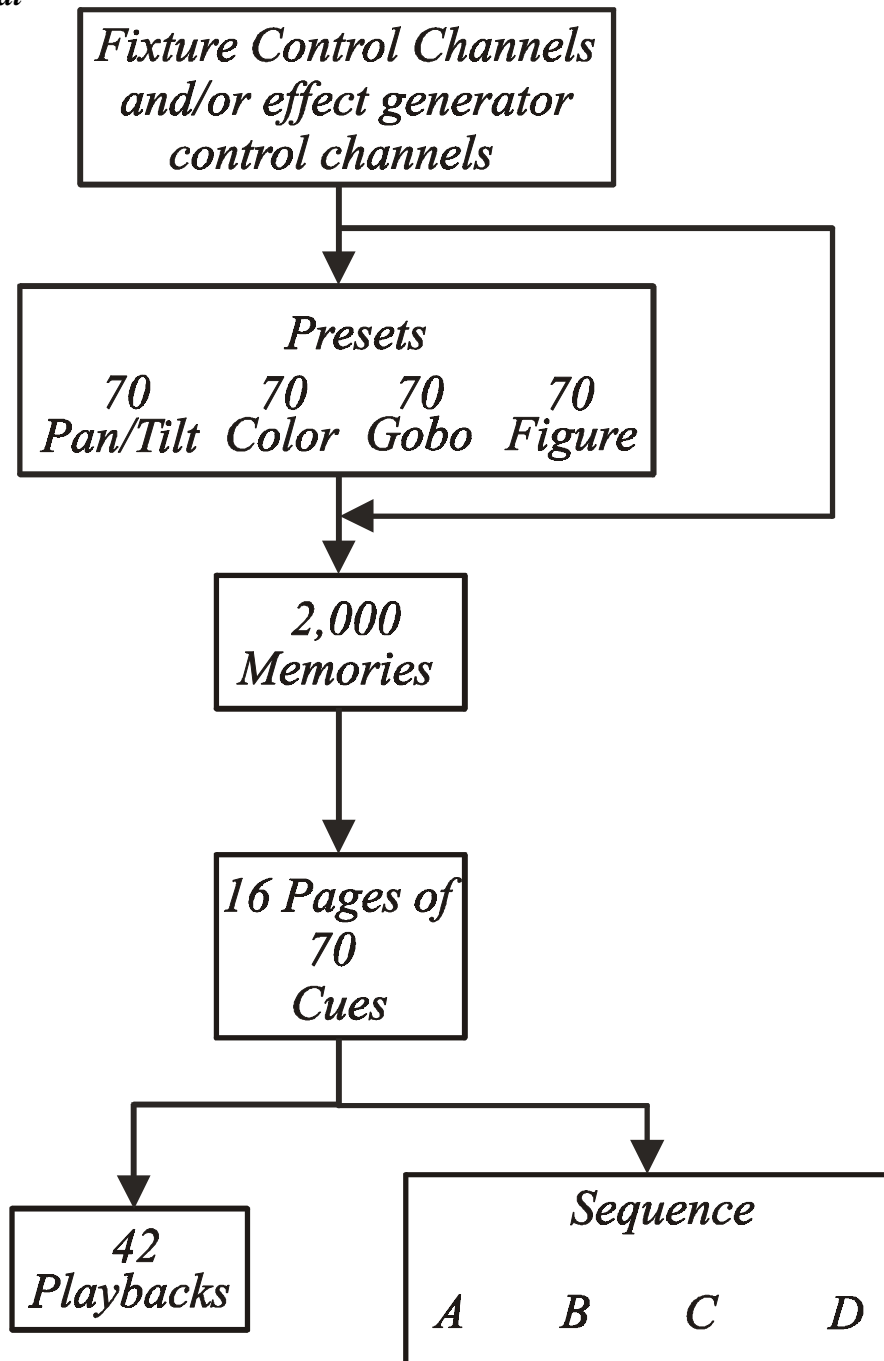


## 4.1 In general

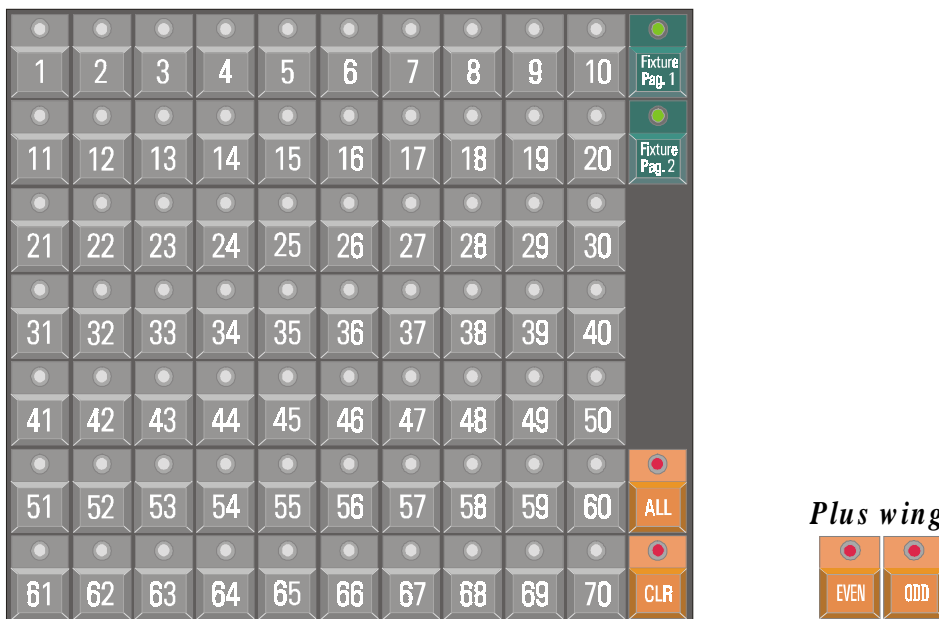
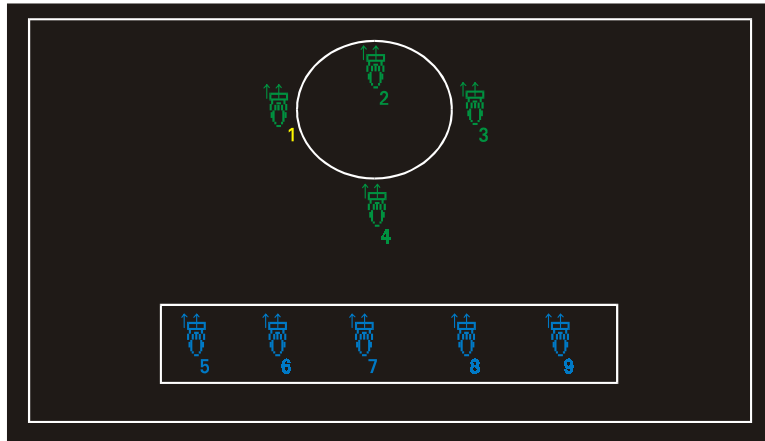


