STAIRVILLE

SonicPulse MH Wash 1208

User Manual

Moving Head

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

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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.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor 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 – high-voltage.
	Warning – hot surface.
	Warning – dangerous optical radiation.
	Warning – suspended load.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for use as a freely moving multifunctional spotlight. 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.

Extend the operating life of the device by regular breaks and by avoiding frequent switching on and off. The device is not suitable for continuous operation.

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. Always use proper ready-made insulated triple-core mains cable with a safety plug. 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.

WARNING!

Risk of eye damage caused by high light intensity!

The device generates highly intense light radiation. Looking directly into the light source can damage the eyes. Never look directly into the light source.

WARNING!

Risk of epileptic fit due to flashing lights!

The device emits flashing lights (strobe effects). Flashing lights can trigger epileptic fits in specific people. If you are at risk of epilepsy, avoid spending longer periods of time subjected to flashing lights and looking into strobing light.

WARNING!

Danger of burns on the device surface!

The surface of the device becomes very hot during operation. Skin contact can result in burns. Never touch the device with your bare hands during operation. After switching off the device, wait for at least 15 minutes before touching it.

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 overheat 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!

Damage to the device due to high voltages!

The device 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 device matches the local power grid before plugging in the device. Only operate the device 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 device from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Risk of fire by exceeding the maximum current!

The device can supply power to other devices of identical design and connected in series. If too many devices are connected, the maximum permitted power consumption can be exceeded, which can cause the device to overheat and burst into flames. Only connect devices of identical design to the device. When deciding how many devices you can connect in series, make sure that the maximum output current specified on the device and in the "Technical specifications" chapter of the user manual is not exceeded. Only use power cords with a cable cross-section designed for the required current intensity when connecting the devices in series.

NOTICE!

Possible staining due to plasticiser in rubber feet!

The plasticiser in the rubber feet of this product may react with the coating of the floor, resulting in permanent dark stains after a while. If necessary, use a suitable mat or felt pads to prevent direct contact between the product's rubber feet and the floor.

3 Features

- Master-slave-compatible with all devices in the SonicPulse series
- 12 × 4-in-1 RGBWW LEDs (each 8 W)
- Pan rotation (540°)
- Tilt rotation (220°)
- Control via DMX (2 different modes) and via buttons and display on the device
- Pre-programmed automatic shows
- Two separately controllable LED segments
- Strobe effect
- Sound control with two different modes for perfectly synchronised light
- Master/slave mode
- Devices can be numbered in master/slave mode
- Selectable fan modes
- Compact and lightweight design
- Lockable connections (Power Twist) for the power supply of the device and for powering additional devices
- Infrared remote control available as an option (item no. 354223)

For technological reasons, the light output of LEDs decreases over their lifetime. This effect increases with higher operating temperature. You can extend the service life of the illuminants by providing adequate ventilation and operating the LEDs with the lowest possible brightness.

4 Installation

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.

Lift the device only at the base. When lifted at the rotatable mounting, the device may be damaged.

WARNING!

Risk of injury caused by falling due to unsuitable trusses and other fixtures!

If trusses or other fixtures are not designed for the weight of the intended number of moving heads, falling can cause severe injury and considerable damage.

Before mounting, ensure that the load capacity of trusses and other fixtures is sufficient for the intended number of devices. Take into account any additional load that affects the load bearing parts due to the movement of the head.

When installing and operating, make sure to follow the standards and regulations that apply in your country.

Always secure devices with a secondary safety attachment, such as a safety cable or a safety chain.

CAUTION!

Risk of injury due to unexpected movements of the device!

The device head may perform fast movements and generate very bright light. This is the case immediately after the device is switched on, in automatic or remote operation, and when a connected DMX controller is switched off. Persons who are in the immediate vicinity of the device may be injured or frightened by this.

Make sure that there are no obstacles within the movement range of the mirror, and that no persons are in the immediate vicinity of the head before switching it on and during its operation.

Switch off the device before any work is performed in the movement range or immediate vicinity of the device, or if unauthorised persons are in that area.

NOTICE!

Risk of overheating and fire due to inadequate distance and bad ventilation!

If the distance between the light source and the illuminated surface is too short or the device is badly ventilated, the device can overheat and cause fires.

Make sure that illuminated surfaces are more than 2 m away.

Do not operate the device in ambient temperatures above 40 °C.

Always ensure sufficient ventilation at the operating location.

NOTICE!

Damage to the device due to operation in confined environments!

If the device is operated in confined environments, movements of the device head can result in collisions, and the device can be damaged.

Ensure that there is sufficient space around the device to allow movements of the device head.

NOTICE!

Data transfer errors due to improper wiring!

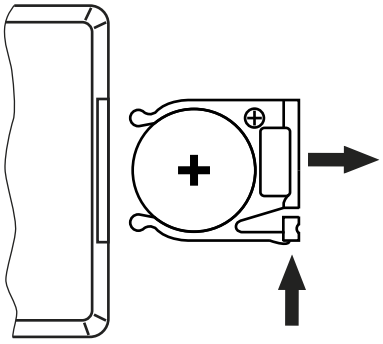
If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

Please note that this device must not be connected to a dimmer.

Inserting the battery into the remote control



Push the lock of the battery holder towards the centre of the housing and pull out the battery holder like a drawer. Insert the batteries. The battery is correct if the positive pole points to the housing base of the remote control. Slide the battery holder back into the remote until it clicks into place.

When shipping, the battery is already installed in the remote and protected against discharge by a transparent plastic film. Remove the plastic film before initial use.

NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries.

Observe the markings on the batteries and on the device.

Ensure that proper polarity is observed when inserting batteries.

NOTICE!

Possible damage due to leaking batteries!

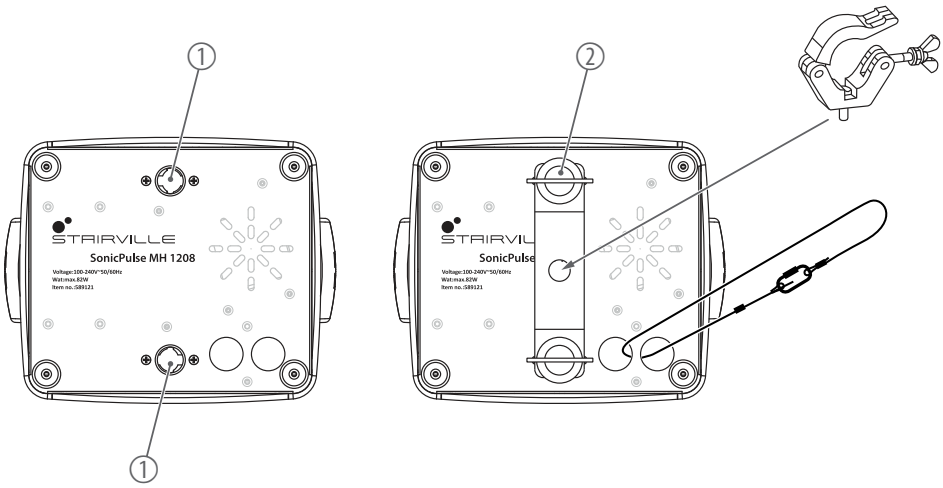
Batteries can leak and cause permanent damage to the device.

Take the batteries out of the device if it is not going to be used for an extended period of time.

Mounting options

You can install the device in hanging or standing positions. When in use, the device must always be attached to a solid surface or an approved mount.

Always work from a stable platform whenever installing, moving or servicing the device. While you do this, the area underneath the device must be cordoned off.



1	Threads for attaching the supplied omega brackets
2	Omega brackets

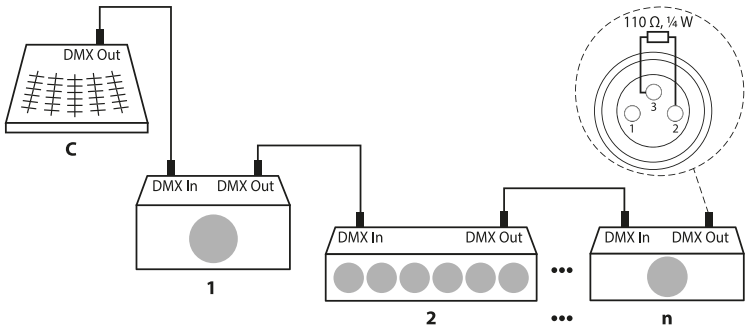
The threads on the case bottom are used for secure mounting of omega brackets. These can be used to mount adapters such as half couplers, trigger clamps, c-hooks etc. The safety cable must be threaded through the cut-outs on the bottom of the housing.

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.

Connections in DMX mode

Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).

