

Jandy® Infinite WaterColors™ LED Light Controller

This product requires AquaLink RS revision Y or later

WARNING

FOR YOUR SAFETY - This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed, where such state or local or provincial requirements exist. In the event no such state or local requirement exists, the individual in charge of installation must be a professional with sufficient experience in pool equipment installation and maintenance, so that all of the instructions in this manual can be followed exactly. Improper installation and/or operation can create dangerous electrical hazards, which can cause high voltages to run through the electrical system. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation may void the warranty.



If these instructions are not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death. **DO NOT MODIFY THIS EQUIPMENT!**

ATTENTION INSTALLER: This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

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FCC Regulatory Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Section 1. IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS

1.1 Safety Instructions

All electrical work must be performed by a licensed electrician and conform to all national, state, provincial and local codes. When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

WARNING

EQUIPMENT UNDER PRESSURE: Always turn pump off prior to installation or service. Your pump/filter system is operated under pressure and the pressure must be released before you begin work. Please see your pump/filter owner's manual for further instructions.

WARNING

To reduce the risk of electric shock, fire or injury, service should only be attempted by a qualified pool service professional.

Risk of electric shock: When installed as a power source for landscape lighting: Install power unit 5 feet (1.5 m) or more from a pool or spa and 10 feet (3.05 m) or more from a fountain. Where the power unit is installed within 10 feet (3.05 m) of a pool or spa connect power unit to a GFCI protected branch circuit. Canadian installations must be at least three (3) meters from the water.

WARNING

Risk of electric shock which can result in serious injury or death: Before attempting to install or service, ensure that all power to the circuit supplying power to the system is disconnected or turned off at the circuit breaker. All wiring must be done in accordance with the National Electrical Code® (NEC)®, NFPA-70®, including those in Article 680 - Swimming Pools, Fountains, and Similar Installations.

In Canada, the Canadian Electrical Code (CEC), CSA C22.1, must be followed. All applicable local installation codes and regulations must be followed.

ATTENTION: This power center and the chlorine generator control center are not to be considered as suitable for use as service equipment. Therefore, it is required to have the appropriate means of disconnection, circuit isolation, and/or branch circuit protection installed upstream of the power/control center

WARNING

To reduce the risk of injury do not permit children to use this product unless they are closely supervised at all times

WARNING

Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa or hot tub unless they are closely supervised at all times

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

PREVENT CHILD DROWNING: Do not let anyone, especially small children, sit, step, lean or climb on any equipment installed as part of your pool's operational system. Locate the components of your operational system at least 1 m (3 ft 3 in) from the pool so children cannot use the equipment to access the pool and be injured or drown.

To reduce the risk of injury, do not remove the suction fittings of your spa or hot tub. Never operate a spa or hot tub if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the equipment assembly.

WARNING

To avoid injury ensure that you use this control system to control only packaged pool/spa heaters which have built-in operating and high limit controls to limit water temperature for pool/spa applications. This device should not be relied upon as a safety limit control. Water temperature in excess of 100°F (38°C) may be hazardous to your health.

WARNING

A terminal bar marked "GROUND" is provided within the power center. To reduce the risk of electrical shock, connect this terminal bar to the grounding terminal of your electric service or supply panel with a continuous copper conductor having green insulation and one that is equivalent in size to the circuit conductors supplying this equipment, but no smaller than no. 12 AWG (3.3 mm²). In addition, a second wire connector should be bonded with a no. 8 AWG (8.4 mm²) copper wire to any metal ladders, water pipes, or other metal within five (5) feet (1.52 m) of the pool/spa. In Canada, the bonding wire must be minimum 6 AWG (13.3 mm²).

WARNING

Install only on a branch circuit protected by a ground fault circuit interrupter (GFCI), Class A GFCI in Canada. The conductors on the load side of the ground-fault circuit-interrupter shall not occupy conduit, boxes, or enclosures containing other conductors unless the additional conductors are also protected by a ground-fault circuit-interrupter. Refer to local codes for complete details.

