



# Owner's Manual and Safety Instructions

## TABLE OF CONTENTS

- Your Spa and Dealer Information – *page 3*
- Important Safety Instructions – *pages 4 and 5*
- Installation Procedures – *pages 5 and 6*
- Electrical specifications – *pages 6, 7, and 8*
  - Safety Tips
- Operation Procedures – *pages 9, 10, and 11*
- Top Side Controls – HS55 and HS200 – *pages 11, 12, and 13*
  - *Software Program Information*
- Display Messages – *page 13*
- Auxiliary Control – *page 13 and 14*
- Maintenance and Care – *pages 14,15,16, and 17*
  - Maintenance Schedule
  - Cleaning the Spa Shell
  - Maintaining the Spa Cover
  - Draining Spa
  - Filters and Parts
  - Replacing Spa Light Bulb
  - Your Cabinet
  - Winterizing Your Spa
- Understand Spa Jargon – *page 18*
- Chemical Use For Your Spa – *pages 19, 20, and 21*
  - Chemical Troubleshooting Guide
- Basic Troubleshooting Procedures – *pages 21, 22, 23, and 24*
- Warranty – *page 25*

Part# 7229



Manufacturer of Fine Spas  
13055 49<sup>th</sup> ST. N.  
Clearwater, Florida 33762  
(727) 573-9611 Fax (727) 573-7758  
[www.hydrospa.com](http://www.hydrospa.com)

# YOUR **SPA** *and* DEALER

## Elites

MILLENNIUM  
SOUTH BEACH ELITE  
PALM BEACH ELITE  
ST. AUGUSTINE ELITE

## Recreation

MONTE CARLO  
SAN MARCO  
SIESTA  
VENICE

### INFORMATION CONCERNING YOUR NEW SPA

(Please take this time to fill out the information below along with your Dealer)  
Complete the Warranty Registration Card on back, and send to Hydro Spa with-in 90  
Days, or complete your Warranty Registration on-line at <http://www.hydrospa.com>

SPA MODEL:

SPA SERIAL NUMBER:  (7 DIGITS)

SPA COLOR:

PURCHASE DATE:

DEALER NAME:

DEALER ADDRESS:

DEALER CITY:  DEALER STATE:

DEALER ZIP CODE:

DEALER BUSINESS PHONE:  ( ) -



## IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, to include the following:

- **READ AND FOLLOW ALL INSTRUCTIONS!**
- **DANGER: TO REDUCE THE RISK OF INJURY**, do not permit children to use spa unless they are closely supervised at all times.
- **WARNING: RISK OF CHILD DROWNING** - extreme caution must be exercised at all times to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use spa unless they are supervised at all times.
- **DANGER: TO REDUCE THE RISK OF INJURY**, do not remove suction grate or cover.
- **DANGER: RISK OF ELECTRICAL SHOCK**. Do not operate any electrical appliance such as light, telephone, radio or TV within five (5) feet of spa.
- **DANGER: RISK OF ELECTRICAL SHOCK**. Position spa at least five (5) feet from all metal surfaces except as provided for in Item Number 1.
  1. Spa can be installed within five (5) feet of metal surfaces, if, in accordance Article 680 of the National Electrical Code, ANSI/NFPA 70-1984, each metal surface is permanently connected by bonding wire which is attached to pressure wire connector provided for that purpose.
  2. If bonding is required, a pressure wire connector is provided in the electrical enclosure adjacent to the power supply terminals to permit connection of a bonding wire between this point and any metal equipment, metal enclosure of electrical equipment, metal water pipe or conduit with five (5) feet of this spa as needed to comply with local requirements. The bonding wire must be at Number 8 AWG (8.4mm<sup>2</sup>) solid copper wire.
- Position spa to provide proper drainage of the compartment for electrical components.
- For floor recesses spas, install to permit access for servicing from above or below floor.
- **NEVER USE AN EXTENSION CORD!**
- Consideration should be taken for water splash out. Water can ruin wood floors and some finishes.
- **DO NOT** use a wall switch, ground fault circuit interrupter, circuit breaker, fuse, or plugging and unplugging the spa as a means of turning on or off your spa for normal everyday use.
- **DO NOT** block access door.
- Set the spa on a firm level (flat) surface. Do not set spa on blocks as structural damage may occur to spa.

**WHILE USING SPA, FOLLOWING ALL THESE SAFETY PRECAUTIONS**

- This causes, symptoms, and effects of hypothermia may be described as follows: Hypothermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98° F. The symptoms of hypothermia include dizziness, fainting, drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hypothermia include (1) unawareness of impending hazard, (2) failure to perceive heat, (3) failure to recognize the need to exit spa, (4) physical inability to exit spa, (5) fetal damage in pregnant women, and (6) unconsciousness resulting in a danger of drowning. **WARNING** - The use of alcohol, drugs, or medication can greatly increase the risk of fatal hypothermia in hot tubs and spas.
- The water in a spa or hot tub should never exceed 40° F (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 extended use (exceeding 10-15 minutes) and for young children.
- **DO NOT JUMP OR DIVE INTO SPA.**
- **SAVE THESE INSTRUCTIONS!**

### **OZONE GENERATOR SAFETY INSTRUCTIONS – OPTIONAL**

- Do not add any device that could, or attempt in anyway to, interrupt the flow of ozone to spa water.
- Do not allow ozone level to reach or exceed 0.1 PPM.
- Do not attempt to energize ozone generator with ozonator's cover off.
- The internal lamp in the ozone generator is intended for application only where humans will not be exposed to the ultraviolet radiation produced.

### **INSTALLATION**

The installation of your spa is not included in the cost the spa unless specifically noted on your invoice by your dealer.

#### **Planning Your Installation**

Proper planning is an important consideration when installing your new spa. Site selection is critical step and should be given some serious thought. Planning ahead, before the delivery of your spa, will make the process of installation easier. The following information is provided to assist you in site preparations.

#### **General**

Check out the local building codes with respects to gates, fences etc.

Be sure that the spa will have proper access to water, draining and electrical.

