

PRODUCT USER GUIDE

Nova Aqua Illuminator



Rev: C9



PLEASE READ THIS USER GUIDE BEFORE INSTALLING, OPERATING
OR PERFORMING MAINTENANCE ON THE ILLUMINATOR UNIT



INTRODUCTION

Thank you for purchasing this UFO illuminator/luminaire. Please keep this user guide for future reference.

To ensure that the illuminator is set up optimally and gives a long service life, please read this user guide before installing, operating or performing any maintenance on the unit.

This User Guide is laid out in three sections:

Installation – details how to connect the luminaire.

Operation – details how to program and set up the luminaire.

Maintenance – maintenance log, troubleshooting guide, technical specifications.

IMPORTANT

This product must be installed in accordance with the applicable installation code, by a person familiar with the construction and operation of the product, and the hazards involved.

These illuminators are not mains dimmable.

The LED array and heatsink in this illuminator can be replaced when it reaches end of life. Contact UFO for details.

Sealing: The illuminator is sealed for external use. All unused front plate connectors must have dust caps securely fitted at all times to maintain the seal. All used front plate connectors must have their corresponding plug securely connected at all times to maintain the seal. There is no access to internal components for maintenance. Maintenance shall be exclusively carried out by the manufacturer or his service agent or a similar qualified person.

Type Y Attachment: If the external flexible power cable or cord supplied with this illuminator or that of the associated PSU/driver is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person to avoid a hazard.

Location: Do not locate this illuminator closer than 200mm from any flammable surface.

Clearance / Ventilation: It is imperative that a gap of 200mm is left around the unit. This is to allow air to circulate and prevent overheating. The location must have free ventilation and must not have an ambient temperature higher than that specified for the unit.

Mounting: This luminaire comes with an integral mounting plate for securing the unit to a vertical or horizontal surface.

Warning: Never look directly at the luminaire through the fiber port of the illuminator.

Warning: The luminaire should be positioned so that staring into the luminaire at a distance closer than 2.7 metres is not expected.

UFO will accept no liability for damage, or associated claims, caused by not following the installation and safety instructions contained within this user guide.

MODELS COVERED BY THIS USER GUIDE

- UFO NOVA IP DMX
- UFO NOVA IP DMX-R
- UFO NOVA IP DMX-TS
- UFO NOVA IP DMX-TRS

MODEL CODE EXPLANATION

Product family	Model	Model/Functionality
UFO NOVA IP DMX		No suffix : RGBW Only
UFO NOVA IP DMX	R	-R : Remote
UFO NOVA IP DMX	TS	-TS: Decorative Twinkle Effect Wheel with Position Sensor*
UFO NOVA IP DMX	TRS	-TRS: Decorative Twinkle Effect Wheel with Position Sensor & Remote*

* The position sensor enables the twinkle effect wheel to rotate back and forth leaving a cut out section to provide maximum light output when the twinkle effect is stopped.

MODEL TYPES

The Nova Aqua is the standard Nova DMX 46W RGBW LED illuminator with optional decorative twinkle wheel capability mounted inside a sealed IP67 enclosure. The Nova Aqua LED illuminator driver PCB has all the control functionality fitted as standard. The following control functionality is available.

1. Standalone master mode
2. Standalone remote mode
3. DMX dimming
4. DMX decorative wheel control

The Nova Aqua LED illuminator is powered by an external 24V IP67 Type HL LED driver.

IMPORTANT - SITING THE ILLUMINATOR

Please note that although this illuminator is fully IP67 rated and can be used in wet/outdoor areas, it is not suitable for submersion in water and it should not be buried underground.

Also note that damage caused by salt water will void any and all warranties on the product and its exterior finish. UFO strongly recommend that the illuminator is not installed in any location where such damage may occur (for example, near the sea or in any other high saline environment).

SEA WATER & SALINE

Please be aware that UFO will not specify, supply or install this light source for use in any area where corrosion or damage from saline may occur. This includes near the sea, on ships or in any other areas where the light source would be in an unprotected area.

Damage caused by salt water due to improper, unprotected siting of the light source will void any and all UFO warranties on the product. UFO strongly recommend that the light source is not installed in any location where such damage may occur.

