



DIRECTOR 768 *DMX 512 Controller*

**manuale
di istruzioni
instructions
manual**

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INTRODUCTION

This controller is suitable for controlling up to twenty four (24) DMX-512 units of any type with maximum 32 channels respectively (scanner, moving head, strobe, etc). The controller's software can be easily updated via its serial port from any PC.

Operating the controller whilst simultaneously reading through these instructions is an excellent method for learning the functions and operation of the controller. If you have any questions, please contact your supplier or the manufacturer via e-mail or telephone. If you are able to provide a full and accurate description of any faults you may encounter, we will endeavour to answer your question via e-mail or to load an appropriate software fix onto our home page as soon as practical, thus allowing you to download and install the latest version with reported bugs removed. Controller software can be upgraded free of charge. To check the software versions currently loaded into your controller, enter the **menu** and select the **SOFTWARE VERSION** menu item. The version number and issue date of the software is displayed in the bottom line of the controller's display. By comparing this version number with the current version number of the software available on the website you may determine whether and upgrade of controller software is available. Instructions for this procedure are described in the chapter entitled **SOFTWARE UPDATE**.


INSTALLATION:

After connecting the power supply, the B.OUT led switch flashes, indicating the controller is in standby mode. After pressing the B.OUT button, the controller's LEDs turn on, and the logging-in text can be seen on the display for a few seconds. The controller then defaults to automatic mode.



DIRECTOR 768
COEMAR v.1.0

If the caption "SOFTWARE UPGRADE IS NECESSARY" is seen on the display after turning the controller on, the controller can be used only after the software has been upgraded.



SOFTWARE UPDATE
NECESSARY

This may occur if connection to your PC is cut off during the course of a software upgrade or if a power failure or spike has occurred, interrupting the upgrade.

Shutting down the device: whilst operating in any mode, depress the B.OUT button for approximately 3 seconds. The device will disconnect and return to standby mode, which is indicated by the button's flashing LED.

There are five possible states for the button's LEDs which indicate the current status of the controller:

- not illuminated: the button has no functionality.
- dimmed illumination: hotkey function mode. The respective button has some functionality and can be activated by pressing down the button.
- full illumination: the respective button is active. This can be switched off by simply selecting another button.
- flashing at full intensity: indicates that the button's function is currently active. This may be switched off by selecting another button.
- flashing at half intensity: indicates that the function is active but with modified parameters that are not currently active. By pressing down on the respective button, the functions will be activated; the LED will flash at full intensity.

SOFTWARE UPDATE:

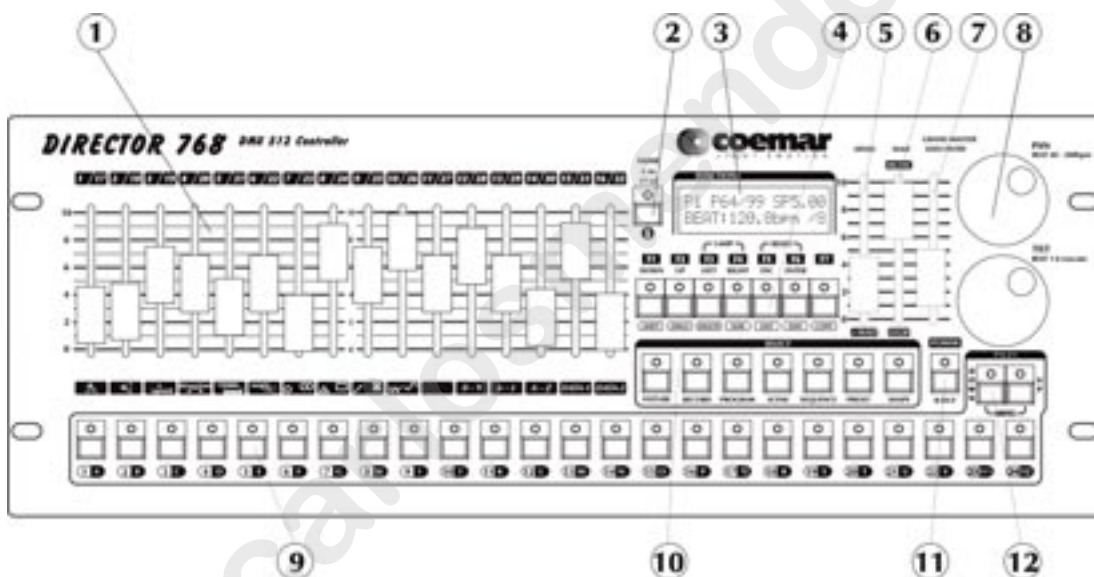
Using of the inbuilt downloading software: ATTENTION! The software runs only under the Windows operating systems. Follow the instructions below to effect a software upgrade:

1. Connect the controller and you computer using a suitable cable (cable type: Link cable DB9M/F), (port: COM1, COM2).
2. Connect the controller to its power supply.
3. Via the computer, download the necessary upgrade software (controller.exe) from the home page of the distributor or manufacturer and the latest version of the controller's software (e.g.: Dir768v10.dat).

4. Launch the upgrade software (controller.exe). After the initial start-up procedure the software requires you to initialise several settings:
 - a. Select a suitable language, and then click on the 'OK' button.
 - b. Select the port to which you have connected your controller and the baud rate value (the speed of communication) to the highest appropriate for your computer, then click on the 'OK' button.
5. Click on the connection icon (1st icon) or select the Settings/Connection menu item. The software will initialise and the controller's LEDs will turn off.
6. If the settings and the connection are appropriate, data will appear in the display panel (type, etc.).
7. If the settings are inappropriate or incorrect, the software will warn you to check the connection and port settings, and then try again.
8. If all connections are OK, click on the 'Opening the file' icon (2nd icon), locate the file to be downloaded into the controller (e.g.: Dir768v10.dat), then acknowledge the selection with the 'Select' button.
9. Click on the 'Download' icon or select the Setting/Start data downloading. Downloading starts.
10. The current state of downloading is visible in the display. If the procedure is finished, 'Downloading is ready' appears. Press the 'OK' button.
11. Click on the connection icon in the menu bar (1st icon) or select the Setting/Stop connection menu item. Click the 'YES' button in the opening panel. This will terminate the connection with the PC and the controller will restart automatically. The upgrade procedure is finished.

If any error occurs during the upgrading procedure, e.g. power failure, restart the controller disconnecting the power, and restart the process, repeat all the steps details above.

INTRODUCTION OF THE OPERATING DEVICES:



1. **1-16 sliders:** manual setting of the individual channels of the attached devices and modification of parameter settings
2. **SLIDER button:** slider channel selection button. This button selects whether channels 1-16 are active or channels 17-32 are active. If the LED is flashing, the upper channels are available.
3. **DISPLAY:** LCD display with 2x16 characters. Background intensity illumination and contrast can be set up via the menu. When altering parameters of any attached devices, information about the changes is displayed.
4. **FUNCTION buttons:** Programmable buttons, F1-F8.
5. **SPEED slider:** sets the program playback speed, ranging from 0.3s-5.0s. The setup is linear between the two limits; the actual value is shown in the display to the thousandth of a second.
6. **WAIT slider:** sets the delay time between program steps from 0.3s-0.5s. With the slider fully down, music mode is selected. With the slider fully on, steps cease to progress.
7. **DATA ENTRY slider:** in automatic mode it operates as a GRAND MASTER and sets the intensity of the dimmer channels. In the menu it supports retrieving values and positions.

