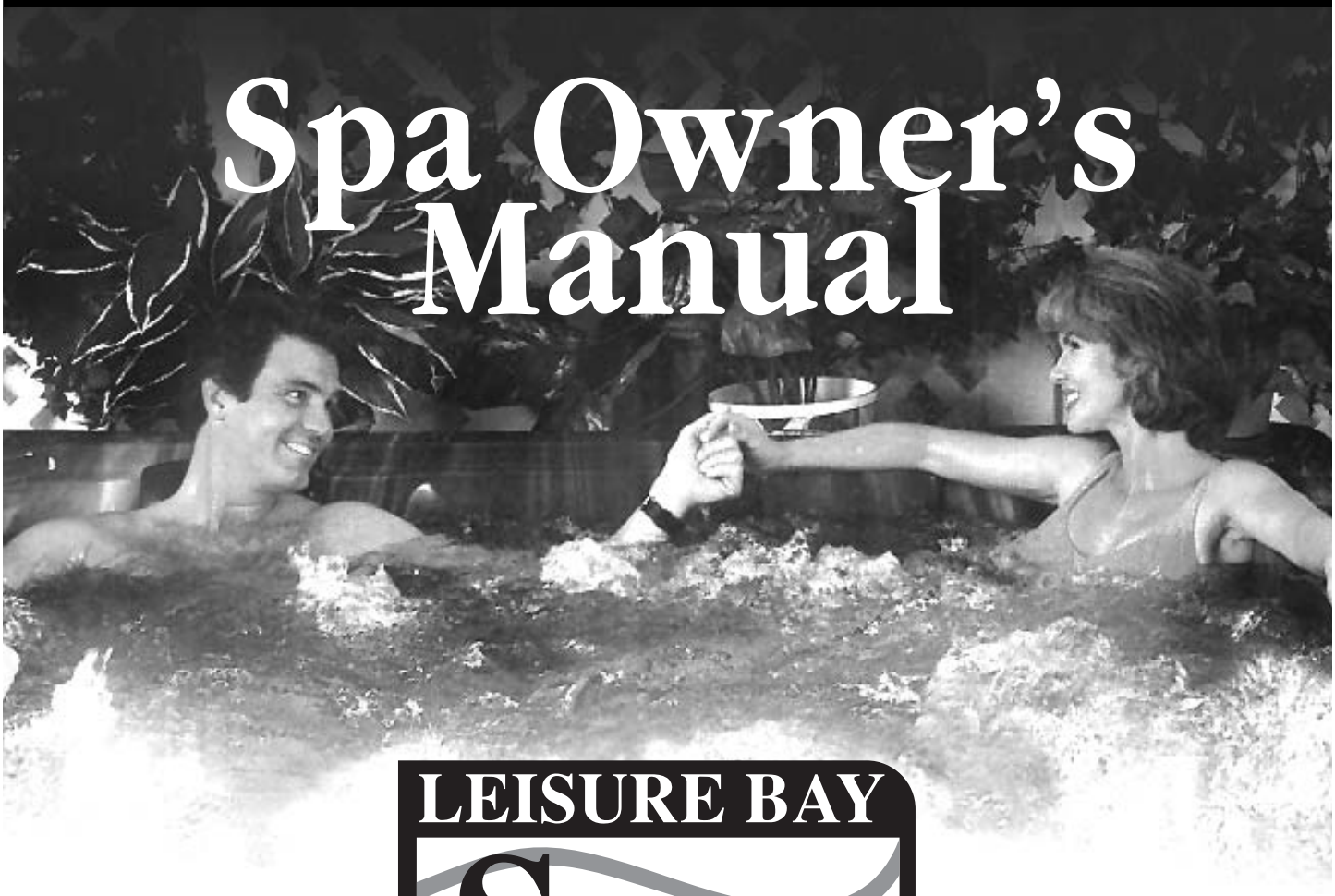
Smart S-2 & Genius G-1.5 & G-2 Series

Spa Owner's Manual



LEISURE BAY Spas

"Trend Setting Innovations Since 1973"

This Manual Contains

IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS

"SAVE THESE INSTRUCTIONS"

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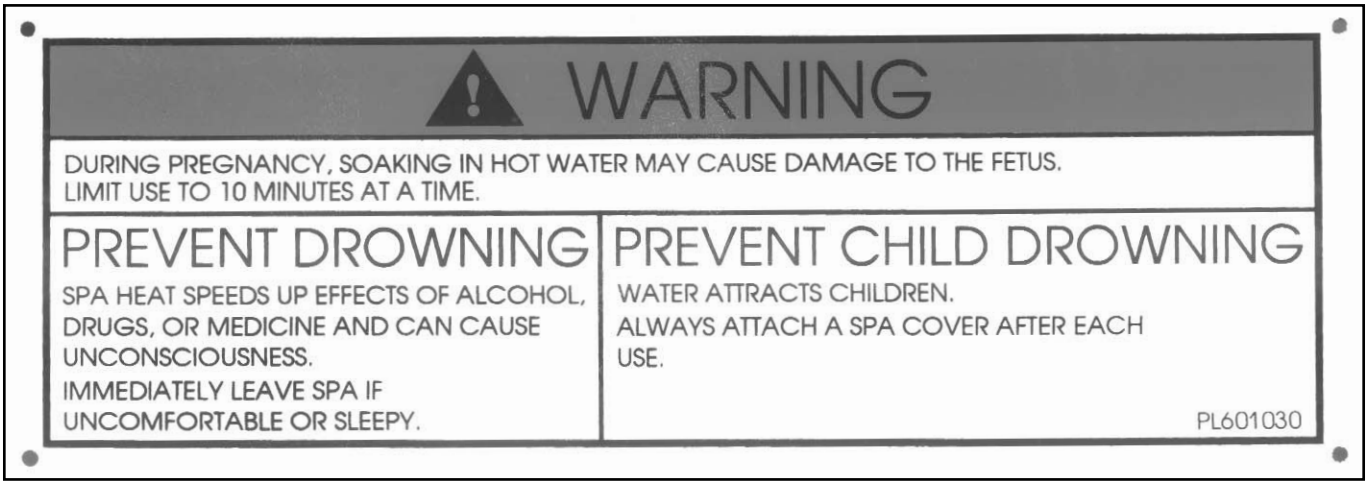
Warning Sign Must Be Posted

An important WARNING sign is packed with your Leisure Bay Spa. This sign must be posted in a prominent place in close proximity to the spa installation Site immediately upon completion of spa installation.



THIS WARNING SIGN MUST BE POSTED BEFORE THE SPA IS USED!

THIS SPA IS FOR RESIDENTIAL USE ONLY!

LEISURE BAY Spas

Important Safety Instructions

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

1. Read and Follow All Instructions

2. Warning

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

3. A wire connector is provided on this unit to connect a minimum No. 8AWG (8.4mm) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit.

4. Danger-Risk of Injury

(For cord-connected/convertible units)

A. Replace damaged cord immediately

B. Do not bury cord

C. Connect to a grounded, grounding type receptacle only.

4A. (For units with a GFCI)

WARNING - This product is provided with a ground-fault circuit interrupter (GFCI) on the end of the spa's power cord. This GFCI must be tested before each use. With the product operating depress the "test" button on the GFCI. The spa should not operate. Depress the "Reset" button on the GFCI. The product should now operate normally. If the spa fails to operated in this manner, there is a ground current flowing indicating a possible electric shock. Disconnect the power until the fault has been identified and corrected by a Licensed Electrician.

5. Warning

(For permanently installed units) The electrical supply for this product must include a suitable rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 442-20 of the National Electric Code, ANSI/NFPA 70-1987. In addition, all 230 Volt installations must be protected by a 230 Volt ground fault circuit interrupter (GFCI). Any GFCI circuit breaker used in the house panel must read current returning through the neutral conductor. 230 Volt 2 conductor GFCI circuit breakers will not operate correctly for your application.

6. Danger

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.

7. Danger

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 spa if suction fittings are broken or missing. Never replace a suction fitting with one less than the flow rate marked on the original suction fitting.

8. Danger

Risk of Electric Shock. Install at least 5 feet (1.5) 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 No. 8AWG (8.4mm) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.

9. Danger

Risk of Electric Shock. Do not permit any electric appliance, such as light, telephone, radio, or television, within 5 feet (1.5m) of a spa.

10. Warning

To reduce risk of injury:

A. The water in a 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 your children and when spa use exceeds 10 minutes.

B. Since excessive water temperatures have high potential for fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 100˚F (38˚C).

C. Before entering spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices vary.

D. The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.

E. Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.

F. Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.

11. Warning Sign

Included with this spa is a warning sign. It is extremely important that this sign be permanently placed in clear view of any persons using the spa. Occasional spa users may not be aware of some of the dangers hot water poses to pregnant women, small children, and people under the influence of alcohol. If you did not receive a warning sign or your sign has become damaged, please contact your spa dealer and ask for sign number PL601030.

