



DR-1

DMX recorder



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# 1 General notes

This user manual contains important information on safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to other users, be sure that they also receive this manual.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

## **Symbols and signal words**

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
<b>DANGER!</b>	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.
<b>NOTICE!</b>	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 intended to be used to record and reproduce 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 to record DMX sequences in real time
- DMX output; the lines are galvanically isolated by optocouplers
- Data storage on standard SD memory cards (included)
- Reproduction of the DMX sequences on the DMX output either manually or timer controlled
- Endless loop playback available
- Connection for optional remote control

## 4 Installation

Unpack and check carefully 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.

### Rack mounting

The unit has been designed for rack mounting in a standard 19-inch rack; it occupies one rack unit.

### 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 pin assignment.



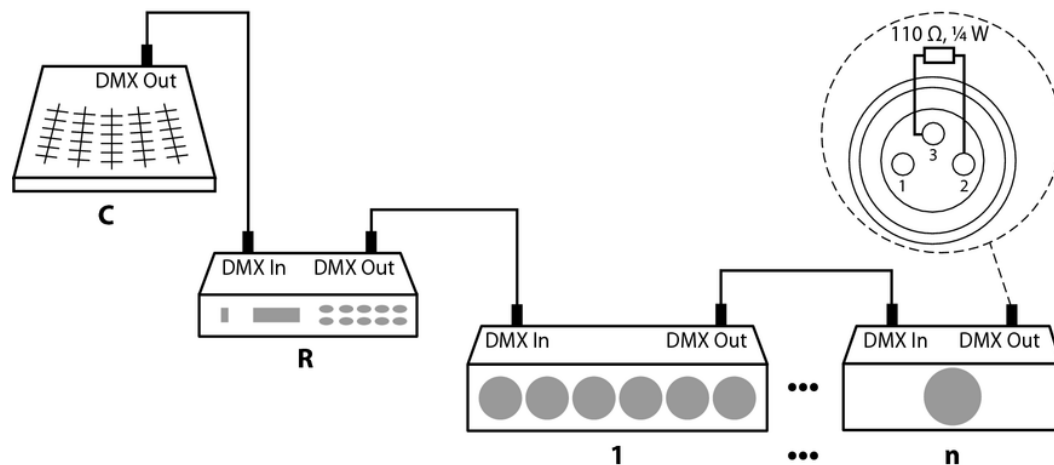
1	Ground, shielding
2	DMX data (-)
3	DMX data (+)

## 5 Starting up

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

## DMX connections

Connect the DMX input of the DMX recorder (R) to the DMX output of a DMX controller (C). Connect the DMX output of the 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 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 ( $110\ \Omega$ ,  $\frac{1}{4}\text{ W}$ ).

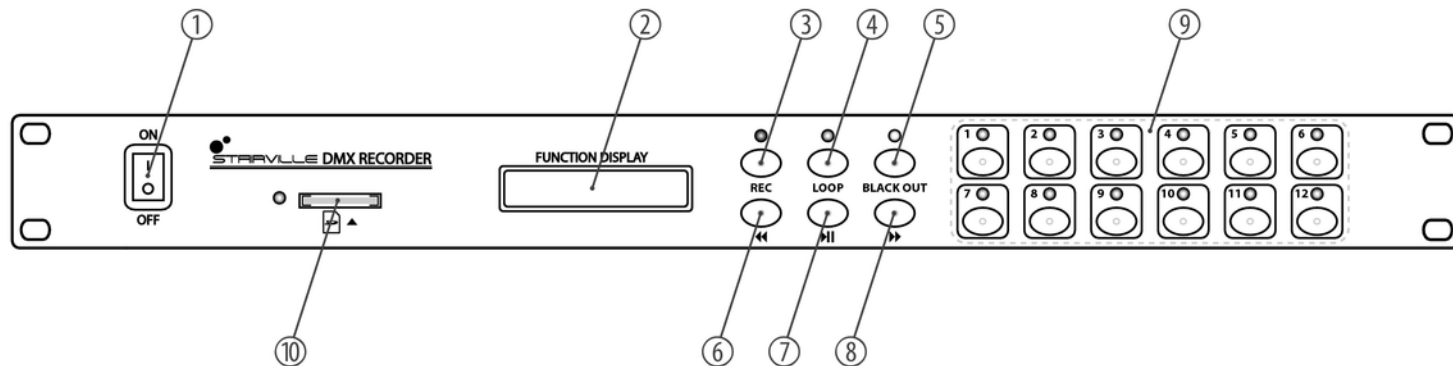



### **DMX indicator**



If the unit and the DMX controller are operating, the word DMX flashes in the display, thereby indicating that a 'DMX' signal is received at the input.

