

User Manual



DMX DC-192

DMX Controller

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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.
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
 A yellow triangular warning sign with a black border and a black lightning bolt symbol in the center.	Warning – high-voltage.
 A yellow triangular warning sign with a black border and a black exclamation mark in the center.	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.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.

**DANGER!****Danger to life due to electric current!**

A short circuit could lead to a fire hazard and risk of death. Do not modify the mains cable or the plug! In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.

**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). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. As a precaution, disconnect the power supply from the power grid when storms are approaching or if the device will not be used for a longer period.

**NOTICE!****Damage to the device due to use of unsuitable external power supplies!**

If the device is operated with an unsuitable external power supply, the device can be damaged by overvoltage or incorrect polarity. If things go badly, using an unsuitable power supply can also cause a risk of injury and fire. Only use the external power supply designated for the device or an equivalent external power supply with identical parameters. If in doubt, compare the voltage specifications on the external power supply and the polarity (+/-) with the specifications in this manual and printed on the device. Voltage and polarity must always match.

**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 over-heat 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 product's rubber feet and the floor.

3 Features

Special features of the device:

- 192 DMX channels
- Twelve devices with up to 16 DMX channels can be operated
- Connection for a fog machine
- 30 banks with eight freely programmable scenes
- Twelve programmable chases
- Eight faders for manual control
- Joystick for controlling the PAN and TILT movement
- Reverse Joystick function
- Fine tuning for PAN and TILT
- Assigned or reversed DMX channel preview
- Blackout master
- Stand-alone mode
- Manual overwriting of scenes in chases
- MIDI control for banks, chases and blackout
- LC display

4 Installation



NOTICE!

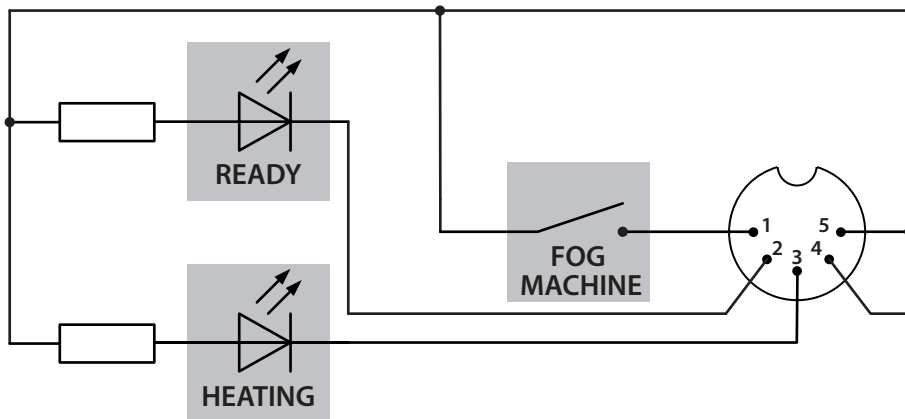
Possible staining due to plasticiser in rubber feet!

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 product's rubber feet and the floor.

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.

Wiring diagram for fog machines



5 Starting up

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.

Connecting the power adapter

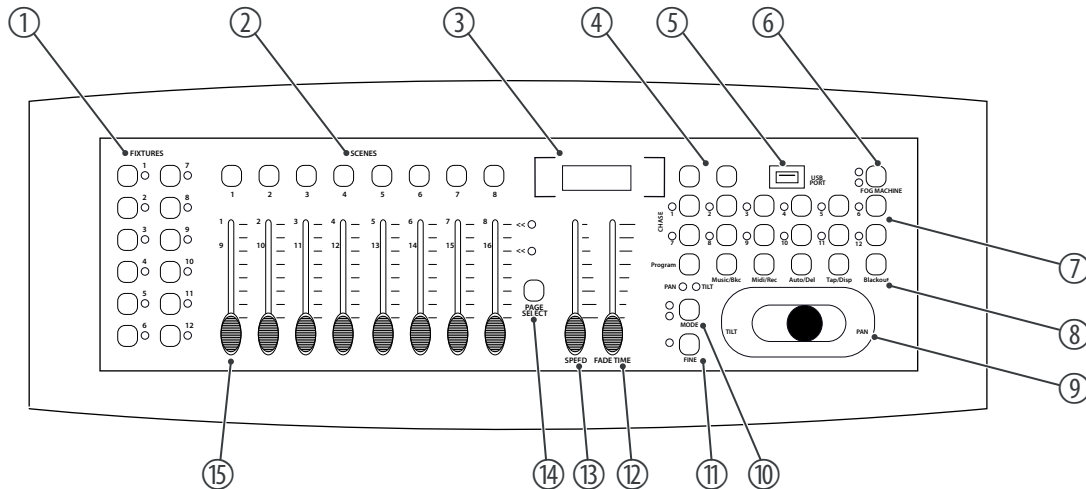
Connect the included power adapter to the 9V connector of the unit and then plug the power adapter into a wall outlet.

