Propulsion Swim Spa

Owner's Manual

Revised 2023/10

TruSwim®

1.800.451.1420 **pdcspas.com** service@pdcspas.com

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Please note "swim spa" and "spa" are used interchangeably throughout this manual.

Plastic Development Company, Inc.
3743 West Fourth Street
Williamsport, PA 17701 USA
570-323-3060 tel 570-323-8485 fax
www.pdcspas.com

Congratulations on Choosing a TruSwim propulsion swim spa!

You now own a high quality TruSwim® 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 fitness spa within these guidelines assures years of fun and relaxation gained from adding a PDC 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. PDC Spas reserves the right to change product in an effort to enhance and improve, without prior notice. To be aware of any of these possible changes and to view / print this manual in color, log on to www.pdcspas.com, referring to the Customer Care / Ownership section, or contact your retailer directly.

Ownership Information

Name _____

Address _____

_____

Installation Date ____ / ____ / ____

Model Name _____ Serial # _____

Retailer Name _____ Retailer Phone Number _____

Service Technician Contact Info _____

Register Your TruSwim® Swim Spa

Please be sure to register your new swim spa upon delivery. Log onto https://www.pdcspas.com/register and enter the required information. We have no record of ownership until this is completed. This will ensure warranty coverage and information regarding possible product updates.

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 blue and silver plate includes a 5 digit serial number.

SAVE THIS MANUAL FOR FUTURE REFERENCE !

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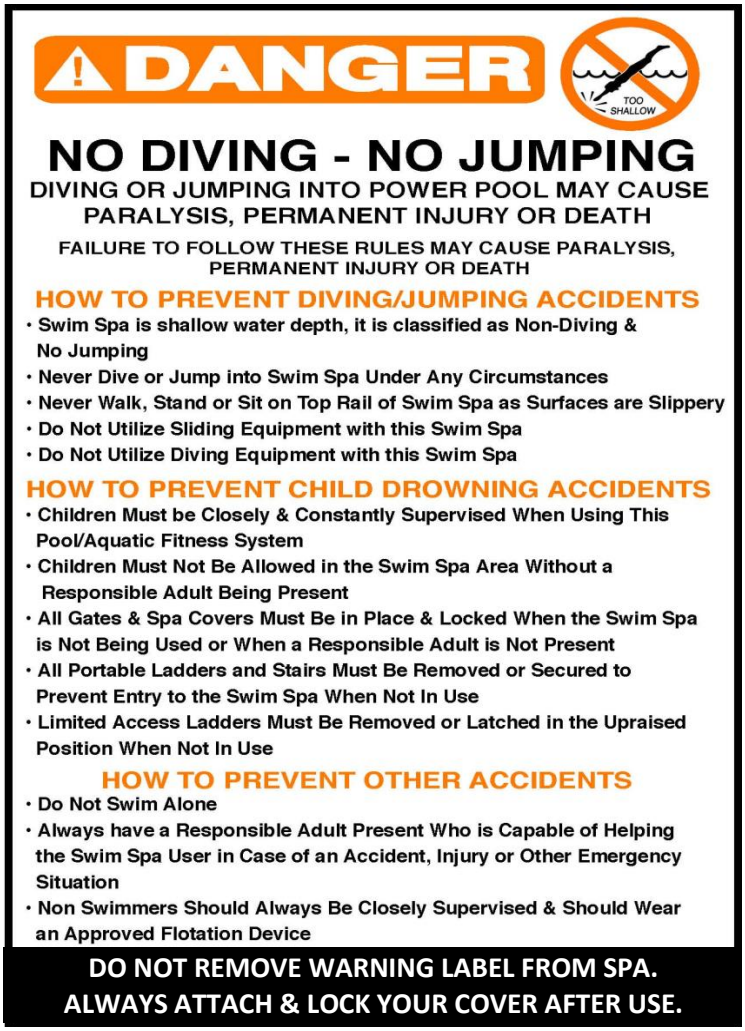


WARNING

Do NOT sit, stand or dive from the TruSwim® propulsion surface. The propulsion end is for operational purposes ONLY.

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 and fitness 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 PDC Spas 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 equivelant; 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 104ºF (40° 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 90°F (32°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 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 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

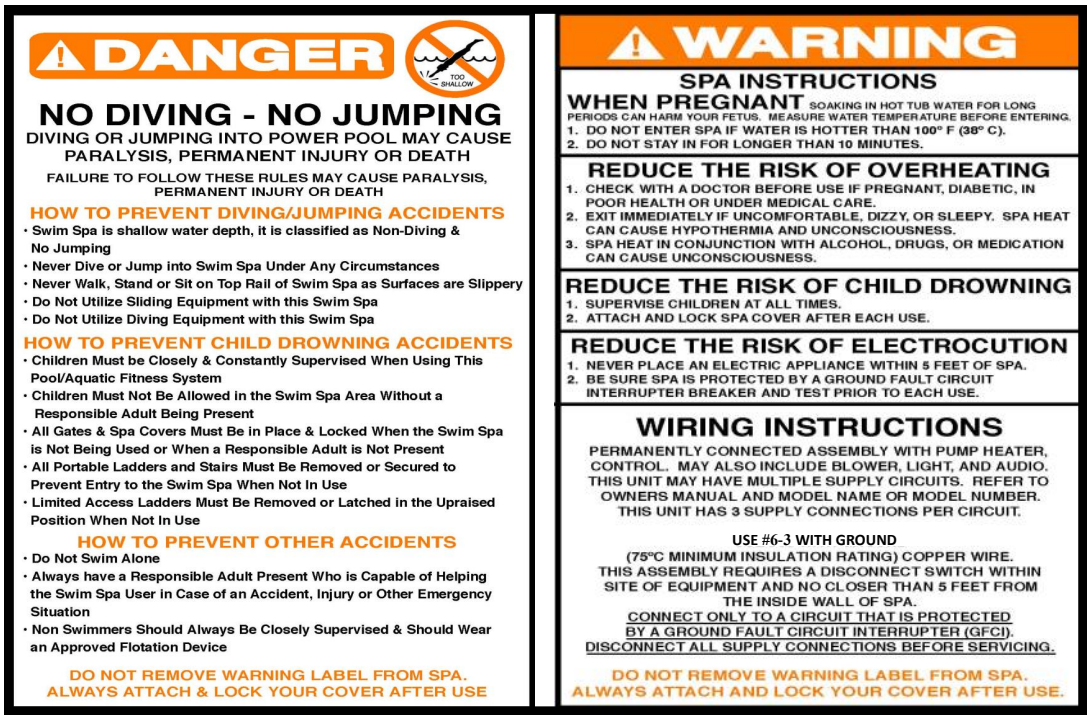
- Install the swim spa to provide drainage for compartments of electrical components.
- For floor recessed swim spas: Install to permit access for servicing from above or below the floor. Swim spa equipment must be installed below water level.
- When planning your swim spa installation site, prepare 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 cabinet of your TruSwim® 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.

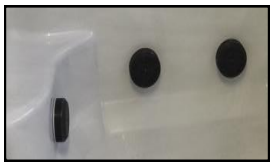
Important: It is extremely important that this sign be posted permanently placed in clear view of persons using the swim spa. Occasional swim fitness spa users may not be aware of some of the dangers hot water poses to pregnant women, small children, seniors, and people under the influence of alcohol. 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. PDC Spas 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 from neck to feet, RX6 massage columns (Synergy™ & Vitality Series)

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 control 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 fittings are in all TruSwim models and also the hot tub zone of the dual zone model, TSX219. There are 2 installed behind the TruSwim® propulsion wall which must be accessed to change.

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.

Pristine™ Filter: The TruSwim® dual zone model , hot tub zone, is 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.

PowerFlo™ 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 fitness 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 EverPure™ 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. This system is used in the hot tub zone of the dual zone model, TSX219.

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, 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 model TSX219, there will be two packs, one for the fitness zone and another for the spa zone.

TSX-SmartTouch™ TruSwim® 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. Convenient familiar operation with the state-of-the art touch screen offers custom and pre-programmed workout in varying speeds, times for multiple users.

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 TSX219 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. Never raise the temperature above 104 degrees. Never raise temperature above 86 degrees for exercising. *(Heater is integrated in the Support Pack as described above.)*

EverPure2™ with EverLite2™ sight glass: Your TruSwim® swim spa is equipped with an advanced purification system of ozone and UV-C to effectively treat bacteria and contaminants. A sight glass is conveniently mounted on the cabinet to assure the user when lit the system is actively at work cleaning the water. The light is lit during filtration cycles. This allows for less added chemicals and a maintenance-free approach to clean, pure swim water.

Secondary pump: A single speed secondary pump has been added to the spa zone of the TSX219 dual zone model for additional enjoyment

Motion Glow™: 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.

Highlights™ LED Lighting: Standard on all TruSwim® models, Highlights™ includes the MotionGlow™ underwater light with 8-10 underwater pin lights and 6 water spout lights, air controls and diverters

Eclipse™ LED Lighting: Optional for all models, this package includes 16 cabinet sconces.

EverLite2™: Exclusive to all PDC TruSwim® models is the cabinet mounted sight glass, EverLite2™ which confirms the EverPure2™ ozone—UV purification system is properly operating.

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

AquaForce™ Mount: As an option on both the TruSwim® Series, the AquaForce™ upper body rope and pulley fitness equipment also uses a stainless steel grommet for pole insertion. Read this manual for safety and use instructions prior to workout.

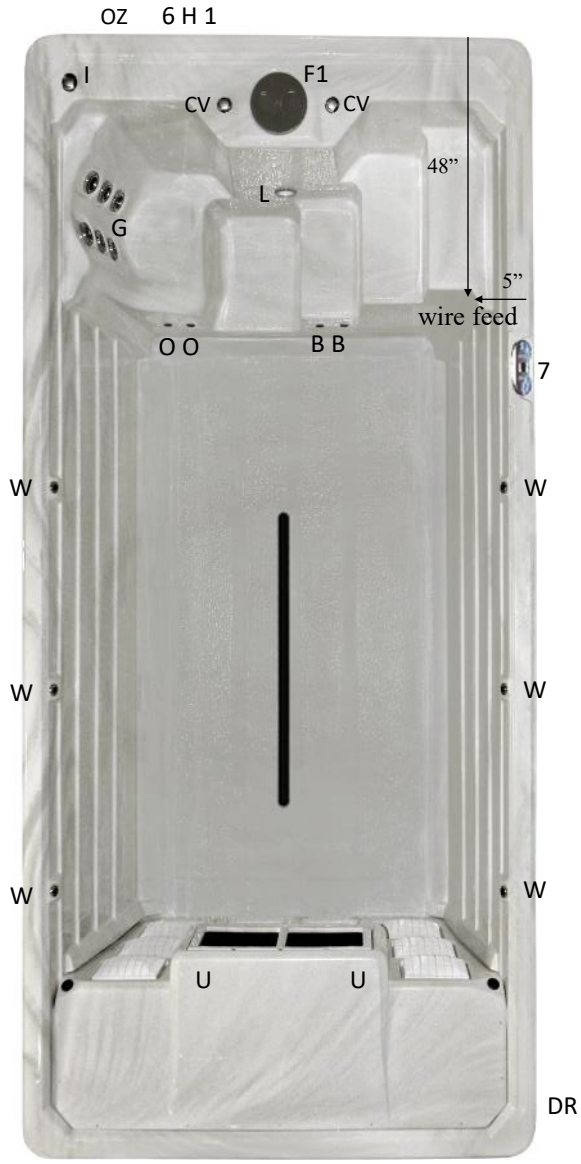
TruSwim®

GENERAL **rev. 2021/08**

Seating Capacity	2 seats, fitness area
Shell Material	Acrylic
Fitness Length	114” approx.
Dimensions (Domestic)	180” x 92” x 56”
Dimensions (Export)	457 cm. x 234 cm x 142 cm.
Water Capacity	2,240 gallons (8,479 liters)
Dry Weight	1,905 lbs. (864 kg.)
Skirt Material	Permawood™
Water Flow	4HP & Dual Propulsion 5000 GPM

WATER SYSTEM** (photo ref.)

EverPure2™Treatment System		1
PowerFlo™ Filter	F1	1
Slide Valves		2
Mega’ssage Jet	G	6
Ozone Jet	O	2
Safety Suction	U	8
Air Control	I	1
MotionGlow™ Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Bypass Jet	B	2
Drain Valve	DR	1



SPECIAL FEATURES

Spa Pillows	0
Highlights™ LED lighting	Standard
Stainless Steel Jetting	Standard
Eclipse™ LED cabinet lighting	Optional
BlueTune™ Audio	Optional*

ELECTRICAL SYSTEM (Requires One 120/240V Circuit with GFCI Protection.)

