BOTEX

DMX DC-136

DMX controller

Table of contents

1 General notes

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

1.1 Further information

On our website (*www.thomann.de)* you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.

Example:

1. ▶ Switch on the device.

2. ▶ Press *[Auto]*.

   ⇨ Automatic operation is started.

3. ▶ Switch off the device.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
⚠	Warning – danger zone.

2   Safety instructions

Intended use

This device is used to control spotlights, dimmers, lighting effects equipment, Moving Heads or other DMX-controlled devices. The device is designed for professional use and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

> **DANGER!**
> **Danger for children**
>
> Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!
>
> Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!
>
> Never let children unattended use electrical devices.

> **NOTICE!**
> **External power supply**
>
> The device is powered by an external power supply. Before connecting the external power supply, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly the user.
>
> Unplug the external power supply before electrical storms occur and when the device is unused for long periods of time to reduce the risk of electric shock or fire.

> **NOTICE!**
> **Risk of fire**
>
> Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.

> **NOTICE!**
> **Operating conditions**
>
> This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

> **!** **NOTICE!**
> **Possible staining**
> The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains.
>
> In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

3 Features

Special features of the device:

- Suitable for eight devices with 16 DMX channels each
- Additional eight DMX channels for conventional light
- Demountable frame for installation in a 19" rack
- Connection for a fog machine with analogue control
- 16 faders for manual control
- Assigned or reversed DMX channel preview
- Sound-to-Light
- 3 function layers
- Blind home function
- Speed fade control
- Blackout master
- Stand-alone mode
- Manual overriding of scenes in chases
- MIDI control for banks, chases and blackout
- LCD

4   Installation

Wiring diagram for fog machines
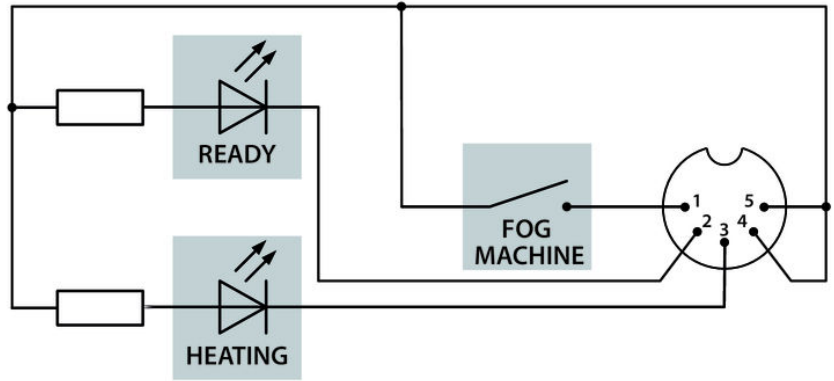
5   Starting up

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

> **!**   **NOTICE!**
> **Possible data transmission errors**
> For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.
>
> Never connect the DMX input or output to audio devices such as mixers or amplifiers.

Connections in DMX mode

Connect the DMX output of the device (C) to the DMX input of the first DMX device (1). Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).
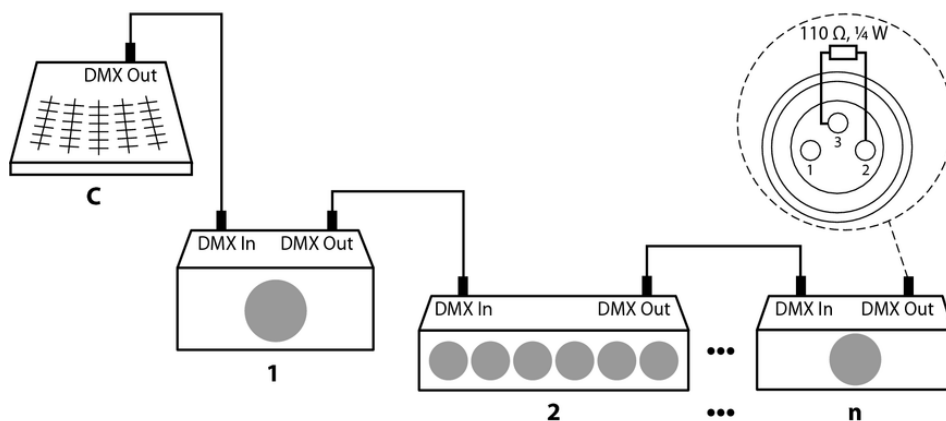
Connecting the power adapter

Connect the included 9V power supply unit to the power supply input of the unit and then plug the power cord plug into the wall outlet.