The spa must have proper support underneath to support the weight. In most cases, the best answer is a 4-inch thick cement pad. However, there are many ways to support your spa. Please consult your spa sales representative before constructing a base that will be right for your needs.

### Indoor Installations

Be sure your spa will fit into the space you have chosen. Proper access into the home is needed to move the spa into place. Ventilation may be needed because of the humidity from the spa. In most cases, a Spa Cover is sufficient. Check the load carrying capabilities of the floor. Most homes meet the requirement of 125lbs per square foot. Insure you have proper drainage in the event of a leak.

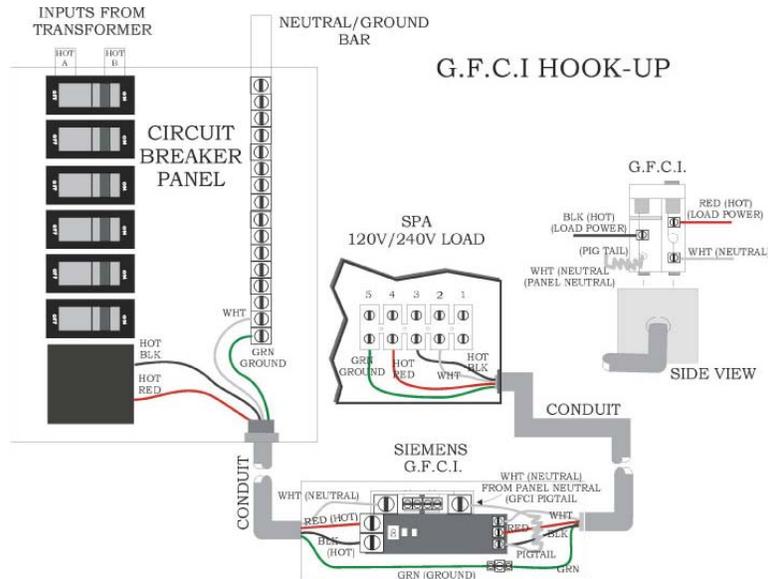
### Out Door Installations

Assure that spa is on a flat level surface. Never put spa on blocks! If spa is not supported evenly over entire bottom surface, structural damage will occur. Protect pump and equipment from the weather (Keep access panel door closed at all times). Assure access to spa's service door, filter, entry and power connection.

## ELECTRICAL SPECIFICATIONS

**IMPORTANT!** Qualified and licensed electrician must perform all electrical hook ups. The following specifications must be followed in order to ensure proper performance and safety.

**CAUTION!** Failure to abide by specification listed may result in damage to equipment and may void the warranty.



### G.F.C.I Line-out Wiring Check for 120/240V convertible System (3/4 wire system including ground wire).

If the spa is equipped with a 120/240V control system, an additional white load neutral wire must connect to the load neutral out. This wire runs with the others to the system

box. Proper placement of this neutral wire is essential. If miss wired, the G.F.C.I will trip when a 120V device is activated.

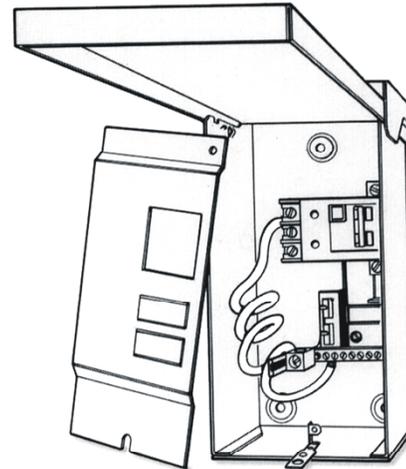
**G.F.C.I (Ground Fault Circuit Interrupter)**  
**The following spas require a 60 AMP G.F.C.I.**



- Millennium
- Palm Beach Elite
- South Beach Elite
- St. Augustine Elite

**The following spas require a 50 AMP G.F.C.I.**

- Monte Carlo
- San Marco
- Siesta
- Venice



### **System Box Wire Gauge Wire**

Using 50/60 AMP services - minimum six gauge copper wire should be used.

### **IMPORTANT!**

This service must be single phase. Do not attempt to fix these types of problems yourself. High voltage can seriously injure or kill. Always use a certified electrician when hooking up your new spa.

The National Electrical Code states that a service disconnect breaker box (a G.F.C.I. can be used for this purpose) must be located at least 5 feet away from the spa and should be conveniently located near the equipment bay. If it is not in plain sight, keep the disconnect padlocked when in the off position.

Remember, high voltage is still accessible in the housebreaker box even though you have turned off the spa breaker.

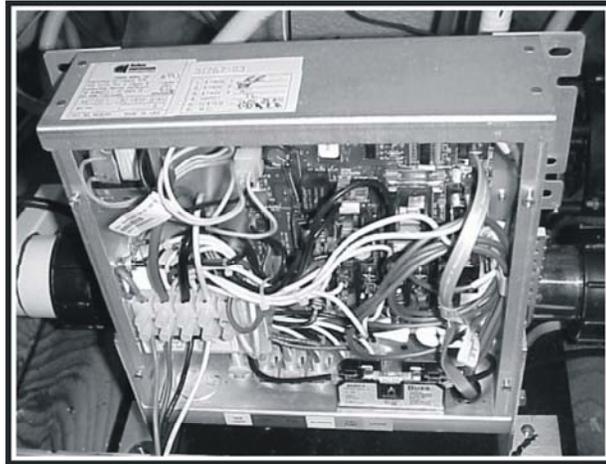
### **SAFETY TIPS**

- Keep children and pets away when working around electrical equipment and wires.
- Be aware of your surroundings. Standing in water while repairing a spa puts you at serious risk.
- Avoid working in cramped or crowded conditions.

**DANGER**

SHOCK HAZARD DO NOT PROCEED IF UNQUALIFIED IN WORKING WITH HIGH VOLTAGE

**BALBOA Spa Control System**



**DANGER** – Make sure electrical is **OFF** before working around equipment!

**Circuit Boards**

**HS200 BOARD** – Installed on Millennium, South Beach Elite, Palm Beach Elite and The St. Augustine Elite Series.



**HS55 BOARD** – Installed on Monte Carlo, San Marco, Siesta, and the Venice Recreational Series.



**IF THE SPA IS WIRED INCORRECTLY, YOUR WARRANTY IS VOID.**

## **OPERATION PROCEDURES**

### **START UP PREPARATION**

Before performing the operations in this section, make sure you have read and understand all of the previous instructions set forth in this manual. Make sure the spa has been installed correctly, including electrical wiring connections as specified in the wiring diagram.