Turning the unit on

Turn on the device using the main switch on the rear panel. After turning the device on the displays shows the software version and the operation mode for a short time. The related display LEDs light up.

6 Connections and controls

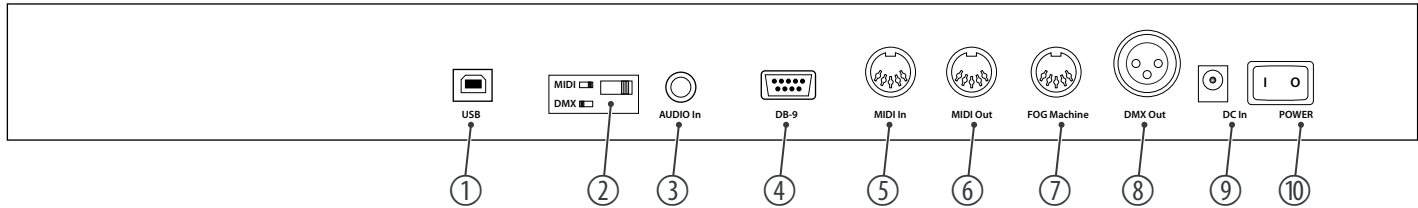
Front



1	<i>[FIXTURES]</i> For selecting the devices relevant for the control
2	<i>[SCENES]</i> Used to store and play back programmed scenes.
3	Display. The LED display shows you relevant information depending on the respective operation.
4	<i>[Bank]</i> ▼ / <i>[Bank]</i> ▲ Buttons for selecting a scene bank
5	USB input
6	Fog machine button. For activating a connected fog machine.
7	Chase buttons <i>[1]</i> ... <i>[12]</i> . For storing and playing chases.
8	Function buttons
	<i>[Program]</i> For activating and ending recording mode during programming
	<i>[Music/Bkc]</i> For activating audio mode for chase synchronisation and for copying scene banks
	<i>[Midi/Rec]</i> For recording scenes and chase steps. Also for setting the MIDI control
	<i>[Auto/Del]</i> For activating auto mode for automatic scene bank sequences or for deleting a scene or a chase.
	<i>[Tap/Disp]</i> For tap-syncing chase playbacks and changing the respective display view
	<i>[Blackout]</i> For setting all current output values to zero
9	Joystick. Usually used to set the X / Y values of the moving light.
10	<i>[MODE]</i> Multifunction button for assigning fader and joystick settings

11	<i>[FINE]</i> Used in conjunction with the joystick. When the button is pressed, a certain area can be controlled much more precisely with the scanner or the moving light.
12	<i>[FADE TIME]</i> Fader for adjusting the chase fade time (0 ... 30 seconds)
13	<i>[SPEED]</i> Fader for adjusting the chase speed (0.1 seconds ... 10 minutes per step)
14	<i>[PAGE SELECT]</i> Button for switching between channels 1 ... 8 or 9 ... 16
15	Channel fader to control the connected and assigned device.

