY**

Select the **Text** cell of the desired page, and type the text to associate it.

Close this screen, pressing **EXIT**

### 8.7.3 PAGE EXAM

---

Exam one page (**#**) or the list of all stored pages, pressing:

 **PAGE** **#** **EXAM**

 **PAGE** **EXAM**



To exam the current contents of the masters, pressing:

 **EXAM** **FLMT**

Page screens using the arrow keys. Quit pressing **EXIT**

## 8.7.4 LOADING OF A PAGE IN MASTERS

It's possible to recover the contents of a page only in the masters. There are 2 modes to load a page in the masters:

Mode	Command	Comment
no-forced (normal)	 <b>PAGE # LOAD</b>	Only the masters that have information stored in the page are loaded. The rest of the masters maintain their contents. In this way it's possible to store pages only for some masters.
forced	 <b>PAGE # LOAD LOAD</b>	All the masters are updated with the page contents, including the empty masters.

**#** is the page number to load. This number and the text page appear in the masters-status line. After, if the page if any master is changed this number is marked with a \*.

In both cases, If in the page load process there is master active, its content remains in scene until the master arrives its **00** (avoiding jumps in scene). These active masters are marked with its number in red.



Note: The page loaded in this way doesn't affect to the crossfader.

## 8.7.5 ASSIGNING A PAGE IN THE CROSSFADER

To recover the crossfader contents stored in a page there are 2 modes:

**Normal**, where only the cue in **X2** is recovered. The crossfade output isn't affected.

**Forced**, where the cue in **X1/X2** are recovered. The crossfade output is affected.



**PAGE # ASSIGN**

Normal mode



**PAGE # ASSIGN ASSIGN**

Forced mode



Note: The page assigned in this way doesn't affect to the masters.

## 8.7.6 SELECTING A PAGE IN MASTERS & CROSSFADER

---

To recover all the information stored in a page in the **masters & crossfader** at the same time:

 **PAGE # ENTER** Normal mode

 **PAGE # ENTER ENTER** Forced mode

## 8.7.7 MODIFYING A PAGE

---

It's possible to modify the contents of a page pressing:

 **PAGE # MDFY** # is the page number to modify.

Select the data to modify or edit and enter the new data. Quit pressing **EXIT**

## 8.7.8 COPING & EXCHANGING PAGES

---

To copy a page or pages range, press:

 **PAGE # COPY #' ENTER**

 **PAGE # THRU #' COPY #' ENTER**



Copy the page 1 as page 10,

**PAGE 1 COPY 10 ENTER**

To exchange the contents of 2 pages or pages range, press:

 **PAGE # COPY COPY #' ENTER**

 **PAGE # THRU #' COPY COPY #' ENTER**



Exchange the contents of the pages 1 & 10:

**PAGE 1 COPY COPY 10 ENTER**

## 8.7.9 DELETING PAGES

---

To delete the page # press:

 **PAGE # DELETE**

 **PAGE # THRU #' DELETE**

 **PAGE DELETE**

Confirm pressing **DELETE**

## RESUME

### Loading masters & master modes.

Load a cue: **CUE # LOAD M#**  
 Load a group: **GROUP # LOAD M# // {editor} LOAD M#**  
 Load a channel: **CHANNEL # LOAD 9 M#**

Load cues in several masters: **CUE # LOAD▼ M# M# .. LOAD▲**  
 Load groups in several masters: **GROUP # LOAD▼ M# M#.. LOAD▲**

Load a range in consecutive masters:  
**GRUPO # THRU #' LOAD M#**  
**CUE # THRU #' LOAD 3 M#**  
**CHANNEL # THRU #' LOAD 9 M#**

Load the 48 masters from the cue//group #: **CUE # LOAD FLMT // GROUP # LOAD FLMT**

Load cue/group in normal mode: {cue/group} **LOAD M#**  
 Load cue/group in absolute mode: {cue/group} **LOAD LOAD M#**  
 Load cue/group in inhibit mode: {cue/group} **LOAD LOAD LOAD M#**

### Exam:

A master: **EXAM M#**  
 All the masters: **EXAM FLMT**

### Modify/edit any master:

**MDFY FLMT {modifications} EXIT**

### Modify a cue or group loaded in a master:

**RST MDFY M#{modifications} REC**  
**{modifications} MDFY M#**

### Emptying masters:

A master: **DELETE Mn**  
 Several masters: **DELETE▼ M# M#.. DELETE▲**  
 All the masters: **DELETE FLMT**

### PAGES, storing and loading:

Store a page: **PAGE # REC**  
 Store the next page: **PAGE REC**  
 Load a page in master in normal mode: **PAGE # LOAD**  
 Load a page in master in forced mode: **PAGE # LOAD LOAD**  
 Assign a page in crossfaders in normal mode: **PAGE # ASSIGN**  
 Assign a page in crossfaders in forced mode: **PAGE # ASSIGN ASSIGN**  
 Select a page in masters & crossfade, normal mode: **PAGE # ENTER**  
 Select a page in masters & crossfade, forced mode: **PAGE # ENTER ENTER**

Exam A page: **PAGE # EXAM**  
 The pages list: **PAGE EXAM**

### Pages modification:

The page #: **PAGE # MDFY**  
 The pages-list (text): **PAGE MDFY**



COPY & EXCHANGE:

Copy: **PAGE # (THRU #) COPY #' ENTER**

Exchange: **PAGE # (THRU #) COPY COPY #' ENTER**

DELETE:

A page: **PAGE # DELETE**

A pages range: **PAGE # THRU #' DELETE**

All the pages: **PAGE DELETE**

Force priority to Mn: **PRIO▼ M# PRIO▲**

Set mode for Mn (GO/FLASH/SOLO): **FLMT**



## 9. THE EFFECTS

**8748GX  
8748GS**

Maximum 48 effects in playback.

The **8700 Series** consoles have 2000 Effects (Chases) and can playback, at the same time a maximum of 48 or 24 (depending of the model).

**8724GX, 8724GS, 8724GL &  
Tour models**

Maximum 24 effects in playback.

An effect is created inserting cues, groups or channels. The effects are executed in masters.

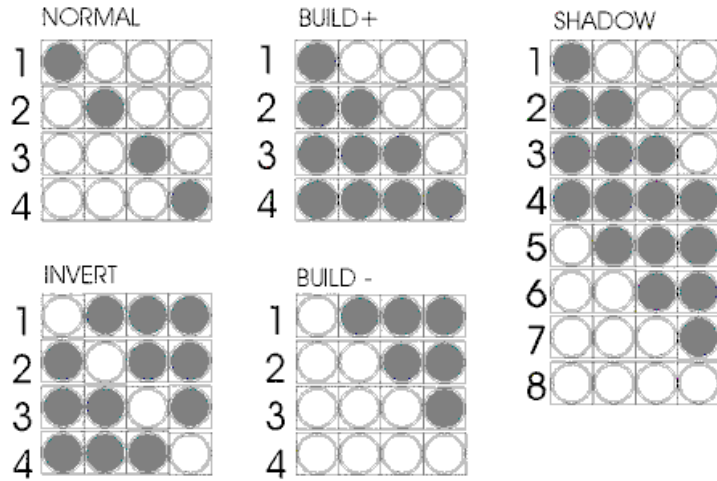
The effect is an ordered succession of cues (channels or groups), in scene the effect activates these cues (channels or groups), dynamically, in the order and mode planned. Each item (cue, group, channel) is a **step**, and each step is a time in scene before to be replaced by the next step. An effect is totally defined by:

Parameter	Name	What is it?
Number	#	It's the number that identify to each effect. (1-2000)
Type	CHANNELS GROUPS CUES	It's the type the item that the steps have. In other words, if the step is edited with a cue, a channel, or a group. All the steps in an effect are the same type.
Title	Text	It's a text associated to the effect.
Fade Time	T ↓	It's the fade time of the effect when the effect is activated in auto (pressing its "GO" key). This fade-time is computed in the start and stop of the effect.
Step Time	StepT	It's the time that each step is in scene before to be replaced by the next step. When the effect is activated in manual mode (step-to-step) this time is not computed.
Direction	> < ><	It's the order of secession of the steps in scene: > Ascendant (1, 2, 3...8, 9) < Descendant (9, 8, 7... 2, 1) >< Cyclic (1, 2, 3... 8, 9, 9, 8, 7..., 2, 1)

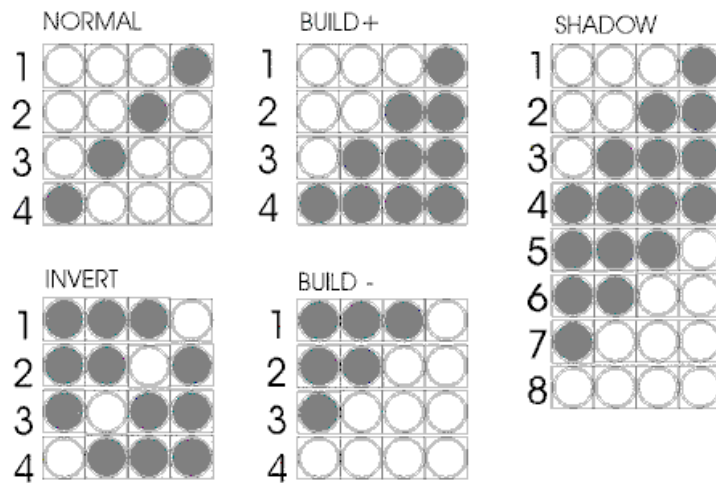
Step Attributes	<p>— </p> <p>/ </p> <p>\ </p> <p>/\</p> <p>XX</p> <p>XF</p>	<p>It's the mode that the steps use to out to scene:</p> <p>—  Each step is activated and deactivated without fade.</p> <p>/  Each step is activated with a fade and deactivated without fade.</p> <p>\  Each step is activated without fade and deactivated with fade.</p> <p>/\ Each step is activated and deactivated with fade.</p> <p>XX The steps are activated and deactivated as a split crossfade.</p> <p>XF The steps are activated and deactivated as a dipless crossfade. (In the dipless crossfade a level never fades down of the minimum stored level, in the split crossfade this level can fades down of the minimum stored level)</p>
Effect Attributes	<p>NORMAL</p> <p>INVERT</p> <p>BUILD+</p> <p>BUILD-</p> <p>SHADOW</p> <p>RANDOM</p> <p>CHAOS</p>	<p><u>NORMAL</u>, the effect starts when all the steps deactivated, and then, each step is activated at the same time that the previous step is deactivated.</p> <p><u>INVERT</u>, the effect starts when all the steps activated, and then, each step is deactivated at the same time that the previous step is activated.</p> <p><u>BUILD+</u>, the effect starts when all the steps deactivated, and then, each step is activated; the previous step follows activated.</p> <p><u>BUILD-</u>, the effect starts when all the steps activated, and then, each step is deactivated; the previous step follows deactivated.</p> <p><u>SHADOW</u>, the effect starts when all the steps deactivated, an then, each step is activated; the previous step follows activated; when all the steps are activated begins a new process where each step is deactivated; the previous step follows deactivated.</p> <p><u>RANDOM</u>, the steps are activated in random order and random time. Very used in effects for fire, etc.</p> <p><u>CHAOS</u>, the steps are activated in random order and random time; also, more than one step can be activated at the same time.</p>
Base cue	<p>Cue</p>	<p>This cue is activated or deactivated at the same time that the effect, and it is used as static part of the effect.</p>
Steps		<p>It's a table is formed with the effect steps. There is not a limit for the steps number. All the steps of one effect are the same type (cues, groups or channels), and each step has one of these items. The steps are ordered, and are activated following the direction, attributes and step time.</p>

Some examples, about a effect of 4 steps, where a activated step is written as “●”, and a deactivated step is written as “○”, and in each example a complete lap is represented.

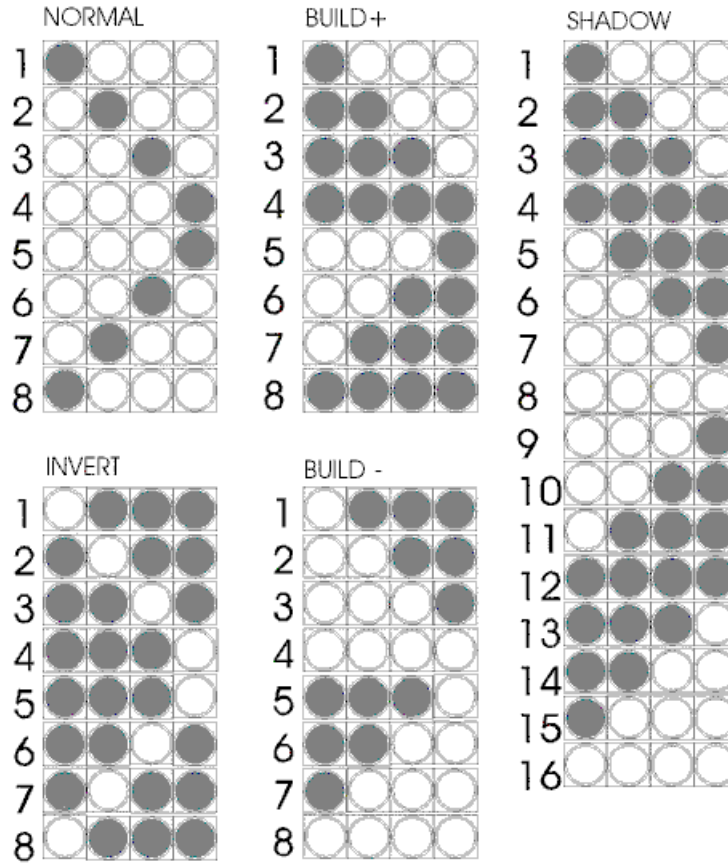
Ascendant direction (> )



Descendant direction (< )




Cyclic direction (> <)

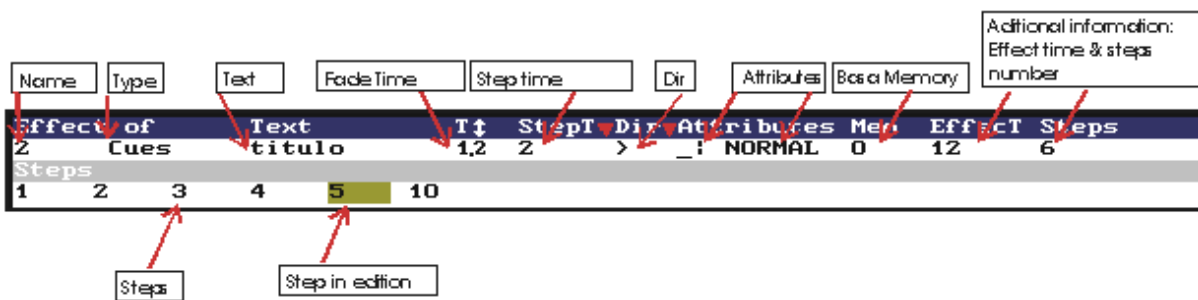


## 9.1 RECORDING A EFFECT

An effect is recorded in the effect edition screen.

 **EFFECT # REC** To open the edition screen of the effect # (1 to 2000)

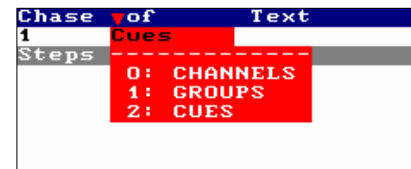
 **EFFECT REC** To open the edition screen of the next effect



When this screen is opened the cursor is placed in the upper zone, where the general parameters of the effect can be edited.

To edit the general parameters:

- Move the cursor using the arrows keys or mouse, to activate the desired parameter.
- Enter the numeric data and accept it pressing **ENTER** or moving the cursor.
- Some parameters present us an options window; in these cases (Type, Direction, etc.), enter the index number of the desired option, or click with the mouse.
- In **Text**, the “text” is entered from the alphanumeric keyboard.



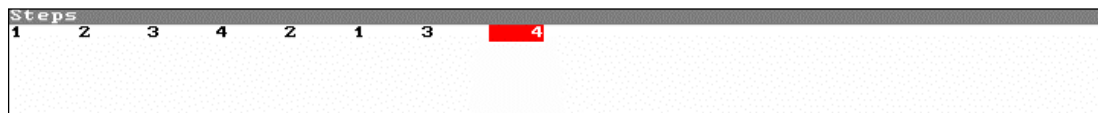
### Notes:

The effect type (**CHANNELS**, **GROUPS** or **CUES**) must be selected before to edit the steps, and this type cannot be changed after the steps edition.

Step time (**StepT**) and fade time (**T↓**) can be from 0.1 to 2000.9 seconds; the times greater than 100 with decimal point don't present us their decimal, but this decimal point is computed.

**MENU** toggles between the general parameters area and the steps area. And, from the general parameters area, also it's possible to access to the steps area pressing **↓**

In the steps edition zone each cell admits a number of cue (channel or group, in accordance with the effect type):



To edit these steps, enter the number of cue, group or channel (**#**). To accept this number, move the cursor to the next cell.

Some special editions for the steps are:

- To insert in the selected step the next cue (group or channel) press **INSERT**
- To insert in the selected step a step with the cue **#** (group or channel) pressing: **# INSERT**
- To delete the selected step press **DELETE**.
- To edit a blackout step, enter **0**

**i** To edit a range (of cues, groups or channels), access to the last step and press and hold down pressed **INSERT** **↓** up to edit the desired steps.

To close the effect edition screen press **EXIT**

## 9.2 MODIFYING A EFFECT

---

The effect is modified in its effect edition screen. Open the edition screen, for the desired effect (#), using one of these options:

 **EFFECT** **#** **MDFY**

 **EFFECT** **#** **REC**

And, if the effect is loaded in masters, i.e. the master 1, also it's possible to press:

 **MDFY** **M1**

Now, it's possible to modify any effect data (except **Type**). To quit pressing **EXIT**

 Note:

The data can be modified at any moment, including if the effect is active in scene.

## 9.3 MODIFYING THE EFFECT PARAMETERS


---

If only it's needed modify the general parameters of an effect/s, these modifications can be done from the effect-list screen:

 **EFFECT** **MDFY**

Move the cursor (using the arrow keys or mouse) and edit the desired parameter.

To quit pressing **EXIT**

 You can use any effect number cell (gray zone) to select a concrete effect. At one of these cells, press **#** **→** to access to the effect #.

## 9.4 EXAM OF EFFECTS

---

It's possible to exam all the effects, in a general mode, pressing:

 **EFFECT** **EXAM**

It's possible to exam the effect #, pressing:

 **EFFECT** **#** **EXAM**

To use the arrow keys to page the information. To quit pressing **EXIT**



## 9.5 COPING EFFECTS

---

It's possible to copy an effect or a range:

 **EFFECT # COPY #' ENTER**

 **EFFECT # THRU #' COPY #' ENTER**



Copy the contents of the Effect 1 in the 5.

**EFFECT 1 COPY 5 ENTER**

If effect 5 was stored, its contents are overwritten.

The effect 1 and 5 are the same.

## 9.6 EXCHANGING EFFECTS

---

It's possible to exchange an effect or a range, pressing:

 **EFFECT # COPY COPY #' ENTER**

 **EFFECT # THRU #' COPY COPY #' ENTER**



Exchange the contents of the Effects 1 & 5.

**EFFECT 1 COPY COPY 5 ENTER**

If the effect 5 is not stored, after exchange, the effect 1 will be not stored.

## 9.7 DELETING EFFECTS

---

To delete the effect #, press:

 **EFFECT # DELETE**

To delete a range, press:

 **EFFECT # THRU #' DELETE**

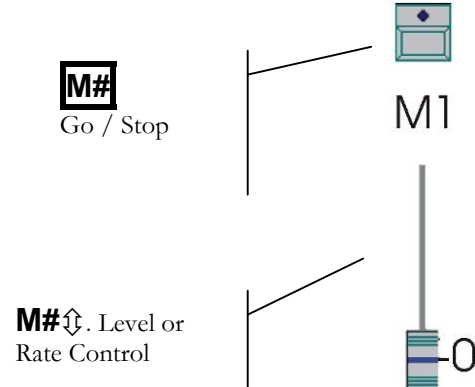
To delete all the effects, press:

 **EFFECT DELETE**

The system asks confirmation. Confirm pressing **DELETE**

## 9.8 THE EFFECTS PLAYBACK

Each effect uses a master to its control.



### 9.8.1 LOADING A EFFECT

An effect can be loaded in a master in 2 modes:

7: EFFECT Rate, **M#** has the effect rate control.

8: EFFECT Level, **M#** has the effect level control.

To load an effect with rate control ( $E^R$ ):

 **EFFECT # LOAD M#**

To load an effect with level control ( $E^L$ ):

 **EFFECT # LOAD LOAD M#** or

 **EFFECT # LOAD 8 M#**

To load an effects range in consecutives masters, i.e. with rate control ( $E^R$ ):

 **EFFECT # THRU # LOAD M#**

To load an effects range in NO consecutives masters, i.e. with level control ( $E^L$ ):

 **EFFECT # LOAD LOAD▼ M# M# ...M# LOAD▲**

After the load, effect is deactivated, its rate control is at 100% or its level control is at full (100< or FF<). **M#** LED is lit at 50%. In this mode, it's not necessary to move **M#** to play the programmed effect.

LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
3:	CUE
4:	CUE Absolute
5:	CUE Inhibit
6:	CUE List
7:	EFFECT Rate
8:	EFFECT Level
9:	CHANNEL

01100<02FF<	
$E^R$ 1	$E^L$ 1
c1	c1

The effect number appears under the master number, marked with an  $E^R$  in red (if has rate control) or marked with an  $E^L$  in red (if has level control). In the last line, the content of the scene steps appears (c1), if the effect is not active, appears the content of the first step; in this example, the first step has the channel 1.

An effect with rate control ( $E^R$ ) always is executed at level full.  $M\#\updownarrow$  controls the effect rate.

Moreover, if a level control is needed, configure a master LEVEL, from **MDFY** **FLMT**. In example, **M12** controls the level of the effect loaded in **M11**.



An effect with level control ( $E^L$ ) always is executed at rate 100%.  $M\#\updownarrow$  controls the effect level.

Moreover, if a rate control is needed, configure a master RATE, from **MDFY** **FLMT**. In example, **M12** controls the rate of the effect loaded in **M11**.



To empty a effect master



## 9.8.2 ACTIVATING A EFFECT

When an effect is loaded in the masters, can have the next modes & status:

- An effect is **active** when any of its steps is active in scene.
- An effect is **auto mode** when its steps are activated following the programmed times (GO).
- An effect is **step-to-step mode**, when the user activates its steps manually.




About **M#** LED:

STATUS	MODE	<b>M#</b> LED
Deactivated	<b>Loaded</b> Not Loaded	<b>Lit at 50%</b> Off
Activated	<b>Auto</b> <b>Step-to-Step</b>	<b>Blinking</b> <b>Lit at 100%</b>

The **base cue** (if it exists) is activated at the same time that the effect, and is deactivated when the effect is deactivated. When an effect changes of auto mode to step-to-step mode (or vice versus) the base cue doesn't change.


The **fade time**,  $T\updownarrow$  only is used when an effect deactivated is activated in auto mode, and when the activated effect is deactivated. This fade time affects to the steps level and the base cue level, as fade-in and as fade-out.

To play the effect it's possible to move/press:

Fader/Key	Comments...
<p><b>M#</b> </p>	<p>If effect <b>E<sup>L</sup></b>. Controls the output level of the effect (for dimmers and channels). When an effect is loaded this master is locked at 100% (<b>FF</b>); to take its control the first time is needed to move it up to the upper extreme.</p> <p>If effect <b>E<sup>R</sup></b>. Controls the speed of execution of the effect. When an effect is loaded this master is locked at 100%; to take its control the first time is needed to move it up to its middle position (<b>-5-</b>).</p>
<p><b>M#</b> <b>GO</b></p>	<p>If the effect is deactivated, when you press <b>M#</b>: The effect is activated in auto mode, reaching its 100% after <b>T</b> seconds: The first step is activated, and after <b>StepT</b> seconds, the next step is activated, and so on... The effect is active until the user deactivates it.</p> <p>If the effect is active in auto mode, when you press <b>M#</b>: The effect is deactivated, reaching its 0% after <b>T</b> seconds.</p> <p>If the effect is active in Step-to-Step mode, when you press <b>M#</b>: The effect following its execution in auto mode from the active step.</p>
<p><b>#</b> <b>M#</b> <b>N° GO</b></p>	<p>If the effect is deactivated, when you press <b># M#</b>: The effect is activated in auto mode, reaching its 100% after <b>T</b> seconds: The first step is activated, and after <b>StepT</b> seconds, the next step is activated, and so on... The effect is executed until <b>#</b> laps are done, and then the effect is deactivated in auto mode in <b>T</b> seconds.</p> <p>If the effect is activated, when you press <b># M#</b>: The effect, in auto mode, is played <b>#</b> laps.</p> <p><b>#</b> is <u>laps number</u>, (1 to 99).</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>In monitor, the laps number that are pending to execution, appears near the scene step... In case of more than 9 laps, the symbol + appears.</p>

<p><b>STEP</b>▼ <b>M#</b> STEP</p>	<p>If the effect is deactivates, pressing <b>STEP</b>▼ <b>M#</b>: The effect is activated in step-to-step mode. The first step and the base cue are activated without fade-time. This step is maintained in scene.</p> <p>If the effect is activated in auto mode, pressing <b>STEP</b>▼ <b>M#</b>: The effect changes to step-to-step mode. The next step is activated and it stays active.</p> <p>If the effect is active in step-to-step mode, pressing <b>STEP</b>▼ <b>M#</b>: The effect follows in step-to-step mode. The next step is activated and it stays active.</p> <p>In this case, each <b>STEP</b>▼ <b>M#</b> advances a step.</p> <p>It's possible to press <b>M#</b> as many times as steps to advance, before to release <b>STEP</b>▲</p>
<p><b>#</b> <b>STEP</b>▼ <b>M#</b> Nº STEP</p>	<p>If the effect is activated or deactivated, pressing <b>#</b> <b>STEP</b>▼ <b>M#</b>: The effect is activated in step-to-step mode. The step # and the base cue are activated without fade-time. This step stays active.</p> <p># is <u>step number</u>, (1 to 2000).</p>

A channel or fixture parameter controlled by an effect, appears in a yellow field in the scene screens.

 Notes: The **Flash** function doesn't affect to effect masters.

## 9.9 LEARN TIME FUNCTION

---

Access to the learn time functions pressing **LNTM** (Learn Time)

Learn the StepT for an effect:

It is possible to learn the step time (**StepT**) of an effect, its rhythm.

Load the effect in the desired masters (**EFFECT 1 LOAD Mn**) and then:

- Press **LNTM** (its LED at ON).
- Press **M#** wait the desired time, and press again **M#**. In this moment:

The effect is activated in auto mode, with the new **StepT**, time between pressings of **M#** y **LNTM** is deactivated (its LED at OFF).

In the right of the status line, **L-T ###** appears in a red filed, when the **LNTM** is active. **# #** **#** is the time (in seconds) that this function is learning.

## 9.10 FIXTURES & EFFECTS

When an effect has fixture parameters (except **Dimmer**), have in mind:

1. The effect level doesn't affect to the parameters. The parameter puts its value in scene inclusively if the level is 0%.
2. Each time that a step is deactivated, its parameters remain their values in scene (**tracking**).
3. The effect takes control of the **LTPs** in scene when it is activated (**GO**), but not with each new step.

### Example 1:

The effect 1 has the cues 1, 2 & 3 (in this order).

The cue 1 has: Fixture 1 at 50% and Red.

The cue 2 has: Fixture 2 at 75% and Blue.

The cue 3 has: Fixtures 1 and 2 at 25%.

The behavior of the effect is:

Active step	Stored in the step	Scene
1	FX 1 @ 50% & Red	FX 1 @ 50% Red
2	FX 2 @ 75% & Blue	FX 1 @ 0% <b>Red</b> (tracking) FX 2 @ 75% Blue
3	FX 1 @ 25%, FX 2 @ 25%	FX 1 @ 25% <b>Red</b> (tracking) FX 2 @ 25% <b>Blue</b> (tracking)
1	FX1 @ 50% & @s Red	FX 1 @ 50% Red FX 2 @ 0% <b>Blue</b> (tracking)
None		FX 1 @ 0% <b>Red</b> (tracking) FX 2 @ 0% <b>Blue</b> (tracking)

### Example 2:

The effect 2 has the cues 1 to 10.

Step 1 has the cue 1: **Color** of the fixtures 1 to 8 at **White**

Step 2 has the cue 2: **Color** of the fixtures 1 to 8 at **Yellow**

Step 3 has the cue 3: **Color** of the fixtures 1 to 8 at **Red**

... ..

Step 10 has the cue 10: **Color** of the fixtures 1 to 8 at **Congo**

This effect allows to you select the desired color in scene for these 8 fixtures quickly:

Command	Scene
<b>3</b> <b>STEP</b> ▼ <b>M#</b>	The <b>Color</b> of the fixtures 1 to 8 is <b>Red</b>
<b>1</b> <b>0</b> <b>STEP</b> ▼ <b>M#</b>	The <b>Color</b> of the fixtures 1 to 8 is <b>Congo</b>
<b>M#</b>	The <b>Color</b> of the fixtures 1 to 8 is changing from <b>White, Yellow, Red...Congo, White...And so on.</b>

### 9.10.1 TAKE PRIORITY WITH A ACTIVE EFFECT

---

If any other playback takes control over the **LTPs** of a active effect, to take control again over these **LTPs** with the active effect, press:

**PRIO** ▼ **M#**

## RESUME

### Storing a effect:

The effect #: **EFFECT # REC**

The next effect: **EFFECT REC**

### Modifying:

Parameters or steps: **EFFECT # MDFY**

**EFFECT # REC**

Only parameters: **EFFECT MDFY**

### Exam:

The effect #: **EFFECT # EXAM**

The effects list: **EFFECT EXAM**

### Delete:

An effect: **EFFECT # DELETE**

A range: **EFFECT # THRU # DELETE**

All the effects: **EFFECT DELETE**

### Copy & Exchange:

Copy: **EFFECT # (THRU #) COPY #' ENTER**

Exchange: **EFFECT # (THRU #) COPY COPY #' ENTER**

### Playback:

GO: **M#**

N°-Lap GO: **# M#**

STEP: **STEP▼ M#**

N° STEP: **# STEP▼ M#**

Learn Time - LNTM: **LNTM M# M#**

Recover the control of the LTPs of a active effect: **PRIO▼ M#**



## 10. SEQUENCES

### 8724GX, 8724GS, 8724GL & Tour Models

24 masters to execute  
sequences. Rest of models have  
48 masters.

The console executes cues in sequential mode using any of its masters or the dedicated crossfader.

The list of cues to execute in sequential mode is named Sequence.

The sequences are executed using crossfades: double fading between 2 cues, one that fade-out scene (scene cue) and the other that fade-in scene (next cue).

Each new crossfade begins with:

- The scene cue at 100% & the next cue at 0%
- During the Crossfade progress the cue in scene fades from 100% to 0%, at the same time that the next cue fades from 0% to 100%.
- At the end of the crossfade, the next cue is now scene cue (100%), and a new cue of the list is now the next cue (0%).

The list is executed, cue to cue, in ascendant order.

### 10.1 LOADING SEQUENCES

To execute a sequence, first you must store the desired cues, and then you must load the cues list in a crossfader or master.

When you load a cues range, the first cue of this range is loaded as next cue.

#### 10.1.1 IN THE X1/X2 CROSSFADER

 **CUE # THRU #' ASSIGN**

In the cues range selection, if **#** is omitted, the range begins from the first stored cue, and if **#'** is omitted the range ends in the last stored cue.

To load all the stored cues, press:

 **CUE THRU ASSIGN** As closed list.

 **CUE ASSIGN** As opened list. Each new cue is added to the list.

10-2  SEQUENCES

If **THRU** is omitted the cues range loaded will be an *open range* and each new stored cue will be loaded at the end of this sequence in the crossfade.

 Examples **CUE # ASSIGN** or **CUE ASSIGN**

To load the cues range, and to execute the first crossfade immediately, press:

 **{cues range} ASSIGN ASSIGN**

The crossfader in the monitor shows us its cues range.

X1 FF	LEVEL	FF	RATE	100%	Dipless	TeOn						
X2 00	Cue	T↑	T↓	Te	Tδ	Tψ	Tm	Jump	Lp	Text	Command	TC
	0											
	3	3	3	∞		T1				crossfader cues		
	4	3	3	∞		T1						
	5	3	3	∞		T1						
	6	3	3	∞		T1						

The crossfaders have the next color-code:

X1 is marked in cyan.

X2 is marked in light cyan.

In the **CUE CUE** screen, the cues loaded in X1 & X2, adopt this color code. When this screen is opened, the cursor is in the first cue. To toggle the cursor between the first cue to the cue in X2, press **CUE CUE**.

## 10.1.2 IN A MASTER, M#

---

 **CUE # THRU #' LOAD M#**

In the cues range selection, if **#** is omitted, the range begins from the first stored cue, and if  **#'** is omitted the range ends in the last stored cue.

To load all the stored cues, press:

 **CUE THRU LOAD M#** As closed list.

Masters don't admit loading of opened list. If **THRU** is omitted will be necessary to select the load mode (**6: CUE List**). In this case, only the selected cue is loaded as sequence.

To load the cues range, and to execute the first crossfade immediately, press:

 **{cues range} LOAD M# M#**

A sequence master in the monitor shows us only the number of its scene cue and of its next cue, in a yellow field.



The sequence master uses the same color for the scene and next cues, the yellow.

To exam the sequence status that is executing in **M#**, press: **EXAM M#**

To edit the cues list loaded in **M#**, press: **MDFY M#**

## 10.2 EMPTYING A SEQUENCE

---

To empty a sequence loaded in the crossfader:

 **DELETE ASSIGN**

To empty a sequence loaded in a master, press:

 **DELETE M#**

## 10.3 EXECUTION

---

The sequences can be executed manually or in auto mode, in base to the programmed times of the cues; from the crossfader or from the masters.

