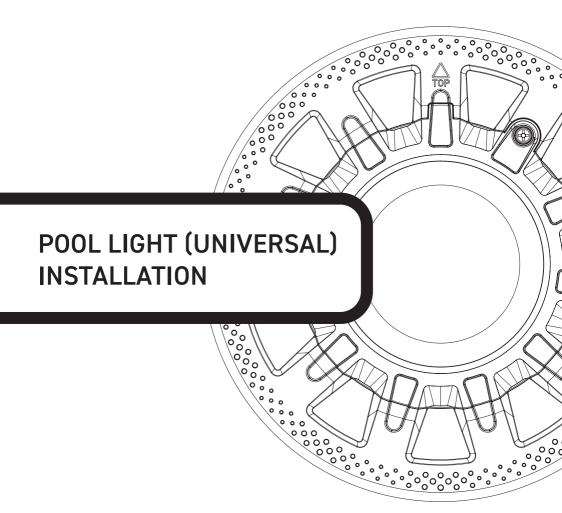




REPLACEMENT LED POOL LIGHT



# RG INSTALLATION & OWNER'S MANUAL

## **CONTENTS**

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READ THIS FIRST	4
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## **IMPORTANT NOTES**



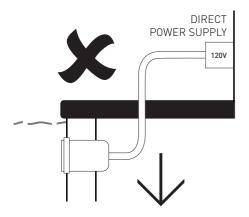
FRESH WATER USE ONLY

NOT INTENDED FOR OPERATION OUT OF WATER

## **PRE-INSTALLATION CHECK**

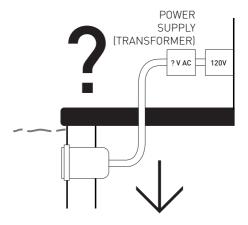
## 1 CHECK POWER SUPPLY

1A: IF THE POOL LIGHTS ARE DIRECTLY CONNECTED TO A 120V POWER SUPPLY, DO NOT CONTINUE INSTALLATION



**1B:** A 12V AC TRANSFORMER **MUST** BE INSTALLED BETWEEN THE 120V POWER SUPPLY AND POOL LIGHT

2A: IF THE POOL LIGHTS
ARE CONNECTED TO A
TRANSFORMER, CHECK THAT IT
MEETS STEP 1B REQUIREMENTS



**2B:** IF THE TRANSFORMER DOES NOT MEET THE REQUIREMENTS, IT WILL REQUIRE REPLACEMENT

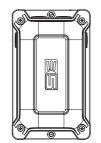
## 2 ADD TRANSFORMER (IF NEEDED)

#### EXISTING TRANSFORMER MUST BE:

- UL Listed Isolating Low Voltage power supply, evaluated for swimming pool use
- Installed as per current NEC wiring rules
- 12~14V AC output
- Minimum 15W per Retro Series Pool light
- In good working order

#### **EXISTING TRANSFORMER MUST NOT BE:**

- DC or 'LED Driver'
- · Electronic or Switch mode
- Weather damaged or in otherwise poor condition



Models Available:

LVX50 LVX50P LVX100 LVX100P

Spa Electrics recommends "LVX" safety transformers for use with **Retro Universal** lights

### **CHECK CABLE THICKNESS**

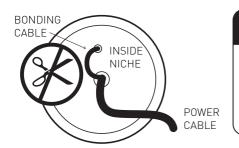
RETRO UNIVERSAL CAN FIT CABLES FROM 9/32" (7mm) UP TO 9/16" (14mm) DIAMETER

Max Ø 9/16 inch [14mm] 9/32" to

4

### **CHECK BONDING**

ENSURE BONDING IS SECURE AT THE BACK OF THE NICHE **DO NOT CUT** THE BONDING CABLE **DO NOT DISTURB** THE BONDING CABLE WHEN WORKING WITH THE PLUG CABLE



#### **ELECTRICAL GROUNDING**



DUE TO ITS PLASTIC HOUSING DESIGN, THE RETRO UNIVERSAL LUMINAIRE DOES NOT REQUIRE GROUNDING / BONDING.

SEE PAGE 26 FOR MORE INFORMATION

5

### **CHECK NICHE DIAMETER**

THE RETRO UNIVERSAL IS
DESIGNED TO WORK WITH 6 INCH
OUTSIDE DIAMETER NICHES

6 inch OD
POWER CABLE

REFER TO **APPENDIX A** FOR A LIST OF NICHES THE R6 RETRO UNIVERSAL HAS BEEN UL TESTED WITH

## **READ THIS FIRST**

Congratulations on your purchase of a Spa Electrics Retro Universal Series Pool Light. This light has been designed in conjunction with leading pool professionals across the USA and manufactured solely in Australia.