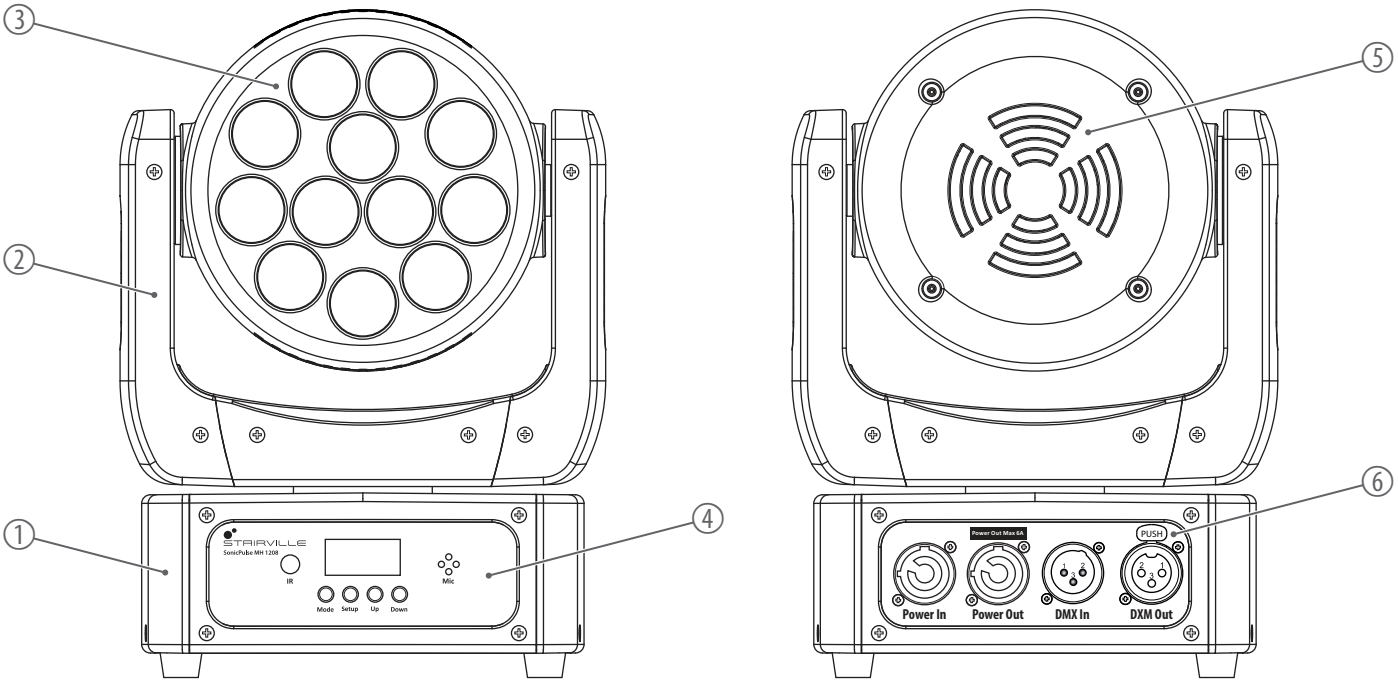


Connections in master/slave mode

When you configure a group of devices in master/slave mode, the first unit will control the other units for an automatic, sound-activated, synchronized show. This function is ideal when you want to start a show immediately. Connect the DMX output of the master device to the DMX input of the first slave device. Then connect the DMX output of the first slave device to the DMX input of the second slave device and so on.

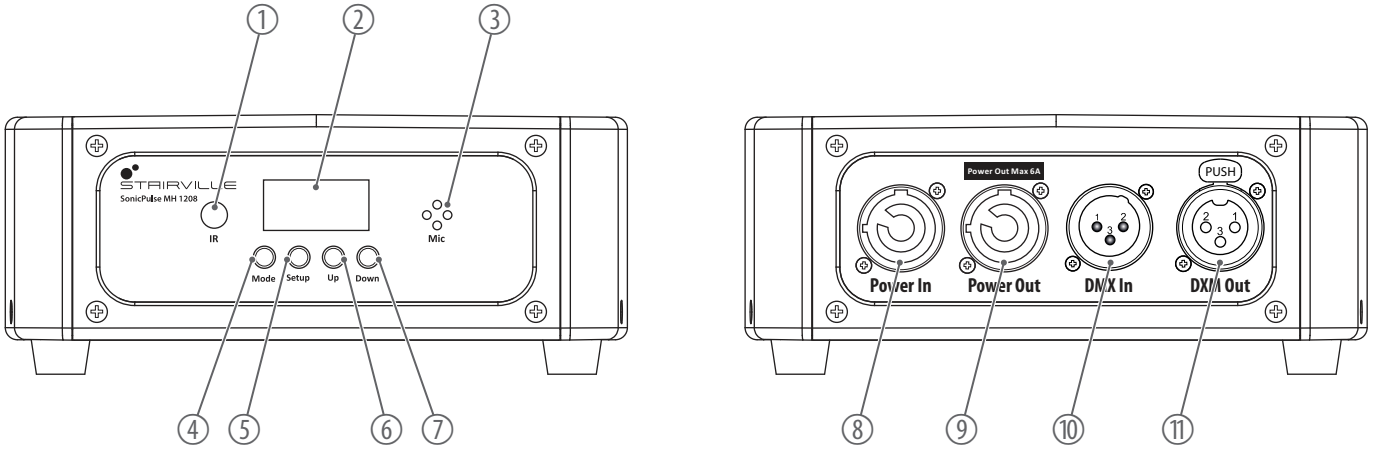
6 Connections and controls

Overview



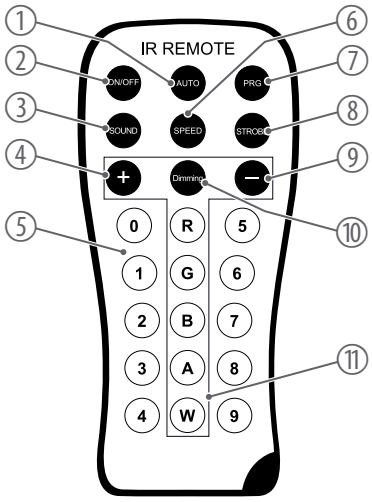
1	Device base
2	Movable head
3	LEDs
4	Operating panel with display
5	Fan grid
6	Connection panel with power supply and DMX connections

Control panel, connection panel



1	Sensor for the optional infrared remote control (item no. 354223)
2	Display
3	Built-in microphone for sound control
4	*[Mode]* | Activates the main menu and toggles between menu items. Closes an open submenu without saving the changes.
5	*[Setup]* | Selects an option of the respective operating mode, confirms the set value.
6	*[Up]* | Increases the displayed value by one and toggles between menu items.
7	*[Down]* | Decreases the displayed value by one and toggles between menu items.
8	*[Power In]* | Lockable input socket (Power Twist) for the power supply of the device
9	*[Power Out]* | Lockable output socket (Power Twist) for the power supply of a connected device
10	*[DMX In]* | DMX input, designed as XLR panel plug, 3-pin
11	*[DMX Out]* | DMX output, designed as XLR panel socket, 3-pin

Infrared remote control (item no. 354223, optionally available)



Since the universal remote control can be used for several device types, some buttons may not be assigned and therefore have no function.

