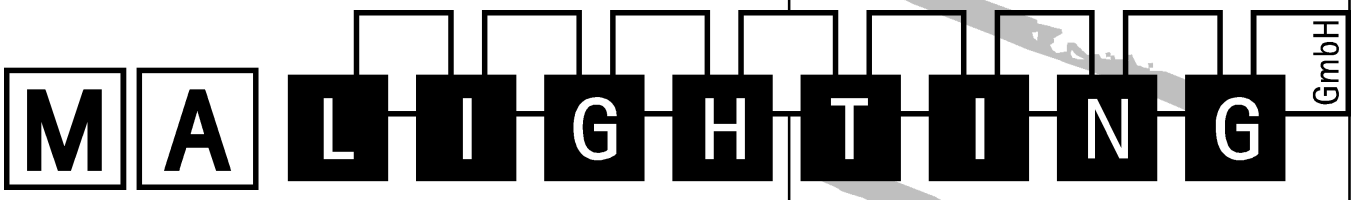


grandMA

User's Manual

Version 2.10

MA LIGHTING GmbH

grand MA

User's Manual

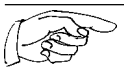
Version 2.10
September 2000

Contents

Explanations

➠ see

Important!
Attention!



Information
Note

1 Introduction

1.1 General Information

Combining an approved concept of operation, an outstanding product design and first-class quality with a bundle of new ideas and top technology, this new board opens the door to a fascinating world of new dimensions, offering the opportunity to gain perfect control on extended lighting shows involving lots of channels and intelligent fixtures.

MA users will feel very familiar with *grandMA* from the very beginning. The basic operation modes, well known from the Scancommander, proved to be the perfect tools to control intelligent fixtures and are now the leading standard of the industry. Of course, there are have been quite a few improvements as controlling hundreds of channels asks for intelligent solutions on time consuming operations, but essentially, the *grandMA* is still an MA console – easy to operate, yet very powerful.

1.1.1 Displays

The first remarkable features of the *grandMA* are the contrast-rich, full color TFT touch screens integrated into a panel with adjustable viewing angle. Optionally supported by two external monitors they allow for perfect control and multiple visualisation of group and preset operations, interactive output displays and different ways of cue listing.

Colors and gobos can diretly be selected by labeled preset buttons and allow for a fast and accurate control, while the encoders can be used anytime for the fine tuning. By way of presets, stored positions can quickly be adjusted to changed arrangements.

1.1.2 Motorfaders

How can a console like the *grandMA* with just 20 faders (10 on the *grandMA light*) possibly claim to control 4000 channels? It's not a trick, it's motorised faders. They automatically capture the actual values as soon as you switch over from one program library to another. Further special features are explained in the respective chapters following.

1.1.3 Programming features and data input

At first, the flexibility of the *grandMA* may surprise, but you have always the choice to do it "the old fashion way". Dealing with huge amounts of data will make you want to use improved ways of programming and even of an automatic effect synthesizer.

1.1.4 Flexible Setup configuration

Despite the *grandMA*'s high flexibility, you will never lose direct access and control. View Macro buttons allow to visualise current information at anytime. Standard displays for typical Live Event, Theatre, synchronised playback or Discotheque applications are some of the settings you can start from.

1.1.5 Hardware and Interfaces

The built-in Hard Disk Drive offers virtually unlimited storage capacity. The built-in flashdisc contains the board's software and makes the *grandMA* independent from any external PC.

1.2 General Comments

This manual describes the complex possibilities th*at* the *gra*n*dMA* has in store for you. Step by step, you will be guided through the logical aspects of working with this console.

You will soon find out, that operating the *grandMA* is relatively simple in view of the vast variety of features and options available. Once you are familiar with the basics, you will realise that you can easily go ahead and try out new possibilities, as all procedures and operation modes are clearly structured.

Consequently, this manual starts with a general introduction, followed by basic settings within the Setup menu, such as selecting fixtures and dimmer channels with DMX address, modifications, etc.

Chapter 3 is dedicated to the practical aspects of setting up a Show, while Chapter 4 will show you how to create and edit Cues and Sequences. Moving on to Chapter 5, you will learn how to execute Cues, Sequences and Chasers. In Chapter 6, you will learn how to create, save and execute effects. Chapter 7 is dedicated to the Remote Control (abbreviated as "Remote"), while Chapter 8 explains the function of Macros and the Quikey. Chapter 9 will deal with saving and loading your show.

We are convinced that you will enjoy working with the *grandMA* and we wish you every success for your Shows!

1.3 Specifications

1.3.1 Capacities

- 2048 control channels (HTP or LTP) with 8 or 16 bit resolution, also available with 4096 channels (optional)
- Virtually unlimited number of presets, memories, cue lists and effects

1.3.2 Ergonomics

- full colour TFT touch screens with a wide angle of view and 2 external monitors (optional)
- encoders for display setting, 5 master encoder for data entry
- 20 (10) motor faders and extra silent GO+ and GO– Buttons
- Numeric keypad plus standard keyboard and mouse (only with *grandMA*)
- Trackball

1.3.3 General user functions

- Permanent access to single units or groups
- Fixture library with update option via Internet
- Selective programming for free combination of memories and effects
- Free switching between stage-orientated movements and DMX control (not yet available in version 2.10)

1.3.4 Hardware

- 2 GB Notebook Hard Disk Drive and 3,5" Floppy Drive
- 12 MB flash memory for self-contained operating system
- Protection against radio interference (CE-Norm)
- Inputs: MIDI, Sound, Remote Go, SMPTE, Analogue (+10 V), DMX 512
- Output: 4 Times DMX 512, MIDI, Printer, Ethernet
- Full tracking backup and sync mode with second unit

1.3.5 Weights and dimensions

***grandMA*:**

- Width 48", height 6", depth 26" (1200 x 150 x 670 mm)
- Weight 104 lb. (47 kg) without flightcase

***grandMA light*:**

- Width 00", height 0", depth 00" (730 x 120 x 510 mm)
- Weight 000 lb. (21 kg) without flightcase

1.4 Installation

90–230 Volt, 40–60 Hz via Euro plug. No switching of voltage necessary.

DMX output: Complies with USITT DMX 512 (1990) protocol. The output is opto-insulated and exceeding RS 485 or RS 422. The pins in the 5 pin XLR plug are: Pin 1: ground, Pin 2: Data–, Pin 3: Data+ (pins 4 and 5: not used)

1.5 Safety Requirements (Important, read carefully!)

1.5.1 Touchscreen

Never use any sharp items when operating the touchscreens! Deep scratches will damage the screen. During operation it might happen that due to temperature fluctuations the calibration of the touchscreens will change, so that a new adjustment will be necessary. ➠ **2.10** Settings in the Setup Menu (point 1)

1.5.2 Sockets for keyboard and mouse

These sockets are located on the back side of the unit and are very delicate; especially during transport, take care that these parts are not subjected to mechanic stress.

1.5.3 Transportation/Case

During transport, take care that the touchscreens are not subjected to mechanical stress. Flightcases not provided by MA Lighting have to be designed in a way that **under no circumstances** pressure can be exerted on the TFT displays.

1.5.4 Panel (*grandMA* only)

If the mechanical parts of the display panel have not been moved for a while (about one day), it might occur that you will feel a stronger resistance when starting to change the angle. This is just normal and related to the mechanics.

1.5.5 Battery

In case of power failure, the console offers (with fully charged battery) an emergency backup of at least 10 minutes. In case of a longer power failure, the console will automatically switch off after approximately 3 minutes or when pressing CONTINUE. In **this case**, the console will **save any data**, unless programmed to do so.

When switching off the unit via **built-in power switch**, all data of the current show are saved automatically.

In case of an automatic switch-off after power failure (described above), the unit must be running again for **at least** 10 minutes, in order to guarantee a proper SAVE procedure the next time the unit is switched off. **By ignoring this advice the harddisk will be damaged.**

The battery needs approximately 4–8 hours for a full recharge, i.e. allow for 10 minutes full back-up in case of power failure.

According to manufacturer provisions, the battery has to be changed **after 5 years at latest**. Please attach a label on the unit, indicating the date of purchase, preferably update data etc. (choose a location, where this information can easily be seen). (This manual was printed in the year 2000.)

1.5.6 Harddisk

During operation, do not push or knock on the unit.

Although the built-in notebook harddisk is secured by a rubber-upholstery, mechanical stress can still damage the unit and lead to e.g. a complete loss of data.

1.5.7 Housing

- Do not block or cover the ventilation. On hot summer days, the lid (*grandMA* only) should be at least 5 cm open, to ensure sufficient ventilation.
- Do not place any drinks on the unit.
- Do not use force when adjusting the viewing angle of the display panel (*grandMA* only).

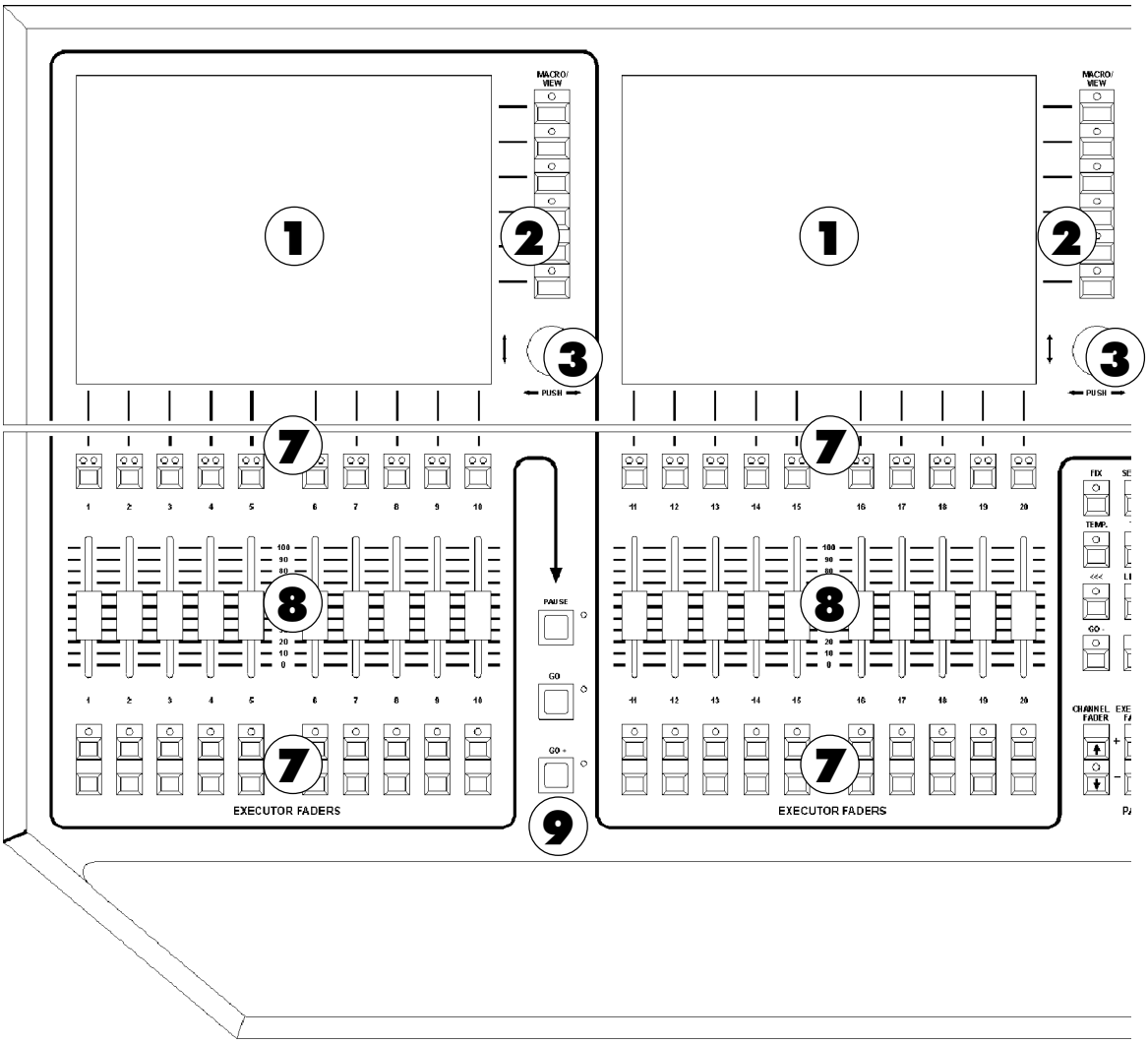
1.6 General Safety Instructions

1. Read all the instructions in the user's manual, especially the safety requirements ➠ **1.5** Safety requirements
2. Keep the user's manual for later use.
3. Follow all cautions and warnings indicated on the unit.
4. Pull the mains plug before cleaning the unit; don't use any liquid or spray cleaner. Clean with a dry cloth.
5. Do not use the unit nearby water. Do not expose it to a humid environment. Do not spill any liquid over the unit.
6. Do not block or cover the ventilation slots in the housing - they guarantee the reliable functioning of the unit and protect it against overheating. Do not install the unit into a frame unless sufficient ventilation is guaranteed.
7. Do not stick any objects through the slots of the unit, as these could make contact with live parts or could cause short circuits. This may cause fires and electric shocks.
8. Do not place the unit on unstable surfaces. It might fall down and be damaged.
9. The unit is provided with a safety plug. This plug can only be used with safety sockets. These precautions should by all means be followed. If the plug should not fit into a given socket (e.g. the case with old sockets), the socket should be replaced by an electrician.
10. Do not place any objects on the power cord and protect it agains inadverted stepping on it.
11. If using an extension cord, make sure the rated output of all units connected in aggreate does not exceed the maximum rated output of the extension cord. The rated output of the units plugged into the socket should in aggreate not exceed 10 amperes.
12. If the power cord or the mains plug is damaged, let a qualified technician replace it immediately.
13. Only use power cords which are marked as safety-proof.
14. The unit should be serviced by qualified personnel only, as live parts may be exposed when opening and/or removing coverings; besides others, you run the risk of suffering an electric shock.
15. All service work should be exclusively performed by qualified service technicians.
16. Do not use any high-power walkie-talkies or cellular phones near the unit.
17. If one of the following conditions occurs, **please pull the mains plug and call the customer service!**
    - Power cord or mains plug is damaged or worn.
    - Liquid penetrated into the unit.
    - The unit was exposed to rain or high ambient humidity.
    - Having observed all regulations, the unit would not function properly. Do only manipulate the controls mentioned in the instructions, as wrong settings on other controls may damage the unit; all too often, it is very time-consuming to have damaged parts repaired by a service technician.
    - The unit fell down and the housing was damaged.

Please note that this console is based on complex software and as you probably know from computer experience, software crashes can occur on occasion. But be assured, that we will do our best to keep them rare exceptions.

1.7 Layout and Controls

1.7.1 Layout and Controls *grandMA*



1 **TFT-Display** with Touchscreen

2 **View / Macro buttons**

3 **Encoders** – To move/scroll the respective window contents

4 **Encoders** – To set the attribute values such as Gobo, Pan/Tilt, times etc.

5 **Manual Time Setting** for Presets

6 **Yellow Knob** - To adjust the Touchscreen Panel

7 **Playback buttons** – Can be defined e.g. as Go+, Go–, Pause, Flash etc.

8 **Executor faders** – Can be defined e.g. as Master, Swap Master, X-Fader etc.

9 **Go+, Go–, Pause buttons** – Only effective for the default sequences. Default sequences can be assigned to the buttons using the ***Select button*** (recognisable by the green title bar of the small EXECUTOR window above it).

10 **Select button**

11 **Buttons** – To directly process Go+, Go– etc. for any Executor, or to lock Executors

12 **Page change-over – For Channel faders, Executor faders and Executor buttons**

13 **Executor buttons** (see also ➠ ***Executor-Fader*** (8))

15 **Select –** Cues, Groups, Executors etc. in combination with numeric keypad

14 **Manual Timing** – Setting for Executor-Buttons

16 **Blind, Freeze, Clear buttons**

17 **Blackout button** for dimmer channels

18 **Grand Master** for Dimmers channels

19 **Numeric keypad**

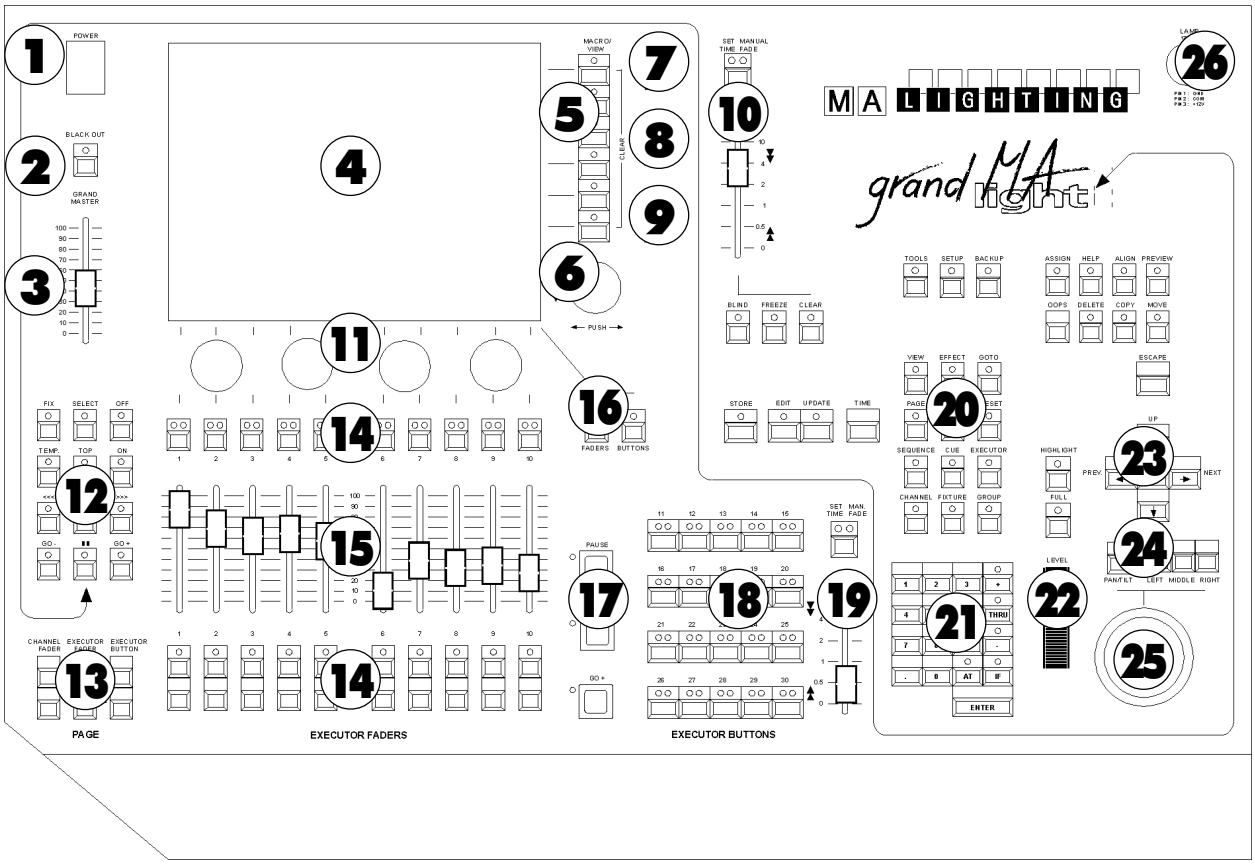
20 **Intensity wheel**

21 **Cursor buttons** NEXT, PREV. Choosing Fixtures or Channels one by one within Groups.

22 **Trackball** for Pan / Tilt


1
2
3
4
5
6
10
11
12
13
14
15
16
17
18
19
20
21
22
grand MA
MA LIGHTING
PUSH TO ERASE
PUSH
EXECUTOR BUTTONS
PAGE
TRACKERBALL ON
ENTER
THRU
UP
DOWN
PREV.
NEXT

1.7.2 Layout and Controls *grandMA light*



1 **Power switch**

2 **Blackout button** for Dimmer channels

3 **Grand Master** for Dimmer channels

4 **TFT Display** with touch screen

5 **View / Macro buttons**

6 **Encoder** for moving / scrolling the respective window contents

7 **Viewpool button** for opening a selection with all created VIEWS on the display. These can be called up directly by selecting the respective ones.

8 **Background button** - If on the TFT display, Views are being overlayed by a menu (ASSIGN, EDIT, ...), you can use this button to bring up or hide the menu.

9 **Keyboard button** to bring up the Soft Keyboard on the TFT display.

10 **Manual setting of times** for Presets

11 **Encoder** for setting the attribute values (e.g. Gobo, Pan/Tilt, times, etc.)

12 **Buttons** to directly execute functions like Go+, Go-, etc. for arbitrary executors, locking executors, SELECT button

13 **Page flipping** for Channel fader, Executor fader and Executor buttons

14 **Playback buttons** can also be defined as e.g. Go, Go-, Pause, Flash, etc..

15 **Executor faders** can also be defined e.g. as Master, Swap Master, X-Fader, etc..

16 **List buttons**
Faders: will bring up small Executor windows for the EXECUTOR FADERS.
Buttons: will bring up small Executor windows for the EXECUTOR BUTTONS.

17 **Go+, Go–, Pause button** – Will only take effect for the default sequences. A default sequence can be assigned to buttons by using the ***Select button*** (indicated by the green title bar in the small EXECUTOR window displayed above.).

18 **Executor buttons** can also be defined as e.g. Go, Go-, Pause, Flash, etc..

19 **Manual setting of times** for Executor buttons

20 **Choosing** Groups, Executors, etc. in combination using the numeric keypad

21 **Numeric keypad**

22 **Intensity wheel**

23 **Cursor buttons** NEXT, PREV. Groupwise Calling up of scanner or dimmer channels one after the other.

24 **PAN / TILT button,** switching over of the trackball function for mouse function (LED off) or Pan / Tilt function (LED on)

Left / Middle / Right button for Mouse function

25 **Trackball** for Mouse or Pan / Tilt function

26 **Socket for console lamp** 12V/5W

1.7.3 *grandMA light*: Differences to the *grandMA*

The software for the *grandMA light* and the *grandMA* are identical.

The product will not be deliverd with a hardware keyboard and an external mouse. An additional external keyboard and a mouse, however, can be connected on the rear of the unit.
Using the KEYBOARD button on the TFT display, a Soft Keyboard can be brought up that can be operated via the touch screen. The Soft Keyboard will only appear, if entries are possible.

If the trackball is switched to mouse function (LED in the PAN / TILT button is off), you can perform mouse functions using the trackball or the LEFT-MIDDLE-RIGHT buttons.

1.7.4 General Operation

Touch screen

- Buttons can directly be selected.
- In charts, individual cells can be selected. By using the Lasso function on the touch screen, you can also select several cells.
- You can simultaneously select individual, but also several Fixtures or Channels by dragging the mouse on the touch screen.
- Directly activating title bars of windows or options for the individual window.

Encoder on the right of the Display

- In the active window, the focus (blue frame) or a highlighted cell (red background) can be moved upwards or downwards. If pressing the Encoder when turning it, you can move the focus to the left or to the right side.
- If a pulldown menu is opened, you can use the Encoder to scroll through the list. When you reach the desired value, you can select it by shortly pressing the Encoder.
- If in a chart, a cell is selected with a value or a time, you can open an entry window by shortly pressing the Encoder. In this window, you can also use the Encoder to adjust the value, pressing the Encoder again will accept the new value.
- If a Fixture or a Channel is selected (blue frame), you can open the options by shortly pressing the Encoder.

grandMA Hardware keyboard or *grandMA light* Soft (TOUCH) Keyboard

- Views, Groups, Presets, Sequences, Effect groups, Forms or even Macros can directly be named within the respective pool.
- Cue names can be adjusted in the EDIT menu, in the Tracking or EXECUTOR Sheet.

grandMA Mouse or *grandMA light* Trackball

With the left button:

- Buttons can directly be selected,
- Individual cells in charts can be selected,
- Several cells in charts can be selected simultaneously by clicking, holding and dragging them,
- Fixtures or Channels can be selected,
- Title bars of windows can be activated or options for the individual window can directly be called up.

With the middle button:

- The values of selected Fixtures or Channels can be adjusted.

With the right button:

- The options for this window can be opened by clicking on the title bar,
- The options can be opened by clicking on an individual Fixture or Channel.

Encoder below the TFT Display

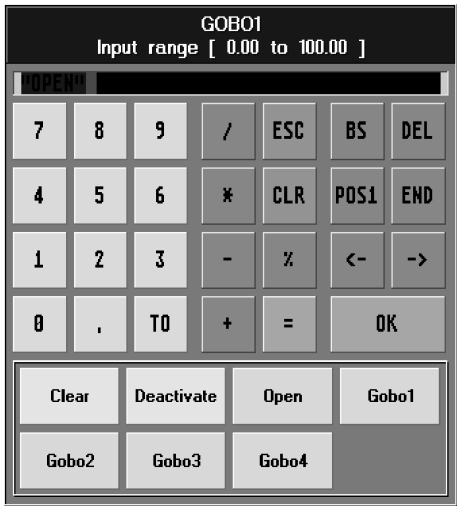
- To set the selected function (PAN/TILT, DIMMER, GOBO, etc.). If pressing the Encoder while turning it, you can change the Encoder's sensitivity.
- Werden über dem Encoder mehrere Funktionen dargestellt, kann durch kurzes Drücken auf die anderen Funktionen umgeschaltet werden.

Entry window/Calculator

In this window, you can enter values or times and recalculate them.
For the selected Fixtures or Channels, Presets can be called up.

If in the Executor Sheet or in the EDIT menu, a trigger call or time is selected, you can open this window by pressing the Encoder on the right side of the Display.

If Fixtures or Channels are selected, this window can be opened by pressing the respective buttons for this function above the Encoder.



The title bar of this window will display the selected function.

In the upper cell, the current value will be displayed.

Using the touch screen, you can enter a different value or time, and accept it pressing the OK button.

Left of the numbers, the following buttons are displayed: H (for hours), M (for minutes), S (for seconds) and F (for frames). With these buttons, you can directly enter times, if necessary.

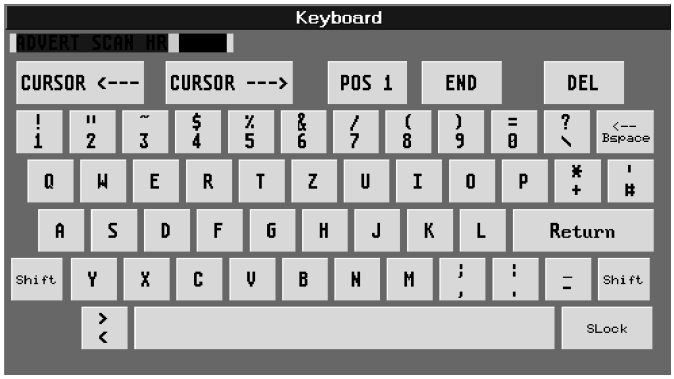
or:

If a function is selected, buttons for Clear, Deactivate and the individual presets are displayed in the lower part. If you press CLEAR, the values of the selected Fixtures or Channels will be deleted. If you press DEACTIVATE, the values of the selected Fixtures or Channels will be deleted.

If you select a Preset, it will be displayed in the upper bar, and you can select it pressing the OK button.

SOFT (TOUCH) Keyboard

On the *grandMA light*, you can call it up by pressing the KEYBOARD button.



In the upper right cell, the entered text will be displayed.

Using the touch screen, you can select individual buttons.

Pressing RETURN will accept your entry.

1.8 Quick Reference

After some years of experience we have lost our illusions about any user to read a complete manual before playing with a new toy. But there are some tips which may help you to find your way around.

1.8.1 Basics

The *grandMA* is a highly specialised computer with up to 6 monitors, and many functions will work as you may be used from your PC or MAC.

Main supply: 90–230V

The mouse in its drawer (*grandMA* only) or track ball on the *grandMA light*:
- Left click selects a field for keyboard or encoder input, etc.
- Right click goes to Modify (opens windows with options, sorting columns by clicking on the headline...)
- Pressing and holding the middle mouse button changes output values (Hold and Move)

The displays (select one by a click into empty space)
The *grandMA* offers different windows: Menus with information and control buttons, spreadsheets, button groups, dimmer channel listings and fader symbols
- Left mouse click on the headline moves a window, the size is set on the left and lower boarders
- Right mouse click on the headline opens a window with different options

Spreadsheets (comparable to those used in Excel or Access):
- Holding left mouse button and moving the mouse, you can select a set of cells (not on all screens possible)
- Left click on a column headline will resize or move the column
- Right click on a column headline will sort by this column

Emergency help: As every computer, the *grandMA* may crash. If nothing helps:
1. Perform a reset (by pressing CTRL-ALT-DEL or the RESET button on the backside of the unit).

Only if this doesn't help:
2. During the booting of the unit, use the red "Utility menu" to delete the current Show.

In case of any further problem, please feel free to contact our HOTLINE +49-931-497940 or +49 - 1 71 - 7 22 65 46.

1.8.2 Setup and start

The easiest way is to use the BACKUP button and load a demo-show or start-setup. Otherwise:

1. SETUP button: Will select and patch the number of dimmers and scanners, possibly create presets, group and effect buttons.

TIP By YES in the BTN column of the Fixture Schedules, the *grandMA* automatically generates a button for each fixture in the group window.

2. Right click into any empty display:
   - creates, moves and resizes a FADER or CHANNEL window for dimmer control and
   - FIXTURE, GROUP and different Preset windows (PAN/TILT, GOBO...) for scanners.

1.8.3 Direct access

The *grandMA* offers different ways of controlling dimmer values and scanner attributes. For a quick start, we give you only one example for each of them.

Setting values for dimmers:

CHANNEL FADER "–" or "+" button switches the motor fader to control single dimmer channels.
- "+" and "–" scrolls in blocks of 20 (10) dimmers.
- The set fader parameters are shown in the dimmer display.

TIP Channels can also be selected and modified by mouse, wheel, encoder ...

TIP With the LINK function (right on headline of display), the window will automatically scroll to show the channels set for the faders.

Controlling Fixture attributes:

GROUP window
Select a fixture by its button (or click on the name of a fixture in the output window).

GOBO, COLOUR ... window
Open a preset for the select unit (if the button shows no result, set the function via an encoder).

TIP1 Pressing and turning the encoder allows for the fine tuning.

TIP2 If more than one function per encoder is displayed, push the encoder to switch over.

1.8.4 Saving Settings

The STORE button of the *grandMA* is very flexible and direct.

TIP Attention: If the STORE button is blinking, switch off with a second press or use ESCAPE.

Example: Selecting some fixtures and setting the color wheel

- STORE + button of an EXECUTOR (make sure you switched back from CHANNEL to EXECUTOR): Saves the color setting as a cue for the selected Executor.
- STORE + button of an EXECUTOR, where a cue was already saved, offers the option to overwrite, add information or creating a list. ➠ **1.8.7** CREATE LIST
- STORE + a cell in the GROUP window: Saves the chosen scanners as a new group (enter name via keyboard)
- STORE + any cell in the preset COLOUR window: Saves the adjusted values as a color preset (enter name via keyboard)
- STORE + one of the VIEW buttons on the right hand side of the displays: Saves the layout of the screen, the mouse position, etc. as a view (enter a name ...)

TIP With the STORE + VIEW buttons in the Button Group, you can save screens individually or all at once.

TIP In the ASSIGN menu, you can enter names for the programs.

1.8.5 Selecting and activating channels, fixtures and functions

The concepts of Selecting and Activating have different meanings and are important terms for working with the *grandMA*.

Selected fixtures or channels (names in status displays switch to yellow) are automatically cleared if a setting was altered and new fixtures selected (a click on the CLEAR button will do the same).

The Selection (red values) determines, which channels are ready to be saved to next cue, and will be controlled by this cue later on. Channels not selected will never be affected by any playback of this cue (LTP rule = Latest Takes Precedence).

Changing the selection:

- Any channel or function, being controlled in Direct Access mode, is automatically marked as selected.
- Pressing the CLEAR button several times, deletes the whole selection.
  1st CLEAR: selects – 2nd CLEAR: activates– 3rd CLEAR: deletes all values set by direct access.
- Selecting a channel, fixture or function two or more times can be used to modify a activation
  1st selects – 2nd activates– 3rd deactivates

TIP By holding the STORE button and selecting ALL, the activation will be ignored and the complete output saved as a cue.

1.8.6 Timing – Fading times (FADE) and Delays (DELAY)

The *grandMA* offers two different ways of storing time settings for a cue:

1. BASIC X-FADE and SNAP DELAY
   With STORE, a basic fade time can be set for all typical fader channels, whereas SNAP DELAY will only work for channels marked as snap channels in the Patch menu.
2. TIME button for individual durations per channel
   With TIME, the status displays can be switched to the FADE or DELAY layer, where individual durations can be set for each channel. These durations will be stored to the cues and will overrule any basic duration.

1.8.7 CREATE LIST

When saving a cue to an Executor already containing a cue, the *grandMA* offers the option to start a cue list, which may be called up as a Chaser or sequence later on.

In the ASSIGN menu, you can preset the Cue list as for tracking or non-tracking, respectively.

TRACKING CUELIST (typically for scanner control or theatre applications):
For this, it would make sense only to include changed values. On playback, the *grandMA* will hold a value until a new one is given by any following step (TRACKING = the *grandMA* will keep track of this value within the next steps).

NON-TRACKING CUELIST
Here, all values to be used have to be saved to the respective step, as all values not selectively stored within a step, will be switched off ("0" or default).

1.8.8 Playback buttons and faders

- The motor faders allow to work on different pages simultaneously. With OFF, the playback can be stopped.
- With the ASSIGN + EXECUTOR buttons, you can define, which program and which functions are on the Playback.
- The 12 function keys can be used for any Playback (OFF - EXECUTOR1).

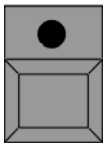
TIP To call up a cue with a fader, it has to be activated via GO+, TOP or ON.

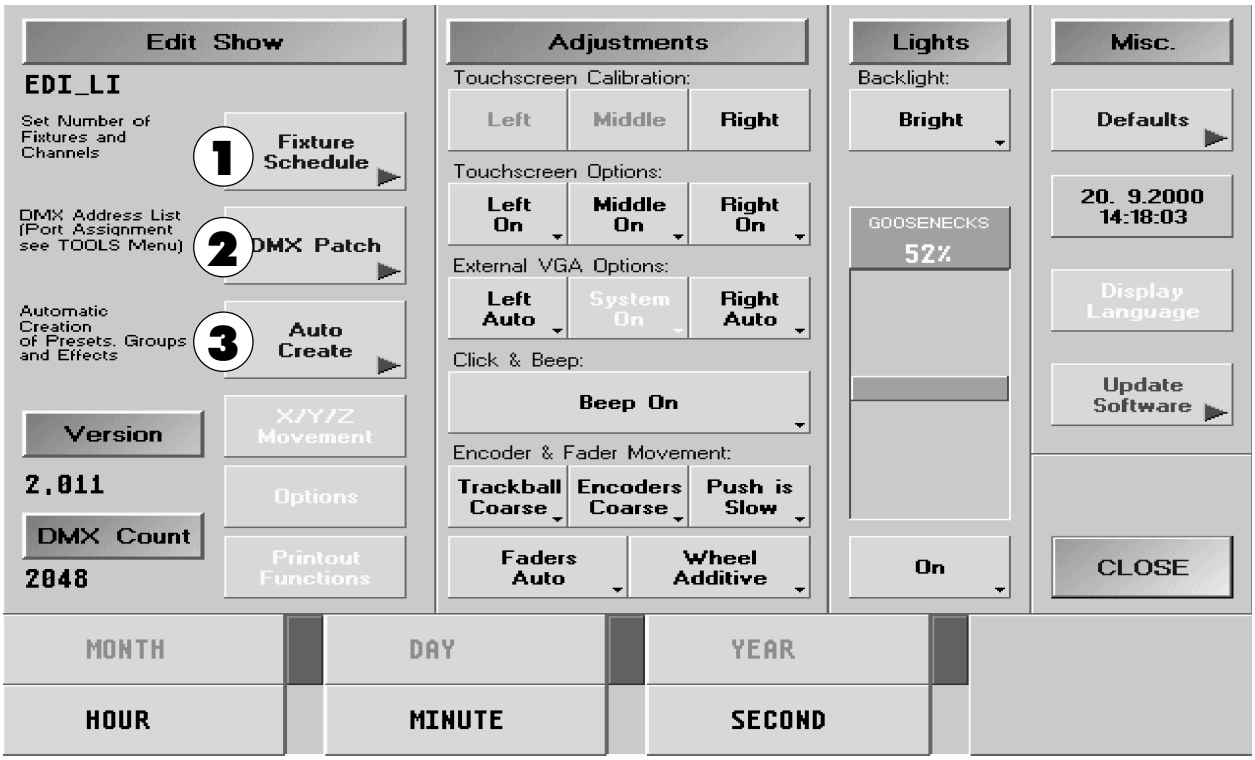
TIP Take care for the GRANDMASTER - or simply switch it off in the Setup menu.

2 Setup

2.1 Selecting, patching, creating and editing of fixtures and dimmers (Edit Show)

SETUP You will reach the SETUP menu by pressing the SETUP button.





1 FIXTURE SCHEDULE

In this menu, you can create, modify and set the number of fixture types and normal dimmer channels. ➠**2.2 / 2.3** Setting up Fixtures and Dimmer Channels

Accessing this menu will take a few seconds, as all Fixtures (approx. 250) will be loaded from the hard disk.

2 DMX PATCH

In this menu, you can choose DMX addresses for all fixtures and Dimmer channels and make lamp-type specific adjustments for the **respective** show. ➠ **2.4 / 2.5** Setting DMX addresses

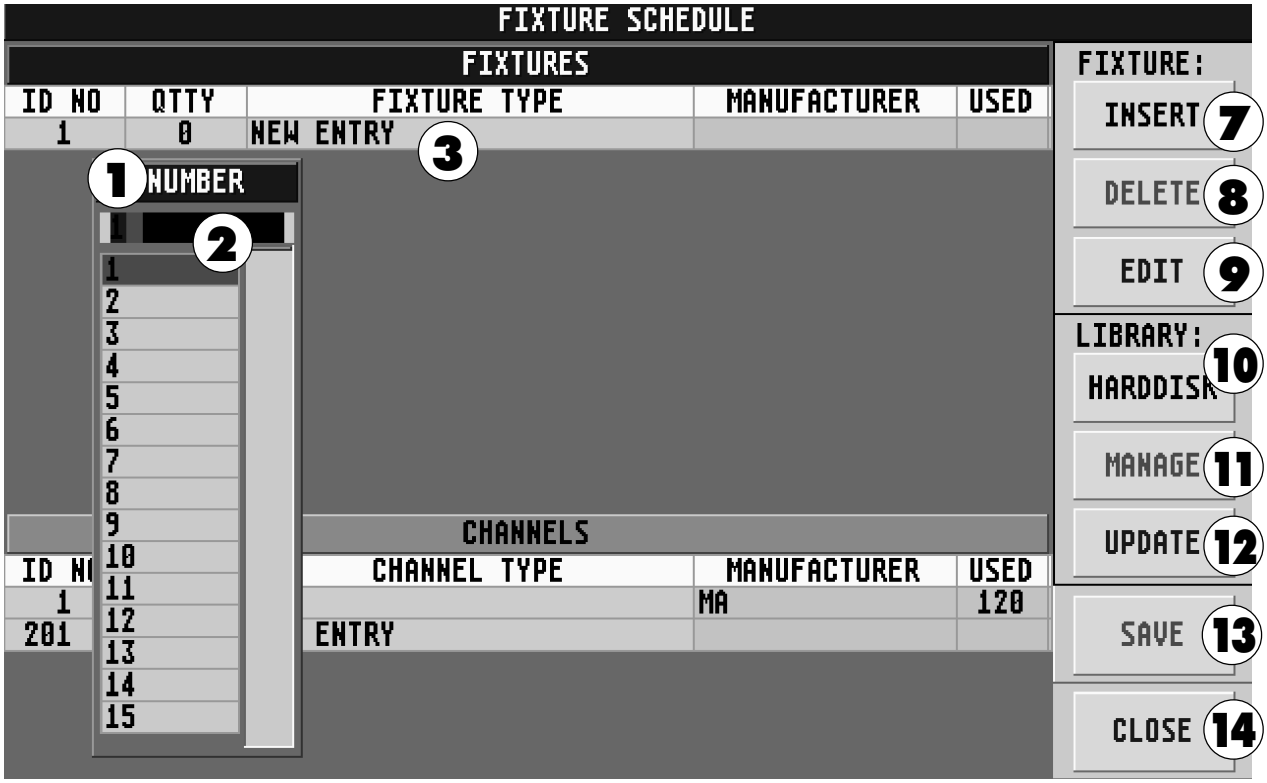
3 CREATE PRESETS

In this menu, you can let automatically create so-called presets for all registered fixtures and dimmers, if those presets are not already contained in the internal library. Furthermore, prepared Effect Groups and buttons for each Fixture or Dimmer channel can be created from the GROUP window. ➠ **2.9** Creating presets, effects and groups automatically

2.2 Selecting Type and Numbers of Fixtures

FIXTURE SCHEDULE

Click on FIXTURE SCHEDULE in the Setup menu (might take a few seconds).



1 Make a right mouse click in the cell below the QTTY title.

2 In the NUMBER window, enter the quantity of Fixtures of one type, using the keyboard. Confirm by pressing ENTER.

Or:

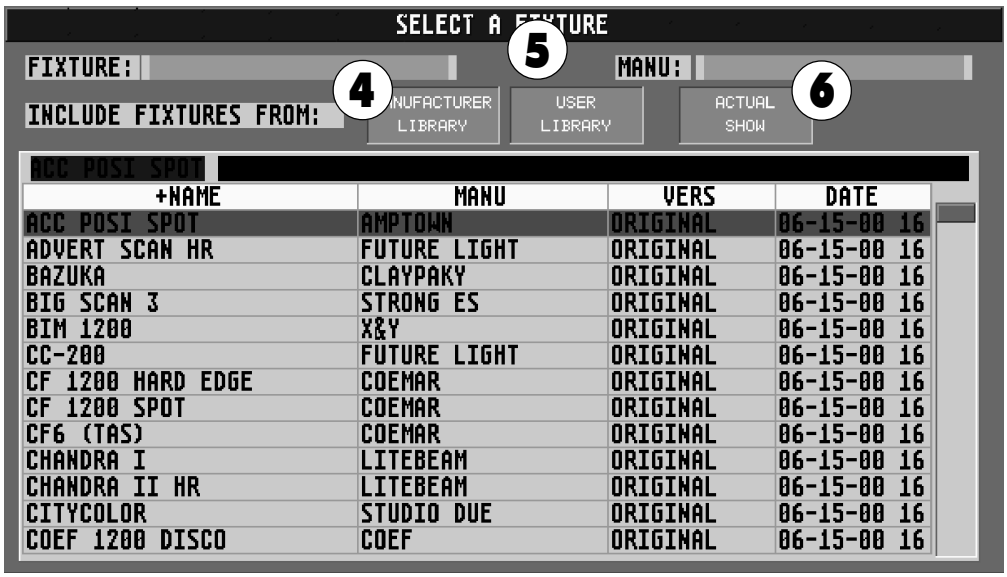
Move the red bar using the left mouse button, until the desired number of Fixtures appears. Now, make a left mouse click on the number; the selected number will be accepted.

3 Make a right mouse click on NEW ENTRY. Move the blue bar within the SELECT A FIXTURE window by holding the left mouse button until the desired Fixture appears in the left column. Select the Fixture with left mouse click. The selected Fixture will be added to the list.

TIP The list can be sorted by name, manufacturer or date for an easy and fast retrieval of fixtures.

For example: Sort by names: Right mouse click on NAME. With first mouse click, Fixture will be sorted A–Z, with second click they will be sorted Z–A.

For further Fixtures, start again with step **1** and use NEW ENTRY, one line below the new Fixture.



4 If the MANUFACTURER LIBRARY button (dark background) is pressed, all Fixtures stored in the library are available.

5 If the USER LIBRARY button (dark background) is pressed, all self-created Fixtures stored in the library are available.

6 If the ACTUAL SHOW button (dark background) is pressed, only Fixtures to be used in this show are available.

7 Will add a new line above the marked position.

8 Will erase the marked line.

9 Accessing the EDIT FIXTURES menu.
From this menu, the selected Fixture can be changed. If NEW ENTRY is activated, a new Fixture can be defined.
➠ **2.8** EDITING FIXTURES (modify) and **2.9** EDITING FIXTURES (create new)

If in the „Start" column the number of a Fixture is followed by an asterix, this is a Fixture that was modified or selfmade.

10 Shifting between the Fixture library on the hard disk or floppy disk. ➠ **2.8** EDITING FIXTURES (modify)

After switching to Floppy disk, it may take a few seconds for the Floppy to react; if no Floppy is inserted, it can take 1–2 minutes.
HARDDISK LIBRARY: Uses Fixtures from internal hard disk.
FLOPPY DISK: Uses Fixtures from floppy disk.

11 Calling up the MANAGE menu.
By clicking on the Fixtures/Dimmers in this menu and choosing and pressing the DELETE ENTRY button, you can delete the self-created Fixtures and Dimmers stored in the library. Fixtures in the manufacturer library can not be deleted.

12 With UPDATE LIBRARY, you can save newly created or modified Fixtures to the hard disk drive (library) or to a floppy disk. By that, a new or modified Fixture will be available for a new show. When Fixtures are modified and stored, they are registered with the appropriate date.

To store a Fixture, please change its name as otherwise this Fixture will appear twice in the library and can only be discerned by its date.

13 All settings will be stored with the SAVE button.

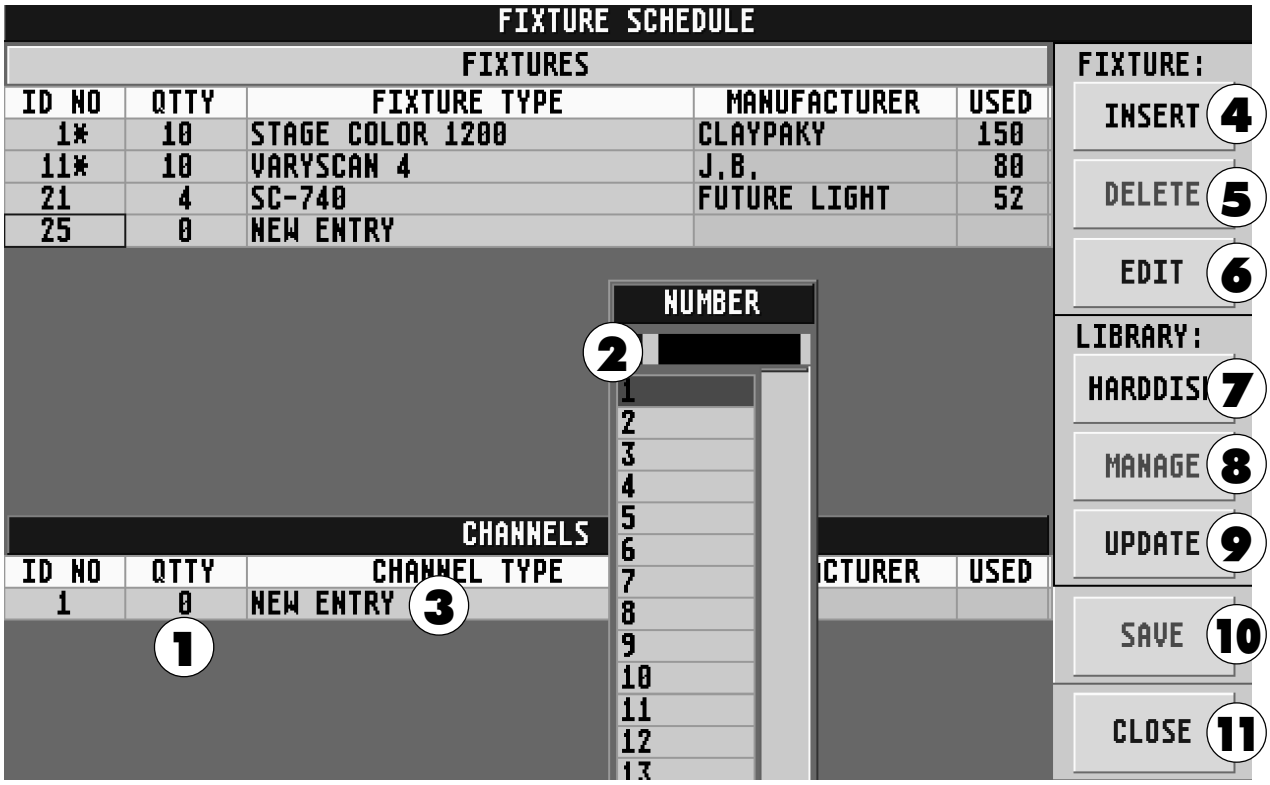
14 To leave this menu, bringing you back to SETUP.