The fixture control channel values can be put in PRESETS. On the console, you can program 70 Pan/tilt presets, 70 Color presets, 70 Gobo presets and 70 effect generator presets. This is very useful when you have to program in advance, or when you have a show that is used many times on different locations. You don't have to program presets, you can always jump over this step and program the memories directly.

All the changes in fixture control channel values and all the presets can be put in memories. You have 2,000 memories available.

Those memories can be put into sequences (chasers) and playbacks. Each of the 1,120 cues has 42 playbacks and 4 sequences.

## 4.2 Fixtures



The numeric keys correspond with the fixture numbers in the stage layout screen.

### 4.2.1 Selecting/deselecting fixtures

**PRESS**



*With the numeric keys you can now select the fixtures  
The selected fixtures will lit up green.*

*You can select or deselect more fixtures together by pressing the first and the last fixture number together.*

#### 4.2.2 Selecting all fixtures

**PRESS**



#### 4.2.3 Deselecting all fixtures

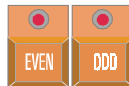
**PRESS**



#### 4.2.4 Selecting odd or even numbered fixtures (only on P1+ and P2+)

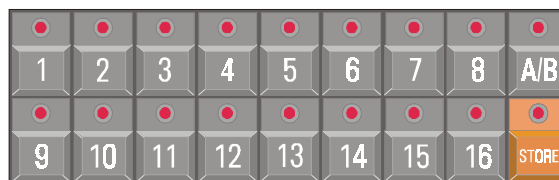
**PRESS**

*Plus wing*



#### 4.2.5 Grouping fixtures

*You can store a group of fixtures that is used frequently in a GROUP.*



*Select the fixtures and*

**PRESS**



*to choose the bank number A or B if needed*

**PRESS**

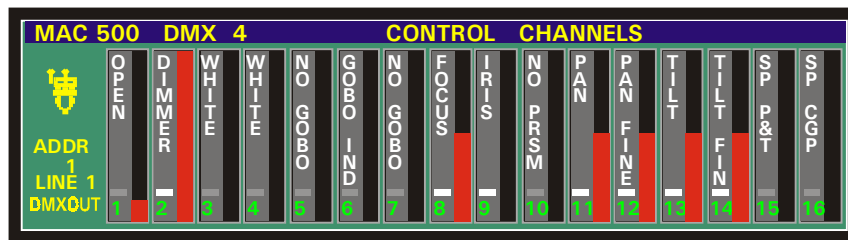


*together with one of the numeric keys (1-16)*

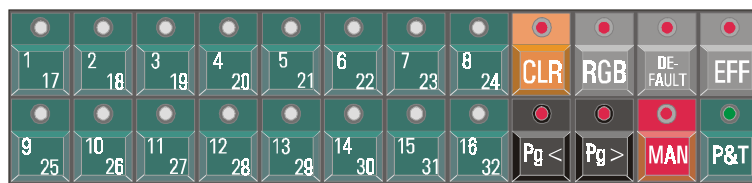
*Pressing now the stored numeric key will select/deselect the fixture group.*

*Note : If you want to erase a stored group then select no fixtures and store this in the number you want to erase.*

4.3 Control channels



PAGE 1 DIGITAL MEMORY-VALUES (CHANNELS)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	20				0	33	0	P5			P5	P5	P5	P5		
2	20						0									
3	20				G2		0	G2			127	127	127	127		
4	20				G2											
5	20															
6	20		C30	C30			E12									
7	20		C30	C30							127	127	127	127		
8	20						212				127	127	127	127		
9	20						0	127			127	127	127	127		
10																
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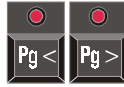
The control channel screen represents the channels of the last selected fixture. The digital memory values screen represents the values or preset numbers of 16 channels of 35 fixtures. If you want to see the values of the next 35 fixtures then

**PRESS**



If you want to see the next 16 values and control channels of fixtures with more than 16 channels then

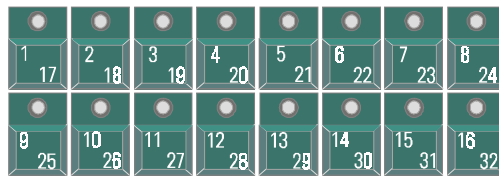
**PRESS**



#### 4.3.1 Changing the control channel values

Select 1 or more fixtures

then PRESS one of :



The selected control channel is now on the Track Ball. Moving the Track Ball up and down will change the value of the channel.

