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Fax: (503) 404-5601
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1. 8700 SERIES INTRODUCTION AND CONNECTIONS

1.1. 8700 SERIES
The models of the 8700 Series cover a great range of necessities and have the same use philosophy. The shows of all models are compatibles.

<table>
<thead>
<tr>
<th>Dimmers / DMX-Out</th>
<th>Masters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GX:</strong></td>
<td></td>
</tr>
<tr>
<td>8748 GX</td>
<td>2048 / 4</td>
</tr>
<tr>
<td>8724 GX</td>
<td>2048 / 4</td>
</tr>
<tr>
<td>8724 GXT (Tour)</td>
<td>2048 / 4</td>
</tr>
<tr>
<td><strong>GS:</strong></td>
<td></td>
</tr>
<tr>
<td>8748 GS</td>
<td>1024 / 2</td>
</tr>
<tr>
<td>8724 GS</td>
<td>1024 / 2</td>
</tr>
<tr>
<td>8724 GST (Tour)</td>
<td>1024 / 2</td>
</tr>
<tr>
<td><strong>GL:</strong></td>
<td></td>
</tr>
<tr>
<td>8724 GL</td>
<td>512 / 1</td>
</tr>
<tr>
<td>8724 GLT (Tour)</td>
<td>512 / 1</td>
</tr>
</tbody>
</table>

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

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

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

1.2.1. GENERAL

### CAPACITY & INTERFACES

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

### FUNCTIONALITY

<table>
<thead>
<tr>
<th>Description</th>
<th>All models</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Cues</td>
<td></td>
<td>2000.9</td>
</tr>
<tr>
<td>Effects</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Pages</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Macros</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Shapes (moving lights &amp; conventional channels)</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
## 8700 SERIES INTRODUCTION AND CONNECTIONS

### Palettes for edition
- **All models**: Yes

### Libraries for dimmer, position, color, gobo, beam y Xtra
- **All models**: Yes
- **99 per category**

### Special function for moving lights
- **All models**: FLIP, FAN, FINE, IGNITE, ORTO…
- **You can modify them & program new libraries.**

### Moving lights configuration with libraries grouped by manufactures.
- **All models**: Yes

### Dimmer Curves
- **All models**: 5 preprogrammed + 3 user

### Timings
- **All models**: 6 preprogrammed (editable)

### Capture (simulator software)
- **All models**: Run on separate PC

### Multimedia & events list
- **All models**: Yes

### Software upgrade using floppy, Ethernet or USB memory.
- **All models**: Yes

### Compatible shows
- **All models**: Yes

## HARDWARE

### VGA
- **For Tour models**, the main monitor (LCD) is included inside the suitcase, the rest are externals.

### HD (minimum)
- **GX**: 2 + 2 optional
- **GS**: 1 + 1 optional
- **GL**: 1

### Floppy Disk & internal keyboard
- **GL, Tour models**: Yes

### Working light (littlite)
- **8748GX, 8748GS**: 2
- **8724GL, 8724GX, 8748GS & all Tour models**: 1

### Ethernet
- **All models**: 10/100

### USB
- **All models**: 2 ports

### RS232
- **GX, GS, GL**: 1

### SMPTE

### MIDI
- **GX, GS, GL**: IN-OUT

### Audio
- **All models**: 1 IN

### Printer
- **GX, GS, GL**: Txt file

### Externals
- **GX, GS, GL**: 3

### Mouse & Keyboard (externals)
- **All models**: 2 PS2
1.2.2. MULTI-PROCESSOR SYSTEM

Main microprocessor: GEODE SC2200 (266MHz).
Secondary microprocessor: H8/3003.

1.2.3. ELECTRIC CHARACTERISTICS

Main supply: 90-260V~ / 50-60 Hz.
Intensity: 0.8A.
Category: II

1.2.4. AMBIENT

Temperature: -15°C to 45°C
Humidity: 80% without condensation.

1.2.5. SIZE

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

1.3. TECHNICAL SERVICE

Leviton Lighting Management Systems Division
20497 SW Teton, Tualatin, OR 97062

Mailing Address:
PO Box 2210
Tualatin, OR 97062

Customer Service: (800) 736-6682
Technical Support: (800) 959-6004
Fax: (503) 404-5601
Internet: www.lms.leviton.com
1.4. **INSTALLATION & START UP**

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

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

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

  **Tip:**
  Connect the console to a SAI to avoid main supply problems.

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

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

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

**Main supply:** IEC base for 90-260V~/50-60 Hz. Always, used normalized cables (confirm the ground plug).
The main supply is protected by 2 fuses of 5 A, type F.

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

**Code:**
- Pin 1: Ground.
- Pin 2: Data –
- Pin 3: Data +
- Pin 4&5: NC.

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

**Tip:**
- Connect 32 loads maximum in a one DMX line.
- Use cables with maximum long of 100 metres.
- Use the 120 ohms terminal load, between the pins 2 & 3 of the last DMX THRU connector.
- Use DMX Splitters to connect more DMX loads or large cables.

**Note:**

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

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th><strong>8700 Series medium values</strong></th>
<th><strong>DMX512-1990 NORMA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Break Length</td>
<td>95 μs</td>
<td>Minimum 88 μs</td>
</tr>
<tr>
<td>MAB Length</td>
<td>25 μs</td>
<td>Minimum 8 μs</td>
</tr>
<tr>
<td>Bytes/packet</td>
<td>512 channels</td>
<td>1-512 channels</td>
</tr>
<tr>
<td>Break to break</td>
<td>25,000 μs</td>
<td>170μs – 3,000,000μs</td>
</tr>
<tr>
<td>Updates/s</td>
<td>40</td>
<td>1-44</td>
</tr>
</tbody>
</table>

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

1 – 0 V ref. {jack body}
2 – N.C.
3 – Signal (1Vpp) {jack live point}
**SMPTE input**
Stereo jack for 1Vpp SMPTE signals. The SMPTE input responds to the formats: 24, 25, 30 & 30 drop frame without adjusts. Code:

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

**External triggers.**

**GX, GS & GL:**
XLR-4 (female) for 3 external triggers. Code:
1 – Ext-1
2 – Ext-2
3 – Ext-3
4 – 0 V ref.

**Work Lights.**
XLR-3 plastic connectors for 12V-15V/5w lamps. The work light is dimmed by the System. Code:
Pin 1: 0 Vdc
Pin 2: 12 Vdc
Pin 3: 0 Vdc
Reset Pushbutton  (RST)
If by some circumstance your console did not switch off, it must be pushed this button to force a disconnection of the battery.

PC standard ports:
RS-232 ports
VGA outputs - standard & TFT monitors.
KDB - alphanumeric keyboard.
MOUSE
MIDI
ETHERNET
2 USB

⚠️ NOTE:
ALWAYS CONNECT THE MOUSE OR THE EXTERNAL KEYBOARD WITH THE CONSOLE TURNED OFF.
2. ABOUT THIS MANUAL

2.1. CONVENTIONS

Concepts and general functions are written as: X1/X2, BANKS,…
Console models are written as 8748GX.

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

A click (press & release) of a key is written as the key: ENTER
The pressing of a key (without releasing) is written as ENTER
The releasing of a pressed key us written as ENTER

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

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

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

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

The Trackball is written as TB

The parameters control encoders are written as W1, W2, y W3
The rotation of the encoders as: W1, W2 y W3
The pressing over the central zone of a encoder as: W1, W2 y W3
Rest of encoders are written with its name, as MONITOR or BANKS

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

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

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

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

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

2.3. EDITION TABLES

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

General:
The line that has the active cell is showed in a yellow field.
The active cell is in a red filed. When this active cell is been edited is in a light red field.

In the edition tables, select the cell for edition:
A. Using the arrow keys to move the cursor, ⟢, ⟡, ↑ & ↓
B. Using the mouse, clicking in the desired cell, Jump

The edited data are accepted moving the cursor or pressing ENTER
The edition tables are closed pressing EXIT
The edition of the active cell depends on the cell type:

<table>
<thead>
<tr>
<th>Cell type</th>
<th>Example</th>
<th>Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeric</td>
<td>Dmx, T↑</td>
<td>Using the console numeric keyboard</td>
</tr>
<tr>
<td>Text</td>
<td>Text, Title</td>
<td>Using the alphanumeric keyboard (internal or external)</td>
</tr>
<tr>
<td>Options</td>
<td>Command</td>
<td>Entered the index number of the desired option or clicking over this option with the mouse. (see following)</td>
</tr>
</tbody>
</table>

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

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

Example for channels patch: If placed over the channel 3 (in a grey field), you press 1 2 3 Æ the cursor jumps to the channel 128.

2.4. OPTIONS WINDOWS

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

a) Press #ENTER to select the option #.

b) Select using the mouse the option #, #:Option

2.5. THE MOUSE

The external mouse can be used, with a simple click, to:
- Select any cell of the edition tables (cue list, patches, etc)
- Select a numeric option of the options red-windows (parameters, libraries, palettes, banks, etc)
- Select the desired menu from the menus-list.

It’s possible to simulate the mouse using the console TB.
2-4 📚 ABOUT THIS MANUAL

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

To deactivate the MOUSE mode of the TBΩ and return to normal mode, press TB
3. SYSTEM CONFIGURATION

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

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

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

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

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

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

![Console Configuration Menu](image)

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

- **87** If some option of **CONSOLE CONFIGURATION** is changed, the system is Reseted, and the show is deleted. Store your show!
3.1. THE MONITOR SCREENS

In the monitors you can see:
- **Base screen**, with information and status about playbacks.
- **Auxiliary screens**, with information and status about editors and scene.

All monitors and screen (base & auxiliary) have:
- **Status line**, for the general status of the system (blue area).
- **Command line**, for the action in process (blue area).
- **Information line**, for the show name and general messages (white area).

3.2. MONITORS CONFIGURATION

Monitors configuration is done from menu 60: **Monitors Configuration**:

The edition inside this menu is done following these steps:
- Move the cursor to the desired data, and enter the option number.
- Press **ENTER** to accept the entered data. To quit of this menu press **EXIT**

The first options, of this menu, are set the monitors number to use, set how many will be base-screens (the rest of the monitors will be for auxiliary screens), and set the formats of the base-screens.
The monitors’ number, Monitors, depends on the console hardware, and the model console, & this number can be from 1 monitor to 4 monitors.

<table>
<thead>
<tr>
<th>Option</th>
<th>Shown information</th>
</tr>
</thead>
<tbody>
<tr>
<td>0: Masters+XFs</td>
<td>Information about masters and crossfaders</td>
</tr>
<tr>
<td>1: Parts+TC+XFs</td>
<td>Information about crossfaders and detail about the progress of the parts in crossfade, plus, information about the events-list.</td>
</tr>
<tr>
<td>2: xxxxxxxxxxxxxx</td>
<td>Yet not available</td>
</tr>
</tbody>
</table>

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

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

Monitors -- Base Screen = Aux Screen

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

The Aux Config options are:
ORDER: to select the visualization order for channels & fixtures, 1 is first place and 2 the last.
NEW PAGE: Option that permits us to force that the channels, or fixtures, begins in a new screen (YES) or follows from the end of the previous item (NO).

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

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

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

2 monitors, example:

<table>
<thead>
<tr>
<th>MONITOR - 1</th>
<th>MONITOR - 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Screen</strong></td>
<td><strong>Auxiliary Screens</strong></td>
</tr>
<tr>
<td>![Base Screen Image]</td>
<td>![Auxiliary Screens Image]</td>
</tr>
</tbody>
</table>

To page these screens press ↑ & ↓
To page the fixtures information press ← & →, or select the desired parameters type in the screen, pressing: DIM, POS, COL, GOB, BEAM or XTRA.

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

| ![Base Screen Image] | ![Auxiliary Screen Image] | ![MONITOR † Image] |

1 monitor, example:

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

To page the fixtures information, the process is the same that for 2 monitors.
3.3.1. THE SCREENS BACKGROUND

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

If MONITOR is LIGHT (white), the screens appear in white background.
If MONITOR is DARK (gray), the screens appear in gray background.

3.4. HELP ON-LINE

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

MENU 6 9

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

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

Quit of this menu pressing EXIT

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

3.5. INFORMATION ABOUT THE CURRENT SHOW

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

EXAM EXAM

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

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

3.6. @USER

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

@USER “text” EXIT
RESUME

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

Screens and monitors configuration:
From menu Monitors Configuration: **MENU 60**

Paging screens:
In auxiliary screens: ↑, ↓, ← & →
Search fixture parameters: DIM, POS, COL, GOB, BEAM, XTRA

Help on-line: **MENU 69**
HELP

Current show exam: **EXAM EXAM**

Text Messages: **@USER “text” EXIT**
4. FIXTURES PATCH

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

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

The fixtures Patch is in the menu 04: Fixtures

(a: menu command)
(b: quick command)

This screen has 3 zones:

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

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

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

<table>
<thead>
<tr>
<th>Fxt</th>
<th>Fixtures number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This number is used by the system to select it.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Name of the fixture definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This type is edited entering its index number (1 to 24) from the Cache list</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dmx--dmx</th>
<th>DMX direction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Are the DMX directions used by the fixtures (only the first direction is editable).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X-Y</th>
<th>Trackball movement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits to exchange or invert the movement parameters (Pan-Tilt), to obtain a homogeneous movement of each fixtures in the trackball, independently of its physical localization.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>dm</th>
<th>External Dimmer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If the fixture has an external dimmer, this is its DMX direction.</td>
</tr>
</tbody>
</table>

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

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

Each Fixture is defined by:

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

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

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

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

If the active data is Fix:

From here you can search a fixture of the list. Example: To access to the fixture 10, at any Fxt cell press 1 0
If the active data is **Type**:  
To edit the desired type for this fixture, enter its index number that appears in the **Cache** list. *Example*: To edit an XSPOT type, enter the number **1 2**.  

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

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

If the active data is **Dmx-dmx**:  
Edit the DMX direction of the fixture that must be the same that the configured in the physical moving light. DMX direction has the next format: **DDD.L**  

**DDD** is the DMX channel (1 to 512)  
**L** is the line number or DMX output (1 to 4), and the total number of DMX outputs is in accordance with the 8700 Series model.  

<Address a fixture in the DMX channel 252 of the line 2, pressing: **2 5 2 1 2**>  

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

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

If the active data is **X-Y**:  
It is possible to configure the response of pan (**X**) and tilt (**Y**) of this fixture in the trackball. In this cell the options appear in a red window. Enter the index number of the option.  
In many case it is necessary to check this response, for this reason, each time that the active data is **X-Y**, you can use the **TB** to move the fixtures and the **Level** to control the fixture dimmer.  

If the active data is **dm**:  
Only if the fixture type is defined with external dimmer, here you can edit the DMX direction for this dimmer.  

<Address a fixture in the DMX channel 252 of the line 2, pressing: **2 5 2 1 2**>  

Fixure 26 is controlling a VL5 that it is connected to the dimmer 12 in DMX-1, fixture 26 has the DMX direction 300 in DMX-3
Patch to control 5 Mac500 connected to the output DMX-3, & 2 Stage Zoom connected to the output DMX-4.

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

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

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

### 4.2. LOADING A NEW FIXTURE DEFINITION

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

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

- **Using mouse**
  - Hard Disk
  - 0: Hard Disk
  - 1: Floppy Disk
  - 2: USB Disk

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

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

- **MENU 1**

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

- **2 ENTER**
The types-library appears, ordered by manufacturers, 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 manufacturers. This function is available in any **Manufacture** cell; here, enter the index number of the desired manufacturer to access to this part of the types-library.

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

(0: Load)  

Quit pressing **EXIT**

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

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

**Note:**

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

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Ch</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGZ</td>
<td>19</td>
<td>StageZoom 1200</td>
</tr>
<tr>
<td>CPARKY</td>
<td>01</td>
<td>STAGE200, --- H 450 252</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Ch+Fn</th>
<th>I</th>
<th>F</th>
<th>Home</th>
<th>SE+</th>
</tr>
</thead>
<tbody>
<tr>
<td>--- Control</td>
<td>17</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>81 Iris</td>
<td>1</td>
<td>b</td>
<td>255</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>47 CMH</td>
<td>2</td>
<td>c</td>
<td>f</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>82 Frost</td>
<td>3</td>
<td>b</td>
<td>f</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>20 Dimmer</td>
<td>4</td>
<td>d</td>
<td>139</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>50 K</td>
<td>5</td>
<td>p</td>
<td>128</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1 X</td>
<td>6</td>
<td>p</td>
<td>128</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3 Qm</td>
<td>7</td>
<td>b</td>
<td>f</td>
<td>129</td>
<td>1</td>
</tr>
<tr>
<td>90 Focus</td>
<td>9</td>
<td>b</td>
<td>f</td>
<td>129</td>
<td>1</td>
</tr>
<tr>
<td>101 Prism</td>
<td>10</td>
<td>x</td>
<td>f</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>102 PrismRot</td>
<td>10</td>
<td>x</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>60 CMH</td>
<td>11</td>
<td>g</td>
<td>f</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>60 CMG</td>
<td>12</td>
<td>g</td>
<td>f</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>61 CMG</td>
<td>13</td>
<td>g</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>40 Cyan</td>
<td>14</td>
<td>c</td>
<td>f</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>41 Magenta</td>
<td>15</td>
<td>c</td>
<td>f</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>42 Yellow</td>
<td>16</td>
<td>i</td>
<td>c</td>
<td>f</td>
<td>0</td>
</tr>
</tbody>
</table>

More information in Chapter 17-Fixtures Definition.
5. EDITOR

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

The pictures can be edited in stage or in blind, because the 8700 Series has 2 editors:

The Stage editor works in live controlling totally the scene (including the playbacks outputs).

The Blind editor doesn’t affect to the scene output.

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

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

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

5.1 DEFAULT SELECTION

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

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

The default selection can be: channel>, fixture>, group>, or cue>

After a Reset the default selection always is channel>

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

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

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

Inside editor a channel can be:
- **Present**: The channel comes from a previous edition and it’s presented in a brown field.
- **Pre-selected**: The channel is in the editor waiting a level edition and presents its number in red.
- **Selected**: The channel level is finished of editing and can be edited again, and it’s presented in a red field.

<table>
<thead>
<tr>
<th>Channel</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>FF</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.2.1 HTP & NO-TRACKING

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

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

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

### 5.2.2 SELECTING CHANNELS

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

**Basic selections**:

- Select the channel #
  
  ![CHANNEL #]

- Select a range from the channel # to #’
  
  ![CHANNEL # THRU #]

- Select a range from the channel # to the last
  
  ![CHANNEL # THRU]

- Select the channel # and the channel #’
  
  ![CHANNEL # CHANNEL #]
These basic selections can be combined as desired. **ENTER** can be used as “**AND**” function among basic selections.

✍ Some examples:

Select the channels 1 to 45 and 50 to 52:

```
CHANNEL 1 THRU 45 CHANNEL 50 THRU 52
```

Select the channels 1, 45, and 58

```
CHANNEL 1 CHANNEL 45 CHANNEL 58
```

5.2.3 EXCLUDING CHANNELS

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

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

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

5.2.4 EDITING CHANNELS

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

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

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

✍ Examples for the channel 1:

```
CHANNEL 1 Level
```

Control of level manual.

```
CHANNEL 1 @ 0 5
```

Set its level at 5%.
Set its level at 100% (FF) in a fading of 2 seconds.
Increase its level a 5%.

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

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

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

5.2.5 SELECTING ALL THE ITEMS IN THE EDITOR
If the editor has channels presents (in a brown field) and selected (in a red field), it’s possible to select all the items as selected items (in a red field) for a same edition, pressing:

After, it’s possible to edit them, maintaining the proportionality: Level↑, ↑↑, or setting the same value for all they.

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

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

To select the channels 1 to 5 and 8 to edit them, press INVERT.
5.2.7 OTHERS SELECTIONS

Select again the last selection of channels:

\[ \text{CHANNEL} \]

Select all the channels in editor and scene:

\[ \text{CHANNEL} \quad \text{THRU} \quad \text{THRU} \]

Select the channels in scene & editor inside a range:

\[ \text{CHANNEL} \ #_1 \quad \text{THRU} \quad \text{THRU} \quad #_7 \]

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

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

\[ \text{CHANNEL} \ 1 \quad \text{THRU} \quad \text{THRU} \quad 7 \]

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

\[ \text{CHANNEL} \quad \text{THRU} \quad \text{THRU} \]

5.2.8 RELEASING ITEMS OF THE EDITOR

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

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

{channels} \[ \text{RELEASE} \quad \text{RELEASE} \]

The channels fade at 0% in 2 seconds

The channels jump at 0% suddenly

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

\[ \text{RST} \quad \text{RST} \]

The channels fade at 0% in 2 seconds

The channels jump at 0% suddenly

Menus: The default time editor (2 seconds) used in the \[ \text{RELEASE}, \text{CALL} \] and \[ \text{RST} \] functions, can be edited inside the menu 30: Editor & Times
5.3 FIXTURES

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

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

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

In this chapter is based in the next fixtures configuration:
- Fixtures 1 to 8 are configured as Mac 500 (MC500)
- Fixtures 9 to 16 are configured as Mac 600 (MC600)

The auxiliary screen shows these fixtures as:

<table>
<thead>
<tr>
<th>Fixture number</th>
<th>Parameters values</th>
<th>Parameter name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3.1 THE FIXTURES IN THE EDITOR

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

In the editor, the **fixtures** can be:
- **Present**, that is of a previous edition and it’s marked with a brown arrow near its number.
- **Selected**, that is been edited and it’s marked with a red arrow near its number.

In the editor, a **parameter** can be:
- **Present**, that is of a previous edition and it’s showed in a brown field.
- **Pre-selected**, that is waiting be edited and its value is showed in red.
- **Selected** that is being edited and it’s showed in a red field.
The **Dimmer**, if exists, works as **HTP & No-Tracking**, the same as the channels (see pg. 5-2). The fixture parameters, except the **Dimmer**, work as **LTP & Tracking**.

5.3.2 LTP & TRACKING

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

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

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

5.3.3 ABOUT THE FIXTURE PARAMETERS

The fixture parameters are grouped for functionality:

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

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

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

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

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

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

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

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

Basic selections:

- **Fixture #**
  - Select the fixture #

- **Fixture # THRU #**
  - Select a range from fixture # to #'

- **Fixture # THRU**
  - Select a range from fixture # to the last fixture

- **Fixture # FIXTURE #**
  - Select the fixture # and the fixture #'

- **Fixture THRU**
  - Select all the fixtures that are in the editor as selected fixtures.

- **Fixture •**
  - Repeat the last selection done

- **Fixture THRU THRU**
  - Select all the fixtures that are in the editor & in the scene

- **Fixture # THRU THRU #’**
  - Select all the fixtures of the range that are in the editor & in the scene

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

- Select the fixtures 1 to 3 and the fixtures 5 to 8
  - **Fixture 1 THRU 3**  **Fixture 5 THRU 8**

- Select the fixtures 1, 5, & 8
  - **Fixture 1**  **Fixture 5**  **Fixture 8**

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

- Select the fixtures 1 to 8 except the fixtures 4 to 6
  - **Fixture 1 THRU 8**  **EXCEPT 4 THRU 6**

5.3.5 SELECTING AND EDITING PARAMETERS

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

Some parameters are accessible at the moment that the fixture is selected:
- **Dimmer** - Its control is always available in the **Level**
- **X** and **Y** – Their control is always available in the **TB**
- **And the first 3 parameters** are available in the control wheels **W1**, **W2** and **W3**
The rest of the parameters are available across the control wheels, but they must be searched changing the active bank in the control wheels, for example pressing \( \langle \rangle \) or \( \rangle \).

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

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

5.3.6 EDITING A PARAMETER

The first step to edit a parameter is its selection:

\[ \{\text{Fixtures}\} \text{ PARAM} \ # \ \text{ENTER} \]

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

\[ \text{Note:} \]

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

\[ \text{Example. To select the Iris of the fixtures 1 to 3 and 5 press:} \]

\[ \text{FIXTURE 1 THRU 3} \ \text{FIXTURE 5} \ \text{PARAM 1 1 ENTER} \]

or

\[ \text{FIXTURE 1 THRU 3} \ \text{FIXTURE 5} \ \text{PARAM 11:Iris} \]

The selection of a parameter implicates:

- Its localization in the auxiliary screen to see it.
- Its selection in \( \text{W1} \), to control it using this control wheel.
- Its activation to can apply it a numeric edition, pressing \( @ \).

5.3.7 NUMERIC EDITION

To edit the selected parameter numerically, press:
To set the parameter # at value #’ (2 digits)

To set the parameter # at full (FF)

Set the parameter # at next step. If the parameter only has 1 step, this command increases the parameter at %.

Set the parameter # at previous step. If the parameter only has 1 step, this command decreases the parameter at %.

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

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

Example: Select the parameter 5 (Color1) of the fixture 1 and set it at BLUE:  

| FIXTURE 1 | PARAM 5 | 0 | 6 |

5.3.7.1 DIMMER

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

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

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

FIXTURE 1 PARAM 1 @ @ is the same that FIXTURE 1 @ @
5.3.8 EDITION IN THE CONTROL WHEELS

Moving $W1\Diamond$, $W2\Diamond$ or $W3\Diamond$, 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 $\rightarrow$ to access to the next 3 parameters.
- Press $\leftarrow$ to access to the previous 3 parameters.
- Press $\text{POS}$, $\text{COL}$, etc. to access to the first parameter of position, color, etc. respectively.
- Select the parameter to control in $W1\Diamond$ pressing $\text{fixtures}$ $\text{PARAM}$ $\#$ $\text{ENTER}$

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

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

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

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

5.3.9 WHEEL KEY

When a parameter is being edited with its wheel, it’s possible to press and hold down pressed $\text{WHEEL} \text{DOWN}$ to do this edition in blind. After when $\text{WHEEL} \text{UP}$ is released, the edition is updated.

If the same parameter of several fixtures is to different values, select it (marked with *) and press $\text{WHEEL}$ $\text{WHEEL}$ to copy to all the fixtures the value of the parameter of the first fixture.
5.3.10 FUNCTIONAL EDITION - PALETTES

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

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

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Key</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>POS</td>
<td>The auxiliary screen shows the parameters of the selected functionality</td>
</tr>
<tr>
<td>Dimmer</td>
<td>DIM</td>
<td>(except Dimmer, X and Y that always are), and if there are selected</td>
</tr>
<tr>
<td>Color</td>
<td>COL</td>
<td>fixtures, besides:</td>
</tr>
<tr>
<td>Gobo</td>
<td>GOB</td>
<td>• The parameters are activated in the wheels. In concrete, the first</td>
</tr>
<tr>
<td>Beam</td>
<td>BEAM</td>
<td>parameter of the functionality is loaded in W1, the next parameter</td>
</tr>
<tr>
<td>X-tra</td>
<td>X-TRA</td>
<td>in W2, and the next parameter in W3.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If BANKS is in AUTO mode, we have access to the palettes.</td>
</tr>
</tbody>
</table>

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

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

```plaintext
{fixtures} COL
```

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

5.3.10.1 NUMERIC SELECTION OF A PALETTE

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

```plaintext
{fixtures} COL @ # ENTER
```

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

5.3.10.2 SELECTING PALETTES FROM THE CONTROL WHEELS

To apply a palette from the control wheels, press EDT+
EDT+ toggles between the visualization the parameters or functionalities. When the functionalities are presented, EDT+ active, the control wheels are palettes control:

To apply a palette, move the associated wheel, or:
- Change the active bank pressing $\leftarrow$ or $\rightarrow$
- Access to the functionality; in example color, pressing COL
- Select the palette pressing $\text{↑↑}$ and $\text{↓↓}$
  If necessary, change the active wheel pressing in it (W#).
- Move a wheel is blind edition during that WHEEL is pressed.
- Put the same active palette in all the selected fixtures pressing WHEEL WHEEL

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

In the visualization for functionalities, are showed their status and you can see:
- Text When this functionality is edited from a palette.
- Track When its parameters are all in Tracking mode.
- Play When some of its parameters are controlled in any Playback Editor
- When some of its parameters are edited in individually.
- 01Text When this functionality is edited from a library, in the example the library 01.

5.3.10.3 SELECTING PALETTES FROM THE BANKS KEYS

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

Pressing BANKS ÷, a windows appears with the configuration options for 1B to 10B
The option 0 sets 1B to 10B in auto mode, changing with the edition process. This is the mode by default.

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

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

Or using the mouse BANKS ÷ 0:Auto

In this way, to apply palettes, for example of color and gobo, press:
5-14  EDITOR

The key associated to the desired palette, from 1 to 10, it’s possible to press more than one, the last pressed will be the active.

**Example with BANKS as 0:Auto**
Select the fixture 1 and 3 and assign them the color palette 2: Yellow--, the gobo palette 4: Gobo4 and the dimmer palette 1: 10%:

```
FIXTURE 1 THRU 3 COL 2 GOB 4 DIM 1
```

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

Set to position Middle the fixtures 1 and 3:

```
FIXTURE 1 THRU 3 1
```

5.3.10.4 OTHER FUNCTIONAL SELECTIONS

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

To release of the editor all the gobo parameters:

```
{fixtures} GOB RELEASE
```

To call to the editor all the parameters of position:

```
{fixtures} POS ENTER
```

5.3.11 THE HOME VALUES

The Home value is the neutral value of the parameter.

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

```
{fixtures} HOME
```

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

```
{fixtures} POS HOME
```
5.3.12 LIBRARIES

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

5.3.13 THE PARAMETER OF CONTROL

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

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

\[
\text{PARAM \ 9 \ 1}
\]

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

\[
\text{PARAM \ 9 \ 2}
\]

To reset the selected fixtures (RST), press:

\[
\text{PARAM \ 9 \ 3}
\]

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

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

\[
\text{FIXTURE \ 1 \ PARAM \ 0 \ @ \ #}
\]

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

This command works only with the fixtures of the first selected type.
The parameter of Control is not accessible in wheels.

5.3.14 INVERT

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

Editing some channels & dimmers, press INVERT to edit the other channels and dimmers
5.3.15 RELEASING ITEMS OF THE EDITOR

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

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

- `{fixtures} RELEASE` Their Dimmers fade out editor in 2 seconds.
- `{fixtures} RELEASE RELEASE` Their Dimmers jump at 0% suddenly.

To release only a parameter, press:

- `{fixtures} PARAM # RELEASE`

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

- `{fixtures} BEAM RELEASE`

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

- `RST` Dimmers & channels fade out editor in 2 seconds.
- `RST RST` Dimmers & channels jump to 0% suddenly

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

The Trackball, TB, has several function keys associated:

**FINE**

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

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

**TB**

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

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

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

**FLIP**

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

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

- FLIP
  - The parameters X and Y of fixtures 1 change their values.
  - Only the parameter X of fixtures 1 changes its value.
Only the parameter $Y$ of fixtures 1 changes its value.

**FAN-OUT**

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

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

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

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

**MOUSE**

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

In this mode the trackball is lit in green.

Quit of this mode pressing $TB$
5.5 THE STATUS LINE

The status line shows us flags about the editor contents. These flags are \texttt{cf\uparrow\downarrow}:

- \texttt{c} appears always that the editor has channels
- \texttt{f} appears always that the editor has fixtures.
- \texttt{\uparrow\downarrow} appears always that the editor has shapes

\textbf{Note:}

These same flags, \texttt{cf\uparrow\downarrow}, also appear in the exam of groups and cues.
RESUME

Activate/deactivate Blind editor: BLIND

Selecting channels & fixtures. Examples for channels:
A channel: CHANNEL #
A range: CHANNEL # THRU #
Several ranges: CHANNEL # THRU # CHANNEL # THRU #
A group: CHANNEL # CHANNEL # // CHANNEL # ENTER # ...

The editor channels: CHANNEL THRU
The scene channels: CHANNEL THRU THRU
The last selection: CHANNEL •

Unselect channels: EXCEPT # EXCEPT # THRU #

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

Fixtures parameters:
Edit x/y: {fixtures} TB○
Edit a parameter: {fixtures} PARAM # @ #

Edit a parameter using wheels, stage or blind mode: {fixtures} W#○ or WHEEL W#○ WHEEL▼
Access to the next or previous step: {fixtures} {parameter*} ↑↑ or ↓↓
Access to the next or previous parameter: {fixtures} {parameter*} ←→

Parameter of selected fixtures at the same value: {fixtures} {parameter*} WHEEL WHEEL

Using palettes (example color): {fixtures} COL @ # ENTER
All parameters at HOME: {fixtures} HOME

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

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

Releasing channels and parameters:
{Selection} RELEASE (RELEASE)
The whole editor RST (RST)

Delete command line: C (C)

Trackball
FINE, set the desired sensibility (normal, high, low)
ORTO, set the TB behavior (normal, none, orthogonal)
FLIP, search the same point with other values of x/y.
FAN-OUT, Edition of values for x/y in relative mode (lineal and symmetric)
6. CUES & GROUPS

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

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

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

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

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

6.1 STORING CUES & GROUPS

To store a cue edit in the editor the desired picture:
• Select channels and edit them a level.
• Select fixtures and edit their parameters.
This scene is named: \{editor\}
The cues need that the channels and/or fixtures are edited (level & values).

