Next

Adobe Acrobat® version

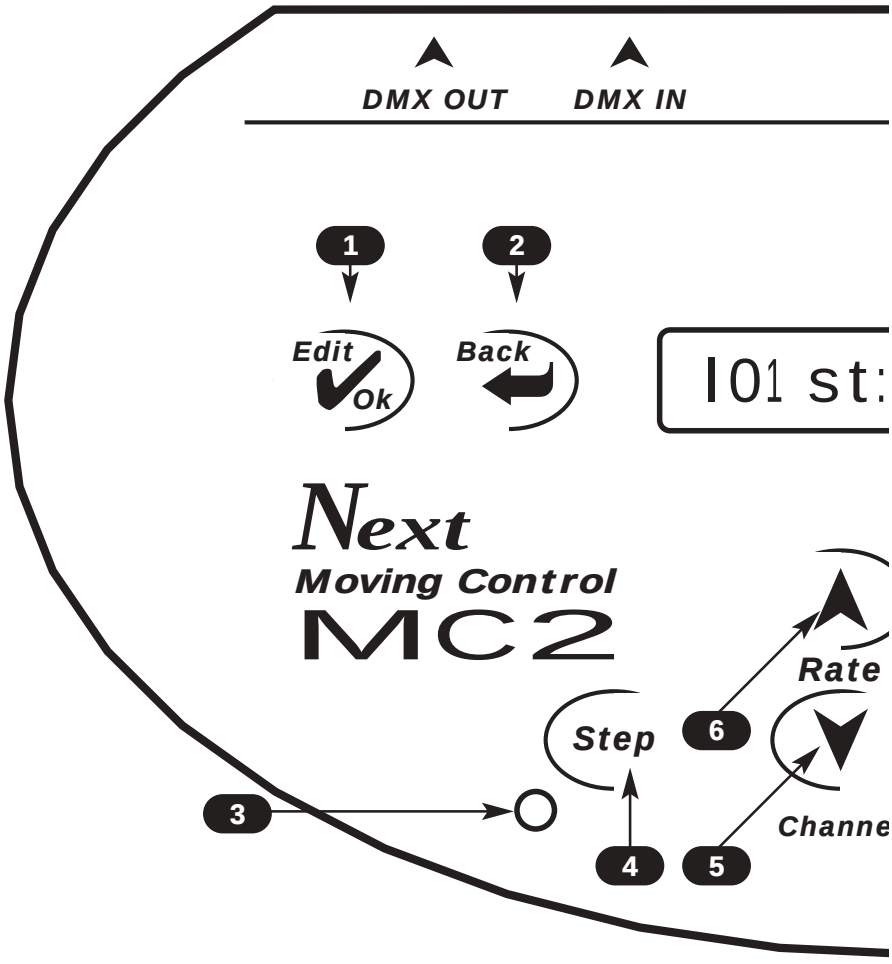
MC2

Moving Control

GB ***USER'S MANUAL***

INDEX

We congratulate you on your purchase of MC2.
Before you proceed using this product, read this user's manual carefully, as it gives important information on safety, use and maintenance .



1 **Edit / Ok** key

2 **Back** key

3 **Step** led

4 Key to **change step, for 2 second pressed it *CHANGE LOOP***

5 **Key** to **increase** the speed of the step / in edit step change channel

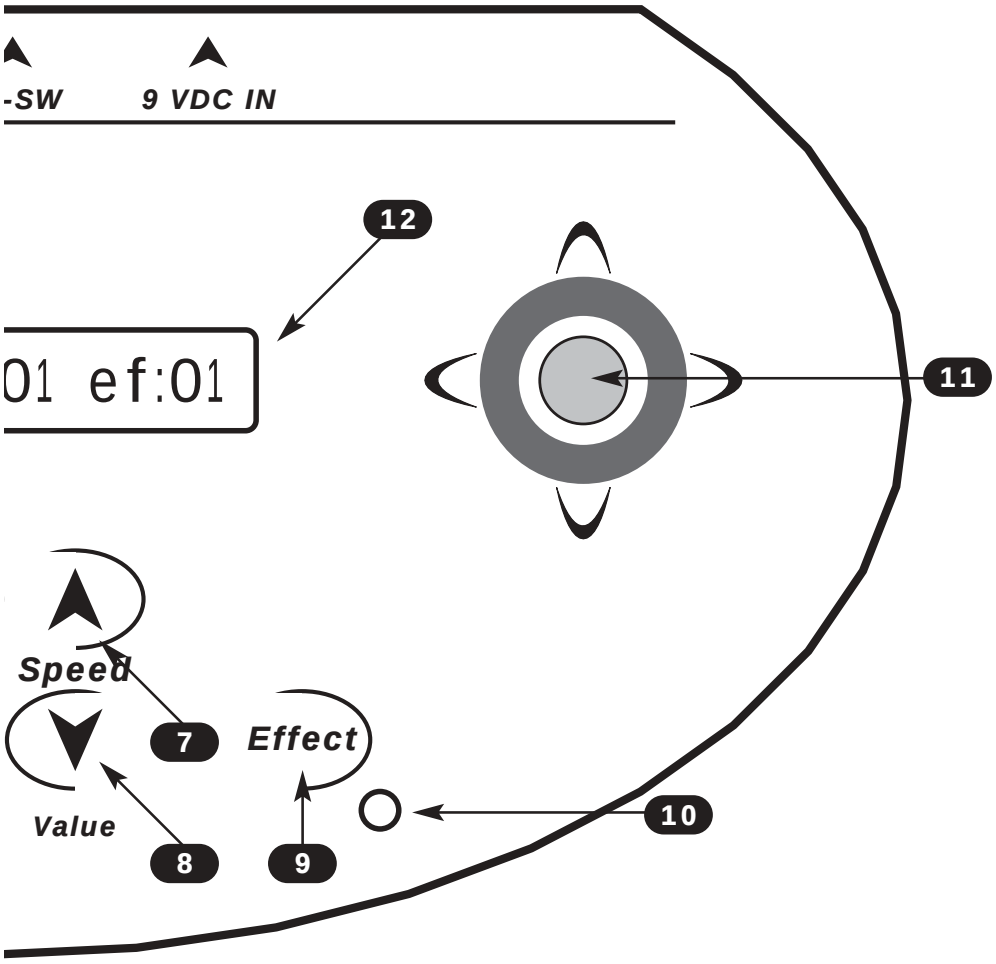
6 **Key** to **decrease** the speed of the step / in edit step change channel

7 **Key** to **increase** the speed of the effect / in edit step change value

8 **Key** to **decrease** the speed of the effect / in edit step change value

9 **Key** to **change effect, for 2 second pressed** activate ***BLACKOUT***

10 **Effect** led



11 **Joystick**: it allows an easy positioning of the unit.
Up / down scroll menu, on the right select the item visualized and up / down adjust the values.

