

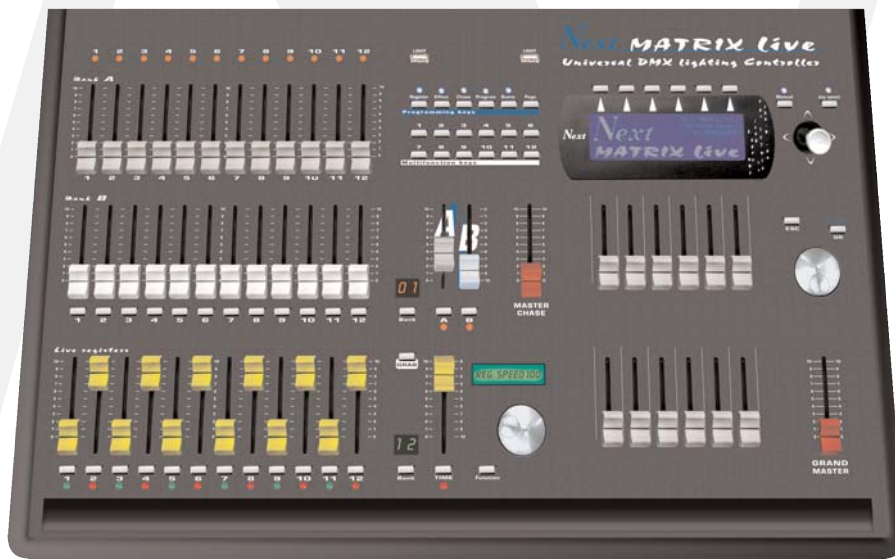
---

*Next*



# MATRIX live

Universal DMX lighting Controller



**GB** *USER'S MANUAL*



## INDEX

***We congratulate you on your purchase of **MATRIX LIVE**.  
Before you proceed using this product, read this user's manual carefully, as it gives important information on safety, use and maintenance .***

### ***Equipment Setting***

- 1.1 Description of the front panel
- 1.2 Accessories and documentation provided with the equipment

### ***Description of the rear panel and installation***

- 2.1 Description of the rear panel
- 2.2 Input connection for power supply
- 2.3 Connection of the AC adapter to the main AC
- 2.4 DMX 512 **Output/Input** connection
- 2.5 Example of DMX 512 **line connection**

### ***Use of the equipment - Start Up setting***

- 3.1 First use of the unit

### ***Equipment Use - Working Modes***

- 4.1 **SCENE** mode
- 4.2 Function keys in **SCENE** mode
- 4.3 **EDIT** in **SCENE** mode
- 4.4 Select in **EDIT SCENE** mode
- 4.5 **EDIT SCENE** mode
- 4.6 Function keys in **EDIT SCENE** mode
- 4.7 Channels adjustment faders in **EDIT SCENE** mode
- 4.8 **PAN** and **TILT** channels adjustment through the **Joystick**
- 4.9 **MASK** function in scene mode
- 4.10 **MANUAL** mode
  
- 5.1 **EDIT PROGRAM** mode
- 5.2 Function keys in **EDIT PROGRAM** mode
- 5.3 Select in **PROGRAM** mode
- 5.4 Function keys in **PROGRAM** mode
  
- 6.1 **CHASE** mode
- 6.2 Function keys in **EDIT CHASE** mode
- 6.3 Select in **CHASE** mode
- 6.4 Function keys in **CHASE** mode
- 6.5 **STEPS** mode
- 6.6 Function keys in **STEPS** mode
- 6.7 **EDIT STEPS** mode
- 6.8 Function keys in **EDIT STEPS** mode
- 6.9 Channels adjustment faders in **EDIT STEPS** mode
- 6.10 Use of **MASTER DIMMER** fader
- 6.11 Use of **MASTER CHASE** fader

- 7.1 Function keys in EDIT **EFFECT** mode
- 7.2 Function keys in **EFFECT** mode
- 7.3 Select in **EFFECT** mode
- 7.4 **EDIT** in **EFFECT** mode
- 7.5 **EDIT EFFECT** mode
- 7.6 Function keys in **EDIT EFFECT** mode

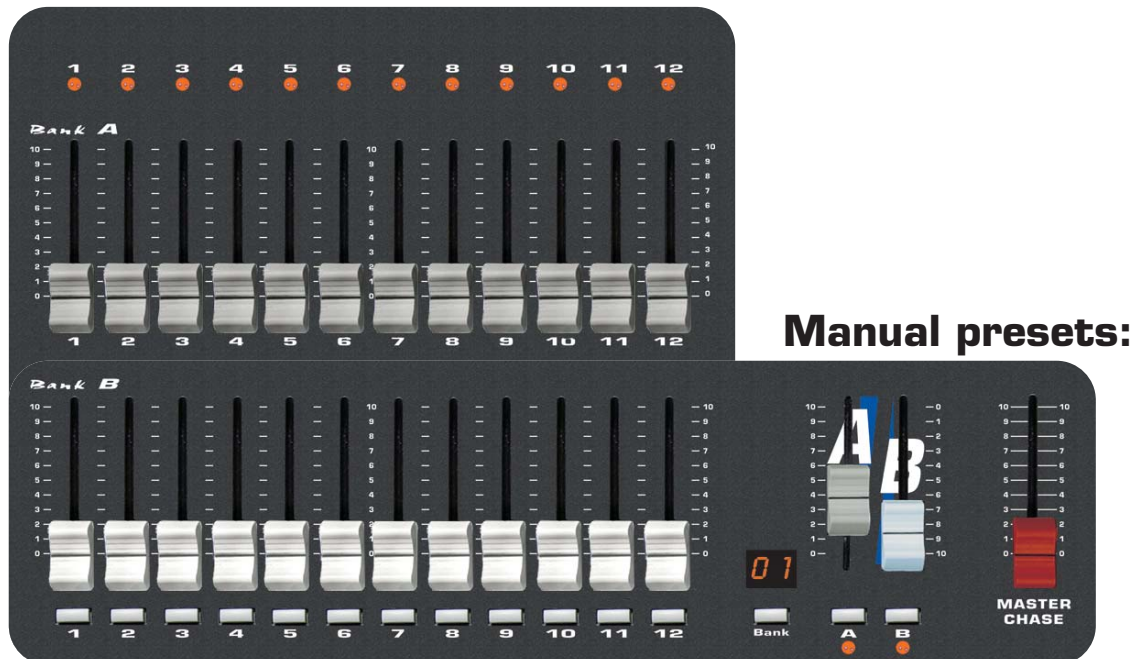
- 8.1 **MANUAL PRESET** mode
- 8.2 Use of **A+B** master
- 8.3 **REGISTER** mode
- 8.4 Function keys in **EDIT REGISTER** mode
- 8.5 **EDIT** in **REGISTER** mode
- 8.6 Function keys in **EDIT REGISTER** mode
- 8.7 **REGISTER** section

### **Examples**

- 9.1 Creation of a **PROGRAM**
- 9.2 Creation of a **CHASE**
- 9.3 Creation of an **EFFECT**

### **Example of usage - menu functions**

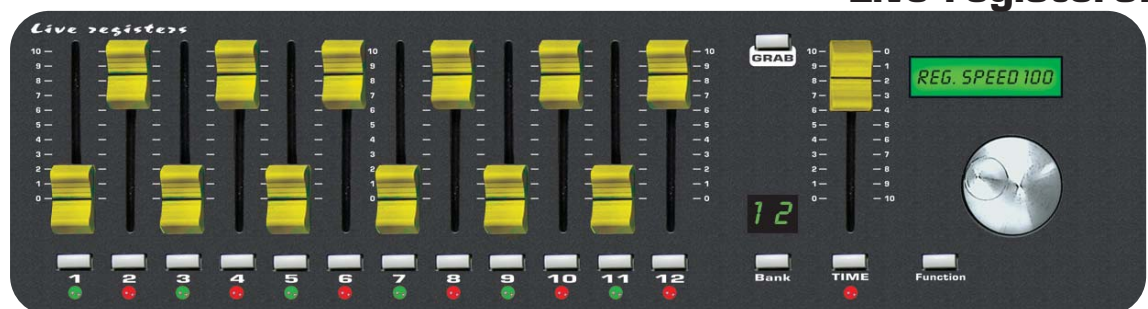
- 10.1 **MENU** Function
- 10.2 **MENU: BLACKOUT**
- 10.3 **MENU: LAMP ON - LAMP OFF**
- 10.4 **MENU: RESET UNITS**
- 10.5 **MENU: FADERS FUNCTIONS**
- 10.6 **MENU: FADERS FUNCTIONS LIVE**
- 10.7 **MENU: EDIT DMX PATCH**
- 10.8 Function keys in **EDIT DMX PATCH** mode
- 10.9 **LOAD LIBRARY** in **EDIT DMX PATCH** mode
- 10.10 Function keys in **LOAD LIBRARY** mode
- 10.11 **EDIT** in **EDIT DMX PATCH** mode
- 10.12 **EDIT** of **DMX CHANNELS**
- 10.13 Function keys in **EDIT** of **DMX CHANNELS** mode
- 10.14 **MENU: SYSTEM SETTINGS**
- 10.15 **MENU: SET LCD CONTRAST**
- 10.16 **MENU: SECURITY LOCK**
- 10.17 **MENU: ABOUT MATRIX**
- 10.18 **MENU: RS 232 HOST LINK**
- 10.19 **MENU: SD CARD ACCESS**
- 10.20 **MENU: WI-DMX TRANSMITTER**
- 10.21 **MENU: MIDI**



### Manual presets:

- **2 banks of 12 faders** : to control two presets A+B.
- **12 keys**: perform flash on the channels.
- **12 led**: Visualize the channels status.
- **A+B faders**: to control presets A+B level output.
- **Master Chase fader**: to control Chase level output.
- **A+B keys**: to enable presets A and B (A+B mode) or to switch the flash buttons of the presets from one bank to the other (single preset mode)
- **BANK key**: to select the preset page max 12.
- **Led display**: Visualize the active preset page.

### Live registers:



- **1 bank of 12 faders**: controls the live playback registers.
- **12 keys**: perform direct registers functions.
- **12 bicolor led bicolor**: visualize registers status.
- **TIME fader**: to control stepping in real time .
- **GRAB key**: grab the active scene into a register.
- **BANK key**: to select registers page.
- **Led display**: visualize registers active page.
- **Lcd**: visualizes registers job mode..
- **FUNCTION key**: to set lcd functions.
- **Encoder**: to set lcd values.

## Intelligent fixture control:



- **12 faders:** to control the functions shown on the display.
- **1 Grand Master fader:** general control of output levels.
- **6 function keys:** to select the functions shown on the display.
- **1 Menu/OK key:** accesses to menu/ok functions.
- **1 Esc key:** to go back.
- **1 Manual key:** to control unit.
- **1 Joy speed key:** Active the moving Joystick speed from 1 to 10 fixed or proportional type.
- **12 Multifunction keys:** to select the functions shown on the display.
- **5 Mode keys:** to select selezionano the modality SCENE / PROGRAM / CHASE / EFFECT GENERATOR / REGISTERS.
- **1 Page key:** changes the active page.

Verify the contents of the packing.

If one of the following parts of the packing is missing or damaged, please, contact your dealer immediately.

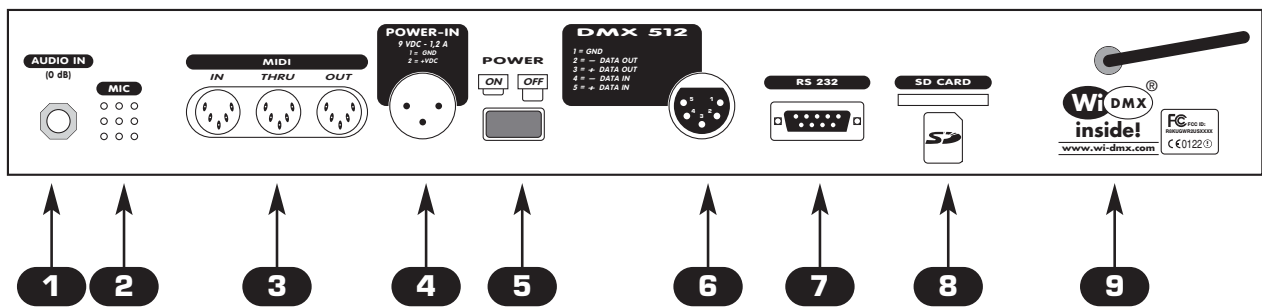
- **Matrix Live**
- **User's manual.**
- **Warranty**
- **1 XLR 5 P male connector**
- **1 AC adapter mod. 1890581**
- **1 Cable for AC adapter**
- **1 Cable male/female RS 232**
- **2 USB Lamp**
- **2 Knob to tilt Matrix Live**

**Read the following warnings before beginning installation.**

- This unit is not intended for home use.
- Read this manual thoroughly and observe the following precautions before working with the controller.
- Take care not to spill liquids on to the controller and do not use it in excessively humid conditions.
- Do not install the controller near heat sources or expose it to direct sunlight and do not install in dusty environments without suitable protection.
- Do not use the controller unless the mains cable and plug are in perfect condition (replace or repair if necessary).
- Do not use solvents such as acetone or alcohol to clean the controller or the finish and panel lettering will be damaged.
- If a fault occurs, consult your nearest service centre or a specialized light equipment repair service. Do not attempt to repair the controller yourself.

## 2.1 DESCRIPTION OF THE REAR PANEL

GB



- 1** 0 dB audio signal INPUT with a mono/stereo jack connector.
- 2** MICROPHONE for the MUSIC function
- 3** MIDI
- 4** 12 Vac power INPUT with a 3-pin cannon connector.
- 5** POWER KEY
- 6** Standard DMX 512 signal INPUT/OUTPUT with a 5-pin cannon connector.
- 7** RS232 signal INPUT.
- 8** SD card slot
- 9** Antenna for built in Wi-DMX<sup>®</sup> wireless Transmitter

## 2.2 INPUT CONNECTION FOR POWER SUPPLY

Plug the 3-pin cannon connector of the AC adapter completely in the power input **4**

Use the “push” safety hook to disconnect it and extract it gently.

**ATTENTION:** do not use AC adapter different from the one supplied, it could cause serious damages at the internal circuitation.

Do not connect the 3-pin cannon connector in other appliances, it has been studied to be used only in this controller.

## 2.3 CONNECTION OF THE AC ADAPTER TO THE MAIN AC

**MAKE SURE THAT VOLTAGE AND POWER FREQUENCY CORRESPOND TO WHAT IS REPORTED ON THE AC ADAPTER PLATE.**

Press **POWER** key to verify the correct installation.

If pressing the **POWER** key no leds light up, please check if there is tension in the electric socket or check the connection between AC adapter-controller and AC adapter-electric socket.

If the problem persists, please consult your dealer.

Make sure you are using shielded twisted cables suitable for the transmission of the DMX 512 signal with connectors of good quality and connection as shown on the side of the connector. **6**

Plug the 5-pin XLR connector coming from the unit completely in the DMX 512 output  
Use the “push” safety hook to disconnect it and than extract it gently.

**ATTENTION:** the shielded part of the cable must never be connected to the ground of the electrical system as this could cause faults during the working of the controller

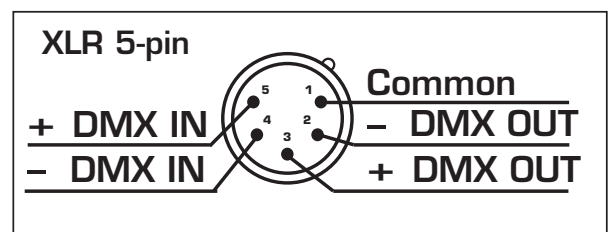
### 2.5 EXAMPLE OF DMX 512 LINE CONNECTION

**MATRIX** has a **DMX 512** input/output that uses standard **XLR 5-pin** connector The input it is for now disabled from the software.

The cable must have shielded with these characteristics:

- 2 conductors plus screen
- 120 Ohm impedance
- low capacity
- maximum transmission rate 250 Kbaud.

For the connection do reference to the figure.



### 3.1 FIRST USE OF THE UNIT

**MATRIX** is a universal DMX controller and is provided with an initial generic configuration. For a correct operation **YOU MUST** configure the controller with the type of projectors/scanner connected to it.

The **SETUP LIBRARY** sheet includes the list of the projectors/scanner contained in the internal memory of the controller, if the requested configuration is not present in the library, you need to make a personalized one.

The operations to configure the controller is described in the user's manual at chapter:

**10.7** Function **MENU: EDIT DMX PATCH**

**MATRIX** is endowed with graphic display with adjustable contrast from menù, if the initial setting isn't correct, it is possible to change the contrast.

The operations to change contrast is described in the user's manual at chapter:

**10.14** Function **MENU: SYSTEM SETTINGS**

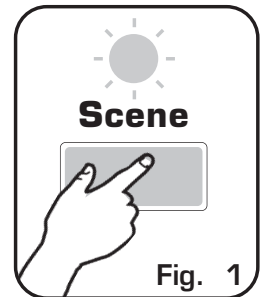


**THIS FUNCTION ALLOWS TO SEE ONE OF THE 48 SCENES OF THE ACTIVE PROGRAM, CHANGE THE PARAMETERS AND EDITING.**

Press **SCENE** key to activate **SCENE** function (Fig. 1)

The **SCENE** key led will light up to indicate the activation of this function, and the display changes as shown in (Fig. 2)

The graphic display indicates the scene (**highlighted**) currently active (Fig. 2) if an empty scene is selected, on the display appears "FREE SCENE".



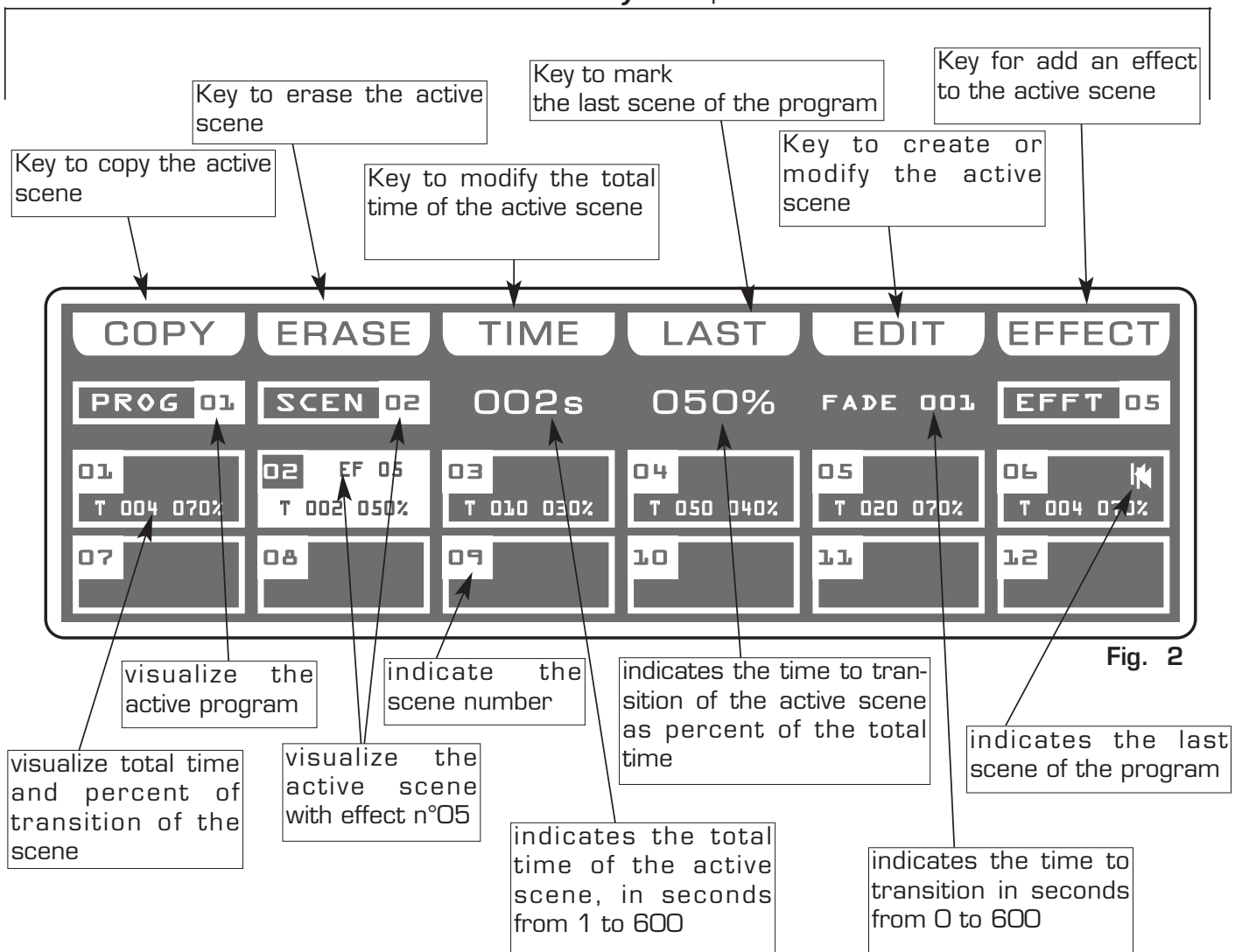
Press one of the 1÷12 keys to select the scene.

Pushes it again, the scene puts on out his end value.

For scenes 13÷24/25÷36/37÷48 use the **PAGE** key

**Note: Keep Master Dimmer Faders to the maximum (see par 6.11)**

**Function Keys** see par 4.2



## 4.2 FUNCTION KEYS IN SCENE MODE

GB

In **SCENE** mode there are 6 **function keys** see (Pic. 2 par 4.1).

### **COPY** Key:

Press this key to copy the active scene on a free scene of the same program: the display shows "**SELECT DESTINATION SCENE,**" select through the 1÷12 keys the destination of the copy.

For the successive scenes use **PAGE** key

**Note:** After have pressed **COPY** key, the same becomes **GRAB** key.

### **GRAB** Key: active only pressing **COPY** key

Press this key to store, the scene; you can then paste it in an empty scene of the same program or in a different program. The key becomes **PASTE**.

### **ALL** Key: active only pressing **COPY** key

Press this key to copy all the scenes of the active program to another program: the display shows "**SELECT DESTINATION PROGRAM,**" select through the 1÷12 keys the destination of the copy.

For the successive program use **PAGE** key

### **PASTE** Key: active only pressing in empty scene

Pressing this key the scene previously stored could be pasted to an any empty scene of any program.

### **ERASE** Key:

Press this key to the erase active scene, select through the 1÷12 keys (for the successive scenes use **PAGE** key) the scene that must be erased, then press the **ERASE** key.

The scene will be erased in a permanent way, it is not possible to recover it.

### **TIME** Key:

Press this key to change the total time of the scene, the value is in seconds from 1 to 600, use the fader under the **TIME** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

### **CROSS** Key: active only pressing **TIME** key

Press this key to modify the time of transition of the scene, the value is expressed in percent from 0 to 100%, use the fader under the **CROSS** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

### **TO ALL** Key: active only pressing **TIME** key

Press this key to set equal values for all the scene.

### **LAST** Key:

Press this key to select the last scene of the program, select through the 1÷12 keys (for the successive scenes use **PAGE** key) the scene where you want to terminate the program, then press the **LAST** key.