To store a group edit in the editor the desired picture or select the desired items:
• Select channels and optionally edit them a level. If no level is edited the channels are stored at 100%.
• Select fixtures and optionally edit their parameters. If no parameters are edited the fixtures are stored only with their dimmers at 100%. Exception: If a fixture hasn’t Dimmer will be needed to edit some parameter to store it in a group.
The result of this edition is named: \{selection/editor\}

To store the cue # press:
\{editor\} CUE # REC
To store the next cue press:
\{editor\} CUE REC
\{editor\} REC

To store the group # press:
\{selection /editor\} GROUP # REC
To store the next group press:
\{selection /editor\} GROUP # REC
The next cue (or group) number is the last cue number used +1.
In case of cues, the next cue number is showed in the command line as Q1.

If the number of cue (or group) that is been stored exists, the system requests us confirmation.
Press REC to confirm, or press C # REC to store it in other number.

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

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

```
FIXTURE 1 FIXTURE 5 FIXTURE 7 FIXTURE 10 GROUP REC
```

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

```
FIXTURE 1 TB1 FIXTURE 3 TB1 GROUP 100 REC
```

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

6.1.1 CALLING TO THE EDITOR OF PLAYBACKS & DATA

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

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

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

```
CHANNEL THRU THRU
```

```
FIXTURE THRU THRU
```

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

```
CHANNEL # THRU THRU #
```

```
FIXTURE # THRU THRU #
```

To pre-select the whole scene, press:

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

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

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

To pre-select the outputs of crossfader, press:

 ENTER ASSIGN

Pre-select the contents of a cue, a group or a range.
To pre-select the contents of a cue or group press:

 CUE # ENTER
 GROUP # ENTER

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

 CUE # THRU # ENTER
 GROUP # THRU # ENTER

Call (select with levels/values) into the editor, some scene item:
To call the whole scene (channels and fixtures) press:

 CALL CALL

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

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

Call into the editor to a cue, group or range:
Call a cue, group or range using a fade-in of 2 seconds:

 CUE # CALL
 CUE # THRU # CALL

Call a cue, group or range suddenly:

 CUE # CALL CALL
 GROUP # CALL CALL
Call a cue or group controlled by the user:

```
CUE # Level
GROUP # Level
```

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

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

```
CUE 1 CHANNEL 8 CALL
```

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

```
GROUP 1 FIXTURE 8 CALL CALL
```

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

```
CUE 1 FIXTURE 8 PARAM 1 0 CALL
```

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

```
CUE 1 FIXTURE THRU CALL
```

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

### 6.1.2 STORING THE SCENE IN THE NEXT CUE

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

```
{scene} CALL REC
```

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

### 6.1.3 EXAM OF CUES & GROUPS

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

To exam the cue list press:

```
CUE EXAM
```

To exam the cue #, press:

```
CUE #
```

To exam the groups list press:

```
GROUP EXAM
```

To exam the group #, press:

```
GROUP #
```
CUES & GROUPS

The cue list or the groups list shows us all the cues or groups with their associated texts and other general parameters, and also shows for each element a flag under the label \textit{cf}:
- \(c\) that has channels,
- \(f\) that has fixtures and
- \(WX\) that has shapes.

To page a list press \(\uparrow\) or \(\downarrow\).

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

To close any exam screen, press \textbf{EXIT}.

6.1.4 ASSOCIATE A TEXT TO A CUE OR GROUP

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

\begin{itemize}
  \item For cues (2 options):
    \begin{itemize}
      \item \(\text{CUE \ CUE}\)
      \item \(\text{CUE MDFY}\)
    \end{itemize}
  \item For groups (2 options):
    \begin{itemize}
      \item \(\text{GROUP \ GROUP}\)
      \item \(\text{GROUP MDFY}\)
    \end{itemize}
\end{itemize}

Select the \textbf{Text} cell of the cue or group to edit, and type the desired text from the alphanumeric keyboard.

Close this screen pressing \textbf{EXIT}.

6.1.5 DELETE CUES OR GROUPS

To delete a cue press:
\(\text{CUE \ # \ DELETE}\)

To delete a group press:
\(\text{GROUP \ # \ DELETE}\)

To delete a cues range press:
\(\text{CUE \ # \ THRU \ # \ DELETE}\)

To delete a groups range press:
\(\text{GROUP \ # \ THRU \ # \ DELETE}\)

To delete all the console cues press:
\(\text{CUE \ DELETE}\)

To delete all the console groups press:
\(\text{GROUP \ DELETE}\)

The system requests confirmation. Confirm pressing \textbf{DELETE} or abort pressing \(\text{CLR}\).
6.1.6 MODIFY A CUE OR GROUP

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

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

To modify the cue or group loaded in master #

The selected cue or group fades in the editor in 2 seconds.
The status line shows us one of these flags:
- Modify Q# in a red field, when we are modifying the cue #
- Modify G# in a red field, when we are modifying the group #

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

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

Resume:

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

6.1.7 COPY CUES OR GROUPS

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

Copy cue # to cue #’

- CUE # COPY #’ ENTER

Copy a cues range in other range:

- CUE # THRU #’ COPY #’ ENTER

Copy the group # to the group #’

- GROUP # COPY #’ ENTER

Copy a groups range in other range:

- GROUP # THRU #’ COPY #’ ENTER
Copy the cue 1 as cue 25.  CUE 1 COPY 25 ENTER
If the cue 25 exists, it will be modified, if not, it will be created.

Copy the cue 1 to 10, as cues 21 to 30.
CUE 1 THRU 10 COPY 21 ENTER
The copy of ranges keeps the original numbers. Suppose that in the previous example the cue 1.5 is stored. After the exchange, will exists the cue 21.5

6.1.8 EXCHANGE CUES OR GROUPS
It’s possible to exchange 2 cues (or 2 group), exchanging their contents, texts and in case of cues, their times & commands.

Exchange 2 cues

CUE # COPY # COPY # ENTER

Exchange 2 cues ranges

CUE # THRU # COPY # COPY # ENTER

Exchange 2 groups

GROUP # COPY # COPY # ENTER

Exchange 2 groups ranges

GROUP # THRU # COPY # COPY # ENTER

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

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

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

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

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

_NOTE:_

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

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

The admitted times are 0.1 to 2000.9 sec. When a time is greater than 100 seconds, the decimal point isn’t represented but is computed by the system.
6.2.1 PROGRAMMING TIMES FROM THE CUE LIST

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

- CUE CUE
- CUE MDFY

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

Select the cue to edit it pressing \( \text{UP} \) and \( \text{DOWN} \) (or using the mouse).

Select the data to edit it pressing \( \text{LEFT} \) and \( \text{RIGHT} \) (or using the mouse).

To edit this list, select the cue data, and enter its value. To accept the entered data press \( \text{ENTER} \) or select other data. Close this screen pressing \( \text{EXIT} \).

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

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

To page the cue list turn \( \text{MONITOR} \) wheel.

- Direct access to a cue in the list:
  - Access to any \( \text{Cue} \) cell (in gray field)
  - And press \( \text{#} \) to select the cue \#.

- Menus
  - The cues default times can be changed inside the menu 30: Editor & Times. See chapter 14.
6.3 TIMING

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

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

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

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

T1: The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), as a whole; there are not separations. As unique exception, only the NO FADE parameters jump to their target values. T1 is the timing by default, timing that always is applied after a system Reset.

T2: The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except: ltps (4) that are forced to jump in scene at the beginning of the master travel (Beg=00). They jump in scene because End = Beg

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

T3: The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except: ltps (4) that are forced to jump in scene at the end of the master travel (Beg=FF). They jump in scene because End = Beg

Use T3 to avoid ltps fade in scene, jumping to their target values at the end of the master travel.
T4:
The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

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

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

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

T5:
The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement), except:

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

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

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

T6:
The contents, of cue or group, fade in accordance with the fade-in time programmed (or fader movement).

**Included:**
- \( X \) & \( Y \) parameters (2), \( \text{COL} \) parameters (3) & \( \text{BEAM} \) parameters (5):
  - Where \( \text{Beg}=00 \) & \( \text{End}=FF \).

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

Use **T6** to avoid \( ltps \), especially \( \text{GOB} \) y \( \text{XTRA} \), fade in scene, jumping to their target values at the beginning of the master travel. Permits that \( \text{COL}, \text{BEAM}, X \) & \( Y \) parameters fade in scene in accordance with the fade-in time or the fader movement. This timing is very used to divide a cue in these 6 basic types…
Graphically:
The time, in which a type is activated, \textbf{Beg}, equivalent to a $T \uparrow$, is represented with a gray bar if greater than 00.
The fading of each type, \textbf{End} - \textbf{Beg}, equivalent to a $T \uparrow$, is represented with a cyan bar if greater than 00.

Example for \textbf{T5}:

![Graphical Representation]

The timings are edited in the menu \textbf{06: Define Timings}.

\textbf{MENU 0 6}

This screen has 2 zones:
\begin{itemize}
  \item Setup line.
  \item Edition table.
\end{itemize}

Toggle between these zones using the mouse or \textbf{MENU}.

Also, from the Setup line, it’s possible to change to the edition table pressing \textbf{▼}.

\begin{center}
\begin{tabular}{|c|c|c|c|c|c|}
\hline
\textbf{Define Timings} & \textbf{▼T1} & \textbf{▼T2} & \textbf{▼T3} & \textbf{▼T4} & \textbf{▼T5} & \textbf{▼T6} \\
\hline
\hline
\textbf{▼T2} & 0: Set Default & Set T2 as default timing to be associated to new cues & 1: Restore & Restore the initial values programmed in T2 \\
& 2: Test Slow & These options permit us to do a dynamic test of the T2 behavior. & 3: Test Middle & This test is showed dynamically in the \textbf{Test} window. The test can be \\
& 4: Test Fast & Slow, Middle or Fast. & \\
\hline
\end{tabular}
\end{center}
In **Test** window, dynamically, it’s possible to observe:

- Status of the timing parts at this moment.
- Part completely in scene.
- Part computing a wait-in time.
- Part fades in scene.
- Test progress, currently at 40%.

To edit timing, toggle to the edition table:

<table>
<thead>
<tr>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>T5</th>
<th>T6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Begin</strong></td>
<td><strong>End</strong></td>
<td><strong>Type</strong></td>
<td><strong>Begin</strong></td>
<td><strong>End</strong></td>
</tr>
<tr>
<td>LTP</td>
<td>00</td>
<td>00</td>
<td>LTP</td>
<td>FF</td>
<td>FF</td>
</tr>
<tr>
<td>XY</td>
<td>00</td>
<td>00</td>
<td>XY</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>COL</td>
<td>00</td>
<td>FF</td>
<td>GOB</td>
<td>00</td>
<td>00</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>The items type that are grouped in this part (<strong>Htp</strong>, <strong>ltp</strong>, <strong>colors</strong>...)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Begin</strong></td>
<td>The point where the fading of this part must be started. This point is edited as percentage (0-100%) of the cue fade-in time and is equivalent to a <strong>T↑</strong></td>
</tr>
<tr>
<td><strong>End</strong></td>
<td>The point where the fading of this part must be ended. This point is edited as percentage (0-100%) of the cue fade-in time. The <strong>End</strong> value must be equal or greater that the begin value. If <strong>Begin=End</strong> the part jumps in scene (equivalent to a <strong>T↑=0.1</strong></td>
</tr>
</tbody>
</table>

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

In concrete, this situation is between the types:
- **HTP & Dimm/CHAN**
- **LTP & XY/POS/DIM/COL/GOB/BEAM/XTRA**
- **POS & XY**
6.3.1  SET THE DEFAULT TIMING

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

There are 3 ways to set up the default timing:
- From the Setup line of the menu 06: Define Timings
- From the Timing option of the menu 30: Editor & Times
- From the Setup line of the cue list, CUE CUE

6.3.2  EDITION OF THE CUE TIMING

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

From the editor:
When a cue is being edited, it’s possible to change its timing pressing:

F PART PART #

Where # is the desired timing number.

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

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

6.3.3  CONVERT TIMINGS TO CUES PARTS

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

The cue parts also can be created in the editor (manually).
A cue with parts hasn’t timing. Editing it timing, the parts are overwritten.
A cue with timing hasn’t parts. Editing parts, the timing is overwritten.

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

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

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

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

One cue can have 9 parts in addition to the base cue. Each part can have its contents and times \((T↑\text{ and } T↑\circ)\) with values totally free.

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

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

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

In resume, one cue can be divided in:

<table>
<thead>
<tr>
<th>CUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base cue = Part 0 + Times of input, output and wait + Text + Jump + Command</td>
</tr>
<tr>
<td>Part 1 (optional) + input times</td>
</tr>
<tr>
<td>Part 2 (optional) + input times</td>
</tr>
<tr>
<td>Part 3 (optional) + input times</td>
</tr>
<tr>
<td>Part 4 (optional) + input times</td>
</tr>
<tr>
<td>Part 5 (optional) + input times</td>
</tr>
<tr>
<td>Part 6 (optional) + input times</td>
</tr>
<tr>
<td>Part 7 (optional) + input times</td>
</tr>
<tr>
<td>Part 8 (optional) + input times</td>
</tr>
<tr>
<td>Part 9 (optional) + input times</td>
</tr>
</tbody>
</table>

6.4.1 EDITION OF PARTS

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

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

\(\def\fnsymbol{\arabic{enumi}}\fnsymbol{1}\text{ (Selection) } \text{ PART #}\) Where \# is the part number (1 to 9).

Repeat this step as many times as necessary.

The auxiliary screen presents near each item its part number. Note that the timing flag is overwritten with the parts flag \((P)\) in the status line.
Edit the cue 10 including the channels 1 to 10 at 50%, the part 1 including the channels 11 to 12 at 35%

Empty the editor if is needed
Edition of the channels 1 to 10
Edition of the part 1
And store the editor as cue 10

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

Select the cue 10 to modify it
Set the channel 1 in part 1
Set the channel 12 in part 2
Edit the part 3
And accept the modification of the cue 10

Use example of parts in Theater:
Suppose a scene with a slowly nightfall, where at the end of the nightfall a street lamp will be lit.

The street lamp is the channel 25, and the nightfall lights are the channels 10 to 15.
Store these channels at full in the cue 1 and the channel 25 in the part 1

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

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

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

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

Note: Example of cue 2 is done using a dipless crossfade in mode $T^\uparrow$
(See option Dipless Mode inside menu 31: Playbacks)
6.4.2 RETURN A ITEM TO THE BASE CUE

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

\[ \text{Selection} \] \text{PART 0} \]

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

\[ \begin{align*} \text{RST} & \quad \text{CUE 10 MDFY} \\
\text{CHANNEL} & \quad \text{PART 0} \\
\text{REC} & \end{align*} \]

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

Select the cue 10 to modify it

Set the channel 1 in the base cue (part 0)

And accept the modification of the cue 10

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

6.4.3 EDIT TIMES FOR THE CUE PARTS

Each cue part can have programmed its input times: \( T^\uparrow \) and \( T^\downarrow \).

To edit these input times, press \( \text{CUE CUE} \)

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

6.4.4 OTHERS ACTIONS WITH PARTS

\[ \begin{align*} \text{CUE #} & \quad \text{PART #} \quad \text{LOAD M#} \\
\text{CUE #} & \quad \text{PART #} \quad \text{ENTER} \\
\text{CUE #} & \quad \text{PART #} \quad \text{CALL} \\
\text{CUE #} & \quad \text{PART #} \quad \text{RELEASE} \end{align*} \]

Loads in \text{M#}, the part \( \#' \) of the cue \( \# \)

Selects in the editor the part \( \#' \) of the cue \( \# \)

Call in the editor the part \( \#' \) of the cue \( \# \)

Releases of the editor the part \( \#' \) of the cue \( \# \)

Remember that \text{CALL} & \text{RELEASE} execute these commands fading in 2 seconds; and \text{CALL} \text{CALL} & \text{RELEASE} \text{RELEASE} execute these commands suddenly.
6.5 MODIFY A RANGE OF CUES OR GROUPS

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

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

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

<table>
<thead>
<tr>
<th>MODIFY OPTIONS</th>
<th>#1</th>
<th>#2</th>
<th>(REC to confirm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: ABSOLUTE/ABSOLUTE</td>
<td>0: Normal</td>
<td>1: News</td>
<td></td>
</tr>
<tr>
<td>#2: RELATIVE/BASE</td>
<td>2: Not &amp; HTPs OFF</td>
<td>3: News &amp; Not &amp; HTPs OFF</td>
<td></td>
</tr>
<tr>
<td>#3: BASE/BASE</td>
<td>1: RED</td>
<td>2: GREEN</td>
<td>3: BLUE</td>
</tr>
</tbody>
</table>

### 6.5.1 The mode options (\#1)

1: ABSOLUTE/ABSOLUTE

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

2: RELATIVE/BASE

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

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

3: BASE/BASE

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

Examples of modification for a cues range:
Modification: **Channel 1@60  Fixture 1 red**
Mode 1: **ABSOLUTE/ABSOLUTE**

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Channel 1@50 2@30, Fixture 1 Blue</td>
<td>Channel 1@60 2@30, Fixture 1 red</td>
</tr>
<tr>
<td>2</td>
<td>Channel 1@60 2@30, Fixture 1 Yellow</td>
<td>Channel 1@60 2@30, Fixture 1 red</td>
</tr>
<tr>
<td>3</td>
<td>Channel 1@30 Fixture 1 Blue</td>
<td>Channel 1@60, Fixture 1 red</td>
</tr>
</tbody>
</table>

Modification: **Channel 1@60 (+10%) Fixture 1 red** (from Blue a red)
Mode 2: **RELATIVE/BASE**

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Channel 1@50 2@30, Fixture 1 Blue</td>
<td>Channel 1@60 2@30, Fixture 1 red</td>
</tr>
<tr>
<td>2</td>
<td>Channel 1@60 2@30, Fixture 1 Yellow</td>
<td>Channel 1@70 2@30, Fixture 1 Yellow</td>
</tr>
<tr>
<td>3</td>
<td>Channel 1@30 Fixture 1 Blue</td>
<td>Channel 1@40, Fixture 1 red</td>
</tr>
</tbody>
</table>

Modification: **Channel 1@60 (de 50% a 60%) Fixture 1 red** (from Blue a red)
Mode 3: **BASE/BASE**

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Channel 1@50 2@30, Fixture 1 blue</td>
<td>Channel 1@60 2@30, Fixture 1 red</td>
</tr>
<tr>
<td>2</td>
<td>Channel 1@60 2@30, Fixture 1 yellow</td>
<td>Channel 1@60 2@30, Fixture 1 yellow</td>
</tr>
<tr>
<td>3</td>
<td>Channel 1@30 Fixture 1 blue</td>
<td>Channel 1@30, Fixture 1 red</td>
</tr>
</tbody>
</table>

6.5.2 The attribute options (#2)

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

1: +News
The modification of an item is applied always; in the cues where this item doesn’t exist the item is added.

2: Not ↓ HTPs @FF
The modification of an item only is applied in the cues where this item exists, except when this item is a channel or dimmer at FF (100%).

3: + News & Not ↓ HTPs @FF
The modification of an item is applied always; except when this item is a channel or dimmer at FF (100%). In the cues where this item doesn’t exist the item is added.
Examples of modification for a cues range:
All the modifications are done in mode 1: **ABSOLUTE/ABSOLUTE**

### Attribute 0: Normal

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>channel 1@ 50, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>2</td>
<td>channel 1@ 60, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>3</td>
<td>channel 1@ FF</td>
<td>channel 1@ 60</td>
</tr>
</tbody>
</table>

### Attribute 1: +News

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>channel 1@ 50, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>2</td>
<td>channel 1@ 60, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>3</td>
<td>channel 1@ FF</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
</tbody>
</table>

### Attribute 2: Not ↓ HTPs @FF

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>channel 1@ 50, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>2</td>
<td>channel 1@ 60, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>3</td>
<td>channel 1@ FF</td>
<td>channel 1@ FF</td>
</tr>
</tbody>
</table>

### Attribute 3: + News & Not ↓ HTPs @FF

<table>
<thead>
<tr>
<th>Cue</th>
<th>Source cue</th>
<th>Modified cue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>channel 1@ 50, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>2</td>
<td>channel 1@ 60, channel 2 @ 30</td>
<td>channel 1@ 60, channel 2 @ 50</td>
</tr>
<tr>
<td>3</td>
<td>channel 1@ FF</td>
<td>channel 1@ FF, channel 2 @ 50</td>
</tr>
</tbody>
</table>

- The exam screen of channels and fixtures (for example **CHANNEL # EXAM**) is used to exam the result of these range modifications.
6.6 THE FIXTURES IN CUES & GROUPS

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

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

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

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

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

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

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

  \textbf{Important:} It's possible to store a cue including any parameters type, for example including the gobo parameters, pressing: \texttt{GOB ENTER}

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

#### STORE CUES OR GROUPS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>A cue // group</td>
<td>{editor}CUE # REC // {editor/selection} GROUP # REC</td>
</tr>
<tr>
<td>The next cue // group</td>
<td>{editor}CUE REC // {editor}REC</td>
</tr>
<tr>
<td>The next group in a master</td>
<td>{editor/selection} GROUP REC // {editor/selection} LOAD M#</td>
</tr>
</tbody>
</table>

Store the scene in the next cue: CALL REC

#### Modifications:

<table>
<thead>
<tr>
<th>Type</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>CUE CUE // GROUP GROUP</td>
</tr>
<tr>
<td>Contents</td>
<td>RST CUE # MDFY {modifications} REC</td>
</tr>
<tr>
<td></td>
<td>RST GROUP # MDFY {modifications} REC</td>
</tr>
<tr>
<td></td>
<td>RST MDFY M# {modifications} REC</td>
</tr>
<tr>
<td></td>
<td>RST CUE # THRU # MDFY {modifications} REC #1 #2 REC</td>
</tr>
<tr>
<td></td>
<td>RST GROUP # THRU # MDFY {modifications} REC #1 #2 REC</td>
</tr>
</tbody>
</table>

#### Exam cues or groups:

The list:

- CUE EXAM // GROUP EXAM

A cue or group:

- CUE # EXAM // GROUP # EXAM

A channel in cues & groups:

- CHANNEL # EXAM

A fixture in cues & groups:

- FIXTURE # EXAM

#### Delete:

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

#### Copy & exchange (examples for cues):

<table>
<thead>
<tr>
<th>Type</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy</td>
<td>CUE # (THRU #') COPY #&quot; ENTER</td>
</tr>
<tr>
<td>Exchange</td>
<td>CUE # (THRU #') COPY COPY #&quot; ENTER</td>
</tr>
</tbody>
</table>

#### Selection:

<table>
<thead>
<tr>
<th>Type</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>A cue or group</td>
<td>CUE # ENTER // GROUP # ENTER</td>
</tr>
<tr>
<td>A range</td>
<td>CUE # THRU # ENTER // GROUP # THRU # ENTER</td>
</tr>
<tr>
<td>The master content</td>
<td>ENTER M#</td>
</tr>
<tr>
<td>The masters contents</td>
<td>ENTER▼ M# M# M# ... ENTER▲</td>
</tr>
<tr>
<td>The scene</td>
<td>ENTER ENTER</td>
</tr>
</tbody>
</table>

#### Call:

<table>
<thead>
<tr>
<th>Type</th>
<th>Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>A cue or group</td>
<td>CUE # CALL (CALL) // GROUP # CALL (CALL)</td>
</tr>
<tr>
<td>A range</td>
<td>CUE # THRU #' CALL (CALL) // GROUP # THRU #' CALL (CALL)</td>
</tr>
<tr>
<td>Several masters</td>
<td>CALL M# // CALL▼ M# M# M# ... CALL▲</td>
</tr>
<tr>
<td>Scene</td>
<td>CALL CALL</td>
</tr>
</tbody>
</table>

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

- CUE # CHANNEL # CALL (CALL)
- CUE # FIXTURE #" (PARAM #") CALL (CALL)
Parts & timings in the editor

Edition: {selection} PART # ... {selection} PART #'
Deleting: {selection} PART 0
Edit with Timing #: {editor} PART PART #
Convert timing to Parts: {editor} PART PART 7

Commands that use parts:
CUE # PART #' ENTER
CUE # PART #' CALL (CALL)
CUE # PART #' LOAD M#
CUE # PART #' RELEASE
7. LIBRARIES

The 8700 Series consoles have 6 library categories:

- 99 libraries of position - POS
- 99 libraries of dimmer - DIM
- 99 libraries of color - COL
- 99 libraries of gobos - GOB
- 99 libraries of beam - BEAM
- 99 libraries of x-tra - XTRA

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

The library behavior depends of its category.

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

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

7.1 POSITION LIBRARIES

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

The position libraries are stored from the editor and take the values of the position parameters (as X and Y) of all fixtures in the editor. Each library can store the position of one, several or all the fixtures. After, this position can be applied to one, several or all the fixtures stored in the library.

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

{fixture} TBø {fixture} TBø {fixture} TBø ...

When all needed fixtures are edited, to store the position #, press:
7-2  

**LIBRARIES**

Or to store the next position, press:

![Position](image)

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

To associate a text to a position library press:

![Position](image)

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

![Position](image)

---

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

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

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

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

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

To store a library, for example of color:

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

![Position](image)  To store the color 

![Position](image)  To store the next color
When **COL COL** is pressed, the system opens a selection window with the positions list to help us to select the desired number. This window has the numbers and texts of the position libraries. If needed, to page this window use **MONITOR**.

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

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

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

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

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

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

### 7.3 COPY & EXCHANGE

The next commands can be applied to any library category.

Copy a library, for example of position, pressing:

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

Exchange 2 libraries, for example of position, pressing:

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

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

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

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

**POS POS # THRU # COPY COPY #** **ENTER**
7.4 EXAM

The next commands can be applied to any library category.

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

\[ \text{POS POS EXAM} \]

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

\[ \text{POS POS # EXAM} \]

7.5 DELETE

The next commands can be applied to any library category.

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

\[ \text{POS POS # DELETE} \]

To delete the position #

\[ \text{POS POS # THRU # DELETE} \]

To delete the positions from # to #'

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

\[ \text{POS POS DELETE} \]

To confirm press \text{DELETE}
7.6 EDITING WITH LIBRARIES

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

a) Numeric selection
b) Selection in control wheels (activated \texttt{EDIT+})
c) Selections using the \texttt{BANKS}.

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

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

7.6.1 NUMERIC SELECTION

Select the fixtures to apply the library, \{fixtures\}
Select the category of the library, for example, \texttt{POS POS}
Select the library number, Pressing \# \texttt{ENTER}
Or using the mouse \#:\texttt{Text}.

Resume:
\{fixtures\} \texttt{POS POS \# \texttt{ENTER}}

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

7.6.2 SELECTION IN CONTROL WHEELS

To take control of the libraries with the control wheels, activate \texttt{EDIT+}

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

Note that in this screen applied libraries are showed with its number in a blue field and its text.
In this mode, the control wheels allow you to edit, directly, palettes & libraries of each category, all organized in 2 banks that are paged pressing ç & Æ.

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

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

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

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

- If when the wheel is being moved, WHEEL▼ is pressed; the edition is done in blind. Only when WHEEL▲ is released, the edited value is effective.

- The command WHEEL WHEEL allows you to set the same value for the selected fixtures, taking as reference the value of the first selected fixture, and avoiding the relative difference between them.

7.6.3 SELECTION IN BANKS KEYS

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

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

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

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

- BANKS $\downarrow$ 0 POS: To set mode: Auto (POS)
- BANKS $\downarrow$ 3: To set mode: POS.

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

In the touch panel there are the contents of the active page of the BANKS - 1B to 10B.

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

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

- FIXTURE 1  FIXTURE 3 1B
- FIXTURE 1  FIXTURE 3 POS 1B

For BANKS in mode POS
For BANKS in mode AUTO

7.6.3.2. **GS and GL Models**

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

- BANKS $\downarrow$ 0 POS: To set mode: Auto (POS)
- BANKS $\downarrow$ 3: To set mode: POS.

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

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

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

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

- FIXTURE 1  FIXTURE 3 1B
- FIXTURE 1  FIXTURE 3 POS 1B

For BANKS in mode POS
For BANKS in mode AUTO
7.6.3.3. General

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

Example

1B W1  W2  W3
5B W1  W3
9B W1

Group 1 selection & edition of: position, dimmer and color.
Group 5 selection & edition of: position and color
Group 9 selection & edition of gobo

Remember that:

1B is the same that GROUP 1 ENTER
1B 1B is the same that GROUP 1 CALL
### RESUME

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

<table>
<thead>
<tr>
<th>Action</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store a library</td>
<td>POS POS # REC</td>
</tr>
<tr>
<td>Select a library</td>
<td>POS POS # ENTER</td>
</tr>
<tr>
<td>Modify a library</td>
<td>POS POS # MDFY</td>
</tr>
<tr>
<td>Associate a text to a library</td>
<td>POS POS MDFY</td>
</tr>
<tr>
<td>Copy a library (or range)</td>
<td>POS POS # (THRU #) COPY #&quot; ENTER</td>
</tr>
<tr>
<td>Exchange libraries (or ranges)</td>
<td>POS POS # (THRU #) COPY COPY #&quot; ENTER</td>
</tr>
<tr>
<td>Exam a library</td>
<td>POS POS # EXAM</td>
</tr>
<tr>
<td>Exam the libraries list</td>
<td>POS POS EXAM</td>
</tr>
<tr>
<td>Delete a library (or range)</td>
<td>POS POS # (THRU #) DELETE</td>
</tr>
<tr>
<td>Delete all the libraries</td>
<td>POS POS DELETE</td>
</tr>
</tbody>
</table>

Edition of palettes & libraries using the control wheels:

**EDIT+ W1, W2, W3**

Edition of palettes & libraries using BANKS keys:

**(POS) #**
8. MASTERS AND PAGES

8.1 MASTERS

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

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

Each master has a key \( M\# \) and a fader \( M\# \),

\( M\# \) is any key from \( M1 \) to \( M24 \) or \( M48 \)

\( M\# \) is any fader from \( M1 \) to \( M24 \) or \( M48 \)

There is a fader to control the masters output, \( SM\# \), and some dedicated function keys, as:

\[ \text{FLMT, LOAD, PRIO, STEP & PAUSE_B} \]

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

\( \text{Select the item} \) LOAD \( \text{Select the option & master} \)

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

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

The options in white are available for the current load. You can select some of them pressing LOAD as many times as will be necessary or entering its index number (\( \# \)), or using the mouse.

The option in yellow is the selected option.

