BOTEX

SD-10

User manual

DMX recorder

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# 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 unit is used to record and playback DMX signals. 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.

# 3    Features

- DMX input for recording DMX sequences
- DMX output
- Data storage for 96 channels, 9 chases and 9 strobe programmes, each with up to 48 steps
- Playback of DMX sequences on the DMX output either manually or timer controlled
- Speed and fading between recorded scenes adjustable
- Sound-controlled operation via built-in microphone possible
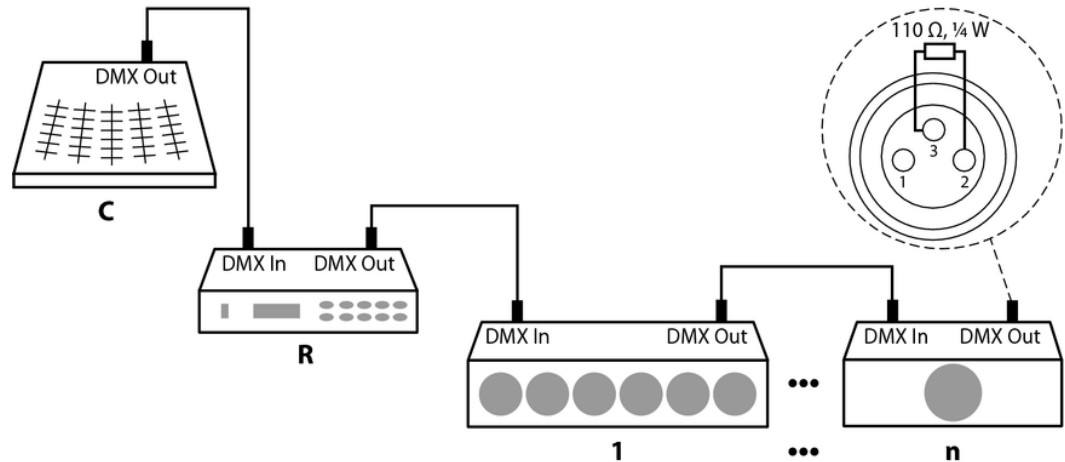- Operating via buttons and display on the unit

# 4    Installation and 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.

**DMX connections**

Connect the DMX input of the DMX recorder (R) to the DMX output of a DMX controller (C). Connect the output of the DMX recorder (R) to the first DMX device (1), such as a spotlight. Connect the output of the first DMX device (1) to the input of the second one and so on, to form a series connection. Make sure that the output of the last DMX device (n) in the chain is terminated by a resistor (110 Ω, ¼ W).
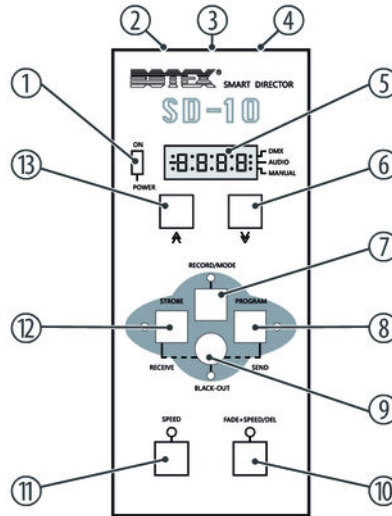
**DMX indicator**

While both the device and the DMX controller are in operation, the *[DMX]* LED lights up and thereby indicates that a DMX signal is being received on the input.

Connect the included AC adapter to the device, then to the mains. Switch the unit on with the main switch to start operation.

# 5    Connections and controls

| 1 | [POWER] |
|---|---|
| | Main switch. Turns the device on and off. |
| 2 | DC INPUT |
| | Connection for the supplied power adapter. |
| 3 | [DMX IN] |
| | DMX input |
| 4 | [DMX OUT] |
| | DMX output |
| 5 | [DISPLAY] |
| | ■  [DMX]: Indicates that a DMX signal is being received.<br>■  [AUDIO]: Lights when playing in Audio mode.<br>■  [MANUAL]: Lights when playing in Manual mode.<br><br>When playing back in Auto mode, neither [AUDIO] nor [MANUAL] will light. |

| 6 | *[DOWN]* / ⌄ |
|---|---|
| | Decreases the displayed value by one. |
| 7 | *[RECORD/MODE]* |
| | Turns Recording mode on. |
| 8 | *[PROGRAM]* |
| | Selects chaser programmes for recording or playback. |
| 9 | *[BLACK-OUT]* |
| | Function button with different meaning, depending on the current mode. |
| 10 | *[FADE+SPEED/DEL]* |
| | Function button with different meaning, depending on the current mode. |
| 11 | *[SPEED]* |
| | Function button with different meaning, depending on the current mode. |

12  *[STROBE]*

Selects strobe programmes for recording or playback.

13  *[UP] / ⌃*

Increases the displayed value by one.

