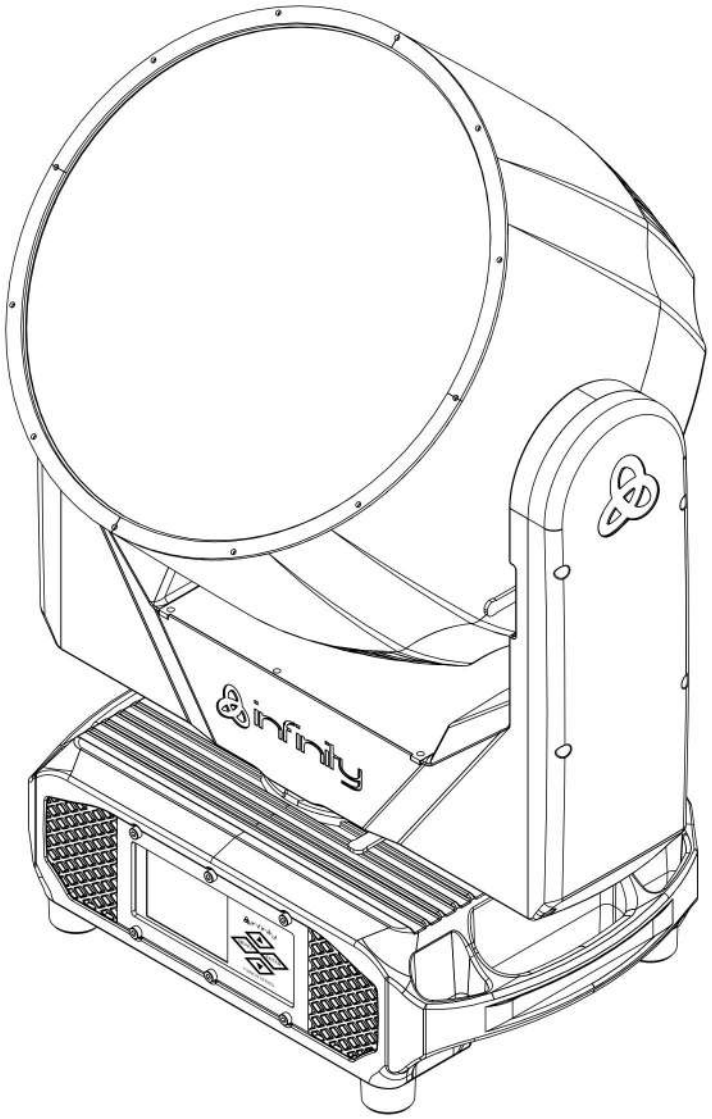
infinity

USER MANUAL

ENGLISH

V1.0



Furion W602 WashBeam

Product code: 41441

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

Table of contents

1. Introduction **4**
1.1. Before Using the Product 4
1.2. Intended Use 4
1.3. LEDs Lifespan 4
1.4. Text Conventions 4
1.5. Symbols and Signal Words 5
1.6. Symbols on the Information Label 5

2. Safety **6**
2.1. Warnings and Safety Instructions 6
2.2. Requirements for the User 8
2.3. Personal Protective Equipment 8

3. Description of the Device **9**
3.1. Front View 9
3.2. Back View 10
3.3. Base Plate 10
3.4. Product Specifications 11
3.5. Dimensions 13
3.6. Optional Accessories 13

4. Installation **14**
4.1. Safety Instructions for Installation 14
4.2. Personal Protective Equipment 14
4.3. Installation Site Requirements 14
4.4. Rigging 14
4.5. Lock/Unlock the Device 16
4.6. Connecting to Power Supply 17
4.7. Power Linking of Multiple Devices 17

5. Setup **18**
5.1. Warnings and Precautions 18
5.2. Stand-alone Setup 18
5.3. DMX Connection 18
5.3.1. DMX-512 Protocol 18
5.3.2. DMX Cables 18
5.3.3. DMX Linking 19
5.3.4. DMX Addressing 20
5.4. Wireless Connection 20
5.5. Ethernet Connection 21
5.5.1. Art-Net/sACN Protocol 21
5.5.2. Network Cables 21
5.5.3. Art-Net/sACN Linking 22
5.5.4. Art-Net Settings 22
5.5.5. sACN Settings 22

6. Operation **23**
6.1. Safety Instructions for Operation 23
6.2. Control Modes 23
6.3. Control Panel 24
6.4. Start-up 24
6.5. Display Lock 25
6.5.1. Locking 25
6.5.2. Unlocking without Password 26
6.5.2.1. Option 1 26
6.5.2.2. Option 2 26
6.5.3. Unlocking with Password 26
6.6. Menu Overview 27
6.7. Main Menu Options 32
6.7.1. DMX Address 32
6.7.2. Settings Menu 33
6.7.2.1. Lock Code 34

6.7.2.1.1. Enter Lock Code ... 35
6.7.2.2. Network Setup ... 35
6.7.2.3. Fans ... 35
6.7.2.4. Dimmer Curve ... 36
6.7.2.5. PWM Option ... 36
6.7.2.6. Color Balance ... 37
6.7.2.7. Calibrated White ... 37
6.7.2.8. White Balance ... 37
6.7.2.9. Service Menu ... 38
6.7.2.9.1. Password 6468 ... 38
6.7.2.9.2. Password 2322 ... 39
6.7.2.10. Reset Function ... 39
6.7.3. Stand Alone ... 40
6.7.4. Control Mode ... 40
6.7.4.1. User Personality ... 40
6.7.5. Manual Control ... 41
6.7.5.1. Auto Test ... 41
6.7.5.2. Manual Test ... 42
6.7.6. Information ... 42
6.7.6.1. Fixture Info ... 43
6.7.6.2. Fan Info ... 43
6.7.6.3. Error Info ... 44
6.7.6.4. Channel Info ... 44
6.8. DMX Channels ... 45
6.8.1. DMX Channels Overview ... 45
6.8.2. DMX Channels Overview ... 46
6.9. RDM Information ... 50
6.9.1. RDM Details ... 50
6.9.2. Supported RDM PIDs (Parameter IDs) ... 50

7. Troubleshooting ... 51
7.1. Error Messages ... 52

8. Maintenance ... 53
8.1. Safety Instructions for Maintenance ... 53
8.2. Preventive Maintenance ... 53
8.2.1. Basic Cleaning Instructions ... 53
8.3. Corrective Maintenance ... 53
8.3.1. Replacing the Fuse ... 54
8.3.2. Draining Condensation Water ... 54

9. Deinstallation, Transportation and Storage ... 55
9.1. Instructions for Deinstallation ... 55
9.2. Instructions for Transportation ... 55
9.3. Storage ... 55

10. Disposal ... 55

11. Approval ... 55

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 W602 WashBeam
- 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.

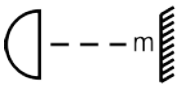


Read and follow the instructions in the user manual before installing, operating or servicing the device.

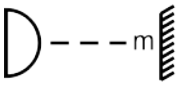


This device falls under IEC protection class I.

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
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

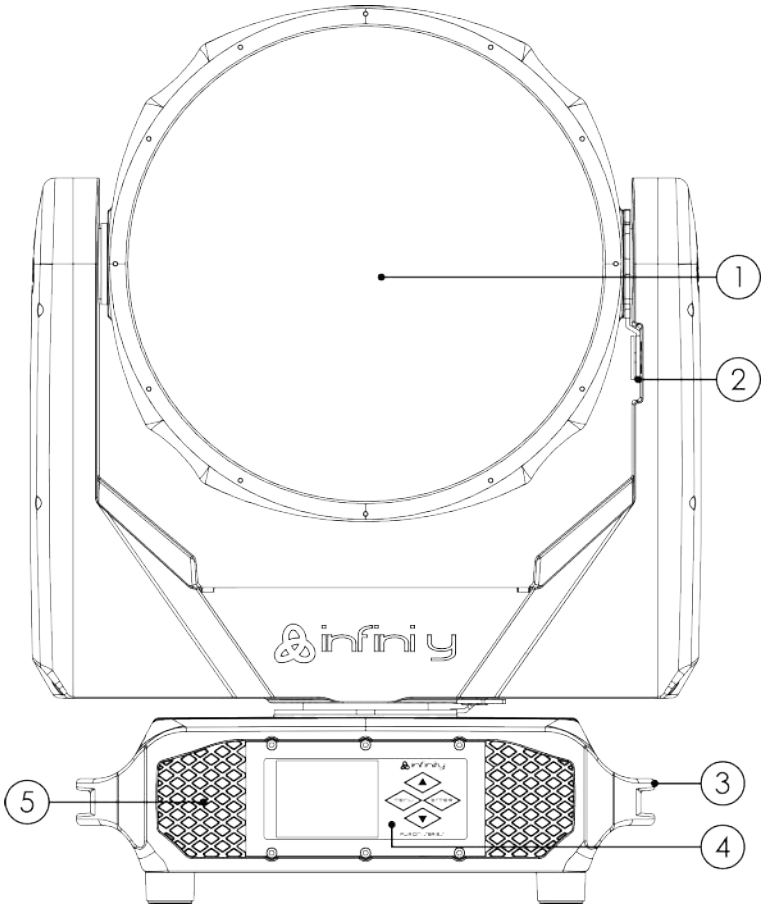
During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

3. Description of the Device

The Infinity Furion W602 WashBeam is an IP65-rated moving head with 19 x 45 W RGBW LEDs. This device has a motorized zoom that enables seamless transitions between a narrow 3° beam and a wide 34,1° wash. Furthermore the device offers customizable color temperatures due to its intelligent white mode with a user-calibrated 7500 K output and the CTC channel offers stepless white light between 2700 K and 7500 K. The device also offers 16-bit dimming capabilities, 4 different fan speeds and 6 different PWM frequencies. The control options include basic, advanced and customized DMX, CRMX, W-DMX, Art-Net, sACN and RDM.