1	*[AUTO]* | Activates "Automatic" mode.
2	*[ON/OFF]* | Turns the device on and off.
3	*[SOUND]* | Activates "Sound control" mode. Set the sensitivity of the built-in microphone with *[+]* and *[–]*.
4	*[+]* | Increases the set value.
5	*[0 … 9]* | Number buttons for the direct selection of a fixed colour.
6	*[SPEED]* | Activates the setting mode for the programme speed. Adjust the speed using *[+]* and *[–]*.
7	*[PRG]* | Activates the "Pre-programmed automatic show" mode. Select the required programme with *[+]* and *[–]*.
8	*[STROBE]* | Activates the setting mode for the strobe speed. Adjust the speed using *[+]* and *[–]*.
9	*[–]* | Decreases the set value.
10	*[Dimming]* | Activates the dimming function for fixed colours. Set the value for each fixed colour using *[+]* and *[–]*.
11	*[R]*, *[G]*, *[B]*, *[A]*, *[W]* | Buttons for selecting the colour shade in dimmer mode.

7 Operating

7.1 Starting the device

CAUTION!

Risk of injury due to unexpected movements of the device!

The device head may perform fast movements and generate very bright light. This is the case immediately after the device is switched on, in automatic or remote operation, and when a connected DMX controller is switched off. Persons who are in the immediate vicinity of the device may be injured or frightened by this.

Make sure that there are no obstacles within the movement range of the mirror, and that no persons are in the immediate vicinity of the head before switching it on and during its operation.

Switch off the device before any work is performed in the movement range or immediate vicinity of the device, or if unauthorised persons are in that area.

Connect the device to the power grid and turn it on with the main switch to start operation. After a few seconds, the fans start to work, the head moves to the home positions for rotation (pan) and inclination (tilt), the screen displays a start message. After a few more seconds, the device operates in the most recently set mode.

7.2 Main menu

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* to select a menu item.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to change the currently displayed value.
5. When the display shows the required value, press *[Setup]* to confirm the selection and close the submenu.
6. To exit a menu item without making changes, press *[Mode]* or wait 30 seconds.

As soon as you activate the main menu, DMX control and a currently running automatic show are interrupted. The moving head of the device moves to its home position.

If you close the main menu without making changes, the device continues to operate with the previous settings.

All previous settings are retained even when you disconnect the device from the power grid.

7.2.1 DMX address

Each device must be assigned a DMX address if it is operated via a DMX controller. The device will only react to control signals that are received on the set DMX address. To combine multiple devices into a group, it is possible to assign the same DMX address to the relevant devices.

In addition to the set DMX address, a device always occupies the number of DMX channels that are set as DMX mode on the device. Other devices that will be controlled individually must always be assigned the next free DMX address according to the channel assignment of other devices. Partial overlaps of channels can cause unintended effects.

Example:

If the first device is set to the '10-CH' DMX mode with the DMX address 1, the next device must be set to DMX address 11 or higher.

The rule is: DMX address of additional device = DMX address of first device + DMX mode

This setting is only relevant if the device is controlled via a DMX controller.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'DMX'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Address'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose a DMX address between 001 and 512 (display shows *'001'* … *'512'*).

   Make sure that this number matches the configuration of your DMX controller. The following table shows the respective highest possible DMX address for the various DMX modes:

Mode	Highest possible DMX address
10-channel mode (*'10-CH'*)	503
19-channel mode (*'19-CH'*)	494

7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.2 DMX mode

This setting is only relevant if the device is controlled via a DMX controller.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'DMX'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Channels'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to select the desired DMX mode.

   The following DMX modes are available:

Menu level 3	Function
'10-CH'	10-channel mode
'19-CH'	19-channel mode

7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.3 Manual control

This setting is only relevant if the device is not controlled via a DMX controller and not working as a slave in a master/slave configuration. This operating mode can be used to set the pan, tilt, colours and strobe.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Control'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to select the required submenu or value.

   The following submenus are available:

Menu level 2	Menu level 3	Function
'Pan'	*'000'* … *'255'*	Adjusts the rotation angle.
'Tilt'	*'000'* … *'255'*	Adjusts the tilt angle.
'Red1'	*'000'* … *'255'*	Adjusts the intensity for red (LED 1).
'Green1'	*'000'* … *'255'*	Adjusts the intensity for green (LED 1).
'Blue1'	*'000'* … *'255'*	Adjusts the intensity for blue (LED 1).
'White1'	*'000'* … *'255'*	Adjusts the intensity for white (LED 1).
'Red2'	*'000'* … *'255'*	Adjusts the intensity for red (LED 2).
'Green2'	*'000'* … *'255'*	Adjusts the intensity for green (LED 2).
'Blue2'	*'000'* … *'255'*	Adjusts the intensity for blue (LED 2).
'White2'	*'000'* … *'255'*	Adjusts the intensity for white (LED 2).

5. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.4 Automatic mode

Automatic mode can only be activated if the device is operating in stand-alone mode or as the master in a master/slave configuration and if the device is not controlled via a DMX controller.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Auto'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to select the desired automatic mode.

   The following automatic modes for the *'Mode'* pre-programmed shows are available:

Menu level 2	Menu level 3	Function
'Pan'	*'000'* … *'255'*	Turns on automatic mode with the set pan angle and speed.
'Tilt'	*'000'* … *'255'*	Turns on automatic mode with the set tilt angle and speed.
'Motor Auto'	*'On'*	Turns automatic mode on.
	'Off'	Turns automatic mode off.

5. Press *[Setup]* to confirm the selection.

   ⇨ Automatic mode starts immediately.

7.2.5 Pre-programmed automatic show

A pre-programmed automatic show can only be activated if the device is operating in stand-alone mode or as the master in a master/slave configuration and if the device is not controlled via a DMX controller.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]/[Down]* until the display shows *'Program'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]/[Down]* to select a pre-programmed automatic show.