8.1.1 LOADING GROUPS IN MASTERS

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

\( \text{GROUP \# LOAD M\#} \)

Load the group 5 in master 8

\( \text{GROUP 5 LOAD M8} \)
To load a groups range, in several masters, there are 2 options:

- **GROUP # LOAD** M# M# ...
- **GROUP # THRU # LOAD M#**

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

```text
GROUP 6 LOAD M6 M15 M17 LOAD
```

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

```text
GROUP 1 THRU 5 LOAD M11
```

Loading ranges:

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

  ```text
  Load from group 1 to last stored, in masters from 11:
  GROUP 1 THRU LOAD M11
  ```

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

  ```text
  Load from first to last stored groups, in masters from 11:
  GROUP THRU LOAD M11
  ```

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

- **GROUP # LOAD FLMT**

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

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

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

```text
CHANNEL 1 THRU 5 LOAD M14
```

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

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

\[ \text{CUE} \ # \ \text{LOAD} \ M\# \]

Load the cue 5 in master 8

\[ \text{CUE} \ 5 \ \text{LOAD} \ M8 \]

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

\[ \text{CUE} \ # \ \text{LOAD} \ T \ M\# \ M\# \ ... \ \text{LOAD} \]

\[ \text{CUE} \ # \ \text{THRU} \ # \ \text{LOAD} \ \text{LOAD} \ M\# \]

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

\[ \text{CUE} \ 6 \ \text{LOAD} \ T \ M6 \ M15 \ M17 \ \text{LOAD} \]

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

\[ \text{CUE} \ 1 \ \text{THRU} \ 5 \ \text{LOAD} \ \text{LOAD} \ M11 \]

or

\[ \text{CUE} \ 1 \ \text{THRU} \ 5 \ \text{LOAD} \ 3 \ M11 \]

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

Loading ranges:

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

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

\[ \text{CUE} \ 1 \ \text{THRU LOAD LOAD M11} \]

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

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

\[ \text{CUE THRU LOAD LOAD M11} \]
To load a cues range, using all masters, from the master 1 and the selected cue:

CUE # LOAD FLMT

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

### 8.1.3 LOADING CHANNELS IN MASTERS

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

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

 CHANNEL # LOAD # M# or CHANNEL # LOAD LOAD LOAD LOAD LOAD M#

This process is done selecting the option 9: CHANNEL

![Load Options](chart)

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

 CHANNEL # THRU # LOAD LOAD LOAD LOAD LOAD M#

To load several channels, from M#, press:

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

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

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

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

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>The master controls the output to scene of its cue or group.</td>
</tr>
<tr>
<td>Inhibit</td>
<td>The master inhibits the output to scene, from others playbacks, of its channels &amp; dimmers (htps). A inhibit cue or inhibit group never has output to scene.</td>
</tr>
<tr>
<td>Absolute</td>
<td>The master controls the output to scene of its cue or group, while the rest of the masters output is forced to 0% progressively.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Mode</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP</td>
<td><code>GROUP  # LOAD  0  M#</code></td>
</tr>
<tr>
<td>GROUP Absolute</td>
<td><code>GROUP  # LOAD  1  M#</code></td>
</tr>
<tr>
<td>GROUP Inhibit</td>
<td><code>GROUP  # LOAD  2  M#</code></td>
</tr>
<tr>
<td>CUE</td>
<td><code>CUE  # LOAD  3  M#</code></td>
</tr>
<tr>
<td>CUE Absolute</td>
<td><code>CUE  # LOAD  4  M#</code></td>
</tr>
<tr>
<td>CUE Inhibit</td>
<td><code>CUE  # LOAD  5  M#</code></td>
</tr>
</tbody>
</table>

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

Load cues from 1 to 5 in inhibit mode in the masters from 1 to 5 pressing:

`CUE 1 THRU 5 LOAD 5 M1`

8.1.5   MASTER IN MONITOR

<table>
<thead>
<tr>
<th>SM</th>
<th>FF</th>
<th>Masters status line</th>
<th>Master number &amp; output level</th>
<th>Group text or cues text</th>
<th>Master content &amp; mode</th>
<th>Time information</th>
</tr>
</thead>
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<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The masters status line shows us, from left to right:
- The level of the masters general fader, SM, from 0 to FF. If SM is under FF its level appears in a red field. If its blackout key is active (LED at on), the SM flag appears in a red field.
• After, you can see the **SM** configuration as **Masters** (when controls the masters output) or **Dmx In** (when controls the Dmx input).

• After, the page number loaded appears. When some masters is modified (content) near the page number a * appears. After the page number, if proceed, the page text appears.

• At the end, the current status of the **M** keys appears, always in a red filed. This current mode, for masters with groups, cues or channels, can be: **GO**, **FLASH** or **SOLO**.

**Master number & output level:**
Each master is identified by its number (00 to 24 or 48). This number appears in white when the master isn’t active in scene (**M#** LED at 50%), and appears in yellow when the master is active in scene (**M#** LED at 100% or blinking). Near the master number appears its output level (00 to FF) in black.
When the master output level isn’t the same that the fader level (physically), the master is locked and the flag < appears in red near the level.

**Group text or cues text:**
Under the master number, if proceed, the text of the loaded cue/group appears.

**Master content & mode:**
Under the text zone, the master content appears, and:

A normal cue is showed with its number: 1
An absolute cue is showed with its number preceded with an ^ in red: ^2
An inhibit cue is showed with its number preceded with an i in red: 3
A normal group is showed with its number preceded with a G in red: G 1
An absolute group is showed with its number preceded with a G^ in red: G^2
A inhibit group is showed with its number preceded with a G i in red: GI 10
A channel, always normal, is showed with its number preceded with a c in red: C 1

**Time information:**
Under master content, its time information appears. This time is the time that is being temporized (if master is active) or the first time to temporize (if master is inactive).

---

**8.1.6 EMPTYING MASTERS**

Empty a loaded master or several masters

**DELETE M#**

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

Empty all the masters:

**DELETE FLMT**
8.1.7 EXAMINING MASTERS

Exam a master content:

EXAM M#

Exam all the masters:

EXAM FLMT

8.2 MASTERS EDITION TABLE

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

MDFY FLMT

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 alls the options of the options window (entered its index number or click it with the mouse), and then, move the cursor to the right and enter the number of cue, group, channel, etc, pressing Æ#

From the setup line it’s possible to change the default fade time assigned to groups and channels (Group/Ch Tt). To access to the setup line press MENU. To return to the edition table press MENU or Ò

In this master edition table there are 2 options that only can be done from here. These options are 10: RATE & 11: LEVEL. About them:

10: RATE Load a rate control to control the speed of the desired playbacks (Ra)
11: LEVEL Load a level control to control the output level of the desired playbacks (Le)
A master set as **RATE** or **LEVEL** permits us to configure the playbacks (masters and sequences) over which this master has control. The next example is for a **LEVEL** master:

<table>
<thead>
<tr>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
<th>05</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>G1</td>
<td>G2</td>
<td>10</td>
<td>c</td>
<td>1</td>
<td>Le</td>
<td>X</td>
<td>Ra</td>
<td>XY</td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td></td>
<td>01</td>
<td>22</td>
<td>23</td>
</tr>
</tbody>
</table>

When the master is configured, the first option permits us to set if this master controls the sequence **X**, or not (**NONE**).

The next options (in the lower line) permit us to set the masters range that will be controlled for this master. In the previous example, **1-24**, masters form **M1** to **M24**.

To close this masters edition table press **EXIT**
8.3 MASTERS IN SCENE

The master behavior depends of its content:

- **Normal**: When a channel, group or cue in normal mode is controlled with a master, its contents appear in a yellow field in the auxiliary screens.

- **Absolute**: When a group or cue in absolute mode is controlled with a master, its content (channels and/or fixture parameters) appears in a yellow field in the auxiliary screens. In this case, at the same time that the output level of this master is increased, the output levels of the rest of the masters are forced to 0% (progressively).

- **Inhibit**: When a group or cue in inhibit mode is controlled with a master, this master hasn’t scene output. At the same time that the master level is increased, the output (coming from other playbacks) of its htp contents (channels & dimmers) is forced, progressively, at 0%. In this case, the output level of channels & dimmers appears in a black field.

Channels 6 to 8 are controlled in masters. Channel 6 is inhibited.

Dimmers of the fixtures 1 to 4 are controlled in masters, also the parameters x & y of the fixtures 3 & 4 are controlled in masters. The dimmer of the fixture 3 is inhibited.

8.4 CONTROLLING A MASTER

A master loaded with a channel, group or cue can be controlled in the next modes:

- Manual
- Automatic
- Flash

8.4.1 MANUAL CONTROL

Manual control of a master is done moving its fader, M#. The fader position controls the master output level (00-FF).

If M# is over its 0, active master, the M# LED is at 100%.
In this example, the master 1 has loaded the cue 1, and it is represented in 3 status:

a) Inactive, its output at 0%.
b) Active, its output at 50%.
c) Active, its output at 100%.

Under each master, the corresponding information just as appears in monitor is showed.

8.4.2 AUTOMATIC CONTROL

The cues are controlled using their programmed times, and their timing or parts. Groups and channels are controlled using its general fade time, Group/Ch T, groups, also, are controlled in accordance with the default timing.

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

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

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

During these fades, the M# LED blinks (the master is temporizing), and it’s possible:

- Press M# to pause the fade in progress.
- Move M# to arrive the master output level (i.e. 50<) and take its control manually with the fader.

If a cue has wait-in time (↑⊙), this time is computed before that the fade-in time.
If a cue has auto time (⊙), this time is computed after the fade-in time and before the fade-out time, and all these times are computed automatically, one behind other. In other words, the master is activated, remains a time in scene, and then is deactivated automatically.
If a cue has wait-out time (↓⊙), this time is computed before that the fade-out time.

8.4.2.1 LTPs

Fixture parameters defined as FADE fades following the programmed times and timing. Parameters defined as NO FADE jump to stored level and never fade.
Always that the master doesn’t arrive to its 100%, LTP’s can return to their starting values. If master has been activated in manual mode, and the Setup option, Manual Track is ENABLE, LTP’s can return to their starting values including if the master arrives its 100%, in other cases, the LTP values will remain in scene in tracking mode.

SM & GM don’t affect to the LTPs parameters.

In accordance with the LTP behavior, the last active master (manual or automatically) is the master that take the control of these parameters.

8.4.2.2 MANUAL PRIORITY CONTROL

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

PRIO

8.4.3 FLASH CONTROL

To do a master flash, set the M# keys in FLASH mode, pressing FLMT as many times as will be necessary to set FLASH mode (FLMT LED at on).

While that M# is held down pressed, the master is at 100% in scene. It’s possible to press as many M# as will be needed.

To do a master flash-solo, set the M# keys in SOLO mode, pressing FLMT as many times as will be necessary to set SOLO mode (FLMT LED blinking).

While that M# is held down pressed, the master is at 100% in scene, at the same time that the rest of the masters are forced at 0%.

The SOLO function can influence to the crossfaders outputs. The level the Flash or Flash-Solo (by default at 100%) can be changed. Both options are modified in menu 32: Masters. See Chapter 14 - MENUS

8.5 MODIFICATION OF THE MASTERS CONTENTS

It’s possible to modify the scene (in the editor) and after to store this modification in the desired group or cue that is loaded in a master.

Master at 100% that has the cue 1. The cue 1 has the channels 1-5 at 50%.
• Modify the desired items in the editor (Stage or Blind). Example, edit the channel 4 at 30% and add the channel 6 at 100%.

• To store this modification in the cue 1 in the master #, pressing **MDFY M#**. The editor content is added to the cue content. The editor is emptied in 2 seconds.

Resume:

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

The master can be modified when is active at any level, or when is deactivated (at 00). If the modifications are done in the Blind editor, they will be effective in scene the next time that the master is activated. In other words, the master content is maintained in scene until the master arrives its 00.

### 8.6 THE MASTER OF MASTERS

The fader **SMₜ**, by default, is the general master of the output of all the masters.

**SMₜ** can be configured as master of masters or as general master of the DMX input. This configuration is done inside menu **03: Dmx In** or menu **31: Playbacks**. See chapter 14.
8.7 PAGES

The console has 2000 pages (1-2000). These pages collect the contents of all the playbacks (masters and crossfaders).

The information stored in the pages can be recovered at any moment, in a way quick and easy.

8.7.1 STORING OF A PAGE

The first step to store a page, it's to load all the masters & the crossfader. It's possible to load all playbacks or only some. Store the page pressing:

PAGE # REC

# is the page number to store. If this number is omitted the next page will be stored.

If the page # exists, the system requests us confirmation. Press REC to confirm, or enter a new page number to try it again.

8.7.2 PAGE TEXT

To associate a text to a page, press:

PAGE MDFY

Select the Text cell of the desired page, and type the text to associate it.

Close this screen, pressing EXIT

8.7.3 PAGE EXAM

Exam one page (#) or the list of all stored pages, pressing:

PAGE # EXAM

To exam the current contents of the masters, pressing:

EXAM FLMT

Page screens using the arrow keys. Quit pressing EXIT
8.7.4 LOADING OF A PAGE IN MASTERS

It’s possible to recover the contents of a page only in the masters. There are 2 modes to load a page in the masters:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Command</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>no-forced</td>
<td>PAGE # LOAD</td>
<td>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.</td>
</tr>
<tr>
<td>forced</td>
<td>PAGE # LOAD LOAD</td>
<td>All the masters are updated with the page contents, including the empty masters.</td>
</tr>
</tbody>
</table>

# is the page number to load. This number and the text page appear in the masters-status line. After, if the page if any master is changed this number is marked with a *.

In both cases, if in the page load process there is master active, its content remains in scene until the master arrives its 00 (avoiding jumps in scene). These active masters are marked with its number in red.

⚠️ Note: The page loaded in this way doesn’t affect to the crossfader.

8.7.5 ASSIGNING A PAGE IN THE CROSSFADER

To recover the crossfader contents stored in a page there are 2 modes:
Normal, where only the cue in X2 is recovered. The crossfade output isn’t affected.
Forced, where the cue in X1/X2 are recovered. The crossfade output is affected.

<table>
<thead>
<tr>
<th>Command</th>
<th>Normal mode</th>
<th>Forced mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAGE # ASSIGN</td>
<td>Normal mode</td>
<td></td>
</tr>
<tr>
<td>PAGE # ASSIGN ASSIGN</td>
<td>Forced mode</td>
<td></td>
</tr>
</tbody>
</table>

⚠️ Note: The page assigned in this way doesn’t affect to the masters.
8.7.6 SELECTING A PAGE IN MASTERS & CROSSFADE

To recover all the information stored in a page in the masters & crossfader at the same time:

- PAGE # ENTER Normal mode
- PAGE # ENTER ENTER Forced mode

8.7.7 MODIFYING A PAGE

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

- PAGE # MDFY # is the page number to modify.

Select the data to modify or edit and enter the new data. Quit pressing EXIT

8.7.8 COPING & EXCHANGING PAGES

To copy a page or pages range, press:

- PAGE # COPY #’ ENTER
- PAGE # THRU #’ COPY #’ ENTER

Copy the page 1 as page 10:

PAGE 1 COPY 10 ENTER

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

- PAGE # COPY COPY #’ ENTER
- PAGE # THRU #’ COPY COPY #’ ENTER

Exchange the contents of the pages 1 & 10:

PAGE 1 COPY COPY 10 ENTER

8.7.9 DELETING PAGES

To delete the page # press:

- PAGE # DELETE
- PAGE # THRU #” DELETE
- PAGE DELETE Confirm pressing DELETE
RESUME

Loading masters & master modes.

Load a cue: CUE # LOAD M#
Load a group: GROUP # LOAD M# / {editor} LOAD M# LOAD M#
Load a channel: CHANNEL # LOAD 9 M#

Load cues in several masters: CUE # LOAD M# M# .. LOAD
Load groups in several masters: GROUP # LOAD M# M# .. LOAD

Load a range in consecutive masters:
  GRUPO # THRU # LOAD M#
  CUE # THRU # LOAD 3 M#
  CHANNEL # THRU # LOAD 9 M#

Load the 48 masters from the cue/group #:
  CUE LOAD FLMT // GROUP # LOAD FLMT

Load cue/group in normal mode: {cue/group} LOAD M#
Load cue/group in absolute mode: {cue/group} LOAD LOAD M#
Load cue/group in inhibit mode: {cue/group} LOAD LOAD LOAD M#

Exam:
  A master: EXAM M#
  All the masters: EXAM FLMT

Modify/edit any master:
  MDFY FLMT {modifications} EXIT

Modify a cue or group loaded in a master:
  RST MDFY M#{modifications} REC
  {modifications} MDFY M#

Emptying masters:
  A master: DELETE Mn
  Several masters: DELETE M# M# .. DELETE
  All the masters: DELETE FLMT

PAGES, storing and loading:

Store a page: PAGE # REC
Store the next page: PAGE REC
Load a page in master in normal mode: PAGE # LOAD
Load a page in master in forced mode: PAGE LOAD LOAD
Assign a page in crossfaders in normal mode: PAGE # ASSIGN
Assign a page in crossfaders in forced mode: PAGE # ASSIGN ASSIGN
Select a page in masters & crossfade, normal mode: PAGE # ENTER
Select a page in masters & crossfade, forced mode: PAGE # ENTER ENTER

Exam:
  A page: PAGE # EXAM
  The pages list: PAGE EXAM

Pages modification:
  The page #: PAGE # MDFY
  The pages-list (text): PAGE MDFY

LEVITON 8700 SERIES
COPY & EXCHANGE:
Copy: PAGE # (THRU #') COPY #’ ENTER
Exchange: PAGE # (THRU #') COPY COPY #’ ENTER

DELETE:
A page: PAGE # DELETE
A pages range: PAGE # THRU #’ DELETE
All the pages: PAGE DELETE

Force priority to Mn: PRIO▼ M# PRIO▲
Set mode for Mn (GO/FLASH/SOLO): FLMT
9. THE EFFECTS

The 8700 Series consoles have 2000 Effects (Chases) and can playback, at the same time a maximum of 48 or 24 (depending of the model).

An effect is created inserting cues, groups or channels. The effects are executed in masters.

The effect is an ordered succession of cues (channels or groups), in scene the effect activates these cues (channels or groups), dynamically, in the order and mode planned. Each item (cue, group, channel) is a step, and each step is a time in scene before to be replaced by the next step. An effect is totally defined by:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Name</th>
<th>What is it?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>#</td>
<td>It’s the number that identify to each effect. (1-2000)</td>
</tr>
<tr>
<td>Type</td>
<td>CHANNELS GROUPS CUES</td>
<td>It’s the type the item that the steps have. In other words, if the step is edited with a cue, a channel, or a group. All the steps in an effect are the same type.</td>
</tr>
<tr>
<td>Title</td>
<td>Text</td>
<td>It’s a text associated to the effect.</td>
</tr>
<tr>
<td>Fade Time</td>
<td>T :</td>
<td>It’s the fade time of the effect when the effect is activated in auto (pressing its “GO” key). This fade-time is computed in the start and stop of the effect.</td>
</tr>
<tr>
<td>Step Time</td>
<td>StepT</td>
<td>It’s the time that each step is in scene before to be replaced by the next step. When the effect is activated in manual mode (step-to-step) this time is not computed.</td>
</tr>
<tr>
<td>Direction</td>
<td>&gt;</td>
<td>It’s the order of secession of the steps in scene: &gt; Ascendant (1, 2, 3...8, 9)</td>
</tr>
<tr>
<td></td>
<td>&lt;</td>
<td>&lt; Descendant (9, 8, 7...2, 1)</td>
</tr>
<tr>
<td></td>
<td>&gt; &lt;</td>
<td>&gt; &lt; Cyclic (1, 2, 3...8, 9, 9, 8, 7..., 2, 1)</td>
</tr>
</tbody>
</table>
### Effect Attributes

<table>
<thead>
<tr>
<th>Step Attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__</td>
<td>Each step is activated and deactivated without fade.</td>
</tr>
<tr>
<td>/\</td>
<td>Each step is activated with a fade and deactivated without fade.</td>
</tr>
<tr>
<td>_/</td>
<td>Each step is activated without fade and deactivated with fade.</td>
</tr>
<tr>
<td>/\</td>
<td>Each step is activated and deactivated with fade.</td>
</tr>
<tr>
<td>XX</td>
<td>The steps are activated and deactivated as a split crossfade.</td>
</tr>
<tr>
<td>XF</td>
<td>The steps are activated and deactivated as a dipless crossfade. (In the dipless crossfade a level never fades down of the minimum stored level, in the split crossfade this level can fades down of the minimum stored level)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect Attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORMAL</td>
<td>The effect starts when all the steps deactivated, and then, each step is activated at the same time that the previous step is deactivated.</td>
</tr>
<tr>
<td>INVERT</td>
<td>The effect starts when all the steps activated, and then, each step is deactivated at the same time that the previous step is activated.</td>
</tr>
<tr>
<td>BUILD+</td>
<td>The effect starts when all the steps deactivated, and then, each step is activated; the previous step follows activated.</td>
</tr>
<tr>
<td>BUILD-</td>
<td>The effect starts when all the steps activated, and then, each step is deactivated; the previous step follows deactivated.</td>
</tr>
<tr>
<td>SHADOW</td>
<td>The effect starts when all the steps deactivated, an then, each step is activated; the previous step follows activated; when all the steps are activated begins a new process where each step is deactivated; the previous step follows deactivated.</td>
</tr>
<tr>
<td>RANDOM</td>
<td>The steps are activated in random order and random time. Very used in effects for fire, etc.</td>
</tr>
<tr>
<td>CHAOS</td>
<td>The steps are activated in random order and random time; also, more than one step can be activated at the same time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Base cue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS cue</td>
<td>This cue is activated or deactivated at the same time that the effect, and it is used as static part of the effect.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>It's a table is formed with the effect steps. There is not a limit for the steps number. All the steps of one effect are the same type (cues, groups or channels), and each step has one of these items. The steps are ordered, and are activated following the direction, attributes and step time.</td>
<td></td>
</tr>
</tbody>
</table>
Some examples, about an effect of 4 steps, where an activated step is written as “*”, and a deactivated step is written as “○”, and in each example a complete lap is represented.

**Ascendant direction ( > )**

**Normal**  | **Build+**  | **Shadow**
---|---|---
1 | 2 | 1
2 | 3 | 2
3 | 4 | 3
4 | 1 | 4

**Invert**  | **Build-**
---|---
1 | 1 | 6
2 | 2 | 7
3 | 3 | 8
4 | 4 | 6

**Descendant direction ( < )**

**Normal**  | **Build+**  | **Shadow**
---|---|---
1 | 2 | 1
2 | 3 | 2
3 | 4 | 3
4 | 1 | 4

**Invert**  | **Build-**
---|---
1 | 1 | 6
2 | 2 | 7
3 | 3 | 8
4 | 4 | 6
9.4  THE EFFECTS

Cyclic direction ( > < )

9.1   RECORDING A EFFECT

An effect is recorded in the effect edition screen.

(EFFECT # REC) To open the edition screen of the effect # (1 to 2000)

(EFFECT REC) To open the edition screen of the next effect
When this screen is opened the cursor is placed in the upper zone, where the general parameters of the effect can be edited.

To edit the general parameters:

a) Move the cursor using the arrows keys or mouse, to activate the desired parameter.
b) Enter the numeric data and accept it pressing ENTER or moving the cursor.
c) Some parameters present us an options window; in these cases (Type, Direction, etc.), enter the index number of the desired option, or click with the mouse.
d) In Text, the “text” is entered from the alphanumeric keyboard.

Notes:
The effect type (CHANNELS, GROUPS or CUES) must be selected before to edit the steps, and this type cannot be changed after the steps edition.
Step time (StepT) and fade time (T) can be from 0.1 to 2000.9 seconds; the times greater than 100 with decimal point don’t present us their decimal, but this decimal point is computed.

MENU toggles between the general parameters area and the steps area. And, from the general parameters area, also it’s possible to access to the steps area pressing ↓

In the steps edition zone each cell admits a number of cue (channel or group, in accordance with the effect type):

To edit these steps, enter the number of cue, group or channel (#). To accept this number, move the cursor to the next cell.

Some special editions for the steps are:
a) To insert in the selected step the next cue (group or channel) press INSERT
b) To insert in the selected step a step with the cue # (group or channel) pressing:

c) To delete the selected step press DELETE
d) To edit a blackout step, enter 0

To edit a range (of cues, groups or channels), access to the last step and press and hold down pressed INSERT up to edit the desired steps.

To close the effect edition screen press EXIT
9.2 MODIFYING A EFFECT

The effect is modified in its effect edition screen. Open the edition screen, for the desired effect (§), using one of these options:

- EFFECT § MDFY
- EFFECT § REC

And, if the effect is loaded in masters, i.e. the master 1, also it’s possible to press:

- MDFY M1

Now, it’s possible to modify any effect data (except Type). To quit pressing EXIT.

Note:
The data can be modified at any moment, including if the effect is active in scene.

9.3 MODIFYING THE EFFECT PARAMETERS

If only it’s needed modify the general parameters of an effect/s, these modifications can be done from the effect-list screen:

- EFFECT MDFY

Move the cursor (using the arrow keys or mouse) and edit the desired parameter.
To quit pressing EXIT.

! You can use any effect number cell (gray zone) to select a concrete effect. At one of these cells, press § to access to the effect §.

9.4 EXAM OF EFFECTS

It’s possible to exam all the effects, in a general mode, pressing:

- EFFECT EXAM

It’s possible to exam the effect §, pressing:

- EFFECT § EXAM

To use the arrow keys to page the information. To quit pressing EXIT.
9.5 COPING EFFECTS

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

1. EFFECT # COPY # ENTER
2. EFFECT # THRU #" COPY # ENTER

Copy the contents of the Effect 1 in the 5.

EFFECT 1 COPY 5 ENTER

If effect 5 was stored, its contents are overwritten.
The effect 1 and 5 are the same.

9.6 EXCHANGING EFFECTS

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

1. EFFECT # COPY COPY # ENTER
2. EFFECT # THRU #" COPY COPY # ENTER

Exchange the contents of the Effects 1 & 5.

EFFECT 1 COPY COPY 5 ENTER

If the effect 5 is not stored, after exchange, the effect 1 will be not stored.

9.7 DELETING EFFECTS

To delete the effect #, press:

EFFECT # DELETE

To delete a range, press:

EFFECT # THRU #" DELETE

To delete all the effects, press:

EFFECT DELETE

The system asks confirmation. Confirm pressing DELETE.
9.8 THE EFFECTS PLAYBACK

Each effect uses a master to its control.

9.8.1 LOADING A EFFECT

An effect can be loaded in a master in 2 modes:

7: EFFECT Rate, \( M \# \) has the effect rate control.
8: EFFECT Level, \( M \# \) has the effect level control.

To load an effect with rate control (\( E^R \)):

\[ \text{LOAD } M \# \]

To load an effect with level control (\( E^L \)):

\[ \text{LOAD } L \# M \# \] or \[ \text{LOAD } 8 M \# \]

To load an effects range in consecutives masters, i.e. with rate control (\( E^R \)):

\[ \text{LOAD } M \# \text{ THRU} \# M \# \]

To load an effects range in NO consecutives masters, i.e. with level control (\( E^L \)):

\[ \text{LOAD } M \# \text{ LOAD } M \# \ldots M \# \text{ LOAD} \]

After the load, effect is deactivated, its rate control is at 100% or its level control is at full (100 or FF). \( M \# \) LED is lit at 50%. In this mode, it's not necessary to move \( M \# \) to play the programmed effect.

The effect number appears under the master number, marked with an \( E^R \) in red (if has rate control) or marked with an \( E^L \) in red (if has level control). In the last line, the content of the scene steps appears \( (c1) \), if the effect is not active, appears the content of the first step; in this example, the first step has the channel 1.
An effect with rate control (\(E^R\)) always is executed at level full. \(M^#\) controls the effect rate.

Moreover, if a level control is needed, configure a master LEVEL, from \(MDFY\ FLMT\). In example, \(M_{12}\) controls the level of the effect loaded in \(M_{11}\).

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, \(M_{12}\) controls the rate of the effect loaded in \(M_{11}\).

To empty a effect master

DELETE \(M^#\)

**9.8.2 ACTIVATING A EFFECT**

When an effect is loaded in the masters, can have the next modes & status:

- An effect is active when any of its steps is active in scene.
- An effect is auto mode when its steps are activated following the programmed times (GO).
- An effect is step-to-step mode, when the user activates its steps manually.

About \(M^#\) LED:

<table>
<thead>
<tr>
<th>STATUS</th>
<th>MODE</th>
<th>(M^#) LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deactivated</td>
<td>Loaded</td>
<td>Lit at 50%</td>
</tr>
<tr>
<td></td>
<td>Not Loaded</td>
<td>Off</td>
</tr>
<tr>
<td>Activated</td>
<td>Auto</td>
<td>Blinking</td>
</tr>
<tr>
<td></td>
<td>Step-to-Step</td>
<td>Lit at 100%</td>
</tr>
</tbody>
</table>

The base cue (if it exists) is activated at the same time that the effect, and is deactivated when the effect is deactivated. When an effect changes of auto mode to step-to-step mode (or vice versus) the base cue doesn’t change.

The **fade time**, \(T^S\) only is used when an effect deactivated is activated in auto mode, and when the activated effect is deactivated. This fade time affects to the steps level and the base cue level, as fade-in and as fade-out.
To play the effect it's possible to move/press:

<table>
<thead>
<tr>
<th>Fader/Key</th>
<th>Comments…</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M#§</strong></td>
<td>If effect <strong>E</strong>. Controls the output level of the effect (for dimmers and channels). When an effect is loaded this master is locked at 100% (FF); to take its control the first time is needed to move it up to the upper extreme.</td>
</tr>
<tr>
<td><strong>M#§</strong></td>
<td>If effect <strong>E</strong>. Controls the speed of execution of the effect. When an effect is loaded this master is locked at 100%; to take its control the first time is needed to move it up to its middle position (5).</td>
</tr>
</tbody>
</table>
| **M# GO** | If the effect is deactivated, when you press **M#**:
  - The effect is activated in auto mode, reaching its 100% after T‡ seconds: The first step is activated, and after StepT seconds, the next step is activated, and so on…
  - The effect is active until the user deactivates it. |
| **M# GO** | If the effect is active in auto mode, when you press **M#**:
  - The effect is deactivated, reaching its 0% after T‡ seconds. |
| **M# GO** | If the effect is active in Step-to-Step mode, when you press **M#**:
  - The effect following its execution in auto mode from the active step. |
| **# M#**  | If the effect is deactivated, when you press **# M#**:
  - The effect is activated in auto mode, reaching its 100% after T‡ seconds: The first step is activated, and after StepT seconds, the next step is activated, and so on…
  - The effect is executed until # laps are done, and then the effect is deactivated in auto mode in T‡ seconds. |
| **# M#**  | If the effect is activated, when you press **# M#**:
  - The effect, in auto mode, is played # laps. 
  - # is laps number, (1 to 99). |
| **Nº GO** | In monitor, the laps number that are pending to execution, appears near the scene step… In case of more than 9 laps, the symbol + appears. |
THE EFFECTS

If the effect is deactivates, pressing **STEP▼ M#:**
The effect is activated in step-to-step mode. The first step and the base cue are activated without fade-time. This step is maintained in scene.

If the effect is activated in auto mode, pressing **STEP▼ M#:**
The effect changes to step-to-step mode. The next step is activated and it stays active.

If the effect is active in step-to-step mode, pressing **STEP▼ M#:**
The effect follows in step-to-step mode. The next step is activated and it stays active.

In this case, each **STEP▼ M#** advances a step.

It’s possible to press **M#** as many times as steps to advance, before to release **STEP▼**

If the effect is activated or deactivated, pressing **# STEP▼ M#:**
The effect is activated in step-to-step mode. The step # and the base cue are activated without fade-time. This step stays active.

# is step number, (1 to 2000).

A channel or fixture parameter controlled by an effect, appears in a yellow field in the scene screens.

Notes: The Flash function doesn’t affect to effect masters.

### 9.9 LEARN TIME FUNCTION

Access to the learn time functions pressing **LNTM** (Learn Time)

Learn the **StepT** for an effect:
It is possible to learn the step time (**StepT**) of an effect, its rhythm.

Load the effect in the desired masters (**EFFECT 1 LOAD Mn**) and then:

- Press **LNTM** (its LED at ON).
- Press **M#** wait the desired time, and press again **M#**. In this moment:
The effect is activated in auto mode, with the new **StepT**, time between pressings of **M#**. 
**LNTM** is deactivated (its LED at OFF).

In the right of the status line, **L-T ###** appears in a red field, when the **LNTM** is active. **# # #** is the time (in seconds) that this function is learning.

### 9.10 FIXTURES & EFFECTS

When an effect has fixture parameters (except **Dimmer**), have in mind:

1. The effect level doesn’t affect to the parameters. The parameter puts its value in scene inclusively if the level is 0%.
2. Each time that a step is deactivated, its parameters remain their values in scene (**tracking**).
3. The effect takes control of the **LTPs** in scene when it is activated (**GO**), but not with each new step.

**Example 1:**
The effect 1 has the cues 1, 2 & 3 (in this order).
The cue 1 has: Fixture 1 at 50% and Red.
The cue 2 has: Fixture 2 at 75% and Blue.
The cue 3 has: Fixtures 1 and 2 at 25%.