12 **Lcd display**

1.2 UNPACK MC2

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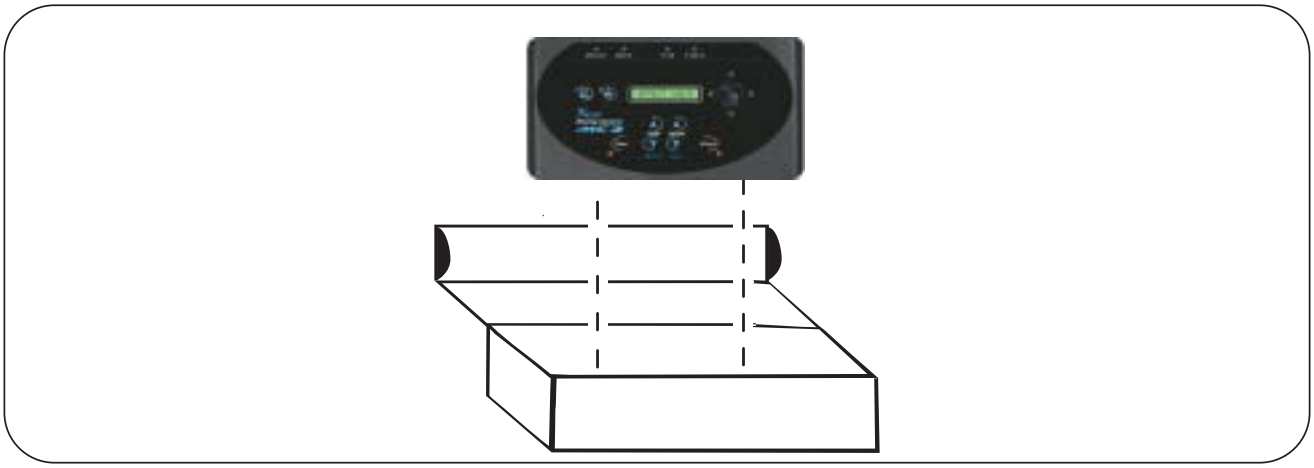
Open the box; take the AC adapter and the documentation out.

Take the equipment out of the box as shown in the picture below.



1.3 ACESSORIES AND DOCUMENTATION PROVIDED WITH THE EQUIPMENT

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

- **MC2**
- **User's manual.**
- **Warranty**
- **1 XLR 5 P male connector**
- **1 XLR 5 P female connector**
- **1 AC adapter mod.1814807**
- **1 Cable male / female RS 232**

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

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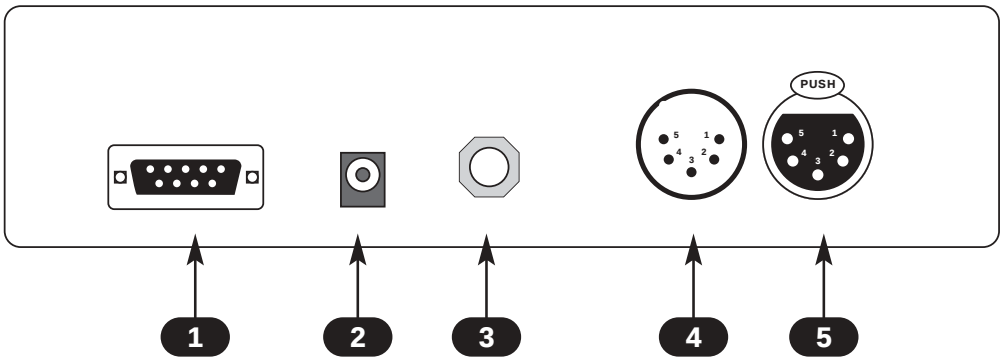

1 **RS232 signal INPUT.**

2 **9 Vdc power INPUT.**

3 **Stereo jack connector for 2 foot-switches to change step and effect**

4 **Standard DMX 512 signal INPUT with a 5-pin cannon connector.**

5 **Standard DMX 512 signal OUTPUT with a 5-pin cannon connector.**

2.2 INPUT CONNECTION FOR POWER SUPPLY

Plug the connector of the ac-adapter completly in the power input **2**
To disconnect it, extract gently.

ATTENTION: do not use ac-adapters different from the one supplied, it could cause serious damages at the internal circuitation.

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.

Fig. 1

The supplied ac-adapter has a plug, therefore you should only plug it in the socket.

When **MC2** is powered, the lcd display appears as in (Fig.1), if this condition is not true, please check if there is power in the electric socket or check the connection between ac-adapter / controller and ac-adapter / electric socket.

If the problem persist, please consult your dealer.

2.4 DMX 512 OUTPUT CONNECTION

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Make sure you are using shielded twisted cables suitable for the transmission of the DMX 512 signal with connectors of good quality.

Plug the 5-pin XLR connector coming from the unit completly in the DMX 512 output **5**

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 DMX 512 INPUT CONNECTION

Plug the 5-pin XLR connector coming from the light desck completly in the DMX 512 output **4**

You can control the channels of the units through the fader of the light desk.
When you edit units the first 48 channels come acquired from the connected light desk The PAN and TILT channels are controlled through joystick of the MC2.