The next step will be the patching of fixtures. ➠ **2.4** Selecting DMX addresses for Fixtures

RECOMMENDATION

After changes in the FIXTURES SCHEDULE Menu – especially the deleting of Fixtures from the Show - a RESET of the *grandMA* should be executed, for safety reasons, after leaving this menu (point **14**) (Control-Alternate-Delete). This will set up and sort the internal structure again.

2.3 Selecting the Number of Dimmer Channels



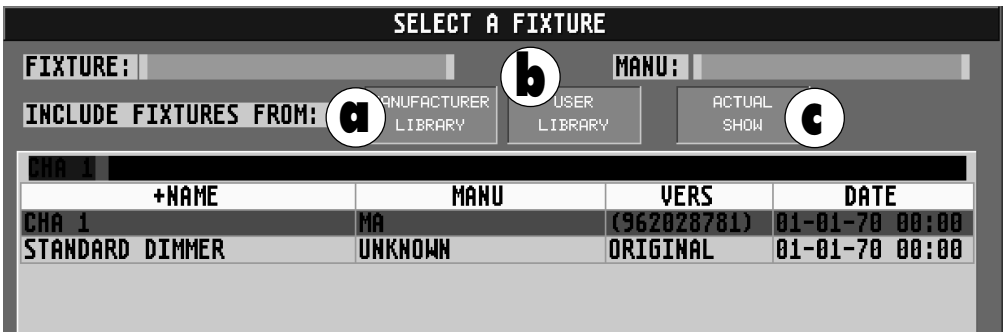
1 Activate by right mouse click on the cell below QTTY. The NUMBER window will open.

2 Using the keyboard, enter the number of dimmer channels into the NUMBER window. Confirm by pressing ENTER.

Or:

Move the red bar by holding the left mouse button until the desired number of dimmer channels appears on the left. Activate number with left mouse click.The selected number will be stored.

3 Right mouse click on NEW ENTRY. The SELECT A FIXTURE window will open. The sheet shows all DIMMER types created. With a left mouse click on a Dimmer type, it will be selected.



a If the MANUFACTURER LIBRARY button (dark background) is pressed, all Dimmer types stored in the manufacturer library are available.

b If the USER LIBRARY button (dark background) is pressed, all self-created Dimmer types stored in the library are available.

c If the ACTUAL SHOW button (dark background) is pressed, only Dimmer types to be used in this show are available.

4 To add a new line in front of the marked position.

5 To erase the marked line.

6 Calling up the EDIT FIXTURE menu.
In this menu, the selected Dimmer can be modified. If NEW ENTRY is selected, you can create a new Dimmer.
➠ **2.10** Modifying Fixtures and Dimmers (EDIT FIXTURE) and ➠ **2.11** Creating Fixtures and Dimmers (EDIT FIXTURE)

If in the "Start" column, the number of a Fixture is followed by an asterix, this is a fixture that was modified or self-created.

7 Switching between library on the hard disk to library on the floppy disk, or vice versa.

After switching to the floppy disk, it can take some seconds until the floppy reacts.
HARDDISK LIBRARY: Uses Fixtures/Dimmers from the internal hard disk.
FLOPPY DISK: Uses Fixtures/Dimmers from the floppy (if any).

8 Calling up the MANAGE menu.
By clicking on the Fixtures/Dimmers in this menu and choosing and pressing the DELETE ENTRY button, you can delete the self-created Fixtures and Dimmers stored in the library. Fixtures in the manufacturer library can not be deleted.

9 With UPDATE LIBRARY, you can save newly created or modified Fixtures/Dimmers to the hard disk drive (library) or to a floppy disk. By that, a new or modified Fixture/Dimmer will be available for a new show. When Fixtures/Dimmers are modified and stored, they are registered with a new date.

To store a Dimmer, please change its name as otherwise this Dimmer will appear twice in the library and can only be discerned by its date.

10 To save all settings with SAVE button.

11 To leave the FIXTURE SCHEDULE menu.

Proceed by "patching" the dimmer channels. ➠ **2.5** Setting DMX Addresses for Dimmers

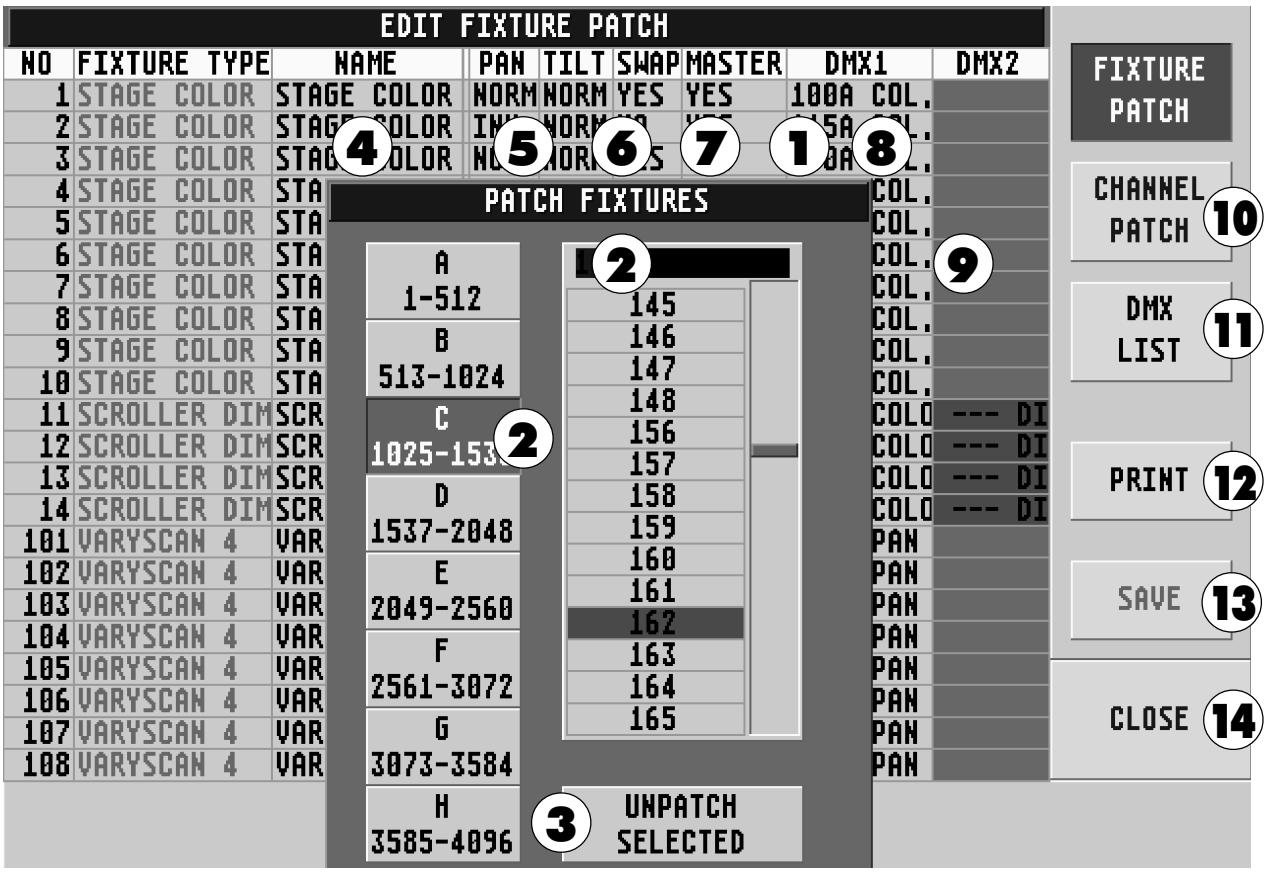
RECOMMENDATION

After changes in the FIXTURES SCHEDULE Menu – especially the deleting of Dimmers from the Show, a RESET of the *grandMA* should be executed after leaving this menu (item **8**) (Control-Alt-Delete).

2.4 Selecting DMX Addresses for Fixtures

FIXTURE PATCH

Activate PATCH in the Setup menu.



1 Select the respective fixture in the DMX 1 column by a right mouse click. The FIXTURES PATCH window will appear.

TIP If several fixtures are addressed one by one, these can be selected in one by clicking and holding the left mouse button (draw loop) in the DMX 1 column. Once the fixtures have been selected (red background), a right mouse click in the marked column will open the window PATCH FIXTURES.

2 Set the DMX output A to H via keyboard. Enter the DMX channel via the keyboard and confirm with ENTER.

Or:

Set the DMX output A to H by a left mouse click. Move the red bar by holding the left mouse button until the desired address appears on the left. Activate by a left mouse click and data will be stored. Repeat these three steps for each fixture.

Assigning the DMX sockets ➠ **2.6** DMX output configuration

Output E to H is only possible with an optional channel expansion to 4096 channels. For the expansion, an upgrade is necessary. As of serial number 156, a dongle (hardware protection) has to be installed within the *grandMA*; for serial numbers under SN 156, a plug-in card has to be exchanged. **For this operation, the unit has to be opened by a qualified technician. CAUTION: unplug the mains plug first!**

---

3 To erase the DMX address of a selected fixture.

4 Selecting a name with a left mouse click, you can overwrite this name, using the keyboard, and set a new name for the respective Fixture; confirm the new name with ENTER. This name will be displayed in the FIXTURE SHEET window.

5 Within the columns of PAN and TILT you can switch between NORM (normal operation) and INV (inverted operation). If you wish to invert PAN or TILT on one of the Fixtures, select the respective Fixture by a left mouse click and then switch by right mouse click.

6 The PAN and TILT functions can be swapped within the SWAP column. If you wish to swap PAN or TILT on one of the Fixtures, select the respective Fixture with a left mouse click and then swap with right mouse click.

TIP Here you can set the most useful "PAN/TILT-Trackball-Orientation" (why not try immediately?). Select the Fixture, press HIGHLITE and "surf" with the trackball. Modifications will only take effect after storing. For this, the HIGHLIGHT button is of great help.)

7 In the MASTER column, the operation of the GRANDMASTER FADER for a specific Fixture can be switched off. By a right mouse click on a cell in the Master column, the GRANDMASTER FADER for this Fixture can be switched off. The readout changes from YES to NO.

8 IWithin the DMX column, the information on a DMX address is followed by the function of the first DMX channel. This serves a better orientation.

9 With some fixtures, you will have to address a second DMX channel (for example: The dimmer of the VL 5, Scroller with dimmer). With these Fixtures, a second DMX channel has to be addressed in this column. ➠ **2.10** EDITING FIXTURES (modify) and **2.11** EDITING FIXTURES (create new)

10 This button will open the DIMMER PATCH menu (patching of dimmer channels).

11 Calling up the DMX LIST menu.
In this menu, you can modify Fixture and Channel-specific settings. ➠ **2.7** Single Channel-specific Adjustments for the Current Show

12 By pressing the PRINT button the DMX sheet will be printed (default printer).

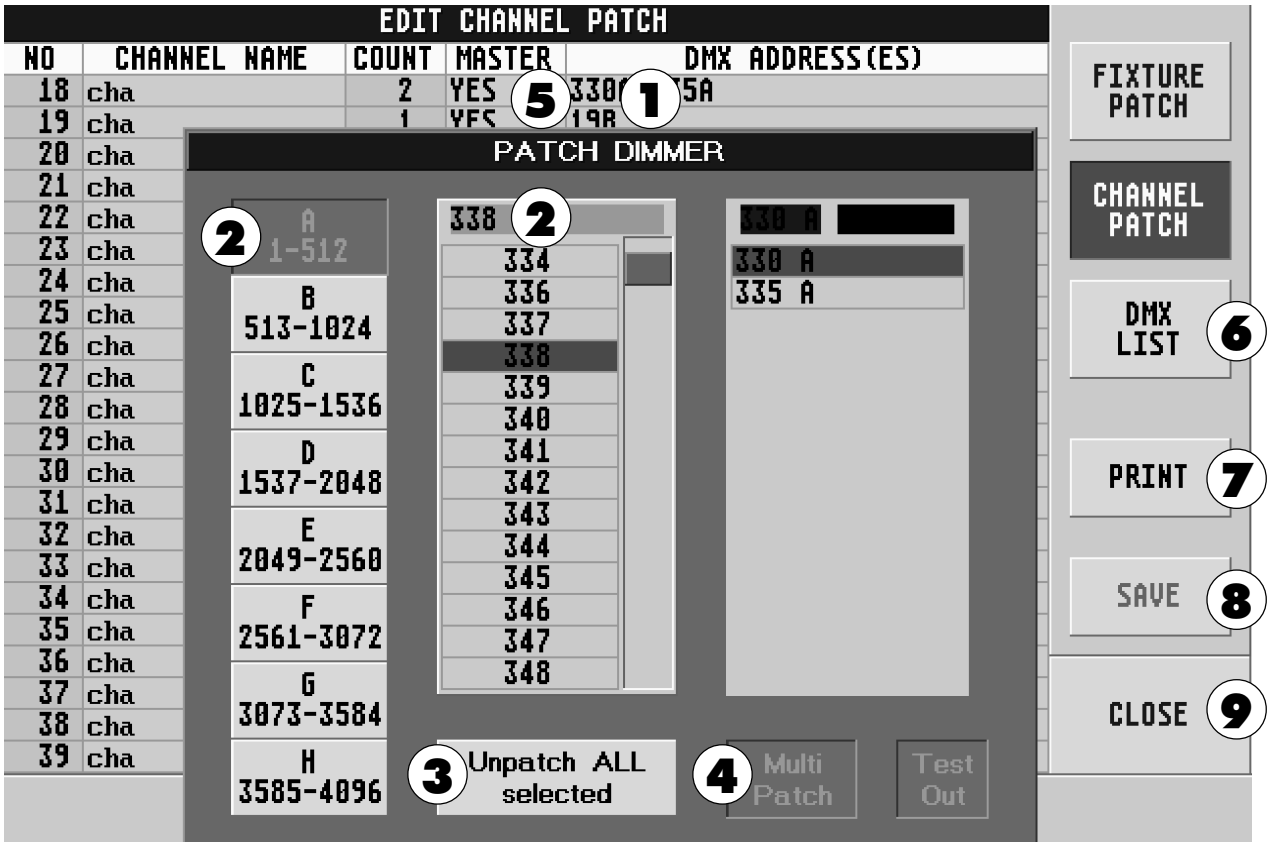
13 The SAVE button will save all settings of the show.

14 To leave the FIXTURE PATCH menu.

2.5 Setting DMX Addresses for Dimmers

FIXTURE PATCH — Activate PATCH in the SETUP menu.

CHANNEL PATCH — The button DIMMER PATCH will lead you to the menu EDIT DIMMER PATCH



1 Select the first dimmer channel with a right mouse click.

TIP If several dimmer channels are addressed one by one, these can be selected in one by clicking and holding the left mouse button (draw loop) in the DMX ADDRESS column. Once the dimmer channels have been selected (red background), a right mouse click in the marked column will open the PATCH DIMMER window.

2 Set the DMX output A to H via keyboard.

Set the DMX channel via keyboard; confirm with ENTER.

Or:

Set the DMX output A to H by a left mouse click. Move the blue bar by holding left mouse button, until the desired address appears on the left. Confirm figure with a left mouse click and the chosen figure will be displayed. Repeat these steps for each dimmer channel.

Assigning the DMX sockets ➠ **2.6** DMX output and Ethernet configuration

---

Outputs E to H are only available with an optional channel expansion to 4096 channels. For the expansion, an upgrade is necessary. As of serial number 156, a dongle (hardware protection) has to be installed within the *grandMA*; for serial numbers under SN 156, a plug-in card has to be exchanged. **For this operation, the unit has to be opened by a qualified technician. CAUTION: unplug the mains plug first!**

---

3 To erase DMX address of selected dimmer channel.

4 When the MULTI PATCH button is pressed (button's background color changes from light gray to dark gray), you can address several DMX output channels for a Fixture channel.

When the TEST OUT button is pressed (dark background), the selected DMX output channel is temporarily set to 100 percent. Doing so, you can find a patched channel much faster within the stage setting.

5 In the MASTER column, the operation of the GRANDMASTER FADER for a specific Dimmer channel can be switched off. By a right mouse click on a cell in the Master column, the GRANDMASTER FADER for this Fixture can be switched off. The readout changes from YES to NO.

6 To activate DMX LIST menu. Within this menu Fixture- and channel-specific adjustments can be realized. ➠ **2.7** Single Channel-specific Adjustments for the Current Show

7 By pressing the PRINT button the DMX sheet will be printed (default printer).

8 The SAVE button will save all settings.

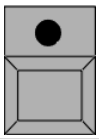
9 To leave the DIMMER PATCH menu.

2.6 DMX Output and Ethernet Configuration

There are 4 DMX output sockets on the back side of the grandMA. These sockets can be assigned to DMX ports A to H in an arbitrary way.
By data transmission via Ethernet, more DMX outputs can be triggered.

Outputs E to H are only available with a channel expansion to 4096 channels. For the expansion, an upgrade is necessary. As of serial number 156, a dongle (hardware protection) has to be installed within the *grandMA*; for serial numbers under SN 156, a plug-in card has to be exchanged. **For this operation, the unit has to be opened by a qualified technician. CAUTION: unplug the mains plug first!**

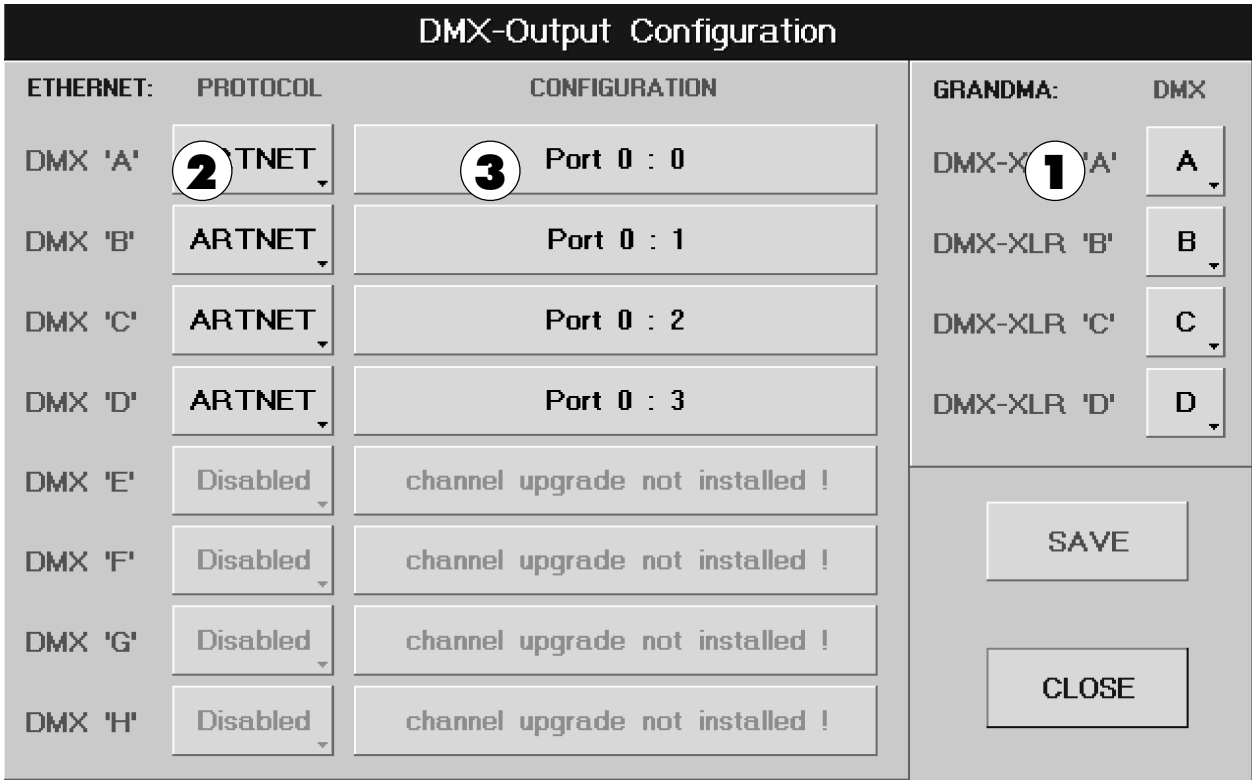
TOOLS



Press the TOOLS button once.

DMX-Output Configuration

Call up this menu from the TOOLS menu using the DMX-OUTPUT CONFIGURATION button.



2.6.1 Assigning the DMX-XLR sockets of the *grandMA*

1 In this column, the DMX ports can be assigned to the respective output sockets on the *grandMA*.

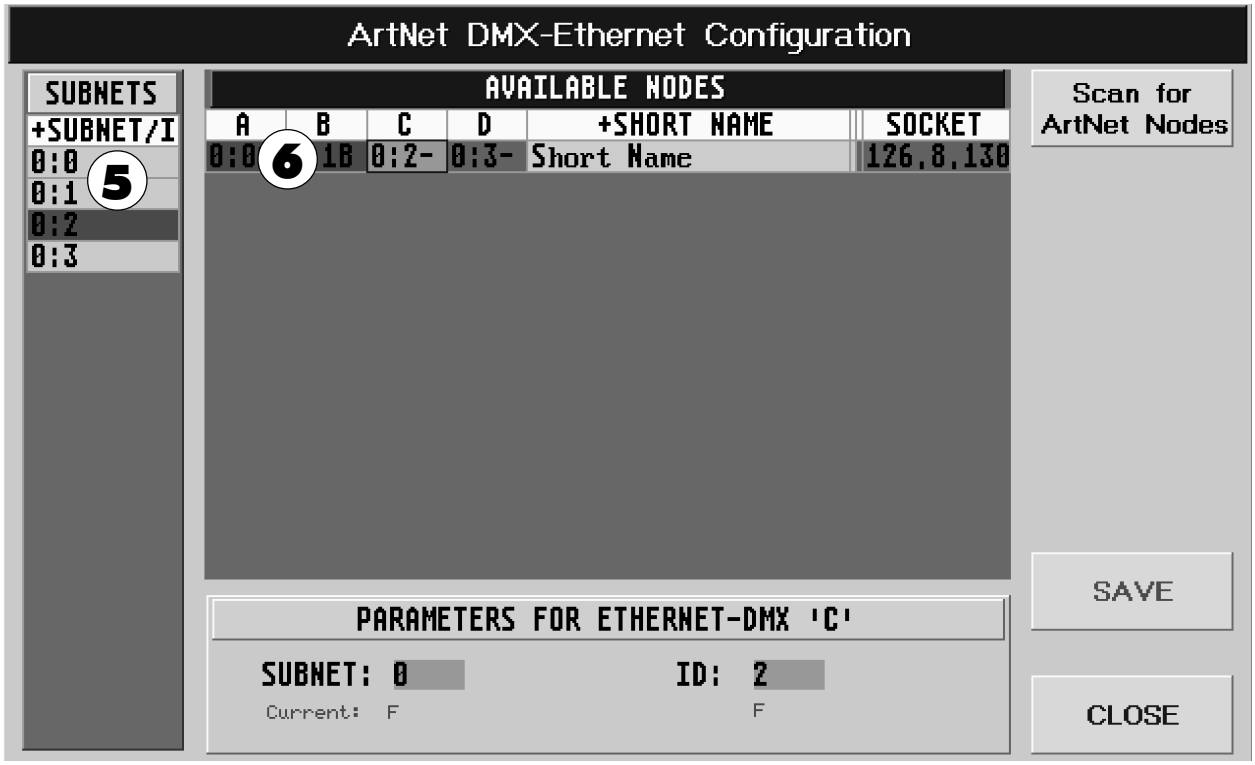
By pressing the buttons several times, one of the DMX ports (Universe) A to H can be assigned to any of the *grandMA's* output sockets A to D. The assigning of DMX ports (Universe) to the sockets will be effected simultaneously.

2.6.2 Configuring the DMX outputs via Ethernet

2 By pressing a button in the PROTOCOL column, a transmission protocol can be designated for the respective DMX output. In version 2.10, ARTNET of the company Artistic Licence can be assigned.

3 By pressing a button in the CONFIGURATION column, the ARTNET DMX ETHERNET CONFIGURATION menu will be opened for this DMX output. ➠ **2.6.3** ARTNET DMX-ETHERNET CONFIGURATION

2.6.3 ARTNET DMX-ETHERNET-CONFIGURATION



As of software version 2.10, DMX hubs of the company Artistic Licence can be used. It is now possible, to connect up to 16 DMX hubs. On the DMX hubs, unique SUB NET addresses have to be designated accordingly. The address switches of the individual DMX sockets have to be set to four different addresses.

If DMX hubs are connected, they will be searched for and displayed in the chart when calling up this menu. If the hub is being activated after opening the menu, you can search for the hub by pressing the **Scan of ArtNet Nodes** button to insert the hub in the chart, if one is found.

5 In the left chart, all hubs found will be displayed with the respectively set address for each DMX OUTPUT. The number in front of the colon is the SUBNET address, the number after the address for the DMX OUTPUT.

Choose an address for the DMX OUTPUT.

6 In the right chart, one line is displayed for each hub. The selected DMX OUTPUT will be displayed on a green background.

If an output is displayed on a red background, this indicates that it is already being assigned and can not be used.

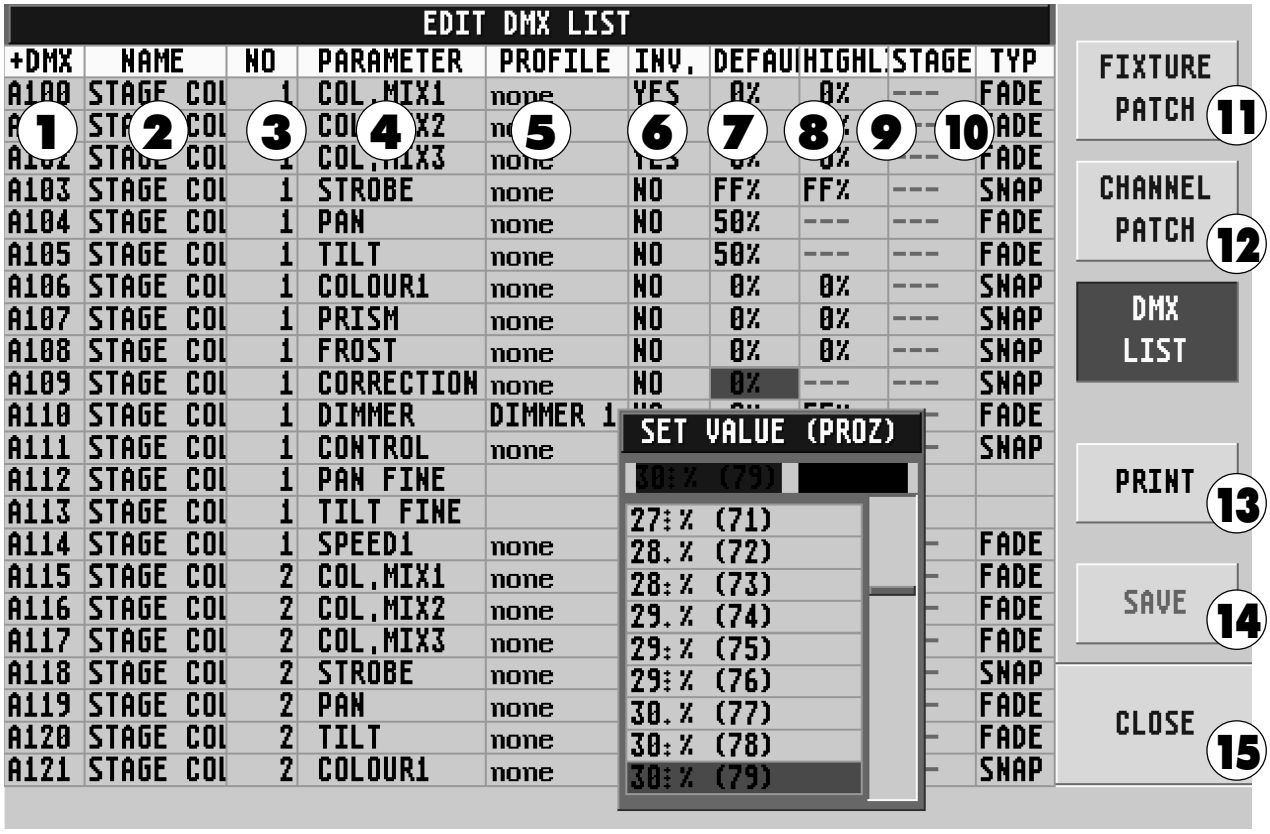
In the SHORT NAME column, you can enter a name for each hub using the keyboard.

Press the SAVE button. Now, the hub for this DMX port is configured and the menu will be closed.

If further ports are to be assigned, repeat steps 2 to 6. When all settings are completed, press the SAVE button in the DMX-OUTPUT CONFIGURATION menu. The modified settings are now saved. Now, the blue ACTIVE LED at the assigned DMX hub is on and the DMX outputs can be used. When data are received, the red LED on the DMX hub is on.

2.7 Single Channel-specific Adjustments for the Current Show

Press the DMX LIST button in the PATCH menu to activate this menu.



This menu will only display the actually patched channels. All changes made **here** will **only** affect the **current show**!

1 This column will show the **individual**, addressed DMX channel.

2 Name of Fixtures and dimmer channels assigned to the individual DMX channels.

3 Number of Fixtures and dimmer channels.

4 Functions of the individual DMX channels.

5 In this column, a profile can be assigned to this cannel. ➠ **2.8** Creating, Assigning and deleting profiles

Using these profiles, you can also define min and max values.

6 Within this column, the respective DMX channel can be inverted. To switch over, use a left mouse click, and a right mouse click will activate the changes.

7 DEFAULT: This value will be called up if no CUE, Sequence, Preset or Direct Access addresses the Fixture or dimmer channel.

This setting can be used for example for PAN/TILT, in order to have the preset of the light beam in the center. The values can be set with a left mouse click. A right mouse click in the selected cell will activate the SET VALUE window. The actual value can be set within this window.

8 The HIGHLIGHT function is used to create a light beam fast and easily during the procedure of programming positions of the selected Fixtures. The values for individual DMX channels have to be set respectively. Values can be changed by addressing the channel with a left mouse click. Now activate the SET VALUE window with a right mouse click in the selected cell. The value can be set in this window.

9 Not yet available in version 2.10.

10 Setup of the respective DMX channel.

FADE: A value can be changed slowly (channel can fade, default setting).

SNAP: New value will be activated fastest possible (jumps, does not fade, default setting). Switches by left mouse click while changes are effected with a right mouse click.

This is only a pre-setting for each individual channel and can easily be changed during programming, if needed.

11 To move back to FIXTURE PATCH.

12 Allows to move back to DIMMER PATCH.

13 By pressing the PRINT button the DMX table will be printed (default printer).

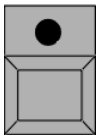
14 All settings will be saved with the SAVE button.

15 To leave the DMX LIST menu.

2.8 Creating, Assigning and Deleting Profiles

In the PROFILE TOOL menu, you can create individual profiles. The profiles created can be assigned to any DMX channel.

TOOLS



Press the TOOLS button once.

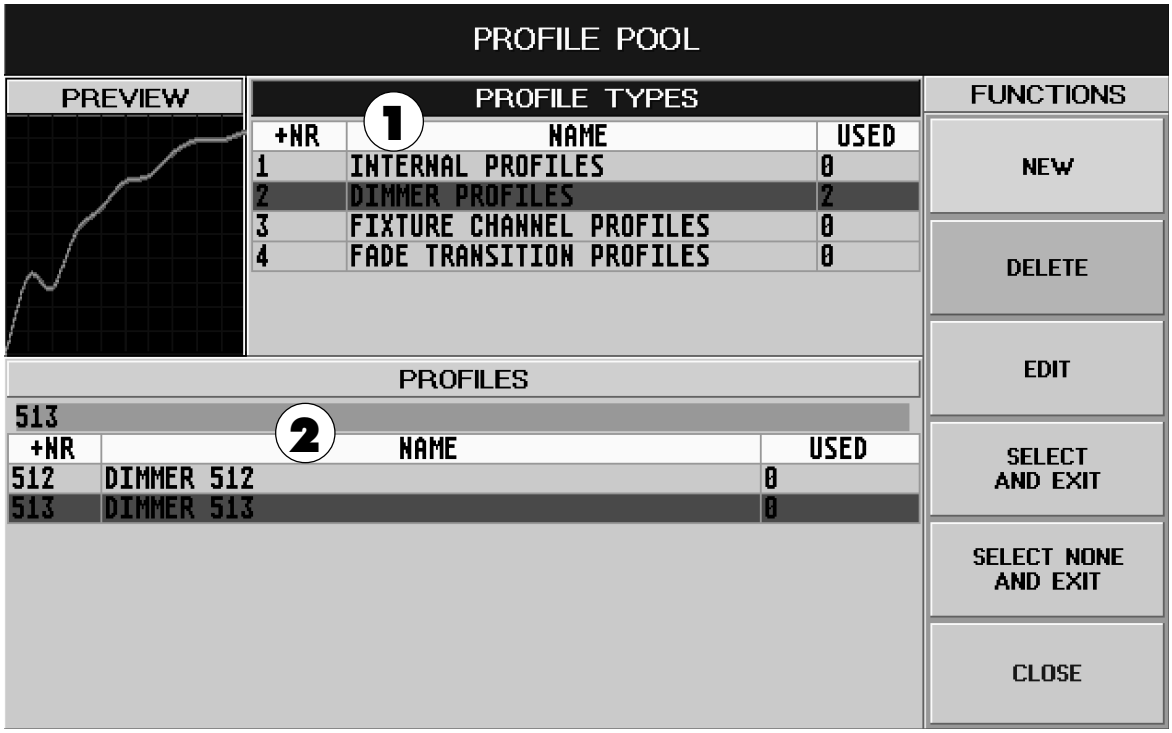
Call up this menu from the TOOLS menu using the EDIT PROFILE button.

Or:

In the DMX List menu, make a right mouse click into the Profiles column. ➠ **2.7** Single Channel-specific Adjustments for the Current Show

Or:

In the EDIT FIXTURE menu, make a right mouse click into the Profiles column. ➠ **2.10** Modifying Fixtures (EDIT FIXTURE) and ➠ **2.11** Creating Fixtures (EDIT FIXTURE)



1 The PROFILE TYPES sheet displays four folders for different profiles. Self-created profiles can be saved to these individual folders.

With the left mouse button, select a folder, in which a created profile is to be saved, deleted or edited.

Creating a new profile

To create a new profile, press the NEW button. The EDIT PROFILES menu will open (➠ next page).

2 The PROFILES sheet displays the created profiles in the selected folder.

Assigning profiles to a DMX channel

Select the profiles and press the SELECT AND EXIT button.

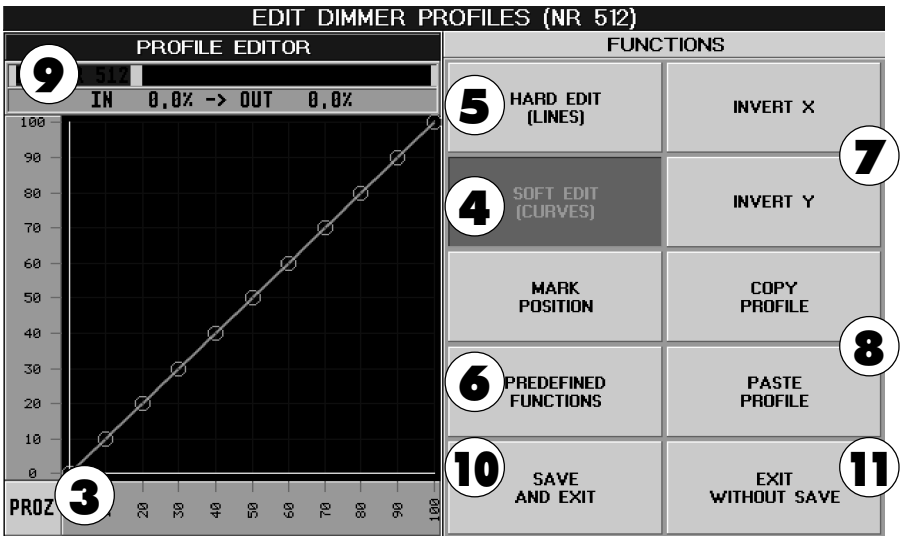
Deleting profiles

Select a profile and press the DELETE button.

Customizing profiles

Select a profile and press the EDIT button. The EDIT PROFILES menu will open with the selected profile (➠ next page).

2.8.1 EDIT PROFILES



3 By pressing the PERCENT button, you can switch the scaling from percent to decimal or, when pressing the button once more, to hexadecimal.

4 Press the SOFT EDIT button (dark background). On the graph, several positions are indicated by dots in regular intervals.

The y-axis gives the value set on the *grandMA*, whereas the x-axis gibes the DMX value that will be output.

Make a left mouse click on an arbitrary spot or touch the touch screen. The closest dot will be moved to this position while the graph is automatically and softly adjusted to the new positioned dot. The spot clicked on is indicated by a cross-hair pointer and the size of the value is displayed above the diagram. The value after IN is the value set on the *grandMA*, the value after OUT is the DMX value to be output.

Or:

Turning the Encoder will move a cross-hair pointer on the drawn line. By pressing and turning the Encoder, you can modify the output value. Above the diagram, the value at the current position is displayed. The value after IN is the value set on the *grandMA*, the value after OUT is the DMX value to be output.

Release the Encoder and press it once or press the MARK POSITION button. The closest dot is moved to the marked position while the graph is automatically and softly adjusted to the new positioned dot.

5 If the HARD EDIT button is pressed (dark background), the graph can be formed arbitrarily.

Mark the first modification dot by a left mouse click or shortly touching the touch screen on an arbitrary spot. This position will be marked by a red dot.

or:

Turning the Encoder will move the cross-hair pointer on the drawn line. By pressing and turning the Encoder, you can modify the output value. Above the diagram, the value at the current position is displayed. The value after IN is the value set on the *grandMA*, the value after OUT is the DMX value to be output.
Now, mark a second position using the mouse, the touch screen or the Encoder. The graph will automatically connect the first dot with the second one.

6 Pressing the PREDEFINED FUNCTION button will open a window, in which you can choose between four standard graphs by clicking on the respective button. Close the window with the EXIT button.

LINEAR: The set value corresponds to the DMX output.

SINUS: The graph displays a sinus curve.

SQUARE: The graph displays a root function.

POWER CORRECTION: The graph serves for correcting a phase-angle Dimmer.

7 Pressing the INVERT X or Y button will invert the values of the x- or y-axis.

8 By pressing the COPY PROFILE button you can copy the currently set graph to a buffer. Pressing the PASTE PROFILE button will paste the graph from the buffer.

9 This is where the current name is displayed. Using the keyboard, you can name the graph you just created.

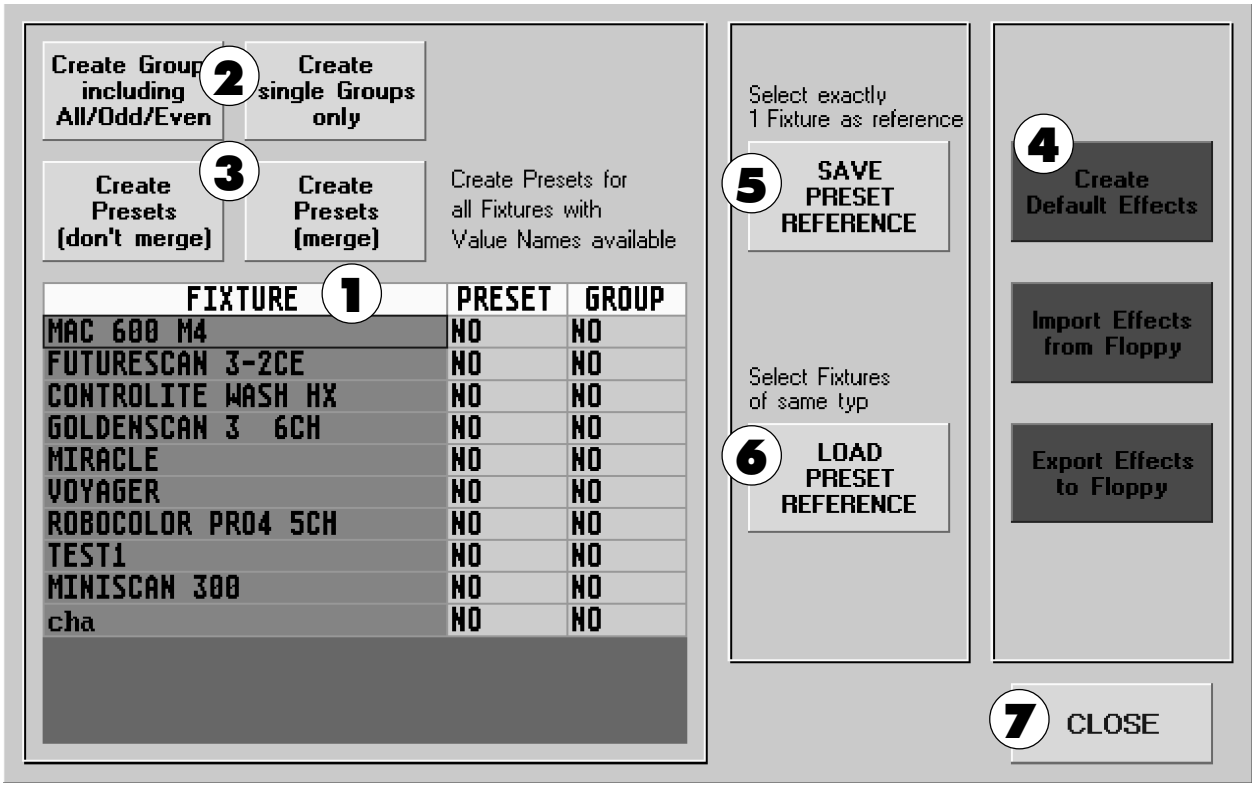
10 Pressing the button will save the graph.

11 If the graph is not to be saved, press this button. You will leave the menu without changing the parameters.

2.9 Creating presets, effects and group buttons automatically

For most of the Fixtures in the library, there are ready-made presets that can be created here. Furthermore, ready-made effects and buttons for each Fixture and Dimmer can be created in the GROUP window.

Call up AUTO CREATE in the SETUP menu.



1 The sheet shows all Fixtures and Dimmers that are used in the current show. On the right side of each Fixture or Dimmer, there is a cell for PRESET and GROUP. In the cells, a NO is displayed. You can switch over to YES by right mouse clicks on the individual cells or using the Encoder on the right side of the Display. When creating presets or group buttons, they will be created only for these specific Fixtures or Dimmers.

2 Pressing the CREATE GROUPS button will create a button for each Fixture in the GROUP window. An ODD button (to select all odd-numbered Fixtures), an EVEN button (to select all even-numbered Fixtures) and an ALL button (to select all Fixtures).

Pressing the CREATE SINGLE GROUPS button will create a button for each Fixture in the GROUP window.

3 Pressing the CREATE PRESETS button (don't merge) will create individual presets for each Fixture type.

Pressing the CREATE PRESETS button (merge) will create the presets for all Fixture types. Equal names of different Fixtures will be displayed on **one** PRESET button.

The created presets can now be called up from the individual PRESET windows.

4 Pressing this button will create ready-made effects that are then available in the EFFECT Pool. ➠ **6** Effects

Pressing the button **Import Effects**, you can load already saved effects from floppy.
Pressing the button **Export Effects**, you can save created effects to a floppy.

5 To save self-created presets from a reference Fixture, select that particular Fixture. Press the SAVE PRESET REFERENCE button. The SELECT A FIXTURE window will open. Confirm with ENTER (from the keyboard).

6 To use the created reference presets for a new Fixture of the same type, select that Fixture. Press the LOAD PRESET REFERENCE button. The SELECT A FIXTURE window will open. Confirm with ENTER (from the keyboard).

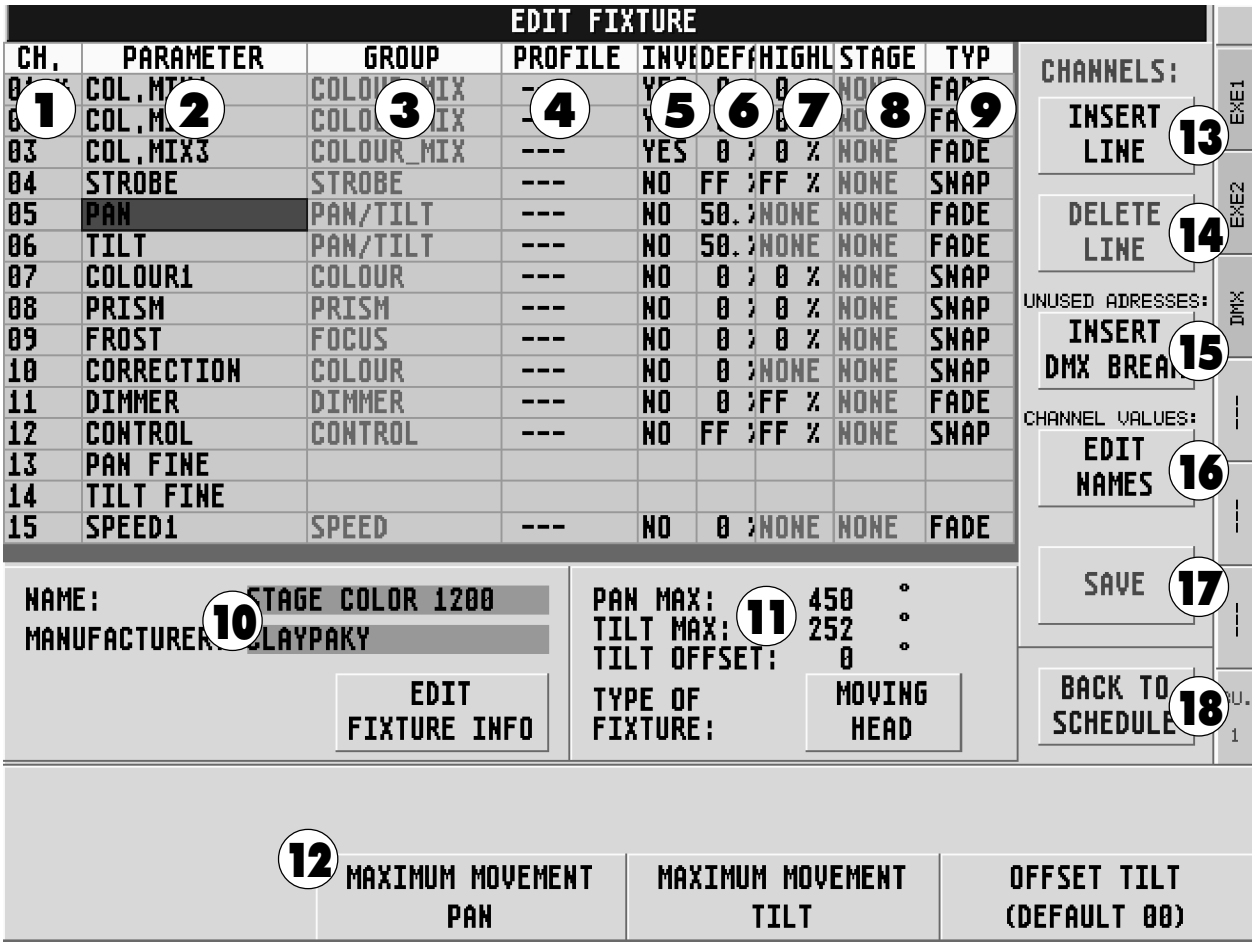
7 Leave CREATE PRESET with the CLOSE button.

2.10 EDITING FIXTURES (modify)

If an existing fixture has to be changed, you have to select it in the FIXTURE SCHEDULE.

EDIT

Press EDIT FIXTURE in the FIXTURE SCHEDULE to activate this menu.



2.10.1 Listing of individual functions in the EDIT FIXTURE menu

1 CH: Listing of individual channels

2 PARAMETER: Column for individual functions

3 GROUP: Display of group functions (Preset Group)

4 PROFILE: In this column, a profile can be assigned to this cannel. ➠ **2.8** Creating, Assigning and deleting profiles

5 INVERS: Within this column, the respective channel can be inverted.

6 DEFAULT : This value will be called up when the Fixture receives no Cue, Sequence, Preset or Direct Access signal.

7 HIGHLIGHT: This value will be called up when these Fixture have been selected and the HIGHLIGHT button is pressed.

8 Not yet available in version 2.10.

9 CURVE: FADE/SNAP function for the respective channel ➠ **2.7** Single Channel-specific Adjustments for the Current Show (point 10)

10 NAME/MANUFACTURER: To change the Fixture's name and manufacturer.

Additional note to item **10**: This is recommended, as otherwise the same name might exist twice.