The behavior of the effect is:

<table>
<thead>
<tr>
<th>Active step</th>
<th>Stored in the step</th>
<th>Scene</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FX 1 @ 50% &amp; Red</td>
<td>FX 1 @ 50% Red</td>
</tr>
<tr>
<td>2</td>
<td>FX 2 @ 75% &amp; Blue</td>
<td>FX 1 @ 0% Red  (tracking)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FX 2 @ 75% Blue</td>
</tr>
<tr>
<td>3</td>
<td>FX 1 @ 25%, FX 2 @ 25%</td>
<td>FX 1 @ 25% Red (tracking)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FX 2 @ 25% Blue (tracking)</td>
</tr>
<tr>
<td>1</td>
<td>FX1 @ 50% &amp; @s Red</td>
<td>FX 1 @ 50% Red</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FX 2 @ 0% Blue  (tracking)</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>FX 1 @ 0% Red  (tracking)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FX 2 @ 0% Blue  (tracking)</td>
</tr>
</tbody>
</table>

**Example 2:**
The effect 2 has the cues 1 to 10.
Step 1 has the cue 1: **Color** of the fixtures 1 to 8 at **White**
Step 2 has the cue 2: **Color** of the fixtures 1 to 8 at **Yellow**
Step 3 has the cue 3: **Color** of the fixtures 1 to 8 at **Red**
... ... ... ... ...
Step 10 has the cue 10: **Color** of the fixtures 1 to 8 at **Congo**
This effect allows you to select the desired color in scene for these 8 fixtures quickly:

<table>
<thead>
<tr>
<th>Command</th>
<th>Scene</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 STEP M#</td>
<td>The Color of the fixtures 1 to 8 is <strong>Red</strong></td>
</tr>
<tr>
<td>1 0 STEP M#</td>
<td>The Color of the fixtures 1 to 8 is <strong>Congo</strong></td>
</tr>
<tr>
<td>M#</td>
<td>The Color of the fixtures 1 to 8 is changing from <strong>White</strong>, <strong>Yellow</strong>, <strong>Red</strong>...<strong>Congo</strong>, <strong>White</strong>...And so on.</td>
</tr>
</tbody>
</table>

9.10.1 **TAKE PRIORITY WITH A ACTIVE EFFECT**

If any other playback takes control over the LTPs of a active effect, to take control again over these LTPs with the active effect, press:

**PRIO** M#
RESUME

Storing a effect:
The effect #: \texttt{EFFECT \# REC}
The next effect: \texttt{EFFECT REC}

Modifying:
Parameters or steps: \texttt{EFFECT \# MDFY}
Only parameters: \texttt{EFFECT MDFY}

Exam:
The effect #: \texttt{EFFECT \# EXAM}
The effects list: \texttt{EFFECT EXAM}

Delete:
An effect: \texttt{EFFECT \# DELETE}
A range: \texttt{EFFECT \# THRU \# DELETE}
All the effects: \texttt{EFFECT DELETE}

Copy & Exchange:
Copy: \texttt{EFFECT \# (THRU \#') COPY \#' ENTER}
Exchange: \texttt{EFFECT \# (THRU \#') COPY COPY \#' ENTER}

Playback:
GO: \texttt{M\#}
Nº-Lap GO: \texttt{\# M\#}
STEP: \texttt{STEP\^ M\#}
Nº STEP: \texttt{\# STEP\^ M\#}

Learn Time - LNTM: \texttt{LNTM \# M\#}

Recover the control of the LTPs of a active effect: \texttt{PRIO\^ M\#}
10. **SEQUENCES**

The console executes cues in sequential mode using any of its masters or the dedicated crossfader.

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

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

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

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

10.1 **LOADING SEQUENCES**

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

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

10.1.1 **IN THE X1/X2 CROSSFADER**

In the cues range selection, if # is omitted, the range begins from the first stored cue, and if #’ is omitted the range ends in the last stored cue.

To load all the stored cues, press:

**CUE THRU ASSIGN**  As closed list.

**CUE ASSIGN**        As opened list. Each new cue is added to the list.
10-2 SEQUENCES

If **THRU** is omitted the cues range loaded will be an *open range* and each new stored cue will be loaded at the end of this sequence in the crossfade.

Examples **CUE # ASSIGN** or **CUE ASSIGN**

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

**{cues range} ASSIGN ASSIGN**

The crossfader in the monitor shows us its cues range.

<table>
<thead>
<tr>
<th>X1</th>
<th>FF</th>
<th>LEVEL</th>
<th>FF</th>
<th>RATE</th>
<th>100%</th>
<th>Dipless</th>
<th>Timed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>T1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>T1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>T1</td>
<td></td>
</tr>
</tbody>
</table>

The crossfaders have the next color-code:

- **X1** is marked in cyan.
- **X2** is marked in light cyan.

In the **CUE CUE** screen, the cues loaded in **X1 & X2**, adopt this color code. When this screen is opened, the cursor is in the first cue. To toggle the cursor between the first cue to the cue in **X2**, press **CUE CUE**
10.1.2 IN A MASTER, M#

In the cues range selection, if $#$ is omitted, the range begins from the first stored cue, and if $#'$ is omitted the range ends in the last stored cue.

To load all the stored cues, press:

$^*$ CUE THRU LOAD M#

As closed list.

Masters don’t admit loading of opened list. If THRU is omitted will be necessary to select the load mode (6: CUE List). In this case, only the selected cue is loaded as sequence.

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

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

A sequence master in the monitor shows us only the number of its scene cue and of its next cue, in a yellow field.

The sequence master uses the same color for the scene and next cues, the yellow.

To exam the sequence status that is executing in M#, press: EXAM M#
To edit the cues list loaded in M#, press: MDFY M#

10.2 EMPTYING A SEQUENCE

To empty a sequence loaded in the crossfader:

$^*$ DELETE ASSIGN

To empty a sequence loaded in a master, press:

$^*$ DELETE M#
10.3 EXECUTION

The sequences can be executed manually or in auto mode, in base to the programmed times of the cues; from the crossfader or from the masters.

10.3.1 MANUAL CONTROL

10.3.1.1 In X1/X2 crossfader
In this mode, the movements of \( X_1 \) & \( X_2 \) control the crossfade between the cues assigned in \( X_1 \) & \( X_2 \). 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 (\( X_1 \) at 100% & \( X_2 \) at 0%), and it ends when both faders reach the other extreme (\( X_1 \) at 0% & \( X_2 \) at 100%). Just at this moment (crossfade ended) the cue in \( X_2 \) at 100% passes to \( X_1 \) at 100% while the next cue in the list passes to \( X_2 \) at 0%. A new crossfade is ready. These 2 faders allow you to do a not homogeneous crossfades.

The crossfader LEDs, \( X_1 \) & \( X_2 \), indicate us the direction the movement of the faders to end the current crossfade.

10.3.1.2 In masters
In this mode, the movement of \( M \) controls the crossfade between the scene cue & next cue. The fader controls both cues with inverted scale; in the same extreme the scene cue is at 100% and the next cue at 0%.

The crossfade begins with the fader in an extreme (Scene at 100% & next at 0%), and it ends when the fader reaches the other extreme (Scene at 0% & next at 100%). Just at this moment (crossfade ended) the next cue (at 100%) passes to scene (at 100%) while that a new cue in the list passes to next cue at 0%. A new crossfade is ready. This fader allow you to do homogeneous crossfades.

The direction of the movement of the fader to end the current crossfade appears near the next cue level (near the master number).
10.3.2 AUTOMATIC CONTROL

Each GO command starts a new crossfade. It’s possible to start a crossfade including if the previous crossfade is finished and if not.
During the crossfade it’s possible to take manual control with the faders, to pause it or to invert the crossfade direction.

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

The times $T^\uparrow$ & $T^\downarrow$ control the crossfade, if have the same value, the crossfade is homogeneous. $T^\uparrow^\circ$ & $T^\downarrow^\circ$ control the start point of each fading, and these times don’t implicate an automatic link to the following crossfade.

The times programmed in the next cue (or cue in X2) control the double fade: The input times control the fade in scene & the output times control the fade out scene of the scene cue (in X1).
Each time that a crossfade ends, the following cue in the sequence is considered as next cue for the crossfade... Only a programmed Jump changes this numerical order.

It’s possible to start crossfade to the previous cue (back mode), but in these crossfades in invert direction:
- Don’t compute the $T^\circ$.
- Can be configured to execute a inverting crossfade with the cues programmed times or using a fixed time, GObACK Time; this time can be edited from the menu 30: Editor & Times or from [CUE][CUE] table.

10.3.2.1 In crossfader X1/X2

- To start a new automatic crossfade, press [GO]. During this double fade, the LED of X1 (or X2) blinks, and indicates you the direction of the faders movement to end the crossfade manually.

At the end of this crossfade, the following is ready. If the cue in X1 has $T^\circ$, this time is computed and then, the following crossfade is started automatically (no GO is needed).

- To pause the crossfade in progress, press [P.BACK] After, when the crossfade is paused, it’s possible:
  1. To restart it again pressing [GO]
  2. To change the crossfade direction pressing [P.BACK] again.
  3. To end it manually using the faders.
• To start a new crossfade to the previous cue, from an inactive crossfade, press **P.BACK**

In monitor, graphics bars show the crossfade progress. These bars have the next color code:

<table>
<thead>
<tr>
<th>Code</th>
<th>( \uparrow )</th>
<th>( \downarrow )</th>
<th>( \circ )</th>
<th>( \uparrow \circ )</th>
<th>( \downarrow \circ )</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1/X2</td>
<td>Light Cyan</td>
<td>Cyan</td>
<td>Dark Blue</td>
<td>Dark Gray</td>
<td>Gray</td>
</tr>
</tbody>
</table>

### 10.3.2.2 In masters

- To start a new automatic crossfade, press **M#**
  - During this double fade, **M#** LED blinks.

  At the end of this crossfade, the following crossfade is ready. If current scene cue has \( \circ \), this time is computed, and then, the following crossfade is started automatically (no **M#** is needed)

- 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 end manually using the fader **M# ▼**

- To start a crossfade to the previous cue, from an inactive crossfade, press: **PAUSE-B ▼ M#**

In monitor, it’s possible to observe the crossfade progress, where:

- **Crossfade computing \( \circ \) programmed in the cue 1.**
- **Normal crossfade**, the cue 2 (next) is fading in scene (0% to 100%).
- **Paused crossfade.**
- **Inverted crossfade**, the cue 2 is fading-out scene (100% to 0%).

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LEVITON 8700 SERIES
10.3.3 PRIORITY CONTROL (MASTERS)

If several active sequences are executed in masters, only the last activated has priority over its LTPs. To recover the priority control in any other active sequence (in a master) press:

![PRIQ M#]
10.4 CONFIGURATION OF THE CROSSFADEs

The crossfaders can be configured in Dipless or Split mode, also can be configured to compute, or not, the auto times (T_on or T_off).

To configure the crossfader:

\[ \text{ASSIGN} \ # \]

# is the index number of the desired option.

The current configuration of the crossfade is showed in its status line.

In a dipless crossfade, channels and fixture parameters that are in \( X_1 \) & \( X_2 \) never have a level inferior to the level of \( X_2 \) (next cue).

\[ \text{Note:} \]

When a sequence is executed using a master, these options are not available. These sequences always are Dipless and have the T as actives (T_on).

10.4.1 Dipless Crossfade

There are 2 modes for Dipless crossfade. You can select the desired mode in the Setup menu 31: Playbacks, in option Dipless Mode.

In a dipless crossfade, channels and fixture parameters that are in \( X_1 \) & \( X_2 \) never have a level inferior to the level of \( X_2 \) (next cue). About this same channel, if you select:

0: \( T \uparrow \)
The channel fades from its origin level to its target level in the input time, \( T \uparrow \), programmed in the next cue.

1: \( T \uparrow\downarrow \)
The channel fades from its origin level to its target level in the input time, \( T \uparrow \), programmed in the next cue if the level change is increasing (i.e. if channel fades from 20% to 80%)
The channel fades from its origin level to its target level in the output time, \( T \downarrow \), programmed in the next cue if the level change is decreasing (i.e. if channel fades from 80% to 20%)
10.5 THE ORDER OF THE CUES

The cues sequence assigned to the crossfade or a master are executed in ascendant numerical order. This order can be broke for: A programmed jump or a manual displacement.

10.5.1 PROGRAMMED JUMP

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

In this example there are 10 consecutive cues, 1 to 10, and the cue 7 has a Jump to the 9; the cue 10 has a Jump to the 1, with a Lp of 3 times.

Then, when the cues 1 to 10 are assigned in the crossfade X (for example), the cues list is as in the figure.

Note that the Lp value (in pink) goes decrementing it, until 0. In this moment the Jump stops to execute it.

10.5.2 END.JP FUNCTION

This function is dedicated to the control of finite jump in the crossfader X, (Jump with programmed Lp)

When in the crossfader X a cue with a finite Jump is executed, END.JP LED is at ON. And, in this case:

END.JP
End of the active Jump, but completing its sequence.

END.JP END.JP
End of the active Jump, and loads in X2 the next cue to the cue with the active Jump.

When more than one finite Jump is active, END.JP begins controlling from the last active finite Jump to the first.

END.JP LED
10-10  SEQUENCES

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.

10.5.3 MANUAL DISPLACEMENT

10.5.3.1 In crossfaders
To select the desired cue as next cue, #, press:

F CUE # ASSIGN  Cue # is assigned in X2.

10.5.3.2 In masters
To select the desired cue as next cue, #, press:

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

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

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

10.6 RATE CONTROL

10.6.1 In crossfaders
A crossfader can be accelerate or decelerate. To activate or deactivate the rate control, press:

F RATE

Now, in the control wheels...
The speed control for the crossfader X is in W1
Move W1 to control Rate X, and/or press ▲ ▲ & ▼ ▼
The speed value is presented in percentage (%), in the status line of each crossfader. When this value is not 100% (affecting to the programmed times) is showed in a red field.

To have a rate control at any moment, it’s possible to use a master configured as RATE from the MDFY FLMT table.

In the next example, M24 is configured as RATE control of crossfader X.

10.6.2 In masters

When a sequence is executed using a master can have a rate control in other master configured as RATE from the MDFY FLMT table.

In the example, M12 is configured as RATE of the sequence M10 & M11.

10.7 LEVEL CONTROL

All models have a level control for the output of X1/X2 crossfade, this is SX.

Others sequences can have a level control in other master configured as LEVEL, from the MDFY FLMT table, for one or several playbacks.

Example, M12 is a LEVEL control for the sequences loaded in the M10 & M11 and the loaded in the crossfaders X & Y.

10.8 THE COMMANDS AND THE CROSSFADERS

If a cue has an associated command, this is executed from the crossfader or master when its cue begins the crossfade. These commands permit us to execute a Macro, a RS232 command.

Each cue only can have 1 associated command that is programmed from the CUE CUE.

These commands can be:

0: NONE Delete any previous associated command.
1: MACRO To select the macro that will be executed for this command.
2: A-232 To select the A-232 command that will be transmitted by the A-232 port.
For the commands types **A-232**, see chapter 18 –RS232 PORT. For the command type **MACRO**, see chapter 11 - MACROS.

ℹ️ Tip:
The commands permit us to execute several playbacks simultaneously, to control external devices (slides, video, music, etc)…

### 10.9 MDFY MDFY FUNCTION

The console has special functions to modify the cues in X1/X2 crossfader.

To modify the scene cue (**X1**) **adding** the editor modifications:
- Take care that **X1** is at 100% (FF).
- From the **Stage** editor modify channels, scrollers and parameters.
- And store these modifications in the **X1** cue pressing **MDFY MDFY**
  The editor content is **added** in the **X1** cue and then the editor is emptied.

{Stage editor} **MDFY MDFY**

To modify the next cue (**X2**) **adding** the editor modification:
- Take care that **X2** is at 0% (00).
- From the **Blind** editor modify channels, scrollers and parameters.
- And store these modifications in the **X2** cue pressing **MDFY MDFY**
  The editor content is **added** in the **X2** cue and then the editor is emptied. When the next crossfade is started, the **X2** cue fades in scene with the last modifications.

{Blind editor} **MDFY MDFY**

### 10.10 THE CROSSFAДЕR OUTPUT

As the same way that for the masters, it’s possible to select and call the outputs of the crossfaders:

To select the channels and parameters (without level) of the crossfade output, press:

**ENTER ASSIGN**
To call the channels and parameters with level/values of the crossfade output, press:

\( \text{CALL ASSIGN} \)

### 10.11 LEARN TIME in CROSSFADER

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

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

- To learn only \( T \uparrow \), pressing [GO] at the desired moment. Press [GO] as many times as \( T \uparrow \) to learn.
  
  Note that each \( T \uparrow \) begins the count after that the crossfade has ended.

- To learn all the cues times, execute the crossfade manually using its \( \text{X1} \uparrow \) & \( \text{X2} \downarrow \). The console learns in each faders travel the \( T \uparrow \) & \( T \downarrow \), and if correct, the \( T \uparrow \uparrow \) & \( T \downarrow \downarrow \). And between travels, learns the \( T \uparrow \). It's possible to repeat this process as many times as will be needed.

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

The both methods can be alternated, executing a crossfade manually, the next pressing [GO], etc.

This function needs the crossfade starts from the beginning (\( \text{X1} \) at 100% and \( \text{X2} \) at 0%).

At the right of the general status line, the flag [L-T ###] appears in a red field when [LNTM] is active. Where ### is the current value of the time counter.

To edit cue times inside the [CUE CUE] screen, but without modifications of the total cue time (according to the crossfade), press [LNTM] (LED at ON) and edit the desired time.

For the normal time edition, deactivate the [LNTM] (LED at OFF).

Examples:

The cues 1 & 2 are programmed with the next times:

<table>
<thead>
<tr>
<th>Cue</th>
<th>( T \uparrow )</th>
<th>( T \downarrow )</th>
<th>( T \downarrow )</th>
<th>( T \uparrow )</th>
<th>( T \uparrow )</th>
<th>Total cue time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.5</td>
<td>2.5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>6.5 seconds (2.5+3+1)</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0.5</td>
<td>0.5</td>
<td>6.5 seconds (3+3+0.5)</td>
</tr>
</tbody>
</table>
Now, edit the $T^\uparrow$ of the cue 1, with $\text{LNTM}$ deactivated:

<table>
<thead>
<tr>
<th>Cue</th>
<th>$T^\uparrow$</th>
<th>$T^\downarrow$</th>
<th>$T^\ominus$</th>
<th>$T^\uparrow$</th>
<th>$T^\downarrow$</th>
<th>Total cue time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5.5 seconds (1.5+3+1)</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0.5</td>
<td>0.5</td>
<td>6.5 seconds (3+3+0.5)</td>
</tr>
</tbody>
</table>

Now, edit the $T^\uparrow$ of the cue 1, with $\text{LNTM}$ active:

<table>
<thead>
<tr>
<th>Cue</th>
<th>$T^\uparrow$</th>
<th>$T^\downarrow$</th>
<th>$T^\ominus$</th>
<th>$T^\uparrow$</th>
<th>$T^\downarrow$</th>
<th>Total cue time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6.5 seconds (1.5+4+1)</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0.5</td>
<td>0.5</td>
<td>6.5 seconds (3+3+0.5)</td>
</tr>
</tbody>
</table>

This time is calculated by the system.

---

**RESUME**

<table>
<thead>
<tr>
<th>Loading</th>
<th>Crossfaders:</th>
<th>Masters:</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the cue #:</td>
<td>CUE # ASSIGN</td>
<td>CUE # THRU LOAD M#</td>
</tr>
<tr>
<td>From the first cue:</td>
<td>CUE ASSIGN</td>
<td>CUE THRU LOAD M#</td>
</tr>
<tr>
<td>A closed range of cues:</td>
<td>CUE # THRU # ASSIGN</td>
<td>CUE # THRU # LOAD M#</td>
</tr>
<tr>
<td></td>
<td>CUE # THRU ASSIGN</td>
<td></td>
</tr>
</tbody>
</table>

Assign and start the crossfade:

{cues} ASSIGN ASSIGN

**Crossfader configuration:** ASSIGN

Empty the crossfader or master:

DELETE ASSIGN

DELETE M#

Place a cue in the master sequence:

Cue 0: STEP▼ M#

Cue #: # STEP▼ M#

**Speed control:**

RATE W1\(\uparrow\)

Modify X1 or X2 cue:

{Stage editor} MDFY MDFY or {Blind editor} MDFY MDFY

Learn times (crossfaders):

LNTM GO GO ... LNTM
11. MACROS

The 8700 Series consoles have 2000 macros.

A macro has several keys programmed by the user that can execute at any moment:
1. Accepts any pressed key (and mouse clicks).
2. Doesn’t accept movements of faders, wheels, joystick or trackball.

The macros are used to execute edition processes or playback processes automatically.

A macro can be executed from the editor, from the BANKS, as command of cue or from the events list.

11.1 EDITING A MACRO

The macros are edited in live. To record a macro, the user must press the needed keys, bearing in mind that the pressed key are executing their functions, for that the macro collects these keys in the correct order. After, the macro repeats this process each time that is executed.

Record a macro, pressing:

- \text{MACRO} \# \text{REC} \quad \text{to begin the recording of the macro \#}
- \text{MACRO} \ \text{REC} \quad \text{to begin the recording of the next macro.}

When \text{MACRO} is pressed opens a red window to present us the macros list. In this way is easy to select the macro number.

When \text{REC} is pressed the flag \text{RecMac} appears in the status line in a red filed, at the same time that the \text{MACRO} LED blinks. The recording process has begun.

Press the desired keys (or mouse clicks) \{\text{Keys}\}
To end the recording process, press \text{MACRO} again. The macro is recorded.
The macros list is opened, and now it’s possible to edit a text for the new macro \{\text{text}\}
Close the macros list pressing \text{EXIT}

Resume:

- \text{MACRO} \# \text{REC} \ \{\text{keys}\} \ \text{MACRO} \ \{\text{text}\} \ \text{EXIT}

After, the macros list can be opened at any moment pressing \text{MACRO} \ MDFY
Example:
Record the macro 1 to select the channels: 1 to 5, 10 to 17 and 68.

```
MACRO 1 REC
    CHANNEL 1 THRU 5 CHANNEL 1 0 THRU 1 7 CHANNEL 6 8
MACRO (Optional, text) EXIT
```

11.2 MACRO MODIFICATION

To edit the contents of the macro #:

```
MACRO # MDFY
```

In the monitor:

Select the key to modify with the cursor, and execute the desired option. The options are:

0: DELETE that permits us to delete this key (in the example CHANNEL)
1: INSERT that permits us to insert a new key.
2: ONLY ▼ that permits us to indicate to the system that only “presses” the key
3: ONLY ▲ that permits us to indicate to the system that only “releases” the key

The 2 last options are used, in example, to execute flash functions. The macros don’t record the duration or time. For these cases, it’s possible to use 2 macros, one to activate the flash function and other to deactivate it.

MENU toggles between the setup line (where text can be edited) and the keys table.

Press EXIT to close this screen.

11.3 MACRO EXAM

It’s possible to exam a concrete macro or the macros list.

```
MACRO # EXAM to exam the macro 
MACRO EXAM to exam the macros list
```
11.4 DELETE A MACRO

To delete the macro # press:

MACRO  #  DELETE

To delete a macros range, press:

MACRO  #  THRU  #  DELETE

To delete all the macros, press:

MACRO  DELETE

11.5 MACROS COPY

To copy a macro or range, press:

MACRO  #  COPY  #  ENTER
MACRO  #  THRU  #''  COPY  #  ENTER

Examples:

MACRO  1  COPY  4  ENTER
MACRO  1  THRU  2  COPY  4  ENTER

11.6 MACROS EXCHANGE

To exchange 2 macros or ranges, press:

MACRO  #  COPY  COPY  #  ENTER
MACRO  #  THRU  #''  COPY  COPY  #  ENTER

Examples:

MACRO  1  COPY  COPY  4  ENTER
MACRO  1  THRU  2  COPY  COPY  4  ENTER
11.7 MACROS PLAYBACK

A macro can be executed using one of these methods:

- From the editor
- From the BANKS in mode Macro or Auto.
- As command of a cue, when the cue is executed in sequence.
- From the events list.

11.7.1 FROM THE EDITOR

Execute the macro #, (using the keys or the mouse):

- **MACRO # ENTER** or
- **MACRO #**

The macros list appears each time that **MACRO** is pressed. If needed, this window can be paged moving **MONITOR**.

11.7.2 FROM THE BANKS KEYS

BANKS allow you to execute macros directly when are configured as Macro or Auto.

The mode of BANKS appears to the left of the status line:

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

In this way, the 2000 macros are accessible in 200 banks selected with **BANK+ & BANK-**.

In the display, under the BANKS keys 1 to 10, you can see the active bank and its contents.

To execute a macro, press its associated bank key **#**.
**GX Models**

Configuration:

- BANKS 0: To set as Auto
- BANKS 1: To set as Macro

In this way, the 2000 macros are accessible in 200 banks selected with the BANKS wheel.

In the touch panel there are the contents of the active page of the BANKS - 1 to 10.

To execute a macro, press its associated touch key.

---

**GS & GL Models**

Configuration:

- BANKS 0: To set as Auto
- BANKS 1: To set as Macro

In this way, the 2000 macros are accessible in 200 banks selected with the BANKS wheel.

In the display, under the BANKS keys 1 to 10, you can see the active bank and its contents.

To execute a macro, press its associated bank key.

---

### 11.7.3 AS COMMAND OF A CUE

A macro associated to a cue is executed when its cue is playback in sequence (crossfaders or masters). Macro is associated to a cue as Command. When cue begins its fade-in scene, the macro is executed.

To associate a macro to a cue, open the cue list, pressing CUE. Access to Command of the desired cue, and select 1: MACRO. Access to the next cell to open the macros list. Select the desired macro number, #.

This is the method to synchronize in the crossfaders any action (master playback, effect playback, load of pages, etc).
11.7.4 FROM THE EVENTS LIST

From the events list, that it’s edited inside menu 23: Time Code, it’s possible to create events to execute macros. See the chapter 21.

11.8 EXAMPLES

The macros have a lot of possibilities. In this section, only there are some basic examples:

<table>
<thead>
<tr>
<th>Macro list:5</th>
<th>1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cross/Seg</td>
</tr>
<tr>
<td>2</td>
<td>Flash 50%</td>
</tr>
<tr>
<td>3</td>
<td>Flash 100%</td>
</tr>
<tr>
<td>4</td>
<td>10KW</td>
</tr>
<tr>
<td>5</td>
<td>MIDI ON</td>
</tr>
</tbody>
</table>

- Macro 1, named Cross X, loads in X2 the cue 123 and starts the crossfade.
- Macros 2 and 3, named Flash 50% and Flash 100%, change the Flash level a 50% and 100% respectively.
- Macro 4, named 10KW, selects all the groups of the 10 KW lamps, in the example, the groups 1, 5 and 65.
- Macro 5, named MIDI ON, activates the MIDI port.

Tips:

If during the macro recording, a warning message appears; press [C] to clear the message and follow with the recording process.

When a macro must begin with a numeric key, is recommended insert [C] before the number to avoid that this number can be modified with other number, in command line, still no used.

As a macro can be executed at any moment, it’s recommended don’t used the default selection (of command line). See chapter 5.

11.9 POWER-UP MACRO

A macro can be configured to execute it each time that the console is turned on. In this way it’s possible that the console executes any thing when it is turned on, and this is very used in small exhibitions where the console works without operator.

This macro is programmed in the menu 38: Power-Up Macro

See chapter 14.
RESUME

Record a macro:
Macro #: MACRO # REC {keys} MACRO {text} EXIT
Next macro: MACRO REC {keys} MACRO {text} EXIT

Execute a macro from editor: MACRO # ENTER

Modify a macro:
The macro #: MACRO # MDFY {modifications} EXIT
Macro texts: MACRO MDFY {texts} EXIT

Exam:
The macro #: MACRO # EXAM
The macros list: MACRO EXAM

Copy & Exchange:
Copy: MACRO # COPY # ENTER or MACRO # THRU # COPY # ENTER
Exchange: MACRO # COPY COPY # ENTER or MACRO # THRU # COPY COPY # ENTER

Delete:
The macro #: MACRO # DELETE
A macros range: MACRO # THRU # DELETE
All the macros: MACRO DELETE
12. GENERAL FUNCTIONS

12.1 SELECTION OF A RANGE

The range is created pressing THRU. An items range is defined with # THRU #', where # is the number of the first item and the #' it’s the number of the last item.

It’s possible to select ranges of: Channels, fixtures, groups, cues, effects, pages, macros, positions, dimmers, colors, gobos, etc.

When # is omitted, the system takes the first item. Examples:

CHANNEL THRU #’ is the same that CHANNEL 1 THRU #’
GROUP THRU #’ is the same that GROUP first-stored THRU #’

When #’ is omitted, the system takes the last item. Examples:

CHANNEL # THRU, is the same that CHANNEL # THRU last-system-channel
GROUP # THRU, is the same that GROUP # THRU last-stored

When # & #’ are omitted, the system takes the first and last items respectively, excepting for channels & fixtures that it’s a special command to select all the channels & fixtures in editor. Examples:

GROUP THRU, is the same that GROUP first-stored THRU last-stored

12.2 COPY AND EXCHANGE FUNCTIONS

The copy function is activated pressing COPY. The exchange function is activated pressing COPY COPY

Copy & exchange levels/values in the editor:

Channels

CHANNEL # COPY #’ ENTER, the level of channel # is copied to channel #’
CHANNEL # COPY COPY #’ ENTER, the levels of the channels # & #’ are exchanged.

Fixtures of the same type

FIXTURE # COPY #’ ENTER, the values of fixture # are copied to fixture #’
FIXTURE # COPY COPY #’ ENTER, the values of the fixtures # & #’ are exchanged.
Parameter of fixture of the same type:

```
FIXTURE # COPY # PARAM #" ENTER,
```
the value of parameter #" of fixture # is copied to fixture #'.

```
FIXTURE # COPY COPY #" PARAM #" ENTER,
```
the values of parameter #" of fixtures # & #' are exchanged.

Copy & exchange stored items:

Groups:
```
GROUP # COPY # ENTER,
```
group # is copied to group #'.
```
GROUP # COPY COPY #" ENTER,
```
the groups # & #' exchanges their contents.

Cues:
```
CUE # COPY # ENTER,
```
cue # is copied to cue #'.
```
CUE # COPY COPY #" ENTER,
```
the cues # & #' exchanges their contents.

Pages:
```
PAGE # COPY # ENTER,
```
page # is copied to page #'.
```
PAGE # COPY COPY #" ENTER,
```
the pages # & #' exchanges their contents.

Effects:
```
EFFECT # COPY # ENTER,
```
effect # is copied to effect #'.
```
EFFECT # COPY COPY #" ENTER,
```
the effects # & #' exchanges their contents.

Macros:
```
MACRO # COPY # ENTER,
```
macro # is copied to macro #'.
```
MACRO # COPY COPY #" ENTER,
```
the macros # & #' exchanges their contents.

Libraries: POS, DIM, COL, GOB, BEAM, XTRA; with examples for POS library:
```
POS # COPY # ENTER,
```
position # is copied to position #'.
```
POS # COPY COPY #" ENTER,
```
the positions # & #' exchanges their contents.

These commands admit as selection a range, i.e. for groups:
```
GROUP # THRU # …
```

Copy function. When the cue, group, etc, of target doesn’t exist, the system will create it.

Exchange function. When the cue, group, etc, of target doesn’t exist the system will create it, at the same time that the cue, group, etc, of source will be deleted.
12.3 RELEASE

RELEASE is used to release items controlled in the editor.