CONTROLS

The Nova Aqua LED Illuminator has accessible external manual controls on the top plate of the shell. There are no internal controls that can be accessed.

CONTROL FUNCTIONALITY AND CONFIGURATION OVERVIEW

1. Standalone Master mode - independent illuminator or in a Master/Slave configuration
2. Standalone Remote mode – controlled by a remote as either a independent illuminator or in a Master/Slave configuration
3. DMX control – 6 channels (color selection, decorative wheel control & LED/fan on and off) via front plate 3 pin Bulgin sockets.

CONNECTION - FOR BASIC OPERATION

There are two connections required – the fiber port and the power supply connections. The fiber port should be connected first before the mains supply.

Connect and secure the fiber optic connector on to the collar on the front plate of the unit. Ensure the fiber optic connector is fully inserted and hand-tighten the lock nut.

Never run the luminaire with the fiber optic connector out of the collar.

WARNING

Front plate sockets without a dust cap or connector plugged in are not IP67 sealed. These sockets must ALWAYS have a dust cap or connector plugged in to maintain the IP seal.

INSTALLATION

Unscrew the dust cap from the 2 pin, Power In socket on the front plate and immediately plug the connector from the 24V IP67 LED driver in to the socket and hand tighten to maintain the seal.

Connect the mains cable to a local mains supply. If used externally the cable must be terminated in a sealed enclosure (recommended minimum IP67) and connected as follows:

UK/EU

- Green/yellow – Earth/ground
- Blue – Neutral
- Brown – Live

USA

- Green – Earth/ground
- White – Neutral
- Black – Live

Switch on power the illuminator is ready for use.

If no light is produced consult the TROUBLESHOOTING section in this manual.

To operate the illuminator using the top panel control use as detailed;



MENU FUNCTIONS – repeated pressing the MENU button cycles the control through the following modes

ADDRESS "ADDR"

Manually select the DMX address using up and down buttons. Press ENTER when selected

MODE "MODE"

Select either MASTER, DMX or REMOTE using up and down buttons. Press ENTER when selected. In MASTER the unit will control another unit set to DMX

PROGRAMME "PROG"

Manually select a range of standalone programmes. Press ENTER when selected

TWINKLE WHEEL "TWNK"

Manually control the Twinkle Effect motor speed and also switches the motor OFF. Press ENTER when selected

TIME "TIME"

Select the length of time between colour changes. Press ENTER when selected

CONNECTION – FOR DMX REMOTE CONTROL OPERATION

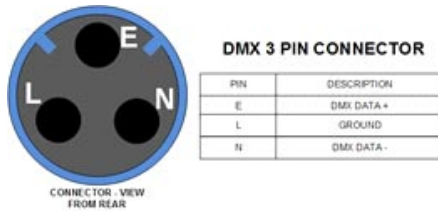
The fiber port should be connected first before the mains supply. Connect and secure the fiber optic connector on to the collar on the front plate of the unit. Ensure the fiber optic connector is fully inserted and hand-tighten the lock nut.

Never run the luminaire with the fiber optic connector out of the collar.

WARNING

Front plate sockets without a dust cap or connector plugged in are not IP67 sealed. These sockets must ALWAYS have a dust cap or connector plugged in to maintain the IP seal.

Wire up using the DMX cables from the DMX control system. Solder the cables to the 3 pin cable connectors using pin outs as detailed below. Note: the connector is viewed from the rear (inside). Unscrew the dust cap from the 3 pin, DMX sockets on the front plate and immediately plug the connectors into the sockets and hand-tighten to maintain the seal.



Unscrew the dust cap from the 2 pin, Power In socket on the front plate and immediately plug the connector from the 24V IP67 LED driver in to the socket and hand tighten to maintain the seal.

Connect the mains cable to a local mains supply. If used externally the cable must be terminated in a sealed enclosure (recommended minimum IP67) and connected as detailed on previous page.

Switch on power the illuminator is ready for use.

Set the illuminator to DMX mode as detailed on page 13. The left hand display shows a rotating line when DMX data is received.

If no light is produced consult the TROUBLESHOOTING section in this manual.