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Spa Pump HP	1	4.0 HP	2.0 HP (2.070 KW)
Electronics			
Electrical Can	6	Balboa BP20	Balboa BP20
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	TSX-SmartTouch™	TSX-SmartTouch™

** 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.

TruSwim®

GENERAL **rev. 2021/08**

Seating Capacity	1 seat, fitness area
Shell Material	Acrylic
Fitness Length	124” approx.
Dimensions (Domestic)	204” x 92” x 56”
Dimensions (Export)	518 cm. x 234 cm x 142 cm.
Water Capacity	2,420 gallons (9,160 liters)
Dry Weight	2,045 lbs. (927 kg.)
Skirt Material	Permawood™
Water Flow	4HP & Dual Propulsion 5000 GPM

WATER SYSTEM** (photo ref.)

EverPure2™Treatment System		1
PowerFlo™ Filter	F1	1
Slide Valves		2
Large Euro Jet w/Eyeball	E	18
Ozone Jet	O	2
Safety Suction	U	8
Air Control	I	1
MotionGlow™ Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Drain Valve	DR	1

SPECIAL FEATURES

Spa Pillows	1
Highlights™ LED lighting	Standard
Stainless Steel Jetting	Standard
Eclipse™ LED cabinet lighting	Optional
BlueTune™ Audio	Optional*

ELECTRICAL SYSTEM (Requires One 120/240V Circuit with GFCI Protection.)

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Spa Pump HP	1	4.0 HP	4.0 HP (2.024 KW)
Electronics			
Electrical Can	6	Balboa BP20	Balboa BP20
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	TSX-SmartTouch™	TSX-SmartTouch™

** 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.

TruSwim®

GENERAL **rev. 2021/08**

Seating Capacity	1 seat, fitness area
Shell Material	Acrylic
Fitness Length	148” approx.
Dimensions (Domestic)	227” x 92” x 56”
Dimensions (Export)	577 cm. x 234 cm x 142 cm.
Water Capacity	2,700 gallons (10,220 liters)
Dry Weight	2,250 lbs. (1,020 kg.)
Skirt Material	Permawood™
Water Flow	4HP & Dual Propulsion 5000 GPM

WATER SYSTEM** (photo ref.)

EverPure™ Treatment System	OZ	1
PowerFlo Filter	F1	2
Slide Valves		6
Large Euro Jet w/ Eyeball	E	26
Mega’ssage Jet	G	10
Ozone Jet	O	2
Diverter Valves	V	2
Safety Suction	U	8
Air Control	I	6
MotionGlow™ Light	L	1
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Drain Valve	DR	1

SPECIAL FEATURES

Spa Pillows	1
Highlights™ LED lighting	Standard
Stainless Steel Jetting	Standard
Eclipse™ LED cabinet lighting	Optional
BlueTune™ Audio	Optional*

ELECTRICAL SYSTEM (Requires One 120/240V Circuit with GFCI Protection.)

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Spa Pump	1	4.0 HP	4.0 HP (2.024 KW)
Electronics			
Electrical Can	6	Balboa BP20	Balboa BP20
Voltage		120/240	230
Amperage		50	1x32
Heater	H	5.5 KW	3.0 KW
Operation System			
Main Spa Side Control	7	TSX-SmartTouch™	TSX-SmartTouch™

** 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.

TruSwim®

GENERAL **rev. 2021/08**

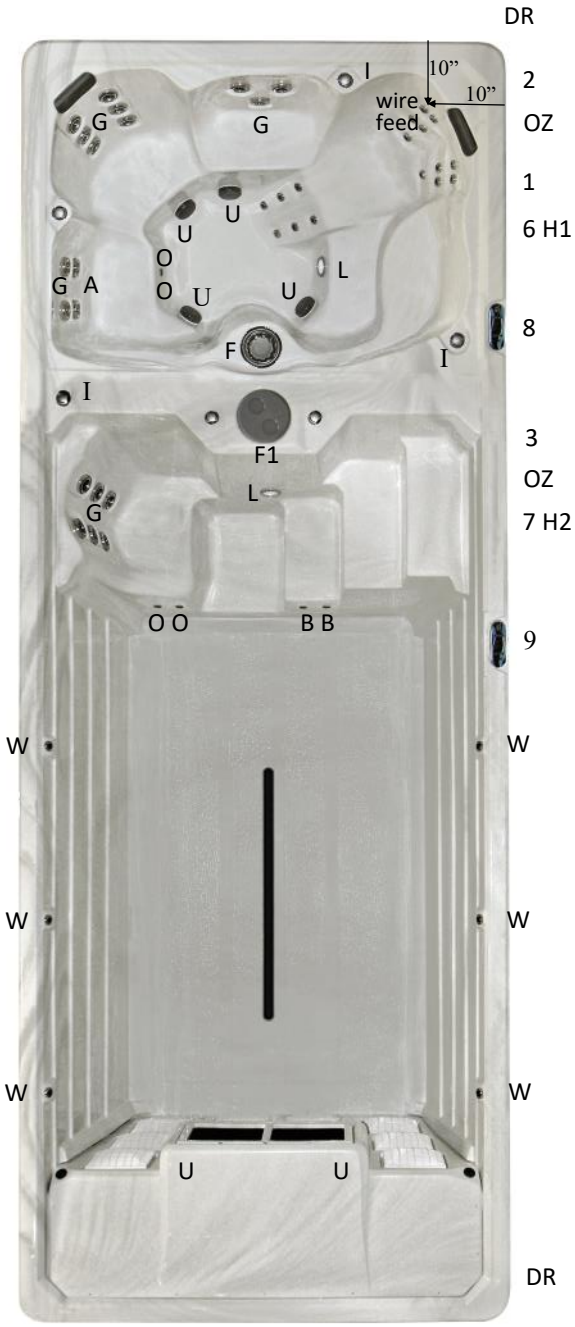
Seating Capacity	5 seats, fitness area
Shell Material	Acrylic
Fitness Length	102” approx.
Dimensions (Domestic)	227” x 92” x 56”
Dimensions (Export)	577 cm. x 234 cm. x 142 cm.
Water Capacity	2,525 gallons (9,558 liters)
	Spa: 425 gal. Fitness: 2100 gal.
Dry Weight	2,735 lbs. (1,240 kg.)
Skirt Material	Permawood™
Water Flow	12HP, & Dual Propulsion 5000 GPM

WATER SYSTEM** (photo ref.)

EverPure2™Treatment System		2
Pristine Filter	F	1
PowerFlo Filter	F1	1
Slide Valves		6
MegaSwirl Jet	A	2
Large Euro Jet w/ Eyeball	E	16
Mega’ssage Jet	G	17
Ozone Jet	O	4
Safety Suction	U	12
Air Control	I	4
MotionGlow™ Light	L	2
Lighted Water Spouts	W	6
Water Spout Control	CV	2
Bypass Jet	B	2
Drain Valve	DR	2

SPECIAL FEATURES

Spa Pillows	2
Highlights2™ LED lighting	Standard
Stainless Steel Jetting	Standard
Eclipse™ LED cabinet lighting	Optional
BlueTune™ Audio	Optional*



ELECTRICAL SYSTEM (Requires Two 120/240V Circuits Each with GFCI Protection.)

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Spa Pump #1	1	4.0 HP	2.0 HP (2.070 KW)
Spa Pump #2	2	4.0 HP	4.0 HP (2.024 KW)
Swim Spa Seating Pump	3	4.0 HP	2.0 HP (2.070 KW)
Electronics			
Electrical Can (spa zone), (swim zone)	6, 7	Balboa BP20(each)	Balboa BP20(each)
Voltage (spa zone), (swim zone)		120/240, 120/240	230 / 230
Amperage (spa zone), (swim zone)		50, 50	1x32, 1x32
Heater (spa zone), (swim zone)	H1, H2	5.5 KW, 5.5 KW	3.0 KW, 3.0 KW
Operation System			
Spa Side Control (spa zone), (swim zone)	8, 9	TSX-SmartTouch™ (each)	TSX-SmartTouch™ (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. Click onto the web site (www.pdcspas.com) or 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 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. **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 NATIONAL 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. 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 NATIONAL 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 ARTICLE 680 OF THE U.S. NATIONAL ELECTRIC CODE AND ANSI/NFPA 70-1984.

Partially or Fully Recessed Installations:

PDC Spas does <u>not</u> 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.

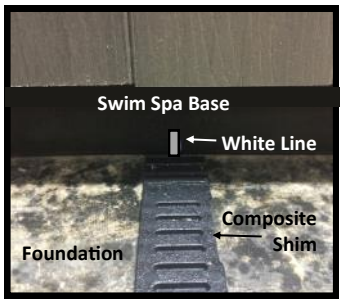
5. Must have proper ventilation so equipment does not overheat.

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.

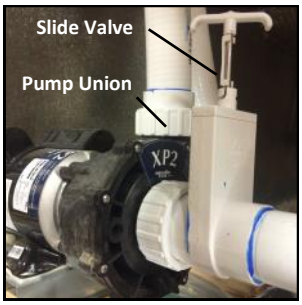
Once the swim spa is in its final location perform the following steps to begin the start-up procedure.

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. 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 PDC Spas for TruSwim® propulsion systems only.

6. Ensure your water source is safe for hot tub 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.

7. 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.

8. 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.

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

10. 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. PDC 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.

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

12. Refer to Control section for heating, filtration cycles and system operation.

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

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

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

16. 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.

17.Always use an approved insulating swim spa cover to cover your swim spa when not in use, especially in outdoor installations where the swim spa is exposed to weather conditions and sun. Constant, prolonged exposure and use of an unapproved or non-insulating swim spa cover can result in damage to swim spa surface which would void the warranty.

Above photo shown with Cover Shelf, optional cover lifter. There are several choices available for cover lifters and are to be installed by the customer. Contact your retailer or the internet for the best suited lifter for your install.

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 fitness 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 National Electrical 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, U.S. 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 PDC SPAS) by a qualified electrician in accordance with all codes and regulations. Dual zone model require GFCI protection for EACH support pack: one for fitness zone and one for hot tub zone. Refer to typical GFCI installation photos and illustrations on the following pages.

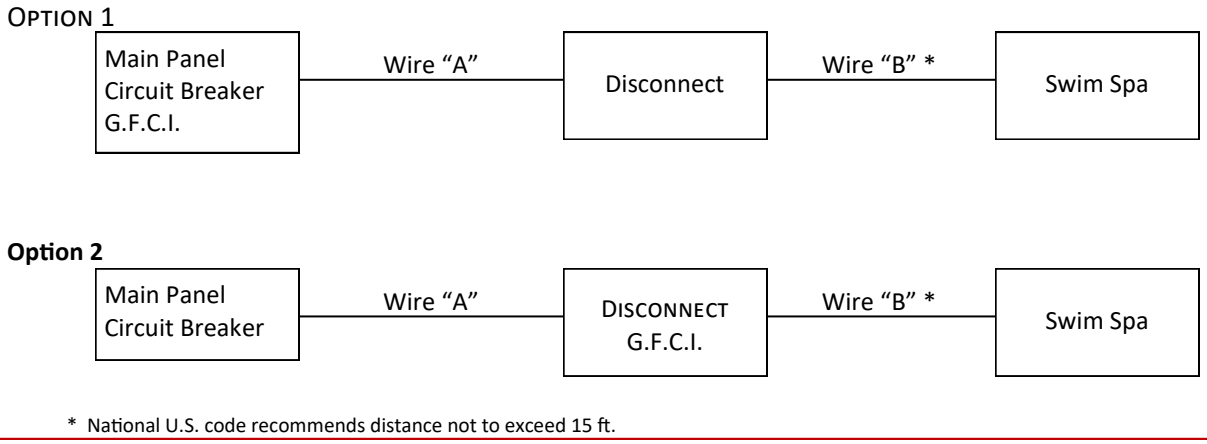
Prior to each use, testing of the GFCI (or equivalent RCD) is required! Refer to the maintenance section of this manual for instructions

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 Fitness Spa Wiring Schematic for Certified Electricians' Reference Only