To change only Pan/Tilt

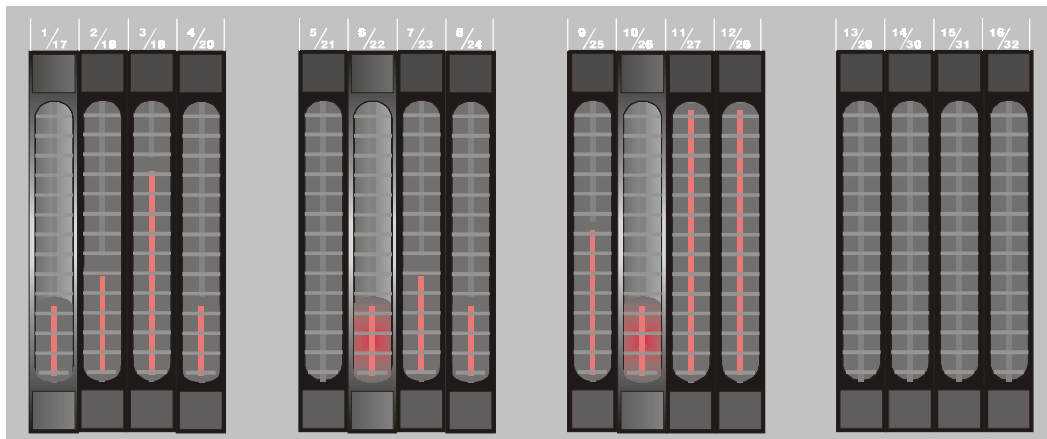
**PRESS**



Pan/Tilt will now be on the Track Ball.

**Note :** Remember, the tracker ball can be switched on/off with the lower Tball buttons. The Pan/Tilt resolution for high resolution Pan/Tilt tracking is set with the upper Tball buttons.

In the Professional 2 system, you can direct access the control channels on the 16 digital fader belts.



Some channels like color, gobo, special functions, ... can be direct accessed by keys.

### PRESS



together with an orange blinking control channel

Hold down the Direct access key and select with the numeric keys (1-70) the picture. If the Direct access key is pressed twice, the direct access screen is frozen. To unfreeze it, press ESC.

**Important note :** If you have selected different fixtures together and you change a channel value, you will see in the Digital Memory-values screen that for all the selected fixtures to chosen channel will change, but the channel can be on a different place in the different fixtures. The console filters out the selected channel for the different fixtures.

Ex. : When you change the color of a fixture type 1 (color wheel = channel 3) and you have also selected a fixture type 2 (color wheel = channel 6), the console will filter out the color wheel of this type 2 fixture, so in this case, channel 3 of fixture 1 will be changed and channel 6 of fixture 2 also.

If the channel does not exist on one of the other fixtures, nothing will change in those last fixtures.

## 4.3.2 Changing the control channel values of the effect generator

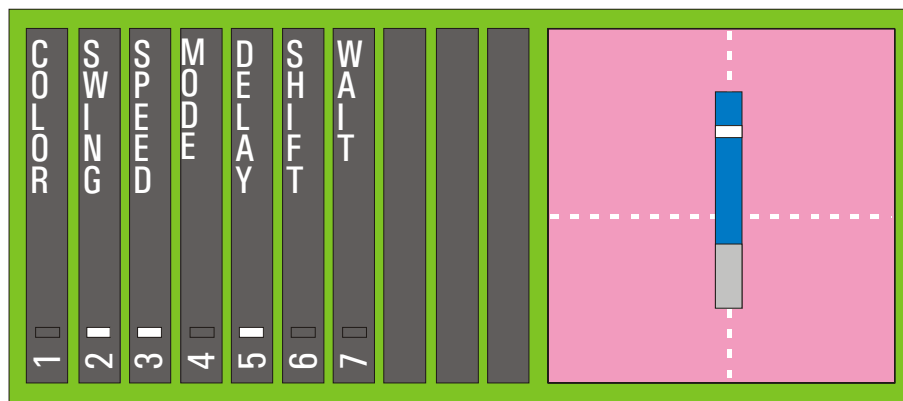
### 4.3.2.1 Selected channel is not Pan/Tilt

Select fixture(s), select the fixture control channel (not Pan/Tilt) and :

### PRESS



The normal control channel screen will now be replaced by the effect generator control channel screen.



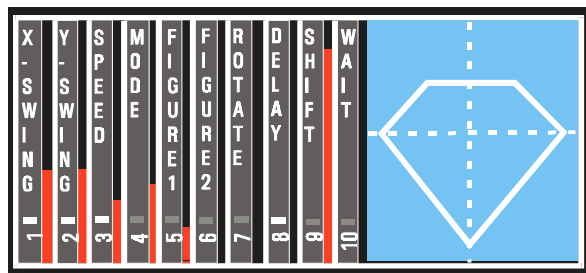
These control channels are accessed in the same way as the normal channels. To start an effect, Give a swingvalue (not 0) and give a speed. How it works and what it means will be explained in the next chapter.

#### 4.3.2.2 Selected channel is Pan/Tilt

Select fixture(s), select P&T and  
**PRESS**



The control channel screen will change into :



These control channels are accessed in the same way as the normal channels. To start a motion, give the x-swing, y-swing and speed a value different from 0. Different motions can be chosen by **DIRECT ACCESSING** channel number 5 or 6. (See next chapter)

#### 4.4 Presets

*Problem 1:*

When you have programmed a show, and you have to go to different locations with it where you can have different stages, you have to walk through all your memories to change the Pan/Tilt settings in the memories.

*Problem 2:*

You have programmed a show but they change the fixtures or gobos or colours every week, you have to walk through all your memories to change the gobos or the colours.

There is an easier way to change all those settings.

You can program a max. of 70 Pan/Tilt presets, 70 Gobo presets, 70 color presets and 70 effect generator presets. When you fill your memories with presets in stead of direct values, you only have to change the presets when something has changed.

## Presets



### 4.4.1 Programming presets

Select fixture(s) and change their control channels the way you want them.

**PRESS**



together with one of :

## Presets



and :

one of the numeric keys (1-70)

The name field will be opened to give in a name on the pc keyboard

Note : When you **store** a preset, all channel values belonging to a certain function of **all the fixtures** will be stored, also if you have only selected just one fixture. When you **call** a stored preset, or when you **modify** a preset, only the values of **the selected fixtures** will be changed.

When you store a Pan/Tilt preset, the Pan/Tilt and focus values will be stored, not the color and gobo values. To store the gobo values in a preset, store a gobo preset.



