



CRYSTAL
COVE SPAS

Swim Spas



LTR20261146-HPS-NC
128/2025

2026

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CRYSTAL COVE SPAS

Congratulations! You are now the owner of the next era of spa excellence with the Crystal Cove swim spa. Now you will experience true full body swim workout to help with your fitness journey and general well being, from the comfort of your backyard. We at Crystal Cove focus on quality, design, and purpose in order to create a truly unique experience like no other.

Welcome to the Crystal Cove Family!

It is important to register your Crystal Cove swim spa as soon as possible. By taking just a few quick minutes to register can enjoy product alerts, more efficient support and quicker service.

Locating the serial number

The serial number of your spa is located on a metal plate attached to the right side of the spa panel. You will need this number to properly register your spa and activate your warranty coverage. Write this information in the space provided below.

Spa Model: _____

Spa Serial Number: _____

Date Purchased: _____

Date Installed: _____

Dealer's Phone Number: _____

Dealer's Address: _____

LTR2061146-HPS-NC
12/8/2025

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Due to continuous improvement programs, all models, operation, and/or specifications are subject to change without prior notice.

Contact Information

For customer service please contact your authorized dealer immediately. If you need additional information and/or assistance, contact

www.heritagepoolsupplygroup.com

1.IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY!

When using installing and using this spa, basic safety precautions should always be followed, including:

1. DANGER: RISK OF SEVERE INJURY OR DROWNING!

- DO NOT allow children to be in or around a spa unless a responsible adult supervises them.
- Keep the spa cover on and locked when not in use.
- See instructions enclosed with your cover for locking procedures.

2. DANGER: RISK OF SEVERE INJURY OR DROWNING!

- The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings, or the pump be sure the flow rates are compatible.
- Never operate the spa if the suction fitting or filter baskets are broken or missing. Never replace a suction fitting with one that is rated less than the flow rate marked on the original suction fitting.

3. DANGER: RISK OF SEVERE INJURY FROM ELECTRIC SHOCK OR DEATH FROM ELECTROCUTION!

- Install the spa at least 5 feet (1.5 meters) from all metal surfaces. As an alternative, a spa may be installed within 5 feet (1.5 meters) of metal surfaces if each metal surface is permanently bonded by a minimum #8 AWG solid copper conductor to the outside of the spa's control box.
- DO NOT permit any external electrical appliances, such as lights, telephones, radios, televisions, and etc., within 5 feet (1.5 meters) of the spa. Never attempt to operate any electrical device from inside the spa.
- Replace a damaged power cord immediately.
- DO NOT bury the power cord.
- Connect to a grounded, grounding-type receptacle only.

4. WARNING: RISK OF HYPERTHERMIA (OVER-HEATING) CAUSING SEVERE INJURY, BURNS, WELTS OR DEATH!

- Water temperature in excess of 104°F (40°C) may be injurious to your health.
- The spa water should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104° F (40°C) are considered safe for a healthy adult.
- Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
- Before using the spa, the user should measure the water temperature since the tolerance of water temperature-regulating devices varies.

5. WARNING: To reduce risk of injury

- Prolonged exposure to hot air or water can induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level between 3°F (2°C) to 6°F (4°C) above the normal body temperature of 98.6°F (37°C). While hyperthermia has many health benefits, it is important not to allow you body;s core temperature to rise above 103°F(39.5°C).
- High water temperatures have a high potential for causing fetal damage during pregnancy. Women who are pregnant, or think they are pregnant should always check with their physician prior to spa usage.
- The use of alcohol, drugs or medication before or during spa use may lead to unconsciousness, with the possibility of drowning.

- Persons suffering from obesity, a medical history of heart disease, low or high blood pressure, circulatory system problems or diabetes should consult a physician before using the spa.
- Persons using medications should consult a physician before using the spa since some medications may induce drowsiness while others may affect heart rate, blood pressure and circulation.

6. Hyperthermia

- Symptoms of excessive hyperthermia include dizziness, lethargy, drowsiness and fainting. The effects of excessive hyperthermia may include:
 - Failure to perceive heat
 - Failure to recognize the need to exit spa or hot tub
 - Unawareness of impending hazard
 - Fetal damage in pregnant women
 - Physical inability to exit spa
 - Unconsciousness

 **WARNING:** The use of alcohol drugs or medication can greatly increase the risk of fatal hyperthermia.

7. **WARNING: DANGER: RISK OF ELECTRIC SHOCK**

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

8.  **WARNING:** people with infectious diseases should not use a spa or hot tub.

9.  **WARNING:** to avoid injury exercise care when entering or exiting the spa or hot tub.

10.  **WARNING:** Do not use spa or hot tub immediately following strenuous exercise.

11.  **WARNING:** Prolonged immersion in a spa or hot tub may be injurious to your health.

12.  **CAUTION:** Maintain water chemistry in accordance with manufacturer's instructions.

SAVE THESE INSTRUCTIONS.

Preparing for Your Swim Spa

Pre-Delivery Checklist

Most cities and counties require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on property to prevent unsupervised access to the property by children. Your dealer can provide information on which permits may be required and how to obtain them prior to the delivery of the spa.

Before Delivery

- ☐ Plan your delivery route
- ☐ Choose a suitable location for the spa
- ☐ Lay a 4-6 inch concrete slab
- ☐ Install dedicated electric supply

After Delivery

- ☐ Place spa on Slab
- ☐ Connect electrical components

Planning the Best Location

Safety First

Do not place your spa within 10 feet (3m) of overhead power lines.

Consider How You Will Use Your Spa

How you intend to use your spa will help you determine where you should position it. For Example, will you use your spa for recreational or therapeutic purposes? If your spa is mainly used for family recreation be sure to leave plenty of room around it for activity. If you will use it for relaxation and therapy, you will probably want to create a specific mood around it.

Plan for Your Environment

If you live in a region where it snows in the winter or rains frequently, place the spa near a house entry. By doing this, you will have a place to change clothes and not be uncomfortable.

Consider Your Privacy

In a cold-weather climate, bare trees won't provide much privacy. Think of your spa's surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors as well when you plan the location of your spa.

Provide a View with Your Spa

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

Keep Your Spa Clean

In planning your spa's location, consider a location where the path to and from the house can be kept clean and free of debris.

Prevent dirt and contaminants from being tracked into your spa by placing a foot mat at the spa's entrance where the bathers can clean their feet before entering your spa.

Allow for Service Access

Make sure the spa is positioned so that access to the equipment compartment and all side panels will not be blocked.

Many people choose to install a decorative structure around their spa. If you are installing your spa with any type of structure on the outside, such as a gazebo, remember to allow access for service. It is always best to design special installations so that the spa can still be moved, or lifted off the ground.

Maintenance/Service Clearances

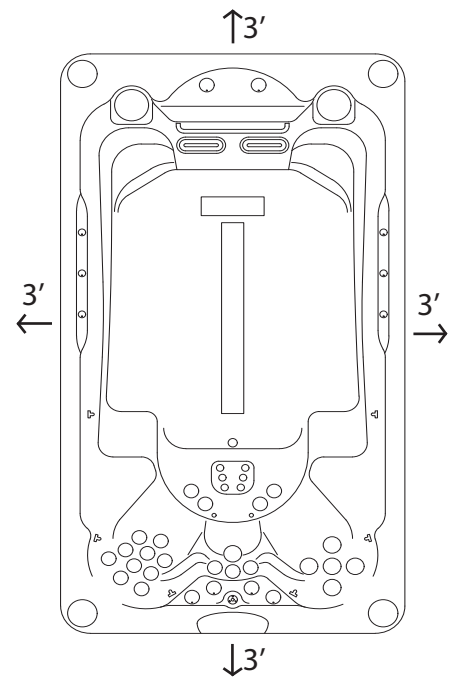
While you are planning where to locate your spa, you need to determine how much access you will need for service.

All spa models including swim spas require a minimum of three feet/one meter access to all sides of the spa for potential service. For this reason, the spa should never be placed in a manner where any side is permanently blocked. Examples include placing the spa against a building, structural posts or columns, or a fence.

Spa models require access to all sides in case they need service or repair, see the figure to the right.

If you are planning to enclose or surround your spa with a deck, make sure there is easy access for service or repair.

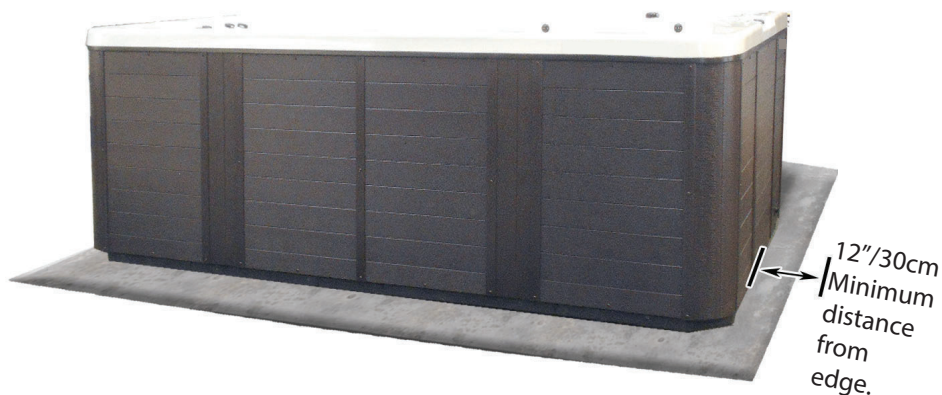
Note: Spas require clearance on all sides to repair access.



Foundation Requirements

NOTE: We strongly recommend that a qualified, licensed contractor prepare the foundation for your spa. Damage caused by inadequate or improper foundation support is not covered by the warranty. It is the responsibility of the spa owner to provide a proper foundation for the spa.

Your spa needs a solid and level foundation. The area that it sits on must be able to support the weight of the spa, with water and occupants who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress that could DAMAGE YOUR SPA SHELL AND FINISH. Place the spa on an elevated 3 to 4" / 30 cm concrete slab. Pavers, gravel, brick, sand, timbers or dirt foundations are **not** adequate to support the spa. If you are installing the spa indoors, pay close attention to the flooring beneath it. Choose flooring that will not be damaged or stained. If you are installing your spa on an elevated wood deck or other structure, it is highly recommended that you consult a structural engineer or contractor to ensure the structure will support the weight of 150 lbs per square foot (732 Kg/m²).



240 Volt Electrical Specifications

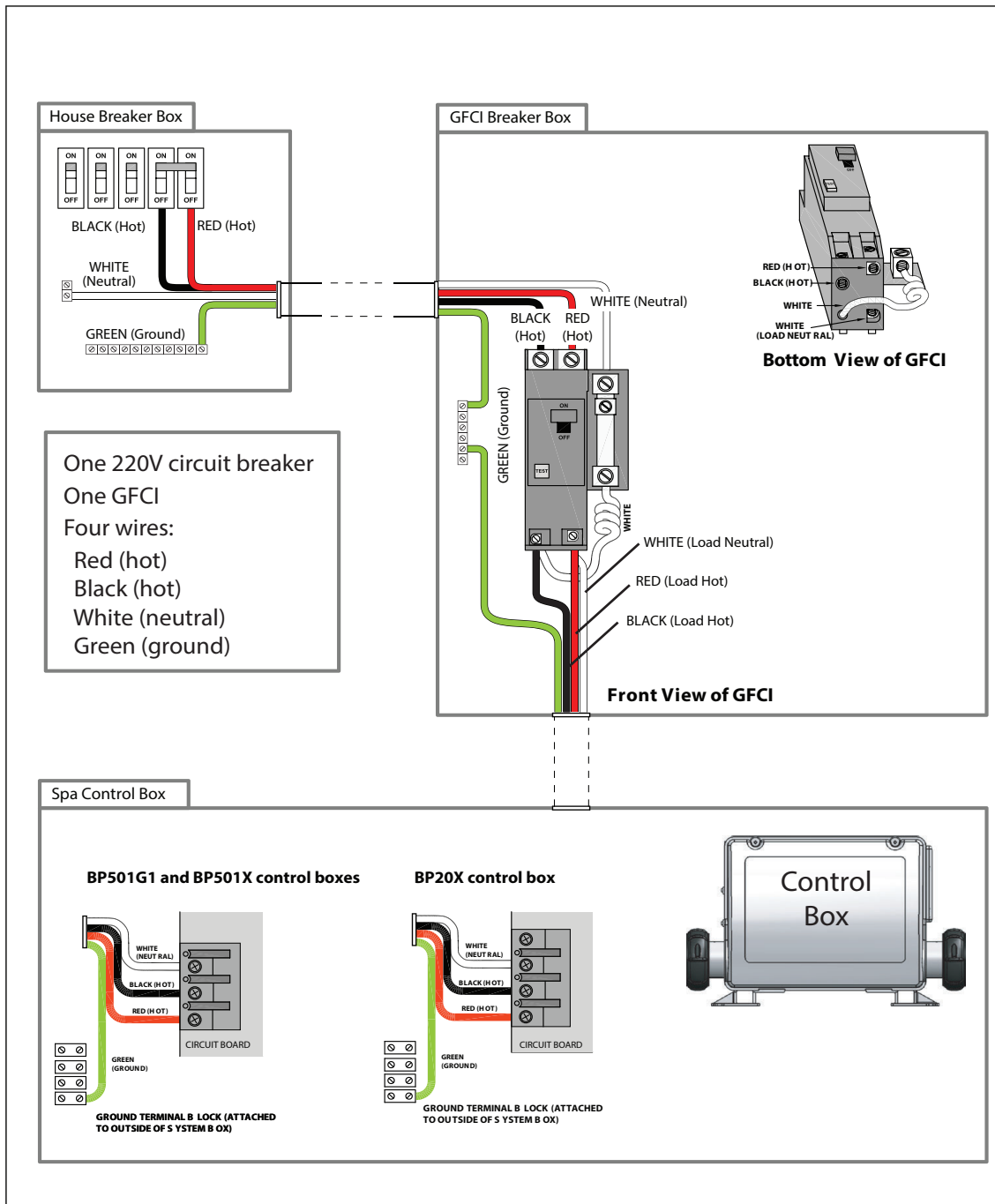
NOTE: These instructions describe the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty and may result in serious injury. The electrical circuit must be installed by an electrical contractor and approved by a local building or electrical inspector. Failure to comply with state and local codes may result in a fire or personal injury and will be the sole responsibility of the spa owner.

All 240V spas must be permanently connected (hard wired) to the power supply. When installed in the United States, the electrical wiring of this spa must meet the requirements of the NEC 70 and any applicable local, state, and federal codes. The power supplied to the spa must be on a dedicated GFCI protected circuit as required by NEC 70 with no other appliances or lights sharing the power. Use copper wire with THHN insulation. DO not use aluminum wire. Use the table below to determine your GFCI and wiring requirements. Wires that run over 100 feet must increase wire gauge to the next lower number. For example: A normal 50 amp GFCI with four #6 AWG copper wires that run over 100 feet would require you to go to four #4 AWG copper wires.

Wiring Specifications and GFCI Requirement

Model	Control System	GFCI Breaker	Wires Required
HPS-1222	BP501X	50 Amp GFCI Breaker	Four 6# AWG Copper Wires
HPS-1431	BP501X	50 Amp GFCI Breaker	Four 6# AWG Copper Wires
HPS-1634	BP20X	60 Amp GFCI Breaker	Four 6# AWG Copper Wires

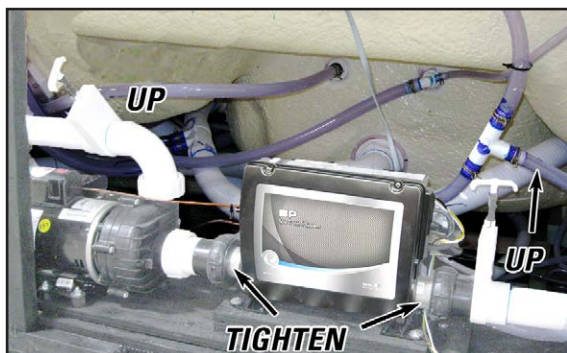
GFCI Wiring Diagram USA/Canada 60 Hz



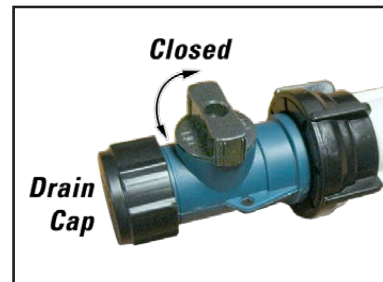
Filling and Powering Up Your Portable Spa

1. Inspect the spa equipment.

Inspect all plumbing connections in the equipment area of your spa.



- Make sure unions in the equipment pack are tight. (Be careful not to over-tighten the plumbing fittings.)
- If your spa has gate valves, make sure they are all in the UP or OPEN position.
- Make sure the drain valve is closed and capped.



Never run the spa with the gate valves closed or without water circulating for long periods of time.

2. Remove the cartridge from filter canister.



Unscrew the cartridge and remove it.



After you remove the filter, remove the plastic wrapper and soak it in water for 30 minutes before you replace it. A dry filter can allow air into the filtration system which can cause the pump to fail to prime. Never try to pull the filter cartridge while the spa is running in low or high speed (i.e., any speed).

3. Fill the spa.



Never fill your spa with soft water.

Soft water makes it impossible to maintain the proper water chemistry and may cause the water to foam, which will ultimately harm the finish of the spa and void your warranty.

You may fill your spa with **well water** provided the following conditions are met:

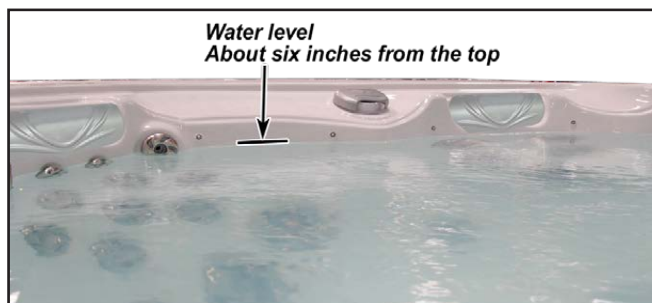
- 1) Purchase and use a pre-filter to run the well water through on the fill-up. The pre-filter will be placed before the spa filter in the fill-up flow of water.
- 2) Have a Total Dissolved Solids (TDS) and metals test performed by a qualified person after the fill-up process but before any spa use.

Place a garden hose in the filter canister and fill your spa with **regular tap water** about six inches from the top.

If the water level is too low or too high, your spa will not operate properly.



Always fill the spa through the filter canister! Failure to do so may cause air to be trapped in the filtration system and prevent the pumps from operating properly.



4. Turn on power to the spa.



When the spa is filled to the correct level, turn on the power at the GFCI breaker. (Ensure that the 120V spas are connected to the proper electrical outlet.)

5. Prime the pump.

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” button during Priming Mode.

6. Install the filter into the filter canister.



Make sure the filter has soaked at least 30 minutes before you install it. Insert the filter all the way and screw it in. Do not over-torque the cartridge during installation, just hand tighten gently.

7. Adjust water chemistry.

Test and adjust the water chemistry.

8. Let the spa heat up.

When the spa has finished priming, the heater will activate. Put the cover on and let the spa heat to the set temperature.

Priming the Pump

New spa owners often have difficulty the first time they start their spa and the pump fails to prime. This can be frustrating, but these simple instructions can help you.

Sometimes air can become trapped in the pump while filling the spa. You will know this has happened when after you have filled and started the spa, the pump does not seem to function. You will hear the pump operating, but no water will be moving.

