

Premium Leisure LLC

SWIM SPAS OWNER'S MANUAL

MODELS: SWIMMER'S EDGE 18, DUAL ZONE 18,
SWIMMER 18, SWIMMER 14



Premium Leisure, LLC
6101 45th St. N.
St. Petersburg, FL 33714
727.573.9611
www.PremiumLeisure.com

Part Number 7068

Revised 02/2013

Owner's Information

Dealer:

Date Purchased: _____
Company: _____
Address: _____
Telephone: _____

Installer:

Date Installed: _____
Company: _____
Address: _____
Telephone: _____

Swim Spa:

Date Delivered: _____
Model: _____
Color: _____
Serial Number: _____

Your unique swim spa serial number is located on a data plate outside the cabinet at ground level. When calling for service, please have your serial number in hand.



Premium LeisureTM Swim Spas

Owner's Manual

Table of Contents

Introduction	2
Important Safety Information	3
Site Selection and Installation (Electrical Connections).....	7
Startup.....	23
Water Balancing	30
Topside Controls and Operation	31
Stereo System.....	41
Cover.....	42
Frequently Asked Questions	43
Troubleshooting	45
Maintenance and Care	48
Specifications	52
Certificate of Verification	60

Important: Premium Leisure is dedicated to offering you the best in customer satisfaction and service. Be sure to read, complete, sign, and **send in the limited warranty card within 30 days of purchase or register online** at <http://premiumleisure.com/owners.shtml> to ensure you understand what you are entitled to in terms of service. If you have any questions, you can call our customer care center at 727.573.9611.

Printed in the U.S.A.

Version 1.3

Revised 02/2013

Part # 7068

Copyright © 2010, Premium Leisure LLC. All rights reserved. No portion of this manual may be reproduced in any manner without express written permission of Premium Leisure LLC. Premium LeisureTM Swim spas and ThermazoneTM are trademarks of Premium Leisure LLC. All other brands, product names, company names, trade names, trademarks, and service marks used are the property of their respective owners. Premium Leisure LLC may make product modifications and enhancements. Specifications may change without notice. International products may be configured differently to meet local electrical requirements. Dimensions are approximate. Patents pending.

Introduction

Your choice of a Premium Leisure™ brand swim spa from Premium Leisure LLC indicates that you are devoted to excellence. The management and staff appreciate your patronage and takes pride in the tradition of quality swim spas that our company represents.

To properly acquaint yourself with your swim spa, we suggest that you take time to read through this manual before hook up and operation. Doing so will familiarize you with important operating and safety procedures, thereby ensuring an enjoyable experience right from the start.

If you need any more information than this manual provides, feel free to visit our Web site at www.PremiumLeisure.com or call our customer care center, at 727.573.9611.

⚠ WARNING: This manual was written to ensure the proper use and installation of your swim spa. Any modifications to the procedures outlined in this manual may result in voiding your warranty.

This manual and its contents are subject to change without notice. Although we have prepared this manual as accurate as possible, we are not liable for errors or omissions; loss, injury, or damages caused by improper installation; or use of swim spa (improper or otherwise).

Your new swim spa is made with quality synthetic cabinet materials. Synthetic materials won't fade and are nearly invulnerable to mold and mildew. Where wood splits, cracks, and stains, synthetic materials stand in timeless perfection.



Figure 1 – Swimmer in the Dual Zone 18

Important Safety Information

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

Your physiological response to hot water depends on subjective factors such as age, health, pregnant women, temperature sensitivities, chemical sensitivities, and medical history. Always consult a physician before using a swim spa to understand your particular tolerance and limitations.

READ AND FOLLOW ALL INSTRUCTIONS

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

A wire connector is provided on this unit to connect a minimum 8 American Wire Gauge (AWG) (8.4mm²) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5 m) of the unit.

*** For cord connected / convertible units:** ⚠ **Danger – Risk of injury.**

Replace damaged cord, immediately. Do not bury cord. Connect to a grounded, grounding type receptacle only.














**** For units with GFCI:** ⚠ **Warning** – This product is provided with a ground-fault circuit interrupter located in the main panel. The GFCI must be tested before each spa use.

Dangers

- ⚠ **RISK OF ACCIDENTAL DROWNING:** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times. Always cover the swim spa and use safety locks when it is not in use.
- ⚠ **RISK OF INJURY:** The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.
- ⚠ **RISK OF ELECTRIC SHOCK:** Install at least 5 feet (1.5 m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum 8 AWG (8.4 mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.
- ⚠ **RISK OF ELECTRIC SHOCK:** Do not permit any electric appliance, such as a light, telephone, radio or television, within 5 feet (1.5 m) of a spa. Do not operate such an appliance from either inside the swim spa or when you are wet, unless such appliances are built-in by the manufacturer.

Warnings

TO REDUCE THE RISK OF INJURY:

- The water in a spa should never exceed 40°C (104°F). Water temperatures between 38°C (100°F) and 40°C (104°F) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
 - Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possible pregnant women should limit spa water temperatures to 38°C (100°F).
 - Before entering a spa/swim spa, the user should measure the water temperature since the tolerance of water temperature regulating devices varies.
 - The use of alcohol, drugs or medication before or during spa/swim spa use may lead to unconsciousness with the possibility of drowning.
 - Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.
 - Persons using medication should consult a physician before using a spa/swim spa since some medication may include drowsiness while other medication may affect heart rate, blood pressure and circulation.
-  Do not connect auxiliary components (such as headphones, cables, and additional speakers) to the stereo (if equipped).
-  Do not use a swim spa immediately following strenuous exercise.
-  Do not use your swim spa alone.
-  Lock the cover on your swim spa when not in use.
-  Persons with infectious diseases should not use a swim spa.
-  Replace audio components only with identical components.
-  Do not leave the CD/Stereo/MP3 access door open on the stereo (if equipped).
-  Some types of hair dye can react with the sanitizers in your swim spa water causing your hair to change color. Use at your own risk.
-  Water normally splashes out of a swim spa during typical use. Install an adequate perimeter that provides sound footing.
-  Do not turn your swim spa on/off from a wall switch, ground fault circuit interrupter, circuit breaker, fuse, or by plugging/unplugging it.
-  Remove all jewelry, metal, and watches from your person before entering your swim spa.
-  Keep all breakables away from the swim spa area.
-  Maintain water balance in accordance with instructions.

Warning Sign



Warning Sign Must Be Posted – The red WARNING sign like the one shown is packed with your new swim spa. This sign must be posted in a prominent place in close proximity to the swim spa installation site immediately upon completion of swim spa installation.

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

Hyperthermia

To reduce the risk of injury, the water temperature in a swim spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children, senior citizens, persons with sensitivities, and when swim spa use exceeds 10 minutes.

WATER TEMPERATURE IN EXCESS OF 100°F (38°C) MAY BE INJURIOUS TO YOUR HEALTH.

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 drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- ⚠ Unawareness of impending hazard
- ⚠ Failure to perceive heat
- ⚠ Failure to recognize the need to exit swim spa
- ⚠ Physical inability to exit swim spa
- ⚠ Fetal damage in pregnant women
- ⚠ Unconsciousness and danger of drowning

If you sense any of the symptoms of hyperthermia, safely exit the swim spa immediately.

SAVE THESE INSTRUCTIONS

Basic Safety Guidelines

Your swim spa is meant to be enjoyable, healthful, and relaxing. Below are some basic safety guidelines to follow every time you use your swim spa.

- Always check the temperature of your swim spa before entering. High water temperatures can be hazardous to your health.
- Persons suffering from heart disease, diabetes, high or low blood pressure, and pregnant women should consult a doctor before using your swim spa.
- Persons under the influence of medication, drugs, or alcohol should not be allowed into your swim spa.
- Remove all jewelry, metal, and watches from your person before entering your swim spa.
- Do not allow children to use your swim spa without continuous supervision of an adult.
- Do not use your swim spa alone.
- Test the ground fault circuit interrupter (GFCI) breaker prior to using your swim spa each time to ensure it operates properly.
- Any electrical devices near your swim spa must be GFCI protected and out of reach from inside the swim spa.
- Keep all breakables away from the swim spa area.
- Lock the cover on your swim spa when not in use.
- Enter and exit the swim spa slowly. Wet surfaces can be slippery.
- Prolonged immersion can be hazardous to your health.
- Maintain water chemistry in accordance with manufacturer's instructions.

For Swim spas Equipped with Audio Components

Audio components are optional and not available on all models.

⚠ WARNING: Prevent Electrocutation: Do not connect any auxiliary components – for example, cable, additional speakers, headphones, etc., – to the system.

⚠ Caution: Risk of Electric Shock: Do not leave audio compartment door open. Replace audio components only with identical components.



Figure 2 – Stereo Controls

Site Selection and Installation

Proper planning is an important consideration when installing your new swim spa. Site selection is a critical step and requires serious thought. Planning ahead makes the installation process easier. The following information is provided to assist you in site preparations.

- 1) Always comply with local building codes and obtain any necessary permits. You may also need to consult with an engineer to address your specific design needs.
- 2) Contact an electrician to assess your electrical needs, install wiring, and assure a safe operation.
- 3) Position your swim spa with proper access to water, drainage, and electricity.
- 4) For **external installations**, place your swim spa on a uniform solid, flat surface designed to properly support its weight. For external installations, a level concrete pad or properly constructed deck capable of supporting 200 lbs/ft² (925 kg/m²) should be installed. For best results, we suggest the installation of a level concrete pad. Dig out and level the ground 8-12 inches (20-30 cm) below your desired base level. Install 4-6 inches (10-15 cm) of crushed stone. Next, install 4-6 inches (10-15 cm) of poured concrete and level it with a broom-type finish. Decks constructed flush to the swim spa should slope away for proper run off. In regions where freeze/thaw occurs, or where there will be custom decking abutting the swim spa, we recommend the installation of poured concrete footings extending below the frost line beneath the pad to prevent the possibility of future shifting.
- 5) For **internal installations**, check the load carrying capabilities of the floor on which the swim spa will reside. The ceiling should be more than 10 feet high (for safe entry and use), the floor should have a drain for splash over and the room should have a window or exhaust fan with humidistat for ventilation. If this is not possible, indoor/outdoor carpeting and the use of a dehumidifier while the cover is off should be adequate.
- 6) For **partial in-ground installations** (not recommended), follow these tips: In non-freezing climates it is sufficient to ensure that the base of the hole or cavity created for the swim spa simply has a stable, compacted base. Where the climate permits, should you choose to backfill directly against the swim spa, a clear sand backfill is suggested. Never fill using raw earth and never cover electrical components or plumbing connections. • In climates where freeze/thaw occurs, it is necessary that a proper poured concrete base, complete with concrete footings. • In areas with a high ground water table, the concrete base, as well as a concrete or wood retaining wall to hold back the earth, is suggested. This forms a box or "crib/vault" where the swim spa is placed. After excavating the installation site for your Premium Leisure swim spa, ensure that the soil underlying the foundation is capable of supporting a minimum of 1,000 lbs/ ft² or 12,206 kg/m² • ALWAYS ensure that there is good drainage, via a properly designed (gravel) drain system and/or a sump pump, to prevent ground water flooding damage to the

support equipment or structure. Install protective waterproof conduit to house light, or topside control cables that must be buried. Access for future service must be considered at the time of design and installation. Difficult access can result in supplemental service labor charges not covered by the factory warranty. Consider easily removable deck materials.

- 7) Assure that your swim spa will fit into the space you have chosen and the delivery route will accommodate its large size. In most cases, a crane will be necessary for the delivery.
- 8) Provide adequate ventilation for the humidity created by your swim spa. In most cases, a Swim spa Hard Cover is sufficient.
- 9) Protect the pumps (and/or turbine) and all equipment from the weather by ensuring the cabinet panels are secure at all times.
- 10) Allow 36 inches (1 meter) of unobstructed access to all sides of your swim spa for normal servicing.
- 11) Contact your local building code department to determine if a building permit is necessary and for information on applicable bylaws (distance from property lines, buildings, fencing requirements, etc). In most cases, the shallow depth of the unit could result in it being classified as a *portable* swim spa by building regulations (as opposed to a *permanent* pool).
- 12) Consider positioning your swim spa out of or adequately protecting it from the wind. Just as people can get cold on cool/windy days, so can your swim spa. Windy environments can significantly increase operating costs.



Figure 3 – A Crane is a Common Delivery Arrangement for Swim Spas

Electrical Specifications

Important – Qualified and licensed electricians must perform all electrical hookups. The following specifications must be followed in order to ensure proper performance and safety.

⚠ WARNING: Starting an incorrectly wired swim spa could cause severe damage to the mechanical equipment or even bodily harm. Have your licensed electrician verify GFCI (or RCD) wiring with the diagrams on pages 10-17 prior to starting the swim spa or call the technical support line at 727.573.9611.

⚠ Caution: Failure to abide by specifications listed may result in damage to the equipment and will void the warranty. All swim spas must be wired with the appropriately sized wiring. Failure to do so will cause equipment damage and will not be covered under your warranty.

All swim spas must be over current protected with a built-in GFCI (or RCD) in the service panel.

Model	Spa side	Swim side	Volts/Freq.	Amps	GFCI/ RCD	Wire size	Controller / Panel
All	All	N/A	240/120/60	32	40	3 Wire #8+Grd	VS500Z/ MVP260
DualZone 18 Swimmer 14 Swimmer 18	N/A	DZ18 Swim14 Swim 18	240/120/60	48	60	3 Wire #6+Grd	PEL2KM3 ML700
Swimmer's Edge 18	N/A	SE 18	240/120/60	40	50	3 Wire #6+Grd	Power unit 1244/Remote panel
All (Export)	All	N/A	220-240/50	1x32, 2x16	IEE WIRE REG	3x4mm ² 5x1.5 mm ²	GS510SZ/ VL600S
DualZone 18 Swimmer 14 Swimmer 18 (Export)	N/A	DZ18 Swim14 Swim 18	220-240/50	1x32, 2x16, 3x16	IEE WIRE REG	3x4mm ² 5x1.5 mm ²	HSEX2000 / ML700
Swimmer's Edge 18 (Export)	N/A	SE 18	220-240/50	1x32	IEE WIRE REG	3x4mm ²	Power unit 1245/Remote panel

Table 1 – Domestic/Export (in Gray) Electrical Specification Chart

NOTE: The swim side and the spa side will need to be wired independently.

⚠ WARNING: Disconnect electrical power before servicing. Before obtaining access to terminals, all supply circuits must be disconnected.

⚠ WARNING: Test the GFCI (or RCD) before each use.



Our swim spas are certified by Intertek Testing, SNAa Ltd. Ontario, Canada to CSA-C22.2 No. 218.1-M89 and ANSI/UL 1563 standards.



Parts with extra low voltage not exceeding 12v must be inaccessible to a person in the swim spa. Earthed appliances must be permanently connected to fixed wiring. Parts incorporating electrical components, except remote control devices, must be located or fixed so that they cannot fall into the swim spa.

Means for disconnection must be used in fixed wiring in accordance with wiring rules.

Important – To allow the 240V GFCI to function properly, connect the white Neutral wire from the swim spa to the Neutral terminal on the GFCI breaker, not the Neutral bus in the GFCI breaker box. An improperly connected Neutral causes the GFCI breaker to trip.

