



Owner's Manual

Manufacturer's
recommendations,
installation, use, &
care instructions for
spa owners

ATTENTION INSTALLER
Give this manual to the spa owner.
Important safety information about
the risk of fire, electric shock, injury,
damage to property & the spa.



Important Safety Information

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Important Safety Information

Please read the safety & user information carefully before installation and use.

Danger: Risk of Drowning. Products equipped with optional AnyTemp® chilling units are for adult use only. They are not designed or intended for use by children under 18 or anyone with reduced physical, sensory, or mental capabilities.

Danger: Risk of Drowning. Take every measure to prevent access by children and pets, including fences and alarms. A responsible adult must supervise children at all times. The cover must be locked securely in place when the spa is not in use. Do not allow children to play with the spa or near it.

Danger: Risk of Electric Shock – 220V models. The electrical supply must include a suitably rated Ground Fault Circuit Interrupter (GFCI) between the main service panel and the spa that is readily accessible to the user, located at least 5 feet (2 m) but no more than 15 feet (3 m) from the spa.

Danger: Risk of Electric Shock. Install at least 5 feet (2 m) from all metal surfaces.

Danger: Risk of Electric Shock. Do not permit any electric appliances such as lights, radios, or televisions within five feet (2 m) of the spa.

Danger: Risk of Entrapment and Drowning. Discontinue use immediately if the suction fittings are damaged, missing, or loose. Contact your dealer for replacements and do not use the spa until they are installed.

Warning: Risk of Injury. Adverse effects with certain medical conditions. Consult your physician before use if you are pregnant, possibly pregnant, obese, have a medical history of heart disease, low or high blood pressure, circulatory problems, diabetes, skin irritations, infectious diseases, or immune deficiencies.

Warning: Risk of Injury. Use of drugs, alcohol, or medication before or during spa use may lead to loss of consciousness with the possibility of drowning.

Warning: Risk of Injury. Adverse interaction with certain medications. Consult your physician before use. Some medications increase cold sensitivity, cause drowsiness, affect your heart rate, blood pressure or circulation.

Warning: Risk of Injury. Before entering, measure the

water temperature with an accurate thermometer.

Hypothermia

Hypothermia is an abnormally low body temperature caused by over exposure to cold temperatures.

Hypothermia symptoms include:

Shivering	Confusion	Clumsiness
Exhaustion	Trouble speaking	Poor Judgment
Weak pulse	Lack of awareness	

The effects of severe hypothermia include:

Difficulty with fine motor skills, rigid muscles, physical inability to get out of the spa, changes in heart rate, respiratory and nervous systems, and loss of consciousness resulting in the danger of drowning.

Danger: Risk of Drowning: Sudden immersion in cold water may cause inability to control breathing, panic, impaired mental ability, changes in heart rate, blood pressure, and nervous system.

Always enter feet first.

Always keep your head above water.

Always use with supervision until you understand your natural response and how you react.

Pump turns off automatically after 5 minutes. To prevent over exposure, always exit after 5 minutes when the pump turns off.

Danger: Risk of Hypothermia. Prolonged immersion in cold water may induce hypothermia. Get out immediately and call 911 if you experience violent shivering, bluish skin, or other severe symptoms.

Danger: Risk of Drowning or Injury. Consuming alcohol or drugs before or during use can dramatically increase the risk of fatal hypothermia.

Hyperthermia

Hyperthermia is an abnormally high body temperature caused by over exposure to heat.

Hyperthermia symptoms include:

Dizziness	Fainting	Blurred vision
Fatigue	Headache	Muscle cramps
Delirium	Poor Judgment	Flushed or pale skin

The effects of hyperthermia include:

Lack of awareness, failure to perceive heat, physical inability to get out of the spa, and loss of consciousness resulting in the danger of drowning.

SAVE THESE INSTRUCTIONS

Important Safety Information

Please read the safety & user information carefully before installation and use.

Warning: Risk of Injury. Water temperatures should never exceed 104°F (40° C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for healthy adults. Lower water temperatures are recommended for young children and healthy adults for more than 10 minutes.

Danger: Risk of Hyperthermia. Prolonged immersion in hot water may induce hyperthermia.

Warning: Risk of Injury. Pregnant or possibly pregnant women should consult a physician before use. Excessive water temperatures have a high risk of fetal damage during early pregnancy.

Warning: Risk of Injury. Do not use immediately after strenuous exercise.

Warning: Risk of Injury. Use caution when entering and exiting. Wet surfaces are slippery.

Warning: Risk of Injury. Cover with an approved locking cover to discourage unauthorized entry when the spa is not in use.

Caution: Always replace components with like components provided by the Manufacturer.

Caution: Do not open the spa control box without proper instruction or direction from your dealer.

Caution: Do not turn the GFCI on until the equipment covers and cabinet panels are securely in place.

Caution: The installation site must include an adequate system to drain water away from the spa foundation and components.

Virginia Graeme Baker Pool & Spa Safety Act Suction Safety & Maintenance Instructions

Warning: Read and follow all instructions in this manual and suction fittings. Failure to follow these instructions can cause severe injury or death.

Inspect suction drain covers frequently and replace if damaged, broken, cracked, missing, or loose.

If a fitting is missing or damaged, replace it immediately with a fitting of an equivalent or higher rating. Installing a suction fitting with a lower rating could result in entrapment, which can cause serious injury, including drowning.

Discontinue use immediately if suction fitting is missing, broken or loose.

Turning a pump on creates suction at the fitting. Instruct users not to come into contact with the fitting in any way that blocks the suction outlet. If any part of a user's body blocks this fitting, serious personal injury or drowning may occur.

Warning: Suction Entrapment Hazard. Suction in suction outlets and suction outlet covers that are damaged, broken, cracked, missing,, or loose may cause these entrapment hazards, resulting in severe injury or death:

Hair Entrapment: Hair entangled in the suction cover.

Limb Entrapment: Inserting a limb into a suction opening or cover that is damaged, missing, or loose can result in a mechanical bind or swelling of the limb.

Body Suction Entrapment: Negative pressure applied to a large portion of the body or limbs.

Evisceration / Disembowelment Entrapment: Negative pressure applied directly to the intestines through an unprotected suction outlet or cover that is damaged, missing, or loose.

Mechanical Entrapment: Jewelry, clothing, hair, fingers, or toes caught in an opening.

Reduce the Risks of Entrapment Hazards:

Immediately discontinue use if any suction outlet component is damaged, missing, or loose.

Replace damaged, missing, or loose suction components immediately.

Inspect suction components at least monthly.

Replace the suction drain cover within seven years of the installation date. This is a mandated regulation and is not covered under the Manufacturer's warranty.

SAVE THESE INSTRUCTIONS

Important Safety Information

Please read the safety & user information carefully before installation and use.

Caution: Maintain water chemistry following the Manufacturer's instructions. Properly balanced water chemistry reduces the risk of waterborne illness and component damage.

Refer to the Water Chemistry & Maintenance section for water care information and instructions.

The recommended levels for your spa are:

Free Available Chlorine:	1.0 to 3.0 ppm
<i>*with optional UV System:</i>	<i>0.5 to 1.0 ppm</i>
Free Available Bromine:	2.0 to 4.0 ppm
Total Alkalinity:	80 to 120 ppm
pH:	7.2 to 7.8
Calcium Hardness:	150 to 250 ppm
Cyanuric acid levels	always less than 100 ppm

- Discontinue use and consult a physician if you have an adverse reaction to the spa chemicals or water.
- Always shower before and after using a spa.
- Turn the pumps on for at least 20 minutes after adding spa chemicals. Vent the cover
- Clean the filter cartridges regularly. Debris accumulating in the filter makes filtration less effective, and contaminants in the water remain.

Important Safety Reminders

- Wet surfaces can be slippery. Exercise care when entering and exiting the spa to reduce the risk of injury. Give children instructions about how to enter and exit the spa safely.
- Remove all jewelry and put long hair in a bathing cap or hair tie before you enter the spa.
- Keep sharp objects away from the spa area.
- Stay out of the spa if you have open wounds or an infectious disease.
- If you will be in the spa for over 10 minutes, reduce the water temperature to 100°F (40°C) or lower.
- Using the spa for more than 30 minutes at any time is not recommended without getting out and allowing your body temperature to cool.
- Never use your spa when you are alone.
- Never leave the spa uncovered, whether it is empty or full. Exposure to sunlight, rain, snow, heat, and freezing temperatures causes permanent damage to the surface, components, and structure that is not covered under the Manufacturer's warranty.

Important Spa Cover Safety Reminders

- Vinyl-insulating spa covers are not intended to support weight loads.
- Brush heavy snow loads off the cover with a soft brush. Reinforce your cover with wind straps during periods of high wind. The tie-downs on the cover will not hold your cover in place if wind speeds are excessive.
- Use only approved and recommended accessories, chemicals, and cleaners.
- Never allow children or pets to sit or stand on the spa cover.
- Always lift or carry the cover using the handles, not the skirt or tie-downs.

SAVE THESE INSTRUCTIONS

Installation Site

Location & delivery considerations

Choosing a Location

The right location requires careful consideration of aesthetics, convenience, and spa maintenance.

- Choose a location out of direct sunlight, particularly in warm climates. External factors such as ambient temperatures and sun exposure directly impact the spa's capacity to regulate the water temperature.
- Keep your spa out of low spots. Natural drainage away from the spa to prevent standing water on all four sides is critical.
- Install your spa away from landscaping sprinklers, gutters, downspouts, roof overhangs, and power lines.
- Proximity to a water hose will help with maintenance and topping off the water level.
- Consider accessibility to your house. Is there a clear pathway, especially in cold weather? Consider the effects of wind, sun exposure, and trees with minimal falling debris to block sunlight.
- Make sure the installation meets your local codes, covenants, and restrictions. Many communities require the same security precautions for spa installations as swimming pools, such as fences with locking gates.

Delivery Considerations

The pathway from the street to the installation site must be straight, relatively flat, at least 2' wider than the spa, and free of obstacles like stairs, overhead cables, balconies, roof overhangs, heat pumps, walls, fences, small gate openings, and tree limbs. If the pathway isn't straight, each turn must have ample room to rotate the spa without obstruction.

Manufacturer's General Installation Recommendations

When filled to capacity, the combined weight of a spa, water, and users can easily reach 1,500 lbs; larger models can weigh over 2,500 lbs. It's imperative to place the spa on a uniformly level foundation that can support the weight of the spa when filled to capacity without shifting or settling. Never install on grass, dirt, gravel, or pebble beds, pallets, landscaping stone, or timber.

A drainage system that moves water away from all four sides is critical. When the drainage system is appropriately designed, splash-out, overflow, drainage for maintenance, rainfall, and runoff are quickly diverted away from the spa.

Site Preparation Recommendations

- The Manufacturer recommends hiring qualified, licensed professionals for construction and electrical installation that may be required for the installation site. Always comply with local ordinances and site-specific installation requirements that exceed the Manufacturer's recommendations. Before you begin, contact local utilities to ensure no underground lines are in your chosen site.
- Place on a level, slip-resistant concrete pad a minimum of 4" (10 cm) thick pad with reinforced steel to support the weight of the spa when filled to capacity.
- A minimum clearance of 3 feet (1m) on all four sides of the spa is required for maintenance and service. The concrete pad should be at least 3 feet (1.25 m) wider and longer than the overall dimension of the spa.
- New concrete must cure for at least 72 hours before placing the spa.
- If you live in a climate with freeze/thaw zones or an area prone to ground shift, poured concrete footings must extend below the freeze line or water table to prevent the possibility of shifting.
- Do not pour concrete over the electrical rough-in.
- The installation site must be a safe distance from areas prone to runoff, flooding, or standing water. If necessary, incorporate a retaining wall to ensure the foundation and components remain dry.
- If your site plan includes a platform surround to give the appearance the spa is recessed, it must include removable or hinged access panels with a minimum clearance of 3 feet (1 m) on all four sides of the spa.
- If your spa is installed on a deck or any other surface not recommended by the Manufacturer, you must hire a competent engineer and licensed contractor to design and install adequate foundation, drainage, and electrical systems.

The Manufacturer's warranty does not cover damage or failure caused by an inadequate foundation or improper installation.

Your spa is self-contained. The entire spa must be installed above ground. Installing any portion below grade or backfilling against the cabinet will void the Manufacturer's warranty.

Installation

Location & delivery considerations

Installing indoors or enclosed areas

Follow the Manufacturer's installation recommendations if placing your spa indoors or in an enclosed area. Because local building and electrical requirements vary, the Manufacturer recommends hiring a competent, licensed contractor to evaluate, design, and build your indoor site. A bathroom may share similar characteristics, but a bathtub is drained after each use. Your spa is not. Typically, indoor installations require additional support and increased ventilation capable of continuously removing moisture and chemical gases from the air. Walls, floor coverings, and other finish materials must withstand higher humidity and moisture without deterioration.

Preparing for the Delivery

It is essential to speak with your sales representative about potential delivery obstacles so the delivery agent has the proper equipment to place your spa without delay.

If your spa is delivered curbside, it will arrive in a 53' common carrier closed box trailer. The carrier is responsible for delivery to an accessible address on the curb of a public road only. The carrier is not responsible for removal from the truck or the placement of your spa. You will need several people to help on the day of delivery.

If placing your spa requires a crane, choose a reputable crane service with spa experience. Spreaders are required with swim spas and should be used on portable spas. If the spa is not stabilized correctly or the straps are too tight or improperly placed, the spa components and structure may be compromised or damaged, even if there is no visible damage at the time of delivery. Crane services familiar with spa placement know how to place spreaders and straps properly, ensuring the frame is adequately supported.

Never Flip the spa on its top. Never flip end over end.

Leveling your spa

After your spa is positioned, ensure it is completely level before filling it with water. NEVER use shims to level the spa. Shims create pressure points that can damage the spa.

240V Hardwired Spa Electrical Requirements

Installed in the United States operating on 60 Hz, alternating current at 240V

If the electrical supply is not connected properly:

- Automatic safety features may be compromised, increasing the risk of electrocution, serious injury, and damage to property or the spa.
- The electrical supply to the spa may be disrupted or the spa may shut down to prevent use until the wiring is corrected.

Danger: Risk of Electrocution. The owner is responsible for hiring a qualified, licensed electrician to install all wiring and make electrical connections in accordance with the National Electric Code (NEC) and state and local electrical codes in effect at the time of the installation. Incorrect wire gauge sizes or improper electrical connections may result in blown fuses, component damage, fire, electrocution, and injury. Damage due to improper connections and wiring voids the Manufacturer's warranty and all listings from independent listing agencies.

Danger: To Reduce the Risk of Electric Shock:

- The spa must be permanently connected (hard wired) to a power supply and grounding system protected by class 'A' double-pole Ground Fault Circuit Interrupter (GFCI). Do not install a pull-out style GFCI.
- Electrical service must be housed in a weatherproof junction box and include a suitably rated Ground Fault Circuit Interrupter (GFCI) between the main service entrance and the spa to open all ungrounded supply conductors in compliance with the National Electrical Code and independent listing agencies.
- The power supplied must be a dedicated circuit with no other appliances, lighting, or electronic components powered by or shared with the circuit.
- All connections must be made using continuous solid copper conductors, which the Manufacturer defines as a single copper wire without any breaks, splices, connections, or joins of any kind, that runs the entire length of the circuit without interruption. Do not use braided copper or aluminum wire.
- Wires, circuit breakers, and fuses, must all be sized to accommodate the Total Ampere load.
- The minimum wire size for 50 and 60 amp systems is #6/3 c/w ground (6 gauge/4 conductor)
- The GFCI must be readily accessible to spa occupants, installed at least 5 feet (2 m) but no more than 15' (3m) from the spa.
- The service panel, GFCI, and terminal block wiring must include suitably rated, non-metallic, water-tight conduit with water-tight fittings at all openings. Damage caused by exposed wiring is not covered under the warranty.
- All electrical connections must be secure and have adequate strain relief to prevent movement at the connection points.
- All field-installed metal components and accessories, such as handrails, ladders, drains, and hardware, within 5 feet (2 m) of the spa must be bonded to the equipment grounding bus with solid copper conductors no smaller than No. 6 AWG..
- The wiring specifications in this manual are for standard installations where the main power supply is within 40 feet (12m) of the spa. The electrician must make appropriate modifications if the main power supply is more than 40 feet (12m) away. The GFCI must be within 70 feet (21 m) of the main power supply.

