BOTEX
STAGE TECHNOLOGY

DC-2448 Light Operator

DMX Controller

Table of contents

1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under *www.thomann.de*.

1.1 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 document.

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.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can 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!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.

NOTICE!

Damage to the external power supply due to high voltages!

The device is powered by an external power supply. The external power supply can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the external power supply matches the local power grid before plugging in the power supply. Only operate the external power supply from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the power supply from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can overheat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.

NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

NOTICE!

Possible staining due to plasticiser in rubber feet!

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the device's rubber feet and the floor.

3 Features

Special features of the device:

- 48 control channels, freely assignable to 512 DMX channels
- Connection for a fog machine
- 4600 scenes
- 4 banks with 96 freely programmable, directly accessible programmes
- 24 programmable chases
- 48 faders for manual control
- Assigned or reversed DMX channel preview
- Sound-to-Light
- 3 function layers
- Blind home function
- Speed and Fade control
- Blackout master
- Stand-alone mode
- Manual overriding of scenes in chases
- MIDI control for banks, chases and blackout
- LED display

4   Installation

Wiring diagram for fog machines
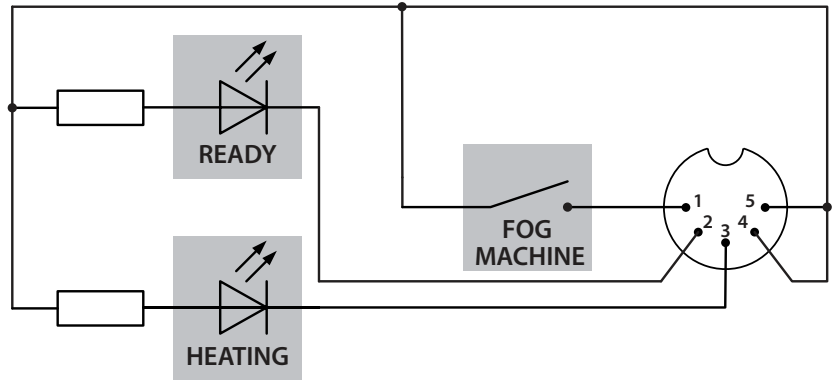
Rack mounting

If the unit is to be mounted in a 19" rack, remove the plastic panel Thereto loosen the screws that hold the panel.

5   Starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product 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!**
> **Data transfer errors due to improper wiring!**
> If the DMX connections are wired incorrectly, this can cause errors during the data transfer.
>
> Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.
>
> Use special DMX cables for the wiring instead of normal microphone cables.

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).
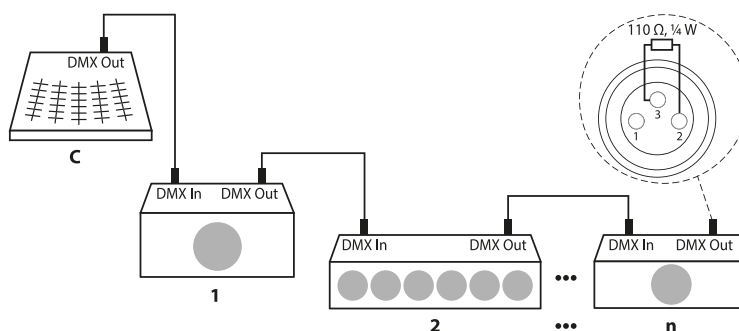
Connecting the power supply

Connect the included 9-V power adapter to the power supply input on the device and then put the power plug into the wall outlet.