In the normal operation (without light desk connected) the first 48 channels are passing and could be used like dimmer channels.
The unitis must depart from address 49.

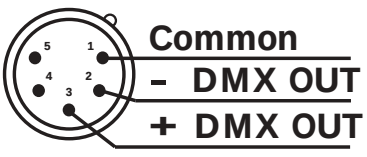
2.6 MAKING A DMX 512 SIGNAL CABLE

MC2 has a **DMX 512** input / output that uses standard **XLR 5-pin** connector
The connection must be done with cable shielded by these characteristics:

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

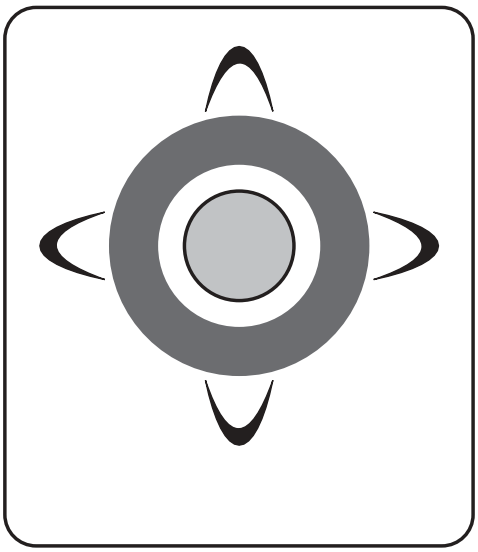
For the connection do reference to the figure.

XLR 5-pin



3.1 USE OF THE JOYSTICK

The **joystick** of the MC2 has more functions (Fig. 8)



Up / down: Scroll the menu
Right : Select the menu
Up / down: Regulate the values
Right : OK

Using the **joystick** the PAN and TILT channels of the scanner's mirror and moving heads can be adjusted.
The **joystick** type is with central return, thanks to the sophisticated software of management, it allows an easy and exact positioning.
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.

3.2 FIRST USE OF THE UNIT

MC2 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. (see.par.4.1)
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. (see.par.4.3)

4.1 LOAD ***UNITS*** *FROM LIBRARY*

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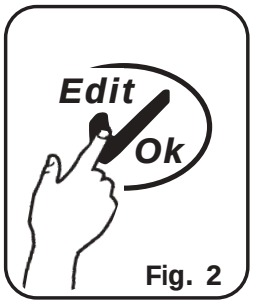


Fig. 2

To activate the function **LOAD FROM LIBRARY**:

1) Press for more than 2 second the ***Edit*** key (Fig. 2) up to the lcd write **edit loop 01**

2) With the **joystick** up / down find **DEFINE UNITS** , press **Ok**

3) The lcd write **No OF UNITS:xx** , press **Ok**

4) With the **joystick** up / down set the connected units, press **Ok**.

5) With unit of the same type through the **joystick** up / down find **edit all UNITS** then press **Ok**

6) With different unit through the **joystick** up / down find **edit unit 01** then press **Ok** two times.

7) The lcd shows the name of the projector currently in use

8) With the **joystick** down find **load from lib.** press **Ok**, the lcd shows the name of the first projector contained in the memory

9) With the ***Speed*** up / down keys or the **joystick** choose the unit that corresponds to the model in use, to search in alphabetical sequence use ***Rate*** up / down keys

10) Press **OK** to store in memory the **fixture**

11) Press **Back** the lcd write **save? YES** press **Ok.**

12) With different unit repeat the operations from the point 7, through the **joystick** up / down change unit and press **Ok** at the end press **Back**

13) With the **joystick** up / down find **patch UNITS**

14) The lcd write **auto patch!** press **Ok.**

15) With the **joystick** up / down check the assigned values . The first unit departs from address **49**, **MC2** will calculate the last channel for that unit and the lcd write the configuration to set on the unit.

16) To modify the address press **Ok**

17) With the **joystick** up / down set the new address then press **Ok**

18) To go out from the menu press **Back** more times

4.2 MENU: ***DEFINE UNITS***

Description of the menu DEFINE UNIT

no. of units 01	To set how much unit are present, from 01 to 20 max
edit all units	To modify the fixture of all the present units and load from library
edit unit 01	To modify the fixture of 1 unit and load from library
patch units	To patch unit automatic or manually

4.3 MENU: ***EDIT DMX CHANNELS***

This function allows to modify manually the name of each channel and its parameters (reset value, blackout value) it also allows to assign special functions to the channel (pan / tilt,pan low / tilt low, lamp control dmx in). ATTENTION ! MODIFICATION OF THE SETUP PARAMETERS, IF NOT EFFECTED IN AN APPROPRIATE WAY, PREVENTS THE CONNECTED UNIT TO WORK CORRECTLY.

To activate this function you need to repeat the operations up to the point 7, in the **MENU *DEFINE UNIT*** functions (v.par.4.1), and after the lcd shows the name of the unit previously loaded.

<u>To modify unit name:</u>
1) Press **Ok**
2) To modify the first letter of the unit use the **joystick** up / down
3) To modify the second letter of the unit use the **joystick** right at the end press **Ok**

<u>To modify the number of the channels</u>
1) With the **joystick** up / down find **max channel: xx**
2) Press **Ok**
3) With the **joystick** up / down set the channels (max 48)

<u>To modify the name of the channels</u>
1) With the **joystick** up / down find **ch01 : xxxx**
2) Press **Ok**
3) With the ***Speed*** up / down keys or the **joystick** choose the name to change, to search in alphabetical sequence use ***Rate*** up / down keys then press **Ok**
4) Repeat the operation for the other channels

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.
DMX-IN -> Control channel for external light desk

Only if the **LAMP** or **LAMP / RES** channel is selected; press **OK** to modify **LAMP ON** value. Press **OK** again to modify **LAMP OFF** value.

