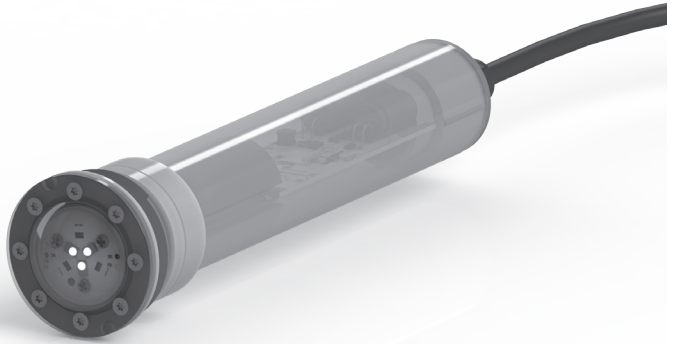




OWNER'S MANUAL

ENGLISH | FRANÇAIS | ESPAÑOL



Jandy Pro Series Nicheless LED Underwater Light

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 requirements exist. The maintainer 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. 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 will void the warranty.



Improper installation and/or operation can create unwanted electrical hazard which can cause serious injury, property damage, or death.

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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Section 1. Important Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS READ AND FOLLOW ALL INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

DANGER

RISK OF ELECTRICAL SHOCK OR ELECTROCUTION. This underwater light must be installed by a licensed or certified electrician in accordance with the National Electrical Code® and applicable local codes and ordinances. In Canada, the Canadian Electrical Code and all applicable local codes and ordinances must be adhered to. Improper installation will create an electrical hazard, which could result in death or serious injury to pool or spa users, installers, or others due to electrical shock, and may also cause damage to property. Read and follow the specific instructions below.

WARNING

Before installing this underwater light, read and follow all warning notices and instructions accompanying this light. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.

Visit www.zodiacpoolsystems.com for additional free copies of these instructions or call Zodiac Technical Support at 800.822.7933 (U.S.) or 888.647.4004 (Canada)

CAUTION

Except when the Jandy® Pro Series Nicheless Underwater LED Lights are installed in an area of the swimming pool that is not used for swimming and the lens is adequately guarded to keep any person from contacting it, the light shall be installed in or on a wall of the pool, with the top of the lens opening not less than 4 inches (102 mm) below the normal water level of the pool.



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.

SAVE THESE INSTRUCTIONS

⚠ WARNING

RISK OF ELECTRICAL SHOCK OR ELECTROCUTION, which could result in serious injury or death. The Jandy® Pro Series Nicheless LED Lights are only available for 12-volt AC power. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated and listed by a NRTL for swimming pool use.

Section 2. Installing the Jandy Pro Series Nicheless LED Light

⚠ WARNING

Risk of Electrical Shock or Electrocution. This underwater light must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code® (Canadian Electrical Code, in Canada) and all applicable local codes and ordinances. Improper installation will create an electrical hazard, which could result in death or serious injury to pool or spa users, installers or others due to electrical shock, and may also cause damage to property.

Always disconnect the power to the light at the circuit breaker before installing or servicing the light. Failure to do so could result in death or serious injury to serviceman, pool or spa users or others due to electrical shock.

Use the chart below to determine the appropriate pipe length for your installation.

	WATTS	MINIMUM LENGTH FOR 1.5" PIPE
JLU4C9W	9W	3"
JLUW9W	9W	3"
JLU4C20W	20W	9"
JLUW20W	20W	9"
JLU4C30W	30W	14"
JLUW30W	30W	14"
All products listed above come in a variety of cord lengths. Typical cord lengths are 50, 100, & 150 feet.		

NOTE: The lights are servicable - do not remove the enclosure or cord from the conduit. No separate ground or bonding wire is required for the JLU4C20W, JLUW20W, JLUW30W or JLU4C30W low voltage lights which do not have any exposed metal.

2.1 Preparing the Light Fixture for Installation

NOTE: The electrician must complete preparatory steps before light fixture is installed. See Figure 1.

