

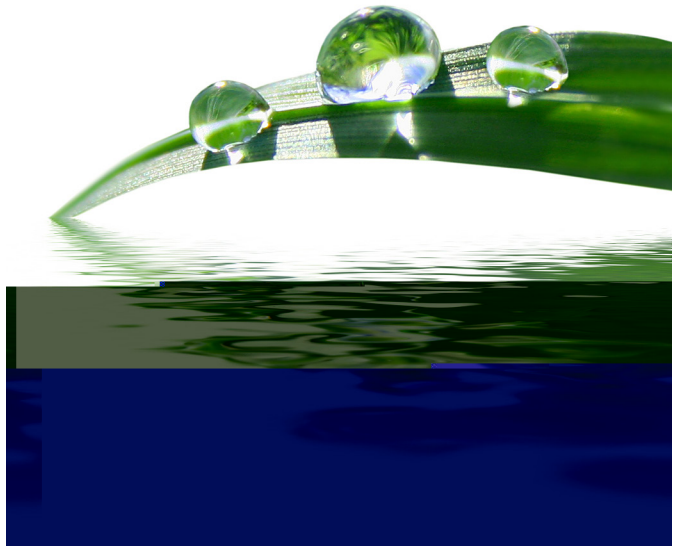


Home & Garden Spas

Owner's Guide Book



ENERGYSAVER
SPA EQUIPMENT



Technical Assistance

For technical assistance or warranty service requests, please call a technical support representative at 877-722-4097. Factory trained technical support representatives are available Monday - Friday from 8:30 am to 5 pm EST.

You may be asked to email pictures of your area of concern to the technical support representative. Pictures allow us to better diagnose the problem and provide service in an efficient and timely manner. Please be prepared to email pictures if you are asked to do so.

When you call, please have the following information to expedite your service request:

Spa Model _____

Spa Serial Number _____

Date of Purchase _____

Dealer Name _____

List of chemicals you are using in your spa

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IMPORTANT INFORMATION ABOUT SPA SAFETY

Read and Carefully Follow Instructions !
Basic safety precautions must be followed including:

HAZARDOUS TO UNATTENDED CHILDREN!



RISK OF CHILDREN DROWNING. Extreme caution must be used to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa unless they are supervised at all times. To reduce risk of injury, do not allow children to use this product unless they are closely supervised at all times. To reduce the risk of injury, lower water temperature when spa is used by children. Lower water temperatures are recommended since children are especially sensitive to hot water.

DO:

Make sure you always lock child resistant locks on the spa cover after use for your children's safety. Every Home & Garden Spa is equipped with a locking cover that meets the ATSM F1346-91 Standard for Safety Covers. There is no representation that the use of the cover, locking clips or actual locks will not prevent access to the spa.

Test the water temperature with your hands before allowing children to enter the spa to be sure that it's comfortable. Children are especially sensitive to hot water.

Remind children that wet surfaces are slippery. Make sure that children are careful when entering and exiting the spa.

Check with local authorities regarding fencing requirements for spas in your area.

DON'T:

Allow children or pets on the spa cover. Most spa covers have a maximum weight load of 20 lbs. Covers are strong enough to withstand the weight of one foot of snow. They are not designed to support the weight of people or pets. Sitting on the cover may cause the foam inserts to break.

Allow children to have unsupervised access to the spa. Children should always be in the company of a responsible adult to make sure children do not have access to the spa.

IMPORTANT INFORMATION ABOUT SPA SAFETY

AVOIDING THE RISK OF ELECTROCUTION



HOME & GARDEN SPAS RECOMMENDS THAT YOUR SPA BE INSTALLED BY A LICENSED ELECTRICIAN.

To ensure the spa functions properly and to ensure your warranty is not compromised by improper installation, you must have a licensed electrician install all electrical components. Connect only to a grounded source.

If your spa model is equipped with a cord, do not bury the cord. A buried cord may result in death or serious injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.

Install at least five feet (1.5m) from all metal surfaces. If this is not possible, a ground terminal (pressure wire connector) is provided on the control box inside the unit to permit connection with solid copper bonding conductor between this point and any metal equipment, metal water pipe, metal enclosures of electrical equipment, or conduit within five feet (1.5m) and within sight of the spa.

Do not permit any electrical appliances, such as lights, telephones, radios or televisions within five feet (1.5m) of the spa unless they were built in by the manufacturer. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance should fall into the spa.

WARNING



Your spa requires a Ground Fault Circuit Interrupter for user and equipment protection in compliance with section 680-42 of the National Electrical Code, ANSI/NFPA 70-1993. To ensure proper operation of the important safety device, test according to the following instructions with regard to your electrical configuration.

CORD-CONNECTED 115 VOLT, 20 AMP

Plug the spa directly into the power source. Do not use an extension cord or surge protector. The GFCI is located at the end of the power cord. Before each use, with the unit operating, push the “test” button.



The unit should stop operating and the GFCI power indicator will go out. Wait 30 seconds and then reset the GFCI by pushing the “RESET” button. The GFCI power indicator will turn on, restoring the power to the spa. If the interrupter does not perform in this

IMPORTANT INFORMATION ABOUT SPA SAFETY

manner, there may be an electrical malfunction and with it, the possibility of an electric shock. Disconnect the power until the problem has been corrected. Please note this action will automatically reset the filter cycle of the spa.

220 VOLT, PERMANENTLY INSTALLED MODELS:



A ground terminal is provided on the terminal block located inside the control box. To reduce the risk of electric shock, connect the terminal to the grounding terminal of your electrical service or supply panel with a continuous green, insulated copper wire. A bonding terminal (pressure wire connector) is provided on the outside of the control box for bonding to local ground points. To reduce the risk of electric shock, this connector should be bonded with solid copper wire to any metal ladders, water pipes, or other metal within five feet (1.5m) of the spa to comply with local requirements. The means of disconnection must be readily accessible, but must be installed at least five feet (1.5m) from the spa.

DO:

Make sure your spa is properly connected - USE A LICENSED ELECTRICIAN

Disconnect the spa from the power supply before draining and servicing components.

Test the Ground Fault Interrupter(s) before each use.

Replace damaged wires and cords immediately to reduce the risk of electric shock. Failure to do so may result in death or serious permanent injury by electrocution.

DON'T

Use the spa with the equipment compartment door removed.

Replace components except with identical components supplied by the manufacturer.

Operate audio or video equipment while inside the spa unless it is with the remote approved or provided by the manufacturer. Do not connect auxiliary components (i.e. headphones) to the system.

Place electrical appliances within five feet (1.5m) of the spa.

Use an extension cord to connect the spa to its power source. The cord may not be properly grounded and the connection is a shock hazard. An extension cord may cause a voltage drop, which will cause overheating of the pump(s), cause motor damage and will void the manufacturer's warranty.

Attempt to open the spa control box unless you are instructed to do so by a representative from technical support. Without proper instruction, you should not attempt to service the parts inside the spa control box.

IMPORTANT INFORMATION ABOUT SPA SAFETY



RISK OF INJURY

Suction Fittings:

Keep all loose articles of clothing, hair or hanging jewelry away from suction fittings, rotating jets or other moving components. The suction fittings in this spa are sized to match the specific water flow created by the pump. If it is necessary to replace the suction fittings or the pump, be sure the flow rates are compatible. Never replace suction fitting with one rated less than the flow rate marked on the original suction fitting. Because of the risk of injury, never operate the spa if the suction fittings are broken or missing. Please contact technical support at 877-722-4097 for service or repair.

Filters and Skimmers

Never operate the spa if the Floating weir(s), filter(s), filter lid(s) or skimmer(s), or skimmer assembly(s) are missing. Do not remove floating weir(s), basket(s) or filter(s) while spa is running. Please contact technical support at 877-722-4097 for service or repair.

Wet Surfaces

Exercise care when entering and exiting the spa. Wet surfaces can be slippery.

Increased Side Effects of Medication

The use of drugs, alcohol, or medication before or during spa use may lead to unconsciousness with the possibility of drowning. Persons using medication should consult a physician before using a spa; some medication may cause a user to become drowsy, while other medication may affect the heart rate, blood pressure or circulation. Persons taking medications which induce drowsiness, such as tranquilizers, antihistamines or anticoagulants should not use a spa.

Health Problems Affected by Spa Use

Pregnant or possibly pregnant women should consult a physician before use. Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory problems, infectious diseases, immune deficiencies, infectious diseases, infections skin irritations, or diabetes should consult a physician before using a spa.

IMPORTANT INFORMATION ABOUT SPA SAFETY

Maintenance of Water Chemistry

Always shower before and after using a spa. To reduce the possibility of contracting a waterborne illness, always maintain water chemistry within the parameters in this manual. If other bathers are affected by such a condition, discontinue use and consult a physician.

Keep the water clean and sanitized with correct chemical care to help maintain safe water and prevent possible damage to spa components. The recommended levels for your Home & Garden Spa are:

Free Available Chlorine (FAC):	3.0 to 5.0 ppm
Total Alkalinity	125 to 150 ppm
Water pH	7.4 to 7.6
Calcium Hardness	150 to 200 ppm

Refer to Water Chemistry and Maintenance section for further information and complete instructions about water and spa care.



IMPORTANT: Turn Jet pump on for at least ten minutes after adding any spa water chemicals into the filter compartment. Clean the filter cartridge monthly to remove debris and mineral buildup which may affect the performance of hydrotherapy jets, limit the water flow, or trip the high limit thermostat which will turn off the entire spa to prevent further damage to the spa.