Switching on the device

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

6 Connections and controls

Front - fader area
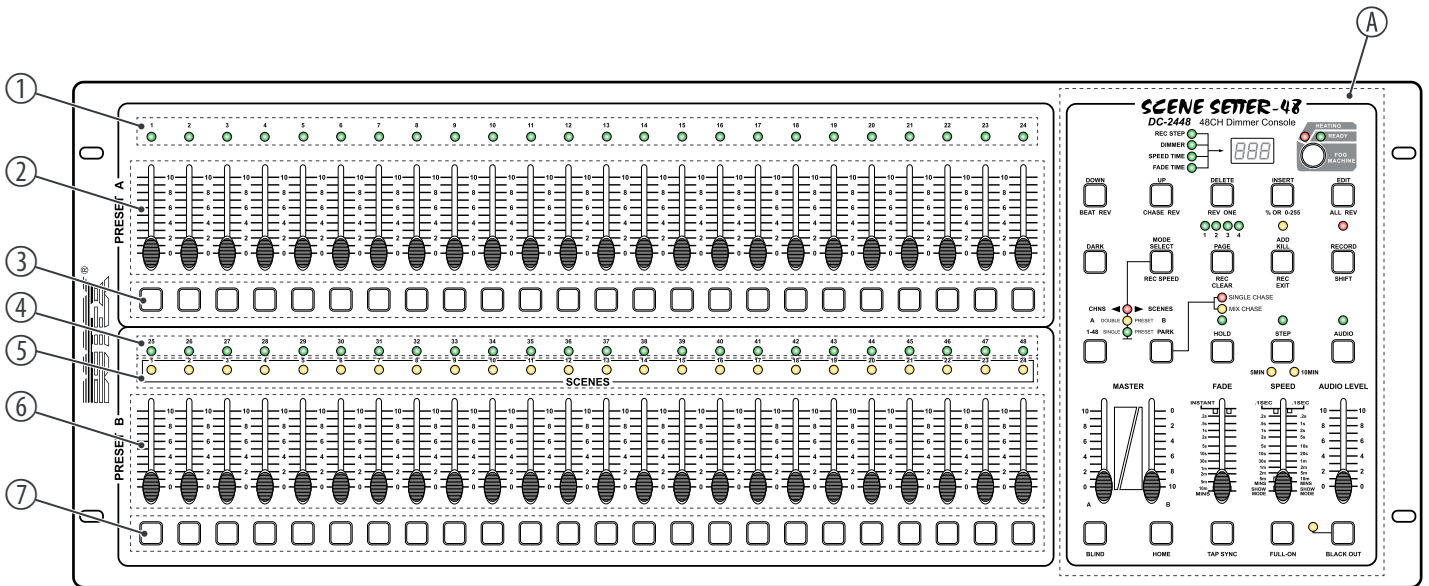
	1	*[PRESET A 1-24]* | Indicates the current intensity of the corresponding channels
	2	*[Channel faders 1-24]* | These faders can be used to adjust / programme the intensity of channels 1-24
	3	*[FLASH 1-24]* | When this button is pressed, the intensity of the respective channel 1-24 is set to 100 %.
	4	*[PRESET B 25-48]* | Indicates the current intensity of the corresponding channels
	5	*[SCENES 1-24]* | These LEDs light up when the corresponding scene is activated.
	6	Channel faders *[25-48]* / Scene faders *[1-24]* | These faders can be used to adjust / programme the intensity of channels 25-48.
	7	*[FLASH 25-48]* | When this button is pressed, the intensity of the respective channel 25-48 is set to 100 %.
	A	Control area