3.1. Front View

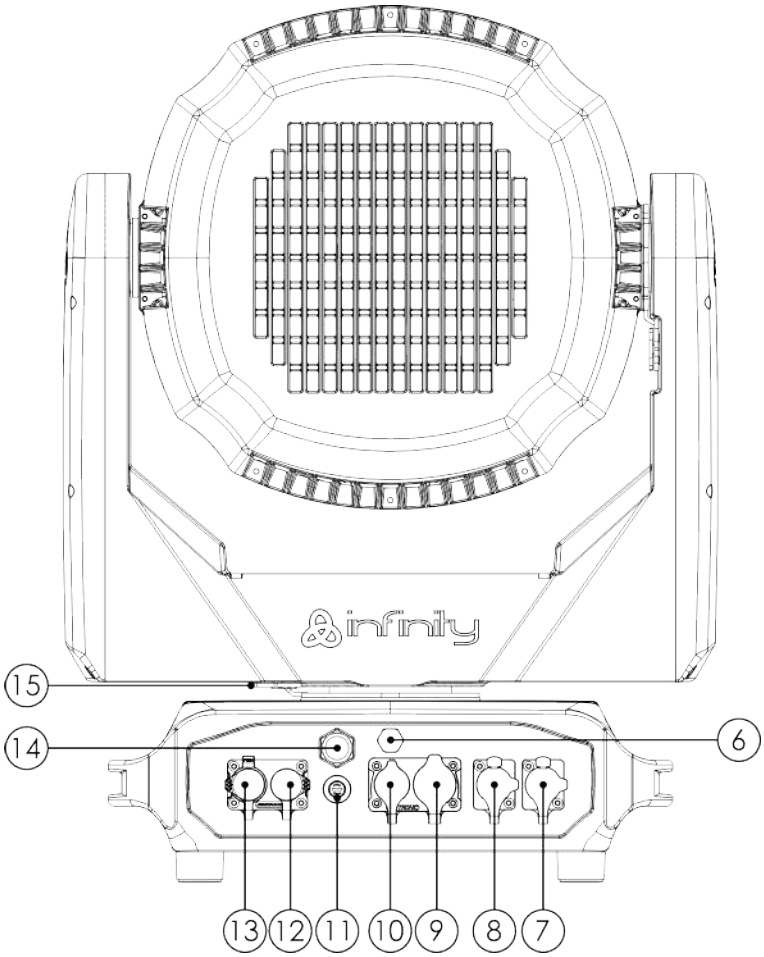
Figure 2



01) Lens
02) Yoke locking mechanism
03) 2 x Transport handles
04) Control panel: TFT screen and control buttons
05) Cooling

3.2. Back View

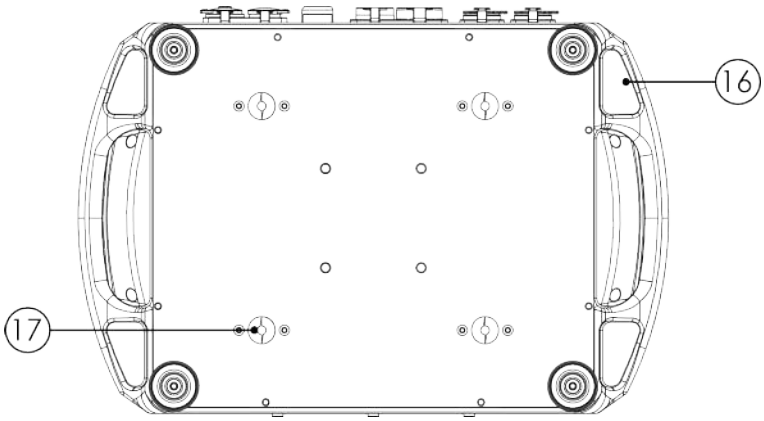
Figure 3



06) Protective vent (M12x1,5)
07) IP65-rated RJ45 connector
08) IP65-rated RJ45 connector
09) IP65-rated Seetronic power connector OUT
10) IP65-rated Seetronic power connector IN
11) Fuse (F20 AL, 250 V)
12) IP65-rated 5-pin DMX signal connector IN
13) IP65-rated 5-pin DMX signal connector OUT
14) W-DMX Antenna
15) Base locking mechanism

3.3. Base Plate

Figure 4



16) 4 x Openings for a safety cable
17) 4 x Mounting holes for quick-lock brackets

3.4. Product Specifications

Model:	Furion W602 WashBeam

Source:	
Light source type	LED
Light source quantity	19
Light source power	45 W
LED color type	RGBW
Refresh rate	600 Hz
Refresh rate (max.)	15 kHz
Luminous flux (total)	11148 lm
Luminous flux (red)	2262 lm
Luminous flux (green)	3837 lm
Luminous flux (blue)	1045 lm
Luminous flux (white)	6010 lm
CRI	79,8
CCT	7500 K

Optical:	
Beam angle minimum (circular)	3°
Beam angle maximum (circular)	34,1°
Cutoff angle maximum (circular)	48,2°
Field angle minimum (circular)	4,6°
Field angle maximum (circular)	44,2°
Zoom type	Motorized

Control and Programming:	
Control mode	Auto / DMX / Manual
DMX channels	14 / 19 / 96 / 179
Protocols	CRMX Classic / DMX / W-DMX / RDM
Wireless	LumenRadio
Display	Battery / Gravity Sensor / TFT
Fan mode	Yes
Dim curve	Linear / Square / I-Square / S-Curve
Dimmer resolution	16-bit
Zoom resolution	16-bit

Dynamic Effects:	
Dimmer	0–100 %
Strobe	0–20 Hz
Gobo system	Digital
Gobo wheel 1	204 + 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	1060 W
Fuse	F20 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	330 mm
Width	430 mm
Height	530 mm
Weight	23 kg
IP rating	IP65
Housing	Magnesium die-cast
Color	Black

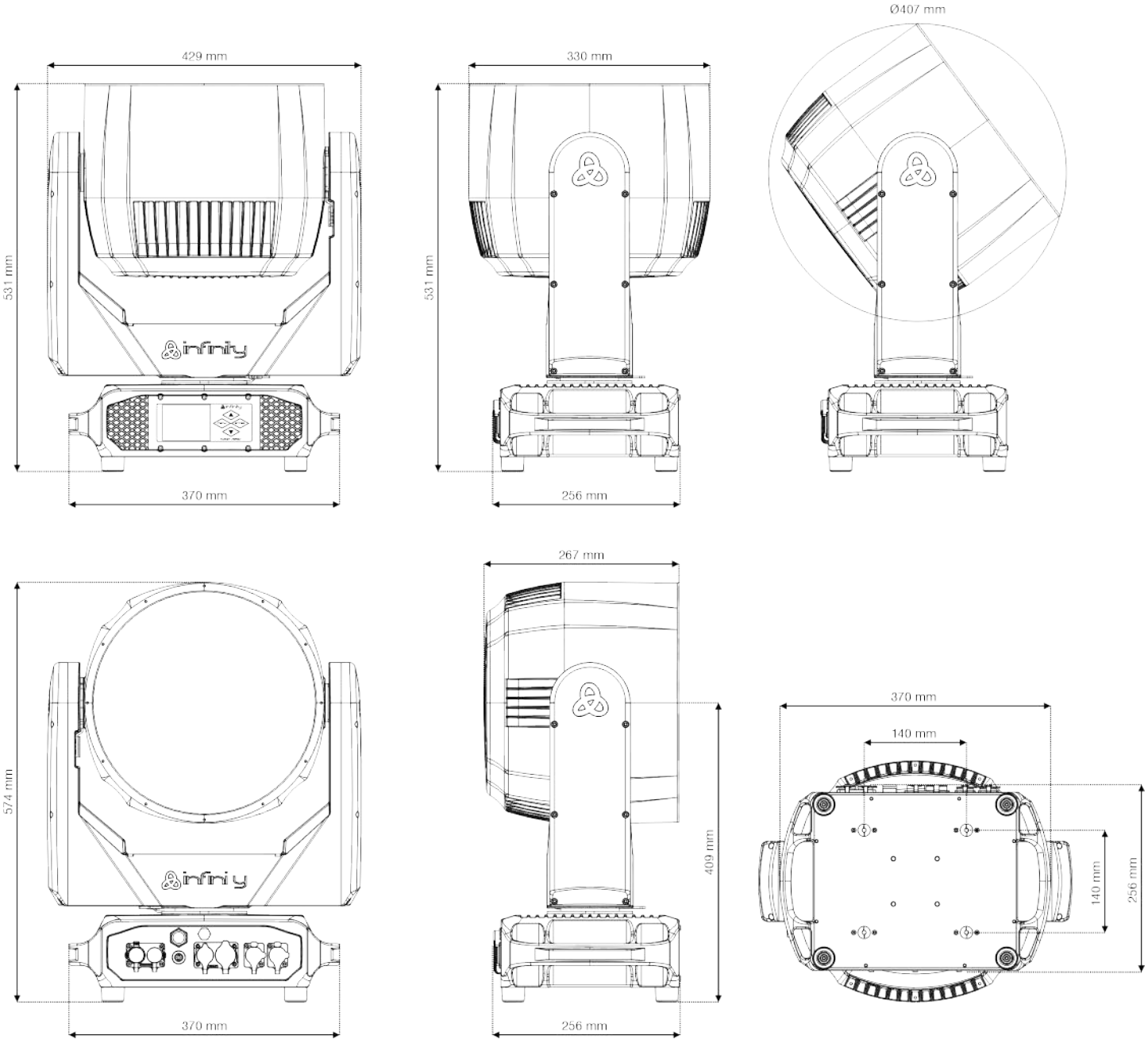
Product Properties:	
Cooling	Forced convection

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. Dimensions

Figure 5



3.6. Optional Accessories

You can additionally purchase the following accessory:

- D7278 Case for 2x Furion W602 WashBeam
- 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

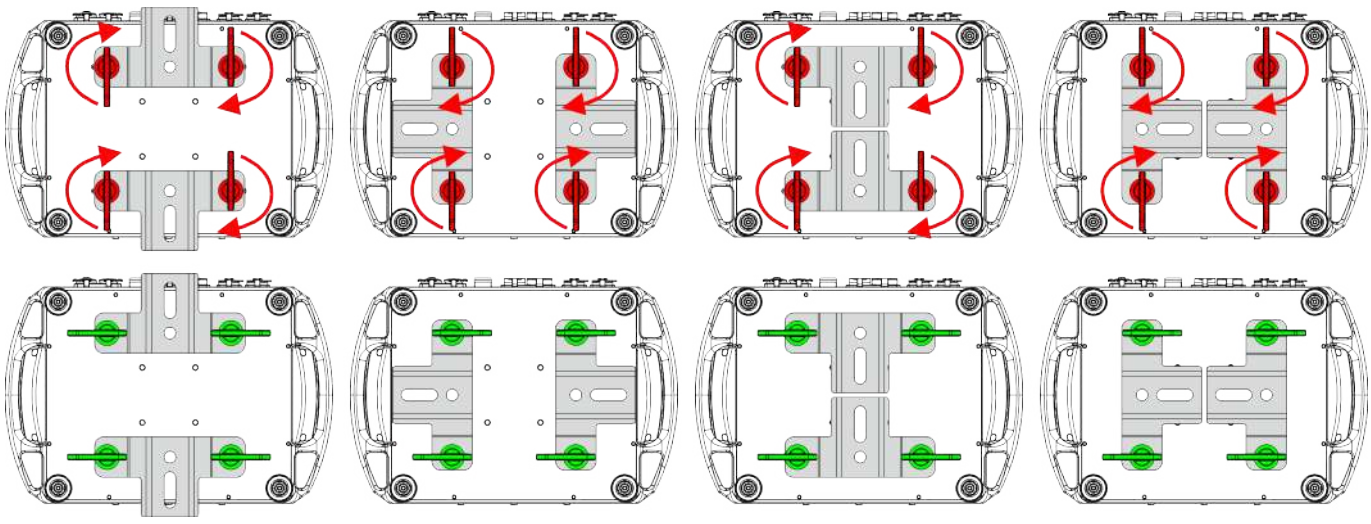
The device can be positioned on a flat surface or mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.