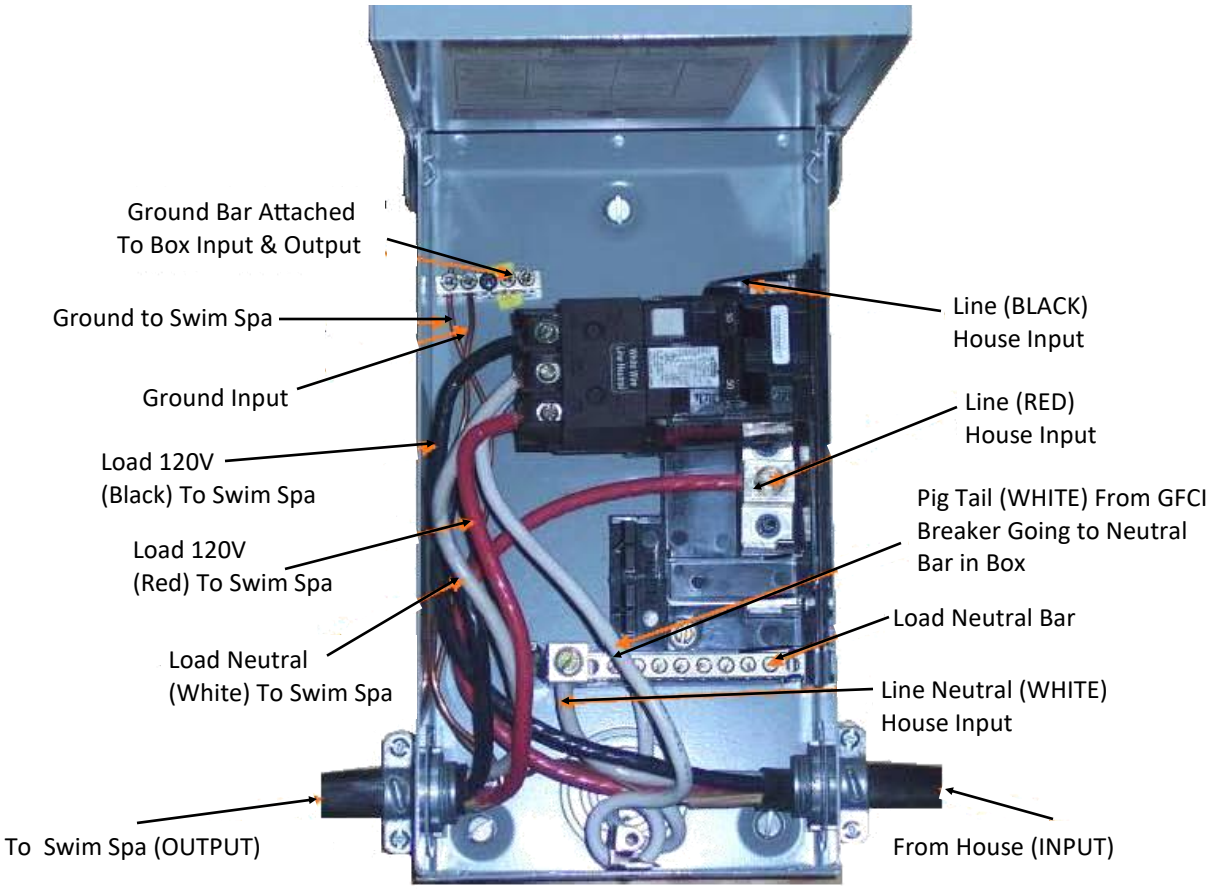
* National U.S. code recommends distance not to exceed 15 ft.

ATTENTION ELECTRICIAN:

All PDC 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. Diagram is a "Typical" installation to be used only as a reference for the installing electrician. PDC does not supply the GFCI breaker. It is recommended to NOT install Eaton-Cutler Hammer brand.

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 National Electrical 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.

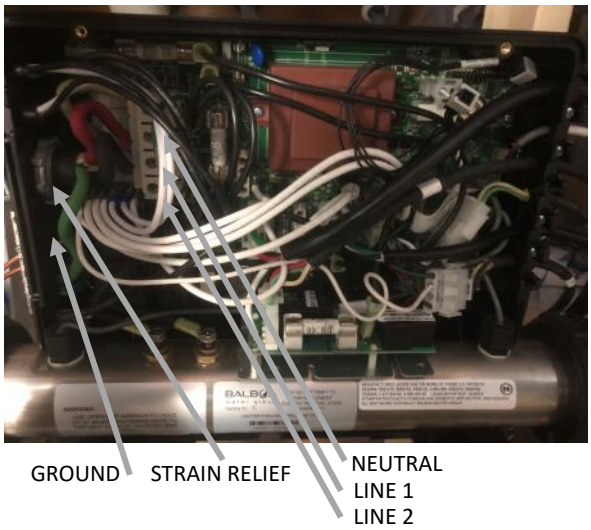
FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!
All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with the National electric code and all applicable local regulations.
Ensure power is turned off prior to making any electrical connections.

ATTENTION ELECTRICIAN:

Swim Spa Support Packs must be installed with a Class A 50 Amp Ground Fault Circuit Interrupter (not supplied) in accordance with the National Electric Code and all applicable local codes. For dual zone model, each support pack requires GFCI protection: one for the fitness zone and one for the hot tub zone. 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.

TruSwim® Pack, mfg. by Balboa



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 Dual Zone Model, perform procedure for EACH support pack.

WARNING:

READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC Spas, PDC International 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.

Fill it Up

Preparation and Filling

Fill the spa to its correct operating level. Be sure to open all valves and jets in the plumbing system before filling to allow as much air as possible to escape from the plumbing and the control system during the filling process.

After turning the power on at the main power panel, the top-side panel will display a company logo screen.

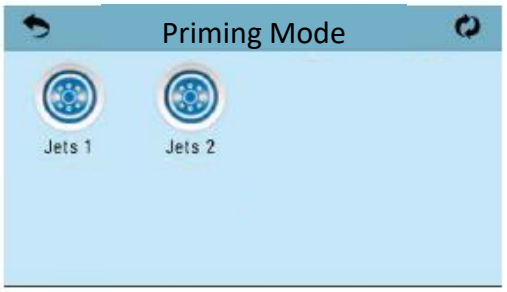
Priming Mode

After the initial start-up sequence, the control will enter Priming Mode and display a Priming Mode screen. Only pump icons appear on the priming mode screen. During the priming mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater under low-flow or no-flow conditions. Nothing comes on automatically, but the pump(s) can be energized by selecting the "Jet" buttons.

Priming the Pumps

As soon as the Priming Mode screen appears on the panel, select the "Jets 1" button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, select the other pumps, to turn them on. The pumps should be running in high-speed to facilitate priming. If the pumps have not primed after 2 minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process.

Note: Turning the power off and back on again will initiate a new pump priming session. Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and call for service.



Important: A pump should not be allowed to run without priming for more than 2 minutes. Under NO circumstances should a pump be allowed to run without priming beyond the end of the 4-5 minute priming mode. Doing so may cause damage to the pump and cause the system to energize the heater into an overheat condition.

Exiting Priming Mode

The system will automatically enter the normal heating and filtering at the end of the priming mode, which lasts 4-5 minutes.

You can manually exit Priming Mode by pressing the "Back" button on the Priming Mode Screen. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4-5 minutes. Be sure that the pump(s) have been primed by this time.

Once the system has exited Priming Mode, the top-side panel will display the Main Screen, but the display will not show the water temperature yet, as shown below. This is because the system requires approximately 1 minute of waterflowing through the heater to determine the water temperature and display it. **– – – –°F – – – –°C**

Navigation

Navigating the entire menu structure is done by touching the screen. Screen selections indicated below can be selected. Touch one of these to enter a different screen with additional controls. Most menu screens time out and revert to the main screen after 30 seconds of no activity.

Messages

At the bottom of the screen, at certain times an indicator may appear showing that a message is waiting. Touch this indicator to go to the Message Display Screen. On that Screen some of the messages can be dismissed.

Swim Spa Status

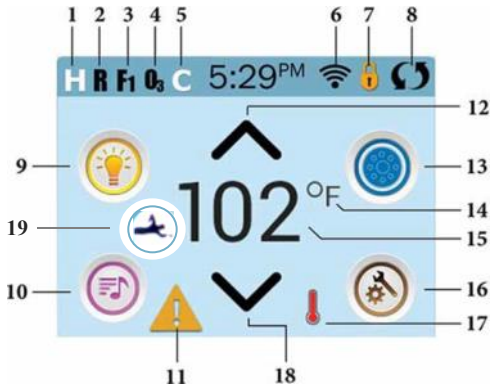
Important information about spa operation can be seen on the Main Screen.

Most features, including Set Temperature adjustment, can be accessed from this screen. The actual water temperature can be seen, and the Set Temperature can be adjusted .The selected Temperature Range is indicated in the upper left corner.

Time-of-Day, Ozone and Filter status is available, along with other messages and alerts. The Spa Equipment Control Icon will spin if any pump is running. A Lock icon is visible if the panel or settings are locked.

ICON Specifications

1. H = High Temperature Range
2. R = Ready Mode
3. F1 = Filter Cycle 1 Running
4. O3 = Ozone Running
5. C = Cleanup Cycle
6. Wi-Fi Signal Indicator
7. Lock Indicator Icon
8. Invert Screen
9. Light Icon = Turns On/Off
10. Music Icon = Press To Enter Music Screen (optional feature)
11. Message Waiting Indicator
12. Set Temperature Up
13. Spa Equipment Control Icon; Therapy Jets & Lights
14. Temperature Scale (F/C)
15. Current Water Temperature
16. Settings Icon
17. Heat Indicator
18. Set Temperature Down
19. Swim Menu = Operates TruSwim® propulsion



NOTE: After 30 minutes* the display will automatically go into sleep mode, which turns the display off. This is normal operation. Touch anywhere on the screen to wake the panel back up.

ICON Specifications

1. = High Temperature Range. = Low Temperature Range.

2. = Ready Mode. = Ready And Rest Mode. = Rest Mode.

3. = Filter Cycle 1 is running. = Filter Cycle 2 is running. = Filter Cycles 1 and 2 are both running.

4. = Ozone is Running. If you don't see the icon that means the Ozone is OFF.

5. = Cleanup Cycle is Running.

6. = Wi-Fi icon just indicates that the Wi-Fi link is connected. It does not indicate signal strength.
Note: Not all systems that support Wi-Fi display this icon.

7. Lock Icon: When displayed, indicates the panel is in a locked mode. To unlock or lock a setting or panel lock, first press the corresponding icon on the Lock Screen, then press and hold the word "Lock" for 5+ seconds until the text and icon change to the opposite state.

There are 2 lock icons that can be shown on the title bar of most screens. A tall skinny one representing a settings lock is applied.

It is shown on screens that are affected by the settings lock. And the standard lock icon Padlock which represents the Panel being locked. If both settings and panel are locked, only the panel lock will show since the settings lock doesn't do much in that situation. When the panel is locked, the Settings Screen will only show items not affected by that lock (System Info and Lock Screens).

8. = Invert (or flip) Screen.

9. = Lights is ON. = Light is Inactive. = Light is Disabled.

10. = Music is Active. = Music is Inactive. = Music is Disabled.

11. Message Waiting Indicator: The Message Waiting Indicator will show one of the following icons:

= fatal error (Spa can't function until it's fixed)

= Normal Error or Warning

= Reminder Message

= Information Message

Touch the Indicator to go to a Message Screen which shows the message.

Some messages will include the "Call for Service" text as it requires a service technician to fix the problem. If the panel is locked and a message alert appears, you will be taken to the Lock Screen (where you will need to Unlock the panel) before you can clear the message.

Touching the Error/Warning/Reminder/Info Icon on the Message Screen will take you to the System Information Screen to allow for trouble-shooting over the phone or for a field service tech to better understand what is going on. Exiting the System information Screen will take you back to the Message Screen in that situation.

12. Adjust set temperature higher.

13. = Spa Equipment Control Icon. Brings up a screen where components other than TruSwim ®can be controlled. While on the Spa Equipment Screen, you can press a Jets button once for low speed, and if configured press it again for high speed. = Jet is Inactive. Indicates if a pump is running or not. 19. Swim Menu Icon allows control of TruSwim propulsion features and options.

14. Indicates if the temperature is in °F = Fahrenheit or °C = Celsius.

15. Current water temperature if °F or °C is solid; set temperature if °F or °C is flashing.

16. Setting Icon. = Settings is Active. = Settings is Inactive (when the panel is locked). Takes you to Settings Screen

17. Different animation sequences, including blinking, may indicate different stages of heating.

18. Adjust set temperature lower.

Settings Screen

Heat Mode—Ready vs. Rest

In order for the swim spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the "heater pump."

The heater pump is a 2-Speed Pump 1, Ready Mode will circulate water every 1/2 hour, using Pump 1 Low, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as "polling."

Rest Mode will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the heater pump has been running for a minute or two.

When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off.

Ready-in-Rest Mode

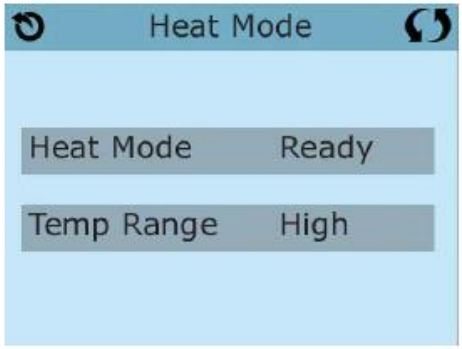
Ready in Rest Mode appears in the display if the spa is in Rest Mode and the Jets 1 Button is pressed. When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off. After 1 hour, the System will revert to Rest Mode. This mode can also be reset by selecting the Heat Mode line.