Front - control area
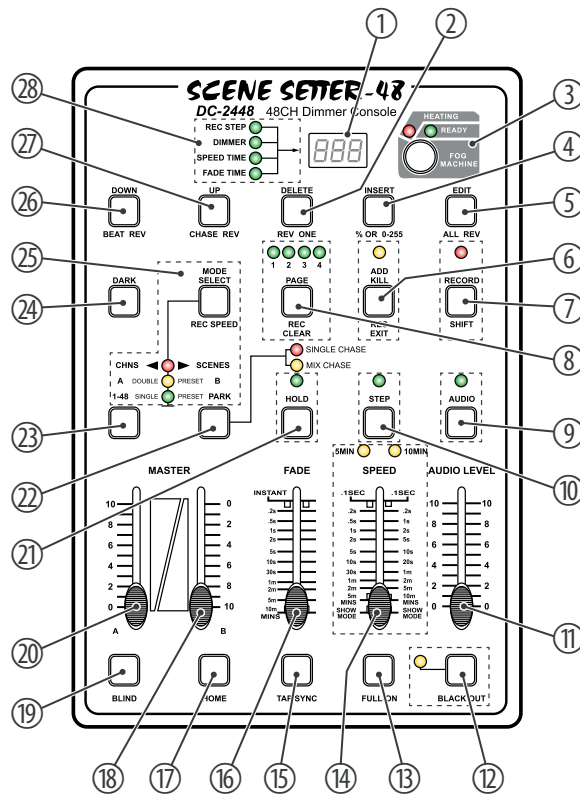
1	*[Display]* | This display shows the current activity or programme status.
2	*[DELETE/REV ONE]*
	[DELETE] | Deletes every step of a scene
	[REV ONE] | Changes the direction of a chase
3	*[FOG MACHINE]* | Control and display elements for a fog machine
4	*[INSERT/% OR 255]* | *[INSERT]* can be used to add steps to a scene. Use *[% OR 255]* to choose whether to see the value as a percentage value or as a value between 0-255.
5	*[EDIT/ALL REV]*
	[EDIT] | Is used to launch edit mode.
	[ALL REV] | The direction of all programmes is changed.
6	*[ADD KILL/REC EXIT]* | In *[ADD]*, multiple scenes or flash buttons are active. In *[KILL]*, pressing a flash button disables any other scene or programme. Use *[REC EXIT]* to exit edit mode.
7	*[RECORD/SHIFT]* | *[RECORD]* is used to launch record mode or to programme a step. *[SHIFT]* is only used in conjunction with other buttons.
8	*[PAGE / REC CLEAR]* | Switches between the four PAGES (banks)
9	*[AUDIO]* | Enables audio mode
10	*[STEP]* | This button is used to move to the next step if *[SPEED]* is on the lowest setting or edit mode is enabled.
11	*[AUDIO LEVEL]* | *[AUDIO LEVEL]* is used to adjust the audio sensitivity.
12	*[BLACK OUT]* | Sets all DMX values on the output to *[000]*
13	*[FULL ON]* | Sets all DMX values to *[255]*

14	*[SPEED]* | *[SPEED]* is used to adjust the speed of a chase.
15	*[TAP SYNC]* | If you are in "Run" mode, you can use *[TAP SYNC]* to manually specify the speed. Pressing this button twice sets the speed.
16	*[FADE]* | *[FADE]* is used to set the fade time.
17	*[HOME]* | This key is used to exit blind mode.
18	*[MASTER B]* | Master fader for channels 25-48
19	*[BLIND]* | This button is used to temporarily remove individual channels from a running programme.
20	*[MASTER]* | Master fader for channels 1-24
21	*[HOLD]* | Freezes all current DMX values at the output
22	*[PARK]* | In CHNS⟨ ⟩SCENES mode you can switch between the single-chase and mix-chase modes. In single-chase mode, the activated programmes run one after the other, while in mix-chase mode the activated programmes run simultaneously.
23	*[MASTER]* | Sets the intensity of Master A to 100% for as long as the button is pressed.
24	*[DARK]* | As long as this button is held, all DMX values at the output are set to [000].
25	*[MODE SELECT/REC SPEED]* | Use *[MODE SELECT]* to switch between these three modes: ■ CHNS⟨ ⟩SCENES ■ A DOUBLE PRESET B ■ 1-12 SINGLE PRESET Use *[REC SPEED]* to adjust the speed of all programmes in "Mix" mode.
26	*[DOWN/BEAT REV]* | *[DOWN]* can be used to change a scene in edit mode. *[BEAT REV]* can be used to change the direction of the chase during a programme with constant beat.
27	*[UP/CHASE REV]* | *[DOWN]* can be used to change a scene in edit mode. *[CHASE REV]* is used to change the direction of all chases.
28	*[REC STEP]* | Shows the recorded step on the display
	[DIMMER] | Shows the current brightness on the display
	[SPEED TIME] | Shows the playback speed on the display
	[FADE TIME] | Shows the fade time on the display

