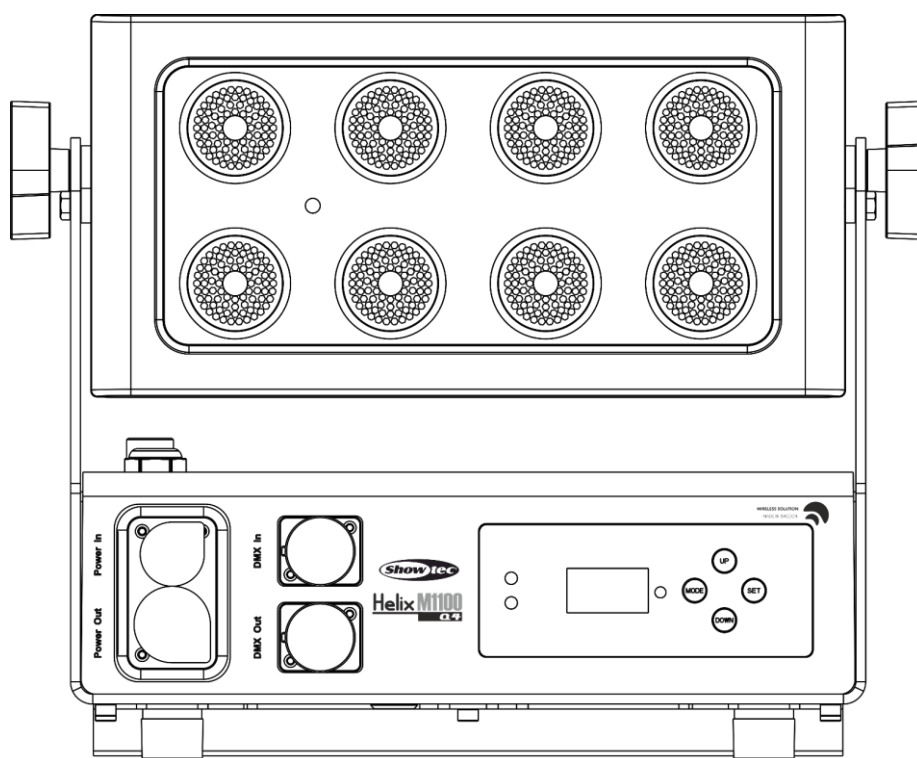




USER MANUAL



ENGLISH

Helix M1100 Q4 Mobile

V1

Product code: 43750

Firmware version: 2.3

Preface

Thank you for purchasing this Showtec product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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1. Introduction

1.1. Before Using the Product



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- Showtec Helix M1100 Q4 Mobile
- Schuko to True1 pro power cable (1,5 m)
- 1 x safety cable
- 1 x quick-lock bracket
- User manual

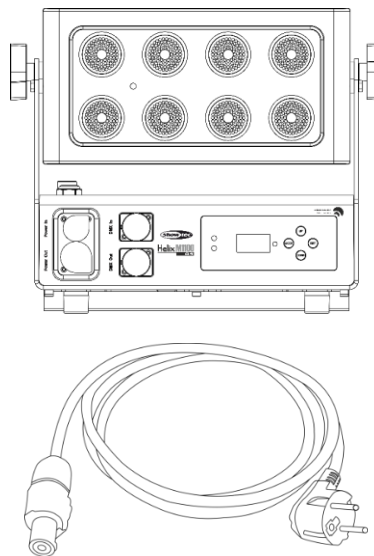
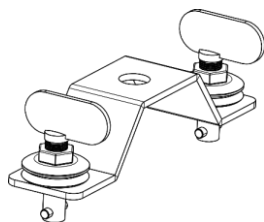


Fig. 01

1.2. Intended Use

This device is intended for professional use as an outdoor wash. It is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. Product Lifespan

This device is not designed for permanent operation. Disconnect the device from the electrical power supply when the device is not in operation. This will reduce the wear and will improve the device's lifespan.

1.4. LEDs Lifespan

The light output of the LEDs gradually decreases over time (lumen depreciation). High operating temperatures contribute to this process. You can extend the lifespan of the LEDs by providing adequate ventilation and operating the LEDs at the lowest possible brightness.

1.5. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "turn the **adjustment handle (05)**"
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.6. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention

Indicates important information for the correct operation and use of the product.



Important

Read and observe the instructions in this document.



Electrical hazard



Provides important information about the disposal of this product.

1.7. Symbols on the Information Label

This product is provided with an information label. The information label is located on the mounting bracket of the device.

The information label contains the following symbols:



This device shall not be treated as household waste.



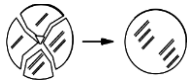
Read and follow the instructions in the user manual before installing, operating or servicing the device.

IP65

This device is rated IP65.



This device falls under IEC protection class I.



Replace any cracked protective shield.



Caution: Risk of electric shock. Do not open.

Caution: To reduce the risk of electrical shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified personnel.



This device contains a battery.

2. Safety



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1. Warnings and Safety Instructions



DANGER

Danger for children

For adult use only. The device must be installed beyond the reach of children.

- Do not leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach. Packaging material is a potential source of danger for children.



DANGER

Risk of explosion caused by incorrect handling

This device contains a built-in rechargeable lithium-ion battery. The battery is not replaceable. The battery may explode or cause burns if it is crushed, disassembled or exposed to fire or high temperatures.

- Do not open the device and do not attempt to remove the built-in battery.
- Do not disassemble the battery.
- Do not crush or puncture the battery.
- Do not short-circuit the battery.
- Do not expose the battery to water or other liquids.
- Keep the battery away from fire and heat.



DANGER

Electric shock caused by dangerous voltage inside

There are areas within the device where dangerous touch voltage may be present.

- Do not open the device or remove any covers.
- Do not operate the device if the covers or the housing are open. Before operation, check if the housing is firmly closed and all screws are tightly fastened.
- Disconnect the device from electrical power supply before service and maintenance, and when the device is not in use.



DANGER
Electric shock caused by short-circuit

This device falls under IEC protection class I.

- Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
- Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
- Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
- Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.
- Do not use the device during thunderstorms. Disconnect the device from the electrical power supply immediately.
- Keep the connectors sealed with the rubber caps when the connectors are not in use.
- Do not connect the cables from above the connectors, if the device is installed outdoors. Make a 'drip loop' in the cable so that rain water cannot enter the device.



WARNING
Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.



Attention
Power supply

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.
- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.



Attention
General safety

- Do not connect the device to a dimmer pack.
- Do not switch the device on and off in short intervals. This decreases the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Change the lens or the LEDs if they are visibly damaged to such an extent that their effectiveness is impaired, for example by cracks or deep scratches. Contact your Highlite International dealer for more information, as servicing can be performed only by instructed or skilled persons.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.

- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue the use immediately.



Attention
For professional use only
This device shall be used only for the purposes it is designed for.

This device is designed to be used as a professional outdoor wash. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households and for general lighting.
- This device is not designed for permanent operation.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixations and installation points.
- The lens is not cracked or damaged.
- The power cables are not damaged and do not show any material fatigue.



Attention
Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP65 rated. IP (Ingress Protection) 65 class means that the device is dust-tight and protected against harmful effect of water jets.

Keep the connectors sealed with the rubber caps when the connectors are not in use.

2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and to avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

3. Description of the Device

The Showtec Helix M1100 Q4 Mobile is a battery powered 8 x 10 W RGBW LED Wash with IP65 rating, suitable for mobile and outdoor applications. It is the follow-up of the Helix M1000 Q4 Mobile and equipped with a 10-15% brighter LED. Its 10° beam angle can be widened to a 20°, 40°, 15°x60°, or 90° beam angle by using optionally available dedicated beam shapers. Equipped with a rechargeable lithium-ion battery, the Helix M1100 Q4 Mobile will operate up to 15 hours without charging. The tilt angle can be manually adjusted over 180° and the unit can be controlled via W-DMX (wireless), DMX, Master/Slave, Manual, and Auto mode with many built-in programs.

It has an emergency backup function, which switches the output to 4000 K white at maximum brightness in case the mains power drops. Its delayed output function allows you to program the unit and have it start later, saving precious battery runtime. This can be very helpful when setting up mid-day and having it turn on automatically at night. The Helix M1100 Q4 comes with a 1.5-metre powerCON TRUE1 cable, Quick-Lock bracket, and Safety Cable.

3.1. Front View

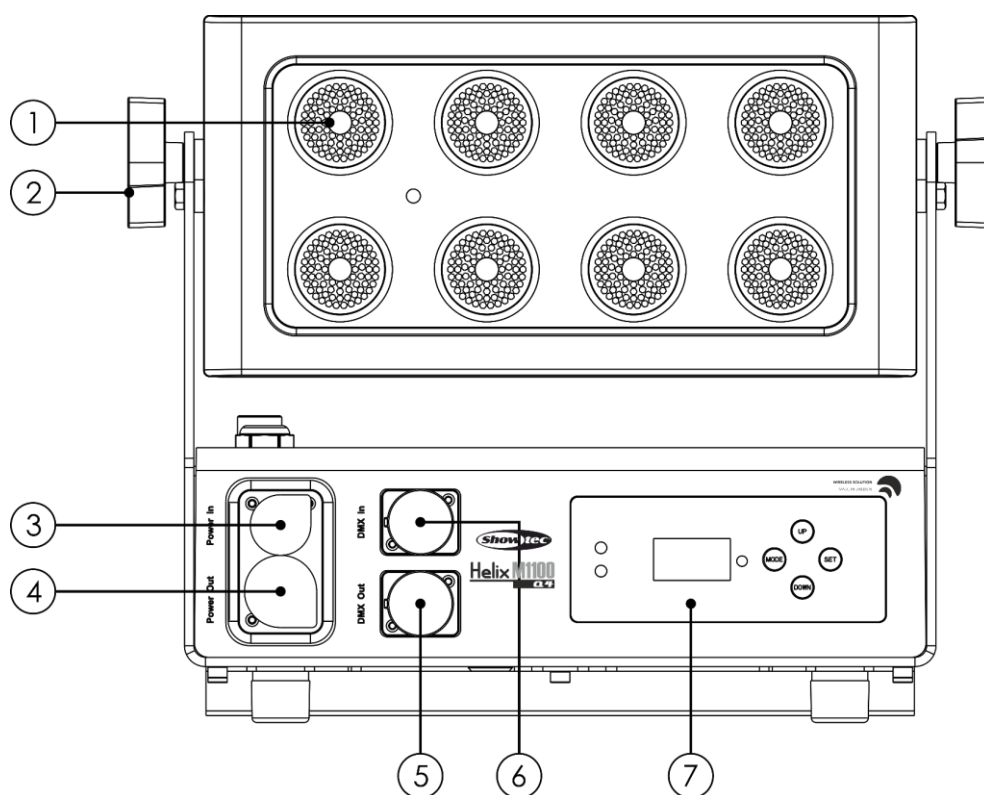


Fig. 02

- 01) 8 x Prolight Opto RGBW 4-in-1 10 W LEDs
- 02) 2x Adjustment screws
- 03) 100–240 V True1 pro power connector IN
- 04) 100–240 V True1 pro power connector OUT
- 05) 5-pin DMX connector OUT
- 06) 5-pin DMX connector IN
- 07) OLED display + control buttons

3.2. Bottom View

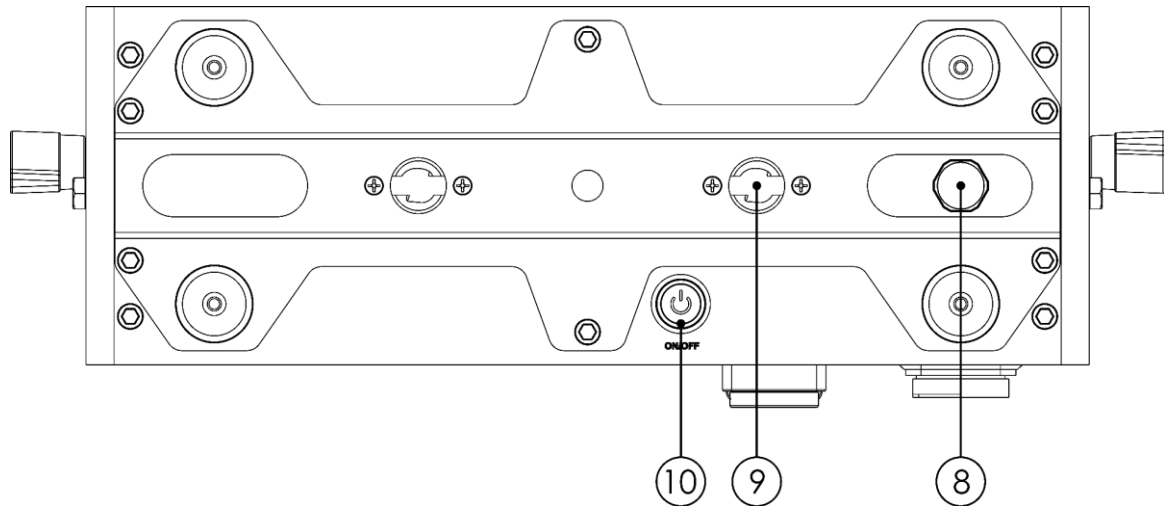


Fig. 03

- 08) Protective valve
- 09) 2x Quick Locks
- 10) Power switch ON/OFF (for battery operation)

Press this switch for the light output to be visible. The current from the built-in battery is responsible for the light output. The True1 pro power cable should be used only when charging the battery.

