TRITTON

COMPACT CONTROL FOR THEATRE AND LIVE

24 CH / 36 CH / 48 CH
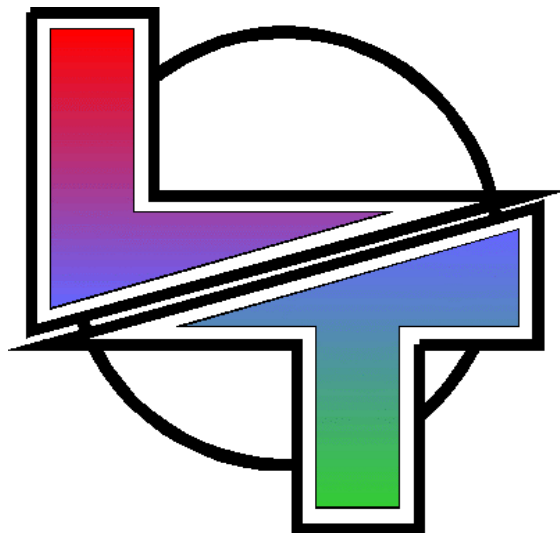
USER MANUAL

Version 1.3

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INTRODUCTION

There are three models for the manual control console "**TRITTON**":

- **TRITTON-24**, for **24** control channels / **12** masters.

- **TRITTON-36**, for **36** control channels / **24** masters.

- **TRITTON-48**, for **48** control channels / **36** masters.

These control boards are manufactured completely with digital technology, and passed the hard control tests.

The manipulation of these consoles is very easy, quick and efficient, in this way the user can use the 100% of the console tools. TRITTON is a console cheaper and very functional.

TRITTON has a great number of possibilities similar to sophisticated consoles possibilities, in constant update.

There are 3 different models, one model for each requirement. In the next figure, we can see the basic parts:

- Manual field. (24 faders for TRITTON-24, 36 for TRITTON-36 and 48 for TRITTON-48).

- Masters. (12 masters for TRITTON-24, 24 for TRITTON-36 and 36 for TRITTON-48).

- Sequence.

- General Master.

- General control, with a display, numeric keyboard, cursors and dedicated function keys.

The difference between models is the channels and masters number.

TRITTON-24:

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TECHNICALS CHARACTERISTICS - DEFINITION

- Control channels: 24, 36 or 48.

- Masters: 12, 24 or 36. Masters for channels groups, presets or chases.

- Dimmers channels: 512.

- Presets or memories: 800 (1 -799).

- Channel Flash.

- Masters Flash, in modes Solo and Normal.

- Times in masters.

- 99 Chases of steps no limited, with presets, groups or channels: With level and rate control, 3 directions, and 5 reproduction modes (4 hard modes and 1 soft mode).

- Sequence: 1000 steps. All step with a preset, time-in, time-out, delay and jump.

- Dipless crossfade.

- 99 master pages.

- 14, 26 or 38 simultaneous fades, for TRITTON-24, 36 or 48 respectively.

- EXAM function. Helps us to know any recorded information.

- MODIFY function. Permits us to modify presets and groups.

- Setup.

    - Patch: 512 dimmers, 4 curves and maximum output level by channel.

    - Preheat function.

    - MIDI port configuration.

    - Inner data memory, for data shows. Functions: record, load, exam... and permits us to export the data show to a MIDI sequencer (Sysex).

    - Warm reset.

    - Messages language selection.

    - Scrollers patch.

    - ... And other friendly functions of the LT consoles.

- Hardware and software tests.

    - Output buffer.

    - Tests for keys, potentiometers, LED's, display, inner data memory...

    - Free memory test…

- General Master. (It is possible to exclude channels of this control).

- Black-Out key. (It is possible enable or disable this function key).

- Scrollers, (colour changer), management.

- MIDI IN-THRU-OUT.

- DMX-512 1990 (USITT).

- Alphanumeric display - 2 x 16 characters.

- Digital technology:

    - Microprocessor: H8/3003 - 16 Mhz.

    - EPROM: 512 Kb.

    - RAM. 512 Kb.

- Size:

    - TRITTON-24:   540 mm. x 500 mm. x 60 mm...160 mm. 6 Kg.

    - TRITTON-36:   770 mm. x 500 mm. x 60 mm…160 mm. 8 Kg.

    - TRITTON-48:   1000 mm. x 500 mm. x 60 mm…160 mm. 10 Kg.

- **85-265V~ / 50-60 Hz.**

- **Nominal Power: 21W.**

- **Nominal Intensity: 0.165 A.**

- **Protection: 2 fuses x 1 A/250V type F**

- **Temperature: -45º / 80ºC**

- **Humidity: 80% (no condensation).**

- **CAT II.**

CONECTIONS

In the rear panel:

DMX-OUT

DMX-512 (1990) output, according to the USITT. (Standard female XLR-5). Code:

Pin 1: GND.

Pin 2: Data -.

Pin 3: Data +.

3 & 4 pins: No connected.

MIDI IN-THRU-OUT

Standard port MIDI: 3 female DIN-5 (180°):
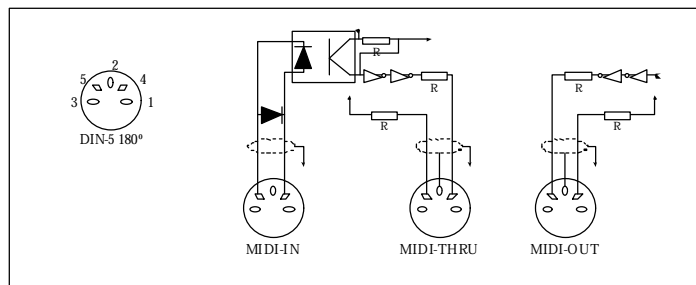
MAINS

Mains input: 85-265V~ / 50-60Hz. IEC base with 2 fuses enclosure (1 A / 250V type F fuses), and on/off switch (I position on & O position off).

Notes:

In the inner power supply, there is one 2 A fuse. Remember this for your replacements!

You have to use cables with earth connection (normalised cables).

INSTALLATION

TRITTON is distributed ready to work:

- Unpack the console with care.

- Place the console in a plane surface.

- Connect the power cable to the IEC base, in the rear of TRITTON. Always use power cable with earth, normalised.

- Connect the DMX output cable to the connector marked like DMX OUT, Always use data cable for the RS485 standard: twisted pares screened, of low capacitance and 120 ohms impedance.

- Switch on the console. Switch in position I.

TRITTON is ready to work!

MAINTENANCE

TRITTON doesn't need periodical maintenance.

Cleaning: Clean the external surfaces with a cloth wetted in water.

TECHNICAL SERVICE

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Actualization of software: www.dimmer.de

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LAYOUT: LOGIC PARTS

In the frontal panel of the console we can find:

MANUAL FIELD

The 24 potentiometers (36 for TRITTON-36 or 48 for TRITTON-48), localizer in the upper zone, and marked like C1..C24 are the channels level potentiometers. All potentiometer has one Flash key associated.

All Flash keys have a green LED. In this LED we can see the output level of its associated channel. These keys are affected only by the general master position.

In the frontal panel, (upper left), we can find the **C** potentiometer, this potentiometer controls the manual field output in scene, (C potentiometer doesn't affect the channel flash level), is the manual field master.

Over this potentiometer we can find the **SG.DB** key. This key permits us to choose between two manual field modes: **Single** (LED off) y **Double** (LED on).

MASTERS

There are 12 masters (24 for TRITTON-36 & 36 for TRITTON-48), marked like M1..M12. All masters have associated a multifunction key.

The multifunction key, Mn, (M1..M12), can work like:

- Master assignation key. It used for load or remove groups, memories or chases in a master.

- Master Flash key: Modes normal and solo.

- GO key: Start fades of the master assignation, (group or memory) or Start the chase (automatic or step by step modes).

These keys have a red LED, this LED show us the associated master status.

GENERAL CONTROL

Located near the masters and under manual field, we can find this general control section. The general control is composed by:

- 2x16 characters alphanumeric display, monitoring the menus, numerical data, fault and information messages, and any other needed information...

- Numerical keyboard.

- Arrows & **ENTER** keys.

- And the dedicated keys:

    - **FL-MT** chooses the working mode of the associated keys to the masters, Mn, like GO, normal master flash or solo master flash keys.

    - **LOAD** loads groups, memories, chases or pages in the masters.

    - **TIME** loads times in the masters are assigned with presets (memories) or groups, and for others special functions.

    - **EX-AM** accedes at the information recorded in the console. (This key works in conjunction with the rest of the console keys).

    - **REC** records presets, chases and pages.

    - **DELETE** deletes presets, pages, manual field, chases and other cleared functions in masters and menus.

    - **INSERT**, works in the menus: sequence, chase and patch editing menus. And in playback mode, this key jumps to the desired position in the sequence.

SEQUENCE

With two potentiometers, X1 & X2, for manual control, and the next functions keys:

GO: Starts the present crossfade.

GO-BACK: Starts the crossfade in invert direction, crossfading at the previous step in the sequence.

PAUSE: Stops the started crossfade.

In playback mode, **INSERT** key jumps at the desired position in the crossfade steps.

GENERAL MASTER & BLACKOUT KEY

The general master is the potentiometer located on the frontal panel (right down).

The general master is associated with the Black-Out key, BLK-OUT, above the GM fader.

MAIN SYSTEM INSTALLATION. COLD RESET

1.- Connect the output cable. 5 pin XLR DMX.

2.- Connect the IEC mains lead.

3.- Press and hold down   key (for "cold reset") and switch on the console power, release the key.

The first time that we start the console have to do "**cold reset**", and each time that we want erase all recorded data in the console. For the cold reset: Press and hold down   key, and switch on the console power.

After the "cold reset", in the console display we can read (for a short time):

```
LT     COPYRIGHT

TRITTON 24 V1.30
```

And after, we can see the main menu:

```
 Main SEQ     >0

MDFY NUM ->
```

THE MANUAL FIELD: C1..C24 FADERS

•   Locate the general master, GM, at 100%.

•   Confirm that the **BLK.OUT** & **SG.DB** keys are not activated (LED off).

From the manual field we have control about 24 console channels:

With the **C** master (manual field general master) at 100%: When a fader is moved out the its 0% level, its corresponding control channel outs in scene, with a proportional level to the marked level with the potentiometer. The associated flash key LED shows us this level.

When we push the channel flash key, and while this is pushed, the channel is at 100% level.

The manual field output is proportional to the C master level. When the C master is in its 0% (the down end of its travel), there is not manual field output.

Note: The Flash keys are not controlled for the C master.

How to remove the output to scene of the manual field? There are three possibilities:

1. Move the 24 manual field faders at 0%. (Clear the manual field composition)

2. Move the C fader at its 0%. (This process maintains the manual field composition).

3. With the keys sequence: **DELETE SG.DB**. (Clear the manual field composition).

There is a second function mode for the manual field: **Double Mode.** This mode permit us to do manual fades between two manuals compositions, from the C1..C24 faders.

- Select **Double mode**: Push the **SG.DB** key, (LED on).

In this way, C master works like a crossfade fader, fading between two manual compositions.

