PRODUCT USER GUIDE

Nova Illuminator

Rev: C9

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

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E357731

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FOR INDOOR USE ONLY

WEATHER RESISTANT ENCLOSURE AVAILABLE

LED 40,000 hrs

MADE IN U.K. PREMIUM QUALITY

Thank you for purchasing this UFO illuminator/luminaire.

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.

Please keep this User Guide for future reference. This User Guide is laid out in three sections

Installation -details on how to connect your luminaire
Operation - details how to programme and set up your luminaire
Maintenance - maintenance log, troubleshooting guide, technical specification

MODELS COVERED BY THIS USER GUIDE

UFO Nova DMX	UFO Nova DMX-TS
UFO Nova DMX-R	UFO Nova DMX-TRS

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.

Type Y Attachment: If the external flexible cable or cord of this luminaire or 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 luminaire.

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

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

Warning: The luminaire should be positioned so that prolonged 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.

MOUNTING

This luminaire supplied with a separate mounting plate. If using the mounting plate refer to the fitting instructions supplied with it.

POWER SUPPLY REQUIREMENTS

The Nova illuminator is powered from a 24V DC desk top power supply unit. This PSU is an IEC input device catering for UK, European and USA mains supplies using the relevant power cord.

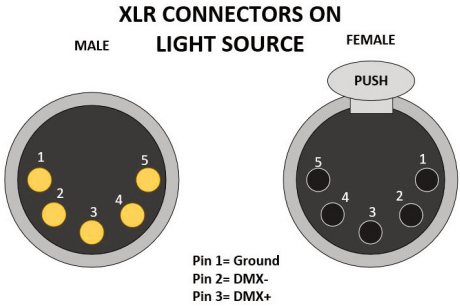
CONNECTIONS

There are 3 connections required – the fiber port, the mains supply cable and, optionally, the DMX control cable. The fiber port should be connected first. Connect and secure the fiber optic connector into the 30mm diameter collar and secure using the M5 locking screw.

Connect the PSU to the DC input jack socket on the illuminator, and connect the IEC plug to the PSU. Plug the mains plug into the electrical supply socket. Switch on power. The LED Indicator will illuminate and the illuminator is ready for use.

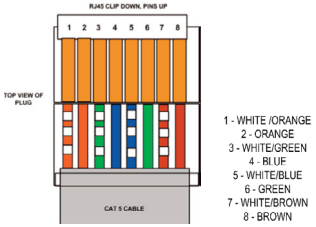
If no light is produced consult the troubleshooting section.

If DMX control is required, connect up the DMX control cables to the XLR sockets on the rear of the illuminator. The pin out details for the plugs are shown right.



As well as the standard XLR connectors for DMX connection, the Nova is also fitted with RJ45 connectors which also offer DMX capability. Details of these are below:

Pin No:	1	2	3	4	5	6	7	8
Color	White Orange	Orange	White Green	Blue	White Blue	Green	White Brown	Brown
Function	DMX+	DMX-	Spare	Spare	Spare	Spare	Ground	Ground
XLR =	Pin 3	Pin 2	-	-	-	-	Pin 1	Pin 1



Note:
It is recommended that a 120ohm terminating resistor be connected across DMX+ and DMX- on the last illuminator on the DMX universe or cable run.

Nova Master Slave function will only work when both Master Nova and Slave Nova is set to address 001.

REAR PANEL CONTROLS

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

The left hand display shows a rotating line when DMX data is received.

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.

DMX MODE

In this mode the illuminator (set to DMX) can be controlled either by another Nova in Master mode or by a DMX controller.

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 effect 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 control 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 ILLUMINATOR

Remove the power plug from the rear of the illuminator, then replace and touch button 5 within 3 seconds, the illuminator will “blink” twice slowly indicating that the Remote Controller is 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 ILLUMINATOR

Remove the power plug from the rear of the illuminator, then replace and touch and hold button 5 within 3 seconds and the illuminator will “blink” 9 times indicating that the Remote Controller is unmatched from the illuminator.