Back



- | | |
|----|--|
| 1 | [<i>USB</i>] USB connection socket |
| 2 | MIDI / DMX operation switch |
| 3 | [<i>AUDIO In</i>] Cinch input socket for connecting audio devices for sound control |
| 4 | [<i>DB-9</i>] For connecting an optional chase step controller |
| 5 | [<i>MIDI In</i>] MIDI input socket |
| 6 | [<i>MIDI Out</i>] MIDI output socket |
| 7 | [<i>FOG MACHINE</i>] For connecting a fog machine with an analogue interface |
| 8 | [<i>DMX Out</i>] DMX output socket for connecting a dimmer or other DMX-controlled devices |
| 9 | [<i>DC In</i>] Connection socket for the 9-V power supply |
| 10 | [<i>POWER</i>] Main switch for turning the device on and off |

7 Basics

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

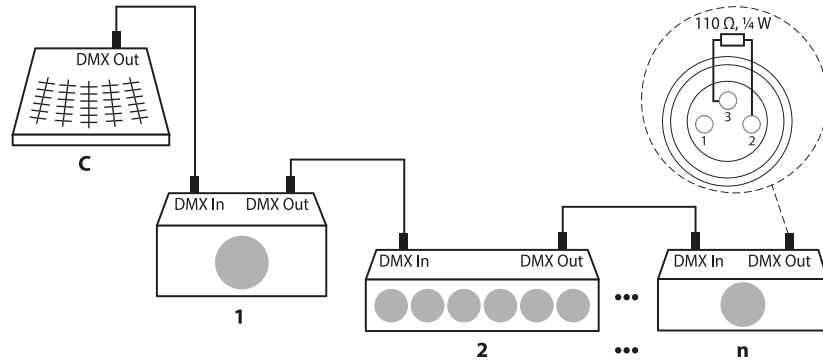
Signal transmission

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 device 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 Manual operation

When you turn on the controller, it starts by default in Manual / Blackout mode. All output values are blanked out. To show the values, press *[Blackout]*. To determine the respective blackout status, there is an indicator in the display that flashes when activated and shows 'OFF' when deactivated. To enable manual operation, turn off Blackout, select the devices to control using the corresponding *[FIXTURE]* buttons on the left side. Then use the eight channel faders, the joystick and *[PAGE SELECT]* to manually control the devices.

8.2 Joystick settings

Assigning the joystick

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Keep *[MODE]* pressed and press *[FINE]*. The LEDs for *[ASSIGN]* and *[PAN]* should light up now.
3. ➤ Select the devices you want to assign PAN to. To do so, press the corresponding *[FIXTURE]* buttons (1 to 12). The LEDs of the selected devices light up.

4. ➤ Press *[Tap/Disp]* to switch between 'PL.XX' and 'PH.XX'. 'PL.XX' stands for the low byte or fine channel, generally listed as the Pan Fine channel. 'PH.XX' stands for the high byte or rough channel, generally listed as the Pan channel. Set 'PH.XX', press and hold *[MODE]* and then press the *[SCENE]* button corresponding to the device's pan channel. For example, if the device's pan channel is 1, you should press the *[SCENE]* button 1. Please refer to the device's DMX table. If your device has a Pan-Fine channel, press *[Tap/Disp]* until the display shows 'PL.XX'. Keep *[MODE]* and then press the *[SCENE]* button corresponding to the device's pan fine channel. For example, if the device's pan fine channel is 2, you should press the *[SCENE]* button 2.
5. ➤ Press *[Bank] ▼ / [Bank] ▲* to switch between 'PL.XX' and 'TL.XX'. Press *[Tap/Disp]* to switch between 'TL.XX' and 'TH.XX'. 'TL.XX' stands for the low byte or fine channel, generally listed as the Tilt Fine channel. 'TH.XX' stands for the high byte or rough channel, generally listed as the Tilt channel. Set 'TH.XX', press and hold *[MODE]* and then press the *[SCENE]* button corresponding to the device's tilt channel. For example, if the device's tilt channel is 3, you should press the *[SCENE]* button 3. Please refer to the device's DMX table. If your device has a Tilt-Fine channel, press *[Tap/Disp]* until the display shows 'TL.XX'. Keep *[MODE]* and then press the *[SCENE]* button corresponding to the device's tilt fine channel. For example, if the device's tilt channel is 4, you should press the *[SCENE]* button 4.
6. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Assigning the reverse joystick (pan / tilt reversal)