Turning the unit on

When all cable connections are made, turn on the device with the main switch on the rear panel. The device is immediately operational.

6   Connections and controls
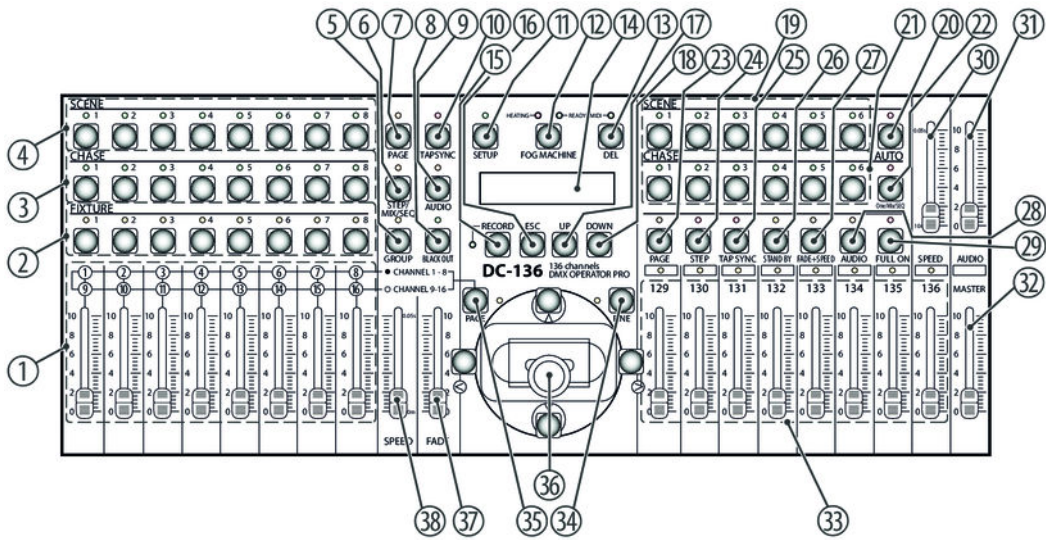
1	[1] - [16]
	Channel fader for the selected device
2	[FIXTURE]
	Selection buttons of the devices 1 – 8
3	[CHASE]
	Memory locations 1 – 8 for chases
4	[SCENE]
	Memory locations 1 – 8 for scenes
5	[GROUP]
	Activation of the multiple selection for [FIXTURE]
6	[STEP/MIX/SEQ]
	For selecting a play mode
7	[PAGE]
	When this button is pressed, the memory page can be selected with [UP] or [DOWN]
8	[BLACK OUT]
	Sets all DMX values of devices 1 – 8 to zero
9	[AUDIO]
	Activates the microphone for sound control
10	[TAP SYNC]
	Button for manual synchronization of the programme speed

11	*[SETUP]*
	Opens the settings menu

12	*[FOG MACHINE]*
	Trigger for a connected fog machine with analogue control

13	*[DEL]*
	Deletes chases, scenes and steps

14	*[DISPLAY]*
	Shows current values and operating tips

15	*[RECORD]*
	Saves a scene or a step

16	*[ESC]*
	Changes to the parent menu and leaves the activated mode

17	*[UP]*
	Increases the displayed value

18	*[DOWN]*
	Decreases the displayed value

19	*[SCENE]*
	Memory locations 1 – 6 for channels 129 – 136

20	*[AUTO]*
	Activates the automatic sequence of the stored scenes 1 – 6

21	*[CHASE]*
	Memory locations 1 – 6 for chases of channels 129 – 136

22	*[One/Mix/SEQ]*
	For selecting a play mode

23	*[PAGE]*
	When this button is pressed, the memory page can be selected with *[UP]* or *[DOWN]*

24	*[STEP]*
	Proceeds one step of an activated chase

25	*[TAP SYNC]*
	Button for manual synchronization of the programme speed

26	*[STAND BY]*
	Sets all DMX values of channels 129 – 136 to zero

27	*[FADE + SPEED]*
	Activates the parallel control of the fade time with the *[SPEED]* control

