

PLANNING A LOCATION FOR YOUR SPA

Consider these things when determining where to place your spa.

SAFETY FIRST:

Make sure your spa is positioned so access to the equipment compartment and side panels will not be blocked. Be certain your installation will meet all city and local safety codes and requirements.

PLANNED USE OF SPA:

How you intend to use your spa will help you determine where you should position the spa. For example, will you use it more for recreational or therapeutic purposes? If your spa is mainly for family recreation, leave plenty of room around it for activity and lawn furniture. If you will use it more for relaxation and therapy, you'll probably want to create privacy around the spa.

PRIVACY:

Think of your surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors when you plan the location of your spa.

VIEWS:

Think about the direction you will be facing when sitting in your spa. Do you have a special landscape you will find enjoyable? Perhaps there is an area that has a soothing breeze during the day or a lovely sunset in the evening.

ENVIRONMENT:

If you live in a climate with a snowy winter and hot summer, a place to change clothes or a house entry near the spa is convenient. A warmer climate may require shade from the hot sun. Consider placement of trees, shrubs, patio cover or perhaps a gazebo structure to provide what you will need. Indoor installations require adequate ventilation. When the spa is in use, considerable amounts of moisture are produced. This moisture can damage walls and ceiling surfaces over time. Special paint is available to resist moisture damage. Remember that spas periodically require drainage, so plan your environment accordingly.

KEEP CLEAN:

Prevent dirt and foliage from being tracked into your spa by utilizing concrete for paths and access areas. Check the location of spill paths from gutters, trees, and shrubs.

SERVICE ACCESS:

Many people choose to install tile or custom wood around their spas. If you are installing your tub with custom decorative trimming, remember to allow for access to it for service. Should you need service, a technician may need to remove the tub's door panel, or access it from beneath. It is always best to design special installations so the spa can still be moved, or lifted from the ground.

A GOOD FOUNDATION:

Your new spa needs a good solid foundation. The area your spa sits on must be able to support the spa, the water in it and those who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress to the shell or components. **NOTE:** Do not shim your spa in any manner, as this could cause the cabinet to warp, thereby voiding the warranty.

INSTALLATION

BE AWARE:

Damage caused by inadequate or improper foundation support is not covered by the spa warranty. It is the sole responsibility of the spa owner to provide a proper foundation for the spa.

Make sure the foundation where the spa is placed drains water away from the spa. Proper drainage will keep components dry from rain and wet weather.

Your spa weight must always be considered when installing your spa. If you are installing it on an elevated wood deck or other structure, it is advisable to consult a structural engineer or contractor to ensure the structure will support the weight.

IT IS STRONGLY RECOMMENDED THAT A QUALIFIED, LICENSED CONTRACTOR PREPARE THE FOUNDATION FOR YOUR SPA.

A reinforced concrete pad at least four inches thick is recommended for your spa. The reinforcing rod or mesh in the pad should be attached to a bond wire.

INDOOR INSTALLATION:

Be aware of some special requirements if you place your spa indoors. Water will accumulate around the spa, so flooring materials must provide a good grip when wet. Proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa, it is recommended that a floor drain be installed. The humidity will naturally increase with the spa installed. Water may get into woodwork and produce dryrot, mildew, or other problems. Check for airborne moisture's effects on exposed wood, paper, etc. in the room. To minimize these effects, it is best to provide plenty of ventilation to the spa area. An architect can help to determine if more ventilation must be installed.

PLACING THE SPA

CHECK THE DIMENSIONS OF YOUR SPA:

Compare the spa dimensions to the width of gates, sidewalks, and doorways along the delivery route used to bring the spa into your yard. It may be necessary for you to remove a gate or partially remove a fence in order to provide an unobstructed passageway to the installation location. Also, keep in mind if you are using special equipment to place your spa into an area it will be necessary to include those measurements and weights.

PLANNING A DELIVERY ROUTE:

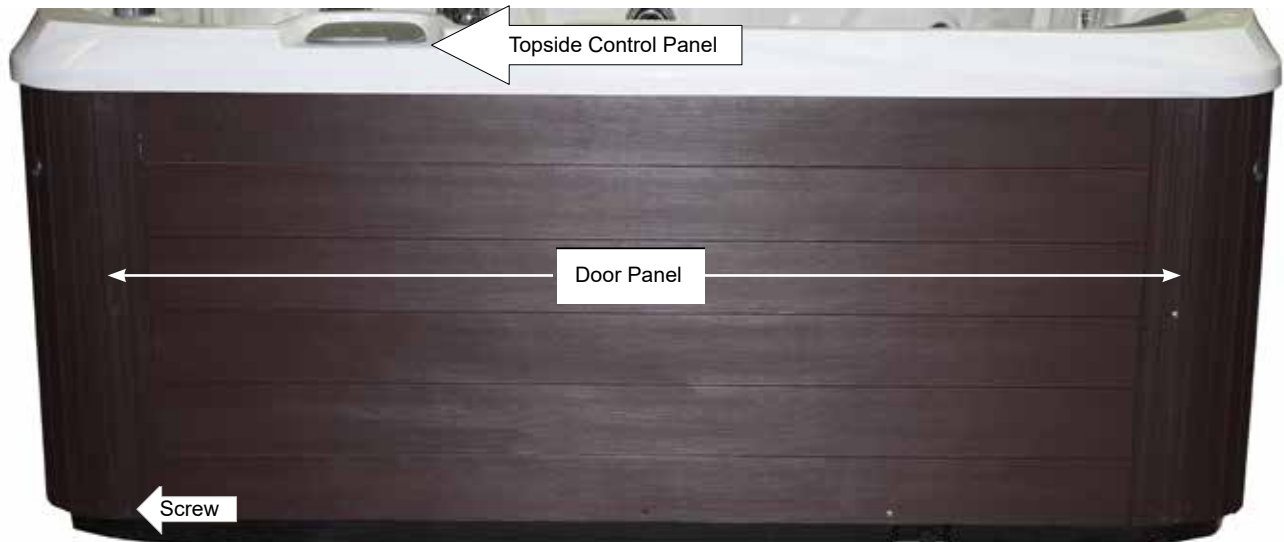
Check the width of gates, doors and sidewalks to make sure your spa will pass through unobstructed. You may have to remove a gate or part of a fence to allow for adequate width clearance. If the delivery route will require a 90-degree turn, check the measurements at the turn to ensure the spa will fit. Check for protruding gas meters, water meters, A/C units, etc., on your home which will cause obstructions along the delivery path to your yard. Check for low roof eaves, over hanging branches or rain gutters that could be an obstruction to overhead clearances.

SPECIAL CIRCUMSTANCES:

The use of a crane for delivery and installation is primarily to avoid injury to your spa, your property or to delivery personnel. Cranes are not considered "normal delivery".

