
HYDRA Family

www.lt-light.com

Hydra **P**lus

Hydra **S**pace

Hydra **S**ky

Hydra **S**pirit

THE SHOW CONTROL

Version 2.1

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QUICK START

1. SYSTEM

1.1 SYSTEM CONFIGURATION

The system is configured in the menu 50: Console Configuration



```

Console Configuration

An automatic RST is done on having changed something of this paragraph!!!

Masters Number.....24 (24, 48)
Channels Number...100 (0, 20, 40, ... 2000)
Attributes Number..1948 (Max)
    
```

 **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 spots 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. SPOTS PATCH

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

The spots Patch is in the menu 04: Spots

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

 **SPOT** **SPOT** (b: quick command)

This screen has 3 zones:

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

Spot Definition that presents the spot definition that it is selected in the Cache or Patch list.

Patch that has the spots configuration, and include the type of each spot number, its Dmx direction, etc... After a Reset this Spot Patch always is empty.

2.1 EDITING THE PATCH

Spt	<p>Spot number This number is used by the system to select it.</p>
Type	<p>Name of the spot definition This type is edited entering its index number (1 to 24) from the Cache list</p>
Dmx--dmx	<p>DMX direction Are the DMX directions used by the spots (only the first direction is editable).</p>
X-Y	<p>Trackball movement Permits to exchange or invert the movement parameters (Pan-Tilt), to obtain a homogeneous movement of each spots in the trackball, independently of its physical localization.</p>

dm	<p>External Dimmer</p> <p>If the spot has an external dimmer, this is its DMX direction.</p>
----	---

If the active data is Spt:

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

If the active data is Type:

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

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

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

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

If the active data is Dmx-dmx:

Edit the DMX direction of the spot 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 spot 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 spot) press **INSERT**.

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

The last DMX direction used by this spots 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 spot 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 spots and the **Level** to control the spot dimmer.

If the active data is dm:

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

 The spot 26 is controlling a VL5 that it is connected to the dimmer 12 in DMX-1, the spot 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	VL5m3	300,3	308,3	x→y↑ 12,1
27				

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

Spt	Type	Dmx--dmx	X-Y	dn
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 spot types have been charged from the Cache list, where:





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

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

2.2 LOADING A NEW SPOT DEFINITION

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



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

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

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



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


 **2** **ENTER**

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

Spots Patch									
▼Edit Cache		▼Hard Disk		▼File Tools					
Cache	Load	Hard Disk	371	Spot	Types	File	Date		
1	PRSLX	10	MARTIN	1016	M250+	13	MAC 250+ mode4 (v 1,3)	MAC250+-.M4-	12-06-03
2	PRULX	14			M250+	9	MAC 250+ mode1 (v 1,3)	MAC250+-.M1-	12-06-03
3	GOLDS	12		1017	M2000	28	Mac2000 Performance (8b)	MAC2000P-.8B	12-06-03
4	SIAGS	17			M2000	31	Mac2000 Performance (16b)	MAC2000P.16B	12-06-03
5	SPSCZ	16		1018	MMACU	4	MiniMac Wash Mode 1	MINMACU-.M1	12-06-03
6	STAGZ	15			MMACU	6	MiniMac Wash Mode 2	MINMACU-.M2	12-06-03
7	PPLUS	33			MMACU	6	MiniMac Wash Mode 3	MINMACU-.M3	12-06-03
8	CPRHX	11			MMACU	8	MiniMac Wash Mode 4	MINMACU-.M4	12-06-03
9	SBEAM	16		1019	P-518	9	RoboScan Pro 518 Mode3	PRO-518-.M3	12-06-03
10	SC575	16			P-518	7	RoboScan Pro 518 Mode1	PRO-518-.M1	12-06-03
11	SS575	24			P-518	9	RoboScan Pro 518 Mode2	PRO-518-.M2	12-06-03
12	ASPOI	36		1020	R1004	5	RoboScan 1004 & 805 (5ch)	ROBS1004.---	12-06-03
13	MC500	16		1021	PALFX	20	Pal 1200 FX Mode4	PAL1200-.FX4	12-06-03
14	MC600	14			PALFX	16	Pal 1200 FX Mode1	PAL1200-.FX1	12-06-03
15	M2000	24			PALFX	18	Pal 1200 FX Mode3	PAL1200-.FX3	12-06-03
16	MC300	13			PALFX	18	Pal 1200 FX Mode2	PAL1200-.FX2	12-06-03
17	PALFX	20		1022	P1200	24	Pal 1200 Mode2	PAL-1200-.M2	12-06-03
18	V2000	15			P1200	26	Pal 1200 Mode4	PAL-1200-.M4	12-06-03
19	V2400	15			0: LOAD	24	Pal 1200 Mode3	PAL-1200-.M3	12-06-03
20	VL5	11			0: LOAD	22	Pal 1200 Mode1	PAL-1200-.M1	12-06-03
21	VL6	11		1023	RS812	5	RoboScan 812 Mode1	ROBSC812-.M1	12-06-03
22	SP575	16			RS812	7	RoboScan 812 Mode2	ROBSC812-.M2	12-06-03
23	WH575	16		1024	ACROB	7	Acrobat (Extended mode)	ACROBAT.---	12-06-03
24	PILT3	10		1025	ALIEN	7	Alien 2 Pendant	ALIEN2PI.---	12-06-03
				1026	EX200	7	Exterior 200	EXTERIOR.200	12-06-03
				1027	EX60C	5	Exterior 600 Compact Mod2	EXTERIOR.6C2	12-06-03
				1028	EX60C	4	Exterior 600 Compact Mod1	EXTERIOR.6C1	12-06-03
				1028	EX600	8	Exterior 600 Mode1	EXTERIOR.601	12-06-03
					EX600	9	Exterior 600 Mode2	EXTERIOR.602	12-06-03
				1029	FIBER	7	FiberSource CHY 150	FBRSOURC.CHY	12-06-03

Control de ficheros de spots

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</u> digits, from 00 to 99
{Channels} @ @	Setting at 100% (FF)
{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 SPOTS

The spot is an item that it permits to control a moving light. Each moving light is controlled for a spot number, and from this spot 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: Spots (See chapter 4 – Spots Patch)

3.2.1 THE SPOTS IN THE EDITOR

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

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

The **Dimmer**, if exists, works as HTP & No-Tracking, the same as the channels (see pg. 10).