8. **SCROLL WHEELS:** in manual mode, the wheels take control of projector mirror or moving head positioning. In automatic mode, program scene change times can be set up with the PAN disc to between 60.0-200.0bpm k, while with the TILT disc the frequency of scene shifting can be set up between 1-8.
9. **1-24 buttons:** the events in an actual event group can be launched via these buttons (program, sequence, record, preset, shape). In manual mode they can be used to select individual devices.
10. **SELECT BUTTON GROUP:**
 - a. **FIXTURE** button: used for selecting manual mode. If the LED is at full intensity, manual mode is active, if the LED is flashing, the channel is overridden in manual mode.
 - b. **RECORD** button: after selecting this button, recorded events can be launched on the 1-24 buttons
 - c. **PROGRAM** button: used to program the event group. After selecting this button programs can be launched via the 1-24 buttons.
 - d. **SCENE** button: used for sequencing through scenes of the current programs. When selected, automatic scene progression stop and the active programs can be sequenced manually.
 - e. **SEQUENCE** button: sequences can be selected via the 1-24 buttons when this button is selected.
 - f. **PRESET** button: preset scenes selected via the 1-24 buttons when this button is selected
 - g. **SHAPE** button: shapes can be selected via the 1-24 buttons when this button is selected
11. **F8 or BLACK-OUT button:** this is the last function button. It possible to assign a function to this button, but it is generally used as a BLACK-OUT button.
12. **PAGE button:** used to change pages across the 1-24 buttons. After pressing PAGE UP or DOWN the entire range of events, 1-24, 25-48 or 49-72, can be accessed via the 1-24 buttons.

PAGE-UP - PAGE-DOWN MENU buttons: briefly depressing these two buttons simultaneously causes the controller to enter menu mode.

F3-F4 LAMP buttons. briefly depressing these two buttons simultaneously causes the controller to enter switching on-off mode.

F5-F6 RESET buttons: briefly depressing these two buttons simultaneously causes the controller to enter reset activation mode.

CONTROLLING THE UNITS

The controller addresses attached devices automatically in multiples of 32. The DMX addresses of any attached devices should be set accordingly. The addresses can be modified in the UNIT POSITION setup menu.

Unit nr.	Dmx addr.	Unit nr.	Dmx addr.
1.	A - 1	13.	A - 385
2.	A - 33	14.	A - 417
3.	A - 65	15.	A - 449
4.	A - 97	16.	A - 481
5.	A - 129	17.	B - 1
6.	A - 161	18.	B - 33
7.	A - 193	19.	B - 65
8.	A - 225	20.	B - 97
9.	A - 257	21.	B - 129
10.	A - 289	22.	B - 161
11.	A - 321	23.	B - 193
12.	A - 353	24.	B - 225

Upon being turned on, the controller operates in automatic mode. In order to program a SHOW, some settings need to be made and the controller needs to be calibrated. It is recommended that you configure the controller in the following sequence:

- Check the software version number of the controller, if you find a more recent one on the homepage of the distributor or the manufacturer, download it and upgrade the controller. See the SOFTWARE VERSION - SOFTWARE UPDATE instructions.
- Select the language in which the controller should display text in its display. See LANGUAGE SELECTION instructions.
- Adjust the contrast and intensity of the display if required. See DISPLAY SETTING instructions.
- Adjust the intensity of the LEDs to the required value. See LED SETTING instructions.

- Check if the articulated luminaires, scanners, etc. that you would like to control are in the controller's directory (library). If not, the units will need to be installed manually, or the appropriate installation file downloaded from the PC. See UNIT INSTALLATION instructions.
- Assign your devices any of the 16 controller positions. See UNIT POSITION menu item.
- Test your devices. See MANUAL MODE instructions.

After configuration, programs, scenes and sequences can be programmed and in automatic mode all the effects can be launched. After starting up the controller, it defaults to automatic mode. From here, programmed events can be launched, manual mode can be initiated or the menu can be accessed, from where you can alter a range of settings.

MENU SYSTEM

The menu system and its settings are an appropriate place to commence learning how to operate the controller. After connecting the power supply and pushing the BO button the controller will be in automatic mode. Simultaneously depress the PAGE-UP and PAGE_DOWN buttons. The controller will enter menu mode after approximately 2 seconds.

In the top line of the display the number of the actual menu item can be read. In the bottom line of the menu the item description is displayed. You can select between menu items using the DATA ENTRY slider or the UP-DOWN buttons. To select a menu item, press the ENTER button. To return to automatic mode press the ESC button.

If the setup menu item is selected, the controller enters the setup menu after pressing the ENTER button. From there, further menu items can be selected.

Menu system map:

- 1. EDIT SHAPE (construction of 1-72 Shapes)
- 2. EDIT PROGRAM (construction of 1-72 programs)
- 3. EDIT SEQUENCE (construction of 1-72 sequences)
- 4. EDIT PRESET (construction of 1-72 preset scenes)
- 5. EDIT RECORD (construction of 1-72 records)
- 6. FUNCTION BUTTON
- 7. SETUP
 - 1. UNIT INSTALL (entering a new device into the directory (library) / modification of an existing device)
 - 2. UNIT POSITION (assigning devices to one of 16 positions in the directory / setup of mirror directions)
 - 3. DISPLAY SETUP (set display intensity and contrast)
 - 5. LED SETUP (set LED intensity)
 - 6. LANGUAGE (select the display language)
 - 7. WORK TIME (operating hours counter)
 - 8. SOFTWARE VERSION (software version number and issue date)
 - 9. CONTROLLER VER. (controller serial number and manufacturing date)
 - 10. MENU CODE (menu code setting / switch off)

MENU SYSTEM –MENU LOCK CODE

If the menu lock code is activated, the code must be entered prior to gaining access to the menu. The code can be entered via buttons 1-24. After entering the code, press ENTER. If an incorrect code is entered, the controller will give a warning and the ESC button must be pressed in order to recommence the process.

If you lose or forgot your code, you will need to access the PIN code of the controller. To gain access to the PIN code you will first need the serial number of your controller. If the display panel is seeking the code, press the F7 button, and the serial number will be visible on the upper line of the display. By contacting the manufacturer or dealer with this serial number, they will be able to provide you with the correct PIN code for your controller.

The PIN code is also entered using the 1-24 buttons, but before you press ENTER you should press and hold down the F7 button. The controller will skip directly to the menu system. It is recommended that you modify or delete the menu lock code prior to escaping from menu mode.

SETUP MENU 9: MENU CODE

It is possible to protect unauthorised access to the controller using the menu lock code. In order to do this, you will need to activate the menu lock code. After this has been activated, access to the menu system from automatic mode is only possible by first entering the menu lock code.

To activate the menu lock code, select the SETUP menu MENU code position.

```
MENU CODE
off
```

If bottom line of the display reads 'off', the code is not activated. Press the ESC button to step back. Press the ENTER button to type in the new code.

```
MENU CODE
new: _
```

Using the 1-24 buttons, type in the new code. Your code can be a maximum of 6 characters. Press the ESC button to step back. When the code is entered press the ENTER button.

```
MENU CODE
again: _
```

Enter the new code again and press the ENTER button.

```
CODES NOT EQUAL
TRY AGAIN
```

If the two entered codes are not the same, the controller will display a warning. You will need to repeat the procedure. Press the ESC button and start again.

```
SAVE CODE?
no yes
```


If the two codes match, the controller will then ask you to save your code. Pressing the ESC button exits without saving. Pressing the ENTER button will save your lock code.

```
MENU CODE
on
```

At this point, the lock code is activated (on) so from automatic mode you will be required to enter the menu lock code in order to move into the menu system. The activated code can be inactivated by pressing the DELETE button.

```
DELETE CODE?
no yes
```

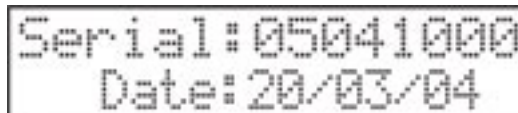
SETUP MENU 8: CONTROLLER DATA



```
Version:   v.2.7
Date: 20/03/04
```

In the top line of the LCD display the serial number of the controller is displayed. The bottom line displays the manufacturing date (day, month, year). Exit the menu item by pressing the ESC button.

