Ilumicode V 2.21
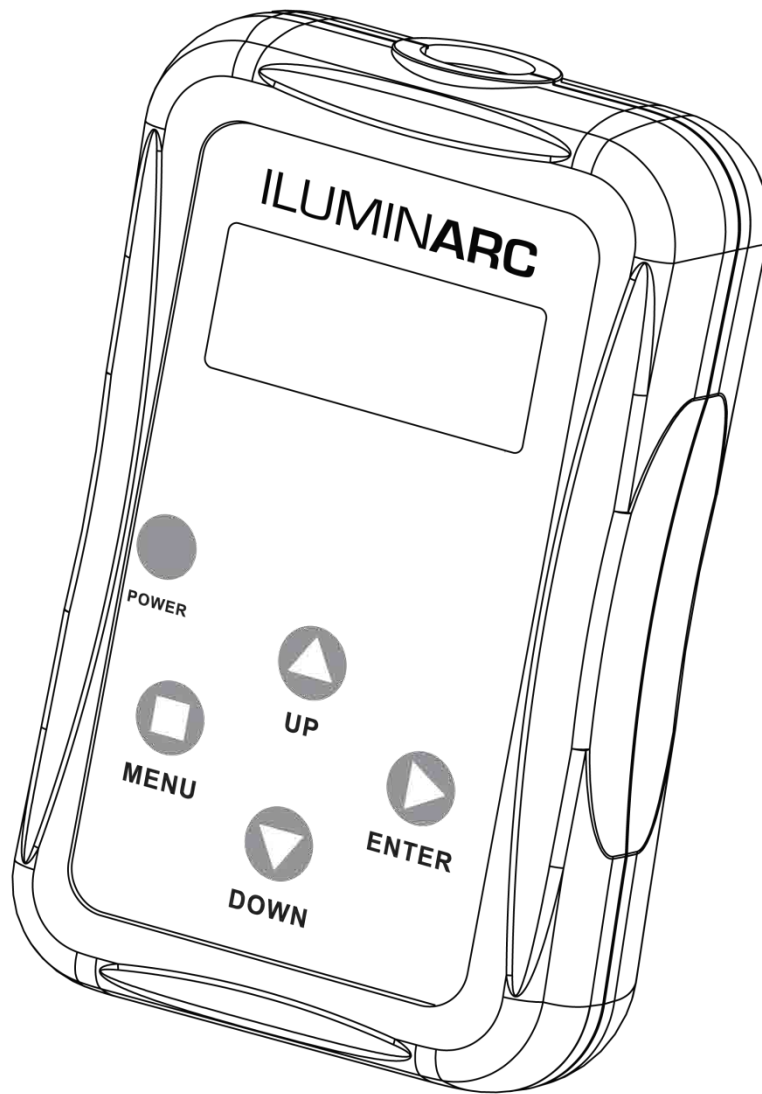
User Manual

Edition Notes

The Ilumicode V 2.21 User Manual Rev. 3 covers the description, safety precautions, installation, programming, operation, and maintenance of the Ilumicode V 2.21. ILUMINARC® released this edition of the Ilumicode V 2.21 User Manual Rev. 3 in May 2015. Read the guide that shipped with the Ilumicode V 2.21 and this User Manual before installing, operating, or maintaining this product.

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Document Printing

For better results, print this document in color, on letter size paper (8.5 x 11 in), double-sided. If using A4 paper (210 x 297 mm), configure your printer to scale the content of this document to A4 paper.

Disclaimer

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Document Revision

The Ilumicode V 2.21 User Manual Rev. 3 supersedes all previous versions of this manual. Discard any older versions of this manual you may have and replace with this version.

Copyright Notice

Author	Date	Editor	Date
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Table of Contents

Notes

1. Introduction

Critical installation, configuration, or operation information. Failure to comply with this information may render the product partially or completely inoperative, damage third-party equipment, or cause harm to the user

Important installation or configuration information. Failure to comply with this information may prevent the product from functioning correctly.