- To alter the DMX address, refer to page 13 in the Introduction section of this document.
- Always use an approved DMX cable appropriate for the environment in which the Nova Aqua is located.
- Always “daisy chain” a DMX cable or universe.
- Never use a T joint on a DMX cable or universe, unless using an approved interface or splitter.
- Never connect more than 30 devices to a single DMX universe unless using an approved interface or splitter.
- Always terminate the last device on a DMX universe by connecting a 120 ohm resistor across DMX + and DMX – across the last output connector.
- This is a 6 channel DMX device always leave 6 channels free when addressing multiple Nova Aqua luminaires i.e. Address 001, 007, 013 etc.

STANDALONE MASTER MODE

In this mode the illuminator (set to Master) can be used in two ways – either as a single independent illuminator or in a Master/Slave configuration with several illuminators connected together using DMX cables. The Slave (set to DMX) will mimic whatever standalone programme the Master illuminator is set to. All menu functions are available in Master mode.

Note: For Master/Slave to operate, both master & slave units must be set to address 001 only.

STANDALONE REMOTE MODE

Again in this mode the illuminator (set to Remote) can be used in two ways – either as a single independent illuminator or in a Master/Slave configuration with several illuminators connected together using DMX cables. The Master color sequences are controlled by a RF remote control and again the Slave will mimic the Master illuminator.

NOVA REMOTE CONTROL UNIT

Description	Details	Comments
Power	2 x AAA batteries	
Range	30 metres	Measured in free space, may be attenuated by obstructions or other RF devices
Frequency	2.4GHz	Approved for use in UK, USA and Europe

BATTERIES

With the illuminator powered up as described above, remove the rear cover on the remote control unit. Taking care not to touch any of the front buttons, insert the batteries. If you touch the remote control buttons when inserting the batteries it WILL affect the operation of your remote control. If you do accidentally touch any of the buttons, remove the batteries and start again. Once the batteries are inserted do not use the remote control for 3 seconds

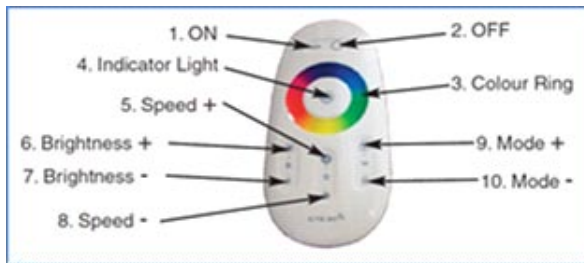


FURTHER INFORMATION

The remote control unit is matched with the illuminator at the factory. If the remote control is not matched or an additional or replacement remote control is required carry out the “Matching Remote to Illuminator” instructions as detailed later in this guide. If a remote control is to be removed from control of a illuminator carry out the “Unmatching Remote to Illuminator” instructions as detailed later in this guide.

REMOTE CONTROL OPERATION

NO.	Description	Function
1	Button	Power on
2	Button	Power off
3	Color ring	Touch controls all colors (white not available)
4	Indicator	Indicates controller active when buttons pressed
5	Button	Increase color cycle speed
6	Button	Increase brightness
7	Button	Decrease brightness
8	Button	Decrease color cycle speed
9	Button	[Mode +] Step up through color cycle programmes
10	Button	[Mode -] Step down through color cycle programmes



MATCHING REMOTE CONTROL UNIT TO LIGHT SOURCE

Disconnect power from the illuminator, then replace and once the indicator light (4.) lights, touch button 5 within 3 seconds. After initialisation the remote will be matched to the illuminator.

Once the remote is matched, follow the procedure on page 10 to put the illuminator into remote programme mode. The illuminator should then respond to remote commands.

UNMATCHING REMOTE CONTROL UNIT FROM LIGHT SOURCE

Remove the power plug from the rear of the illuminator, then replace and once the indicator light (4) lights, touch and hold button 5 within 3 seconds. After initialisation the remote will be unmatched to the illuminator.