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 (17)**. 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 6



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

Figure 7

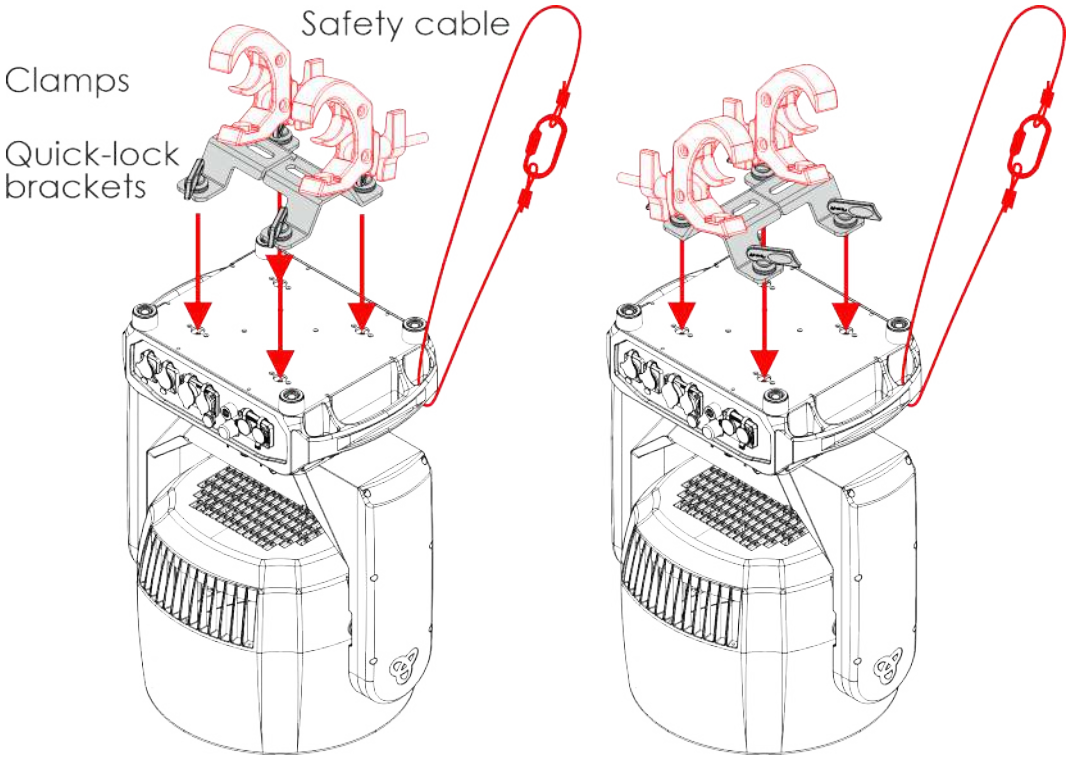
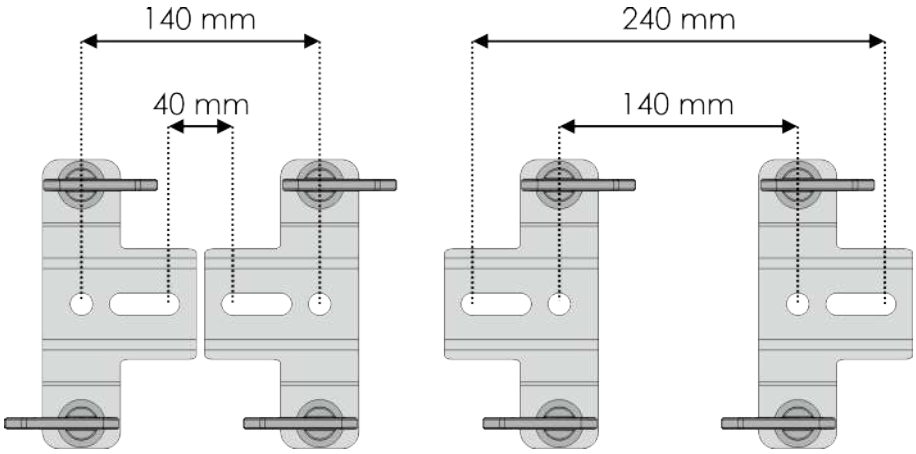


Figure 8



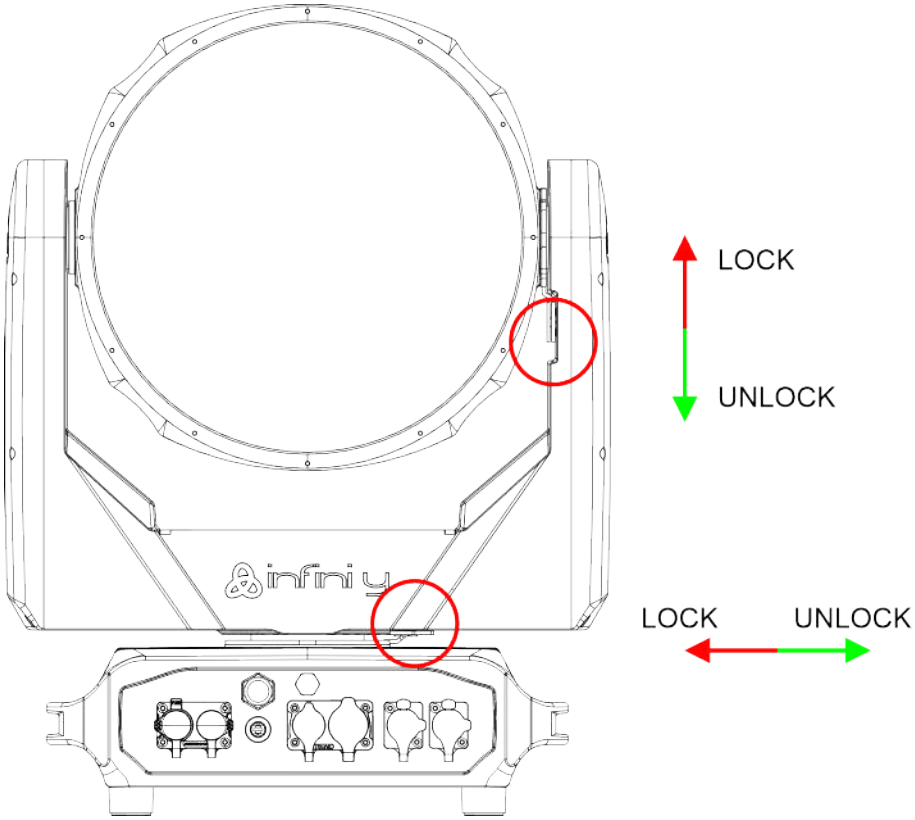
04) Attach the device to the supporting structure. Make sure that the device cannot move freely.
05) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the **openings for a safety cable (16)**.

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 (15)** to the the right or slide the **yoke locking mechanism (02)** downwards.
- To lock the device, slide the **base locking mechanism (15)** to the left or slide the **yoke locking mechanism (02)** upwards.

Figure 9



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 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: 1 devices Furion W602 WashBeam
- at 200–240 V: 2 devices Furion W602 WashBeam

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 W602 WashBeam 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 23).

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 W602 WashBeam 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

