STAIRVILLE

DMX-Master I, DMX-Master MK II ENC

DMX controller

th•mann
MUSIC IS OUR PASSION

user manual

Musikhaus Thomann
Thomann GmbH
Hans-Thomann-Straße 1
96138 Burgebrach
Germany
Telephone: +49 (0) 9546 9223-0
E-mail: info@thomann.de
Internet: www.thomann.de

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1 General information

This user manual contains important information on the 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 another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under *www.thomann.de*.

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.

Cross-references

References to other locations in this manual are identified by an arrow and the specified page number. In the electronic version of the manual, you can click the cross-reference to jump to the specified location.

Example: See *'Cross-references' on page 8*.

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:

- 192 DMX channels
- 12 units with up to 16 DMX channels operable
- 30 banks with 8 freely programmable scenes
- Six Chase programmes with up to 240 scenes from 30 banks
- Eight faders for manual control
- All data interchangeable between two units
- Auto programmes (scenes and chases), controlled by Wait Time knob (or Tap Sync) and Fade Time knob
- Stepless fade time setting (0-30 seconds)
- Two encoder wheels for precise adjustment of PAN and TILT (DMX Master MK-II ENC)
- Fine tuning for PAN and TILT
- Inverted DMX channels allow reverse output control for the sliders
- Assigned or reversed DMX channel preview
- 8 / 16 channel mode for assigned or reversed DMX channels
- Blackout master
- Stand-alone mode

- Manual overriding of scenes in chases
- Sound control
- MIDI control for banks, chases and blackout
- LCD
- DMX polarity adjustable
- Memory retention on power failure
- Auto addressing

4 Installation

NOTICE!

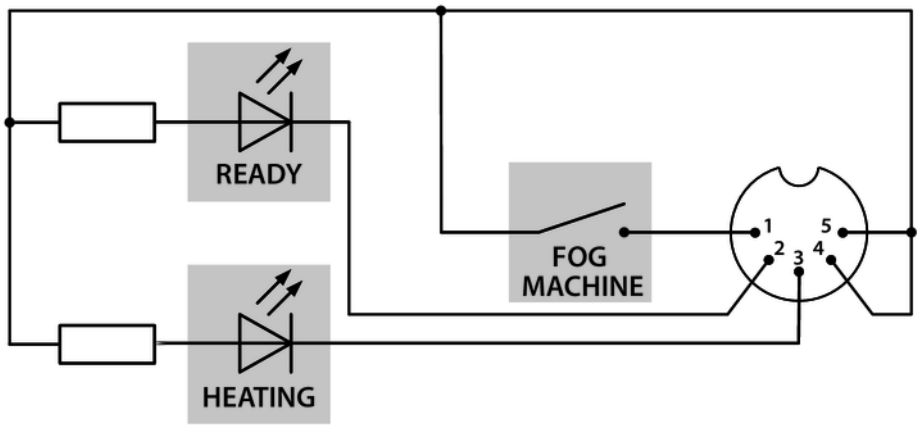
Possible staining

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.

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.

Wiring diagram for fog machines



5 Starting up

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

Connecting the power adapter

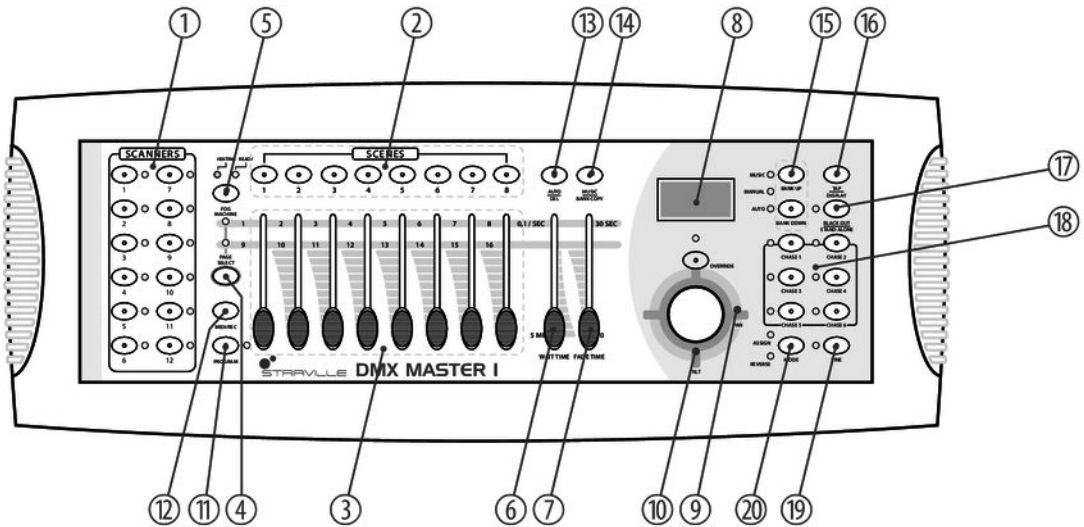
Connect the included power adapter to the 9V connector of the unit and then plug the power adapter into a wall outlet.

