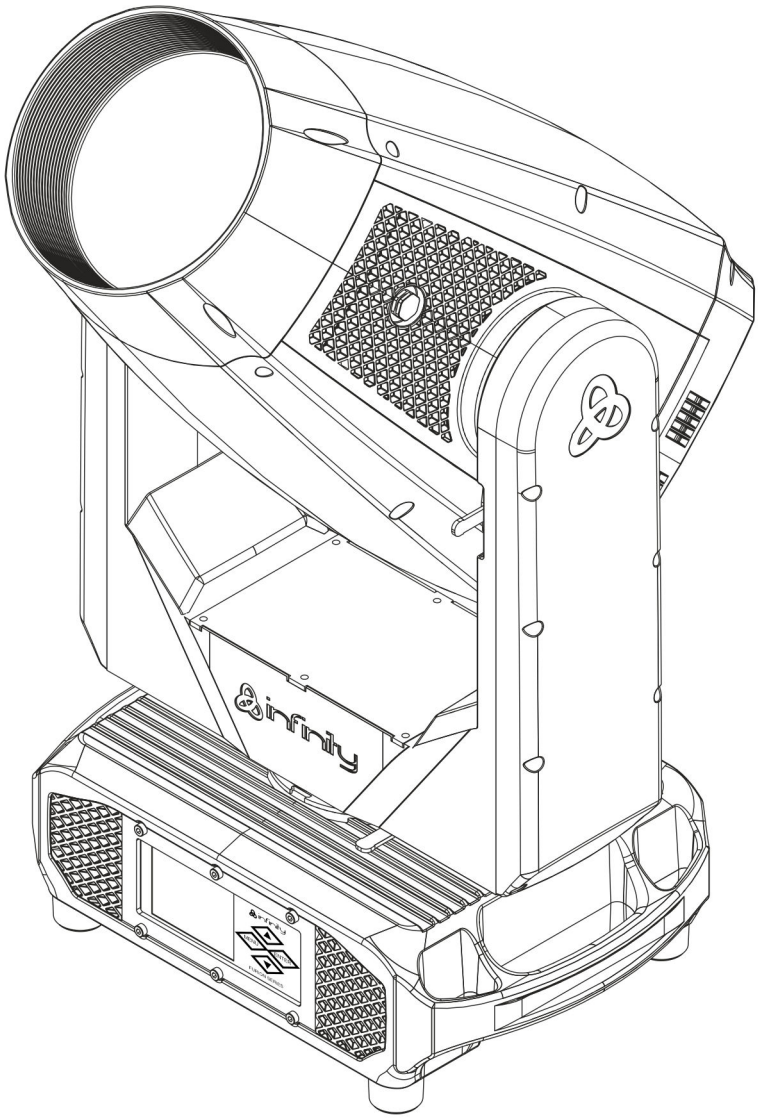
infinity

USER MANUAL

ENGLISH

V1.0



Furion H402 Hybrid

Product code: 41431

Preface

Thank you for purchasing this Infinity 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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Highlite International B.V. – Vestastraat 2 – 6468 EX Kerkrade – the Netherlands

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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.

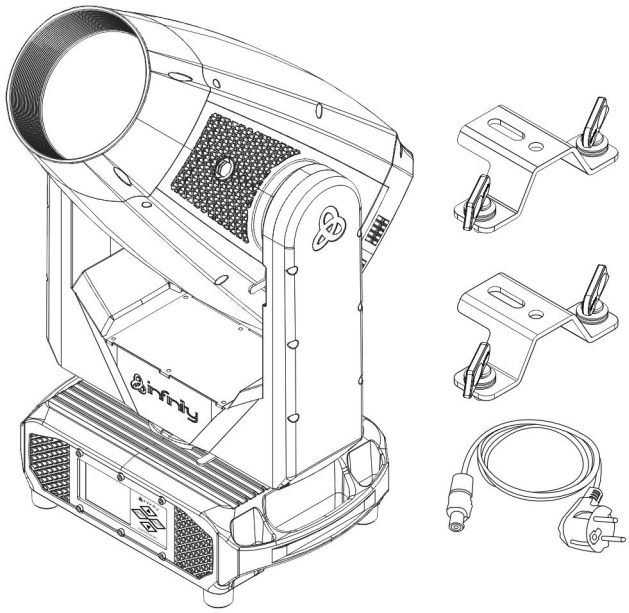
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

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

Your shipment includes:

- Infinity Furion H402 Hybrid
- Schuko to Power Pro True cable (1,5 m)
- 2 x quick-lock brackets
- User manual

Figure 1



1.2. Intended Use

This device is intended for professional use as a moving head. It can be installed indoors and outdoors. This device 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. 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.

1.4. 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 parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.5. 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



Eye damage hazard



Provides important information about the disposal of this product.

1.6. Symbols on the Information Label

This product is provided with an information label. The information label is located on the base plate of the device.

The information label contains the following symbols:



This device shall not be treated as household waste.

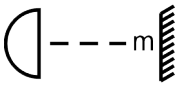


Read and follow the instructions in the user manual before installing, operating or servicing the device.

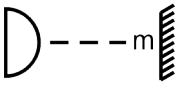


This device falls under IEC protection class I.

IP65 This devices is rated IP65.



Minimum distance from lighted objects



Minimum distance from other objects

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 any parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within the reach of children. Packaging material is a potential source of danger for children.



DANGER
Electric shock caused by dangerous voltage inside

There are areas inside 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 the 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 a ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.
- 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.



WARNING
Possible eye damage caused by high light intensity

Possibly hazardous optical radiation emitted from this device.

- Do not look at the operating light source. May be harmful to the eye.
- Do not look at the light source with optical instruments that may concentrate the light output.
- Make sure that persons are not looking directly into the light source when the device lights up suddenly. This can happen when the device is powered on, when it receives a DMX signal, or when certain menu items are selected.
- Disconnect power before servicing.
- Wear protective goggles if looking into the light source during service or maintenance.



CAUTION
Risk of injury due to movement of the device

The head of the device can move quickly. Persons standing near the device could get injured or scared.

- Make sure that there are no persons close to the device when you turn on the device and during operation.
- Keep body parts away from the moving parts of the device when servicing and during maintenance. Long hair or loose clothing can be entangled during the rotation of the moving head.



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
Lamp can spontaneously explode

A hot discharge lamp is under high pressure and can therefore spontaneously explode. The risk increases with the age, temperature and improper handling of the lamp.

If the lamp breaks, special safety precautions must be taken as mercury is released. Evacuate the area immediately and ventilate it.

- Replace the lamp if it has become damaged or thermally deformed.
- Do not install lamps with a higher wattage.
- Read the safety instructions that are included with the lamp before replacing the lamp.
- Let the lamp cool down for 20 minutes, before replacing the lamp.



Attention
Risk of fire

The distance between the device and the lighted object should be at least 2 m.

- Do not aim the device towards flammable materials.
- Do not cover the LEDs or lens.
- Do not place the device close to flammable liquids or gases.
- Keep away from flames.
- Do not install the device near direct heat sources.
- Always allow a free space of at least 0,5 m around the device for ventilation.



Attention
General safety

- Do not lift the device holding it by the projector head. This may damage the mechanics. Use the transport handles when handling the device.
- Do not insert objects into air vents.
- Do not connect the device to a dimmer pack.
- Do not switch the device on and off in short intervals. This reduces 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 use immediately.



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

This device is intended for professional use as a moving head. 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, fixings 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 out 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 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.

2.3. Personal Protective Equipment

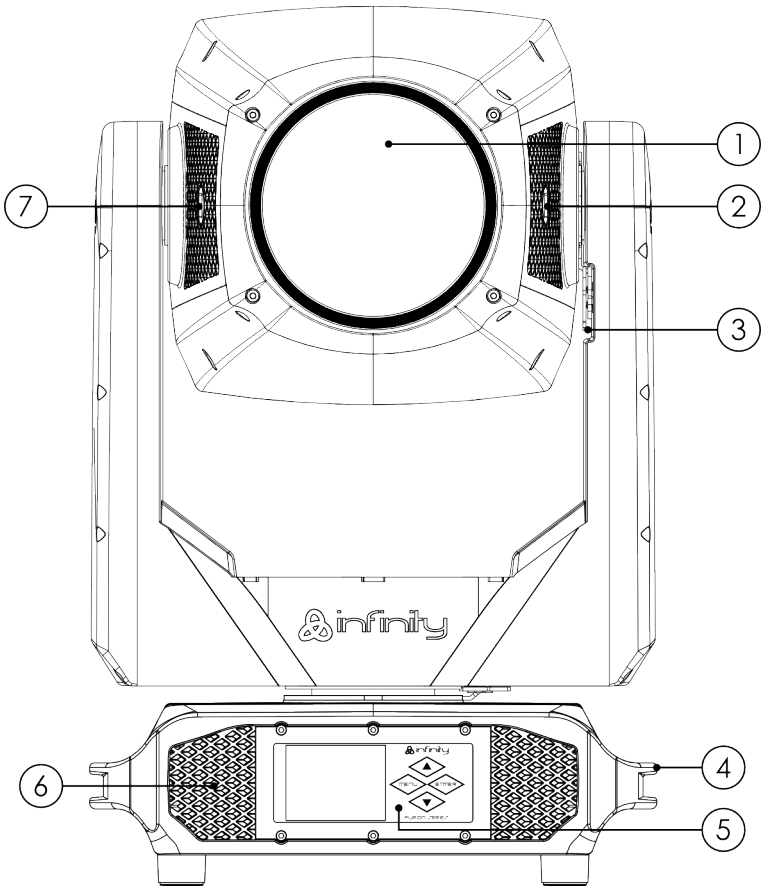
During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

3. Description of the Device

The Infinity Furion H402 Hybrid is an IP65-rated moving head with a 420 W discharge lamp, a beam angle between 0,6°–50,7° and a large front lens. This device has a color wheel with 13 colors, plus an open position, a rotating gobo wheel with 9 gobos, and a static gobo wheel with 16 gobos. Furthermore the device has a rotating 8-facet circular and an 6-facet linear prism, a frost filter and a diffusor. The control options include basic, advanced and customized DMX, CRMX, W-DMX, Art-Net, sACN and RDM.

3.1. Front View

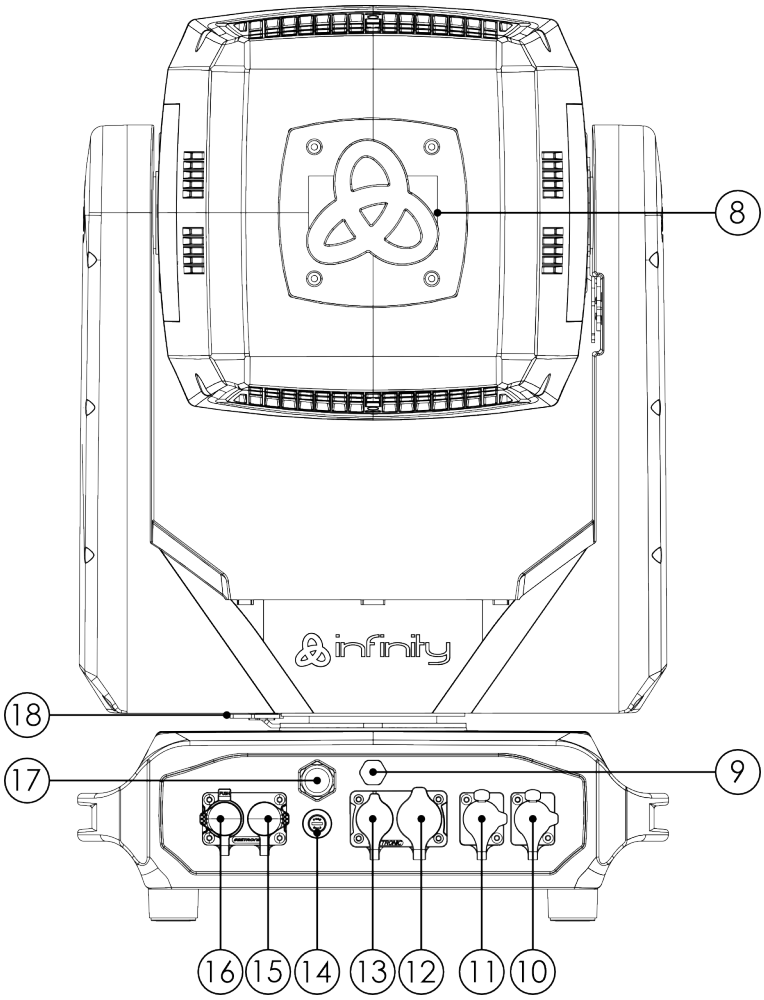
Figure 2



01) Lens
02) Drain plug
03) Yoke locking mechanism
04) 2 x Transport handles
05) Control panel: TFT screen and control buttons
06) Cooling
07) Protective vent (M12x1,5)

3.2. Back View

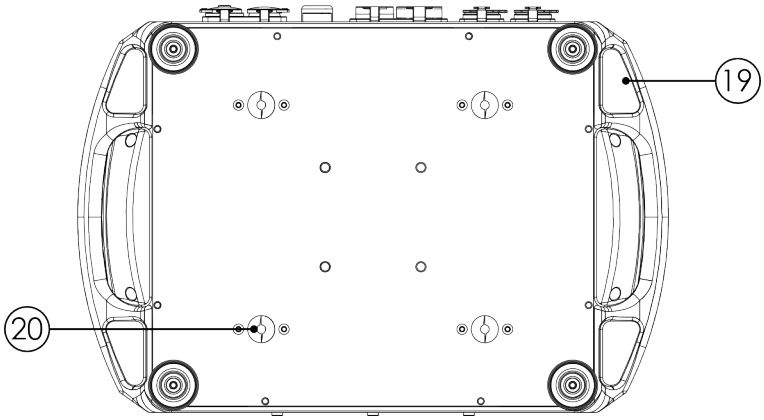
Figure 3



08) Lamp cover
09) Protective vent (M12x1,5)
10) IP65-rated RJ45 connector
11) IP65-rated RJ45 connector
12) IP65-rated Seetronic power connector OUT
13) IP65-rated Seetronic power connector IN
14) Fuse (F10 AL, 250 V)
15) IP65-rated 5-pin DMX signal connector IN
16) IP65-rated 5-pin DMX signal connector OUT
17) W-DMX Antenna
18) Base locking mechanism

3.3. Base Plate

Figure 4



19) 4 x Openings for a safety cable
20) 4 x Mounting holes for quick-lock brackets

3.4. Product Specifications

Model:	Furion H402 Hybrid

Source:	
Light source type	Discharge
Light source quantity	1
Light source power	420 W
Life expectancy	3000 h
Illuminance @ 5 m	1.323.098 lx
Luminous flux (total)	32970 lm
CRI	76,4
CCT	6900 K

Optical:	
Beam angle minimum (circular)	0,6°
Beam angle maximum (circular)	31,9°
Cutoff angle minimum (circular)	1,9°
Cutoff angle maximum (circular)	50,7°
Field angle minimum (circular)	1,6°
Field angle maximum (circular)	47,6°
Zoom type	Motorized
Frost	Yes
Focus	Motorized

Control and Programming:	
Control mode	Auto / DMX / Manual
DMX channels	20 / 27
Protocols	CRMX Classic / DMX / W-DMX / RDM
Wireless	LumenRadio
Display	Battery / Gravity Sensor / TFT
Dimmer resolution	16-bit
Focus resolution	16-bit
Zoom resolution	16-bit
Frost resolution	8-bit

Dynamic Effects:	
Dimmer	0–100 %
Strobe	0–15 Hz
Prism 1	8-facet circular
Prism 2	6-facet linear
Prism overlay	Yes
Color system	Color wheel
Dichroic color wheel 1	13 + open
Gobo system	Glass + metal
Gobo wheel 1	9 + open
Gobo wheel 2	16 + open