3.3. Accessories

The device is delivered without a barndoor, beamshaper or tophat. There are several accessories for this device:

- Product code: [43742](#) – Barndoor for Helix M1000 Q4 Mobile
- Product code: [43745](#) – Beamshaper for Helix M1000 Q4 Mobile (20°)
- Product code: [43746](#) – Beamshaper for Helix M1000 Q4 Mobile (40°)
- Product code: [43747](#) – Beamshaper for Helix M1000 Q4 Mobile (15°x60°)
- Product code: [43748](#) – Beamshaper for Helix M1000 Q4 Mobile 90°
- Product code: [43741](#) – Tophat for Helix M1000 Q4 Mobile
- Product code: [52001](#) – W-DMX™ BlackBox F-1 Tranceiver G6
- Product code: [D7229](#) – Case for 4x Helix M1000

3.4. Product Specifications

Model:		Helix M1100 Q4 Mobile	
Electrical:			
Input voltage:		100–240 V AC, 50/60 Hz	
Power consumption:		75 W	
Physical:			
Dimensions:		367 x 126 x 307 mm mm (L x W x H) (including bracket)	
Weight:		7,9 kg	
Optics:			
Light source:		8 x RGBW 4-in-1 10 W LEDs	
Light output		8800 lm	
Refresh rate:		12000 Hz	
Beam angle:		10° horizontal + 10° vertical (optional 20°, 40°, 15°x60° beamshapers)	
Dimmer:		0–100 %	
Strobe:		0–20 Hz	
Dim curves:		4	
Tilt angle:		0–180°	
Battery:		Lithium-ion	
Battery voltage:		18,5 V	
Battery storage:		13 Ah	
Battery life time:		8 h @ Full, 15 h by software	
Charging cycle:		6 h	
Rigging:		Quick-locks for fast rigging and mounting	
Wireless DMX:		Wireless Solutions	
IP rating:		IP65	
DMX control:		via standard DMX controller	
Onboard:		OLED Graphical display with 4 touch buttons	
Operation and control:			
Control:		Auto, Built-in programs, Manual, Master/Slave, DMX512, W-DMX, RDM	
DMX channels:		4, 6 or 10 channels	
Control panel:		LCD display and buttons	
Connections:			
Power connections:		IP65-rated Seetronic power connectors IN/OUT	
Data connections:		IP65-rated 5-pin DMX connectors IN/OUT	
Signal pinouts:		Pin 1 (earth), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)	
Construction:			
Housing:		Die-cast aluminum	
Color:		Black	
IP rating:		IP65	
Cooling:		Convection	
Thermal:			
Maximum ambient temperature t_a :		45 °C	
Minimum ambient temperature:		-10 °C	
Minimum distance:			
Minimum distance from flammable surfaces:		0,8 m	
Minimum distance to lighted object:		0,8 m	

3.5. Dimensions

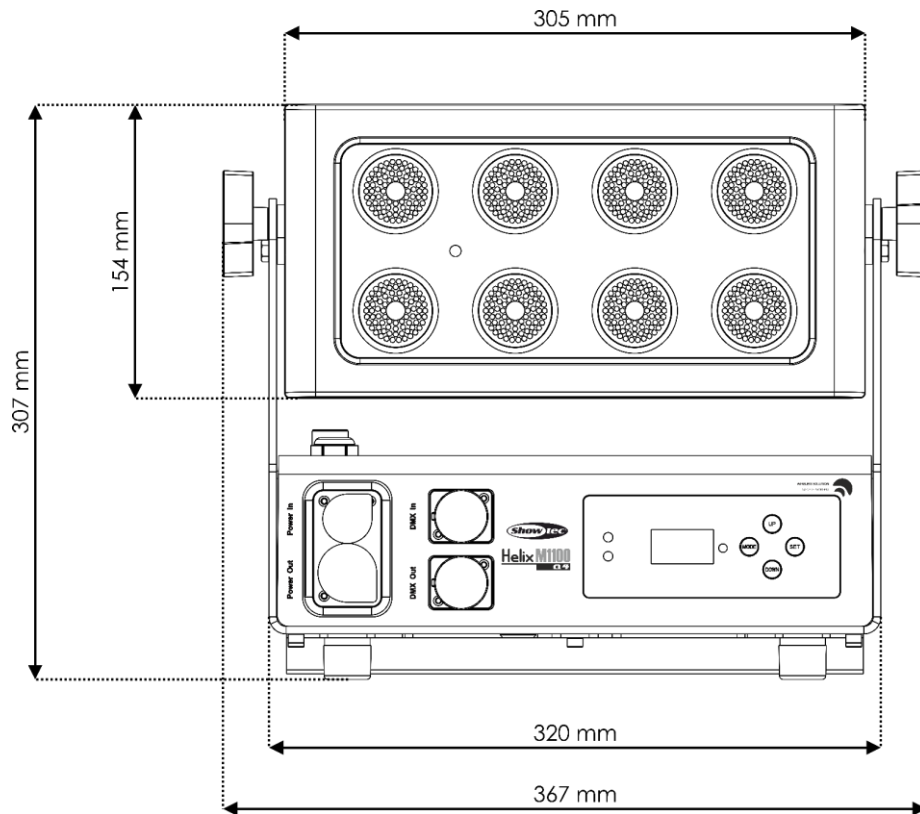


Fig. 04

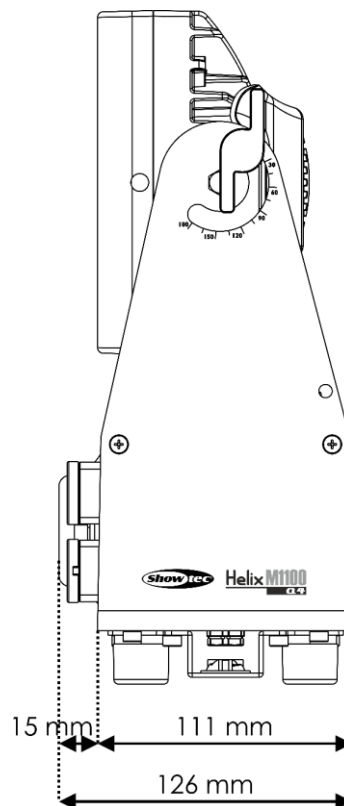


Fig. 05

4. Installation

4.1. Safety Instructions for Installation



WARNING

Incorrect installation can cause serious injuries and damage of property.

If trussing systems are used, installation must be carried out only by instructed or skilled persons.

Follow all applicable European, national and local safety regulations concerning rigging and trussing.

4.2. Personal Protective Equipment

During installation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

4.3. Installation Site Requirements

- The device can be used outdoors.
- The device can be mounted to a truss or other rigging structure in any orientation.
- The minimum distance between the light output and the illuminated surface must be bigger than 0,5 m.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.

4.4. Installing the Beamshapers (43745/43746/43747/43748)

- 01) In order to install the Beamshaper, place it on the lens of the Helix. The Beamshaper is equipped with multiple magnets which keep it firmly in position.
- 02) For extra safety, use a safety cable to connect the Beamshaper to the Helix.

[43745](#) – Beamshaper for Helix M1000 Q4 Mobile (20°)

[43746](#) – Beamshaper for Helix M1000 Q4 Mobile (40°)

[43747](#) – Beamshaper for Helix M1000 Q4 Mobile (15°x60°)

[43748](#) – Beamshaper for Helix M1000 Q4 Mobile 90°

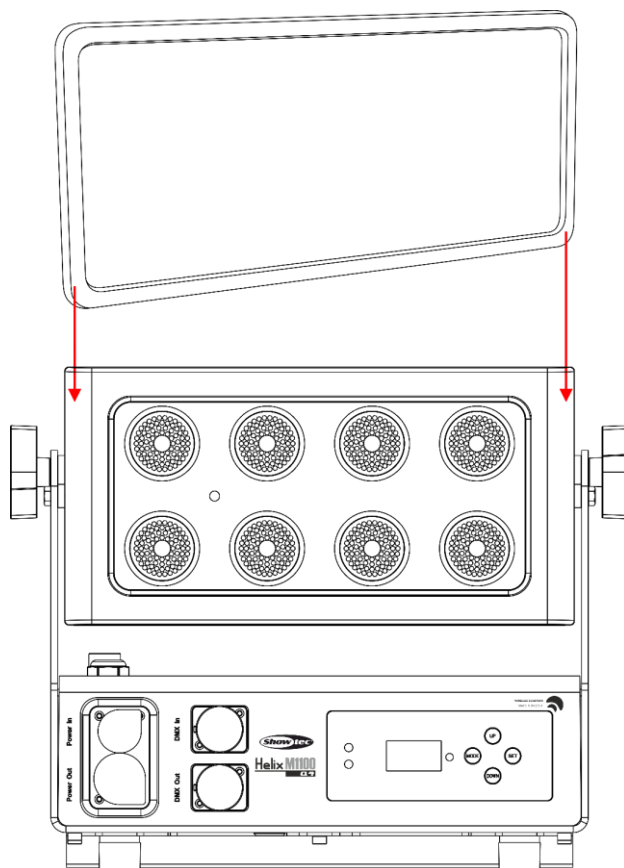


Fig. 06

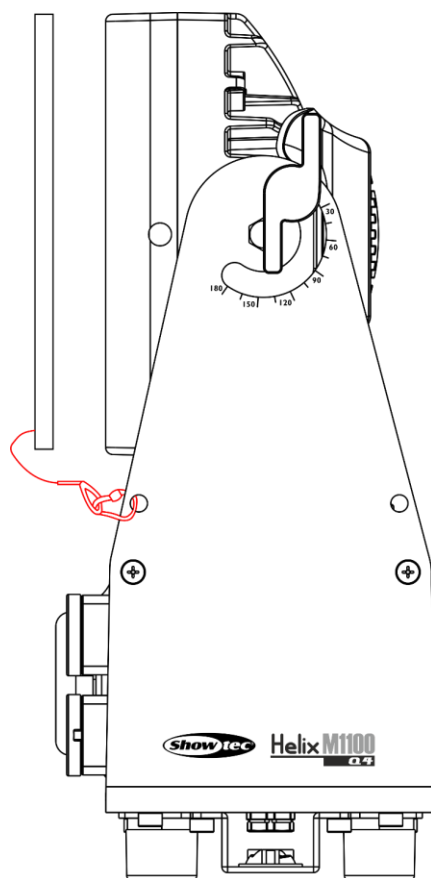


Fig. 07

4.5. Installing the Barndoor (43742)

- 01) Pull on the spring-loaded locking screws, on both sides of the barndoor ([43742](#)), to unlock the mechanism.

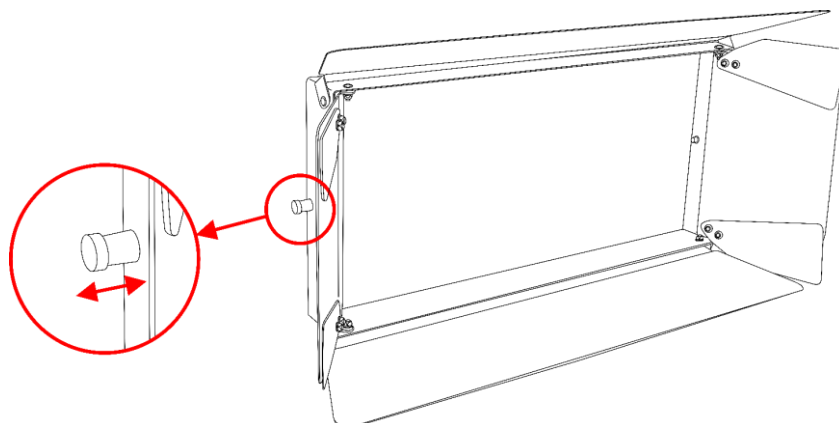


Fig. 08

- 02) Place the barndoor on the Helix, to secure the barndoor's screws in the Helix's mounting holes.

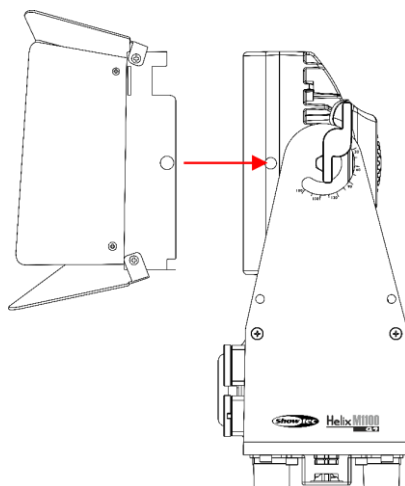


Fig. 09

- 03) Release both locking screws to lock the barndoor in position.
04) For extra safety, use a safety cable to connect the barndoor to the Helix.