For the successive scenes use **PAGE** key

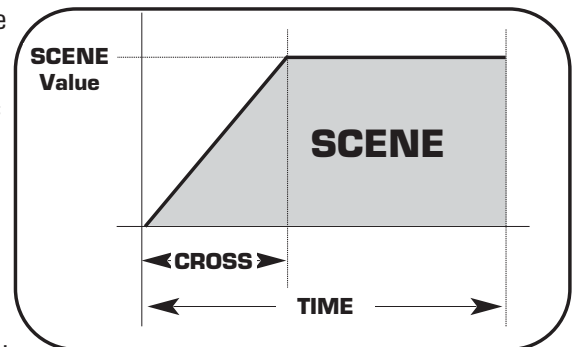
**Note:** The last scene of the program will be stored automatically in **EDIT** mode.

### **EDIT** Key:

Press this key to create/modify the active scene see par. **4.3 EDIT IN SCENE mode**

### **EFFECT** Key:

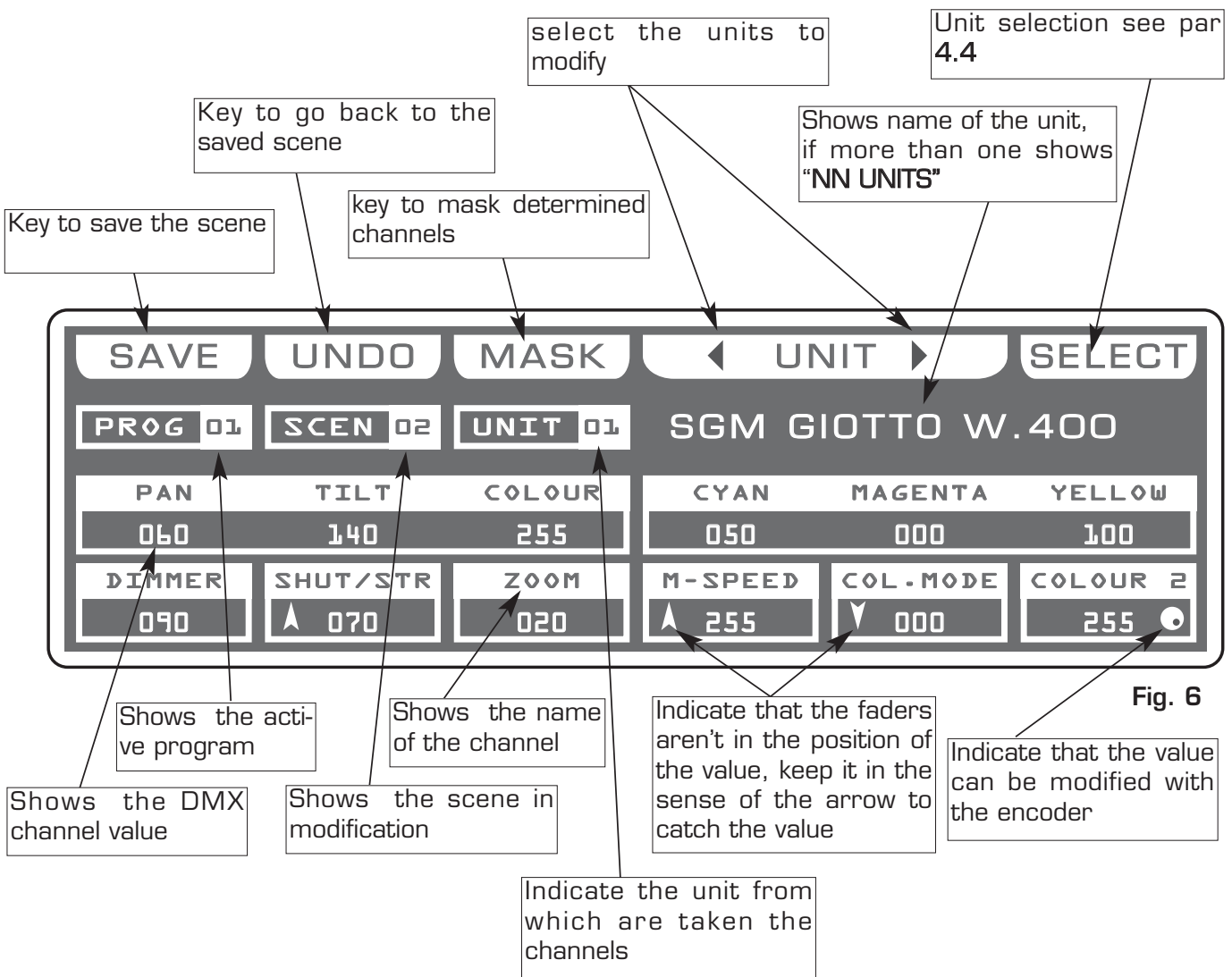
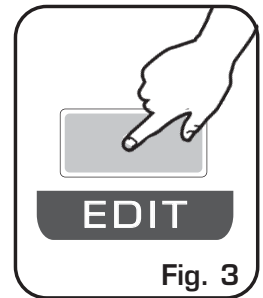
Press this key to set a shape generator for the active scene, for creation of an effect see par **7.5 EDIT EFFECT** mode.



THIS FUNCTION ALLOWS TO EDIT ONE OF THE 48 SCENES OF THE ACTIVE PROGRAM.

The graphic display indicates the scene (**highlighted**) currently active (Fig. 2 par 4.1) to create/modify it press the **EDIT** key (Fig. 3).

The display changes as shown in (Fig. 4).



## THIS FUNCTION ALLOWS TO SELECT ONE OR MORE UNIT OF THE ACTIVE PROGRAM.

To activate the multiple selection of the unit press the **SELECT** key (Fig. 4 par 4.3).

The display changes as shown in (Fig. 5).

Press one of the 1÷12 keys to activate one or more the unit.

To successive units use the **PAGE** key

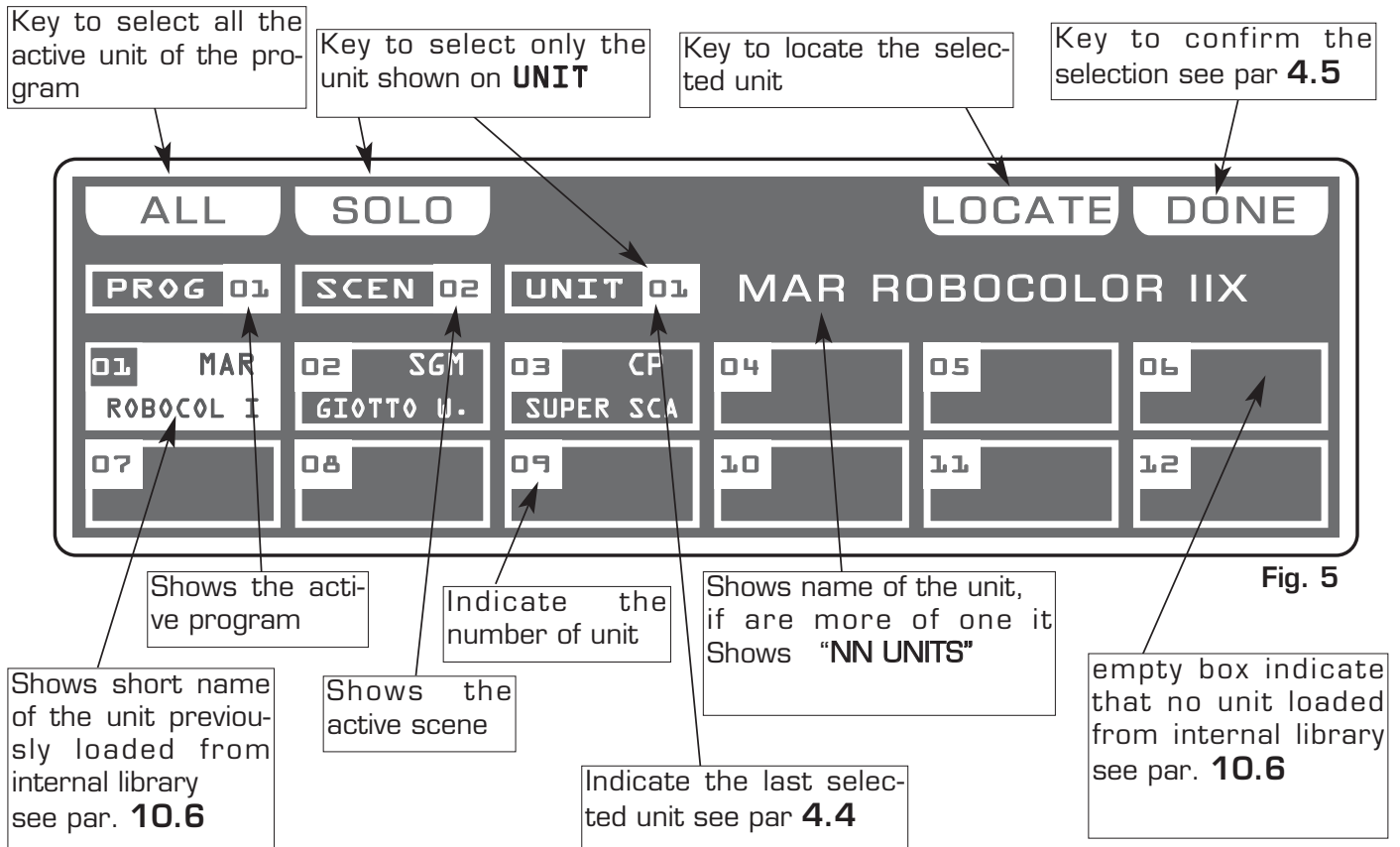


Fig. 5

### **ALL** Key:

Press this key to select all the units previously assign to the program, it isn't possible select unit if not active in the program.see par. 5.2.

Pressing this key the display shown "NN UNITS", the DMX control channels will taken from the unit shown in the box **UNIT** ..

### **SOLO** Key:

Press this key to select only the unit shown in the box **UNIT** .., if we have selected with the **ALL** key all the 48 unit, and we wants to change the value of the unit channels (es. n° 02), press twice the key 02 of selection unit. The unit box will indicate **UNIT 02** now the **SOLO** key unselect all the other unit, activating **SOLO** the **UNIT 02**

### **DONE** Key:

Pressing this key you confirm the selection of the unit see par. 4.5.

**THIS FUNCTION ALLOWS TO MODIFY THE VALUE OF THE CHANNELS OF THE UNITS SELECTED**

Through the 12 faders you regulate the value of corresponding channel see par 4.7 Pressing one of the 1÷12 keys the correspondent channel can be modified with the encoder.

For successive channels use the **PAGE** key

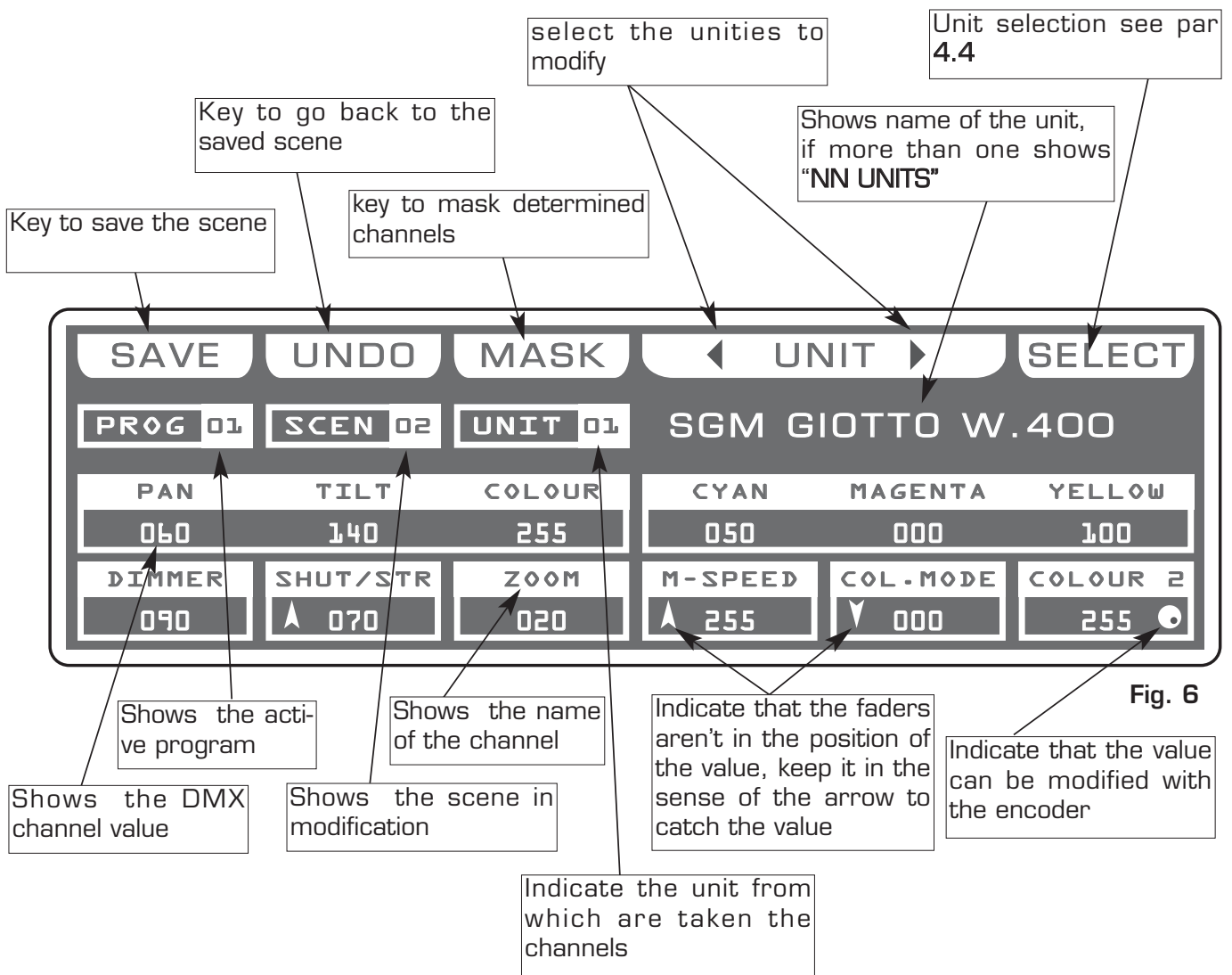


Fig. 6

## 4.6 FUNCTION KEYS IN EDIT SCENE MODE

GB

In **EDIT SCENE** mode there are 6 function keys see (Fig. 6 par 4.5).

**SAVE/UPDATE** key:

Press the **SAVE** key to save the free scene and go to the next free scene

The **UPDATE** key allow you to update the saved scene and go back to the scene function see par 4.1

**UNDO** key: it works only on saved scenes

Pressing this key you go back to the saved scene

**MASK** key:

Press this key to activate the mask function. see par 4.8

**UNIT** key:

Press this keys to select the successive/precedent unit

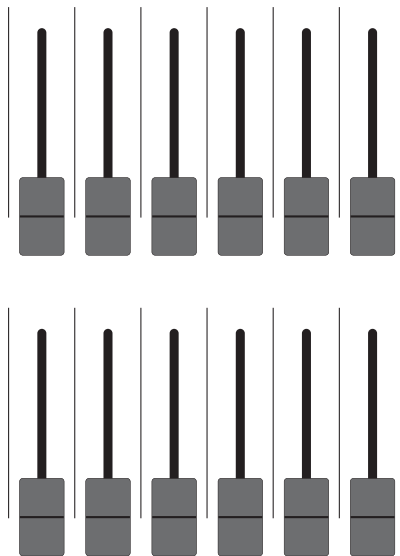
**SELECT** key:

Pressing this key you go back to the unit selection see par 4.3

## 4.7 CHANNELS ADJUSTMENT FADERS IN EDIT SCENE MODE

Fig. 7

SAVE	UNDO	MASK	← UNIT →	SELECT	
PROG D3	SCEN D3	UNIT D3	SGM GIOTTO W.400		
PAN	TILT	COLOUR	CYAN	MAGENTA	YELLOW
255	000	100	195	000	255
SHUTTER	SHUT/STR	ZOOM	R-SPEED	COL-MODE	COLOUR 2
090	A 070	020	A 195	V 000	255



The 12 faders are used to adjust the channels value see (Fig. 7)

To modify the scene, keep the faders to desired values.

Each time that changes page the faders remains inactive.

The arrow in the box indicate that the fader aren't in the position of the value, keep it in the sense of the arrow to catch the value. If you select more unit at the same time, the names of the channels and the suitable values do reference to the unit signalled from the box unit. **You can not modify the value of the channels: PAN LOW / TILT LOW / LAMP / LAMP-RES.** To modify the value see par 10.6

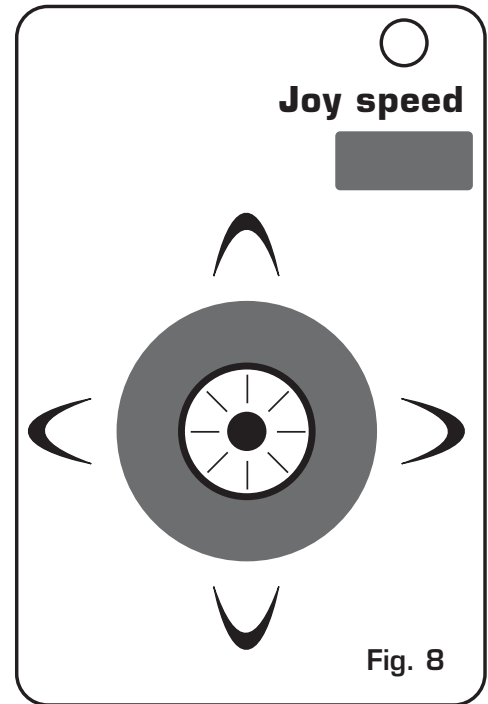
Using the joystick the PAN and TILT channels of the scanner's mirror and moving heads can be adjusted (Fig.8).

The joystick type is with central return, thanks to the sophisticated software of management, it allows an easy and exact positioning.

The mirror's speed movement could be changed through the **Joy speed** key

Every time you press the **Joy speed** key the selected speed it is shows for 3 seconds on the graphic display (Fig. 9).

With **SPEED 01/10** the joystick moves the mirror with a fixed speed, with **SPEED PROP** joystick become proportional type, if you leave the joystick in central position the mirror keeps still; whereas the more you move it away from the centre the faster the mirror will run.



Pressing twice the **Joy speed** key joystick passes directly to the fine movement mode.

The **Joy speed** key led will light up to indicate the activation of this function. Useful function for control moving heads

The FANOUT key appears only if you have selected more than one unit, press this key to move selected units as a fan.

Joystick movement change the **PAN/PAN LOW** and **TILT/TILT LOW** output channels.

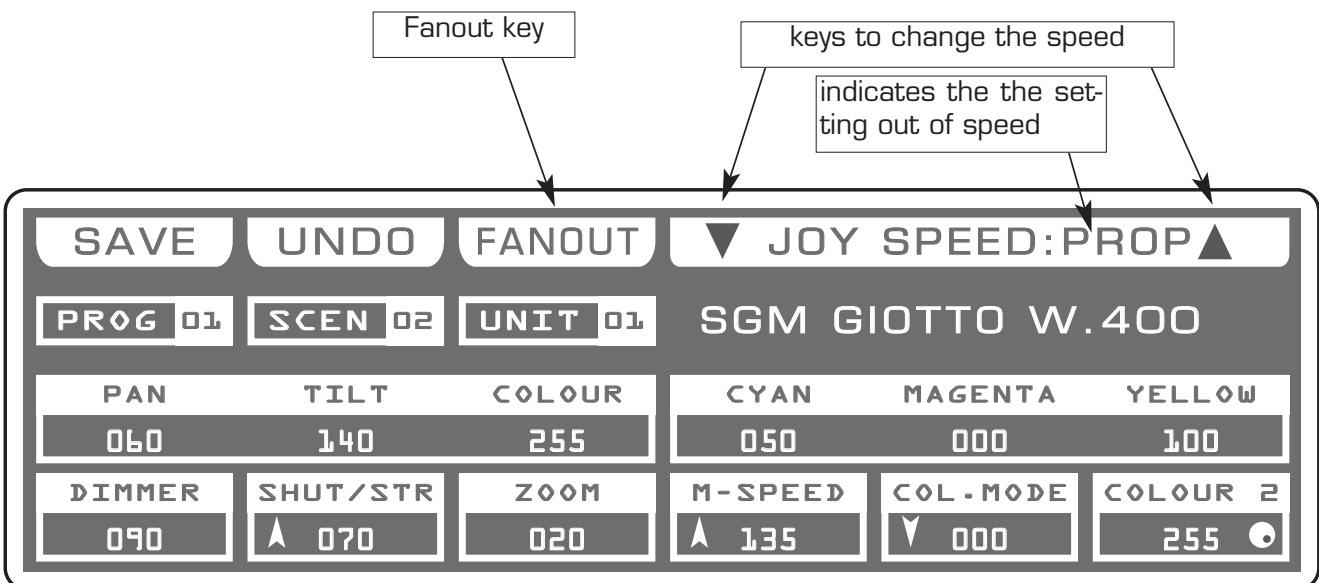


Fig. 9

THIS FUNCTION ALLOWS TO MASK THE CHANNELS OF THE PREVIOUSLY SELECTED UNIT IN A DETERMINED SCENE.

Press **MASK** key to activate **MASK** function (Fig. 10)

The display changes as shown in (Fig. 11)

The graphic display indicates the channels masked with the symbol"===" (Fig. 11)

The operator in this case masks the tilt, cyan, magenta and yellow channels. When you recall the scene The masked channels stay to the value planned in precedence.

Very useful function for create scenes that make only change color etc.



Fig. 10

Press one of the 1÷12 keys to masks the correspondent channels.

For successive channels use the **PAGE** key

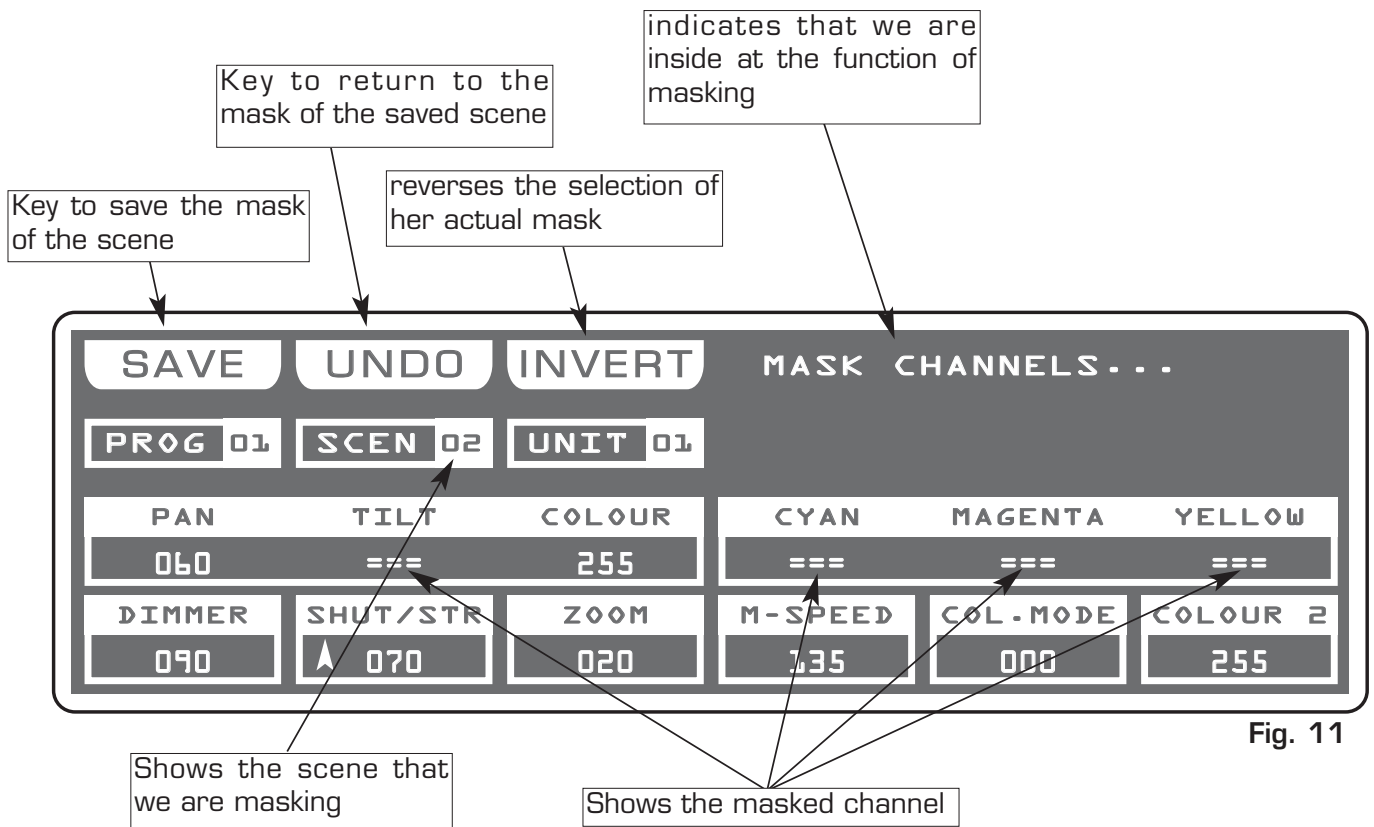


Fig. 11

**INVERT** key:

Press this key to reverse the selection of the actual mask, in the case of the (Fig. 9) the tilt, cyan, magenta and yellow channels becomes modifiable, while the others comes masked.



