

PIRENE

SOFTWARE UPDATE 1.0 → 1.1

IMPORTANT!

After each software updating, should be do a Cold Reset:

- Switch Off the unit
- Press and hold down pressed ←
- Switch On the unit, and after a few seconds...
- Release ←

NEW FUNCTIONS

New Conversion Modes DMX → MIDI

From this version, the working mode selected in the DMX <> MIDI converter, it affects to the conversion direction DMX → MIDI.

For the direction **DMX → MIDI**, the converter has the next modes:

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SEQUENCER The channels/levels of the DMX input are converted in controllers/levels of the MIDI output.

In accordance with the **DIR** option, this conversion will be:

DMX IN
MIDI OUT

DIR
CHANN
LEVEL%
CONTROLLER
LEVEL

1-128

1

2

...

128

0-100

0-100

...

0-100

0

2

...

127

0-127

0-127

...

0-127

129-256

129

130

...

256

0-100

0-100

...

0-100

0

2

...

127

0-127

0-127

...

0-127

257-384

257

258

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...
384
0-100
0-100
...
0-100
0
2
...
127
0-127
0-127
...
0-127

385-512

385
386
...
512
0-100
0-100
...
0-100
0
2
...
127
0-127
0-127
...
0-127

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FLASH The channels/levels of the DMX input are converted in notes of the MIDI output (all
SWITCH notes are sending at the same velocity value). Each time that the channel goes beyond
HOLD its 6%, the corresponding note is sending at 100% (velocity 127).

In accordance with the **DIR** option, this conversion will be:

DMX IN
MIDI OUT

DIR
CHANN
LEVEL%
CONTROLLER
LEVEL

1-128

1

2

...

128

6-100

6-100

...

6-100

0

2

...

127

127

127

...

127

...

...

...

...

...

385-512

385

386

...

512

6-100

6-100

...

6-100

0

2

...

127

127

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127

...

127

FLASH+VEL The channels/levels of the DMX input are converted in notes/velocity of the MIDI
SWITCH+VEL output.

HOLD+VEL
MODULATOR In accordance with the **DIR** option, this conversion will be:

DMX IN
MIDI OUT

DIR
CHANN
LEVEL%
CONTROLLER
LEVEL

1-128

1

2

...

128

0-100

0-100

...

0-100

0

2

...

127

0-127

0-127

...

0-127

...

...

...

...

...

385-512

385

386

...

512

0-100

0-100

...

0-100

0

2

...

127

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0-127

0-127

...

0-127

The DMX & MIDI protocols have different speed of data transmission, and DMX is most quick protocol. For this, it is recommended don't use MIDI polyphony of more of **30 notes/controllers**. In other words, don't use more than 30 lighting channels at the same time.

NEW PIRENE - BACKUP y SEQUENCER

The BACK+SEQ configuration permits to store a sequence of 99 memories, with fade and wait times, with the objective of to playback the sequence when the DMX input is in fault, or this DMX input isn't connected, working as Universal Backup or Sequencer.

The playback control is done in the same unit, or externally, using external commands (Rs232, MSC or MIDI Notes).

To configure PIRENE as BACK+SEQ

1. Access to the menus list
2. Select **PIRENE**
3. Select and accept **BACK+SEQ**

The BACK+SEQ configuration, in the main page, shows its active ports and status:

Back+Seq	-----	1»3
IN1	512	>OUT1 512

The DMX input signal must be connected to IN1. These DMX channels are available in OUT1 connector.

If the input signal, IN1 connector, is not connected, in OUT1, we have the scene output of the inner sequence.

THRU1 (output port) always has a copy of the signal of IN1. THRU1 is used to link other DMX units to the IN1 input line.

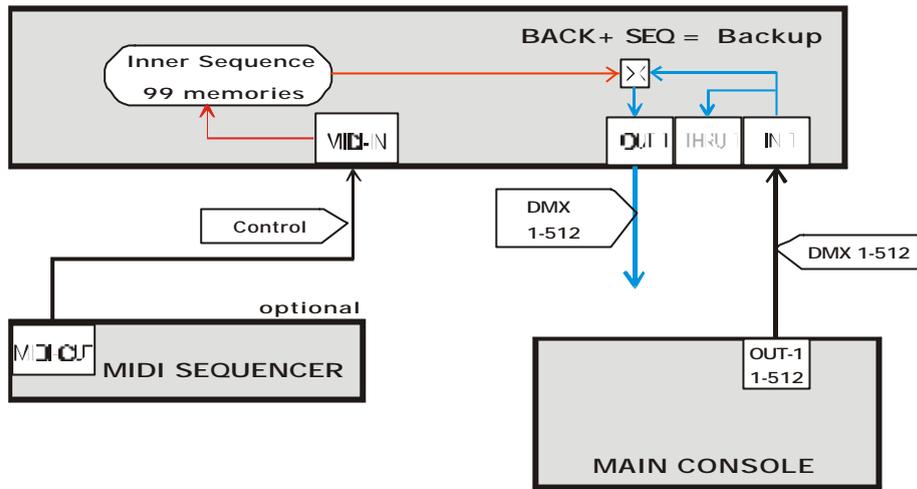
Also, it is possible to have actives, with objective of external control, the RS232 (IN) port and the MIDI (IN-THRU) port.

No other connector is active.

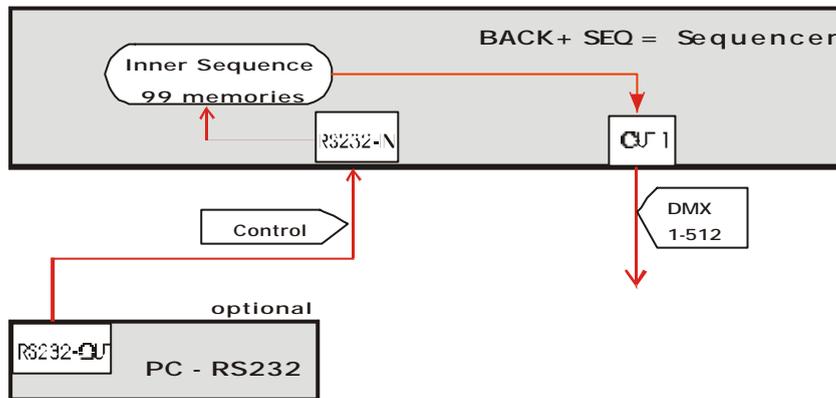
Use examples

A.- Universal Backup, controlled from a MIDI sequencer.

