

coloronix®



RGBW PATHWAY LIGHTING MANUAL

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Summary

Introduction

RGBW Color Changing Pathway Lights are active, top-of-the-line color changing fixtures. They draw on solid-state elements in order to produce highlights and washes in architectural spaces.

More specifically, “RGBW” is an acronym for “Red, Green, Blue, and White”. RGBW LED color mixing luminaires have the potential to produce 4.3 billion colors, and 16.7 million white light tones.

When installed and operated according to this manual, these pathway lights will operate safely and dependably for their rated lifespan.

These luminaries require a USITT DMX 512 control signal on four consecutive channels total. The unit includes a DATA OUT output for connection to additional units or other DMX512 devices. A Color Ray Signal from the internal stand-alone controller or external controller can be used as well.

The pathway lights are UL 1598 damp location rated for use in indoor or outdoor environments.

Scope

The purpose of this manual is to properly install and use color-changing pathway lights at peak performance.

This manual must be complimented by additional references, consultation from qualified professional(s), and observance of state and local codes and regulations. This rule applies to any interior structure, exterior structure, or environment.

Therefore, it is important to: *“please read and comply with all instructions and warnings in this manual when installing or using this product.”*

Who Is This Manual Intended for?

This manual is intended for electrical contractors, electrical engineers, and licensed electricians.

Additional Supplies

DMX control cable: Belden 9841 or CAT5 RJ45 Cable
DMX512 compatible controller or Coloronix Color Ray Device
DMX controllers


Safety


Purpose of Product

Coloronix Color Changing Pathway Lights are designed for interior applications, and are ETL/CETL certified.


Hazard Icon Key:


The “ **DANGER**” icon means avoiding *pending* danger will result in serious injury, or death.

The “ **WARNING**” icon means avoiding this warning may result may in serious injury, or death.


The “ **CAUTION**” icon means not exercising caution here may result in minor to moderate injury, or property damage.


The precautions are:


 **DANGER:** Not turning off the main power before wiring, installing, connecting, or disconnecting this product may result in serious injury, or death.


 **WARNING:** Not following NEC codes, local codes, or consulting a certified professional may result in property damage, serious injury, or death.


 **WARNING:** Not following instructions, or safety labels may result in property damage, or serious injury.


 **WARNING:** Modifying, servicing, or ignoring these safety indications may void the warranty.


 **WARNING:** Inspect product before use. DO NOT use if damaged.

 **WARNING:** Install safety cables per local and structural engineer's code.

 **CAUTION:** Hot swapping, not turning off fixtures before connection or disconnection, will void the warranty, and damage property.

 **CAUTION:** Do not go beyond the specified voltage, input current, maximum number of fixtures, or run length.

 **CAUTION:** Do not use sharp tools near the reflector or lens.

 **CAUTION:** Do not look directly into beam, with or without optical instruments.

Specifications

Power Input: Direct 120VAC or 24V DC Available.

Power Consumption: 0.1-4W

Environment: Dry Location

L70 Life: 35,000 Hours.

Temperature Rating: 35°F - 120°F Ambient

LED Die Colors:
 Red (620-635nm)
 Green (520-535nm)
 Blue (450-465nm)
 Neutral White (4000k)

Safety: UL 8750 and UL 1598

Planning for Installation

Unpacking

Survey the unit to make sure the pathway light is intact—not cracked or damaged. Any damages to the package or its contents are the buyer's responsibility; please follow protocol for filing damage claims. Please recycle or appropriately discard any packing materials.

Preparation

Before Installation, Coloronix suggests:

- Consulting the provided submittal drawings to recognize layouts of luminaries, power supplies, and wiring layouts.
- Drawing out a layout plan consisting of locations of luminaries and wiring.
- Record DMX addresses on a mapping grid for easy reference and addressing (where applicable).
- An electrical inspector reviews all wiring plans.

Point to Consider About Data

- AC Power and DATA cables may NOT run in the same conduit due to possible induced errors.

Quick Step-by-Step Instructions

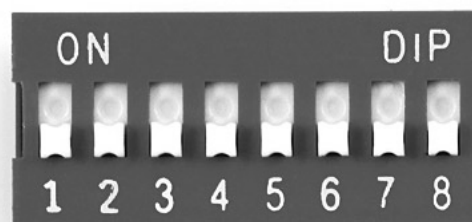
To successfully install RGBW Pathway lights, the steps are:

1. Setting Color Mode or Setting Stand Alone Color Ray mode
2. Mounting and Alignment of Fixture
3. Installing Power Connections
4. Installing Data Connections
5. Install Pathway Light
6. Ready to Go!