The Retro Series Pool light is designed to quickly and easily replace existing LOW VOLTAGE, 6" Pool Light (PAR 38) fittings from major brands. Its patented cam-lock system allows for simple installation in situations where the existing niche hardware has been damaged or is no longer serviceable.

For safe and proper installation, please read this manual in full before commencing installation and use only the parts (screws, plugs, sealant, etc) as provided. For operating instructions, please refer to the MULTI PLUS Operating Manual. (Provided)

**NOTE:** The use of DC / Electronic (or Switch mode) power supplies is not permitted as they can cause disruptions in the light's normal operation & in some cases damage the light's internal electronic components. For more information, please contact Spa Electrics Inc.

## **WARNING**



- Ensure sufficient cable is coiled behind the light to allow for servicing (~12 to 24inch)
- Ensure only circular cable not exceeding 9/16" (14mm) diameter is connected to the **Retro Universal** Light. The use of Fig. 8 or non-circular cable will not seal correctly & will void the product warranty.
- The Retro Universal LED Light does not contain any user-serviceable parts, opening the light will void the product warranty.
- Pool chemicals & pH levels: Due to the corrosive nature of unbalanced pool water, Spa Electrics strongly recommends that your pool water is balanced prior to installing your pool lights or any plastic or stainless steel components, and tested weekly to maintain these levels. pH levels should be maintained between 7.2-7.6 at all times to ensure the longevity of these components. Failure to do so can result in chemical damage to the light housing and pool fittings, including stainless steel components.
  - **Please note:** Lights or components found to have excessive chemical damage will not be covered under our manufacturer's warranty policy.

## **TOOLS REQUIRED**



✓ Phillips head screwdriver



Small flat blade screwdriver

### **IMPORTANT NOTES**



- The use of power tools during installation is **not** recommended as these devices can cause faults and damage to light components.
- All installation steps should be carried out with manual tools only.
- The enclosed images are for illustrative purposes only. Appearances of parts and assemblies may vary from the enclosed illustrations.
- Please contact your reseller if you have any guestions regarding the correct installation of this product.

## WINTERIZATION



- Lights must be removed from the pool wall and cable disconnected via plug connection & stored in a safe place.
- Winterization Cover must be fitted to Plug Top prior to reinstalling into the niche for winter.
- Unless niche/conduit connection is adequately sealed (i.e. via included cable gland components), the pool water level must be drained down 12" below the lowest light(s) position in the pool wall.
- All conduits should be checked for accumulated water and drained if required.
- Follow instructions on page 22 OR consult your local pool professional for a complete pool winterization process.

## PRODUCT SUPPORT & INFORMATION

**CANADA** 

**Select Pool Products** 

Tel: 1-855-881-0889

Email: info@selectpoolproducts.ca

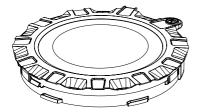
www.selectpoolproducts.ca

INTERNATIONAL

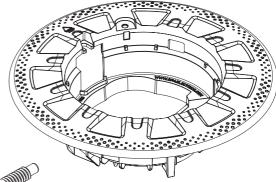
Spa Electrics Pty Ltd

www.spaelectrics.ca

## **INCLUDED PARTS**

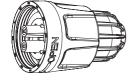


**LIGHT ASSEMBLY** 



NICHE ADAPTOR MOUNTING SCREW

NICHE ADAPTOR (P/N: R6C 008)



PLUG ASSEMBLY
(PROVIDED AS COMPONENTS SEE BELOW)
(P/N: N3 003)



LIGHT MOUNTING SCREW (SPARE)



WINTERIZATION COVER (P/N: R6C 001)





1 X WARRANTY CARD

#### PLUG ASSEMBLY COMPONENTS (P/N: N3 003)



Screw Terminal End



Strain Relief Clip (Optional)



Connector Barrel



Glands X 3 Sizes Provided



Gland Nut (Small Size)



Gland Nut (Large Size)



Connector Collar

## **REQUIRED PART (NOT INCLUDED)**



**UL LISTED ISOLATING LOW VOLTAGE POWER SUPPLY, EVALUATED FOR SWIMMING POOL USE.** Installed as per current NEC wiring rules. 12~14V AC output. Minimum 15W per Retro Series Pool Light. Spa Electrics recommends the use of its "**LVX Series**" safety transformers with the **Retro Series** lights.