Rear panel
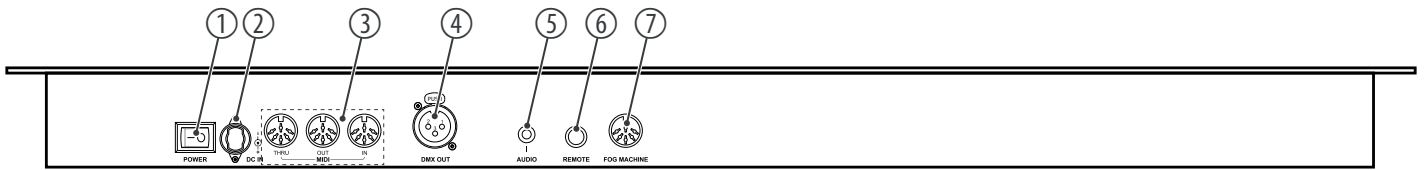
1	*[POWER]* | Turns the device on and off
2	*[DC IN]* | Input for the power supply
3	*[MIDI THRU/OUT/IN]* | "MIDI" connections for connecting a sequencer or a MIDI device
4	*[DMX OUT]* | This connection sends DMX signals to DMX-enabled devices. Use a cable with 3-pin XLR connector to connect the devices.
5	*[AUDIO]* | This input can be used to connect an audio signal with a level between 100 mV and 1 V.
6	*[REMOTE]* | "Black out" and "Full on" can also be activated via a remote control. Please use a 6.35-mm jack plug (stereo) for the connection.
7	*[FOG MACHINE]* | A fog machine can be connected to this input.

7 Operating

7.1 Starting programming

7.1.1 Enabling programming

1. ▶ Keep *[RECORD]* pressed.

2. ▶ While keeping *[RECORD]* pressed, press the Flash buttons 1, 6, 6 and 8 in sequence.

> ⓘ *When you turn on the unit for the first time, the record code is 1, 6, 6 and 8. You can change the code to protect your programmes.*

3. ▶ Release *[RECORD]* .

⇨ The RECORD LED lights up.

Now you can start programming.

7.1.2 Protecting programmes

To protect your programmes, you can change the Record code. To change the Record code, proceed as follows:

1. ▶ Activate the programming (⭥ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* and *[EDIT]* pressed simultaneously.

3. ▶

> ⓘ *The record code consists of a combination of four Flash buttons, this number may not be exceeded or fallen below.*

While keeping *[RECORD]* and *[EDIT]* pressed, enter the new code using the flash buttons.

4. ▶ Release *[RECORD]* and *[EDIT]* .

⇨ The display shows *'Cod'*

5. ▶ Keep *[RECORD]* and *[EDIT]* pressed simultaneously.

6. ▶ Re-enter the new Record code.

⇨ All Channel and Scene LEDs flash three times.

The RECORD code is now changed.

> ⓘ *If you re-enter something other than the first time, the LEDs will not light up. This means that changing the Record code has failed.*

> ⚠️ **WARNING!**
> Always remember to exit the Record mode if you do not want to continue programming. If you forget this, you lose control of the device.

7. ▶ To quit the Record mode, press *[REC EXIT]* while keeping *[RECORD]* pressed.

8. ▶ Release both buttons.

⇨ The LED of the *[RECORD]* turns off. You have left the Record mode.

To cancel the process of changing the record code:

▶ Press *[RECORD]* and *[EXIT]* simultaneously.

⇨ The change process is cancelled.

7.1.3 Programming a scene

1. ▶ Activate the programming (✎ *Chapter 7.1.1 'Enabling programming' on page 14*).

> ℹ️ *Make sure the faders [Master A&B] are both set to their maximum. ([MASTER A] is set to maximum when it is at the top. [MASTER B] is set to maximum when it is at the bottom).*

2. ▶ To select the mode *'1-48 Single'*, press *[MODE SELECT]*. This gives you control over all 48 channels.

3. ▶ Create the desired scene using the channel faders 1-48. At 0 % or DMX 0, the faders should be in position 0, at 100 % or DMX 255, the faders should be in position 10.

4. ▶ To save the desired scene as a step, press *[RECORD]*.

5. ▶ Repeat steps 3 and 4 until all desired steps have been stored.

> ℹ️ *You can store up to 1000 steps in memory.*

6. ▶ Press *[PAGE]* to select a page (1-4) where you save your scenes.

7. ▶ Keep *[RECORD]* pressed and simultaneously press one of the *[FLASH]* buttons between 25 and 48.

⇨ All record LEDs flash once.

The program is saved.

8. ▶ To exit programming mode, press *[Exit]* and *[RECORD]* simultaneously.