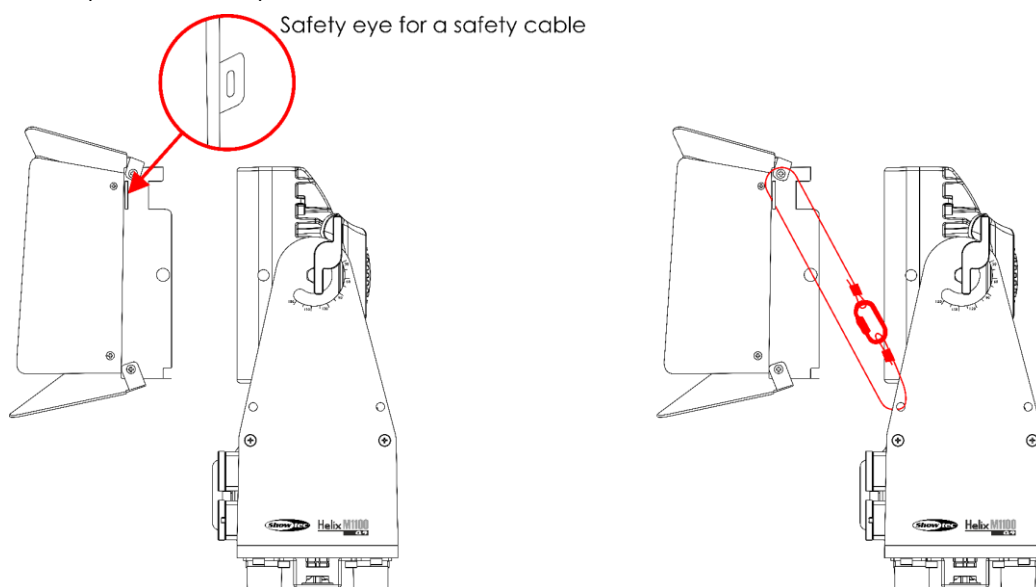


Fig. 10

4.6. Installing the Tophat (43741)

- 01) Pull on the spring-loaded locking screws, on both sides of the tophat ([43741](#)), to unlock the mechanism.

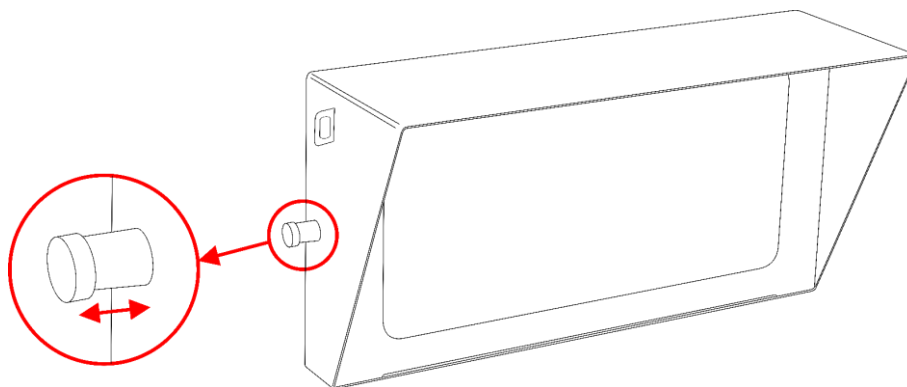


Fig. 11

- 02) Place the tophat on the Helix, to secure the tophat's screws in the Helix's mounting holes.

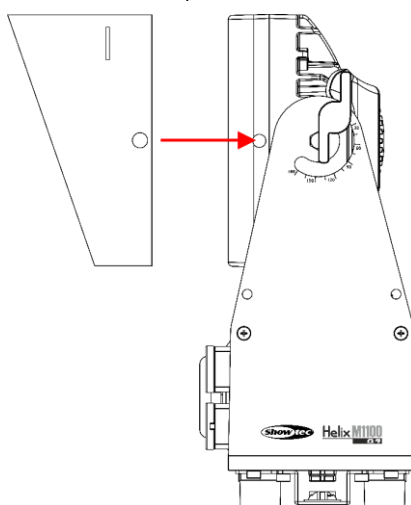


Fig. 12

- 03) Release both locking screws to lock the tophat in position.
04) For extra safety, use a safety cable to connect the tophat to the Helix.

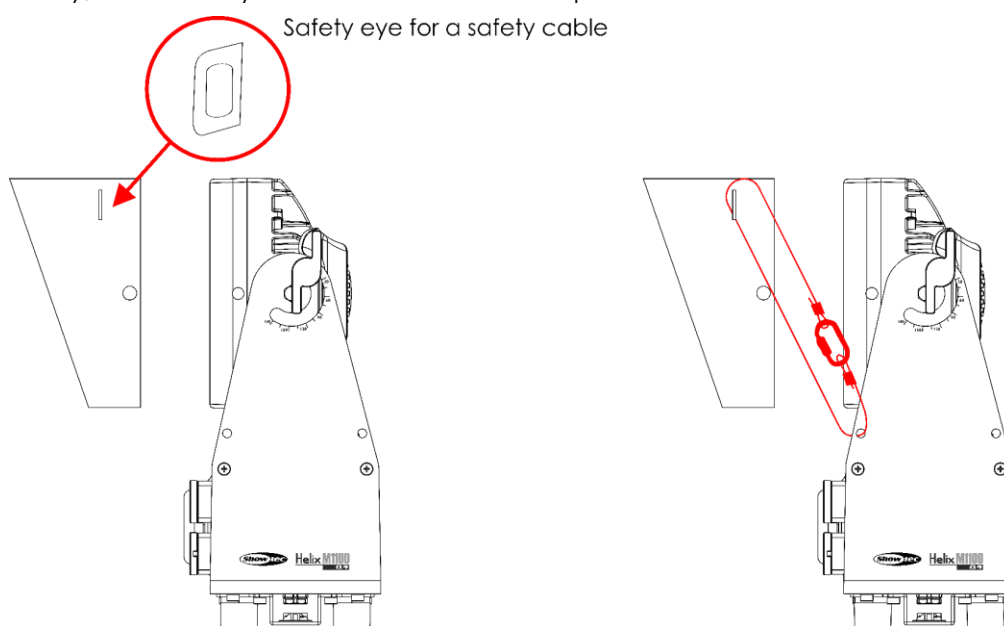


Fig. 13

4.7. Rigging

The device can be positioned on a flat surface or mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.

If the device is mounted overhead, it should always be secured with a safety cable or another secondary suspension.



CAUTION

Restrict the access under the work area during rigging and/or derigging.

To mount the device, follow the steps below:

- 01) Use a clamp to attach the device to the supporting structure, as shown in Fig. 14. Make sure that the device cannot move freely. The use of a quick lock bracket is optional.
- 02) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the safety eye, as shown in Fig. 14. You can use the safety cable supplied with the device.

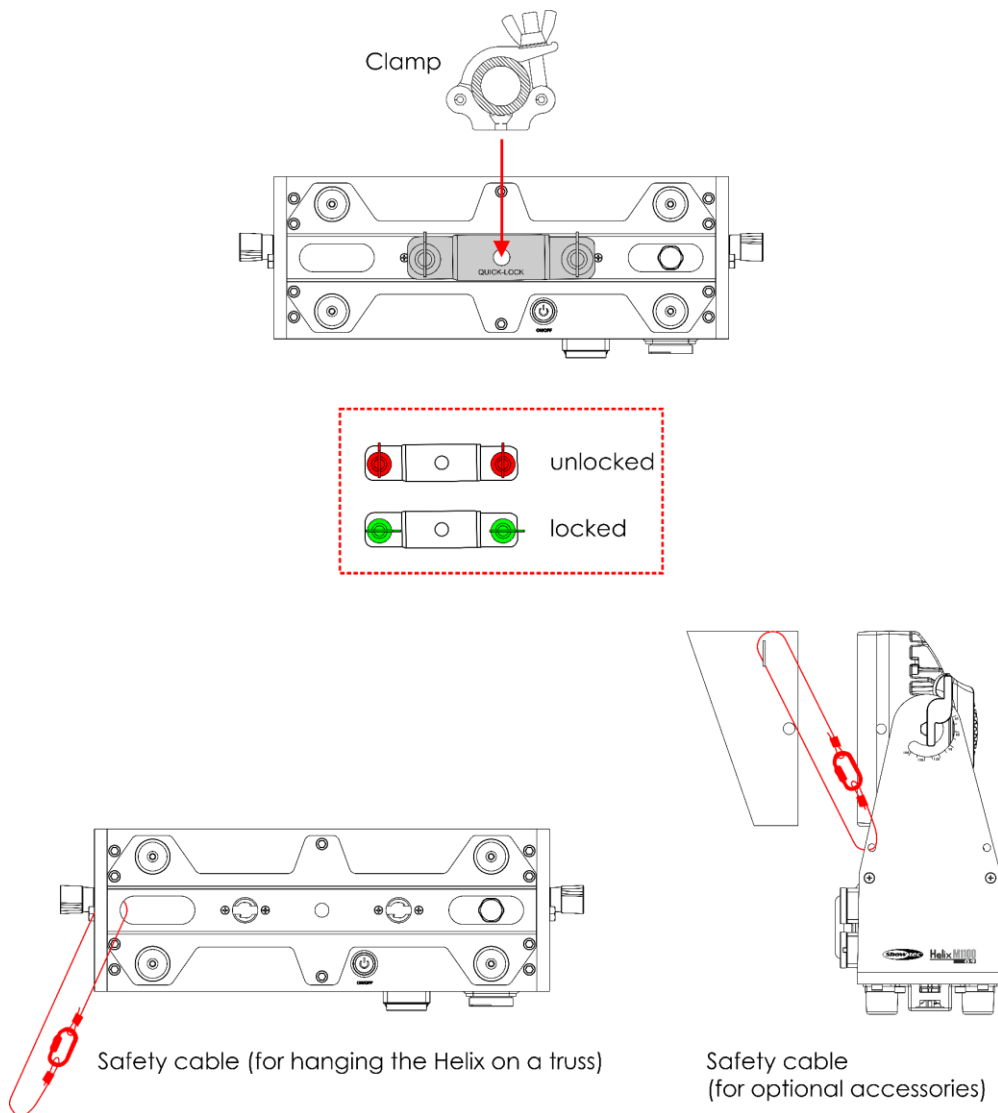


Fig. 14

4.7.1. Angle Adjustment

You can adjust the angle of the device with the 2 **adjustment screws (02)**.

- 01) Turn the **adjustment screws (02)** counterclockwise to release them.
- 02) Tilt the device at the desired angle (see Fig. 15).
- 03) Turn the **adjustment screws (02)** clockwise to tighten them. Make sure that the device cannot move freely after the **adjustment screws (02)** are tightened.

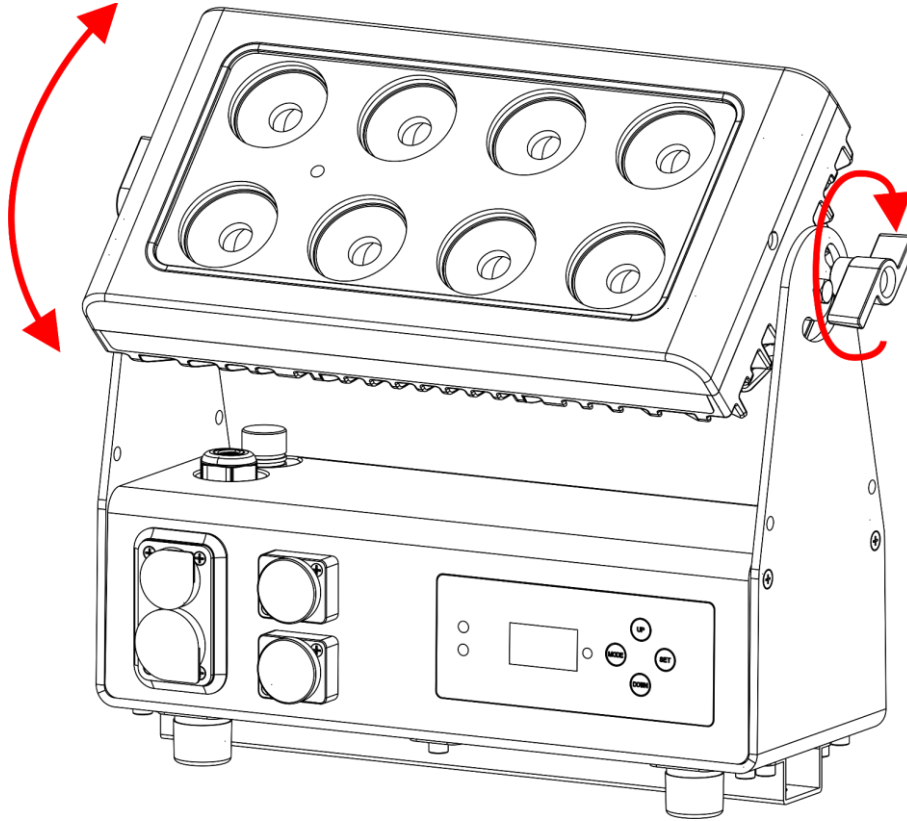


Fig. 15

4.8. Charging the Battery



DANGER

Risk of explosion caused by incorrect handling

This device contains a built-in rechargeable lithium-ion battery. The battery is not replaceable. The battery may explode or cause burns if it is crushed, disassembled or exposed to fire or high temperatures.

- Do not open the device and do not attempt to remove the built-in battery.