### 10.3.1 MANUAL CONTROL

---

#### 10.3.1.1 In X1/X2 crossfader

In this mode, the movements of **X1** ⇄ & **X2** ⇄ control the crossfade between the cues assigned in **X1** & **X2**. Both faders have an inverted scale, in short, in the same extreme a fader is at 100% and the other fader at 0%.

The crossfade begins with the 2 faders in the same extreme (**X1** ⇄ at 100% & **X2** ⇄ at 0%), and it ends when both faders reach the other extreme (**X1** ⇄ at 0% & **X2** ⇄ at 100%). Just at this moment (crossfade ended) the cue in **X2** at 100% passes to **X1** at 100% while that the next cue in the list passes to **X2** at 0%. A new crossfade is ready. These 2 faders allow you to do a not homogeneous crossfades.

The crossfader LEDs, **X1** & **X2**, indicate us the direction the movement of the faders to end the current crossfade.



#### 10.3.1.2 In masters

In this mode, the movement of **M#** ⇄ controls the crossfade between the scene cue & next cue. The fader controls both cues with inverted scale; in the same extreme the scene cue is at 100% and the next cue at 0%.

The crossfade begins with the fader in an extreme (Scene at 100% & next at 0%), and it ends when the fader reaches the other extreme (Scene at 0% & next at 100%). Just at this moment (crossfade ended) the next cue (at 100%) passes to scene (at 100%) while that a new cue in the list passes to next cue at 0%. A new crossfade is ready. This fader allow you to do homogeneous crossfades.

The direction of the movement of the fader to end the current crossfade appears near the next cue level (near the master number).



## 10.3.2 AUTOMATIC CONTROL

Each **GO** command starts a new crossfade. It's possible to start a crossfade including if the previous crossfade is finished and if not.

During the crossfade it's possible to take manual control with the faders, to pause it or to invert the crossfade direction.

The auto-time ( $T_{\infty}$ ) permits to link crossfades, in others words, if we start the crossfade to the next cue and this cue has programmed a  $T_{\infty}$ , after this first crossfade, automatically, the following crossfade is started. Only if  $T_{\infty}$  is  $\infty$  (infinite) will be necessary a new **GO** command to start the following crossfade.

The times  $T_{\uparrow}$  &  $T_{\downarrow}$  control the crossfade, if have the same value, the crossfade is homogeneous.  $T_{\uparrow\infty}$  &  $T_{\downarrow\infty}$  control the start point of each fading, and these times don't implicate an automatic link to the following crossfade.

The times programmed in the next cue (or cue in **X2**) control the double fade: The input times control the fade in scene & the output times control the fade out scene of the scene cue (in **X1**).

Each time that a crossfade ends, the following cue in the sequence is considered as next cue for the crossfade... Only a programmed **Jump** changes this numerical order.

It's possible to start crossfade to the previous cue (back mode), but in these crossfades in invert direction:

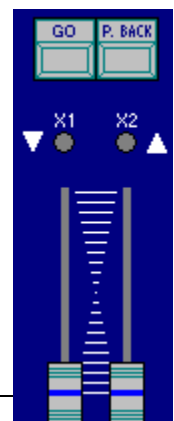
- Don't compute the  $T_{\infty}$ .
- Can be configured to execute a inverting crossfade with the cues programmed times or using a fixed time, **GOBACK Time**; this time can be edited from the menu **30: Editor & Times** or from **CUE CUE** table.

### 10.3.2.1 In crossfader X1/X2

- To start a new automatic crossfade, press **GO**.  
During this double fade, the LED of **X1** (or **X2**) blinks, and indicates you the direction of the faders movement to end the crossfade manually.

At the end of this crossfade, the following is ready. If the cue in **X1** has  $T_{\infty}$ , this time is computed and then, the following crossfade is started automatically (no **GO** is needed).

- To pause the crossfade in progress, press **P.BACK**. After, when the crossfade is paused, it's possible:
  1. To restart it again pressing **GO**
  2. To change the crossfade direction pressing **P.BACK** again.
  3. To end it manually using the faders.



- To start a new crossfade to the previous cue, from a inactive crossfade, press **P.BACK**

In monitor, graphics bars show us the crossfade progress. These bars have the next color code:

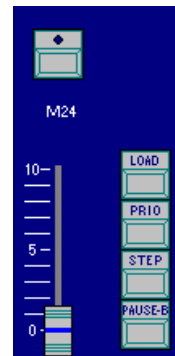
Code	T↑	T↓	T⊙	T↑⊙	T↓⊙
X1/X2	Light Cyan	Cyan	Dark Blue	Dark Gray	Gray

### 10.3.2.2 In masters

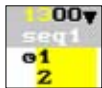
- To start a new automatic crossfade, press **M#**  
During this double fade, **M#** LED blinks.

At the end of this crossfade, the following crossfade is ready. If current scene cue has T⊙, this time is computed, and then, the following crossfade is started automatically (no **M#** it's needed)

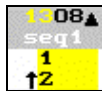
- To pause a crossfade in progress, press **PAUSE-B**▼ **M#**. After, when the crossfade is paused, it's possible:
  - To restart it again pressing **M#**
  - To change the crossfade direction pressing **PAUSE-B**▼ **M#**
  - To ended manually using the fader **M#**↕
- To start a crossfade to the previous cue, from a inactive crossfade, press: **PAUSE-B**▼ **M#**



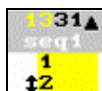
In monitor, it's possible to observe the crossfade progress, where:



Crossfade computing T⊙ programmed in the cue 1.



Normal crossfade, the cue 2 (next) is fading in scene (0% to 100%).



Paused crossfade.



Inverted crossfade, the cue 2 is fading-out scene (100% to 0%).

### 10.3.3 PRIORITY CONTROL (MASTERS)

---

If several active sequences are executed in masters, only the last activated has priority over its LTPs. To recover the priority control in any other active sequence (in a master) press:

**PRIO**▼ **M#**

## 10.4 CONFIGURATION OF THE CROSSFADERS

The crossfaders can be configured in **Dipless** or **Split** mode, also can be configured to compute, or not, the auto times (**T<sub>On</sub>** or **T<sub>Off</sub>**).

To configure the crossfader:



	X
0:	T <sub>On</sub>
1:	T <sub>Off</sub>
2:	Dipless
3:	Split

# is the index number of the desired option.

The current configuration of the crossfade is showed in its status line.

X1 FF 100% Dipless T<sub>On</sub>

In a **dipless** crossfade, channels and fixture parameters that are in **X1** & **X2** never have a level inferior to the level of **X2** (next cue).

 Note:

When a sequence is executed using a master, these options are not available. These sequences always are **Dipless** and have the **T<sub>On</sub>** as actives (**T<sub>On</sub>**)

### 10.4.1 Dipless Crossfade

There are 2 modes for Dipless crossfade. You can select the desired mode in the Setup menu 31: Playbacks, in option Dipless Mode.

In a **dipless** crossfade, channels and fixture parameters that are in **X1** & **X2** never have a level inferior to the level of **X2** (next cue). . About this same channel, if you select:

**0: T<sub>↑</sub>**

The channel fades from its origin level to its target level in the **input** time, **T<sub>↑</sub>**, programmed in the next cue.

**1: T<sub>↑↓</sub>**

The channel fades from its origin level to its target level in the **input** time, **T<sub>↑</sub>**, programmed in the next cue if the level change is increasing (i.e. if channel fades from 20% to 80%)

The channel fades from its origin level to its target level in the **output** time, **T<sub>↓</sub>**, programmed in the next cue if the level change is decreasing (i.e. if channel fades from 80% to 20%)



## 10.5 THE ORDER OF THE CUES

The cues sequence assigned to the crossfade or a master are executed in ascendant numerical order. This order can be broke for: A programmed jump or a manual displacement.

### 10.5.1 PROGRAMMED JUMP

The **Jump** of a cue has the cue number that will be executed after it (its next cue). The **Lp** has the number of times that this programmed jump will be executed (1-99). If **Jump** is empty the next number of cue in sequence will be executed. If **Lp** is empty the programmed Jump is executed always. To delete a **Jump** or **Lp** enter a **0**.

In this example there are 10 consecutive cues, 1 to 10, and the cue 7 has a **Jump** to the 9; the cue 10 has a **Jump** to the 1, with a **Lp** of 3 times.

Then, when the cues 1 to 10 are assigned in the crossfade X (for example), the cues list is as in the figure.

Cue list:10									
Cue	T↑	T↓	T <sub>0</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>5</sub>	T <sub>6</sub>
1	3	3	∞						T1
2	3	3	∞						T1
3	3	3	∞						T1
4	3	3	∞						T1
5	3	3	∞						T1
6	3	3	∞						T1
7	3	3	∞						T1 9
8	3	3	∞						T1
9	3	3	∞						T1
10	3	3	∞						T1 1 3

X1 FF	LEVEL FF	RATE 100%	Dipless	T											
X2 00	Cue	T↑	T↓	T <sub>0</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>5</sub>	T <sub>6</sub>	T <sub>7</sub>	T <sub>8</sub>	T <sub>9</sub>	Jump	Lp
0	0														
1	3	3	∞											T1	
2	3	3	∞											T1	
3	3	3	∞											T1	
4	3	3	∞											T1	
5	3	3	∞											T1	
6	3	3	∞											T1	
7	3	3	∞											T1 9	
9	3	3	∞											T1	
10	3	3	∞											T1 1 3	
1	3	3	∞											T1	
2	3	3	∞											T1	
3	3	3	∞											T1	
4	3	3	∞											T1	
5	3	3	∞											T1	
6	3	3	∞											T1	
7	3	3	∞											T1 9	
9	3	3	∞											T1	
10	3	3	∞											T1 1 3	
1	3	3	∞											T1	2

Note that the **Lp** value (in pink) goes decrementing it, until 0. In this moment the **Jump** stops to execute it.

### 10.5.2 END.JP FUNCTION

This function is dedicated to the control of finite jump in the crossfader X, (**Jump** with programmed **Lp**)

When in the crossfader X a cue with a finite **Jump** is executed, **END.JP** LED is at ON. And, in this case:

 **END.JP**

End of the active **Jump**, but completing its sequence.

 **END.JP** **END.JP**

End of the active **Jump**, and loads in X2 the next cue to the cue with the active **Jump**.

When more than one finite **Jump** is active, **END.JP** begins controlling from the last active finite **Jump** to the first.

**END.JP** LED

ON	Indicates us that in the crossfader <b>X</b> a finite <b>Jump</b> is been executed. Its key is active.
BLINK	Indicates us that in the crossfader <b>X</b> more than one finite <b>Jump</b> is been executed. Its key is active.
OFF	Indicates us that in the crossfader <b>X</b> no-finite <b>Jump</b> is been executed. Its key is no-active.

## 10.5.3 MANUAL DISPLACEMENT

---

### 10.5.3.1 In crossfaders

To select the desired cue as next cue, **#**, press:


 **CUE # ASSIGN** Cue **#** is assigned in X2.

### 10.5.3.2 In masters

To select the desired cue as next cue, **#**, press:

 **# STEP M#** Cue **#** is placed as next cue.

To restore the cues list that is loaded in the master, but beginning with a blackout, press:

 **STEP M#** Cue **0** (blackout) is placed as next cue.

## 10.6 RATE CONTROL


---




### 10.6.1 In crossfaders

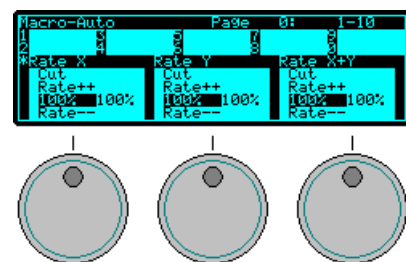
A crossfader can be accelerate or decelerate. To activate or deactivate the rate control, press:

 **RATE**

Now, in the control wheels...

The speed control for the crossfader **X** is in **W1** 

Move **W1**  to control **Rate X**, and/or press  & 



The speed value is presented in percentage (%), in the status line of each crossfader. When this value is not 100% (affecting to the programmed times) is showed in a red field.

To have a rate control at any moment, it's possible to use a master configured as **RATE** from the **MDFY** **FLMT** table.

In the next example, **M24** is configured as **RATE** control of crossfader **X**.

### 10.6.2 In masters

When a sequence is executed using a master can have a rate control in other master configured as **RATE** from the **MDFY** **FLMT** table.

1000▲	1100▲	12100<
0	0	Ra
1	5	10-11
ZZ	Z3	Z4100<
		Ra X

In the example, **M12** is configured as **RATE** of the sequence **M10** & **M11**.

## 10.7 LEVEL CONTROL

All models have a level control for the output of **X1/X2** crossfade, this is **SX**

Others sequences can have a level control in other master configured as **LEVEL**, from the **MDFY** **FLMT** table, for one or several playbacks.

Example, **M12** is a **LEVEL** control for the sequences loaded in the **M10** & **M11** and the loaded in the crossfaders **X** & **Y**.

1000▲	1100▲	12FF<
0	0	Le XY
1	5	10-11

## 10.8 THE COMMANDS AND THE CROSSFADERS

If a cue has an associated command, this is executed from the crossfader or master when its cue begins the crossfade. These commands permit us to execute a **Macro**, a **RS232** command.

Each cue only can have 1 associated command that is programmed from the **CUE** **CUE**. These commands can be:

- 0: NONE      Delete any previous associated command.
- 1: MACRO    To select the macro that will be executed for this command.
- 2: A-232    To select the **A-232** command that will be transmitted by the **A-232** port.

For the commands types **A-232**, see chapter 18 –RS232 PORT. For the command type **MACRO**, see chapter 11 - MACROS.

### **Tip:**

The commands permit us to execute several playbacks simultaneously, to control external devices (slides, video, music, etc)...

## 10.9 **MDFY MDFY FUNCTION**

---

The console has special functions to modify the cues in X1/X2 crossfader.

To modify the scene cue (X1) **adding** the editor modifications:

- Take care that X1 is at 100% (FF).
- From the **Stage** editor modify channels, scrollers and parameters.
- And store these modifications in the X1 cue pressing **MDFY** **MDFY**  
The editor content is **added** in the X1 cue and then the editor is emptied.

 {Stage editor} **MDFY** **MDFY**

To modify the next cue (X2) **adding** the editor modification:

- Take care that X2 is at 0% (00).
- From the **Blind** editor modify channels, scrollers and parameters.
- And store these modifications in the X2 cue pressing **MDFY** **MDFY**  
The editor content is **added** in the X2 cue and then the editor is emptied. When the next crossfade is started, the X2 cue fades in scene with the last modifications.

 {Blind editor} **MDFY** **MDFY**

## 10.10 **THE CROSSFADER OUTPUT**

---

As the same way that for the masters, it's possible to select and call the outputs of the crossfaders:

To select the channels and parameters (without level) of the crossfade output, press:

 **ENTER** **ASSIGN**

To call the channels and parameters with level/values of the crossfade output, press:

 **CALL** **ASSIGN**

## 10.11 LEARN TIME in CROSSFADER

---

It's possible to learn the times for the cues loaded in the crossfade.

To learn the crossfade times, assign the desired cues in the crossfade and press **LNTM** (LED at ON). Now it's possible:

- To learn only  $T_{\odot}$ , pressing **GO** at the desired moment. Press **GO** as many times as  $T_{\odot}$  to learn.  
Note that each  $T_{\odot}$  begins the count after that the crossfade has ended.
- To learn all the cues times, execute the crossfade manually using its **X1**  $\updownarrow$  & **X2**  $\updownarrow$ . The console learns in each faders travel the  $T_{\uparrow}$  &  $T_{\downarrow}$ , and if correct, the  $T_{\uparrow\odot}$  &  $T_{\downarrow\odot}$ . And between travels, learns the  $T_{\odot}$ . It's possible to repeat this process as many times as will be needed.

To end the learning process press **LNTM** again (LED at OFF).

The both methods can be alternated, executing a crossfade manually, the next pressing **GO**, etc.

This function needs the crossfade starts from the beginning (**X1** at 100% and **X2** at 0%).

At the right of the general status line, the flag **L-T ###** appears in a **red** field when **LNTM** is active. Where **###** is the current value of the time counter.

To edit cue times inside the **CUE CUE** screen, but without modifications of the total cue time (according to the crossfade), press **LNTM** (LED at ON) and edit the desired time.

For the normal time edition, deactivate the **LNTM** (LED at OFF).



Examples:

The cues 1 & 2 are programmed with the next times:

Cue	$T_{\uparrow}$	$T_{\downarrow}$	$T_{\odot}$	$T_{\uparrow\odot}$	$T_{\downarrow\odot}$	Total cue time
1	2.5	2.5	3	1	1	6.5 seconds (2,5+3+1)
2	3	3	3	0.5	0.5	6.5 seconds (3+3+0,5)

Now, edit the T↑ of the cue 1, with **LNTM** deactivated:

Cue	T↑	T↓	T⊙	T↑⊙	T↓⊙	Total cue time
1	<b>1.5</b>	1.5	3	1	1	<b>5,5 seconds (1,5+3+1)</b>
2	3	3	3	0.5	0.5	6,5 seconds (3+3+0,5)

Now, edit the T↑ of the cue 1, with **LNTM** active:

Cue	T↑	T↓	T⊙	T↑⊙	T↓⊙	Total cue time
1	<b>1.5</b>	1.5	<b>4</b>	1	1	<b>6,5 seconds (1,5+4+1)</b>
2	3	3	3	0.5	0.5	6,5 seconds (3+3+0,5)

This time is calculated by the system.

## RESUME

Loading	Crossfaders:	Masters:
From the cue #:	<b>CUE # ASSIGN</b>	<b>CUE # THRU LOAD M#</b>
From the first cue:	<b>CUE ASSIGN</b>	<b>CUE THRU LOAD M#</b>
A closed range of cues:	<b>CUE # THRU # ASSIGN</b> <b>CUE # THRU ASSIGN</b>	<b>CUE # THRU # LOAD M#</b>
<u>Assign and start the crossfade:</u>		
<b>{cues} ASSIGN ASSIGN</b>		
<u>Crossfader configuration:</u> <b>ASSIGN</b>		
<u>Empty the crossfader or master:</u>	<b>DELETE ASSIGN</b>	<b>DELETE M#</b>
<u>Place a cue in the master sequence:</u>		
	Cue 0: <b>STEP▼ M#</b>	
	Cue #: <b># STEP▼ M#</b>	
<u>Speed control:</u>	<b>RATE W1⊙</b>	
<u>Modify X1 or X2 cue:</u>	<b>{Stage editor} MDFY MDFY or {Blind editor} MDFY MDFY</b>	
<u>Learn times (crossfaders):</u>	<b>LNTM GO GO ... LNTM</b>	

## 11. MACROS

The **8700 Series** consoles have 2000 macros.

A macro has several keys programmed by the user that can execute at any moment:

1. Accepts any pressed key (and mouse clicks).
2. Doesn't accept movements of faders, wheels, joystick or trackball.


The macros are used to execute edition processes or playback processes automatically.

A macro can be executed from the editor, from the **BANKS**, as command of cue or from the events list.

### 11.1 EDITING A MACRO

The macros are edited in live. To record a macro, the user must press the needed keys, bearing in mind that the pressed key are executing their functions, for that the macro collets these keys in the correct order. After, the macro repeats this process each time that is executed.

Record a macro, pressing:

 **MACRO** **#** **REC** to begin the recording of the macro **#**

 **MACRO** **REC** to begin the recording of the next macro.

When **MACRO** is pressed opens a red window to present us the macros list. In this way is easy to select the macro number.

When **REC** is pressed the flag **RecMac** appears in the status line in a red filed, at the same time that the **MACRO** LED blinks. The recording process has begun.

Press the desired keys (or mouse clicks) **{Keys}**

To end the recording process, press **MACRO** again. The macro is recorded.

The macros list is opened, and now it's possible to edit a text for the new macro **{text}**

Close the macros list pressing **EXIT**

Resume:

 **MACRO** **#** **REC** **{keys}** **MACRO** **{text}** **EXIT**

After, the macros list can be opened at any moment pressing **MACRO** **MDFY**

## 11-2 MACROS



Example:

Record the macro 1 to select the channels: 1 to 5, 10 to 17 and 68.

**MACRO** **1** **REC**  
**CHANNEL** **1** **THRU** **5** **CHANNEL** **1** **0** **THRU** **1** **7** **CHANNEL** **6** **8**  
**MACRO** (Optional, text) **EXIT**

Macro list:	1	1-1
Macro Text		Keys
1	ciclorana-1	CHANNEL 1 THRU 5 CHANNEL 1 0 THRU 1 7 CHANNEL 6 8

## 11.2 MACRO MODIFICATION

To edit the contents of the macro #:



**MACRO** **#** **MDFY**

In the monitor:

Macro Text	1	1-1
1	ciclorana-1	Keys
	CHANNEL 1	THRU 5 CHANNEL 1 0 THRU
	CHANNEL 6	8
	0: DELETE	
	1: INSERT	
	2: ONLY ▼	
	3: ONLY ▲	

Select the key to modify with the cursor, and execute the desired option. The options are:

0: DELETE that permits us to delete this key (in the example **CHANNEL**)

1: INSERT that permits us to insert a new key.

2: ONLY ▼ that permits us to indicate to the system that only “presses” the key

3: ONLY ▲ that permits us to indicate to the system that only “releases” the key

The 2 last options are used, in example, to execute flash functions. The macros don't record the duration or time. For these cases, it's possible to use 2 macros, one to activate the flash function and other to deactivate it.

**MENU** toggles between the setup line (where text can be edited) and the keys table.

Press **EXIT** to close this screen.

## 11.3 MACRO EXAM

It's possible to exam a concrete macro or the macros list.



**MACRO** **#** **EXAM** to exam the macro #



**MACRO** **EXAM** to exam the macros list



## 11.4 DELETE A MACRO

---

To delete the macro # press:

 **MACRO # DELETE**

To delete a macros range, press:

 **MACRO # THRU # DELETE**

To delete all the macros, press:

 **MACRO DELETE**

## 11.5 MACROS COPY

---

To copy a macro or range, press:

 **MACRO # COPY #' ENTER**

 **MACRO # THRU #' COPY #' ENTER**



Examples:

**MACRO 1 COPY 4 ENTER**  
**MACRO 1 THRU 2 COPY 4 ENTER**

## 11.6 MACROS EXCHANGE

---

To exchange 2 macros or ranges, press:

 **MACRO # COPY COPY #' ENTER**

 **MACRO # THRU #' COPY COPY #' ENTER**



Examples:

**MACRO 1 COPY COPY 4 ENTER**  
**MACRO 1 THRU 2 COPY COPY 4 ENTER**

## 11.7 MACROS PLAYBACK

---




A macro can be executed using one of these methods:

- From the editor
- From the **BANKS** in mode **Macro** or **Auto**.
- As command of a cue, when the cue is executed in sequence.
- From the events list.

### 11.7.1 FROM THE EDITOR

---


Execute the macro #, (using the keys or the mouse):

 **MACRO** **#** **ENTER** or  
 **MACRO** # 

```

Macro
1 : NEGRO
2 : REPETICION
3 : PANTALLA
5 : LT
6 : MOVIE
8 : AUDIO 40%
9 : AUDIO 50%
10 : AUDIO 60%
11 : AUDIO 80%
12 : AUDIO 100%
13 : ROMANO
14 : ARABE
15 : MOZARABE
16 : MUDEJAR
17 : ROMANICO NO
18 : ROMANICO Nyc
19 : ROMANICO Pir
20 : GOTICO
21 : GAUDI

```

The macros list appears each time that **MACRO** is pressed. If needed, this window can be paged moving **MONITOR** 

### 11.7.2 FROM THE BANKS KEYS

---

**BANKS** allow you to execute macros directly when are configured as **Macro** or **Auto**.

The mode of **BANKS** appears to the left of the status line:

■ **Macro** in a blue field, if mode is **Macro**

■ **Macro** in a red field, if mode is **Auto**. In **AUTO** mode is needed press **MACRO** to access to the macros, since this configuration is interactive with the edition process.

In this way, the 2000 macros are accessible in 200 banks selected with **BANK+** & **BANK-**

In the display, under the **BANKS** keys - **1<sub>B</sub>** a **10<sub>B</sub>** -, you can see the active bank and its contents

To execute a macro, press its associated bank key


 **#<sub>B</sub>**

### GX Models

Configuration:

**BANKS**  $\oplus$  **0** To set as Auto

**BANKS**  $\oplus$  **1** To set as Macro

In this way, the 2000 macros are accessible in 200 banks selected with the **BANKS**  wheel  
 In the touch panel there are the contents of the active page of the **BANKS** - **1<sub>B</sub>** to **10<sub>B</sub>**

To execute a macro, press its associated touch key.




### GS & GL Models

Configuration:

**BANKS**  $\oplus$  **0** To set as Auto

**BANKS**  $\oplus$  **1** To set as Macro

In this way, the 2000 macros are accessible in 200 banks selected with the **BANKS**  wheel  
 In the display, under the **BANKS** keys - **1<sub>B</sub>** a **10<sub>B</sub>**-, you can see the active bank and its contents

To execute a macro, press its associated bank key



## 11.7.3 AS COMMAND OF A CUE

A macro associated to a cue is executed when its cue is playback in sequence (crossfaders or masters). Macro is associated to a cue as **Command**. When cue begins its fade-in scene, the macro is executed.

To associate a macro to a cue, open the cue list, pressing **CUE** **CUE**  
 Access to **Command** of the desired cue, and select 1: MACRO  
 Access to the next cell to open the macros list.  
 Select the desired macro number, **#**

Cue	It	T1	Te	TΔ	Tφ	To	Jump	Lp	Text	Macro	band	TC	cf
1	01	01	05						INICI	1 : NEGRO/BLACK	1		
2	01	01	1						1 min	2 : REPETITION	>> >>		
3	01	01	1						ROMAN	3 : PANTALLA	Remote OFF		
4	01	01	3						music	5 : LT			
5	12	12	01						ACUED	6 : MOVIE	PAUSE		
6	12	12	01						PUENT	8 : AUDIO 40%	PLAY		
7	12	12	01						ARCO	9 : AUDIO 50%	15		
8	12	12	01						ARCO	10 : AUDIO 60%	16		
9	12	12	01						ARCO	11 : AUDIO 80%	15		

This is the method to synchronize in the crossfaders any action (master playback, effect playback, load of pages, etc).

## 11.7.4 FROM THE EVENTS LIST

From the events list, that it's edited inside menu **23: Time Code**, it's possible to create events to execute macros. See the chapter 21.

## 11.8 EXAMPLES

The macros have a lot of possibilities. In this section, only there are some basic examples:

Macro list:5		1-5	↑↑↑↑ ↓↓↓↓
Macro	Text	Keys	
1	Cross/Seq	CUE 1 2 3 ASSIGN GO	
2	Flash 50%	MENU 3 1 5 0 ENTER EXIT	
3	Flash 100%	MENU 3 1 1 0 0 ENTER EXIT	
4	10Kw	GROUP 1 ENTER GROUP 5 ENTER GROUP 6 5 ENTER	
5	MIDI ON	MENU 2 1 MENU 1 ENTER EXIT	

- Macro 1, named **Cross X**, loads in **X2** the cue 123 and starts the crossfade.
- Macros 2 and 3, named **Flash 50%** and **Flash 100%**, change the Flash level a 50% and 100% respectively.
- Macro 4, named **10KW**, selects all the groups of the 10 KW lamps, in the example, the groups 1, 5 and 65.
- Macro 5, named **MIDI ON**, activates the MIDI port.

### Tips:

If during the macro recording, a warning message appears; press **C** to clear the message and follow with the recording process.

When a macro must begin with a numeric key, is recommended insert **C** before the number to avoid that this number can be modified with other number, in command line, still no used.

As a macro can be executed at any moment, it's recommended don't used the default selection (of command line). See chapter 5.

## 11.9 POWER-UP MACRO

A macro can be configured to execute it each time that the console is turned on. In this way it's possible that the console executes any thing when it is turned on, and this is very used in small exhibitions where the console works without operator.

This macro is programmed in the menu **38: Power-Up Macro**

See chapter 14.

## RESUME

### Record a macro:

Macro #: **MACRO # REC** {keys} **MACRO** {text} **EXIT**

Next macro: **MACRO REC** {keys} **MACRO** {text} **EXIT**

Execute a macro from editor: **MACRO # ENTER**

### Modify a macro:

The macro #: **MACRO # MDFY** {modifications} **EXIT**

Macro texts: **MACRO MDFY** {texts} **EXIT**

### Exam:

The macro #: **MACRO # EXAM**

The macros list: **MACRO EXAM**

### Copy & Exchange:

Copy: **MACRO # COPY # ENTER** or **MACRO # THRU # COPY # ENTER**

Exchange: **MACRO # COPY COPY # ENTER** or  
**MACRO # THRU # COPY COPY # ENTER**

### Delete:

The macro #: **MACRO # DELETE**

A macros range: **MACRO # THRU # DELETE**

All the macros: **MACRO DELETE**



## 12. GENERAL FUNCTIONS

### 12.1 SELECTION OF A RANGE

The range is created pressing **THRU**

An items range is defined with **# THRU #'**, where **#** is the number of the first item and the **#'** it's the number of the last item.

It's possible to select ranges of: Channels, fixtures, groups, cues, effects, pages, macros, positions, dimmers, colors, gobos, etc.

When **#** is omitted, the system takes the first item. *Examples:*

**CHANNEL THRU #'** is the same that **CHANNEL 1 THRU #'**  
**GROUP THRU #'** is the same that **GROUP first-stored THRU #'**

When **#'** is omitted, the system takes the last item. *Examples:*

**CHANNEL # THRU**, is the same that **CHANNEL # THRU last-system-channel**  
**GROUP # THRU**, is the same that **GROUP # THRU last-stored**

When **#** & **#'** are omitted, the system takes the first and last items respectively, excepting for channels & fixtures that it's a special command to select all the channels & fixtures in editor.

*Examples:*

**GROUP THRU**, is the same that **GROUP first-stored THRU last-stored**

### 12.2 COPY AND EXCHANGE FUNCTIONS

The copy function is activated pressing **COPY**

The exchange function is activated pressing **COPY COPY**

Copy & exchange levels/values in the editor:

Channels

**CHANNEL # COPY #' ENTER**, the level of channel **#** is copied to channel **#'**

**CHANNEL # COPY COPY #' ENTER**, the levels of the channels **#** & **#'** are exchanged.

Fixtures of the same type

**FIXTURE # COPY #' ENTER**, the values of fixture **#** are copied to fixture **#'**

**FIXTURE # COPY COPY #' ENTER**, the values of the fixtures **#** & **#'** are exchanged.

Parameter of fixture of the same type

**FIXTURE # COPY #' PARAM #' ENTER**,

the value of parameter #' of fixture # is copied to fixture #

**FIXTURE # COPY COPY #' PARAM #' ENTER**,

the values of parameter #' of fixtures # & #' are exchanged.

Copy & exchange stored items:

Groups:

**GROUP # COPY #' ENTER**, group # is copied to group #'

**GROUP # COPY COPY #' ENTER**, the groups # & #' exchanges their contents.

Cues:

**CUE # COPY #' ENTER**, cue # is copied to cue #'

**CUE # COPY COPY #' ENTER**, the cues # & #' exchanges their contents.

Pages:

**PAGE # COPY #' ENTER**, page # is copied to page #'

**PAGE # COPY COPY #' ENTER**, the pages # & #' exchanges their contents.

Effects:

**EFFECT # COPY #' ENTER**, effect # is copied to effect #'

**EFFECT # COPY COPY #' ENTER**, the effects # & #' exchanges their contents.

Macros:

**MACRO # COPY #' ENTER**, macro # is copied to macro #'

**MACRO # COPY COPY #' ENTER**, the macros # & #' exchanges their contents.

Libraries: **POS**, **DIM**, **COL**, **GOB**, **BEAM**, **XTRA**; with examples for **POS** library:

**POS # COPY #' ENTER**, position # is copied to position #'

**POS # COPY COPY #' ENTER**, the positions # & #' exchanges their contents.

These commands admit as selection a range, i.e. for groups:

**GROUP # THRU #' ...**



Copy function. When the cue, group, etc, of target doesn't exist, the system will create it.

Exchange function. When the cue, group, etc, of target doesn't exist the system will create it, at the same time that the cue, group, etc, of source will be deleted.



## 12.3 RELEASE

---

**RELEASE** is used to release items controlled in the editor.

A channel and/or fixture:

**CHANNEL # FIXTURE # RELEASE**

A group of channels and/or fixtures:

**CHANNEL # ENTER #' FIXTURE # ENTER #' RELEASE**

A range of channels and/or fixtures:

**CHANNEL # THRU #' FIXTURE # THRU #' RELEASE**

A parameter of a fixture or fixtures range:

**FIXTURE # THRU #' PARAM # RELEASE**

All the parameters of the same function of a fixture or fixtures range (example with **COL** function):

**FIXTURE # THRU #' COL RELEASE**

The contents of a cue or cues range:

**CUE # RELEASE**  
**CUE # THRU #' RELEASE**

The contents of a group or groups range:

**GROUP # RELEASE**  
**GROUP # THRU #' RELEASE**

The contents of a part of a cue:

**CUE # PART #' RELEASE**

The LTP parameters pass to tracking mode suddenly.

The channels & fixtures dimmers fade out editor in 2 sec if the command ends with **RELEASE**, or they are released suddenly if the command ends with **RELEASE RELEASE**

## 12.4 SELECT & CALL FUNCTIONS

---

To select items to the editor use **ENTER**.

To call items to the editor use **CALL**.

**Channels and/or fixtures:**

{channels / fixtures} <b>ENTER</b>	The channels and fixtures are pre-selected
{fixtures} <b>PARAM # ENTER</b>	The parameter # of the fixtures is pre-selected and is active in the control wheels.
{fixtures} <b>COL ENTER</b>	All the color parameters are selected and actives in the control wheels.
{channels / fixtures} <b>CALL</b>	The channels and fixtures dimmers fade at 100% in 2 sec.
{channels / fixtures} <b>CALL CALL</b>	The channels and fixtures dimmers jump at 100%.