28	*[AUDIO]*
	Adjusts the input sensitivity for the audio signal
29	*[FULL ON]*
	Sets the DMX values of channels 129 – 136 to 255
30	*[Speed]*
	Sets the programme speed of the chases in a range between 0.05 s and 10 min per step
31	*[Audio]*
	Activates the microphone for the sound control of chases 1 – 6
32	*[MASTER]*
	Limits the maximum value of DMX channels 129 – 136
33	*[129] – [136]*
	Channel faders 129 – 136
34	*[FINE]*
	Enables control of Pan and Tilt fine adjustment channels with the joystick
35	*[PAGE]*
	Toggles between channels 1 - 8 and 9 - 16 of the respectively selected devices
36	JOYSTICK
	Controls its assigned Pan and Tilt channels
37	*[FADE]*
	Sets the Fade speed
38	*[SPEED]*
	Sets the programme speed of the activated chases in a range between 0.05 s and 10 min per step
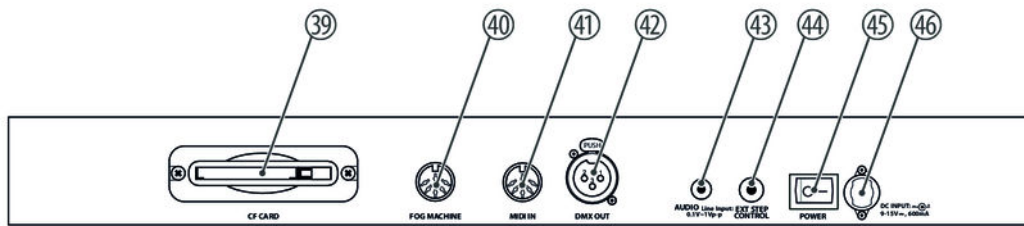
39	*[CF CARD]*	
	Interface for an external memory card.	
40	*[FOG MACHINE]*	
	A fog machine can be connected to this input.	
41	*[MIDI IN]*	
	'MIDI' port to connect a MIDI device.	
42	*[DMX OUT]*	
	DMX output	
43	*[AUDIO Line Input: 0.1V~1Vp-p]*	
	At this input, an audio signal with a level of 100 mV to 1 V can be connected.	
44	*[EXT STEP CONTROL]*	
	Connection for receiving STEP signals.	
45	*[POWER]*	
	Turns the device on and off.	
46	*[DC INPUT]*	
	Power supply port.	

7 Operating

7.1 Assignment of DMX channels to the joystick

In order to control pan and tilt channels of a device with the joystick, these channels must be assigned to each fixture.

1. ▸ Keep *[SETUP]* pressed for about 5 seconds until the display changes.

2. ▸ Press *[DOWN]* to highlight the menu item *'Assign CH'*. Then press *[RECORD]*.

   ⇨ The display shows *'Channel01>Out01'*.

3. ▸ Use the Fixture buttons to select the devices whose channels you want to assign.

4. ▸ Press *[UP]* until the display shows *'PAN > NONE'*. Now use *[DOWN]* to select the channel that controls the rotation (pan) of the device (for instance *'PAN>CH01'*). Press *[UP]*. Now you can use *[DOWN]* to assign the corresponding channel for the inclination (tilt).

5. ▸ If your device has fine tuning channels for pan and tilt, you can specify them by repeating steps 3 and 4. The display shows *'PAN FINE'* or *'TILT FINE'*.

6. ▸ To complete the assignment, press *[RECORD]*.

   ⇨ For confirmation, all LEDs light up briefly.

7. ▸ Press *[ESC]* twice to quit the menu.

7.2 Recording a scene of chase.

7.2.1 Recording a scene

1. ▸ To activate the recording mode, keep *[RECORD]* pressed for about 5 seconds pressed.

   ⇨ The corresponding LED lights.

   The display shows:

   ```
   SELECT  A  SCENE
   OR CHASE ! PAGE XX
   ```

2. ▸ Press *[PAGE]* (on the left side) so that the corresponding LED is lit. Use *[UP]* and *[DOWN]* to select the corresponding *'PAGE'* to save the scene to. A total of twelve pages are available.

3. ▶ Press the *[SCENE]* button of the scene to be recorded.

⇨ The associated LED flashes.

The display shows:

```
EDIT SCENE X / PG XX
SAVE ESC  PAGE XX
```

4. ▶ Select one or more spotlights.

5. ▶ Use the faders to adjust the scene.

> *You can apply the settings from an existing scene.*

6. ▶ If necessary, select a different set of spotlights.