To charge the battery follow the steps below:

- 01) Turn off the power switch **(10)**.
- 02) Plug in the True1 pro power cable.
- 03) While the battery is charging, the **red LED (A)** on the left-hand side of the display will light up.
- 04) When the battery is fully charged, the **green LED (H)** on the left-hand side of the display will light up

- Charge the battery before using the device for the first time.
- Do not deep discharge the battery as this will shorten the battery's lifetime. Recharge the battery as early as possible. Do not let the light run until the battery is depleted.
- Make sure that the battery is charged to at least 50 % before storing the device.
- Do not charge the lithium-ion battery for more than 24 hours.
- Please recharge the battery in time, for example when the battery is (almost) depleted. If you do not use the Helix for a long time, please recharge the battery at least once a month, in order to prevent the lithium-ion battery from becoming damaged.
- After a cycle use of 300 times, the battery capacity will be reduced to about 8 AH (70% of the total capacity). Please reduce the charge and discharge times, to extend the battery lifetime. After 300 times of charging and discharging, you need to replace the battery.
- Store in the upright position.

It is recommended to charge the device at an ambient temperature between 0 °C and 35 °C.

If the device is charged in a carrying case, leave the case open.

Refer to **3.4. Product Specifications** on page 12 for the charge time of the battery.

Note:

You cannot remove the lithium-ion battery and charge it separately. The battery can only be charged when the device is connected to the mains power.

4.9. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

The device accepts AC mains power at 100–240 V and 50/60 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:

- Make sure that the power supply matches the input voltage specified on the information label on the device.
- Make sure that the socket-outlet has ground (earth) connection.

Connect the device to the socket-outlet with the power plug. Do not connect the device to a dimmer circuit, as this may damage the device.

This device is IP65 rated.

- Do not expose the device to conditions that exceed the rated IP class conditions.
- Keep the connectors sealed with the rubber caps when the connectors are not in use.
- Do not connect the cables from above the connectors, if the device is installed outdoors. Make a 'drip loop' in the cable so that rain water cannot enter the device.
- Make sure that the cable run is not too heavy. A heavy cable run can cause damage to the connectors. If the connectors are damaged, their ingress protection (IP) can deteriorate.

4.10. Power Linking of Multiple Devices

This device supports power linking. Power can be relayed to another device via the power OUT connector. Note that the input and the output connectors have different designs: one type cannot be connected to the other.

Power linking of multiple devices must be carried out only by instructed or skilled persons.



WARNING
Incorrect power linking may lead to overload of the electrical circuit and result in serious injuries and damage of property.

To prevent overload of the electrical circuit, when power linking multiple devices:

- Use cables with sufficient current-carrying capacity. The power cable supplied with the device is not suitable for power linking of multiple devices.
- Make sure that the total current draw of the device and all connected devices does not exceed the rated capacity of the power cables and the circuit breaker.
- Do not link more devices on one power link than the maximum recommended number.

Maximum recommended number of devices:

- at 100–120 V: 20 devices Helix M1100 Q4 Mobile
- at 200–240 V: 43 devices Helix M1100 Q4 Mobile

5. Setup

5.1. Warnings and Precautions



DANGER
Electric shock caused by short-circuit

This device is IP65 rated.

- Do not expose the device to conditions that exceed the rated IP class conditions.
- Keep the connectors sealed with the rubber caps when the connectors are not in use.
- Do not connect the cables from above the connectors, if the device is installed outdoors. Make a 'drip loop' in the cable so that rain water cannot enter the device.
- Make sure that the cable run is not too heavy. A heavy cable run can cause damage to the connectors. If the connectors are damaged, their ingress protection (IP) can deteriorate.



Attention
Connect all data cables before supplying power.
Disconnect power supply before connecting or disconnecting data cables.

5.2. Stand-alone Setup

When the Helix M1100 Q4 Mobile is not connected to a controller or to other devices, it functions as a stand-alone device.

For more information about the control modes, refer to **6.4. Control Modes** on page 29.

5.3. DMX Connection

5.3.1. DMX-512 Protocol

You need a DMX serial data link to run light shows of one or more devices using a DMX-512 controller or to run synchronized shows of two or more devices set in a master/slave control mode.

The Helix M1100 Q4 Mobile has 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows:

- 5-pin: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)

Devices on a serial data link must be daisy-chained in a single line. The number of devices that you can control on one data link is limited by the combined number of the DMX channels of the connected devices and the 512 channels available in one DMX universe.

To comply with the TIA-485 standard, no more than 32 devices should be connected on one data link. In order to connect more than 32 devices on one data link, you must use a DMX optically isolated splitter/booster, otherwise this may result in deterioration of the DMX signal.

Note:

- Maximum recommended DMX data link distance: 300 m
- Maximum recommended number of devices on a DMX data link: 32 devices

5.3.2. DMX Cables

Shielded twisted-pair cables with 5-pin XLR connectors must be used for reliable DMX connection. You can purchase DMX cables directly from your Highlite International dealer or make your own cables.

If you use XLR audio cables for DMX data transmission, this may lead to signal degradation and unreliable operation of the DMX network.

When you make your own DMX cables, make sure that you connect the pins and wires correctly as shown in Fig. 16.

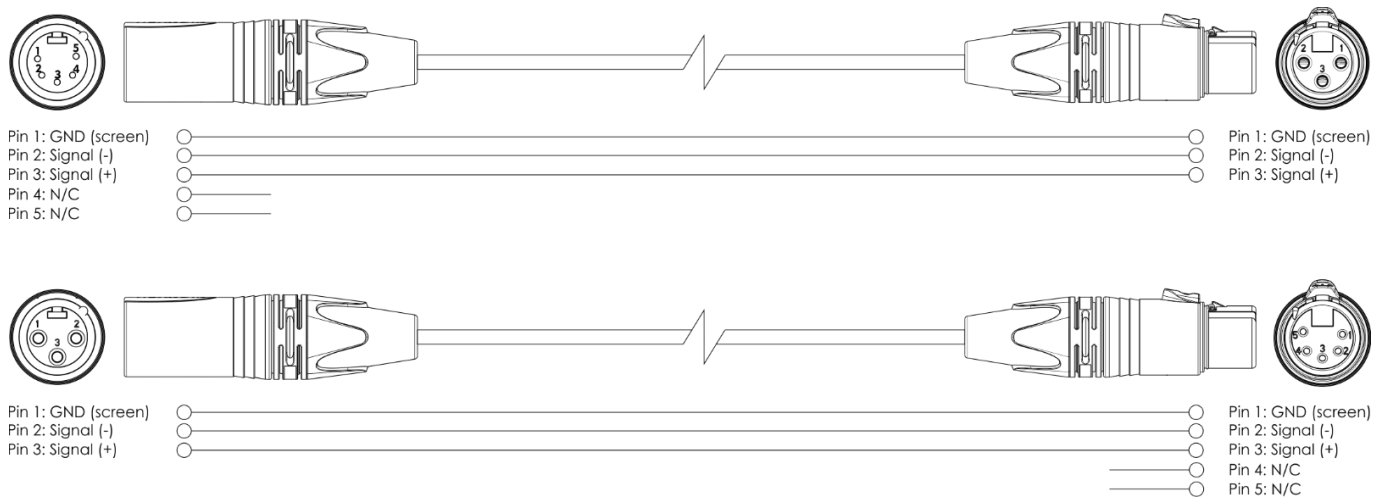


Fig. 16

5.3.3. Master/Slave Setup

The Helix M1100 Q4 Mobile supports master/slave control mode. To connect multiple devices in a master/slave setup, follow the steps below:

- 01) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 5-pin DMX cable. The first connected device in the setup will be automatically recognized as the master device.
- 02) Repeat step 1 to connect all devices as shown in Fig. 17.
- 03) Set all subsequent devices in the setup as slave devices. See **6.8.5 Slave Mode** on page 37 for more information.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device in the setup.

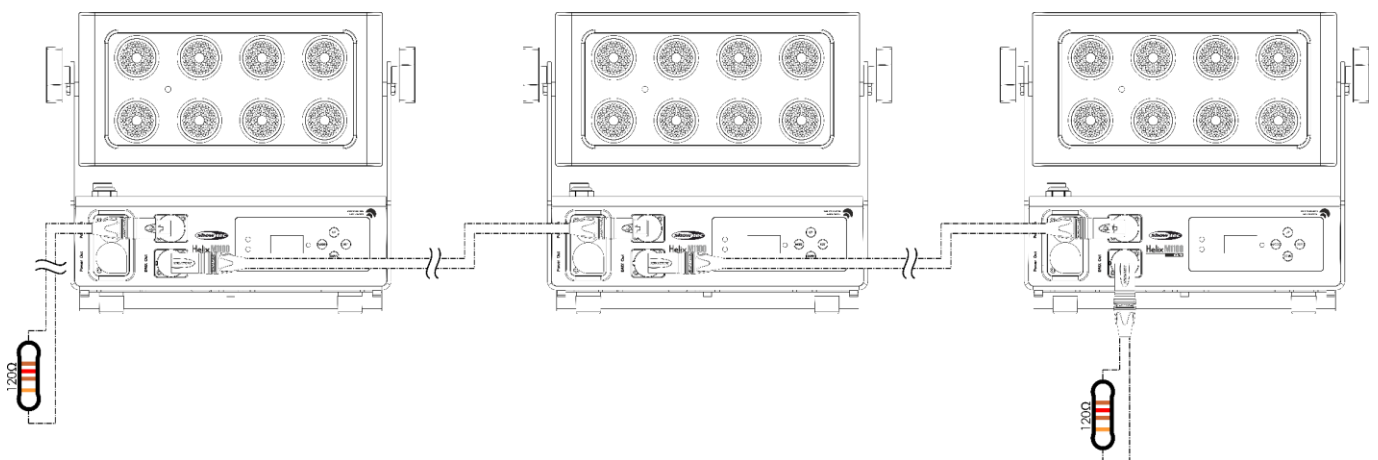


Fig. 17

5.3.4. DMX Linking

To connect multiple devices on one DMX data link, follow the steps below:

- 01) Use a 5-pin DMX cable to connect the DMX OUT connector of the lighting controller to the DMX IN connector of the first device.
- 02) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 5-pin DMX cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain as shown in Fig. 18.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

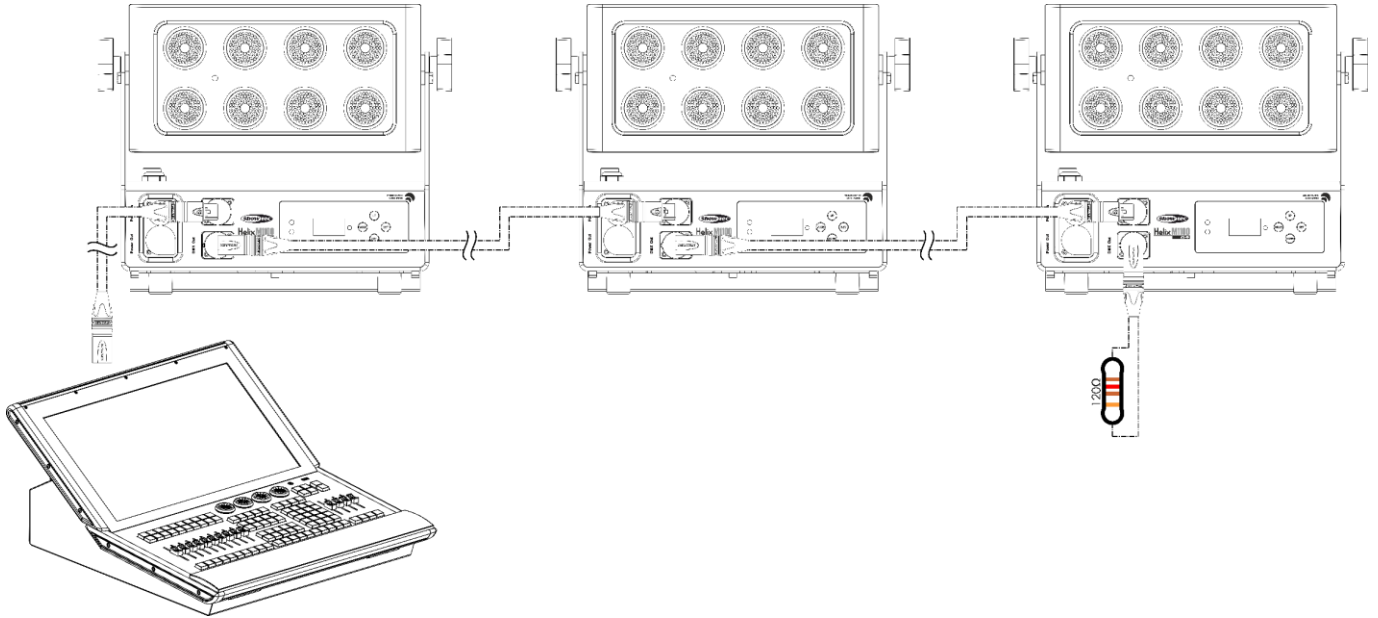


Fig. 18

5.3.5. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Helix M1100 Q4 Mobile has 3 personalities: 4 channels, 6 channels and 10 channels.

If you want to connect multiple devices on one data link and use them in 10-channel mode, for example, follow the steps below:

- 01) Set the starting address of the 1st device on the data link to 1 (001).
- 02) Set the starting address of the 2nd device on the data link to 11 (011), as $1 + 10 = 11$.
- 03) Set the starting address of the 3rd device on the data link to 21 (021), as $11 + 10 = 21$.
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 10 to the previous number.

Make sure that you do not have any overlapping channels in order to control the Helix M1100 Q4 Mobile correctly. If two or more devices are addressed similarly, they will work similarly.