   The following pre-programmed automatic shows are available:

Menu level 2	Menu level 3	Function
'Pan'	*'000'* … *'255'*	Specifies a fixed pan angle.
'Tilt'	*'000'* … *'255'*	Specifies a fixed tilt angle.
'Mode'	*'01'* … *'15'*	Selects a show between 01 and 15.
'Color:(Mode:1)'	*'01'* … *'33'*	Turns on a show with a constant colour.
'Speed: (Mode:2-15)'	*'000'* … *'255'*	Turns on a show with a colour change.
'Strobe'	*'0'* … *'10'*	No function
	'11' … *'127'*	Turns on a show with a linear strobe effect with increasing speed.
	'128' … *'255'*	Turns on a show with a random strobe effect with increasing speed.
'Motor Auto'	*'On'*	Turns automatic mode on.
	'Off'	Turns automatic mode off. The head remains in one position.

5. Press *[Setup]* to confirm the selection.

   ⇨ The automatic show starts immediately.

7.2.6 Sound control

This setting is only relevant if the device is not controlled via a DMX controller and not working as a slave in a master/slave configuration.

The settings in sound mode are adopted if the device is controlled as *'Slave 2'* by a different SonicPulse device.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Sound'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to select the required submenu.

   The following submenus are available:

Menu level 2	Menu level 3	Function
'Pan'	*'000'* … *'255'*	Specifies a fixed pan angle.
'Tilt'	*'000'* … *'255'*	Specifies a fixed tilt angle.
'Mode'	*'01'* … *'02'*	Selects a show between 01 and 02.
'Sensitivity'	*'0'* … *'255(50)'*	Adjusts the sensitivity of the built-in microphone.
'SerialNumber'	*'001'* … *'016'*	Sets the position that the relevant device assumes in the chain.
'SubNumber'	*'001'* … *'016'*	Sets the total number of SonicPulse devices in a chain.
'Frequency'	*'001'* … *'019'*	Sets the frequency of the built-in microphone.
'Sound Fail'	*'Black out'*	Switches off sound control after the music is turned off.
	'Continue effect'	Activates the most recently set show after the music is turned off.
'Motor Auto'	*'On'*	Turns automatic mode on.
	'Off'	Turns automatic mode off. The head remains in one position.

5. When the display shows the required value, press *[Setup]* to confirm the selection.

   ⇨ The device follows the rhythm of the background music or sounds detected by the built-in microphone.

Setting the frequency

The following frequencies can be set:

Frequency	Hertz
'001'	40…360 Hz
'002'	400…3000 Hz
'003'	3040…10200 Hz
'004'	40…80 Hz
'005'	120…200 Hz
'006'	240…360 Hz
'007'	400…600 Hz
'008'	640…880 Hz
'009'	920…1200 Hz
'010'	1240…1560 Hz
'011'	1600…2080 Hz
'012'	2120…2520 Hz
'013'	2560…3000 Hz
'014'	3040…3560 Hz
'015'	3600…4200 Hz
'016'	4240…4920 Hz
'017'	4960…5720 Hz
'018'	5760…8000 Hz
'019'	8040…10200 Hz

7.2.7 "Master/slave" mode

This setting is only relevant if the device is operating as a slave in a master/slave configuration and is not controlled via a DMX controller.

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Slave'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to choose between *'Slave1'* and *'Slave2'* (adopts the settings in the *'Sound'* menu item).
5. Press *[Up]*/*[Down]* until the display shows *'Yes'*.
6. Press *[Setup]* to confirm the selection.

   ⇨ The device exactly follows the operation of the master device to which it is connected.

7.2.8 Pan rotation angle

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Pan Angle'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to adjust the maximum rotation angle between 0° and 540°.
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.9 Pan inversion

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Pan Inv'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Normal'* (normal direction of rotation) and *'Inverted'* (inverted direction of rotation).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.10 Tilt inversion

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Tilt Inv'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Normal'* (normal tilt direction) and *'Inverted'* (inverted tilt direction).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.11 Dimmer curves

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Curves Select'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to select the required dimmer curve. The dimmer curve determines how the brightness increases or decreases depending on the set DMX value.

   The following dimmer curves are available:

Menu level 3	Function
'Linear'	Linear course
'Square'	Exponential course (square curve with a flat course at the beginning and a steep course at the end)
'Inverse Square'	Logarithmic course (inverted square curve with a steep course at the beginning and a flat course at the end)
'S-Curve'	S-curve shape course (Non-linear curve with a distinctive flat course at the beginning and end)

7. When the display shows the required value, press *[Setup]* to confirm the selection.

Setting the speed

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Dimmer Speed'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Fast'* and *'Smooth'* (slow).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.12 Display reversal

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Display Inv'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Normal'* (normal display) and *'Inverted'* (inverted display, display is inverted by 180°).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.13 PWM frequency

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'PWM Frequency'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'12KHz'*, *'6KHz'*, *'3KHz'* and *'1KHz'*.
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.14 Behaviour after DMX control failure

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Dmx Fail'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Off'* (turn the device dark), *'Hold'* (retain the most recent setting), *'Control'* (activate manual control) and *'Program'* (activate automatic mode).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.15 Fan settings

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Mode'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Auto'* (automatic mode), *'High'* (maximum speed), *'Low'* (minimum speed) and *'Off'* (fan off).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.16 Display lighting

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Backlight Time'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Always on'* (display lighting is permanently on) and *'5s'* / *'10s'* / *'20s'* / *'30s'* (display lighting is switched off after 5/10/20/30 seconds).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.17 Key lock

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Key Lock'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose *'Locked'* (key lock activated) or *'Unlocked'* (key lock deactivated).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.18 Calibration

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Calibration'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'Pan'* (calibrate the starting position for the rotation), *'Tilt'* (calibrate the starting position for the tilt) and *'Default'* (reset to default values).