SETUP MENU 7: SOFTWARE VERSION



```
Serial: 05041000
Date: 20/03/04
```

In the top line of the LCD display the software version is displayed. The bottom line displays the software's issue date is displayed (day, month, year). Exit the menu item by pressing the ESC button.

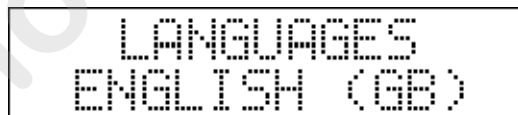
SETUP MENU 6: WORKING TIME



```
WORKING TIME
000002:49:19
```

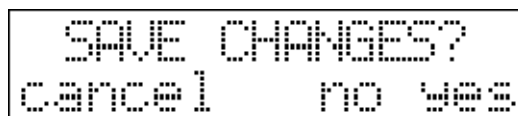
The total operating life of the controller is displayed in the bottom line (second: minute: hour). Exit the menu item by pressing the ESC button.

MENU 5: LANGUAGE SELECTION



```
LANGUAGES
ENGLISH (GB)
```

The name of the display language is shown in the bottom line of the display. It may be altered using the UP-DOWN buttons. Currently, five languages are available: Hungarian, English, German, Dutch, French
If the UP-DOWN button is not pressed, the controller returns to the setup menu via pressing the ESC button. If modifications have been made, the controller will ask for the confirmation prior to saving.



```
SAVE CHANGES?
cancel   no   yes
```

Pressing the F2 "cancel" button causes the controller to remain in the menu item, pressing the F5 (ESC) "no" button causes the controller to return to the menu without saving modifications, while by pressing the F6 (ENTER) "yes" button causes the controller to save any modifications and return to the menu.

SETUP MENU 4: LED SETUP

```
FULL LIGHT: 100%  
HALF LIGHT: 020%
```

The intensity of the LEDs can be altered to achieve an optimal value based on varying lighting conditions in different application areas. The current value of the LED illumination settings can be seen in the top line of the display, and on the LEDs of the 9-16 buttons as well. This intensity can be set by the 7th slider. In the bottom line the value for half-intensity can be seen, and the current value can be seen via the 1-8 LEDs.

If no modification is made in this menu item, pressing the ESC button returns the controller to the setup menu. If modifications have been made, the controller requires confirmation prior to saving.

```
SAVE CHANGES?  
cancel    no  yes
```

Pressing the F2 “cancel” button causes the controller to remain in the menu item, pressing the F5 (ESC) “no” button causes the controller to return to the menu without saving modifications, while by pressing the F6 (ENTER) “yes” button causes the controller to save any modifications and return to the menu.

SETUP MENU 3: DISPLAY SETUP

```
BACKLIGHT: 100%  
CONTRAST: 040%
```

The intensity and contrast of the LCD display can be altered to achieve an optimal value based on varying lighting conditions in different application areas. The current value of the background illumination can be seen in the display. This value can be set by the 7th slider. In the bottom line the current value of the contrast is displayed. This value can be altered using the 8th slider.

If no modification is made in this menu item, pressing the ESC button returns the controller to the setup menu. If modifications have been made, the controller requires confirmation prior to saving.

```
SAVE CHANGES?  
cancel    no  yes
```

Pressing the F2 “cancel” button causes the controller to remain in the menu item, pressing the F5 (ESC) “no” button causes the controller to return to the menu without saving modifications, while by pressing the F6 (ENTER) “yes” button causes the controller to save any modifications and return to the menu.

SETUP MENU 2: UNIT POSITION

Each of the 24 devices connected to the controller must be assigned to a position - meaning the 1-24 buttons. A particular device’s configuration can be selected from the dictionary /library of the controller unit via this menu item and assigned to a position.

In the upper left corner of the display the number of the actual position can be seen, all the other data belongs to this position. Following the DMX text, the dmx address of the respective positions can also be read. The selected unit must be set to this displayed address! The inverted ‘A’ or ‘B’ letter refers to the actual dmx output. On the right, the mirror direction of the particular unit assigned to the position can also be seen. Mirror directions can be inverted, so that mirrors or heads of units installed opposite each can move in the same direction according to settings on the scroll wheel to left. In the bottom line of the display the name of the unit assigned to the position is displayed.


```
P01 Dmx0001 P<T<
CF7 Hard Edge X
```

- F1: alter the PAN direction of the selected device
- F2: alter the TILT direction of the selected device
- F3 (DELETE): delete the actual device position
- F4: setup the dmx addresses of all device positions automatically by a multiple of 32.
- F5 (ESC): leave the device position menu
- F6 (ENTER): assign a device to the selected unit position
- PAGES: alter the dmx address of actual device position by 1.
- DATA-2 slider: alter the dmx address of actual device position from 1 to 512 by 2.
- DATA-1 slider: alter the dmx output on actual device position between 'A' and 'B'.

Press F6 (ENTER) to alter or select a device for the actual position:

```
PRODUCER:
COEMAR
```

- F1(DOWN): scroll down to select a manufacturer (if there is more than one manufacturer on the list)
- F2 (UP): scroll up to select a manufacturer (if there is more than one manufacturer on the list)
- F5 (ESC): back to device position menu without change of unit type on actual position
- F6 (ENTER): open the list of devices which are produced by selected manufacturer

Press F6 (ENTER) to select a device type for the actual position:

```
FIXTURES:
CF7 Hard Edge X
```

- F1(DOWN): scroll down to select a device (if there is more than one device on the list)
- F2 (UP): scroll up to select a device (if there is more than one device on the list)
- F5 (ESC): back to device position menu without change of device type on actual position
- F6 (ENTER): back to device position menu with change of device type on actual position
- 1-24: The same device type may be assigned to multiple positions. Selecting more than one button will result in all positions between these buttons being selected or deselected.

Press F5 (ESC) or F6 (ENTER) to return to device position menu.

If no modification is made in this menu item, pressing the ESC button returns the controller to the setup menu. If modifications have been made, the controller requires confirmation prior to saving.

```
SAVE CHANGES?
cancel  no  yes
```

Pressing the F2 "cancel" button causes the controller to remain in the menu item, pressing the F5 (ESC) "no" button causes the controller to return to the menu without saving modifications, while by pressing the F6 (ENTER) "yes" button causes the controller to save any modifications and return to the menu.

SETUP MENU 1: UNIT INSTALLATION

The main directory/library of the controller unit can be found here. It is possible to create a new device, edit a current device, or delete a device from the directory/library.



PRODUCER:
COEMAR

- F1(DOWN): scroll down to select a manufacturer (if there is more than one manufacturer on the list)
- F2 (UP): scroll up to select a manufacturer (if there is more than one manufacturer on the list)
- F4 (NEW): define a new manufacturer.
- F5 (ESC): back to setup menu without saving changes.
- F6 (ENTER): open the list of devices which are produced by selected manufacturer

Press F6 (ENTER) to select a device type from the selected manufacturer's list



FIXTURES:
CF7 Hard Edge X

- F1(DOWN): scroll down to select a device (if there is more than one device in the list)
- F2 (UP): scroll up to select a device (if there is more than one device in the list)
- F4 (NEW): define a new device.
- F5 (ESC): back to manufacturer selection without any changes
- F6 (EDIT): edit the selected device

Press F6 (ENTER) to save a new device:



UNIT NAME: (A)

Name the device.

1-24: Each button has one or more alphabet characters assigned to it. Where two characters are assigned, the second character is accessed by pressing twice.

PAGES: alternate between lower- and uppercase mode

F2 (SPACE): insert a blank space

F3 (LEFT): move the cursor 1 position to the left

F4 (RIGHT): move the cursor 1 position to the right

F5 (ESC): return to the device menu

F6 (ENTER): proceed to the next adjustment.

SLIDER 12: select numbered characters from '0' to '9'

SLIDER 13: select lowercase characters from 'a' to 'z'

SLIDER 14: select uppercase characters from 'A' to 'Z'

Press F6 (ENTER) to go forward to give a manufacturer's name of the new unit:



PRODUCER NAME (A)

Name the manufacturer:

1-24: Each button has one or more alphabet characters assigned to it. Where two characters are assigned, the second character is accessed by pressing twice.