A channel and/or fixture:
CHANNEL # FIXTURE # RELEASE

A group of channels and/or fixtures:
CHANNEL # ENTER # FIXTURE # ENTER # RELEASE

A range of channels and/or fixtures:
CHANNEL # THRU # FIXTURE # THRU # RELEASE

A parameter of a fixture or fixtures range:
FIXTURE # THRU # PARAM # RELEASE

All the parameters of the same function of a fixture or fixtures range (example with COL function):
FIXTURE # THRU # COL RELEASE

The contents of a cue or cues range:
CUE # RELEASE
CUE # THRU # RELEASE

The contents of a group or groups range:
GROUP # RELEASE
GROUP # THRU # RELEASE

The contents of a part of a cue:
CUE # PART # RELEASE

The LTP parameters pass to tracking mode suddenly.
The channels & fixtures dimmers fade out editor in 2 sec if the command ends with RELEASE, or they are released suddenly if the command ends with RELEASE RELEASE

12.4 SELECT & CALL FUNCTIONS

To select items to the editor use ENTER
To call items to the editor use CALL
### Channels and/or fixtures:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTER {channels / fixtures}</td>
<td>The channels and fixtures are pre-selected</td>
</tr>
<tr>
<td>{fixtures} PARAM # ENTER</td>
<td>The parameter # of the fixtures is pre-selected and is active in the control wheels.</td>
</tr>
<tr>
<td>{fixtures} COL ENTER</td>
<td>All the color parameters are selected and active in the control wheels.</td>
</tr>
<tr>
<td>{channels / fixtures} CALL</td>
<td>The channels and fixtures dimmers fade at 100% in 2 sec.</td>
</tr>
<tr>
<td>{channels / fixtures} CALL CALL</td>
<td>The channels and fixtures dimmers jump at 100%.</td>
</tr>
</tbody>
</table>

### Cues and groups:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTER {cues or groups}</td>
<td>The contents of the cues or groups are pre-selected</td>
</tr>
<tr>
<td>{cues or groups} CALL</td>
<td>The cues or groups are loaded in the editor at 100%, fading in 2 seconds.</td>
</tr>
<tr>
<td>{cues or groups} CALL CALL</td>
<td>The cues or groups are loaded in the editor at 100%, suddenly.</td>
</tr>
</tbody>
</table>

### Part of a cue:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUE # PART #' ENTER</td>
<td>The contents of the part #' of the cue # are pre-selected</td>
</tr>
<tr>
<td>CUE # PART #' CALL</td>
<td>The part #' of the cue # is loaded in the editor at 100%, fading in 2 sec.</td>
</tr>
<tr>
<td>CUE # PART #' CALL CALL</td>
<td>The part #' of the cue # is loaded in the editor at 100%, suddenly.</td>
</tr>
</tbody>
</table>

### Effects: No supported for these functions.

### Masters with channels, cues or groups:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTER M#</td>
<td>The M# contents are pre-selected</td>
</tr>
<tr>
<td>ENTER ▼ M# M# M# … M# ENTER▲</td>
<td>The contents of these masters are pre-selected</td>
</tr>
<tr>
<td>CALL M#</td>
<td>The M# output is captured</td>
</tr>
<tr>
<td>CALL ▼ M# M# M# … CALL▲</td>
<td>The outputs of these masters are captured</td>
</tr>
</tbody>
</table>

### Crossfader

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTER ASSIGN</td>
<td>The output of crossfader is pre-selected</td>
</tr>
<tr>
<td>ENTER ▼ M# ASSIGN … ENTER▲</td>
<td>The contents of these playbacks are pre-selected</td>
</tr>
<tr>
<td>CALL ASSIGN</td>
<td>The output of crossfader is captured</td>
</tr>
<tr>
<td>CALL ▼ M# ASSIGN … CALL▲</td>
<td>The outputs of these playbacks are captured</td>
</tr>
</tbody>
</table>
The scene (console output):

| ENTER ENTER | All the items of the scene are pre-selected |
| CALL CALL   | All the items of the scene are captured   |

Page, Macro or Library (POS, DIM, COL, GOB, BEAM, X-TRA):

| {page, macro or library} ENTER | These are execution commands. The page is loaded in masters and crossfaders (normal mode); the macro is executed, or the library is applied in the selected fixtures. |
| {page} ENTER ENTER           | The page is loaded in masters and crossfaders in forced mode. |

### 12.5 MDFY & EXAM FUNCTIONS

Both functions permit us to access to the same information:

- **EXAM** only for exam, and
- **MDFY** for edition.

To quit any of these screens press **EXIT**.

Exam of a channel or fixture over the stored cues (and groups):

| CHANNEL # EXAM |
| FIXTURE # EXAM |

Exam or modification of the lists of cues, groups, effects, pages, macros, libraries (pos, dim, col, gob, beam, x-tra):

| CUE EXAM | CUE MDFY | CUE MEM |
| GROUP EXAM | GROUP MDFY | GROUP GROUP |
| MACRO EXAM | MACRO MDFY | MACRO MACRO |
| POS POS EXAM | POS POS MDFY | Etc.. |

In these lists the modification are about general attributes (times, texts, etc) never about contents.

Exam or modification of a cue, group or library:

| CUE # EXAM |
| GROUP # EXAM |
| COL COL # EXAM |

The contents and attributes are presented in an exam screen.

| RST # MDFY |
| RST GROUP # MDFY |
| RST COL COL # MDFY |

The cue, group or library is loaded at 100% in the editor, fading in 2 sec, to modify it.
Modification of a range of cues or groups:

\[ \text{RST CUE} \# \text{THRU} \# \text{MDFY} \]
\[ \text{RST GROUP} \# \text{THRU} \# \text{MDFY} \]

The first cue or first group is loaded at 100% in the editor, fading in 2 sec to modify it. The modifications done in this first cue (or group) are stored in all the cues (or groups) of the range. After press \text{REC} to store the modifications. The cue or group fades out the editor in 2 sec.

Exam or modification of an effect, page, or macro

\{\text{effect, page or macro}\} \text{EXAM}

The contents and attributes are presented in an exam screen.

\{\text{effect, page or macro}\} \text{MDFY}

The contents and attributes are presented in a modification screen.

Exam or modification of a master

\text{EXAM M#}

The contents and attributes (of the loaded item) are presented in an exam screen.

\text{RST MDFY M#}

Load in the editor, in modification mode, the cue or group at 100%, ready to modify it. If the master has an effect, open the modification screen of its effect.

\{\text{editor}\} \text{MDFY M#}

Modify the cue or group in \text{M#} with the editor contents.

Exam or modification all the masters

\text{EXAM FLMT}

Exam the items loaded in masters.

\text{MDFY FLMT}

Modifies the items loaded in masters.

Other special commands:

\text{EXAM EXAM}

Permits us to exam a resume of all the show data.

\{\text{editor}\} \text{MDFY MDFY}

Special function that permits us to modify the crossfade. See the chapter 10
12.6 SELECTION OF THE NEXT ITEM

The NEXT function can be applied in general mode or selective mode (in case of channels and fixtures into the editor).

a) General mode. It’s used to increment the number of channel, fixtures, cue or group used.

<table>
<thead>
<tr>
<th>Selection</th>
<th>In the command line…</th>
</tr>
</thead>
<tbody>
<tr>
<td>{channel}{optional level} NEXT</td>
<td>Gives the next number of channel</td>
</tr>
<tr>
<td>{fixtures}{optional edition} NEXT</td>
<td>Gives the next number of fixture</td>
</tr>
<tr>
<td>{group}{optional level} NEXT</td>
<td>Gives the next number of stored group</td>
</tr>
<tr>
<td>{cue}{optional level} NEXT</td>
<td>Gives the next number of stored cue</td>
</tr>
<tr>
<td>{page, macro or effect} NEXT</td>
<td>Gives the next number of entered number</td>
</tr>
</tbody>
</table>

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

Select the channels 125, 127 and 129

CHANNEL 1 2 5 ENTER NEXT ENTER NEXT ENTER

b) Selective mode. Increment the number of channel or fixtures that are in the editor. This mode is only for channels & fixtures.

<table>
<thead>
<tr>
<th>Selection</th>
<th>In the commands line…</th>
</tr>
</thead>
<tbody>
<tr>
<td>{editor} CHANNEL NEXT</td>
<td>NEXT LED at on. Gives the next channel in the editor</td>
</tr>
<tr>
<td>{editor} FIXTURE NEXT</td>
<td>NEXT LED at on. Gives the next fixture in the editor</td>
</tr>
</tbody>
</table>

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

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

PREV works as NEXT decreasing the number.
Select the fixtures 1, 5 and 7 and adjust their positions.

<table>
<thead>
<tr>
<th>Commands</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXTURE 1</td>
<td>Selection of the 3 fixtures</td>
</tr>
<tr>
<td>FIXTURE 5</td>
<td></td>
</tr>
<tr>
<td>FIXTURE 7</td>
<td></td>
</tr>
<tr>
<td>@ @</td>
<td>Edition of their dimmers at 100%</td>
</tr>
<tr>
<td>FIXTURE NEXT</td>
<td>Pre-selection of fixture 1</td>
</tr>
<tr>
<td>TB@</td>
<td>Adjustment of the position of this fixture</td>
</tr>
<tr>
<td>NEXT TB@</td>
<td>Pre-selection of fixture 5 and adjustment of its position</td>
</tr>
<tr>
<td>NEXT TB@</td>
<td>Pre-selection of fixture 7 and adjustment of its position</td>
</tr>
</tbody>
</table>

12.7 TEST FUNCTIONS

The TEST function permits us to isolate (in the editor) a channel, a dimmer, a cue or a group with the objective to check it. In this testing process:

- The editor contents are forced to 0%, at the same time that the tested item is loaded at 100% in the editor, fading in the editor default time.

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

Press TEST as many times as item to test. In example, to test several cues press CUE 1 TEST TEST TEST …
12.8 RESCUE

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

The system stores 3 data types:

**Editors.** Each time that RST is pressed, it stores a copy of this editor before emptied it.

**Selections.** Each time that a new selection is done the editor stores a copy.

**Modified cues.** Each time that a cue is modified, the system stores a copy of the original cue.

[RESCUE] permits us to recover the last 5 of each type (editor, selection or cue). Each new data of a type is stored in the first place in the rescue list.

To recover same the these data press [RESCUE].

A red window appears with the current options.

<table>
<thead>
<tr>
<th>SELECTION</th>
<th>EDITOR</th>
<th>CUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10: *</td>
<td>20: *</td>
<td>30: 3</td>
</tr>
<tr>
<td>11: *</td>
<td>21: *</td>
<td>31: 2</td>
</tr>
<tr>
<td>12: *</td>
<td>22: *</td>
<td>32: 1</td>
</tr>
<tr>
<td>13: *</td>
<td>23: *</td>
<td>33: 7</td>
</tr>
<tr>
<td>14: *</td>
<td>24: *</td>
<td>34: 5.6</td>
</tr>
</tbody>
</table>

Select the desired option, #, and end the command with [CALL], [ENTER], or [TEST].

The index numbers 10 to 14 are selections, the index numbers 20 to 24 are editors, and the index numbers 30 to 34 are cues.

In the rescue lists of SELECTION and EDITOR an * indicates us that these data have information stored. In the rescue list of CUE each stored data presents the original cue number.

Modify the cue 3

CUE 3 MDFY {modifications} REC

Recover the original cue 3 pressing

RESCUE 3 0 CALL

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

CUE 3 REC REC
GENERAL FUNCTIONS

RESUME
RANGE: # THRU #’

COPY & EXCHANGE
Copy // exchange of channels & fixtures
# COPY #’ ENTER // # COPY COPY = #’ ENTER
Copy a fixture parameter
FIXTURE # COPY #’ PARAM #’ ENTER
Exchange a fixture parameter
FIXTURE # COPY COPY #’ PARAM #’ ENTER
Copy a group, cue, page, macro, effect or library
# COPY #’ ENTER
Exchange of a group, cue, page, macro, effect or library
# COPY COPY #’ ENTER
Copy a range of groups, cues, pages, macros, effects or libraries
# THRU #’ COPY #’ ENTER
Exchange a range of groups, cues, pages, macros, effects or libraries
# THRU #’ COPY COPY #’ ENTER

RELEASE
The selection in 2 s // 0.1 s {selection} RELEASE // {selection} RELEASE RELEASE

SELECT & CALL
Pre-selection {selection} ENTER
Load at 100% fading in 2 sec {selection} CALL
Load at 100% suddenly {selection} CALL CALL
Execute a page (normal mode), macro or library {selection} ENTER
Execute a page (forced mode) {selection} ENTER ENTER
Select // call to the master content ENTER M# // CALL M#
Select the contents of several masters ENTER▼ M#, M#… M# ENTER▼
Call the outputs of several masters CALL▼ M#, M#… M# CALL▼
Select // call the output of a crossfader ENTER ASSIGN // CALL ASSIGN
Select // call the scene output ENTER ENTER // CALL CALL

MDFY & EXAM
Command of exam // modification {selection} EXAM // {selection} MDFY
Modification of groups and cues RST {selection} MDFY
Exam // modification of a master EXAM M# // RST MDFY M#
Add the editor to a master {editor} MDFY M#
Exam // modification of all the masters EXAM FLmT // MDFY FLmT
Exam of the show EXAM EXAM
Add the editor to X1 // X2 {Stage} MDFY MDFY // {Blind} MDFY MDFY

NEXT & PREV
Next item (or preview) in the system {item} NEXT // {item} PREV
Next item in the editor {editor} CHANNEL /FIXTURE NEXT
TEST {item} TEST, TEST...
RESCUE: RESCUE # CALL / ENTER...
13. SHAPES

Shape functions allows to you establish dynamic values for channels and fixture parameters; they can be applied parameter by parameter or using some combinations as Pan&Tilt (position parameters), or Cyan, Magenta & Yellow (or color mix parameter). Shapes are edited from Editor and are stored & executed in groups and cues.

To edit with shapes, we start of pre-programmed shapes for movements, colors, dimmers, etc… The basic list of LT shapes can be enlarged with new shapes and shapes combinations that have been adjusted by the user.

Cues & groups with shapes allow you to control the fade of their shapes, with the timing (general mode) or, only for cues, too with part times (specific mode). Timings and parts allow you to control the shapes fade in reference to their size, rate or both.

13.1 EDITING SHAPE FOR A SELECTION

To apply a shape (NEW) it is needed to select the channels and/or fixtures that you want that execute the shape. After, it’s possible to add (ADD) more shapes to this same selection.

In the editor you can have several selections executing several shapes each one. One selection can has from one channel or parameter up to all the channels & fixtures of the console.

The limit of shapes is: **30** shapes for each group or cue stored.

To apply a shape, from the editor:

1. **{Select fixtures and/or channels}** SHAPE
   
   From SHAPE window, select **0: NEW**

   Follow the selection process in the next windows:
   
   SHAPE FILTER, SHAPE LIST & PARAMS ID

<table>
<thead>
<tr>
<th>SHAPE window</th>
<th>Selection of the desired function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This window is opened pressing SHAPE…</td>
</tr>
<tr>
<td>0: NEW</td>
<td><strong>To apply a new shape</strong> you must select the option 0:NEW</td>
</tr>
<tr>
<td>1: ADD</td>
<td>The options in grey are not available. The option in yellow is the option pre-selected. To select an option:</td>
</tr>
<tr>
<td>2: EDITOR</td>
<td>Use the mouse; enter the option number, #, or press SHAPE as many times as will be necessary to pre-select the desired option (in yellow) and press ENTER to accept it.</td>
</tr>
<tr>
<td>3: PLAYBACKS</td>
<td></td>
</tr>
<tr>
<td>4: LIST</td>
<td></td>
</tr>
<tr>
<td>5: EXAM</td>
<td></td>
</tr>
<tr>
<td>6: EXAM SEL</td>
<td></td>
</tr>
</tbody>
</table>
**SHAPE FILTER**

**window**

Help to find the desired shape using filters.

<table>
<thead>
<tr>
<th>SHAPE FILTER</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- - - - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0: FREE</td>
<td>1: DIM</td>
<td>2: COL</td>
</tr>
<tr>
<td>3: GOB</td>
<td>4: BEAM</td>
<td>5: XTRA</td>
</tr>
</tbody>
</table>

Appears if the selection has fixtures, and allows you to filter the shapes list only with shapes for DIM, COL or other category. The **0:FREE** option is the access to the full list, and is the option to choose a shape that you can apply in a concrete parameter, as the gobo wheel or the zoom.

To choose one of these options:

Use the mouse or enter the option number, #

If you initial selection has only channels, this window doesn’t appear. In this case, the list is filtered automatically by dimmers (DIM).

**SHAPE LIST**

**window**

Selection of one shape of the list.

<table>
<thead>
<tr>
<th>SHAPE LIST</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- - - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1: Sine</td>
<td>2: Cosine</td>
<td>3: Step</td>
</tr>
<tr>
<td>4: Flash</td>
<td>5: Trapeze</td>
<td>6: Tri</td>
</tr>
<tr>
<td>7: Saw</td>
<td>8: Up</td>
<td>9: Down</td>
</tr>
</tbody>
</table>

Appear the list of the existing list, normally filtered following the choosing of the previous window.

To choose one of these shapes:

Use the mouse, or enter the shape number, # **ENTER**

If the desired shape isn’t in the list, you can return to the filter window to change it, pressing **C**

**PARAMS ID**

**window**

Selection of the parameter for the shape (if proceed)

<table>
<thead>
<tr>
<th>- - - - - - POS - - - - -</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0: X</td>
<td>1:Y</td>
<td></td>
</tr>
<tr>
<td>2:XY-Func</td>
<td>19: S-Pos</td>
<td></td>
</tr>
<tr>
<td>- - - - - - DIM - - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:Dimmer</td>
<td>21:Shutter</td>
<td></td>
</tr>
<tr>
<td>- - - - - - COL - - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22:Strobo</td>
<td>22: S-Dim</td>
<td></td>
</tr>
<tr>
<td>40: Cyan</td>
<td>41:Magenta</td>
<td></td>
</tr>
<tr>
<td>42:Yellow</td>
<td>43:Red</td>
<td></td>
</tr>
<tr>
<td>44:Green</td>
<td>45:Blue</td>
<td></td>
</tr>
<tr>
<td>46:Amber</td>
<td>47:Color</td>
<td></td>
</tr>
<tr>
<td>48:Col-Fnc</td>
<td>49:Correct</td>
<td></td>
</tr>
<tr>
<td>50: S-Col</td>
<td>52: GOB</td>
<td></td>
</tr>
</tbody>
</table>

This window only appears if proceed (if it is needed), normally when you has chosen a shape FREE... and it isn’t of movement (Pan&Tilt) or color mix (CYM, RGB, etc). This window allows you to choose the parameter where the shape is executed.

To choose a parameter:

Use the mouse, or enter the parameter number, # **ENTER**

You can return to the previous window pressing **C**
Examples:

a) Apply a position shape, a circle movement, to 6 fixtures:

```
FIXTURE [1] THRU [6] {if necessary can be edited} SHAPE
In SHAPE window, select 0:NEW
In SHAPE FILTER window, select 2:POS
In SHAPE LIST window, select 40:Circle
```

b) Apply a dimmer shape of “sine” to 6 channels:

```
CHANNEL [1] THRU [6] {if necessary can be edited} SHAPE
In SHAPE LIST window, select 1:Sine
```

c) Apply a free shape of “sine” to the gobo wheel of the fixtures 1 to 6:

```
FIXTURE [1] THRU [6] {if necessary can be edited} SHAPE
In SHAPE window, select 0:NEW
In SHAPE FILTER window, select 2:FREE
In SHAPE LIST window, select 1:Sine
In PARAMS ID* window, select 60:Gobo
```

* More information about this last window in chapter 17 – Fixtures definition.

Channels & fixture parameters that are executing shapes are marked with the symbol `◆` in the scene screens. In the next example, the channels 1 to 10 & the Shutter parameter of the fixtures 1 to 7:
13.2  ADDING A SHAPE TO A SELECTION

In the editor you can have several selections (of channels and/or fixtures) executing shapes. At any moment, it’s possible to add (1:ADD) other shape to the last selection.

To add one shape to the last selection executing shapes:

1. In SHAPE window, select 1:ADD
2. Follow the selection process in the next windows
   SHAPE FILTER,
   SHAPE LIST &
   PARAMS ID

*To add a shape it’s not necessary to do a selection; it’s necessary to have, at least, a selection executing shapes in the editor. The selection executing shapes, these shapes and their order can be seen in the Shape Editor screen. See below.

13.3  THE SHAPE EDITOR - ADJUSTEMENTS

When you have a shape applied in the editor, you can enter in the Shape Editor to adjust the desired shape parameters. To enter to this screen, press:

1. In SHAPE window, select 2:EDITOR

<table>
<thead>
<tr>
<th>Shape Editor</th>
<th>2: Editor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape Filter</td>
<td>1: ADD</td>
</tr>
<tr>
<td>Shape List</td>
<td>1: ADD</td>
</tr>
<tr>
<td>Params ID</td>
<td>1: ADD</td>
</tr>
</tbody>
</table>

*Shape Editor*

**Shape identification parameters…**

| SS | Order of the applied basic shapes to the different selections in the editor. Each new selection is marked with the symbol: ▶
In previous example, the first selection has 2 shapes (0 and 1), and the last selection has only one shape (2). |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Palette</td>
<td>Name of the basic shapes.</td>
</tr>
<tr>
<td>Type</td>
<td>Name of the shape type (parameter of parameters group where the shape is applied). There are some complex types, as PanTil (for movements) or as ColMix (for color changes in color mix fixtures) that they cannot be edited; and other simple types, as Shutter, Dimmer, etc. that they can be edited</td>
</tr>
</tbody>
</table>
from one parameter to other at any time.

### Basic mode parameters

<table>
<thead>
<tr>
<th>Effect</th>
<th>Selection of the desired effect. All of them are effects with different offset or time delays among the items that are executing the shape. The items number can be the number of selected items or a desired number (Nm). For more information, see 13.3.1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nm</td>
<td>Size control of the shape… The size control has 3 options to apply this amplitude: amplitude centered (↕), amplitude increased (↑) and amplitude decreased (↓)</td>
</tr>
<tr>
<td>Rate</td>
<td>Rate control for the shape execution. This control has 2 options, (+ &amp; -) that they are a direction change of the shape execution.</td>
</tr>
</tbody>
</table>

### Advanced parameters...

| Game 1 to 4 | There are up to 4 special possible games (all of them optional). These games allow to you from deform a shape to modify sizes or rates among items or cycles. For more information, see 13.3.2 |
| Nm     | Mod/Par  |

To enter data in this table you can use the numeric keyboard and the arrow keys; or use the last encoder (W3) and its associated keys: ↑↑↑ & ↓↓↓; the encoder is used, specially, to do continuous adjustments of Size & Rate.

### 13.3.1 Effect/Nm

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

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

If Nm is 0 the total offset is distributed among all the items of the shape (in the example case, 7 fixtures or items). Changing the Nm value, it’s possible to distribute this offset among Nm items.
Effect 0 – All items executing the shape with no-offset, simultaneously. Total offset is 0. In this effect the Nm value has no-action.

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

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

Effect 3 – Total offset among all items is of ¾ of cycle.

Effect 4 – Total offset among all items is of 1 cycle.

Effect 5 – Total offset among all items is of 1 cycle & 1/2.

Effect 6 – Total offset among all items is of 2 cycles.
Effect7 – First, there is an offset the $\frac{1}{2}$ cycle between odd & even items; and then, over this offset other offset of $\frac{1}{4}$ of cycle is applied.

Effect8 – there is an offset of $\frac{1}{2}$ of cycle between odd & even items.

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

If \( Nm = 0 \) the chase is applied to all the items of the shape (in the example, 7 fixtures). Changing values to \( Nm \), it’s possible to execute the chase each \( Nm \) items.

For Chase0 mode, the “next” item begins to execute its circle only when the previous item has ended.

For Chase1 mode, the “next” item begins to execute its circle when the first item is at half-cycle.

\( Nm \) is used to define the items number to apply the selected effect. If \( Nm=0 \) (default value) the effect will be applied to all the items of the selection, but it’s possible to change this value:
Examples (7 fixtures executing a circle with Effect1) for \( Nm=0 \) or 7, \( Nm=3 \) and \( Nm=5 \); respectively. \( Nm \) can have values from 0 to 32.

### 13.3.2 Advanced parameters: Games

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

<table>
<thead>
<tr>
<th>Games</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:None</td>
<td>No game is selected.</td>
</tr>
<tr>
<td>1:SizeIt</td>
<td>For this game it’s necessary that the shape is executing over several items. This game allows to you change the shape size in each item.</td>
</tr>
<tr>
<td>2:RateIt</td>
<td>For this game it’s necessary that the shape is executing over several items. This game allows to you change the shape rate in each item.</td>
</tr>
<tr>
<td>3:SizeCy</td>
<td>This game allows to you change the shape size in each cycle. In example, increasing the shape size in each new cycle during several cycles, and then to return to the start size and repeat the process.</td>
</tr>
<tr>
<td>4:RateCy</td>
<td>This game allows to you change the shape rate in each cycle. In example, decreasing the shape rate in each new cycle during several cycles, and then to return to the start rate and repeat the process.</td>
</tr>
<tr>
<td>5:Form</td>
<td>This game allows to you deform basic shapes of more than one parameter (types PanTil and CYM). Deforming the geometric figures (circle can be a oval) or the color mix (adjusting the gain of any color).</td>
</tr>
</tbody>
</table>

\( Nm \) is used to define the number of items, or cycles, for the associated Game. For items, if \( Nm=0 \) (default value) the associated Game it’s applied over all items of the selection.

**Mod/Par** this parameter is explained using some examples. Examples based in the Game 1, but valid for Games from 1 to 4:
For the Game 5: Form, the Mod/Par allows to you select the parameter to deform the shape, and this deformation is always in linear mode.

In the special line of the Shape Editor, press MENU to access to it, you can change the default Timing of the editor, or you can assign the shape fade control (size, rate or both) to any time part (P). Shape fade, programmed using timing or parts, has several options:

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

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

In this same edition screen, you can consult and edit the selection of each shape. In the special line of the Shape Editor, press MENU to access to it, you can change the Edit mode from Shapes to Selections... In this mode you can see the selection of each shape, in the adopted order (by default, numerical order).

f# is a fixture number, and c# is a channel number.
The symbol “–” appears near each fixture or channel that is disabled, in example -f60.
In general, you can edit the selection order, enable or disable any element of it, and delete an element or insert new elements.

13.4 SHAPES & PLAYBACKS

When shapes are edited, shapes can be stored in groups & cues. Shapes are executed in the playbacks as the cues or groups, as effects and as sequences. Shapes are activated when its cue (or groups) is activated and its activation is in accordance with the programmed timing or part.

To obtain information about the shapes loaded in playbacks, access to the Playbacks Shapes screen pressing:

SHAPE 3:PLAYBACKS

This screen allows you to have information & control about the shapes. The control only is accessible for the active playbacks and has 3 basic commands:
These commands can affect to all the shapes of the master or crossfader, (inside Playbacks list) or can affect, in selective mode, a each shape independently (inside Shapes list).

The Playbacks list shows us labels that coincide with the last command executed (by the user in this list, or by the system when a master, or crossfader, is activated or deactivated). If the symbol “??” appears near the playback label, it’s indicating to us that some shapes inside this playback has been controlled in independent mode.

In the crossfader and the masters with sequence, the label Mixed appears, indicating to us that the scene cue has its shapes in play and the next cue has its shapes in stop (the current crossfade ended).

If, at any moment, it’s necessary to play, pause or stop all the shapes in active playbacks, access to the Command cell in the special line inside this screen (always pressing MENU).

To access quickly to a playback – master (01...24), crossfader (X) or editor (Ed)– inside this screen, you can use the MOUSE.

From this screen, you can capture the shapes that proceed of a playback, with the objective of to call them to the editor for their modification. This action is done with the command 3: Call to Editor

Example of use:
Call to editor the shapes that proceed of the master 13, M13, from the screen SHAPE 3
Now, from the editor, inside screen SHAPE 2, you can modify the size or rate of a shape
After the modification, you can store it in the master 13, pressing MDFY M13
13.5 SHAPE LIBRARY

After a reset, always, the console starts with a shapes basic list. The user can store his own shapes from the editor and can maintain his own shapes list completely from Shape list screen.

13.5.1 STORING NEW SHAPES

To add a new shape to the list, the first step is to edit the shape, or shapes for a same selection (•) from the editor… the group the shapes associated to a selection (•) can be stored as a new shape, user shape, in the list. To store this new shape, access to the Shape Editor pressing:

SHAPE 2:EDITOR

<table>
<thead>
<tr>
<th>Shape Editor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lin</td>
</tr>
<tr>
<td>SS Palette</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

In this example, all is ready to store a new Shape that will include the basic shapes 4, 5 and 6, all of them applied in the same selection (•). The basic shapes from 0 to 3 will can be stored one-to-one, because each one of them is associated to a different selection (•).

To store the user shape, with the desired number, select one of the possible free numbers that appear in the red window. Then, to store the shape, enter the number, in example 1 0 0, and press ENTER.

13.5.2 MAINTENANCE OF THE SHAPES LIST

The maintenance of the shapes list is done from the Shape list screen. To access to this screen press:

SHAPE 4:LIST
Then, these user shapes can be used in the same mode that the basic shapes; including the filtering function. In case of this example, the shape 100 will appear in the list of the next filters:

FREE (all the shapes appear here)
POS (for CanCan in X)
COL (for Sine in Magenta) &
DIM (for Sine in Dimmer).

13.5.3 LOADING SHAPES FROM OTHERS SHOWS

The console allows you to load the desired shapes from any show. For this, access to the menu 10, select the source show with the cursor and execute its option 1: Load Selected. See chapter 14 – Menus.

13.6 EXAMINING SHAPES IN GROUPS & CUES

Examining cues & groups with shapes, it’s possible to open the shapes information screen pressing:

SHAPE 5:EXAM

Too, it’s possible to open the shapes information screen with a format it allows you to see the content of each selection (▶), pressing:

SHAPE 6:EXAM SEL

These commands only work inside the exam screen of cues and groups.
14. MENUS

MENU opens the menus list. To select a menu of this list, you can:

Use the mouse (external or trackball in Mouse mode)

Insert the menu number in 2 digits:  #   #

Example: To open the menu 01: Channels, press  MENU  0  1

To close the active menu screen and return to editor, press  EXIT

To close the active menu screen and return the menus list, press  MENU  MENU

In this chapter are explained all the menus, except menus seen in other chapters, as:

Menu 50 & 60:  Chapter 3 – Configuration
Menu 04:  Chapter 4 – Fixtures patch & Chapter 17 – Fixtures definition
Menu 06:  Chapter 6 – Cues & Groups.
Menus 00 to 02 & 05:  Chapter 15 – Channels Patch
Menu 03:  Chapter 16 – DMX input
Menu 20:  Chapter 18 – The RS232 port
Menu 21:  Chapter 19 – Midi
Menu 22:  Chapter 20 – Sound and externals triggers
Menu 23:  Chapter 21 – Synchronisms, Time Code
Menu 40:  Chapter 24 – Ethernet
Menu 79 (part):  Chapter 24-Ethernet & Chapter 22-Reset and Updates.
14.1 GENERAL EDITION

Inside the menus the cursor is moved using the mouse or the arrow keys. Options of interactive windows are selected using the mouse or pressing \textbf{ENTER}. Data are edited from numeric keyboard (except the text data that are edited from the alphanumeric keyboard) and are accepted pressing \textbf{ENTER} or moving the cursor.

14.2 MENU 10 – TO STORE/LOAD A SHOW

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

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

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

Inside this menu the console presents the directory of show files of the active disk. Each show uses a line for its information. A show is defined with a \textbf{Name}, a \textbf{Title}, the model and version of the console where was stored - \textbf{Board & Ver}, the capacity in \textbf{Kbytes}, and its \textbf{Date & Time}. This directory always has a last empty line that is used to store a new show.
In the shows directory, each line has a ▼F cell. Selecting this cell, the functions to store, load, and delete are available.

Each time that a LT show is selected, the Exam zone presents you information about it.

14.2.1 STORE A NEW SHOW

To store a new show in the disk:
- Select the last empty line
- Its ▼F cell is active.
- Select the option 2: Save
- The system requests confirmation. Confirm pressing [ENTER]

Each new show is named with a general name NEW-000.LT that it’s possible to edit.

Each time that a show is stored, the system ordered the directory. The new show is selected (yellow line) to can edit its Name or Title using the alphanumeric keyboard.

A show name has MS-DOS format: name.ext
Where name has maximum 8 characters, and ext has maximum 3 characters.

Title is a free text of maximum of 20 characters.

14.2.2 OVERWRITE A SHOW

To overwrite a stored show with the last modifications:
- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option 2: Save

The system requests you confirmation:
Confirm pressing [ENTER]. The show is replaced with the new data.

14.2.3 LOAD A SHOW

To load a stored show in the console:
- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option 0: Load

The system requests you confirmation:
Confirm pressing [ENTER]. The selected show is loaded in the system. When the loading ends it presents a general exam screen. Press any key to close this exam screen.
14.2.4 LOAD SOME ITEMS OF A SHOW

The console allows you to load only some items of the show, partially. Example, it’s possible to load a Patch used in a show, without the need the load cues, pages, etc. To load some part of a show:

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

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

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

The system requests a confirmation:

ENTER to confirm or EXIT to abort.

