TruSwim
TECHNOLOGY
By Sunrise Spas

Owner's Manual

REVISED 2016/06

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Sunrise Spas
317 South Service Road West
Grimsby, Ontario Canada L3M4E8

Congratulations on Choosing a Quality TruSwim Swim Spa by Sunrise Spas!

You now own a high quality TruSwim Swim Spa built for years of enjoyment and relaxation. It is of prime importance that you understand the operation of your swim spa and enjoy it with safety in mind. You must read this manual thoroughly and understand all of the safety precautions. Using your swim spa within these guidelines assures years of fun and relaxation gained from adding a TruSwim Swim Spa to your lifestyle.

Please read the Owner's Manual completely before installing and using your new swim spa. The purpose of this manual is to provide you with safety, operational and installation information which will allow you the fullest enjoyment of this fine product.

At the time of printing, this manual was deemed as accurate as possible. Sunrise Spas reserves the right to change product in an effort to enhance and improve, without prior notice.

Ownership Information

Name _____

Address _____

_____

Installation Date ____ / ____ / ____

Model Name _____ Serial # _____

Retailer Name _____ Retailer Phone Number _____

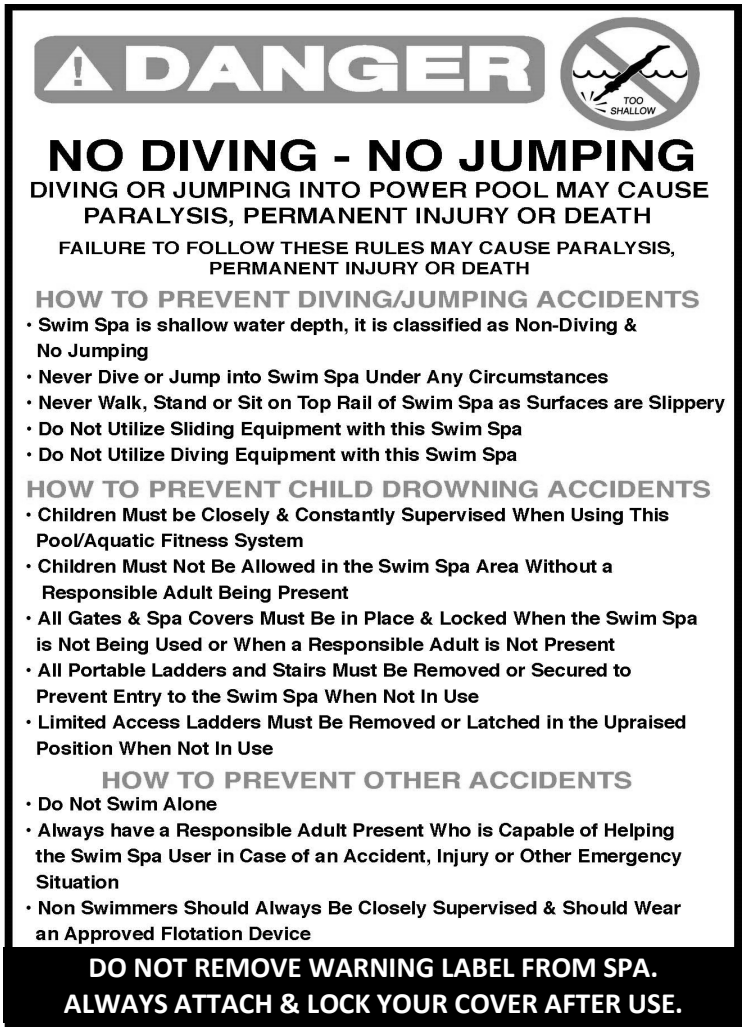
Service Technician Contact Info _____

Locating Your Serial Number

The metal serial number plate can be found on the backside of the swim spa shell by removing the cabinet panel beneath the digital control pad. This silver plate includes a 5 digit serial number.

SAVE THIS MANUAL FOR FUTURE REFERENCE !

Sunrise Spas
317 South Service Road West
Grimsby, Ontario Canada L3M4E8



WARNING

This unit is a professional-grade product. A knowledge of construction techniques, plumbing and electrical installation according to codes are required for proper installation and user satisfaction. It is recommended that a licensed contractor perform the installation. Warranty is voided for improper installation related issues**.**

WARNING

REPLACE ALL SAFETY SUCTION COVERS EVERY 7 YEARS.
Replace with similar VGB approved fittings at same or higher flow ratings.
Replacement applies to all swim spa models, both round and square grate fittings

READ AND FOLLOW ALL IMPORTANT SAFETY INSTRUCTIONS

When installing and using this equipment basic safety precautions should always be taken to reduce the risk of electrical shock, to ensure safe usage, and to safeguard the user's health.

READ AND FOLLOW ALL INSTRUCTIONS!!

This unit is a professional-grade product. A knowledge of construction techniques, plumbing and electrical installation according to codes are required for proper installation and user satisfaction. It is recommended that a licensed contractor perform the installation. Warranty is voided for improper Installation related issues.

It is the responsibility of the home owner to ensure that all users of the swim spa are adequately informed of all precautions. Use the swim spa only as described in this manual. The swim spa is intended for home use only. Do not use the swim spa in a commercial or rental setting. All warranties will be voided.

GROUND ALL METAL ELECTRICAL EQUIPMENT

- **A green colored terminal or a terminal marked G, GR, Ground, or Grounding, is located inside the supply terminal box or compartment. This terminal must be connected to the grounding means provided in the electric supply service panel, using a continuous copper wire equivalent in size to the circuit conductors supplying this equipment. *according to, but not limited to: NEC, NFPA 70, Section 680.40, UL 1563.**
- **At least two lugs marked "Bonding Lugs" are provided on the external surface or on the inside of the supply terminal box or compartment. Connect the local common bonding grid (household ground) in the area of the swim spa to these terminals, using an insulated or bare copper conductor not smaller than No. 6 AWG.**
- **All field-installed metal components such as rails, ladders, drains or similar hardware located within 5 feet of the swim spa or hot tub must be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.**
- **All metal surfaces within 5 feet of the swim spa must be bonded to the home bonding grid.**

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (*or equivalent; RCD, for export installs*)

- **All swim spas are permanently installed units. GROUND FAULT CIRCUIT INTERRUPTER PROTECTION IS REQUIRED. All swim spa equipment systems must be protected by a class A ground fault circuit interrupter (GFCI) or equivalent; RCD, for export installs. A ground fault circuit interrupter type circuit breaker (NOT SUPPLIED) must be installed in the home panel box by a licensed electrician when making wire connection to the swim spa support pack equipment.**

DANGER: RISK OF ELECTRICAL SHOCK:

- **Install the swim spa at least five feet (1.52 m) from all ungrounded (unbounded) metal surfaces.**
- **Ground fault circuit interrupter protection of the home power supply to the swim spa is necessary. Your electrician should explain how it operates. (See swim spa maintenance for function and testing)**
- **Do not permit any electric appliance, such as a light, telephone, radio or television, within five feet (1.52 m) of a swim spa. Keep electrical appliances and extension cords away from the swim spa. Water is a conductor of electricity.**

DANGER: RISK OF ACCIDENTAL DROWNING.

- **Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a swim spa unless they are supervised at all times.**

DANGER: TO REDUCE THE RISK OF DROWNING:

1. **Never use the swim spa alone.**
2. **Children should not use the swim spa unless they are supervised by an adult**
3. **Keep pets away from the swim spa at all times.**
4. **ALWAYS REPLACE AND LOCK THE SWIM SPA COVER WHEN THE SWIM SPA IS NOT IN USE.**

DANGER: TO REDUCE THE RISK OF DROWNING

- **Prolonged immersion in the swim spa may cause hyperthermia. The causes, symptoms and effects of hyperthermia may be described as follows: Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 °F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting. The effects of hyperthermia include:**

  1. **Failure to perceive heat**
  2. **Failure to recognize the need to exit the swim spa**
  3. **Unawareness of impending hazard**
  4. **Fetal damage in pregnant women**
  5. **Physical inability to exit the swim spa**
  6. **Unconsciousness resulting in the danger of drowning**

DANGER: RISK OF INJURY

- **Do not remove the suction fittings. The suction fitting in this swim spa is sized to match the specific water flow created by the pump. Should the need arise to replace the suction fitting or the pump, be sure that the flow rates are compatible. Never operate the swim spa if the suction fitting is broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.**

DANGER: RISK OF ACCIDENTAL DROWNING

- **Keep hair and body parts away from the suction guard. Do not allow long hair to float freely in the water; long hair should be restrained with a bathing cap. To reduce the risk of drowning from hair or body entrapment, install a suction fitting (s) with a marked flow rate in gallons per minute that equals or exceeds the flow rate marked on the equipment assembly, if replacement of suction fittings becomes necessary.**

WARNING

- **Ground fault circuit interrupter protection (GFCI) or equivalent; RCD, for the swim spa should be tested prior to each use by the homeowner. With the swim spa in operation, push the "test" button on the GFCI circuit breaker at the panel box. The swim spa should shut down immediately. Now reset the GFCI. The swim spa should return to normal operation. If the GFCI fails to operate in this manner, there exists a possibility of electrical shock. Approved testing applies for export protection devices, i.e. RCD.**
- **Discontinue swim spa operation by disconnecting the power source and notify a qualified electrician for identification and correction of the problem.**

WARNING

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

WARNING: TO REDUCE THE RISK OF INJURY

- **The water in a swim spa should never exceed 86ºF (30° C). Water temperatures between 100° F (38º C) and 104º F (40° C) are considered safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10 to 15 minutes) and for young children. Never exercise or swim in water above 86°F (30°C).**
- **Excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy. Pregnant or possibly pregnant women should limit swim spa temperatures to 100º F (38° C).**
- **Before entering a swim spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as 5º F (3°C).**
- **THE USE OF ALCOHOL, DRUGS, OR MEDICATION BEFORE OR DURING SWIM SPA USE MAY LEAD TO UNCONSCIOUSNESS WITH THE POSSIBILITY OF DROWNING.**
- **Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatiory system problems, or diabetes should consult a physician before using a swim spa.**
- **Always consult with a physician prior to beginning any exercise regimen . Do not overexert yourself. Take frequent breaks.**

- Persons using medication should consult a physician before using a swim spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
- Enter and leave swim spa slowly and with caution. Surfaces around swim spa will be wet and slippery.

WARNING

1. Never use the swim spa alone.
2. Do not bring any object into the swim spa that could damage the swim spa shell.
3. Do not sit on swim spa cover or place objects on it; it is not designed to support weight.
4. Remove any water or debris that may collect on the swim spa cover.
5. Keep all chemicals away from children and pets.
6. The PH and chemical balance of the water must be maintained as explained in this manual. Failure to do so may cause injury to users or damage to the swim spa, and will void your warranty.

WARNING: HEALTH CONSIDERATIONS

- The use of alcohol, drugs, medication can greatly increase risk of fatal hyperthermia.
- Individuals with infections and open sores or wounds should not use the swim spa. Bacteria thrive in warm and hot water. Always keep your swim spa disinfected and maintain the proper chemical balance.
- Shower before and after using the swim spa. This will remove any deodorant, perspiration, or body oils that could contaminate the water. Showering after will remove any residual chemicals and any bacteria that may have been in the swim spa.
- Do not use the swim spa immediately after strenuous exercise.
- If you feel pain or dizziness at any time while using the swim spa, discontinue use and contact a physician.

WARNING: TO REDUCE THE RISK OF INJURY

- It is especially important for persons over the age of 35 or persons with pre-existing health problems, such as obesity, heart disease, high blood pressure, circulatory problems, or diabetes to consult their physician before using the swim spa.
- The swim spa jets produce a stream of water with relatively high pressure. Prolonged exposure of a localized area of the body may cause bruises to the skin.
- Never insert any object into any opening.
- Do not use breakable containers in or near the swim spa.

WARNING: ELECTRICAL CONSIDERATIONS

- For controls other than underwater lighting circuits: A Ground Fault Circuit Interrupter (or equivalent for export installs) must be provided if this device is used to control an underwater lighting fixture. The conductors on the load side on 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 (or equivalent for export installs).
- The electrical supply for this product must include a suitably rated switch or circuit breaker to open all underground supply conductors to comply with Canadian Electric Code and Section 422-20 of the U.S. National Electric Code. The disconnecting means must be readily accessible to the swim spa occupant but installed at least 5 FT (1.5 M) from the swim spa water.

WARNING: For swim spas with audio / video components

1. CAUTION - Risk of Electric Shock. Do not leave compartment door open.
2. CAUTION - Risk of Electric Shock. Replace components only with identical components.
3. Do not operate the audio/video controls while inside the swim spa.
4. WARNING - Prevent Electrocution. Do not connect any auxiliary components (for example cable, additional speakers, headphones, additional audio/video components, etc.) to the system.

5. These units are not provided with an outdoor antennae; when provided, it should be installed in accordance with Canadian Electric Code and Article 810 of the U.S. National Electrical Code, ANSI/NFPA 70.

6. Do not service this product yourself as opening or removing covers may expose you to dangerous voltage or other risk of injury. Refer all servicing to qualified service personnel.

7. When the power supply connection or power supply cord(s) are damaged; if water is entering the audio/video compartment or any electrical equipment compartment area; if the protective shields or barriers are showing signs of deterioration; or if there are signs of other potential damage to the unit, turn off the unit and refer servicing to qualified service personnel.

8. This unit should be subjected to periodic routine maintenance (for example, once every 3 months) to make sure that the unit is operating properly.

ADDITIONAL SAFETY CONSIDERATIONS

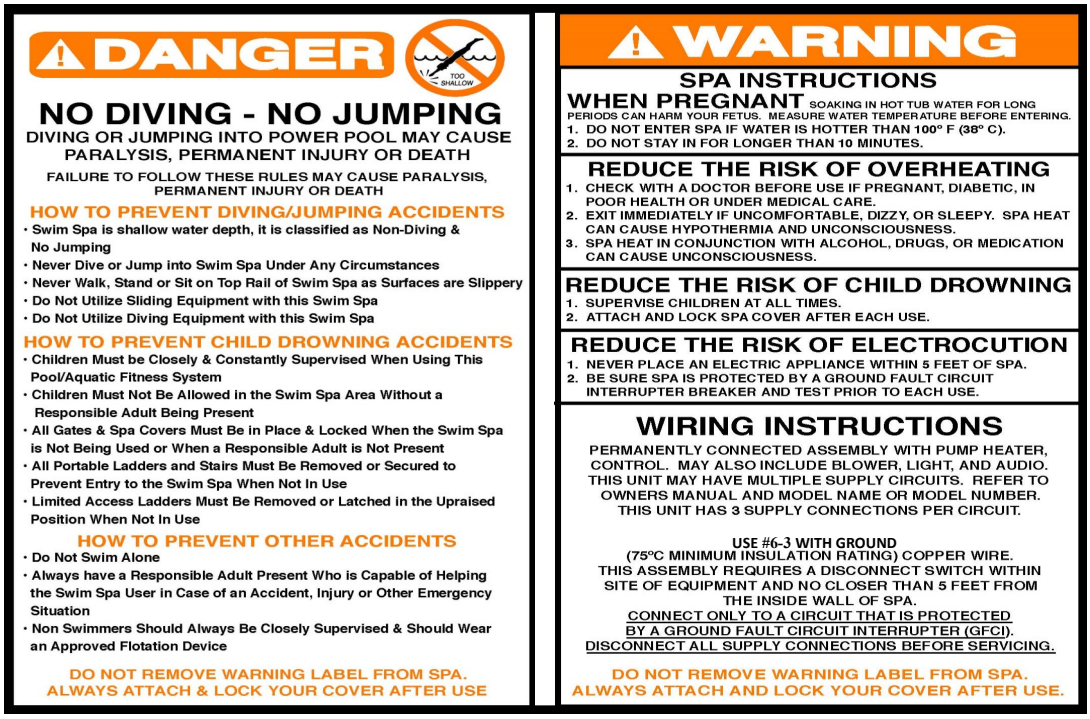
- **Install the swim spa to provide drainage for compartments of electrical components.**
- **For floor recessed swim spas: Install to permit access for servicing from above or below the floor. Swim spa equipment must be installed below water level.**
- **When planning your swim spa installation site, prepare for the unlikely event of rapid swim spa drainage.**
- **Do not place swim spa in direct sunlight while unit is empty or when sealed in shipping materials. Excessive heat build may cause damage to swim spa and void warranty.**
- **When installing swim spa, allow ample space for future servicing, noting location of all support equipment per the model specifications.**

SAVE THESE INSTRUCTIONS

Warning Danger Signs

Cabinet Installed: For your referral, safety and convenience, a weather resistant sign has been mounted on the end cabinet side of your portable swim spa. Become familiar with the precautions, exercise safety and care while enjoying your swim spa. Notify the factory or your retailer should you require additional signs or replacements.