Wiring Diagrams

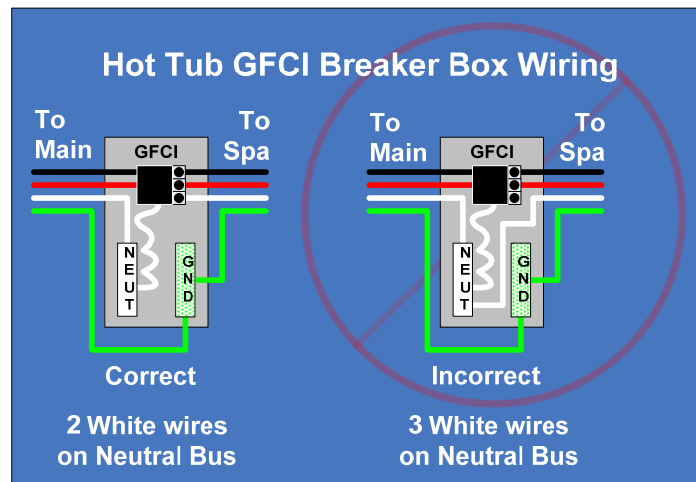


Figure 4 – 240V GFCI Wiring



PAGE 11A

Page 11
For HELP, call 727.573.9611

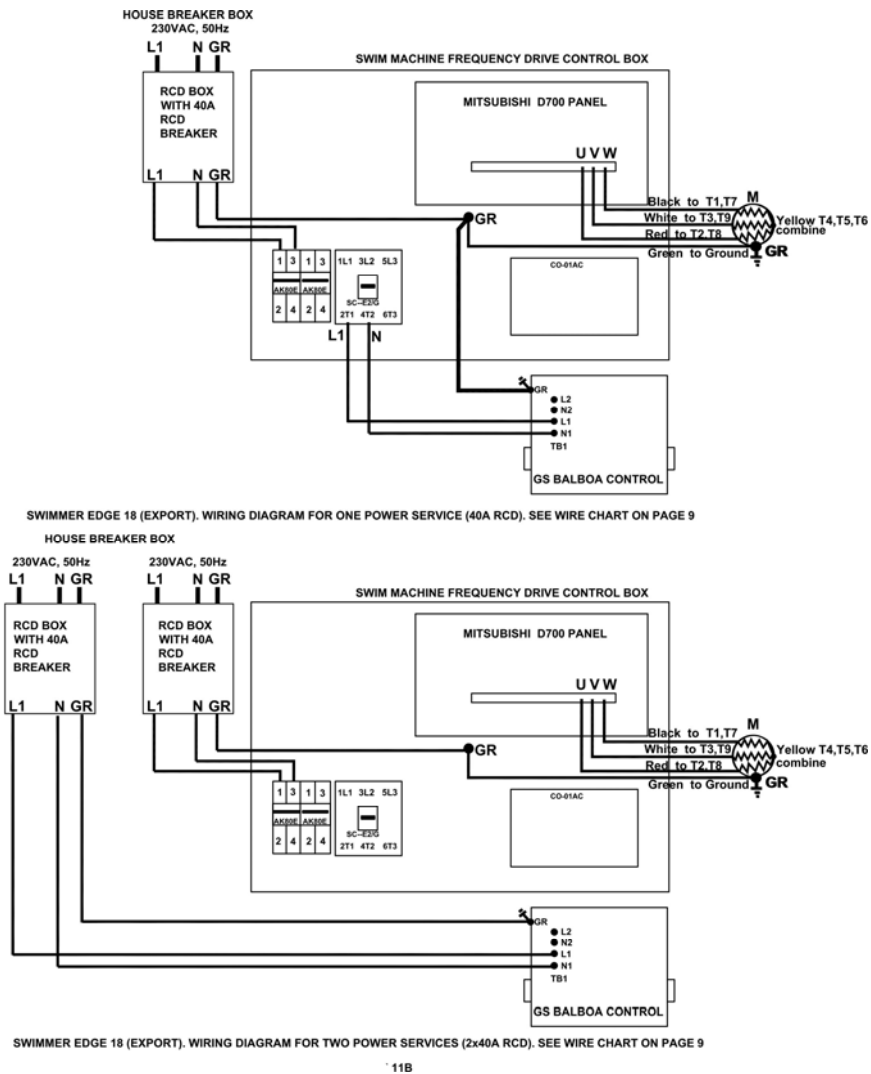


Figure 11B – Electrical Service for model Swimmer’s Edge 18.

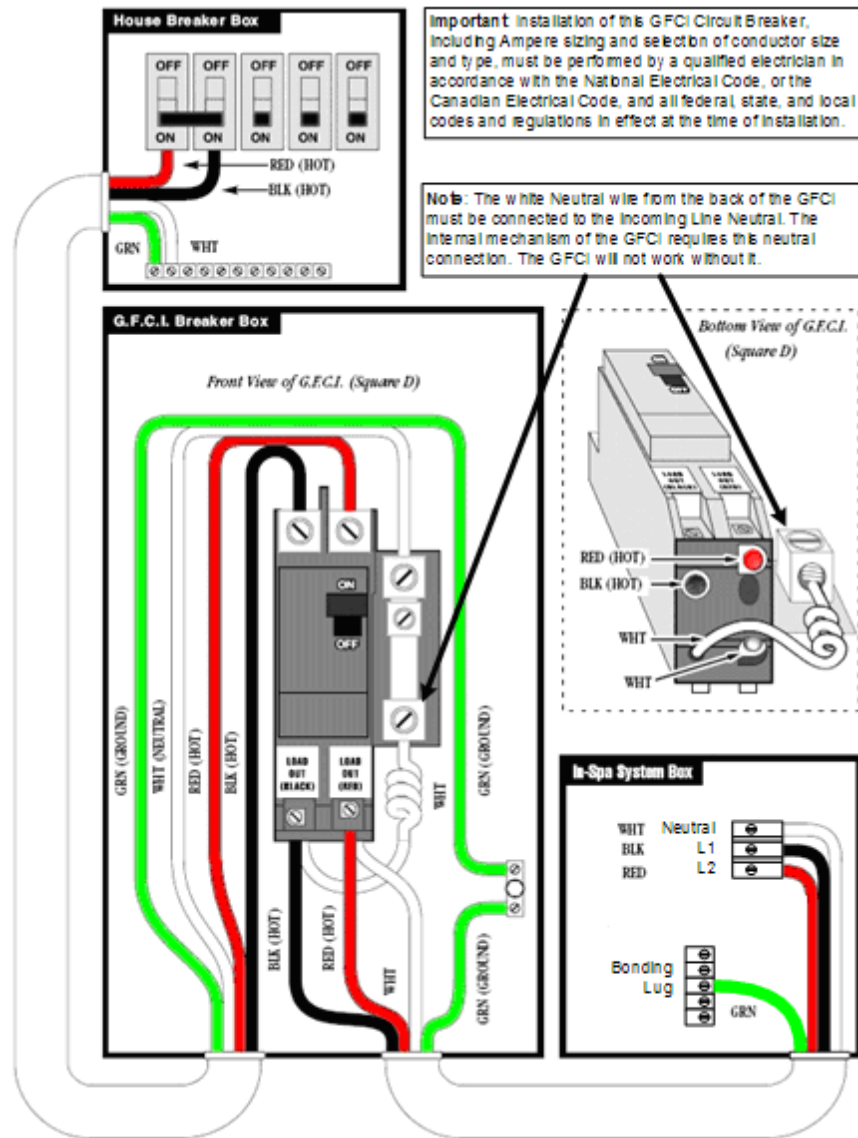


Figure 5 – Electrical Service for models (Dual Zone 18, Swimmer 18 and Swimmer 14). Single-phase 240V domestic version

See wire size chart on page 9.

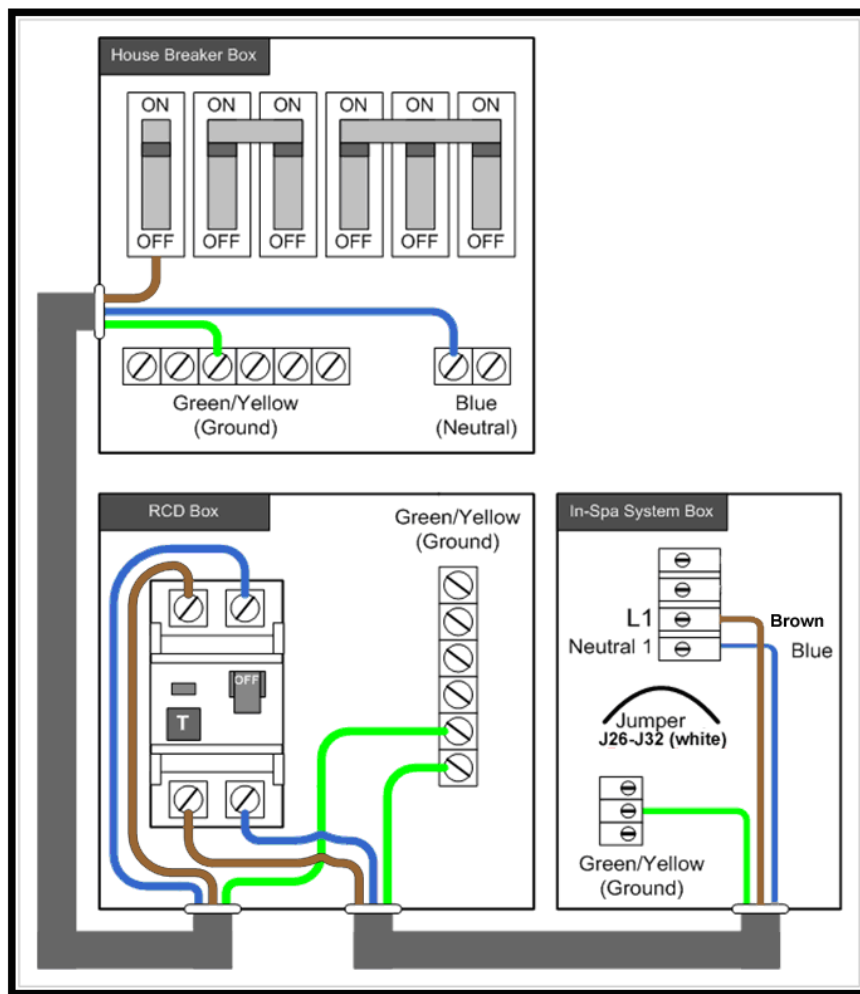
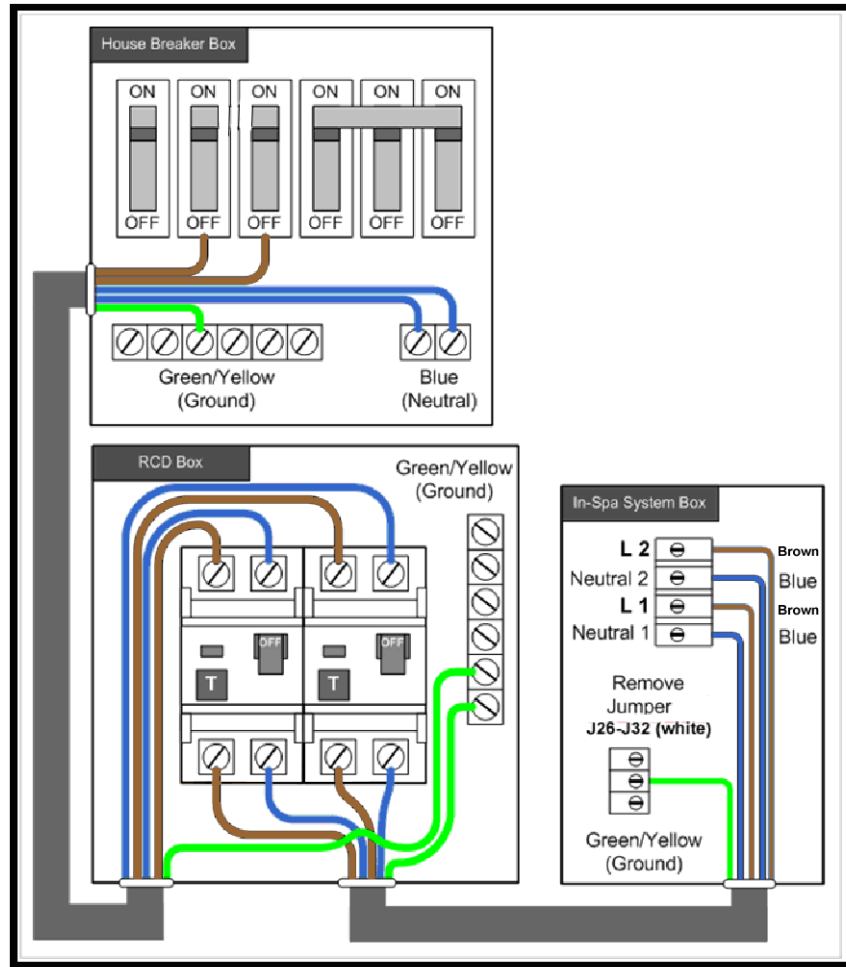


Figure 6 – Electrical Service for models (Dual Zone 18, Swimmer 18 and Swimmer 14). Single Service, 1x32A, export version

All wiring is 3x4 mm², solid copper
See wire size chart on page 9.

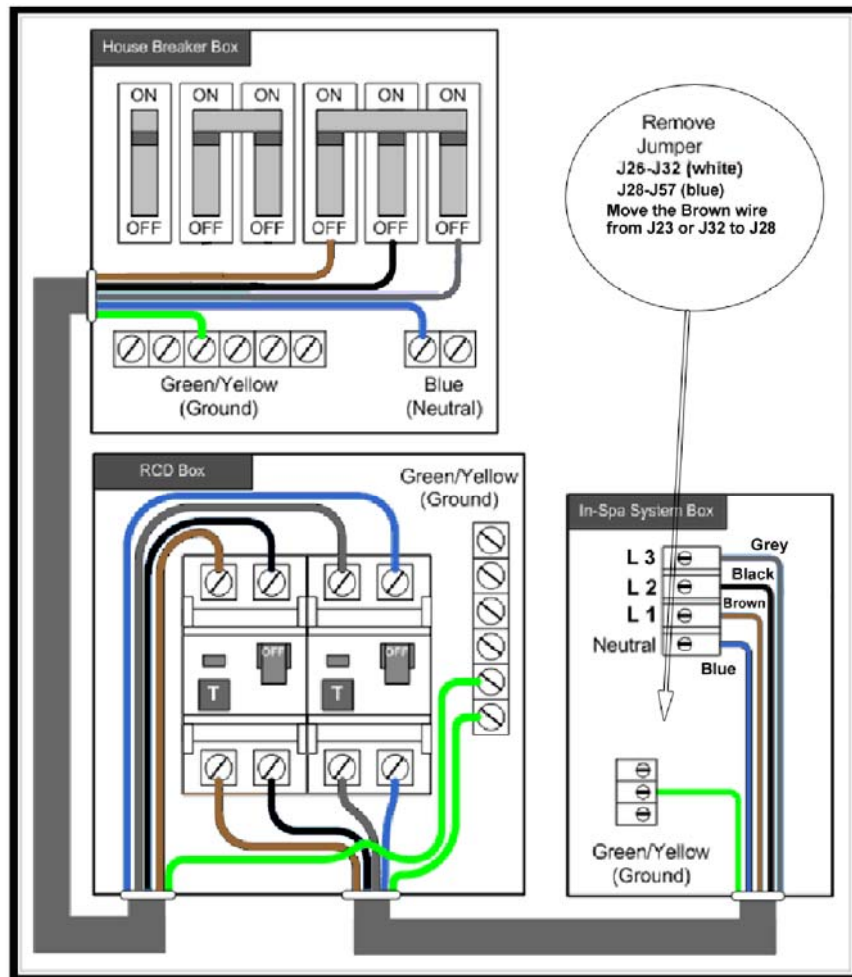
Note: DIP switch A2 MUST BE OFF.



**Figure 7 – Electrical Service (Dual Service, 2x16A)
for Dual Zone 18, Swimmer 18 and Swimmer 14 export models**

All wiring is 5x1.5 mm², solid copper
See wire size chart on page 9.

Note: DIP switch A2 MUST BE ON.



**Figure 8 – Electrical Service (Three Phase, 3x16A)
for Dual Zone 18, Swimmer 18 and Swimmer 14 export models**

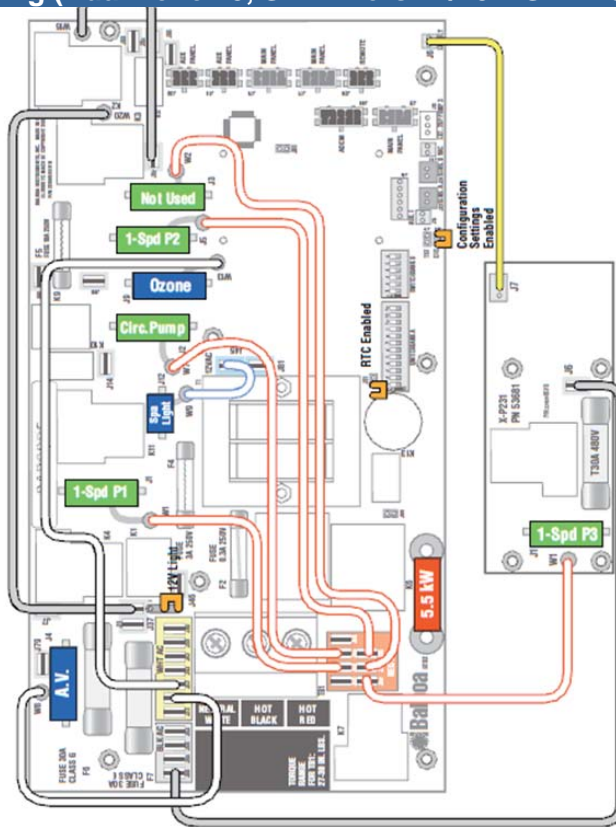
All wiring is 5x1.5 mm², solid copper
See wire size chart on page 9.

Note: DIP switch A2 MUST BE ON.