REMOTE CONTROL MODES AND FUNCTION

NO.	Mode	Brightness	Speed	Comment
1	Static white	Adjustable	Non adjustable	Touch color ring then mode + to enter this mode at any time
2	White and colors mixed	Adjustable	Non adjustable	Color ring control. Touch color ring to enter this mode at any time
3	All colors fade	Adjustable	Adjustable	No white
4	RGBW fade	Adjustable	Adjustable	Red, green, blue, white
5	RGBW snap	Adjustable	Adjustable	Red, green, blue, white
6	7 colors snap	Adjustable	Adjustable	White and colors mixed
7	2 colors snap	Adjustable	Adjustable	Red and white
8	2 colors snap	Adjustable	Adjustable	Blue and white
9	2 colors snap	Adjustable	Adjustable	Green and white
10	1 color flash	Adjustable	Adjustable	Red
11	1 color flash	Adjustable	Adjustable	Blue
12	1 color flash	Adjustable	Adjustable	Green
13	1 color flash	Adjustable	Adjustable	White
14	All colors snap/fade	Adjustable	Adjustable	Random

OPERATION

Mode Buttons – Do not work in a loop, i.e. touching the mode+ button will not eventually bring you back to mode 1. To revert to mode 1, either touch mode – button repeatedly to step back up through the mode numbers, or touch color ring then mode+

Color Ring –The color ring can be used to select individual colors by touching the ring and sliding your finger around the ring.

Brightness – brightness can be increased or reduced in any mode using buttons 6 & 7

Cycle Speed – speed of color cycling in modes 3 to 14 can be adjusted using buttons 5 & 8

REMOTE RANGE WALK TEST

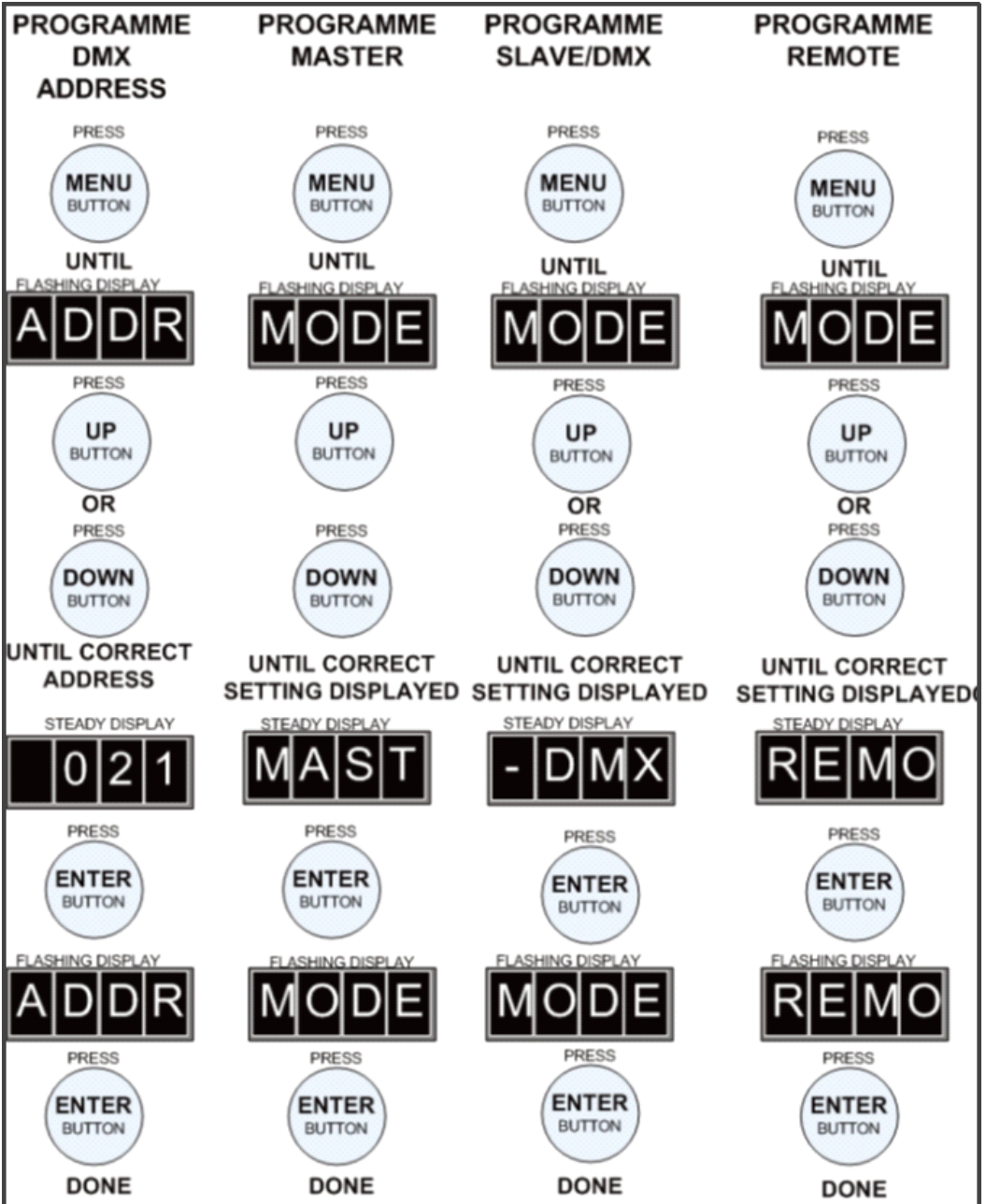
Once the illuminator is fully installed carry out a complete range walk test and record the range in the table below.