AVOIDING THE RISKS OF HYPERTHERMIA



Prolonged immersion in hot water can result in HYPERTHERMIA, a dangerous condition which occurs when the internal temperature of the body reaches a level above normal (98.6°F). The symptoms of hyperthermia include unawareness of impending hazard, failure to perceive heat, failure to recognize the need to exit the spa, physical inability to exit the spa, fetal damage in pregnant women, and unconsciousness resulting in a danger of drowning. The use of alcohol, drugs or medication can greatly increase the risk of fatal hyperthermia in spas.

IMPORTANT INFORMATION ABOUT SPA SAFETY

To reduce the risk of injury:

The Consumer Products Safety Commission has stated that the water in the 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 extended use (exceeding 10 minutes) and for young children. Extended use can cause hyperthermia. Pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C). Failure to do so may result in permanent injury to your baby. You should consult with a physician prior to using a spa.

DO:

Measure the water temperature with an accurate thermometer before entering the spa to verify the digital thermometer since the tolerance of water temperature regulating devices may vary as much as +/- 5°F (2°C).

Test the water with your hand to be sure it's comfortable before entering the spa.

DON'T:

Use alcohol or drugs before or during spa use. Stay well hydrated and drink plenty of water.

Stay in the spa for extended periods of time. If you are going to be in the spa for more than 10 minutes, you should reduce the temperature of the spa to 100°F (40°C) or lower.

Use a spa immediately after strenuous exercise.



DO:

Use and lock the vinyl cover when spa is not in use whether it is empty or full. Because heat retentive materials are used to insulate the spa for efficient operation, an uncovered spa surface with direct exposure to sunlight and high temperatures for long periods of time is subject to permanent damage. Damage caused by exposing the spa to this abuse is not covered by the warranty.

Brush heavy snow loads off the cover with a soft brush. Spa covers are not designed to hold weight loads of more than 20 pounds.

Reinforce your cover with wind straps during periods of high wind. The tie downs will not hold your cover in place if wind speeds are excessive.

IMPORTANT INFORMATION ABOUT SPA SAFETY

Clean the vinyl with approved, non-alcohol based cleaner. Alcohol based vinyl cleaners will break down the vinyl and stitching over time.

Use only approved and recommended accessories, chemicals and cleaners.

DON'T:

Leave the spa exposed to the sun or other elements without water or the vinyl cover in place. Exposure to direct sunlight, excessive rain and snow and falling debris can cause distress to the spa's shell material.

Push or drag the spa cover. This will damage the cover.

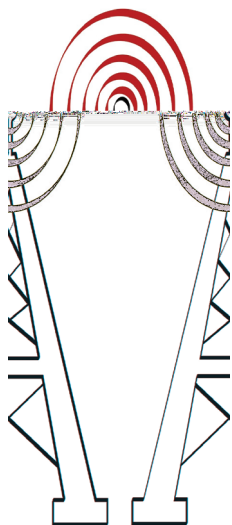
Lift or drag the cover by using the cover lock tie downs. Always lift or carry the cover by using the handles.

Place heavy objects on your spa cover. Heavy weight loads will cause foam inserts to crack.

Use sharp objects near your spa cover. Sharp objects may puncture the vinyl and/or plastic causing the foam inserts to become heavy and break.

Use excessive chemicals. Excessive chemical use breaks down the cover materials allowing the foam inserts to become heavy and break. When adding chemicals, it's a good idea to leave the cover partially open for 20 minutes to allow excessive chemicals to escape.

FCC NOTICE



If your spa is equipped with audio or video equipment, it has been tested and found to comply with the limits for a class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, use harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

IMPORTANT INFORMATION ABOUT SPA SAFETY


1. Rearrange or relocate the receiving antenna;
2. Increase the separation between equipment and receiver;
3. Connect the equipment into an outlet on a circuit different from the circuit connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressed or approved by party responsible for FCC compliance could void the user's authority to operate this equipment.

IMPORTANT CSA SAFETY INSTRUCTIONS (CANADA ONLY)



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

1. Read and follow all instructions.
2. A green colored terminal or a terminal marked G, Gr, Ground, Ground  symbol * is located inside the supply terminal box or compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with continuous copper wire equivalent in size to the circuit conductors that supply this equipment. *IEC Publication 417, Symbol 5019.
3. At least two lugs marked “Bonding Lugs” are provided on the external surface or on the inside of the supply terminal box/compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor..
4. All field installed metal components such as rails, ladders, drains, and other similar hardware within 10 feet (3m) of the hot tub shall be bonded to equipment grounding buss with copper conductors..
5. SAVE THESE INSTRUCTIONS.

Site Selection

Choosing a Location

Proper placement of your spa is key not only to enjoying it, but also taking care of it. Whether you choose to place your spa outdoors or indoors, there are some basics that must be followed.

Make sure the location is free of obstacles that may interfere with delivery.

A clear pathway makes placement a breeze. The pathway should be minimum of 4' wide, free of obstruction from things like tree limbs, heat pumps, and power lines. Check to be sure gate openings are wide enough for the spa to pass through without damaging the spa.

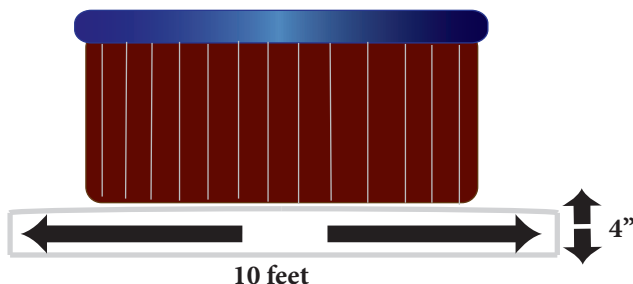
Consider the weight of the spa. You must have the proper foundation to support not only its dry weight, but also its weight when filled with water and people.

Consider the proximity to the doors of the house especially in cold weather. Be sure there is a pathway to the spa that can be easily maintained in inclement weather.

Keep your spa away from landscaping sprinklers, roof overhangs and guttering. Keeping drainage of water away from the spa's foundation is important.

Consider the negative effects of wind, exposure to the sun and the location of trees to minimize the effects of falling debris and shade if the spa is outdoors.

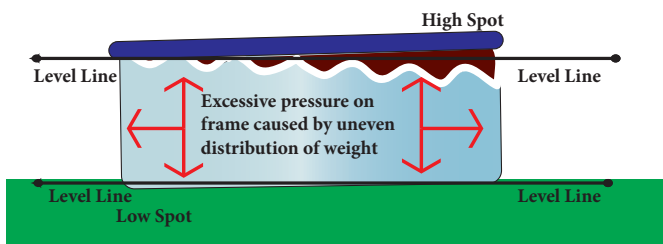
Manufacturer's Recommended Installation



To allow for adequate drainage away from the spa, Concrete should slope 1/2" over 10' from the center.

When placing your spa outdoors, the manufacturer recommends that your Home & Garden Spa be placed on a reinforced concrete pad that is at least four inches thick and large enough to accommodate the entire spa. The concrete should cure for a minimum of 72 hours before placing the spa on the pad. You should place your spa so the electronics and other components are easily accessible when servicing your spa. Structural damage that occurs to your spa that results from an inadequate foundation is not covered under your warranty so it's important that you follow the manufacturer's guidelines.

Site Selection

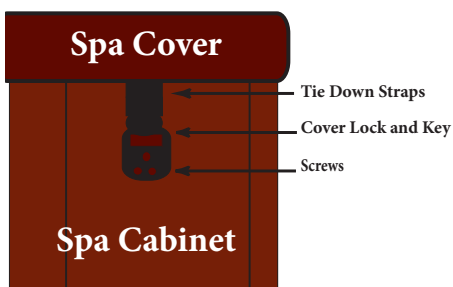


If you choose to place your spa on a deck, ask a licensed contractor or engineer to determine the deck's maximum load bearing capacity. The weight per square foot must not exceed that limit or the result will be serious structural damage to the deck and the spa. If you are considering a recessed spa in your deck or floor, be sure there is access to the electrical equipment and other components when servicing your spa. Make sure there is adequate room to remove all of the exterior panels, with special attention paid to the side where the electrical components are located.

It is important to remember that the spa must be accessible on all sides if you require service. If the spa is recessed or in a confined area, the manufacturer is not responsible for the costs associated with making the spa accessible for service.

If you are placing your spa indoors or in a basement, choose a floor covering that will hold up well to the water that will inevitably sit around the spa. Floor coverings should be slip resistant with some ability to grip when the floor is wet. There must be adequate drainage away from the spa. The location and floor covering must be able to handle draining of the entire spa. Humidity should be considered, as should moisture to the wood, paper, drywall, and any mold and mildew which accompanies humid areas of the home. Some spa chemicals may have an adverse reaction to some household metals. You should consider installing a ventilation system to address these issues. Again, adequate support for the weight of the spa is vital.

Installation of Locking Cover Clips



Put the spa cover on the spa. Position the tie down locks on the spa cabinet so they can easily reach the tie down straps. Allow approximately 3/4 inch slack in the straps so there is ample room for the clip to slide easily into the lock when there are variations in the weather. Attach the locks with screws.

Electrical Information

AVOID THE RISK OF ELECTROCUTION.



ALL ELECTRICAL CONNECTIONS MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) AND WITH STATE AND LOCAL ELECTRICAL CODES IN EFFECT AT THE TIME OF THE INSTALLATION.

Connecting the spa to an improperly wired circuit will eliminate many of the spa's built in safety features which may result in fire, electrocution, or other risk of injury. Damages to the spa which are the result of improper wiring are not covered under the manufacturer's warranty and will terminate all listings from independent listing agencies. The electrical diagrams contained in this manual are included as a guideline for the licensed electrician installing the electrical connections and may vary by model. Please refer to the diagram in the spa control box.. All wiring connections must be watertight.



