BOTEX
STAGE TECHNOLOGY

SD-10

User manual

DMX recorder

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Table of contents

1 General notes ... 6
1.1 Further information ... 7
1.2 Notational conventions ... 8
1.3 Symbols and signal words ... 9
2 Safety instructions ... 11
3 Features ... 14
4 Installation and starting up ... 15
5 Connections and controls ... 18
6 Operating ... 21
6.1 Record ... 21
6.2 Playback ... 27
6.3 Data exchange ... 30
6.4 Special functions ... 32
7 Technical specifications ... 33
8 Plug and connection assignments ... 34

9 Protecting the environment..... 35


SMART DIRECTOR
SD-10
DMX
AUDIO
MANUAL
POWER
ON
RECORD/MODE
PROGRAM
SEND
STROBE
RECEIVE
BLACK-OUT
FADE+SPEED DEL
SPEED

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

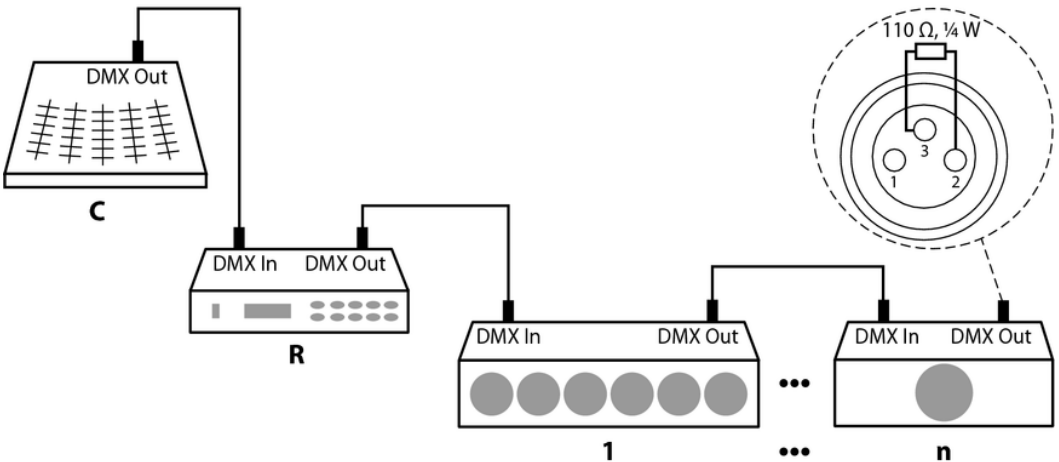
4 Installation and starting up

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).

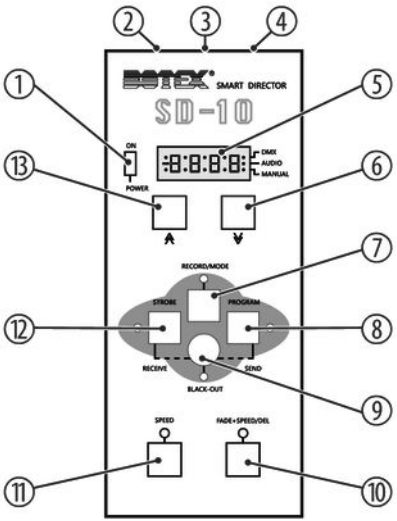


DMX indicator

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. ■ *[AUDIO]*: Lights when playing in Audio mode. ■ *[MANUAL]*: Lights when playing in Manual mode. 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⎓), centre positive
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) 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.