**THIS FUNCTION ALLOWS TO ACTIVATE ONE OR MORE UNIT WHILE THE NOT SELECTED ONES GO ON PERFORMING THE OWN FUNCTION.**

Press **MANUAL** key to activate **MANUAL** function (Fig. 12).

The **MANUAL** key led will light up to indicate the activation of this function, and the display changes as shown in (Fig. 13).

The graphic display indicates the channels masked with the symbol "==" through the 12 faders, the joystick or the 1÷12 keys the touched channel could be modified, also if the same is inside of a program in play.

No modification for the others

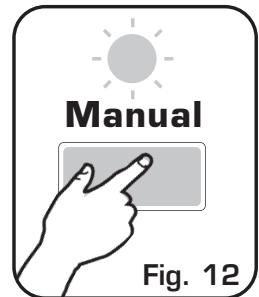


Fig. 12

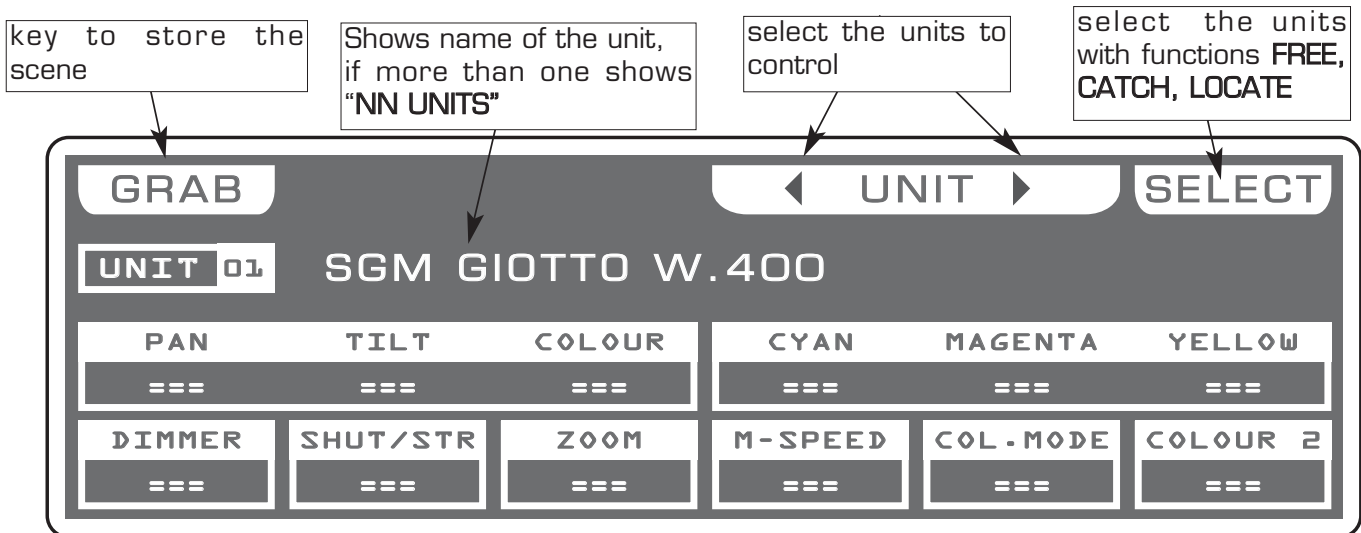


Fig. 13

In **MANUAL** mode there are 4 function keys see (Fig. 13).

**GRAB** Key:

Press this key to store the scene, you can then paste it in an empty scene of any program.

**UNIT** Keys:

Press this keys to select the successive/precedent unit

**SELECT** Key:

Press this key for select the unit to control.

**FREE** Key: active only pressing **SELECT** key

Pressing this key the selected units become free.

**CATCH** Key: active only pressing **SELECT** key

Pressing this key Key the selected units will stop in the current position.

**LOCATE** Key: active only pressing **SELECT** key

Press this key to locate the selected units

**DONE** Key: active only pressing **SELECT** key

Pressing this key to confirm.

THIS FUNCTION ALLOWS TO ACTIVATE A PROGRAM AND CHANGE THE PARAMETERS OF THE SAME.

**A PROGRAM IS A SEQUENCE OF SCENES (STATIC) , EXECUTE IN SEQUENCE FROM 1 TO MAX 48.**

Press **PROGRAM** key to activate **PROGRAM** function.  
(Fig. 14)

The **PROGRAM** key led will light up to indicate the activation of this function, and the display changes as shown in (Fig. 15).

The graphic display indicates the program (**highlighted**) currently active (Fig. 15).

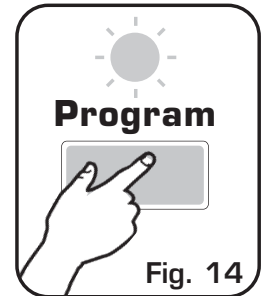


Fig. 14

Press one of the 1÷12 keys to select the program.  
For successive programs use the **PAGE** key.

**Function Keys** see par 5.2

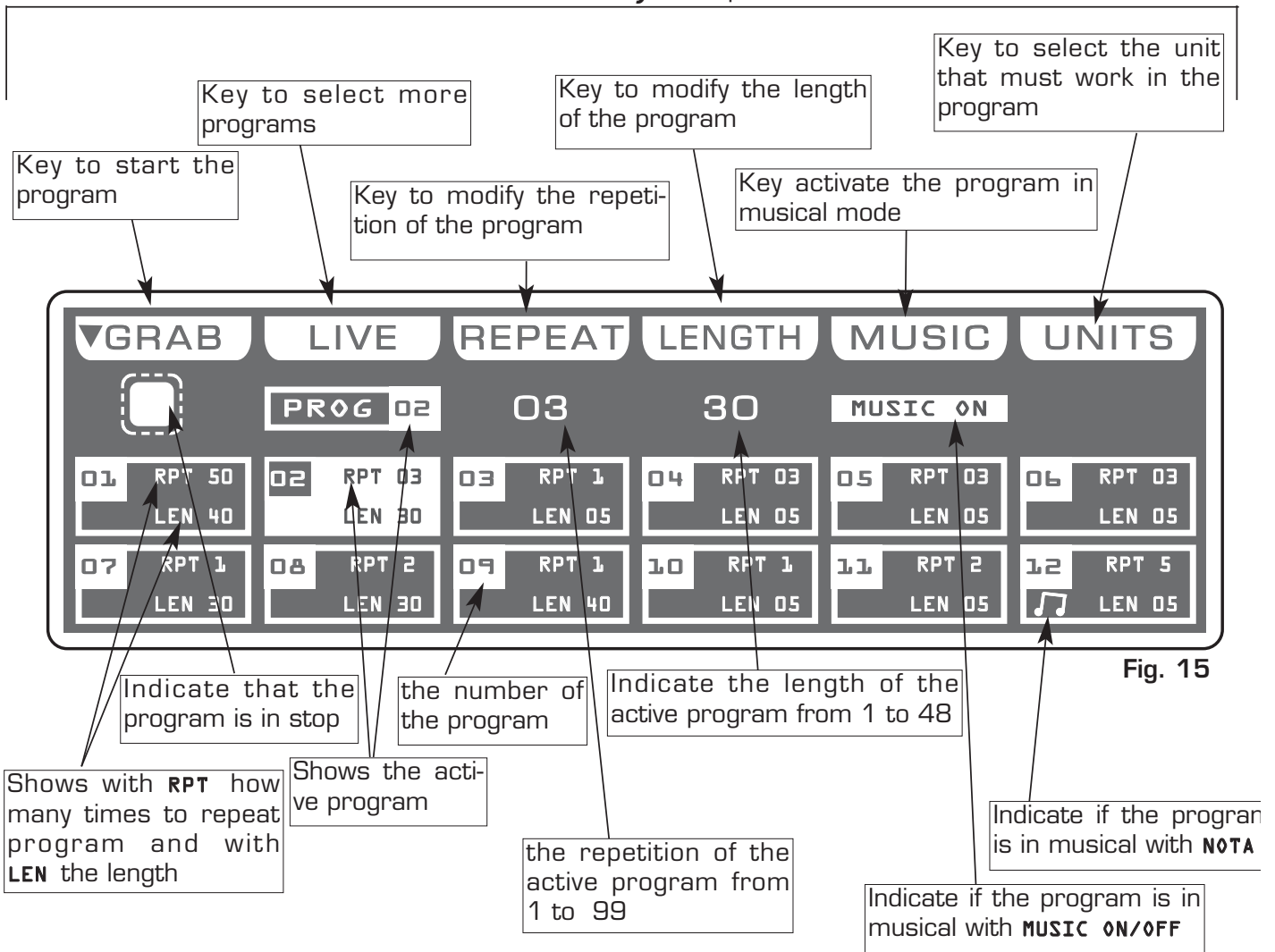


Fig. 15

In **EDIT PROGRAM** mode there are 6 function keys see (Fig. 15 par 5.1)

**GRAB** key:

Press this key to transfer a chase in one register, press one of the 1÷12 keys to confirm

**LIVE** key:

Pressing this key the display change to start chase

**GO** key:

Press this key to start the program.

**Note: Keep Master Dimmer Faders to the maximum (see par 6.11)**

The key becomes **PAUSE** the display changes as shown in (Fig. 15 par 5.3)

**PAUSE** key:

Press this key to stop the program in the current position, pressing the **GO** key it recovers from the same position.

**SELECT** key:

Pressing this key it is possible the multiple selection of the programs. The display changes as shown in (Fig. 14) see par 5.3

Press one of the 1÷12 keys to select the program.

For successive programs use the **PAGE** key.

**REPEAT** key:

Press this key to modify the number of repetitions of the program, the value is in number from 1 to 99 use the faders under the **REPEAT** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**LENGTH** key:

Press this key to set how many scenes of the program will execute, the value is in number from 1 to 48 use the faders under the **LENGTH** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**MUSIC** key:

Pressing this key, and activating **MUSIC ON**, the active program will change the scenes to time of music, in the box of the program and to the side at symbol play the display shows a note.

The internal music sensor has an automatic gain adjustment which allows to have a signal level good for **Matrix** working.

The input music signal is a 0dB mono/stereo so it could be taken from sound sources like Mixer, CD, Dat etc.

**UNITS** keys:

Press this key to set what unit will be active in the program.

For successive units use the **PAGE** key.

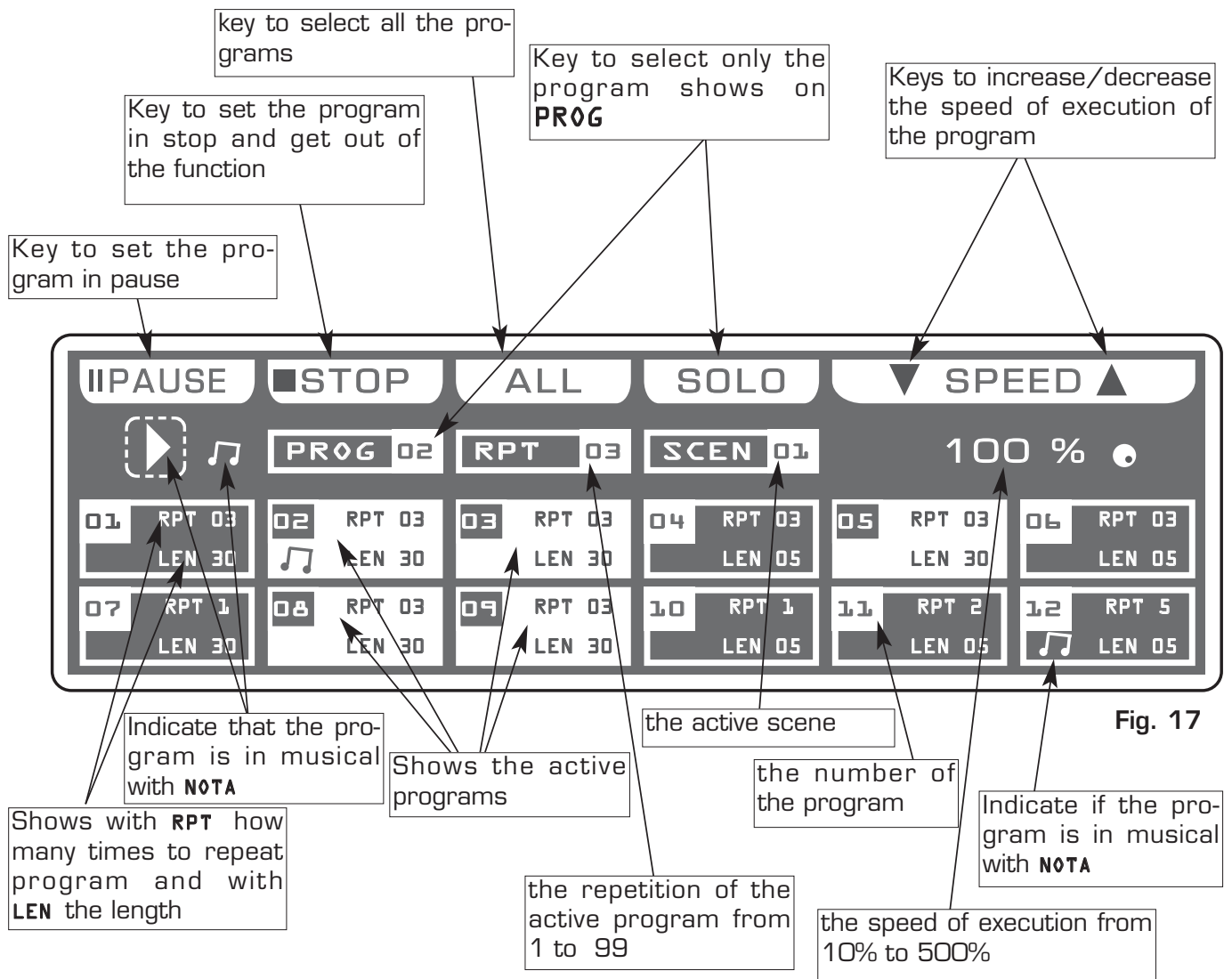
**THIS FUNCTION ALLOWS TO SELECT A SERIES OF PROGRAMS**

To activate the multiple selection of the programs you must press the **SELECT** key (Fig. 16).

The display changes as shown in (Fig. 17).



Press one of the 1÷12 keys to select more programs.  
For successive programs use the **PAGE** key.



In **PROGRAM** mode there are 6 function keys see (Fig. 17 par 5.3).

**PAUSE** key:

Press this key to stop the program in the current position, pressing the **GO** key it recovers from the same position.

**STOP** key:

Press this key to stop the program with return to the function edit program see (par 5.1), pressing the **GO** key it start from the first scene.

**ALL** key:

Press this key to select all the program from 1 to 48.

**SOLO** key:

Press this key to select only the program shown in the box **PROG**, if we have selected with the **ALL** key all the **48** program, and we wants to selectd only the program (es. n° **02**), press twice the key **02** of program selection. The prog box will indicate **PROG 02** now the **SOLO** key unselect all the other program, activating **SOLO** the **PROG 02**

**SPEED** key:

Pressing one of these two keys will be increased/decreases the speed of execution of the program the value is in percent and varied from 10% at 500%. To the value 100%. the speed of execution is that planned in the scenes.

THIS FUNCTION ALLOWS TO ACTIVATE A CHASE AND CHANGE THE PARAMETERS OF THE SAME.

**A CHASE IS A PLAY OF LIGHTS, IT IS A SEQUENCE OF STEPS (FROM 1 TO 48 MAX).**

Press **CHASE** key to activate **CHASE** function (Fig. 18)

The **CHASE** key led will light up to indicate the activation of this function, and the display changes as shown in (Fig. 18).

The graphic display indicates the chase (**highlighted**) currently active (Fig. 19).

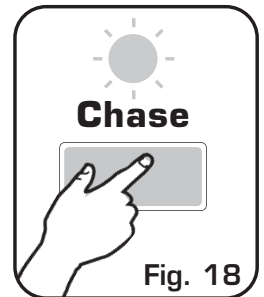


Fig. 18

Press one of the 1÷12 keys to select the chase.  
For successive chases use the **PAGE** key

**Function Keys** see par 6.2

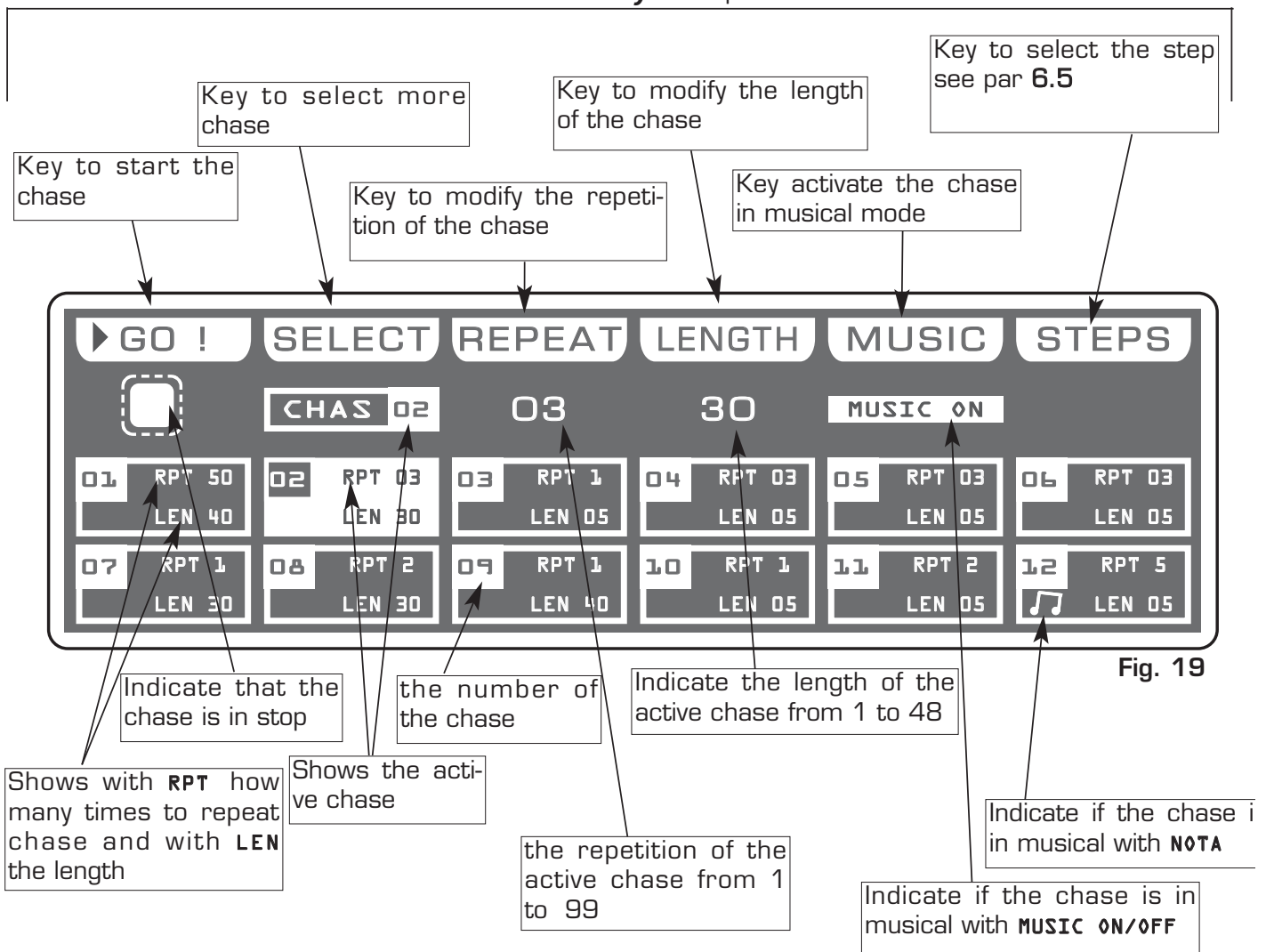


Fig. 19

In **EDIT CHASE** mode there are 6 **function keys** see (Fig. 19 par 6.1)

**GRAB** key:

Press this key to transfer a chase in one register, press one of the 1÷12 keys to confirm

**LIVE** key:

Pressing this key the display change to start chase

**GO** key:

Press this key to start the chase.

**Note: Keep Master Dimmer Chase to the maximum see (par 6.12)**

The key becomes **PAUSE** the display changes as shown in (Fig. 21 par 6.3)

**PAUSE** key:

Press this key to stop the chase in the current position, pressing the **GO** key it recovers from the same position.

**SELECT** key:

Pressing this key it is possible the multiple selection of the chases. The display changes as shown in (Fig. 19 par 6.3)

Press one of the 1÷12 keys to select the chase .

For successive chases use the **PAGE** key.

**REPEAT** key:

Press this key to modify the number of repetitions of the chase , the value is in number from 1 to 99 use the faders under the **REPEAT** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**LENGTH** key:

Press this key to set how many scenes of the chase will execute, the value is in number from 1 to 48 use the faders under the **LENGTH** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**MUSIC** key:

Pressing this key, and activating **MUSIC ON**, the active chase will change the scenes to time of music, in the box of the chase and to the side at symbol play the display shows a note.

The internal music sensor has an automatic gain adjustment which allows to have a signal level good for the **Matrix** working.

The input music signal is a 0dB mono/stereo so it could be taken from sound sources like Mixer, CD, Dat etc.

**STEPS** keys:

Pressing this key you go in the step mode see par 6.5

THIS FUNCTION ALLOWS TO SELECT A SERIES OF CHASE

To activate the multiple selection of the chases you must press the **SELECT** key (Fig. 20).

The display changes as shown in (Fig. 21).