EQUIPMENT ACCESS

EQUIPMENT ACCESS PANEL

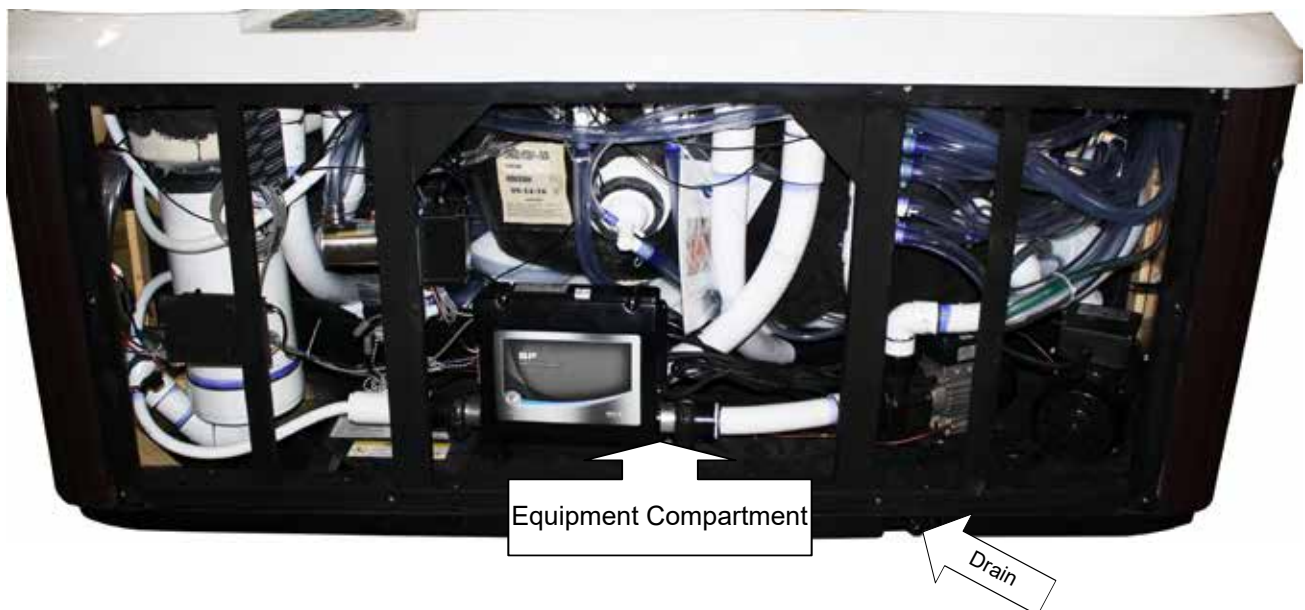


To access the equipment compartment:

- Remove the screws holding the door panel to spa. Lower door panel slightly, pull bottom of door away from spa then remove.

NOTE: The Tornado spa has equipment located on the left side of the spa. The side panel is also the full length of the spa and requires the removal of screws and lowering of the panel to remove.

NOTE: Your Equipment Compartment May Look Different



ELECTRICAL REQUIREMENTS

ELECTRICAL REQUIREMENT

⚠ DO NOT POWER THE SPA WITHOUT FIRST FILLING WITH WATER!

⚠ DANGER – RISK OF ELECTRIC SHOCK

Installations that do not conform to the following procedures and requirements may expose users to electric shock. Non-conforming installations will not be covered under warranty.

The electrical wiring of this spa must meet the requirements of your National Electric code and any applicable state or local codes. The electrical circuit must be installed by an electrical contractor and approved by a local building electrical inspection authority.

1. Installations within 1.5 m of any metal surfaces must ground the metal surfaces to the spa. Use an 8 mm² solid copper wire and attach it to the grounding lug on the control box, located in the equipment compartment.
2. Only a licensed electrician may install power to the spa.
3. Power supply installation must include a suitably rated Residual Current Devices (RCD) as required by your National/local code. The circuit breaker must be dedicated and should not be shared with any other appliances. It must be labeled and easily accessible to users.
4. The electrical supply for the spa must include a suitable circuit breaker to open all ungrounded supply conductors to comply with your National/local code. The disconnecting means must be readily accessible to the spa's occupant but installed at least 1.5 m from the spa water.
5. Power supply lines must be hard wired into the power pack. When hard wired, the use of a shut-off box near the spa is also recommended. This box provides a quick and convenient method to shut off power to the spa for emergencies and maintenance.
6. Supply lines must be properly sized as per your National/local electric code. A ground line must be provided that is as large as the largest current carrying conductor, but no less than 8 mm². Use copper wiring only.
7. Please open the front cover of the control box, and follow the instructions and wiring diagram printed on the backside.
8. 220-240V HARD WIRED SPAS
 - Wire size must be appropriate per your national electric code and/or local codes.
 - Wire size is determined by length of run from breaker box to spa and maximum current draw.
 - All wiring must be copper to ensure adequate connections. Do not use aluminum wire.



Equipment access is below the topside control panel.

ELECTRICAL REQUIREMENTS

CIRCUIT BREAKER REQUIREMENTS:

A new RCD circuit breaker must be used for your spa installation. Do not use an existing breaker, as its condition is unknown.

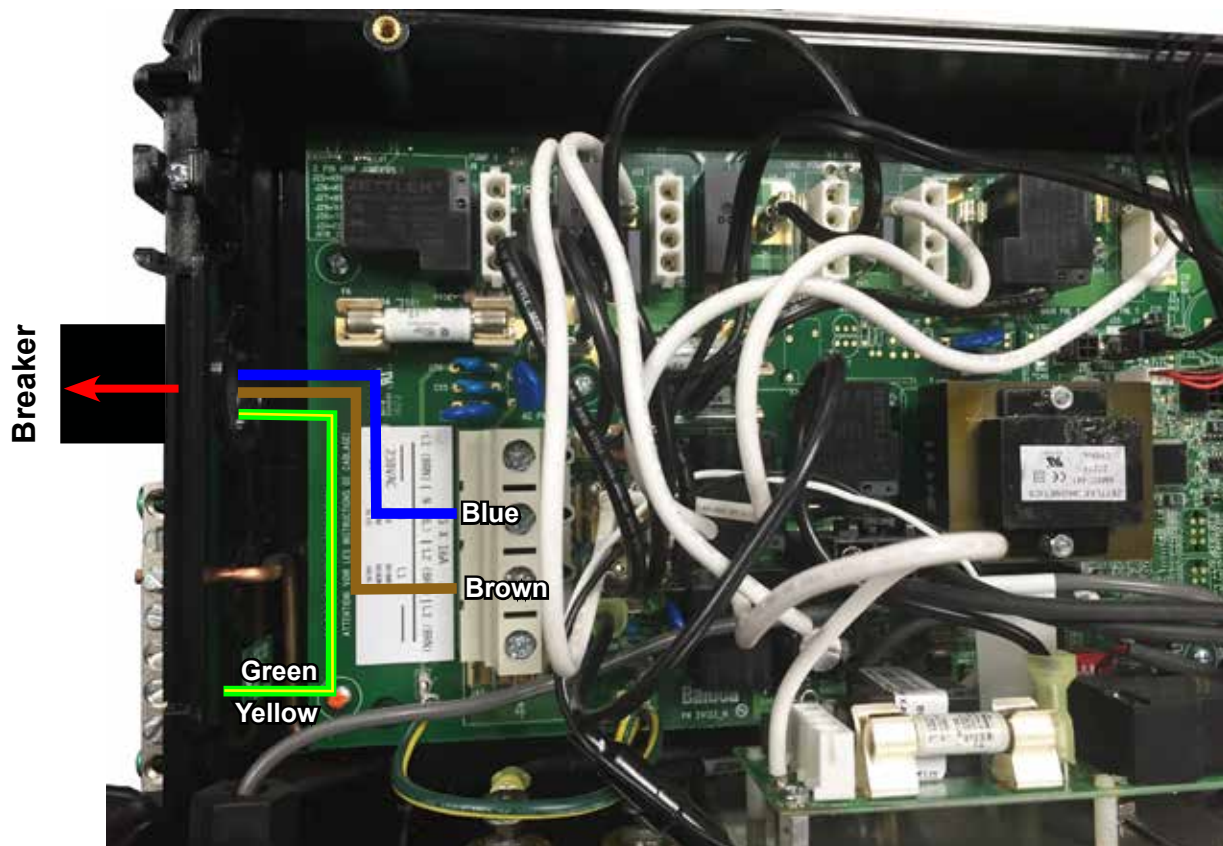
The 220-240V 50Hz systems use a single electrical service (one 13 amp breaker for the Signature SR3 model or one 32 amp breaker for either Signature SR2 or Signature SR1 models) using 3 wires. The 3 wires are 1 line (brown) + 1 neutral (blue) + 1 protective earth (green/yellow). The spa must be connected to a dedicated RCD breaker that is not shared with any other equipment. Do not use extension or plug type cords of any kind.