Verify that the pool meets the requirements of the current National Electrical Code® (Canadian Electrical Code, in Canada) and all local codes and ordinances. A licensed or certified electrician must install the electrical system to meet or exceed those requirements before the underwater light is installed. Some of the requirements of the National Electrical Code, which the pool electrical systems must meet, are as follows:

1. The junction box or the low-voltage transformer must be located at least eight (8) inches (measured from the inside of the bottom of the junction box or transformer) above the MAXIMUM water level, OR at least four (4) inches above the ground level or pool deck, whichever is greater. The junction box or transformer must also be installed at least forty-eight (48) inches (4 ft.) from the edge of the pool. See Figure 1.
2. A standard 1.5" plastic wall / return fitting (not included) must be installed so that the top edge of the underwater light's lens is at least 4 inches (10.2 cm) below the surface of the water in the pool. See Figure 1.

NOTE: To be certain that the pool's electrical system meets all applicable requirements, the electrician should also consult the local building department.

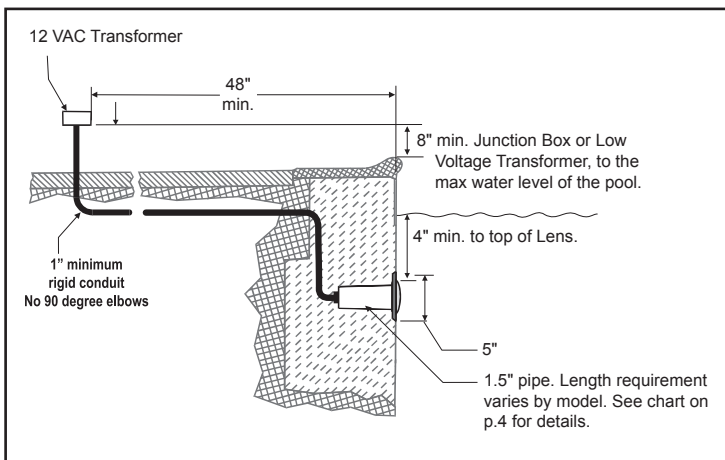


Figure 1. Jandy® Pro Series LED Light Installation with Standard 1.5" Plastic Fitting

2.2 Installing the Light Fixture

NOTE: Perform these steps *only* after the electrical system requirements are met.

1. 1.5" pipe must be installed through the bond beam with a minimum length of 14", followed by 1" conduit with sweeps only without 90 degree elbows. It is highly recommended to use 1.5" pipe throughout the entire width of the bond beam.

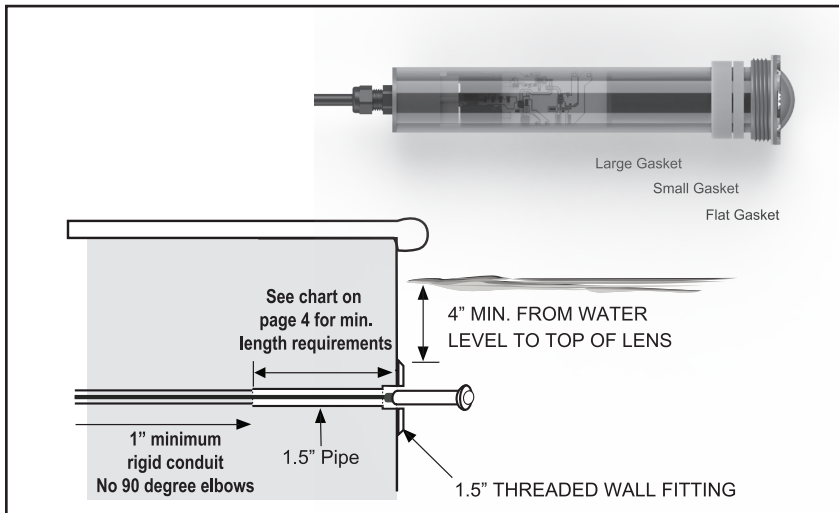
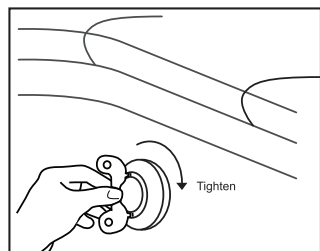


Figure 2. Standard installation with 1.5" pool wall fitting

2. Snake the 2-Conductor electric cord through the conduit outlet of the wall fitting, into the conduit and up to the location of the 12VAC pool transformer. Cut off cord after allowing for service and length of run to the transformer. 18"-24" of excess cord is recommended for the service loop. Pull the fixture snug to the wall fitting.