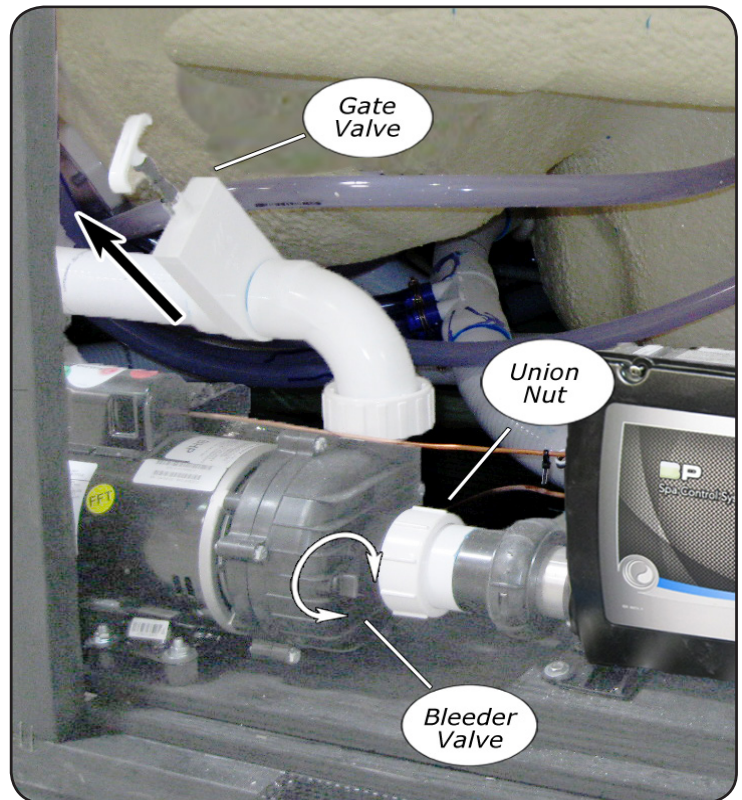


The pump will not work properly while air is trapped in it. Continuing to operate the pump in this way will cause damage.

Bleeding Air from the Pump

If you have tried priming the pump several times unsuccessfully using the control panel, you can bleed the air from the pump manually.

1. Shut off the power to the spa.
2. Using a Phillips screwdriver, remove the front panel from the spa and locate the pump.
3. Close the gate valve on the discharge side of the pump (if your spa is installed with one.)
4. Turn the bleeder valve counter clockwise with a small pair of pliers until the air has been released from the pump.
5. If this is unsuccessful, loosen the union nut on side of the pump with channel locks. When air is bled out, tighten the nut.
6. Turn on power to the spa and press the JETS button. If there is still air trapped in the pump, repeat steps 2 through 5 until the pump primes.





The HPS-1431 and the HPS-1634 swim spas offer industry leading powerful pump systems. These swim spas are equipped with modern touch controls to start your workout with ease. Icons to help navigate through the different options and setting within your spa.

The following pages will offer you insight and guidance to the features of this swim spa, and allow for easy temperature and filtration adjustment.



The HPS-1222 uses the TP-500 Controller, a small but capable controller, built with a tried and tested design. Details on how to operate this controller can be found on page 31



Spa Touch Control System

Certain models are offered with an upgraded control panel, the Spa Touch 2 control system. The elegant 4 ½" touch display offers easy navigation of all of your spas equipment, with an elegant color LCD screen. The controllers main screen is designed display all main equipment options, including temperature control, LED light activation, and pump activation. There is easy access to your spas internal settings for filtration, time/date, heat modes, languages, and other specified features.

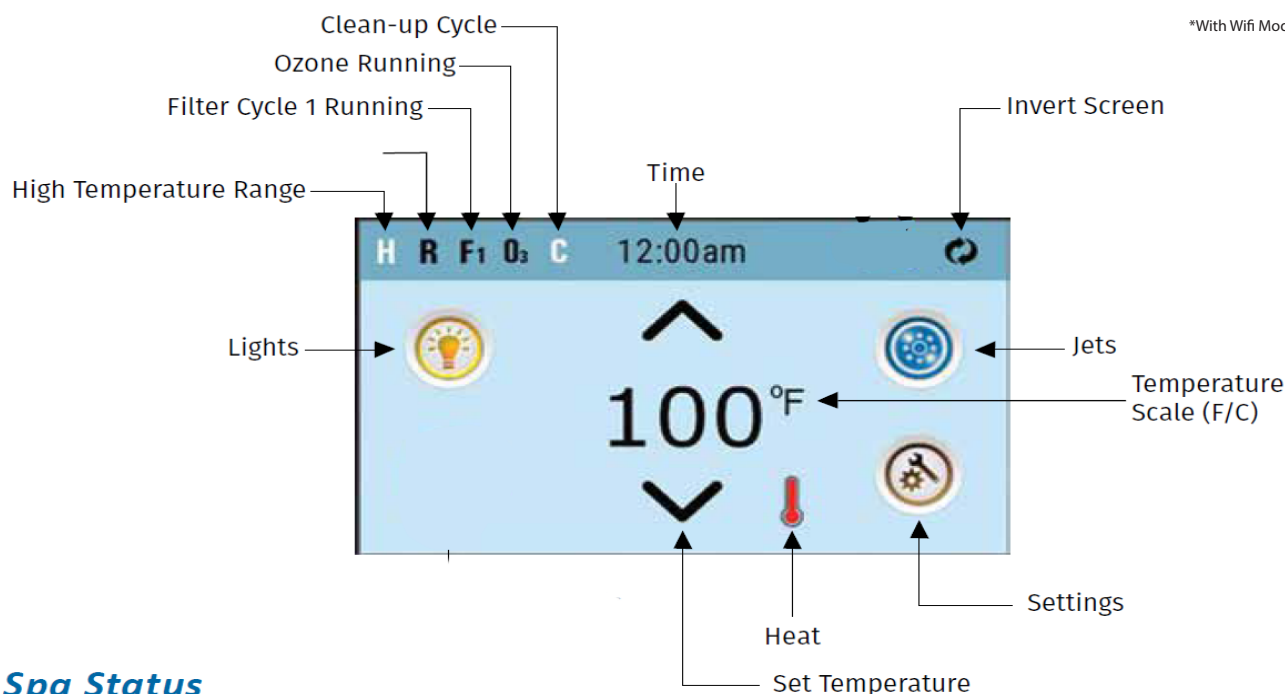
The top of the display is designed to offer insight on what operations or modes are activated inside of your spa. Ensuring that you know everything and anything your spa is doing at that very moment.

Display Care

To maintain and care for your spa display, we recommend using a microfiber towel to clean the display from finger prints. The touch screen is designed to respond to touch with wet hands, but excessive water droplets on the display should be wiped away with your hand before using the controller.

The Main Screen

*With Wifi Module



Spa Status

Important information can be found on the main screen, such as temperature adjustment, current spa operations, pump activation, lights, and the settings tab. Certain icons or options may not appear on your display, this dependent on the options your spa is equipped with.

- H = High Temperature Range
L = Low Temperature Range

- R = Ready Mode | RR = Ready/Rest Mode
⌞ = Rest Mode

- F1 = Filter Cycle 1 is running
F2 = Filter Cycle 2 is running
F+ = Filter Cycles 1 & 2 are both running

- O₃ = Ozone is running. If you don't see the icon that means the Ozone is OFF.

- C = Clean-up cycle is running.
Note: Not all systems that can run a Cleanup Cycle display this icon.

- Wi-Fi icon just indicates that the Wi-Fi link is connected.

- = Invert (or flip) Screen

- = Adjust set temperature higher

- = Spa equipment control icon
Brings up a screen where the spa jets, blower or other equipment can be controlled. While on the Spa Equipment Screen, you can press a Jets button once for low speed, and if configured press it again for high speed.

- = Jet is inactive. Indicates if a pump is running or not

Current water temperature if °F or °C is solid
Set temperature if °F or °C is flashing

- = Settings is active = Settings is inactive
(when the panel is locked). Takes you to Settings Screen

- Different animation sequences, including blinking, may indicate different stages of heating

● ∇ = Adjust set temperature lower

● ● = on ● = inactive ● = disabled

● 🎵 = on 🎵 = inactive 🎵 = disabled

● Message waiting indicator: 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

i = Information Message

NAVIGATION



Music



Settings



Spa Equipment

MESSAGES



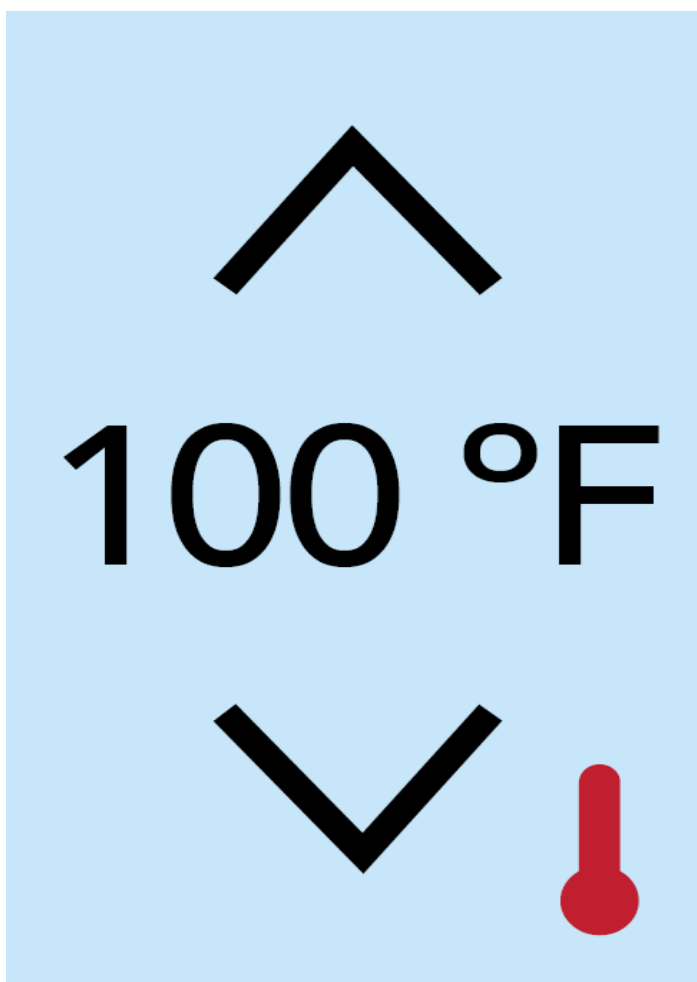
This icon indicates that a message is waiting for you to review, it can be an error code or a general message code.

After 30 seconds the display will enter sleep mode and power off, you can tap the display to wake up.

Adjusting Temperature


You can press the up and down arrows once to see what the spas set temperature is, this is shown by the temperature values changing in color to indicate the set temperature. Pressing the up or down arrows again will move the set temperature to whatever temperature you desire. You may also press and hold the arrows to change temperature.


Note: if the spas set temperature was 99°F, and you set the new temperature to a lower value for example 94°F, the spa will not chill and cool down. This change in value commands your spa heater to only activate to maintain 94°F. The heater will remain off until the water temperature falls below 94°F, in order to maintain the new set temperature.

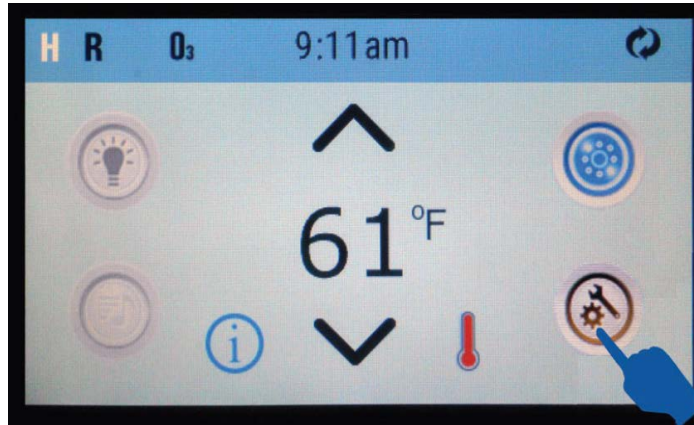


Changing Languages


Step 1. Touch the Settings Icon at the lower right portion of the screen.

 Appuyez sur l'icône Paramètres dans la partie inférieure droite de l'écran.

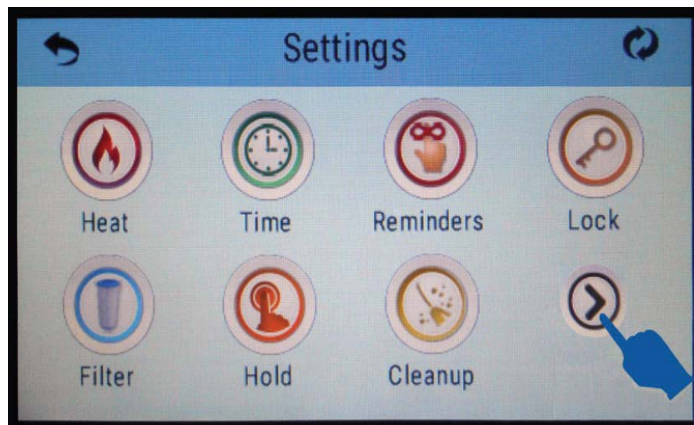
 Toque el ícono de Configuración en la parte inferior derecha de la pantalla.




Step 2. Touch the right arrow icon at the lower right portion of the screen. Pressing this allows you to navigate to the next screen


 Appuyez sur l'icône de flèche droite dans la partie inférieure droite de l'écran. En appuyant dessus, vous pouvez accéder à l'écran suivant

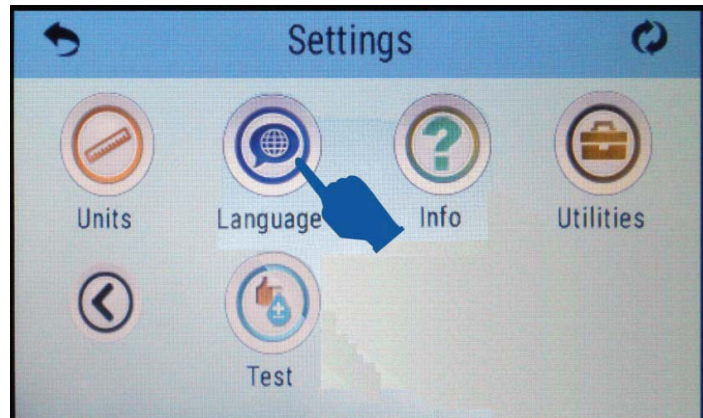
 Toque el ícono de flecha derecha en la parte inferior derecha de la pantalla. Al presionar esto, podrá navegar a la siguiente pantalla.





Step 3. Touch the Language icon


 Appuyez sur l'icône Langue

 Toca el ícono de Idioma





Once you select the language icon, the screen will open up a list of languages you can select, use the up and down arrows to navigate down the list of available languages.

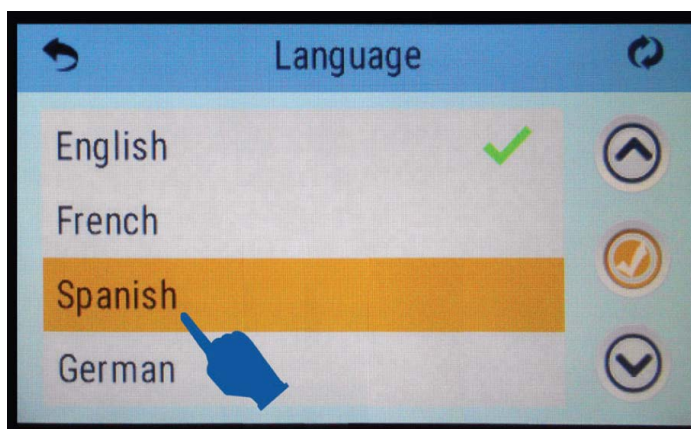
  Une fois que vous avez sélectionné l'icône de langue, l'écran ouvrira une liste de langues que vous pouvez sélectionner, utilisez les flèches haut et bas pour parcourir la liste des langues disponibles.

 Una vez que seleccione el ícono de idioma, la pantalla abrirá una lista de idiomas que puede seleccionar, use las flechas hacia arriba y hacia abajo para navegar hacia abajo en la lista de idiomas disponibles

Step 4. Select your language of choice, we will select Spanish as an example.

  Sélectionnez la langue de votre choix, nous sélectionnerons l'espagnol comme exemple.

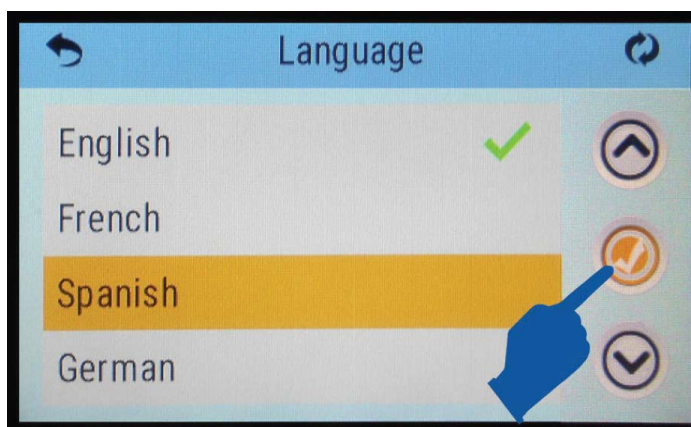
 Seleccione su idioma de preferencia, seleccionaremos español como ejemplo.



Step 5. The screen will refresh and your selected language of choice should now be the default setting.

  L'écran s'actualisera et la langue sélectionnée devrait maintenant être le paramètre par défaut.

 La pantalla se actualizará y el idioma seleccionado ahora debería ser la configuración predeterminada.



Priming Mode [Initial Start Up]

When your spa is first powered on the unit will enter a mode called priming mode, this also occurs whenever the power to the unit is cut off from a GFCI trip or a power surge. This mode's purpose is to ensure the primary pump is clear of any air pockets or obstructions, and allows your temperature sensors to calibrate and read the water temperature to begin the heating process or to disengage the heater if the spa is already within its desired range.

When Priming Mode starts, the primary pump will turn on in low speed, then switch to high speed. This is done to purge any air pockets, that could have been trapped inside of the pump. This is considered normal operation. Priming mode will run for about 4-5 minutes, the spa will enter regular heating and filtering once Priming Mode ends. You can manually exit priming mode by pressing the "Back" icon on the priming mode screen.

Note: if after 2 minutes you see no water movement or hear the pump activating but no visible or notable water movement, cut the power to the spa from the GFCI and read the pump bleeding procedure in the beginning of this owner's manual. A large air pocket within the pump could be causing issues with water circulation. Following the pump bleeding procedure, activate the spa power again. If there is no water movement within the spa, call your dealer for service as there could be an issue with your primary pump or control box.

Temperature Sensors

— — — — °F — — — — °C

When priming mode occurs, this allows time for the water temperature sensors inside of the control box to gather data and display the correct temperature. During priming mode or when you skip/exit priming mode, the sensors may show no values on its temperature reading. This is normal as it is collecting data through a period of time, to give an accurate reading. It usually takes about 1 minute of data collection for the display to properly display the temperature.