# 6    Operating

## 6.1   Record

**Recording a programme**

**1.** ▶ Press and hold *[RECORD/MODE]* for five seconds.

⇨    The LED above the button lights up. The display shows the programme and its last scene.

**2.** ▶ Press *[PROGRAM]* or *[STROBE]* to select chase or strobe programmes.

⇨    The LED next to the corresponding button lights up.

**3.** ▶ Press *[UP]* or *[DOWN]* to select the desired programme. You can choose between 9 chaser and 9 strobe programmes.

**4.** ▶ Press *[RECORD/MODE]* to record a scene. Now create a scene on your DMX controller. If you want to record this scene, press *[RECORD/MODE]*.

⇨    As soon as all the LEDs light up, the scene is saved. You can save up to 48 scenes.

**5.** ▶ Press *[BLACK-OUT]* until the *[RECORD/MODE]* LED turns off to stop recording

**Deleting a programme**

**1.** ▶ Press and hold *[RECORD/MODE]* for five seconds.

    ⇨   The LED above the button lights up.

**2.** ▶ Press *[PROGRAM]* or *[STROBE]* to select chase or strobe programmes.

    ⇨   The LED next to the corresponding button lights up.

**3.** ▶ Press *[UP]* or *[DOWN]* to select the desired programme.

**4.** ▶ Press *[FADE+SPEED/DEL]* to delete the selected programme.

**Deleting a scene**

1. ▷ Press and hold *[RECORD/MODE]* for five seconds.

   ⇨ The LED above the button lights up.

2. ▷ Press *[PROGRAM]* or *[STROBE]* to select chase or strobe programmes.

   ⇨ The LED next to the corresponding button lights up.

3. ▷ Press *[UP]* or *[DOWN]* to select the desired programme.

4. ▷ Press *[RECORD/MODE]*.

5. ▷ Use *[UP]* or *[DOWN]* to select a scene you want to delete.

6. ▷ Press *[FADE+SPEED/DEL]* to delete the selected scene.

**Adding a scene**

1. ▶ Press and hold *[RECORD/MODE]* for five seconds.
   ⇨ The LED above the button lights up.
2. ▶ Press *[PROGRAM]* or *[STROBE]* to select chase or strobe programmes.
   ⇨ The LED next to the corresponding button lights up.
3. ▶ Press *[UP]* or *[DOWN]* to select the desired programme.
4. ▶ Press *[RECORD/MODE]*.
5. ▶ Use *[UP]* or *[DOWN]* to select the scene where you want to add another.
6. ▶ Now create a scene on your DMX controller. If you want to add this scene, press *[RECORD/MODE]*.

**Showing preview for a scene**

1. ▶ Press and hold *[RECORD/MODE]* for five seconds.

    ⇨ The LED above the button lights up.

2. ▶ Press *[PROGRAM]* or *[STROBE]* to select chase or strobe programmes.

    ⇨ The LED next to the corresponding button lights up.

3. ▶ Press *[UP]* or *[DOWN]* to select the desired programme.

4. ▶ Press *[RECORD/MODE]*.

5. ▶ Press *[PROGRAM]* or *[STROBE]*.

    ⇨ The LED next to the corresponding button lights up.

6. ▶ Use *[UP]* or *[DOWN]* to select the desired scene.

7. ▶ Press *[PROGRAM]* or *[STROBE]* to exit the Preview mode.

**Quitting Recording mode**

▶ Press *[BLACK-OUT]* until the *[RECORD/MODE]* LED turns off to stop recording

**Recording AS/AP scenes**

**1.** ▶ Press and hold *[RECORD/MODE]* for five seconds.

⇨ The LED above the button lights up. The display shows the programme and its last scene.

**2.** ▶ Use *[UP]* or *[DOWN]* to choose between *'AS'* (strobe programme) and *'AP'* (chaser programme).

**3.** ▶ Press *[RECORD/MODE]*.

**4.** ▶ Press *[RECORD/MODE]* to record a scene. Now create a scene on your DMX controller. If you want to record this scene, press *[RECORD/MODE]*.

⇨ As soon as all the LEDs light up, the scene is saved.

**5.** ▶ Repeat step 4 until the desired programme is complete. You can record a maximum of 60 scenes in this AS / AP programme.

**6.** ▶ Press *[BLACK-OUT]*.

⇨ The display shows *'SP01'*. Now you can set the beat time or fade time of the first step of the first scene.

**7.** ▶ Press *[SPEED]* to adjust the speed of the scene. Press *[FADE+SPEED/DEL]* to adjust the fade speed.

8. ▶ Press *[UP]* or *[DOWN]* to set the beat or fade time of the current step.

9. ▶ To go to the next step, press *[PROGRAM]* (for AP scenes) or *[STROBE]* (for AS scenes).