NEVER TURN POWER ON TO THE SPA WHEN IT IS NOT FILLED WITH WATER ! DO NOT Connect power to the empty spa. Power to the spa automatically activates critical components within the spa, such as the controls and the heating. If power is supplied to the components prior to the spa being filled, the components will be damaged. Damage that occurs to the components because power was supplied before the spa was filled with water is not covered by the manufacturer's warranty.



PRIOR TO PERFORMING ANY SERVICE TO YOUR HOME & GARDEN SPA, TURN OFF ALL PRIMARY ELECTRICAL EQUIPMENT AT THE MAIN CIRCUIT BREAKER OR DISCONNECT PANEL. Your 220V Home

& Garden Spa must be permanently connected (hard wired) to the power supply. No plug in connections, extension cords or surge protectors are to be used in conjunction with the operation of your new spa. Power supplied to your Home & Garden Spa must be a dedicated circuit with no other appliances, lighting, or any other electronic components powered by this circuit.



THE ELECTRICAL SUPPLY FOR THIS PRODUCT MUST BE HOUSED IN A WEATHERPROOF SERVICE BOX AND INCLUDE A SUITABLY RATED SWITCH OR GROUND FAULT CIRCUIT INTERRUPTER between the

main service entrance and the spa to open all ungrounded supply conductors in compliance with Section 422-20 of the National Electrical Code/USA, ANSI/

Electrical Information

NFPA/70 and in compliance with Underwriters Laboratories, Inc.. This might be used as a shut off switch, which must be installed so that it is accessible to the spa occupants, but not within 5 feet (1.5m) of the spa.



ALL CONNECTIONS SHOULD BE MADE USING COPPER CONDUCTORS ONLY. Do not use aluminum wire. Connection wires, circuit breakers, and/or fuses, must all be sized to accommodate the Total Ampere load.

110 V INSTALLATION



All 110 volt HOME & GARDEN SPAS are delivered with a GFCI power cord that is approximately 15 feet in length. Electrical service must be no farther than 15 feet (4.5m) and no closer than 5 feet (1.5m) to the spa. There is a reset switch on the power cord which allows you to reset power by pressing the reset button on the plug. If service is interrupted, you must press the reset button to restore service.

The dedicated circuit must have a 20 amp GFCI in the main breaker panel with ground wire and the correct polarity throughout the circuit. A pressure wire connector is provided on the exterior surface of the control box, inside the spa. This wire allows grounding between this point and any metal equipment, reinforced concrete, metal pipe or water pipes within 5 feet (1.5m) of the spa. The bonding wire must be solid copper wire.

Do not connect the spa using extension cords or surge protectors. The spa must be connected to a dedicated 110v/20a GFCI protected, grounded circuit. This circuit must not be used by or shared with any other electrical component. If it is connected to a shared circuit, it will overload the circuit leading to tripping at the main breaker.

Power supplied to your Home & Garden Spa must be a through dedicated circuit with no other appliances, lighting, or any other electronic components powered by this circuit. Failure to connect the spa to a breaker that is dedicated may result in damage or failure of the equipment which is not covered by the manufacturer's warranty.

Do not use the spa if the cord or plug is damaged. Disconnect the spa from the power source and do not use until they have been replaced.

Do not apply power to the spa until it has been filled with water.

Electrical Information

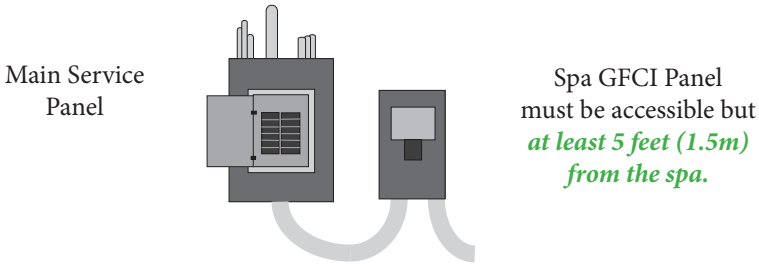
220V Installation



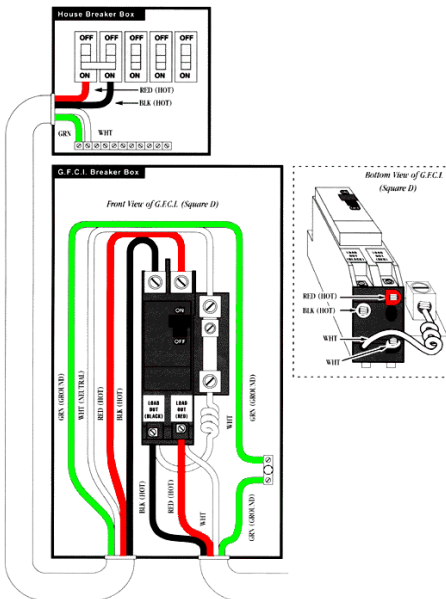
IF YOUR ELECTRICIAN HAS QUESTIONS ABOUT THE WIRING INSTRUCTIONS, please call HOME & GARDEN SPAS Technical

Assistance prior to starting installation at (877) 722-4097. Factory trained technical service specialists are available to answer questions during their normal business hours Monday through Friday from 8:30 am to 5 PM est.

Correct wiring of the electrical service box, GFCI box and pack terminal block is required. Spas installed for 220v operation require a 4-wire, 50 amp or 60 amp (depending on the spa model), 220 volt subfeed in non metallic pipe to the spa equipment compartment.



US and Canadian GFCI Wiring Diagram



The black and red wires from the electrical box must be connected to the input of the GFCI.

The white wire from the electrical box must be connected to the neutral bus.

The green or copper wire must be connected to the ground lug of the GFCI.

The black, red and white wires going to the spa must be connected directly to the output of the GFCI.

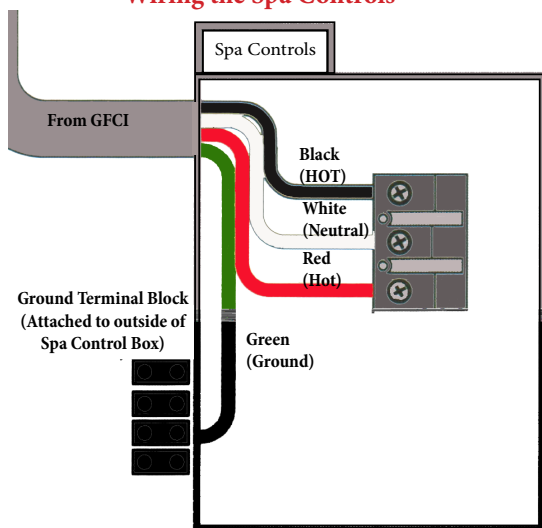
The neutral to the GFCI must be connected to the neutral bus.

The green or copper wire going to the spa must be connected to the ground lug.

Electrical Information

To allow the 220V GFCI to function properly, connect the white Neutral wire from the spa to the Neutral terminal on the GFCI breaker, not the Neutral bus in the GFCI breaker box. An improperly connected Neutral causes the GFCI breaker to trip.

Wiring the Spa Controls



A green colored terminal is provided in the control box. To reduce the risk of electrical shock, connect this terminal or connector to the grounding terminal of your electrical service or supply panel with a continuous green insulated copper wire.

A second pressure wire connector is provided on the surface of the control box for bonding to local ground points. To reduce the risk of electrical shock, this connector should be bonded with copper wire to any reinforced concrete, metal water pipes, or any metal within 5 feet (1.5m) of the spa. International customers should contact their HOME & GARDEN SPAS dealer for Electrical Wiring Requirements.

Refer to supplied wiring diagrams inside the control box for model specific diagrams and call technical support associate for assistance prior to wiring the controls for assistance if necessary. Factory trained technical service specialists are available to answer questions by calling (877) 722-4097 during their normal business hours Monday through Friday from 8:30 am to 5 PM est.



Do not replace the exterior cabinet panel until your new Home & Garden Spa has been filled with water and you are sure it is operating properly. Be sure to hand tighten the unions in the plumbing lines and

Getting Started

For replacement parts or service, please call HOME & GARDEN SPAS Technical Assistance at (877) 722-4097. Factory trained technical service specialists are available during their normal business hours Monday through Friday from 8:30 am to 5 PM est.

The Spa Pack is the computer that controls the spa. Pressing buttons on the topside controls triggers a reaction in the spa pack. When the “jets” button is pressed, the spa pack triggers the pump to push water back into the spa through the jets. When the “temperature up” button is pressed, the spa pack triggers the heater and pump to begin circulating water until it reaches the desired temperature.

Unless you are instructed to do so by a technical support representative, you should not remove the cover on the spa pack. There are no serviceable parts inside the box. If you are instructed to remove the cover on the box, you should manually turn the GFCI “off” before removing the cover.

The Topside Control is like the keyboard for a computer. It allows you to change what the spa does by pressing buttons. Temperature, filtration, energy consumption and jets are all controlled by pressing the buttons on the spa controls. The options offered on the spa controls will vary depending on the model purchased. Please refer to the model specific controls for detailed instructions.

Error codes on the topside controls will alert you to problems detected by the spa pack. If your topside controls have an error message, please refer to the trouble shooting section of the manual beginning on page 29 and follow the instructions or call a technical support representative at 877-722-4097.

The Spa Heater heats the water in the spa. When the water temperature falls below the allowed temperature range, the heater comes on and heats the water to the preset temperature. When the heater is on, a light on top of the heater box turns on.

Spas are designed to keep water warm and insulated against heat loss. If the water temperature on your spa is set lower than your ambient temperature, and the ambient temperature does not go down, your spa may not lose enough heat to lower the water temperature to the preset temperature.