- Locate the C fader in one of its end positions (0% ó 100%):

With the faders C1..C24, perform one composition. Note that we have not output in scene. The green LED's of the channel flash keys are off.

Move the C fader at the other end position. Note as the manual composition appears in scene following the C fader movement. At the end of the C fader travelling, the console produces an acoustic signal, "beep", indicating the end of the fade. The composition is in scene at 100%.

Now, we cam move the manual field faders, to obtain the new desired composition. These faders' movements still are not showed in the output.

Move the C fader at the other end position. Note as the old manual composition, in scene, fade at 0% and the new manual field composition fades at 100%. Both fades follow the C fader movement. At the end of the C fader travelling, the console produces a new acoustic signal, "beep", indicating the end of the fade. Now the new composition is at 100% in scene, and the C1..C24 faders are ready for the next manual composition.

Repeat this process the desired times.

This mode, Doubling mode, permits us do a manual sequence.

Exit the **Double** mode pressing **SG.DB** again (LED off).

CHANNELS GROUPS

The channels groups are created in the masters and only exit within them. The channels groups help us select channels sophisticated combinations.   And in any case, groups can be used like presets in the masters.

Create a channel group:

Do you a combination channels/levels with the manual faders (C1..C24), for example, all panoramas at 100%. When the desired picture is in scene, load you this combination in a master, like a channel group:

- **Push the LOAD key.**

- **Push the desired Mn key. (Mn: Associated master key, M1..M12)**

- **The light in scene now is in the master.**

The red LED of the associated key to the master (Mn) is lit at 50%, this LED shows us that its associated master has light information. Now you can give this channels group in scene, moving up the master fader. The green LED is lit at 100%, it shows us that its associated master is in scene.

If we remove the manual field output, and move up the master fader that has this group, we can see, in scene, the channel group.

We can have up to 800 different groups. The channels groups can be recorded in the master pages.

When we remove a group of its master, the group is erased. We have to record it in a master page.

Remove the master assignation pressing:

- **0 LOAD**

- **Mn. Master associated key that we want clear.**

Now the red LED of the master associated key, Mn, is at 0%, showing us that the master is empty.

Other way for remove the master assignation is:

- **DELETE**

- **Mn. Master associated key that we want clear.**

Note: In the groups and preset always is recorded the all console output, the current scene. In this way we can use the masters outputs to create new presets or new groups. The channels groups only can be reproduced with the masters.

MEMORIES or PRESETS

The **TRITTON** control board can store up to 800 presets (1..799).

In each preset we store the current console output, the scene. The scene is composed for the manual field, masters and sequence outputs, and controlled by the general master level.

To store a preset, prepare the scene giving level to some channels through the manual field faders and/or assigned master. When the scene is constituted:

- **Enter a number to name the preset, in the numerical keyboard, (optional).**

- **Push the REC key.**

When we push the **REC** key the console produces one 'beep'; the preset has been recorded. The console display shows us the recorded preset number (upper right corner).

If you attempt storing to an existing preset, the console shows us one warning message, in this situation, we can:

- Press the **REC** again to overwrite the preset or press **C** if you do not intend to overwrite the existing preset, and enter a different preset number.

Notes:

When we push the **REC** key without previous number, TRITTON stores the next preset number to the last stored preset number, or as preset 1 if there aren't recorded presets.

The recorded presets, by default, are inserted in the sequence, directly. We can set that the sequence does not include to the new presets from the SETUP SEQ menu.

Preset numbers are 1 - 799.

The presets are used as base to create the sequence and chases. The presets can be loaded and reproduced in the masters and stored in the master pages.

To erase a stored preset:

- **Enter the preset number that you want erase**

- **Push DELETE key. The console needs confirmation to erase this preset.**

- **Confirm pushing DELETE again.**

Information about the recorded presets:

1. **Push   0 EX-AM**: The display shows us the stored presets list.

2. **Push   # EX-AM**: The display shows us the information about the preset #. (# is a preset number).

Example: exam display for the preset 2, this preset has the channels 1, 2 y 3 at 93% and the channel 7 at 100%:

```
P    c   1-3 7

2    @    93 F
```

If we use the arrow keys, we can accede to the next information:

↓ Accede to the next recorded preset.

↑ Accede to the previous recorded preset.

→Accede to the more information about the same preset. Advance.

← Accede to the more information about the same preset. Review.

To exit of these information displays, push the **ENTER** key.

TRITTON has one command to erase all recorded preset. This keys sequence needs confirmation:

- **0 DELETE (DELETE** confirmation).

LOADING PRESET IN THE MASTERS

To load a preset in a master is necessary that the preset is stored.

1. Load one preset in one master.

    - **Enter the preset number that you wish load, #**

    - **Press the LOAD key**

    - **Press the desired Mn**. (Master associated key). It is possible push mote than one Mn key, the associated master with each pushed key, is loaded with the next recorded preset to the last loaded preset. Exit with **ENTER.**

2. Clear the master content.

    - **Press the 0 numerical key.**

- **Press LOAD**

- **Press the desired Mn**. It is possible push mote than one Mn key, the associated master with each pushed key, is cleared. Exit with **ENTER.**

Or:

- **Press DELETE**

- **Press the desired Mn**. It is possible push mote than one Mn key, the associated master with each pushed key, is cleared. Exit with **ENTER.**

3. Enter a fade time in a master within a preset or channel group:

- **Enter the desired time (0 - 999 in seconds)**. Enter the 0 seconds is similar to clear the master assigned time.

- **Press TIME key.**

- **Press the desired Mn key**. It is possible push mote than one Mn key to enter the same time in their associated masters. Exit with **ENTER.**

4. Loading correlative presets in consecutive masters.

- **Enter the first preset number to load in the masters.**

- **Press LOAD LOAD**. (Double click[1]). All the masters are loaded from the indicated preset to the last recorded preset or until all the masters are loaded. This keys sequence reloads the previous assignations.

5. Clearing all the masters.

- **Enter number 0.**

- **Press LOAD LOAD**. (Double click). All the masters are cleared.

6. Loading a time in all the masters within presets or groups.

- **Enter the time for the masters, in seconds**. The 0 time is similar to clear the assigned time.

- **Press TIME TIME**. (Double click). The fade time is included in all the masters that are loaded with groups or presets.

When we have a loaded master, the red LED of its associated key is lit at 50%. If this master is providing scene output, its LED is lit at 100%.

We can give output to the master assignation, with the master fader or with its associated key, Mn, in GO mode:

1. If the master has no time, its assignation fades in scene at 100%, in 0.1 seconds. In a second GO, its assignation fades out scene at 0%, in 0.1 seconds.

2. If the master has fade time, when we push its associated key, Mn, its assignation fades from 0% at 100% in the assigned fade time. When the master is at 100%, if we push its Mn, the master assignation fades at 0% in the assigned fade time. If the master fader is at x% level, fades from

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[1] Double click: Two "clicks" followed, in a short time.

x to 100%, in the proportional assigned fade time.   In these fades the master is temporised. When a master is temporised its red LED is blinking.

Note: Upon loading or emptying a master, be careful that its control fader is at 0%, to avoid light jumps in stage.

RECORDING MASTER PAGES

TRITTON has 99 master pages. From 901 until 999.

In all page, we stored the current masters assignations. Prepare the desired master assignations (presets, groups, chases, times…):

- **Enter the page number: 9##**

- **Press REC**

In the moment of pushing REC will be heard a 'beep': the page has been stored correctly. If you attempt storing to an existing pages, the console shows us a messages, press REC again to overwrite the existing page, if you do not intend to overwrite this page, push C key, and enter a different page number.

Erasing a master pages:

- **Enter the page number you desired erase: 9##**

- **Press DELETE**

Loading a stored master page:

- **Enter the page number: 9##**

- **Press LOAD**

Note: The page load does not imply a light jump in scene, if you have a active master, its new assignation is not effective until its master fader rise at its 0% level.

Removing the master pages (two different ways):

- **900 LOAD**   or

- **0 LOAD LOAD**

To obtain information about the pages, or about the master assignations in the console display (Remember that in all exam displays we can move with arrows keys to obtain more information):

- **EXAM Mn**: Shows us the assignation, status and level of the selected master. Example: Exam of the master 1, **M1**. In the display, we can see that the M1output is at 100%, that its assignation is a preset 56 and has a fade time of 15 seconds. Furthermore we can see the stored channels of the preset 56, in this example the channels 1, 2 & 3 at 100% (1-3 @100%):

```
M1   56   C 1-3
```

```
 F    ↕15  @    F
```

- **EXAM FL-MT**: Shows us the assignations of all the Masters, including its charged page number. In the example display, we can see that the charged page is 901, that M1 has the preset 1 and that it is at 96%, That M2 has a channels group and that it is at 83%… Pushing the key, we can access to M3 and M4 information, and then up to M12. To see the assigned times push the ↓ key.

```
 P901  P   1 GRP

M1    @  96  83
```

↓
```
 P901  P   1 GRP

M1    ↕ 2.0 3.1
```

- **900 EXAM**: Shows us the list of recorded pages.

- **9## EXAM**: Shows us the information about the selected page 9##. In the example, the information about the page 901, thus the M1 has the preset 1 and a fade time of 2 seconds, and the M2 has a group and a fade time of 3.1 seconds. To access the information about M3..M12 press the   key, as many times as will be necessary.

```
 P901  P   1 GRP

M1    ↕ 2.0 3.1
```

MAIN MENU

In the TRITTON console, many of the editing, set-up & test functions are implemented into the menus. This permits us eliminate a great number of dedicated keys.

The menus are a very simple use, for menus we have:

- The arrow keys (4), or cursors, they permit us to advance by the screen, selecting the functions.

- The **ENTER** key, to enter/exit of the menu options.

- The numerical keyboard permits us to enter the numerical data, for the edit and set-up process.

- In any cases, the **INSERT** key permits us to access to certain options, into the menus.

- When we switch on the console, in its display, the main menu appears:

```
 Main SEQ    >0

MDFY NUM ->
```

In the main menu there are the next functions:

1. **SEQ:** To edit the sequence.

2. **MDFY:** To modify presets & groups.

3. **NUM:** To edit the manual field in small numerical editor.

4. **->**: To access to the second page of the main menu.

5. **DEL:** Deleting the sequence completely.

6. **TEST:** In this we can find hard and soft tests.

7. **SETUP:** Console configuration. Including the Patch, MIDI port, scrollers and other user options.

8. **->**: To return to the first page of the main menu.

The first command, in each menu, is its own name, in this case **Main**, this first command permits us to **exit** to the previous menu, and always it written in tiny letters. In this case, the Main menu is a first menu and this command has not function.

In the drawing, we can see that there are two cursors, Main , to both sides of the selected option, you can displace these cursors with the arrows keys. Then, to select one menu option, for example SEQ, press the key: '   ' one time, in the display: SEQ , to enter in this option press **ENTER** key.

EDITOR FOR THE MANUAL FIELD: ▮ NUM▮

When we need more precision to adjust the channel level, TRITTON has a little editor for the manual field from the numerical keyboard. For example, when we work with scrollers or moving lights this tool is very used.