**Cues and groups:**

{cues or groups} <b>ENTER</b>	The contents of the cues or groups are pre-selected
{cues or groups} <b>CALL</b>	The cues or groups are loaded in the editor at 100%, fading in 2 seconds.
{cues or groups} <b>CALL CALL</b>	The cues or groups are loaded in the editor at 100%, suddenly.

**Part of a cue:**

<b>CUE # PART #' ENTER</b>	The contents of the part #' of the cue # are pre-selected
<b>CUE # PART #' CALL</b>	The part #' of the cue # is loaded in the editor at 100%, fading in 2 sec.
<b>CUE # PART #' CALL CALL</b>	The part #' of the cue # is loaded in the editor at 100%, suddenly.

Effects: No supported for these functions.

**Masters with channels, cues or groups:**

<b>ENTER M#</b>	The M# contents are pre-selected
<b>ENTER ▾ M#, M#... M# ENTER ▲</b>	The contents of these masters are pre-selected
<b>CALL M#</b>	The M# output is captured
<b>CALL ▾ M# M#... M#... CALL ▲</b>	The outputs of these masters are captured

**Crossfader**

<b>ENTER ASSIGN</b>	The output of crossfader is pre-selected
<b>ENTER ▾ M# ASSIGN ... ENTER ▲</b>	The contents of these playbacks are pre-selected
<b>CALL ASSIGN</b>	The output of crossfader is captured
<b>CALL ▾ M# ASSIGN... CALL ▲</b>	The outputs of these playbacks are captured

The scene (console output):

<b>ENTER</b> <b>ENTER</b>	All the items of the scene are pre-selected
<b>CALL</b> <b>CALL</b>	All the items of the scene are captured

Page, Macro or Library (POS, DIM, COL, GOB, BEAM, X-TRA):

{page, macro or library} <b>ENTER</b>	These are execution commands. The page is loaded in masters and crossfaders (normal mode); the macro is executed, or the library is applied in the selected fixtures.
{page} <b>ENTER</b> <b>ENTER</b>	The page is loaded in masters and crossfaders in forced mode.

## 12.5 MDFY & EXAM FUNCTIONS

Both functions permit us to access to the same information:

**EXAM** only for exam, and  
**MDFY** for edition.

To quit of any of these screen press **EXIT**

Exam of a channel or fixture over the stored cues (and groups):

**CHANNEL** # **EXAM**  
**FIXTURE** # **EXAM**

Exam or modification of the lists of cues, groups, effects, pages, macros, libraries (pos, dim, col, gob, beam, x-tra):

<b>CUE</b> <b>EXAM</b>	<b>CUE</b> <b>MDFY</b> ó	<b>CUE</b> <b>MEM</b>
<b>GROUP</b> <b>EXAM</b>	<b>GROUP</b> <b>MDFY</b> ó	<b>GROUP</b> <b>GROUP</b>
<b>MACRO</b> <b>EXAM</b>	<b>MACRO</b> <b>MDFY</b> ó	<b>MACRO</b> <b>MACRO</b>
<b>POS</b> <b>POS</b> <b>EXAM</b>	<b>POS</b> <b>POS</b> <b>MDFY</b>	

Etc..                                  Etc..

In these lists the modification are about general attributes (times, texts, etc) never about contents.

Exam or modification of a cue, group or library:

**CUE** # **EXAM**  
**GROUP** # **EXAM**  
**COL** **COL** # **EXAM**

The contents and attributes are presented in an exam screen.

**RST** # **MDFY**  
**RST** **GROUP** # **MDFY**  
**RST** **COL** **COL** # **MDFY**

The cue, group or library is loaded at 100% in the editor, fading in 2 sec, to modify it.

**Modification of a range of cues or groups:**

**RST** **CUE** **#** **THRU** **#'** **MDFY**  
**RST** **GROUP** **#** **THRU** **#'** **MDFY**

The first cue or first group is loaded at 100% in the editor, fading in 2 sec to modify it. The modifications done in this first cue (or group) are stored in all the cues (or groups) of the range. After press **REC** to store the modifications. The cue or group fades out the editor in 2 sec.

**Exam or modification of an effect, page, or macro**

**{effect, page or macro}** **EXAM**

The contents and attributes are presented in an exam screen.

**{effect, page or macro}** **MDFY**

The contents and attributes are presented in a modification screen.

**Exam or modification of a master**

**EXAM** **M#**

The contents and attributes (of the loaded item) are presented in an exam screen.

**RST** **MDFY** **M#**

Load in the editor, in modification mode, the cue or group at 100%, ready to modify it. If the master has an effect, open the modification screen of its effect.

**{editor}** **MDFY** **M#**

Modify the cue or group in **M#** with the editor contents.

**Exam or modification all the masters**

**EXAM** **FLMT**

Exams the items loaded in masters.

**MDFY** **FLMT**

Modifies the items loaded in masters.

**Other special commands:**

**EXAM** **EXAM**

Permits us to exam a resume of all the show data.

**{editor}** **MDFY** **MDFY**

Special function that permits us to modify the crossfade. See the chapter 10

## 12.6 SELECTION OF THE NEXT ITEM

**NEXT** search the next channel, fixture, cue or group. The **NEXT** function can be applied in **general mode** or **selective mode** (in case of channels and fixtures into the editor).

a) **General mode.** It's used to increment the number of channel, fixtures, cue or group used.

Selection	In the command line...
{channel}{optional level} <b>NEXT</b>	Gives the next number of channel
{fixtures}{optional edition} <b>NEXT</b>	Gives the next number of fixture
{group}{optional level} <b>NEXT</b>	Gives the next number of stored group
{cue}{optional level} <b>NEXT</b>	Gives the next number of stored cue
{page, macro or effect} <b>NEXT</b>	Gives the next number of entered number

Press **NEXT** as many times as will be necessary to arrive the desired number. *Example:*



Select the channels 125, 127 and 129

**CHANNEL 1 2 5 ENTER NEXT NEXT ENTER NEXT NEXT ENTER**


b) **Selective mode.** Increment the number of channel or fixtures that **are in the editor**. This mode is only for channels & fixtures.




Selection	In the commands line...
{editor} <b>CHANNEL NEXT</b>	<b>NEXT</b> LED at on. Gives the next channel in the editor
{editor} <b>FIXTURE NEXT</b>	<b>NEXT</b> LED at on. Gives the next fixture in the editor

To exit of the selective mode, use one of these options:

<b>CHANNEL</b> # {level} <b>FIXTURE</b> # {values} <b>GROUP</b> # {level} <b>CUE</b> # {level} <b>RST</b>	<b>NEXT</b> LED at off. Now, <b>NEXT</b> is in general mode
---	---

**PREV** works as **NEXT** decreasing the number.

 Select the fixtures 1, 5 and 7 and adjust their positions.

Commands	Comments
<b>FIXTURE 1</b> <b>FIXTURE 5</b> <b>FIXTURE 7</b>	Selection of the 3 fixtures
<b>@</b> <b>@</b>	Edition of their dimmers at 100%
<b>FIXTURE</b> <b>NEXT</b>	<b>Pre-selection of fixture 1</b>
<b>TB</b> 	Adjustment of the position of this fixture
<b>NEXT</b> <b>TB</b> 	<b>Pre-selection of fixture 5</b> and adjustment of its position
<b>NEXT</b> <b>TB</b> 	<b>Pre-selection of fixture 7</b> and adjustment of its position

## 12.7 TEST FUNCTIONS

The TEST function permits us to isolate (in the editor) a channel, a dimmer, a cue or a group with the objective to check it. In this testing process:

- The editor contents are forced to 0%, at the same time that the tested item is loaded at 100% in the editor, fading in the editor default time.

{channels} <b>TEST</b>	Empties the editor. The selected channels fade at 100%.
{fixtures} <b>TEST</b>	Empties the editor. The dimmers of the selected fixtures fade at 100%.
{group} <b>TEST</b>	Empties the editor. The selected group fades at 100%.
{cue} <b>TEST</b>	Empties the editor. The selected cue fades at 100%.
{mixed selection} <b>TEST</b>	Empties the editor. The selected channels and fixture dimmers fade at 100%.

Press **TEST** as many times as item to test. In example, to test several cues press **CUE 1**  
**TEST TEST TEST** ...

## 12.8 RESCUE

---

The system stores in automatic mode some data that can be interesting, with the objective of that can be recovered.

The system stores 3 data types:

**Editors.** Each time that **RST** is pressed, it stores a copy of this editor before emptied it.

**Selections.** Each time that a new selection is done the editor stores a copy.

**Modified cues.** Each time that a cue is modified, the system stores a copy of the original cue.

**RESCUE** permits us to recover the last 5 of each type (editor, selection or cue). Each new data of a type is stored in the first place in the rescue list.

To recover same the these data press **RESCUE**

A red window appears with the current options.

SELECTION	EDITOR	CUE
10: *	20: *	30: 3
11: *	21: *	31: 2
12: *	22: *	32: 1
13: *	23: *	33: 7
14: *	24: *	34: 5.6

Select the desired option, **#**, and end the command with **CALL**, **ENTER**, or **TEST**.

The index numbers **10** to **14** are selections, the index numbers **20** to **24** are editors, and the index numbers **30** to **34** are cues.

In the rescue lists of **SELECTION** and **EDITOR** an \* indicates us that these data have information stored. In the rescue list of **CUE** each stored data presents the original cue number.



Modify the cue 3

**CUE 3** **MDFY** {modifications} **REC**

Recover the original cue 3 pressing

**RESCUE 3 0** **CALL**

The original cue 3 is loaded in the editor. Now it's possible to store this editor as any group or cue, including as cue 3

**CUE 3** **REC** **REC**

**RESUME**

RANGE: # THRU #'

COPY & EXCHANGE

Copy // exchange of channels & fixtures

**# COPY #' ENTER // # COPY COPY = #' ENTER**

Copy a fixture parameter

**FIXTURE # COPY #' PARAM #' ENTER**

Exchange a fixture parameter

**FIXTURE # COPY COPY #' PARAM #' ENTER**

Copy of a group, cue, page, macro, effect or library

**# COPY #' ENTER**

Exchange of a group, cue, page, macro, effect or library

**# COPY COPY #' ENTER**

Copy a range of groups, cues, pages, macros, effects or libraries

**# THRU #' COPY #' ENTER**

Exchange a range of groups, cues, pages, macros, effects or libraries

**# THRU #' COPY COPY #' ENTER**

RELEASE

The selection in 2 s // 0.1 s {selection} **RELEASE // {selection} RELEASE RELEASE**

SELECT & CALL

Pre-selection {selection} **ENTER**

Load at 100% fading in 2 sec {selection} **CALL**

Load at 100% suddenly {selection} **CALL CALL**

Execute a page (normal mode), macro or library {selection} **ENTER**

Execute a page (forced mode) {selection} **ENTER ENER**

Select // call to the master content **ENTER M# // CALL M#**

Select the contents of several masters **ENTER▼ M#, M#... M# ENTER▲**

Call the outputs of several masters **CALL▼ M#, M#... M# CALL▲**

Select // call the output of a crossfader **ENTER ASSIGN // CALL ASSIGN**

Select // call the scene output **ENTER ENTER // CALL CALL**

MDFY & EXAM

Command of exam // modification {selection} **EXAM // {selection} MDFY**

Modification of groups and cues **RST {selection} MDFY**

Exam // modification of a master **EXAM M# // RST MDFY M#**

Add the editor to a master {editor} **MDFY M#**

Exam // modification of all the masters **EXAM FLmT // MDFY FLmT**

Exam of the show **EXAM EXAM**

Add the editor to X1 // X2 {Stage} **MDFY MDFY // {Blind} MDFY MDFY**

NEXT & PREV

Next item (or preview) in the system {item} **NEXT // {item} PREV**

Next item in the editor {editor} **CHANNEL /FIXTURE NEXT**

TEST {item} **TEST, TEST...**

RESCUE: **RESCUE # CALL / ENTER...**



## 13. SHAPES

Shape functions allows to you establish dynamic values for channels and fixture parameters; they can be applied parameter by parameter or using some combinations as Pan&Tilt (position parameters), or Cyan, Magenta & Yellow (or color mix parameter). Shapes are edited from Editor and are stored & executed in groups and cues.

To edit with shapes, we start of pre-programmed shapes for movements, colors, dimmers, etc... The basic list of LT shapes can be enlarged with new shapes and shapes combinations that have been adjusted by the user.

Cues & groups with shapes allow you to control the fade of their shapes, with the timing (general mode) or, only for cues, too with part times (specific mode). Timings and parts allow you to control the shapes fade in reference to their size, rate or both.

### 13.1 EDITING SHAPE FOR A SELECTION

To apply a shape (**NEW**) it is needed to select the channels and/or fixtures that you want that execute the shape. After, it's possible to add (**ADD**) more shapes to this same selection.

In the editor you can have several selections executing several shapes each one. One selection can has from one channel or parameter up to all the channels & fixtures of the console.

The limit of shapes is: **30** shapes for each group or cue stored.

To apply a shape, from the editor:

☞ {Select fixtures and/or channels} **SHAPE**  
 From SHAPE window, select 0:NEW

☞ Follow the selection process in the next windows:  
 SHAPE FILTER,  
 SHAPE LIST &  
 PARAMS ID


SHAPE window	Selection of the desired function
<b>SHAPE</b> ----- 0 : <b>NEW</b> 1 : ADD 2 : EDITOR ----- 3 : PLAYBACKS 4 : LIST ----- 5 : EXAM 6 : EXAM SEL	This window is opened pressing <b>SHAPE</b> ...  <b>To apply a new shape</b> you must select the option 0:NEW  The options in grey are not available. The option in yellow is the option pre-selected. To select an option: Use the mouse; enter the option number, #, or press <b>SHAPE</b> as many times as will be necessary to pre-select the desired option (in yellow) and press <b>ENTER</b> to accept it.

<b>SHAPE FILTER</b> window	Help to find the desired shape using filters
<b>SHAPE FILTER</b> - - - - - 0: FREE 1: DIM 2: POS 3: COL 4: GOB 5: BEAM 6: XTRA	Appears if the selection has fixtures, and allows you to filter the shapes list only with shapes for DIM, COL or other category. The <b>0:FREE</b> option is the access to the full list, and is the option to choose a shape that you can apply in a concrete parameter, as the gobo wheel or the zoom.  To choose one of these options: Use the mouse or enter the option number, #  If you initial selection has only channels, this window doesn't appear. In this case, the list is filtered automatically by dimmers (DIM).

<b>SHAPE LIST</b> window	Selection of one shape of the list.
<b>SHAPE LIST</b> - - - - - 1 : Sine 2 : Cosine 3 : Step 4 : Flash 5 : Trapeze 6 : Tri 7 : Saw 8 : Up 9 : Down ... . .	Appear the list of the existing list, normally filtered following the choosing of the previous window.  To choose one of these shapes: Use the mouse, or enter the shape number, # <b>ENTER</b>  If the desired shape isn't in the list, you can return to the filter window to change it, pressing <b>C</b>

<b>PARAMS ID</b> window	Selection of the parameter for the shape (if proceed)
- - - - - POS - - - - - 0: X 1:Y 2:XY-Func 19: S-Pos - - - - - DIM - - - - - 20:Dimmer 21:Shutter 22:Strobo 22: S-Dim - - - - - COL - - - - - 40: Cyan 41:Magenta 42:Yellow 43:Red 44:Green 45:Blue 46:Amber 47:Color 48:Col-Fnc 49:Correct 50: S-Col - - - - - GOB - - - - -	This window only appears if proceed (if it is needed), normally when you has chosen a shape FREE... and it isn't of movement (Pan&Tilt) or color mix (CYM, RGB, etc). This window allows you to choose the parameter where the shape is executed.  To choose a parameter: Use the mouse, or enter the parameter number, # <b>ENTER</b>  You can return to the previous window pressing <b>C</b>



 Examples:

- a) Apply a position shape, a circle movement, to 6 fixtures:

**FIXTURE 1 THRU 6** {if necessary can be edited} **SHAPE**  
 In SHAPE window, select 0:NEW  
 In SHAPE FILTER window, select 2:POS  
 In SHAPE LIST window, select 40:Circle


- b) Apply a dimmer shape of “sine” to 6 channels:

**CHANNEL 1 THRU 6** {if necessary can be edited } **SHAPE**  
 In SHAPE LIST window, select 1: Sine

- c) Apply a free shape of “sine” to the gobo wheel of the fixtures 1 to 6:

**FIXTURE 1 THRU 6** {if necessary can be edited} **SHAPE**  
 In SHAPE window, select 0:NEW  
 In SHAPE FILTER window, select 2:FREE  
 In SHAPE LIST window, select 1: Sine  
 In PARAMS ID\* window, select 60:Gobo

\* More information about this last window in chapter 17 – Fixtures definition.

Channels & fixture parameters that are executing shapes are marked with the symbol  in the scene screens. In the next example, the channels 1 to 10 & the Shutter parameter of the fixtures 1 to 7:

Macro GM 100 B0 Jy Jx Stage Q1 T1 cf 99% 09:17:01																			
Channels																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
10	10	10	10	10	10	10	10	10	10										
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
MC500	Dimmer	R	Y	Shutter	Color1	Color2	RotGB	RotGbRot	GWhl										
1	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
2	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
3	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
4	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
5	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
6	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									
7	10%	55%	56%	24	TROBE	00WHITE	00%	00OPEN	00ROT-->	00OPEN									


## 13.2 ADDING A SHAPE TO A SELECTION

In the editor you can have several selections (of channels and/or fixtures) executing shapes. At any moment, it's possible to add (1:ADD) other shape to the **last selection**.

To add one shape to the **last selection** executing shapes:



In SHAPE window, select 1 : ADD

-  Follow the selection process in the next windows  
SHAPE FILTER,  
SHAPE LIST &  
PARAMS ID

\*To add a shape it's not necessary to do a selection; it's necessary to have, at least, a selection executing shapes in the editor. The selection executing shapes, these shapes and their order can be seen in the **Shape Editor** screen. See below.

## 13.3 THE SHAPE EDITOR - ADJUSTEMENTS

When you have a shape applied in the editor, you can enter in the **Shape Editor** to adjust the desired shape parameters. To enter to this screen, press:





In SHAPE window, select 2 : EDITOR

Shape Editor											
Edit		Tim									
Shapes		T2									
SS	Palette	Type	Effect	Nm	Size	Rate	Gene1	Nm	Mod/Par	Gene2	Nm Mod/Par
0	Circle	PanTil	Free4	0	15	+69	Form	Pan+7	SizeCy	14	Fn1+7
1	Up	Dimmer	Free8	3	83	+92	None				
2	CmySin	ColMix	Free0	0	80	+80	None				

Shape identification parameters...	
SS	Order of the applied basic shapes to the different selections in the editor. Each new selection is marked with the symbol: ▶ In previous example, the first selection has 2 shapes (0 and 1), and the last selection has only one shape (2).
Palette	Name of the basic shapes.
Type	Name of the shape type (parameter of parameters group where the shape is applied). There are some complex types, as PanTil (for movements) or as ColMix (for color changes in color mix fixtures) that they cannot be edited; and other simple types, as Shutter, Dimmer, etc. that they can be edited

	from one parameter to other at any time.
--	--

Basic mode parameters	
Effect Nm	Selection of the desired effect. All of them are effects with different offset or time delays among the items are executing the shape. The items number can be the number of selected items or a desired number (Nm). For more information, see 13.3.1.
Size	Size control of the shape... The size control has 3 options to apply this amplitude: amplitude centered (↕), amplitude increased (↑) and amplitude decreased (↓)
Rate	Rate control for the shape execution. This control has 2 options, (+ & -) that they are a direction change of the shape execution.
Advanced parameters...	
Game 1 to 4 Nm Mod/Par	There are up to 4 special possible games (all of them optional). These games allow to you from deform a shape to modify sizes or rates among items or cycles. For more information, see 13.3.2

To enter data in this table you can use the numeric keyboard and the arrow keys; or use the last encoder (**W3**) and its associated keys:  & ; the encoder is used, specially, to do continuous adjustments of Size & Rate.

### 13.3.1 Effect/Nm

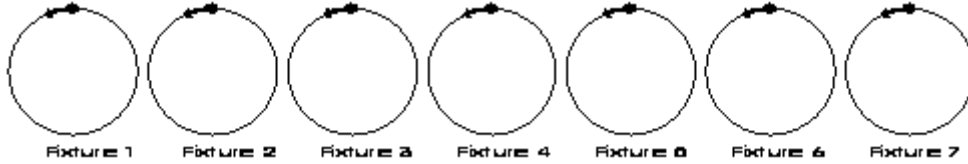
The different effects mark the start points of each shape in relation with the items that are executing the shape. To explain these effects there are examples for 7 fixtures (items) executing a Circle of PanTil type

SS Palette	Type	Effect Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	Nm	Mod/Par
0 Circle	PanTil	Free4 0	↑5	+80	None	---	None	---	---	---

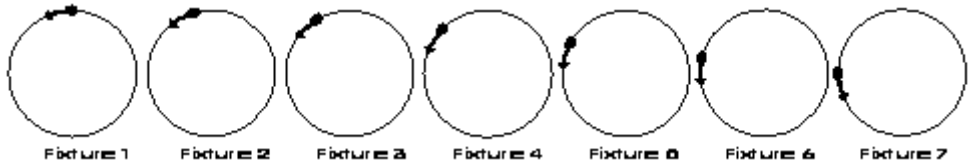
From Effect0 to Effect8, each item that is executing the Circle shape start to do the Circle in a different point of this circle, in other words, start with a small offset that it depends of the selected effect.

If Nm is 0 the total offset is distributed among all the items of the shape (in the example case, 7 fixtures or items). Changing the Nm value, it's possible to distribute this offset among Nm items.

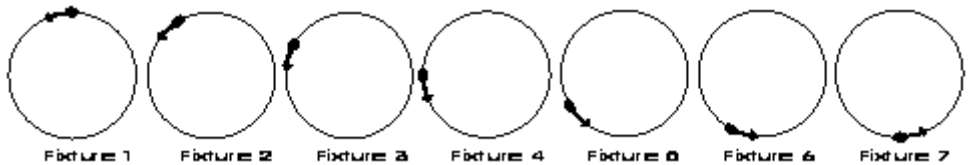
**Effect0** – All items executing the shape with no-offset, simultaneously. Total offset is 0. In this effect the Nm value has no-action.



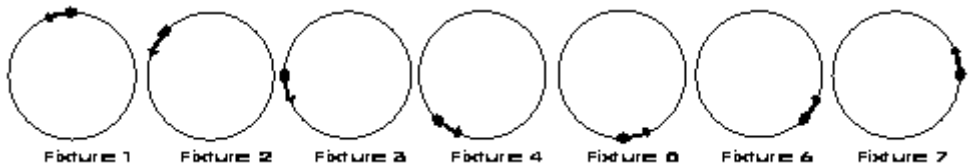
**Effect1** – Total offset among all items is of 1/4 of cycle (cycle = 1 complete circle).



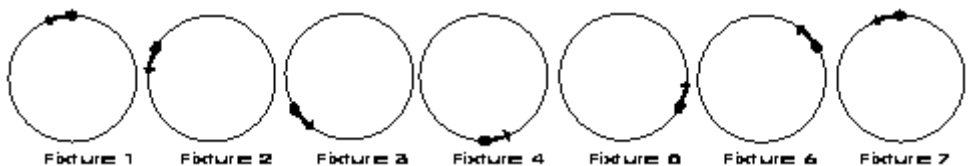
**Effect2** - Total offset among all items is of 1/2 of cycle



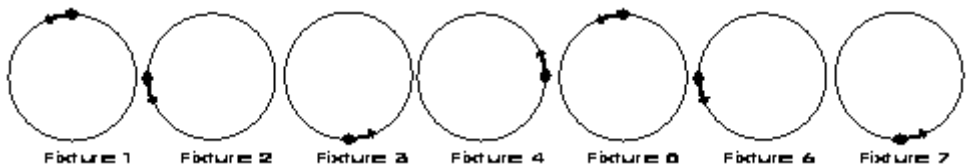
**Effect3** - Total offset among all items is of 3/4 of cycle



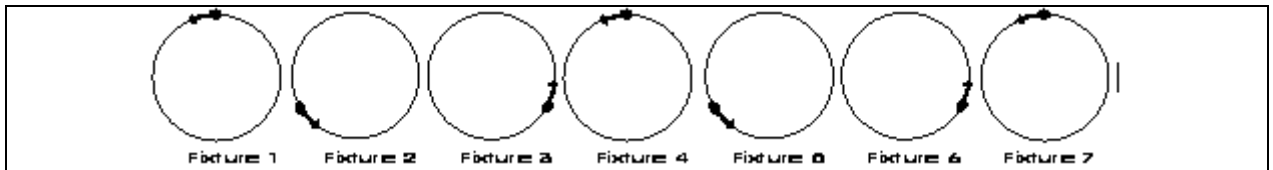
**Effect4** - Total offset among all items is of 1 cycle



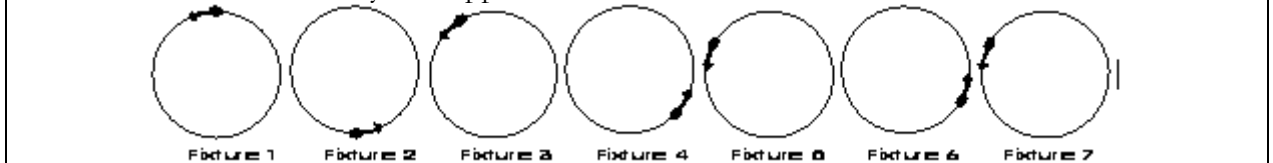
**Effect5** - Total offset among all items is of 1 cycle & 1/2



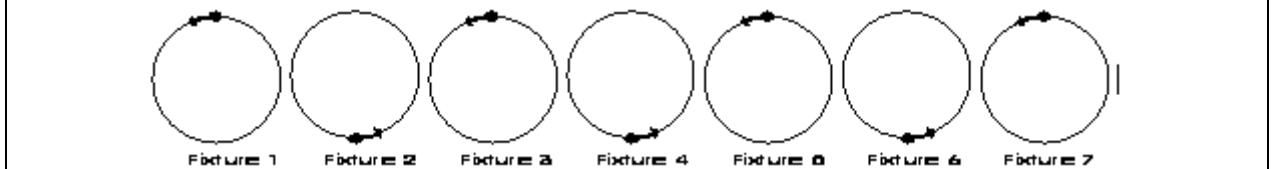
**Effect6** - Total offset among all items is of 2 cycles



**Effect7** – First, there is an offset the  $\frac{1}{2}$  cycle between **odd & even** items; and then, over this offset other offset of  $\frac{1}{4}$  of cycle is applied.



**Effect8** – there is an offset of  $\frac{1}{2}$  of cycle between **odd & even** items.



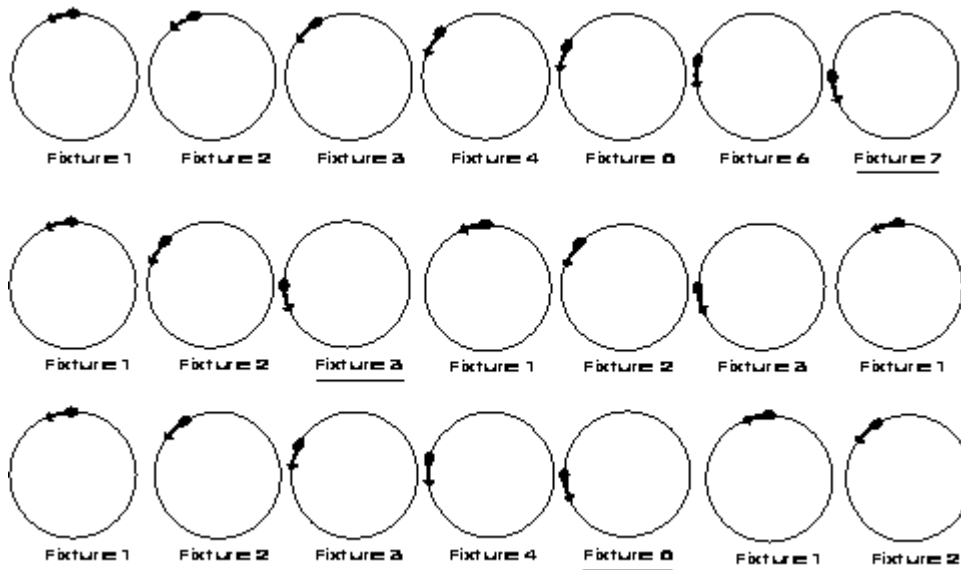
From Chase0 to Chase1, each item executing the Circle shape, will execute its Circle one time following a closed order. First, the first item will execute the circle; then, the second; then, the next... and so on up to the Nm item. After this last item all the process is repeated.

If Nm = 0 the chase is applied to all the items of the shape (in the example, 7 fixtures). Changing values to Nm, it's possible to execute the chase each Nm items.

For Chase0 mode, the “next” item begins to execute its circle only when the previous item has ended.

For Chase1 mode, the “next” item begins to execute its circle when the first item is at half-cycle.

Nm is used to define the items number to apply the selected effect. If Nm=0 (default value) the effect will be applied to all the items of the selection, but it's possible to change this value:



Examples (7 fixtures executing a circle with Effect1) for Nm=0 or 7, Nm=3 and Nm=5; respectively. Nm can have values from 0 to 32.

### 13.3.2 Advanced parameters: Games

Inside the **Shape Editor**, it's possible to apply, optionally, up to 4 different games per shape.

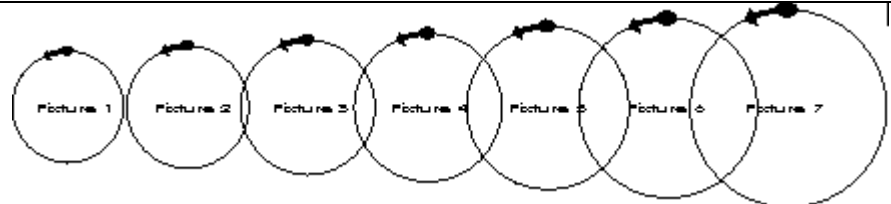
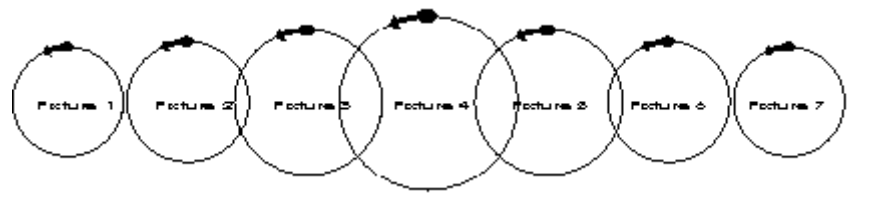
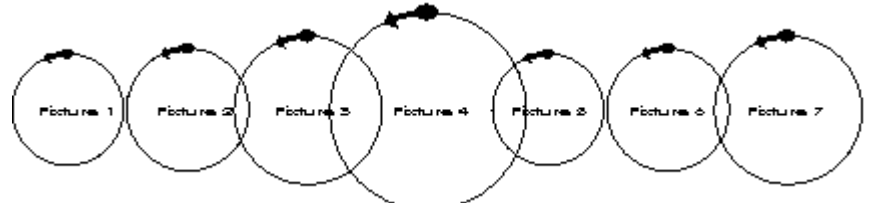
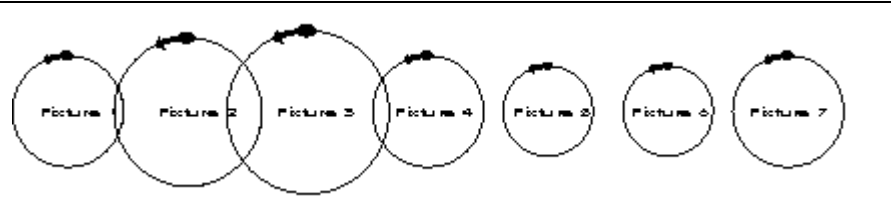
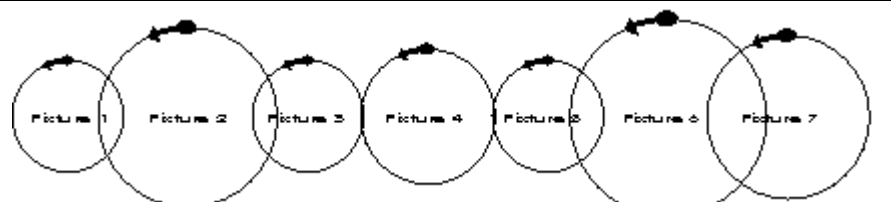
Games	Use
0:None	No game is selected.
1:SizeIt	For this game it's necessary that the shape is executing over several items. This game allows to you change the shape size in each item.
2:RateIt	For this game it's necessary that the shape is executing over several items. This game allows to you change the shape rate in each item.
3:SizeCy	This game allows to you change the shape size in each cycle. In example, increasing the shape size in each new cycle during several cycles, and then to return to the start size and repeat the process.
4:RateCy	This game allows to you change the shape rate in each cycle. In example, decreasing the shape rate in each new cycle during several cycles, and then to return to the start rate and repeat the process.
5:Form	This game allows to you deform basic shapes of more than one parameter (types PanTil and CYM). Deforming the geometric figures (circle can be a oval) or the color mix (adjusting the gain of any color).

Nm is used to define the number of items, or cycles, for the associated Game. For items, if Nm=0 (default value) the associated Game it's applied over all items of the selection.