11 PAN/TILT MAX: Value of maximum refraction from PAN/TILT function; important for Flip functions.
TILT OFFSET: Starting value of TILT function
TYPE OF FIXTURE: Swap between mirror or head Fixture. When using head Fixtures, the FIXTURE SHEET will show a yellow square left of the PAN value, symbolizing the current head position.

12 Encoder name for setting the PAN/TILT function and the OFFSET value.

13 To add one empty line in front of the marked position in the chart.

14 To erase the marked line.

15 Enables you to assign separate DMX addresses to a fixture. Beginning with the respective channel, where the figure is followed by an asterix, a new DMX address can be assigned later on.

16 This is where you can change or create Presets for the various functions (for example: COLOR). ➠ **2.11** Creating Fixtures (EDIT FIXTURE), item 3

17 The SAVE button will save all changes **only** within and for the **current show**.

18 To leave the EDIT FIXTURE menu.

2.10.2 Modifying Fixtures

All settings for the selected fixture will be displayed in the chart.

By selecting the function or value, the settings can now be changed.

For example:

- Selecting a DEFAULT value with a left mouse click. ➠ **2.10.1** Listing of individual functions in the EDIT FIXTURE menu (point 6)
- Now, confirm with ENTER (from the keyboard) or make a right mouse click into the marked space (red background).
- The SET VALUE window will appear.
- Enter the new value or select it with the left mouse button.
- The selected value will now be listed in the chart.
- By pressing the SAVE button, all changes will be saved.

The modified fixture can only be used for the *current show.*

If you wish to include this fixture configuration in the general fixture library (on hard or floppy disk), this has to be updated (save on hard or floppy disk).

In order to add this fixture to the harddisk library, the HARDDISK LIBRARY button must be activated (default). If the fixture is to be saved on floppy disk, the HARDDISK LIBRARY button has to be switched to FLOPPY LIBRARY (Fixture library on floppy disk). This way, you can also put fixtures in external archives and transfer these to other *grandMA* consoles and operators.

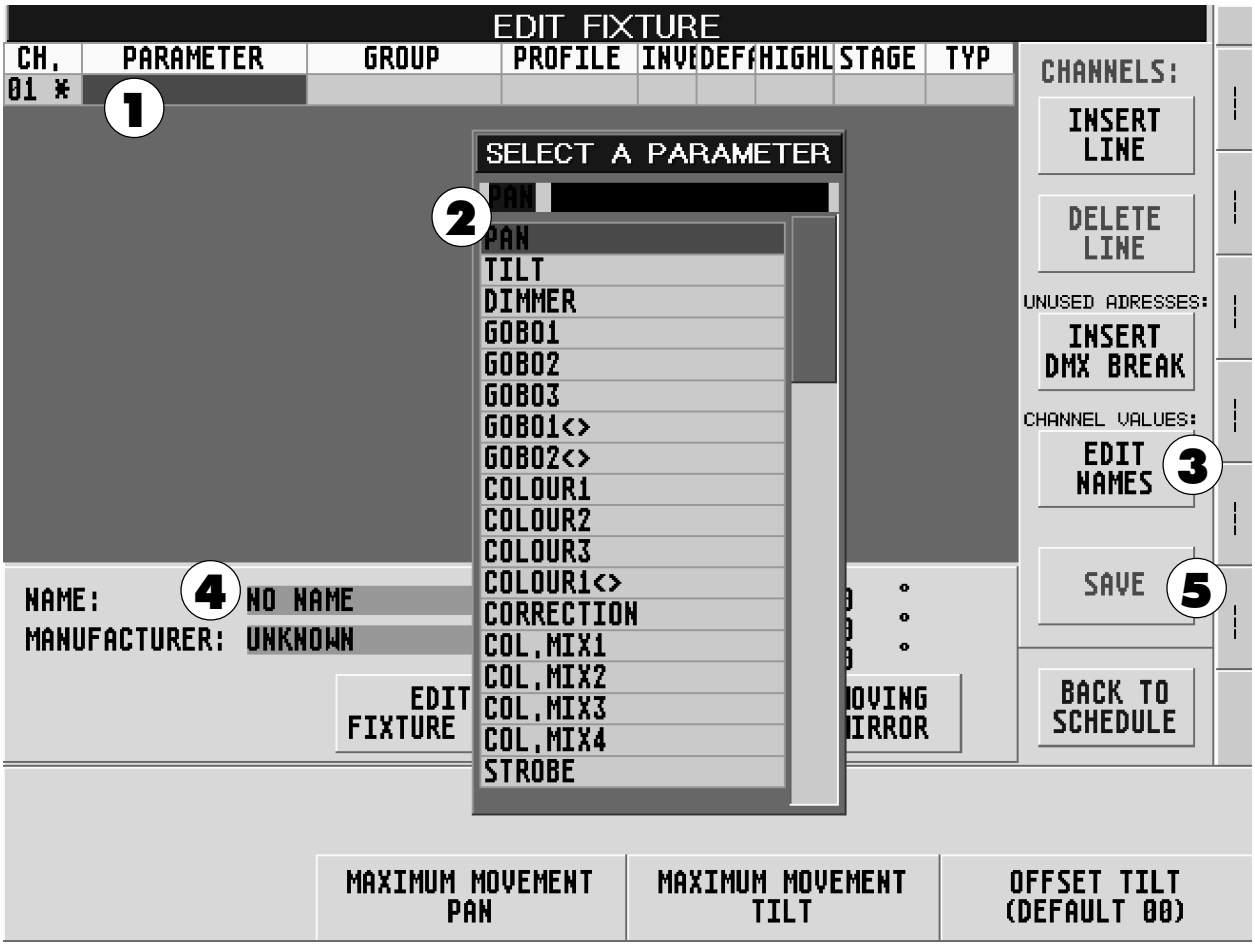
If you wish to save to a floppy disk, please insert an empty IBM/PC formatted 3.5" disk. Remove the write protection on the disk. After switching to floppy disk, it might take a few seconds for the floppy to respond. If no floppy is inserted it takes 1–2 minutes to respond.

Select the fixture in FIXTURE SCHEDULE (blue frame).The selected fixture will now be saved by pressing the UPDATE LIBRARY button. **Remove the disk from the drive afterwards.**

2.11 EDITING FIXTURES (create new)

In order to create a new fixture, activate NEW ENTRY in the FIXTURE SCHEDULE menu with a left mouse click.

Press the EDIT FIXTURE button in the FIXTURE SCHEDULE to call up this menu.



1 Select the cell on the right side of CH. 1 (will be displayed with a red background). Press ENTER (from the keyboard) or make a right mouse click into the cell. The SELECT A PARAMETER window will open.

2 Now, select the function for the first channel. It will automatically be inserted into the cell.

For further functions, repeat these two steps each time by using the cell below.

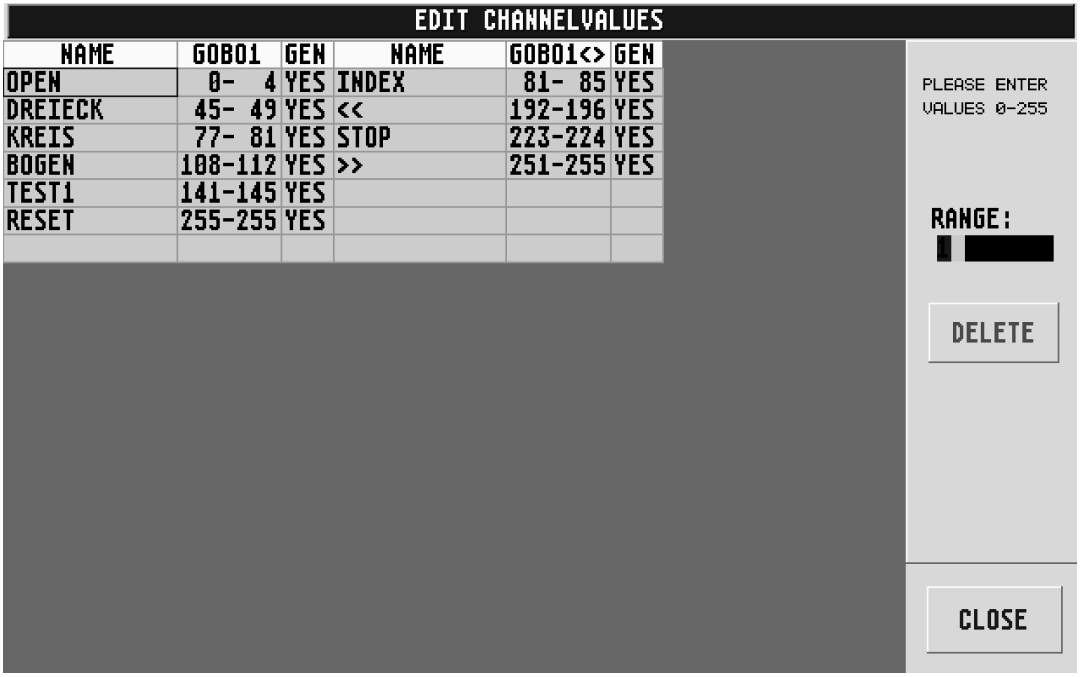
If all fixture functions have been selected, you can now program the presets.
The following factory presets are available

- PROFILE
- INVERS
- DEFAULT
- HIGHLIGHT
- CURVE
- PAN / TILT MAX and TILT OFFSET
- TYPE OF FIXTURE

➠ **2.10.1** Listing of individual functions in the EDIT FIXTURE menu

3 Here, you can create or modify so-called PRESETS for the individual functions (e.g. GOBO).

Pressing the EDIT NAMES button will open the FEATURE GROUP TO EDIT menu in which you can select a preset group. The EDIT CHANNEL VALUES menu will open.



Select the cell below NAME and enter a name for a preset. In the next column, enter the value for the preset. In the GEN column (generate), a YES is displayed. When presets are created automatically, they are created by using YES. If the preset is not be created automatically, select the cell and switch over to NO by pressing an arbitrary button. For further presets, use the next line (as an example ➠ illustration above). Leave the menu with the CLOSE button.

4 **After all parameters have been set, give them a name.** Perform a left mouse click on NO NAME. This column will now have a blue background and you can enter a name, using the keyboard; confirm with ENTER.

Please make sure that the chosen name does **not** already exist, because otherwise two with the same name can later only be recognised by their date. Now name the MANUFACTURER (name of manufacturer will help you find the fixture much faster later on). Continue with a left mouse click on UNKNOWN. This column will now have a blue background and you can enter a name using the keyboard; confirm with ENTER.

5 With the SAVE button, all settings will be saved and you switch to the FIXTURE SCHEDULE menu.

The created fixture can only be used for the *current show.*

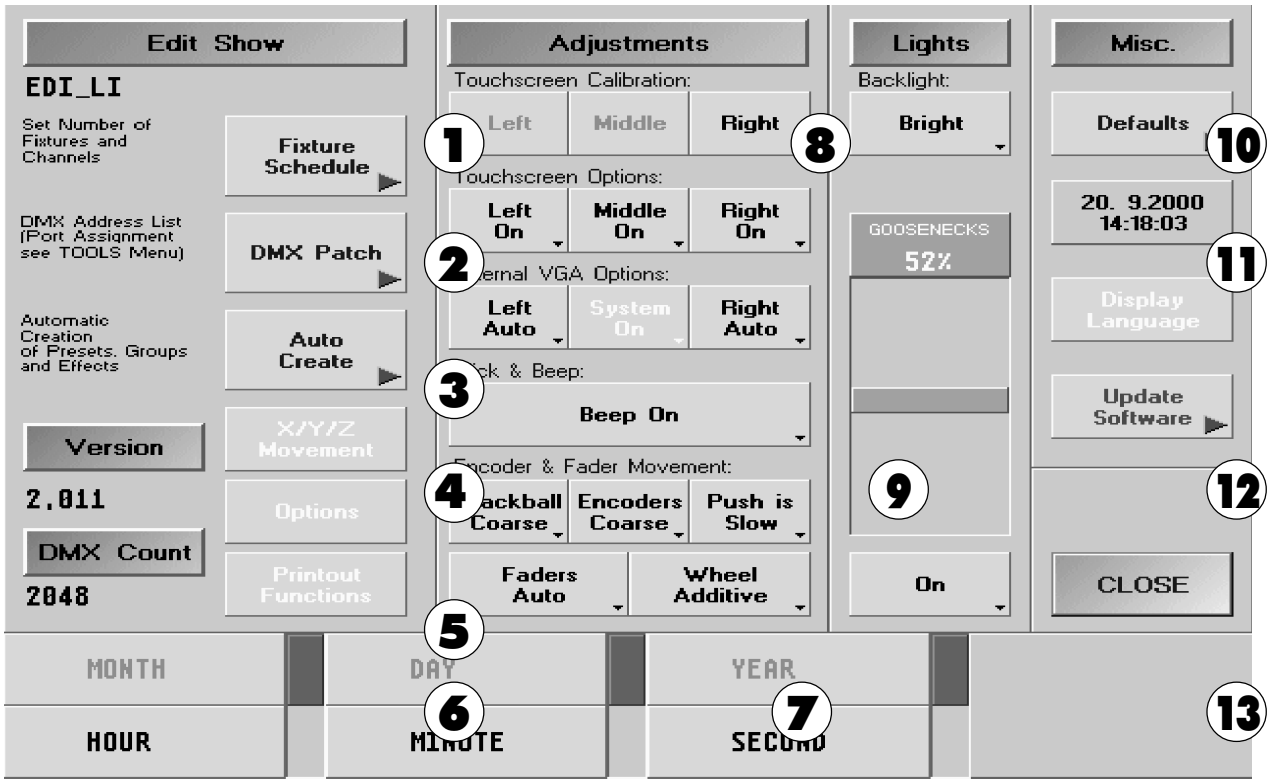
If you wish to include this fixture configuration in the general fixture library (on hard or floppy disk), this has to be updated (save on hard or floppy disk).

In order to add this fixture to the **hard disk library**, the HARDDISK LIBRARY button must be activated. If the fixture has to be saved on **floppy disk**, the HARDDISK LIBRARY button must be switched to FLOPPY LIBRARY (Fixture library on floppy disk). This way you can also put fixtures in external archives and transfer these to other *grandMA* consoles and operators.

If you wish to save to a floppy disk, please insert an empty IBM/PC formatted 3.5" disk. Remove the write protection on the disk. After switching to floppy disk, it might take a few seconds for the floppy to respond. If no floppy is inserted it takes 1–2 minutes to respond. Select the fixture in FIXTURE SCHEDULE (blue frame).

The selected fixture will now be saved by pressing the UPDATE LIBRARY button. **Remove the disk from the drive afterwards.**

2.12 Settings in the Setup Menu



1 By clicking this button, four calibrating buttons, numbered 1 to 4, will be displayed on the respective TFT display. Now, activate the buttons using your finger or the supplied pen (special pen with soft rubber core). After the last button, the display will automatically switch back. Now, the touchscreen is calibrated. The setting will automatically be saved.

2 With the respective button, the touch screens can be switched on or off, respectively. If one of them is faulty, it may occur that the mouse will freeze on one position and can not be operated anymore. In this case, the touch screens can be switched off. For this, use function key F9 on the keyboard.

F9 will switch off all three touchscreens (emergency switch). To switch the touch screens back on, you can use the mouse again.

3 To switch the mouse function on both external monitors on and off. In AUTO mode, the software will recognize by itself, if a monitor is connected or not and will switch the mouse function for the external monitors on or off, respectively.

OFF **will not allow** any mouse function, while ON will keep the mouse function **activated** at all times.

4 With this button, the *grandMA*'s acoustic sensor can be switched on or off (with older grandmas, probably not available).

5 To set the sensitivity of trackball and roughly of the Encoder. With the PUSH button, you can set the Encoder's sensitivity while holding the button down.

6 Switching between the Motorfader functions (Executor Fader, Channel Fader).

AUTO:	Executor Faders:	When switching between the Pages, the Motorfaders will automatically pick up the values saved last.
	Channel Faders:	Faders adjust to the called-up values of the allocated channels.
MANUAL:	Executor Faders:	When switching between the Pages, the saved values will be called up, but the Faders will **not** follow. To change a saved value, you have to use the Fader to manually set it to a higher or lower value.
	Channel Faders:	Faders do not adjust automatically to the called-up values of the assigned channels. To change a saved value, you have to use the Fader to manually set it to a higher or lower value.
DISABLED:	**Faders without function**	
	Executor Faders:	When switching between the Pages, the saved values will be called up, but the Faders will not follow.
	Channel Faders:	Faders do not adjust automatically to the called-up values of the assigned channels.

7 To switch the wheel's functions for the dimmers.

Additiv: All dimmer values will be changed simultaneously. If they reach "0" or "FF", they will be aligned.

Incremental: All dimmer values will be changed simultaneously. If they reach "0" or „FF", the respective intervals will be maintained.

Prop.+: All dimmer values will be changed in percentages and will reach "0" simultaneously.

Prop.–: All dimmer values will be changed in percentages and will reach "FF" simultaneously.

Please note, that with PROP+ a change of the value "0" is not considered a change.
Please note, that with PROP– a change of the value "FF" is not considered a change.

8 To switch between "Light" and "Dark" display background illumination.

9 The desk lamp can be switched either on or off with the ON/OFF button. The brightness of the desk lamp can be changed using a left mouse click on the blue bar or using the touchscreen.

10 By pressing this button, you will enter the DEFAULTS menu. All general presets can be set in this menu. ➠ **2.13** Settings in the DEFAULTS menu

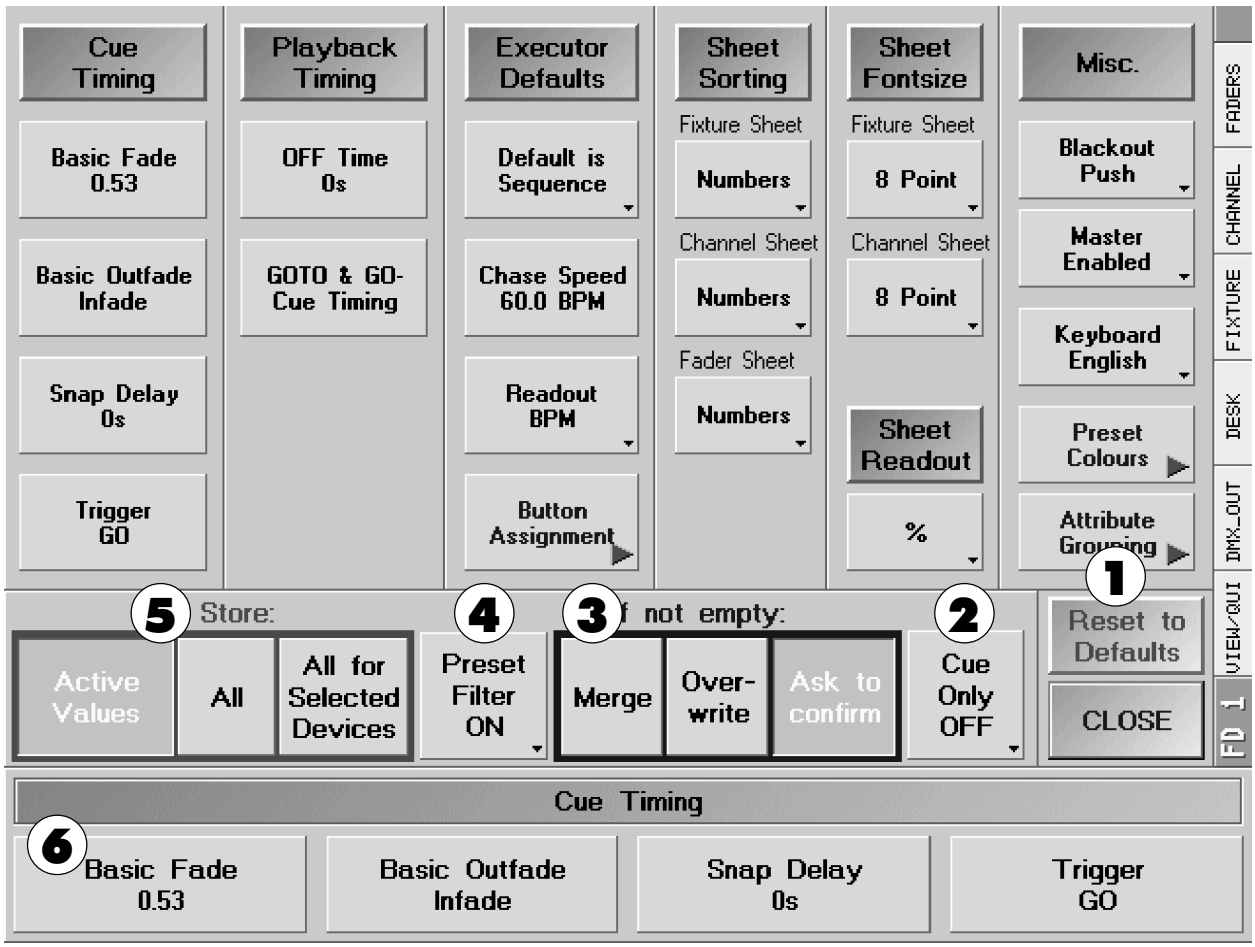
11 To display time and date. After a short press on the softkey of the clock display you can set time and date with the encoder below the TFT screen.

12 By pressing this button, you will reach the UPDATE SOFTWARE menu. The operating system, the operating software as well as the console software and the fixtures can be updated from this menu. ➠ **10** Software Update

13 To leave the SETUP menu.

2.13 Settings in the DEFAULTS Menu

Pressing the DEFAULT button in the SETUP menu will bring you to the DEFAULTS menu.nü.



Cue Timing

This column will display the preset times and settings that will be used when saving Cues and Sequences.

6 Using the Encoders, you can adjust the individual times and trigger calls.

Playback Timing

The duration set for the **OFF Time** will be used when switching off Executors (OFF button).

GOTO & GO-: If a specific time is set when calling up a Cue using the GOTO or GO- function, the Cue will be called up with this duration. If Cue Timing was set, the Cue will be called up with the duration programmed in this Cue. You can overwrite the Goto Default duration at any time. ➠ **4.2.3** Default Sequence (Master Sequence)

Executor Defaults

Default is Sequence/Chaser: With this button, you can define, whether a newly programmed sequence will be created as a Chaser (running light) or as a Sequence (GO MODE) (default setting).

Chase Speed: Here, you can define the preset for Chase Speed and Effect Speed.

Readout: By pressing the button, you can here switch the Chaser Speed between BPM (beats per minute), Hz (beats per second) and SEC (seconds).

The preset of the Chaser Speed is also used for the Effect Speed.

Button Assignnent: Calling up this menu ➠ **2.16** Settings in the BUTTON ASSIGNMENT menu

Sheet Sorting

By the SORTING column, you define according to which aspects the fixtures and channels shall be sorted when setting up new windows. You can switch to the next option by clicking on the respective buttons.

Sheet Fontsize

With the FONTSIZES column, you can define the type size of new windows.

Sheet Readout

Preset for the output of numbers in the OUTPUT, CHANNEL and PATCH windows.

Misc

- Function of BLACKOUT button:
  PUSH: serves as push button (key)
  TOGGLE: will remain active when pressed
  DISABLED: switches the blackout function off
- Function of the GRANDMASTER FADER:
  ENABLED: Fader active
  DISABLED: Fader inactive
- KEYBOARD GERMAN/ENGLISH: Switch option for country-specific keyboards.
- With the **Preset Color** button, three different presets for the color scheme of displaying preset buttons can be called up.
- ATTRIBUTE GROUPING: Calling up this menu ➠ **2.15** Settings in the ATTRIBUTE GROUPING menu

1 RESET DEFAULTS button: Will reset all changes back to factory settings.

2 Preset, whether Cue Only will be ON or OFF when saving data.

3 To set the query mode to create or overwrite cues.

4 PRESET FILTER ON /OFF:

FILTER ON: When saving a PRESET, **only** the functions of this feature (e.g. COLOUR) will be saved.

FILTER OFF: When saving a PRESET, **all functions** of the chosen fixture will be saved.

5 Functions for data saving.

Active Values: Will save **only active** values (red background or red numbers/characters)

All: Will always save **all** values given on the output (DMX)

All for Selected Devices: Will save **all** values of the selected Fixtures and Dimmers (Fixture and Dimmer characters in yellow)

6 Encoder labelling for figures within the Cue Timing column.

2.14 Setting Sound Signals

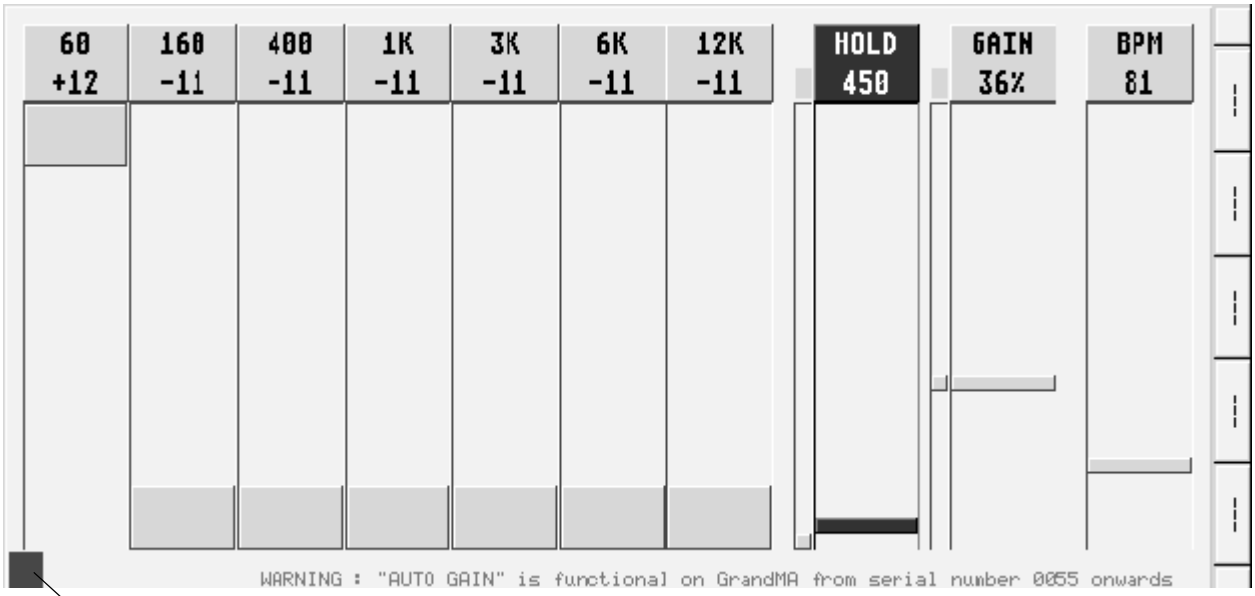
The sound signal is used for triggering Chasers and Sequences. In other words, this is an electronic, graphic equalizer. In order to slowly balance any fluctuations of the audio signal, a specific compressor function has been integrated.

Furthermore, you will find an integrated adjustable HOLD-OFF function. This function will prevent any double triggers (for example: with fast BASSDRUM beats).

Furthermore, beats will be automatically recognized via the incoming sound signal (BPM).

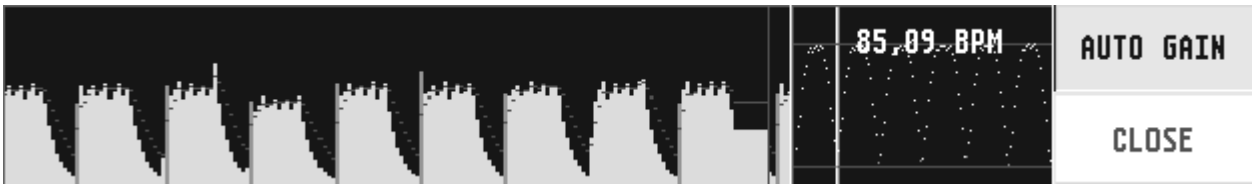
Press the TOOLS button once.

Call up this menu from the TOOLS menu using the **Sound Settings** button.



Trigger monitor

To set an equalizer, pull the respective "slider" to the desired position. In the left lower corner, there is a visual trigger signal (monitor) for your orientation. The small dot on the left side of the HOLD Function will indicate the remaining HOLD time. The small dot on the left side of the GAIN indicator will show, the compression rate of the audio signal.



The right small dot will indicate the state of compression of the audio signal. The sound signal is visualized in the lower left part of the display. The analysis of the sound signal will be indicated in the smaller right part of the window, including indication of the recognised BPM (Beats per minute). By moving the BPM slider, the beats per minute can be adjusted.

The AUTO GAIN button is usable for *grandMA*s from serial no. 0055 and later (dark-grey button, HARDWARE modification).

For *grandMA*'s with serial no. up to 0054, this button can *not* be used.

You can leave this menu by pressing the CLOSE button; all settings will be saved.

2.15 Settings in the ATTRIBUTE GROUPING Menu

Attention! This menu is important and will influence the entire programming!

All settings within this menu will affect the saving of Cues, Presets and creating of Presets (Create Preset menu).

Functions displayed in the same line belong together and will be saved together later on in the saving process (e.g.: Prism and Prism rotation).

If these two functions are set to "separate saving possible", they have to be listed in two separate lines.

In order to do this, perform a left click on the cell containing the function and **hold** the mouse button down (the cell will be appear red); now you can move this cell correspondingly.

This way, you can create you own active groups (Attribute Grouping).

FEATURE	MEMBER	MEMBER	MEMBER	MEMBER	MEMBER	MEMB
PAN/TILT	PAN	TILT				
	MOVE_MODE					
	PAN<>					
	TILT<>					
	TILT<					
	TILT>					
DIMMER	DIMMER					
GOBO	GOBO1					
	GOBO2					
	GOBO3					
	GOBO1<>					
	GOBO2<>					
	GOBO_MODE1					
	GOBO_MODE2					
COLOUR	COLOUR1					
	COLOUR2					
	COLOUR3					
	COLOUR1<>					
	CORRECTION					
	COLOUR_MODE1					
	COLOUR_MODE2					
COLOUR_MIX	COL.MIX1	COL.MIX2	COL.MIX3	COL.MIX4		
BEAM	STROBE					
	IRIS					
	PRISM					
	PRISM<>					
EFFECT	EFFECT					

RELOAD RESET CLOSE

When changes were made in this menu, they can be reset to their initial setting by pressing the RELOAD button.

By pressing the RESET button, the manufacturer's setting will be called up.

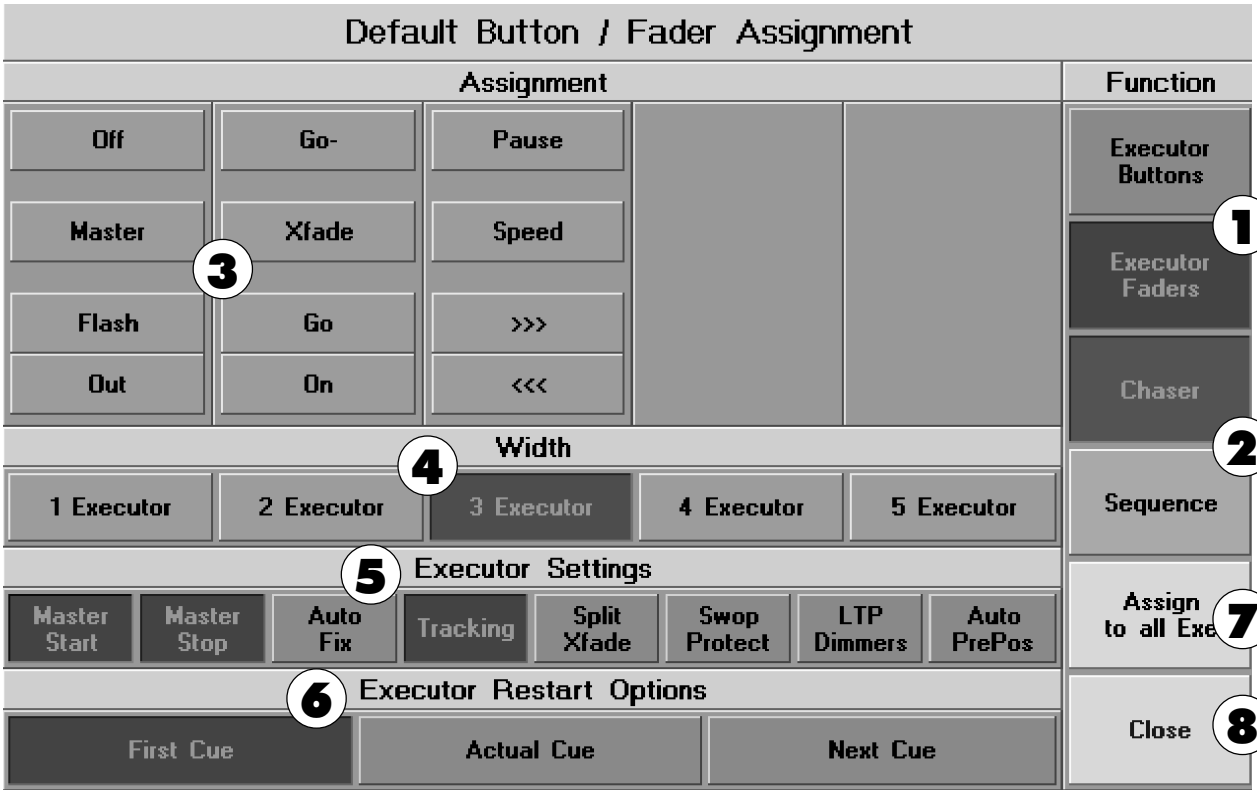
You can leave this menu by pressing the CLOSE button; all settings will be saved.

2.16 BUTTON/FADER ASSIGNMENT MENU

In this menu, **all** EXECUTOR buttons or faders can be preset or changed simultaneously.

BUTTON ASSIGNMENT

Press this button in the DEFAULTS menu to open the menu.



1 By pressing the respective button, you can switch between changing the assignment for the EXECUTOR buttons or for the EXECUTOR Faders.

2 By pressing the CHASER button, only Chaser buttons or Faders will be changed; by pressing the SEQUENCE button only Sequence buttons or Faders are changed.

3 By selecting the FADER symbol, a selection will appear, in which you can assign the respective function to the fader.

- Master: The Fader controls all dimmer values of this sequence.
- Swap: With the Fader, the sequence is faded in and **all** dimmer values used in this sequence are set to „0" or the value respectively programmed.

It is only possible, to use the SWAP *or* the Master fader.

- Fade: With the Fader, the fade-in time can be set for the FADE function, when using Chasers.
- Speed: The Chaser speed can be set with the Fader.
- Xfade: With the Fader, you can fade in to the next step.
- XF A: If Split Crossfade is active, you can fade out the currently called up Cue when pushing the fader upwards (➠ **item 5**).
  If Split Crossfade is **not active**, you can fade out to the darkening Dimmer channels of the next Cue when pushing the fader upwards.
- XF B: If Split Crossfade is active, you can use the Fader to fade in the next Cue when pushing the fader upwards (➠ **item 5**).
  If Split Crossfade is **not active**, you can fade out to the next Cue and to the brightening Dimmer channels when pushing the fader upwards.
- Empty: Fader has no Function.

By selecting the respective BUTTON symbol, a selection will appear, in which you can assign a different function to the button.

- Go: The next step will be called up with all programmed FADE and DELAY times.
- Go–: For sequences, the previous step is called up and all changes effected on previous Cues are executed (full tracking). At the same time, all programmed FADE and DELAY times will be executed. For Chasers, the running direction will be reversed.
- Pause: Sequence or Chaser will be interrupted; continue with Go oder Go–.
- On: Switches the Executor on and starts the sequence or brings it back, if it was overwritten (LPT).
- Off: Switches the Executor off.
- Learn: Direct entering of the Chaser speed. When pressing this button at least three times, the Chaser speed is set.
- <<<: Call-up of the previous step without FADE or SNAP times.
- <<<: Call-up of the previous step without FADE or SNAP times.
- Temp: Cue, Chaser or Sequence will be active, as long as the button is pressed. Then, the previous condition will be re-established.
- Top: Resets the Sequence to the first step.
- Empty: Button has no function.
- Flash: Sets the Dimmer value to 100%, starts the sequence, if not already activated.
- Out: To hide the dimmer values (temporarily).
- Toggle: To switch on and off the respective Cue, Sequence or Chaser.
- Swop: Cue, Chaser or Sequence will be active as long as the button is pressed; all other Dimmer channels with active "Swop Protected", except Executors, will be hidden.

4 Using the EXECUTOR buttons 1–5, you can preset whether it should be possible to use one, ein bis zu fünf faders, and for the EXECUTOR BUTTONS, whether it should be possible to use one, ein bis zu fünf buttons. The respective titles will be displayed on the TFT Display above the EXECUTOR FADERS. When the List function is active, the function of the EXECUTOR buttons will be displayed above these Buttons (press LIST Button).

5 If you press the MASTER START button (background dark gray), the Sequence or Chaser will be automatically started when pushing up the Master Fader (➠ **item 6**).

If the MASTER STOP button is pressed (dark gray background), the sequence or Chaser will automatically be switched off when pushing the master fader down to the lower stop.

If the AUTO FIX button is pressed (dark background) and the Sequence or Chaser is started, this Executor will be locked to that position when switching the Executor pages and will **only be released after switching it off**. If an Executor is saved at that position on another page, this Executor will appear and can be used again only after switching the locked Executor off.

If the TRACKING button is pressed (dark background), the Sequence will be executed in TRACKING mode. If the button is not pressed, the Sequence will be executed in NON TRACKING mode. ➠ **5.1** ASSIGN menu

If the SPLIT CROSSFADE button is pressed (displayed in dark), the function is active (➠ **item 3** Fader XF A and XF B).

If the SWOP PROTECTED button is pressed, the Dimmers of this Sequence will not be switched off, when another Sequence is called up using Swop.

LTP Dimmers button pressed: When activating this sequence, the dimmer channels of this sequence will be called up as previously programmed. They will overwrite all other dimmer channels of those Cues that were also called up in LTP mode. HTP Executors remain unchanged.

Auto PrePos button pressed: For Fixtures with **inactive Dimmers**, all other channels will be executed without programmed fade times when calling up the first Cue of this Sequence. When deactivating this sequence, the channels will be altered only after the respective dimmer has been set to 0.

6 If you press the FIRST CUE button, the Sequence will, after switching off and on, start again at the **first** step.

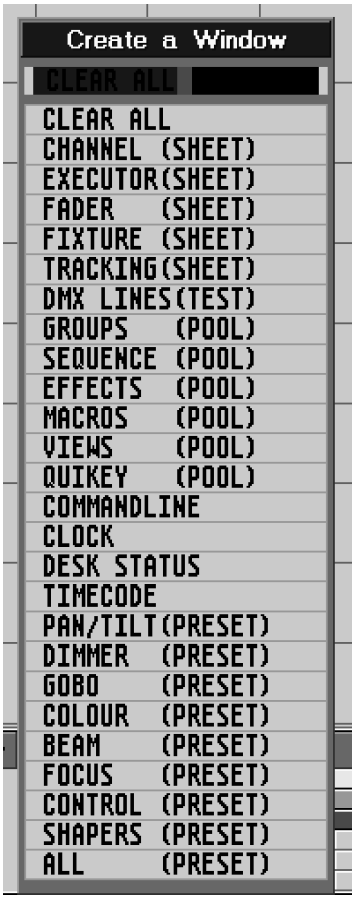
If you press the ACTUAL CUE button, the Sequence will, after switching off and on, start again at the **last called-up** step.

If you press the NEXT CUE button, the Sequence will, after switching off and on, start again at the **next** step.

7 Using the ASSIGN TO ALL EXE button, you can transfer the changes directly to **all** EXECUTOR FADERS or BUTTONS. For safety reasons, a message box will appear after pressing the button and you are asked to confirm with YES.

8 You can leave the BUTTON ASSIGNMENT menu with the CLOSE button.

3 Creating a Show



3.1 CREATING A WINDOW

1 Click into an "empty" space on the three TFT displays or the external monitors. The CREATE A WINDOW menu will open.

Or:

Click into an "empty" space on the three TFT displays or the external monitors. The CREATE A WINDOW menu will open.

3.1.1 Listing of individual windows and functions

CLEAR ALL: Erases all windows on this screen/monitor.

CHANNEL: This window will display dimmer channels as figures. You have direct access to channels and values here. ➠ **3.5** Accessing Dimmer Channels directly

EXECUTOR: Within this window, you will have the option to display a sequence, which is assigned to an EXECUTOR fader or an EXECUTOR button. Among other options, this is where global times can be changed also. ➠ **5.3** EXECUTOR window

FADER: Selected dimmer channels can be displayed as either bar or figure within this window. Here you will also have direct access to channels and values. ➠ **3.5** Accessing Dimmer Channels directly

FIXTURE: Displays all fixtures plus the various functions, values, status etc. Here you will have direct access to the fixtures, functions and values. ➠ **3.4** Accessing Fixtures directly

TRACKING: In this window, you can display a Sequence that is assigned to an EXECUTOR fader or EXECUTOR button. Here, as opposed to the EXECUTOR Sheet, all values or times can be displayed separately. Any value/time can be modified separately for any channel. ➠ **5.4** TRACKING window

DMX LINES: In this window, all DMX output channels are displayed as hexadecimal values, like they are actually patched.

GROUPS: Displays, creates new, edits and calls up fixture and dimmer groups. ➠ **3.3** Creating and Calling up Fixtures and Dimmer groups

SEQUENCE: In this Pool, all created Sequences are displayed. This way, assignments to Executors can be made very quickly. Here, the Sequences can be renamed, copied and deleted. ➠ **5.1** ASSIGN menu

EFFECT: Displaying and Calling up Effect Groups. ➠ **6** Effects

MACROS: Indicates and calls up macros on the displays. ➠ **8** Macros and QUIKEY

VIEWS: Displaying and Calling up Views. ➠ **3.2.2** View Pool

QUIKEY: Displaying and Calling up control buttons on the displays. ➠ **8** Macros and QUIKEY

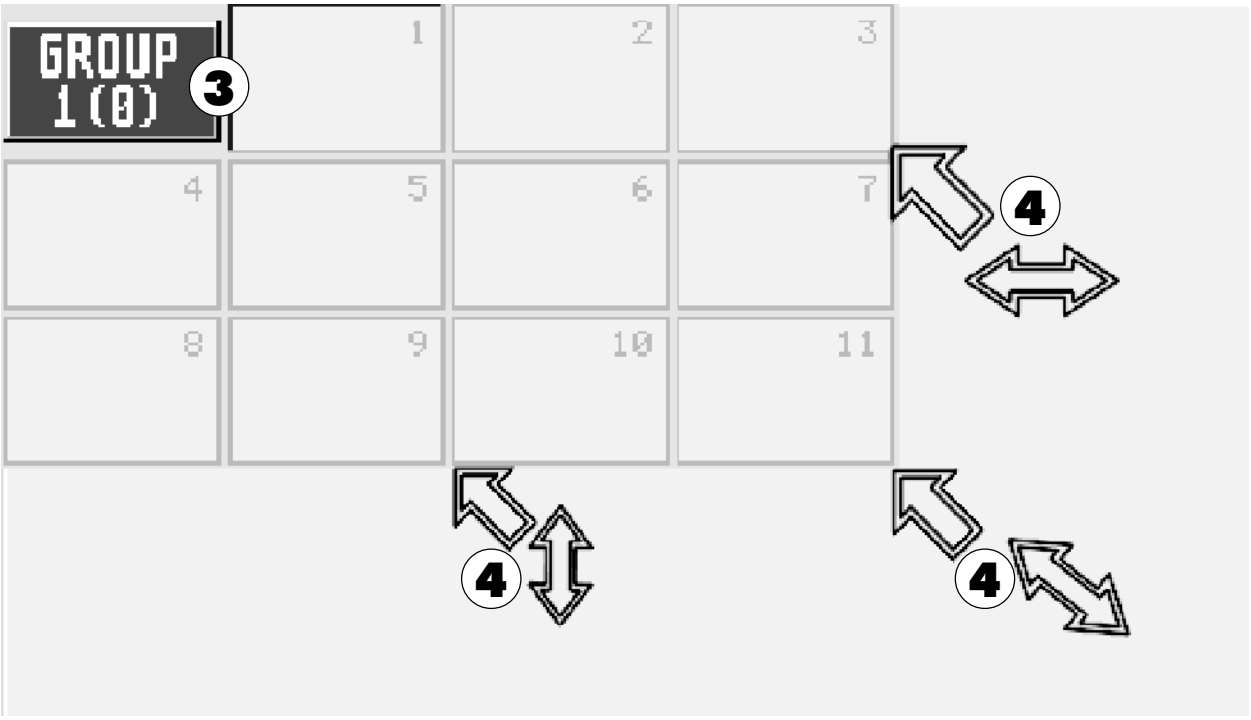
COMMANDLINE: Here, the executed commands are listed with their respective names. This is also, where the commands can be entered. ➠ **3.1.3** Commandline

CLOCK: Display window for the analogue or digital clock. Switching by pressing the ANALOG button.

DESK STATUS: Displays the current software versions:
VXWORKS: operating system with date
GrandMA: main program with date If this line is displayed in green, the unit supports 4096 DMX channels
IO SUBSYSTEM: program for the second integrated computer (Motorola), internals, system load, etc.

TIMECODE: Recording, Playing back, Editing and Saving SMPTELTC Timecode controlled operations. ➠ **7.1** Timecode

PAN / TILT, DIMMER, GOBO, COLOUR, BEAM, FOCUS, CONTROL, SHAPERS und ALL: Creates new, edits and calls up individual PRESETS with name and number. ➠ **3.7** Creating and Calling up Presets



2 Select the window or function to be created with a left mouse click.

3 If you wish to move the newly created window, hold the window border with the left mouse button and move the window.

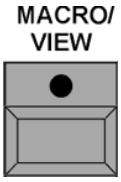
4 There are 3 ways to enlarge a window: Move the cursor carefully to the lower or right border or corner, until you will see a small double-arrow next to the cursor. Now press and hold the left mouse button. By moving the mouse, the window can now be zoomed according to your requirements.

3.1.2 Deleting a window

Press the DELETE button once. Click on the title bar of the window.

Or:

Click the headline with the right mouse button. In the next window, confirm with YES or DELETE.



Or:

When pressing the uppermost and lowermost VIEW buttons simultaneously, all windows on this TFT display will be deleted.

3.1.3 Commandline

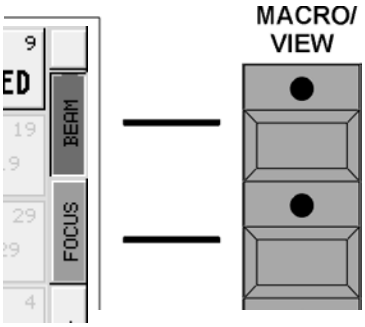
Almost every command entered will be listed in the Commandline. Each command will be displayed including the respective internal time/duration, and for Timecode operations or Macro applications (involving a specific duration), the respective time/duration will be also displayed.

As long as a chain of commands was only entered, but not yet completed with ENTER, you can delete the commands or numbers using the BACKSPACE button (on the keyboard). In the Commandline, entered commands that were not yet executed, will be displayed in a larger font in the bottom line.

3.2 Saving VIEWS

The VIEW buttons on the touchscreens or the external monitors can be assigned with various views.

The buttons located beside the screens can be used for direct access to the VIEW buttons on the screens.



What can a button (key) be used for?

- You can save **one or more** displays on it,
- you can save **all** currently created windows on **all** screens and both external monitors on it,
- or you can save a Macro function ➠ **7.1** Creating Macros

1 Organize a display or monitor ➠ **3.1** CREATING A WINDOW

2 Press STORE button once (STORE LED is on).

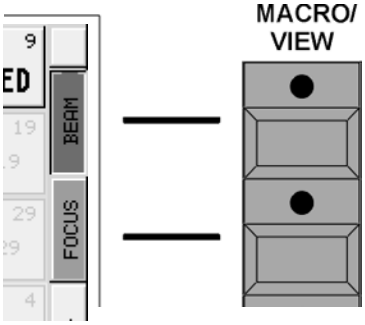
3 Enter a name for the VIEW using the keyboard. The new name will be displayed in the top line.

4 Enter a name for the VIEW using the keyboard. The new name will be displayed in the top line.

5 By pressing the buttons 1–5 (selected button will turn dark-grey), select the display to be saved.

Pressing the button ALL SCREENS will save all five displays on one view button.

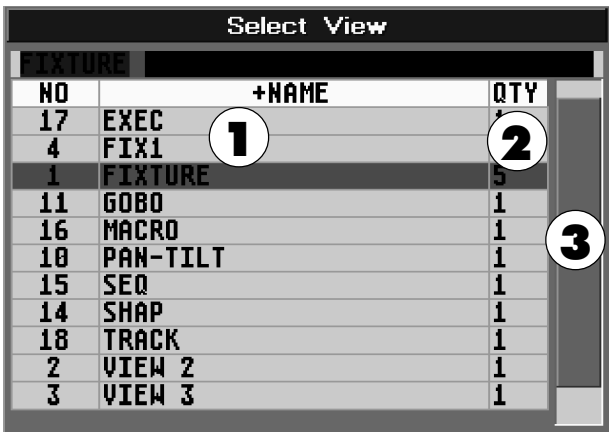
6 With the OK or ENTER button you can save and assign the view to the view button.