Example programme

Programming a chase with 16 steps with channels 1-16 and storing a sequence to *[Flash 15]* on Page 1.

1. ▶ Activate the programming (✋ *Chapter 7.1.1 'Enabling programming' on page 14*).

> ℹ️ *Make sure the faders [Master A&B] are both set to their maximum. [MASTER A] is set to maximum when it is at the top. [MASTER B] is set to maximum when it is at the bottom).*

2. ▶ To select the mode *'1-48 Single'*, press *[MODE SELECT]*. This gives you control over all 48 channels.

3. ▶ Slide channel fader 1 to position 10.

⇨ The LED lights up fully.

4. ▶ To save the desired scene as a step, press *[RECORD]*.

5. ▶ Repeat steps 4 and 5 until all channels 1-16 have been programmed.

6. ▶ Press *[PAGE]* until the LED at *[PAGE 1]* is lit.

7. ▶ Press *[FLASH 15]* while keeping *[RECORD]* pressed.

⇨ All record LEDs flash once.

The program is saved.

7.2 Editing

7.2.1 Programme editing

1. ▶ Activate the programming (✋ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Use *[PAGE]* to select the page where the programme to be edited is stored.

3. ▶ Press *[MODE SELECT]* to select *[CHNS〈/〉SCENES]* .

4. ▶ Keep *[EDIT]* pressed.

5. ▶ Press the respective *[FLASH]* button.

6. ▶ Release *[EDIT]* .

⇨ The LED of the corresponding scene lights up, indicating that the device is in 'Edit' mode.

7.2.2 Deleting programme

1. ▶ Activate the programming (✋ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Use *[PAGE]* to select the page where the programme to be edited is stored.

3. ▶ Keep *[RECORD]* and *[EDIT]* pressed.

4. ▶ Press the respective *[FLASH]* button.

5. ▶ Release the buttons.

⇨ All LEDs light up.

The programme is deleted.

7.2.3   Deleting all programmes

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Press *[FLASH 1]*, *[FLASH 4]*, *[FLASH 2]* and *[FLASH 3]* successively.

⇨   All LEDs light up.

All programmes are deleted.

7.2.4   Deleting scenes

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Record one or multiple scenes.

3. ▶ If you are not satisfied with one or more scenes, press *[REC CLEAR]* while keeping *[RECORD]* pressed.

⇨   All LEDs light up.

All scenes in the memory are deleted.

7.2.5   Deleting a single or multiple steps

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[EDIT]* pressed and then simultaneously press the respective *[FLASH]* button.

3. ▶ Press *[STEP]* until you have reached the step you want to delete.

4. ▶ Press *[DELETE]*.

⇨   All LEDs light up.

The step is deleted.

5. ▶ Repeat steps 2 and 3 to delete all unwanted steps.

6. ▶ Exit the mode. To do so, press *[REC EXIT]* while keeping *[RECORD]* pressed.

⇨   The LED of the scene turns off.

You have left the Edit mode.

Example for deleting a step

Deleting the third step in the programme on *[FLASH]* 15 on page 2.

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ To select *[CHNS⟨⟩SCENES]* , press *[MODE SELECT]*.

3. ▶ Press *[FLASH]* while keeping *[EDIT]* pressed.

⇨   The LED of the corresponding scene lights up.

4. ▶ To get to the third step, press *[STEP]*.

5. ▶ To delete this step, press *[DELETE]*.

6. ▶ Exit the mode. To do so, press *[REC EXIT]* while keeping *[RECORD]* pressed.

⇨ The LED of the scene turns off.

You have left the Edit mode.

7.2.6 Adding one or multiple steps

1. ▶ Programme one or more steps you want to add.

2. ▶ Make sure you are in *[CHNS⟨⟩SCENES]* mode and activate the *[EDIT]* mode.

3. ▶ Press *[STEP]* press until you reach the step before which you want to insert a step.

4. ▶ Press *[INSERT]* to add the step.

⇨ All LEDs light up.

The step is added.

5. ▶ Exit the Edit mode. To do so, press *[REC EXIT]* while keeping *[RECORD]* pressed.

7.2.7 Changing one or multiple steps

1. ▶ Activate the Edit mode.

