
HYDRA Family

www.lt-light.com

Hydra **P**lus

Hydra **S**pace

Hydra **S**ky

Hydra **S**pirit

THE SHOW CONTROL

Version 3.2 - 3.3

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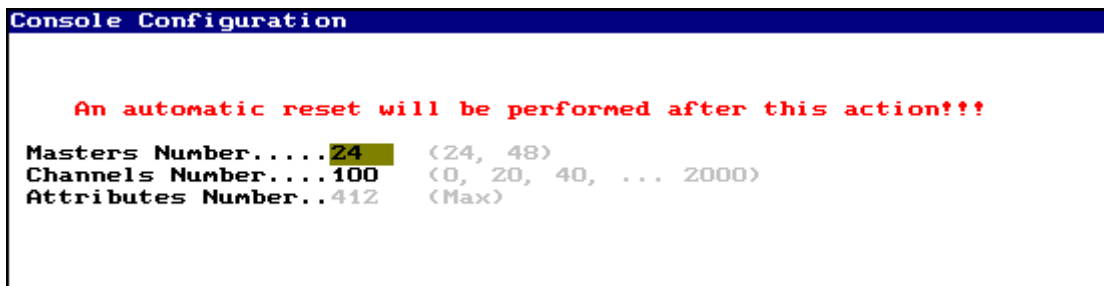
QUICK START

1 SYSTEM

1.1 SYSTEM CONFIGURATION

The system is configured in the menu 50: Console Configuration

 **MENU** **5** **0**



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



1.2 MONITORS CONFIGURATION

Monitors configuration is done from menu 60: Monitors Configuration:

 **MENU** **6** **0**

1.2.1 MOVING THE SCREENS

To page this screens press  & 

To page the fixtures information press  & , or select the desired parameters type in the screen, pressing: **DIM**, **POS**, **COL**, **GOB**, **BEAM** or **XTRA**

1.2.2 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.

1.3 HELP ON-LINE

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

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

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


1.4 INFORMATION ABOUT THE CURRENT SHOW

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

 **EXAM** **EXAM**

1.5 @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** "texto" **EXIT**

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

 **MENU** **0** **4** (a: menu command)

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

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.

2.1 EDITING THE PATCH

Fxt	2.1.1.1 Fixture number This number is used by the system to select it.
Type	Name of the fixture definition This type is edited entering its index number (1 to 24) from the Cache list
Dmx--dmx	DMX direction Are the DMX directions used by the fixtures (only the first direction is editable).
X-Y	2.1.1.2 Trackball movement 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.
dm	2.1.1.3 External Dimmer If the fixture has an external dimmer, this is its DMX direction.

Sc	<p>2.1.1.4 Scrollers</p> <p>2.1.1.5 It allows you to access to a special table where you can adjust, manually, the Scrollers gels, and, if necessary, you can assign the “dark gel” function to protect the dark gels.</p>
-----------	---

If the active data is Fxt:

From here you can search a fixtures 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 **XFIXTURE** type, enter the number **1 2**

Cache	Type	Q1
1	MC500	14
2	MC600	12
3	GOLDS	12
4	STAGS	17
5	SPSCZ	16
6	STAGZ	15
7	PPLUS	33
8	CPRHX	9
9	SBEAM	16
10	SC575	16
11	SS575	24
12	KSPOT	38
13	PRSLX	16
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 Hydra 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.



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

24	pal 12	251,3	274,3	x+y↑
25	pal 12	275,3	298,3	x+y↑
26	VL5	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 fixture types have been changed 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**).

If the active data is **Sc**:

The value of the gel center for each Scroller can be adjusted in a manual way in fixture patch. This is an easy way to adjust your fixture and to compensate for tolerance in gel length.

To access the table for the manual adjustment of the scrollers, move the cursor to the “+” cell in the table and select it by pressing the **[ENTER]** key.

Fixtures Patch													
Cache				Fixture Definition				Patch					
Ty	Name	Ch		Name	Ch	Comment		Fxt	Type	Dmx--dmx	X-Y	dm	Sc
1	MC500	16		WHISP	1	WHISPER 16 COLORES		1	YOKE	210 214	x+y↑	209	
2	MINIS	4		Manuf Id		File	M X ² Y ²	2	YOKE	217 221	x+y↓	216	
3	YOKE	5		COMPU	3600	WHISPER-.16-	0 0	3	YOKE	224 228	x+y↑	223	
4	WHISP	1						4	YOKE	231 235	x+y↓	230	
				Num	Name	Ch+Fn	I L F Hom St	5	WHISP	215 215			+
				---	Control	1	- - - 0 0	6	WHISP	222 222			+
				1	50 Scroller	1	c 0 16	7	WHISP	229 229			+
				2	20 Dimmer	EXT	f 0 1	8	WHISP	236 236			+
				3				9					
				4									

By fixture: In the scroller definition table, the cell for the value of the fixture to be edited must be selected to adjust each gel. The location and the value of the color (gel) has to be set for fixture which should be adjusted by entering the value directly or by pressing **[TEST]** to see the value on stage. With the encoder the adjustment can then be corrected and/or set. Like in any table, the **[ENTER]** key is used to accept (or the displacement with arrows keys), use the **[C]** key discard entered values.

Fixtures Patch						
Fixture(Scroller) SCR11 Definition						
Name	COLOR1	COLOR2	COLOR3	COLOR4	COLOR5	COLOR6
Palette	White	Yellow	Amber			
Dark						
Steps->	01	02	03	04	05	06
Ext 1	011	035	058	082	105	128
Ext 2	011	035	058	082	105	128
Ext 3	011	035	058	082	105	128
Ext 4	011	035	058	082	105	128

COLOR8 COLOR9 COLOR10		
08	<V>	10
174	0: NO DARK	21
174	1: DARK	21
174	197	221
174	197	221

By type: In the top part the name of the scrollers, per type, can be seen and below the colors and their pallets (the values can be changed using EDIT+). Also “dark gel” can be set, see below.

Each scroller type appears in the table, including all fixtures (scrollers) in patch. If different types of scrollers are used, each type has to be selected individually from the patch table entering the “+” cell.

Edition of the “dark gel”:

This function is used to protect the dark gels of heat and burns ... for this purpose 2 gels of the same dark color must be joined together in the scroller. In the definition table this color should be marked as “dark”. When in scene the color filter of this position in the Scroller will move slowly back and forth avoiding a hot spot on the filter and a damage or burn due to overheat.

2.2 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:

Fixtures Patch
 ▼Edit Patch ▼Hard Disk ▼File Tools ▼Patch Tools

Using the functions keys	Using mouse
Access to the Setup-line pressing MENU . Select the second option (arrow keys or mouse) and enter: 0 to select 0: Hard Disk 1 to select 1: Floppy Disk 2 to select 2: USB Stick Accept the option pressing ENTER	Hard Disk  0: Hard Disk  1: Floppy Disk  2: USB Stick 

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**

Select the desired manufacture. 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. Use the arrow keys or the mouse to select the desired library type.


Fixtures Patch									
▼Edit Cache ▼Hard Disk ▼File Tools ▼Patch Tools									
Cache		Load Hard Disk		559 Fixture Types					
Ts	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	12		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	Acrobat (Extended mode)	ACROBAT-.---	19-09-06
					1025	ALIEN	Alien 2 Pendant	ALIEN2PT.---	19-09-06
					1026	EX200	Exterior 200	EXTERIOR.200	19-09-06

Patch Tools				
▼Command	▼Item	From-To	->	▼Item Target
	c	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**

3 EDITOR

The pictures can be edited in stage or in blind, because **Hydra** 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.

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.

3.1 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 filed.

3.1.1 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%.

3.1.2 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.

3.1.3 EXCLUDING CHANNELS

EXCEPT permits us to exclude channels of a selected range.

3.1.4 EDITING CHANNELS

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

{Channels} Level 	Continuous adjustment of level moving the vertical wheel or joystick
{Channels} @ # #	Level assignation with number using <u>2 digits</u> , from 00 to 99
{Channels} @ @	Setting at 100% (FF)
{Channels} @ OPTIONS # # #	Precision level edition. Level assignation with number using <u>3 digits</u> , from 000 to 255
{Channels} CALL	Setting at 100% in a fading of 2 seconds.
{Channels} ↑↑	Increase the level a 5% (+%) For Plus systems, this command, besides, it's moving Level 
{Channels} ↓↓	Decrease the level a 5% (-%) For Plus systems, this command, besides, it's moving Level 
{Channels} @ .	Assignation of the last level used from the numerical keyboard.

3.1.5 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 filed) for a same edition, pressing:

 **CHANNEL THRU**

3.1.6 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.

3.1.7 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** **#''**

3.1.8 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**

3.2 THE 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)

3.2.1 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 fixture **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%	33GOBO2	FFSTOP	17GOBO4
6	50%	55%	55%	26STROBE	15RED	51%	33GOBO2	FFSTOP	17GOBO4
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. 12).