NOTE: When using a 1 1/2" MIP fitting on the back of a SP-1022 or SP-1408 Wall Fitting, the interior of the Spears and Dura MIP are too small for use with the Jandy® Pro Series Nicheless LED Lights.

3. Using the included Lens Key, thread the light into the wall fitting until it is snug. Please provide the pool owner with minimum of 1 key upon job completion.



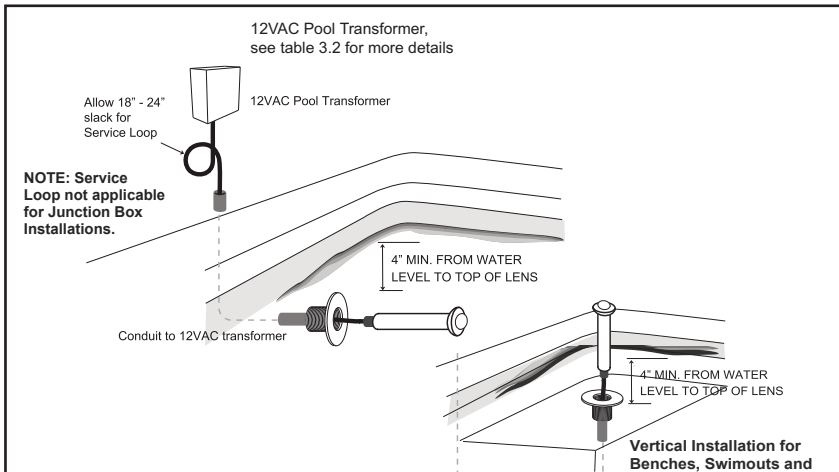


Figure 3. Standard installation with 1.5" pool wall fitting

Section 3. Wiring Options for Controlling Jandy® Pro Series Nicheless LED Lights

NOTE: Always consider the cable length when calculating the input voltage at the transformer. The maximum run of service between transformer and lights should not exceed 150ft. in length, inclusive of the use of J Box or not.

To the extent allowed by local installation codes in effect in the installation jurisdiction and capacity of the electrical equipment, multiple Jandy Pro Series lights may be controlled with a single switch and transformer so their colors may be synchronized.

IMPORTANT NOTE: All fixtures must be tied into the same transformer, circuit or switch for synchronization to occur. The use of Solid Core over Stranded wire and terminating Bus Bars is strongly recommended.

3.1 Wiring to an AquaLink® Controller

The Jandy Pro Series Nicheless LED Lights can be controlled by an AquaLink controller. Connect the transformer powering the lights to one of the auxiliary relays in the AquaLink.

Refer to Figure 4 to connect the Jandy Pro Series Nicheless LED Lights to the Power Center.

3.2 Wire Gauge and Length

CAUTION

Jandy® Pro Series Nicheless Underwater LED Lights are low voltage fixtures. Improper wire gauge and wire length can effect the performance of these products. Follow the guidelines below to determine the proper operation and optimum performance of the lights.

Voltages are determined by the measured voltage level at the Bus Bar where the transformer and cords are connected.