## **A: CONNECTION TO CABLE**



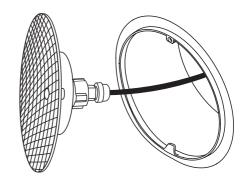


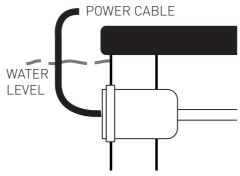
TURN OFF BREAKER TO POOL LIGHT TRANSFORMER

1 REMOVE EXISTING LIGHT

REMOVE EXISTING LIGHT FROM NICHE AND BRING TO THE SURFACE FOR CONNECTION

ENSURE YOU DON'T DISTURB THE BONDING CABLE





### **IMPORTANT NOTE**

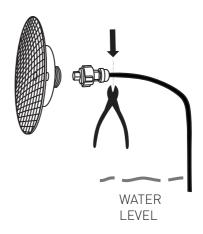


ALL CABLE CONNECTIONS ARE TO BE DONE AT SURFACE LEVEL, AND OUT OF WATER

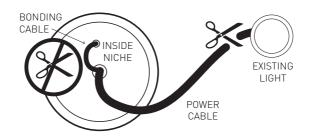
### **DISCONNECT EXISTING LIGHT**

DISCONNECT LIGHT FROM POWER CABLE

CUT POWER CABLE AS CLOSE TO BACK OF EXISTING LIGHT AS POSSIBLE



#### ENSURE BONDING CABLE IS NOT CUT OR DISTURBED



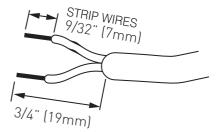
## 3 CABLE PREPARATION

STRIP POWER CABLE TO SPECIFIED LENGTH

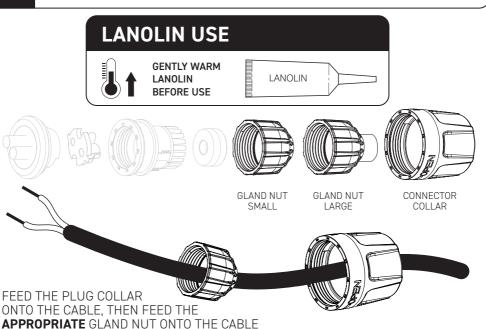
## **NOTE**



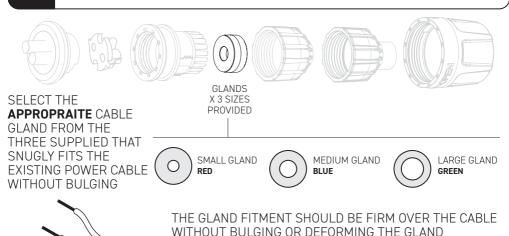
IF CABLE LENGTH ALLOWS, CUT CABLE BACK UNTIL FRESH COPPER APPEARS.



### START ASSEMBLY OF CONNECTOR PLUG



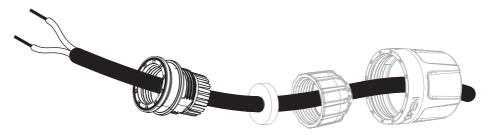
## 5 CHOOSE THE APPROPRIATE GLAND



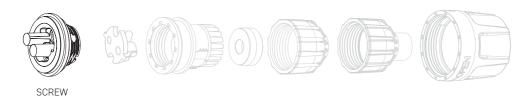
### **CONTINUE ASSEMBLY OF CONNECTOR PLUG**



FEED THE CONNECTOR BARREL ONTO THE CABLE



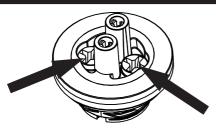
## CHECK SCREWS ON SCREW TERMINAL END



CHECK IF SCREWS ARE PRESENT IN THE TOP OF THE SCREW TERMINAL END



TERMINAL END



USE A MANUAL PHILLIPS HEAD SCREWDRIVER TO ENSURE THAT THE 2 SCREWS INDICATED ARE FULLY SEATED. PROCEED TO STEP 8.

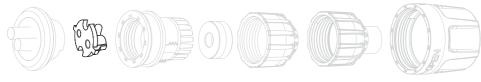
### WITHOUT SCREWS



CHECK THERE ARE NO HOLES IN THE INDICATED LOCATIONS.

PROCEED TO STEP 8.