Save These Instructions!

LEISURE BAY Spas

Important Spa Safety Precautions

Your spa can be a source of great pleasure. It offers healthful stimulating recreation and is a delightful fun center for you,your family and friends. However, it contains large quantities of water and is deep enough to present inherent dangers to life and health unless the following safety rules are strictly observed.

1. Never permit the spa to be used unless it is attended by at least one person other than the bather.

Someone should be present to lend assistance if the bather should be in trouble due to injuries, cramps, drowning especially in case of children, etc.

2. Always use care in and around your spa

The spa has many rigid, unyielding parts and many areas that become wet and slippery; these are all potentially dangerous when rough play is permitted or if care is not used particularly when entering or leaving the spa.

3. Keep the water sanitary and healthful at all times

Your filter system will remove suspended particles from the water. Regular application of spa chemicals in proper quantities will destroy harmful bacteria and prevent formation of algae. Your surface skimmer will remove insects, leaves, and other debris from the water surface. Unsanitary water is a serious health hazard.

4. The water in your spa should NOT be warmer than 100˚-104˚ F (38-40C)

Always keep an accurate thermometer in the water because your spa's thermostat may be in error. Use a high quality, shatterproof thermometer with increments of one degree or less.

The National Spa and Pool Institute considers a temperature of 100˚F (38˚C) safe and comfortable for a healthy adult. Most healthy adults can enjoy this water temperature for as long as desired, although it may raise the body temperature to the water temperature and eventually become uncomfortable (like a fever). At higher water temperatures the soaking time should be shorter; never soak for more than 20 minutes when the water temperature is 102˚F (39˚C) or higher. If you are planning a long rest in the spa, lower the water temperature closer to normal body temperature, about 99˚F (37.2˚C). Some people find even lower water temperatures relaxing and pleasing. Try different water temperatures in the 98˚-102˚F (36.6˚-39˚C) range until you find what temperatures suit you best.

5. Hot water can raise the body temperature high enough to cause heat stroke.

This can be fatal even to healthy adults. If you have any questions about your own fitness or whether you should soak in the spa, check with your physician.

6. Prolonged immersion in hot water may induce hyperthermia

Hyperthermia occurs when internal body temperature reaches a level several degrees above the normal body temperature of 98.6F (36.6C). The symptoms of hyperthermia include: (1) dizziness, (2) fainting, (3)drowsiness, (4) lethargy, (5) increases in the internal body temperature. The effects of hyperthermia 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) unconsciousness resulting in danger of drowning.

7. WARNING-The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs or spas

Despite the popular image of people in spas drinking wine or other alcoholic beverages, DO NOT use alcoholic beverages before or during spa use. Alcohol is a depressant which causes slowed reflexes and drowsiness, especially in conjunction with the relaxed soaking in hot water. This can lead to sleep or unconsciousness and possibly result in drowning. Using your spa with other people who are also drinking is not a preventative measure since they are likely to become similarly affected by the combinations of alcohol and hot water soaking.

Soaking in hot water causes changes in the circulatory system, such as enlargement of blood vessels near the skin. Therefore, people with a medical history of heart disease, circulatory problems, diabetes, or high blood pressure should check with their physician before using spas. Additionally, people taking medications causing drowsiness, such as tranquilizers, narcotics, antihistamines, or anticoagulants should not use spas without asking their physician.

8. Broken or missing drain covers should be replaced immediately

Accidents can occur when long hair or a body part is trapped by suction from a drain or outlet whose cover is broken or removed. Children are particularly vulnerable, and they should be warned against danger.

DO NOT :

Do not use electrical appliances in or around your spa! Do not use glass or other breakable items in or around your spa! Do not remove spa cabinet panels and attempt to make repairs! Do not attempt electrical repairs! :Retain a Licensed Electrician!

Save These Instructions!

Selecting A Good Location

Site Selection...

Your new spa will provide you and yours with hour upon hour of healthy, relaxing enjoyment. The following suggestions and recommendations will help you select a safe and compatible site for your spa maximizing your enjoyment.

READ ALL SAFETY INSTRUCTIONS!

See pages 1, and 2 for other safety requirements and instructions

1. Licensed Electrician Required

Electrical installation, approval of and connection to, power source must be completed by a qualified licensed electrician in compliance with all codes.

2. No Overhead Power Lines

Do not locate your spa under overhead power lines or in near proximity to existing buried or exposed electrical circuits. See your Electrician

3. Childproof Your Spa

Plan for limiting access of children. Precautions such as self closing and locking gates or access doors, fencing and other child barriers, as dictated by the site.

4. UL Safety Cover Required

In addition to its insulating factors, a good cover, also provides a measure of additional protection from unwanted access. Select a cover which is classified by the Underwriters Laboratories meeting ASTM F1346-91 requirements.

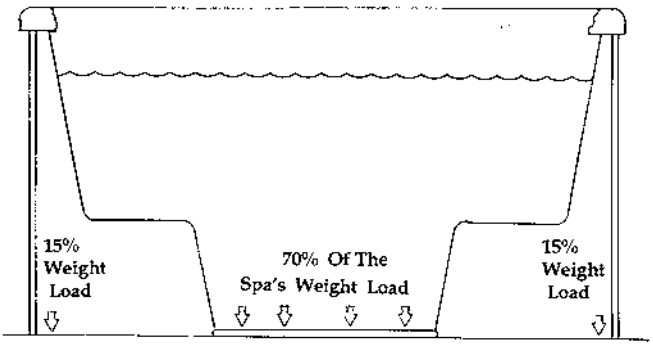
LEVEL, FLAT & SOLID LOAD BEARING SITE CRITICAL

Solid Load Bearing Site

The site must provide a solid foundation with a minimum load bearing capacity of 75 pounds per square foot (33.75 kgr per 929.03 sq. cm.). Concrete slabs and decks must be designed to support this weight. Do not select a site composed of individual unsupported bricks, blocks or other materials which will shift unevenly and cause damage to your spas internal frame.

Level Site, Flat Surface

A level site is critical to both the performance and enjoyment of your spa. Water is unforgiving and will always settle level. A flat and level site provides the surface necessary to properly dispense weight between the footwell which bears most of the spa's weight and the structural frame which primarily provides stabilization and secondary support. The importance proper support for the foot well in conjunction with Spa cabinet can not be over stressed.



Solid, Level, Flat Surface Capable of Supporting 75 Pounds Per Sq. Ft.

THE BULK OF YOUR SPA'S WEIGHT IS SUPPORTED BY THE FOOTWELL
Failure to provide support will result in damage to the spa's shell and will void the shell warran-

Filling Your Spa

Filling your spa is the first step in maintaining water quality and chemical balance. Use only clear, uncontaminated potable water when filling the spa.

fig. 1

Water Level

The correct water fill level varies with each individual installation. Every person entering a spa displaces a given volume of water.

Suggested "Fill Range" Provided

A fill range label has be placed on the surface skimmer face plate at the factory (see fig. 1). This label has a suggested minimum and maximum fill levels that will provide a starting point for selecting a water level that meets your individual needs.

Chemically Treat Water Immediately

To assure the maintenance of water quality it is imperative that you chemically threat the spa water immediately upon completion of filling. See the treatment sections on page 14 & 15.

Winterizing Your Spa

Warning: Allowing the spa water to freeze will cause severe damage to the spa shell, equipment, and plumbing

A spa can be a great asset to your health and relaxation during the winter months. However, for those who will be using a spa in freezing cold weather it is critical that a water temperature is maintained well above freezing.

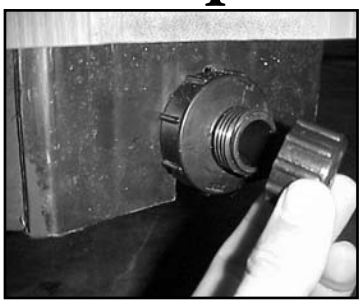
Freeze Protection

Your Leisure Bay spa is equipped with a special feature called freeze protection. If the high limit sensor detects 40 degrees F at the heater, then all the equipment is automatically activated to provide freeze protection. This equipment stays on until the sensor detects 45 degrees F at the heater.

WARNING: We strongly recommend that you inspect and test your spa and controls on a daily basis during periods when temperatures are below 32 degrees F. Every installation is different and many factors contribute to possible freeze damage situations; rate of temperature drop thermal cover insulating properties, thermal cover installation, spa installation location, wind exposure, power outage, spa water temp. etc. The spa's freeze protection system is designed to protect your spa from unforeseen freeze situations. However, in severe freeze conditions or if you do not plan to use your spa for a period of time, it may be impossible for the freeze protect system to fully protect your spa. When severe conditions threaten, we strongly recommend that you have the unit drained and winterized by a "Spa Professional". Properly winterizing a spa is a complicated process and should not be attempted by an amateur.