From the Main menu, select the option **NUM**:

```
Main SEQ     >0

MDFY  NUM   ->
```

In the display:

```
C           +
>0

        @   -   :
```

To the right of the display are the symbols that indicate us the new functions for the cursor keys. These functions only are actives when this display are present.

To the left of the display is the command line.

The new functions, for the cursors or arrow keys, are:

Arrow Up,   ＋ : Permit us add one channel/group of the selected group.

Arrow down,   **-**: Permit us eliminate one channel of the selected group.

Arrow right,   **:** : Permit us create a channel range.

Arrow left,   @: Permits us assign a level for the selected channels group in the editor. Enter this level with two digits.

Examples:

• Select the channel 1 at 75%.

  The first entered number is always a channel number.

  Press the keys: **1**   **75** .

  In the command line: C 1@75.

• Select the channels 5-20 at 56%.

  Press the keys: **5**   **20**   **56** .

  In the command line: C 5:20@56.

• Select the channels 16, 18, and 20-24 except the 23 at 15%.

Press the keys: **16** **18** **20** **24** **23** **15** .

In the command line: C 16+18+20:24-23@15.

- Select the channel 23 at 100%.

    Press the keys: **23** .

    In the command line: C 23@F.

    To obtain the level 100% (Full), press the key (@) two times.

- Select the channel 24 at 5%.

    Press the keys: **24** **05** .

    In the command line: C 24@5.

    To obtain the level < 10%, enter this level with two digits: 0#.

The last action done in the editor is erased pressing **C**.

To exit the editor press ENTER.

Note: The editor of manual field has the same functioning that the faders of the manual field, included the functioning in "Double" mode.

LEVEL: FINE ADJUSTMENT

The user can do a fine adjustment (0-255), with more precision that the numeric entry, after to enter a level (by numeric keyboard) and before to press other key:

The up and down arrows permit us to do a fine adjustment about the entered level.

PRESETS & GROUPS MODIFICATION

It is possible to change the group or preset content editing it newly with other information (overwrite), or modifying its content with the **MDFY** function.

To **overwrite** the preset number # we must:

- Edit the desired scene.

- **# REC**. TRITTON ask for a confirmation. **REC** to confirm. The preset # has been stored with the new scene.

To **overwrite** the group in the master # we must:

- Edit the desired scene.

- **LOAD Mn**. The group in the master # has been stored with the new scene.

Using the **MDFY** function it is possible to modify presets and groups totally or partially. The **MDFY** function is in the first page of the main menu. To select it, displace the cursor using the arrows keys and press **ENTER** to accept it.

```
Main SEQ    >0

MDFY  NUM ->
```

To **modify** the preset number # we must:

- **#   MDFY   ENTER**

To **modify** the group or preset in the master # we must:

- **MDFY   ENTER Mn**

Now, a new working mode is activated, the modification mode, this mode permit us to do the needed modifications and store them. During this mode is active, in the display you can see:

```
 REC   ESC NUM

Mdfy GRP
```

These options permit us to store the modifications (REC), to quit without store them (ESC) and access to the numerical editor (NUM) in a temporal mode to adjust channels.

In the inner line, you can see the item that TRITTON is modifying. The preset are identified by their number (Mdfy 23) and the groups with the label GRP (Mdfy GRP).

When you access to modify a preset or group, in addition to the display options, TRITTON loads the preset or group selected in the A manual field, and at the same time, forces at 0% to the resst of

the console outputs. In this way, only the preset or group selected to modification mode is active in scene. In this status the **SG-DB** LED is blinking to shows us that the modification mode is active.

Now we can use the channel faders or the numerical editor (NUM) to do the desired modifications.

When the preset or group is satisfactorily modified, press   **REC**   **ENTER** to store the changes or press   **ESC**   **ENTER** to quit without store the modifications.

Resume:

\#   **MDFY**   **ENTER** {modifications}   **REC**   **ENTER**

   MDFY   **ENTER Mn** {modifications}   **REC**   **ENTER**

Note:

When you access to the numerical editor (NUM) from **MDFY**, in the NUM display you can see the flag *Mdfy*, this flag informs us that the modification mode is active. When you quit of the NUM menu pressing **ENTER**, you return to the **MDFY** menu.

Summary:

SG.DB	Selects the single or double modes for the manual field.
DELETE SG.DB	Erases the manual field output.
LOAD Mn	Loads the scene, like a group, in the selected master.
REC	Stores the scene like a preset N+1
# REC	Stores the scene like a preset # (1-799).
# DELETE	Erases the selected preset.
0 DELETE	Erases all the stored presets.
# LOAD Mn	Loads the preset # in the selected master.
# LOAD LOAD	Loads the correlative presets, from the #, in all the masters.
0 LOAD Mn	Clears the assignations of its associated master.
DELETE Mn	Clears the assignations of its associated master.
0 LOAD LOAD	Clear the assignations of all the masters.
# TIME Mn	Assigns a fade time # (0-999) at the selected master.
# TIME TIME	Assigns a fade time # at all the masters within preset or group.
9## REC	Records the 12 masters assignation in a page 9##
9## DELETE	Erases the indicated page.
900 DELETE	Erases all the stored pages.
9## LOAD	Loads the indicated page in the masters.
900 LOAD	Clear the assignations of all the masters.
MDFY ENTER Mn	Modify the content of the Mn
# MDFY ENTER	Modify the preset #

Summary for EXAM functions:

EXAM EXAM	Scene output.
0 EXAM	List of recorded presets. Arrows keys for more information.
# EXAM	Preset #
EXAM Mn	Mn: assignation and status.
900 EXAM	List of recorded pages. Arrows keys for more information.
9## EXAM	Indicated page.
EXAM FL-MT	Assignations of all the masters, and their status.
EXAM SG.DB	Scene output from the manual field, and status of C fader.

4 - MASTERS

FUNCTIONS KEYS ASSOCIATED TO THE MASTERS

There are three functions keys specially associated with the masters:

1. **LOAD**, Used to load/empty them.

2. **TIME**, Used to load/clear fade times them.

3. **FL-MT**, Used to choose the function of the associated keys, Mn, there are three possibilities:

   - FL-MT LED at off. The Mn keys are GO keys, to start the master assignation within preset or group. GO Mode.

   - FL-MT LED at on. (Push FL-MT). The Mn keys are master flash keys in Normal mode. Flash NORMAL Mode.

   - FL-MT LED blinks. (Push FL-MT again). The Mn keys are master flash keys in Solo mode. Flash SOLO Mode.

WORKING IN "GO" MODE

Only for masters loaded with preset or channels groups. For masters loaded with chase see the lesson 6).

There are two basic modes working with masters:

1. MANUAL.

The movement of the master fader controls the scene output of its assignation. Thus, when the fader is in its extreme 0% (down), there is not scene output. When the fader is in its extreme 100% (up) its assignation is at 100% in scene (maximum level). In intermediate positions we will obtain intermediate output levels. At the moment that the master is scene output, its LED is lit at 100%.

In this mode, the assigned fade times are not counted. The output follows the fader movement.

2. AUTOMATIC

Suppose that we have a master with one preset (or channel group) but without fade time, and its fader is at 0%. In this situation push its Mn key, (In GO mode - FL-MT LED at off), the master assignation jump at scene, at 100%, in 0.1 seconds. Its red LED of its Mn key is lit at 100%.

If the master is at 100% and we push its Mn key, its assignation jump at 0%, in 0,1 seconds, its LED now, is lit at 50%.

3. AUTOMATIC WITH FADE TIMES

Suppose that we have a master with one preset (or channel group) and fade time. For example, a fade time of 5 seconds, and its fader is at 0% (down). In this situation push its **Mn** key, (In GO mode - FL-MT LED at off), the master assignation fade in scene at 100% in 5 seconds. The red LED of its **Mn** key, is blinking, indicating us that it is temporising. When the fade finishes the led stops of blink.

During the automatic temporisation, in a master, if we push the **Mn** key again, the temporisation is stopped. Push **Mn** again to restart the temporisation fade newly.

If the master is at 100% and we push its **Mn** key, fades out scene, from 100% at 0%, in 5 seconds.

MASTER FLASH FUNCTION

After cold reset, or initially, the FL-MT LED is off, the Flash function is deactivated:

1. Push **FL-MT**, one time, and its LED is on. Normal Flash Mode. In this situation of FL-MT function, each time that we push the associated Mn of a preset or group master, its assignation takes a 100% level in scene, release the Mn key for that its assignation take the 0% level in scene.

2. Push **FL-MT** again, its LED is blinking. Solo Flash Mode. In this situation of FL-MT function, each time that we push the associated Mn of a preset or group master, its assignation takes a 100% level in scene, and at the same time, blacks out the output of the others masters and sequence[1]. In stage, **only** is the output of the selected master. Release the Mn key for that its assignation take the 0% level in scene, and the output of the rest of the master their previous levels.

([1]) The influence of this functions about the sequence is selected in the *SETUP SEQ* menu..

NOTES ABOUT THE MASTERS

• When we load a preset or group in a master, we have to place its fader at 0%, to avoid light jumps in scene.

• When we load an assigned master, the new assignation is active directly, it is not necessary remove its previous assignation.

- When we load a masters page, the faders at 0% accept their new assignations automatically. The faders with level different at 0% (with scene output), marked with one asterisk, * (in the exam displays), take its new assignation when they are moved at 0%.

- When one master is temporising, the LED of its Mn key is blinking, its output level and fader level is not equal. The master is nailed. This situation is marked with the symbol "<". At any time of the its temporisation, we can take manual control about the master output: Move the fader up to reach the master output, moment in which will be heard a 'beep', indicating that we have manual control about the master output.

- With the Mn keys in GO mode, if the fader is out of its 0%, the fade always is from the current level up to 100% level, with the proportional fade time.

Summary:

FL-MT (LED off) Mn	GO. Starts the fade of the master assignation, counting the possible assigned time.
FL-MT (LED on) Mn	Normal Flash. When Mn is pushed its output is at 100%.
FL-MT (LED blinking) Mn	Solo Flash. When Mn is pushed its output is at 100% and the output of the rest of the masters is 0%.

5 - THE SEQUENCE

THE SEQUENCE

Various steps form the sequence, TRITTON has a maximum of 1000 steps for its sequence. In all step, we can have:

- A preset.

- A fade-in time.

- A fade-out time for the previous step.

- A delay time.

- A jump at other sequence step/preset.

When we replay the sequence, in manual mode, automatic mode or temporised automatic mode, the sequence steps are gone happening in scene of the following form:

The sequence step, or the preset that it is in the X1 step (normally in stage) fades out at 0%, while the preset of the step in X2 (next preset in scene) fades in scene from 0% up to 100%. This double fade is named like **crossfade**. When the X2 step is at 100%, its preset advances to X1, and the next step in the sequence advances to X2. The sequence is prepared to begin a new crossfade between the steps in X1 and X2. In this way, we can say that the sequence is a succession of crossfades.

In TRITTON, these crossfades, by default, are **dipless**[0].

The preset 0 is always the preset of the 0 step (blackout preset). It is not possible to change the preset of this step, but we can edit fade times, delay time and step jump.