Movement:	
Pan	540°
Tilt	260°
Pan/Tilt resolution	16-bit

Electrical Specifications and Connections:	
Power supply	100–240 V AC 50/60 Hz
Power consumption	660 W
Fuse	F10 AL, 250 V
Power connector IN	Power Pro True
Power connector OUT	Power Pro True
DMX connector	XLR 5P IN/OUT
DMX connector IN	XLR 5P
DMX connector OUT	XLR 5P
Data connector	etherCON IN/OUT
Data connector IN	RJ45
Data connector OUT	RJ45

Mechanical Specifications:	
Length	254 mm
Width	370 mm
Height	705 mm
Weight	26,5 kg
IP rating	IP65
Housing	Magnesium die-cast
Color	Black

Product Properties:	
Cooling	Forced convection

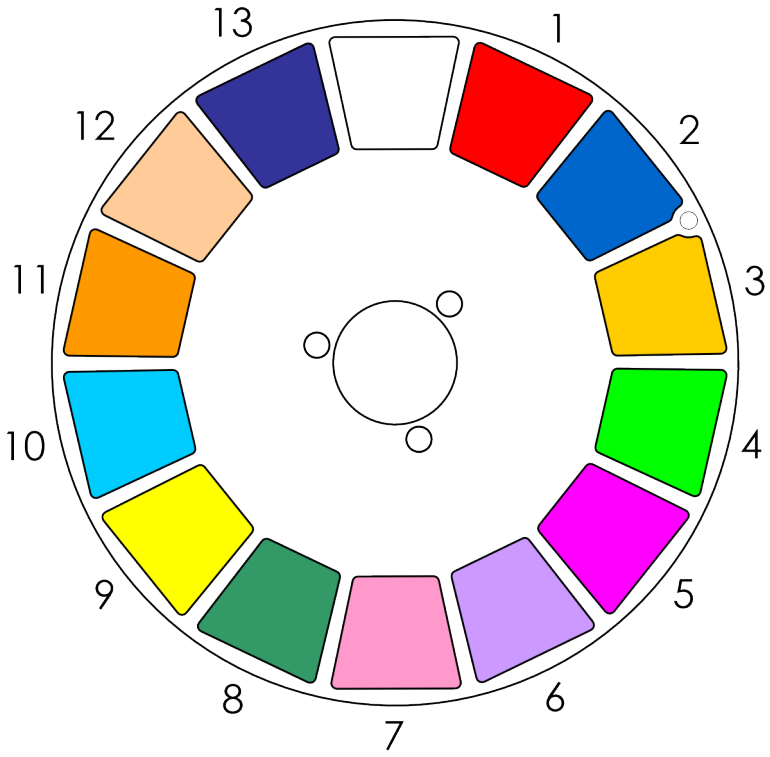
Thermal Specifications:	
Maximum ambient temperature	45 °C
Minimum operating temperature	-10 °C

Included Items:	
Included cables	Power Pro True cable
Included rigging	Quick-lock bracket

3.5. Effect Wheels

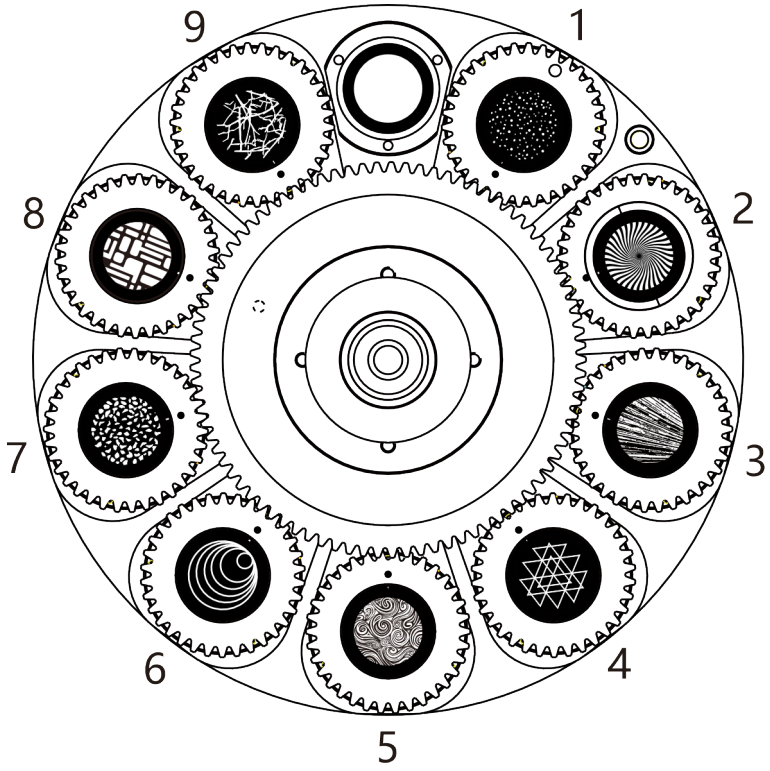
3.5.1. Color Wheel

Figure 5



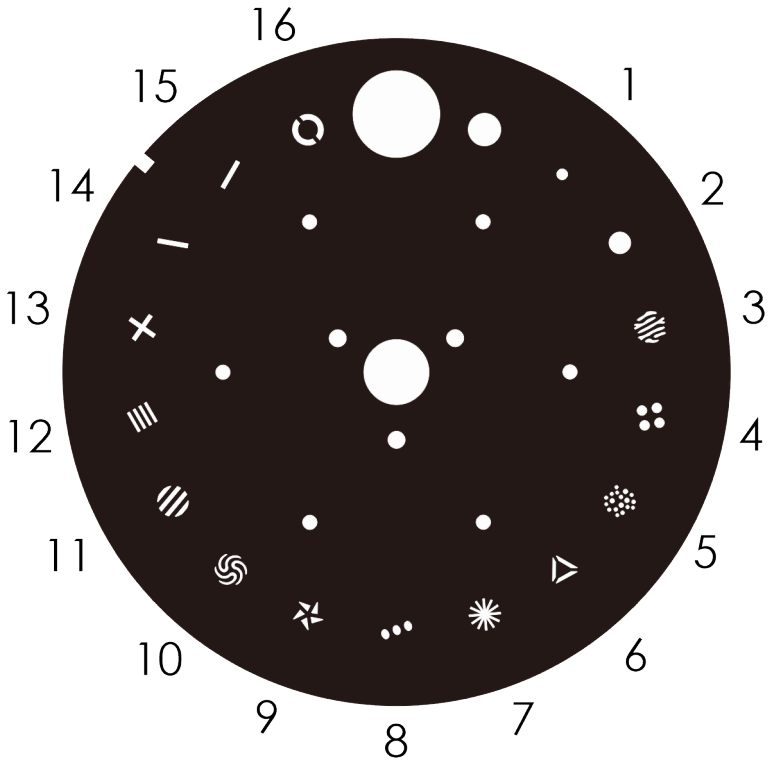
3.5.2. Rotating Gobo Wheel

Figure 6



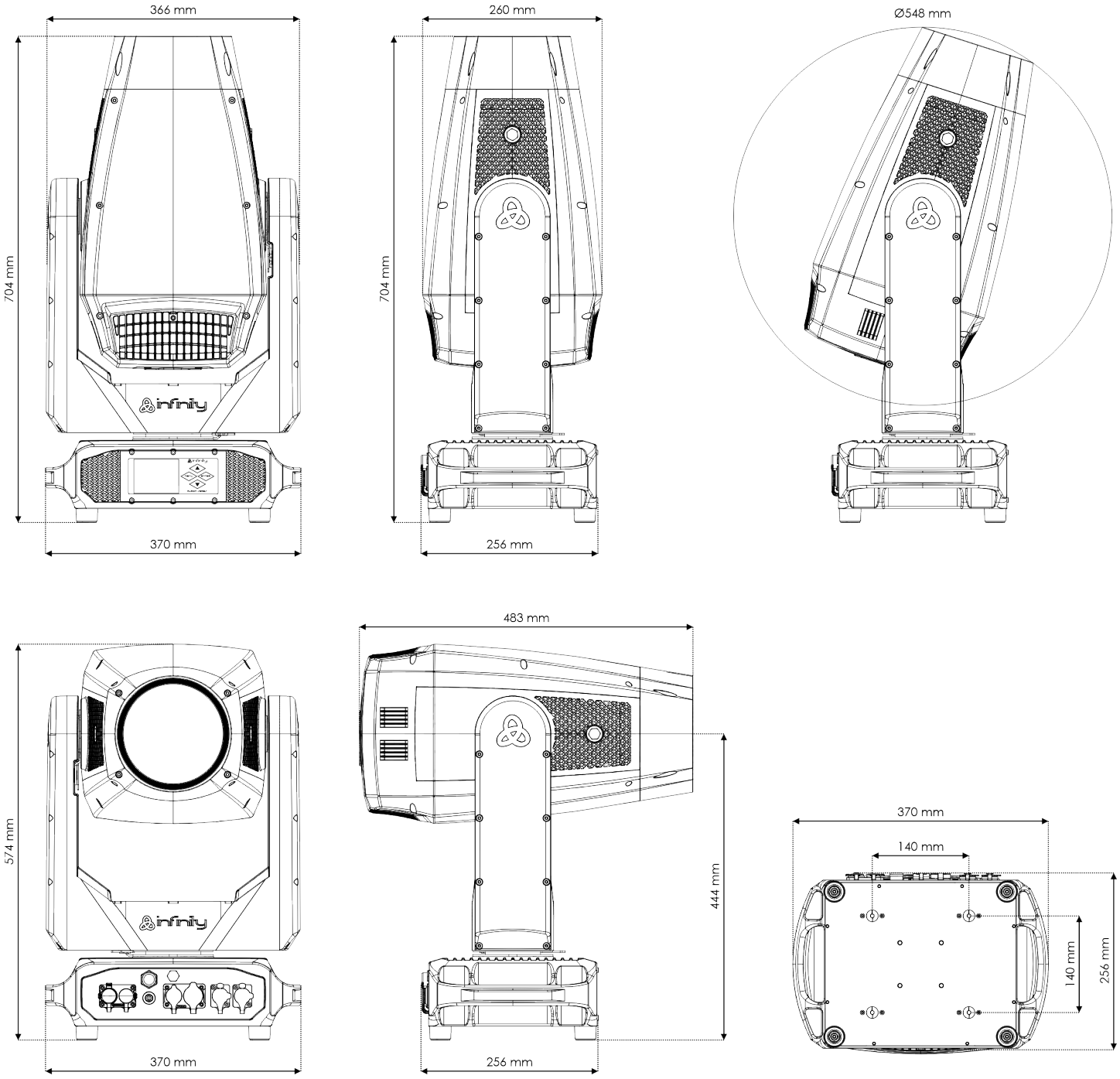
3.5.3. Static Gobo Wheel

Figure 7



3.6. Dimensions

Figure 8



3.7. Optional Accessories

You can additionally purchase the following accessories:

- 81023 Ushio NSL400L Replacement lamp for Furion H402
- D7276 Case for 2x Furion H402 Hybrid
- 41549 Infinity IP Tester for Furion

Contact your Highlite International dealer for more information.

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, deinstallation 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 indoors and outdoors.
- The minimum distance between the light output and the illuminated surface must be bigger than 2 m.
- The minimum distance to other objects must be bigger than 0,5 m.
- The maximum ambient temperature t_a = 45 °C must never be exceeded.

4.4. Rigging

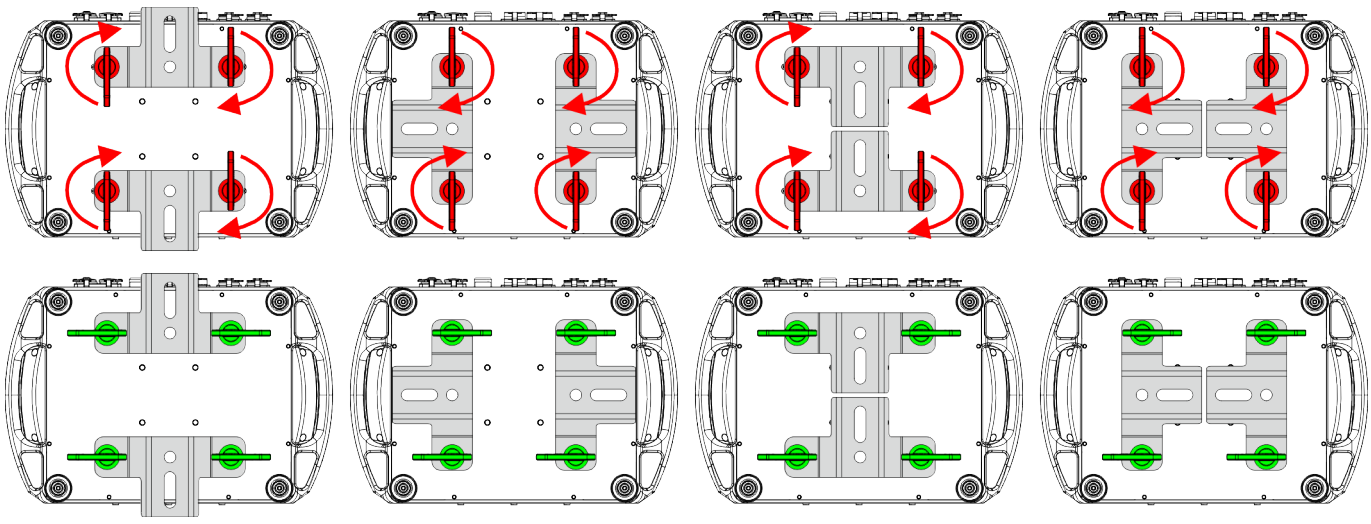
The device can be positioned on a flat surface or mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.

CAUTION
Restrict the access under the work area during rigging/derigging.

To mount the device, follow the steps below:

01) Fasten the 2 quick-lock brackets, supplied with the device, on the **mounting holes for quick-lock brackets (20)**. You can position the quick-lock brackets in 4 ways.
02) Lock the 2 quick-lock brackets by turning the locking mechanism of the quick-lock brackets clockwise.

Figure 9



03) Install the clamps. Make sure that you use clamps suitable for attaching the device to a truss.