3.2.1 Assigning VIEWS

All created views can by assignd to any view button.

Click on the view button with the right mouse button. The window SELECT will appear. In this window, make a left click on the VIEW button. Now, the window SELECT VIEW will appear:



1 The table shows all created VIEWs with their names.

2 The QTY column shows the number of saved displays and external monitors for the individual VIEWs.

3 Scrolling is possible by dragging the scrollbar on the right side.

4 Selecting a VIEW in the table will assign this view to the chosen button.

3.2.2 View Pool

In the View Pool, all created Views are displayed and can be called up directly by selection.

3.3 Creating and calling up Fixtures and Dimmer GROUPS

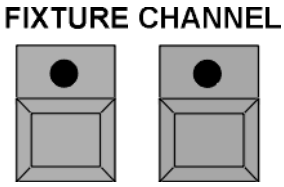
Important and frequently used combinations of fixtures and dimmer channels can be saved in groups (currently max. 999 pcs.).

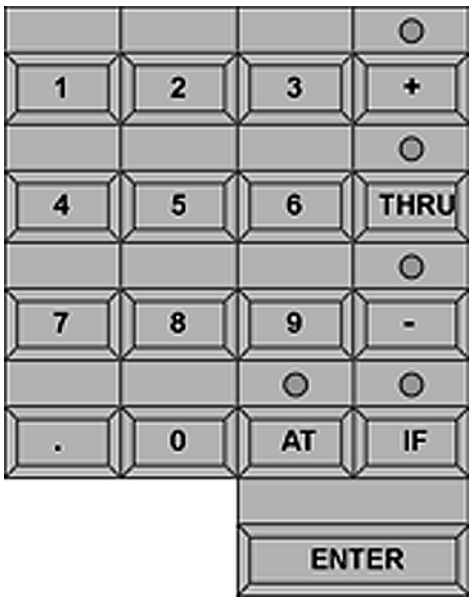
3.3.1 Creating fixture or dimmer groups

Create a GROUP window on one of the TFT touchscreens. ➠ **3.1** Creating a Window

- Use the touch screen or make a left mouse click on the individual Fixture within the FIXTURE SHEET or click on the Dimmer channels in the CHANNEL or FADER SHEET.

The **selected** scanners or dimmer channels of a selected group can be called up one by one in a certain sequence. In selected groups, the individual Fixtures or Dimmer channels can be selected in a specific order one after another. When selecting Fixtures or Channels for a group, make use of their order in which, after calling up the group, they are to be separately switched by using the NEXT/PREV button.





Or:

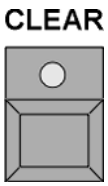
- Press the FIXTURE button for a fixture group or the CHANNEL button for dimmer groups (LED is on).

  Pressing the ENTER key shortly will lock the Fixture or Channel in the Commandline.
- Enter the number of first fixture or dimmer channel, using the numeric keypad.
- Now you can select the fixture or dimmer channel with the respectively following number by using the "+" key.
- The THRU key on the numeric keypad will select all fixtures and dimmer channels **from... to** including the last number entered.
- Using the "–" key, the fixture/dimmer channel with the following input number will **not** be selected.
- Confirm with ENTER; the selection will be processed.

The **selected fixtures** or channels will be displayed in the FIXTURE or CHANNEL window, and given in yellow characters.

Press the STORE button once (LED within the button is on). Using the touchscreen or left mouse click, select the desired group button on the display containing the GROUP window. The selected fixtures are now saved to this group (STORE LED is off).

You can now name this group, using the keyboard. Enter the names or descriptions and confirm with ENTER.



Press the CLEAR button once. This erases the selected group of fixtures and dimmer channels.

For further groups, simply repeat all steps.

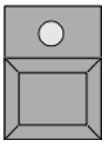
➠ **2.9** Creating presets, effects and group buttons automatically

3.3.2 Calling up groups

Groups can be called up by:

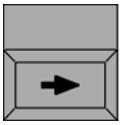
- A left mouse click
- Direct touch on screen
- Pressing the GROUP button once, entering the preset group number with the keyboard and confirming with ENTER.
- Press the GROUP button once. Pressing the ENTER key once will lock GROUP as preset in the Commandline. Then, enter the group number on the numeric keypad and call it up pressing ENTER.

CLEAR



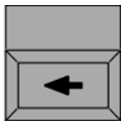
By pressing the CLEAR button once shortly, all selected Fixtures and Channels are deleted (displayed in yellow).

Proceed as follows to separately activate selected Fixtures/Dimmers or called-up groups in the desired/stored order:



NEXT button once within a group or selection: forwards

PREV



PREV button once within a group or selection: backwards

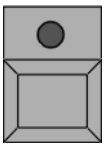
Pressing the SET button once reselects all Fixtures and dimmer channels in the group.

If there are more groups than can be displayed in the respective GROUP window, you can scroll within every "active" window (title bar in dark blue) on every screen by using the encoder wheel down on the right.

3.3.3 Moving GROUP buttons within a window

MOVE

Press the MOVE button once (MOVE LED lights up).

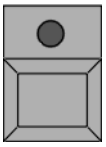


Using the touch screen or left mouse button, click on the GROUP button and hold it down (a small hand appears). Move the button to the another positon within this window and release it there.

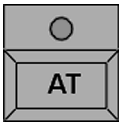
3.3.4 Copying groups

COPY

Press the COPY button once (LED is on).



Select the Group Buttons in the GROUP window. By selecting several groups one after the other, that set of groups can be copied together.



Press the AT button once (LED is on).

Click on the position for the copied group in the GROUP window.

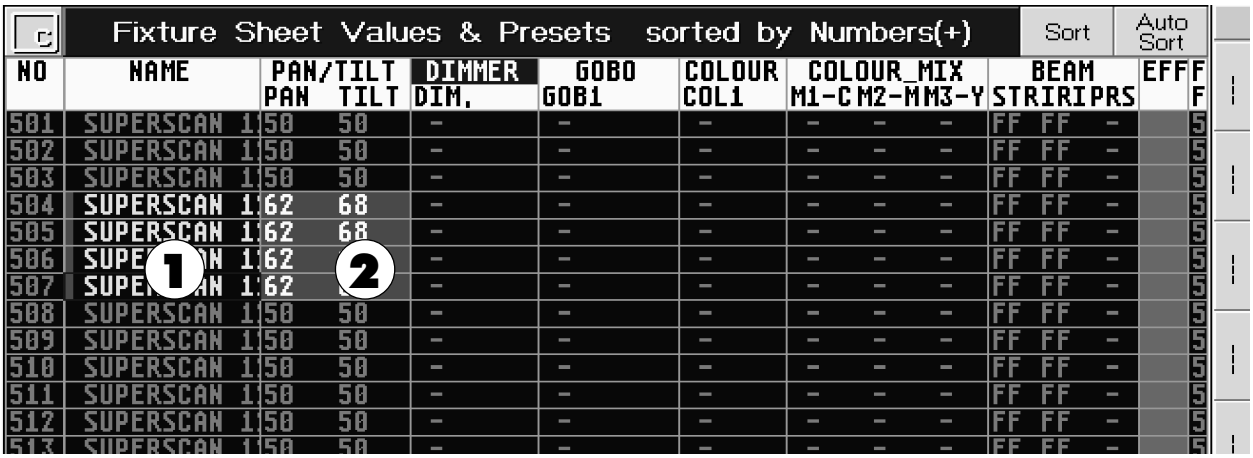
Confirm with ENTER.

The functions Move, Copy or Delete should also be used for Executors, Pages, Sequences or Effects.

3.4 Accessing Fixtures directly (in the FIXTURE SHEET)

The individual fixture functions can always be accessed directly. Several fixtures can be controlled by one function simultaneously. The selection will determine which fixtures will react to Direct Access procedures (selected fixtures will be marked in yellow writing in the FIXTURE window).

Within the FIXTURE window, you can locate, select and execute all functions of all visible fixtures.



1 Select the fixtures, for which you wish to modify a value (the selected fixtures will be displayed in yellow characters).

Selection:

- A left mouse click on the individual fixtures.

or:

- Call up a fixture group. ➠ **3.3** Creating and calling up Fixtures and Dimmer GROUPS

or:

- Select fixtures by using the Fixture button and the numeric keypad. ➠ **3.3** Creating and calling up Fixtures and Dimmer GROUPS

2 Click on the desired function with the middle mouse button and **hold it**; the value will change by moving the mouse while holding the middle mouse button down.

or:

Select the desired function with a left mouse click. The values can now be changed via the encoders, located below the right TFT display (all functions of the encoders will be displayed directly on the screen; pressing the encoder will switch over).

The Trackball effects the PAN/TILT function only (if switched on).

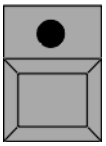
The wheel effects dimmer values only.

For saving the settings ➠ **4** Cues and Sequences
For creating Presets ➠ **3.7** Creating and calling up Presets
To call up or create Effects ➠ **6** Effects

3.4.1 The ALIGN Function

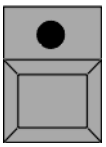
The ALIGN function allows you to use four different **modes** of changing values.

ALIGN ALIGN button pressed once (LED is on).



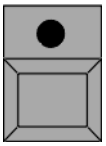
When changing activated values, the value of the first selected Channel/Fixture will be taken as starting value (will not be changed), while the value of the last selected Channel/Fixture value will be the one modified most, and all values in between will be distributed evenly.

ALIGN ALIGN button pressed twice (LED is on).



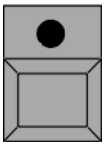
When changing activated values, the last value of the last selected Channel/Fixture will be taken as first value (will not be changed), while the value of the first selected Channel/Fixture will be the one modified most, and all values in between will be distributed evenly.

ALIGN ALIGN button pressed 3 times (LED is on).



When changing activated values, the value of the selected Channel/Fixture value "in the middle" will be taken as first value (will not be changed). The value of the first and last selected Channel/Fixture will be the ones modified most, and all values in between will be distributed evenly.

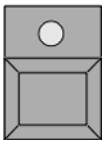
ALIGN ALIGN button pressed 4 times (LED is on).



When changing activated values, the middle value will be the one modified most, the values on the left and right will not change, and the values in between will be distributed evenly.

If you wish to modify the selection **or** the activated values of the fixtures:

CLEAR

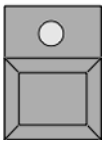


- Press the CLEAR button:

  When pressing the CLEAR button the **first** time, the selection of fixtures will be deleted from the FIXTURE window (yellow characters turn grey).

The **modified** values will be kept and displayed in red characters/numbers.

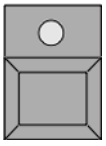
CLEAR



- Press the CLEAR button again:

  When pressing the CLEAR button the **second** time, the activation of modified values will be cancelled (red figures/characters).

CLEAR



- Press the CLEAR button one more time:

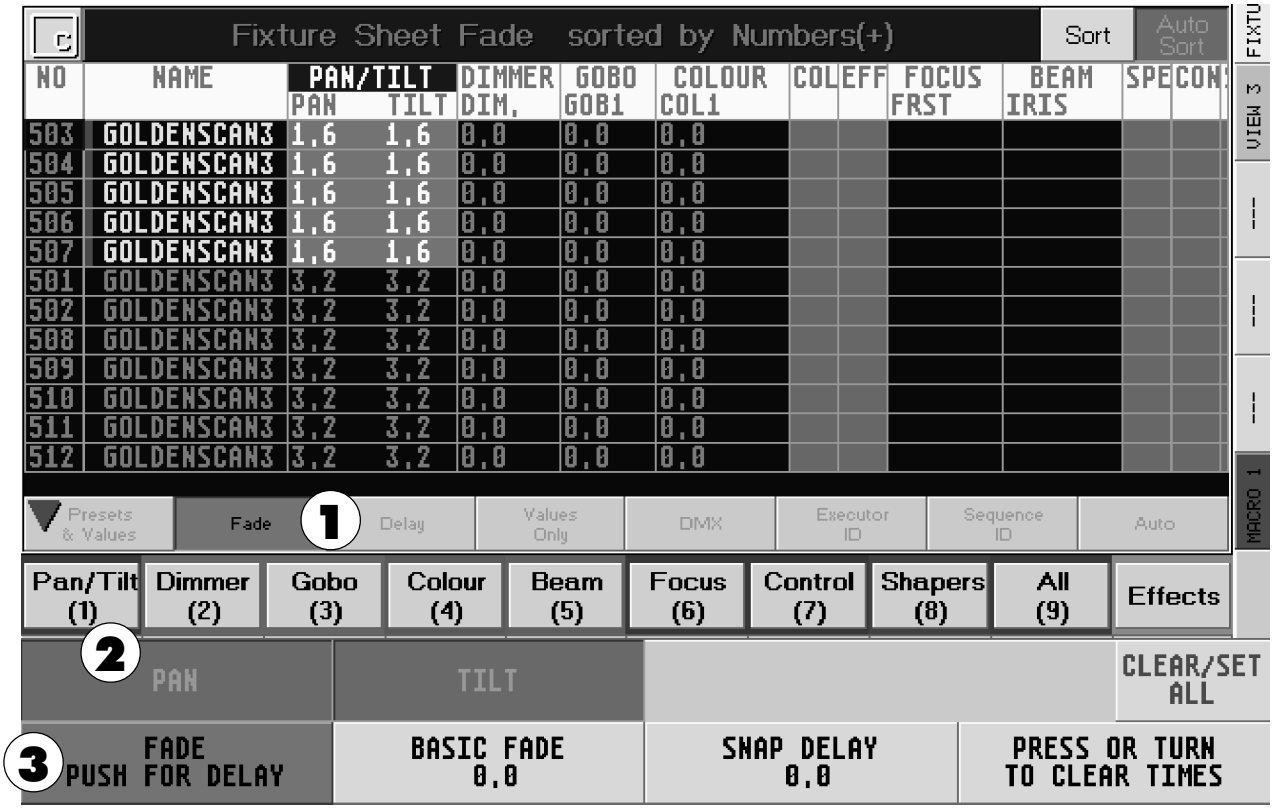
  When pressing the CLEAR key the **third** time, all modified values will be reset (default or to their original setting prior of the activation).

After pressing the CLEAR button for the first time, the yellow LED in this buttons will blink. This means that only the selection was deleted. When you select other Fixtures or dimmer channels now, the yellow LED will not blink anymore.

3.4.2 FADE and DELAY times in the FIXTURE window

Additionally to the standard (Basic) FADE and DELAY times, individual durations can also be set for the individual functions in the FIXTURE window.

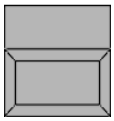
You will need these settings when creating Cues, in order to be able to work with different FADE or DELAY times for individual functions.



1 Press the FADE or DELAY button (switching on the control bar ➠ **3.4.7** Options in the Fixture window).

Or:

TIME



If the AUTO button is pressed (on the control bar or in the options, Switching on the Control bar. ➠ **3.4.7** Options in the Fixture window), when pressing the TIME button once, the fixture sheet will switch to **FADE** time mode. The second time, the fixture sheet will switch to DELAY time mode.

If the AUTO button is not pressed, the display will not switch over. The currently selected FADE or DELAY function will be displayed by an arrow on the Commandline control bar. ➠ **3.1.3** Commandline

2 Choose a function, for which you wish to program a time, other than the Basic time. You will find a button for each function, displayed above the Encoder descriptions. By pressing these buttons (buttons will turn dark-grey), you can select, which functions shall be affected by the change.

Using the CLEAR/SET ALL button, you can either select all buttons (dark grey) or erase them (light grey).

3 Now you can modify the IND. FADE time (individual Fade Times) for the selected fixtures using the left encoder.

Press on the Encoder in order to switch to IND. DELAY time; now you can modify the individual DELAY times with this encoder.

Press on the Encoder again in order to switch back to IND. FADE time.

You can set a FADE time for all FADE functions (e. g. PAN/TILT) using the BASIC FADE encoder.

You can set a DELAY time for all SNAP functions (e. g. GOBO wheel) using the SNAP DELAY encoder.

All modified times of selected fixtures and functions will be reset to the Basic Fade or Basic Snap Delay time by either pressing or turning the right encoder.

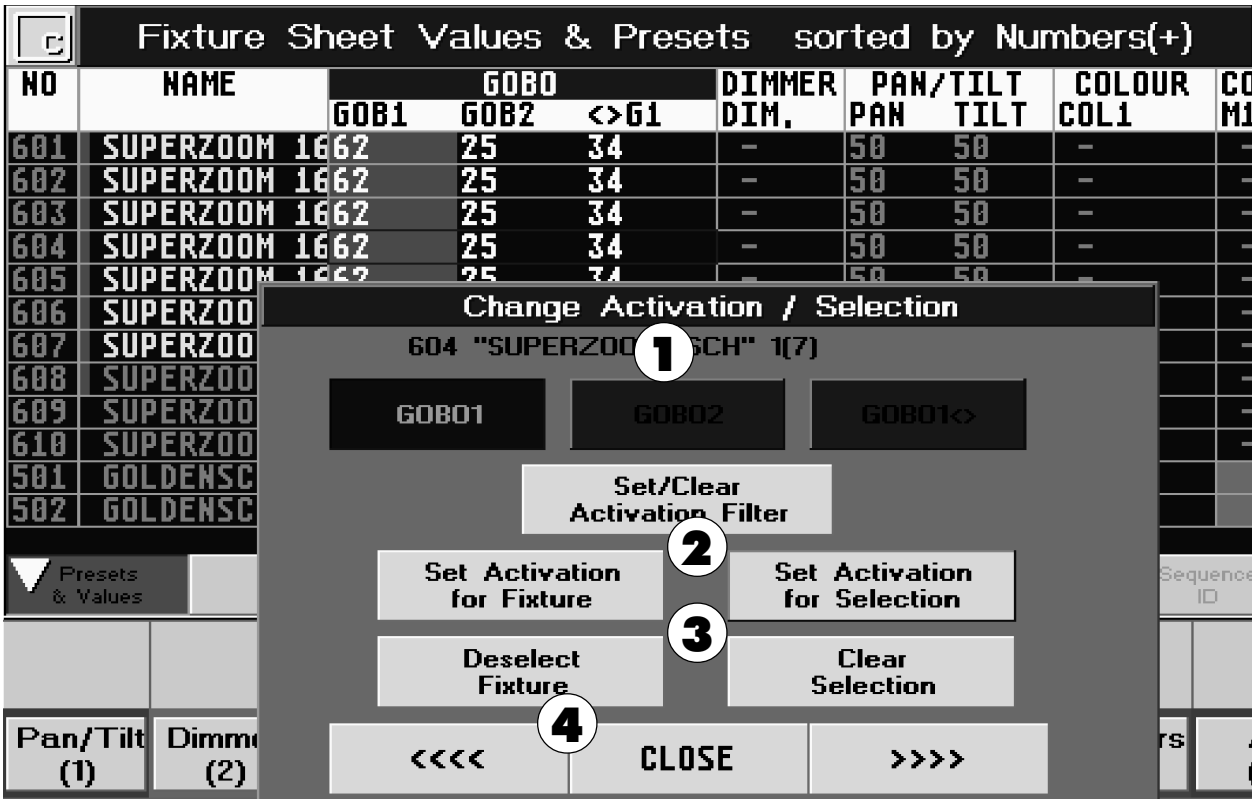
3.4.3 Selecting individual Values

When saving settings, active values can also be saved. These values are indicated by a red background or by red numbers.

By default, functions are activated together. ➠ **2.15** Settings within the ATTRIBUTE GROUPING menu

In order to split the activation for a function once, make a right mouse click on the set activation (red background) **before saving** it.

This will open the Change Activation/Selection window.



1 Functions, which are **not** supposed to be saved, need to be switched off via the respective buttons (buttons will turn from dark-gray to light-gray).

2 With the Set Activation for Selection button, the activation is separated for all selected Fixtures.

With the Set Activation for Fixture button, the activation for the individual Fixture (number and name being displayed by the function buttons) is separated.

When saving, the individual active value is now being saved.

3 With the Deselect Fixture button, the individual Fixture is deselected. With the Clear Selection button, **all** selected Fixtures are deselected.

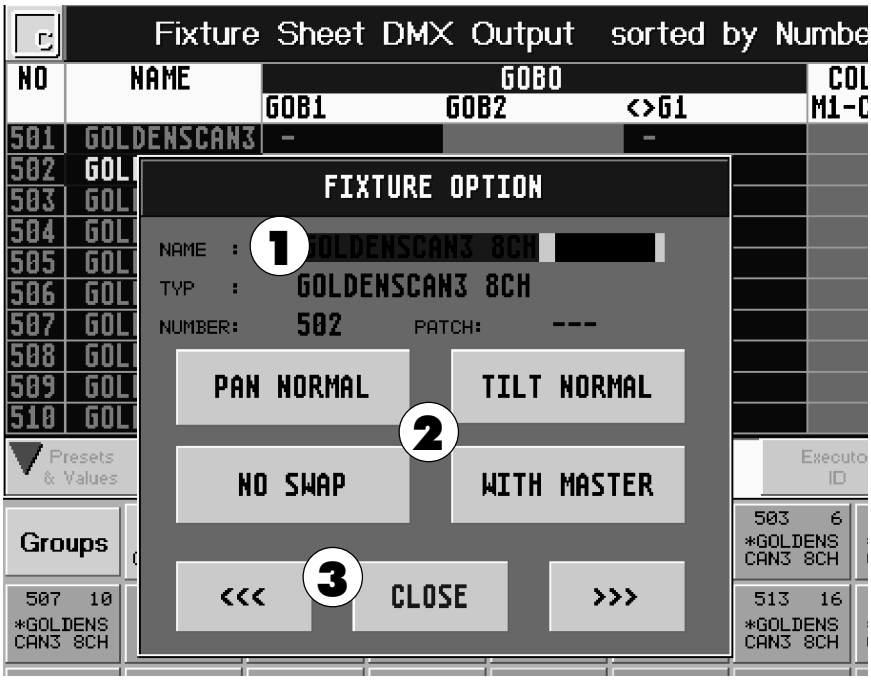
4 With the <<<< button, you can switch to the previous Fixture (number and name will be displayed above the function buttons). With the >>>> button, you can switch to the next Fixture.

With the CLOSE button, you can close the window.

3.4.4 FIXTURE OPTION

In the Fixture Sheet, you can adapt different basic settings for each individual Fixture.

Make a right mouse click on the Fixture. The FIXTURE OPTION window will open.



1 The Fixture can be renamed using the keyboard.

Next to TYPE the type of Fixture is displayed, next to NUMBER the corresponding number, and next to PATCH the patched channel for this Fixture.

2 Pressing the PAN NORMAL button (display changes to PAN INVERSE) will invert the output of the PAN function.

Pressing the TILT NORMAL button (display changes to TILT INVERSE) will invert the output of the TILT function.

Pressing the NO SWAP button (display changes to SWAPPED) will invert the output of the PAN and TILT functions.

Pressing the WITH MASTER button (display changes to NO MASTER), the Dimmer value will be output without regard to the set GRANDMASTER.

If a Fixture was modified in this window, the Fixture's name will be displayed on a blue background in the Fixture Sheet. These changes can also be set while patching Fixtures. ➠ **2.4** Selecting DMX addresses for Fixtures

3 With the <<< button, you can switch to the previous Fixture. With the >>> button, you can switch to the next Fixture.

With the CLOSE button, you can close the window.

3.4.5 AUTO-SORT-Function in the FIXTURE Window

Using the AUTO-SORT-Function will automatically move the function column, in which a value is being modified, to the left.

- Press the AUTO-SORT-button in the top line (button with black background).
- When selecting Presets **or** Functions in the Preset windows (➠ **3.7** Creating and calling up Presets) the respective column in the FIXTURE window will be moved to the left.

3.4.6 SORT-Function in the FIXTURE Window

When pressing the SORT button, the sorting (➠ below) within the FIXTURE window will be updated each time.

3.4.7 Options in the FIXTURE Window

Touch the touch screen on the left corner of the title bar.

Or:

Proceed with a right mouse click on top line.

The FIXTURE SHEET OPTIONS window will open.

LAYER TO DISPLAY: By pressing the respective button, the following values will be displayed as basic setting.

- Preset Values: The FIXTURE window will show the presets or values.
- Fade: FADE times will be displayed.
- Delay: DELAY times will be displayed.
- Values Only: Only the values will be displayed.
- DMX: The DMX output values will be displayed.
- Id Executor: The Executor's number and page will be displayed.
- Id Sequence: The sequence's number and the respective Cue will be displayed.
- Auto: If this button is pressed, the display will automatically toggle between the different options when swapping with the TIME button.

FONT SIZE: By pressing this button, you can choose between LARGE or SMALL characters in the FIXTURE window.

SORT BY: With the respective button, you can determine according to which criteria the fixtures within the column are to be sorted.

- Numbers: Fixtures will be sorted by numbers in the FIXTURE window.
- Names: Fixtures will be sorted by name.
- Selected Devices: The **selected** Fixtures will be moved upwards.
- Active Values: Fixtures for which a value is **activated**, will be moved upwards.
- Dimmer Values: Fixtures will be sorted according to highest dimmer value.
- Sort Ascending: Sorting by ascending values.
  Sort Desending: Sorting by descending values.

READOUT: Pressing this button, you can switch between the following display options.

- %: Values will be displayed as percentages.
- % +: Values will be displayed as percentage values; interim values will be displayed next to the figure in form of 3 dots.
- DEC: Values will be displayed as decimal numbers (0–255).
- HEX: Values will be displayed as hexadecimal numbers (0–FF).

When pressing the Show Layer Control button (displayed in dark gray), a control bar will be displayed below the Fixture. By pressing the respective buttons on the control bar, the display in the window will switch to the respective value.

This window can be deleted by pressing the DELETE WINDOW button.

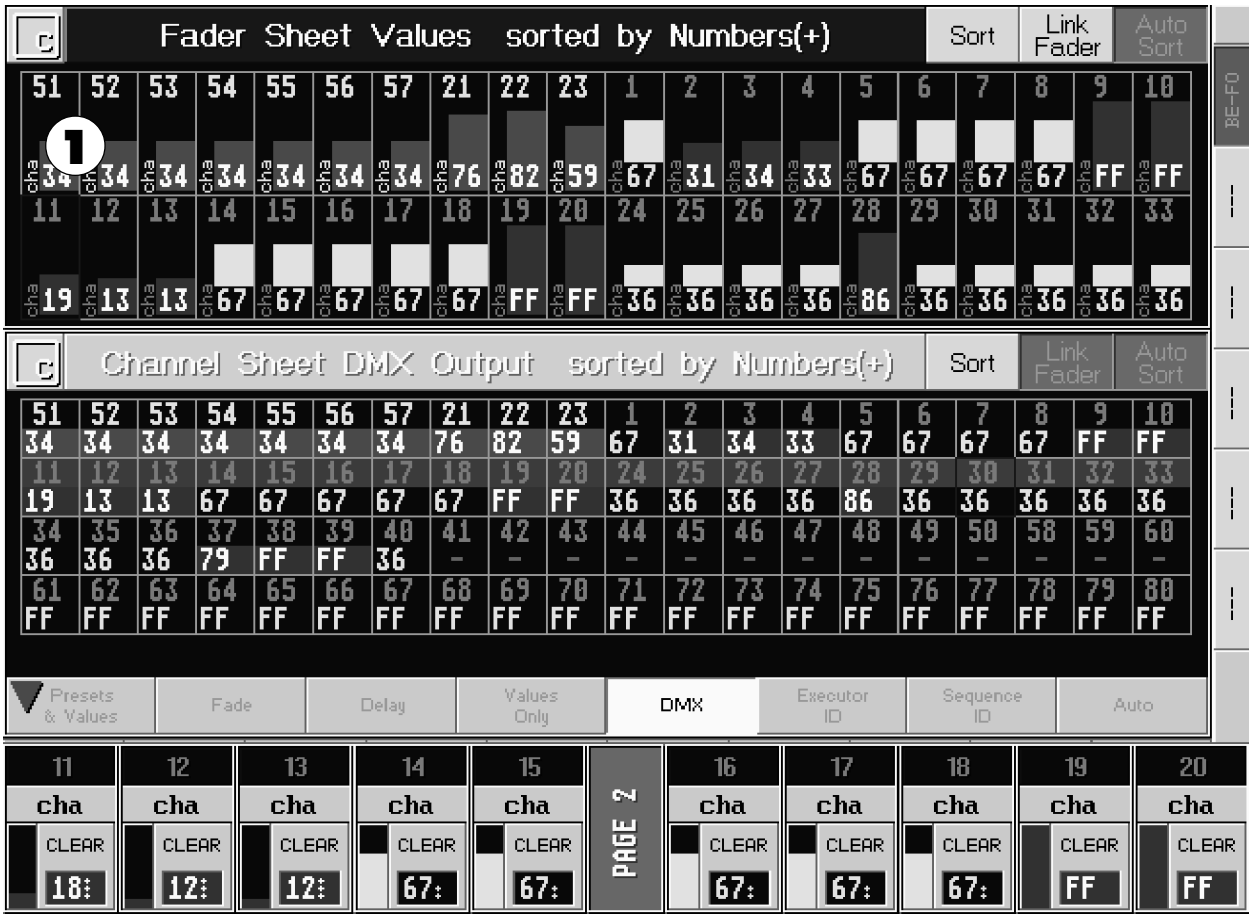
By pressing the CLOSE button, this window will be closed.

These settings will all be saved when saving the VIEWS (➠ **3.2** Saving VIEWS).

Pressing the CLOSE button will close the OPTION window.

3.5 Accessing Dimmer Channels directly (in the CHANNEL SHEET)

The individual dimmer channels can always be accessed directly, provided that the desired channels have been selected for direct access (selected channels will be displayed in yellow characters in the CHANNEL window).



1 Select the channels, for which you wish to modify a value (selected channels will be displayed in yellow characters).

Selection:

- Start with a left mouse click on the individual channels.
  Or:
- Make a left mouse click on the first channel and hold the mouse button down; by moving the mouse (creates a **Loop**), all channels **in this loop** are being **selected**.
  Or:
- Call up a dimmer group. ➠ **3.3** Creating and calling up Fixtures and Dimmer GROUPS
  Or:
- Select dimmers via the CHANNEL button and the numeric keypad. ➠ **3.1.3** Commandline

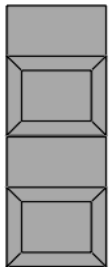
2 Select channels with a middle mouse click and **hold** the mouse button down; the value will be modified by moving the mouse while holding the middle mouse button down.

Or:

Values can also be modified via the encoders (the assignments of encoders can be found in the display on top) or the wheel.

3.5.1 CHANNEL Mode

CHANNEL FADER

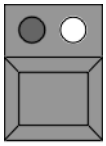


Activate CHANNEL Mode with the CHANNEL FADER buttons.

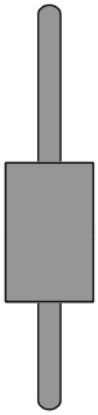
The assignment of Channels and Faders can be changed via the CHANNEL FADER buttons (for example: 1–20, 21–40, etc.).

The assignment of a channel number to a Fader is listed on the TFT displays above the faders.

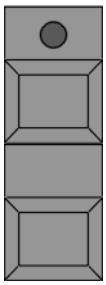
By pressing the CLEAR button, individual channels, which have been modified manually, can be released again while the selection of this channel will be deleted.



The respective channel can be selected using the button above the Fader.



In CHANNEL mode, the individual channel values can be set with the Faders.



The respective channel can be set to 100% using the button below the Fader.

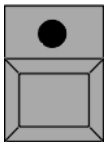
The respective channel can be hidden using the lower button.

In the TFT displays above the Faders, the assignment between channel numbers and Faders will be displayed.

3.5.2 ALIGN Function

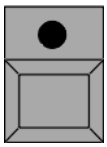
Using the ALIGN function enables you to use three different **function modes** for changing values.

ALIGN Press the ALIGN button once (LED is on).



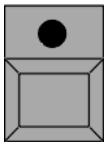
When changing aktivierte values, the first value will be taken as starting value (will not be changed), while the last value be the one modified most, and all values in between will be distributed evenly.

ALIGN Press the ALIGN button twice (LED is on).



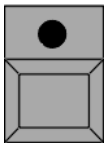
When changing the activated values, the last value will be taken as starting value (will not be changed), while the first value will be the one modified most, and all values in between will be distributed evenly.

ALIGN Press the ALIGN button 3 times (LED is on).



When changing the activated values, the middle value will be taken as starting value (will not be changed), the first and last value will be the ones modified most, and all values in between will be distributed evenly.

ALIGN Press the ALIGN button 4 times (LED is on).

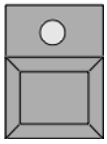


When changing activated values, the middle value will be the one modified most, the values on the left and right will not change, and the values in between will be distributed evenly.

Saving these settings ➠ **4** Cues and Sequences

If you wish to modify the selection **or** the values of channels:

CLEAR

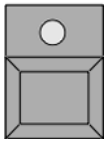


- Press the CLEAR button:

  When pressing the CLEAR button the **first** time, the selection of channels within the CHANNEL window will be deleted (yellow characters turn grey).

The **modified** values will be kept and displayed in red characters/numbers.

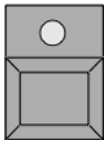
CLEAR



- Press the CLEAR button again:

  When pressing the CLEAR button the **second** time, the selection of modified values will be cancelled (red figures/characters).

CLEAR



- Press the CLEAR button a third time:

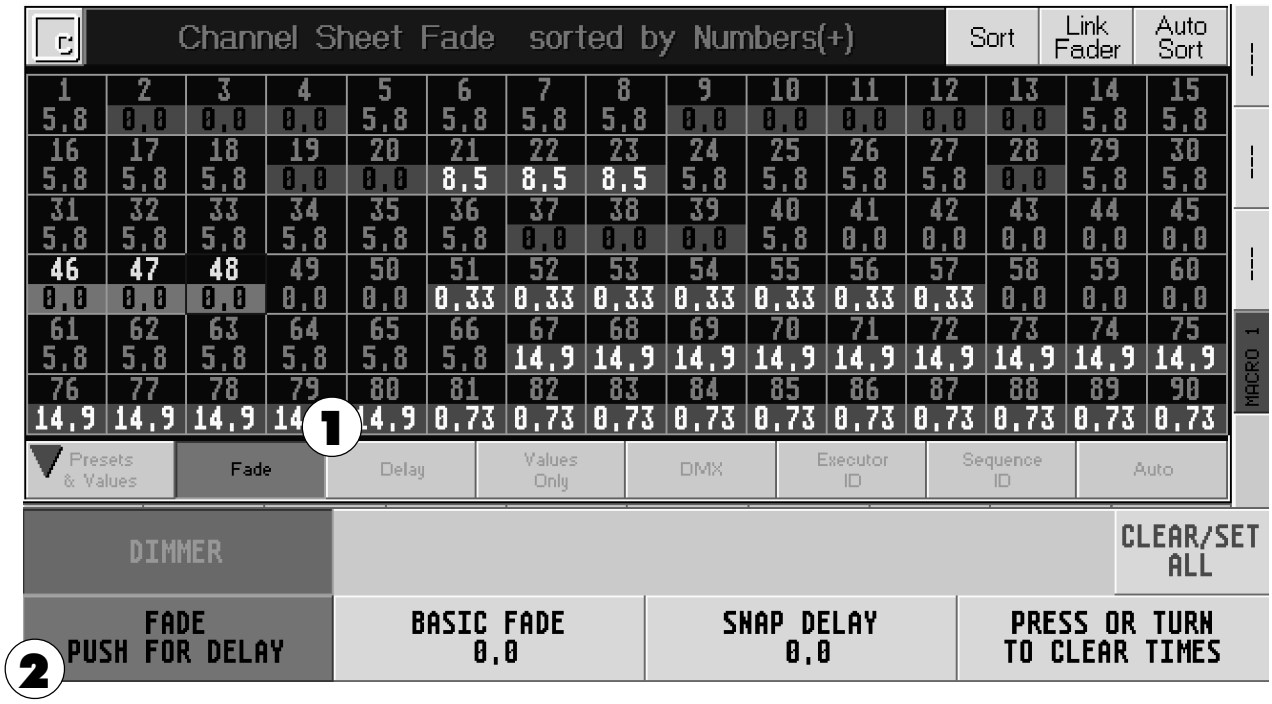
  When pressing the CLEAR button the **third** time, all modified values will be reset (default or to their original setting prior to modification).

After pressing the CLEAR button for the first time, the yellow LED in this buttons will blink. This means that only the selection was deleted. When you select other Fixtures or dimmer channels now, the yellow LED will not blink anymore.

3.5.3 FADE and DELAY times in the CHANNEL window

In addition to the standard (basic) FADE times, individual durations can also be set for the individual functions in the FIXTURE window (not in the FADER CHANNEL window).

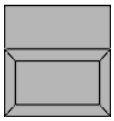
These settings are needed when creating Cues, so that you can work with different FADE or DELAY times for individual channels.



1 Press the FADE or DELAY button (switching on the control bar ➠ **3,5.7** Options in the Channel window).

Or:

TIME



If the AUTO button is pressed (on the control bar or in the options, Switching on the Control bar. ➠ **3,5.7** Options in the Fixture window), when pressing the TIME button once, this will switch the channel sheet to the **FADE** time mode. The second time, this will switch the channel sheet to the DELAY time mode.

If the AUTO button is not pressed, the display will not switch over. The currently selected function of the FADE or DELAY Commandline will be displayed by an arrow on the control bar for the Commandline ➠ **3.1.3** Commandline

2 Now you can modify the individual FADE time for the selected dimmer channels using the left encoder.

By pressing on the encoder, you will switch to IND. DELAY time, so that you can now modify the IND. DELAY times.

By pressing on the encoder one more time, you will switch back to IND. FADE time.

You can set the FADE time for all dimmer channels using the BASIC FADE encoder.

With the SNAP DELAY Encoder, you can set the DELAY period for all SNAP functions.

All modified times of selected channels will be reset to Basic Fade or Basic Snap Delay value by pressing or turning the right encoder.

3.5.5 Link Fader-Function in the CHANNEL window

If the Link Fader function is activated (button has a black background), all changes will automatically be transferred to the faders when in CHANNEL mode (➠ CHANNEL mode).

3.5.6 AUTO-SORT-Function in the CHANNEL window

If the AUTO-SORT-function is activated (button has a black background), the selected channels in the CHANNEL window will automatically be moved to the left and upwards.

3.5.7 Options within the CHANNEL window

Touch the touch screen on the left corner of the title bar.

Or:

Start with a right mouse click on top line. The CHANNEL SHEET OPTIONS window will open.

Layer to Display (not in the FADER CHANNEL window):
By pressing the respective buttons, the following basic values will be displayed:

- Values: Values are displayed in the CHANNEL window.
- Fade: FADE times will be displayed.
- Delay: DELAY times will be displayed.
- DMX: The DMX output values are displayed.
- Id Executor: The Executor's number and page are displayed (only valid for Executor buttons).
- Id Sequence: The Sequence's number and respective Cue are displayed (only valid for Executor buttons).
- Auto: If this button is pressed, the display will automatically swap in this window when using the TIME button.

Font Size (not in the FADER CHANNEL window):
Pressing this button, you can choose between LARGE or SMALL characters in this window.

Sort by:
With the respective button, you can define the channels' sorting order in the window.

- Numbers: Within the CHANNEL window channels are sorted by numbers.
- Names: Channels will be sorted by name.
- Selected Devices: The **selected** channels will be moved to left/above.
- Active Values: Channels for which a value is **activated**, will be moved upwards.
- Values: Channels will be sorted by highest value.
- Sort Ascendig: Sorting by ascending numbers.
  Sort Desending: Sorting by descending numbers.

Readout:
By pressing this button, you can choose the display criteria for the values.

- %: Values will be displayed as percentages.
- % +: Values will be given as percentage values; interim values will be displayed next to the figure in form of dots.
- DEC: Values will be given as decimal numbers (0–255).
- HEX: Values will be given as hexadecimal numbers (0–FF).

Direction:
By pressing this button, you can choose between sorting the channels from left to right or from top to bottom.

Colums:

- The figure indicates, how many channels will be displayed in one column. Clicking on that figure, you can enter a new number via keyboard; confirm with ENTER. The new number will automatically be taken over.
- With this button, you can choose between either AUTO WRAP (automatic adaptation of size when changing the number of channels in this window) or NO WRAP (size of channels will **not** be adjusted when modifying the number).

Name Field:

- With this button, you can switch between SHOW (displays the channel names) and HIDE (no names are displayed).

The Channel window can be deleted by pressing the DELETE button.

By pressing the CLOSE button, the Option window will be closed.

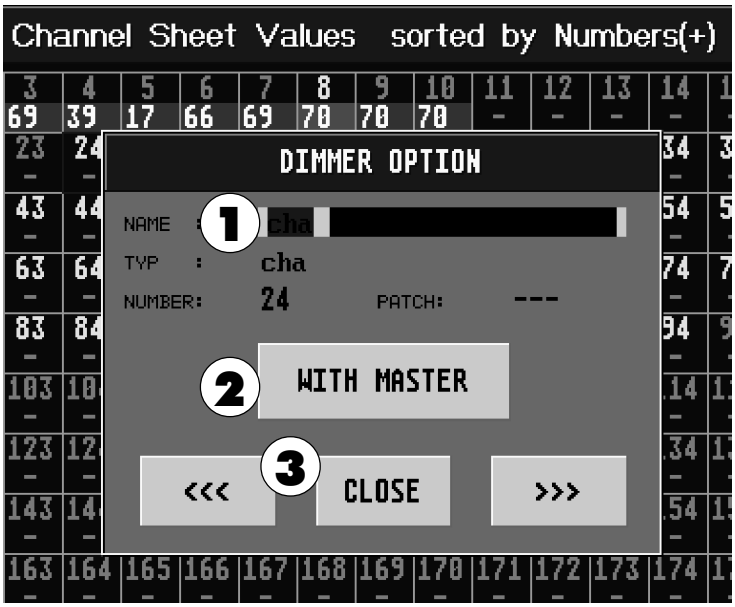
All these settings (excl. "LINK") will be saved when saving the VIEWS (➠ **3.2** Saving VIEWS).

3.5.8 DIMMER OPTION

IIn the Channel Sheet, you can adapt different basic settings for each individual Dimmer channel.

Make a right mouse click on the Channel.

The DIMMER OPTION window will open.



1 The Dimmer channel can be renamed using the keyboard.

Next to TYPE the type of Dimmer is displayed, next to NUMBER the corresponding number, and next to PATCH the patched channel for this Channel.

2 Pressing the WITH MASTER button (display changes to NO MASTER), the Dimmer channel will be output without regard to the set GRANDMASTER.

If a Dimmer channel was modified in this window, the Dimmer channel's number or name will be displayed on a blue background in the Channel Sheet.

These modifications can also be defined while patching Dimmer channels. ➠ **2.5** Selecting DMX addresses for Dimmers

3 With the <<< button, you can switch to the previous Dimmer channel. With the >>> button, you can switch to the next Dimmer channel.

With the CLOSE button, you can close the window.

3.6 Colours used in the FIXTURE, CHANNEL and FADER window

Input or Function	Status	Channel number/ Attribute	Dimmer Channel Value	Fixture Attribute Value
Channel or attribute not used, or released 3x CLEAR	not selected, no value	gray	gray	gray
Not selected, but value from any Executor	not selected, but output value >0%	gray	yellow	yellow
Dimmer not selected, last fade on Master Sequence did not change the value	not selected, but output value >0%	gray	blue-green	yellow
Dimmer not selected, last fade on Master Sequence decreased the value (DOWN)	not selected, but output value >0%	gray	green	yellow
Dimmer not selected, last fade on Master Sequence increased the value (UP)	not selected, but output value >0%	gray	magenta	yellow
Not selected, last change was manual	not selected, but manual changed	gray	White on dark-red background	White on dark-red background
Manuell calling up	selected, but not active	yellow	gray	gray
Again manual Activation or changed by Fader or Encoder	active	yellow	white on red background	white on red background
Selection deleted by CLEAR button	not selected, not active, but selected	gray	White on dark-red background	White on dark-red background
Activation deleted by CLEAR button	not selected, but manually changed	grey	white	white
Not selected, but value from any Executor (except Master)	only output	grey	yellow	yellow
Not selected, but Preset activated	not selected, value fromPreset	gray	Turquoise on dark-red background	White on dark-red background
Selected, after Preset was activated	selected, value fromPreset	yellow	Turquoise on red background	White on red background
Activation deleted by CLEAR	Not selected, value from Preset	gray	White on tur-quoise background	White

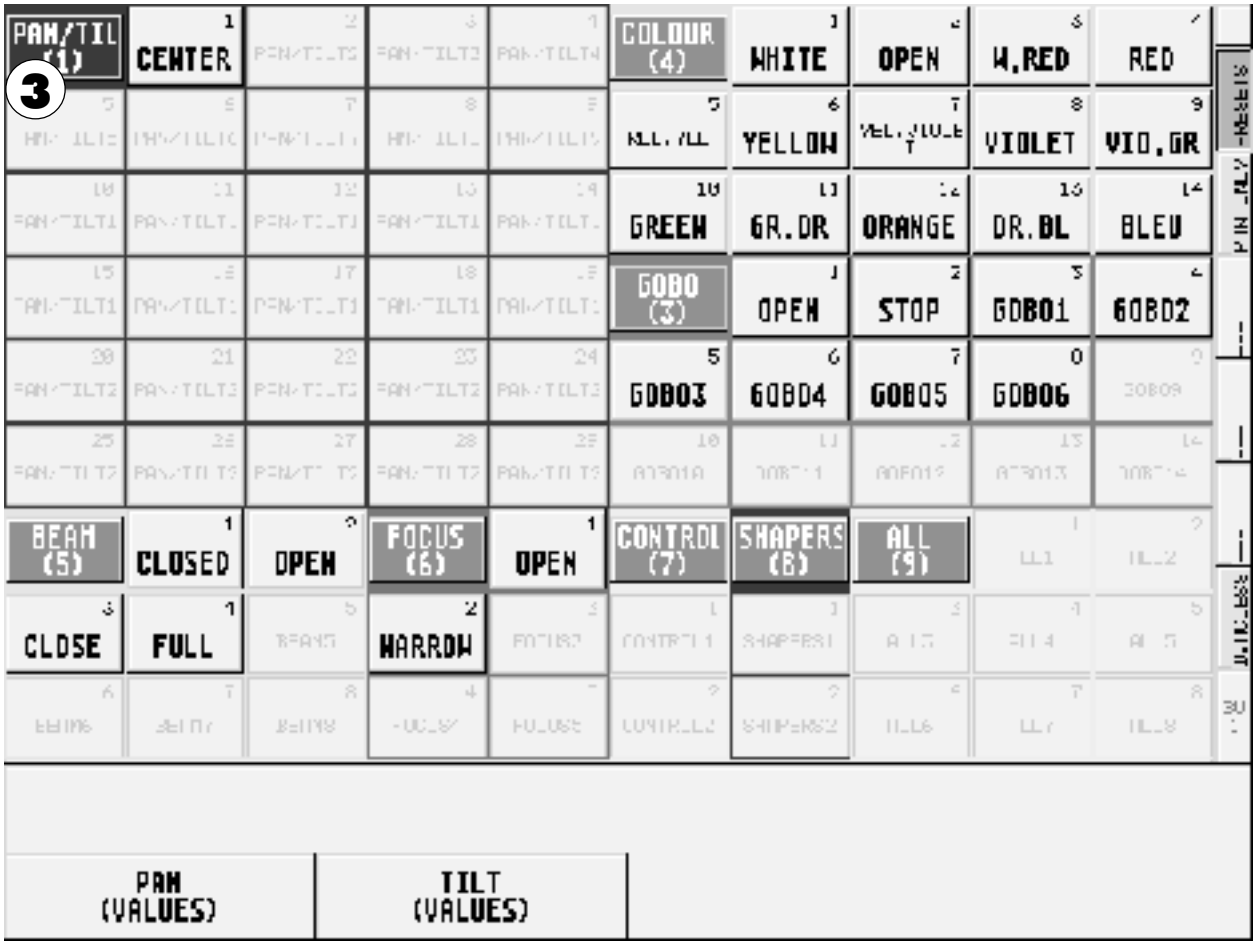
3.7 Creating and calling up Presets

There are certain values for the functions of fixtures, which will be needed again and again, for example the values for individual colours of the color wheel. These values can be programmed as presets in the respective PRESET window and can here be called up again.

If you let presets for the fixtures be created automatically (CREATE PRESETS), these pre-recorded presets will be available in the respective windows. ➠ **2.9** Creating Presets, Effects and Group buttons automatically

1 Create a window for all functions for which presets are to be used and position it on a display.

2 In the GROUP window, select those fixtures, for which you want to create a Preset, by a simple touch or mouse click (fixtures have to be displayed in yellow in the FIXTURE window).