Turning the unit on

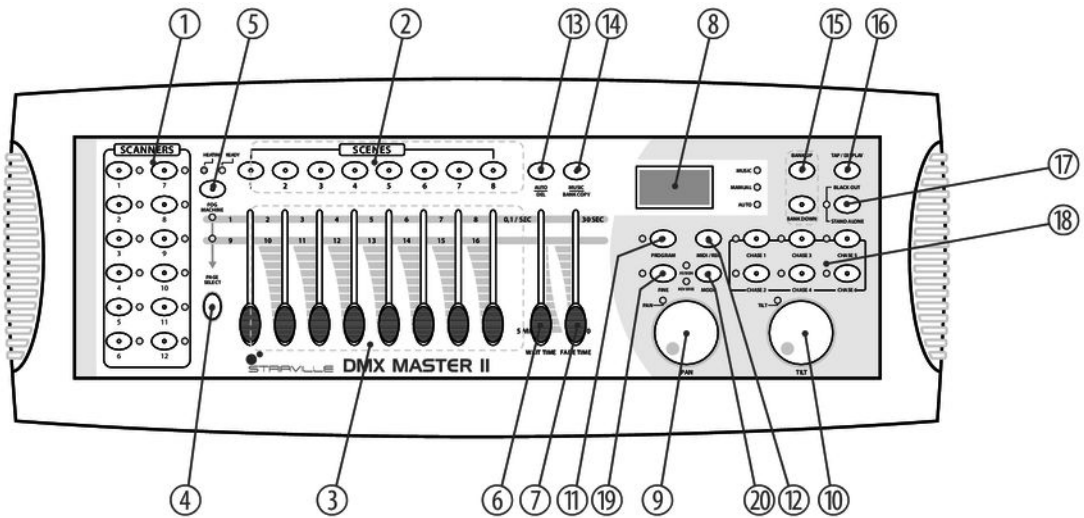
Turn on the device using the main switch on the rear panel. After switching on, the display briefly shows the software version as well as the operating mode and the associated indicator LED lights up.

6 Connections and controls

Front panel DMX Master I



Front panel DMX Master MK-II ENC



1	*[SCANNERS]* 12 scanners with 16 DMX channels and fader control. Press one of the scanner buttons to turn on the manual fader control. Press the scanner button again to turn it off. The LED next to the button lights up or goes out to indicate your selection. For channel assignment, see table below.
2	*[SCENES]* Scene buttons. Press one of the Scene buttons to load or save scenes. A maximum of 240 scenes can be saved.
3	Fader. Use these knobs to control the intensity of channels 1-8 or 9-16, depending on which Page is selected.
4	*[PAGE SELECT]* Page select button. To select the desired page A (1-8) or page B (9-16).

5	*[FOG MACHINE]* Activates the fog machine. The control LEDS indicate the current operation status of the fog machine. ■ *[HEATING]*: Fog machine is heating up. ■ *[READY]*: Fog machine is operational.
6	*[WAIT TIME]* Time control. For setting the Chase-Wait time of 0.1 s to 5 min.
7	*[FADE TIME]* Time control. For setting the Fade time. The Fade time is the time it takes for a scanner to move from one position to another, or for a dimmer from Fade In to Fade Out.