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

Into the Load Selected zone, you can select:

- Cues, groups, effects, pages and macros, if needed, adjusting the loading range, From-To that allows you to load one, some, or all stored cues, groups, etc.
- The channels patch.
- The fixtures Patch & all the fixtures libraries (pos, dim, col, gob, beam & x-tra)
- The dimmer curves
- The MIDI configuration
- The event list inside the Time Code menu
- The console Setup

Each one of the items of the list has associated a Load cell and an Overwrite cell. The Load cell allows you to set if the associated items are loaded (YES) or not (NO). The Overwrite cell allows you to set if the loaded items overwrite to the stored in the console (YES) or not (NO).

Example: The console has the cues 1 to 100 and 140 to 145. Now, load from other show the cues 101 to 150:
Access to the menu 10 and select the show that has these cues, then, select in ▼F its option 1: Load Selected, and:
Select the Cue line and set its Load cell at YES.
Edit From-To at 101-150
To preserve the console cues 140-145 edit its Overwrite at NO.
To overwrite the console cues 140-145, edit Overwrite at YES.
Note:
If it's needed load items from several shows, is recommended follow this order to load:
2. Cue/Groups/Macro
3. Effect/Page/Time Code

The rest the options can be loaded in any order.

14.2.5   DELETE A SHOW

To delete a show of the disk:
- Select the stored show with the cursor (using the mouse or arrow keys).
- Select its ▼F cell
- Select the option 3: Delete Show
- The system requests you a confirmation. To confirm press ENTER

14.2.6   THE SHOW FILE FORMATS

The 8700 Series consoles can use show files with the format LT or ASCII.

The LT format is the ideal format (all data shows are stored and the processes to store and to load and very quick). It’s recommended use always this format.

The ASCII format is an auxiliary format used to export shows to other consoles and to import shows from other consoles. A show in ASCII format only has cues with their times, groups, channels Patch and curves. The cues & groups only have channels information.

The ASCII format is a standard of the USITT that only has the more standard items. Use this format when will be necessary to export the LT show to a console pf other manufacture, or vice versus. If an ASCII show has been loaded in the console, don’t forget store it in LT format to continue working with this LT show.

The process of load of an ASCII show can use several minutes (in accordance with the show size), during this process the screen presents you the evolution of the load.

A LT show can be edited in a PC, using the 8700 Series Off Line Editor.
An ASCII show can be edited in a PC using any text editor.
14.2.7   SELECT THE FORMAT & ACTIVE DISK

The first step to work with show files, is to select the show format (LT or ASCII), and the active
disk (Hard Disk, Floppy Disk or USB Disk).

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

Each time that this option is changed, the system update the directory to present you the shows
with the selected format of the active disk.

To return to the shows list, use the mouse, press ENTER or press ↓

14.2.8   UPDATE THE SHOWS DIRECTORY

The Directory is updated automatically each time that the format/disk option is changes and the
first time that the menu Disk is selected in the session. In this way, if the floppy is exchanged, as
something like that, it is needed to execute the option Update (in the setup line) to update the
directory:

- Access to the setup line, pressing MENU
- Select the command 0: Update

To return to the shows list, use the mouse, press ENTER or press ↓

14.2.9   ORGANIZE SHOWS IN FOLDERS

It’s possible to create Folders to organize the shows.

To create a new Folder in the current directory:
- Move the cursor to the empty last line. Its ▼F cell is active.
- Execute the option 4: New Folder
The system creates a folder with a name as FOLDER00; it’s possible to edit its **Name**.

**To work with the shows of a Folder:**
- Select the Folder line with the cursor.
- Access to its ▼F cell
- Execute the option 5: Select Folder

The system presents the directory of the selected Folder. The name of the opened folder appears in the Setup line:

```
<table>
<thead>
<tr>
<th>Disk</th>
<th>1483644</th>
<th>Kbytes free</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Disk</td>
<td>▼LT Shows</td>
<td>▼Update</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>Board</td>
</tr>
</tbody>
</table>
```

Now, it’s possible to store shows or to load shows following the normal processes.

**To quit to the previous Folder:**
- From any directory line, access to its ▼F cell.
- Execute the option 6: Previous Folder

The system closes this folder and presents the directory to the previous folder.

**To delete a Folder:**
To delete a Folder, first it’s needed delete all the shows (or others folders) inside this Folder. Delete each one of the shows inside the folder, and quit to the previous folder and:
- Select the folder to delete with the cursor.
- Access to its ▼F cell
- Execute the option 7: Delete Folder

**Graphic example:**

![Graphic example of folder structure]( Graphic example.png)
Note:
Hard Disk, Floppy Disk & USB Disk have a basic organization. The show files are stored inside the folder SHOWS (accessible from menu 10), the fixtures are stored inside the folder FIXTURES (accessible from menu 04) and the devices are stored inside the folder DEVICES (accessible from menu 20). The items, placed out of their respective folder, are not accessible.

14.2.10 FORMAT ATHE FLOPPY DISK
The console uses 3½ formatted floppy disks. The format of these floppy disks is DOS. If the floppy is not formatted (or if it’s needed delete it completely), must be necessary to format it. The floppy can be formatted in a PC or from the own console.

To format a floppy in the console, inside the menu Disk:
• Insert the floppy in the disk unit of the console.
• Access to the setup line
• Select its command 0: FORMAT FLOPPY DISK

This process needs some seconds. All data in disk are deleted.

14.2.11 LT SHOWS COMPATIBILITY
Your console can load the LT show files:
• Any show stored in this console with the same version number or lower.
• Any show stored in a 8700 Series console with the same number of software version or lower.
14.3  MENU 11 – DATA PRINT

To print any console data must access to the menu 11: Print

The screen presents a list with all the items that the system can print. It’s possible to print one, some or all the items.

For libraries, cues, groups, effects, pages & macros, 2 options are available: contents (Data) or general list (List).

For the Data printing, it’s possible to select the items range to print (From-To).

Each cue, macro, etc. needs minimum 1 page to print its contents.

Select the items to print individually

From the Print cells of the items list, it’s possible to select the items to print:
- To don’t print the item select 0: NO
- To print the item select 1: YES

Example: Print all lists, and print the contents of all the cues (105 in the next example) in addition the content of the POS libraries from 3 to 5.

Select the items to print generically

In the setup line select ▼ All/None and choose one the its options:
- To unselect all the items, select 0: NONE
- To select all the items, select 1: ALL

To return to the list, use the mouse, press ENTER, or press ↓

---

LEVITON 8700 SERIES
**Print the selected items**

- Select its option ▼**Print**, in the setup line.
- Select the desire option:

<table>
<thead>
<tr>
<th>Options…</th>
<th>For …</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: TO PRINTxxx.TXT ON HARD DISK</td>
<td>Print to file in a hard disk</td>
</tr>
<tr>
<td>2: TO PRINTxxx.TXT ON FLOPPY DISK</td>
<td>Print to file in a floppy disk</td>
</tr>
<tr>
<td>3: TO PRINTxxx.TXT ON USB DISK</td>
<td>Print to file in a USB disk</td>
</tr>
</tbody>
</table>

The print files are named as **PRINTxxx.txt**. They can be edited & printed, in a PC, using any text editor. The objective of this file is be used in a PC. From the PC will be possible to edit it, to print it, etc.
SETUP CONFIGURATION

All the configuration menus are in the SETUP group.

14.3.1 30: EDITOR & TIMES

The editable parameters are:

- `-% +% Level`. It’s the value of ↑↓ y ↓↑ in continuous variations, by default 5%.
- `Editor Time`. It’s the time in seconds that the editor uses in functions as RST, RELEASE or CALL. By default 2 sec.
- `Cue T↑` in seconds for cues.
- `Cue T↓` in seconds for cues.
- `Cue T` in seconds for cues. 0 to assign at ∞.
- `Timing`. It’s the default timing (T1 to T6) for groups & cues
- `GOback Time`. It’s the time, in seconds, for the Go-Back function. This time also can be edited as 0: CUES, to assign to the Go-Back function, the fade times of the cue in scene.
- `Group/Ch Tϧ`. It’s the fade time associated to groups & channels to their playback in masters.

14.3.2 31: PLAYBACKS

The editable parameters are:

- `Flash Level`. It allows you to change the level of the Flash functions.
- `Solo Off X+Y`. It allows to configure if the Flash-Solo function affects (or not) to the output of X1/X2 crossfader, forcing it to 0%. This function is DISABLED by default, and doesn’t affect to the crossfader output.
- `SM`, that allows to configure the functioning of the master SM ϧ as control of master outputs or as control the DMX inputs.
- `SX`, allows you to enable, 0:ENABLED, or disable, 1:DISABLED, the level control master of the X1/X2 crossfader, SX ϧ.
- `GM`, that allows to configure if the General Master works in scale 0 to 100%, in scale 0 to 200%, or is DISABLED. By default, 100%. DISABLED option is a good solution when the GM ϧ fader is broken.
- `BLKoUT-SM-SX`, allows you to disable (or enable) the blackout key of the masters SM ϧ, SX ϧ & GM ϧ.
- `CHS OUT GM`, allows you to edit the channels number not- controlled by the GM ϧ. By default 0. The fixture parameters aren’t controlled by GM ϧ (except Dimmer). The
conventional channels that are excluded of the GM control are always the last of the system. Example: If a console has 250 channels, and 3 channels are excluded here, these channels will be the 250, 249 & 248.

- **Manual Track**, when this option is **ENABLED**, the manually activated masters control their LTP parameters in all moment (fade-in & fade-out processes), using their return values and avoiding that these LTPs remain to tracking value.

- **Dipless Mode**, when this option is **T↑**, channels in the current cue & next cue, do the crossfade using the input time of the next cue; and if this option is **T↑↓**, if the shared channel increases (i.e. from 80% to 10%) do the crossfade using the output time and if decreases (i.e. from 10% to 80%) using the input time.

### 14.3.3  32: SYSTEM

[**MENU 3 2**](#)

The editable parameters are:

- **LANGUAGE** selects the language of messages and warnings.
- **KEYBOARD** selects the language (type) of the alphanumeric keyboard. To accept this selection is needed turn off the console.
- **KEYBOARD** selects the active alphanumeric keyboard, this keyboard can be the internal placed in the drawer (INT) or an external (EXT).
- **LEDS BRIGHT** selects the brightness level for blue LEDS of the frontal panel (5 options are available).
- **BEEP**, that allows to adjust the tone of the warning acoustic signal (beep). The BEEP can have values from 0 to 100, where 0 indicates a deactivated BEEP, and from 1 to 99 adjust the BEEP frequency. By default the BEEP is at **10**.
A beep is emitted each time that the system requests the user attention.
- **LIGHT** adjusts the level of the working lights (0-100). By default at 0 %.
- **MONITOR** configures the look of the screens, select:
  0: **LIGHT** to set a light background (white).
  1: **DARK** to set a dark background (gray).
- **DISPLAY** adjusts the Display contrast (0-100). By default 100%. This option there is not in the GS models.
- **DATE**, it’s the current date.
- **TIME**, it’s the current time.

### 14.3.4  33: DMX OUTS UPDATES

[**MENU 3 3**](#)

Here, it’s possible to adjust the speed transmission for each one of the DMX outputs: **DMX 1**, **DMX 2**, **DMX 3** & **DMX 4**.
The adjustment of speed has the objective of avoid problems with oldest DMX receivers, and the available options are:

0: FAST  DMX output is updated 20 times per second (Default option).
1: MEDIUM DMX output is updated 10 times per second.
2: SLOW  DMX output is updated 6.6 times per second.
3: CHANGE DMX output is updated only when its information has a change.

14.3.5 34: SECURITY

If the Security option is activated, the system works in a protected mode, where the REC, DELETE & MDFY functions aren’t operatives. In this way the show data cannot be changed (cues, pages, groups, libraries, etc.), but the show can be executed. To activate the Security option is needed a Password.

To activate Security
Enter any password (8 numbers, no text can be edited here). The system requests you to confirmation. Enter again the same password. Security is ENABLED.

To deactivate Security
Enter the same activation password. Any password can activate Security, but only the activation password can deactivate it.

Don’t forget the Password, will be needed to deactivate Security !!!

14.3.6 35: REMOTE & POCKET PC

There are 2 types of remote control: Remote & Pocket PC.

Note: For more information about these types, see the respective user manual.
To configure the communication with the remote control, you have the next options:
• **Enabled** that allows to set the type the remote control to use, as **NONE** (default option), **REMOTE** or **POCKETpc**.

Only if the selected type is **REMOTE**, the next options are used:

• **Remote ID**, that allows to set the communication with the remote control that have this same ID number. The ID can have a value from 1 to 12.

**PocketPC** remote control works by Ethernet, for this reason it’s needed to activate in the console the Ethernet communication (if it’s needed, activate it inside menu 40: **Ethernet Configuration**). Only if the selected type is **POCKETPC**, a flag appears at the right of this option to shows you the Ethernet status:

  - **Net Off**: If Ethernet communication is deactivated; it’s needed activate it.
  - **Net ON**: If Ethernet communication is activated

14.3.7 36: **POWER-UP MACRO**

It’s possible to edit a macro number for that the system executes it each time that it is turned on.

• **Macro** accepts a stored macro number (1-999). Use the number 0 to delete any edited macro.

### 14.4 TOUCH SCREEN CALIBRATION (GX)

For **GX** models models, there is a menu 51: **Touch Screen Calibration**. This menu only is the physical consoles (no-simulators) and it allows to you to calibrate the touch screen.

Follow the process in screen. The adjustment will be better if it is done using a pointer suitable for touch screen.

### 14.5 SPECIAL COMMANDS

Menus 70 & 71 and placed in the same screen.
14.5.1 70: MULTIMEDIA PANEL

Groups the most of the options On/Off for multimedia. The objective of this grouping is to have a quick access to these options, especially when more than one is active in the show.

14.5.2 71: STATUS & PLAYBACKS ZERO

This menu groups several commands used to return a known situations.

<table>
<thead>
<tr>
<th>STATUS &amp; PLAYBACKS ZERO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status . . . . . . . . .</td>
</tr>
<tr>
<td>All Playbacks .. . . . .</td>
</tr>
<tr>
<td>All Masters . . . . . . .</td>
</tr>
<tr>
<td>All Crossfaders . . . . .</td>
</tr>
</tbody>
</table>

**Status** initializes any temporal function and some special functions:
- The editor active is **Stage**
- Any screen of exam, edition or menu is closed.
- The blackout functions of **GM** & **SX** & **SM** are enables.
- This command ends the storage in progress of any macro.
- The **LNTM** function is deactivated.

**All Playbacks** is a command that groups the next 2 options.

**All Masters** sets at 0% the output of any active master. The master contents aren’t affected. In case of effect masters, the effect is stopped and the system locks the level master at FF & the speed master at 100%.

**All Crossfaders** empties the scene cue, loaded in **X1**, and this cue is placed in **X2** as next cue at 0%. The crossfader hasn’t stage output.

These commands can cause light-jump in stage!

These commands are very used to give back (at zero) in processes of playback or edition.

- To execute any of these commands, select its corresponding 0: ZERO option.

14.5.3 79: TOOLS, SOFTWARE UPDATES…
Inside this menu, you can find the two options groups:

**TOOLS**

**0: File Tools**

1: 8700 Series Ebox Configuration (See Chapter 24)

**SOFTWARE UPDATES**

3: Console by Ethernet (See Chapter 22, option not available in OLE)
4: Console by USB Disk (See Chapter 22, option not available in OLE)
5: Remote Control by Cable (See Chapter 22, option not available in OLE)

**0: File Tools**

This menu is a tool to exchange and maintenance our files. Files that can be in console disks (hard disk, floppy disk & USB disks) or disks of other consoles (or OLE-PC) connected by Ethernet. **File Tools** menu allows you to manage files of Shows, Devices & Fixtures; and folders.

To use this tool, select in all consoles:

```
0 7 9 0
```

<table>
<thead>
<tr>
<th>Hard disk</th>
<th>1</th>
<th>Size</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devices</td>
<td>2</td>
<td>Size</td>
<td>Date</td>
<td>Time</td>
</tr>
<tr>
<td>Shows</td>
<td>3</td>
<td>Size</td>
<td>Date</td>
<td>Time</td>
</tr>
</tbody>
</table>

The **File Tools** screen is divided in 2 zones (disks), each zone is independent, and at the first moment the both zones present you the same: the inner hard disk of our console. In each zone you have:

1) The active directory (upper sub-zone). This can be the Hard disk, Floppy disk, USB disk or the hard disk of other console or PC simulator.

2) Path of the selected file or folder (in first line of lower sub-zone) that will be a dot (.) if we are working in the root directory.

3) List of folders and files in the selected path (rest of the lower sub-zone).

Use the arrows keys (or mouse) to move the cursor inside of the lower sub-zone and between lower sub-zones to select the desired file or folder.

**ENTER** or double click: Opens the selected folder and presents you its contents. If the path is selected (first line of the lower sub-zone), returns to the previous directory.
**File Tools** allows you to work in the 2 zones. The possible actions, showed in the lower line) are executed entered the corresponding number or command (or selecting it with the mouse):

- **ChangeDisk [0]**: Opens a window to select the desired active disk in the cursor zone. This options window has the hard disk, floppy disk and USB memory of our console, and hard disks of others consoles connected by Ethernet (they must be into menu 79).

- **NewFolder [1]**: Creates a new folder in the active path to organize or archive our files. The new folders names must be of 8 characters (maximum). If the active directory is the root directory, the new folder name begins with the name of the selected folder (DEVICEs, FIXTUREs or SHOWS), in this mode only is allowed to create folders as FIXTUREs1, SHOWS03, etc.

- **Rename [2]**: Changes the name of the selected file or folder. Remember, folder names in the root directory must begin with FIXTUREs, DEVICEs or SHOWS. The file names must be 8 characters as name and 3 more as extension (maximum).

- **Compare [3]**: Compares 2 files or 2 folders, one in each zone (disk), searching for the selected file or folder in any of the zones. The selected file or folder must be correspondence in the other zone (example, set both zones in FIXTUREs directory to compare them). After the comparison the system shows you if the files or folders are the same (name and contents) in both zones (======) or are different (xxxx). The files & folders are showed in alphabetical order and when one of them is not in a zone, its space is preserved and an empty line is showed in this location.

- **Copy [4]**: Copies the selected file or folder to the other zone (disk).

- **Delete [5]**: Deletes the selected file or folder.
In the lower line of the File Tools screen, the available commands are showed and they can be in (depending of the selected item):

- White: When the command can be executed.
- Grey: When the command cannot be executed. This status can be temporal if the selected file or folder is being used from other console in the net.

**Note**

To connect to the net the PC-OLE, it is needed that the PC has installed the IPX protocol with the type 802.3. See Chapter 24.

While File Tools is active, the console isn’t operative in normal mode. Take care using File Tools, this tools can delete or modify any stored file.

The active show can’t be affected for the operations the File Tools. To return to the system from File Tools, press **EXIT**.
14.6 TESTS

The next tests are thought to help you to solve problems and to consult the DMX buffers of input & output.

Note

The most these test stops the normal working of the console.

Only the test from 80 to 84 can be executed at any moment (including while the show playback).

All these tests are closed pressing EXIT

14.6.1 80: INPUTS

This menu allows you to test:

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keys</td>
<td>Each key pressed must appear in a red field.</td>
</tr>
<tr>
<td>Faders</td>
<td>Each moved fader must present its current level in a red field (0-255).</td>
</tr>
<tr>
<td>Alphanumeric keyboard</td>
<td>Each key pressed must present it under KBD label.</td>
</tr>
<tr>
<td>Mouse</td>
<td>Its movement and clicks are presented under MOUSE label.</td>
</tr>
<tr>
<td>SMPTE</td>
<td>The SMPTE connected to the console is presented (in real time) under SMPTE label.</td>
</tr>
<tr>
<td>External triggers</td>
<td>Each external trigger activated is presented.</td>
</tr>
<tr>
<td>Audio input</td>
<td>The audio signal connected to the console is presented under SOUND label.</td>
</tr>
<tr>
<td>Remote Control</td>
<td>The code of the keys pressed in the Remote Control is presented under REMOTE label. This code has the next format: ID (Identification Device) FUNC (function code) and ST (status)</td>
</tr>
</tbody>
</table>

14.6.2 81: OUTPUTS

The screen presents you all the options to test: working lights, sound output, each console LED and the console Display. Select the item to test using left & right.

While an item is selected it is executing an auto-test.
14.6.3   82: VGA

This test presents in the connected monitors, the charts of colors & characters. The console display presents its characters chart.

14.6.4   83: DMX-IN

Its screen presents the DMX input buffer (the 512 channels of input, each one with its level). To page this screen press ↑ & ↓.

14.6.5   84: DMX-OUT

Its screen presents the DMX output buffers of the 4 DMX outputs (the 512 channels and its associated levels, per output line). To page this screen press ↑ & ↓ (more channels), or press ← & → (more lines).

14.6.6   85: MEMORY

It allows you to test the data memory. The system does an auto-test and presents you the data memory status. This test doesn’t affect to the show data.

14.6.7   86: MIDI

It allows you to test the MIDI port. Follow the instructions in the screen.
14.6.8  87: Rs232

MENU 8 7

Test of the RS232 port. Follow the instructions in the screen.

14.6.9

14.6.10  88: 8700 Series Link

MENU 8 8

Test of the 8700 Series Link port. Follow the instructions in the screen.

14.6.11  90: DISK

MENU 9 0

Used to test the disk unit. Follow the instructions in the screen.
14.7 ALPHANUMERIC KEYBOARD

The alphanumeric keyboard always is active to edit text for cues, groups, effects, pages, libraries, macros & shows. While a Text cell is selected, this alphanumeric keyboard is active.

But, also is possible to use the alphanumeric keyboard “to press” the console keys (since each console key has an associated key of the alphanumeric keyboard) of the same way that in the PC-OLE. This functionality is optional, and it can be activated or deactivated at any moment, form the option 99: Enable/Disable of the menu KEYBOARD OLE

14.7.1 99: Enable/Disable

MENU 9 9

Toggles the current status of the alphanumeric keyboard, allowing or not, to access to the console functions from the keyboard. Remember the Text function is always active.

The correspondence between the keys of the console & the alphanumeric keyboard are explained in the chapter 23.
15. CHANNELS PATCH

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

By default, the 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:

 aç MENU aç 0 1 aç To open the Channels list
 aç MENU aç 0 2 aç To open the Dimmers list

Or by command, pressing:

 aç CHANNEL aç CHANNEL aç 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)
15.1 CHANNELS LIST

To access to the Channels list using one of these options:

- **MENU** 0 1
- **CHANNEL** CHANNEL

The list has all the channels (one per line) showing their associated dimmer. If the channel is controlling more than 1 dimmer, shows us the symbol +, indicating that in the +Edit window there are more information about it (all the dimmers associated to this channel, with their curves and limit values).

1 channel can control as many dimmers as will be necessary.
1 dimmer only can be controlled by 1 channel.

ABOUT THIS LIST

Cha: Channel number. This number cannot be edited, used to find a concrete channel.

Dmx: First dimmer associated to the channel.

+: Pressing ENTER here, it permits us to enter in the +Edit window. When the channel has associated more than 1 dimmer, + appears.

Each line has the information about a channel.

15.1.1 EDITING CHANNELS

Into the Channels list:
- Use the arrow keys or mouse to select the data that we want to edit.
- Enter the numeric data.
- Accept the data moving the cursor or pressing ENTER.

If the active cell is a Cha:
Enter channel number that we want to edit, and press ➔. The system selects this channel into the list.

If the active cell is a Dmx:
To edit the associated dimmer, enter the dimmer number
To delete the associated dimmer press DELETE
To insert the next dimmer (in accordance with the previous channel) press INSERT

LEVITON 8700 SERIES
Id the active cell is a +:
To edit more than 1 dimmer to the channel, press **ENTER** to access to the +Edit window. In the +Edit window it is possible to edit as many dimmers as will be necessary.

In any cell:
To test the response of the selected channel in scene, move W25. The test level is represented in the display and the monitor (up-right).

15.1.2 THE +Edit WINDOW
To access to this window, press **ENTER** in the cell + of the selected channel or use the mouse. In the +Edit window it is possible to edit as many dimmers as will be necessary.

Each line has the information about one dimmer:
- **Dmx**: It’s the dimmer direction.
- **Li**: It’s the value of the Limit function (maximum dimmer level)
- **Cu**: It’s the curve associated to the dimmer.

From +Edit it is possible to edit, to modify or to delete dimmers.

To edit a new dimmer, select the last cell (empty) and enter the dimmer number.

To return to Channels list, press **EXIT**

The values by default, of Dmx, Li and Cu, are presented in gray. In this mode is easy to locate an edited value.

Notes:
Remember: A dimmer only can be associated with 1 channel. For this reason, in the previous example, the dimmer 3.1 has been associated with the channel 1, and the channel 3 is free (the channel 3 is associated with the dimmer 3.1 by default).

## 15.2 DIMMERS LIST

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

```plaintext
MENU 0 2
```

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

```plaintext
MENU 1 ▼
```

This list has all the dimmers. Each dimmer (one per line) presents us its channel associated, and its curve and **Limit** value.

Into this list it’s possible to edit the channel, its curve and Limit level for each dimmer.

A channel can be assigned to many dimmers as will be needed.  
A dimmer only can have assigned 1 channel.

### ABOUT THIS LIST

Each line has the information about one dimmer:

- **Dmx**: It’s the dimmer number. This number cannot be edited.  
  And these cells are used to find the dimmer to edition.
- **Li**: Value for the **Limit** function. The dimmer output never exceeds this **Limit** level. If this value is **FF** (100%) the dimmer is not limited.
- **Cu**: It’s the response curve. See PRE-PROGRAMMED CURVES, page 15-9.
- **Cha**: The number of the assigned channel.
- **Fxt**: It’s a fixture number that is using this direction for its control. This numbers appear as information, but they cannot be modified here.

<table>
<thead>
<tr>
<th>Dmx</th>
<th>Cu</th>
<th>Cha</th>
<th>Spt</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>FF</td>
<td>Lin 1</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>FF</td>
<td>Lin 2</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>FF</td>
<td>Lin 3</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>FF</td>
<td>Lin 4</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>FF</td>
<td>Lin 5</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>FF</td>
<td>Lin 6</td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>FF</td>
<td>Lin 7</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>FF</td>
<td>Lin 8</td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>FF</td>
<td>Lin 9</td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>FF</td>
<td>Lin 10</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>FF</td>
<td>Lin 11</td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>FF</td>
<td>Lin 12</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>FF</td>
<td>Lin 13</td>
<td></td>
</tr>
<tr>
<td>141</td>
<td>FF</td>
<td>Lin 14</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>FF</td>
<td>Lin 15</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td>FF</td>
<td>Lin 16</td>
<td></td>
</tr>
<tr>
<td>171</td>
<td>FF</td>
<td>Lin 17</td>
<td></td>
</tr>
</tbody>
</table>

By default, the system assigns all the channels, consecutively, from the first direction of DMX-1.

### 15.2.1 EDITING

Into the **Dimmers** list:

- Use the arrow keys or mouse to select the data (cell) to edit.
• To edit the selected cell enter the appropriate number.
• Accept the entered data moving the cursor or pressing ENTER.

If the active cell is a Dmx:
To search the desired dimmer, entering the desired dimmer number and press ➔. The system searches this dimmer into this list. Note that it’s possible to search a dimmer of any DMX line.

Example: To search the dimmer 2 of the DMX-2, press 2 ➔

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.TestCase

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)

More about curves in page 15-9

If the active cell is a Cha:
To edit the channel of this dimmer, enter the channel number.
To delete an edited channel, press DELETE
To insert the next channel (in reference with the previous dimmer) press INSERT

In any cell:
The selected dimmer can be tested using the W2TestCase at any moment. This Test is independent of its control channels.

15.3 SELECTION OF LIST
There are 3 ways to select the desired list.

Using the commands of the Setup line.
To access to Setup line, press MENU, and select the first cell. Here it’s possible to press:
0 ➔ To access to Channels

LEVITON 8700 SERIES
To access to Dimmers

Using the mouse (External or TrackBall in MOUSE mode): Do click in the desired list cell to activate it.

Using the function keys: **CHANNEL**

To close the Patch screen, press **EXIT**

15.4 PATCH TOOLS

The next commands can be used to edit, copy, exchange, delete or return to the value by default of a dimmer or range, enclosed inside the Patch Tools option.

Inside any Patch, access to Patch Tools using the mouse or pressing **MENU**:

These Tools allow:

Set dimmers to their default values. **Default**

Some commands examples that can be edited:

<table>
<thead>
<tr>
<th>Command</th>
<th>Item</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default</td>
<td>Dimmer</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>Dimmer</td>
<td>2.1</td>
<td>512.3</td>
</tr>
<tr>
<td></td>
<td>Dimmer</td>
<td>.1</td>
<td>.1</td>
</tr>
<tr>
<td></td>
<td>Dimmer</td>
<td>.1</td>
<td>.4</td>
</tr>
</tbody>
</table>

*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

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

Some commands examples that can be edited:
<table>
<thead>
<tr>
<th>Command</th>
<th>Item</th>
<th>From</th>
<th>To</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete</td>
<td>Dimmer</td>
<td>1.1</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Dimmer</td>
<td>2.1</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Dimmer</td>
<td>2.1</td>
<td>512.3</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Dimmer</td>
<td>.1</td>
<td>.1</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Dimmer</td>
<td>.1</td>
<td>.4</td>
<td></td>
</tr>
</tbody>
</table>

*Delete assignment of dimmer 1.1
*Delete dimmer assignments from 2.1 to 512.3
*Delete assignment of DMX-1 output.
*Delete assignments of outputs from DMX-1 to DMX-4

*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

**Copy dimmers. Copy**

Some commands examples that can be edited:

<table>
<thead>
<tr>
<th>Command</th>
<th>Item</th>
<th>From</th>
<th>To</th>
<th>Item</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy</td>
<td>Dimmer</td>
<td>1.1</td>
<td>1.1</td>
<td>Dimmer</td>
<td>2.1 2.1</td>
</tr>
<tr>
<td>Copy</td>
<td>Dimmer</td>
<td>2.1</td>
<td>2.2</td>
<td>Dimmer</td>
<td>2.3 2.4</td>
</tr>
<tr>
<td>Copy</td>
<td>Dimmer</td>
<td>.1</td>
<td>.1</td>
<td>Dimmer</td>
<td>.2 .2</td>
</tr>
<tr>
<td>Copy</td>
<td>Dimmer</td>
<td>.1</td>
<td>.2</td>
<td>Dimmer</td>
<td>.3 .4</td>
</tr>
</tbody>
</table>

*Copy dimmer 1.1 to 2.1
*Copy dimmers from 2.1 to 2.2 in dimmers from 2.3 to 2.4
*Copy dimmers of DMX-1 output to DMX-2 output
*Copy dimmers of outputs 1 and 2 to outputs 3 and 4

*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

**Exchange dimmers. Exchange**

Some commands examples that can be edited:

<table>
<thead>
<tr>
<th>Command</th>
<th>Item</th>
<th>From</th>
<th>To</th>
<th>Item</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange</td>
<td>Dimmer</td>
<td>1.1</td>
<td>1.1</td>
<td>Dimmer</td>
<td>2.1 2.1</td>
</tr>
<tr>
<td>Exchange</td>
<td>Dimmer</td>
<td>2.1</td>
<td>2.2</td>
<td>Dimmer</td>
<td>2.3 2.4</td>
</tr>
<tr>
<td>Exchange</td>
<td>Dimmer</td>
<td>.1</td>
<td>.1</td>
<td>Dimmer</td>
<td>.2 .2</td>
</tr>
<tr>
<td>Exchange</td>
<td>Dimmer</td>
<td>.1</td>
<td>.2</td>
<td>Dimmer</td>
<td>.3 .4</td>
</tr>
</tbody>
</table>

*Exchange dimmer 1.1 with 2.1
*Exchange dimmers from 2.1 to 2.2 with dimmers from 2.3 to 2.4
*Exchange dimmers of DMX-1 output with DMX-2 output
*Exchange dimmers of outputs 1 & 2 with outputs 3 & 4.

*After edition, press **ENTER** to execute the command, or quit pressing **EXIT**

These commands don’t request confirmation.
15.5 USER CURVES

The console has 5 response curves, pre-programmed, to assign them to the channel dimmers. Also it has 3 user curves. The user curves can be defined in the menu 05: Define Curves

15.5.1 PRE-PROGRAMMED CURVES

Graphic presentation of the 5 pre-programmed curves, where the vertical axis is the output channel (in power) and the horizontal axis is the control level:

About these curves:

**Lineal** curve, \(1: \text{LIN}\). 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, \(2: \text{SQR}\). 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, \(3: \text{INV}\). 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, \(4: \text{O-F}\). 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, \(5: \text{PRK}\). A channel with park curve is always at 100% (of power output). Its output is independently of the control level. And this curve is used, mainly, in backstage (dressing rooms, working lights...) and it guarantees that the channel is at 100% if the consol is turned off.
15.5.2 USER CURVES

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

- After a Reset these 3 curves are like the lineal curve.
- They can be Soft (conventional curves) or Hard (specials for effects).
- These curves are defined using 10 points.