Draining Your Spa

(Warning: Do not supply power to an empty Spa!)



Drain Every Three Months

Draining your spa on a regular basis rids the spa of dissolved solids and protects your spa equipment from the effects of residual calcium hardness and total alkalinity problems.

1. Turn Power Off

Turn power off at the spa consoles and deactivate disconnect switches at the GFCI plug or load center.

2. Remove Spa Drain Hose

Remove the spa drain hose located in a storage compartment which is located under the lower corner of the spa as you are facing the console. See arrow.

3. Remove Drain Valve Safety Cap

Remove safety drain cap and store for use when refilling your spa. Attach a standard garden hose to the drain valve.

4. Attach Hose & Select Safe Suitable Drain

Route the hose to a sewer drain capable of safely assimilating 300 plus gallons of water which may contain both unsanitary contaminants and chemical residue. Open drain valve.

CAUTION: Drain waste water may contain chemical residue and unsanitary contaminants which could be a hazard to health or the environment. Drain to specified sanitary sewer only.

WARNING: Shock Hazard! Under No Circumstances Should This Spa Be Installed By Anyone Other Than A Certified Licensed Electrician!

All wiring MUST be in accordance with the National Electrical Code and All Local Codes.

S-2 Series Convertible Equipment Package

The S-2 is a convertible equipment pack designed to except either 120 or 240 volt power input.

Your spa has a factory installed 120 volt power cord with a GFCI 20 amp configured plug connector designed for use with a Nema 5-20R receptacle. See below for further details. Conversion of the S-2 from the standard 120 volt cord connection to a 240 volt hard wire connection must be completed by a Licensed Electrician in accordance with all codes.

A GFCI Must Be A Integral Part Of The Connection

The National Electrical Code requires that both 120 and 240 volt circuits be protected by a Ground Fault Circuit Interrupter (GFCI) and a Disconnect Switch. See NEC Article 680-42 & 680-12

WARNING:

This GFCI Plug provides ground fault protection for the spa and should never be removed, altered or disabled for any reason!

This GFCI Plug has one vertical and one horizontal blade in addition to a grounding prong. This plug configuration is to be plugged into a like receptacle. Under no circumstance should this configuration be modified.

A NEMA 5-20R 20 Amp Receptacle is Required

A NEMA 5-20 Amp Receptacle is required for a Power Cord installation. This receptacle must be installed in accordance with the National Electrical Code and All Local Codes.

Isolated, Dedicated 120 Volt, 20 Amp Circuit Is Required

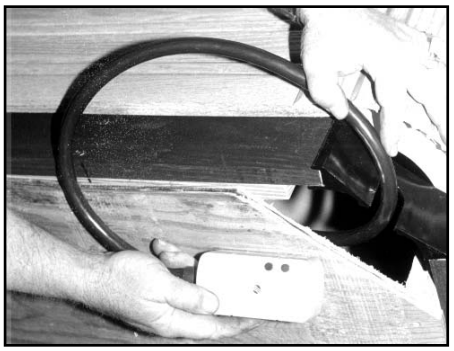
All 120 volt installations require a isolated, dedicated 120 volt circuit to provide the power necessary for the proper operation of the electrical equipment.

Safety Factors In Placement of the 20 Amp Receptacle

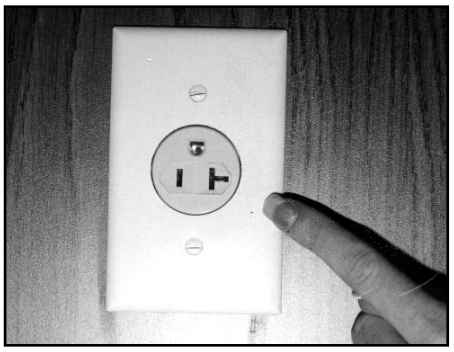
Special consideration should be given to safety when selecting a location for the 20 Amp receptacle. The receptacle should be placed no closer than six (6') feet (180cm) from the spa and in such a manner as to be out of the way of traffic to and from the spa and normal foot traffic. The power cord should be situated so it will not cause any other type of hazard.

Wire Sizing Must Meet Electrical Codes

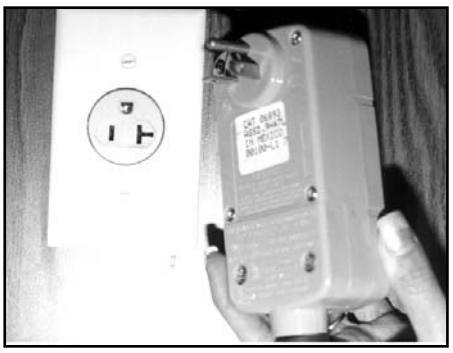
All installations are different. Wire sizing must meet the National Electrical Code and all Local Code Specifications.



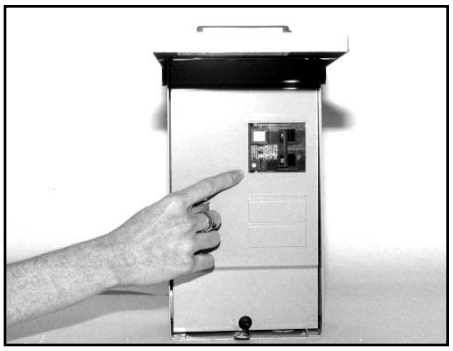
Ground fault interrupter plug & power cord fished through arched corner of the spa.



NEMA 5-20 20 Amp Receptacle



GFCI Equipped Plug



Load Center

LEISURE BAY Spas

Ground Fault Circuit Interrupter

Your Leisure Bay Spa has a factory mounted power cord which is equipped with a Ground Fault Circuit Interrupter (GFCI) built within the plug housing.

The GFCI has two mode buttons. The first is labeled "Test". This button has a dual function. First it acts as a disconnect switch. Depress this button and power to the spa is disconnected. The same action is preformed to test the GFCI circuit.

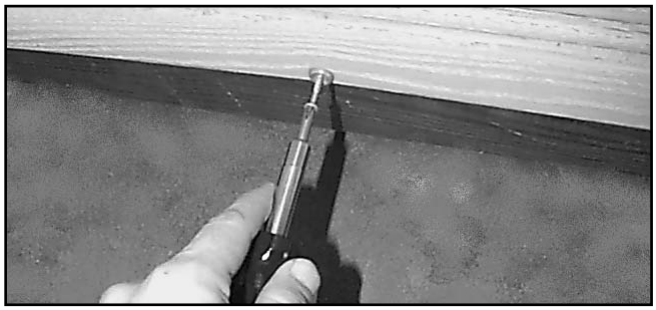
The second button labeled "Reset" also has two functions. The "Reset" button is also the connect (on) switch. Depressing the "Reset" button returns power to the spa equipment. This same button is used to "Reset" the GFCI during a test cycle. See page 1 number 4A.

Should a GFCI circuit test fail immediately disconnect the power plug and contact a Licensed Electrician to diagnose and correct the problem.

Removal of Cabinet Panels

(For Use By Qualified Professionals Only)

Remove and reserve the phillips head screws that secure the left and right corners and bottom edges of the cabinet panel.



Remove and reserve the phillips head screws that secure the top edge of the cabinet panel

Slide the panel down, then all the way to the left, and pull out from the right side.

Remove panel and store in safe place. For installation follow steps 1 to 3 in reverse order.

WARNING: Shock Hazard! No User Serviceable Parts.
Spa Cabinet panels should be removed by qualified spa service professionals only!

ELECTRICAL DATA FOR THE USE OF LICENSED ELECTRICIAN

WARNING: Shock Hazard! Under No Circumstances Should This Spa Be Installed By Anyone Other Than A Certified Licensed Electrician!

All wiring **MUST** be in accordance with the National Electrical Code and All Local Codes.

S-2 Series 120-240 Volt Hard Wire Conversion.

Conversion of the S-2 Series Equipment

To Convert a **S-2** equipment package from a factory installed 120 Volt system to a hardwired 240 volt system must be completed by a Certified Licensed Electrician.

A Ground Fault Circuit Interrupter and a Disconnect Switch Are Required.

The National Electrical Code requires that spas connected to 240 volts circuits be equipped with a Ground Fault Circuit Interrupter and Disconnect Switch. See NEC Articles 680-12 and 680-42.

Leisure Bay's S-2 Series spas are <u>NOT EQUIPPED</u> With A 240V Ground Fault Circuit Interrupter or a Disconnect Switch.

Outdoor Load Center Provides Both

The addition of an outdoor load center such as a Siemens W0408ML 1125 or equal must be added to the Circuit. This type of load center provides both a Ground Fault Circuit Interrupter and Disconnect Switch in a convenient configuration as required by the NEC.