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B.- Autonomous Sequencer, controlled from a PC



THE SETUP PARAMETERS

By default, in the BACK+SEQ configuration, **PIRENE** works always as **Backup**. Only when the DMX input is in fault, its working mode toggle from **Backup** to **Sequencer**. Is in Sequencer mode, when we can playback its inner sequence.

A DMX input is needed to can store the inner sequence memories. The contents of these memories cannot be modified manually.

The configuration parameters edition and the sequence edition are done inside the **SETUP** menu.

To select the **SETUP** menu:

- | | | |
|---------------|------------|--|
| Menu : | 2↓4 | From the main display: |
| TEST | | Press ENTER , to select the menus list. |
| »SETUP | « | Select SETUP . |
| DISK | | |

Inside the **SETUP** menu, you can find the next options:

BACK Set the behavior in the working mode changes, from **Backup** to **Sequencer**, and vice versus.

The selected option (**MANUAL** or **AUTO**) can be seen in this menu:

»**BACK** **Manual** «

When in **Backup** mode, the DMX input faults, BACK+SEQ toggles to **Sequencer** mode, and the inner sequence is activated.

If this option is **AUTO**, the scene output (last DMX input received) will be replaced by the selected memory of the inner sequence, automatically.

If this option is **MANUAL**, the scene output is maintained (last DMX input received), until the user forces its replacement with the selected memory of the inner sequence.

When in **Sequencer** mode, the DMX input is restored, BACK+SEQ toggles to **Backup** mode, and the inner sequence is deactivated.

If this option is **AUTO**, the scene output (from the inner sequence) will be replaced by the DMX input automatically.

If this option is **MANUAL**, the scene output (from the inner sequence) is maintained until the user forces its replacement with the DMX input. If the mode change is produced during a crossfade, this crossfade will be completed.

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SEQ Permits us to edit (**EDIT**) or to eliminate (**DELETE**) the inner sequence.

In both, **SEQ** and **EDIT** menu, you can see the total number of stored memories in the inner sequence. »**EDIT** 1 Items «

The **DELETE** command permits us to delete, totally, the sequence. This command needs confirmation.

See THE SEQUENCE EDITION- page 15

TIMES Permits to set the default times for the memories.

The default times are edited in seconds, and they are:

Fade time (↓↑)

Wait time (⌚)

The values of these times can be seen in the menu line: »**TIMES** ↓↑3 ⌚GO «

Example: 3 seconds for the fade time and infinite for the wait time.

To edit these values:

- Select **TIMES**. In the display:
»003.0↓↑ GO⌚ On «
- Press **ENTER**. The edition cursor, □, appears in the first data cell:
Use the right-left arrows to select the desired digit.
Use the up-down arrows to edit the selected digit.
- When the edition is ended, press **ENTER** to exit of the edition mode.
- Press **EXIT** to return to the previous menu.

Notes about the edition:

The fade time is between 0.1 and 999.9 seconds.

The wait time is between 0.1 and 999.9 seconds.

To edit here a GO⌚ value, enter in this cells the value **0.0**. This value shows us that the wait time is infinite, and each new crossfade must be started pressing **F2** (GO).

The last cell permits us to deactivate (or activate) the programmed wait times in the sequence memories, without the necessity of to delete their values.

At **On** the wait times are actives, and at **Off** the wait times are deactivated.

When the wait times are deactivated, in the **TIME** menu, you can see:

»**TIMES** ↓↑3 ⌚**Off** «

EXTERN Configuration for the external control, by default, deactivated:

»**EXTERN** **Off** «

Inside **EXTERN**, you can find:

SOURCE **Off**

Including the external control modes (for the inner sequence execution). The modes are:

OFF	*	Default. The external control is deactivated.
RS232		Control from RS232 commands, using the RS232 port.
MIDImsc		Control from MSC commands, using the MIDI port.
MIDInotes		Control from MIDI Notes, using the MIDI port.

MIDI Channel 1

If the **SOURCE** is **MIDInotes**, setup here the MIDI communication channel (1-16).

- Press **ENTER** to edit this parameter.

MIDI Note 0

If the **SOURCE** is **MIDInotes**, setup here the first MIDI NOTE that you wish for use in the commands.

- Press **ENTER** to edit this parameter.

The commands of external control, according to the modes, are explained in page 26

PANEL Permits to enable (**ENABLED**) or to disable (**DISABLED**) the operability of the **F1-F6** keys. (See USER CONTROL, page 14)

LANG Permits to select the language used in messages of help and information. The available languages are: **CASTELLANO**, **ENGLISH** and **FRANCASIE**
The selected language appears in the option-line:

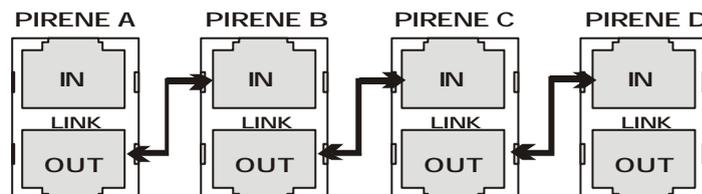
»**LANG Castellano** «

- Press **ENTER** to change it.

LINK (Id) The first **LINK** command permits to set the Identification Number of this unit in a net, this number takes a value from 0 to 9.

This **Id** number, moreover, is used to identify each **BACK+SEQ** in the control external commands. (More in page 26).

10 PIRENES can be connected in one net. In one net each unit must have a unique **Id** number. The net connection is done with the **LINK** port:



LINK (mode) The second **LINK** command permits us to edit the response mode of this unit in the net. In this case, only the **ALONE** mode is available (no editable).
ALONE .- This unit operates in independent mode to the net.

Note: The net functionality is not implement yet.

AUTOMATIC CONTROL

When the unit is turned off:

An inner relay connects IN1 with OUT1.

When IN1 has a correct DMX signal, the system works in **Backup** mode (OUT1 is a copy of IN1, and it is possible to store memories).