Useful information.

What Is In The Box

- · Ilumicode V 2.21
- · One signal connector (XLR to clips)
- · Two AA batteries
- · Warranty Card
- · Quick Reference/Start Guide

Unpacking Instructions

Immediately upon receiving a product from ILUMINARC®, carefully unpack the carton. Check the contents of the box to ensure that all parts are present and that they are in good condition.

Claims

The carrier is responsible for any damage incurred during shipping. Therefore, if the received merchandise appears to have been damaged during shipping, the customer must submit the damage report and any related claims to the carrier, not ILUMINARC®. The customer must submit the report upon receipt of the damaged merchandise. Failure to do so in a timely manner may invalidate the customer's claim with the carrier.

For other issues such as missing components or parts, damage not related to shipping, or concealed damage, the customer must make claims to ILUMINARC® within 7 days of receiving the merchandise.

Text Conventions

The term "DMX" used throughout this document refers to the USITT DMX512-A transmission protocol.

Convention	Meaning
1~512	A range of values in the text
50/60	A set of mutually exclusive values in the text
"ILUMICON UM"	The name of another publication or manual
<SET>	A button on the product's control panel
Settings	A product function or a menu option
MENU > Settings	A sequence of menu options
1~10	A range of menu values from which to choose in a menu
Yes/No	A set of two mutually exclusive menu options in a menu
ON	A unique value to enter or select in a menu

There are no user-serviceable parts inside this product. Any reference to servicing you may find in this User Manual will only apply to properly certified ILUMINARC® technicians. Do not open the housing or attempt any repairs unless you are certified to do so.

Please refer to all applicable local codes and regulations for the proper installation of this product.

Keep this manual for future consultation. If you sell this product to another user, make sure that they also receive this manual.

In the unlikely event that your Ilumicode V 2.21 may require service, please contact ILUMINARC® Technical Support.

Safety Notes

Please read all the following Safety Notes carefully because they include important information on how to install, use, and maintain this product safely or any Iluminarc product connected to it.

Personal Safety

- Avoid direct eye exposure to the light source while the product is on.
- Always disconnect this product from its power source before servicing.
- Always connect this product to a grounded circuit to avoid the risk of electrocution.

Mounting and Installation

- This product is for indoor use only! To prevent risk of fire or shock, do not expose this product to rain or moisture.
- Make sure there are no flammable materials close to this product while it is operating.
- CAUTION: When transferring product from extreme temperature environments, (e.g. cold truck to warm humid ballroom) condensation may form on the internal electronics of the product. To avoid causing a failure, allow product to fully acclimate to the surrounding environment before connecting it to power.

Power and Wiring

- Always make sure that you are connecting the products associated to the Ilumicode V 2.21 to the proper voltage, as per the specifications in the product's manual or on the product's sticker.
- Never connect this product to a dimmer pack.

Operation

- The maximum ambient temperature is 113° F (45° C). Do not operate this product at a higher temperature.
- In case of a serious operating problem, stop using this product immediately!

2. Product Description

The Ilumicode V 2.21 is the configuration module for ILUMINARC® products that do not have a control panel. This product is the only way of changing their DMX address and personality from their default values. The Ilumicode V 2.21 can also be used to configure and control its associated products in the absence of a DMX controller.

The Ilumicode V 2.21 consists of a single hand-held instrument with a pig tale cable terminated on a 3-pin XLR connector. It comes with a short adapter cable to connect the Ilumicode V 2.21 to the signal wires using color-coded alligator clips.