CAUTION: This device is intended for use with permanent swimming pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

Modifications made to this equipment, which are not authorized by the manufacturer, may void the user's authority to operate this equipment.


WARNING

To reduce the risk of FIRE OR INJURY TO PERSONS:
Turn off/unplug and allow to cool before replacing lamp.
Lamp gets HOT quickly! Contact only switch/plug when turning on. Do not touch hot lens, guard, or enclosure (see diagram/picture). Keep lamp away from materials that may burn. Do not touch the lamp at any time. Use a soft cloth. Oil from skin may damage lamp. Do not operate the luminaire fitting with a missing or damaged shield.
Lighted lamp is HOT!

1.2 Landscape Lighting Instructions

THIS SECTION INCLUDES INSTRUCTIONS, PRECAUTIONS AND WARNINGS APPLICABLE TO LANDSCAPE LIGHTING APPLICATIONS. FOLLOW ALL REQUIREMENTS OF THIS SECTION WHEN LIGHT CONTROLLER IS USED IN LANDSCAPE LIGHTING APPLICATIONS. .

CAUTION: For use only on a branch circuit protected by a ground fault circuit interrupter (GFCI), Class A GFCI in Canada.

 WARNING
<p>RISK OF ELECTRICAL SHOCK Install power unit 5 feet (1.5 m) or more from a pool or spa and 10 feet (3.05 m) or more from a fountain. Where the power unit is installed within 10 feet (3.05 m) of a pool or spa connect power unit to a GFCI protected branch circuit. In Canada, do not mount power supply or landscape luminaires within 3 m (10 feet) of a swimming pool or spa or fountain.</p>

THIS DEVICE IS ACCEPTED AS A COMPONENT OF A LANDSCAPE LIGHTING SYSTEM WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY CSA OR LOCAL INSPECTION AUTHORITIES HAVING JURISDICTION

-IN CANADA, LANDSCAPE LIGHTING POWER SUPPLIES ARE FOR OUTDOOR USE ONLY. MOUNT AT LEAST 30 CM ABOVE GROUND.

-THIS DEVICE IS CERTIFIED FOR USE WITH LANDSCAPE LIGHTING SYSTEMS. THIS DEVICE IS ACCEPTED AS A COMPONENT OF A LANDSCAPE LIGHTING SYSTEM WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY CSA OR LOCAL INSPECTION AUTHORITIES HAVING JURISDICTION.


-DO NOT CONNECT TWO OR MORE POWER SUPPLIES IN PARALLEL.

-LANDSCAPE LIGHTING SYSTEMS ARE FOR OUTDOOR USE ONLY. NOT FOR USE IN DWELLING UNITS.

1.3 Specifications

Power Supply	
Input:	120VAC, 60 Hz, 2.75A
Output:	14 VAC, 60 Hz, max 300W
Enclosure	
Type 3RX	
Knockouts	
10 total 1/2" - 3/4" combination	

Aqualink will support control of up to 4 Infinite WaterColors Light Controllers and each controller will support communication with up to 16 (15W) and 9 (25W) lights. Ensure the combined light wattage does NOT exceed 240W per controller.

 WARNING
<p>The Infinite WaterColors LED Light Controller should not be considered suitable for use as service equipment. Therefore, it is required to have the appropriate means of disconnection, circuit isolation, and/or branch circuit protection installed upstream of the power center.</p>

Section 2. System Overview

This manual provides installation and basic operational instructions for the Jandy Infinite WaterColors LED Light Controller. The Infinite WaterColors LED Light Controller includes a 300W transformer specifically designed to supply 14 volts to pool/spa lights, submersible fixtures, and outdoor garden lights. The Infinite WaterColors LED Light Controller is capable of communicating with the low voltage lights and automation systems. The built-in circuit protection will disconnect power to the transformer in case of defect or overload. These transformers are suitable for direct connection to underwater pool, spa, and landscape lights.

