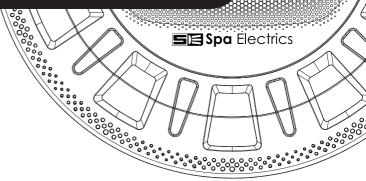




REPLACEMENT LED POOL LIGHT





R10 INSTALLATION & OWNER'S MANUAL

U.S. Patent No. 11746996

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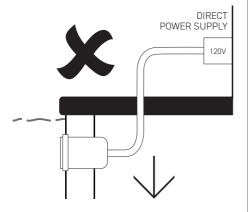
NOTICE

FRESH WATER USE ONLY.
NOT INTENDED FOR OPERATION OUT OF WATER.

PRE-INSTALLATION CHECK

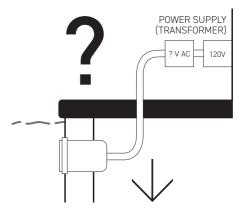
1 CHECK POWER SUPPLY

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 2 REQUIREMENTS



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

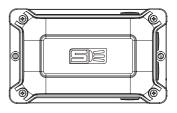
2 ADD TRANSFORMER (IF NEEDED)

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 50W 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 pool condition



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

PRE-INSTALLATION CHECK

3 CHECK PLUG CABLE THICKNESS

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

4 CHECK BONDING

ENSURE BONDING IS SECURE AT BACK OF NICHE **DO NOT CUT** THE BONDING CABLE

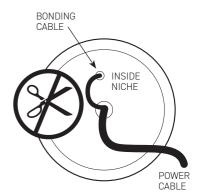
DO NOT DISTURB THE BONDING CABLE WHEN WORKING WITH THE PLUG CABLE

ELECTRICAL GROUNDING



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

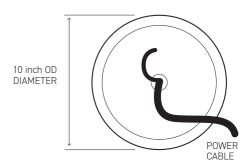
SEE ELECTRICAL GROUNDING SECTION FOR MORE INFORMATION



5 CHECK NICHE DIAMETER

THE RETRO UNIVERSAL IS
DESIGNED TO WORK WITH 10
INCH OUTSIDE DIAMETER NICHES

REFER TO APPENDIX A FOR A LIST OF NICHES 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, 10" Pool Light (PAR 56) 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 lights normal operation & in some cases damage the lights internal electronic components. For more information, please contact Spa Electrics Inc.

WARNING



- The Retro Universal Light must be water cooled at all times. DO NOT switch the light on until
 installation is complete and the light is fully submerged in water.
- Ensure sufficient cable is coiled behind the light to allow for servicing (~12 to 24inch)
- Ensure only circular cable not exceeding 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 chemicals, Spa Electrics strongly recommend 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 questions regarding the correct installation of this product.

WINTERIZATION

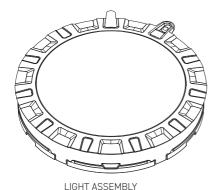


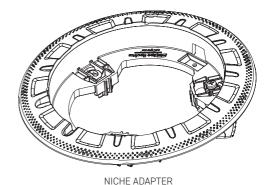
- Lights must be removed from the pool wall and cable disconnected via plug connection & stored in a safe place.
- Winterization Cover must be fitted to Plug Top prior to reinstalling into the niche for winter.
- Unless niche/conduit connection is adequately sealed (i.e. via included cable gland components), 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 in the Winterization section OR consult your local pool professional for a complete pool winterization process.