Settings

Programming, Etc.

The Settings Screen is where all programming and other spa behaviors are controlled.
Each icon on the Settings screen takes you to a different screen, where one or more setting may be viewed and/or edited.

The Heat Icon takes you to a screen where you control the Heat Mode and the Temperature Range.



The Heat Icon takes you to a screen where you control the Heat Mode and the Temperature Range.

Dual Temperature Ranges (High vs. Low)

This system incorporates two temperature range settings with independent set temperatures. The specific range can be selected on the Settings screen and is visible on the Main Screen in the upper left corner of the display.

These ranges can be used for various reasons, with a common use being a "ready to use" setting vs. a "vacation"setting. Each range maintains its own set temperature as programmed by the user. This way, when a range is chosen, the spa will heat to the set temperature associated with that range.

High Range can be set between 80°F and 104°F. Low Range can be set between 50°F and 99°F. More specific Temp Ranges may be determined by the Manufacturer. Freeze Protection is active in either range.

Time-of Day

Be sure to set the Time-of Day

Setting the time-of-day is important for determining filtration times and other background features. The Heat Icon on the Settings Screen takes you to a screen where you control the Time-of-Day.
On the Time-of-Day screen, simply select the Hours and Minutes. Use the Up and Down Buttons to make changes, then Save. If no time-of-day is set in the memory an Information Screen will appear. If you exit it and Information Icon will appear at the bottom of the Main Screen, until the time-of-day has been set. NOTE: If power is interrupted to the system, Time-of-Day will be maintained for several days.

Adjusting

Main Filtration

Using the same adjustment as Setting the Time, Filter Cycles are set using a start time and a duration. Each setting can be adjusted in 15-minute increments. The panel calculates the end time and displays it automatically. The Filter Icon on the Settings Screen takes you to a screen where you control the Filter Cycles.

Filter Cycle 2 - Optional Filtration

Filter Cycle 2 is OFF by default. Press “1” to view Filter 1. Press “2” once to view Filter 2. Press “2” again to turn Filter 2 ON or OFF. When Filter Cycle 2 is ON, it can be adjusted in the same manner as Filter Cycle 1.
It is possible to overlap Filter Cycle 1 and Filter Cycle 2, which will shorten overall filtration by the overlap amount.

Main Filtration

Viewing Filter 1 while Filter 2 is

Viewing Filter 1 while Filter 2 is ON

The Meaning of Filter Cycles

1. The heating pump always runs during the filter cycle*
2. In Rest Mode, heating only occurs during the filter cycle
3. Purges happen at the start of each filter cycle

*For example, if your spa is set up for 24/hour circulation except for shutting off when the water temperature is 3℉/1.3℃ above the set temperature, that shutoff does not occur during filter cycles.

Additional Settings

Restricting

The control can be restricted to prevent unwanted use or temperature adjustments.

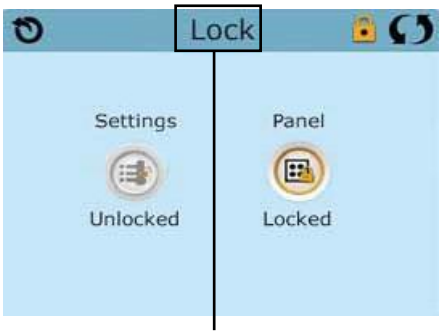
Locking the Panel prevents the controller from being used, but all automatic functions are still active.

Locking the Settings allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

Settings Lock allows access to a reduced selection of menu items. These include Filter Cycles, Invert, Information and Fault Log.

They can be seen, but not changed or edited. To lock either Settings or Panel first select Settings (if it says “Unlocked”) or Panel (if it says “Unlocked”), than press the word “Lock“ for at least 5 seconds. To unlock either Settings or Panel first select Settings (if it says “Locked”) or Panel (if it says “Locked”), than press the word “Lock“ for at least 5 seconds. Press for 5 seconds to unlock.

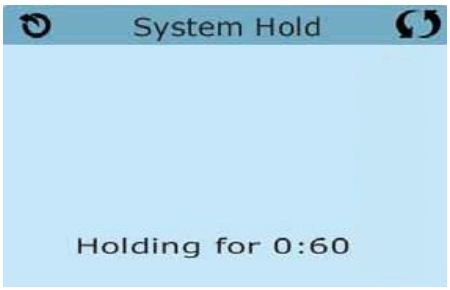
Panel locked and settings unlocked



Press here for 5 seconds to lock or unlock

Hold—M037*

Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. Hold Mode will last for 1 hour unless the mode is exited manually. If spa service will require more than an hour, it may be best to simply shut down power to the spa. The Hold Icon on the Settings Screen places the spa in Hold Mode and displays the System Hold screen. Touch Back to exit Hold Mode.



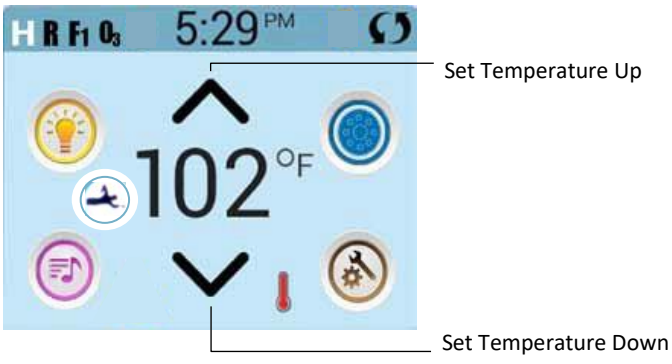
Set Temperature

Press Up or Down once to display the Set Temperature (indicated by a flashing ºF or ºC, plus a change in color of the temperature). Press Up or Down again to modify the Set Temperature. The Set Temperature changes immediately.

If you need to switch between High Temperature Range and Low Temperature Range you need to go to the Settings Screen.

Press and Hold

If Up or Down is pressed and held, the temperature will continue to change until you stop pressing, or until the Temperature Range limits are reached.



TruSwim® Swim Spa Series—Spa Screen

The Spa Screen shows all available equipment* to control. The display shows icons that are related to the equipment installed on a particular spa model, so this screen may change depending on the installation.

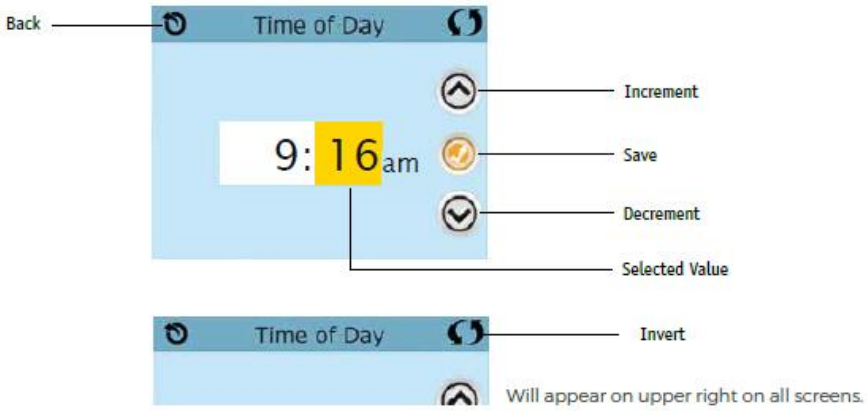
The icon buttons are used to select and control individual devices.

Jets Off Jets Low Jets High

Some devices, like pumps, may have more than one ON state, so the icon will change to reflect the state of the equipment. Below are some examples of 2-speed Pump indicators. *One exception: The Main Spa Light is not shown on the Spa Screen; it is only shown (and controlled) on the Main Screen.

Values Increment / Decrement and Invert

If an Up or Down button is shown and pressed when on an editing page, and a value has been selected (highlighted), the value can be incremented by pressing the up arrow or decremented by pressing the down arrow.



Common Buttons

Exiting Screens

The Back button is on every screen except the Main Screen, the Priming Mode Screen are a Message Display Screen.

When you see only this button, or this button plus an Inactive Save Button, it means Back or Exit. It appears on editing screens before you have changed any value, as well as on all other screens. When you see both the Back button and an Active Save button, the Save button will Save, while the Back button will Cancel. If the screen times out due to no activity it will act like Cancel.

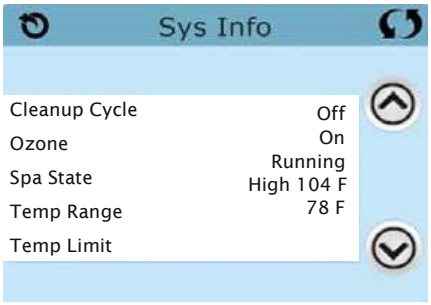
Page Right / Left

If there is a right arrow at the bottom of the screen, it takes you to the next page.

If there is a left arrow at the bottom of the screen, it takes you to the previous page.

Page Up / Down

If an Up or Down button is shown and pressed when on a page with a text list, the list can be scrolled a page at a time.



Overview

Pumps

On the Spa Screen, select a “Jets” button once to turn the pump on or off, and to shift between low- and high-speeds if equipped. If left running, the pump will turn off after a time-out period. The low-speed of pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode, Pump 1 low may also activate for at least 1 minute every 30 minutes to detect the spa temperature (polling) and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

Filtration and Ozone

Pump 1 low and the ozone generator will run during filtration. The system is factory-programmed with one filter cycle that will run in the evening (assuming the time-of-day is properly set) when energy rates are often lower. The filter time and duration are programmable.
A second filter cycle can be enabled as needed.

At the start of each filter cycle, the water devices like blower and other pumps will run briefly to purge the plumbing to maintain good water quality.

Clean-Up Cycle

When a pump is turned on by a button press, a clean-up cycle begins 30 minutes after the pump is turned off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the system. On some systems, you can change this setting.

Freeze Protection

If the temperature sensors within the heater detect a low enough temperature, then the water devices automatically activate to provide freeze protection. The water devices will run either continuously or periodically depending on conditions.

In colder climates, an optional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Auxiliary freeze sensor protection acts similarly except with the temperature thresholds determined by the switch. See your dealer for details.

Utilities Screen

Utilities

The Utilities Icon on the Settings Screen takes you to the Utilities Screen.

Panel

Touching the Panel Icon you to the Panel Screen, where you can set how long it takes the panel to go to sleep after the last activity. The Sleep Timer can be set from 1 to 60 minutes. The default is 30 minutes.

Fault Log

The Fault Log is a record of the last 24 faults that can be reviewed by a service tech. Use the Up and Down buttons to view each of the Faults. When Priming Mode shows in the Fault Log, it is not a fault. Rather, it is used to keep track of spa restarts.

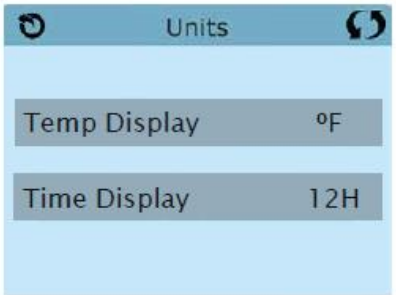
GFCI Test

The Ground Fault Circuit Interrupter (GFCI) or Residual Current Detector (RCD) is an important safety device and is required equipment on a hot tub installation.

CE registered systems do not have an RCD Test Feature due to the nature of the electrical service. The end-user must be trained how to properly test and reset the RCD.

It is mandatory to verify proper installation and function of the GFCI or RCD. Users / owners are to manually test this safety device prior to each use. Should the device not function properly, shut the hot tub off at the breaker and contact service tech.

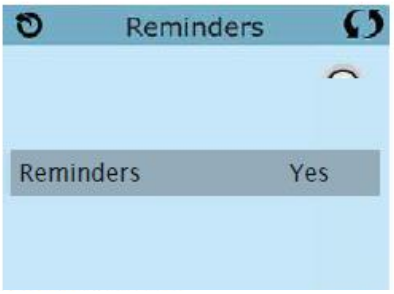
Units Screen



The Units Icon on the Settings Screen takes you to the Units Screen.

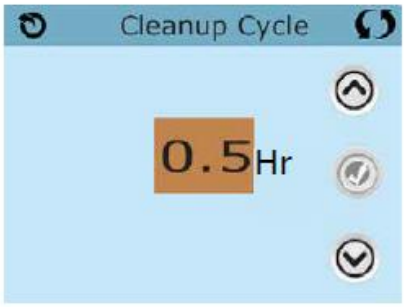
1. Press “Temp Display” to change the temperature between Fahrenheit and Celsius.
2. Press “Time Display“ to change the clock between 12 hr and 24 hr display.

Reminders



The Reminder Icon on the Settings Screen takes you to the Reminders screen. Press “Reminders“ to turn the reminder messages (like “Clean Filter”) ON (Yes) or OFF (No).