8	Display Shows the current activity of the device or the status of programming (*'Information in the display' on page 30*). The control LEDs show the current operating mode of the controller: ■ *[MUSIC]*: Sound control. ■ *[MANUAL]*: Manual operation. ■ *[AUTO]*: Automatic run.
9	*[PAN]* Pan wheel. This wheel controls the Pan movement of the scanner or is used for programming.
10	*[TILT]* Tilt wheel. This wheel controls the Tilt movement of the scanner or is used for programming.
11	*[PROGRAM]* Enables the Programme mode.

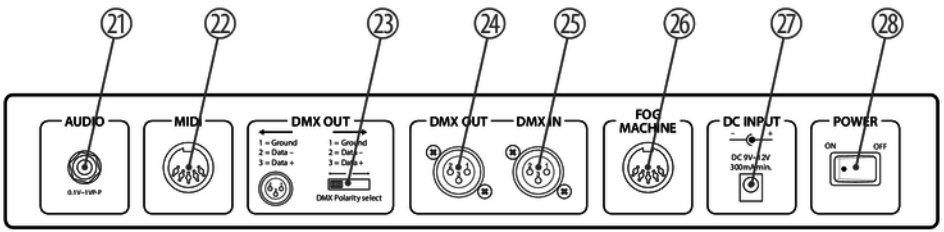
12	*[MIDI/REC]* To control MIDI operations or to record programmes.
13	*[AUTO/DEL]* Activates Auto mode or deletes scenes or chases.
14	*[MUSIC/BANK COPY]* Activates Music mode or to copy a bank of scenes.
15	*[BANK UP]* / *[BANK DOWN]* Press the Up / Down buttons to choose from 30 banks.
16	*[TAP/DISPLAY]* Use this button to set the beat for the program sequence or to switch the display from % to numeric (0-255) indication.
17	*[BLACK OUT/STAND ALONE]* Press this button to set all DMX values to 0 (Blackout). Keep the button pressed to switch to Stand alone mode.
18	*[CHASE 1]* … *[CHASE 6]* To call your programmed chases.

19	*[FINE]* When this function is enabled you can make fine adjustments for Pan and Tilt.
20	*[MODE]* Button for calling up various functions.

Device	DMX channels
1	1 … 16
2	17 … 32
3	33 … 48
4	49 … 64
5	65 … 80
6	81 … 96
7	97 … 112
8	113 … 128

Device	DMX channels
9	129 … 144
10	145 … 160
11	161 … 176
12	177 … 192

Rear panel


21
22
23
24
25
26
27
28
AUDIO
MIDI
DMX OUT
DMX OUT
DMX IN
FOG MACHINE
DC INPUT
POWER
ON
OFF
DMX Polarity select

21	*[AUDIO]* RCA input socket to connect audio equipment for sound control. 0.1 V … 1 V_{p-p}.
22	*[MIDI]* MIDI input socket.
23	*[DMX Polarity Select]* DMX polarity switch to change the polarity.
24	*[DMX OUT]* DMX output socket to connect a dimmer or other DMX-controlled devices.
25	*[DMX IN]* To receive DMX signals.
26	*[FOG MACHINE]* To connect a fog machine with analogue interface.

27	*[DC INPUT]* Connection socket for the 9 V power supply unit.
28	*[POWER ON | OFF]* Main switch to turn the device on and off.

Information in the display

Display (example)	Meaning
CHASE 5	Chase 5 is activated
STEP 002	Second step of a chase
DATA 151	DMX value (000-255)
WT: 1M36S	The current waiting time is 1 minute and 36 seconds
TP: 5.32S	The time interval between the last two Tap keystrokes is 5.32 seconds
FT: 10.5S	The fade time is 10.5 seconds
ASS 07 08	Assign DMX channels 7 and 8
RES 10 13	Reverse DMX channels 10 and 13
SN 6	Scene 6
BK 03	Bank 03

7 Basics

This chapter provides basic information about the data transmission using the DMX protocol.