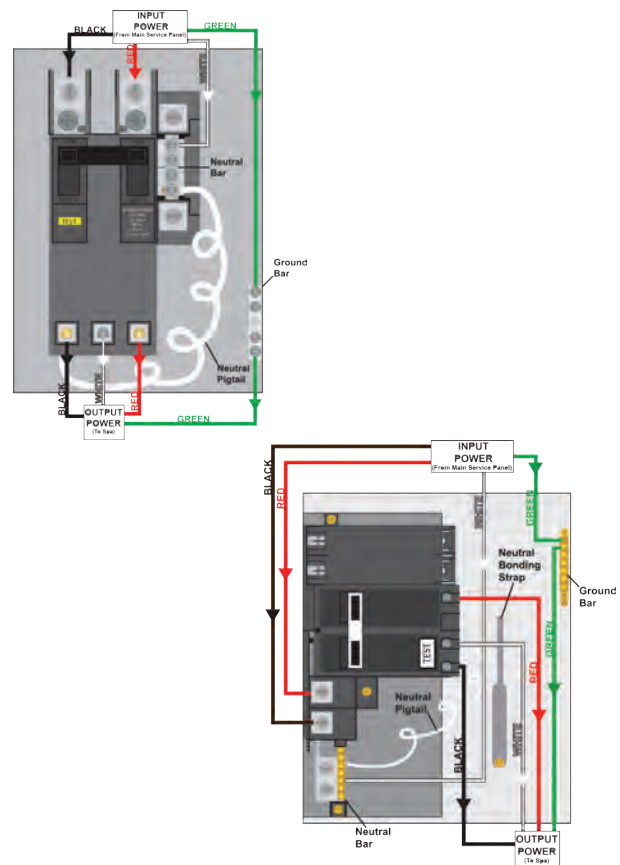
- Electrical connections to the control terminal must comply with the color coding on the terminal block or the wiring diagram inside the control box lid. The electrical instructions and wiring diagrams in this manual vary by model and are included as a guideline only for the licensed electrician.
- Do not permit any electrical appliances like lights, telephones, smart devices, radios or televisions within five feet (2 m) of the spa. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance falls into the spa.

Caution: The spa must be filled with water before the GFCI is turned on. The Manufacturer's warranty does not cover damage that occurs if power is supplied when the spa is empty.

GFCI Wiring Diagrams

GFCI wiring diagrams have been included in this manual to illustrate the differences in the input, output, grounding lug, neutral block and wiring connection locations, which vary by Manufacturer.

Always follow the installation instructions that are included with the GFCI you purchase.

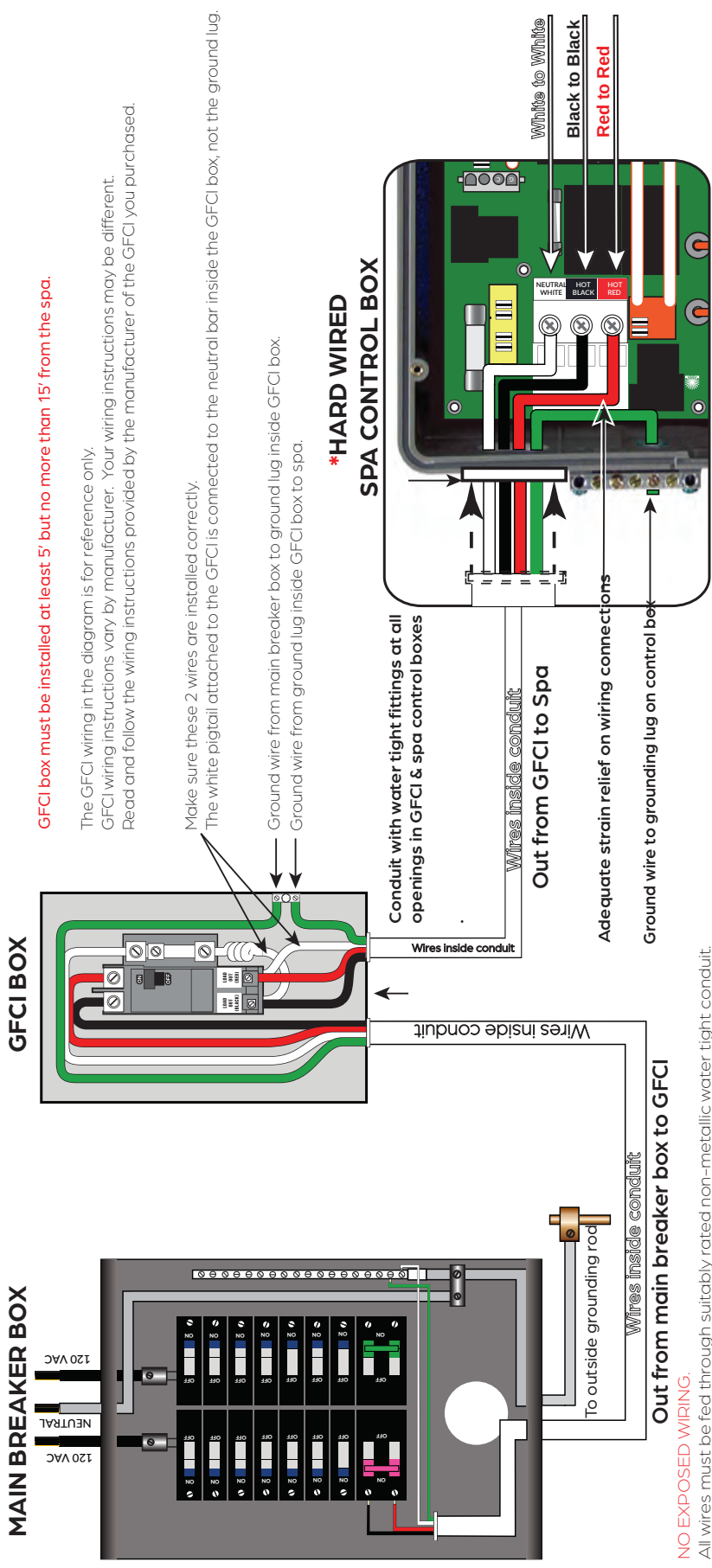


50 amp & 60 amp Wiring Requirements & Diagrams

FOR HARDWIRED SPAS INSTALLED IN THE UNITED STATES

Operating on 60 Hz, alternating current at 240V

ALL WIRING AND ELECTRICAL CONNECTIONS MUST BE PERFORMED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH NEC, STATE, & LOCAL CODES IN EFFECT AT THE TIME OF INSTALLATION. DAMAGE AND FAILURE CAUSED BY IMPROPER WIRING & MOISTURE IS NOT COVERED UNDER THE MANUFACTURER'S WARRANTY.



120V Electrical Requirements

Plug-In Spas with a Quick Connect Cord

Installed in the United States operating on 60 Hz, alternating current at 120V

Any necessary electrical wiring and connections must be performed by a qualified licensed electrician in accordance with the National Electric Code (NEC) following state and local electrical codes in effect at the time of the installation.

Voltage	Breaker	Poles	Wires
120V	20 Amp Dedicated	2	3

Electrical Supply Requirements:

Danger: Risk of Electric Shock. Connecting the spa to an improperly wired circuit, any alteration or modification to the Quick Connect Cord or plugs will eliminate many of the spa's built-in safety features, increasing the risk of fire, electrocution, injury, damage to property, or spa. Damage caused by improper electrical installation or use is not covered under the Manufacturer's warranty and terminates all listings from independent listing agencies.

Danger: To Reduce the Risk of Electric Shock:

- A Quick Connect cord with a GFCI plug is supplied by the Manufacturer for use with the spa only. Never connect any cord the Manufacturer did not supply, and never use the Quick Connect cord with any other electronic device..
- Always connect the Quick Connect power cord to the spa side first and verify the connection is secure before plugging the power cord into the outlet.
- A cord clamp is included and must be used to prevent accidental disconnection of the Quick Connect cord, wire strain at connection points, and sharp bends in the power cord.
- If the Quick Connect cord is accidentally disconnected from the spa, unplug the cord from the outlet before touching the Quick Connect cord or reconnecting it to the spa.
- Power to your spa must be supplied by a dedicated circuit not shared with any other appliance, lighting, or electronic device.
- The connection port in the spa must be within 9 1/2 feet of the dedicated outlet, leaving ample slack on both ends of the Quick Connect cord to relieve wire strain at the connection points and prevent sharp bends. Do not use an extension cord or surge protector. Damage to components caused by low voltage is not covered under the Manufacturer's warranty.

- Never cut, splice, modify, or alter the Quick Connect cord, GFCI, or metal prongs on the plug in any way.
- Do not permit any electrical appliances, including lighting, telephone, audio, or video, within 5 feet (2 m) of the spa. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance should fall into the spa.
- Never touch or come into contact with the Quick Connect cord or any other electric appliance when you are in the spa or any part of your body is wet.
- Do not use the spa if the Quick Connect cord is damaged. First, remove the GFCI plug end from the outlet, then unplug from the connection port in the spa. Do not use the spa until the cord is replaced. Failure to do so may result in serious permanent injury or death by electrocution.
- Do not run the Quick Connect power cord across walkways, through windows, or doorways. Do not bury the cord. Keep it away from lawnmowers, weed eaters, and other equipment that may damage it.
- Test the GFCI regularly. If the GFCI works properly, pressing the test button will turn the spa off. Pressing the reset button will turn it back on. If the spa does not turn on and off as expected, unplug it immediately and do not use it until your electrician corrects the ground current fault.

Caution: Replace the protective covers on the connection port and Quick Connect plug when the cord is not in use.

Caution: Fill the spa with water before plugging the Quick Connect cord into the outlet to prevent damage to critical components. The Manufacturer's warranty does not cover damage caused by turning the spa on before filling.

Caution: When the spa is filled with water, keep it plugged in continuously under normal conditions. Your spa is designed to perform maintenance cycles periodically that require a permanent connection to the power supply.

Caution: Always unplug the Quick Connect cord from the outlet before draining, performing maintenance, or servicing.

120V Electrical Requirements

Plug-In Spas with a Quick Connect Cord

Installed in the United States operating on 60 Hz, alternating current at 120V

Using the Quick Connect Cord



Quick Connect Port in Spa

Make sure the cord is plugged in securely before plugging the GFCI end into the outlet.



Cord Clamp

Mounted in the cabinet near the Quick Connect Port



Quick Connect Cord

Plug this end into the Connection Port before plugging the GFCI end into the outlet.

The cord clamp must be installed to prevent accidental disconnection, wire strain at connection points, and cord damage. Before remounting the cord clamp to the cabinet, feed approximately 4" of cord between the clamp and the connection port. Always connect the cord to the spa first and verify the connection is secure before the other end of the cord is plugged into the outlet.

- Always connect the cord to the spa first and verify the connection is secure before the other end of the cord is plugged into the outlet.
- If the cord is accidentally disconnected from the spa, unplug the cord from the outlet before reconnecting the cord to the spa.
- Replace protective covers on the connection port and Quick Connect plug when the cord is removed from the spa.

Start Up – Step by Step:

- When placing the spa, verify the connection port is within 9 ½ feet of the dedicated outlet.
- Remove the protective covers from the connection port on the spa and cord. Plug the cord into the connection port on the spa.
- Remove the mounting screw from the cord clamp. Widen the clamp opening, put the cord inside and slide the clamp toward the hole for the mounting screw. Feed approximately 4" of the slack power cord between the clamp mount and the connection port to prevent wire strain.
- Squeeze the clamp around the cord and screw the clamp onto the spa.
- Fill the spa with water.
- Verify the cord is securely connected to the spa. Plug the cord into the outlet and press the reset button on the GFCI to turn on the spa. *Each time the power cord is plugged in, press the reset button to turn on the spa.*

120V Electrical Requirements

Plug-In Spas with an Attached Power Cord

Installed in the United States operating on 60 Hz, alternating current at 120V

All electrical connections must be performed by a qualified licensed electrician in accordance with the National Electric Code (NEC) following state and local electrical codes in effect at the time of the installation.

Electrical Supply Requirements:

Danger: Risk of Electric Shock. Connecting the spa to an improperly wired circuit, any alteration or modification to the cord, or the plug will eliminate many of the spa's built-in safety features, increasing the risk of fire, electrocution, injury, damage to property, or spa. Damage caused by improper electrical installation or use is not covered under the Manufacturer's warranty and terminates all listings from independent listing agencies.

Danger: To Reduce the Risk of Electric Shock:

- A power cord with an appropriately rated GFCI is attached and stored inside the spa cabinet. Remove the cabinet panel under the topside control panel to access the cord.
- Never connect any cord to the spa that the Manufacturer did not supply.
- Power to your spa must be supplied by a dedicated circuit not shared with any other appliance, lighting, or electronic device.
- When placing the spa, ensure the cord reaches the outlet easily with adequate slack on both ends to prevent wire strain.
- Plug the power cord directly into the outlet. Do not use an extension cord or surge protector. Damage to components caused by low voltage is not covered under the Manufacturer's warranty.
- Never cut, splice, modify, or alter the power cord, GFCI, or metal prongs on the plug in any way.

- Do not permit any electrical appliances, including lighting, telephone, audio, or video, within 5 feet (2 m) of the spa. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance should fall into the spa.
- Never touch or make contact with any electric appliance when you are in the spa or any part of your body is wet.
- Do not use the spa if the power cord is damaged. Unplug the cord from the outlet and discontinue use until the cord is replaced.
- Do not run the power cord across walkways, windows, or doorways. Do not bury the cord. Keep it away from lawnmowers, weed eaters, and other equipment that may damage it.
- Test the GFCI before each use. If the GFCI works properly, pressing the test button will turn the spa off. Pressing the reset button will turn it back on. If the spa does not turn on and off as expected, unplug it immediately and do not use it until your electrician corrects the ground current fault.
- Do not open the spa control box without proper instruction or direction from your dealer.

Caution: Fill the spa with water before plugging the power cord into the outlet to prevent damage to critical components. The Manufacturer's warranty does not cover damage that occurs if the spa is powered on before filling.

Caution: When the spa is filled with water, keep it plugged in continuously under normal conditions. Your spa is designed to perform maintenance cycles periodically that require a permanent connection to the power supply.

Caution: Always unplug the power cord from the outlet before draining, performing maintenance, or servicing.

Start Up – Step by Step:

- The power cord is shipped inside the spa cabinet. Remove the panel under the topside controls, remove the plug end of the cord from the cabinet. Replace the cabinet panel.
- When placing the spa, verify the power cord is long enough to easily reach the outlet with adequate slack at both ends to prevent wire strain and sharp bends at the connection points.
- Fill the spa with water.
- Plug the cord directly into the outlet. Press the reset button on the GFCI to turn on the spa.
Each time the power cord is plugged in, press the reset button to turn on the spa.

CONVERTING CONTROLS FROM 120V PLUG-IN TO 240V HARDWIRED

FOR SPAS INSTALLED IN THE UNITED STATES ONLY

Operating on 60 Hz, alternating current at 240V

If your spa was manufactured with an electrical cord that plugs into a dedicated 120V outlet but you would prefer a 240V electrical supply, your licensed electrician can quickly convert the spa controls from 120V to 240V when installing the required wiring and making electrical connections. Because the spa controls are uniquely designed for conversion, spa components do not have to be removed or replaced and additional components are not required.

Hire a qualified, licensed electrician to perform all electrical installation, wiring connections, and to convert the spa controls in compliance with the National Electric Code (NEC), state and local electrical codes in effect at the time of the installation. Please give your electrician these instructions with the 240V wiring instructions & diagrams on page 9 & 10 of this manual. Connecting your spa to an improperly wired circuit or making electrical connections incorrectly may result in electrocution, serious injury, fire, damage to property, and the spa. Damage caused by improper electrical installation voids the warranty and terminates all listings from independent listing agencies.