5.3.6. Multiple Helixes (Wireless DMX Control)

You can use the Helix in a wireless DMX setup. Make sure the device is operating in wireless DMX mode, which can be set in the main menu (see **6.8.1.3. DMX Signal** on page 34 for more information).

5.3.6.1. Sweden 2.4GHz Wireless Communication Module

Communication distance:	depending on the transmitting power or transmitter module
Test conditions:	W-DMX TRx Transmitter module, 2dBi Antenna, transmitting power 20dBm (100mW)
Range indoor:	60 m (approx. through three concrete walls)
Range outdoor:	250 m

5.3.6.2. Wireless DMX Connection

The wireless receiving module "Nano G5 Receiver, 2.4GHz", provided by Swedish WIRELESS SOLUTION, only has a 2.4 GHz wireless signal receiving function. In order to establish a wireless connection, please use the ([52001](#)) W-DMX BlackBox F-1 Transceiver G6 by WIRELESS SOLUTION. To control the status of the wireless communication, please look at the green LED indicator light on the right-hand side of the display.

Note:

- When the Helix receives a wireless DMX signal, then this signal will also be present at its 5-pin DMX output **(05)**. However, **the Helix has not been designed to send wireless signals**. Therefore, always connect the Helix devices to each other using a DMX cable.

5.3.6.3. Wireless DMX Problems

- 01) No signal from the W-DMX transmitter.
The LED indicator will blink quickly.
- 02) Proper connection with the W-DMX transmitter, but no DMX signal is present.
The LED indicator will blink slowly.

When the wireless DMX communication is unhindered and a DMX signal is present, the LED indicator will always be on.

Note:

The Helix M1100 Q4 Mobile cannot receive a W-DMX signal and a DMX cable signal at the same time.

When the device is in Auto mode or Built-in Programs mode, please ensure that the paired 2.4GHz wireless signal transmitter is OFF.

Note:

The Helix M1100 Q4 Mobile is only a W-DMX receiver and never a W-DMX transmitter.

5.3.6.4. Connect the Helix to the Wireless DMX Signal Transmitter

The Helix cannot actively match a random wireless signal transmitter. In order to create a wireless match, please check the manual of your wireless signal transmitter. We advise you to use the W-DMX BlackBox F-1 Transceiver G6 ([52001](#)) by WIRELESS SOLUTION.

5.3.6.5. Disconnect the Helix from the Wireless DMX Signal Transmitter

- 01) Turn off/unlink the W-DMX. In order to do so, deactivate W-DMX (see **6.8.1.4. W-DMX Unlock** on page 34 for more information).
- 02) Unlink the Helix (see **6.8.1.4. W-DMX Unlock** on page 34 for more information).
- 03) The Helix will now be disconnected.

5.3.6.6. Setup Example 1

The Helix cannot send any wireless signals. Therefore, the slave Helix fixtures must always be connected via a DMX signal cable.

Note:

The Helix M1100 Q4 Mobile is only a W-DMX receiver and never a W-DMX transmitter. When the Helix operates in DMX or Slave mode, it can receive a wireless DMX signal (CH1–512) and at the same time it can also send a DMX signal, via its DMX output (**05**), through a DMX cable.

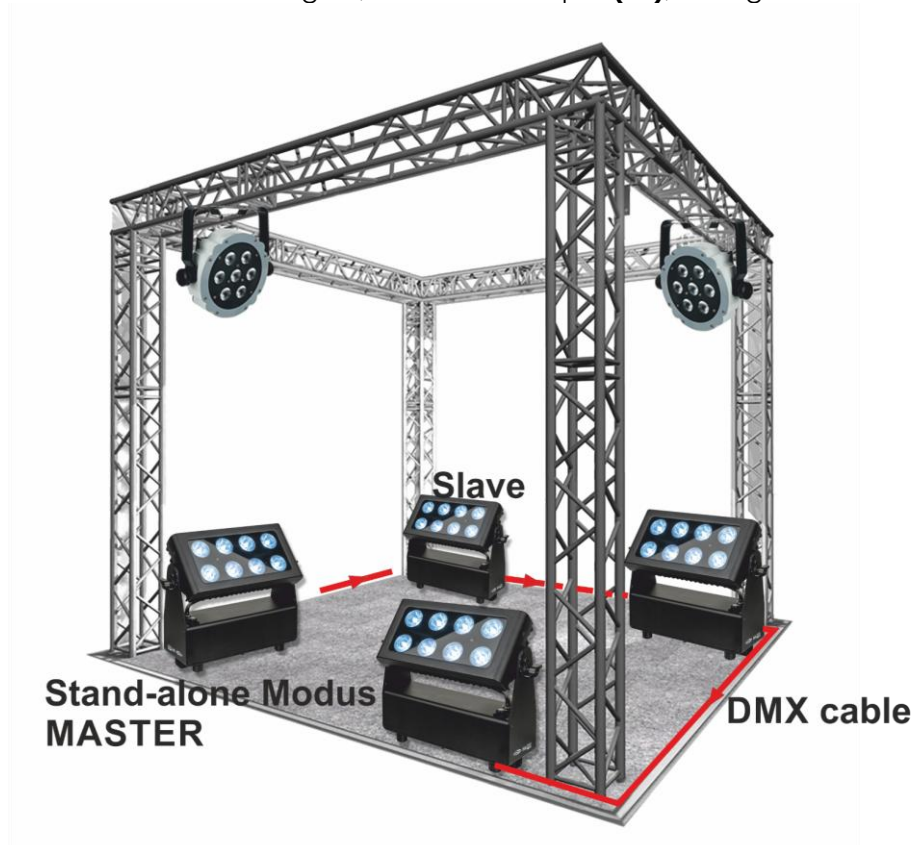


Fig. 19

5.3.6.7. Setup Example 2

Connect the Helix to the wireless DMX signal transmitter

The Helix M1100 Q4 Mobile cannot actively search for wireless signal transmitters.

In order to pair the Helix with the wireless signal transmitter, please check the manual of the wireless signal transmitter you use.

It is recommended to use the W-DMX BlackBox F-1 Tranceiver G6 ([52001](#)) by WIRELESS SOLUTION.

Disconnect from the Wireless DMX signal transmitter

The Helix can be disconnected from the wireless DMX signal transmitter.

It is possible to deactivate W-DMX in the main menu, see **6.8.1.4. W-DMX Unlock** on page 34 for more information.

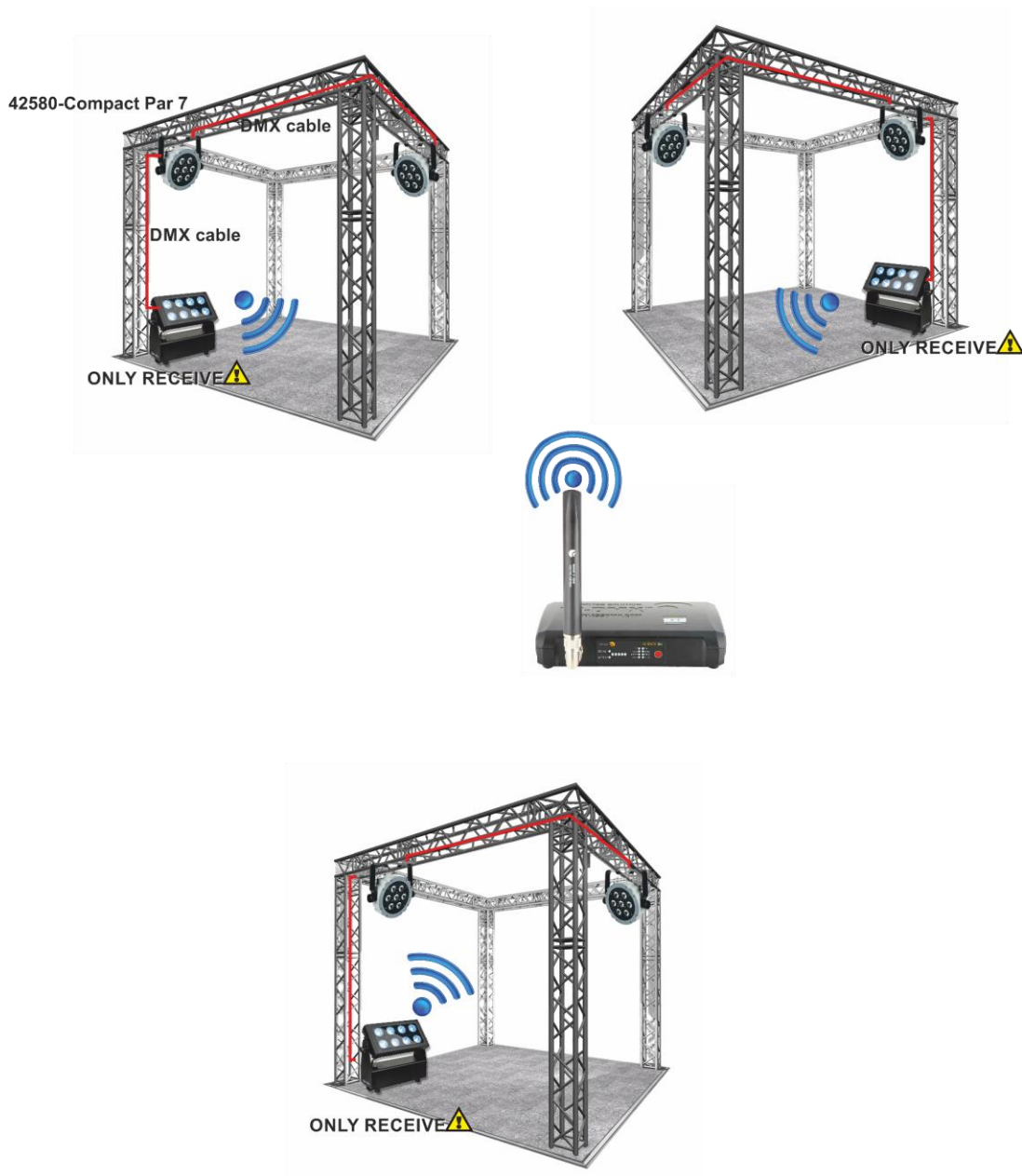


Fig. 20

6. Operation

6.1. Safety Instructions for Operation



Attention

This device must be used only for the purposes it is designed for.

This device is intended for professional use as an outdoor spot. It is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.



Attention

Power supply

Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

6.2. Turning On/Off

The device has a power switch.

- Set the **power switch (10)** to ON position to turn on the device.
- Set the **power switch (10)** to OFF position to turn off the device.

Make sure that the device is turned off from the **power switch (10)** when the device is not in use. This will prevent the battery from depletion.

It is recommended to reset the device to its factory settings after each setup or use. Refer to **6.8.6.10. Factory Reset** on page 42 for more information. When you turn off the device, the next time you turn it on, it will continue to operate in the previously selected operation mode.

6.3. Factory Reset

It is recommended to reset the device to its factory settings after each setup or use. If you do not reset the device, the next time you turn it on, it will continue operating in the last selected operation mode.

If the device is turned off, to reset the device follow the steps below:

- 01) Set the **power switch (10)** to ON position to turn on the device.
- 02) Refer to **6.8.6.10. Factory Reset** on page 42 for more information.

6.4. Control Modes

The Helix M1100 Q4 Mobile can be operated with a DMX controller, or without a DMX controller as a stand-alone device or in a master/slave setup.

The Helix M1100 Q4 Mobile supports the following control modes:

- Stand-alone: Manual operation mode, auto operation mode (auto programs), built-in programs
- Master/Slave: Manual operation mode, auto operation mode (auto programs), built-in programs
- DMX-512: 3 channel modes (4, 6 and 10 channels)

For more information about how to connect the devices, refer to **5. Setup** on pages 22–27.

To operate the device manually as a stand-alone device or in a master/slave setup:

01) Adjust the intensity values for the colors. See **6.8.2. Manual Mode** on page 35 for more information.

In auto operation mode you can run the auto program:

01) Select the auto program. See **6.8.3. Auto Mode** on page 35 for more information.

In Program Mode 01 you can select one of 33 static colors. To run this program:

- 01) Select Program Mode 01 in the Program menu.
- 02) Select one of the 33 static colors. See **6.8.4.1. Program 01 / Static colors** on page 36 for more information.
- 03) Add strobe effect. See **6.8.4.1. Program 01 / Static colors** on page 36 for more information.

In Program Mode 02-16 you can select one of the built-in programs. To run one of the built-in programs:

- 01) Select Program Mode 02-16 in the Program menu.
- 02) Select one of the 15 built-in chases. See **6.8.4.2. Program 02-16** on page 36 for more information.
- 03) Add strobe effect or adjust the chase speed. See **6.8.4.2. Program 02-16** on page 36 for more information.

To operate the device with a DMX controller:

- 01) Select DMX or W-DMX mode in the DMX menu. See **6.8.1.3. DMX Signal** on page 34 for more information.
- 02) Set the DMX starting address of the device in the DMX Address menu. See **6.8.1.1. DMX Address** on page 33 for more information.
- 03) Select the DMX channel mode in the DMX Configuration menu. See **6.8.1.2. Channels** on page 34 for more information. See **6.9. DMX Channels** on pages 43–44 for complete overview of all DMX channels.