Isolated, Dedicated 240 Volt, 30 or 50 Amp Circuits Are Required

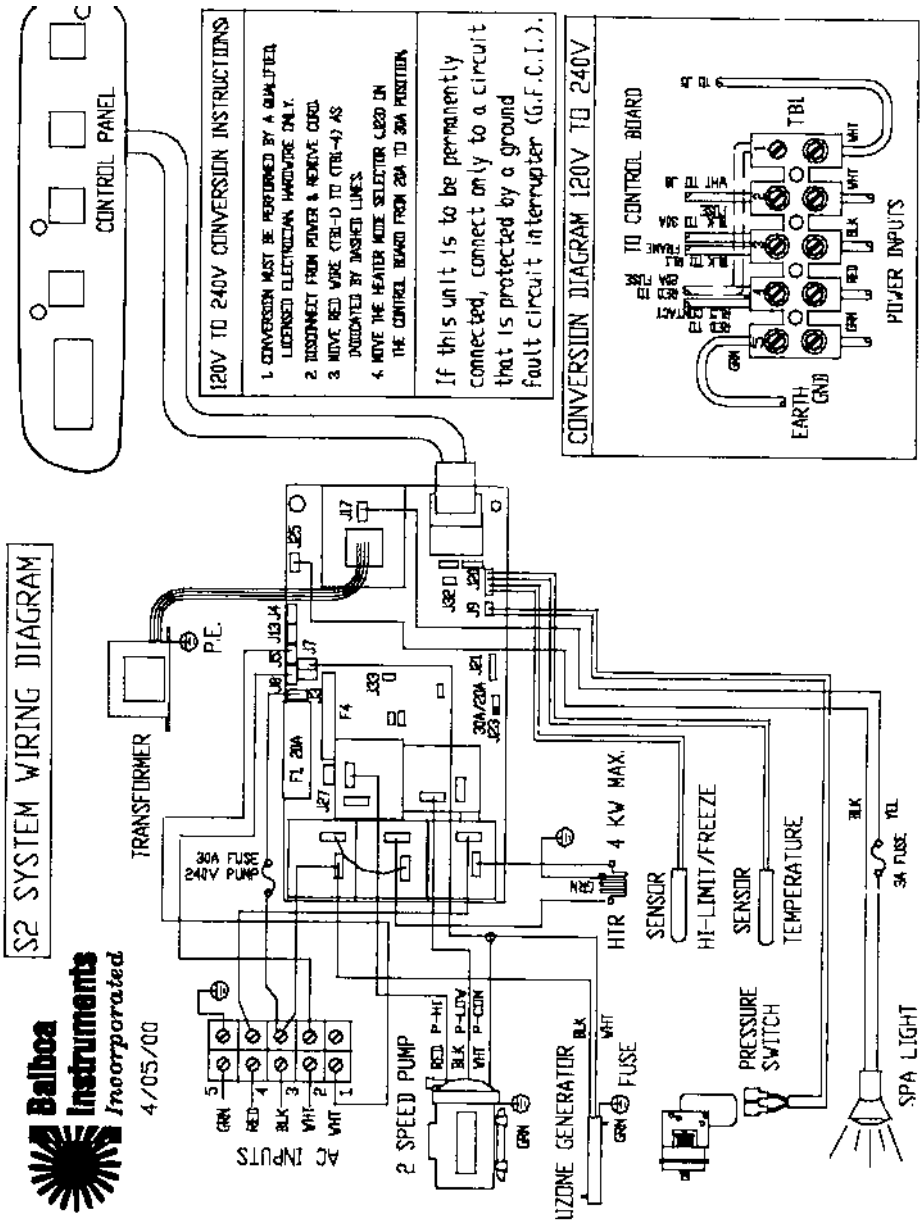
An isolated, dedicated 240 Volt, 30 or 50 amp Circuits are required to provide the power necessary to properly operate the 240v Equipment Package.

Permanently Hard Wired

All 240 Volt operations wiring must be permanently hard wired and installed in grounded conduit and installed in compliance with the National Electrical Code and all Local Codes.

Wire Sizing Must Meet Electrical Codes

All installations are different. Wire sizing must meet the National Electrical Code and all Local Code Specifications.



For Mode Selector Details See Pg. 9

WARNING! <u>USE COPPER CONDUCTORS</u>

WARNING: Shock Hazard! Under No Circumstances Should This Spa Be Installed By Anyone Other Than A Certified Licensed Electrician!

All wiring **MUST** be in accordance with the National Electrical Code and All Local Codes.

LEISURE BAY Spas Genius Series G-1.5 & G-2 240 Volt Hard Wire Installation

Licensed Electrician Required

Wiring of the Genius G-2 volt system must be completed by a Certified Licensed Electrician.

A Ground Fault Circuit Interrupter and a Disconnect Switch Are Required.

The National Electrical Code requires that spas connected to 240 volt circuits be equipped with a Ground Fault Circuit Interrupter (GFCI) and Disconnect Switch. See NEC Articles 680-12 and 680-42.

Leisure Bay GENIUS Series Spas are NOT EQUIPPED With A 240v Ground Fault Circuit Interrupter or a Disconnect Switch.

Outdoor Load Center Provides Both

The addition of a outdoor load center such as a Siemens W0408ML 1125 or equal must be added to the Circuit. This type of load center provides both a Ground Fault Circuit Interrupter and Disconnect Switch in a convenient configurations as required by the NEC.

Isolated, Dedicated 240 Volt, 50 Amp Circuit Is Required

An isolated, dedicated 240 Volt, 30 or 50 amp circuit is required to provide the power necessary to properly operate the 240v Equipment Package.

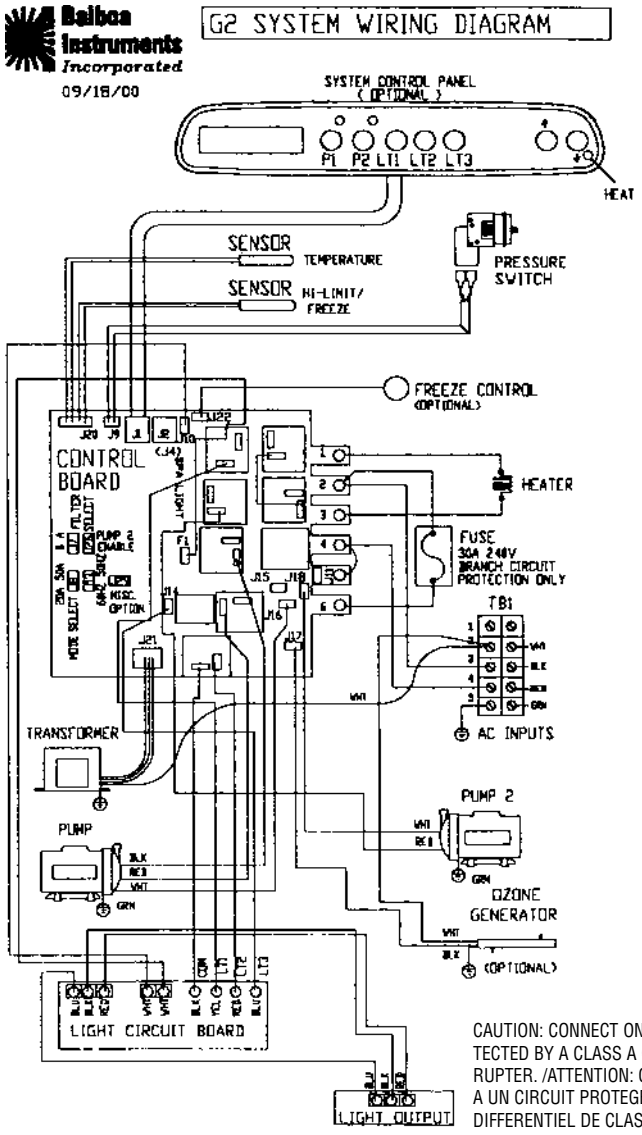
For 30 Amp Configuration See Page 9

Permanently Hard Wired

All 220 Volt operations wiring must be permanently hard wired and installed in grounded conduit and installed in compliance with the National Electrical Code and all Local Codes.

Wire Sizing Must Meet Electrical Codes

All installations are different. Wire sizing must meet the National Electrical Code and all Local Code Specifications.



CAUTION: CONNECT ONLY TO A CIRCUIT PROTECTED BY A CLASS A GROUND FAULT INTERRUPTER. /ATTENTION: CONNECTOR UNIQUEMENT A UN CIRCUIT PROTEGE PAR UN DISJONCTEUR DIFFERENTIEL DE CLASSE A.

CAUTION: READ THE INSTRUCTION MANUAL. /ATTENTION: LIRE LA NOTICE TECHNIQUE.

USE COPPER CONDUCTORS ONLY! / EMPLOYER UNIQUEMENT DES CONDUCTEURES DE CUIVRE.