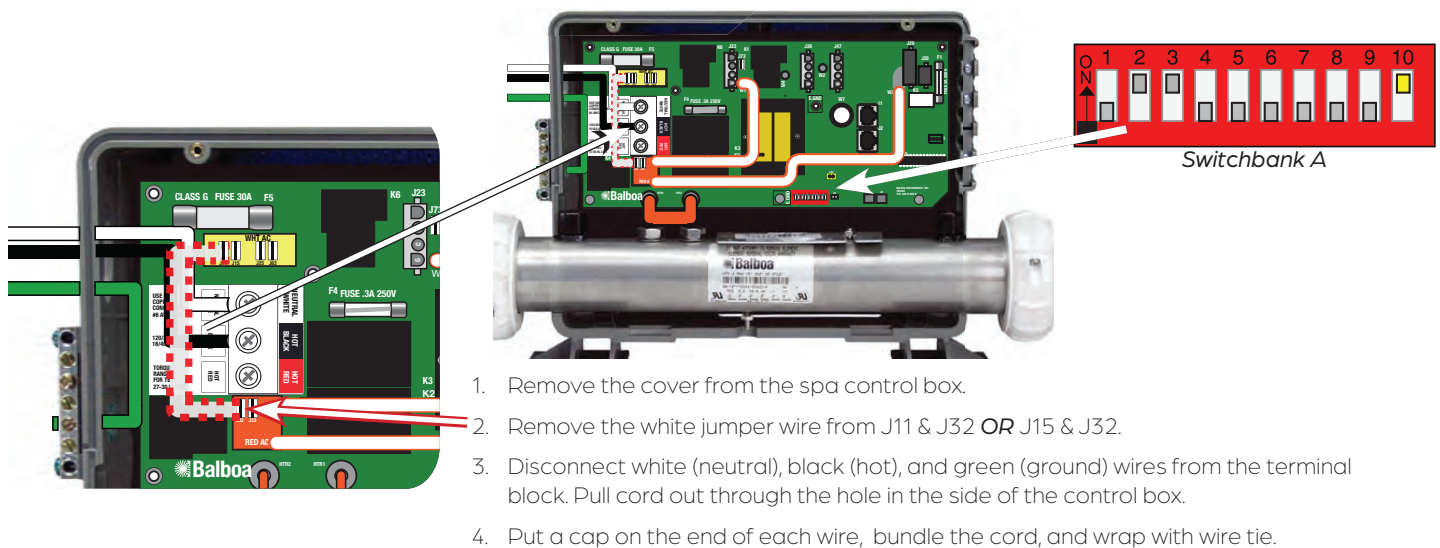
Step 1: Disconnect the spa from the power supply.

Always unplug the spa from the outlet before performing service or maintenance.

The spa must be filled with water before power is supplied. Never connect the spa to the power supply when the spa is empty.

Step 2: Disconnect the power cord from the spa controls.

Inside the Spa Control Box

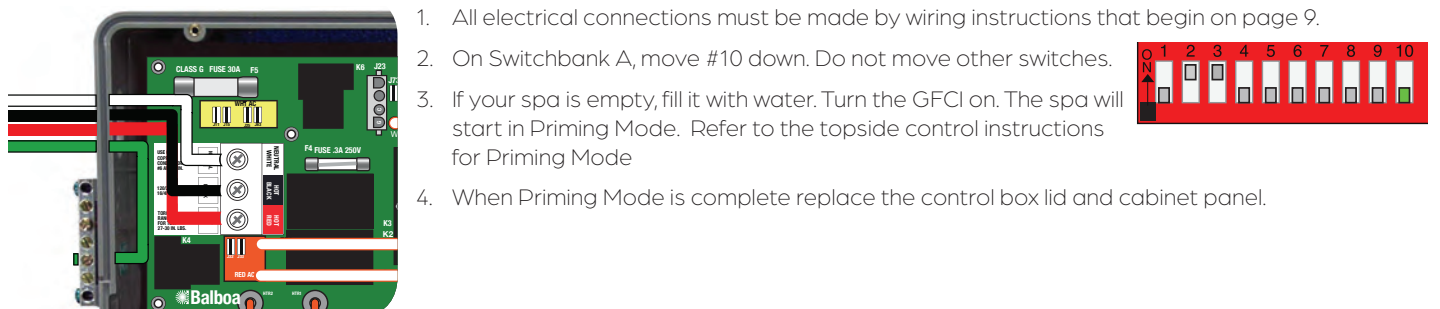


Step 3: If your spa has a Quick Connect cord, remove cord from the clamp & replace cap on the connection port. Move to step 4 if one end the electrical cord is hard wired to the spa controls with a GFCI plug on the other end.



Step 4: Hardwire the Electrical Connections & Convert Spa Controls for 240V Service.

Wiring and electrical connections must comply with Manufacturer's instructions beginning on page 9 of the owner's manual.



Spa Components

Electronic controls, heater, & pumps



Topside controls vary by model.

The **Topside Control Pad** displays essential information about your spa and is used to control the water temperature, filtration cycles, pump, lighting and other functions.

User Controls & Maintenance Functions

Because the spa pack prioritizes your safety and necessary maintenance, user controls that disrupt those functions may not operate as expected until the cycle is complete. For example, during filtration cycles the water circulates on low speed until the cycle is complete. Because the pump is already running, pressing the Pump 1 button will change the pump speed, but it will not turn the pump off. User controls are restored when the cycle ends.

Users can safely use the topside controls from inside or outside the spa.



The **Spa Controls** regulate user functions, automatic maintenance, diagnostics, and safety features. For example, when it's time for a filtration cycle, Pump 1 turns on low speed and circulates the water until the filtration cycle ends.

The spa control box is inside the cabinet on the same side as the topside controls. *Do not remove the lid without instruction to do so from your dealer.*

For electricians hardwiring 240V electrical connections only: Remove the cabinet panel below the topside controls. Remove the lid from the spa control box. Follow the wiring diagram in the lid or color coding on terminal blocks.

The spa controls are programmed to run periodic diagnostic testing to ensure your spa operates efficiently. If a problem requires your attention, an error message is displayed on the control pad. Refer to the error code troubleshooting section in the topside control instructions or contact your dealer for assistance.



The **Heater** is inside the spa control box. Sensors in the chamber monitor the water temperature and flow rate as water circulates through. *The heater only turns on when the water is cooler than the water temperature setting.*



The **Primary Pump** is a two speed pump. Press "Pump 1" or "Jets 1" on the control panel once for low speed with moderate jet pressure. Press a second time to for high speed to maximize jet pressure. Press a third time to turn the pump off.

During heating, filtration, and maintenance cycles, the primary pump automatically turns on and circulates water at low speed. Because the pump is already running on low speed, when you press the Pump 1 Button once, the pump will run on high speed. Pressing the button will change the speed from high to low, but it will not turn the pump off until the cycle ends.

If your spa is equipped with an ozonator or UV Sanitizer, they run when the water is heating, during filtration cycles and when the primary pump is on low speed.

The **Secondary Pump(s)** (if equipped) are single speed pumps. Press the "Pump" or "Jets" button for each pump once to turn a pump on, press it a second time to turn it off. *The number of secondary pumps varies by model.*

Pumps turn off automatically after 20 minutes. Press the "Pump" or "Jets" button to turn them back on.

Circulation Pump (if equipped): circulates water through the filtration system continuously until the temperature is 1° above the temperature setting. When the water temperature is correct, the circulation pump automatically turns off and back on every 30 minutes to check the water temperature. If necessary, water continues circulating the water is the correct temperature. Your water temperature may not fall enough for your circulation pump to run in warm climates. For additional circulation, reduce your temperature setting and increase filtration cycles.

Spa Components

Plumbing components, drain valve, suction drain covers, & jets



The Plumbing Unions connect the plumbing to components. Make sure the unions are tight before filling the spa. If you develop a leak, ensure the unions are tight, and the seals are properly seated. *If using channel locks or an oil filter strap to tighten unions, wrap them with a towel or heavy cloth and rotate them no more than 1/4 turn to prevent over tightening.*



The Drain Valve is in the cabinet panel on the right side of the topside control. When you drain your spa, attach a garden hose to the valve fitting to prevent standing water near the spa foundation and control where the water flows. When filling your spa, check the drain valve to ensure it's closed and isn't leaking.

The Air Relief Valve



Filter compartment varies by model. The air relief valve forces out trapped air before it can accumulate, minimizing the potential for air pockets that prevent pumps from priming and inhibit water flow. The maximum water level is 1" above the air relief valve. It must be completely submerged. *If the air relief valve is above water, do not turn the pumps on until you correct the water level.*

Airlocks

You may have an airlock if a pump hums, surges, or jets don't work. Ensure the air relief valve is completely submerged, the diverters are centered, and the jets are open. If you still have an airlock, slowly loosen the union on top of the pump and tighten it when water trickles from the union. Never run a pump that isn't primed for more than 2 minutes.



T Stems (or slice valves) are installed in the plumbing lines so components can be serviced without draining the water. Pushing the T stem down seals the plumbing line. When service is complete, the T stems are raised to restore water flow. Make sure T stems are up and locked before power is supplied. *If the T stem will not stay up, push it all the way down then pull it up very slowly to engage the internal locking mechanism in the cap.* If it still won't stay up, disconnect from the power supply and do not use the spa until the locks are repaired or replaced.



Suction Drain Covers in the footwell prevent debris from entering the plumbing lines. Instruct users to keep their bodies, hair, clothing, and jewelry away from the suction drains. Debris on the suction drain covers obstructs water flow, which may damage your spa.

Remove debris from the drain cover surfaces when you exit the spa and inspect them regularly to ensure they are in good condition and securely in place. Discontinue use if they are missing, damaged, or loose. Contact your dealer for replacements.

Suction drain covers must be replaced within 7 years of installation. This is a mandated regulation and is not covered under the Manufacturer's warranty.

Therapy Jets



Jet styles vary by model.

Your spa includes a variety of jets that produce different massages to meet your changing needs. Swirling jets provide a soothing, kneading massage from pulsating jets and a deep, penetrating massage from directional jets.

Close Open



Rotating the outer ring adjusts the water flow from many larger jets. The outer ring will rotate easily if a jet is adjustable. To open a jet or increase flow, rotate clockwise. Rotate the outer ring approximately 1/4 turn; it will "stop" when the jet is fully open. Rotate the outer ring counterclockwise to decrease flow. Rotate approximately 1/4 turn to close the jet. Stop rotating when the jet is fully closed. Rotating further will separate the screw threads on the back of the jet from the jet housing.

Open all of the jets each time you exit the spa and add chemicals so water circulates through all of the plumbing lines and jets.

Spa Components

Diverter, water feature, & air controls

Diverter Controls



Diverter control styles vary by model.

Diverter controls on the flange redistribute the water flow in seating zones that share the same pump. Water flow is equally distributed through all of the jets when the jets are centered. Rotating the diverter control in one direction increases water flow in one section and decreases it in the other. Rotating it in the opposite direction reverses the water flow. Arrows on the control indicate the direction of water flow.

Rotate the diverter controls to the center when you exit the spa and add chemicals so water circulates through all of the plumbing lines and jets.



360° Turbo Diverter Jet (if equipped) combines the function of a diverter in the form of a jet. To divert the water flow, rotate the outside of the Turbo Jet 90°. Each 90° rotation redirects water flow in 1 of 4 ways:

- Water flow is equally distributed through all of the jets on both sides
- All water flow is diverted to one side, super charging the jets on that side.
- All water flow is diverted to the turbo jet in the middle.
- All of the water flow is diverted to the opposite side, super charging the jets on the other side.

You can rotate the Turbo Jet 360° clockwise or counterclockwise.

When you exit the spa, rotate the Turbo Jet into the position that circulates water through all of the jets.

If your pumps won't prime, check the position of your diverter or 360° Turbo Jet (depending upon model). If they aren't centered, limited water flow in one section can prevent priming.

Water Feature Controls



Water features & controls vary by model.

Water feature controls on the flange regulate water flow through waterfalls, fountains, hydrofalls, crystal balls, and other water features.

Rotating the control turns the water features on and off. Rotating in one direction increases water flow; rotating in the opposite direction decreases the flow or turns it off entirely.

Turn water features off when you exit the spa to prevent water loss, leaking, component, and cover damage.

Remove crystal balls (if equipped) before replacing the spa cover.

Air Controls



Air control styles vary by model.

Air controls are smaller than diverter controls.

Air controls on the flange regulate the mix of air and water to enhance jet pressure. Rotate the air control in one direction to open the air valve, increasing airflow to maximize the force of the jets. Rotate the air valve in the opposite direction to reduce airflow or stop it entirely.

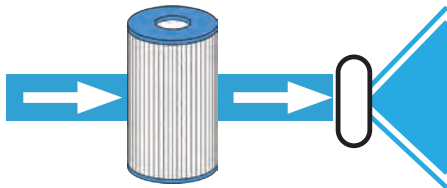
Close the air controls when you exit the spa. Seasonal air temperatures injected into the water directly impact your water temperature.

If rotating the diverter & water feature controls is difficult, turn the pumps off. They're easier to turn when the water isn't circulating.

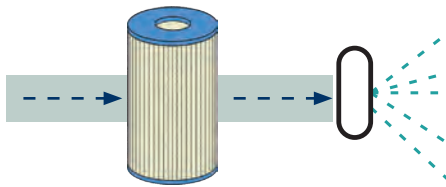
The Filtration System

Filtration system maintenance & filter access

Whenever the pumps are on, water circulates through the filtration system. Dirt, hair, and cosmetics in the water are trapped in the filters, where they remain until you remove them.



When filters are clean, water flow is unobstructed. Jet output is strong, chemical levels are relatively stable, chemical consumption is consistent, water is clear, odor free, & colorless.



When your filters are dirty, accumulating debris restricts water flow. Jet pressure decreases, chemical consumption increases, and water quality deteriorates.

If filter maintenance is ignored, pumps overheat, filtration is ineffective, and impurities remain in the water. Most overheating and low flow error codes can be resolved by replacing your filters and adding water. If water chemistry is difficult to balance, it may be easier to drain your spa and refill it with fresh water.

Under normal use, clean your filters bi-weekly, replace your filters quarterly, and drain & replace the water in your spa every 3 to 4 months.

Filter maintenance depends on several variables, including the number of bathers, the duration, and frequency of use. A spa used by 6 people for 20 minutes every day will need the filter cleaned more often than a spa used by one person for 20 minutes 3 times a week. *Taking a shower before you get in your spa is the easiest way to minimize filter maintenance.*

Filtration Cycles

Your spa is programmed to automatically run filtration cycles daily. For most users, the factory settings provide adequate filtration. However, additional filtration may be beneficial if multiple bathers use the spa frequently for extended periods or if bathers don't shower to remove cosmetics, lotion, and hair products before entering.

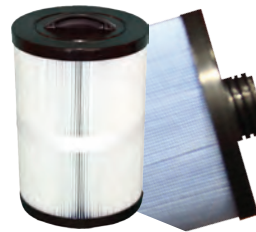
Increasing filtration does not eliminate or reduce the need for chemical sanitizers. If filters are dirty, increasing filtration and chemicals will not improve spa performance or water quality.

Drop-in Filter



Open at the top & bottom. The filter is placed inside the housing. The basket on top of the filter catches larger debris; the pleated filter fiber traps particulates as water is pulled through the core and out of the spa.

Never drop Nature 2 sticks inside the opening in the filter.



Screw-in Filter

Handle at the top, threads on the bottom of the filter screw into fitting; the pleated filter fiber traps particulates as water is pulled through the core and out of the spa.

Accessing Filters

Filter access varies by model.

Always turn the GFCI off or put the Spa Controls in Hold Mode before removing the filters.

Lift-Off Lid



Turn the GFCI off or put the controls in Hold Mode. Lift the lid from the back and continue lifting toward the inside of the spa to remove the lid.

When finished, position the front of the lid on the lip of the skimmer and lower the back into place, ensuring the lid is properly seated on all sides.

Before Removing the Filters:

Remove loose debris from the skimmer and filter compartment, and wipe surfaces with a soft cloth.

Removing & Installing the Filters:

Grip the handle on top of the filter and rotate counterclockwise until the screw separates from the fitting. Lift the filter out.

Repeat with the second filter.

Reverse the process to install.

The Filtration System

Filter access & cleaning filters

Always turn the GFCI off or put the Spa Controls in Hold Mode before removing the filters.

Twist-Off Lid



Turn the GFCI off or unplug the power cord from the electrical outlet.

Twist the lid counterclockwise approximately 1/4 turn and lift off.

Twist the basket counterclockwise approximately 1/4 turn and lift the basket out of the canister, empty the contents and rinse with fresh water.

Wipe the surface with soft cloth.

When finished, replace the basket & lid. Twist the lid clockwise to lock in place.

Before Removing the Filter(s):

Remove loose debris and wipe surfaces clean with a soft cloth.

Removing & Installing the Filters:

Drop-In Filter:

Lift the filter out to remove; place the filter inside to install.

Screw-In Filter:

Grip the handle on the filter & rotate counterclockwise until the screw separates, then lift the filter out. Reverse the process to install.

Cleaning Filters

Never use a pressure washer to clean filters.

Always turn the GFCI off before removing the filters.

Keep debris out of the plumbing entrance.

Never turn the GFCI on if the filters are not installed.