Clean-Up Cycle



Cleanup Cycle Duration is not always enabled, so it may not appear. When it is available, set the length of time Pump 1 will run after each use. 0-4 hours are available. Settings it to 0.0 Hr keeps the Cleanup Cycles from running.

The Cleanup Icon on the Settings Screen takes you to the Cleanup Cycle screen.

Language

The Language Icon on the Settings Screen takes you to the Language screen. Change the language displayed on the panel.

Reset Button

Only use the Reset Button prior to moving the spa to a new location.
Pressing the Reset the button forces a new Test to be performed at the new location.

General

Most messages and alerts will appear at the bottom of the normally used screens. Several alerts and messages may be displayed in a sequence.

Water Temperature is Unknown

After the pump has been running for 1 minute, the temperature will be displayed

– – – –°F – – – –°C

Possible Freezing Condition

A potential freeze condition has been detected, or the Aux Freeze Switch has closed. All water devices are activated. In some cases, pumps may turn on and off and the heater may operate during Freeze Protection. This is an operational message, not an error indication.

The Water is Too Hot—M029*

The system has detected a spa water temp of 110°F (43.3°C) or more, and spa functions are disabled. System will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.

The Water Level is Too Low

This message can only appear on a system that uses a water level sensor. It appears whenever the water level get too low (or the water level sensor is disconnected), and automatically disappears when the water level is adequate. Pumps and the heater turn OFF when this message appears.

Heater Related

The Water Flow is Low—M016*

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater start up will begin again after about 1 min. See “Flow Related Checks” below.

The Water Flow had Failed* - M017*

There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. See “Flow Related Checks” below. After the problem has been resolved, reset the message*.

The Heater may be Dry* - M028**

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Reset this message* to reset the heater start-up. See “Flow Related Checks” below.

The Heater is Dry* - M027**

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must reset the message* to restart heater start up. See “Flow Related Checks” below.

The Heater is Too Hot* - M030**

One of the water temp sensors has detected 118°f (47.8°C) in the heater and the spa is shut down. You must reset the message* when water is below 108°f (42.2°C).

Flow-Related Checks

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime.
On some systems, even when spa is shut down by an error condition, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

* ***Some messages can be reset from the panel.*** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.

Sensor-Related

Sensors are Out of Sync—M015**

The temperature sensors MAY be out of sync by 3°F. Call for Service if this message does not disappear within a few minutes.

Sensors are Out of Sync—Call for Service* - M026**

The temperature sensors ARE out of sync. The fault above has been established for at least 1 hour. Call for service.

Sensor A Fault, Sensor B Fault—Sensor A: M031**, Sensor B: M032**

A temperature sensor or sensor circuit has failed. Call for Service.

Communications Error

The control panel is not receiving communication from the System. Call for Service.

* ***Some messages can be reset from the panel.*** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.

System Related

Program memory failure* – M022**

At Power-Up, the system has failed the Program Checksum Test. This indicates a problem with the firmware (operation program) and requires a service call.

The Settings have been Reset (Persistent Memory Error)* – M021**

Contact your dealer or service organization if this message appears on more than one power-up.

The clock has failed* – M020**

Contact your dealer or service organization.

Configuration error (Spa will not Start Up)

Contact your dealer or service organization.

The GFCI test failed (System Could Not Test the GFCI) – M036**

(North America Only) May indicate an unsafe installation. Contact your dealer or service organization.

A Pump may be Stuck On – M034**

Water may be overheated. POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

Hot Fault – M035**

A Pump Appears to have been Stuck ON when spa was last powered

POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

* ***Some messages can be reset from the panel.*** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.

General Maintenance Reminders

Reminder Messages can be suppressed by using the Reminders Screen.

Reminder Messages can be chosen individually by the Manufacturer. They may be disabled entirely, or there may be a limited number of reminders on a specific model. The frequency of each reminder (i.e. 7 days) can be specified by the Manufacturer.

Check the pH

May appear on a regular schedule, i.e. every 7 days. Check pH with a test kit and adjust pH with the appropriate chemicals.

Check the sanitizer

May appear on a regular schedule, i.e. every 7 days.

Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.

Clean the filter

May appear on a regular schedule, i.e. every 30 days.

Clean the filter media as instructed by the manufacturer. .

Test the GFCI (or RCD)

May appear on a regular schedule, i.e. every 30 days. The GFCI or RCD is an important safety device and must be tested on a regular basis to verify its reliability. Every user and owner is to be trained to safely test the GFCI or RCD associated with the hot tub installation. A GFCI or RCD will have a TEST and RESET button on it that allows a user to verify proper function.

Change the water

May appear on a regular schedule, i.e. every 90 days. Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.

Clean the cover

May appear on a regular schedule, i.e. every 180 days.

Vinyl covers should be cleaned and conditioned for maximum life

Change the filter

May appear on a regular schedule, i.e. every 365 days.

Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.

Change the UV

May appear on a regular schedule.

Change the UV as instructed by the manufacturer.

Check ozone

May appear on a regular schedule.

Check the ozone generator as instructed by the manufacturer.

Service check-up

May appear on a regular schedule.

Do a service check-up as instructed by the manufacturer.

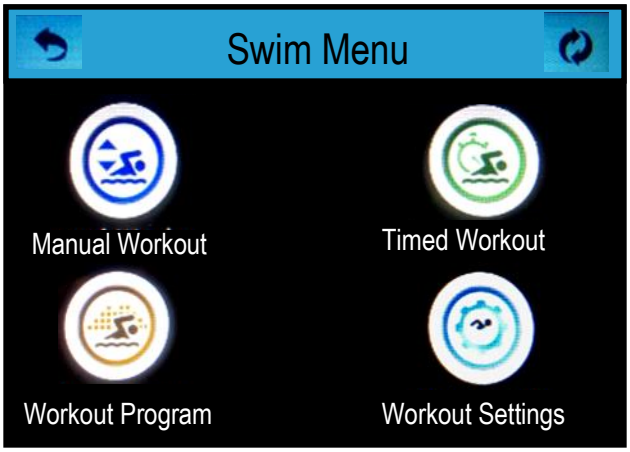
Swim / Fitness Menu Overview

Manual Workout
Manual Workout requires you to manually set the swim speed during the workout. The swim speed can be changed at any time you desire. The workout runs until you stop it, or the workout times out after 30 minutes from the last time you changed the speed setting

Timed Workout
A Timed Workout is the same as a Manual Workout except you can specify the duration of a Timed Workout.

Workout Programs
A Workout Program automatically adjusts the swim speed over the course of the workout, following a predefined workout profile. You can create a custom workout profile also. Make the workout easier or harder any time you like, while running a Workout Program.

Workout Settings
The user is able to change settings used during the workouts



Button Definition
(A) Back button
(B) *Manual Workout* screen
(C) Stop workout
(D) Pause/restart workout
(E) Stop workout
(F) Increase/decrease speed
(G) Speed

Manual Workout Menu Overview

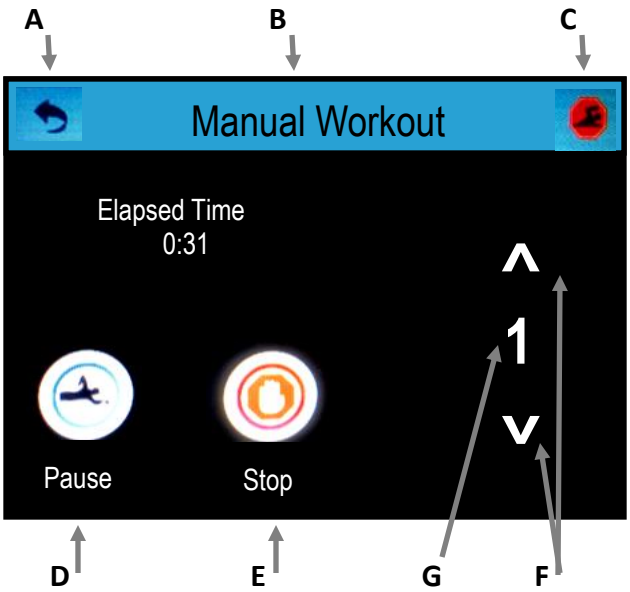
Manual Workout requires you to manually set the swim speed during the workout. The swim speed can be changed at any time you desire. The workout runs until you stop it, or the workout times out after 30 minutes from the last time you changed the speed setting.

Run Manual Workout

On the swim panel go to the *Swim Menu*, and navigate to the *Manual Workout* screen (B). When the *Manual Workout* screen appears, the workout begins automatically, after an optional start delay. The workout duration is 30 minutes.

What is the difference between the two Stop buttons (C, E)? Both buttons stop the workout. However, the Stop Workout button at the upper right corner of the screen (C) continually appears while you navigate to other screens, as long as the workout is in progress.

Note:
The workout speed (G) can be set between 1 and 20.



Timed Workout Overview

Timed Workout

A Timed Workout is the same as a Manual Workout (view previous page), except you can specify the duration of a Timed Workout.

Timed Workout Operation

Follow these steps to run a *Timed Workout*

1. Enter the desired number of *minutes* (A), between 1 and 60, by using the *up/down arrows* (B). Enter the desired *Speed* ©, between 1 and 20, by using the *Up/Down Arrows* (B). Press the *check* (D). *(Image 1)*
2. The workout will begin automatically and will show you both *Elapsed Time* and *Time Remaining (E).* The *Speed* (G) can be changed during the workout by pressing the *Up/Down Arrows* (G). The workout can be paused by pressing *Pause (*H) and restarted by pressing the same button (H) again*. (Image 2)*
3. The workout will stop either when the time is up, or when *Stop* (I) is pressed. The program can be restarted by pressing *Restart* (J). *(Image 3)*

Image 1

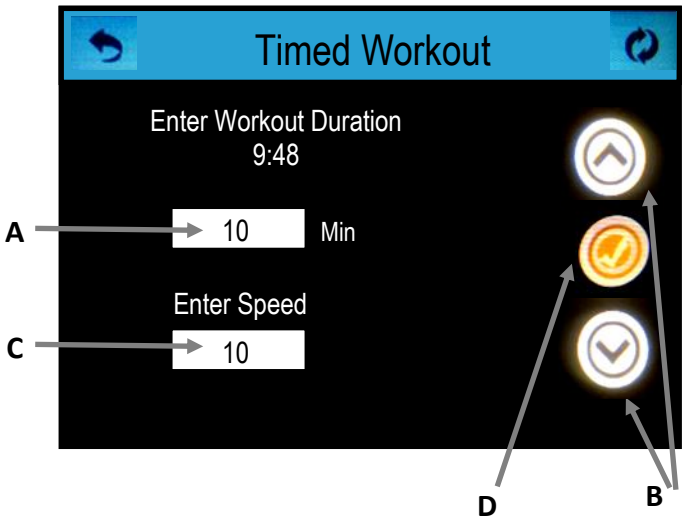


Image 2

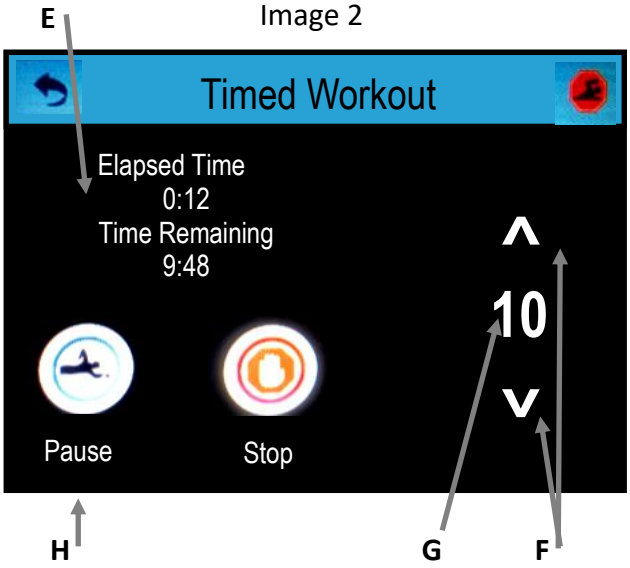
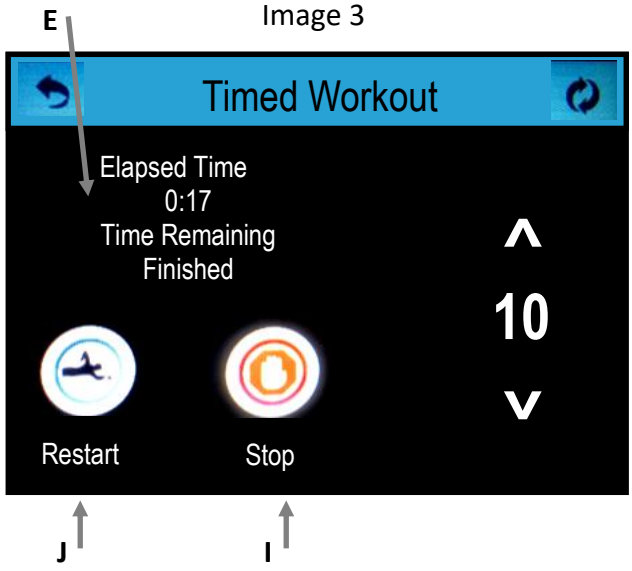