### **START UP STEPS**

Prior to filling your spa with water and before turning on the power to the spa, perform the following:

1. Install the filter(s) if not already installed.
2. Ensure all valves are opened (Handle Pulled Up).
3. Ensure that none of the water or airlines had slipped under foot well area of the spa shell during shipment.
4. Fill the spa with water 2-3 inches above the highest jet.

Your spa control has been specifically designed so that by simply connecting the spa to its properly grounded source, the spa will function safely at 100° F. The system consists of a double speed pump/pumps that along with an ozone generator (optional on some models) provides filtration and oxidation of the spa water and (optional) a single speed pump. Both pumps provide hydrotherapy jet action. Each spa is equipped with an electrical heater and mood lighting. Some models are equipped with an air blower for hydrotherapy bubble action.

### **DOUBLE SPEED PUMP**

Your spa features a double speed pump for hydrotherapy jet action at High/Low speed, and is controlled by the “Jets 1” on the topside control. Follow the instruction under TOPSIDE CONTROL OPERATING INSTRUCTIONS (“Jets 1” button). The low speed jets is either controlled by the thermostat during Standard Mode operation, or by the filtration cycle timer.

### **SINGLE SPEED PUMP**

Your spa features a single speed pump (if equipped with a single speed pump) for hydrotherapy jet action and is controlled by the “Jets 2” on the topside control. Follow the instructions under TOPSIDE CONTROL OPERATING INSTRUCTIONS (“Jet 2” button).

## **HEATER**

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. This is not only convenient, but it is energy efficient. The spa will maintain the water temperature as required and does not depend on the filtration cycle to heat.

## **TEMPERATURE ADJUSTMENT**

Press the Set keypad to control temperature adjustment. The display shows the actual water temperature unless the pad is pressed. When the pad is pressed, the display will show the set temperature. Pressing the pad a second time will cause the set temperature to increase or decrease depending on what direction was last chosen. Each successive press will change the set temperature in the same direction. If the opposite direction is desired, release the pad and let the display revert to the actual water temperature again. Press the pad to display the set temperature, and again to make the temperature change in the desired direction.

## **DIGITAL TOPSIDE CONTROL**

Your spa is equipped with a digital Topside Control located on the top of the spa. The Topside Control provides all control functions of the spa equipment (pumps, blower, light, heater). For more details follow the TOPSIDE CONTROL OPERATING INSTRUCTIONS and CONTROL SYSTEM FEATURES.

## **OZONE GENERATOR**

Ozone is injected into the spa water during the filtration cycle. The ozone generator (if equipped) operates in conjunction with low speed pump operation. The ozone is injected into the water to supplement chemical sanitizers, kill bacteria, oxidize organics, and control minerals. Anytime the pump, the air blower, or the light is turned on, the ozone will turn off.

## **JETS**

Press the Jet keypad to turn on the low speed of pump 1. Press the pad again to turn on the high speed of pump 1. Press the pad a third time to turn on the high speed of pump 1 and pump 2. Press the pad again for pump 2 only. Press the pad a final time to turn off the pumps. Due to Automatic Spa Control, the low-speed pump will start automatically when the spa is heating, when a filter cycle is activated, or when a freeze condition is detected. If the low-speed pump is on under Automatic Spa Control, it cannot be deactivated from the panel; however, the high-speed pumps may be started. The low-speed pump will automatically turn off after 2 hours. The high-speed pumps will automatically turn off after 30 minutes of operation.

## BLOWER

Press the Blower keypad to turn the blower on and off. The blower will automatically turn It-self off after 30 minutes.

## LIGHT

Press the Light keypad to turn the spa light on and off. The light will automatically turn off after 4 hours of use.

## TOP SIDE CONTROL PANEL



### Software program:

240V dedicated system - 30/50 AMP power configurations.

30 AMP (heater will not heat on high speed).

Temperature control: 80° F 104° F

Pump sequence: 1.) Pump 1 low; 2.) Pump 1 high; 3.) Off. If the spa has a second pump, 1.) pump 1.) pump 1 low; 2.) pump 1 high; 3.) pump 1 high, pump2 high;4.) pump 2 high; 5.) Off.

Automatic timeouts for each function:

12V Light: 4 hrs. 240V Pump1-hi: 30 min. 240V Pump2-hi: 30 min.

120V Blower: 30 min. 240V Pump1-lo: 2 hrs.

Filter cycles: First starts one minute after start up. Second starts 12 hours later.

Filter duration is programmable 2, 4, 6, or 12 hours via topside panel default: 2 hours (F2). To program, press the “set temp” pad, then press the “jets” pad. Press the “set temp” pad again to select filter duration. Press the “Jets” pad to exit. Low speed pump will run during filter duration.

120V ozone generator. Operates during filter cycle (circ. Mode 24 hour operation)

Automatic air channel clean out 30 seconds once/day

Circ/Non-circ. Mode: J7 A = non-circ. J7 B = 24 hour circ. & O3, Pump1 lo & pump2 lo purge 1 min., twice a day.

Automatic freeze protection @ 40° F both pumps

High-limit protection 2 levels: software and hardware

Diagnostic message visible on the LCD

Sensor failure detection- “Sn” High-limit detection “OH”

Flow switch error detection “FL”

Spa side panel high-limit reset

Piezo switches

Solid-state accuracy + or - .5° F

Heater/status indicator light

### Preset Filter Cycles

Your spa will automatically filter itself twice each day. The first filter cycle will begin 1 minute after the spa is energized. The second filter cycle will begin 12 hours after the start of the first filter cycle. Filter duration is programmable at the topside panel for 2,4,6, or 12 hours. (FILC = 12 hours). The default filter time is 2 hours. (FIL2 = 2 hours). To program, press the “Set” pad, then the “Jets” pad. Press the “Set” pad to select the filter duration. Press the “Jets” pad again to exit the programming mode. During filtration, the low speed of the pump and ozone generator (if installed) will run. The blower will run for 30 seconds at the start of the first cycle to clean out the air channel.