The spot 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 SPOT PARAMETERS

The spot 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 \updownarrow (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 SPOTS

Basic selections:

	SPOT #	Select the spot #
	SPOT # THRU #'	Select a range from spot # to #'
	SPOT # THRU	Select a range from spot # to the last spot
	SPOT # SPOT #'	Select the spot # and the spot #'
	SPOT THRU	Select all the spots that are in the editor as selected spots.
	SPOT .	Repeat the last selection done
	SPOT THRU THRU	Select all the spots that are in the editor & in the scene
	SPOT # THRU THRU #'	Select all the spots 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 spots are edited editing one, several or all their parameters.

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

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

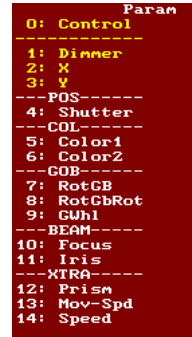
The rest of the parameters are available across the control wheels, but they must be searched changing the active bank in the control wheels, for example pressing **←** or **→**

3.2.6 EDITING A PARAMETER


The first step to edit a parameter is its selection:

 {Spots} **PARAM** **#** **ENTER**

When **PARAM** is pressed, a red window is opened to show us the index number of the parameters of the spot. 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:











 {spots} **PARAM** **#** **@** **#'** To set the parameter # at value #' (2 digits)

 {spots} **PARAM** **#** **@** **@** To set the parameter # at full (FF)

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





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



The **LEVEL** of the selected spots {spots} can be edited pressing:

 {spots} Level 	Manually, moving the vertical wheel or the joystick.
 {spots} @ # #	Directly, assigning a numeric level entered in 2 digits (00 to 99)
 {spots} @ @	Directly at 100% (FF)
 {spots} CALL	At 100% (FF) with a fading of 2 seconds.
 {spots} ↑↑	Increase the level a 5% (+%) For Plus systems, this command, besides, it's moving Level 
 {spots} ↓↓	Decrease the level a 5% (-%) For Plus systems, this command, besides, it's moving Level 
 {spots} @ 	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 spots is to different values, select it (marked with *) and press   to copy to all the spots the value of the parameter of the first spot.

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 spots, 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	

NUMERIC SELECTION OF A PALETTE

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

 {spots} **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.

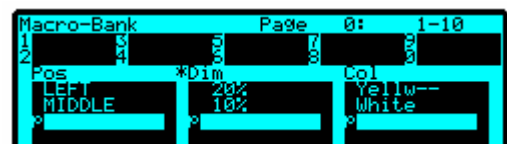
SELECTING PALETTES FROM THE CONTROL WHEELS

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

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

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

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



If necessary, change the active wheel pressing in it (**W#** **+**), or for **Plus** models, pressing **←←** and **→→**

- Move a wheel is blind edition during that **WHEEL** **▼** is pressed.

- Put the same active palette in all the selected spots pressing **WHEEL WHEEL**

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

MC500	Director	Pos	Col	*Gob	Beam	Xtra	Fig
1	15%	Home	Amber	GOBO 4	01fondo1	Prism 1	None
2	15%	Track	Track	Editor	Play	Track	
3	15%	Home	Amber	GOBO 4	Home	Prism 1	None

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

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

SELECTING PALETTES FROM THE BANKS KEYS

The keys **1B** to **10B** 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 **1B** to **10B**

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

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

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

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

 **BANKS** \oplus **0** Or using the mouse **BANKS** \oplus **0** : Auto \odot

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

 {spots} **COL** **#B** **GOB** **#B**

And **#B** is the key associated to the desired palette, from **1B** to **10B**. 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.

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:

 {spots} **GOB** **RELEASE**


To call to the editor all the parameters of position:

 {spots} **POS** **ENTER**

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 spots pressing:

 {spots} **HOME**

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

 {spots} **POS** **HOME**

3.2.12 THE PARAMETER OF CONTROL

Same 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 spots (ON), press:

 {spots} **PARAM** **9** **1**

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

 {spots} **PARAM** **9** **2**

To reset the selected spots (RST), press:

 {spots} **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 spots 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 spot parameters maintain its scene value in tracking mode.

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

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

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


To release only a parameter, press:


 {spots} **PARAM # RELEASE**


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

 {spots} **BEAM RELEASE**

To release all the channels and spots 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 & Memories

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 \times (pan) and ψ (tilt)
None	On	The TB is inactive
Orthogonal	Blinking	The TB only controls one of these parameters, only \times or only ψ . 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 spot, sometimes, it's not possible to arrive the desired point. In these cases, press **FLIP** for that the system edits a complementary values for \times and ψ 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 .