- Turn the GFCI off or put the controls in Hold Mode
- Remove the filter(s) and soak in a large bucket filled with clean water. Using a garden hose, rinse between each pleat to remove debris.
- Shake to remove excess water and allow to air dry thoroughly. If the filter fiber is completely dry, use a soft brush to remove any remaining debris. Never use a brush if the filter fiber is wet.
- Soak the filter in the spa or fresh water to saturate the fabric before installing the filter.
- Do not put filters in the dishwasher or clean them with bleach, soap, or household cleaners.
- If you're using filter cleaner, follow the instructions on the bottle and rinse thoroughly before reinstalling. Residue may cause excessive foam that requires draining and refilling your spa.
- Replace the filter if it is damaged. Over time, filter fabric breaks down, and cleaning may not remove all contaminants.
- Inspect the filter fabric closely for tears and separation during each cleaning. Debris pulled through holes in the fabric will damage components.

An extra set of filters minimizes downtime for maintenance. Install extra filters while you clean dirty filters. Allow filters to air dry thoroughly and store until the next cleaning. Continue rotating filters at each cleaning and replace them when necessary.

Filling the Spa

The water level & filling your spa

The water level in your spa fluctuates as the bather load changes. Pay close attention to the water level as bathers enter and exit the spa.

The maximum water level is 1" above the air relief valve installed near your filters. If your spa has built-in speakers, ensure they are always above the water. You should expect to add or remove water, depending upon bather load. If the bather load increases, drain some water before reaching the speakers. If the bather load decreases, add water before it falls below the air relief valve.

Speakers must always be above water.



The air relief valve must always be underwater.

DO NOT SUBMERGE SPEAKERS

Ensure the speakers, pillows, water features, rotating valves, topside controls are never submerged.

The water level must be lower than the skimmer opening. The skimmer cannot collect surface debris effectively if it is underwater.

When you exit the spa, adjust the water level if necessary.

Check the water level weekly, even if you haven't used the spa. When you exit the spa, adjust the water level if necessary.

Damage from overfilling or under filling is not covered under the Manufacturer's warranty.

The Auto-Fill System (if equipped) continuously monitors the water level in your spa and automatically corrects low water levels when your water hose is connected to the spa and the spigot is turned on. Auto-Fill instructions are on page 28 of this manual.

Water Disposal

Follow your State, Local, and Community codes to dispose of chemically treated water. Typically, if the pH and chemical levels are in the correct range, you can drain the water on your lawn, provided there is adequate drainage to prevent pooling or stagnating water, you take measures to keep the water out of public storm drains and there is no potential for erosion or flooding on surrounding properties.

Always fill the spa with water before connecting to the power supply. Turn the GFCI off before draining, maintenance, or service.

Draining and Filling in Cold Weather

Under normal circumstances, water should only be drained when the ambient temperature is above freezing. If water must be drained when temperatures are freezing or below, the process must be completed quickly, and the spa must either be refilled or winterized immediately. Water remaining in the lines will freeze quickly, and damage caused by freezing isn't covered under the warranty.

Filling your Spa

Open the drain valve. Make sure unions are tight and T-Stems are up and locked.

- Rinse the spa surface and wipe it with a clean, soft cloth. Close the drain valve.
- Remove the filter. If the filter is dry, place it inside the spa while it fills with water. Never install a dry filter.
- Place a garden hose inside the filter opening and turn the water on. Filling the spa through the opening reduces the risk of an airlock.
- Check the drain valve to be sure it's completely closed.
- Make sure water flows through all of the jets. If necessary, rotate jets to open and center diverters.
- If your spa has two filters, move the water hose to the other opening when the spa is filled approximately halfway.
- When the water reaches the water level line on the marker, or the water line is between the air relief valve and the speaker, remove the garden hose and turn the water off. Install the filter(s) and skimmer assembly.
- Check for leaks inside the cabinet. If there are no visible leaks, turn the GFCI on and reinstall the cabinet panel.
- Priming mode and diagnostic testing begin when power is supplied to the spa. Pumps may run for up to 30 minutes.

The Manufacturer recommends draining & refilling your spa every 3 to 4 months.

Draining the Spa

Draining for routine maintenance, winter, & long term storage

Draining your Spa

- Turn the GFCI off or put the controls in Hold Mode.
- The drain valve is in the cabinet on the right side of the topside controls. Twist the valve to the right while pulling it out of the cabinet approximately 1".
- Remove the drain cap, exposing the threads.
- Attach the water hose to the drain and push the valve in toward the cabinet approximately 1/2". If water isn't draining from the hose, push the valve in slightly to open the drain.
- When your spa is empty, remove the hose, replace the drain cap, and push the valve back in until it's flush with the cabinet.

Draining for Winter or Storage

Keeping your spa full and connected to a reliable power source is the best way to protect your spa. If you choose to shut down your spa for winter or long-term storage, hire a professional to drain the water. Draining the spa as you would for routine maintenance is inadequate and will not prevent freezing. All water must be removed from the filtration system, pumps, chilling unit, heater, jets, hoses, plumbing lines, and interior surfaces. Damage caused by freezing, standing, or untreated water is not covered under the Manufacturer's warranty.

- Turn the GFCI off
- Follow the instructions to drain your spa and dispose of the water.
- When the spa is empty, loosen unions on both sides of the heater, pump, and chilling unit.
- Lift the lid from the filter skimmer and remove the filter. Set a wet-dry vacuum to blow, not vacuum; put the vacuum hose inside the filter canister and blow out all the water. DO NOT REINSTALL USED OR WET FILTERS!
- Place the hose over each suction fitting for 30 seconds to blow all of the water out of the suction line.
- Rotate the jets, water features, and air controls to open. Blow the water out of each jet by starting at the top of each seat and working down until all water is removed. Repeat this process at least twice, moving from the top to the bottom with every jet in every seat until all the water is removed.
- Vacuum all standing water in the seats, footwell, and inside the spa cabinet.
- Clean the surface thoroughly with a soft cloth and wipe until completely dry.

- Allow the cabinet inside to air dry before replacing the cabinet panels.
- Replace the insulating cover and lock it in place.
- Replace the drain cap, close the drain, and tighten the plumbing unions.
- Cover the spa with a watertight tarp to protect it from harsh weather and debris. Brush snow off to prevent cover damage. Check regularly to make sure it's dry.

Antifreeze is not recommended. Even with thorough flushing, residual antifreeze may irritate skin and eyes, making water chemistry challenging to balance. When the spa is empty, o-rings and seals dry out. Inspect plumbing unions for leaks and reseal or replace damaged seals when refilling the spa.

Failure in Freezing Temperatures

If your spa shuts down when it is exposed to freezing temperatures, check the topside control pad for an error code and refer to the error code section in the topside control instructions or contact your dealer for assistance.

After Hours

If your spa shuts down or your pumps will not circulate the water, drain it immediately. Follow the instructions in the preceding section to drain your spa for winter or storage. Replace the spa cover but do not tighten the unions or close the drain cap until you are certain *ALL* of the water has been removed.

Water expands when it freezes and the water lines in your spa are filled to capacity. Because there's no room in the lines for expansion, if the water freezes they rupture.

Water Chemistry

Adding chemicals

Water Chemistry

Each step of a water maintenance routine requires balancing the previous steps within the recommended ranges. The omission of any step or failure to adjust to recommended ranges can damage the spa and cause discomfort for bathers. Always follow the instructions on the product label. Never touch the test of the strip, as it may alter your results.

Step 1.) Balancing Total Alkalinity (TA)

The recommended total alkalinity level is between 80 and 120 ppm. The Total Alkalinity (TA) measures the water's resistance to changes in the pH. TA is like a tether that holds the pH in place. If the TA is low, the pH level fluctuates quickly, easily, and significantly. Low TA can be corrected with a pH increaser. If the TA is high, the pH level is elevated. High Total Alkalinity levels can be adjusted with pH decreaser. When the Total Alkalinity is within the recommended range, proceed to the next step.

Step 2.) Balancing Calcium Hardness (CH)

The recommended calcium hardness level is between 150–250 ppm. Calcium Hardness is a measurement of the total dissolved calcium in the water. Calcium helps control the corrosive nature of the water. Calcium-low (CL) water, commonly called "soft" water, is highly corrosive and may stain the surface. If your water passes through a softener, you should bypass it when filling your spa. Calcium-high (CH) water, commonly called "hard" water, causes scaling on the spa and the components. Calcium hardness can usually be corrected with a mixture of 75% "hard" and 25% "soft" water. If "soft" water is not available, add a stain and scale inhibitor according to the label instructions. Once the CH is balanced, it usually remains stable and shouldn't change when small quantities of water are added. When the Calcium Hardness is within the recommended range, proceed to the next step.

Step 3.) Balancing the pH

While pH levels between 7.2 and 7.8 are acceptable, the ideal range for bather comfort is 7.4 to 7.6. Maintaining pH within the acceptable range is imperative for the efficiency of sanitizers, the comfort of bathers, and the prevention of equipment deterioration. Problems become more severe the further the pH moves outside the acceptable range. When the pH level falls below 7, sanitizer will dissipate rapidly, the water may irritate users, and the spa equipment may corrode. The pH can be increased with pH/Alkalinity Up. If the pH level is too high, the sanitizer is less effective, scale may form on the surface and components, the water may become cloudy,

and fibers in the filter cartridge will clog, obstructing water flow. Decrease the pH with pH/Alkalinity Down. If pH up or down is added to the water, wait two hours before testing the pH levels again. Checking the pH level every week is essential. When the pH is within the recommended range, proceed to the final step.

Step 4.) Maintaining the Sanitizer Levels

The recommended free available chlorine level is between 1.0 and 3.0 ppm.

If the spa has an optional UV Sanitizing System, maintain a free chlorine level of .5 to 1 ppm.

Sanitizers kill algae, bacteria, and viruses while preventing the growth of unwanted organisms in the water. If sanitizer levels are too high, skin, lungs, and eyes may be irritated. Always maintain the recommended levels of sanitizer you are using.

Check your sanitizer and pH levels before each use and at least twice weekly, even if the spa is not in use.

Warning: Risk of chemical reaction and toxic fumes. To prevent the risk of injury:

- Handle spa chemicals with care.
- Never mix Bromine, Chlorine, or other chemical sanitizers.
- Always dissolve chemicals in warm water. Do not add dry chemicals directly into the spa.
- Read and follow the instructions on the product label.
- Always wear safety goggles and gloves.
- Do not get in the spa if chemicals exceed the recommended levels.

Do not use tri-chlor chlorine, bromo-chlor-dimethyl-hydantoin (BCDMH), compressed bromine or chlorine tablets, acid of any kind, hydrogen peroxide, enzymes, or any other chemical not recommended by the Manufacturer.

Adding Chemicals

- Stir chemicals in warm water until dissolved. Use care not to splash chemicals while stirring.
- Measure the recommended amount of the first chemical following the instructions on the label. Replace the lid.
- Stir the chemical in warm water until dissolved.
- Turn the pump on. Pour into the spa.
- Repeat with each chemical.
- When all chemicals have been added, run the pump for 20 minutes with the cover off or vented while chemical gases dissipate.
- Replace the cover and secure the locks..

Water Chemistry

Chemical safety reminders & secondary sanitizing systems

Nature2 Sticks



Never place Nature2 sticks in the opening if you have drop in filters.

Never place Nature2 sticks directly on the spa surface.

- If your spa has a filter basket: Discard the extension stilts and place the Nature2 stick in the filter basket.
- If your spa does not have a filter basket: Attach the extension stilts needed to position the Nature2 stick diagonally in the filter compartment.

Chemical Safety Reminders

- Do not add chemicals when bathers are in the spa.
- Keep chemicals away from children and pets.
- Inhaling chemical fumes and contact with your eyes, nose, or mouth is dangerous.
- Wash your hands after handling chemicals.
- In case of accidental contact or ingestion, follow the emergency advice on the product label. If a doctor's visit is needed, take chemical containers with you.
- Clean up spilled chemicals immediately with a water hose. To ensure safety, thoroughly saturate the surrounding area with fresh water, especially areas used by children and pets.
- Never use a vacuum to clean up chemical spills.
- Keep chemicals in their original container with the lid tightly closed when not in use.
- Store chemicals in a cool, dry, well-ventilated place. Do not expose to extreme temperatures or bright light.
- Do not store chemicals inside the spa cabinet.
- Never allow the water from your spa to run into public water sources.
- Never smoke when handling chemicals.

Secondary Sanitizing Systems

Ozone Generator(if equipped): Ozone generators do not replace chemical sanitizers, but they do reduce chemical consumption. Ozone breaks down dissolved solids and increases the oxygen in the water, making chemical sanitizers more efficient and making it easier to maintain water chemistry. The ozone generator does not require regular maintenance but may become less effective over time. Under normal use, the ozonator should be replaced every 12 months.

Optional UV Sanitizer(if equipped): UV sanitation doesn't eliminate chemicals, but it does reduce chemical consumption. When UV light combines with ozone, a short-lived and environmentally safe chemical reaction occurs, creating hydroxyl radicals that eliminate sediments, metals, salts, and complex organic matter that may be present in your water. Disinfection only occurs as water circulates through the system, and eventually, all of the water circulates through, but chemical sanitizers must be used to destroy microbes that survive or are newly introduced.

Since UV light must reach the bacteria, the system's effectiveness is dependent upon exposure time, lamp intensity, and equipment maintenance. Your water must be clear and the quartz sleeve must be kept clean. Murky water creates a barrier between the UV rays and micro-organisms, blocking the transmission of UV light waves and preventing the direct contact required for disinfection. Organic matter, sediment, and water with high mineral content can coat the quartz sleeve, resulting in lowered doses and reduced disinfection. Under normal use, the UV Lamp should be replaced every 12 months.

Troubleshooting

Water Chemistry

Problem	Could Be Caused By	Could Be Solved By
Water Will Not Balance	Well, untreated, softened, or old water	Contact your dealer for assistance
Cloudy Water	Dirty filter	Clean or replace filter
	Excessive/suspended organic matter	Clean/replace filter, add shock, run jets
	Bacteria inside cover dripping into water	Spray cover with medium pressure hose, allow to dry
	Improper sanitization	Add sanitizer
	Hard water	Add scale preventative or soft water until hardness is 80-150 ppm
	Alkalinity too high	Add pH reducer, adjust total alkalinity to 80-150 ppm
	pH too high	Add pH reducer, adjust pH to 7.2-7.6 ppm
	End of water life / calcium pH imbalance	Drain & refill spa, replace filter
Green or Brown Water	Excessive metal /algae	Add metal sequestering agent
Excessive Foam	Oil, cosmetics, or detergent	Add defoamer Clean or replace filter Run extra rinse cycle when washing swim wear
	Soft water	Add calcium increaser until hardness is 150-280 ppm
Water has Bad Smell	Excessive organic matter - bacteria	Add shock
	Improperly sanitized	Add sanitizer
	Low pH	Adjust pH
	Chloramines	Add oxidizing shock
Smells Musty	Bacteria growth	Add shock
Ring Around Spa	Build up of oil & dirt	Wipe surface with cloth, drain and refill spa
Algae	High pH / leaving cover off	Add pH reducer
	Low sanitizer level	Add shock & sanitizer
Eye, Skin Irritation or Rash	Improper sanitation	Test water. Add shock & sanitizer as needed
	Chlorine level low after adding water	Correct chlorine levels
	Too Much Chlorine	Drain several inches of water & replace with fresh water
	Dirty filter or pH imbalance	Adjust pH to 7.2-7.6 ppm, clean or replace filter
Stains on Surface	High alkalinity or low pH	Adjust pH to 7.2-7.6 ppm, adjust alkalinity to 80-150 ppm
	High mineral content	Use stain & scale reducer
	High metal content	Use metal sequestering agent
Scale Build Up	High calcium levels, high pH, high alkalinity	Drain partially, adjust pH to 7.2-7.6 ppm, adjust alkalinity to 80-150 ppm; Use stain and scale preventative

Care Recommendations

Routine care & cleaning

Caring for the Surface: Your spa surface is dirt and stain resistant, requiring very little care. When needed, wipe surface with warm water and a soft cloth. Do not use soap, detergent, or household cleaners. Never use abrasive, ammonia, chlorine, or citrus based cleaners, which can damage the surface and may react negatively with the chemicals used to maintain water chemistry. Keep the cover on when not in use. Exposure to the elements may cause irreparable damage that is not covered under the Manufacturer's warranty.

Caring for the Cabinet Panels: Your spa cabinet is virtually maintenance free. You never need to wax, paint or seal the cabinet. When necessary, rinse the cabinet with a water hose with a moderate pressure nozzle. Remove stubborn dirt rub with a damp, soft cloth. Never use abrasive cleaners. Camouflage minor imperfections with color matched scratch concealer. Available from the your dealer.

Caring for the Pillows: Foam pillow cores are coated in water-resistant vinyl. Prolonged contact with chemical sanitizers will damage the vinyl coating. Foam cores will retain water if the vinyl coating is damaged. To prevent premature deterioration and discoloration, wipe chemical residue off periodically with clear water and a soft cloth. Avoid oil or alcohol-based vinyl protectors which can damage the pillow and adversely affect water chemistry. If you're not using your spa for a while, dry your pillows with a soft towel and store them in a cool, dry place.