The fixture parameters, except the **Dimmer**, work as **LTP & Tracking**.

3.2.2 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.

3.2.3 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 \times (pan) and Ψ (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 wheels or Joystick (**Level**⬆) and too 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.

3.2.4 SELECTING FIXTURES

Basic selections:

	FIXTURE #	Select the fixture #
	FIXTURE # THRU #'	Select a range from fixture # to #'
	FIXTURE # THRU	Select a range form fixture # to the last fixture
	FIXTURE # FIXTURE #'	Select the fixture # and the fixture #'
	FIXTURE THRU	Select all the fixtures that are in the editor as selected fixtures.
	FIXTURE .	Repeat the last selection done
	FIXTURE THRU THRU	Select all the fixtures that are in the editor & in the scene
	FIXTURE # THRU THRU	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.



3.2.5 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 **Level**⬆
- \times and Ψ – 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 

3.2.6 EDITING A PARAMETER


The first step to edit a parameter is its selection:

 {Fixtures} **PARAM** **#** **ENTER**

When **PARAM** 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.




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 




3.2.7 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** **#** **@** **OPTIONS** **#''** To set the parameter **#** at value **#''** (3 digits). In a scale of precision total from **0-255**

 {fixtures} **PARAM** **#**   Set the parameter **#** at its next step. If the parameter only has 1 step, this command increases the parameter a %.

 {fixtures} **PARAM** **#**   Set the parameter **#** at its previous step. If the parameter only has 1 step, this command decreases the parameter a %.





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



 {fixtures} Level  	Manually, moving the vertical wheel or the joystick.
 {fixtures} @ # #	Directly, assigning a numeric level entered in 2 digits (00 to 99)

 {fixtures}  	Directly at 100% (FF)
 {fixtures}     	Directly, assigning a numeric level entered in <u>3 digits</u> (000 to 255) *Visualization of these level is always in %
 {fixtures} 	At 100% (FF) with a fading of 2 seconds.
 {fixtures} 	Increase the level a 5% (+%) For Plus systems, this command, besides, it's moving Level ↔
 {fixtures} 	Decrease the level a 5% (-%) For Plus systems, this command, besides, it's moving Level ↔
 {fixtures}  	Assigning a level as the last numeric level used.



3.2.8 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 , , etc. to access to the first parameter of position, color, etc. respectively.

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#**↻), pressing it (**W#**↻), or, in the **Plus** models, pressing:

-  to select the previous parameter
-  to select the next parameter

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.

3.2.9 WHEEL KEY

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

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

3.2.10.1 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.

3.2.10.2 SELECTING PALETTES FROM THE BANKS KEYS

The keys **1_B** to **10_B** are configured as direct access to different items pressing **BANKS** \oplus , and are paged turning this wheel: **BANKS** \odot .


In the **Plus** models, instead of **BANKS** wheel, there are 3 functions keys: **BANKS** to configuration, and **BANK-**, **BANK+** to page it.

Pressing **BANKS** \oplus , a windows appears with the configuration options for **1_B** to **10_B**

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

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

For the next commands, configure the keys **1_B** to **10_B** 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** **#_B** **GOB** **#_B**

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

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.

3.2.10.3 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**

DIMMER VIRTUAL (PARAMETRO ESPECIAL EN EDICION)

Existe una opción en el menú 30, que si está activa, nos permite tener un “dimmer virtual” para el proceso de edición, en fixtures de mezcla de color (CMY, RGB) que no tengan dimmer (especialmente pensado para los focos de LEDs sin dimmer) y que nos permite, mediante este parámetro **Virtual** mover las 3 ruedas de color al mismo tiempo. Esto agiliza mucho el proceso de edición, ya que podemos manejar la saturación de un color desde este control “virtual” (a modo de dimmer):

p1044*Virtual	Red	Green	Blue
1 +27%	27%	27%	27%
2 +27%	27%	27%	27%
3 +27%	27%	27%	27%

Si esta opción se encuentra **ENABLED**, la consola nos mostrará este control Virtual de forma automática en cualquier foco de mezcla que no tenga dimmer (parámetro ID 20: Dimmer).

No es realmente un parámetro, es una ayuda de edición y siempre se maneja desde la rueda **Level** .

3.2.11 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**

3.2.12 THE PARAMETER OF CONTROL

Some moving lights have a parameter to control some special functions of the moving light from the console. **Hydra**, as more important, 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**

3.2.13 INVERT

INVERT toggle between the present items (brown) and the selected items (red) inside editor.

3.2.14 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 & Cues

3.3 THE TRACKBALL

Press **FINE** as many times as necessary to set the sensibility:

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


Press **TB** as many times as necessary to set the behavior:

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


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 \times and ψ , only to \times , or only to ψ .

 **FIXTURE 1 FLIP** The parameters \times and ψ of fixtures 1 change their values.

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

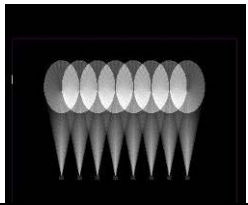
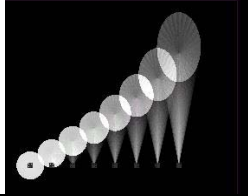
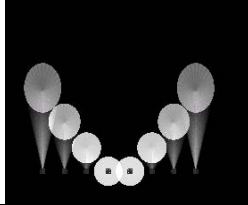
 **FIXTURE 1 PARAM 3 FLIP** Only the parameter ψ of fixtures 1 changes its value.

FAN-OUT

This function permits the edition, in a selection of several fixtures, of values for \times &/or ψ 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 \times &/or ψ edition isn't affected for this function. Example: Increase of ψ of the fixtures 1 to 8	
On	Fan-Out activated in <u>lineal mode</u> . \times &/or ψ edition has a relative value, in lineal mode, between the first and last fixtures. Example: Increase of ψ of the fixtures 1 to 8	
Blinking	Fan-Out activated in <u>symmetrical mode</u> . \times &/or ψ edition has a relative value, in symmetrical mode, between the first and last fixtures. Example: Increase of ψ 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**

3.4 THE STATUS LINE

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

- c** appears always that the editor has channels
- f** appears always that the editor has fixtures.
- ◀▶** appears always that the editor has shapes

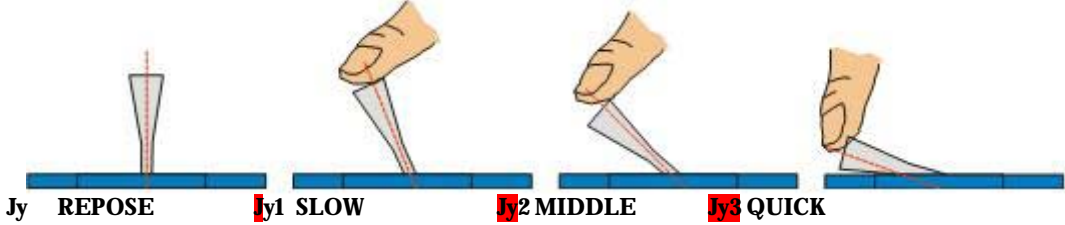


3.4.1.1 THE JOYSTICK

Only for **Hydra Plus** models

The status line shows us the flags **Jy** and **Jx**, to indicate the status of the Joystick for its 2 directions of movement (**Jy** - vertical, **Jx** - horizontal).

The Joystick has 3 control zones in each direction; these zones depend of its position and in each zone the joystick works with a resolution. The resolution is the “magnitude” of the variation that the joystick applies over the channels & dimmers controlled by it. In this way, the joystick can apply a variation slow (zone 1), middle (zone 2) or fast (zone 3).



4 CUES & GROUPS

The cues are numbered from 1 to 2000, admitting decimal numbers, example: 55.5, 1.9, etc.
The groups are numbered from 1 to 2000.

4.1 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 picture 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%.