   During calibration, the range of values from 0 to 255 (display *'001'* … *'255'*) allows fine adjustment of the initial positions for pan and tilt.
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.19 System reset

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Reset Motor'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'No'* (no action) and *'Yes'* (reset all moving axes to their starting positions).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.20 Resetting to factory defaults

1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Settings'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* until the display shows *'Factory Reset'*.
5. Press *[Setup]* to confirm the selection.
6. Press *[Up]*/*[Down]* to choose between *'No'* (no action) and *'Yes'* (restore device to factory defaults).
7. When the display shows the required value, press *[Setup]* to confirm the selection.

7.2.21 System information

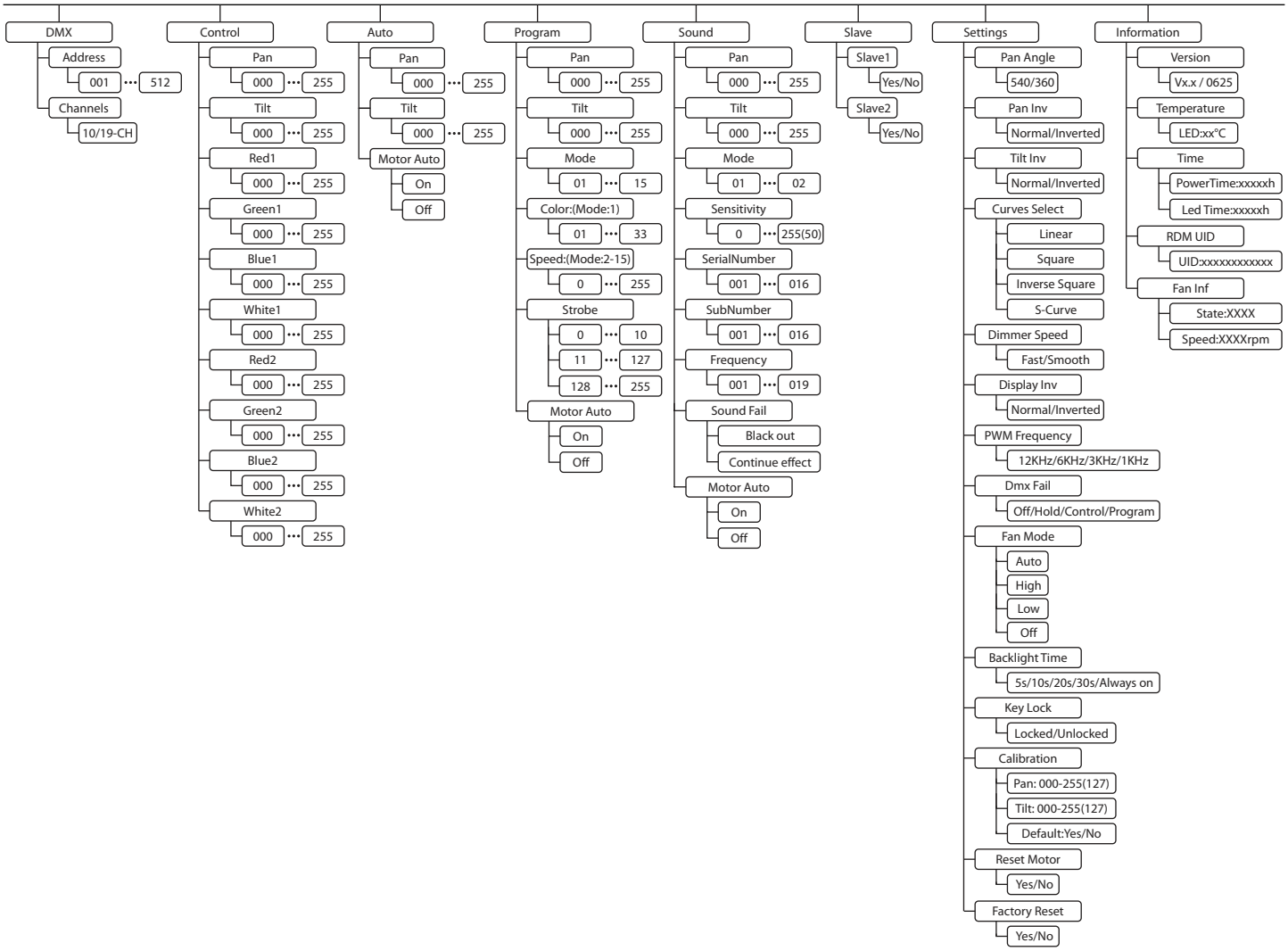
1. Press *[Mode]* to activate the main menu.
2. Press *[Mode]* or *[Up]*/*[Down]* until the display shows *'Information'*.
3. Press *[Setup]* to confirm the selection.
4. Press *[Up]*/*[Down]* to select the required submenu.

   The following submenus are available:

Menu level 2	Menu level 3	Function
'Version'		Displays the current software version.
'Temperature'		Displays the temperature of the LEDs.
'Time'	*'PowerTime'*	Displays the total running time of the device.
	'Led Time'	Displays the total running time of the LEDs.
'RDM UID'	*'UID'*	Displays the UID number.
'Fan Inf'	*'State'*	Displays the status of the fan.
	'Speed'	Displays the fan speed.