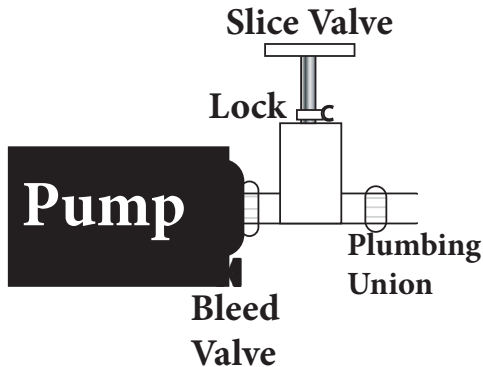
Your spa controls will not cool the water. If you want to lower your water temperature, you should partially remove the cover for a short period of time or drain some of the water from the spa and add cool water. If you drain water from the spa, you should manually turn the GFCI “off” and follow the instructions for filling your spa beginning on page 22.

The Drain Valve is used to remove water from the spa. It is located at the base in the corner of the spa cabinet. The valve is attached to a hose inside the cabinet which allows you to drain all of the water from the spa. It moves outward to

Getting Started

open the valve and inward to close the valve.

After attaching a water hose to the drain valve, pull the valve gently outward 1 1/2", remove the cap and attach a water hose. Push the drain inward 1/2" and allow the spa to drain completely. Gently pull the valve outward, remove the hose and replace the cap. Push the valve inward so it is flush with the frame. Check to be sure no water is draining from the drain valve as you refill the spa.



The Spa Pump pushes water through the plumbing lines into the jets. Pumps are turned on and off by pressing the button(s) on the topside controls. The number and speed of the pump varies by spa model.

The pump is designed to pump water, not air. If air is in the pump or the plumbing lines, air will be trapped in the spa preventing circulation of the water. Letting your spa run if there is an air lock will damage the pump. Filling the spa properly or "bleeding" the pump prior to powering the spa on will help prevent air locks. If there is no water coming from the jets when the jets button is pushed and you hear the pump "humming", it is likely you have an air lock and need to bleed the pump.

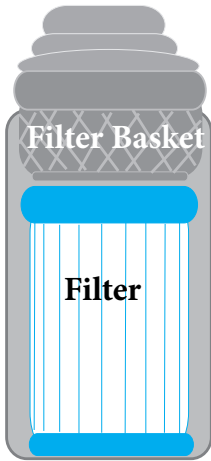
To bleed the pump, manually turn the GFCI "off". To release the air lock, turn the bleed valve (thumb screw) on the base of the pump counter clockwise until water trickles from the pump. When water begins to trickle, turn the bleed valve counter clockwise to tighten. Do not over tighten. Do not use tools to turn the bleed valve because it may break the screw.

The Slice Valves (Gate Valves or "T" Stems), close the plumbing lines allowing service on the spa without draining the water from the spa. The slice valves are placed in the plumbing lines near the pump(s). When the spa is serviced, the lock is removed and the "T" stem is pushed down which creates a seal allowing parts between the "T" stems to be serviced. When service is complete, the "T" stems are raised and locked in the up position.

Getting Started

The slice valves should always be locked in the “up” position when power is applied to the spa. If the spa is allowed to operate when the slice valves are closed it will damage the spa. Each time you change the water in the spa, you should check to be sure the locks on the slice valves are in good condition; locks should be replaced if they will not hold the “T” stem in the “up” position. Do not use the spa until the locks have been replaced.

The Plumbing Unions connect the plumbing lines to the spa components. When you receive the spa and each time you fill the spa with water, you should hand tighten the plumbing unions, which loosen in transit and when seasons change. In many cases, when there is a leak inside the spa cabinet, it is from a plumbing union that needs to be tightened. Do not use tools or overtighten plumbing unions as you may damage the spa.



The Filter Assembly consists of the filter, the filter basket and the floating weir. Never use the spa without the filter assembly in place because it will not only damage the spa but is a drowning hazard. If any part of the filter basket assembly is damaged, do not use the spa until it has been replaced.

To remove the filter basket when filling the spa or changing the filter, turn the basket counter clockwise until it stops to unlock the basket. Lift the basket assembly to remove. Lift the filter out of the filter housing. Replace the filter, place the basket assembly over the filter housing and turn the basket assembly clockwise until it stops and is locked in place.

The filter basket catches large debris, the filter catches fine particulates and oil. You should check the filter assembly on a regular basis making sure the basket is free of debris and the filter is in good condition. If the filter assembly is obstructed, flow will be restricted and damage the spa. The manufacturer recommends that you replace the filter every three months. To prevent air getting into your spa, you should soak new filters in water for 30 minutes before installing.

The Suction Drain Covers are on the sides in the foot well of the spa. They are caps that cover the suction drains that prevent debris from being sucked into the plumbing lines. If the suction drain covers are obstructed, flow is restricted which can damage your spa.

It is important to check them on a regular basis to be certain they are in good condition to help prevent



Getting Started

risk of drowning. Keep hair, clothing and children away from the suction drains when using the spa. Do not use the spa if they need to be replaced. You should avoid contact with the suction drain covers when the GFCI is powered “on”.



The Diverter Valve is a large rotating dial on the topside of the spa used to control flow of the water between sections of the spa controlled by each pump in the spa. The diverter valve rotates right and left. Do not over turn the diverter valve which has built in “stops”. Forcing the valve to turn past it’s built in “stop” will damage the spa.

When the diverter valve is positioned in the center, water flow will be spread evenly throughout each area of the spa controlled by a diverter valve. Turning the diverter valve all the way to one side will restrict the water flow from one section and

force all of the flow into the other section. Turning the diverter valve all the way to the other side will reverse the flow of water to the opposite side of the spa.

The Air Valve is a smaller rotating valve on the topside of the spa that looks like the Diverter Valve, but is smaller in size. It is used to increase or decrease air flow through the jets. Increasing air flow creates “bubble action” as the water enters the spa. The air valve rotates right and left. Do not over turn the air valve which has built in “stops”. Forcing the valve to turn past it’s built in “stop” will damage the spa.

When the air valve is positioned in the center, there is moderate air flow with moderate “bubble action”. When the air valve is turned to one direction, or closed, there is less air flow and fewer bubbles. If the air valve is turned fully to the opposite direction, the air valve is fully open creating the most bubbles.

The Waterfall Valve is used to increase or decrease flow thru the waterfall. The waterfall valve rotates right and left. Do not over turn the air valve which has built in “stops”. Forcing the valve to turn past it’s built in “stop” will damage the spa.

When the waterfall valve is placed in the center, there is moderate flow through the waterfall. If the valve is turned all the way in one direction, there is no flow through the waterfall. If the valve is turned all the way in the opposite direction, the flow is increased to allow maximum flow through the waterfall.



Getting Started

Preparing the Spa for Use

Your new Home & Garden Spa has been put through rigorous testing during the manufacturing process. It is not uncommon that some water may remain in the plumbing after testing and may leave spots on the acrylic finish or cabinet. Wipe the spa and cabinet with a clean soft rag. Do not use household cleaners that contain bleach or ammonia (cleaners that are manufactured to clean glass) because they may have an adverse effect on the surfaces of the spa and have a negative reaction with chemicals used to maintain water chemistry. Never use abrasive cleaners on the cabinet, cover or acrylic surface. They may do permanent, irreversible damage.

With the drain valve open, rinse the inside of the spa with clear water. With the filters removed and the drain valve open, run water through the filtration canister and jet lines until the water runs clear. This will remove any incidental dust, dirt and debris that may have accumulated during shipping and installation.

Filling the Spa with Water



Check to be sure the GFCI is turned off. Never attempt any kind of service or cleaning when power is applied to the spa. Each time you remove the spa cabinet for any reason, check to be sure the GFCI is turned off.

Never leave the spa unattended while the exterior panels or cover are off the spa.

Remove the entire cabinet panel with the sticker that says **“REMOVE THIS PANEL FOR ELECTRICAL”**. In most models you will remove the panel underneath the spa’s top side control pad by removing all screws attaching the cabinet panel to the spa frame. Check for obvious signs of damage including loose wires or broken pipes. If you see damage inside the spa cabinet, call a technical service associate at 877-722-4097 for assistance and repair

Hand tighten the plumbing unions and check to be sure the slice valves are locked and in the “up” position. If the slice valves are not in the up position, pull the “T” stem all the way up to open the slice valves. Lock the “T” stem and attach the clip locks. The slice valves allow service to the spa without draining water by stopping the flow of water. Never operate the spa when the slice valves are closed. This will damage the pumps and seals. Damage that occurs because the spa was powered on when the slice valves were closed is not covered by the manufacturer’s warranty.

With the slice valves are locked in the up position and the unions hand tightened, remove the floating weir, skimmer basket and filters from the filtration canister of your new Home & Garden Spa.

Do not use water that has been filtered or softened. Do not use hot water when you fill your spa.

Getting Started

Place a garden hose into the empty filtration canister and turn the water on. Water will begin filling the low lying plumbing lines inside the spa cabinet. When the plumbing lines are full, water will begin to fill the spa from foot well, upward. Filling the spa in this manner will allow the pumps and internal plumbing to fill with water, reducing the risk of an air lock in the pumps(s) when power is applied.

Continue filling the spa until the water level is approximately 4 inches over the top of the filtration canister of the spa. Over filling your spa will not allow room for water to displace when people enter the spa and will cause the spa to overflow. Under filling the spa will not allow the water to flow properly through the water lines and pumps causing a potential air lock or damage to the pumps and heater. Damage that occurs because of improper water levels is not covered under the manufacturer's warranty.