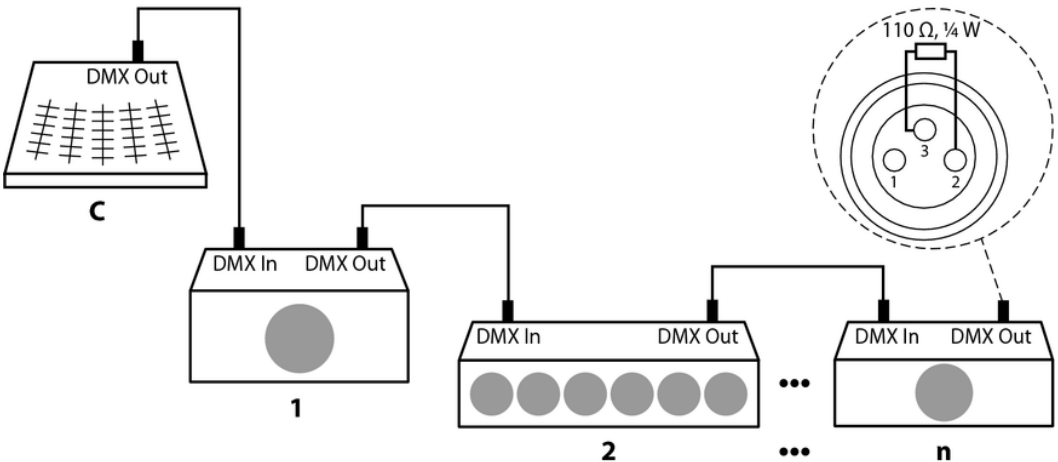
Signal transmission

DMX signals are generated by a DMX controller. The signals are transferred over a DMX cable to the connected devices. Each connection can transmit up to 512 channels. For each channel, a value between 0 and 255 is being transmitted. The 512 channels form a so-called 'DMX universe'.

Cabling

DMX devices are connected serially, that means the sending device transmits signals to all connected receivers (daisy chain). The order of the receivers in the daisy chain does not matter since all devices filter and process the relevant data independently from each other.

To create the daisy chain, the DMX input of the first receiver is connected to the DMX output of the controller or another DMX master. The output of the first receiver is connected to the input of the second one, and so on. The output of the last receiver in the DMX chain must be terminated using a resistor (110 Ω, ¼ W).



If the cable length exceeds 300 m (328 yds.) or the number of devices is greater than 32, the signal must be amplified using a DMX booster.

Signal processing

Each DMX devices operates on a specific number of channels to transfer the incoming control signals into movements, changing of light intensity or colour, and so on. Since all receivers that are part of a DMX daisy chain receive all signals, a start address must be assigned to each DMX device. Starting from this address (a value between 0 and 512) the incoming signals are being evaluated and transferred into the functions of the receiver (internal channel assignment).

It is no problem to use a start address more than once in a DMX chain. In that case, the relevant receivers operate synchronously (identical movement, light intensity, colour, and so on).

Addressing

When setting the DMX address, the counting method of the device determines the first channel. Depending on the device, the channel numbers may start from 0 or from 1. The address range may therefore reach from 0 to 511 or from 1 to 512.

8 Operating

8.1 Introduction

With the DMX Master I or the DMX Master MK II ENC you can control up to twelve devices with up to 16 DMX channels per device. 30 banks with each eight programmable scenes are available as program memory. You can programme six chases, each with up to 240 programmed scenes. Control is done via eight faders and further function buttons. With DMX Master MK II ENC, you can very easily control pan and tilt of a scanner using two encoder wheels. To create your very special light effect, you can assign or also invert DMX channels. In addition, two devices can communicate with each other so that they can exchange files.

8.2 Enabling programming mode

As soon as you turn the unit on, the manual mode will be automatically activated. To enter the programming mode, press the button *[PROGRAM]* for three seconds. The LED will start flashing, indicating that you are now in programming mode.

8.3 Programming scenes

1. Enabling programming mode.
2. Press one of the *[SCANNERS]* buttons to turn on fader control for the corresponding scanner. The lighting LED indicates this. You can select several scanners at the same time by pressing their *[SCANNERS]* buttons. So you can set several scanners at once.
3. If using a dimmer, use the faders to set the desired dimmer intensity. With the DMX Master MK-II ENC, you can also use the two encoder wheels to control the Pan or Tilt movements of the scanners.
4. If desired, use *[PAGE SELECT]* to move to the second level to programme channels 9-16.
5. Once you have made all the settings, press *[MIDI/REC]* to save the scene.
6. Use the *[BANK UP/DOWN]* buttons to select the bank where you want to save your scene. 30 banks with each eight memory locations are available.
7. To save the scene to the desired location, press the corresponding *[SCENES]* button (1-8). All LEDs and the display will flash three times, indicating that the scene has been saved. Then the display shows Bank and Scene.
8. Repeat steps 3 - 7 until all desired scenes have been saved. Press the *[SCANNERS]* button again to turn off its fader control. To set another scanner, press the corresponding *[SCANNERS]* button to turn on its fader control. Then you can begin programming again.