7. ▶ Repeat steps 4 and 5.

8. ▶ Press *[RECORD]* to record the scene.

⇨ All LEDs light up simultaneously.

9. ▶ To leave this mode, press *[ESC]*.

> *Scenes can also be deleted in recording mode.*

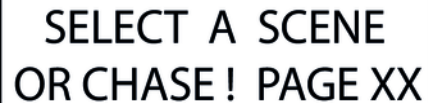**To delete a scene in recording mode:**

1. ▶ Press the button of a recorded scene.

⇨ The associated LED flashes quickly.

2. ▶ To delete the scene, press *[DEL]*.

⇨ All LEDs light up simultaneously.

3. ▶ To leave this mode, press *[ESC]*.

7.2.2 Recording a chase

1. ▶ To activate the recording mode, keep *[RECORD]* pressed for about 5 seconds pressed.

⇨ The corresponding LED lights.

The display shows:

> **SELECT A SCENE**
> **OR CHASE ! PAGE XX**

2. ▶ Press *[PAGE]* and use *[UP]* or *[DOWN]* to select the page to save the chase to. Select a memory location by pressing the corresponding *[CHASE]* button.

⇨ The associated LED flashes.

The display shows:

> **EDIT CHASE X / TL XX**
> **ADD ESC STEP XX**

'TL' in the display stands for the total number of steps contained in the selected chase.

3. ▶ Select a scene for chase recording or create a scene by selecting a *[FIXTURE]* and setting up the scene with the channel faders.

4. ▶ Press *[RECORD]*.

⇨ All LEDs flash briefly.

The display shows the next instruction.

5. ▶ To delete the current step, press *[DEL]*.

⇨ All LEDs flash briefly.

6. ▶ To leave this mode, press *[ESC]*.

7.3   Selecting or deselecting a scene or chase

7.3.1   Selecting or deselecting a scene

1. ▶ Press *[PAGE]*.

⇨ The corresponding LED lights.

2. ▶ Use *[UP]* and *[DOWN]* to select a page.

⇨ *'PAGE: XX'* is displayed in the left area of the display.

The LEDs of the programmed scenes light up.

3. ▸ To call up a scene, press the corresponding button.

4. ▸ To end the scene, press the corresponding scene button again.

7.3.2 Selecting or deselecting a chase

To select the playback mode:

1. ▸ If no programme is running, press *[STEP/MIX/SEQUENCE]*.

⇨ When the LED lights up, the MIX mode is active.

When the LED flashes, the SEQUENCE mode is active.

> ⓘ *MIX / SEQ can not be changed when a scene or chase is activated.*

2. ▸ Start the program by pressing the corresponding *[CHASE]* button.

⇨ When a program is running, the LED flashes.

3. ▸ Close all programmes before you exit this mode.

> ⓘ *In MIX mode, the LEDs flash simultaneously and the programmes run synchronized. In SEQ mode, the active programmes run sequentially.*
>
> *If several programmes control one spotlight, the last program will take effect.*

Selecting chase speed mode

Press the button of a programmed chase. The associated LED lights up to indicate the corresponding speed mode. Fast flashing means you can adjust the speed using the speed fader or *[TAP SYNC]*. Slow flashing means that the chase speed is already programmed (a further speed adjustment would be ineffective at this moment). You can change the chase speed mode by holding down the button of the programmed chase while pressing *[STEP/MIX/SEQ]*. The priority of the chase sequence remains unaffected.

Chase editing with faders

You can control each channel with the faders while the chase is running. If you want to discard the manual changes, press the activated *[CHASE]* button twice.

> ⓘ *All scenes are disabled when a chase is running.*

STEP function

If you press *[STEP]*, the chase progresses step-by-step while the program is running. Set the *[SPEED]* control to *'10m'*, to advance an activated chase.

AUDIO function

If you press *[AUDIO]* while a chase is running, the audio LED will light. This means that the device is in audio mode. In this case, *[FADE TIME]* is ineffective and the *[TAP SYNC]* LED flashes according to the audio effect. Sensitivity is set via the *[AUDIO]* control.

FADE TIME/SPEED function

If the chase speed mode (fast flashing) is activated, you can specify the running and fading speed with the controls.
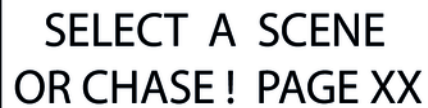
PAN/TILT FADE ONLY

Specify whether the set cross-fade time affects all channels or only the assigned PAN / TILT channels of a device.