PAGES: alternate between lower- and uppercase mode

F2 (SPACE): insert a blank space
 F3 (LEFT): move the cursor 1 position to the left
 F4 (RIGHT): move the cursor 1 position to the right
 F5 (ESC): return to the device menu
 F6 (ENTER): proceed to the next adjustment.
 SLIDER 12: select numbered characters from '0' to '9'
 SLIDER 13: select lowercase characters from 'a' to 'z'
 SLIDER 14: select uppercase characters from 'A' to 'Z'

Press F6 (ENTER) to proceed to setting up channels:



CH:01 PM:NAME(A)
 [Ch-01]

In the top line of the display the current channel number of the unit and the name of the current parameter are displayed. In the bottom line the name of the current channel is displayed. If you have not assigned a name to it, the controller will name it according to the slider number of the channel. The flashing caret indicates that a name may be created. Create the name of the device's channel according to the following instructions:

1-24: It can be read under the buttons which letter is written by the button to the display. Where two letters can be read under it, there the back letter can be written by double pressing down
 PAGES: changing lower- and uppercase mode
 F2 (SPACE): write space character to the display
 F3 (LEFT): Move the cursor to left position by 1
 F4 (RIGHT): Move the cursor to right position by 1
 F5 (ESC): leave making unit and back to unit directory
 F6 (ENTER): go forward to the next adjustment.
 SLIDER 12: select numbered characters from '0' to '9'
 SLIDER 13: select lowercase characters from 'a' to 'z'
 SLIDER 14: select uppercase characters from 'A' to 'Z'

Press F6 (ENTER) to proceed to assigning sliders to actual channels:

Assigning the device channel to a slider:



CH:01 PM:SLIDER

In the top line of the display the current channel number of the device and the name of the current parameter are displayed. In the present case SLIDER. Here the current channel can be assigned to a slider. In manual mode and when creating programs the output value of this channel is set via the slider. In the bottom line of the display the assignment state of the sliders can be seen. A horizontal line means that no channel is assigned to the slider with that number. The X means that a channel has been assigned to that slider, but not the channel currently selected. The star means that the current channel is assigned to the slider with that number. Where two stars are seen, a channel has been assigned to both possible slider states (lower channel number/higher channel number). All 32 controllable channels may be accessed via the shift (SLIDER) button. If it is flashing, then channels 17-32 are currently being accessed by the sliders.

If you do not wish to control a channel via a slider, it is not necessary to assign it to one. For example, a PAN or TILT channel, or a channel not used by the device. A channel can be specified with the 1-16 sliders in the way that it is drawn to a value higher than its half. Then a star will indicate the slider at the adequate place on the display. Pressing the ENTER button you can move to the special settings.

Special setup of the unit channel:

```
CH:01 PM:SPECIAL
DEFAULT
```

It can be selected by the UP-DOWN buttons, if the channel has a special function: These are: PAN, TILT, PAN-FINE, TILT-FINE, DIMMER, BLACK-OUT, ALL-DIMM

If the current channel controls PAN mirror movement, the PAN special setup has to be selected. Consequently, its value can be controlled with the pan jog disc. It is the same with the TILT channel and the FINE channels. If the installed unit has such a channel, with which exclusively its intensity can be controlled, it is worth being set as DIMMER. Consequently, in automatic mode the intensity of the unit can be set with the GRAND MASTER slider. For the right operation of the BLACK-OUT button and the sequence setting of the black-out function is needed in case of channel, which has two states, when it does not allow the beam to leave the controller, and when it allows. This is usually the SHUTTER channel. If you do not want to supply the channel with special setting, press the F3 (DELETE) button, so the channel is settled as default.

By using the ENTER button to shift functions, the strobe function of your device can accessed.

```
CH:01 PM:STROBO
ACTIV:-----
```

By pressing the STROBE button a strobe effect can be launched while the controller is in automatic mode. A specific channel can also be assigned to a strobe effect. If you do not wish to specify a channel as strobe, press the DELETE button. Three lines will appear after the active caption in the display. If you wish to setup you strobe, set that value with the 7th or 8th slider, on which the channel is strobing. (Tip: If your device has prisms available and you wish to insert prisms by simply pushing a button, you can assign an insert value on the prism channel in which case the units will not start to strobe on the push of a button, but their prisms will be activated).

Press the ENTER button to switch the lamp on-off.

Device lamp channel setup:

```
CH:01 PM:LAMP
ON:----- OFF:-----
```

If you wish to set a channel to turn the lamp on or off, you may do so using the 7th and 8th sliders. If you do not require this, press the DELETE button.

Press the ENTER button to move to the reset function

Device reset channel setup:

```
CH:01 PM:RESET
AKTIV:-----
```

If you wish to set a channel to turn the reset function, you may do so using the 7th and 8th sliders. In this way a reset command can be easily applied to your devices in automatic mode. If you do not require this, press the DELETE button.

Press the ENTER button to move to the setup device type function.

Setup of channel device types:

```
CH:01 PM:TYPE
01 [typ-01 1255
```

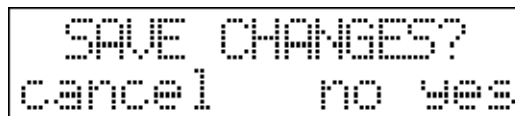
In this function, channels can be divided into different domains. This means that the display can accurately display the effects that appear on the channels. Use the text tools to name the device, then use the 15th or 16th slider to assign a maximum value.

Press the ENTER button to move on to the next device. A maximum of 128 device types can be set. In case of the last type the maximum value, that is value of 225 has to be set within a channel! There is another possibility as well, this is the percentage indication. If it is about a continuously controlled channel, e.g. dimmer, focus, then you can set the channel to indicate the percentage, then in manual mode its value can be read in percentage. This can be switched on and off by pushing the F1 (SHIFT) button.

If you have set the assignment of the channel type, push the ENTER. The controller is restored to the NAME parameter, and a colon will be flashing in front of the channel number. Setup of a channel is ready in this way.

A newer channel can be added by pushing the F4 (NEW) button, then the controller automatically skips to effect name editing, and this channel can be set as well according to those described above. You can go up to 32 channels, the controller is able to control so many within one unit. It is possible to delete a channel with the restriction that always the last channel can be deleted with the F3 (DELETE) button.

You can log off from the unit construction by pressing the ESC button severally. The controller asks for the confirmation of saving the modification.



```
SAVE CHANGES?  
cancel    no    yes
```

Pressing the F2 “cancel” button causes the controller to remain in the menu item, pressing the F5 (ESC) “no” button causes the controller to return to the menu without saving modifications, while by pressing the F6 (ENTER) “yes” button causes the controller to save any modifications and return to the menu.

MENU 1: SHAPE EDITING



```
SHAPE:01  
Shape-01
```

The shape generator located in the controller allows up to 8 different shapes to be recreated by the mirrors or the moving head of particular articulated devices, with a range of alterable parameters. These shapes can then be assigned to program steps or preset scenes.

In the shape selection editor, you may select from 72 shapes using the 1-24 buttons and the PAGE shift button in combination. In the top line of the display the available shapes are displayed. In the bottom line the corresponding name of the selected shape is displayed. If a shape is not available, ‘empty’ is displayed.

During shape selection the respective movements are immediately visualised on any attached articulated devices.

F3 (DELETE): if a selected shape is recorded, it can be deleted

F5 (ESC): return to the menu without saving any changes.