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

To store el cue # press:


 {editor} **CUE # REC**

To store the next cue press:


 {editor} **CUE REC**

 {editor} **REC**

To store the next group loading a master press:

 {selección/editor} **REC LOAD M#**

To store the group # press:

 {selección/editor} **GROUP # REC**

To store the next group press:

 {selección/editor} **GROUP # REC**

Starting from Group 1

To store the next group loading a master press:

 {selección/editor} **LOAD M#**

Starting from Group 500

4.1.1 CALLING TO THE EDITOR OF PLAYBACKS & DATA

Hydra 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 the whole scene, press:

 **ENTER** **ENTER**

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

 **ENTER** **M#**

To pre-select the outputs of crossfader, press:

 **ENTER** **ASSIGN**

4.1.1.1 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**

4.1.1.2 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:

4.1.1.3  **CALL** **M#**

 **CALL** **ASSIGN**

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

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

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

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

4.1.1.6  **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↕

4.1.1.7 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 the 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 the 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**

4.1.2 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:

 **{escena} CALL REC**

4.1.3 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:

 **CUE # EXAM**

To exam the groups list press:

 **GROUP EXAM**

To exam the group #, press:

 **GROUP # EXAM**

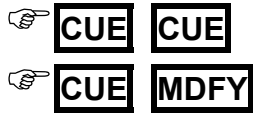
To page a list press    

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

4.1.4 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):



For groups (2 options):



To associate a text to a concrete cue or group:



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**

4.1.5 DELETE CUES OR GROUPS

To delete a cue press:



To delete a group press:



To delete a cue range press:



To delete a groups range press:



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



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



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


4.1.6 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:



 **GROUP # MDFY**

 **MDFY M#** To modify the cue or group loaded in master #

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

Resume:

 **RST CUE # MDFY {modifications} REC**

 **RST GROUP # MDFY {modifications} REC**

 **RST MDFY M# {modifications} REC**

4.1.7 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 the cue # to the 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

4.1.8 EXCHANGE CUES OR GROUPS

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


Exchange 2 cues

 **CUE #**
COPY COPY #' ENTER

Exchange 2 cues ranges

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

Exchange 2 groups

 **GROUP #**
COPY COPY #' ENTER

Exchange 2 groups ranges

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

4.2 CUES TIMES

The times programmed in a cue are used to execute this cue in crossfaders and masters. Times programmed in a group are used only in the masters. The cue times are:

T↑	Fade-in time. It's the time that the cue uses to fade from 0% to 100%.
T↓	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↓ is applied to the previous cue (scene cue). When the cue is executes in a master, its T↓ is applied to this cue.
T⌚	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↑⌚	Wait-in time. It's the time that the cue waits before to fade from 0% to 100%.
T↓⌚	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↓⌚ is applied to the previous cue (scene cue). When the cue is executes in a master, its T↓⌚ is applied to this cue.

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

The group times are: **T↑**, **T↓** & **T⌚**

4.2.1 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** **CUE**

 **CUE** **MDFY**

O cue by cue, into the options lines:

 **CUE** **#** **OPTIONS**


Cue list:31										1-31		↑↑↑↑ ↓↓↓↓	
Cue	T↑	T↓	Te	T ₀	T ₁	T ₂	In	Jump	Lp	Text	Command	TC	cf↕
1	3	3	∞		T1					Defaults	GOBACK Time	CUES	c
2	3	3	∞		T1								c
3	3	3	∞		T2					cue text			cf↕
4	3	3	∞		T1								cf↕
5	3	3	∞	Q1	T1					texto del cue			cf↕
6	3	3	∞		T1								cf↕
7	3	3	2		T3								cf↕
8	3	3	∞		T1								cf↕

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 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

In **Plus** models, without **MONITOR** wheel, page the screen pressing **MON+** **MON-**

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

4.2.2 PROGRAMMING TIMES FROM THE CUE LIST

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

 **GRP** **GRP**

 **GRP** **MDFY**

Or group by group, into the options lines:

 **GRP** **#** **OPTIONS**

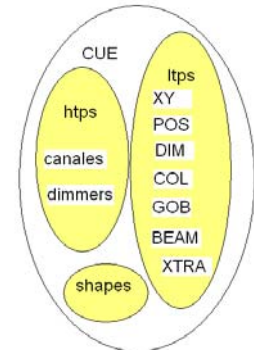
Group list:7							1-7		↑↑↑↑ ↓↓↓↓	
Group	T↑	T↓	Te	Text						
1	3	3	∞							c
2	3	3	∞							c
3	3	3	∞							c
4	3	3	∞							c
5	3	3	∞							c
6	3	3	∞							c
7	3	3	∞							c

Editing is done as explained in the times for cues (previous part).

4.3 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.

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.



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



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:

Type	The items type that are grouped in this part (https, ltps, colors...)
Beg	Begin: 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 ⊙↑
End	End: 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 End value must be equal or greater that the begin value. If Begin=End the part jumps in scene (equivalent to a T ↑= 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.

4.3.1 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**

4.3.2 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).

4.3.3 CONVERT TIMINGS TO 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 parts also can be created in the editor (manually).

A cue with parts hasn't timing. Editing its 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**}

4.4 CUE PARTS

One cue can have 9 parts in addition to the base cue. Each part can have its contents and times (**T↑** and **T↑⊙**) 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 absolute 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

4.4.1 EDITION OF PARTS

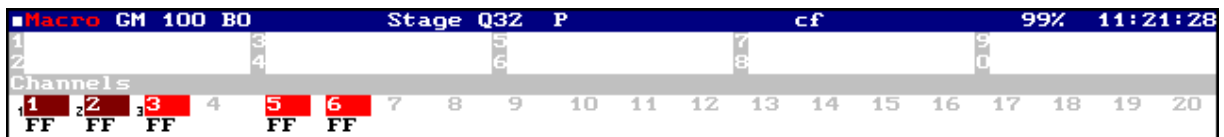
The parts can be edited when the cue is been edited or modifying the cue to divide it in parts. In both cases, the same method is used:

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.




4.4.2 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.

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

4.4.3 EDIT TIMES FOR THE PARTS

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

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

Cue list:31										1-31		↑↑↑↑ ↓↓↓↓	
Cue	T↑	T↓	Te	T ₀	T ₁	In	Jump	Lp	Text	Command	TC	cf	
1	3	3	∞		T1				Defaults	GOBACK Time		CUES	
									P2			cf	
	+P1	01			01							c	
	+P2	23			03							c	

The times of each part are presented in one line (T↑ & T↑₀). To edit one of these times, select it and enter its value. In this example, the cue 1 has 2 parts (+P1 & +P2).

4.5 MODIFY A RANGE OF CUES OR GROUPS

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

 **RST** **CUE** **#** **THRU** **#'** **MDFY** {modifications} **REC** **#₁** **#₂** **REC**

 **RST** **GROUP** **#** **THRU** **#'** **MDFY** {modifications} **REC** **#₁** **#₂** **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 (**#₁**) and attribute (**#₂**). After that the options **#₁** and **#₂** have been entered, press **REC** again to modify the range.

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

4.5.1 The mode options (**#₁**)

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.

4.5.2 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**.

5 LIBRARIES

Hydra has 6 library categories:

99 libraries of position -	POS	POS
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
99 special libraries of dimmer -	DIM	DIM

The library behavior depends of its category.

5.1 POSITION LIBRARIES

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

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**


Just after the storing process, to edit text, press:

 **OPTIONS** {edit text} **EXIT**

At any other time, to edit text, press:

 **POS** **POS** **#** **OPTIONS** {edit text} **EXIT**

And to edit text to several libraries, 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**

5.2 COL, GOB, BEAM & X-TRA LIBRARIES

These libraries collect parameters configurations of 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 active of each type; or if no actives, from the first present of each type**. 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.

These 4 categories (color, gobo, beam & x-tra) are stored, modified and applied in the same way.

To store a library, for example of color:

Select at least, one fixture of the 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

If you need to store the current color of a concrete fixture (always in editor), press:

 **FIXTURE** **#** **COL** **COL** **#** **REC** To store the color **#**, from the selected fixture.


Just after the storing process, to edit text, press:

 **OPTIONS** {edit text} **EXIT**

At any other time, to edit text, press:

 **COL** **COL** **#** **OPTIONS** {edit text} **EXIT**

And to edit text to several libraries, press:

 **COL** **COL** **MDFY** {editar texto} **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:

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

5.3 DIM LIBRARIES OR “SCENES”

DIM libraries, or “scenes”, admit any item (channels and fixture parameters). Whith them it’s possible to store as reference a total scene and, each scene can have one, someone or all show items.

DIM libraries are very interesting to store the basic scenes of our show, also to store, in a unique library, the different colors of one complete scene (nightfall, dawn, etc), the levels of balance for a cyclorama, blades and positions, etc...


To store a library of dimmer or “scene”:

Edit the complete scene to include in the scene library. If needed, repeat this step for each type to store in the library, and press:

 **DIM DIM # REC** To store the scene #

 **DIM DIM REC** To store the next scene

Just after the storing process, to edit text, press:

 **OPTIONS** {edit text} **EXIT**

At any other time, to edit text, press:

 **DIM DIM # OPTIONS** {edit text} **EXIT**

And to edit text to several libraries, perss:

 **DIM DIM MDFY** {edit text} **EXIT**

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

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

5.4 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**

5.5 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**

5.6 EDITING WITH LIBRARIES

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

- a) Numeric selection
- b) 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.

5.6.1 NUMERIC SELECTION

 {fixtures} **POS** **POS** **#** **ENTER**

Applying DIM libraries, we can do it with the previous commands, or in a new “total mode” that doesn’t need a previous selection. In this way, we can:

 **DIM** **DIM** **#** **ENTER** To apply all values stored in DIM # over all its items.

5.6.2 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**).