### **STRAIN RELIEF CLIP**



STRAIN RELIEFT CLIP (OPTIONAL)

**OPTION 1:** WHEN USING THE MEDIUM OR LARGE CABLE GLANDS, THE STRAIN RELIEF CLIP IS NOT REQUIRED. FOLLOW STEP 9A (IGNORE STEP 9B).

**OPTION 2:** THE STRAIN RELIEF CLIP MUST BE USED WHEN THE SMALL CABLE GLAND IS USED. FOLLOW STEP 9B (IGNORE STEP 9A).





SMALL GLAND



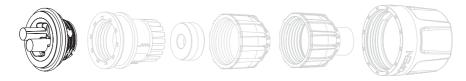
MEDIUM GLAND



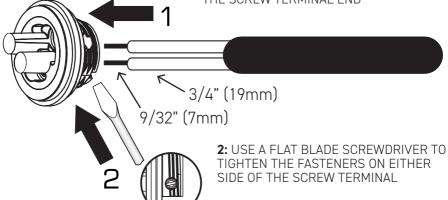
LARGE GLAND

## **9A**

### **CONNECT THE SCREW TERMINAL END**



1: FEED THE TWO STRIPPED CABLE ENDS
THROUGH THE TWO HOLES IN THE BACK OF
THE SCREW TERMINAL END



## 9B

### **CONNECT THE SCREW TERMINAL END**









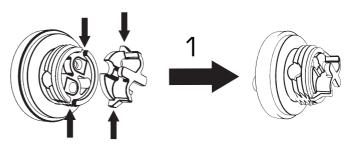




SCREW TERMINAL END

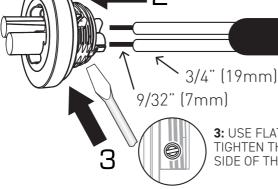
STRAIN RELIEF CLIP

1: ATTACH THE STRAIN RELIEF CLIP TO THE SCREW TERMINAL END

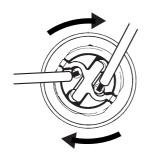


2: FEED THE TWO STRIPPED CABLE ENDS THROUGH THE TWO HOLES IN THE BACK OF THE SCREW TERMINAL END





**3:** USE FLAT BLADE SCREWDRIVER TO TIGHTEN THE FASTENERS ON EITHER SIDE OF THE SCREW TERMINAL



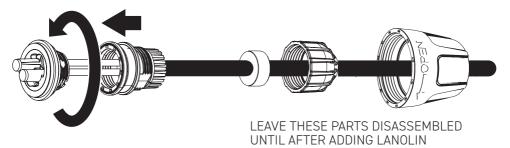
**4:** TWIST THE SCREW TERMINAL AND LOOP CABLE ENDS UNDER THE STRAIN RELIEF CLIP



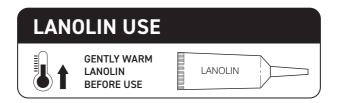


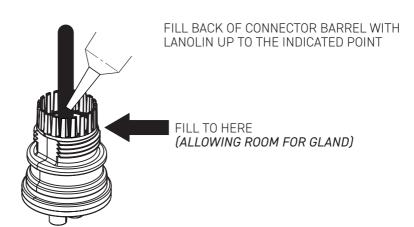
### START ASSEMBLY OF CONNECTOR PLUG

CAREFULLY THREAD CONNECTOR BARREL ONTO SCREW TERMINAL AND TIGHTEN FIRMLY BY HAND



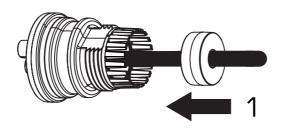
## 11 ADD LANOLIN

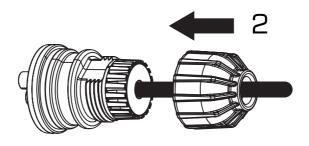


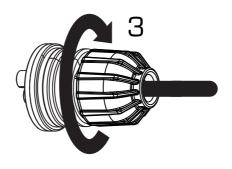


## **CONTINUE ASSEMBLY OF CONNECTOR PLUG**

- 1: SEAT CABLE GLAND ALL THE WAY INTO CONNECTOR (DO A VISUAL CHECK TO MAKE SURE A SEAL BETWEEN GLAND AND CABLE)
- 2: CAREFULLY THREAD GLAND NUT ONTO CONNECTOR BARREL
- 3: TIGHTEN GLAND NUT FIRMLY BY HAND