Figure 10

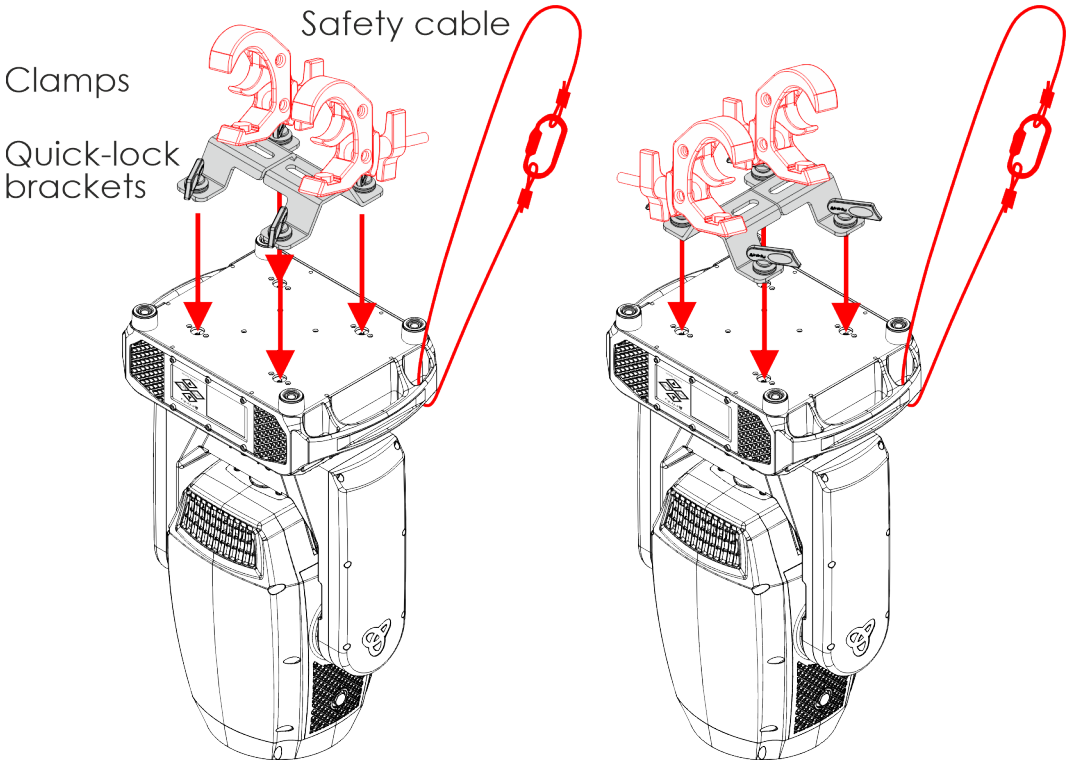
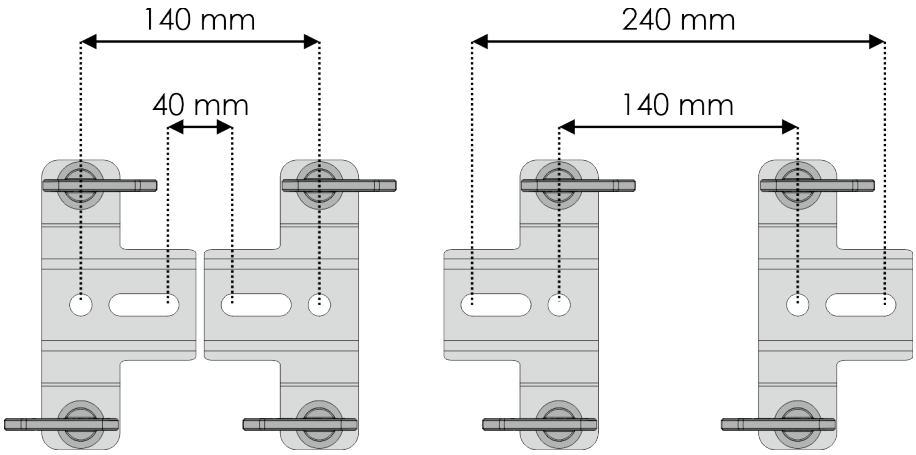


Figure 11



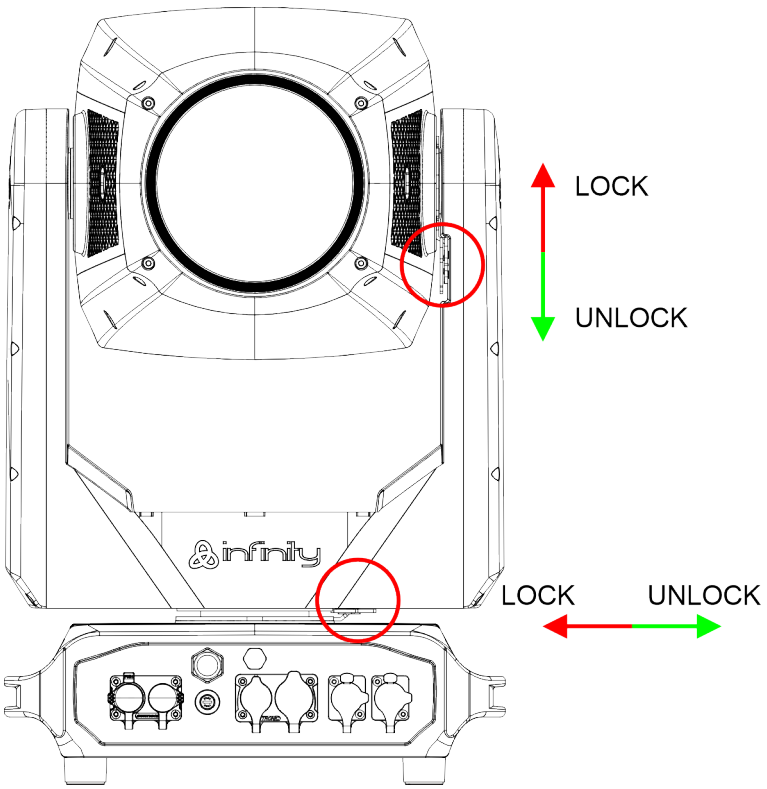
04) Attach the device to the supporting structure. Make sure that the device cannot move freely.
05) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the **openings for a safety cable (19)**.

4.5. Lock/Unlock the Device

The device has a locking mechanism on the yoke and on the base.

- To unlock the device, slide the **base locking mechanism (18)** to the the right or slide the **yoke locking mechanism (03)** downwards.
- To lock the device, slide the **base locking mechanism (18)** to the left or slide the **yoke locking mechanism (03)** upwards.

Figure 12



Note:

Do not operate the device with the locking mechanisms locked.

4.6. 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 a 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.

4.7. 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: 2 devices Furion H402 Hybrid
- at 200–240 V: 5 devices Furion H402 Hybrid

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 Furion H402 Hybrid is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually via the control panel or in auto mode.

For more information refer to Control Modes (see 6.2. Control Modes on page 26).

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.

The Furion H402 Hybrid has 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows: 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

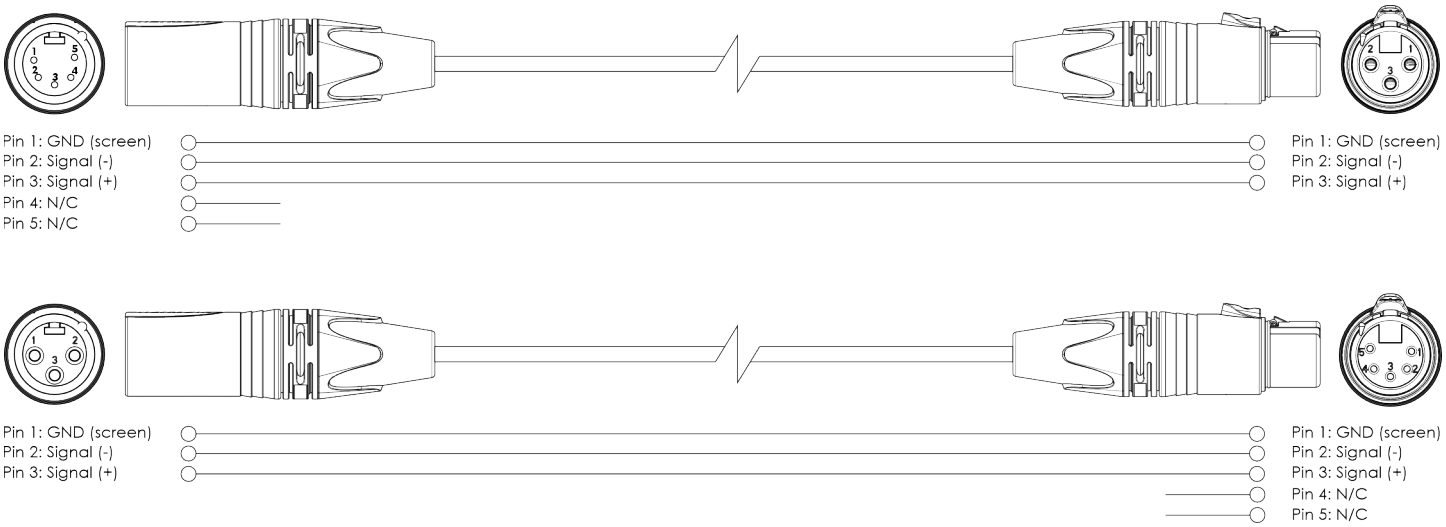
5.3.2. DMX Cables

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 the figure below.

Figure 13

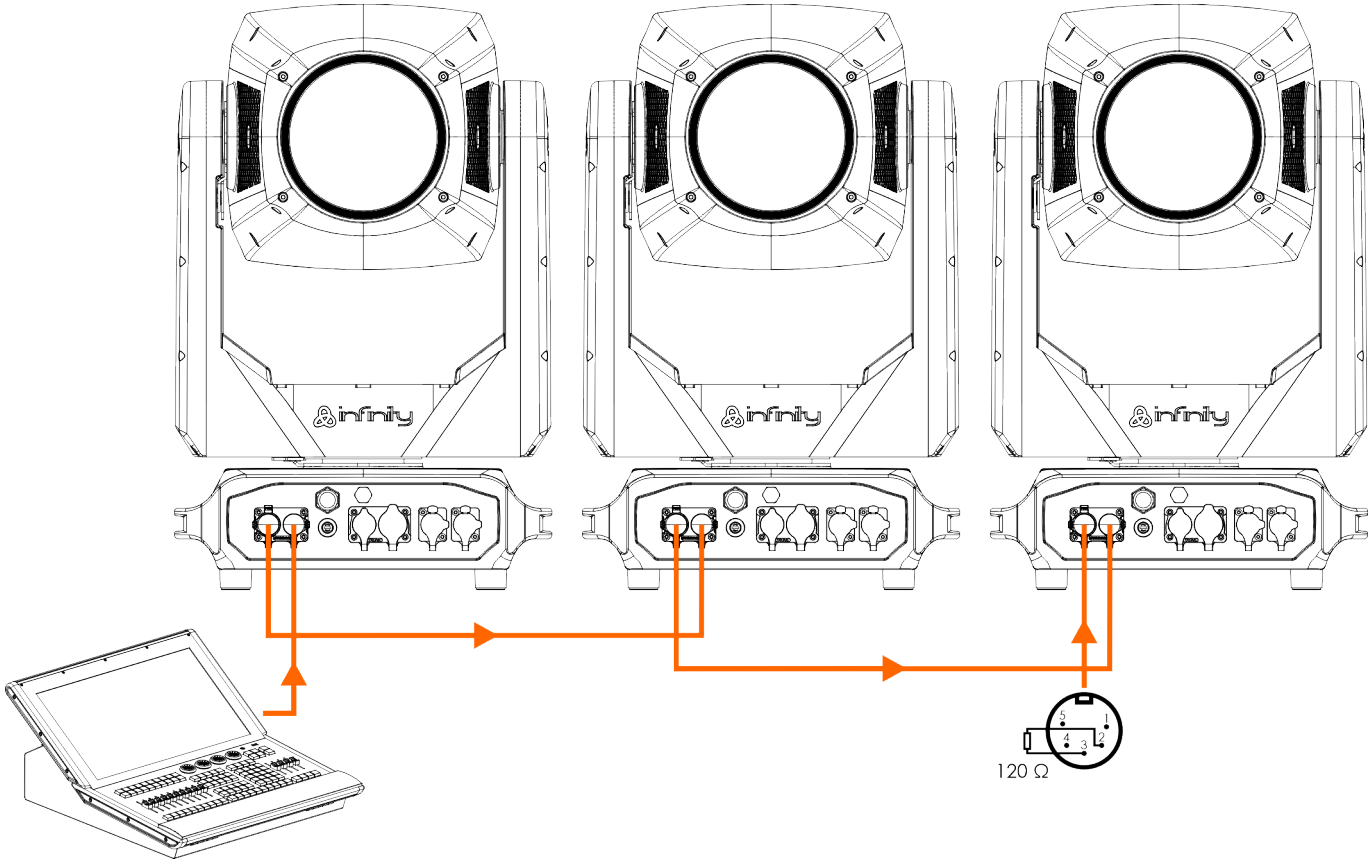


5.3.3. DMX Linking

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 1st device.
02) Connect the DMX OUT connector of the 1st device to the DMX IN connector of the 2nd device with a 5-pin DMX cable.
03) Repeat step 2 to connect all devices in a daisy-chain.
04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

Figure 14



5.3.4. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Furion H402 Hybrid has 3 personalities: Basic (20 channels), Advanced (27 channels) and User (27 channels).

If you want to connect multiple devices on one data link and use them in 27-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 28 (028), as 1 + 27 = 28.
03) Set the starting address of the 3rd device on the data link to 55 (055), as 28 + 27 = 55.
04) Continue assigning the starting addresses of the remaining devices by adding each time 27 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Furion H402 Hybrid correctly. If two or more devices are addressed similarly, they will work similarly.

5.4. Wireless Connection

The device is equipped with a 2,4 GHz wireless receiver from LumenRadio. The W-DMX receiver is compatible only with other W-DMX devices. It can be paired only with transceivers and transmitters with a W-DMX module.

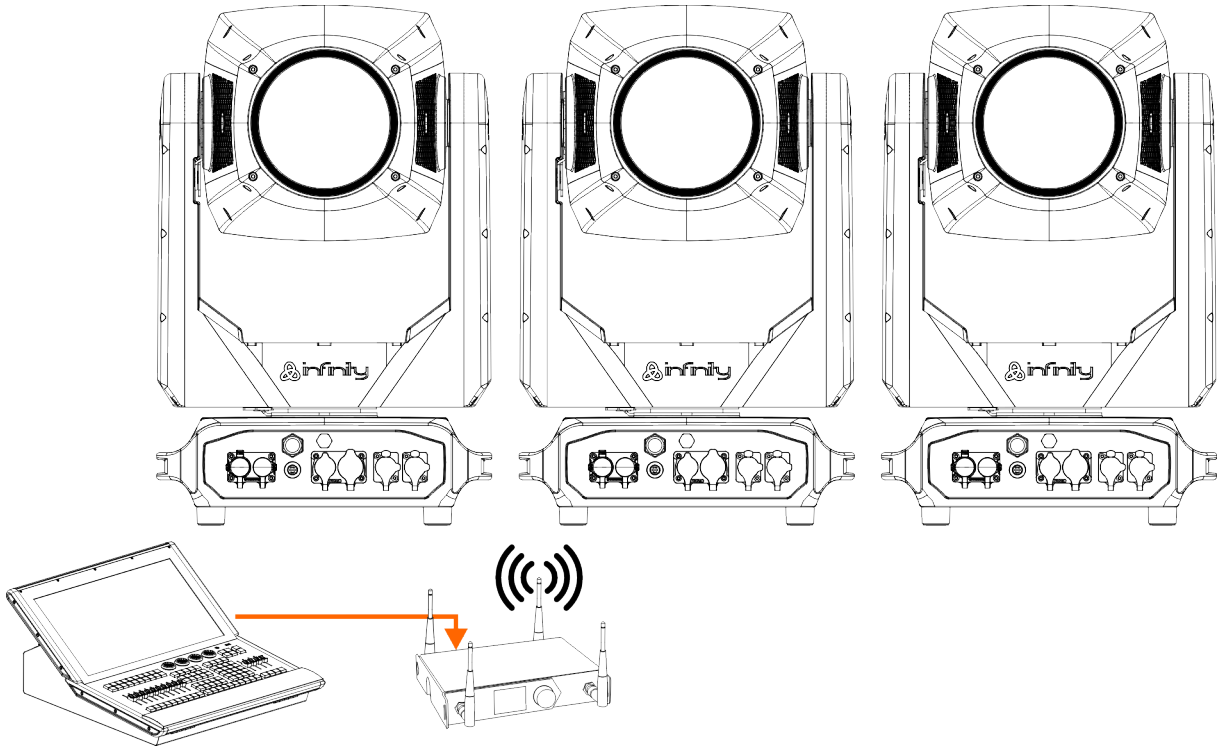
Communication distance	**Depending on the transmitting power or transmitter module**
Test conditions	WDMX TRx Transmitter module, 2 dBi Antenna, transmitting power 20 dBm (100 mW)
Range indoor	60 m
Range outdoor	250 m

Recommended transceiver: 51503 Lumenradio Stardust (G3, G4s, CRMX)

To connect multiple devices via wireless DMX, follow the steps below:

01) Set the devices to receive wireless DMX signal, refer to Control Mode (see 6.7.4. Control Mode on page 44).
02) Connect the transceiver/transmitter to the lighting controller.
03) Follow the user manual supplied with the transceiver to pair the devices.

Figure 15



5.5. Ethernet Connection

5.5.1. Art-Net/sACN Protocol

Art-Net is a protocol that uses TCP/IP to transfer a large amount of DMX-512 data over an Ethernet network. Art-Net 4 can support up to 32768 universes. Art-Net™ is designed by and copyright of Artistic Licence Holdings Ltd.