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When IN1 has not a correct DMX signal, the system works in **Sequencer** mode (OUT1 is the output of the inner sequence).

USER CONTROL

The user has special functions for activate or deactivate the input and output lines (IN1 and OUT1) and to control the sequence playback. These functions are accessible in the **F1-F6** keys.

3 pages compose the main screen. To access to the desired page, use the right-left **ARROWS**:

Page1: Connections	Page 2: Status	Page 3: F1-F6 functions
Back+Seq ----- 1»3 IN1 512 >OUT1 512	Back+Seq ----- 2»3 --BACK--EXT---AUTO-- DMX-IN 01 STEP01 ↑ 99	Back+Seq ----- 3»3 ↓F1-F2 ↓F3-F4 ↓F5-F6 IN1 SELECT OUT1 GO PAUSE BACK

Page 1 / Connections:

The input (IN1) and output (OUT1) show us the channels number, received and transmitted, or an asterisk, *, in the case of fault signal.

Page 2 / Status:

Back+Seq ----- 2»3 --BACK--EXT---AUTO-- DMX-IN 01 STEP01 ↑ 99
--

In the second line, **--BACK--EXT---AUTO--**, you can see the next status flags:
BACK/SEQ. This flag appears as **BACK**, for **Backup** mode, or as **SEQ** for **Sequencer** mode.
EXT. This flag appears if the external control is activated in any of its formats.
AUTO/MAN. This flag shows the selected mode inside the **BACK** menu. (**AUTO** or **MANUAL**)

Page 3 / F1-F6 functions. Functions for the sequence control and the input-output control:

Back+Seq ----- 3»3 ↓F1-F2 ↓F3-F4 ↓F5-F6 IN1 SELECT OUT1 GO PAUSE BACK
--

Input – output control functions:

F1: IN1, it permits us to activate / deactivate the **IN1**. Its LED shows the IN1 status.

F5: OUT1, it permits us to activate / deactivate the **OUT1**. Its LED shows the OUT1 status.

The **F1** LED can be:

- Off – The input (IN1) is deactivated by the user. Press this key again to restore this input.
- On – No data are received in this input.

- Blinking – Correct data are received in this input.

The **F5** LED can be:

- Off – The output (OUT1) is deactivated by the user. Press this key again to restore this output.
- Blinking – The output is transmitting data.

The objective of these functions is to have an easy tool to check lines.

Moreover, **F1** permits us to force the mode change, from **Backup** to **Sequencer**, or vice versa; it avoiding the necessity of disconnect physically the input signal in IN1.

Sequence control functions active in Sequencer mode:

F2: GO, it starts a new crossfade to the next memory in the sequence.

F4: PAUSE, it stops the current crossfade.

F6: BACK, it starts or follows a crossfade in inverted direction (to the previous memory).

Sequence control function actives in Sequencer & Backup mode:

F3: SELECT, it permits to select the desired next memory in the sequence.

(See SEQUENCE PLAYBACK, page 21)

THE SEQUENCE EDITION

The inner sequence can be a maximum of 100 memories: The fixed memory 0 and the free memories 1-99. The **memory 0** is a **blackout** memory; it always is and cannot be modified. This memory is labeled as **BLACKOUT**.

Basic concepts about this sequence:

- The memories are, always, ordered numerically.
- The sequence is executed with consecutives crossfades. Each new crossfade is done from the memory in scene the next memory in the list.
- A crossfade is a double fade, for which, the memory in scene is replaced by the next memory in the list: The scene fades from 100 to 0%, and the next scene fades from 0% to 100%.
- The fade times used in the crossfade are the times programmed in the “next memory”.
- The “next memory” fades up scene in its **Time↑**, at the same time that the scene memory fades down scene in the **Time↓**.
- When this crossfade reaches its end, the “next memory” is the “scene memory”. All is ready for a new crossfade. If corresponding, its **Time☺** will be computed before to start the new crossfade automatically. If this time is at **GO** value, or the wait times are deactivated, the user has to start the new crossfade pressing **F1:GO**.
- It is possible to break the numerical order for the sequence playback, programming a jump to the desired memory number, **Jp**.

To edit the sequence, select in **SETUP**, the **SEQ** menu and inside this the option: **EDIT**.

Edition-Functions (Temporal)	Data-1	Data-2
-- Edit Functions -- ↓F1-F2 ↓F3-F4 ↓F5-F6	s Mm Text Time↑ »00« deflt Nw	s Mm Time↓ Time☺ Jp 00 »deflt«deflt Nw
REC INSERT DELETE		

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The first page is temporal, it appears when **EDIT** is selected and after a few seconds disappears. In this temporal page you can see the new functions for the keys **F1-F6**, functions available while that the **EDIT** menu is opened (this function change affects only to the key, not to its LED). If you want to see this page again, it is needed to exit of the **EDIT** menu, pressing **EXIT**, and to enter again in this menu, pressing **ENTER** again.

The sequence edition table is showed in the next 2 pages. Cells, divided in lines and 9 columns, compose this table. The first line is always visible. This line shows us the label of each column. The rest of the lines have the information about 1 memory each one.

The contents of each column are:

Column number	Data-1 page				Data-2 page				
	1	2	3	4	5	6	7	8	9
Line 2 – memory A	s	Mm	Text	Time↑	s	Mm	Time↓	Time⌚	Jp
Line 3 – memory B	=	00	BLACKOU	deflt	=		deflt	deflt	
Line 4 - memory C	↑	»01«	T	deflt	↑		deflt	deflt	
	↑	Nw			↑				

The cells in grey field are no editables. The cursors, » «, mark the active cell. To active the desired cell, mover the cursor using the **ARROWS**:

- Up-down **ARROWS** to select the previous – next memory in the list.
- Left-right **ARROWS** to select the previous – next column in the same memory.