9. Once programming is complete, press *[PROGRAM]* for three seconds. The *[PROGRAM]* LED goes out and indicates that you have exited the programming mode.

Example: Programme scanner 1 with eight scenes in which channels 1 - 8 are successively set to 100 %. Save the scenes in bank 3.

1. Enabling programming mode.

2. Press *[SCANNERS]* 1 to turn on its fader control.

3. Press *[PAGE SELECT]* to select Page A.

4. Slide fader 1 all the way up.

5. Press *[MIDI/REC]*.

6. Select bank 3 using the *[BANK UP/DOWN]* buttons.

7. Press *[SCENES]* 1.

8. Repeat steps 4 - 7 until all eight scenes are stored in bank 3.

9. Press *[SCANNERS]* 1 again to disable the scanner.

10. Press *[PROGRAM]* for three seconds to exit programming mode.

Altering scenes

1. Enabling programming mode.
2. Use *[BANK UP/DOWN]* to select the bank containing the scene to be changed.
3. Select the desired scene using the *[SCENES]* buttons.
4. Make the desired changes using the faders and / or joystick or the encoder wheels.
5. Press *[MIDI/REC]* to save the changes.
6. Pressing the corresponding *[SCENES]* button again overwrites the existing scene.

Make sure that you select the same scene in steps 3 and 6 to avoid accidentally overwriting the wrong scene!

Copying scanners

With this function you can copy the settings of a device to another.

1. Press and hold the button on the scanner to be copied.
2. While holding this button, additionally press the button of the scanner that you want to copy the settings to.

Copying scene

1. Enabling programming mode.
2. Use *[BANK UP/DOWN]* to select the bank containing the scene to be copied.
3. Use the *[SCENES]* buttons to select the scene to be copied.
4. Use *[BANK UP/DOWN]* to select the bank to which the scene is to be copied.
5. Press *[MIDI/REC]*.
6. Select the desired memory location for the scene to be copied using the *[SCENES]* buttons.

Deleting a scene

1. Use the *[SCENES]* buttons to select the scene you want to delete.
2. Press and hold down *[AUTO/DEL]*. In addition, press the *[SCENES]* button of the scene you want to delete.

Deleting all scenes

This function clears all stored scenes and sets the DMX channels to '0'.

1. While the unit is off, press *[BANK DOWN]* and *[PROGRAM]* simultaneously.
2. While pressing the buttons, turn on the device. All scenes should now be deleted.

Copying bank

1. Enabling programming mode.
2. Use *[BANK UP/DOWN]* to select the bank to be copied.
3. Press *[MIDI/REC]*.
4. Use *[BANK UP/DOWN]* to select the bank to copy to.
5. Press *[MUSIC/BANK COPY]*. All LEDs will flash three times and thus confirm the copying of the Bank.
6. Press *[PROGRAM]* for three seconds to exit programming mode.

8.4 Programming chase

In order to programme chases, scenes must have been previously programmed. Each Chase can contain up to 240 scenes.

1. Enabling programming mode.
2. Select the Chase to be programmed using the *[CHASE]* buttons. Only one Chase can be selected in each case.
3. Select the desired scene from a bank that contains scenes (see also *Chapter 8.3 'Programming scenes' on page 35*).
4. Press *[MIDI/REC]*.
5. Repeat steps 3 and 4 until all desired scenes are stored in the chase.

Storing an entire bank to a chase

1. Enabling programming mode.
2. Select a chase using the *[CHASE]* buttons 1-6.
3. Use *[BANK UP/DOWN]* to select the bank containing the scenes to be copied.
4. Press *[MUSIC/BANK COPY]*.
5. Press *[MIDI/REC]*. All LEDs will flash three times and thus indicate that the scenes were copied into the Chase.