NOTE: Each color mode has a slightly different power draw

JLU4C9W/JLUW9W/JLU4C20W/JLUW20W Min/Max Voltage per cord length		
Cord Length	Min. Voltage	Max. Voltage
50 Feet	9.4VAC	12.4VAC
100 Feet	10.7VAC	13.2VAC
150 Feet	11.82VAC	13.8VAC

JLU4C30W & JLUW30W Min/Max Voltage per cord length		
Cord Length	Min. Voltage	Max. Voltage
50 Feet	10.34VAC	12.56VAC
100 Feet	10.9VAC	13.5VAC
150 Feet	11.43VAC	14.1VAC

WARNING

RISK OF ELECTRICAL SHOCK OR ELECTROCUTION, which could result in serious injury or death. A Ground Fault Circuit Interrupter (GFCI) must be provided for 120 Volt transformers. The conductors on the load side of the GFCI circuit shall not occupy conduit, boxes, or enclosures containing other conductors unless the additional conductors are also protected by a GFCI. Refer to local codes for complete details.

WARNING

RISK OF ELECTRICAL SHOCK OR ELECTROCUTION, which could result in serious injury or death. The Jandy Pro Series Nicheless LED Lights are only available for 12-volt AC power. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated and listed by a NRTL for swimming pool use.

3.3 Wiring to a Switch

The Jandy® Pro Series Nicheless LED Lights can be wired to a switch to manually operate the lights. Refer to Figure 4 to connect the lights into the switch.

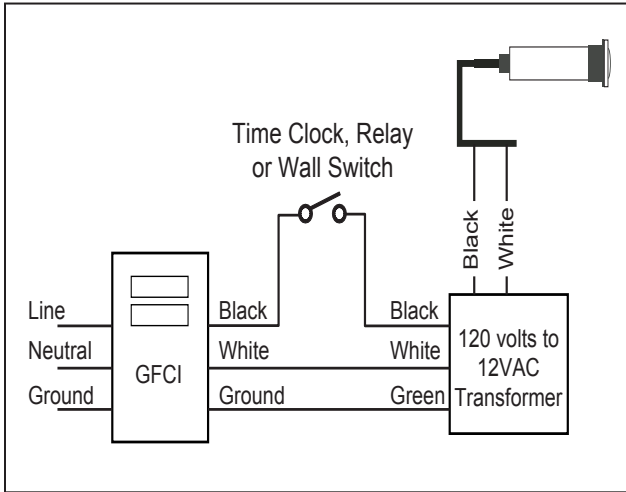


Figure 4. Wiring Jandy Pro Series Nicheless Underwater Lights

3.4 Twelve (12) Volt Installation

A 12-14 Volt AC Transformer must be used to power all 12-Volt lights.

NOTE For optimum performance Jandy Pro Series recommends not exceeding the load factor specified by the instructions included with the transformer.

To ensure maximum safety, use only a Class 2 transformer that can supply 12-14 Volts AC to power all 12-Volt lights. The transformer must be listed or certified by a Nationally Recognized Testing Laboratory (NRTL) for the intended use.

! CAUTION

To prevent risk of fire which could result in property damage, and to ensure optimum performance, do not exceed the load factor specified in the instructions provided by the transformer manufacturer.

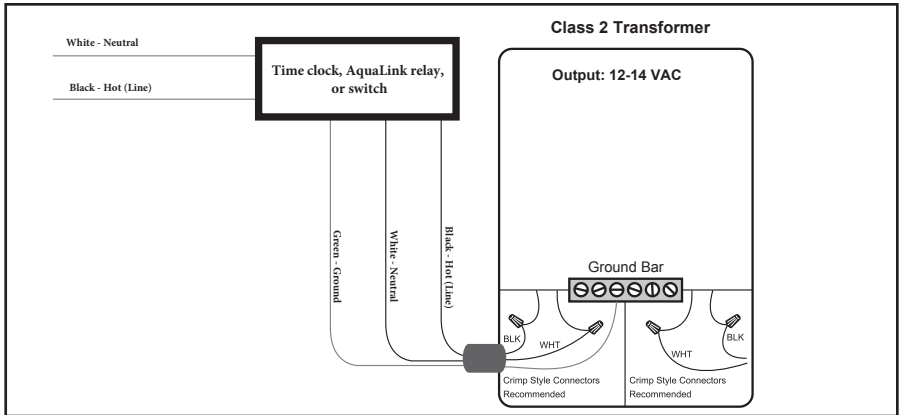


Figure 5. Wiring LED Lights to a 12 Volt Transformer

NOTE A dimmer switch or dimming relay may be used when Jandy Pro Series Nicheless WHITE ONLY lights are installed. Jandy Pro Series color lights are NOT DIMMABLE and are NOT COMPATIBLE with dimmer switches or dimmer relays.