Hydra Plus

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

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

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

Access to the desired palette (or library), paging **BANKS** with **BANK+** & **BANK-**

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

 **#_B**

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

 **POS** **#_B**

Hydra Space


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

5.6.2.1.1.1.2 **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**

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

 **#_B**


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


 **POS** **#_B**

Hydra Sky & Spirit

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

5.6.2.1.1.1.3 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** 

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:



5.6.3 SELECTION WITH FADE TIME – EDT+

EDT+ function allows to you the application of fade times during the edition with libraries.

From now, it's possible to set a fade time, in live and temporally, applying a library, ans also, doing a **TEST** of cue, group, or doing a **HOME**.

Command block for temporized Libraries:

From Editor (Examples with POSICION 1)	Form Bank keys: B.1 to B.0	Comments
POS POS n ENTER	n_B	Library n is applied in a cut time, suddenly, over the editor selection.
POS POS 1 ENTER	1_B	
EDT+ # POS POS n ENTER	EDT+ # n_B n_B	Library n is applied fading in # seconds (# from 0,1 to 999.9 sec; 3 sec in example), over the editor selection.
EDT+ 3 POS POS 1 ENTER	EDT+ 3 1_B	

*Note 1: Only parameters set as “**fade**” are affected for these times.

*Note 2: For Bank keys, this time, will be active if only bank keys are pressed (and in the same category, dim, pos, etc). Pressing any other key, this last inserted time is lost.

Commands block for **TEST**:

For next commands block, **{item}** is the selection for **TEST**, this selection can be of channels, fixtures, groups & cues.

EDT+ # {item} TEST TEST ...	There are 2 commands, entering time after or before that {item} . Selected channel/fixture/group/cue fades into editor with # seconds (# from 0.1 to 999.9 sec; 3 sec. in example).
{item} EDT+ 3 TEST TEST ...	
EDT+ 3 CUE 1 TEST	

Commands block for **HOME**:

For next commands block, **{fixtures}** is the selection, one or several fixtures, with all parameters or only the selected: **FIXTURE n°**; **FIXTURE n° POS**; **FIXTURE n° PARAM n°**; etc.

EDT+ # {fixtures} HOME	There are 2 commands, entering time after or before that {fixture}
{fixtures} EDT+ # HOME	
EDT+ 3 FIXTURE 1 HOME	Selected fixtures/parameters are edited with their HOME values, fading in # seconds (#, from 0.1 to 999.9 sec).

5.7 LIBRARIES & MODIFICATIONS “IN LIVE”

- (a) If any value of a library applied in editor is modified, it's possible to update this library with the new value.

SISp5 Dimmer	X	Y	*Color	Col-Fnc
1	%	50%	50%	21Cyan 00No Eff
2	%	1voz	1voz	18Cyan 00No Eff
3	%	1voz	1voz	2verde 2verde
4	%	1voz	1voz	2verde 2verde
5	%	1voz	1voz	2verde 2verde

To update the modified library with the new value, press:

MDFY **COL**  **Actualizar COL Z?. [REC] si, [->] no** Confirm with **REC**

- (b) Modifying, in live mode, a cue or group using the commands:

{modifications} **MDFY** **MDFY** or **{modifications}** **MDFY** **M#**

SISp5 Dimmer	X	Y	*Color	Col-Fnc
1	%	50%	50%	21Cyan 00No Eff
2	50%	58%	32%	60Or-Co 00No Eff
3	50%	53%	33%	67Co-Ye 00No Eff
4	50%	53%	33%	62Congo 00No Eff
5	50%	58%	32%	62Congo 00No Eff

If some of the modified values were edited with a library, the console answers to you if the modification will be done in corresponding library or only in cue/group. In this way, you can update the corresponding libraries, dynamically and quickly, avoiding delete libraries by error.

 **Actualizar COL Z?. [REC] si, [->] no**

Press **REC** to update the library, or **->** to modified with to update libraries.

Note: If a library (of color, gobo, beam or xtra) is modified with more than a value in several fixtures, the modification will be referenced to the first active fixture or from the first fixture in the editor.

6 MASTERS AND PAGES

6.1 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)
- Or 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⇅**

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

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

6.1.1 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#**

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

 **GROUP # LOAD ▾ M# M# ... LOAD ▲**

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

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

 **GROUP # LOAD FLMT**

6.1.2 LOADING CUES 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 cue in master, normal mode, press:

 **CUE # LOAD M#**

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

 **CUE # LOAD ▾ M# M# ... LOAD ▲**

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

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**



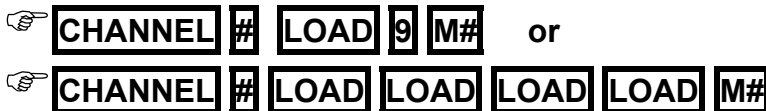
To load a cues range, using all masters, from the master 1 and the selected cue:



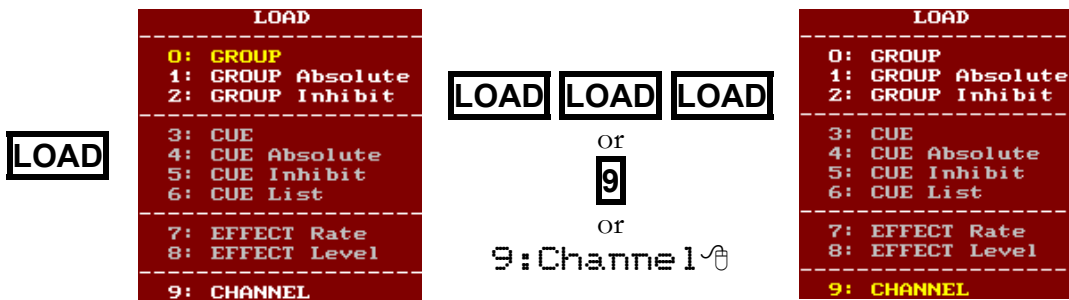
6.1.3 LOADING CHANNELS IN MASTERS

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

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



This process is done selecting the option **9: CHANNEL**



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









To load several channels, from M#, press:







6.1.4 MODES

A cue or group loaded in a master can be several modes, to load a cue or group in one of these modes, use the next commands:

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

6.1.5 EMPTYING MASTERS

Empty a loaded master or several masters

 **DELETE** **M#**
 **DELETE**  **M#** **M#**... **DELETE** 

Empty all the masters:

 **DELETE** **FLMT**

6.1.6 EXAMINING MASTERS

Exam a master content:

 **EXAM** **M#**



Exam all the masters:

 **EXAM** **FLMT**

6.2 MASTERS EDITION TABLE

All the functions of load in masters can be done from the masters edition table. Access to this table pressing



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  

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**)

6.3 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.

6.4 CONTROLLING A MASTER

6.4.1 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  LED is at 100%.

6.4.2 AUTOMATIC CONTROL

The cues & groups are controlled using their programmed times, and their timing or parts. Channels are controlled using its general fade time, **Ch T↓**. Groups, 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).

6.4.2.1 MANUAL PRIORITY CONTROL

To change this priority order, use the **PRIO** function. Any active master takes priority again, over its LTPs, pressing:

 **PRIO**▼ **M#**

6.4.3 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%.

6.5 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.

 {modifications} **MDFY** **M#**

6.6 PAGES

6.6.1 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**

6.6.2 PAGE TEXT

Just in the storing process, pressing:

PAGE REC OPTIONS

And then, after the page is stored, pressing:

PAGE # OPTIONS

Select the **Text** cell, and type the text to associate it, and close this screen, pressing

EXIT, **OPTIONS**, **LOAD** or **ASSIGN** (the last 2, loading de page)

To associate a text to a several pages, press:

 **PAGE MDIFY** Text **EXIT**

6.6.3 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**

6.6.4 LOADING OF A PAGE IN MASTERS

Mode	Command	Comment
no-forced (normal)	 PAGE # LOAD	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	 PAGE # LOAD LOAD	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 *****.

6.6.5 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 cues in **X1/X2** are recovered. The crossfade output is affected.

 **PAGE # ASSIGN** Normal mode

 **PAGE # ASSIGN ASSIGN** Forced mode

For **Plus** models, where there are 2 crossfaders, both are loaded at the same time, and the commands are:

 **PAGE # AssignX** or

 **PAGE # AssignY** For Normal mode

 **PAGE # AssignX AssignX** ó

 **PAGE # AssignY AssignY** For Forced mode

6.6.6 SELECTING A PAGE IN MASTERS Y 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

6.6.7 MODIFYING A PAGE

It's possible to modify the contents of a page pressing:

 **PAGE** **#** **MDFY**

6.6.8 COPING & EXCHANGING PAGES

To copy a page or pages range, press:

 **PAGE** **#** **COPY** **#'** **ENTER**

 **PAGE** **#** **THRU** **#'** **COPY** **#''** **ENTER**

To exchange the contents of 2 pages or pages range, press:

 **PAGE** **#** **COPY** **COPY** **#'** **ENTER**

 **PAGE** **#** **THRU** **#'** **COPY** **COPY** **#''** **ENTER**

6.6.9 DELETING PAGES

To delete the page # press:

 **PAGE** **#** **DELETE**

 **PAGE** **#** **THRU** **#'** **DELETE**


 **PAGE** **DELETE**


Confirm pressing **DELETE**


7 THE EFFECTS

7.1 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

 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**

7.2 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**

7.3 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**

 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 #.