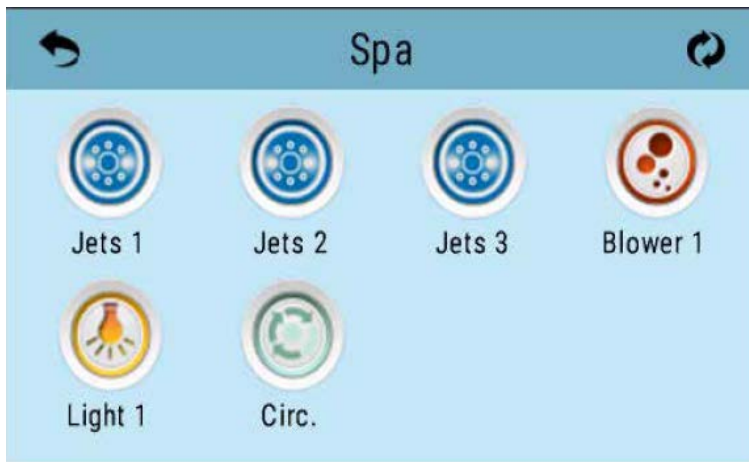
Freeze Protection

To prevent water freezing inside of the spa water lines and pumps, the sensors will detect drops in water temperature inside of the spa. The pump(s) will purge and run on max speed to circulate water inside of the spa to prevent the creation of ice. During cold/freezing weather it is recommended to keep the spa around 80°F, filled up, and operating during the colder months. The insulation inside of the spa and the spa cover, will help retain heat inside of the spa. Although you can follow the winterization procedure inside of this manual, this does not guarantee against ice damage inside of the spa.

Pumps will run continuously or intermittently depending on the conditions and ambient temperature.

Ozonators

If your spa is equipped with an ozone generator, the ozone generator will operate during filtration cycles. Ozone generators help breakdown organic materials suspended inside of spa water, reducing odors and assists your sanitizers effectiveness.



Pump Speed Indicator



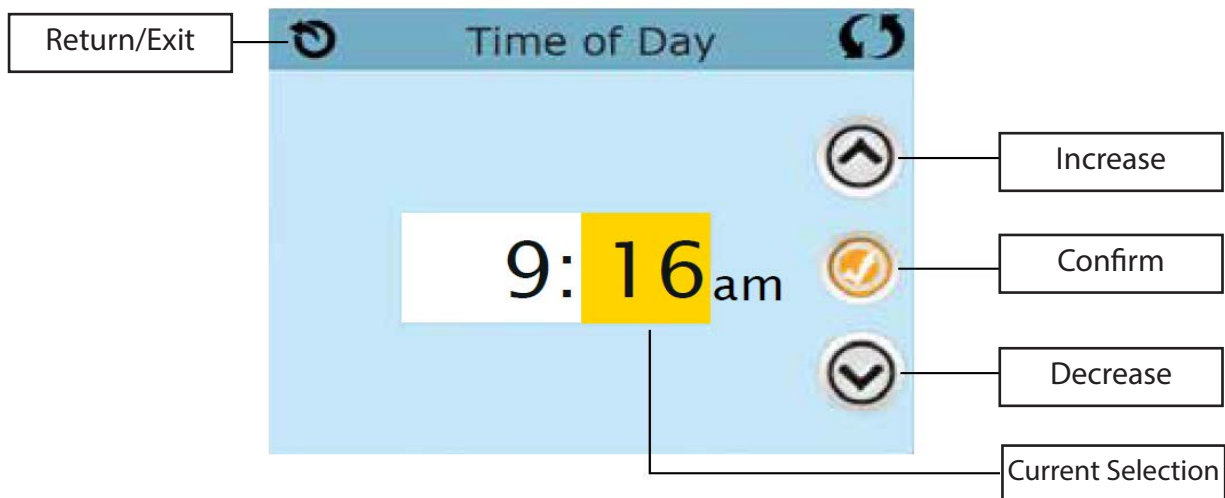
Fig. 1-01

The spa screen shows all available equipment to control based on your spa options. The icons shown in this screen may vary based on the number of pumps or additional options the spa is equipped/ordered with.

Some pumps have more than one speed, indicated by Figure 1-01, some spas have only one dual speed pump, and others can be equipped with one dual speed pump with additional single speed pumps.

If your spa was equipped with a circulation pump (24hr filtration system), the spa control screen will show if the circulation pump is active, but this pump will not be able to be controlled through the panel.

Navigation and Selection



As you navigate through screens you can confirm what options are active or inactive by looking at the small check-mark icons within the selected page.



**Active Save
Button**

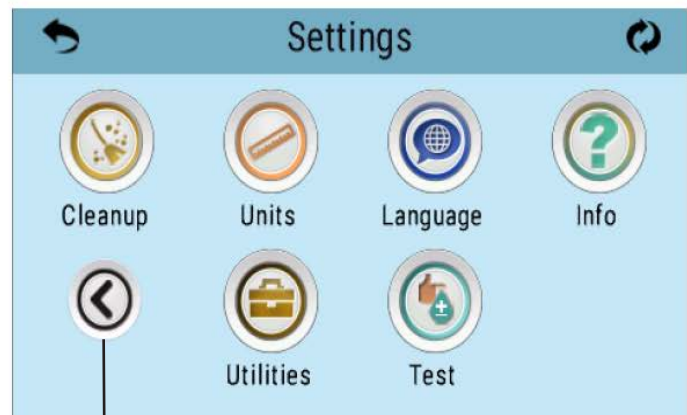


**Inactive Save
Button**

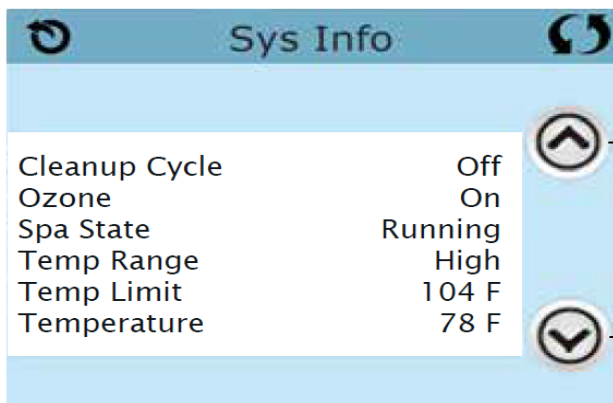
Page Left | Page Right : Certain menus contain more than one page to access all options. Use the navigation arrows as illustrated bellow to move page to page



Next Page



Previous Page



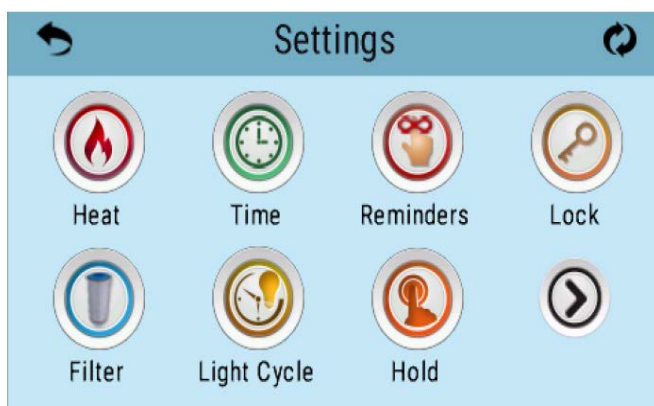
Line/Page Up

Line/Page Down

Similarly you will press these arrows to navigate up and down.

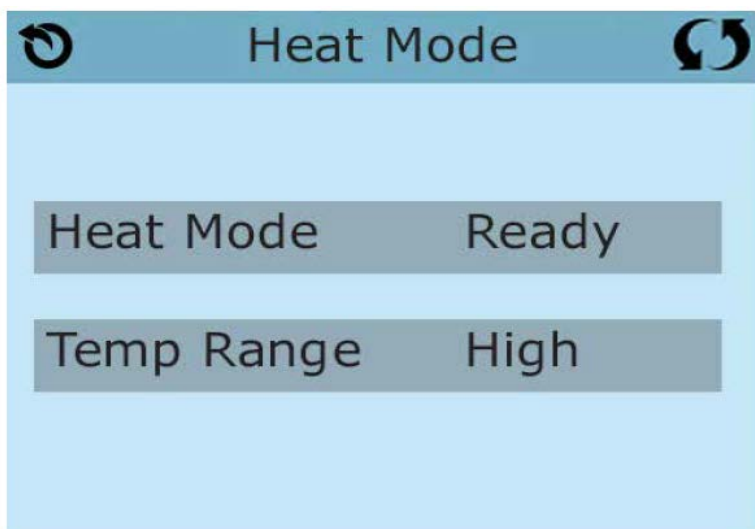
Depending on the screen these arrow icons can be used to change values or to navigate through the screen.


The Settings Screen



The settings screen is where all programming and certain spa operations are controlled. Each icon leads to a sub menu that can toggle specific parameters that fall under the mentioned option.

Dual Temperature Ranges



By pressing the  icon you will be able to access and control the heat range and heat mode of your spa.

Heat Modes:

Your spas heating system activates whenever the temperature falls below the set spa temperature, this is called "Ready" Mode.

To maximize energy efficiency and lower costs most spa owners will run high power demand operations such as filtration cycles in the evening or night, when energy costs are lower. You can also set the spas heater to only activate during its filtration cycle, this is called "Rest" Mode.

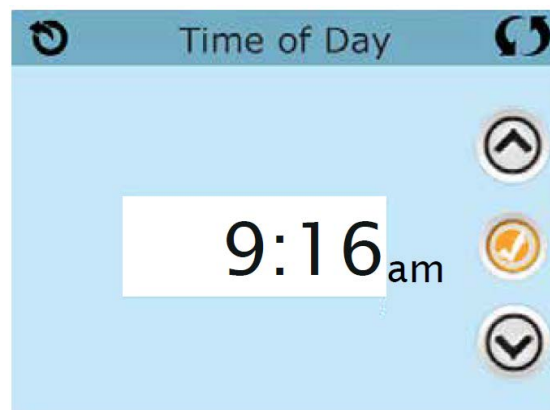
Ready in Rest Mode

In some spa models when the spa is programmed for rest mode and a jet button is pressed, the heater will kick on automatically. The heater will run for about 1 hour after a jet or pump is activated to maintain the heat of the spa while it is in use. Ideally its best to run a 3-4hr filter cycle at night when energy costs are lowest, allowing enough time for the spa to heat up during its filtration. This allows Ready in Rest mode to accommodate for small drops in temperature throughout the day.

Note: Always use your insulated spa cover to maintain the temperature within your spa.

Setting the Time of Day

It is important to set the time within your spa control system. Setting the proper time within your spa allows you to have better control of your filtration system and accurate reminder notifications. As long as the power to the spa remains active, the internal clock will display the correct time. Keep in mind that the spas control system does not account for daylight savings time, and will need to be manually adjusted.

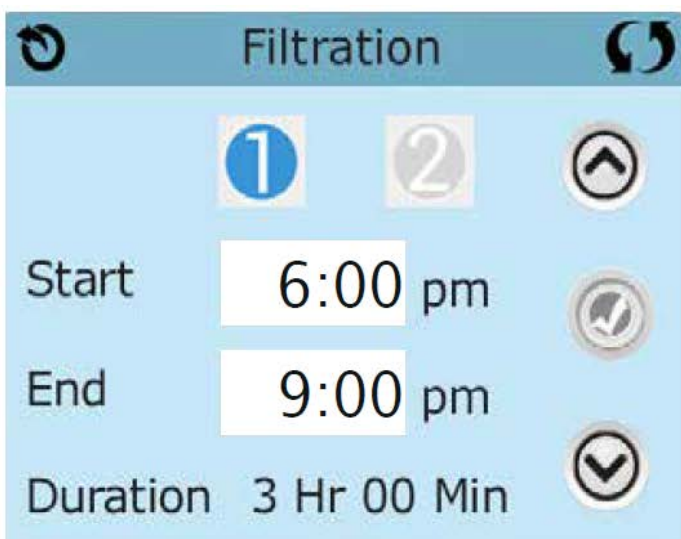
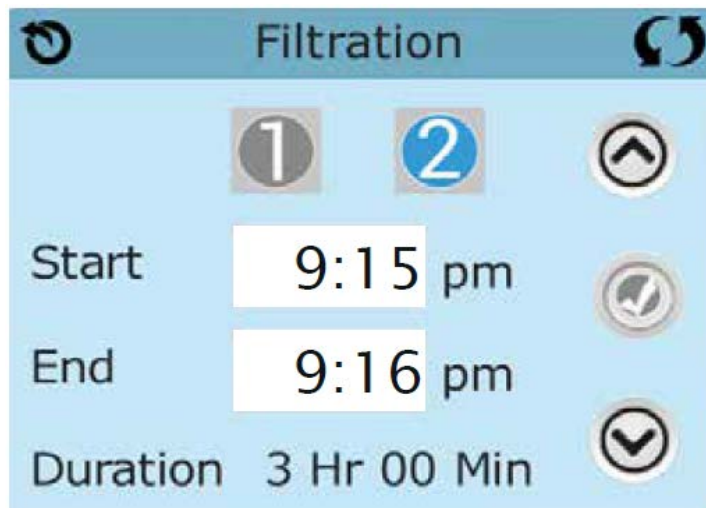


Message Code: 40

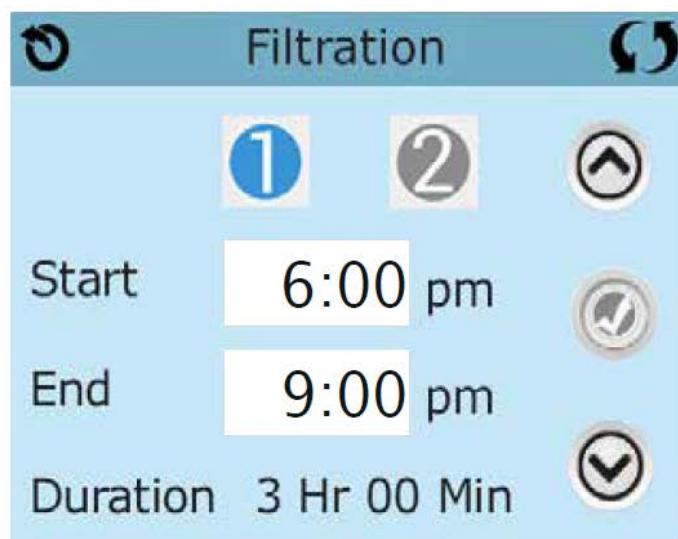
Whenever the power to your spa is interrupted or an electrical fault occurs, the internal clock will reset. This error also occurs when the spa is powered on for the first time.

Adjusting Filtration

Filter Cycles are very important in maintaining water clarity within your spa. Each setting can be adjusted by increments of 15 minutes. Most spa owners are able to maintain water clarity with a total of 3-4 hours of filtration per day. Your spa is able to have two separate filter cycle times based on your spa usage. By default filtration 1 is active, you can activate the second cycle by tapping the "2" icon and setting a time, confirmed with the checkmark on the right side of the screen. To maintain optimal filtration, make sure you perform regular maintenance on your filter cartridge. **Systems with a 24hr circ pump must set the start time from 12pm to 12am to activate the circ pump features.**



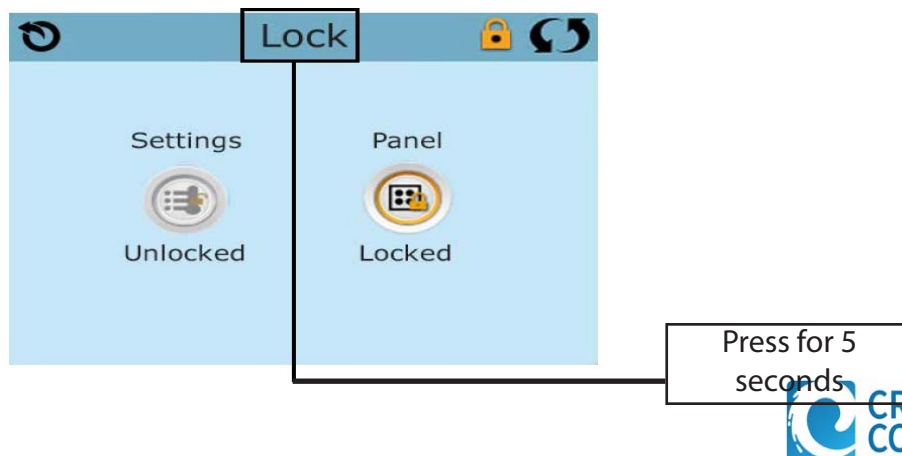
Viewing Filter 1 while Filter 2 is OFF:




Viewing Filter 1 while Filter 2 is ON:

Panel Locking/Unlocking

You can restrict panel operation to prevent unwanted modifications to your spa settings, or spa operation. To lock either the panel or the settings select the settings tab, and press the "Lock" icon. The panel will show two icons, representing panel and settings. You may choose which kind of restrictions you want to activate. locking settings will restrict access to the spas settings, activating panel lock will restrict all spa panel operations. If you wish to unlock the display, place your finger on the top where the words "Lock" appear, hold your finger for about 5 seconds and the panel will unlock to its regular operations.



Utilities

The Utilities icon  on the settings screen will take you to the Utilities screen. This screen contains several options that can modify the operation of the touch panel, as well as testing tools and the spa fault logs.

Panel

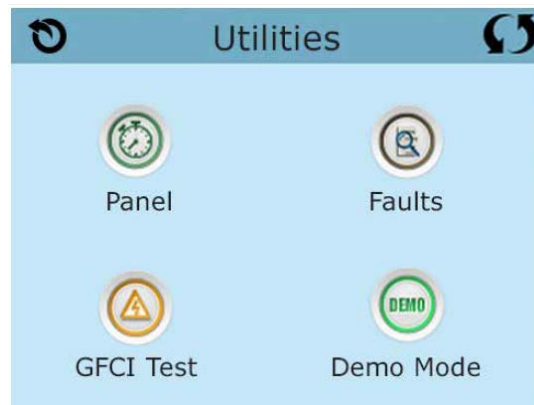
Selecting the Panel icon allows you to choose the duration of time that the control panel remains activated before entering back into sleep mode. The display can remain active between an interval of 1 min to 60 min.

Demo Mode

Demo Mode is not always active, so it may not appear, this mode is designed to operate several spa features/devices in sequence. This mode is intended to showcase the various features of the spa.

Fault Log

The spas control system has an internal memory to keep track of any fault codes or messages that are generated. The fault log stores the last 24 error codes generated by the system. This includes normal operation codes and actual fault codes. For example "Priming Mode" will appear in the fault log but it is not a fault, it is a code that is used to keep track of when the spa restarts. Having codes like this appear in the fault log allows for better troubleshooting, by allowing technicians to see the spas entire code history to observe normal spa operations.



GFCI Test

This feature only exists with models sold in North America.

You are able to test the GFCI circuit connected to your spa through this feature to ensure that your GFCI is properly grounded and able to handle a surge or ground failure.

- Manual GFCI Test is enabled in this system
- GFCI test will not appear on your screen if its not enabled, with 120V systems this feature may not be enabled since there is a tested physical GFCI connected to 120V spas.

Additional Settings

Units

The units screen allows you to change the units of the display from either imperial inches or Metric

Reminders

The reminders icon takes you to the reminders screen. Choosing to have reminders activated will allow you to get maintenance reminders on the display of your spa. This can range from reminders to perform filter maintenance or to remind you to change the spa water if needed. These reminders are based off of common water intervals, some reminders may recommend a task that may not be necessary based on your spa usage.

Note: The only way to properly maintain your spa is by regular maintenance and spa water testing.

Clean Up Cycle

Your spa will start a clean up cycle every time after you activate the pump or spa lights. The duration of the clean up cycle can be changed based on your spa usage. For example the spa normally performs a 30 minute clean up cycle after use, if you tend to use this spa with a heavy bather load (more than 2 people), it would be a good idea to increase the amount of time the clean up cycle operates for.

You may also disable this feature by setting the time to 0.0

General Messages & Heater-Related Messages

Water is too hot - M029

The system has detected water temp of 110°F (43.3°C) or more, spa functions are disabled. The system will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.

Water flow is low - M016

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater will attempt to start up again after 1 minute. Correct any water flow restrictions.