Read the installation and operation instructions completely before proceeding with the installation. Keep this manual in a safe place for future reference when inspecting or servicing the Infinite WaterColors LED Light Controller.

Before starting, check that you have the correct parts as indicated below. If any parts are missing or incorrect, please call your local distributor or technical support at 1-800-822-7933 for assistance.

2.1 Package Contents

Jandy Infinite WaterColors LED Light Controller
1- Enclosure and PIB
2- Upper mounting bracket
3- Lower mounting bracket
4- 20 FT RS-485 Cable

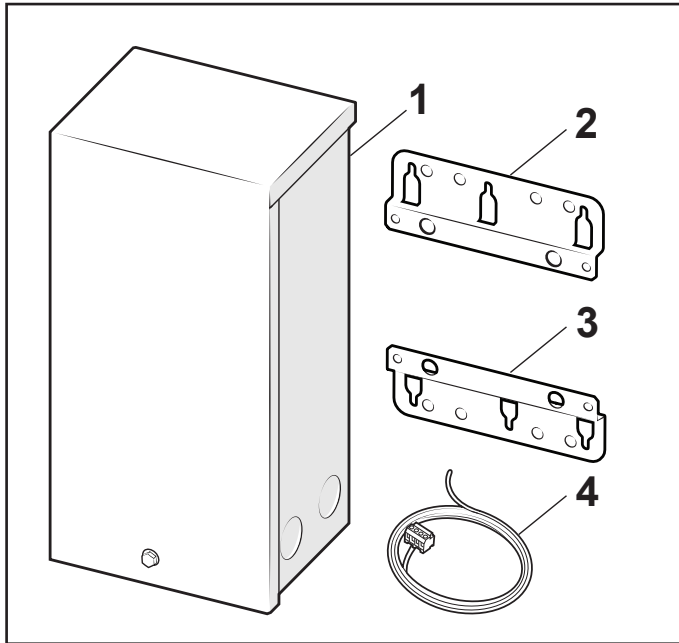


Figure 1. Package Contents

2.2 Location Requirements for Pool and Spa Light Applications

In order to protect the Infinite Water Colors LED Light Controller from pressurized water spray (such as that from irrigation sprinklers) and from mechanical impacts and/or damage, it should be located:

- At least 4 inches (10 cm) above the ground.
- At least 8 inches (20 cm) above the water level.
- At least 4 feet (1.3 m) from the inside edge of the pool or spa, at least 10 feet (3 m) from a fountain, or as required by local code in the US.
- At least 10 feet (3 m) from the inside edge of the pool, spa or fountain in Canada, or as required by local code.

Section 3. Installation

3.1 Mounting

The Infinite WaterColors LED Light Controller is shipped with mounting brackets fastened on the back.

- Turn the Light Controller over and inspect the brackets installed inverted on the back.
- If any parts are missing or damaged, please call your local distributor or technical support at 1-800-822-7933 for assistance.

1. Remove mounting screws from upper and lower brackets on the back of the Light Controller.
2. Rotate and secure upper and lower brackets with mounting screws to the same mounting holes, see Figure 2.