4.4 CREATION OF A ***STEP***

MC2 has 340 STEP these are static scenes.
To execute them in succession create Loop without effects, with no active units in the effect or associate effects with shape (OFF) for PAN and TILT. (v.par 4.6)

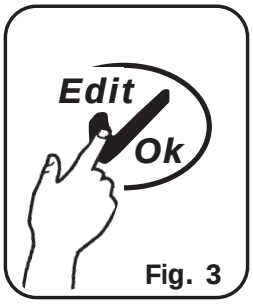


Fig. 3

To create ***STEP 001***:
1) Press for more than 2 second the ***Edit*** key (Fig. 3) up to the lcd write **edit loop** 01
2) With the **joystick** up / down find **edit step** 001 , press **Ok** two times
3) With unit of the same type through the **joystick** up / down find **select all** UNITS, press **Ok**
4) With different unit through the **joystick** up / down find **edit unit** 01, press **Ok** two times
5) With the ***Rate*** up / down keys or the **joystick** find the channel, press **Ok**
6) To modify channel use ***Speed*** up / down keys or the **joystick**
7) To select next / precedent channels use ***Rate*** up / down keys
8) Press **Ok** to create the step then **Back** the lcd shows **save?** YES, press **Ok.**
9) Repeat the operations to create the other step

4.5 MENU: ***EDIT STEP***

Description of the menu EDIT STEP

select all units	To select all units
select unit 01	To select unit 01
select dimmers	To select dimmer channel from 1 to 48
locate all!	To locate all the unit
erase step!	To erase the step
run effect: next	To associate the effect to the step in Syncro mode

4.6 CREATION OF AN ***EFFECT***

MC2 is endowed of 96 plays movement 12 are pre-programmed, (modifiable) dedicated to the scanner and moving-head

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

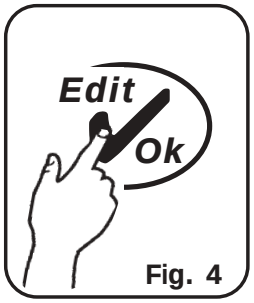


Fig. 4

To create ***EFFECT 013***:

1) Press for more than 2 second the ***Edit*** key (Fig. 4) up to the lcd write **edit loop 01**

2) With the **joystick** up / down find **edit EFFECT 01** , press **Ok**

3) With the **joystick** up / down find **edit EFFECT 13** , press **Ok**

4) The lcd shows **pan motion** , press **Ok**

5) The parameters that the operator could vary correspond to:

shape >off<	Shape: OFF (no effect) Circle, Hola, Ladder, Square, Vertex, and Zigzag
figure size 020	Dimension of the shape (from 1 to 128)
speed (rpm) +15	Speed and direction of the shape (from -60 to +60)
phase angle 000	Corner of departure of the shape (from 0 to 359).
delay angle 015	Delay of execution of the shape between an unit and the next (from 0 to 359).

6) To modify parameter press **Ok** with the **joystick** up / down set new value, press **Ok**

7) Press **Back**

8) Repeat the operations for **tilt motion** if you want effect for ***TILT***

9) With the **joystick** up / down find **active unis!** press **Ok select all!** press **Ok**

10) To go out from the menu press **Back** more times

4.7 MENU: ***EDIT EFFECT***

Description of the menu EDIT EFFECT

pan motion	To create effect for x movment
tilt motion	To create effect for y movment
active units	To select what unit must have the type of effect, the step is in stop without unit selected

The Loop assembles the step and the effect

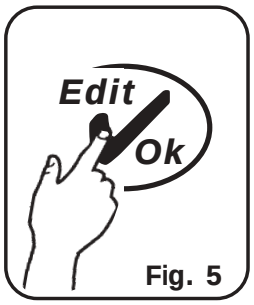


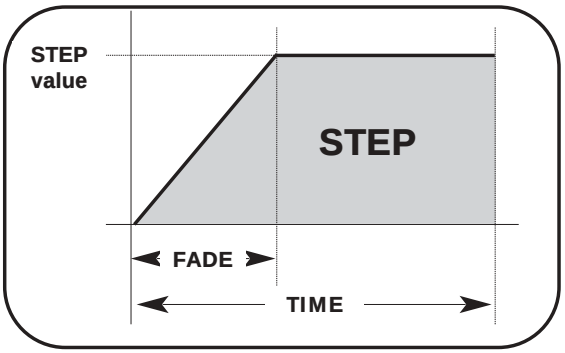
Fig. 5

To create ***LOOP 01***:
1) Press for more than 2 second the ***Edit*** key (Fig. 5) up to the lcd write edit loop 01
2) Press Ok two times.

3) The parameters that the operator could vary correspond to:

first step 001	To select the first step of loop
last step 001	To select the last step of loop
first effect 01	To select the first effect of loop
last effect 12	To select the last effect of loop
next loop is 02	To set the next loop
step time 002s	To set the total time of the step, the value is in seconds from 0,2 to 600, (see fig.under)
step fade 050%	To set the time of transition of the step, the value is express in percent from 0 to 100%, (see fig.under)

4) To change value press Ok with joystick up / down set new value, press Ok
5) Press Back
6) To go out from the menu press Back more times



Description of the menu MAIN MENU see fig. 6
To run menu use joystick up / down, to modify use joystick right.