PRODUCT SUPPORT AND INFORMATION

For the most update to date installation information and contact information for assistance in your region, please visit **www.spaelectrics.com.au**

INCLUDED PARTS





OPEN

QUICK CONNECT PLUG (PROVIDED AS COMPONENTS SEE BELOW)



LIGHT MOUNTING SCREW (SPARE)



NICHE ADAPTOR MOUNTING SCREW



LANOLIN



WINTERIZATION COVER

CONNECTOR PLUG COMPONENTS



Screw Terminal End with screws attached



Strain Relief Clip



Barrel



Glands x 3 sizes provided



Gland Nut



Large Gland Nut (also supplied)



Collar





1X WARRANTY CARD



1X MULTIPLUS MANUAL

REQUIRED PART (NOT INCLUDED)

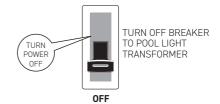


UL LISTED ISOLATING LOW VOLTAGE POWER SUPPLY, EVALUATED FOR SWIMMING POOL USE. Installed as per current NEC wiring rules. 12~14v AC output. Minimum 50W per Retro Series Pool Light. Spa Electrics recommends the use of its "LVX Series" safety transformers with the Retro Series lights.

A: CONNECTION TO CABLE

STOP! WARNING ELECTROCUTION

CHECK POWER IS TURNED OFF FIRST

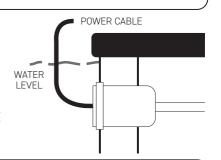


1 REMOVE EXISTING LIGHT

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

ENSURE YOU DON'T DISTURB THE BONDING CABLE

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

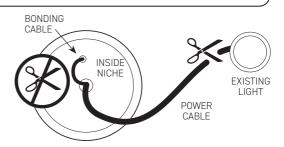


2 DISCONNECT EXISTING LIGHT

DISCONNECT LIGHT FROM POWER CABLE

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

ENSURE BONDING CABLEIS NOT CUT OR DISTURBED



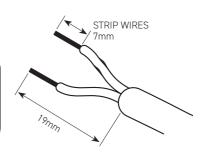
CABLE PREPARATION

STRIP POWER CABLE TO SPECIFIED LENGTH

NOTE



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



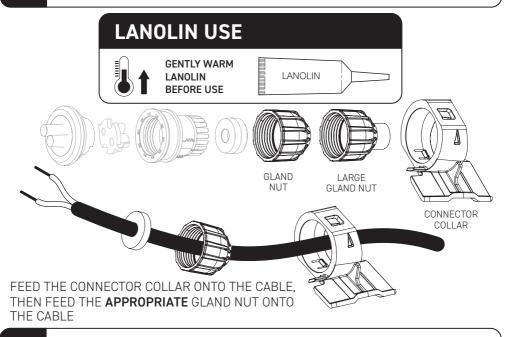
NOTE



THE EXISTING CABLE MAY INCLUDE A GROUND WIRE (GREEN), CUT THIS WIRE OFF AS THIS IS NOT REQUIRED FOR CONNECTION TO THE SPA ELECTRICS LIGHT AND DOESN'T FOLLOW THE CABLE PREPARATION STEP.

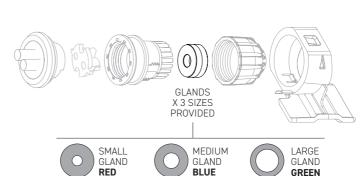
4

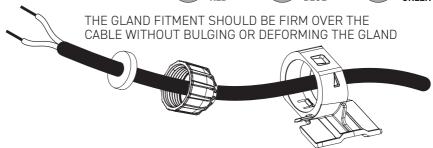
START ASSEMBLY OF CONNECTOR PLUG



CHOOSE THE APPROPRIATE GLAND

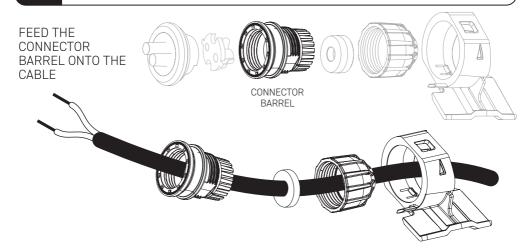
SELECT THE
APPROPRIATE CABLE
GLAND FROM THE
THREE SUPPLIED THAT
SNUGLY FITS THE
EXISTING POWER CABLE
WITHOUT BULGING