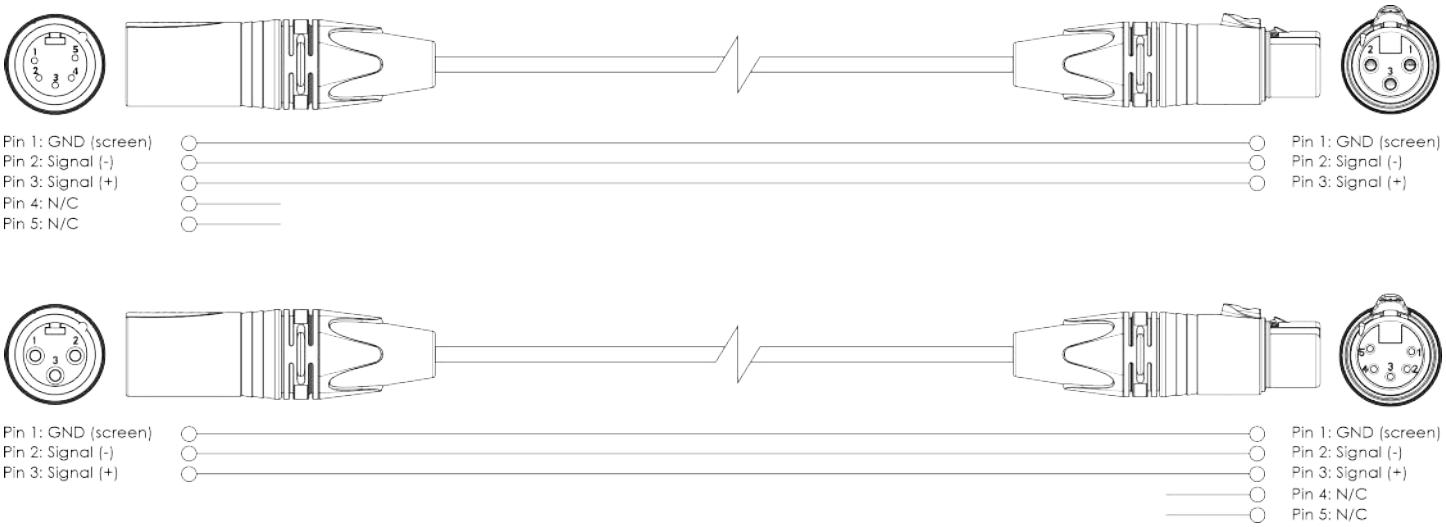
5.3.2. DMX Cables

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 10

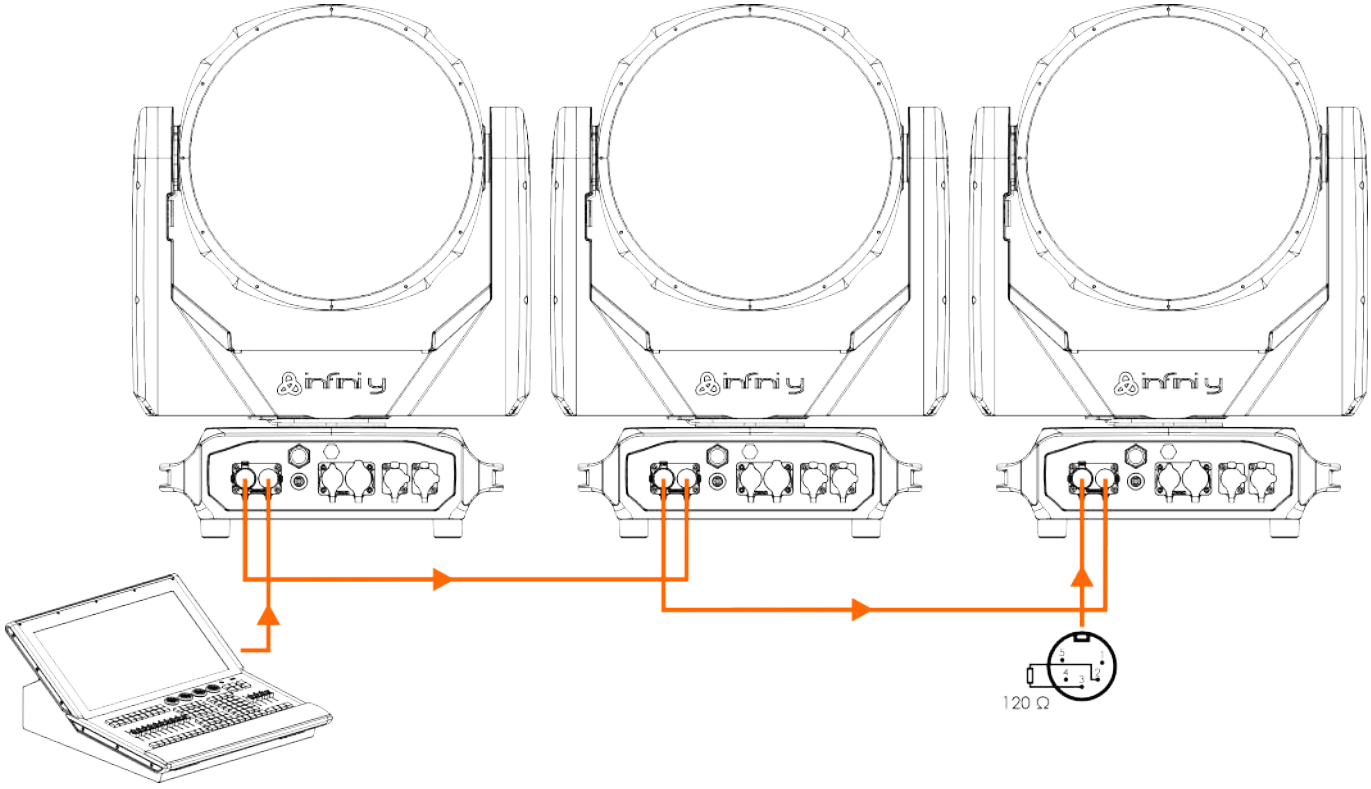


5.3.3. DMX Linking

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 11



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 W602 WashBeam has 5 personalities: Basic (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels) and Art-Net (76+14).

If you want to connect multiple devices on one data link and use them in 179-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 180 (180), as 1 + 179 = 180.
03) Set the starting address of the 3rd device on the data link to 359 (359), as 180 + 179 = 359.
04) Continue assigning the starting addresses of the remaining devices by adding each time 179 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Furion W602 WashBeam 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.

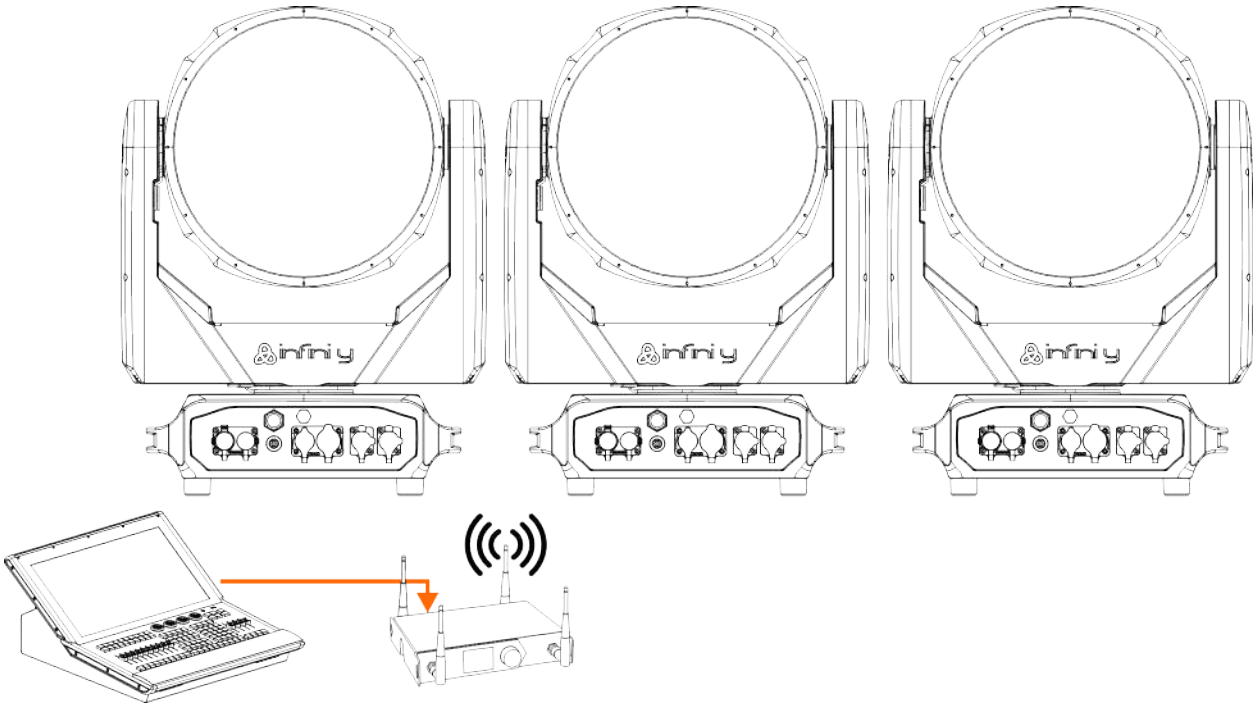
Communication distance	**Depending on the transmitting power or transmitter module**
Test conditions	WDMX TRx Transmitter module, 2 dBi Antenna, transmitting power 20 dBm (100 mW)
Range indoor	60 m
Range outdoor	250 m

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 40).
02) Connect the transceiver/transmitter to the lighting controller.
03) Follow the user manual supplied with the transceiver to pair the devices.

Figure 12



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.

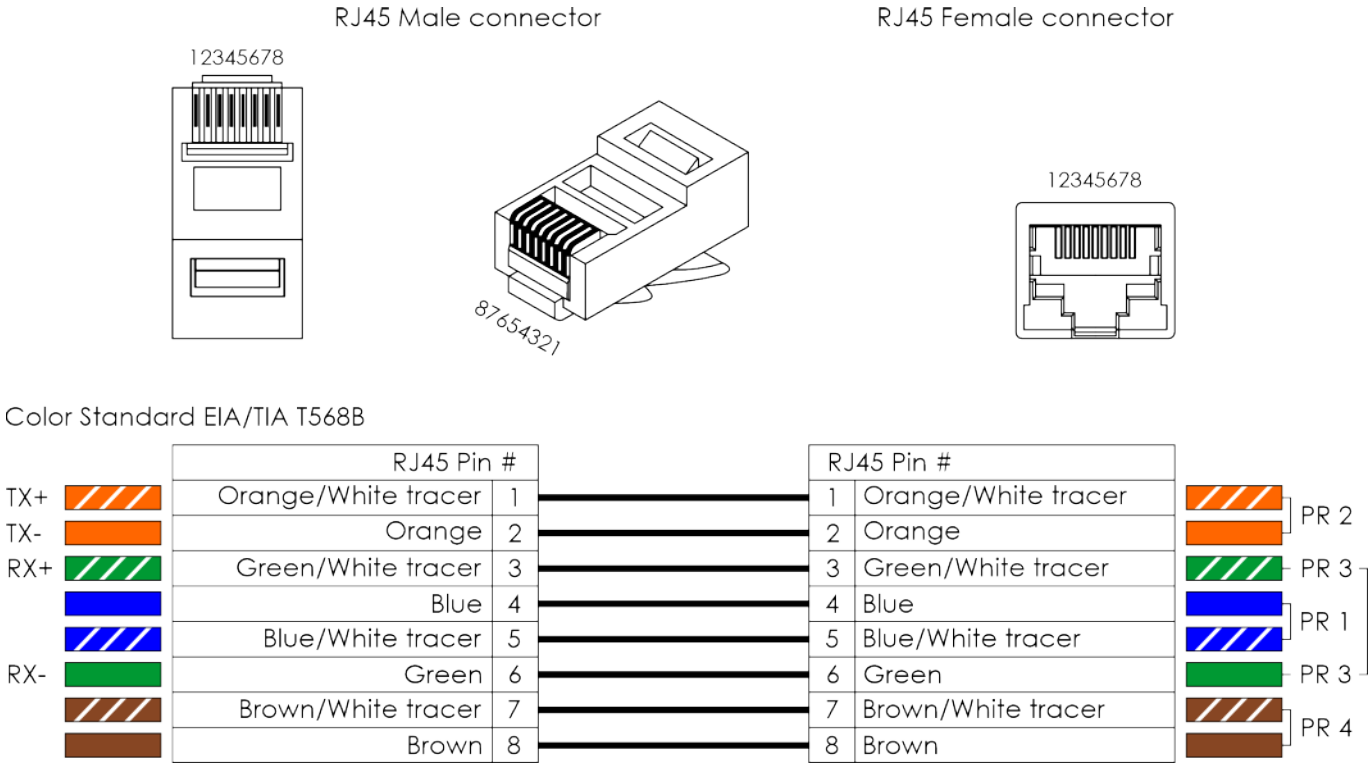
sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol developed by ESTA (Entertainment Services and Technology Association) for sending DMX-512 data over IP networks. It supports up to 63999 universes and uses multicasting.