Software program:

240V dedicated system - 30/50 AMP power configurations

LED function indicators

30 AMP (heater will not heat on high speed).

Optional remote panel

Digital temperature display: 80 F 104° F

Economy/Standard mode selection (can disable heater in economy mode)

Auxiliary panel available for 7-button panel configuration.

Auxiliary sequence: (1) Jets2-low, high, off, (2) Blower high, medium, low, off.

6-button panel (J10 shorted): warm, cool, jets1, blower light, mode

7-button panel (J10 not shorted): warm, cool, jets1, jets2, blower, light, mode

Automatic timeouts for each function:

12V Light: 4 hrs. 240V Pump1-hi: 30 min. 240V Pump2-hi: 30 min.

12V Blower (1-speed): 30 min. 240V Pump1-lo: 4 hrs. 240V Pump2-lo: 30 min.

Settable filter times: Two times per day. First cycle begins 1 minute after system is powered up. Second cycle starts 12 hours later. Programmable for 2, 4, 6, or 12 hrs.

Default is 2 hrs. Press “temp”, then press “pump 1” to program, press “temp” to adjust. Press “pump1” to exit.

120V ozone generator. Operates during filter cycle (circ. Mode 24 hour operation)

Automatic air channel clean out 30 seconds once/day

Circ/Non-circ. Mode: J7 A = non-circ. J7 B = 24 hour circ. & O3, Pump1 lo & pump 2 lo purge 1 min., twice a day.

Automatically backlit panel for day/night visibility

Automatic freeze protection @ 40° F both pumps

High-limit protection 2 levels: software and hardware  
Temperature set back/20° F below set/Economy  
Diagnostic message visible on the LCD  
Sensor failure detection “Sn”            High-limit detection “OH”  
Flow switch error detection “FL”        Freeze Protection “ICE”  
Spa side panel high-limit reset  
Piezo switches  
Solid-state accuracy + or - .5° F  
Optional additional freeze sensor input

## DISPLAY MESSAGES

### **E C O N** - “Economy”

The spa is in economy mode. Econ is flashed alternately with the current spa temperature and COOL until the spa water is 15° F cooler than the set temperature.

### **O H** “Overheat” (spa is deactivated)

The spa has shut down. Either the water has reached 112° F, or the high-limit sensor has detected 118° F at the heater. **DO NOT ENTER THE WATER.** Remove the spa cover and allow the water to cool. At 110° F, the spa should automatically reset. If the spa does not reset, then shut off the power to the spa and call your dealer or service representative.

### **F L O** - “Flow” (Flashing alternately with temperature)

The filter may need cleaning. The water level may be low. Be sure flow valves are open.

### **F L O** - “Flow” (Not flashing)

A pressure switch has malfunctioned. Contact your dealer or service organization.

### **C O O L** - “Cool”

The spa water is more than 20° F cooler than the temperature last set. No action is required. Spa is functioning properly.

### **I C E** - “Ice” (Freeze protection)

If a freeze condition is detected, the pump(s) are automatically activated. This is a normal spa function; no corrective action is necessary. Freeze protection is enabled regardless of the spa's status.

## AUXILIARY CONTROL



Your Auxiliary Control has been specifically designed for those setting on the other side of the spa wishing to control the blower or jets. The left button will control the blower and the right button controls the jets just as the main top side control..

## **MAINTENANCE and CARE**

Your new spa was built to give you years of enjoyment and pleasure. However, certain maintenance steps must be taken in order to extend life and usability of the spa.

**IMPORTANT!** The warranty on your spa and equipment is dependent on proper water balance through the use of spa chemicals. A special section of this manual will cover chemical usage and requirements. In addition to chemicals water balancing, the following maintenance procedures must be followed periodically.

### **Cleaning The Spa**

The spa shell should be cleaned with a mild soap solution. Do not use solvents. The spa should always be clean and dry before being moved or stored.

### **Maintaining The Spa Cover**

The spa cover should be cleaned monthly. To clean the spa cover, use water and a non-abrasive cleaner on the entire cover. Rinse the cover with a garden hose to remove any cleaner residue. Dry the cover entirely. You should also use a non-silicone based vinyl conditioner on the cover after you clean it. This will protect the cover from sun damage.

## **MAINTENANCE SCHEDULE**

### Daily

- Check the water level and refill the spa to the proper level
- Check the pH balance and sanitizer level. Adjust if necessary.
- Clean the surface of the water with a skimming net.

### Weekly

- Clean the spa shell at the waterline.
- Check and thoroughly clean the filter if needed.
- Replace the filter if needed. (Always have a spare.)

### Monthly

- Clean the spa cover.
- Soak the filter for two hours in a trisodium phosphate (TSP) solution. Rinse the filter in clean water.

### Every Three Months

- Drain the spa and refill with clean water. Sanitize and test the pH of the water.
- Check for any leaks around the pump or joints in the pipes. The seals will wear out over time; detecting leaks early can reduce repair cost.
- Clean the interior of the spa. **DO NOT** use solvents or waxes.

## DRAINING SPA

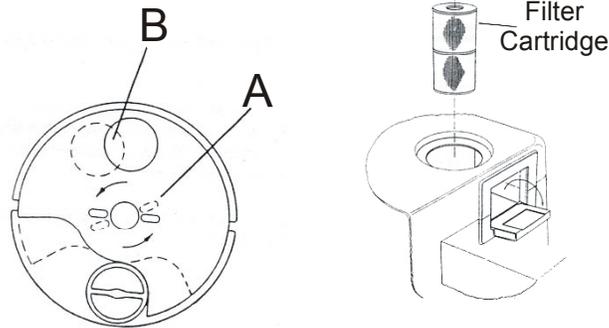
1. Disconnect the electrical power. Never run spa while draining or empty!
2. Open the access service door. Locate the drain valve, and then remove the cap from the valve and screw on the end of a garden hose.  
**NEVER SUPPLY WATER TO THE SPA BY THIS MEANS!**
3. Turn down the heat to its lowest setting.
4. Route the garden hose to a place suitable for draining water and open the spa drain valve. **NOTE:** Some models may take hours to drain completely.
5. Once drained, close the valve back to closed position and install the cap back to the spa drain hose. **DO NOT** supply power again until the spa is refilled! Once filled run the spa until there is good water flow and all air is bled from the system. Once this is done, turn heater thermostat back to the setting you desire.