Fig. 20

Press one of the 1÷12 keys to select more chase.  
For successive chases use the **PAGE** key.

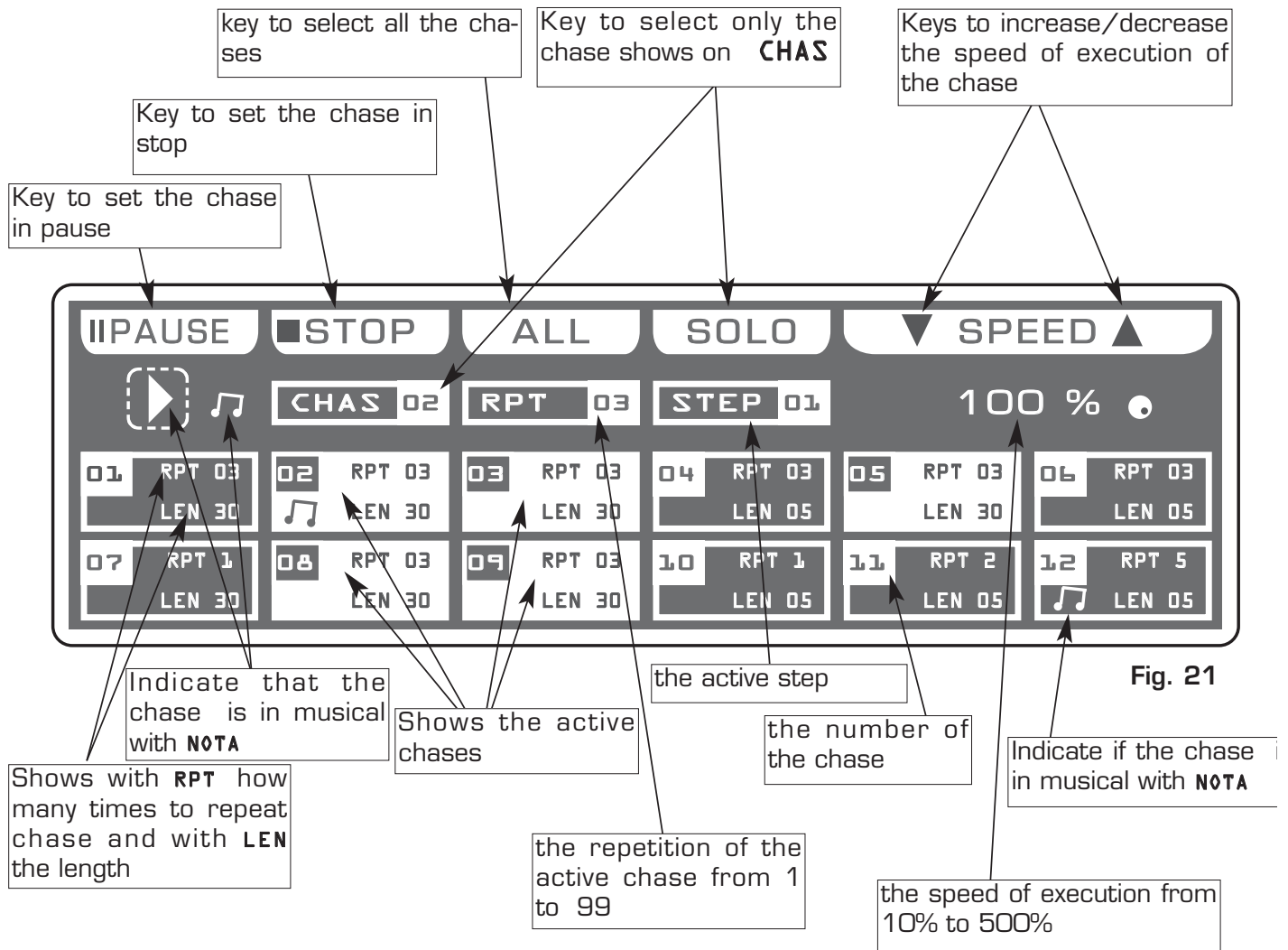


Fig. 21



In **CHASE** mode there are 6 function keys see (Fig. 21 par 6.3).

**PAUSE** key:

Press this key to stop the chase in the current position, pressing the **GO** key it recovers from the same position.

**STOP** key:

Press this key to stop the chase, pressing the **GO** key it start from the first step.

**ALL** key:

Press this key to select all the chase from 1 to 48.

**SOLO** key:

Press this key to select only the chase shown in the box **CHAS**, if we have selected with the **ALL** key all the **48** chase, and we wants to selectd only the chase (es. n° **02**), press twice the key **02** of chase selection. The chase box will indicate **CHAS 02** now the **SOLO** key unselect all the other chase, activating **SOLO** the **CHAS 02**

**SPEED** key:

Pressing one of these two keys will be increased/decreases the speed of execution of the chase the value is in percent and varied from 10% at 500%.  
To the value 100%. the speed of execution is that planned in the scenes.

**THIS FUNCTION ALLOWS TO SEE ONE OF THE 48 STEPS OF THE ACTIVE CHASE, CHANGE THE PARAMETERS AND EDITING.**

Press **STEPS** key to activate **STEPS** function (Fig. 22)

The display changes as shown in (Fig. 23)

The graphic display indicates the scene (**highlighted**) currently active (Fig. 23) if an empty step is selected, on the display appears "FREE STEPS".



Fig. 22

Press one of the 1÷12 keys to select the step.

Pushes it again, the step puts on out his end value.

For successive step use the **PAGE** key

**Note: Keep Master Chase Faders to the maximum see (par 6.12)**

**Function Keys** see par 6.6

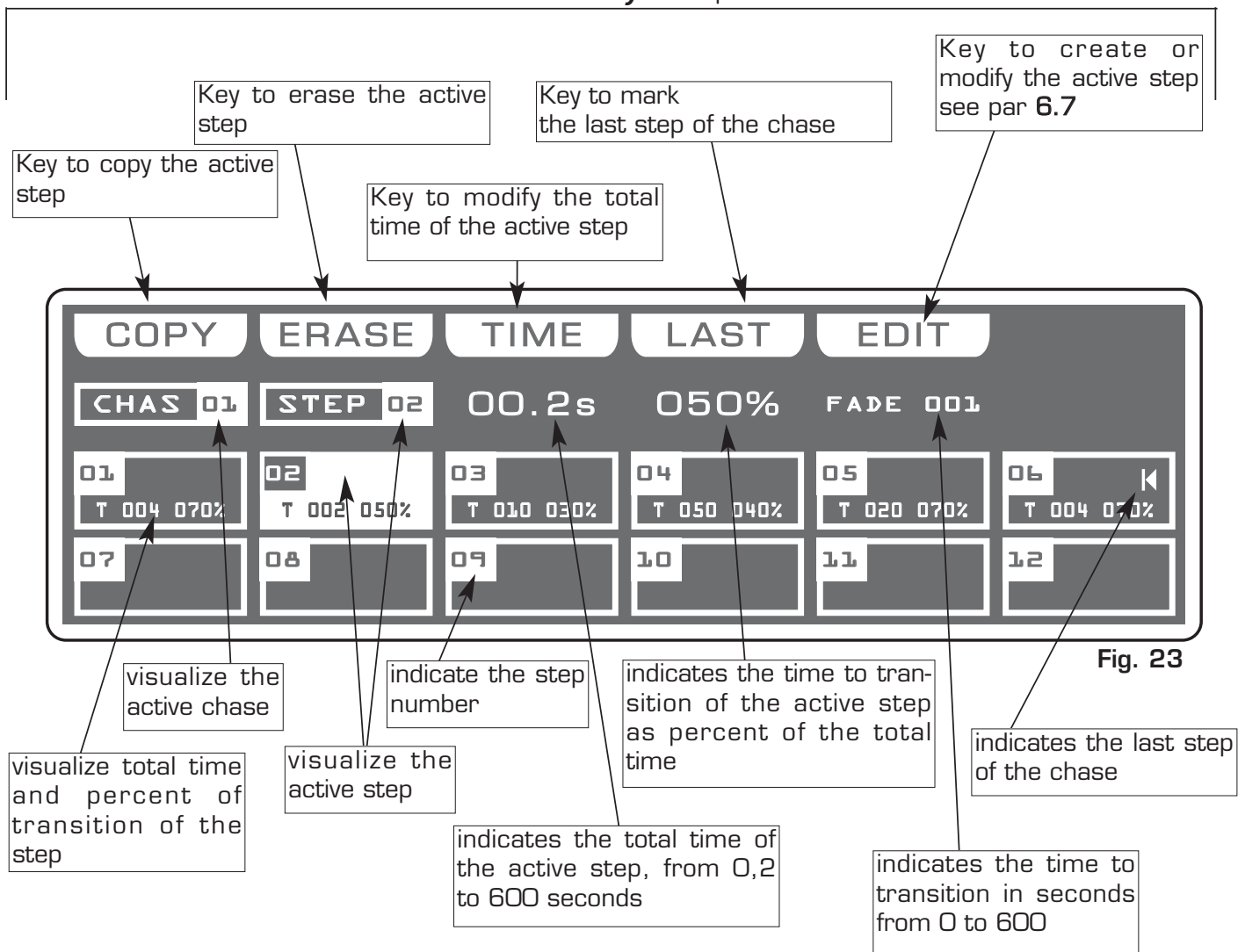


Fig. 23

In **STEP** mode there are 6 **function keys** see (Pic. 2 par 4.1).

**COPY** Key:

Press this key to copy the active step on a free step of the same chase: the display shows "**SELECT DESTINATION STEP,**" select through the 1÷12 keys the destination of the copy.

For the successive steps use **PAGE** key

**Note:** After have pressed **COPY** key, the same becomes **GRAB** key.

**GRAB** Key: active only pressing **COPY** key

Press this key to store, the scene; you can then paste it in an empty scene of the same program or in a diferent program. The key becomes **PASTE**.

**ALL** Key: active only pressing **COPY** key

Press this key to copy all the steps of the active chase to another chase: the display shows "**SELECT DESTINATION CHASE,**" select through the 1÷12 keys the destination of the copy.

For the successive chase use **PAGE** key

**PASTE** Key: active only pressing in empty step

Pressing this key the step previously stored could be pasted to an any empty step of any chase.

**ERASE** Key:

Pressing this key the active step will be erased, select through the 1÷12 keys (for the successive chases use **PAGE** key) the step that must be erased, then press the **ERASE** key.

The step will erased in a permanent way, it is not possible recover it.

**TIME** Key:

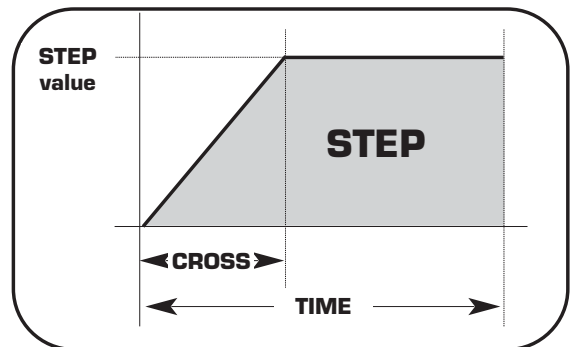
Press this key to change the total time of the scene, the value is in seconds from 0,2 to 600, use the fader under the **TIME** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**CROSS** Key: active only pressing **TIME** key

Press this key to modify the time of transition of the scene, the value is express in percent from 0 to 100%, use the fader under the **CROSS** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**TO ALL** Key: active only pressing **TIME** key

Press this key to set equal values for all the step .



**LAST** Key:

Press this key to select the last step of the chase, select through the 1÷12 keys (for the successive chases use **PAGE** key) the step where you want to terminate the chase, then press the **LAST** key.

For the successive chases use **PAGE** key

**Note:** The last step of the chase will be stored automatically in **EDIT** mode.

**EDIT** Key:

Press this key to create/modify the active step see par. **6.7 EDIT IN STEP mode**

**THIS FUNCTION ALLOWS TO CREATE OR MODIFY ONE OF 48 STEP OF ACTIVE CHASE .**

The graphic display indicates the step (**highlighted**) currently active (Fig. 23 par 6.5) to create/modify it press the **EDIT** key (Fig. 24).

The display changes as shown in (Fig. 25).



Fig. 24

Pressing one of the 1÷12 keys the correspondent channel go to the 0 value if it is high, to 255 value if it is low.

For successive channels use the **PAGE** key

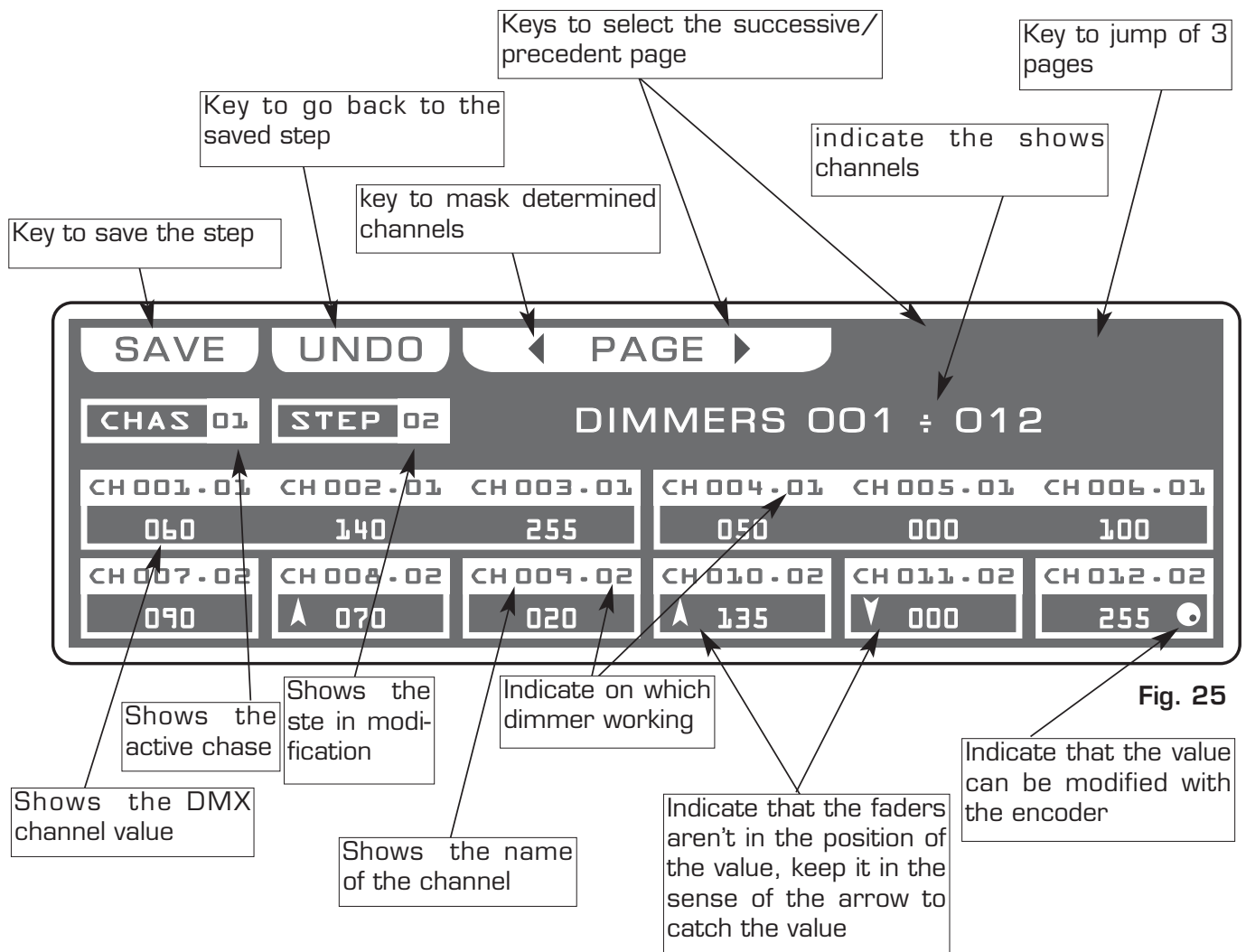


Fig. 25

## 6.8 FUNCTION KEYS IN EDIT STEPS MODE

GB

In **EDIT STEPS** mode there are 5 function keys see (Fig. 6 par 4.5).

### **SAVE** key:

Press this key to save the step

The **UPDATE** key allow you to update the saved step and go back to the steps function

### **UNDO**: it works only on saved scenes

Pressing this key you go back to the saved step

### **PAGE** keys :

Press this keys to select the successive/precedent page

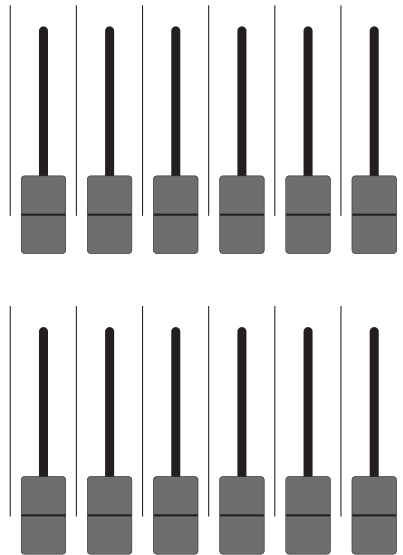
### **3PG** keys:

Pressing this will jump of 3 pages in 3 pages.

## 6.9 CHANNELS ADJUSTMENT FADERS IN EDIT STEPS MODE

Fig. 26

SAVE	UNDO	← UNIT →		SELECT	
PROG 03	SCEN 02	UNIT 03	8GM GIOTTO W.400		
PAN	TILT	COLOUR	CYAN	MAGENTA	YELLOW
215	000	100	135	000	215
SHUTTER	SHUT/STR	ZOOM	H-SPEED	COL-MODE	COLOUR
040	1 070	020	1 335	Y 000	215



The 12 faders are used to adjust the channels value see (Fig. 7)

To modify the step , keep the faders to desired values.

Each time that changes page the faders remains inactive.

The arrow in the box ndicate that the fader aren't in the position of the value, keep it in the sense of the arrow to catch the value.

### **To an on-off chase type use the 1÷12 keys**

For successive channels use the **PAGE** key

MATRIX LIVE IS ENDOWED WITH A GENERAL CONTROL LEVEL OUTPUT, OF ALL "DIMMER" CHANNELS OF THE INTELLIGENT UNITS.

The Grand Master fader (Fig. 29) allows to adjust the bright general intensity of all the units, **(only if the connected units have the dimmer channel)**.

Keep the fader always to the maximum 100%, keep to 0 value only to create a blackout.

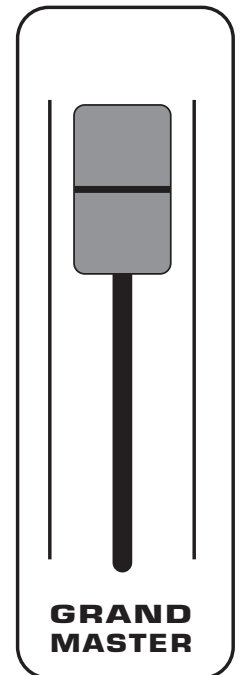


Fig. 27

MATRIX LIVE IS ENDOWED WITH A GENERAL CONTROL LEVEL OUTPUT, OF DIMMER CLASSIC CHANNELS.

The Master Chase fader (Fig. 30) allows to adjust the bright general intensity of the chase and relative step.

For have the bright intensity of chase/step at 100% keep the fader to the maximum, keep to 0 value only to create a blackout.

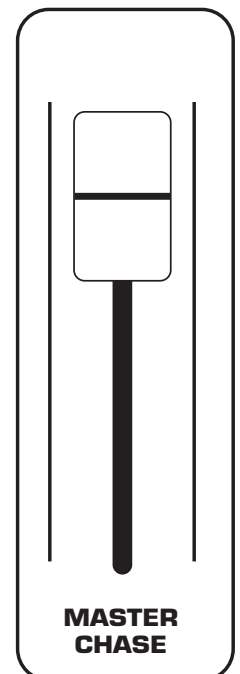


Fig. 28

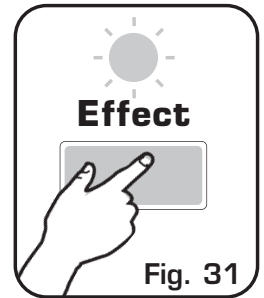
THIS FUNCTION ALLOWS TO ACTIVATE AN EFFECT GENERATOR AND MODIFY THE PARAMETERS.

**USING THIS MODE OF OPERATION IT IS POSSIBLE CREATE ANIMATIONS OF NOTABLE EFFECT WITH AN ONLY COMMAND.**

Press **EFFECT** key to activate **EFFECT** function (Fig. 18)

The **EFFECT** key led will light up to indicate the activation of this function, and the display changes as shown in (Fig. 31).

The graphic display indicates the effect (**highlighted**) currently active (Fig. 32).



Press one of the 1÷12 keys to select the effect.

For successive effect use the **PAGE** key

**Function Keys** see par 7.2

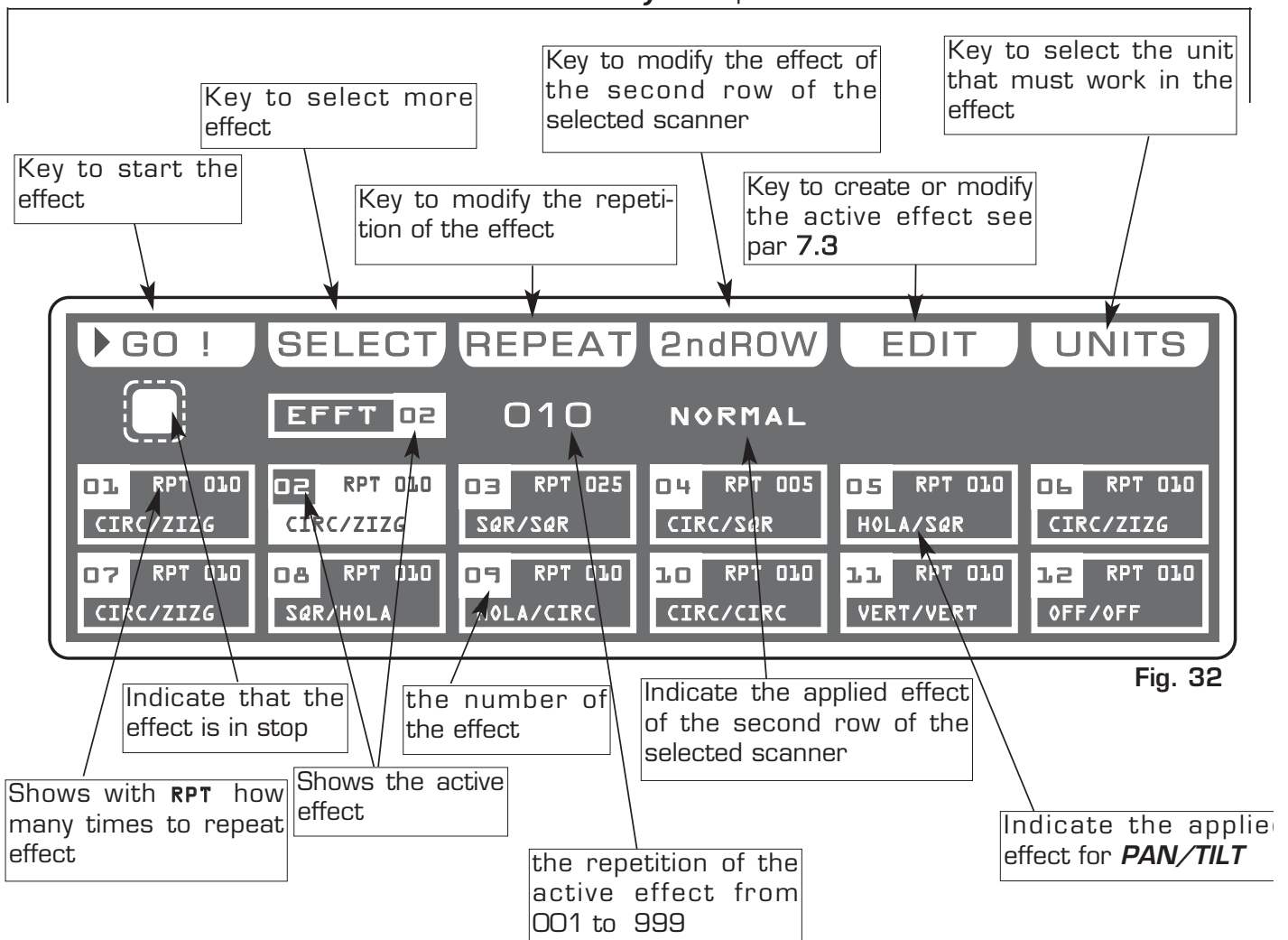


Fig. 32

In **EFFECT** mode there are 6 function keys see (Fig. 32 par 7.1)

**GO** key:

Press this key to start the effect.