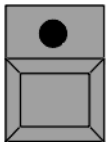


3 On the display, select the Preset group, for which you want to create a Preset, using the Touchscreen or by a left mouse click on the title bar, for example: In the Preset window PAN/TILT.

Values and positions can be changed by:

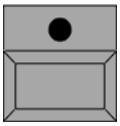
- Encoders (all functions and the asignment will be displayed on the right display above the encoders),
- Trackball (only PAN /TILT), if activated,
- Wheel (only for dimmer values),
- Middle mouse button (click on a value in the FIXTURE or CHANNEL window and hold it; the value will be changed by moving the mouse while holding the middle mouse button).

TRACKERBALL ON/OFF



- Switch on the Trackball by pressing the TRACKBALL ON button (the integrated LED must be on). Now you can control the selected fixtures via the trackball (PAN/TILT) . Changed (active) values will be displayed in the OUTPUT window by a red background colour.

STORE

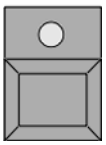


- Shortly push STORE button (STORE LED comes on). Select the required location on the display showing the PAN/TILT window by a simple touch or with left mouse click. These values are now saved in **this** location (STORE LED off).

- Now enter a name using the keyboard; confirm by pressing ENTER.

If you want to save more Presets for the same Fixture and functions, start again with step **6**.

CLEAR

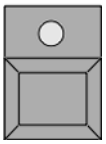


- Press the CLEAR button once:

  When pressing the CLEAR button for the **first time**, the Selection for all Fixtures in the FIXTURE window will be deleted (yellow characters will turn grey).

The modified (active) values will be preserved and displayed in red characters.

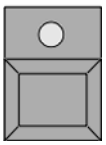
CLEAR



- Press the CLEAR button a 2nd time:

  Pressing the CLEAR button the **second time** will cancel the activation of the modified values (red numbers/characters).

CLEAR



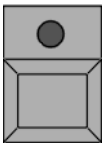
- Press the CLEAR button a 3rd time:

  Pressing the CLEAR button a **third time** will reset all modified values (default or to the position before the modification).

To call up more Presets for other Fixture, start againwith step **5**.

3.7.1 Moving Presets Buttons within the Window

MOVE

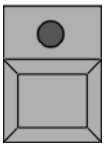


Press the MOVE button once (LED lights up).

Activate the button in the respective window by either using the touch screen or making a left mouse click on the button and hold it (hand symbol will appear). Move the button to the desired location within the window and release it. When more than one presets are to be moved simultaneously, just select several of them and click on an empty space.

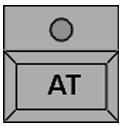
3.7.2 Copying Presets

COPY



Press the COPY button once (LED is on).

Select the Preset Buttons in the respective PRESET window. By selecting different Presets, several of them can be copied together.



Press the AT button once (LED is on).

Click on the position for the copied Presets in the PRESET window.

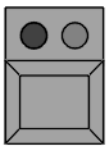
Press the ENTER button once.

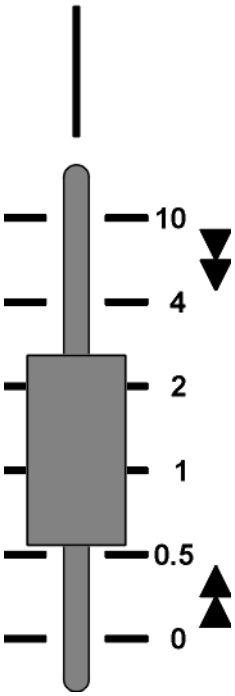
3.7.3 Calling up Presets

Select the Fixtures or Dimmers, for which you want to call up a preset (Fixtures/Dimmers have to be displayed in yellow). Now, the individual presets can be called up for the selected Fixtures. The called-up presets and their names will be displayed in the FIXTURE windows.

If you select a preset directly, without having selected Fixtures or Dimmer channels, all Fixtures and Dimmers, for which presets had been created, will be selected. The preset can now be called up by pressing the respective button.

SET MANUAL FADE





Using the Fader next to the right display, you can either define Preset Fade times or fade over presets manually.

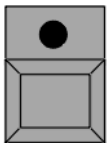
Press the button above the Fader once (red LED is on). Select the desired Fade time using the Fader. The selected Fade time will be used when presets are being called up .

Press the button above the Fader once more (green LED is on). Select your Presets. With the Fader, you can now fade over **from bottom to top** towards the selected Preset.

3.7.4 FREEZE Function

By activating the FREEZE function, called-up Presets can be locked. As long as the FREEZE Function is switched on, the called-up preset can not be overwritten by any Cues, Sequences or Chasers.

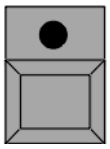
FREEZE



Press the FREEZE button once (LED is on).

Select a Preset – the selected Preset will be activated and can no longer be modified by Cues, Sequences or Chasers.

FREEZE



In order to deactivate the FREEZE function, press the FREEZE button once more (LED is off).

3.8 Deleting Groups, Sequences, Views etc.

For all following Deletions, the DELETE button has to be pressed in advance (LED is on).

Deleting Groups: Select the respective Group by touch or left mouse click.

or:

Press the GROUP button. Enter a Group number using the numeric keypad and confirm with ENTER.

Deleting Presets: Select Preset in the respective window by touch or left mouse click.

or:

Press the PRESET button. Enter a Preset Function number (e.g.: 3 for Gobo) followed by „." and the Preset number; confirm with ENTER.

Deleting VIEW Assignments: Select a VIEW with the VIEW button on the side of the numeric keypad, via the Touchscreen or a left mouse click.

Deleting a VIEW: Press the VIEW button (LED is on). The SELECT VIEW window appears; now select the window to be deleted. The VIEW Name will be maintained, but without any contents. All assignments to VIEW buttons are now deleted.

Deleting a MACRO: Press the MACRO button (LED is on). The SELECT MACRO window appears; now select the macro to be deleted. The MACRO Name will be maintained, but witout any contents. All assignments to MACRO buttons are now deleted.

Deleting an EXECUTOR: Press the desired EXECUTOR button.

or:

Deleting the EXECUTOR on the **current** page:
- Press the EXECUTOR button next to the numeric keypad (LED is on). Enter the EXECUTOR number via the numeric keypad and confirm with ENTER.

Deleting the EXECUTOR on **another** page:
- Press the EXECUTOR button next to the numeric keypad (LED is on). Now, enter the PAGE number.

Then, press the full stop key and the number of the EXECUTOR and confirm with ENTER.

Example: EXECUTOR 5 on PAGE 3 is to be deleted:
Entry: [DELETE button] [EXECUTOR button] [3] [.] [5] [ENTER]

Or:

- Press the EXECUTOR button next to the numeric keypad (LED is on). Enter the EXECUTOR number via the numeric keypad.
- Press the PAGE button next to the numeric keypad (LED is on). Enter the PAGE number via the numeric keypad and confirm with ENTER.

Deleting Sequences: Press the SEQUENCE button. Enter the number of Sequence via the numeric keypad and confirm with ENTER.

Deleting CUES: Press the SEQUENCE button. Enter the number of Sequence via the numeric keypad. Press the CUE button and enter the number of cue via numeric keypad; confirm with ENTER.

If no sequence number is entered, the Cue of the Master (default) sequence is deleted.

Deleting a PAGE: Press the PAGE button next to the numeric keypad. Enter the PAGE number via the numeric keypad and confirm with ENTER. The complete PAGE with all EXECUTOR faders and buttons are deleted.

4 Cues and Sequences

Cues are individual stage settings, which can be assigned and saved directly to and on so-called EXECUTOR buttons or EXECUTOR Faders.

Several cues in line are called a sequence, which can also be assigned and saved to and on so-called EXECUTOR buttons or EXECUTOR Faders.

If cues and sequences are created on the basis of Presets, a later change of this Preset will automatically cause the respective change of all cues and sequences in this Preset.

Thus, the time-consuming check and correction of each Cue becomes unnecessary.

TIP Therefore, we recommend to use the Preset functions as often as possible.

EXECUTOR buttons or Faders can be used and can have assignments for multiple created sequences.

EXECUTOR Faders and buttons are organised pagewise (in PAGES). You can work on several PAGES simultaneously. When using motor faders, always those motor faders will be moving which had been activated on the respective PAGE.

With the EXECUTOR buttons it is possible, to call up the Cues, Sequences and Chasers. **à 5.1.3** Buttons and Faders.

For the dimmer channels, the respective FADER and the Grandmaster always has to be pushed upwards.

EXECUTOR buttons do not have a Master and are therefore activated immediately. If dimmer values are called up via Cues or Sequences **assigned to EXECUTOR buttons**, these values will be overwritten (➠ LTP principle) when calling up the same dimmers via Executor buttons later. In practical terms this means: Dimmers, serving as "standard" console (HTP), have to be assigned to the Executor Faders.

4.1 Creating Cues (separate memories)

The actual stage setting can be saved as a Cue and be called up via the EXECUTOR buttons or faders.

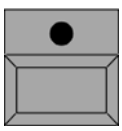
- All **changed** (active) values (recommended setting),
- **all** momentary settings (complete Output),
- or all values of the **selected** Fixtures and channels

can be saved as Cues.

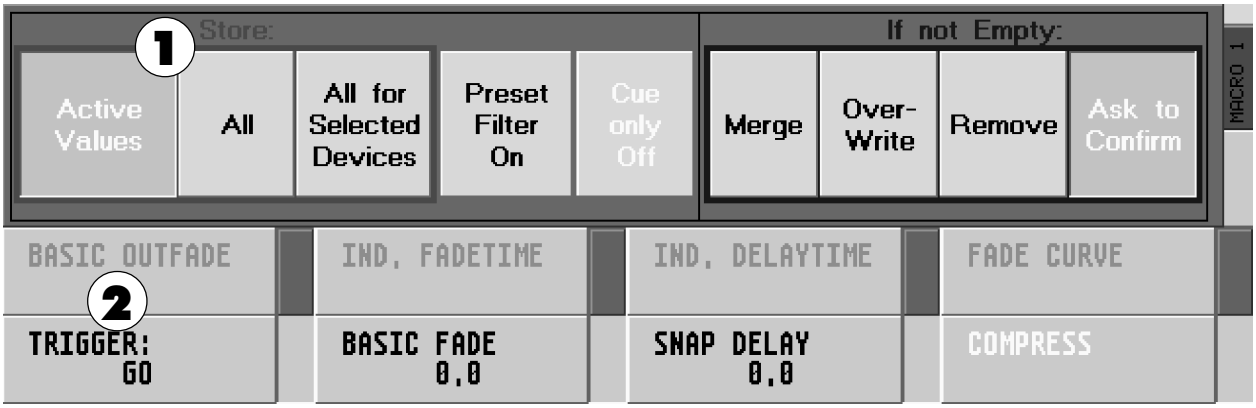
4.1.1 Creating new Cues

Define the stage setting via direct access or presets. ➠ **3.4** and **3.5** Accessing Dimmer Channels directly or **3.7** Calling up Presets

This shall now be saved as CUE in the following way**:**



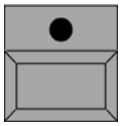
Press the STORE button and **hold** it. The following options and encoder names will appear on the right TFT display:



1 Press this button (selected button will receive dark-grey background colour):

- Active Values: Save **only** the **active** values (all values in the FIXTURE/CHANNEL window which are shown with a **red background colour** or as **red colour figures**).
- All: Save **all** momentary settings (all fixture and channel values).
- All for Selected Devices: **All** values of the **selected** fixtures and channels are being saved (the fixtures/ channels numbers will be marked in yellow).

STORE



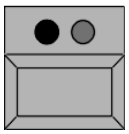
Release the STORE button (LED stays on).

For **this** CUE, set the following parameters via the encoders:

- TRIGGER: Call of the CUE by GO, SOUND, TIME or FOLLOW (i.e. after all previous durations have ended) or automatically at a set point of time.
- BASIC-FADE: CUE will be faded in with a set time; this is only possible with "FADE" functions. ➠ **2.7** Single Channel-specific Adjustments for the Current Show (point 10) and ➠ **2.10** EDITING FIXTURES (modify) (point 9)
- SNAP DELAY: The values of the CUE will be called up with delay (only with "SNAP" functions).
- COMPRESS: Not yet available in version 2.10.
- OUTFADE TIME: Dimmer channels, which **become smaller** in the next Cue, will be faded in with the set duration.
- IND. FADETIME: All additional individual FADE times set in the FIXTURE Sheet.
- IND. DELAYTIME: All additional individual DELAY times set in the FIXTURE Sheet.

Cues can be saved on EXECUTOR faders or EXECUTOR buttons.

31

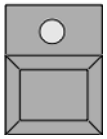


Define the assignment position of the Cue by pressing the EXECUTOR button once. When saving to an EXECUTOR FADER, press a button above or below the fader once.

The CUE is now assigned to this EXECUTOR button or EXECUTOR fader and saved to the Sequence Pool. This way it is possible, to assign the same Cue more often than once. ➠ **5.1** ASSIGN menu (Assignment to EXECUTOR)

Repeat all steps to create the next Cue.

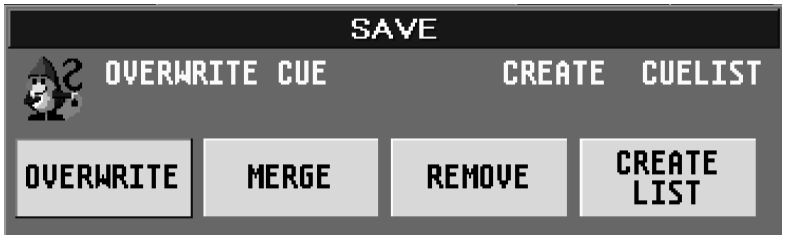
CLEAR



Pressing the CLEAR button: once - will delete the selection, twice – will delete the active values and reset all values then.

4.1.2 Overwriting a Cue

If you wish to overwrite a Cue, simply use the same EXECUTOR fader or EXECUTOR button once again. The follo-wing window will appear:



In order to overwrite this cue completely, press the OVERWRITE button.

4.1.3 Merging a Cue

When merging cues, all existing and saved settings will be maintained. The newly set values will be saved and added to the cue, while already existing values will be overwritten.

If you wish to merge a cue, simply use the same EXECUTOR Fader or EXECUTOR button once again. The SAVE window will appear (as above). In order to merge this cue, press the MERGE button.

4.1.4 Removing a Cue

In the removing operation, only those parts of the Cue will be taken out (deleted) of the already existing Cue that are active (red).

You can also remove some part of a complete sequence by entering: [STORE] [SEQUENCE] [Sequence number] [CUE] [1] [THRU] [number of last Cue] [ENTER],. A window will open in which you confirm your operation by pressing the REMOVE button. (This syntax does also apply for "OVERWRITE" and "MERGE".)

Caution! In NON-TRACKING mode, only Dimmer channels of the first copied Cue are taken account of. For the following Cues, the Dimmer values are "0" and have to be reprogrammed manually.

4.2 Programming Sequences

Sequence is the generic term for a combination of cues, with the option of various Fade and Delay times per channel and cue. Sequences can be saved either on an EXECUTOR fader or an EXECUTOR button.

Save the first Cue (first step of a sequence) either on an EXECUTOR fader or an EXECUTOR button. ➠ **4.1** Creating Cues

Set the second Cue (next step of the sequence) as before. When saving the second Cue, use the same EXECUTOR fader or EXECUTOR button. Now, the SAVE window will appear:

In order to create a Sequence (more than one Cue) now, press the CREATE LIST button. The saved Cue will now be saved in this Sequence as the second step.

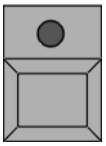
In the ASSIGN menu, you can define whether this Sequence should be executed in TRACKING or NON-TRACKING mode. TRACKING and NON TRACKING do only refer to Dimmer values. ➠ **5.1.4** EXECUTOR SETTINGS

Create the next Cue for any other step and use the same EXECUTOR fader or button when saving.

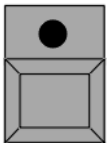
4.2.1 Copying Sequences

Once a Sequence has been set, it can be copied completely with all Cues, Fade and Delay times.

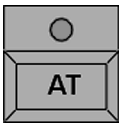
COPY — Press the COPY button once (LED is on).



SEQUENCE — Press the SEQUENCE button once (LED is on).



Using the numeric keypad, enter the number of the Sequence to be copied. All sequences and their numbers will be displayed in the Assign menu. ➠ **5.1** ASSIGN Menu

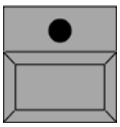


Press the AT button once (LED is on).

Using the numeric keypad, enter the number of the new Sequence and confirm with ENTER.

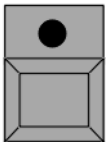
4.2.2 Including Cues

STORE — Set a Cue ➠ **4.1** Creating Cues



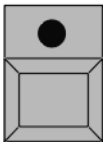
Press the STORE button once (LED is on).

SEQUENCE — Press the SEQUENCE button once (LED is on).



Enter the number of the Sequence using the numeric keypad.

CUE — Press the CUE button once (LED is on).



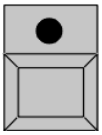
Enter the number of the **new** Cue via numeric keypad and confirm with ENTER.

Example: A new Cue is to be included between Cue 3 and Cue 4. This new Cue will be named for example Cue no. 3.1(numbers between 3.001 and 3.999 are possible).This way, 999 Cues can be included between two Cues.

4.2.3 Default Sequence (Master Sequence)

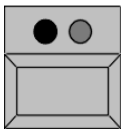
When creating sequences, Cues can directly be saved on a Default Sequence.

SELECT Press the SELECT button once (LED is on).

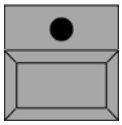


Select the respective EXECUTOR, which shall run the Default Sequence by pressing the respective EXECUTOR button once. The headline of the small EXECUTOR window will be green.Ersten Cue der

31 Set the first Cue of the Default Sequence. ➠ **4.1** Creating Cues



STORE STORE-Taste 1x drücken (LED leuchtet).

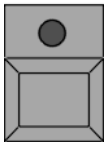


ENTER-Taster 1x drücken; der erstellte Cue ist in der Master-Sequenz gespeichert.

TIP If no EXECUTOR button has been selected before saving, and you confirm with ENTER, the saved Cue will always be added to the current Default Sequence.

In the Default Sequence, Cues can be called up directly.

GOTO Press the GOTO Button once (LED is on).



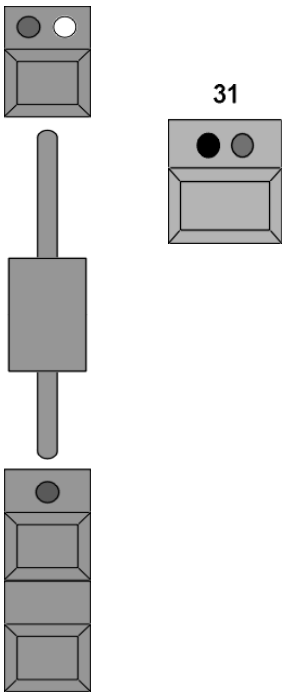
Enter the Cue number on the numeric keypad and confirm withENTER. The Cue will be called up with the preset duration (➠ **2.13** Settings in the DEFAULTS menu).

When calling up Cues directly, you can enter a FADE or DELAY time using the TIME button.

After having entered the Cue number, press the TIME button for the FADE time once and enter the duration using the numeric keypad, or press the TIME button once more for the DELAY time, enter the duration using the numeric keypad and confirm with enter. The Cue will be called up with the entered duration.

The Cue will always be called up as if the Sequence would run from the very beginning. That means, all previous steps will be accounted for and the result will be realized immediately afterwards. (As far as Dimmers is concerned, this function depends on whether Tracking had been activated in the ASSIGN menu. ➠ 5.1.4 EXECUTOR SETTINGS**)**

4.2.4 Calling sequences or chasers (Playback)



Using the EXECUTOR button, you can call up the saved Sequences directly.

If the green LED in the button is on, a Cue or a Sequence is saved on this button.

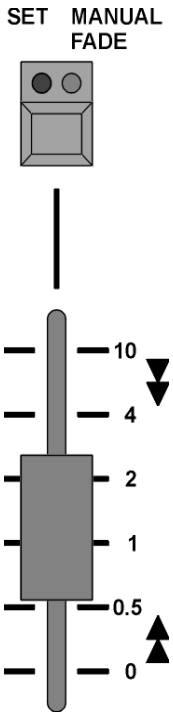
If the yellow LED is on or is blinking, this Cue, the Sequence or the saved Chaser is activated.

The yellow LED indicates the beat of a Chaser or a Sequence.

Push up the respective Fader for the EXECUTER faders to see the dimmer values. Call up the Cue using the Go+ button (standard setting: button below the Fader). If the green LED in the button above the Fader is on, a Cue or a Sequence is saved on this button.

If the yellow LED is on or is blinking, this Cue, the Sequence or the saved Chaser is activated. The yellow LED indicates the beat of a Chaser or a Sequence.

Using the PAGE buttons, you can additionally select other pages. Using the PAGE buttons, you can additionally select other pages. ➠ **5.4** PAGE Administration (PAGE)



With the Fader right to the EXECUTOR button, you can either set fixed fade times or perform a fade-in manually when calling up Cues using the EXECUTOR buttons.

Press the button above the Fader once (red LED is on). Set the desired fade time using the Fader. When selecting Cues using the EXECUTOR buttons, only the fade time set here will be used (does also apply for SNAPDELAY times).

Press the button above the Fader again (green LED is on). Select the Cue using the EXECUTOR button. Using the Fader, you can now fade **from bottom to top** to the selected Cue.

With the PREVIEW function, Cues in the FIXTURE SHEET or CHANNEL SHEET will be displayed (without output to the DMX output).

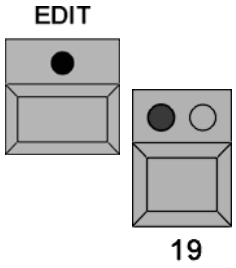
Press the PREVIEW button once and call up the desired Cue using the EXECUTOR button.

4.3 Editing Sequences

During editing procedures, you can change **all** values of the various cues, add values or delete them. The X-FADE and DELAY times can be adapted, and the call of various cues via GO button, X-FADER, SOUND or TIME can be defined.

Except as indicated in this chapter, there are three other ways:

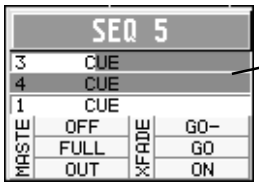
- **4.1.2, 4.1.3, 4.1.4** Overwriting, expanding, removing Cues
- **4.3.4** Update Cues or Presets
- **5.3** EXECUTOR window



Press the EDIT button (LED is on).

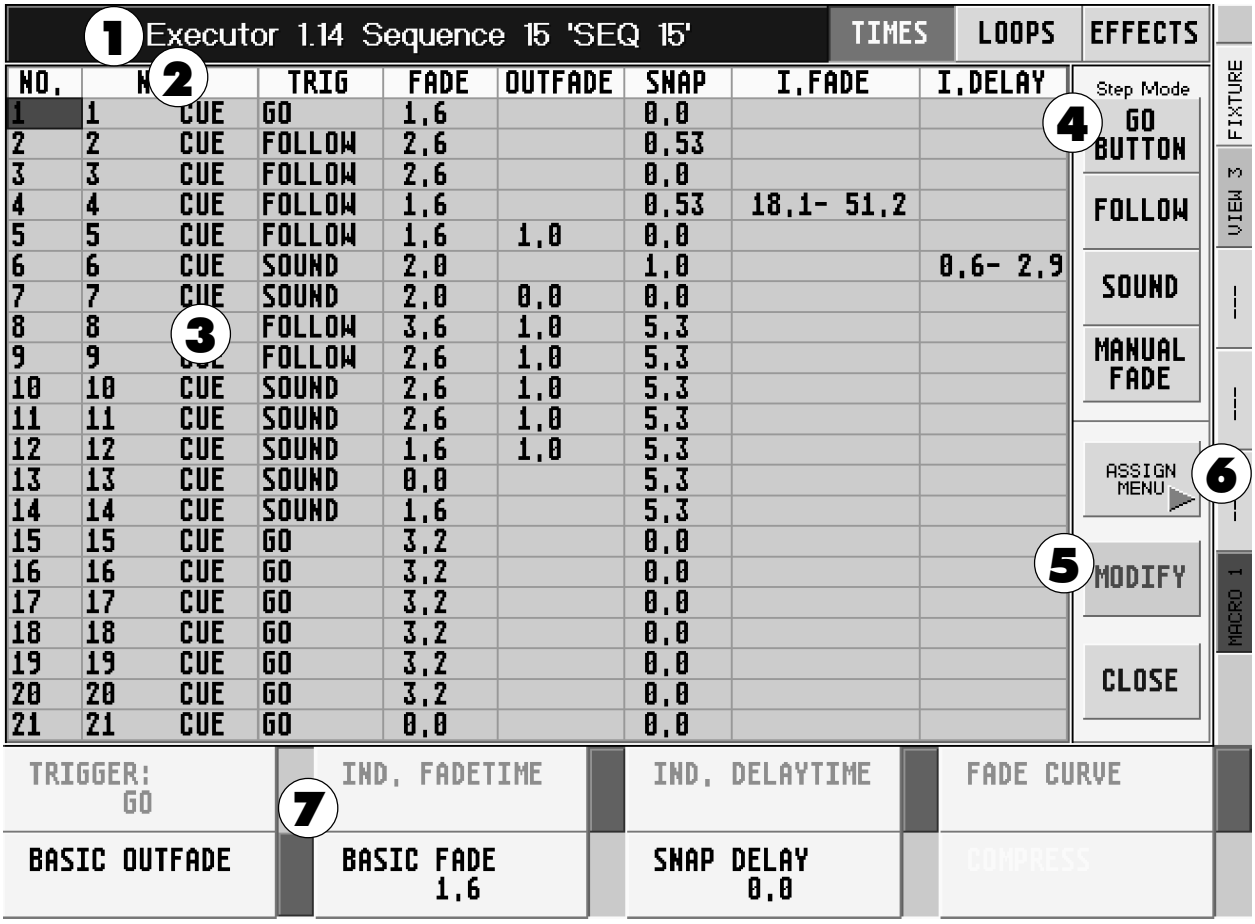
Select the cue or sequence with the respective EXECUTOR button.

Or:



Make a left mouse click into the Sheet of the small window above the EXECUTOR Fader or use the touchscreen to do so.

The EDIT menu appears on the right TFT display, showing a listing of the individual cues.



NO.	NAME	TRIG	FADE	OUTFADE	SNAP	I.FADE	I.DELAY
1	1	CUE	GO	1,6		0,0	
2	2	CUE	FOLLOW	2,6		0,53	
3	3	CUE	FOLLOW	2,6		0,0	
4	4	CUE	FOLLOW	1,6		0,53	18,1- 51,2
5	5	CUE	FOLLOW	1,6	1,0	0,0	
6	6	CUE	SOUND	2,0		1,0	0,6- 2,9
7	7	CUE	SOUND	2,0	0,0	0,0	
8	8	CUE	FOLLOW	3,6	1,0	5,3	
9	9	CUE	FOLLOW	2,6	1,0	5,3	
10	10	CUE	SOUND	2,6	1,0	5,3	
11	11	CUE	SOUND	2,6	1,0	5,3	
12	12	CUE	SOUND	1,6	1,0	5,3	
13	13	CUE	SOUND	0,0		5,3	
14	14	CUE	SOUND	1,6		5,3	
15	15	CUE	GO	3,2		0,0	
16	16	CUE	GO	3,2		0,0	
17	17	CUE	GO	3,2		0,0	
18	18	CUE	GO	3,2		0,0	
19	19	CUE	GO	3,2		0,0	
20	20	CUE	GO	3,2		0,0	
21	21	CUE	GO	0,0		0,0	

1 You will find the addressed EXECUTOR fader or button in the headline, giving the number of the PAGE and the sequence by its name.

2 The second line will give you the functions of the columns.

- No.: Number of Cue
- NAME: Name of Cue
- TRIGGER: Call of the Cue (GO button, X-FADER, SOUND, TIME or LOOP)

If the TIMES button on the title bar is pressed:

- FADE: FADE time
- OUTFADE: Duration of fade in on Dimmer channels becoming smaller
- SNAP: Duration of the DELAY
- I.FADE: Duration of the individual FADE time (min and max)
- I DELAY: Duration of the individual DELAY time (min and max)

If the LOOPS button on the title bar is pressed:

- LOOP: will jump, when called up, to the CUE of the given number **without** calling up this Cue
- LOOPDELAY: The sequence of the LOOP-Function will be displayed.
- LINK: The set Macro will be displayed
- LI. DEL: The set time will be displayed, **after** which the Macro will be called up

If the EFFECTS button on the title bar is pressed:

- EFFECTS: Display of the effects calls

A second sheet will appear in the lower part of the display:

- NO.: Number of the Effect Group
- NAME: Name of the Effect Group
- ACTION: Type of Effect call
- INTENS: Display of the defined size of the Effect Group
  F (Fade): If Y (YES) is displayed, the size will be faded in with the set fade time
- SPEED: Display of the defined speed of the Effect Group
  F (Fade): If Y (YES) is displayed, the speed will be faded in with the set fade time
- SOFT: Display of the set softness (softer fade in) of the effect
  F (Fade): If Y (YES) is displayed, the softness will be faded in with the set fade time

3 The chart will show you all cues of a sequence including the various TRIGGER functions.

4 You can define the TRIGGER (call-up option) for the **all** cues using the buttons (selected button will turn dark gray).

5 The MODIFY CUE button will enable you to change values of individual cues (➠ below).

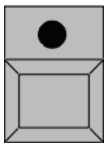
6 This button will lead you to the ASSIGN menu. ➠ **5.1** ASSIGN menu

7 Description of each encoder.

4.3.1 Changing values for individual steps in the sequence

- Select the Cue that you want to changed (red cell).
- Press the MODIFY CUE button (the Cue will be displayed on a green background and the STORE button starts blinking).
- In the FIXTURE or CHANNEL window, **all values of the Cue will now be called up or displayed (active, red).** At the same time, this Cue will be output to the stage.

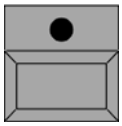
BLIND



- The cue can now be changed by either direct access or presets. ➠ **3.4** Accessing Fixtures directly (in the FIXTURE SHEET) / **3.5** Accessing Dimmer Channels directly (in the CHANNEL SHEET) and **3.7** Creating and calling up Presets

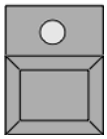
  If the Cue is not be seen on stage, activate the Blind function by pressing the BLIND button (integrated LED is on).

STORE



Press the STORE button once. The changed Cue is now saved.

CLEAR

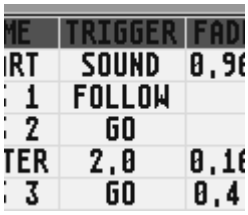


Press the CLEAR button twice if necessary (Cue values will be deleted in the FIXTURE or CHANNEL window).

For modifying further Cues, select the respective Cue one by one (will be displayed on a green background).

Repeat all steps as described with first cue and save with STORE.

4.3.2 Changing the TRIGGER (Call-up) of individual Steps within the Sequence

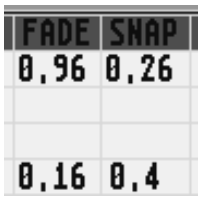


Select the respective cue within the TRIGGER column (red cell).

Enter the following with the left Encoder or via the keyboard and confirm with ENTER.

- F: for FOLLOW mode
- G: for GO button
- S: for Sound signal
- No.: Automatically according to set time (e.g. if the set time is 1.5, this Cue will be called up after 1.5 seconds automatically).

4.3.3 Changing the FADE or DELAY times of individual steps within the Sequence



Select the respective cue (red cell).

Here, the duration for **this** cue can be changed globally with the BASIC-FADE TIME encoder. Pressing the encoder BASIC-FADE TIME, you switch to IND.FADE (all additional individual FADE times changed in the FIXTURE-Timing sheet). Byturning the wheel, you can change these times.

Pressing the encoder SNAP DELAY, you switch to DELAY TIME (all additional individual DELAY times changed in the FIXTURE-Timing sheet). Byturning the wheel, you can change these times.

Pressing the TRIGGER encoder will switch to BASIC OUTFADE. Here, you can modifiy the durations by turning the Encoder.

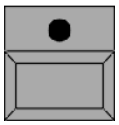
If no FADE or DELAY times are indicated, no values are saved to this CUE.

4.3.4 Updating Cues or Presets

When executing sequences, separate Cues or Presets can be modified and saved directly.

Call up the Cue to be modified. Modify the Cue by either direct access or via presets (UPDATE button LED is on). It is **not** possible to change FADE oder DELAY times by using the Cue UPDATE. ➠ **3.4** Direct Access to Fixtures (in the FIXTURE SHEET) / **3.5** Direct Access to Dimmer Channels (in the CHANNEL SHEET) and **3.7** Creating and calling up Presets

UPDATE Press the Update button once.



The UPDATE CUELIST window will open

Update Preset

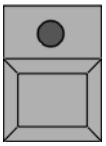
To save the modifications to the original preset, press the UPDATE PRESET button. If other values (not of this preset) were modified, these values will not be saved to the preset. These modified values remain active (red) and can be saved by pressing again the update button and UPDATE CUE button.

Update Cue

In order to save only this Cue with the modifications made, press the UPDATE CUE button.

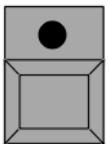
4.3.5 Copying Cues

COPY



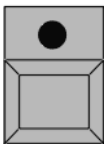
Press the COPY Button once (LED is on).

SEQUENCE

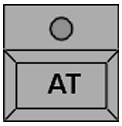


Press the SEQUENCE Button once (LED is on).
Using the keypad, enter the number of the Sequence from which Cues are to be copied.

CUE



Press the CUE Button once (LED is on).
Using the keypad, enter the number of the first Cue from which the copying is to start. If only one Cue is to be copied, continue with the AT Button.
Pressing the + button will copy the respective Cue indicated by the following number.
Pressing the THRU button on the keypad will copy the Cues **from...to** (including last Cue).
When pressing the – button, the Cue with the next number will **not** be copied.

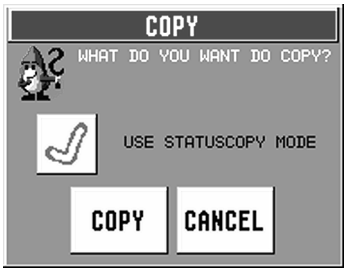


Press the AT button once (LED is on).

Enter the new number for the copied Cues using the keypad.

Example: The Cues are to be inserted between Cue 10 and Cue 11. Number these Cues e.g. as 10.1 (possible Cue numbers are 10.001 - 10.999). This way, up to 999 Cues can be inserted between two existing Cues.

Confirm with ENTER.



When copying **one** Cue, the COPY window will open.

After pressing this button, you can choose between:

Only the values and times actually saved to this Cue will be copied. The history will be disregarded.

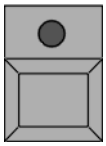
The Cue will be copied as it would actually be realized on stage. That means, all previous steps will be accounted for and the result will be copied afterwards.

Pressing COPY will copy the Cue, CANCEL will abort the process.

When copying more than one Cue, **only the values and times actually saved to this Cue** will be copied. The history will be disregarded.

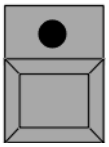
4.3.6 Moving Cues

MOVE



Press the MOVE Button once (LED is on).

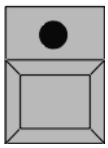
SEQUENCE



Press the SEQUENCE Button once (LED is on).

Using the keypad, enter the number of the Sequence in which Cues are to be moved.

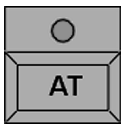
CUE



Press the CUE button once (LED is on).

Using the keypad, enter the number of the first Cue as of which the Cues are to be moved. If only one Cue is to be moved, continue with the AT button.

Pressing the + key will move the respective Cue indicated by the following number.
Pressing the THRU key on the keypad will move the Cues from...to **(including last Cue).**
When pressing the – key, the Cue with the next numbe**r w**ill **not** be moved**.**
Press the AT button once (LED is on).

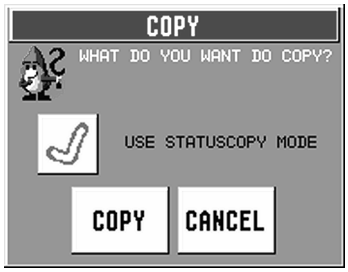


Enter the new number for the moved Cues using the keypad.

Example: The Cues are to be inserted between Cue 10 and Cue 11. Number these Cues e.g. as 10.1 (possible Cue numbers are 10.001 - 10.999).

This way, up to 999 Cues can be inserted between two existing Cues.

Confirm with ENTER.



When moving **one** Cue, the COPY window will open.

After pressing this button, you can choose between:

During the moving process, only the values and times actually saved to this Cue **will be copied**. The history will be disregarded.

The Cue will be moved as it would actually be realized on stage. That means, all previous steps will be accounted for and the result will be copied afterwards.

Pressing COPY will move the Cue, CANCEL will abort the process.

When moving more than one Cue, only the values and times actually saved to this Cue **will be copied.** The history will be disregarded.

4.3.7 Deleting and renumbering Cues

Make a right mouse click on the respective Cue in the NO. column.

The following window will open.

1 START LINE: Display of the first selected Cue. The number can be modified by clicking on it.

END LINE: Display of the last selected Cue. The number can be modified by clicking on it.

2 NEW START: Display of the first new number of the selected Cues. The number can be modified by clicking on it.
STEP WIDTH: Display of the steps, in which the Cues' new numbers will be placed. The number can be modified by clicking on it.

Deleting Cues

Select the Cue to be deleted. By pressing the DELETE button, the CUE will be deleted. If you want to delete not only one but several Cues, select the respective Cues. By pressing the DELETE button, the Cues will be deleted.

Renumbering Cues

Select the Cue to be renumbered. By pressing the RENUMBER button, the Cue will be renumbered. If you want to renumber not only one but several Cues, select the respective Cues. By pressing the RENUMBER button, the Cues will be renumbered.

4.3.8 Inserting LOOPs

Within a Sequence, you can allocate a Loop to a Cue. When this Cue is reached, it will **not** be executed, but the Sequence will be repeated from the indicated Cue. This process will either run over a preset period or for the number of Loops indicated.

A Cue, in which a LOOP is set, will only be executed after the LOOP has ended.

Make a right mouse click on the respective Cue in the LOOP column. The SELECT LOOP-TARGET window will open. Select the Cue to which a jump is to be performed. The Cue will be listed in the top line.

Select the jump function by pressing the respective Button:
- With the LOOP (TIMED) Button, only jumps within the set time frame are performed.
- With the LOOP (COUNT) Button, the jump will be repeated as often as indicated.
- With the DELETE Button, you can delete the jump.

For the indicated jump, you can now determine the duration or number of jumps in the LOOPDELAY column by clicking on or entering the respective value.

Example: When you enter „5" in the TIMED cell, the jumps will be executed for 5 seconds. When you enter „5" in the COUNT cell, the jump will be repeated five times, before the Sequence will be continued.

4.3.9 Inserting Macros

Within a Sequence, a Macro can be called up by a Cue. As soon as this Cue is reached, the Marco will be executed. By setting a time frame, the Macro can be called up with an individual delay. ➠ **7.1** Creating and Programming Macros

Make a right mouse click on the respective Cue in the LINK column. The SELECT MACRO window will open. Select the MACRO to be executed. The Macro will be displayed with its name or number.

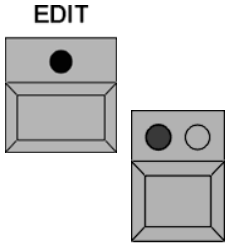
For the selected Macro, you can now enter a time frame in the LI. DEL column. The Macro will only be executed after this time has ended, e.g. if you enter „5" in the LI. DEL column, the Macro will be executed after a delay of five seconds.

4.4. Editing Chasers

EA Chaser is an automatically running sequence. During the editing process, you will be able to modify, add or delete **all** values of individual Cues. Speed, X-FADE, and SNAP-DELAY times can be adapted globally.

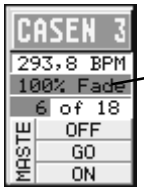
Except as indicated in this chapter, there are three other ways:

- **4.1.2, 4.1.3, 4.1.4** Overwriting, expanding, removing Cues
- **4.3.4** Update Cues or Presets
- **5.3** EXECUTOR window



Press the EDIT button (LED is on). Select a Chaser with the respective EXECUTOR button.

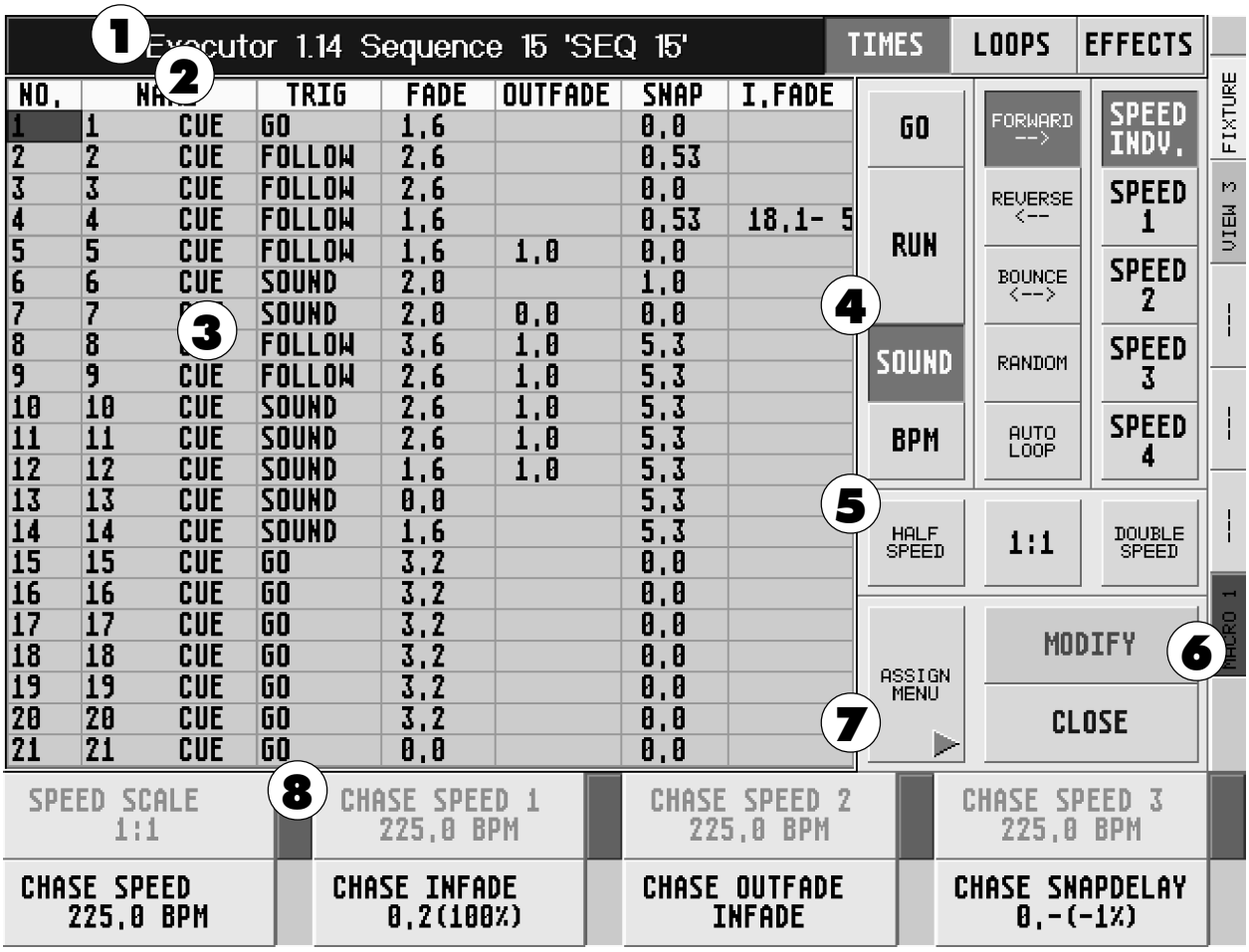
Select a Chaser with the respective EXECUTOR button.



Or:

Make a left mouse click into the Sheet of the small window above the EXECUTOR Fader.

The EDIT menu appears on the right TFT display, giving a listing of the individual cues.



1 The activated EXECUTOR fader or button is now listed in the headline, giving the page number and the name of sequence.

2 The functions of the columns are given in the second line.

- No.: Number of Cues
- NAME: Name of Cue
- TRIGGER: Has no effect on Chaser

If the TIMES button on the title bar is pressed:

- FADE: Has no effect on Chaser
- OUTFADE: Has no effect on Chaser
- SNAP: Has no effect on Chaser
- I.FADE: Has no effect on Chaser
- I DELAY: Has no effect on Chaser

If the LOOPS button on the title bar is pressed:

- LOOP: Jumps to the respective CUE of indicated number upon activation, **without** calling this Cue up
- LOOPDELAY: The sequence of the LOOP function will be displayed.
- LINK: The set Macro will be displayed
- LI. DEL: The set time will be displayed, **after** which the Macro will be called up

If the EFFECTS button on the title bar is pressed:

- EFFECTS: Display of the Effect calls

A second sheet will appear in the lower part of the display:

- No.: Number of the Effect Group
- NAME: Name of the Effect Group
- ACTION: Type of Effect call
- INTENS: Display of the defined size of the Effect Group
  F (Fade): If Y (YES) is displayed, the size will be faded in with the set fade time
- SPEED: Display of the defined speed of the Effect Group
  F (Fade): If Y (YES) is displayed, the speed will be faded in with the set fade time
- SOFT: Display of the set softness (softer fade in) of the effects
  F (Fade): If Y (YES) is displayed, the softness will be faded in with the set fade time

3 The chart will show all Cues of the Chaser.

4 With the help of the button you can define various sequences for the Chaser.

- GO: Call-up of the steps with the GO button. Fade and Delay time will be executed with the set time.
- RUN: Chaser runs with the set speed. Fade and Delay time will be adjusted in terms of percentage.
- SOUND: Call-up of the steps via a sound signal. Fade and Delay time will be executed with the set time.
- BPM: Call-up of the steps via the automatic recognition of Beats per minute. Fade and Delay time will be adjusted in terms of percentage.
- FORWARD: Chaser runs forward.
- REVERS: Chaser runs backwards.
- BOUNCE: Chaser runs forward, then backwards and so on.
- RANDOMLY: Chaser calls up individual steps on random basis.
- AUTO LOOP / SINGLE ON / SINGLE OFF (Switch over by pressing the button):
  On AUTO LOOP, after the last step, the Chaser will jump back to the first and continue. With SINGLE ON, the Chaser makes one run and stops at the last Cue. With SINGLE OFF, the Chaser makes one run and switches off after the last Cue.
- SPEED INDV.: On RUN, an individually set speed will be used.
- SPEED 1–4 : On RUN, the respective SPEED-Group will be used. These set speeds can be used for all Chasers.
  ➠ **5.1.10** Assigning the Special Master

5 Using the buttons, you can either divide or double the set speed.

HALF SPEED: Pressing 1x, the set speed will be divided in half – this can be done up to 8 times (Modification will be displayed above the left Encoder).

1:1: Resets the speed to the set value.

DOUBLE SPEED: Pressing 1x, the set speed will be doubled – this can be done up to 8 times (Modification will be displayed above the left Encoder.

6 Values of individual Cues can be modified with the MODIFY-CUE button (STORE button blinks). ➠ **4.4.1** Modifying values of separate Chaser steps

7 This button will bring you to the ASSIGN menu. ➠ **5.2** ASSIGN menu

8 Description/labelling of the encoders, located below the TFT display.

- CHASE SPEED: The **individual** speed can be set with this Encoder.
  If one of the SPEED buttons 1 to 4 is pressed, you can set the speed of this SPEED group using this Encoder.

  SPEED SCALE: Pressing the CHASE SPEED encoder, this encoder will be switched to SPEED SCALE – now you can set the division or doubling of the speed with this Encoder
- CHASE INFADE: Setting of the In-Fade time for FADE functions.

  CHASE SPEED 1: When pressing the CHASE INFADE encoder, this encoder will be switched to CHASE SPEED 1 – now you can set the speed for this group with this Encoder.
- CHASE OUTFADE: Setting the Out-Fade time for Dimmer Functions. (The OUTFADE time can be linked to the infade time; The display shows "INFADE")

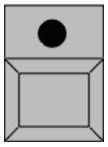
  CHASE SPEED 2: When pressing the CHASE OUTFADE encoder, this encoder will be switched to CHASE SPEED 2 – now you can set the speed for this group with this Encoder
- SNAP DELAY: Setting the delay time of SNAP functions.