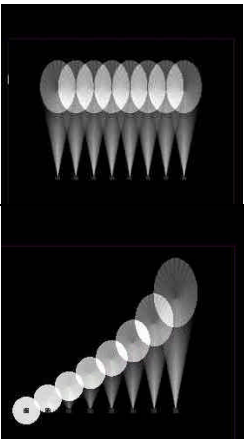
-  **SPOT 1 FLIP** The parameters \times and ψ of spots 1 change their values.
-  **SPOT 1 PARAM 2 FLIP** Only the parameter \times of spots 1 changes its value.
-  **SPOT 1 PARAM 3 FLIP** Only the parameter ψ of spots 1 changes its value.

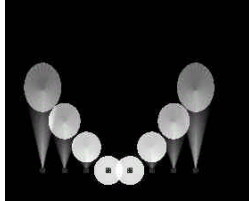
FAN-OUT

This function permits the edition, in a selection of several spots, 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 spots 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 spots. Example: Increase of ψ of the spots 1 to 8	

Blinking	Fan-Out activated in <u>symmetrical mode</u> . ✕ &/or ʏ edition has a relative value, in symmetrical mode, between the first and last spots. Example: Increase of ʏ of the spots 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 S f

- c appears always that the editor has channels
- S appears always that the editor has spots.
- f appears always that the editor has figures

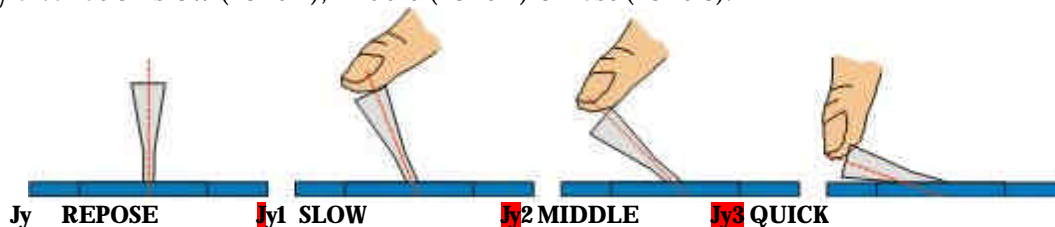


THE JOYSTICK

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. MEMORIES & GROUPS

The memories 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 MEMORIES & GROUPS

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

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

This picture is named: {editor}

The memories need that the channels and/or spots 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 spots and optionally edit their parameters. If no parameters are edited the spots are stored only with their dimmers at 100%. Exception: If a spot hasn't **Dinner** will be needed to edit some parameter to store it in a group.

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

To store the memory # press:


 {editor} **MEM** **#** **REC**

To store the next memory press:


 {editor} **MEM** **REC**

 {editor} **REC**


To store the group # press:

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

To store the next group press:

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

To store the next group loading a master press:

 {selección/editor} **LOAD** **M#**

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 spots that are in scene, press:

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

 **SPOT** **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**

Pre-select the contents of a memory, a group or a range

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

 **MEM** **#** **ENTER**

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

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

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

 **CALL** **CALL**

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

 **CALL** **M#**

 **CALL** **ASSIGN**

Call into the editor to a memory, group or range:

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

 **MEM** **#** **CALL**

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

 **MEM** **#** **THRU** **#'** **CALL**

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

Call a memory, group or range suddenly:

 **MEM** **#** **CALL** **CALL**

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

Call a memory or group controlled by the user:

 **MEM** **#** Level⇅

 **GROUP** **#** Level⇅

Call into the editor, a channel spot or parameters, as are stored in a memory or group. Examples

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

 **MEM** **1** **CHANNEL** **8** **CALL**

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

 **GROUP** **1** **SPOT** **8** **CALL** **CALL**

Call to the parameter 10 of the spot 8, as it is stored in the memory 1:

 **MEM** **1** **SPOT** **8** **PARAM** **1** **0** **CALL**

The editor controls a channel or spot called into the `Stage` editor.

4.1.2 STORING THE SCENE IN THE NEXT MEMORY

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

 **{escena}** **CALL** **REC**

4.1.3 EXAM OF MEMORIES & GROUPS

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

To exam the memories list press:

 **MEM** **EXAM**

To exam the memory #, press:

 **MEM** **#** **EXAM**

To exam the groups list press:

 **GROUP** **EXAM**

To exam the group #, press:

 **GROUP** **#** **EXAM**

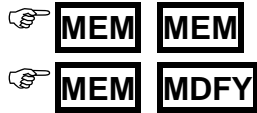
To page a list press **←** **↑** **↓** **→**

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

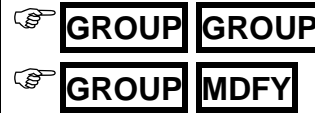
4.1.4 ASSOCIATE A TEXT TO A MEMORY OR GROUP

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

For memories (2 options):



For groups (2 options):



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

Close this screen pressing **EXIT**

4.1.5 DELETE MEMORIES OR GROUPS

To delete a memory press:



To delete a memories range press:



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



To delete a group press:



To delete a groups range press:



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



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

4.1.6 MODIFY A MEMORY OR GROUP

The contents of a memory 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 memory or group to modify it, using one of these options:



- Modify it adding, editing or releasing channels and/or spots, {modifications}

- Store the modification pressing **REC** or abort the modification pressing **RST**

Resume:

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

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

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

4.1.7 COPY MEMORIES OR GROUPS

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

Copy the memory # to the memory #'

 **MEM** **#** **COPY** **#'** **ENTER**

Copy a memories range in other range:

 **MEM** **#** **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 MEMORIES OR GROUPS

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

Exchange 2 memories

 **MEM** **#**
COPY **COPY** **#'** **ENTER**

Exchange 2 memories ranges

 **MEM** **#** **THRU** **#'**
COPY **COPY** **#''** **ENTER**

Exchange 2 groups

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

Exchange 2 groups ranges

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

4.2 MEMORY TIMES

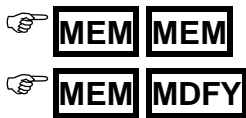
The times programmed in a memory are used to execute this memory in crossfaders and masters. These times are:

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

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

4.2.1 PROGRAMMING TIMES FROM THE MEMORIES LIST

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



Mem	T \uparrow	T \downarrow	T \odot	T $\uparrow \odot$	T $\downarrow \odot$	Tn	Jump	Lp	Text	Command	TC	cs	S
1	35	35	∞			T1						c	S
2	3	3	∞			T1						c	S
3	3	3	∞			T2			memory text			c	S
4	3	3	01			T1						c	S
5	3	2				T1			texto memoria			c	S
6	3	3	2			T3						c	S
7	3	3	∞			T1						c	S

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

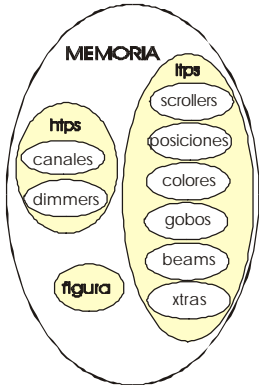
The default times are showed in this screen in its setup line. It's possible to access to this setup line to change any of these times pressing **MENU** or using the mouse. Return to the memories list pressing **MENU** again, or pressing **↓**, or using the mouse.

To page the memories list turn **MONITOR** wheel
 In **Plus** models, without **MONITOR** wheel, page the screen pressing **MON+** **MON-**

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

4.3 TIMING

The console has 6 different timings (T1 to T6). The timing sets the memory & group behavior in playbacks.
 At any moment, the memory timing can be edited.
 Groups answer to the default timing.



The timing divides the memory (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 memory (or group), its behavior depends of the timing and of the own memory (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.

 **MENU 0 6**

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
	LTP	00 00	LTP	FF FF		LTP	00 00		LTP	FF 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 (htps, ltps, colors...)
Begin	Begin: The point where the fading of this part must be started. This point is edited as percentage (0-100%) of the memory fade-in time and is equivalent to a T_{\uparrow}
End	End: The point where the fading of this part must be ended. This point is edited as percentage (0-100%) of the memory fade-in time. The End value must be equal or greater than the begin value. If Begin=End the part jumps in scene (equivalent to a $T_{\uparrow} = 0.1$)

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

4.3.1 SET THE DEFAULT TIMING

The default timing is the timing associated to each new memory 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 **T i m i n g** option of the menu 30: Editor & Times
- From the Setup line of the memories list, **MEM MEM**

4.3.2 EDITION OF THE MEMORY TIMING

The Memory timing (T_1 to T_9) can be edited from the editor or from the memories list.

From the editor:

When a memory 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 MEMORY PARTS


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

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

A memory with parts hasn't timing. Editing its timing, the parts are overwritten.

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

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

 **PART PART 7** {to select the option 7 : TO PART}

4.4 MEMORY PARTS

One memory can have 9 parts in addition to the base memory. Each part can have its contents and times (T↑ and T↑⊙) with values totally free.

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

Each channel and parameter stored in the memory can be controlled for the times of the base memory (F⊖) or for the times of one memory part (F1 to F9).

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


In resume, one memory can be divided in:

MEMORY	
Base memory = 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

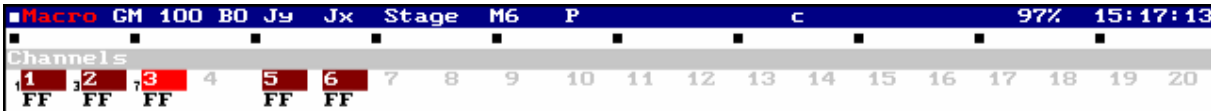
The parts can be edited when the memory is been edited or modifying the memory to divide it in parts. In both cases, the same method is used:

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 MEMORY

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

 {Selection} **PART 0**

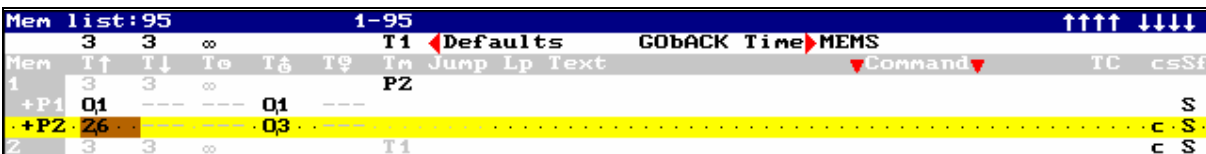
If all the items of one part are eliminated, the part is deleted.

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

4.4.3 EDIT TIMES FOR THE MEMORY PARTS

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

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



Mem	T↑	T↓	T⊙	T⊙	Tn	Jump	Lp	Text	Command	TC	csSf
1	3	3	∞	∞				P2			
+P1	01				01						S
+P2	26				03						c S

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

4.5 MODIFY A RANGE OF MEMORIES OR GROUPS

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

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

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

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

After the modifications, press **REC** to store them over all the memories 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 memories 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 memories this channel increments its level in 5%.

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

3: BASE/BASE

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

4.5.2 The attribute options (#₂)

0: Normal

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

1: +News

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

2: Not ↓ HTPs @FF

The modification of an item only is applied in the memories 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 memories 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 dimmer -	DIM	DIM
99 libraries of color -	COL	COL
99 libraries of gobos -	GOB	GOB
99 libraries of beam -	BEAM	BEAM
99 libraries of x-tra -	XTRA	XTRA

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

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

{spot} **TB**⊙ {spot} **TB**⊙ {spot} **TB**⊙ ...