The key becomes **PAUSE** the display changes as shown in (Fig. 34 par 7.3)

**PAUSE** key:

Press this key to stop the effect in the current position, pressing the **GO** key it recovers from the same position.

**SELECT** key:

Pressing this key it is possible the multiple selection of the effect. The display changes as shown in (Fig. 34) see par 7.3

Press one of the 1÷12 keys to select more effect .

For successive effects use the **PAGE** key.

**REPEAT** key:

Press this key to modify the number of repetitions of the effect, the value is in number from 001 to 999 use the faders under the **REPEAT** writing, or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**2ndROW** key:

For faced or disposed on more rows scanners.

Press this key to modify the effect of the second half of the selected scanner.

The modalities are:

**NORMAL:** No modification.

**NO DELAY:** Keep the first scanner in phase, if there are **DELAY**.

**INV PAN:** Reverses the movement of the mirror X axis

**INV TILT:** Reverses the movement of the mirror Y axis

**INV ROT:** Reverses the direction of the shape execution.

Use the fader under **2ndROW** write or the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

**EDIT** Key:

Press this key to create/modify the active effect, see par 7.5.

**UNITS** keys:

Press this key to set what unit will be active in the effect.

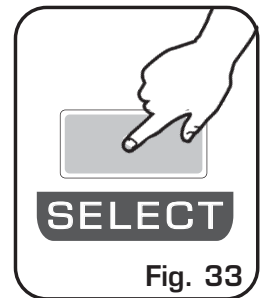
For successive units use the **PAGE** key.



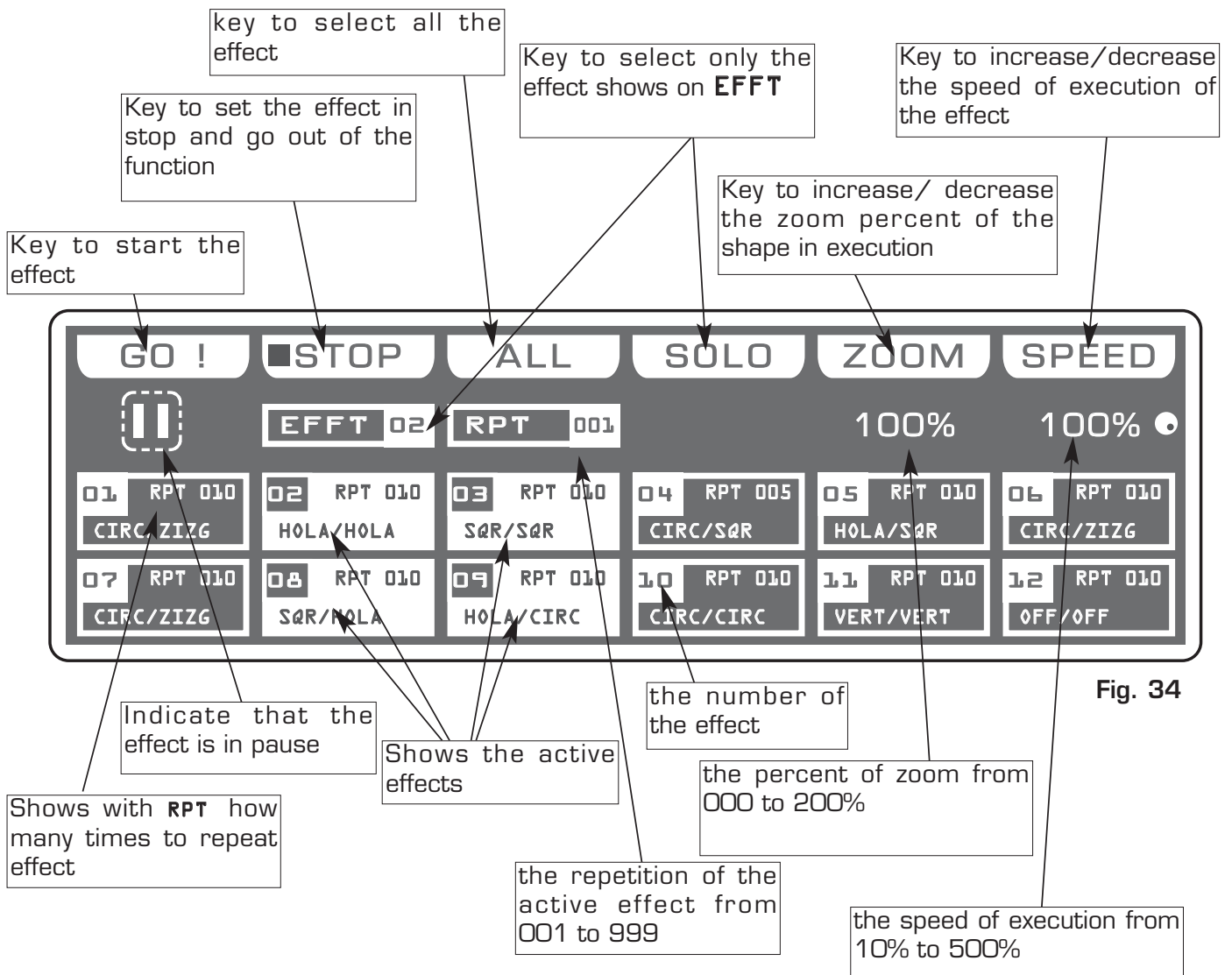
**THIS FUNCTION ALLOWS TO SELECT A RANGE OF EFFECTS EXECUTABLE IN SUCCESSION**

To activate the multiple selection of the effects you must press the **SELECT** key (Fig. 33).

The display changes as shown in (Fig. 34).



Press one of the 1÷12 keys to select more effect. For successive effects use the **PAGE** key.



In **EFFECT** mode there are 6 function keys see (Fig. 34 par 7.3).

**GO** key:

Press this key to start the effect.

The key becomes **PAUSE**

**PAUSE** key:

Press this key to stop the effect in the current position, pressing the **GO** key it recovers from the same position.

**STOP** key:

Press this key to stop the effect, return to the *EFFECT* function see (par 7.1), pressing the **GO** key it start again.

**ALL** key:

Press this key to select all the effect from 1 to 48.

**SOLO** key:

Press this key to select only the effect shown in the box **EFFT**, if we have selected with the **ALL** key all the **48** effect, and we wants to selectd only the effect (es. n° **02**), press twice the key **02** of effect selection. The effect box will indicate **EFFT 02** now the **SOLO** key unselect all the other chase, activating **SOLO** the **EFFT 02**

**ZOOM** key:

Press this key to increase/decrease the percent of zoom of the shape in execution, the value is express in percent and varied from 000% to 200%. To 000 value the shape stop.

**SPEED** key:

Press this key to increase/decrease the speed of execution of the chase, the value is in percent and varied from 10% at 500%.

## THIS FUNCTION ALLOWS TO EDIT ONE OF 48 EFFECTS

The graphic display indicates the effect (**highlighted**) currently active (Fig. 32 par 7.1) to create/modify it press the **EDIT** key (Fig. 35).

The display changes as shown in (Fig. 36).

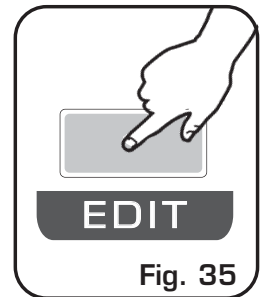


Fig. 35

Press one of the 1÷6 keys to select the effect on the **PAN** channel  
Press one of the 7÷12 keys to select the effect on the **TILT** channel

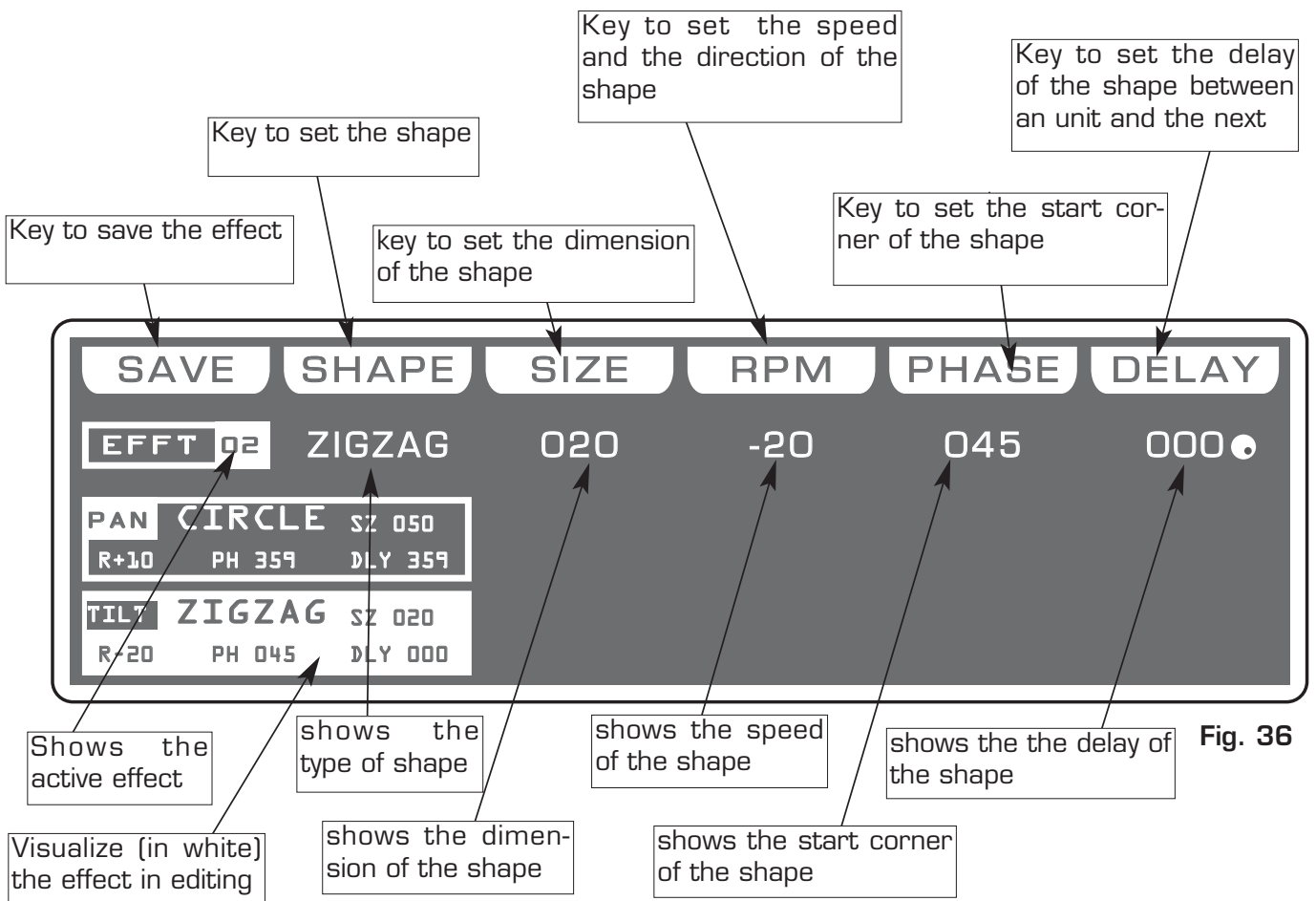


Fig. 36

In **EDIT EFFECT** mode there are 6 function keys see (Fig. 36 par 7.5).

**SAVE** key:

Press this key to save the effect

**SHAPE** key:

Press this key to select the shapes, that are:

Circle, Hola, Ladder, Square, Vertex, and Zigzag.

The parameters that the operator could change correspond to:

**SIZE** key:

Press this key to change the size of the shape (from 1 to 128)

**RPM** key:

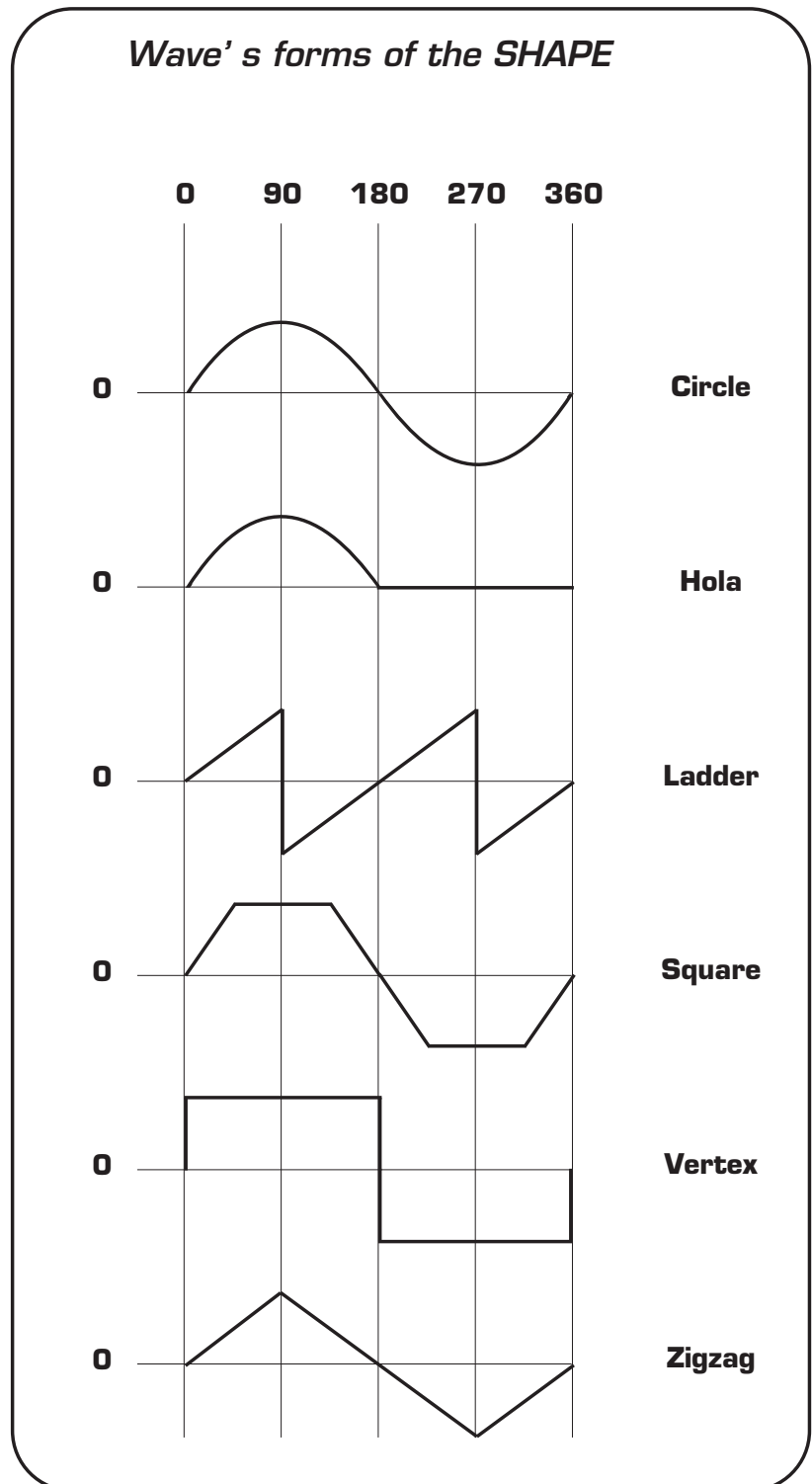
Press this key to change the speed and direction of the shape (from -60 to +60)

**PHASE** key:

Press this key to change the the start corner of the shape (from 0 to 359).

**DELAY** key:

Press this key to change the delay of the shape between an unit and the next (from 0 to 359).



THIS SECTION OF MATRIX LIVE IS MANUAL ENTIRELY CONTROLLED

**12 bank A faders** to control presets A

**12 bank B faders** to control presets B

**12 keys:** perform flash on the channels.

**12 led:** Visualize the channels status.



**BANK key:** (Fig. 37) to select the preset page, max 12.  
 Press **Bank** key followed from 1÷12 key, to change page  
 Press twice the **Bank** key to go to the next page  
 The selection of the bank is limited to the number of the dimmer set in the patch.



Fig. 37

**Led display:** (Fig. 37) Visualize the active preset page.

8.2 MASTER A + B USE

MATRIX LIVE IS ENDOWED OF TWO CONTROL A+B LEVEL OUTPUT

The **Master A** fader (Fig. 38) allows to adjust the bright of preset A

The **Master B** fader (Fig. 38) allows to adjust the bright of preset B

The **Master B** fader has the scale inverted as regards the **Master A** fader, move the two knobs at the same time to have a **A** and **B** mix.

**A and B** Key are used to enable the two presets crossfade, for this function keep **one** master to 0 value (the corresponding led will turn off).

Set the transition **XFADE TIME** from 0 to 600 seconds with encoder under lcd display

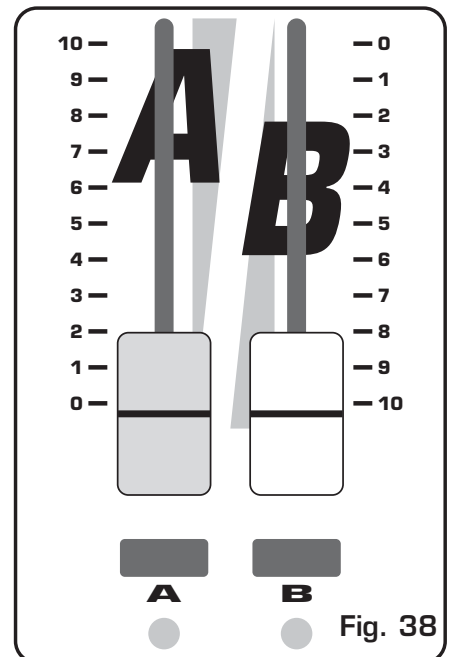


Fig. 38

Press **Function** key then **A** or **B** key to change Lcd **XFADE TIME** of manual preset. Press **Function** key then **A** or **B** key to change Lcd **XFADE TIME** of manual preset.

In **REGISTER** mode there are 6 function keys see (Fig. 40 par 8.3)

**EDIT** key:

Press this key to create/modify the active register, the display changes as shown in (Fig. 42 par 8.5)

**NAME** key:

Press this key to modify register name.

Through the encoder choose the character, Through the **OK** or **CHAR** Key we insert/modify the next/precedent character. Press **DONE** key to confirm the modify of the name.

**BANK** key:

Press this keys to select the successive/precedent page

**KEY** key:

Press this key to change register function

**GO-PAUSE** = *Pause/Go register*

**FLASH 100%** = *Play the register at 100% up to the key isn't left (with cursor to zero too)*

**FLASH GO** = *Play the register up to the key isn't left*

**TAP KEY** = *Change the register step by step*

**MODE** key:

Press this key to cange register function fader

**ONCE** = *Register play once and stop it*

**SOLO** = *Only one register in output the others has excluded.*

**ONCE + SOLO** = *Only one register in output the others has excluded, register play once and stop it*

THIS FUNCTION ALLOWS TO CREATE OR MODIFY ONE OF 144 REGISTER.

The graphic display indicates the step (highlighted) currently active (Fig. 40 par 8.3) to create/modify it press the **EDIT** key (Fig. 41).

The display changes as shown in (Fig. 42).

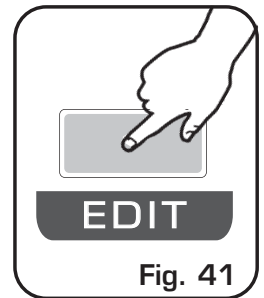


Fig. 41

For successive register use the **PAGE** or **BANK** key

Function Keys see par 8.6

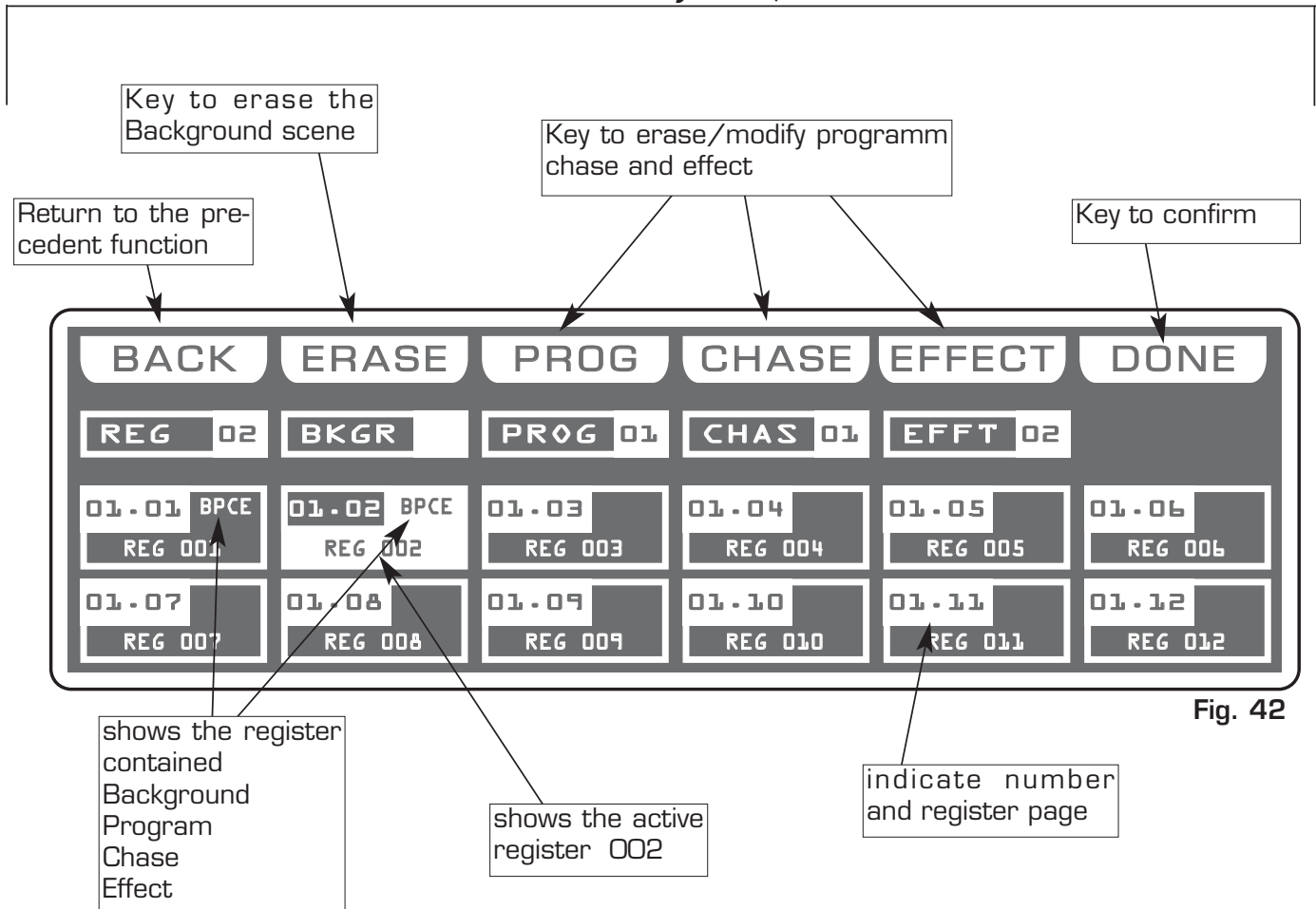


Fig. 42

In **REGISTER** mode there are 6 function keys see (Fig. 42 par 8.5)

**BACK** key:

Press this key to return to the precedent functionn see par 8.2

**ERASE** key:

Press this key to the erase Background scene

**PROG** key:

Pressing this key it becomes **NONE** key and appears the encoder symbol, now you can change program, presse **NONE** key to delete from the register.