Image 3



Workout Program Overview

Workout Programs

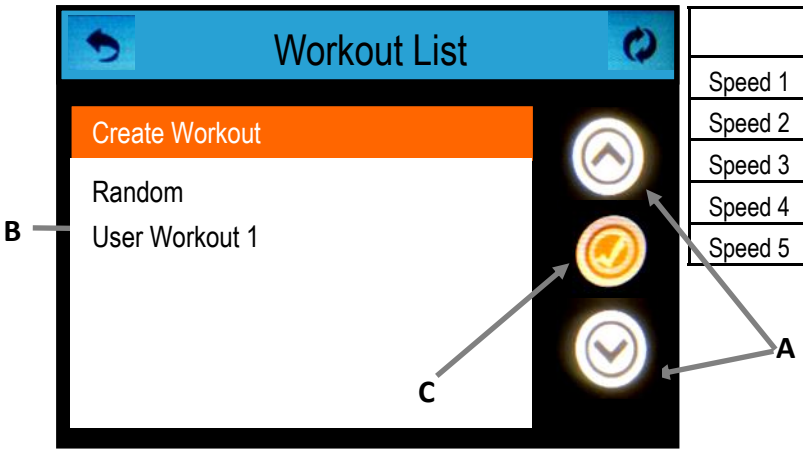
A Workout Program automatically adjusts the swim speed over the course of the workout, following a predefined workout profile. You can create a custom workout profile or use the unlimited pre programed random workouts. Make the workout easier or harder any time you like, while running a Workout Program.

*****It is suggested that all swimmers familiarize themselves with the various speeds in the manual mode prior to using the workout feature*****

Run Workout Programs

Use the Up/Down arrows (A) to scroll through the predefined workout options. Select one of the workouts. In this example we will select a workout named *Create Workout (B)*. Press Check (C) to select the *Create Workout* workout.

In addition to the Random workout up to 10 User Workout's can be created. Each one of these are saved created workouts.



	Difficulty 1	Difficulty 2	Difficulty 3	Difficulty 4	Difficulty 5
Speed 1	11	12	13	14	15
Speed 2	12	13	14	15	16
Speed 3	13	14	15	16	17
Speed 4	14	15	16	17	18
Speed 5	15	16	17	19	20

Selecting a Workout Program

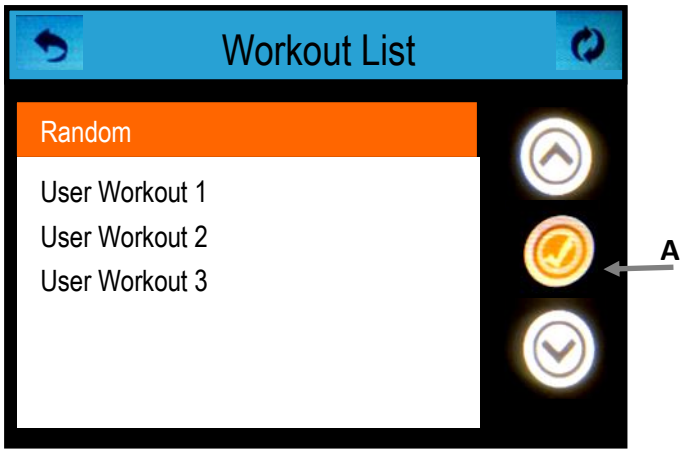
Random Workout

Follow these steps to run a *Random* workout.

1. Select *Random* on the *Workout List*, and press Check (A). *(Image 1)*
2. The *Workout* screen will appear. The graph represents the full workout duration and difficulty pattern. (If you do not like the this particular *Random* workout press the back button (C) and repeat step 1.) Press Check (B) to go to the *Setup Workout* screen. *(Image 2)*
3. Press the *Minutes* field (D) and use the Up/Down arrows to set the workout duration. Press the *Difficulty* field (E) and use the Up/Down arrows to set the difficulty. Press Check (F) to start the Random workout. *(Image 3)*

.

Image 1



Selecting a Workout Program

Random Workout (cont'd)

Image 2

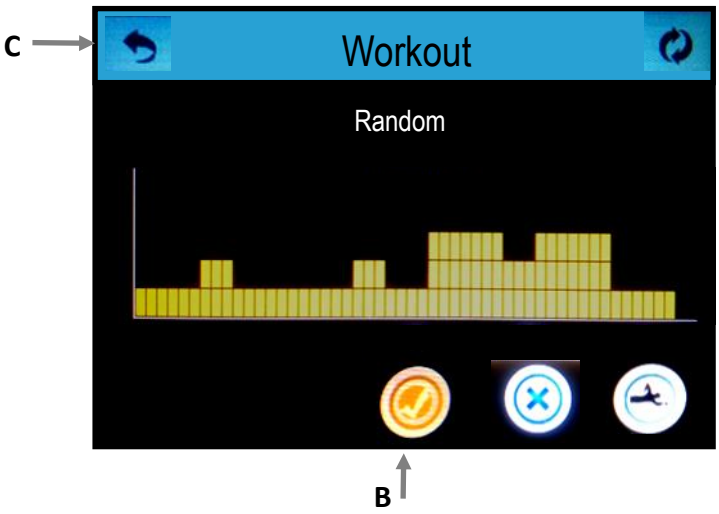
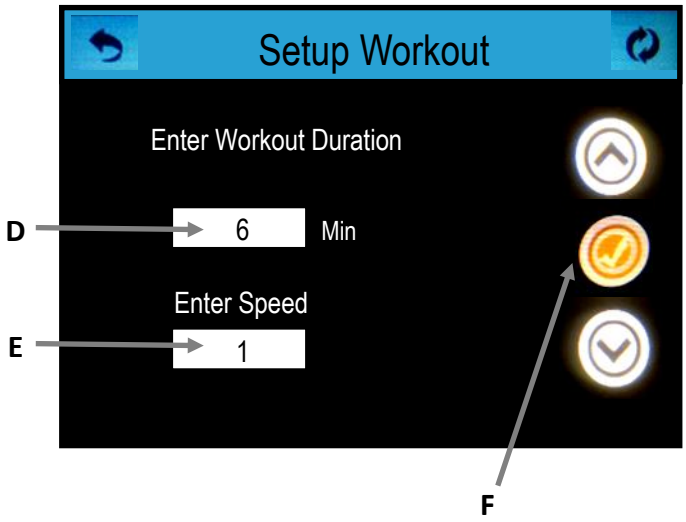


Image 3



Selecting a Workout Program

Saving a Random Workout

Since *Random* workout is unique every time it is chosen it is necessary to save a *Random* workout that you like prior to starting it. It will be stored as a *User Workout* , to select this workout see section on Using Your Created Workout.

Follow these steps to save a *Random* workout

1. Press the edit button (F). *(image 1)*
2. Press the save button (G) *(Image 2)*

Image 1

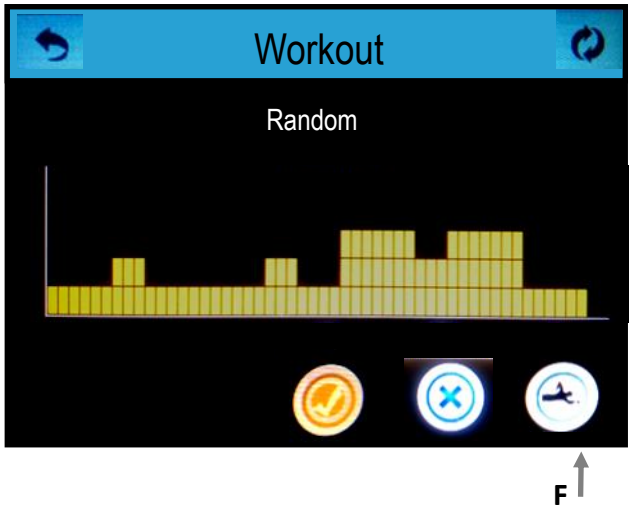
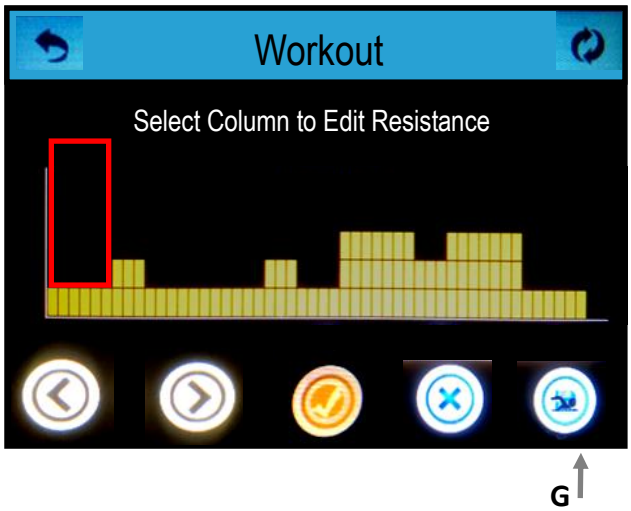


Image 2

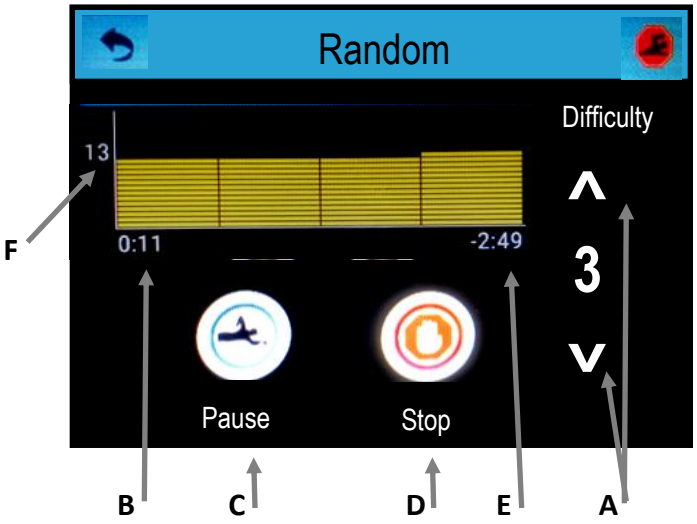


Selecting a Workout Program

Random Workout

You can increase/decrease the difficulty during a workout with the Up/Down buttons (A). Increasing or decreasing the difficulty scales the whole workout to use higher or lower speeds.

Button Definition	
(A) Increase/decrease difficulty	(D) Stop workout
(B) Time elapsed	(E) Time remaining
(C) Pause/restart workout	(F) Speed



Creating Your Own Custom Workout Program

1. Select *Create Workout* (A). Press Check (B), and the *Edit Workout* screen appears. *(Image 1)*
2. The graph going left to right represents the full workout duration, and the duration is divided into 13 segments of time. The red vertical box (C) indicates which segment of time is selected. Use the Left/Right arrows (D) to select the desired segment. Once the segment is selected, press the Check button (F). *(image 2)*
3. Use Up/Down buttons (F) to increase/ decrease water resistance. Once you have the desired resistance, press Check (G). This brings you back to the previous view (Step 2) where you can edit the resistance of other segments. *(Image 3)*
4. Repeat this process until your custom workout is complete, and then press Save (H) to save your workout. *(Image 4)*