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

 **POS** **POS** **#** **REC**

Or to store the next position, press:

 **POS** **POS** **REC**

To associate a text to a position library press:

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

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

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

5.2 DIM, COL, GOB, BEAM & X-TRA LIBRARIES

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

These libraries are stored in the editor, using the **first spot of each type**; type that will be included in the library.



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

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

To store a library, for example of color:

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



COL COL # REC To store the color #



COL COL REC To store the next color

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



COL COL MDFY {editor text} **EXIT**

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



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

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

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

5.3 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**

5.4 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**

5.5 EDITING WITH LIBRARIES

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

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

The libraries, always, are applied to the spots 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.

5.5.1 NUMERIC SELECTION




 {spots} **POS** **POS** **#** **ENTER**

5.5.2 SELECTION IN CONTROL WHEELS




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

In this mode, the control wheels allow you to edit, directly, palettes & libraries of each category, all organized in 2 banks that are paged pressing **←** & **→** (and **←←** & **→→** for **Plus** models).

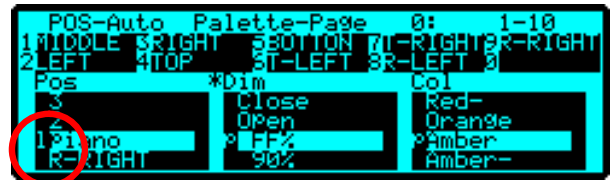
In the Display (or touch panel for **Space** models), the contents of each wheel are presented, where:


Moving the wheels, **W1** , **W2**  & **W3** , you select the library/palette in continuous mode.





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

Pressing in each wheel, **W1** , **W2**  y **W3** , you change the active wheel, marked with a *, (or pressing **←←** & **→→** for **Plus** models).

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



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

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

5.5.3 SELECTION IN BANKS KEYS

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

Hydra Plus

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

BANKS **0** **POS** To set mode: Auto (POS)
BANKS **3** To set mode: POS.

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

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:

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:

 **#B**

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

 **POS** **#B**

6. MASTERS AND PAGES

6.1 MASTERS

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

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

LOAD	
0:	GROUP
1:	GROUP Absolute
2:	GROUP Inhibit
3:	MEM
4:	MEM Absolute
5:	MEM Inhibit
6:	MEM List
7:	EFFECT Rate
8:	EFFECT Level
9:	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:	MEM
4:	MEM Absolute
5:	MEM Inhibit
6:	MEM 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 MEMORIES IN MASTERS

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

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

☞ **MEM # LOAD M#**

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

☞ **MEM # LOAD ▾ M# M# ... LOAD ▲**

☞ **MEM # THRU #' LOAD LOAD M#**

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



To load a memories range, using all masters, from the master 1 and the selected memory:



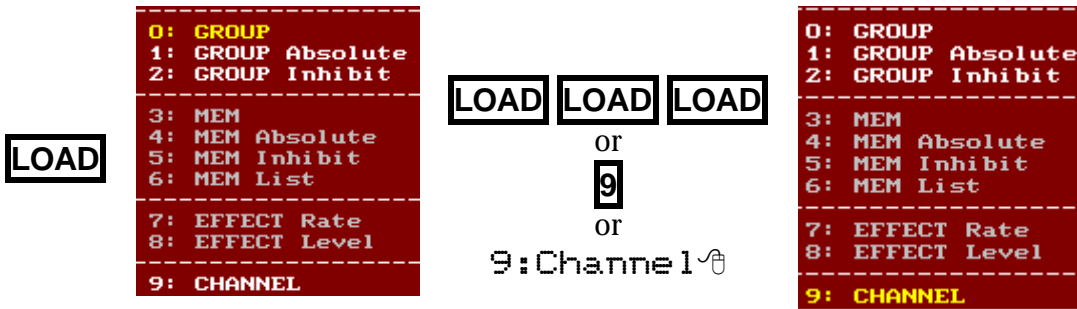
6.1.3 LOADING CHANNELS IN MASTERS

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 memory or group loaded in a master can be several modes, to load a memory 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#
MEM	 MEM # LOAD 3 M#
MEM Absolute	 MEM # LOAD 4 M#
MEM Inhibit	 MEM # 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 memory, 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 (**Re**)

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 memory in normal mode is controlled with a master, its contents appear in a **yellow** field in the auxiliary screens.
- **Absolute:** When a group or memory in absolute mode is controlled with a master, its content (channels and/or spot 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 memory 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 memories are controlled using their programmed times, and their timing or parts. Groups and channels are controlled using its general fade time, **Group/Ch T↓**, groups, also, are controlled in accordance with the default timing.

To control a master automatically, set the **M#** keys in **GO** mode, pressing **FLMT** as many times as will be necessary to set **GO** mode (**FLMT** LED at off).

Initially, the master is inactive at 0% (**00**). Press **M#** (**GO**) to fade in 100% (**FF**) in the fade-in time (example: **↑3**).

When the master is active at 100% (**FF**), press **M#** (**GO**) to fade out 0% (**00**) in the fade-out time (example: **↓3**).

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 memory 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

To associate a text to a page, press:

 **PAGE** **MDFY** 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 memory in X2 is recovered. The crossfade output isn't affected.

Forced, where the memories 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 memories, 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 #.

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:	MEM
4:	MEM Absolute
5:	MEM Inhibit
6:	MEM 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 memories in sequential mode using any of its masters or the dedicated crossfader.

The list of memories to execute in sequential mode is named Sequence.

The sequences are executed using crossfades: double fading between 2 memories, one that fade-out scene (scene memory) and the other that fade-in scene (next memory).