U.S./Can. Wiring (Dual Zone 18, Swimmers 14/18 – Swim Side)

Setup 1 (As Manufactured)

- 240V Pump 1, 1-Speed
- 240V Pump 2, 1-Speed
- 240V Pump 3, 1-Speed
- 120V AV (Stereo)
- 240V 5.5kW Heater
- ML700 Main Panel
- 240V Circ Pump
- 120V Ozone
- 12V Spa Light



WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.

WARNING: Persistent Memory (A12) must be RESET to allow new DIP switch settings to take effect. (See Persistent Memory page)

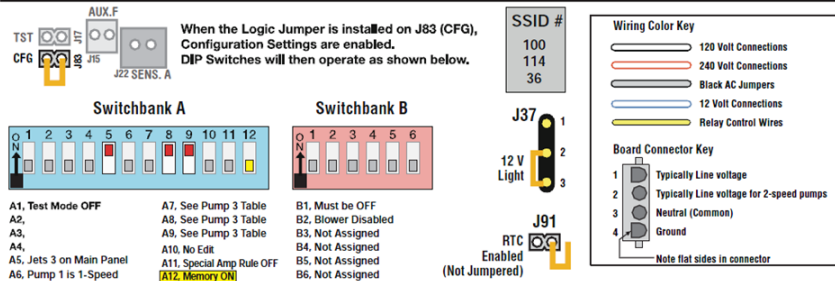


Figure 9 – Wiring Diagram for Dual Zone 18, Swimmer 18 and Swimmer 14 models with PEL2KM3 Control Pack (Swim Side).

DIP Switches and Jumpers Definitions

WARNING:

- Setting DIP switches incorrectly may cause abnormal system behavior and/or damage to system components.
- Refer to Switchbank illustration on Wiring Configuration page for correct settings for this system.
- Contact Balboa if you require additional configuration pages added to this tech sheet.

DIP Switchbank A Key

- A1 Test Mode (normally Off)
A2 In "ON" position, add one high-speed pump (or blower) with Heater
A3 In "ON" position, add two high-speed pumps (or 1 HS Pump and Blower) with Heater
A4 In "ON" position, add four high-speed pumps (or 3 HS Pumps and Blower) with Heater
A10 When switched ON when spa is on, system will enter the Edit Menu
for Configuration Settings. **Do not start spa with A10 turned on or CFE* error will occur**
A11 In "ON" position, enables Special Amperage Rule, see "SA" in Software
Configuration section for functionality with your system
In "OFF" position, disables Special Amperage Rule
A12 Persistent memory reset (used when spa is powering up) See "Persistent Memory and Powering Up" page

A2, A3, and A4 work in combination to determine the number of high-speed devices and blowers that can run before the heat is disabled. i.e. A2 and A3 in the ON position and A4 in the OFF position will allow the heater to operate with up to 3 high-speed pumps (or two HS Pumps and Blower) running at the same time. Heat is disabled when the fourth high-speed pump or blower is turned on.

Note: A2/A3/A4 all off - No heat with any high-speed pump or blower.

*CFE errors are illegal configurations such as a pump and a blower set to run on the same output. The configuration must be corrected before the spa will operate.

Assignable DIP Switch Key

- A5 In "ON" position, Jets 3 is on the Main Panel Aux Button
In "OFF" position, Blower is on the Main Panel Aux Button
A6 In "ON" position, Pump 1 is 2-speed
In "OFF" position, Pump 1 is 1-speed
A7 See Pump 1 Table
A8 See Pump 2 Table
A9 See Pump 3 Table
B1 Must Be OFF
B2 In "ON" position, Blower is enabled
In "OFF" position, Blower is disabled
B3 Not Assigned
B4 Not Assigned
B5 Not Assigned
B6 Not Assigned

A7	A8	A9	Pump 3 Behavior
OFF	OFF	OFF	No Pump 3
OFF	OFF	ON	1-Spd on J3
OFF	ON	ON	1-Spd on X-P or X-P231
ON	OFF	OFF	1-Spd Pump 3 on X-P632
ON	OFF	ON	2-Spd Pump 3 on X-P632

Jumpers

- J37 Jumper on Pins 1 and 2 will power one leg of J9 (Spa Light) at 120 Volts AC
Jumper on Pins 2 and 3 will power one leg of J9 (Spa Light) at 12 Volts AC
Note: W9 controls voltage on the other leg of J9 and must be set for the same voltage
J91 Jumper on 1 Pin only enables Real Time Clock function; use with time capable panels
Jumper on Pins 1 and 2 disables RTC function; use with non-time capable panels

The diagram illustrates the electrical wiring for a Balboa control panel. Key components and their connections include:

- 1-Speed P3:** A green box representing a speed control unit, connected to the main power supply.
- 1-Speed P2:** A green box representing another speed control unit, connected to the main power supply.
- 2-Speed P1:** A green box representing a speed control unit, connected to the main power supply.
- A.V. (Automatic Valve):** A blue box representing a valve control unit, connected to the main power supply.
- Circ Pump (Circulation Pump):** A green box representing the pump motor, connected to the main power supply.
- Spa Light:** A blue box representing the spa lighting, connected to the main power supply.
- Ozone:** A blue box representing the ozone generator, connected to the main power supply.
- 3.0 kW Heater:** A red box representing the heater, connected to the main power supply.

The diagram also shows various fuses (F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, F29, F30, F31, F32, F33, F34, F35, F36, F37, F38, F39, F40, F41, F42, F43, F44, F45, F46, F47, F48, F49, F50, F51, F52, F53, F54, F55, F56, F57, F58, F59, F60, F61, F62, F63, F64, F65, F66, F67, F68, F69, F70, F71, F72, F73, F74, F75, F76, F77, F78, F79, F80, F81, F82, F83, F84, F85, F86, F87, F88, F89, F90, F91, F92, F93, F94, F95, F96, F97, F98, F99, F100, F101, F102, F103, F104, F105, F106, F107, F108, F109, F110, F111, F112, F113, F114, F115, F116, F117, F118, F119, F120, F121, F122, F123, F124, F125, F126, F127, F128, F129, F130, F131, F132, F133, F134, F135, F136, F137, F138, F139, F140, F141, F142, F143, F144, F145, F146, F147, F148, F149, F150, F151, F152, F153, F154, F155, F156, F157, F158, F159, F160, F161, F162, F163, F164, F165, F166, F167, F168, F169, F170, F171, F172, F173, F174, F175, F176, F177, F178, F179, F180, F181, F182, F183, F184, F185, F186, F187, F188, F189, F190, F191, F192, F193, F194, F195, F196, F197, F198, F199, F200, F201, F202, F203, F204, F205, F206, F207, F208, F209, F210, F211, F212, F213, F214, F215, F216, F217, F218, F219, F220, F221, F222, F223, F224, F225, F226, F227, F228, F229, F230, F231, F232, F233, F234, F235, F236, F237, F238, F239, F240, F241, F242, F243, F244, F245, F246, F247, F248, F249, F250, F251, F252, F253, F254, F255, F256, F257, F258, F259, F260, F261, F262, F263, F264, F265, F266, F267, F268, F269, F270, F271, F272, F273, F274, F275, F276, F277, F278, F279, F280, F281, F282, F283, F284, F285, F286, F287, F288, F289, F290, F291, F292, F293, F294, F295, F296, F297, F298, F299, F300, F301, F302, F303, F304, F305, F306, F307, F308, F309, F310, F311, F312, F313, F314, F315, F316, F317, F318, F319, F320, F321, F322, F323, F324, F325, F326, F327, F328, F329, F330, F331, F332, F333, F334, F335, F336, F337, F338, F339, F340, F341, F342, F343, F344, F345, F346, F347, F348, F349, F350, F351, F352, F353, F354, F355, F356, F357, F358, F359, F360, F361, F362, F363, F364, F365, F366, F367, F368, F369, F370, F371, F372, F373, F374, F375, F376, F377, F378, F379, F380, F381, F382, F383, F384, F385, F386, F387, F388, F389, F390, F391, F392, F393, F394, F395, F396, F397, F398, F399, F400, F401, F402, F403, F404, F405, F406, F407, F408, F409, F410, F411, F412, F413, F414, F415, F416, F417, F418, F419, F420, F421, F422, F423, F424, F425, F426, F427, F428, F429, F430, F431, F432, F433, F434, F435, F436, F437, F438, F439, F440, F441, F442, F443, F444, F445, F446, F447, F448, F449, F450, F451, F452, F453, F454, F455, F456, F457, F458, F459, F460, F461, F462, F463, F464, F465, F466, F467, F468, F469, F470, F471, F472, F473, F474, F475, F476, F477, F478, F479, F480, F481, F482, F483, F484, F485, F486, F487, F488, F489, F490, F491, F492, F493, F494, F495, F496, F497, F498, F499, F500, F501, F502, F503, F504, F505, F506, F507, F508, F509, F510, F511, F512, F513, F514, F515, F516, F517, F518, F519, F520, F521, F522, F523, F524, F525, F526, F527, F528, F529, F530, F531, F532, F533, F534, F535, F536, F537, F538, F539, F540, F541, F542, F543, F544, F545, F546, F547, F548, F549, F550, F551, F552, F553, F554, F555, F556, F557, F558, F559, F560, F561, F562, F563, F564, F565, F566, F567, F568, F569, F570, F571, F572, F573, F574, F575, F576, F577, F578, F579, F580, F581, F582, F583, F584, F585, F586, F587, F588, F589, F590, F591, F592, F593, F594, F595, F596, F597, F598, F599, F600, F601, F602, F603, F604, F605, F606, F607, F608, F609, F610, F611, F612, F613, F614, F615, F616, F617, F618, F619, F620, F621, F622, F623, F624, F625, F626, F627, F628, F629, F630, F631, F632, F633, F634, F635, F636, F637, F638, F639, F640, F641, F642, F643, F644, F645, F646, F647, F648, F649, F650, F651, F652, F653, F654, F655, F656, F657, F658, F659, F660, F661, F662, F663, F664, F665, F666, F667, F668, F669, F670, F671, F672, F673, F674, F675, F676, F677, F678, F679, F680, F681, F682, F683, F684, F685, F686, F687, F688, F689, F690, F691, F692, F693, F694, F695, F696, F697, F698, F699, F700, F701, F702, F703, F704, F705, F706, F707, F708, F709, F710, F711, F712, F713, F714, F715, F716, F717, F718, F719, F720, F721, F722, F723, F724, F725, F726, F727, F728, F729, F730, F731, F732, F733, F734, F735, F736, F737, F738, F739, F740, F741, F742, F743, F744, F745, F746, F747, F748, F749, F750, F751, F752, F753, F754, F755, F756, F757, F758, F759, F760, F761, F762, F763, F764, F765, F766, F767, F768, F7

Page 19
For HELP, call 727.573.9611

WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.
WARNING: Persistent Memory (A12) must be RESET to allow new DIP switch settings to take effect.

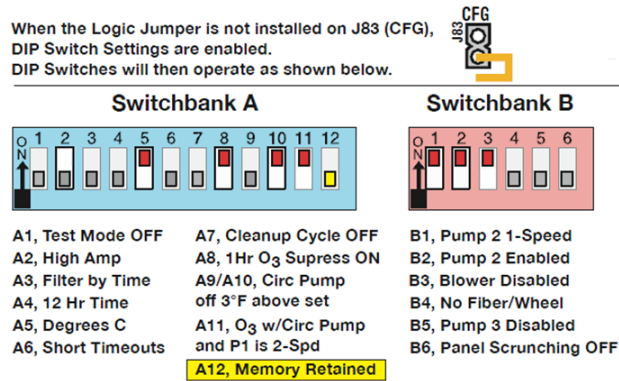


Figure 11 –Board Diagram for Dual Zone 18, Swimmer 18 and Swimmer 14 models. Export (220-240V) version with HSEX2000 Control Pack.

WARNING:
•Setting DIP switches incorrectly may cause abnormal system behavior and/or damage to system components.
•Refer to Switchbank illustration on Wiring Configuration page for correct settings for this system.
•Contact Balboa if you require additional configuration pages added to this hot sheet.

DIP Switchbank A Key

A1	Test Mode (normally Off)
A2	In "ON" position, heater can run while any/all high-speed pumps or blowers are running (High amperage) In "OFF" position, heater is disabled while any high-speed pump or blower is running (Low amperage)
A3	In "ON" position, filter cycles are programmed by duration for non-time capable panels In "OFF" position, filter cycles are programmed to start and end times for time capable panels
A4*	In "ON" position, displays time in 24 hours (military/European time)
A5*	In "OFF" position, displays 12 hour time In "ON" position, displays temperature in Celsius In "OFF" position, displays temperature in Fahrenheit
* Sets default for user preferences - only applies when persistent memory is reset (A12 On) during power-up	
A6	In "ON" position, Equipment timeout 30 minutes (4 hours for Pump 1-Low) In "OFF" position, Equipment timeout 15 minutes (2 hours for Pump 1-Low)
A7	In "ON" position, Cleanup Cycle - 30 minutes after spa use/timeout, Pump 1-Low & Ozone or Circ Pump and Ozone run for 1 hour In "OFF" position, no Cleanup Cycle
A8	In "ON" position, Ozone suppression for one hour after pump/blower button press
A9 and A10	See Table for Circ Pump Behavior settings
A11	In "ON" position (<i>non-circ mode operation</i>) Pump 1 is two-speed, Ozone is ON in Filter & Cleanup Cycles only (<i>in any circ mode</i>) Pump 1 is one-speed, Ozone is ON with circ pump In "OFF" position (<i>non-circ mode operation</i>) Pump 1 is two-speed, Ozone is ON with Pump 1-Low (<i>in any circ mode</i>) Pump 1 is two-speed, Ozone is ON with circ pump
A12	Persistent memory reset (normally off) (used when spa is powering up)

A9	A10	Circ Pump Behavior
OFF	OFF	No Circ Pump or Circ Pump not plumbed w/heater
ON	OFF	24 Hours
OFF	ON	24 Hr w/3°F Shut-Off
ON	ON	Acts like Pump 1-Low (Filter Cycles, Polls)

DIP Switchbank B Key

B1	In "ON" position, single-speed Pump 2 In "OFF" position, two-speed Pump 2
B2	In "ON" position, Pump 2 enabled In "OFF" position, Pump 2 disabled
B3	In "ON" position, Blower enabled with Pump 2 low relay In "OFF" position, Blower disabled
B4	In "ON" position, Fiber and Wheel instead of Spa Light (if A9 & A10 are both OFF, Fiber uses J2 connector; if either A9 or A10 is ON, X-FOW Kit required to run Fiber)
B5	In "OFF" position, Spa light enabled In "ON" position, Pump 3 enabled (Jets 3 replaces Blower on Aux panel)
B6	In "OFF" position, Pump 3 disabled In "ON" position, Alternate Panel layout (ML900 scrunching enabled - ML550 / 700 Jets 3 replaces Blower) In "OFF" position, Normal Panel layout

U.S. and Canada Wiring (All Models – Spa Side)

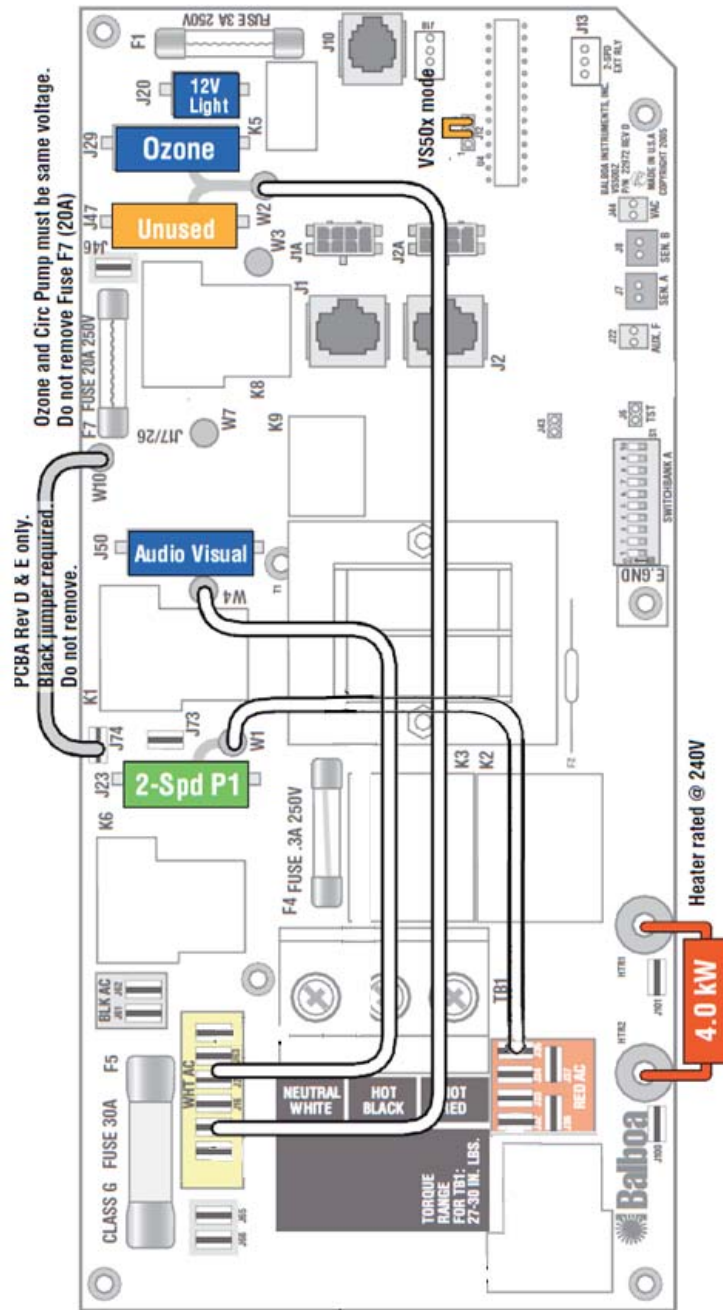
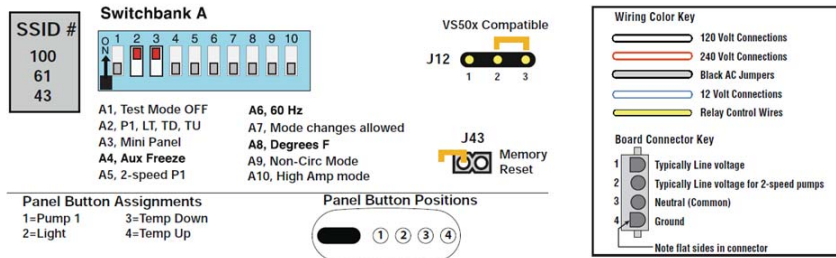


Figure 12 – Domestic Wiring Diagram for all models
Single-phase 240V for VS500Z Control Pack.

WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.
WARNING: Persistent Memory (J43) must be RESET to allow new DIP switch settings to take effect.



**Figure 13 – Board Diagram for all models
Single-phase 240V Domestic version**

SSID 100 61 43

Base Model VS500Z

DIP Switch Key

- A1 Test Mode (normally OFF)
A2 "ON" position: Button layout will be: Pump 1, Light, Temp Down, Temp Up *
"OFF" position: Button layout will be: Unused, Pump 1, Temp, Light
A3 "ON" position: use Mini Panel
"OFF" position: use Lite Duplex or Digital Duplex panel
A4 Aux Freeze (must be OFF)
A5+A9 Pump 1 speeds and Circ Modes:
- | A5 | A9 | Circ Mode | Pump 1 Speed |
|-----|-----|---|--------------|
| OFF | OFF | Non-circ | 2-speed |
| ON | OFF | Circ "acts like Pump 1 low" (filters/polls/ect) | 1-speed |
| OFF | ON | 24 hours with 3°F shut-off | 1-speed |
| ON | ON | 24 hours with 3°F shut-off | 2-speed |
- A6 "ON" position: 50Hz operation
"OFF" position: 60Hz operation
A7 "ON" position: Standard mode only
"OFF" position: Std/Ecn/Sleep mode changes allowed
A8 "ON" position: temperature is displayed in degrees Celsius
"OFF" position: temperature is displayed in degrees Fahrenheit
A10 "ON" position: heater is disabled while any high-speed pump is running (low amperage mode)
"OFF" position: heater can run while any/all high-speed pumps are running (high amperage mode)

Jumper Key

- J12 **Factory set. DO NOT MOVE.**
Jumper must be on Pins 1 and 2 for VS51xZ/VS52xZ/VS5xxSZ/VS5xxDZ software.
Jumper must be on Pins 2 and 3 for VS50xZ software.
- J43 When jumper is placed on 2 pins during power-up, system will reset persistent memory.
Leave on 1 pin only to enable persistent memory feature.

Export Wiring (Dual Zone 18, Swimmer 14 & 18 – Spa Side)

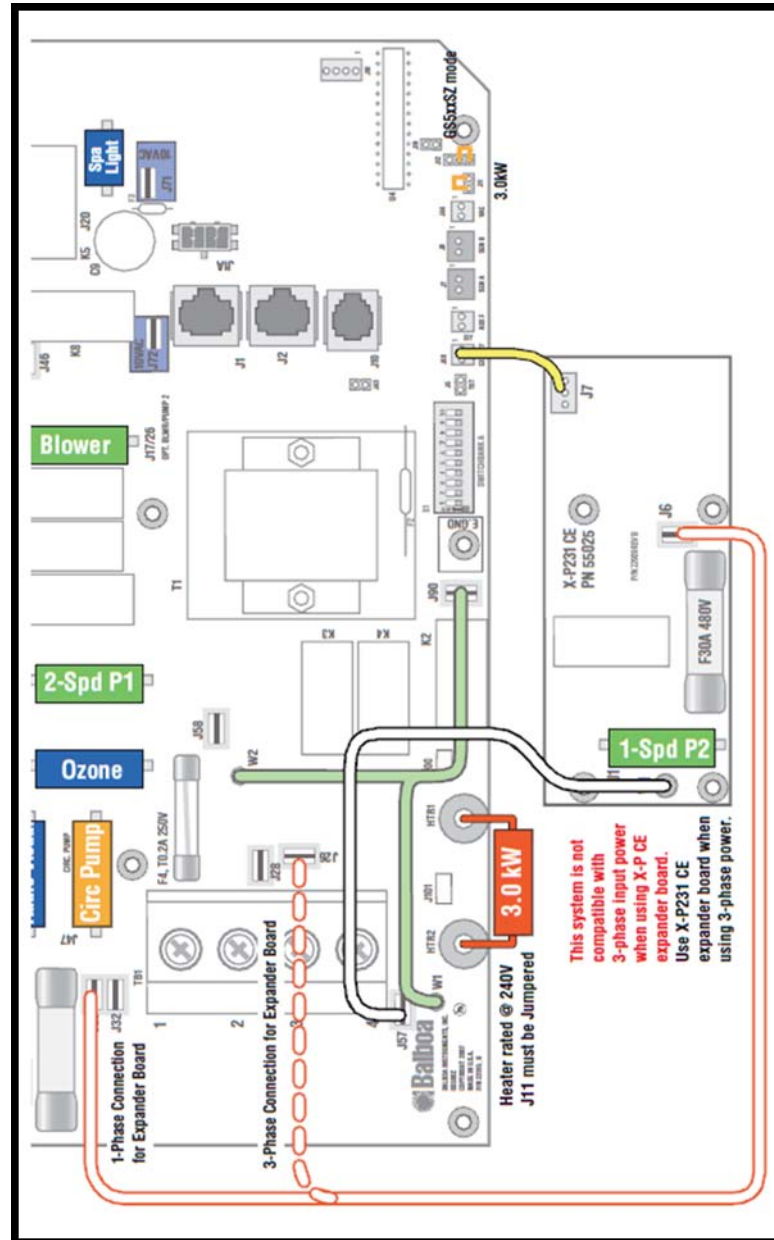


Figure 14 – Export Wiring Diagram for Dual Zone 18, Swimmer 18 and Swimmer 14 for GS510SZ Control Pack (See wire size chart on Pg. 9)

WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.
WARNING: Persistent Memory (J43) must be RESET to allow new DIP switch settings to take effect.

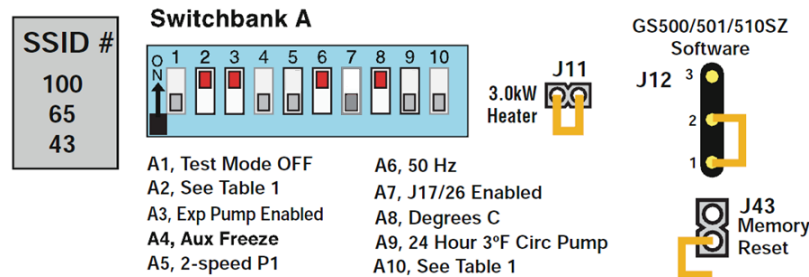


Figure 15 – Board Diagram for all models Export version for GS510SZ Control Pack.

SSID 100 65 43 Base Model GS500SZ-GS501SZ-GS510SZ

DIP Switch Key

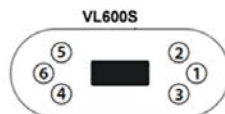
- A1 Test Mode (normally OFF)
- A2+A10 Control amp draw requirements (See Table 1)
- A3 "ON" position: Expander Board Enabled for 1-speed Pump only.
"OFF" position: Expander Board Disabled.
- A4 Aux Freeze (must be OFF)
- A5+A9 Pump 1 speeds and Circ Modes:

A5	A9	Circ Mode	Pump 1 Speed
OFF	OFF	Non-circ	2-speed
ON	OFF	Circ "acts like Pump 1 low" (filters/polls/ect)	1-speed
OFF	ON	24 hours with 3°F shut-off	1-speed
ON	ON	24 hours with 3°F shut-off	2-speed

Table 1 # of Hi-Speed Pumps/Blower Before Heat Disabled		
A2	A10	
OFF	OFF	0
ON	OFF	1
OFF	ON	2
ON	ON	3

- A6 "ON" position: 50Hz operation
"OFF" position: 60Hz operation
- A7 "ON" position: J17/26 Enabled for Blower or 1-speed Pump.*
"OFF" position: J17/26 Disabled
- A8 "ON" position: temperature is displayed in degrees Celsius
"OFF" position: temperature is displayed in degrees Fahrenheit

* Panel with button layout (5 6 4 2 1 3) is not compatible when both A3 and A7 are ON.



Panel Button Assignments (A2 must be OFF)

- 1=Mode
- 2=Temp Up
- 3=Temp Down
- 4=Light
- 5=Pump 1
- 6= Pump 2

Figure 16 – Panel Button Positions for Dual Zone 18, Swimmer 18 and Swimmer 14 Models Export version

Startup

Important – Read these step-by-step startup procedures before starting your swim spa. Failure to follow any of these steps listed may result in damage to the equipment and may void your warranty.

Note: If you are unsure of any of the above startup procedures, please call our customer care center at 727.573.9611. For best results, read each step in its entirety before proceeding.

⚠ Caution: Running the swim spa pump dry (without water running through it) can cause IMMEDIATE damage and will void the warranty! Be sure that the swim spa is installed properly in accordance with the instructions in this manual.

Refer to the following picture for an explanation of your swim spa's controls, components, and technical terms. Note that not all models have all features and components. See also pages 52-59 for more information.

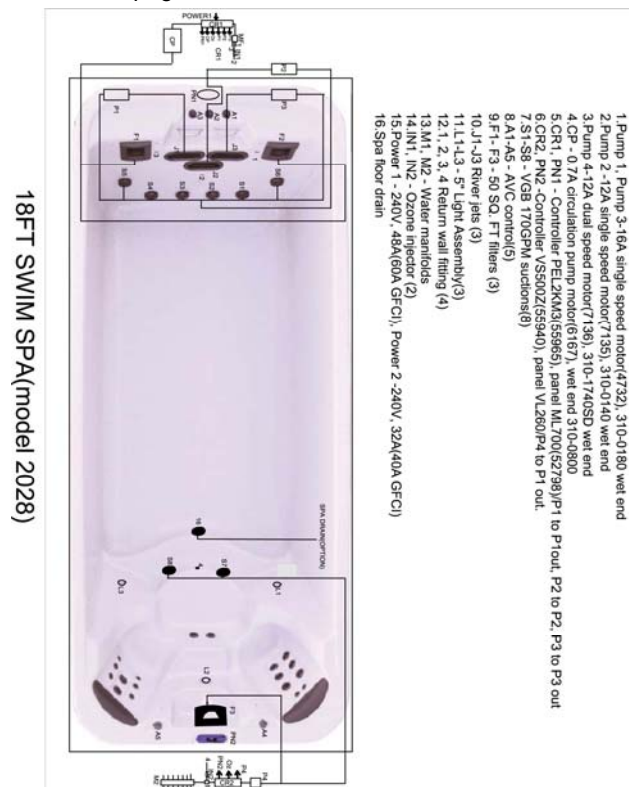


Figure 17 – Swim spa Callouts (Swimmer 18 Shown)

Before Adding Water

Before adding water, go through these simple steps now to prevent common issues when setting up your swim spa for the first time. Verify that the following have all been rechecked.

1. Turn off all power to the swim spa at the main breaker panel.
2. Open the side panels to access the internal components.
3. Check that all slide valves are opened (T-handles pulled out) to the heater and all pumps.
4. Check that there are no obvious signs of loose wires or broken pipes.

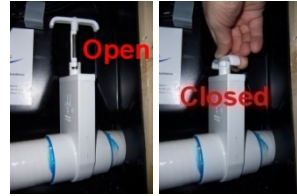


Figure 18 - Valve Open/Closed

5. Check that the two heater unions are hand tight.



Caution: Do not use a wrench. Over-tightening may cause damage to unions and gaskets, which will not be covered under warranty.



Figure 19 - Unions Tight

6. Check that the unions on all pumps are tight.
7. Clean out any foreign debris from within the service access area or inside of the swim spa itself.
8. With the drain open and filters removed, thoroughly rinse out the swim spa with warm water until the drained water runs clear. Run water through the filtration canister and jet lines to remove any incidental dust, dirt, and debris that may have accumulated during shipment or installation. Drain all water completely.
9. Make sure that the swim spa drain valve is closed and the cap is on tight (see page 49).
10. Install the filter(s) in the filtration canister.
11. Check that all of the swim spa jets are open (turned full counter-clockwise).
12. Now is the best time to clean and polish the surfaces of your swim spa (see page 44).

Filling Your Swim spa

Now it's time to fill your swim spa with water. Do not turn on the electricity yet until the swim spa is completely filled. To properly fill your swim spa:

1. Make sure that the filters (in the filtration canister) are gently screwed into place. Turn them clockwise until they stop being careful not to over-tighten them (this avoids cracking the filter).
2. Connect a standard garden hose to a faucet with regular cold tap water (not softened water or hot water).



Figure 20 – Filtration Canister

⚠ Caution: The water from your hot water tank should not be used to fill the swim spa.

3. Put the pre-filter (if equipped*) on the other end of the hose, point the pre-filter into a suitable drain, turn on the water, and allow any sediment to be flushed down the drain. Once the water stream runs clear, turn off the hose.
4. Put the pre-filter (if equipped) into the filtration canister and turn on the hose.
5. **Fill slowly.** If too much water pressure is used, foaming water can force air into the pipes and cause startup problems.

Important: To assure that the pump is properly primed, **fill the swim spa through the filter area only.**

6. Fill the swim spa until the water level is about 1" above all jets (or about ½" below the pillow). Do not over fill.

Note: Every person entering a swim spa displaces a given volume of water, so adjust water level to the number of people regularly using the swim spa. Turn off the hose and check again for any small leaks.

Operational Checks: Swimmer's Edge 18 (Hydraulic System)

Starting the Hydraulic System

⚠ Caution: Turn off all power to the swim spa at the main breaker panel.

1. Check the sight glass located on the side of the tank. A small amount of fluid is shipped in the tank from the factory and should be visible in the sight glass.
2. Remove the fill cap lid located on the top of the tank. Pour fluid in the tank until the sight glass is completely filled. (NOTE: USE ONLY THE FLUID PROVIDED BY PREMIUM LEISURE). Fluid will be blue. Once full, tighten the fill cap.

* Pre-filters are available by calling 877.530.PARTS

3. Turn the power on at the main breaker. The LED display will show two red lights. Using the handheld remote control (see page 40), press the ON/OFF button. The system will come on and the LED readout will automatically go to 50. Let the system run for 2-3 minutes to pressurize itself. (NOTE: If the system does not turn on, check the LED readout to see if it reads "LOW OIL." If so, follow the instructions for Low Oil Shut Off (below).
4. Shut the system off and check for any leaks that may have occurred during shipment. The fluid level should have dropped as it pressurized the hoses.
5. Fill the tank until the fluid reaches 260 in the sight glass. Your system is now ready to restart. We recommend maintaining your fluid level at 260 in the sight glass. Periodically check your fluid level.
6. Using the handheld remote control, turn your system on and increase the flow to 100-150 and let it run for 5-10 minutes.

NOTE: There is an automatic shut off built in to the Swimmer's Edge 18 swim spa. The hydraulic system will run for 30 minutes and shut off. If this happens, simply turn it back on using the handheld remote control.