Warning Sign Must Be Posted: An additional copy of this sign can be found packaged with your new swim spa. This sign must be posted permanently in a prominent area near the swim spa where it is clearly visible to all swim spa occupants. Post this sign immediately upon installation. Notify the factory or your retailer should you require additional signs or replacements.



DANGER

NO DIVING - NO JUMPING

DIVING OR JUMPING INTO POWER POOL MAY CAUSE PARALYSIS, PERMANENT INJURY OR DEATH

FAILURE TO FOLLOW THESE RULES MAY CAUSE PARALYSIS, PERMANENT INJURY OR DEATH

HOW TO PREVENT DIVING/JUMPING ACCIDENTS

- Swim Spa is shallow water depth, it is classified as Non-Diving & No Jumping
- Never Dive or Jump into Swim Spa Under Any Circumstances
- Never Walk, Stand or Sit on Top Rail of Swim Spa as Surfaces are Slippery
- Do Not Utilize Sliding Equipment with this Swim Spa
- Do Not Utilize Diving Equipment with this Swim Spa

HOW TO PREVENT CHILD DROWNING ACCIDENTS

- Children Must be Closely & Constantly Supervised When Using This Pool/Aquatic Fitness System
- Children Must Not Be Allowed in the Swim Spa Area Without a Responsible Adult Being Present
- All Gates & Spa Covers Must Be in Place & Locked When the Swim Spa is Not Being Used or When a Responsible Adult is Not Present
- All Portable Ladders and Stairs Must Be Removed or Secured to Prevent Entry to the Swim Spa When Not In Use
- Limited Access Ladders Must Be Removed or Latched in the Upraised Position When Not In Use

HOW TO PREVENT OTHER ACCIDENTS

- Do Not Swim Alone
- Always have a Responsible Adult Present Who is Capable of Helping the Swim Spa User in Case of an Accident, Injury or Other Emergency Situation
- Non Swimmers Should Always Be Closely Supervised & Should Wear an Approved Flotation Device

DO NOT REMOVE WARNING LABEL FROM SPA.
ALWAYS ATTACH & LOCK YOUR COVER AFTER USE

WARNING

SPA INSTRUCTIONS

WHEN PREGNANT SOAKING IN HOT TUB WATER FOR LONG PERIODS CAN HARM YOUR FETUS. MEASURE WATER TEMPERATURE BEFORE ENTERING.

1. DO NOT ENTER SPA IF WATER IS HOTTER THAN 100° F (38° C).
2. DO NOT STAY IN FOR LONGER THAN 10 MINUTES.

REDUCE THE RISK OF OVERHEATING

1. CHECK WITH A DOCTOR BEFORE USE IF PREGNANT, DIABETIC, IN POOR HEALTH OR UNDER MEDICAL CARE.
2. EXIT IMMEDIATELY IF UNCOMFORTABLE, DIZZY, OR SLEEPY. SPA HEAT CAN CAUSE HYPOTHERMIA AND UNCONSCIOUSNESS.
3. SPA HEAT IN CONJUNCTION WITH ALCOHOL, DRUGS, OR MEDICATION CAN CAUSE UNCONSCIOUSNESS.

REDUCE THE RISK OF CHILD DROWNING

1. SUPERVISE CHILDREN AT ALL TIMES.
2. ATTACH AND LOCK SPA COVER AFTER EACH USE.

REDUCE THE RISK OF ELECTROCUTION

1. NEVER PLACE AN ELECTRIC APPLIANCE WITHIN 5 FEET OF SPA.
2. BE SURE SPA IS PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER BREAKER AND TEST PRIOR TO EACH USE.

WIRING INSTRUCTIONS

PERMANENTLY CONNECTED ASSEMBLY WITH PUMP HEATER, CONTROL. MAY ALSO INCLUDE BLOWER, LIGHT, AND AUDIO. THIS UNIT MAY HAVE MULTIPLE SUPPLY CIRCUITS. REFER TO OWNERS MANUAL AND MODEL NAME OR MODEL NUMBER. THIS UNIT HAS 3 SUPPLY CONNECTIONS PER CIRCUIT.

USE #6-3 WITH GROUND (75°C MINIMUM INSULATION RATING) COPPER WIRE. THIS ASSEMBLY REQUIRES A DISCONNECT SWITCH WITHIN SITE OF EQUIPMENT AND NO CLOSER THAN 5 FEET FROM THE INSIDE WALL OF SPA.
CONNECT ONLY TO A CIRCUIT THAT IS PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI).
DISCONNECT ALL SUPPLY CONNECTIONS BEFORE SERVICING.

DO NOT REMOVE WARNING LABEL FROM SPA.
ALWAYS ATTACH AND LOCK YOUR COVER AFTER USE.

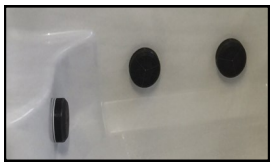
Important: It is extremely important that this sign be posted permanently placed in clear view of persons using the swim spa. Occasional swim spa users may not be aware of some of the dangers hot water poses to pregnant women, small children, seniors, and people under the influence of alcohol. If you did not receive a warning sign or your sign has become damaged, please call your local retailer or the factory for a replacement.

WARNING: Read all instructions before using the swim spa. The manufacturer assumes no responsibility for personal injury or property damage sustained by or through the use of this product.

SAVE THIS MANUAL, SIGNS, AND INSTRUCTIONS FOR FUTURE REFERENCE.

Hydrotherapy Jets:
Various sized fittings mix water with air to produce localized therapy, in a straight stream, circular motion, or in random patterns for massage. Positioned in massage seats.

Air Controls: Fittings mounted on the lip of swim spa controlling amount of outside air mixed with incoming water of the hydrotherapy jet. Your swim spa has multiple air controls on the swim spa lip that control air/ water mix for a segment of the jets. You choose the strength that best suits you. When not in use, the air controls should be kept in the off position.



Suction: Circular fitting mounted on the vertical wall of the footwell and serves as an additional pump water inlet. These fitting are to be replaced every 7 years with the same safety approved VGB fitting.

In the TruSwim Series, the large square white suction grates assist in the dual propulsion operation. In the event any damage to either type of suction cover occurs replace immediately with a like VGB approved suction. This replacement must be done every 7 years regardless of damage or not.

Teleweir Filter: The spa zone of both the TS-1900DZ and TSE1900DZ dual zones are equipped with skim suction-side filters. They assure optimum water filtering and ease of cleaning at spa side. Review the maintenance section of this manual for filter cartridge cleaning and replacement.

Pressure-Side Filter: This pressure-side filtration is a powerful design built into the TruSwim Series Swim Spas. The filter cartridge is easily accessible for maintenance and hidden from occupant's view.

Ozone Jets: All swim spas are equipped with ozone jets for sanitation. The filter cycle should circulate 8-10 hours daily for proper ozonation. Use the programmable electronic control center to program this operation.

Ozonator: Your ozonator will operate in conjunction with your filtration system. Ozone is a gas, $O^{3,}$ that has been used for years as a sanitation treatment for drinking water, and now as a proven purifier for swim spas and hot tubs.

Slide Valves: Valves are used to shut off the water flow to the heater, circulation pump, Secondary pump, and Fitness pumps for specific service problems.

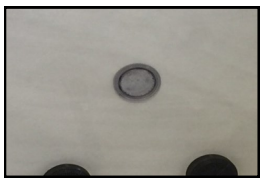
Support Pack: The control system operates all functions of the swim spa. Make sure your electrician connects the power supply accordingly to all National Electric Code, US and Canadian and shows you how to test the GFCI circuit breaker (not supplied). This pack is connected to a 50 amp breaker and for dual zone products; TS-1900DZ and TSE1900DZ, there will be two packs, one for the fitness zone and another for the spa zone.

Waterway Neo 2100 TruSwim Swim Control: Digital lighted control center operates all pump functions, temperature control, scheduled filtration cycles, lights and workout modes. Refer to the Control section of this manual for programming of personalized propulsion speed for custom workouts.

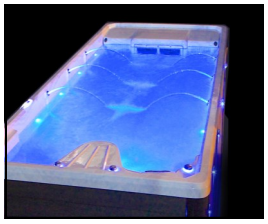
Circulation Pump: A dual speed pump designed to use low speed for water filtration and heating, and a high speed for hydrotherapy. The jets one button on the topside control will activate the circulation pump. The TS-1900DZ and TSE-1900DZ will have a second circulation pump for the spa zone.

Heater: Your swim spa is equipped with a thermostat control at the spa side (topside control). Set the swim spa at the temperature you enjoy. Leave the thermostat at that setting, and the swim spa will automatically maintain the correct temperature; ready for your enjoyment anytime. Avoid constant resetting of the thermostat; it is more economical to maintain temperature then to let the temperature fall and raise. Never raise the temperature above 104º F (40° C) for spa use. Never raise the temperature above 86°F (30°C) for swimming or exercising.

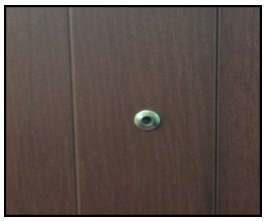
Secondary pump: A single speed secondary pump has been added to the spa zone of the TS-1900DZ and TSE-1900DZ for additional enjoyment



Main Spa Light: Low voltage underwater swim spa light, with varying shades of a color wash, controlled at the spa side control panel. Choose rotation of color or constant color of your choice.



LED Lighting: Standard feature on all swim spa models is the main spa lighting which includes the underwater light with 8-10 underwater pin lights and 6 water spout lights. As an option, the exterior LED lighting is 16 cabinet sconces..



Ozone Light: A cabinet mounted indicator light which confirms the ozone purification system is properly operating.

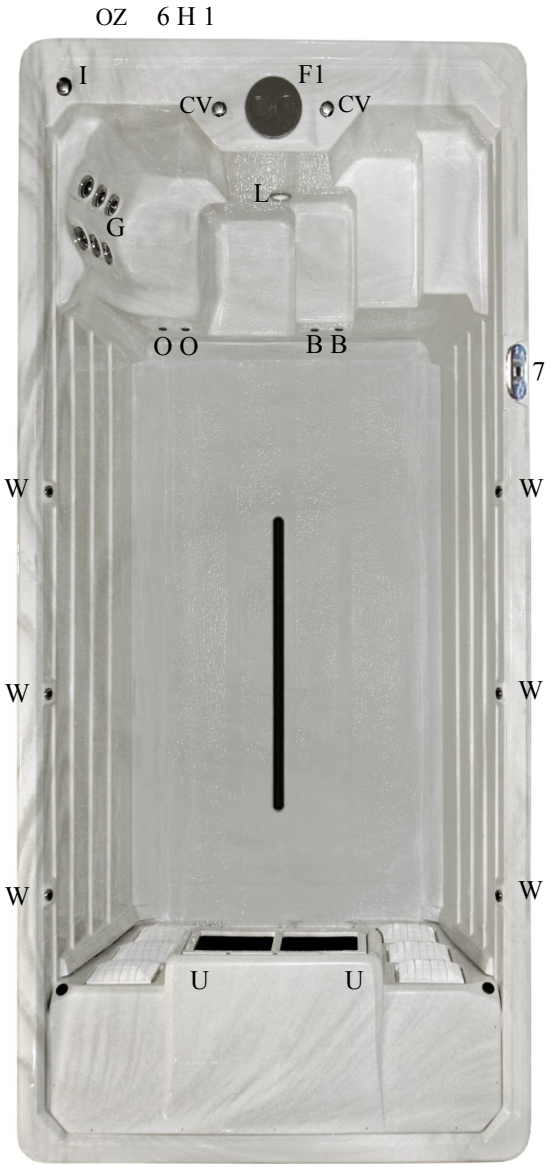
Water Spout Control Valve: Every swim spa model includes 6 water spouts. These two control valves each operate the flow on 3 spouts, each on a side of the unit.

GENERAL **rev. 2016/06**

Seating Capacity	2 seats, fitness area
Shell Material	Acrylic
Dimensions (North America)	180” x 92” x 56”
Dimensions (Export)	427 cm. x 234 cm x 142 cm.
Water Capacity	2340 Gallons (8,479 liters)
Dry Weight	1,845 lbs. (837 kg.)
Skirt Material	Synthetic
Water Flow	5140 GPM (19,457 LPM)

WATER SYSTEM** (photo ref.)

Ozone Treatment System	OZ	1
Pressure Side Filter 75SF (6.97SM)	F1	1
Slide Valves		2
Massage Jet	G	6
Ozone Jet	O	2
Safety Suction	U	8
Air Control	I	1
Main Spa Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Bypass Jet	B	2



SPECIAL FEATURES

Spa Pillows	0
LED lighting	Standard
Stainless Steel Jetting	Standard
LED cabinet lighting	Optional
Bluetooth Audio	Optional*

ELECTRICAL SYSTEM

Pump Information	Reference Number	North America (60Hz)	Export (50Hz)
Jet Pump HP	1	2.0 HP (1.848 KW)	2.0 HP (2.070 KW)
Electronics			
Electrical Can	6	Waterway Neo 2100 Series	Waterway Neo 2100 Series
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	Waterway Neo 2100 Series	Waterway Neo 2100 Series

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install.

All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

GENERAL **rev. 2016/06**

Seating Capacity	1 seat, fitness area
Shell Material	Acrylic
Dimensions (North America)	204” x 92” x 56”
Dimensions (Export)	427 cm. x 234 cm x 142 cm.
Water Capacity	2420 Gallons (9,161 liters)
Dry Weight	1,985 lbs. (900 kg.)
Skirt Material	Synthetic
Water Flow	5187 GPM (19,634 LPM)

WATER SYSTEM** (photo ref.)