#### 4.4.2 Modifying presets

Normally, when you have to change the values of the presets, you have to select all the fixtures, call the preset you want to change, change the values and store the preset again. This is the way you use, when you have to reprogram all the presets.

But, if your show is running, and you see that one value of one fixture is not the way you like it, you can use the modify function.

When the show is running

**PRESS**



and select the fixture you want to modify

then **PRESS**



together with one of :

Presets



and :

one of the numeric keys (1-70)

**Note :** Only the selected fixtures will be modified in the preset.

#### 4.4.3 Calling presets

To call a preset

Select fixture(s) and

**PRESS** one of :

Presets



together with :

one of the numeric keys (1-70)

**Note :** Only the presets of the selected fixtures will be called.

#### 4.4.4 Changing the name of a preset

**PRESS**



together with one of :

**Presets**



and :

one of the numeric keys (1-70)

Now you can give in the name on the PC keyboard.

#### 4.4.5 Changing the loadselection of a preset

When presets are stored, all channels of a function belonging to this function are stored. E.g. if a color preset is stored, all values of all color wheels including the speeds and all RGB values (if supported on the fixture) of all fixtures are stored. Suppose, when the color preset is called, you are only interested in the RGB values, and not the normal color-wheels. Then the loadselection of the preset has to be changed.

**PRESS**



Together with a preset function (P/T, color, gobo, Eff), and select the preset number(s)

PRESET CHANNELS																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
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The control channel screen will change, and the screen above shows the control channels (vertical) and preset numbers (horizontal) . A bar means that the control channel of the preset will be loaded when the preset is called. To delete the bar, press the desired control channel number.

The channels involved to the functions are :

- P/T : Pan/Tilt, Focus
- Color : All color wheels, All color parameters (speeds...), All RGB wheels
- Gobo : All gobo wheels, All gobo parameters (speeds...), All knife wheels (Martin PAL1200), All effect wheels (prisms), Frost, Zoom, Focus
- Eff : All effect channels

### 4.5 Memories

Memories contain fixture control channel values. Those values can also be presets. The maximum number of values in 1 memory is 15,348 because the console can send a max. of 2,048 channels. The other 13,300 channels are effect generator channels.

Normally we will use only **some** values in one memory.

PAGE 1 DIGITAL MEMORY-VALUES (CHANNELS)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	20				0	33	0	P5			P5	P5	P5			
2	20						0									
3	20				G2		0	G2			127	127	127	127		
4	20				G2											
5	20															
6	20		C30	C30			E12									
7	20		C30	C30							127	127	127	127		
8	20						212				127	127	127	127		
9	20						0	127			127	127	127	127		
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When we take a look at the Digital Memory Values in the figure, we will notice that some fields are filled with a value and others are left blank.

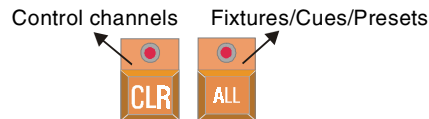
When we call this memory, only the channels with values or presets will be changed, the other channels (blank field) will remain unaffected. The controller works with memories that contain only changes compared to the last called memory.

**Important :** A blank memory field is not the same as a field on value 0. A blank field does not change the value of a channel. A field on zero changes the value to 0.

### 4.5.1 Clearing the memory field

When we want to program a new memory, starting from nothing, we have to clear the values because all the values on the screen, including the effect generator values, will be saved when we save the memory. When one of the effect channels of a control channel is programmed, this will be indicated by a box behind the value.

#### PRESS



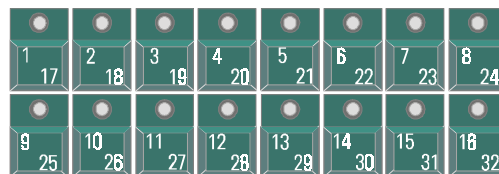
When we accidentally filled in a value, we can clear only one value.

Select the fixture(s) and

PRESS (Control Channels key window)



together with one of :



When we want to clear the values of an entire fixture :

PRESS (Control Channels key window)



together with a fixture number (1-70)

### 4.5.2 Programming a memory

When we program a memory, keep always in mind that we will use this memory later to put it into a sequence or in a playback, so we don't have to give in all the values of a fixture.

Suppose, later, we want to use sequence D for Pan/Tilt movements, sequence C for gobo effects and sequence B for color effects. When we program the memories that we want to use for color effects, and we put Pan/Tilt values together with color values in those memories, the Pan/Tilt positions in the color sequence B will take precedence over the Pan/Tilt positions in sequence D, because sequence B has a higher priority than sequence D.

To program the memory

*Select fixture(s) and set their control channels.  
If needed, set the effect generator channels.  
Clear the not needed values out of the fields.*

To store the programmed memory

**PRESS**



,give in a number on the numeric keypad and

**PRESS**



To store the programmed values to **the next** memory

**PRESS**



*Note : When the memory number, you want to save, already exists, a second RET has to be given. On the screen will be the message "Replace memory xx : ENTER=Y ESC=N"*