Features

- · External control panel for ILUMINARC® IP rated products
- · Configures products to operate on 1, 2, 3, 4, 5, 6 or 7-channel DMX modes
- · Operating modes:

1-channel:	SOLID
2-channel:	VW
3-channel:	VW + D
3-channel:	ARC1
4-channel:	ARC1 + D
4-channel:	ARC2
5-channel:	ARC2 + D
5-channel:	ARC3
6-channel:	ARC3 + D
7-channel:	ARC FULL

Additional Features

SPECIAL1:	Refer to lighting product's user manual
SPECIAL2:	Refer to lighting product's user manual

Overview

LCD
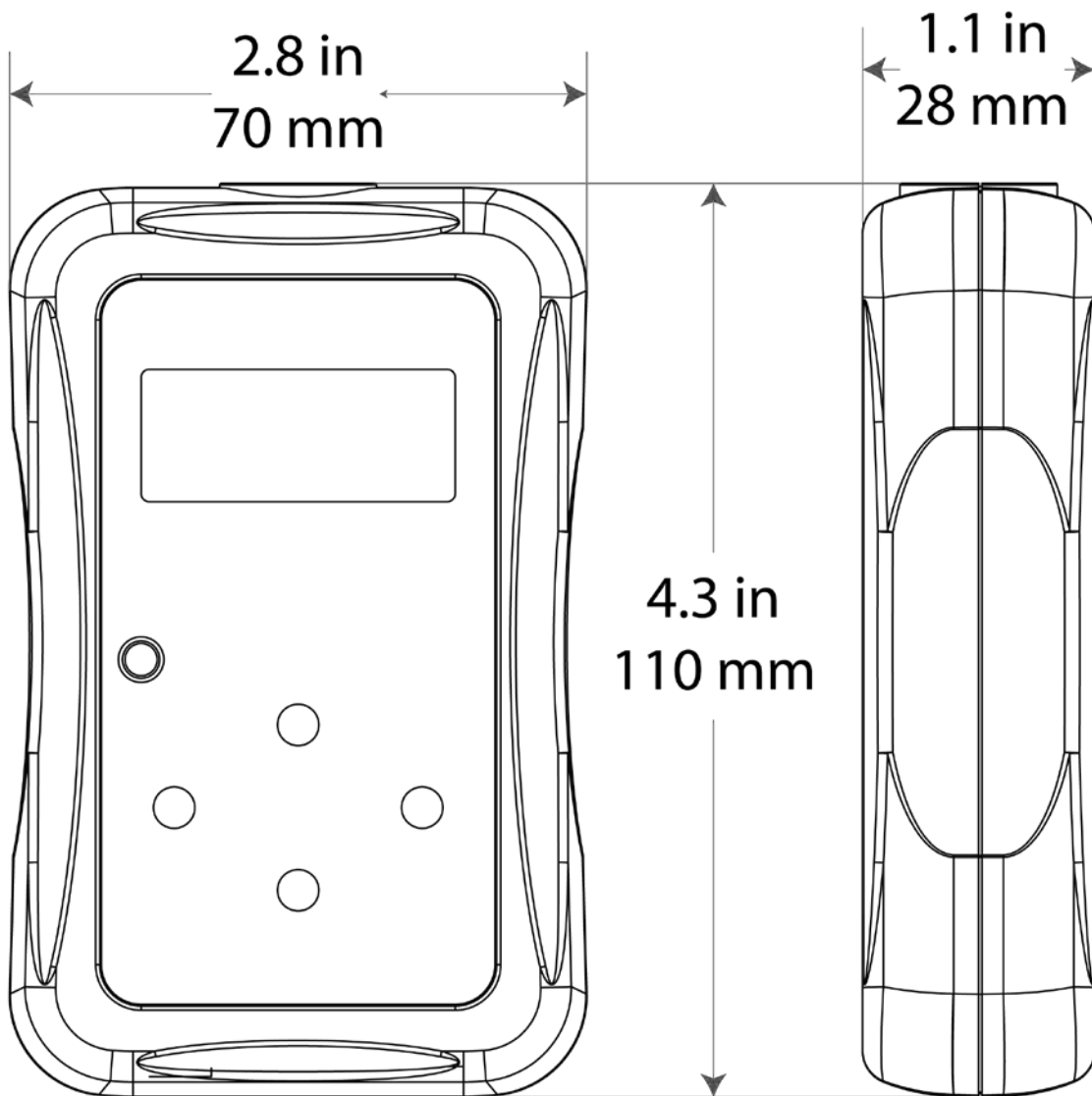Display

Power On
Button

UP

MENU

DOWN

ENTER

Dimensions

2.8 in
70 mm

1.1 in
28 mm

4.3 in
110 mm
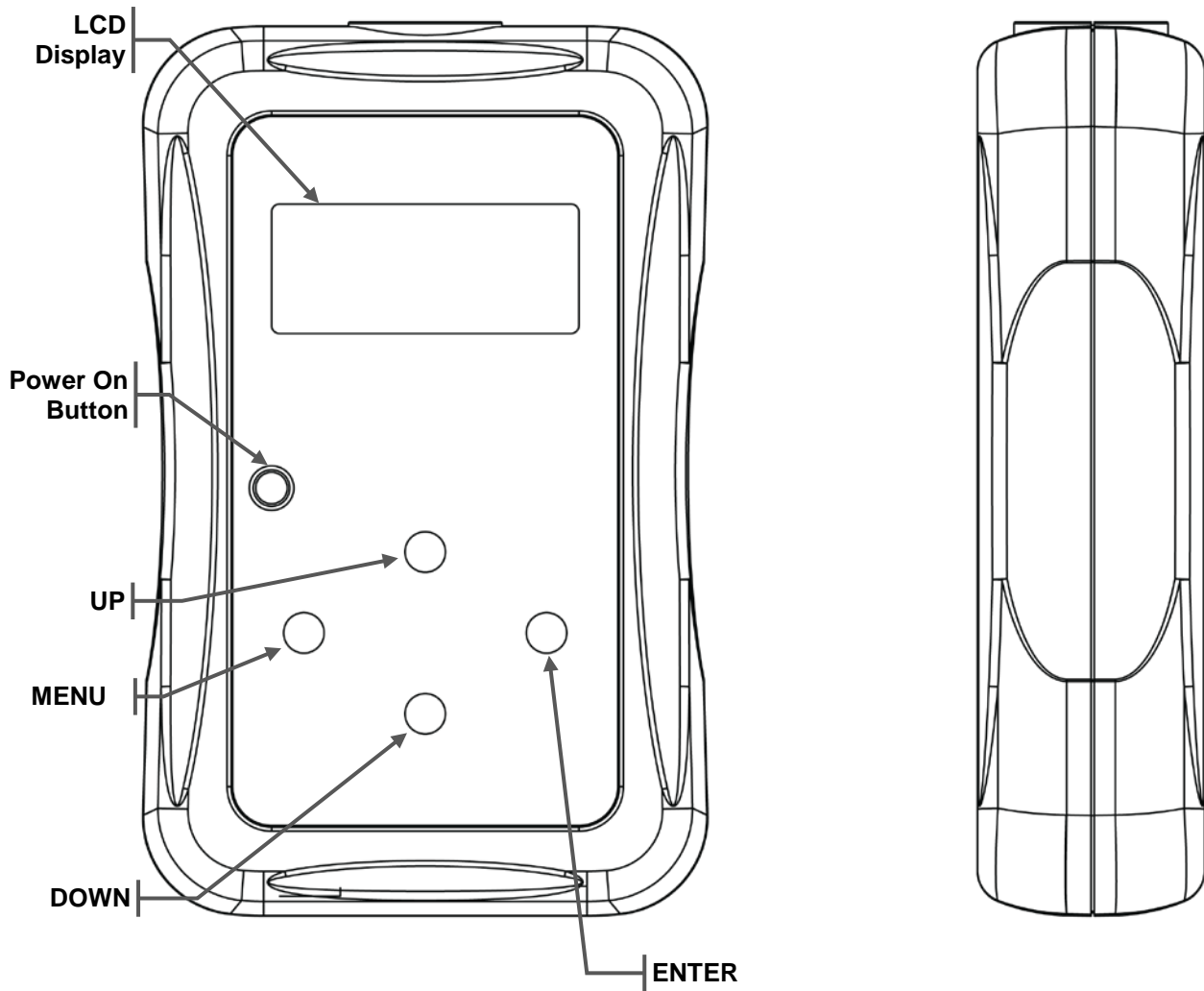
3. Installation

⚠ Always connect ILUMINARC® products to protected AC circuits with an appropriate electrical ground to avoid the risk of electrocution or fire