5. When the display shows the required value, press *[Setup]* to confirm the selection.

7.3 Menu overview



7.4 Functions in 10-channel DMX mode

Channel	Value	Function
1	Rotation (pan)	
	000…255	Fixed position (0° to 540°)
2	Inclination (tilt)	
	000…255	Fixed position (0° to 220°)
3	Pan/tilt speed	
	000…255	Decreasing speed
4	000…255	Dimmer intensity (0% to 100%)
5	Strobe	
	0…10	No function
	11…127	Linear strobe effect, increasing speed
	128…255	Random strobe effect, increasing speed
6	000…255	Red intensity (0% to 100%), all LEDs
7	000…255	Green intensity (0% to 100%), all LEDs
8	000…255	Blue intensity (0% to 100%), all LEDs
9	000…255	White intensity (0% to 100%), all LEDs
10	Special functions if the value is transmitted for at least 5 seconds	
	000…009	No function
	010…014	Reset if the value is transmitted for at least 5 seconds
	015…019	No function
	020…024	No function
	025…029	No function
	030…034	No function
	035…039	No function
	040…044	No function
	045…049	Automatic ventilation
	050…054	Fast ventilation
	055…059	Slow ventilation
	060…064	Ventilation off
	065…069	Linear proportional course (Linear)
	070…074	Quadratic curve with a flat profile at the beginning and a steep profile at the end (Square Law)
	075…079	Inverted square curve with a steep course at the beginning and a flat course at the end (inverse square law)
	080…084	Non-linear curve with a distinctive flat profile at the beginning and end (S-Curve)
	085…089	Steep gradient
	090…094	Flat course

Channel	Value	Function
	095…099	Normal rotation
	100…104	Inverted rotation
	105…109	Normal tilt
	110…114	Inverted tilt
	115…255	No function

7.5 Functions in 19-channel DMX mode

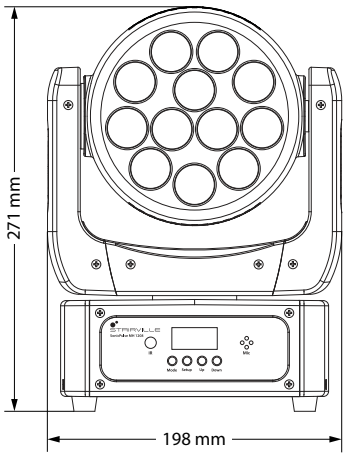
Channel	Value	Function
1	Rotation (pan)	
	000…255	Fixed position (0° to 540°)
2	Intensity of rotation (pan (pan fine)	
	000…255	Intensity of rotation (0% to 100%)
3	Inclination (tilt)	
	000…255	Fixed position (0° to 220°)
4	Intensity of tilt (tilt fine)	
	000…255	Intensity of tilt (0% to 100%)
5	Pan/tilt speed	
	000…255	Decreasing speed
6	000…255	Dimmer intensity (0% to 100%)
7	Strobe	
	0…10	No function
	11…127	Linear strobe effect, increasing speed
	128…255	Random strobe effect, increasing speed
8	Colour settings	
	000…024	No function
	025…031	R: 255; G: 000; B: 000; W: 000
	032…038	R: 255; G: 000; B: 000; W: 100
	039…045	R: 255; G: 000; B: 000; W: 200
	046…052	R: 255; G: 050; B: 000; W: 000
	053…059	R: 255; G: 150; B: 000; W: 000
	060…066	R: 255; G: 255; B: 000; W: 000
	067…073	R: 255; G: 255; B: 000; W: 075
	074…080	R: 000; G: 255; B: 000; W: 255
	081…087	R: 000; G: 255; B: 000; W: 150

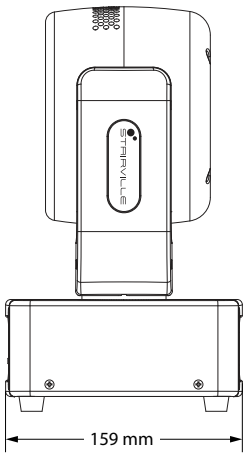
Channel	Value	Function
	088…094	R: 000; G: 255; B: 000; W: 050
	095…101	R: 000; G: 255; B: 000; W: 000
	102…108	R: 000; G: 255; B: 050; W: 000
	109…115	R: 000; G: 255; B: 150; W: 000
	116…122	R: 000; G: 255; B: 255; W: 000
	123…129	R: 000; G: 255; B: 255; W: 075
	130…136	R: 000; G: 255; B: 255; W: 150
	137…143	R: 000; G: 100; B: 255; W: 255
	144…150	R: 000; G: 000; B: 255; W: 100
	151…157	R: 000; G: 000; B: 255; W: 050
	158…164	R: 000; G: 000; B: 255; W: 000
	165…171	R: 075; G: 000; B: 255; W: 000
	172…178	R: 160; G: 000; B: 255; W: 000
	179…185	R: 255; G: 000; B: 255; W: 000
	186…192	R: 255; G: 000; B: 175; W: 000
	193…199	R: 255; G: 000; B: 100; W: 000
	200…206	R: 255; G: 000; B: 100; W: 050
	207…213	R: 255; G: 000; B: 025; W: 050
	214…220	R: 255; G: 000; B: 025; W: 025
	221…227	R: 255; G: 000; B: 025; W: 000
	228…234	R: 000; G: 000; B: 000; W: 255
	235…241	R: 075; G: 075; B: 000; W: 255
	242…248	R: 000; G: 000; B: 100; W: 255
	249…255	R: 255; G: 255; B: 255; W: 255
9	Colour change	
	000…017	No function
	018…034	Colour shift 1
	035…051	Colour shift 2
	052…068	Colour shift 3
	069…085	Colour shift 4
	086…102	Colour shift 5
	103…119	Colour shift 6
	120…136	Colour shift 7
	137…153	Colour gradient 1
	154…170	Colour gradient 2
	171…187	Colour gradient 3