Remove the garden hose and turn the water off. Replace the filter, skimmer basket and floating weir. Check for leaks inside the cabinet of the spa, especially at the unions for plumbing and heaters and hand tighten if necessary. If the spa is leaking and the unions are tight, do not turn the GFCI on. Call a technical service associate at 877-722-4097 for assistance and repair before applying power to the spa.

After your electrician has successfully connected power to the spa, turn the GFCI "on". Before reinstalling the spa cabinet, turn the spa jets on in accordance with the topside control instructions for your spa model. Check to be certain water is circulating through all jets, that the diverter valves and air controls are functioning properly. Verify there are no leaks inside the spa cabinet. If the spa is functioning properly and there are no leaks inside the spa cabinet, reinstall the spa cabinet.

Re-Filling your Spa with Water

Follow these instructions step by step each time you re-fill the spa to ensure successful start up

Each time you fill your spa, it is a good idea to check the condition of the locks on the slice valves to ensure they are intact and not damaged. At the same time you should check to be sure that all plumbing unions are hand tightened. You should not re-install the spa cabinet until the spa has been filled and power has been applied. The cabinet should only be replaced after you have checked for leaks inside the spa cabinet and are sure all the pumps, jets, diverters and air valves are in proper working order.

If you need to replace the screws on the cabinet, they should be replaced only with stainless steel screws which will not rust. If you would like to order screws that are painted to match your spa cabinet, please call a technical support representative at 877-722-4097 during normal business hours.

Topside Controls



When you receive your new Laguna Bay Spa, it will arrive with factory programmed settings with the clock set to Eastern Standard Time, in Normal Mode, with a Filtration Cycle to begin at 6 PM (18:00) and ending at 8 PM (20:00) When the spa is in Energy Cost Efficiency Mode, the heater only runs during the filter cycle. For most users, putting the spa in Energy Cost Efficiency Mode mode when the weather is warm or when they will not be using the spa on a regular basis ensures optimal energy efficiency.

Operating Modes

Nom **Normal Mode:** When your spa is in Normal Mode, the LED will display “Nom”. While you are using your Laguna Bay Spa, it should be in Normal Mode. Normal Mode allows full function of jets, filtration cycles and maintains the water temperature to within a few degrees of the temperature you set.

EcE **Energy Cost Efficiency Mode:** In this mode, the LED will display “EcE”. Your spa will run the programmed filtration cycles will heat *only* during the filtration cycle. In warm climates and in warm weather, setting the spa in this mode will eliminate unnecessary heating. If you leave your spa in this mode in cool climates and during cold months, you may find that the water temperature falls too low for daily use. If you plan to use your spa more than 3 days a week when the ambient temperature is cold, you should leave your spa in Normal Mode.

Fil **Filter Only Mode:** When your spa is in Filter Only Mode, the LED will display “Fil”. Filter Only Mode should be used when you are not using your spa for extended periods of time. When your spa is in Filter Only Mode, the spa will run filter cycles but will not heat the water until the water temperature falls to 44°F. Filter Only Mode prevents water in the spa from freezing but will not heat the water unless the water temperature reaches 44°F.

Topside Controls

Spa Controls

Pump 1 Button:



Pump 1 is a two speed pump. Press this button once to turn the pump on Low Speed. The pump 1 “LOW” icon will be displayed on the LED.



The pump will get to High speed. The Pump 1 “HIGH” icon will be displayed on the LED. Press the button a third time to turn Pump 1 “OFF”.



When the spa is heating, the pump will operate on low speed until the water reaches the correct temperature. If you want to use the spa with the pump on low speed, increase the temperature.

Your Laguna Bay Spa is programmed to automatically turn the jets off after 25 minutes.

Pump 2 Button:



If your spa is equipped with 2 pumps, this button controls Pump 2. Press this button once to turn the pump on. The Pump 2 icon will be displayed on the LED. Press it again to turn the pump off. Your

Home & Garden Spa is programmed to automatically turn the jets off after 25 minutes.

If your spa has only one pump, pressing this button will do nothing.

Light Button:



Press this button controls the lights. Press this button once to turn the lights “on”. The “LIGHT” icon will be displayed on the LED. If your spa is equipped with a multi-color lamp, pressing this button a second time will stop the rotation of the colors, locking it on the color of your choice, when the button is pressed at the same time the color is displayed. Press the button again to turn the lights off.

If your spa is equipped with optional perimeter lighting, the perimeter lighting works in tandem with the under water light.

Your Home & Garden Spa is programmed to automatically turn the lights off after 2 hours.

AUX Button:



If your spa is equipped with optional SurroundWave Audio System, this button controls the built in audio components. Press this button to turn SurroundWave “ON”. AUX will be displayed on the LED.

Press this button again to turn SurroundWave “OFF”.

The AUX button turns the built in speakers “ON” and “OFF”. All other functions, like volume and the track playing, are controlled by the device plugged into the SurroundWave Audio System.

If your spa is not equipped with SurroundWave Audio System, pressing this button will do nothing.

Topside Controls

Up and Down Buttons:



The “UP” arrow button and the “DOWN” arrow button allow you to increase and decrease the water temperature. The LED will display the current temperature of the water in the spa. Pressing the “UP” arrow allows you to increase the water temperature. Pressing the “DOWN” arrow allows you to decrease the water temperature.

Setting the Water Temperature

When you press either the “UP” or “DOWN” arrow button, the temperature on the LED will flash. While the LED display is flashing, press the “UP” arrow to increase the water temperature until the flashing number displays the desired temperature. After 6 seconds, the LED will stop flashing. The current water temperature will be displayed on the LED.



The “HEATER” icon will appear on the LED display and remain there until the new temperature is reached.

To decrease the water temperature, press the “DOWN” arrow. The current water temperature on the LED display will flash. While the temperature is flashing, press the down arrow until the desired temperature is reached. After 6 seconds, the LED will stop flashing and the water temperature will decrease to the set temperature.

Your Home & Garden Spa is designed to retain heat and maintain water temperature efficiently and economically. It is not equipped with a cooling device. When the outdoor temperature is high, the water in your spa may be higher than a cool water temperature setting. During warm weather, if the water temperature in your spa is higher than a cool temperature setting, the spa is functioning as it is designed. If you want to cool the water in your spa, remove the spa cover allowing the water to cool. Do not leave the spa unattended while the cover is removed. You can also drain some of the water from the spa and add cool water to the correct level for your spa model, making sure you adjust your water chemistry to recommended levels.

Changing Operating Modes



Pressing the “M” button changes the modes from Energy Cost Efficiency Mode “EcoE”, Filter Only Mode “Fil”, and Normal Mode “Nom”. The LED will display the current mode setting.

When the spa is in Energy Cost Efficiency Mode “EcE”, press the button once to put the spa in Filter Only Mode “Fil”. Press the button again to put the spa in Normal Mode “Nom”.

Topside Controls

When you receive your new Laguna Bay Spa, it will arrive with factory programmed settings with the clock set to Eastern Standard Time, in Normal Mode, with a Filtration Cycle to begin at 6 PM and ending at 8 PM.

The clock displays military time. (Midnight is 00:00, Noon is 12:00, 6 PM is 18:00 and so on). The Mode Button allows you to change the factory settings; filtration time, filter duration, and the time on the clock.

Programming

Press and hold the “M” button for 6 seconds to enter programming mode. If no buttons are pressed for 6 seconds, the spa will exit programming mode and resume with the programmed settings. While you are in the program menu, use the Up or Down keys to adjust the parameters and use the “M” key to move to the next parameter.

The changes will be saved after the confirmation of the last parameter only. If there is no key pressed for 6 seconds, the system will exit the program menu without saving the changes.

Programming the Clock Settings

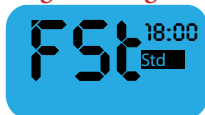


Press and hold the “M” button for 6 seconds; the water temperature will flash on the LED display followed by “rtc” (real time clock). Use the “UP” arrow key to change the hours. Use the “DOWN” arrow key to adjust the minutes.

In this example, the clock is set for 8:30 PM (20:30).

Press the “M” button to confirm the adjustment and move to the next parameter.

Programming the Start Time of the Filtration Cycle



Your LED will display “fst” (filter start time). The factory settings start the filter cycle at 6 PM EST. To change the filter start time, use the “UP” arrow button to adjust the hours and the “DOWN” arrow button to adjust the minutes. In this

example, the filtration cycle is set to begin at 6:00 PM (18:00), the factory setting.

Press the “M” key to confirm the changes and move to the next parameter.

Programming the Filter Duration



The LED will display “ft”. Use the “UP” arrow button to adjust the number of hours the spa will filter. The filtration cycles adjust in hours only, not minutes. Pressing the “DOWN” button will not make any adjustments. In this

example, the filtration cycle is set to run for 2 hours, which is the factory setting.

Press the “M” button to move the next parameter.

Topside Controls

Programming the Water Temperature Adjustment Allowance



The LED will display “Adj”. Use the “UP” arrow button to raise the temperature allowance. Use the “DOWN” arrow button to decrease the water temperature allowance.

In this example, the manufacturer’s recommended settings are displayed. This setting will maintain the pre-programmed water temperature and will maintain the programmed settings of +/- 3°F before automatically heating the water. The manufacturer recommended and factory settings will allow the water temperature to fall 3°F before the heater automatically turns on to begin heating the water and will automatically stop heating the water when the temperature is no more than 3°F above the set temperature. With these settings, if your water temperature is set to 99°F, the heater will automatically turn on when the water temperature falls to 96°F and will automatically turn off when the water temperature reaches no more than 102°F.