**Mod/Par** this parameter is explained using some examples. Examples based in the Game 1, but valid for Games from 1 to 4:



SS Palette	Type	Effect	Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	Nm	Mod/Par
0 Circle	PanTil	Free0	0	\$5	+80	SizeIt	0	Lin+10	None		

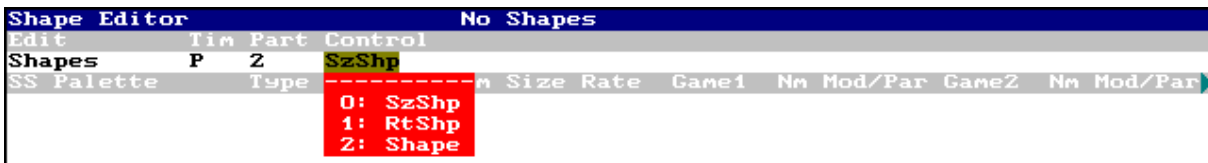
0:Lin	Lineal	
1:Fn1	Symmetric 1	
2:Fn2	Symmetric 2	
3:Sin	Sine	
4:Rnd	Random	

For the Game 5:Form, the Mod/Par allows to you select the parameter to deform the shape, and this deformation is always in lineal mode.

In the special line of the **Shape Editor**, press **MENU** to access to it, you can change the default Timing of the editor, or you can assign the shape fade control (size, rate or both) to any time part (P). Shape fade, programmed using timing or parts, has several options:

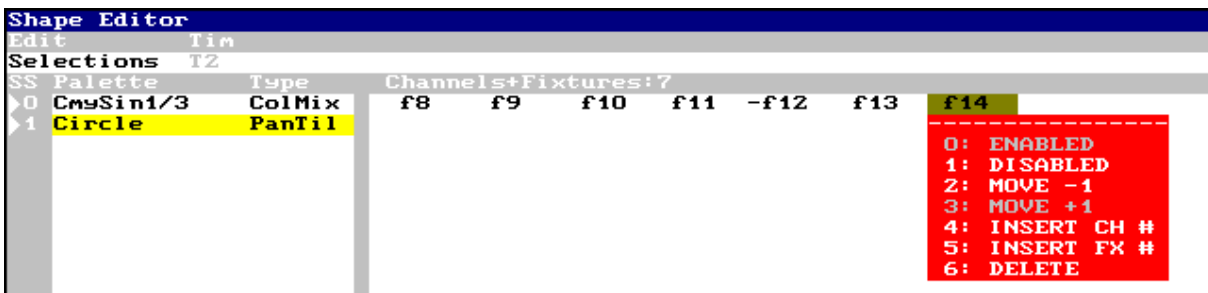
- SzShp (size fade),
- RtShp (rate fade) or
- Shape (fade of size & rate).

More information about timings & parts in chapter 6 – Groups and Cues



### 13.3.3 Selections

In this same edition screen, you can consult and edit the selection of each shape. In the special line of the **Shape Editor**, press **MENU** to access to it, you can change the Edit mode from Shapes to Selections... In this mode you can see the selection of each shape, in the adopted order (by default, numerical order).



f# is a fixture number, and c# is a channel number.

The symbol “-“ appears near each fixture or channel that is disabled, in example -f60.

In general, you can edit the selection order, enable or disable any element of it, and delete an element or insert new elements.

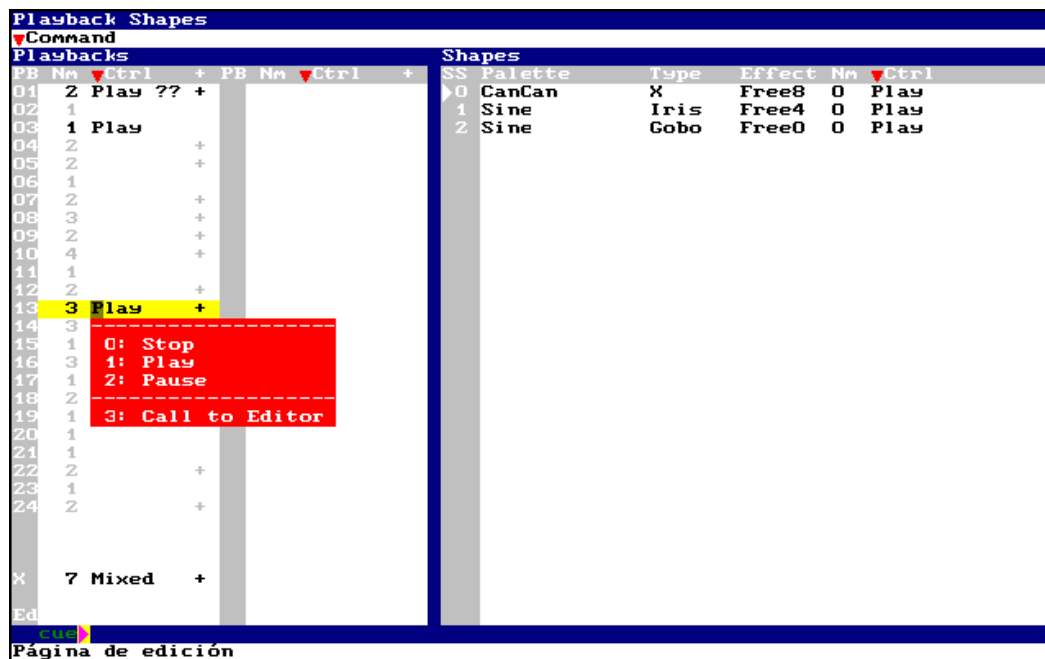
## 13.4 SHAPES & PLAYBACKS

When shapes are edited, shapes can be stored in groups & cues. Shapes are executed in the playbacks as the cues or groups, as effects and as sequences. Shapes are activated when its cue (or groups) is activated and its activation is in accordance with the programmed timing or part.

To obtain information about the shapes loaded in playbacks, access to the **Playbacks Shapes** screen pressing:

**SHAPE** 3 : PLAYBACKS

This screen allows to you have information & control about the shapes. The control only is accessible for the active playbacks and has 3 basic commands:



These commands can affect to all the shapes of the master or crossfader, (inside **Playbacks** list) or can affect, in selective mode, a each shape independently (inside **Shapes** list).

The **Playbacks** list shows us labels that coincide with the last command executed (by the user in this list, or by the system when a master, or crossfader, is activated or deactivated). If the symbol “??” appears near the playback label, it’s indicating to us that some shapes inside this playback has been controlled in independent mode.

In the crossfader and the masters with sequence, the label **Mixed** appears, indicating to us that the scene cue has its shapes in play and the next cue has its shapes in stop (the current crossfade ended).

If, at any moment, it’s necessary to play, pause or stop all the shapes in active playbacks, access to the Command cell in the special line inside this screen (always pressing **MENU**).

To access quickly to a playback – master (01...24), crossfader (X) or editor (Ed)– inside this screen, you can use the **MOUSE**

From this screen, you can capture the shapes that proceed of a playback, with the objective of to call them to the editor for their modification. This action is done with the command  
3: Call to Editor



Example of use:

Call to editor the shapes that proceed of the master 13, **M13**, from the screen **SHAPE 3**

Now, from the editor, inside screen **SHAPE 2**, you can modify the size or rate of a shape

After the modification, you can store it in the master 13, pressing **MDFY M13**

## 13.5 SHAPES LIBRARY

After a reset, always, the console starts with a shapes basic list. The user can store his owns shapes from the editor and can maintain his own shapes list completely from **Shape list** screen.

### 13.5.1 STORING NEW SHAPES

To add a new shape to the list, the first step is to edit the shape, or shapes for a same selection (▶) from the editor... the group the shapes associated to a selection (▶) can be stored as a new shape, user shape, in the list. To store this new shape, access to the **Shape Editor** pressing:

**SHAPE** 2: EDITOR

Shape Editor											
Tim											
12											
SS	Palette	Type	Effect	Nm	Size	Rate	Gene1	Nm	Mod/Par	Gene2	Nm Mod/Par
▶0	Flash	Dimmer	Free4	0	↑20	+98	None				
▶1	Flash	Blue	Free8	32	↑100	+98	RateIt 0	Rnd-23		None	
▶2	Circle	PanTil	Free1	0	↑14	+80	RateIt 0	Fn2+0		None	
▶3	CanCan	Y	Free2	0	↑17	+79	RateCy 2	Lin+10		None	
▶4	CanCan	X	Free0	0	↑50	+80	RateIt 0	Fn2+0		None	
▶5	Sine	Magent	Free0	0	↑50	+80	None			None	
▶6	Sine	Dimmer	Free0	0	↑50	+80	None			None	
--Store in Shape--											
100...999											

In this example, all is ready to store a new Shape that will include the basic shapes 4, 5 and 6, all of them applied in the same selection (▶). The basic shapes from 0 to 3 will can be stored one-to-one, because each one of they is associated to a different selection (▶).

To store the user shape, with the desired number, select one of the possible free numbers that appear in the red window. Then, to store the shape, enter the number, in example **100**, and press **ENTER**.

### 13.5.2 MAINTENANCE OF THE SHAPES LIST

The maintenance of the shapes list is done from the **Shape list** screen. To access to this screen press:

**SHAPE** 4: LIST

Shp	Text	Palette	Type	Effect	Size	Rate	Game1	Game2	Game3	Game4
1	Sine	CanCan	X	Free0	\$50	+80	RateI	None	None	None
2	Cosine	Sine	Magenta	Free0	\$50	+80	None	None	None	None
3	Step	Sine	Dimmer	Free0	\$50	+80	None	None	None	None
4	Flash									
5	Trapeze									
6	Tri									
7	Saw									
8	Up									
9	Down									
10	Sierra									
11	CanCan									
40	Circle									
41	Shape8									
42	Triangle									
43	Square									
44	Arch									
70	CmySin									
71	CmySin1/3									
72	CmyFlash1/3									
73	CmyUp1/3									
100	User 100									

0: Delete  
--Move to--  
101...999

Then, these user shapes can be used in the same mode that the basic shapes; including the filtering function. In case of this example, the shape 100 will appear in the list of the next filters:

FREE (all the shapes appear here)

POS (for CanCan in X)

COL (for Sine in Magenta) &

DIM (for Sine in Dimmer).

### 13.5.3 LOADING SHAPES FROM OTHERS SHOWS

The console allows to you load the desired shapes from any show. For this, access to the menu 10, select the source show with the cursor and execute its option 1: Load Selected. See chapter 14 – Menus.

## 13.6 EXAMINING SHAPES IN GROUPS & CUES

Examining cues & groups with shapes, it's possible to open the shapes information screen pressing:

**SHAPE** 5 : EXAM

Too, it's possible to open the shapes information screen with a format it allows to you see the content of each selection ( ▶ ), pressing:

**SHAPE** 6 : EXAM SEL



These commands only works inside the exam screen of cues and groups.



## 14. MENUS

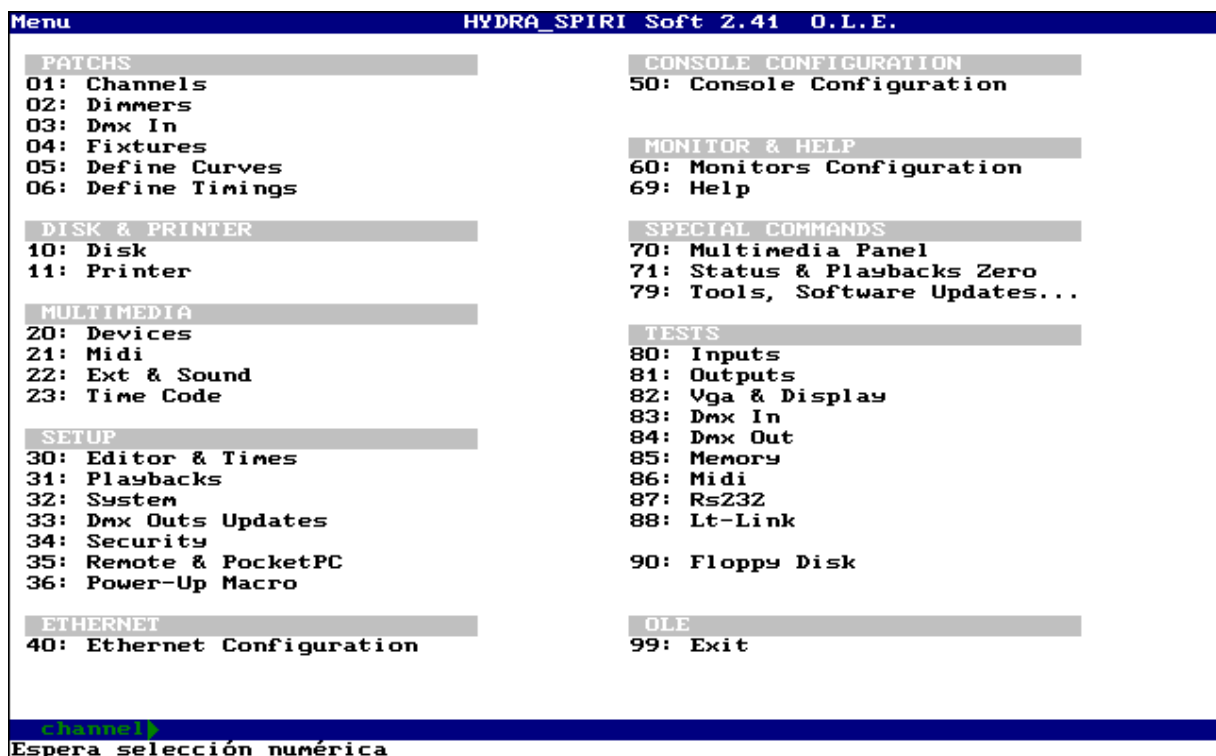
**MENU** opens the menus list. To select a menu of this list, you can:

Use the mouse (external or trackball in Mouse mode)

Insert the menu number in 2 digits: **# #**



*Example:* To open the menu 01: Channels, press **MENU 0 1**



To close the active menu screen and return to editor, press **EXIT**

To close the active menu screen and return the menus list, press **MENU MENU**

In this chapter are explained all the menus, except menus seen in other chapters, as:

Menu 50 & 60:	Chapter 3 – Configuration
Menu 04:	Chapter 4 – Fixtures patch & Chapter 17 – Fixtures definition
Menu 06:	Chapter 6 – Cues & Groups.
Menus 00 to 02 & 05:	Chapter 15 – Channels Patch
Menu 03:	Chapter 16 – DMX input
Menu 20:	Chapter 18 – The RS232 port
Menu 21:	Chapter 19 – Midi
Menu 22:	Chapter 20 – Sound and externals triggers
Menu 23:	Chapter 21 – Synchronisms, Time Code
Menu 40:	Chapter 24 – Ethernet
Menu 79 (part):	Chapter 24-Ethernet & Chapter 22-Reset and Updates.

## 14.1 GENERAL EDITION

Inside the menu the cursor is moved using the mouse or the arrow keys.

Options of interactive windows are selected using the mouse or pressing **#** **ENTER**

Data are edited from numeric keyboard (except the text data that are edited from the alphanumeric keyboard) and are accepted pressing **ENTER** or moving the cursor.

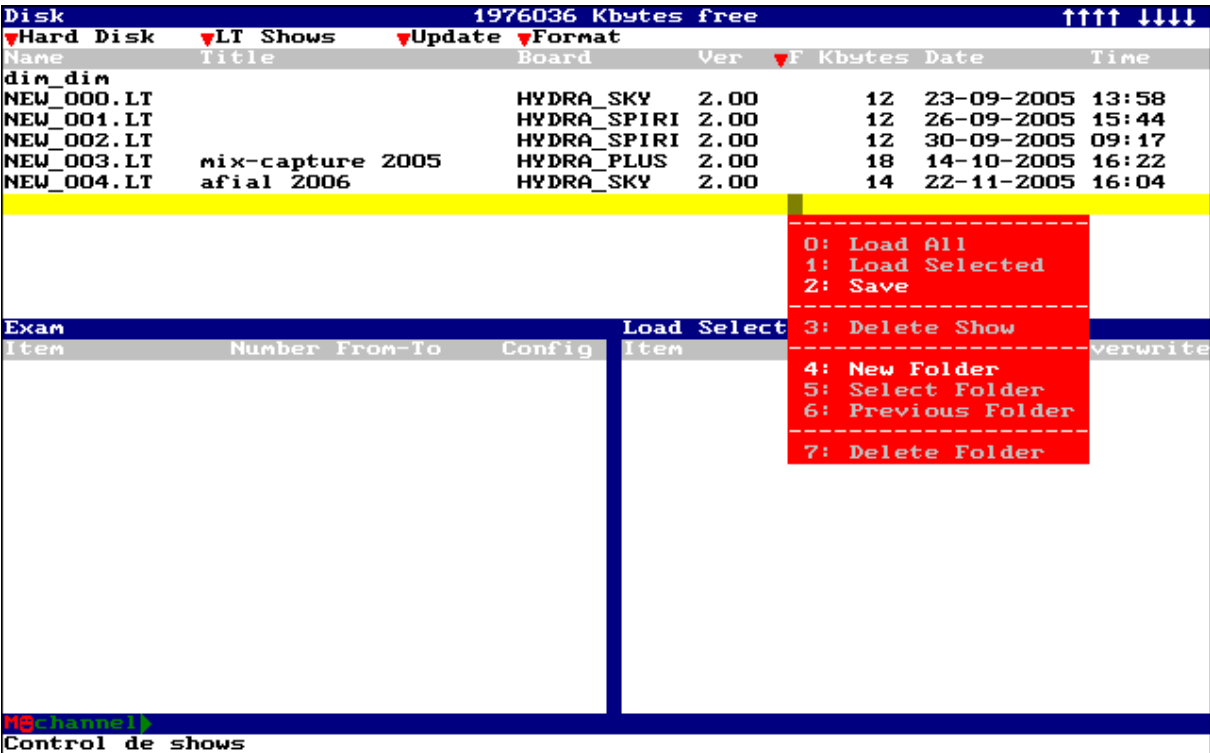
## 14.2 MENU 10 – TO STORE/LOAD A SHOW

A show is a file that contents all the spectacle data. The console can record shows in its hard Disk, in a Floppy Disk or in a USB Disk.

 Store the show periodically. This process needs a seconds and it can save hours of edition.

The shows are stored, loaded or deleted from the menu 10: Disk

 **MENU 10**



The screenshot shows a terminal window titled 'Disk' with '1976036 Kbytes free' and navigation arrows. It displays a table of show files:

Name	Title	Board	Ver	F	Kbytes	Date	Time
dim_dim							
NEW_000.LT		HYDRA_SKY	2.00	12	23-09-2005	13:58	
NEW_001.LT		HYDRA_SPIRI	2.00	12	26-09-2005	15:44	
NEW_002.LT		HYDRA_SPIRI	2.00	12	30-09-2005	09:17	
NEW_003.LT	mix-capture 2005	HYDRA_PLUS	2.00	18	14-10-2005	16:22	
NEW_004.LT	afial 2006	HYDRA_SKY	2.00	14	22-11-2005	16:04	

A red menu overlay is visible on the right side of the screen, listing the following options:

- 0: Load All
- 1: Load Selected
- 2: Save
- 3: Delete Show
- 4: New Folder
- 5: Select Folder
- 6: Previous Folder
- 7: Delete Folder

At the bottom of the terminal window, the text 'Control de shows' is visible.

Inside this menu the console presents the directory of show files of the active disk. Each show uses a line for its information. A show is defined with a **Name**, a **Title**, the model and version of the console where was stored - **Board & Ver**, the capacity in **Kbytes**, and its **Date & Time**. This directory always has a last empty line that is used to store a new show.



In the shows directory, each line has a ▼F cell. Selecting this cell, the functions to store, load, and delete are available.

Each time that a LT show is selected, the Exam zone presents you information about it.

## 14.2.1 STORE A NEW SHOW

---

To store a new show in the disk:

- Select the last empty line
- Its ▼F cell is active.
- Select the option **2: Save**
- The system requests confirmation. Confirm pressing **ENTER**

Each new show is named with a general name **NEW-000.LT** that it's possible to edit.

Each time that a show is stored, the system ordered the directory. The new show is selected (yellow line) to can edit its **Name** or **Title** using the alphanumeric keyboard.

A show name has MS-DOS format: **name.ext**

Where **name** has maximum 8 characters, and **ext** has maximum 3 characters.

**Title** is a free text of maximum of 20 characters.

## 14.2.2 OVERWRITE A SHOW

---

To overwrite a stored show with the last modifications:

- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option **2: Save**

The system requests you confirmation:

Confirm pressing **ENTER**. The show is replaced with the new data.

## 14.2.3 LOAD A SHOW

---

To load a stored show in the console:

- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option **0: Load**

The system requests you confirmation:

Confirm pressing **ENTER**. The selected show is loaded in the system. When the loading ends it presents a general exam screen. Press any key to close this exam screen.

## 14.2.4 LOAD SOME ITEMS OF A SHOW

The console allows you to load only some items of the show, partially. *Example*, it's possible to load a Patch used in a show, without the need the load cues, pages, etc. To load some part of a show:

- Select the desired show with the cursor (using the mouse or arrow keys).
- Select its **▼F** cell
- Select the option **1: Load Selected**

Now, from the **Load Selected** window, you can select the items to load.

When the items to load are selected (see below) press **ENTER** to load them.

The system requests a confirmation: **ENTER** to confirm or **EXIT** to abort.

You can follow the process in screen, at the end, press **ENTER** to return to the system.

Load Selected			
Item	From-To	Load	Overwrite
Cue	0-20009	NO	YES
Group	0-2000	NO	YES
Effect	0-2000	NO	YES
Page	0-2000	NO	YES
Macro	0-2000	NO	YES
Shape	0-2000	NO	YES
Channels Patch		NO	YES
Fixtures Patch +Libraries		0: NO	
Curves		1: YES	
Midi Patch		NO	YES
Time Code		NO	YES
Setup		NO	YES

Into the **Load Selected** zone, you can select:

- Cues, groups, effects, pages and macros, if needed, adjusting the loading range, **From-To** that allows you to load one, some, or all stored cues, groups, etc.
- The channels patch.
- The fixtures Patch & all the fixtures libraries (pos, dim, col, gob, beam & x-tra)
- The dimmer curves
- The MIDI configuration
- The event list inside the Time Code menu
- The console Setup

Each one of the items of the list has associated a **Load** cell and an **Overwrite** cell.

The **Load** cell allows you to set if the associated items are loaded (**YES**) or not (**NO**).

The **Overwrite** cell allows you to set if the loaded items overwrite to the stored in the console (**YES**) or not (**NO**).



**Example:** The console has the cues 1 to 100 and 140 to 145. Now, load from other show the cues 101 to 150:

Access to the menu **10** and select the show that has these cues, then, select in **▼F** its option **1: Load Selected**, and:

Select the **Cue** line and set its **Load** cell at **YES**.

Edit **From-To** at **101-150**

To preserve the console cues 140-145 edit its **Overwrite** at **NO**.

To overwrite the console cues 140-145, edit **Overwrite** at **YES**.

**Note:**

If it's needed load items from several shows, is recommended follow this order to load:

1. Fixtures Patch & Libraries.
2. Cue/Groups/Macro
3. Effect/Page/Time Code

The rest the options can be loaded in any order.

## 14.2.5 DELETE A SHOW

---

To delete a show of the disk:

- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option **3: Delete Show**
- The system requests you a confirmation. To confirm press **ENTER**

## 14.2.6 THE SHOW FILE FORMATS

---

The **8700 Series** consoles can use show files with the format **LT** or **ASCII**.

The **LT** format is the ideal format (all data shows are stored and the processes to store and to load and very quick). It's recommended use always this format.

The **ASCII** format is an auxiliary format used to export shows to other consoles and to import shows from other consoles. A show in **ASCII** format only has cues with their times, groups, channels Patch and curves. The cues & groups only have channels information.

The **ASCII** format is a standard of the **USITT** that only has the more standard items. Use this format when will be necessary to export the **LT** show to a console pf other manufacture, or vice versus. If an **ASCII** show has been loaded in the console, don't forget store it in **LT** format to continue working with this **LT** show.

The process of load of an **ASCII** show can use several minutes (in accordance with the show size), during this process the screen presents you the evolution of the load.

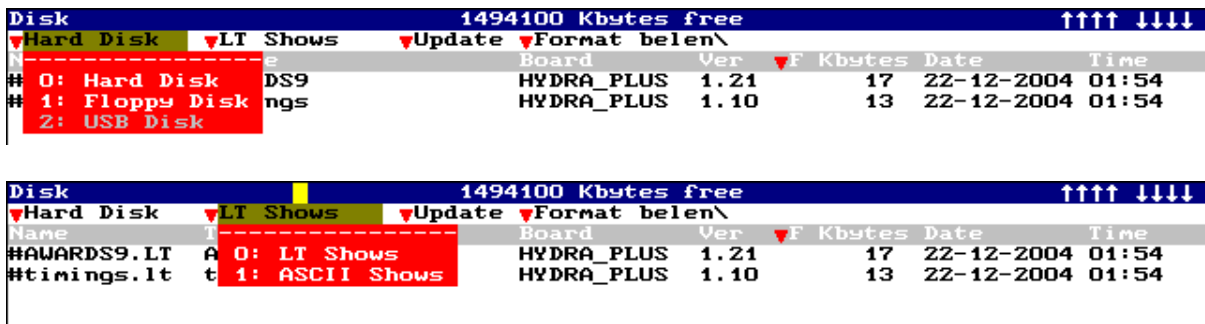
A **LT** show can be edited in a PC, using the 8700 Series Off Line Editor.

An **ASCII** show can be edited in a PC using any text editor.

## 14.2.7 SELECT THE FORMAT & ACTIVE DISK

The first step to work with show files, is to select the show format (LT or ASCII), and the active disk (Hard Disk, Floppy Disk or USB Disk).

For that, access to the setup line of the disk menu, pressing **MENU** or using the mouse.




The first screenshot shows the 'Disk' menu with 'Hard Disk' selected. The 'Update' option is highlighted. The second screenshot shows the 'Update' option selected, and the '0: LT Shows' option is highlighted.

Disk		1494100 Kbytes free				↑↑↑↑ ↓↓↓↓	
▼	▼	▼	▼	▼	▼	▼	▼
Name	Title	Board	Ver	F	Kbytes	Date	Time
#0: Hard Disk	DS9	HYDRA_PLUS	1.21	17	22-12-2004	01:54	
#1: Floppy Disk	ngs	HYDRA_PLUS	1.10	13	22-12-2004	01:54	
#2: USB Disk							

Disk		1494100 Kbytes free				↑↑↑↑ ↓↓↓↓	
▼	▼	▼	▼	▼	▼	▼	▼
Name	Title	Board	Ver	F	Kbytes	Date	Time
#AWARDS9.LT	0: LT Shows	HYDRA_PLUS	1.21	17	22-12-2004	01:54	
#timings.lt	1: ASCII Shows	HYDRA_PLUS	1.10	13	22-12-2004	01:54	

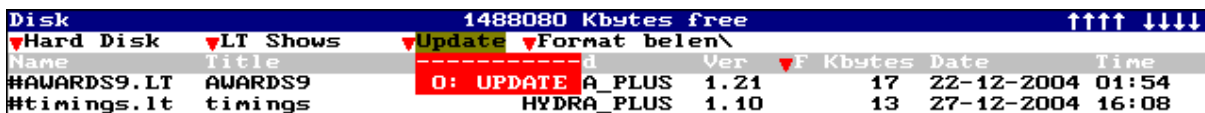
Each time that this option is changed, the system update the directory to present you the shows with the selected format of the active disk.

To return to the shows list, use the mouse, press **ENTER**, or press 


## 14.2.8 UPDATE THE SHOWS DIRECTORY

The Directory is updated automatically each time that the format/disk option is changes and the first time that the menu **Disk** is selected in the session. In this way, if the floppy is exchanged, as something like that, it is needed to execute the option **Update** (in the setup line) to update the directory:

- Access to the setup line, pressing **MENU**
- Select the command 0: Update



Disk		1488080 Kbytes free				↑↑↑↑ ↓↓↓↓	
▼	▼	▼	▼	▼	▼	▼	▼
Name	Title	Board	Ver	F	Kbytes	Date	Time
#AWARDS9.LT	AWARDS9	A_PLUS	1.21	17	22-12-2004	01:54	
#timings.lt	timings	HYDRA_PLUS	1.10	13	27-12-2004	16:08	

To return to the shows list, use the mouse, press **ENTER**, or press 

## 14.2.9 ORGANIZE SHOWS IN FOLDERS

It's possible to create **Folders** to organize the shows.

**To create a new Folder in the current directory:**

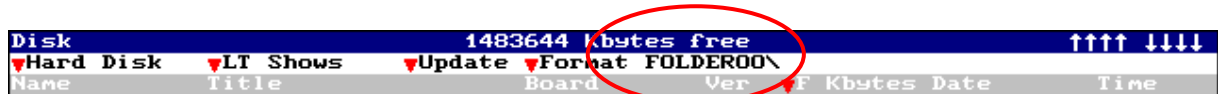
- Move the cursor to the empty last line. Its **▼F** cell is active.
- Execute the option 4: New Folder

The system creates a folder with a name as FOLDER00; it's possible to edit its Name

**To work with the shows of a Folder:**

- Select the Folder line with the cursor.
- Access to its ▼F cell
- Execute the option 5: Select Folder

The system presents the directory of the selected Folder.  
The name of the opened folder appears in the Setup line:



Now, it's possible to store shows or to load shows following the normal processes.

**To quit to the previous Folder:**

- From any directory line, access to its ▼F cell.
- Execute the option 6: Previous Folder

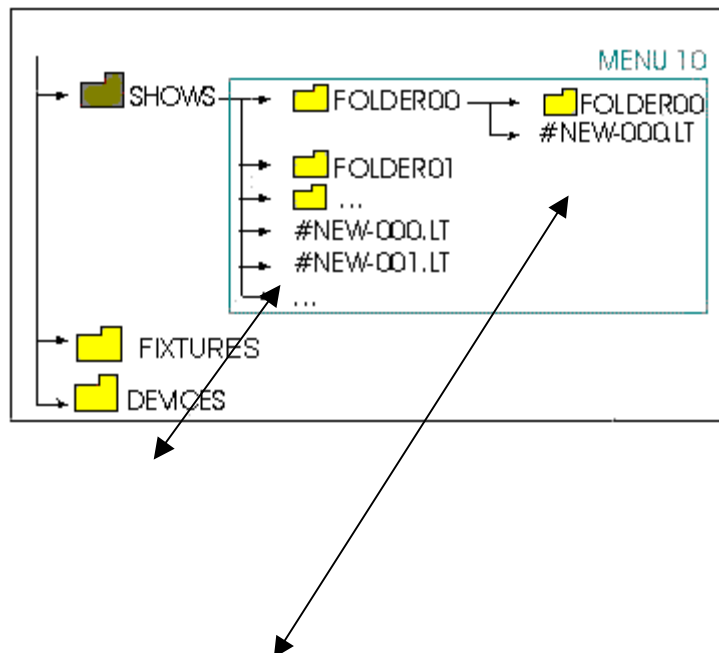
The system closes this folder and presents the directory to the previous folder.

**To delete a Folder:**

To delete a Folder, first it's needed delete all the shows (or others folders) inside this Folder.  
Delete each one of the shows inside the folder, and quit to the previous folder and:

- Select the folder to delete with the cursor.
- Access to its ▼F cell
- Execute the option 7: Delete Folder

**Graphic example:**



Disk								1475688 Kbytes free		↑↑↑↑	↓↓↓↓
▼Hard Disk	▼LT Shows	▼Update	▼Format								
Name	Title	Board	Ver	▼F	Kbytes	Date	Time				
FOLDER00											
FOLDER01											
#NEW_000.LT		HYDRA_PLUS	1.27		13	28-12-2004	09:35				
#NEW_001.LT		HYDRA_PLUS	1.27		13	28-12-2004	09:35				

Disk								1472504 Kbytes free		↑↑↑↑	↓↓↓↓
▼Hard Disk	▼LT Shows	▼Update	▼Format	FOLDER00\							
Name	Title	Board	Ver	▼F	Kbytes	Date	Time				
FOLDER00											
#NEW_000.LT		HYDRA_PLUS	1.27		13	28-12-2004	09:35				



Note:

Hard Disk, Floppy Disk & USB Disk have a basic organization. The show files are stored inside the folder **SHOWS**, (accessible from menu 10), the fixtures are stored inside the folder **FIXTURES** (accessible from menu 04) and the devices are stored inside the folder **DEVICES** (accessible from menu 20). The items, placed out of their respective folder, are not accessible.

### 14.2.10 FORMAT AT THE FLOPPY DISK

The console uses 3½ formatted floppy disks. The format of these floppy disks is DOS. If the floppy is not formatted (or if it's needed delete it completely), must be necessary to format it. The floppy can be formatted in a PC or from the own console.

To format a floppy in the console, inside the menu **Disk**:

- Insert the floppy in the disk unit of the console.
- Access to the setup line
- Select its command 0: **FORMAT FLOPPY DISK**

Disk								1468004 Kbytes free		↑↑↑↑	↓↓↓↓
▼Hard Disk	▼LT Shows	▼Update	▼Format								
Name	Title	Board	Ver	▼F	Kbytes	Date	Time				
FOLDER00											
				0: FORMAT FLOPPY DISK							



This process needs some seconds. All data in disk are deleted.

### 14.2.11 LT SHOWS COMPATIBILITY

Your console can load the LT show files:

- Any show stored in this console with the same version number or lower.
- Any show stored in a 8700 Series console with the same number of software version or lower.

## 14.3 MENU 11 – DATA PRINT

To print any console data must access to the menu 11: Print



The screen presents a list with all the items that the system can print. It's possible to print one, some or all the items.

For libraries, cues, groups, effects, pages & macros, 2 options are available: contents (**Data**) or general list (**List**).

For the **Data** printing, it's possible to select the items range to print (**From-To**).



Each cue, macro, etc. needs minimum 1 page to print its contents.

### Select the items to print individually

From the **▼Print** cells of the items list, it's possible to select the items to print:

- To don't print the item select **0:NO**
- To print the item select **1:YES**




Example: Print all lists, and print the contents of all the cues (105 in the next example) in addition the content of the POS libraries from 3 to 5.

