

PRODUCT USER GUIDE

Luna Decorative Illuminator



Rev: C2D



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



INTRODUCTION

Thank you for purchasing this UFO illuminator.

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 illuminator is suitable for indoor use only unless it is situated in a weatherproof enclosure.

MODELS COVERED BY THIS USER GUIDE

UFO Luna CM / UFO Luna TM
UFO Luna MCM / UFO Luna MTM
UFO Luna CDMX / UFO Luna TDMX
UFO Luna C 0-10V / UFO Luna T 0-10V

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 is a fixed luminaire. See mounting plate instruction on Page 3 for fixing to surface.

Warning: Never look directly into the luminaire LED illuminator.

Warning: The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 0.33m 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.

ATTACH THE ILLUMINATOR TO ITS MOUNTING PLATE

Fit the metal mounting plate to the base of the illuminator before making electrical connections.

Remove the mounting plate and the four M3 10mm screws from the box. Invert the illuminator and remove the four screws securing the rubber feet.

Leaving the rubber feet in place, align the plate against the feet and secure the plate to the illuminator with the four M3 10mm screws using an M3 pozidrive screwdriver.

Do not overtighten. The illuminator can now be fixed securely to the mounting surface.

POWER SUPPLY REQUIREMENTS

The illuminator is powered from a 24V DC PSU/Constant Voltage SELV LED driver.

The driver caters for UK/European/other mains supplies using the relevant power cord supplied.



LUNA DMX / 0-10V



LUNA MCM / MTM



LUNA CM / TM

CONNECTION - LUNA CM, MCM, TM AND MTM MODELS ONLY

There are 2 connections required – the fiber port and the mains supply cable. The fiber port should be connected first. Connect and secure the fiber optic connector into the 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 of this user guide.

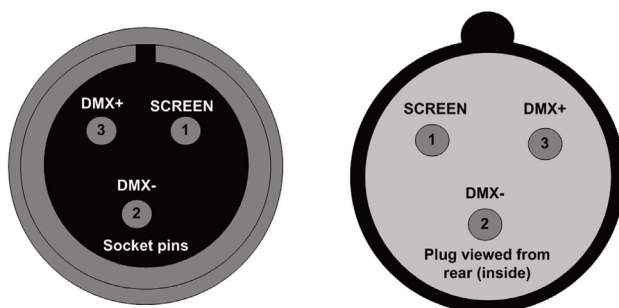
CONNECTION - LUNA CDMX AND TDMX MODELS ONLY

There are 3 connections required – the fiber port, the mains supply cable and the DMX control cable. The fiber port should be connected first. Connect and secure the fiber optic connector into the 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 of this user guide.

Connect the DMX control cables to the Mini-XLR sockets on the rear of the illuminator. The recommended plug for these sockets is Multicom SVP556-TA. The pin out details for the plugs are shown below. Either socket may be used as DMX in or DMX out.

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



Note: UFO can supply converters for these illuminators to allow them to be interfaced to standard 3 pin XLR connectors or RJ45 connectors.

CONNECTION - LUNA C0-10V AND T0-10V MODELS ONLY

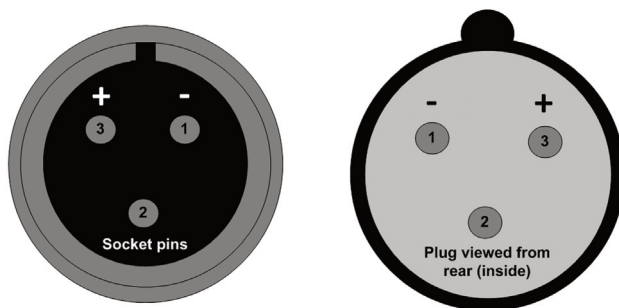
The 0-10V control type needed in the Luna illuminator is current source, not current sink. The unit relies on the control unit to supply the 0-10V control voltage.

There are three connections required - the fiber port, the mains supply cable and the 0-10V control cable. The fiber port should be connected first. Connect and secure the fiber optic connector into the 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 of this user guide.