Press the “M” button to move to the next parameter.

The cycle will rotate back to the flashing “rte”. If you are satisfied with the changes, do not press any buttons and allow the spa to exit programming mode. When the spa has exited programming mode, the flashing “rte” will be replaced by the water temperature on the LED display.

WHEN SERVICING YOUR SPA, ALWAYS MANUALLY POWER “OFF” THE GFCI.

On occasion, error codes appear when there is not a problem with the spa, but to indicate the spa needs the opportunity to reset. After severe weather, which may include power surges that you do not notice, your spa may display an error code.

You should try resetting your spa before calling technical support to report a problem. Allowing the spa to reset will often solve the problem. To reset your spa, manually power “OFF” the GFCI, wait 40 minutes and manually turn the GFCI “ON”.

There is a battery in the spa controls which allows the spa to hold all of the program settings while the power is disconnected. It will not power the spa. However, during prolonged periods of power outages, the water in the spa may freeze and damage the spa. If you experience prolonged periods without power, please call technical support at 877-722-4097 for instructions.

Topside Controls

Troubleshooting Error Codes

“**ESR**”: **Temperature Sensor Error**. Check to be sure the cable is properly connected and that there is no damage to the connector or the cable. If this does not correct the problem call technical support at 877-722-4097.

“**ESb**”: **Water Flow Sensor Error**. Check to be sure the cable is properly connected and that there is no damage to the connector or the cable. If this does not correct the problem call technical support at 877-722-4097.

“**Ecb**”: **Water Flow Sensor Error**. Check to be sure the cable is properly connected and that there is no damage to the connector or the cable. If this does not correct the problem call technical support at 877-722-4097.

“**EHH**” **Heater Error**. The spa is overheating. Do not enter the water. Check to be sure the filter and filter basket are free of debris. Remove the spa cabinet and allow the spa to cool. If this does not correct the problem call technical support at 877-722-4097.

“**EOH**”: **Heater Error**. The spa is overheating. Do not enter the water. Check to be sure the filter and filter basket are free of debris. Remove the spa cabinet and allow the spa to cool. If this does not correct the problem call technical support at 877-722-4097.

“**EPL**” **Water Flow Error**: Check the suction drain covers and filter basket and remove debris. Make sure the slice valves are locked in the “UP” position. Clean or replace the filter. If this does not correct the problem call technical support at 877-722-4097.

“**ECP**”: **Water Flow Error**: Check the suction drain covers and filter basket and remove debris. Make sure the slice valves are locked in the “UP” position. Clean or replace the filter. If this does not correct the problem call technical support at 877-722-4097.

“**LLL**”: **Low Water Level**. Make sure water is at the level recommended for your spa model. Add water if needed. If this does not correct the problem call technical support at 877-722-4097.

“**ICE**”: **Freeze Warning**. Your spa is in danger of freezing. The water temperature is below 44°F and the heater may not heat the water enough to prevent damage to the spa. Reset the GFCI and check for normal operation. If the spa does not resume normal operation, call technical support at 877-722-4097.

Water Chemistry Basics



The manufacturer recommended replacement chemicals can be ordered from HOME & GARDEN SPAS. To place an order visit LagunaBaySpas.com and click on the link for “Spa Supplies”

The Importance of Good Water Chemistry

For your health and safety, it is imperative to have clean, clear, water. Water maintenance will vary depending on many things like the quality of your water, how often and how many people use your spa. The fundamental things to consider when it comes to maintaining chemistry are filtration, sanitation, and proper balance of chemicals and pH. Following a regular schedule will help you achieve acceptable water. It is important to remember that bacteria and viruses grow quickly in water that is not properly maintained. Maintaining your water in proper balance is necessary not only for proper sanitation, but it ensures minimal buildup of deposits and prolongs the life of the spa.



One of the leading causes of spa service is that water chemistry is not correctly balanced. Too many chemicals will cause deterioration of many of the components in the spa and the spa cover. Not enough sanitation allows impurities to accumulate in the spa which hinders its performance or even damages the filtration system. Water can become unhealthy if chemicals are not used to sanitize water. Improper pH or calcium levels can lead to corrosion and scale build up on integral spa components. The following guidelines have been established by the Association of Pool and Spa Professionals:

pH	7.4 to 7.6
Free Chlorine	3.0 to 4.0 ppm
Free Bromine	2.0 to 4.0 ppm
Total Alkalinity	100 to 120 ppm
Calcium Hardness	150 to 250 ppm



Add chemicals only after the water temperature has reached a minimum of 80°F to prevent damage to the acrylic surface. Remove the cover and the filter basket assembly. Press the Primary Pump button to turn the pump on high. Carefully measure the recommended amount of chemical in accordance with the instructions on the label. Add chemicals through the filtration canister with the primary pump on high speed, allowing water to circulate for a minimum of ten minutes with the spa cover off. Never leave the spa unattended when the cover is off. Use care not to splash chemicals onto your hands, into your eyes, onto the spa cabinet, or on the acrylic surface of the spa. Replace the lid onto the chemical container. After ten minutes, reduce the primary pump speed to low. Close and lock the cover.


Water Chemistry Basics



WARNING: HIGH LEVELS OF SANITIZER CAN CAUSE DISCOMFORT TO EYES, LUNGS AND SKIN. ALWAYS ALLOW SANITIZER LEVELS TO FALL TO THE RECOMMENDED LEVELS BEFORE USING THE SPA.

Breaking Down the Basics

Each step of a water maintenance program is dependent of the previous steps. Omission of a step or failing to reach the recommended range may cause an imbalance in water chemistry. Unbalanced water may lead to damage to the spa and its components and discomfort for spa users. Damage to the spa caused by improper water chemistry is not covered under the manufacturer's warranty. To measure the quality of your spa's water, immerse the test strip in water, following the instructions on the test strip.

 Do not touch the test strips as it may affect the results. Compare the test strip and the label to determine the condition of the spa water.

Step 1.) Balancing Total Alkalinity (TA)

The recommended total alkalinity for your spa is between 125 and 150 ppm. Total alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides and other alkaline substances in the water. TA is referred to as the water's "pH buffer". It is a measure of the water's ability to resist changes in the pH level. If the TA is too low, the pH level will fluctuate from high to low. Changes in pH can cause corrosion or scaling of the spa components. Correct low Total Alkalinity by adding sodium hydrogen carbonate (pH/Alkalinity Up).

Step 2.) Balancing Calcium Hardness (CH)

The recommended calcium hardness (CH) level for your spa is 150-200 ppm. Calcium Hardness is a measurement of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa's water.

Calcium-low water (commonly known as "soft" water) is not recommended.

It is highly corrosive to the spa components and can cause staining of the spa shell. If the CH is too high (commonly known as "hard" water), formation of scale on the spa and the spa components can result. CH can be decreased by using a mixture of 75% "hard" water and 25% "soft" water; this will usually yield a reading of the correct range. If "soft" water is not available or practical for you, a stain and scale inhibitor should be added to the water, according to the label instructions. If CH is too low, add a CH increaser. Once the CH is balanced, it

Water Chemistry Basics

normally remains stable. Adding more water with a low or high calcium content will raise or lower the CH reading of the water. When the Calcium Hardness is within recommended range, proceed to the next step.

Step 3.) Balancing the pH

The pH level is the measure of the acidity and the alkalinity. It is imperative to have a slightly alkaline pH level between 7.4 - 7.6. Problems become proportionately severe the further outside the range the water gets. Values above 7 are alkaline; those below 7 are acidic. Maintaining proper pH level is extremely important for optimizing the effectiveness of sanitizer, maintaining water comfort for the users, and prevention of equipment deterioration.

If the spa water's pH level is too low, the sanitizer will dissipate rapidly, the water may become irritating to users, and the spa's equipment may corrode. If the pH is too low, it can be increased by adding sodium hydrogen carbonate (pH/Alkalinity Up) to the spa water.

If the pH level is too high, the sanitizer is less effective, scale may form on the spa and the spa components, the water may become cloudy and filter cartridge pores will become clogged and obstructed. If the pH is too high, it can be decreased by adding sodium bisulfate (pH/Alkalinity Down) to the spa water. After adding sodium hydrogen carbonate or sodium bisulfate.

Wait two hours before testing the water's pH levels again. Measurements taken too soon may not be accurate. It is important to check the pH level on a weekly basis. The pH will be affected by the bather load, the addition of new water, the addition of chemicals and the type of sanitizer used. When the pH is within the recommended range, proceed to the final step.

Step 4.) Maintaining the Sanitizer Levels

Sanitizer is extremely important for killing algae, bacteria and viruses and preventing unwanted organisms from growing in the spa. At the same time, if the sanitizer levels are too high it may cause irritation to the skin, lungs and eyes. Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer. To keep sanitizer levels in the desired range you should check the bromine, shock, and pH levels before each use and no less than twice each week even if the spa is not in use.

Do not use tri-chlor chlorine, bromo-chlor-dimethyl-hydantoin (BCDMH) or any type of compressed bromine or chlorine, acid or any sanitizer not recommended by HOME & GARDEN SPAS.

Heavy Cleaning or Decontamination

On occasion, it may be necessary to "Super Sanitize" your spa. If algae develops, simply draining and refilling the spa will not kill the algae. It will be necessary for you to decontaminate the spa before it is refilled.

Water Chemistry Basics



DURING THE DECONTAMINATION PROCESS, EXCESSIVE CHEMICAL VAPORS ARE PRODUCED. KEEP CHILDREN AND PETS AWAY FROM THE SPA. WEAR GLOVES AND A PROTECTIVE MASK DURING THE DECONTAMINATION PROCESS. REMOVE THE SPA COVER, ALL PILLOWS FROM THE SPA AND PROTECT THE PLASTIC VALVES. IF YOUR SPA IS INDOORS, OPEN THE WINDOWS AND DOORS. USE A FAN TO

CIRCULATE THE AIR AND FORCE THE VAPORS OUT OF THE ROOM.