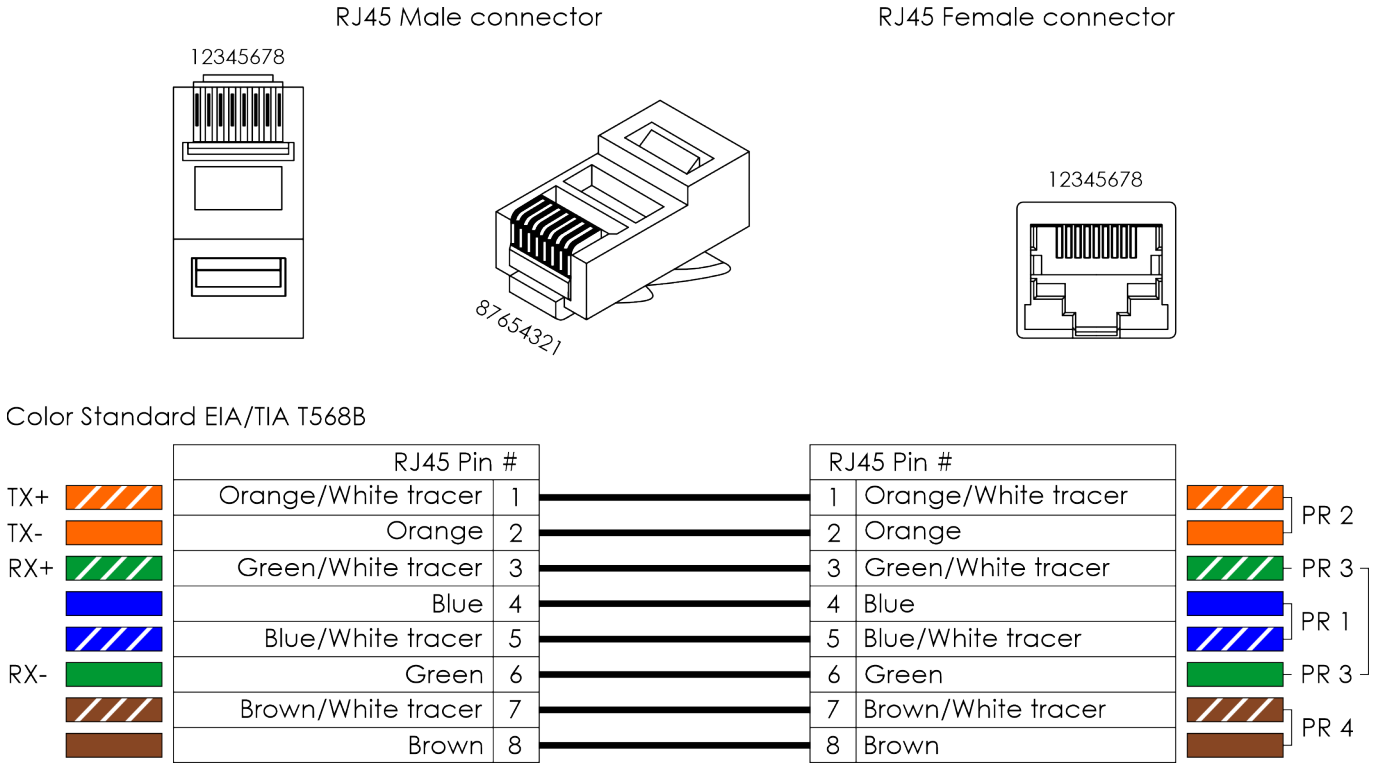
sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol developed by ESTA (Entertainment Services and Technology Association) for sending DMX-512 data over IP networks. It supports up to 63999 universes and uses multicasting.

5.5.2. Network Cables

Standard twisted-pair Ethernet cables (CAT-5E/CAT-6) can be used to connect the device to a computer or to a lighting controller that supports Art-Net or sACN.

If you make your own network cables, make sure that you connect the pins and wires correctly. Use RJ45 (8P8C) connectors and patch the cables according to the T568B color standard.

Figure 16

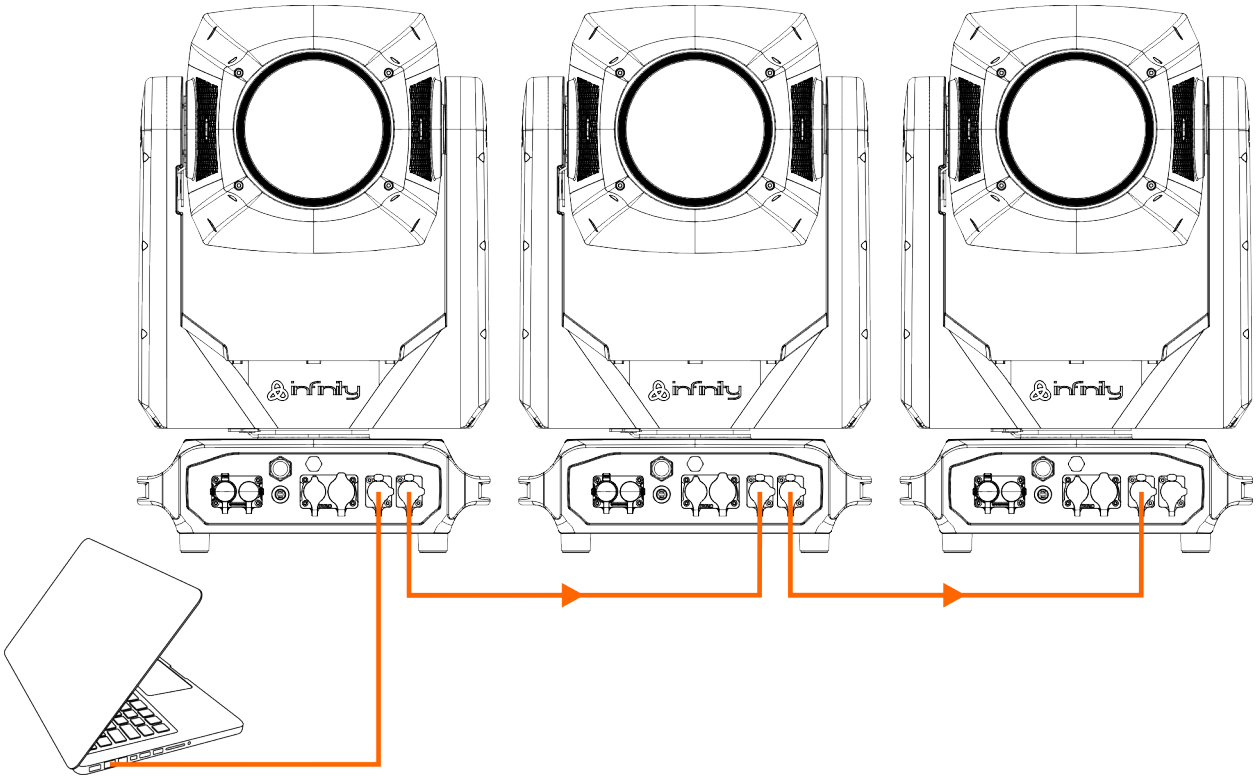


5.5.3. Art-Net/sACN Linking

To connect multiple devices on one Art-Net/sACN data link, follow the steps below:

01) Use a CAT-5E/CAT-6 cable to connect the RJ45 connector of the computer/lighting controller to one of the RJ45 connectors of the 1st device.
02) Connect the 2nd RJ45 connector of the 1st device to the 1st RJ45 connector of the 2nd device with a CAT-5E/CAT-6 cable.
03) Repeat step 2 to connect all devices in a daisy-chain.

Figure 17



5.5.4. Art-Net Settings

You need an Art-Net data link to run light shows of one or more devices using a computer/light controller.

If you want to connect multiple devices on one Art-Net/RDM data link, follow the steps below:

01) Set the IP address of your computer/light controller to 2.x.x.x or 10.x.x.x, depending on the Art-Net settings. All devices in the network must have a unique IP address. To change the IP address, the IP Mode, the Subnet mask, and the Universe of the device, refer to Network Setup (see 6.7.2.1. Network Setup on page 38).
02) Set the Subnet mask to 255.0.0.0. on all devices.
03) Set the universe of the 1st device to 1.
04) Set the DMX address of the 1st device to 001.
05) Map all the connected devices in the Art-Net-based software. To change the Art-Net protocol of the device, refer to Art-Net/sACN Protocol (see 5.5.1. Art-Net/sACN Protocol on page 24).

5.5.5. sACN Settings

To run your device using sACN protocol:

01) Set the IP address of your computer/light controller. sACN does not have restrictions on the IP address. To change the IP address, the IP Mode, the Subnet mask, and the Universe of the device, refer to Network Setup (see 6.7.2.1. Network Setup on page 38).
02) Select sACN Protocol in the Control Mode menu (see 6.7.4. Control Mode on page 44).
03) Set the universe in the Network Setup menu (see 6.7.2.1. Network Setup on page 38).

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 a moving head. It can be installed indoors and outdoors. This device 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. Control Modes

The Furion H402 Hybrid supports the following control modes:

- Stand-alone: Stand-alone mode (built-in programs), manual control
- DMX-512: Basic (20 channels), Advanced (27 channels), User (27 channels)
- WDMX: Basic (20channels), Advanced (27 channels), User (27 channels)
- Art-Net: Basic (20 channels), Advanced (27 channels), User (27 channels)
- sACN: Basic (20 channels), Advanced (27 channels), User (27 channels)

For more information about how to connect the devices, refer to Setup (see 5. Setup on page 21).

To operate the device manually as a stand-alone device:

Adjust the parameters of the device in the Manual Control menu (see 6.7.5. Manual Control on page 44).

To run the built-in programs in auto operation mode without a DMX controller:

Select the control mode of the device in the Stand Alone menu (see 6.7.3. Stand Alone on page 43). If you select Program 1–9, the device will run the built-in program.

To operate the device with a DMX controller:

01) Select DMX512 as control mode in the Control Mode menu (see 6.7.4. Control Mode on page 44).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 36).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 44). Refer to DMX Channels (see 6.8. DMX Channels on page 49) for a complete overview of all DMX channels.

To operate the device wireless with a DMX controller in combination with a wireless transceiver:

01) Select WDMX as control mode in the Control Mode menu (see 6.7.4. Control Mode on page 44).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 36).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 44). Refer to DMX Channels (see 6.8. DMX Channels on page 49) for a complete overview of all DMX channels.

To operate the device via Art-Net with a computer/lighting controller:

01) Select ArtNet as control mode in the Control Mode menu (see 6.7.4. Control Mode on page 44).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 36).

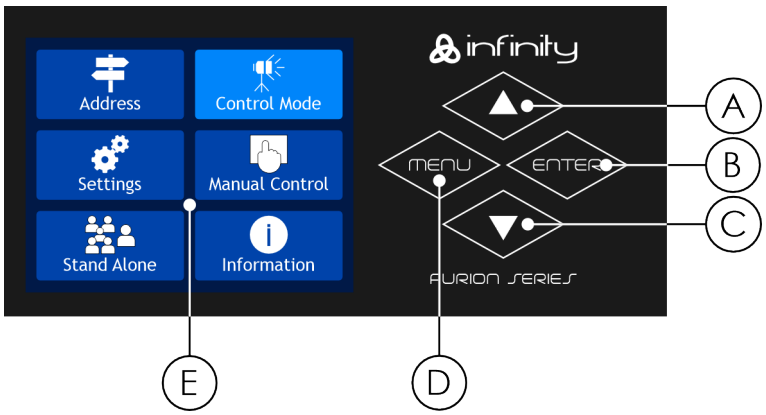
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 44). Refer to DMX Channels (see 6.8. DMX Channels on page 49) for a complete overview of all DMX channels.

To operate the device via sACN with a computer/lighting controller:

01) Select sACN as control mode in the Control Mode menu (see 6.7.4. Control Mode on page 44).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 36).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 44). Refer to DMX Channels (see 6.8. DMX Channels on page 49) for a complete overview of all DMX channels.

6.3. Control Panel

Figure 18



A) UP touch button
B) ENTER touch button
C) DOWN touch button
D) MENU touch button
E) TFT display

- Use the **MENU** button to exit the current submenu, to return to the Main Menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice or to set the currently selected value.

6.4. Start-up

After the device is connected to power supply, the device will perform a reset. During the reset the display shows a splash screen with the Infinity logo and the name of the device:



During the reset procedure it is possible to enter the menu to change the DMX address.
After the reset is completed, the device is ready to be operated. The display shows the start screen. The start screen provides information about the DMX starting address, the IP address, the universe and the selected DMX channel mode of the device:



I. DMX starting address of the device.
   - If the DMX connection is lost or the device is not connected, the DMX starting address is red.
   - If the device is receiving DMX signal, the DMX starting address is white.

II. Control protocol and channel mode

III. IP address and assigned universe

IV. W-DMX indicator: if the control protocol of the device is set to W-DMX (Wireless DMX), the W-DMX indicator appears on the display.
   - If the device is not assigned to a transmitter, the indicator is gray.
   - If the device is assigned to a transmitter but DMX is not present, the indicator is blinking slowly.
   - If the device is assigned to a transmitter and DMX is present, the indicator is green.
   - If the device is being linked to a transmitter or lost the connection with the transmitter, the indicator is blinking quickly.

V. Art-Net/sACN indicator: if the control protocol of the device is set to Art-Net or sACN, the Art-Net/sACN indicator appears on the display.
   - If the Ethernet connection is lost or the device is not connected, the Art-Net/sACN indicator is gray.
   - If the Ethernet connection is properly working, the Art-Net/sACN indicator is green.

VI. Enter/Unlock button. By default the display of the device is locked (see 6.5. Display Lock on page 28).

VII. Warning icon: if there is an error message (see 7.1. Error Messages on page 59), the warning icon starts blinking in the top left corner of the display.

Note:

If no button is pressed, after 5 seconds the display is locked.

6.5. Display Lock

In this screen you can lock/unlock the display of the device.

There are 3 options to lock/unlock the device:

- Locking Option (see 6.5.1. Locking)
- Unlocking without Password (see 6.5.2. Unlocking without Password)
- Unlocking with Password (see 6.5.3. Unlocking with Password)

6.5.1. Locking

In this screen you can lock the display of the device.

01) Press and hold down the **MENU** button and **ENTER** button for 3 seconds.
02) The display shows:

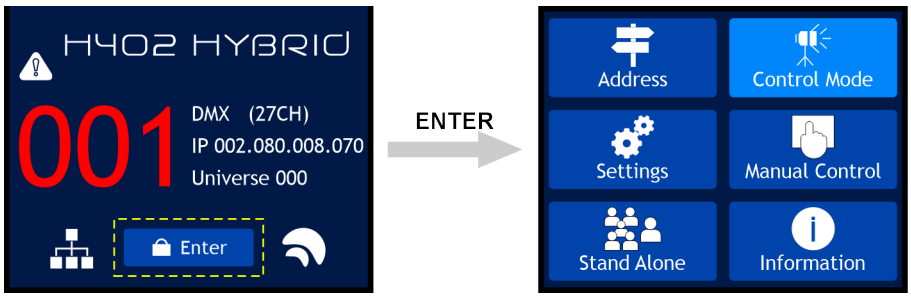


03) To unlock the device, refer to Unlocking Option.