WORKING WITH THE SEQUENCE

With the EX-AM function we can obtain information in the display:

- **EX-AM GO**: Access to the current crossfade information.

To create the sequence we have to store the desired presets. The console included in the sequence all stored preset in numerical order [1].

The edition of the sequence is detailed in the next part.

There are three ways of sequence reproduction:

1. **Manual.**

In this mode, we only work with the X1 & X2 faders. The recorded sequence times are not computed.

As initial situation, suppose we have the X1 & X2 faders in their lower position. These faders are inverted, when X1 is in its lower position, has its maximum level, at 100%, and when X2 is in its lower position is at 0%. In this situation the X1 preset is in scene, and the X2 preset is waiting to fade in scene. We can move the faders at the same time or not. Note that the X1 & X2 presets respond to the movements of their faders. The crossfade finishes when the two faders reach their upper position. In this moment the X2 step (preset) jump to X1 and the next step in the sequence jump to X2. The next crossfade is ready. The scale of these faders have been inverted, now, X1 is in its 100% and X2 in its 0%.

The green LEDS marked likes X1 & X2, show us the direction of the needed movement to finish the crossfade:

- If X2 is lit, move the faders at their upper position.

- If X1 is lit, move the faders at their lower position.

In any time, we can press the GO key, starting the crossfade automatically. In the same way, when the crossfade is in automatic mode, we can take manual control with the faders.

2. **Automatic without stored fade times.**

In this mode the GO & GO-BACK keys are used. Not store fade times in the sequence.

Each time that we press the GO key, the sequence advances one step. There is not a real fade because we have not stored fade times.

Each time that we press the GO-BACK key, the sequence goes back one step.

3. **Automatic with stored fade times**

It is the more complete mode to reproduce the sequence. The associated function keys are GO, GO-BACK and PAUSE.

Place the X1 & X2 faders are in their lower positions and the sequence with the 0 step in X1 and 1 step in X2:

When we press the GO key, the X2 step, the 1, starts its fade to scene during the stored fade-in time, Tin. And the X1 step, in this example the 0, starts its fade from scene during the stored fade-out time, Tout, (this time is in the X2 step). The X2 LED shows us the direction of the faders movement to finish the crossfade in manual mode, during the automatic crossfade this LED is blinking. At the end of the crossfade, the X2 step (preset) jump to X1 and the next step in the sequence jump to X2. The next crossfade is ready. The X2 LED does not blink.

If we have programmed a delay time[2], Tauto, the step 1 will stay in scene this time, when this delay time finishes, the next crossfade begins. If there is not delay time, the new crossfade begins with a new GO. During the delay time, one LED is lit and the other LED is blinking (X1 & X2).

At any time during the crossfade, we can press GO. In this moment a next step enters in X2 immediately.

If during a crossfade we push PAUSE, the crossfade is stopped. To restart the crossfade press GO or press GO-BACK.

If we push GO-BACK the crossfade is restarted in inverted direction. We can press this key , as many times as will be necessary.

The displacement of the sequence

There are two modes to interrupt the sequential order of the crossfades, one programmed, editing jumps in the sequence. Basically is one indication of the next step to fade after the step with the programmed jump. For example, in the step 56, enter a jump to step 1 (J1), so, when the step 56 is in scene the next step will be the step 1 (now in X2). And other with the INSERT function. With this function, at any time, we can:

- **Enter the step number and press INSERT GO**: Inserting in X1 (scene) the indicated step.

- **Enter the preset number and press . (dot) INSERT GO**: Inserting in X1 (scene) the indicated preset. If this preset number is in more than one step, in X1 is located the first step with this preset.

- **Enter the step number and press INSERT GO-BACK**: Inserting in X2 (next step in scene) the indicated step. There is not light jump in scene.

- **Enter the preset number and press . (dot) INSERT GO-BACK**: Inserting in X2 (next preset in scene) the indicated preset. There is not light jump in scene.

- **1 INSERT INSERT (double click)**: Places the sequence in initial position.

- **Enter the step number and press INSERT INSERT**: places the step 0 in X1 and the indicated step in X2.

- **Enter the preset number and press . (dot) INSERT INSERT**: places the step 0 in X1 and the indicated preset in X2.

To program a jump, JUMP, or with the displacements with the INSERT function, we can use de number of the step or of the preset. To indicate that we enter a preset number, only press •, (dot) after the numerical data. (Format ###.).

EDITING THE SEQUENCE

From the **SEQ** menu, we can edit the sequence completely. Enter in this menu and note the change of the display.

This display shows us a numerical sheet, we have to place us in the appropriated place and enter the desired data. In general, to move us by the "sheets" use the arrow keys, and to enter the numerical data use the numerical keyboard.

Select the **SEQ** command in the main menu: Push the ⬛ key, (SEQ , placing the cursors in the command SEQ), and press **ENTER**. Note we have a new display.

In this display the sequence sheet is showed, in the console we only can see two sequence steps.

This display with the empty sequence is:

```
S0   P0    J
S1   P     J
```

Where by columns we have:

1.- Information about the sequence step we are editing, **S#** or Step #, this column can not be editing.

2.- Information about the step preset.   **P#**

3.- Step number (or preset number -j-) that it will follow in the sequence to the step that we are programming. Jump: J #.

Press the   key 3 times, we pass to the second display for these steps:

$$\downarrow \qquad \uparrow \qquad \circ$$
$$\downarrow \qquad \uparrow \qquad \circ$$
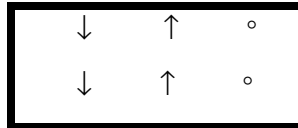
4.- Fade-out time for the previous step in seconds. ($\downarrow$)

5.- Fade-in time for this step in seconds. ($\uparrow$)

6.- Delay time for this step in seconds. (°)

Move the cursor with the arrow keys (cursors) at the desired position, and enter the desired numerical data:

   : Moves the cursor one position to the right, from the last position goes back to the first position of the same step.

   : Moves the cursor one position to the right. Not changes of step.

$\downarrow$: Moves the cursor to the next step.

$\uparrow$: Moves the cursor to the previous step.

Example: Edit the step 1 with the preset 1, a T.out of 2 seconds, a T. in of 0.5 seconds, a T.Delay of 3 seconds and a Jump at step 0:

S 1   P 1   J0 $\downarrow$ 2.0 $\uparrow$ 0.5   ° 3.0

Place the cursor in the cell **P**, with the cursors, and enter **1**.

Press   , now we are in cell **J**. Enter the number 0.

Press   , now we are in cell $\downarrow$**.** Enter 2.

Press   , now we are in cell $\uparrow$**.** Enter **0.5**.

Press   , now we are in cell °**.** Enter **3**.

The step 1 is edited.

Repeat this process for all steps we want edit.

To exit of this editing menu and stored the data, press **ENTER** key.

Notes about the sequence:

- If we have active the Setup option FIXED[1] sequence, each time that we store a preset, this is enter in the sequence automatically, in numerical order. If the sequence is FREE, we have to enter the preset by edition.

- The **INSERT** key is used in the editing of the sequence to insert the next recorded preset to the previous step preset, always located in the cell **P**. If we are in a time cell, the INSERT function will copy the times of the previous step.

- To erase an edited time, press **0** or **DELETE** with the cursors around it.

- The step 0, always has the preset 0.

- The steps are not editable, cell **S**. From this column, enter a step number and press   to go to the indicated step. It is a "localisation" function.

- In the columns S or P, when we press **DELETE**, we erase the complete step.

- To insert one preset in the sequence, locate the cursors in the step that we want have the new preset, in the cell P, enter the preset number and press **INSERT**.

- To cancel a numerical enter, before store it, press **C**.

- The times can take values from 0 seconds to 999 seconds, though the times of 3 numbers will not be able to have decimal part.

- **INSERT** function for the edition of the sequence:

  In the cell P (preset), when we press **INSERT** the next recorded preset is inserted (in numerical order with reference to the pervious step).

  In the cell ↑ (time in), when we press **INSERT**, the time in of the previous step will be copied.

  In the cell ↓ (time out), when we press **INSERT**, the time out of the previous step will be copied.

  In the cell ° (delay time), when we press **INSERT**, the delay time of the previous step will be copied.

- In the sequence visualisation, a jump to one step is showed like **J###,** and a jump to one preset is showed like a **j###.**

NOTES FOR SETUP AND SEQUENCE

In this lesson you can find marks like this: [1]. In this part, these marks, about the setup options, are explained. (See the lesson 'SETUP, Systems Configuration'):

From the SETUP menu, there are two submenus about the sequence options: SEQ and XF:

0.- The 'dipless' characteristics can be inhibited: SETUP Xfon: ON **OFF**

1.- To avoid that the systems inserts the stored preset in the sequence: SETUP SEQ RECfixed: FIXED **FREE**.

2.- To deactivate the delay time: SETUP SEQ T°on: ON **OFF**

ERASING THE SEQUENCE: DEL

To erase the sequence access to the DEL command, from the main menu:

```
Main DEL
>0

TEST SETUP ->
```

Select DEL command and select the SEQ option. This command needs confirmation.

Summary:

GO	Starts the new crossfade.
GO-BACK	Starts the crossfade in inverted direction.
PAUSA	Stops the current crossfade.
Nº INSERT GO	The indicated step goes to X1. Light jump.
Nº INSERT GO-BACK	The indicated step goes to X2. No Light jump.
Nº INSERT INSERT	Deactivates the sequence, and the indicated step goes to X2.
1 INSERT INSERT	Deactivates the sequence, and the step 1 goes to X2. Initialisation.
INSERT INSERT	Deactivates the sequence, and the step 0 goes to X1. No modification in X2.
Nº preset . INSERT GO	The indicated preset goes to X1. Light jump.
Nº preset . INSERT GO-BACK	The indicated preset goes to X2. No Light jump.
Nº preset . INSERT INSERT	Deactivates the sequence, and the indicated preset goes to X2.
0 . INSERT INSERT	Deactivates the sequence, and the preset 0 goes to X2.
EXAM GO/GO.BACK/PAUSE	Access to the sequence exam display.

6 - THE CHASES

THE CHASES

Various <u>steps</u> form a chase, the steps are not limited. The steps are done with **presets, groups** or **channels**.

In TRITTON, we can store 99 chases, named like **8**01-**8**99, and we can reproduce up to 6 chases in the same time. (12 for TRITTON-36, and 18 for TRITTON-48).

For one chase, we can define:

- Its steps and if these steps are of channels, groups or presets.

- The step time (time for the step in scene).

- Direction for the chase operation. There are 3 directions:

    - In crescent direction, >,

    - Decrescendo direction, <,

    - And cyclic, <>.

- The chase mode. There are 5 modes:

    - ´Hard 1', _| , the step goes-in scene in flash mode and goes-out scene in flash mode.

    - 'Hard 2', / |, the step goes-in scene with a slow-ramp and goes-out scene in flash mode.

    - 'Hard 3', | \, the step goes-in scene in flash mode and goes-out scene with a slow-ramp.

    - 'Hard 4', / \, the step goes-in scene with a slow-ramp and goes-out scene in the same way.

    - 'Soft', XX. The step goes-in scene with a slow-ramp. At the same time the previous step goes-out scene with a slow-ramp (it is like a crossfade).