5.5.2. Network Cables

Standard twisted-pair Ethernet cables (CAT-5/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 13

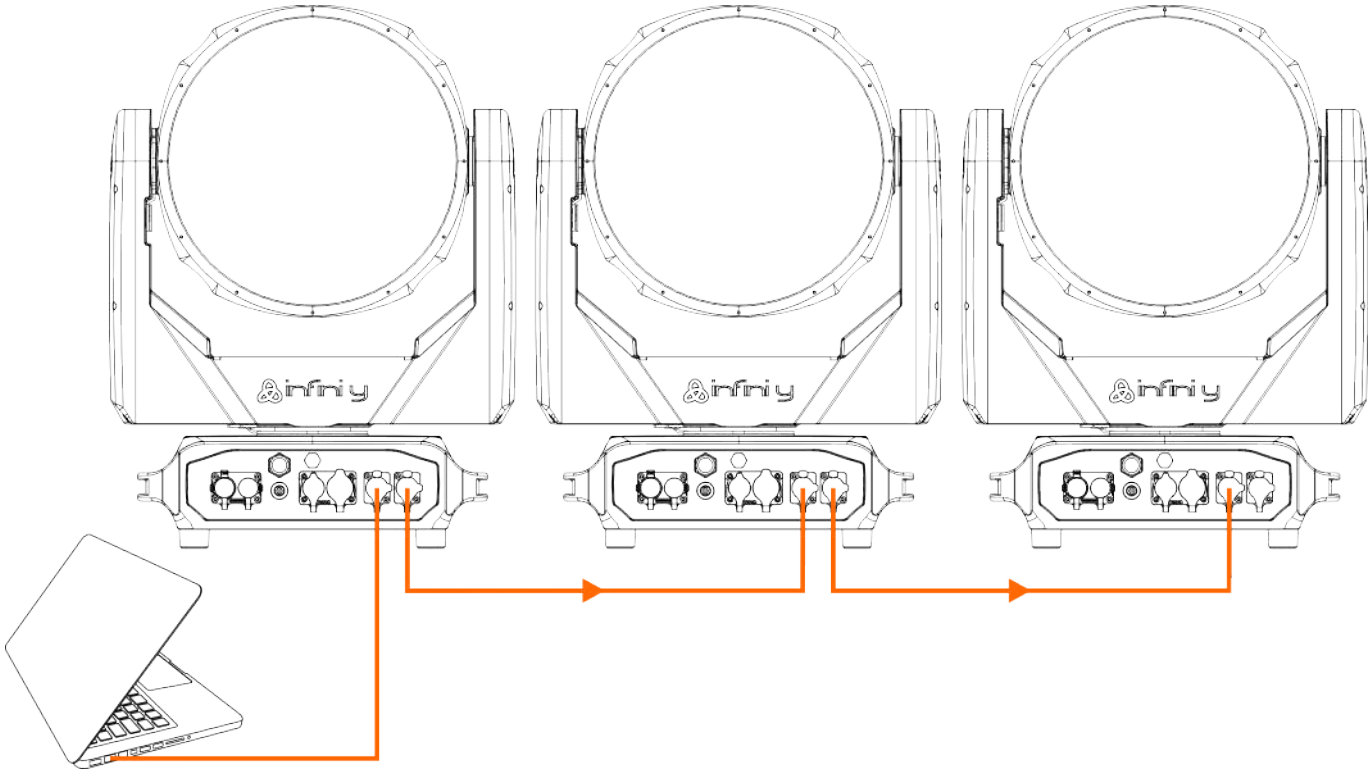


5.5.3. Art-Net/sACN Linking

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

01) Use a CAT-5/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-5/CAT-6 cable.
03) Repeat step 2 to connect all devices in a daisy-chain.

Figure 14



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 6.7.2.2. Network Setup on page 35).
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 21).

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 6.7.2.2. Network Setup on page 35).
02) Select sACN Protocol in the Control Mode menu (see 6.7.4. Control Mode on page 40).
03) Set the universe in the Network Setup menu (see 6.7.2.2. Network Setup on page 35).

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 W602 WashBeam supports the following control modes:

- Stand-alone: Stand-alone mode (built-in programs), manual control
- DMX-512: Basic (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels), Art-Net (76+14)
- WDMX: Basic (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels), Art-Net (76+14)
- Art-Net: Basic (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels), Art-Net (76+14)
- sACN: Basic (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels), Art-Net (76+14)

For more information about how to connect the devices, refer to Setup (see 5. Setup on page 18).

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 41).

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 40). 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 40).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 32).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 40). Refer to DMX Channels (see 6.8. DMX Channels on page 45) 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 40).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 32).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 40). Refer to DMX Channels (see 6.8. DMX Channels on page 45) for a complete overview of all DMX channels.

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

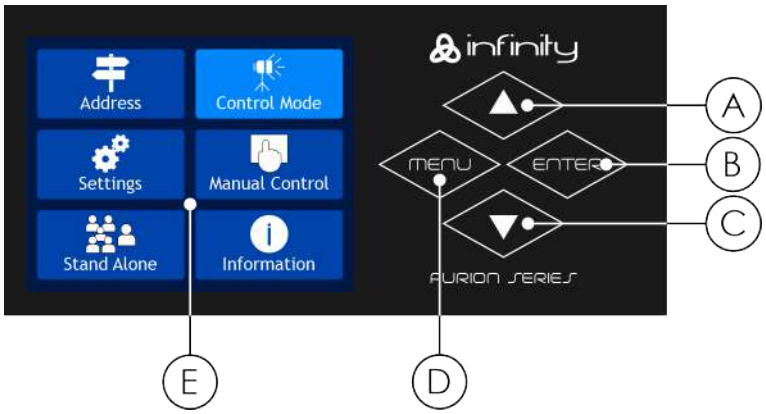
01) Select ArtNet as control mode in the Control Mode menu (see 6.7.4. Control Mode on page 40).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 32).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 40). Refer to DMX Channels (see 6.8. DMX Channels on page 45) 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 40).
02) Set the DMX starting address of the device in the DMX Address menu (see 6.7.1. DMX Address on page 32).
03) Select the DMX channel mode in the Control Mode menu (see 6.7.4. Control Mode on page 40). Refer to DMX Channels (see 6.8. DMX Channels on page 45) for a complete overview of all DMX channels.

6.3. Control Panel

Figure 15



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 25).

VII. Warning icon: if there is an error message (see 7.1. Error Messages on page 52), 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:

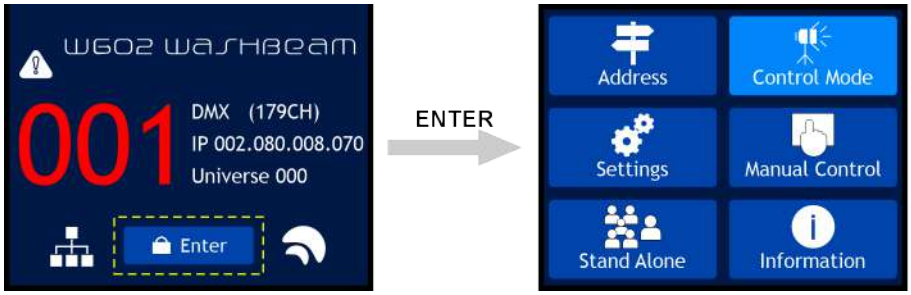


03) To unlock the device, refer to Unlocking Option.

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 32)	Address Setting	001–512	
Settings (see 6.7.2. Settings Menu on page 33)	Screen Reverse	NO	
		YES	
		AUTO	
	Pan Reverse	NO	
		YES	
	Tilt Reverse	NO	
		YES	
	Zoom Reverse	NO	
		YES	
	Pan Angle	540	
		360	
		180	
	Tilt Angle	260	
		180	
		90	
	BL.O.P/T Move	NO	
		YES	
	Auto Pan Invert	OFF	
		ON	
	Lock Code (6468)	Activate Lock Code	NO
			YES
		Enter Lock Code	SET
	WDMX	OFF	
		ON	
	Wireless Unlink	NO	
		YES	
	Backlight Timer	30S	
		1M	
		5M	
		ON	
	DMX Fail	Hold	
		OFF	
	Network Setup	IP Mode	Manual
			DHCP
		Universe	000–255
			001–256
		IP Address	002.243.075.222
		SubMask	255.000.000.000
	Fans	Auto	
		Full	
		Silent	
		Studio	
	C Mixing Mode	RGBW	
		CMY	

Level 1	Level 2	Level 3	Level 4
	Dimmer Curve	Linear	
		Square	
		I Squa	
		SCurve	
	Dimmer Speed	Smooth	
		Fast	
	PWM Option	600 Hz	
		1200 Hz	
		2000 Hz	
		4000 Hz	
		6000 Hz	
		15000Hz	
	Color Balance	Red	100–255
		Green	100–255
		Blue	100–255
		White	100–255
	Calibrated White	ON	
		OFF	
		Custom	
	White Balance	Red	000–255
		Green	000–255
		Blue	000–255
		White	000–255
	Service Menu (6468)	PAN	128
		TILT	128
		ZOOM	128
		MAC4	128
		MAC5	128
		MAC6	128
		RDM4	128
		RDM5	128
		RDM6	128
	Service Menu (2322)	Red	255
		Green	255
		Blue	255
		White	255
	Reset User Hours	NO	
		YES	
	Reset Function	Pan/Tilt	NO
			YES
		Zoom	NO
			YES
		All	NO
			YES
	Factory Settings	NO	
		YES	