6.5.2. Unlocking without Password

6.5.2.1. Option 1

Press the **ENTER** button to unlock the device. The display shows:



6.5.2.2. Option 2

01) Press the **MENU** button.
02) Press the **ENTER** button to unlock the device. The display shows:



6.5.3. Unlocking with Password

01) Press and hold down the **MENU** button and **ENTER** button for 3 seconds.
02) Press the **ENTER** button to unlock the device. The display shows:



6.6. Menu Overview

Level 1	Level 2	Level 3	Level 4
Address (see 6.7.1. DMX Address on page 36)	Address Setting	001–512	
Settings (see 6.7.2. Settings Menu on page 37)	Screen Reverse	NO	
		YES	
		AUTO	
	Pan Reverse	NO	
		YES	
	Tilt Reverse	NO	
		YES	
	Pan Angle	540	
		360	
		180	
	Tilt Angle	260	
		180	
		90	
	Auto Pan Invert	OFF	
		ON	
	Backlight Timer	30S	
		1M	
		5M	
		ON	
	WDMX	OFF	
		ON	
	Wireless Unlink	NO	
		YES	
	DMX Fail	Hold	
		OFF	
	Network Setup	IP Mode	Manual
			DHCP
		Universe	000–255
			001–256
		IP Address	002.080.008.070
		SubMask	255.000.000.000
	Lock Code (6468)	Activate Lock Code	NO
			YES
		Enter Lock Code	SET
	BL.O.P/T Move	NO	
		YES	
	BL.O.Color Move	NO	
		YES	
	BL.O.Gobo Move	NO	
		YES	
	Lamp Setting	On/Off	OFF

Level 1	Level 2	Level 3	Level 4
			ON
		State/Power on	OFF
			ON
		Off Via Dmx	NO
			YES
		On If Dmx On	NO
			YES
		Off If Dmx Off	NO
			YES
		Ignition Delay	000–255
		Low Power Delay	000–255
		Reset Lamp Time	NO
			YES
	Special Set	Interval	10–250
		Remain Time	RESET
			NO
	Service Menu (6468)	PAN	128
		TILT	128
		SHUT1	128
		SHUT2	128
		COLOR	128
		GOBO	128
		GOBO ROTATE	128
		GOBO2	128
		FOCUS-GOBO	128
		FOCUS-GOBO2	128
		ZOOM	128
		PRISM1	128
		PRISM1 ROTATE	128
		PRISM2	128
		PRISM2 ROTATE	128
		FROST	128
		FROST2	128
		MAC4	000
		MAC5	000
		MAC6	000
		RDM ID4	000
		RDM ID5	000
		RDM ID6	000
	Reset User Hours	NO	
		YES	
	Reset Function	Pan/Tilt	NO
			YES
		Shutter/Prism	NO
			YES

Level 1	Level 2	Level 3	Level 4
		Color	NO
			YES
		Gobo/Gobo Rotate	NO
			YES
		Zoom	NO
			YES
		Frost	NO
			YES
		All	NO
			YES
	Factory Settings	NO	
		YES	
Stand Alone (see 6.7.3. Stand Alone on page 43)	Program Number	1–9	
Control Mode (see 6.7.4. Control Mode on page 44)	Control Mode	DMX	
		WDMX	
		ArtNet	
		sACN	
	Personality	Basic	
		Advance	
		User	
	User Personality	Pan	NO/1~Advance Num
		Pan Fine	NO/1~Advance Num
		Tilt	NO/1~Advance Num
		Tilt Fine	NO/1~Advance Num
		P/T Speed	NO/1~Advance Num
		Dimmer	NO/1~Advance Num
		Dimmer Fine	NO/1~Advance Num
		Shutter	NO/1~Advance Num
		Color	NO/1~Advance Num
		Gobo	NO/1~Advance Num
		Gobo Rotate	NO/1~Advance Num
		Gobo Rotate Fine	NO/1~Advance Num
		Gobo2	NO/1~Advance Num
		Prism1	NO/1~Advance Num
		Prism1 Rotate	NO/1~Advance Num
		Prism1 Rotate Fine	NO/1~Advance Num
		Prism2	NO/1~Advance Num
		Prism2 Rotate	NO/1~Advance Num
		Prism2 Rotate Fine	NO/1~Advance Num
		Zoom	NO/1~Advance Num
		Zoom Fine	NO/1~Advance Num
		Focus	NO/1~Advance Num
		Focus Fine	NO/1~Advance Num
		Focus Auto	NO/1~Advance Num

Level 1	Level 2	Level 3	Level 4
		Frost	NO/1~Advance Num
		Frost2	NO/1~Advance Num
		Control	NO/1~Advance Num
Manual Control (see 6.7.5. Manual Control on page 44)	Auto Test	Apply	
	Manual Test	Pan	000–255
		Pan Fine	000–255
		Tilt	000–255
		Tilt Fine	000–255
		P/T Speed	000–255
		Dimmer	000–255
		Dimmer Fine	000–255
		Shutter	000–255
		Color	000–255
		Gobo	000–255
		Gobo Rotate	000–255
		Gobo Rotate Fine	000–255
		Gobo2	000–255
		Prism1	000–255
		Prism1 Rotate	000–255
		Prism1 Rotate Fine	000–255
		Prism2	000–255
		Prism2 Rotate	000–255
		Prism2 Rotate Fine	000–255
		Zoom	000–255
		Zoom Fine	000–255
		Focus	000–255
		Focus Fine	000–255
		Focus Auto	000–255
		Frost	000–255
		Frost2	000–255
		Control	000–255
Information (see 6.7.6. Information on page 46)	Fixture Info	Ver	V2. XXXXXX
		Running Mode	DMX
		DMX Address	001
		Temperature	025
		Fixture Hours	00000
		User Hours	00000
		Lamp On Time	00000
		Remain Time	000
		IP Address	002.080.008.070
		SubMask	255.000.000.000
		UID	29B40E3XXXXX
		MAC	34.29.8F.7F.7E.80
	Fan Info	BFAN1 Speed	2000
		BFAN2 Speed	2000

Level 1	Level 2	Level 3	Level 4
		BFAN3 Speed	2000
		BFAN4 Speed	2000
		BFAN5 Speed	2000
		ZFAN1 Speed	2000
		FAN1 Speed	2000
		FAN2 Speed	2000
		FAN3 Speed	2000
		FAN4 Speed	2000
		FAN5 Speed	2000
		FAN6 Speed	2000
		FAN7 Speed	2000
		FAN8 Speed	2000
		AFAN1 Speed	2000
		Base Fan1 Speed	2000
		Base Fan2 Speed	2000
		Gravity	UP/ DOWN/RIGHT/ LEFT/ BACK/FRONT
		Power	232W
		Voltage	070V
		Current	3.3A
	Error Info		
	Channel Info	DMX Frequency	000
		Pan	000–255
		Pan Fine	000–255
		Tilt	000–255
		Tilt Fine	000–255
		P/T Speed	000–255
		Dimmer	000–255
		Dimmer Fine	000–255
		Shutter	000–255
		Color	000–255
		Gobo	000–255
		Gobo Rotate	000–255
		Gobo Rotate Fine	000–255
		Gobo2	000–255
		Prism1	000–255
		Prism1 Rotate	000–255
		Prism1 Rotate Fine	000–255
		Prism2	000–255
		Prism2 Rotate	000–255
		Prism2 Rotate Fine	000–255
		Zoom	000–255
		Zoom Fine	000–255
		Focus	000–255
		Focus Fine	000–255

Level 1	Level 2	Level 3	Level 4
		Focus Auto	000–255
		Frost	000–255
		Frost2	000–255
		Control	000–255

6.7. Main Menu Options

The main menu has the following 6 options:



DMX Address



Settings Menu



Stand Alone



Control Mode



Manual Control



Information

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

6.7.1. DMX Address

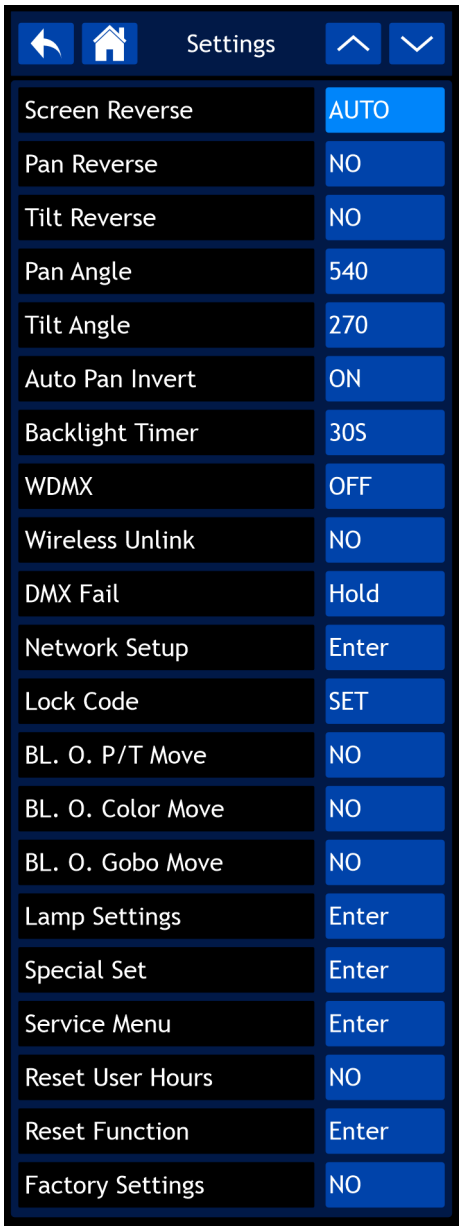
In this menu you can set the DMX starting address of the device.

01) Press the **UP/DOWN** buttons to select the DMX starting address of the device. The adjustment range is between 001–512.
02) Press the **ENTER** button to confirm the selection.

6.7.2. Settings Menu

In this menu you can adjust the settings of the device.

01) Press the **UP/DOWN** buttons to scroll through the 21 available options:



- Screen Reverse: Rotate the text on the display 180° when the device is mounted upside down (NO/YES/AUTO). If you select AUTO, the text on the display will automatically rotate 180° when the device is turned upside down
- Pan Reverse: Turn off/on the inverted pan direction (NO/YES)
- Tilt Reverse: Turn off/on the inverted tilt direction (NO/YES)
- Pan Angle: 540°/360°/180°
- Tilt Angle: 260°/180°/90°
- Auto Pan Invert: Invert the pan direction automatically, depending on the position of the device (ON/OFF)
- Backlight Timer: Set the time after inactivity, before the display turns off (30 s/1 min/5 min/ON). If you select ON, the display will not turn off
- WDMX: Activate/deactivate Wireless DMX (ON/OFF)
- Wireless Unlink: Terminate the connection between the device and the transmitter (NO/YES)
- DMX Fail: Set the behavior of the device in case of a DMX failure. There are 2 options: OFF (the device will black out the light output) and HOLD (the device will use the last properly received DMX signal which ensures undisrupted performance)
- Network Setup (see 6.7.2.1. Network Setup)
- Lock Code (see 6.7.2.2. Lock Code)

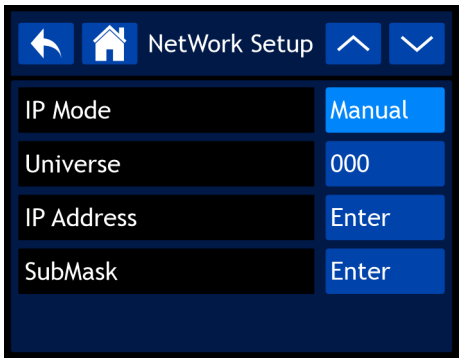
- BL.O. P/T Move: The device will black out the light output when Pan/Tilt are active (NO/YES)
- BL.O. Color Move: The device will black out the light output during the color wheel movement (NO/YES)
- BL.O. Gobo Move: The device will black out the light output during the gobo wheel movement (NO/YES)
- Lamp Setting (see 6.7.2.3. Lamp Setting)
- Special Set (see 6.7.2.4. Special Set)
- Service Menu (see 6.7.2.5. Service Menu)
- Reset User Hours: Reset the total operation time counter (NO/YES)
- Reset Function (see 6.7.2.6. Reset Function)
- Factory Settings: Restore the factory default settings (NO/YES)

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

6.7.2.1. Network Setup

In this submenu you can adjust the network settings.

01) Press the **UP/DOWN** buttons to scroll through the 4 available options:



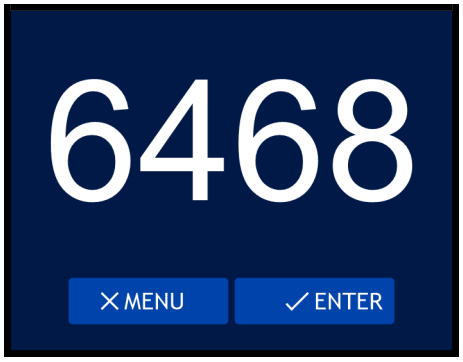
- IP Mode: Set the configuration of the IP Address manually or automatically by a network server (DHCP)
- Universe: Set the Universe. The range is 000–255 for Art-Net/001–256 for sACN
- IP Address: Set the IP address
- SubMask: Set the Subnet Mask

02) Press the **ENTER** button to confirm the selection.
03) Press the **UP/DOWN** buttons to increase/decrease the value.
04) Press the **ENTER** button to confirm the selection.

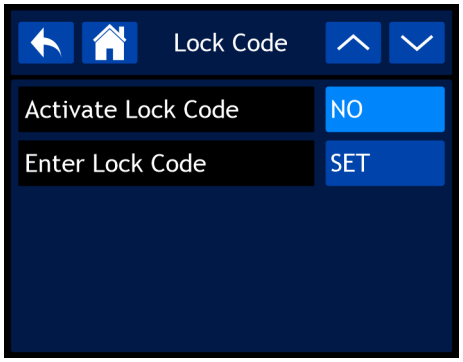
6.7.2.2. Lock Code

In this submenu you can set a personal lock code or change the current lock code.

01) Press the **UP/DOWN** buttons to insert the master code: 6468:



02) Press the **ENTER** button to confirm.
03) Press the **UP/DOWN** buttons to select the desired mode. There are 2 options:



- Activate Lock Code: Activate the lock code (NO/YES)
- Enter Lock Code (see 6.7.2.2.1. Enter Lock Code)

6.7.2.2.1. Enter Lock Code

In this menu you can set Enter Lock Code for the device.

01) Press the **UP/DOWN** buttons to increase/decrease the values in order to create your personal code. Set the lock code 0000–9999.
02) Press the **ENTER** button to confirm the selection.



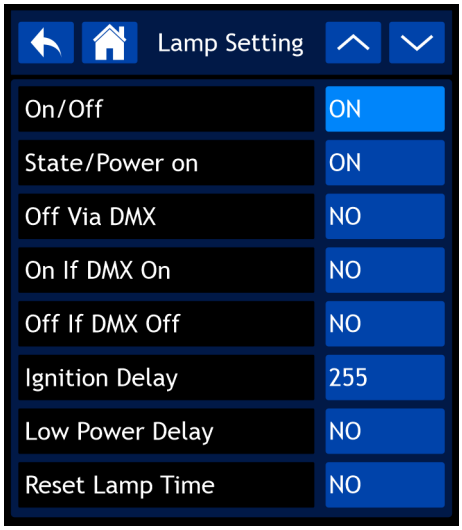
Note:

If you forget your personal code, you can still insert the **master code: 6468** which overrides your personal code.

6.7.2.3. Lamp Setting

In this submenu you can adjust the lamp settings.

01) Press the **UP/DOWN** buttons to scroll through the 8 available options:



- On/Off: Set the lamp setting at start-up (ON/OFF)
- State/Power on: The lamp turns on when the device is powered up (ON/OFF)
- Off Via DMX: The lamp can be turned on/off via lighting controller if DMX connection is present (NO/YES)
- On If DMX ON: The lamp turns on automatically when a DMX signal is detected (NO/YES)
- Off If DMX Off: The lamp turns off automatically when the DMX signal is lost (NO/YES)
- Ignition Delay: Set the duration of delay before the lamp turns on when the device is powered up (010–255)
- Low Power Delay: Set the duration of delay before the lamp enters low power mode when the shutter is closed (000–255)
- Reset Lamp Time: Reset the lamp time (NO/YES)

02) Press the **UP/DOWN** buttons to increase/decrease the values.
03) Press the **ENTER** button to confirm the selection.

6.7.2.4. Special Set

In this submenu you can adjust the maintenance timer for the lamp.

Press the **UP/DOWN** buttons to select the mode. There are 2 options:



- Interval Code (see 6.7.2.4.1. Interval Code)
- Remain Time (see 6.7.2.4.2. Remain Time)

6.7.2.4.1. Interval Code

In this submenu you can set the maintenance timer for the lamp (10–250).

01) Press the **ENTER** button to open the submenu.
02) Press the **UP/DOWN** buttons to increase/decrease the values.The values are in hours.
03) Press the **ENTER** button to confirm the selection.

6.7.2.4.2. Remain Time

In this submenu you can reset the remaining time, counting down from the Interval time.