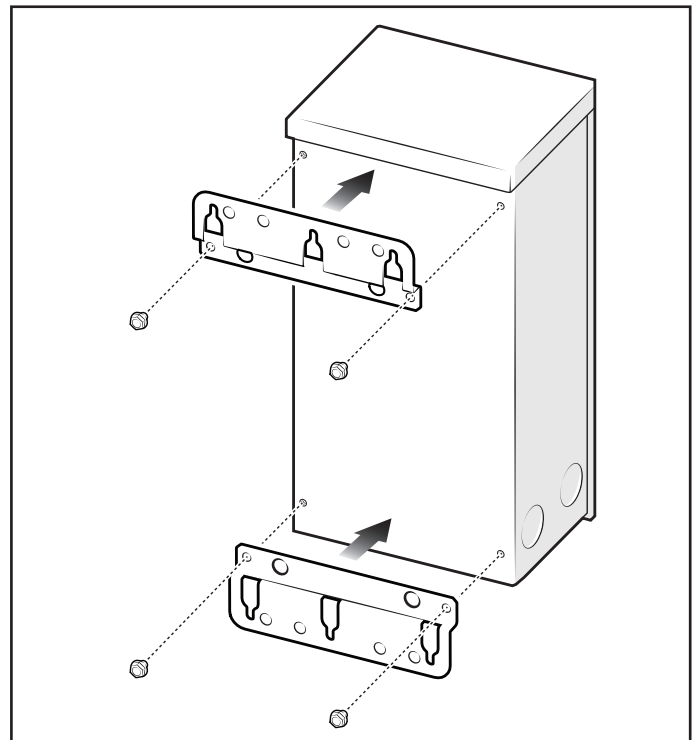


Figure 2. Install Brackets

3. Mark the location for the mounting screws.
4. Drill holes where the mounting screws will be installed.
5. Secure screws (or other hardware appropriate for the mounting surface) through either the keyhole slots or the mounting holes of the Light Controller enclosure, see Figure 3.

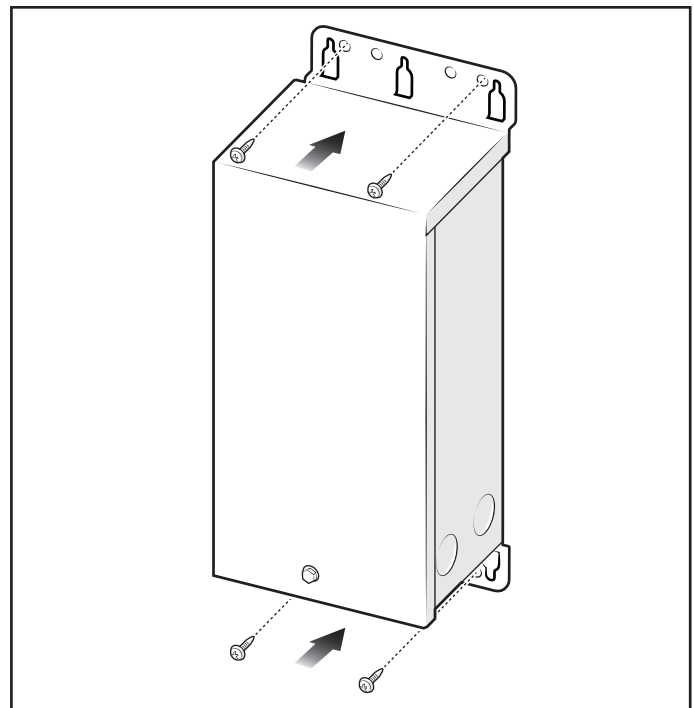


Figure 3. Mounting Light Controller

3.2 High Voltage Wiring

⚠ WARNING

Risk of electric shock which can result in serious injury or death: Before attempting to install or service, ensure that all power to the circuit supplying power to the system is disconnected or turned off at the circuit breaker. All wiring must be done in accordance with the National Electrical Code® (NEC(R))®, NFPA70®.

In Canada, the Canadian Electrical Code (CEC), CSA C22.1, must be followed. All applicable local installation codes and regulations must be followed.

Wiring connections must be made exactly as shown in the wiring diagram found on the inside of the Infinite WaterColors LED Light Controller cover. The NEC and CEC also require that pool equipment be bonded together as part of the equipotential bonding grid. Zodiac Pool Systems LLC provides a labeled bonding lug on the bottom of the Light Controller to accommodate this requirement.

1. Turn off power at the breaker panel.
2. Remove the cover. The cover is held on by one screw, see Figure 4(a).
3. Remove a knockout from the bottom left side of the Light Controller.
4. Thread a conduit connector that is rated to local code into the knockout hole on the Light Controller, see Figure 4(b).
5. Feed 120 VAC through the conduit and conduit connector on the Light Controller, see Figure 4.