## FILTERS and PARTS

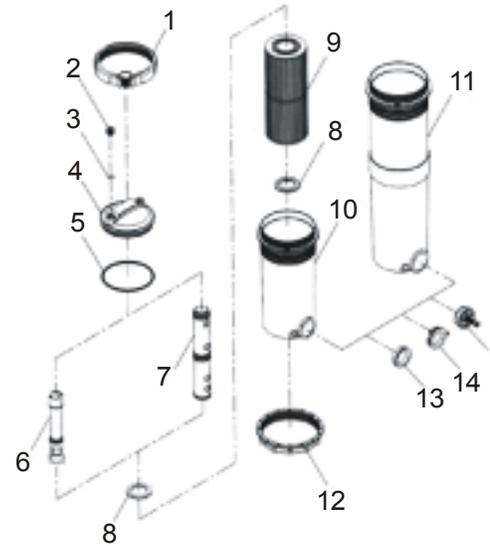
The filter(s) in your spa should be cleaned at least every 5-6 weeks, depending on usage. This will ensure that the water is being filtered properly, and there is no restriction in the filter due to dirt and grease.

Cleaning the filter can be done easily using a Filter Degreaser solution and following the directions on the bottle. Soak filters in a degreaser and power wash with a garden hose. It is recommended to have a second filter, which can be cleaned between changes. This will enable you to quickly exchange the dirty filter with the clean one and immediately start your spa again.

Adjusting Diverter Plate: In the event that air is being drawn into the skimmer, it may be necessary to adjust the diverter plate (slow the water flow). This is done by turning knob "A" thereby adjusting opening "B". Turn clockwise to increase and counter clockwise to decrease water flow.

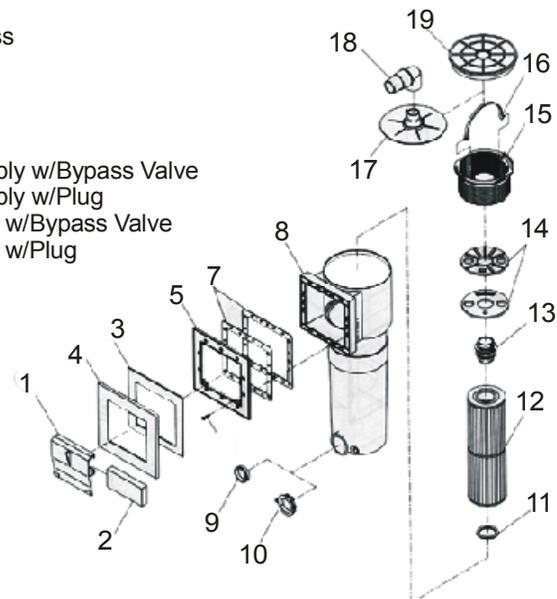


<b>PART#</b>	<b>KEY</b>	<b>DESCRIPTION</b>
500-1000	1	Lock Ring Assembly
715-1001	2	Plug, Air Relief
805-0114	3	O-ring, Air Relief Plug
511-1000	4	Filter Lid
805-0360	5	O-ring, Filter Lid
519-1070	6	Brominator, 10 Tablet
519-1060	7	Flow Restriction Tube
711-1010	8	Filter Spacer Ring
5107	9	Filter Cartridge, 25 Sq. Ft.
5532		Filter Cartridge, 50 Sq. Ft.
550-5000	10	1-1/2" Filter Body, w/Bypass
550-5010		2" Filter Body, w/Bypass
550-5110	11	1-1/2" Extended Filter Body, w/Bypass
550-5230		2" Extended Filter Body, w/Bypass
718-1000	12	Filter Body Nut
715-1010	13	1-1/2" Plug
715-9900		2" Plug
600-1000	14	1-1/2" Bypass Valve Assembly
600-1010		2" Bypass Valve Assembly



**South Beach Elite – Filter Assembly  
Filter # 5532**

<b>PART#</b>	<b>KEY</b>	<b>DESCRIPTION</b>
519-3060	1	Weir Door
865-1000	2	Foam, Weir Door
519-3090	3	Trim Plate, ABS. Front Access
216-1000	4	Optional-Trim Plate, Stainless Steel, Front Access
519-3180	5	Mounting Plate, Front Access, Long Throat Only
519-3080		Mounting Plate, Front Access, Short Throat Only
819-6940	6	Screw, #12 x 1 1/4" PGH 18-8 Sms
806-1040	7	Gasket-Mounting, Front Access
550-5020	8	1 1/2" Short Throat, F/A, Skim Filter, Body Assembly w/Bypass Valve
550-5030		1 1/2" Short Throat, F/A, Skim Filter, Body Assembly w/Plug
550-5160		2" Short Throat, F/A, Skim Filter, Body Assembly w/Bypass Valve
550-5170		2" Short Throat, F/A, Skim Filter, Body Assembly w/Plug
715-1010	9	Plug, 1 1/2"
715-9900		Plug, 2"
600-1000	10	Bypass Valve, 1 1/2"
600-1010		Bypass Valve, 2"
711-1010	11	Spacer Ring, Filter
2741	12	Cartridge, 35 Sq. Ft. 2-Piece
5460		Cartridge, 35 Sq. Ft. 1-Piece
519-3100	13	Collar Plate, Skim Filter
519-3010	14	Diverter Plate, Skim Filter
519-3000	15	Basket, Short Throat, Front Access
519-3070	16	Handle, Basket
519-3120	17	Vacuum Plate, Front Access
411-6500	18	Optional-Vacuum Hose Adapter, Vacuum Plate
519-3030	19	Lid, Front Access