Printer					
Item		▼All/None Print		▼Print	▼Print From-To
POS	List	NO	Data	YES	3-5
DIM	List	NO	Data	NO	0-0
COL	List	NO	Data	NO	0-0
GOB	List	NO	Data	NO	0-0
BEAM	List	NO	Data	NO	0-0
XTRA	List	NO	Data	NO	0-0
Shape	List	NO	Data	YES	1-105
Cue	List	NO	Data	NO	1-376
Group	List	NO	Data	NO	1-3
Effect	List	NO	Data	NO	1-1
Page	List	NO	Data	NO	0-0
Macro	List	NO	Data	NO	1-5

### Select the items to print generically

In the setup line select **▼All/None** and choose one the its options:

- To unselect all the items, select **0: NONE**
- To select all the items, select **1: ALL**

To return to the list, use the mouse, press **ENTER**, or press 

**Print the selected items**

- Select its option ▼**Print**, in the setup line.
- Select the desire option:

Options...	For ...
1: TO PRINTxxx.TXT ON HARD DISK	Print to file in a hard disk
2: TO PRINTxxx.TXT ON FLOPPY DISK	Print to file in a floppy disk
3: TO PRINTxxx.TXT ON USB DISK	Print to file in a USB disk

The print files are named as **PRINTxxx.txt**. They can be edited & printed, in a PC, using any text editor. The objective of this file is be used in a PC. From the PC will be possible to edit it, to print it, etc.



## SETUP CONFIGURATION

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All the configuration menus are in the **SETUP** group.

### 14.3.1 30: EDITOR & TIMES

---

 **MENU 3 0**

The editable parameters are:

- **-% +% Level.** It's the value of  y  in continuous variations, by default 5%.
- **Editor Time.** It's the time in seconds that the editor uses in functions as **RST**, **RELEASE** or **CALL**. By default 2 sec.
- **Cue T↑** in seconds for cues.
- **Cue T↓** in seconds for cues.
- **Cue T⊙** in seconds for cues. **0** to assign at ∞.
- **Timing.** It's the default timing (**T1** to **T6**) for groups & cues
- **GOBACK Time.** It's the time, in seconds, for the Go-Back function. This time also can be edited as **0: CUES**, to assign to the Go-Back function, the fade times of the cue in scene.
- **Group/Ch T⇅.** It's the fade time associated to groups & channels to their playback in masters.

### 14.3.2 31: PLAYBACKS

---

 **MENU 3 1**

The editable parameters are:

- **Flash Level.** It allows you to change the level of the Flash functions.
- **Solo Off X+Y.** It allows to configure if the Flash-Solo function affects (or not) to the output of X1/X2 crossfader, forcing it to 0%. This function is **DISABLED** by default, and doesn't affect to the crossfader output.
- **SM**, that allows to configure the functioning of the master **SM**⇅ as control of master outputs or as control the DMX inputs.
- **SX**, allows you to enable, **0:ENABLED**, or disable, **1:DISABLED**, the level control master of the X1/X2 crossfader, **SX**⇅.
- **GM**, that allows to configure if the General Master works in scale 0 to 100%, in scale 0 to 200%, or is **DISABLED**. By default, 100%. **DISABLED** option is a good solution when the **GM**⇅ fader is broken.
- **BLKoUT-SM-SX**, allows you to disable (or enable) the blackout key of the masters **SM**⇅, **SX**⇅ & **GM**⇅.
- **CHS OUT GM**, allows you to edit the channels number not- controlled by the **GM**⇅. By default **0**. The fixture parameters aren't controlled by **GM**⇅ (except **Dimmer**). The

conventional channels that are excluded of the **GM**⇕ control are always the last of the system. Example: If a console has 250 channels, and 3 channels are excluded here, these channels will be the 250, 249 & 248.

- **Manual Track**, when this option is **ENABLED**, the manually activated masters control their **LTP** parameters in all moment (fade-in & fade-out processes), using their return values and avoiding that these **LTPs** remain to tracking value.
- **Dipless Mode**, when this option is **T↑**, channels in the current cue & next cue, do the crossfade using the input time of the next cue; and if this option is **T↑↓**, if the shared channel increases (i.e. from 80% to 10%) do the crossfade using the output time and if decreases (i.e. from 10% to 80%) using the input time.

### 14.3.3 32: SYSTEM

---



The editable parameters are:

- **LANGUAGE** selects the language of messages and warnings.
- **KEYBOARD** selects the language (type) of the alphanumeric keyboard. To accept this selection is needed turn off the console.
- **KEYBOARD** selects the active alphanumeric keyboard, this keyboard can be the internal placed in the drawer (**INT**) or an external (**EXT**).
- **LEDS BRIGHT** selects the brightness level for blue LEDES of the frontal panel (5 options are available).
- **BEEP**, that allows to adjust the tone of the warning acoustic signal (beep). The **BEEP** can have values from **0** to **100**, where **0** indicates a deactivated **BEEP**, and from **1** to **99** adjust the **BEEP** frequency. By default the **BEEP** is at **10**.  
A beep is emitted each time that the system requests the user attention.
- **LIGHT** adjusts the level of the working lights (0-100). By default at 0 %.
- **MONITOR** configures the look of the screens, select:  
**0: LIGHT** to set a light background (white).  
**1: DARK** to set a dark background (gray).
- **DISPLAY** adjusts the Display contrast (0-100). By default 100%. This option there is not in the GS models.
- **DATE**, it's the current date.
- **TIME**, it's the current time.

### 14.3.4 33: DMX OUTS UPDATES

---



Here, it's possible to adjust the speed transmission for each one of the DMX outputs: **DMX 1**, **DMX 2**, **DMX 3** & **DMX 4**.

The adjustment of speed has the objective of avoid problems with oldest DMX receivers, and the available options are:

- 0: **FAST** DMX output is updated 20 times per second (Default option).
- 1: **MEDIUM** DMX output is updated 10 times per second.
- 2: **SLOW** DMX output is updated 6,6 times per second.
- 3: **CHANGE** DMX output is updated only when its information has a change.

### 14.3.5 34: SECURITY

---



If the **Security** option is activated, the system works in a protected mode, where the **REC**, **DELETE** & **MDFY** functions aren't operatives. In this way the show data cannot be changed (cues, pages, groups, libraries, etc.), but the show can be executed. To activate the **Security** option is needed a **Password**

To activate **Security**

Enter any **password** (8 numbers, no text can be edited here). The system requests you to confirmation. Enter again the same **password**. **Security** is **ENABLED**

To deactivate **Security**

Enter the same activation **password**. Any **password** can activate **Security**, but only the activation **password** can deactivate it.



Don't forget the **Password**, will be needed to deactivate **Security** !!!

### 14.3.6 35: REMOTE & POCKET PC

---



There are 2 types of remote control: **Remote** &

**Pocket PC**



Note: For more information about these types, see the respective user manual.

To configure the communication with the remote control, you have the next options:

- **Enabled** that allows to set the type the remote control to use, as **NONE** (default option), **REMOTE** or **POCKETpc**.

Only if the selected type is **REMOTE**, the next options are used:

- **Remote ID**, that allows to set the communication with the remote control that have this same ID number. The **ID** can have a value from **1** to **12**.

**PocketPC** remote control works by Ethernet, for this reason it's needed to activate in the console the Ethernet communication (if it's needed, activate it inside menu **40: Ethernet Configuration**). Only if the selected type is **POCKETPC**, a flag appears at the right of this option to shows you the Ethernet status:

**Net Off:** If Ethernet communication is deactivated; it's needed activate it.

**Net ON:** If Ethernet communication is activated

### 14.3.7 36: POWER-UP MACRO

---



It's possible to edit a macro number for that the system executes it each time that it is turned on.

- **Macro** accepts a stored macro number (1-999). Use the number **0** to delete any edited macro.

## 14.4 TOUCH SCREEN CALIBRATION (GX)

---

For **GX** models models, there is a menu **51: Touch Screen Calibration**. This menu only is the physical consoles (no-simulators) and it allows to you to calibrate the touch screen.



Follow the process in screen. The adjustment will be better if it is done using a pointer suitable for touch screen.

## 14.5 SPECIAL COMMANDS

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Menus **70** & **71** and placed in the same screen.

14.5.1 70: MULTIMEDIA PANEL

---



Groups the most of the options **On/Off** for multimedia. The objective of this grouping is to have a quick access to these options, especially when more than one is active in the show.

14.5.2 71: STATUS & PLAYBACKS ZERO

---



This menu groups several commands used to return a known situations.

**STATUS & PLAYBACKS ZERO**

Status... .. . . . . .	Zero
All Playbacks .. . . .	Zero
All Masters . . . . .	Zero
All Crossfaders . . .	Zero


**Status** initializes any temporal function and some special functions:

- The editor active is *Stage*
- Any screen of exam, edition or menu is closed.
- The blackout functions of **GM**↕, **SX**↕ & **SM**↕ are enables.
- This command ends the storage in progress of any macro.
- The **LNTM** function is deactivated.

**All Playbacks** is a command that groups the next 2 options.

**All Masters** sets at 0% the output of any active master. The master contents aren't affected. In case of effect masters, the effect is stopped and the system locks the level master at FF & the speed master at 100%.

**All Crossfaders** empties the scene cue, loaded in **X1**, and this cue is placed in **X2** as next cue at 0%. The crossfader hasn't stage output.

 These commands can cause light-jump in stage!

These commands are very used to give back (at zero) in processes of playback or edition.

- To execute any of these commands, select its corresponding **0: ZERO** option.

14.5.3 79: TOOLS, SOFTWARE UPDATES...

---



Inside this menu, you can find the two options groups:

**TOOLS**

**0: File Tools**

1: 8700 Series Ebox Configuration (See Chapter 24)

**SOFTWARE UPDATES**

3: Console by Ethernet (See Chapter 22, option not available in OLE)

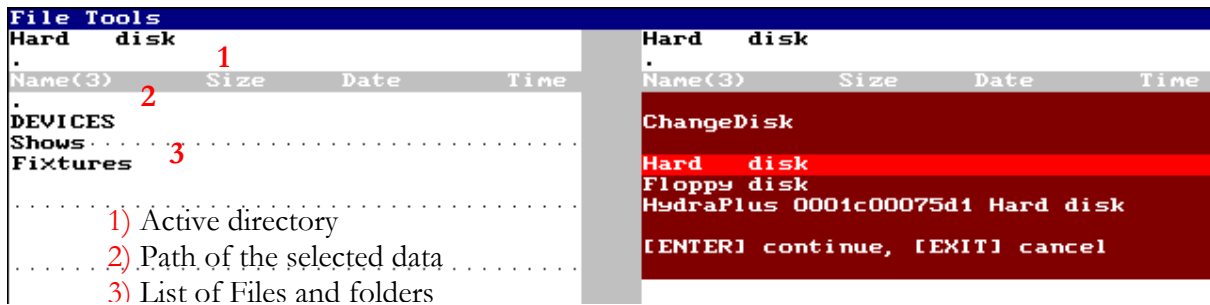
4: Console by USB Disk (See Chapter 22, option not available in OLE)

5: Remote Control by Cable (See Chapter 22, option not available in OLE)

**0: File Tools**

This menu is a tool to exchange and maintenance our files. Files that can be in console disks (hard disk, floppy disk & USB disks) or disks of other consoles (or OLE-PC) connected by Ethernet. **File Tools** menu allows you to manage files of Shows, Devices & Fixtures; and folders.

To use this tool, select in all consoles:



The **File Tools** screen is divided in 2 zones (disks), each zone is independent, and at the first moment the both zones present you the same: the inner hard disk of our console. In each zone you have:

- 1) The active directory (upper sub-zone). This can be the Hard disk, Floppy disk, USB disk or the hard disk of other console or PC simulator.
- 2) Path of the selected file or folder (in first line of lower sub-zone) that will be a dot (.) if we are working in the root directory.
- 3) List of folders and files in the selected path (rest of the lower sub-zone).

Use the arrows keys (or mouse) to move the cursor inside of the lower sub-zone and between lower sub-zones to select the desired file or folder.

**ENTER** or double click: Opens the selected folder and presents you its contents. If the path is selected (first line of the lower sub-zone), returns to the previous directory.

**File Tools** allows you to work in the 2 zones. The possible actions, showed in the lower line) are executed entered the corresponding number or command (or selecting it with the mouse):

**ChangeDisk [0]:** Opens a window to select the desired active disk in the cursor zone. This options window has the hard disk, floppy disk and USB memory of our console, and hard disks of others consoles connected by Ethernet (they must be into menu **79**).

**NewFolder [1]:** Creates a new folder in the active path to organize or archive our files. The new folders names must be of 8 characters (maximum).

If the active directory is the root directory, the new folder name begins with the name of the selected folder (DEVICES, FIXTURES or SHOWS), in this mode only is allowed to create folders as FIXTURES1, SHOWS03, etc.

**Rename [2]:** Changes the name of the selected file or folder. Remember, folder names in the root directory must begin with FIXTURES, DEVICES or SHOWS. The file names must be 8 characters as name and 3 more as extension (maximum).

**Compare [3]:** Compares 2 files or 2 folders, one in each zone (disk), searching for the selected file or folder in any of the zones. The selected file or folder must be correspondence in the other zone (example, set both zones in FIXTURES directory to compare them). After the comparison the system shows you if the files or folders are the same (name and contents) in both zones (====) or are different (xxxx). The files & folders are showed in alphabetical order and when one of them is not in a zone, its space is preserved and an empty line is showed in this location.


**Copy [4]:** Copies the selected file or folder to the other zone (disk).

**Delete [5]:** Deletes the selected file or folder.

File Tools				File Tools			
Hard disk				Floppy disk			
.\Fixtures				.\Fixtures			
Name(411)	Size	Date	Time	Name(56)	Size	Date	Time
.\Fixtures				.\Fixtures			
36-1200-.PRO	1034	28-07-2004	10:08	36-1200-.PRO	1034	28-07-2004	10:08
36-2-COL.HP-	341	28-07-2004	10:08	36-2COL.HP-	341	28-07-2004	10:08
36-2PB--.HP-	677	28-07-2004	10:08	36-2PB--.HP-	677	28-07-2004	10:08
575MULTI.ZOM	1478	28-07-2004	10:08	575MULTI.ZOM	1478	28-07-2004	10:08
ACROBAT-.---	647	28-07-2004	10:08	ACROBAT-.250	812	28-07-2004	10:08
ACROBAT-.250	812	28-07-2004	10:08				
ACROBAT-.575	713	28-07-2004	10:08				
ACROBAT-.FE-	416	28-07-2004	10:08				
ACTIVECO.LOR	488	28-07-2004	10:08				
AF-1000-.---	146	28-07-2004	10:08	AF-1000-.---	146	28-07-2004	10:08
ALIENZPT-.---	443	28-07-2004	10:08	ALIENZPT-.---	443	28-07-2004	10:08
ASTRORAG-.---	164	28-07-2004	10:08	ASTRORAG-.---	164	28-07-2004	10:08
ASTROSCA-.---	824	28-07-2004	10:08	ASTROSCA-.---	824	28-07-2004	10:08
ATOMIC3K-.---	248	28-07-2004	10:08	ATOMIC3K-.---	248	28-07-2004	10:08
BEAM250-.XT-	542	28-07-2004	10:08	BEAM250-.XT-	542	28-07-2004	10:08
CAT-150W-.---	380	28-07-2004	10:08	CAT-150W-.---	380	28-07-2004	10:08
CF1200HE-.---	779	28-07-2004	10:08	CF1200HE-.---	779	28-07-2004	10:08
CF1200SP-.---	524	28-07-2004	10:08	CF1200SP-.---	524	28-07-2004	10:08
CF7HE-.---	971	28-07-2004	10:08	CF7HE-.---	971	04-09-2004	12:57
CF7HEX-.---	1031	28-07-2004	10:08	CF7HEX-.---	1031	28-07-2004	10:08
CF7WASHZ.OOM	524	28-07-2004	10:08	CF7WASHZ.OOM	524	28-07-2004	10:08
CITYBEAM-.---	254	28-07-2004	10:08	CITYBEAM-.---	254	28-07-2004	10:08
CITYCOLO-.---	236	28-07-2004	10:08	CITYCOLO-.---	236	28-07-2004	10:08
CITYCOLO.E--	254	28-07-2004	10:08	CITYCOLO.E--	254	28-07-2004	10:08
CMIX150-.ATP	629	28-07-2004	10:08	CMIX150-.ATP	629	28-07-2004	10:08
CMIX150-.ATW	407	28-07-2004	10:08	CMIX150-.ATW	407	28-07-2004	10:08
CMIX240-.AT1	824	28-07-2004	10:08	CMIX240-.AT1	824	28-07-2004	10:08
CMIX240-.AT2	770	28-07-2004	10:08	CMIX240-.AT2	770	28-07-2004	10:08
CMIX250-.AT1	992	28-07-2004	10:08	CMIX250-.AT1	992	28-07-2004	10:08
ChangeDisk[0]				Compare[3]			
NewFolder[1]				Cops[4]			
Rename[2]				Delete[5]			

In the lower line of the **File Tools** screen, the available commands are showed and they can be in (depending of the selected item):

- White: When the command can be executed.
- Grey: When the command cannot be executed. This status can be temporal if the selected file or folder is being used from other console in the net.

 **Note**

To connect to the net the PC-OLE, it is needed that the PC has installed the IPX protocol with the type 802.3. See Chapter 24.

While **File Tools** is active, the console isn't operative in normal mode.  
 Take care using **File Tools**, this tools can delete or modify any stored file.

The active show can't be affected for the operations the File Tools. To return to the system from File Tools, press **EXIT**.



## 14.6 TESTS

---

The next tests are thought to help you to solve problems and to consult the DMX buffers of input & output.

 **Note**

The most these test **stops** the normal working of the console.

Only the test from **80** to **84** can be executed at any moment (including while the show playback).

All these tests are closed pressing **EXIT**

### 14.6.1 80: INPUTS

---

 **MENU 8 0**

This menu allows you to test:

<b>Keys</b>	Each key pressed must appear in a red field.
<b>Faders</b>	Each moved fader must present its current level in a red field (0-255).
<b>Alphanumeric keyboard</b>	Each key pressed must presents it under <b>KBD</b> label.
<b>Mouse</b>	Its movement and clicks are presented under <b>MOUSE</b> label.
<b>SMPTE</b>	The SMPTE connected to the console is presented (in real time) under <b>SMPTE</b> label.
<b>External triggers</b>	Each external trigger activated is presented.
<b>Audio input</b>	The audio signal connected to the console is presented under <b>SOUND</b> label.
<b>Remote Control</b>	The code of the keys pressed in the Remote Control is presented under <b>REMOTE</b> label. This code has the next format: <b>ID</b> (Identification Device) <b>FUNC</b> (function code) and <b>ST</b> (status)

### 14.6.2 81: OUTPUTS

---

 **MENU 8 1**

The screen presents you all the options to test: working lights, sound output, each console LED and the console Display. Select the item to test using **←** & **→**

While an item is selected it is executing an auto-test.

### 14.6.3 82: VGA

---

 **MENU 8 2**


This test presents in the connected monitors, the charts of colors & characters. The console display presents its characters chart.

### 14.6.4 83: DMX-IN

---

 **MENU 8 3**

Its screen presents the DMX input buffer (the 512 channels of input, each one with its level).





To page this screen press  & .

### 14.6.5 84: DMX-OUT

---

 **MENU 8 4**

Its screen presents the DMX output buffers of the 4 DMX outputs (the 512 channels and its associated levels, per output line).

To page this screen press  &  (more channels), or press  &  (more lines).

### 14.6.6 85: MEMORY

---

 **MENU 8 5**

It allows you to test the data memory.

The system does an auto-test and presents you the data memory status. This test doesn't affect to the show data.

### 14.6.7 86: MIDI

---

 **MENU 8 6**

It allows you to test the MIDI port.  
Follow the instructions in the screen.

### 14.6.8 87: Rs232

---



Test of the RS232 port. Follow the instructions in the screen.

### 14.6.9

---

### 14.6.10 88: 8700 Series Link

---



Test of the 8700 Series Link port. Follow the instructions in the screen.

### 14.6.11 90: DISK

---



Used to test the disk unit. Follow the instructions in the screen.

## 14.7 ALPHANUMERIC KEYBOARD

---

The alphanumeric keyboard always is active to edit text for cues, groups, effects, pages, libraries, macros & shows. While a **Text** cell is selected, this alphanumeric keyboard is active.

But, also is possible to use the alphanumeric keyboard “to press” the console keys (since each console key has an associated key of the alphanumeric keyboard) of the same way that in the PC-OLE. This functionality is optional, and it can be activated or deactivated at any moment, form the option **99: Enable/Disable** of the menu **KEYBOARD OLE**

### 14.7.1 99: Enable/Disable

---



Toggles the current status of the alphanumeric keyboard, allowing or not, to access to the console functions from the keyboard. Remember the Text function is always active.

The correspondence between the keys of the console & the alphanumeric keyboard are explained in the chapter 23.

# 15. CHANNELS PATCH

**GX**

DMX Output: 2048  
Maximum channels: 2000

**GS**

DMX Output: 1024  
Maximum channels: 1024

**GL**

DMX Output: 512  
Maximum channels: 512

The Channel Patch is the assignment between control channels to dimmers channels (DMX outputs).

By default, the channels are assigned to the first dimmers from the output DMX-1.

These assignments of channel-dimmer can be edited (totally or partially) following the next conventions:

- 1 dimmer can be controlled only by 1 channel or be free.
- 1 channel can control as many dimmers as will be needed.



Edit the Patch before the show programming!

To edit the Patch, open its edition screen, by menu, pressing:

**MENU** **0** **1** To open the Channels list

**MENU** **0** **2** To open the Dimmers list

Or by command, pressing:

**CHANNEL** **CHANNEL** To open the Channels list

The lists of Channels & Dimmers are placed in the same screen. These lists are synchronized, with the objective to present the same information in each moment. The user can edit the Patch in one of the lists or can use various list.

This screen is closed pressing **EXIT**

DMX direction can be used in two formats:

**Dmx 1-2048** Lineal by console: direction number of 1 to 2048 for 4 outputs.

**Dmx 1.1 – 512,4** Lineal by output, direction number (1 to 512) plus output number (1 to 4)

Channels & Dimmers Patch						
▼Edit Channels		▼Patch Tools		▼Dmx 1-2048		
Channels			+Edit			
Cha	Dmx	+	Cha	Dmx	Li	Cu
1	1		5	5	PF	Li
2	2					

0: Dmx 1-2048  
1: Dmx 1,1-512,4

## 15.1 CHANNELS LIST

---

To access to the **Channels** list using one of these options:

 **MENU** **0** **1**

 **CHANNEL** **CHANNEL**

The list has all the channels (one per line) showing their associated dimmer. If the channel is controlling more than 1 dimmer, shows us the symbol **+**, indicating that in the **+Edit** window there are more information about it (all the dimmers associated to this channel, with their curves and limit values).

1 channel can control as many dimmers as will be necessary.  
1 dimmer only can be controlled by 1 channel.

### ABOUT THIS LIST

**Cha:** Channel number. This number cannot be edited, used to find a concrete channel.

**Dmx:** First dimmer associated to the channel.

**+**: Pressing **ENTER** here, it permits us to enter in the **+Edit** window. When the channel has associated more than 1 dimmer, **+** appears.

Each line has the information about a channel.

Channels			+Edit			
Cha	Dmx	+	Cha	Dmx	Li	Cu
1	11		1	11	FF	Lin
2	21					
3	31					
4	41					
5	51					
6	61					
7	71					
8	81					
9	91					
10	101					


### 15.1.1 EDITING CHANNELS

---

Into the **Channels** list:

- Use the arrow keys or mouse to select the data that we want to edit.
- Enter the numeric data.
- Accept the data moving the cursor or pressing **ENTER**.

If the active cell is a **Cha**:

Enter channel number that we want to edit, and press . The system selects this channel into the list.

If the active cell is a **Dmx**:

To edit the associated dimmer, enter the dimmer number


To delete the associated dimmer press **DELETE**

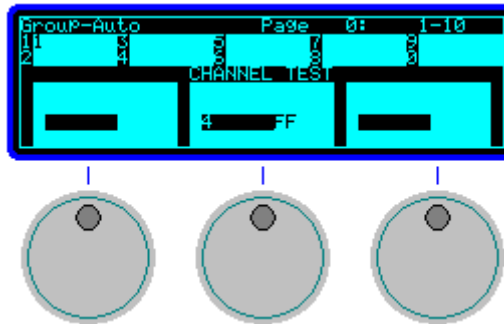
To insert the next dimmer (in accordance with the previous channel) press **INSERT**

Id the active cell is a +:

To edit more than 1 dimmer to the channel, press **ENTER** to access to the **+Edit** window. In the **+Edit** window it is possible to edit as many dimmers as will be necessary.

In any cell:

To test the response of the selected channel in scene, move **W2** . The test level is represented in the display and the monitor (up-right).



## 15.1.2 THE +Edit WINDOW

To access to this window, press **ENTER** in the cell **+** of the selected channel or use the mouse. In the **+Edit** window it is possible to edit as many dimmers as will be necessary.

Each line has the information about one dimmer:

**Dmx:** It's the dimmer direction.

**Li:** It's the value of the **Limit** function (maximum dimmer level)

**Cu:** It's the curve associated to the dimmer.

From **+Edit** it is possible to edit, to modify or to delete dimmers.

To edit a new dimmer, select the last cell (empty) and enter the dimmer number.

To return to **Channels** list, press **EXIT**

Channels			+Edit			
Cha	Dmx	+	Cha	Dmx	Li	Cu
1	11	+	1	11	FF	Lin
2	21			31	FF	Lin
3				32	FF	Lin
4	41			54	FF	Lin
5	51					
6	61					
7	71					
8	81					
9	91					
10	101					

The values by default, of **Dmx**, **Li** and **Cu**, are presented in gray. In this mode is easy to locate an edited value.

 Notes:

Remember: A dimmer only can be associated a 1 channel. For this reason, in the previous example, the dimmer 3.1 has been associated with the channel 1, and the channel 3 is free (the channel 3 is associated with the dimmer 3.1 by default).

## 15.2 DIMMERS LIST

To access to the **Dimmers** list press:



To toggle from Channels List to Dimmer List use the mouse, or select the option **Edit Dimmers** pressing



This list has all the dimmers. Each dimmer (one per line) presents us its channel associated, and its curve and **Limit** value.

Into this list it's possible to edit the channel, its curve and Limit level for each dimmer.

A channel can be assigned to many dimmers as will be needed.  
A dimmer only can have assigned 1 channel.

### ABOUT THIS LIST

Each line has the information about one dimmer:

- Dmx:** It's the dimmer number. This number cannot be edited. And these cells are used to find the dimmer to edition.
- Li:** Value for the **Limit** function. The dimmer output never exceeds this **Limit** level. If this value is **FF** (100%) the dimmer is not limited.
- Cu:** It's the response curve. See PRE-PROGRAMMED CURVES, page 15-9.
- Cha:** The number of the assigned channel.
- Fxt:** It's a fixture number that is using this direction for its control. This numbers appear as information, but they cannot be modified here.

Dimmers				
Dmx	Li	Cu	Cha	Spt
11	FF	Lin	1	
21	FF	Lin	2	
31	FF	Lin	3	
41	FF	Lin	4	
51	FF	Lin	5	
61	FF	Lin	6	
71	FF	Lin	7	
81	FF	Lin	8	
91	FF	Lin	9	
101	FF	Lin	10	
111	FF	Lin	11	
121	FF	Lin	12	
131	FF	Lin	13	
141	FF	Lin	14	
151	FF	Lin	15	
161	FF	Lin	16	
171	FF	Lin	17	
181	FF	Lin	18	

By default, the system assigns all the channels, consecutively, from the first direction of DMX-1.

### 15.2.1 EDITING

Into the **Dimmers** list:

- Use the arrow keys or mouse to select the data (cell) to edit.



- To edit the selected cell enter the appropriate number.
- Accept the entered data moving the cursor or pressing **ENTER**.

If the active cell is a Dmx:

To search the desired dimmer, entering the desired dimmer number and press **→**. The system searches this dimmer into this list. Note that it's possible to search a dimmer of any DMX line.



*Example:* To search the dimmer 2 of the DMX-2, press **2 0 2 →**

If the active cell is a Li:

This cell only is active for dimmers with channel. It admits level from 0% to 100% (FF). The output level in this dimmer never exceeds this value. Its default value is **FF**, not limited. The regulation curves are computed between 0 and the Limit level. A dimmer limited at 0% hasn't output in scene.

To insert the **Test** level as **Limit** level, press **INSERT**. The **Test** level (for the selected dimmer) is adjusted in scene moving **W2**.

If the active cell is a Cu:

This cell only is active for dimmers with channel. By default, all the dimmers have the **Lineal** curve (curve of response lineal in power).

Dmx	Li	Cu	Cha
1,1	FF	Lin	
2,1	FF		
3,1	FF	1: LIN	
4,1	FF	2: SQR	
5,1	FF	3: INV	
6,1	FF	4: O-F	
7,1	FF	5: PRK	
8,1	FF	6: US6	
9,1	FF	7: US7	
10,1	FF	8: US8	
11,1	FF	Lin	11
12,1	FF	Lin	12

To assign other curve, enter its index number (1-8)

More about curves in page 15-9

If the active cell is a Cha:

To edit the channel of this dimmer, enter the channel number.

To delete an edited channel, press **DELETE**

To insert the next channel (in reference with the previous dimmer) press **INSERT**

In any cell:

The selected dimmer can be tested using the **W2** at any moment. This **Test** is independent of its control channels.

## 15.3 SELECTION OF LIST


There are 3 ways to select the desired list.

Using the commands of the Setup line.

To access to Setup line, press **MENU**, and select the first cell. Here it's possible to press:

**0 ↓** To access to **Channels**

Channels & Dimmers Patch			
Edit Channels		Patch Tools	
C		Dmx	Li
0:	Edit Channels		
1:	Edit Dimmers	1,1	FF
2:			
3:			

**1**  To access to Dimmers

Using the mouse (External or TrackBall in MOUSE mode): Do click in the desired list cell to activate it.

Using the function keys: **CHANNEL CHANNEL**

To close the Patch screen, press **EXIT**

## 15.4 PATCH TOOLS

The next commands can be used to edit, copy, exchange, delete or return to the value by default of a dimmer or range, enclosed inside the **Patch Tools** option.

Inside any Patch, access to **Patch Tools** using the mouse or pressing **MENU**:



These Tools allow:



Set dimmers to their default values. **Default**



Some commands examples that can be edited:

Command	Item	From	To	
Default	Dimmer	1.1	1.1	* Default value for dimmer 1.1
Default	Dimmer	2.1	512.3	* Default value for dimmers from 2.1 to 512.3
Default	Dimmer	.1	.1	* Default value for DMX-1 output.
Default	Dimmer	.1	.4	* Default value for outputs from DMX-1 to DMX-4

\*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

Delete assignments of dimmers (free dimmers). **Delete**



Some commands examples that can be edited:

Command	Item	From	To	
Delete	Dimmer	1.1	1.1	* Delete assignment of dimmer 1.1
Delete	Dimmer	2.1	512.3	* Delete dimmer assignments from 2.1 to 512.3
Delete	Dimmer	.1	.1	* Delete assignment of DMX-1 output.
Delete	Dimmer	.1	.4	* Delete assignments of outputs from DMX-1 to DMX-4

\*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

Copy dimmers. **Copy**



Some commands examples that can be edited:

Command	Item	From	To	Item	Target	
Copy	Dimmer	1.1	1.1	Dimmer	2.1 2.1	* Copy dimmer 1.1 to 2.1
Copy	Dimmer	2.1	2.2	Dimmer	2.3 2.4	* Copy dimmers from 2.1 to 2.2 in dimmers from 2.3 to 2.4
Copy	Dimmer	.1	.1	Dimmer	.2 .2	* Copy dimmers of DMX-1 output to DMX-2 output
Copy	Dimmer	.1	.2	Dimmer	.3 .4	* Copy dimmers of outputs 1 and 2 to outputs 3 and 4

\*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

Exchange dimmers. **Exchange**



Some commands examples that can be edited:

Command	Item	From	To	Item	Target	
Exchange	Dimmer	1.1	1.1	Dimmer	2.1 2.1	* Exchange dimmer 1.1 with 2.1
Exchange	Dimmer	2.1	2.2	Dimmer	2.3 2.4	* Exchange dimmers from 2.1 to 2.2 with dimmers from 2.3 to 2.4
Exchange	Dimmer	.1	.1	Dimmer	.2 .2	* Exchange dimmers of DMX-1 output with DMX-2 output
Exchange	Dimmer	.1	.2	Dimmer	.3 .4	* Exchange dimmers of outputs 1 & 2 with outputs 3 & 4.

\*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

These commands don't request confirmation.

15-8  CHANNELS PATCH

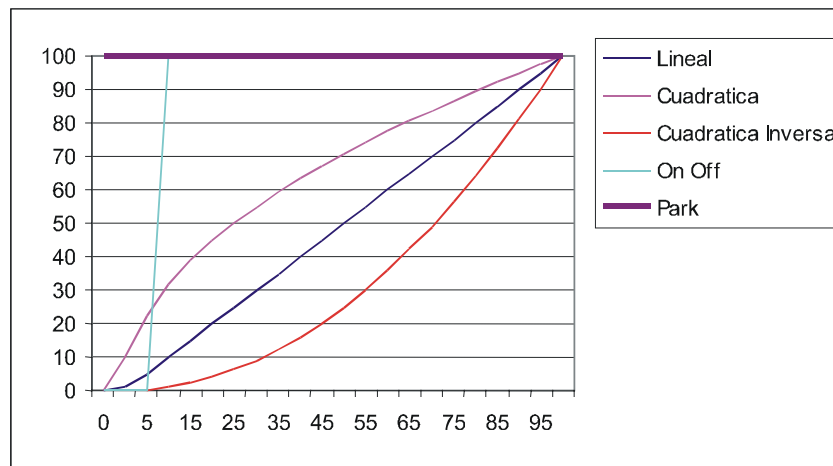
## 15.5 USER CURVES

The console has 5 response curves, pre-programmed, to assign them to the channel dimmers. Also it has 3 user curves. The user curves can be defined in the menu **05: Define Curves**



### 15.5.1 PRE-PROGRAMMED CURVES

Graphic presentation of the 5 pre-programmed curves, where the vertical axis is the output channel (in power) and the horizontal axis is the control level:



About these curves:

**Lineal** curve, (**1: LIN**). It's the curve of lineal response in power. At the 50% of control level, the output is the 50% of the total power.