This information is essential for maintenance purposes to determine if the range/sensitivity is reducing and also to record dead areas within the remote control units range due to RF obstructions and/or RF interference.

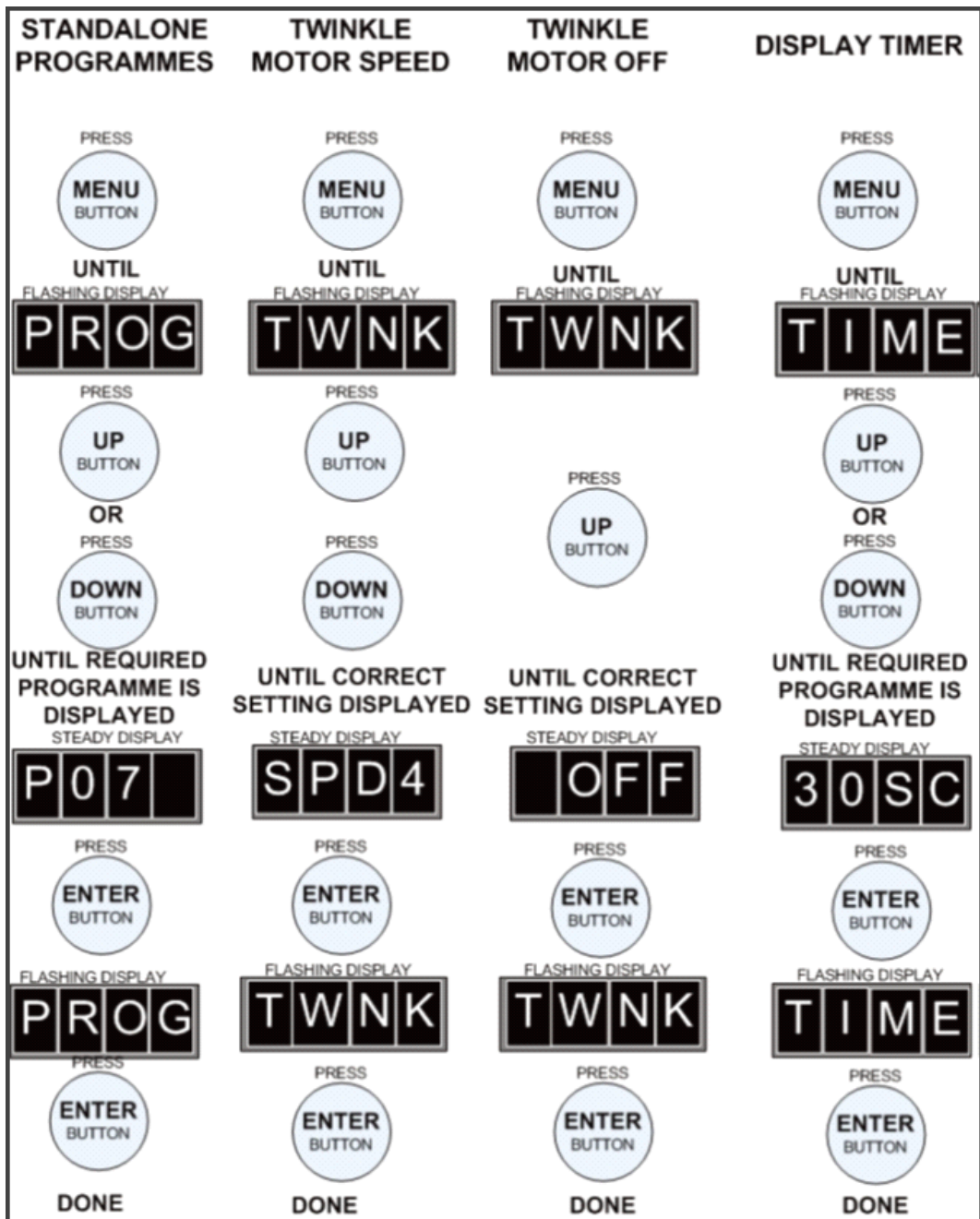
Note: Where a illuminator has more than one remote control, reduction in operating range may be experienced when both (or multiple) remote controls are used simultaneously