Cells contents, by column:

s Columns 1 & 5	<p>Working mode flag, and position of memories.</p> <p>In line 1, the working mode appears as:</p> <p>s If the current mode is Sequencer, and the sequence output is in scene. b If the current mode is Backup, and the DMX input is in scene.</p> <p>In the rest of the lines, a position flag, associated to memory in the line, appears as:</p> <p>↓ If the memory number is smaller than the number of the “next memory” = If the memory is the “next memory” in the sequence playback. ↑ If the memory number is grater than the number of the “next memory”</p>
Mm Columns 2 & 6	<p>The memory number for the data of this line. This number can be showed as:</p> <p>00 Memory 0. First memory in the list. ## Memory ##. Each time that a new memory is stored, the system assigns it a number. The memories always are ordered numerically. When a memory is deleted or inserted, all affected memories are renumbered to maintain the numerical order. Nw Option to store a new memory at the end of the list. This option appears always At the end of the list (except when the list is full)</p>
Text	<p>The associated text to the memory.</p>

Column 3	The memory text has a maximum of 8 alphanumeric characters. The memory 0, by default, has the assigned the text: “ BALCKOUT ”. This text can be edited at any time.
Time↑ Column 4	Fade-in time associated to the memory. From 0.1 to 999.9 seconds. Here you can see: Deflt If the memory has the default fade time (it programmed in TIMES menu). ###.# The value of this time if it has been edited by the user.
Time↓ Column 7	Fade-out time associated to the memory. From 0.1 to 999.9 seconds. You can see: Deflt If the memory has the default fade time (it programmed in TIMES menu). ###.# The value of this time if it has been edited by the user.
Time⌚ Column 8	Wait time associated to the memory. From 0.1 to 999.9 sec, or infinite. You can see: Deflt If the memory has the default wait time (it programmed in TIMES menu). ###.# The value of this time if it has been edited by the user. GO If this time has been edited as “infinite”. In this case, press GO (F2) will be needed to start the next crossfade.
Jp Column 9	The jump associated to the memory. In this jump any memory number can be specified as the “next memory” in the sequence playback. By default, these cells appear empty indicating that the next memory in the list will be the next memory in numerical order. The programming of the jump is a way to break the order numerical of playback for the memories.

The memories can be stored, modified or deleted at any moment.

Mm	Storing new memories (except memory 00).	F2:REC
»00« Nw ----	<ul style="list-style-type: none"> Connect the DMX signal from a lighting control to IN1. BACK mode must be active. In the lighting control, get ready the scene that will stored in the memory. (Note that this scene is active in the OUT1 connector of PIRENE). 	
00 »Nw« ----	<ul style="list-style-type: none"> Select, using the cursors, the »Nw« cell. Press F2:REC, to store this scene in the new memory. 	
00 01 »Nw« ----	<ul style="list-style-type: none"> The new stored memory appears in the list (01). The cursor is moved to the »Nw« cell, and the system is ready to store other memory. In the lighting control, get ready other scene. Press F2:REC, to store this scene in the new memory. 	
00 01 02 »Nw« ----	<ul style="list-style-type: none"> The new stored memory appears in the list (02). The cursor is moved to the »Nw« cell, and the system is ready to store other memory. Repeat this process, as many times as memories you want to store. 	
Mm	Deleting memories (except memory 00).	F6:DELETE
00 »01«	<ul style="list-style-type: none"> Move the cursor to select the memory number cell that you want to delete. For example, the memory number 01. 	

02 Nw -----	<ul style="list-style-type: none"> Press F6:DELETE, to delete the selected memory. 	
00 »01« Nw -----	<ul style="list-style-type: none"> The old memory 01 has been deleted. But the memories of the list are renumbered to maintain the numerical order: The previous memory 02, now is the memory 01. Repeat this process, as many times as memories you want to delete. 	
Mm	Inserting a new memory between 2 stored memories.	F4:INSERT
00 01 »02« Nw -----	<ul style="list-style-type: none"> To insert a new memory between the memories 01 & 02, select with the cursor the cell of the memory 02. BACK mode must be active! In the lighting control, get ready the desired scene. Press F4:INSERT, to store a new memory between the previous memories 01 and 02. 	
00 01 »02« 03 Nw -----	<ul style="list-style-type: none"> Note that the memories in the list are renumbered to maintain the order. The new stored memory is now the memory 02, and the previous memory 02, is now the memory 03. 	
Mm	Modifying a stored memory.	F2:REC
00 01 »02« Nw -----	<ul style="list-style-type: none"> To modify the contents of the memory 02, select with the cursor, the cell of its memory number. BACK mode must be active! In the lighting control, get ready the desired scene. Press F2:REC, to modify the memory 02 with a new scene. 	

Note: Each time that a no-permitted operation is done (as delete the memory 00, etc) PIRENE emits a warning acoustical signal. This signal indicates that the operation cannot be done.

When a memory is stored, it is possible to edit its associated text.

TEXT	Edit the associated text of a memory.	ENTER
BLACKOUT » -----	<ul style="list-style-type: none"> Select the desired text cell using the cursors. Press ENTER. The edition cursor appears inside the cell. With the right-left ARROWS select the desired character. With the up-down ARROWS edit the selected character. Repeat the 2 previous steps to edit the text completely. Press ENTER to close the text edition. 	
TEXT	Copy the associated text from the previous memory.	F4:INSERT
BLACKOUT »BLACKOUT« -----	<ul style="list-style-type: none"> Select the desired text cell using the cursors. Press F4:INSERT. Note that the text of the previous memory has been copied. After, this text can be edited again. 	
TEXT	Delete the associated text.	F6:DELETE
BLACKOUT » -----	<ul style="list-style-type: none"> Select the desired text cell using the cursors Press F6:DELETE. Note that the text cell, now is empty. 	

When a memory is stored, it has assigned the default times (times edited inside the **TIMES** menu). At any moment these times can be edited.