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Keep *[MODE]* pressed and press *[FINE]*. The LEDs for *[ASSIGN]* and *[PAN]* should light up now.
3. ➤ Press again *[MODE]* and press *[FINE]*. The LED for *[REVERSE]* should light up now.
4. ➤ Select the devices you want to assign pan / tilt reversal to. To do so, press the corresponding *[FIXTURE]* buttons (1 to 12). The LEDs of the selected devices light up. Ideally, you should choose opposing devices for pan / tilt reverse. For example, fixtures 1, 3, 5, 7 etc. should be assigned normally. Fixtures 2, 4, 6 etc. should be set up in the reverse direction, so the units will react in the opposite direction when you turn the joystick around. The movement of opposing devices should be in opposite direction.
5. ➤ Press *[Tap/Disp]* to switch between 'PL.XX' and 'PH.XX'. 'PL.XX' stands for the low byte or fine channel, generally listed as the Pan Fine channel. 'PH.XX' stands for the high byte or rough channel, generally listed as the Pan channel. Set 'PH.XX', press and hold *[MODE]* and then press the *[SCENE]* button corresponding to the device's pan channel. For example, if the device's pan channel is 1, you should press the *[SCENE]* button 1. Please refer to the device's DMX table. If your device has a Pan-Fine channel, press *[Tap/Disp]* until the display shows 'PL.XX'. Keep *[MODE]* and then press the *[SCENE]* button corresponding to the device's pan fine channel. For example, if the device's pan fine channel is 2, you should press the *[SCENE]* button 2.

6. ➤ Press *[Bank]* ▼ / *[Bank]* ▲ to switch between 'TL.XX' and 'TH.XX'. 'TL.XX' stands for the low byte or fine channel, generally listed as the Tilt Fine channel. 'TH.XX' stands for the high byte or rough channel, generally listed as the Tilt channel. Set 'TH.XX', press and hold *[MODE]* and then press the *[SCENE]* button corresponding to the device's tilt channel. For example, if the device's tilt channel is 3, you should press the *[SCENE]* button 3. Please refer to the device's DMX table. If your device has a Tilt-Fine channel, press *[Tap/Disp]* until the display shows 'TL.XX'. Keep *[MODE]* and then press the *[SCENE]* button corresponding to the device's tilt fine channel. For example, if the device's tilt channel is 4, you should press the *[SCENE]* button 4.
7. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Deletion Pan / Tilt joystick settings on selected devices

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Keep *[MODE]* pressed and press *[FINE]*. The LEDs for *[ASSIGN]* and *[PAN]* should light up now.
3. ➤ Select the devices you want to delete pan / tilt reversal for. To do so, press the corresponding *[FIXTURE]* buttons (1 to 12). The assigned LEDs light up.
4. ➤ Keep *[MODE]* pressed and press *[Auto/Del]* to delete the settings of the selected devices. All LEDs flash three times to confirm the deletion.
5. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Deletion Pan / Tilt joystick settings on all devices

1. ➤ Turn off the controller using the mains switch.
2. ➤ Simultaneously press *[Auto/Del]* and *[MODE]* and switch the controller back on again. All LEDs flash three times, the settings have been cleared.

8.3 Scenes

8.3.1 Recording scenes

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Select the devices you want to incorporate into your scene. To do so, press the corresponding *[FIXTURE]* buttons (1 to 12). The LEDs of the selected devices light up.
3. ➤ Design your scene using the eight channel faders, the joystick and *[PAGE SELECT]*. This should be used to switch between channels 1 to 8 and 9 to 16.
4. ➤ When you are satisfied with your scene, press *[Midi/Rec]* to record.
5. ➤ Use *[Bank] ▼* / *[Bank] ▲*, choose a scene bank for the backup. A total of 30 scene banks are available. These can be seen in the display by looking at the digits on the right outer side.