F6 (ENTER): advance to edit the selected shape position

F7 (COPY): copy a selected shape to an empty position

Creating a new shape or modifying an existing one:

Select a shape, then push the F6 (ENTER) button:



```
SHAPE NAME  
Shape-01
```

Assign a name to the shape using the text keys, then press the ENTER.



```
SHAPE MASK  
select fixture
```

Now it has to be set which units you would like to have a shape drawn by. The units can be masked in and out with 1-24 button. The current setup can be seen on the LED of 1-24 buttons. If the LED is flashing, than it is selected to the mask. The

masked units are open and the others are closed, so very easy to identify the masked units on the stage. For two seconds after pushing the button the unit name can be read. If you push more than one button at same time than all the position will be selected or deselected between the two pushed position!

After masking press the ENTER.



Now the masked units can be selected on buttons 1-24, and shapes can be assigned to them with FADER 7-10. You can have altogether 8 different shapes drawn: round, octet, triangle, rectangle, straight line, ex, zigzag and sine.

Adjustable parameters of the shapes:

- Centre: the centre of shape drawing of the selected units can be set with the jog wheels.
- Width: width of the shape can be set with potentiometer 1 (0-255)
- Height: height of the shape can be set with potentiometer 2 (0-255)
- Speed: angular speed of the shape can be set with potentiometer 3 (0-255)
- Direction: drawing direction of the shape can be affected with potentiometer 4 . (Forward - Backward)
- Rotating: the shape can be rotated with potentiometer 5, in this way, for example, a laid octet can be drawn.
- Initial angle: initial position of the shapes can be set with potentiometer 6, drawing will be started in this position.

Shape drawing can be stopped on a unit, it means that if a unit has been drawing a shape so far, and now such a shape is starting, in which the shape drawing of this unit is set to stop, it finishes the unit drawing. It can be switched on with the F3 (DELETE) button.

The shape can be restarted with the F7 (RECALL) button.

If no modification has been made in the shape, then the controller returns to the shape selection by pushing the F5 (ESC) button, if any modification has been made, the controller asks for the confirmation of saving the modification.



Shape deletion:

The shape can be deleted by pushing the F3 (DELETE) button in the shape selection. The controller asks for confirmation of the deletion, and then it completes it after clicking on the F6 (ENTER) yes button.

Shape copy:

Events can be copy to free places. It can be necessary if you want to use more events which have only a little differences. In this case you have to make the first event, then you have to copy it to free place, and then you have to modify it and ready.

First select the event which you like to copy, and press F7 (COPY) button. Its led will blinking and on the lower line of the display you can read the copy text. Select a free event with 1-24 button where you 'd like to copy the event. On the display appear the info about source and destination places. If you press F5 (ESC) the controller step back without copy, but you press F6 (ENTER) the controller will copy the event.

MENU 2: PROGRAM EDITING



In this menu item up to 72 individual programs can be recorded, edited or deleted. The controller is able to store a maximum of 1024 program scenes, each with a maximum number 99 steps each.

In the top line of the display, the number of the selected program is shown, or if using an existing program, its step number. In the bottom line, the program name can be read if it has been created or the text will be 'empty' if no name has been assigned.

Select a program with the help of buttons 1-24 and the PAGE shift button. Pressing the ENTER button allows you to move to program editing, the first step of which is creating or modifying the program's name.

Create a program name:

```
PROGRAM NAME(A)  
Program-01
```

Create a name using the text keys as previously described in this manual. When finished, press the ENTER button.

Selecting devices:

```
PROGRAM MASK  
select fixture
```

You will now need to select which devices will take part in your program. This can be done using the 1-24 buttons. The current setup will be displayed on the respective button's LEDs. If a LED is flashing, than it is selected. The selected units will be on and the unselected off, so it is a very simple task to identify the selected devices on the stage. After selecting a device using the buttons, the respective device name is displayed in the LCD display for about two seconds. Selecting two buttons simultaneously will select or deselect all buttons between them.

After selection is complete, press the ENTER button.

Editing programs:

```
LOADING PROGRAM  
PLEASE WAIT
```

It may take a few seconds for a program to load, after which time the controller enters program editing mode.

```
F01 FAD02 VAL231  
COLOR Yellow
```

Preparation a program scene:

For selected devices (the LEDs of selected devices are flashing on buttons 1-24), data of the channel modified at last of the unit selected at last can be always seen. After letter F (Fixture) in the upper line number of the unit selected at last can be seen. In the middle the number of the slider moved at last, the number of the edited program and the number of the program scene being edited currently can be seen alternately. At the end of the line the current value of the channel can be read. In the bottom line the name of the last channel modified and the type name belonging to the current value can be read. Additional fixtures may be selected using the 1-24 buttons, the respective LEDs will flash, or the currently selected devices can be deselected, the respective LEDs will be dimmed. Each channel of the selected units can be modified using sliders 1-16 and the SLIDER button. Using the SCROLL wheels, the mirror and the head movement of the selected units can be set. If you have set a scene, press the ENTER button to save it. In the LCD display the number of the program scene will increase by one. Additional scenes can be created in a similar manner to that previously described. A program can consist of a maximum of 99 steps.

Adding a shape into a program scene:

Any of the 72 shapes to be edited can be assigned to a program scene. To do this, press the SHAPE button.

```
23/15 SHAPE  
FIRST STAGE Pr.
```

```
23/15 SHAPE  
STOP
```

The number of the edited program and scene can be shown in the middle of the upper line of the display. In the bottom line, the name of the shape assigned to the current step, 'Stop', or 'Without changes' captions can be read. 'Without changes' means that no shape is assigned to the current step. The 'Stop' caption means that shape drawing will cease in the current step. If there is a name in the bottom line, and one of the 1-24 LEDs is flashing, this means the number of the selected shape. A shape can be selected using the 1-24 buttons. If you want the shape drawing to cease in the current step, press the F3 button. If you do not want any change in the shape drawing to this point, press the F4 button. It is possible to set the initial position of a shape as well and to save these positions in a scene. This means that the devices will add the initial positions for the shape drawing from the previous program scene, and will start drawing in the next step. After selecting the shape (buttons 1-24) press the button again for this to occur. Press the SHAPE button again to return to scene editing.

Reviewing program scenes:

It is possible to review program scenes before prior to leaving program editing mode. You can move between program scenes using the F1-F2 (UP-DOWN) buttons, and the current scene is selected by pressing the F7 (RECALL) button. This means that it is also possible to copy a scene. Select the number of the scene to be copied, press the RECALL button and the scene will be loaded. Use the UP-DOWN buttons to locate the scene where you wish to copy to, then press the ENTER button to save the scene. If this completes your program, you may press the ESC button to leave this mode.

Saving the program:

Pressing the ESC button will cause the controller to seek confirmation prior to saving any modifications.



Deleting programs

Programs can be deleted by pressing the F3 (DELETE) button. The controller will seek confirmation prior to deletion. Press the (ENTER) yes button to complete this process.

MENU 3: SEQUENCE EDITION



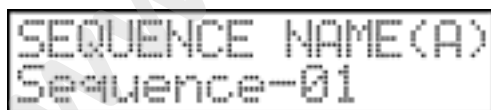
Sequencing is an event which acts on the strobe channel of an attached devices and the sequence in which the strobing occurs may be programmed.

The controller may program up to 72 sequences and existing sequences may be edited or deleted. The maximum number of steps in a sequence is 32.

The top line of the display shows the number of the selected sequence, or editing an existing sequence, its step number. The bottom line of the display shows the sequence name is one has been created, or 'empty' if one has not.

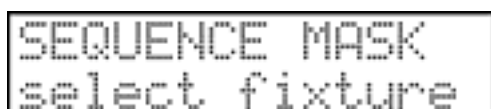
Select a sequence using buttons 1-24 and the PAGE shift button. Press the ENTER button to move to sequence editing.

Naming sequences:



Create a name using the text keys as previously described in this manual. When finished, press the ENTER button.

Selecting devices:



You will now need to select which devices will take part in your sequence. This can be done using the 1-24 buttons. The current setup will be displayed on the respective button's LEDs. If a LED is flashing, than it is selected. The selected units will be on and the unselected off, so it is a very simple task to identify the selected devices on the stage. After selecting a device using the buttons, the respective device name is displayed in the LCD display for about two seconds. Selecting two buttons simultaneously will select or deselect all buttons between them. After selection is complete, press the ENTER button.