Remove the filter basket assembly and filter. Before adding chemicals, make sure all pumps are operable. Check to be sure all jets and air valves are open. Be certain the diverter valves are in the center position allowing even circulation through all sections of the spa.

With all pumps on low speed, add 2.5 ounces of sodium dichlor for every 100 gallons of water in the spa. For example, if there are 400 gallons of water in your spa, add 10 ounces of sodium dichlor. After all the sodium Di-Chlor has been added turn all pumps on their highest speed and allow the water to circulate for one hour. Do not replace the cover over the spa during decontamination. Never leave the spa unattended while it is uncovered.

After allowing the spa to run for one hour, turn the GFCI off and drain the spa. Follow the procedure to refill the spa and add chemicals as needed for proper water chemistry.

Common Sense Water Chemistry

Without chemicals, the warm water in your spa is the perfect environment for germs, bacteria and other living organisms. Chemicals added to your spa water are utilized as they destroy the bacteria from dead skin cells, sweat and other body fluids. Consistent addition of sanitizers kept at constant levels keep your water clear and safe to use. The water in your Home & Garden Spa and your filter should be replaced every 3 months.

What is required to maintain proper water chemistry is different in every spa and for every spa user. Your water chemistry changes constantly. When it's warm outside, chemicals evaporate faster than when the weather is cold. Using the spa once a day will require more chemicals than using the spa once a week. What it takes to balance your water chemistry in January will be different than what it takes in July.



The major considerations in water chemistry are:

- The number of gallons of water in the spa
- The number of people using the spa
- The number of hours the spa is being used

Water Chemistry Basics

In short, more water used by more people for more hours means more chemicals. Whether you use the spa or not, you should test your water twice a week. Regularly testing water allows you to make adjustments before levels are out of control. When it comes to chemicals, more is not better. Adding chemicals changes the pH, changes in the pH changes the way the chemicals react. The addition of too many chemicals makes the problem worse making your only option to drain the spa and start over.

Ozone Generators

Your spa may have come with an optional ozonator which will do a good job at killing bacteria and oxygenating water, but it will not sanitize the water. You must use bromine in tandem with the Ozone generator. The Ozone generator is designed to make chemicals more efficient and water chemistry maintenance easier. Ozone is a gas that oxidizes contaminants and disinfects bacteria. The ozone generator injects ozone while the water is in the plumbing before it comes through the jets and into the spa.

Chlorine Generators

Your spa may have come with an optional salt system, also known as a chlorine generator. This system is designed to maintain water chemistry by converting salt into the sanitizer without the use of bromine and shock. Since the system does not create any residual chlorine, water testing will not provide an accurate assessment of sanitation levels. Test strips should be used to maintain adequate levels of alkalinity, pH and water hardness.

DO:

Wash your hands after handling chemicals. In case of accidental contact, follow the emergency advice on the product label. If a doctor is needed, take chemical containers with you to the hospital so the substances can be identified. Clean up spilled chemicals immediately using water from a water hose. Saturate the surrounding area thoroughly, especially areas used by children and pets to ensure safety.

Keep chemicals in their original container with the lid replaced properly after using. Keep chemicals closed when not in use..

Keep chemicals away from children and pets. Allow a responsible person to handle spa chemicals; use care when handling chemicals.

Store chemicals in a cool, dry, well ventilated place.

Don't:

Add chemicals when the water temperature is below 80°F

Smoke when adding chemicals. Some of the chemicals used to maintain water chemistry are highly flammable and smoking while adding chemicals can lead to serious injury.

Store chemicals in the spa cabinet or anywhere they are exposed to extreme

Water Chemistry Basics

temperatures or bright light. This may cause them to become less potent.

Allow anyone in the spa while adding chemicals. Inhaling fumes or allowing chemicals to come in contact with your eyes, nose or mouth is very dangerous.

Use swimming pool chemicals, muratic acid or household bleach, or chlorine tablets (trichlor) in your spa. It can be extremely corrosive. Damage caused by use of tri-chlor is not covered under the manufacturer's warranty.

Use a vacuum cleaner to clean up chemical spills or allow spilled chemicals to get on surrounding surfaces or landscaping.

Troubleshooting Water Chemistry

Problem	Could be Caused By	Could be Solved By
Cloudy Water	Dirty Filter	Replace Filter
	Excessive Organic Matter	Add Sanitizer Shock
	Improper Sanitization	Add Sanitizer
	Suspended Organic Matter	Add Shock, Run Jets
	Old Water	Drain & Refill Spa
Water has Bad Smell OR Users have Eye Irritation	Excessive Organic Matter	Add Shock
	Improperly Sanitized	Add Sanitizer
	Low pH	Adjust pH
Smells Musty	Bacteria Growth	Add Shock. If the problem persists, perform Spa Decontamination
Ring Around Spa	Build Up of Oil & Dirt	Wipe surface with cloth, drain spa, refill spa.
Algae	High pH	Add Shock & Sanitizer
	Low Sanitizer Level	Add Shock & Sanitizer
Skin Irritation or Rash	Improper Sanitation	Add Shock & Sanitizer
	Free Chlorine too High	Allow Free Chlorine Level to Drop
Stains on Surface	High Alkalinity or Low pH	Adjust Alkalinity and pH Accordingly
	High Metal Content	Use Stain & Scale Reducer
Scale Build Up	High Calcium Levels	Adjust Alkalinity; Use Stain & Scale Reducer

Troubleshooting Guide



If you do not see the solution to your problem , please call a technical support associate at 877-722-4097 for assistance.

When making repairs to your spa, you should always manually turn the GFCI “off” to eliminate risk of shock.

Problem	May be Caused By	Might Be Solved By
Spa Not Working	Power is off	Reset GFCI and Main Service
Spa Won't Turn Off	Spa is heating	Lower temperature
	Spa is filtering	Normal function of spa
Spa Leaking	Loose unions	Hand tighten unions
GFCI Tripping	Improper wiring	Check with electrician
Pump(s) Not Working	No power	Make sure pump is connected to the pack
	Pump Cycle has ended	Press button to turn pump on
	Slice Valves Closed	Open slice valves (instructions on page 19)
	Blockage in line	Clear obstructions in filter assembly
Pump(s) run hot	Pump running dry	Call technical support at 877-722-4097
	Flow restricted	Remove debris from filter basket and suction valves.
Pump Surges	Water level too low	Add water
	Blockage or restriction	Empty filter basket and clean suction drain covers
No or Low Heat	Spa is at correct temperature	Normal function of spa
	No power to spa	Reset GFCI and Main Power Supply
	Slice Valve is Closed	Open slice valves (instructions on page 19)
	Breaker(s) off	Reset GFCI and Main Breaker
	Air lock in pump(s)	Bleed pump (instructions on page 19)
	Dirty Filter	Change filter

Troubleshooting Guide



If you do not see the solution to your problem , please call a technical support associate at 877-722-4097 for assistance.
When making repairs to your spa, you should always manually turn the GFCI “off” to eliminate risk of shock.

Problem	Might be Caused By	Might Be Solved By
	Improper Line Voltage	Have an electrician check voltage
Heats, but not High Enough	Thermostat turned down	Raise thermostat
	Dirty filter	Change filter
	Slice valve closed	Open slice valves (instructions on page 19)
	Spa cover not in place	Reposition spa cover
Heats too much	Thermostat set too high	Lower thermostat
	Outside temperature high to allow cooling	Add cold water
Lights Don't Work	Bulb burned out	Replace bulb
	Loose, dirty connection	Check light connections
Jets Don't Work	Air lock in pump(s)	Bleed Pump instructions on page 19
	Slice valve(s) closed	Open slice valves (instructions on page 19)
	Diverter valve closed	Rotate diverter until desired pressure is achieved
	Jet Closed	Rotate outer stainless rim of jet to open
	Dirty Filter	Change filter
Low Water Flow	Spa heating or filtering	Normal spa function
	Diverter valve position	Rotate diverter valve to increase flow
	Air valve closed	Rotate air valve to open
	Dirty filter	Change filter
	Slice valve(s) closed	Open slice valves (instructions on page 19)
	Improper Line Voltage	Have an electrician check voltage

Warranty Information

Manufacturer's Limited Warranty

SPA WARRANTY PROCEDURES AND PROCEDURES

Important Notice: The following are not actual warranties, but detailed descriptions of our warranty policies and procedures. Certain exclusions and disclaimers may apply to these descriptions. Always read the warranty that comes with each spa. These policies and procedures are subject to change at any time and without notice. Throughout this document, HOME & GARDEN SPAS shall be referred to as the "MANUFACTURER". Each spa warranty is given to the original consumer only and terminates upon any transfer of ownership. Commercial applications are excluded from all warranty.

LABOR WARRANTY

Labor is described as the work completed by a technician. MANUFACTURER will be responsible for the costs associated for labor for all warranty repairs for ninety days from the original date of purchase. THIS WARRANTY IS GIVEN TO THE ORIGINAL CONSUMER AND TERMINATES UPON TRANSFER OF OWNERSHIP. COMMERCIAL APPLICATIONS ARE EXCLUDED FROM THIS WARRANTY. It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

SURFACE WARRANTY

The spa surface is defined as the exposed material finish. The MANUFACTURER warrants the spa surface to be free from defects in material and workmanship, such as blistering, cracking, or delamination, under normal use and maintenance for a period of five (5) years from the original date of purchase. This is a full warranty for the first year, and shall be pro rated for the remaining four years with the original owner responsible for the following percentages of the replacement or repair: 40% for year 2, 60% for years 3, and 80% for years 4 & 5. THIS WARRANTY IS GIVEN TO THE ORIGINAL CONSUMER AND TERMINATES UPON TRANSFER OF OWNERSHIP. COMMERCIAL APPLICATIONS ARE EXCLUDED FROM THIS WARRANTY.