**Square** curve, (**2: SQR**). It's the curve of quick-start. At the 50% of control level, the output is the 70% of the total power. This curve is very used in TV studies, and in Theatre, to compensate the slow start of the lamps of more power.

**Invert square** curve, (**3: INV**). It's the curve of slow-start. At the 50% of control level, the output is the 70% of the total power. This curve is very used with fluorescence, and in Theatre, to compensate the quick start of the lamps of less power.

**On-Off** Curve, (**4: O-F**) It's the Non-Dim curve. This curve hasn't regulation. At the 0% of its control level the power output is at 0%, but when the control level is over 6%, the power output is at 100%. This curve is very used for HMI lamps.

**Park** Curve, (**5: PRK**). A channel with park curve is always at 100% (of power output). Its output is independently of the control level. And this curve is used, mainly, in backstage (dressing rooms, working lights...) and it guarantees that the channel is at 100% if the consol is turned off.

## 15.5.2 USER CURVES

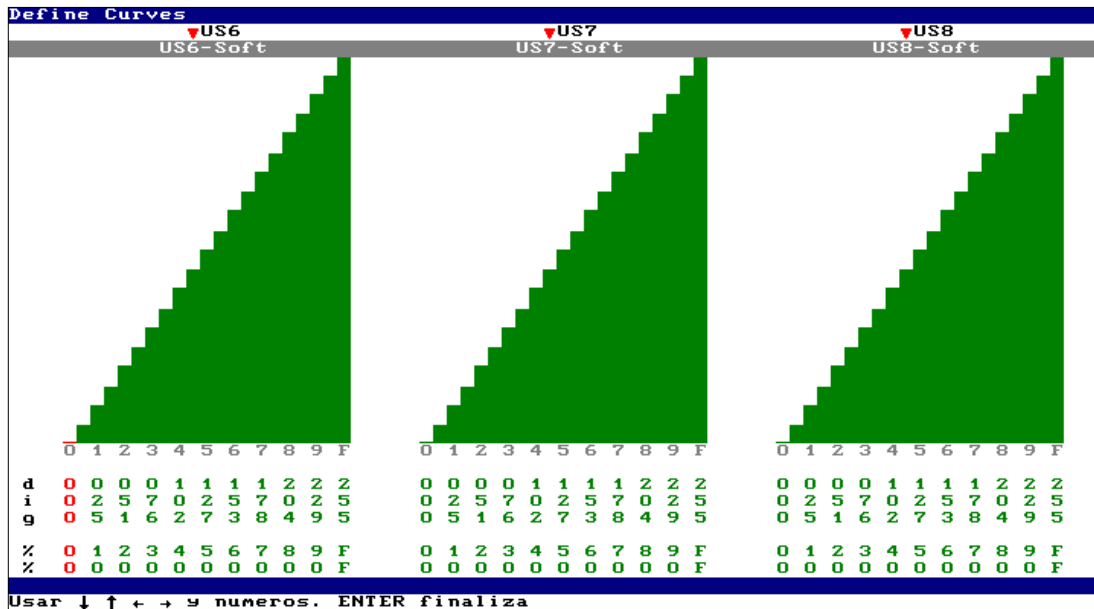
The user curves are defined in the menu **05: Define Curves**. These curves are named **US6**, **US7** & **US8**. About these curves:

- After a Reset these 3 curves are like the lineal curve.
- They can be **Soft** (conventional curves) or **Hard** (specials for effects).
- These curves are defined using 10 points.

To open the menu **05: Define Curves**:



This screen presents the current definition of the user curves; the definition is in graphic mode and numeric mode (using 2 scales, **dig**: 0-255 y **%%**: 0-100)



- Press **←** and/or **→** to select the point of the curve to edit. The selected point is presented in red, and is ready to edit it.
- Press **↑** and/or **↓** to edit the value of the selected point (these keys work in 0-255 scale), or enter the value for the selected point, **#** in scale 0-100.
- Repeat this steps as many times as points to edit.

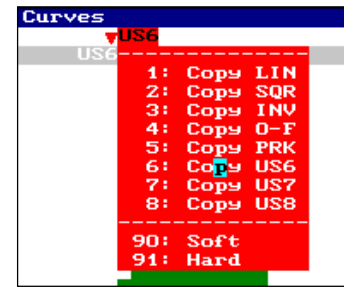
When the edition is finished, press **EXIT** to close this menu screen.

### Special editions:

The commands of the Setup line are grouped by curve, and are: **▼US6**, **▼US7** & **▼US8**. Remember, that pressing **MENU**, the cursor toggle between Setup line and curves edition zone. These commands are used to select the curve mode, and to copy the values of any curve.

COPY CURVE VALUES:

The **1** to **8** options permit us to copy the values of their curve in the selected curve. Also, it's possible to copy values from other user curve (**6** to **8** options). These copied values are used as start point to edit the selected curve.

CURVE MODE:

About these mode options:

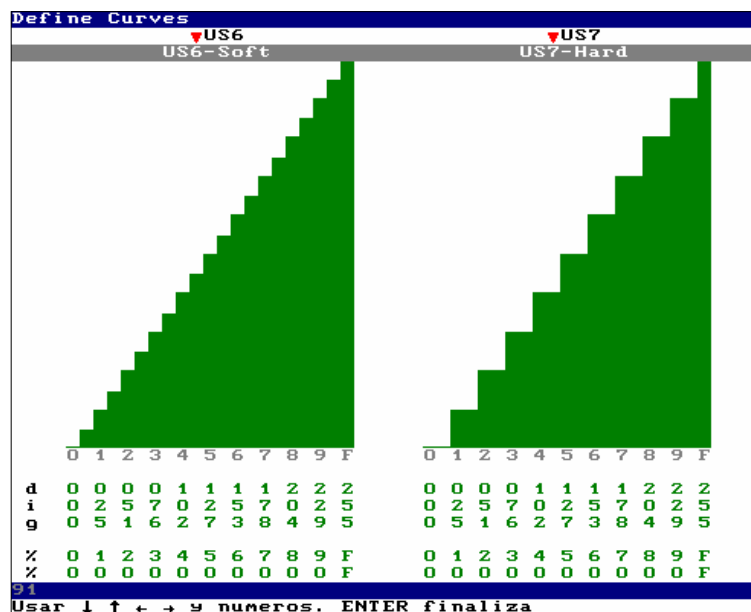
**90: Soft**

**91: Hard**

A **Soft** curve uses average values among its 10 edited values. In other words, the curve varies slowly.

A **Hard** curve (for special effects) only uses the 10 edited values, doing sudden changes between a point and the next point. The **Hard** mode is used to do special effects (fire, storm, palpitates...) using curves.

In the screen, a **Hard** curve is presented only with 10 bars (note that the **Soft** curves are presented with 20 bars):



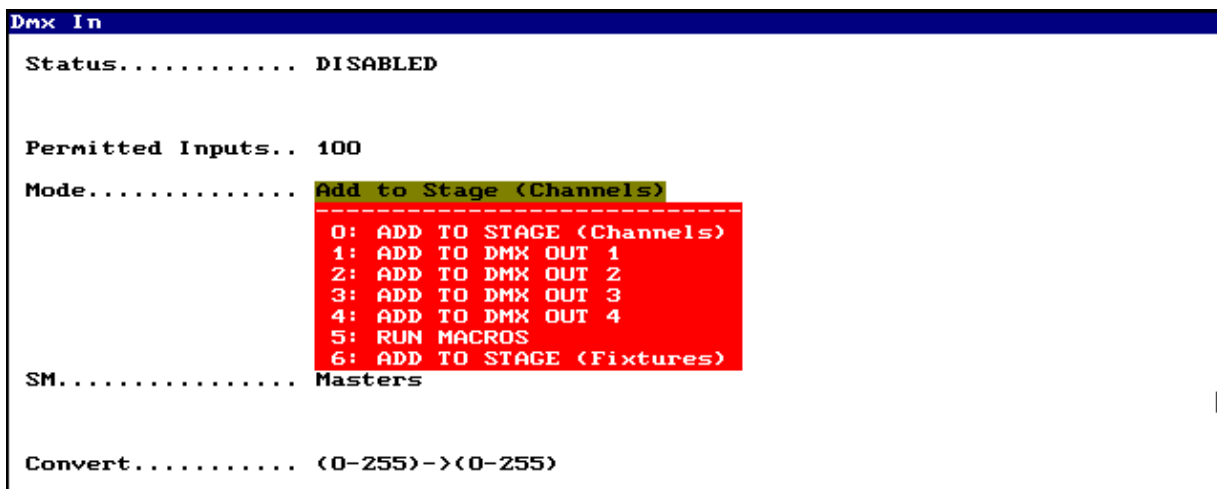
Only the user curves can be **Hard**.

## 16. DMX IN

The DMX input can be used to control conventional channels, to edit fixtures, to execute macros or, simplest, plug this DMX line to merger it with a DMX output of the console.

The DMX input is configured in the menu **03: Dmx In**:

☞ **MENU 0 3**



### Status

Select **0: ENABLED** to work with the DMX input, entering here the number **0**.

Select **1: DISABLED** to avoid that the console reads this input, entering here the number **1**.

### Permitted Inputs

A DMX line has 512 channels, but here it's possible to set the maximum number of channel to read. For example, if you are controlling with the DMX input 4 fixtures of 12 parameters (12x4=48), you can set this option at **48**, avoiding in this way, that the console did read more input channels. The input channels always begin from 1.

### Mode

To set the behavior of the DMX input, select here the desired option. The options are:

#### 0: ADD TO STAGE (Channels)

Permits us to use the DMX input to control a maximum of 512 channels (the first 512 system channels). The channels levels that be read from the **Dmx In** are presented in a blue filed. To capture their levels in the editor, press **CALL CALL** (also it's possible to use **CALL REC**).



**1: ADD TO DMX OUT 1 to 4: ADD TO DMX OUT 4**

The 1-4 options permit us to use the console as a standard merger. The **Dmx In** information is mixed with the information of the selected output line. In this mode, the user hasn't control of the DMX input.

These options are used when there are 2 control consoles, but only 1 physical DMX line.

*Example:*

A console is controlling channels (1-200), and other console (**8700 Series**) is controlling fixtures and some channels (201-350). If the output of the first console is connected to the **Dmx In** input of the **8700 Series** console, and **ADD TO DMX 1** is selected, all the channels & fixtures (1-350) are sent by the DMX-1 output.

**5: RUN MACROS**

The channels of the DMX input execute macros (maximum 512). When the input channel exceeds its 5%, the corresponding macro is executed (the correspondence between channels and macros is 1 to 1, channel 1-macro 1, channel 2-macro2, and so on).

**6: ADD TO STAGE (Fixtures)**

Allow you to use the DMX input to control a maximum of 512 fixture parameters (the first 512 system parameters). The parameters values that be read from the **Dmx In** are presented in a blue filed. To capture their levels in the editor, press **CALL CALL** (also it's possible to use **CALL REC**).

Also the parameters at 0% are captured from the DMX input in this mode.

Use the **SM**↕ as control of **DMX In** when this mode is selected.

**SM**

Allows you to configure the behavior of **SM**↕ that can work as masters-control or DMX input-control.

To configure **SM**↕ enter the index number of the appropriate option.

If **SM**↕ is configured as control of DMX input (1: **DMX IN**) its associated key, **SM**, works as Blackout of DMX input.

**CONVERT**

Allows you set the conversion type to use with the levels of **Dmx In**.

**0: (0-255)->(0-255)** It is a lineal conversion, 1:1.

**1: (0-1, 2-255)->(0, 2-255)** It is a special conversion where the levels received as 01 as translated as 00. This conversion allows the compatibility with some consoles that send the level of 01 for the inactive channels (conceptually at 0%).

Close the this menu screen, pressing **EXIT**

## 16.1 DMX INPUT TEST

---

It's possible to test (read) the DMX input selecting the menu **83: Dmx In:**

 **MENU** **8** **3**

Inside this menu, use  &  to page it.

To close this menu screen press **EXIT**

Note: This test is available with the DMX input enabled or disabled.



# 17. FIXTURES DEFINITION

This chapter has all the details about the fixture definitions, the modification & edition process, as well as all about the library of fixture definitions.

All these processes are placed in the menu 04: Fixtures, open this menu using one of these options:



**MENU 0 4**



**FIXTURE FIXTURE**

## 17.1 THE FIXTURE DEFINITIONS

The definition of a fixture, **Type**, defines the fixture parameters in accordance with the manufacture specifications.

Fixture Definition										Steps Definition				
Name	Ch	Comment								Name	Min	Max	S	Palette
MC500	16	Mac500 Mode4								1	CLOSED	0	19	Close
										2	OPEN	20	49	Open
										3	STROBE	50	72	s Strobe
										4	OPEN P	80	99	s PulseOp
										5	CLOS P	100	119	s PulseCl
										6	RndOpn	191	196	s Random
										7	RndCls	197	202	s
										8	OPEN	203	207	
										9				
										10				
										11				
										12				
										13				
										14				
										15				
										16				
										17				
										18				
										19				
										20				
										21				

Each **Type** has:

- Identification data
- Definition of all its parameters.
- Definition of steps of parameter.

### 17.1.1 IDENTIFICATION DATA

#### Name

It's the short name of the **Type**, with 5 characters.

Name	Ch	Comment
MC500	16	Mac500 Mode4
MARTIN	1001	MAC500M4. --- H 440 306

#### Ch

It's the channels number used to control the fixture. This number is calculated by the system (in gray) and it cannot be edited.

#### Comment

It's the long name of the **Type**.

#### Manuf

It's the manufacturer of the fixture. The console will show a list, ordered alphabetically, for the selection of the manufacturer. There is a **USER** option, where to include the manufacturer personalities not envisaged. If there are fixtures of manufacturers that are not included in the current manufacturers list, these fixtures are labeled as **?????**

17-2  FIXTURES DEFINITION

**ID**

It's the Identification Number. This number is used to order the **Types**, and as reference. The 2 first digits of this number are in accordance with the manufacturer (in gray) that cannot be edited.

**File**

It's the MD-DOS file name (MS-DOS format) where is stored the **Type**. Each **File** must be unique.

**M**

It's the moving characteristic of the fixture: **MIRROR**, **HEAD** or **NONE**. To edit it enter its index number. (Optional)

**X° & Y°**

It's the grades of the **Pan & Tilt** movements (Optional)

17.1.2 PARAMETERS DEFINITION

Each parameter of the fixture is defined in accordance with its operative function. All parameters have the same structure, except the **Control** parameter. Where:

Name	Ch	Comment							
MCS500	16	Mac500 Mode4							
Manuf Id	File		M	X°	Y°				
MARTIN	1001	MAC500M4.---	H	440	306				
Num	Name	Ch+Fn	I	L	F	Hom	St		
---	Control	1	-	-	-	-	0	3	
1	21 Shutter	1				49	8		
2	20 Dimmer	2			f	255	1		
3	47 Color1	3			c	f	0	23	
4	47 Color2	4			c	f	0	1	
5	60 RotCB	5			g	f	0	11	
6	61 RotCbRot	6			g		0	3	
7	60 GWhl	7			g	f	0	19	
8	80 Focus	8			f	128	1		
9	81 Iris	9					0	6	
10	101 Prism	10			x	f	0	12	
11	0 X	11	12		p	f	128	1	
12	1 Y	13	14		p	f	128	1	
13	103 Mov-Spd	15					0	5	
14	105 Speed	16					0	3	

**Num**

It's an index number that indicates the parameter function. The parameters functions are divided in 6 groups that are:

**POS** for the position parameters. **X & Y** parameters and always in the Trackball.

<b>POS</b>	
0: X	1: Y
2: XY-Func	19: S-Pos
<b>DIM</b>	
20: Dimmer	21: Shutter
22: Strobo	39: S-Dim
<b>COL</b>	
40: Cyan	41: Magenta
42: Yellow	43: Red
44: Green	45: Blue
46: Amber	47: Color
48: Col-Fnc	49: Correct
59: S-Col	
<b>GOB</b>	
60: Gobo	61: Gobo->
79: S-Cob	
<b>BEAM</b>	
80: Focus	81: Iris
82: Frost	83: Zoom
84: Shaper	85: Blade A
86: Blade B	87: Blade C
88: Blade D	89: Blade->
99: S-Beam	
<b>X-TRA</b>	
100: Effect	101: Prism
102: Prism->	103: XY-Spd
104: Col-Spd	105: Speed
106: Control	107: User
119: S-Xtra	

**DIM** for the dimmer parameters. The **Dimmer** parameters are used as **HTP** (conventional regulation). A Dimmer parameter is always in the vertical wheel or Joystick.

**COL** for the color parameters.

**GOB** for the gobo parameters.

**BEAM** for beam parameters, including the blades parameters.

**X-TRA** for the rest of the fixture parameters: prisms, effects, macros, speed, etc.

Fixture parameters are always ordered by functionality.

### Name

It's the parameter name (8 characters) that by default takes the name of its **Num**, although this can be changed.

### Ch+Fn

It's the Dmx order for the parameter. A simple parameter (8bits) has only a Dmx order (**Ch**), and a parameter with fine control (16 bits) uses 2 Dmx orders (**Ch+Fn**).

For the **Dimmer** parameters, it's possible to edit the characteristic **EXTERNAL** that permits us to use an external dimmer (conventional dimmer) to regulate this fixture. The **External Dimmer** of these fixtures is configured in the Fixture Patch.

### I

It permits to invert the parameter. Example: If an **Iris** at 0% is opened and at 100% is closed, you can invert this parameter to open the **Iris** at 100% and to close it at 0%. An inverted parameter presents its **Home** level and steps in blue.

### L

It permits us to include (or not) the parameter in any of the system libraries (pos, dim, col, gob, beam or x-tra). For that a parameter can be stored in a user library (for example color) must be assigned to this library.

### F

It permits to configure if the parameter fades or not fades during a playback fade.

### Hom

It's the neutral value for the parameter (0-255).

### St

It's the steps number of the parameter (in gray). This number is calculated by the system and cannot be edited; press **ENTER** here to enter to the **Steps definition** zone.

**St** takes values from **0** to **99**:

**0** when the parameter is spare (without steps).

**1** when the parameter is continuous (only has 1 step from 0 to 255). Some continuous parameters are **X, Y, Zoom, Iris, Dimmer**, etc.

**2, 3... 99** when the parameters is defined with steps (**2, 3... 99**). These steps definition can be edited in the **Steps Definition** zone.

The special **Control** parameter is used to define the fixture commands. Usually, these commands are used to turn-on or turn-off the lamp, to reset the fixture, etc. A Control parameter is defined with:

**Ch**

It's the Dmx order. Usually, each fixture has a dedicated parameter for the commands, or the fixture can have a parameter with **Control** and other functionality. Then, this number can be exclusive, can be repeated in other parameter and, as special case, you can edit here a **99: ALL** for that the commands affect to all the parameters of the fixture.

**Hom**

It's the **Control** neutral value (0-255).

**St**

It's the commands number (in gray) that is calculated by the system; press **ENTER** here to enter to the **Steps definition** zone that in this case will be the command definition zone.

### 17.1.3 STEPS DEFINITION IN A PARAMETER

The **Steps Definition** window presents us the definition of the selected parameter. Each line has a concrete function of the parameter (step). A general parameter can have a maximum of **99** steps, and a control parameter can have a maximum of **26** commands (steps).

Steps Definition					
	Name	Min	Max	S	Pa
1	WHITE	0	15		Wh
2	BLUE	16	31		Bl
3	RED	32	47		Re
4	MAGNTA	48	63		Mg
5	GREEN	64	79		Gr
6	YELLOW	80	95		Ye
7	PURPLE	96	111		Pu
8	BLUE	112	127		
9	PINK	128	143		Pi
10	CYAN	144	144	s	Cy
11	CYAN	145	148		
12	PINK	149	152		
13	BLUE	153	156		
14	PURPLE	157	160		
15	YELLOW	161	164		
16	GREEN	165	168		
17	MAGNTA	169	172		
18	RED	173	176		
19	BLUE	177	180		
20	WHITE	181	184	s	
21	SPN-->	185	215		C>
22	<--SPN	216	245	s	
23	CW2_ON	246	255		

For a general parameter:

**Name**

It's the step name.

**Min & Max**

They are the values minimum & maximum those define the step (0-255).

**Notes:**

A complete parameter begins at 0 and ends at 255.



It's possible to omit a range (not-used) of the parameter.

It's not possible to overload these values. Example:

White: 0-15 & Blue: 15-31 is a configuration not admitted.

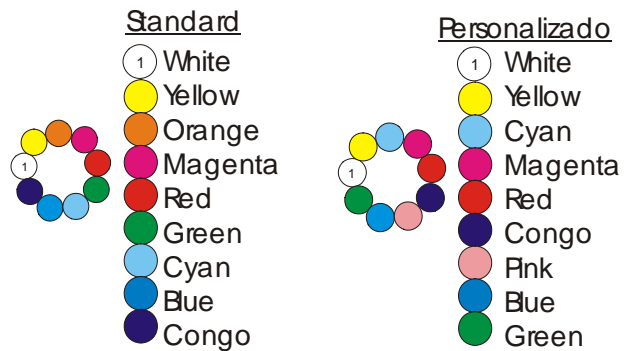
The value **15** only must be defined in one step.

**S**

It's the Stop function. When the system find a step with stop (S), doesn't permit to pass to the next step with the wheel or the joystick.. Will be necessary press  or  to change of step. The Stop function is thought to avoid mistakes when a parameter has several functionalities, for example, dimmer & strobe, gobos & macros, etc.

**Pa**

It's the definition of the Palette for dimmer/strobe/shutter, colors and gobos. It cell only is activated in the parameters of color wheel and gobo wheel (20:Dimmer, 21:Shutter, 22:Strobe, 47:Color & 60:Gobo). The Pa value permits us to locate a concrete strobe function, color or gobo. Each value of Pa only can be associated to a step.



In the case of the color palettes only the fixtures without color mix (CYM, RGB, etc...) uses the Pa values. A fixture with color-mix uses these wheels to obtain the correct color.

If a color or gobo wheel is personalized, will be necessary to personalize too its Pa values.

For a Control parameter, where each step is a command:

**Name**

It's the command name

**Lev**

It's the level (0-255) that corresponds to the command.

**Tim**

It's the time, in seconds, for the command.

**Pal**

It's permits to identify the more important commands of the Control parameter: turn on (On), turn off (Off) and reset (Rst).

Steps Definition				
	Name	Lev	Tim	Pal
1	Reset	208	6	Rst
2	On	228	6	On
3	Off	248	6	Off
4				
5				

In general, a Control command, sends a level during a time by a DMX\* channel (following the programmed data) and then the Dmx channel is sets up to Hom value.

\*Remember: Some fixtures send the level by all the Dmx channels to execute the commands.



## 17.2 EXAM & TYPE EDITION

---

It's possible to exam and to edit any **Type** loaded in the **Cache**.

From the menu **04: Fixtures**

Select the **Cache** list pressing **MENU 1 MENU** (or using the mouse)

Select with the cursor the desired **Type**, and enter **0** to select the option **0: Edit**

The **Fixture Definition** is active for the selected **Type**. Now, it's possible to edit any element of the definition.

When the **Fixture Definition** is edited, press **EXIT** to store and exit. The system requests us a confirmation. Press **ENTER** to store it (or press **EXIT** to not store it). The **Type** is modified in the **Cache**.

## 17.3 EDITING A NEW TYPE

---

It's possible to edit a new **Type**, in **Cache**, always overwriting a not used **Type**:

Access to the menu **04: Fixtures**

Select the **Cache** list pressing **MENU 1 MENU** (or using the mouse)

Select the **Type** to overwrite with a new definition and enter **1** to select the option **1: New**

\*This option only is available if the **Type** is not used in the **Patch**.

\*If necessary, store in disk this **Type** (**3: Save** option).

From here, you can select any **Fixture** data and edit it following the manufacturer specifications.

Define all the parameters of the fixtures.

Define the steps of all the parameters.

Define the general parameters, and specially take careful with the **File** name (unique).

When the **Fixture Definition** is edited, press **EXIT** to store and exit. The system requests us a confirmation. Press **ENTER** to store it (or press **EXIT** to not store it). The **Type** is modified in the **Cache**.

## 17.4 SAVE TO DISK

---

Any **Type** in **Cache** can be stored in a **Disk** (Hard Disk, Floppy Disk or USB disk). All the **Type** files stored in the **Disk** form the fixtures library.

Each time that a **Type** is edited or created, its name appears in red... This status indicates us that this fixtures still is not stored in the library or in a show.

\* Note: The complete **Cache** is stored in the Show.

A **Type** that appears in red in the **Cache** list will be lost if a Reset is done. It's recommended to store in library the **Type** in red.

To store it, access to the **Cache**, select the **Type** in red, and select the **3: Save** option.

The **Type** is stored in a **File** in the selected Disk. To select the desired Disk, **Hard Disk**, **Floppy Disk**, or **USB Disk**:

- Access to the Setup line with the mouse or pressing **MENU**.
- Select the second option and press:
  - 0** to select 0: Hard Disk
  - 1** to select 1: Floppy Disk
  - 2** to select 2: USB Disk
- Accept the data pressing **ENTER** or **MENU**.

When we are modifying a **Type**, it's possible:

- 1) Change the **File** name with the objective of store the new **Type** in other file (respecting the original).
- 2) Don't change the **File** name; in this case, the original file is replaced with the modifications done.

Each time that the system tries to store in an exiting **File**, a confirmation message appears.

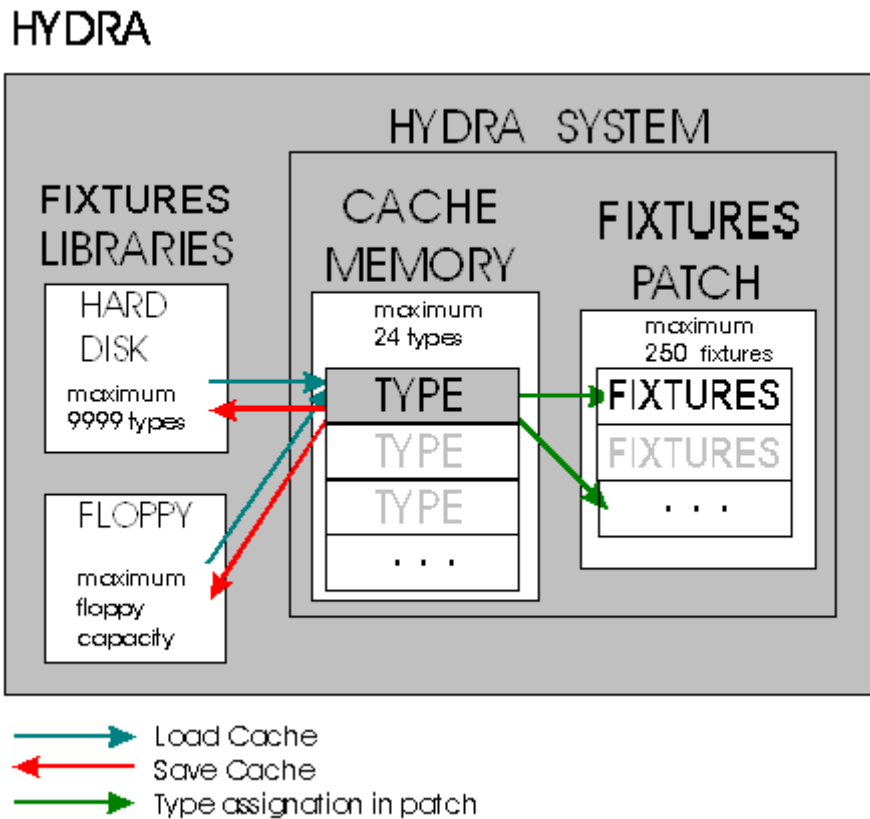
## 17.5 CONCEPTUAL

---

Any **Type** in **Cache** can be substituted from other in the Hard Disk, Floppy or USB.

Any **Type** edited in **Cache** can be stored to Hard Disk, Floppy or/and USB.

To **Patch** a fixture with a **Type**, this **Type** must be in the **Cache**.



## 17.6 THE TYPES FILES

Any **Type** in **Cache** can be stored in a Disk (Hard Disk, Floppy Disk or USB Disk). All these **Files** stored in the Disk form the fixtures library. If it's necessary to delete a **File** in the selected Disk:

Select the menu **04: Fixtures**

Select the **File Tools** option, in the Setup Line.

Execute the **0: Enter** option

Access to the Files list, pressing **MENU** or **↓**

Select the **File** to erase, and select its ▼ cell

Execute the **0: DELETE** option, pressing **0 ENTER**. The selected **File** is erased.

Quit pressing **EXIT**

## 18. SERIAL PORTS

GX GS GL
----------------

Rs232 port: 1

The serial port of the console allows you to control some external systems (tape machine, audio player, etc) from the show. These external systems are defined as **Devices**, and they have their particular control commands. The console has a small **Devices** library, and the user can edit it, modify it or create new **Devices**.

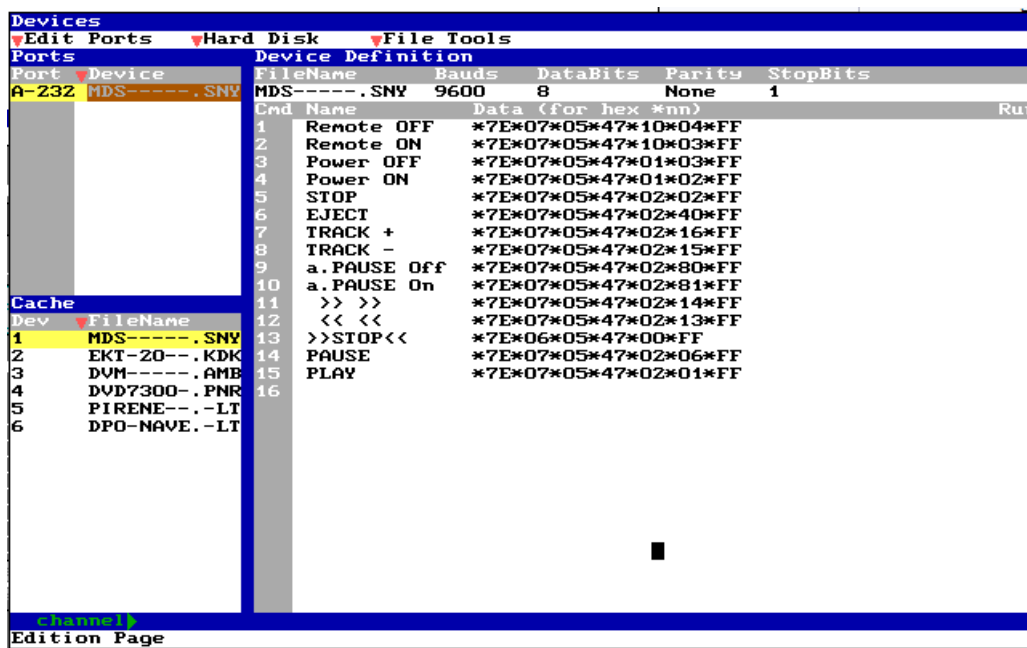
The external systems must have a control serial port.

In the **Devices** library, each **Device** is stored in a file (in the **Hard Disk**, **Floppy Disk** or **USB Disk**). Beside, some **Devices** are loaded in the **Cache** memory (active in the system) and they are stored with the show.

To associate a **Device** to a serial port, this must be in the **Cache** memory.

The ports and their **Devices** are configured from the menu 20: Serial Ports

☞ **MENU 20**



This screen has:

- The setup line with general options.
- The **Ports** list with the status and the associated **Device** of each port.
- The list of the **Cache** memory, with the active **Devices** that can be used in the **Ports** list.

- Finally, the zone of **Device Definition**, used as information and to edit **Devices**.

Press **MENU**, or using the mouse, to toggle between the setup line and the active list (**Ports** or **Cache**)

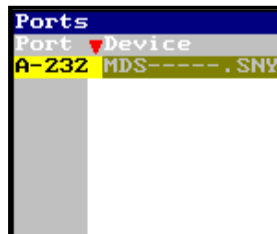
Press **EXIT** to close this menu screen.

## 18.1 PORTS CONFIGURATION

The ports are configured into the **Ports** list. To access to **Ports**, open menu 20, click with the mouse in any cell of **Ports**, or select the option **0: Edit Ports** (inside the setup line).

Inside **Ports** it's possible:

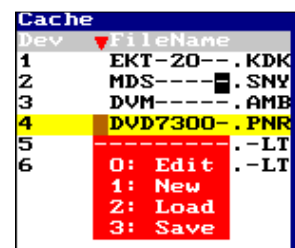
- **▼** cell: Activate (**ON**) or deactivate (**OFF**) each port. These **ON/OFF** controls also are placed in the menu **70: Multimedia Panel**. When a port is at **OFF**, its **Device** appears in gray.
- **Device** cell: Associate the **Device** of **Cache** that you want to control. For this, enter the index number (according with the **Cache**).



## 18.2 DEVICES OF THE CACHE LIST

The **Cache** has loaded some **Devices** that they can be used in the show. From here it's possible:

- To edit any **Devices**.
- To create a new **Device**.
- To load a library **Device** (**Hard, Floppy** or **USB**).
- To save any **Device** in the Library (**Hard, Floppy** or **USB**).



To access to **Cache**, click with the mouse in any cell of **Cache**, or select the option **1: Edit Cache** (inside the setup line).

## 18.2.1 DEVICE EDITION

To edit a **Device** you must access to the **Device Definition** window, clicking with the mouse inside it, or from the **Cache** list, selecting the **Device** and its associated option:

0: Edit.