Each new crossfade begins with:

- The scene memory at 100% & the next memory at 0%
- During the Crossfade progress the memory in scene fades from 100% to 0%, at the same time that the next memory fades from 0% to 100%.
- At the end of the crossfade, the next memory is now scene memory (100%), and a new memory of the list is now the next memory (0%).

The list is executed, memory to memory, in ascendant order.

8.1 LOADING SEQUENCES

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


When you load a memories range, the first memory of this range is loaded as next memory.

8.1.1 IN THE X1/X2 CROSSFADER

 **MEM # THRU #' ASSIGN**

To load all the stored memories, press:

 **MEM THRU ASSIGN** As closed list.

 **MEM ASSIGN** As opened list. Each new memory 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#

 **MEM # THRU #' LOAD M#**

To load all the stored memories, press:

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

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

 **{memories 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


In X1/X2 crossfader

In this mode, the movements of **X1** ⇅ & **X2** ⇅ control the crossfade between the memories 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.




In masters





In this mode, the movement of **M#**  controls the crossfade between the scene memory & next memory. The fader controls both memories with inverted scale; in the same extreme the scene memory is at 100% and the next memory 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 memory and this memory has programmed a **T** , after this first crossfade, automatically, the following crossfade is started. Only if **T**  is 8 (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 memory (or memory 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 memory (in X1).

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 memory, from a inactive crossfade, press **P.BACK**

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 memory, 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, playbaking the sequence in inverting order.

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 memory, 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 MEMORIES

8.5.1 PROGRAMMED JUMP

The **JUMP** of a memory has the memory number that will be executed after it (its next memory). The **Lp** has the number of times that this programmed jump will be executed (1-99). If **JUMP** is empty the next number of memory in sequence will be executed. If **Lp** is empty the programmed Jump is executed always. To delete a **JUMP** or **Lp** enter a **0**.

Men list:10		1-10						
		Default times						
Men	T↑	T↓	Te	T↓	T↑	Jump	Lp	P
1	3	3	∞					
2	3	3	∞					
3	3	3	∞					
4	3	3	∞					
5	3	3	∞					
6	3	3	∞					
7	3	3	∞				9	
8	3	3	∞					
9	3	3	∞					
10	3	3	∞			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 memory to the memory 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

In crossfaders

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

 **MEM** **#** **ASSIGN** Memory # is assigned in X2.

For **Plus** models, also:

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

 **PAUSE** **GO**


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

 **PAUSE** **GOBACK**


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

In masters

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

 **#** **STEP** **M#** Memory # is placed as next memory.

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

 **STEP** **M#** Memory 0 (blackout) is placed as next memory.

8.6 MDFY MDFY FUNCTION

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

To modify the scene memory (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 memory pressing **MDFY** **MDFY**

The editor content is **added** in the X1 memory 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 memory.

 {**Stage** editor} **MDFY** **MDFY**

To modify the next memory (X2) **adding** the editor modification:

- Take care that X2 is at 0% (00).
- From the **Block** editor modify channels, scrollers and parameters.

- And store these modifications in the X2 memory pressing **MDFY** **MDFY**
The editor content is **added** in the X2 memory and then the editor is emptied. When the next crossfade is started, the X2 memory 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 memory.

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

8.7 LEARN TIME in CROSSFADER

It's possible to learn the times for the memories loaded in the crossfade.

To learn the crossfade times, assign the desired memories in the crossfade and press **LNTM** (LED at ON). Now it's possible:

- To learn only T_{\odot} , pressing **GO** at the desired moment. Press **GO** as many times as T_{\odot} to learn.
- To learn all the memories times, execute the crossfade manually using its **X1** \updownarrow & **X2** \updownarrow . **Hydra** learns in each faders travel the T_{\uparrow} & T_{\downarrow} , and if correct, the $T_{\uparrow\odot}$ & $T_{\downarrow\odot}$. And between travels, learns the T_{\odot} . It's possible to repeat this process as many times as will be needed.

To end the learning process press **LNTM** again (LED at OFF).

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, spots, groups, memories, 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 & spots that it's a special command to select all the channels & spots 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, spot, memory or group. The **NEXT** function can be applied in **general mode** or **selective mode** (in case of channels and spots into the editor).

a) **General mode.** It's used to increment the number of channel, spots, memory or group used.

Selection	In the command line...
{channel}{optional level} NEXT	Gives the next number of channel
{spots}{optional edition} NEXT	Gives the next number of spot
{group}{optional level} NEXT	Gives the next number of stored group
{memory}{optional level} NEXT	Gives the next number of stored memory
{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 spots that **are in the editor**. This mode is only for channels & spots.

Selection	In the commands line...
{editor} CHANNEL NEXT	NEXT LED at on. Gives the next channel in the editor
{editor} SPOT NEXT	NEXT LED at on. Gives the next spot 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
SPOT # {values}	
GROUP # {level}	
MEM # {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 memory 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%.
{spots} TEST	Empties the editor. The dimmers of the selected spots fade at 100%.
{group} TEST	Empties the editor. The selected group fades at 100%.
{memory} TEST	Empties the editor. The selected memory fades at 100%.
{mixed selection} TEST	Empties the editor. The selected channels and spot dimmers fade at 100%.

Press TEST as many times as item to test. In example, to test several memories press MEM 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 memory). 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	MEM
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 **MEM** each stored data presents the original memory number.



Modify the memory 3

MEM 3 MDFY {modifications} **REC**

Recover the original memory 3 pressing

RESCUE 3 0 CALL

The original memory 3 is loaded in the editor. Now it's possible to store this editor as any group or memory, including as memory 3

MEM 3 REC REC

10. FIGURES

The figures are applied to the position parameters, x & y, of the selected spots. The figures are stored in memories & groups.