Level 1	Level 2	Level 3	Level 4
Stand Alone (see 6.7.3. Stand Alone on page 40)	Program Number	1–9	
Control Mode (see 6.7.4. Control Mode on page 40)	Control Mode	DMX	
		WDMX	
		ArtNet	
		sACN	
	Personality	Basic	
		Pixel	
		Advance	
		User	
		76+14	
	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
		Red	NO/1~Advance Num
		Red Fine	NO/1~Advance Num
		Green	NO/1~Advance Num
		Green Fine	NO/1~Advance Num
		Blue	NO/1~Advance Num
		Blue Fine	NO/1~Advance Num
		White	NO/1~Advance Num
		White Fine	NO/1~Advance Num
		CTC	NO/1~Advance Num
		CTC Fine	NO/1~Advance Num
		Zoom	NO/1~Advance Num
		Zoom Fine	NO/1~Advance Num
		Pattern	NO/1~Advance Num
		LED Macro	NO/1~Advance Num
		LED Ma.Speed	NO/1~Advance Num
		Background	NO/1~Advance Num
		Background Dim	NO/1~Advance Num
		Red 1	NO/1~Advance Num
		Red 1 Fine	NO/1~Advance Num
		Green 1	NO/1~Advance Num
		Green 1 Fine	NO/1~Advance Num
		Blue 1	NO/1~Advance Num
		Blue 1 Fine	NO/1~Advance Num
		White 1	NO/1~Advance Num
		White 1 Fine	NO/1~Advance Num
		[...]	
		Red 19	NO/1~Advance Num

Level 1	Level 2	Level 3	Level 4
		Red 19 Fine	NO/1~Advance Num
		Green 19	NO/1~Advance Num
		Green 19 Fine	NO/1~Advance Num
		Blue 19	NO/1~Advance Num
		Blue 19 Fine	NO/1~Advance Num
		White 19	NO/1~Advance Num
		White 19 Fine	NO/1~Advance Num
		Control	NO/1~Advance Num
Manual Control (see 6.7.5. Manual Control on page 41)	Auto Test	Apply	
	Manual Test	Pan	000–255
		Tilt	000–255
		P/T Speed	000–255
		Red	000–255
		Green	000–255
		Blue	000–255
		White	000–255
		CTC	000–255
		Color	000–255
		Pattern	000–255
		LED Macro	000–255
		LED Ma.Speed	000–255
		Background	000–255
		Background Dim	000–255
		Dimmer	000–255
		Shutter	000–255
		Zoom	000–255
		Control	000–255
Information (see 6.7.6. Information on page 42)	Fixture Information	Ver	V2. XXXXXX
		Running Mode	DMX
		DMX Address	001
		Temperature	025
		Fixture Hours	00000
		User Hours	00000
		IP Address	002.243.075.222
		SubMask	255.000.000.000
		UID	29B40E5XXXXX
		MAC	34.29.8F.08.09.0A
	Fan Information	LFAN1 Speed	2000
		LFAN2 Speed	2000
		LFAN3 Speed	2000
		LFAN4 Speed	2000
		DFan3 Speed	2000
		Base Fan1 Speed	2000
		Base Fan 2 Speed	2000
	Error Information		
	Channel Information	DMX Frequency	0
		Pan	000–255

Level 1	Level 2	Level 3	Level 4
		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
		Red	000–255
		Red Fine	000–255
		Green	000–255
		Green Fine	000–255
		Blue	000–255
		Blue Fine	000–255
		White	000–255
		White Fine	000–255
		CTC	000–255
		CTC Fine	000–255
		Zoom	000–255
		Zoom Fine	000–255
		Pattern	000–255
		LED Macro	000–255
		LED Ma.Speed	000–255
		Background	000–255
		Background Dim	000–255
		Red 1	000–255
		Red 1 Fine	000–255
		Green 1	000–255
		Green 1 Fine	000–255
		Blue 1	000–255
		Blue 1 Fine	000–255
		White 1	000–255
		White 1 Fine	000–255
		[...]	
		Red 19	000–255
		Red 19 Fine	000–255
		Green 19	000–255
		Green 19 Fine	000–255
		Blue 19	000–255
		Blue 19 Fine	000–255
		White 19	000–255
		White 19 Fine	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 26 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)
- Zoom Reverse: Turn off/on the inverted zoom direction (NO/YES)
- Pan Angle: 540°/360°/180°
- Tilt Angle: 260°/180°/90°
- BL.O. P/T Move: The device will black out the light output when Pan/Tilt are active (NO/YES)

- Auto Pan Invert: Invert the pan direction automatically, depending on the position of the device (ON/OFF)
- Lock Code (see 6.7.2.1. Lock Code)
- WDMX: Activate/deactivate Wireless DMX (ON/OFF)
- Wireless Unlink: Terminate the connection between the device and the transmitter (NO/YES)
- 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
- 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 6.7.2.2. Network Setup)
- Fans (see 6.7.2.3. Fans)
- C Mixing Mode: Set the C Mixing Mode (RGBW/CMY)
- Dimmer Curve (see 6.7.2.4. Dimmer Curve)
- Dimmer Speed: Set the dimmer speed (Smooth/Fast)
- PWM Option (see 6.7.2.5. PWM Option)
- Color Balance (see 6.7.2.6. Color Balance)
- Calibrated White (see 6.7.2.7. Calibrated White)
- White Balance (see 6.7.2.8. White Balance)
- Service Menu (see 6.7.2.9. Service Menu)
- Reset User Hours: Reset the total operation time counter (NO/YES)
- Reset Function (see 6.7.2.10. Reset Function)
- Factory Settings: Restore the factory default settings (NO/YES)

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

6.7.2.1. 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 6.7.2.1.1. Enter Lock Code)

6.7.2.1.1. 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.



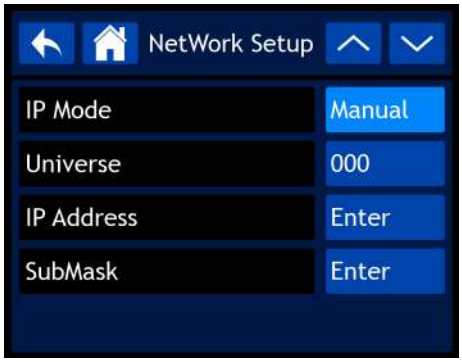
Note:

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

6.7.2.2. 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.

6.7.2.3. Fans

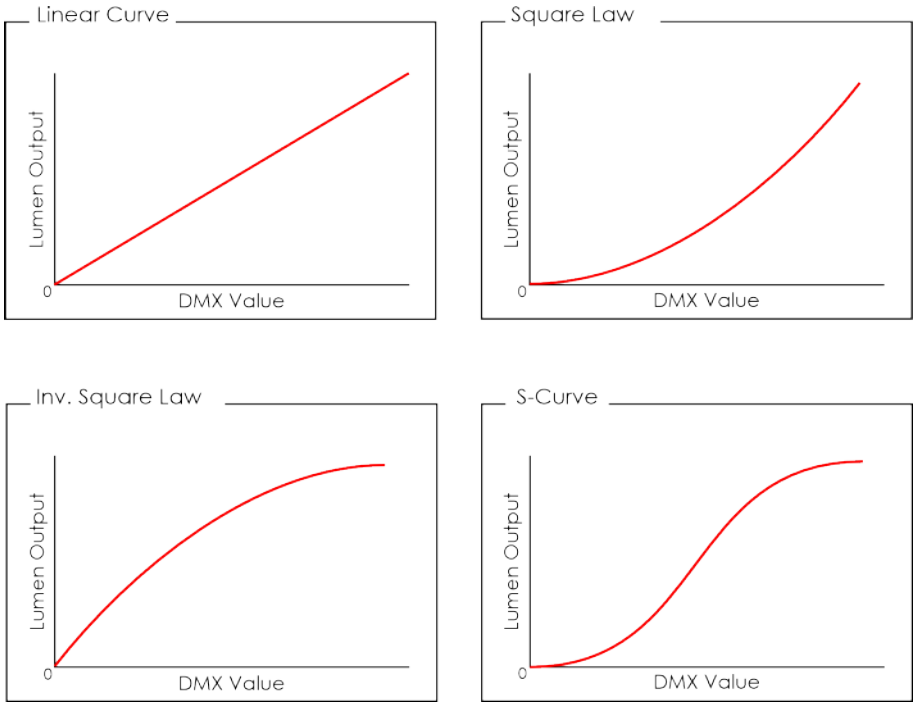
In this submenu you can adjust the fan settings.

01) Press the **UP/DOWN** buttons to scroll through the 4 available options:
- Auto: The fan speed is automatic, depending on the selected light output
- Full: The fan speed is full on
- Silent: The fan speed is silent
- Studio: The fan speed is set for studio use. The light output will be reduced to guarantee a constant reduced fan speed

6.7.2.4. Dimmer Curve

In this submenu you can select the dimming curve.

01) Press the **UP/DOWN** buttons to select one of the 4 options:
- Linear
- Square
- Inverse Square
- S-Curve



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

6.7.2.5. PWM Option

In this submenu you can adjust the PWM (pulse-width modulation) frequency of the LEDs.

01) Press the **UP/DOWN** buttons to select one of the 6 options:
- 600 Hz
- 1200 Hz
- 2000 Hz
- 4000 Hz
- 6000 Hz
- 15000 Hz

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

6.7.2.6. Color Balance

In this submenu you can adjust color brightness of the LEDs.

01) Press the **UP/DOWN** buttons to select one of the 4 options:



- Red
- Green
- Blue
- White

02) Press the **ENTER** button to confirm the selection
03) Press the **UP/DOWN** buttons to change the value. The adjustment range is between 100–255.
04) Press the **ENTER** button to confirm the selection.

6.7.2.7. Calibrated White

In this submenu you can set the white calibration.

01) Press the **UP/DOWN** buttons to scroll through the 3 available options:
- ON: The white calibration is ON
- OFF: The white calibration is OFF
- Custom: Manually change the RGBW values in the White Balance menu (see 6.7.2.8. White Balance)

6.7.2.8. White Balance

In this submenu you can adjust color brightness of the LEDs.

This submenu is only visible when you have selected Calibrated White (see 6.7.2.7. Calibrated White) to ON or Custom.

01) Press the **UP/DOWN** buttons to select one of the 4 options:



- Red
- Green
- Blue
- White

02) Press the **ENTER** button to confirm the selection
03) Press the **UP/DOWN** buttons to change the value. The adjustment range is between 000–255.
04) Press the **ENTER** button to confirm the selection.