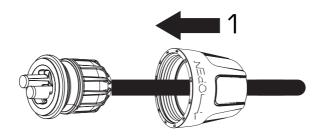






## **CONTINUE ASSEMBLY OF CONNECTOR PLUG**

1: SLIDE CONNECTOR COLLAR ALL THE WAY TO THE END READY FOR ATTACHMENT TO THE LIGHT ASSEMBLY



#### **ASSEMBLED VIEW OF CONNECTOR PLUG**

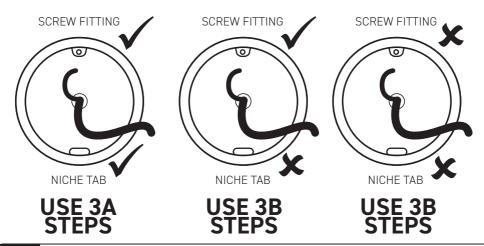


## **B: ATTACH NICHE ADAPTOR**

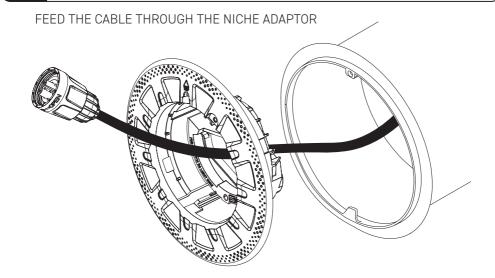
## 1 CHECK QUALITY OF NICHE

ENSURE NICHE TAB AND SCREW FITTING IS INTACT, NOT DAMAGED ORCORRODED AND FIT FOR PURPOSE

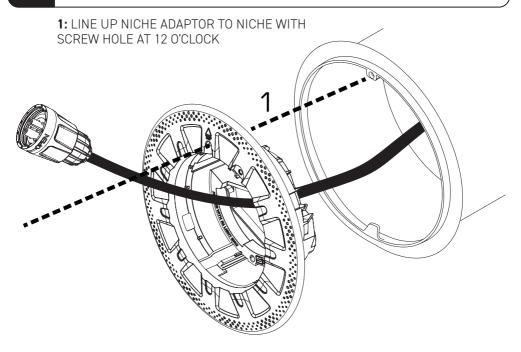
IF THE NICHE TAB AND SCREW FITTING IS INTACT: THEN FOLLOW **3A STEPS**IF ANY PARTS ARE BROKEN OR NOT SERVICEABLE, FOLLOW **3B STEPS** 



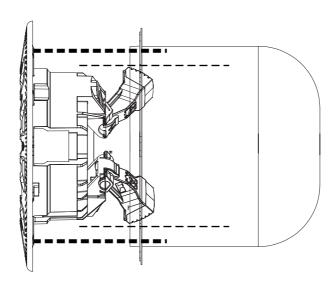
## 2 INSERT NICHE ADAPTOR

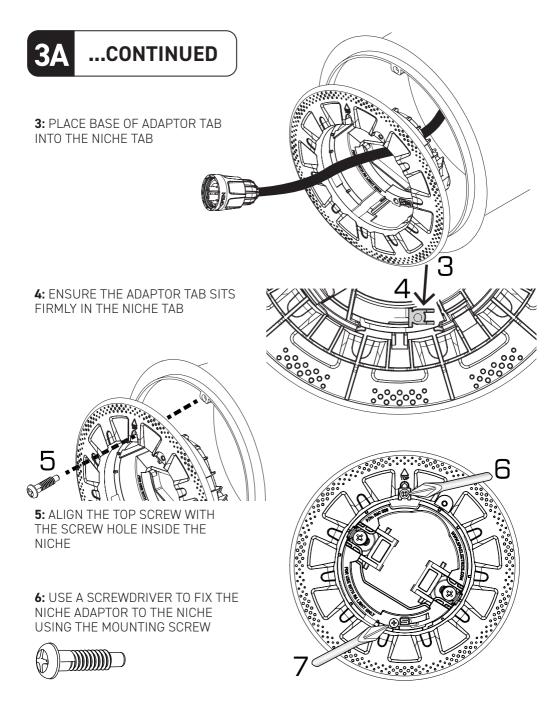


### IF NICHE TAB & SCREW FITTING IS INTACT



#### 2: ENSURE CAM LOCKS FIT INSIDE NICHE NEATLY





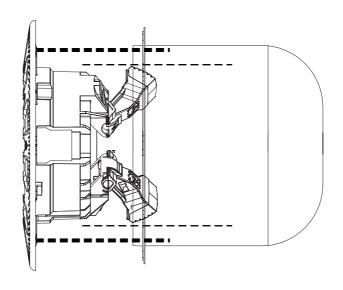
7: TIGHTEN THE LOWER SCREW IN THE ADAPTOR TAB