Channel	Value	Function
	188…204	Colour gradient 4
	205…221	Colour gradient 5
	222…238	Colour gradient 6
	239…255	Colour gradient 7
10	000…255	Colour effect, increasing speed
11	000…255	Red intensity (0% to 100%), LED 1
12	000…255	Green intensity (0% to 100%), LED 1
13	000…255	Blue intensity (0% to 100%), LED 1
14	000…255	White intensity (0% to 100%), LED 1
15	000…255	Red intensity (0% to 100%), LED 2
16	000…255	Green intensity (0% to 100%), LED 2
17	000…255	Blue intensity (0% to 100%), LED 2
18	000…255	White intensity (0% to 100%), LED 2
19	Special functions if the value is transmitted for at least 5 seconds	
	000…009	No function
	010…014	Reset if the value is transmitted for at least 5 seconds
	015…019	No function
	020…024	No function
	025…029	No function
	030…034	No function
	035…039	No function
	040…044	No function
	045…049	Automatic mode of the fan
	050…054	Maximum fan speed
	055…059	Minimum fan speed
	060…064	Fan off
	065…069	Linear proportional course (Linear)
	070…074	Quadratic curve with a flat profile at the beginning and a steep profile at the end (Square Law)
	075…079	Inverted square curve with a steep course at the beginning and a flat course at the end (inverse square law)
	080…084	Non-linear curve with a distinctive flat profile at the beginning and end (S-Curve)
	085…089	Steep gradient
	090…094	Flat course
	095…099	Normal rotation
	100…104	Inverted rotation
	105…109	Normal tilt

Channel	Value	Function
	110…114	Inverted tilt
	115…255	No function

8 Technical specifications





Light source	12 × RGBWW LED, 8 W each	
Optical properties	Beam angle	9°
Rotation angle (pan), max.		540°
Inclination angle (tilt), max.		220°
Dimmer	Electronic, 0…100%	
Control protocols	DMX 512/RDM	
Control	DMX, buttons and display on the device, infrared remote control (item no. 354223, optional)	
Number of DMX channels	10 or 19	
Input connections	Power supply	Lockable input socket (Power Twist)
	DMX control	XLR panel socket, 3-pin
Output connections	Power supply for further devices	Lockable output socket (Power Twist) Output current, max.: 6 A
	DMX control	XLR panel socket, 3-pin
Power consumption	max. 82 W	
Supply voltage	100 - 240 V ~ 50/60 Hz	
International Protection Rating	IP20	
Mounting options	Hanging, standing	
Dimensions (W × H × D)	198 mm × 271 mm × 159 mm	
Weight	3.3 kg	
Ambient conditions	Temperature range	0 °C - 40 °C
	Relative humidity	20%…80% (non-condensing)

Further information

Lamp type	LED
Light output	96 W
Colour mix	RGBWW
Motorised zoom	No

9 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')

10 Troubleshooting

NOTICE!

Data transfer errors due to improper wiring!

If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The device is not working, no light	1. Check the mains connection.
	2. Check the settings in manual mode.
No response to the DMX controller	1. Check whether the DMX controller is switched on. Check that the DMX connections and cables are connected properly.
	2. Check the address settings and the DMX polarity.
	3. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to a DMX interface circuit.
	4. Try using another DMX controller.
Unintended light effects	Make sure that the DMX channel assignments of the devices do not overlap, and that the DMX start address of devices with independent control is always higher by the number of channels that have been set for the DMX mode on another device.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at *www.thomann.de*.

11 Cleaning

Optical lenses

Clean the optical lenses, that are accessible from the outside, regularly in order to optimize the light output. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more accumulation of dirt on the optics of the device.

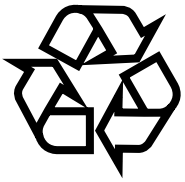
- Clean with a soft cloth using our lamp and lens cleaner (item no. 280122).
- Always dry the parts carefully.

Fan grids

The fan grids of the device must be cleaned of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

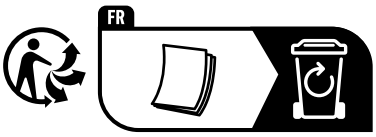
12 Protecting the environment

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.



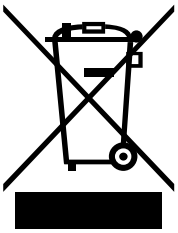
Observe the disposal note regarding documentation in France.

Disposing of lithium batteries and rechargeable batteries

Do not dispose of lithium batteries and rechargeable batteries with normal household waste, but in accordance with the local regulations for the disposal of hazardous waste. Use the available collection sites or contact your local waste disposal facility.

Only dispose of lithium batteries and rechargeable batteries when they are empty. Remove lithium batteries and rechargeable batteries from the device before disposal if this is possible without destroying it. Protect used lithium batteries and rechargeable batteries against short circuit, for example by taping the poles. Dispose of solid state lithium batteries and rechargeable batteries together with the device. Check for an appropriate collection facility.

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.