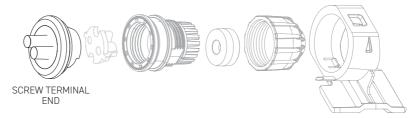
6

CONTINUE ASSEMBLY OF CONNECTOR PLUG



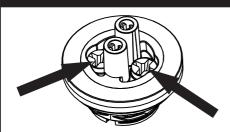
7

CHECK SCREWS ON SCREW TERMINAL END



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

WITH SCREWS



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

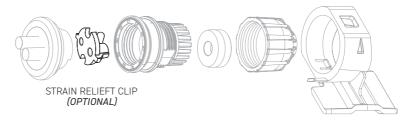
WITHOUT SCREWS



CHECK THERE ARE NO HOLES IN THE INDICATED LOCATIONS.

PROCEED TO STEP 8.

STRAIN RELIEF CLIP

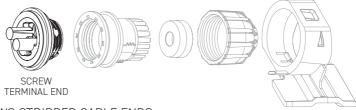


OPTION 1: WHEN USING THE MEDIUM OR LARGE CABLE GLANDS, THE STRAIN RELIEF CLIP IS NOT REQUIRED. FOLLOW STEP 9A (IGNORE STEP 9B).

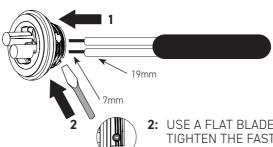
OPTION 2: THE STRAIN RELIEF CLIP MUST BE USED WHEN THE SMALL CABLE GLAND IS USED. FOLLOW STEP 9B (IGNORE STEP 9A).



9A CONNECT THE SCREW TERMINAL END

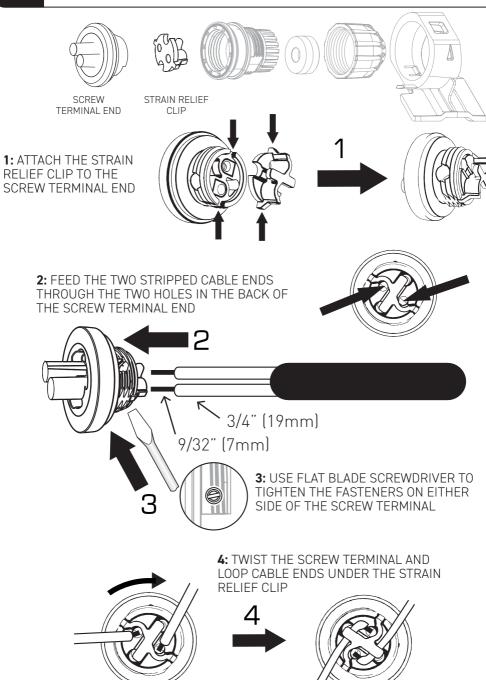


1: FEED THE TWO STRIPPED CABLE ENDS THROUGH THE TWO HOLES IN THE BACK OF THE SCREW TERMINAL END



2: USE A FLAT BLADE SCREWDRIVER TO TIGHTEN THE FASTENERS ON EITHER SIDE OF THE SCREW TERMINAL

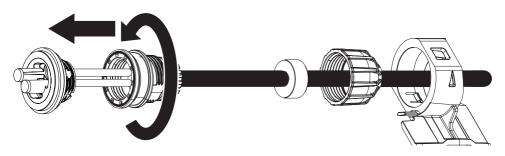
CONNECT THE SCREW TERMINAL END



10

START ASSEMBLY OF CONNECTOR PLUG

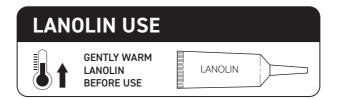
CAREFULLY THREAD CONNECTOR BARREL ONTO SCREW TERMINAL AND TIGHTEN FIRMLY BY HAND