  CHASE SPEED 3: When pressing the SNAPDELAY encoder, this encoder will be switched to CHASE SPEED 3 – now you can set the speed for this group with this encoder.

4.4.1 Modifying values of separate Chaser steps

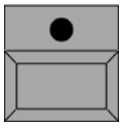
- Select the Cue to be modified (red cell).
- Press the MODIFY CUE button (The Cue will be displayed with a green background).
- In the FIXTURE or CHANNEL window, **all values of the Cue will now be called up or displayed (active, red).** At the same time, this Cue will be output to the stage.
- This cue can now be modified by either direct access or presets. ➠ **3.4** Direct Access to Fixtures (in the FIXTURE SHEET) / **3.5** Direct Access to Dimmer Channels (in the CHANNEL SHEET) and **3.7** Creating and calling up Presets

BLIND



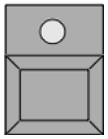
If the Cue is not be seen on stage, activate the Blind function by pressing the BLIND button (integrated LED is on).

STORE



Press the STORE button once. The changed Cue is now saved.

CLEAR



Press the CLEAR button twice (Cue values will be deleted in the FIXTURE or CHANNEL window).

For modifying further Cues, select the respective Cue (Cue will be displayed on a green background).

Repeat all steps as described with the first cue and save with STORE.

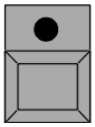
➠ **4.3.5** Copying Cues
➠ **4.3.6** Moving Cues
➠ **4.3.7** Deleting and renumbering Cues
➠ **4.3.8** Inserting LOOPs
➠ **4.3.9** Inserting Macros

5 Executing Cues, Sequences and Chasers

5.1 ASSIGN menu (Assignment to EXECUTOR)

The created Cues, Sequences or Effect Groups can be assigned to any EXECUTOR fader or button.

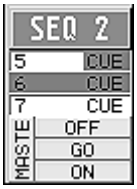
ASSIGN



Press the ASSIGN button once (LED is on).

Select a Sequence in the Sequence Pool, or an Effect Group in the Effect Pool.

Press the EXECUTOR FADER or EXECUTOR button, on which you want to assign a Sequence or Chaser.

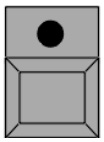


Or:

One way to enter the ASSIGN menu is by a mouse click or using the touch screen on the title bar of the EXECUTOR FADER window.

Or:

ASSIGN

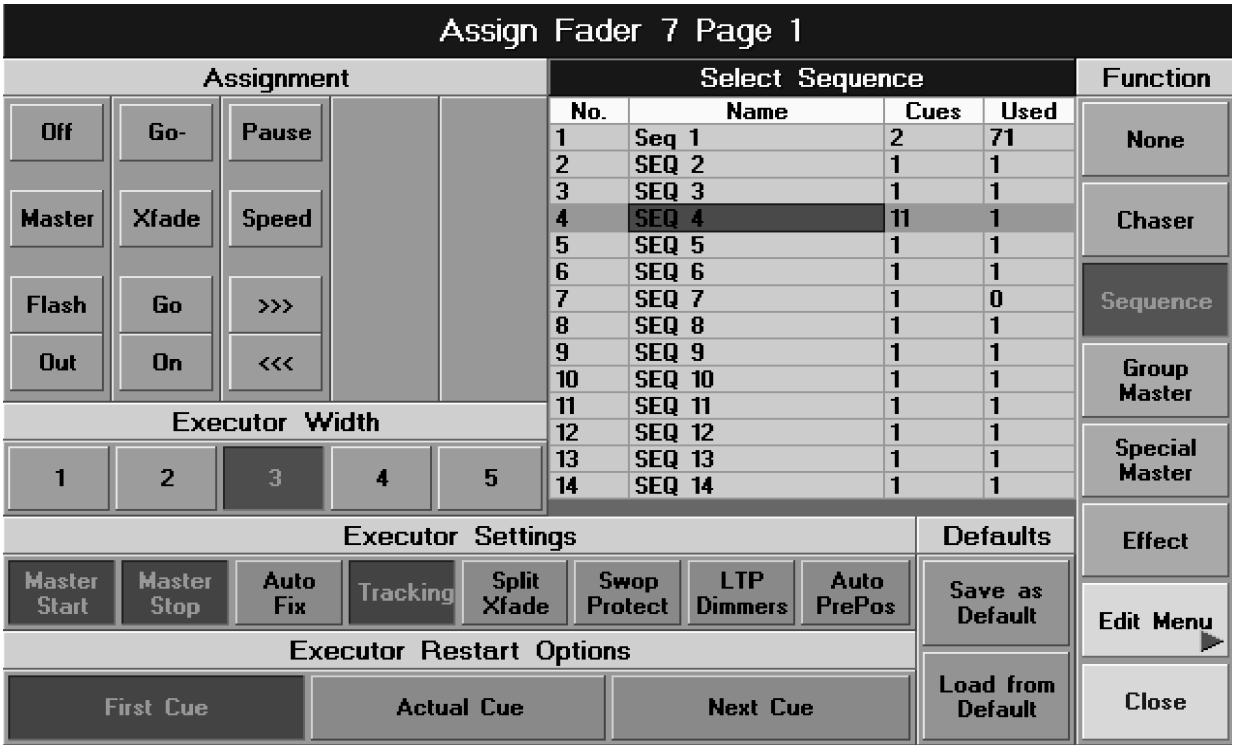


Press the ASSIGN button once (LED is on).

Press the EXECUTOR FADER or EXECUTOR button, for which a Sequence or Chaser is to be created. The ASSIGN menu will appear in the middle TFT display.

Another way to enter the ASSIGN menu is via the EDIT menu.

The title bar will display the selected EXECUTOR FADER or BUTTON.



5.1.1 Assigning Sequences or Effect Groups

By pressing the CHASER, SEQUENCE or EFFECT button, all created Sequences will be listed in the Sheet. Select the Sequence or Effect Group to be assigned. Assigned Sequences or Effect Groups are displayed in red.

The CUES column shows the number of Cues in the individual Sequences.

The USED column shows, how often a Sequence is already being used.

By pressing the EDIT MENU button, you can customize the assigned Sequence Effect Group from the EDIT menu. ➠ **4.3** or **4.4** Editing Cues, Sequences or Chasers. ➠ **6.2** Editing Effect Groups

5.1.2 Changing Sequence Names

After clicking on the name of the respective Sequence (red cell), you can enter a new name via the keyboard.

5.1.3 Changing Buttons and Faders

With a left mouse click on the FADER symbol, a selection will appear in which you can assign the respective function to the Fader by another left mouse click.

- Master: The Fader controls all dimmer values of this Sequence.
- Swap: With the Fader, the sequence is faded in and **all** dimmer values used in this sequence are set to "0" or the value respectively programmed.

It is only possible, to use a SWAP *or* Master fader.

- FADE: With the Fader, the fade-in time can be set for the FADE function, when using Chasers.
- Speed: The Chaser speed can be set with the Fader.
- Xfade: With the Fader, you can fade in to the next step.
- XF A: If Split Crossfade is active, you can fade out the currently called up Cue when pushing the fader upwards (➠ **item 5**).
  If Split Crossfade is **not active**, you can fade out to the darkening Dimmer channels of the next Cue when pushing the fader upwards.
- XF B: If Split Crossfade is active, you can use the Fader to fade in the next Cue when pushing the fader upwards (➠ **item 5**).
  If Split Crossfade is **not active**, you can fade out to the next Cue and to the brightening Dimmer channels when pushing the fader upwards.
- Empty: Fader has no function.

By a right mouse click on the respective BUTTON symbol, a selection will appear in which any button can be allocated with different functions.

- Go: The next step will be called up with all programmed FADE and DELAY times.
- Go–: For sequences, the previous step is called up and all changes effected on previous Cues are executed (full tracking). At the same time, all programmed FADE and DELAY times will be executed. For Chasers, the running direction will be reversed.
- Pause: Sequence or Chaser will be interrupted; continue with GO+ or GO–.
- On: Switches the Executor on and starts the sequence or brings it back, if it was overwritten (LPT).
- Off: Switches the Executor off.
- Learn: Direct entering of the Chaser speed. When pressing this button at least three times, the Chaser speed is set.
- <<<: Call-up of the previous step without FADE or SNAP times.
- >>>: Call-up of the next step without FADE or SNAP times.
- Temp: Cue, Chaser oder Sequenz wird eingeschaltet, solange der Taster gedrückt ist, danach wird vorheriger Zustand wieder hergestellt.
- Top: Resets the Sequence to the first step.
- Empty: Button has no function.
- Flash: Sets the Dimmer value to 100%, starts the sequence, if not already activated.
- Out: To hide the dimmer values (temporarilyy).
- Toggle: To switch on and off the respective Cue, Sequence or Chaser.
- Swop: Cue, Chaser oder Sequenz wird eingeschaltet, solange der Taster gedrückt ist, **alle** anderen Dimmerkanäle werden ausgeblendet, außer bei Executoren, bei denen „Swop Protected" aktiv ist.

With the Executor Width buttons 1 – 5, you can define whether it should be possible to use one to five Faders for your operations with EXECUTOR FADERs, und whether one to five buttons could be used for EXECUTOR BUTTONS. The respective titles will be displayed on the TFT display above the EXECUTOR FADERS. When the LIST function is active, the function of the EXECUTOR buttons will be displayed above these buttons (press LIST button).

5.1.4 EXECUTOR SETTINGS

If you press the MASTER START button (background dark gray), the Sequence or Chaser will be automatically started when pushing the Master Fader upwards (item 6).

If the MASTER STOP button is pressed (dark gray background), the sequence or Chaser will automatically be switched off when pushing the master fader downwards to the lower stop.

If the AUTO FIX button is pressed (dark background) and the Sequence or Chaser is started, this Executor will be locked to that position when switching the Executor pages and will **only be released after switching it off**. If an Executor is saved at that position on another page, this Executor will appear and can be used again only after switching the locked Executor off.

If the TRACKING button is pressed (dark background), the Sequence will be executed in Tracking mode. If the button is not pressed, the Sequence will be executed in Non Tracking mode.

TRACKING and NON TRACKING refer to all Dimmer values *only*.

The **TRACKING** mode is intended for **theater applications**.

Dimmer channels that were called up in a Cue, remain unchanged for each further Cue, until they are modified or overwritten by a further Cue (LTP principle). Therefore, you do not have to program them in later steps.

TIP Example: At the beginning of a Sequence, Dimmer channels are set to 80 percent. Let's assume that the setting is to used for several steps. As long as the channels are not modified, they will remain on 80 percent. When working with this Sequence, you may recognize, however, that the channel setting should only be at 70 percent. Now, you only have to change this channel setting **once**; all further Cues will automatically be "modified" to 70 percent.

The **NON TRACKING** mode is the „Standard SHOW Mode". As opposed to TRACKING (Theater mode), all Dimmer channels that are **not activated (not red)** will be saved with "0%" or called up with "0%", respectively.

That means: This is to ensure that in the next step, the unused Dimmer channels will be set to 0 percent. ➠ **5.4** TRACKING window
If the SPLIT CROSSFADE button is pressed (displayed in dark), this function is active (➠ **item 5.1.3** Changing Faders, Fader XF A and XF B).

If the SWOP PROTECTED button is pressed, the Dimmers of this Sequence will not be switched off, when a **different** Sequence is called up using Swop.

LTP Dimmers button pressed: When activating this sequence, the dimmer channels of this sequence will be called up as previously programmed. They will overwrite all other dimmer channels of those Cues that were also called up in LTP mode. HTP Executors remain unchanged.

Auto PrePos button pressed: For Fixtures with **inactive Dimmers**, all other channels will be executed without programmed fade times when calling up the first Cue of this Sequence. When deactivating this sequence, the channels will be altered only after the respective dimmer has been set to 0.

5.1.5 EXECUTOR RESTART OPTIONS

If the FIRST CUE button is pressed, the Sequence will, after switching off, start again at the **first** step.

If the ACTUAL CUE button is pressed, the Sequence will, after switching off, start again at the **last called** step.

If the NEXT CUE button is pressed, the Sequence will, after switching off, start at the **next** step.

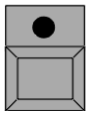
5.1.6 EXECUTOR Defaults

Pressing the SAVE AS DEFAULT button will save the current settings as default settings in the Default Button/Fader menu.

Pressing the LOAD FROM DEFAULT button will load the saved default settings and use them for this Executor.

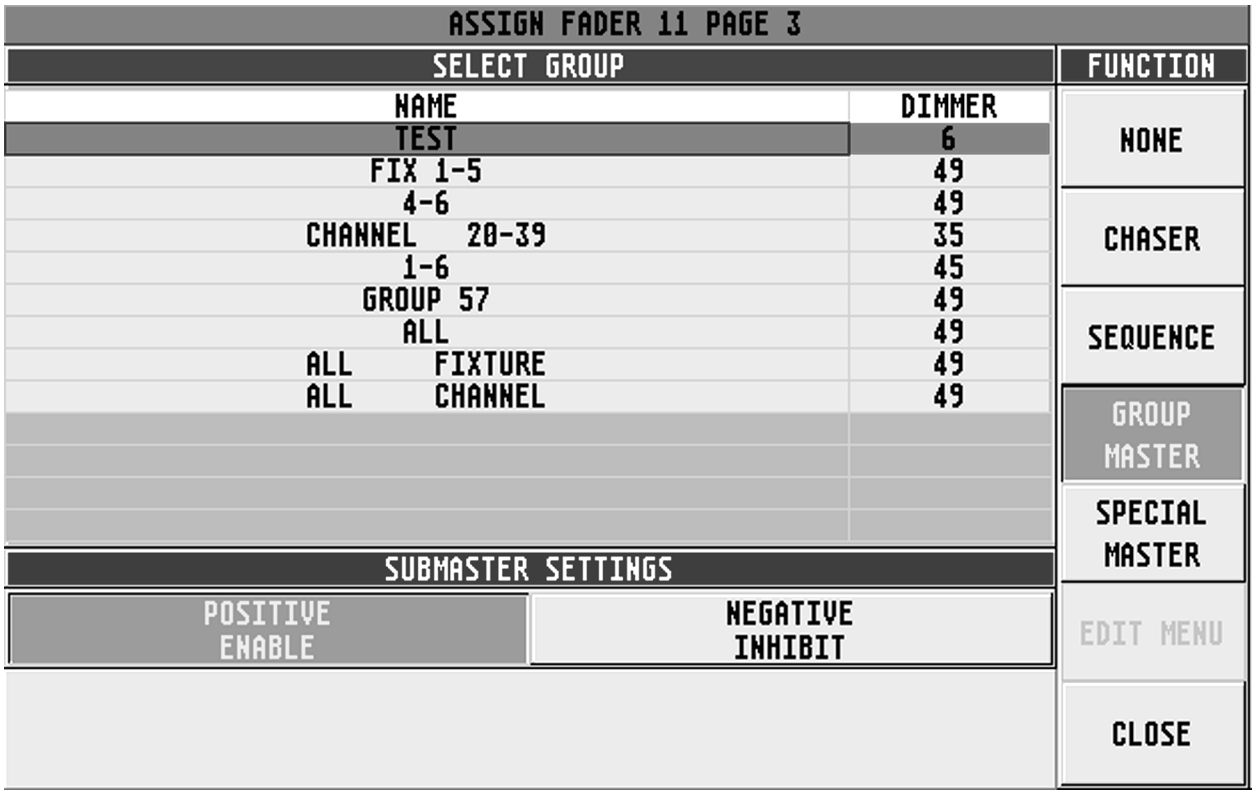
5.1.7 Assigning Group Masters

ASSIGN



Press the ASSIGN button once (LED is on).
Select a group in the GROUP Pool.
Press an EXECUTOR FADER button, onto which the group is to be assigned to.

Or: Using the ASSIGN menu:



If the GROUP MASTER button is pressed, the Sheet will display all created groups.

Select the group to be assigned. Assigned groups are displayed in red. The DIMMER column will show the number of Dimmer channels used by the Fixtures and Dimmers.

5.1.8 Changing Group Names

After clicking on the respective name of the group (blue frame), you can enter a new name via the keyboard.

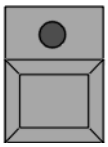
5.1.9 SUBMASTER SETTINGS

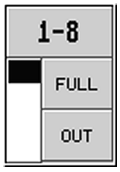
If the POSITIVE ENABLE button is pressed, this Group Master is the Master Fader for all dimmer channels of this group.

If a Group Master is set as INHIBIT Master (NEGATIVE INHIBIT button pressed) for a group in which also exist Fixtures or dimmer channels from other groups, the INHIBIT Master must also be pushed up, to be able to use the overlapping channels. The INHIBIT Master can also be used as Master Fader for all other Group Masters.

5.1.10 Group Overview

GROUP





Pressing the GROUP button twice will open an overview in the right display showing all assigned Group Masters. In this overview, every Group Master is displayed with a separate small window.

The upper button contains the group name. Clicking on this button will open the Page on which it is saved to. The display above the Fader shows „HERE".

With the FULL button, you can set the Master to 100%. With the OUT button, you can set the Master to „0". The yellow status indicator next to the buttons will give you the currently set value for the respective Fader.

Pressing the ALL FULL button in the title bar will set all group masters to 100%.

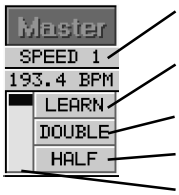
Pressing the CLOSE button will close this window.

Assigning Special Masters

If the SPECIAL MASTER button is pressed, all CHASER SPEED Masters will be displayed.

Select the CHASER SPEED to be assigned.

The following window will appear above the assigned Executor fader:



Here, the name of the Speed Group will be displayed.

With the upper button, you can enter a speed directly. By pressing the button at least twice, you can set the speed.

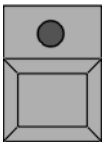
With the button below the fader, you can double the speed.

With the lower button, you can half the speed.

The speed of the Speed Group can be adjusted by using the respective Fader.

5.1.12 Moving, copying or deleting Executors

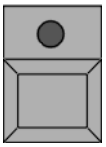
MOVE



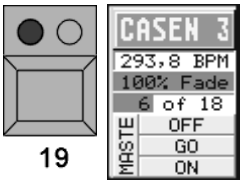
Press the MOVE button once to move Executors (LED is on).

Or:

COPY



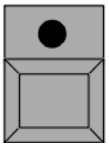
Press the COPY button once to copy Executors (LED is on).



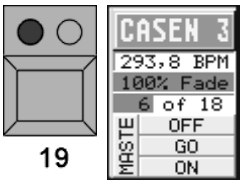
To move or copy an Executor button or a window above the Executor, press or click on it once.

Pressing another Executor button or window above the Executor will set the new position.

DELETE



Press the DELETE button once to delete Executors (LED is on).



Press an Executor button or on a window above the Executor once.

If there are programmed Macros or Timecode Shows, in which the moved or deleted Executors were to be used, these assignments may get lost!

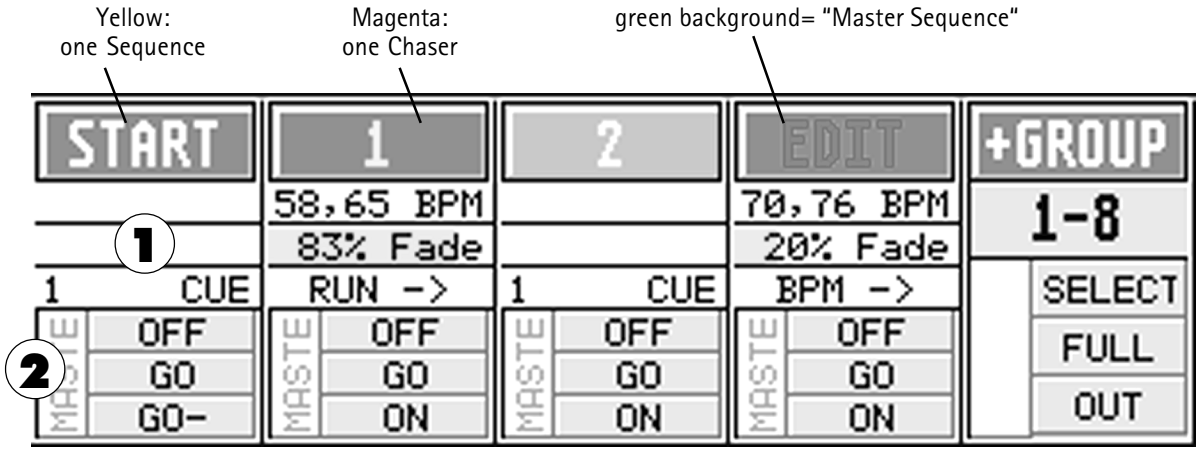
5.2 Small EXECUTOR Window

grandMA:

These windows are located above every EXECUTOR FADER or, after pressing the LIST button twice, in the right TFT display for the EXECUTOR buttons.

grandMA light:

After pressing the LIST FADERS button, these windows will be displayed above each of the EXECUTOR FADERS.
After pressing the LIST BUTTONS button twice, they will be displayed on the TFT display for the EXECUTOR buttons.



1 Clicking on the **Sheet** (not into the header) on the touch screen or using the left mouse button will open the EDIT menu. ➠ **4.3** Editing Sequences or **4.4** Editing Chasers

Clicking on the **title bar** on the touch screen or using a mouse button will open the ASSIGN menu. ➠ **5.1** ASSIGN menu

Furthermore, an extract from the Cue Sheet will be displayed:

Sequence: The Outfade time of the last Cue will be displayed by a red bar in the upper cell.

The Infade time of the cue will be displayed in the second cell.
The next Cue will be displayed in the next cell below.

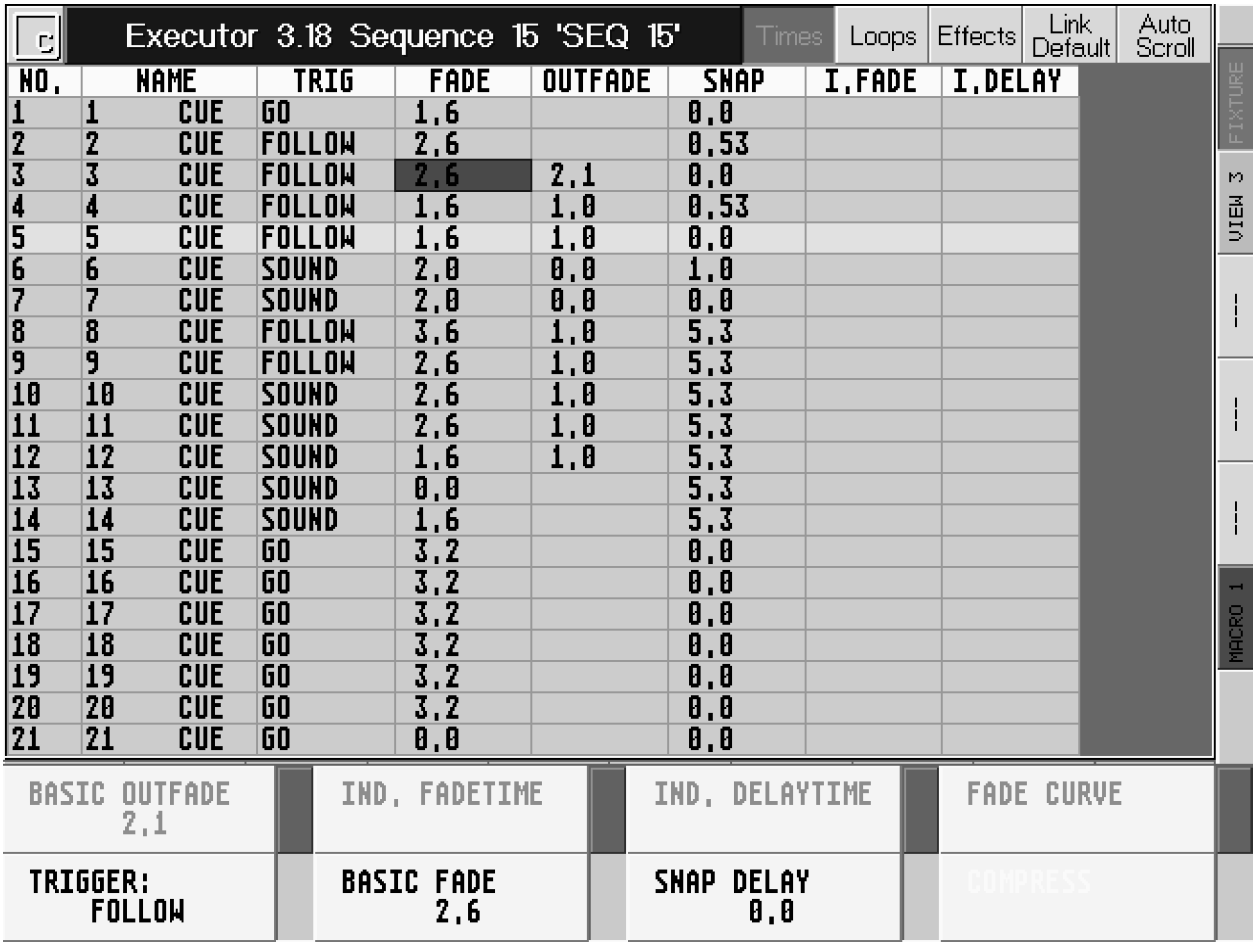
Chaser: The speed will be displayed in the upper cell.
The Fade time in percentage will be displayed in the second cell and also as green or red bar.
As long as the Chaser is not activated, you will find the type of activation in the bottom line. During execution, the number of Cues already done will be displayed on the left while on the right side you will see the total number of all Cues, which is also being displayed symbolically by a bar.

2 Here, the individual Fader and Button functions are displayed:

- On the left side, the Fader function is displayed. The yellow status indicator will give you the Fader value currently set.
- The function for the button above the encoder is displayed on top,
- The function of the upper button below the Fader is displayed in the middle cell
- And the function of the lower button below the Fader is displayed in the lower cell.

5.3 EXECUTOR Window

In the EXECUTOR window, you can have the sequence of one FADER or BUTTON displayed, while you have the possibility for modifications. ➠ **3.1** Creating a window



Touch the touch screen on the left corner of the title bar.

Or:

With a right mouse click on the title bar, you can open the EXECUTOR SHEET OPTIONS window.

In this EXECUTOR window, you can select the respective Sequence by clicking on it. With the FONT SIZE button, you can switch the font size used in this window between LARGE and SMALL. With the DELETE WINDOW button, you can delete the Executor window or close the OPTIONS window using the CLOSE button.

In this window, you can watch the progress of the sequence; the currently called-up Cue will be displayed by a yellow background. Trigger calls, FADE or DELAY times can be modified directly.

By clicking on a Cue listed in the Sheet (indicated by a red cell), the possible Cue settings appear in the right display above the Encoders. Now, you can use the Encoders to modify the individual values for the selected Cue. If the LOOPS button is pressed, the set jumps and Macros will be displayed in the Sheet. If the EFFECTS button is pressed, the calls of the Effect Groups are displayed. ➠ **4.3** Editing Sequences
If the LINK DEFAULT button of the title bar is pressed, the default sequence will automatically be transferred to the EXECUTOR window when changing the default sequence. (Assigning the Default sequence ➠ **1.7** Layout and Controls (items 9 and 10))

If you press the AUTO SCROLL button, the Sheet will be automatically moved upwards/downwards when working on a larger Sequence.

5.4 TRACKING Window

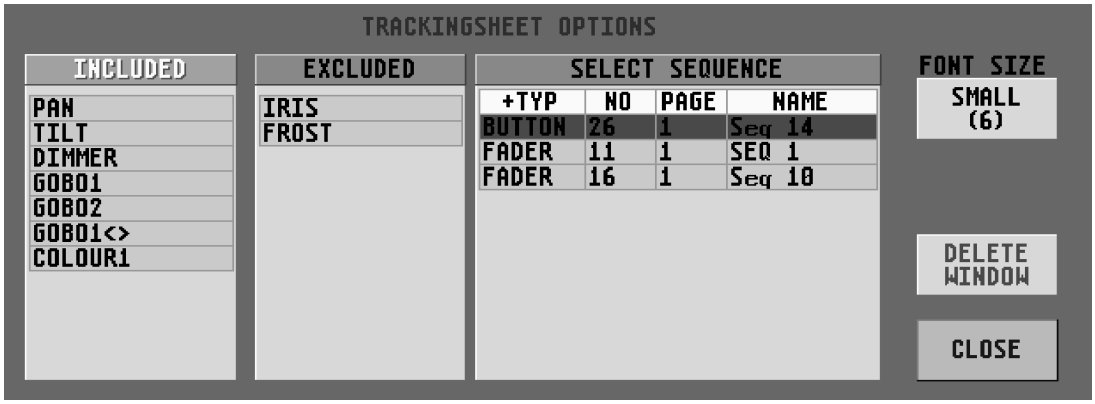
In the Tracking window, all values and times/durations of a Sequence can be displayed. Here, all values and times/durations can be reviewed and modified.

Create a Tracking Sheet. ➠ **3.1** Creating windows

Touch the touch screen on the left corner of the title bar.

Or:

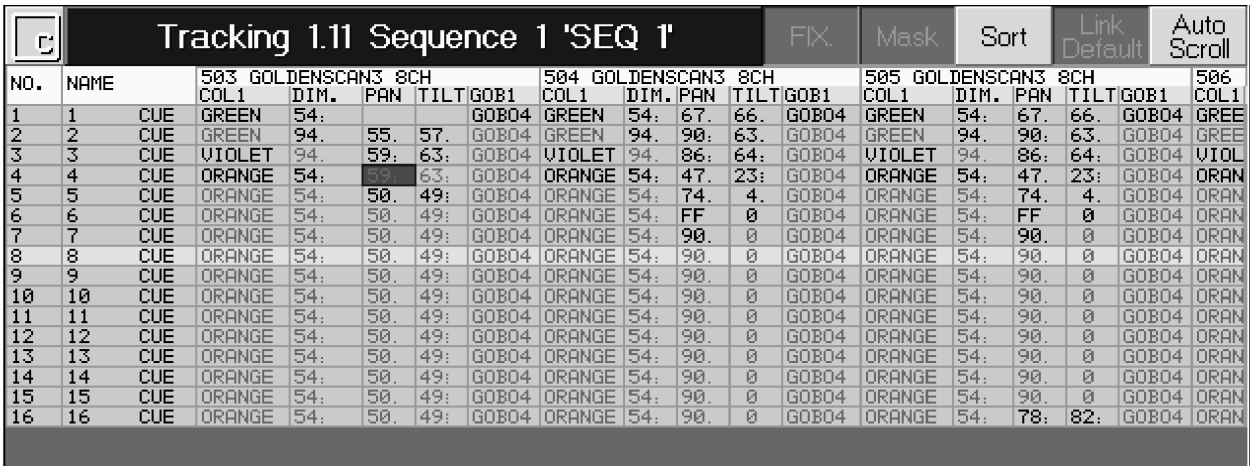
With a right mouse click on the title bar, you can open the TRACKINGSHEET OPTIONS window.



In this window, you can select sequences by clicking on the respective ones.

In the INCLUDED Sheet, all functions of the Fixtures used in this Sequence are displayed. By clicking on a function, you can move it into the EXCLUDED sheet. Functions displayed in this Sheet will **not** be displayed in this Tracking Sheet. With this function, you obtain a better overview for the Tracking Sheet.
With the FONT SIZE button, you can switch the font size used in this window between LARGE and SMALL.

With the DELETE WINDOW button, you can delete the Executor window or close the OPTIONS window using the CLOSE button.



NO.	NAME		503 GOLDENSCAN3 8CH					504 GOLDENSCAN3 8CH					505 GOLDENSCAN3 8CH					506
			COL1	DIM.	PAN	TILT	GOB1	COL1	DIM.	PAN	TILT	GOB1	COL1	DIM.	PAN	TILT	GOB1	COL1
1	1	CUE	GREEN	54:			GOBO4	GREEN	54:	67.	66.	GOBO4	GREEN	54:	67.	66.	GOBO4	GREE
2	2	CUE	GREEN	94.	55.	57.	GOBO4	GREEN	94.	90:	63.	GOBO4	GREEN	94.	90:	63.	GOBO4	GREE
3	3	CUE	VIOLET	94.	59.	63:	GOBO4	VIOLET	94.	86:	64:	GOBO4	VIOLET	94.	86:	64:	GOBO4	VIOL
4	4	CUE	ORANGE	54:	59:	63:	GOBO4	ORANGE	54:	47.	23:	GOBO4	ORANGE	54:	47.	23:	GOBO4	ORAN
5	5	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	74.	4.	GOBO4	ORANGE	54:	74.	4.	GOBO4	ORAN
6	6	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	FF	0	GOBO4	ORANGE	54:	FF	0	GOBO4	ORAN
7	7	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
8	8	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
9	9	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
10	10	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
11	11	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
12	12	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
13	13	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
14	14	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
15	15	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	90.	0	GOBO4	ORAN
16	16	CUE	ORANGE	54:	50.	49:	GOBO4	ORANGE	54:	90.	0	GOBO4	ORANGE	54:	78:	82:	GOBO4	ORAN

In this window, you can watch the progress of the sequence; the currently called-up Cue will be displayed by a yellow background.

If the FIX button is pressed (dark background), all **selected** Fixture functions will be displayed as first functions in the Sheet.

If the button is not pressed (indicated by a CHA), the Sheet will display all functions **regardless of their selections**. When selecting presets, the Fixtures/Dimmers will be sorted accordingly in the Tracking Sheet.

If the MASK button is pressed, the INCLUDED/EXCLUDED functions will be activated in the OPTIONS menu.

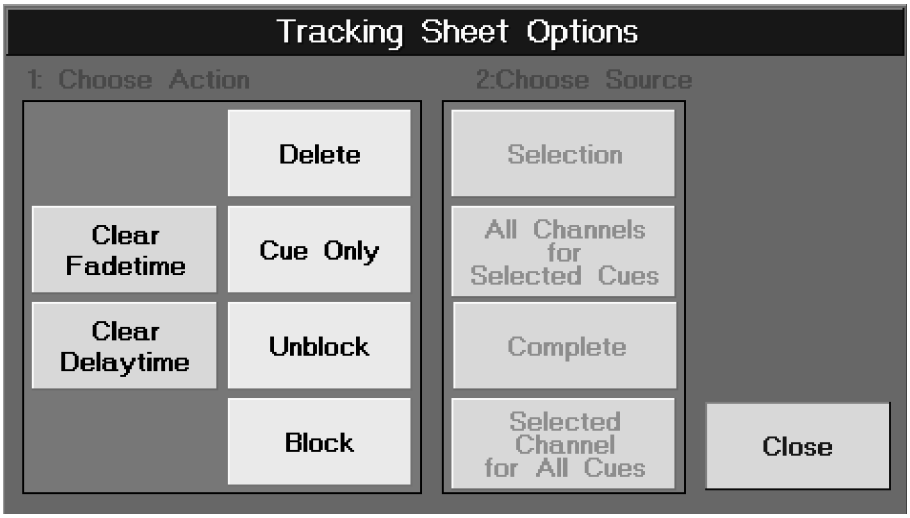
If the SORT button is pressed (dark appearance), the Fixtures/Dimmers will be sorted by selection an function. When selecting groups or presets, the Fixtures/Dimmers will be sorted accordingly in the Tracking Sheet.

If the LINK DEFAULT button of the title bar is pressed, the default sequence will automatically be transferred to the EXECUTOR window when changing the default sequence. (Assigning the Default sequence ➠ **1.7** Layout and Controls (items 9 and 10))

If the AUTO SCROLL button is pressed, the Sheet will be automatically moved upwards/downwards when working on a larger Sequence.

Using the left mouse button, you can select values or times/durations (also by using the "lasso function"). Values and times/durations can be modified using the middle mouse button.

The following window will open on a right mouse click on the selected values.



Proceed with one of the following options:
1. Selecting one or more cells in the Tracking Sheet
2. Choosing the DELETE, CUE ONLY, UNBLOCK or BLOCK command
3. Executing the command when activating the selection (Selection, All Channels..., Complete or Selected Channel...).

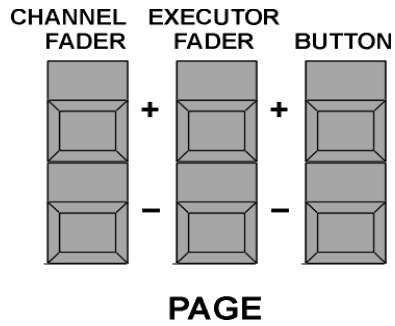
DELETE: Will remove all values.

Cue Only: Will copy the values of the previous step into the following step (that step must be empty).

Block: With BLOCK, the removed values (light gray) can be converted into "saved values". The values will be displayed in pink.

Unblock: Re-converts block values to removed values (light gray).

5.5 Page Administration



The currently called-up PAGE of the CHANNEL Mode (e.g. CH1) appears down on the right side of the left TFT display. If you are in Channel Mode, the currently called-up PAGE of the CHANNEL Mode appears down in the middle. ➠ **3.5.1** CHANNEL Mode.

The currently called-up PAGE of the EXECUTOR BUTTONS (e.g. BU1) appears down on the right side of the right TFT display.

After pressing the LIST button once, the currently called-up PAGE of the EXECUTOR BUTTONS appears at the bottom of the right display.

Using the respective PAGE buttons, you can open the different PAGES.

Or:

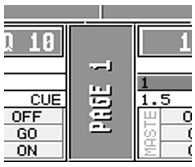
Hold a PAGE button down, for which another is to be called up. While holding down a button, the EXECUTOR Button LEDs will indicate the current PAGE you are on (Example: If LED 28 is blinking, PAGE 8 is selected). By pressing another button you can switch to a different PAGE.

Or:

5.5.1 Channel Page

When pressing both PAGE buttons of the Channel Mode simultaneously the display will show a summary of the CHANNEL PAGES.

Or:

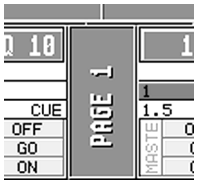


If in Channel Mode, you can call up the summary for all Channel Pages by pressing the PAGE Buttons in the display. By clicking on the respective PAGE Buttons you can call up the PAGE.

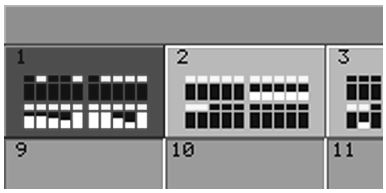
5.5.2 Executor Fader Page

When pressing both PAGE buttons for the Executor Faders simultaneously the display will show a summary of the Executor Fader Pages.

Or:



If in EXECUTOR FADER Mode, you can call up the summary for all EXECUTOR FADER Pages by pressing the PAGE Buttons in the display. By clicking on a PAGE Button you can call up the respective PAGE.

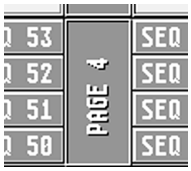


The individual Faders are indicated by symbols in the respective PAGE Buttons. The yellow bar graph will give you the currently set value for the respective Fader. If there is a green square above the Fader symbol, a Sequence, a Group or a Special Master is allocated to this Executor Fader. If this square is yellow, the Sequence or Chaser is active.

5.5.3 Executor Button Page

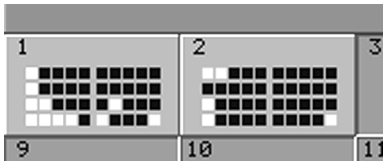
When pressing both PAGE buttons for the Executor Buttons simultaneously the display will show a summary of the EXECUTOR BUTTON Pages.

Or:



After pressing the LIST button once, the TFT display will show a listing of the Sequences assigned to the Buttons, and in the middle a PAGE Button with the currently called-up EXECUTOR Page.

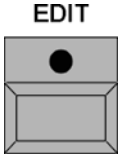
You can call up the summary for all EXECUTOR BUTTON Pages by pressing the PAGE buttons in the display. By clicking on a PAGE button you can call up the respective PAGE.



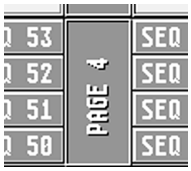
The buttons are indicated by symbols in the respective PAGE buttons. If there is a green square, a Sequence, a Group or a Special Master is allocated to this Executor Button. If this square is yellow, the Sequence or Chaser is active.

MA Lighting Technology GmbH · Dachdeckerstr. 16 · D-97297 Waldbüttelbrunn · Fax: +49 931 4979429 · www.malighting.de

5.5.4 Edit PAGE Name



Press the EDIT button once.



Select the PAGE button on the display.

The EDIT NAME window will open. Enter a name using the keyboard and confirm with ENTER.

5.5.5 Copying, moving and deleting Pages

Copy or move the Page containing the Executor faders *or* buttons

Press the COPY button once to copy Pages (LED is on).

Or:

Press the MOVE button once to move Pages (LED is on).
Press the PAGE button once (LED is on).
„**2**" for Executor fader or „**3**" for Executor buttons (enter via numeric keypad).
Press the „**.**"-(dot) key and then enter the page number.
Press the AT key (LED is on), enter the number of the target Page and confirm with ENTER.

Copy or move complete Pages with Executor-Faders *and* buttons

Press the COPY button once to copy Pages (LED is on).

Or:

Press the MOVE button once to move Pages (LED is on).
Press the PAGE button once (LED is on).
Enter the page number.
Press the AT key (LED is on), enter the number of the target Page and confirm with ENTER.

Delete Pages with Executor faders *or* buttons

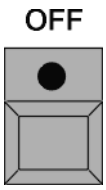
Press the DELETE button once to delete Pages (LED is on).
Press the PAGE button once (LED is on).
„**2**" for Executor fader or „**3**" for Executor buttons (enter via numeric keypad).
„**.**"-(dot) key and then the page number; confirm with ENTER.
A window will open; here, confirm the deleting operation with the DELETE button.

Deleting Pages with Executor fader *and* buttons

Press the DELETE button once to delete Pages (LED is on).
Press the PAGE button once (LED is on).
Enter the page number on the keypad and confirm with ENTER.
A window will open; here, confirm the deleting operation with the DELETE button.

If there are programmed Macros or Timecode Shows, in which the moved or deleted Pages were to be used, these assignments may get lost!

5.6 OFF menu (RUNNING PROGRAMMS)



Pressing this button will open the RUNNING PROGRAMMS window.

RUNNING PROGRAMS — CLOSE

CHASES

NO	PG	CUELIST	CUE
16	2	RR	42 CL
11	3	SEQ 3	1 CL
16	4	RR	77 CL
11	1	DSJAJ	1 CL

CHASES OFF

SEQUENCES

NO	PG	CUELIST	CUE
10	1	SEQ 11	1 CL
6	1	SEQ 12	1 CL
5	1	SEQ 13	1 CL
15	1	SEQ 14	1 CL
16	1	RR	1 CL
5	2	SEQ 13	1 CL
10	2	SEQ 11	1 CL
10	3	SEQ 11	1 CL
5	3	SEQ 13	1 CL
6	3	SEQ 12	1 CL
16	3	RR	1 CL
15	3	SEQ 14	1 CL
6	4	SEQ 12	1 CL
5	4	SEQ 13	1 CL

SEQUENCES OFF

EFFECTS

NO	NAME
1	EFF 1

EFFECTS OFF — DETAILS

CURRENT PAGE OFF — FADERS OFF — BUTTONS OFF — EVERYTHING OFF

The left column shows all activated Chasers, the middle column all active Sequences and Cues, and the right column contains all activated Effect Groups.

- CHASES OFF: Switches off **all** (!) active CHASERS.
- SEQUENCES OFF: Switches off **all** (!) active SEQUENCES.
- EFFECTS OFF: Switches off **all** (!) active EFFECTS.

Pressing the DETAILS button will open the View ALL RUNNING EFFECTS menu. ➠ **6.5** View ALL RUNNING EFFECTS menu

- CURRENT PAGE OFF: Switches off **all** (!) Executers of the current Page
- FADERS OFF: Switches off **all** (!) active EXECUTOR Faders.
- BUTTONS OFF: Switches off **all** (!) active EXECUTOR buttons.
- EVERYTHING OFF: Switches off **all** (!) EXECUTORS.
- CLOSE: Schließt dieses Fenster.

You can also switch off Executors or Pages directly.

e.g.: – [OFF button] [EXECUTOR button] [3] [TIME button] [2] [Enter]

– [OFFbutton] [PAGE button] [3] [TIME button] [2] [Enter]

Furthermore, Fixtures or Groups can be released (kicked out) of the direct access.

e.g.: – [OFF button] [FIXTURE button] [3] [Enter]

– [OFF button] [GROUP button] [3] [Enter]

6 Effects

6.1 Effect Pool

In the Effect Pool, you can save up to 900 different Effect Groups. In the individual Effect Groups, different Effects and functions can be combined and matched to each other.

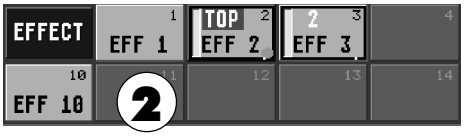
For PAN/TILT values, self-created two-dimensional forms can be called up and adjusted. ➠ **6.7** Creating and saving virtual forms

The individual Effect Groups can be subdivided into **four** different types:

- Effect Group **with** assigned Fixtures or Dimmers (button of the Effect Group is displayed in pink)
- Effect Group **without** assigned Fixtures or Dimmers (button of the Effect Group is displayed in red)
- Temporary Effect Group (buttons displayed in blue in the ALL RUNNING EFFECTS menu). If this Effect Group is not saved after having been created, it will automatically be deleted after switching off.
- Cuelist Effect Group (Effect Group button displayed in orange). A temporary effect will directly be saved in a Cue.

6.1.1 Creating an Effect Group

Create an EFFECT window. ➠ **3.1** Creating windows

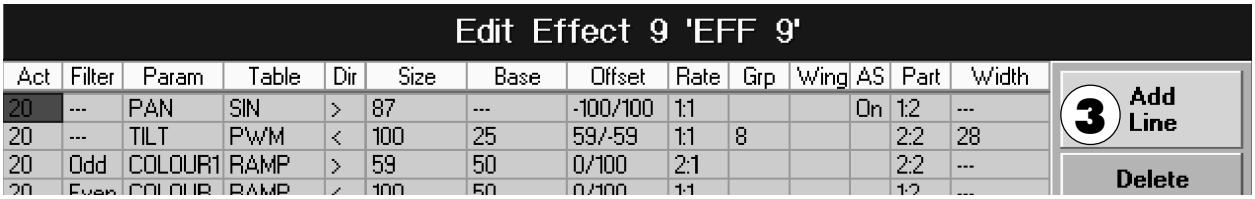


1 Select Fixtures or Dimmers, for which an effect is to be used (selected Fixtures/Dimmers are indicated by yellow characters).

2 Choose an Effect Group. Above the Encoders, buttons and Encoder names are displayed. Pressing the **EDIT button** for this Effect Group will open the EDIT EFFECT menu in the right TFT display.

Or:

Make a right mouse click on a button in the Effect Pool. The EDIT EFFECT menu will appear in the right TFT display.



3 Pressing the ADD LINE button once will open the SELECT PARAMETER window. Now, select a function (e.g. PAN). After selecting a function, the SELECT TABLE window will open, where you can select an Effect for the chosen function.

PWM:	Pulse width modulation
RANDOM:	Random fade ins of individual channels of the selected function
CHASE:	Running light function
SIN:	Sinus function
COS:	Co-sinus function
LIN+:	Saw tooth ascending
LIN–:	Saw tooth descending
TRIANGLE:	Triangle function
PHASE1/PHASE2/PHASE3:	To create rainbow colors by means of the coloring unit. Setting one of the PHASES on one channel of the coloring unit will create a rainbow color-blending when executing the effect.

By pressing the USER DEFINED button (turns dark gray), self-created two-dimensional forms can be selected for the PAN/TILT function. If a form is to be created or modified, press the NEW or EDIT button to open the EDIT FORMS menu. ➠ **6.6** Creating and saving virtual forms

In order to assign further Effects to the selected Fixtures/Dimmers in this group, press the Add Line button again. A new line will be displayed and the Select Parameter window will open. Choose a function now and assign an Effect.