THE LIGHT SOURCE WILL NOT ILLUMINATE UNLESS DIP SWITCH 10 IS ON AND A 0-10V SIGNAL IS PRESENT

Connect up the 0-10V control cable to the mini XLR sockets on the rear of the illuminator. The recommended plug for these sockets is the Multicomp SVP556-TA. The pin out details for these plugs are shown below. Either socket may be used as 0-10V IN or 0-10V OUT



Note: UFO can supply converters for these illuminators to allow them to be interfaced to standard 3 pin XLR connectors or RJ45 connectors.

USING THE ILLUMINATOR - LUNA CM, MCM, TM AND MTM MODELS ONLY

Model	Description
UFO Luna CM	Either manual dimming with fixed color wheel speed or fixed light output with manual color wheel speed control*
UFO Luna TM	Either manual dimming with fixed twinkle wheel speed or fixed light output with manual twinkle wheel speed control*
UFO Luna MCM	Manual dimming & manual color wheel speed control
UFO Luna MTM	Manual dimming & manual twinkle wheel speed control
*Fixed wheel speed can be either 0.6 rpm or 3.75 rpm depending on link - see text below	

The Luna CM & Luna TM has either manual control of the dimming or manual control of the speed of the decorative wheel motor.

For a Luna CM or TM with only manual control of the decorative wheel - the motor speed can be adjusted using the control on the rear of the unit from approximately 0.6 rpm to 3.75 rpm.

For a LunaCM or TM with only manual control of the light output – the output can be adjusted using the control on the rear of the unit from no light output to maximum light output. In this mode, the speed of the decorative motor is fixed, but controlled by a wire link between 10V and SPD screw terminals on the PCB (see image on following page). With the link in place the speed is fixed at 3.75 rpm. With the link removed the speed is fixed at 0.6 rpm.

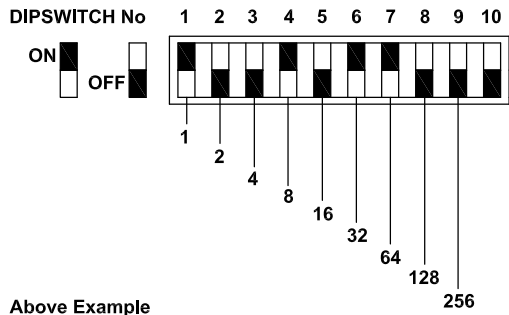
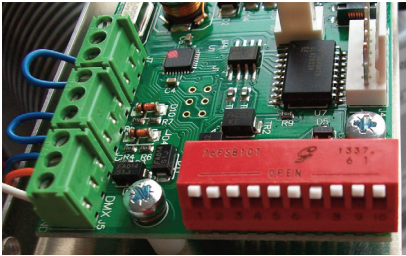
USING THE ILLUMINATOR - LUNA CDMX AND TDMX MODELS ONLY

Model	Description
UFO Luna CDMX	DMX dimming and color wheel speed control
UFO Luna CDMXs	DMX dimming and color wheel speed control with sensor on the wheel allowing individual color selection
UFO Luna TDMX	DMX dimming and continuous twinkle wheel speed control

SETTING THE DMX ADDRESS

To set the DMX address, switch off power to the illuminator and remove the top cover to access the dip switch on the PCB as shown below. Set the address as detailed below and replace the top cover. Connect up the illuminators with the PSU & remote DMX controller using the Mini XLR sockets provided on the back of the illuminator - it doesn't matter which socket is used.