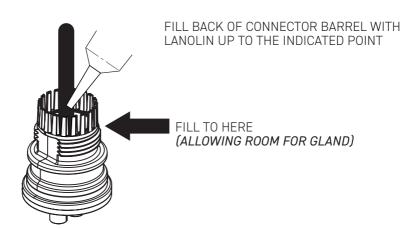


LEAVE THESE PARTS DISASSEMBLED UNTIL AFTER ADDING LANOLIN

11

ADD LANOLIN

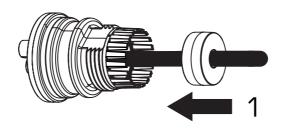


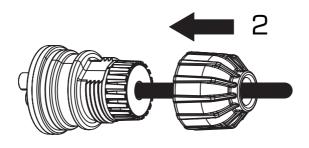


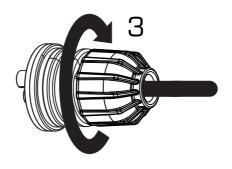
12

CONTINUE ASSEMBLY OF CONNECTOR PLUG

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

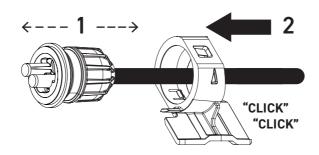




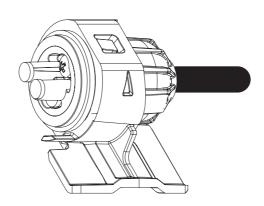


CONTINUE ASSEMBLY OF CONNECTOR PLUG

- 1: DO A PULL TEST ON THE PLUG ASSEMBLY SO FAR, ALL ASSEMBLED PARTS SHOULD FEEL FIRM AND TIGHT
- 2: PUSH CONNECTOR COLLAR ALL THE WAY IN TO THE END UNTIL THERE ARE TWO DISTINCT "CLICKS". THE END WILL BE FREE TO ROTATE