Time↑	Time↓	Edit the fade times of a memory.	ENTER
deflt	deflt	<ul style="list-style-type: none"> Select the desired fade time cell using the cursors. Press ENTER. The edition cursor appears inside the cell. With the right-left ARROWS select the desired digit. With the up-down ARROWS edit the selected digit. Repeat the 2 previous steps to edit the time completely. Press ENTER to close the time edition. 	
»deflt«	deflt		

deflt	deflt	<ul style="list-style-type: none"> The edited Time↑ is copied as Time↓ if both fade times had the same value. 	
»010.1«	010.1	Note: The Time↓ edition doesn't affect to the Time↑	

Time↑	Time↓	Copy the fade times from a previous memory.	F4:INSERT
010.1	010.1	<ul style="list-style-type: none"> Select the desired fade time cell using the cursors. Press F4:INSERT to copy the value of the selected time of the previous memory in the selected time cell. 	
»deflt«	deflt		

010.1	010.1	<ul style="list-style-type: none"> The inserted Time↑ is copied as Time↓ if both fade times had the same value. 	
»010.1«	010.1	Note: The edition of Time↓ doesn't affect to the Time↑	

Time↑	Time↓	Return to the default time.	F6:DELETE
010.1	010.1	<ul style="list-style-type: none"> Select the desired fade time cell using the cursors. Press F6:DELETE to return to the default value. 	
»010.1«	010.1		

010.1	010.1	<ul style="list-style-type: none"> The returned Time↑ is copied as Time↓ if both fade times had the same value. 	
»deflt«	deflt	Note: The edition of Time↓ doesn't affect to the Time↑	

TimeⓈ	Edit the associated TimeⓈ.	ENTER	
deflt	<ul style="list-style-type: none"> Select the desired wait time cell using the cursors Press ENTER. The edition cursor appears inside the cell. With the right-left ARROWS select the desired digit. With the up-down ARROWS edit the selected digit. Repeat the 2 previous steps to edit the time completely. Press ENTER to close the time edition. 		
»deflt«			

deflt	<ul style="list-style-type: none"> If TimeⓈ is edited with the value 000.0, this time is showed as GO. In these cases, will be necessary start the next crossfade pressing F1:GO. 		
» GO«			

TimeⓈ	Copy the wait time from a previous memory.	F4:INSERT	
010.1	<ul style="list-style-type: none"> Select the desired wait time cell using the cursors Press F4:INSERT to copy the wait time value from the previous memory: 		
»deflt«	010.1		
-----	»010.1«		

Time 	Return to the default time.	F6:DELETE
010.1	• Select the desired wait time cell using the cursors	
»010.1«	• Press F6:DELETE to return to the default wait time:	
-----	010.1	
	»deflt«	

The sequence memories always are executed in numerical order, from the memory 00 to the last memory. To break this order, will be necessary to program a jump. When a memory has a programmed jump, in the crossfade, this is replaced with the memory programmed in the jump, and no with the next numerical memory. Example, in the memory 02 has a programmed jump to the memory 04. In this case, after the memory 02 does its crossfade with the memory 04.

Jp	Edition of the associated jump.	ENTER
» « ----	<ul style="list-style-type: none"> Select the desired jump cell using the cursors Press ENTER. The edition cursor appears inside the cell. With the right-left ARROWS select the desired digit. With the up-down ARROWS edit the selected digit. Repeat the 2 previous steps to edit the memory number completely. Press ENTER to close the number edition. 	

Note: The memory number entered must be a memory number stored.

Jp	Delete the associated jump.	F6:DELETE
»23« ----	<ul style="list-style-type: none"> Select the desired jump cell using the cursors Press F6:DELETE and the jump is delete (empty). » « 	

To delete the complete sequence, select, inside **SETUP**, the **SEQ** menu, and inside this the **DELETE** option. Press **ENTER**, the system requests us confirmation.
Confirm pressing **ENTER** again to delete the complete sequence (only the memory 00 is in the list).

SEQUENCE PLAYBACK

The sequence playback is active when the system is working in **Sequencer** mode, **SEQ**. In this mode, the scene output of the system (OUT1) is the output of the inner sequence.

The BACK+SEQ works in **Sequencer** mode, automatically, when the system doesn't detect a correct DMX input (IN1), or when the user forces this pressing **F1** (IN1) to deactivate this DMX input signal.

The sequence playback is controlled using **F2, F3, F4, F6** and the frontal fader.
The **F2, F3, F4 & F6** functions are showed in the main page 3»3.

Back+Seq	-----	3»3
↓F1-F2	↓F3-F4	↓F5-F6
IN1	SELECT	OUT1
GO	PAUSE	BACK

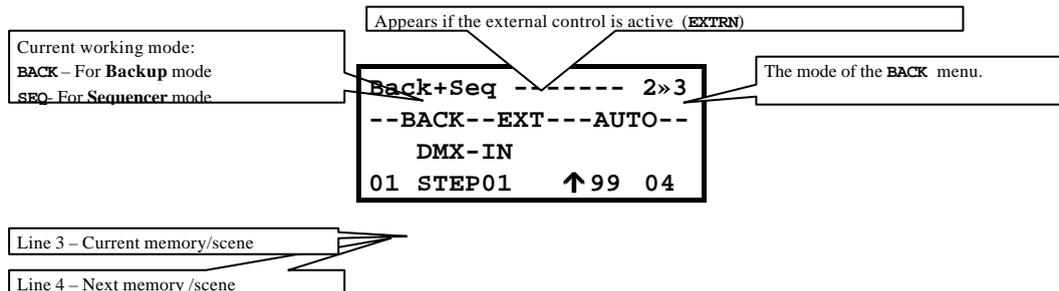
F3	SELECT	<p>Accesses to the memories list with the objective to select a memory as “next memory”.</p> <p>To select the desired memory as “next memory”:</p> <ul style="list-style-type: none"> Press F3. Using the up-down ARROWS select the desired memory. Press ENTER to accept it as “next memory”.
-----------	---------------	--

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		This function is active always (LED F3 at ON)
--	--	--

F2	GO	<p>Each time that this key is pressed a crossfade to the next memory is started.</p> <p>This function only is active in SEQ mode (LED F2 at ON). This function is inactive in BACK mode (LED F2 at OFF).</p> <p>The crossfade also can be executed manually, moving the frontal fader from an end to the other end.</p>
F4	PAUSE	<p>Each time that this key is pressed, the crossfade in progress is stopped.</p> <p>This function only is active in SEQ mode (LED F4 at ON). This function is inactive in BACK mode (LED F4 at OFF).</p>
F6	BACK	<p>Each time that this key is pressed, the crossfade in progress inverts its direction, or a crossfade to the previous memory is started.</p> <p>This function only is active in SEQ mode (LED F6 at ON). This function is inactive in BACK mode (LED F6 at OFF).</p>

In the main page 2»3, the system shows us the status of the current scene output:



If the system is in **BACK** mode, its output is the own DMX input (OUT1=IN1).