Note:
More than one illuminator controlled by one Remote Controller will eventually run out of sync with each other (color cycle mismatch)

REMOTE CONTROL MODES AND FUNCTIONS

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

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

PROGRAMME DMX ADDRESS

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY


PRESS
UP BUTTON
OR
PRESS
DOWN BUTTON
UNTIL CORRECT ADDRESS
STEADY DISPLAY


PRESS
ENTER BUTTON
FLASHING DISPLAY


PRESS
ENTER BUTTON
DONE

PROGRAMME MASTER

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY


PRESS
UP BUTTON
PRESS
DOWN BUTTON
UNTIL CORRECT SETTING DISPLAYED
STEADY DISPLAY


PRESS
ENTER BUTTON
FLASHING DISPLAY


PRESS
ENTER BUTTON
DONE

PROGRAMME SLAVE/DMX

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY


PRESS
UP BUTTON
OR
PRESS
DOWN BUTTON
UNTIL CORRECT SETTING DISPLAYED
STEADY DISPLAY


PRESS
ENTER BUTTON
FLASHING DISPLAY


PRESS
ENTER BUTTON
DONE

PROGRAMME REMOTE

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY


PRESS
UP BUTTON
OR
PRESS
DOWN BUTTON
UNTIL CORRECT SETTING DISPLAYED
STEADY DISPLAY


PRESS
ENTER BUTTON
FLASHING DISPLAY


PRESS
ENTER BUTTON
DONE

PROGRAMMING

STANDALONE PROGRAMMES

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY

PRESS
UP BUTTON
OR
PRESS
DOWN BUTTON
UNTIL REQUIRED PROGRAMME IS DISPLAYED
STEADY DISPLAY

PRESS
ENTER BUTTON
FLASHING DISPLAY

PRESS
ENTER BUTTON
DONE

TWINKLE MOTOR SPEED

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY

PRESS
UP BUTTON
PRESS
DOWN BUTTON
UNTIL CORRECT SETTING DISPLAYED
STEADY DISPLAY

PRESS
ENTER BUTTON
FLASHING DISPLAY

PRESS
ENTER BUTTON
DONE

TWINKLE MOTOR OFF

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY

PRESS
UP BUTTON
UNTIL CORRECT SETTING DISPLAYED
STEADY DISPLAY

PRESS
ENTER BUTTON
FLASHING DISPLAY

PRESS
ENTER BUTTON
DONE

DISPLAY TIMER

PRESS
MENU BUTTON
UNTIL
FLASHING DISPLAY

PRESS
UP BUTTON
OR
PRESS
DOWN BUTTON
UNTIL REQUIRED PROGRAMME IS DISPLAYED
STEADY DISPLAY

PRESS
ENTER BUTTON
FLASHING DISPLAY

PRESS
ENTER BUTTON
DONE

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 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

TROUBLESHOOTING

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 illuminator not illuminated	Loose DC plug	Check plug
	PSU faulty	Check PSU output / replace PSU
	illuminator faulty	Contact UFO
illuminator no light output, but LCD display on illuminator is illuminated	If programme Mode is set 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 illuminator 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 6 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

Port Connector Size	30mm diameter
Fiber Type	Glass / PMMA
Material/Finish	Aluminum, powdercoated grey (RAL9006)
Dimensions (L x W x H)	183mm (7.2”) x 178mm (7.0”) x 128mm (5.0”)
Weight	1.91kg
Operating Environment	Indoor use - IP20
Min Ambient Temp.	-10°C
Max Ambient Temp.	+45°C

LED Array Type	Custom RGBW array
LED Array Power	46W
LED Array Model	Luxeon 36 LED Array
LED Array Life (L70, B10)	50,000 hours typical @ 25°C
Red	615nm \ 700lm
Green	530nm \ 1160lm
Blue	460nm \ 315lm
White	6500K \ 1435lm

Supply Voltage	90-264Vac
Mains Running Current	0.2A @ 240Vac
Mains Voltage VA rating	50VA
External PSU Type	Meanwell, 24V, 2.5A, 60W
Motor Type	Crouzet 829140 geared stepper motor
Fan Type	Sunon, 80mm, 22dBA

RF Remote Frequency	2.4GHz
RF Remote Range	30m, depending on environment
RF Remote Power	2 x AAA batteries (supplied)

Control Functionality	DMX, manual push-button and remote control options
DMX Interface	3 or 5 pin XLR sockets can be specified
DMX Addressing	User addressable to 512
DMX Channels	6 channels
Color Change Functionality	Controlled by DMX, manual push-button or remote control
Dimming Functionality	Controlled by DMX or remote control
Effects Wheels Options & Functionality	Twinkle wheel controlled by DMX or manual push-button operation.

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