Low Oil Shut Off

The low oil shut off valve is located on the top of the aluminum tank, next to the fill cap. If your system is low on oil, the LED digital readout will indicate "LOW OIL." You must turn the system off at the breaker and wait 5 minutes before turning it back on. This will reset the program. Fill the tank until the fluid reaches 200 in the sight glass. Turn the power back on at the breaker.

Bleeding Air from the Pressure Line

When you turn your power unit on and the flow head (water current) does not come on, you must bleed your pressure system (yellow line). With the system running, slowly loosen the yellow pressure hose fitting. Air will escape. Once all the air has escaped, the flow head will spin and the current will resume.

Startup and Maintenance

The Swimmer's Edge 18 is full and ready for swimming when the water level reaches ½ inch to 1 inch above the flow head where the water current is produced. (About level with the metal grab rail).

NOTE: A low water level can result in filtration and heating problems. Regularly "top off" your Swimmer's Edge 18 swim spa with a nearby garden hose. A high water level could cause excess overspill and splash out.

Once your Swimmer's Edge 18 is full and all connections are made, the water quality system can be started.

Set your filtration mode to your desired setting (see page 32) and set your water temperature (see page 31) to your desired setting (we recommend 80 degrees F, or 27 C, for swimming). It could take 36 to 48 hours to reach your desired

temperature the first time you fill your swim spa.

Note: The hydraulic hoses should be changed every year.

Balancing the Swim Spa Water

Using a water test kit (if one was not provided, please call 877.530.PARTS) test for chlorine, pH, total alkalinity, etc. (You may also take a sample of your water to your local pool dealer.)

Follow all instructions with the test kit and take notes accordingly. Water quality is different across the world, so once you know your water type, follow up care will be easier. Your goal is to balance the water to acceptable ranges of total alkalinity, pH and calcium hardness levels.

Note: A chlorine-based system with 3-5 ppm of free chlorine is recommended if you intend to keep your swim spa at "swimming pool" temperatures. A bromine-based system is recommended if you intend to keep your swim spa at "hot tub" temperatures.

See balanced water chart (Table 2) on page 30.


Draining Your Swimmer's Edge 18

We recommend draining your water every 6-12 months.

1. Turn off the breaker and disconnect electrical power to all equipment.
2. Locate the drain valve at the base of your swim spa cabinet
3. Attached a garden hose to the valve, open the valve and drain


Note: For faster draining, you may use a sump pump or siphon.

Operational Checks: Dual Zone 18, Swimmers 18/14 (Swim Side)

 **Caution:** Do not turn on any pump until your swim spa is properly filled with water. Running any pump without water in your swim spa can cause IMMEDIATE damage, which is not covered under warranty!


By now you have rechecked your swim spa's mechanical connections and filled it with water to about 1" above all jets by adding cold tap water through the pre-filter (if equipped). Turn on power to the swim spa at the main breaker panel and test the operation of the electrical system. If you encounter a problem, please reference the troubleshooting guide on page 45.

1. Turn on the breaker and test the swim side operation of the Ground-Fault Circuit Interrupter (GFCI) breaker by pushing the small button. This should automatically trip the swim spa's circuit breaker.

 **DANGER:** If this breaker does not trip, immediately call your electrician. Do not use your swim spa!

Only if pushing this button successfully trips this circuit breaker should you reset this breaker and proceed to the next step.

2. Go to the topside control panel. The swim spa first goes into a 6-minute Priming mode, indicated by "Pr" message. Water heating is disabled during priming. To exit Priming mode and begin normal swim spa operation, press "Up" or "Down" button. The circulation pump starts and water flows through the returns.
3. Press the Jets 1 button. You should hear the pump turn on high speed, see water circulating, and see the Jets 1 icon spin on the information display area.

 **Caution:** If water is not flowing from the jets after 2 minutes, turn the power off at the main panel and bleed air from the system (see page 43-44). Turn the power on again. Sometimes momentarily turning the pump off/on will help to prime. Only do this 4 times.


4. If the water is running smoothly through the lines, open the air control valve to the jets and you should see an increase in jet pressure. Check and adjust the water and airflow of every river jet if necessary.

An air mixture intensifies the level of your current. Turn the air control valve counterclockwise to increase the air mixture and clockwise to turn it off.

To minimize heat loss, close the air control valve when the swim spa is not in use.


5. Press the Jets 1 button a second time to turn off the pump.
6. Press the Jets 2 button. You should hear the pump turn on, see water circulating, and see the Jets2 icon spin on the information display area.
7. Press the Jets 2 button again to turn off the pump.
8. Press the AUX button. You should hear Pump 3 turn on, see water moving, and see the AUX icon spin on the information display area.
9. Press the AUX button again to turn off Pump 3.

Operational Checks: All Models (Spa Side)

 **Caution:** Do not turn on any pump until your swim spa is properly filled with water. Running any pump without water in your swim spa can cause IMMEDIATE damage, which is not covered under warranty!


By now you have rechecked your unit's mechanical connections and filled it with water to the recommended level). Turn on power to the swim spa at the main breaker panel and test the operation of the electrical system. If you encounter a problem, please reference the troubleshooting guide on page 45.

1. Turn on the breaker and test the operation of the Ground-Fault Circuit Interrupter (or RCD) breaker by pushing the small button. This should automatically trip the swim spa's circuit breaker.

 **DANGER:** If this breaker does not trip, immediately call your electrician.
Do not use your swim spa!

Only if pushing this button successfully trips this circuit breaker should you reset this breaker and proceed to the next step.

2. Go to the topside control panel. The spa side of the unit first goes into a 6-minute Priming mode, indicated by "Pr" message. Water heating is disabled during priming. To exit Priming mode and begin normal swim spa operation, press "WARM" (or the up arrow) or "COOL" (or the down arrow).
3. Press the "JETS" button. You should hear pump 1 turn on, see water circulating, and see the Jets light illuminate on the panel.
4. Press the JETS button again. You should hear the pump turn on a higher speed.

 **Caution:** If water is not flowing from the jets after 2 minutes, turn the power off at the main panel and bleed air from the system (see page 43-44). Turn the power on again. Sometimes momentarily turning the pump off/on will help to prime. Do this only 4 times.

5. If the water is running smoothly through the lines, open the air control valve to the jets and you should see an increase in jet pressure. Check and adjust the water and airflow of every jet if necessary.

Each hydrotherapy jet in the spa side can be adjusted for massage intensity and directional flow. Turn the outer jet dial counterclockwise to increase the water volume and clockwise to turn it off. Pivot the angle of a jet to achieve an optimal massage.

An air mixture intensifies the level of your massage. Turn the air control valve counterclockwise to increase the air mixture and clockwise to turn it off.

To minimize heat loss, close the air control valve when the swim spa is not in use.

6. Press the JETS button a third time to turn off pump 1.

Note: The pump remains on if filtration or heat is needed.


7. Press the LIGHT button to turn on all lights. Verify that the LED light system is on. Press the LIGHT button multiple times to cycle through the many available color patterns. Press the LIGHT button again to turn off the LED light system.

Water Balancing

Note: Perform water balancing weekly and whenever you change water (or when the swim spa is first filled) to ensure proper water condition.

Once your swim spa reaches 95°F, use our *Bromine Test Strips* (not included) and add the necessary chemicals (not included) to stabilize your water chemistry. Turn Pump 1 on high speed before starting your tests to distribute chemicals evenly. Wait 5 minutes between measurements to allow added chemicals to mix thoroughly.

Important: Test the condition of your water in the following order:

1. **Total Alkalinity** (80-120 ppm) – Use our *Alkalinity Increaser* to raise total alkalinity and *Alkalinity Decreaser* to lower it. Low total alkalinity has little buffering capacity making the pH erratic. High total alkalinity has too much buffering capacity making the pH difficult to change.
2. **pH** (7.2-7.8) – Use *Spa Up* to raise the pH level and *Spa Down* to lower it.
 **Caution:** A pH lower than 7.2 can harm the metal surfaces of your swim spa and irritate your eyes and skin. A pH higher than 7.8 can create calcium deposits (scaling) on the shell and equipment.
3. **Hardness** (150-400 ppm) – Add *Increase Calcium* until the proper level is achieved. Unfortunately, there is no practical way to lower the native water hardness other than using a different source of water when filling your swim spa. Low hardness causes equipment corrosion and water foaming.
4. **Sanitizer** (3.0-5.0 ppm) – Use our *Deluxe Bromine Kit* to add Bromine until the proper level is achieved. Neglected swim spa water can breed bacteria and algae causing bather discomfort, skin rashes, and/or irritation.

Test	Range
Total Alkalinity	80-120 ppm
pH	7.2-7.8
Calcium Hardness	150-400 ppm
Sanitizer	3.0-5.0 ppm

Table 2 - Recommended Ranges for Balanced Water

Topside Controls & Operation

Swimmer's Edge 18, Dual Zone 18, Swimmer 18 & Swimmer 14 - Spa Side (MVP 260 Domestic)

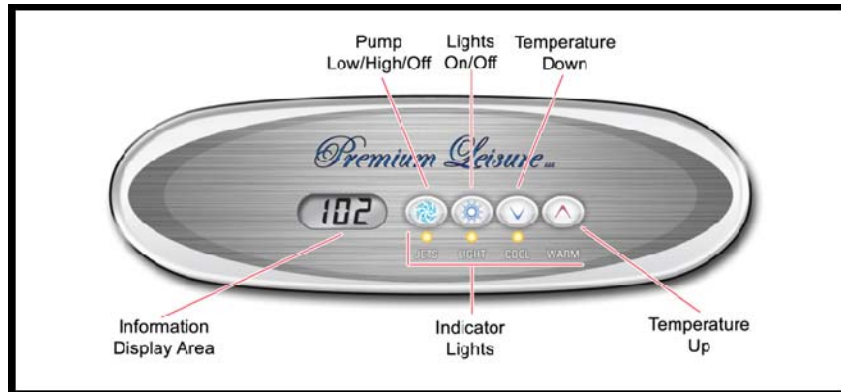


Figure 21– Topside Callouts for MVP 260 Controls

Initial Start Up

When your swim spa is first actuated, it will go into Priming mode, indicated by "Pr." The priming mode will last for less than five minutes. Press "WARM" or "COOL" to skip Priming Mode and then the swim spa will begin to heat and maintain the temperature in "Standard Mode."

Warm/Cool Buttons (Set Temperatures between 80°F - 104°F / 26°C - 40°C)

The startup temperature is set at 100°F/37°C. The last measured temperature is constantly displayed on the LCD and is current only when the pump has been running for at least two minutes. To **display** the set temperature, press the "WARM" or "COOL" button once. To **change** the set temperature, press the "WARM" or "COOL" button a second time before the LCD stops flashing. Each press of the "WARM" or "COOL" button will continue to raise/lower the set temperature. After three seconds, the LCD will stop flashing and display the current swim spa temperature.

Jets Button

Press the "JETS" button once to activate the low speed of Pump 1. Press it a second time to activate the high speed of Pump 1. Press it a third time to turn off Pump 1. If left running, the high speed of Pump 1 automatically will turn off after 15 minutes and the low speed of Pump 1 automatically will turn off after 4 hours.

The low speed of Pump 1 may be active for at least two minutes every half hour to detect the swim spa temperature and then to heat to the set temperature if

needed (depending on mode). When the low speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be activated.

Light

Press the "LIGHT" button once to turn on your swim spa lights. Press the LIGHT button multiple times to cycle through the many available color patterns. Press the LIGHT button again to turn off the LED light system. If left on, the lights automatically turn off after 4 hours.

Mode

Your swim spa operating mode is changed by first pressing the "WARM" or "COLD" button, then pressing the "LIGHT" button.

- **Standard Mode** is programmed to constantly maintain the desired temperature. "St" will be displayed momentarily when you switch into standard mode.
- **Economy Mode** heats the spa to the set temperature *only* during filter cycles. "Ec" will display solid when temperature is not current and will alternate with temperature when temperature is current.
- **Sleep Mode** heats the swim spa to within 20°F/10°C of the set temperature *only* during filter cycles. "SL" will display solid when temperature is not current and will alternate with temperature when temperature is current.

Preset Filter Cycles

The first filter cycle begins six minutes after the swim spa is energized. The second filter cycle begins 12 hours later. Filter duration is programmable for 2, 4, 6 or 8 hours – or for continuous filtration indicated by "FC". The default filter time is two hours.

To program filter cycles, press "WARM" or "COOL" and then "JETS." Press "WARM" or "COOL" again to adjust to your desired setting. Press "JETS" again to exit filter cycle programming.

The low speed of the 2-speed pump runs during filtration and the ozonator will be enabled.

Smart Winter Mode



If the system (sensor located inside heater) detects ambient conditions below 44°F/6.7°C, it automatically enters the Smart Winter Mode for period of four minutes after it detects the swim spa temperature has risen to 45°F/7.2°C.

Swimmer's Edge 18, Dual Zone 18, Swimmer 18 and Swimmer 14 - Spa Side (Export VL600S)

The topside control panel operates and programs your swim spa. Basic button functions are described next.

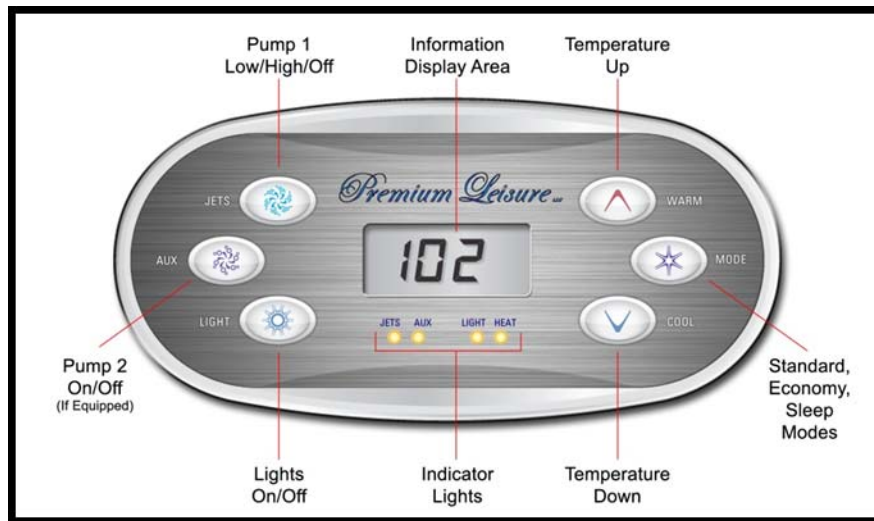


Figure 22 – Topside Callouts for VL600S Controls

Initial Start Up

When your swim spa is first actuated, it will go into Priming mode, indicated by "Pr." The priming mode will last for less than five minutes. Press "WARM" or "COOL" to skip Priming Mode and then the swim spa will begin to heat and maintain the temperature in "Standard Mode."

Warm/Cool Buttons (Set Temperatures between 80°F - 104°F / 26°C - 40°C)

The startup temperature is set at 100°F/37°C. The last measured temperature is constantly displayed on the LCD and is current only when the pump has been running for at least two minutes. To **display** the set temperature, press the "WARM" or "COOL" button once. To **change** the set temperature, press the "WARM" or "COOL" button a second time before the LCD stops flashing. Each press of the "WARM" or "COOL" button will continue to raise/lower the set temperature. After three seconds, the LCD will stop flashing and display the current swim spa temperature.

Jets Button

Press the "JETS" button once to activate the low speed of Pump 1. Press it a second time to activate the high speed of Pump 1. Press it a third time to turn off Pump 1. If left running, the high speed of Pump 1 automatically will turn off after

15 minutes and the low speed of Pump 1 automatically will turn off after 4 hours.

The low speed of Pump 1 runs when the “AUX” Pump 2 (if equipped) is on. It may also active for at least two minutes every half hour to detect the swim spa temperature and then to heat to the set temperature if needed (depending on mode). When the low speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be activated.

Aux Button

Press the “AUX” button once to turn on Pump 2 (if equipped). Press it a second time to turn off Pump 2. If left running, Pump 2 automatically will turn off after 15 minutes.

Light

Press the “LIGHT” button once to turn on your swim spa lights. Press the LIGHT button multiple times to cycle through the many available color patterns. Press the LIGHT button again to turn off the LED light system. If left on, the lights automatically turn off after 4 hours.

Mode

Your swim spa operating mode is changed by first pressing the “WARM” or “COLD” button, then pressing the “MODE” button.

- **Standard Mode** is programmed to constantly maintain the desired temperature. “*Std*” will be displayed momentarily when you switch into standard mode.
- **Economy Mode** heats the spa to the set temperature *only* during filter cycles. “*Ecn*” will display solid when temperature is not current and will alternate with temperature when temperature is current.
- **Sleep Mode** heats the swim spa to within 20°F/10°C of the set temperature *only* during filter cycles. “*SLP*” will display solid when temperature is not current and will alternate with temperature when temperature is current.