Water flow has failed - M017

There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. After the problem has been resolved, reset the message.

The heater may be dry - M028

Possible dry heater, or not enough water in the heater to start it. Shut down the spa for 15 min to reset this message. Call for service if this message does not clear, as there could be an issue with your sensors or your spa pumps.

The heater is dry - M027

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must reset the message* to restart heater start up.

The heater is too hot - M030

This code occurs when, one of the water temp sensors has detected 118°F (47.8°C) in the heater. When this happens the spas current operations will shut down. You must reset the message, and this message will not reappear, when the water in the heater is below 108°F (42.2°C).

Sensor-Related Messages

Sensors are out of sync - M015

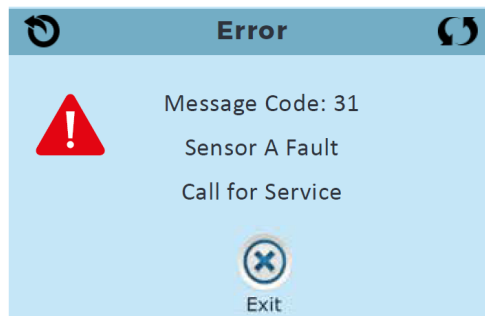
When this error code appears, the temperature sensors may be out of sync by 3°F. Call your dealer for service, if this message does not disappear within a few minutes.

Sensors are out of sync - M026

This code is specific to when the system has detected a consistent temperature difference between the sensors of 3°F or more. Contact your spa dealer for service.

Sensor A/B Fault - M031/M032

Either temperature sensor A, B, or both have failed due to a circuit failure. Call your spa dealer for service.



Sensor-Related Messages

Communications Error

The control panel is not receiving communications from the control system, call your spa dealer for service.

Test software installed

The control system is operating with test software. Contact your spa dealer for service or to reformat the unit.

System-Related Messages

Settings have been reset - M021

Contact of spa dealer if this message appears on more than one power up. This could be an internal memory issue.

The clock has failed - M020

The internal clock in your control system has failed. Contact your spa dealer for service.

GFCI Test has failed - M036

Indicates the failure of an automated GFCI self test. This highlights a possible issue with your spas GFCI electrical circuit.

A pump may be stuck on M034

Indicates the failure of an automated GFCI self test. This highlights a possible issue with your spas GFCI electrical circuit.

Hot fault - M035

A pump is possibly in a stuck on position when the spa was last powered on. Meaning the electrical switch controlling the pump is stuck in the on position, ignoring the switch off command. DO NOT ENTER THE SPA, DO NOT ENTER THE WATER. Contact your spa dealer for service.

Reminder Messages

Check the PH

May appear on a regular schedule, i.e. every 7 days. Check pH with a test kit and adjust pH with the appropriate chemicals.

Check the sanitizer

May appear on a regular schedule, i.e. every 7 days. Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.

Clean the filter

May appear on a regular schedule every 30 days. Rinse the filter cartridge out and gently reinstall.

Test the GFCI

May appear every 30 days. The GFCI is an important safety device that should be tested to verify its reliability.

Change the water

May appear every 90 days. A general recommendation of draining the spa and using new water to ensure water clarity and proper sanitation. This interval is dependent on spa usage and bather load, this interval might be shorter or longer. Spas with heavy usage may require a water change every 30-60 days, and spas with minimal usage may require a water change every 90-120 days.

Clean the cover

May appear every 180 days. This reminder is to remind you to clean your vinyl spa cover, and treat the vinyl cover with a spa UV protectant. This will ensure maximum life of your spa cover.

Change the UV

May appear on a regular schedule. The UV light may need to be changed, contact your spa dealer for service.

Change the filter

May appear on a regular schedule every 365 days. Filters when properly maintained should be changed out every 365 days to maintain proper sanitation.

Check ozone

May appear on a regular schedule. If your spa is equipped with an ozone system, it is recommended to inspect the ozone generator once a year for proper operation.

Service check - up

May appear on a regular schedule. **This does not indicate that the spa is encountering a problem.** This is just a reminder to inspect the operation of your spa and to contact your spa dealer or the manufacture if anything is not operating as designed.

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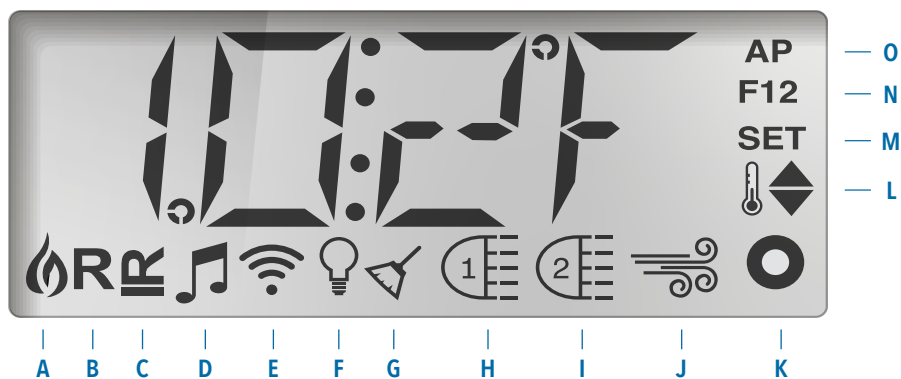
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Control Panel Operation

Your Crystal Cove spa is equipped with a standard button controller, this controller is used for both single pump spas and dual pump spas.



Display Icon Legend



A - Heat	F - Light	K - Auxiliary (Jets 3 or MICRO SILK®)
B - Ready Mode	G - Cleanup Cycle	L - Temperature Range (High / Low)
C - Rest Mode	H - Jets 1	M - Set (Programming)
D - bba™2 On	I - Jets 2	N - Filter Cycle (1 or 2 or Both)
E - WiFi (Cloud Connection)	J - Blower	O - AM or PM (Time)

Menu Navigation

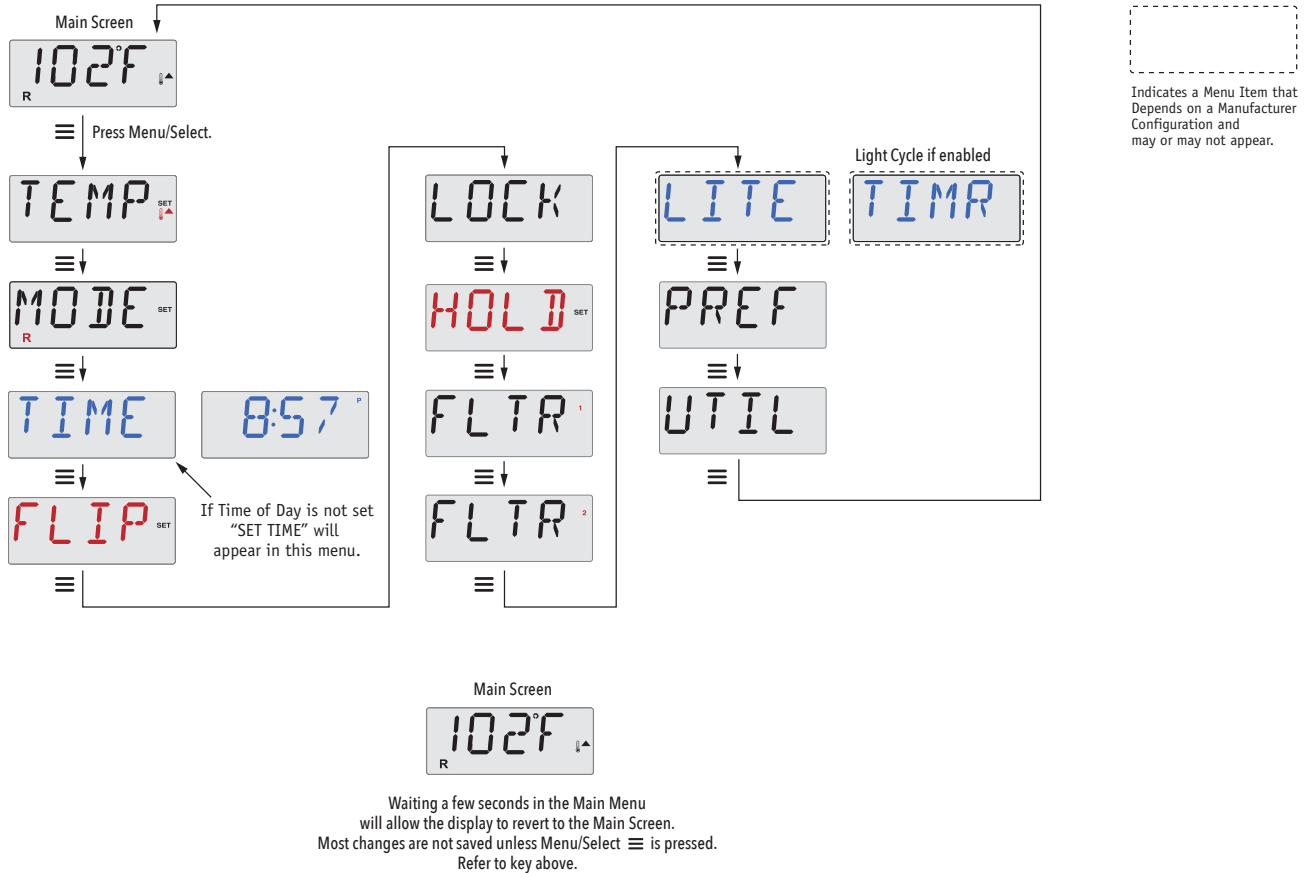
Power-up Screens

Each time the System powers up, a series of numbers is displayed.
After the startup sequence of numbers, the system will enter Priming Mode (See Page 3).

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- 3 A temperature button, used for "Action"
- ≡ Menu/Select button

- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Initial Power Up

Priming Mode - MO19*

This mode will last for 4-5 minutes or you can manually exit the priming mode after the pump(s) have primed.



Regardless of whether the priming mode ends automatically or you manually exit the priming mode, the system will automatically start normal heating and filtering at the end of the priming mode. 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 pushing the "Jets" or "Aux" buttons.

If the spa has a Circ Pump, it can be activated by pressing the "Light" button during Priming Mode.

Temperature and Temp Range

Adjusting the Set Temperature

When using a panel with Up and Down buttons (Temperature buttons), pressing Up or Down will cause the temperature to flash. Pressing a temperature button again will adjust the set temperature in the direction indicated on the button. When the LCD stops flashing, the spa will heat to the new set temperature when required.

If the panel has a single temperature button, pressing the button will cause the temperature to flash. Pressing the button again will cause the temperature to change in one direction (e.g. UP). After allowing the display to stop flashing, pressing the Temperature Button will cause the temperature to flash and the next press will change the temperature in the opposite direction (e.g. DOWN).

Press-and-Hold

If a Temperature button is pressed and held when the temperature is flashing, the temperature will continue to change until the button is released. If only one temperature button is available and the limit of the Temperature Range is reached when the button is being held, the progression will reverse direction.

Dual Temperature Ranges

This system incorporates two temperature range settings with independent set temperatures. The High Range designated in the display by a thermometer and an “up” arrow, and the Low Range designated in the display by a thermometer and “down” arrow.

These ranges can be used for various reasons, with a common use being a “ready to use” setting vs. a “vacation” setting. The Ranges are chosen using the menu structure below. Each range maintains its own set temperature as programmed by the user. This way, when a range is chosen, the spa will heat to the set temperature associated with that range.

For example:

High Range might be set between 80°F and 104°F.

Low Range might be set between 50°F and 99°F.

More specific Temp Ranges may be determined by the Manufacturer.

Freeze Protection is active in either range.

Key

■ Indicates Flashing or Changing Segment

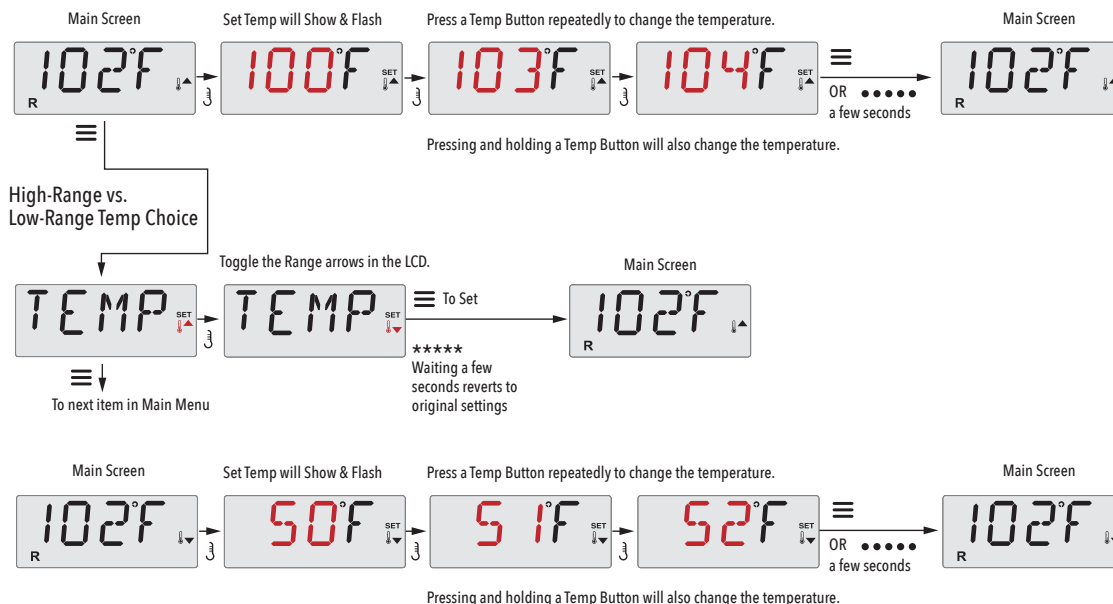
■ Indicates Alternating or Progressive Message - every 1/2 second

⏏ A temperature button, used for “Action”

≡ Menu/Select button

••••• Waiting time that keeps the last change to a menu item.

***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Heat Modes, Ready & Rest

In order for the spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the "primary pump."

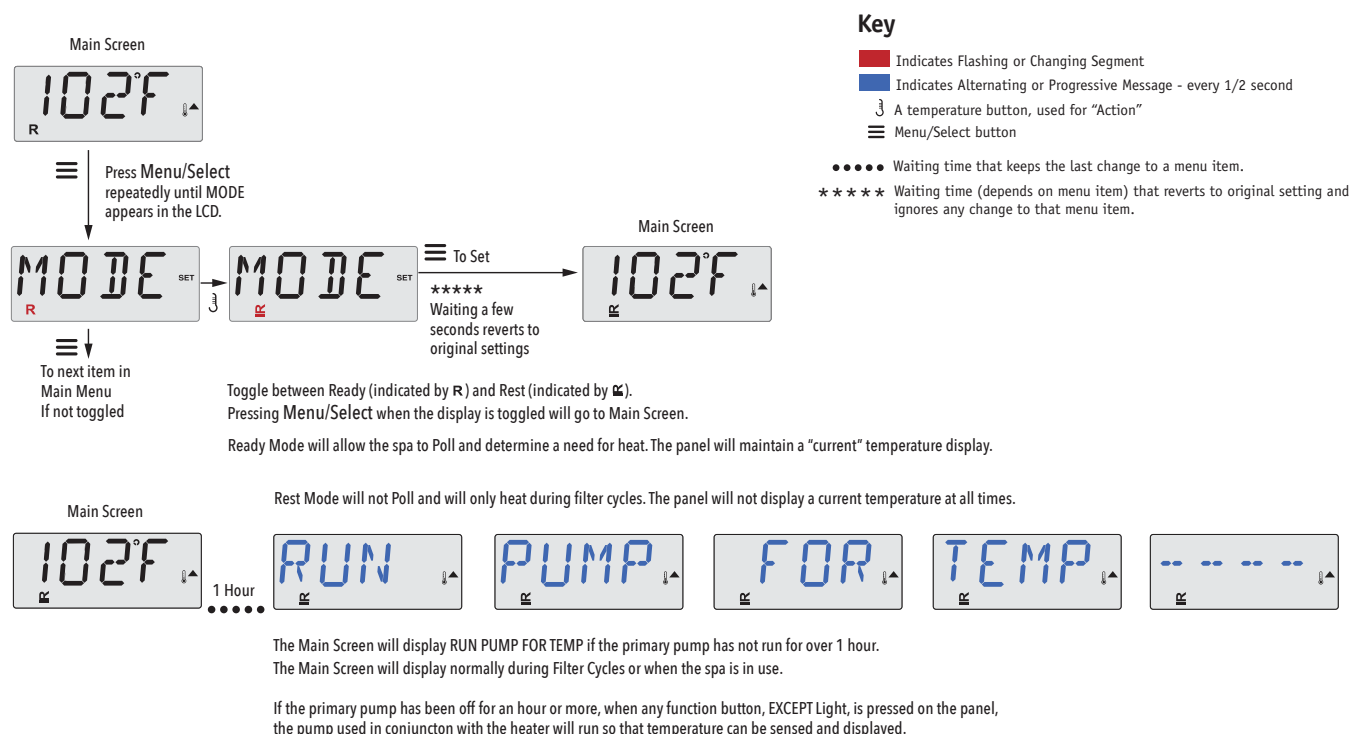
The primary pump can be either a 2-Speed Pump 1 or a circulation pump.

If the primary pump is a 2-Speed Pump 1, Ready Mode (indicated by **R**) will circulate water periodically, using Pump 1 Low, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as "polling."

Rest Mode (indicated by **R**) will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the primary pump has been running for a minute or two.

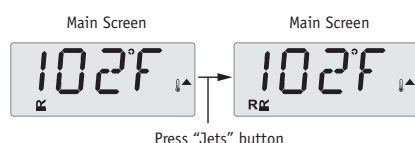
If the spa is configured for 24HR circulation, the primary pump generally runs continuously. Since the primary pump is always running, the spa will maintain set temperature and heat as needed in Ready Mode, without polling.

In Rest Mode, the spa will only heat to set temperature during programmed filter times, even though the water is being filtered constantly when in Circulation Mode.



Ready-in-Rest Mode

R **R** appears in the display if the spa is in Rest Mode and "Jets" is pressed. It is assumed that the spa is being used and will heat to set temperature. The primary pump will run until set temperature is reached, or 1 hour has passed. After 1 hour, the System will revert to Rest Mode. This mode can also be reset by entering the Mode Menu and changing the Mode.