The 'soft' mode is the unique mode that permits has two steps of the chase in scene.

The chases are play in the masters, using 2 consecutive faders (and their associated keys) to control each chase.

STORING A CHASE

To store a chase:

Enter the chase number: 8##.

Press REC.

The console answer us if the steps are of preset, grupos or channels:

```
■PRES■CHAN
GRPS
```

Select the desired step type. Next, in the display:

```
802■T0.0■>  _|
P
```

The form of editing the chase, it is similar to the employee in a "data sheet", and to the already explained for the case of the sequence. Remember that the arrow keys permit us mover us to the desired cells and the numerical data are entered from the numerical keyboard.

In the display, from left to right:

Cell 1.- It is the chase number we are editing or modifying (802), under this number there is a flag shows us if the chase is from preset (P), groups (G) or channels (C).

Cell 2.- It is the step time. The time chase depends of the number the steps. (T0.0)

Cell 3.- It is the direction. Right, left or cyclic. To select the desired direction, places in this cell and press **INSERT**. (>).

Cell 4.- It is the chase mode: there are 4 "hard" modes and 1 "soft" mode. To select the desired mode, places in this cell and press **INSERT**. (_|)

By this upper line we move us with the arrow keys   &   .

Pass to the lower line with ↓ key, in this line we can find or edit the numbers of the presets or channels of the chase. The steps assignation. These steps are in order from left to right. By the steps we move us with the arrow keys   &   .

Example: Suppose we want stored the chase 805, for preset, "soft" mode, cyclic, with the presets, 1, 3, 5, 7, 5, 8, 9 & 9, in this order. If we want a chase time of 1 minute, or 60 seconds, (each step 7.5 seconds - 60/8 is the step time). To store this chase:

- **805 REC**

- **■PRESET■ ENTER**

- Pass to the cell **■T0.0■** and enter **7.5.** (Display: **■T7.5■**).

- Pass to the cell **■>■** and press **INSERT INSERT,** the symbol **<>** will appear**.**

- Pass to the cell **■ _|■** and press **INSERT INSERT INSERT INSERT,** the symbol **XX** will appear**.**

- **↓.** Now we can insert the desired presets**:**

- **1,   .**

- **3,   .**

- **5,   .**

- **7,   .**

- **5,** .

- **8,** .

- **INSERT** (or 9 and   ), and

- **9,** .

Now the chase is programmed. To exit press **ENTER**.

Copying a chase

Copy the chase 802 like a chase 810:

- **802 REC**

- Over the cell ■**802**■ press **810** (if it is necessary modify the new chase 810)

- Press **ENTER.**

Now there are the chase 802 & 810.

Notes about the chase edition:

- When we are editing the preset for the chase, we can enter the preset/channel number or press **INSERT** key to insert the next number preset/channel/group. Maintaining the **INSERT** key pressed, we insert presets/channels/group, without need of displacing us with the arrows.

- To clear one step, press **DELETE** (over this step).

- To clear a step time, press **DELETE** (over this time).

- The step time by default is 0.1 seconds or "CUT" time.

- Each time that we move the cursors the previous entry is stored.

- **C** key erases the numerical data no stored.

- The step time can be from 0 seconds up to 999 seconds, though the times of 3 characters have not decimal part.

Chases of groups

To store a group in a chase step, we can:

Select the desired chase step, with the cursors.

Prepare the desired scene.

Press **LOAD**. In this moment the console output is stored like a group in the selected chase step. Move the arrows to edit other step.

Or we can:

Go to the end of the chase, (the first empty step).

Prepare the desired scene.

Press **INSERT**. In this moment the console output is stored like a group in the selected chase step, and the system is ready in the next step.

General notes:

To load one group you can use **LOAD** or **INSERT** (in the last step).

During of edition of the chase the **LOAD** key doesn't work out this chase edition.

In the groups chases, because of the chases haven't reference number, in the chase steps appears the step number.

THE CHASES IN THE MASTERS

The chase uses 2 consecutive masters for its control:

The odd master is the level control master for the chase output. (0 - 100%)

The even master is the speed control master for the chase. (CUT: 100%, STORED TIME: 50% and HOLD: 0%).

The Mn key associated to the odd master, $M_{odd,}$ starts the stopped chase or stops the active chase, (GO-chase).

The Mn key associated to the even master, M_{even} is to execute the chase step to step, each time that you press its M_{even} the chase advances one step.

The flash master function does not work in the Mn keys associated to a chase.

Loading a chase in masters.

- **8## LOAD Mn.** (The M_{impar} LED is lit)

All Chases are loaded with its level control locked at 100% and its speed control locked at 100%, in this way it is not necessary displace the masters to reproduce the chase.

Removing a chase in masters. There are three options:

- **800 LOAD Mn**

- **0 LOAD Mn** or

- **DELETE Mn**

Information about the chases:

- **EX-AM Mn**: Information about the chase loaded in the selected masters:

```
M1  C801 >  T2.0

78  STOP /\ P1
```

Where: M1 is the master name with the charged chase; C801 is the chase number; > is the direction of the chase; T2.0 is the step time; 78 is the chase output level; STOP is the speed; /\ is the chase mode and P1 is the current preset in scene (or c1 for the channel chase).

- **8## EX-AM**: Information about the chase 8##.

- **800 EX-AM**: Information about all stored chases.

Erasing a chases from the console memory:

- **801 DELETE**.

Other functions for the chases:

- **M**odd: Stars the chase. The first step appears in scene, after the step time, this step goes out and the next step appears in scene... After the last step, the first step appears again. The M odd LED is blinking. If the chase is active, when we press the M odd key, the chase is stopped and deactivates, and its LED is lit.

- **# M**odd. Stars the chase. The chase is executed # times, and after, it is deactivated automatically.

- **M**even. Chase execution in manual mode, "step to step". In this way the speed control has not function. The user marks the step time with the M even key. Each time that we press M even key a new step appears in scene. The M even LED is lit, the M odd LED stops if is blinking. When the chase steps fade in scene, the speed control fader controls the speed of this fade. If this fader is at 0%, HOLD, there are not steps in scene (except in "hard1" mode, _│).

- **# M**even: Stars the step # to scene. The chase is in "step to step" mode.

Summary:

8## REC	Stores 8##.
801 LOAD Mn	Loads the chase, 801, in the selected masters.
0 LOAD Mn	Removes the master assignation
8## DELETE	Erases the chase from the console memory
800 DELETE	Erase all stored chases.
M$_{impar}$	Stars / Deactivates the chase.
M$_{par}$	Executes the chase in "step to step" mode.
# M$_{impar}$	Stars and executes the chase # times.
# M$_{par}$	Activates the step #, and the chase is now in "step to step" mode.
800 EXAM	Exams the stored chases list.
801 EXAM	Exams the chase 801.
EX-AM Mn	Exams the master assignation.

7 - SETUP

SYSTEMS SETUP

The user can configure the systems with his preferences, in the Setup menu. Each parameter of the systems has valour by default; this valour is the adopted valour after a hard reset.

Adjust all the parameter before the programming.

Options of Setup menu:

```
Main SEQ      >0   Main DEL      >0

MDFY NUM ■->■      TEST ■SETUP■ ->
```

The ■SETUP■ menu is in the second page of the Main menu. This menu is formed by 2 pages, with the next options:

Page 1:
```
■Set■PCH SEQ GM

 PRH MEM MID ->
```

→ Page 2:
```
■Set■RST LNG CT

 BEEP XF SCR ->
```

PCH - 24/36/48 control channels: 512 dimmer channels

Page 1:
```
Set■PCH■SEQ GM

 PRH MEM MID ->
```

Select the option PCH (channels patch), pressing: ■**PATCH**■ **ENTER**.

In Setup Patch menu:
```
 ■Patch■EDIT
DFT

          c1 LF
C1
```

In the lower line we find information about the current patch:

• **c1** appears if the patch is lineal for 24/36/48 channels, by default.

- **LF** appears if all channels have their LIMIT at 100%, by default.

- **C1** appears if all channels have assigned the curve 1, by default.

In the upper line we find:

- **Patch**. To return to the previous menu (SETUP).

- **EDIT**. To edit the patch.

- **DFT** (Patch by default). To return to the default patch. After this command, **always**, appear the flags c1, LF & C1.

EDIT, edits the channel patch

Select the *EDIT* option, in the display pressing ■**EDIT**■ **ENTER**:

```
■1   ■c1  LF  C1

 2    c2  LF  C1
```

To edit the patch we use the format of numerical sheet, similar to the used in the edition of the sequence and chases. Remember: Access to the desired cell and enter the numerical data.

In the display, we can see two dimmer channels at the same time. The dimmer channels, in the first column, are not editable. We have 512 dimmer channels.

From left to right we find:

1

It is the number of the **dimmer channel**. This data is not editable. In the cells of dimmer channel number we can use a displacement function:

- Enter the dimmer number we want edit.

- Press the → key. (The System goes to this dimmer channel)

Or we can displace us using ↑ and ↓ to displace us at the desired dimmer channel.

c1

It is the number of **control channel** that it is controlling the dimmer channel, which it is just in the previous cell. We can enter any number from 1 up to 24, 36 or 48, respectively for TRITTON of 24, 36 or 48 control channels.

LF

It is the valour for the **LIMIT function**: the maximum level for the dimmer output. The dimmer output never will be more level. You can enter valour from 0 up to 100. The 100 level is marked like F, (full), the channels are not limited.

When we have a LIMIT different to 100%, its assigned curve is recalculate between 0% and the LIMIT valour.

C1

It is the number of the assigned **curve**. There are 4 curves:

1. Lineal.

2. Square.

3. Invert square.

4. ON-OFF or Non-dim.

EDITING THE PATCH

Example 1: Control the dimmer 101 with the control channel 2. Select the curve 4, ON-OFF. (Suppose that the dimmer 101 is connected to a discharge lamp).

- Access to the dimmer number: 101. Entering the 101 and pressing → key (or manteining pressed the ↓ key until arriving to this dimmer channel).

- In the display:

```
101■c-  ■L-   C-

102 c-   L-   C-
```

- Enter the channel number (2) and press → key two times. In the display:

```
 101 c2   LF
■C1■

 102 c-   L-   C-
```

- Enter the curve number, (4). This channel dimmer is configured.

Example 2: About the TRITTON-24, suppose that we want control the dimmer channels 25, 26 & 27 with the control channels 1, 2 & 3.

- From the cell 1, enter the number 25 and press →

```
25 ■c-  ■L-   C-

26  c-   L-   C-
```

- Press the 1 key, and the arrow-down key to move us at the next dimmer channel (26).

```
25   c1   LF   C1

26 ■c-  ■L-   C-
```

- Press **INSERT** key. The INSERT function enters the next control channels with reference to the control channel assigned to the previous dimmer channels. The INSERT function depends of the cell that we are situated:

  1. From a cell of the number of dimmer channel: inserts the next number of control channel, the same valour for LIMIT and the same curve. And passes at the next number of dimmer channel.

  2. From a cell of the number of control channel: inserts the next number of control channel and inserts he valour by default for LIMIT and curve. And passes at the next number of dimmer channel.