DMX B Start Ch #	Dip Switches On	DMX B Start Ch #	Dip Switches On
1	1	11	1,2,4
2	2	12	3,4
3	1,2	13	1,3,4
4	3	14	2,3,4
5	1,3	15	1,2,3,4
6	2,3	16	5
7	1,2,3	:	:
8	4	:	:
9	1,4	:	;
10	2,4	511	1,2,3,4,5,6,7,8,9



Above Example

- | | |
|---------|----------|
| 1 - ON | 6 - ON |
| 2 - OFF | 7 - ON |
| 3 - OFF | 8 - OFF |
| 4 - ON | 9 - OFF |
| 5 - OFF | 10 - OFF |
- = ADDRESS 105

LUNA CDMX COLOR WHEEL

Channel	Function	Value	Description
1	Dimming	0-255	From off at 0 to brightest at 255
2	Color wheel	0-255	From 0.6 rpm at 0 to 4 rpm at 255)

LUNA CDMX COLOR WHEEL WITH SENSOR

Channel	Function	Value	Description
1	Dimming	0-255	From off at 0 to brightest at 255
2	Color wheel variable 0-59	0	Color 1 (white)
2	Color wheel variable 0-59	10	Color 2 (yellow)
2	Color wheel variable 0-59	20	Color 3 (green)
2	Color wheel variable 0-59	30	Color 4 (orange)
2	Color wheel variable 0-59	40	Color 5 (magenta)
2	Color wheel variable 0-59	50	Color 6 (blue)
2	Color wheel variable 0-59	59	Color 1 (white)
2	Color wheel snap 60-129	60	Color 6 (blue)
2	Color wheel snap 60-129	75	Color 5 (magenta)
2	Color wheel snap 60-129	85	Color 4 (orange)
2	Color wheel snap 60-129	95	Color 3 (green)
2	Color wheel snap 60-129	105	Color 2 (yellow)
2	Color wheel snap 60-129	115	Color 1 (white)
2	Color wheel speed clockwise	130-189	Slow to fast rotation clockwise (approx 0.3 rpm slowest to 7.5 rpm fastest)
2	Color wheel speed ctr clkwse	190-255	Fast to slow rotation counter clockwise (approx 0.3 rpm slowest to 7.5 rpm fastest)

NOTES ON POWERING UP THE LUNA CDMX ILLUMINATOR

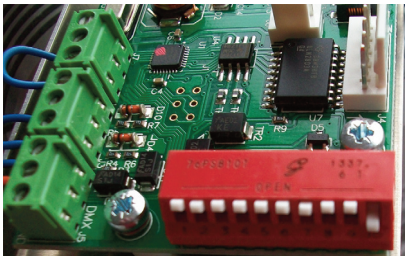
- 1. If internal DIP switch 10 is OFF, the wheel will find its reference point and stop on color 1 (white).
- 2. If internal DIP switch 10 is ON, the wheel will find its reference point then rotate continuously counter clockwise at 7.5 rpm. If internal DIP switch 10 is then switched OFF without powering down the wheel will continue rotating until power is recycled. The wheel will then revert to the status detailed in 1. above.

LUNA TDMX TWINKLE WHEEL

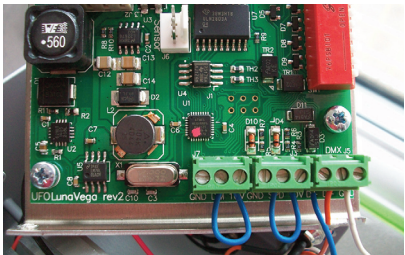
Channel	Function	Value	Description
1	Dimming	0-255	From off at 0 to brightest at 255
2	Motor control	0-255	From 0.6rpm at 0 to fastest at 255 (3-4 rpm)

REVERTING A DMX ILLUMINATOR TO MANUAL OPERATION MODE

To revert a DMX only illuminator to normal manual operation of the wheel and the light output, remove top cover to access the dip switch on the PCB. Set switches 1 to 9 off and switch 10 on, as detailed below. You must also ensure that the wire links are fitted as detailed below.



Dip switch 10 must be on for manual operation



For manual operation to work there must be wire links fitted to the screw terminals on the PCB between 10V & DM and 10V & SPD as detailed, left.

USING THE ILLUMINATOR - LUNA 0-10V MODELS ONLY

0-10V Control is available to either control a color wheel (Luna C 0-10V) or control a twinkle wheel (Luna T 0-10V).