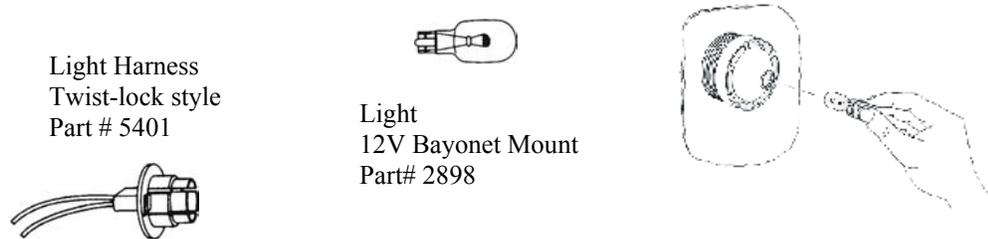


**Millennium, Palm Beach Elite, St.  
Augustine Elite, Monte Carlo,  
San Marco Siesta, Venice Filter  
Assembly – Part # 2741 or 5460**

## REPLACING SPA LIGHT BULB

To replace the spa light bulb, open up the access door and look on the body of the shell and locate the light. Remove the bulb by twist on the bulb socket (not wires), as illustrated. Once removed, pull the bulb from the light socket and replace by reversing steps.

NOTE: The replacement bulb must be of the same electrical rating as the factory installed bulb.



## Winterizing Your Spa

If you **DO NOT** plan on using your tub during the winter, you must drain all the water out completely. Otherwise you may cause damage to your plumbing lines. See your dealer if you have any questions concerning products that you may use to winterize your tub. Neglect is not covered under the warranty.

## Your Cabinet & Cedar Skirting

Your cabinet has an access panel or door to the internal parts which consists of a pump or pumps, motor or motors, heater, ozonator (if you have one), filter housing, hoses, and wiring to provide electricity to your control system.

The cabinet frame is made of treated wood, and covered outside by either redwood, cedar, cypress or TimberStone™ siding.

The cabinet should be treated just like any other piece of furniture in your home. If spa will be setting outside in the weather, remember that it will be out in all types of conditions such as rain, sun and the wind. It will be necessary at least every 4 months to retreat the wood using a water-resistant stain (linseed oil) to protect the wood as needed. You may also order stain though the manufacturer.

## UNDERSTANDING SPA JARGON

Below are some parts and accessories that are installed in your spa. These pictures listed below are to help you better understand their operation and, what they look like.



**Jets** – The openings through which water flows into the spa. Jets affect the direction, volume & velocity of the water.



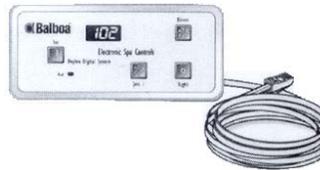
**Air Control (AVC)** – Controls airflow through the jets providing more water agitation.



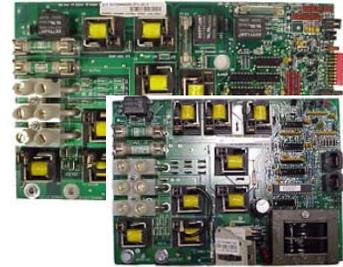
**Drain Shut-Off Valve and Threaded End Cap** – Used for draining your spa.



**Slide Valves** – Handle must be pulled out during normal operation of spa allowing flow of water through pumps and system.



**Topside Panels** – Controls spa time intervals, pumps, blower, light and temperature setting.



**Circuit Boards** – Digital Boards used to control the functions of the spa located inside the Equipment Control Box.



**Equipment Electronic Control System & Head** – System controls spa functions.



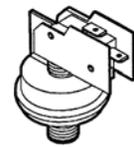
**Air Blower** – Provides air from the bottom jets creating a bubbling sensation.



**Pump Assembly** – Includes motor and wetend. The pump moved water through your spa filter, heater system, jets, and spa.



**Ozonator** – Ozonators bubble ozone into the spa to kill organic matter such as bacteria. They are mounted inside the cabinet.



**Pressure Switch** – Used to control and sense water flow.



**Heater Element** – Located inside your control head heater tube which heats up the water as it flows through the system.

## CHEMICALS

**IMPORTANT!** The following section on chemicals must be read and understood fully! The warranty on your new spa is dependent on the proper use of these chemicals.

The biggest threat to a spa is poor chemical balancing the water. Spas can present health hazards if inadequate maintenance programs are used. Consider that four people in 1,000 liter spa are equal to 160 people in 38,000 gallons of water in a pool. Bear in mind that the water in your spa is an environment if the water is not properly maintained.

The following are some important points when dealing with spa chemicals:

1. Always follow the directions on the individual (bromine & chlorine) chemicals containers.
2. Never mix different types of chemicals; it could cause a fire or explosion.
3. Never store chemicals in anything but their original containers.

### CHEMICALS AND ACCESSORIES NEEDED FOR SPA

There are many types of chemicals recommended for use in spas. Some are mandatory, were others are optional.

Below is a list of all chemicals and accessories with an explanation of each:

**CHLORINE:** A highly concentrated chemical, which is used in pools and spas as a bactericide and algaecide. Chlorine will sanitize and disinfect your spa. Chlorine is most often available in two different forms, a concentrated granular form and tablet form. (When using a tablet from of chlorine, a non-chlorine shock is recommended). A residual of 1-1.5 p.p.m. (parts per million) is needed.

**PH UP & pH DOWN:** The pH level of water represents the amount of acid or alkaline in the water. This can promote scaling, cloudy water, eye irritations, and difficulty in maintaining a proper chlorine level. Too low pH makes the water in the spa corrosive. This could lead to damage to the spa itself or he spa pack. **NOTE THIS DAMAGE IS NOT COVERED UNDER WARRANTY!** A pH Level of 7.2 – 7.6 p.p.m. is to be maintained in your spa.

**CHLORINE AND pH TEST KIT:** An accurate, high quality test kit is needed to properly test and maintain the chlorine and pH levels in the spa water.