Description	Date	Max Range	
Controller 1			
Controller 2			
Controller 3			
Dead areas			

PROGRAMMING



PROGRAMMING



STANDALONE OPERATION

Prog	Function	Effect
1	Color 1	White
2	Color 2	Red
3	Color 3	Green
4	Color 4	Blue
5	Color 5	Yellow
6	Color 6	Cyan
7	Color 7	Magenta
8	Snap color change between colors 1,2,3,4,5,6,7	Display color for adjustable time (display timer) and then snap to next color
9	Snap color change between colors 2,3,4,5,6,7	Display color for adjustable time (display timer) and then snap to next color
10	Snap color change between colors 1,2,3,4	Display color for adjustable time (display timer) and then snap to next color
11	Fade color change between colors 1,2,3,4,5,6,7	Display color for adjustable time (display timer) and then fade slowly to next color
12	Fade color change between colors 2,3,4,5,6,7	Display color for adjustable time (display timer) and then fade slowly to next color
13	Fade color change between colors 1,2,3,4	Display color for adjustable time (display timer) and then fade slowly to next color

DMX CHANNEL OPERATION

The Nova Aqua DMX occupies 6 DMX channels as detailed below.

Channel	Function	Values
1	Red	0-5 off / 6-255 min to max
2	Green	0-5 off / 6-255 min to max
3	Blue	0-5 off / 6-255 min to max
4	White	0-5 off / 6-255 min to max
5	Twinkle Wheel	0-5 off / 6-255 slow to fast
6	LED and Fan	0-250 on / 251-255 off

Note: the fan is controlled by a temperature circuit on the LED driver PCB – switching the fan on and off to optimise LED Junction temperature.

MAINTENANCE

To ensure a long working life and the safe, reliable operation of the illuminator, it is very important to maintain it properly and ensure it is installed in an appropriate and safe location.

Before performing any maintenance on the illuminator it should be disconnected from the power supply and allowed to cool down.

- The illuminator fans and vents should be blown out with compressed air at least every 12 months, or more often if located in a dusty environment.
- Do not allow dust to build up on internal pcb's & components as this will increase heat within the illuminator and lead to failure. Units should be checked regularly and all dust must be vacuumed off. Failure caused by excessive dust will not be covered under warranty.
- After the illuminator has been installed, check the fans and vents to ensure they are clear of dust and debris. Blow out with compressed air if required.
- The body of the illuminator can be cleaned using a soft damp cloth. Do not use any abrasives on the unit.

Note that a record of all maintenance **MUST** be kept in the table below, indicating what maintenance was undertaken. This must be dated and is required for warranty purposes.