Mounting

The Ilumicode V 2.21 is strictly a handheld unit. Therefore, ILUMINARC® does not provide any mounting harness or mounting instructions for it. Refer to the corresponding product manual for instructions on how to mount the compatible ILUMINARC® products.

Power

The Ilumicode V 2.21 uses two (2) AA batteries (included).

⚠ Never connect an ILUMINARC® product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.

DMX Linking

The diagram below shows how to connect the Ilumicode DMX output to any compatible ILUMINARC® product.

Note that this connection will control multiple products at the same time, all having the same DMX address. To assign individual DMX addresses to each product, you must connect the Ilumicode unit to each product, individually. This means that you will also have to disconnect the DMX output of the product under configuration if there are other products connected to it.

ⓘ ILUMINARC® recommends not connecting more than 20 products in this mode, while keeping the total distance from the Ilumicode controller to less than 60 m (197 ft). Otherwise, you might need to use an optically isolated signal amplifier.

Power

To Other Products

Signal

1: Gnd
2: Data –
3: Data +

DMX Output

1: Gnd (Black Clip)
2: Data – (Green Clip)
3: Data + (Red Clip)

Signal Connector

Ilumicode Addresser

4. Operation

When turned on, the Ilumicode V 2.21 display shows "**VER 2.21**".

The Ilumicode V 2.21 has a timer that turns the unit off after 60 seconds of inactivity.

The LCD display on the Ilumicode V 2.21 shows the Ilumicode's last sent setting, not the current setting on the product.

Make sure you have connected the Ilumicode V 2.21 to the product(s) before starting programming.

To change the DMX address of a single product, make sure that there is no other product connected to the DMX cable.

Compatible ILUMINARC® products do not light up when they do not receive DMX or Ilumicode signals, unless they are in STATIC mode

Some personalities on this list may not apply to your ILUMINARC® product. Consult the product's manual for more information.

Ilumicode Panel Description

Button	Function
<MENU>	Exits from the current menu or function.
<ENTER>	Enables the currently displayed menu or sets the currently selected value into the selected function.
<UP>	Navigates upwards through the menu list and increases the numeric value when in a function.
<DOWN>	Navigates downwards through the menu list and decreases the numeric value when in a function.
<POWER>	Turns the unit on. The unit will turn off automatically after 30 seconds of inactivity.
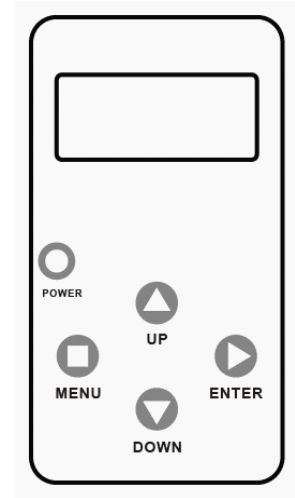
Product Compatibility

The Ilumicode V 2.21 contains all the parameters for all the compatible ILUMINARC® products it can control. Therefore, consult the corresponding product's user manual to determine which parameters on the Ilumicode V 2.21 apply to that specific product.

Programming

Carry out all the programming procedures indicated below from the control panel. Refer to the Menu Map section to learn how the menu options relate to each other.
Use **<ENTER>** and **<MENU>** to change levels in the Menu Map, moving right and left respectively. Use **<UP>** and **<DOWN>** to move vertically within the Menu Map.