01) Press the **ENTER** button to open the submenu.
02) Press the **UP/DOWN** buttons to select NO/RESET.
03) Press the **ENTER** button to confirm the selection.

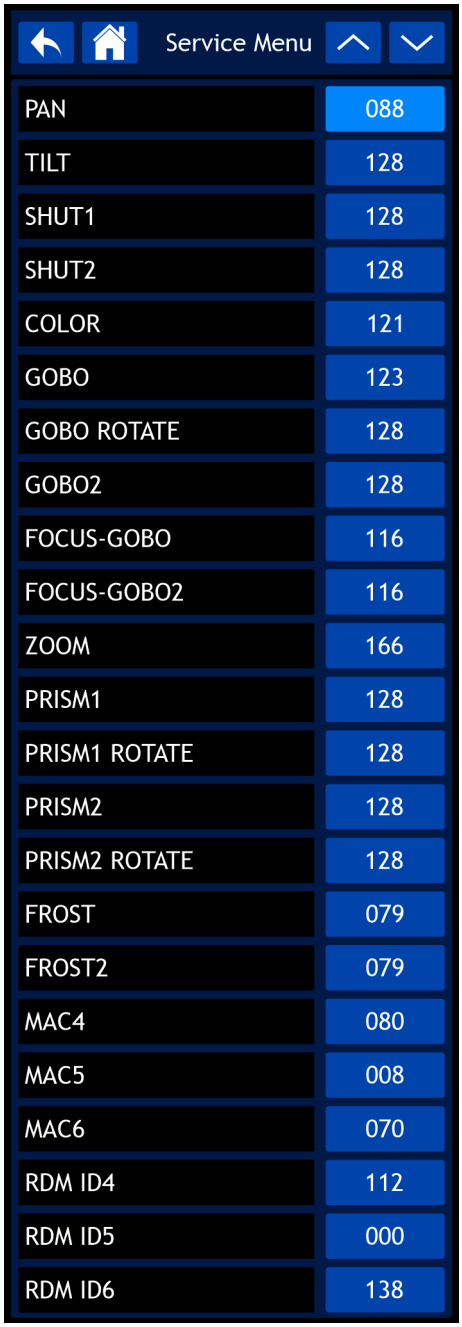
6.7.2.5. Service Menu

In this submenu you can make fine adjustments of the home position of all moving parts or change the MAC address and the RDM identification number of the device.

Note:

If you forget your previously set personal lock code, you can still insert the **master code: 6468** which overrides the personal code.

01) Press the **UP/DOWN** buttons to insert the personal code or if you forgot that, insert the master code: 6468.
02) Select **ENTER** to confirm.
03) Press the **UP/DOWN** buttons to scroll through the 23 available options:



04) Once you have selected the desired option, press the **ENTER** button to confirm the selection.
05) Press the **UP/DOWN** buttons to adjust the values to change the home position of all moving parts, the MAC addresses and the RDM identification numbers of the device. The adjustment range is 000–255.
06) Press the **ENTER** button to confirm the selection.

6.7.2.6. Reset Function

In this submenu you can reset the settings of the device.

01) Press the **UP/DOWN** buttons to scroll through the 7 available options:



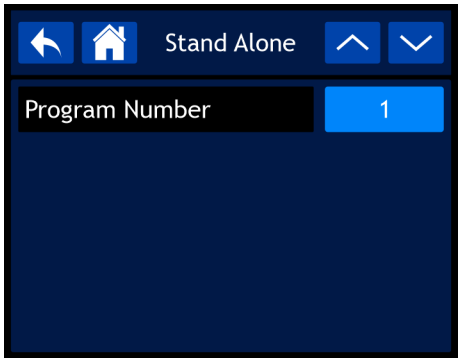
- Pan/Tilt: Reset Pan/Tilt (NO/YES)
- Shutter/Prism: Reset Shutter/Prism (NO/YES)
- Color: Reset Color (NO/YES)
- Gobo/Gobo Rotate: Reset Gobo/Gobo Rotate (NO/YES)
- Zoom: Reset Zoom (NO/YES)
- Frost: Reset Frost (NO/YES)
- All: Reset all settings (NO/YES)

02) Press the **UP/DOWN** buttons to select NO or YES. If you select YES, the function in question will reset.
03) Press the **ENTER** button to confirm the selection.

6.7.3. Stand Alone

In this menu you can set the built-in program.

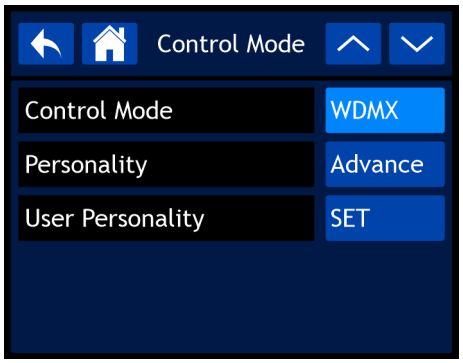
Press the **UP/DOWN** buttons to start one of the 9 built-in programs. The display shows:



6.7.4. Control Mode

In this menu you can set the control mode, personality and user personality.

01) Press the **UP/DOWN** buttons to scroll through the 3 available options:



- Control Mode: DMX, WDMX, Art-Net, sACN
- Personality: Basic (20 channels), Advance (27 channels), User (up to 27 channels)
- User Personality (see 6.7.4.1. User Personality)

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

6.7.4.1. User Personality

In this menu you can customize the device by changing the order of the 27 DMX channels and/or leaving some channels out. These functions are the same as the 27 DMX channels in Advance personality. For more information, refer to DMX Channels (see 6.8. DMX Channels on page 49).

01) Press the **UP/DOWN** buttons to scroll through the 27 available options:

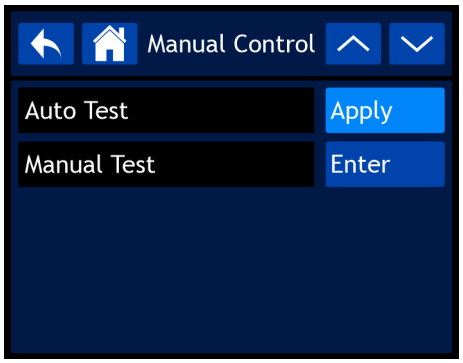


02) Press the **ENTER** button to confirm the selection.
03) Press the **UP/DOWN** buttons to increase/decrease the numeric value in order to assign a DMX channel to this function. The adjustment range is between 001–027. Select NO if you want to exclude a function.
04) Press the **ENTER** button to confirm the selection.

6.7.5. Manual Control

In this menu you can set Auto Test or Manual Test.

01) Press the **UP/DOWN** buttons to scroll through the 2 available options:



- Auto Test (see 6.7.5.1. Auto Test)

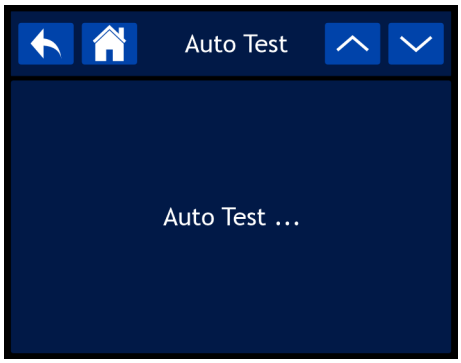
- Manual Test (see 6.7.5.2. Manual Test)

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

6.7.5.1. Auto Test

In this submenu you can automatically run an auto test of the functions of the device.

(If you have selected Auto Test in the previous menu and pressed the **ENTER** button) The device automatically runs an auto test of the functions of the device and the display shows:

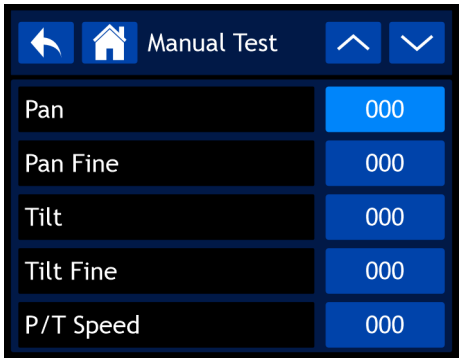


6.7.5.2. Manual Test

In this submenu you can test each function of the device individually or as a group.

It is possible to customize the device by changing the value of each function manually. These functions are the same as the 27 DMX channels in Advance personality. For more information, refer to DMX Channels (see 6.8. DMX Channels on page 49).

01) Press the **UP/DOWN** buttons to scroll through the 27 available options:

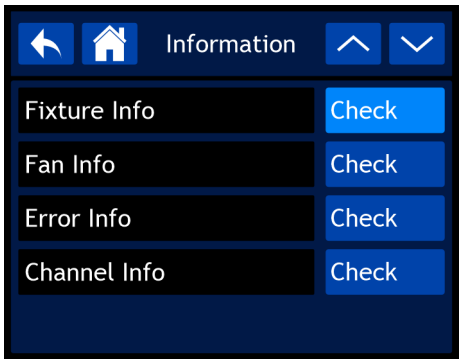


02) Press the **ENTER** button to confirm the selection.
03) Press the **UP/DOWN** buttons to adjust the values in order to test each function of the device individually or as a group. The adjustment range is between 000–255.
04) Press the **ENTER** button to confirm the selection.

6.7.6. Information

In this menu you can view the parameters of the device.

01) Press the **UP/DOWN** buttons to scroll through the 4 available options:



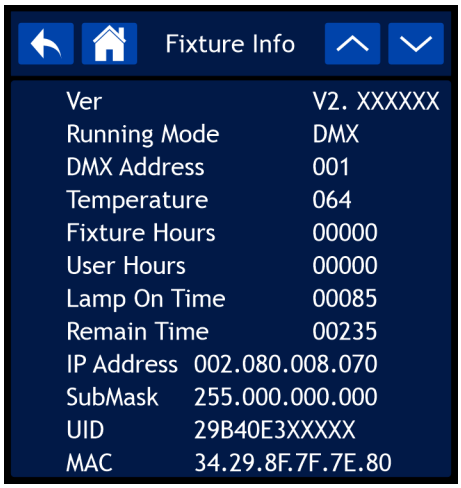
- Fixture Info (see 6.7.6.1. Fixture Info)
- Fan Info (see 6.7.6.2. Fan Info)
- Error Info (see 6.7.6.3. Error Info)
- Channel Info (see 6.7.6.4. Channel Info)

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

6.7.6.1. Fixture Info

In this submenu you can view the currently installed firmware version, operation mode, DMX address and other parameters of the device.

Press the **UP/DOWN** buttons to see all available parameters.

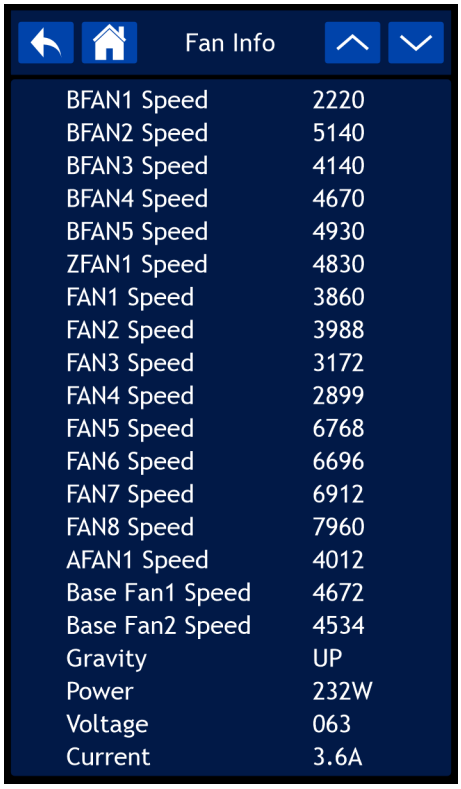


- Ver: Shows the current software version
- Running Mode: Shows the current running mode
- DMX Address: Shows the current DMX address
- Temperature: Shows the current temperature
- Fixture Hours: Shows the total amount of hours the device has been running
- User Hours: Shows the total amount of hours the device has been running the current day
- Lamp On Time: Shows the total amount of hours the lamp has been running
- Remain Time: Shows the total amount of remaining hours the lamp has left before renewal
- IP Address: Shows the current IP address
- SubMask: Shows the current SubMask address
- UID: Shows the UID address of the device
- MAC: Shows the current MAC address

6.7.6.2. Fan Info

In this submenu you can view the parameters of the fans and other parameters of the device.

Press the **UP/DOWN** buttons to see all available parameters.

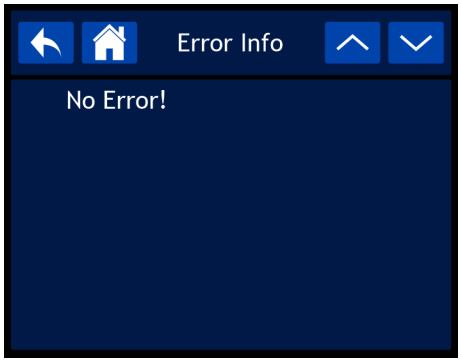


- BFAN1 Speed: Shows the current speed of gobo fan 1
- BFAN2 Speed: Shows the current speed of gobo fan 2
- BFAN3 Speed: Shows the current speed of gobo fan 3
- BFAN4 Speed: Shows the current speed of gobo fan 4
- BFAN5 Speed: Shows the current speed of gobo fan 5
- ZFAN1 Speed: Shows the current speed of the prism fan
- FAN1 Speed: Shows the current speed of defrost fan 1
- FAN2 Speed: Shows the current speed of defrost fan 2
- FAN3 Speed: Shows the current speed of fan 3
- FAN4 Speed: Shows the current speed of fan 4
- FAN5 Speed: Shows the current speed of cooling fan 5
- FAN6 Speed: Shows the current speed of cooling fan 6
- FAN7 Speed: Shows the current speed of cooling fan 7
- FAN8 Speed: Shows the current speed of cooling fan 8
- AFAN1 Speed: Shows the current speed of the arm fan
- Base Fan1 Speed: Shows the current speed of base fan 1
- Base Fan2 Speed: Shows the current speed of base fan 2
- Gravity: Shows the current position of the device
- Power: Shows the current power used
- Voltage: Shows the current voltage used
- Current: Shows the current current used

6.7.6.3. Error Info

In this submenu you can view whether there are any system errors.

If you have selected Error Info and there are no errors the display shows:



Note:

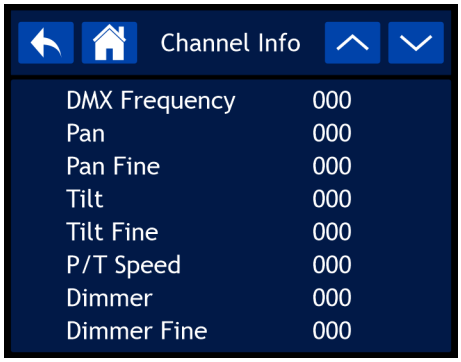
In case of an error message, discontinue the use of the device and contact your Highlite International dealer for more information.

For more information about the complete list of error messages, refer to Error Messages (see 7.1. Error Messages on page 59).

6.7.6.4. Channel Info

In this submenu you can view the current value of all signal input channels.

Press the **UP/DOWN** buttons to see all current channel values.