6.5. Control Panel

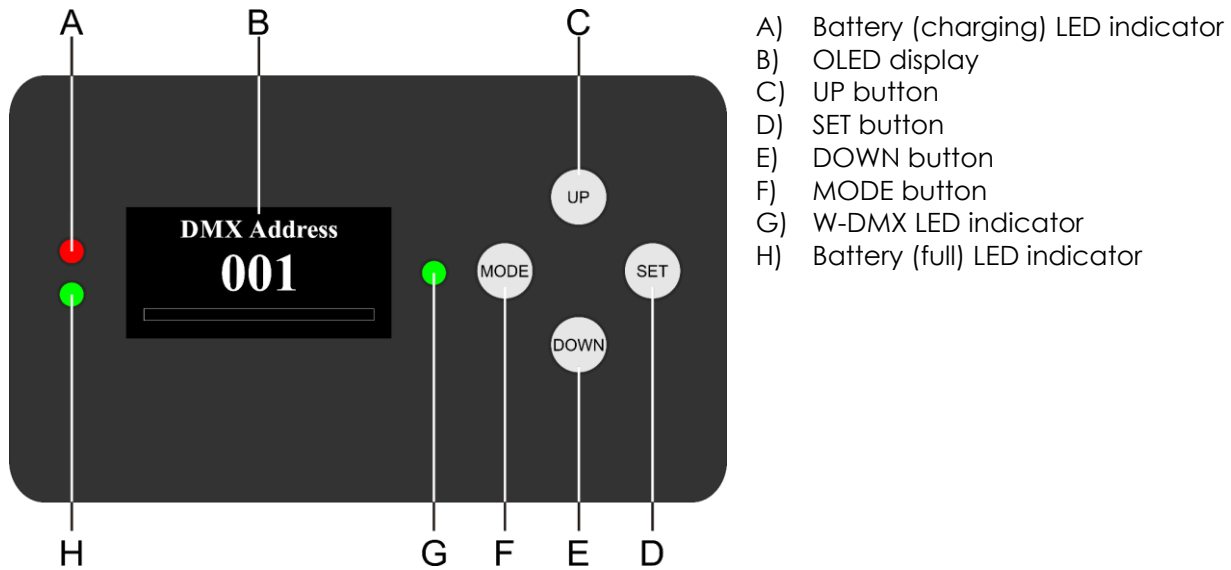


Fig. 21

- Use the **MODE** button to open the main menu or to exit the current submenu and return to the main menu.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **SET** button to open the desired menu, to confirm your choice or to set the currently selected value.

6.6. Start-up

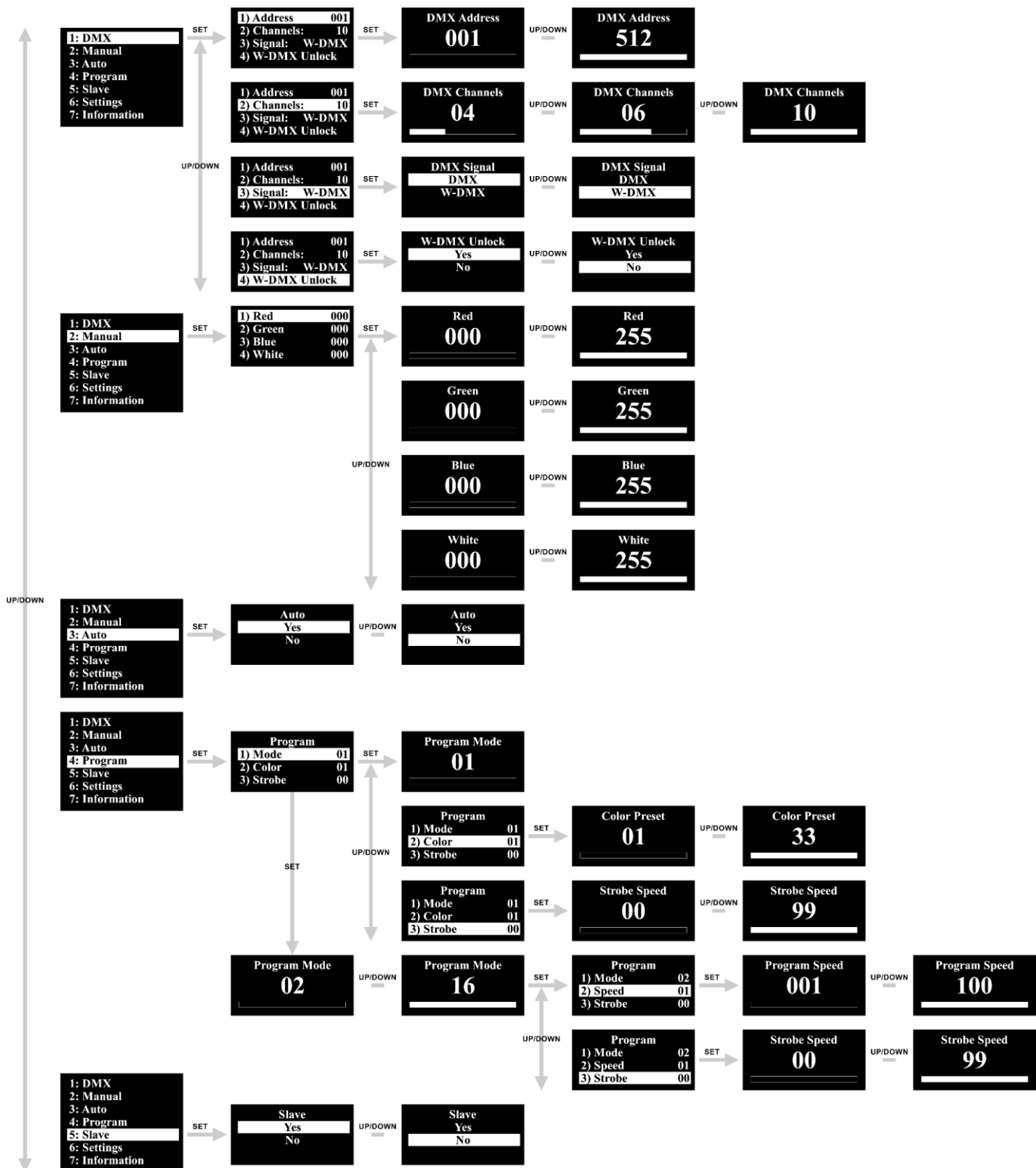
Upon start-up the display shows the start screen. The start screen provides information about the software version, the temperature of the LEDs, the DMX starting address of the device, and the selected DMX channel mode:

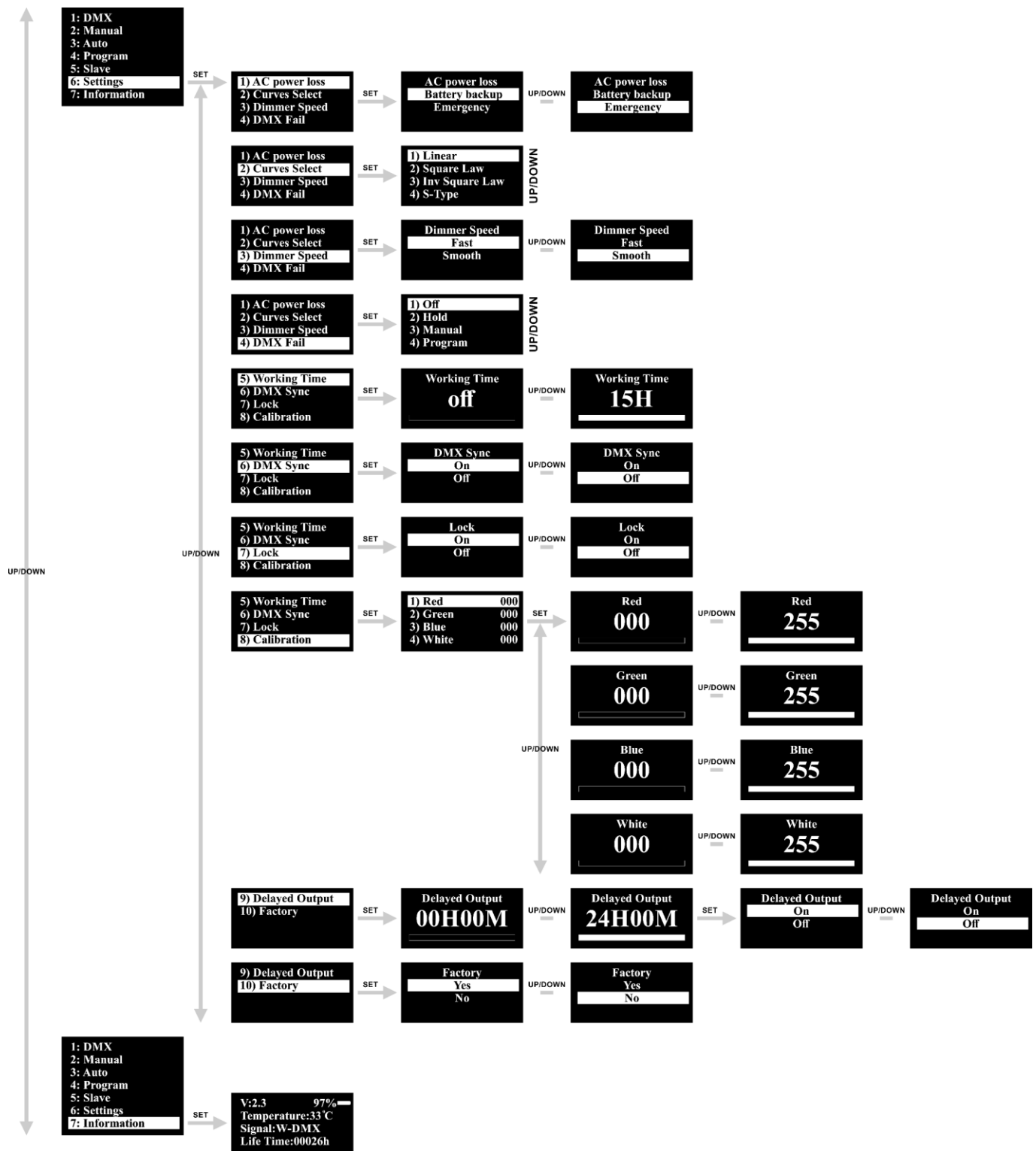


Note:

If no button is pressed, after 30 seconds of inactivity the display will turn off. To unlock the display, you have to **press and hold down the MODE and SET buttons for 3 seconds**. Once you have pressed the buttons, the display will light up.

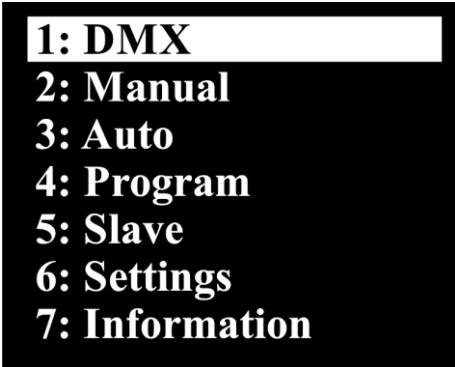
6.7. Menu Overview





6.8. Main Menu Options

The main menu has the following options:



A black rectangular box with white text listing the main menu options. The first option, '1: DMX', is highlighted with a white background.

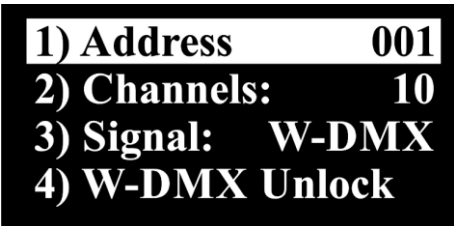
- 1: DMX**
- 2: Manual**
- 3: Auto**
- 4: Program**
- 5: Slave**
- 6: Settings**
- 7: Information**

- 01) Press the **UP/DOWN** buttons to navigate through the main menu.
- 02) Press the **SET** button to open the submenus.

6.8.1. DMX Settings

In this menu you can set the DMX address, choose the desired DMX mode and activate/deactivate the wireless DMX.

- 01) Press the **UP/DOWN** buttons to select one of the 4 submenus:
 - Address
 - Channels
 - Signal
 - W-DMX unlock



A black rectangular box with white text listing the DMX settings submenu options. The first option, '1) Address', is highlighted with a white background.

- 1) Address 001**
- 2) Channels: 10**
- 3) Signal: W-DMX**
- 4) W-DMX Unlock**

6.8.1.1. DMX Address

In this menu you can set the DMX starting address of the device.

- 01) Press the **UP/DOWN** buttons to select the DMX starting address of the device. The selection range is 001–512. Refer to **5.3.5. DMX Addressing** on page 24 for more information.



6.8.1.2. Channels

In this menu you can set the desired DMX channel mode.



01) Press the **UP/DOWN** buttons to set the desired DMX channel mode. Choose one of the 3 options:

- 4 channels
- 6 channels
- 10 channels

Note:

See **6.9. DMX Channels** on pages 43–44 for complete overview of all DMX channels.

6.8.1.3. DMX Signal

In this menu you can set the DMX signal type.

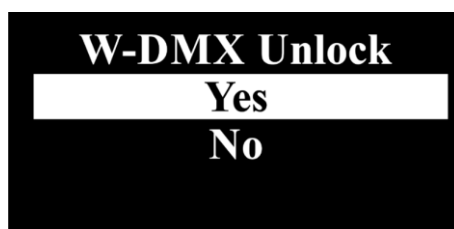


01) Press the **UP/DOWN** buttons to set the desired DMX signal type. Choose one of the 2 options:

- DMX: Conventional DMX
- W-DMX: Wireless DMX

6.8.1.4. W-DMX Unlock

In this menu you can unlock the wireless DMX.