Ozone Treatment System	OZ	1
Pressure Side Filter 75SF (6.97SM)	F1	1
Slide Valves		2
Large Euro Jet w/Eyeball	E	18
Ozone Jet	O	2
Safety Suction	U	2
Air Control	I	1
Main Spa Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2

SPECIAL FEATURES

Spa Pillows	1
LED lighting	Standard
Stainless Steel Jetting	Standard
LED cabinet lighting	Optional
Bluetooth Audio	Optional*

ELECTRICAL SYSTEM

Pump Information	Reference Number	North America (60Hz)	Export (50Hz)
Spa Pump HP	1	4.0 HP (2.040 KW)	4.0 HP (2.024 KW)
Electronics			
Electrical Can	6	Waterway Neo 2100 Series	Waterway Neo 2100 Series
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	Waterway Neo 2100 Series	Waterway Neo 2100 Series

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install.

All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

GENERAL **rev. 2016/06**

Seating Capacity	1 seat, fitness area
Shell Material	Acrylic
Dimensions (North America)	227” x 92” x 56”
Dimensions (Export)	578 cm. x 234 cm x 142 cm.
Water Capacity	2700 Gallons (10,221 liters)
Dry Weight	1,990 lbs. (903 kg.)
Skirt Material	Synthetic
Water Flow	5187 GPM (19,634 LPM)

WATER SYSTEM** (photo ref.)

Ozone Treatment System	OZ	1
Pressure Side Filter 75SF (6.97SM)	F1	1
Slide Valves		2
Large Euro Jet w/Eyeball	E	18
Ozone Jet	O	2
Safety Suction	U	2
Air Control	I	1
Main Spa Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2

SPECIAL FEATURES

Spa Pillows	1
LED lighting	Standard
Stainless Steel Jetting	Standard
LED cabinet lighting	Optional
Bluetooth Audio	Optional*

ELECTRICAL SYSTEM

Pump Information	Reference Number	North America(60Hz)	Export (50Hz)
Spa Pump	1	4.0 HP (2.040 KW)	4.0 HP (2.024 KW)
Electronics			
Electrical Can	6	Waterway Neo 2100 Series	Waterway Neo 2100 Series
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	Waterway Neo 2100 Series	Waterway Neo 2100 Series

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install.
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

GENERAL **rev. 2016/06**

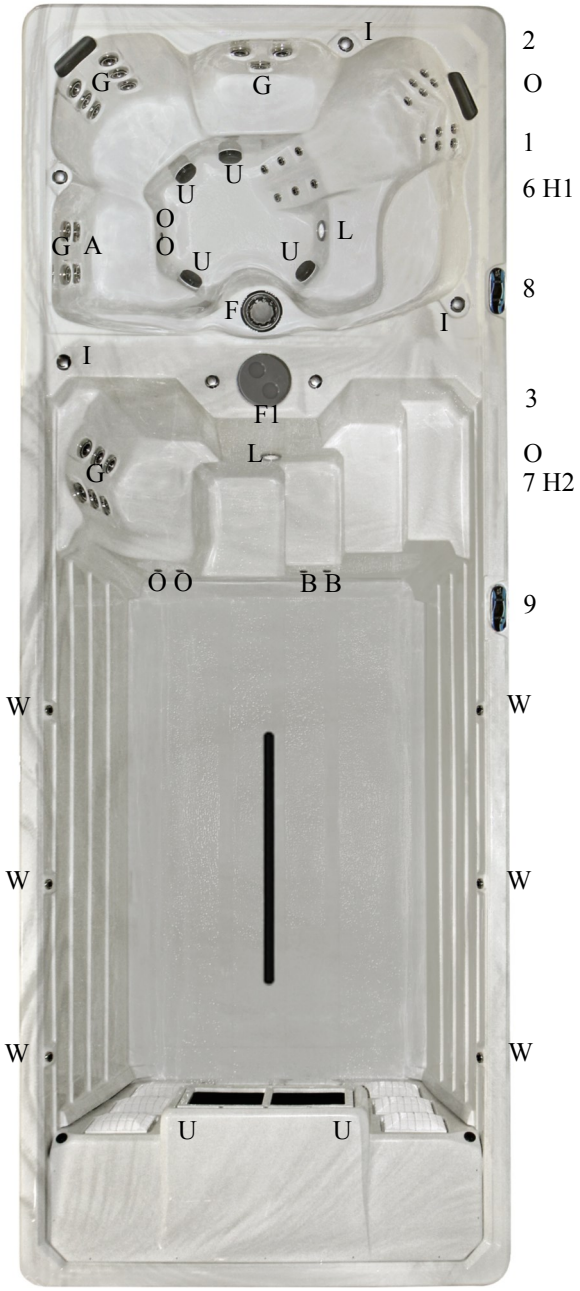
Seating Capacity	5 seats, fitness area
Shell Material	Acrylic
Dimensions (North America)	227” x 92” x 56”
Dimensions (Export)	578 cm. x 234 cm x 142 cm.
Water Capacity	2525 Gallons (9,558 liters)
Dry Weight	2,675 lbs. (1213 kg.)
Skirt Material	Synthetic
Water Flow	5467 GPM (20,695 LPM)

WATER SYSTEM** (photo ref.)

Ozone Treatment System	OZ	2
Teleweir Filter 50SF (4.65SM)	F	1
Pressure Side Filter 75SF (6.97SM)	F1	1
Slide Valves		6
Rotational Jet	A	2
Large Euro Jet w/ Eyeball	E	16
Massage Jet	G	17
Ozone Jet	O	4
Safety Suction	U	12
Air Control	I	4
Main Spa Light	L	2
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Bypass Jet	B	2

SPECIAL FEATURES

Spa Pillows	2
LED lighting	Standard
Stainless Steel Jetting	Standard
LED cabinet lighting	Optional
BlBluetooth Audio	Optional*



ELECTRICAL SYSTEM

Pump Information	Reference Number	North America (60Hz)	Export (50Hz)
Spa Pump #1	1	2.0 HP (1.848 KW)	2.0 HP (2.070 KW)
Spa Pump #2	2	4.0 HP (2.040 KW)	4.0 HP (2.024 KW)
Swim Spa Seating Pump	3	2.0 HP (1.848 KW)	2.0 HP (2.070 KW)
Electronics			
Electrical Can (spa end), (swim end)	6, 7	Waterway Neo 2100 Series (each)	Waterway Neo 2100 Series (each)
Voltage (spa end), (swim end)		120/240, 120/240	230 / 230
Amperage (spa end), (swim end)		50, 50	1x32, 1x32
Heater (spa end), (swim end)	H1, H2	5.5 KW, 5.5 KW	3.0 KW, 3.0 KW
Operation System			
Spa Side Control (spa end), (swim end)	8, 9	Waterway Neo 2100 Series(each)	Waterway Neo 2100 Series(each)

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install.
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

Swim spa installation can be quick and simple if these guidelines are considered in planning the site. Please read the following information carefully. Proper planning will make the delivery and install more economical and efficient and the proper site selection will increase your year-round enjoyment.

Access from delivery point to final site: Consider the route from where the unit is delivered to the installation site. The steepness of grade, trees, shrubs, gates, roof overhangs, cables and overhead wires need consideration. Outside dimensions of your model choice can be used to determine clearance required for the move. Review outdoor and indoor installation suggestions prior to choosing your swim spa location.

It is common to have swim spas moved with the use of a crane onto the site of your choice. This is an easy solution to locate your new swim spa in what may be the most advantageous area of your home, although not accessible with the normal means.

Surface Requirements: Your swim spa should be placed on a level concrete pad designed to support 26,000 lbs.(11,793 kg.). Do not place the swim spa on a dirt surface or directly on the ground. Once you have a location selected, there are several issues you should consider in preparing the site for the swim spa installation.

A flat, level surface strong enough to support your swim spa is mandatory. Once your swim spa is filled, it has considerable weight. Make certain the location you choose can support a minimum of 200 lbs (91 kg) per square foot load, per recommended guidelines. A reinforced concrete slab should be at least four inches thick with the reinforcing mesh or rod attached to a bond wire. To check the level of this surface, spray a hose on the surface and check for puddles or run-off. Make the necessary corrections assuring levelness prior to placement of your new swim spa. Structural damage to the swim spa resulting from the incorrect installation of placement on inadequate foundation is not covered in the swim spa's limited warranty.

General Considerations:

Make sure your dimensions are correct as you prepare the site for your new swim spa. Call your retailer for dimensions of the model you have chosen. Allow a perimeter of the chosen ground surface to extend beyond the swim spa itself to provide a clean area for users to get in and out of the swim spa.

The swim spa location and the swim spa itself must be level before filling with water. Review Installing the Shim Guidelines included with your swim spa. Instructions are also found under the Installation section of this manual. This must be completed prior to filling your unit with water.

Allow adequate space to access the equipment behind the four access panels on the swim spa cabinet. Review the pages in this manual referencing swim spa model specifications for the location of the support equipment for the model you have chosen.

Leave ample access to the GFCI circuit breaker (RCD) for testing and frequent access.

A quick disconnect (manual disconnect) or GFCI is to be installed between 5 - 15 ft. (1.5-4.6 m) of the spa and within the line of sight from the unit. Consider where this can be located when selecting and preparing the spa site. All wiring must comply with the U.S. National Electric Code / Canadian Electric Code. **ALL EQUIPMENT MUST BE GROUND FAULT CIRCUIT PROTECTED (NOT SUPPLIED) AT THE POWER SOURCE. ALL ELECTRICAL WIRING OF THE SWIM SPA SUPPORT EQUIPMENT MUST COMPLY WITH THE US NATIONAL ELECTRIC CODE / CANADIAN ELECTRIC CODE.**

Note location of electric source into the unit prior to positioning on surface.

THIS IS A PROFESSIONAL GRADE PRODUCT. A KNOWLEDGE OF CONSTRUCTION TECHNIQUES, PLUMBING AND ELECTRICAL INSTALLATION ACCORDING TO CODES ARE REQUIRED FOR PROPER INSTALLATION AND USER SATISFACTION. WE RECOMMEND THAT A LICENSED CONTRACTOR PERFORM THE INSTALLATION. OUR WARRANTY DOES NOT COVER IMPROPER INSTALLATION-RELATED PROBLEMS.

Important: All swim spa sides must be accessible for regular maintenance or in the event that service is required. General maintenance will require entry to equipment behind cabinet panels. It is recommended to allow 3 feet of access to all sides of the swim spa for routine and service maintenance. Your warranty does not include any cost associated with gaining access to equipment for servicing.

Indoor Installation Considerations

1. Local electrical and plumbing codes.

2. Ventilation fans and/or dehumidifiers should be provided to handle the high humidity developed by your swim spa. Walls, ceiling and wood trim resistance to moisture and water should be of consideration.

3. Chemicals will vaporize from the water and may cause an odor and possibly corrosion to certain home hardware. Never store chemicals inside the swim spa cabinet or where they may come into contact with water.

4. During the normal use of the swim spa, water will escape the swim spa vessel. Never place the swim spa on or over any material which may be damaged by this water or the chemicals within the water. Keep damageable materials far enough away from the swim spa to avoid water damage, even if the spa should lose all its water.

5. Consider and prepare for the unlikely event of rapid swim spa drainage. If placement of the swim spa is permanent, you may wish to provide floor drains to accommodate draining, etc. Always leave space around the swim spa for easy access in case of repairs and maintenance, 3 ft. (.914 m) is suggested.

6. Consider and prepare for the unlikely event of swim spa removal.

7. Read 7-13 in the Outdoor Installation Considerations.

8. Do not set swim spa on finished floor without a waterproof barrier protection underneath.

9. The swim spa should have access to a power source capable of supplying 240 volts AC power. It must be wired directly into a grounded circuit with a Ground Fault Circuit Interrupter (G.F.C.I.) or equivalent RCD (not supplied), for export installs. No other appliances should be on the same circuit.

10. The swim spa should be close to a source of water.

11. Be sure the location you choose is stable. It must be able to support the weight of the swim spa when it is filled with water, plus the weight of the occupants. The swim spa may weigh up to 26,000 lbs (11,793 kg.) when it is filled with water. Contact a contractor or structural engineer to determine adequate support.

12. Do not use the swim spa above a finished living area, due to the risk of water damage.

13. The swim spa is not designed for in-floor installation. However, it is compatible with a deck system that is built flush with the top of the unit, provided adequate space for service is considered.

14. Be sure to note any other considerations, such as aesthetics or privacy concerns, that may affect the safety or enjoyment of using the swim spa.

Outdoor Installation Considerations:

1. Local electrical and plumbing codes.

2. Consider local codes pertaining to fencing, enclosures, walls, electrical and plumbing. You will need to ensure that your swim spa is an adequate distance from power lines, both aboveground and underground. Your swim spa will also need to be childproofed.

3. View from house for aesthetics and supervisory needs.

4. Distance from house for wintertime use.

5. Nighttime lighting.

Outdoor Installation Considerations (cont'd):

6. Locate the swim spa with an awareness to sunlight exposure, views, access, property lines, lighting, wind direction, shielding, septic tanks, plants, trees. (Chemicals in the swim spa water splashed from your swim spa may damage nearby plant life.)

7. Consider the location of the nearest bathroom or dressing room.

8. If your swim spa is to be located on a second story, be positive support is adequate. Call your builder and a structural engineer.

9. Area for placement of support equipment where adequate space will be needed to gain access to components for maintenance and general servicing.

10. Be sure to note any other considerations, such as aesthetics or privacy concerns, that may affect the safety or enjoyment of using the swim spa.

11. Provide adequate drainage away from the equipment and adequate elevation to allow draining by siphon, should it be required.

12. Location of electrical supply. 120/240 volt systems require hard wire installed from the electrical source to the swim spa support pack terminal. ALL EQUIPMENT MUST BE GROUND FAULT CIRCUIT PROTECTED (NOT SUPPLIED) AT THE POWER SOURCE. ALL ELECTRICAL WIRING OF THE SWIM SPA SUPPORT EQUIPMENT MUST COMPLY WITH THE US NATIONAL ELECTRIC CODE / CANADIAN ELECTRIC CODE.

13. Locations at least 5 ft (1.52 m) from all metal surfaces. (A swim spa may be installed within 5 feet of metals surfaces providing each metal surface is permanently connected by a No. 6AWG (8.4 mm2) copper conductor attached to the wire connector on the terminal box provided for this purpose.) ALL INSTALLATIONS MUST COMPLY WITH CANADIAN ELECTRIC CODE AND ARTICLE 680 OF THE U.S. NATIONAL ELECTRIC CODE AND ANSI/NFPA 70-1984.

Partially or Fully Recessed Installations:

Sunrise Spas does not recommend this type of installation, although if this is what you have chosen for your new swim spa, please review the following considerations.

1. A system for preventing collection and pooling of water must be designed in accordance to local authorities.

2. If installed in designated floodways, additional attention to maximum water load entering that floodway must be addressed to prevent water from accumulating below grade. The swim spa is not designed to be submerged in water and will void all warranties.

3. Unit must be level and self-supporting and NEVER backfilled with sand, gravel or dirt. This will void all warranties.

4. Plan for complete drainage.

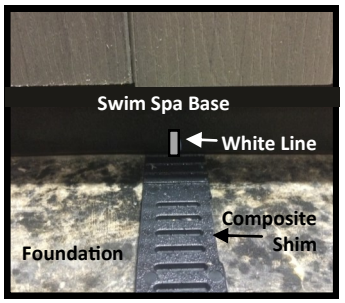
5. Must have proper ventilation so equipment does not overheat.

6. Must provide at least 3 feet of access around all sides of the swim spa. Warranty does not cover costs associated with gaining access for service and maintenance.