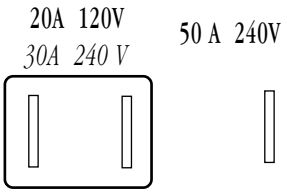
WARNING! USE COPPER CONDUCTORS

ELECTRICAL DATA FOR THE USE OF LICENSED ELECTRICIAN

WARNING: Shock Hazard! Under No Circumstances Should This Spa Be Installed By Anyone Other Than A Certified Licensed Electrician!

All wiring **MUST** be in accordance with the National Electrical Code and All Local Codes.

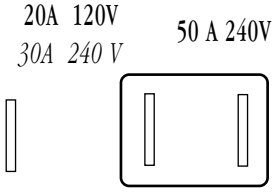
Conversion of S-2 SMART Series From 120V to 240V



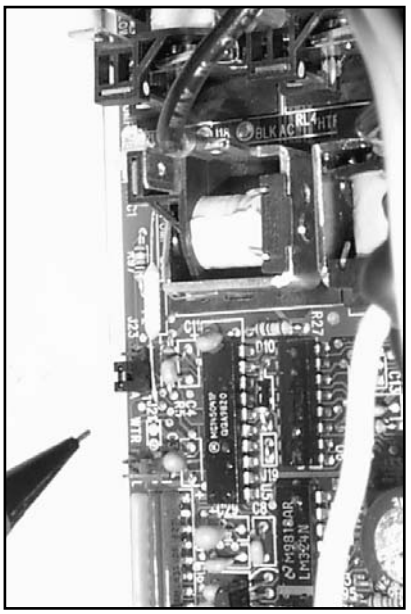
Factory Set 120 Volt - 20 Amp
Switch Bridge Connects Left and Center Post

Or

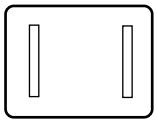
Factory Set 240 Volt - 30 Amp
Switch Bridge Connects Left and Center Post



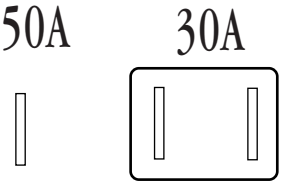
Convert To 240 Volt - 50 Amp
Switch Bridge Connects Right and Center Post



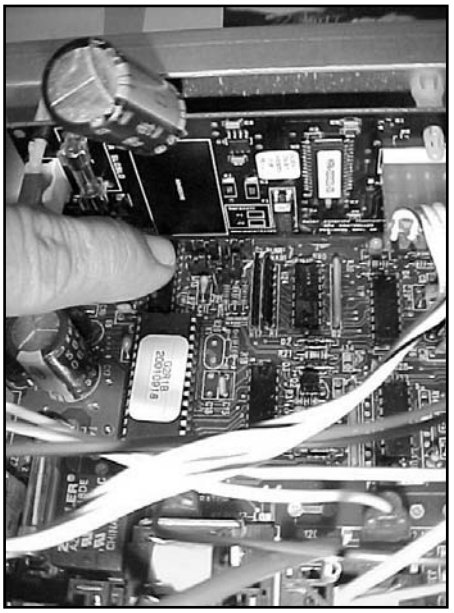
Conversion of G-1.5 & G-2 GENIUS Series From 50 AMP to 30 AMP

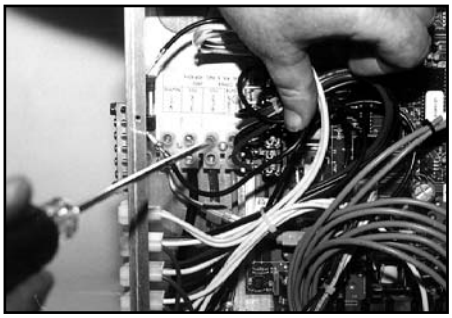


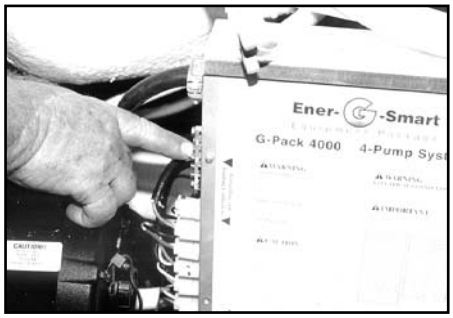
In 240V 50 amp configuration Select Switch Bridge connects the left and center posts.

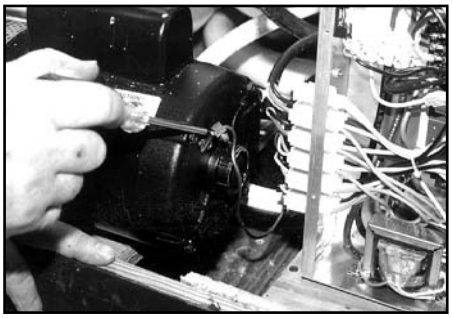


To convert a GENIUS Series from 240V 50 amp to 240V 30 amp setting the Select Switch Bridge must be moved to connect the center and right post.









A grounding lug has been provided on the exterior of the pack chassis to allow connection of a ground wire to a local grounding point to be established in compliance with the National Electric Code (NEC) and all Local

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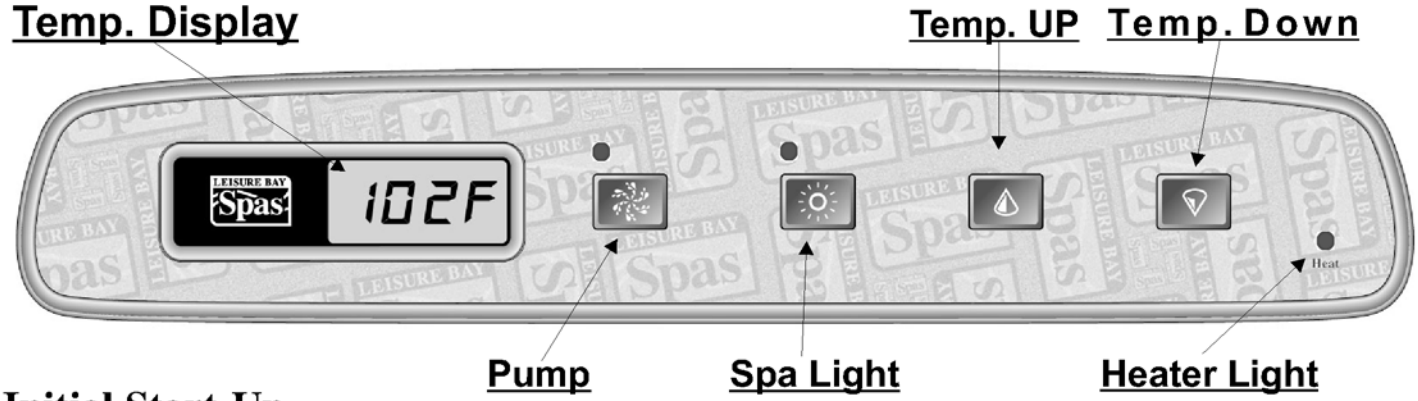
S-2 Series Control



Initial Start-Up

When your Spa is first activated, it will automatically heat and maintain 100° F until you change the set temperature. Also it will run on low speed for two hours. (F2)

Temperature Adjustment (60° F-104° F)

When either of the temp. pads or are touched once, the LCD will flash and display the temperature which has been set. While flashing, press the temp. pad again to increase or decrease the temperature. The temperature will change from 81-104° F in 1° F increments. From 60° F-80° F, the temperature will change in 5° F increments. After 5 seconds, the LCD will automatically display the current spa temperature.

Jets

Press the pad to run the pump on and off.
If left running, the pump will automatically turns off after 30 minutes.

Light

Press the pad to turn the spa light on and off. If left on, the light will automatically turns off after 4 hours. See page 11 for new color scape light user guide.

Freeze Protection

If the high-limit sensor detects 40° F at the heater, then all the equipment is automatically activated to provide freeze protection. This is a normal spa function; no corrective action is necessary. The equipment stays on until the sensor detects 45° F at the heater. Freeze protection is enabled regardless of the spa's status.

Standby Mode

The spa can be disable when the filter needs to be replaced. To put the system in standby mode, press the "Accu Temp" pad then the "Light" pad and the display will show "SB ". All spa functions are disabled except for freeze control. Press any panel button to resume spa operation.

Display Messages

OH **"Overheat" (spa is Deactivated)**
DO NOT ENTER THE WATER. If the spa water has reached 112° F, the display will flash "OH" (meaning overheat). Remove the spa cover to cool the water, the spa will remain shut down until the water and the heater sensor cools to 110° F. At that point press any button to reset the spa. If the spa will not reset, the shut off the power to the spa and call your dealer or service organization.

FL **"Flow"**
The pressure switch is not working. Call your dealer or service center.