To open the menu 05: Define Curves:

This screen presents the current definition of the user curves; the definition is in graphic mode and numeric mode (using 2 scales, \textit{dig}: 0-255 \textit{y \%\%}: 0-100)

- Press \(\text{Å}\) and/or \(\text{Æ}\) to select the point of the curve to edit. The selected point is presented in red, and is ready to edit it.
- Press \(\uparrow\) and/or \(\downarrow\) to edit the value of the selected point (these keys work in 0-255 scale), or enter the value for the selected point, \#\# in scale 0-100.
- Repeat this steps as many times as points to edit.

When the edition is finished, press \(\text{EXIT}\) to close this menu screen.

Special editions:
The commands of the Setup line are grouped by curve, and are: ▼US6, ▼US7 & ▼US8. Remember, that pressing \(\text{MENU}\), the cursor toggle between Setup line and curves edition zone. These commands are used to select the curve mode, and to copy the values of any curve.
COPY CURVE VALUES:
The 1 to 8 options permit us to copy the values of their curve in the selected curve. Also, it’s possible to copy values from other user curve (6 to 8 options). These copied values are used as start point to edit the selected curve.

CURVE MODE:
About these mode options:
90: Soft
91: Hard

A Soft curve uses average values among its 10 edited values. In other words, the curve varies slowly.

A Hard curve (for special effects) only uses the 10 edited values, doing sudden changes between a point and the next point. The Hard mode is used to do special effects (fire, storm, palpitates…) using curves.

In the screen, a Hard curve is presented only with 10 bars (note that the Soft curves are presented with 20 bars):

Only the user curves can be Hard.
16. DMX IN

The DMX input can be used to control conventional channels, to edit fixtures, to execute macros or, simplest, plug this DMX line to merge it with a DMX output of the console.

The DMX input is configured in the menu **03: Dmx In**:

```
MENU 0 3
```

**DMX In**

<table>
<thead>
<tr>
<th>Status</th>
<th>DISABLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Inputs</td>
<td>100</td>
</tr>
<tr>
<td>Mode</td>
<td>Add to Stage (Channels)</td>
</tr>
<tr>
<td></td>
<td>0: ADD TO STAGE (Channel=x)</td>
</tr>
<tr>
<td></td>
<td>1: ADD TO DMX OUT 1</td>
</tr>
<tr>
<td></td>
<td>2: ADD TO DMX OUT 2</td>
</tr>
<tr>
<td></td>
<td>3: ADD TO DMX OUT 3</td>
</tr>
<tr>
<td></td>
<td>4: ADD TO DMX OUT 4</td>
</tr>
<tr>
<td></td>
<td>5: RUN MACROS</td>
</tr>
<tr>
<td></td>
<td>6: ADD TO STAGE (Fixtures)</td>
</tr>
<tr>
<td>SM</td>
<td>Masters</td>
</tr>
<tr>
<td>Convert</td>
<td>(0-255) -&gt; (0-255)</td>
</tr>
</tbody>
</table>

**Status**

Select **0: ENABLED** to work with the DMX input, entering here the number **0**.

Select **1: DISABLED** to avoid that the console reads this input, entering here the number **1**.

**Permitted Inputs**

A DMX line has 512 channels, but here it’s possible to set the maximum number of channel to read. For example, if you are controlling with the DMX input 4 fixtures of 12 parameters (12x4=48), you can set this option at **48**, avoiding in this way, that the console did read more input channels. The input channels always begin from 1.

**Mode**

To set the behavior of the DMX input, select here the desired option. The options are:

**0: ADD TO STAGE (Channels)**

Permits us to use the DMX input to control a maximum of 512 channels (the first 512 system channels). The channels levels that be read from the DMX In are presented in a blue filed. To capture their levels in the editor, press **CALL CALL** (also it’s possible to use **CALL REC**).
1: ADD TO DMX OUT 1 to 4: ADD TO DMX OUT 4
The 1-4 options permit us to use the console as a standard merger. The Dmx In information is mixed with the information of the selected output line. In this mode, the user hasn't control of the DMX input.

These options are used when there are 2 control consoles, but only 1 physical DMX line.

**Example**
A console is controlling channels (1-200), and other console (8700 Series) is controlling fixtures and some channels (201-350). If the output of the first console is connected to the Dmx In input of the 8700 Series console, and ADD TO DMX 1 is selected, all the channels & fixtures (1-350) are sent by the DMX-1 output.

5: RUN MACROS
The channels of the DMX input execute macros (maximum 512). When the input channel exceeds its 5%, the corresponding macro is executed (the correspondence between channels and macros is 1 to 1, channel 1-macro 1, channel 2-macro2, and so on).

6: ADD TO STAGE (Fixtures)
Allow you to use the DMX input to control a maximum of 512 fixture parameters (the first 512 system parameters). The parameters values that be read from the Dmx In are presented in a blue filed. To capture their levels in the editor, press CALL CALL (also it’s possible to use CALL REC).
Also the parameters at 0% are captured from the DMX input in this mode.
Use the SM as control of Dmx In when this mode is selected.

SM
Allows you to configure the behavior of SM that can work as masters-control or DMX input-control.
To configure SM enter the index number of the appropriate option.

If SM is configured as control of DMX input (1: DMX IN) its associated key, SM, works as Blackout of DMX input.

CONVERT
Allows you set the conversion type to use with the levels of Dmx In.
0: (0-255)->(0-255) It is a lineal conversion, 1:1.
1: (0-1, 2-255)->(0, 2-255) It is a special conversion where the levels received as 01 as translated as 00. This conversion allows the compatibility with some consoles that send the level of 01 for the inactive channels (conceptually at 0%).

Close the this menu screen, pressing EXIT
16.1 DMX INPUT TEST

It’s possible to test (read) the DMX input selecting the menu 83: Dmx In:

MENU 8 3

Inside this menu, use ↑ & ↓ to page it.

To close this menu screen press EXIT

Note: This test is available with the DMX input enabled or disabled.
17. FIXTURES DEFINITION

This chapter has all the details about the fixture definitions, the modification & edition process, as well as all about the library of fixture definitions.

All these processes are placed in the menu 04: Fixtures, open this menu using one of these options:


17.1 THE FIXTURE DEFINITIONS

The definition of a fixture, Type, defines the fixture parameters in accordance with the manufacture specifications.

Each Type has:
- Identification data
- Definition of all its parameters.
- Definition of steps of parameter.

17.1.1 IDENTIFICATION DATA

Name
It’s the short name of the Type, with 5 characters.

Ch
It’s the channels number used to control the fixture. This number is calculated by the system (in gray) and it cannot be edited.

Comment
It’s the long name of the Type.

Manuf
It’s the manufacturer of the fixture. The console will show a list, ordered alphabetically, for the selection of the manufacturer. There is a USER option, where to include the manufacturer personalities not envisaged. If there are fixtures of manufacturers that are not included in the current manufacturers list, these fixtures are labeled as ????
17-2  FIXTURES DEFINITION

ID
It's the Identification Number. This number is used to order the Types, and as reference. The 2 first digits of this number are in accordance with the manufacturer (in gray) that cannot be edited.

File
It's the MD-DOS file name (MS-DOS format) where is stored the Type. Each File must be unique.

M
It's the moving characteristic of the fixture: MIRROR, HEAD or NONE. To edit it enter its index number. (Optional)

Xº & Yº
It's the grades of the Pan & Tilt movements (Optional)

17.1.2  PARAMETERS DEFINITION

Each parameter of the fixture is defined in accordance with its operative function. All parameters have the same structure, except the Control parameter. Where:

Num
It's an index number that indicates the parameter function. The parameters functions are divided in 6 groups that are:

POS for the position parameters. X & Y parameters and always in the Trackball.

DIM for the dimmer parameters. The Dimmer parameters are used as HTP (conventional regulation). A Dimmer parameter is always in the vertical wheel or Joystick.

COL for the color parameters.

GOB for the gobo parameters.

BEAM for beam parameters, including the blades parameters.

X-TRA for the rest of the fixture parameters: prisms, effects, macros, speed, etc.

Fixture parameters are always ordered by functionality.
Name
It's the parameter name (8 characters) that by default takes the name of its Num, although this can be changed.

Ch+Fn
It's the Dmx order for the parameter. A simple parameter (8 bits) has only a Dmx order (Ch), and a parameter with fine control (16 bits) uses 2 Dmx orders (Ch+Fn).

For the Dimmer parameters, it’s possible to edit the characteristic EXTERNAL that permits us to use an external dimmer (conventional dimmer) to regulate this fixture. The External Dimmer of these fixtures is configured in the Fixture Patch.

I
It permits to invert the parameter. Example: If an Iris at 0% is opened and at 100% is closed, you can invert this parameter to open the Iris at 100% and to close it at 0%. An inverted parameter presents its Home level and steps in blue.

L
It permits us to include (or not) the parameter in any of the system libraries (pos, dim, col, gob, beam or x-tra). For that a parameter can be stored in a user library (for example color) must be assigned to this library.

F
It permits to configure if the parameter fades or not fades during a playback fade.

Hom
It’s the neutral value for the parameter (0-255).

St
It’s the steps number of the parameter (in gray). This number is calculated by the system and cannot be edited; press ENTER here to enter to the Steps definition zone.

St takes values from 0 to 99:
0 when the parameter is spare (without steps).
1 when the parameter is continuous (only has 1 step from 0 to 255). Some continuous parameters are X, Y, Zoom, Iris, Dimmer, etc.

2, 3... 99 when the parameters is defined with steps (2, 3... 99). These steps definition can be edited in the Steps Definition zone.
The special **Control** parameter is used to define the fixture commands. Usually, these commands are used to turn-on or turn-off the lamp, to reset the fixture, etc. A Control parameter is defined with:

**Ch**  
It’s the Dmx order. Usually, each fixture has a dedicated parameter for the commands, or the fixture can have a parameter with **Control** and other functionality. Then, this number can be exclusive, can be repeated in other parameter and, as special case, you can edit here a **99: ALL** for that the commands affect to all the parameters of the fixture.

**Hom**  
It’s the **Control** neutral value (0-255).

**St**  
It’s the commands number (in gray) that is calculated by the system; press **enter** here to enter to the **Steps definition** zone that in this case will be the command definition zone.

### 17.1.3 STEPS DEFINITION IN A PARAMETER

The **Steps Definition** window presents us the definition of the selected parameter. Each line has a concrete function of the parameter (step). A general parameter can have a maximum of **99** steps, and a control parameter can have a maximum of **26** commands (steps).

<table>
<thead>
<tr>
<th>Name</th>
<th>Min</th>
<th>Max</th>
<th>S</th>
<th>Pa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>15</td>
<td>Wh</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>31</td>
<td>Bl</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>47</td>
<td>Re</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>48</td>
<td>63</td>
<td>Mg</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>64</td>
<td>79</td>
<td>Gr</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>80</td>
<td>95</td>
<td>Ye</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>96</td>
<td>111</td>
<td>Pu</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>112</td>
<td>127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>128</td>
<td>143</td>
<td>Pi</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>144</td>
<td>144</td>
<td>Cy</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>145</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>149</td>
<td>152</td>
<td></td>
<td></td>
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<td>13</td>
<td>153</td>
<td>156</td>
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<td>157</td>
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<td>15</td>
<td>161</td>
<td>164</td>
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<td>16</td>
<td>165</td>
<td>168</td>
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<td>17</td>
<td>169</td>
<td>172</td>
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<td>173</td>
<td>176</td>
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<td>19</td>
<td>177</td>
<td>180</td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>181</td>
<td>184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>215</td>
<td>215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>216</td>
<td>245</td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>246</td>
<td>255</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For a general parameter:

**Name**  
It’s the step name.

**Min & Max**  
They are the values minimum & maximum those define the step (0-255).

**Notes:**  
A complete parameter begins at 0 and ends at 255.  
It’s possible to omit a range (not-used) of the parameter.  
It’s not possible to overload these values. Example:  
White: 0-15 & Blue: 15-31 is a configuration not admitted.  
The value 15 only must be defined in one step.
It’s the Stop function. When the system find a step with stop (§), doesn’t permit to pass to the next step with the wheel or the joystick. Will be necessary press ▲ or ▼ to change of step. The Stop function is thought to avoid mistakes when a parameter has several functionalities, for example, dimmer & strobe, gobos & macros, etc.

Pa
It’s the definition of the Palette for dimmer/strobe/shutter, colors and gobos. It cell only is activated in the parameters of color wheel and gobo wheel (20:Dimmer, 21:Shutter, 22:Strobe, 47:Color & 60:Gobo). The Pa value permits us to locate a concrete strobe function, color or gobo. Each value of Pa only can be associated to a step.

In the case of the color palettes only the fixtures without color mix (CYM, RGB, etc…) uses the Pa values. A fixture with color-mix uses these wheels to obtain the correct color.

If a color or gobo wheel is personalized, will be necessary to personalize too its Pa values.

For a Control parameter, where each step is a command:

Name
It’s the command name

Lev
It’s the level (0-255) that corresponds to the command.

Tim
It’s the time, in seconds, for the command.

Pal
It’s permits to identify the more important commands of the Control parameter: turn on (On), turn off (Off) and reset (Rst).

In general, a Control command, sends a level during a time by a DMX* channel (following the programmed data) and then the Dmx channel is sets up to Hom value.

*Remember: Some fixtures send the level by all the Dmx channels to execute the commands.
17.2  EXAM & TYPE EDITION

It’s possible to exam and to edit any Type loaded in the Cache.
From the menu 04: Fixtures
Select the Cache list pressing [MENU 1 MENU] (or using the mouse)
Select with the cursor the desired Type, and enter 0 to select the option 0: Edit

The Fixture Definition is active for the selected Type. Now, it’s possible to edit any element of the definition.

When the Fixture Definition is edited, press EXIT to store and exit. The system requests us a confirmation. Press ENTER to store it (or press EXIT to not store it). The Type is modified in the Cache.

17.3  EDITING A NEW TYPE

It’s possible to edit a new Type, in Cache, always overwriting a not used Type:
Access to the menu 04: Fixtures
Select the Cache list pressing [MENU 1 MENU] (or using the mouse)
Select the Type to overwrite with a new definition and enter 1 to select the option 1: New

*This option only is available if the Type is not used in the Patch.
*If necessary, store in disk this Type (3: Save option).

From here, you can select any Fixture data and edit it following the manufacturer specifications.
Define all the parameters of the fixtures.
Define the steps of all the parameters.
Define the general parameters, and specially take careful with the File name (unique).

When the Fixture Definition is edited, press EXIT to store and exit. The system requests us a confirmation. Press ENTER to store it (or press EXIT to not store it). The Type is modified in the Cache.

17.4  SAVE TO DISK

Any Type in Cache can be stored in a Disk (Hard Disk, Floppy Disk or USB disk). All the Type files stored in the Disk form the fixtures library.

Each time that a Type is edited or created, its name appears in red… This status indicates us that this fixtures still is not stored in the library or in a show.
* Note: The complete Cache is stored in the Show.
A **Type** that appears in red in the **Cache** list will be lost if a Reset is done. It’s recommended to store in library the **Type** in red.

To store it, access to the **Cache**, select the **Type** in red, and select the 3: **Save** option.

The **Type** is stored in a **File** in the selected Disk. To select the desired Disk, **Hard Disk**, **Floppy Disk**, or **USB Disk**:
- Access to the Setup line with the mouse or pressing **MENU**.
- Select the second option and press:
  - 0 to select 0: **Hard Disk**
  - 1 to select 1: **Floppy Disk**
  - 2 to select 2: **USB Disk**
- Accept the data pressing **ENTER** or **MENU**.

When we are modifying a **Type**, it’s possible:
1) Change the **File** name with the objective of store the new **Type** in other file (respecting the original).
2) Don’t change the **File** name; in this case, the original file is replaced with the modifications done.

Each time that the system tries to store in an exiting **File**, a confirmation message appears.

### 17.5 CONCEPTUAL

Any **Type** in **Cache** can be substituted from other in the Hard Disk, Floppy or USB.

Any **Type** edited in **Cache** can be stored to Hard Disk, Floppy or/and USB.

To **Patch** a fixture with a **Type**, this **Type** must be in the **Cache**.
17.6 THE TYPES FILES

Any Type in Cache can be stored in a Disk (Hard Disk, Floppy Disk or USB Disk). All these Files stored in the Disk form the fixtures library. If it's necessary to delete a File in the selected Disk:

Select the menu 04: Fixtures
Select the File Tools option, in the Setup Line.
Execute the 0: Enter option
Access to the Files list, pressing MENU or 
Select the File to erase, and select its ▼ cell
Execute the 0: DELETE option, pressing ENTER. The selected File is erased.

Quit pressing EXIT
18.  SERIAL PORTS

The serial port of the console allows you to control some external systems (tape machine, audio player, etc) from the show. These external systems are defined as **Devices**, and they have their particulars control commands. The console has a small **Devices** library, and the user can edit it, modify it or create new **Devices**.

The external systems must have a control serial port.

In the **Devices** library, each **Device** is stored in a file (in the **Hard Disk**, **Floppy Disk** or **USB Disk**). Beside, some **Devices** are loaded in the **Cache** memory (active in the system) and they are stored with the show.

To associate a **Device** to a serial port, this must be in the **Cache** memory.

The ports and their **Devices** are configured from the menu **20: Serial Ports**

This screen has:
- The setup line with general options.
- The **Ports** list with the status and the associated **Device** of each port.
- The list of the **Cache** memory, with the active **Devices** that can be used in the **Ports** list.
Finally, the zone of **Device Definition**, used as information and to edit **Devices**.

Press **MENU**, or using the mouse, to toggle between the setup line and the active list (**Ports** or **Cache**).

Press **EXIT** to close this menu screen.

### 18.1 PORTS CONFIGURATION

The ports are configured into the **Ports** list. To access to **Ports**, open menu 20, click with the mouse in any cell of **Ports**, or select the option 0: **Edit Ports** (inside the setup line).

Inside **Ports** it's possible:

- ▼ cell: Activate (ON) or deactivate (OFF) each port. These ON/OFF controls also are placed in the menu 70: **Multimedia Panel**. When a port is at OFF, its **Device** appears in gray.
- **Device** cell: Associate the **Device** of **Cache** that you want to control. For this, enter the index number (according with the **Cache**).

![Ports Configuration](image)

### 18.2 DEVICES OF THE CACHE LIST

The **Cache** has loaded some **Devices** that they can be used in the show. From here it’s possible:

- To edit any **Devices**.
- To create a new **Device**.
- To load a library **Device** (Hard, Floppy or USB).
- To save any **Device** in the Library (Hard, Floppy or USB).

To access to **Cache**, click with the mouse in any cell of **Cache**, or select the option 1: **Edit Cache** (inside the setup line).
18.2.1 DEVICE EDITION

To edit a Device you must access to the Device Definition window, clinking with the mouse inside it, or from the Cache list, selecting the Device and its associated option:
0: Edit.

<table>
<thead>
<tr>
<th>Device Definition</th>
<th>Bauds</th>
<th>Data Bits</th>
<th>Parity</th>
<th>Stop Bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy AMB 9600</td>
<td>9</td>
<td>None</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Device name

FileName

It’s the Device name and also is the name of the library file. This name can has 8 characters more 3 characters for the extension.

The serial protocol configuration

- **Bauds** It’s the transmission speed used.
- **Data Bits** It’s the number the bits used.
- **Parity** It’s the parity type used.
- **Stop Bits** It’s the number of stop bits used.

When one of these parameters is selected, a red window presents its possible options. These parameters must be defined following the manufacturer specifications.

The commands

In this list each command uses one line. Each command has:

- **Cmd** It’s the command number. Designated by the system, cannot be edited.
- **Name** It’s a name to identify it. This name appears in the commands selection list, and if correct, in the events list and the cue list.
- **Data** They are the data that are transmitted by the serial port when the command is executed. The data must be in accordance with the manufacturer specifications, and can be edited using ASCII or HEX characters. The HEX characters are preceded with a * (each 2 characters) with the objective to differentiate of the ASCII characters.
- **Run** Pressing **ENTER** here, the command Data are transmitted by its port. It’s possible to use it as test. Don’t forget to connect the corresponding equipment to the serial port.
After that the Device is edited, press **EXIT** to quit. The system request us confirmation to store the change. Confirm pressing **ENTER** or cancel pressing **EXIT** again.

The modified Device appears in red in the Cache list until this Device is saved in the Library or until the show is stored.

Notes about Data:

ASCII is the Data format by default. Any Data in ASCII format can be edited using the alphanumeric keyboard directly.

Example: 00 06

The Data in HEX format are edited using the alphanumeric keyboard, but must be preceded by a * each 2 characters.

Example: *00 *06

In the same Data it’s possible to mix ASCII & HEX characters.

Example: 00 *06, where 00 are 2 ASCII characters and *06 is 1 HEX data.

The conversion between ASCII and HEX is represented in the next table:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>!</td>
<td>&quot;</td>
<td>#</td>
<td>$</td>
<td>%</td>
<td>&amp;</td>
<td>'</td>
<td>(</td>
<td>)</td>
<td>*</td>
<td>+</td>
<td>,</td>
<td>-</td>
<td>.</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>:</td>
<td>;</td>
<td>&lt;</td>
<td>=</td>
<td>&gt;</td>
</tr>
<tr>
<td>4</td>
<td>@</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>H</td>
<td>I</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
</tr>
<tr>
<td>5</td>
<td>P</td>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
<td>[</td>
<td>\</td>
<td>]</td>
<td>^</td>
</tr>
<tr>
<td>6</td>
<td>`</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>g</td>
<td>h</td>
<td>i</td>
<td>j</td>
<td>k</td>
<td>l</td>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>7</td>
<td>p</td>
<td>q</td>
<td>r</td>
<td>s</td>
<td>t</td>
<td>u</td>
<td>v</td>
<td>w</td>
<td>x</td>
<td>y</td>
<td>z</td>
<td>{</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ASCII – HEX.

Example: the ASCII character “ T ” is the same that the HEX data *54.

To edit in a Data the ASCII character: *, this must be written as **

18.2.2 CREATE A NEW DEVICE

Inside Cache, select the Device that will be replaced by the new (this Device cannot be associated to a serial port) and execute its option 1: New
The **Device Definition** is active and totally empty. Now it’s possible to edit the new **Device**, following the same line that in the previous section.

When the edition is done, press **EXIT** to quit. The system request us confirmation to store the new **Device**. Confirm pressing **ENTER** or cancel pressing **EXIT** again.

The new **Device** appears in red in the **Cache** list until this **Device** is saved in the Library or until the show is stored.

**18.2.3   LOAD A LIBRARY DEVICE**

Before to execute the **Load** option, check that the working disk is the desired. The working disk is presented in the setup line (**Hard**, **Floppy** or **USB**), and if needed, it’s changed here:

<table>
<thead>
<tr>
<th>Device</th>
<th>Device</th>
<th>Hard Disk</th>
<th>File Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>Ports</td>
<td>Ports</td>
<td>Ports</td>
</tr>
</tbody>
</table>

Inside **Cache**, select the **Device** that will be replaced by the loaded (this **Device** cannot be associated to a serial port) and execute its option **2: Load**.

At the right of the screen, the system presents us the list of library **Devices** stored in the working disk. Select the desired **Device** and execute its option **0: Load**.

The **Device** is loaded in **Cache**, and now it’s possible to associate it to any serial port.

**18.2.4   SAVE A DEVICE**

Before execute the **Save** option; check that the working disk is the desired. If it’s needed change the working disk, follow the steps explained in the previous section.

Inside **Cache**, select the **Device** to store and execute its option **3: Save**.

The **Device** is stored in a file into the working disk.

If there is a file with the same name, the system request confirmation. Confirm pressing **ENTER** or cancel pressing **EXIT** and edit its **FileName** to save in other file.

Remember that all the **Cache Devices** presented in red, are not stored.

*Notes:*
To copy a Device from a disk to other disk (Hard, Floppy or USB), it’s needed to load the Device to Cache, and then to save it changing the working disk.

The Devices files are stored into a folder named Devices and placed in the main directory (root). The system creates this folder, automatically, when the first Device is stored.

In case of manipulation of Devices with floppies or USB disk, don’t forget to create this folder. If this folder is not, the console will be able not to access to these files.

18.2.5 THE DEVICE FILES

In the setup line is the option File Tools. This option permits us to delete any file of the Devices library of the working disk (Hard, Floppy or USB). For this:

- Execute the option 0: ENTER of File Tools.
- The system presents us the list the Device files of the working disk.
- Select the desired file and execute its option 0: DELETE

18.3 THE COMMANDS IN THE SHOW

When a port has a Device associated, and this port is active (ON) it’s possible to execute any Device command using any of these methods:

- Inside [CUE][CUE] screen, associating the command to a cue. When the cue begins its crossfade the command is transmitted.
- Programming the command as an event in the events list. ([MENU][2][3])
- Executing its option Run inside Device Definition in menu 20: Serial Ports
19. MIDI

MIDI (Musical Instruments Digital Interfaces) is a serial digital protocol, originally developed for the music instruments, and nowadays used for the most of the computers and multimedia equipments.

From the MIDI port, it’s possible to communicate any MIDI equipment, including a second console.

The most basic level of MIDI communication is the transmission of musical NOTES (these musical NOTES are associated with the console keys); and of musical CONTROLLERS (these CONTROLLERS are associated with console faders).

MIDI transmits 16 communication channels; each communication channel transmits 128 NOTES & 128 CONTROLLERS. The NOTES & CONTROLLERS are transmitted at the moment that one key is pressed or one fader is moved.

Notes:

The console uses the first 97 CONTROLLERS MIDI (0-96), because the upper CONTROLLERS usually have special functions in MIDI nets.

The MIDI used in the console accepts "Running Status" to improve the MIDI transmission speed.

19.1 THE MIDI MENU

The associations between NOTES and keys and between CONTROLLERS and faders, as well as the MIDI port configuration are placed in the menu 21: Midi

The first time that enter this menu, and always after a Reset, you have the association by defect between Notes - keys and Controllers faders. This association is designated as MIDI chart, and it can be edited.

The MIDI chart by defect, which depends on each console model, it is thought to maintain a compatibility maximum between the different models of the 8700 series.
The screen is divided in 2 zones: The Setup-line & the MIDI chart. To toggle between these zones, use the mouse or press **MENU**.

To close this menu screen, press **EXIT**.

### 19.1.1 SETUP LINE

The Setup line options permit us to:

**▼Off**

Activate or deactivate the MIDI port selecting the appropriate option:

- **0**: OFF or **1**: ON

The activation/deactivation of the MIDI port is available too in the menu **70**: Multimedia Panel.

**▼Out**

Select the communication mode entered the index number to the desired option. When the console is the MIDI transmitter, select the **0**: OUT option; and when the console is the MIDI receiver, select the **1**: IN option.

**Channel+1**

Select the communication channel (from 1-16) to the communication entering its number. Remember, the MIDI protocol use 16 channels independents.
1:1
Return to the default MIDI chart, executing the 0: Default option.

Active/Inactive
This option includes several quick editions commands:

0: Inactive Faders
Execute it to deactivate the transmission/reception of all Fader/Controller associations.

1: Active Faders
Execute it to activate the transmission/reception of all Fader/Controller associations.

2: Inactive Keys
Execute it to deactivate the transmission/reception of all key/Note associations.

3: Active Keys
Execute it to activate the transmission/reception of all key/Note associations.

4: Inactive PCs
Execute it to deactivate the reception of Program Change MIDI.

5: Active PCs
Execute it to activate the reception of Program Change MIDI.

6: Inactive Mouse & Keyboard
Execute it to deactivate the transmission/reception of the mouse & keyboard.

7: Active Mouse & Keyboard
Execute it to activate the transmission/reception of the mouse & keyboard.

19.1.2 MIDI CHART
The MIDI chart is ordered by Faders and then, by Keys.

The 2 firsts columns present the Faders with their associated Controllers.

The rest of the columns present the Keys with their associated Notes.

At the end of the last column, the special commands are presented. These special commands are: Program Change (PC) and Mouse & Keyboard.
In the columns:

1. It's the Key name or Fader name. Not editable.
2. It's the status: activated or deactivated. When a key or fader is active presents a *
3. It's the Note or Controller associated with the key or fader, respectively.

A Controller number is identified with a C, as C0, C1, etc.
A Note number is identified with an N, as N0, N1, etc.

**Fader edition:**
- Access to the cell ▼ of the fader to edit, and if it's needed select 0: INACTIVE or 1: ACTIVE, entering the index number of the desired option.
- Access to the next cell, and enter the Controller number, 📅 (0-96) to associate to the selected fader. The faders always are associated to controllers.

If the port is in Midi Out mode, each time that a fader is moved, its associated Controller is sent with the current level.
If the port is in Midi In mode, each time that the system receives a Controller, moves the associated fader to the received level.

**Key edition**
- Access to the cell ▼ of the key to edit, and if it's needed select 0: INACTIVE or 1: ACTIVE, entering the index number of the desired option.
- Access to the next cell, and enter the Note number, 🎵 (0-127) to associate to the selected key.

A key too can be associated with a Controller, in this case, enter the Controller number (0-96) with a decimal point, as 🎵

Note: The decimal point (.) is used to differentiate a Note number of a Controller number.

If the port is in Midi Out mode, each time that the key is pressed, its Note On is sent (or Controller at 64) and each time that the key is released, its Note Off is sent (or Controller at 0).
If the port is in Midi In mode, each time that the system receives a Note On (or Controller at 64) presses its associated key, and each time that the system receives a Note Off (or Controller at 0) releases its associated key.
PC edition

- Access to its cell ▼ and if it’s needed select 0: INACTIVE or 1: ACTIVE, entering the index number of the desired option.
- Access to the next cell and enter the number of the first console page, # (1-999), that it will be loaded when the PC1 is received. The 128 PCs (PC1-PC128) permit us to load 128 consecutives pages, beginning from the edited page (#).

If the port is in Midi Out mode, the PC command has not function.
If the port is in Midi In mode, when the system receives:
- PC1, the command PAGE # SELECT is executed; the page # is loaded.
- PC2, the command PAGE #+1 SELECT is executed; the page # +1 is loaded.
- ...  
- PC 128, the command PAGE #+127 SELECT is executed; the page # +127 is loaded.

Keyboard & Mouse edition

- Access to its cell ▼ and if it’s needed select 0: INACTIVE or 1: ACTIVE, entering the index number of the desired option.
- Access to the next cell and enter the number of the first Controller # (0-96). The Mouse & Keyboard and transmitted using 5 consecutive Controllers for the mouse clicks and ASCII characters.

This option can be used when 2 8700 Series consoles are connected via MIDI.
19.2 EXAMPLES

It’s possible to connect a console with a MIDI sequencer, and store the console output in a sequencer track. The connection is:

Then, it’s possible to play the sequencer track to control the console (repeating the same process that stored in the track). The connection:

It’s possible to connect a MIDI keyboard, to execute an effect, or to obtain a light organ. In these cases is recommended deactivate the keys/faders without use. The connection:

It’s possible to connect a MIDI sound generator, to execute some of its sound synchronized with the console. The connection:
19.3  CONNECTING 2 8700 Series consoles

The best master-slave connection is done using Ethernet connection. Only in the cases that a Ethernet cable is not available, it’s possible to communicate 2 consoles using MIDI (both consoles are synchronized, but this is not a master-slave connection).

One of the consoles is working as main console and the other console as auxiliary console (following the process done in the main console), in this way, will be possible to appeal at the auxiliary console when the main console faults. The connection is:

19.3.1  START CONNECTION

To connect the 2 consoles, will be necessary to begin from a known situation:
• Do a Reset in both consoles.
• Load the show in both consoles.
• Connect the MIDI cable from MIDI-OUT (main console) to MIDI-IN (auxiliary console).
• In the auxiliary console: Configure its MIDI port as ON / IN / DEFAULT
• In the main console: Configure its MIDI port as ON / OUT / DEFAULT

From now on, each action done in the main console is transmitted to the auxiliary console, that in this way, it repeats each action (pressed key, moved fader, clicked mouse, typed text, etc.)