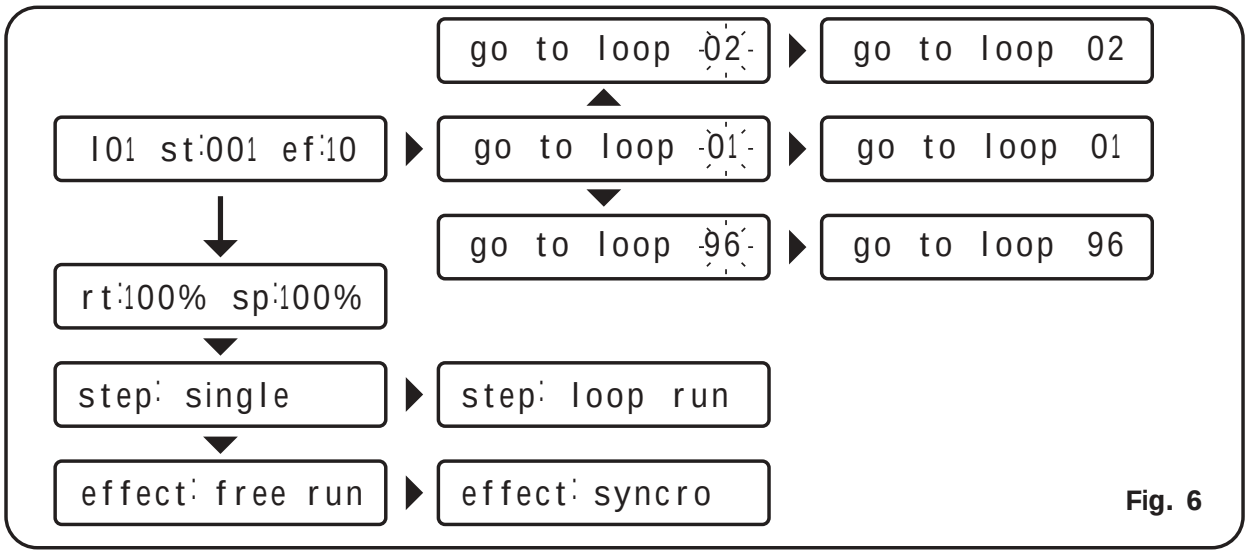


Fig. 6

l01 st001 ef10	Indicate the state of loop 01 step 001 effect 10
rt100% sp100%	Indicate the step and effect speed, use ***Rate*** up / down and ***Speed*** up / down keys to change the values
step: single	You must press ***Step*** key to change step
step: loop run	Executes the step specified in the loop, one after the other with the times set in the loop
effect: free run	You must press ***Effect*** key to change effect
effect: syncro	Change the effect to each change of step, with run effect next go to the next step, with run effect 01 the step is associated to the effect. In this mode of operation the ***Effect*** key also works
l01 st001 ef10 ▶ go to loop 01	Allows to change loop between the 96 available

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

1) Disconnect the DMX and power in cable.
2) Connect the RS 232 cable (included) from the MC2 to the RS 232 of the Computer
3) Start a program of terminal emulation and to set the communication like:
115200 bps, 8 data bit, no parity, 1 stop bit.

With **Miicrosoft Windows®** system
start the software **Hyper Terminal** (Start> Programs> Accessories> Communications
4) Set the connection like in **fig. 7 - 8 - 9**
5) Press at the same time ***Rate*** up and ***Speed*** up then connect the power plug, the lcd write **RS232 HOST LNK!**

5) In the monitor of Computer appears the Menù see **fig.10**
Press (**Computer Keyboard**) the number of the desired function.

6) 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 **mc2_set.bak**

Fig. 7

Fig. 8

7) Press **2** to restor the data of programming;
You must select from the menù **Transfer> Send file**. search the file with **mc2_set.bak** name, set **Ymodem** protocol then click to **Send**.

8) Press **3** to update setup library; you must select from the file menù **Transfer> Send file**. search the file with **mc2_lib.bin** name **(downloaded from internet)**, set **Ymodem** protocol then click to **Send** see **fig.11**

9) Press **4** to exit.
Close the application and disconnect the cable.