7.4 Deleting a chase

1. ▶ To activate the recording mode, keep *[RECORD]* pressed for about 5 seconds pressed.

   ⇨ The corresponding LED lights.

   The display shows:

   ```
   SELECT A SCENE
   OR CHASE ! PAGE XX
   ```

2. ▶ Select the chase to be deleted.

   ⇨ The LED flashes quickly.

   The display shows:

   ```
   EDIT CHASE X / TL XX
   ADD  ESC  STEP XX
   ```

   ℹ *'TL XX' means TOTAL.*

3. ▶ Keep the respective Chase button pressed while briefly pressing *[DEL]*.

   ⇨ The chase will be deleted within seconds.

   All LEDs flash.

4. ▶ To leave this mode, press *[ESC]*.

7.5   Selecting or deselecting a PAR scene or PAR chase

7.5.1   Enabling or disabling PAR chase

To select the chase mode:

➤ If no programme is running, press *[One/Mix/SEQ]*.

⇨ When the LED lights up, the MIX mode is active.

When the LED does not light up, the One mode is active.

When the LED flashes, the SEQUENCE mode is active.

> *The mode can not be changed when a programme is active.*

One mode

1. ➤ Select One Mode by pressing *[One/Mix/SEQ]* until the status LED turns off.
2. ➤ Press the button of the programmed chase.
   ⇨ The corresponding LED lights.
   Other, ongoing PAR chases are closed.

SEQUENCE mode

1. ➤ To play the chases, press the buttons of the programmed chases in sequence.
   ⇨ The corresponding LEDs light up.
   All other running PAR chases are closed.
2. ➤ Close the running chases when leaving this mode.

MIX mode

In this mode, chases can run at the same time. The corresponding LEDs light up when the programmes are running.

Close the running chases when leaving this mode.

Audio mode

➤ To activate the audio mode, press *[AUDIO]* while the chase is running.

⇨ The device is in audio mode.

The Audio LED lights.

[FADE TIME] is ineffective.

The *[TAP SYNC]* LED flashes at the rhythm of the audio signal.

STEP function

If you press *[STEP]*, the chase progresses step-by-step while the program is running.

FADE + SPEED Press this button to adjust the cross-fade time in parallel to Speed with the *[SPEED]* control.

STAND BY Pressing this button sets the DMX values of channels 129 – 136 to zero.

8 Settings

8.1 Switch to the setting mode

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

    ⇨ The corresponding LED lights.

    The display shows:

```
1. CF CARD        ↓
2. ASSIGN CH.
```

2. ▶ Use *[UP]* and *[DOWN]* to navigate between menu items.

3. ▶ To select a menu item, press *[RECORD]*.

4. ▶ To exit the menu, press *[ESC]*.

8.2 Storing data to a memory card

> *Never remove the memory card while it's in use.*

> *Turn off the device before inserting or removing the memory card.*

> *For **DC-136,** only a 32 MBmemory card can be used. Otherwise your data could be lost.*

> *The DMX output should be stopped while reading or writing on the memory card.*

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

   ⇨ The corresponding LED lights.

   The display shows:

1. CF CARD ↓
2. ASSIGN CH.

2. ▶ Use *[UP]* and *[DOWN]* to select *'CF CARD'*.
3. ▶ Press *[RECORD]*.

   ⇨ The display shows:

1. READ FROM CF
2. STORE TO CF

4. ▶ Use *[UP]* and *[DOWN]* to select the item *'READ FROM CF'*.
5. ▶ Press *[RECORD]*.
6. ▶ Use *[UP]* and *[DOWN]* to select a location between 1-99 .
7. ▶ Press *[RECORD]*.

   ⇨ The data is read.

8. ▶ To cancel the procedure or exit the menu, press *[ESC]*.

8.3 Assigning patch channel

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

   ⇨ The corresponding LED lights.

   The display shows:

1. CF CARD ↓
2. ASSIGN CH.

2. ▶ Use *[UP]* and *[DOWN]* to select *'ASSIGN CH.'*.
3. ▶ Press *[RECORD]*.