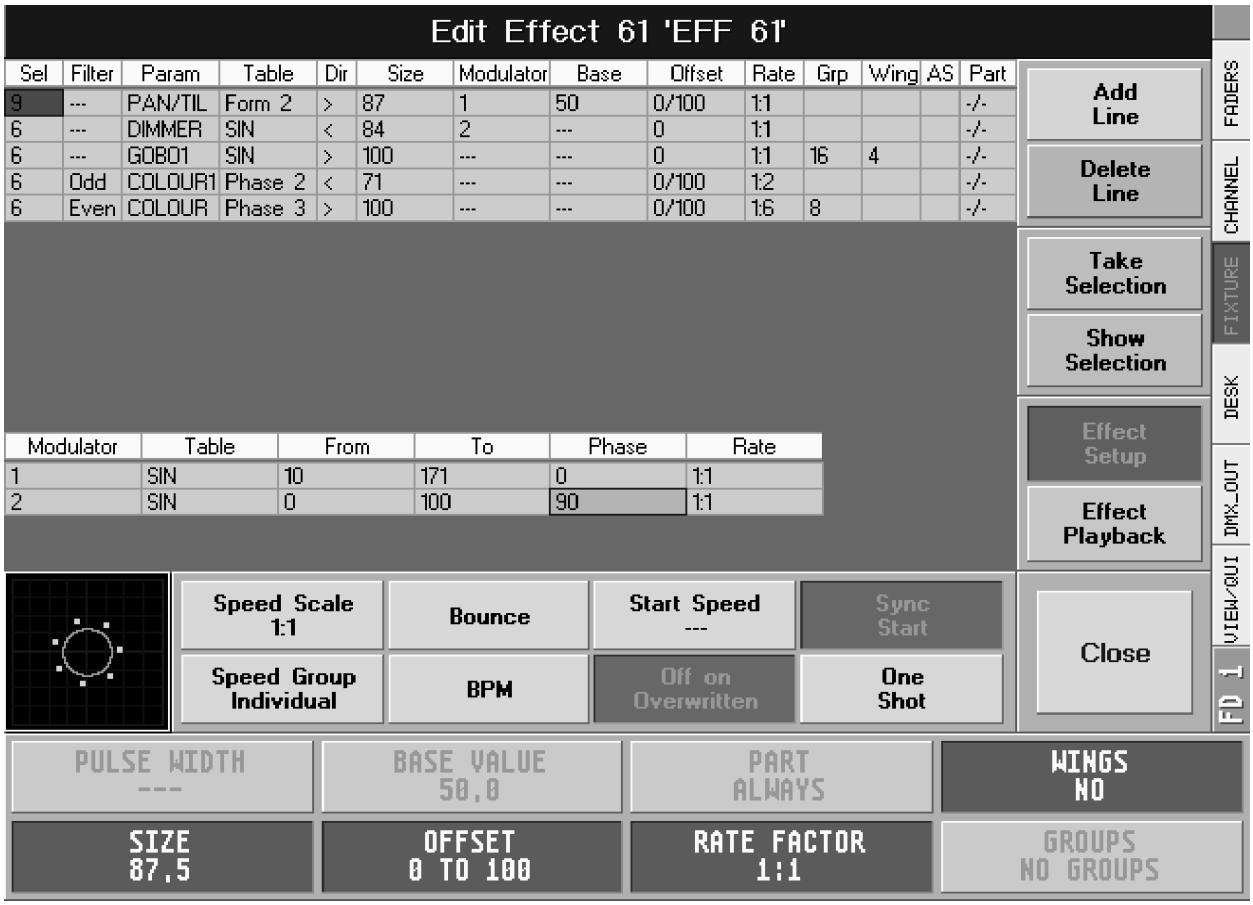
Up 16 individual Effects can be combined within a Group.

6.2 Editing Effect Groups

When choosing an Effect Group from the Effect Pool, respective buttons will be displayed above the Encoders. Pressing the **EDIT button** for this Effect Group will open the EDIT EFFECT menu.

Or:

Make a right mouse click on a button in the Effect Pool. The EDIT EFFECT menu will appear in the right TFT display.



6.2.1 Editing Effects

In the title bar, the Effect Group to be modified will be displayed with its number and name. In the second line, the column functions are listed:

- Sel (Selection): Displays the number of Fixtures or Dimmers assigned to this Effect. If the Fixtures' or Dimmers' assignments are to be modified for an Effect, it has to be chosen first. If chosen, this will be indicated by a red background.

Pressing the SHOW SELECTION button once will select the assigned Fixtures and Dimmers. (displayed in yellow).

Select those Fixtures and/or Dimmers (will be displayed in yellow) that are to be assigned to this Effect. Now, press the TAKE SELECTION button once. The new number of Fixtures and Dimmers will now be inserted and adopted. If an Effect Group without selection is to be created, do **not** select Fixtures and Dimmers, but press the TAKE SELECTION button once. The cell will now display a "Zero". The button of this Effect Group will be indicated in red in the Effect Pool.

- Filter: Here, a filter can be set that limits the execution of the Effect either to the odd-numbered or to the even-numbered Fixtures. To assign a filter, select the cell. Press the Encoder right to the display once. The SELECT FILTER window will open, where you can select a filter for this Effect.

- Param (Parameter): Display of the assigned function, for which the respective Effect has an influence. To re-assign a function, select the cell. Press the Encoder right to the display once. The SELECT PARAMETER window will open, where you can select a different function for this Effect.

- Table: Here, the assigned Effect is indicated with its name.

  To re-assign an Effect, select the cell. Press the Encoder right to the display once. The SELECT TABLE window will open, where you can select a different Effect for this function. The left part of the window displays the selected Effect. If the Effect Group has been started, the Fixtures and Dimmers will be displayed on the Form.

  PWM: Pulse width modulation. The pulse width can be defined as follows: Press the EFFECT SETUP button once (button has a dark background), press the PULSE WIDTH button once (button has a green background). Now, the pulse width can be modified using the Encoder below. The pulse width can be set to between 0 and 100%. Pressing the Encoder once shortly will automatically set the width to 25, 50, or 75. You can also use the ALIGN function to set this value. ➠ **3.4.1** ALIGN function

  The values set for the respective Effects will be displayed in the WIDTH column. **Press and hold** the Encoder and turn to the right so that the focus (blue cell frame with red background) will be moved to the right. When moving the focus beyond the right border, further columns will be displayed (WIDTH, BASE).

  RANDOM: Random fade ins of individual channels of the selected function. Die number of channels faded in can be set.

  SIN: Sinus function

  COS: Co-sinus function

  LIN+: Saw tooth ascending

  LIN–: Saw tooth descending

  TRIANGLE: Triangle function

  PHASE1/PHASE2/PHASE3: To create rainbow colors by means of the coloring unit. Setting one of the PHASES on one channel of the coloring unit will create a rainbow color-blending when executing the effect.

  By pressing the USER DEFINED button (turns dark gray), self-created two-dimensional forms can be selected for the PAN/TILT function. If a form is to be created or modified, press the NEW or EDIT button to open the EDIT FORMS menu. ➠ **6.6** Creating and saving virtual forms

  Pressing the SELECT button will adopt the function; the window will close discarding any modifications when pressing CANCEL.

- Dir (direction): In this column, an arrow indicates in which direction the Effect will be executed. To reverse the direction, select the cell. Press the Encoder right to the display once.

- Size: In this column, each Effect is displayed with a separate value. The set value increases or decreases the size of the selected function. The maximum limit for size modifications can be set from –200 to +200%.

  Before modifying the value of a size, select the Effect first. Press the SIZE button once (green background). Now, you can set a different size using the Encoder below. Pressing the Encoder once shortly will automatically set the size to 100. Pressing the Encoder a second time, the value will increase to 200, and at the third time, it will be reset to "0". You can also use the ALIGN function to set this value. ➠ **3.4.1** ALIGN function

- Modulator: In this column, you can assign an individual Modulator to each individual Size effect. Using a Modulator, the effect size can automatically be altered.

  To assign a Modulator for this effect, select this cell and shortly press the Encoder on the right side of the Display. The SELECT MODULATOR window will open, where you can now go to NEW MODULTOR by turning the Encoder and shortly pressing it to select this option. A new modulator will now be generated in the lower part of the sheet.

  - Modulator: In this column, the modulators will be discerned by respective numbers.
  - Table: Here, the assigned effect for the modulator will be displayed by its name (Assignment ➠ item **Table**, previous page).
  - From: Here, the starting point for the automatic modification is set.
  - To: Here, the end point for the automatic modification is set.
  - Phase: Here, an angle for moving individual modulators can be set.
  - Rate: Display of the set ratio between the rate for this individual Modulator as to that of the whole Effect Group (Assignment ➠ item **Rate**, below).

- Base: You can also set an average value for each Effect using the BASE VALUE option. The set value will overwrite all previously modified values of this function and by this, will control all Fixtures/Dimmers evenly. The value can be set to between 0 and 100%.

  Before modifying the BASE VALUE, select the Effect first. Press the BASE VALUE button once (green background). Now, you can set an average value using the Encoder below. Pressing the Encoder once shortly will automatically set the value to 50% (default value). Pressing the Encoder a second time, the value will be deleted and set to NONE (no BASE VALUE). If **no** BASE VALUE ist set, the Cue "behind" or a direct access will take effect. You can also use the ALIGN function to set this value. ➠ **3.4.1** ALIGN function

- Offset: Display of the set Offset for this Effect. By modifying the Offset, the starting points for the selected Fixtures and Dimmer will change. Default setting is between 0 and 100, i.e. the first Fixture/Dimmer starts with an offset of 0, the last with a maximum offset of 100%; all Fixtures/Dimmers in between will be distributed evenly. The maximum limit for Offset modifications can be set from -100 to +100.

  Before modifying the value of a size, select the Effect first. Press the OFFSET button once (green background). Now, you can set a different Offset using the Encoder below. Pressing the Encoder once shortly will automatically set the value to 0. You can also use the ALIGN function to set this value. ➠ **3.4.1** ALIGN function

- Rate: Display of the set ratio between the rate for this individual Effect as to that of the whole Effect Group. Possible settings range between 1:16 and 4:1. At a ratio of 16:1, the rate set for the Effect Group will be divided by 16. If the setting is 4:1, the rate will be multiplied by four.

  Before modifying the ratio's value, select the Effect first. Press the RATE FACTOR button once (green background). Now, you can set a different ratio using the Encoder below. Pressing the Encoder once shortly will automatically set the value to 1:1.

- Grp (Group): Display of the set number, by which the assigned Fixtures or Dimmers will be divided. In the subdivided groups, the Effect will then fully be executed.

  Before modifying the subdivision value, select the Effect first. Press the GROUPS button once (green background). Now, the subdivision of the Effect can be set using the Encoder below. Pressing the Encoder once shortly will automatically delete the set value.

- Wing: The set number will indicate, how often the assigned Fixtures or Dimmers and the Effect will be mirrored. Possible settings range between –8 and +8.

Example: With a setting of 2, the assigned Fixtures/Dimmers will be divided in the middle. The set effect will now be executed in the first half forwards up to the middle, and in the second half, the Effect will be executed in reverse from the middle onto the last Fixture/Dimmer.

With a setting of -2, the assigned Fixtures/Dimmers will be divided in the middle. The set effect will now be executed in the first half forwards up to the middle, and in the second half, the Effect will be executed in reverse and phase-shifted by 180° from the middle onto the last Fixture/Dimmer.

Before modifying the wing value, select the Effect first. Press the WINGS button once (green background). Now, the number of Effect wings can be set using the Encoder below. Pressing the Encoder once shortly will automatically delete the set value.

- AS (Adaptive Speed): If this function is activated, the speed will automatically be adjusted when the number of Fixtures or Dimmers changes. That means, the individual Effects of this Effect Group do **not** run at different speeds when working with different numbers of Fixtures or Dimmers, but always at the same step speed.

  To activate the function, select the cell. Press the Encoder right to the display once.

  Or:

  Activate by making a short right mouse click into the cell below AS. This will be indicated by a YES in this cell.

- Part (Partly): Display of the set sequential division of the respective Effect as to the whole Effect Group. The sequence of an Effect can be subdivided 16 times, and an Effect can then be assigned to **one individual** subdivision.

  Example: With a setting of 1:2, the individual Effect would always be executed in the first half of a Effect Group sequence. Before modifying the subdivision value, select the Effect first. Press the PART button once (green background). Now, you can set the subdivision of the Effect Group for the individual Effect by **pressing and holding** the Encoder below. After a subdivision is set, and when the Encoder is pressed, you **cannot** designate a section in which a particular Effect is to be executed.

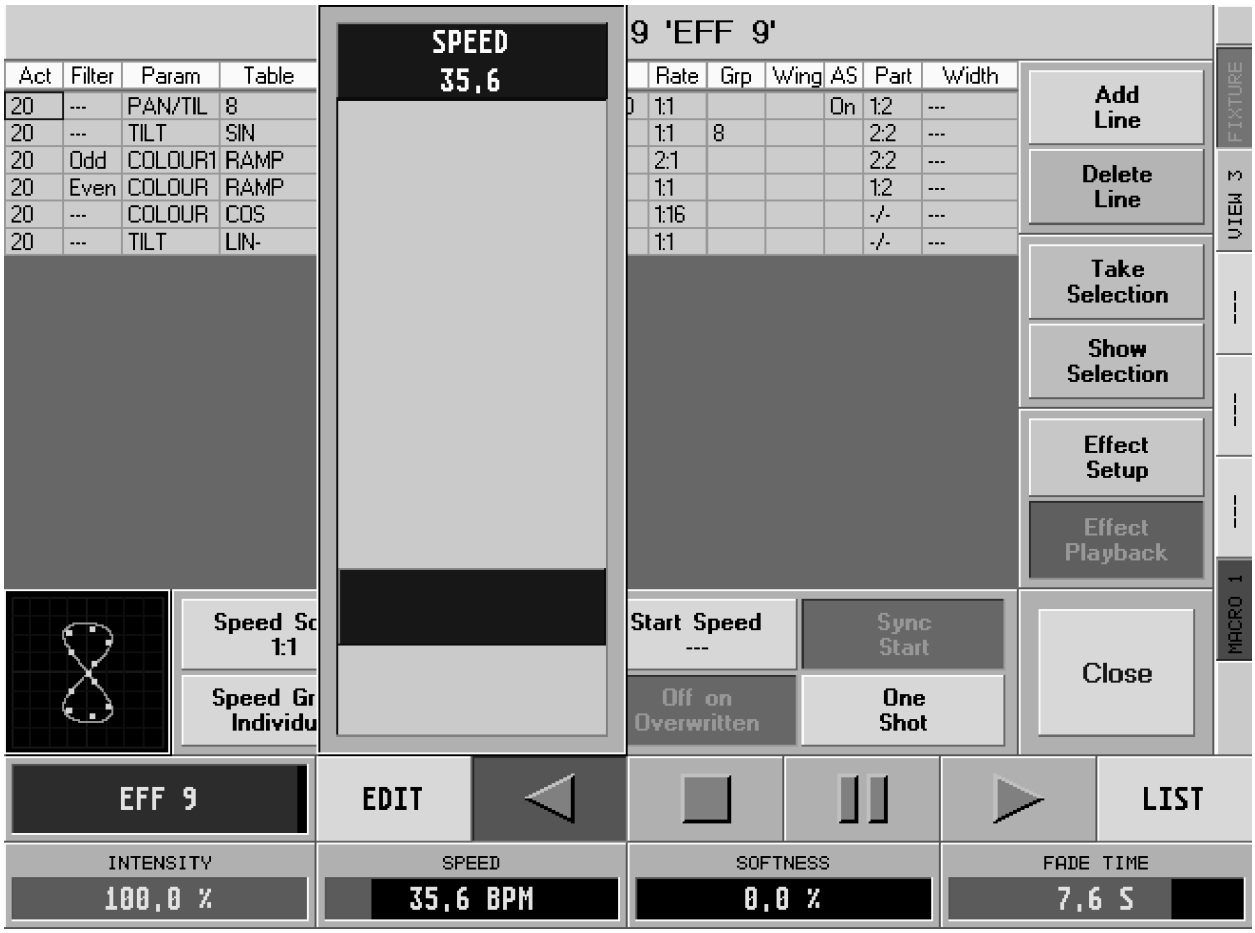
  Pressing the Encoder once shortly will set the value to ALWAYS and the Effect will be executed during the whole period.

6.2.2 Deleting individual Effects

Select the Effect to be deleted.

Press the DELETE LINE button.

6.3 Executing an Effect Group



Select the Effect Group from the Effect Pool. The Effect Group will be started automatically.

Or:

The names and playback buttons for the Effect Groups will be displayed in the right TFT display above the Encoders. The name of the currently selected Effect Group will appear above the left Encoder.

- Pressing the right arrow will start the complete Effect. The selected Fixtures or Dimmers will now form the Effect.
- Pressing the PAUSE button will stop or restart the complete Effect, respectively.
- You can switch off the Effect using the STOP button.
- By pressing the left arrow, the Effect will run backwards.

With the left INTENSITY Encoder, you can globally adjust the size of the whole Effect Group.

Pressing the Encoder while turning it will increase or decrease the Encoder's resolution, depending on the setup. When pressing an Encoder or the button above, this will bring up a Fader above the Encode in the display. Now, you can also use it to modify the value.

Use the SPEED encoder to set the speed for the whole Effect Group.

If you use the Encoder to increase the SOFTNESS value, the Effect will be faded in and out more softly. SOFTNESS can be used for PWM-, RANDOM- and CHASE Effects.

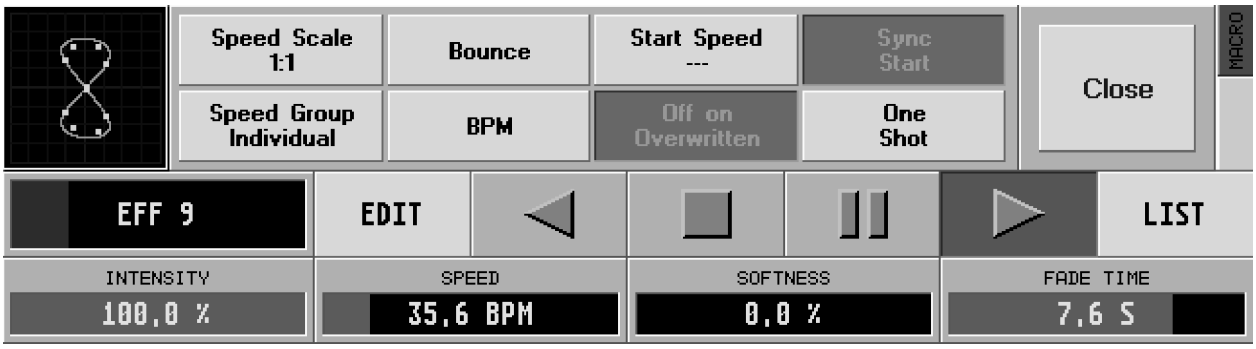
Using the right FADE TIME Encoder, you can now globally set an fade in and fade out time for this Effect Group. When switching the Effect Group on or off, this Fade Time will be faded in or out with the set duration.

Pressing the EDIT button will call up the Edit menu for this effect. ➠ **6.2** Editing Effects

Pressing the LIST button will open the VIEW ALL RUNNING EFFECTS, where you have an overview on all currently active Effect Groups. ➠ **6.6** View ALL RUNNING EFFECTS menu

6.4 Customizing an Effect Group

The global settings like e.g. Bounce, BPM, Intensity, Speed etc., are automatically saved to the Effect Group.



You can set the customize the individual sequences of the Effect Groups by using the respective buttons.

Speed Scale: The current ratio of the SPEED setting will be displayed on the button. Pressing this button will open the SPEED SCALE menu. Pressing a button will re-adjust the Speed setting. With MUL BY 2 or MUL BY 4, the SPEED setting will by multiplied by 2 or 4, with DIV BY 2, 4 or 8, the SPEED setting will be divided by 2, 4 or 8. Pressing the 1:1 button will recall the default setting again.

Speed Group: The button will display the currently assigned SPEED group. Pressing this button will open the SPEED GROUP menu. By pressing a button, you can designate a SPEED Group. Using the Fader of the assigned SPEED Group, you can now adjust the speed for this Effect Group. ➠ **5.1.10** Assigning Special Masters

If INDIVIDUAL is selected (default setting), you can adjust the speed only by using the SPEED encoder.

Bounce: If this button is pressed (dark background), the whole Effect Group will first run forwards and then backwards, etc.

BPM: If this button is pressed (dark background), the speed of the whole Effect Group will be controlled by the automatic measure recognition. ➠ **2.14** Setting Sound signals

Start Speed: Pressing this button once will save the currently set speed. The button will display the saved speed. From now on, this Effect Group will be started with this speed, even if the speed was changed during the execution. To delete the saved speed, use the Encoder to set the SPEED to STOP and press the START SPEED button once. Now, no speed is saved and the button will display NONE.

Off On Overwritten: This Effect Group will be switched off, when the OFF ON OVERWRITTEN button is pressed (dark background) and another Effect Group is started, in which the same Fixture/Dimmers are to be used (default setting).

If this function is disabled, the Effect Group will **not** be switched off. It is still active, but does not trigger any Fixture/Dimmer. The button of this Effect Group in the Effect Pool will display a white/red blinking "2". The number indicates, at what position this Group will be in relation to the other overwritten Effect Groups. If the **other** Effect Group that had overwritten this Group, is switched off, this Effect Group will again trigger the Fixtures/Dimmers. This function is active by default when creating a new Effect Group.

Sync Start: If this button is pressed (dark background), and another Effect Group had already been started, **this** Group will automatically be started at the same speed and position.

One Shot: If the button is pressed (dark background), the Effect Group will only be executed for one run and deactivated afterwards.

6.5 Effect Groups in Cues

Effect Group calls can be saved in Cues, too.

In the Cues, the settings for call (GO, GO-, Pause and OFF), Intensity, SPEED, SOFTNESS and IN/OUT FADE TIME are saved. In the Cues, no further settings from the Effect Group will be saved (function as with presets).

Or:

It is also possible to create Cues, to which an own Effect Group can be assigned. If temporary Effect Groups are used when creating the Cues, a copy of the Cue will also be saved, i.e. it will not be depending on the original Effect Group anymore.

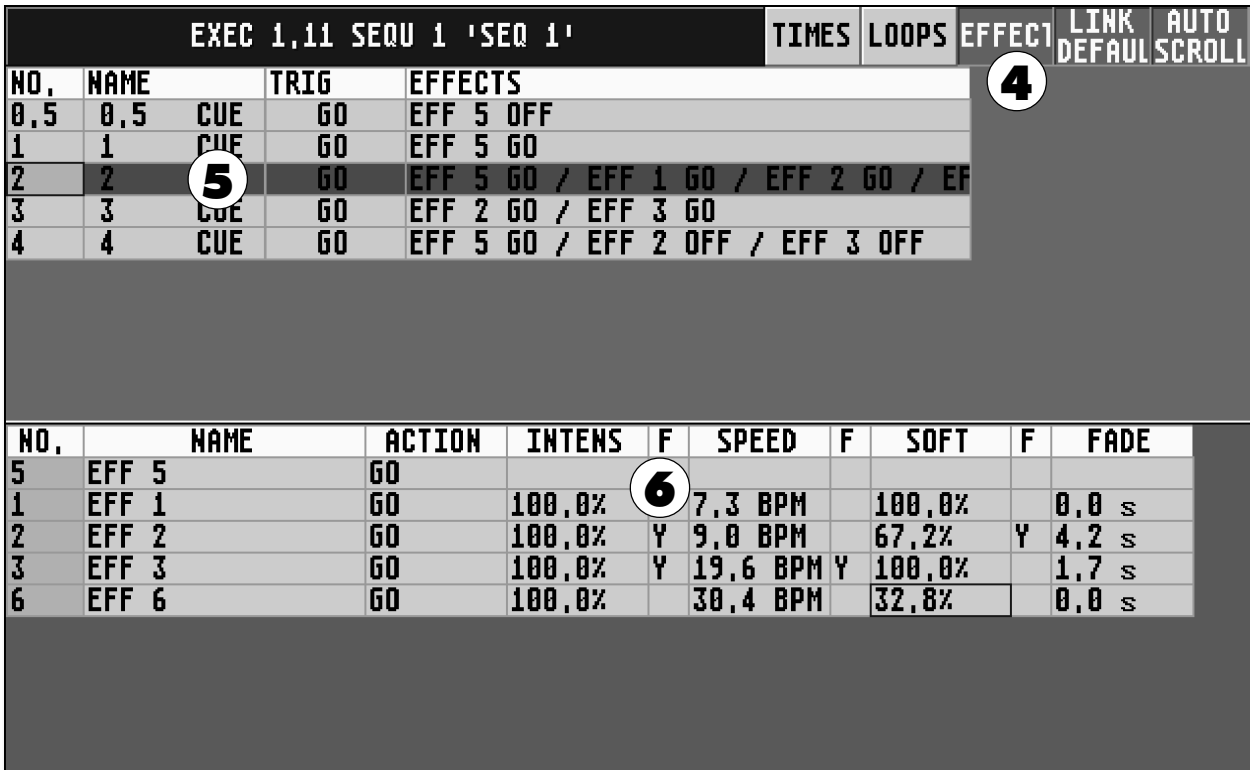
1 Start an Effect Group in the Effect Pool by selecting it.

2 Press the STORE button once.

3 Press the EXECUTOR button to which the call is to be saved. The Effect Group call will be saved in the Cue with all settings mentioned above. If this Cue is called up, the Effect Group will be started.

When calling up Effect Groups, its size, speed and softness can be faded in or out.

If in the Effect Group a FADE TIME is set, the intensity and speed or softness of the Effect Group will automatically be faded in or out when this Group is started.



4 In the Executor Sheet or in Edit Sequence, press the EFFECT button (will be displayed dark gray). The window will be divided into two halves. The upper part will display the Cue, the lower part the calls of the individual Effect Groups for the selected Cue, including the respective parameters.

5 Select a Cue in which calls or parameters of Effect Groups are to be modified (selected Cue will be displayed with a blue frame and a magenta background).

6 The lower chart displays all calls of Effect Groups from this Cue.

Select an individual call to be modified (will be displayed with a blue frame). In the right display, the setting will be adopted and displayed above the Encoders and can be customized at will. If intensity, speed or softness are to be faded in or out with the set Fade Time when the Effect Group is called up, make one right mouse click into the cells behind the value in column **F** (Fade). The column will show a **Y** for YES. Press UPDATE to confirm the modifications and save them in the Cue.

You can modify the cells Name, Intens, Speed, F, Soft and Fade directly by a right mouse click.

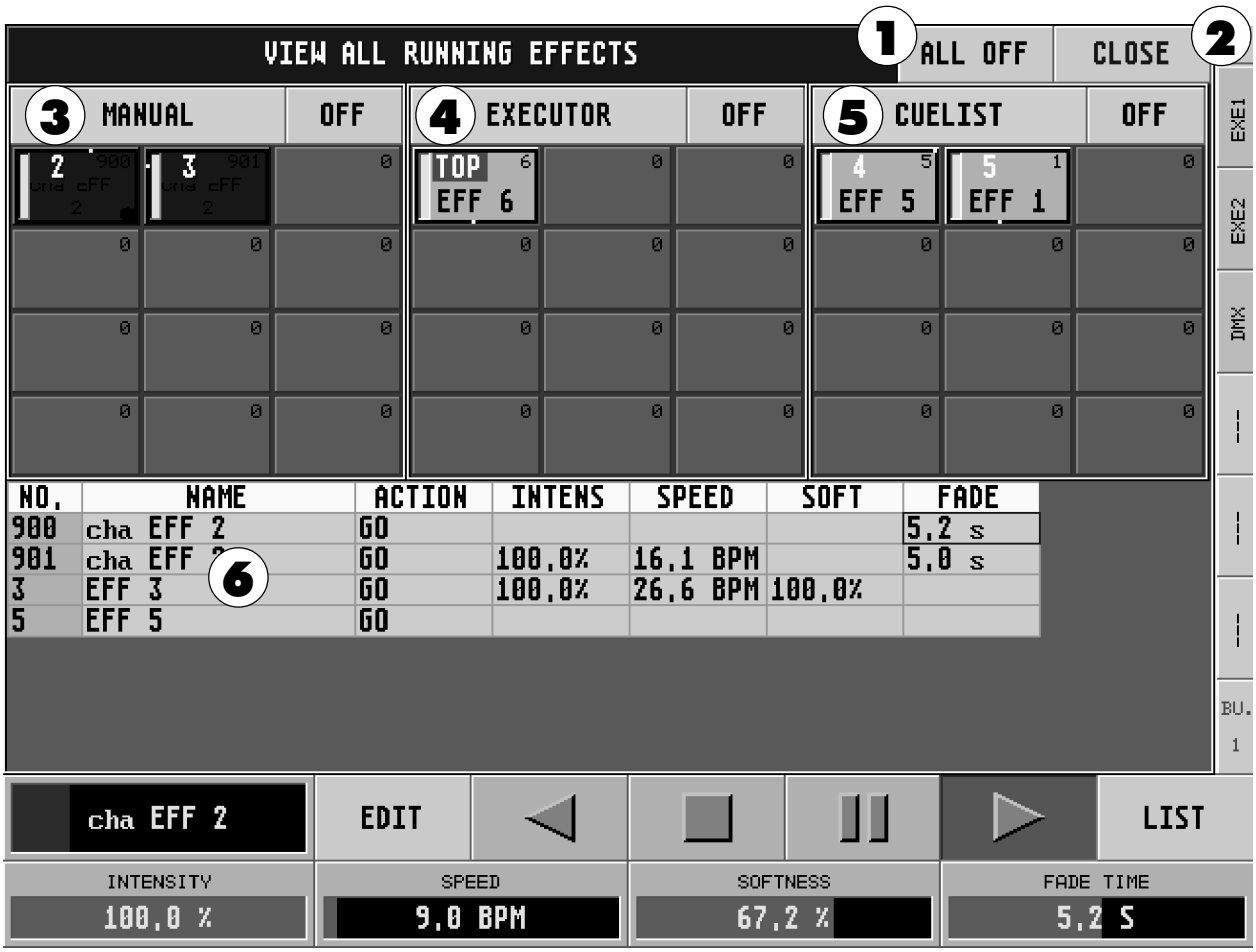
6.6 View ALL RUNNING EFFECTS menu

In this menu, all currently active Effect Groups will be displayed.

Press the EFFECT button twice. (On older consoles, this button is not labeled and is positioned between the VIEW and GOTO buttons. An appropriate label can be ordered from MA.)

Or:

When choosing an Effect Group from the Effect Pool, respective buttons will be displayed above the Encoders. Press the LIST button.



1 By pressing the ALL OFF button, you can switch off all Effect Groups simultaneously.

2 You can leave the menu with the CLOSE button.

3 In the left part of the menu, all manually called-up Effect Groups will be displayed. Pressing the OFF button on the right side of MANUAL, all these Effect Groups will be switched off.

4 The middle part of the menu shows all Effect Groups that were called up via EXECUTOR faders. Pressing the OFF button at the right of the EXECUTOR will switch off these Effect Groups. ➠ **5.1.1** Assigning Effect Groups to EXECUTOR faders

5 The left part of the menu shows all Effect Groups that were called up by Cues. Pressing the OFF button on the right side of CUELIST, all these Effect Groups will be switched off.

6 The lower part of the menu shows all Effect Group calls performed since last saving a Cue, including their respective parameters. When saving the next Cue, all calls in this Sheet will also be saved.

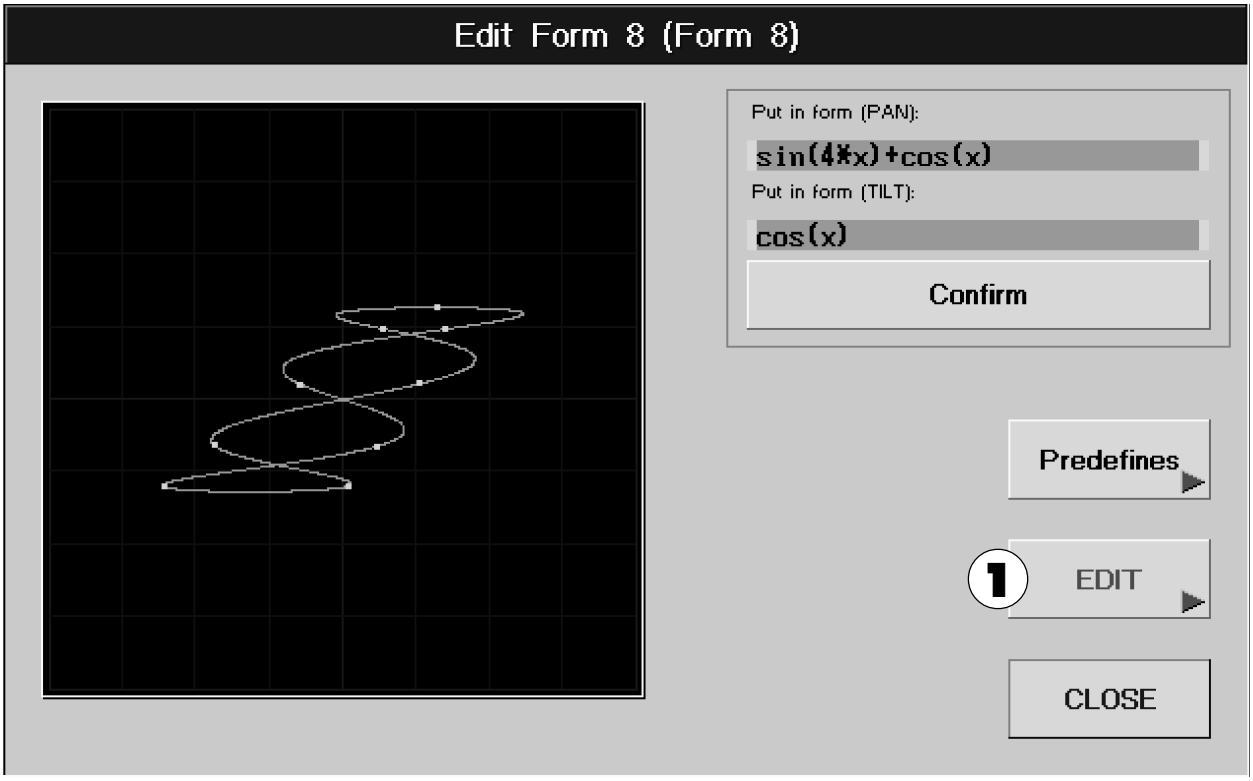
It is also possible to modify individual calls. To do so, select the respective call (will be displayed with a blue frame). The setting will be adopted, displayed above the Encoders and can be adjusted with them. You can delete a complete call by making a right mouse click into the NAME column. If you only want to delete a single parameter, make a right mouse click on the parameter.

6.7 Creating and Saving Virtual Forms (EDIT FORMS)

6.7.1 Creating Virtual Forms

From this menu, you can create two-dimensional forms for the PAN/TILT function. When creating Forms, the movements can directly be output to the Fixtures. This serves mainly for testing the created forms and movements. The created Forms will automatically be saved to the Form Pool.

Calling up this menu: ➠ **6.1.1** Creating an Effect Group, **item 3**
➠ **6.2.1** Editing Effects, **item Table**

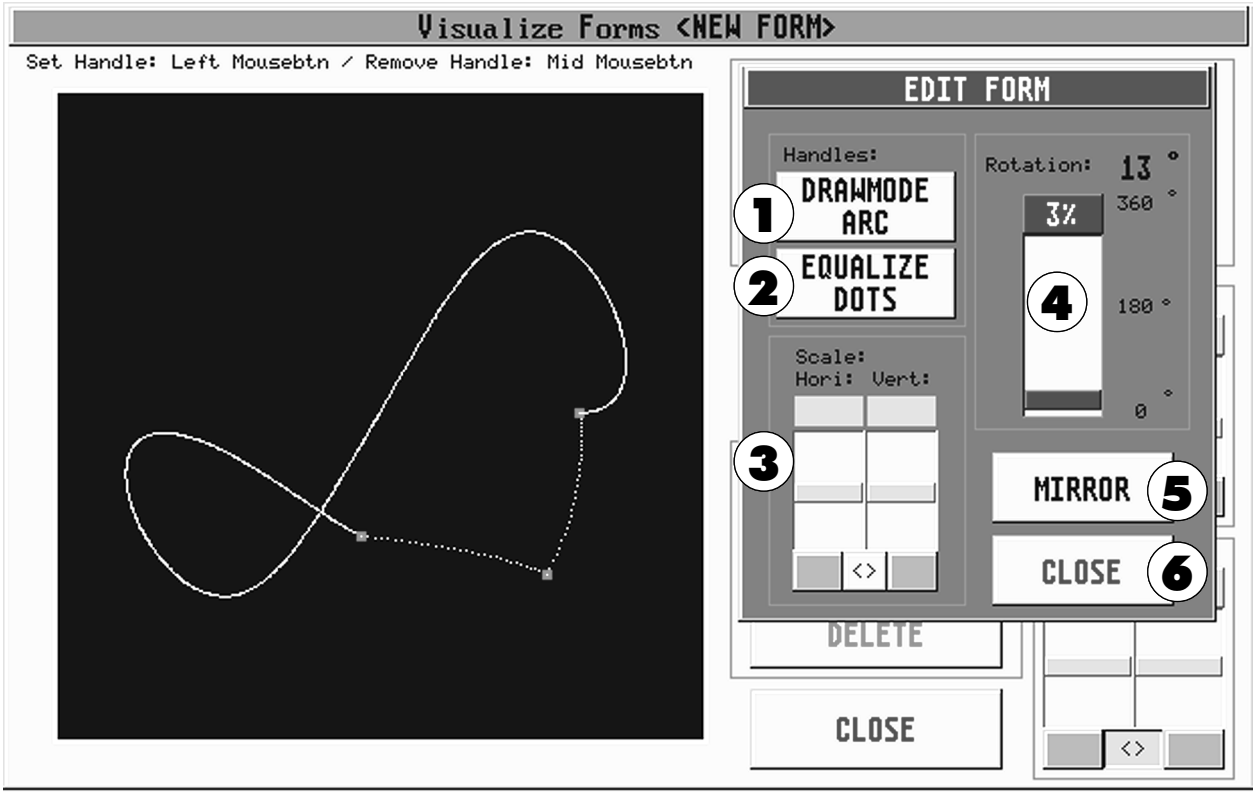


1 Press the PREDEFINES button once. A window will open, where several prepared Forms will be displayed. Select one of these Forms; this Form will now be drawn onto the black window.

6.7.2 Modifying Forms

EDIT

The EDIT FORMS window will open by pressing the EDIT button.



Make a left mouse click on various positions of the marked form. With each click on the form, a new red dot will be displayed on that position. In order to delete one of the dots, make a middle mouse click on this dot.

To reshape the form, make another left mouse click and **hold** the mouse button on one of the red dots. If you click the right mouse button during the reshaping (while holding the left mouse button), you can define the reshaping each time. ➠ item **1**

1 By pressing the button, you can program in which way the lines shall be drawn when reshaping the form:
ANGLE: straight line
ARC: outer arc
ARROW: inner arc

By reshaping the form, the lines will be expanded and, respectively, the extended positions of the form will be reported to the Fixture faster.

2 If the extended lines and, consequently, the longer ways for the Fixture are to be transmitted with the same speed, you have to press the EQUALIZE DOTS button once.

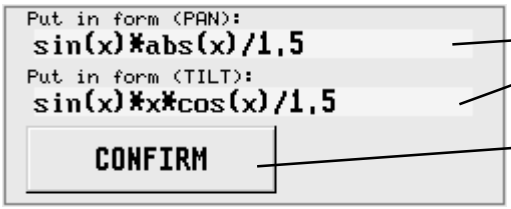
3 The form can be modified in its horizontal or vertical size using the Hori: and Vert: sliders. By pressing the dark-grey button below the modified sliders shortly, both values can be set simultaneously. By pressing the "< >" button, both sliders can be coupled, so that the size can be modified simultaneously.

4 Using the ROTATION slider, the form can be turned from 0° to 360°.

5 By pressing the MIRROR button, the form can be mirrored.

6 You can leave the EDIT menu with the CLOSE button.

With good knowledge in maths, you can also use formulas for PAN and TILT.



Make a left mouse click on the respective fields – now enter the formula via keyboard.

The form will confirmed by pressing CONFIRM.

Syntax to enter a formula manually:

The standard display of mathematic formulas will be executed. The following is allowed:

- Mathematic Basic Operators: +, –, *, /
- Numerical constants: integers, floatingpoint numbers or exponential figures
  Example for valid numerical constants: 2.71818
  1.2e – 2
  0,4
- Other constants: pi — corresponds to the circle figure π
- Variables: x
- Mathematical functions:
  - sin(x) — or sinus(x)
  - cos(x) — or cosinus(x)
  - abs(x) — corresponds to the absolute amount
  - sqrt(x) — corresponds to the square root
  - pow(x; y) — corresponds to the y Power of x

  Arguments errors with x = 0 und y < = 0 or bei x < 0 and y are no integers

Examples:

```
sin(3 * x)
sqrt(abs(x)) * sin(x)
sin(x) * cos(3 * x) * pi/2
(cos(x) * abs(x) + 1) / pow(x;2)
(cos(0.5 * x) * abs(x) + 0.5) / 2
```

7 Remote Control

7.1 Timecode

All programs of the *grandMA* can be synchronized by the LTC Timecode. The *grandMA* processes 25 - 30 frames per second. They are automatically adjusted to the incoming Timecode.

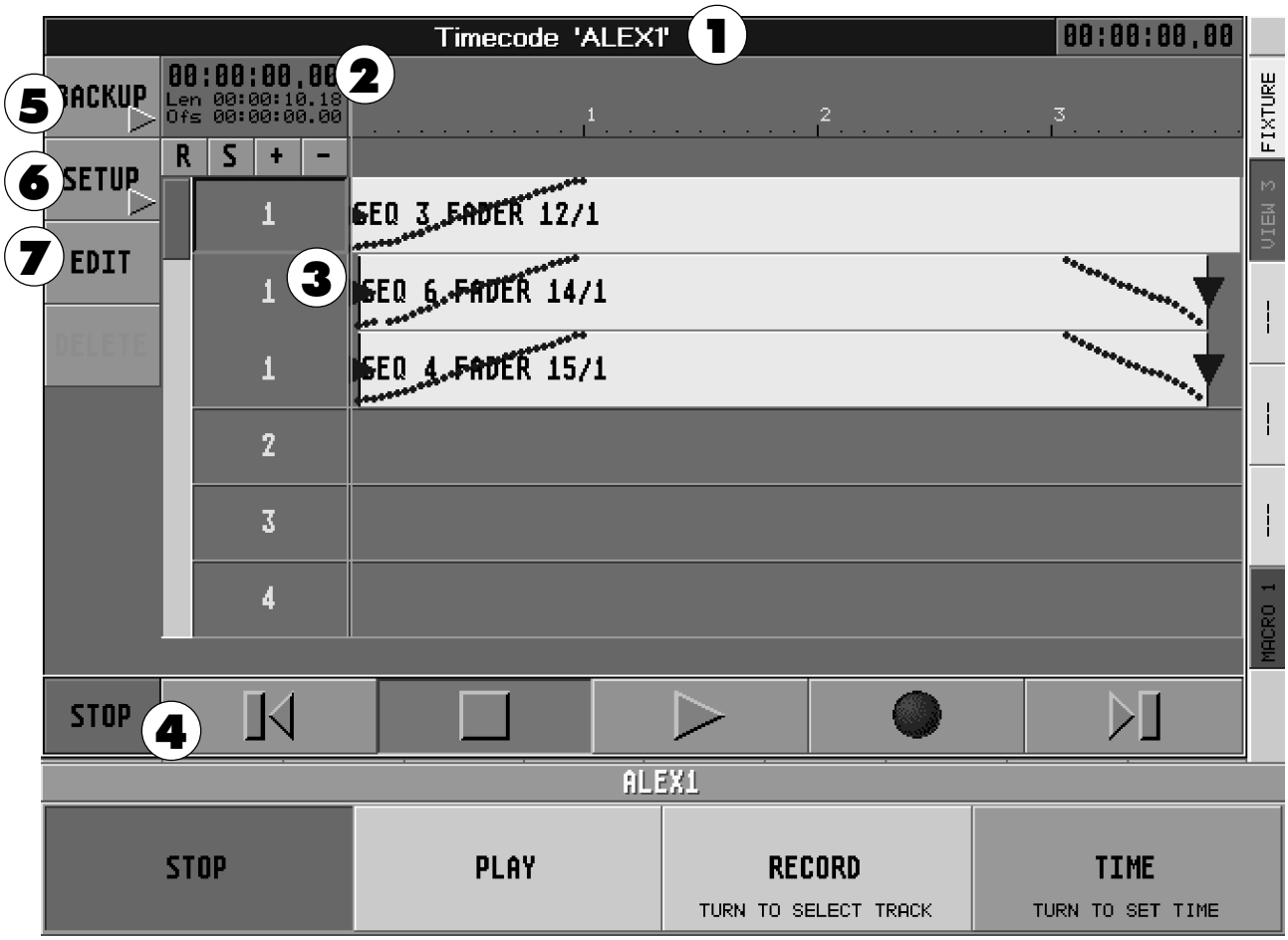
Timecode synchronization can be used to call up programs of one or more controllers to synchronize with a given audio or video recording. SMPTE and EBU Timecode (LTC) are encoded time information, e.g. to be recorded on a separate track of a multitrack tape (frequency range of 1–2 kHz). Normally, this Timecode is already added when compiling the music, e.g. for presentations, but it can also be recorded afterwards making use of a regular recording studio. If the music is to be recorded in stereo, at least a third track is needed for the Timecode.

All programs of the *grandMA* can be synchronized by the LTC Timecode.

During the playback of the tape, the Timecode information is being transmitted to the connected controllers. Each controller has an internal memory that triggers the activation of a specific program at a given point of time. On the *grandMA*, the EXTERNAL Timecode can be fed in via a jack socket on the backside of the unit.

7.1.1 TIMECODE Window

Make a right mouse click into an „empty" space of a display or an external monitor. In the CREATE A WINDOW menu, make a left mouse click on TIMECODE. For your convenience, feel free to maximize this window.



1 The top line contains the name of the currently loaded Show. The external Timecode will be displayed on the right side.

2 The large timecode display indicates the current position of the TIMECODE Show, represented also by a blue time line in the Sheet. On the right side of the time display, there is a time axis.

The TIMECODE Show will be stopped at Timecode **Len** displayed below. This time will be set automatically, but you can also modifiy it yourself. The end position of the TIMECODE Show will be indicated by a red time line in the Sheet.

The position **Offs** indicates the set OFFSET time. By setting an OFFSET time, you can move the TIMECODE Show by the time indicated.

3 Here, individual TRACKS will be displayed; up to 32 TRACKS are possible. You can save several processes to one TRACK.

4 This Button will display the current status of the TIMECODE Show: REC, PLAY or STOP.
On the right side, there are several buttons for the following functions:

Pressed once, this button will reset the current time to the beginning.

Will stop the recording or playback of a TIMECODE Show.

Will start the playback of a TIMECODE Show.

Will start the recording of a TIMECODE Show.

Pressed once, this button will reset the current time to the end.

5 Pressing the BACKUP button will open the FILE menu. By pressing the respective Button, you can trigger the following functions:

SELECT: The currently loaded TIMECODE Shows can be directly selected. Up to 4 TIMECODE Shows can be loaded and executed simultaneously.
LOAD: Will load an already created TIMECODE Show by clicking on it in the selection and confirming with ENTER.
IMPORT TIM: Will load an old TIMECODE Show that had been created in **TIMECODE old** (up to version 1.3x).
SAVE AS: Will save the current TIMECODE Show under another name.
SAVE: Will save the current TIMECODE Show.
RELOAD: Will load the current TIMECODE Show disregarding the changes made after the last saving.
CLOSE: Will close the current TIMECODE Show.
DELETE: Will delete the current TIMECODE Show.
EXIT: Will close this menu.

6 Pressing the SETUP button will open the SETUP menu. The following buttons are available:

TIMES: Will open the TIME SETTINGS menu:
- Pressing the FINE button will enlarge the size of the timecode display up to 12x.
- Pressing the COARSE button will reduce the size of the timecode display up to 12x.
- Pressing the SET LENGTH button will set the **end position** of the Show either to the end of the recorded TIMECODE Show or to the currently set time (blue time line, large timecode display), if longer than the Show itself.
- After pressing the SET LENGTH > button, the **end position** for the time period can be manually set in the opened window using the „+" and „–" keys for hours, minutes, seconds or frames.
- After pressing the SET OFFSET > button, the OFFSET time can be set in the opened window using the „+" and „–" keys for hours, minutes, seconds or frames.
- After pressing the GOTO TIME > button, the curent time period (blue time line, large timecode display) can be set in the opened window using the „+" and „–" keys for hours, minutes, seconds or frames.
- With EXIT, you can leave this menu.

TRACKS: Will open the TRACK SETTINGS menu:
- With SELECT ALL TRACKS, you can select all TRACKS.
- With DESELECT ALL TRACKS, you can cancel the selection of all TRACKS.
- After pressing the SET TRACKNAME button, you can name the selected TRACK using the keyboard. Confirm with ENTER.
- If the DISPLAY TEXT button is pressed, the Sequence name and the appropriate EXECUTOR will be displayed on the yellow or magenta bars.
- If the DISPLAY EVENTS button is pressed, the called buttons will be displayed as symbols on the yellow or magenta bars.
- If the DISPLAY FADER button is pressed, the FADER movements will be displayed as appropriately positioned dots on the yellow or magenta bars.
- By pressing the SMALLER TRACKS button, the TRACKS can be displayed up to 2x faster.
- By pressing the BIGGER TRACKS button, the TRACKS can be displayed up to 2x larger.
- With EXIT, you can leave this menu.