The spa must be set on a level cement slab and/or a level deck surface that is sufficient to support the entire length and width of the spa. Standard building practices must be followed. Damage caused by failure to have a properly leveled and supported foundation under the spa is not covered under warranty. The MANUFACTURER does not warrant against problems associated with prolonged standing water, prolonged exposure to sunlight and/or use of any sanitation or ozone system not approved by the MANUFACTURER. Damage to the spa surface caused by leaving the spa uncovered and empty of water with direct exposure to sunlight will terminate this warranty. Any alteration to any system, including but not limited to electrical, plumbing, or mechanical, or over-use of chemicals, or any other problems caused by an external source are not covered under warranty. Other exclusions may apply. Please read the warranty thoroughly.

Warranty Information

Normally, problems associated with material and workmanship can and will be repaired. If the spa surface is repaired, the repair is limited to the affected area only, and there is no guarantee against discoloration or fading. The decision to repair will be made by the MANUFACTURER and its field representative after review of the facts, pictures, or any other data presented by the dealer or the customer. In all cases, pictures of the effected area and foundation of the spa must be provided before any decisions to repair or replace are made. In the unlikely event of a spa replacement, all warranties (including but not limited to shell, acrylic, equipment and plumbing) date back to the original date of sale. If it is determined that the shell is to be replaced, the same conditions and terms as outlined in the shell warranty section apply. It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

STRUCTURE (SHELL)/SURFACE (ACRYLIC) REPAIR WARRANTY PROCEDURES
THE HOME & GARDEN SPAS CUSTOMER CARE DEPT. WILL WORK WITH YOU
TO MAKE THE PROCESS AS SIMPLE AND EASY AS POSSIBLE. TO ENSURE THE
EFFICIENT PROCESSING OF STRUCTURE/SURFACE CLAIMS, PLEASE FOLLOW
THESE STEPS:

1. The MANUFACTURER relies upon the consumer and service technician to assist in warranty claims and how best to work toward the consumer's satisfaction. If you have any questions concerning a claim, you should call the HOME & GARDEN SPAS Customer Care Department for assistance.

2. If the claim is determined to be valid you will need to submit to the HOME & GARDEN SPAS Customer Care Department the proof to purchase and photographs of the damaged spa and the surrounding area where the spa is supported. Customer Care will determine the proper solution for repairing the spa. Photographs of the damaged spa should have the following information attached:

- * Spa Model
- * Spa Serial Number
- * Spa Color
- * Date of Purchase
- * Name of Customer
- * Address of Customer
- * Phone number of Customer
- * Date of Delivery
- * Thorough Description of Problem

NOTE: MOST OF THE ABOVE INFORMATION IS PROVIDED ON THE ORIGINAL INVOICE OF SPA.

3. Upon receiving the above information, HOME & GARDEN SPAS Customer Care will evaluate it and make a decision on how the damage will be repaired. In all situations, a repair is considered the appropriate course of action unless it is deemed irreparable. If the spa cannot be repaired in the field and must be returned to the factory, approval must be obtained from Customer Care Manager. Cost for removal of the defective spa and delivery and installation of the replacement spa are the responsibility of the consumer and will not under any circumstances be covered by the MANUFACTURER.

Warranty Information

It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

COMPONENTS WARRANTY

The components may be defined as the electrical items (i.e., pumps, equipment packs, heaters, topside, etc.) The MANUFACTURER warrants all components to be free from defect in material and workmanship for two (2) years.

Some components including, but limited to, the spa cover, ozonator, stereo components, speakers and related parts, and fiber optics are not included in this warranty, but are covered under separate warranty from the original manufacturer. Some items, including, but not limited to pump seals are a maintenance item and are covered for manufacturer defects only. Damage caused by weather, poor water chemistry, standing water and/or improper maintenance will not be covered under this warranty. Alterations or replacement of components installed in the spa that are not purchased and/or approved by the MANUFACTURER will terminate the spa warranty.

It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

PLUMBING WARRANTY

The plumbing may include all piping, jets and valves. The MANUFACTURER warrants all plumbing parts for a period of 2 years from the original date of purchase. THIS WARRANTY IS GIVEN TO THE ORIGINAL CONSUMER ONLY AND TERMINATES UPON TRANSFER OF OWNERSHIP. COMMERCIAL APPLICATIONS ARE EXCLUDED FROM THIS WARRANTY. Jet internals and diverter handles are not covered under this warranty. Damage caused by weather, poor water chemistry, standing water, and/or improper maintenance will not be covered under this warranty.

It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

COMPONENTS AND PLUMBING WARRANTY PROCEDURES THE HOME & GARDEN SPAS CUSTOMER CARE DEPT. WILL WORK WITH YOU TO MAKE SURE THAT PROCESS AS SIMPLE AND EASY AS POSSIBLE. TO ENSURE THE EFFICIENT PROCESSING OF COMPONENTS AND PLUMBING CLAIMS, PLEASE FOLLOW THESE STEPS:

1. The technician assigned to service your spa & the HOME & GARDEN SPAS Customer Care Dept. must determine whether damage is due to a chemical imbalance or manufacturer's defect. If the damage is due to manufacturer's defect, the MANUFACTURER will warrant the defective part and labor during the warranty period. This does not include any travel or trip charges, troubleshooting or diagnostic charges. Customers living outside the technician's travel area need to be aware that trip charges are

Warranty Information

their responsibility.

2. HOME & GARDEN SPAS Customer Care Dept. will supply necessary parts for service or repair. The technician should troubleshoot and repair the problem. If the technician has a problem with a service call, the technician should call the HOME & GARDEN SPAS Customer Care Department for assistance. Upon completion of a warranty job, a Warranty Service Claim (WSC) form should be completely filled out by the service technician. NOTE: THE SPA SERIAL NUMBER SHOULD BE TAKEN DIRECTLY OFF THE SPA TO ENSURE THAT THE CORRECT WARRANTY IS APPLIED.

3. The warranty service claim must be sent to HOME & GARDEN SPAS Customer Care Dept. within 45 days of the date of service. The defective parts must be sent in along with the claim form. An RGA form must be filled out and faxed to HOME & GARDEN SPAS Customer Care, who will process the warranty claim(s) within fifteen (15) working days (if claim is received in the proper time frame and the required information is submitted). Claims turned in late or without the proper information will be delayed. It is the responsibility of the spa owner to insure that the spa is accessible for repairs. MANUFACTURER is not responsible for any cost associated with making spa accessible for repairs. If parts are required for repair, MANUFACTURER is not responsible for the cost of shipping of parts under the terms of this warranty agreement.

ITEMS NOT COVERED UNDER WARRANTY

The following is a general overview of non-warranty items and work. This is NOT an all-inclusive list.

- | | |
|-------------------------------|--|
| * Diagnosis of spa problems | * Jet inserts |
| * Fuses | * Valve Handles |
| * Light bulbs of all kinds | * Pump Seals |
| * Removing spa from structure | * Draining and filling a tub |
| * Pillows | * Acts of Nature |
| * Filters | * Travel Charges |
| * Chemical misuse | * any part not purchased with HOME & GARDEN SPAS |
| * Shipping Charges | |

The spa cover, light bulbs, light lenses, fuses, headrests, cabinet finish, and filters are warranted to be free of defects in workmanship and materials at the time of delivery. Any alterations of the spa that have not been PRE-APPROVED by the MANUFACTURER will void all warranties. If an alteration is approved by the MANUFACTURER, verify that this alteration is covered under warranty. Not all alterations are considered a warranty call. For example, moving the tub to access the problem is not considered a warranty call.

The MANUFACTURER understands that some problems take longer than the allowed time to correct the problem. An authorization number will be required for warranty coverage of extra time. If you are unable to get an authorization from the MANUFACTURER, a detailed description must be included with the warranty claim to get approval for the overtime.

LIMITATIONS

The HOME & GARDEN SPAS warranty is terminated if the spa has been subject to alteration, misuse, or abuse. Misuse or abuse is defined as but not limited to: use of spa in non-residential situation, water temperatures outside the range of 32 to 110 degrees,

Warranty Information

damage caused by clogged or dirty filters, damage of spa caused by the absence of a hard cover, damage of components from improper pH, use of any type of acid, water left standing, or water chemical imbalance. This warranty is terminated if any repairs have been attempted or made by anyone other than an authorized agent of HOME & GARDEN SPAS . This warranty is terminated if any extra components area installed after the manufacturer date.

DISCLAIMER

No one has the authorization to add, take away, or make any promise of performance or representation not included in HOME & GARDEN SPAS warranties that accompany each HOME & GARDEN SPAS Spa. HOME & GARDEN SPAS would not be taken upon to go by any other warranty. There are no additional warranties, express or implied, which extend beyond the terms of the warranty.

The liability of the Manufacturer under this limited warranty, of any, shall not exceed the original amount paid for the original product. Spa owner is required to provide adequate access to the spa for any repair or inspection. HOME & GARDEN SPAS will 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 circumstance 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 no other rights. No agent, dealer, Service Company, or other parts representative is authorized to change, modify, or extend the terms of this warranty in any manner what so ever. Any disputes arising from the purchase of a Home & Garden Spa or this warranty are governed by the laws of the State of Tennessee.