WIRE HOOK-UP FOR 13 AMP & 32 AMP MODELS

Your spa must be supplied by a ground fault circuit interrupter - residual current device (RCD) - with a tripping rating not exceeding 30 mA in an electrical subpanel.

For the Signature SR3 model only, while running the pump on high speed the heater will not come on when heat is required.

Signature SR1 and SR2 models use a 24 hour on demand circulation pump heating the water whenever required but heater will not come on if both jets pumps are running on high speed.



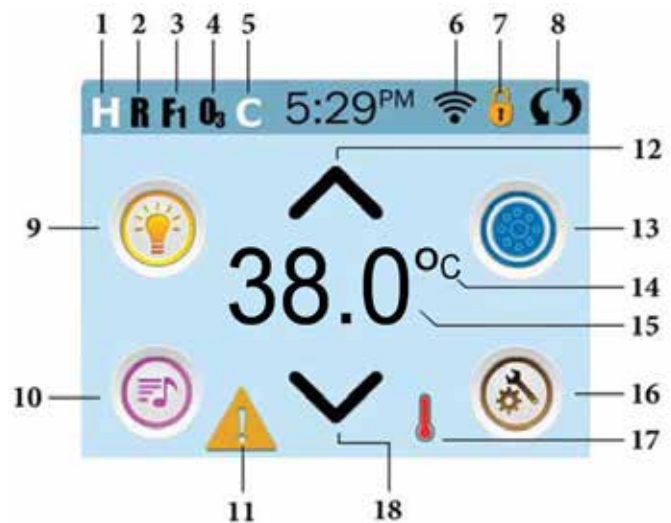
CONTROL PANEL OPERATION

THE MAIN SCREEN

Spa Status - Important information about spa operation can be seen on the Main Screen. Most features, including Set Temperature adjustment, can be accessed from this screen. The actual water temperature can be seen, and the Set Temperature can be adjusted. Time-of-Day, Ozone and Filter status is available, along with other messages and alerts. The selected Temperature Range is indicated in the upper left corner. The Jets Icon will spin if any pump is running. A Lock icon is visible if the panel or settings are locked. A Lock icon is visible if the panel or settings are locked.

ICON DESCRIPTION

1. H = High Temperature Range
2. R = Ready Mode
3. F1 = Filter Cycle 1 Running
4. O3 = Ozone Running
5. C = Cleanup Cycle
6. Wi-Fi Signal Indicator
7. Lock Indicator Icon
8. Invert Screen
9. Light Icon = Turns On/Off
10. Music Icon = Press To Enter Music Screen
11. Message Waiting Indicator
12. Set Temperature Up
13. Jets Icon
14. Temperature Scale (F/C)
15. Current Water Temperature
16. Settings Icon
17. Heat Indicator
18. Set Temperature Down



NOTE: After 30 minutes (can be customized) the display will automatically go into sleep mode, which turns the display off. This is normal operation. Touch anywhere on the screen to wake the panel up.


ICON SPECIFICATIONS


1. **H** = High Temperature Range 26.5°C - 40°C. **L** = Low Temperature Range 10°C - 37°C.
2. **R** = Ready Mode. **RR** = Ready And Rest Mode. **RE** = Rest Mode.
3. **F1** = Filter Cycle 1 is running. **F2** = Filter Cycle 2 is running.
4. **O3** = Ozone is Running. If you don't see the icon that means the Ozone is OFF.
5. **C** = Cleanup Cycle is Running. **NOTE:** Not all systems that run a Cleanup Cycle display this icon.
6. **Wi-Fi** = Wi-Fi icon just indicates that the Wi-Fi link is connected. It does not indicate signal strength. Note: Not all systems that support Wi-Fi display this icon.
7. **Lock** = Represents the settings being locked. **Panel Lock** = Represents the Panel being locked.
8. **Invert** = Invert (or flip) Screen.
9. **Light ON** = Lights is turned ON. **Light OFF** = Light is Inactive.
10. **Music ON** = Music is Active. **Music OFF** = Music is Inactive.

CONTROL PANEL OPERATION

ICON SPECIFICATIONS (CONTINUE)

11. The Message Waiting Indicator will show one of the following icons:

 = Fatal error (Spa can't function until it's fixed)

 = Normal Error or Warning


 = Reminder Message


 = Information Message.

Touch the Indicator to show the message.

Some messages will include the "Call for Service" text as it requires a service technician to fix the problem. If the panel is locked and a message alert appears, you will be taken to the Lock Screen (where you will need to Unlock the panel) before you can clear the message.


Touching the Error/Warning/Reminder/Info Icon on the Message Screen will take you to the System Information Screen to allow for troubleshooting over the phone or for a field service tech to better understand what is going on. Exiting the System information Screen will take you back to the Message Screen in that situation.


12.  Adjust set temperature higher.


13.  = Brings up a screen where the spa jets, can be controlled.

14. Indicates if the temperature is in Fahrenheit or Celsius.

15. Current water temperature if °C or °F is solid; set temperature if °C or °F is flashing.

16.  = Takes you to Settings screen.

17.  = Different animation sequences, including blinking, indicates different stages of heating.

18.  Adjust set temperature lower.

NAVIGATION

Navigating the entire menu is done by touching the screen.

The three screen selections indicated can be selected.

Touch one of these icons to enter a different screen with additional controls.

Most menu screens time out and revert to the main screen after 30 seconds of no activity.



TEMPERATURE ADJUSTMENT

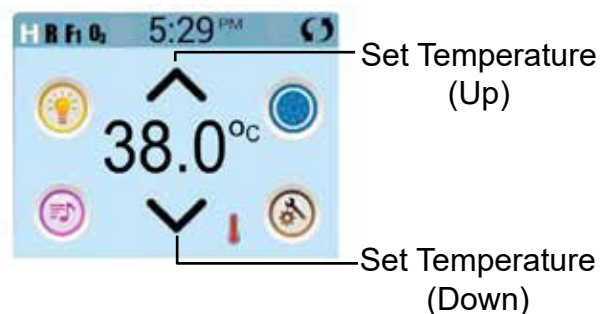
Your spa incorporates two temperature range settings with independent set temperatures. The specific range can be selected on the Settings screen and is visible on the Main screen in the upper left corner of the display (illustrated as H for High range).