6. ➤ Press one of the *[SCENE]* buttons (1 to 8) to store. As soon as all the LEDs flash, the scene is saved. Make sure you use a different button each time you save a scene so you do not overwrite what you want to keep.
7. ➤ To record additional scenes, repeat steps 2 to 6.
8. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.3.2 Editing scenes

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Use *[Bank] ▼* / *[Bank] ▲* to select the scene bank that contains the scene you want to edit. You can see the active scene bank in the display.
3. ➤ Press the *[SCENE]* button (1 to 8) of the scene you want to edit.
4. ➤ Select the device or devices where you want to change the settings for each scene. To do so, press the corresponding *[FIXTURE]* buttons (1 to 12). The LEDs of the selected devices light up.
5. ➤ Use the faders or the joystick to adjust the settings.
6. ➤ Press the *[Midi/Rec]* and then the *[SCENE]* button of the scene you want to edit. All LEDs flash three times when the new settings are saved.

7. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.3.3 Copying a scene

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Use *[Bank] ▼* / *[Bank] ▲* to select the scene bank that contains the scene you want to copy.
3. ➤ Use the *[SCENE]* buttons (1 to 8) to select the scene you want to copy.
4. ➤ Use *[Bank] ▼* / *[Bank] ▲* to change the scene bank.
5. ➤ Press the *[Midi/Rec]* and then the *[SCENE]* button (1 to 8) where you want to copy the scene to. All LEDs flash three times when the scene has been copied.
6. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.3.4 Deleting a scene

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ Use *[Bank]* ▼ / *[Bank]* ▲ to select the scene bank that contains the scene you want to delete.
3. ➤ Keep *[Auto/Del]* and simultaneously press the *[SCENE]* button (1 to 8) of the scene you want to delete. All LEDs flash three times when the scene has been deleted.
4. ➤ Repeat steps 2 and 3 to delete further scenes.
5. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.3.5 Deleting all scenes

1. ➤ Turn off the controller using the mains switch.
2. ➤ Simultaneously hold down *[Program]* and *[Bank]* ▲ and switch the controller back on again. All LEDs flash three times when all scenes have been deleted.

8.3.6 Scene playback

Manual playback

1. ➤ When you turn on the controller, it starts by default in Manual / Blackout mode. All output values are blanked out. To show the values, press *[Blackout]*. To determine the respective blackout status, there is an indicator in the display that flashes when activated and shows 'OFF' when deactivated. Press *[Blackout]* to stop the display from flashing.
2. ➤ Use *[Bank] ▼* / *[Bank] ▲* to select the scene bank that contains the scene you want to play.
3. ➤ Use the *[SCENE]* buttons (1 to 8) to select the scene you want to play. The selected scene is started. Press the same button again to end the scene, or *[Blackout]* to stop any output.
4. ➤ Repeat steps 2 and 3 to play additional scenes.

Automatic playback

1. ➤ Press *[Auto/Del]*. The indicator for automatic playback in the display lights up.
2. ➤ Press *[Bank] ▼* / *[Bank] ▲* to select a desired scene bank for automatic playback. All eight scenes of the selected scene bank are now played one after the other.
3. ➤ Using the faders *[SPEED]* and *[FADE]* you can adjust the scene playback. You can also *[Tap/Disp]* twice to set a number of sequences. The number depends on the bar in which you press *[Tap/Disp]*. Press again *[Auto/Del]* to exit the automatic playback mode.

8.3.7 Audio playback

1. ➤ Press *[Music/Bkc]*. The indicator for automatic playback in the display lights up.
2. ➤ Press *[Bank] ▼ / [Bank] ▲* to select a desired scene bank (1 to 30) or press a *[CHASE]* button (1 to 12). The selected scene bank or chase will start synchronously with the audio playback of the internal microphone or the connected line level input. Press again *[Music/Bkc]* to exit the audio mode.

8.4 Chases

8.4.1 Recording chases

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ To select a chase press the corresponding *[CHASE]* button (1 to 12). The corresponding LED lights up.
3. ➤ Use *[Bank] ▼ / [Bank] ▲* to firstly select the desired scene bank and then the scene to be recorded. You can see the scene bank in the display by looking at the digits on the right outer side. You can also adjust the scene using the eight channel faders, the joystick or *[PAGE SELECT]* . Use *[PAGE SELECT]* to switch among channels 1 to 8 and 9 to 16.