ASSEMBLED VIEW OF CONNECTOR PLUG



B: ATTACH NICHE ADAPTOR

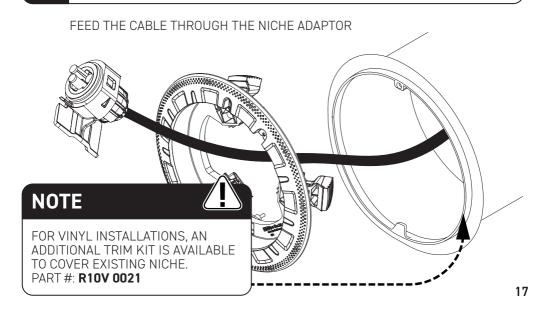
1 CHECK QUALITY OF NICHE

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**

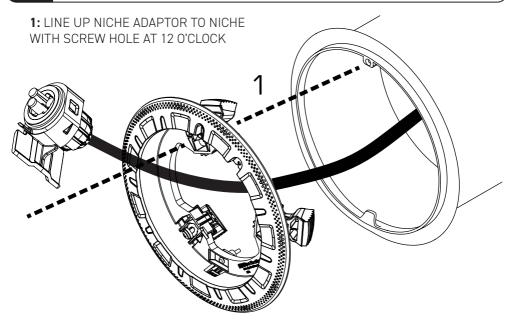


2 INSERT NICHE ADAPTOR

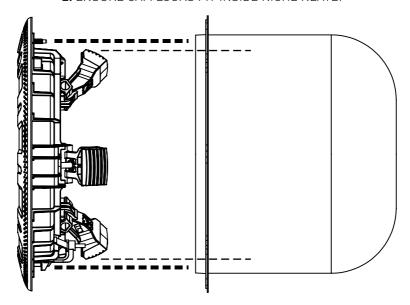


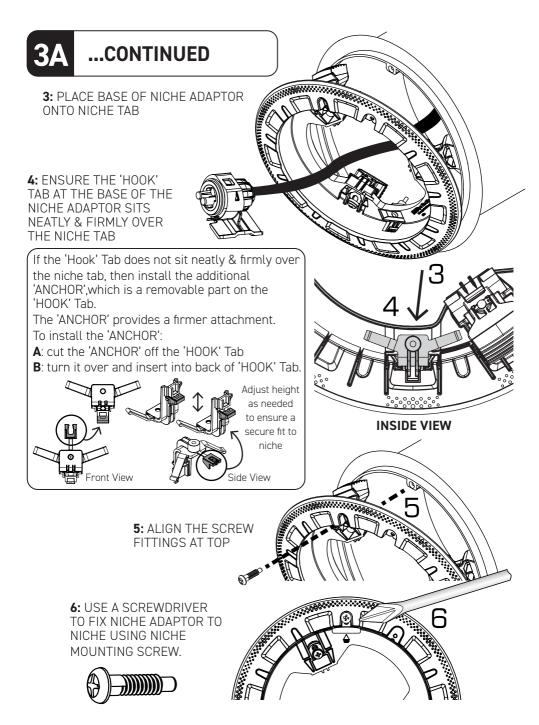


IF NICHE TAB & SCREW FITTING IS INTACT



2: ENSURE CAM LOCKS FIT INSIDE NICHE NEATLY





7: TIGHTEN LOWER 'HOOK' TAB SCREW TO ENSURE A TIGHT FIT

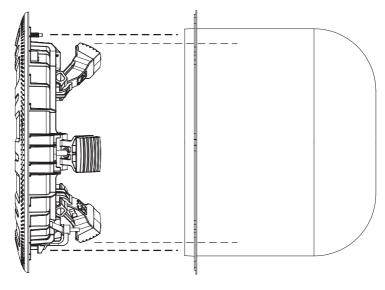
8: GO TO SECTION C: CONNECT LUMINAIRE

3B

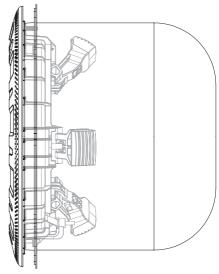
IF NICHE TAB & SCREW FITTING IS NOT INTACT

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



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



3B

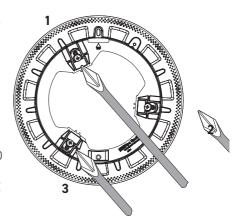
...CONTINUED

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

DO NOT OVERTIGHTEN.

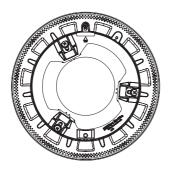
CHECK FOR SECURE FITTING, THE NICHE ADAPTOR SHOULD BE FIRM AND NOT ABLE TO MOVE EASILY BY HAND

GO TO SECTION C: CONNECT LUMINAIRE

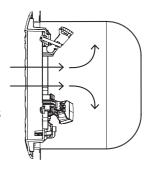


AS THE CAM LOCK SCREWS TIGHTEN, THE CAM LOCKS WILL MOVE IN AND UP, PULLING THE NICHE ADAPTOR FIRMLY INTO THE NICHE

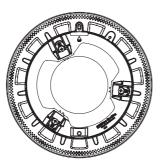
MINIMUM CAM LOCK POSITION (LOOSE)



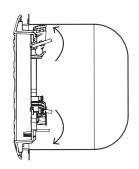
TIGHTEN SCREWS TO PULL NICHE ADAPTOR INTO NICHE



MAXIMUM CAM LOCK POSITION (TIGHT)

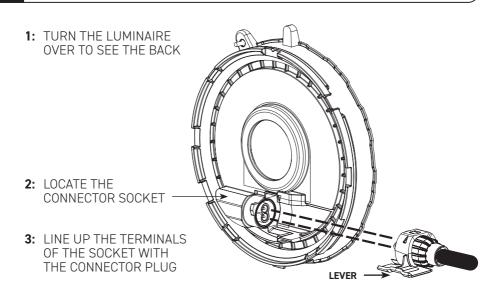


WHEN ALL CAM LOCKS ARE SCREWED TIGHT, THE CAM LOCKS SIT TIGHT AGAINST THE INSIDE OF THE NICHE, AND THE NICHE ADAPTOR IS PULLED FURTHER INTO THE WALL