To modify only one effect, or effect by effect, press:

 **EFFECT** **#** **OPTIONS**

7.4 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**

7.5 COPING EFFECTS

It's possible to copy an effect or a range:

 **EFFECT # COPY #' ENTER**

 **EFFECT # THRU #' COPY #' ENTER**

7.6 EXCHANGING EFFECTS

It's possible to exchange an effect or a range, pressing:

 **EFFECT # COPY COPY #' ENTER**

 **EFFECT # THRU #' COPY COPY #' ENTER**

7.7 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**

7.8 THE EFFECTS PLAYBACK

7.8.1 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#**



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 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▲**

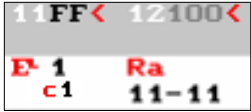
An effect with rate control (E^R) always is executed at level full. **M#**↕ controls the effect rate.

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#**↕ 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

-  **DELETE M#**

7.8.2 ACTIVATING A EFFECT

About **M#** LED:

STATUS	MODE	M# LED
Deactivated	Loaded	Lit at 50%
	Not Loaded	Off
Activated	Auto	Blinking
	Step-to-Step	Lit at 100%

M# Starts the effect in auto mode.

M# Starts the effect in auto mode, and is played # times.

STEP▼ **M#** Starts the effect in step-to-step mode.

**STEP**▼ **M#** Starts the effect in step-to-step mode, from the step #.

7.9 LEARN TIME FUNCTION

It is possible to learn the step time (**Step T**) 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:

7.9.1 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#**

8 SEQUENCES

Plus

2 dedicated crossfaders. Rest of models have 1 crossfade.

Space 24, Sky 24 Spirit Tour Models

24 masters to execute sequences. Rest of models have 48 masters.

Hydra 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.

8.1 LOADING SEQUENCES

To execute a sequence, first you must store the desired cues, and then you must load the cue list in a crossfader or master.

When you load a cues range, the first cue of this range is loaded as next cue.

8.1.1 IN THE X1/X2 CROSSFADER

 **CUE # THRU #' ASSIGN**

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.

8.1.2 IN THE CROSSFADERS OF THE **Plus** MODELS

Plus models have 2 dedicated crossfaders, X1/X2 & Y1/Y2. The load process is the same that the explained previously.

The main difference is that in **Plus** models each crossfade has its assignation key, so:

Load the X1/X2 crossfade using **ASSIGNX**

Load Y1/Y2 crossfade using **ASSIGNY**

8.1.3 IN A MASTER, M#

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

To load all the stored cues, press:

 **CUE THRU LOAD M#** As closed list.

To load the cues range, and to execute the first crossfade immediately, press:

 **{cues range} LOAD M# M#**

8.2 EMPTYING A SEQUENCE

To empty a sequence loaded in the crossfader:

 **DELETE ASSIGN**

For **Plus** models, press **DELETE ASSIGNX** and/or **DELETE ASSIGNY**

To empty a sequence loaded in a master, press:

 **DELETE M#**

8.3 EXECUTION

8.3.1 MANUAL CONTROL


8.3.1.1 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%).

Applicable to **Plus** models for the 2 crossfaders, X1/X2 & Y1/Y2.




8.3.1.2 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%).

8.3.2 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.

The auto-time (**T** ) permits to link crossfades, in others words, if we start the crossfade to the next cue and this cue has programmed a **T** , after this first crossfade, automatically, the following crossfade is started. Only if **T**  is ∞ (infinite) will be necessary a new **GO** command to start the following crossfade.

The times **T**  & **T**  control the crossfade, if have the same value, the crossfade is homogeneous. **T**  & **T**  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**).

8.3.2.1 In crossfader X1/X2

- To start a new automatic crossfade, press **GO**
- 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**

8.3.2.2 In crossfader X1/X2 & Y1/Y2 (Only for Plus models)

- To start a new automatic crossfade, press **GO**
- To pause the crossfade in progress, press **PAUSE**. After, when the crossfade is paused, it's possible:
 1. To restart it again pressing **GO**
 2. To change the crossfade direction pressing **GOBACK**
 3. To ended manually using the faders.
- To change the crossfade direction in progress returning to the previous scene, or start a new crossfade to the previous cue, press **GOBACK**.
Each time that **GOBACK** is pressed, the crossfade returns to the previous scene. This key can be pressed as many times as will be necessary, playbacking the sequence in inverting order.

8.3.2.3 In masters

- To start a new automatic crossfade, press **M#**
- To pause a crossfade in progress, press **PAUSE-B**▼ **M#**. After, when the crossfade is paused, it's possible:
 1. To restart it again pressing **M#**
 2. To change the crossfade direction pressing **PAUSE-B**▼ **M#**
 3. To ended manually using the fader **M#**↕
- To start a crossfade to the previous cue, from a inactive crossfade, press: **PAUSE-B**▼ **M#**

8.3.3 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#**

8.4 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 (**TeOn** or **TeOff**).

To configure the crossfader:



8.5 THE ORDER OF THE CUES

8.5.1 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**.

Cue	list:10	1-10	T1	Default
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

8.5.2 END.JP FUNCTION

This function is dedicated to the control of finite jump in the crossfader **X**, (**JUMP** with programmed **LP**). And, in this case:



End of the active **JUMP**, but completing its sequence.



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. About **END.JP** LED:

- ON Indicates us that in the crossfader **X** a finite **JUMP** is been executed. Its key is active.
- BLINK Indicates us that in the crossfader **X** more than one finite **JUMP** is been executed. Its key is active.
- OFF Indicates us that in the crossfader **X** no-finite **JUMP** is been executed. Its key is no-active.

8.5.3 MANUAL DISPLACEMENT

8.5.3.1 In crossfaders

To select the desired cue as next cue, #, press:

 **CUE # ASSIGN** Cue # is assigned in X2.

For **Plus** models, also:

Advance to the next cue in the list, immediately (without fades):

 **PAUSE**▼ **GO**

Regress to the previous cue, immediately (without fades) press:

 **PAUSE**▼ **GOBACK**


These changes to the previous cue or next cue are done in **0,1 seconds**.

8.5.3.2 In masters

To select the desired cue as next cue, #, press:

 **# STEP**▼ **M#** Cue # is placed as next cue.

To restore the cue list that is loaded in the master, but beginning with a blackout, press:

 **STEP**▼ **M#** Cue 0 (blackout) is placed as next cue.

8.6 MDFY MDFY FUNCTION

Hydra has special functions to modify the cues in X1/X2 crossfader (and for cues in Y1/Y2 in **Plus** models).

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.

For **Plus** models, if X1 is empty or is not at 100%, the editor content, if it's possible, will be added to the Y1 cue.

 {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.










For **Plus** models, if **X2** is empty or is not at 0%, the editor content, if it's possible, will be added to the **Y2** cue.

 {Blind editor} **MDFY** **MDFY**

8.7 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**, pressing **GO** at the desired moment. Press **GO** as many times as **T** to learn.
- To learn all the cues times, execute the crossfade manually using its **X1** & **X2**. **Hydra** learns in each faders travel the **T** & **T**, and if correct, the **T** & **T**. And between travels, learns the **T**. 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).

9 GENERAL FUNCTIONS

9.1 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**

9.2 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} NEXT	Gives the next number of channel
{fixtures}{optional edition} NEXT	Gives the next number of fixture
{group}{optional level} NEXT	Gives the next number of stored group
{cue}{optional level} NEXT	Gives the next number of stored cue
{page, macro or effect} NEXT	Gives the next number of entered number

Press **NEXT** as many times as will be necessary to arrive the desired number.

- 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} CHANNEL NEXT	NEXT LED at on. Gives the next channel in the editor
{editor} FIXTURE NEXT	NEXT LED at on. Gives the next fixture in the editor

To exit of the selective mode, use one of these options:

CHANNEL # {level}	NEXT LED at off. Now, NEXT is in general mode
FIXTURE # {values}	
GROUP # {level}	
CUE # {level}	
RST	

PREV works as NEXT decreasing the number.

9.3 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} TEST	Empties the editor. The selected channels fade at 100%.
{fixtures} TEST	Empties the editor. The dimmers of the selected fixtures fade at 100%.
{group} TEST	Empties the editor. The selected group fades at 100%.
{cue} TEST	Empties the editor. The selected cue fades at 100%.
{mixed selection} TEST	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 ...