SN **"Sensor" (Spa is Deactivated.)**
The hi-limit sensor or water temp. Sensor is not working. Call your dealer or service center.

SB **Standby Mode (Spa is deactivated.)**
All spa functions are disable except for freeze control. Press any panel button to resume spa operation.

Spa Water Maintenance

This function enables you to program the amount of water filtration and (ozone purification "optional") time.

Press the or then the to enter the programing mode.

Once in the programing mode press or to select the filtration time. Once selected, press the button to exit the programing.

F2 In this mode the water will be filtered for 2 hours every 12 hours.

F4 In this mode the water will be filtered for 4 hours every 12 hours.

F6 In this mode the water will be filtered for 6 hours every 12 hours.

FC In this mode the water will be filtered continuously.

WARNING: Shock Hazard! No User Serviceable Parts. *Do not attempt to service this control. Contact your dealer or service center for assistance. Follow all ownersís manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.*

LEISURE BAY Spas

User Guide for New Colorscape Lights S-2 models Only

Controlling Colorscape Lights

Use the Spas's existing light button  **to turn Colorscape On and Off.**

Choosing Effects

Colorscape lights are preprogramed with an assortment of light shows.

1. **When you turn color scape Off and then On again immediately it advances to the next show.**
2. **When you turn color scape Off and leave it Off for more than Five seconds, it remembers the last show you selected. The next time you turn colorscape on, it will display the same show.**

Description of Shows

1. **Slow Color Wash***
   Colors transition gracefully from color to color, cycling through the color spectrum.
   Each color takes approximately 3 minutes.
2. **Fast Color Wash***
   Colors transition gracefully from color to color, cycling through the color spectrum.
   Each color takes approximately 1 minute.
3. **Slow Random Colors***
   Color step or jump from one color to the next in random order.
   Each color last approximately 10 - 15 seconds.
4. **Fast Random Colors**
   Color step or jump from one color to the next in random order.
   Each color last approximately 5 seconds.
5. **High Speed Random Colors**
   A rapid series of intense flashing of varying colored light.
6. **Cross Fade***
   Colors cycle back and forth gracefully between blue and green.
   Total cycle last one minute.

7-13. Fixed Colors
Static display of a single color. Available colors include white, pink, lavender, light blue, dark blue, light green, and dark green.

*These effects begin at slightly faster speed, then slow down after 1 or 2 seconds. This is to help you identify the effect.

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G-1.5 Series Control

Initial Start-Up

When your Spa is first activated, it will automatically heat and maintain 100º F (38º C) until you change the set temperature.
Also it will run on low speed for two hours.
See F2 under Spa water maintenance in this page.

Temperature Adjustment 60-104º F (15-40º C)

When either of the temp. pads or are touched once, the LCD will display the temperature which has been set.
Press the temp. pad again to increase or decrease the temperature.
The temperature will change from 81-104º F (27-40º C) in 1º increments.
From 60-80º F (15-26º C), the temperature will change in 5º increments.
After 5 seconds, the LCD will automatically display the current spa temperature.

Spa Water Maintenance

This function enables you to program the amount of water filtration and (ozone purification "optional") time.

Press the then to enter the programing mode.

Once in the programing mode press or to select the filtration time. Once selected, press the button to exit the programing.

FIL2 In this mode the water will be filtered for 2 hours every 12 hours.
FIL4 In this mode the water will be filtered for 4 hours every 12 hours.
FIL6 In this mode the water will be filtered for 6 hours every 12 hours.
FILC In this mode the water will be filtered continuously.
The system will also automatically purge the plumbing lines, once per day the pumps will run for 30 seconds.

Jets

Press the pad to turn the pump on and off.
If left running, the pump will automatically turn off after 30 minutes.

Lights

See the control panel display on next page for settings and adjustments.

Display Messages

OH **"Overheat" (spa is Deactivated)**
DO NOT ENTER THE WATER. If the spa water has reached 112º F (44º C) the display will flash OH (meaning overheat). Remove the spa cover to cool the water, the spa will remain shut down until the water and the heater sensor cools to 110º F (43º C). At that point press any button to reset the spa. If the spa will not reset, then shut off the power to the spa and call your dealer or service organization.

FLO **Flashing Alternately with Temperature**
1) The filter may be plugged. Remove the filter and clean. 2) The amount of water flow may be inadequate. Make sure the spa is filled correctly. 3) The pressure switch may be malfunctioning. The spa will continue to operate, but the heater will not activate. Contact your dealer or service center.

FLO **Constant**
The pressure switch has malfunctioned. Contact your dealer or service center.

SN1 **"Open Sensor" (Spa is Deactivated.)** The hi-limit temp. sensor is not functioning. This must be repaired by your dealer or service center.

SN3 **"Open Sensor" (Spa is Deactivated.)** The main temp. sensor is not functioning. This must be repaired by your dealer or service center.

COOL **Temperature Set back**
The heater will activate to provide freeze protection when the spa water is more than 20º F (-6º C) cooler than the set temperature. This is a normal function; no corrective action is necessary.

ICE **Freeze Protection**
If the high-limit sensor detects 40º F (4º C) or less at the heater, the pumps will be automatically activated to provide freeze protection. This is a normal spa function; no corrective action is necessary. The pumps will stay on until the sensor detects 45º F (7º C) or higher at the heater. Freeze protection is enabled regardless of the spa's status.
See the ***Winterizing Your Spa*** section for more information.

Standby Mode

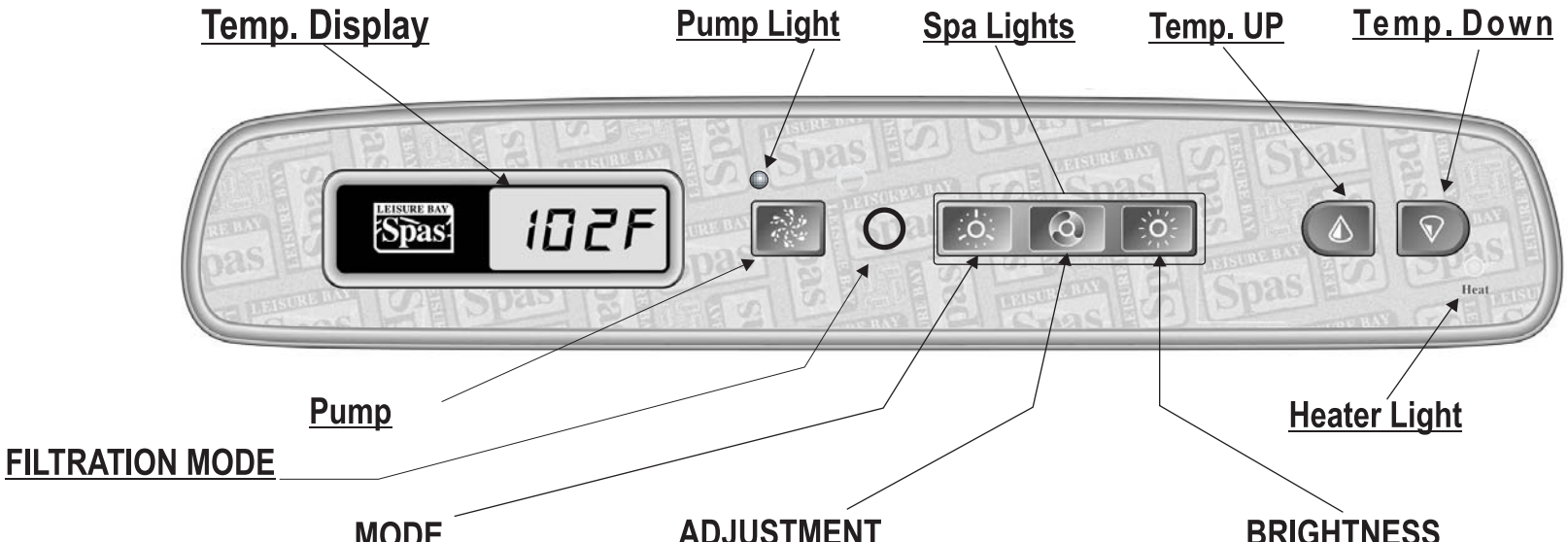
In order to service the water filter, it is desirable to stop and disable the pump. To put the system in standby mode, press the or then the and the display will show STBY. All spa functions are disabled except for freeze control. Press any panel button to resume spa operation.

Temp. Display Inversion

Press or then to invert the temperature display.

WARNING: Shock Hazard! No User Serviceable Parts. *Do not attempt to service this control. Contact your dealer or service center for assistance. Follow all ownerís manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.*

G-1.5 Control Panels



	MODE	ADJUSTMENT	BRIGHTNESS
Push 1	Solid Color	Sequences through 6 solid colors	Sequences through 6 brightness settings
Push 2	Random colors	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 3	Color wash	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 4	Color chase	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 5	Off	No effect when in Off mode	No effect when in Off mode

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G-2 Series Control

Initial Start-Up

When your Spa is first activated, it will automatically heat and maintain 100º F (38º C) until you change the set temperature. Also it will run on low speed for two hours. See F2 under Spa water maintenance in this page.