NOTE: Power the Infinite WaterColors LED Light Controller directly from a breaker, do NOT wire to a relay.

6. Connect the green ground wire to the ground terminal bar in the Light Controller, see Figure 4(c).
7. Use wire nuts to connect the line wires (black to black) and neutral wires (white to white), see Figure 4(d).
8. Proceed to section 3.3 Low Voltage Wiring.

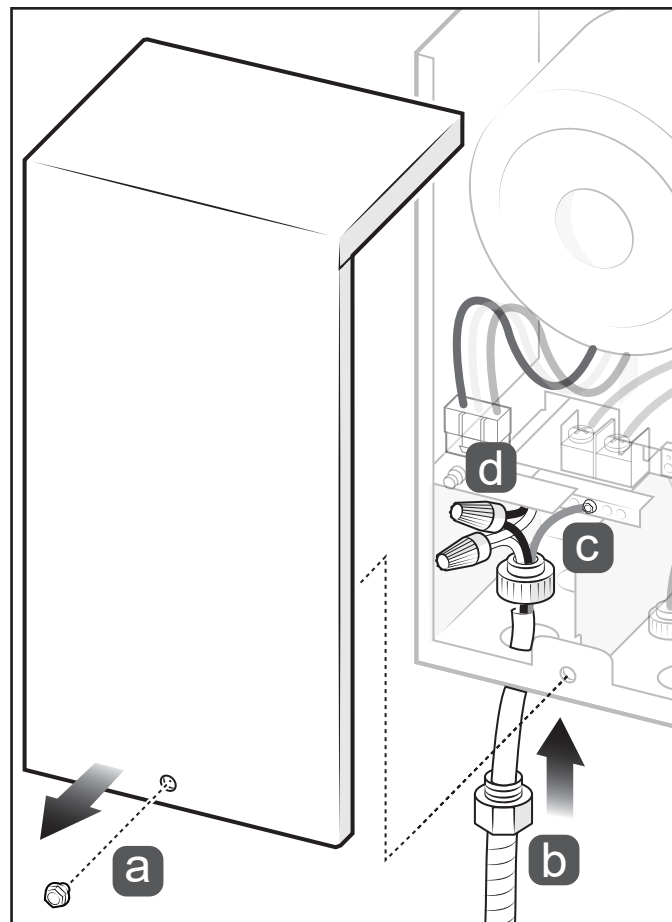


Figure 4. Connect High Voltage Wires

3.3 Low Voltage Wiring and Communication

1. Remove a knockout from the bottom right side of the Light Controller.
2. Thread a conduit connector into the knockout hole on the Light Controller, see Figure 5.
3. Feed low voltage light cord through the conduit and conduit connector on the Light Controller, see Figure 5.

NOTE: It is recommended to add a junction box when installing more than two lights. Low voltage wires are not polarity sensitive.

4. Use wire nuts to connect the low voltage light wires, white wire connects to orange wire and black wire connects to orange wire, see Figure 5. If installing a niched light, connect the green ground wire to the terminal bar in the controller
5. Once power is restored, verify lights perform the “rainbow sequence” (it could take up to two minutes), this indicates the lights are powered and communicating to the Light Controller.

NOTE: A blinking yellow light means no communication between lights and the light controller.