Editing sequences:



SEQUENCE: 72/32
select fixture

The top line of the display will show the number and the current step number of the sequence being edited. The bottom line displays the positions of the sequence channels of the devices. The relative positions of the units may be altered using buttons 1-24. Use the ENTER button to move to the next step. Using the UP-DOWN buttons any step can be set, and its original position can be reloaded with the RECALL button. If the edited sequence is ready, exit by pressing the ESC button. The controller will seek confirmation prior to saving. After saving it will return to the sequence selection menu.

Copying sequences:

Sequences can be copied to free memories. This may be necessary if you wish to use multiple sequences which are slightly different. In this case you would create the first sequence, then copy it to a free memory where you could modify it and then save it.

First select the sequence which you like to copy and press the NEW button. Its led will blink and the bottom line of the display will show the copied text. Select a free memory using the 1-16 buttons to where you wish to copy the event. The display will show information about both source and destination. If you press the ESC button, the controller will step back without copying. Pressing the ENTER button will confirm the copy.

MENU 4: PRESET EDITING



PRESET: 01
Preset-01

A preset is a lighting scene and may contain such information such as beam positions, colours, gobos and other effects. This controller may store up to 72 different preset scenes which can be called in auto mode. The preset scene is built up by channels. Preset scenes can also be used as colour macros.

The preset is a set scene, which can be run by pressing a button.

The 72 presets to be run by the controller can be created, edited or deleted in this menu.

The top line of the display shows the number of the selected preset and 'OK' caption if one exists or 'free' if one does not. The bottom line displays the name of the preset if one has been entered.

Select a preset using the 1-24 buttons and the PAGE shift button. Press the ENTER button to move to preset editing mode. The first step is to assign a name to the preset.

Assigning a preset name:



PRESET NAME (A)
Preset-01

Create a name using the text keys as previously described in this manual. When finished, press the ENTER button.

Preset masking:

```
PRESET MASK
select fixture
```

Now it has to be set which units you would like to take part in the preset scene. The units can be masked in and out with buttons 1-24. The masked units are open and the others are closed, so very easy to identify the masked units on the stage. For two seconds after pushing the button the unit name can be read in the lower line, then a star can be seen at the place of the masked units.

One channel can be masked next way: Select the unit which contains the channel (1-24 button). Move the slider which can control the selected channel to the top (over 50%) and on the display will appear also the info about channel name and active mask info. If you move a slider under 50% then it will switch off from the preset scene mask. It is also possible to switch all channel in mask with pressing F2 button. On the display appear the info: ALL CHANNEL ON. If you like to make a preset scene with only some channels it is reasonable to push F1 button (ALL CHANNEL OFF) and then switch on only the wanted channels.

How get to know if a channel on or off in the mask? Press and hold FIXTURE button, and select a unit (1-24 button). Now you have to move a slider, if you hold the FIXTURE button pressed then the channel mask state will not change only its status will appear on the display.

After masking press the ENTER.

Preset editing:

```
F01 FAD02 VAL231
COLOR Yellow
```

Editing preset scenes is the same as editing program scenes with the exception that you cannot move to the next scene by pressing the ENTER button.

When editing is complete, press the ESC button to return to the previous menu.

Saving presets:

Pressing the ESC button will cause the controller to seek confirmation prior to saving any modifications

```
SAVE CHANGES?
cancel no yes
```

Deleting presets:

Presets can be deleted by pressing the F3 (DELETE) button. The controller will seek confirmation and will then execute after the (ENTER) yes button is selected.

Copying presets:

Presets can be copied to free memories. This may be necessary if you wish to use multiple presets which are slightly different. In this case you would create a preset, copy it to a free memory, and then modify it to suit.

To do this first select the preset which you would like to copy and press F7 (COPY) button. The led will flash and the bottom line of the display will display the copied text. Select a free memory using the 1-24 buttons to where you wish to copy the preset. The display will show information about both source and destination. Pressing the F5 (ESC) button will cause the controller to step back without copying. Pressing the F6 (ENTER) button will confirm the copy.

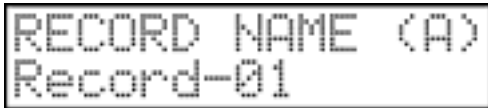
MENU 5: RECORD EDITING

```
RECORD: 01/--
Record-01
```

A record is an event which initiates programs and lets them run over a preset timeframe.

In this menu, up to 72 records may be recorded, edited or deleted. The maximum number of steps in a record is 85. In the top line of the display the number of the selected record is shown, or if an existing record, its step number. The bottom line displays the record name if one has been created. Select a record using the 1-24 buttons and the PAGE shift button. Pressing the ENTER button allows you to move to record editing, the first step of which is creating or modifying the record name.

Creating a record name:



```
RECORD NAME (A)
Record-01
```

Create a name using the text keys as previously described in this manual. When finished, press the ENTER button.

Editing records:



```
RECORD: 01/01
PR:01 TIME:001.5
```

In the top line of the display, the number of the selected record and the number of the actual step are displayed. The bottom line displays the number of the program assigned to the actual record step and the running time. The actual record step can be created using the PAGE and 1-24 buttons to select a program (1-72). The record step time can be set using SLIDERS 14-16 (0.1s-999.9s).

If one record step is edited, you can save it temporarily by pushing the ENTER button. The controller will increase the actual record step by one, and you can then set up the next step.

With the DATA ENTRY slider you can select any record step, and then modify it. When editing is complete, you can exit by pressing the ESC button.

Saving records:

Pressing the ESC button will cause the controller to seek confirmation prior to saving any changes.



```
SAVE CHANGES?
cancel no yes
```

Deleting records:

Record can be deleted by pressing the F3 (DELETE) button. The controller will seek confirmation prior to deleting and will execute after the (ENTER) yes button is pressed.

Copying records:

Records can be copied to free memories. This may be necessary if you wish to use multiple records which are slightly different. In this case you would create a record, copy it to a free memory, and then modify it to suit.

To do this first select the record which you like to copy and then press the F7 (COPY) button. The led will flash and the bottom line of the display will display the copied text. Select a free memory using the 1-24 buttons to where you wish to copy the shape. The display will show information about both source and destination. Pressing the ESC button will cause the controller to step back without copying. Pressing the ENTER button will confirm the copy.

MENU 6: SETUP

At this point you can enter the setup menu by pressing the ENTER button.

AUTOMATIC MODE

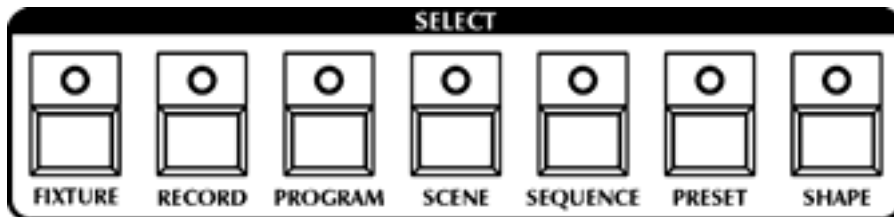
Events written in the menu can be launched in automatic mode according to the data created in the setup menu, and the parameters of the launched events can be changed.

Function of some operating devices:

PAGE UP and DOWN button:

Events 1-72 can be launched with buttons 1-24. After pressing these buttons, the lower line of the display will read 'PAGE 01-24', 'PAGE 25-48' or 'PAGE 49-72'.