Caring for the Jets: Many of the larger jets in your spa can be rotated to adjust the flow of water. Turn the outer ring clockwise to increase flow, counterclockwise to decrease it or stop the flow entirely. Open all jets when you exit your spa to release pressure in the lines that can damage your spa. Removing mineral deposits that accumulate over time can restore the speed of spinning jets. With the GFCI "off", rotate the outside of the jet counterclockwise until it reaches its natural "stop". Continue turning and pull out to remove the jet. Place jets in a bucket of equal parts water and white vinegar overnight. Rinse with warm water. Remove stubborn debris with a soft bristle brush. Do not use steel wool or a wire brush. When clean, place jet inside housing, tap gently to engage in place and rotate in a clockwise direction until it's securely in place. If you find heavy calcium deposits on your jets, have your water tested.

Caring for the Lights: Wipe light lenses with a soft cloth. Never attempt to remove the lighting lens covers or clean the back side of the lens covers.

Caring for Audio/Video Systems (if equipped): Always keep the water level below built-in audio or video components; they're water resistant but are not designed to be submerged. Wipe off chemical residue with a soft cloth. Towel dry video components before lowering into the cabinet. The sub-woofer is enclosed in the spa cabinet and does not require regular maintenance. For your safety and to protect your devices, always store your devices safely away from the spa. Keep all electrical appliances that including audio, video, lighting, and other electronic devices at least 5 feet (2 m) from the spa if they are not original equipment installed by the Manufacturer. Never touch or come into contact with electronic devices or power cords when using the spa or any part of your body is wet.

Caring for the Vinyl Cover: The foam cores protect the spa from the elements, reduce heat loss, keep unwanted debris out, and prevent evaporation. Clean the vinyl skin with warm water and a soft sponge as needed and air dry. If desired, wipe vinyl with an oil-free, non-alcohol-based vinyl protector. Avoid using oil-based products, which can affect water chemistry that can be difficult to correct. Using alcohol or chlorine-based cleaning products may cause deterioration of stitching and UV inhibitors. The locking tie-downs are not designed to keep the cover in place in heavy winds. Use the handles to remove and replace the cover. Foam cores are not designed to hold heavy weight loads. Use a soft bristle broom to remove snow and debris. Replace the cover and secure the locking tie downs when the spa is not in use. Keep children and pets off the cover. Never leave the spa unattended when the cover is not in place.

Caring for the Tuff Top (if equipped): Clean the surface, seals, and hardware with warm water and a soft sponge when necessary. Use a soft bristle brush to remove stubborn dirt. To avoid damage and discoloration, do not use cleaning products containing harsh chemicals, abrasives, oils, or wax

Use & Care of Tuff Top & Shelving

Tuff Top converts into shelves for conveniently storing towels, drinks, and other lightweight items while using the spa. The maximum combined weight of all items on a shelf is 40 lbs (18 kg). When placing objects on the shelves, use care to distribute the weight evenly across the surface. Damage caused by uneven weight distribution, excessive weight, impact, or force is not covered under the Manufacturer's warranty.

- Close the Tuff Top and secure locks when not in use.
- Do not allow children or pets to sit, stand, or jump on the Tuff Top, whether it is open or closed.
- Do not sit, stand, jump, or lean on the shelves.
- Never place electrical devices on the Tuff Top, whether it is open or closed.



Troubleshooting

Spa performance

Always turn the GFCI off before service & maintenance.

Problem	Might be caused by	Might be corrected by
LED Display is Blank	Power is off or fuse is blown	Reset GFCI and Main Service breaker. Replace blown fuses
Letters on Display	Error message on control pad	See error message section in the topside control instructions
Can't Turn Pump Off	Filtration or heating cycle	Normal function of spa during filtration. Lower temperature setting to stop heating.
Leaking	Loose unions	Tighten unions, reseal or replace seals
GFCI Tripping	Improper wiring / overloaded circuit	Contact electrician to check wiring, dedicated circuit, and amperage
Pump Not Working	Pump timed out (20 minutes)	Normal function of spa. Press button to turn pump on
	GFCI is off; cord on plug-in spa disconnected	Turn GFCI on; plug in power cord
	Air Lock or "T Stems" closed	Loosen union to bleed air; Pull stem up and secure lock
	Overheating protection	Normal function of spa. Allow pumps to cool for 1 hour.
	Fuse blown	Replace fuse
	Connection to pack	Make sure pump connection in control box is secure
Pump never stops	Continuous filtration setting	Change filter setting; Turn off continuous filtration
Pump(s) run hot	High ambient temperature	Reduce temperature setting, gap cover, add cool water, clean vents (if equipped),
	Water flow restricted	Clean filters, remove debris from suction covers, check T-Stems
Pump / Jets Surge	Water level too low	Add water
	Blockage or restriction	Wipe debris from suction drain covers, change filters, check T-Stems
No or Low Heat	Low temperature setting	Normal function, increase temperature setting
	Operating mode	Verify spa in Standard or Ready Mode, not Economy, Sleep, Rest or Low Range
	Position of diverter and air controls	Center diverter controls and close air controls
	Water level too low	Add water
	Dirty filter	Change filter
	Air lock or closed "T Stem"	Make sure T-Stems are up and pump isn't air locked
	Improper line voltage	Contact electrician to check voltage
Heats too Much	Filtration cycles too long	Change filtration settings - shorter filtration cycles
	High ambient temperature	Vent cover and/or add cold water
		If equipped with chiller, make sure air flow to vents is unobstructed; clean cabinet vents
Lights Don't Work	Bulb or fuse burned out	Replace bulb or fuse
	Loose, dirty connection	Check light connections
Jets Sluggish Not Working	Air lock in pump	Loosen unions to bleed pump
	T-Stems closed	Open T-Stems and secure lock
	Diverter control position or jets closed	Rotate diverter control; open jets
	Dirty Filters	Clean or change filters
	Debris obstructing water flow	Remove jet, clear debris
Can't Rotate Jets	Debris or mineral build-up	Soak overnight in 50/50 water & vinegar solution
Low Water Flow	Heating or filtration cycle	Normal operation. Pump runs on low speed during heating and filtration cycles
	Diverter control position	Rotate diverter control to increase flow
	Water level low	Add Water
	Dirty filters or suction covers	Clean or change filters, remove debris from suction cover
	T Stem closed or air in pump	Lift stem and secure lock; loosen unions to bleed air
	Improper line voltage	Contact electrician check voltage

Optional Equipment

WiFi Connectivity & ConnectMySpa App (CMS)

If your spa is equipped with optional WiFi, follow these steps to connect the CMS Gateway Ultra Home Module directly to your router and download the ControlMySpa App from the Apple or Google Play Store.

ControlMySpa App Access Code: During initial setup of the ControlMySpa App, you will be prompted to enter an access code.

When prompted, enter **WMY-88132**.

1. Plug the supplied Ethernet Cable into your router.



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



3. Plug the power cord into an outlet.



4. Plug the power supply into the micro USB power port.



5. Scan the QR Code to download the ControlMySpa App.



6. Open App and press "Setup". Follow instructions in the App to setup an account. When prompted for the access code during setup, enter WMY-88132.



7. When prompted for the access code during initial setup
8. Stand within 10 feet of your spa. Make sure the GFCI for your spa is on.
9. Open your device settings, select Bluetooth settings, verify Bluetooth is turned on and your device is scanning for available devices. If your device doesn't scan automatically, turn the Bluetooth off and back on..
10. When your spa appears on your screen, tap it to connect. A pairing code is not required.

If the Bluetooth signal for your spa isn't detected, turn your GFCI off for 10 seconds, turn it back on and check for available devices again.

Troubleshooting

Solid Red: The gateway and spa aren't connected.

Blinking Red: The home and spa are connected but not connection to the spa controller.

Blinking Blue: Remote Software Update is underway. Do not unplug.

Blinking Green: The CMS Gateway and Home Side Module RF is connected but no Internet connection.

Steady Green: Successfully connected to the Internet. No errors.

Optional Equipment

Auto-Fill & Fresh Water Mist Systems

If your spa is equipped with optional freshwater mist or auto-fill, the freshwater intake assembly is located in the cabinet panel on the left side of the topside controls. The Auto Fill system continuously monitors the water level in your spa and automatically corrects low water levels when your water hose is connected to the spa and the spigot is turned on.

- Turn the GFCI off before connecting, disconnecting, or performing maintenance.
- All connections must be watertight. Inspect connections frequently.
- If a leak develops, turn off the GFCI and water spigot. Do not turn the GFCI back on until leaks are repaired and all connections are watertight.

- Do not use Teflon, plumbing tape, or putty on fittings.
- Do not install a permanent connection to the water supply or modify plumbing, components, or connections in any way. Any modification automatically voids the Manufacturer's warranty and may terminate listings from independent listing agencies.
- The maximum pressure to the spa side intake assembly is 30 psi. The pressure reducer included with the spa must be installed between the brass fitting and the water hose. Damage caused by excessive water pressure is not covered under the Manufacturer's warranty.
- If the water hose isn't insulated to prevent freezing, disconnect it from the spa when the ambient temperature is 34°F or below.
- Always reinstall the cap when you disconnect the water hose from the spa. Small animals may enter the openings and damage the spa if the cap is not installed.

Auto Fill Fresh Water Intake Assembly



A - Cap (front view): Mounted in the cabinet on the left side of the topside control.

B - Cap (side view): The fresh water intake assembly (C - E) is attached to the cap.

C - Pressure Regulator. Regulates incoming water pressure and produces consistent output pressure on the spa side to prevent damage. Do not remove the pressure regulator. Maximum spa side intake pressure is 30 psi.

D - Water Shut Off Valve (Closed): Rotate the valve handle to turn the water on and off. When the valve handle is perpendicular to the hose, the valve is closed. Rotate the handle 90° to open.

E - Water Shut Off Valve (Open): Rotate the valve handle to turn the water on and off. When the valve handle is parallel to the hose, the valve is open. Rotate the handle 90° to close.

Connecting the Fresh Water Supply to your Spa

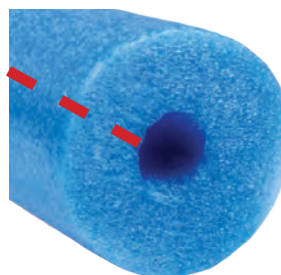
- Pull the cap (A) out of the cabinet. Twist the cap and adapter (B) clockwise to unscrew from the pressure regulator. Store the cap and adapter in a safe place.
- Make sure the valve on the fitting is closed (D).
- Screw your water hose into the pressure regulator (C). Make sure the flow direction arrow points toward the spa.
- Turn the water hose on at the spigot.
- Check connections for leaks and tighten them if necessary. If leaks remain, turn the water off and ensure seals in the fittings are seated.
- Rotate the valve on the fitting to open (E), allowing freshwater to flow into the spa.
- To disconnect, repeat each step in reverse order. Turn the water hose off; close the valve on the fitting (D); disconnect your water hose from the pressure regulator (C); screw the cap and the adapter onto the pressure regulator (B); push the cap into the cabinet.

Fresh Water Mist



Your water hose must be connected to the spa, and the spigot must be turned on.

Rotate to the mist control to turn misters on and off. Rotating in one direction opens the flow of fresh water and increases mist; rotating in the opposite direction decreases mist or turns it off entirely. Turn misters off when you exit the spa to prevent water loss, leaking, component, and cover damage.



Tech Tip: Use a pool noodle to prevent kinks in the water hose & seal the cabinet.

Cut approximately 4" off a pool noodle. Slice lengthwise to the hole in the center.

Slide the hose through the opening in the pool noodle.

Squeeze the pool noodle to compress slightly before feeding it into the cabinet or removing it.

Optional Equipment

Any Temp®

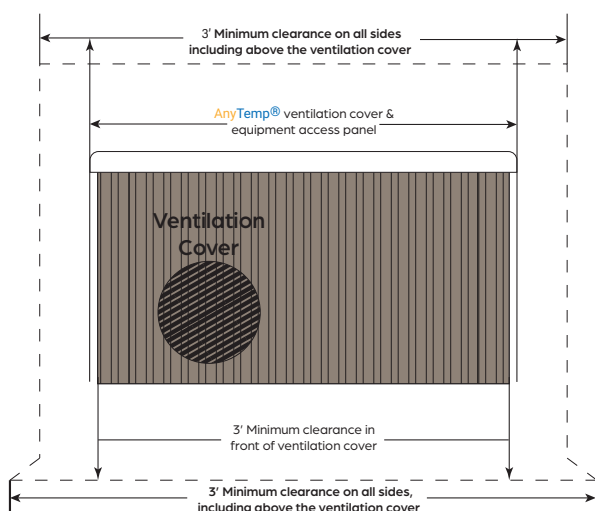
Installation, Use, & Care Instructions



The AnyTemp® Chilling Unit is factory installed; additional assembly is not required. The chiller is inside the cabinet behind the ventilation panels.

Any Temp® Swim Spas maintain cold, cool, or tepid water temperatures with a minimum 30-degree average ambient air-to-water temperature variance. A higher air-to-water temperature variance can be obtained when you place your spa or swim spa is placed under full or partial shade.

The minimum temperature setting is 70°F. However, external factors such as high ambient temperatures and sun exposure directly impact the cooling ability. Warm climates with an ambient temperature of 90°F or exposure to direct sunlight may limit the chiller's capacity to cool the water to your cold water temperature setting. Water temperatures will be coolest in the early morning and late evening.



- A minimum clearance of 3 feet (1m) is required. Adequate airflow in and around the chilling unit is critical to the chiller performance.
- The concrete pad must be at least 3 feet (1 m) wider and longer than the tub's overall dimension.
- Keep plants, towels, steps, furniture, the cover, and other objects at least 3' from the cabinet vent. Obstructing air flow, even for a very short time, can cause overheating and irreparable damage the warranty does not cover.
- After removing the cover, store it safely away from the cabinet vent. The heat generated by the chiller may damage the cover and components. Damage caused by inadequate ventilation is not covered under the Manufacturer's warranty.
- Wipe the outside of the cabinet vent cover regularly with a soft, dry cloth to remove dust, dirt, and other debris from the surface.
- When you remove the cabinet panel for maintenance or service, wipe both sides of the vent cover with a soft cloth and warm water, rinse with a hose, and wipe dry. Allow the cabinet panel and vent cover to dry thoroughly before replacing the cabinet panel.

- If necessary, spray the chilling unit with condensed air to remove dirt and debris collecting on the surface. Always turn the GFCI off and allow the chilling unit to cool completely before spraying with condensed air.
- Never clean the inside of the cabinet or any part of the chilling unit with water. Moisture may damage the chiller and other critical components, which is not covered under the Manufacturer's warranty.
- Never use chemicals or detergents of any kind to clean any part of the chilling unit or vent covers.

If the chilling unit overheats or the system detects low water flow in the cooling chamber, your spa will automatically shut down to prevent component damage.

- Turn the GFCI off. If more than one GFCI is connected, turn all of them off. To prevent damage when electrical service is restored, built-in safety features will delay restarting the chilling unit for up to 5 minutes.
- The chilling unit surface and components are hot. Always allow the chilling unit to cool before performing maintenance or service.
- To resolve overheating, remove the cabinet panel to improve ventilation inside the cabinet and allow the chilling unit to cool. If the air temperature is very warm, place a portable fan near the cabinet opening to increase air circulation inside the cabinet. Clear dirt and debris from the vent covers.
- Allow the air inside the cabinet and chilling unit to cool sufficiently before turning on the GFCI. If an overheat message is displayed on the control panel when the GFCI is turned on, turn the GFCI off and call for service.

Optional Equipment

Any Temp®

Programming Cool Water Temperature Settings



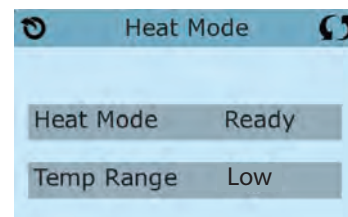
R  RR




Tap for Settings




Tap for Heat Mode



Tap Heat Mode to Toggle Ready / Rest
Tap Temp Range to Toggle Low /High

The Manufacturer's recommended cool water settings

★ Ready Mode – Low Range ★

Ready, Rest, & Ready-In-Rest Modes

In Ready Mode:

★ *Manufacturer's recommendation for cool water settings*

R The R Icon appears in the upper left of the home screen. The water circulates every thirty minutes for a polling cycle so that the water temperature is maintained consistently, the temperature on the display refreshes regularly, and the water continues circulating if cooling is necessary.