  3. From a cell of L or C: copies only the valour of L or C (respectively). And passes at the next number of dimmer channel. It is necessary have assigned the control channel.

Note: If we want copy the same control channel number (that the assigned too the previous dimmer channel), in the cell of control channel, c, maintain pressed the **TIME** key and press **INSERT**.

Example 3: Assign the dimmer channels 3-15 to the control channels 4-16. Setup EDIT:

- Access to the dimmer channel 3, and select its cell of control channel.

```
3   ■c3 ■LF  C1

4    c4  LF  C1
```

- Enter its control channel, 4, and press ↓ key.

- Press INSERT, and maintain this key pressed up to the dimmer channel 15.

```
15   ■c16■LF
C1

16    c16 LF  C1
```

SEQ- Parameters for the sequence

- Select the menu option SEQ, from the Setup menu:

Display 1:

```
Set PCH■SEQ■GM

PRH MEM MID ->
```

- Select the option *SEQ*, pressing ■**SEQ**■ **ENTER**.

In the SEQ SETUP menu:

```
■Seq■SOLOon

T°on RECfixed
```

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Here, we have access to the parameters:

SOLOon/SOLOoff

This parameter can appear in these two formats. This parameter permits that a Flash Solo (in the masters) backs out the sequence or not:

SOLOon: Activate. The Flash Solo does not black out the sequence.

SOLOoff: Deactivate. The Flash Solo blacks out the sequence.

The parameter is active by default (on).

To change this parameter, select the SOLOon option, now we can choose the desired status for this parameter:

ON   OFF

Select the desired option and press ENTER.

Tºon/Tºoff

This parameter can appear in these two formats. This parameter permits count the delay time of the sequence or not.

Tºon: Activate (by default). The delay time is active in the sequence execution.

Tºoff: Deactivate. The delay time is not active in the sequence execution. The user have to press GO to start each new crossfade. (The delay times are not erased).

This option is very used to test the sequence rapidly. (Only testing the crossfade times).

To change this parameter, select the Tºon option, now we can choose the desired status for this parameter:

ON   OFF

Select the desired option and press ENTER.

RECfixed / RECfree

This parameter can appear in these two formats. This parameter permits that the stored preset will be included in the sequence automatically or not:

RECfixed   At the same time that you store one preset, this preset is inserted in the sequence (in numerical order).

RECfree: The new stored presets are not inserted in the sequence.

We can change this parameter in any time.

When we are storing presets for our sequence this parameter have to be like FIXED, and when we are storing presets for others things this parameter have to be like FREE.

By default, we have this parameter like RECfixed.

To change this parameter, select the command and, in the new display appears:

FIXED FREE

Choose the desired option.

GM - General Master parameters

Select the GM (option in Setup menu):

Display 1:

```
 Set PCH
SEQ■GM■

PRH MEM MID ->
```

- Select *GM*, with the arrow keys.

- Press **ENTER**.

In the display:

```
■Gm■CH-0

BLKOUTenabled
```

The General Master fader (GM) controls the general output of the console. By default, this fader controls all the channels, except the scrollers channels. This fader has associated one black out key, B.O. to deactivate the console output. When this function key is active, its LED is lit, there is not console output. The program in the console is active.

Configuration about GM fader and B.O. key.

CH

TRITTON permits us exclude channels of the control of the GM. Indicate the channels number that the GM fader (and the B.O. key) to exclude:

■CH■ ENTER

is a number between 0 and 24 (for TRITTON-24). The excluded channels always will be the last channels of the systems. For example, if we exclude 5 channels, (5 CH) the GM does no control the channels: 24, 23, 22, 21 & 20. These channels are very used controlling smoke machinery, work lights…

BLKOUTenabled / BLKOUTdisabled

This parameter can appear in these two formats. This parameter permits us deactivate the console dimmers output whit the BO key, or not:

BLKOUTenabled: The BO key deactivates the console dimmers output .

BLKOUTdisabled: The BO key has not function.

To change this parameter, select the command BLKOUTenabled. In the display:

ENABLE   DISABLE

Choose the desired option.

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To see the current configuration for the GM fader and the BO key in the display:

EX-AM BLK.OUT

PRH- Preheat Function

- Select the option PRH (in the Setup menu):

Screen 1:

```
Set PCH SEQ GM

■PRH■MEM MID ->
```

- Select *PRT*, with the cursors.

- Press **ENTER**.

In the display:

```
■Prh■LV CAP
>0
```

To preheat the lamps use the "preheat" function.

There are two working modes:

LV (LEVEL)

Linear function: All channels are to the same preheating level.

■LV■ ENTER

In this moment, all the console dimmer channels are at ##%.

To erase any preheating information:

0 ■LV■ ENTER

CAP (CAPTURE)

Non linear function: We can capture one scene for the preheat function:

Prepare the desired scene output.

■CAP■ ENTER

This scene is now, the preheating output.

For the two working modes:

The information in scene from the PRHT function is not stored in the presets.

The PRHT function, from the option LEVEL, does not affect to the scrollers.

The general master has not control about the PRHT levels.

Note: Inside the PRH menu, we can increase or decrease the preheating level with the arrow-up key and arrow-down key.

The preheat function is not applied to the channel out of the master general.

MEM - The Show data.

- Select the option MEM (In the Setup menu)

Display 1:

```
Set PCH SEQ GM

PRH■MEM■MID ->
```

- Select *MEM* with the cursors.

- Press **ENTER**.

The Mem menu has the next options:

Page 1

```
■Mem■EX LO
>0

  REC DEL ->
```

Page 2

```
■Mem■FORMT
>0

  Sysx RXD TXD ->
```

TRITTON has 256 Kbytes to store shows. We can have various shows stored in the console. The time used in one show storing/loading is very short. The number of shows that the console can store depends to the own shows.

Moreover, TRITTON permits us a serial communication using the MIDI port, with a MIDI sequencer to export or to import the show data using a MIDI "System Exclusive" known as **Sysex**.

In the MEM menu, we have the functions:

EX (EXAM)

To see (exam) the recorded shows in the inner data memory. In the console display will appear the quantity of empty memory, in the next format: 'Free ######Bytes'. To exam the recorded shows, press the arrow-down key (or arrow-up key): 'Show### ######B'. In this message we can see the show number and its capacity (in Bytes). Press the arrow-down key to see the next recorded show…

LO (LOAD)

To load one recorded show from the data memory to the active console memory:

■LO■ ENTER

In this process, the active console memory is actualised completely with the stored data show.

The number of the last show loaded appears at the end of the inner line of the first page.

REC

To record the current show in the memory like a show file:

■REC■ ENTER

The currents show is without changes.

In the show file are stored:

All presets, pages, chases, the sequence, and all the Setup Parameters.

The number of the last show stored appears at the end of the inner line of the first page.

Note: The groups or masters assignations only are stored if they are in any page.

Recommendation: Record your show periodically. In case of problems you can save a lot of edition time.

DEL (DELETE)

To erase one stored show file:

■DEL■ ENTER

The show file is deleted. If this show is too in the active show, remains here, only the show file is erased.

FORMT (FORMAT)

To format the data memory for shows files. The console advises us when this process is necessary (the first time that you want store one show) or used this command, always that you want erase all the show files. All show file is erased:

■FORMT■ ENTER

This command needs confirmation.

SYSTEM EXCLUSIVE: Sysx RXD TXD

TRITTON permits us to export show data (stored in its memory) to a MIDI sequencer (or other console), and after, it permits us to import these data. Moreover, this functionality permits to exchange shows between TRITTON consoles and between TRITTON and TITAN consoles.

To export or to import the show data you need a MIDI cable and a MIDI sequencer (or other console LT). Connect the MIDI cable following the next table:

TRITTON	MIDI CABLE - FUNCTION	SEQUENCER or TRITTON-TITAN
MIDI OUT	>-----TXD - TRANSMISSION ------>	MIDI IN
MIDI IN	<-------RXD - RECEPTION -------<	MIDI OUT

To export a stored show, you must:

- Connect the MIDI cable in transmission mode (see the previous table).

- Set the sequencer (or the other console) in reception mode for the System Exclusive, **Sysex**. (Each sequencer has its particular way to do this).

- Press: **## ■TXD■ ENTER**

Where ## is a number of a show recorded in the TRITTON memory. During the transmission in the display you can see: ***Sending...***

When the show data are send, TRITTON returns to the previous menu. The sequencer (or other LT console) permits us to store the received data.

To import a show in the TRITTON memory, you must:

- Connect the MIDI cable in reception mode (see the previous table).

- Press: **## ■RXD■ ENTER**

Where ## is a number of a new show that it will be stored in the TRITTON memory. During the transmission in the display you can see: ***Receiving...***

- Send from the sequencer (or other console) the **Sysex** data. (Each sequencer has its particular way to do this).

NOTE: The transmission from the sequencer must begin after the set up TRITTON in reception mode, but, before 4 seconds, in other way, the reception mode (in TRITTON) is deactivated in automatically.

When the transmission is finished, TRITTON returns to the previous menu. In the memory of TRITTON the show ## is stored.

Remember: Only a stored show in the TRITTON memory can be sent. All **Sysex** data received are stored in the TRITTON memory. The System Exclusive doesn't work with the active show.

All **Sysex** data are available for software MIDI sequencer of PC or Mac, for hardware MIDI sequencers and for others LT consoles, in concrete the consoles TRITTON and TITAN.

The MIDI port of TRITTON is automatically configured to execute the Sysex commands (RXD or TXD).

MID - MIDI port configuration

Select the option MID (In Setup menu):

Display 1:

```
Set PCH SEQ GM

PRH MEM■MID■->
```

- Select the option *MIDI*, with the cursors.

- Press **ENTER**.

In the display:

```
┌─────────────────────────┐
│ ■Midi■off               │
│ >1                      │
│                         │
│  out CH1 INFO           │
└─────────────────────────┘
```

on/off

This parameter can appear in these two formats. This command activates (on) /or deactivates (off) the MIDI port:

    Off: Deactivate. The MIDI port does transmit / receive MIDI commands.

    On: Activate. The MIDI port transmits / receives MIDI commands.

To change this command, select the command and choose the desired option.

In/out

This parameter can appear in these two formats. Setup the MIDI port like transmitter (OUT) or like receiver (IN).

To change this command, select the command and choose the desired option.

CH1

To set-up the MIDI channel (1-16) for the MIDI communication:

    ## ■CH1■ ENTER The command, now, is showed like CH##.

INFO

To exam the midi code used in the console. TRITTON has each key associated with one MIDI note, and each fader associated with one MIDI controller. These associations can be consulted in the INFO command (information):

MIDI code in TRITTON is:

Note 0	-	0	Controller 0	-	Master C
Note 1	-	1	Controller 1	-	X1
Note 2	-	4	Controller 2	-	X2
Note 3	-	7	Controller 3	-	GM
Note 4	-	TIME	Controller 4..51	-	Fader C1..C48*
Note 5	-	LOAD	Controller 52..87	-	Fader M1..M36*
Note 6	-	INSERT			
Note 7	-	DELETE			
Note 8	-	●			
Note 9	-	3			
Note 10	-	6			
Note 11	-	9			
Note 12	-	C			
Note 13	-	2			

Note 14	-	5
Note 15	-	8
Note 16	-	↓
Note 17	-	→
Note 18	-	ENTER
Note 19	-	←
Note 20	-	↑
Note 21	-	EXAM
Note 22	-	REC
Note 23	-	FLMT
Note 24	-	SG.DB
Note 25	-	BLKOUT
Note 26	-	GOBACK
Note 27	-	PAUSE
Note 28	-	GO
Note 29..76	-	C1..C48*
Note 77..112	-	M1..M36*

*The MIDI code showed is generic (and compatible) for all TRITTON models.