EVENT GROUP buttons:



Only one button can be active at a time, with its LED illuminated to full intensity. The other LEDs are dimmed. When you press an alternative button, this will be selected and the others dimmed. Buttons 1-24 will initiate events based upon which bank is currently active. Selecting the PROGRAM button makes programs active, pressing the PRESET button activates the preset scenes. Pages must be incremented to launch events numbered 25 or higher. Starting an event will cause the event bank button to blink also. Pressing the SEQUENCE button will start sequences using the 1-24 buttons. If you press button one, its led will blink as will the SEQUENCE button's led. If you press PROGRAM button, its led will illuminate to full intensity and the SEQUENCE led will blink at half intensity. So you select now programs, but you see that you have running sequence. If a blinked event bank button lights with full power and you push it, its event will stop if there was a running one, and it will stop also blinking. Except SCENE button, read more in 'Select program scene by one' part.

BUTTONS 1-24:

Events can be launched using these buttons which belong to the current event bank. If a LED does not illuminate, no event is attached to it in the currently selected event bank. If it's LED illuminates at half intensity, an event has been written on it, and it can be commenced by pushing the button, causing the LED to flash. It may flash at half intensity as well. This may occur if the program belonging to a button is running and you select another bank using the bank-selecting buttons. The half-intensity flashing indicates that the program with assigned to this channel is running, but not in the currently selected bank.

Launching the programs:

After pushing the PROGRAM button programs can be launched using buttons 1-24. After launching a program its LED will flash indicating that the program is running. The display will show the number of the currently running program in the current group and the scene number. If you select another group, the LED associated with the previously running program will flash at half intensity indicating that the program belonging to it is running, but not in the current group. If such a program has already been running in another group, it can be launched as well, the only change will be that the program will run at the speed and scene shifting time of the currently selected group.

When creating programs, they can be masked, which means specifying which units should take part in it. When launching a program, the units belonging to its mask will run according to the launched program. If a unit has run in another group so far, it drops from that group, and only the remaining programs will belong to that program. It is called unit robbery. If all the units have been robbed from a program by program launchings in other groups, the program automatically stops, its flashing LED will not flash any more.

If the program button is kept pressed and you press any of the buttons 1-24, the program belonging to it will not start, but the controller displays the name of the program in the lower line for a short time, which can be given in the program editing. By this means the program can be identified easily, and there is no chance to launch a wrong program accidentally!

Program scene shifting time modification:

The time between loading sequential program scenes may be altered by using the WAIT slider. Scene changes can be stopped (stop), changed switched on via music input (music), or the wait time clue can be adjusted (wait) and changed via the BMP button (manual bpm) or the scroll wheels (auto bpm). Via the SCENE button (scene) you can also alter the program scene changes.

In music mode, programs may be changed via the built-in microphone unit or via an external source through the audio input.

1. STOP mode:



Turning the WAIT slider to its minimum position turns on the stop mode. The lower line of the display will show the STOP caption. In the current group no scene changes occur until stop mode is altered.

2. MUSIC mode:



Setting the WAIT slider to music signalling activates music mode. The lower line of the display shows the MUSIC caption, and the perceived rate in bpm. The controller is able to indicate microphone input rates between 60.0-200.0bpm. In this mode, scenes are shifted when a microphone impulse arrives from the audio source. The controller has an inbuilt automatic microphone sensitivity setup, which is very sensitive to varied volume inputs. If the rate is outside the given range, scene are still shifted, but the display indicates horizontal lines.

3. WAIT mode:

In the intermediate positions between STOP and MUSIC, the WAIT slider sets a time value in the range of 0.300s-5.000s. Changes progress according to a logarithmic scale so scene changes time should be as smooth as possible. The display will show the current time to the nearest thousandth of a second. This setup applies only the current group.

4. AUTO BPM mode:



In automatic mode, moving the PAN scroll wheel assigns a bpm value in the range of 60.0-200.0bpm. If you are aware of the bpm value of the current music being played, then setting this value and pressing the BPM button once can synchronize scene with the music being played. A marker can be set using the TILT scroll disc. This means that scene changes will happen at the number of steps determined by this value, in the range: 1-8.

5. SPECIAL mode:

Rotate the TILT jog wheel until you see in the upper line right side of the display the 'S' letter (it means Special). In this mode the program scene changing will work others.

Now if you start a program, only the first unit channels will load. After wait time the program scene number will not change, but the second unit channel will load. And so on. After the last unit channel loaded, the program scene number will increase by one.

With this mode you can make great effects also with simple programs. Try to change in special mode the wait and speed time. If the speed time is higher then wait time, one of the beam moving when a new beam will start move.

6. SCENE mode:

When pressing the SCENE button shifting of the programmes stops on the actual group, and step shifting will happen by pressing the SCENE button again, or pressing button 1-24. This mode can be switched off only by pressing an another event group button: RECORD, PROGRAM, PRESET, SEQUENCE.

Control of the head movement and mirror movement speed:

In automatic mode the speed of the beam movement can be controlled by the SPEED and WAIT sliders.

1. SPEED setup:

Using the SPEED slider, the movement time can be set in a range of 0.300s-5.000s.

2. SPEED set for wait time:



Moving the SPEED slider to its maximum value results in a speed time that match the scene change time. Consequently, speeds can be adjusted using the WAIT slider and beams of light move to their new position within the same timeframe as scene changes. The top line of the display indicates in the right upper corner that the SPEED value is the same as the WAIT value.

Launching the sequences:

Pressing the SEQUENCE button allows sequences to be launched using buttons 1-24. The top line of the display indicates the number of the sequence currently being run and its step number, with the current speed on the right. The bottom line indicates the current position of the sequence and which units are on or off open or closed at the time. Holding down the sequence button and pressing any of the 1-24 buttons will put this new sequence on hold. The controller's display will show the name (entered by the user at the time of creating the sequence) of the new sequence in its bottom line for a short time, thus allowing the new sequence to be easily identified and reducing the possibility of initiating the wrong sequence.



The sequence speed control offers several features. With the wait slider in the minimum position the sequence will stop. In the maximum position the sequence will run in time to any input music. In addition, it is possible to use an AUTO BPM value using the PAN scroll wheel, or to set a manual bpm

value with BPM button.

Calling the preset scenes:

Pressing the PRESET button allows preset scenes to be run via the 1-24 buttons. The display information does not change at this time.

When initiating preset scenes, the respective channels of any attached devices involved in scene are set to manual mode and their values are set according to those recorded in the preset. The MANUAL button's LED will flash, indicating that there are channels in preset mode. A preset scene can be terminated by pushing the PRESET button. Holding down the preset button and pressing any of the 1-24 buttons will put this new preset on hold. The controller's display will show the name (entered by the user at the time of creating the preset) of the new preset in its bottom line for a short time, thus allowing the new preset to be easily identified and reducing the possibility of initiating the wrong scene.

Launching Records:



By pressing the RECORD button, preset scenes can be initiated using buttons 1-24. In the top line of the display, the R letter and the record number and its step are displayed. If there is a currently running record and the PROGRAM button is pressed, the display will show the the program number which is running. If you start program while running a record, then the record will automatically stop.

Holding down the record button and pressing any of the 1-24 buttons will put this new record on hold. The controller's display will show the name (entered by the user at the time of creating the record) of the new record in its bottom line for a short time, thus allowing the new record to be easily identified and reducing the possibility of initiating the wrong one.

PROGRAMMABLE FUNCTION BUTTONS (F1-F8):

The console has programmable function buttons in F1 to F8. There are many functions which can be assigned to these function buttons. In order to assign a function to these buttons, see the MENU section: Function buttons.

Below are the functions which can be assigned to a button:

NO FUNCTION

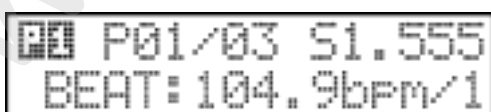
In this case there is no function is assigned and the led is off.

B.OUT



This is a black out function. Pressing the button to activate black out. If one of the parameters associated with this function is STOP, then the articulated head or mirror of any fixtures will also stop.

MAN.BPM



Pressing the BPM button in time to the music causes the controller to record the rhythm's pace and scenes change accordingly. The bpm value can be noted after the MBEAT (manual beat) caption in the display. It may also be switched off by assigning a new wait value or auto bpm.