**CHASE** key :

Pressing this key it becomes **NONE** key and appears the encoder symbol, now you can change chase, presse **NONE** key to delete from the register.

**EFFECT** key:

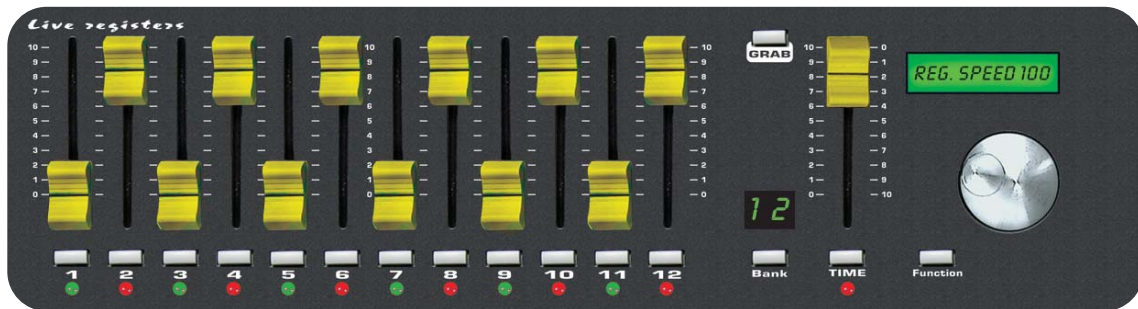
Pressing this key it becomes **NONE** key and appears the encoder symbol, now you can change effect, presse **NONE** key to delete from the register.

**DONE** key:

Premendo questo tasto si confermano le modifiche effettuate.



## THE REGISTER SECTION IS THE "HEART" OF MATRIX LIVE.



**12 faders:** controls the live playback registers.

**Mode:** *Once, Solo e Once + Solo* (see par 8.4)

**12 keys:** perform direct registers functions.

**Mode:** *Go-Pause, Flash 100%, Flash Go e Tap Key* (see par 8.4)

**12 bicolor led :** Shows the register status.

**Green Switched on:** Register in play

**Green Blinking:** Register in pause

**Red Switched on:** Register in play in other page

**Red Blinking:** Register in pause in other page

**TIME fader:** to control stepping in real time.

Press **TIME** key then the register you wants to perform in step mode. Use the fader from 0 to 100% and viceversa to change the step in real time.

Keep the register fader to 100%

Press **TIME** key to go out of the functionn.

**GRAB key:** grab the active scene (background) into a register.

Press **GRAB** key then the register you wants to store the scene

**BANK key:** to select registers page max 12

Press **Bank** key then the register 1÷12 key to cange page

Press twice **Bank** key to go in the next page

**Led display:** visualize registers active page.

**Lcd:** visualizes registers job mode.

**FUNCTION key:** to set lcd functions

Press **Function** key then **A** or **B** key to cange XFADE TIME of manual preset

Press **Function** key then **Register 1/12** key to cange REG SPEED of single register

Press **Function** key then **Register 1/12** key and holding the Register key, select other register to cange REG SPEED of those register

Press twice **Function** key to cange in MAIN SPEED

**Encoder:** to set lcd values.

A **Program** is a range of scenes (max 48) performed in succession. To create/modify a program follow all steps listed below:

- 1) If Matrix is switched off, switch it on pressing **POWER** key.
- 2) Press **Program** key to activate the **PROGRAM** function.  
(the **Program** led key will light up).
- 3) Press 1÷12 keys to select only the program that you want to modify.  
(only one program **highlighted**).  
For successive program use the **PAGE** key
- 4) Press the **UNITS** key and select through the 1÷12 keys the units that must work in the program. Confirm with the **DONE** key
- 5) Press **Scene** key to activate the **SCENE** function.  
(the **Scene** led key will light up).
- 6) Press one of the 1÷12 keys to select the scene that we want to create/modify.  
For successive scenes use the **PAGE** key
- 7) Press the **EDIT** key to create/modify the selected scene.
- 8) Modify the position with the joystick and the sets of the channels with the relative faders, press **UNIT** key for next/precedent unit.
- 9) When the scene has been completed, it can be stored through the **SAVE** key.
- 11) Now Matrix is in the next scene repeat again the 7 and 8 steps.
- 12) When the creation of the scenes has been finished press **Program** key to come back to the **PROGRAM** function.  
(the **Program** led key will light up).
- 13) Finally you must press the **LIVE** key followed to **GO** key to execute the program.

The program is complete; to create/modify others repeat again all the above steps.

A **Chase** is a play of lights, it is a sequence of steps (from 1 to 48 max). To create/modify a program follow all steps listed below:

- 1) If Matrix is switched off, switch it on pressing **POWER** key.
- 2) Press **Chase** key to activate the **CHASE** function.  
(the **Chase** led key will light up).
- 3) Press 1÷12 keys to select only the chase that you want to modify.  
(only one chase **highlighted**).  
For successive chase use the **PAGE** key
- 4) Press **STEPS** key to activate the **STEPS** function
- 5) Press one of the 1÷12 keys to select the step that we want to create/modify.  
For successive steps use the **PAGE** key
- 7 Press the **EDIT** key to create/modify the selected step.
- 9) Modify the value of the channels through the 12 relative faders or the 1÷12 keys.  
For next channels use the **PAGE** key
- 10) When the step is completed it can be stored through the **SAVE** key.
- 11) Now Matrix is in the next step repeat again the 9 and 10 steps.
- 12) When the creation of the steps has been finished press **Chase** key to come back to the **CHASE** function.  
(the **Chase** led key will light up).
- 13) Finally you must press the **LIVE** key followed to **GO** key to execute the chase.

The chase is complete; to create/modify others repeat again all the above steps.

Matrix is endowed with pre-programmed plays movement, (modifiable) dedicated to the scanner and moving-head.

With this function it's possible to create animations of notable effect.

The available plays are:

Circle, Hola, Ladder, Square, Vertex, and Zigzag.

The parameters that the operator could vary correspond to:

**SHAPE:** Shape

**SIZE:** Dimension of the shape (from 1 to 128)

**RPM:** Speed and direction of the shape ( from -60 to +60)

**PHASE:** Corner of departure of the shape (from 0 to 359).

**DELAY:** Delay of execution of the shape between an unit and the next (from 0 to 359).

The parameters are independent for **PAN** and **TILT**, it is possible an infinity of combinations.

- 1) If Matrix is switched off, switch it on pressing **POWER** key.
- 2) Press **Effect** key to activate the **EFFECT GENERATOR** function.  
(the **Effect** led key will light up).
- 3) Press one of the 1÷12 keys to select the effect that we want to create/modify.  
For successive effect use the **PAGE** key
- 4) Press the **EDIT** key to create/modify the selected effect.
- 5) Press one of the 1÷6 keys to select the effect on the **PAN** channel  
Press one of the 7÷12 keys to select the effect on the **TILT** channel
- 6) Modify the parameters of the effect through the **SHAPE** , **SIZE**, **RPM**,  
**PHASE** and **DELAY** keys.
- 7) Once modified the parameters, we can be store the modifications through  
the **SAVE** key.
- 8) Now Matrix is again in the **EFFECT** function.
- 9) Press the **UNITS** key to check which unit must perform the effect.
- 10) Finally you must press the **LIVE** key followed to **GO** key to execute the effect.

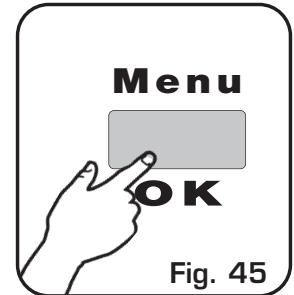
The effect is complete; to create/modify others repeat again all the above steps.

THIS FUNCTION ACTIVATES SOME SPECIAL FUNCTIONS FOR THE CONTROL OF THE UNIT AND THE SETTING OF THE CONTROLLER.

Press **Menu** key to activate **MENU** function. (Fig. 45)

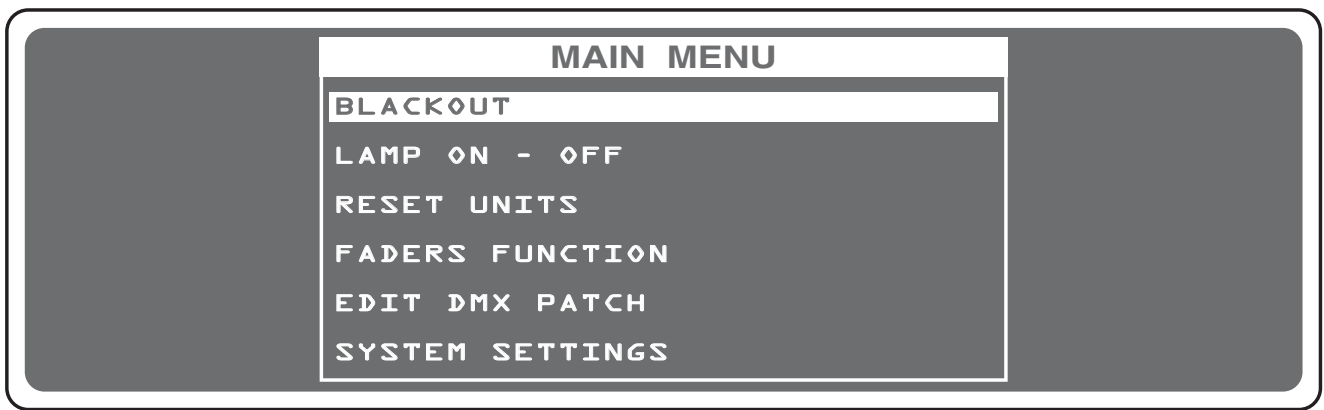
The display changes as shown in (Fig. 46)

As soon as this function is activated, the display shows the first function available..



Through the encoder it is possible select the **MENU** functions available. To activate the selected function press the same (**OK**) key.

Fig. 46



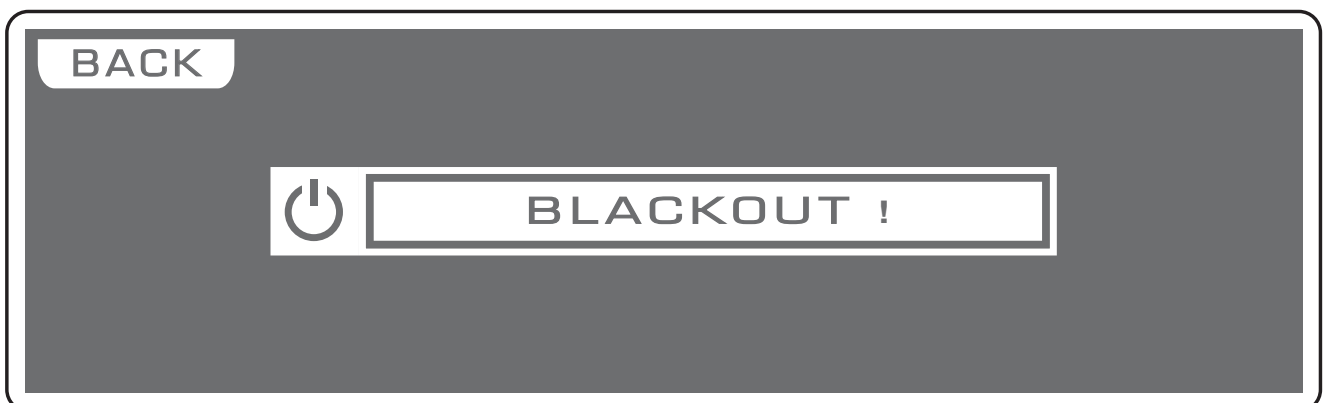
## 10.2 MENU: BLACKOUT

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

This function allows to black-out all the unit connected.

Press **DONE** or **ESC** key to start again the normal working.

The display changes as shown in (Fig. 46).



Pressing the **KEEP** key the Blackout comes kept up to when you call a program or a scene.

Fig. 46

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

**ALLOWS TO TURN ON / TURN OFF THE LAMP OF ONE OR MORE UNIT.**  
(only if the selected unit are predisposed for this function).

**NOTE:** If the lamp is "discharge" type and it is still hot, before its lighting you will need to wait that it gets cold.

The display changes as shown in (Fig. 47).

At the activation of the function the units are all selected.

Press one of the 1÷12 keys to select the unit.

For successive unit use the **PAGE** key

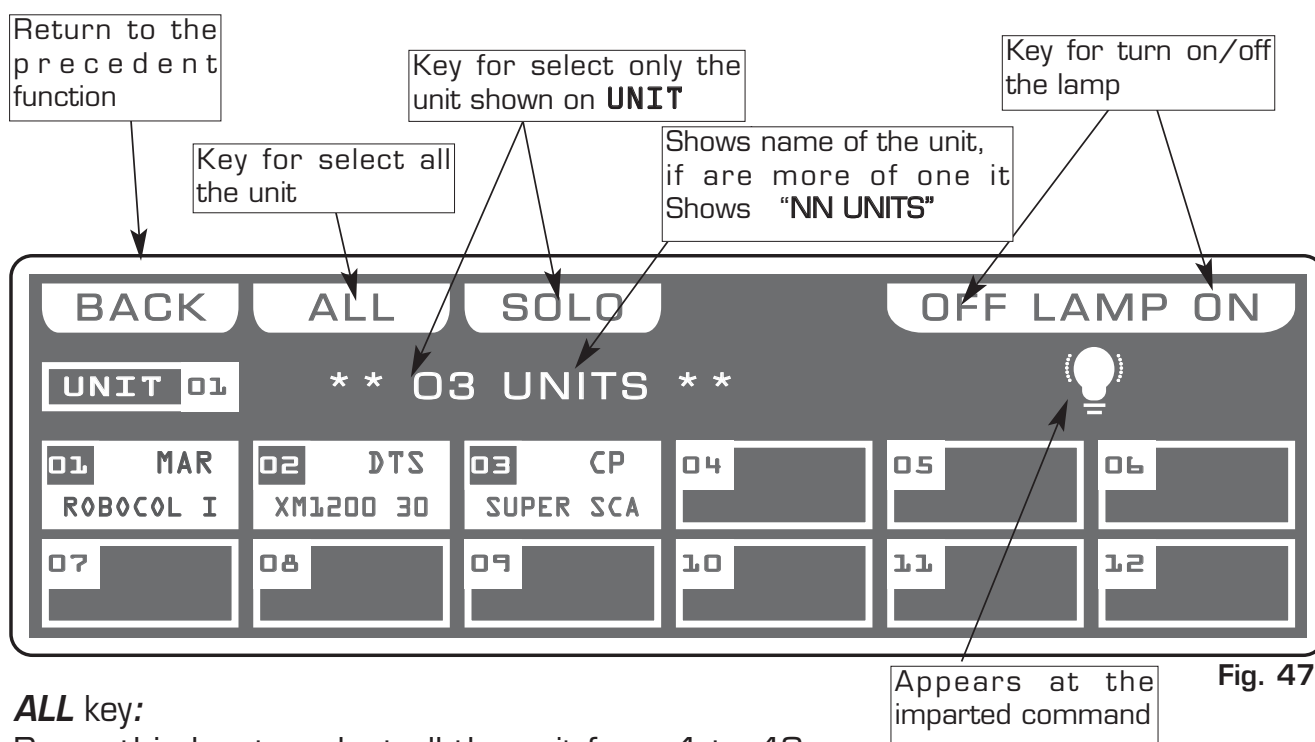


Fig. 47

**ALL** key:

Press this key to select all the unit from 1 to 48.

**SOLO** key:

Press this key to select only the unit shown in the box **UNIT**, if we have selected with the **ALL** key all the 48 unit, and we want to select only the unit (es. n° 02), press twice the key 02 of unit selection. The unit box will indicate **UNIT 02** now the **SOLO** key unselect all the other unit, activating **SOLO** the **UNIT 02**

**OFF - ON** keys:

Pressing one of these two keys will be turn on/turn off the lamp of the selected unit. To get out of the function press the **ESC** key.

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

**ALLOWS TO RESET ONE OR MORE UNIT.**

(only if the selected unit are predisposed for this function).

This function must be performed when the unit lose synchronization or they don't perform the commands of the controller in a correct way.

The display changes as shown in (Fig. 48).

At the activation of the function the units are all selected.

Press one of the 1÷12 keys to select the unit.

For successive unit use

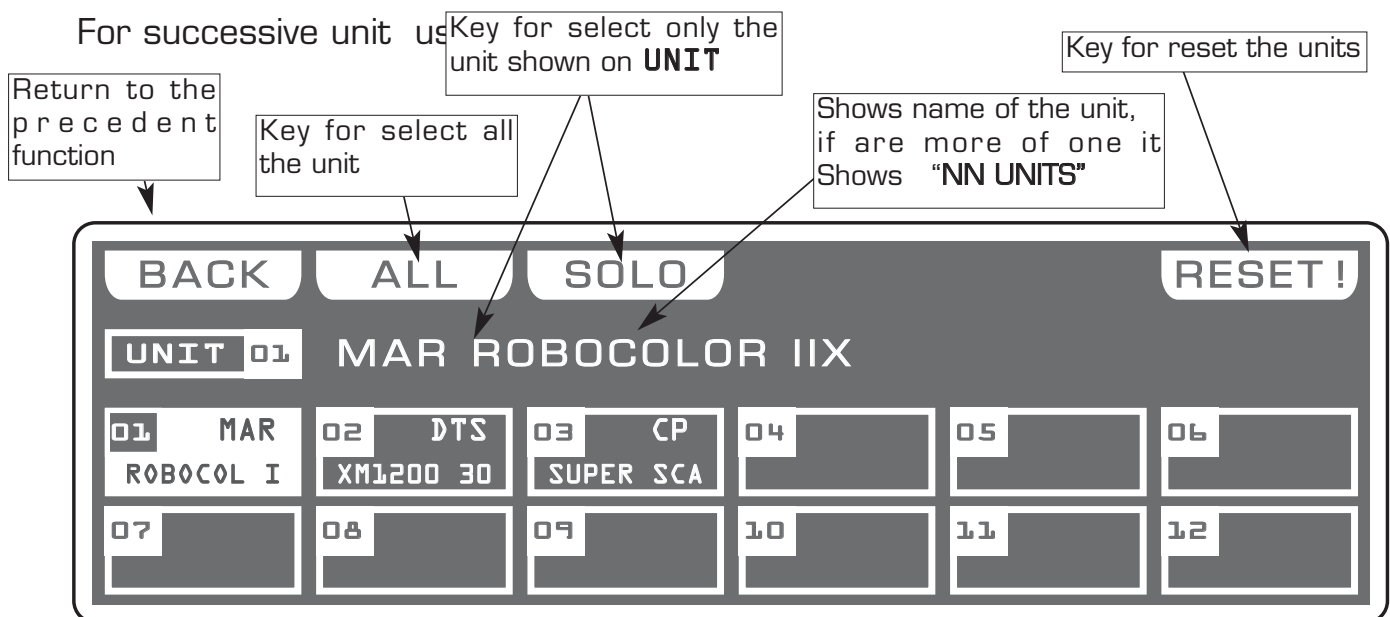


Fig. 48

**ALL** key:

Press this key to select all the unit from 1 to 48.

**SOLO** key:

Press this key to select only the unit shown in the box **UNIT**, if we have selected with the **ALL** key all the **48** unit, and we wants to selectd only the unit (es. n° **02**), press twice the key **02** of unit selection. The unit box will indicate **UNIT 02** now the **SOLO** key unselect all the other unit, activating **SOLO** the **UNIT 02**

**RESET** key:

Press this key to reset the selected unit  
To get out of the function press the **ESC** key.

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

**ALLOWS TO ASSIGN THE NAME OF THE DMX CHANNEL TO DETERMINED FADERS  
THIS FUNCTION IS VALID IN THE MODE OF OPERATION EDIT SCENE (SEE  
PAR 4.5) AND MANUAL (SEE PAR 4.10)**

This function is used when we have the need to control a determined channel (of all the connected units), always and only from a faders.

The display changes as shown in (Fig. 49).

When you keep the fader to zero value the display shows the writing **\*free\***, free from assignments, the channels come loaded from the controller in an original way.

Move the fader of the section "A" or "B," to assign a memorized channel.

Through the encoder or the 1/12 keys directly above at the faders you can roll forward/back for a more precise search.

To assign the channel press the **DONE** or **OK** key

To get out of the function press the **ESC** key.