10. ▶ Press *[UP]* or *[DOWN]* to select the next scene. Repeat steps 7, 8, and 9 until each step has a beat and a fade time assigned to it.

11. ▶ Press *[BLACK-OUT]* to return to the AS / AP programme.

12. ▶ Press *[RECORD]* to exit the Recording mode.

## 6.2 Playback

When you turn on the device, it is automatically in Run mode. Press *[RECORD/MODE]* to activate the programmes in audio, Manual or Auto mode. Make sure that these programmes contain previously saved scenes, otherwise they will not run.

**Programme playback in Manual mode**

1. ▷ Press *[RECORD/MODE]* repeatedly until the *[MANUAL]* LED lights up.

2. ▷ Press *[PROGRAM]* or *[STROBE]* repeatedly until you have selected the desired programme.

3. ▷ If necessary: disable *[BLACK-OUT]*.

4. ▷ Press *[UP]* or *[DOWN]* to play the scene step by step.

**Programme playback in Audio mode**

1. ▷ Press *[RECORD/MODE]* repeatedly until the *[AUDIO]* LED lights up.

2. ▷ Press *[PROGRAM]* or *[STROBE]*.

3. ▷ If necessary: disable *[BLACK-OUT]*.

4. ▷ Press *[UP]* or *[DOWN]* repeatedly until you have selected the desired programme.

   ⇨ The selected programme is controlled by the rhythm of the music received by the built-in microphone.

**Programme playback in Auto mode**

1. ▶ Press *[RECORD/MODE]* repeatedly until neither the *[AUDIO]* nor the *[MANUAL]* LED light up.

2. ▶ If necessary: disable *[BLACK-OUT]*.

3. ▶ Press *[UP]* or *[DOWN]* repeatedly until you have selected the desired programme.

   ⇨ When the programme is selected, it will play at the speed you have selected. You can set the speed in a range from 10 steps/s to 1 step/600 s.

**Setting the programme speed**

1. ▶ Press *[SPEED]* or *[FADE+SPEED/DEL]* to choose between Chase mode and Fade mode.

   ⇨ The illumination of the LED shows you the selection. If the LED at *[SPEED]* lights up, you're in Chase mode. If the LED at *[FADE+SPEED/DEL]* lights up, you're in Fade mode.

2. ▶ Press *[UP]* or *[DOWN]* to adjust the speed between 0,1 s and 600 s. The display shows the selected speed. *'1:00'* corresponds to one minute; *'1.00'* corresponds to one second.

3. ▶ Press *[SPEED]* or *[FADE+SPEED/DEL]* to complete the setting.

## 6.3  Data exchange

**Sending data**

**1.** ▶ Press and hold *[BLACK-OUT]* for three seconds.

**2.** ▶ Press *[PROGRAM]* and *[BLACK-OUT]* simultaneously. If the device has stored scenes, the display shows *'OUT'*, indicating that data can be sent. Otherwise the display shows *'EPTY'* – all programs are empty.

**3.** ▶ Make sure that the receiving device is in Receive mode to fully receive the file.

**4.** ▶ Press *[FADE+SPEED/DEL]* to send the data set. During sending, no other functions are accessible.

**5.** ▶ When sending is complete, the display shows *'END'*. Press any button to exit this mode.

**Receiving data**

1. ▸ Press and hold *[BLACK-OUT]* for three seconds.

2. ▸ Press *[STROBE]* and *[BLACK-OUT]* simultaneously. If the device has saved scenes, the display shows *'SURE'*, otherwise *'IN'*.

3. ▸ Press *[FADE+SPEED/DEL]* to receive the data set.

   ⇨ The display shows *'IN'*.

4. ▸ When receiving is complete, the display shows *'END'*. Press any button to exit this mode.

## 6.4   Special functions

**Setting up Black-out mode**

1. ▶ Switch off the device.

2. ▶ Press *[SPEED]* and *[BLACK-OUT]* while turning the power on.

   ⇨ If the display shows *'Y-Bo'* the unit will not show any output after powering up. If the display shows *'N-Bo'* output is active after powering up.

3. ▶ Press *[FADE+SPEED/DEL]* to switch between *'N-BO'* and *'Y-BO'*.

4. ▶ Press *[PROGRAM]* to complete the setting.

**Clearing memory, resetting to factory defaults**

1. ▶ Switch off the device.

2. ▶ Press *[PROGRAM]*, *[UP]* and *[FADE+SPEED/DEL]* simultaneously until the device powers up.

   ⇨ The memory is cleared, the device is reset to factory defaults.

# 7 Technical specifications

| Voltage supply | Wall plug transformer (12 V/ 300 mA⎓), positive pole via inner contact |
|---|---|
| Dimensions (W × H × D) | 220 mm × 65 mm × 72 mm |
| Weight | 0.8 kg |

# 8    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') |

# 9     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). 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