**THERMOMETER:** A thermometer is necessary in your spa to provide an easy temperature reading. Water temperatures, which are too hot, are unsafe and could cause damage to your spa's finish. Recommended temperatures ranges are 102° F to 104° F. UL has determined that water in excess of 104° F is **UNSAFE!**

The following chemicals are not necessary for safe use in your spa. However, depending on the type of water available to you, the products are highly recommended. In most

cases, these products will increase the life of your spa and equipment and will make the spa more pleasant to maintain.

**SPA SHOCK:** This chemical oxidizes or “burns-out” most organic contaminants in the spa water. It works together with the chlorine in your spa. Most often it is a weekly or bi-weekly treatment. (This product is mandatory when using a tablet form of chlorine, bromine or granular).

**STAIN & SCALE REMOVER:** A stain and scale remover prevents water discoloration due to certain minerals in the water. It also prevents scaling which could corrode the pump and shorten its lifespan. Depending on the brand, stain & scale remover is most often a weekly treatment.

**WATER CLARIFIER:** This product is designed to coagulate small particle of unwanted dirt or grime in order to aid filtration. As with the stain & scale remover is most often a weekly treatment. Use of this chemical will prolong your filtration system and filter a spa.

**ALKALINITY INCREASER:** Total alkalinity in the water is the combined measurement of a group of alkaline sales in the water. Too low alkalinity may cause the pH levels to fluctuate excessively when being adjusted. The ideal range for total alkalinity is between 90 -150 p.p.m. range. (A special test kit is required).

**CALCIUM HARNESS INCREASER:** Calcium is the mineral in water, which determines whether the water is “soft” or “hard”. Low calcium can make the spa water is ideal in the 225 - 275 p.p.m. range. (A special test kit is required). Test Strips are recommended for testing.

**BROMINE:** Bromine is an alternative to chlorine as a disinfectant. The benefit of using bromine is that it has less-odor and is more pH independent.

## CHEMICAL STARTUP

The initial chemical startup of your new spa involves a number of simple steps. Most important is adjusting the pH level of the water and introduction chlorine (or bromine) into the spa. Follow the step-by-step procedures listed below and remember to follow the directions on each individual chemical bottle.

Test both pH and the chlorine/bromine levels of the water. Adjust the pH level by adding degreaser or pH increaser. NOTE! The pH may be too high or too low to fully adjust in one treatment. Do not try to make large changes in the pH with one treatment; you must increase or reduce the pH gradually to ensure damage does occur to your spa or equipment. Add chlorine/bromine into the water in the method you have chosen. **NOTE!** If a tablet of chlorine/bromine is used, “shock” the water first with the spa

shock. Add the Water Clarifier and Stain & Scale chemicals as recommended on the chemical bottle.

### **CHEMICAL TROUBLE SHOOTING GUIDE**

Just as with anything else, adjusting and balancing spa chemicals takes practice. Below are a number of common problems, which may arise in your spa water. Try curing the problem by following the trouble-shooting guide. If the problem persists, or the problem is not covered in the following guide contact your authorized After Hours Dealer.

<b>PROBLEM</b>	<b>SOLUTION</b>
Cloudy Water	<ol style="list-style-type: none"> <li>1. Cloudy water is normally due to high pH or low chlorine/bromine levels. Test the water and correct the pH levels and chlorine/bromine levels.</li> <li>2. Excessive use of defoamer chemical may cause the water to turn cloudy.</li> </ol>
Foamy Water	Use defoamer in the water. This chemical must be used only when necessary. It will cause the water to turn cloudy if used excessively.
Green or Yellow Water	This usually means the water is low on chlorine/bromine levels. “Shock” the water and test for chlorine/bromine levels. Add water clarifier.
Scum Line	A scum line will normally appear on the water level of the spa. However, it is unusual for scum line to persist. Add stain and remover as directed.

### **BASIC TROUBLESHOOTING**

#### **Brown Outs**

“Brown outs” can have an effect on the spa’s operation in a variety of ways. It can Trip the Breaker. The control panel may go blank, have scrambled messages on the LCD, or only a few features will function.

Corrective Action - Reset the system, by turning off the spa to include the G.F.C.I. breaker box. After resetting then recheck for proper operation. If problem persists, first check all electrical connections to insure none are loose. Call your dealer for service.

#### **Panel Messages**

Panel messages are a quick clue toward solving a variety of problems. Here are the most common messages and what they mean.

**The Panel Display is Flashing OH or the Status/Heat LED is Flashing (1 second on, 1 second off)**

This means that the control system is at a high-limit condition and the spa is deactivated. **NOTE:** Overheating may occur if the low-speed pump is set to operate for extended periods of time. In rare cases (usually warmer climates), the circulation pump may also cause overheating.

The following is a list of most probable causes of this message. Inspect these first:

- Check slide valves, making sure that they are open.
- Clean the filter/skimmer if there is any blockage.
- In extremely hot weather, check for proper cabinet ventilation.
- Check for excessive filter duration.
- Check the water level.
- Check the water temperature with an accurate temperature thermometer. Remove the spa cover and allow the water to cool to below 110° F. Adding cool water may be necessary. Touch any button to reset the system. If the water is still hotter than the set temperature, press the blower button (if applicable) to cool the spa.

If problem persist call your dealer for service. - Problems maybe:

- High-limit Sensor (at the heater)
- Temperature Sensor (in the spa)
- Circuit Board Bad

**The Panel Display Shows Sni or the Status/Heat LED is Flashing Briefly Off Once a Second.**

This indicates that the control system is at a high-limit sensor is open or faulty. The spa is deactivated. The following is a list of most probable causes of this message. Inspect these first:

- Check sensor wires for cracks or damage that may indicate the presence of a rodent.

If problem persist call your dealer for service. - Problems maybe:

- Sensor Set Bad
- Circuit Board Bad

**Note:** In rare cases, rapid system-overheat causes sensor error messages. Be sure to rule out possible situations like no flow or no water.

**The Panel Display Shows Sn3 or the Status/Heat LED is Flashing Briefly Off Once a Second.**

Indicates that the water temperature sensor is open or faulty. The spa is deactivated.