To get a previous programmed memory

**PRESS**



,give in a number on the numeric keypad and **PRESS**



To get the previous or next memory

**PRESS**



### 4.5.3 Give a memory a name

*First, go into fixture mode and get a memory. Then*

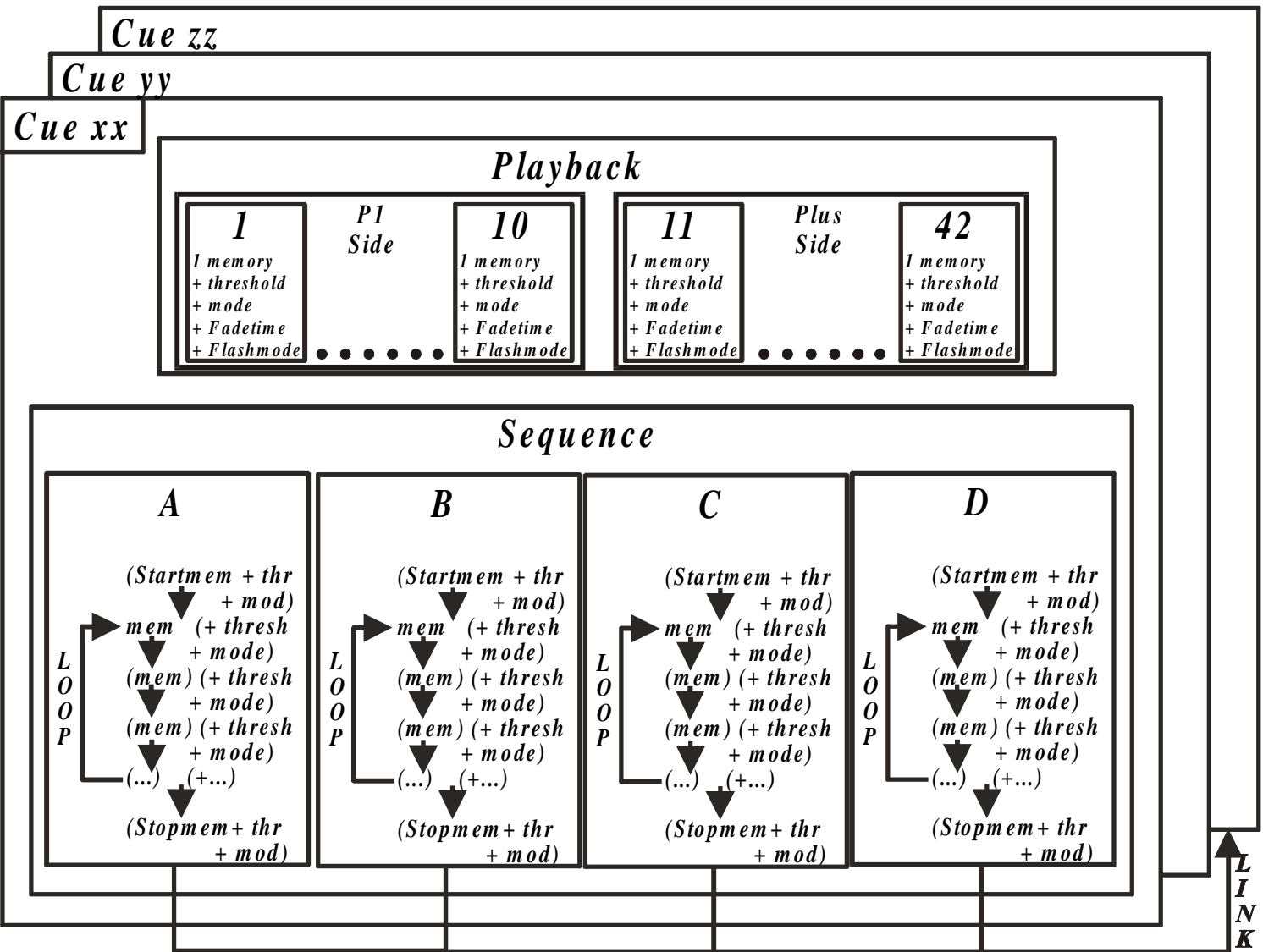
**PRESS**



*Now you can give in the name on the PC keyboard.*

4.6 Cues

There are 16 pages of 70 cues available on the controller. Each cue contains a max. of 42 playbacks and 4 sequences.



### 4.6.1 Playbacks

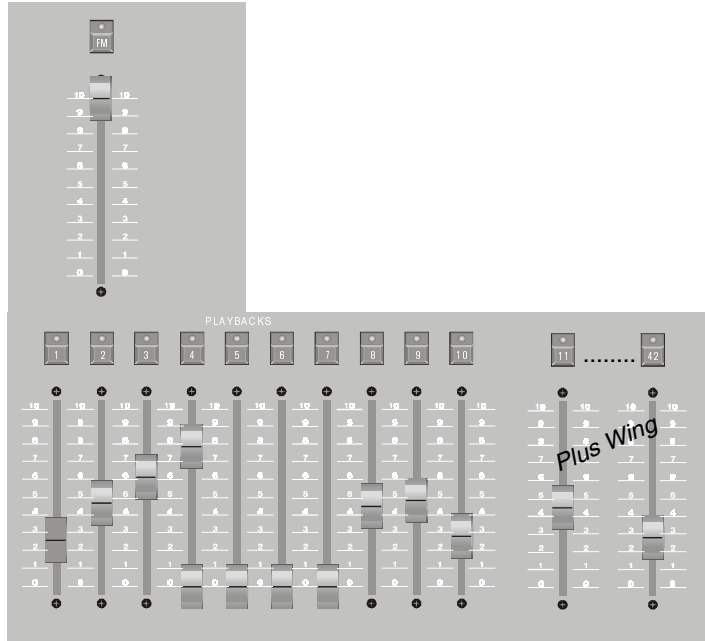
A playback can be programmed with 1 memory. You can fade this memory with the playback slider or you can fade (with fade-in and out timings) this memory with the flash button of the playback. The flash button can be set in flash, toggle or kill mode (see 3.11.1)

The maximum fade value of the flash key depends on the level of the flash master.

The memory put in the playback can have a threshold number and a mode.

With the threshold, you can delay the action of certain channels until the slider has reached the threshold percentage you have programmed for that channel. (Chapter 3)

With the mode, you can determine if only the pre-programmed channels have to fade (the other channels will open directly) or if every channel has to fade or if no channel has to fade (see mode key). Remember, mode 3 and 4 will be the same if used in a playback. (Chapter 2)



### 4.6.2 Sequences

A sequence is a succession of memories.

Each sequence **can** begin with a start memory (with its threshold number and mode) and it **can** end with a stop memory (with its threshold number and mode). Between this start and stop memory there **can** be a sequence of memories (with their threshold numbers and mode). The number of times this sequence of memories has to repeat itself depends on the value of the loop counter.