   ⇨ The display shows:

CHANNEL1 > OUT1
OK ESC SEL ADJ

4. ▶ Select the spotlight you want to assign.
5. ▶ Use *[UP]* or *[DOWN]* to select the channel number you want to assign.
6. ▶ Press *[RECORD]* to confirm.
7. ▶ To cancel the procedure or exit the menu, press *[ESC]*.

8.4   PAN / TILT FADE ONLY

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

⇨   The corresponding LED lights.

The display shows:

1. CF CARD   ↓
2. ASSIGN CH.

2. ▶ Use *[UP]* and *[DOWN]* to select *'P/T FADE ONLY'*.

3. ▶ Press *[RECORD]*.

⇨   The display shows:

FIXTURE1: ONLY
OK ESC SEL ADJ

4. ▶ Use *[UP]* to select a spotlight.

5. ▶ Use *[DOWN]* to select *'FADE ONLY'* or *'FADE ALL'*.

6. ▶ Press *[RECORD]* to confirm.

7. ▶ To cancel the procedure or exit the menu, press *[ESC]*.

8.5   Display mode (100/255)

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

⇨   The corresponding LED lights.

The display shows:

1. CF CARD   ↓
2. ASSIGN CH.

2. ▶ Use *[UP]* and *[DOWN]* to select *'DISPLAY MODE'*.

3. ▶ Press *[RECORD]*.

⇨   The display shows:

DISPLAY MODE : XXX
OK ESC CHANGE

4. ▶ Use *[UP]* and *[DOWN]* to select *[MODE 100]* (percentage indication) or *[MODE 255]* (indication of DMX value).

5. ▶ Press *[RECORD]* to confirm.

6. ▶ To cancel the procedure or exit the menu, press *[ESC]*.

8.6   MIDI channel

```
1. CF CARD        ↓
2. ASSIGN CH.
```

```
MIDI CH.  <xx>
OK ESC  CHANGE
```

1. ▶ To enter the setting mode, press the button *[SETUP]* for 5 seconds.

⇨ The corresponding LED lights.

The display shows:
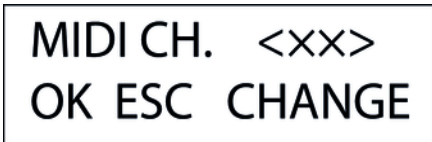
2. ▶ Use *[UP]* and *[DOWN]* to select *'MIDI CH.'* .

3. ▶ Press *[RECORD]*.

⇨ The display shows:

4. ▶ Use *[UP]* and *[DOWN]* to select a MIDI channel 1 – 16 .

5. ▶ Press *[RECORD]* to confirm.

6. ▶ To cancel the procedure or exit the menu, press *[ESC]*.

9 MIDI implementation

This unit can send and receive MIDI signals. The following list is for reference.

Number of MIDI notes / channels	Function
22-33	FIXTURE PAGE 1-12
34-49	PAR PAGE 1-16
50-57	FIXTURE SCENE 1-8
58-65	FIXTURE CHASE 1-8
66-71	PAR SCENE 1-6
72-77	PAR CHASE 1-6
78	PAR STANDBY
79	PAR FADE + SPEED
80	FIXTURE BLACKOUT
81	FIXTURE AUDIO
82	PAR AUDIO
83	PAR AUTO
84	PAR STEP
85	FIXTURE MIX/SEQ
86	PAR ONE/MIX/SEQ
87	PAR FULL ON

10   Formatting memory

To format the memory, proceed as follows:

1. ▸ Switch off the device.

2. ▸ Keep the Chase buttons *[3]*, *[6]* and the spotlight buttons *[2]*, *[7]* simultaneously pressed while turning on the device.

    ⇨   The screen shows:

       The memory will be formatted within 5 seconds.

CLEAR MEMORY NOW
PLEASE WAIT..

11   Technical specifications

Voltage supply	Plug-in power supply (9 – 15 V ⎓/ 600 mA min., positive pole via inner contact)
DMX output	3-pin XLR chassis socket
MIDI signal	5-pin standard connectors
Audio input	RCA socket, 100 mV, 1 Vpp
Fuse (internal)	5 mm × 20 mm, 0.5 A, 250 V, fast-acting
Dimensions (W × H × D)	482 mm × 80 mm × 178 mm (w/o frame)
	530 mm × 94 mm × 240 mm (w/ frame)
Weight	4 kg

12 Plug and connection assignments

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections

The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX−, 'cold signal')
3	Signal (DMX+, 'hot signal')

13 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

Notes

Notes