2. ▶ To get to the step you want to change, press *[STEP]*.

3. ▶ Keep *[UP]* if you want to increase the intensity. Keep *[DOWN]* if you want to decrease the intensity.

4. ▶ Press the *[FLASH]* button of the corresponding DMX channel of the scene to be changed. While doing this, press and hold *[UP]* or *[DOWN]* pressed.

5. ▶ Press the respective *[FLASH]* until you are satisfied with your new scene.

6. ▶ Repeat steps 2, 3, 4 and 5 until all steps have been edited.

7. ▶ Exit the Edit mode. To do so, press *[REC EXIT]* while keeping *[RECORD]* pressed.

7.3 Operation

7.3.1 Starting a programme

1. ▶ Press *[MODE SELECT]* to select *[CHNS⟨⟩SCENES]* .

2. ▶ To call up the page where your desired programme is stored, press *[PAGE]*.

3. ▶ Slide *[MASTER B]* to position 10.

4. ▶ To initiate the programme, slide the corresponding channel fader (13-24) to position 10.

> ⓘ *The 'fade time' of the programme depends on the setting on [FADE].*

5. ▶ Use the channel fader to set the intensity of the corresponding programme.

7.3.2 Sound control

1. Use the built-in microphone or connect an external audio source via an RCA plug.
2. Select the desired programme.
3. Press *[AUDIO]*.
   ⇨ The LED lights up.

   Audio mode is activated.
4. Use *[AUDIO LEVEL]* to adjust the sensitivity.
5. To exit Audio mode, press *[AUDIO]* again.
   ⇨ The LED turns off.

   'Audio' mode is disabled.

7.3.3 Setting the programme speed with fader

1. Make sure that the Audio mode is disabled.
2. Select the desired programme.
3. Use *[FADE]* to set the desired fade time.
4. Use *[SPEED]* to set the desired speed.

7.3.4 Setting a standard beat

'Audio' mode is disabled

1. To select *[CHNS⟨⟩SCENES]* , press *[MODE SELECT]*.
2. Select the desired programme.
3. You can adjust the speed by pressing *[TAP SYNC]* twice.

7.3.5 Changing the speed mode between 5 and 10 minutes

1. Activate the programming (✆ *Chapter 7.1.1 'Enabling programming' on page 14*).
2. Keep *[RECORD]* pressed and press *[FLASH 5]* (5 minute mode) three times or *[FLASH 10]* (10 minute mode).
3. *[5MIN]* or *[10MIN]* lights up, indicating which setting has been made.
4. Exit the mode. To do so, press *[REC EXIT]* while keeping *[RECORD]* pressed.

8 MIDI and DMX channel settings

8.1 MIDI

8.1.1 Setting MIDI IN

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Press *[FLASH 1]* in parallel three times.

⇨ The display shows *'CHI'*.

The MIDI IN channel setup is now available.

4. ▶ To select *[MIDI OUT]* to a channel 1 - 16, press *[FLASH 1-16]*.

⇨ The corresponding LED lights up.

8.1.2 Exiting MIDI settings

1. ▶ Keep *[RECORD]* pressed.

2. ▶ Press *[REC EXIT]*.

8.1.3 Receiving MIDI file

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Press *[FLASH 3]* three times.

⇨ The display shows *'IN'*.

The controller can now receive MIDI files.

> ⓘ *During the data exchange, no other functions are available. The functions are automatically available again as soon as the data exchange is complete.*

> ⓘ *The data exchange is interrupted as soon as errors occur or the device is switched off.*

8.1.4 Sending MIDI file

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Press *[FLASH 4]* three times.

⇨ The display shows *'OUT'*.

The controller can now send MIDI files.

> ⓘ *During the data exchange, no other functions are available. The functions are automatically available again as soon as the data exchange is complete.*

> ⓘ *The data exchange is interrupted as soon as errors occur or the device is switched off.*

8.1.5 Implementation

- During the reception and transmission of MIDI files, all automatically running MIDI scenes and channels are stopped for 10 minutes .
- While receiving and sending MIDI data, the device automatically searches for or sends an ID of 55H(85), a file named **DC1224** with the addition **BIN(SPACE)**.
- Data can be transferred to another device or to a MIDI device.
- There are two different ways to transfer data.