In Ready Mode, cooling occurs whenever necessary, and circulation ends when the water reaches the correct temperature. Your water temperature is continuously maintained when you program your spa for 24-hour circulation. Polling cycles are unnecessary.

When the setting is in Rest Mode:

IR The IR icon appears in the upper left of the home screen. Cooling occurs only during programmed filtration cycles, so the water temperature can fluctuate significantly. Since polling doesn't occur in Rest Mode, the current water temperature may be inaccurate until the pump turns on & the water circulates for a few minutes.

In Rest Mode, cooling occurs only during filtration cycles. When the cycle ends, cooling stops regardless of the water temperature.

If 24-hour circulation is enabled, cooling occurs only during programmed filtration cycles.

Ready-In-Rest Mode:

RR The RR icon appears in the upper left of the home screen. If "Jets 1" is tapped when in Rest Mode, water circulates for 1 hour and heats or cools as needed. After 1 hour, the pump stops, and Rest Mode resumes.

High & Low Temperature Range Settings

You can program your controls with two independent water temperature settings: one for the heater and one for the chiller. With your preferred warm and cool water temperatures already set, change the temperature range when the weather changes.

Temp Range Low

Low Range: Chill the water

★ *Manufacturer's recommendation for cool water settings*

Cool the water in warm climates

Minimum temperature setting: 70°F

Maximum temperature setting: 99°F.

Temp Range High

High Range: Heat the water

Warm water setting for cool climates

Minimum temperature setting: 80°F

Maximum temperature setting: 104°F

Setting & Selecting High Temperature Range:

Tap the Settings icon on the Main Screen to open the Settings. Tap the Heat icon to open the Heat Mode screen. Tap the Heat Mode bar and select Ready. Tap the Temp Range bar to select High Range.

Setting & Selecting Low Temperature Range:

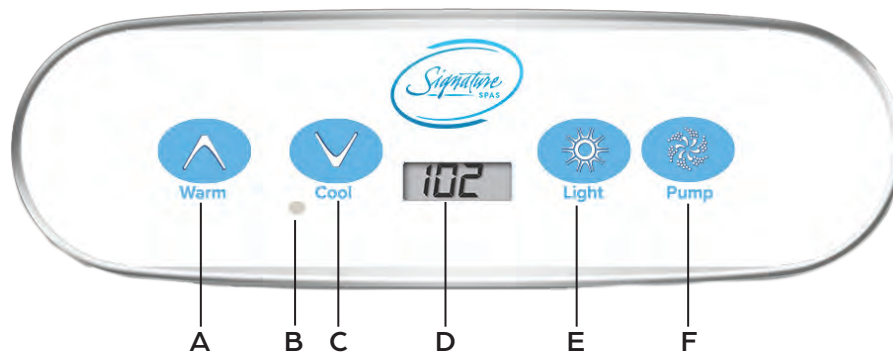
Tap the Settings icon on the Main Screen to open the Settings. Tap the Heat icon to open the Heat Mode screen. Tap the Heat Mode bar and select Ready. Tap the Temp Range bar to select Low Range.

High ambient temperatures and exposure to direct sunlight may limit the chiller's capacity to cool the water to your cold water setting.

Topside Display & User Controls

Single Pump VL400 Topside Controls

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.



User functions, operating modes, and programming menus that simplify saving your preferences now and adjusting them later.

A – Lights & Operating Modes

- Turn lights on, off & select color
- Set the operating mode

B – LED Indicator Light

- Illuminated when the heater is on
- Flashes for approximately 1 minute during polling cycles

C – Temperature Controls & Programming Menus

- Adjust the water temperature
- Program operating mode and filtration cycle settings

D – Digital Display

- Monitor operating mode, water temperature, and error messages when your spa requires attention.

E – Pump 1

- Two-speed pump
- Set filtration cycles.

F – Pump 2

- Single-speed pump.

The pumps are programmed to turn off automatically after 20 minutes. Press the PUMP button to turn it back on.

The ozonator (if equipped) runs when the water is heating, during filtration cycles and when the pump is running on low speed.

Factory Settings

The spa will start in Standard Mode.

The temperature setting is 100°F.

The minimum temperature setting is 80°F.

The maximum temperature setting is 104°F.

The Filtration cycles run twice each day for one hour.

Turning the Spa On

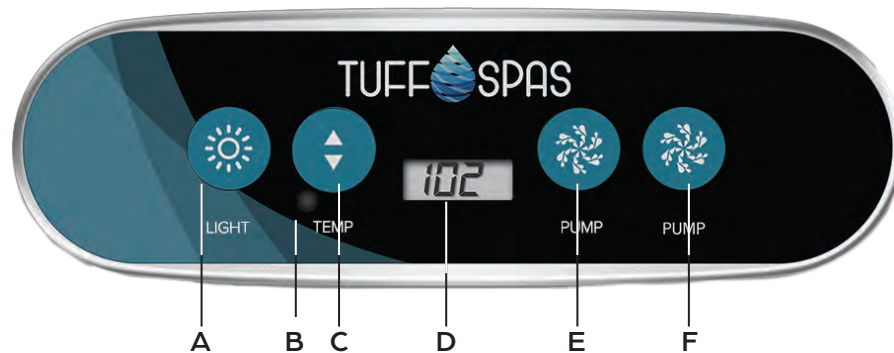
When the tub is full, remove the water hose, replace the filter, filter basket, skimmer lid. Make sure the jets are open and the 2" diverter valves on the flange are centered. Turn the GFCI on.

Each time the GFCI is turned on, diagnostic messages are displayed before priming mode begins.

Topside Display & User Controls

Two Pump VL400 Topside Controls

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.



Topside Controls

User functions, operating modes, and programming menus that simplify saving your preferences now and adjusting them later.

A – Lights & Operating Modes

- Turn lights on, off & select color
- Set the operating mode

B – LED Indicator Light

- Illuminated when the heater is on
- Flashes for approximately 1 minute during polling cycles

C – Temperature Controls & Programming Menus

- Adjust the water temperature
- Program operating mode and filtration cycle settings

D – Digital Display

- Monitor operating mode, water temperature, and error messages when your spa requires attention.

E – Pump 1

- Two-speed pump
- Set filtration cycles.

F – Pump 2

- Single-speed pump.

The pumps are programmed to turn off automatically after 20 minutes. Press the PUMP button to turn it back on.

The ozonator (if equipped) runs when the water is heating, during filtration cycles and when PUMP 1 is on low speed.

Factory Settings

The spa will start in Standard Mode.

The temperature setting is 100°F.

The minimum temperature setting is 80°F.

The maximum temperature setting is 104°F.

The Filtration cycles run twice each day for two hours.

Turning the Spa On

When the tub is full, remove the water hose, replace the filter, filter basket, skimmer lid. Make sure the jets are open and the 2" diverter valves on the flange are centered. Turn the GFCI on.

Each time the GFCI is turned on, diagnostic messages are displayed before priming mode begins.

User Controls & Filtration Cycles

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Turning the Jets On

The number of pumps varies by model



Pump 1 is a two-speed pump. Press the PUMP 1 button once to turn the pump on. Press the PUMP 1 button again to change to High Speed. Press the Pump 1 button again to turn it off. The ozonator is on when Pump 1 is on low speed.

Pump 1 runs on low speed during filtration and heating cycles and turns off automatically when the cycle ends. To change the speed from low to high, press the PUMP 1 button once. Press it again for low speed. Pressing the PUMP 1 button will not turn the pump off until the cycle is complete.



Pump 2 (if equipped) is a single-speed pump. Press the PUMP 2 button once to turn the pump on. Press the PUMP 2 button again to turn it off.

Pumps are programmed to turn off automatically after 20 minutes. Press the PUMP button to turn it back on.

The ozonator and UV Sanitizer (if equipped) runs when the water is heating, during filtration cycles and when PUMP 1 is on low speed.

Priming Mode

Priming Mode safely removes air trapped in the lines, which can instantly damage some components.

- Your spa starts in Priming Mode when you turn the GFCI on.
- Priming Mode runs for approximately 6 minutes
- When Priming Mode ends your spa runs in Standard Mode.

When PR is on your display, press the PUMP buttons to turn on the pumps. Press the PUMP 1 button twice so all pumps run on high speed.

If the jets or the pumps surge and water flows from jets in some seats but not others, turn the pumps off. Make sure water is 1" above the air relief valve, the jets are open, and the 2" diverters are centered. If the pumps aren't primed after 1 minute, press the PUMP buttons to turn both pumps on and off. Bleed air from the plumbing unions, verify the T-Stems are up and locked, and if necessary remove debris from the skimmer and suction drain covers. Turn the GFCI on again and repeat the process. If the pumps aren't properly primed after the third attempt, turn the GFCI off, and contact your dealer for assistance before turning the GFCI on. *Do not let the pumps run for more than 2 minutes if they do not prime.*

Polling Cycles in Standard Mode circulate the water for a few minutes every hour to monitor the water temperature. If heating is necessary, the water continues circulating until it reaches the correct temperature. Some topside buttons may not work until the polling cycle is complete.

Water Temperature

Adjusting the Water Temperature Setting



To change the programmed temperature setting, press the TEMP or UP button once. While the temperature is flashing on the display, press and release or press and hold the UP, DOWN, or TEMP button until the desired temperature is displayed. The new temperature is saved automatically.



When you press the UP, DOWN, or TEMP button, wait until the display stops flashing before you press a different button to avoid unintended changes to your programmed settings.

To change the direction the temperature moves in: **Press and release** the TEMP button 3 times (flash - solid - flash). When the TEMP button is pressed the 4th time, the temperature reverses and moves in the opposite direction.



OR

Press & hold the TEMP button. When the temperature reaches the range limit, it reverses and moves in the opposite direction.

Filtration Cycles



Single Pump



Two Pumps



- Filtration cycles run every 12 hours.
- Filtration cycle duration adjusts in increments of two hours.

To change the duration of the filter cycles, press and release the UP button. While the display is flashing, press and release the Pump button, then press and release the UP button to scroll through cycle duration options, from F1 (1 hour filtration cycle) to F8 (8 hour filtration cycle) stopping when your selection is displayed on the LED. Press the "PUMP" button to confirm your selection and exit. Filter cycles can be set to run for 2, 4, 6, or 8 hours or continuous filtration (FC).

Each time you turn the GFCI on, your spa starts in Priming Mode. The first filtration cycle begins approximately 6 minutes later, when Priming Mode is complete. When the filtration cycle begins, the pump will operate on high speed for approximately 1 minute to flush the lines, then on low speed until the filtration cycle is complete. Filtration cycles run every 12 hours. For example, with the factory settings of 1 hour filtration cycles, if you turn your GFCI on at 4:54 your filtration cycles will run from 5 to 7 a.m. and from 5 to 7 p.m. If you want the filtration cycles to run from 3 to 5, turn on the GFCI at 2:54.

Operating Modes & Lighting

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Operating Modes

Understanding Operating Modes

Operating modes can be programmed to help regulate energy consumption and reduce operating costs. How often you use your spa and the ambient temperature will help you determine which mode is best for you.

Your spa heats the water, it cannot cool it.
In warm climates, the water temperature will not fall below the ambient temperature, regardless of the operating mode.

Standard Operating Mode



- The water temperature setting is consistently maintained.
- The water circulates for a few minutes every hour to monitor the temperature. It continues circulating to heat the water if necessary.



Economy Operating Mode

- The water heats only during filtration cycles.
- Heating stops when the cycle ends, regardless of the water temperature.
- In cool weather, the spa may not be ready for immediate use.
- The water temperature and EC will flash alternately on the display when the pump runs on low speed. Otherwise, EC is displayed on the topside controls.
- *Do not put your spa in Economy Mode when the ambient temperature is 40°F or lower.*

In moderate weather, setting the filtration cycle to end right before you use your spa can effectively reduce energy consumption. However, the water temperature can drop significantly below the temperature setting between filtration cycles in cool weather

Sleep Operating Mode



- The water heats to within 20°F of the temperature setting.
- The water only heats during filtration cycles.
- Heating stops when the cycle ends, regardless of the water temperature.

- The water temperature and "SL" flash alternately on the display when the pump runs on low speed. Otherwise, "SL" is displayed on the topside controls.
- *Do not put your spa in Sleep Mode when the ambient temperature is 40°F or lower.*

Sleep Mode is ideal for warm weather or if you aren't using the spa for a prolonged period in a moderate climate. Water only heats during filtration cycles to within 20°F of the temperature setting. For example, if your temperature setting is 100°F, your water will only heat to 80°F during filtration cycles. If your water temperature is above 80°F, the heater will not turn on during filtration cycles.

Programming Operating Modes



Single Pump



Two Pumps



To change operating modes, press & release the TEMP button. While the display is flashing, press the LIGHT button. The current operating mode will flash on the display. To scroll to the next operating mode, press the TEMP button followed by the LIGHT button until your operating mode selection is displayed on the topside controls.

Lighting

Turning the Lights On, Off, & Selecting the Color



Turn the lights on & off: Press and release the light button once to turn the lights on. All light colors rotate continuously. Press the Light button to turn off.

Select a solid light color: Press and release the light button once to turn the lights on. All colors will rotate. When the light rotates to the color of your choice, quickly press and release the light button twice. The first quick press turns the lights off, the second quick press turns them back on in the color you selected. Press the light button to turn the lights off.

If the lights have been on for more than 1 minute the next press of the LIGHT button will turn the lights off.

The lights are programmed to turn off automatically after 2 hours if the light button isn't pressed to turn the lights off. Press the Light button to turn the lights back on. *Lighting features work in tandem with jets and water features (if equipped).*

Audio Controls & Bluetooth Connectivity

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Built-In Audio Components must be turned on to pair your wireless devices and to hear your selection through the built-in speakers.



Press up to turn on.
Press down to turn off.

To turn the built-in audio components on and off, press the rocker switch mounted in the spa cabinet on the same side as your topside controls.

- Use your device to control the volume through the speakers and to make, play, and pause your selections.
- If you can't hear your selection, make sure your device isn't muted or paused, and that the volume setting isn't too low.
- If the device settings are correct, make sure the wiring to the switch wasn't disconnected during installation.
- Press the rocker switch down to turn the speakers off when you exit the spa to prevent overheating, which can permanently damage your audio components.

Pairing your Wireless Device

- Press the rocker switch to turn on the built-in audio components and listen carefully. A chime will sound within 15 seconds signaling the spa is discoverable and ready for pairing.
- Open your device settings, select Bluetooth settings, verify your Bluetooth is turned on and your device is scanning for available devices.
- If your device doesn't scan automatically, turn the Bluetooth off and back on.
- When discoverable device SC012345 appears on your screen, tap it to connect. A pairing code is not required.
- Multiple devices can be paired with your spa, but only one device can be connected at a time.
- Each device must be paired individually following the same process.

Troubleshooting Bluetooth Connections

No Connection: Discovery mode for the spa may have timed out before the connection to your device was established.

- Flip the rocker switch to turn the audio components off for 10 seconds. Repeat the process.

No Connection / Intermittent Connection: Bluetooth signal may be weak or wavering.

- Check the signal strength on your device standing next to your spa. If the signal on your device is weak or fades in and out, the signal may be wavering.
- Consider a booster to improve signal strength.

No Sound from Speakers: Device settings may need adjusting.

- Make sure the selection hasn't been paused or muted.
- Press play and increase the volume setting on your device.
- Make sure rocker switch is on.
- Check the Bluetooth settings on your device to confirm it's connected and the signal is strong.

Multiple Devices Connected: Spa is picking up active signal on a different device.

- Turn off Bluetooth on the device with active connection until the correct device is connected to the spa.
- Multiple devices can be paired with your spa, but only one device can be connected at a time.

Duplicate SC012345 Discovered: Occasionally, duplicate SC012345 devices are detected in discovery mode. If more than one SC012345 appears on your screen, tap the first device on the list. If that connection fails, press the rocker switch to turn the audio components off for 10 seconds before pressing the switch to turn them back on and repeat the connection process, this time choosing the second SC012345 device.

For your safety and to protect your device from water damage, store your device safely away from your spa. Always press the rocker switch to turn the audio components off when you exit the spa. Leaving them on causes overheating that will permanently damage the audio components. Damage to the audio components that occurs because the components were not turned off is not covered under the warranty.

Troubleshooting

Electrical Connections & Topside Error Messages

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

If your spa doesn't operate as expected when you turn on the GFCI:

- Make sure your GFCI is installed properly and the terminal block is wired correctly.
- Check the voltage at the terminal block and check for loose wires. If necessary secure the connection. The torque range for supply line connections to the terminal block is 27 to 30 in. lbs.
- Check for loose or disconnected wires which may have been disturbed during the electrical installation.
- If your pump surges or jets sputter you may have an airlock. Instructions to release an airlock are on the back cover.