DMX Personality

1. Go to **PERS** and select any DMX personality.
2. Make sure to rearrange the DMX addresses of all products in the current DMX universe to avoid address overlapping.

DMX Starting Address

1. Go to **DMX**.
2. Select a starting DMX address (**001~512**).
3. Press <**ENTER**> to send the new DMX address to the product. The display will show "**SEND…**"

Dmx Values

Refer to the compatible ILUMINARC® product's manual for the DMX Values that correspond to that particular product.

Some colors or the strobe effect on this list may not apply to your ILUMINARC® product. Consult the product's manual for more information.

DIM1 is the fastest dimming curve and **DIM4** is the slowest.

Static Colors

1. Go to **STATIC**.
2. Select a color or effect (**RED**, **GREN**, **BLUE**, **COOL**, **WARM**, **AMBE**, **SOLD**, or **STRB**).
3. Select a color value (**000~255**) or a strobe frequency (**00~20**).

Dimmer

This setting gives the user four different options to simulate the dimming curve of an incandescent lighting product.

1. Go to **DIMMER**.
2. Select a dimming curve (**OFF** or **DIM1~4**).

Procedure:

DIMMER	Description
OFF	Dimmer curve is linear with fader
DIM1	Non-linear (fastest)
DIM2	Non-linear (fast)
DIM3	Non-linear (slow)
DIM4	Non-linear (slowest)

Color (Full Color Products)

1. Go to **SETTINGS > COLOR**.
2. Select the color method (**OFF**, **RGB TO W**, **UC**).

Details:
OFF
When the RGB faders are all set to "255," the output is maximum.
RGB TO W
When the RGB faders are all set to "255," the output is the selected White color (see Whites Setting).
UC
When the RGB faders are all set to "255," the output matches the same color output of previous versions of this product.

Whites Setting (Full Color Products)

1. Go to **CALIB**.
2. Select a white color (**WHITE 1~11**) or **RGB TO W**.
3. Select an RGB color (**RED**, **GREN**, **BLUE**, **COOL**, **WARM**, or **AMBE**).
4. Configure the color value (**000~255**).
5. Repeat steps 3 and 4 for the other RGB colors to obtain a white color.
6. Repeat steps 2 through 5 for the other white colors.

Reset to Factory Settings

1. Go to **SETTINGS > RESET**.
2. Select an option (**YES/NO**).

Details:
The product will assume its default values as per the corresponding manual.

Menu Map

Main Level	Programming Levels				Description
DMX	**001~512**				Sets the DMX starting address
PERSON	**VW**				2-channel: WW,CW control
	VW+D				3-channel: WW,CW control + dimmer
	ARC 1				3-channel: RGB control
	ARC 1 + D				4-channel: RGB control + dimmer
	ARC2				4-channel: RGBW control
	ARC2 + D				5-channel: RGBW control + dimmer
	ARC3				5-channel: RGBWA control
	ARC3 + D				6-channel: RGBWA control + dimmer
	ARC FULL				7-channel: RGB control + dimmer
	REMOTE				Reserved for future use
	SOLID				1-channel: Dimmer
	SPECIAL 1				See each product's manual
	SPECIAL 2				
CALIB	**WHITE**	**01~11**	**RED**	**000~255**	Determines the white balance for the color macros
			GREN		
			BLUE		
	RGB		**COOL**		Determines the white balance when **RGBTOW** is active
			WARM		
			AMBE		
DIMMER	**OFF**				Dimmer works in linear mode
	DIM 1				Dimmer works in non-linear mode, from fast to slow
	DIM 2				
	DIM 3				
	DIM 4				
STATIC	**RED**	**000~255**			Configures the static color
	GREN				
	BLUE				
	COOL				
	WARM				
	AMBE				
	SOLD				
	STRB	**00~20**			Configures strobe speed
SETTINGS	**COLOR**	**OFF**			Maximum output, unbalanced white
		RGBTOW			White output is as per **CALIB > RGB** settings
		UC			Output matches that of product's previous versions
	RESET	**NO/YES**			Restores factory defaults

5. Technical Information

Product Maintenance

To maintain optimum performance and minimize wear, clean the products frequently. Usage and environment are contributing factors in determining the cleaning frequency. As a general guideline, products should be cleaned at least twice a month. Dust build-up reduces performance and can cause overheating.