Image 1

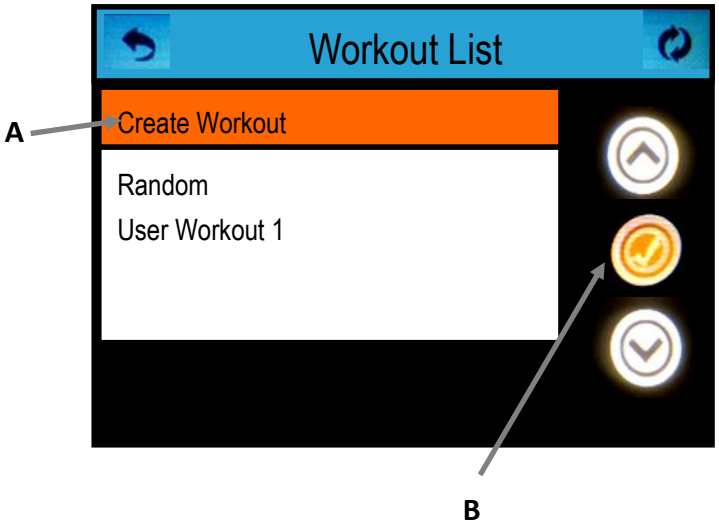
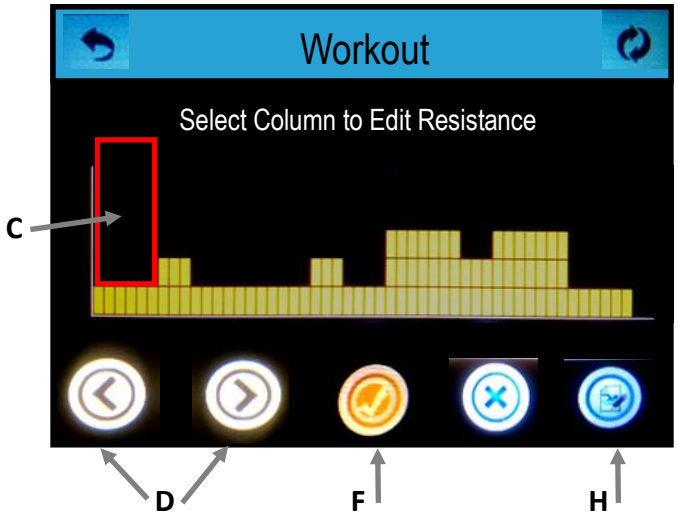


Image 2



Creating Your Own Workout Program (cont'd)

Image 3

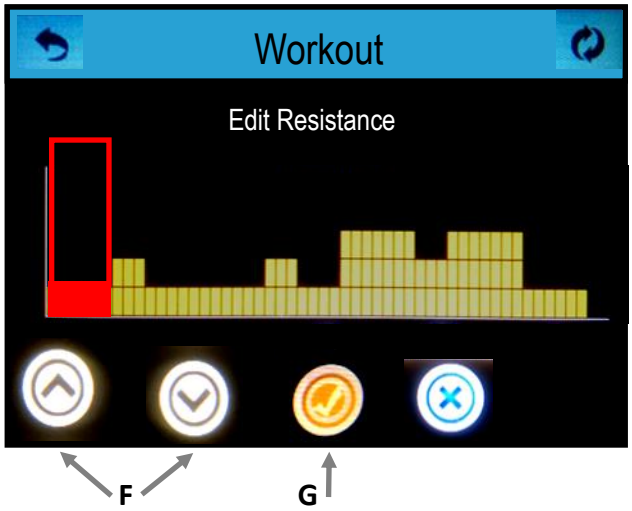
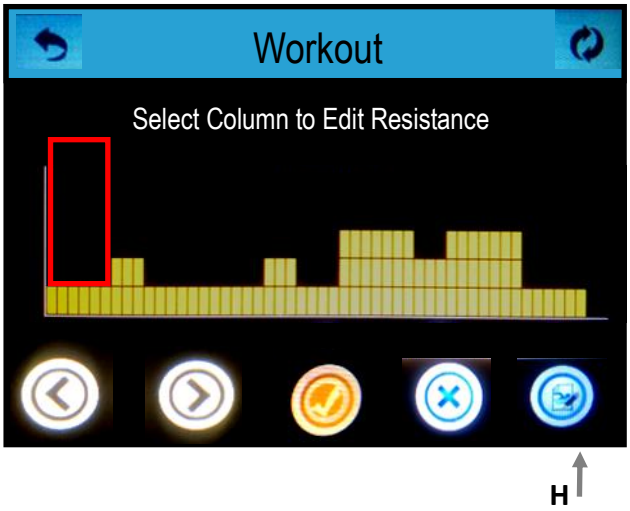


Image 4



Using Your Custom Created Workout Program

You have successfully created a custom workout name *User Workout 1,* which has automatically been saved at the end of the workout list. The steps below will guide you through selecting your workout and starting it.

1. Use down arrow (A) to select *User Workout 1*, then press the *Check* (B). *(Image 1)*
2. Press the *Check* (C) to setup your workout. *(Image 2)*
3. Select the *Minutes* field (D) and use the up/down arrows E) to set the duration. Select the *Difficulty* (F) (refer to chart 1a below for speeds for each difficulty) and use the up/down arrows E) to set the difficulty. Then press check (G) to start workout. *(Image 3)*

	Difficulty 1	Difficulty 2	Difficulty 3	Difficulty 4	Difficulty 5
Speed 1	11	12	13	14	15
Speed 2	12	13	14	15	16
Speed 3	13	14	15	16	17
Speed 4	14	15	16	17	18
Speed 5	15	16	17	19	20

4. Screen as it will appear during workout. The difficulty can be changed at anytime during the workout by using the up/down arrows (F). *(Image 4)*

Image 1

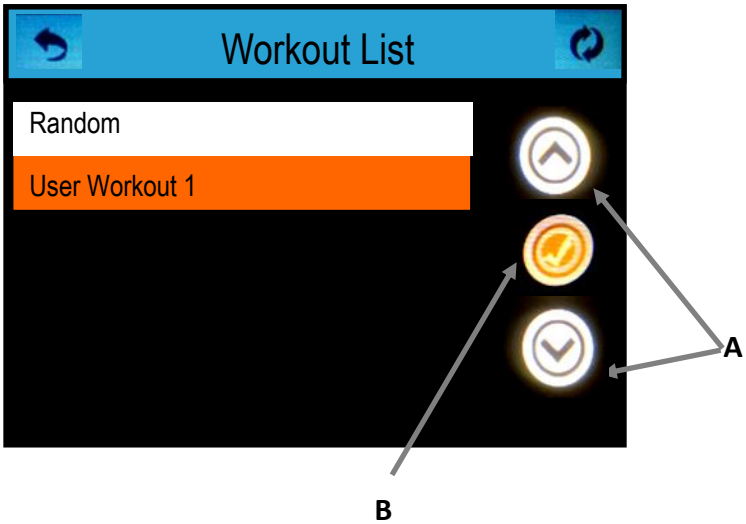
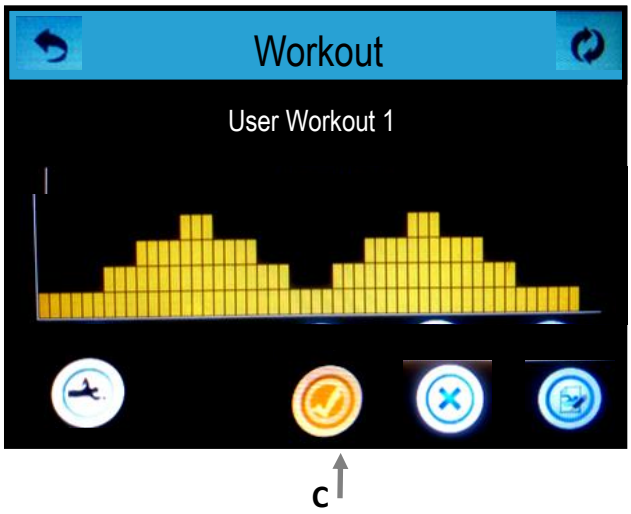


Image 2



Using Your Custom Created Workout Program (cont'd)

Image 3

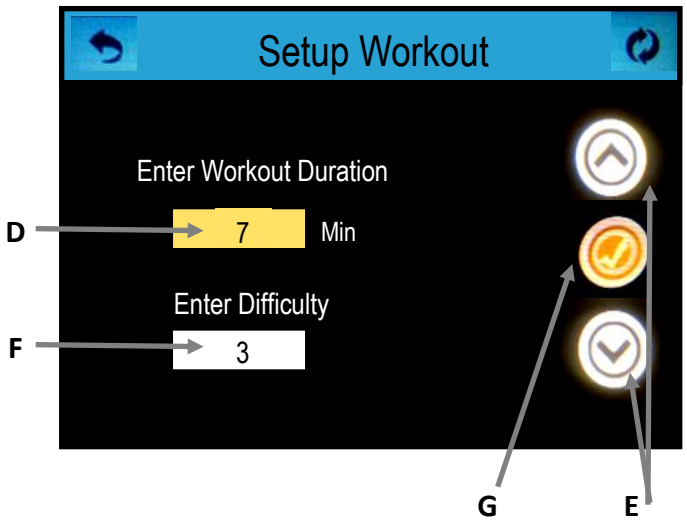


Image 4

Deleting a Created Workout Program

1. Select the *User Workout* you want to delete and press the *check* (A). *(Image 1)*
2. From the workout screen press the *trash can* (B). *(Image 2)*
3. Confirm you wish to delete the program by pressing *yes* (C). The screen will return to the Workout List. *(Image 3)*

Image 1

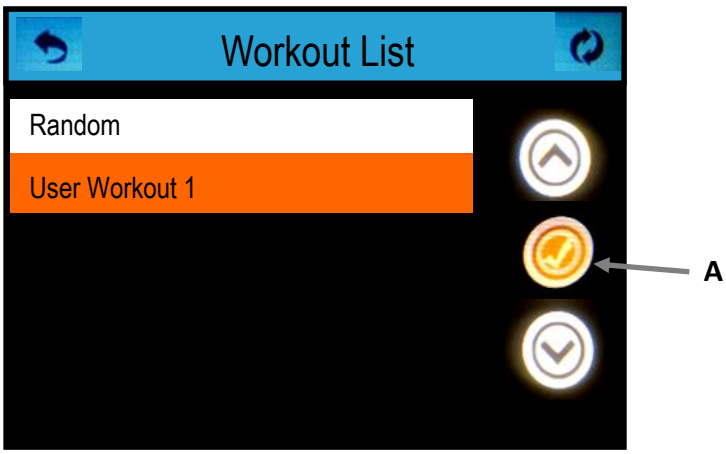


Image 2

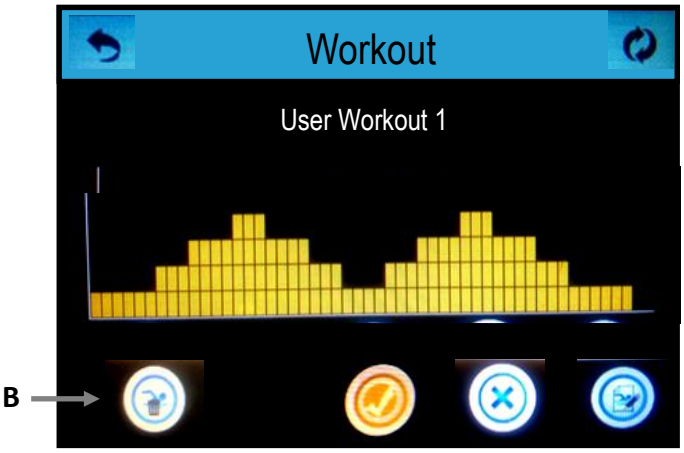
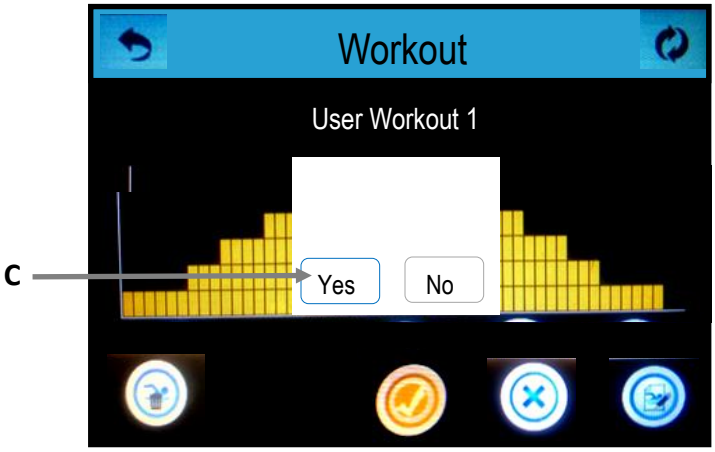


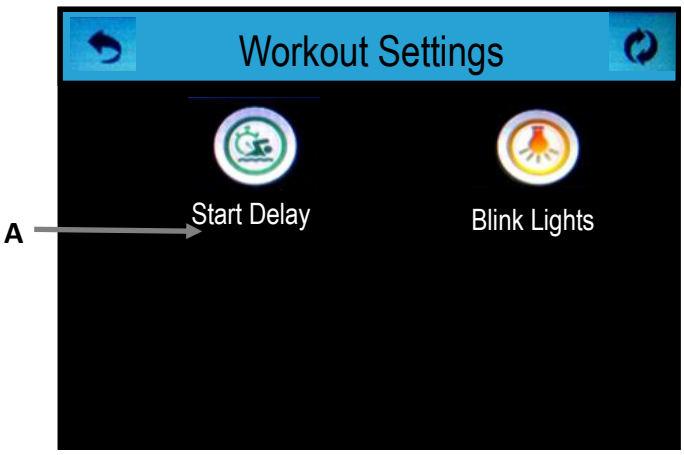
Image 3

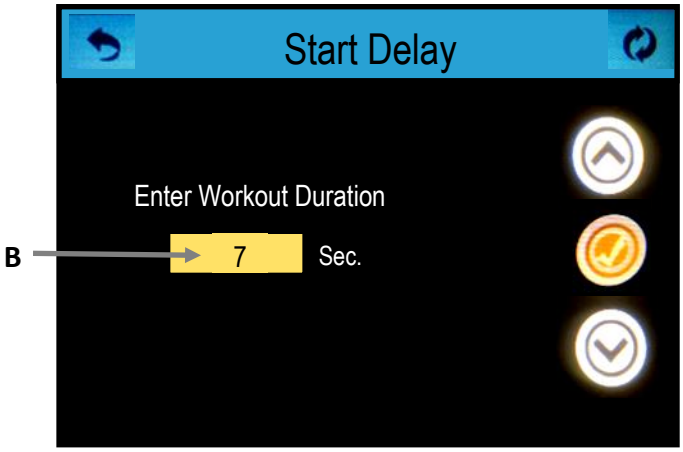


Workout Setting

Start Delay

Start Delay (A) enables you to delay the pumps at the beginning of a workout. The delay range is 1 - 15 seconds (B).
Start Delay works with all workouts.