7. Below grade drainage needs to be evaluated based upon specific region rainfalls. This analysis must be done by a qualified local engineer to ensure proper drainage.

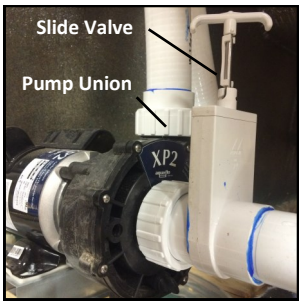
Once the swim spa is in its final location perform the following steps to begin the start-up procedure.

1. Locate white lines painted on the outside of the swim spa base. There are as few as 8 and as many as 14 depending on the model and series. Insert provided composite shim below the painted line, between the swim spa base and foundation. Push shim in by hand until it stops, then gently tap shim with hammer until it stops. Score shim with utility knife and break off flush with swim spa base. Photo top right.



2. Consult the specification sheet for your specific swim spa model to locate the electrical spa pack. Remove the cabinet panel exposing pack to complete electric connection.

3. Consult the specification sheet to locate all the pumps for your specific model, then remove appropriate cabinet panels. Be sure all pump and heater unions are secure. Each pump has 2 unions, the heater has 2 unions. The unions of a newly delivered swim spa may have loosened during transportation. While checking the unions also check the slide valves are in the up position and the lock is installed. Photo bottom right.



4. Inspect the swim spa for any dirt or particles that may have gotten on the surface after the plastic was removed from the swim spa. Wipe the swim spa with a soft damp sponge.

5. Ensure your water source is safe for swim spa use. Water may contain minerals that may cause stains or deposits. Water with high mineral count may discolor the water once a sanitizer is added.

6. Let the water run out of your garden hose for several minutes before filling the swim spa. This will flush out stagnant water in the line that may cause bacteria.

7. Begin filling the swim spa. We recommend filling the swim spa to the top line on side wall. During the filling process periodically check the unions to ensure they are tight and no water is leaking out. The dual zone models are separate zones each with their own pack, heater, control. Follow the connection, filling instructions for each zone.

8. Once the swim spa is filled turn the circuit breaker on. The spa will turn on and start the circulation pump.

9. It may be necessary to bleed air from the pump or pumps on your swim spa, if after start up your swim spa pumps do not operate. Due to the nature of water flow and hydrotherapy pumps, please be advised that air locking of pumps may occur. Sunrise Spas has taken measures to reduce the possibility of this, but it still may occur, especially after refilling a swim spa. This is not a service covered under warranty. To relieve an airlock situation, loosen the pump union on the discharge side of the pump. You may possibly hear air come out when union is loosened, after a few seconds tighten the union. Turn the pump on to see if proper jet flow has been achieved. If proper jet flow has not been achieved repeat process.

10. Open air regulators allowing maximum flow through jets assuring pump operation.

11. Refer to Waterway Neo 2100 Control section for heating, filtration cycles and function

12. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.

13. View current water temp on the control panel and set to desired level. Water will heat approximately 1– 2 degrees Fahrenheit an hour. Times may vary.

14. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.

15. Remove the swim spa cover from the box and place it on the swim spa. Pull down one of the straps on the swim spa cover and hold latch against the cabinet side panel. To position the lock correctly, have a second person hold the strap tight on the opposite side of the swim spa cover. The swim spa cover must be tight. Do not place the latch over the grooves of the cabinet finish. Remove the latch from the lock, attach the lock to the cabinet side panel with three #4 screws provided. Attach the other locks to the cabinet in the same manner. To lock the cover in place, insert the key and turn it clockwise 1/4 turn. To unlock the latches, insert the key and turn it counterclockwise 1/4 turn. Always keep locked when not in use. Keep the keys in a safe place, out of the reach of children.

ELECTRICAL REQUIREMENTS

HAVE YOUR ELECTRICIAN READ THE FOLLOWING INFORMATION BEFORE INSTALLATION BEGINS.

Electrical connections made improperly, or the use of wire gauge sizes for incurring power which are too small, may continually blow fuses in the electrical equipment support box, may damage the internal electrical controls and components, may be unsafe and in any case will void the swim spa warranty.

It is the responsibility of the swim spa owner to ensure that electrical connections are made by a qualified electrician in accordance with the US National Electrical Code / Canadian Electric Code and any local and state electrical codes in force at the time of installation.

IMPORTANT !!

ALL EQUIPMENT MODELS ARE 120/240 VOLT,
60 CYCLE FOR STATE-SIDE, NORTH AMERICA INSTALLATIONS, AND 50 HZ FOR EXPORT, CE, INSTALLATIONS.

All swim spas must be permanently connected.

All swim spa support systems are multiple supply circuits.

All swim spa systems require the installation of a ground fault circuit interrupter (GFCI) protector or equivalent; (RCD, for export installs), at the power source (NOT SUPPLIED BY SUNRISE SPAS) by a qualified electrician in accordance with all codes and regulations. Refer to typical GFCI installation photos and illustrations on the following pages.

Prior to each use, testing of the GFCI (or equivalent RCD) is required! Refer to the maintenance section of this manual for instructions

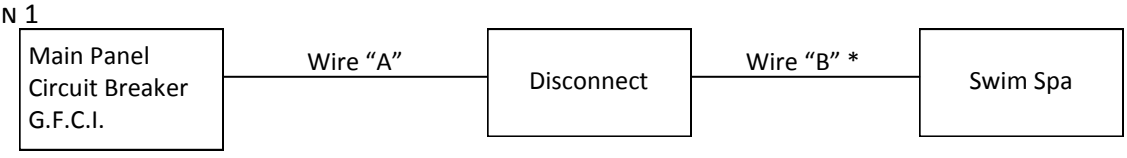
All swim spa support equipment must be bonded (grounded) to the pressure connector located within the control support box as well as the outside of the control support box. *(see wiring schematic below and references on following pages)*

Disconnect all electrical supplies and contact a qualified technician before servicing.

All swim spa installations are to be performed by a licensed electrician and in accordance with all local and national codes.

Swim Spa Wiring Schematic for Certified Electricians' Reference Only

OPTION 1



Option 2

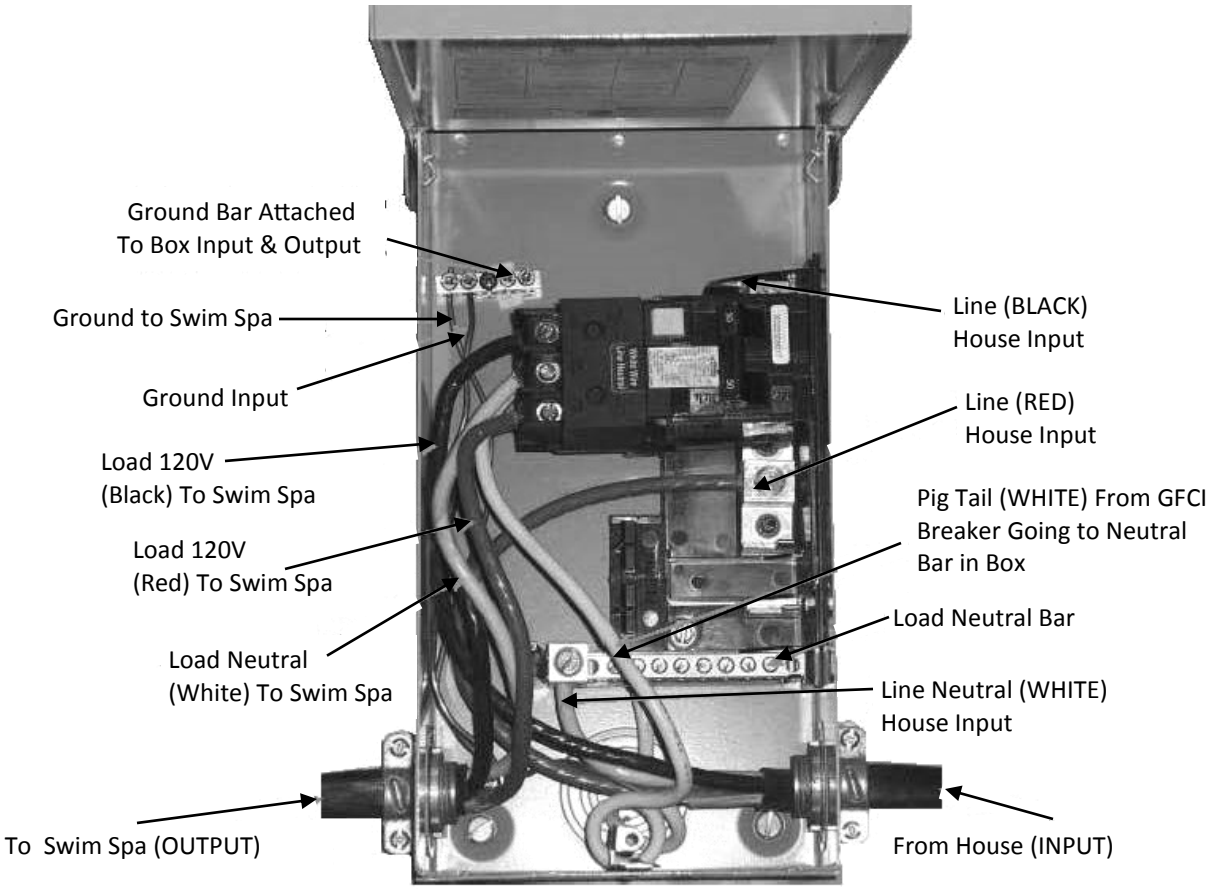
* National U.S. code recommends distance not to exceed 15 ft.

ATTENTION ELECTRICIAN:

All TruSwim Swim Spa Units must be installed with an approved G.F.C.I. in accordance with all applicable codes. Installation of G.F.C.I. varies among those manufacturers. Follow each manufacturer's guidelines to ensure proper operation and protection of swim spa occupants. This diagram is a "Typical" installation to be used only as a reference for the installing electrician.

IMPORTANT: 6 Gauge Copper Wire MUST Be Used
Test GFCI Monthly and Prior to Each Use.

Typical Installation Breaker Box
Class A 50 amp, 120/240 volt, GFCI



TO BE NOTED: Installation of this GFCI Circuit Breaker, including ampere sizing and choice of wire must be made by a qualified electrician, in accordance with the US National Electrical Code / Canadian Electric Code and all applicable federal, state and local codes and regulations in effect at the time of installation.

TO BE NOTED: The white neutral wire from the back of the GFCI Circuit Breaker MUST be connected to an incoming Line Neutral. The internal mechanism of the GFCI requires this Neutral connection for proper GFCI function.

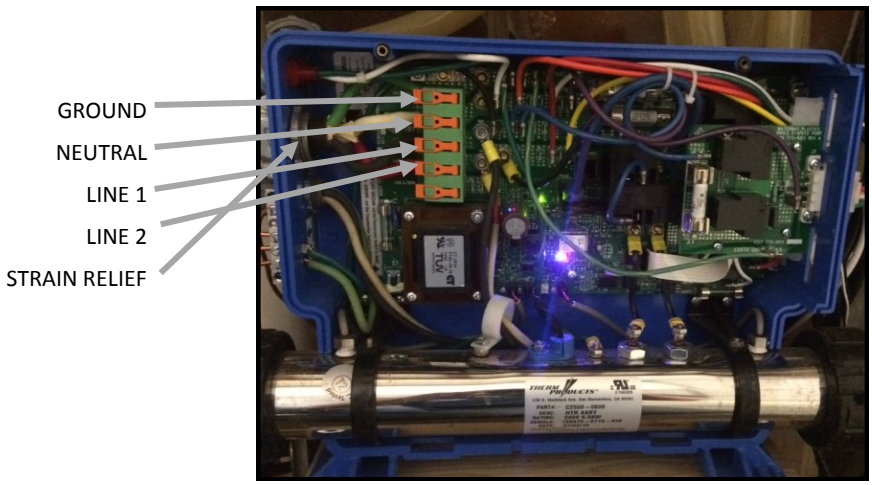
FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with the US National Electric Code / Canadian Electric Code and all applicable local regulations. Ensure power is turned off prior to making any electrical connections.

ATTENTION ELECTRICIAN:

Swim Spa Units must be installed with a Class A 50 Amp Ground Fault Circuit Interrupter (not supplied) in accordance with the US National Electric Code / Canadian Electric Code and all applicable local codes. Installation of GFCI varies among those manufacturers. Follow each manufacturer's guidelines to ensure proper operation and protection of swim spa occupants.

IMPORTANT: 6 Gauge Copper Wire MUST Be Used
Test GFCI Monthly and Prior to Each Use.



Connecting Power to Swim Spa Pack (QUALIFIED ELECTRICIAN ONLY)

- Confirm the circuit being used for swim spa power is GFCI protected either at main panel box or at disconnect.
- Verify that power is off to outside disconnect / GFCI.
- Determine how wire is to enter swim spa cabinet.
- Route wire into swim spa cabinet over to spa pack.
- Remove spa pack cover.
- Install appropriate strain relief into spa pack. (see photo above)
- Insert wire through strain relief, removing wire sheath as needed depending on wire type.
- Strip insulation from wire and insert wire into correct terminal on terminal block. (see photo above)
- Replace spa pack cover.
- Refer to start up procedure in manual before turning power on.

FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with the US National Electric Code / Canadian Electric Code and all applicable local regulations. Ensure power is turned off prior to making any electrical connections.

Your new TruSwim Swim Spa will arrive from the factory wired to operate with a single 120/240 volt 50 Amp Ground Fault Circuit Interrupter Type A circuit breaker (not included from mfg) supplied from the homeowner's power source.

The system, when wired this way, is designed to turn off the high speed of the jet pump and heater while the TruSwim propulsion system is operating. Since water cools slowly, this is adequate for most installations.

If you choose, the swim spa can be wired with an additional 240 volt 30 amp Ground Fault Circuit Interrupter (not supplied) power source from the home owners electrical power. The addition of the 30 amp circuit will allow the high speed of the jet pump and the heater to operate simultaneously with the TruSwim propulsion system after a programming change is made to the operating system of the swim spa. This programming change is not supplied with this manual due to the possibility of other features being changed accidentally. Your swim spa retailer should have the information needed to make the necessary programming change. In the event he does not or no retailer is available contact our customer service for assistance.

Steps for Adding Additional Power Supply

1. Make sure all electrical power is turned off before performing service.
2. Disconnect and remove wire #1 from both the relay center and spa control center. See figure #1 and figure #2.
3. Install the 30 amp 240 volt ground fault circuit protected L1 and L2 legs into the fuse block and the ground wire in the ground strip where the wire was removed from the relay control center as shown in figure #3.
4. Place a cap into the hole left behind from the removal of wire #1 in the spa control center.