The relation between the MIDI notes and the standard keyboard is:

NOTAS - CANALES

Left note		Key	Right note
		G8	Nota 127
Nota 126	F#8	F8	Nota 125
		E8	Nota 124
Nota 123	D#8	D8	Nota 122
Nota 121	C#8	C8	Nota 120
		B7	Nota 119
Nota 118	A#7	A7	Nota 117
Nota 116	G#7	G7	Nota 115
•••			•••
Nota 82	A#4	B4	Nota 83
Nota 80	G#4	A4	Nota 81
Nota 78	F#4	G4	Nota 79
		F4	Nota 77
Nota 75	D#4	E4	Nota 76
Nota 73	C#4	D4	Nota 74
		C4	Nota 72
Nota 70	A#3	B3	Nota 71
Nota 68	G#3	A3	Nota 69
Nota 66	F#3	G3	Nota 67
		F3	Nota 65
Nota 63	D#3	E3	Nota 64
Nota 61	C#3	D3	Nota 62
		C3	Nota 60 **DO CENTRAL**
Nota 58	A#2	B2	Nota 59
Nota 56	G#2	A2	Nota 57
Nota 54	F#2	G2	Nota 55
		F2	Nota 53
Nota 51	D#2	E2	Nota 52
Nota 49	C#2	D2	Nota 50
		C2	Nota 48
Nota 46	A#1	B1	Nota 47
Nota 44	G#1	A1	Nota 45
Nota 42	F#1	G1	Nota 43
		F1	Nota 41
Nota 39	D#1	E1	Nota 40
Nota 37	C#1	D1	Nota 38
		C1	Nota 36
•••			•••
		F-2	Nota 5
Nota 3	D#-2	E-2	Nota 4
Nota 1	C#-2	D-2	Nota 2
		C-2	Nota 0

General:

- Each time we press a key, the console transmits the NOTE ON of the associated MIDI note.

- Each time the console receives one NOTE ON its associated key is activated.

- Each time we release a key, the console transmits the NOTE OFF of the associated MIDI note.

- Each time the console receives one NOTE OFF its associated key is released.

- Each time we move a fader, the console transmits the associated MIDI controller.

- Each time the console receives a MIDI controller its associated fader imitates this movement. (It is one way to store the movements of faders in real time).

- TRITTON have Running Status, increasing the transmission velocity.

More information about MIDI in the lesson 10.

-> - To access to the second SETUP display

Select the option -> (In the Setup menu):

Display 1:

```
Set PCH SEQ GM

PRH MEM MID■-
>■
```

- Select the option ->, with the cursors.

- Press **ENTER**.

In the display, we have the second page of SETUP commands:

Display 2:

```
■Set■RST LNG CT

BEEP XF SCR ->
```

In this page, also it is the command **->** to pass to the first Setup menu page. The first command, 'Set', also it is used to return at the Main menu.

RST - Warm reset

Select the option RST (In the second pages of the Setup menu):

Display 2:

```
Set■RST■LNG CT
BEEP XF SCR ->
```

- Select the option *RST*, with the cursors.

- Press **ENTER**.

In this moment, the console:

1. Places the sequence in its beginning.

2. Deactivates the started chases.

3. Sets up all masters at 0% level.

4. Erases the manual field information.

5. Maintains all the stored data and all the Setup parameters.

The console, now, is in a known status.

NOTE: In TRITTON also has a hardware reset. With the console in off, press: ←, and hold down this key, and switch on the console. (For more information see the lesson 3).

LNG - Language

Select the option LNG (In the second pages of the Setup menu):

Display 2:

```
Set RST■LNG■CT
BEEP XF SCR ->
```

- Select the option *LNG*, with the cursors.

- Press **ENTER**.

Now, we can see the selected language. Select it and choose the desired working language. This change only affects to the messages and information lines.

CT - Display contrast

Select the option CT (In the second pages of the Setup menu):

Display 2:

```
Set RST
LNG■CT■
```

```
BEEP XF SCR ->
```

- Select the option *CT*, with the cursors.

- Press **ENTER**.

Now, to adjust the display contrast, use the up & down arrows keys. We can see the result of this adjustment in the display.

BEEP - Acoustic signal

Select the option BEEP (In the second pages of the Setup menu):

Display 2:

```
Set RST LNG CT

■BEEP■XF SCR ->
```

- Select the option *BEEP*, with the cursors.

- Press **ENTER**.

To activate /deactivate the acoustic signal, 'beep'.   Here, we have the commands ON (beep active) & OFF (beep deactivate). By default we have the option at ON, active.

XF - Crossfade type

Select the option XF (In the second pages of the Setup menu):

Display 2:

```
Set RST LNG CT

BEEP■XF■SCR ->
```

- Select the option *XF*, with the cursors.

- Press **ENTER**.

In the display:

```
■Xf■DIPLESSon
```

By default the TRITTON crossfade is dipless. But the user can deactivate this characteristic.

About the dipless crossfade:

The dipless characteristic is applied to the channels that are in X1 and X2 at the same time. One channel in X1 fades up at 0% and in the same time this channel in X2 fade at 100% level. When a crossfade is dipless this channel never has (during the crossfade) a level inferior at the level stored in X2 (target level). Example: The channel 1 is in X1, in scene, at 75%, and it is in X2, at 80%. When we press GO, to start the crossfade: The channel 1 is maintained at 75%, until the X2 output scopes this level, in this moment this channel is controlled for X2 and fades at 80%.

If the crossfade is not dipless, in this same example, when we press GO, the channel 1 beginning to fade toward 0%, until the X2 output scopes this current level. In this moment this channel is controlled by X2.

SCR - Scrollers (colour changers)

- Select the option SCR (In the second pages of the Setup menu):

Display 2:

```
Set RST LNG CT

BEEP XF■SCR■->
```

- Select the option *SCR*, with the cursors.

- Press **ENTER**.

In the display:

```
■Scr■EDIT DFT

PRIORIoff Scr0
```

From here, we can:

EDIT: Edit the scroller sheet.

DFT (DEFAULT): Whit this option we set up that all the channels are lighting channels. There are not scrollers. In this case in the display (downright) we can see, Scr0.

PRIOIRoff / PRIORIon: To activate /deactivate the priority for scrollers, about its control mode. By default this characteristic is PRIORoff.

To edit the scrollers sheet, select the option EDIT. In this submenu we can define that channel is a scroller:

```
c1 ■LIGHT    ■

c2  LIGHT
```

In the display, we have the scroller sheet, and from the second column we can set up the type of the control channel (LIGHT or SCROLLER). To change the current selection, press the INSERT key. Each time that we press INSERT this option switch between light and scroller. We can move with the arrow keys to set up the desired channels. Press ENTER to store and exit of this menu.

About the scroller channel operation:

1. The GM or the BO key does not control the scroller channels.

2. The "preheat" function does not work with the scroller channels.

3. All the scroller channels work in LTP mode (Last Take Precedence), the last command has priority. In the light channels the maximum level has priority (HTP mode - Highest Take Precedence).

4. A stored scroller in one preset scopes its maximum level in the moment that the preset is activated (in the sequence, master, and chase…).

5. A scroller channel will not lose the level reached upon deactivating the preset that contains it. Staying in this position, until other playback takes control over it. To erase is information, we can accomplish a warm reset, RST, or edit the channel again.

6. When we work in **PRIORIon** mode: The scroller channels follow a different priority mode that the lighting channels. In this case the value that will take precedence will be:

   - Manual field. (Priority 1).

   - Masters. (1..12). (Priority 2..13).

   - Sequence, X2 & X1. (Priority 14-15).

7. When we work in **PRIORIoff** mode, option by default, all the console playbacks have the same priority, excepting the manual field.

One example working with PRIORIon mode:

Suppose that we have a scroller handled by the sequence. In any moment, we can handle its colour, simply we should make it from a source most high-priority. To suppose that the scroller 3 is in green colour and controlled by the sequence, will stay in scene 1 minute, in this same time we wish that the scroller accomplishes a chase of colours, yellow, red, and blue. Simply we should program the chase of colours and to execute it. If in any moment we wish put a colour, for example, violet, will be able to do it from a master without the need of deactivating the chase or the sequence.

Thus upon eliminating the exit from the master, the scroller will continue making the chase of colours.

Upon ending the chase, the scroller returns to the colour indicated by the sequence, the green.

One example working with PRIORIoff mode:

Each time that we activate a control source, and this pass of 0% to other value of intensity, actives the scroller, and will lose its control over this output of the scroller. Thus any master triggered will impose its level - colour on scene, the same as any step new of a chase or of sequence, and once put this colour in scene will lose all its control over the same.

It can not be eliminated colour information, so only to give new colour.

8 - TEST

TRITTON-24, TRITTON-36 & TRITTON-48 have functions of TEST, that they help us to exam the correct operation of the console, and to isolate possible problems.

We have "Software Tests" and "Hardware Tests".

SOFTWARE TEST

Select the option TEST (in the Main menu):

TEST   ENTER.

In the display:

```
 Test  BUF
>0

 HARD  MEMORIA
VER
```

Here we have the next test options:

BUF (BUFFER)

This option shows us the output level of the 512 DMX channels. We can exam a concrete channel, moving us with the arrow keys or entering the desired dmx channel number and press   key.

The information that it appears in the function EXAM EXAM, in not the same that the buffer information, in the buffer information we see also the result of applying the curve and the limit function.

Note: In the buffer information we have the information about the 512 output channels.

HARD (HARDWARE)

This option has a series of test options of console physical parts, as are the test of LED, the faders, the keys... See below.

MEM (MEMORY)

This test shows us the empty RAM memory (capacity), in a format like:

XX% free memory.

Some parameters, as the number of steps of a chase, depend only and exclusively of the quantity of available memory in the internal RAM.

To exit of this Test, press any key or wait a seconds.

VER (VERSION)

This option shows us the current software version. This version is very important for maintenance and update of the console.

To exit of this Test, press any key or wait a seconds.

Note. The software test are compatibles with the console operation.

HARD (HARDWARE TEST)

The software tests are not compatibles with the console operation. When we execute some hardware test the console operation is stopped.

This test help us to find the hardware problems in the console:

```
Hard  INPUT MEM

DISP BEEP LEDS
```

INPUT

Keys and faders Test.

Enter in the **INPUT HARD TEST**, follow the instructions in the display. To begin, press:

- **ENTER**

And in the display we can see the active faders and their levels, and the name of the pressed keys. So, press the desired keys and move the desired faders, and check their reading in the display.

This display is in white if there are not active faders or pressed keys.