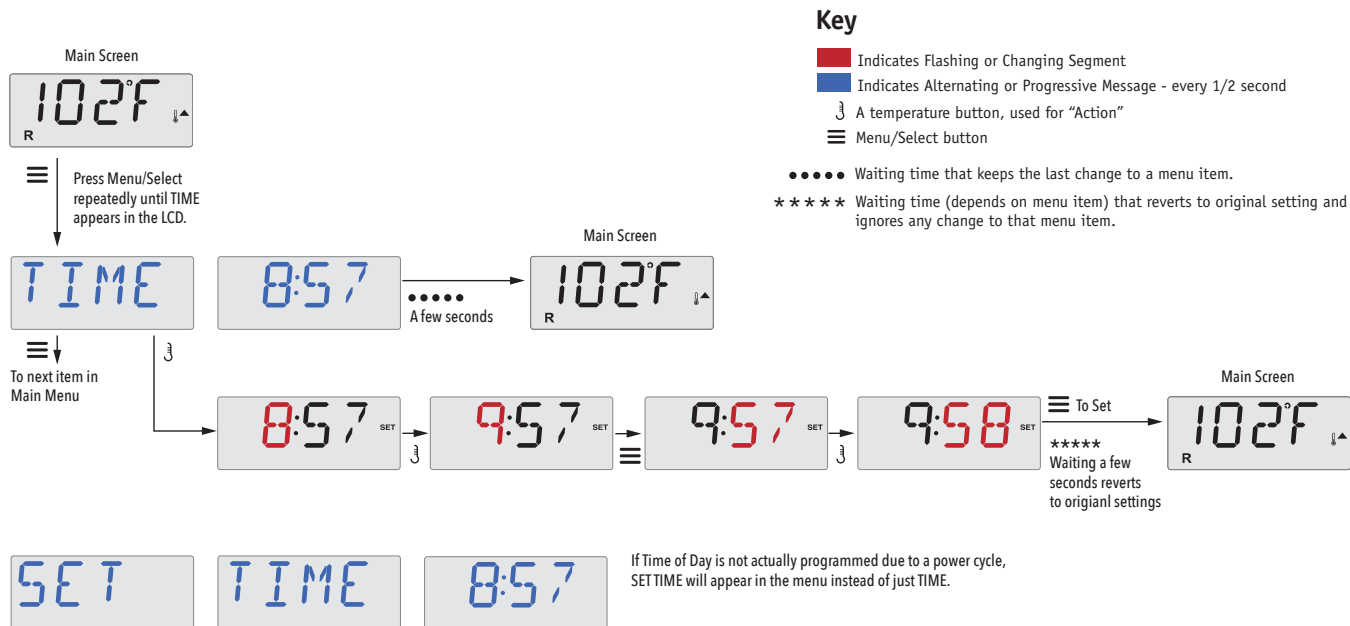
Setting the Time of Day

Be sure to set the Time-of-Day

Setting the time-of-day can be important for determining filtration times and other background features.

When in the TIME menu, SET TIME will flash on the display if no time-of-day is set in the memory. 24-hour

time display can be set under the PREF menu.



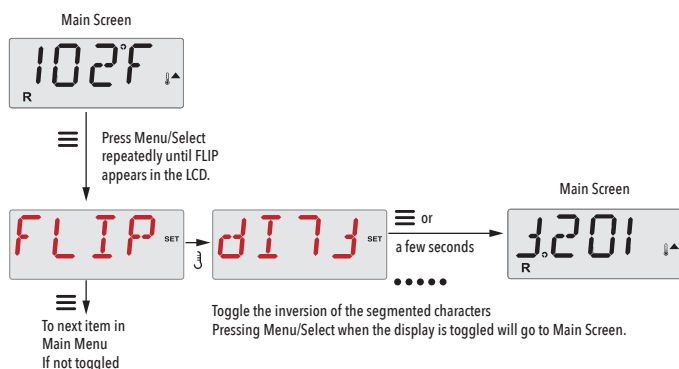
Note:

This note refers to systems that do not keep track of Time-of-Day when powered down.

If power is interrupted to such a system, Time-of-Day is not stored. The system will still operate and all other user settings will be stored. If filter cycles are required to run at a particular time of day, resetting the clock will return the filter times to the actual programmed periods.

When such a system starts up, it defaults to 12:00 Noon, so another way to get filter times back to normal is to start up the spa at noon on any given day. SET TIME will still flash in the TIME Menu until the time is actually set, but since the spa started at noon, the filter cycles will run as programmed.

Flip Display (Invert)





Adjusting Filtration

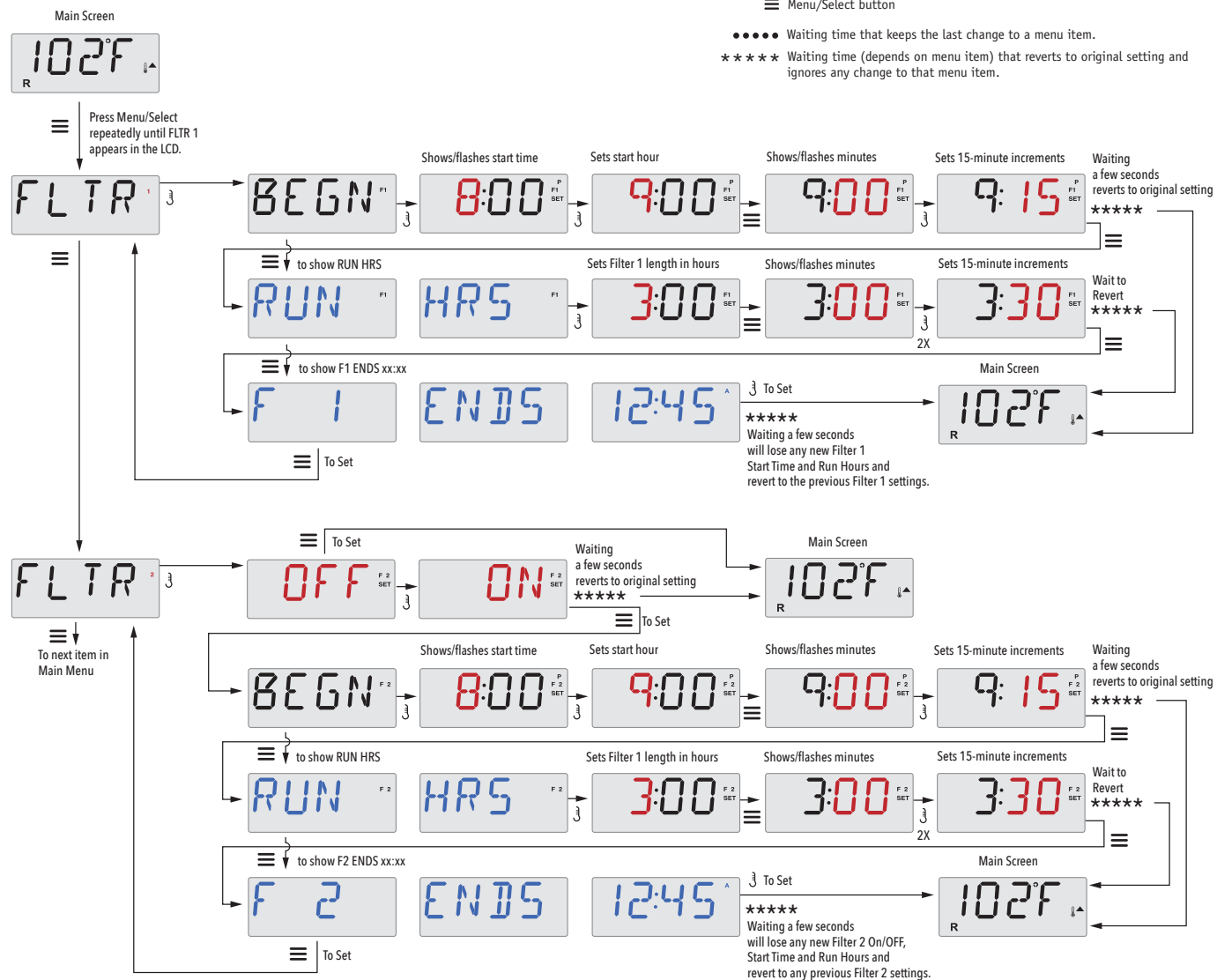
Main Filtration

Filter cycles are set using a start time and a duration. Start time is indicated by an "A" or "P" in the bottom right corner of the display. Duration has no "A" or "P" indication. Each setting can be adjusted in 15-minute increments. The panel calculates the end time and displays it automatically.

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Menu/Select button

- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Filter Cycle 2 - Optional Filtration

Filter Cycle 2 is OFF by default.

It is possible to overlap Filter Cycle 1 and Filter Cycle 2, which will shorten overall filtration by the overlap amount.

Purge Cycles

In order to maintain sanitary conditions, secondary Pumps and/or a Blower will purge water from their respective plumbing by running briefly at the beginning of each filter cycle.

If Filter Cycle 1 is set for 24 hours, enabling Filter Cycle 2 will initiate a purge when Filter Cycle 2 is programmed to begin.

Panel Lock/Restriction

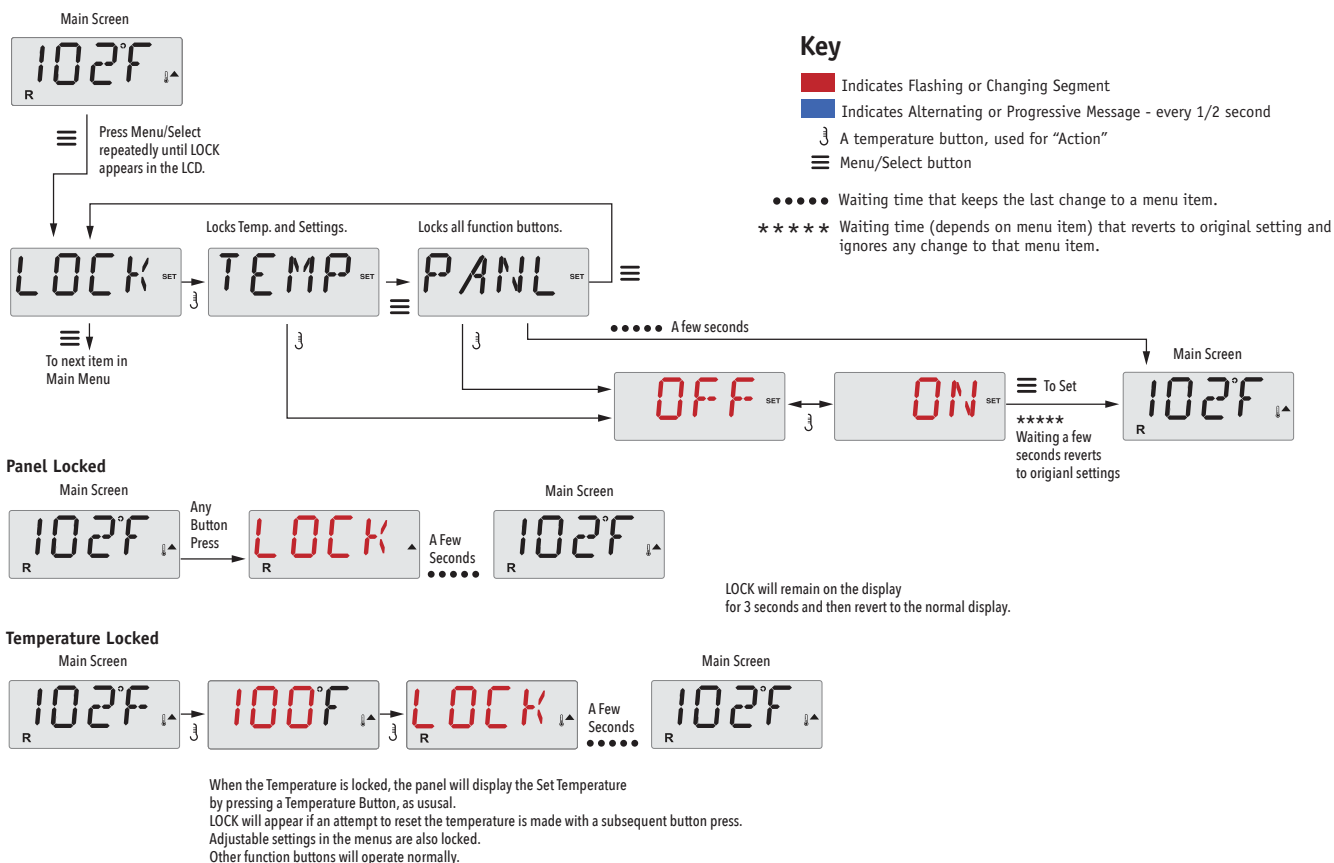
The control can be restricted to prevent unwanted use or temperature adjustments.

Locking the panel prevents the controller from being used, but all automatic functions are still active.

Locking the Temperature allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

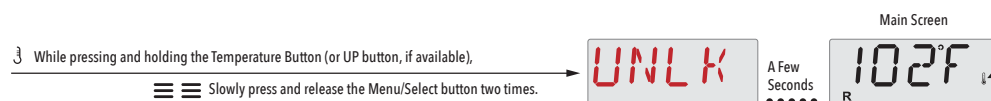
Temperature Lock allows access to a reduced selection of menu items.

These include Set Temperature, FLIP, LOCK, UTIL, INFO and FALT LOG.



Panel Unlock

This Unlock sequence may be used from any screen that may be displayed on a restricted panel.



NOTE: If the panel has both an UP and a Down button, the ONLY button that will work in the Unlock Sequence is the UP button.

The temperature will not Unlock if the Unlock sequence is done while the panel is displaying "LOCK".

Pump Hold (Standby)

Hold Mode –MO37*

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.





Drain Mode

Some spas have a special feature that allows a pump to be employed when draining the water.

When available, this feature is a component of Hold Mode.

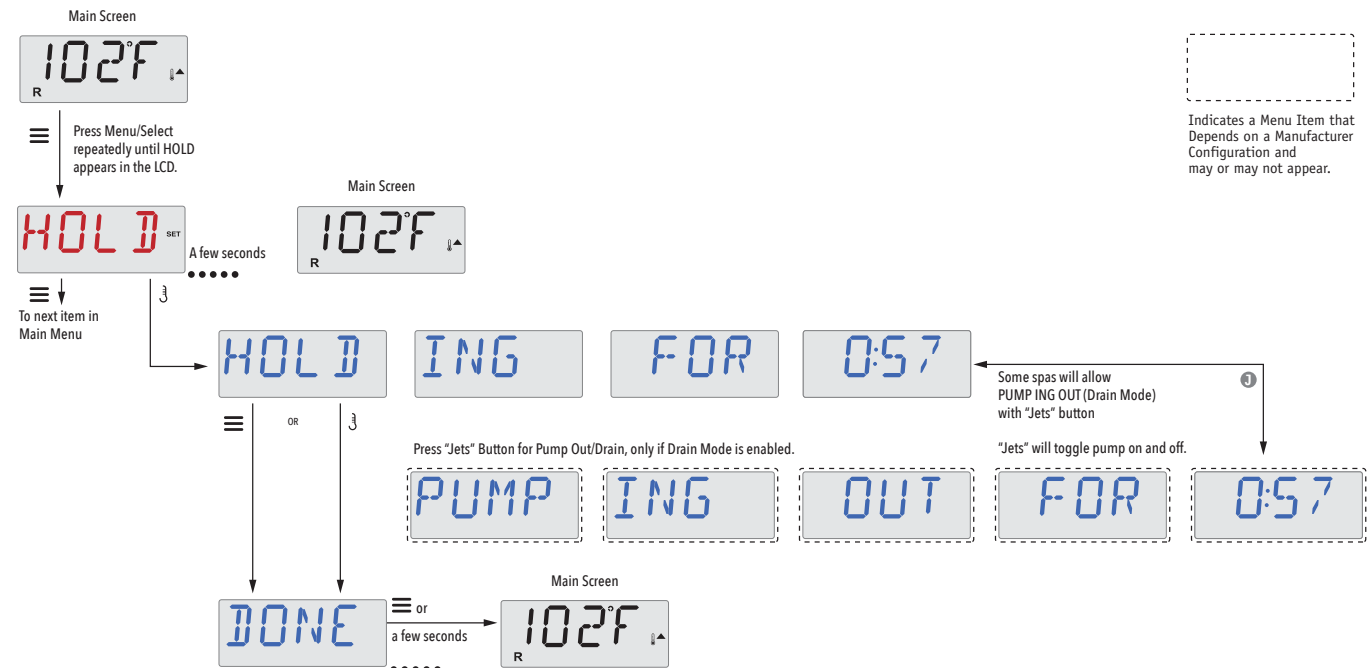
Drain Mode will time out with Hold Mode.

Key

-  Indicates Flashing or Changing Segment
-  Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Menu/Select button

..... Waiting time that keeps the last change to a menu item.

***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Preferences

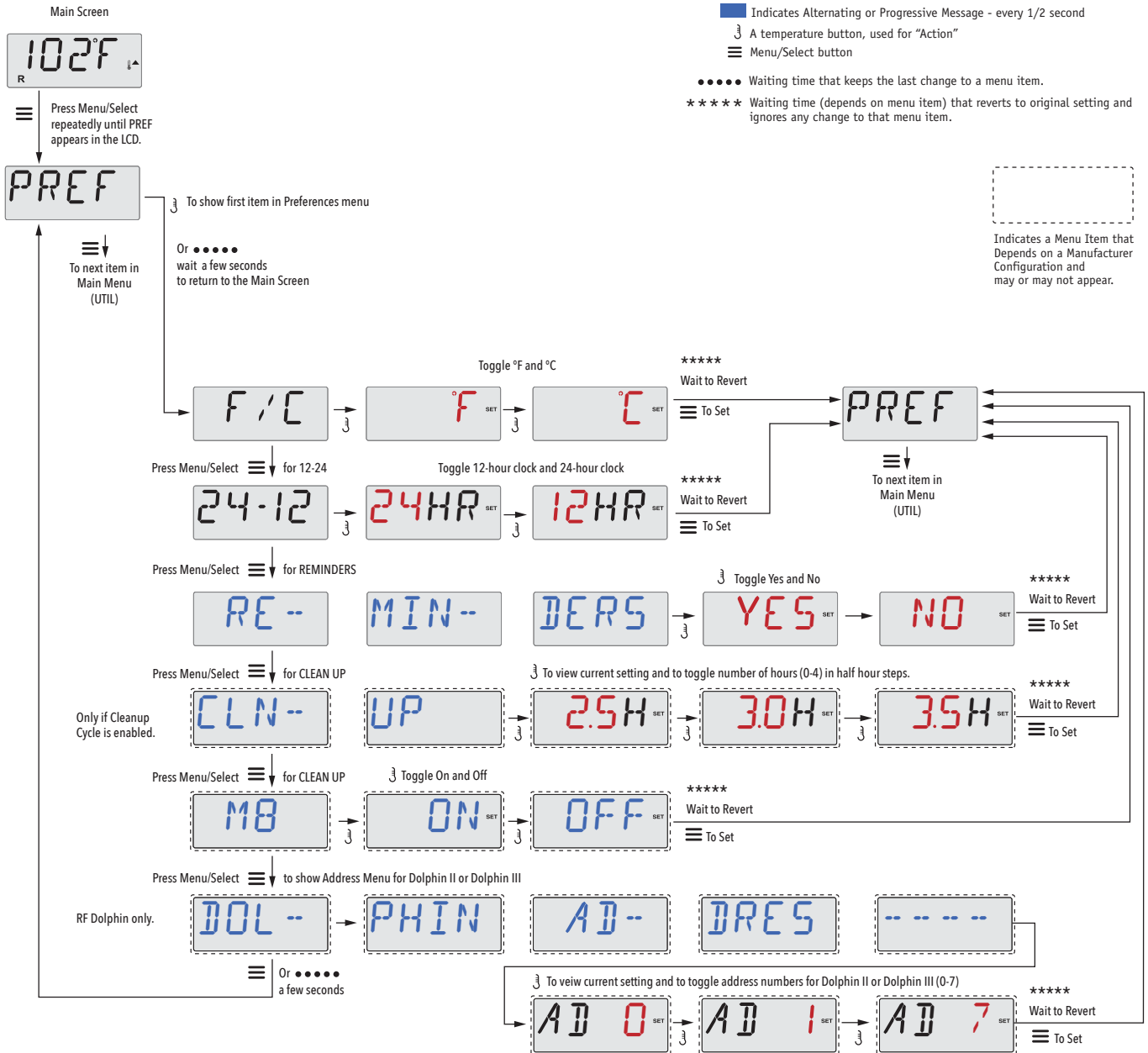
Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ⏸ A temperature button, used for "Action"
- ≡ Menu/Select button



••••• Waiting time that keeps the last change to a menu item.