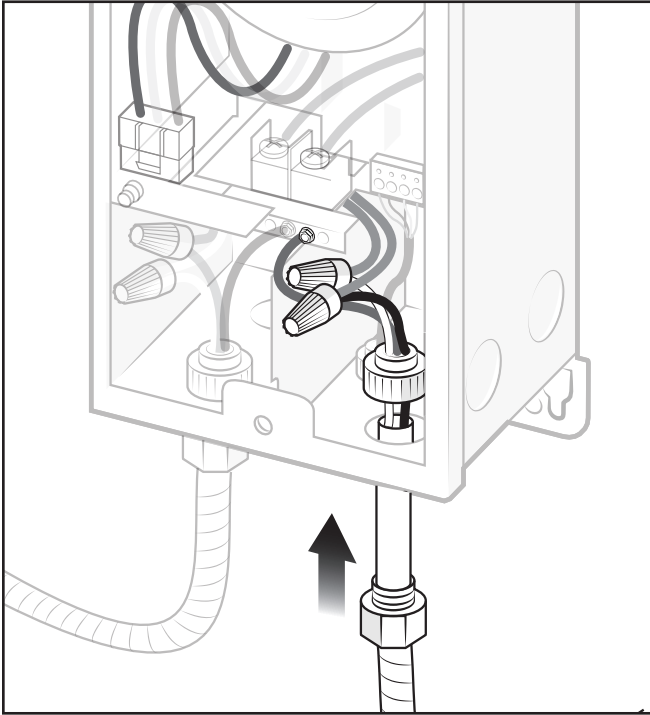


Figure 5. Connect Low Voltage Wires

6. Turn off power at the breaker panel.
7. RS-485 comes factory wired to the Light Controller. Connect the low voltage RS-485 communication wires to the Aqualink RS automation system. First wire red (R) to 1, black (B) to 2, yellow (Y) to 3, and green (G) to 4 on the connector, see Figure 6.

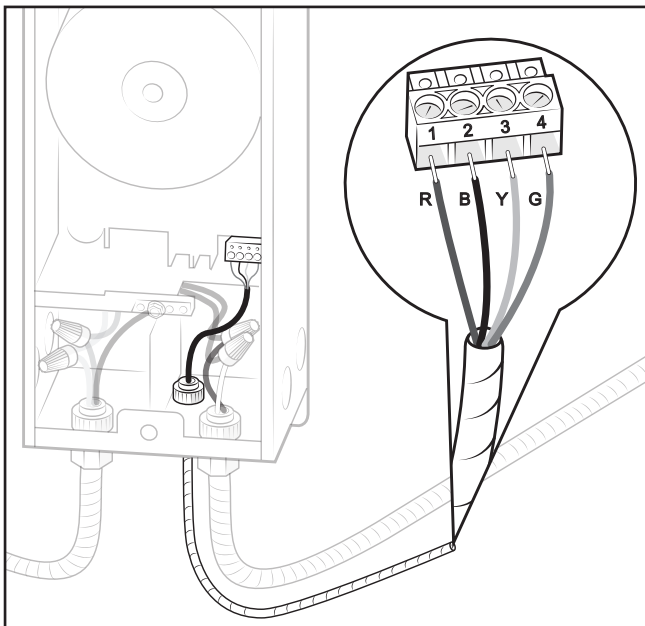


Figure 6. Connect RS-485 Wires

8. Check all connection points and wiring for secure connections.

NOTE: Cover screw ensures bonding to ground, and must be secured in place.

9. Turn on the breaker to restore power (LED2 will turn on red and LED1 will start flashing green). Pool & Spa Lights will be off due to control from automation, see Figure 7.

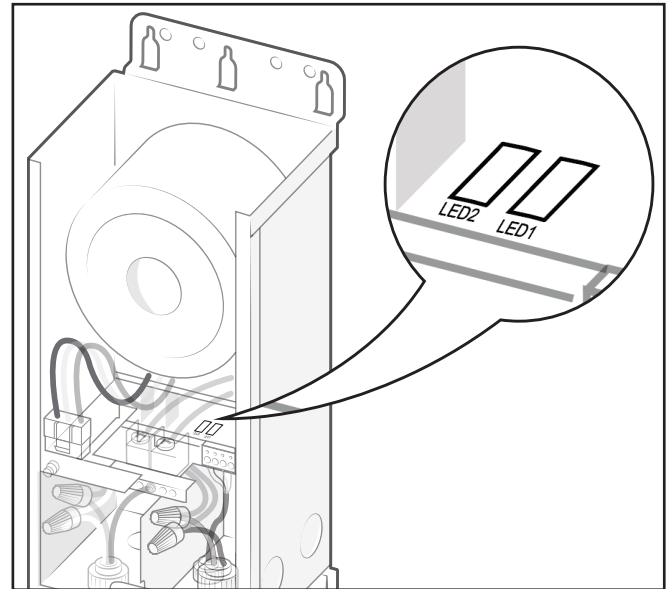


Figure 7. LED1 and LED2

10. Install cover and secure hand tight with the screw provided.
11. Turn on the breaker to restore power (LED1 will turn on).