6.8. DMX Channels

6.8.1. DMX Channels Overview

Function	Basic 20 CH	Advance 27 CH	DMX Value	Setting	Default	Highlight
Pan	1	1	000–255	0°–540°	128	
Pan Fine 16-bit	2	2	000–255	Fine positioning		
Tilt	3	3	000–255	0°–260°	128	
Tilt Fine 16-bit	4	4	000–255	Fine positioning		
Pan/Tilt Speed		5	000–255	From fast to slow	0	
Dimmer	5	6	000–255	0–100 %	0	255
Dimmer Fine 16-bit		7	000–255	Fine adjustment		
Strobe	6	8	000–255	Check channel details	6	6
Color Wheel	7	9	000–255	Check channel details	0	0
Rotating Gobo wheel 1	8	10	000–255	Check channel details	0	0
Gobo wheel 1 index/rotating	9	11	000–255	Check channel details	128	
Gobo wheel 1 index/rotating 16-bit		12	000–255	Fine adjustment		
Static Gobo wheel	10	13	000–255	Check channel details	0	0
Prism 1 (8-facet Round)	11	14	000–255	Check channel details	0	0
Prism 1 rotating	12	15	000–255	Check channel details	128	
Prism 1 rotating 16-bit		16	000–255	Fine adjustment		
Prism 2 (5-facet Linear)	13	17	000–255	Check channel details	0	0
Prism 2 rotating	14	18	000–255	Check channel details	128	
Prism 2 rotating 16-bit		19	000–255	Fine adjustment		
Zoom	15	20	000–255	Wide to narrow	128	
Zoom 16-bit		21	000–255	Fine adjustment		
Focus	16	22	000–255	Far to near	128	
Focus 16-bit		23	000–255	Fine adjustment		
Auto Focus	17	24	000–255	Check channel details	0	
Light Frost	18	25	000–255	0–100 %	0	
Diffusor	19	26	000–255	0–100 %	0	
Control	20	27	000–255	Check channel details	0	

6.8.2. Basic (20 Channels), Advance (27 Channels)

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
1	1	**Pan**	000–255	Pan adjustment 0°–540°		
2	2	**Pan Fine**	000–255	Pan adjustment, 16-bit		
3	3	**Tilt**	000–255	Tilt adjustment 0°–260°		
4	4	**Tilt Fine**	000–255	Tilt adjustment, 16-bit		
	5	**Pan/Tilt Speed**	000–255	From fast to slow		
5	6	**Dimmer**	000–255	From low to high intensity (0–100 %)		
	7	**Dimmer Fine**	000–255	Fine adjustment		
6	8	**Strobe**	000–003	No function		
			004–006	Open		step
			007–066	Syncronized strobe, from low to high frequency		proportional
			067–127	Pulse strobe, from low to high frequency		proportional
			128–188	Ramp-down, from low to high frequency		proportional
			189–249	Random strobe, from low to high frequency		proportional
			250–255	Open		step
7	9	**Color Wheel**	000–003	White		
			004–007	Color 1 (RED)		step
			008–011	Color 2 (DARK BLUE)		step
			012–015	Color 3 (DARK YELLOW)		step
			016–019	Color 4 (NEON GREEN)		step
			020–023	Color 5 (MAGENTA)		step
			024–027	Color 6 (LAVENDER)		step
			028–031	Color 7 (PINK)		step
			032–035	Color 8 (DARK GREEN)		step
			036–039	Color 9 (LIME)		step
			040–043	Color 10 (CYAN)		step
			044–047	Color 11 (ORANGE)		step
			048–051	Color 12 (CTO)		step
			052–059	Color 13 (CONGO BLUE)		step
			060–068	White + Color 1		proportional
			069–077	Color 1 + Color 2		proportional
			078–086	Color 2 + Color 3		proportional
			087–095	Color 3 + Color 4		proportional
			096–104	Color 4 + Color 5		proportional
			105–113	Color 5 + Color 6		proportional
			114–122	Color 6 + Color 7		proportional
			123–131	Color 7 + Color 8		proportional
			132–140	Color 8 + Color 9		proportional
			141–149	Color 9 + Color 10		proportional
			150–158	Color 10 + Color 11		proportional
			159–167	Color 11 + Color 12		proportional

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
			168–176	Color 12 + Color 13		proportional
			177–185	Color 13 + white		proportional
			186–219	Color scroll, from fast to slow		proportional
			220–223	Stop		step
			224–255	Reverse color scroll, from slow to fast		proportional
8	**10**	**Rotating Gobo wheel 1**	000–004	Open		step
			005–006	Gobo 1 (index) Astroids		step
			007–008	Gobo 2 (index) Psycho		step
			009–010	Gobo 3 (index) Brushed		step
			011–012	Gobo 4 (index) Triangles		step
			013–014	Gobo 5 (index) Baroque		step
			015–016	Gobo 6 (index) Spiral		step
			017–018	Gobo 7 (index) Stones		step
			019–020	Gobo 8 (index) Maze		step
			021–022	Gobo 9 (index) Branches		step
			023–024	Open		step
			025–026	Gobo 1 (rotating)		step
			027–028	Gobo 2 (rotating)		step
			029–030	Gobo 3 (rotating)		step
			031–032	Gobo 4 (rotating)		step
			033–034	Gobo 5 (rotating)		step
			035–036	Gobo 6 (rotating)		step
			037–038	Gobo 7 (rotating)		step
			039–040	Gobo 8 (rotating)		step
			041–042	Gobo 9 (rotating)		step
			043–044	Open		step
			045–052	Gobo 1 shake, from slow to fast (index)		proportional
			053–060	Gobo 2 shake, from slow to fast (index)		proportional
			061–068	Gobo 3 shake, from slow to fast (index)		proportional
			069–076	Gobo 4 shake, from slow to fast (index)		proportional
			077–084	Gobo 5 shake, from slow to fast (index)		proportional
			085–092	Gobo 6 shake, from slow to fast (index)		proportional
			093–100	Gobo 7 shake, from slow to fast (index)		proportional
			101–108	Gobo 8 shake, from slow to fast (index)		proportional
			109–116	Gobo 9 shake, from slow to fast (index)		proportional
			117–124	Open		step

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
			125–132	Gobo 1 shake, from slow to fast (rotating)		proportional
			133–140	Gobo 2 shake, from slow to fast (rotating)		proportional
			141–148	Gobo 3 shake, from slow to fast (rotating)		proportional
			149–156	Gobo 4 shake, from slow to fast (rotating)		proportional
			157–164	Gobo 5 shake, from slow to fast (rotating)		proportional
			165–172	Gobo 6 shake, from slow to fast (rotating)		proportional
			173–180	Gobo 7 shake, from slow to fast (rotating)		proportional
			181–188	Gobo 8 shake, from slow to fast (rotating)		proportional
			189–196	Gobo 9 shake, from slow to fast (rotating)		proportional
			197–225	CW gobo scroll, from fast to slow		proportional
			226–255	CCW gobo scroll, from slow to fast		proportional
9	11	**Gobo wheel 1 index/ rotating**		**Gobo index selected - set by CH 8/10**		proportional
			000	No function		
			001–255	Gobo indexing from 0 to 360°		proportional
				Gobo rotating selected - set by CH 8/10		
			000–014	No function		
			015–127	Gobo rotating, from fast to slow		proportional
			128	Stop		step
			129–241	Reverse gobo rotating, from slow to fast		proportional
			242–255	Gobo swiveling, from fast to slow		proportional
	12	**Gobo wheel 1 index/ rotating 16-bit**	000–255	Fine adjustment		
10	13	**Static Gobo wheel**	000–006	Open		step
			007–009	Gobo 1 (Small dot)		step
			010–012	Gobo 2 (Medium dot)		step
			013–015	Gobo 3 (Clouds)		step
			016–018	Gobo 4 (4 Dot square)		step
			019–021	Gobo 5 (Digi Dots)		step
			022–024	Gobo 6 (Triangle)		step
			025–027	Gobo 7 (Firework)		step
			028–030	Gobo 8 (Lasercones)		step
			031–033	Gobo 9 (Spinblade)		step
			034–036	Gobo 10 (Twisted)		step
			037–039	Gobo 11 (Linear)		step
			040–042	Gobo 12 (4 Bar)		step

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
			043–045	Gobo 13 (Spokes)		step
			046–048	Gobo 14 (Horizontal)		step
			049–051	Gobo 15 (Vertical)		step
			052–055	Gobo 16 (Circle)		step
			056–063	Open		step
			064–067	Gobo 1 shaking, slow to fast		proportional
			068–071	Gobo 2 shaking, slow to fast		proportional
			072–075	Gobo 3 shaking, slow to fast		proportional
			076–079	Gobo 4 shaking, slow to fast		proportional
			080–083	Gobo 5 shaking, slow to fast		proportional
			084–087	Gobo 6 shaking, slow to fast		proportional
			088–091	Gobo 7 shaking, slow to fast		proportional
			092–095	Gobo 8 shaking, slow to fast		proportional
			096–099	Gobo 9 shaking, slow to fast		proportional
			100–103	Gobo 10 shaking, slow to fast		proportional
			104–107	Gobo 11 shaking, slow to fast		proportional
			108–111	Gobo 12 shaking, slow to fast		proportional
			112–115	Gobo 13 shaking, slow to fast		proportional
			116–119	Gobo 14 shaking, slow to fast		proportional
			120–123	Gobo 15 shaking, slow to fast		proportional
			124–127	Gobo 16 shaking, slow to fast		proportional
			128–189	Gobo scroll, from fast to slow		proportional
			190–193	Stop		step
			194–255	Reverse gobo scroll, from slow to fast		proportional
11	**14**	**Prism 1 (8-facet Round)**	000–004	No function		
			005–127	Prism effect (index)		step
			128–255	Prism effect (rotating)		step
12	**15**	**Prism 1 rotating**		**Prism index selected - set by CH 11/14**		
			000	No function		
			001–255	Gobo indexing from 0 to 360°		proportional
				Prism rotating selected - set by CH 11/14		
			000–014	No function		
			015–127	Gobo rotating, from fast to slow		proportional
			128	Stop		step
			129–240	Reverse gobo rotating, from slow to fast		proportional
			241–255	Gobo swiveling, from fast to slow		proportional
	16	**Prism 1 rotating 16-bit**	000-255	Fine adjustment		
13	**17**	**Prism 2 (6-facet Linear)**	000–004	No function		
			005–127	Prism effect (index)		step
			128–255	Prism effect (rotating)		step

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
				Prism index selected - set by CH 13/17		
			000	No function		
			001–255	Gobo indexing from 0 to 360°		proportional
				Prism rotating selected - set by CH 13/17		
14	**18**	**Prism 2 rotating**	000–014	No function		
			015–127	Gobo rotating, from fast to slow		proportional
			128	Stop		step
			129–240	Reverse gobo rotating, from slow to fast		proportional
			241–255	Gobo swiveling, from fast to slow		proportional
	19	**Prism 2 rotating 16-bit**	000–255	Fine adjustment		
15	**20**	**Zoom**	000–255	Wide to narrow		
	21	**Zoom 16-bit**	000–255	Fine adjustment		
16	**22**	**Focus**	000–255	Far to near		
	23	**Focus 16-bit**	000–255	Fine adjustment		
			000	No function		
			001–011	0–5 m, auto focus gobo 1		step
			012–022	6 m, auto focus gobo 1		step
			023–033	7 m, auto focus gobo 1		step
			034–044	8 m, auto focus gobo 1		step
			045–055	9 m, auto focus gobo 1		step
			056–066	10 m, auto focus gobo 1		step
			067–077	12.5 m, auto focus gobo 1		step
			078–088	15 m, auto focus gobo 1		step
			089–099	17.5 m, auto focus gobo 1		step
			100–110	20–60 m, auto focus gobo 1		step
17	**24**	**Auto Focus**	111–127	Auto detect distance gobo1		step
			128–138	0–5 m, auto focus gobo 2		step
			139–149	6 m, auto focus gobo 2		step
			150–160	7 m, auto focus gobo 2		step
			161–171	8 m, auto focus gobo 2		step
			172–182	9 m, auto focus gobo 2		step
			183–193	10 m, auto focus gobo 2		step
			194–204	12.5 m, auto focus gobo 2		step
			205–215	15 m, auto focus gobo 2		step
			216–226	17.5 m, auto focus gobo 2		step
			227–237	20–60 m, auto focus gobo 2		step
			238–255	Auto detect distance gobo 2		step
18	**25**	**Light Frost**	000–255	0–100% Light frost		
19	**26**	**Diffusor**	000–255	0–100% Beam diffusor		
			000–004	No function		
20	**27**	**Control**	005–009	Pan reverse		step
			010–014	Pan normal		step

Basic 20 CH	Advanced 27 CH	Function	Value	Setting	Color	Control Type
			015–019	Tilt reverse		step
			020–024	Tilt normal		step
			025–029	Auto pan invert OFF		step
			030–034	Auto pan invert ON		step
			035–039	BO PT OFF		step
			040–044	BO PT ON		step
			045–049	BO Color OFF		step
			050–054	BO Color ON		step
			055–059	BO Gobo OFF		step
			060–064	BO Gobo ON		step
			065–104	Reserved		
			105–109	DMX Fail: Hold		step
			110–114	DMX Fail: Off		step
			115–124	Reserved		
			125–129	Lamp ON		step
			130–199	Reserved		
			200–204	Reset P/T		step
			205–209	Reset Prism		step
			210–214	Reset Color		step
			215–219	Reset Gobo/Gobo rotate		step
			220–224	Reset Zoom/Focus		step
			225–229	Reserved		
			230–234	Reset Frost		step
			235–239	Reset All		step
			240–244	Reserved		
			245–249	Lamp OFF		step
			250–255	Reserved		

6.9. RDM Information

This device supports RDM (see 6.9.2. Supported RDM PIDs (Parameter IDs)).

6.9.1. RDM Details

- Responder ID: 29B4:0E3XXXXX
- Manufacturer's ID: Infinity (Highlite International B.V.)
- Manufacturer Label: Infinity
- Model Description: Furion H402 Hybrid
- Model ID: 227 (0E3 hexadecimal)
- Device Label: Furion H402 Hybrid

Note:

An RDM responder ID consists of 3 parts:

- 1st part – 4 digits – Manufacturer's ID
- 2nd part – 3 digits – Model ID
- 3rd part – 5 digits – Unique ID

The RDM responder IDs of all products of Highlite International start with the same 4 digits. The first 7 digits of the RDM responder ID for each model are the same. The last 5 digits are different for each device.

6.9.2. Supported RDM PIDs (Parameter IDs)

RDM Parameter ID	Value	Required	GET	SET
SUPPORTED_PARAMETERS	0x0050	*	*	
PARAMETER_DESCRIPTION	0x0051	*	*	
DEVICE_MODEL_DESCRIPTION	0x0080		*	
MANUFACTURER_LABEL	0x0081		*	
DEVICE_LABEL	0x0082		*	*
FACTORY_DEFAULTS	0x0090		*	*
DMX_PERSONALITY	0x00E0		*	*
DMX_PERSONALITY_DESCRIPTION	0x00E1		*	
DMX_START_ADDRESS	0x00F0	*	*	*
SENSOR_DEFINITION	0x0200		*	
SENSOR_VALUE	0x0201		*	*
DEVICE_HOURS	0x0400		*	*
LAMP_HOURS	0x0401		*	*
LAMP_STATE	0x0403		*	*
LAMP_ON_MODE	0x0404		*	*
DISPLAY_INVERT	0x0500		*	*
PAN_INVERT	0x0600		*	*
TILT_INVERT	0x0601		*	*
RESET_DEVICE	0x1001			*

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 function at all	No power to the device	• Make sure that the device is connected to power supply and the cables are plugged in
	Main fuse is blown	• Replace the fuse (see 8.3.2. Replacing the Fuse on page 63)
The device responds erratically	The factory settings of the device are changed	• Reset the parameters of the device to the default factory settings (see 6.7.2.6. Reset Function on page 43)
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	Connections are defective	• Examine connections and cables. Correct defective 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	• Make sure that the address settings are correct
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	• To find out the defective device, bypass one device at a time until normal operation is restored
No light or LEDs cut out intermittently	Lamp broken/damaged	• Disconnect the device and contact your Highlite International dealer for a new lamp, refer to Corrective Maintenance (see 8.3.1. Lamp Replacement on page 61)
	The input power parameters of the device do not match the local AC voltage and frequency	• Disconnect the device. Make sure that the local current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device
No wireless connection	The device is not connected to the transmitter, when the W-DMX indicator on the display of the device is gray.	• Create a wireless connection, refer to Wireless Connection (see 5.4. Wireless Connection)
	The device is trying to connect to the transmitter, when the W-DMX indicator on the display is blinking quickly. This will take 30 seconds.	• Create a wireless connection, refer to Wireless Connection (see 5.4. Wireless Connection)

Problem	Probable cause(s)	Solution
	This device cannot receive a wireless DMX signal and a DMX cable signal at the same time.	• Remove the DMX cable

7.1. Error Messages

In case one of the error messages below appears on the error information screen, discontinue the use of the device and contact your local dealer.