8: GO TO SECTION C: CONNECT LUMINAIRE

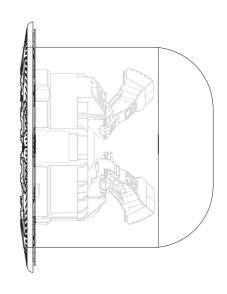
## IF NICHE TAB & SCREW FITTING IS NOT INTACT

1: CENTRE NICHE ADAPTOR INTO NICHE, SO THE SCREW HOLE IS AT 12 O'CLOCK, OR LINES UP WITH THE SCREW FITTING ON NICHE

ENSURE THE CAM LOCKS GO INTO THE NICHE EASILY



2: PUSH THE NICHE ADAPTOR INTO THE WALL SO IT SITS FLUSH AND IS FULLY INSERTED INTO THE NICHE



## 3B

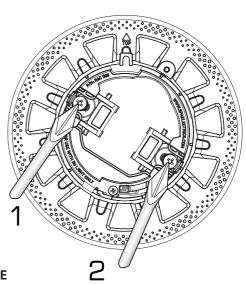
### ...CONTINUED

TIGHTEN THE TWO CAM LOCK SCREWS EQUALLY AND IN ROTATION, AS SHOWN, BY HAND UNTIL YOU FEEL THE NICHE ADAPTOR IS SECURE IN PLACE

DO NOT OVERTIGHTEN

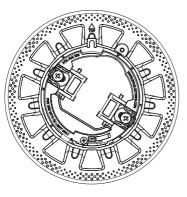
CHECK FOR SECURE FITTING, THE NICHE ADAPTOR SHOULD BE FIRM AND NOT ABLE TO MOVE EASILY BY HAND

GO TO SECTION C: CONNECT LUMINAIRE

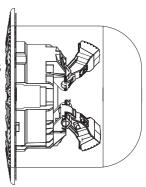


AS THE CAM LOCK SCREWS TIGHTEN, THE CAM LOCKS WILL MOVE IN AND UP, PULLING THE NICHE ADAPTOR FIRMLY INTO THE NICHE

MINIMUM CAM LOCK POSITION (LOOSE)



TIGHTEN SCREWS TO PULL NICHE ADAPTOR INTO NICHE

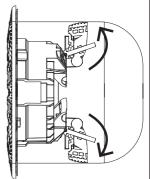


MAXIMUM CAM LOCK POSITION (TIGHT)



LOCKS ARE
SCREW TIGHT,
THE CAM LOCKS
SIT TIGHT
AGAINST THE
INSIDE OF THE
NICHE, AND THE
NICHE ADAPTOR
IS PULLED
FURTHER INTO
THE WALL

WHEN ALL CAM

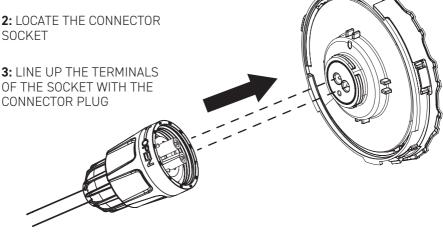


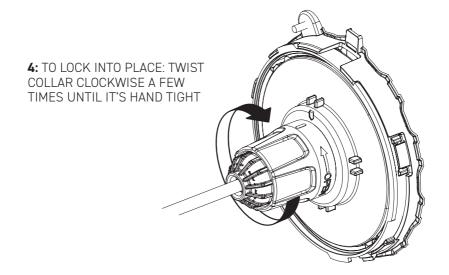
## C: CONNECT LUMINAIRE

### ALIGN UP AND CONNECT CONNECTOR PLUG

1: TURN THE LUMINAIRE OVER TO SEE THE BACK 2: LOCATE THE CONNECTOR

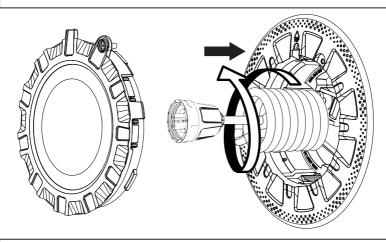
3: LINE UP THE TERMINALS OF THE SOCKET WITH THE