9.4 RESCUE

The system stores in automatic mode some data that can be interesting, with the objective of that can be recovered.

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**.

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**

10 SHAPES

Shape functions allow you to 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 with pre-programmed shapes for movements, colors, dimmers, etc... The basic list of LT shapes can be enlarged with new shapes and shape 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.


10.1 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 have 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
	<p>This window is opened pressing SHAPE...</p> <p>To apply a new shape you must select the option 0:NEW</p> <p>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 SHAPE as many times as will be necessary to pre-select the desired option (in yellow) and press ENTER to accept it.</p>

SHAPE FILTER window	Help to find the desired shape using filters
<pre> SHAPE FILTER ----- 0: FREE 1: DIM 2: POS 3: COL 4: GOB 5: BEAM 6: XTRA </pre>	<p>Appears if the selection has fixtures, and allows you to filter the shapes list only with shapes for DIM, COL or other category. The 0:FREE 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.</p> <p>To choose one of these options: Use the mouse or enter the option number, #</p> <p>If you initial selection has only channels, this window doesn't appear. In this case, the list is filtered automatically by dimmers (DIM).</p>

SHAPE LIST window	Selection of one shape of the list.
<pre> SHAPE LIST ----- 1 : Sine 2 : Cosine 3 : Step 4 : Flash 5 : Trapeze 6 : Tri 7 : Saw 8 : Up 9 : Down ... </pre>	<p>Appear the list of the existing list, normally filtered following the choosing of the previous window.</p> <p>To choose one of these shapes: Use the mouse, or enter the shape number, # ENTER</p> <p>If the desired shape isn't in the list, you can return to the filter window to change it, pressing C</p>

PARAMS ID window	Selection of the parameter for the shape (if proceed)
<pre> ----- 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 ----- 60: Gobo 61: Gobo-> 62: S-Gob ... </pre>	<p>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.</p> <p>To choose a parameter: Use the mouse, or enter the parameter number, # ENTER</p> <p>You can return to the previous window pressing C</p>

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	BO	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	K	Y	Shutter	Color1	Color2	RotGB	RotGbRot	GWh1									
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								

10.2 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:



SHAPE

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.

10.3 THE SHAPE EDITOR - ADJUSTEMENTS

Just after to apply a shape in the editor, to adjust its options, press:



OPTIONS

{ Size, Rate, etc... }

GM		100	BO	Stage	Q1	T1	c		98%		15:57:33													
SS Palette																								
0	Sine	Dimmer	Free0	0	50	+80	None	None																
Channels																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
FF	FF	FF	FF	FF	FF																			
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
p1044 Virtual				0: Free0	Green	Blue																		
1				1: Free1	00%	00%																		
2				2: Free2	00%	00%																		
3				3: Free3	00%	00%																		
4				4: Free4	00%	00%																		
5				5: Free5	00%	00%																		
6				6: Free6	00%	00%																		
7				7: Free7	00%	00%																		
8				8: Free8	00%	00%																		
9				9: Chase0	00%	00%																		
10				10: Chase1	00%	00%																		

Exit pressing **OPTIONS**, **EXIT** or pressing **LOAD** **M#** loading editor in a Master

When you have a shape applied in the editor, or when you need adjust options for more than one, you can enter in the **Shape Editor** to adjust the desired shape parameters. To enter to this screen, press:





SHAPE

In SHAPE window, select **2:EDITOR**

Shape Editor												
T1												
SS	Palette	Type	Effect	Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	Nm	Mod/Par
0	Circle	PanTil	Free4	0	↓5	+80	None	---	---	None	---	---
1	Up	Shutte	Free0	0	↓50	+80	None	---	---	None	---	---
2	Sine	Dimmer	Free0	0	↓50	+80	None	---	---	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**.

10.3.1 Effect/Nm

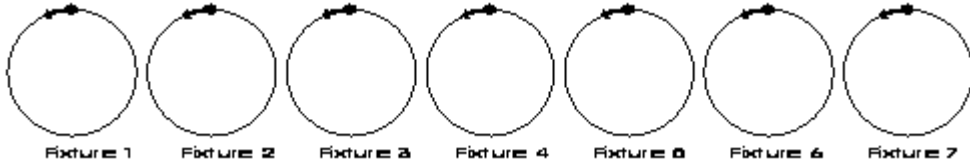
The different effects mark the start points of each shape in relation with the items that are executing the shape. To explain these effects there are examples for 7 fixtures (items) executing a **Circle** of **PanTil** type

SS	Palette	Type	Effect	Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	Nm	Mod/Par
0	Circle	PanTil	Free4	0	15	+80	None	---	None	---	---	---

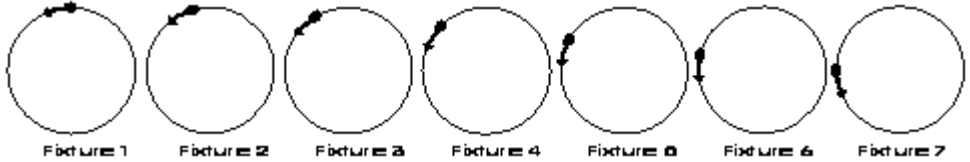
From **Effect0** to **Effect8**, each item that is executing the **Circle** shape start to do the **Circle** in a different point of this circle, in other words, start with a small offset that it depends of the selected effect.

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.

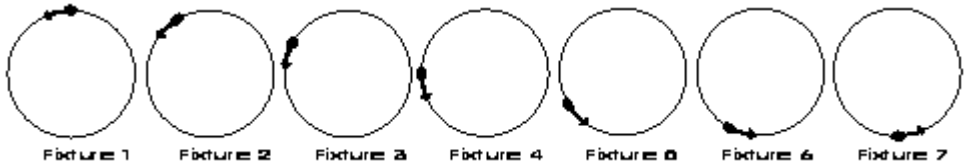
Effect0 – All items executing the shape with no-offset, simultaneously. Total offset is 0. In this effect the **Nm** value has no-action.



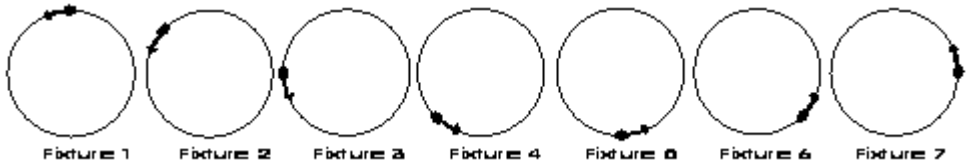
Effect1 – Total offset among all items is of 1/4 of cycle (cycle = 1 complete circle).



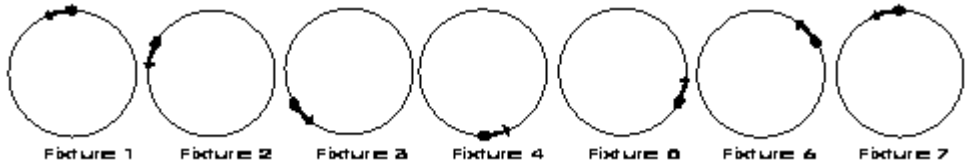
Effect2 – Total offset among all items is of 1/2 of cycle



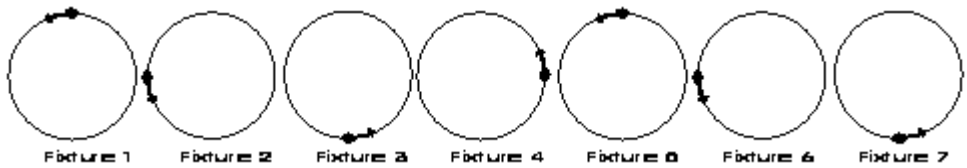
Effect3 – Total offset among all items is of 3/4 of cycle



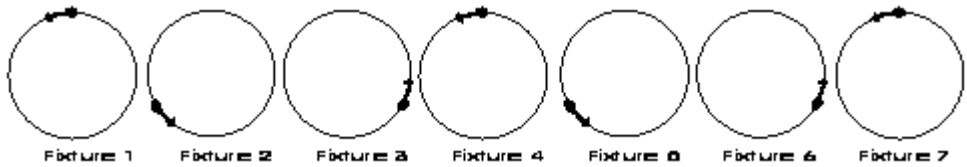
Effect4 – Total offset among all items is of 1 cycle



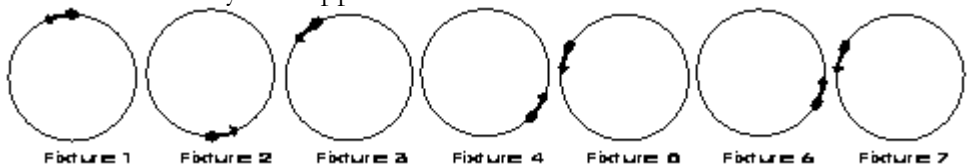
Effect5 – Total offset among all items is of 1 cycle & 1/2



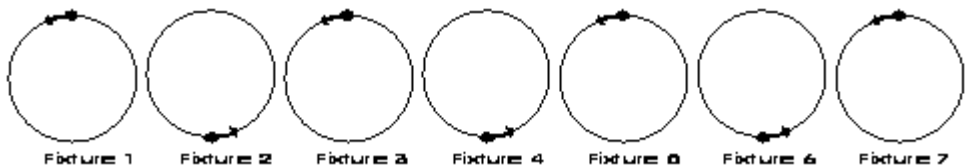
Effect6 – Total offset among all items is of 2 cycles



Effect7 – First, there is an offset the 1/2 cycle between **odd & even** items; and then, over this offset other offset of 1/4 of cycle is applied.