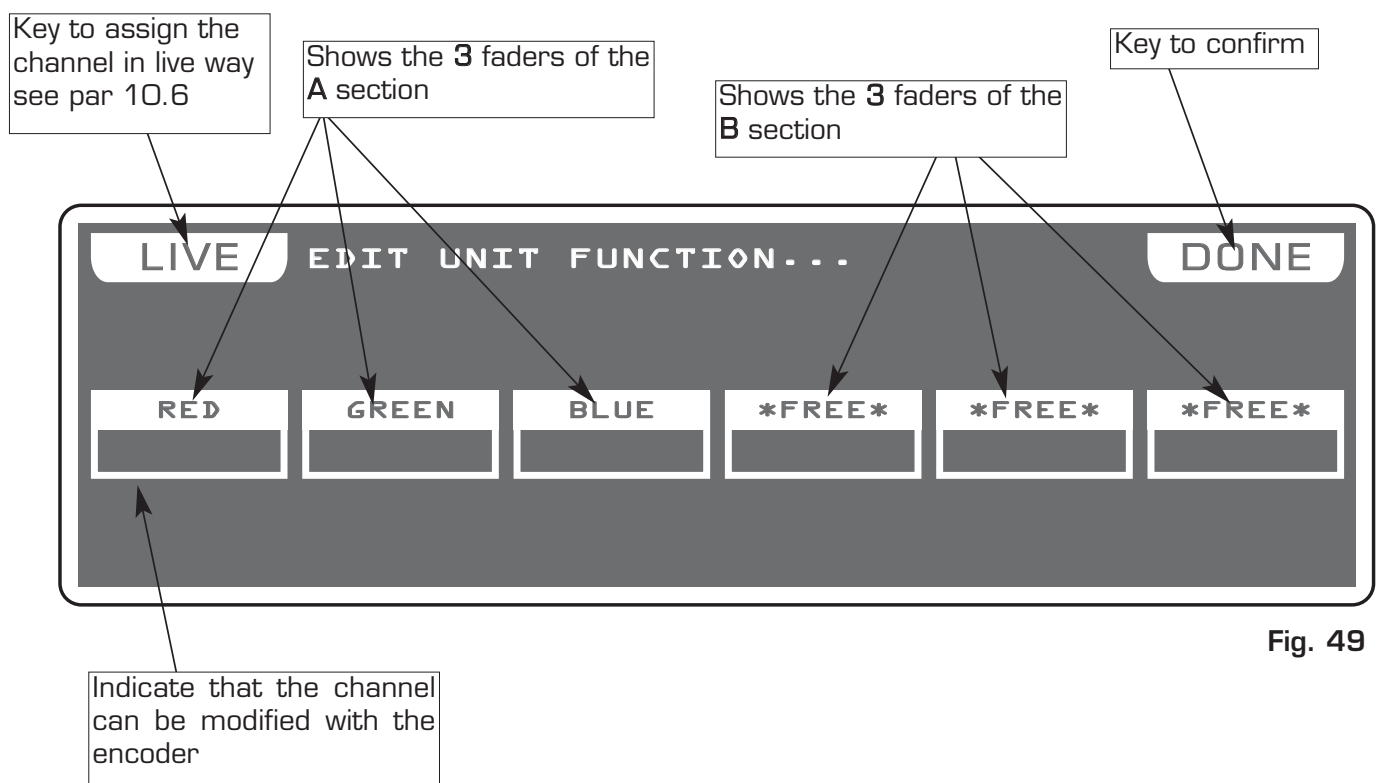


Fig. 49



AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

**ALLOWS TO ASSIGN DIRECT CONTROL FUNCTIONS AT 12 FADERS.**

This function is used to control the performance of programs, chase, effects through faders or to control a determined DMX channel.

The display changes as shown in (Fig. 50).

The functions that the operator could assign through the relative keys correspond to:

**MAIN SPD** : Performance Speed of the *Show*  
**PROG SPD**: Performance Speed of the *Program*  
**CHAS SPD**: Performance Speed of the *Chase*  
**EFT SPD**: Performance Speed of the *Effect*  
**EFT ZOOM**: Dimension of the *Effect*  
**DMX 001**: Direct control of the channel  
**FREE**: No function associate

If the function is of **DMX** type, through the faders or the encoder you select the channel.

Except **MAIN SPD** the other functions could join to specific registers through the cursor or the encoder

To assign the function faders press the **DONE** or **OK** key

To get out of the function press the **ESC** key.

**NOTE: THIS FUNCTION IS ACTIVE IN MODE:**

**SCENE/STEPS/PROG/GO! PROG/CHASE/GO! CHASE/EFFECT/GO! EFFECT/SHOW/GO! SHOW**

**FOR RECALL THE DISPLAY THAT SHOWS THE VALUES, PRESS THE CORRESPONDING Show, Effect, Chase, Program KEY (FIXED LED)**

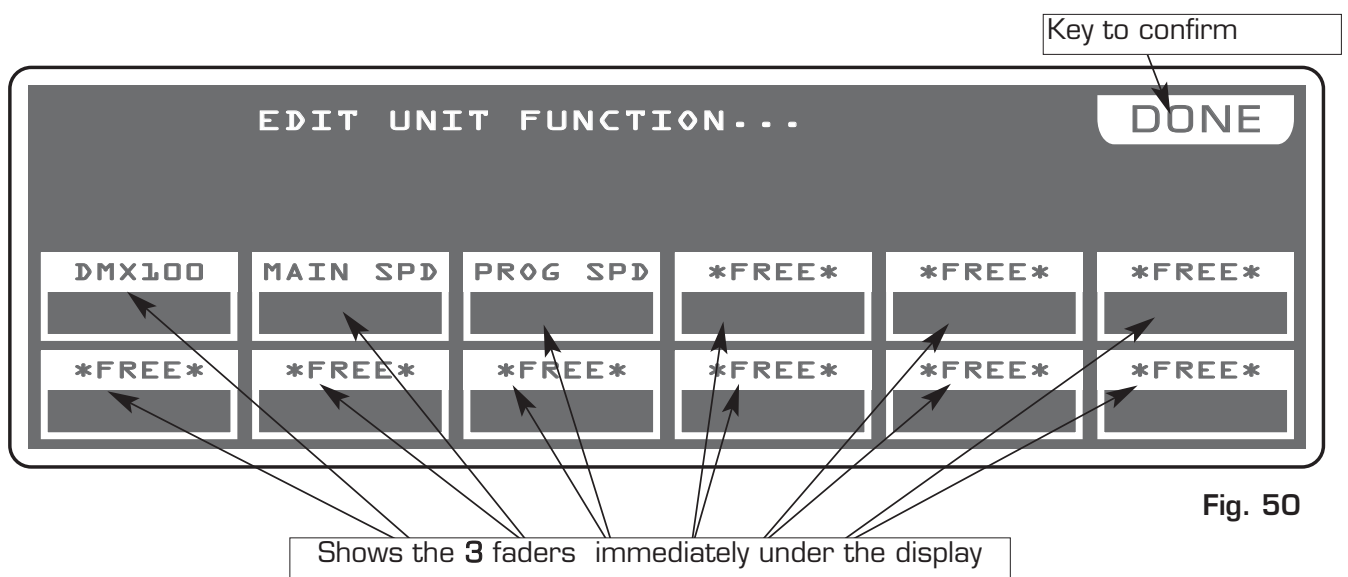


Fig. 50

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.1)

**ALLOWS TO LOAD A COMPLETE SETUP FROM LIBRARY AND STORE IT IN MEMORY.  
ALLOWS TO PATCH DMX / AUTOMATIC / MANUAL.**

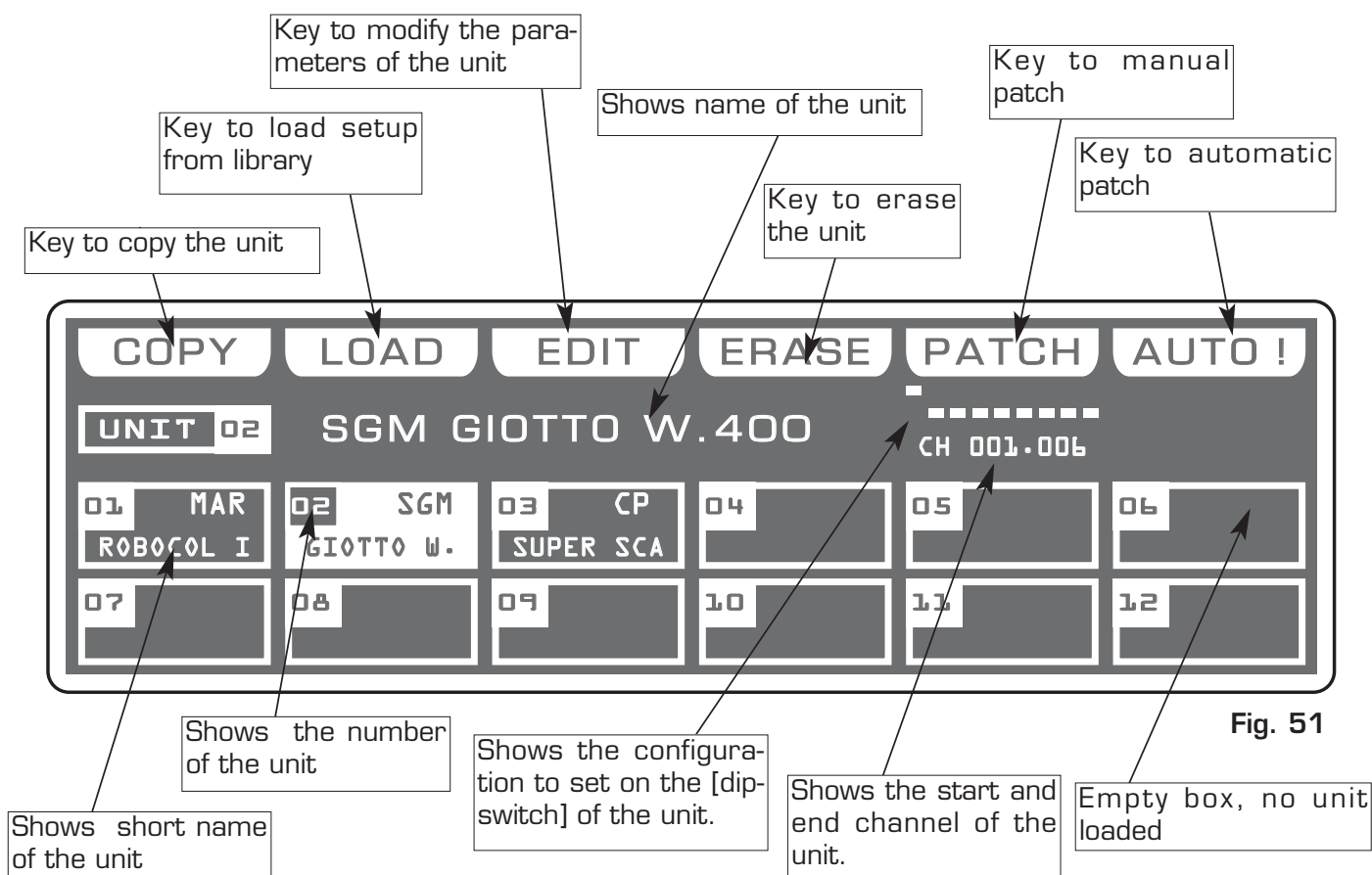
**ALLOWS TO MODIFY THE NAME OF EACH CHANNEL AND ITS PARAMETERS (RESET VALUE, BLACKOUT VALUE, HARD/SOFT CROSS) IT ALSO ALLOWS TO ASSIGN SPECIAL FUNCTIONS TO THE CHANNEL (PAN/TILT,PAN LOW/TILT LOW, LAMP CONTROL).**

**ATTENTION ! MODIFICATION OF THE EDIT DMX PATCH PARAMETERS, IF NOT EFFECTED IN AN APPROPRIATE WAY, PREVENTS THE CONNECTED UNIT TO WORK CORRECTLY.**

The display changes as shown in (Fig. 51).

Press one of the 1÷12 keys to select the unit.

For successive unit use the **PAGE** key



In **EDIT DMX PATCH** mode there are 6 function keys see (Fig. 51 par 10.7).

**COPY** Key:

Pressing this key on the display shows " **SELECT DESTINATION UNIT**", select through the 1÷12 keys the destination of the copy.

For the successive unit use **PAGE** key

**LOAD** Key:

Press this key to load complete setup from library, see par 10.9.

**EDIT** Key:

Press this key to modify the name of each channel and its parameters, see par 10.11.

**ERASE** Key:

Press this key to the erase active unit, select through the 1÷12 keys (for the successive units use **PAGE** key) the unit that must be erased, then press the **ERASE** key.

The unit will be erased in a permanent way, it is not possible to recover it.

**PATCH** Key:

Press this key to modify start address of the unit, use the fader under *PATCH* write on the encoder. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.

Matrix will calculate the last channel for that unit and under *PATCH* write you can see the configuration to set on the dip-switch of the unit.

**NOTE: ANY BUILDERS ADOPT THE CONFIGURATION OF THE DIP-SWITCH LIKE STANDARD SET TO "0" FOR INDICATE DMX CHANNEL "1." IN THIS CASE FOR A CORRECT OPERATION, YOU MUST BE ADDED +1" (EXAMPLE ADDRESS OF UNIT START = 128 → MATRIX ADDRESS = 129**

The on position of the dip-switch is with white box appears aloft.

*When you exit from the menu the software controls if there are units with equal or overlapped addresses, the display shows a message of error "PATCH OVERLAY AT UNIT."*

**AUTO** Key:

Press this key to modify start address in automatic way, select through the 1÷12 keys the unit of start, then press the **AUTO** key.

For the successive unit use **PAGE** key

Now from the unit of start to the last unit the addresses have been assigned.

For the successive unit use **PAGE** key

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.7)  
**ALLOWS TO LOAD A COMPLETE SETUP FROM LIBRARY AND STORE IT IN MEMORY.**

Press the **LOAD** key to load setup from library (Fig. 52).

The display changes as shown in (Fig. 53).  
 The display shows the first unit in the library

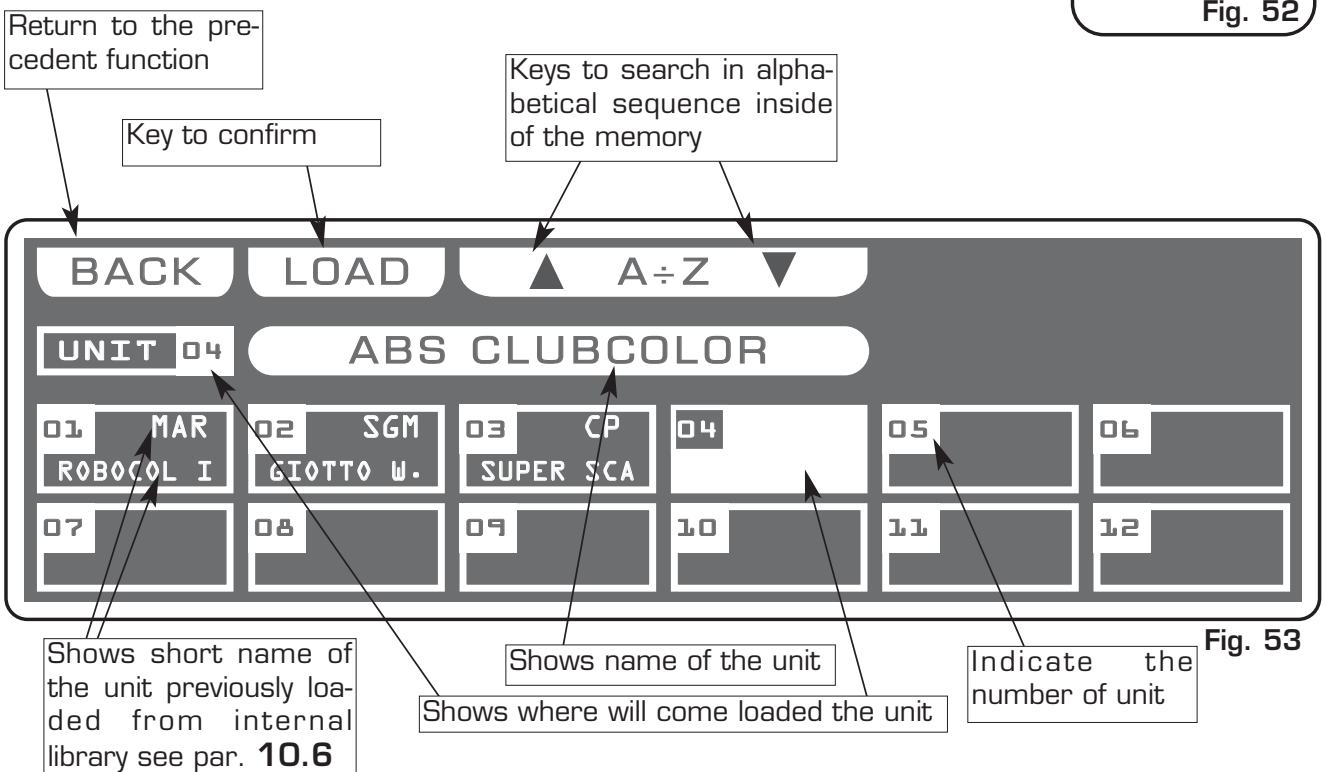
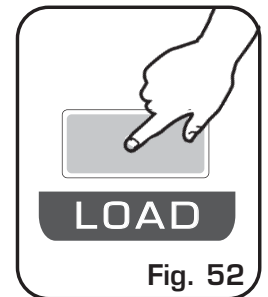


Fig. 53

10.10 FUNCTION KEYS IN LOAD LIBRARY MODE

In **LOAD LIBRARY** mode there are 3 function keys see (Fig. 53)

**A ÷ Z** Key:

Press this key to search in alphabetical sequence inside of the memory, when you arrive at the initial letter of the firm, you can search through the encoder in fine way. For a rapid search could be used also the faders under **LOAD** write

**LOAD** Key:

Press this key to load the select unit in the box highlighted.

To get out of the function press the **ESC** key.

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par.10.7)

**ALLOWS TO MODIFY THE NAME OF EACH CHANNEL AND ITS PARAMETERS (RESET VALUE, BLACKOUT VALUE, HARD/SOFT CROSS) IT ALSO ALLOWS TO ASSIGN SPECIAL FUNCTIONS TO THE CHANNEL (PAN/TILT,PAN LOW/TILT LOW, LAMP CONTROL).**

The graphic display indicates the unit (**highlighted**) currently active (Fig. 51 par 10.7) to modify it press the **EDIT** key (Fig. 54).

The display changes as shown in (Fig. 56).



Fig. 54

Pressing the **NAME** key it is possible modify the name of the projector, the display changes as shown in (Fig. 55).

Through the encoder we select the character, with the **OK** key or the **CHAR** keys we modify the next/precedent character. Press **DONE** key to confirm the modify of the name.



Fig. 55

Key to return to the menu function see par 10.7

Key to modify the name of the unit



Fig. 56

Shows name of the channel

Shows that the channel is hard cross

Shows that the channel is soft cross

Shows that the channel have a blackout value with **B**. a reset value with **R**. a blackout and reset value with **BR**.

Indicate the number of the channel

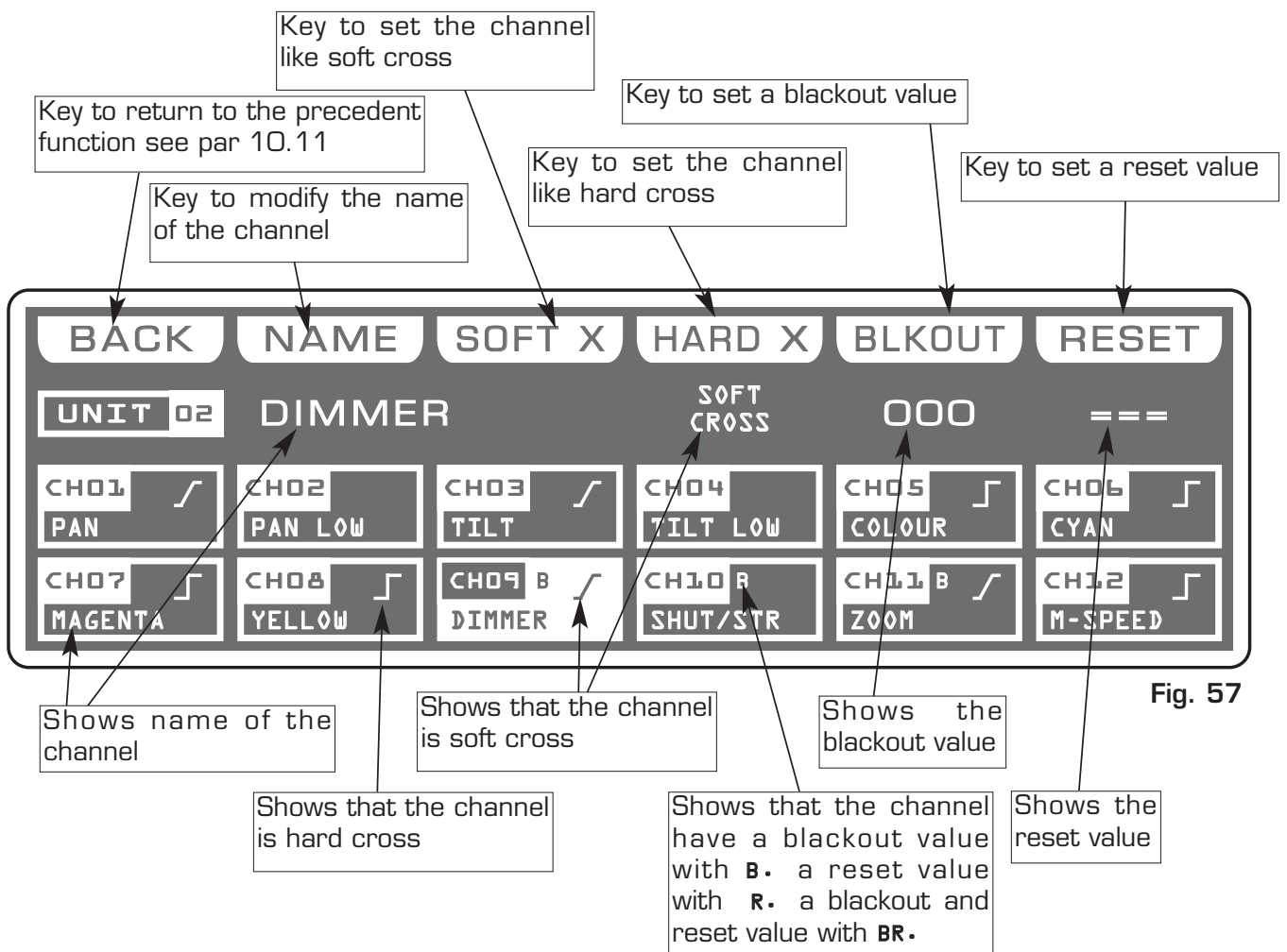
AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par. 10.11)

Through the 1÷12 keys select the number of the channel to modify see (Fig. 56 par 10.11).

For the successive channels use **PAGE** key

The selected channel will come highlighted the display changes as shown in (Fig. 57).

To use **Function Keys** see par 10.13



The controller uses these special channels for predefined functions, you must use them for the specific functions assigned to them.

**NOT USED** -> Not used channel.

**PAN** -> Pan channel (**SOFT CROSS/HARD CROSS**).

**PAN LOW** -> Pan channel **LOW**.

**TILT** -> Tilt channel (**SOFT CROSS/HARD CROSS**).

**TILT LOW** -> Tilt channel **LOW**.

**LAMP** -> Lamp control channel.

**LAMP/RES** -> Like **LAMP**.

In **EDIT DMX CHANNEL** mode there are 6 function keys see (Fig. 57 par 10.12).

**BACK** Key:

Press this key to return to the precedent function see par 10.11

**NAME** Key:

Press this key to replace the channel name.

Use the fader under **NAME** write or the encoder. To confirm the modify press the **NAME** or **OK** key.

Putting the faders to **0** value **\*CUSTOM\*** appears on the display, now we can write the name of the channel.

Pressing again **NAME** key the display changes as shown in (Fig. 58).

Through the encoder choose the character, Through the **OK** or

**CHAR** Key we insert/modify the next/precedent character.

Press **DONE** key to confirm the modify of the name.

Fig. 58



The value change between two scenes can be immediate (**HARD CROSS**) or gradual (**SOFT CROSS**).

**SOFT X** Key:

Press this key to set for the selected channel the type of gradual change (**SOFT CROSS**).

**HARD X** Key:

Press this key to set for the selected channel the type of immediate change (**HARD CROSS**)

**BLKOUT** Key:

Press this key to modify "**BLACKOUT VALUE**" that is the value of the channel when the **BLACKOUT** function is active ( see par. 10.2).

Through the encoder or the fader under the **BLKOUT** write, you can select === (unchanged) value or **0 / 255** value. The === value is selected putting the fader to **0** and it allows to maintain unchanged the output value (no blackout for this channel).