A figure allows you to program (and playback) a complex movement in an easy way.

10.1 EDITION OF A FIGURE

The first step to edit a figure is set the position of the involved spots, editing their parameters x and y. The set positions will be the geometric center of the figures. These positions can be adjusted at any moment (before, after or during the figure edition).

 **SPOT** **#** **TB**  **SPOT** **#** **TB**  **SPOT** **#** **TB**  ...

Then, select the spots that will execute the figure, to select all spots in editor, press:

 **SPOT** **THRU**

Activate the figures editor:

 **FIGURE**

The monitor presents the figure parameters and these are actives in the control wheels.

Set the **Figure** type moving **W1**  or pressing **--** & **--**

Note that **--** & **--** are applied over the active wheel, marked with *****

The figure is active in the editor. Now it's possible to adjust the rest of parameters using the wheels and its associated functions.



To return to the edition of spot parameters, press **POS**, **COL**, **GOB**, etc.

10.1.1 THE FIGURE PARAMETERS

X+Y allows you to adjust the size of the figure. This control is divided in 2 modes that are selected pressing **--** or **--**



X+Y this mode allows you to adjust the size of all the figures in the same percentage.

relX+Y this mode allows you to adjust the size in a relative percentage.

Y Allows you to deform the figure to obtain ovals, lines, etc. This control is divided in 2 modes that are selected pressing  or 

Y allows you to deform all the figures in the same percentage.



relY allows you to deform all the figures in a relative percentage.

Speed Allows you to adjust the direction and speed of the figure. This control is divided in 2 modes that are selected pressing  or 

Spd allows you to adjust all the spots in the same percentage.


relSpd allows you to adjust the spots in a relative percentage.


Cycle Allows you to adjust the effective cycle, in accordance with the time needed to draw one time (lap). A lap corresponds with a Cycle of 100.


Offset allows you to adjust the initial point for the figure drawing. Values from 0 to Cycle. The control is divided in 2 modes that are selected pressing  or 

Ofs permits us to adjust all the spots in the same percentage.


relOfs permits us to adjust all the spots in relative percentage.



 Any relative control only has use the figure is applied to more than one spot.

In the monitor, the symbol -  - is associated to the spots that have figure active. This symbol is showed with the color code of control (master, crossfade, editor...).

 Notes: To deactivate any active figure, select **Figure: None**.

10.2 GENERAL NOTES

When  is pressed, the spots present us their figure parameters.

And only if when  is pressed there is some spot selected (in the editor), the figures editor is activated in the control wheels. When a exam screen of memory or group is active,  also permits us to see the figure parameters in this screen.

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: Disk

 **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 memories, pages, etc. To load some part of a show:

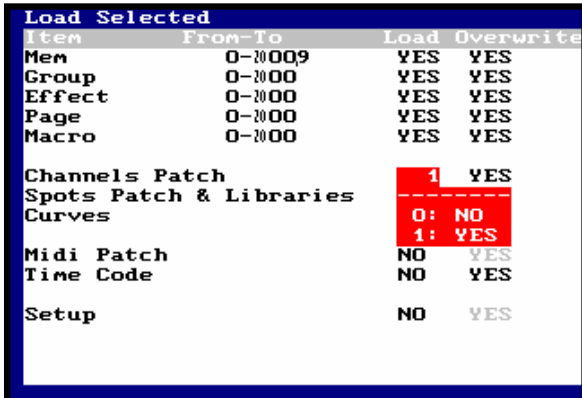
- Select the desired show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option 1: Load Selected

Now, from the Load Selected window, you can select the items to load.

When the items to load are selected (see below) press **ENTER** to load them.

The system requests a confirmation: **ENTER** to confirm or **EXIT** to abort.

You can follow the process in screen, at the end, press **ENTER** to return to the system.



Item	From-To	Load	Override
Mem	0-20 00,9	YES	YES
Group	0-20 00	YES	YES
Effect	0-20 00	YES	YES
Page	0-20 00	YES	YES
Macro	0-20 00	YES	YES
Channels Patch		1	YES
Spots Patch & Libraries		0: NO	
Curves		1: YES	
Midi Patch		NO	YES
Time Code		NO	YES
Setup		NO	YES

11.2.5 DELETE A SHOW

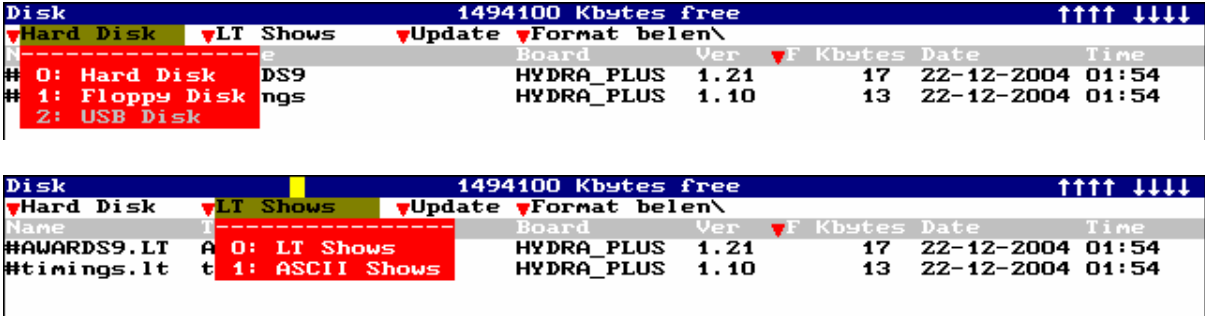
To delete a show of the disk:

- 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 Disk).