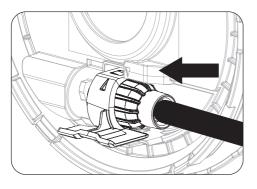


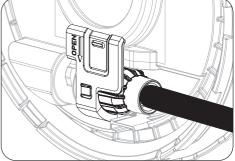
C: CONNECT LUMINAIRE

ALIGN UP AND CONNECT CONNECTOR PLUG



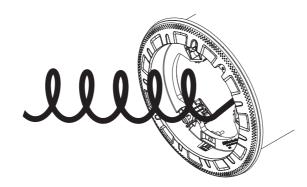
- 4: SLIDE THE CONNECTOR PLUG FIRMLY INTO THE SOCKET WITH THE LEVER HORIZONTAL
- 5: FOLD THE LEVER UPRIGHT UNTIL IT LOCKS INTO PLACE VERTICALLY



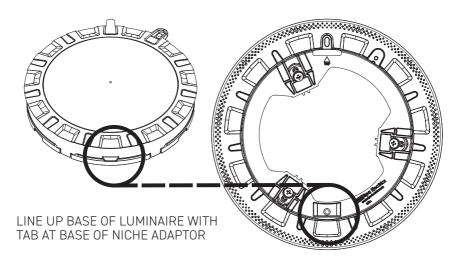


D: FIT LIGHT TO NICHE

COIL EXCESS CABLE INTO NICHE



2 CONNECT LIGHT ASSEMBLY

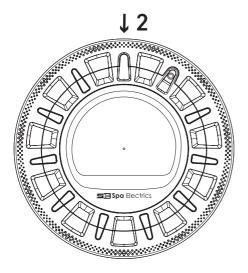


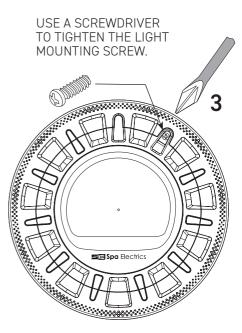


2

CONNECT LIGHT ASSEMBLY CONTINUED

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





POST INSTALLATION CHECK

1

TEST SYSTEM

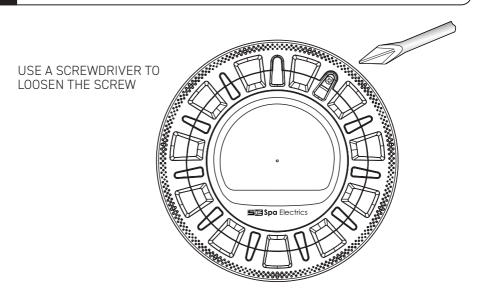
TURN ON POWER AND CHECK ALL WORKING CORRECTLY



TURN ON BREAKER TO POOL LIGHT TRANSFORMER

WINTERIZATION

1 DETACH THE LIGHT ASSEMBLY

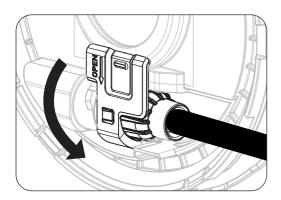


2 PULL OUT LIGHT ASSEMBLY

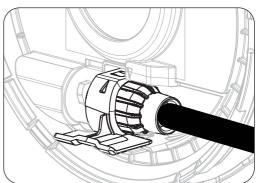
PULL THE LIGHT ASSEMBLY FORWARD AND UPSO IT LIFTS OFF THE TAB AT BASE.