Adding step

1. Enabling programming mode.
2. Select the Chase, you want to add a step to.
3. Press *[TAP/DISPLAY]*, the display shows the current step.
4. Use *[BANK UP/DOWN]* to select the step behind which you want to add a step.
5. Press *[MIDI/REC]*, then the display shows the number of steps increased by one. If you, e.g., want to insert a step between steps 3 and 4, and you scroll to step 3, the display shows *'STEP 004'* when you press the *[MIDI/REC]* button
6. Press *[TAP/DISPLAY]* again, then the display shows the current chase, scene and bank. Create the desired scene and record it as a new step. Or select a programmed scene which you want to add to this chase.

You can press [TAP/DISPLAY] to toggle the display modes 'STEP' and 'BANK'.

7. Press *[MIDI/REC]* again, then all LEDs will briefly flash three times indicating that the new step has been inserted into this chase.

Deleting step

1. Enabling programming mode.
2. Select the chase containing the step to be deleted.
3. Press *[TAP/DISPLAY]*, the display shows the current step.
4. Use *[BANK UP/DOWN]* to select the step you want to delete.
5. Press *[AUTO/DEL]* to delete the step. All LEDs will flash three times briefly, thus indicating that the step has been deleted.

Deleting chase

1. Select the chase you want to delete.
2. Press and hold *[AUTO/DEL]* down while pressing *[CHASE]*. All LEDs will flash three times briefly, thus indicating that the chase has been deleted.

Deleting chases

1. With the unit off, press and hold *[AUTO/DEL]* and *[BANK DOWN]* simultaneously.
2. Switch on the device.

8.5 Assigning / reversing DMX channels.

Assigning DMX channel

1. Enabling programming mode.
2. Press *[FINE]* and *[MODE]* simultaneously twice. Then the *[ASSIGN]* LED lights up and indicates that the ASSIGN mode is active.
3. Use *[BANK UP/DOWN]* to toggle between Pan and Tilt. The corresponding LED indicates your selection.
4. Select the desired scanner.
5. Press *[TAP/DISPLAY]* to toggle between 8-channel and 16-channel mode. The display shows either *'ASSXX XX | X/Y 08CH'* or *'ASSXX XX | X/Y 16CH'*.
6. If necessary, you can use *[PAGE SELECT]* to toggle between the two levels, Page A and Page B.
7. While holding down *[MODE]*, press *[SCENES]*. All LEDs should flash briefly and thus indicating that the DMX channel has been assigned. The *[SCENES]* button 1 stands for DMX channel 1, *[SCENES]* button 2 for DMX channel 2 and so on.
8. Repeat steps 3 - 7.

8-channel mode: You can assign the PAN / TILT movement for 24 scanners. In 8-channel mode, you can save PAN / TILT for page A and page B.

16-channel mode: You can assign the PAN / TILT movement for 12 scanners. In 16-channel mode, you can save PAN / TILT only for page A or page B.

Reversing channels

1. Enabling programming mode.
2. Press *[FINE]* and *[MODE]* simultaneously. The *[REVERSE]* LED lights up and indicates that the device is in reverse mode.
3. Use *[BANK UP/DOWN]* to toggle between Pan and Tilt.
4. Press *[TAP/DISPLAY]* to toggle between 8-channel and 16-channel mode.
5. Select the desired scanner with one of the *[SCANNERS]* buttons.
6. If necessary, you can use *[PAGE SELECT]* to toggle between the two levels, Page A and Page B.
7. While holding down *[MODE]*, press the *[SCENES]* button. All LEDs should flash briefly and thus indicating that the DMX channel has been reversed. The *[SCENES]* button 1 stands for DMX channel 1, *[SCENES]* button 2 for DMX channel 2 and so on.
8. Repeat steps 3 - 7.

   8-channel mode: You can assign the PAN / TILT movement for 24 scanners. In 8-channel mode, you can save PAN / TILT for page A and page B.

   16-channel mode: You can assign the PAN / TILT movement for 12 scanners. In 16-channel mode, you can save PAN / TILT only for page A or page B.