## 6 Connections and operating elements

### Front panel

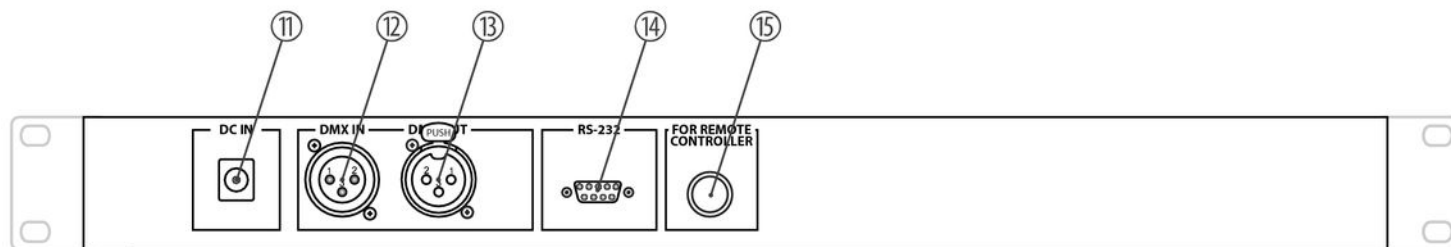


1	Main switch to turn the device on or off.
2	Display.
3	<i>[REC]</i> button To start a recording.
4	<i>[LOOP]</i> button To reproduce a recorded file in an endless loop.
5	<i>[BLACK OUT]</i> button To blackout all connected DMX devices.
6	 button During playback: to reduce the speed. In menu: to decrease the displayed value by one.

7	 button During recording and playback: to pause or resume recording or playback. Keep this button pressed for 3 seconds to open the menu. In menu: to select a sub menu or to confirm a selection.
8	 button During playback: to increase the speed. In menu: to increase the displayed value by one.
9	Keypad to select a file on the SD card for recording or playback. Each file is assigned to an indicator light. If the light flashes, DMX data was already recorded to this file.
10	Indicator light and slot for SD memory cards.



## Rear panel



11	<b>DC IN</b> Connection for external power supply (DC 9...12 V $\overline{=}$ ).
12	<b>DMX IN</b> Input for DMX signal, such as coming from a DMX controller.
13	<b>DMX OUT</b> Output for DMX signal to be connected to DMX controlled devices.
14	<b>RS-232</b> No function.
15	<b>FOR REMOTE CONTROLLER</b> 1/4" phone socket to connect the optionally available remote control Stairville Pocket Master.

## 7 Operation

With this device you can record DMX signal sequences. The DMX sequences are recorded to individual files on an SD memory card. Each SD memory card can contain twelve files in total.

You can play back the stored sequences once, or run in an endless loop or let the built-in timer control the playback.

### 7.1 Recording

#### Procedure



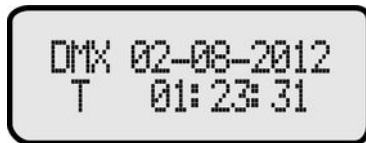
1. ➤ Make sure that an SD memory card is inserted into the card slot (10) on the front panel.
2. ➤ The device must be in normal operating state, where no menu is open. The display shows date and time. If any menu should still be open, press the ►|| button to quit the menu.





3. ➤ Press the [REC] button.
  - ⇒ The indicator light next to the SD card slot lights up and the display prompts you to select a file for recording.
4. ➤ Use the keypad (9) to select a file. If the indicator light above a keypad button flashes, this file already contains a DMX sequence. When choosing a file that already contains data, the new recording will overwrite the previous data.
  - ⇒ After selecting a file, the rectangle in the display indicates that the device is ready to record.
5. ➤ Press the ►|| button to start the recording. Now use your DMX controller to perform the show that should be recorded.
  - ⇒ The dot in the display indicates the running recording. The word 'DMX' is flashing in the display when a signal is received from the DMX controller.
6. ➤ Press the ►|| button for two seconds to stop the recording.

## 7.2 Playback

### Procedure







1. ➤ Make sure that there is no DMX signal present at the input (**DMX IN**). Otherwise, no stored DMX sequence can be played.
2. ➤ Make sure that an SD memory card is inserted into the card slot (10) on the front panel.
3. ➤ The device must be in normal operating state, where no menu is open. The display shows date and time. If any menu should still be open, press the ►|| button to quit the menu.
4. ➤ Use the keypad (9) to select a file to be reproduced. If the indicator light above the button flashes, this file already contains a DMX sequence. When choosing a file that does not contain a DMX sequence, the display shows the message 'NO FILE'.  
⇒ Playback begins.
5. ➤ You can use the ◀◀ and ▶▶ buttons to decrease or increase the playback speed. The display indicates the playback speed.  
To prevent playback in an endless loop, press the [LOOP] button. To resume loop playback, press the button again.
6. ➤ To pause the playback, briefly press the ►|| button. Press the button again to resume playback on the same position.