FIGURE #1

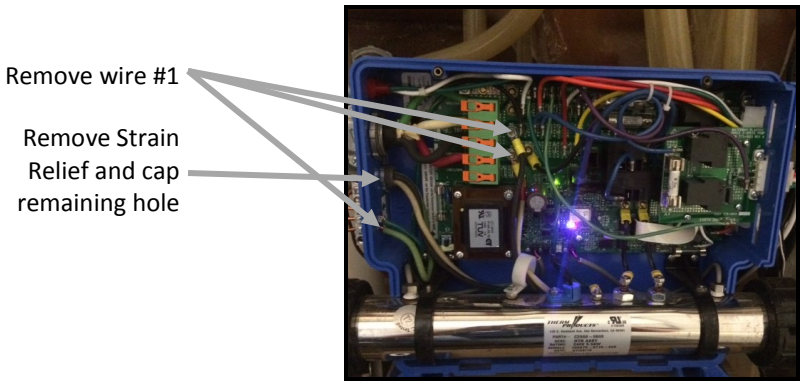
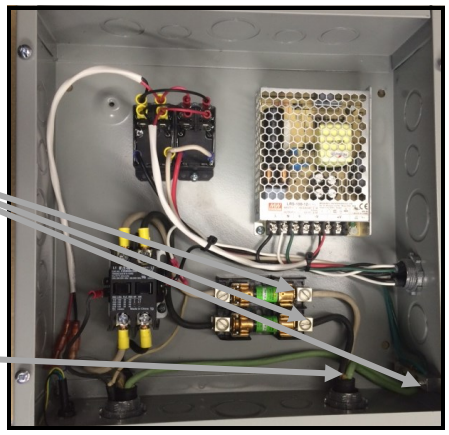


FIGURE #2

FIGURE #3



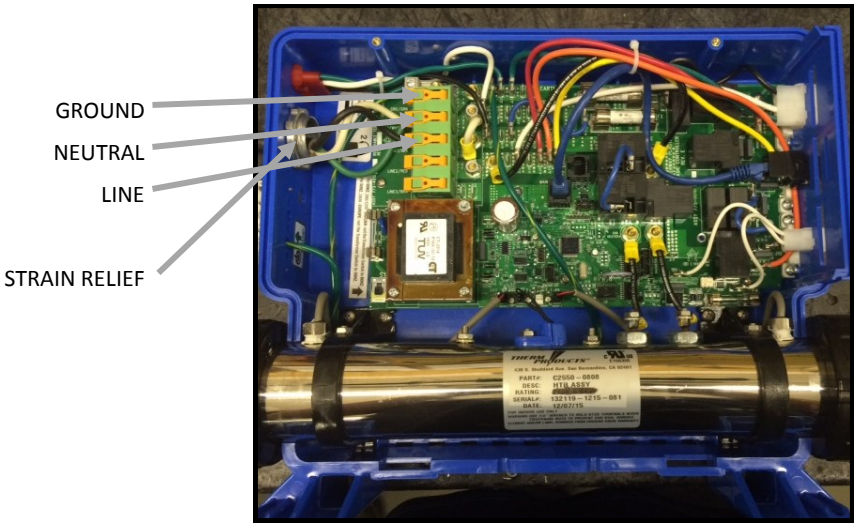
FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with all applicable National, Country and Local regulations and codes. Ensure power is turned off prior to making any electrical connections.

ATTENTION ELECTRICIAN:

Swim Spa Units must be installed with a Residual Current Device, RCD, (not supplied) Having a rated operating residual current not exceeding 30 mA in accordance with all applicable local codes. Installation of RCD varies among those manufacturers. Follow each manufacturer's guidelines to ensure proper operation and protection of swim spa occupants.

IMPORTANT: 10 Gauge (2.59mm) Copper Wire MUST Be Used
Test RCD Monthly and Prior to Each Use.



Connecting Power to Swim Spa Pack (QUALIFIED ELECTRICIAN ONLY)

- Confirm the circuit being used for swim spa power is RCD protected either at main panel box or at disconnect.
- Verify that power is off to outside disconnect / RCD.
- Determine how wire is to enter swim spa cabinet.
- Route wire into swim spa cabinet over to spa pack.
- Remove spa pack cover.
- Install appropriate strain relief into spa pack. (see photo above)
- Insert wire through strain relief, removing wire sheath as needed depending on wire type.
- Strip insulation from wire and insert wire into correct terminal on terminal block. (see photo above)
- Replace spa pack cover.
- Refer to start up procedure in manual before turning power on.

FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with all applicable National, Country and Local regulations and codes. Ensure power is turned off prior to making any electrical connections.

Your new TruSwim Swim Spa will arrive from the factory wired to operate with a single phase 230 Volt 32 Amp Residual Current Device, RCD current device (not supplied by mfg) from the homeowner's power source.

The system, when wired this way, is designed to turn off the high speed of the jet pump and heater while the TruSwim propulsion system is operating. Since water cools slowly, this is adequate for most installations.

If you choose, the swim spa can be wired with an additional 230 volt 32 amp Residual Current Device Protected (not supplied) power source from the home owners electrical power. The addition of the 32 amp circuit will allow the high speed of the jet pump and the heater to operate simultaneously with the TruSwim propulsion system after a programming change is made to the operating system of the swim spa. This programming change is not supplied with this manual due to the possibility of other features being changed accidentally. Your swim spa retailer should have the information needed to make the necessary programming change. In the event he does not or no retailer is available contact our customer service for assistance.

Steps for Adding Additional Power Supply

1. Make sure all electrical power is turned off before performing service.
2. Disconnect and remove wire #1 from both the relay center and spa control center. See figure #1 and figure #2.
3. Install the 32 amp 230 volt RCD protected 230volt line and neutral wire into the fuse block and the ground wire in the ground strip where the wire was removed from the relay control center as shown in figure #3.
4. Place a cap into the hole left behind from the removal of wire #1 in the spa control center.

FIGURE #1

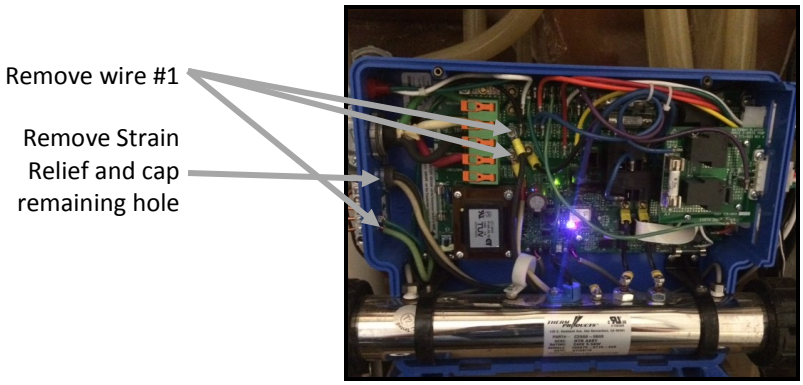
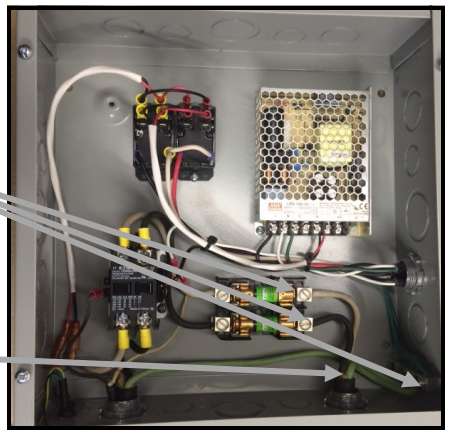


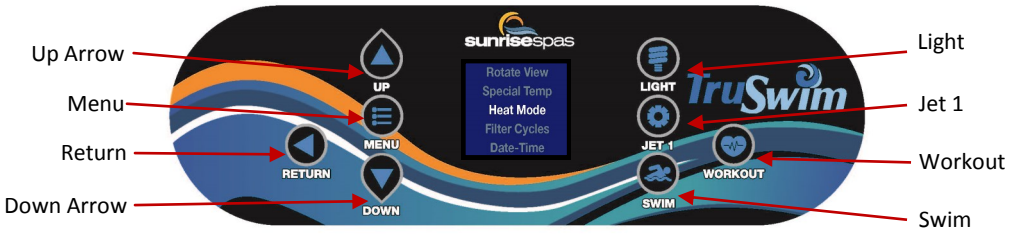
FIGURE #2

FIGURE #3



WARNING: Read all instructions before using the spa. The manufacturer and Sunrise Spas assumes no responsibility for personal injury or property damage sustained by or through the use of this product. When installing and using this equipment basic safety precautions should always be taken to reduce risk of electrical shock, ensure safe usage, and safeguard the user's health.

TruSwim Swim Spas Control Center



UP ARROW & DOWN ARROW KEY
These keys adjust the temperature and navigate through the menu screens.

MENU KEY
This key will allow you to enter the menu.

RETURN KEY
The return key will take you back to the previous screen.

LIGHT KEY
This key turns the light on / off.

JETS 1 KEY
The first press of this key will turn pump 1 on to low speed. Pressing this key a second time will activate high speed (If the spa is heating or in a filter cycle low speed will already be on. The first press of the key will turn on high speed and pump will not be able to be turned off if the spa is calling for heat).

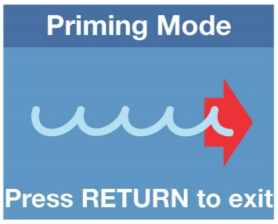
SWIM KEY
This key turns the TruSwim propulsion system on or off.

WORKOUT KEY
This key turns the pre-programmed workout on or off.

Below are icons that will be displayed on control screen depending on the component or option selected.

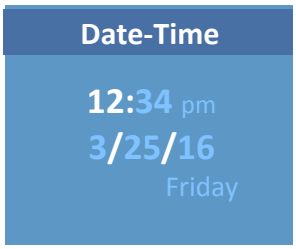
Selection Icons

FILTER CYCLE 1	ENERGY SAVING HEAT MODE	OZONE ON
FILTER CYCLE 2	VACATION HEAT MODE	JET ON LOW SPEED
FILTER CYCLE 3	CLEANER CYCLE	JET ON HIGH SPEED
FILTER CYCLE 4	POLLING CYCLE	SPECIAL TEMP SELECT
LIGHT ON	TEMPERATURE LOCK	WORKOUT
HEATER ON	PANEL LOCK	SWIM



Priming Mode

When power is ON, the system will enter a priming mode with priming screen display on the panel. In this mode, all devices such as JETS, or LIGHT are operable. JETS can be turned an and off to prime the pump. System will exit priming mode and go to MAIN display when RETURN button is pushed, or after 4 minutes of inactivity.

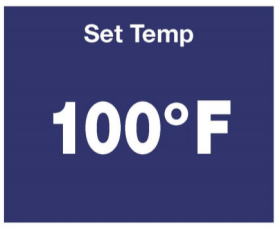


Setting the Time and Date

To set the time press the menu button. Use the down arrow until Date-Time is highlighted then press menu again. The hour will be highlighted first, use the up or down arrow key to change the hour to the correct hour. Press the menu key again to highlight the minutes and again, use the arrow key to change to the correct minute. Press the menu key again to highlight the month, then use the up or down arrow key to change to the correct month. Press the menu key again to highlight the day, then use the up or down arrow key to change to the correct date of the current month. Press the menu key again to highlight the year, then use the up or down arrow key to change to the correct year. Press the menu key again to highlight the day of the week, then use the up or down arrow key to change to the correct day of the week. Once the time and date are correct, press the return key to return to the menu and, again, to return to the main screen.

Setting the Filter Cycle

To set the filter cycle press the menu button. Use the down arrow until Filter Cycles is highlighted. There are 4 programmable filter cycles. A minimum of 8 hours is needed for the ozonator to be effective. Use of all 4 filter cycles is not needed but it will allow you greater control of the filter time each day. Once Filter Cycles is selected in the main menu screen, Filter Cycle 1 is highlighted press the menu key to enter Filter Cycle 1. The start time hour will be highlighted use the up or down arrow key to adjust to the desired hour. Press the menu key again to move to minutes, again, use the up or down arrow key to adjust to the desired minute. Press the menu key again to move to am/pm use the up or down arrow key to select the desired selection. Press the menu key again to set the number of hours of duration using the up or down arrow keys. The duration is the amount of hours the spa will filter during Filter Cycle 1. Press the menu key again to set the minutes of duration using the up or down arrow keys. Press the return key to return to the filter cycles menu. If desired, repeat above directions to program more filter cycles. When finished, press return to go back to the menu and return again to go back to the main screen.



Setting Temperature

To change water set temperature, use UP and DOWN buttons to set the desired temperature. The screen will display “SET TEMP” with the current set temperature. After 5 seconds without any change to the set temperature, the screen will reverse back to the MAIN screen with current water temperature display. Changing set temperature will make the heater and pump turn on to get accurate water temperature and determine if water needs to be heated.

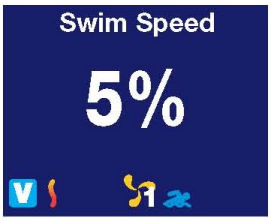
Panel Timeout

It user is in Setting Menus and no button is pushed within 15 seconds, the screen will timeout, current screen setting will be lost and panel reverts back to MAIN screen.

In MAIN screen, if no button is pushed within 60 minutes, all LED and LCD lights will turn off and panel goes to sleep. Any button pushed in this time will wake the panel up, LED and LCD lights will turn back on and panel will poll for water temperature.

Swim Button

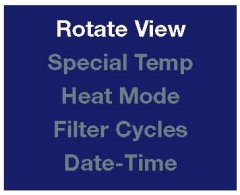
1. Press the SWIM button to turn the pump ON—the blue SWIM icon on the LCD screen turns ON at low speed, and JET 2 at high speed. Pressing the Up or Down speed select before it reaches set point will cause the reading to be inaccurate. If this occurs, turning the prop system offshould reset the control.



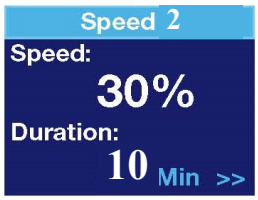
2. Then press UP or DOWN button to select your desired SPEED % between 5% and 100%. The duration is preset to 20 minutes.

3. Press the SWIM button again to turn OFF the pump (the pump will continue to run until re-setting to 5% then turns off) the blue SWIM icon on the LCD screen turns off.

Workout Button



1. To program the SWIM WORKOUT; press the MENU button; then up button and select SWIM WORKOUT by pressing the MENU button to get to the SPEED 1 setting.



2. Press the UP or DOWN button to select the SPEED % (between 5% and 100%) for SPEED 1; then press the MENU button to select DURATION in minutes up to 10 minutes; then press the MENU button twice to get to SPEED 2.

3. Press the UP or DOWN button to select the SPEED % for SPEED 2, then press the MENU button to select DURATION in minutes up to 10 minutes, then press MENU button twice to get to SPEED 3.

4. Press the UP or DOWN button to select the SPEED % for SPEED 3; then press the MENU button to select DURATION in minutes, up to 10 minutes, then press the MENU button twice to get out of SPEED 4. Repeat this step for up to 10 settings.

5. Press the UP or DOWN button to select the speed for SPEED 4; then press the MENU button to select DURATION in minutes, up to 10 minutes; then press the RETURN button twice to get out of the SWIM WORKOUT screen.

6. Press the SWIM WORKOUT button to turn ON the pump, the red SWIM icon on the LCD screen turns ON. The WORKOUT feature will activate to cycle each of the SPEED setting and specific DURATION setting for WORKOUT. If you need to increase or decrease pump speed manually, press the UP or DOWN button to your desired SPEED % in each cycle.

7. Press the SWIM WORKOUT button again at any time, to turn OFF the pump—the red SWIM icon on the LCD screen turns OFF.

At the end of the programmed workout, the red icon on the LCD screen and pump turn off.

Setting Screens

Rotate View: rotate the view 180°, the UP and DOWN button also swap when rotated. With ROTATE VIEW highlighted press MENU to enter ROTATE VIEW setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm the setting.