If problem persist call your dealer for service. - Problems maybe:

- Sensor Set Bad
- Circuit Board Bad

The Display Continually Shows FLO or the Status/Heat LED is Flashing Briefly Once a Second. When this is happening, the software is detecting pressure at the pressure switch without the pump running.

The following is a list of most probable causes of this message. Inspect these first:

- Check that the slide valves are open. If any valves are closed, opening them may remove the error message from the display and the spa should operate normally.
- Clean the filter/skimmer if there is any blockage.

If problem persist call your dealer for service. - Problems maybe:

- Pressure Switch Bad
- Circuit Board Bad

### **The Display is Flashing FLO**

When this is happening, the software is detecting no pressure at the pressure switch with the pump running.

The following is a list of most probable causes of this message. Inspect these first:

- Check water level and if needed add water.
- Remove the filter cartridge, then run the spa. If the message disappears, then clean or replace the filter cartridge.
- Check slide valves ensuring they are open fully.

If problem persist call your dealer for service. - Problems maybe:

- Pressure Switch or Bad Connection (brush clean)
- Circuit Board Bad

### **The Display Indicates COOL**

This is a normal spa function; no further action is necessary. The water is more than 20° F cooler than the set temperature. The heater will automatically activate to provide freeze protection.

### **The Panel Display Show ICE**

This is a normal spa function; no further action is necessary.

When the high-limit sensor or an optional freeze sensor reads below 40° F, the system provides freeze protection. It automatically activates all the pumps to circulate water and warm the plumbing.

### **The Panel Display Shows Pd**

Power has been cut off to the spa, and it is using its battery backup to preserve its settings. The control panel will be disabled until power returns to the unit.

If you have a problem with your spa please call your dealer for service.

### **WARNING!**

**DO NOT** attempt to CHANGE any electrical components yourself or you may void the warranty. (Check with your dealer or manufacturer)



MANUFACTURER OF FINE SPAS

By signing this warranty card you have read & understand the owners manual in its entirety.

DEALER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_

STATE: \_\_\_\_\_

PHONE NUMBER: ( ) - \_\_\_\_\_

DATE PURCHASED: \_\_\_\_\_

MODEL: \_\_\_\_\_

SPA SERIAL NO.: \_\_\_\_\_

CUSTOMER NAME: \_\_\_\_\_

CUSTOMER ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_

CUSTOMER PHONE NO: ( ) - \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

PLEASE PRINT

**IMPORTANT WARRANTY INFORMATION**

The Warranty Card Must Be Filled Out Completely and Mailed Within Ten (10) Days of Purchase To Validate Warranty.

**WARRANTY**

**Lifetime Spa Structural Warranty**

Hydro Spa warrants the Elites, Recreation, After Hours, Sun Ray, Regency, Royalty and Fitness 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 spa. Contact your dealer if you have any questions concerning warranty issues, prior to contacting Hydro Spa.

**10-Year Limited Hydro Spa Surface Warranty**

Hydro Spa warrants the Elites, Recreation, After Hours, Sun Ray and Regency Series interior acrylic spa surface against blisters, cracks, or delaminating resulting from a defect in the acrylic surface material for a period of 10 years from the date of purchase, based on the following formula: Retail cost divided by months covered (120, 60 for Royalty and Fitness), multiplied by months owned = replacement cost. Royalty and Fitness Series 5 year surface warranty. Spa Surface Warranty issues will be notified to Hydro Spa by certified mail to warranty department with-in 30 days of defect found or warranty will be void.

**Lifetime Manifold Plumbing Warranty**

Hydro Spa warrants the Elites, Recreation, After hours, Sun Ray, Regency, and Fitness Series plumbing manifolds, fittings, and parts to be free of defects in materials or workmanship for as long as the spa is owned by the original purchaser.

**Limited Electrical Equipment Warranty**

Hydro Spa warrants the Elites, Recreation, After Hours and Sun Ray electrical equipment and components to be free of defects in materials and workmanship for a period of 2 years from the date of purchase. Regency, Royalty, and Fitness series are warranted for a period of 1 year from the date of purchase.

**Warranty Performance**

In the event of a defect covered under the terms of this Limited Warranty, notify your Hydro Spa Dealer. Use all reasonable means to protect the spa from further damage. A service representative from your Dealer will repair the spa subject to the terms and conditions contained in this Limited Warranty. The service representative may assess reasonable travel charges, during inspection or repairs if over 25 miles. If we determine that repairs are not feasible due to functional defect, we reserve the right to provide a replacement part or spa in lieu of repair. We will replace with a part of value equal to the original purchase. In such event, reasonable costs for removal of the defective spa and delivery and installation of the replacement spa will be the responsibility of the spa owner. We reserve the right to an on-site inspection by an authorized service representative. Hydro Spa will not pay reimbursements without prior authorization.

**Limitations and Exclusions**

This limited warranty applies to spas sold after January 1, 2001 by Hydro Spa. This limited warranty applies only to the Original Purchaser and terminates with any transfer of ownership. This limited warranty does not apply to a spa used for any commercial, rental, club purposes, or for any spa used outside of the United States. The purchaser must establish the date of purchase by dated sales invoice or delivery receipt.

This limited warranty does not cover damage resulting from abuse, misuse, or neglect including any installation, operation, maintenance, or use of spa other than in accordance with the Owner's Manual of the spa. Damage caused by operation of the 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 spa surface caused by improper use of chemicals or cleaning agents, allowing undissolved spa sanitizing chemicals to lie on the surface, damage caused by improper pH balance or other improper water chemistry, damaged caused by failure to provide even and sufficient support for the spa, are considered abuses and may invalidate this Limited Warranty. Damage 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 is 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 Hydro Spa be liable for incidental or consequential damages.

**Disclaimers**

The spa owner is required to provide adequate access to the spa for any repair or inspection. Hydro Spa shall not be liable for loss of use of the 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 custom 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 Agent, Dealer, Service Company, or other party is authorized to change, modify, or extend the terms of this Warranty in any manner what so ever, otherwise they are responsible and not Hydro Spa.