Setting DMX Color Mode

The unit is shipped without a set specific DMX address. Set the personalized DMX address using the address table (Below) for address dip switch position settings. The Dip Switch Board can be found inside the Housing accessible below the ceiling. See figure. Up to 57 different addresses can be set per DMX universe.

Dip Switch Inside Housing



Dip Switch Setting	DMX Channels	Dip Switch Setting	DMX Channels
1	1-4	1,3,5,6,7	117-120
1,3	5-8	1,4,5,6,7	121-124
1,4	9-12	1,3,4,5,6,7	125-128
1,3,4	13-16	1,8	129-132
1,5	17-20	1,3,8	133-136
1,3,5	21-24	1,4,8	137-140
1,4,5	25-28	1,3,4,8	141-144
1,3,4,5	29-32	1,5,8	145-148
1,6	33-36	1,3,5,8	149-152
1,3,6	37-40	1,4,5,8	153-156
1,4,6	41-44	1,3,4,5,8	157-160
1,3,4,6	45-48	1,6,8	161-164
1,5,6	49-52	1,3,6,8	165-168
1,3,5,6	53-56	1,4,6,8	169-172
1,4,5,6	57-60	1,3,4,6,8	173-176
1,3,4,5,6	61-64	1,5,6,8	177-180
1,7	65-68	1,3,5,6,8	181-184
1,3,7	69-72	1,4,5,6,8	185-188
1,4,7	73-76	1,3,4,5,6,8	189-192
1,3,4,7	77-80	1,7,8	193-196
1,5,7	81-84	1,3,7,8	197-200
1,3,5,7	85-88	1,4,7,8	201-204
1,4,5,7	89-92	1,3,4,7,8	205-208
1,3,4,5,7	93-96	1,5,7,8	209-212
1,6,7	97-100	1,3,5,7,8	213-216
1,3,6,7	101-104	1,4,5,7,8	217-220
1,4,6,7	105-108	1,3,4,5,7,8	221-224
1,3,4,6,7	109-112	1,6,7,8	225-228
1,5,6,7	113-116	1,3,7,6,8	229-232

Color Ray Stand Alone Mode

For application not using DMX control, user can preprogram shows.

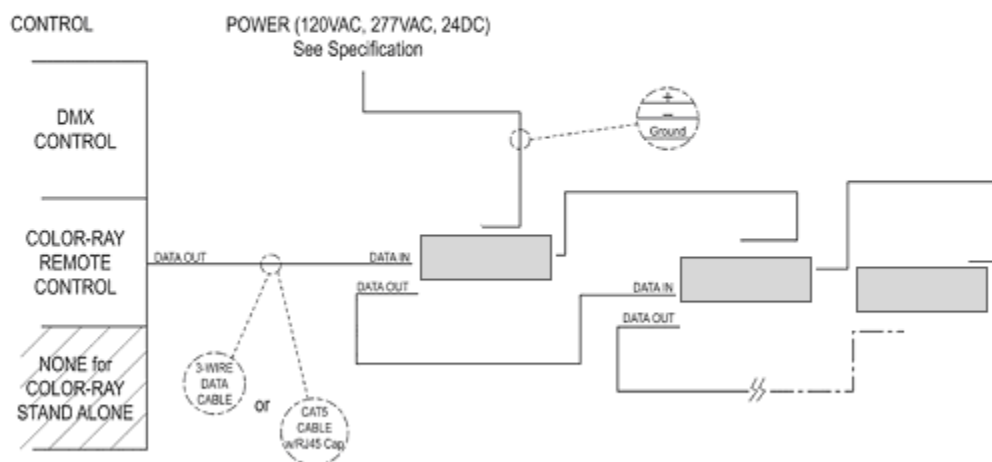
The fixtures on board computer have been pre-configured with ColorRay programs. No additional software or hardware is needed to access. Set the dip switch address for stand alone use.