Depending on the temperature range selected the setting can be anywhere between 10°C - 40°C.

SET TEMPERATURE

Press Up or Down once to display the Set Temperature (indicated by a flashing °C or °F, plus a change in color of the temperature).

Press Up or Down again to modify the Set Temperature. The Set Temperature changes immediately.



CONTROL PANEL OPERATION

PRESS-AND-HOLD

If Up or Down is pressed and held, the temperature will continue to change until you stop pressing, or until the Temperature Range limits are reached.

SET TEMPERATURE RANGE

If you need to switch between High Temperature Range and Low Temperature Range you will need to do the following:



JETS OPERATION

Signature SR1 & SR2 Models

These spas are equipped with two jet pumps as well as a circulation pump. Press the Jets icon on the Main screen to enter the Spa screen.

Jets 1 uses a two speed pump while Jets 2 uses a single high speed pump, use either Jets icon to start and stop the Jet pumps. Jets 1 when off can be pressed once to turn the pump on in low speed, pressed a second time for high speed and a third time to shut Jet pump 1 off.

Jets 2 uses only two presses, once for on and once for Off.

The Circ pump Icon will appear to indicate its activity, but outside of Priming Mode, the Circulation pump cannot be controlled directly.

NOTE: Jet Pumps will run continuous for 15 minutes before automatically shutting off. Simply press desired jet pump icons to restart the pump.

Signature SR3

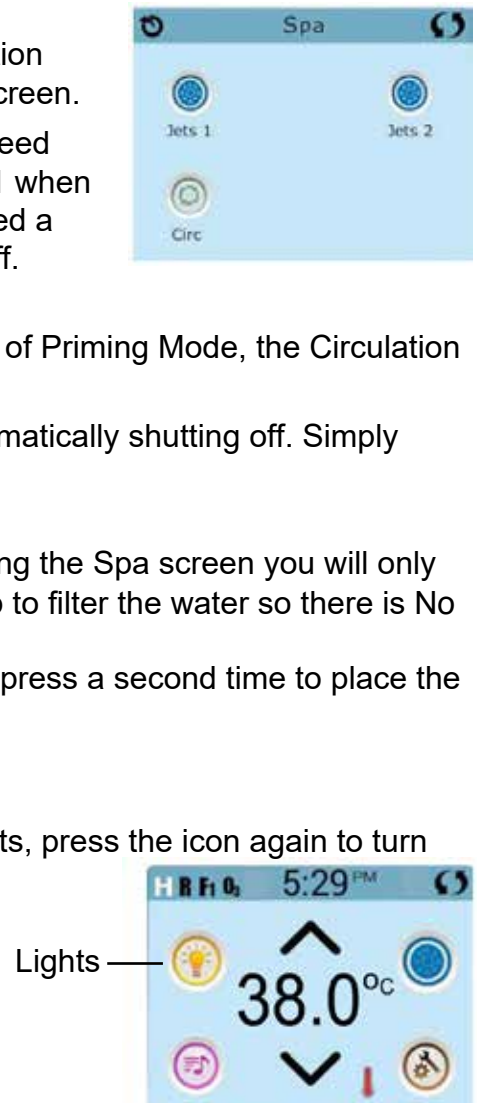
This spa is equipped with a single two-speed pump. When entering the Spa screen you will only see Jets 1 icon. This spa also uses the low speed of the jet pump to filter the water so there is No circulation pump and No circulation pump icon.

Press Jets 1 icon once when off to place the pump in low speed, press a second time to place the pump in High speed and a third time to shut the pump off.

MULTI COLOR LED LIGHTS

Press the Light icon (on the Main screen) once to turn on the lights, press the icon again to turn the lights off. Every time the lights are turned off and back on a new light mode will appear. The sequence is as follows: White, Aqua, Magenta, Azure, Amber, Emerald, Ruby, color wheel with abrupt color changes, strobe, and full color wheel.

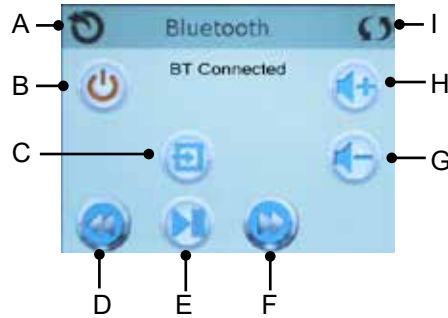
NOTE: If left on, the light will automatically turn off after 4 hours of operation.



CONTROL PANEL OPERATION

MUSIC

To enter the Music screens, press the Music icon on the Main screen.



- A. Back
- B. Power On/Off
- C. Select Source
- D. Track / Song
- E. Play / Stop
- F. Track / Song Up
- G. Volume Down
- H. Volume Up
- I. Invert Screen

BLUETOOTH CONNECTION

1. Power On (press B icon)
2. Turn on Bluetooth function of your mobile or music device
3. On your music device, click search for Bluetooth device. Make sure you are close enough to the spa.
4. Select "PPGME60" from the pairing list.
5. Enter "6000" as the password (if required).
6. Click "Connect"
7. Once connected, you can now start playing your favorite music from your music device.
8. Operating Range is up to 10 m (will vary, dependent on installation).

NOTE: Press Source (C icon) to change between Line in and Bluetooth)

SETTINGS

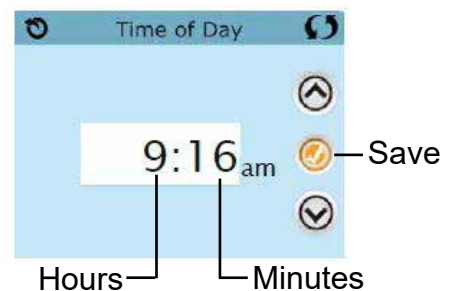
The Settings screen is where all programming and other spa behaviors are controlled. Each icon on the Settings screen takes you to a different screen, where one or more setting may be viewed and/or edited

To enter the settings screens, press the Settings icon on the Main screen.



TIME BE SURE TO SET THE TIME-OF-DAY

Setting the time-of-day is important for determining filtration times (Signature SR3 spa only) and other background features. The time icon (🕒) on the Settings Screen takes you to a screen where you set the Time-of-Day.



CONTROL PANEL OPERATION

On the Time-of-Day screen, simply select (touch) the Hours and Minutes. Touch the Up and Down arrows to make changes, then touch Save.

REMINDERS:

The Reminder Icon on the Settings screen takes you to the Reminders screen.

Press “Reminders” Icon to turn the reminder messages (like “Clean Filter”) ON (Yes) or OFF (No).

LOCK RESTRICTING OPERATION

The control panel can be restricted to prevent unwanted use or temperature adjustments.

- Locking the Panel prevents the control panel from being used, but all automatic functions are still active.
- Locking the Settings allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted. Settings Lock allows access to a reduced selection of menu items. These include Filter Cycles, Invert, Information and Fault Log. They can be seen, but not changed or edited.