Special Notes:
• Don’t forget to insert a floppy disk in both consoles to store the show.
• The actions done from the externally (from remote, DMX-in, externals, etc) are not transmitted to the auxiliary console. If it’s needed, the user must connect this external element to both consoles.
• Any think done in the auxiliary console is not transmitted to the main console.
19.3.2 END CONNECTION

Both consoles are synchronized for edition & playback. If the main console faults, is enough to disconnect the MIDI cable between the 2 consoles and follow working in the auxiliary console.

As preventive measure, it’s recommended to disable the MIDI port in the auxiliary console (OFF).
20. SOUND & EXTERNAL TRIGGERS

The console has one audio input, Sound, and 3 external triggers, Ext.

Each external trigger input, Ext1, Ext2 and Ext3, can be associated with a key, and when the external trigger is activated, the system “press” its associated key.

The AUDIO connector admits an audio signal of 1Vpp. This signal is filtered in the 3 basic bands: Bass, Medium & Treble. Each one of the 3 filtered signals can be used to control a key or fader.

The signals of Bass, Medium & Treble, are activated when the audio input exceeds (per band) a certain level (Sensibility). When one of these signals is activated its associated key is pressed; or its associated fader is moved in accordance with the filter level, modulating the fader output.

The level of activation each filter (0-100), Sensibility, is adjusted independently entering a level in its Sensibility cell. Each filter has a Test value (current filter output), with the objective to help us to adjust the Sensibility.

The configuration of these inputs are placed in the menu 22: Ext & Sound

---

**Ext & Sound**

<table>
<thead>
<tr>
<th>Item</th>
<th>Key/Fader</th>
<th>Sensibility</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ext1....</td>
<td>NONE</td>
<td>01: NONE</td>
<td>11 KEY</td>
</tr>
<tr>
<td>Ext2....</td>
<td>NONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ext3....</td>
<td>NONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound Bass</td>
<td>NONE</td>
<td>FF</td>
<td></td>
</tr>
<tr>
<td>Sound Medium</td>
<td>NONE</td>
<td>FF</td>
<td></td>
</tr>
<tr>
<td>Sound Treble</td>
<td>NONE</td>
<td>FF</td>
<td></td>
</tr>
</tbody>
</table>

---

**Página de configuración**

LEVITON 8700 SERIES
This screen is divided in 2 zones: the setup line and the configuration table. To toggle between these zones use the mouse or press **MENU**

To close this screen, press **EXIT**

### 20.1 SETUP LINE

From this line it’s possible to activate / deactivate the Sound input and the external triggers.

- **Ext** Off
  Activate/deactivate the 2 external inputs simultaneously.

- **Sound** Off
  Activate/deactivate the 3 filtered signals of the audio input.

These options too are placed in the menu 70: Multimedia Panel

### 20.2 CONFIGURATION ZONE

To configure the Ext1 to Ext3:

- Access to the **Key/Fader** cell of the desired external trigger

- Select the option 1: **KEY** to associate a key, pressing **1 ENTER**. The system requests us the key (**Waiting key**). Press the desired key.

- Or select the option 0: **NONE** to delete the associated key, pressing **0 ENTER**.

Example, for that an actor turns on the room light in a scene; connect a physical pushbutton (in scenery) to a console Ext that activates the master that controls the room light.

To configure **Sound Bass**, **Sound Medium** & **Sound Treble**:

- Access to the **Key/Fader** cell of the desired filter.

- Select the option 1: **KEY/FADER** to associate a key or fader, pressing **1 ENTER**. The system request us the key or fader (**Waiting key or Fader**). Press the desired key or move the desired fader.

Access to **Sensibility** and adjust it, entering the appropriate level, **#** (0-100). This adjust is done with the audio input connected.

- Or select the option 0: **NONE** to delete the associated key/fader, pressing **0 ENTER**.

The audio input can be used to synchronize an effect with the sound, in step-to-step mode (pressing **STEP** < **M#**). In this way, the effect executes its steps in accordance with the rhythm of the audio signal.

---

**LEVITON 8700 SERIES**
21. TIME CODE & EVENT LIST

21.1 SMPTE, MTC, CLOCK & INTERNAL

8700 Series consoles allow you to synchronize an events list with a Time Code that can be:
- A Time Code external as... SMPTE or MTC (Midi Time Code)
- A Time Code of the console clock CLOCK
- A Time Code internal (simulated) INTERNAL

From here, Time Code will be written as TC, in reference of any of these types: SMPTE, MTC, CLOK or INTERNAL.

TC is a time value with a format as hh:mm:ss:ff, where:
- hh Hours (0 – 23)
- mm Minutes (0-59)
- ss Seconds (0-59)
- ff Frames (0-29). This format implicates a precision of 1/30 of second.

An event is a playback action associated to a concrete TC. The event is executed at the time of its TC, and it has all the data about the action to do. The action can be:

- Execution of a cue in the CROSSFADER X
- Execution of a macro, MACRO
- Execution of a command of the Rs232 port, A-232

The menu 23: Time Code allows you to configure and to edit the events list:

This screen has 2 zones: Setup line & Event list. MENU toggles between these 2 zones.
To close this menu press **EXIT**

## 21.2 SETUP LINE

The functions & options of the Setup line are:

**ON** (0:OFF, 1:ON)

To activate (ON) or deactivate (OFF) the events list. If this option is at OFF, no events are executed. The event list is not active in the system.

This option also is placed in the menu 70: Multimedia Panel.

**SMPTE** (0: SMPTE, 1: MTC, 2: CLOCK, 3: INTERNAL)

To select the type of Time Code to control the events list.

When the TC is SMPTE, MTC or CLOCK, the user has not control of the TC, which is created in an external source or the own console clock. In these cases the unique time adjust is the Offset. The Offset only permits us advance or retreat the events execution in relation to the current TC.

**Offset**

Edit this time to adjust the Offset. The Offset value is added to the current TC value.

Example: Working with the SMPTE TC, the current time is 11:29:23:11, if an Offset of 1 hour is applied (01:00:00:00), the TC counter presents 12:29:23:11, if an Offset of 23 hours is applied (23:00:00:00) the TC counter presents 10:29:23:11.

In this way, it’s possible to execute events with a TC different to the external TC without reprogram the events list.

When the TC type is INTERNAL, the user has control of the TC, in concrete:

**STOP** (0:STOP, 1:PLAY, 2:PAUSE, 3:AUTOPLAY)

PLAY: Select this option to start the TC counter. The TC counts from its current time up to the time value programmed in To.

PAUSE: Select this option to pause the TC counter. The TC maintains its value.

STOP: Select this option to stop the TC counter and set it to the From value.

AUTOPLAY: Select this option to start the TC counter, in cyclic mode, where the TC is active from the From value up to To value, and then the count cycle is repeated, and so on until the counter is stopped or paused.

**From**

The first value for the TC INTERNAL, by default 00:00:00:00

The events with TC lower than From are not executed.
This value can be edited here, in the setup line; or in the Event list selecting in the adequate ▼Internal its option 0: SET FROM.

To 23:59:59:29
The last value for the TC INTERNAL, by default 23:59:59:29
The events with TC higher than To are not executed.
This value can be edited here, in the setup line; or in the Event list selecting in the adequate ▼Internal its option 1: SET TO.

Note: The ▼Internal cells (inside the events list) only are activates when the TC type is INTERNAL

At the right of the setup line the current TC is presented.

21.3 EVENTS LIST

The events list has 1 line per event, where the event is defined with:

▼Internal These cells only are actives when the TC type is INTERNAL. They are used to set the values of From and To in a easy way.

TC it’s the value of the time code in that the event will be executed (this value can be edited or captured). The TC has a format as hh:mm:ss:ff

▼Pl it’s the type of playback action. The available options are:
0: CROSSFAADER X Execute a cue in the crossfader X
2: MACRO Execute a Macro
3: A-232 Transmit a command of the A port

Item it’s the number of the cue to execute in the crossfader, the number of the macro or the number of the command. This number sets a date for the playback action.

Text it’s the associated text to the cue, macro or command. Not editable.

The event selected to edition is in a yellow filed.
If it’s the case, the next event that will be executed is in a brown filed.

21.3.1 EDITION OF THE EVENTS LIST

- It’s possible to edit all the playback actions, and then, their TC.
- It’s possible to edit all the TC, and then, their playback actions.
- And, also it’s possible to edit at the same time a TC and its playback action (or vice versus).
21.3.2 TC EDITION OR TC CAPTURE

The TC value of each event can be edited from the numeric keyboard entering the adequate number; or can be captured from the current TC pressing [INSERT] in any of its TC cells.

For the TC capture (or edition) it’s not necessary that the events list is active (ON). But if the events list is active (ON) at the same time that the TC is captured the event will be executed, simulating the execution at the same time that you capture the TC values.

Notes:
- The execution order of the events is controlled for the TC values.
- It’s not possible to have 2 events with the same TC.
- The TC-CLOCK permits to execute events at the same time all the days, always than the console is at on.
- The TC-SMPTE or TC-MSC permits to synchronize the show with external devices (videos, music…)
- The TC-INTERNAL permits to simulate an external signal as SMPTE or MTC but controlled by the user.

21.4 ACTIVATING THE EVENT LIST

To execute the events list, this must be activated (ON). When the events list is active, in the general status line a flag that is a musical note is presented in a red field.

To see the events list and the input of the current TC, select the base screen 1:
MONITOR + MONITOR + 1

<table>
<thead>
<tr>
<th>CHANNEL RO</th>
<th>Time Code</th>
<th>TC</th>
<th>Mem</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>00:00:00:00</td>
<td></td>
<td></td>
<td>A1</td>
</tr>
<tr>
<td></td>
<td>00:00:06:07</td>
<td>X</td>
<td></td>
<td>canción 1</td>
</tr>
<tr>
<td></td>
<td>00:10:14:04</td>
<td>R2</td>
<td>19</td>
<td>SHUTTER CLOS</td>
</tr>
<tr>
<td></td>
<td>00:00:19:20</td>
<td>R4</td>
<td>0</td>
<td>PLAY</td>
</tr>
<tr>
<td></td>
<td>00:00:21:10</td>
<td>X</td>
<td>10</td>
<td>canción 2</td>
</tr>
<tr>
<td></td>
<td>00:00:23:13</td>
<td>Y</td>
<td>100</td>
<td>especial entrada</td>
</tr>
</tbody>
</table>

The events list is active (ON)
Current TC and TC type, in the example INTERNAL.
Events list.
This list presents the next 6 events.

Each time that an event is executed, the event disappears of the list, and the next event appears. The events always are ordered for their TC values.

When the current TC arrives to an event TC, the event is executed automatically.
The cues programmed in events present us a flag of a musical note (as reference).

<table>
<thead>
<tr>
<th>X1</th>
<th>X2</th>
<th>CUE</th>
<th>IF</th>
<th>IL</th>
<th>TS</th>
<th>IL</th>
<th>TV</th>
<th>Jump</th>
<th>LP</th>
<th>P</th>
<th>Text</th>
<th>Command</th>
<th>TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**canción 1**
22. RESET & UPDATE

22.1 RESET

Store the Show to disk before do a Reset. The Reset process erases all console data.

To do a Reset:
- Turn off the console
- Press and hold down the RST button
- Turn on the console
- When the display presents **RST: Loading System**, release the RST button

All consoles have a push button named **RST** in the rear panel. This button is used to switch off the console after some software faults (similar to some Windows software faults in the computers). This button must be pressed with the console at **OFF**, and then, you can switch on the console doing a Reset (see previous process).

22.2 SOFTWARE UPDATE

The update software of 8700 Series consoles is available at [www.lms.leviton.com](http://www.lms.leviton.com). Inside there is an installer that allows you to install the new software using a floppy, a Ethernet connection with the PC or a USB memory.

To update the console software:
- Download the last version in accordance with your model.
- Unzip the loaded file in a folder in the Hard Disk of your PC
- Inside this folder there is the program: *Install8700SERIES.exe*. Execute it.
- From its File menu, select the type of update… and follow the instructions in the screen.

A dialog window allow you to select the folder where are the update files. **Accept** the folder that the installer suggests.
22.2 RESET & UPDATE

*Install8700SERIES.exe → Install8700GX.exe for GX models.
Install8700GS.exe for GS models.
Install8700GL.exe for GL models.

Store the Show to disk before do a software update.

22.2.1 SOFTWARE UPDATE by FLOPPY DISK

You can obtain the update disk contacting with your Leviton distributor or you can create it using the program Install8700SERIES.exe with the option Update by Floppy Disk in File menu (see 22.2).

When you have the update disk…

- Turn off the console
- Insert the update disk in the disk unit of the console
- Press and hold down pressed ENTER & ➔
- Turn on the console. When the display presents Updating system, release the pressed keys: ENTER ➔ ➔
- Follow the instructions that appear in the screen...The first request that the console does to you is the selection of the language for the instructions.

Tip:
Following the instructions, store the old software version in an empty disk as a security measurement.

22.2.2 SOFTWARE UPDATE by ETHERNET

To update the software by Ethernet, it’s needed:

1. Access to menu 79: Tools, Software Updates… and select its option 3: Console by Ethernet.
When this option is selected, in a black screen you can see:

   Update by Ethernet. [ENTER] cancel

   The console is ready to receive the new software version. It’s possible to cancel the software update pressing ENTER to return to the system if the update process hasn’t started.

2. A Windows PC with Ethernet connection, to execute the installer program. (ver 22.2).

   To connect the console & the PC, the Ethernet cable must be cross if the connection is direct between PC and console; and this cable must be no cross if the console and PC are
connected using a hub, switcher or router (in the same mode that any Ethernet peripheral).

Remember! To connect to the net the PC it’s needed that the PC has installed the IPX protocol with the type 802.3. (See Chapter 24).

3. Execute Installer8700SERIES.exe in your PC and select the option Update by Ethernet in File menu. The installer searches in the net a console to update in mode 3: Console by Ethernet. A list with the console or consoles searched appears in the monitor. Follow the instructions in the screen to complete the update.

Note
If during the update process there is a communication fault, the console will be without correct software version and will be needed restore the software version using an update diskette.

Note
The update by Ethernet always must be done using a cable Ethernet connection, DON'T USE wireless systems (WIFI, etc.) for this process. Also is recommended use a local net connection (PC- Console) for one or several consoles.

22.2.3 SOFTWARE UPDATE by USB DISK
Create the update USB disk using the program Installer8700SERIES.exe with the option Update by USB Disk in File menu (see 22.2).

The installer requests you the unit letter where is connected the USB disk (normally D, E or F), enter the adequate letter to begin the process the creation of the update USB disk.

When you have the update disk…

1. Turn off the console.
2. In the console, connect the USB disk in any of the USB ports.
3. Turn on the console.
22.3 UPDATING THE REMOTE CONTROL (RADIO/CABLE)

The software of the remote control (and its receiver) is included in each software version of the console, and this process the updating is done from the console.

1. Connect the remote control to the console 8700-LINK port using a 8700-LINK cable.
2. Turn on the remote control.
3. In the console, access to menu 79: Tools, Software Updates… and select its option 5: Remote Control by Cable. The update process begins. Follow the instructions in the screen.
23. OFF LINE EDITOR

The Off Line Editor for PC/Windows allows you to create and edit shows, compatibles with the console. Each console model has its Off Line Editor and each console software version has its corresponding Off Line Editor.

The Off Line Editor simulates the monitors and the frontal panel of the console.

23.1 PC

Personal computer: PC 486 and higher.

Operative system:
- WIN95/WIN98/WIN2000, ME, WIN-NT & WIN-XP

If the computer has not much video memory, the WOLE program can be slow. In this case, it’s recommended to configure the PC video at 256 colors (16 bits).

23.1.1 INSTALLATION

The Off Line Editor software is supplied with the consoles and also is available at www.lms.leviton.com. Each model and version of console has its corresponding Off Line Editor.

This software is supplied zipped.

<table>
<thead>
<tr>
<th>Model</th>
<th>Zipped File (1)</th>
<th>Off Line Editor Program (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX</td>
<td>wOLEGX.zip</td>
<td>wOLEGX.exe</td>
</tr>
<tr>
<td>GS</td>
<td>wOLEGS.zip</td>
<td>wOLEGS.exe</td>
</tr>
<tr>
<td>GL</td>
<td>wOLEGL.zip</td>
<td>wOLEGL.exe</td>
</tr>
</tbody>
</table>

To install it:

Copy the zipped file (1) inside a new folder in the Hard Disk of your PC.
In the same folder, unzip the copied file.
The Off Line Editor Program (2) is ready to execute it.

The first time that this program is executed it creates 3 folders:
- **Shows**, used to store and load shows from its Hard Disk option.
- **Fixtures**, used to store and load fixtures from its Hard Disk option.
- **Devices**, used to store and load devices from its Hard Disk option.
23.1.2 USING THE OFF LINE EDITOR

The off line editor works in the same mode that the console and you can use it only with the PC mouse: Click, to press keys or to select options of menu or interactive windows. Drag, to move faders, trackball & encoders.

To move, using the mouse, the bitmaps of console and monitors, is enough click and drag in a zone no-active of the bitmap (without keys…)

It’s possible to move 2 faders at the same time, and also press and hold down pressed a key, with the help of the PC keyboard:
• Press Ctrl↓. Click over one of the faders to move. Then, click and drag the second fader. Both faders are moved at the same time. Then release Ctrl▲
• Press Ctrl↓. Click the key to hold down pressed. Then, click in others keys. Then release Ctrl▲

For a quicker edition, you can use the PC keyboard. There is a correspondence between the console functions and the keys of the PC keyboard. This correspondence is showed in the next drawing and it is based in a QWERTY keyboard.

For the Compact Keyboards, where there isn’t a numeric keyboard, you can access to the numeric keys using the function key FN. For commands as Ctrl↓ ##, the order to press the keys must be FN↓ CTRL↓ #

Using only the PC keyboard, to press and hold down pressed a key: Press and hold down pressed CapsLock↓, then press the key that you want hold down pressed. Press other keys. At the end, to release the pressed key, release CapsLock▲.

Example:

To execute a command as: LOAD↓ M1, M2 … LOAD▲ Press CapsLock↓ L Ctrl↓ 01, 02 …Ctrl▲ CapsLock▲

You can use the mouse or PC keyboard in any combination.

To close the off line editor program, press Tab 99, and follow the instructions; or click over the ON switcher of the console bitmap.
23.1.3 SOME EXCEPTIONS

There are some exceptions between the physical console and the Off Line Editor. The Off Line Editor has not the next signal outputs: DMX, MIDI, RS232, etc…. Only the Ethernet communication is possible in the Off Line Editor.

To work with Ethernet, the PC must have enabled an Ethernet communication. In these cases, will be necessary to install (in the PC) the IPX protocol and set it an 802.3 frame type. The Off Line Editor can communicate with others consoles (Ethernet connected) and with simulators as Capture… If the PC has several Ethernet cards, active only one of them.

The exceptions list:

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>33: Operating system - Keyboard (external keyboard configuration)</td>
<td>This configuration depends of your PC, and it is deactivated in the Off Line Editor.</td>
<td></td>
</tr>
<tr>
<td>34: Hardware - Beep Configuration of the beep frequency</td>
<td>Can be configured, as in the console, but the computer cannot execute it. The Off Line Editor always beeps at the same frequency.</td>
<td></td>
</tr>
<tr>
<td>34: Hardware - Date Date &amp; Time</td>
<td>It’s possible to edit the current Date and Time, but <strong>TAKE CARE!</strong> This edition changes the Date &amp; Hour of the computer.</td>
<td></td>
</tr>
<tr>
<td>10: Disk Access to USB disk</td>
<td>It’s not possible to access to the USB disks connected to the PC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Menus of TEST</td>
<td>The hardware test of the console has no utility in the Off Line Editor.</td>
</tr>
</tbody>
</table>

**Special Functions**

To obtain the “bitmaps” of console and monitors

Press “Pause” in the PC-keyboard. These bitmaps are stored as *.bmp files, inside the Off Line Editor folder.
23.1.4   OLE & Ethernet

Each time that OLE is executed in the PC (or each time that its Ethernet connection is activated, in menu 40), the system checks the number of PC Ethernet cards:

- If the PC hasn’t Ethernet card, OLE can’t communicate by Ethernet with others consoles. The rest of the OLE functions work.
- If the PC has 1 Ethernet card, the OLE program communicates by Ethernet using this card.
- If the PC has more than one Ethernet card, the system shows us a warning message indicating that it’s needed disabled (from Windows) the Ethernet cards no used. Ethernet communication is available only if one of them is activated.

The simultaneous use of several Ethernet cards in a same PC can induce communication problems and communication not safe.

23.1.5   OLE demo

OLE Demo is a complete program, with alls its functions actives except for the Ethernet transmission of DMX universes. This transmission of DMX by Ethernet is restricting a 30 minutes (A Demo flag appears over DMX universes in the menu 40: Ethernet). OLE Demo only can transmit the DMX universes by Ethernet all the time when a console is connected a its net. It’s enough that OLE Demo detects a 8700 series console one time for that the “Demo” flag disappears. From this moment, this OLE, in its PC, always can transmit DMX by Ethernet.
24. ETHERNET

The Ethernet connection allows you:

- Connect several 8700 Series systems (consoles and/or OLEs) in the next modes:
  - Master - Full Slave
  - Master - Data Slave (multi-user).
  - Master - Master

- Special connections with:
  - Remote Control on PDA portable computer.
  - Converters DMX <> Ethernet
  - Graphics tools as Capture, Wysiwyg...

24.1 ETHERNET CONNECTIONS

Ethernet allows you to connect 8700 Series systems (consoles /PC OLE) of the same console model and the same software version, and with the same, or not, masters number.

Basic connection for 2 consoles:

Recommended: Use STP cable to connect the console with the first Ethernet unit.
Connection for several **8700 Series** systems (2 consoles, 1 remote control and 1 Ethernet<>DMX converter):

---

### 24.2 CONFIGURE A NET

Ethernet connection is configured in menu **40: Internet Configuration**

![Menu 40](image)

Inside this menu, it's possible:
- To activate/deactivate the Ethernet communication.
- To select the working net.
- To configure the units into the current session.
- To examine all the units connected to Ethernet in the current net.

#### 24.2.1 SELECTING THE WORKING NET

The net allows you to divide all the units connected at the same Ethernet installation. Only the units connected in the same net can work together, and the working in one net is independent of the workings in others nets. In others words, it’s needed that all the units are in the same net to can interact together. The user can change the net number in the setup-line of this menu.

The console has 10 nets, from **Net 0** to **Net 9**.
24.2.2 ACTIVATE ETHERNET COMMUNICATION

The Ethernet communication, by default, is deactivated (▼Off) but at any moment when it’s needed, it’s possible to activate it (▼On) from the setup-line of the menu.

24.2.3 START A NEW SESSION

The basic connections modes for consoles and OLE’s are:

**Master & Master connection (in process)**

Multi-user mode. All the master units (that can be their own slaves) can edit and playback the show using their data (cues, pages, etc.). In this mode only the playback process is synchronized.

**Master & Data Slave connection (in process)**

Multi-user mode. The master unit & DataSlave unit have the same data (cues, pages, effects, etc) but the playback process is controlled for the master console. The DataSlave unit can be used to modify cues or any edition process…. Only, when the master unit faults, the DataSlave unit take the show control.

**Master & Full Slave connection**

One-user mode. The Master unit & FullSlave unit are totally synchronized and the Master unit controls the show. When the Master unit faults, the FullSlave unit takes the show control. In these cases, only one console is transmitting DMX by Ethernet (normally the Master console), and only when this console faults, the next console in the list takes control and transmits the DMX by Ethernet.

The first step to can work in Ethernet is the configuration of the Ethernet session from the master console, and the session can include one or more consoles (or PC OLE’s). Any console/OLE that we want added to the session must be connected in the same net, and must be seen in **8700’s on Net** window of the Master console:

The **8700’s on Net** window shows the names of all the consoles (OLE’s) connected in this net. About this list:

- The consoles are numbered (Nh) and in this order, 1 always is the active console (the console from that I’m seeing the **8700’s on Net** window).
- W appears near to the name of the PC OLE.
- By default, the console name has inserted its MAC address. The MAC address is unique. When the console is added to a session this name can be edited.
- If some console connected in the net, cannot be added to the current session (for example, because its software version is different to the software version of the Master console) is marked with a small -
To initi a session, access to the **Current Session** window, and insert the Nh of the console from that we are editing (1) that will be added to the session as **Master** console.

When this number is accepted, the user can edit the console name and the DMX configuration in Ethernet (see below).

Then, any other console can be added to the current session. The next consoles always are added as slaves of the Master console, in this case in mode **FullSlave**. The slave consoles are auto-programmed with the same DMX configuration in Ethernet that the **Master** console, and this configuration cannot be edited.

The priority of the slaves of one session is in accordance with the numerical order of the list of **Current Session**.

In concrete, the **Current Session** table is composed for:

**Nh**
From here we can edit the **Current Session** list, entered the Nh of the console that we can add to the session, always in accordance with the **8700's on Net** window. To delete a console of the list, press 0 **ENTER**.

**Name**
It’s the console name, only when a console is into a session it’s possible to edit its name. The names of the session consoles are edited from the **Master** console.

**Priority**
It shows us the function programmed for each console into the session. At present, this cell can have 2 values: **Master** & **FullSlave**.

**Now**
It shows us the current function of the console (in this moment). For example, normally a **Master** console works as **Master+**, but and a **FullSlave** as **FullSlave**, but if the **Master** console faults, the **FullSlave** console must begin to work as **Master**. At present, this cell can have several values: **Master+**, **Master**, **FullSlave+**, **FullSlave** & **Off**.
### Priority

<table>
<thead>
<tr>
<th>Priority</th>
<th>Now</th>
<th>Session status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master FullSlave</td>
<td>Master+ FullSlave</td>
<td>Status of a session working perfectly…</td>
</tr>
<tr>
<td>Master FullSlave</td>
<td>Off master</td>
<td>Status of a session where the master console faults and the Slave console takes the control of the show.</td>
</tr>
<tr>
<td>Master FullSlave</td>
<td>FullSalve+ Master</td>
<td>Status of a session where the master console in fault is newly ok, but the control still being in the slave console.</td>
</tr>
<tr>
<td>Master FullSlave</td>
<td>Master+ Off</td>
<td>Status of a session where the slave console is deactivated.</td>
</tr>
</tbody>
</table>

### Universes

**Out 1 / Out 2 / Out 3 / Out 4**

It permits to edit/consult the DMX configuration for Ethernet. See below.

---

### 24.2.4 DMX CONFIGURATION

Each net in Ethernet can have 16 DMX universes. When a console or wole is included the current session, if this unit is a master unit, it’s possible to configure its 4 DMX outputs to be transmitted into the Ethernet DMX universe that is desired.

One Ethernet DMX universe only can transmit one DMX output.

One DMX output can be transmitted only for one Ethernet DMX universe.

In **Current Session**, **Out1** to **Out4** correspond to the console DMX outputs, and the numbers that you edit correspond with the number of the Ethernet universe to transmit the DMX output (1 to 16)

<table>
<thead>
<tr>
<th>Ethernet Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Session</strong></td>
</tr>
<tr>
<td><strong>4 Nets</strong></td>
</tr>
<tr>
<td><strong>Priorities</strong></td>
</tr>
<tr>
<td><strong>Universes</strong></td>
</tr>
</tbody>
</table>

- **HydraPlus 1603/008-24X** Master Master+ 1 35 3 4
- **HydraPlus 0061c00000016 FullSlave FullSlave** 1 76 0 4

The slaves units always are configured with the same values that the master.

The DMX outputs sent by Ethernet allow you to have these information in simulators as Capture and in the Ethernet<>DMX converters.
24.2.5 EXAMINATION OF THE NET

8700’s on Net
Shows all systems connected to the current net.

Others (ebox, pocketPCs, sandnets, …)
Here are listed the rest of systems connected to the net; as Ethernet<>DMX converters or ebox, the Ethernet protocols converter software or Sandnet, PDA remote control, etc…

See the chapter 14 – MENUS, you can find more information about the configuration of the Ethernet<>DMX converters or ebox.

24.2.6 WORKING IN MASTER & FULL SLAVE MODE

If all is ok, the edition and playback processes are done in the Master console. The FullSlave console “follows” to the edition and playback processes of the Master console, but the FullSlave console doesn’t transmit DMX into Ethernet. DMX is transmitted into Ethernet only by the console that works as Master.

To the left of the command-line of any console working in a current session, it’s possible to read:

<table>
<thead>
<tr>
<th>Console</th>
<th>Communication OK</th>
<th>Communication Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master</td>
<td>☺</td>
<td>☹</td>
</tr>
<tr>
<td>FullSlave</td>
<td>☺</td>
<td>☹ or ☺</td>
</tr>
</tbody>
</table>

Where, M (Master) or F (FullSlave) shows us the current function in the session.
And where, ☺ (communication OK) or ☹ (communication problem) shows us the session status.
Always that this symbol shows us that there is a problem, it’s needed to access to the menu 40 to see the status of each one of the session units.

Each time that a session is started or continued, take care that all the session units are in the same status (same show, same page, etc…).

When the session control is taken from a FullSlave console (because the master console faults) take in mind that if some change is done, this change is not in the consoles that are no connected to the session in this moment. In this cases, will be necessary the show reload into all the session consoles.
24.3 EBOX CONVERTERS

LT-Light Ebox allows you to obtain 2 DMX universes from Ethernet. Remember that Ethernet has 9 nets, and each net a maximum of 16 DMX universes.

Each Ebox can configure its 2 DMX outputs as any of the Ethernet universes presents in any of the 9 nets.

To configure the Ebox (Ethernet <-> Dmx), access to menu 79:Tools

MENU 7 9

Select its option 1: 8700 Series Ebox Configuration

<table>
<thead>
<tr>
<th>LT-Light Ebox Configuration</th>
<th>Ethernet</th>
<th>Find</th>
<th>Net -&gt; Universe</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detected Ebox</td>
<td></td>
<td></td>
<td>Ebox stage a</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ebox stage b</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 -&gt; 1, Enable</td>
<td>1 -&gt; 2, Disable</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 -&gt; 1, Enable</td>
<td>0 -&gt; 2, Enable</td>
</tr>
</tbody>
</table>

If Ethernet is at On, the connected Eboxes appear in list, each Ebox shows its current configuration that can be changed at any moment. Then, each Ebox has:

**Ebox name**  Current name of the Ebox. This name has a maximum of 22 characters.

**Box?**  It’s a command, that is activated pressing ENTER, that does blink all the Ebox LEDs with the objective of identify the Ebox physically if some doubt is about its identity.

**DMX1 & DMX2**  Are the current configuration of the DMX1 & DMX2 outputs in the Ebox, these configurations are defined as:

Net -> Universe -> Status

Net: It’s the number net (0..9) that has the universe for the DMX output.
Universe: It’s the universe number (1..16) for the DMX output.
Status: It allows you to Enable or to Disable the DMX output.

These Ethernet <-> DMX converters allow you to obtain conventional DMX signal at any point of the Ethernet installation, and this installation can use any present technology in the marked… In example, you can work with an installation Ethernet wireless, using wireless access points:
24.4 CAPTURE

To communicate console & Capture you need:
- 8700 Series console (or OLE)
- PC executing Capture
- Ethernet cable to connect between console & PC

In the PC, install the Ethernet protocol IPX, with frame type: Ethernet 802.3

In the console, active the Ethernet communication (On) and transmit some DMX by Ethernet ports.
With these minimum requisites and an Ethernet cable to connect the console & Capture, these systems are communicated.

Remember:
- If PC & console are connected directly, use a cross Ethernet cable.
- If PC & console are connected using a hub, use a no-cross Ethernet cable.

Console & capture must have the same patches information for a correct simulation.
24.5 8700 Series X SPY
Software for Windows PC that allows you “to capture” in the PC screen any console screen.

The program is extremely simple. Only it needs of a PC with connection Ethernet:
- In the console, access to menu 40: Ethernet Configuration, and set the communication at ▼On.
- Between console & PC, set an Ethernet red connection (cable or wireless).
- In PC, install the Ethernet protocol IPX, with frame type Ethernet 802.3 (See before)

In the PC this program can be executed in any location PC, since does not generate any type of auxiliary files… once opened the program (double click in 8700SeriesXspy.exe):
- Accede to the menu View and to select anyone of the monitors/tables that appear in this menu… It’s possible to change of monitor as long as is wished, belonged or not to the same console.
- To close the program, File/Exit