Preset Filter Cycles

The first filter cycle begins six minutes after the swim spa is energized. The second filter cycle begins 12 hours later. Filter duration is programmable for 2, 4, 6 or 8 hours – or for continuous filtration indicated by “*FILC*.” The default filter time is two hours.

To program filter cycles, press “WARM” or “COOL” and then “JETS.” Press “WARM” or “COOL” again to adjust to your desired setting. Press “JETS” again to exit filter cycle programming.

The low speed of the 2-speed pump runs during filtration and the ozonator will be enabled.

Smart Winter Mode



If the system (sensor located inside heater) detects ambient conditions below 44°F/6.7°C, it automatically enters the Smart Winter Mode for period of four minutes after it detects the swim spa temperature has risen to 45°F/7.2°C.

Programming Summary

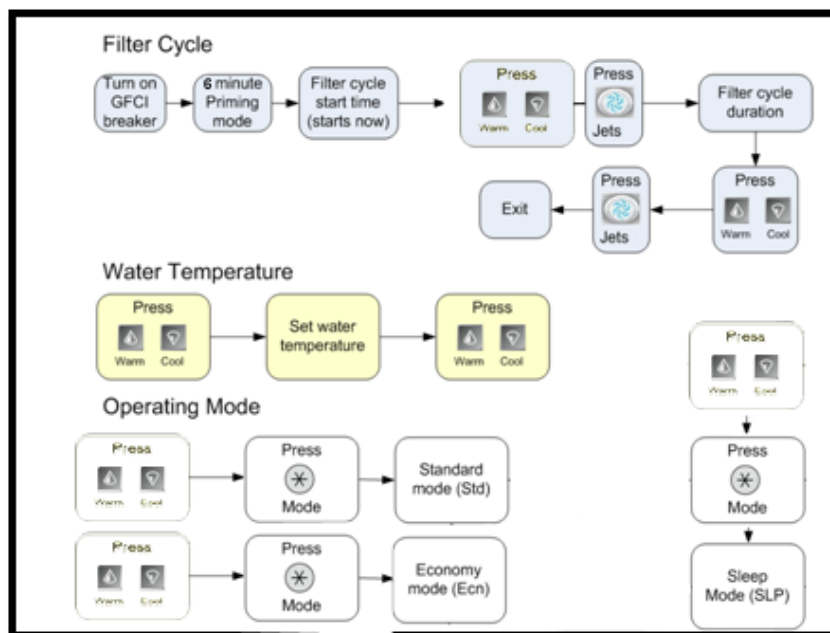


Figure 24 – VL600S Programming Summary

NOTE FOR ALL DOMESTIC SWIM SIDE (MVP 260) TOPSIDE CONTROLS:

- Follow the above steps to set the filter cycle and water temperature.
- To set the operating modes, follow the steps above *except* instead of pressing "Mode" – press "LIGHT."


Dual Zone 18, Swimmer 18 and Swimmer 14 - Swim Side (ML700 Domestic and Export)




Figure 23 – ML700 Topside Control Panel

Control Panel Legend

 Heat icon: Indicates different stages of heating

 Jets icon: Spins fast on high speed; spins slow on low speed

 Light icon: Light is on/off

F1, F2 indicators: Filter cycle 1 or 2 will be illuminated

PL, TL indicators: Locking Panel or Set Temperature will be illuminated

Temperature Up/Down Buttons

Press the Arrow Up or Arrow Down buttons once to display the set temperature. Each time either button is pressed again, the set temperature will increase or decrease depending on which button is pressed. After three seconds, the LCD display will automatically display the current temperature the swim spa water.

Mode Button

This button is used to switch between **standard**, **economy** and **sleep** modes. Press "Mode" To enter mode programming, press "Cool" through to desired mode (LCD flashes until confirmed), then press "Mode" to confirm selection.

Standard mode heats the spa water to the set temperature. The "Standard" icon will display until the mode is changed.

Economy mode heats the spa water to the set temperature only during filter cycles. The "Economy" icon will display until mode is changed. Pressing "Jets 1" button while in Economy mode puts the spa in "Standard-In-Economy mode," which operates the same as Standard mode, and then reverts to Economy mode automatically after one hour. During this time, a press of the "Mode" button will revert to Economy mode immediately. Because your swim spa is equipped with a 24-hour circulation pump the filtration cycle program operates only on a limited basis. At the start of each filter cycle, Pumps 1, 2 and 3 will run for five minutes

to prevent the spa water from becoming stagnant in the plumbing and air lines and improve skimming action to remove debris and suspensions from the water surface. In addition, the programmable filtration cycle (start/end) times of each cycle will designate the start and end time where the heater is allowed to operate in economy and sleep modes. Sleep mode heats the spa water to within 20°F (11°C) of the set temperature only during filter cycles. The "Sleep" icon will display until mode is changed.

Standby Mode: Pressing "Warm Arrow Up" or "Cool Arrow Down" then "Jets2" button will turn off all spa functions temporarily. This is helpful when changing filter cartridges. Press any button to exit Standby mode.

Jets 1 Button

Press the "Jets 1" button once to turn pump 1 on or off. If left running, the jet turns off after 15 minutes.

Jets 2 Button

Press the "Jets 2" button once to turn pump 2 on or off. If left running, the pump 2 turns off after 15 minutes.

Aux Button (Jets 3)

Press the "Aux" button once to turn pump 3 on or off. If left running, the pump turns off after 15 minutes.

Light Button (If Equipped)

Press the "Light" button to turn the spa light system on and off. The LED light system is preprogrammed with an assortment of lighting effects. When you turn Light off and turn on again within five (5) seconds, it advances to the next effect. When you turn Light off for more than five (5) seconds, it remembers that last effect you selected. The next time you turn on the Light will display the same effect. The Light will automatically turn off after approximately four (4) hours.

Time Button

Once your spa has been properly connected the first time the "Time" icon appearing on the screen and flashing. Press "Time" pad, then "Mode." Select the hour by pressing "Warm" or "Cool" (each press changes time by 1 hour). Press "Mode" pad again and select minutes by pressing "Warm" or "Cool" (each press changes time by 1 minute). Press "Mode" pad to exit the time setting procedure and enter the optional filter cycle programming. Press "Time" pad to exit programming. The Time setting on 2000 systems is not preserved in the event of power loss; time will have to reprogram upon each power up.

Inverting the Information Display Area Readout

Press "Warm Arrow Up" or "Cool Arrow Down" button, followed by the "Aux" button to change the numbers in the display to read upside down.

Circulation Pump Operation

Your system is equipped with a circulation pump. The circulation pump provides 24-hour continuous water circulation and filtration. It works like this: a dedicated, energy efficient circulation pump constantly draws water from the spa, runs it through the filter and the heater (heating only when necessary), then back to the spa. The ozone output is on whenever the circulation pump is running except when the jet pump(s) or blower is (are) activated by the user. The ozone generator will turn off for one (1) hour any time a function button (Jets 1, Jets 2 or Aux.) is pressed. The Circulation pump will turn off for 30 minutes at a time when the water temperature reaches 3°F (1.5°C) above the set temperature (most likely this will happen in a very hot climate or during summer).

Heater Operation

Your spa is equipped with an electrical heater. By setting your thermostat to the desired temperature, your heater will automatically turn on and off as needed. The temperature set point (set temperature) can be adjusted from 80°F to 104°F/26°C-40°C. To raise the set temperature press the "Warm Arrow Up" button. To lower the set temperature, press the "Cool Arrow Down" button. The start up temperature is set at 100°F/37.5°C. The last measured temperature is constantly displayed on the LCD. In Economy mode the heater heats the spa water only during filter cycles. In sleep mode the heater heats the spa water to within 20°F (11°C) of set temperature only during filter cycles.

Filter Cycle Programming - Optional

As explained above in a 24-hour circulation pump system the filtration cycle program operates only on a limited basis. At the start of each filter cycle, pumps 1, 2 and 3 will run for five minutes to prevent the spa water from becoming stagnant in the plumbing and air lines and improve skimming action. In addition, the programmable filtration cycle (start/end) times of each cycle will designate the start and end time where the heater is allowed to operate in economy and sleep modes. The default filter cycles are as follows:

The first filter cycle is automatically activated at 8 a.m. and operates the pump until 10 a.m. The filter indicator icon will light when filter 1 cycle is running.

The second filter cycle is automatically activated at 8 p.m. and operates the pump until 10 p.m.. The filter indicator icon will light when filter 2 cycle is running.

Time of day settings are not preserved in the event of power loss; time will have to be reprogrammed upon each power up.

Spa settings (temperature set point, filter cycles) are preserved.

Ozonator System

Your spa is equipped with an ozone purification system. You will find that your spa water stays fresh and clear with significantly less chemical sanitizer usage. You will be able to go longer between complete spa draining. The ozone generator operates in conjunction with the circulation pump. Ozone generator is on any time the circulation pump is running. Ozone generator will turn off for one (1) hour any time a function button (Jets 1, Jets 2, Aux) is pressed.

Freeze Protection

If the temperature sensor detects a temperature drop to 44°F (6.7°C) within the heater, then the pump automatically activates to provide freeze protection. The equipment stays on until four (4) minutes after the sensors detect that the spa water temperature has risen to 45°F (7.2°C) or higher. In colder climates, an optional additional freeze sensor may be added to protect against freeze condition that may not be sensed by the standard sensors. Auxiliary Freeze sensor protection acts similarly except with the temperature thresholds determined by the switch and without a four (4) minute delay in turnoff. See your dealer for details.

Locking the Panel

Press "Time", "Jets 1" then "Warm Arrow Up" buttons within three (3) seconds. When locked, the "PL" indicator light will light. All buttons are frozen except the "Time" button. To unlock the panel, press "Time", "Jets 1" then "Cool Arrow Down."

Locking the Temperature Setting

Press "Warm Arrow Up" or "Cool Arrow Down" then "Time," "Jets 1," and "Warm Arrow Up" buttons within three (3) seconds to activate lock. When locked, the "TL" indicator light will light when the set temperature is locked. To unlock the set temperature, press "Warm Arrow Up" or "Cool Arrow Down" then "Time", "Jets 1," and "Cool Arrow Down."

Swimmer's Edge 18 - Swim Side (Turbine Propeller, All Units)

When you are ready to swim in the Swimmer's Edge 18 Swim Spa, press the "ON/OFF" button on the waterproof touchpad panel located on swim spa lip. Your digital readout will default to the No. 50. Increase to your desired swim speed by pushing the "FAST" arrow up button. A "220" readout is approximately 3 miles per hour and should provide most people with a comfortable workout. A "300+" readout is recommended for advanced swimmers. Decrease the speed of the unit by pressing the "SLOW" arrow down button.

The digital readout numbers range from 50-999. They do not represent anything specific, but rather they provide each swimmer a benchmark to enjoy the same swim experience every time.

Press the "ON/OFF" button a second time to turn off the propeller. If you do not turn the propeller off, it will automatically turn off after 30 minutes.

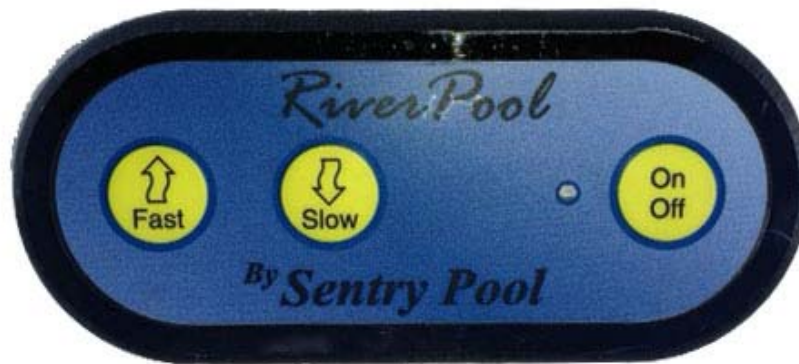


Figure 25 – Touchpad for Hydraulic Turbine Propeller

Stereo System

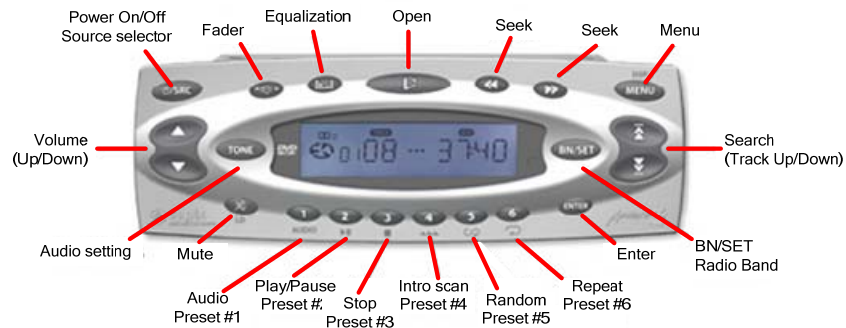


Figure 26 – Stereo Callouts

The built-in AM/FM/Weather Band stereo CD system (if equipped) plays CDs and MP3s.

Playing a CD

1. Press the **POWER** button on the stereo
2. Press the **OPEN** button on the top of the stereo
3. Insert a CD
4. Press the **CD** button on the remote control
5. Press **PLAY** on the remote control
6. Press the **Previous/Next** button on the remote control to go to the previous/next track

Listening to the Radio

1. Press the **POWER** button on the stereo
2. Press the **Stereo** button on the top of the remote control
3. Press the **Channel Up/Down** button on the remote control to scan for the next/previous station
4. Press the **Previous/Next** button on the remote control to go to the previous/next pre-programmed station

For complete information on the audio capabilities and features, see the manufacturer's manuals (enclosed).

Using the Built-in MP3 Docking Station and Speakers



Figure 27 – Optional MP3 Docking Station with Jack

If equipped, simply plug in your MP3 player, push play and select your desired volume. Your favorite music is amplified through a built-in subwoofer (underneath your swim spa) and is heard through the speakers. For safety reasons, rest your MP3 player inside the docking station and slide the plastic cover down to protect from water splashing. Do not attempt to handle your MP3 player while swimming in your swim spa.

Cover

Place the insulated cover on your swim spa. Keeping the cover in place anytime the swim spa is not in use reduces the heating time and minimizes operating costs. The time required for initial heat-up varies depending on the starting water temperature, ambient temperature, and the capacity of your swim spa.

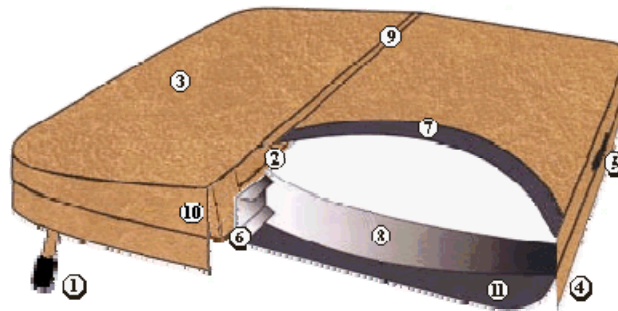


Figure 28 - Cover Callouts

- | | |
|--------------------------|--------------------------------|
| 1. Lock-down tab | 3. Marine-grade cover material |
| 2. Double-stitched seams | 4. Edge overlap material |

- | | |
|-----------------------------|-----------------------------------|
| 5. Grip handle | 9. Polystyrene seam stoppers |
| 6. Aluminum channel | 10. Reinforced edges |
| 7. Heat-sealed insulation | 11. Breathable underside material |
| 8. Chemical-resistant vapor | |

Use the lock-down tabs to prevent access to the swim spa by children and to prevent the wind from lifting the cover off.



**Figure 29 -
Lockdown Tabs**

Sitting, standing, and snow buildup on the cover will break the cover. Dragging it over rough surfaces will scuff or tear the fabric. Always lift by the handles or use the optional cover lift device.



Figure 30 – Swim Spa Cover Sections for “18” Models

Frequently Asked Questions

Who do I call for warranty information or service?

Call our customer care center between 8 a.m. and 5 p.m. EST Monday through Friday at 727.573.9611. Our representatives are eager to assist or you can get parts and information online at www.HotTubParts.com.

How do I bleed air from my system?

When draining and refilling your swim spa, the pump may become air locked. Air-locked pumps stop water from flowing in your swim spa and is easily resolved by bleeding off the trapped air. To do this:

1. Turn off the GFCI breaker
2. Open the access panel below the topside control panel

3. Loosen a heater union until you hear the trapped air escape
4. Once water drips out in a continuous stream, hand tighten the union until the water stops leaking
5. Loosen the discharge union on Pump 2 (if equipped)
6. Once water drips out in a continuous stream, hand tighten the union until the water stops leaking
7. Turn on all pumps to make sure that there are no leaks
8. Put the access panels back on
9. Turn on the GFCI breaker



Figure 31 - Bleeding Air

What happens when my warranty expires?