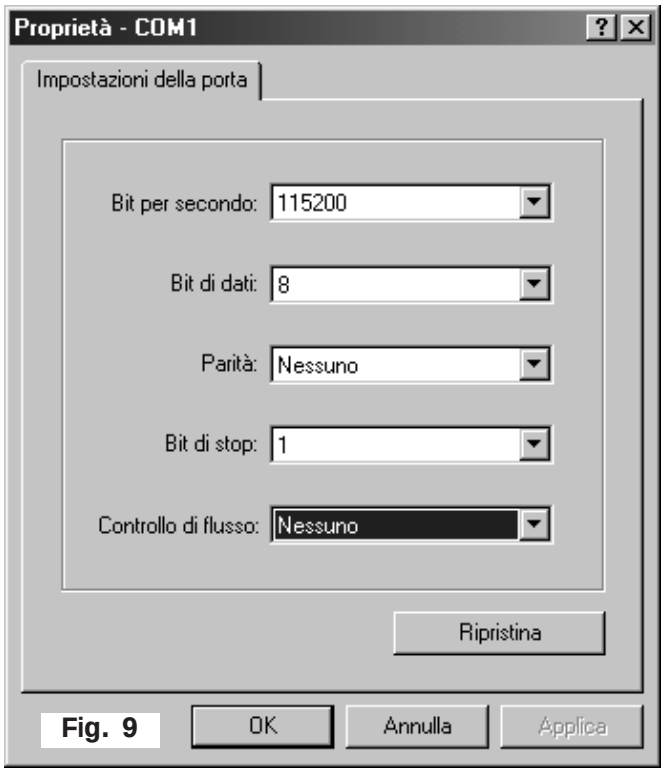


Fig. 9

Fig. 10

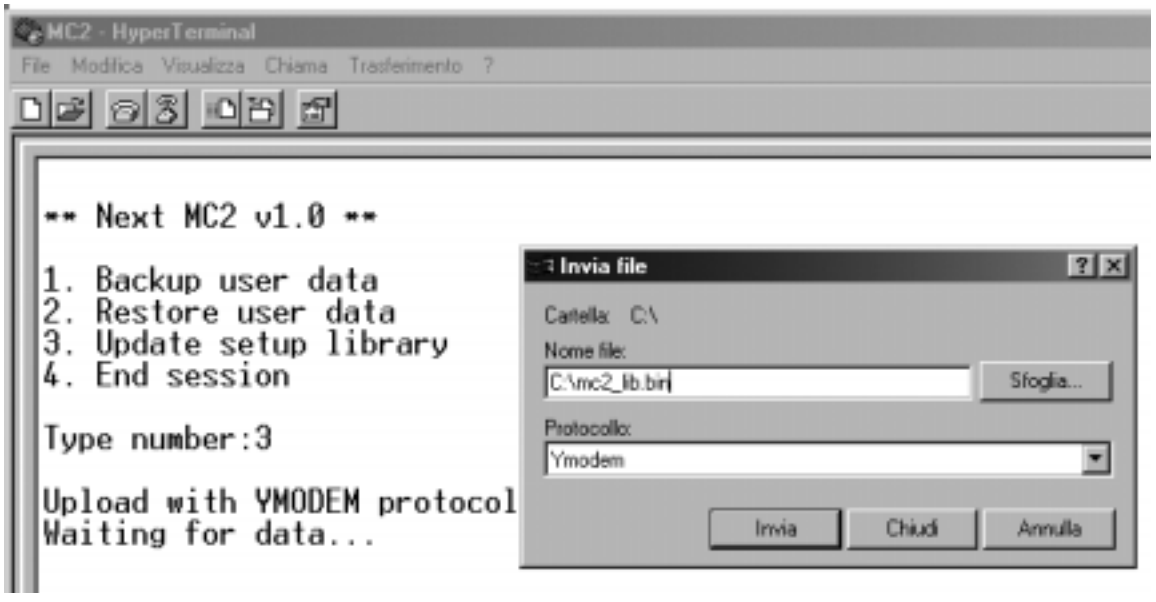