The values table for 0-10V control is shown below:

Function	Value	Description
Color wheel	0V	Color 1 (white)
Color wheel	0.4V	Color 2 (yellow)
Color wheel	0.8V	Color 3 (green)
Color wheel	1.2V	Color 4 (orange)
Color wheel	1.6V	Color 5 (magenta)
Color wheel	2V	Color 6 (blue)
Color wheel	2.3V	Color 1 (white)
Color wheel	2.6V	Color 6 (blue)
Color wheel	3V	Color 5 (magenta)
Color wheel	3.6V	Color 4 (orange)
Color wheel	4V	Color 3 (green)
Color wheel	4.4V	Color 2 (yellow)
Color wheel	4.6V	Color 1 (white)
Color wheel	5.4V to 9.2V	Slow to fast clockwise
Color wheel	9.3V to 10V	Fast counter clockwise
Twinkle Wheel	0-10V	From 0.6 rpm to 3.75 rpm

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

PROCEDURES FOR ALL MODEL TYPES

Problem	Possible Cause(s)	Remedy
Unit is dead – no light output and LED power indicator on PSU is not illuminated	Mains supply off	Check supply & reinstate
	Loose mains plugs	Check plugs
	Plug fuse blown (UK)	Check fuse. If blown, replace
	PSU failed	Replace PSU
Unit is dead – no light output and LED power indicator on PSU is illuminated, but LED indicator on Illuminator not illuminated	PSU failed	Replace PSU
Poor light output on fiber	Illuminator dimmed either manually or by DMX or 0-10V control	Check and increase dimmer settings as appropriate
	LED driver failure	Contact UFO

ADDITIONAL PROCEDURES FOR MANUAL DIMMING MODELS

Problem	Possible Cause(s)	Remedy
Unit is dead – no light output but LED power indicator is illuminated	Dimming control at minimum adjust	Adjust brightness on dimmer control at rear
	Dip switch no 10 not switched on	Remove cover and switch dip switch 10 to on
	LED array or drive failure	Contact UFO

Note: Please complete relevant troubleshooting procedures before returning the unit to us for further investigation.

ADDITIONAL PROCEDURES FOR DECORATIVE MANUAL MOTOR MODELS

Problem	Possible Cause(s)	Remedy
Decorative wheel not turning	Motor control at minimum	Adjust motor control at rear
	Dip switch no 10 not switched on	Remove cover and switch dip switch 10 to on
	Driver circuit or motor failure	Contact UFO

ADDITIONAL PROCEDURES FOR DECORATIVE DMX MODELS

Problem	Possible Cause(s)	Remedy
Not responding to DMX control	Dip switch no 10 is switched on	Remove cover and set dip switch 10 to off
	DMX address not correctly set	Remove cover and set correct address
	No DMX signal from controller	Check DMX controller for correct setting
	Wiring fault on DMX cables	Check cables and repair as required
	Driver circuit failure	Contact UFO

ADDITIONAL PROCEDURES FOR DECORATIVE 0-10V MODELS

Problem	Possible Cause(s)	Remedy
No 0-10V signal present	Dip switch no 10 is switched off	Remove cover and switch dip switch no 10 to on
	No 0-10v signal at illuminator due to cable or controller fault	Check input to illuminator using a DMM set to correct range - rectify cable / controller fault

Note: Please complete relevant troubleshooting procedures before returning the unit to us for further investigation.

Description	Details
Port connector size	30mm diameter
Fiber type	Glass / PMMA
Mains Supply Voltage	100-240V AC, 47-63Hz
PSU Output	24V DC, 0.75A, 18W max.
LED Power	11.5W
Min Ambient Temperature	-10°C
Max Ambient Temperature	+45°C
Fan	60mm crossflow, 12V
Led Type	White light
DMX [specific models only]	User addressable
0-10V [specific models only]	0-10V DC receiving
LED Life	50,000 hours typical
CRI	3000°K >82 (typical) / 4000°K > 75 (typical)
Color Temperature	3000°K or 4000°K
Material	Aluminium
Finish	Grey
Dimensions (L x W x H) / Weight	152mm x 132mm x 112mm / 1.18kg



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