LOCKING AND UNLOCKING


To lock either Settings or Panel first press Settings (if it says “Unlocked”) or Panel (if it says “Unlocked”), then press the word “Lock” for at least 5 seconds until the word Locked is below.

To unlock either Settings or Panel first select Settings (if it says “Locked”) or Panel (if it says “Locked”), then press the word “Lock” for at least 5 seconds until the word Unlocked is below.



Press here for 5 seconds to lock or unlock

FILTRATION SIGNATURE SR3 MODEL

The Filter Icon  on the Settings screen takes you to a screen where you control the Filter Cycles. This icon is found on all spa models however the duration settings will only function on non circulation pump models (Signature SR3). If your spa has a circulation pump then each jet pump will purge for 1 minute only at the start of the filter cycle 1 and filter cycle 2 is not optional. The Signature SR1 & SR2 have a 24 hour on demand circulation pump.


On the Signature SR3 model, the filter cycle will turn on the jet pump in low speed to filter the water for the selected time and time of day set. This can be done once or twice each day.

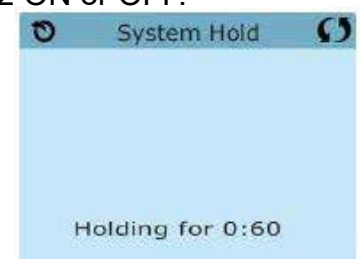
Using the same adjustment as Setting the Time, Filter Cycles are set using a start time and a duration. Each setting can be adjusted in 15-minute increments. Once the desired time is set, press the Save icon between the up and down arrow before exiting. The control panel calculates the end time and displays it automatically under Duration.

- Press “1” icon to view Filter 1.
- Press “2” icon once to view Filter 2. Press “2” icon again to turn Filter 2 ON or OFF.
- When Filter Cycle 2 is ON, it can be adjusted in the same manner as Filter Cycle 1.



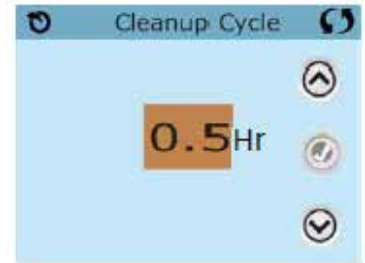
HOLD

The Hold Icon  on the Settings screen places the spa in Hold Mode and displays the System Hold screen. Touch Back to exit Hold Mode.




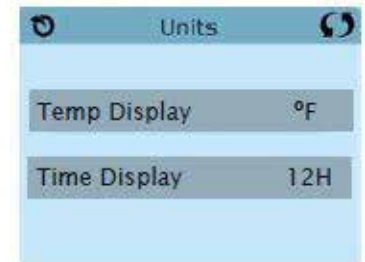
CONTROL PANEL OPERATION

Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. Hold Mode will last for 1 hour unless the mode is exited manually. If spa service will require more than an hour, it may be best to simply shut down power to the spa.




CLEANUP

The Cleanup Icon  on the Settings screen takes you to the Cleanup Cycle screen. If it is available, set the length of time Pump 1 will run after each use. 0-4 hours are available. Settings it to 0.0 Hr keeps the Cleanup Cycles from running.




UNITS


The Units Icon  on the Settings Screen takes you to the Units Screen. Press "Temp Display" to change the temperature between Fahrenheit and Celsius.

Press "Time Display" to change the clock between 12 hr and 24 hr display.


LANGUAGE

The Language Icon  on the Settings screen takes you to the Language screen. Change the language displayed on the panel by pressing the desired language followed by the save icon.

INFO

The Info Icon  on the Settings screen takes you to the Information screen. The System Information screen displays various settings and identification of the particular system.

UTILITIES

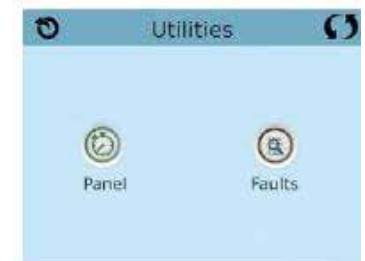
The Utilities Icon  on the Setting screen takes you to the Utilities screen. The Utilities screen contains the following:

- **Panel**

Touching the Panel Icon on the Utilities screen takes you to the Panel screen, where you can set how long it takes the panel to go to sleep after the last activity. The Sleep Timer can be set from 1 minute to 60 minutes. The default is 30 minutes.

- **Fault Log**

The Fault Log is a record of the last 24 faults that can be reviewed by a service tech. Use the Up and Down buttons to view each of the Faults. When Priming Mode shows in the Fault Log, it is not a fault. Rather, it is used to keep track of spa restarts.



MESSAGES

Most messages and alerts will appear at the bottom of the normally used screens. Several alerts and messages may be displayed in a sequence.

CONTROL PANEL OPERATION

GENERAL

- **Possible freezing condition** - A potential freeze condition has been detected, or the Aux Freeze Switch has closed. All water devices are activated. In some cases, pumps may turn on and off and the heater may operate during Freeze Protection. This is an operational message, not an error indication.
- **The water is too hot** - The system has detected a spa water temp of 43.3°C or more, and spa functions are disabled. System will auto reset when the spa water temp is below 42.2°C. Check for extended pump operation or high ambient temp.

HEATER - RELATED

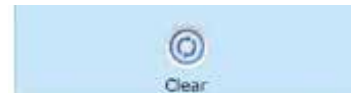
- **The water flow is low** - There may not be enough water flow through the heater to carry the heat away from the heating element. Heater start up will begin again after about 1 min. See “Flow Related Checks” below.
- **The water flow has failed*** - There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. See “Flow Related Checks” below. After the problem has been resolved, reset the message*.
- **The heater may be dry*** - Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Reset this message* to reset the heater start-up. See “Flow Related Checks” below.
- **The heater is too hot*** - One of the water temp sensors has detected 47.8°C in the heater and the spa is shut down. You must reset the message* when water is below 42.2°C. See “Flow Related Checks” below.

FLOW-RELATED CHECKS

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime.

On some systems, even when spa is shut down by an error condition, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

* Some messages can be reset from the panel. Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.



For additional information about the control panel operation including additional messages go to:

<http://www.balboawatergroup.com/Topside-Spa-Panels> find spaTouch™ Menu Panel User Guide (42281_A)

WI-FI MODULE

Remotely control the operations of your spa via an integrated Wi-Fi module that works with the Balboa Water Group Wi-Fi Spa Control App. This app is available for Apple® or Android® devices. Please refer to the Balboa Water Group website and mobile device app for operation information.

<http://www.balboawater.com/bwa>

SPA COMPONENT OPERATION

AIR CONTROL VALVE

The air control valves (smaller valves) serve to regulate the amount of air mixed with the water when the jets are operational. Turn the air control valves in one direction to increased jet action. Rotating the air control in the opposite direction to turn air off and allow the jets to work with water only. Turn the air controls off when the spa is not in use, this will prevent cold air from entering the spa and will keep heating cost to a minimum. The ozone jet, will always produce air bubbles when pump is on.

DIVERTER VALVE (SIGNATURE SR1 & SR2 MODELS)

The diverter valves (larger valves) on your spa allows you to direct the flow of water to one of the jet flow combinations. Your spa has two pumps and two diverter valve, each diverter valve works with one pump. The function of the diverter valves can best be learned by experimentation. Turn the large valve completely to one side to see which jets are on, then turn completely to the other to see which jets are affected if nothing seems to happen than try the other diverter valve. (You can adjust the diverter value to any position between the two possible extremes to achieve the jet pressure that feels best to you).