Section 4. Jandy® Pro Series Nicheless Underwater LED Light Operating Instructions

4.1 Light Synchronization

NOTE This section only applies to the color (RGBW) lights. All fixtures must be tied into the same transformer, circuit or switch for synchronization to occur.

1. Turn the light **ON**. If the light has been off for 7 seconds or longer, the light will turn on at the last color selected.
2. To synchronize multiple lights to the same color mode, you will need to reset to the beginning of the color mode sequence. With the lights **ON**, turn them **OFF** for five (5) seconds, then turn **ON** again. All of the lights will reset to the Alpine White color mode. If all of the lights are not in the Alpine White color mode, they have not been synchronized, repeat step 2.

4.2 Operating the Light

3. To change the color mode, turn the light **OFF** for one 1-3 seconds.

Continue turning **OFF** and **ON** until the desired light color mode is reached. See Table 1 for the color mode sequence.

Example: If you followed step 3 and are now on Sky Blue and want the lights to be Violet, then the lights must be turned off and on 7 seven times to bring you to Violet.

Sequence Order	Color Modes
1	Alpine White
2	Sky Blue
3	Cobalt Blue
4	Caribbean Blue
5	Spring Green
6	Emerald Green
7	Emerald Rose
8	Magenta
9	Violet
10	Slow Color Splash
11	Fast Color Splash
12	America the Beautiful
13	Fat Tuesday
14	Disco Tech

Table 1. Color Mode Sequence

4. The lights have memory. If the lights are off for 7 seconds or more, the next time the lights are turned on, they will return to the last color mode they were on prior to being turned off (Step 1 listed above). This function allows you to keep your lights returning to your favorite color mode every time the lights are turned back on.

NOTE To synchronize colors on multiple Jandy® Pro Series Nicheless Underwater LED Light systems wired to separate switches, perform the above actions on all of their switches simultaneously. All Jandy Pro Series Nicheless Underwater LED Lights will synchronize automatically if activated by the same switch. No other accessories are required.

Section 5. Designer Lens Options

The Designer Lenses offer a unique set of options for the LED Series of lights. Each one has the ability to create unique lighting effects within the pool's interior. See the list below to learn more about the designer lens options.



HALF DOME - This escutcheon adds over the existing lens to allow you to direct 1/2 the light in a direction you want. Downwards-to light a pools interior without light shining upwards. Upwards to light a water feature or sideways to put light where it might be needed but no where else

HALO LENS - This lens allows for gentle lighting in an area but knocks down the center beam. This allows for installation on walls, etc. where there might be an opposite wall, etc. where you want to eliminate generating a “hot” spot. Great general lighting but softly.

SPOT LENS - Just the opposite of the Halo. Concentrates the light and reduces the output at wider beam angles in order to produce a spot-light effect. Great for illuminating that special feature.

CATS EYE - This lens reduces the light to just a “slice” of light that is broad but thin. An incredible effect for illuminating but without spilling light all over.

DIAMOND - WOW want to really create something special? The Diamond lens creates incredible points of light throughout the interior. The points will be different the farther away from the light they are. Put the LED colored light on DISCO TECH MODE AND WATCH THE FUN BEGIN!