01) Press the **UP/DOWN** buttons to choose YES (to unlock the wireless DMX) or NO (to return to the previous screen).

02) Press the **UP/DOWN** buttons to set the desired DMX signal type. Choose one of the 2 options:

- DMX: Conventional DMX
- W-DMX: Wireless DMX

6.8.2. Manual Mode

In this menu you can manually set the desired color.

- 01) Press the **UP/DOWN** buttons to select the parameter.
- 02) Press the **SET** button to confirm the selection and open the submenu.
- 03) Press the **UP/DOWN** buttons to increase/decrease the values:

1) Red	000
2) Green	000
3) Blue	000
4) White	000

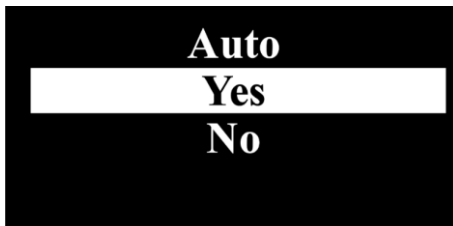
- **RED:** Set the intensity of the red color. The adjustment range is 0–255, from low to high intensity
- **GREEN:** Set the intensity of the green color. The adjustment range is 0–255, from low to high intensity
- **BLUE:** Set the intensity of the blue color. The adjustment range is 0–255, from low to high intensity
- **WHITE:** Set the intensity of the white color. The adjustment range is 0–255, from low to high intensity

- 04) You can combine Red, Green, Blue and White to create an infinite range of colors (0–255).

6.8.3. Auto Mode

In this menu you can set Auto mode.

- 01) Press the **SET** button to enter the menu. The display will show:



- 02) Press the **UP/DOWN** buttons to choose YES (to start the auto show) or NO (to return to the previous screen).

6.8.4. Built-in Programs Mode

In this menu you can set the built-in auto programs.

01) Press the **UP/DOWN** buttons to select one of the following options. The selection range is Program 01–Program 16:

- Program 01 You can select one of the static colors. See **6.6.4.1. Program 01** on page 36 for more information
- Program 02-16 You can select one of the built-in programs. See **6.6.4.2. Program 02-16** on page 36 for more information

6.8.4.1. Program 01 / Static Colors

01) If you have chosen program 01, the display will show:

Program	
1) Mode	01
2) Color	01
3) Strobe	00

02) Press the **UP/DOWN** buttons to choose one of the 2 options:

- COLOR
- STROBE

03) Press the **SET** button to confirm the selection and open the desired submenu.

04) If you have chosen COLOR, press the **UP/DOWN** buttons to choose one of the 33 color macros. Press the **SET** button to save your settings.

05) If you have chosen STROBE, press the **UP/DOWN** buttons to set the strobe frequency. The adjustment range is between 0–99, from OFF to high frequency. Press the **SET** button to save your settings.

6.8.4.2. Program 02-16

01) If you have chosen one of the programs 02–16, the display will show:

Program	
1) Mode	02
2) Speed	01
3) Strobe	00

02) Press the **UP/DOWN** buttons to choose one of the 2 options:

- SPEED
- STROBE

03) Press the **SET** button to confirm the selection and open the desired submenu.

04) If you have chosen SPEED, press the **UP/DOWN** buttons to set the built-in program's speed. The adjustment range is between 1–100, from slow to fast. Press the **SET** button to save your settings.

05) If you have chosen STROBE, press the **UP/DOWN** buttons to set the strobe frequency. The adjustment range is between 0–99, from OFF to high frequency. Press the **SET** button to save your settings.

6.8.5. Slave Mode

In this menu you can set the slave mode of the device.

01) Press the **UP/DOWN** buttons to select one of the following 2 options:



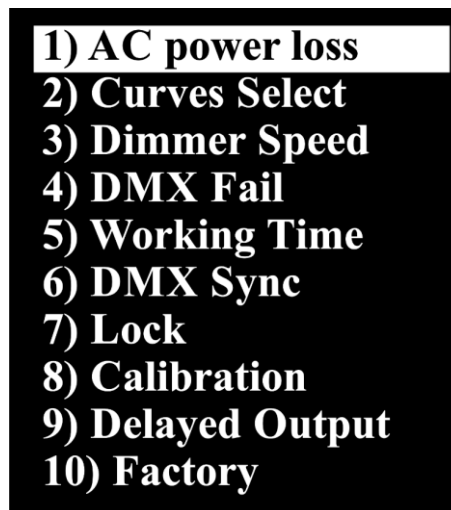
02) Press the **SET** button to confirm your choice.

03) If you have chosen YES, the device will be set as a slave and will react the same as the master device.

6.8.6. Settings

In this menu you can adjust the device's settings.

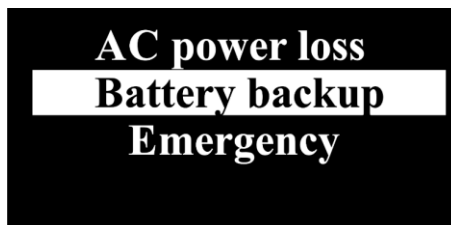
01) Press the **UP/DOWN** buttons to select one of the following 10 options:



02) Press the **ENTER** button to confirm the selection.

6.8.6.1. AC Power Loss

In this menu you can determine the behavior of the device in case of an AC power loss.

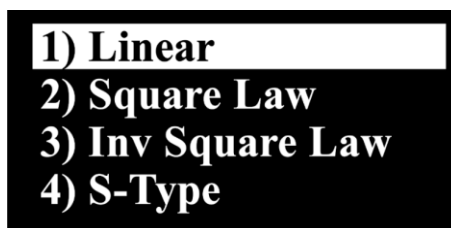


01) Press the **UP/DOWN** buttons to set the desired AC power loss setting. Choose one of the 2 options:

- Battery backup (device will continue working on battery power if AC power is lost, the operation mode will remain unchanged.)
- Emergency (device will overrule all operation settings and switch output to a bright white output if AC power is lost. Once AC power has returned, then device will return to previous operation mode.)

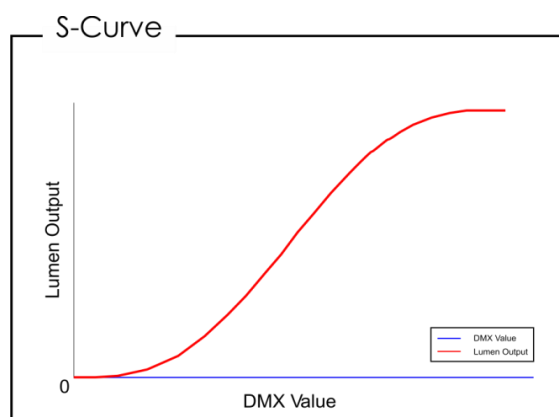
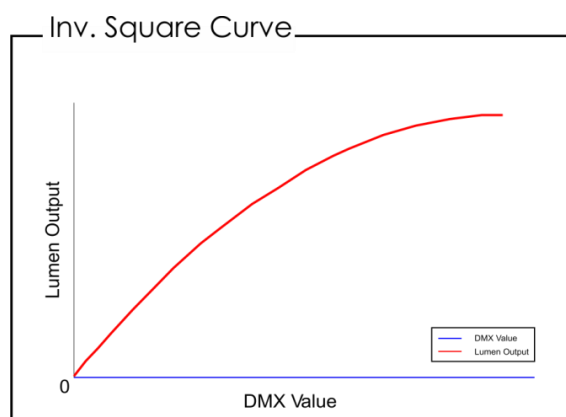
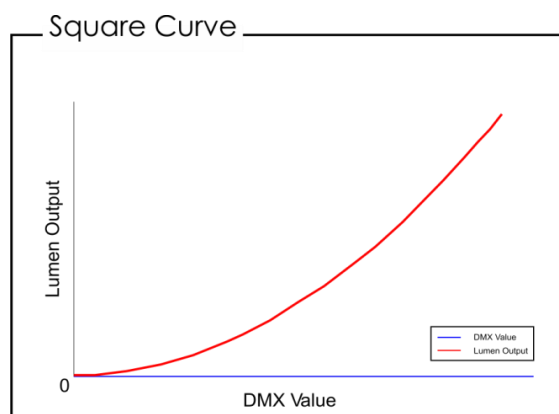
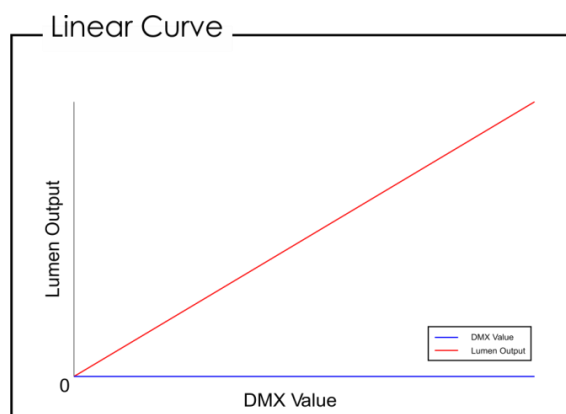
6.8.6.2. Curves Select

In this menu you can set dimming curves.



01) Press the **UP/DOWN** buttons to set the desired dimming curve. Choose one of the 4 options:

- Linear
- Square Law
- Inv Square Law
- S-Type



6.8.6.3. Dimmer Speed

In this menu you can set the dimming speed.

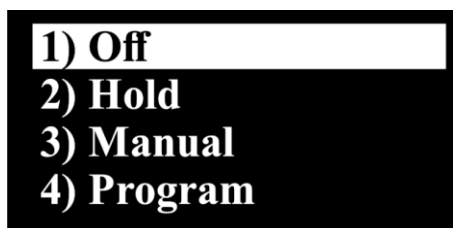


01) Press the **UP/DOWN** buttons to set the desired dimming speed. Choose one of the 2 options:

- Fast (output will follow DMX dimmer value directly)
- Smooth (output will follow DMX dimmer value with fade time to create smooth transitions)

6.8.6.4. DMX Fail

In this menu you can set the device's behavior in case of a DMX failure.



01) Press the **UP/DOWN** buttons to set the desired DMX Fail option. Choose one of the 4 options:

- **OFF:** The device will black out the light output
- **HOLD:** The device will use last properly received DMX signal, ensuring uninterrupted performance
- **MANUAL:** The device will switch to Manual mode
- **PROGRAM:** The device will run the built-in programs

02) Press the **SET** button to confirm your choice.

6.8.6.5. Working Time

In this menu you can set the working time.



01) Press the **UP/DOWN** buttons to set the desired working time. Choose one of the 16 options:

- **OFF:** Turns off the working time setting and the device runs at maximum power, until the battery is depleted.
- **1–15H:** Unit working hours, that means limited power operation based on current battery capacity

02) Press the **SET** button to confirm your choice.

Note:

After the working time is set, the maximum operating power of the device will be limited, according to the current capacity of the battery, to achieve the set working time.

However, if the capacity of the battery is too low, the set time is too long and the working time is not sufficient, then it will run at the minimum power, and the specific time will be shorter than the set time. If the battery capacity is sufficient to perform for the desired amount of time, the device will run at the maximum power, and the working time is uncertain, which may be longer than the set time.

6.8.6.6. DMX Sync

In this menu you can set the devices' Sync behavior, while using multiple Helixes.



- 01) Press the **UP/DOWN** buttons to set the desired DMX sync option. Choose one of the 2 options:
- ON: all Helix devices will simultaneously perform the same action, without any delays
 - OFF: risk of random delays

6.8.6.7. Lock

In this menu you can set the safety lock, restricting access to the main menu.



- 01) Press the **UP/DOWN** buttons to set the desired safety lock. Choose one of the 2 options:
- ON: When no button is pressed within 30 seconds, the device's main menu will be locked.
In order to unlock it, press and hold down the MODE and SET buttons for 3 seconds
 - OFF: Safety lock is inactive.

6.8.6.8. Calibration

In this menu you can manually calibrate the desired color.

- 01) Press the **UP/DOWN** buttons to select the parameter.
- 02) Press the **SET** button to confirm the selection and open the submenu.
- 03) Press the **UP/DOWN** buttons to increase/decrease the values:

1) Red	000
2) Green	000
3) Blue	000
4) White	000

- **RED:** Set the intensity of the red color. The adjustment range is 0–255, from low to high intensity
- **GREEN:** Set the intensity of the green color. The adjustment range is 0–255, from low to high intensity
- **BLUE:** Set the intensity of the blue color. The adjustment range is 0–255, from low to high intensity
- **WHITE:** Set the intensity of the white color. The adjustment range is 0–255, from low to high intensity

- 04) You can combine Red, Green, Blue and White to create an infinite range of colors (0–255).

Note:

If you change the values for a predefined white color in this submenu, the colors in the respective DMX channel will be changed as well.

6.8.6.9. Delayed Output

In this menu you can set the amount of time that needs to pass before the light output becomes activated.