***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.

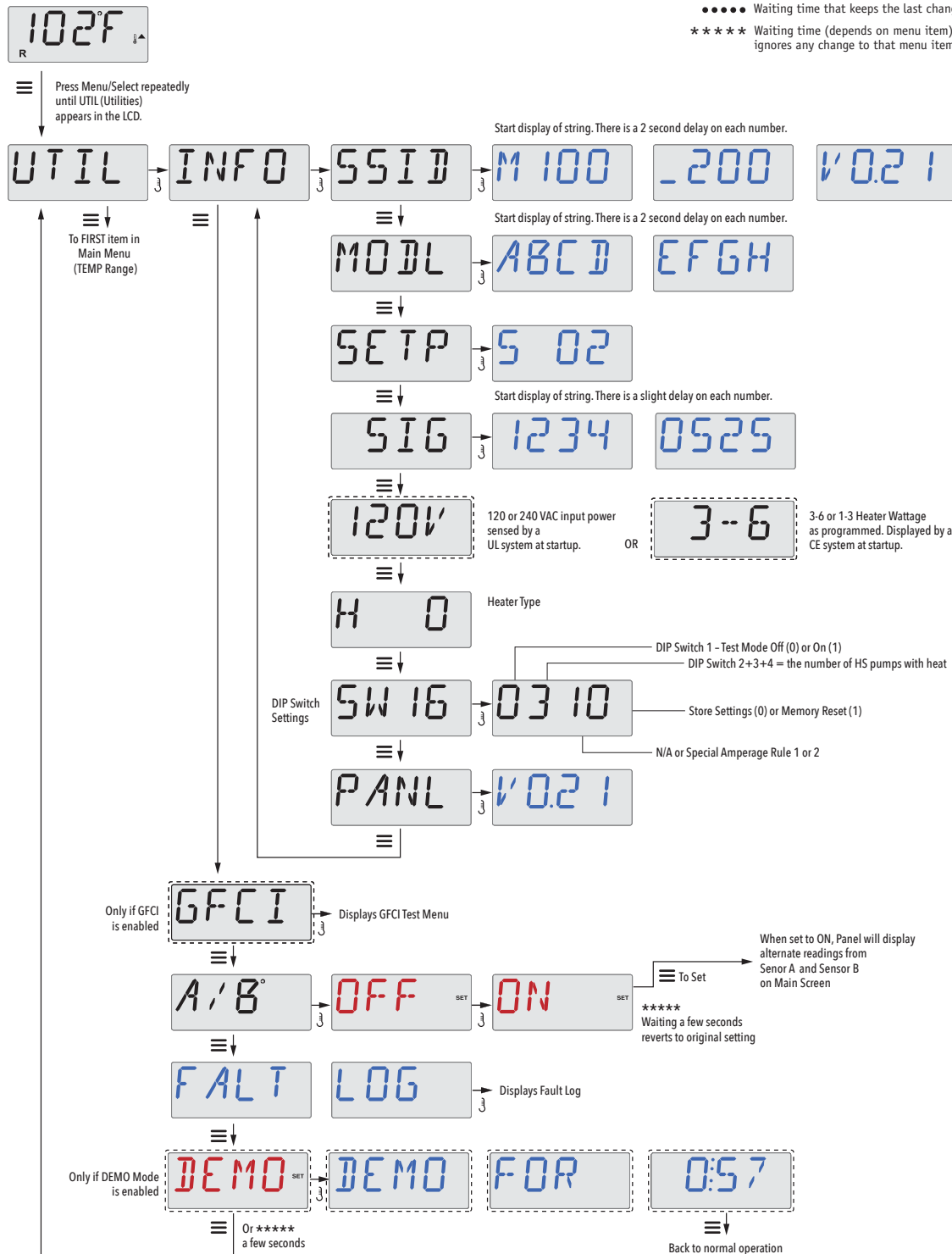
Indicates a Menu Item that Depends on a Manufacturer Configuration and may or may not appear.



Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Menu/Select button

- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



These strings will display once and return to the beginning. Press Temperature again to display the string again.

..... Waiting 10 seconds will allow the screen to return to normal operation.

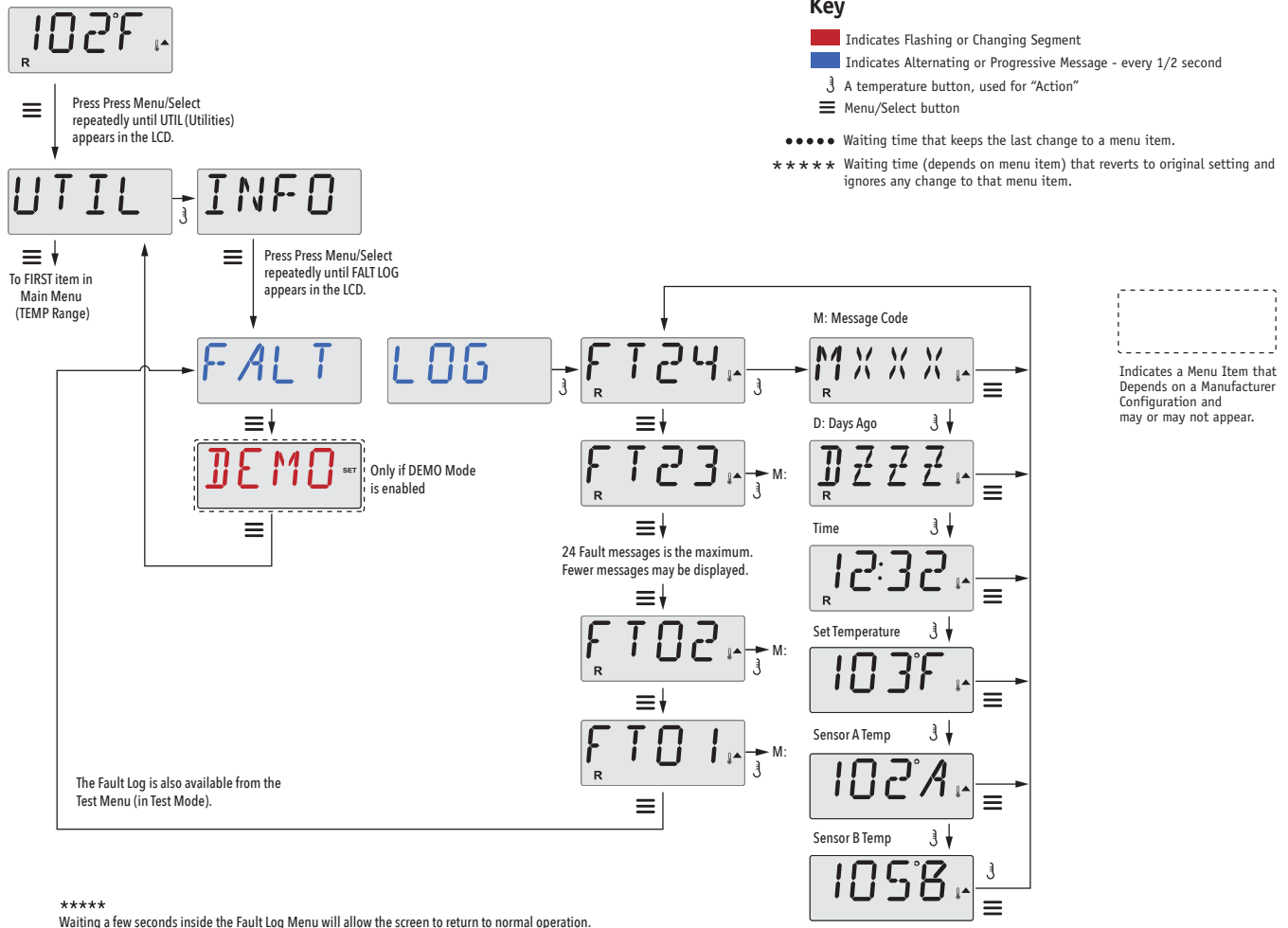
Indicates a Menu Item that Depends on a Manufacturer Configuration and may or may not appear.

Utilities & Fault Logs

A Little History can tell a lot

The Fault Log stores up to 24 events in memory and they can be reviewed under the Fault Log Menu.

Each event captures a Fault Message Code, how many days have passed since the fault, Time of the fault, Set Temperature during the fault, and Sensor A and B temperatures during the fault.



General Messages



Priming Mode – MO19

Each time the spa is powered up, it will enter Priming Mode. The purpose of Priming Mode is to allow the user to run each pump and manually verify that the pumps are primed (air is purged) and water is flowing. This typically requires observing the output of each pump separately, and is generally not possible in normal operation. Priming Mode lasts 4 minutes, but you can exit it earlier by pressing any Temp button. The heater is not allowed to run during Priming Mode.

NOTE: If your spa has a Circ Pump, it will turn on with "Light" in Priming Mode. The Circ Pump will run by itself when Priming Mode is exited.



Water Temperature is Unknown

After the pump has been running for 1 minute, the temperature will be displayed.



Too Cold - Freeze Protection

A potential freeze condition has been detected, or the Aux Freeze Switch has closed, and all pumps and blower are activated, either one at a time, or all at once, depending on how your system was built. All pumps and blower are ON for at least 4 minutes after the potential freeze condition has ended, or when the aux freeze switch opens.

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.



Water is too Hot (OHS) – MO29

One of the water temp sensors has detected spa water temp 110°F (43.3°C) and spa functions are disabled. System will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.



J29 Warning – MO44

J29 is typically used as a Heater Disable input. As such, it should not typically be shorted at power-up. This message appears if J29 is shorted at power-up.

Heater Related Error Codes



Heater Flow is Reduced (HFL) – MO16

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.



Heater Flow is Reduced (LF)* – MO17

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, you must press any button to reset and begin heater start up.



Heater may be Dry (dr)* – MO28

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Press any button to reset the heater start-up. See “Flow Related Checks” below.



Heater is Dry* – MO27

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must press any button to reset and restart heater start up. See “Flow Related Checks” below.



Heater is too Hot (OHH)* – MO30

One of the water temp sensors has detected 118°F (47.8°C) in the heater and the spa is shut down. You must press any button to reset when water is below 108°F (42.2°C). See “Flow Related Checks” below.



A Reset Message may Appear with other Messages.

Some errors may require power to be removed and restored.

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, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

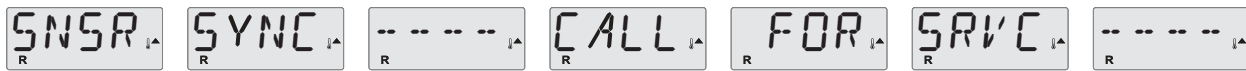
* This message can be reset from the topside panel with any button press.

Sensor Related Codes



Sensor Balance is Poor – MO15

The temperature sensors MAY be out of sync by or 3°F. Call for Service.



Sensor Balance is Poor* – MO26

The temperature sensors ARE out of sync. The Sensor Balance is Poor fault has been established for at least 1 hour. Call for Service.



Sensor Failure – Sensor A: MO31, Sensor B: MO32

A temperature sensor or sensor circuit has failed. Call for Service.

Miscellaneous Codes/Messages



No Communications

The control panel is not receiving communication from the System. Call for Service.



Pre-Production Software

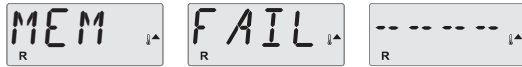
The Control System is operating with test software. Call for Service.



°F or °C is replaced by °T

The Control System is in Test Mode. Call for Service.

Miscellaneous Codes/Messages



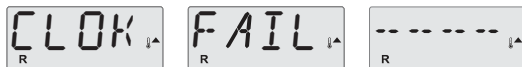
Memory Failure - Checksum Error* – MO22

At Power-Up, the system has failed the Program Checksum Test. This indicates a problem with the firmware (operation program) and requires a service call.



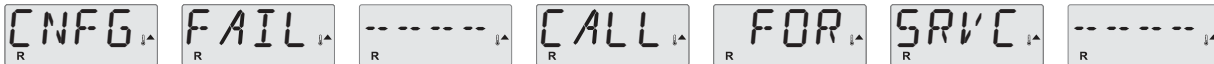
Memory Warning - Persistent Memory Reset* – MO21

Appears after any system setup change. Contact your dealer or service organization if this message appears on more than one power-up, or if it appears after the system has been running normally for a period of time.



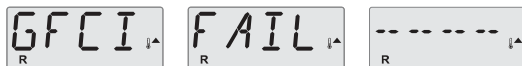
Memory Failure - Clock Error* – MO20 - Not Applicable on the BP1500

Contact your dealer or service organization.



Configuration Error – Spa will not Start Up

Contact your dealer or service organization.



GFCI Failure - System Could Not Test/Trip the GFCI – MO36

NORTH AMERICA ONLY. May indicate an unsafe installation. Contact your dealer or service organization.

Operation Related Codes/Messages



A Pump Appears to be Stuck ON – MO34

Water may be overheated. POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.



A Pump Appears to have been Stuck ON when spa was last powered - MO35

POWER DOWN THE SPA. DO NOT ENTER THE WATER.
Contact your dealer or service organization.



The water level is too low

Some systems have a water level detect, and this message appears if it detects that the water level is too low.

Reminders

General maintenance helps.

The display of Reminder Messages can be suppressed by using the PREF Menu.

Reminder Messages can be chosen individually by the Manufacturer. They may be disabled entirely, or there may be a limited number of reminders on a specific model.

The frequency of each reminder (e.g. 7 days) can be specified by the Manufacturer.

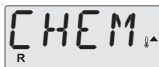
Press a Temperature button to reset a displayed reminder message.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 7 days.

Check pH with a test kit and adjust pH with the appropriate chemicals.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 7 days.

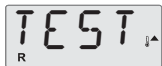
Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 30 days.

Clean the filter media as instructed by the manufacturer.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 30 days.

The Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) is an important safety device and must be tested on a regular basis to verify its reliability.

Every user should be trained to safely test the GFCI or RCD associated with the hot tub installation.

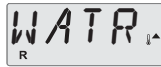
A GFCI or RCD will have a TEST and RESET button on it that allows a user to verify proper function.

Warning:

If freezing conditions exist, a GFCI or RCD should be reset immediately or spa damage could result.

The end user should always be trained to test and reset the GFCI or RCD on a regular basis.

Reminders



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 90 days.

Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 180 days.

Vinyl covers should be cleaned and conditioned for maximum life.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 180 days.

Wood skirting and furniture should be cleaned and conditioned per the manufacturers instructions for maximum life.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

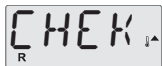
Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.



Alternates with temperature or normal display.

As needed.

Install new mineral cartridge.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

Check your ozone and/or UV generator per your spa manufacture's instructions.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

Have a service technician do a check-up on your spa per your spa manufacturer's instructions.

Jets

Almost all of the jets in your spa are adjustable. Rotating the face of an adjustable jet to the left (counter-clockwise) will decrease the amount of water flow through the jet. Rotating the face of an adjustable jet to the right (clockwise) will increase the amount of water flow through the jet.

Neck jets adjust in the opposite directions (counter-clockwise to increase, clockwise to decrease).



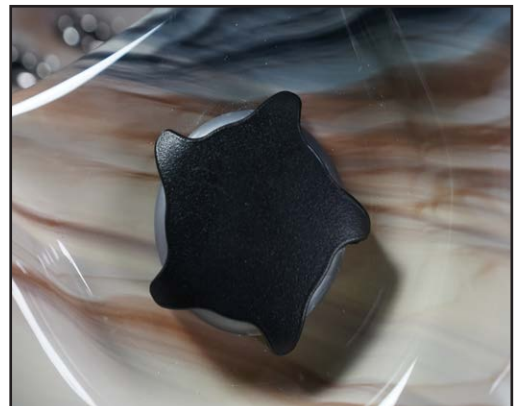
Water Diverters

Water diverter knobs are 1" and 2" knobs located around the top of your spa. They allow you to divert water through jets from one side of the spa to the other, or from floor jets to wall jets. This is accomplished by rotating the knob to the left or right to increase or decrease the flow of water through the jets.



Air Control

The air controls is the 1" knob located around the top of your spa. The air control will let you add a mixture of air with the jet pressure. This is accomplished by rotating the knob to the left or right to increase or decrease the amount of airflow through the jets.



Hydro Streamer Waterfall / Optional Feature

Your spa may include two to three hydro streamer waterfalls. When the booster pump is on, turn the 1" diverter knob to adjust the rate of flow to the waterfall jets. The waterfall jet faces are not adjustable. Do not turn the jet faces because you may accidentally remove them.

Always shut off water to the hydro streamers before placing the spa cove on the spa. Water from the hydro streamers sprays in an arc that is higher than the top surface of the spa when. Water from the hydro streamer will spray the bottom of the cover and begin to collect and run off the sides of the cover causing water to drip off the sides of the spa.



The most important water jet in your spa, the Swim Jet Rip Current jet. These jets are designed to move large amounts of water to provide the resistance needed to exercise and swim within your swim spa.

You may adjust the resistance by tilting the position of the jet, lower for less resistance, higher for more resistance. You may also increase the amount of air injection to increase the resistance in your workout.

Cover Latches

When your hot tub is not in use, make sure you place the cover on top and latch it securely. Besides protecting your hot tub from sun damage and keeping out contaminants, it will prevent small children from drowning in the hot tub.

Your cover will have four clips attached to the ends of the four latches, two on each end of the hot tub cover. There will also be a small bag with eight wood screws.

After you place the cover on the hot tub, attach the clips to the side of the hot tub using the wood screws.

This section is intended for new spa owners who are not familiar with adjusting spa water chemistry. Everyone's knowledge with maintaining water quality is different, but there are some general concepts you need to know.

Water maintenance is not difficult, however it is something that requires regular attention. The most important thing to understand about taking care of your spa water, is that preventative action is easier than corrective action when balancing chemistry and maintaining water clarity

Before beginning, we recommend you become familiar with some water quality terms and their definitions within this following section.

1. Chemical Balancing

Learning how to properly balance your water.

You will need to test and adjust the chemical balance of your spa water, this is not a difficult task but it must be done regularly. Important areas to focus on with water chemistry is the calcium hardness, total alkalinity, and the pH range.

Spa owners with salt generators will need to perform a total dissolved solids and phosphate test.

3. Filtration

Learn how to properly clean your filter

Cleaning your filter cartridge is the easiest and most effective thing you can do to keep your spa water clear.

A clogged dirty filter will cause the heater and pump to work harder than they need to, possibly causing them to fail.

The spa's heating system will only function with the proper amount of water flow through the system.

2. Sanitation and Shock

Learning how to properly sanitize and shock your spa.

Sanitizers kill bacteria and viruses and keeps your water clean. A low sanitizer level will allow microbes to grow quickly in the spa water. We recommend using either granulated chlorine or bromine as your sanitizer.

You also need to add shock to the water to stimulate the chemical sanitizer. How much you use and how often you use sanitizers, depends on how frequently the spa is used.

4. Consistency

Make checking your spa part of your daily routine.

Clear water requires regular maintenance. Establish a routine based on a regular schedule, testing your water on a daily basis.

Maintaining your water quality helps the enjoyment of your spa and extends the lifetime of spa components by preventing damage from neglect and chemical abuse.

Water Quality Terms and Definitions

The following chemical terms are used in this section. Understanding their meaning will help you to better understand clear water maintenance. Words in bold type are defined in this table.