Open Loop Mode

Close Loop Mode
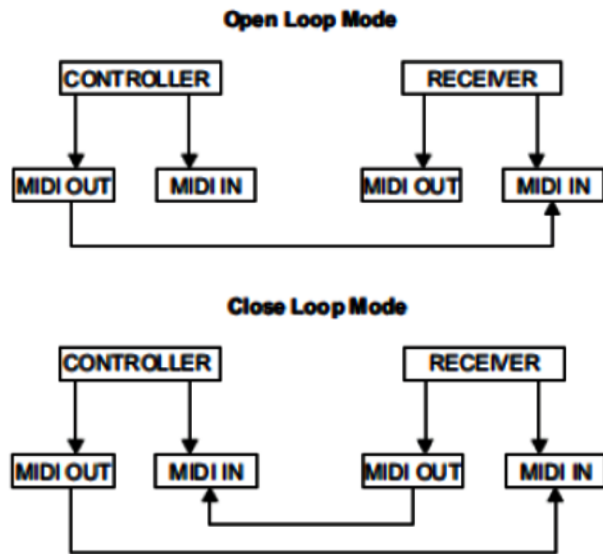
- The controller sends and receives **Note On** and **Note Off** data via the *[Flash]* buttons.

Note No.	Touch velocity	Functions
22-69	Programme master	Turns programmes 1-48 on or off.
70-93	Channel intensity	Activates channel 1-24.
94		Full on
95		Dark
96		Hold

Note No.	Touch velocity	Functions
97		Turns audio on or off.
98		CHNS⟨ ⟩SCENES
99		'Double Preset' mode
100		'Single Preset' mode
101		Step
102		Black out

8.2 DMX

8.2.1 DMX channel settings

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ To do so, press *[FLASH 8]* three times.

⇨ The display shows the current DMX channel.

4. ▶ Use *[UP]* and *[DOWN]* to select a DMX channel between 1-512.

5. ▶ Then press the desired *[FLASH]* button between 1-48.

⇨ The selected DMX channel is assigned to the console

6. ▶ If you press *[FULL ON]* the highest value *'255'* is output on the current DMX channel.

⇨ All *[FLASH]* LEDs light up.

7. ▶ If you press *[BLACK OUT]* the lowest value *'000'* is output on the current DMX channel.

⇨ All *[FLASH]* LEDs turn off.

8. ▶ To quit the Setup mode, keep *[RECORD]* pressed and additionally press *[EXIT]*.

8.2.2 Deleting the DMX channel settings

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Press *[FLASH 7]* three times.

⇨ All DMX channel settings will be deleted and reset to factory settings.

8.2.3 Calling up 12 preprogrammed programmes

1. ▶ Activate the programming (✍ *Chapter 7.1.1 'Enabling programming' on page 14*).

2. ▶ Keep *[RECORD]* pressed.

3. ▶ Successively press *[FLASH 6]*, *[FLASH 6]*, *[FLASH 8]* and *[FLASH 8]*.

⇨ 12 preprogrammed programmes are loaded to *'PAGE 1'*, all other programs are deleted.

9 Quick Start Guide for the main functions

9.1 Reversing scene direction

To reverse the direction of all scenes:

▶ Press *[ALL REV]*.

⇨ All scenes change their direction.

To reverse the chase direction of all programmes using the speed control:

▶ Press *[CHASE REV]*.

To reverse the chase direction of all programmes with standard beat:

▶ Press *[BEAT REV]*.

To reverse the chase direction of a particular programme:

1. ▶ Keep *[REC ONE]* pressed.

2. ▶ Additionally press the *[FLASH]* button of the corresponding programme.

3. ▶ Release both buttons simultaneously.

9.2 Setting Fade time

The time setting determines how long the dimmer will take to get from minimum to maximum output.

'Fade Time' can be set via *[FADE TIME]* . Adjustable from 'immediately' up to 10 minutes.

9.3 Using TAP SYNC

[TAP SYNC] is used to set and synchronize the chase rate (the speed of the chases) by pressing it several times. Chase speed is set by the interval of the last two keystrokes. The LED flashes at the new speed. The chase rate can be set at any time, whether a programme is set or not.