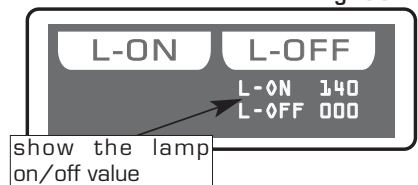
**RESET** Key:

Press this key to modify "**RESET VALUE**" that is the value of the channel when the **MENU: RESET** function is active (see par. 10.4).

Through the encoder or the fader under the **RESET** write, you can select === (unchanged) value or **0 / 255** value. The === value is selected putting the slider to **0** and it allows to maintain unchanged the output value (no reset for this channel).

Only if the **LAMP** or **LAMP/RES** channel is selected you can modify the **LAMP ON /LAMP OFF** value. see (Fig. 59).

Fig. 59



**L-ON** Key:

Press this key to modify "**LAMP ON VALUE**" that is the value of the channel when the **MENU: LAMP ON** function is active (see par. 10.3).

Through the encoder or the fader under the **L-ON** write, you can select **0 / 255** value.

**L-OFF** Key:

Press this key to modify "**LAMP OFF VALUE**" that is the value of the channel when the **MENU: LAMP OFF** function is active (see par. 10.3).

Through the encoder or the fader under the **L-OFF** write, you can select **0 / 255** value.

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **MENU** FUNCTIONS (see par. 10.1)

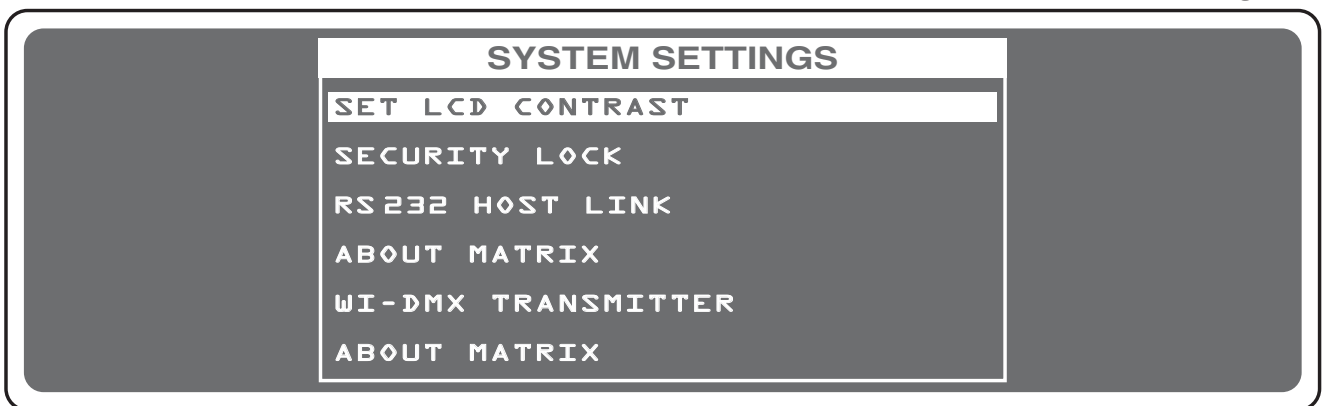
**ALLOWS TO CHANGE THE DISPLAY CONTRAST, TO SET A PASSWORD, RS 232 FUNCTIONS, SHOW THE SOFTWARE VERSION.**

Select **SYSTEM SETTINGS** from main menù the display changes as shown in (Fig. 60)

As soon as this function is activated, the display shows the first function available.

Through the encoder it is possible select the **SYSTEM SETTINGS** functions available. To activate the selected function press the same (**OK**) key.

Fig. 60



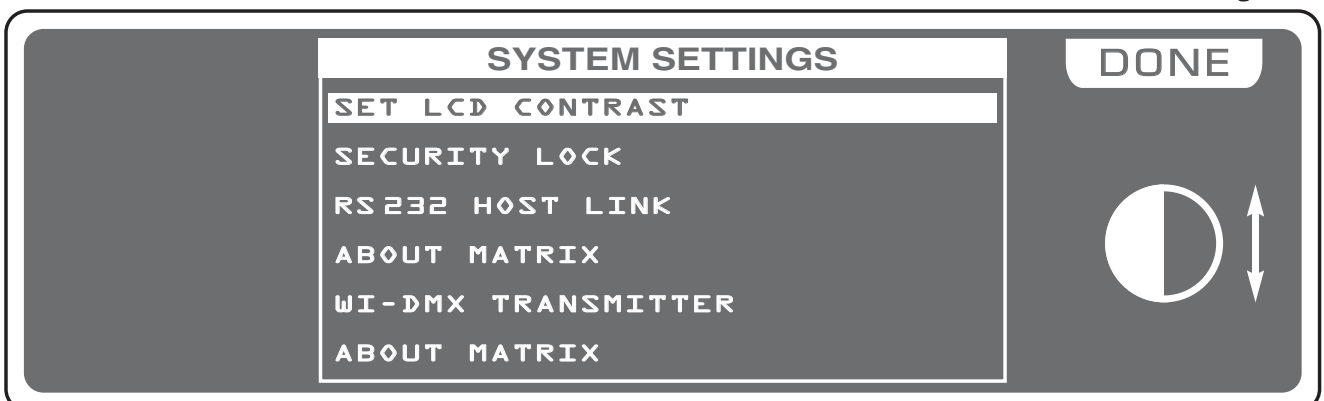
## 10.15 MENU: SET LCD CONTRAST

DISPONIBILE SOLO DOPO L'ATTIVAZIONE DELLA FUNZIONE **SYSTEM SETTINGS** (see par. 10.14)

**THIS FUNCTION ALLOWS TO CHANGE THE GRAPHIC DISPLAY CONTRAST**

The display changes as shown in (Fig. 61)

Fig. 61



Through the encoder or the fader under the **DONE** write, you can modify the display contrast. To confirm the modify press the **OK** key, to get out of the function press the **ESC** key.



AVAILABLE ONLY AFTER THE ACTIVATION OF THE **SYSTEM SETTINGS** (see par.10.14)

**ALLOWS TO LOCK/UNLOCK FUNCTIONS OF EDITING AND RESETTING.**

Pressing the **LOCK** key (**F6**) the display will change as shown in (Fig. 62)

Through the 1÷10 keys, insert a numerical combination of 5 number for lock the functions. At the end of the last number MATRIX will ask "**ENTER PASSWORD AGAIN**", you must introduce the password again. Now MATRIX is locked.

To unlock it repeat again all the above steps list above, but you must remember the password.

If you forget the password, we have a code of unblocking that is:

**F6 1 3 9 7 F2**

**MATRIX TOTAL RESET :**

With MATRIX unlocked, do this sequence of keys:

**F6 10 8 2 4 F4**, then follow the display instructions .



Fig. 62



AVAILABLE ONLY AFTER THE ACTIVATION OF THE **SYSTEM SETTINGS** (see par.10.14)

**ALLOWS TO SHOW THE SOFTWARE VERSION.**

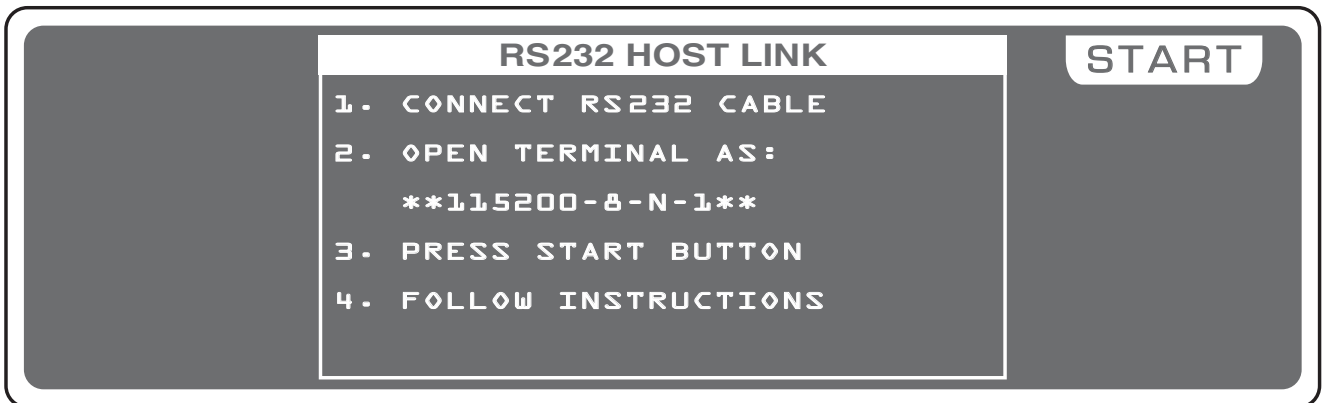
The display changes as shown in (Fig. 63)



AVAILABLE ONLY AFTER THE ACTIVATION OF THE **SYSTEM SETTINGS** (see par.10.14)

**THIS FUNCTION ALLOWS TO UPDATE LIBRARY, SAVE THE PROGRAMMING AND TO RESTORE USER DATA.**

The display changes as shown in (Fig. 64)



Connect the RS 232 cable (included) from the Matrix to the RS 232 of the Computer, start a program of terminal emulation and to set the communication like:

115200 bps, 8 data bit, no parity, 1 stop bit.

With **Microsoft Windows**<sup>®</sup> system start the software **Hyper Terminal** (Start> Programs> Accessories> Communications), set the connection like in **fig.65-66-67**.

Press the **START** key (Matrix); in the monitor of Computer appears the Menù see **fig.68**.

Press (**Computer Keyboard**) the number of the desired function.

Press **1** to save the data of programming;

You must select from the menù **Transfer> Receive file**. Set **Ymodem** protocol then click to **Receive** The saved file is in the Hard Disk with name **MATRIX.BAK**.



Fig. 65



Fig. 66

Press **2** to restore the data of programming;

You must select from the menu **Transfer> Send file**. search the file with **MATRIX.BAK** name, set **Ymodem** protocol then click to **Send**.

Press **3** to update setup library; you must select from the file menu **Transfer> Send file**. search the file with **Mat\_lib.bin** name (downloaded from internet), set **Ymodem** protocol then click to **Send** see fig.69.

Press **4** for personal library backup;

You must select from the menu **Transfer> Receive file**. Set **Ymodem** protocol then click on **Receive**.

The file will be saved on computer hard drive with this name: **mylib.BAK**.

Press **5** to exit.

Close the application and disconnect the cable.

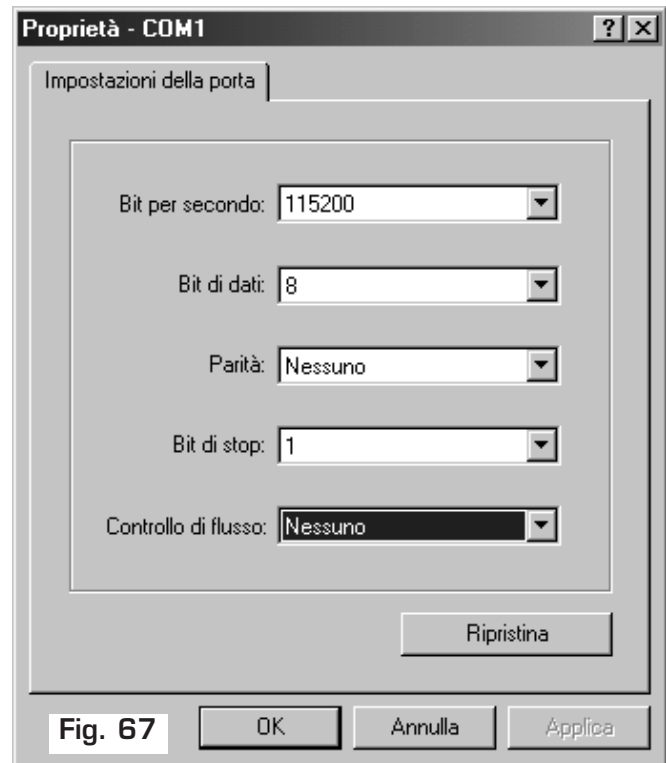


Fig. 67

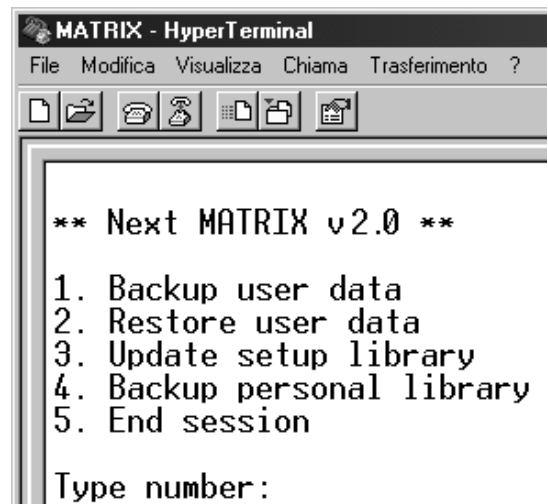


Fig. 68

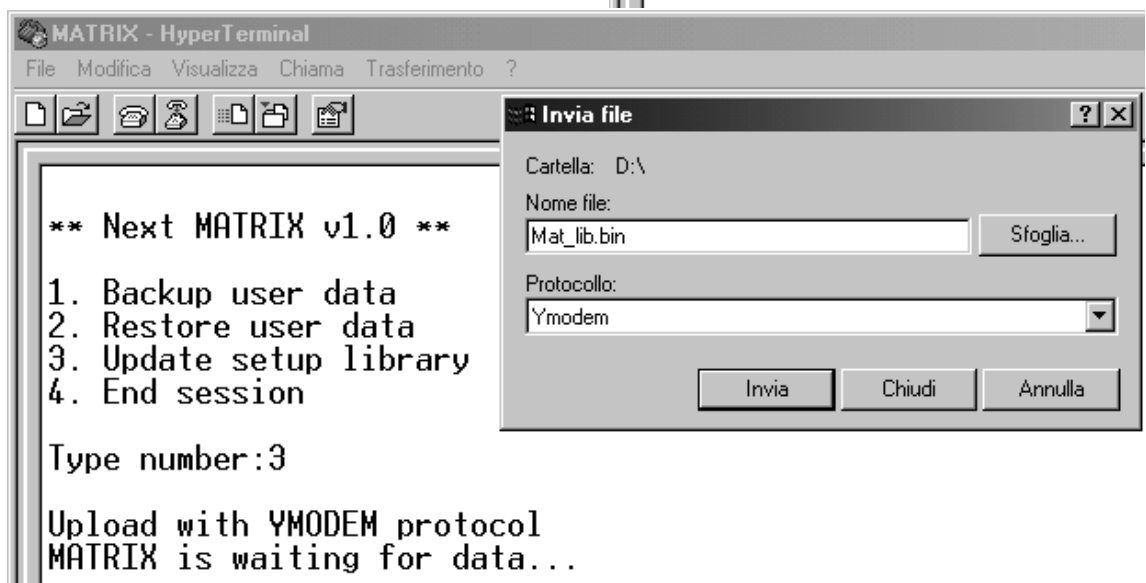


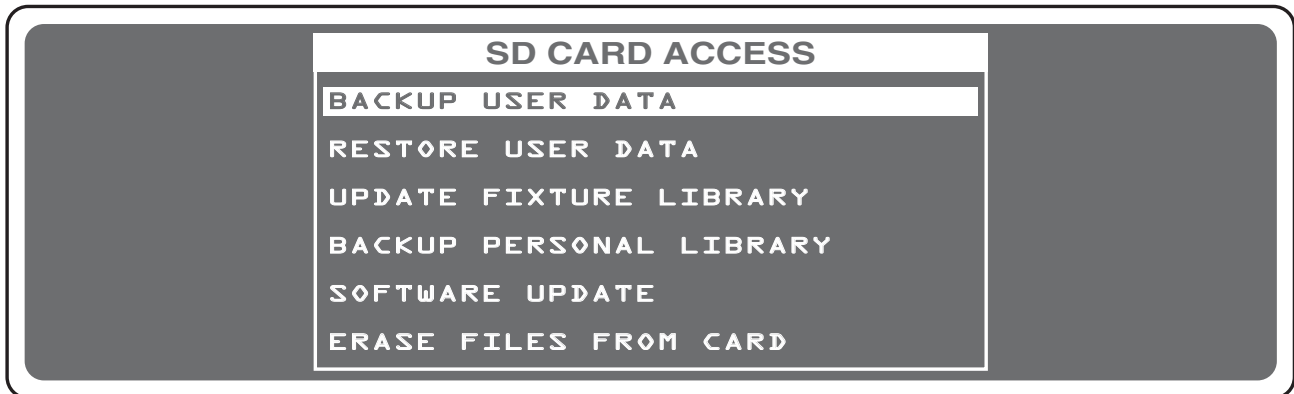
Fig. 69

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **SYSTEM SETTINGS** (see par.10.14)

**ALLOWS TO UPDATE SOFTWARE, LIBRARY, SAVE THE PROGRAMMING AND TO RESTORE USER DATA.**

The display changes as shown in (Fig. 70)

Fig. 70



**DO NOT REMOVE THE CARD DURING READING AND WRITING OPERATIONS**

#### **BACKUP USER DATA**

Press **OK** to save programming data, default is **MATRIX.BAK**. Press **SAVE** to confirm. Press **NAME** to change the name, Through the encoder choose the character, Through the **OK** or **CHAR** Key we insert/modify the next/precedent character. Press **SAVE** to save programming data.

#### **RESTORE USER DATA**

Press **OK** to restore programming data. Through the encoder choose saved file, press **LOAD** to load the file.

#### **UPDATE FIXTURE LIBRARY**

Press **OK** to update fixture library. Through the encoder choose the **.LIB** file from Codem provided, press **LOAD** to load the file.

#### **BACKUP PERSONAL LIBRARY**

Press **OK** to save personal library, default is **MYLIB.BAK**. Press **SAVE** to confirm. Press **NAME** to change the name.

#### **SOFTWARE UPDATE**

Press **OK** to update the software. Through the encoder choose the **.FWU** file from Codem provided, press **LOAD** to load the file. **Do not turn off Matrix during this operation.**

#### **ERASE FILES FROM CARD**

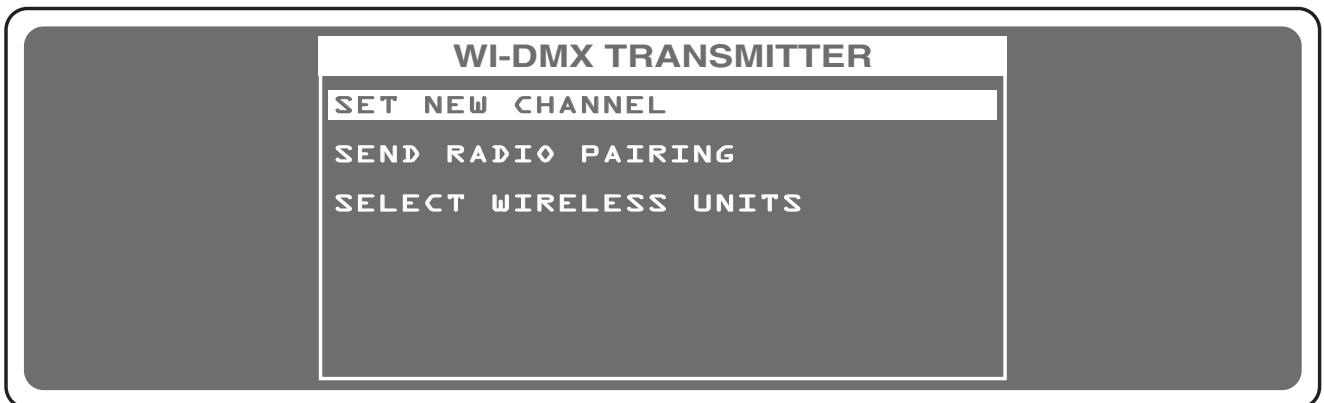
Press **OK** to delete card files. Through the encoder choose the file, press **ERASE** to erase.

AVAILABLE ONLY AFTER THE ACTIVATION OF THE **SYSTEM SETTINGS** (see par.10.14)

**ALLOWS TO PAIR WI D PEN RECEIVER, CHANGE THE RADIO CHANNEL AND TO SELECT OF WIRELESS CONTROLLED UNITS.**

the display will change as shown in (Fig. 70)

Fig. 70



#### **PAIRING:**

- 1) Power up **Wi D Pen** receiver
- 2) Hold the button until the **Wi D Pen** led starts blinking red/green alternately
- 3) In Matrix Live through the encoder find **SEND RADIO PAIRING**
- 4) Press **OK** key and wait the **DONE** message
- 5) The **Wi D Pen** receiver is paired

#### **TO CHANGE RADIO CHANNEL:**

- 1) Power up **Wi D Pen** receiver
- 2) In Matrix Live through the encoder find **SET NEW CHANNEL**
- 3) Press **OK** key and wait the **DONE** message
- 4) The **Wi D Pen** receiver has change radio channel and led's colour

#### **SELECTION OF WIRELESS CONTROLLED UNITS:**

- 1) Through the knob find the writing **SELECT WIRELESS UNIT**
- 2) Confirm with the **OK** key
- 3) Select the units that will work in wireless and confirm with the **DONE** key

**NOT ENABLE IN SOFTWARE**

## MATRIX LIVE TECHNICAL FEATURES

- Individual control of up to **36 DMX 512 units**.
- **48 DMX channels** for each unit.
- **512 DMX** configurable channels for intelligent units and dimmers.
- **48 Program processor** with **48 scenes** each one (2304 total scenes).
- **36 Chase processor** with **48 scenes** each one (1728 total scenes).
- **48** Built in editable **Effects**.
- **144 Registrs** with **1 Progam + 1 Chase + 1 Effect + 1 Preset**.
- **2 bank** of **12 faders** to control **144 Dimmer channels**.
- **RS-232** for connection with a PC.
- **DMX 512/1990 standard output** (5-pole female "XLR" connector).
- **SD CARD** slot for data backup.
- **MIDI IN/TRHU/OUT**.
- Built-in **Wireless Wi DMX<sup>®</sup>** transmitter.
- **GRAPHIC** white led backlight **LCD PANEL**.
- Very easy **SETUP** with wide **LIBRARY**, allows the configuration of each unit connected to the **Matrix live**.
- Control of the **48** channels by **12** faders for simplest use.
- **Compatible with every DMX 512 unit (max 48 channels)**
- **8/16 bit PAN and TILT movements** controlled by an auto-return Joystick.
- **MUSIC** function with independent speed.
- **Built-in microphone** and **0 dB audio input** with auto-level control.
- Non volatile **16 Mbit FLASH** memory with **40 years** data retention.
- **Very simple programming and intuitive use**.

### *Condizioni climatiche di utilizzo:*

- Umidità: **35% ÷ 80%**
- Temperatura: **-10° ÷ +50 °C**

### *Dimensioni e peso:*

Dimensioni (L x H x P) / Peso: **712 x 436 x 55 mm 15 Kg**.

---

**CODEM MUSIC S.r.l.** - Via G.Pierini, 13 - 61100 PESARO - ITALY  
Tel. +39 0721 204357 - Fax +39 0721 203554  
<http://www.codemmusic.com> - E-mail: [info@codemmusic.com](mailto:info@codemmusic.com)

---



All rights reserved. No parts of this document can be copied, photocopied or reproduced without the prior written permission of the **CODEM MUSIC s.r.l.**

No responsibility is taken for possible inaccuracies or mistakes.

The **CODEM MUSIC s.r.l.** reserves the right to make any alterations or aesthetics changes of this product that seem necessary at any time and for whatever reason.

The **CODEM MUSIC s.r.l.** takes no responsibility for the use or for the application of this product.

---