Note: At the same time only we can see 4 inputs (reading).

To exit of this Test, press ENTER again.

MEM (MEMORY)

This test permits us check the memory status. <u>It does not affect to its recorded data.</u>

When this test is finished, appears the message: MEM OK.

DISP (DISPLAY)

To activate this function press ENTER key.

The display will appear in black (all spots are actives).

To exit of this function press ENTER again.

BEEP

To check the acoustic signal or "beep"

60 📖 LT

Select the option BEEP, and press ENTER key to activate this test.

In this moment, the console emits 'beeps' periodically.

To exit of this test, press ENTER key again.

LEDS

To check each LED of the console.

Select the option BEEP, and press ENTER key to activate this test.

When this test is activated:

1. In the console display we can see the name of the LED in exam, the first LED is SG.DB (LED of the upright key). This LED is fading up-down, until we exit of this test or we check other LED.

2. The   &   keys permit us check the next LED, or the previous LED respectively. In the display always we see the name of the LED in exam.

To exit of this test, press ENTER key again.

9 - WORKING WITH SCROLLERS

TRITTON can work with scrollers (colour changers). These scrollers have some special characteristics.

DEFINING ONE CONTROL CHANNEL LIKE SCROLLER

From the SETUP menu, we can define that control channel is a scroller.

SETUP SCR EDIT:

```
c1   LIGHT

c2   LIGHT
```

Place us in the desired cell, the cell at right of the control channel number that will be a scroller, and with the INSERT key, switch between the two options (LIGHT ó SCROLLER) set up the desired channel like scroller. See also the lesson 7.

SCROLLERS EXAM

Scroller channel:

• Press EX-AM key and press the Flash key of the desired channel.

The channel number appears in the display with a little 's' (for scroller channel) or with a little 'c' (for light channel).

From the SETUP PATCH menu, the scroller channel also is marked with a little 's'.

In others words, each time that you see a little 's' near the channel number, you see a scroller number.

WORKING WITH THE SCROLLERS

The scroller output level is a colour in scene, and one colour isn't more important than other colour (with great output level). To resolve this problem in scene, the scroller channels work in LTP mode (Last Take Precedence), and no in HTP mode (High Take Precedence).

TRITTON has two working modes for scrollers:

PRIORIon Mode: In this mode, the playbacks of TRITTON have the next priority order:

1. Manual field

2. The masters, beginning from the master 1 and finishing in master 12 (TRITTON-24).

3. The sequence, first X2 and after X1.

PRIORIoff Mode: All playbacks have the same priority, except the manual field.

- One scroller, controlled by the manual field, will follow to the movement of its fader, except when the fader is at 0%, in this moment this scroller can be controlled by other playbacks. For **PRIORIoff** the scroller is at 0% and without control and for **PRIORIon** the scroller channel takes the level of the next playback in the priority order.

- One scroller included in a master follows the next process: In the moment that the master takes a level >0%, the scroller appears in scene at its recorded level, in others words, the scroller take its colour immediately (f.e.80%), in this way this scroller doesn't pass by the previous colours.

- This scroller included in the master doesn't change its output level when the master returns at 0%. In others word, the colour is maintained in scene, but this scroller isn't controlled by this masters. (If we are in **PRIORIon** mode, the next playback takes its control).

- When one scroller is controlled by one chase: The scroller always is in "hard 1" mode ($\_$|) and the scroller doesn't depend to the master level of this chase. The scroller output level changes when the next chase step produces one change or when other playback produces the change.

- When one scroller is in X2, in the sequence, in the same moment that X2 begins its fade to scene, the scroller takes its target level (its stored colour), this scroller doesn't fade.

It is important that the user tests with both modes and chooses your preferred mode.

Note: If we have a preset (or group) only with scroller charged in a master, we can start it with its Flash key, it isn't necessary to move the fader, (when we release the Flash key the scroller loses its control, but no its output level).

Note: When one channel is scene has not origin (any playback is controlling its level), its level is not stored in the presets.

10 - WORKING WITH MIDI

The MIDI protocol (Musical Instrument Digital Interface), it is a protocol created for the musical instruments, but today is introduced in the world of the lighting and multimedia. The synchronisation of the all show elements is possible with MIDI.

The basic configurations using TRITTON and its MIDI, are represented in this drawing:
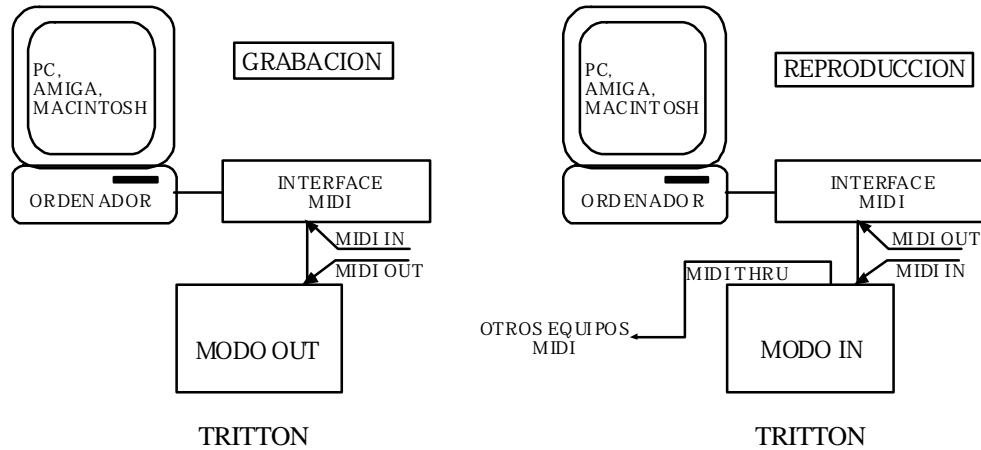
The computer can be substituted with a MIDI sequencer. In this case the MIDI interfaces isn't necessary.

The MIDI protocol permits us a time control very interesting, synchronising in a very accurate mode, even advancing a lighting event to its music event (adjusting slow response of the lamps). Permits us to accelerate/decelerate an event, to the same speed that the rest of the show (music, smoke...). And above all permits that the musicians handle the lighting from a most familiar control for them or that the illuminators start musical events from their lightboards.

The correspondence MIDI in the TRITTON console is:

MIDI Note = Console key.

MIDI Controller = Console fader.

There are not commands like Program Change, Pause, Play... or commands in real time like "click"…

The Running Status is contemplated in this console, increasing the transmission speed.

MIDI PORT CONFIGURATION

The MIDI port is configured in the menu: *SETUP MID (MIDI).*

We can activate or deactivate the MIDI port. (ON or OFF respectively).

If we want that the console emits MIDI commands, select the option OUT. The entry MIDI-IN is not active.

If we want that the console receives MIDI commands, select the option IN. The entry MIDI-IN is active and the output MIDI-OUT is not active.

The MIDI-THRU connector always is a copy of the MIDI-IN signal. And it is used to link other MIDI units.

The MIDI communication channel (1..16) is defined by: ## CH.

See also the lesson 7.

FOR MORE INFORMATION...

If it is the first time that we do an assembly using the MIDI synchronisation, will be very interesting to widen information about this topic. Some publications that we consider interesting:

'**Técnicas de Interface MIDI. Música y Ordenadores Personales**'. Editorial JACKSON. Author G. Perotti.

 '**MIDI systems and Control**'. Editorial Focal Press. Author Francis Rumsey.

11 - EXAM FUNCTION

This function permits us obtain information very interesting.

EXAM Command | Display information.

EX-AM EX-AM	Output level of all channels. To see a concrete channel, enter its number **##** and press .
EX-AM Channel Flash key	List of preset with this channel stored.
EX-AM Mn	Content /status of the selected master.
EX-AM FL-MT	Content /status of all master.
EX-AM LOAD	**Deactivate the EX-AM function.
EX-AM TIME	Help about the TIME key.
EX-AM REC	Help about the REC key.
EX-AM DELETE	Help about the DELETE key.
EX-AM INSERT	Help about the INSERT key.
EX-AM GO (PAUSE or GO-BACK)	Exam the current crossfade.
EX-AM BLK.OUT	Exam the status of GM and BO key.
EX-AM SG.DB	Exam the manual field.
EX-AM any arrow key	**No function.
EX-AM any numerical key	**Deactivate the EX-AM function.
EX-AM ENTER	**Deactivate the EX-AM function.
0 EX-AM	List the recorded presets. Arrow keys.
### EX-AM (1..799)	Exam of selected preset. Arrow keys.
800 EX-AM	List the recorded chases. Arrow keys.
8## EX-AM (801..899)	Exam of selected chase. Arrow keys.
900 EX-AM	List the recorded pages. Arrow keys.
9## EX-AM (901..999)	Exam of selected page. Arrow keys.

- To exit of the exam display press ENTER.

- Note: You can access other information with the arrows keys.

12 - SPECIAL FUNCTIONS - TIME

'CAPTURING' DELAY TIMES FOR THE SEQUENCE

We can 'capture' the delay times, for the sequence, manually. In other words, we can press the GO key, reproducing the sequence, as times as it is necessary, and TRITTON 'teaches' the time between pressings (delay time). This delay time, **Tauto**, is inserted in X1 at the end of its crossfade.

If we have programmed delay times, deactivate this times (SETUP SEQ T°off).

Recording delay times manually:

- Press and hold down **TIME** and press **GO**. The crossfade begins, when the crossfade finish begins the delay time, to mark its finish and the beginning of the next crossfade:

- Press and hold down **TIME** and press **GO.** In this moment the total delay time is inserted in the step in X1 and the next crossfade begins…

- Press and hold down **TIME** and press **PAUSE**, to finish this process.

Notes:

If we have recorded fade times, these times are discounted of the delay times.

If we have not recorded fade times, and we want insert them after maintaining the time between crossfades:

1. From the Main menu, select the option SEQ to edit the sequence.

2. Enter the desired fade times pressing and hold down **TIME** (**TIME + ###**), in this way the inserted fade time is discounted of Tauto. The time between crossfades is the same.

Note:

In the capture processing: If the delay time is smaller than the stored fade time, the console emits a warning 'beep' and the delay time is not recorded, but the storing process is not deactivate.

'CAPTURING' STEP TIMES FOR THE CHASE

It is possible capture the step time for a chase manually.

Charge the desired chase in the masters (the chase can be activated or not), and:

- Press and hold down **TIME** and press **Mpar (Step)**, **Mpar**, **Mpar** …as times as it is necessary, until be sure of be the desired time for the chase.

- Press and hold down **TIME** and press **Mimpar (Go).** After this command the chase begins work automatically, with the step time inserted manually. In concret, the new step time is the time between the last pressing of **Mpar** , STEP, and the pressing of **Mimpar**, GO, (always with the TIME key pressed).

In this way is very simple synchronise the chases with the music in leave or other thing, without the necessity of edit this step time.
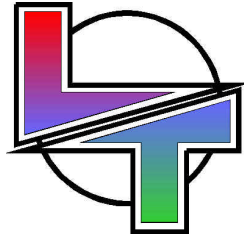
Because your successes are ours

Specifications can be changed without previous notice.