An error message is displayed on your topside controls if sensors detect an abnormality that requires your attention. Many error codes can be resolved by cleaning or replacing your filters and removing debris from the skimmers. If following the recommendations in this troubleshooting guide does not clear the error code, turn the GFCI off and contact your dealer.

Message	Meaning	Possible Solution
	No message to display No Power to Spa	Control panel disabled until power is restored. Settings have been preserved.
--	Temperature Unknown	Temperature will be displayed after pump has been running for 2 minutes
HH	OVERHEAT - Spa shut down to protect against excessively high water temperature in heater chamber at sensor	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
OH	OVERHEAT - Spa has shut down to protect against high water temperatures in heater chamber at sensor	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
IC	Ice - Potential for freezing	Check frequently to be sure pump is on & water is circulating to prevent freezing.
SA	Spa shut down - Sensor A	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
SB	Spa shut down - Sensor B	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
Sn	Sensors out of balance. Temporary if alternating with water temperature. If flashing by itself, spa has shut down	DO NOT ENTER THE WATER! Turn off the GFCI. Put spa in Standard Mode and reduce water temperature so water circulates hourly without heating. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
HL	Significant difference between sensors - likely flow problem	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
LF	Persistent Flow Problems Heater shut down, other functions will run normally	DO NOT ENTER THE WATER! Turn off the GFCI. Make sure the water level is adequate. Change filter if dirty, remove debris from the filter, filter basket and suction drain cover. Make sure T Stems are up & locked.
dr	Possible low water levels, low flow or air bubbles in heater. Spa inoperable for 15 minutes.	Check water level and refill if necessary. Bleed air. Make sure slice valves are up and locked, remove obstruction from filter basket and suction covers. Spa has shut down for 15 minutes, Press any button to reset.
dy	Inadequate water in heater. Likely low water level. Spa shut down.	Check water level and refill if necessary. Make sure slice valves are up and locked, remove obstruction from filter basket and suction covers. Press any button to reset.

Start-Up & Programming Quick Reference

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Priming Mode



Pr

Whenever you turn on the GFCI, your spa starts in Priming Mode. When "Pr" appears on your display, press the pump button twice to run the pump at high speed. Priming Mode ends after approximately 6 minutes. Your spa will be in Standard Mode.

Airlocks

If the pump is on but it surges or water isn't flowing from all of the jets, you may have an air lock.

- Press the pump button once to turn the pump off.
- Make sure the air relief valve near the filter is submerged.
- Center the 2" Diverter.
- Rotate the outer rim of the larger jets counterclockwise to ensure they're open.
- Turn the pump back on.



If the airlock isn't resolved, turn the pump off.

- Slowly loosen the plumbing union on top of the pump.
- Retighten when water trickles from the union.
- Restart the pump and check the union for leaks. If tools are necessary to tighten the union, wrap it with a towel and rotate no more than 1/4 turn.

Adjust the Water Temperature Setting



100°F



Press & release the TEMP button. While the temperature is flashing on the display, press & hold or press & release the TEMP button until the desired temperature is displayed. The last change is saved and the display returns to the home screen automatically.

Change the Operating Mode

Press & release the TEMP button then the LIGHT button to change the operating mode.



St

Standard Mode: Your water temperature is continuously maintained. If your water temperature falls a few degrees the setting, the pump automatically turns on and circulates on low speed until the correct temperature is reached



Ec

Economy Mode: Your water only heats during filtration cycles. EC is displayed when the water temperature is not current. If PUMP 1 is running on low speed, the water temperature and EC flash alternately on the display.



SL

Sleep Mode: Heats your water only during filter cycles to within 20°F of the set temperature. SL is displayed on the topside controls. If PUMP 1 is running on low speed, the water temperature and SL flash alternately on the display.

Do not put your spa in Sleep or Economy Modes when the ambient temperature is 40°F or lower. Limited heating may not adequately protect your spa from freezing in cold temperatures.

Filtration Cycle Start Time & Cycle Duration

Turn
your
GFCI on

Priming Mode
Approximately
6 minutes

1st Filtration Cycle
Start time set when
Priming Mode ends

2nd Filtration Cycle
Starts 12 hours after
1st filtration cycle.



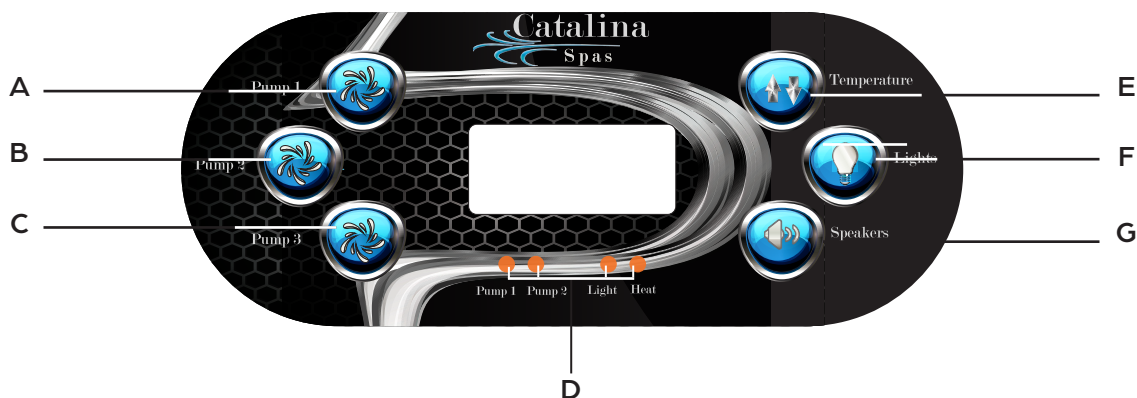
Filter duration is programmable for 2, 4, 6, or 8 hours or continuous filtration (FC).

Press & release the TEMP button then press & release the PUMP 1. Press & release the TEMP button to scroll through duration options. When the correct number of hours is displayed, press the PUMP 1 button to save the selection and exit the programming menu.

Topside Display & User Controls

One, Two, & Three Pump TP600 Topside Controls

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.



Topside Display

Monitor activity and performance in real time with illuminated icons for active settings, user controls and programming menus that simplify setting your preferences now and adjusting them later.

A – Pump 1

- Two-speed pump.
- Ozonator & UV Sanitizer run when Pump 1 is on low speed.

B – Pump 2 (if equipped)

- Single-speed pump.

C – Pump 3 (if equipped)

- Single-speed pump.

Pumps automatically time out after 20 minutes. Press the pump button again to restart.

D – LED Indicator

- LED is illuminated when a component is on.
- LED is dark when a component is off.

E – Temperature Controls & Programming Menus

- Change the water temperature
- Enter programming menus
- Navigate programming menu options
- Change settings.

F – Lights & Programming Menus

- Turn lights on, off & select color
- Scroll through programming menus
- Toggle menu setting options
- Save changes.

G – Topside Audio Control Button

Not available on all models

- Press once to turn on the speakers & sub woofer. Press again to turn off.
- Built-in audio automatically times out after 2 hours; press the button again to restart.*

Factory Settings

Your spa will start in Ready Mode.

The water temperature setting is 100°F.

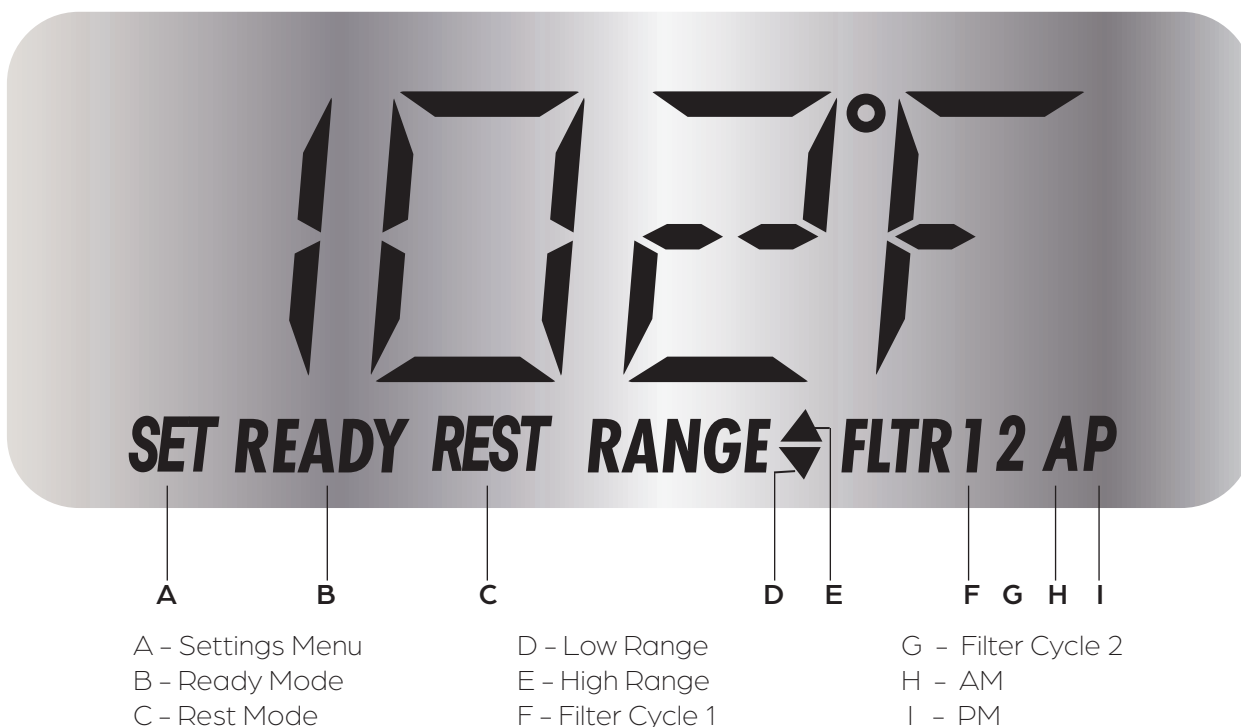
The filtration cycles will run twice each day for 2 hours.

Turning the Spa On

When the spa is full, remove the water hose, replace the filter(s), and close the skimmer lid. Make sure the 2" diverter valves on the flange are centered. Turn the GFCI on. Each time the GFCI is turned on, diagnostic messages are displayed before priming mode begins.

The Menu Screen

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.



Icons & LED notifications are illuminated for active user controls, programmable settings and during maintenance cycles.

A - Visible in programming menu when setting selections.
B - Visible when Ready Mode is selected.
C - Visible when Rest Mode is selected.
D - Down arrow is visible when Low Range is selected.
E - Up arrow is visible when High Range is selected.

F - F1 visible when setting & during 1st filtration cycle.
G - F2 visible when setting & during 2nd filtration cycle.
H - A visible in programming menu when AM is selected.
I - P visible in programming menu when PM is selected.

Turning the Jets On

Turning the Jets On and Off

Number of pumps varies depending upon the spa you purchase.



Pump 1 is a two-speed pump. Press the PUMP 1 button once to turn the pump on. Press the PUMP 1 button again to change to high speed. Press the Pump 1 button again to turn it off.

Pump 1 runs on low speed during filtration and heating cycles and turns off automatically when the cycle ends. To change the speed from low to high, press the PUMP 1 button once. Press it again for low speed. Pressing the PUMP 1 button will not turn the pump off until the cycle is complete.



Pump 2 (if equipped) is a single-speed pump. Press the PUMP 2 button once to turn the pump on. Press the PUMP 2 button again to turn it off.



Pump 3 (if equipped) is a single-speed pump. Press the PUMP 3 button once to turn the pump on. Press the PUMP 3 button again to turn it off.

Pumps are programmed to turn off automatically after 20 minutes. Press the PUMP button to turn it back on.

The ozonator & UV Sanitizer run when the water is heating, during filtration cycles and when PUMP 1 is on low speed.

Priming Mode

Priming Mode safely removes air trapped in the lines, which can instantly damage some components. When the GFCI is turned on, priming mode runs for 5 minutes.

Run Pumps to Purge the Air



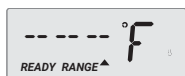
When this priming message is displayed on the screen, press the PUMP buttons to turn on the pumps. Press the PUMP 1 button twice so all pumps run on high speed.

User Controls & Programming Menus

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

If the jets or the pumps surge and water flows from jets in some seats but not others, make sure the water is above the air release valve, check the 2" diverters to be sure they're centered and all jets are open. If the pumps aren't primed after 1 minute, press the PUMP buttons to turn all of the pumps off. Bleed air from the plumbing unions, verify the T-Stems are up and locked, and if necessary remove debris from the skimmer and suction drain covers. Turn the GFCI on again and repeat the process. If the pumps aren't properly primed after the third attempt, turn the GFCI off, and contact technical support for assistance before turning the GFCI on.

Topside Display After Priming



When Priming Mode is complete, the set temperature is briefly displayed. The current water temperature is displayed after the water circulates for approximately 1 minute.

Polling Cycles in Ready Mode

When the spa is in Ready Mode, the water circulates for a few minutes every hour to monitor the water temperature. During polling cycles, the LED Heat Indicator flashes. If heating is necessary, the Heat Indicator is solid and the water continues circulating until it reaches the correct temperature. Some topside buttons may not work until the polling cycle is complete.

Adjusting the Water Temperature



To change the programmed temperature setting, press the TEMP button once. While the temperature is flashing on the display, press and release or press and hold the TEMP button until the desired temperature is displayed. The new temperature is saved automatically.

To change the direction the temperature moves in:

Press and release the TEMP button 3 times (flash – solid – flash). When the TEMP button is pressed the 4th time, the temperature reverses and moves in the opposite direction.

OR

Press & hold the TEMP button. When the temperature reaches the range limit, it reverses and moves in the opposite direction.

High & Low Temperature Ranges

Your controls can be programmed with two independent temperature range settings. Use High Range to save your preferred warm water temperature and Low Range to minimize heating in warm weather. When you select a range, the spa will heat to the temperature setting for the range but it will not cool the water to the low temperature range in warm weather.



High Range
the arrow points up



Low Range
the arrow points down

When setting and selecting High and Low Ranges, pay attention to the direction of the arrow on the topside display.

Your spa heats the water, it cannot cool it. In warm weather, the water temperature will not fall below the average high ambient temperature, regardless of the operating mode or water temperature setting.



High Range
Minimum Setting 80°F



High Range
Maximum Setting 104°F



Low Range
Minimum Setting: 50°F



Low Range
Maximum Setting 99°F

Switch the temperature range in the programming menu if the temperature you're trying to set is higher or lower than the range limits.

Setting Dual Temperature Ranges

To set the Dual Temperature Ranges, press and release the TEMP button. When the display is flashing, press the LIGHT button once. When TEMP is on the screen, press the TEMP button to toggle between High and Low Range. The arrow on the display points up for the High Range and down for the Low Range. When the arrow is pointing in the correct direction, press the LIGHT button to save and return to the home screen. If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.

Understanding Operating Modes

Operating modes can be programmed to help regulate energy consumption and reduce operating costs. The frequency of use and the ambient temperature will help you determine which mode is best for you.

The differences between Ready Mode & Rest Mode



Topside Display
Ready Mode



Topside Display
Rest Mode

Ready Mode: The water temperature is maintained consistently within a few degrees of the temperature setting. The water circulates every hour for a few minutes to monitor the water temperature, heat it as needed, and refresh the temperature on the topside display.

Rest Mode: Water is only heated during filtration cycles. Polling cycles do not run. Because the water temperature isn't monitored or maintained, it can fluctuate significantly. The current water temperature may not be immediately available.

Never put the spa in Rest Mode when the ambient temperature is 40°F or lower. If the spa is exposed to freezing temperatures, circulating water may not prevent freezing.

Programming Menus

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.



If the pump has been off for an hour or more and the PUMP 1 button is pressed, the polling message will scroll across the screen until the water temperature is available.



Ready Mode



Ready-in-Rest Mode

Ready in Rest Mode: If the PUMP button is pressed when the tub is in Rest Mode, the pump will circulate for 1 hour and heat the water if needed. After 1 hour, the pump will turn off regardless of the water temperature and return to REST Mode.

Changing Operating Modes



Ready Mode



Rest Mode

To set the temperature range, press and release the TEMP button. When the display is flashing, press the LIGHT button twice. When MODE is on the screen, press the TEMP button to toggle between Ready and Rest Mode. When the desired mode is displayed, press the LIGHT button to save your selection and return to the home screen. If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.

Setting the Time of Day



Setting the time of day establishes when filtration cycles and other functions are performed.