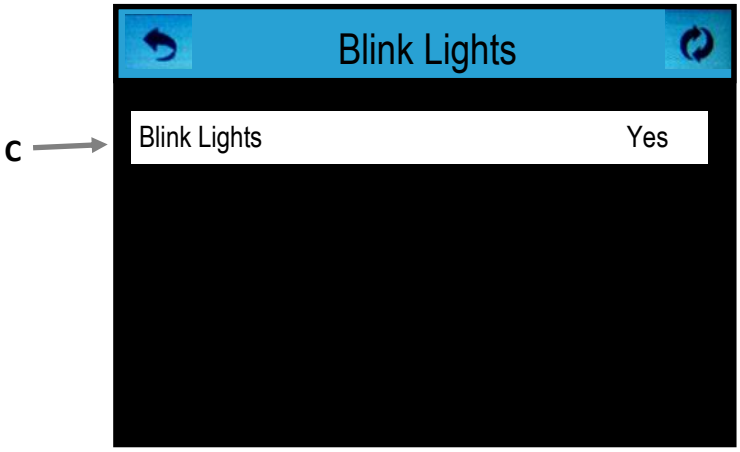


Workout Setting

Blink Lights

When *Blink Lights* is enabled, the spa lights will blink a moment before the TruSwim changes speed. *Blink Lights* works with all workouts listed in Workout Programs. The duration must be set to 3 minutes or longer for *Blink Lights* to work.

Press the *Blink Lights* line (C) to turn *Blink Lights* On (Yes) or Off (No).



STEP 1 and 2

Ethernet cable and power supply

Plug in the supplied Ethernet cable to a home router

Plug the other end of the cable into the CMS Gateway Ultra Home Module

Plug in the power supply to the wall

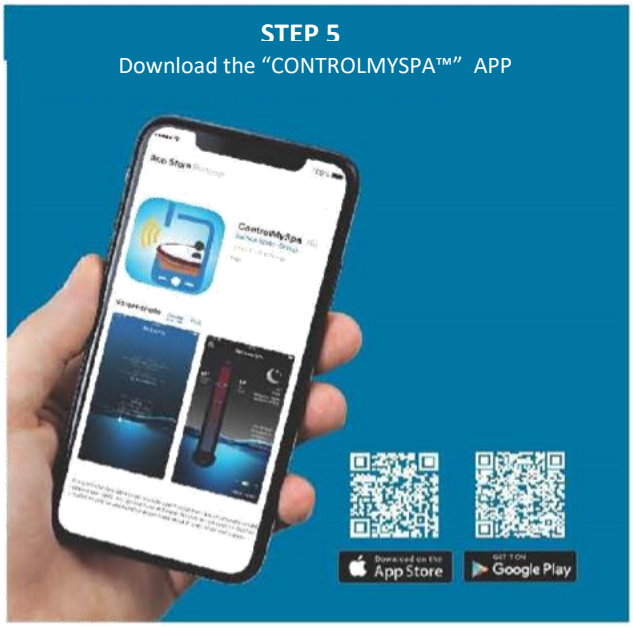
Plug in the power supply into the CMS Gateway Ultra Home Module micro USB power port

STEP 3 and 4

Stand next to your hot tub or swim spa (within 10ft./3m) and ensure the power is on

STEP 5

Download the “CONTROLMYSPA™” APP



STEP 6

Open APP and press “Setup”. Follow instructions in the APP to setup an account.

Completing the APP download requires a “CMS” code which is only available from your dealer. During APP install, if you are asked for a WiFi network, power down the device, restart and reopen APP.

STEP 7

Troubleshooting

- Steady Red or Blinking Red: Spa is not connected
- Blinking Blue: Remote software update is underway. Do not unplug power
- Blinking Green: CMS Gateway Ultra Spa and Home Side Module RF is connected, but no connection to internet
- Steady Green: Spa successfully connected to internet, no errors

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 TruSwim® 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 1to a 20 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 1-20, the types of exercise and level of challenge are endless. It is recommended the lower range 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 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, 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.

MotionMat

Full size stylish mat adds floor grip for balance and stability making walking, jogging, and running pleasurable and beneficial and the economical alternative to costly bulky treadmills.

MatTrax™ Stair Treads

Additional safety and good looks with the MatTrax. Custom sized to fit all steps in all models, Standard or Graphic design, this optional feature can be added to the TruSwim model after the sale should this be a choice.

AquaForce

Rope and Pulley System for upper body and core workout. Attaches into a stainless steel grommet on swim spa lip. Optional on all TruSwim swim spa models.

WARNING

Review these safety precautions before installing and using the AquaForce™ exercise System.

Rope intended for use with AquaForce™ ONLY, in swim spas factory equipped for the System.

Do not exceed 240 lbs. of pulling force.

System pole must be inserted correctly and secure in the holding grommet prior to use.

System hand grips are intended for hand use only.

System must be removed when not in use, never to be in place during other swim spa use.

System is NOT a floatation or safety device.

Keep System out of the reach of children.

Always keep the insulating swim spa cover in place and locked to prevent unauthorized use and prevent sun, weather conditions from degrading the fitness equipment.

AquaForce

IMPORTANT SAFETY & CARE INSTRUCTIONS - PLEASE READ

The AquaForce™ is designed for a cardio-vascular workout, as well as light to medium strength building.

BEFORE USING:

1. **INSPECT** your AquaForce™ swim pulley system before each use. Check for visual signs of wear on all parts
2. **DO NOT** use if any indication of wear or deterioration
3. **BE SURE** the AquaForce™ is properly seated on the bottom of the pole receiver—grommet—before beginning use.
4. **DO NOT** use AquaForce™ out of the water.

PRECAUTIONS:

1. **DO NOT** enter or exit the swim spa with the AquaForce™ in your hands or any body part
2. Use **ONLY** when positioned in the center of the swim spa fitness lane
3. **DO NOT** violently tug or pull on ropes / cords or handles which could cause damage to the swim spa or yourself

NEVER ALLOW a child or minor to use AquaForce™ without constant, undivided adult supervision! All aquatic activities must be supervised at all times!

CARE INSTRUCTIONS

1. **Rinse** AquaForce™ pulley system with fresh water after every use.
2. **Store in a cool, dry place** when not in use to avoid excessive damage from the elements. Prolonged exposure to UV rays may have adverse effects on some of the components. It's best to store all components away from sunlight.

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 stain 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 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 for your new swim spa.

Basic Understanding of Water Care

Always keep in mind that a swim or fitness spa is NOT a swimming pool. The smaller volume of water, warmer temperatures and circulation combined with the PDC Spas' standard EverPure2™ system, far LESS and different types of chemicals are needed to maintain pure, clean swim spa water.

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 is 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 successful 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 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: A granular dichlor is recommended to work in junction with the ozone and UV-C EverPure2™ system. It is recommended to broadcast granules; 1 tbsp. per 500 gallons, once a week, to maintain a chlorine residual of 3-5 ppm. YOUR SHOULD NEVER HAVE AN ODOR OF CHLORINE FROM YOUR SWIM OR FITNESS SPA! IMPORTANT: Do NOT use trichlor! Trichlor is usually what swimming pool stores and big box retailers, such as Lowe's and Sam's Club, sell. This trichlor product is intended for swimming pools NOT swim spas. Dichlor (Sani Spa) is approximately 55% chlorine, where as trichlor is closer to 98%. PDC Spas has equipped their swim and fitness spas with the EverPure2™ system allowing owners to use LESS chemicals overall, particularly for sanitation. This proven purification treatment maintains a level of sanitation without large doses of harsh chemicals. ALWAYS leave the cover open with the water circulating for at least 15 minutes after adding chemical.

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, cleaners, high pH levels, algaecides, detergents, low calcium and sanitizer levels often cause foaming.

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; EverPure2™ w/EverLite2™.

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.

Perma-Wood™ 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 swim spa 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. An excessive level of chlorine may cause corrosion and rust. Use only dichlor and maintain suggested levels.

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.

EverPure2™ Ozone and UV 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 EverLite2™ will light green when the ozone generator is operating (during the filtration cycle) indicating the EverPure2™ 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.

PowerFlo™ System: Pressure-side design (TruSwim® models only)
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.

Prolonged sun exposure could damage the material of which the swim spa shell is constructed due to capacity to absorb heat. Do not leave the swim spa exposed to the sun without adequate protection when not in use. Any damage resulting from failure to observe will void the warranty.

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℉ (15℃).
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. PDC 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.
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 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. **Winterizing must be done before prior to atmosphere freezing temperatures.**

1. Turn off at circuit breaker, open air controls and jets, drain completely using drain valve and sump pump if needed. Remove all water as even a low level remaining in the spa shell can freeze drains and cause unwarranted damage.
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. Considerable snow accumulation may break the cover, remove snow as necessary. It is recommended to wrap the unit with a tarp to prevent outside moisture from entering the unit.

Storing the Swim Spa

Always use the thermal cover! The swim spa shell is to never be unprotected and uninsulated during storage. Thermal cover and cabinet side panels must be in place. Never use a clear plastic wrap or it's like to cover / wrap the unit. Never leave unprotected in direct sunlight as it can damage the acrylic and fittings, not covered under warranty. The unit, even when winterized, must have the thermal cover in place and locked. During times of storage, infrequent use or winterization, the cover must be in place and locked. Failure to cover the swim spa during storage and when not in use will void the warranty due to prolonged sun exposure.

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.

1 Year Recommendation

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 PDC Spas for TruSwim® propulsion systems only. Use of any other fluid will void warranty.

The TruSwim® oil reservoir is equipped with a low oil cut-off switch designed to shut off the hydraulic system if oil is low due to use or leakage. If oil is low and the system shuts off, contact your service center or the factory prior to operating the system. Failure to do so will cause additional damage and the unit will not be covered under warranty.

2 Year Recommendation

We recommend your service center drain the TruSwim. Remove the 2 lower middle grates on the wall to inspect the hydraulic motors, stainless steel hydraulic lines and props. For unusual wear or rust on motors and lines, check all wall grates and propulsion grate for deterioration, cracks, etc.

3 Year Recommendation

We recommend your service center inspect and replace the hydraulic motors, stainless steel hydraulic lines and props. Replace oil filter, top off with oil and replace the propulsion grates.

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. Hydraulic propulsion not operating

Low oil. Contact service center prior to operating system..

3. 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.

4. 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.

5. Water is too hot

During periods of warm weather, it is possible a prolonged filter cycle may cause the spa temperatures to creep above the set point. Should this occur, it is recommended to set your filter cycle or cycles to operate between the hours of 8PM-10AM to avoid pump operation during the warmer times of day. This actions will help limit the temperature gain.

Should the water temperature be above the desired set point, there are actions that can be taken to reduce the temperature:

Remove the spa cover during the cooler evening out side temperatures.
Drain an amount of spa water and replace with cold water.

Should the spa water reach 110°F, all of the spa pumps will automatically turn off until the water temperature returns below 108°F and "The water is too hot" will be displayed on the spa side panel. Once the spa water temperature returns to below the 108°F, the spa pumps will auto reset.

6. 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.

7. No light

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

8. Water is cloudy

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

9. 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							
Test GFCI							
Test GFCI							
Test GFCI							
Change All Suction Fittings (every 7 years)							
Clean and Drain Swim Spa							
Change / Clean Filter							
Clean / Condition Cover							
Miscellaneous							
Miscellaneous							

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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. PDC Spas, Plastic Development Co, Inc., can not accept responsibility for any representations, statements, or contracts made by any retailer beyond the parameters of our warranty.

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