IMPORTANT: Your spa is not designed to provide full power to all jets when the diverter valves are in the mid position. However with the diverter valve in this position, you may increase the power to selected jets by rotating the faces of the hydrotherapy jets to close the ones that are not in use.

HYDROTHERAPY JETS

The hydrotherapy jets are recessed in the wall of the spa. Rotate the jet faces to turn the jets on or off. Turning a jet on or off will increase or decrease the effects of any jets not in the closed position.

OZONE GENERATOR (SIGNATURE SR3 MODEL)

The ozone system enhances the quality of the spa water when used to supplement the spa owner's regular water maintenance program. Contrary to some information circulated throughout the pool and spa industry regarding ozone systems, ozone **CAN'T** be used as a single-source sanitizer, water clarifier, anti-foamer, and mineral chelating agent. A secondary source sanitizer must be used to maintain 3.0 - 5.0 ppm of Free Available Chlorine (FAC). **GRIZZLY BEAR HOT TUBS** recommends that a chemical maintenance program based on recognized and documented industry standards still be followed when using an ozone purification system to assure water sanitation and the highest quality purified water.

UV-C LIGHT (SIGNATURE SR1 & SR2 MODELS)

UV-C light effectively modifies the DNA of waterborne pathogens to stop their reproduction. The system is a natural process that adds no byproducts or chemicals to the water. UV-C light is a proven and reliable water disinfectant. The system simply exposes water to UV-C light after filtration and then returns the disinfected water to the hot tub using up to 50 percent less sanitizing chemicals. It is recommended to have your UV-C light replaced every 18 months by your Dealer.

WATERFALL

Your spa has a control valve to operate the amount of flow through the waterfall from no flow to a full steady stream. The waterfall will only work when Jet Pump 1 is on. Rotate the valve to turn adjust the flow of water.

FILL-UP AND START-UP INSTRUCTIONS

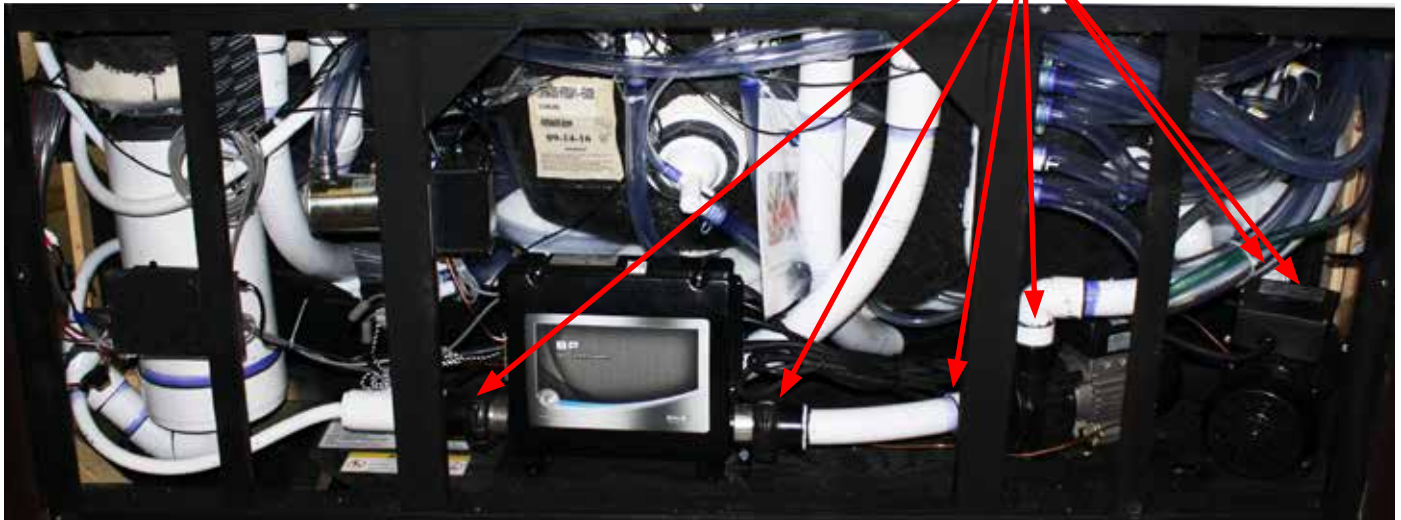
The following procedures should be followed on initial startup and whenever the spa is drained for routine maintenance.

FILLING THE SPA WITH WATER

1. Clear all the debris from your spa.
2. Be sure to open all jets to allow as much air as possible to escape from the plumbing during the filling process.
3. Insert a garden hose into filter compartment to fill your spa.

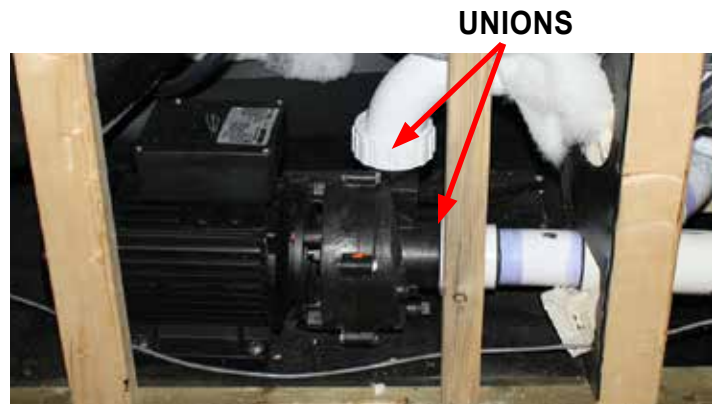
NOTE: Do not use hot or softened water.

NOTE: Your Equipment Compartment May Look Different



UNIONS

4. As the water level rises, check inside the equipment compartment for water leaks. It may be necessary to tighten unions and/or fittings that may have loosened during delivery. There is no need to call for service; this can easily be done. If assistance is required, contact your local Dealer.
5. Under normal circumstances keep the water level half way between the top of the spa and the top of the gray filter ring or just above the highest jets (whichever is higher).



UNIONS

SIGNATURE SR2 MODEL ONLY

Failure to keep enough water in your spa may in damage to your system and invalidate your warranty. If your spa filter is sucking in air causing the pump to cavitate, you need to add water!

6. Check the filter installation and make sure the filter is not loose.

APPLYING POWER

Turn power to spa "ON" (after filling spa) from the main panel at the house and the subpanel.

FILL-UP AND START-UP INSTRUCTIONS

PRIMING MODE

After the initial start-up sequence, the control will enter Priming Mode and display a Priming Mode screen. Only pump icons appear on the priming mode screen. During the priming mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater under low-flow or no-flow conditions. Nothing comes on automatically, but the pump(s) can be energized by selecting the “Jet” buttons. If the spa has a Circ Pump, it can be turned on and off by pressing the “Circ” icon during Priming Mode.



PRIMING THE PUMPS

As soon as the Priming Mode screen appears on the panel, select the “Jets 1” button once to start Pump 1 in low-speed and then again to switch to high-speed. Also if applicable, select the other pumps, to turn them on. Rotate all the air control valves counter clockwise and observe the increased jet action (air mixed with water). After several minutes, rotate diverter valves changing to the other jet systems.