Dip Address	Setting	Function	Speed
0	All Down	Generic Rainbow Face	
232	4,6,7,8	Static Color: Red	
233	1,4,6,7,8	Static Color: Green	
234	2,4,6,7,8	Static Color: Light Blue	
235	1,2,4,6,7,8	Static Color: Dark Blue	
236	3,4,6,7,8	Static Color: Orange	
237	1,3,4,6,7,8	Static Color: Purple	
238	2,3,4,6,7,8	Static Color: Pink	
239	1,2,3,4,6,7,8	Static Color: Yellow	
240	5,6,7,8	Full Rainbow: Full Color Fade, Repeat	0.5 seconds
241	1,5,6,7,8	Full Rainbow: Full Color Fade, Repeat	5 seconds
242	2,5,6,7,8	Full Rainbow: Full Color Fade, Repeat	5 minutes
243	1,2,5,6,7,8	Full Rainbow: Full Color Fade, Repeat	30 minutes
244	3,5,6,7,8	Christmas Colors: Red, Green, Repeat	0.5 seconds
245	1,3,5,6,7,8	Christmas Colors: Red, Green, Repeat	5 seconds
246	2,3,5,6,7,8	Christmas Colors: Red, Green, Repeat	5 minutes
247	1,2,3,5,6,7,8	Christmas Colors: Red, Green, Repeat	30 minutes
248	4,5,6,7,8	Cool Blue: Dark Blue, Sky Blue, Repeat	0.5 seconds
249	1,4,5,6,7,8	Cool Blue: Dark Blue, Sky Blue, Repeat	5 seconds
250	2,4,5,6,7,8	Cool Blue: Dark Blue, Sky Blue, Repeat	5 minutes
251	1,2,4,5,6,7,8	Cool Blue: Dark Blue, Sky Blue, Repeat	30 minutes
252	3,4,5,6,7,8	Exotic Colors: Orange, Turquoise, Neon Green, Fuchsia, Repeat	0.5 seconds
253	1,3,4,5,6,7,8	Exotic Colors: Orange, Turquoise, Neon Green, Fuchsia, Repeat	5 seconds
254	2,3,4,5,6,7,8	Exotic Colors: Orange, Turquoise, Neon Green, Fuchsia, Repeat	5 minutes
255	1,2,3,4,5,6,7,8	Exotic Colors: Orange, Turquoise, Neon Green, Fuchsia, Repeat	30 minutes

Color Ray Remote Control

For remote control of the ColorRay setting, use SCC5-In-Wall Receiver and remote control. All programs and static colors can be set via remote control.

DATA + POWER for RECESSED



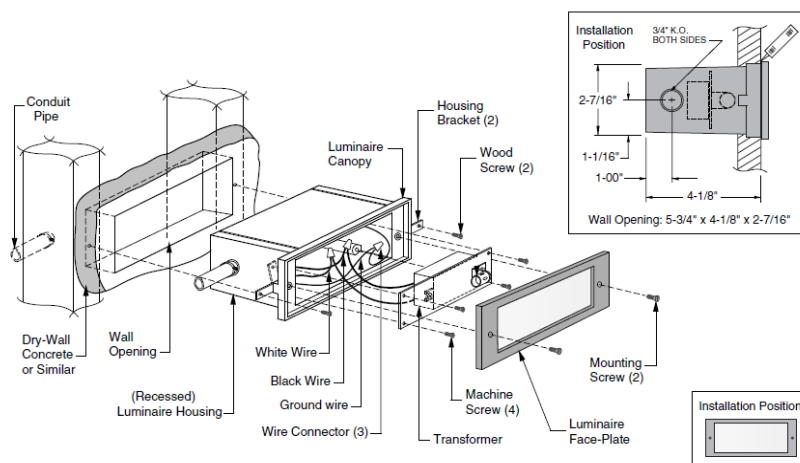
Install Fixture

Mounting

1. Rotate the Mounting Brackets and install the Housing using the two Wood Screws as shown.
2. Install luminaire Face-Place with the two Mounting Screws (provided) as shown in figure below.

Note: In order to comply with established electrical code, the installer must seal the area around the Luminaire Canopy and the Wall, with type of caulking compound such as GE 100% or Dow Corning 100% silicone to provide a watertight seal in accordance with the differing surface textures of the wall.

Note: Install Fixture Canopy Flush to the Wall.



1. Electrical Connection

Connect field supply wires (120VAC or 24DC—see specifications) to driver input power leads using appropriately sized wire nuts. Hot to black, neutral to white, ground to green and bare copper wire (if applicable).

2. Data Connection

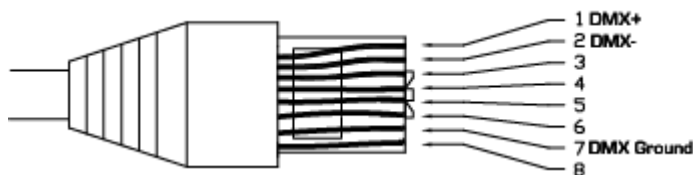
Connect data cables in series.

Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard, no more than 32 fixtures should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended serial data link distance: 500 m (1640 ft)

Maximum recommended number of fixtures on a serial data link: 32

For RJ45/CAT5 installation, a RJ45 jack can be used (use PCLO04 RJ45 coupler).