SAFETY GUIDANCE

- A gap of 200mm (8") **MUST** be left around the unit. This is to allow air to circulate and prevent overheating. The location must have free ventilation and must not have an ambient temperature higher than that specified for the luminaire.
- The outer body of the illuminator may become hot - keep away from all combustible materials and **DO NOT** locate this light source within 200mm (8") of any flammable surface.
- The illuminator must not be run without the fiber optic harness fitted.

MAINTENANCE LOG

Date	Maintenance Undertaken

Problem	Probable Cause(s)	Remedy
Illuminator dead, LED indicator on PSU not illuminated	Main supply off	Check supply and reinstate
	Loose mains plug	Check plug
	PSU faulty	Replace PSU
Unit dead – LED indicator on PSU illuminated, LCD display on light source not illuminated	Loose DC plug	Check plug
	PSU faulty	Check PSU output / replace PSU
	Illuminator faulty	Replace illuminator
Illuminator no light output, but LCD display on illuminator is illuminated	If programme Mode is to “REMO”, illuminator may have been switched off using RF remote control	Switch array on using RF remote control
	LED array / driver faulty	Contact UFO
RF remote controller range reduced	Remote batteries failing	Replace batteries as per User Guide
	Another RF device causing interference	Check for another RF device in same area
	RF remote control needs resetting	Remove and reinsert batteries as per User Guide
	RF remote failing	Replace remote
	Illuminator receiver failing	Contact UFO
Illuminator won't respond to RF remote controller	Illuminator not in Remote mode	Check mode programming and set to “REMO”
	Remote batteries failed	Replace batteries as per User Guide
	RF remote control needs resetting	Remove and reinsert batteries as per User Guide
	RF remote failed	Replace remote
	Illuminator receiver failed	Contact UFO
Not responding to DMX – no rotating symbol on LCD display	Illuminator not in “DMX” mode	Check mode programming and set to “DMX”
	DMX address incorrectly set	Change address on light source or DMX controller
	No DMX signal from controller	Check DMX controller for correct setting
	Wiring fault on DMX cables/connections	Check cable connections and repair as necessary
	DMX driver failure	Contact UFO

Not fully responding to DMX – some but not all colors controllable, no rotating symbol on LCD display	Illuminator address out of range – not 5 available channels on DMX controller	Change address on illuminator or DMX controller to make 6 channels available
Not responding to DMX – no light output, rotating symbol on LCD display	Incorrect address set on illuminator or controller	Check addresses
	No values set in DMX channel	Check DMX controller channel values
	Channel 6 value high (251-255) switching off the array	Reduce channel 6 value to <251
	LED array/driver failed	Contact UFO
Unit in Master mode but twinkle wheel not moving	Twinkle Motor switched off	Check “TWNK” mode setting
	Internal component/motor failure	Contact UFO
Poor light output on fiber	Unit needs cleaning	Clean the LED lens with a dry cloth clean fiber common end
	Fiber port connector not plugged in correctly	Ensure plugged in correctly and secured with locking screw

Description	Details
Port connector Size	30mm diameter
Fiber Type	Glass / PMMA
Mains Supply Voltage	100-240V AC, 50-60Hz
PSU Output	24V DC, 2.5A
LED Power	46W
Min Ambient Temperature	-10°C
Max Ambient Temperature	+45°C
Fan	80mm crossflow, 12V
Thermal Protection	Onboard pre-set thermistor
LED Type	RGBW
DMX	User addressable 6 channels (0-255)
LED Life	50,000 hours typical
RF Remote Frequency	2.4GHz
RF Remote Range	30m depending on environment
RF Remote Power	2 x AAA batteries
PSU Type	Desktop PSU with IEC power cord
Lumen Output	700 (R), 1160 (G), 315 (B), 1435 (W)
Material	Aluminium
Finish	Hard anodised
Dimensions (W x H x L)	240mm x 164.80mm x 216mm
Weight	5.4kg
Ingress Protection	IP67

A range of accessories are available for the Nova Aqua illuminator. To order, or for more information, please contact your UFO sales representative.

- 24V IP67 PSU with IP68 connector
- 2 pole IP68 solder pin power connector
- 3 pole IP68 solder pin DMX connector
- 2m DMX data cable with IP68 connector



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