Bromine / Bromamines	<p><u>Bromine</u> is an efficient sanitizer chemical for spas. When used as a sanitizer, bromine forms compounds called bromamines. Bromine can be added to the spa or automatically generated.</p> <p><u>Bromamines</u> are compounds formed when bromine combines with nitrogen from body oils, perspiration, etc. Unlike chloramines, bromamines have no pungent odor and are effective sanitizers.</p>
Chlorine / Chloramines	<p><u>Chlorine</u> is an efficient sanitizing chemical for spas. We recommend using sodium dichlor-type granulated chlorine because it is totally soluble and nearly pH neutral. When used as a sanitizer, chlorine forms compounds called chloramines.</p> <p><u>Chloramines</u> are compounds formed when chlorine combines with nitrogen from body oils, perspiration, etc. Chloramines can cause eye irritation as well as having a strong odor. Unlike bromamines, chloramines are weaker, slower sanitizers. To remove chloramines, see the description of shock below.</p>
Calcium Hardness	Abbreviated as CH. Calcium hardness is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa's water and is why soft water is not recommended. The low CH level can cause corrosion to the equipment and can cause staining of the spa shell.
Corrosion	The gradual wearing away of metal spa parts, usually caused by chemical action. Generally, corrosion is caused by low pH or by water with levels of TA, CH, pH or sanitizer which are outside the recommended ranges.
Dichlor	Also called sodium dichlor. It is a type of chlorine and is frequently used when shocking the water . An effective chlorine -based powdered oxidizer and sanitizer . Dichlor works by oxidizing waste product in the water such as bromamines and chloramines and causing them to burn off.
Monopersulphate or MPS	Frequently used when shocking the water . An effective non-chlorine-based powdered oxidizer that works well with both chlorine and bromine . It works by oxidizing waste product in the water such as bromamines and chloramines and causing them to burn off.
Oxidizer	Shocking the water with an oxidizing chemical prevents the buildup of contaminants, maximizes sanitizer efficiency, minimizes combined chlorine and improves water clarity.
Ozone	Ozone is a powerful oxidizing agent which is produced in nature and artificially. Ozone forms no by-products of chloramines (ozone actually oxidizes chloramines) and will not alter the water's pH .
pH	The pH level is the measure of the balance between acidity and alkalinity. Low pH causes the water to be too acid, which will cause corrosion , whereas high pH causes the water to be too alkaline, which will cause scaling . See page for testing for and balancing pH.
ppm	The abbreviation of "parts per million", the standard measurement of chemical concentration in water. Identical to mg/l (milligrams per liter).
Sanitizer	Sanitizer is a chemical added to the water to kill bacteria and viruses and keep the water clean. The two sanitizers we recommend are chlorine and bromine

Scale Rough calcium-bearing deposits that can coat spa surfaces, heaters, plumbing lines and clog filters. Generally, scaling is caused by mineral content combined with high **pH**. Additionally, scale forms more readily at higher water temperatures.

Shock Also called shocking the water, shock treatment, or superchlorination. Shocking the water is adding significant doses of **dichlor** or **MPS** to **oxidize** non-filterable organic waste and to remove **chloramines** and **bromamines**. Shock treatment breaks down organic waste contaminants which cause odor and cloudy water.

Total Alkalinity Abbreviated as TA. Total alkalinity is the measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is important for **pH** control. If the TA is too low, the **pH** will fluctuate out of control, and if it is too high, the **pH** becomes difficult to stabilize.

Trichlor Used as a pool **sanitizer**. NEVER use trichlor in a spa. Trichlor is extremely acidic and will lower the **pH**, causing corrosion to equipment. Using trichlor will void your warranty.

Water Testing Methods

There are two testing methods to choose from:

Test strips are a convenient testing method commonly used by spa owners.



The reagent test kit is a method which provides a high level of accuracy but is more expensive and more difficult to use if not experienced with this testing method.



Adding Chemicals to the Spa

IMPORTANT: All spa water chemicals, including MPS (Shock), chlorine, granulated pH increaser or decreaser, granulated total alkalinity increaser, calcium hardness increaser, liquid stain and scale inhibitor, and liquid de-foamer must always be added into or in front of the filter compartment while the primary jet is running for a minimum of 10 minutes.

1. - Fold back the cover.
2. - Press the Jets button or Jet 1 button (Touch devices, activate pump 1)
3. - Carefully measure the recommended amount of chemical and slowly pour it into the filter area. Use care not to splash chemicals on your hands, clothes, eyes, or spa surface/siding
4. - Close the spa cover

Warning: High sanitizer levels can cause discomfort to the user's eyes, lungs, and skin. Always allow the sanitizer level to fall into the recommended range before using the spa.

IMPORTANT NOTE REGARDING SHOCK TREATMENT: After administering shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent into the atmosphere. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover. This type of damage is considered chemical abuse and is not covered under the terms of the limited warranty.

Balancing Water Chemistry Levels

Maintaining spa water chemistry can be tricky, especially since there are many methods of keeping your water clear and clean. Note: We do not recommend a specific brand of chemicals.

See a spa dealer for guidance and recommendations on spa chemicals and supplies needed, as water chemistry varies from region to region. Various chemicals often sold under brand names, but a spa dealer can advise you on generic chemicals that are often less expensive than proprietary brands.

Balancing the Total Alkalinity (TA)

Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH Buffer". In other words, it's a measure of the ability of spa water to resist chemical changes in the pH level.

If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH level can cause corrosion or scaling of the spa components. Low TA can be corrected by adding sodium carbonate (pH/Alkalinity Up).

If the total Alkalinity is too high, the pH level will tend to be high, and may be difficult to bring down. It can be lowered by using sodium bisulfate (pH/Alkalinity Down).

Once the TA is balanced, it normally remains stable, although the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.

When the Total Alkalinity is within the recommended range, proceed to the next step.

Balancing the Calcium Hardness (CH)

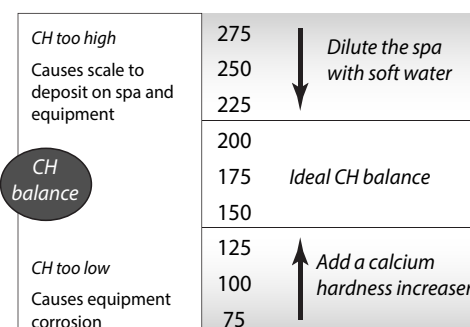
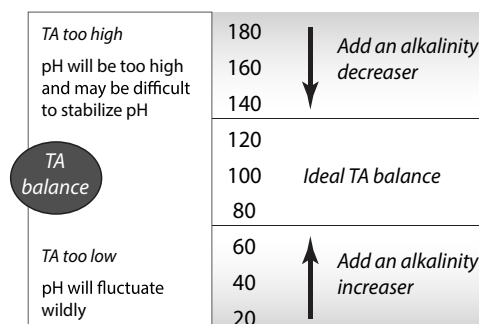
Calcium Hardness is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of spa water, that's why Calcium - low water (Soft Water) is not recommended. It is very corrosive to the equipment and can cause stains in the spa shell.

If the CH is too high (Hard Water) formation of scale on the spa shell & surface can result. You can use a generic calcium remover to remove hardness from water. CH can also be decreased by dilution (75% Hard water, 25% Soft water) will usually yield a reading within the correct range. If soft water is not available or practical for you, a stain and scale inhibitor should be added to the spa water, according to label instructions.

If the CH is too low, add CH Increaser.

Once the CH is balanced, it normally remains stable, although the addition of more water with a high or low calcium content will raise or lower the CH reading of the water.

When the CH is within the recommended range, proceed to the next step.



Balancing the pH

The pH level is the measure of acidity and alkalinity. Values above 7.8 are alkaline; those below 7.2 are acidic. Maintaining the proper pH level is extremely important for optimizing the effectiveness of the sanitizer, maintaining water that is comfortable for the user, and preventing equipment deterioration.

If the spas water's pH level is too low, the following may result:
The sanitizer will dissipate rapidly

- The water may become irritating to spa users
- The spas equipment may corrode
- Bacteria and algae spikes can occur.

If the pH is too low it can be increased with sodium hydrogen carbonate (pH/Alkalinity Up) to the spa water.

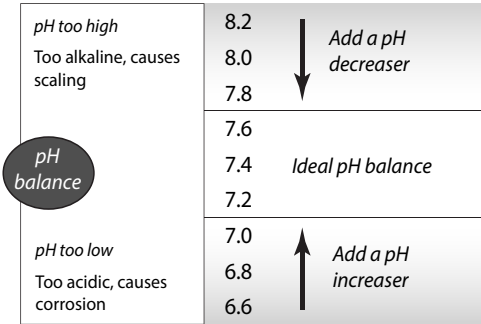
If the pH level is too high, the following may result:

- The sanitizer is less effective
- Scale will form on the spa shell surface and equipment
- The water may become cloudy
- The filter cartridge may become obstructed.

If the pH is too high, it can be decreased by adding sodium bi-sulfate (pH/Alkalinity Down) to spa water.

Note: After adding sodium hydrogen carbonate or sodium bi-sulfate, wait two hours before testing the spa water again for pH. Compounds take time to fully dissolve into the spa water, initial reading may not be accurate

Its important to check the pH on a regular weekly basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and other sanitizer used. When the pH is within the recommended range, proceed to begin the sanitation process.



Sanitation and Shock

Sanitizers kill bacteria and other organic waste by breaking them down to non-harmful level which are filtered out. Before you fill your spa, you need to decide which chemical sanitizer you wish to use. Consult your Cal Spas dealer for the right decision with regards to your lifestyle and spa usage.

We recommend granulated chlorine or bromine as your sanitizer. Both work well when maintained regularly

Note: DO NOT USE Trichlor. Trichlor is very acidic and the hot temperature of the spa causes it to dissolve too fast, it will cause damage to your spa and will void your warranty.

Whichever chemical you decide to use, do not take shortcuts. It will provide you with clean, safe, clear, spa water with a minimum of effort. Spa owners with an ozonator still need to use a chemical sanitizer. Whenever you test chemical levels, your test strip will likely have a test for chlorine or bromine. Make sure you sanitizer falls within the range shown on the next page.

Whenever you test your chemical levels, your test strip will likely have a test for chlorine or bromine. Make sure your sanitizer falls within the range shown on the next page.

If your spa is equipped with a ozonator, this will assist in breaking down organic material and odors, but it will not disinfect your water, following the standard ppm recommendation for the sanitizer of choice is mandatory.

Starting & Maintaining Sanitizer Levels

After you choose a sanitizer, you will need to establish a baseline and maintain it regularly.

Sanitizing your spa with chlorine or bromine is very similar. Each sanitizer has its advantages and disadvantages. Sanitizer helps neutralize bacteria that can cause illness and other organic matter.

Bromine: Creates less odor and skin irritation than chlorine, bromine is less likely to do so. Additionally, unlike chlorine when bromine combines with bather waste and other contaminants in the water it remains an effective sanitizer. Bromine is also far less pH dependent than chlorine. Always remember that bromine itself is not a sanitizer, it needs to be activated with a bromine shock chemical in order to be effective, speak with your spa dealer for more information.

Chlorine: The most commonly recognized sanitizer is chlorine. However, the effectiveness of chlorine depends heavily on the pH level of the spa water. In order to get the most effective and economical benefit of chlorine, you must maintain a consistent pH level of between 7.2-7.6; a disadvantage of using chlorine is that when chlorine combines with bather waste and other contaminants, not only does it lose its sanitizing ability, it can cause odors and irritate eyes and skin to individuals with sensitive skin or prolonged spa exposure.

Testing For:	Ideal Range (ppm)	
	Minimum	Maximum
Chlorine Level	3.0 - 5.0	
Bromine Level	6.0 - 11.0	

Note: If you choose to use bromine or chlorine we do not recommend the use of a floater. You have more control over the sanitizer levels by adding sanitizer as needed. Chemical abuse will void your warranty. When adding sanitizer to your spa, ensure that pump one is operating at high speed, and feed the sanitizer into the filter canister with the most suction, for spas with more than one pump we recommend activating all pumps for at least 10 minutes when adding sanitizer.

Starting with fresh water/pre-filtered well water:

1. Establish a baseline by adding either granulated chlorine or bromine.
 - Use a half ounce of chlorine for every 500 gallons of water
 - Use half an ounce of bromine for every 100 gallons
2. Run the Jets for 10 minutes (Press/toggle the pump 1 button/icon)
3. Test the water, make sure the pH, TA, and CH levels all fall within the ranges shown in the previous pages, make adjustments as needed.
4. After balancing the water, if you are using bromine to sanitize your spa, you must activate your bromine. You will need to shock-oxidize the bromine inside of your spa. Depending on the size of your spa, usually you must add one to two ounces of shock, refer to the instructions inscribed in your chemical of choice.
5. Test the water again, when the water is balanced, your spa is ready to use.

Shocking the Water

In addition to using a chemical sanitizer, you will periodically need to shock the water. Shocking the water helps remove burned-out chemicals, bacteria, and other organic material from your spa's water and improves your sanitizer's effectiveness.

Do not use chlorinating shock, which can damage the spas jets and pump seals. Only use Oxidizer shock. It can be used with either bromine or chlorine sanitizers.

Add two ounces of oxidizer shock per 500 gallons once a week, after heavy bather loads, or if the water has a strong odor. The spa must be running with all of the jets on high for 30 minutes with the cover open. If necessary repeat the oxidizer shock in 30 minute intervals.

Filtration & Cleaning

The filter is the part of your spa that removes big and microscopic debris from the water to maximize your spas water clarity. Regular maintenance must be done to maximize the spas filtering performance and heat efficiency.

It is extremely important that you never run the spa without a filter, there is a possibility that debris may be sucked into the plumbing, damaging the spa pumps and heater.

Cleaning the Filter

In addition to spraying the filter down with a hose to remove surface debris, the filter must be deep cleaned every so often to dissolve scale and particles that are trapped within the pleats of the filter. Even if the filter looks clean, scale and other particles hide deep within the filter fibers restricting water flow. If the filter is not properly cleaned this will cause flow issues within the spa heater creating a heater malfunction. We recommend cleaning your filter at least once a month or every two weeks depending on spa usage.

Cleaning the filter

1. Remove the filter by unscrewing the filter counterclockwise from the top of the filter, do not use excessive force when removing or installing the filter.
2. Place the dirty filter into a bucket of water where the filter is completely submerged in water. Add the desired filter cleaner of choice, on average most manufactures recommend 8 ounces of chemical cleaner, verify the amount used on your chemical instructions.

Note: It is recommended to obtain a spare filter to use in the spa when performing maintenance on the dirty filters. This way you can rotate the filters and extend their lifespan.

3. Soak the filter for a minimum of 24hrs
4. Spray the filter with a water hose, with careful attention between filter pleats.
5. Reinstall the filter, Do not over-tighten.

UV Light Water Treatment

In some Cal Spa models an optional UV light could be purchased to assist in sanitizing your spa. The UV light is always operating in the background whenever the spa is powered on. This UV light assists the disinfection of your spa by breaking down viruses and bacteria that could linger in the spas water. The UV light works in tandem with your regular sanitation regiment.

General Water Care Schedule

Prior to each use	Test the spa water. Adjust chemical levels as necessary. Shock the water by adding ½ teaspoon of sodium dichlor per 250 gallons or 1 teaspoon of MPS per 250 gallons.
After each use	Add an ounce of oxidizer after heavy bather loads
Once a week	Check the filter well and inside the filter pipe for leaves and foreign matter. Test the spa water. Adjust chemical levels as necessary. Shock the water by adding ½ teaspoon of sodium per 250 gallons or 3 teaspoons of MPS per 250 gallons. If your water source is high in calcium, add stain and scale preventer.
Every two to four weeks	Deep clean your spa's filter. How often you clean your filter depends on how much you use your spa. There is no harm in frequently cleaning your filter and will only help your spa's efficiency.
Every two to four months	Change the spa water. How often you change the water depends on how much you use the spa. When you change the water, you will need to: <ul style="list-style-type: none"> • Clean and polish the acrylic surface • Clean and treat the spa cover and pillows • Deep clean the filter • Refill your spa
Each time you refill the spa	Follow the section "Filling and Powering Up Your Portable Spa"

Generic Names for Chemicals

Water Chemistry		
Common name	Usual chemical name	Common brand names
pH Up	sodium hydroxide	pH Increaser, pH Up, pH Plus, pH Booster
pH Down	sodium bisulfate sodium bicarbonate (baking soda) sodium carbonate	pH Decreaser, pH Down, pH Minus, pH Subtractor, Dry Acid
Alkalinity increaser	sodium carbonate sodium bicarbonate (baking soda)	Alkalinity Increaser, Alkaline Up
Alkalinity decreaser	sodium bisulfate	Alkalinity Decreaser, Alkaline Down
Calcium increaser	calcium chloride	Calcium Increaser, Calcium Up, Calcium Plus, Hardness Increaser
Calcium decreaser	N/A To decrease calcium hardness, drain several gallons of water from the spa and refill using a mixture of 75% hard water and 25% soft water, or use a stain and scale inhibitor.	

Sanitizers

Common name	Usual chemical name	Common brand names
Chlorine	sodium dichlor	Both chlorine and bromine are available under numerous brand names
Bromine	sodium bromide	

Shock

Common name	Usual chemical name	Common brand names
MPS	monopersulphate	MPS Shock, Oxy-Spa, SeaKlear
Dichlor	sodium dichlor	Dichlor Shock

Note: Dichlor (chlorine) is both a sanitizer and a shock. Monopersulphate (MPS), when used as a shock, can be purchased alone as non-chlorinated shock or combined with dichlor, which makes it significantly more effective than MPS alone.

Other chemical additives

Common name	Usual chemical name	Common brand names
Stain and scale inhibitor	These are usually proprietary chemical formulations and cannot be purchased as a single generic chemical.	Metal Stain Gone, Scale Inhibitor, Stain and Scale Preventer, Stain and Scale Defense
Foam inhibitor		Foam Gone, Foam Down, Defoamer
Clarifier		Water Brite, Spa Bright, Water Clarifier, Clear Water, Natural Clarifier, Brite & Clear

Do NOT use these in your spa:

- Sodium hypochlorite (household bleach)
- Trichlor

Common Water Chemistry Questions

Question : Why is the use of a floater not recommended to sanitize my spa water?

Answer: We do not recommend the use of a floater for three reasons:

- The floater is unable to control the rate at which the sanitizer is dissolved into the water. When a floater is placed into a spa the sanitizer levels inside the spa can be extremely high. High sanitizer levels over a period of time will cause chemical burns and discolor the spa shell, jets, pillows, and spa cover underside. The use of floaters tends to lead to negligence of spa water sanitizer levels as well. Once the sanitizer is all dispensed and the floater is not checked daily, the low sanitizer level will allow viruses, algae and harmful bacteria like Legionella (Legionnaires disease) and E-Coli to grow.
- Floaters tend to stay in one area of the spa most of the time, causing this area to be exposed to extreme sanitizer levels. Most commonly a floater will become trapped near the filter weir or a seat, causing chemical damage to the section of the spa.
- The floater may allow small chunks or pieces of the concentrated sanitizer to fall out of its housing causing the chunks to settle at the bottom, causing pitting or chemical blisters to the spa shell. For this reason we advise you to use granulated chlorine or bromine as granulated sanitizers are designed for dissolve quickly inside of the spa with your jets activated. Chemical abuse is not covered under the terms of the limited warranty.

Bather Load

"Bather Load" is the term used to describe the number of people using a spa, combined with the length of usage, and the frequency of usage. All these factors have a great effect on the spa water. The higher the bather load, the more chemicals need to be added and a longer filtration time will be needed.

Recommendations are designed for spas with average bather load (3 to 4 people, 15 minutes of usage, three times a week at 100 degrees). If your bather load exceeds these guidelines, and you experience water quality problems, increase the amount of filtration first, (go to the next higher filtration number) then if water quality is still not adequate, consult the advice of your Cal Spas dealer for additional chemical or system recommendations. Be sure to give them your bather load information.