Effect8 – there is a offset of 1/2 of cycle between **odd & even** items.



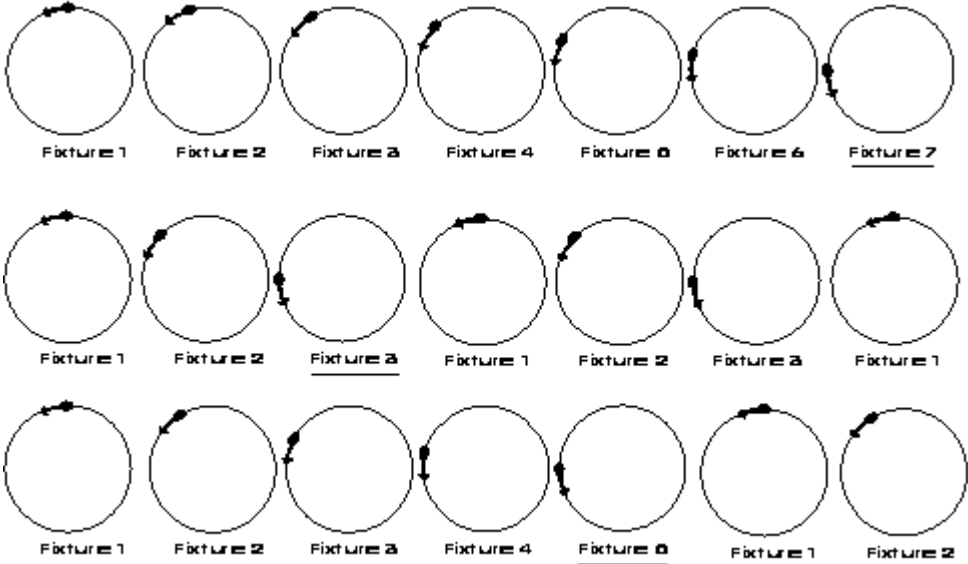
From **Chase0** to **Chase1**, each item executing the **Circle** shape, will execute its **Circle** one time following a closed order. First, the first item will execute the circle; then, the second; then, the next... and so on up to the **Nm** item. After this last item all the process is repeated.

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**.

10.3.2 Advanced parameters: Games

Inside the **Shape Editor**, it's possible to apply, optionally, up to 4 different games per shape.

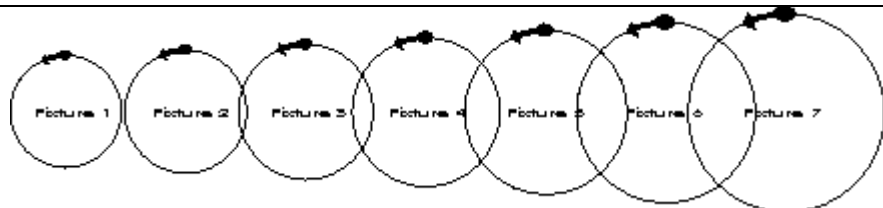
Games	Use
0:None	No game is selected.
1:SizeIt	For this game it's necessary that the shape is executing over several items. This game allows to you change the shape size in each item.
2:RateIt	For this game it's necessary that the shape is executing over several items. This game allows to you change 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.

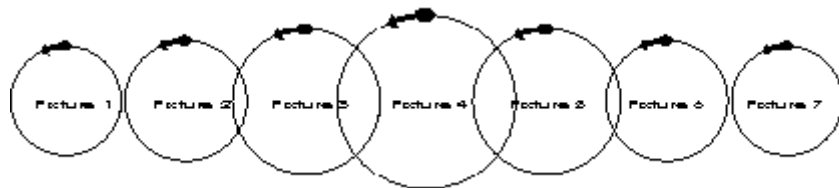
Mod/Par this parameter is explained using some examples. Examples based in the **Game 1**, but valid for **Games** from **1** to **4**:

SS	Palette	Type	Effect	Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	Nm	Mod/Par
0	Circle	PanTil	Free0	0	15	+80	SizeIt	0	Lin+10	None		

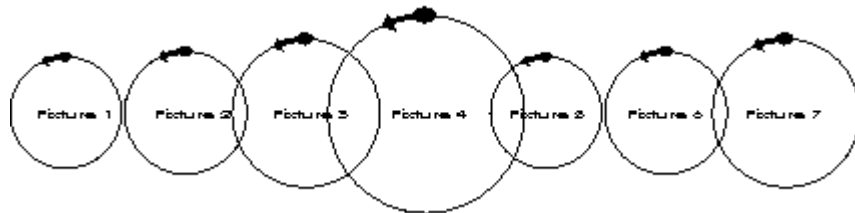
0:Lin Lineal



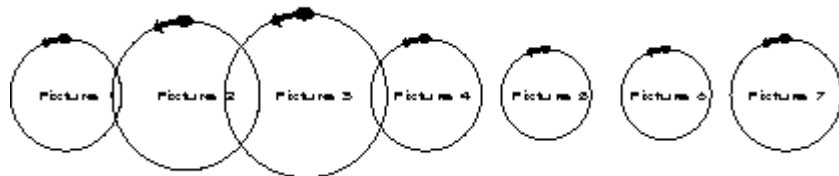
1:Fm1 Symmetric
1



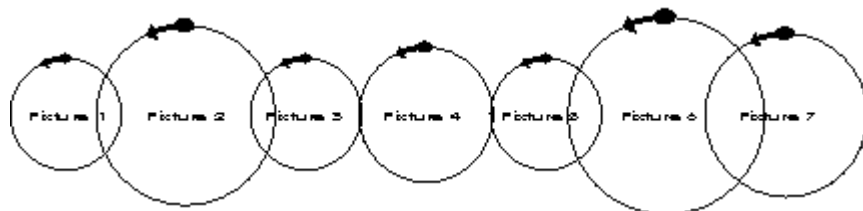
2:Fm2 Symmetric
2



3:Sin Sine



4:Rnd Random

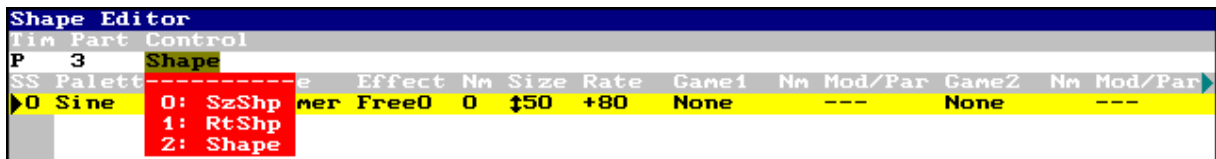


For the **Game 5:Form**, the **Mod/Par** allows to you select the parameter to deform the shape, and this deformation is always in lineal mode.

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 (F). Shape fade, programmed using timing or parts, has several options:

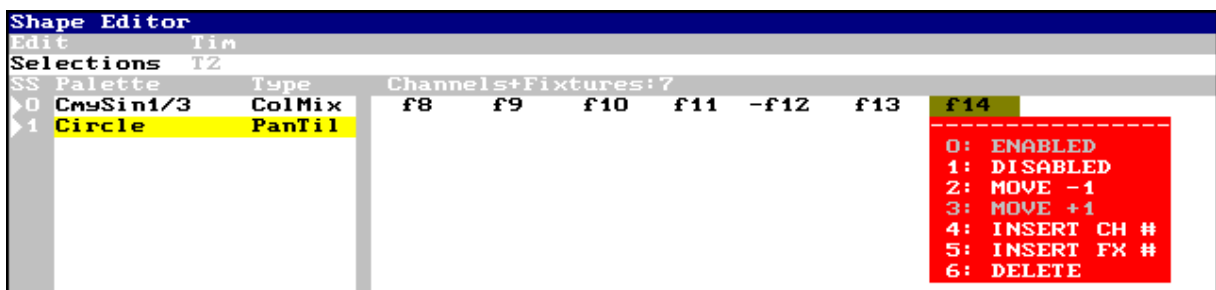
- SzShp (size fade),
- RtShp (rate fade) or
- Shape (fade of size & rate).