To clean a product:

- Clean all plastic surfaces, with mild soapy water and a soft, lint-free cotton cloth or a lens-cleaning tissue.
- Apply the solution directly to the cloth or tissue and wipe any dirt and grime to the outside edge.
- Gently polish the external surfaces until they are free of haze and lint.

If you still experience technical problems after trying the solutions in the Troubleshooting Table, contact ILUMINARC® Technical Support.

Product Repairs

ILUMINARC® strongly advises you against attempting any repairs to this product unless you are an authorized ILUMINARC® technician.

ILUMINARC® presents the information contained in the Troubleshooting Guide as potential solutions only. In most cases, opening the product's housing will invalidate its warranty.

Troubleshooting Guide

Symptom	Cause(s)	Action(s)
Product is powered but it does not light up	No Ilumicode connected	Connect Ilumicode to product. Product should light up during programming, but it will shut off after the timer kicks in.
	No DMX controller connected	Connect DMX controller and set faders to increase light output
	Static mode not configured	Configure the Static mode to leave the product running stand-alone. Product should stay on after configuring STATIC mode.
Ilumicode does not power up	No / Reversed batteries	Install two AA dry cells in the correct position
	Low battery charge	Change both AA dry cells
	Defective Ilumicode	Replace Ilumicode
Product does not change mode after configuration	Bad signal connection to product	See **DMX Signal Problems** below
	If using clips, wrong connection	Connect clips as per manual
	Defective product	Replace product
	Defective Ilumicode	Replace Ilumicode
Circuit breaker/fuse keeps tripping/blowing	Excessive circuit load	Check total load placed on the electrical circuit
	Short circuit along the power wires	Check for a short in the electrical wiring
Product does not power up	No power	Check for power on power outlet
	Loose or damaged power cord	Check power cord
	Faulty internal power supply	Replace internal power supply
Product does not respond to DMX	Wrong DMX addressing	Check Control Panel and unit addressing
	Damaged DMX cables	Check DMX cables
	Wrong polarity on the controller	Check polarity switch settings on the controller
	Loose DMX cables	Check cable connections
	Faulty DMX interface	Replace the DMX board
DMX signal problems	Non DMX cables	Use only DMX compatible cables
	Bouncing signals	Install terminator as suggested
	Long cable / low level signal	Install an optically coupled DMX splitter right after the product with the strong signal
	Too many products	Install an optically coupled DMX splitter after unit #32 or before
	Interference from AC wires	Keep DMX cables separated from power cables or fluorescent/black lights
	Humidity in the cables or connection boxes	Make sure that the buried conduit and connection boxes are dry. If not using conduit, make sure that you are using cable approved for exterior or underground installation.

LED Disclaimer

LED Life

ILUMINARC® rates LED lifetime based on lumen depreciation of 70% of the original output, with data provided by the manufacturer of the LED. Data from the manufacturer of the LED are not independently verified or measured by ILUMINARC®. When the product is operating in optimal environmental conditions, the LED lifetime is rated to be 50,000 to 70,000 hours by the LED manufacturer.

LED Binning

LED manufacturers sort LEDs into "bins," based on variances in color, output intensity, and the frequency at which the semiconductor operates. ILUMINARC® strives to hold its LED manufacturers to the highest standards of binning to optimize consistency in output from product to product. However, the availability of a single bin cannot be guaranteed. With that in mind, ILUMINARC® has developed a rigorous control system to seek the best-achievable consistency in color and output.

Color Rendering Index (CRI)

CRI is an industry standard method to compare properties of different types of light sources. There are known limitations and inconsistencies related to CRI. Results may vary depending on the environmental factors involved. For this reason, the U.S. Department of Energy (DOE) states that CRI should be considered as one point of reference among others in evaluating white LED products and systems.