Special Temp: *only available for authorized technicians*

Heat Mode: select STANDARD heating mode for most users or ENERGY SAVING mode (reduces polling water temperature) or VACATION mode (set temp set to 50°F). With HEAT MODE highlighted press MENU to enter HEAT mode setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm the setting.

Filter Cycles: set up filter cycle start time, duration and date for filtering the spa. For FILTER CYCLE 1 and 2, if duration is set to zero the system will do a purge cycle at the start time setting. With FILTER CYCLE highlighted press MENU to enter FILTER CYCLE 1,2,3,or 4 setting. Select a FILTER CYCLE and press MENU again to enter TIME/DURATION setting screen. In this screen, press MENU to move between HOURS, MINUTES and DAYS setting; UP/DOWN to change values, RETURN to exit and confirm setting.

Date-Time: set up date and time for spa. With DATE-TIME highlighted press MENU to enter DATE-TIME setting. In his screen, pressing MENU will move and highlight various fields that can change the setting; UP/DOWN to change the values and RETURN to exit and confirm the setting.

Degree F/C: displays spa temperature in Celsius or Fahrenheit. This option is only available for 60HZ countries and automatically displays Celsius for 50HZ. With DEGREE F/C highlighted press MENU to enter DEGREE F/C setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Time Display: display spa time in AM/PM or 24 hours time. With TIME DISPLAY highlighted press MENU to enter TIME DISPLAY setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm setting.

Devices Timeout: *only available for authorized technicians*

Panel Lock: locks all panel buttons except MENU button. With PANEL LOCK highlighted press MENU to enter PANEL LOCK setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Temp Lock: locks TEMPERATURE setting with UP/DOWN buttons. With TEMP LOCK highlighted press MENU to enter TEMP LOCK setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Service Mode: *only available for authorized technicians*

Demo Mode: to demonstrate all device capabilities of the spa. With DEMO MODE highlighted press MENU to enter MODE setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

General Information: displays general information of the spa. With GENERAL INFORMATION highlighted press MENU to enter GENERAL INFORMATION menu. Use UP/DOWN to view different pages and information and RETURN to exit and confirm.

Languages: to select various languages for spa display. With LANGUAGES highlighted press MENU to enter and select a specific language. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

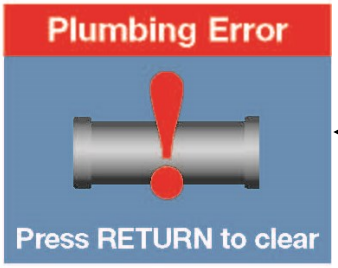
Serenity Mode: to turn off all outputs and provide a quiet time setting. With SERENITY MODE highlighted press MENU to enter and select a specific time. Use UP/DOWN to select the desire time setting. Press MENU again to navigate to EXIT/START. Select the desired option and RETURN to exit and confirm setting.

Energy Interval: *only available on non-circ systems.* With ENERGY INTERVAL highlighted press MENU to enter ENERGY INTERVAL setting. Use UP/DOWN to select the desired minutes setting and RETURN to exit and confirm.

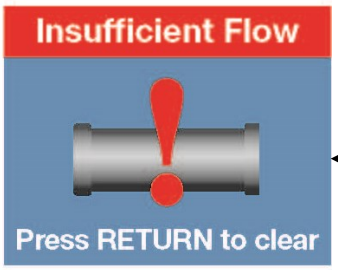
Silent Time: *only available on non-circ systems.* Set up time for no polling. With SILENT TIME highlighted press MENU to enter SILENT TIME setting. In this screen, pressing MENU will move and highlight various fields that can change the setting; UP/DOWN to change the values and RETURN to exit and confirm setting.

Cleaner Cycle: *only available on non-circ systems.* To turn on filtration after using the spa for short cleaning period. With CLEANER CYCLE highlight press MENU to enter and select a specific duration. Use UP/DOWN to select the desired time setting. Press MENU again to navigate to EXIT/START/ Select the desired option and RETURN to exit and confirm.

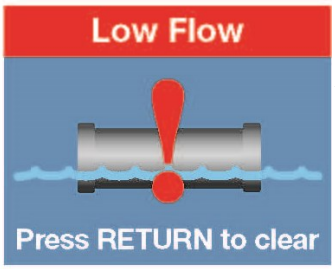
Error Codes



Error caused when SENSOR 1 and SENSOR 2 have been plugged in incorrectly. Swap the SENSOR 1 and SENSOR 2 plug in controller to correct this problem.

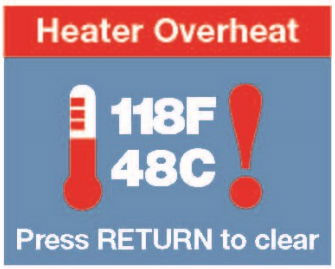


Error caused by no water flow through heater or no water in heater. Check to be sure there is enough water flow through heater.

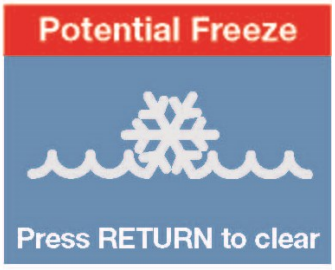


Check to be sure there is enough water flow through heater.

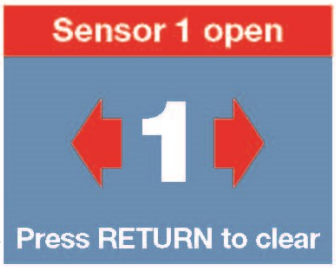
Wait for water temperature to cool down.



Wait for water temperature to cool down. Check to be sure there is enough water flow through heater.



Error caused when SENSOR 1,2, or 3 detects low temperature. All JETS and BLOWERS will turn on automatically to protect plumbing from freezing. JETS and BLOWERS will shut down when all 3 SENSORS reach a desired temperature.



Clean filter.
Check SENSOR 1 connection.
Clean filter, check jets in “on” position and valve open.

Clean filter.
Check SENSOR 1 connection or replace SENSOR 1.
Clean filter, check jets in “on” position and valve open.

Clean filter.
Check SENSOR 2 connection.
Clean filter, check jets in “on” position and valve open.

Check SENSOR 2 connection or replace SENSOR 2.

Clean filter.
Check SENSOR 3 connection.

Check SENSOR 3 connection or replace SENSOR 3.

continued next page

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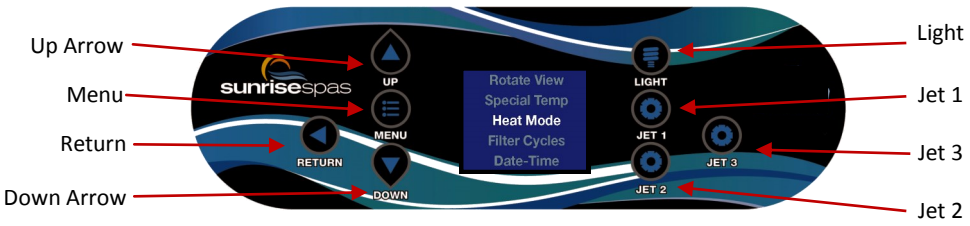
Hot Tub Zone Control for
Dual-Zone models,TS-1900DZ, TSE-1900DZ



UP ARROW & DOWN ARROW KEY
These keys adjust the temperature and navigate through the menu screens.

MENU KEY
This key will allow you to enter the menu.

RETURN KEY
The return key will take you back to the previous screen.

LIGHT KEY
This key turns the light on / off.

JETS 1 KEY
The first press of this key will turn pump 1 on to low speed. Pressing this key a second time will activate high speed (If the spa is heating or in a filter cycle low speed will already be on. The first press of the key will turn on high speed and pump will not be able to be turned off if the spa is calling for heat).

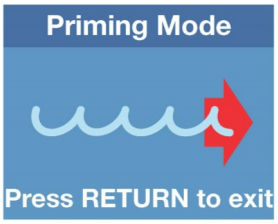
JETS 2 KEY
This key turns pump 2 on or off.

JETS 3 KEY
This key turns pump 3 on or off.

Below are icons that will be displayed on control screen depending on the component or option selected.

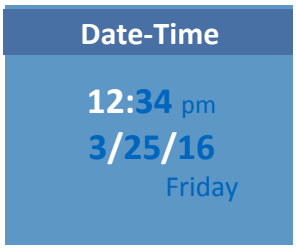
Selection Icons

- FILTER CYCLE 1
- FILTER CYCLE 2
- FILTER CYCLE 3
- FILTER CYCLE 4
- LIGHT ON
- HEATER ON
- ENERGY SAVING HEAT MODE
- VACATION HEAT MODE
- CLEANER CYCLE
- POLLING CYCLE
- TEMPERATURE LOCK
- PANEL LOCK
- OZONE ON
- JET ON LOW SPEED
- JET ON HIGH SPEED
- SPECIAL TEMP SELECT



Priming Mode

When power is ON, the system will enter a priming mode with priming screen display on the panel. In this mode, all devices such as JETS, or LIGHT are operable. JETS can be turned an and off to prime the pump. System will exit priming mode and go to MAIN display when RETURN button is pushed, or after 4 minutes of inactivity.

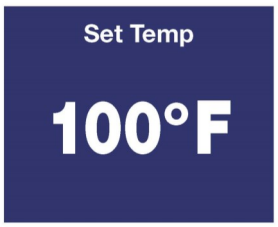


Setting the Time and Date

To set the time press the menu button. Use the down arrow until Date-Time is highlighted then press menu again. The hour will be highlighted first, use the up or down arrow key to change the hour to the correct hour. Press the menu key again to highlight the minutes and again, use the arrow key to change to the correct minute. Press the menu key again to highlight the month, then use the up or down arrow key to change to the correct month. Press the menu key again to highlight the day, then use the up or down arrow key to change to the correct date of the current month. Press the menu key again to highlight the year, then use the up or down arrow key to change to the correct year. Press the menu key again to highlight the day of the week, then use the up or down arrow key to change to the correct day of the week. Once the time and date are correct, press the return key to return to the menu and, again, to return to the main screen.

Setting the Filter Cycle

To set the filter cycle press the menu button. Use the down arrow until Filter Cycles is highlighted. There are 4 programmable filter cycles. A minimum of 8 hours is needed for the ozonator to be effective. Use of all 4 filter cycles is not needed but it will allow you greater control of the filter time each day. Once Filter Cycles is selected in the main menu screen, Filter Cycle 1 is highlighted press the menu key to enter Filter Cycle 1. The start time hour will be highlighted use the up or down arrow key to adjust to the desired hour. Press the menu key again to move to minutes, again, use the up or down arrow key to adjust to the desired minute. Press the menu key again to move to am/pm use the up or down arrow key to select the desired selection. Press the menu key again to set the number of hours of duration using the up or down arrow keys. The duration is the amount of hours the spa will filter during Filter Cycle 1. Press the menu key again to set the minutes of duration using the up or down arrow keys. Press the return key to return to the filter cycles menu. If desired, repeat above directions to program more filter cycles. When finished, press return to go back to the menu and return again to go back to the main screen.



Setting Temperature

To change water set temperature, use UP and DOWN buttons to set the desired temperature. The screen will display “SET TEMP” with the current set temperature. After 5 seconds without any change to the set temperature, the screen will reverse back to the MAIN screen with current water temperature display. Changing set temperature will make the heater and pump turn on to get accurate water temperature and determine if water needs to be heated.

Panel Timeout

It user is in Setting Menus and no button is pushed within 15 seconds, the screen will timeout, current screen setting will be lost and panel reverts back to MAIN screen.

In MAIN screen, if no button is pushed within 60 minutes, all LED and LCD lights will turn off and panel goes to sleep. Any button pushed in this time will wake the panel up, LED and LCD lights will turn back on and panel will poll for water temperature.

Setting Screens

Rotate View: rotate the view 180°, the UP and DOWN button also swap when rotated. With ROTATE VIEW highlighted press MENU to enter ROTATE VIEW setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm the setting.

Special Temp: *only available for authorized technicians*

Heat Mode: select STANDARD heating mode for most users or ENERGY SAVING mode (reduces polling water temperature) or VACATION mode (set temp set to 50°F). With HEAT MODE highlighted press MENU to enter HEAT mode setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm the setting.

Filter Cycles: set up filter cycle start time, duration and date for filtering the spa. For FILTER CYCLE 1 and 2, if duration is set to zero the system will do a purge cycle at the start time setting. With FILTER CYCLE highlighted press MENU to enter FILTER CYCLE 1,2,3,or 4 setting. Select a FILTER CYCLE and press MENU again to enter TIME/DURATION setting screen. In this screen, press MENU to move between HOURS, MINUTES and DAYS setting; UP/DOWN to change values, RETURN to exit and confirm setting.

Date-Time: set up date and time for spa. With DATE-TIME highlighted press MENU to enter DATE-TIME setting. In his screen, pressing MENU will move and highlight various fields that can change the setting; UP/DOWN to change the values and RETURN to exit and confirm the setting.

Degree F/C: displays spa temperature in Celsius or Fahrenheit. This option is only available for 60HZ countries and automatically displays Celsius for 50HZ. With DEGREE F/C highlighted press MENU to enter DEGREE F/C setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Time Display: display spa time in AM/PM or 24 hours time. With TIME DISPLAY highlighted press MENU to enter TIME DISPLAY setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm setting.

Devices Timeout: *only available for authorized technicians*

Panel Lock: locks all panel buttons except MENU button. With PANEL LOCK highlighted press MENU to enter PANEL LOCK setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Temp Lock: locks TEMPERATURE setting with UP/DOWN buttons. With TEMP LOCK highlighted press MENU to enter TEMP LOCK setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

Service Mode: *only available for authorized technicians*

Demo Mode: to demonstrate all device capabilities of the spa. With DEMO MODE highlighted press MENU to enter MODE setting. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

General Information: displays general information of the spa. With GENERAL INFORMATION highlighted press MENU to enter GENERAL INFORMATION menu. Use UP/DOWN to view different pages and information and RETURN to exit and confirm.

Languages: to select various languages for spa display. With LANGUAGES highlighted press MENU to enter and select a specific language. Use UP/DOWN to select the desired setting and RETURN to exit and confirm.

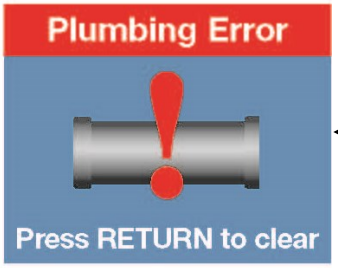
Serenity Mode: to turn off all outputs and provide a quiet time setting. With SERENITY MODE highlighted press MENU to enter and select a specific time. Use UP/DOWN to select the desire time setting. Press MENU again to navigate to EXIT/START. Select the desired option and RETURN to exit and confirm setting.

Energy Interval: *only available on non-circ systems.* With ENERGY INTERVAL highlighted press MENU to enter ENERGY INTERVAL setting. Use UP/DOWN to select the desired minutes setting and RETURN to exit and confirm.

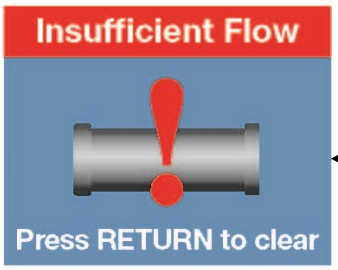
Silent Time: *only available on non-circ systems.* Set up time for no polling. With SILENT TIME highlighted press MENU to enter SILENT TIME setting. In this screen, pressing MENU will move and highlight various fields that can change the setting; UP/DOWN to change the values and RETURN to exit and confirm setting.