4. ➤ Press *[Midi/Rec]* to record the chase step. When the chase step is recorded, all LEDs flash three times.
5. ➤ Repeat steps 3 and 4 to record further steps.
6. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.4.2 Recording a scene bank on a chase

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ To select a chase press the corresponding *[CHASE]* button (1 to 12). The corresponding LED lights up.
3. ➤ Use *[Bank] ▼* / *[Bank] ▲* to select a scene bank you want to add to the chase. You can see the scene bank in the display by looking at the digits on the right outer side.
4. ➤ Simultaneously press *[Music/Bkc]* and *[Midi/Rec]* to include the entire scene bank. When the scene bank is included, all LEDs flash three times. Scenes are being included in the same order in which they are stored in the scene bank.
5. ➤ Repeat steps 3 and 4 to include further scene banks.
6. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

8.4.3 Editing chases

Adding a chase step

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ To select a chase press the corresponding *[CHASE]* button (1 to 12). The corresponding LED lights up.
3. ➤ Press *[Tap/Disp]*, step indicator lights up on the display.
4. ➤ Press *[Bank] ▼ / [Bank] ▲* to manually go through each section of the chase step. Locate the chase step to which you want to add another step.
5. ➤ Press *[Tap/Disp]* to exit the step mode. The step display in the display should then be off.
6. ➤ Use *[Bank] ▼ / [Bank] ▲* to select the scene bank containing the scene you want to add. You can see the scene bank in the display by looking at the digits on the right outer side.
7. ➤ Press *[Midi/Rec]* to copy the step into your chase. When the step is added, all LEDs flash three times.
8. ➤ Repeat steps 3 to 7 to add further chase steps.
9. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Deleting chase steps

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ To select a chase press the corresponding *[CHASE]* button (1 to 12). The corresponding LED lights up.
3. ➤ Press *[Tap/Disp]*, step indicator lights up on the display.
4. ➤ Press *[Bank] ▼* / *[Bank] ▲* to manually go through each chase step. Locate the chase step you want to delete.
5. ➤ Press *[Auto/Del]* to delete the chase step. When the step is deleted, all LEDs flash three times.
6. ➤ Repeat steps 4 and 5 to delete further chase steps.
7. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Deleting chase

1. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator flashes on the display. When the indicator flashes, the recording mode is active and you can release the button.
2. ➤ To select a chase press the corresponding *[CHASE]* button (1 to 12). The corresponding LED lights up.
3. ➤ Hold down *[Auto/Del]* and additionally press that *[CHASE]* button that you have selected in step 2. When the chase is deleted, all LEDs flash three times.

4. ➤ Repeat steps 2 and 3 to delete further chases.
5. ➤ Keep *[Program]* pressed for about two seconds or until the PROG indicator stops flashing on the display. As soon as the blackout indicator flashes, the programme mode is deactivated.

Deleting all chases

1. ➤ Turn off the controller using the mains switch.
2. ➤ Simultaneously hold down *[Program]* and *[Bank]* ▼ and switch the controller back on again. All LEDs flash three times when all chases have been deleted.

8.4.4 Playing chases

Manual playback

1. ➤ When you turn on the controller, it starts by default in Manual / Blackout mode. All output values are blanked out. To show the values, press *[Blackout]*. To determine the respective blackout status, there is an indicator in the display that flashes when activated and shows 'OFF' when deactivated. Press *[Blackout]* to stop the display from flashing.
2. ➤ Press the *[CHASE]* button (1 to 12) of the scene you want to play. The corresponding LED lights up.
3. ➤ Press *[Bank]* ▼ / *[Bank]* ▲ to manually go through the chase steps. You can also use the fader *[FADE TIME]* if you want to have a cross fade between the steps.
4. ➤ Repeat steps 2 and 3 to manually play additional scenes.

Automatic playback

1. ➤ Press *[Auto/Del]*. The indicator for automatic playback in the display lights up.
2. ➤ Press the *[CHASE]* buttons of the chases you want to play. The corresponding LED lights up and playback starts. You can choose more than one chase at a time to create a chase sequence.
3. ➤ Using the faders *[SPEED]* and *[FADE]* you can adjust the chase playback. You can also *[Tap/Disp]* twice to set a number of sequences. The number depends on the bar in which you press *[Tap/Disp]*. Press again *[Auto/Del]* to exit the automatic playback mode.