6.7.2.9. Service Menu

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

There are 2 passwords to enter the service menu:

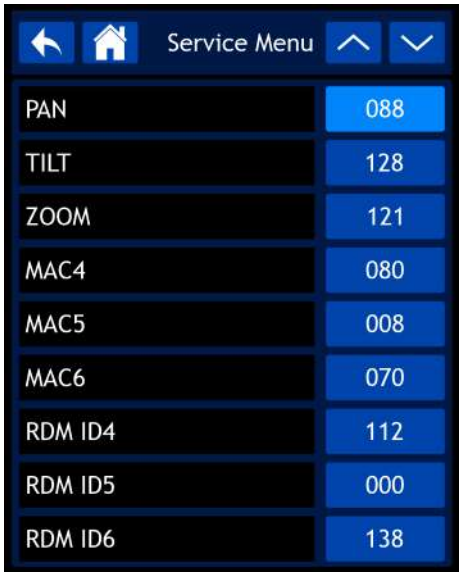
- Password 6468 (see 6.7.2.9.1. Password 6468)
- Password 2322 (see 6.7.2.9.2. Password 2322)

6.7.2.9.1. Password 6468

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 9 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.

6.7.2.9.2. Password 2322

01) Press the **UP/DOWN** buttons to insert the master code: 2322.
02) Select **ENTER** to confirm.
03) Press the **UP/DOWN** buttons to scroll through the 4 available options:



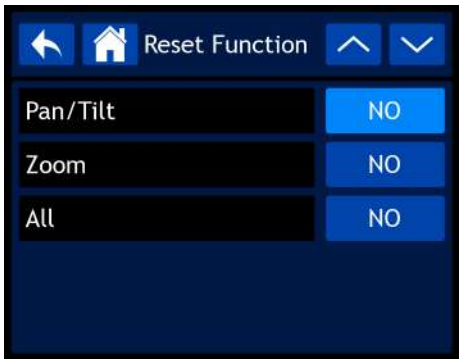
- Red
- Green
- Blue
- White

04) Press the **ENTER** button to confirm the selection
05) Press the **UP/DOWN** buttons to change the value. The adjustment range is between 100–255.

6.7.2.10. Reset Function

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

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



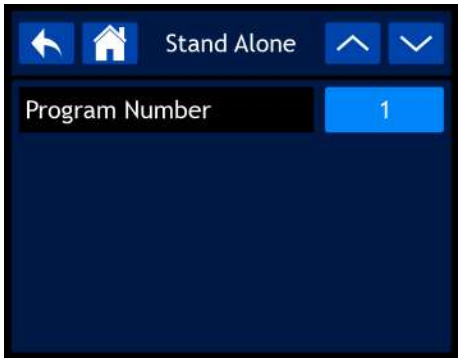
- Pan/Tilt: Reset Pan/Tilt (NO/YES)
- Zoom: Reset Zoom (NO/YES)
- All: Reset all settings (NO/YES)

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 (19 channels), Pixel (96 channels), Advanced (179 channels), User (179 channels) and Art-Net (76+14)
- 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 179 DMX channels and/or leaving some channels out. These functions are the same as the 179 DMX channels in Advance personality. For more information, refer to DMX Channels (see 6.8. DMX Channels on page 45).

01) Press the **UP/DOWN** buttons to scroll through the 179 available options:



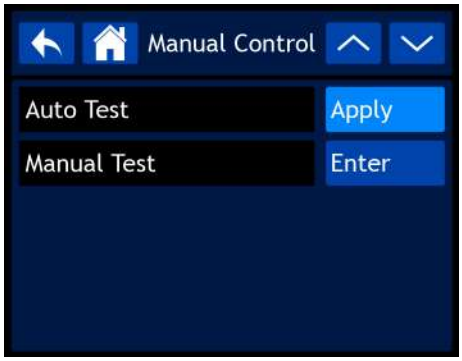
02) Press the **ENTER** button to confirm the selection.
03) Press the **UP/DOWN** buttons to increase/decrease the numeric value in order to assign a DMX channel to this function. The adjustment range is between 001–179. Select NO if you want to exclude a function.

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:



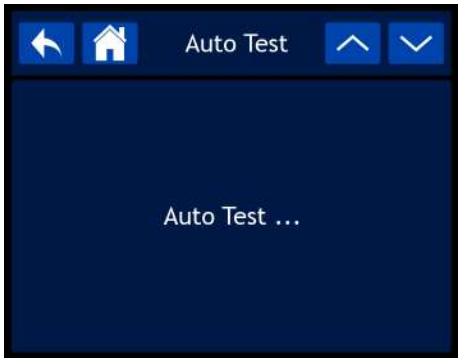
- Auto Test (see 6.7.5.1. Auto Test)
- Manual Test (see 6.7.5.2. Manual Test)

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 179 DMX channels in Advance personality. For more information, refer to DMX Channels (see 6.8. DMX Channels on page 45).

01) Press the **UP/DOWN** buttons to scroll through the 179 available options:

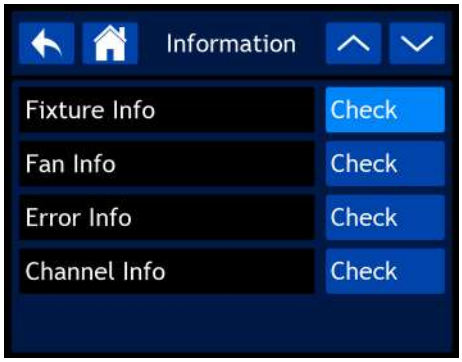


02) Press the **ENTER** button to confirm the selection.
03) Press the **UP/DOWN** buttons to adjust the values in order to test each function of the device individually or as a group. The adjustment range is between 000–255.
04) Press the **ENTER** button to confirm the selection.

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
- 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.

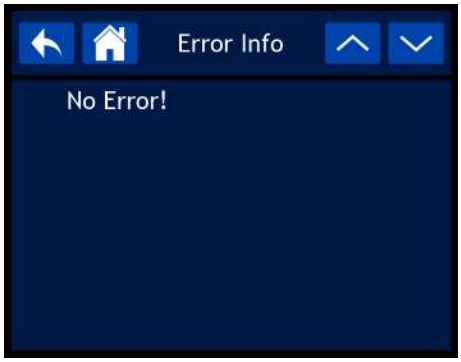


- LFAN1 Speed: Shows the current speed of head fan 1
- LFAN2 Speed: Shows the current speed of head fan 2
- LFAN3 Speed: Shows the current speed of head fan 3
- LFAN4 Speed: Shows the current speed of head fan 4
- DFAN3 Speed: Shows the current speed of the pan fan
- Base Fan1 Speed: Shows the current speed of base fan 1
- Base Fan2 Speed: Shows the current speed of base fan 2

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 52).

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 19 CH	Pixel 96 CH	Advanced 179 CH	DMX+ArtNet 76+14 CH	DMX Value	Setting	Default	Highlight
Pan	1	1	1	1	000–255	0–540°	128	
Pan fine 16bit	2	2	2	2	000–255	Fine positioning		
Tilt	3	3	3	3	000–255	0–260°	128	
Tilt fine 16bit	4	4	4	4	000–255	Fine positioning		
Pan/Tilt speed		5	5	5	000–255	Fast to Slow	0	
Dimmer	5	6	6	6	000–255	0–100 %	0	255
Dimmer fine 16-bit			7	7	000–255	Fine adjustment		
Strobe	6	7	8	8	000–255	check details	6	6
Color Wheel	7	8	9		000–255	check details	0	0
Red	8	9	10	9	000–255	0–100 %	255	255
Red 16-bit			11		000–255	Fine adjustment		
Green	9	10	12	10	000–255	0–100 %	255	255
Green 16-bit			13		000–255	Fine adjustment		
Blue	10	11	14	11	000–255	0–100 %	255	255
Blue 16-bit			15		000–255	Fine adjustment		
White	11	12	16	12	000–255	0–100 %	255	255
White 16-bit			17		000–255	Fine adjustment		
CTC	12	13	18		000–255	check details	0	0
CTC 16-bit			19		000–255	Fine adjustment		
Zoom	13	14	20	13	000–255	Wide to narrow	128	
Zoom 16-bit			21		000–255	Fine adjustment		
Pattern	14	15	22		000–255	check details	0	
LED Built-in	15	16	23		000–255	check details	0	
LED Built-in Speed	16	17	24		000–255	check details	0	
Background color	17	18	25		000–255	check details	0	
Background color dimmer	18	19	26		000–255	0–100 %	0	
Red (Pixel 1)		20	27	1	000–255	0–100 %	255	255
Red (Pixel 1) 16-bit			28		000–255	Fine adjustment		
Green (Pixel 1)		21	29	2	000–255	0–100 %	255	255
Green (Pixel 1) 16-bit			30		000–255	Fine adjustment		
Blue (Pixel 1)		22	31	3	000–255	0–100 %	255	255
Blue (Pixel 1) 16-bit			32		000–255	Fine adjustment		
White (Pixel 1)		23	33	4	000–255	0–100 %	255	255
White (Pixel 1) 16-bit			34		000–255	Fine adjustment		
[...]								
Red (Pixel 19)		92	171	73	000–255	0–100 %	255	255
Red (Pixel 19) 16-bit			172		000–255	Fine adjustment		
Green (Pixel 19)		93	173	74	000–255	0–100 %	255	255
Green (Pixel 19) 16-bit			174		000–255	Fine adjustment		
Blue (Pixel 19)		94	175	75	000–255	0–100 %	255	255
Blue (Pixel 19) 16-bit			176		000–255	Fine adjustment		
White (Pixel 19)		95	177	76	000–255	0–100 %	255	255
White (Pixel 19) 16-bit			178		000–255	Fine adjustment		
Control	19	96	179	14	000-255	check details	0	

6.8.2. DMX Channels Overview

Basic 19 CH	Pixel 96 CH	Advance 179 CH	DMX (76)+ ArtNet(14)	Function	Value	Setting	Control type
1	1	1	1	Pan	000–255	Pan adjustment 0°–540°	
2	2	2	2	Pan Fine	000–255	Pan adjustment, 16-bit	
3	3	3	3	Tilt	000–255	Tilt adjustment 0°–260°	
4	4	4	4	Tilt Fine	000–255	Tilt adjustment, 16-bit	
	5	5	5	Pan/Tilt Speed	000–255	From fast to slow	
5	6	6	6	Dimmer	000–255	From low to high intensity (0–100 %)	
		7	7	Dimmer Fine	000–255	Fine adjustment	
6	7	8	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	8	9		Color Macro	000	No function	
					001–002	White 2700 K (R=156, G=118, B=0, W=63)	step
					003–004	White 3200 K (R=156, G=141, B=5, W=89)	step
					005–006	White 4200 K (R=156, G=141, B=14, W=255)	step
					007–008	White 5600 K (R=156, G=207, B=54, W=255)	step
					009–010	White 8000 K (R=130, G=255, B=96, W=255)	step
					011	Blue (R=0, G=0, B=255, W=0)	step
					012–048	R=0, G+, B=255, W=0	proportional
					049	Cyan (R=0, G=255, B=255, W=0)	step
					050–086	R=0, G=255, B-, W=0	proportional
					087	Green (R=0, G=255, B=0, W=0)	step
					088–124	R+, G=255, B=0, W=0	proportional
					125	Yellow (R=255, G=255, B=0, W=0)	step
					126–162	R=255, G-, B=0, W=0	proportional
					163	Red (R=255, G=0, B=0, W=0)	step
					164–200	R=255, G=0, B+, W=0	proportional
					201	Magenta (R=255, G=0, B=255, W=0)	step
					202–238	R-, G=0, B=255, W=0	proportional
					239	Blue (R=0, G=0, B=255, W=0)	step
					240–247	Color fade from fast to slow	proportional
					248–255	Color jump from fast to slow	proportional