[TAP SYNC] overwrites all previously made speed controller settings until it is moved again. This also applies to preset standard beat.

9.4 Using MASTER fader

[MASTER] allows proportional control over all channels and scenes except the *[FLASH]* buttons. For example:

If the master fader is in the zero position, the output will also be zero, unless *[FLASH]* or *[FULL ON]* is used. If the master fader is set to 50 % , also the channel output will be 50 % , unless *[FLASH]* or *[FULL ON]* is used.

When the master fader is in its highest position, all device settings can be used.

9.5   Selecting 'Single' mode.

All programmes run sequentially and start at the lowest number.

The number of the currently running programme is shown in the display.

All programmes are controlled with the same speed controller.

1. ▶ To select *[CHNS⟨⟩SCENES]* , press *[Mode Select]*.

2. ▶ Press *[PARK]* and use *[SINGLE]* to select the 'Single Chase' mode.

⇨   A red LED lights up.

9.6   'Mix' mode

All programs run synchronously.

All programmes are controlled with the same speed controller or the speed of each programme can be controlled individually.

1. ▶ Press *[MODE SELECT]* to select *[CHNS⟨⟩SCENES]* .

2. ▶ Press *[PARK]* and use *[MIX CHASE]* to select the 'Single Chase' mode.

⇨   A red LED lights up.

9.7   Dimmer Display

The display is used to display the percentage or absolute DMX value.

To switch between the percentage and absolute display:

1. ▶ Keep *[SHIFT]* pressed.

2. ▶ To switch between the percentage and absolute display, press *[% OR 0-255]*.

9.8   BLIND and HOME

[BLIND] temporarily removes a channel from a chase when it is playing, and allows you to manually control that chase.

To switch to Blind mode:

1. ▶ Keep *[BLIND]* pressed and press the *[FLASH]* button which is associated with the channel that is temporarily removed from the Chase.

2. ▶ To return to normal chase, keep *[HOME]* pressed and press the respective *[FLASH]* button.

9.9   PARK

If you are in *[CHNS⟨⟩SCENES]* mode, keep *[PARK]* pressed to switch between 'Single' and 'Mix' mode.

When the device is in 'Double Preset' mode, press *[PARK]* simultaneously together with *[MASTER B]*.

In 'Single Preset' mode, the current output can be recorded. Settings are made with *[MASTER B]* .

9.10   ADD/KILL

[ADD/KILL] changes the mode of the 'Flash' buttons. Normally, the 'Flash' buttons are in 'Add' mode. Pressing *[FLASH]* does not deactivate a scene, different scenes can run at the same time.

'Kill' mode is activated by pressing *[ADD/KILL]* , the LED above it lights up. By pressing *[FLASH]*, any other active scene or programme is disabled.

In 'Kill' mode, the disabled programme is not stopped, but it can not be output.

9.11   Double Preset

1. ▶ To enter the 'A Double Preset' mode, press *[MODE SELECT]*.
2. ▶ In this mode, channels 1-24 are controlled with both channel faders 1-24 and channel faders 25-48 .
3. ▶ With *[MASTER A]* , faders 1-24, with *[MASTER B]* faders 25-48 are controlled.

> *In this mode, no scene can be recorded.*

Example

1. ▶ Change to the 'Double Preset' mode.
2. ▶ Set faders 1-6 to the highest position, as well as 19-24.
3. ▶ Set *[MASTER A]* and *[MASTER B]* to the same value.
   ⇨   You now have a scene.

10 Technical specifications

Number of DMX channels	512	
Input connections	MIDI	Standard connections, 5-pin
	Audio signal	Cinch socket, 100 mV, 1 Vpp
Output connections	DMX control	XLR panel socket, 3-pin
Power supply	Power adapter	
Operating voltage	12 - 20 V ⎓ / 500 mA min., centre positive	
Dimensions (W × H × D)	716 mm × 80 mm × 267 mm	
Weight	6.7 kg	

11   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')

12 Protecting the environment

Disposal of the packing material

Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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

Observe the disposal note regarding documentation in France.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

If your old device contains personal data, delete those data before disposing of it.

Notes