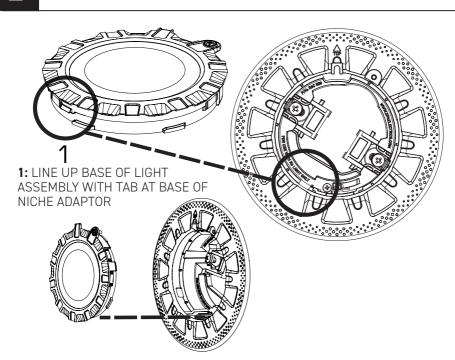


## D: FIT LIGHT TO NICHE

## 1 COIL EXCESS CABLE INTO NICHE

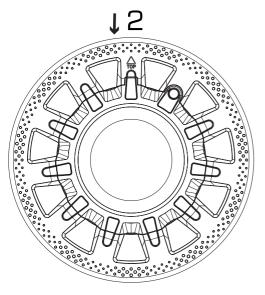


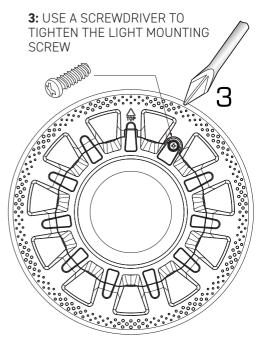
## 2 CONNECT LIGHT ASSEMBLY



### ...CONTINUED

2: PUSH LUMINAIRE INTO PLACE ENSURING TAB LOCATES AT TOP AT 12 O'CLOCK



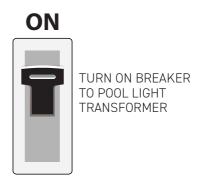


## **POST INSTALLATION CHECK**

1

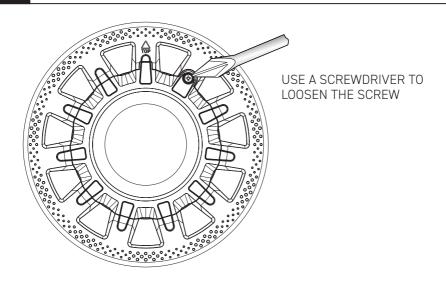
### **TEST SYSTEM**

TURN ON POWER AND CHECK ALL WORKING CORRECTLY

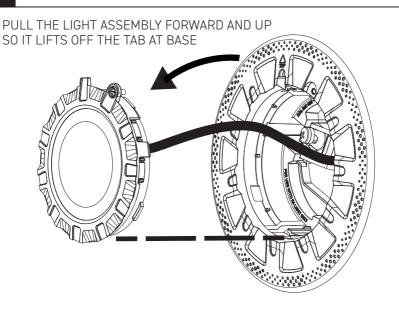


## **WINTERIZATION**

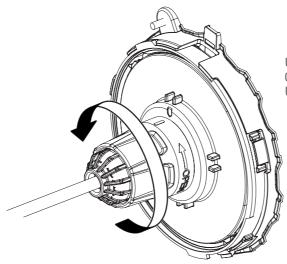
## **DETACH THE LIGHT ASSEMBLY**



## **PULL OUT LIGHT ASSEMBLY**

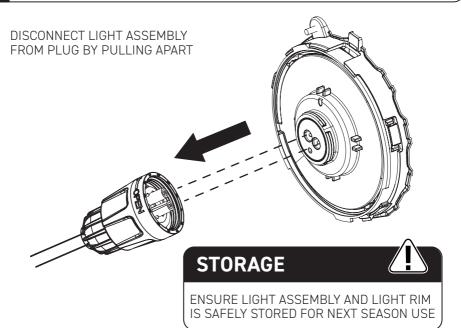


### **UNLOCK THE PLUG**



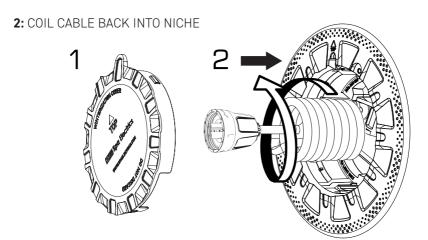
UNSCREW PLUG COLLAR COUNTER-CLOCKWISE UNTIL IT IS FREE SPINNING

## **4** REMOVE THE LIGHT ASSEMBLY



### **CONNECT WINTERIZATION PLUG CAP**

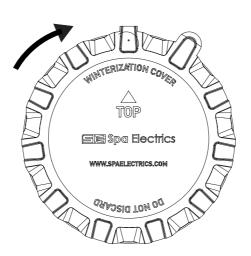
1: ALIGN TERMINAL PINS ON PLUG WITH TERMINAL PINS ON BACK OF WINTERIZATION COVER AND FIRMLY ASSEMBLE PLUG TO COVER