Basic 19 CH	Pixel 96 CH	Advance 179 CH	DMX (76)+ ArtNet(14)	Function	Value	Setting	Control type
8	9	10	9	Red	000–255	0–100%	
		11		Red 16-bit	000–255	Fine adjustment	
9	10	12	10	Green	000–255	0–100%	
		13		Green 16-bit	000–255	Fine adjustment	
10	11	14	11	Blue	000–255	0–100%	
		15		Blue 16-bit	000–255	Fine adjustment	
11	12	16	12	White	000–255	0–100%	
		17		White 16-bit	000–255	Fine adjustment	
12	13	18		CTC	000	No function	
					001–255	Color temp from output mode to 2700 K	proportional
		19		CTC 16-bit	000–255	Fine adjustment	
13	14	20	13	Zoom	000–255	Wide to narrow	
		21		Zoom 16-bit	000–255	Fine adjustment	
14	15	22		Pattern	000	No function	
					001	Pattern 1	step
					002	Pattern 2	step
					003	Pattern 3	step
					[...]		
					253	Pattern 253	step
					254	Pattern 254	step
					255	Pattern 255	step
15	16	23		LED effect	000–015	No function	
					016	LED effect 1	step
					017	LED effect 2	step
					018	LED effect 3	step
					[...]		
					116	LED effect 101	step
					117–135	LED effect 102 (main effect)	step
					136	LED effect 103	step
					[...]		
					236	LED effect 203	step
					237–255	LED effect 204	step
16	17	24		LED effect speed	000–127	Fast to slow	proportional
					128	Stop	step
					129–255	Reverse slow to fast	proportional
17	18	25		Background color macro	000	No function	
					001–002	White 2700 K (R=156, G=118, B=0, W=63)	step
					003–004	White 3200 K (R=156, G=141, B=5, W=89)	step
					005–006	White 4200 K (R=156, G=141, B=14, W=255)	step
					007–008	White 5600 K (R=156, G=207, B=54, W=255)	step
					009–010	White 8000 K (R=130, G=255, B=96, W=255)	step
					011	Blue (R=0, G=0, B=255, W=0)	step
					012–048	R=0, G+, B=255, W=0	proportional

Basic 19 CH	Pixel 96 CH	Advance 179 CH	DMX (76)+ ArtNet(14)	Function	Value	Setting	Control type
					049	Cyan (R=0, G=255, B=255, W=0)	step
					050–086	R=0, G=255, B-, W=0	proportional
					087	Green (R=0, G=255, B=0, W=0)	step
					088–124	R+, G=255, B=0, W=0	proportional
					125	Yellow (R=255, G=255, B=0, W=0)	step
					126–162	R=255, G-, B=0, W=0	proportional
					163	Red (R=255, G=0, B=0, W=0)	step
					164–200	R=255, G=0, B+, W=0	proportional
					201	Magenta (R=255, G=0, B=255, W=0)	step
					202–238	R-, G=0, B=255, W=0	proportional
					239	Blue (R=0, G=0, B=255, W=0)	step
					240–247	Color fade from fast to slow	proportional
					248–255	Color jump from fast to slow	proportional
18	**19**	**26**		**Background color dimmer**	000–255	From low to high intensity (0–100 %)	
	20	**27**	**1**	**Red (Pixel 1)**	000–255	0–100%	
		28		**Red (Pixel 1) 16-bit**	000–255	Fine adjustment	
	21	**29**	**2**	**Green (Pixel 1)**	000–255	0–100%	
		30		**Green (Pixel 1) 16-bit**	000–255	Fine adjustment	
	22	**31**	**3**	**Blue (Pixel 1)**	000–255	0–100%	
		32		**Blue (Pixel 1) 16-bit**	000–255	Fine adjustment	
	23	**33**	**4**	**White (Pixel 1)**	000–255	0–100%	
		34		**White (Pixel 1) 16-bit**	000–255	Fine adjustment	
[...]							
	92	**171**	**73**	**Red (Pixel 19)**	000–255	0–100%	
		172		**Red (Pixel 19) 16-bit**	000–255	Fine adjustment	
	93	**173**	**74**	**Green (Pixel 19)**	000–255	0–100%	
		174		**Green (Pixel 19) 16-bit**	000–255	Fine adjustment	
	94	**175**	**75**	**Blue (Pixel 19)**	000–255	0–100%	
		176		**Blue (Pixel 19) 16-bit**	000–255	Fine adjustment	
	95	**177**	**76**	**White (Pixel 19)**	000–255	0–100%	
		178		**White (Pixel 19) 16-bit**	000–255	Fine adjustment	
					000–004	No function	
					005–009	Pan reverse	step
					010–014	Pan normal	step
					015–019	Tilt reverse	step
					020–024	Tilt normal	step
19	**96**	**179**	**14**	**Control**	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
					045–064	Reserved	
					065–069	Single color calibration OFF	step

Basic 19 CH	Pixel 96 CH	Advance 179 CH	DMX (76)+ ArtNet(14)	Function	Value	Setting	Control type
					070–074	Single color calibration ON	step
					075–079	Preset Color HTP OFF	step
					080–084	Preset Color HTP ON	step
					085–089	Fans Auto	step
					090–094	Fans Full	step
					095–099	Fans Silent	step
					100–104	Fans Studio (TV35)	step
					105–109	DMX Fail: Hold	step
					110–114	DMX Fail: Off	step
					115–119	Dimmer mode FAST	step
					120–124	Dimmer mode SMOOTH	step
					125–129	Reserved	
					130–134	Dimmer Linear	step
					135–139	Dimmer Square	step
					140–144	Dimmer Inv-Square	step
					145–149	Dimmer S-curve	step
					150–154	PWM 600 Hz	step
					155–159	PWM 1200 Hz	step
					160–164	PWM 2000 Hz	step
					165–169	PWM 4000 Hz	step
					170–174	PWM 6000 Hz	step
					175–179	PWM 15000 Hz	step
					180–184	Defrost fan OFF	step
					185–189	Defrost Fan ON	step
					190–194	Color Calibration OFF	step
					195–199	Color Calibration ON	step
					200–204	Reset P/T	step
					205–219	Reserved	
					220–224	Reset Zoom/Focus	step
					225–234	Reserved	
					235–239	Reset All	step
					240–244	Full mode	step
					245–249	White mode (7500 K)	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: 29B4:0E5XXXXX
- Manufacturer's ID: Infinity (Highlite International B.V.)
- Manufacturer Label: Infinity
- Model Description: Furion W602 WashBeam
- Model ID: 229 (0E5 hexadecimal)
- Device Label: Furion W602 WashBeam

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		*	*
CURVE	0x0343		*	*
CURVE_DESCRIPTION	0x0344	*	*	
MODULATION_FREQUENCY	0x0347		*	*
MODULATION_FREQUENCY_ DESCRIPTION	0x0348	*	*	
DEVICE_HOURS	0x0400		*	*
LAMP_HOURS	0x0401		*	*
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 8.3.1. Replacing the Fuse on page 54)
The device responds erratically	The factory settings of the device are changed	• Reset the parameters of the device to the default factory settings (see 6.7.2.10. Reset Function on page 39)
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	LEDs are damaged	• Disconnect the device and contact your Highlite International dealer, refer to Corrective Maintenance
	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)
	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 44).

Error code	Error description
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 (head)
CPU-D	CPU-D error (head)
CPU-E	CPU-E error (head)
CPU-F	CPU-F error (head)
LFAN1	head fan 1 error
LFAN2	head fan 2 error
LFAN3	head fan 3 error
LFAN4	head fan 4 error
AFAN1	defrost fan error
DFAN3	pan fan 3 error
Base Fan1	base fan 1 error
Base Fan2	base fan 2 error
R-OPEN	thermistor open
R-SHORT	thermistor short
LED_HOT	LED over heat

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. 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.

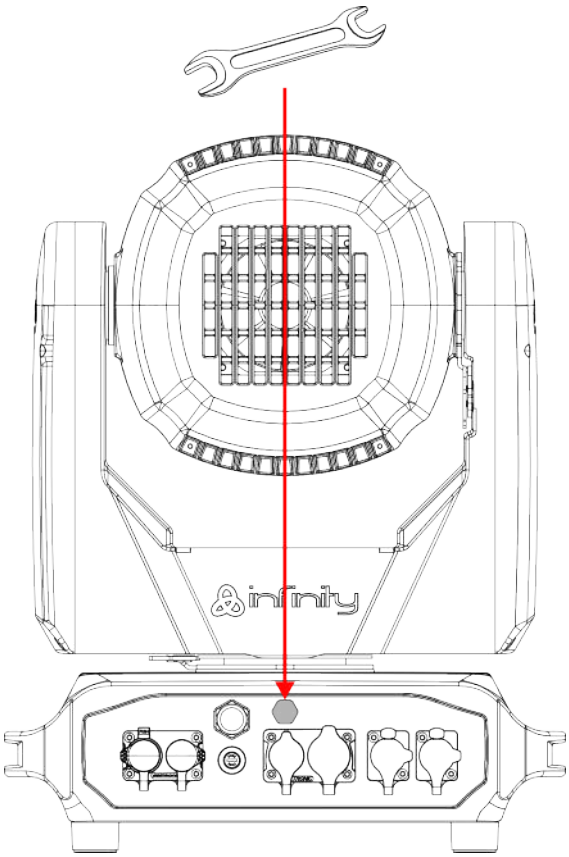
8.3.2. Draining Condensation Water

The Furion W602 WashBeam 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 (06)** 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 (06)**. Make sure that you do not overtighten.

Figure 16



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 53).
- 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 W602 WashBeam, product code 41441, 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).