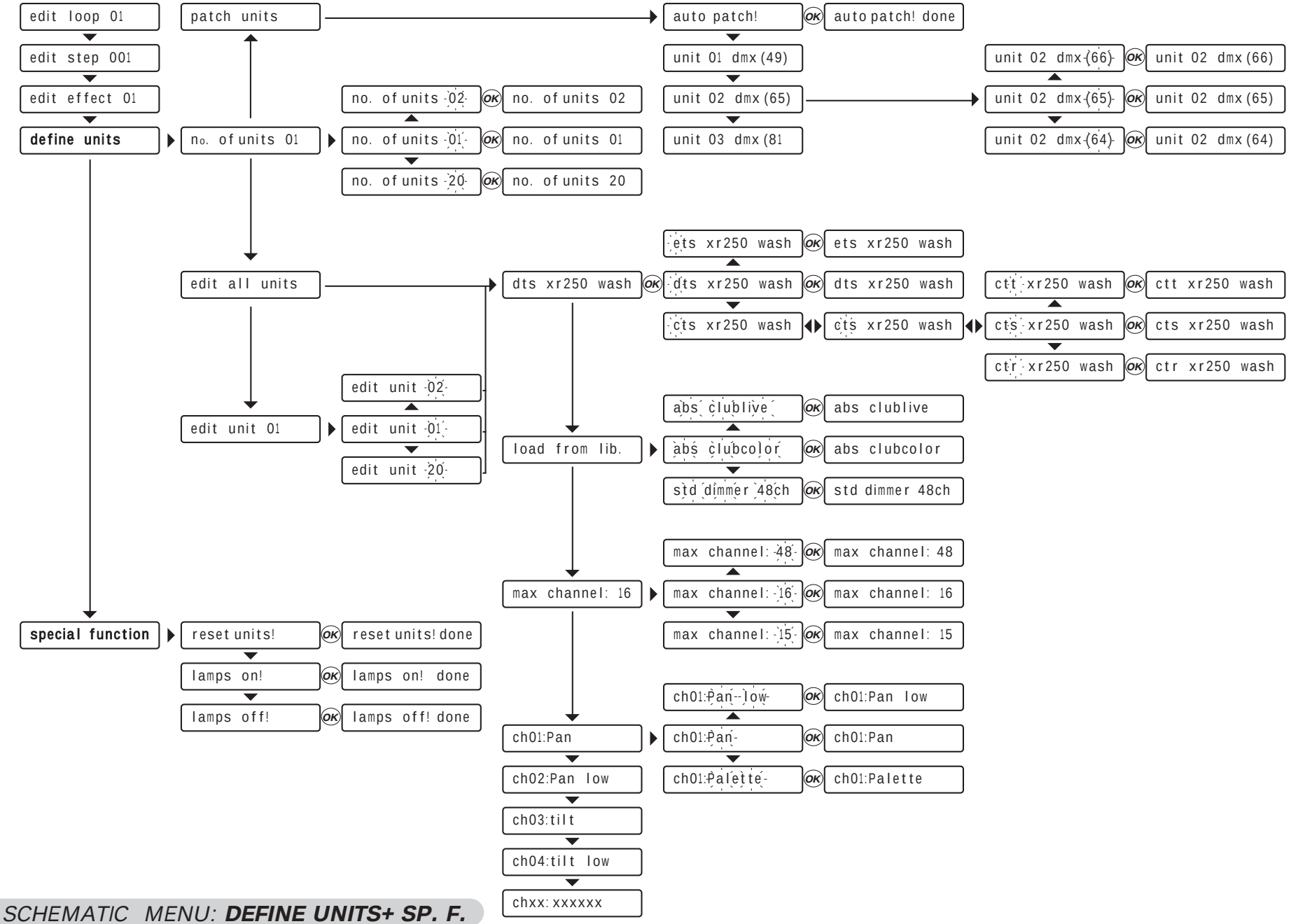
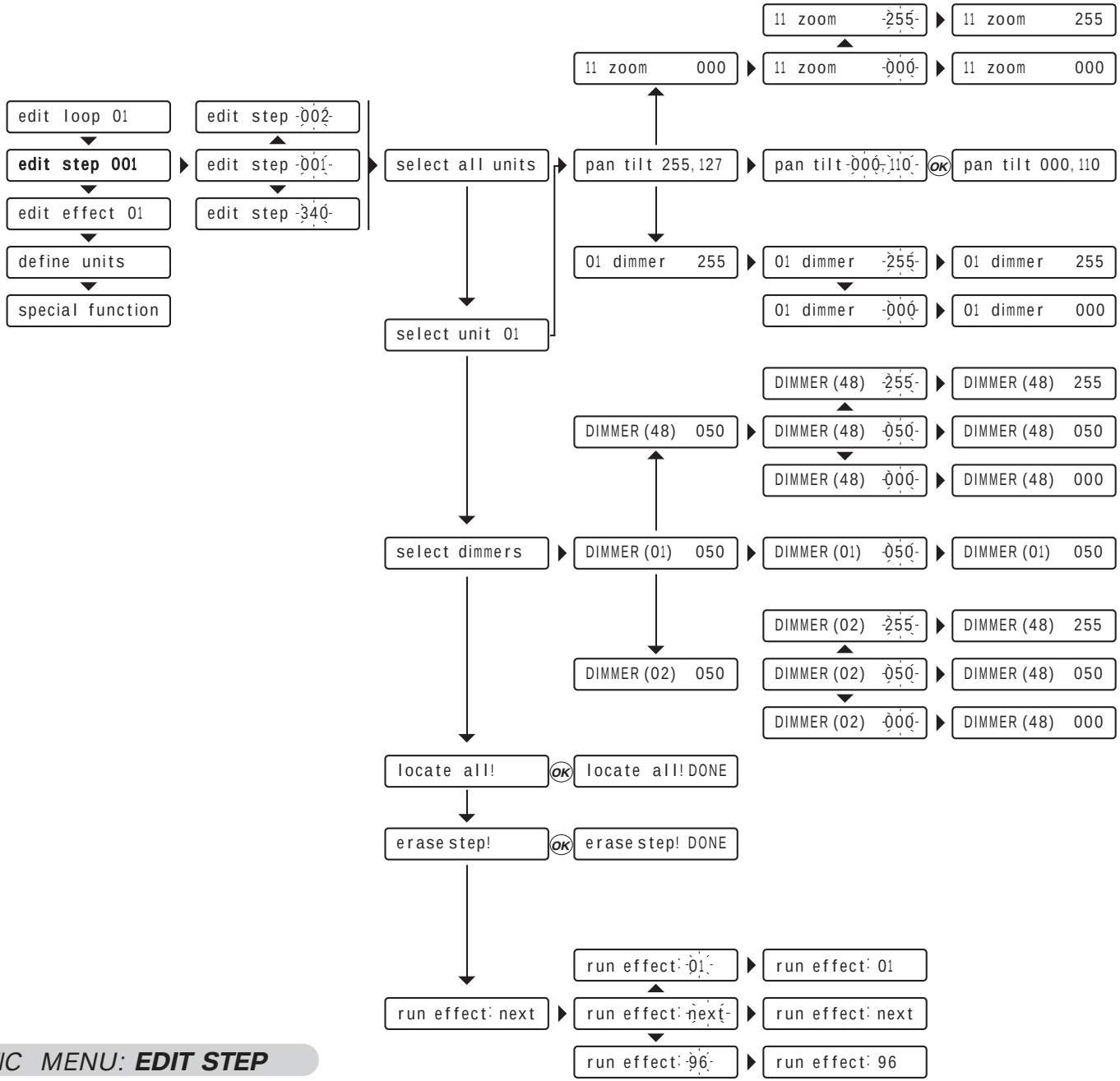