In **BACK** mode:

Line 3 – Current Scene: **DMX-IN** appears to indicate us that this is our scene output.
 Line 4 – Next memory is showed here. (This memory, by default, is the first sequence memory). The next memory can be selected using **F3:SELECT** command.
 The next memory is **ready** to fade up scene when the system toggles to **SEQ** mode (when DMX input faults or the user forces this change pressing **F1:IN1**).

In **BACK** mode the functions of sequence control are not actives, only **F3:SELECT** can be used.

In **SEQ** mode:

Line 3 – Current memory is showed here.
 Line 4 – Next memory is showed here.

The data about the current memory & the next memory, for a static and ended crossfade, are:

Mm Text Time* Jp

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Line 3 –Current memory	01 STEP01	↓99	
Line 4 – Next memory	04 STEP04	↑99	20

- The number of the current memory (**01**), and the number of the next memory (**04**).
- The associated text of each memory (**STEP01** & **STEP04**).
- The fade times of the next crossfade. When the crossfade is ended and static, these times appear with their corresponding symbols (↓ & ↑).
In this example, in the next crossfade the memory 01 fades at 0% in ↓99 seconds, at the same time that the memory 04 fades at 100% in ↑99 seconds.
- Only for the line 4, the jump associated to this memory. (**20**)

In **SEQ** mode all functions of sequence control are actives.

Following with the previous example, if **F2:GO** is pressed (or the frontal fader is moved), the crossfade between the memories 01 & 04 begins:

1. If **F2: GO** is pressed, the crossfade begins controlled by the fade times of the memory 04. During the crossfade in progress:

	Mm	Text	Time*	Jp
Line 3 –Current memory	01	STEP01	87	
Line 4 – Next memory	04	STEP04	87	20

Dynamically, you can see:

The remaining time for that the current memory fades out from 100 to 0%.
The remaining time for that the next memory fades in from 0 to 100%.

When this crossfade ends, the memory **04** will be the current memory, and the next memory will be the memory **20** (programmed in the jump of the memory 04):

	Mm	Text	Time*	Jp
Line 3 –Current memory	04	STEP04	⌚12	
Line 4 – Next memory	20	STEP20	↑15	

If the memory 04 has a wait time programmed, this time is computed now, at the end of this wait time the next crossfade will be executed automatically.

2. If the **frontal fader** is moved, the fader movement controls the crossfade times.
At the end of a manual crossfade, a programmed wait time will be not computed.

The frontal fader LEDs:

The LED at ON marks the direction of the fader movement to end the crossfade.

If the LED is ON in **red**, the crossfade control is automatic.

If the LED is ON in **green**, the crossfade control is manual (the fader is controlling it).

During a crossfade in progress, or during a wait-time is in progress, it is possible to pause this process.
To pause the current crossfade, press **F4: PAUSE**

A paused crossfade can be reactivated pressing **F2:GO**, or pressing **F6:BACK**.

The **GO** & **BACK** functions can be pressed at any moment, and as many times as will be necessary.

If **GO** (or **BACK**) is pressed before the current crossfade ends, the new crossfade starts. This is named multi fade GO from the current sequence output to the next memory. This situation is marked with “#” near the current memory.

Change of mode from **BACK** to **SEQ**:

This change is done, of working in backup mode, the DMX input faults, or the user press **F1**.

If **BACK** menu is at **AUTO**, when the system detects the change of mode:

- Emits an acoustic signal to indicate us mode change.
- The current scene output, copy of DMX-IN, begins its crossfade with the “next memory”. This crossfade is controlled by the times of the “next memory”.
- The functions **F2**, **F4** & **F6** are activated

Line 2- Mode	--BACK-----AUTO--	--SEQ-----AUTO--
Line 3 –Current scene	DMX-IN	DMX-IN 35
Line 4 –Next memory	04 STEP04 99 20	04 STEP04 35 20

When this first crossfade ended, the DMX input is totally out scene.

If **BACK** menu is at **MAN**, when the system detects the change of mode:

- Emits an acoustic signal to indicate us mode change.
- The current scene output, copy of DMX-IN, is maintained with the last correct information.
- The functions **F2**, **F4** & **F6** are activated
- The system waits a user GO or external GO to begins its crossfade with the “next memory”. This crossfade is controlled by the times of the “next memory”. In the status line, the character “-” is replaced by the character “=” to indicate us this waiting.
- The user must press **GO** or move the **fader**.

Line 2- Mode	==SEQ=====MAN==	--SEQ-----MAN---
Line 3 –Current scene	DMX-IN	DMX-IN 35
Line 4 –Next memory	04 STEP04 ↑99 20	04 STEP04 35 20

When this first crossfade ended, the DMX input is totally out scene.

Change of mode form **SEQ** to **BACK**:

This change is done when working in sequencer mode, the DMX input is restored or the user press **F1**.

If **BACK** menu is at **AUTO**, when the system detects the change of mode:

- Emits an acoustic signal to indicate us mode change.
- The DMX input is inserted as “next scene”
- The current scene output, from the inner sequence output, begins its crossfade with the “next scene” (the DMX input). This crossfade is done, approximately in 2 seconds (in fact in done during 50 frames of the DMX input).
- The functions **F2**, **F4** & **F6** are deactivated

Line 2- Mode	--SEQ-----AUTO--	--BACK-----AUTO--
Line 3 –Current scene	04 STEP04 ⌚12	04 STEP04 2
Line 4 –Next memory	20 STEP20 ↑15	DMX-IN 2

When this first crossfade ended, the DMX input is totally in scene.

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If **BACK** menu is at **MAN**, when the system detects the change of mode:

Emits an acoustic signal to indicate us mode change.

- The functions **F4** & **F6** are deactivated
- If a crossfade is in progress, this crossfade will end in a normal way.
- When the crossfade is ended, the DMX input is inserted as “next scene”
- The system waits a user **GO** to begin its crossfade with the “next scene” (the DMX input). In the status line, the character “-” is replaced by the character “=” to indicate us this waiting.
- The user must press **GO**.
- In this moment, the **F2** function is deactivated too.
- This crossfade takes about 2 seconds.