- 7.**  Press the  for two seconds to stop the playback of the show.

## 7.3 Menu functions


### Setting the date




Press the  button for three seconds to open the menu.




Press the  and  buttons until the display shows '*Set date*'; then press the  button to select this menu item.

Use the buttons  and  to input the correct date. Then press the  button to confirm the setting and to quit this menu item.

### Setting the clock time

Press the  button for three seconds to open the menu.

Press the  and  buttons until the display shows '*Set time*'; then press the  button to select this menu item.

Use the buttons  and  to input the correct clock time. Then press the  button to confirm the setting and to quit this menu item.

## Using the timer

Press the ►|| button for three seconds to open the menu.

Press the ◀◀ and ▶▶ buttons until the display shows *'Set clock'*; then press the ►|| button to select this menu item.

For each switching point of the timer, you can now select the day of the week, the switching on / off time, the file to be played, etc.. Use the ►|| button to select the individual parameters of the switching point and the ◀◀ and ▶▶ buttons to change the respective value. Then press the ►|| button to confirm the setting.

You can determine 21 switching points per week, a maximum of three per day.

## Showing file properties

Press the ►|| button for three seconds to open the menu.

Press the ◀◀ and ▶▶ buttons until the display shows *'File info'*; then press the ►|| button to select this menu item.

The display shows the file name and the total time of the selected file.

Press ►|| to quit this menu item.

### Setting the start status

Press the ►|| button for three seconds to open the menu.

Press the ◀◀ and ▶▶ buttons until the display shows *'Start status'*; then press the ►|| button to select this menu item.

Use the buttons ◀◀ and ▶▶ to toggle between *'Normal play'* and *'Last status'*. Then press the ►|| button to confirm the setting and to quit this menu item.

### Resetting to factory default values

Press the ►|| button for three seconds to open the menu.

Press the ◀◀ and ▶▶ button until the display shows *'Default set'*; then press the ►|| button to select this menu item.

Use the buttons ◀◀ and ▶▶ to toggle between *'YES'* (reset) and *'NO'* (no reset). Then press the ►|| button to confirm the setting and to quit this menu item.

### Indicating the firmware version

Press the ►|| button for three seconds to open the menu.

Press the ◀◀ and ▶▶ buttons until the display shows *'Version'*; then press the ►|| button to select this menu item.

The display now shows the version number of the currently used firmware.

Then press the ►|| button to quit this menu item.



## 7.4 Firmware update

### Procedure

1. Save the new firmware to a directory `SD:\CA-REC2` on an SD memory card.
2. Insert the SD memory card containing the new firmware into the card slot of the device and switch the unit off.
3. Keep the buttons `[REC]`, `▶▶` and `[7]` of the keypad simultaneously pressed while switching the unit on.
  - ⇒ The display message *'Find update file'* indicates, that the new firmware is looked for.
4. Keep the buttons pressed until the display shows *'Updating firmware, please wait'*.
  - ⇒ The device now checks the new firmware and installs it then.
5. Neither take out the SD memory card, nor switch the device off until the display shows the message *'Update complete, please reboot'*.
  - ⇒ Now the installation is complete.
6. Reboot the device to put the new firmware into operation.

### 7.5 Remote control

The DMX recorder can also be remote controlled using the 'Pocket' or 'Foot-Master' remote controller. Once a remote controller is connected, its **Stand-by** LED is flashing.

#### Activating remote control

As after activation of the remote control it is no longer possible to control the DMX recorder directly, you should select all desired functions (e.g.: loop) before the remote control is activated.

Press the *[Stand-By]* button at least 3 seconds to activate the remote control.

The LED **Stand-By** turns off.

The LED **BLACK OUT** on the DMX recorder flashes.

#### Remote control operation

Press the *[Mode]* button to switch between the functions of the *[Function]* button. The **Mode** LED indicates the respective function.

**Mode** LED is lit: the programme switching function is active.

**Mode** LED is not lit: the Play-Stop function is active.

**Activating / deactivating BLACK OUT**

Briefly press the *[Stand-By]* button to activate or deactivate the 'BLACK OUT' function on the DMX recorder.

**Deactivating remote control**

Press the *[Stand-By]* button at least 3 seconds to deactivate the remote control.

Only then you may disconnect the remote controller from the DMX recorder. Otherwise, the functions remain disabled at the DMX recorder.

## 8 Technical specifications

Operating voltage supply	DC 9...12 V $\overline{=}$
Dimensions (W × D × H)	483 mm × 105 mm × 44.5 mm (1 RU)
Weight	1.5 kg

## 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 device is subject to the European directive 2002/96/EC.

Do not dispose of the device 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.