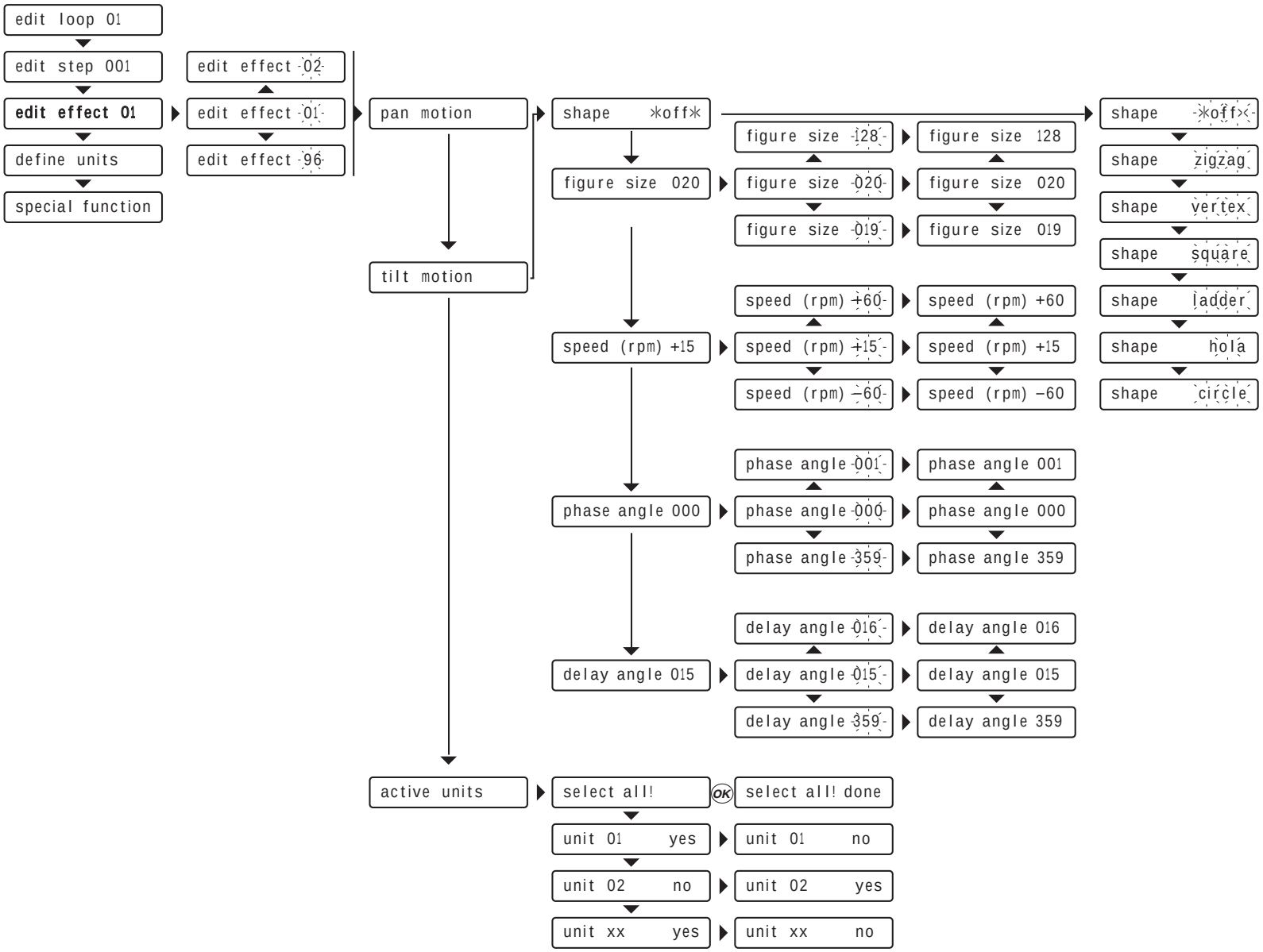
Fig. 11



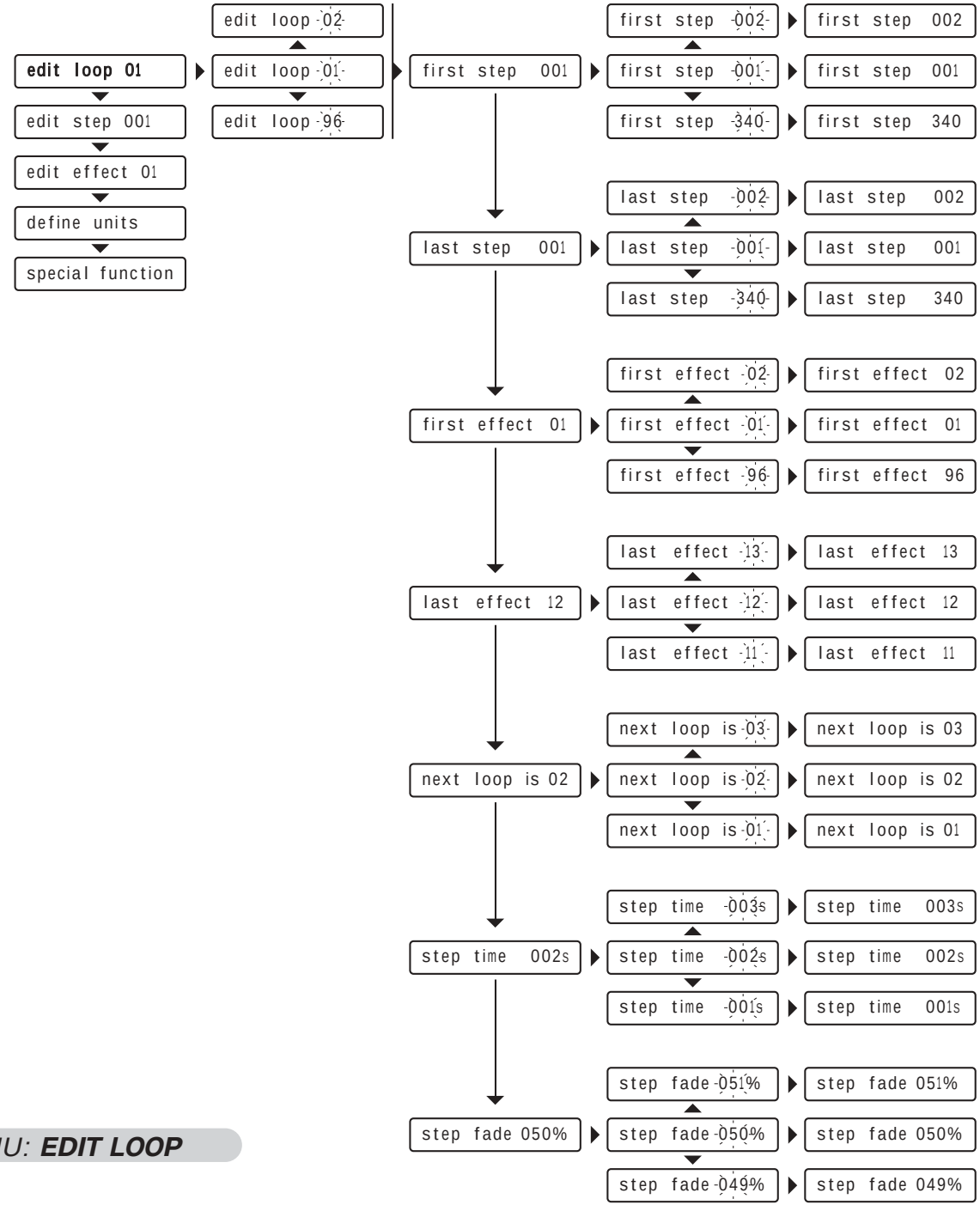
5.1 SCHEMATIC MENU: **DEFINE UNITS+ SP. F.**



5.2 SCHEMATIC MENU: ***EDIT STEP***



5.3 SCHEMATIC MENU: ***EDIT EFFECT***



5.4 SCHEMATIC MENU: ***EDIT LOOP***

MC2 TECHNICAL FEATURES

- Individual control of up to **20 DMX 512 units.**
- **48 DMX channels** for **each unit.**
- **512 DMX** configurable **channels** for **intelligent units** and **dimmers, 48** channels (maximum) for **dimmers**.
- **340 programmable steps**
- **96** Built in editable **effects** for **PAN** and **TILT 8 / 16 bit**.
- **96** programmable **loops** for **step** and **effect** sequences**.**
- **RS-232** for connection with a PC.
- **DMX 512 / 1990 standard output** (5-pin female “XLR” connector).
- **Display LCD**.
- Ability to use an external **DMX** controller for **Edit** and **Live** functions**.**
- **Compatible with every DMX 512 unit (max 48 channels)**
  - Programmable channels name and function.

Climatic condition for the use

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

Dimensions and weight

Dimension (W x L x H) / Weight: **287 x 132 x 40 mm (4U rack) / 2 Kg.**

Note

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