- 01) Press the **UP/DOWN** buttons to select the output delay time between 00H00M–24H00m, in increments of 30 minutes
- 02) Press the **SET** button to confirm your choice. The display will show:



- 03) Press the **UP/DOWN** buttons to set the desired delayed output. Choose one of the 2 options:
 - **ON:** The device will wait for the determined amount of time and then it will activate its light output.
 - **OFF:** Delayed Output is inactive.

6.8.6.10. Factory Reset

In this menu you can restore the default factory settings of the device.



01) Press the **UP/DOWN** buttons to set the desired safety lock. Choose one of the 2 options:

- YES: Restore to Factory Default Settings
- NO: Keep current settings, no factory reset.

02) Press the **SET** button to confirm your choice.

Note:

Calibration changes made in **6.8.6.8 Calibration** cannot be reset.

6.8.7. Information

In this menu you can see the firmware version, temperature, signal status and lifetime of the device.



6.9. DMX Channels

6.9.1. 4 channels

4 CH	Function	Value	Setting
1	Red	000–255	From low to high intensity (0–100 %)
2	Green	000–255	From low to high intensity (0–100 %)
3	Blue	000–255	From low to high intensity (0–100 %)
4	White	000–255	From low to high intensity (0–100 %)

6.9.2. 6 channels

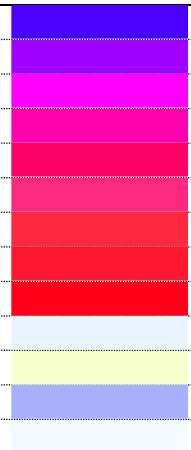
6 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–010	No function
		011–128	Random strobe, from low to high rate
		129–255	Linear strobe, from low to high frequency (0–25 Hz)
3	Red	000–255	From low to high intensity (0–100 %)
4	Green	000–255	From low to high intensity (0–100 %)
5	Blue	000–255	From low to high intensity (0–100 %)
6	White	000–255	From low to high intensity (0–100 %)

Note:

Make sure that the Master Dimmer channel is open in order to see the light output.

6.9.3. 10 channels

10 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–010	No function
		011–128	Random strobe, from low to high rate
		129–255	Linear strobe, from low to high frequency (0–25 Hz)
3	Color macros	000–007	No function
		008–013	Color1(R255 G000 B000 W000)
		014–020	Color2(R255 G000 B000 W100)
		021–027	Color3(R255 G000 B000 W200)
		028–034	Color4(R255 G050 B000 W000)
		035–041	Color5(R255 G150 B000 W000)
		042–048	Color6(R255 G255 B000 W000)
		049–055	Color7(R255 G255 B000 W075)
		056–062	Color8(R000 G255 B000 W255)
		063–069	Color9(R000 G255 B000 W150)
		070–076	Color10(R000 G255 B000 W050)
		077–083	Color11(R000 G255 B000 W000)
		084–090	Color12(R000 G255 B050 W000)
		091–097	Color13(R000 G255 B150 W000)
		098–104	Color14(R000 G255 B255 W000)
		105–111	Color15(R000 G255 B255 W075)
		112–118	Color16(R000 G255 B255 W150)
		119–125	Color17(R000 G100 B255 W255)
		126–132	Color18(R000 G000 B255 W100)
		133–139	Color19(R000 G000 B255 W050)
		140–146	Color20(R000 G000 B255 W000)

10 CH	Function	Value	Setting	
		147–153	Color21(R075 G000 B255 W000)	
		154–160	Color22(R160 G000 B255 W000)	
		161–167	Color23(R255 G000 B255 W000)	
		168–174	Color24(R255 G000 B175 W000)	
		175–181	Color25(R255 G000 B100 W000)	
		182–188	Color26(R255 G000 B100 W050)	
		189–195	Color27(R255 G000 B025 W050)	
		196–202	Color28(R255 G000 B025 W025)	
		203–209	Color29(R255 G000 B025 W000)	
		210–216	Color30(R000 G000 B000 W255)	
		217–223	Color31(R075 G075 B000 W255)	
		224–230	Color32(R000 G000 B100 W255)	
		231–255	Color33(R255 G255 B255 W255)	
4	Color Switch / Color Flow	000–015	No function	
		016–031	Color switch 1	
		032–047	Color switch 2	
		048–063	Color switch 3	
		064–079	Color switch 4	
		080–095	Color switch 5	
		096–111	Color switch 6	
		112–127	Color switch 7	
		128–143	Color switch 8	
		144–159	Color flow 1	
		160–175	Color flow 2	
		176–191	Color flow 3	
		192–207	Color flow 4	
		208–223	Color flow 5	
		224–239	Color flow 6	
		240–255	Color flow 7	
5	Speed	000–255	Gradual speed adjustment, from fast to slow	
6	Function	000–036	No function	
		037–073	Dimmer Fast	
		074–110	Dimmer Slow	
		111–147	Linear curve	
		148–184	Square curve	
		185–221	Inv. Square curve	
		222–255	S-type curve	
7	Red	000–255	From low to high intensity (0–100 %)	
8	Green	000–255	From low to high intensity (0–100 %)	
9	Blue	000–255	From low to high intensity (0–100 %)	
10	White	000–255	From low to high intensity (0–100 %)	

Note:

Make sure that the Master Dimmer channel is open in order to see the light output.

6.10. RDM Information

This device supports RDM. Refer to **6.10.2. Supported RDM PIDs (Parameter IDs)** on page 45 for more information.

6.10.1. RDM Details

- Responder: 29B4:022xxxxx
- Manufacturer's ID: Showtec (Highlite International B.V.)
- Manufacturer Label: Showtec
- Model Description: Helix M1100 Q4 Mobile
- Model ID: 34
- Device Label: Helix M1100 Q4 Mobile

6.10.2. Supported RDM PIDs (Parameter IDs)

Parameter ID	Value	Required	GET	SET
DISC_UNIQUE_BRANCH	0x0001	*		
DISC_MUTE	0x0002	*		
DISC_UN_MUTE	0x0003	*		
SUPPORTED_PARAMETERS	0x0050	*	*	
PARAMETER_DESCRIPTION	0x0051	*	*	
DEVICE_INFO	0x0060	*	*	
DEVICE_MODEL_DESCRIPTION	0x0080		*	
MANUFACTURER_LABEL	0x0081		*	
DEVICE_LABEL	0x0082		*	*
FACTORY_DEFAULTS	0x0090		*	*
SOFTWARE_VERSION_LABEL	0x00C0	*	*	
DMX_PERSONALITY	0x00E0		*	*
DMX_PERSONALITY_DESCRIPTION	0x00E1		*	
DMX_START_ADDRESS	0x00F0	*	*	*
SENSOR_DEFINITION	0x0200		*	
SENSOR_VALUE	0x0201		*	*

6.10.3. Highlite RDM Details

All Highlite RDM responder IDs are divided into 3 parts, starting with a 4-digit Manufacturer's ID, followed by a 3-digit Model ID, and a 5-digit unique ID for each item.

As a result, RDM responder IDs will always start with the same 7 digits (exclusive to each type of device). The last 5 digits will be different for each device.

7. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not turn on	The battery is depleted	Recharge the battery. See 4.8. Charging the battery on page 20
The device does not function at all	No power to the device	Check if power is switched on and cables are plugged in
	Internal fuse is blown	Disconnect the device and contact your Highlite International dealer
The device responds erratically	The factory settings of the device are changed	Reset the device's parameters to the default factory settings. See 6.8.6.10. Reset on page 42
The device does not respond to DMX control	The controller is not connected	Connect the controller
	The signal is reversed. The 5-pin DMX OUT of the controller does not match the DMX IN of the device	Install a phase-reversing cable between the controller and the device
	The controller is defective	Try using another controller
The device responds erratically to DMX control	Bad data link connection	Examine connections and cables. Correct poor connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	Insert a termination plug in the DMX OUT connector of the last device on the link
	Incorrect addressing	Check address settings and correct, if necessary
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	To find out which device is defective, bypass one device at a time until normal operation is restored
No light or LEDs cut out intermittently	LEDs are damaged	Disconnect the device and contact your Highlite International dealer
	The power supply settings do not match local AC voltage and frequency	Disconnect the device. Check the settings and correct, if necessary

8. Maintenance

8.1. Safety Instructions for Maintenance



DANGER
Electric shock caused by dangerous voltage inside

Disconnect power supply before servicing or cleaning.

8.2. Preventive Maintenance



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixations and installation points.
- The lens is not cracked or damaged.
- The power cables are not damaged and do not show any material fatigue.

8.2.1. Basic Cleaning Instructions

The external lens of the device must be cleaned periodically in order to optimize the light output. The cleaning schedule depends on the conditions at the site where the device is installed. When smoke or fog machines are used at the site, the device will need more frequent cleaning. On the other hand, if the device is installed in well-ventilated area, it will need less frequent cleaning. To establish a cleaning schedule, examine the device at regular intervals during the first 100 hours of operation.

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 5 minutes.
- 03) Remove the dust collected on the external surface with dry compressed air and a soft brush.
- 04) Clean the lens with a damp cloth. Use a mild detergent solution.
- 05) Dry the lens carefully with a lint-free cloth.
- 06) Clean the DMX and other connections with a damp cloth.



Attention

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.
- Make sure that the connections are fully dry before connecting the device to the power supply and to other devices.

8.2.2. Draining Condensation Water

The Helix M1100 Q4 Mobile is IP65 rated. The device can resist water jets. If the device is exposed to extreme humid conditions during servicing, condensation may collect inside the device. This can happen also during transportation, if the device is exposed to extreme temperature variations.

If condensation water collects inside the device, follow the steps bellow to remove the condensation water:

- 01) Carefully remove the **protective vent (08)** with a wrench (16 mm).

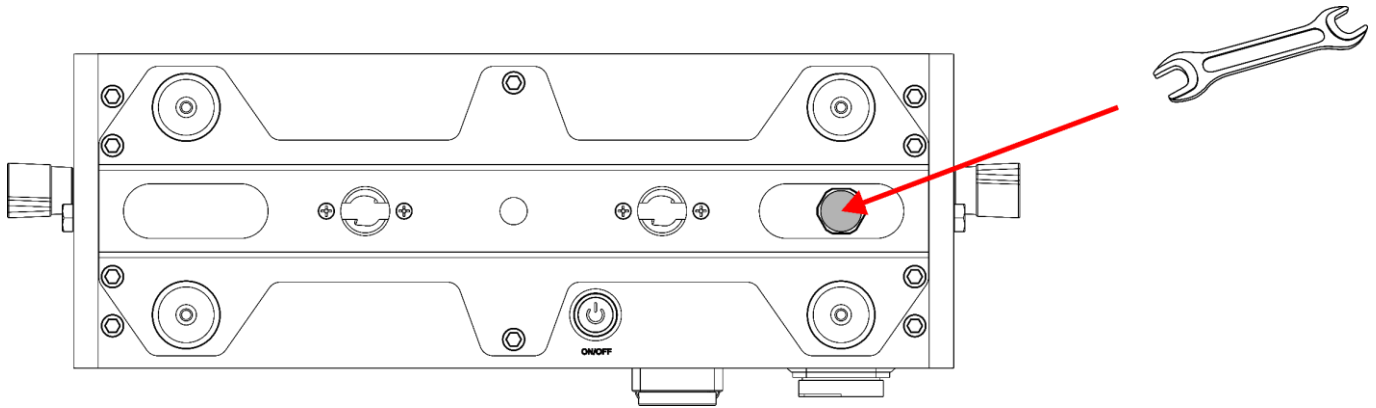


Fig. 22

- 02) Let the device operate at full output for 60 minutes.
03) Let the device cool down for 30 minutes.
04) Install the **protective vent (08)** back in place. Make sure that you do not overtighten it.

8.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

9. Deinstallation, Transportation and Storage

9.1. Instructions for Deinstallation



WARNING

Incorrect deinstallation can cause serious injuries and damage of property.

- Let the device cool down before dismounting.
- Disconnect power supply before deinstallation.
- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

9.2. Instructions for Transportation

This device contains a rechargeable (secondary) lithium-ion battery. Lithium-ion batteries contained in equipment fall under the category of dangerous goods for transportation.

Make sure that you are in compliance with all applicable transportation regulations when you transport this device. See **3.4. Product Specifications** on page 12 for the specifications of the battery.

Use the original packaging to transport the device or other suitable packaging that complies with the regulations for transportation of secondary lithium-ion batteries.

Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

9.3. Storage

This device contains a rechargeable (secondary) lithium-ion battery. The battery is not replaceable. The battery may explode or cause burns if it is crushed, disassembled or exposed to fire or high temperatures.

- Store the device in a dry place, at temperatures between 5 °C and 20 °C. Lithium-ion batteries self-discharge during storage. Temperatures above 20 °C speed up the self-discharging process.
- Do not store the device with depleted battery. Make sure that the battery is charged to at least 50 % before storing the device. See **4.8. Charging the Battery** on page 20.
- If the device is stored for an extended period, check the battery's charge status regularly.
- Clean the device before storing. Follow the cleaning instructions in chapter **8.2.1. Basic Cleaning Instructions** on page 47.
- Store the device in the original packaging, if possible.

10. Disposal

This device contains a lithium-ion battery. Do not dispose of with the household waste.

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

11. Approval



Wireless (RED Directive)

Hereby, Highlite International declares that the device, is in compliance with Directive 2014/53/EU (RED – Radio Equipment Directive)

The full text of the EU declaration of conformity is available at the respective product page on the website of Highlite International (www.highlite.com)



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