TOOLS: Will open the SELECT TOOLS menu. In this menu, you can preselect, which tool is to be used by the mouse when modifying (EDIT) individual tracks. ➠ **7.1.5** Modifying a TIMECODE Show (EDIT).

SYNC: The SELECT SYNCMODE menu will open.
If this INTERNAL SYNC button is pressed (dark gray), the *grandMA* will activate its internal TIMECODE. Pressing this EXTERNAL SYNC button will switch over to the EXTERNAL TIMCODE input. The input for the **external Timecode** is located at the backside of the unit.

7 If the button is pressed (dark grey), the EDIT mode is activated. ➠ **7.1.5** Modifying a TIMECODE Show (EDIT).

7.1.2 Creating a New TIMECODE Show

To create a new Timecode Show, you first have to load an **empty** Show with a **new** name.

Make a left mouse click on the BACKUP button or touch it on the Touchscreen. A selection menu will open, in which you have to press the LOAD button. In the open window, use the keyboard to enter a **new** name for the TIMECODE Show and confirm with ENTER.

7.1.3 Recording a TIMECODE Show

Click on a track that you want to record to. The selected TRACKS will be displayed inverted.

Before you can start the recording, you have to specify, if you want to record with an INTERNAL or an EXTERNAL TIMCODE signal.

The standard preset is INTERNAL TIMECODE. The *grandMA* will automatically use its internal TIMECODE signal.

To switch over to the external TIMECODE, make a left mouse click on the SETUP button, then on the SYNC button (top left on the display) or on the TOUCHSCREEN. A selection list will open, in which you have to click on the EXTERNAL SYNC button. If this button is inverted (dark gray), EXTERNAL is selected.

In the right display above the Encoders, there is one button for the following functions:
STOP: Will stop the recording or playback of a TIMECODE Show.
PLAY: Will start the playback of a TIMECODE Show.
REC: Will start the recording of a TIMECODE Show.

To start recording, press the REC button or the Encoder below once. The Button color will change to red. The recording will start, when you press one of the EXECUTOR buttons. The timecode display will start counting and the time line will start moving, but for the moment, nothing else will be displayed. Now, you can make your entries for the Show and for this TRACK by calling up the playback functions.

To stop recording, press the STOP button or the Encoder below once. After this, each used EXECUTOR having a Sequence will be displayed as a yellow bar, each Chaser as a magenta bar in the TRACKS.

7.1.4 Executing a TIMECODE Show

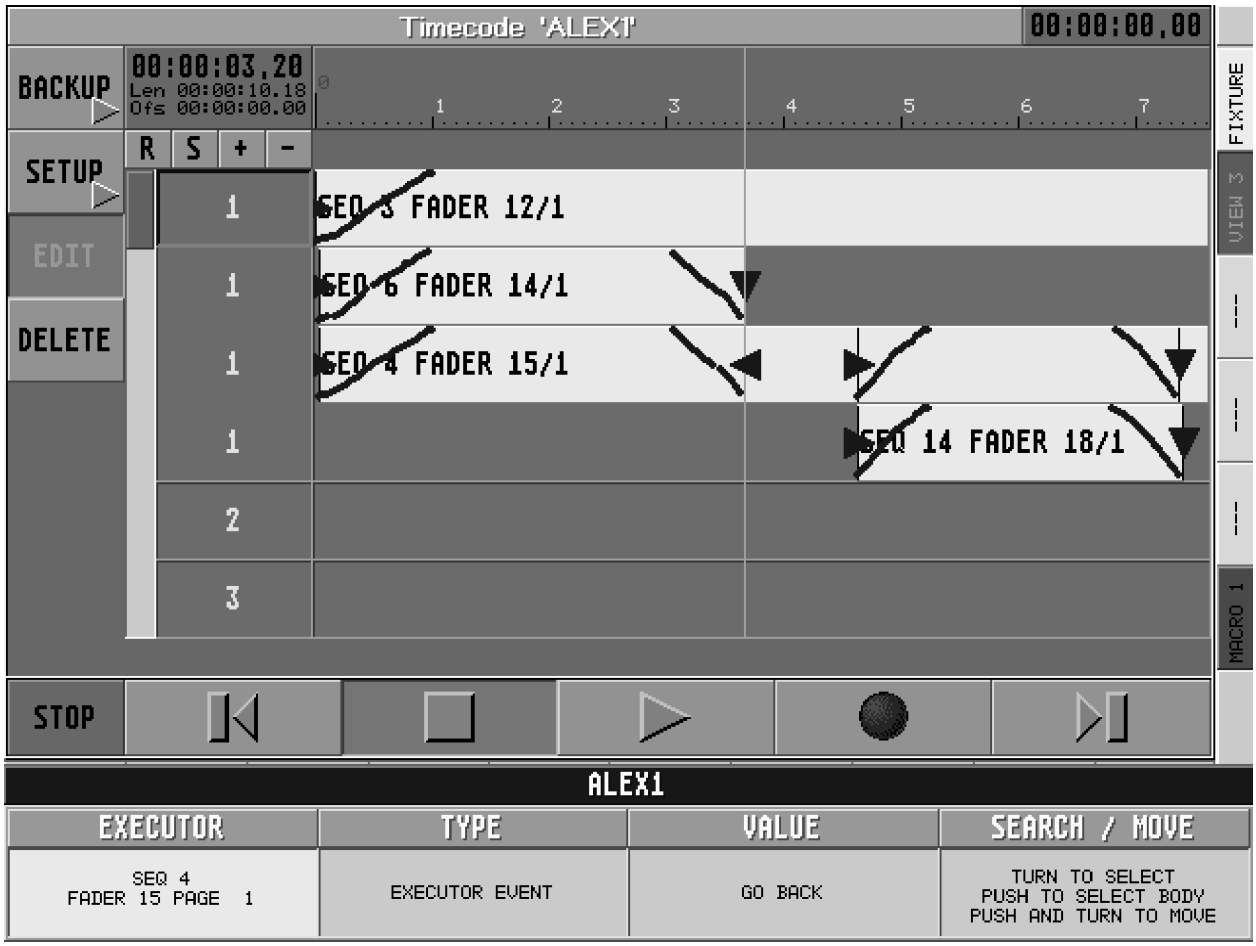
When the TIMECODE Show is loaded, it can be directly started.

To run the Show, press the PLAY button or the Encoder once. The Show will beginn at the set INTERNAL TIMECODE for the given time period. If EXTERNAL TIMECODE was set, the Show will start with the incoming EXTERNAL TIMECODE signal synchroneously to the incoming SMPTE time.

The TIMECODE Show will internally continue, even if you switch to another window. If you open the TIMECODE window again afterwards, there is no TIMECODE Show displayed at first. If you press the BACKUP button and then the SELECT button, all loaded TIMECODE Shows will be displayed and can be directly opened by clicking on them.

7.1.5 Modifying a TIMECODE Show (EDIT)

Press the EDIT button (displayed in dark gray). All symbols for EXECUTOR buttons or Faders appear on the display now. Close to the cursor, the currently set editing tool will be displayed as a symbol.



On the right display, you will find the names of all Encoders.

Now, select one TRACK (will be displayed in dark gray) to be modified. Make a right mouse click on the selected TRACK. The SELECT TOOLS menu will open, in which you can select an editing tool.

NONE: no tool selected

BLOCK:
- By holding down the right mouse button and dragging on one or more colored bars, you can select button calls and Fader movements (will be displayed in red).
- By making a left mouse click on a selected dot, you can move all selected processes at once.

EVENT: With this tool, you can select individual button calls or Fader movements (will be blinking).
- Use the mouse to move the selected dot.
- In the selection list that will open, you can allocate a new call for button calls by rotating the VALUE Encoder.
- For Fader movements, you can change the Fader value accordingly.
- By rotating the SEARCH/MOVE Encoder, you can switch to the next or previous dot. If you press on the Encoder while rotating it, the selected dot can be moved.
- If you shortly press on the Encoder once, alle dots in this bar will be selected (will be displayed in red) and can be moved together when rotating and pressing this Encoder simultaneously. By pressing again on the Encoder, you can select individual dots again.

ADD:
- If you select this tool, a quick click on a position will add a dot to the selected colored bars.
- By rotating and pressing the TYPE Encoder, you can switch between button or Fader call modes.
- In the selection list that will open, you can allocate another call for button calls by rotating the VALUE Encoder.
- For Fader movements, you can change the Fader value accordingly.

DEL:
- By a quick click on the button calls or Fader movements, you can delete individual button calls or Fader movements.
- By holding down the right mouse button and dragging on one or more colored bars, you can completely delete the button calls and Fader movements you have created.

COPY: The selected dots (displayed in red) can be copied to another position in this TRACK.

EXIT: To close this window.

For the selected colored bar, you can define a new EXECUTOR by rotating the appropriate Encoder and selecting an EXECUTOR.

7.2 Remote Control vial Touchboard

On the back side of the *grandMA*, there is a 25-pin SUB-D socket (DC REMOTE CONTROL) to connect a standard Touchboard with up to 16 channels.

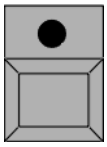
PIN 1 ... 16:	Input Channels 1 to 16
PIN 21+22:	+5 Volt (max. 100 mA)
PIN 17+18 und 24+25:	Earthing

The Touchboard input sockets only function as switches:

0 bis +2 Volt:	Off
+5 bis +15 Volt:	On

7.2.1 Assigning Playback buttons

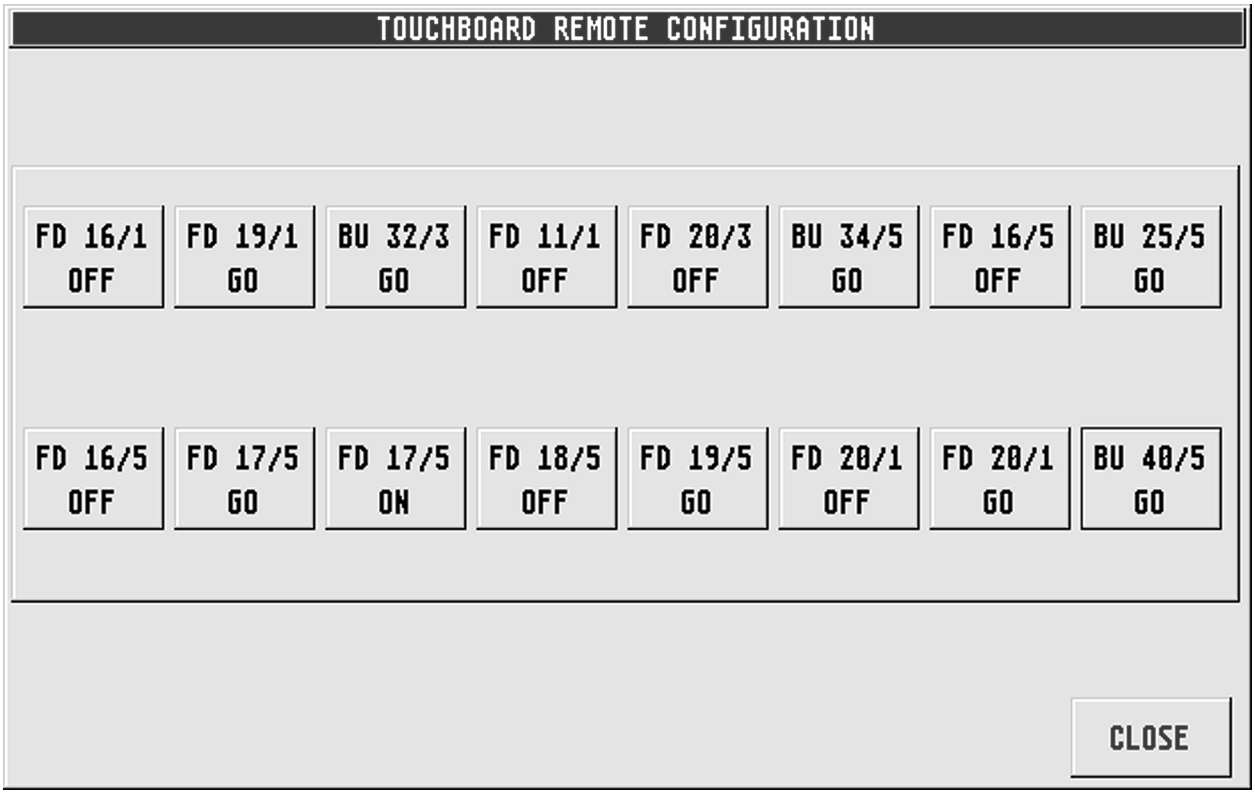
TOOLS



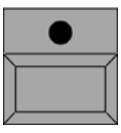
Press the TOOLS button once.

REMOTE TOUCHBOARD

Call up the TOUCHBOARD REMOTE CONFIGURATION menu using the REMOTE button.



STORE



Press the STORE button once (LED is on).

Press a button on the Touchboard, where a Playback button is to be assigned to, once.

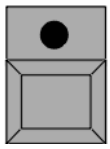
Or:

Select a button in the REMOTE CONFIGURATION menu. Press the Playback button that you want to assign. The selected button will now be assigned.

The assigned Playback buttons will be displayed on individual buttons. Only EXECUTOR buttons can be assigned to the Touchboard.

7.2.2 Deleting Assignments

DELETE

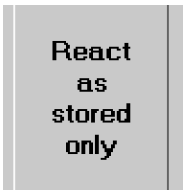


To delete an assigned Playback button, press the DELETE button once (LED is on).

Press the Touchboard button or the appropriate button once.

In the TOOLS menu, you can switch the Touchboard function on or off using the ON / OFF button.

If the Touchboard is activated, you can use all assigned buttons with the Touchboard. For optical convenience, the Button in the TOUCHBOARD REMOTE CONFIGURATION menu will have a red background when pressing a Touchboard button.



If REACT AS STORED ONLY is displayed, the assigned playback buttons will be executed directly.

Pressing this button will display COMBINED WITH COMMAND LINE COMMANDS. The assigned playback buttons will be executed in combination with the pre-selected commands.

Example: If an OFF button is programmed on a TOUCHBOARD button, but PAUSE is activated (➠ **1.7** Layout and Controls, item 11), not the OFF command, but the PAUSE command will be executed when pressing this button.

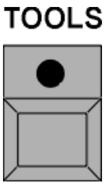
7.3 Remote Control by DMX IN

DMX IN can be used to MERGE the signals of a second control board with those of the *grandMA* and transmit them to the stage via the same line. If, during this process, channels from the *grandMA* and from the second control board are triggered, only the respective higher value will be transmitted. DMX IN will only be linked to DMX OUT A and not be output to the Ethernet.

From the TOOLS menu, you can switch the MERGE function on or off by pressing the DMX in MERGE button.

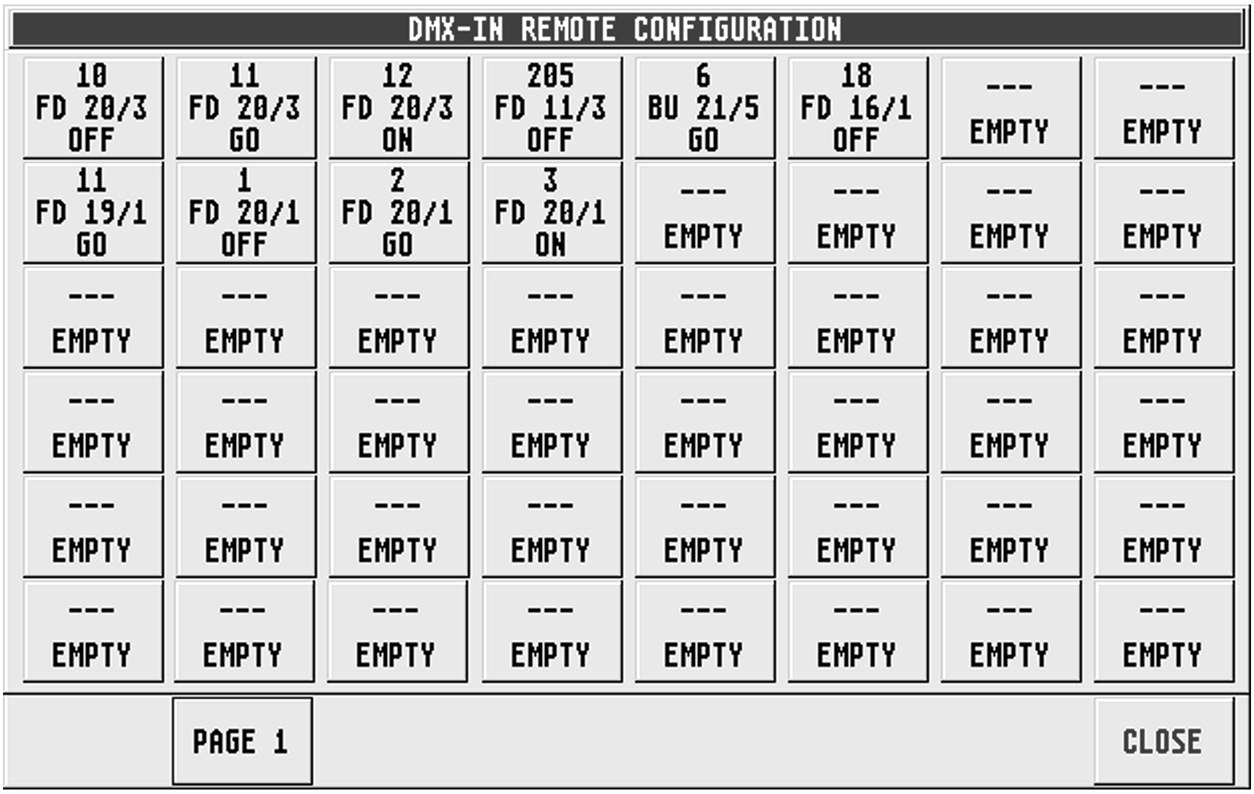
Via the DMX IN socket, assigned commands can be called up from an external DMX console. The DMX input has only the function of a switch that will release at approx. 10%.

7.3.1 Assigning Playback Buttons



Press the TOOLS button once.

Call up the DMX-IN REMOTE CONFIGURATION menu using the REMOTE button.



Press the STORE button once (LED is on).

Select a button in the DMX-IN REMOTE CONFIGURATION menu.

Press the Playback button that you want to assign. The selected button will now be assigned.

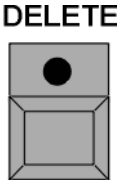
The assigned Playback buttons will be displayed on the individual buttons. Only EXECUTOR buttons can be assigned to the respective DMX channel.

7.3.2 Assigning DMX Channels

Make a right mouse click on the button. A menu will open in which you can assign one of the 512 DMX channels to this button. Identical DMX channels can be assigned to more than one button.

By pressing the PAGE 1 button, you can open another page (PAGE 2) with buttons.

7.3.3 Deleting Assignments

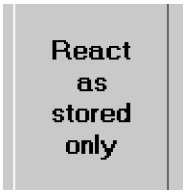


To delete an assigned Playback button, press the DELETE button once (LED is on). Press the respective DMX IN button once.

7.3.4 Using the DMX Input

In the TOOLS menu, you can switch the DMX input function on or off using the ON / OFF button.

If the DMX input is activated, you can use the assigned buttons by switching on the respective DMX input. For optical convenience, the buttons in the DMX-IN REMOTE CONFIGURATION menu will have a red background when switching on the respective DMX channel.



If REACT AS STORED ONLY is displayed, the assigned playback buttons will be executed directly.

Pressing this button will display COMBINED WITH COMMAND LINE COMMANDS. The assigned playback buttons will be executed in combination with the pre-selected commands.

Example: If an OFF button is programmed on a DMX-IN, but PAUSE is activated (➠ **1.7** Layout and Controls, item 11), not the OFF command, but the PAUSE command will be executed when calling up this DMX-IN channel.

7.4 Remote Control by MIDI

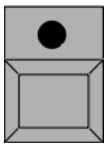
On the backside of the *grandMA*, you will find the MIDI IN, MIDI THRU and MIDI OUT sockets. Assigned commands can be called up using e.g. an external MIDI keyboard or sequencer. Devices like these can be plugged into the Midi IN socket. Only note commands will be processed. The incoming signals will be automatically output the MÍDI THRU.

In version 2.10, MIDI OUT is not yet available.

7.4.1 Assigning Playback Buttons

TOOLS

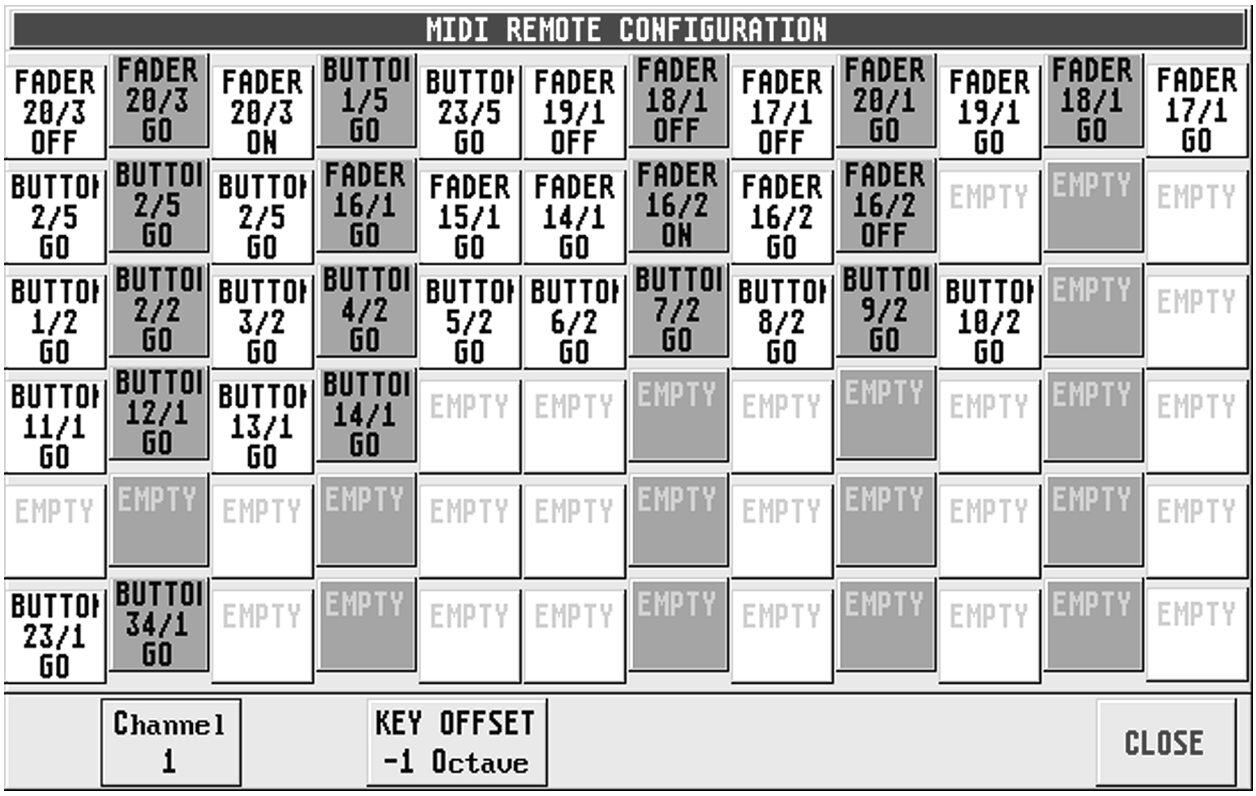
Press the TOOLS button once.



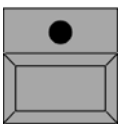
Call up the MIDI REMOTE CONFIGURATION menu using the REMOTE button.

REMOTE
MIDI

Press the STORE button once (LED is on).



STORE



Select a button in the MIDI REMOTE CONFIGURATION menu.

Press the Playback button that you want to assign. The selected button will now be assigned.

The assigned Playback buttons will be displayed on the individual buttons of the MIDI REMOTE CONFIGURATION menu. Only EXECUTOR buttons can be assigned to the respective MIDI note.

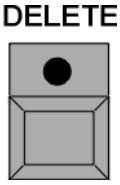
7.4.2 Selecting the MIDI Channel

Pressing the Channel button will open a menu in which you can select one of the 16 Midi channels by a simple mouse click.

7.4.3 Assigning the Pitch

By pressing the KEY OFFSET button, you can transpose the incoming notes by one octave downwards. This can be set for up to three octaves.

7.4.4 Deleting Assignments

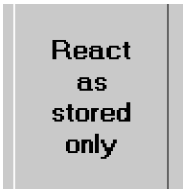


To delete an assigned Playback button, press the DELETE button once (LED is on). Press the Button once.

7.4.5 Using the MIDI Input

In the TOOLS menu, you can switch the MIDI input function on or off using the ON / OFF Button.

If the MIDI input is active, you can call up the assigned buttons by pressing the respective note keys on the MIDI keyboard. For optical convenience, the button in the MIDI REMOTE CONFIGURATION menu will have a red background when pressing a note key.



If REACT AS STORED ONLY is displayed, the assigned playback buttons will be executed directly.

Pressing this button will display COMBINED WITH COMMAND LINE COMMANDS. The assigned playback buttons will be executed in combination with the pre-selected commands.

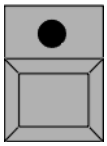
Example: If an OFF button is programmed on a DMX-IN, but PAUSE is activated (➠ **1.7** Layout and Controls, item 11), not the OFF command, but the PAUSE command will be executed when calling up this DMX-IN channel.

7.5 Master Slave Coupling

The Master Slave Coupling allows for two *grandMAs* or two *grandMA lights* to work together in the so-called True-Tracking-Backup mode. In this mode, both consoles function a 100% synchronously. In case of a failure of the Master console, you can continue your work on the Slave console after the TIMEOUT duration has elapsed.

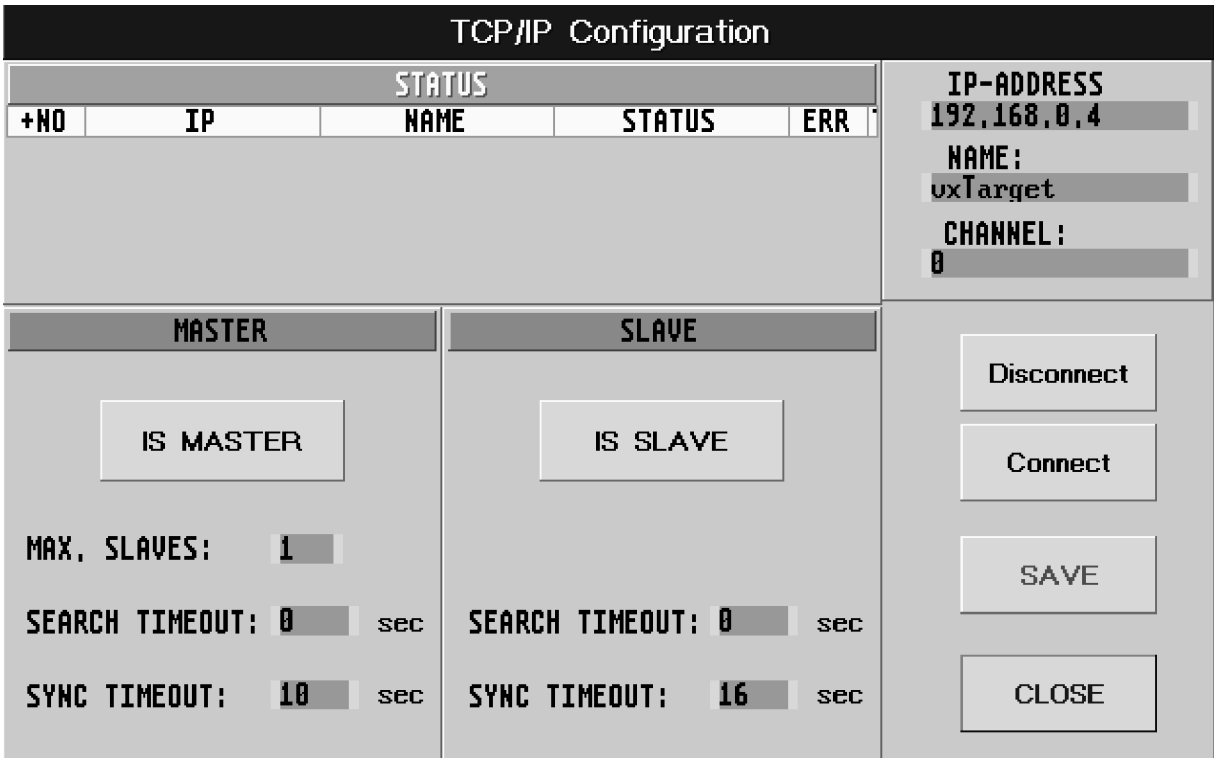
In order to couple two *grandMAs* or two *grandMA lights*, these have to be connected via a network. Furthermore, you have to see to that the DMX signal in case of a failure will be received by the Slave instead of by the Master or that a common DMX hub is connected.

TOOLS



Press the TOOLS buttons on both units once.

Switch to this menu using the TCP/IP Configuration button.



The IP address on both console must be unique. If this is not the case, you have to modify one using the keyboard (the other numbers must not be modified).

On the **Master console**, first press the IS MASTER button, then the CONNECT button and confirm with OK. The current Show will be saved and the console will automatically perform a reset and a reboot.

On the **Slave console**, first press the IS SLAVE button, then the CONNECT button and confirm with OK. The current Show will be saved and the console will automatically perform a reset and a reboot.

After the reboot of both consoles, the current Show will be automatically transferred from the Master to the Slave. After completion of this process, you can continue you work on the Master console as usual. The Slave console will now function a 100% synchronously to the Master console. The settings will be automatically saved.

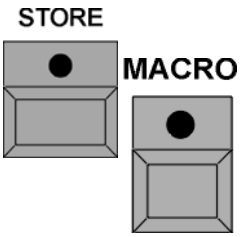
In this menu, the Master Slave mode can be switched off again. On the **Master console**, press the DISCONNECT button and confirm with OK.

8 Macros und QUIKEYS

8.1 Creating Macros

With macros, you can combine several processes in one batch. These can be e.g.:

- Playback buttons (e.g. GO, Fader, Pause, etc., incl. number of the Executor)
- Call-ups of Views
- Call-ups of Delete operations
- Other Macro calls
- Call-ups of Clear operations



Press the STORE button once (LED is on).

Press the MACRO button once (LED is on). The SELECT MACRO window will open.

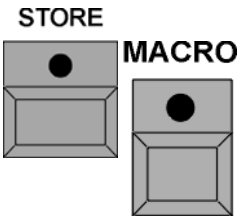
Enter a name for the Macro using the keyboard.

Press the TIMED button (will turn dark-gray) if the Macro shall not be executed as fast as possible, but within the set time frame.

Confirm with ENTER.

LED in the MACRO button blinks.

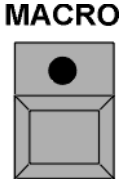
Now, enter all operational steps to be executed by this Macro.



After input of the last step, press the STORE button **first**, **after that** press the MACRO button, and last press ENTER (LED in the MACRO button is now off).

This completes the MACRO Programming procedure.

8.1.1 Activating Macros



Press the MACRO button once (LED is on). The SELECT MACRO window will open. Activate a Macro by a left mouse click.

Or:

Press the MACRO button once (LED is on). The SELECT Macro window will open. Enter the number of a Macro via keypad and confirm with ENTER.

Or:

Make a right mouse click on one of the VIEW buttons.

The SELECT window will open – select your MACRO here.

The SELECT MACRO window will open. Select the Macro by a left mouse click.

Now the Macro has been assigned to the VIEW button and can be activated at any time.

Or:

8.1.2 Macro Pool

In the Macro Pool, you can call up Macros directly by selection.

Make a right mouse click on an „empty" position on the three TFT displays or on an external monitor. The CREATE A WINDOW menu will open. ➠ **3.1** Creating Windows.

Select MACROS.The MACRO window will open. Make a right mouse click on one of the buttons; the MACRO OPTIONS window will open.

Clicking on one of the macros, this macro will be assigned to a button.

Now the macro has been assigned to a certain button and can be activated at any time.

8.1.3 Editing Macros

Press the EDIT button once. Select a Macro from the MACRO Pool.

Or:

Press the EDIT button once. Press the MACRO button once, enter the Macro number and confirm with ENTER. The EDIT MACRO window will open.

- In the LINE column, the individual calls are numbered.
- In the COMMAND column, all saved calls are displayed one by one.
- For each call, a time frame, during which the call was entered, will be displayed in the DELAY column.

Pressing the ADD LINE button will insert a step in front of the chosen position. Now, you can enter a call. If you want to use a Delay time when performing a call, click into the cell, enter a time using the keyboard, and confirm with ENTER.

To delete a call, select one and press the DELETE LINE(S) button.

To modify a call, select one and press the EDIT LINE button. Now, you can enter a new call.

If you want to modify the Delay time, click into the cell, enter a different time using the keyboard, and confirm with ENTER.

Pressing the EDIT MACRO NAME will open the EDIT NAME window. Now, you can enter a new name using the keyboard and confirm this with ENTER.

If the TIMED button is switched on, the calls of this Macro will be executed with the set DELAY times. Pressing this button once will switch the display to NO TIMED, in the Sheet, the DELAY times will be displayed on a dark background, and the Macro will be executed without time limit.

You can leave the menu with the CLOSE button.

8.2 Assigning and Activating QUIKEYS

From the QUIKEY window, you can display and activate various buttons and functions.

Make a right mouse click on an „empty" position on one of the three TFT displays or on an external monitor. The CREATE A WINDOW menu will open ➠ **3.1** Creating Windows

Select the QUIKEY. The QUIKEY window will open.

Make a right mouse click on one of the buttons; the QUIKEY OPTIONS window will open.

By clicking on one of the functions, this function will be assigned to the button.

This function can be activated at any time by a simple mouse click.

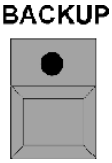
List of functions:

ALIGN OFF: Switches off the ALIGN function.
ALIGN LEFT: ALIGN button pressed once
ALIGN RIGHT: ALIGN button button pressed twice
ALIGN BOTH: ALIGN button button pressed three times
ALIGN SYM: ALIGN button button pressed four times
CLEAR SELECTION: CLEAR button pressed once
CLEAR AKTIVE: CLEAR button pressed twice
CLEAR ALL: CLEAR button pressed three times
VALUES MODE: Switches the FIXTURE and CHANNEL SHEET to the VALUES mode
FADE MODE: Switches the FIXTURE and CHANNEL SHEET to the FADE time mode
DELAY MODE: Switches the FIXTURE and CHANNEL SHEET to the DELAY time mode
ASSIGN: ASSIGN button
EMPTY: Creates an empty button
FLIP:
- Head Fixtures:
  - Pressing 1x: The head will be turned and the light beam be directed to the same target position.
  - Pressing 2x: The head will be turned again and the beam be directed to the last identical position. (This is only possible for fixtures that have a PAN value of more than 360°, otherwise, only 2 positions are possible.)
  - Pressing 3x: The head will be turned to the first position.

  When using head Fixtures, the FIXTURE SHEET will show a yellow square left of the PAN value, symbolizing the current head position.
- Mirror Fitxures:
  The PAN/TILT value will be inverted, the mirror will be positioned in opposition.

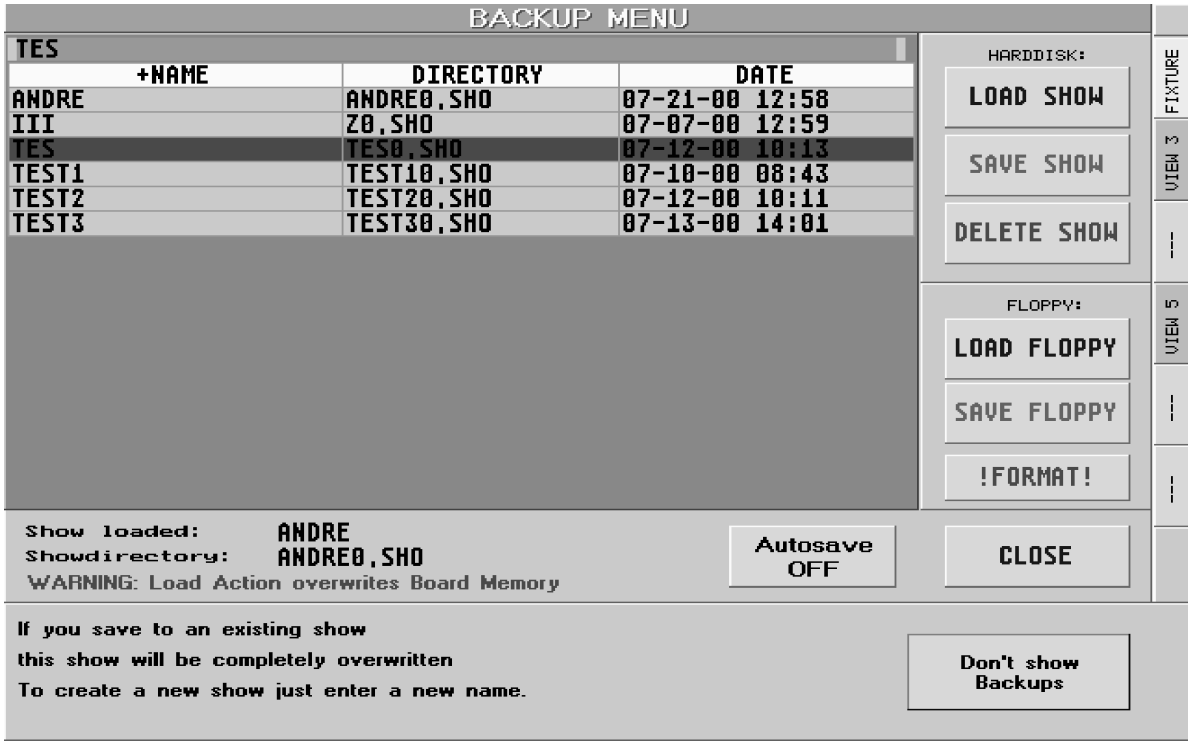
– (minus): Minus key
STORE: STORE button
EDIT: EDIT button
UPDATE: UPDATE button
ESCAPE: ESCAPE button
ENTER: ENTER button
ALL SELECTION: Selects **all** FIXTURES and CHANNELS (this can be necessary after using the NEXT/PREV).
ODD SELECTION: Selects all odd FIXTURES and CHANNELS
EVEN SELECTION: Selects all even FIXTURES and CHANNELS
INVERT SELECTION: Not yet available in version 2.10.
DELETE: Delete button
MOVE: MOVE button
COPY: COPY button
BACKUP: BACKUP button
SETUP: SETUP button
TOOLS: TOOLS button
PREVIOUS: PREV. button
NEXT: NEXT button
TRACKBALL SPEED: Toggles the TRACKBALL between coarse and fine.
ENCODER SPEED: Toggles the ENCODER between coarse and fine; further toggling is achieved by pressing on the ENCODER.

9 Saving and Loading a Show



By pressing the BACKUP button, you will open the Backup menu.

Pressing the BACKUP button twice will save the current Show and makes a backup (➠ below).



The processes of saving and loading shows is being organized in the BACKUP menu. The current SHOW (currently loaded Show) can be named and saved on the internal harddisk or additionally on floppy disk.

With the AUTOSAVE button, you can set an automatically save according to the time displayed on the button.

Furthermore, a BACKUP of the Show will be made with each saving operation (max. 10). These backups can be used to restore previously saved Shows. You can display the backups using the SHOW BACKUP button.

9.1 Saving the Current Show on the internal harddisk

Proceed with a left mouse click on the title bar. Name the show using the keyboard.

The chosen name has to differ from OTHER SHOWS' names by their first 8 characters, because otherwise the existing show will be overwritten.

Continue with a left mouse click on the SAVE SHOW button. The SAVING ACTSHOW/COPYING ACTSHOW window will appear. The SHOW will be saved as soon as this window has automatically closed.

9.2 Loading a Show from the internal harddisk

Make a left mouse click on the desired SHOW in the list (indicated by its red line). In the top line, the name of the Show will appear. Press on the LOAD SHOW button.

The QUESTION window (save the current show first) with the following options will open:

YES To save the current Show before loading the new one.
NO To load the new Show without saving the current one.
CANCEL To abort this process.

After loading the Show, the LOADING ACTSHOW window and the PRESS OK TO REBOOT button will appear.

Press the TO REBOOT button. The console will now reset and automatically start up again. This will take approximately 1 minute. The new SHOW will be loaded after the start-up procedure.

9.3 Loading an Empty Show

To create a completely new Show, first click on the top line and enter a name that had not been used for other Shows. Press the LOAD SHOW button. The QUESTION window (save the actual show first) will open.

Pressing the YES button will save the current Show.
Pressing the NO button will discard the current Show.

Now, the LOADING ACTSHOW window containing the PRESS OK TO REBOOT button will open. After pressing the PRESS OK TO REBOOT button, the *grandMA* will perform a Reset and will automatically restart. This will take approx. 1 minute.

After the restart, the right display will show a window containing the following options:
NEW SHOW: Will load an empty Show. The display will switch to the SETUP menu.
LOAD SHOW: Will load an alread existing Show. The display will switch to the BACKUP menu.

Additionally, you can save an „empty" Show to hard disk or floppy so that you can use them later when needed. This way, you can also transfer demo shows, standard settings, etc. to others.

9.4 Deleting the Current Show

The currently loaded Show can not be deleted! In order to delete the currently loaded Show, you have to load another Show first.

9.5 Deleting a Show from the internal harddisk

In the list, make a left mouse click on the Show to be deleted (indicated by a red line). Press the DELETE SHOW button. The QUESTION window (delete the show first from harddisk) with the following options will open:
YES Will delete the selected Show.
NO Will abort the process.

The hard disk has a capacity of at least 2,000 Megabytes so that you can save lots of Shows to the *grandMA's* hard disk.

9.6 Saving the Current Show on floppy disk

All data necessary for the SHOW are being saved on disk (even all fixtures being used in the show). Thus, you can transfer the whole show to another *grandMA* console or put the data to the archives.

Proceed with a left mouse click on title bar. Enter the name of the show via keyboard.

The chosen name has to differ from OTHER SHOWS' names by their first 8 characters, because otherwise the existing show will be overwritten.

Continue with a left mouse click on the SAVE FLOPPY button. The SAVING ACTSHOW/COPYING ACTSHOW window will appear. After just a few seconds, the SAVING COMPRESSED SHOW window will open.

Insert an empty IBM/PC formatted 3,5" disk and remove the write protection (small tongue on the disk must be **closed**). Now press the OK button.

The show will be saved after the window has closed. This procedure might take a few minutes.

Remove the disk from the drive afterwards.

9.7 Loading a Show from floppy disk

Press the LOAD FLOPPY button. The window LOADING COMPRESSED SHOW will open. Insert the disk containing the show. Now press the OK button (might take a few minutes).

After loading the Show, the LOADING ACTSHOW window with the "PRESS OK TO REBOOT" button will appear.

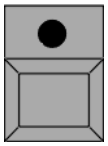
Remove the disk from the drive afterwards.

The console will now reset and automatically start up again. This will take approximately 1 minute. The SHOW will be loaded after the start-up procedure.

TIP Please make sure to frequently save the current show on harddisk during the programming procedure. A back-up on floppy disk is always reasonable.

10 Software Update

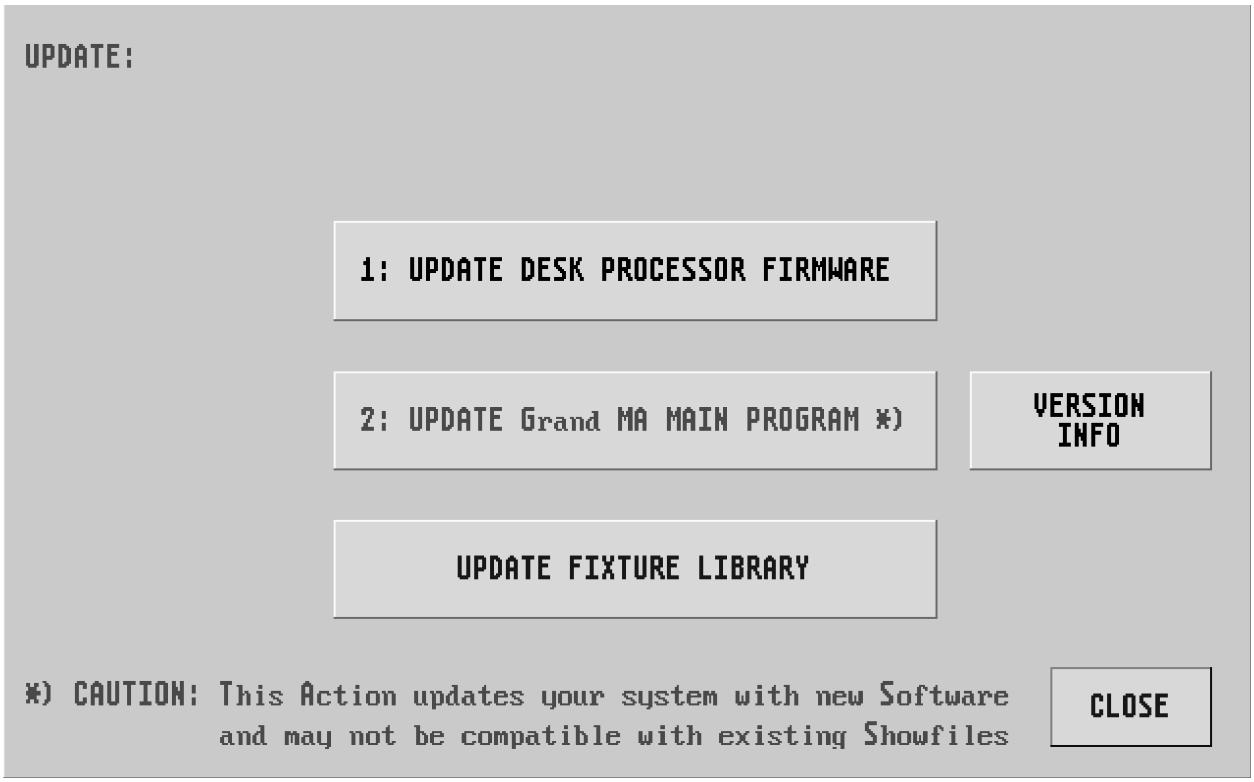
SETUP



Open the SETUP menu with the SETUP button.

UPDATE SOFTWARE

Open the UPDATE menu by pressing the UPDATE SOFTWARE button. If thisis not possible (e.g. an update had not been completed correcly), you can open the menu with the F4 key.



Do not update the *grandMA* before running a Show!

To update the *grandMA* software, insert the current UPDATE disk labeled "LAST DISK" and press the respective button.

UPDATE Grand MA MAIN PROGRAM:	Will update the "main program" (PC).
UPDATE DESK PROCESSOR FIRMWARE:	Will update the program for the second in-built computer (Motorola).
UPDATE FIXTURE LIBRARY:	Will delete and update the internal MA-FIXTURE library. Self-created Fixtures will be kept and not be overwritten. ➠ **2.8** EDITING FIXTURES (modify)

Before changing disks, make sure that the green LED on the floppy disk drive is off. The Update procedure can take between 2 and 10 minutes. After updating the main program, it is necessary to reset the console.

All three UPDATES should be installed.

***Always* read the attached text file or enclosed information before updating the system!**

You can only download the update from our HOMEPAGE (www.malighting.de) using an IBM compatible PC. Then you **have to** unzip the files with the **original WINZip** program (www.winzip.com); proceed by copying this data on a 3.5" disk. The disk must not contain any data!

Declaration of Conformity according to directives 89/336 EWG and 92/31 EWG

Manufacturer's name:	MA Lighting Technology GmbH
Manufacturer's address:	Dachdeckerstraße 16 D-97297 Waldbüttelbrunn Germany

declares that the product

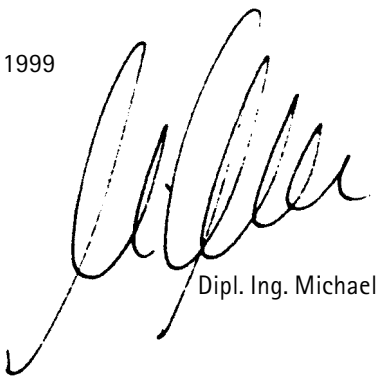
Name of product:	MA *grandMA*
Type:	MA GM

complies with the following product specifications:

Safety:	EN60065, EN60950
EMV (EMC):	EN55103-1 (E1), EN50081-1 EN55103-2 (E2), EN50082-1

Additional information: II DMX512 and analogue inputs and outputs must be shielded and the shielding must be connected to the earthing resp. to the housing of the corresponding plug.

Waldbüttelbrunn, March 15th, 1999



Dipl. Ing. Michael Adenau

Index