Device Definition					
FileName	Bauds	DataBits	Parity	StopBits	
DVM-----	.AMB	9600	8	None	1
Cmd	Name	Data (for hex *nn)			Run
1	AUDIO OFF	0AD*0D			
2	AUDIO 20%	30AL*0D			
3	AUDIO 25%	25AL*0D			

Device name

**FileName** It's the **Device** name and also is the name of the library file. This name can has 8 characters more 3 characters for the extension.

The serial protocol configuration

**Bauds** It's the transmission speed used.  
**DataBits** It's the number the bits used.  
**Parity** It's the parity type used.  
**StopBits** It's the number of stop bits used.

When one of these parameters is selected, a red window presents its possible options. These parameters must be defined following the manufacturer specifications.

The commands

In this list each command uses one line. Each command has:

**Cmd** It's the command number. Designated by the system, cannot be edited.


**Name** It's a name to identify it. This name appears in the commands selection list, and if correct, in the events list and the cue list.

**Data** They are the data that are transmitted by the serial port when the command is executed. The data must be in accordance with the manufacturer specifications, and can be edited using ASCII or HEX characters. The HEX characters are preceded with a \* (each 2 characters) with the objective to differentiate of the ASCII characters.


**Run** Pressing **ENTER** here, the command Data are transmitted by its port. It's possible to use it as test. Don't forget to connect the corresponding equipment to the serial port.

After that the **Device** is edited, press **EXIT** to quit. The system request us confirmation to store the change. Confirm pressing **ENTER** or cancel pressing **EXIT** again.

The modified **Device** appears in red in the **Cache** list until this **Device** is saved in the Library or until the show is stored.

 Notes about Data:

ASCII is the Data format by default. Any **Data** in ASCII format can be edited using the alphanumeric keyboard directly.

 Example: 00 06

The **Data** in HEX format are edited using the alphanumeric keyboard, but must be preceded by a \* each 2 characters.

 Example: \*00 \*06


In the same **Data** it's possible to mix ASCII & HEX characters.


 Example: 00 \*06, where 00 are 2 ASCII characters and \*06 is 1 HEX data.

The conversion between ASCII and HEX is represented in the next table:

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
2		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{		}	~	

ASCII – HEX.

 Example: the ASCII character “T” is the same that the HEX data \*54.

 To edit in a **Data** the ASCII character: \*, this must be written as \*\*

## 18.2.2 CREATE A NEW DEVICE

Inside **Cache**, select the **Device** that will be replaced by the new (this **Device** cannot be associated to a serial port) and execute its option 1: **New**

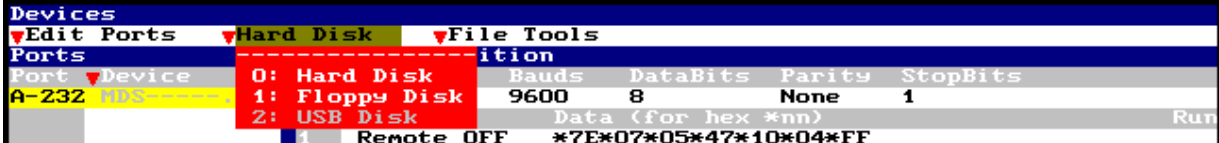
The **Device Definition** is active and totally empty. Now it's possible to edit the new **Device**, following the same line that in the previous section.

When the edition is done, press **EXIT** to quit. The system request us confirmation to store the new **Device**. Confirm pressing **ENTER** or cancel pressing **EXIT** again.

The new **Device** appears in red in the **Cache** list until this **Device** is saved in the Library or until the show is stored.

### 18.2.3 LOAD A LIBRARY DEVICE

Before to execute the **Load** option, check that the working disk is the desired. The working disk is presented in the setup line (**Hard, Floppy** or **USB**), and if needed, it's changed here:



Port	Device	Bauds	DataBits	Parity	StopBits
A-232	0: Hard Disk	9600	8	None	1
	1: Floppy Disk				
	2: USB Disk				

Remote OFF \*7E\*07\*05\*47\*10\*04\*FF

Inside **Cache**, select the **Device** that will be replaced by the loaded (this **Device** cannot be associated to a serial port) and execute its option **2: Load**

At the right of the screen, the system presents us the list of library **Devices** stored in the working disk. Select the desired **Device** and execute its option **0: Load**.

The **Device** is loaded in **Cache**, and now it's possible to associate it to any serial port.

### 18.2.4 SAVE A DEVICE

Before execute the **Save** option; check that the working disk is the desired. If it's needed change the working disk, follow the steps explained in the previous section.

Inside **Cache**, select the **Device** to store and execute its option **3: Save**.

The **Device** is stored in a file into the working disk.

If there is a file with the same name, the system request confirmation. Confirm pressing **ENTER** or cancel pressing **EXIT** and edit its **FileName** to save in other file.

Remember that all the **Cache Devices** presented in red, are not stored.

 Notes:



To copy a **Device** from a disk to other disk (**Hard, Floppy** or **USB**), it's needed to load the **Device** to **Cache**, and then to save it changing the working disk.

The **Devices** files are stored into a folder named **Devices** and placed in the main directory (root). The system creates this folder, automatically, when the first **Device** is stored.

In case of manipulation of **Devices** with floppies or USB disk, don't forget to create this folder. If this folder is not, the console will be able not to access to these files.

### 18.2.5 THE DEVICE FILES

---

In the setup line is the option **File Tools**. This option permits us to delete any file of the **Devices** library of the working disk (**Hard, Floppy** or **USB**). For this:

Execute the option **0: ENTER** of **File Tools**.

The system presents us the list the **Device** files of the working disk.

Select the desired file and execute its option **0: DELETE**

## 18.3 THE COMMANDS IN THE SHOW

---

When a port has a **Device** associated, and this port is active (**ON**) it's possible to execute any **Device** command using any of these methods:

- Inside **CUE CUE** screen, associating the command to a cue. When the cue begins its crossfade the command is transmitted.
- Programming the command as an event in the events list. (**MENU 2 3**)
- Executing its option **Run** inside **Device Definition** in menu **20: Serial Ports**

## 19. MIDI

**MIDI** (Musical Instruments Digital Interfaces) is a serial digital protocol, originally developed for the music instruments, and nowadays used for the most of the computers and multimedia equipments.

From the **MIDI** port, it's possible to communicate any MIDI equipment, including a second console.

The most basic level of MIDI communication is the transmission of musical **NOTES** (these musical **NOTES** are associated with the console keys); and of musical **CONTROLLERS** (these **CONTROLLERS** are associated with console faders).

MIDI transmits 16 communication channels; each communication channel transmits 128 **NOTES** & 128 **CONTROLLERS**. The **NOTES** & **CONTROLLERS** are transmitted at the moment that one key is pressed or one fader is moved.

 Notes:

The console uses the first **97** **CONTROLLERS** **MIDI** (**0-96**), because the upper **CONTROLLERS** usually have special functions in MIDI nets.

The MIDI used in the console accepts "Running Status" to improve the MIDI transmission speed.

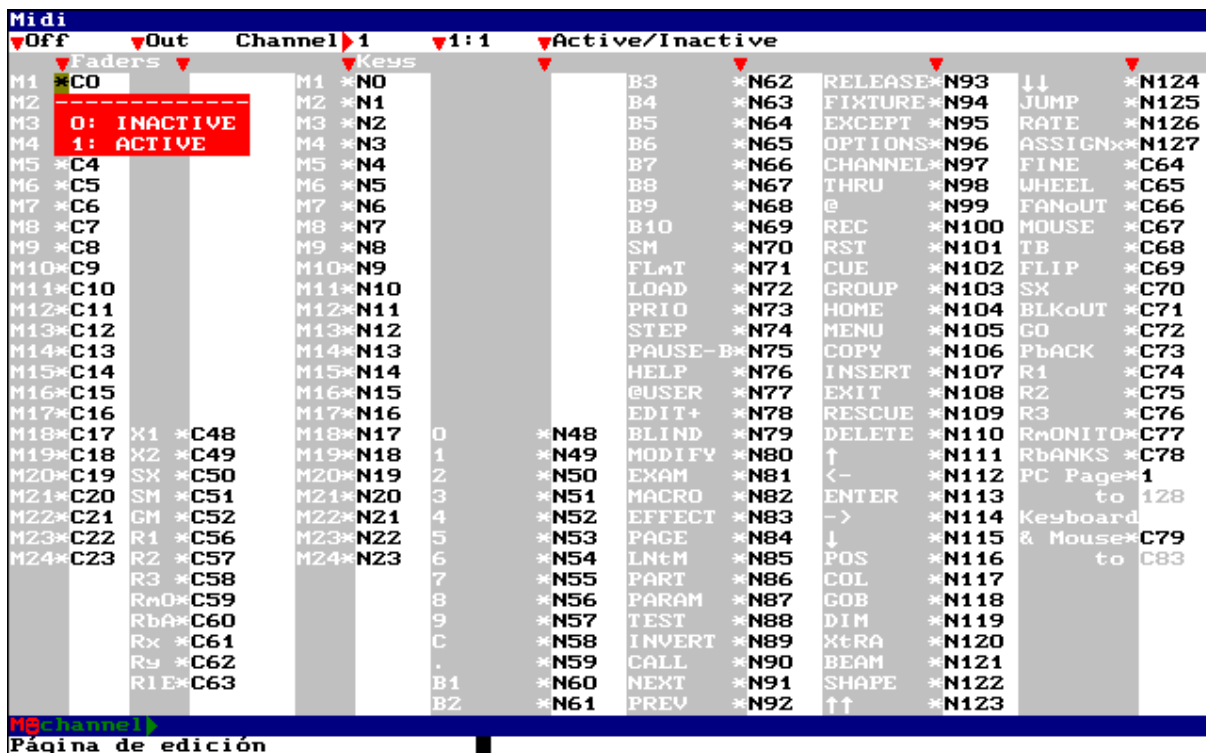
### 19.1 THE MIDI MENU

The associations between **NOTES** and keys and between **CONTROLLERS** and faders, as well as the MIDI port configuration are placed in the menu **21: Midi**

 **MENU 2 1**

The first time that enter this menu, and always after a Reset, you have the association by defect between Notes - keys and Controllers faders. This association is designated as MIDI chart, and it can be edited.

The MIDI chart by defect, which depends on each console model, it is thought to maintain a compatibility maximum between the different models of the 8700 series.



The screen is divided in 2 zones: The Setup-line & the MIDI chart. To toggle between these zones, use the mouse or press **MENU**

To close this menu screen, press **EXIT**

### 19.1.1 SETUP LINE

The Setup line options permit us to:

#### ▼Off

Activate or deactivate the MIDI port selecting the appropriate option:  
0: OFF or 1: ON

The activation/deactivation of the MIDI port is available too in the menu 70: Multimedia Panel

#### ▼Out

Select the communication mode entered the index number to the desired option. When the console is the MIDI transmitter, select the 0: OUT option; and when the console is the MIDI receiver, select the 1: IN option.

#### Channel▶1

Select the communication channel (from 1-16) to the communication entering its number. Remember, the MIDI protocol use 16 channels independents.

**▼1:1**

Return to the default MIDI chart, executing the **0: Default** option.

**▼Active/Inactive**

This option includes several quick editions commands:

**0: Inactive Faders**

Execute it to deactivate the transmission/reception of all Fader/Controller associations.

**1: Active Faders**

Execute it to activate the transmission/reception of all Fader/Controller associations.

**2: Inactive Keys**

Execute it to deactivate the transmission/reception of all key/Note associations.

**3: Active Keys**

Execute it to activate the transmission/reception of all key/Note associations.

**4: Inactive PCs**

Execute it to deactivate the reception of Program Change MIDI.

**5: Active PCs**

Execute it to activate the reception of Program Change MIDI.

**6: Inactive Mouse & Keyboard**

Execute it to deactivate the transmission/reception of the mouse & keyboard.

**7: Active Mouse & Keyboard**

Execute it to activate the transmission/reception of the mouse & keyboard.

## 19.1.2 MIDI CHART

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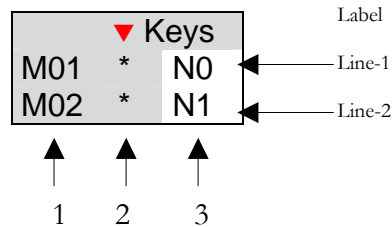
The MIDI chart is ordered by **Faders** and then, by **Keys**.

The 2 firsts columns present the **Faders** with their associated Controllers.

The rest of the columns present the **Keys** with their associated Notes.

At the end of the last column, the special commands are presented. These special commands are: Program Change (**PC**) and **Mouse & Keyboard**.

In the columns:



- 1 It's the **Key** name or **Fader** name. Not editable.
- 2 It's the status: activated or deactivated. When a key or fader is active presents a \*
- 3 It's the Note or Controller associated with the key or fader, respectively.

A Controller number is identified with a **C**, as **C0**, **C1**, etc.

A Note number is identified with an **N**, as **N0**, **N1**, etc.

#### Fader edition:

- Access to the cell ▼ of the fader to edit, and if it's needed select **0: INACTIVE** or **1: ACTIVE**, entering the index number of the desired option.
- Access to the next cell, and enter the Controller number, **#** (0-96) to associate to the selected fader. The faders always are associated to controllers.

If the port is in **Midi Out** mode, each time that a fader is moved, its associated Controller is sent with the current level.

If the port is in **Midi In** mode, each time that the system receives a Controller, moves the associated fader to the received level.

#### Key edition

- Access to the cell ▼ of the key to edit, and if it's needed select **0: INACTIVE** or **1: ACTIVE**, entering the index number of the desired option.
- Access to the next cell, and enter the Note number, **#** (0-127) to associate to the selected key.

A key too can be associated with a Controller, in this case, enter the Controller number (0-96) with a decimal point, as **#.0**

Note: The decimal point (.) is used to differentiate a Note number of a Controller number.

If the port is in **Midi Out** mode, each time that the key is pressed, its Note On is sent (or Controller at 64) and each time that the key is released, its Note Off is sent (or Controller at 0).

If the port is in **Midi In** mode, each time that the system receives a Note On (or Controller at 64) presses its associated key, and each time that the system receives a Note Off (or Controller at 0) releases its associated key.

PC edition

- Access to its cell ▼ and if it's needed select **0: INACTIVE** or **1: ACTIVE**, entering the index number of the desired option.
- Access to the next cell and enter the number of the first console page, **#** (1-999), that it will be loaded when the **PC1** is received. The 128 PCs (PC1-PC128) permit us to load 128 consecutives pages, beginning from the edited page (**#**).

If the port is in **Midi Out** mode, the **PC** command has not function.

If the port is in **Midi In** mode, when the system receives:

**PC1**, the command **PAGE # SELECT** is executed; the page **#** is loaded.

**PC2**, the command **PAGE #+1 SELECT** is executed; the page **# +1** is loaded.

...

**PC 128**, the command **PAGE #+127 SELECT** is executed; the page **# +127** is loaded.

Keyboard & Mouse edition

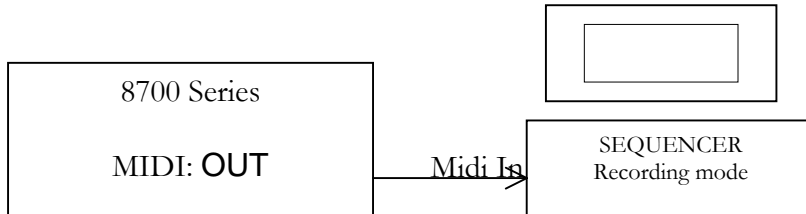
- Access to its cell ▼ and if it's needed select **0: INACTIVE** or **1: ACTIVE**, entering the index number of the desired option.
- Access to the next cell and enter the number of the first Controller **#** (0-96). The Mouse & Keyboard and transmitted using 5 consecutives Controllers for the mouse clicks and ASCII characters.

This option can be used when 2 **8700 Series** consoles are connected via MIDI.

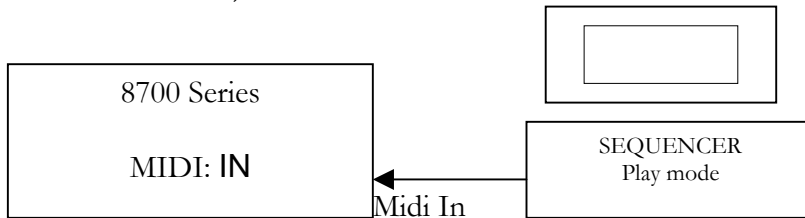
## 19.2 EXAMPLES

---

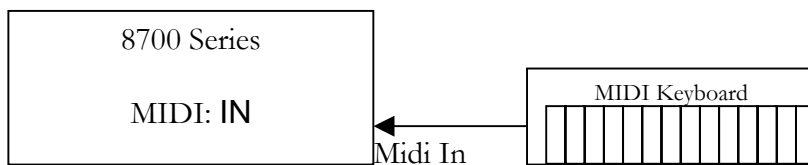
It's possible to connect a console with a MIDI sequencer, and store the console output in a sequencer track. The connection is:



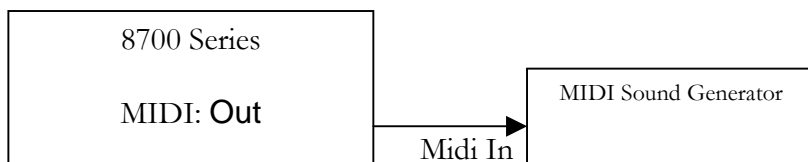
Then, it's possible to play the sequencer track to control the console (repeating the same process that stored in the track). The connection:



It's possible to connect a MIDI keyboard, to execute an effect, or to obtain a light organ. In these cases is recommended deactivate the keys/faders without use. The connection:



It's possible to connect a MIDI sound generator, to execute some of its sound synchronized with the console. The connection:

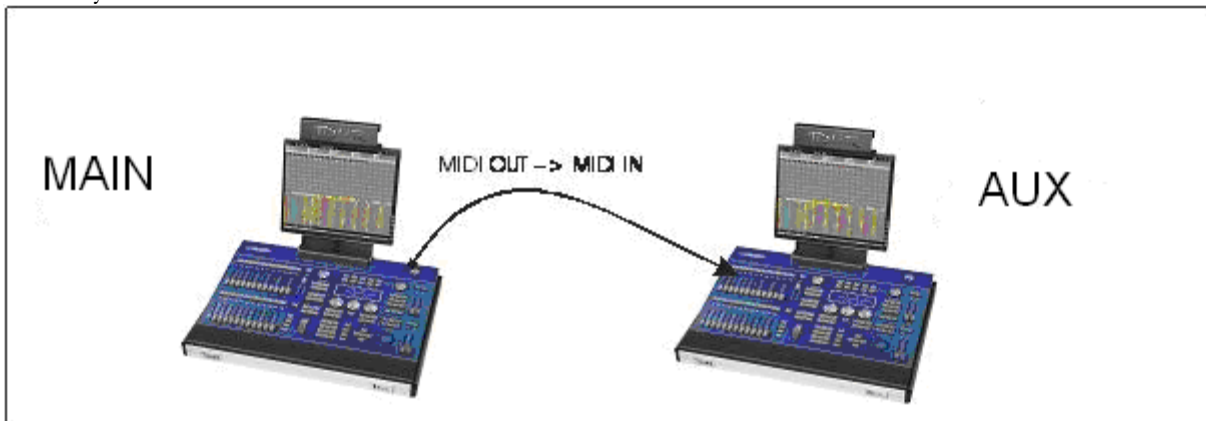


## 19.3 CONNECTING 2 8700 Series consoles

---

The best master-slave connection is done using Ethernet connection. Only in the cases that a Ethernet cable is not available, it's possible to communicate 2 consoles using MIDI (both consoles are synchronized, but this is not a master-slave connection).

One of the consoles is working as main console and the other console as auxiliary console (following the process done in the main console), in this way, will be possible to appeal at the auxiliary console when the main console faults. The connection is:



### 19.3.1 START CONNECTION

---

To connect the 2 consoles, will be necessary to begin from a known situation:

- Do a Reset in both consoles.
- Load the show in both consoles.
- Connect the MIDI cable from MIDI-OUT (main console) to MIDI-IN (auxiliary console).
- In the auxiliary console: Configure its MIDI port as **ON / IN / DEFAULT**
- In the main console: Configure its MIDI port as **ON / OUT / DEFAULT**

From now on, each action done in the main console is transmitted to the auxiliary console, that in this way, it repeats each action (pressed key, moved fader, clicked mouse, typed text, etc.)

Special Notes:

- Don't forget to insert a floppy disk in both consoles to store the show.
- The actions done from the externally (from remote, DMX-in, externals, etc) are not transmitted to the auxiliary console. If it's needed, the user must connect this external element to both consoles.
- Any think done in the auxiliary console is not transmitted to the main console.



### 19.3.2 END CONNECTION

---

Both consoles are synchronized for edition & playback. If the main console faults, is enough to disconnect the MIDI cable between the 2 consoles and follow working in the auxiliary console.

As preventive measure, it's recommended to disable the MIDI port in the auxiliary console (**OFF**).

## 20. SOUND & EXTERNAL TRIGGERS

The console has one audio input, **Sound**, and 3 external triggers, **Ext**.

Each **external trigger** input, **Ext1**, **Ext2** and **Ext3**, can be associated with a key, and when the external trigger is activated, the system “press” its associated key.

The **AUDIO** connector admits an audio signal of 1Vpp. This signal is filtered in the 3 basic bands: **Bass**, **Medium** & **Treble**. Each one of the 3 filtered signals can be used to control a key or fader.

The signals of **Bass**, **Medium** & **Treble**, are activated when the audio input exceeds (per band) a certain level (**Sensibility**). When one of these signals is activated its associated key is pressed; or its associated fader is moved in accordance with the filter level, modulating the fader output.

The level of activation the each filter (0-100), **Sensibility**, is adjusted independently entering a level in its **Sensibility** cell. Each filter has a **Test** value (current filter output), with the objective to help us to adjust the **Sensibility**.

The configuration of these inputs are placed in the menu **22: Ext & Sound**

☞ **MENU 2 2**

Item	Key/Fader	Sensibility	Test
Ext1.....	NONE		
Ext2.....	NONE		
Ext3.....	NONE		
Sound Bass...	NONE		FF
Sound Medium.	NONE		FF
Sound Treble.	NONE		FF

MG - 870001 |  
Página de configuración

This screen is divided in 2 zones: the setup line and the configuration table. To toggle between these zones use the mouse or press **MENU**

To close this screen, press **EXIT**

## 20.1 SETUP LINE

---

From this line it's possible to activate / deactivate the Sound input and the external triggers.

**Ext▼Off**

Activate/deactivate the 2 external inputs simultaneously.

**Sound▼Off**

Activate/deactivate the 3 filtered signals of the audio input.

These options too are placed in the menu 70: Multimedia Panel

## 20.2 CONFIGURATION ZONE

---

To configure the **Ext1** to **Ext3**:

- Access to the **Key/Fader** cell of the desired external trigger
- Select the option **1: KEY** to associate a key, pressing **1 ENTER**. The system requests us the key (*Waiting key*). Press the desired key.
- Or select the option **0: NONE** to delete the associated key, pressing **0 ENTER**.




Example, for that an actor turns on the room light in a scene; connect a physical pushbutton (in scenery) to a console **Ext** that activates the master that controls the room light.

To configure **Sound Bass**, **Sound Medium** & **Sound Treble**:

- Access to the **Key/Fader** cell of the desired filter.
- Select the option **1: KEY/FADER** to associate a key or fader, pressing **1 ENTER**. The system request us the key or fader (*Waiting key or Fader*). Press the desired key or move the desired fader.

Access to **Sensibility** and adjust it, entering the appropriate level, **#** (0-100). This adjust is done with the audio input connected.

- Or select the option **0: NONE** to delete the associated key/fader, pressing **0 ENTER**.

 The audio input can be used to synchronize an effect with the sound, in step-to-step mode (pressing **STEP▼ M#**). In this way, the effect executes its steps in accordance with the rhythm of the audio signal.

# 21. TIME CODE & EVENT LIST

## 21.1 SMPTE, MTC, CLOCK & INTERNAL

8700 Series consoles allow you to synchronize an events list with a **Time Code** that can be:

- A **Time Code** external as... **SMPTE** or **MTC** (Midi Time Code)
- A **Time Code** of the console clock **CLOCK**
- A **Time Code** internal (simulated) **INTERNAL**

From here, **Time Code** will be written as **TC**, in reference of any of these types: **SMPTE**, **MTC**, **CLOCK** or **INTERNAL**.

**TC** is a time value with a format as **hh:mm:ss:ff**, where:

- hh** Hours (0 – 23)
- mm** Minutes (0-59)
- ss** Seconds (0-59)
- ff** Frames (0-29). This format implicates a precision of 1/30 of second.

An **event** is a playback action associated to a concrete **TC**. The **event** is executed at the time of its **TC**, and it has all the data about the action to do. The action can be:

- Execution of a cue in the **CROSSFADER X**
- Execution of a macro, **MACRO**
- Execution of a command of the Rs232 port, **A-232**

The menu **23: Time Code** allows you to configure and to edit the events list:



Time Code	Offset	00:00:00:00	↑↑↑↑	↓↓↓↓
▼On	▼SMPTE	▼Pl	Item	Text
TC				
00:00:00:01	Ma:1			Inicia Show
00:00:00:10	X 1			Luz Ambiente
00:00:01:00	A-3			MUDEJAR
00:00:05:00	B-2			GOTICO
00:00:10:00	Y 128			Efecto Colores
XX:XX:XX:XX				

This screen has 2 zones: Setup line & Event list.

**MENU** toggles between these 2 zones.

To close this menu press **EXIT**

## 21.2 SETUP LINE

---

The functions & options of the Setup line are:

### ▼ON (0:OFF, 1:ON)

To activate (ON) or deactivate (OFF) the events list. If this option is at OFF, no events are executed. The event list is not active in the system.

This option also is placed in the menu **70: Multimedia Panel**.

### ▼SMPTE (0: SMPTE, 1: MTC, 2: CLOCK, 3:INTERNAL)

To select the type of **Time Code** to control the events list.

When the **TC** is **SMPTE**, **MTC** or **CLOCK**, the user has not control of the **TC**, which is created in an external source or the own console clock. In these cases the unique time adjust is the **Offset**. The **Offset** only permits us advance or retreat the events execution in relation to the current **TC**.

#### Offset▶00:00:00:00

Edit this time to adjust the **Offset**. The **Offset** value is added to the current **TC** value.



Example: Working with the **SMPTE TC**, the current time is **11:29:23:11**, if an **Offset** of 1 hour is applied (**01:00:00:00**), the **TC** counter presents **12:29:23:11**, if an **Offset** of 23 hours is applied (**23:00:00:00**) the **TC** counter presents **10:29:23:11**.

In this way, it's possible to execute events with a **TC** different to the external **TC** without reprogram the events list.

When the **TC** type is **INTERNAL**, the user has control of the **TC**, in concrete:

### ▼STOP (0:STOP, 1:PLAY, 2:PAUSE, 3:AUTOPLAY)

**PLAY**: Select this option to start the **TC** counter. The **TC** counts from its current time up to the time value programmed in **To**

**PAUSE**: Select this option to pause the **TC** counter. The **TC** maintains its value.

**STOP**: Select this option to stop the **TC** counter and set it to the **From** value.

**AUTOPLAY**: Select this option to start the **TC** counter, in cyclic mode, where the **TC** is active from the **From** value up to **To** value, and then the count cycle is repeated, and so on until the counter is stopped or paused.

#### From▶00:00:00:00

The first value for the **TC INTERNAL**, by default **00:00:00:00**

The events with **TC** lower than **From** are not executed.


This value can be edited here, in the setup line; or in the Event list selecting in the adequate ▼Internal its option 0: SET FROM.

To▶23:59:59:29

The last value for the TC INTERNAL, by default 23:59:59:29

The events with TC higher than To are not executed.

This value can be edited here, in the setup line; or in the Event list selecting in the adequate ▼Internal its option 1: SET TO.

 Note: The ▼Internal cells (inside the events list) only are activates when the TC type is INTERNAL

At the right of the setup line the current TC is presented.

## 21.3 EVENTS LIST

---

The events list has 1 line per event, where the event is defined with:

▼Internal	These cells only are actives when the TC type is INTERNAL. They are used to set the values of From and To in a easy way.
TC	it's the value of the time code in that the event will be executed (this value can be edited or captured). The TC has a format as hh:mm:ss:ff
▼PI	it's the type of playback action. The available options are: 0: CROSSFADER X      Execute a cue in the crossfader X 2: MACRO              Execute a Macro 3: A-232              Transmit a command of the A port
Item	it's the number of the cue to execute in the crossfader, the number of the macro or the number of the command. This number sets a date for the playback action.
Text	it's the associated text to the cue, macro or command. Not editable.

The event selected to edition is in a yellow filed.

If it's the case, the next event that will be executed is in a brown filed.

### 21.3.1 EDITION OF THE EVENTS LIST

---

- It's possible to edit all the playback actions, and then, their TC.
- It's possible to edit all the TC, and then, their playback actions.
- And, also it's possible to edit at the same time a TC and its playback action (or vice versus).

## 21.3.2 TC EDITION OR TC CAPTURE

The **TC** value of each event can be edited from the numeric keyboard entering the adequate number; or can be captured from the current **TC** pressing **INSERT** in any of its **TC** cells.

For the **TC** capture (or edition) it's not necessary that the events list is active (**ON**). But if the events list is active (**ON**) at the same time that the **TC** is captured the event will be executed, simulating the execution at the same time that you capture the **TC** values.



### Notes:

- The execution order of the events is controlled for the **TC** values.
- It's not possible to have 2 events with the same **TC**.
- The **TC-CLOCK** permits to execute events at the same time all the days, always than the console is at on.
- The **TC-SMPTE** or **TC-MSA** permits to synchronize the show with external devices (videos, music...)
- The **TC-INTERNAL** permits to simulate an external signal as **SMPTE** or **MTC** but controlled by the user.

## 21.4 ACTIVATING THE EVENT LIST

To execute the events list, this must be activated (**ON**). When the events list is active, in the general status line a flag that is a musical note is presented in a red field.

To see the events list and the input of the current **TC**, select the base screen 1:

**MONITOR**  **MONITOR**  **1**

Time Code	Pl	Men	Text
00:00:00:00	Ma	1	volumen 80%
00:00:06:07	X	1	canCIÓN 1
00:00:14:04	R2	18	SHUTTER CLOS
00:00:19:28	R4	0	PLAY
00:00:21:10	X	10	canCIÓN 2
00:00:23:13	Y	100	especial entrada

The events list is active (**ON**)

Current **TC** and **TC** type, in the example **INTERNAL**.

Events list.

This list presents the next 6 events.

Each time that an event is executed, the event disappears of the list, and the next event appears. The events always are ordered for their **TC** values.

When the current **TC** arrives to an event **TC**, the event is executed automatically.

The cues programmed in events present us a flag of a musical note (as reference).


X1	FF	100% Dipless TeOn						Jump	Lp	P	Text	Command	TC
X2	00	Cue	T↑	T↓	Te	Tô	T?						
		<b>1</b>	<b>3</b>	<b>3</b>	∞						<b>canCIÓN 1</b>		<b>fl</b>
		1.5	2	2	∞								
		2	3	3	∞								
		3	3	3	∞								
		4	3	3	∞							<b>4</b>	
		5	3	3	∞								
		6	3	3	∞								



21-6  TIME CODE & EVENT LIST

## 22. RESET & UPDATE

### 22.1 RESET

 Store the Show to disk before do a Reset. The Reset process erases all console data.

To do a Reset:

- Turn off the console
- Press and hold down pressed 
- Turn on the console
- When the display presents **RST: Loading System**, release 

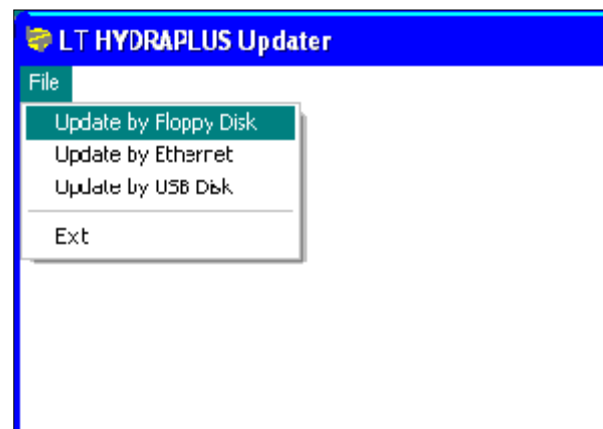
All consoles have a push button named **RST** in the rear panel. This button is used to switch off the console after some software faults (similar to some Windows software faults in the computers). This button must be pressed with the console at **OFF**, and then, you can switch on the console doing a Reset (see previous process).

### 22.2 SOFTWARE UPDATE

The update software of 8700 Series consoles is available at [www.lms.leviton.com](http://www.lms.leviton.com). Inside there is an installer that allows you to install the new software using a floppy, a Ethernet connection with the PC or a USB memory.

To update the console software:

- Download the last version in accordance with your model.
- Unzip the loaded file in a folder in the Hard Disk of your PC
- Inside this folder there is the program: \***Install8700SERIES.exe**. Execute it.
- From its **File** menu, select the type of update... and follow the instructions in the screen.



A dialog window allow you to select the folder where are the update files. **Accept** the folder that the installer suggests.

\*Install8700SERIES.exe → Install8700GX.exe for GX models.  
Install8700GS.exe for GS models.  
Install8700GL.exe for GL models.

 **Store the Show to disk before do a software update.**

## 22.2.1 SOFTWARE UPDATE by FLOPPY DISK

---

You can obtain the update disk contacting with your Leviton distributor or you can create it using the program **Install8700SERIES.exe** with the option **Update by Floppy Disk** in **File** menu (see 22.2).

When you have the update disk...

- Turn off the console
- Insert the update disk in the disk unit of the console
- Press and hold down pressed **ENTER**▼ & **→**▼
- Turn on the console. When the display presents **Updating system**, release the pressed keys: **ENTER**▲ **→**▲
- Follow the instructions that appear in the screen...The first request that the console does to you is the selection of the language for the instructions.