UNLOCK THE PLUG

FOLD THE LEVER DOWN SO THE LEVER IS HORIZONTAL



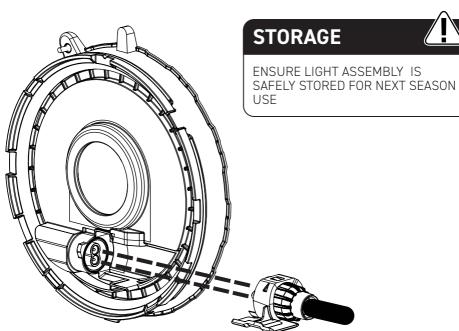
THE LIGHT ASSEMBLY IS NOWREADY TO BE REMOVED



4

REMOVE THE LIGHT ASSEMBLY

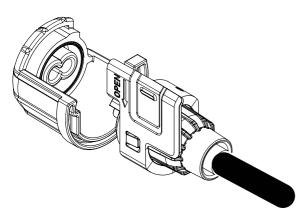
PULL OFF THE LIGHT ASSEMBLY



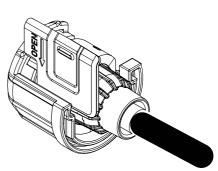
5

CONNECT WINTERIZATION PLUG CAP

LINE UP THE WINTERIZATION PLUG CAP TO THE PLUG

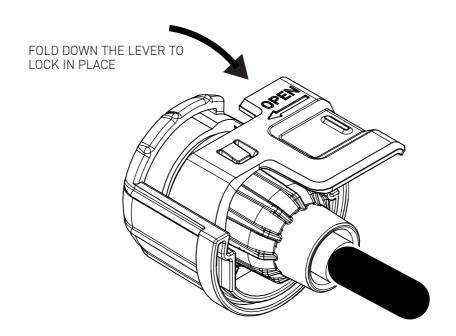


SLIDE INTO PLACE UNTIL SECURE



6

LOCK ON WINTERIZATION PLUG CAP



TROUBLESHOOTING

ISSUE	REASON	ACTION	
Light returns to WHITE colour during manual colour change.	Light synchronization process has been triggered.	Refer to MultiPlus User Guide instructions.	
Light flashes 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 to voltage under load using multi-meter (ie. 50w 12v) Required voltage (11v ~ 1		
Light not operating (4)	Transformer not working	Check fuses & test transformer using multimeter under load (ie.50w 12v)	
Light colours not synchronized with controller	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.

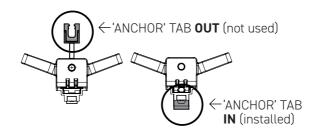
APPENDIX A

THE RETRO UNIVERSAL HAS BEEN UL TESTED WITH THE FOLLOWING NICHES

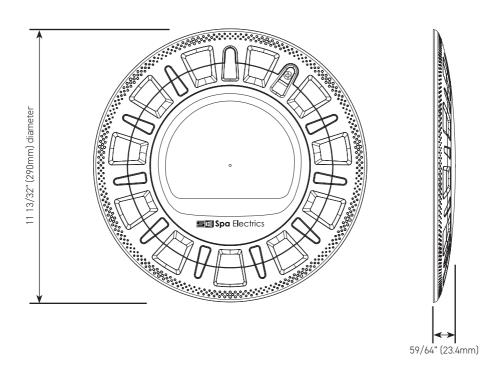
	Hayward	Jandy Zodiaz	Jandy Zodiac	Pentair	Pentair
	SP0609C	PLNICLRG	SSNICLRG1R	79206700	78210300
'ANCHOR' on 'HOOK' Tab	IN	IN	IN	IN	OUT
Niche Adaptor	Fitted and	Fitted and	Fitted and	Fitted and	Fitted and
Tab and Slot	Aligned	Aligned	Aligned	Aligned	Aligned

ALL THESE FITTED AND ALIGNED IN ACCORDANCE WITH SECTION:

B: ATTACH NICHE ADAPTOR > STEP 3



KEY DIMENSIONS





IMPORTANT NOTE

PLEASE STORE THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE



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The underwater lighting specialists

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