Note: If the user doesn't want to return to **BACK** mode, he must be press **F1**.

Line 2- Mode	==BACK=====MAN==	--BACK-----MAN---
Line 3 –Current scene	04 STEP04 ↓2	04 STEP04 1.5
Line 4 – Next memory	DMX-IN ↑2	DMX-IN 1.5

When this first crossfade ended, the DMX input is totally in scene.

THE EXTERNAL CONTROL COMMANDS

The sequence can be controlled using external commands. These commands can be:

RS232 commands. (RS232.IN port)

MSC commands, MIDI SHOW CONTROL. (MIDI-IN port)

MIDI commands based in MIDI notes. (MIDI-IN port)

To active any of the external commands, configure, inside of **SETUP**, the **EXTERN** menu.

RS232 & MSC COMMANDS

The system uses the same command structure for the MSC commands and the RS232 commands. Both commands-sets are the same; the difference is only the used port and signal type.

The used MSC commands are a standard of control and synchronization, in our case, the basic-set of MSC.

EXTERN/ RS232

When the external control unit is a PC or programmable automata, the RS232 external commands are the more used.

The RS232 port (for external commands) must be configured as:

Parameter	Value
Speed	9.600
Byte	8 bits
Parity	No
Stop	1 bit

EXTERN/ MIDI_{MSC}

This set of external commands is a standard of the MIDI protocol, this set permits to a central unit controls the different show parts (video, audio, lighting...).

THE COMMANDS SET (MSC & RS232)

Commands structure and commands basic set are the same for **MSC & RS232**.

SYS-EXC	ID	MSC	FORMAT	COMMAND	CUE	END
F0 7F	Receiver	02	Type	Command	Memory	F7

*Data in hexadecimal format.

SYS-EXC (System-Exclusive):

Start of a command of exclusive system. This is formed by 2 bytes: **F0 F7**.

These 2 bytes are always needed.

ID (Identification Device):

ID identifies the equipment that must execute the command. In our case, this value must be the same that the **LINK ID** of the BACK+SEQ that will execute the command. This parameter uses 1 byte and this byte can have the next values:

00...09 selects the equipment with Id 00...09, for example, **05** selects the equipment with ID 05.

7F selects "all" the equipments connected.

Example: The next command is a command for all connected equipments.

SYS-EXC	ID	MSC	FORMAT	COMMAND	CUE	END
F0 7F	7F	02	Type	Command	Memory	F7

MSC (MIDI SHOW CONTROL)

Indicates that the exclusive system command is a MSC command. This parameter uses 1 byte, and this byte is always **02**.

(Remember that the structure used is of MSC commands, but that the RS232 command uses this same structure).

FORMAT

Indicates the equipments type that they must execute the command. This parameter uses 1 byte. For our system (lighting system), only 2 types are implemented.

01 when the command is for lighting equipments.

7F when the command is for all connected equipments (lighting, sound, video...)

Example: The next command is a command for all connected lighting equipments.

SYS-EXC	ID	MSC	FORMAT	COMMAND	CUE	END
F0 7F	7F	02	01	Command	Memory	F7

COMMAND

This is the own command, and it uses 1 byte. Some commands can have a CUE associated. Our system has the next basic commands:

Byte value	Command name	Behavior
01	GO +Cue	The GO external command permits to start a new crossfade, it is the same that to press F2:GO . <u>Optionally</u> , this command can have an associated CUE. In this case the response will be as to press: F3:SELECT [memory selection] ENTER F2:GO
02	STOP	The STOP external command permits to pause a crossfade in progress, it is the

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		same that to press F4:PAUSE
03	RESUME	The RESUME external command permits to reactivate a paused crossfade, it is the same that to press F2:GO , but <u>only</u> when the current crossfade is in PAUSE. Nothing happens in other cases.

05	LOAD +Cue	The LOAD external command permits to select the “next memory”, <u>always</u> has a associated CUE (memory number) and is the same that press: F3:SELECT [memory selection] ENTER
08	ALL OFF	The ALL OFF external command permits to deactivate the system output, and it is similar to press F5:OUT1
09	RESTORE	The RESTORE external command permits to activate the system output (when this output is deactivated). It is similar to press, newly, F5:OUT1 .
0A	RESET	The RESET external command permits to initiate the inner sequence. It is the same that press: F3:SELECT [memory 00] ENTER
0B	GO OFF	The GO OFF external command permits to activate a crossfade in reverse direction. It is the same that press F6:BACK

Example: A STOP command for all the connected lighting equipments

SYS-EXC	ID	MSC	FORMAT	COMMAND	CUE	END
F0 7F	7F	02	01	02	Memory	F7

CUE (The memory number).

CUE is the memory number. CUE only is needed in the LOAD command, and optionally, in the GO command. This command indicates the associated memory number; in our case, these values can be from 00 to 99.

This parameter can use from 2 to 5 bytes.

For example, if you want to send the memory number 43, it is possible to do using any of these formats: 43, 43.0, 043 or 043.0.

To send the memory number, it is needed to send the ASCII value of each digit (the ASCII value is obtained adding a “3” to the numeric digit. The decimal point is always 2E).

Following with the example, you can send the data of memory “43” using one of the next formats:

43 **34 33** (2 bytes)
 43.0 **34 33 2E 30** (4 bytes)
 043 **30 34 33** (3 bytes)
 043.0 **30 34 33 2E 30** (5 bytes)

Example: A “LOAD memory 25” command for all the connected lighting equipments

SYS-EXC	ID	MSC	FROMAT	COMMAND	CUE	END
F0 7F	7F	02	01	05	32 35	F7

END

It’s the end of the command. This uses 1 byte: **F7**, and always is needed.

In the MSC standard, some command can have more associated data. In our case, these additional data are no read.

MIDI NOTES COMMANDS (MIDI_nOTES)

If the external control unit is a multimedia PC, or a MIDI keyboard, you can use this commands set, based only in MIDI notes, to control the BACK+SEQ. In these cases, it is necessary to configure 3 parameters:

EXTRN/MIDI_nOTES The source
EXTRN/MIDI Channel # The communication MIDI channel (#: 1 a 16)
EXTRN/MIDI Note #' And the first MIDI note to use (#: 0..103)

This commands set is developed by LT for the BACK+SEQ.