Assigning Fade time

1. With the unit off, press and hold the two buttons *[TAP/DISPLAY]* and *[MODE]*.
2. Switch the device on again. Press *[TAP/DISPLAY]* to toggle between 'Fade Time' and 'Assign Fade Time'. The display either shows *'ALL CH| FD TIME'* or *'ONLY X/Y|FD TIME'*.
3. Press *[TAP/DISPLAY]* and *[MODE]* simultaneously to save the settings. In case you do not want to save, press *[BLACKOUT]* to exit the mode.

Deleting DMX settings of a scanner

1. Activate the Assign or Reverse mode (see *'Assigning DMX channel' on page 45* and *'Reversing channels' on page 47*).
2. Use one of the *[SCANNERS]* buttons to select the scanner you want to delete.
3. Press *[AUTO/DEL]* and *[MODE]* simultaneously. All LEDs will flash briefly to confirm the deleting.

Resetting all DMX channels

1. Switch off the device.
2. Simultaneously press and hold *[AUTO/DEL]* and *[MODE]*.
3. Keep the buttons pressed and turn the device on again. All LEDs will flash briefly to confirm the deleting. All assigned or reversed channels are reset.

Indicating DMX channels

1. Press *[MODE]* and *[FINE]* simultaneously, the *[ASSIGN]* LED lights up.
2. If you press both buttons again, the *[ASSIGN]* and *[REVERSE]* LEDs light up.
3. By pressing the *[SCANNERS]* buttons you can let the display show the Pan and Tilt channels of the respective scanner.

Setting up a new logo

1. Switch off the device.
2. Press and hold *[SCANNERS]* buttons 6 and 12 simultaneously while turning the device on again. Then release the buttons.
3. Press *[SCANNERS]* buttons 6 or 12 to move the cursor to the left or right.
4. Press *[Bank Up]* or *[Bank Down]* to change the characters at the current position.
5. Repeat steps 3 - 4. You can enter up to 16 characters in two rows.
6. Press and hold *[SCANNERS]* buttons 6 and 12 simultaneously to save the new characters. All LEDs will flash briefly, thus indicating the success of the procedure. In case you do not want to save, press *[BLACKOUT]* to end this function.

8.6 Calling up scenes

Manual mode

1. As soon as you turn on the device, it is automatically in manual mode.
2. Make sure that the *[AUTO]* and *[MUSIC]* LEDs are off.
3. Use *[BANK UP/DOWN]* to select the bank containing the desired scenes.
4. Press the corresponding *[SCENES]* button to select the desired scene.

Auto mode

With this function, you can run a bank of scenes in an endless loop.

1. Press *[AUTO/DEL]* to enable Auto mode. The *[AUTO]* LED lights up and indicates the activation.
2. Use *[BANK UP/DOWN]* to select a bank containing scenes for the run.
3. After selecting the bank whose scenes are to run, you can use the controllers *[WAIT TIME]* (or the *[TAP SYNC/DISPLAY]* button) and *[FADE TIME]* to adjust the scenes as desired.

Repeatedly press [TAP SYNC] to adjust the speed. The interval of the last two respective keystrokes defines the speed with a maximum of 5 minutes. If you use this function, settings previously made with the [WAIT TIME] fader will be skipped unless you move the fader.

4. Press *[AUTO/DEL]* again to disable the mode.

Sound control

1. Press *[MUSIC/BANK COPY]* to activate the sound control. The *[MUSIC]* LED then lights up.
2. Select the bank using *[BANK UP/DOWN]*. The scenes are now running in an endless loop according to the rhythm of the music which the device perceives via the built-in microphone.
3. Press *[MUSIC/BANK COPY]* to exit the mode.

8.7 Calling chases

First, you have to programme scenes before you can run chases!

Manual mode

1. When you turn on the device, it is automatically in manual mode.
2. Press one of the six *[CHASE]* buttons to select the desired Chase. If you press the button again, you disable this function.
3. With the *[FADE TIME]* control you can now adjust the fading time of the current scene.
4. Use *[BANK UP/DOWN]* you can call up the steps of the chase one by one.

Auto mode

1. Press *[AUTO/DEL]* to enable Auto mode. The *[AUTO]* LED then indicates that the mode is active.
2. Press one of the six *[CHASE]* buttons to select the desired Chase. If you press the button again, you disable this function.
3. Use the controllers *[WAIT TIME]* (or the *[TAP SYNC]* button) and *[FADE TIME]* to adjust the chase as desired.