Each cue has 4 sequences, A, B, C and D. Remember the order of priority :

A takes precedence over B, B over C and C over D, if the same fixture channels are used in the sequence memories and no dimmer channels are used.

Cues can be linked. So if we programme a link in a sequence, the linked cue will be called when the sequence has finished its loops (**loop counter value may not be infinite**).



### 4.6.3 Selecting a cue

To put the console in CUE MODE

**PRESS**



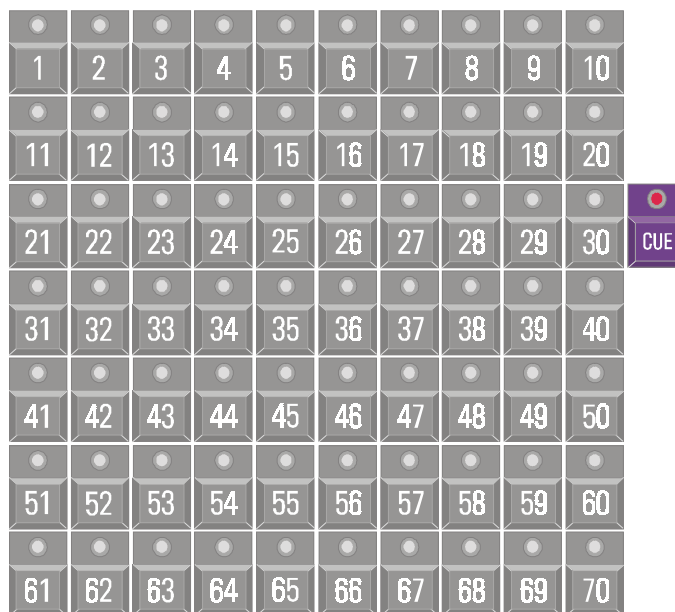
To put it back in FIXTURE MODE

**PRESS**



To choose a cue, put the console in cue mode and

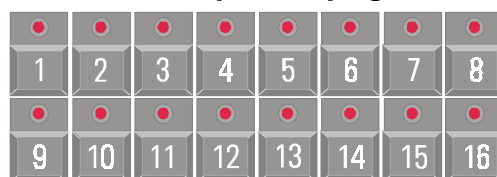
**PRESS one of :**



To choose a cue in another cue page, select first the cue page by

**PRESSING one of :**

**Groups/Cuepages**



*then select the cue.*

#### 4.6.4 Selecting CUE OVERWRITE mode and CUE REPLACE ALL mode.

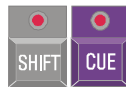
*In cue replace all mode, all sequences and all playbacks will be replaced by new sequences and new playbacks when an other cue is chosen if they are not frozen.*

*In cue overwrite mode, only the programmed sequences and playbacks of the called cue will overwrite the old sequences and playbacks, all the others will remain.*

*So when you begin programming cues, determine first in what mode you want to work.*

*To select the mode*

**PRESS**



*or on the PLUS wing (Pro1+ Pro2+)*

**TRANSP  
MODE**



*(In software version 6.21 SEQ and PLAY-BACK has the same function)*

*The selected mode will appear in the General Function screen.*

#### 4.6.5 Programming Playbacks

*The explanation of programming playbacks is given in the Screens... chapter, but there is a faster way of programming playbacks if you don't need the thresholds, mode and timings. Remember to **choose first the cue you want to program.***

**Fast method :**

**Choose a cue, and get a memory, then  
PRESS**



*hold it down and press twice the playback key you want to program*

#### 4.6.6 Programming sequences

*The detailed description is given in the screens... chapter. There is also a faster way in programming sequences, if thresholds and modes are not needed (you can always fill them in later).*

**Fast method :**

**Choose a cue, and get a memory, then  
PRESS**

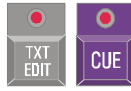


*hold it down and press twice the sequence key (A, B, C or D) you want to program. The memory will be added to the tail of the list.*

#### 4.6.7 Give a cue a name

*Go into cue mode and*

***PRESS***



*Hold down the EDIT TXT key and pick a cue number (1-70).*

*Now you can give in the cue name on the PC keyboard.*

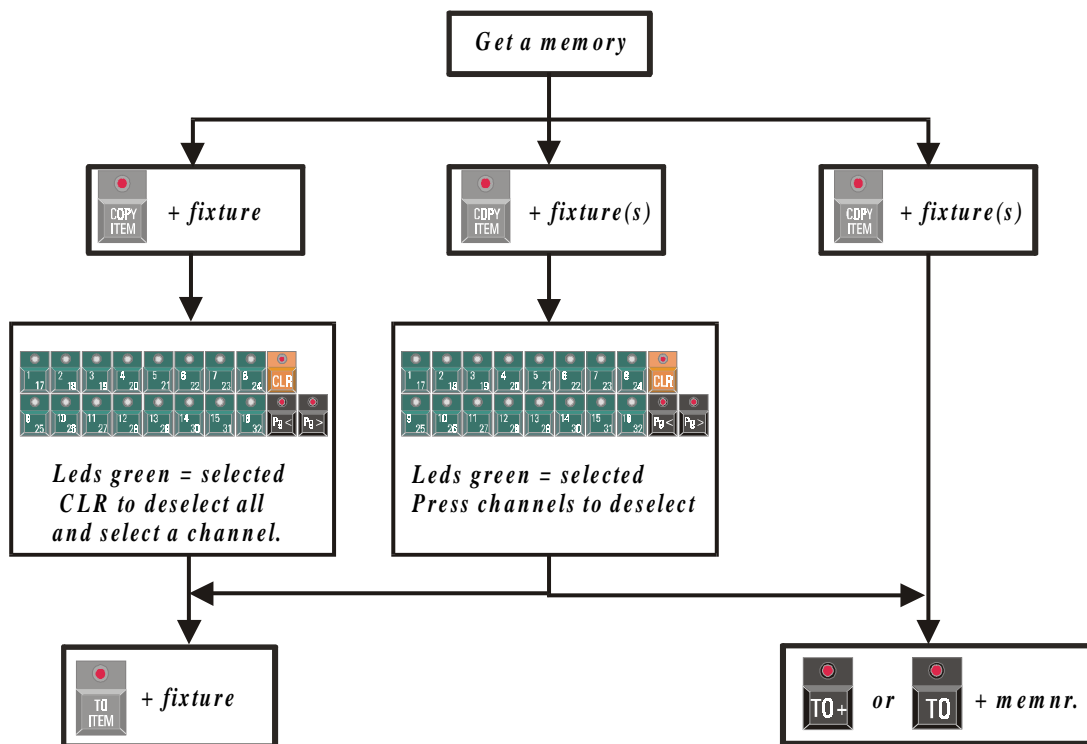
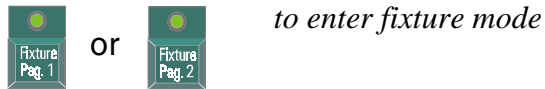
### 4.7 Copy functions : Copy item and To item