Cleaner Cycle: *only available on non-circ systems.* To turn on filtration after using the spa for short cleaning period. With CLEANER CYCLE highlight press MENU to enter and select a specific duration. Use UP/DOWN to select the desired time setting. Press MENU again to navigate to EXIT/START/ Select the desired option and RETURN to exit and confirm.

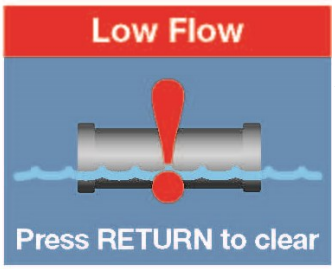
Error Codes



Error caused when SENSOR 1 and SENSOR 2 have been plugged in incorrectly. Swap the SENSOR 1 and SENSOR 2 plug in controller to correct this problem.

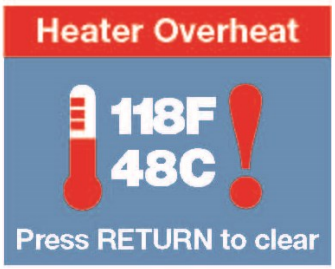


Error caused by no water flow through heater or no water in heater. Check to be sure there is enough water flow through heater.

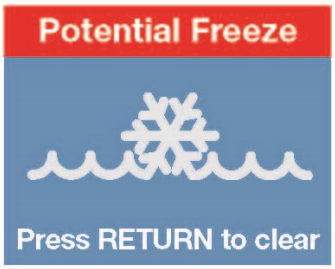


Check to be sure there is enough water flow through heater.

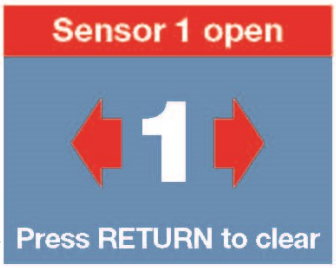
Wait for water temperature to cool down.



Wait for water temperature to cool down. Check to be sure there is enough water flow through heater.



Error caused when SENSOR 1,2, or 3 detects low temperature. All JETS and BLOWERS will turn on automatically to protect plumbing from freezing. JETS and BLOWERS will shut down when all 3 SENSORS reach a desired temperature.



Clean filter.
Check SENSOR 1 connection.
Clean filter, check jets in "on" position and valve open.

Clean filter.
Check SENSOR 1 connection or replace SENSOR 1.
Clean filter, check jets in "on" position and valve open.

Clean filter.
Check SENSOR 2 connection.
Clean filter, check jets in "on" position and valve open.

Check SENSOR 2 connection or replace SENSOR 2.

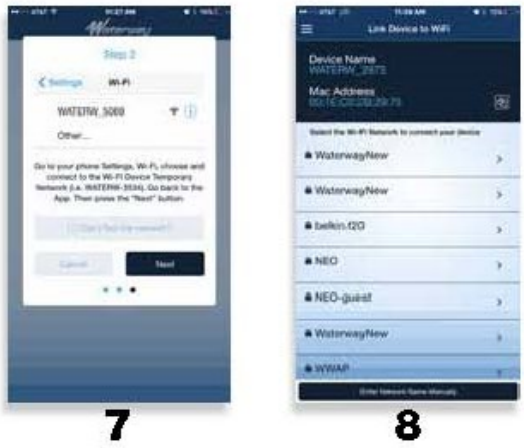
Clean filter.
Check SENSOR 3 connection.

Check SENSOR 3 connection or replace SENSOR 3.

continued next page

1. Download and install the app from App Store or Google Store.

2. Click on Create an Account.

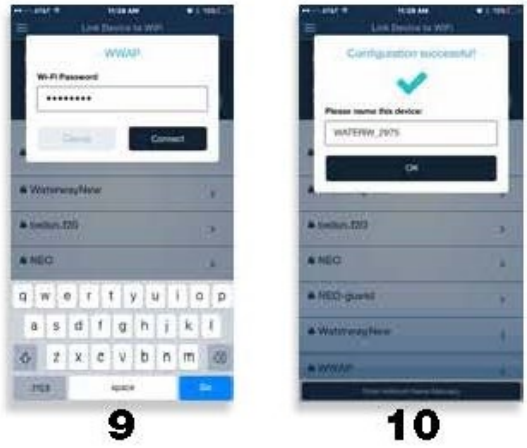


7. Go back to the App, press Next.

8. Select your home network from the list (If your network name is not on the listed, it can be entered manually).

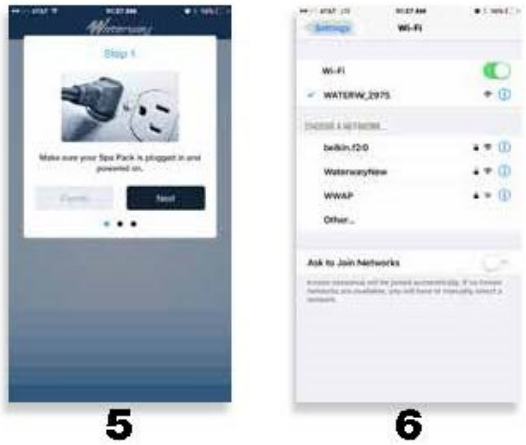
3. Enter your email address, password, confirm and submit.

4. Click on Configure a Device.



9. Enter your home network password and press Connect.

10. Then the device will configure and connect to your home Wi-Fi network and the web, press OK.



5. Make sure your spa control pack is powered on and press Next.

6. Go to your phone setting, Wi-Fi, and connect to the Waterway Wi-Fi device temporary network.

11. Click on configured Waterway Wi-Fi device, i.e. WATERW-2975.

12. Set the temp, heating, light operation. To access the App menu press ON in top left corner.

Swim, walk, run, use weights for upper and lower body fitness or choose any underwater fitness machine; treadmill or elliptical, for the most natural, proven, health and well-being program. Aquatic exercise promotes balance, is easy on joints and enjoyed by any age group, all in the convenience and privacy of your own home.

Patent Pending Technology with this dual propulsion system provides the widest, smoothest and strongest exercise current of any swim spa in the market. Congratulations in your choice to add the very best swim spa and the benefits of aquatic exercise to your lifestyle.

Personalized Workout Programs

It is up to you. You may choose a leisurely jog or swim benefiting from the buoyancy of aquatic exercise, or for the athlete in training, the added challenge of our prop strengths from 5% to a full 100% will keep you in shape and competitive.

Refer to the Control section of this guide for simple programming of up to 10 speeds, each at a maximum of 10 minutes to customize your exercise level and goals.

With a range of 5%-100%, the types of exercise and level of challenge are endless. It is recommended the lower range, 5%-25%, for most users, is beneficial for walking, weights, kicks and perfect range for general well-being and relief to joint pain sufferers.

The higher intensity, 25%-65%, is best suited for the fitness enthusiast with goals on muscle strength, aerobic fitness and moderately competitive sports activities.

TruSwim provides the ultimate in training for the athlete, with the higher range of prop performance, 65%-100%, that no other swim spa dares to match. Choose the speed, the time of each speed, and the total length of your workout gaining the edge you need to be on the top of your game.

With TruSwim, you achieve the highest level of workout in the shortest period of time with our unique current stream.

The Importance of Proper Water Chemistry

Evaporation: Only pure water evaporates leaving a higher concentration of salts, metals, minerals and unused chemicals in the remaining swim spa water. Over time, the water can become saturated with these impurities causing stand and scales to build up on the spa walls and equipment components. Discoloration and possible corrosion may occur on fittings, pillows and cover.

Swim Spa Users: Occupants introduce contaminants to the water. That level of contamination is dependent on the number of users, time used and frequency of use. Skin lotions and detergent residue in bathing suits may cause excessive foaming and cloudy water.

Temperature: Swim spas and hot tubs are normally kept in the range of 87°F to 102°F. These warm temperatures increase evaporation, increasing the solidification of minerals, metals and scale formation. The heat level also increases the need for proper sanitation to inhibit bacteria growth.

Surrounding Elements: Most swim spas are installed in the backyard where occupants introduce grass, leaves, insects, dust, etc. from the environment. Both indoor and outdoor installations are exposed to pollen, dust, etc. in the surrounding air.

Adhere to the routine maintenance suggested in this manual for proper water chemistry and maximum enjoyment or your new swim spa.

Basic Understanding of Water Care

Filtration: Cartridge filters in both the suction-side Pristine system and the pressure-side PowerFlo system remove dust, debris, algae that are continuously entering the spa. The frequency of filtration is programmed at the spa side control and dependent upon your individual use patterns. The cartridge is recommended to be changed at least once a month and cleaned per the instructions under maintenance. A spare cartridge is recommended to avoid shut-down during the cleaning process.

Shocking the Water: This is the term used when super chlorinating the water by adding extra chlorine raising the chlorine level above 8 ppm (part per million) or by adding a non-chlorine (oxidizer) to eliminate chloramines or bromamines. The non-chlorine additive releases oxygen into the water acting as a chlorinator. Do not enter the water until the chlorine level as below 5 ppm. The non-chlorine additive will not treat bacteria.

Total Alkalinity: This is a measurement of the water's ability to maintain a proper pH level. Total alkalinity is measured in ppm from 0 - 400+ with the optimum reading 100-120 ppm. With low alkalinity, the pH level will flip easily. With a high alkalinity reading, it becomes difficult to regulate.

pH levels: This a measurement of acidity (active hydrogen) in the water. pH is not measured in ppm but on a scale of 0-14 with 7.4—7.6 being the neutral desired level. Anything below 7 is considered acidic and will cause eye and skin irritation and corrode metals with excessive chlorine loss. Anything above the neutral range may cause cloudy water, eye and skin irritation and scale formation. This level should never be below 7.2 or above 7.6.

Ozone Sanitation: Ozone is a natural sanitizer, a byproduct of oxygen; $O^{3\cdot}$ It has been used successfull for may years as a purifier of drinking water. Ozone kills bacteria and has an "after rain" smell as it leaves the swim spa water. There is no test for ozone levels in the spa water. It is introduced into the spa water by an ozonator component located behind the cabinet wall. It is operating during the filtration cycle of the pump and is easily programmed at the spa side control. This is a virtually maintenance-free treatment for sanitizing the spa water keeping the water clear and odor free. It is necessary to adjust pH levels, alkalinity and shock as needed.

Chlorine / Bromine as Sanitizers: Only sodium dichlor, granular, is approved for spa use . This is a fast dissolving, pH neutral chlorine. Chlorine immediately sanitizes and levels should be kept between 2-4 ppm. Bromine is a slow dissolve chemical which takes up to a few days to build a reserve and test levels. Bromine levels should also read between 2-4 ppm.

Calcium Hardness: Water that is considered too hard (over 250 ppm) may cause scale formation in electrical components and water too low (less than 150 ppm) may also have a negative effect on components.

Foaming: Body oils, lotions cosmetics, cleaners, high pH levels, algaecides and detergents often cause foaming. Foam can also be a result of low calcium and sanitizer levels.

Water Care Initial Start-Up

Improper use of swim spa chemicals may be dangerous and could damage your swim spa and cover. Since this damage is not covered by the warranty, it is extremely important to take precautions when using these products. Only use chemicals and cleaning agents designed for swim spas. Damage resulting from the use of non-recommended chemicals and/or cleaning agents is not covered under the warranty. Following the procedures in this guide will make the maintenance and care of your swim spa simple and reliable.

Proper Handling of Chemicals

Keep all chemicals out of the reach of children.

Always keep lids on chemicals when not in use and store in a cool, dry location away from direct sunlight.

Do not store chemicals within the interior of the swim spa cabinet.

Do not interchange caps or measuring scoops for different types of chemicals.

Do not smoke around chemicals. Some may emit highly flammable fumes.

In case of contact or if a doctor is required, bring the chemical container to medical authorities for proper treatment.

Never use swimming pool chemicals in your swim spa. This may void the warranty.

Never mix chemicals or chemical solutions directly with each other.

Always add chemicals to water when mixing them. Never add water to chemicals.

Important:

Before using chemicals, read the labels and follow directions carefully.

Always add the chemicals directly to the swim spa water, either in a suitable feeder, distributed over the water surface, or poured into the water, preferable with the pump on.

Never add chemicals to the water while persons are using it.

Leave the cover off and circulate the water for at least 15 minutes after adding chemicals to effectively distribute the chemicals and allow odors to escape.

Initial Start-Up

1. Never use more than 50% softened water when filling the swim spa. It is suggested to use an in-line filter on the hose when filling to prevent many minerals from entering the water making balancing and adjusting the water easier.
2. Add a sequestering agent to treat suspended minerals in the water during this initial fill. Allow water to circulate and filter for at least half an hour before adding additional chemicals.
3. Test water for pH, total alkalinity and calcium hardness. Acceptable levels for pH are 7.4-7.6, for total alkalinity 100-120 ppm and calcium hardness between 150-250 ppm.
4. Adjust pH and total alkalinity per the instructions on the chemical bottle. Allow the chemicals to circulate and wait at least 24 hours to retest.
5. Adjust and retest as necessary.
6. Add concentrated chlorinating granules (sodium dichlor) until a level of 5-8 ppm is reached to effectively treat initial fill water. Add this chlorine by broadcasting over the water surface while the pumps are operating. Do not use the swim spa until that level drops to below 5 ppm. DO NOT add the chlorine granules until after the pH, alkalinity and calcium hardness levels are appropriately met.

DUAL-ZONE MODELS: The hot tub zone of these units is separate from the fitness zone and may be treated with AquaFinesse. This is a proprietary system that sanitizes the water with a clean lavender scent, soft feel, and gentle on your skin. The water will require pH, alkalinity and calcium hardness management and chlorine shock as needed. Contact the factory or your retailer for further info. Remember each zone is separate with controls, filtering and ozone sanitation.

Water Care Schedule

Before Use: Each time before the unit is used, check the water with a test strip for proper sanitation levels and adjust accordingly achieving the optimum 2-4 ppm level. The unit should not be used if the level is 5 ppm or higher.

Every Other Day: Using test strips, monitor the pH, alkalinity and sanitizer levels. The pH should read between 7.4-7.6, alkalinity between 100-120 ppm.

Weekly: Add non-chlorine shock as needed to maintain correct level dependent upon amount of users, frequency and length of use during that week.

Monthly: Change the cartridge filter. Soak overnight in a non-sudsing cleanser, preferably Filter Clean available at your retailer. Rinse well and replace. Be sure to turn off all circulation for removal and replacement. Review in Maintenance section.

Every 6 Months: Drain and refill your unit. Wipe down the acrylic surface, install a clean filter. Refer to the Maintenance section.