6

### **SCREW ON WINTERIZATION CAP**

PLACE WINTERIZATION COVER ONTO CLAMP RING AT 10 O'CLOCK AND TURN CLOCKWISE TO 12 O'CLOCK TO LOCK INTO PLACE



## **TROUBLESHOOTING**

ISSUE	REASON	ACTION
Light returns to WHITE color during manual color change	Light synchronization process has been triggered	Refer to MULTI PLUS User Guide Instructions
Light flashes 2 times (RED)	Light over heating.	Check light is fully submerged. Check vents are not obstructed
Light not operating (1)	Faulty connection to transformer	Ensure cable correctly connected to transformer terminals
Light not operating (2)	Mains power not connected	Check transformer is plugged in to GPO and switched on
Light not operating (3)	Damaged cable	Disconnect plug top and test voltage under load using multi-meter (ie. 20w 12v)
Light not operating (4)	Transformer not working	Check fuses & test transformer using multimeter under load (ie.15W 12V)
Light colors not synchronized	Incorrect operating mode selected.	Refer to MULTI PLUS setup procedure

If these issues cannot be resolved with the above recommended actions, please contact your local Spa Electrics reseller or Spa Electrics directly.

## **ELECTRICAL GROUNDING**

#### **Underwriters Laboratories (UL) Statement**

Per the NEC, NFPA 70, Article 680.23 (B)(5), states that bonding shall not be required for luminaires that are listed for the application and have no non-current carrying metal parts. In addition, per Article 680.26 (B)(4), exception states that Listed low-voltage lighting systems with non-metallic forming shells shall not require bonding.

Therefore, luminaires with polymeric/non-current carrying metal parts are not required to be grounded / bonded.

#### **Manufacturers Statement**

Spa Electrics **Retro Universal** luminaires with their plastic housing designs do not require grounding / bonding.

Spa Electrics **Retro Universal** lights have also been determined to comply with the applicable requirements for wet-niche, LED type Swimming Pool and Spa Luminaires.

## **FCC COMPLIANCE STATEMENT**

This device complies with part 15 of the FCC rules. Operation is subject to the following two (2) 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.

**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 to that to which the receiver is connected
- · Consult the dealer or an experienced radio / TV technician for help

Do not make any changes or modifications to the equipment unless otherwise specified in the manual.

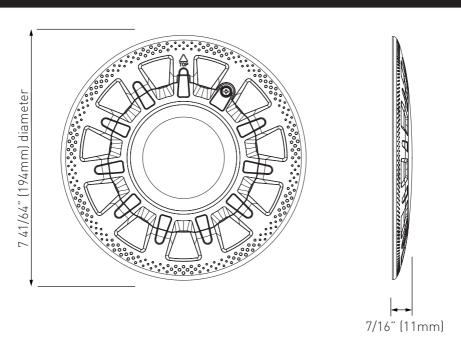
## **APPENDIX A**

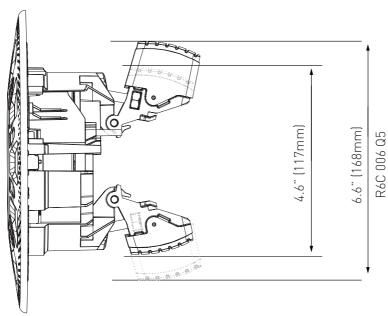
#### THE RETRO UNIVERSAL HAS BEEN UL TESTED WITH THE FOLLOWING NICHES

PENTAIR	PENTAIR	JANDY	JANDY
PLASTIC NICHE - SMALL	STAINLESS STEEL NICHE - SMALL	PRO NICHE PL - SMALL	PRO SERIES S/S - SMALL 1" REAR OULET, GUNITE & SIDE OUTLET GUNITE
P/N 79206600	P/N 78243100, 78243200, 78243300, 78244100, 78244200, 78244300	PLNICSM SMALL PLASTIC PLNICSM	#SSNICSM1R & #SSNICSM1S

JACUZZI	HAYWARD	HAYWARD	HAYWARD
9431-1234 GUNITE NICHE FOR FULL MOON POOL LIGHT	UCL SERIES UNDERWATER SMALL LIGHTING NICHE - 6.5 INCH	DURANICHE SP0601U - 4.8 TO 6.5 INCH	S/S UNDERWATER LUMINAIRE HOUSINGS (NICHES)
6 X 4 6 INCHES ASIN: B018QQLDVE	LGGUY1000	SP0601U	SP0606C

## **KEY DIMENSIONS**







## IMPORTANT NOTE

## PLEASE STORE THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE



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