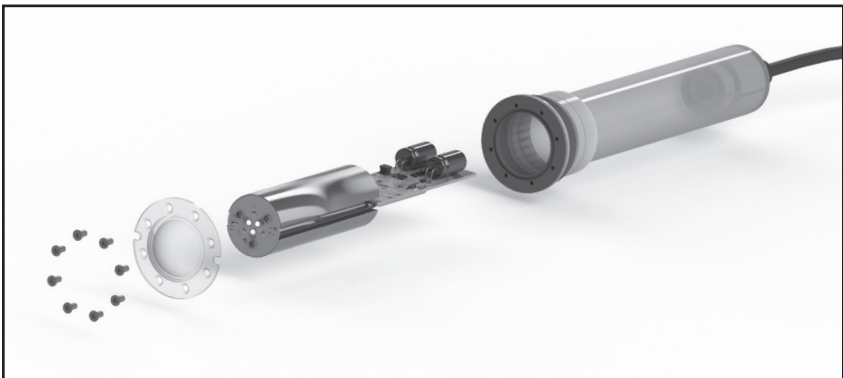
Section 6. Light Cartridge Replacement

⚠ WARNING

RISK OF ELECTRICAL SHOCK OR ELECTROCUTION, which could result in serious injury or death. The Jandy® Pro Series Nicheless LED Lights are only available for 12-volt AC power. For supply connection, use only an isolating low voltage power supply with ungrounded output, evaluated and listed by a NRTL for swimming pool use.

Always disconnect the power to the light at the circuit breaker before installing or servicing the light. Failure to do so could result in death or serious injury to serviceman, pool or spa users or others due to electrical shock.

1. Verify that the light has been disconnected from the power source and be sure that the light fixture is in a dry environment. Remove the eight (8) screws from the lens with the tool provided. Pull the lens from the fixture body. Remove and discard the O-ring between the Lens and Fixture Body.
2. Using the tool provided, insert and turn the threaded portion into the extraction hole in the face of the light cartridge. Pull the light cartridge from the housing body.
3. Insert the replacement cartridge into the housing body. Line up the TAB at the end of the circuit board with the receiving slot inside the housing body. It may be necessary to slowly turn the light cartridge until the TAB lines up with the slot.

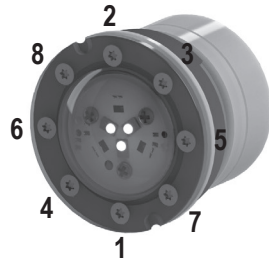


4. Clean the lens and the enclosure of any remaining old silicone before applying new silicone and replacing the lens. Replace the O-ring with the new one provided. Attach the lens onto the fixture body. Tightly secure the eight (8) screws indicated in the diagram below. Once all screws are tight, slowly submerge in water, checking for any air bubbles - quickly remove from water bubbles appear as it indicates the seal is not water tight. retighten the screws and test for bubbles again.



SILICONE BEAD ON LENS

Apply a new silicone bead to the lens with tube provided after cleaning the lens and body of old silicone.



SCREW TIGHTENING DIAGRAM

5. Reset the fixture into the wall fitting and turn the power ON.

Section 7. Winterizing

The water level should be lowered to approximately 12 inches below the pool lights. Make certain that the water is drained out of the wall housing. Consult a Local Swimming Pool Professional for proper winterization. Minimum safeguard requires dropping the water level 2"-4" below the light. At NO TIME should there be water removed from the pool without checking ground water tables.

Section 8. Troubleshooting

Use the troubleshooting information in the following table for suggestions.

Symptom	Problem	Corrective Action
All lights fail to illuminate	Lights are not receiving power	Check 120VAC power supply into transformer. Check for 12VAC output at transformer. Check or reset GFCI. Make sure 120 volts has not been used in the installation - damage is assured and is NON WARRANTY.
One or more lights are dim, blinking or not working	Poor connection or improper wire gauge	Separate each light and independently wire 12V to the single light only. Repeat this process on each light. If junction box is being used, check for proper connection of light cord. Verify that the correct wire gauge is being used between the transformer and junction box.
Colored lights out of synch	Improper voltage supply or poor connection to the light	Verify that proper wire connections are being achieved for the lights that are out of synch. Reset all the lights to white by turning lights OFF for five (5) seconds, then turning ON

Jandy® Pro Series Nicheless Underwater LED Lights are field servicable and the cord and light body fixture should not be removed completely from the conduit or pool. There should be enough cord supplied in the service loop to remove light from wall fitting and lifted above water level for LED light cartridge replacement. If there is not enough cord in service loop or it cannot be accessed, pool water can be drained below light to access front of light.

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