For more information, refer to Error Info (see 6.7.6.3. Error Info on page 48).

Error code	Error description
Focus	Focus error
Zoom	Zoom error
Prism1	Prism 1 error
Prism1.R	Prism 1 rotate error
Prism2	Prism 2 error
Gobo	Rotating gobo wheel error
Gobo.R	Gobo rotate error
Gobo2	Static gobo wheel error
Color	Color wheel error
X_cm	Pan magnetic sensor error
X_op	Pan optocoupler error
Y_cm	Tilt magnetic sensor error
Y_op	Tilt optocoupler error
CPU-A	CPU-A error (display)
CPU-B	CPU-B error (Pan/tilt)
CPU-C	CPU-C error (color/gobo)
CPU-D	CPU-D error (prism)
CPU-E	CPU-E error (fan)
BFAN1	Gobo fan 1 error
BFAN2	Gobo fan 2 error
BFAN3	Gobo fan 3 error
BFAN4	Gobo fan 4 error
BFAN5	Gobo fan 5 error
ZFAN1	Prism fan error
FAN1	Defrost fan 1 error
FAN2	Defrost fan 2 error
FAN3	Fan 3 error
FAN4	Fan 4 error
FAN5	Cooling fan 5 error
FAN6	Cooling fan 6 error
FAN7	Cooling fan 7 error
FAN8	Cooling fan 8 error
AFAN1	Arm fan error
Base Fan1	Base fan 1 error
Base Fan2	Base fan 2 error
Protecting(Lamp Off)	Lamp protecting mode
err code:lamp time exceeded 2000 hours	

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, fixings 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 15 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.

8.3. 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.

8.3.1. Lamp Replacement

Attention
Lamp can spontaneously explode

A hot discharge lamp is under high pressure and can therefore spontaneously explode. The risk increases with the age, temperature and improper handling of the lamp.

If the lamp breaks, special safety precautions must be taken as mercury is released. Evacuate the area immediately and ventilate it.

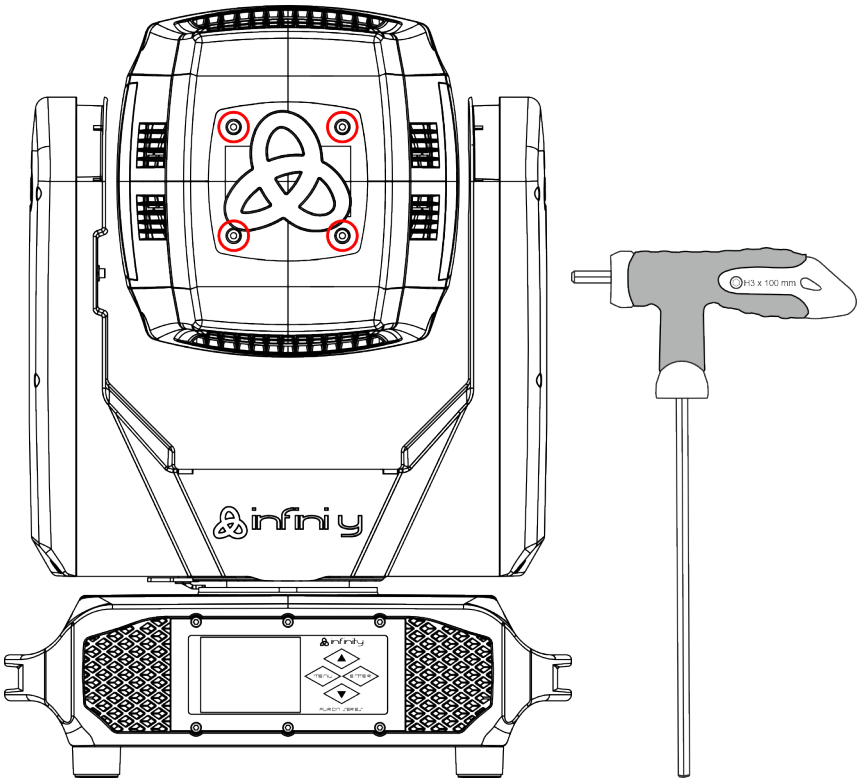
- Replace the lamp if it has become damaged or thermally deformed.
- Do not install lamps with a higher wattage.
- Read the safety instructions that are included with the lamp before replacing the lamp.
- Let the lamp cool down for 20 minutes, before replacing the lamp.
- Do not touch the bulb with bare hands. Oil on hands shortens the lamp life. If you touch the bulb glass, wipe off the glass with a clean lint-free cloth and rubbing alcohol.

The device is equipped with an Ushio NSL400L 420 W discharge lamp (see 3.7. Optional Accessories on page 16).

To change the lamp, follow the steps below:

01) Turn off the lamp and let it cool down for at least 5 minutes.
02) Disconnect the device from the electrical power supply. Let it cool down for 20 minutes.
03) Tilt the head of the device 90°.
04) Loosen the 4 screws with an H3 x 100 mm Allen screwdriver, as shown in Fig. 19.

Figure 19



05) Remove the **lamp cover (08)**, as shown in Fig. 20.
06) Disconnect the 2 orange lamp connectors from the lamp terminals, as shown in Fig. 21.

Figure 20

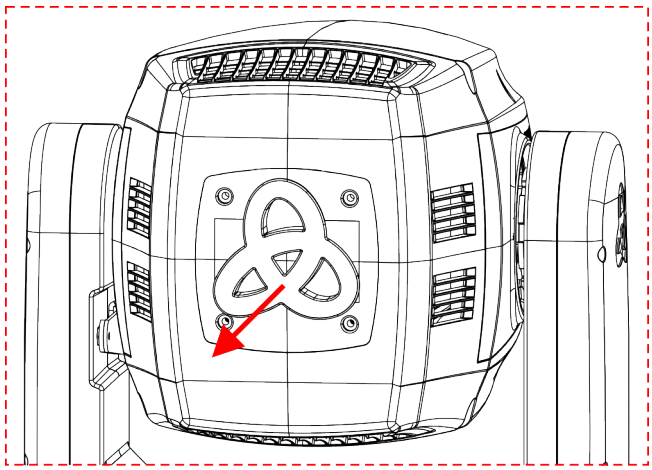
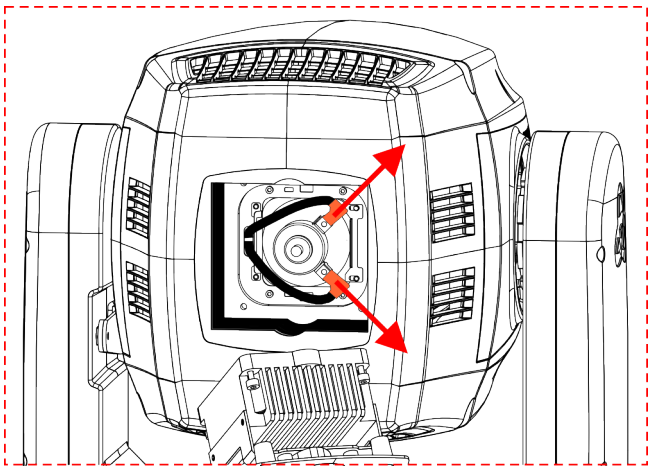
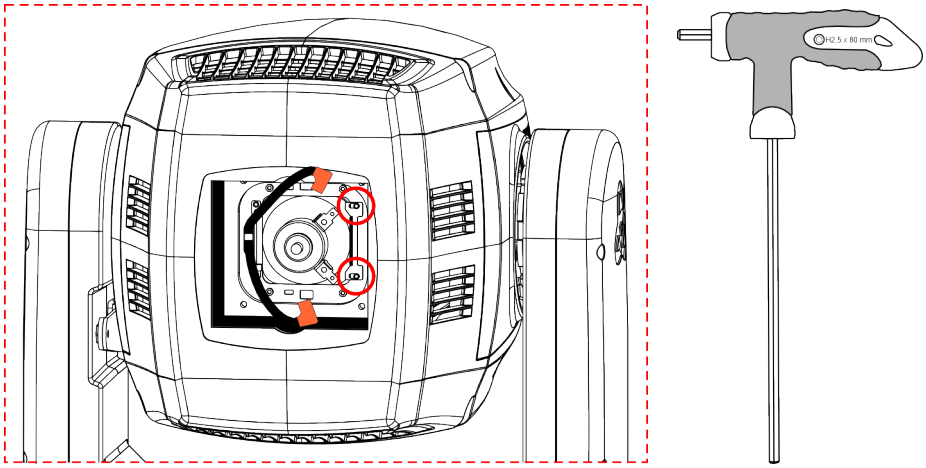


Figure 21



07) Loose the 2 screws on the right side of the lamp with an H2,5 x 100 mm Allen screwdriver, as shown in Fig. 22

Figure 22



08) Slide the small metal plate to the right, as shown in Fig. 23.
09) Slide the lamp carefully to the left, away from the small plate on the right, as shown in Fig. 24.

Figure 23

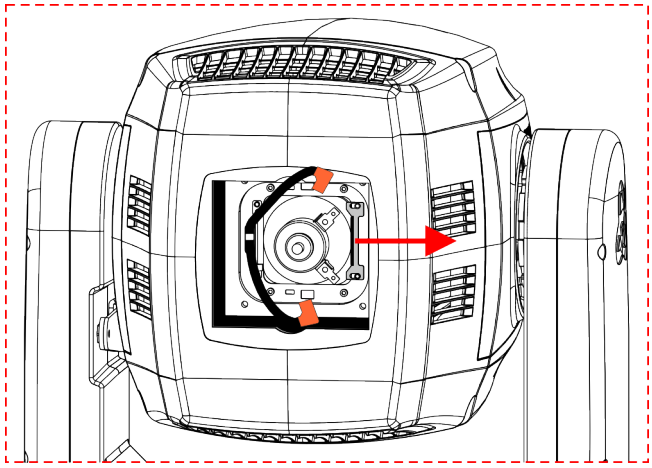
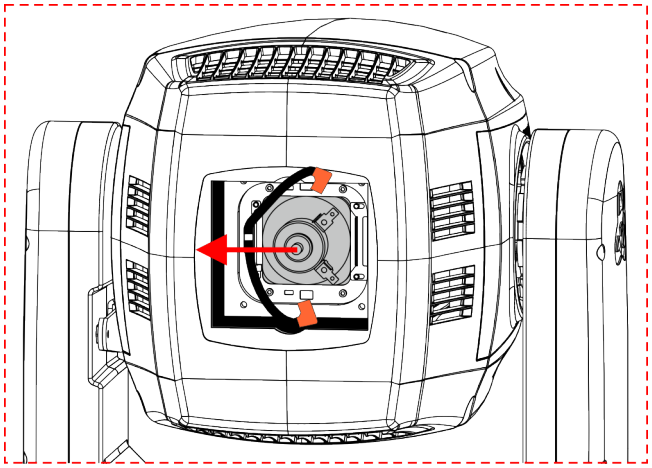


Figure 24



10) Take the old lamp out.
11) Install the new lamp by following steps 4–10 in reverse order.

8.3.2. Replacing the Fuse

DANGER
Electric shock caused by short-circuit

- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.

Power surges, short-circuit or incorrect electrical power supply may cause a fuse to burn out. If the fuse burns out, the device will not function anymore. If this happens, follow the steps below:

01) Disconnect the device from the electrical power supply.
02) Allow the device to cool down for at least 15 minutes.
03) Loosen the fuse cover with a screwdriver and remove the fuse holder.
04) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
05) Insert a new fuse in the fuse holder. Make sure that the type and the rating of the replacement fuse are the same as the ones specified on the information label of the product.
06) Replace the fuse holder in the opening and tighten the fuse cover.

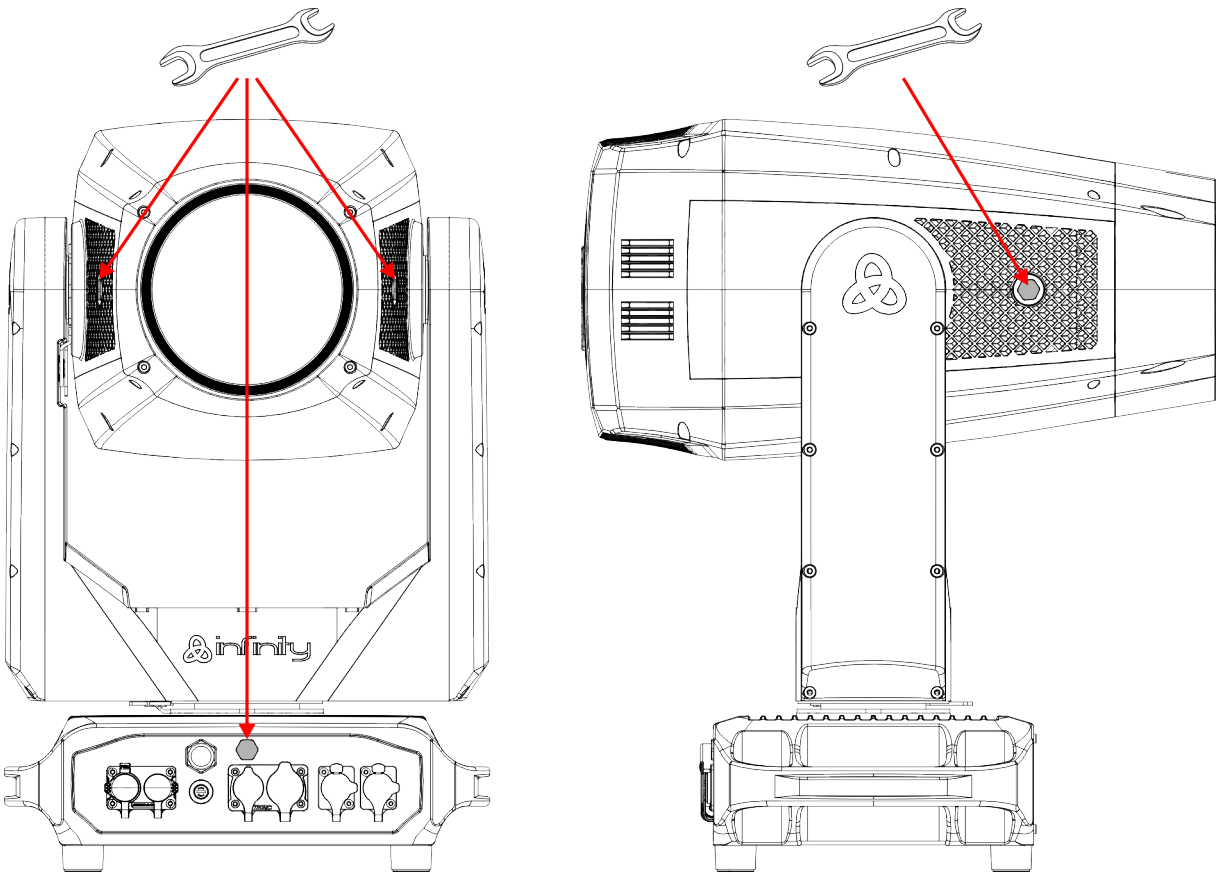
8.3.3. Draining Condensation Water

The Furion H402 Hybrid is IP65 rated. The device can resist water jets. If the device is exposed to extreme humid conditions during use, 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 below to remove the condensation water:

01) Carefully remove the **protective vents (07+09)** and the **drain plug (02)** with a wrench (16 mm).
02) Let the device operate with the lamp at full output for 60 minutes.
03) Let the device cool down for 30 minutes.
04) Reinstall the **protective vents (07+09)** and the **drain plug (02)**. Make sure that you do not overtighten them.

Figure 25



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

- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

9.3. Storage

- Clean the device before storing (see 8.2.1. Basic Cleaning Instructions on page 60).
- Store the device in the original packaging, if possible.

10. Disposal



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

Hereby, Highlite International declares that the device Furion H402 Hybrid, product code 41431, is in compliance with Directive 2014/53/EU (RED – Radio Equipment Directive).

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