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



Disk		1494100 Kbytes free			↑↑↑↑ ↓↓↓↓		
▼	Hard Disk	▼	LT Shows	▼	Update	▼	Format belen\
#	0: Hard Disk	DS9	HYDRA_PLUS	1.21	▼	F	Kbytes Date Time
#	1: Floppy Disk	ngs	HYDRA_PLUS	1.10			17 22-12-2004 01:54
	2: USB Disk						13 22-12-2004 01:54

Disk		1494100 Kbytes free			↑↑↑↑ ↓↓↓↓		
▼	Hard Disk	▼	LT Shows	▼	Update	▼	Format belen\
#	AWARDS9.LT	A	0: LT Shows	HYDRA_PLUS	1.21	▼	F Kbytes Date Time
#	timings.lt	t	1: ASCII Shows	HYDRA_PLUS	1.10		17 22-12-2004 01:54
							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 nº canales: 2000

Sky

DMX Output: 1024
Maximum nº canales: 1024

Spirit

DMX Output: 512
Maximum nº 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	Li
1	1		5	5	FF	Li	0: Dmx 1-2048
2	2						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 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 **Dim**:

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	Ch	DMX	Li
0	0	FF	FF
1	1	FF	FF
2	2	FF	FF
3	3	FF	FF

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`:

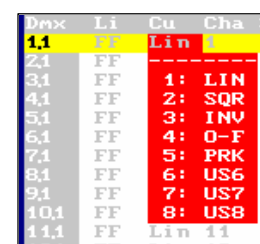
This cell only is active for dimmers with channel. It admits level from 0% to 100% (FF). The output level in this dimmer never exceeds this value. Its default value is `FF`, not limited. The regulation curves are computed between 0 and the Limit level. A dimmer limited at 0% hasn't output in scene.

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	1
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		

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**

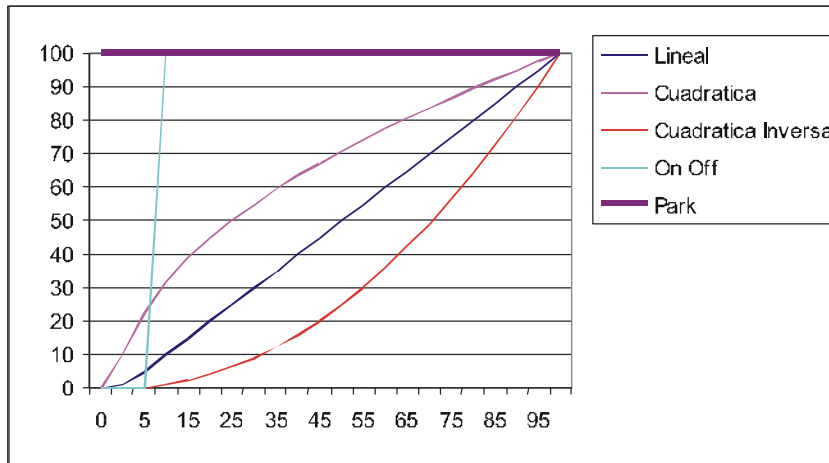
Exchange dimmers. **Exchange**

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 : SQR). It's the curve of quick-start. At the 50% of control level, the output is the 70% of the total power. This curve is very used in TV studies, and in Theatre, to compensate the slow start of the lamps of more power.

Invert square curve, (3 : INV). It's the curve of slow-start. At the 50% of control level, the output is the 70% of the total power. This curve is very used with fluorescence, and in Theatre, to compensate the quick start of the lamps of less power.

On-Off Curve, (4 : O-F) It's the Non-Dim curve. This curve hasn't regulation. At the 0% of its control level the power output is at 0%, but when the control level is over 6%, the power output is at 100%. This curve is very used for HMI lamps.

Park Curve, (5 : PRK). A channel with park curve is always at 100% (of power output). Its output is independently of the control level. And this curve is used, mainly, in backstage (dressing rooms, working lights...) and it guarantees that the channel is at 100% if the consol is turned off.

12.4.2 USER CURVES

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

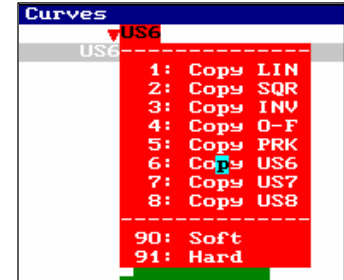
To open the menu 05: Define Curves:



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 ▲

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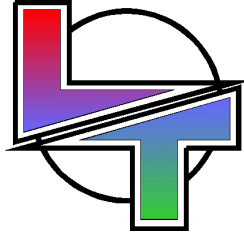
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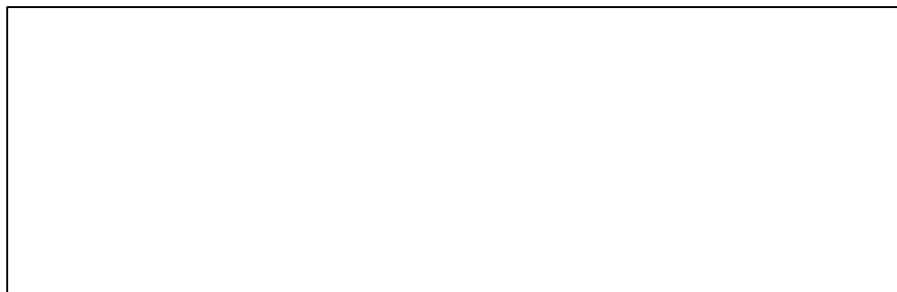
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