All commands, based in MIDI notes, can be configured using 24 consecutives notes, by default from N0 to N23. These 24 notes can be placed in other bank; for example it is possible to use the notes bank from N60 to N83, for this only is needed to configure:

EXTRN/MIDI Note 60

There is equivalence between MIDI notes and a basic numeric keyboard. This equivalence is used to edit the commands. The table shows us this equivalence for 2 notes banks, N0-N23 & N60-N83:

MIDI note		Number
N0-N23	N60-N83	
N0	N60	0
N1	N61	1
...
N8	N68	8
N9	N69	9
N10	N70	• (decimal point)

The structure and command set, always using MIDI notes, is:

START	ID	COMMAND	CUE	END
N22	Receiver	Command	Memory	N23

*All data are showed using the notes bank: N0-N23.

START

The command begins always with the note: **N22**.

ID (Receiver)

ID identifies the equipment that must execute the command. In our case, this value must be the same that the **LINK ID** of the BACK+SEQ that will execute the command. This note is the corresponding note to the number (from **N0** to **N9**). If the command is for all PIRENES, no ID is sent.

Example: A command only for the equipments with ID=0

START	ID	COMMAND	CUE	END
N22	N0	Command	Memory	N23

COMMAND

The system has the same basic commands that for RS232 or MSC, but here, each command is identified by one note:

Note	Command	Behavior
N11	GO +Cue	The GO external command permits to start a new crossfade, it is the same that to press F2:GO . <u>Optionally</u> , this command can have an associated CUE. In this case the response will be as to press: F3:SELECT [memory selection] ENTER F2:GO
N12	STOP	The STOP external command permits to pause a crossfade in progress, it is the same that to press F4:PAUSE
N13	RESUME	The RESUME external command permits to reactivate a paused crossfade, it is the same that to press F2:GO , but <u>only</u> when the current crossfade is in PAUSE. Nothing happens in other cases.
N15	LOAD +Cue	The LOAD external command permits to select the “next memory”, <u>always</u> has a associated CUE (memory number) and is the same that press: F3:SELECT [memory selection] ENTER
N18	ALL OFF	The ALL OFF external command permits to deactivate the system output, and it is similar to press F5:OUT1
N19	RESTORE	The RESTORE external command permits to activate the system output (when this output is deactivated). It is similar to press, newly, F5:OUT1 .
N20	RESET	The RESET external command permits to initiate the inner sequence. It is the same that press: F3:SELECT [memory 00] ENTER
N21	GO OFF	The GO OFF external command permits to activate a crossfade in reverse direction. It is the same that press F6:BACK

Example: The STOP command for the equipments with ID=0

START	ID	COMMAND	CUE	END
N22	N0	N12	Memory	N23

CUE (The memory number)

The CUE value is needed for the LOAD command, and optionally, for the GO command. In CUE is the memory number, in our system from 00 to 99. This number always uses 2 notes.

The memory number is configured with the corresponding notes to the numeric data. Examples:

The cue “43” is **N4 N3**

The cue “03” is **N0 N3**

Example: The “LOAD memory 25” command for the equipments with ID=0

STA	ID	COMM	CU	EN
N2	N0	N1	N2 N	N2

END

The command ends always with the note: **N23**.

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Remember that the used notes are in accordance with the notes bank selected. For example, if the system is configured to work with the notes N60-N83, the "LOAD memory 25" command for the equipments with ID=0 will be:

START	ID	COMMAND	CUE	END
N82	N60	N75	N62 N65	N83

THE EXTERNAL COMMANDS TEST (EXT-IN)

BACK+SEQ has a test to read the received external commands:

- Select the **TEST** menu
- Select its **EXT-IN** option

In the display page if the external control is at **OFF**, **RS232** or **MIDImsc**, you can see:

EXT-IN				
001	002	003	004	005
F0	7F	7F	02	7F

If the external control is at **MIDInotes**, you can see:

EXT-IN				
001	002	003	004	005
82	60	75	62	65

Where:

Line / Status	OFF / RS232/ MIDImsc	MIDInotes
001 002 003 ...	Command byte order.	Command NOTE order.
F0 7F 7F ... 0	Byte value in hexadecimal. These values are read when the complete command is received.	MIDI note number (0-128). These values are read when the complete command is received.
82 60 75 ...		

Use left-right **ARROWS** to see the rest of bytes (or notes) of the command.

IMPORTANT!!!

Don't forget to store configuration & data of PIRENE in the **DISK** menu.

The show of a BACK+SEQ, if it uses 99 memories, only will be possible to store 1 show in the **DISK** menu.
Any previous show must be deleted with the objective to store this new show.

DOCUMENTATION

User Manual. Reset Procedure

The explanation of the Reset Procedure was being erroneous. The key ← was confused with →.

To execute a Reset:

- Turn off the unit (switch in **O** position)
- Press, and hold down pressed the ← key
- Turn on the unit (switch in **I** position)
- After a few seconds, release the ← key

User Manual. DMX < > RS232 Converter

The RS232 protocol used in the DMX < > RS232 converter, it was not explained.

The Rs232 protocol used by PIRENE in this configuration, it is defined by the next parameters:

Parameter	Value
Speed	115.200
Byte	8 bits
Parity	No
Stop	1 bit

The RS232 frame is similar to the DMX frame.

The format of the RS232 frame and its code in bytes (bytes are in hexadecimal):

Frame Start	DMX Type	Start Code "0"	Channel 1 Level (0-255)	Channel 2 Level (0-255)	Channel N° (max: 512) Level (0-255)
01	44	00	00-FF*	00-FF*	00-FF*

* Note: To transmit a level of 01 (hex), will be necessary to send this value to times.

Example: Transmit by RS232 the dimmer 1 at A9(hex) the dimmer 2 at 01(hex) & the dimmer 3 at FF(hex):

01 44 00 A9 01 01 FF

Conversion table for Level(Format):

0-100(%)	0-255(bin)	00-FF(hex)	0000 0000 – 1111 1111(bits)
0	0	00	0000 0000
25	63	3F	0011 1111
50	127	7F	0111 1111
75	191	BF	1011 1111
100	255	FF	1111 1111

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