Temperature Adjustment 60-104˚F (15-40˚C)

When either of the temp. pads or are touched once, the LCD will display the temperature which has been set. Press the temp. pad again to increase or decrease the temperature. The temperature will change from 81-104º F (27º-40 C) in 1º increments. From 60-80º F (15-26º C), the temperature will change in 5º increments. After 5 seconds, the LCD will automatically display the current spa temperature.

Spa Water Maintenance

This function enables you to program the amount of water filtration and (ozone purification "optional") time.

Press the or then (pump 2) to enter the programing mode.

Once in the programing mode press or to select the filtration time. Once selected, press the button to exit the programing.

FIL2 In this mode the water will be filtered for 2 hours every 12 hours.
FIL4 In this mode the water will be filtered for 4 hours every 12 hours.
FIL6 In this mode the water will be filtered for 6 hours every 12 hours.
FILC In this mode the water will be filtered continuously.
The system will also automatically purge the plumbing lines, once per day the pumps will run for 30 seconds.

Jets

Press the pads to turn the pump 1 or 2 on and off.
If left running, the pumps will automatically turns off after 30 minutes.

Lights

See the control panel display on next page for settings and adjustments.

Display Messages

OH **"Overheat" (spa is Deactivated)**
DO NOT ENTER THE WATER. If the spa water has reached 112º F (44º C) the display will flash OH (meaning overheat). Remove the spa cover to cool the water, the spa will remain shut down until the water and the heater sensor cools to 110º F (43º C). At that point press any button to reset the spa. If the spa will not reset, then shut off the power to the spa and call your dealer or service organization.

FLO **Flashing Alternately with Temperature**
1) The filter may be plugged. Remove the filter and clean. 2) The amount of water flow may be inadequate. Make sure the spa is filled correctly. 3) The pressure switch may be malfunctioning. The spa will continue to operate, but the heater will not activate. Contact your dealer or service center.

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The pressure switch has malfunctioned. Contact your dealer or service center.

SN1 **"Open Sensor" (Spa is Deactivated.)** The hi-limit temp. sensor is not functioning. This must be repaired by your dealer or service center.

SN3 **"Open Sensor" (Spa is Deactivated.)** The main temp. sensor is not functioning. This must be repaired by your dealer or service center.

COOL **Temperature Set back**
The heater will activate to provide freeze protection when the spa water is more than 20º F (-6º C) cooler than the set temperature. This is a normal function; no corrective action is necessary.

ICE **Freeze Protection**
If the high-limit sensor detects 40º F (4º C) or less at the heater, the pumps will be automatically activated to provide freeze protection. This is a normal spa function; no corrective action is necessary. The pumps will stay on until the sensor detects 45º F (7º C) or higher at the heater. Freeze protection is enabled regardless of the spaís status.
See the ***Winterizing Your Spa*** section for more information.

Standby Mode

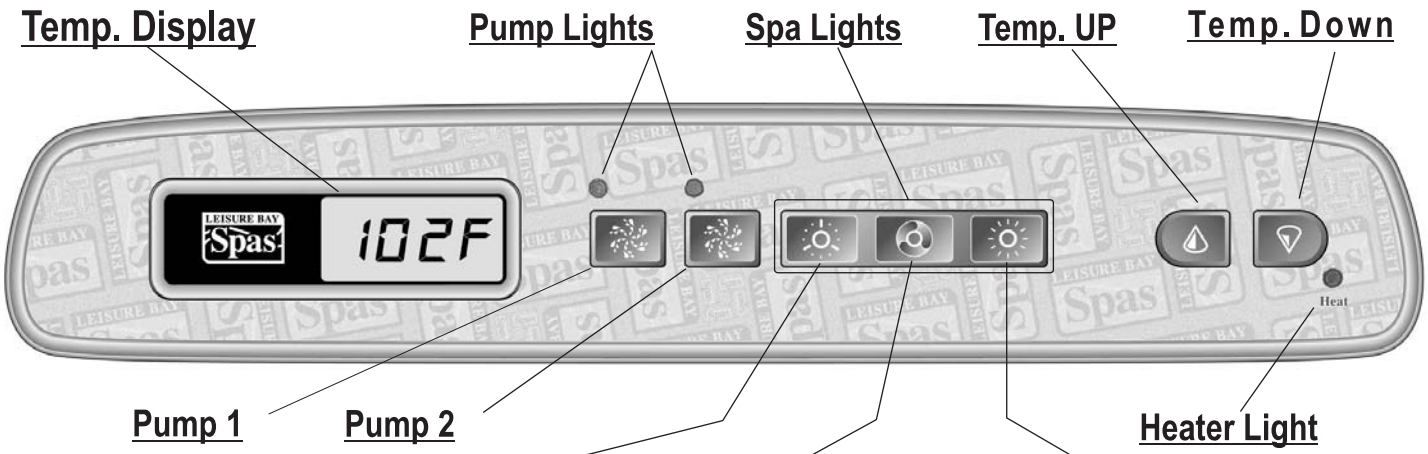
In order to service the water filter, it is desirable to stop and disable the pump. To put the system in standby mode, press the or then the and the display will show STSB. All spa functions are disabled except for freeze control. Press any panel button to resume spa operation.

Temp. Display Inversion

Press or then (pump 1)to invert the temperature display.

WARNING: Shock Hazard! No User Serviceable Parts. *Do not attempt to service this control. Contact your dealer or service center for assistance. Follow all ownerís manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.*

G-2 Control Panels



	MODE	ADJUSTMENT	BRIGHTNESS
Push 1	Solid Color	Sequences through 6 solid colors	Sequences through 6 brightness settings
Push 2	Random colors	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 3	Color wash	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 4	Color chase	Sequences through 5 speed adjustments	Sequences through 6 brightness settings
Push 5	Off	No effect when in Off mode	No effect when in Off mode

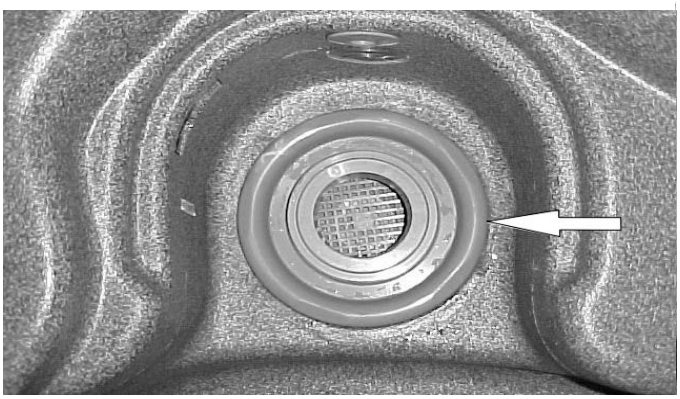
Auxiliary Panel

Skim Filter

Cleaning Your Spa Filter

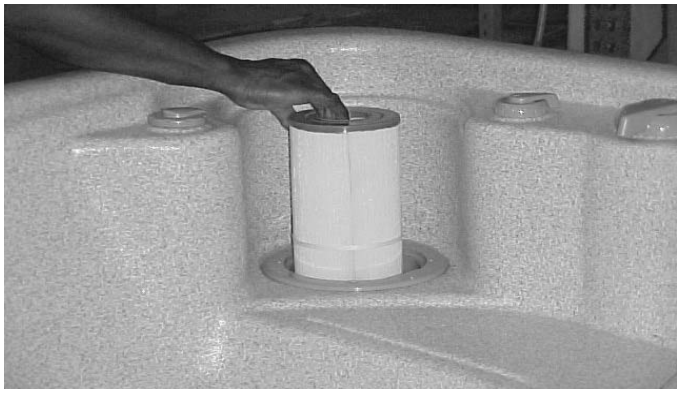
Proper care and cleaning of your spa filter is very important to the enjoyment of your spa. The filter is designed to remove emerged debris and contaminants providing clear clean water for the bather. The most important maintenance step is to establish a cleaning routine to fit your use pattern. Heavy use and introduction of contaminants such as oily body lotions could mean cleaning on a weekly basis while average use might require only monthly cleaning.