We use this function if we want to copy parts of a memory from one fixture to another or to copy playbacks or sequences from one cue to another.

#### 4.7.1 Fixture mode :

In fixture mode we can copy parts from memories from one fixture to another or to a memory.

**PRESS**

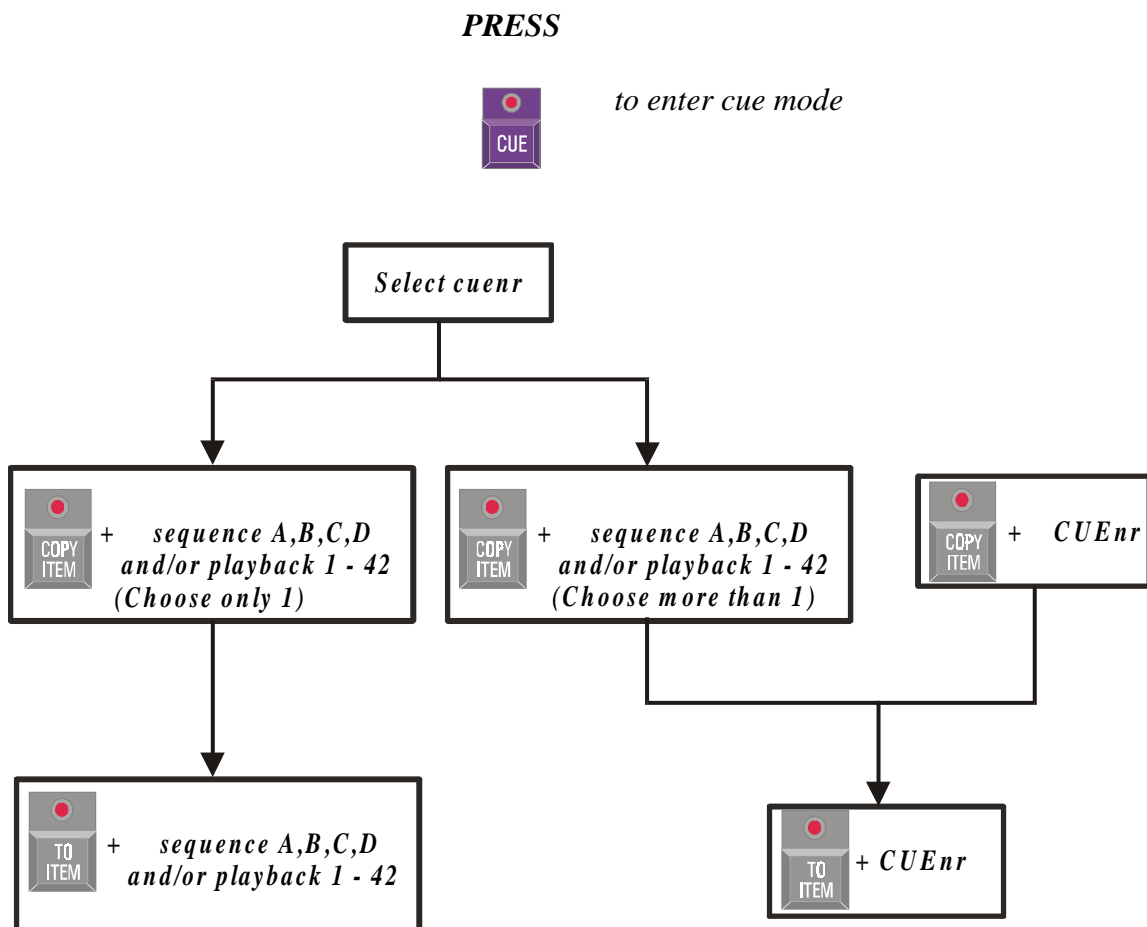


When we use *copy* in *fixturemode*, we can copy an entire fixture i.e. all its channel values filled in, in the memory, or only some channels and /or presets to :

- another memory. Only that fixture will be replaced in the new memory now.
- another fixture. All the channel values filled in, in the memory, and existing in the fixture to copy to, will be copied to the chosen fixture. This is only possible if *copy item* is used with 1 fixture only.

#### 4.7.2 Cue mode

In *cue mode*, we can copy entire cue's to other cue's. We can also copy some items of a cue, like sequences or playbacks, to sequences or playbacks of the same or other cues.



## 4.8 Programming hints.

### 4.8.1 Programming memories

If you call a new memory, only those control channels filled in, in the memory will be changed. For example, if you make a start memory where all control values are filled in, and now you want to change the colors, the next memory you have to make, has to contain only the color value, the rest of the fields have to be left blank, so the other control channels won't change.

Memory 1	Pan1	Tilt1	Gobo1	Color1	Dimmer1
----------	------	-------	-------	--------	---------

Memory 2	-	-	-	Color2	-
----------	---	---	---	--------	---

Result	Pan1	Tilt1	Gobo1	Color2	Dimmer1
--------	------	-------	-------	--------	---------

Memory 1 contains pan value 1, Tilt value 1, Gobo value 1, Color value 1 and Dimmer value 1. Memory 2 contains only Color value 2. We call first memory 1, then memory 2. The result will be that only the color of the fixture will change, the other values will stay the same as in memory 1.