Notice: To comply with all local codes and jurisdiction, qualified communications technicians must do communications wiring.

Notice: Communication cables and AC power lines must not be run in the same conduit.

- A. Route Data Cables in series between housing and any communications accessories using DATA IN and DATA OUT.
- B. In order that they may be easily accessed from the room once construction is complete, secure data cables in the immediate proximity of the housings.

Coloronix strongly recommends clearly marking communication cables near the RJ45 connectors (or end of cables) in such a way to indicate the correct order of connection.

- C. Use RJ45 DMX terminator, insert in “DATA OUT” of last fixture in series.

*To avoid signal transmission problems and interference, it is always advisable to connect to a DMX signal terminator.

Troubleshooting Guide

If does not light, check if:

- Electrical power is not connected.
- Electrical power is less than specific voltage.
- Electrical power is greater than specified voltage.

If does not respond to DMX control signal, check if:

- DMX control device and RGBW are addressed differently.
- DMX cable is damaged.
- DMX control device is disconnected or not operating.
- DMX device needs to be restarted.
- LED fixture was not restarted after address change.

If the fixture is not responding to DMX, check if:

- DMX addressing is wrong:
 - Check Control Panel and unit addressing.
- The wrong polarity settings may be on the controller:
 - Check polarity switch settings on the controller.
- DMX cables may be loose:
 - Check cable connectors.

If DMX control operation flickers or is intermittent, check if:

- RGBW Color Changing Pathway Light or final DMX device in daisy chain is not terminated.
- DMX cable is damaged.
- DMX control device is operating at less than 25Hz.

If there is a loss of signal, check if:

- Non-DMX cables are being used:
 - Use only DMX compatible cables (see page 10).
- Signals are bouncing:
 - DMX terminator is not installed as suggested.

If output is less than normal, check if:

- Environment temperature may be in excess of 50C/122F.
- Lens may be damaged or dirty.
- DMX control or RGBW channels may be set at low level.

Further Troubleshooting

Should problems occur while using the product, unplug it at once and contact:

Coloronix, Inc.
 Tech Support: (909) RGBW-555
support@coloronix.com

Replacing a Failed Fixture

“Hot Swapping” a fixture is not allowed. If a fixture needs to be replaced, the steps are to:

1. Disconnect the DMX input at the junction box of the fixture needing replacement.
2. Disconnect DMX output.
3. Replace fixture.
4. Reconnect AC negative.
5. Reconnect AC positive.
6. Reconnect DATA output.
7. Reconnect DATA input.
8. Reconnect power.
9. Make sure the replaced fixture and the entire system is in working order.

Warranty Information

3 YEAR PRODUCT LIMITED WARRANTY

Coloronix, Inc. provides a warranty to LED housings and LED trims in case of physical or assembly-related malfunctions. This warranty is valid up to three years from the product's purchase date. Furthermore, Coloronix, Inc. offers to repair products with no charge for labor, or at its own discretion, may offer to replace parts at no charge. However, any labor to remove or install fixtures is not covered. This warranty is only valid for the original purchaser of the product. Proof of date of purchase by receipt or by other means (deemed acceptable by Coloronix, Inc.) is necessary for any warranty service. The warranty only covers product failures due to failure in parts or labor resulting from normal use. The warranty does not cover product failure due to mistake, improper use, mistreatment, neglect, modification, improper installation, inappropriate application of product, or any other defect not resulting from the manufacturer's construction or labor. This warranty does not cover damages resulting from products interacted with non-Coloronix, Inc. brand products. Corrosion or discoloration in components or products are not covered. Except as written above, no other warranties are applicable.

Coloronix, Inc. is not liable for any damages—accidental, unusual, or resulting—in breach of this warranty. Any warranties, stated here or implied, are only valid for the duration of this warranty.

The length, limitation, or cancellation of a warranty, whether incidental or resulting from use, may not apply to individuals in certain states.

This warranty is the only warranty, written or verbal, accepted by Coloronix, Inc. The rights of the consumer herein may be different from state to state.

For warranty service, please write to:

Coloronix, Inc.
5461 W. Jefferson Blvd.
Los Angeles, CA 90016.

Please include the product name, a description of the product, and address and telephone contacts.

Coloronix, Inc. will offer a solution to the problem, or provide instructions for return. Any returns must include the return material authorization code (provided by Coloronix, Inc.), as well as return freight prepaid. Returns without a return authorization code will not be accepted.

Coloronix, Inc. accepts no liability for any damages incurred in shipping. All products are inspected as packed. Damages, apparent or not, must be claimed with the delivery carrier.

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