### **Tip:**

Following the instructions, store the old software version in an empty disk as a security measurement.

## 22.2.2 SOFTWARE UPDATE by ETHERNET

---

To update the software by Ethernet, it's needed:

1. Access to menu **79: Tools, Software Updates...** and select its option **3: Console by Ethernet**.

When this option is selected, in a black screen you can see:

**Update by Ethernet. [ENTER] cancel**

The console is ready to receive the new software version. It's possible to cancel the software update pressing **ENTER** to return to the system if the update process hasn't started.

2. A Windows PC with Ethernet connection, to execute the installer program. (ver 22.2).

To connect the console & the PC, the Ethernet cable must be cross if the connection is direct between PC and console; and this cable must be no cross if the console and PC are

connected using a hub, switcher or router (in the same mode that any Ethernet peripheral).

Remember! To connect to the net the PC it's needed that the PC has installed the IPX protocol with the type 802.3. (See Chapter 24).

3. Execute **Installer8700SERIES.exe** in your PC and select the option **Update by Ethernet** in **File** menu. The installer searches in the net a console to update in mode **3: Console by Ethernet**. A list with the console or consoles searched appears in the monitor. Follow the instructions in the screen to complete the update.



#### Note

If during the update process there is a communication fault, the console will be without correct software version and will be needed restore the software version using an update diskette.



#### Note

The update by Ethernet always must be done using a cable Ethernet connection, DON'T USE wireless systems (WIFI, etc.) for this process. Also is recommended use a local net connection (PC- Console) for one or several consoles.

### 22.2.3 SOFTWARE UPDATE by USB DISK

---

Create the update USB disk using the program **Install8700SERIES.exe** with the option **Update by USB Disk** in **File** menu (see 22.2).

The installer requests you the unit letter where is connected the USB disk (normally D, E or F), enter the adequate letter to begin the process the creation of the update USB disk.

When you have the update disk...

1. Turn off the console.
2. In the console, connect the USB disk in any of the USB ports.
3. Turn on the console.
4. Access to menu **79: Tools, Software Updates...** and select its option **4: Console by USB Disk**. The update process begins. Follow the instructions in the screen.

## 22.3 UPDATING THE REMOTE CONTROL (RADIO/CABLE)

---

The software of the remote control (and its receiver) it's included in each software version of the console, and this process the updating is done from the console.

1. Connect the remote control to the console 8700-LINK port using a 8700-LINK cable.
2. Turn on the remote control.
3. In the console, access to menu **79: Tools, Software Updates...** and select its option **5: Remote Control by Cable**. The update process begins. Follow the instructions in the screen.

## 23. OFF LINE EDITOR

The Off Line Editor for PC/Windows allows you to create and edit shows, compatibles with the console. Each console model has its Off Line Editor and each console software version has its corresponding Off Line Editor.

The Off Line Editor simulates the monitors and the frontal panel of the console.

### 23.1 PC

Personal computer: PC 486 and higher.

Operative system:

- WIN95/WIN98/WIN2000, ME, WIN-NT & WIN-XP

If the computer has not much video memory, the WOLE program can be slow. In this case, it's recommended to configure the PC video at 256 colors (16 bits).

#### 23.1.1 INSTALLATION

The Off Line Editor software is supplied with the consoles and also is available at [www.lms.leviton.com](http://www.lms.leviton.com). Each model and version of console has its corresponding Off Line Editor.

This software is supplied zipped.

Model	Zipped File (1)	Off Line Editor Program (2)
GX	wOLEGX.zip	wOLEGX.exe
GS	wOLEGS.zip	wOLEGS.exe
GL	wOLEGL.zip	wOLEGL.exe

To install it:

Copy the zipped file (1) inside a new folder in the Hard Disk of your PC.

In the same folder, unzip the copied file.

The Off Line Editor Program (2) is ready to execute it.

The first time that this program is executed it creates 3 folders:

**Shows**, used to store and load shows from its Hard Disk option.

**Fixtures**, used to store and load fixtures from its Hard Disk option.

**Devices**, used to store and load devices from its Hard Disk option.

## 23.1.2 USING THE OFF LINE EDITOR

---

The off line editor works in the same mode that the console and you can use it only with the PC mouse:

- Click, to press keys or to select options of menu or interactive windows.
- Drag, to move faders, trackball & encoders.



To move, using the mouse, the bitmaps of console and monitors, is enough click and drag in a zone no-active of the bitmap (without keys...)



It's possible to move 2 faders at the same time, and also press and hold down pressed a key, with the help of the PC keyboard:

- Press **Ctrl▼**. Click over one of the faders to move. Then, click and drag the second fader. Both faders are moved at the same time. Then release **Ctrl▲**
- Press **Ctrl▼**. Click the key to hold down pressed. Then, click in others keys. Then release **Ctrl▲**

For a quicker edition, you can use the PC keyboard. There is a correspondence between the console functions and the keys of the PC keyboard. This correspondence is showed in the next drawing and it is based in a QWERTY keyboard.



For the **Compact Keyboards**, where there isn't a numeric keyboard, you can access to the numeric keys using the function key **FN**. For commands as **Ctrl▼ ##**, the order to press the keys must be **FN▼ CTRL▼ ##**



Using only the PC keyboard, to press and hold down pressed a key:

Press and hold down pressed **CapsLock▼**, then press the key that you want hold down pressed. Press other keys. At the end, to release the pressed key, release **CapsLock▲**.  
Example:

To execute a command as: **LOAD▼ M1, M2 ... LOAD▲**

Press **CapsLock▼ L Ctrl▼ 01, 02 ...Ctrl▲ CapsLock▲**



You can use the mouse or PC keyboard in any combination.

To close the off line editor program, press **Tab 99**, and follow the instructions; or click over the **ON** switcher of the console bitmap.

Teclas de Macros

<b>Bank 1</b>	<b>Bank 2</b>	<b>Bank 3</b>	<b>Bank 4</b>	<b>Bank 5</b>	<b>Bank 6</b>	<b>Bank 7</b>	<b>Bank 8</b>	<b>Bank 9</b>	<b>Bank 10</b>	<b>Bank+</b>
TB< R1<	TB> R1>	TB< R2<	TB> R2>	R2>	R2<	R3<	R3>	R3	Bank 10	Bank+
1	@User	4	5	6	7	8	9	COPY	C	
<b>Menu Cue</b>	wheel	Edt+ Effect	Rate Rec Test	Rate TR Test	Rebase	Invert	Options	Prio F Pos Page	Enter	
Pause- Part Param	Step Dimmer	Flip Ficture	Group	HELP HOME	JUMP	Mouse	Next/Modify	LnTm Load		
2	X-tra	Col Call	B.O.B. Beam Blind							
3				<b>EXAM</b>						
4										
Insert	Step +	Monitor	MON+							
Delete	EXIT	MON-								
JS Left	JS Right	JS Up	JS Down	JS Level	JS Level	JS Level	JS Level	JS Level	JS Level	JS Level
1	2	3	4	5	6	7	8	9	0	Enter
1	2	3	4	5	6	7	8	9	0	Enter

Tecla  
 Shift+Tecla  
 Alt+Tecla  
 Alt Gr+Tecla  
 Ctrl+Tecla



### 23.1.3 SOME EXCEPTIONS

There are some exceptions between the physical console and the Off Line Editor. The Off Line Editor has not the next signal outputs: DMX, MIDI, RS232, etc.... Only the Ethernet communication is possible in the Off Line Editor.

To work with **Ethernet**, the PC must have enabled an Ethernet communication. In these cases, will be necessary to install (in the PC) the **IPX** protocol and set it an **802.3** frame type. The Off Line Editor can communicate with others consoles (Ethernet connected) and with simulators as Capture... If the PC has several Ethernet cards, active only one of them.

The exceptions list:

MENU 33 - SYSTEM - KEYBOARD (external keyboard configuration)	This configuration depends of your PC, and it is deactivated in the Off Line Editor.
MENU 34 - HARDWARE - BEEP Configuration of the beep frequency	Can be configured, as in the console, but the computer cannot execute it. The Off Line Editor always beeps at the same frequency.
MENU 34 - HARDWARE - DATE Date & Time	It's possible to edit the current Date and Time, but <b>TAKE CARE!</b> This edition changes the Date & Hour of the computer.
MENU 10 - DISK Access to USB disk	It's not possible to access to the USB disks connected to the PC
Menus of TEST	The hardware test of the console has no utility in the Off Line Editor.

<b>Special Functions</b>	
To obtain the "bitmaps" of console and monitors	Press " <b>Pause</b> " in the PC-keyboard. These bitmaps are stored as *.bmp files, inside the Off Line Editor folder.

### 23.1.4 OLE & Ethernet

---

Each time that OLE is executed in the PC (or each time that its Ethernet connection is activated, in menu 40), the system checks the number of PC Ethernet cards:

- If the PC hasn't Ethernet card, OLE can't communicate by Ethernet with others consoles. The rest of the OLE functions work.
- If the PC has 1 Ethernet card, the OLE program communicates by Ethernet using this card.
- If the PC has more than one Ethernet card, the system shows us a warning message indicating that it's needed disabled (from Windows) the Ethernet cards no used. Ethernet communication is available only if one of them is activated.

The simultaneous use of several Ethernet cards in a same PC can induce communication problems and communication not safe.

### 23.1.5 OLE demo

---

OLE Demo is a complete program, with alls its functions actives except for the Ethernet transmission of DMX universes. This transmission of DMX by Ethernet is restricting a 30 minutes (A Demo flag appears over DMX universes in the menu 40: Ethernet). OLE Demo only can transmit the DMX universes by Ethernet all the time when a console is connected a its net. It's enough that OLE Demo detects a 8700 series console one time for that the "Demo" flag disappears. From this moment, this OLE, in its PC, always can transmit DMX by Ethernet.



## 24. ETHERNET

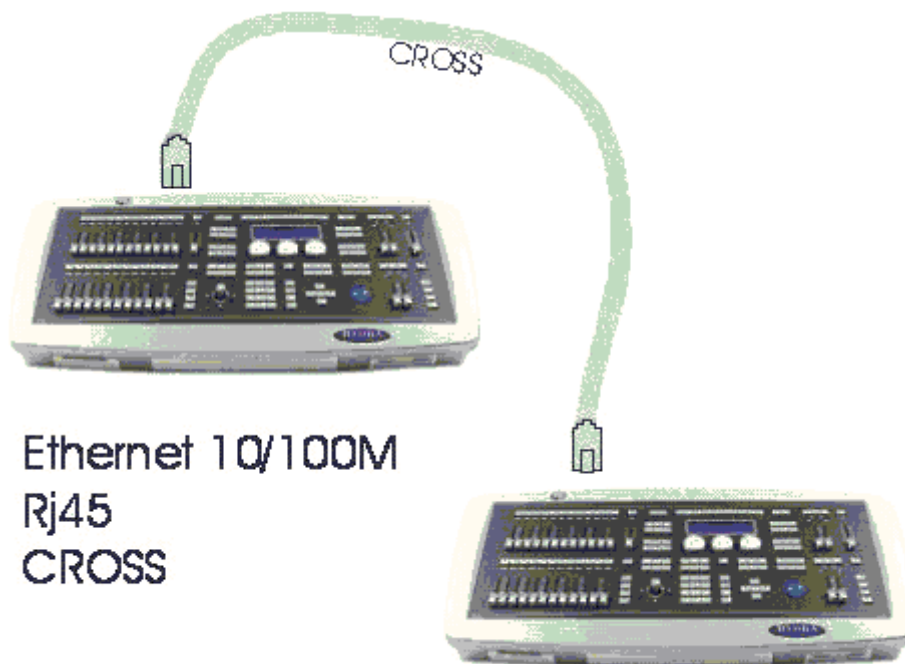
The Ethernet connection allows you:

- Connect several **8700 Series** systems (consoles and /or OLEs) in the next modes:
  - Master- Full Slave
  - Master- Data Slave (multi-user).
  - Master – Master
- Special connections with:
  - Remote Control on PDA portable computer.
  - Converters DMX <> Ethernet
  - Graphics tools as Capture, Wysiyg...

### 24.1 ETHERNET CONNECTIONS

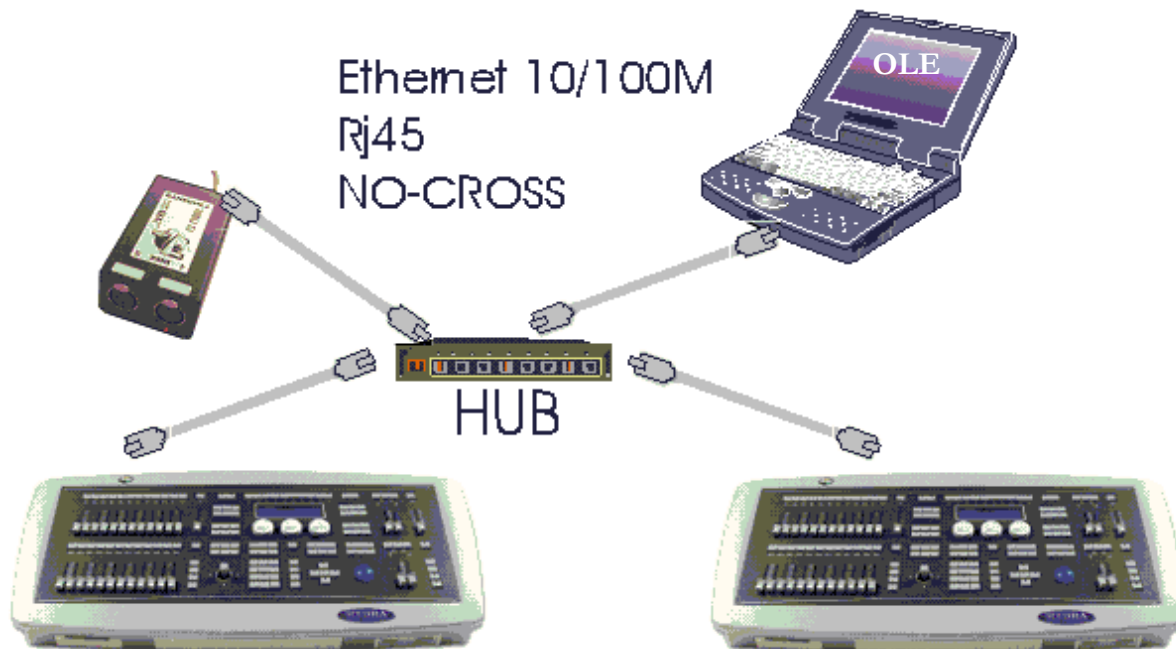
Ethernet allows you to connect **8700 Series** systems (consoles /PC OLE) of the same console model and the same software version, and with the same, or not, masters number.

Basic connection for 2 consoles:



Recommended: Use **STP** cable to connect the consol with the first Ethernet unit.

Connection for several **8700 Series** systems (2 consoles, 1 remote control and 1 Ethernet<>DMX converter):



## 24.2 CONFIGURE A NET

---

Ethernet connection is configured in menu 40: Internet Configuration



Inside this menu, it's possible:

- To activate/deactivate the Ethernet communication.
- To select the working net.
- To configure the units into the current session.
- To examine all the units connected to Ethernet in the current net.

### 24.2.1 SELECTING THE WORKING NET

---

The net allows you to divide all the units connected at the same Ethernet installation. Only the units connected in the same net can work together, and the working in one net is independent of the workings in others nets. In others words, it's needed that all the units are in the same net to can interact together. The user can change the net number in the setup-line of this menu.

The console has 10 nets, from **Net▶0** to **Net▶9**.

## 24.2.2 ACTIVATE ETHERNET COMMUNICATION

---

The Ethernet communication, by default, is deactivated (**▼Off**) but at any moment when it's needed, it's possible to activate it (**▼On**) from the setup-line of the menu.

## 24.2.3 START A NEW SESSION

---

The basic connections modes for consoles and OLE's are:

### Master & Master connection (in process)

Multi-user mode. All the master units (that can be their owns slaves) can edit and playback the show using their data (cues, pages, etc...). In this mode only the playback process is synchronized.

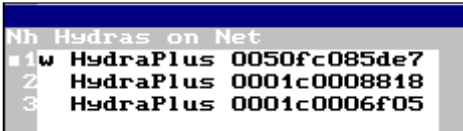
### Master & Data Slave connection (in process)

Multi-user mode. The master unit & DataSlave unit have the same data (cues, pages, effects, etc) but the playback process is controlled for the master console. The DataSlave unit can be used to modify cues or any edition process.... Only, when the master unit faults, the DataSlave unit take the show control.

### Master & Full Slave connection

One-user mode. The **Master** unit & **FullSlave** unit are totally synchronized and the **Master** unit controls the show. When the **Master** unit faults, the **FullSlave** unit takes the show control. In these cases, only one console is transmitting DMX by Ethernet (normally the **Master** console), and only when this console faults, the next console in the list takes control and transmits the DMX by Ethernet.

The first step to can work in Ethernet is the configuration of the Ethernet session from the master console, and the session can include one or more consoles (or PC OLE's). Any console/OLE that we want added to the session must be connected in the same net, and must be seen in **8700's on Net** window of the Master console:



```
Nh Hydras on Net
# 1w HydraPlus 0050fc085de7
  2 HydraPlus 0001c0008818
  3 HydraPlus 0001c0006f05
```

The **8700's on Net** window shows the names of all the consoles (OLE's) connected in this net. About this list:

- The consoles are numbered (**Nh**) and in this order, **1** always is the active console (the console from that I'm seeing the **8700's on Net** window).
- **W** appears near to the name of the PC OLE.
- By default, the console name has inserted its **MAC** address. The **MAC** address is unique. When the console is added to a session this name can be edited.
- If some console connected in the net, cannot be added to the current session (for example, because its software version is different to the software version of the **Master** console) is marked with a small -

To init a session, access to the **Current Session** window, and insert the **Nh** of the console from that we are editing (1) that will be added to the session as **Master** console.

Ethernet Configuration							
▼	On	Net	0				
Current Session				Universes			
Nh	Name	Priority	Now	Out1	Out2	Out3	Out4
1	HydraPlus 0050fc085de7	Master	Master+				
0: DELETE							

When this number is accepted, the user can edit the console name and the DMX configuration in Ethernet (see below).

Then, any other console can be added to the current session. The next consoles always are added as slaves of the Master console, in this case in mode **FullSlave**

The slave consoles are auto-programmed with the same DMX configuration in Ethernet that the **Master** console, and this configuration cannot be edited.

Ethernet Configuration							
▼	On	Net	0				
Current Session				Universes			
Nh	Name	Priority	Now	Out1	Out2	Out3	Out4
	HydraPlus 0050fc085de7	Master	Master+	1	2	3	4
	HydraPlus 0001c0008818	FullSlave	FullSlave	1	2	3	4

The priority of the slaves of one session is in accordance with the numerical order of the list of **Current Session**.

In concrete, the **Current Session** table is composed for:

### Nh

From here we can edit the **Current Session** list, entered the **Nh** of the console that we can add to the session, always in accordance with the **8700's on Net** window. To delete a console of the list, press **0 ENTER**.

### Name

It's the console name, only when a console is into a session it's possible to edit its name. The names of the session consoles are edited from the **Master** console.

### Priority

It shows us the function programmed for each console into the session. At present, this cell can have 2 values: **Master** & **FullSlave**.

### Now

It shows us the current function of the console (in this moment). For example, normally a **Master** console works as **Master+**, but and a **FullSlave** as **FullSlave**, but if the **Master** console faults, the **FullSlave** console must begin to work as **Master**. At present, this cell can have several values: **Master+**, **Master**, **FullSlave+**, **FullSlave** & **Off**

Priority	Now	Session status
Master FullSlave	Master+ FullSlave	Status of a session working perfectly...
Master FullSlave	Off master	Status of a session where the master console faults and the Slave console takes the control of the show.
Master FullSlave	FullSlave+ Master	Status of a session where the master console in fault is newly ok, but the control still being in the slave console.
Master FullSlave	Master+ Off	Status of a session where the slave console is deactivated.

## Universes

### Out 1 / Out 2 / Out 3 / Out 4

It permits to edit/consult the DMX configuration for Ethernet. See below.

## 24.2.4 DMX CONFIGURATION

Each net in Ethernet can have 16 DMX universes. When a console or wole is included the current session, if this unit is a master unit, it's possible to configure its 4 DMX outputs to be transmitted into the Ethernet DMX universe that is desired.

One Ethernet DMX universe only can transmit one DMX output.

One DMX output can be transmitted only for one Ethernet DMX universe.

In **Current Session**, **Out1** to **Out4** correspond to the console DMX outputs, and the numbers that you edit correspond with the number of the Ethernet universe to transmit the DMX output (1 to 16)



Ethernet Configuration							
On Net 0							
Current Session							
Nh	Name	Priority	Now	Universes			
				Out1	Out2	Out3	Out4
■	HydraPlus 0050f085de7	Master	Master+	1	15	3	4
	HydraPlus 0001c0008818	FullSlave	FullSlave	1	15	3	4

The slaves units always are configured with the same values that the master.

The DMX outputs sent by Ethernet allow you to have these information in simulators as Capture and in the Ethernet<>DMX converters.



## 24.2.5 EXAMINATION OF THE NET

---

### 8700's on Net

Shows all systems connected to the current net.

### Others (ebox, pocketPCs, sandnets, ...)

Here are listed the rest of systems connected to the net; as Ethernet<>DMX converters or **ebox**, the Ethernet protocols converter software or Sandnet, PDA remote control , etc...



See the chapter 14 – MENUS, you can find more information about the configuration of the Ethernet<>DMX converters or **ebox**

## 24.2.6 WORKING IN MASTER & FULL SLAVE MODE

---

If all is ok, the edition and playback processes are done in the **Master** console. The **FullSlave** console “follows” to the edition and playback processes of the **Master** console, but the **FullSlave** console doesn't transmit DMX into Ethernet. DMX is transmitted into Ethernet only by the console that works as **Master**.

To de left of the command-line of any console working in a current session, it's possible to read:

Console	Communication OK	Communication Problem
Master	M☺	M☹
FullSlave	F☺	F☹ or M☹

Where, **M (Master)** or **F (FullSlave)** shows us the current function in the session.

And where, ☺ (communication OK) or ☹ (communication problem) shows us the session status. Always that this symbol shows us that there is a problem, it's needed to access to the menu 40 to see the status of each one of the session units.

Each time that a session is started or continued, take care that all the session units are in the same status (same show, same page, etc...).

When the session control is taken from a **FullSlave** console (because the master console faults) take in mind that if some change is done, this change is not in the consoles that are no connected to the session in this moment. In this cases, will be necessary the show reload into all the session consoles.

## 24.3 EBOX CONVERTERS

LT-Light Ebox allows you to obtain 2 DMX universes from Ethernet. Remember that Ethernet has 9 nets, and each net a maximum of 16 DMX universes.



Each Ebox can configure its 2 DMX outputs as any of the Ethernet universes presents in any of the 9 nets.

To configure the Ebox (Ethernet <-> Dmx), access to menu 79:Tools

 **MENU 7 9**

Select its option 1: 8700 Series Ebox Configuration

LT-Light Ebox Configuration			
Ethernet <b>On</b>			
Detected Ebox	Find	Net →	Universe → Status
Ebox name	Box?	DMX1	DMX2
ebox stage a	<b>1</b>	1→ 1→Enable	1→ 2→Disable
ebox stage b	<b>0</b>	0→ 1→Enable	0→ 2→Enable

If **Ethernet** is at **On**, the connected Eboxes appear in list, each Ebox shows its current configuration that can be changed at any moment. Then, each Ebox has:

**Ebox name** Current name of the Ebox. This name has a maximum of 22 characters.

**Box?** It's a command, that is activated pressing **ENTER**, that does blink all the Ebox LEDs with the objective of identify the Ebox physically if some doubt is about its identity.

**DMX1 & DMX2** Are the current configuration of the **DMX1** & **DMX2** outputs in the Ebox, these configurations are defined as:

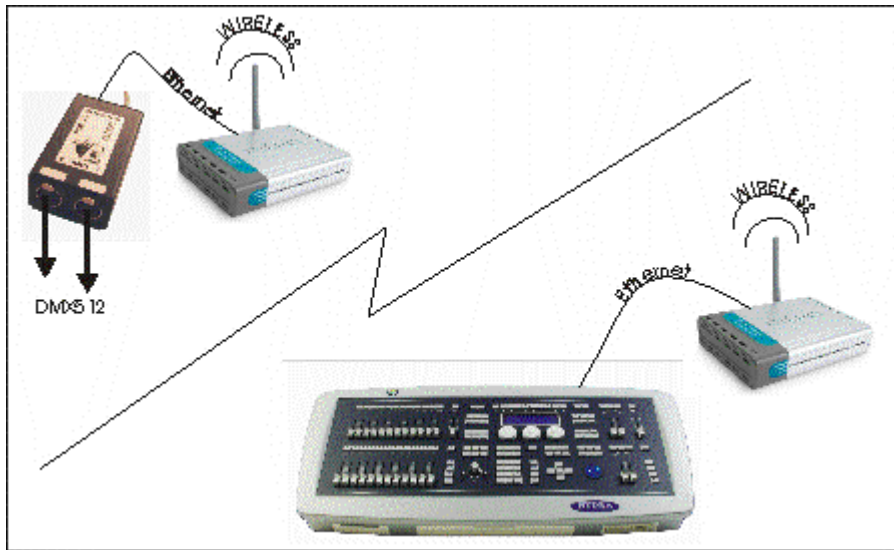
**Net → Universe → Status**

**Net:** It's the number net (0..9) that has the universe for the DMX output.

**Universe:** It's the universe number (1..16) for the DMX output.

**Status:** It allows you to **Enable** or to **Disable** the DMX output.

These Ethernet <> DMX converters allow you to obtain conventional DMX signal at any point of the Ethernet installation, and this installation can use any present technology in the marked... In example, you can work with an installation Ethernet wireless, using wireless access points:

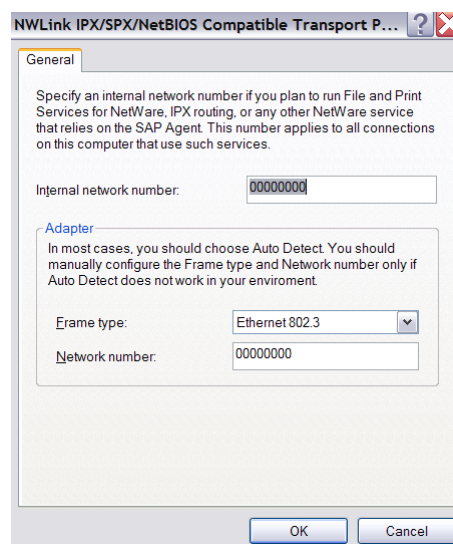
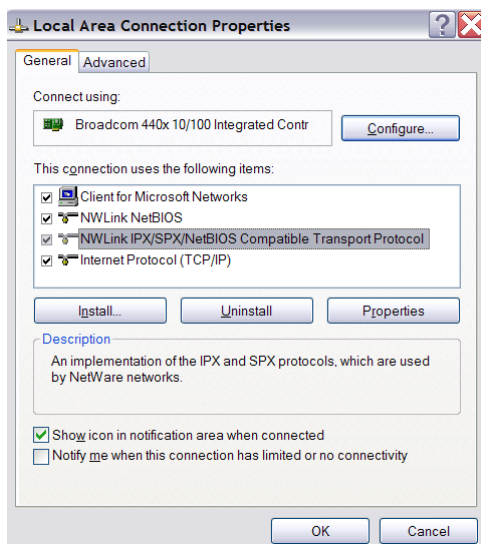


## 24.4 CAPTURE

To communicate **console & Capture** you need:

- 8700 Series console (or OLE)
- PC executing Capture
- Ethernet cable to connect between console & PC

In the PC, install the Ethernet protocol **IPX**, with frame type: **Ethernet 802.3**



In the console, active the Ethernet communication (**On**) and transmit some DMX by Ethernet ports.

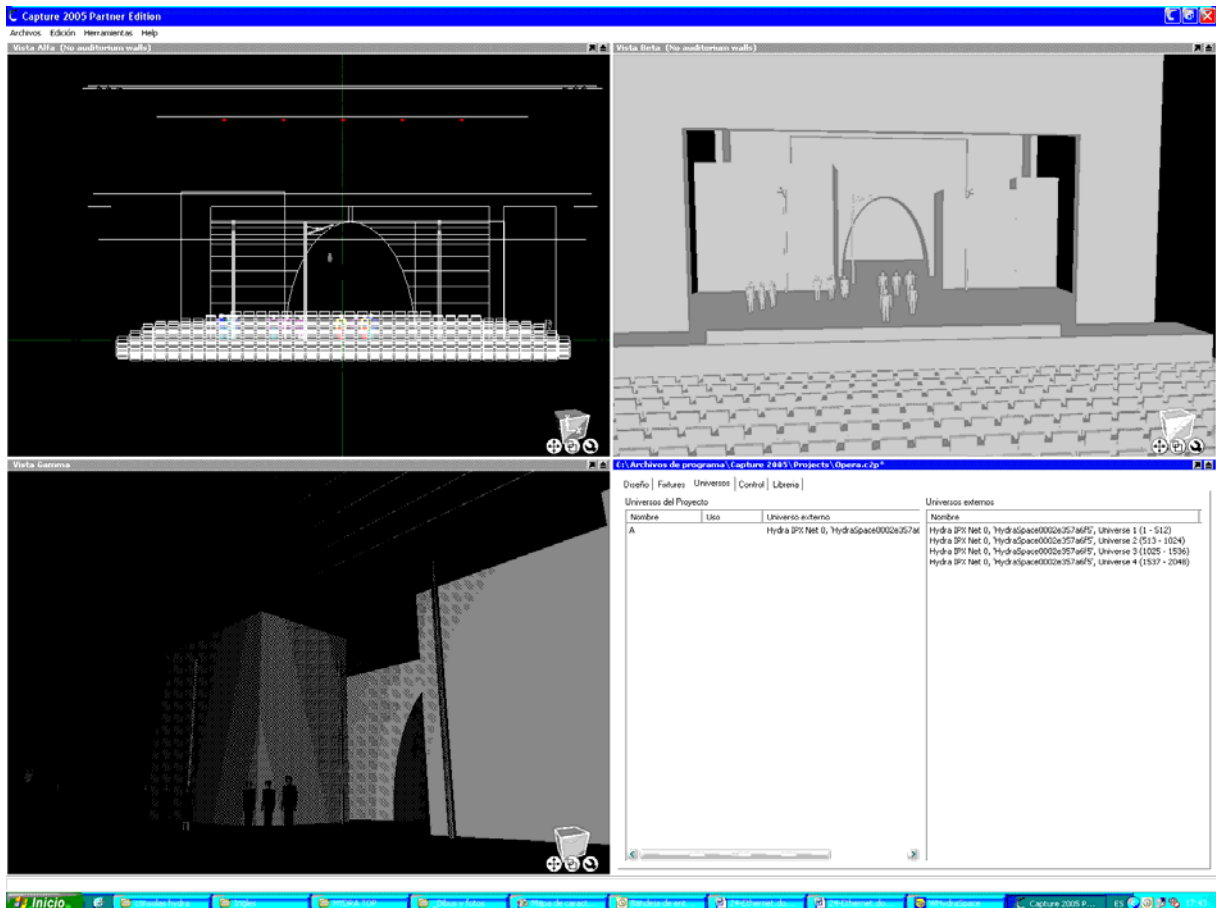
Ethernet Configuration							
▼ On		Net 0					
Current Session				Universes			
Nh	Name	Priority	Now	Out1	Out2	Out3	Out4
■	HydraPlus 0050fc085de7	Master	Master+	1	2	3	4
O: DELETE							

With these minimum requisites and an Ethernet cable to connect the console & Capture, these systems are communicated.

Remember:

- If PC & console are connected directly, use a cross Ethernet cable.
- If PC & console are connected using a hub, use a no-cross Ethernet cable.

Console & capture must have the same patches information for a correct simulation.

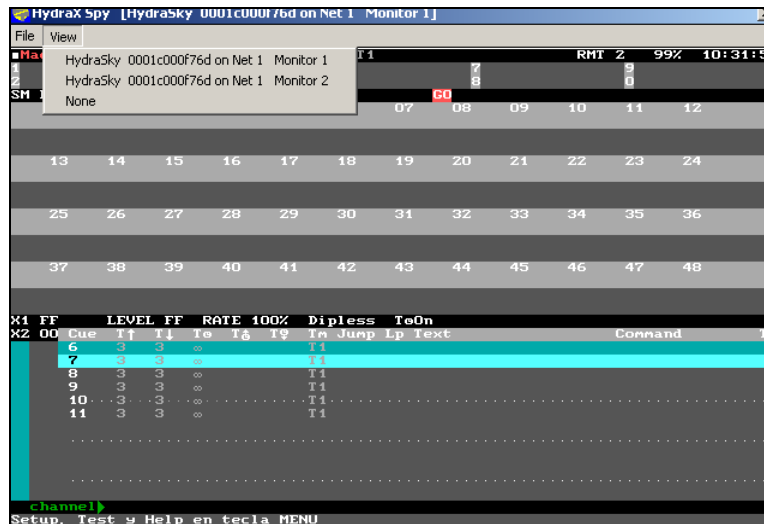


## 24.5 8700 Series X SPY

Software for Windows PC that allows you “to capture” in the PC screen any console screen.

The program is extremely simple. Only it needs of a PC with connection Ethernet:

- In the console, access to menu 40: **Ethernet Configuration**, and set the communication at **▼On**.
- Between console & PC, set an Ethernet red connection (cable or wireless).
- In PC, install the Ethernet protocol **IPX**, with frame type Ethernet 802.3 (See before)



In the PC this program can be executed in any location PC, since does not generate any type of auxiliary files... once opened the program (double click in **8700SeriesXspy.exe**):

- Accede to the menu **View** and to select anyone of the monitors/tables that appear in this menu... It's possible to change of monitor as long as is wished, belonged or not to the same console.
- To close the program, **File/Exit**





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