8.4.5 Audio playback

1. ➤ Press *[Music/Bkc]*. The indicator for automatic playback in the display lights up.
2. ➤ Press the *[CHASE]* buttons (1 to 12) of the chases you want to play. The corresponding LED lights up and playback is started. The selected chase will start synchronously with the audio playback of the internal microphone or the connected line level input. Press again *[Music/Bkc]* to exit the audio mode.

8.5 Copying scene bank and fixtures

8.5.1 Copying scene bank

1. ▶ Start programme mode.
2. ▶ Use *[Bank]* ▼ / *[Bank]* ▲ to select the scene bank you want to copy.
3. ▶ Press *[Midi/Rec]* and then use *[Bank]* ▼ / *[Bank]* ▲ to select the scene bank you want to copy to.
4. ▶ Press *[Music/Bkc]*. All LEDs light up three times after copying.

8.5.2 Copying fixtures

1. ▶ Start programme mode.
2. ▶ Press the *[FIXTURE]* button you want to copy.
3. ▶ Use the channel faders (1 to 8) or the joystick to set your unit as desired.
4. ▶ Hold down *[FIXTURE]* and then press that *[FIXTURE]* button to which you want to copy the same settings.

8.6 Fade time

1. ▶ Press *[MODE]* and then *[Tap/Disp]*. The display now shows 'ONLY' or 'ALL' for 3 seconds, depending on the current settings. 'ONLY' indicates that only the pan / tilt channels are controlled by the *[FADE TIME]* fader. 'ALL' indicates that all channels are changed by the fader.
2. ▶ To switch between 'ONLY' and 'ALL', hold down *[MODE]* and press *[Tap/Disp]*.

8.7 MIDI functions

MIDI channel setting

1. ▶ Keep *[Midi/Rec]* pressed for two seconds. The display shows the last set MIDI channel.
2. ▶ Use the Scene UP / DOWN buttons to select a DMX channel 01 - 16 that you assign as MIDI channel.
3. ▶ Keep *[Midi/Rec]* pressed for two seconds or until all LEDs light up three times to save the setting.

Control This unit can receive MIDI data to control or activate scene banks 1 to 30, chases 1 to 12, and the blackout function.

Note number	Function
00 to 11	Turning chases 1 ... 12 on / off
12 to 19	Turning scenes 1 ... 8 on / off
20 to 49	Selecting scene banks 1 ... 30
50	Turning audio on / off
51	Turning auto on / off
52	Turning blackout on / off

9 Technical specifications

Control protocols	DMX512	
Number of DMX channels	max. 192	
Input connections	MIDI	DIN socket, 5-pin
	Audio signal	Cinch socket, 100 mV, 1 Vpp
	Power supply	Hollow plug socket for power adapter
	Chase step controller	D-sub panel socket, 9-pin
	USB	
Output connections	DMX control	XLR panel socket, 3-pin
	MIDI	DIN socket, 5-pin
	Fog machine	DIN socket, 5-pin
Power supply	External power adapter, 100 - 240 V ~ 50/60 Hz	
Operating voltage	9 V...12 V $\overline{\text{---}}$ / 500 mA min., centre positive	
Dimensions (W × H × D)	530 mm × 120 mm × 170 mm	
Weight	2.8 kg	

Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Further information

Preset function	No
External storage option	Yes
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 connection

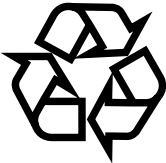
A female 3-pin XLR socket serves as the DMX output. The figure and the table show the pin assignment of the XLR socket.



Pin	Assignment
1	Ground (shielding)
2	Signal inverted (DMX-, "Cold")
3	Signal (DMX+, "Hot")

11 Protecting the environment

Disposal of the packing material



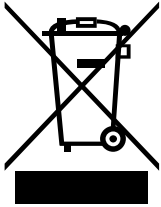
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on www.thomann.de.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

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. For example, use the classified ads of Thomann GmbH.

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