While the pumps are running check again for water leaks at the drain spigot, unions, or fittings in the equipment compartment (leaks may have occurred during transit). If water is leaking from one of these areas, there is no need to call for service. Simply tighten the fitting. If assistance is required contact your local dealer.

The pumps should be running in high-speed to facilitate priming. If the pumps have not primed after 2 minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process.

NOTE: Turning the power off and back on again will initiate a new pump priming session. Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and contact your local dealer.

IMPORTANT: A pump should not be allowed to run without priming for more than 2 minutes. Under NO circumstances should a pump be allowed to run without priming beyond the end of the 4-5 minute priming mode. Doing so may cause damage to the pump and cause the system to energize the heater and go into an overheat condition.

EXITING PRIMING MODE

The system will automatically enter the normal heating and filtering at the end of the priming mode, which lasts 4-5 minutes.

You can manually exit Priming Mode by pressing the “Back” icon on the Priming Mode Screen. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4-5 minutes.

Be sure that the pump(s) have been primed by this time. Once the system has exited Priming Mode, the top-side panel will display the Main Screen, but the display will not show the water temperature yet, as shown below. This is because the system requires approximately 1 minute of water flowing through the heater to determine the water temperature and display it.

— — — —°F — — — —°C

Once the actual temperature is displayed you should then adjust your temperature, time and filter settings.

ADDING START-UP CHEMICALS

WATER CHEMISTRY GUIDELINES

The following step-by-step instructions are a recommended guideline for balancing water chemistry. If unsure about any step in the process, please contact your local Dealer.

IMPORTANT: Add all chemicals into the filter area with Jets 1 on high speed for 10 minutes.

Initially, it is advisable to identify what minerals (e.g. iron) are present in the local source water. This will provide a better understanding of how to treat the water. Please follow the four steps below and be sure to achieve the correct levels in each area before moving onto the next step.

STEP #1: ESTABLISH PROPER PH LEVEL:

The recommended range for pH is between 7.2 and 7.8. If the reading is too high, lower the pH by using a pH Down/Decreaser (sodium bisulfate). If the pH level needs to be increased, do so with a pH Up/Incraser (sodium hydrogen carbonate). Any pH Up or Down should be added one teaspoon at a time, waiting one-half hour between application and re-measuring.

STEP #2: MEASURE TOTAL ALKALINITY:

The ideal range is between 40-120 parts per million (PPM). If the total alkalinity is too high, it should be reduced by using an Alkalinity Down/Decreaser (sodium bisulfate). If the total alkalinity is too low, it can be increased by adding an Alkalinity UP/Incraser (sodium bicarbonate or sodium hydrogen carbonate). These products should be added in small amounts – a teaspoon at a time. After adding one teaspoon, wait one half hour before re-measuring. Once the safe range of total alkalinity is established, proceed to the next step.

STEP #3: DETERMINE CALCIUM HARDNESS:

It is important to bring the calcium reading to between 50-150 PPM. If the reading requires adjustment, it should now be corrected. If the water is too soft (a low reading) calcium hardness should be added to the water to increase the PPM reading. If the water is too hard (a high reading), it can be corrected by either: (A) a mixture of hard and soft water added to attain a reading in the safe range, or (B) addition of stain and scale control. If calcium hardness is a problem with the local source water (either too hard or too soft) a test kit, which measures calcium hardness, is essential.

STEP #4: SANITIZING:

After steps 1-3 are complete, **the spa must be sanitized using Chlorine (sodium dichlor)**. Add 2 teaspoons of Chlorine, and increase as necessary to reach a level of 3-5 ppm. Check and maintain this level weekly, and before and after using the spa. **IMPORTANT NOTE:** *A granulated sodium dichlor is highly recommended for sanitizing spa water, granular bromine may also be used. Never use compressed sanitizers even with a floater. As with any other chemicals, the sanitizer should be introduced to the spa with the jets running for 10 minutes.*

WEEKLY SHOCK:

Using a potassium monopersulfate (MPS) shock, add approximately 60 ml over the filter while the jets are running. Shocking is achieved by adding the MPS to turbulent water. Leave the cover up and jets on high for 10 minutes. Then shut jets off and return the cover to the closed position to maintain heat. Then return the cover to the closed position to maintain heat.

FILTER CARTRIDGE MAINTENANCE

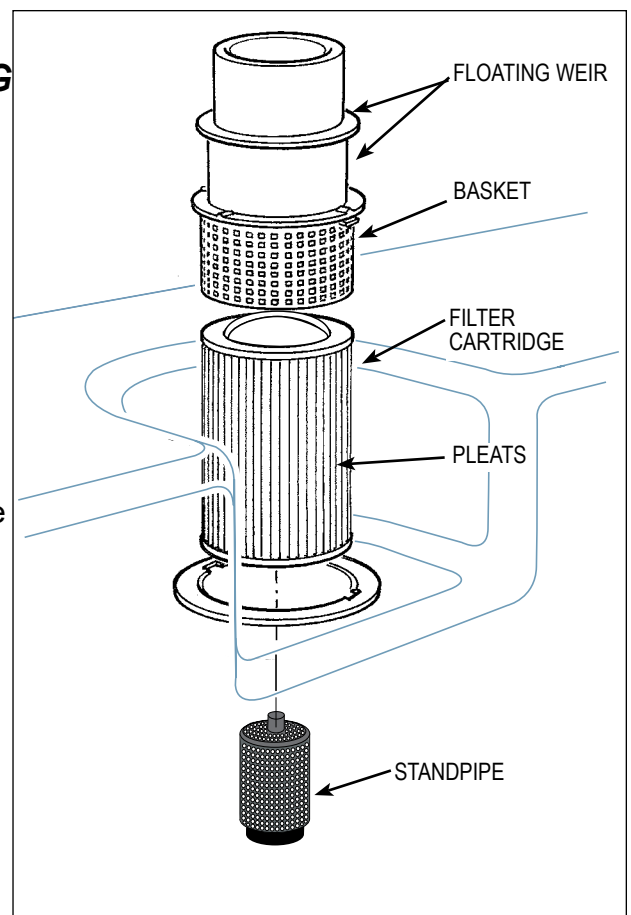
At least once a week, check and clean the skimmer basket and weir to ensure proper filter flow. Remove leaves, foreign matter, and debris. It is very important to keep your spa filter cartridge clean and free of particles to ensure proper water flow. A clean filter permits the hydrotherapy system to function properly and also allows more efficient filter cycles. Depending on how frequently your spa is used, we recommend cleaning the spa filter cartridge every four weeks. If this is not done, the filter may clog and restrict water flow, which causes improper filtration and poor jet performance.

IMPORTANT: The frequency and duration of use, and the number of occupants all contribute to determining the appropriate time between filter cleanings. More use means that more frequent filter cleanings will be required.