Troubleshooting Reference

Symptom	Probable Cause	Suggested Correction
Cloudy Water	High total alkalinity levels, High pH levels, High calcium hardness. Algae growth, low sanitizer levels, high user load, pets, rain. Overuse of defoamer.	Test levels and make correcting adjustments.
Colored Water	Red-Brown; overall imbalance Blue-Green; high pH level.	Brown-Red; Test pH, alkalinity and calcium hardness. Drain and refill if necessary. Blue-Green; Test pH and make adjustments.
Foaming	Low calcium hardness. Build up of soaps, lotions, organic matter, etc.	Raise calcium hardness level. Use defoaming agent. Replace filter. Drain if necessary.
Skin/Eye Irritation	pH level imbalance. Low sanitizer level.	Test pH, alkalinity and sanitizer levels. Make adjustments. Shock if necessary.
Stains at Waterline, Pillows, etc.	Low alkalinity, pH levels.	Adjust pH and alkalinity. Drain, clean off stained areas, change filter and refill.
pH Fluctuation	Low alkalinity levels.	Test alkalinity level and make adjustments.
pH Resistance	High alkalinity levels.	Test alkalinity level and make adjustments.
Sanitizer Inefficiency	High pH and/or alkalinity level.	Test both levels and make adjustments.
Scale Formation	High pH, calcium harness and/or alkalinity levels.	Test all levels and make adjustments. Drain and refill if necessary.
Algae Formation	Low sanitizer level.	Clean spa walls, add algaecide*, add shock.
Corrosion in Fittings and Components	Low pH and/or alkalinity levels. High chlorine level.	Test all levels and make adjustments. (This build-up may cause operation failure and void warranty.)

* Avoid using any biguanide or copper based algaecide in the unit. Use of these products is not recommended and may void the warranty

Regular Swim Spa Maintenance Procedures

There is some basic maintenance that will need to be performed on your swim spa. By following these basic maintenance suggested procedures, you will insure that your spa provides years of service. These basic maintenance procedures are not covered under warranty.

Testing the G.F.C.I. (equivalent RCD for export installations)

Ground Fault Circuit Interrupter (G.F.C.I.) protection for the swim spa should be tested prior to each use by the homeowner. With the swim spa in operation, push the "test" button on the G.F.C.I. breaker at the panel box. The spa should shut down immediately. Now reset the G.F.C.I. The swim spa should return to normal operation. If the G.F.C.I. fails to operate in this manner, there exists a possibility of electrical shock. Discontinue swim spa operation by turning off power and disconnecting the power source and notify a qualified electrician for identification and correction of the problem.

Cleaning Jets

Most of the jets in your swim spa are able to be turned on or off. Over time they may become difficult to turn. When this happens it will be necessary to remove the jet and clean any grit or debris from the jet body. To remove the jet you will need to turn the face of it counter clockwise until it stops. Next continue to turn the jet counter clockwise as you pull on the face. The jet will then pull away from the jet body. Clean jet body with cloth to remove all debris from the jet body.

To clean the jet barrels you can soak them overnight in white vinegar. Once the jet has soaked overnight rinse thoroughly with water. To reinsert the jet barrel into the jet body simply put the barrel back into the body and push while turning clockwise.

Cleaning Diverter Valves

Due to mineral deposits, grit, and sand that may get into the internal parts of the diverter valve, it may become hard to turn or lock up completely. In the event this happens it will become necessary to remove the handle, cap, and puck to clean out the diverter valve. Follow the steps below to clean out the diverter valve.

1. Turn off power to swim spa.
2. Remove handle and loosen diverter valve cap. If that cap can not be removed by hand you may need to use a wrench. Before you place a wrench on the cap cover it first with a clean rag.
3. Pull the cap off of the diverter valve. The puck may or may not come out with the lid. You may need to pull the puck out of the body with a pair of plyers.
4. Wipe down the puck as well as the diverter body to remove all grit and debris. Soak in white vinegar if needed.
5. Place the puck back into the diverter body. Check the large o-ring to make sure it is seated correctly on top of the diverter housing.
6. Check the two stem o-rings to make sure they are both in the center of the lid before reinstalling and tightening the lid.
7. Reinstall the handle and turn the power back on.

Synthetic Cabinet Care

Your swim spa cabinet is constructed from a wood alternative, polymer material designed to be durable, tough, and virtually maintenance-free. It may require periodic cleaning with a non-abrasive cleaner and/or rinsed with a hose.

Pillow Care

Your swim spa pillows should periodically be rinsed to clear them of any chemical residue. If the unit is not intended to be used for a period of time, it is recommended to remove them to extend their life.

Stainless Jet Finish Care

The stainless trim on your jets can keep it's luster for many years with proper care. Frequent wiping with clean water and a good car cleaning wax at time of drain and refill will protect against possible rusting. Never clean with bleach, corrosive materials or abrasive material such as steel wool. Failure to properly care for stainless steel components could result in rust formation which is not covered under the warranty.

Thermal Cover Care

Always use the locking thermal cover when not in use to reduce heat-up time, operating costs and keep unwanted out. To prolong the life of the cover, handle it with care and clean it regularly using mild soap and water. Periodic treatments with a vinyl conditioner will help protect against deterioration caused by UV rays from the sun. Never allow anyone to stand or sit on the cover, and avoid dragging it across rough surfaces. Be sure to lock all straps when not in use for safety and to prevent wind damage. Keep cover open at least 15 minutes after adding chemicals.

Ozone Care

The ozone hose and check valve connection between the ozone generator and ozone injector should be inspected or replaced, if necessary, annually. The air quality pulled into the generator may cause rapid wear on the hose and check valve. The indicator light will light green when the ozone generator is operating (during the filtration cycle) indicating the ozone system is indeed sanitizing the water.

Plumbing Care

Swim spas are plumbed with plastic jets, pipes and fittings which are glued together. These plastic parts and their many glue joints are subjected to harsh treatment with years of operation, subjected to many hot-cold cycles and the high pressure generated by the powerful jet pump stressing pipes and joints. Although the factory has a rigorous testing procedure, even transportation from the factory to you can cause vibration and possible loosening of the joints.

Should a leak occur, remove that appropriate section of cabinet wall exposing the leaking area. Drain the swim spa to below the leak and contact a qualified technician for repair.

Filter Cartridge Care

Swim Spa water filtration begins as soon as the flow is steady through the pump. As the filter cartridge removes dirt from the water, the accumulated debris will cause a resistance to flow. When this is noticed, along with cloudy water, clean or replace the filter element as noted below. This generally occurs monthly depending upon use and water care.

Teleweir System: Suction-side design (hot tub zone in dual zone models)
1. Shut off power at the main or sub panel.
2. Remove the filter housing top by pulling up the raised portions of the filter top.
3. Lift the skimmer basket out of the filter canister.
4. Remove the filter from the canister.
5. Replace with clean filter, either a clean spare which is recommended, or cleaning of the soiled removed cartridge. Refer to scheduled care section for recommendations.
6. Place skimmer basket back in filter canister.
7. Place filter top onto filter canister and turn clockwise until top stops.

Pressure Side System: (TruSwim)
1. Shut off power at the main or sub panel.
2. Open the small, black bleeder valve on top of the filter cover slightly to release pressure. (Be sure to re-close the valve snugly before reactivating the spa.)
3. Remove the black lock ring. Lift the dome lid and remove the filter element. Clean any debris from the filter housing. Soak the filter element in a non-sudsing filter cleansing solution.
4. Rinse the filter element with a garden hose or pressure hose, and replace in the filter housing. (It is recommended to have an extra filter cartridge on hand so that a clean element will always be available while the soiled element is being cleaned. This will minimize downtime of the spa during the cleaning procedure.) When replacing the element into the housing, be sure that the o-ring is in place and clear to assure a snug fit of the filter dome lid to prevent leakage. Hand tighten the lock ring until snug and locking tab engages. Re-check bleeder valve to be sure it is closed.

Swim Spa Acrylic Surface Care

To preserve the sheen of the acrylic surface, clean and sanitize with clean water to remove any particles and use rubbing alcohol or a non-abrasive, non-sudsing cleaner to wipe clean. Use a soft, lint free cloth and never use an aggressive solvent such as a lacquer thinner or acetone which will cause damage to the acrylic.

Periodic Water Draining and Refilling

After a certain time, you may find the addition of chemicals will not clarify or eliminate odors in the spa. This is an indication the water needs to be drained and replaced. Generally, depending upon bather load and water chemistry maintenance, this may need done every 3 months. With the use of ozone, this may need done less frequently.

1. Reduce set temperature to 59˚F (15˚C).
2. Turn off all power.
3. Connect a garden hose to the recessed drain valve found on the side of your swim spa cabinet, by slowly pulling the cap out all the way (approximately 2") and turn cap counterclockwise to remove. Attach the hose and push valve 1", this will start the draining process. After draining the spa, replace the cap and push the valve all the way in. *(See photo.)* Note: Unscrew the large nut around the drain valve to remove the cabinet panel from the spa for servicing, if necessary.

4. Clean cartridge filter as noted previously in this section regarding maintenance recommendations.
5. Clean acrylic shell surface with non-sudsing cleanser per maintenance recommendations.
6. Begin filling the swim spa. We recommend filling the swim spa to the top line on side wall. During the filling process periodically check the unions to ensure they are tight and no water is leaking out. The dual zone models are separate zones each with their own pack, heater, control. Follow the connection, filling instructions for each zone.
7. Once the swim spa is filled turn the circuit breaker on. The spa will turn on and start the circulation pump.
8. It may be necessary to bleed air from the pump or pumps on your swim spa, if after start up your swim spa pumps do not operate. Due to the nature of water flow and hydrotherapy pumps, please be advised that air locking of pumps may occur. The manufactur er has taken measures to reduce the possibility of this, but it still may occur, especially after refilling a swim spa. This is not a service covered under warranty. To relieve an airlock situation, loosen the pump union on the discharge side of the pump. You may possibly hear air come out when union is loosened, after a few seconds tighten the union. Turn the pump on to see if proper jet flow has been achieved. If proper jet flow has not been achieved repeat process.
9. Open air regulators allowing maximum flow through jets assuring pump operation.
10. Refer to Waterway Neo 2100 Control section for heating, filtration cycles and function.
11. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.
12. View current water temp on the control panel and set to desired level. Water will heat approximately 1– 2 degrees Fahrenheit an hour. Times may vary.
13. Close cover to expedite heating and assure safety. Always keep the cover locked when not in use. Keep the keys in a safe place, out of the reach of children.

Winterizing the Swim Spa

Your swim spa has been designed to be used year-round and it is certainly suggested that you enjoy the many benefits of enjoying your purchase in any season. If you should decide to not use your swim spa during the winter months, it must be cared for properly to avoid damage. During those months of shut-down, we recommend the unit being checked periodically to assure no water is entering the unit causing potential freezing resulting in damage. Your warranty does not cover this type of damage, both structural and operational.

1. Turn off at circuit breaker, open air controls and jets, drain completely using drain valve and sump pump if needed.
2. Remove filter cartridges and all cabinet panels to access equipment.
3. Loosen pump unions and winterizing plug from face of pump. Replace plugs after all water has been cleared from the unit.
4. Use a shop vac in blowing mode to remove all water from return and suction lines.
5. Use the wet vacuum to pull all water from jets. You may choose to use a non-toxic RV type anti-freeze to assure freeze prevention and remove ALL prior to next use.
6. Replace all cabinet panels.
7. Cover the unit with the thermal cover, lock in place.

Storing the Swim Spa

The swim spa shell is to never be unprotected and uninsulated during storage. Never use a clear plastic wrap or it's like to cover it. Never leave unprotected in direct sunlight as it can damage the acrylic and fittings, not covered under warranty. Always use the thermal cover. Do not allow, even if winterized, the unit in cold temperatures 0°F or below. If it will be exposed to these temperatures, keep the unit filled and set to the lowest operating temperature setting.

The TruSwim Series models require additional maintenance procedures to assure proper operation of the propulsion system. Follow the guidelines below, recording the date in the chart found in the back of this manual, assuring flawless performance of your TruSwim swim spa.

Weekly

Check all suction grates and the return grid making sure they are free of any flow restriction debris.

To clean suction grates / return grid

1. Turn off all power to swim spa.
2. Remove screws of suction grate / return grid to be cleaned.
3. Remove and clean suction grate / return grid.
4. Reinstall grate / return grid.
5. Reinstall all screws assuring securely in place.
6. Turn power on.

Every 6 Months

Remove and clean the return grid of any and all debris. Follow instructions above for cleaning.

Every 12 Months

For TruSwim Series models, remove the end cabinet panel and check the hydraulic oil level of the hydraulic oil reservoir. Oil reservoir should be 3/4 full. If oil is needed, add biodegradable oil supplied by the swim spa manufacturer for TruSwim propulsion systems specifically is the only oil to be used. Use of any other oil will void warranty.

Every 30 Months

We recommend your service center remove the TruSwim wall and inspect the hydraulic motors and props for unusual wear. Replace any parts as needed.

Every 60 Months

We recommend your service center inspect and replace the hydraulic motors and props if needed.

A good general rule is to visually inspect your swim spa and equipment area frequently. If anything looks broken, worn, or incorrect, contact your electrician or spa retailer. A simple repair may prevent an injury or more serious problems requiring expensive repairs. If your swim spa is not operating, check the following:

1. Nothing on the swim spa operates

Check power source G.F.C.I. breaker. (or equivalent)
Check to assure spa has dedicated circuit.
Check the "test" and "reset" buttons on G.F.C.I. (or equivalent)
Check internal fuses.
Review control panel for any error code. Refer to that section of this manual.

2. Pump does not work

Check all items above.
Check filter; clean or replace cartridge.
Check for blockages (restrictions) at suctions, skimmer and pump.
Push "pump" button(s) to check if high speed is functioning, on a dual-speed pump.

3. Inadequate jet action

Make sure jets are turned on.
Make sure air controls are open.
Check for restrictions (blockages) in jets and/or main skimmer and pump.
Check water level.
Push "pump" button(s) to check if high speed is functioning on a dual-speed pump.
Check to be sure the diverter valve is in center position.
Check for dirty filters and change if necessary.

4. No heat

Check all steps under part "1".
Check temperature settings.
Check for clogged filter element and other restrictions.
Check water level.
Check if pump is running.

5. No light

Check "light" button.
Check G.F.C.I. (or equivalent) "test" and "reset" buttons.

6. Water is cloudy

Increase circulation cycle.
Test water chemistry.
Clean/replace filter cartridge.

7. GFCI or equivalent is tripping

A ground fault circuit interrupter (GFCI) is required by the National Electric Code for your protection. The tripping of the GFCI may be caused by a component on the spa or by an electrical problem. Electrical problems include although are not limited to, a faulty GFCI breaker, spa component, power fluctuations, or improper wiring. If this new electrical service and GFCI installation, an instantly tripping GFCI may likely be caused by improper wiring of the neutral from the GFCI to the spa. Contact a qualified technician to rectify the problem.

If above checks do not solve the problem, contact a qualified service technician.

	Date	Date	Date	Date	Date	Date	Date
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Change All Suction Fittings (every 7 years)							
Clean and Drain Swim Spa							
Change / Clean Filter							
Clean / Condition Cover							
Miscellaneous							
Miscellaneous							

	Date	Date	Date	Date	Date	Date	Date
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Change All Suction Fittings (every 7 years)							
Clean and Drain Swim Spa							
Change / Clean Filter							
Clean / Condition Cover							
Miscellaneous							
Miscellaneous							

	Date	Date	Date	Date	Date	Date	Date
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Test GFCI (RCD)							
Change All Suction Fittings (every 7 years)							
Clean and Drain Swim Spa							
Change / Clean Filter							
Clean / Condition Cover							
Miscellaneous							
Miscellaneous							

The manufacturer reserves the right to change product as deemed necessary without notification. As a manufacturer we stand behind our products in accordance to our written limited warranty. Your retailer is an independent business operator not employed by the manufacturer. Sunrise Spas can not accept responsibility for any representations, statements, or contracts made by any retailer beyond the parameters of our warranty.

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