3.4 Bonding

Zodiac Pool Systems LLC, requires that the Infinite Water Colors LED Light Controller be connected to a “bonding loop” that includes all electrical equipment in the system and on the equipment pad. Bonding lugs must be connected with a solid copper wire not smaller than 8 AWG (6 AWG in Canada). Failure to do so may void the Zodiac Pool Systems LLC warranty.

CAUTION

To prevent premature failure of the equipment resulting from stray voltages and voltage differentials, the Infinite WaterColors LED Light Controller must be bonded to other equipment which is part of the pool plumbing system with a solid copper wire not smaller in diameter than 8 AWG (6 AWG in Canada).

Additionally, in the United States the National Electrical Code® (NEC®) and in Canada the Canadian Electrical Code (CEC), require that all metallic components of a pool structure, including reinforcing steel, metal fittings and above ground components be bonded together (forming an equipotential bonding grid) with a solid copper conductor not smaller than an 8 AWG (6 AWG in Canada).

The NEC and CEC also require that the equipment and/or appliances associated with the pool water circulating system, including, but not limited to, pump motors and heaters, be bonded together as part of the equipotential bonding grid. Zodiac Pool Systems LLC provides special labeled bonding lugs on the bottom of the power center to accommodate this requirement.

After bonding the electronics to the grounding lug, installer must verify ground continuity of all metal components using a multimeter.

Wiring connections must be made exactly as shown in the wiring diagram found on the inside of the Infinite WaterColors LED Light Controller cover. The NEC and CEC also require that pool equipment be bonded together as part of the equipotential bonding grid. Zodiac Pool Systems LLC provides a labeled bonding lug on the bottom of the Light Controller to accommodate this requirement.

Section 4. iAquaLink® App Features

Download the iAquaLink app or upgrade to the latest version prior to light and zone set up. App function and design is subject to change.

NOTE: When replacing lights, make sure to follow these steps:

- Remove any existing light aux names (system setup > label aux >)
- Remove previous light aux labels (system setup > color lights)
- Remove schedules of light auxiliaries (system setup > schedules)

4.1 Light Setup

1. Open the app on your device.
2. From My Systems page, select your pool.
3. From the home page, choose the cog system icon on the top right and select System Setup.

4.1.1 Assign Lights

1. From the System Setup page, select Light Setup and Assign Lights.
2. From the Assign Lights pop up, choose proceed to continue the process.
3. On the Light Zone Setup page, select a light in order to move it to a different zone. Selected light will flash the color of the zone it's currently assigned to. Follow further instructions in the app.

NOTE: Default zone colors include: zone 1 (green), zone 2 (white), zone 3 (red), and zone 4 (blue).

NOTE: When exiting the Light Zone Setup page, the lights will turn off.

NOTE: Lights have to be assigned to a zone in order to rename the zone.

WARNING

Installer must ensure that the Infinite WaterColors LED Light Controller is in acceptable working condition; including all seals/gaskets must be in place and functional; grounding lug must be present, functional, and bonded; and corrosion must not compromise ingress protection against weather. Additionally, all hardware must be present and functional. If any of the aforementioned conditions are not met, a new enclosure **MUST** be used.

WARNING

Risk of electric shock which can result in serious injury or loss of life. Before attempting to install or service, ensure that all power to the circuit supplying power to the system is disconnected or turned off at the circuit breaker. All wiring must be done in accordance with the National Electrical Code® (NEC)®, NFPA-70®.