FILTER CARTRIDGE REMOVAL AND CLEANING INSTRUCTIONS

1. Press the Hold icon in the Setting screen.
2. Push the filter basket down slightly and turn counter-clockwise to unlock. Then pull out the basket and weir.
3. Carefully pull up the filter cartridge and bring it out of the spa.
4. Always clean the filter using a filter degreaser to remove mineral and oil build-up. Soak the filter in the degreaser (according to the package directions). Then place the filter on a clean surface and, using a garden hose, spray until it is clean. It may be necessary to rotate the filter while spraying to remove any debris lodged between the filter pleats.
5. Replace the cartridge in the spa. To return the basket and weir, insert and rotate clockwise to lock into position.
6. Press the Back icon in Hold screen.

NOTE: Refer to the back of this manual to determine the appropriate size of your filter.



CAUTION! Always use proper eye protection when using chemicals, or high-pressure water. Read instructions on cleaning products and follow applicable safety and warning instructions listed on label.

CAUTION! Never scrub the filter cartridge with a brush, as this will cause the filter to wear out and come apart. Never let the spa pump run without a filter cartridge in the skimmer compartment. Running the spa without a filter cartridge may permit debris to enter the spa plumbing and void the warranty!

- Replace filter cartridge, then reinstall basket and weir, (insert and rotate clockwise to lock into position). **DO NOT OVERTIGHTEN!**
- Turn spa's power back on.

SPA MAINTENANCE

SURFACE CARE

Do not use solvents or abrasive cleaners to clean the spa. Typically, a mild detergent and water will resolve cleaning issues.

COVER CARE

Please keep your cover free from dirt at all times. Use a cover cleaner or a warm, mild soapy water to clean the surface. Do not use any silicone-based products, as it will dry and may eventually crack the vinyl. **NOTE:** Do not stand on the cover at any time. Remove the cover when adding chemicals to your spa. This will extend the life of your cover. The gasses from burned off chemicals will be trapped under the cover, if not removed. These gasses may erode the protective lining of the foam inserts. This will not be covered under warranty.

CABINET CARE

Little maintenance is required to keep your spa cabinet looking good.

Spa cabinet product should be cleaned as needed to remove dirt and debris.

- NO abrasive or harsh chemicals should be used on the spa's cabinet.
- NO solvents or cleaners containing aromatic solvents should be used on the spas cabinet.
- Hot soapy water is the best choice for cleaning the spa's cabinet.

DRAINING OR WINTERIZING

Every three to six months, depending upon the water condition, you need to renew your water.

CAUTION: READ THIS BEFORE DRAINING YOUR SPA

- To prevent damage to the spa's components, **TURN OFF SUBPANEL BREAKER BEFORE DRAINING. DO NOT POWER BACK UP UNTIL YOUR SPA HAS BEEN REFILLED WITH WATER.**
- There are certain precautions to keep in mind when draining your spa. If it is extremely cold, and the spa is outdoors, freezing could occur in the plumbing or the equipment.
- Do not leave the spa's shell (inside surface) exposed to direct sunlight.

DRAINING YOUR SPA

- a. Route the outlet of the drain hose to an appropriate draining area. Locate the drain (bottom front right) of the spa, remove the drain cap and attach the inlet of a garden hose to drain the spa, (to avoid flooding of the foundation surrounding the spa) open the valve by turning the knob to drain. **NOTE:** Spa water with a high sanitizer level may harm plants and grass.
- b. Allow all of the water to drain through the drain.
- c. After your spa is empty, clean the shell and filter cartridge. See "Spa Maintenance" section.
- d. After cleaning, close the drain valve and reinstall the drain cap.
- e. Follow the "Fill up and Start-up Instructions" on page 18.



WINTERIZING YOUR SPA

If you plan to store your spa for the winter, you must also use a wet-vac to clean out the water lines to ensure they are free of any water. Water left in the lines might freeze and damage the lines and jets.

- a. It will be necessary to remove all water from the interior plumbing.
- b. Remove the floating weir, basket, and filter cartridge. Clean the filter cartridge and store in a dry place. Attach the vacuum hose to the **vacuum side** of the shop vac and thoroughly dry the filter compartment.
- c. Using the shop vac, remove the water starting with the jets at the top and moving to the ones at the bottom of the spa. **NOTE:** When removing the water from jet openings, you may notice suction coming from another jet. With the help of a second person, block off any suction from the other jet using a large rag or cloth. This will help pull out the water that is trapped deep inside the main line.
- d. Thoroughly dry the spa shell with a clean towel.
- e. Using a funnel, pour Propylene glycol anti-freeze into the filter suction fittings and jet outlets. **CAUTION: Use only Propylene glycol as your anti-freeze. This is non-toxic. NEVER use automobile anti-freeze since it is toxic.**
- f. Remove the pump drain plug located on the front of the pump housings. Allow all water to drain out. Place the drain plug in a reclosable plastic storage bag and store near the pump. Replace the drain plugs on start-up.
- g. Unscrew the suction/discharge pump and heater unions and allow the water to drain. Leave union loose. **NOTE:** Tighten unions before filling spa.
- h. Replace the equipment compartment door and secure with screws.

Note: Damage caused by improper winterizing will not be covered under warranty. You may want to contact your Dealer for complete winterizing instructions.

TROUBLESHOOTING PROCEDURES

In the event the spa is not working the way it should, please first review all the installation and operating instructions in this manual and check the message on the panel display. If you are still not satisfied it is working properly, please follow the appropriate troubleshooting instructions.

CAUTION! WARNING! SHOCK HAZARD! No User Serviceable Parts.

Do not attempt service of the control box. You may want to contact your Dealer for proper winterizing. Follow all owner's manual power connection instructions.

NO COMPONENT OPERATION

Check the following:

1. Is there power to the spa?
2. Is the household circuit breaker tripped?
3. Is the subpanel (220-240V) tripped?
4. If 1, 2 or 3 are yes contact your local Dealer for assistance.

PUMP DOES NOT OPERATE, BUT THE LIGHT DOES

Press the *Jets 1 or 2* button:

The pump operates but no water flows to jets. Pump may not be properly primed. This can happen after the spa is drained and refilled. Press the *Jets 1 or 2* button several times, never leaving the motor on for more than 5-10 seconds at-a-time with no water coming out of jets.

POOR JET ACTION

1. Press the *Jets 1 or 2* button to make certain the pump is on.
2. Turn the air control valves in one direction to increased jet action.
3. Make sure the water level is half way between top of spa and top of the gray filter ring.
4. Check for dirty filter. Clean, if necessary.
5. Make sure all jets are in the open position.

WATER IS TOO HOT

1. Check desired temperature on topside control.
2. Check for a Diagnostic Message (in Control Panel Operation section).

OH - Overheat (spa is deactivated) DO NOT ENTER THE WATER.

If the spa has overheated you should remove the cover to promote heat reduction. The spa control system should reset itself when the water temperature reduces below 41°C. When the spa temperature falls below the reset you can push any button on the topside control to reset the control system. If the spa will not reset, then shut off power to the spa and contact your local Dealer.

Under extreme and/or prolonged weather conditions it is possible for the ambient temperature to exceed 41°C; effecting the water temperature of the spa and causing it to overheat. These conditions could cause the spa sensors to produce an OH message and prevent the usage of your spa during these conditions. The location of your spa should be reconsidered to reduce the outside temperature around the spa. For example, you may need to prevent direct sunlight on any surface of your spa. Regardless, do not enter your spa if the temperature is above 40°C.

Should checking the above steps fail to correct the problem, please contact your local Dealer.