To set the Time of Day, press and release the TEMP button. When the display is flashing, press the LIGHT button 3 times. When TIME is on the screen, press the TEMP button to set the hours. Press the LIGHT button to save the hour and move to the minutes setting. When the minutes flash on the screen, press the TEMP button until the correct time is displayed. Press the LIGHT button to save your selection and return to the main screen. If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen. If the time is not stored in memory, SET TIME will appear in the menu instead of just TIME.

Flip the Display



The topside display can be inverted, making it easier to read from inside the tub and out. To invert the display, press and release the TEMP button. When the display is flashing, press the LIGHT button 4 times. When FLIP is displayed, press the TEMP button to toggle the options and release when your selection is displayed. The selection is saved automatically and the display returns to the home screen.

Lock the Temperature and Topside Controls



The automatic functions work when the control panel is locked, but the topside controls cannot be used. When the temperature is locked, the jets and tub's other features can be used, but the temperature and other programmed settings cannot be adjusted.

To lock: press and release the TEMP button. When the display is flashing, press the LIGHT button 5 times. When LOCK is displayed, press the TEMP button. When TEMP is displayed, press the LIGHT button to toggle between TEMP and PANL. When your preference is displayed, press the LIGHT button to save and return to the main screen. If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.



To unlock: While pressing and holding the TEMP button, press and release the LIGHT button twice. UNLK will appear on the display. The selection is saved automatically, and the display returns to the home screen.

Temperature cannot be unlocked if the controls are locked.

Hold Mode



To put the tub in Hold Mode for up to 1 hour, press and release the TEMP button. When the display is flashing, press the LIGHT button 6 times. When HOLD is on the screen, press the TEMP button to put the tub on standby for up to 1 hour. A countdown of the remaining time will scroll across the screen. To exit Hold Mode manually before the automatic timeout, press the LIGHT button. The display returns to the home screen automatically.



Programming Menus & Reminders

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Filtration Cycle Settings

Your tub has been pre-programmed with factory settings to run for 2 hours twice daily.

During filtration cycles, the water circulates to remove debris and small particulates. Increasing filtration cycles does not reduce or eliminate chemical sanitizers. The length of filtration cycles varies depending on several factors, including the number of bathers, duration, and frequency of use. Under normal conditions, factory settings should provide adequate filtration. However, frequent use by several bathers may necessitate additional filtration.

Programming Filtration Cycles



Filtration Cycle 1
PM



Filtration Cycle 2
AM

The start time and duration are used to set filtration cycles, which can be adjusted in 15-minute increments. Pay close attention to the "A" or "P" on the display when setting the time. If "A" is displayed, the filtration cycle will run in the morning; if "P" is displayed, it will run in the afternoon.

Setting Filtration Cycle Start Time



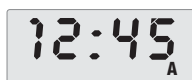
Press and release the TEMP button. When the display is flashing, press the LIGHT button 7 times. When FLTR 1 is displayed, press the TEMP button to open the menu settings. When BEGN is displayed, press the TEMP button to move to the hour setting. When the hour flashes on the display, press the TEMP button to change the hour. When the correct hour is displayed, press the LIGHT button to save and move to minutes. When the minutes are flashing, press the TEMP button to change the setting in 15 minute increments. When the minutes are correct, press the LIGHT button to save the start time and to move the duration setting.



Setting the Filter Cycle Duration



When RUN HRS is displayed, press the TEMP button until the correct number of hours is displayed. Press the TEMP button to set the hours. Press the LIGHT button to move to save the selection and move to minutes. When the minutes are flashing, press and release the TEMP button to change the setting in 15 minute increments. When the cycle duration on the display is correct, press the LIGHT button to save the setting and move to the message confirming the time of day the cycle will end.



If the time is correct, press the TEMP button while the message is still scrolling to save and return to the home screen. If the TEMP button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.

Setting a Second Filter Cycle



Press and release the TEMP button. When the display is flashing, press the LIGHT button 8 times. When FLTR 2 is displayed, press the TEMP button to enter the programming menu and toggle between OFF and ON. When ON is displayed, press the LIGHT button to enter the programming menu. Repeat the steps to set the start time and duration for Filter Cycle 2. *If the TEMP button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

Stopping the Second Filter Cycle



Press and release the TEMP button. When the display is flashing, press the LIGHT button 8 times. When FLTR 2 is displayed press the TEMP button to enter the programming menu and toggle between OFF and ON. When OFF is displayed, press the LIGHT button to save the change and exit to the main screen. *If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

When filtration cycles begin, all pumps turn on to purge the lines. PUMP 2 & PUMP 3 shut down automatically. When the purge cycle is complete, Pump 1 runs on LOW SPEED and shuts down automatically when filtration cycle is complete.

Setting Preferences – Reminder Messages

These reminder messages will alternate with current water temperature. The default setting is ON. When maintenance is complete, press the LIGHT button to reset the display.

Message	Reminder	Frequency
CHEK CHEM	Check pH / chemical levels	7 Days
CHEK COVR	Clean cover Inspect for damage	365 Days
CHEK FLTR	Clean & inspect filter Replace if necessary	30 Days
CHNG WATR	Drain water from spa Refill with fresh water	90 Days
CHNG UV	Replace UV Lamp (If equipped – Default Off)	365 Days
CHNG OZN	Replace ozone unit (If equipped – Default Off)	365 Days
CHNG FLTR	Replace filter	120 Days
TEST GFCI	Test GFCI	60 Days

To set reminder preferences, press and release the TEMP button 9 times. When PREF is displayed, press LIGHT button to scroll through the options. When REMINDERS is displayed, press Press the LIGHT button to scroll through the options. Press TEMP to toggle ON and OFF. Press LIGHT when your preference is displayed. If ON is selected, reminders for routine maintenance will be displayed.

Lighting & Audio

The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

Turning the Lights On, Off, & Selecting the Color



Turn the lights on & off: Press and release the light button once to turn the lights on. All light colors rotate continuously. Press the LIGHT button to turn the lights off.

Select a solid light color: Press and release the light button once to turn the lights on. All colors will rotate. When the light rotates to the color of your choice, quickly press and release the light button twice. The first quick press will turn the lights off, the second quick press turns them back on in the color you selected. Press the light button to turn the lights off.

If the lights have been on for more than 1 minute, the next press of the LIGHT button will turn the lights off. If the light button isn't pressed to turn the lights off, they turn off automatically after 2 hours. Press the Light button to turn the lights back on. Lighting features work in tandem.

Using the Topside Control Audio Button to Turn the Built-In Audio Components On and Off



Press the audio button to turn the built in speakers on and off. Use your device to control the volume through the speakers and to make, play, and pause your selections. If you can't hear your selection, make sure your device isn't muted or paused, and that the volume setting isn't too low.

Press the Rocker Switch in the Cabinet to Turn the Built-In Audio Components On and Off For Plug & Power models only



Press up to turn on.
Press down to turn off.

Press the rocker switch installed in the spa cabinet to turn the built in speakers on and off. Use your device to control the volume through the speakers and to make, play, and pause your selections. If you can't hear your selection, make sure your device isn't muted or paused, and that the volume setting isn't too low.

Built-In audio components automatically turn off after two hours. Press the audio button to turn them back on.

For your safety and to protect your device from water damage, store your device safely away from your spa.

Pairing your Wireless Device

- Press the audio button to turn on the built-in audio components and listen carefully. A chime will sound within 15 seconds signaling the spa is discoverable and ready for pairing. Open your device settings, select Bluetooth settings, verify Bluetooth is turned on and your device is scanning for available devices.
- If your device doesn't scan automatically, turn the Bluetooth off and back on.
- When discoverable device SC012345 appears on your screen, tap it to connect. A pairing code is not required.
- Use your device to make selections, play, and adjust the volume.
- Multiple devices can be paired with your spa, but only one device can be connected at a time.
- Each device must be paired individually following the same process.
- To switch between devices, turn off Bluetooth on the connected device until the correct device is connected.

Troubleshooting Bluetooth Connections

No Connection: Discovery mode for the spa may have timed out before the connection to your device was established.

- Press the audio button to turn the audio components off for 10 seconds. Repeat the process.

No Connection / Intermittent Connection: Bluetooth signal may be weak or wavering.

- Check the signal strength on your device standing next to your spa. If the signal on your device is weak or fades in and out, the signal in your spa is also wavering.
- Consider a booster to improve signal strength.

No Sound from Speakers: Settings may need adjusting

- Make sure the selection hasn't been paused or muted.
- Press play and Increase the volume setting on your device.
- Press the audio button to turn the speakers are turned on..
- Check the Bluetooth settings on your device to confirm it's connected and the signal is strong

Multiple Devices Connected: Spa is picking up active signal on a different device.

- Turn off Bluetooth on the device with active connection until the correct device is connected to the spa.
- Multiple devices can be paired with your spa, but only one device can be connected at a time.

Duplicate SC012345 Discovered: Occasionally, duplicate SC012345 devices are detected in discovery mode.

- If more than one SC012345 appears on your screen, tap the first device on the list.
- If that connection fails, press the audio button on the topside controls to turn the audio components off.
- After 10 seconds press the button to turn them back on and repeat the connection process, this time choosing the second SC012345 device.

Topside Control Error Messages

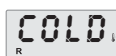
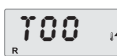
The appearance of topside controls and available equipment varies, depending upon the spa you purchased.

General Messages



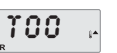
Unknown Water Temperature

Water circulates for 1 minute before water temperature is displayed.



Water Too Cold
Freeze Protection

A potential freeze condition has been detected. Take immediate action to prevent freezing. Pump will stay on for at least 4 minutes after the potential freeze condition has ended. Pumps may turn on and off automatically during freeze protection.



Water too Hot

One of the temperature sensors has detected 110°F (43.3°C) water temp and tub functions have been disabled. DO NOT ENTER THE WATER! Probable cause is pump running excessively or high ambient temperatures. Remove the cover and add cool water. Reduce filter cycle time. Operation will resume when the water temperature has fallen.



J29 Warning

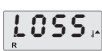
J29 heater disable short when powered up.

Heater Related Messages – Low or No Water Flow

To resolve heater related messages:

- Make sure pump is primed.
- Make sure all jets are open and T-Stems are up & locked.
- Add water & clean the filter if necessary.
- Remove debris from filter skimmer and suction drain cover.

DO NOT ENTER THE WATER UNTIL PROBLEM IS CORRECTED! If the error code persists after taking these steps, turn the GFCI off and contact your dealer.



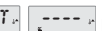
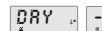
Reduced Heater Flow

There may not be enough water flow away from the heater. Water temperature readings in the heater chamber are too high. Heater will restart in approximately 1 minute.



Reduced Heater Flow

Not enough flow to carry water away from the heating element and the heater has been disabled.



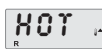
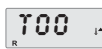
Heater Dry

There is not enough water in the heater. Tub shut down for 15 minutes. When the problem is resolved, press any button to resume operation.



Heater is Dry

There is not enough water in the heater. Tub is shut down. When the problem is resolved, press any button to resume operation.



Heater is too Hot

One of the temperature sensors has detected 118°F (47.8°C) water temp and tub functions have been disabled. DO NOT ENTER THE WATER!

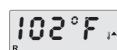


Reset Message

A reset message may appear with some error messages

Sensor Related Messages – Call for Service

Sensor Balance is Poor



Temperature sensors are out of balance by 2 to 3 Degrees.

Sensor Balance is Poor



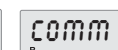
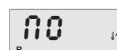
Temperature sensors are out of balance and fault has been established for at least 1 hour.

Sensor A or B Failure



Message may read Sensor A or Sensor B. Temperature sensor or sensor circuit has failed.

Miscellaneous Messages



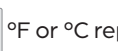
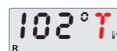
No Communication

The topside control is not communicating with the tub controls.



Beta Software

The tub controls is operating with test controls.



°F or °C replaced by °T

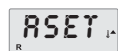
Tub controls are operating in Test Mode.

System Related Messages – Call for Service



Memory Failure

When the tub was powered on the system failed the Program Checksum Test. There is a problem with the firmware.



Persistent Memory Reset

Appears after system set up change. If this message appears on more than one power up, or it appears after operating normally for a period of time, call for service.



Memory Failure Clock Error

Configuration Error No Power



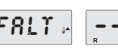
GFCI Failure



Pump Stuck On

Pump appears to be stuck ON. Water may be hot. DO NOT ENTER TUB! Turn GFCI off.

Pump Stuck On



Pump appears to have been stuck ON when the tub was last powered. Water may be hot. DO NOT ENTER TUB! Turn GFCI off.

Quick Programming Reference

Change the Programmed Temperature Setting



Press & release the TEMP button. While the temperature is flashing on the display, press & hold or press & release the TEMP button until the desired temperature is displayed. *The last change is saved and the display returns to the home screen automatically.*

NAVIGATING THE PROGRAMMING MENU:



Press & release TEMP button to open the programming menu, navigate programming menus, & change settings.



Press & release LIGHT button to scroll through programming menus, toggle menu screens, & save changes.

Press &
Release

Number
of Times

Message
on Display

Set Dual Temperature Ranges



Once



Press & release the LIGHT button once. When TEMP is displayed, press the TEMP button to enter menu and toggle between High Range (*arrow points up*) & Low Range (*arrow points down*). When correct range is displayed, press LIGHT button to save & return to home screen. *If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

Select the Heat Mode



Twice



Press & release the LIGHT button twice. When MODE is displayed, press the TEMP button to toggle between Ready and Rest Modes. When the desired mode is displayed, press the LIGHT button to save & return to the home screen. *If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

Set the Time of Day



3 Times



Press & release the LIGHT button three times. When "TIME" is displayed, press the TEMP button until the correct hour is displayed. Press the LIGHT button to save & move to minutes. When the minutes flash press the TEMP button until the correct time is displayed. Press the LIGHT button to save & return to the main screen. *If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

Flip the Display



4 Times



Press & release the LIGHT button four times. When FLIP is displayed, press the TEMP button to toggle the options. When your selection is displayed, press the LIGHT button to save & return to the main screen. *The selection is saved automatically and the display returns to the home screen.*

Restrict Access



5 Times

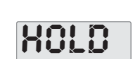


To lock: Press & release the LIGHT button five times. When LOCK is displayed, press the TEMP button to toggle between TEMP and PANL. When your preference is displayed, press the LIGHT button to save & return to the main screen. *If the LIGHT button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*
To unlock: The UP button must be used to unlock. While pressing & holding the UP button, press & release the LIGHT button twice. UNLK will be displayed. Press the LIGHT button to save & exit.

Put Spa on Standby



6 Times



Press & release the LIGHT button six times. When HOLD flashes on the display press the TEMP button to put the tub on standby for up to 1 hour. A countdown of the remaining time will be displayed. To exit Hold Mode manually before the automatic timeout, press the LIGHT button. *The selection is saved automatically and the display returns to the home screen.*

Set the 1st Filtration Cycle



7 Times



Press & release the LIGHT button seven times. When FLTR1 is displayed, press the TEMP button to enter the LIGHT. When "BEGN" is displayed, press the TEMP. When hour flashes, press TEMP to change. When the correct hour is displayed, press LIGHT to save & move to minutes. When the minutes are flashing, press TEMP to increase or decrease in 15 minute increments. When minutes are correct, press LIGHT button to save the start time & move to the duration setting.

Set the 2nd Filtration Cycle



8 Times



Setting the Filter Cycle Duration

When "RUN HRS" is displayed, press TEMP until the correct number of hours is displayed. Press LIGHT to save & move to minutes. When the minutes are flashing, press TEMP to increase or decrease in 15 minute increments. When the cycle duration on the display is correct, press LIGHT to save. If the time the cycle ends on the display is correct, press TEMP while the message is scrolling to save & exit. *If the TEMP button isn't pressed to save the selection, the system reverts to the original setting and returns to the home screen.*

To set second filtration cycle, press & release the LIGHT button eight times. When FLTR2 is displayed repeat the steps for setting the first cycle.

Set Personal Preferences



9 Times



Press & release the LIGHT button nine times. When PREF is displayed, press TEMP to display the first option and select it, or press the LIGHT button to scroll through options. When F / C is displayed, press TEMP to toggle between °F or °C. Press the LIGHT button when your preference is displayed to save your selection.

To select 12 or 24-hour clock, when 24 -12 is displayed, press TEMP to toggle between the options. Press the LIGHT button when your preference is displayed to save your selection. To set maintenance reminders: When REMINDERS is displayed, press Press the LIGHT button to scroll through the options. Press TEMP to toggle ON and OFF. Press LIGHT when your preference is displayed. If ON is selected, reminders for routine maintenance will be displayed. *If the LIGHT button isn't pressed to save the selections, the system reverts to the original setting and returns to the home screen.*