Premium Leisure will continue to provide service for your swim spa after your warranty has expired via our customer care center at 727.573.9611.

Where can I get more Chemicals or other accessories?

Visit www.hottubparts.com or call 877.530.PARTS.

How should I clean my swim spa?

Use non-sudsing cleaners and non-oily polishes (see page 50). Our Citra Bright Spray Cleaner and our Tub Rub cleaning pad quickly removes scum lines and helps restore your shell's original beauty. Rinse all filters, covers, pillows, and surfaces thoroughly with warm tap water. Our Filter Clean concentrated cleanser is a safe, effective way to clean and re-use your filters and our Jet Clean plumbing cleanser cleans the inside of all plumbing in your swim spa. Call 727.573.9611 to order these easy-to-use cleaning products.

How often should I drain my swim spa?

You should drain and refill your swim spa every 6-12 months depending on usage. Every other time you drain and refill, you should also replace the filters and wipe down the swim spa (see pages 50).

How do I adjust my spa jets?

Simply turn the jets counterclockwise to open and clockwise to close. Be careful not to overturn the jets, as damage can occur.

⚠ Caution: Do not turn off too many jets at the same time. This can create backflow and possible damage to your swim spa! Do not attempt to adjust the oval jets on the swim side of the unit.

Are the spa jets removable? Interchangeable? Replaceable?

Most spa jets are made removable and adjustable for customized hydrotherapy. Do not attempt to remove the oval jets on the swim side of the unit.

Troubleshooting

If a problem arises, you can check this list for a quick solution. If this does not resolve your problem, please call our customer care center, at 727.573.9611. Additional information is also available at www.PremiumLeisure.com. You will need your serial number to access this site.

Important – Most problems can be quickly resolved by resetting the GFCI breaker. Try this first before proceeding.

Spa Side Troubleshooting

PROBLEM	CAUSE	SOLUTION
Breaker trips	Wiring error	Load Neutral wire not connected to GFCI (connected to Neutral bus)
	Wrong GFCI	GFCI breaker is wrong size
	Ozonator wet	Remove tube from ozonator and allow 2 days to dry out
Foamy water	Soaps, skin oils, or undissolved sanitizer particles	Close the air control valves and allow filtration cycle to run Add defoamer Drain and clean your swim spa Clean or change filters Rinse all bathing suits before bathing
Leak	Loose connection	Check and hand-tighten unions at heater & pumps, or clamps on jets
	Drain open	Close drain valve or replace cap
Light doesn't work	LED burnt out	Replace bulb
	Loose wire	Check wiring harness to LED
	Loose plug	Reseat J20 plug on swim spa pack
Low/no jet pressure	Air lock	Bleed air from the system (page 43-44)
	Dirty filter	Check and clean or replace filter
	Closed jets	Open all jets by turning CCW
	Closed valves	Open all T-handle shutoff valves on heater and pumps
	ACV open	Close air control valves
	Low water	Fill swim spa 1" above all jets

PROBLEM	CAUSE	SOLUTION
Moved my swim spa and now it doesn't work	Wiring error at GFCI	Check Neutral wiring of GFCI (see diagrams on pages 10-22)
	No power to swim spa	Reset circuit breakers on GFCI panel and main circuit breaker panel
Nothing works	Breaker has tripped	Check and reset breaker. If problem persists, check for loose electrical connections. Check for Neutral wiring error at GFCI.
	Fuse blown	Check for blown fuses inside of spa pack.
Pump not running	No power to swim spa	Reset circuit breakers on GFCI panel and main circuit breaker panel
Water does not flow	Air lock	Bleed air from the system (page 43-44)
	Closed jets	Open all jets by turning counterclockwise
Water too hot	ACV open	Close air control valves
	High set temperature	Turn down set temperature on topside control panel
	High ambient temperature	Remove the cover
Water will not heat	Thermostat is set too low	Check and reset to desired temperature
	Air open	Close air control valve
	Dirty filter	Check and clean filter
	Blown fuse	Check and replace fuse
	Slide valve closed	Check and open all valves
	Cover off	Put the cover back on
	Swim spa in Economy mode	Press the Standby button and take out of Economy

Common Error Codes:

MESSAGE	MEANING	ACTION REQUIRED
<i>(none)</i>	No message on display. Power has been cut off to swim spa.	The control panel is disabled until power returns. Swim spa settings are preserved.
OHH HH	The swim spa has shut down from high heat detection. One of the sensors detected 118°F (48°C) at the heater.	Do not enter the water. Remove the cover and allow the water to cool. Once cool, push any button. If the swim spa does not reset, turn off the GFCI and call service.
OHS OH	The swim spa has overheated and shut down. One of the sensors detected that the swim spa water is 110°F (43°C).	Do not enter the water. Remove the cover and allow the water to cool. At 107°F (42°C), the swim spa resets automatically. If the swim spa does not reset, turn off the GFCI and call service.

MESSAGE	MEANING	ACTION REQUIRED
ICE IC	Potential freeze condition detected (Ice)	No action required. The pump will automatically operate regardless of the swim spa status.
SnA SA	Sensor A is not working correctly. Swim spa is shut down.	Check the sensor "A" plug connection to circuit board. The problem may appear temporarily in an overheat situation and disappear when the heater cools. If the problem persists, contact service.
SnB SB	Sensor B is not working correctly. Swim spa is shut down.	Check the sensor "B" plug connection to circuit board. The problem may appear temporarily in an overheat situation and disappear when the heater cools. If the problem persists, contact service.
SnS Sn	Sensors are out of balance.	If this alternates with the temperature, it may be temporary. If the display shows only this message (periodically blinking), the swim spa is shut down. If the problem persists, contact service.
HFL HL	A substantial difference between sensors was detected (possible flow problem).	Check water level in swim spa and add water if necessary. Be sure that slide-valves are open. Make sure the pump is primed and has power. If the problem persists, contact service.
LF	<i>Low Flow</i> – persistent problem. Displays after the fifth occurrence of the "HL" message within 24 hours. Heater shuts down but other swim spa functions run normally.	Heating ability of the swim spa will not reset automatically; press any button to reset.
dr	Inadequate water, poor flow, or air bubbles detected in the heater. Swim spa is shut down for 15 minutes.	Check the water level and add water if necessary. Be sure that slide-valves are open. Make sure the pump is primed and has power. Press any button to reset (automatically reset within 15 minutes). If the problem persists, contact service.
drY dy	Inadequate water detected in heater. Displays on third occurrence of "dr" message. Swim spa is shut down.	Check water level in swim spa. Add water if necessary. Be sure that slide-valves are open. Make sure the pump is primed and has power. Press any button to reset.

MESSAGE	MEANING	ACTION REQUIRED
Pr	When the swim spa is first activated, it goes into Priming mode.	The Priming mode runs for up to four minutes and then the swim spa begins to heat and maintain the water temperature in Standard mode.
-- F	Temperature unknown	After the pump has been running for two minutes, the temperature will be displayed.
-- C	Temperature unknown	After the pump runs for two minutes, the temperature displays
---	Temperature not current	The swim spa is in either Economy or Sleep modes and the pump has not run for a while. To view the current temperature, switch to Standard mode or operate Jets 1 for at least one minute.
SbY	Swim spa is in standby mode	Press any button except Jets 1 to leave Standby mode.

Maintenance and Care

Important – The warranty on your swim spa and equipment depends on proper sanitation (see page 50). In addition, the following maintenance procedures must be followed periodically.

Cabinets

Your cabinet is made from a polymer that combines the durability of plastic with the beauty of simulated wood. To clean the cabinet, a mild soap and water solution easily removes residue.

Cover

The 5-inch thick tapered cover on your swim spa is made from a weatherproof marine-grade vinyl. It comes in three pieces, two that fold in half and one small section for the middle. See page 42 for cover installation information. Your cover will last much longer if you heed the following suggestions:

- 1) Don't drag the cover on the ground; wearing of the vinyl could easily develop into a tear.
- 2) The insulating foam in your cover is not designed to hold the weight of a person or an animal.

Important – Cracked foam in the cover is not covered under warranty! Do not stand on it.

- 3) Occasionally clean the inside of your cover with our special All Purpose Cleaner rinsed with warm water. (Using soap or vinyl cleaners on the inside of your cover causes foamy water.) Call our order line at 727.573.9611 to order our All Purpose Cleaner.

- 4) Our special Vinyl Cover Cleaner applied to the outside of the cover and stitching once yearly will keep your cover looking better longer. Call our order line at 727.573.9611 to order our special Vinyl Cover Cleaner.
- 5) Do not lift the cover by the safety straps, they are made to secure the tub to the cabinet and may tear.

Draining and Refilling

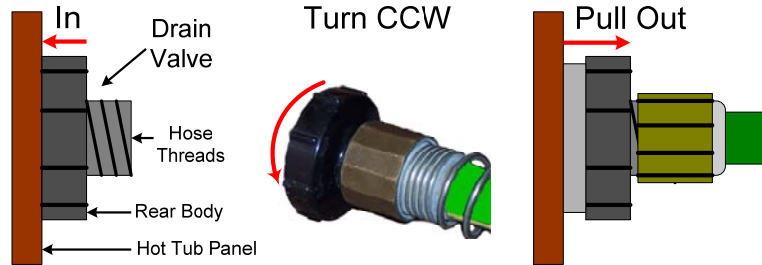


Figure 32 - Drain Operation

- 1) Turn off the GFCI breaker.
- 2) Remove swim spa cover and allow water to cool down.
- 3) Select a safe, suitable drainage area capable of safely assimilating approximately 2,000 gallons of water (7,571 liters) that may contain unsanitary contaminants and chemical residue that could cause harm to plants or grass.
- 4) Locate drain valve at base of the swim spa. Hold the rear body to prevent it from turning, then loosen and remove the front cap.
- 5) Attach a garden hose to the exposed threads and route the hose downhill to your drainage area.
- 6) Twist the drain fitting 1/3 turn counterclockwise to unlock the drain valve and pull it outward to open completely. The water will drain by gravitational flow.
- 7) After the swim spa drains, perform steps 3-5 in reverse order to close the drain prior to refilling swim spa.
- 8) Attach the garden hose to a thoroughly-flushed pre-filter (not included, rinsed of all residual sediment) and refill your swim spa through the filtration canister.
- 9) After refilling, turn on the GFCI breaker to the swim spa.

If the pump runs but no water flows, see page 43-44 to see how to bleed air from the system.

Filters

The filters in your swim spa should be removed and cleaned every 2 weeks with our special Filter Clean concentrated cleanser and typically replaced every 4-6 months (depending upon use). You can clean your filters with the water pressure from the end of a garden hose then rinsed with warm water. This ensures that the water is being filtered properly.

DO NOT USE BLEACH. We recommend having replacement filters on hand that

can be swapped between cleanings. Doing so enables you to quickly exchange the dirty filters with clean ones and immediately start your swim spa again. Call our order line at 727.573.9611 to order replacement filters and our special Filter Clean concentrated cleanser.

Spa Jets

Remove and clean the spa jets as needed using our special our Jet Clean plumbing cleanser, water, and a cloth or soft-bristled brush. Call our order line at 727.573.9611 to order our special our Jet Clean plumbing cleanser.

Light

Drain the swim spa and clean the light lens as needed using an optical cloth and an eyewear cleaning product specifically designed not to scratch optical surfaces. If the back side of the lens is also dirty remove the rear panel, remove the light from the holder, and clean in this same manner.

Pillows

Remove and clean the headrest pillows as needed using our Citra Bright Spray Cleaner and our Tub Rub cleaning pad and rinsed thoroughly with warm water. Call our order line at 727.573.9611 to order our Citra Bright Spray Cleaner and our Tub Rub cleaning pad.

Sanitation

Sanitation level is influenced by two factors:

1. Filter Cycle (filtration) time
2. How much you use your swim spa each week

If your water chemistry and water clarity are all proper and your sanitation level is still too low/high, you can adjust the sanitation intensity up/down by adding more/less sanitizer a little at a time and testing the water again after two days.

Shutdown / Winterizing




Your Premium Leisure swim spa is designed to operate year round. If you plan to leave your swim spa unused for long periods of time in severely cold weather, you should winterize your swim spa to avoid accidental freezing due to a power or equipment failure.

We highly recommend that you have a swim spa professional winterize and restart your swim spa.

⚠ WARNING: Damage from improperly winterizing or restarting your swim spa is not covered under your warranty. You can call our customer care center, at 727.573.9611 for recommended service organizations to assist you in properly winterizing your swim spa.

Surface

The acrylic surface of your swim spa should be cleaned with our Citra Bright Spray Cleaner and our Tub Rub cleaning pad and thoroughly rinsed with warm (not cold) water before refilling. (See also page 44.) Call our order line at 727.573.9611 to order cleaners.

 **WARNING:** NEVER use paint solvents, acids, acetone, benzene, lacquer thinner, toluene, xylene, or similar chemicals to clean your swim spa shell.

Water Management

Our chemical water purification system is a perfect match for your swim spa.

Depending on usage, the water in your swim spa should be changed every 6-12 months. Upon each change of water it is a good practice to wipe down the swim spa.

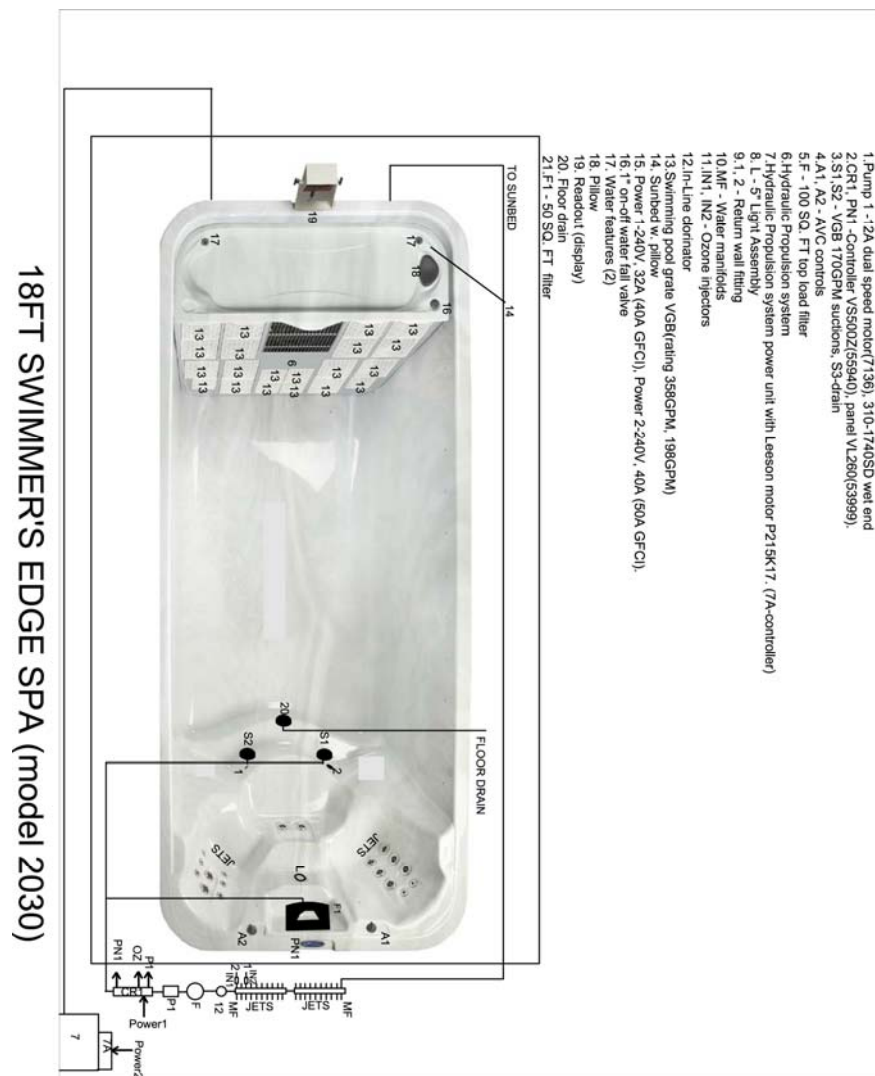
If your water quality seems improper, increasing the time the swim spa filters the water (see page 32) may clear up your problem.