The following is an excerpt of recommendations from the DOE:

1. Identify the visual tasks to be performed under the light source. If color fidelity under different light sources is critically important (for example, in a space where color or fabric comparisons are made under both daylight and electric lighting), CRI values may be a useful metric for rating LED products.

2. CRI may be compared only for light sources of equal correlated color temperature. This applies to all light sources, not only to LEDs. Also, differences in CRI values of less than five points are not significant, e.g., light sources with 80 and 84 CRI are essentially the same.

3. If color appearance is more important than color fidelity, do not exclude white light LEDs solely on the basis of relatively low CRI values. Some LED products with CRIs as low as 25 still produce visually pleasing white light.

4. Evaluate LED systems in person and, if possible, on-site when color fidelity or color appearance are important issues.

Source: DOE publication: PNNL-SA-56891, January 2008.

Return Procedure

ILUMINARC®
reserves the right
to use its own
discretion to repair or
replace returned
product(s).

You must send the merchandise prepaid, in the original box, and with its original packing and accessories. ILUMINARC® will not issue call tags.

Call ILUMINARC® and request a Return Merchandise Authorization Number (RMA #) before shipping the product. Be prepared to provide the model number, serial number, and a brief description of the cause for the return.

The user must clearly label the package with an RMA #. ILUMINARC® will refuse any product returned without an RMA #. **DO NOT write the RMA # directly on the box. Instead, write it on a properly affixed label.**

Once you receive the RMA #, please include the following information on a piece of paper inside the box:

Always keep the
original box and
all packaging
material as you
will need those to ship the
product back to
ILUMINARC®.

- · Your name
- · Your address
- · Your phone number
- · The RMA #
- · A brief description of the problem

Be sure to pack the product properly. Any shipping damage resulting from inadequate packaging will be the customer's responsibility. Proper FedEx packing or double-boxing are recommended.

Contact Us

WORLD HEADQUARTERS - ILUMINARC®

General Information		**Technical Support**	
Address:	5200 NW 108th Avenue	Voice:	(800) 762-1074
	Sunrise, FL 33351	Email:	support@iluminarc.com
Voice:	(954) 923-3680		
Fax:	(800) 544-4898	**World Wide Web** www.iluminarc.com	

UNITED KINGDOM AND IRELAND - Chauvet Europe Ltd.

General Information		**Technical Support**	
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	Pinxton, Nottingham, UK	**World Wide Web** www.chauvetlighting.co.uk	
	NG16 6NT		
Voice:	+44 (0)1773 511115		
Fax:	+44 (0)1773 511110		

MEXICO - Chauvet Mexico

General Information		**Technical Support**	
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	Parque Industrial Lerma		
	Lerma, Mexico C.P. 52000	**World Wide Web** www.chauvet.com.mx	
Voice:	+52 (728) 285-5000		

CHAUVET EUROPE - Chauvet Europe BVBA

General Information		**Technical Support**	
Address:	Stokstraat 18	Email:	Eutech@chauvetlighting.eu
	9770 Kruishoutem		
	Belgium	**World Wide Web** www.chauvetlighting.eu	
Voice:	+32 9 388 93 97		

Outside the U.S., United Kingdom, Ireland, Mexico, or Benelux, contact the dealer of record. Follow their instructions to request support or to return a product. Visit our website for contact details.

Technical Specifications

Dimensions and Weight	Length	Width	Height	Weight
	4.3 in (110 mm)	2.8 in (70 mm)	1 in (28 mm)	.45 lbs (.2 kg)

Note: Dimensions in inches rounded to the nearest decimal digit.

Electrical	Power Supply Type		
	2-AA batteries		
DMX	I/O Connectors	Connector Type	
	3-pin XLR	Sockets	
Ordering	Product Name	Item Code	
	Ilumicode	44444001	

RoHS

CE