MUSIC

This has a similar effect to moving the WAIT slider to its maximum position. This parameter can be setup for both programs and sequences.

STOP

This has a similar effect to moving the WAIT slider to its minimum position. This parameter can be setup for both programs and sequences.

=WAIT

This is similar to setting the SPEED slider to its minimum position. This is valid only for programs

STROBE



The LCD display shows two lines of text. The top line reads 'P01/03 S1.555' and the bottom line reads 'SPEC STROBO on'. There are small square icons on the left side of the top line.

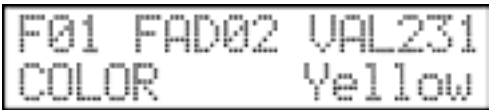
After pressing it, the LED illuminates at half intensity and will flash indicating that the strobe effect is switched on. In the bottom line of the display a 'SPEC STROBE ON' caption momentarily appears. On the special strobe channels the preset values will be transmitted (these are usually

SHUTTER channels and their value generally have devices strobing at maximum speed), which overload the value of automatic channel or the manual one, but not the contingent black-out value. Upon pressing the button again the special strobe effect is switched off, its LED illuminated at half intensity, and the display showing a 'SPEC STROBE OUT' caption for a short time.

MANUAL MODE

Manual mode is available by pressing the FIXTURE button. In this mode, individual device channels can be altered using the 1-16 sliders and the scroll wheels.

In this mode, the FIXTURE button's LED will illuminate at full intensity, indicating that the manual mode is active. Devices can be specified using the 1-24 buttons (their LEDs will be flashing). If no unit is selected, the display will indicate 'NO UNIT SELECTED'. Otherwise, the display will show the most recent value of the current devices last channel.



The LCD display shows two lines of text. The top line reads 'F01 FAD02 VAL231' and the bottom line reads 'COLOR Yellow'.

After the letter 'U' (Unit/Device) the number of the selected device is displayed. After 'POT' is the number of the slider last altered, while in the corner the value of the channel controlled by the slider can be seen. In the bottom line the name of the channel and the type name belonging to the value can be seen.

The channels of the specified device can be altered using sliders 1-8 and the current values are immediately visible in the display. If you move a slider to which there is no channel assigned, no channel value appears as that channel is undefined.



The LCD display shows two lines of text. The top line reads 'F01 FAD03 VAL----' and the bottom line reads 'not defined'.

Beams may be controlled using the scroll wheels. When they are moved, the values of the PAN and TILT channels are shown in the display. The movement speed of the beams depend on the speed with which the scroll wheels are rotated.



The LCD display shows two lines of text. The top line reads 'F01 JOG WHEELS' and the bottom line reads 'PAN:053 TILT:250'.

SLIDER button: The controller is able to control devices with maximum 32 channels. All the 32 channels can be accessed via the 16 sliders and the SLIDER shift button. Upon pressing it, its LED will flash, indicating that sliders 17-32 are now activated. When pressed again, the LED will illuminate at half intensity again, and channels 1-16 can once again be accessed.

If at least one channel is overloaded in manual mode, the LED of the MANUAL mode signals it with flashing. When pressing the FIXTURE button again, flashing stops, and all the channels that were manually overloaded, return to automatic mode.

MANUAL SHAPE FUNCTION

It is possible to recall the 72 shapes in manual mode. By pressing the SHAPE button the top line of the display will show MANUAL SHAPE. Using the 1-24 and PAGE buttons you can select a shape from the 72 available. In the bottom line of the display is visualised the shape which the device will follow. A current shape can be stopped by pressing its button again. The shape's parameters can be modified using sliders 1-6.

Pressing any other EVENT button will cause you to exit manual shape mode. Pressing the SHAPE button again and manual shape will be stopped.

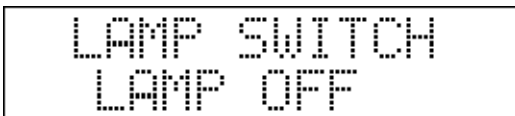
GRAND MASTER function



Using the GRAND MASTER (DATA ENTRY) slider, the intensity of connected devices can be set, if these devices have available a channel for exclusive control of intensity (usually the dimmer channel) and this has been marked as a special dimmer channel upon installation of the unit. In both

automatic and manual mode the intensity can be set by moving the slider. The bottom line of the display will show the current intensity value as a percentage figure.

LAMP function



The controller is able to turn the fixture's lamp on and off if the device has this functionality available and this has been set to on at installation. By holding down the LEFT-RIGHT buttons simultaneously, the controller moves to lamp mode. At this time switch-on and switch-off values can be sent to the fixtures using buttons 1-16. Pressing the UP button will cause its LED to flash, signalling that the lamps can be turned on now using buttons 1-24. The controller will send switch-on values to the devices for as long as the button is pressed. On pressing the DOWN button, its LED will flash, signalling the lamps to switch-off, again via buttons 1-24.

You can exit the setup by pressing the LEFT or RIGHT buttons.

RESET function



The controller is able to reset attached devices if these device have a reset function and this was activated at installation. Holding the ESC-ENTER buttons simultaneously will activate the controller's reset mode. The reset command can then be forwarded to the devices using buttons 1-24. The

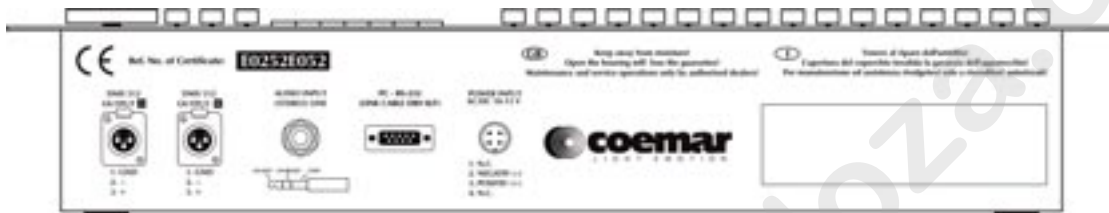
reset command will be sent for as long as the button is kept pressed.

You can exit the setup by pressing the ESC or ENTER button.

Technical specification:

- Controlled units: 24pcs all kind of dmx unit
- Channel numbers: 24 unit by 32 channels
- Nr. of records: 72, max. 85 step / record
- Record step time: 0.1- 999.0s / 0.1s step
- Nr. of program scene: 1024
- Nr. of programs: 72, max. 99 scene / program
- Program wait time: 0.300s – 5.000s / 254 value
- Mirror and head speed: 0.300 – 5.000s / 255 value
- Nr. of sequences: 72, max. 32step / sequence
- Sequence speed: 0.050s – 1.000s / 254 value
- Manual beat interval: 60.0 – 200.0bpm
- No. of soft channels: 255

Connectors and plugs:



DMX connectors 'A' and 'B': For scanners, movingheads, dimmers and smoke-machines

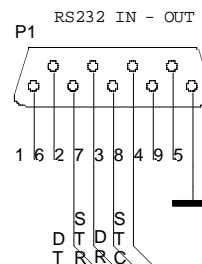
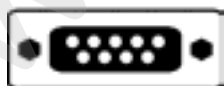
POWER INPUT AC/DC 10-15 V

Power supply: The controller can be operated from a power supply of AC and DC types, therefore the linking is not sensitive to polarity. The controller should be operated only from such a power supply, which is of 12 voltage and can be loaded with at least 500mA.



PC RS-232

PC RS232 connector: SubD9
Cable to be used: LINK CABLE DB9 M/F



AUDIO INPUT (STEREO LINE)

AUDIO INPUT (STEREO LINE) connector: 6,3mm jack



8 controller v.2.4

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Dimensions and weight:

- Width: 483mm, 19"; Height: 132mm 4HE; Depth: 83mm
- Weight of the controller: 3,8kg

Accessories:

- 1pc 230V/12V AC/DC or AC/AC power supply
- 1pc operating instruction