Below are some answers to common water chemistry questions.

pH	It is common to have pH fluctuations after adding chemicals to your swim spa or after a party. Let your jets run and give your water time to stabilize. 9 times out of 10, your pH will come back into the 7.2-7.8 range on its own.
MILDEW on cover	Mildew usually grows in the folds and seams of your cover and then drips into your swim spa water causing cloudiness and/or odor. Clean with our special Citra Bright Spray Cleaner and then rinse the inside of your cover with clean warm water.
Foamy water	Foam typically results from soap residue on your skin and hair, or laundry detergent residue on clothing. Take a soapless shower and rinse all clothing in warm water prior to bathing.
CLEAR green or brown water	Your "source water" most likely has dissolved heavy metals. When this is the case, order our special Metal Gon metal remover. Using a pre-filter can remove these contaminants before they get into your swim spa (see page 25).
CLOUDY green water	Algae can be resolved by adding a respected brand of algaecide.
CLOUDY white water	Although a normal condition immediately after filling that dissipates after time, with stabilized water this is a visual indication that the total alkalinity or pH or both are at improper levels. Test your water weekly and maintain proper water chemistry (see page 30).
ODOR and/or CLOUDY water	If your water develops an odor and/or cloudiness, clean your cover and filters and try increasing the amount of time the swim spa filters per day by turning your filtration cycle time or duration up.
HEAVY use	After a period of heavy use, your swim spa may cloud. Shock your swim spa with 2 ounces of non chlorine shock and wait 36 hours.

Specifications

SWIMMER'S EDGE 18 (MODEL 2030)



*Specifications are subject to change without notice. For export (overseas) part numbers, please call 727.573.9611. For export (overseas) electrical rating, see the chart on page 9.

Swimmer's Edge 18 Specifications*

Dimensions	213" (541 cm) L x 89" (226 cm) W x 58"147 (cm) D
Therapy Seats	2
Water Jets	18
Capacity	2,400 USG /9,085 L
Dry Weight	2,750 Lbs/1,247 Kg
Filled Weight	22,778 Lbs/10,332 Kg
Electrical	240VAC 40A 60Hz (Swim Side) 240VAC 32A 60Hz (Spa Side)
GFCI	50A (Swim Side) and 40A (Spa Side)



Figure 33 – Swim Side of Swimmer's Edge 18



Figure 34 – Spa Side of Swimmer's Edge 18

DUAL ZONE 18 (MODEL 2022)



1. Pump 1, Pump 3-16A single speed motor(4732), 310-0180 wet end
2. Pump 2 -12A single speed motor(7135), 310-0140 wet end
3. Pump 4-12A dual speed motor(7136), 310-1740SD wet end
4. CP - 0.7A circulation pump motor(6167), wet end 310-0800
5. CR1, FN1 - Controller/FELZKM3(55965), panel ML700(52798)/P1 to P1 out, P2 to P2 out, P3 to P3 out
6. CR2, FN2 - Controller/V500Z(55940), panel VL260/P4 to P1 out.
7. S1-S8 - VGB 170GPM suction(8)
8. A1-A5 - A/C controls
9. F1, F2, F3 - 50 SQ. FT filters(3)
10. J1-J3 River jets(3)
11. L1-L3 - 5" Light Assembly(3)
12. 1, 2, 3, 4 Return wall fittings(4)
13. M1, M2 - Water manifold
14. IN1, IN2 - Ozone injectors 884(2)
15. Pillows
16. Power 1- 240V,48A(60A GFCI), Power 2- 240V, 32A(40A GFCI)

DUAL ZONE18FT SWIM SPA(model 2022)

*Specifications are subject to change without notice. For export (overseas) part numbers, please call 727.573.9611. For export (overseas) electrical rating, see the chart on page 9.

Dual Zone 18 Specifications*

Dimensions	213" (541 cm) L x 89" (226 cm) W x 58"147 (cm) D
Therapy Seats	4
Water Jets	42
Capacity	2,100 USG /7,949 L
Dry Weight	1,900 Lbs/862 Kg
Filled Weight	19,424 Lbs/8,811 Kg
Electrical	240VAC 48A 60Hz (Swim Side) 240VAC 32A 60Hz (Spa Side)
GFCI	60A (Swim Side) 40A (Spa Side)

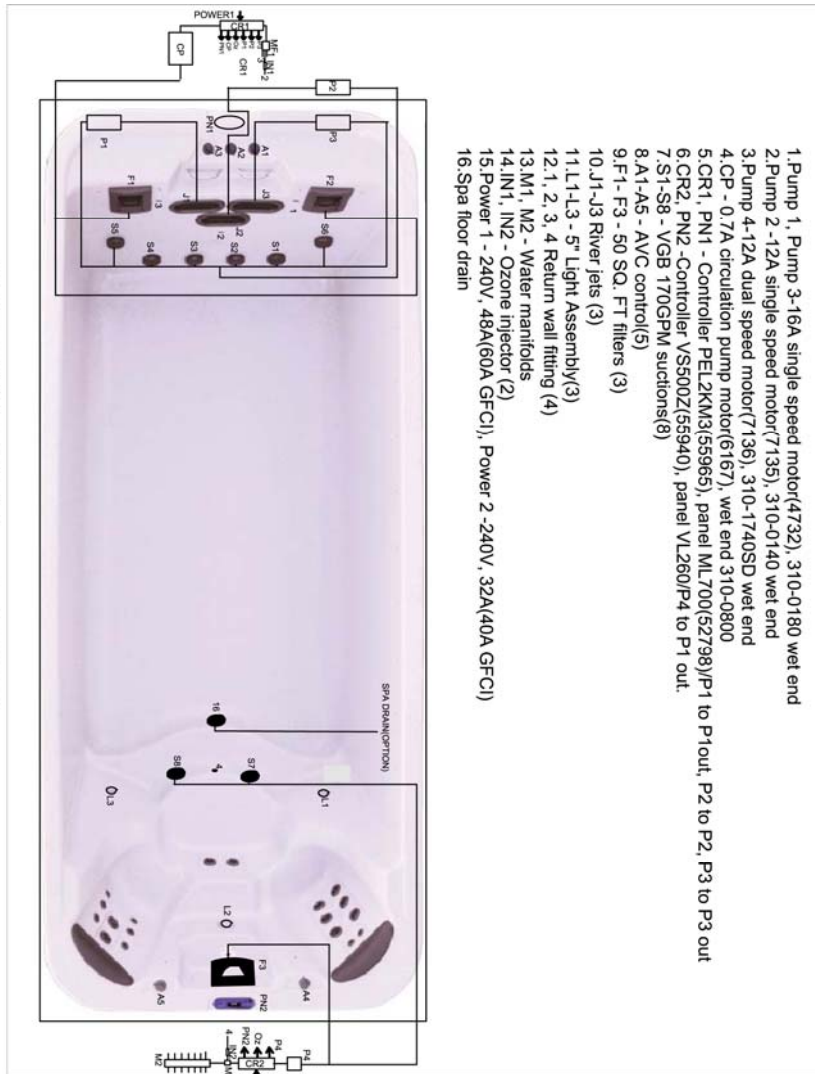


Figure 35 – Swim Side of Dual Zone 18



Figure 36 – Spa Side of Dual Zone 18

SWIMMER 18 (Model 2028)



18FT SWIM SPA(model 2028)

*Specifications are subject to change without notice. For export (overseas) part numbers, please call 727.573.9611. For export (overseas) electrical rating, see the chart on page 9.

Swimmer 18 Specifications*

Dimensions	213" (541 cm) L x 89" (226 cm) W x 58"147 (cm) D
Therapy Seats	2
Water Jets	21
Capacity	2,400 USG /9,085 L
Dry Weight	1,900 Lbs/862 Kg
Filled Weight	19,424 Lbs/8,811 Kg
Electrical	240VAC 48A 60Hz (Swim Side) 240VAC 32A 60Hz (Spa Side)
GFCI	60A (Swim Side) 40A (Spa Side)



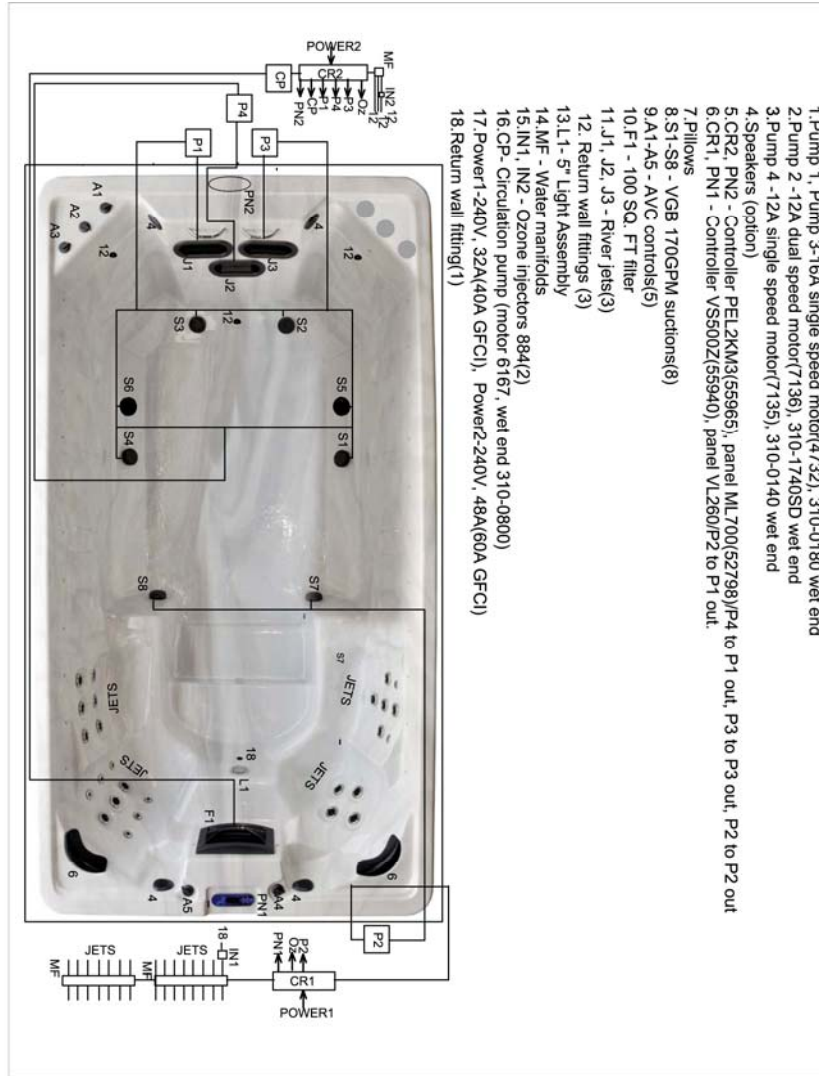
Figure 37 – Swim Side of Swimmer 18



Figure 38 – Spa Side of Swimmer 18

SWIMMER 14 (Model 2021)

14FT SWIM SPA(model 2021)



*Specifications are subject to change without notice. For export (overseas) part numbers, please call 727.573.9611. For export (overseas) electrical rating, see the chart on page 9.

Swimmer 14 Specifications*

Dimensions	170" (432 cm) L x 91" (231 cm) W x 50"127 (cm) D
Therapy Seats	3 (With Lounge) 4 (Without Lounge)
Water Jets	28 (With Lounge) 29 (Without Lounge)
Capacity	1,600 USG /6,057 L
Dry Weight	1,605 Lbs/728 Kg
Filled Weight	14,958 Lbs/6,785 Kg
Electrical	240VAC 48A 60Hz (Swim Side) 240VAC 32A 60Hz (Spa Side)
GFCI	60A (Swim Side) 40A (Spa Side)



Figure 39 – Swim Side of Swimmer 14



Figure 40 – Spa Side of Swimmer 14 (with lounge)

Warranty

Lifetime Swim Spa Structural Warranty

Premium Leisure LLC warrants the swim spa shell structure against the loss of water through the fiberglass laminate of the shell caused by defects in materials and workmanship for as long as the original purchaser owns the swim spa. Contact manufacturer if you have any questions concerning warranty issues.

Five (5) Year – Swim Spa Surface Warranty

Premium Leisure LLC Warrants the interior acrylic swim spa surface against blisters, cracks, or delaminating resulting from a defect in the acrylic surface material for a period of five (5) years from the date of purchase, based on the following formula: Suggested retail price divided by months covered (60), multiplied by months owned plus shipping = replacement cost.

Lifetime Manifold Plumbing Parts Warranty

Premium Leisure LLC warrants the plumbing manifolds, fittings, and parts to be free of defects in materials or workmanship for as long as the original purchaser owns the swim spa.

Two (2) Year – Limited Swim Spa Equipment Warranty

Premium Leisure LLC warrants the electrical equipment and components to be free of defects in materials and workmanship for a period of two (2) years on major swim spa components (electrical system, swim spa controls, motors) and two (2) years authorized field service on these items. Ninety (90) day (Parts ONLY) Limited Warranty on all optional accessory items (optional cabinets, fixtures, trim kits, skirts, CD & MP3 players, all other music and video devices, ozone, waterfall assembly, LED lighting, etc). All perishable, cosmetic or owner serviceable items, swim spa cover, light bulb, light lenses, fuses, headrests, cabinet, filters, cover-lift, swim spa drain, jet inserts, etc are warranted to be free of defects in materials and workmanship at the time of delivery. These items may be covered by a manufacturer's warranty, which may have a longer duration than this Limited Warranty. Premium Leisure LLC may serve as an agent in presenting claims under the manufacturers' warranties, but disclaims any liability there under. In the event Premium Leisure LLC provides parts to replace an alleged defective part under warranty owner will be billed for the cost thereof and credited, minus freight, upon both the defective part being returned to Premium Leisure LLC and the manufacturer of said part accepting warranty claim.

Warranty Performance

In the event of a suspected defect, under the terms of this Limited Warranty, notify manufacturer. Use all reasonable means to protect the swim spa from further damage. A service representative will provide the technical labor only, to affect the repair subject to the terms and conditions contained in this Limited Warranty. The service representative may assess reasonable travel charges. Visits to simply diagnose, troubleshoot, or inspect problems are not covered under this Limited Warranty. If we determine that repairs are not feasible due to functional defect, we reserve the right to provide a replacement part or swim spa in lieu of repair. We will replace with a part of value equal to the original purchase. In such event, owner is responsible for expenses including removal, shipping, and re-installation of the existing or replacement hot tub. The replacement swim spa or part will carry the balance of the original swim spa's warranty, if any. Either party's waiver of any breach or failure to enforce any of the terms or conditions of the warranty shall not in any way affect, limit or waive such party's right at any time to enforce strict compliance with every term and condition thereof.

Limitations and Exclusions

This Limited Warranty applies to swim spas sold after January 1, 2008. This Limited Warranty takes effect from the date the unit was originally purchased or six months from the date of manufacture whichever comes first. This Limited Warranty applies only to the Original Purchaser and terminates with any transfer of ownership. This Limited Warranty does not apply to a swim spa used for any commercial, rental, club purposes or for any swim spa used outside of the United States. The purchaser must establish the date of purchase by dated sales invoice of delivery receipt.

This Limited Warranty does not cover damage resulting from abuse, misuse, or neglect including any installation, operation, maintenance or use of the swim spa other than in accordance with the Owner's Manual of the swim spa. Damage caused by operation of the swim spa at water temperatures outside the range of 32 degrees F. and 120 degrees F., damage caused by dirty, clogged, or calcified filter cartridges, damage to the swim spa surface caused by improper use of chemicals or cleaning agents, allowing un-dissolved water sanitizing chemicals to lie on the surface, damage caused by improper pH balance or other improper water chemistry, damage caused by failure to provide even and sufficient support for the swim spa, are considered abuses and may invalidate this Limited Warranty. Damaged caused by repairs or alterations performed by anyone other than an authorized service representative is not covered. Failure caused by accidents, acts of God, nonstructural normal wear and tear, cosmetic blemishes and other causes beyond our control are excluded.

The warranty is in lieu of all other warranties, expressed or implied, including implied warranties of merchantability and fitness for a particular purpose. In no event shall manufacturer be liable for incidental or consequential damages.

DISCLAIMERS

The swim spa owner is required to provide unencumbered access to the swim spa for any warranty repair or inspection. Manufacturer shall not be liable for loss of use of swim spa or other incidental or consequential costs, expenses or damages, which may include, but are not limited to water damage, or the removal of a permanent deck or other customer fixture. Under no circumstances shall we, or any of our representatives be held liable for injury to any person or damage to any property, however arising. This warranty gives you specific legal rights and you may have other rights. No service company, or other party is authorized to change, modify, or extend the terms of this Limited Warranty in any manner whatsoever. The jurisdiction and venue for any litigation arising with respect to the transaction evidenced by this warranty shall be the Circuit Court in and for Pinellas County, Florida and Buyer hereby agrees to such jurisdiction and venue.

Premium Leisure LLC

6101 45th St. N.
St. Petersburg, FL 33714
727.573.9611

www.PremiumLeisure.com