### 4.8.2 Replace all mode or overwrite mode ?

It is a very important choice you have to make before you start making cues. Because the cues and playbacks will be loaded in a different way when you make cue-selections.

You can toggle between the 2 modes by holding SHIFT + CUE keys together or on the PLUS wing select CUE or PLAYBACK in transparent mode. (P=Playback, S=Sequence)

Cue 1	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	S1	S2	S3	S4
	mem1	mem2	mem3	-	-	-	mem4	mem5	-	-	filled1	filled2	-	-
Cue 2	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	S1	S2	S3	S4
	-	mem10	mem11	mem12	-	-	-	-	-	-	filled5	-	-	-

#### Replace all mode (Cue 1 running and cue 2 called)

Result	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	S1	S2	S3	S4
	-	mem10	mem11	mem12	-	-	-	-	-	-	filled5	-	-	-

#### Overwrite mode (Cue 1 running and cue 2 called)

Result	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	S1	S2	S3	S4
	mem1	mem10	mem11	mem12	-	-	mem4	mem5	-	-	filled5	filled2	-	-

The result in replace all mode, when cue 1 is running and cue 2 is called, will be cue2. In overwrite mode, only the programmed playbacks and sequences of cue 2 will overwrite those of cue 1.

Explanation of the 2 modes:

**Replace all mode:**

*This mode replaces, each time you press a cue-selection, all the sequences (4) and all the playbacks (10) even if there are not programmed.*

*Use this mode to prepare a total different effect for each cue. Recommended for concerts, broadcasting, etc... where the show is preprogrammed and rehearsed. Also use this mode when you're learning the console.*

**Overwrite mode:**

*This mode loads only the programmed sequences and/or playbacks of the selected cue.*

*The sequences and playbacks that are not replaced are still those of the previous cue(s).*

*In this mode it's possible to load separate sequences and/or playbacks without changing the other already loaded sequences and/or playbacks. In fact you can have an effect running existing out of up to 46 different cues (4 sequences + 42 playbacks). It is evident that this mode is very flexible to load effects over effects, but you have to do it in the right way!*

**Important:**

*Put only the same control channels (it can be an entire fixture or separate control channels of fixtures with the same functionality) into the same sequences of different cues.*

**Example 1:**

*Program different Pan & Tilt cues always in sequence D (sequence A, B, C are empty), different dimmer-chasers in cues programmed with sequence C (A,B,D are empty), different color-chasers in cues programmed with sequence B, etc.... Now it's possible to load different Pan & Tilt cues without changing the dimmer- or other chasers because they are loaded through other cues. The same philosophy for the playbacks.*

**Example 2:**

*Program different fixtures always in the same sequences of different cues.*

*Fixture type 1 always in sequence A, fixture type 2 and 3 always in sequence B, etc...*

*In this way you can change the effects of your grouped fixtures separate from the other fixtures just by loading those cues of that group.*

*Suppose, you don't program the same fixture control channels in the same sequences for each cue. Calling those cues can result in having the same fixture control channels in 2 or more sequences at the same time. In this case, the priority rules of sequences will take over. Sequence A has the highest priority, sequence D the lowest.*

<b>Cue 1</b>			
<b>Sequence A</b>	<b>Sequence B</b>	<b>Sequence C</b>	<b>Sequence D</b>
<i>Empty</i>	<i>Empty</i>	<i>Colormemory1 of fixture 1</i>	<i>Empty</i>

<b>Cue 2</b>			
<b>Sequence A</b>	<b>Sequence B</b>	<b>Sequence C</b>	<b>Sequence D</b>
<i>Empty</i>	<i>Empty</i>	<i>Empty</i>	<i>Colormemory2 of fixture 1</i>

<b>Result when calling both cues in overwrite mode</b>			
<b>Sequence A</b>	<b>Sequence B</b>	<b>Sequence C</b>	<b>Sequence D</b>
<i>Empty</i>	<i>Empty</i>	<i>Colormemory1 of fixture 1</i>	<i>Colormemory2 of fixture 1</i>
<i>Only sequence C will react because the same fixturechannel is used in both sequences and sequence C has a higher priority</i>			

For example if the color-channel of fixture 1 is loaded through memories in sequence C and D by calling cue 1 and 2. The result will be that only the memories in sequence C will be processed in the output and the memories in sequence D not because of the priority rules. If we want to run the color-memories of cue 2 when we have called first cue 1, we had to program them to sequence C.

Use this mode in shows where you have to improvise all the time, like in discos, concerts with unknown bands, etc...

#### 4.8.3 Absolute or relative programming

When you select a number of fixtures, of the same type, together and you change their Pan/Tilt, iris, frost, zoom dimmer or focus values, all the fixtures will react the same in **ABSOLUTE programming**. Their **digital values** will be the **same**. When we set for instance a Pan/Tilt value, the mirror-position of all fixtures will be the same.

In **RELATIVE programming** however, the value you change will be added or subtracted from the control channel value whatever that may be. When the maximum value of one fixture control channel is reached, the others will still respond until their max. is reached. Now we can put for example all fixtures in one spot and move this spot around. All selected fixtures will follow the spot. You can't do this in absolute programming.

#### 4.8.4 Solo Function (works only when all sequences are stopped)

When we are programming with a lot of fixtures together, sometimes it can be difficult to see the reaction of one particular fixture. When we select the fixture(s) and press the solo key, all not selected fixtures will dim, and the selected will stay open. To move to the next or previous fixture, press the NEXT or LAST key.

#### 4.8.5 Blind programming (will be explained in Running...)

The blind function is used when the show is already running and we want to change something in the cues. The show will keep running, but we can make changes. As soon as blind is disabled and the changed cue is re-selected, the new changes will be activated.