1. Activate the Stand by mode or turn off electical power. Remove filter cover and set a side.



2. To remove floating weir and basket rotate it a 1/4 turn counter clockwise.

3. Remove the floating weir and basket

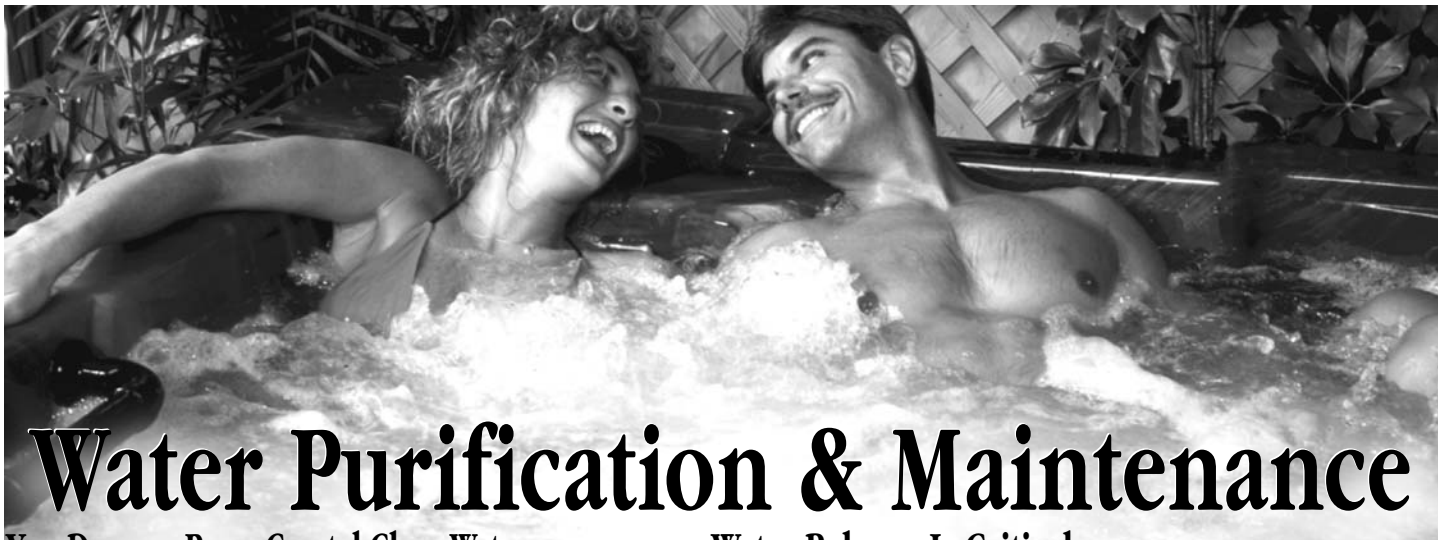


4. Remove filter cartridge and wash it with a garden hose inside and out until the cartridge

Note:

1. Body oils, algae, and suntan oil can form a coating on the spa filter cartridge pleats which may not be thoroughly removed by the garden hose. To remove such substances, soak the filter in a solution of filter cleaner. Various brands of such cleaners are readily available at your local dealer.

2. Improper spa filter maintenance will alter the water sensing devise on your spa. This will lead to faulty heater and / or pump operation. But generally, cleaning or replacing the filter cartridge regularly will remedy this situation.



Water Purification & Maintenance

You Deserve Pure, Crystal Clear Water...

Pure, crystal clear water is part of the reward you receive for owning your very own spa. And maintaining water quality is a simple matter when a Use/Maintenance Routine is established early on in ownership.

Use/Maintenance Routine...

The tasks required to maintain superior water quality are divided into two categories, Regular and Special. "Regular" tasks included those that should be routinely performed regardless of use pattern. For example, the spa filter should be cleaned at a minimum monthly, even if the spa is used only occasionally. "Special" tasks are those performed to compensate for increase in spa use. For example, the filter on a spa that has experienced a heavy bather load resulting from vacation time and visiting friends or relatives might need cleaning on a weekly basis or more. Planning and establishing a routine of Regular and Special maintenance as required by time and bather load will significantly simplify your spa maintenance.

Starting Point For Developing A Use/Maintenance Routine...

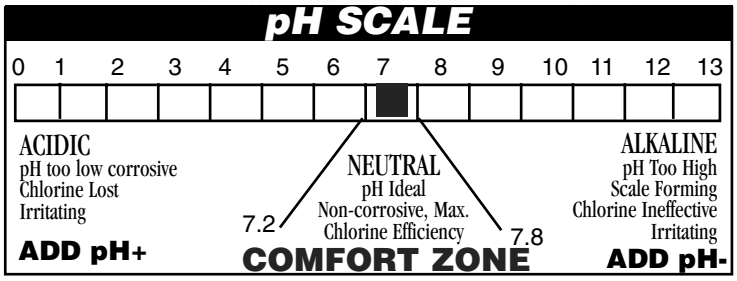
No hard set rules can be established for creation of a spa maintenance program since each individual spa has its own unique location conditions and bather patterns. The following chart of regular and special maintenance tasks is meant to provide a starting point. Water testing and experience will be the final indicators of what your routine should be.

	Light Usage	*Average Usage*	*Above Ave. Usage*	*Heavy Usage*
Test & Adjust pH (7.2-7.8 Range)	Weekly	Twice Weekly	Thrice Weekly	Daily
Test & Maintain Bromine (3.0-5.0ppm)	Weekly	Twice Weekly	Daily	Daily
Vacuum Spa	Monthly	Twice Monthly	Thrice Monthly	Weekly
Clean Spa Shell Water Line	Weekly	Weekly	Twice Weekly	Daily
Clean Spa Filter	Monthly	Twice Monthly	Twice Monthly	Weekly
Test & Maintain Alkalinity	Bi-Weekly	Weekly	Twice Weekly	Twice Weekly
Add "Non Chlorine Shock"			Weekly	As Required
Test & Maintain Calcium Hardness Monthly	Weekly	Weekly	Weekly	Weekly
Clean Cartridge With Chemical Cleaner	Quarterly	Monthly	Twice Monthly	As Required

Always Follow The Manufacturers Directions & Instructions On The Chemical Container's Label

Water Balance Is Critical

Unlike ordinary drinking water, spa water is held captive in your spa and is used over and over. All water contains minerals, metals and other dissolved solids. In the case of spa water these materials tend to concentrate due to normal usage and evaporation. Therefore it is critical that you test and treat your spa water to maintain proper balance.



pH

pH is the measure of the degree of pH acidity or Alkalinity of pool water. Practically speaking, it tells if water is neutral or how far away from neutral.

pH is a measure on a scale, to which numbers have been assigned, from 1 to 14, 7 is the middle of the scale and is considered exactly neutral. Readings below 7 are increasingly acidic, above 7 are increasingly basic or alkaline. Under normal conditions, it has been found that the proper pH for spa water is approximately 7.5 with pH 7.2-7.7 being an acceptable range. The chart above indicates different tendencies at assigned pH readings and what chemical to add.

Total Alkalinity

Alkalinity represents the amount of alkaline minerals in water. It is the measure of the buffering capacity or resistance to a change in pH of water. It minimizes changes in pH, making pH easier to control. Alkalinity and pH are sometimes confused. pH is a measure of DEGREE of acidity of water. Alkalinity is a QUANTITATIVE measure, telling you the total amount or quality of alkaline minerals present. The proper alkalinity range is 80-120 ppm. If alkalinity is allowed to drift, corrosion or scaling may result. Have your spa water tested periodically for alkalinity by a qualified dealer.

Calcium Hardness

Total Hardness is used to describe the total amount of dissolved calcium and magnesium bicarbonates, as well as smaller quantities of other minerals, in water. Unbalanced water, high in hardness, can cause water to become cloudy. Scale can form inside pipes restricting water flow reducing their efficiency. Scale can also discolor a spa's interior. On the other hand, low hardness and unbalanced water can contribute to corrosive water conditions. Therefore, a certain amount of hardness is desirable. The desired range is between 100-200 ppm. Once again, your water should be tested periodically for hardness.

IMPROPER WATER BALANCE WILL DAMAGE YOUR SPA'S SHELL & EQUIPMENT.

Cleaning The Spa

From time to time it will be necessary to clean the exposed surface areas of you spa shell and cabinet. Do not use cleaners or compounds that contain harsh abrasives or caustic chemicals. Avoid using rubbing or buffing compounds.

Water Marks On Spa Shell

Water marks on the spa shell are best removed by applying a commercially available alcohol base window washing compound such as plain Windex to a soft rag or paper towel and wiping the surface in a circular motion.

Removing Tub Ring

Tub ring is best removed with a specialized commercially available cleaner such as Sun Surface Cleaner. Ask your local dealer for recommendations. Always apply with a soft wet sponge or paper towel.

Cleaning The Spa Cabinet

Use a mild dish detergent diluted with tap water and applied with a soft wet sponge or paper towel to clean the spa cabinet. Never use abrasive or caustic compounds.

Do not use cleaners or compounds that contain harsh abrasives or caustic chemicals. Avoid using rubbing or buffing compounds.

---------- Maintenance Notes ----------