In Canada, the Canadian Electrical Code (CEC), CSA C22.1, must be followed. All applicable local installation codes and regulations must be followed.

4.1.2 Name Light Zones

1. Go to > System Setup > Light Setup > Zone Name.
2. From the Edit Zone Name pop up, enter the zone name and choose OK.

4.2 Turn Lights On/Off

1. Open the app on your device.
2. From My Systems page, select your pool.
3. Choose the equipment page.
4. Turn zone lights on/off by tapping the toggle to the right of the desired zone.

NOTE: Ability to turn light zones on/off is only done through the app.

4.3 Select Colors

1. Open the app on your device.
2. From the My System page, select your pool.

4.3.1 Select Custom Color

1. Go to > equipment page.
2. From the equipment page, choose the zone you want to change color.
3. From that zones page, choose Custom Color.
4. Choose your custom color from the color wheel.
5. Choose Apply to apply the custom color to your zone.

4.3.2 Preset Colors

1. Go to the equipment page and select the zone you want to change color.
2. After selecting the zone, then choose from the list of preset colors to apply that preset color to your zone.

4.3.3 Preset Color Shows

1. From equipment page, choose the zone you want to change color.
2. After selecting the zone, then choose from the list of preset color shows to apply that preset color show to your zone.

4.4 Adjust Brightness

1. From the equipment page, select the sun icon on the zone where you want to adjust the brightness.
2. Move the slider bar up or down with your finger and then click apply to change the brightness.

Section 5. OneTouch Setup

5.1 Light Setup

5.1.1 Assign Lights

1. Choose menu on the OneTouch display screen and press select.
2. From the menu screen, go to > System Setup > IWC Lights.
3. Select zone set up.
4. From the IWC Lights Zone Setup screen, choose Assign Zone.
5. From the IWC Lights screen, choose your device (light controller) from the list to assign lights to a light zone.
6. A list of lights currently connected to the light controller will appear, select a light and assign it to a light zone (up to 4 zones).

NOTE: The list will display the last six digits of your Infinite WaterColors LED Light Controller serial number located on the bottom of your controller.

NOTE: When exiting the Light Zone Setup page, the lights will turn off

5.1.2 Name Light Zones

1. Choose menu on the OneTouch display screen and press select.
2. From the menu screen, go to > System Setup > IWC Lights.
3. From the IWC Lights screen, select Zone Setup.
4. From the IWC Lights Zone Setup screen, choose Zone Name.
5. From the IWC Lights Rename screen, choose the zone you want to name and enter the name.

5.2 Select Color

1. Choose equipment on the OneTouch display screen and press select.
2. Scroll through the menu and select the desired light zone.
3. From the list of preset colors and color shows, select the desired color.

NOTE: To turn off lights, re-select the light zone and wait 5 seconds.

NOTE: Custom color can only be adjusted using the iAquaLink app.

Section 6. Amazon Alexa Light Control

Go to iaqualink.com for more information on controlling your Infinite WaterColors lights through Amazon Alexa.



Section 7. Troubleshooting

Problem	Possible Cause	Corrective Action
Light don't turn on	Light Controller is not powered	Check supply power, LED2 should be on.
	Light Controller is not communicating to automation	Check that RS4-85 is connected, LED1 should be blinking.
	Lights are not powered	Check that the light is wired to the Light Controller output.
	Lights has failed	Replace the light or swap the PCBA (for niched pool and spa LED lights only).
Lights are flashing yellow	Lights are powered but not communicating to the Light Controller	Check that lights are wired to the Light Controller. Other transformers are not compatible.
Lights are on, but not switching to the selected color	Non-compatible lights are connected	Check that Infinite WaterColors Lights are connected. Other lights are not compatible.
	Lights are in a different zone than the one being switched	Ensure lights are in the zone selected.
Some of my lights come on, but not others	Lights are in separate zones	Ensure lights are in the zone selected.

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CSA C22.2 No. 250.7,
CSA C22.2 No. 94.2
and CSA C22.2 No. 89