More information about timings & parts in chapter 6 – Groups and Cues



10.3.3 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.

10.4 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**

10.5 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.

10.5.1 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											
Lin											
N2											
SS	Palette	Type	Effect	Nm	Size	Rate	Game1	Nm	Mod/Par	Game2	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**.

10.5.2 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

Shape list:Z1		1-100								
Shp	Text	Palette	Type	Effect	Size	Rate	Game1	Game2	Game3	Game4
1	Sine	CanCan	X	Free0	150	+80	RateI	None	None	None
2	Cosine	Sine	Magenta	Free0	150	+80	None	None	None	None
3	Step	Sine	Dimmer	Free0	150	+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	CmsSin									
71	CmsSin1/3									
72	CmsFlash1/3									
73	CmsUp1/3									
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**).

10.5.3 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.

10.6 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.

“SHAPE BASE” OPTION

This option allows you to select the shape behavior in scene, when from another master we take control over the shape base values. This option is in **MENU 31 (Playbacks)**:

Shape Base is ~ (Free): each new group or cue activated can change the shape base value, and the shape will follow its course with the new base values. In general, if you are storing colors, positions, shapes, etc. in several masters, and then you combine them, use this option.

Shape Base is - (Fixed): each new group or cue activated that it changes the shape base value, it also stops the shape in scene. It stops the shape of any shape parameter over which we take control. In general, if you are storing complete scenes, with dimmers and parameters in the same master, use this option.

Example: Store in **M1** a group with several channels to 10% with shape of flash and some fixtures at HOME with shape of circle. Store in **M2** those same channels to 50% without shape, and those same fixtures in a new position, also without shape. And, we observe the differences, activating and deactivating the masters.

Masters	~ (Free)	- (Fixed)
Start from blackout	Blackout scene	Blackout scene
Activate M1	Channels at 10% + flash and Fixtures t Home + circle	Channels at 10% + flash and Fixtures at Home + circle
Activate M2	Channels at 50% + flash and Fixtures in new position + circle. Scene is mixture of both groups.	Channels at 50%, without flash, and Fixtures in new static position (without shape). The scene is only from last group.

11 BASIC 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: **# #**

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**

11.1 GENERAL EDITION


Inside the menus 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.

11.2 MENU 10 – TO STORE/LOAD A SHOW

A show is a file that contains all the spectacle data. **Hydra** can record shows in its hard Disk, in a Floppy Disk or in a USB Disk.

 Store the show periodically. This process needs a second and it can save hours of edition.

The shows are stored, loaded or deleted from the menu 10: Shows

 **MENU 10**

11.2.1 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**

11.2.2 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

11.2.3 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

11.2.4 LOAD SOME ITEMS OF A SHOW

Hydra 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.

Load Selected			
Item	From-To	Load	Overwrite
Cue	0-1000	NO	YES
Group	0-1000	NO	YES
Effect	0-1000	NO	YES
Page	0-1000	NO	YES
Macro	0-1000	NO	YES
Shape	0-1000	NO	YES
Channels Patch		NO	YES
Fixtures Patch +Libraries		0: NO	1: YES
Curves		0: NO	1: YES
Midi Patch		NO	YES
Time Code		NO	YES
Setup		NO	YES

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.

11.2.5 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**

11.2.6 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 Stick**).

For that, access to the setup line of the shows menu, pressing **MENU** or using the mouse.

Disk		1494100 Kbytes free				↑↑↑↑ ↓↓↓↓	
▼Hard Disk	▼LT Shows	▼Update	▼Format	belen\			
#		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				↑↑↑↑ ↓↓↓↓	
▼Hard Disk	▼LT Shows	▼Update	▼Format	belen\			
#	Name	Board	Ver	F	Kbytes	Date	Time
#AWARDS9.LT	A	0: LT Shows	HYDRA_PLUS	1.21	17	22-12-2004	01:54
#timings.lt	t	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 **↓**

11.3 SETUP CONFIGURATION

All the configuration menus are in the **SETUP** group.

11.3.1 30: EDITOR & TIMES

 **MENU 3 0**

Allows you to configure the behavior of editor.

11.3.2 31: PLAYBACKS

 **MENU 3 1**

Allows you to configure the behavior of playbacks.

11.3.3 32: SYSTEM

 **MENU 3 2**

Allows you to configure the system.

12 CHANNELS PATCH

Space Plus

DMX Output: 2048
Maximum n° canales: 2000

Sky

DMX Output: 1024
Maximum n° canales: 1024

Spirit

DMX Output: 512
Maximum n° canales: 512

The Channel Patch is the assignation between control channels to dimmers channels (DMX outputs).

By default, the **Hydra** channels are assigned to the first dimmers from the output DMX-1.

These assignations 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	FF Li
2	2				

0: Dmx 1-2048
1: Dmx 1,1-512,4

12.1 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.

12.1.1.1

12.1.2 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**

If 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).

12.2 DIMMERS LIST

To access to the **Dimmers** list press:

 **MENU** **0** **2**

To toggle from Channels List to Dimmer List use the mouse, or select the option **Edit Dimmers**

pressing **MENU** **1** 



Channels & Dimmers Patch			
Edit Channels		Patch Tools	
C	0: Edit Channels	Dmx	Li
1	1: Edit Dimmers	1,1	FF
2	2,1		
3			

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.

12.2.1 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** **.** **2** 

If the active cell is a **Li**:

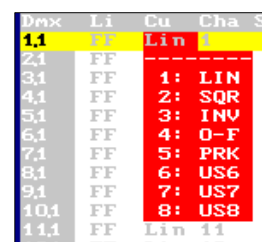
This cell only is active for dimmers with channel. It admits level from 0% to 100% (FF). The output level in this dimmer never exceeds this value. Its default value is **FF**, not limited. The regulation curves are computed between 0 and the Limit level. A dimmer limited at 0% hasn't output in scene.

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).

To assign other curve, enter its index number (1-8)



Dmx	Li	Cu	Cha
1,1	FF	Lin	
2,1	FF		
3,1	FF		
4,1	FF		
5,1	FF		
6,1	FF		
7,1	FF		
8,1	FF		
9,1	FF		
10,1	FF		
11,1	FF		
12,1	FF		

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.

12.3 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**

Delete assignments of dimmers (free dimmers). **Delete**

Copy dimmers. **Copy**

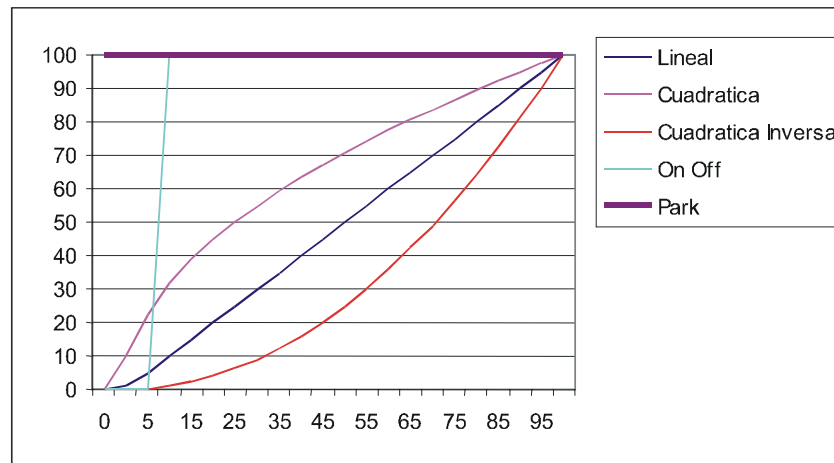
Exchange dimmers. **Exchange**

These commands don't request confirmation.

12.4 CURVES

12.4.1 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 : SQF**). 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.

12.4.2 USER CURVES

The user curves are defined in the menu **05: Define Curves**. These curves are named **US6**, **US7** & **US8**.

To open the menu **05: Define Curves**:



Special editions:

COPY CURVE VALUES:

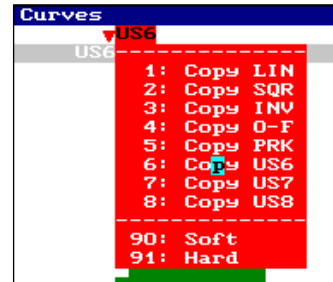
The **1** to **8** options permit us to copy the values of their curve in the selected curve. Also, it's possible to copy values from other user curve (**6** to **8** options). These copied values are used as start point to edit the selected curve.

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.

13 RESET

13.1 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, except **Plus** models, 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).

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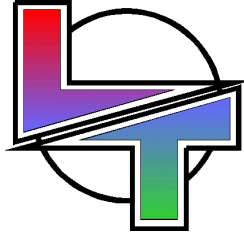
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