   You can select several chases at a time. The chases run in the sequence in which you select them.

Sound control

1. Press *[MUSIC/BANK COPY]* to activate the sound control. The *[MSUIC]* LED then indicates that the mode is active.
2. Press one of the six *[CHASE]* buttons to select the desired Chase. The chase is then controlled by the rhythm of the music. You can select several chases at a time.

8.8 The MIDI functions

MIDI channel setting

1. Press and hold *[MIDI/REC]* for three seconds. The display shows the last set MIDI channel.
2. Use *[BANK UP/DOWN]* to select a DMX channel 01 - 16 that you assign as MIDI channel.
3. Press *[MIDI/REC]* again for three seconds to save the setting and to deactivate the MIDI settings. In case you do not want to save the setting, press any other button (except *[BANK UP/DOWN]*) to exit the MIDI mode.

Control

This device receives 'Note on' signals. These signals allow calling up of 15 banks (01 - 15) with scenes and six chases with scenes. In addition, also the Blackout function can be controlled via MIDI.

Bank	Note number	Function
Bank 1	00 to 07	Scenes 1 - 8 of bank 1 on / off
Bank 2	08 to 15	Scenes 1 - 8 of bank 2 on / off
Bank 3	16 to 23	Scenes 1 - 8 of bank 3 on / off
⋮	⋮	⋮
Bank 14	104 to 111	Scenes 1 - 8 of bank 14 on / off
Bank 15	112 to 119	Scenes 1 - 8 of bank 15 on / off
Chase 1	120	Chase 1 on / off
Chase 2	121	Chase 2 on / off
Chase 3	122	Chase 3 on / off
Chase 4	123	Chase 4 on / off

Bank	Note number	Function
Chase 5	124	Chase 5 on / off
Chase 6	125	Chase 6 on / off
	126	Blackout

8.9 Sending data

You have to establish a DMX connection between the two controllers before you can transfer data.

1. With the power off, press *[SCANNERS]* 2, *[SCANNERS]* 3 and *[SCENES]* 1 at the same time.
2. Keep the buttons pressed and turn the device on again. The display shows *'TRANSMIT'*. The controller is now ready for transmission.
3. To start the transfer process, press *[SCENES]* 7 and *[SCENES]* 8 simultaneously.

8.10 Receiving data

1. With the power off, press *[SCANNERS]* 8, *[SCANNERS]* 9 and *[SCENES]* 2 at the same time.
2. Keep the buttons pressed and turn the device on again. The display shows *'RECEIVE'*. The controller now receives the data.
3. As soon as the transmission process is complete, the device automatically returns to the normal status.

9 Technical specifications

Control protocols	DMX	
Number of DMX channels	192	
Input connections	MIDI	1 × DIN socket, 5-pin
	Audio signal	RCA socket, 100 mV … 1 Vpp
	DMX input	XLR chassis plug, 3-pin
	Voltage supply	Connection for power supply cable
Output connections	DMX output	XLR chassis socket, 3-pin
	Fog machine	1 × DIN socket, 5-pin
Voltage supply	Plug-in power supply (9 V ⎓ (DC), 300 mA min., centre positive)	
Dimensions (W × H × D)	423 mm × 73 mm × 132 mm	
Weight	2.5 kg	

Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

Further information

Preset function	No
External storage option	No
DMX - universes	1
Ethernet	No

10 Plug and connection assignment

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')

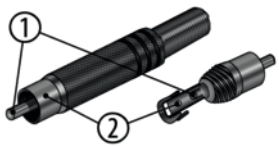
DMX connections

A five-pin XLR socket serves as DMX output, a five-pin XLR plug serves as DMX input. The drawing below and the table show the pin assignment of a matching coupling.

Pin	Assignment
1	Ground (shielding)
2	Signal inverted (DMX–, 'cold')
3	Signal (DMX+, 'hot')
4	unused / second connection (DMX–)
5	unused / second connection (DMX+)

RCA connection

Drawing and table indicate the pin assignment of an RCA plug.



1	Signal
2	Ground, shielding

11 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.

Musikhaus Thomann · Hans-Thomann-Straße 1 · 96138 Burgebrach · Germany · www.thomann.de