Ozonator

The ozone generator releases ozone into the spa water. You will still need to test for chlorine/bromine and occasionally replenish it to return the sanitizer level back to baseline. **For spas without a circulation pump, "Pump 1" will run at low speed and the ozonator will run during filtration.**

The spa's control system is factory programmed with one filter cycle that will run in the evening, aligning with lower energy rates in that time slot. The time and duration of the filter cycle can be set according to your needs. In addition, a second filter cycle can be enabled. Filtration time may need to be increased with a heavy bather load.

Make sure water diverter valves are turned all the way to the left or right, and never left in the center position during filtration cycles. When the diverter valve is in the center position, there is not enough suction from the pump in order to inject ozone into the spa. The ozonator will generate ozone, but it would not be injected into the water effectively.

Troubleshooting Water Clarity

Problem	Probable Causes	Possible Solutions
Cloudy Water	<ul style="list-style-type: none">• Dirty Filter• Excessive oils/ Organic matter• Improper sanitation• Suspended particles/organic matter• Overused or old water	<ul style="list-style-type: none">• Clean filter• Shock spa with sanitizer• Add sanitizer• Adjust pH and/or alkalinity to recommended range• Run jet pump and clean filter• Drain and refill spa
Water Odor	<ul style="list-style-type: none">• Excessive organics in water• Improper sanitation• Low pH	<ul style="list-style-type: none">• Shock spa with sanitizer• Add sanitizer• Adjust pH to recommended range
Musty Odor	<ul style="list-style-type: none">• Bacteria or algae growth	<ul style="list-style-type: none">• Shock spa with sanitizer• Adjust pH to recommended range

Problem	Probable Causes	Possible Solutions
Organic Buildup/ Scum Ring Around Spa	<ul style="list-style-type: none"> Buildup of oils and dirt 	<ul style="list-style-type: none"> Wipe off scum with clean rag - if severe, drain the spa, use a spa surface and tile cleaner to remove the scum and refill the spa
Algae Growth	<ul style="list-style-type: none"> High pH Low sanitizer level 	<ul style="list-style-type: none"> Shock spa with sanitizer if problem is visible or persistent, drain, clean and refill the spa
Eye Irritation	<ul style="list-style-type: none"> Low pH Low sanitizer level 	<ul style="list-style-type: none"> Adjust pH Shock spa with sanitizer and maintain sanitizer level
Skin Irritation/ Rash	<ul style="list-style-type: none"> Unsanitary water Free chlorine level above 5ppm 	<ul style="list-style-type: none"> Shock spa with sanitizer and maintain sanitizer level Allow free chlorine level to drop below 5 ppm before spa use
Stains	<ul style="list-style-type: none"> Total alkalinity and/or pH is too low High iron or copper in source water 	<ul style="list-style-type: none"> Adjust total alkalinity and/or pH Use a stain and scale inhibitor
Scale	<ul style="list-style-type: none"> High calcium content in water - total alkalinity and pH too high 	<ul style="list-style-type: none"> Adjust total alkalinity and pH - If scale requires removal, drain the spa, scrub off the scale, refill the spa and balance water Use a stain and scale inhibitor

Chemical Abuse

Chemical abuse is defined as negligent/careless use of both recommended spa chemicals, and use of prohibited chemicals. The spa shell is designed to last for many years, but when the shell is exposed to excessive chemicals, or improper chemical application; this can cause reactions on the shell that can cause pitting, cracks, bubbling, and other blemishes on the shell.

Spa jets, pillows, and other components are designed to withstand sanitizer levels within the range mentioned in this manual. Excessive sanitizer use will cause oxidation of the interior of the spas metals and other components, which can cause rust/oxidation of jets, deterioration of spa pillows, speakers and plastics, and damage/oxidation of the spa cover.

Components & materials damaged by chemical abuse are not covered under warranty. Depending on the extent of damage the entire spa warranty can be voided, as stated in the limited warranty.

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Removing and Reseating the Pillows

You can remove the pillows for cleaning and maintenance quickly and easily. This method works for all types of pillows.

Grab the lower edge of the pillow with both hands firmly and pull up. As you do this, the pillow inserts will pop out of the holes.

Reseat the pillows by aligning the pillow inserts with the holes and tapping the pillow hard enough to insert the pegs back into the holes.



Spa Cover

Important! Keep the spa covered when not in use!

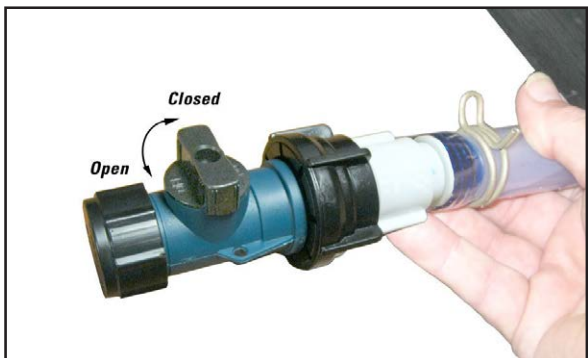
- Covered spas will use less electricity in maintaining your set temperature.
- Covering your spa will protect your spa's finish from the sun's ultraviolet rays.
- You are required to keep the spa covered to maintain warranty coverage.
- Covering your spa helps prevent children from drowning in the spa.

See the manual enclosed with your cover for instructions on mounting the locks and how to lock and unlock the cover.

In addition, while the spa cover is rigid, it is not designed to support any weight. Therefore, as a safety precaution and to preserve the life of your cover, you must not sit, stand, or lie on it, nor should you place objects of any kind on top of it.

Draining Your Portable Spa

1. Turn off the power at the breaker.
2. Remove all filters.
3. Using a Phillips screwdriver, remove the screws to the access panel and open it.



4. Locate hose ending with the $\frac{3}{4}$ inch hose-bib fixture.
5. Unscrew the cap.
6. Hook up the female end of a garden hose to the drain fitting.
7. Place the other end of the garden hose where you would like the water to drain to.
8. Turn the valve on the hose-bib fixture to open the drain.
9. Let spa drain completely, then remove garden hose.
10. Turn the valve on the hose-bib fixture to close the drain.
11. Replace the cap.

Winterizing (Cold Climate Draining)

In many areas of the country, the temperature drops below 32°F (0°C). We recommend that you always have your spa full of water and running at normal spa temperatures (80°F to 100°F, 26.7°C to 37.8°C). This will help reduce the risk of freezing in your spa and your spa's equipment.

Warning: If you find the need to drain your spa, be aware of the potential of freezing in your spas equipment and plumbing. Even if the directions below are followed perfectly, there is no guarantee that your spa will not suffer freeze damage. Freeze damage is not covered by your warranty.

1. Open all filter covers.
2. Remove the filter baskets and filters.
3. Drain your spa completely as described in the instructions above.
4. Vacuum water from the spa's main drain fitting with a wet/dry vacuum.
5. Open the bleeder valves on the pumps.
6. For spas with the UV lamp chamber mounted flat on the equipment floor:
Loosen the quartz tube nut at the top of the UV lamp chamber and pull up the quartz tube to let the water drain from the UV lamp chamber.
7. Disconnect the unions from both sides of the pump.
8. Blow any remaining water out of the jets and equipment area with the wet/dry vacuum.
9. When it has completely finished draining, replace the quartz tube in the UV lamp chamber and retighten the nut. Close the bleeder valves and re-connect the unions on the pumps. Replace the filter baskets and filters.
10. Cover your spa with a good spa cover and an all-weather tarp to ensure that neither rain nor snow enters the spa.

Vacation Care

You can leave your spa unattended for up to two weeks if you follow these instructions.

ALWAYS lock your cover using the cover locks if you plan to be away from home and the spa is filled with water.

1. Refer to control panel type, you may have access to a vacation mode, if not set to lower temperatures of 80F°.
2. Adjust the pH of your water,
3. Shock the water (add either chlorine or bromine sanitizer).
4. When you return, check and adjust the pH and shock the water.

If you will not be using your spa for longer than 14 days and a spa maintenance service is not available, we strongly recommend you drain or winterize your spa.

Jet Removal and Replacement

Jets can be easily removed for cleaning.

Grasp the outer rim of the jet and turn it counter-clockwise. The jet will unscrew from the fitting until it is free.

(Shown below in the sequence from left to right is the process for removing the jet. A quarter turn counter-clockwise will turn off the jet. Another quarter-turn will allow you to pull out the jet from the spa.)

To replace the jet, place it in the fitting and turn it clockwise until it is snug in place. Do not overtighten the jet.



Cleaning and Replacing the Filter

Filtration is one of the most important steps you can take to ensure clean, clear water. It is far less expensive to fix water clarity problems by filtering your spa than by using excessive amounts of chemicals, excessive filtration times, or by water replacement. See the section "Clear Water Plan" for more information on cleaning your filter.

Cleaning Your Spa

Spa Cover and Pillows

Due to the constant punishment your spa cover and pillows receive, you should protect them by applying a vinyl and leather cleaner as part of your monthly maintenance plan. Use a product that is specifically designed to protect spa covers and pillows from chemical and ultraviolet light damage without leaving an oily residue behind that is normally associated with common automotive vinyl protectants.

Warning: Do not use automotive vinyl protectants on spa covers or pillows. These products are generally oil-based and will cause severe water clarity issues that are difficult to correct.

Spa Shell

Each time you drain your spa, before you refill it you should clean your spa shell with an all-purpose cleaner and apply a coat of surface protectant.

Use a low detergent, non-abrasive cleaner specifically formulated to clean the spa without damaging its acrylic finish.

Use a non-oil based surface protectant that is specifically formulated to protect the spa's finish from the chemicals and minerals associated with normal spa use.

Using the Sound System

The optional stereo entertainment system contains a Bluetooth enabled speaker system. This is designed to pair and unpair easily and quickly, controlled through your mobile device or tablet.

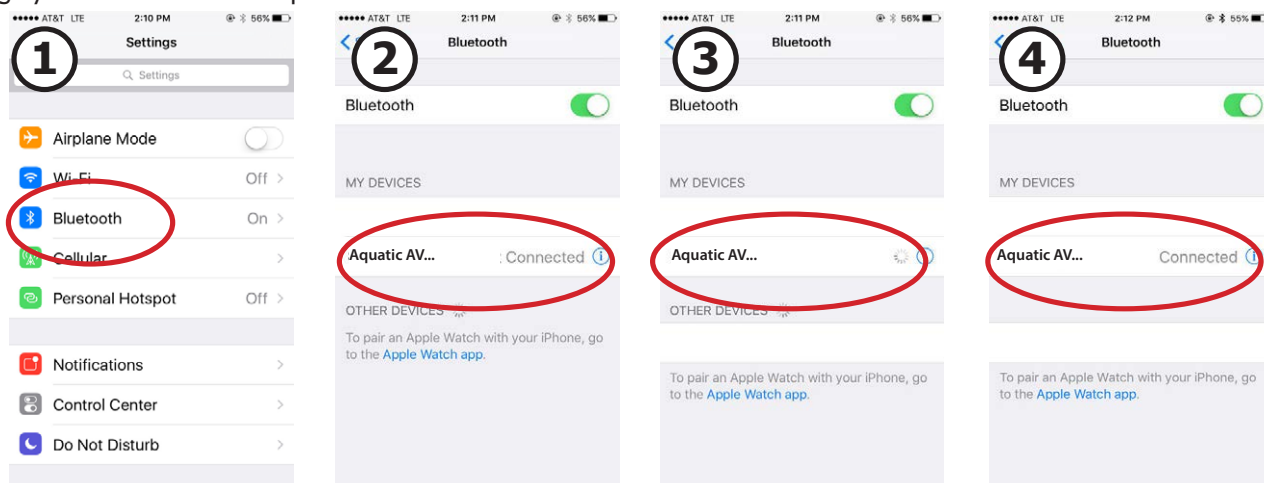
Before you can use the sound system, you need to pair the Bluetooth module with your device. The Bluetooth module is installed within the spa cabinet. Everything can be done with your device. The example shown below is from an iPhone device. Your device may appear differently. Before you begin, make sure Bluetooth is enabled on your device.

1. Select Bluetooth from your device's option list.
2. Select **Aquatic AV...** from the list of available devices to pair.
3. Your iPhone device will ask for a code: the code is **0000**.
4. Allow your device to pair with the spa's Bluetooth module.
5. When the devices have been connected, the device **Aquatic AV...** will be highlighted.

Only one device can be paired with the spa sound system at a time.

(For Android users, the systems will pair automatically - no code is needed.)

Once your device is paired and connected, all sounds from your device will be played through the sound system, including system sounds and telephone.



LED Lighting

Press the LIGHT button on the topside control panel to turn the spa light on. If your spa has perimeter LED lights, they will also light up at the same time as the spa light.

The LEDs operate in three modes:

1. **Cycle:** When you continually press the LIGHT button, the LEDs will cycle through the three main LED colors (Red, Green, and Blue) or combinations of the three that produce the following colors: light green, purple, light blue, yellow, etc.

Each time you press the button, you immediately advance to the next color in sequence or eventually a different light pattern.

2. **Flashing:** When you are cycling through all the colors, the next time you push the LIGHT button, the LED lights may start flashing. This is another normal operational pattern option.
3. **Fading cycle:** The next phase of operation when you push the LIGHT button is a slow and/or fast fade random transition from one color to the next.

Spas with exterior corner LED lighting generally work in the same mode as described above. The variations in color and patterns provide you with multiple options to suit almost any lighting preference.

ANYWHERE. ANYPLACE.

Access your spa via

1. a direct connection anywhere in the local proximity of your tub = **(INITIAL SETUP)**
2. anywhere in your house that you can connect to your local WiFi network = **(LOCAL CONNECT)**
3. anywhere in the World you have an internet connection to your smart device via 3G, 4G or WiFi hot spots = **(CLOUD CONNECT)**

bwa™ for Android™

bwa™ for iOS®

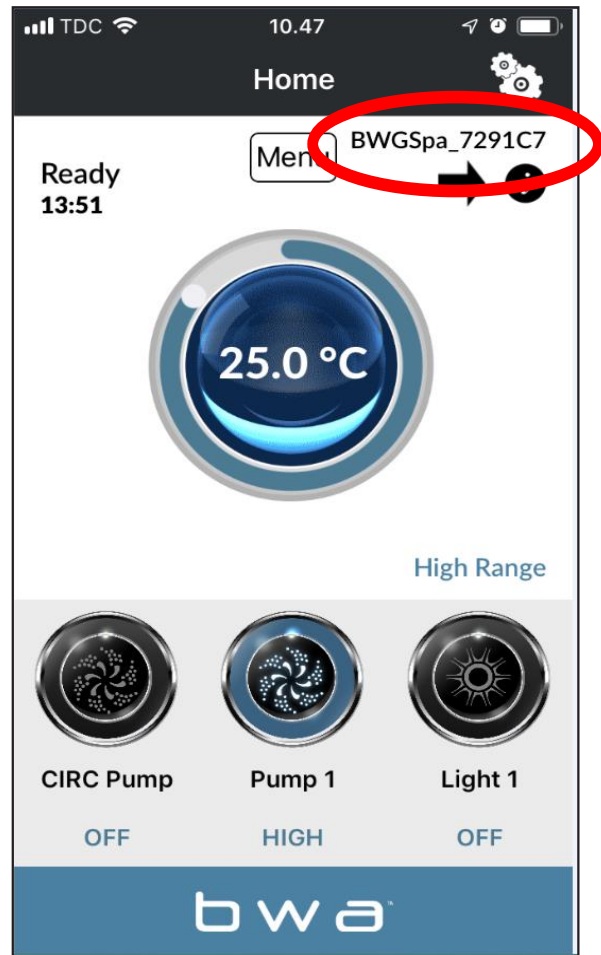


BWA APP FOR IOS & ANDROID DEVICES



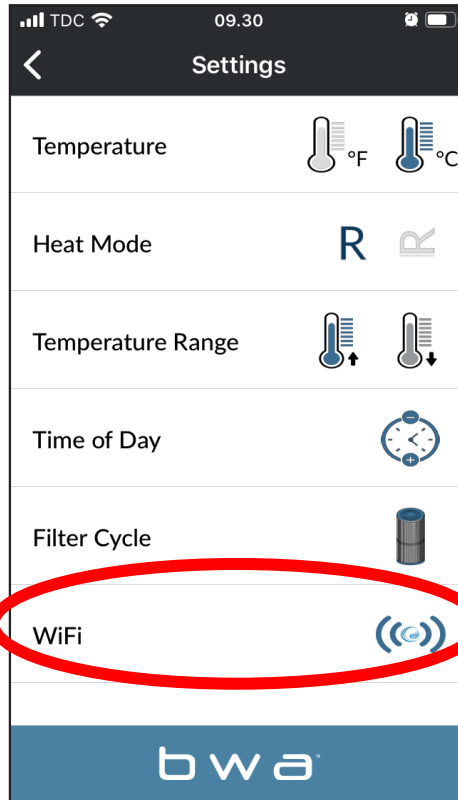
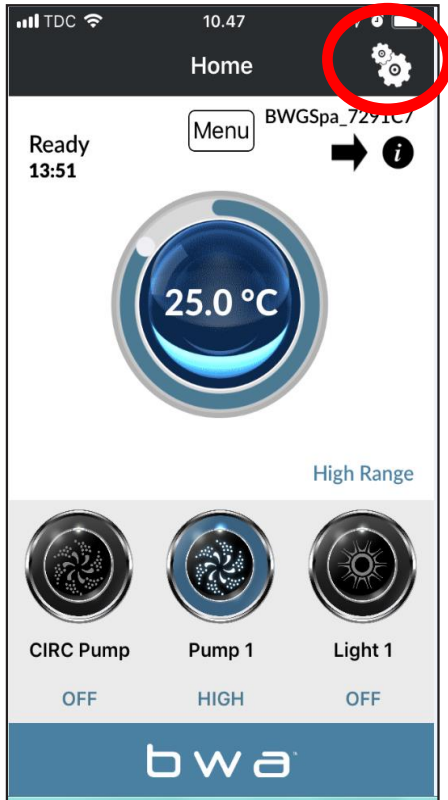
1. Before starting, ensure the wifi module is connected to the BP control pack. Also flip your spa breaker off then back on again to send the wifi module into discovery mode.
2. On your iPhone or Android device ensure that the wifi option is toggled active to detect networks nearby. stay on this discovery screen.
3. Select the network with the name BWGSpa_xxxxxx (it will be a combination of numbers and letters)
4. Once connected to the network you can proceed to the BWA App.

INITIAL SETUP



- 5- Launch the BWA app and select initial set up.
- 6- Once selected follow the steps presented to you within the app, it will attempt to communicate with the module to establish its first initial connection.
- 7- After following the steps presented in the app you will be greeted with the screen above, you will now be able to control the spa using the modules local wifi network.
- 8- Test the communication of the module with the app by turning on your pump or light option

LOCAL CONNECT

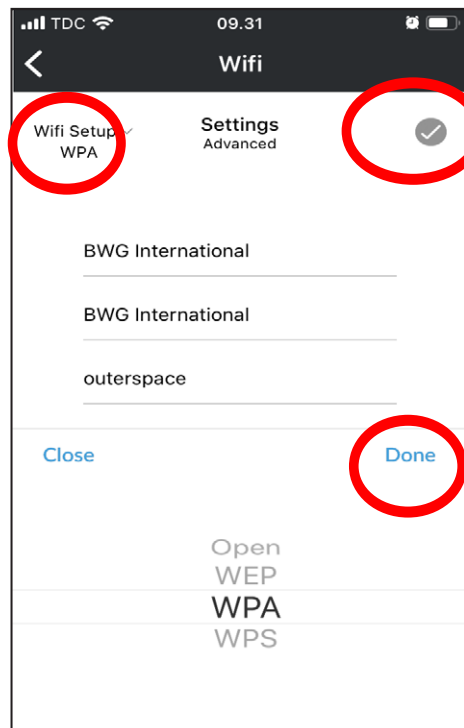
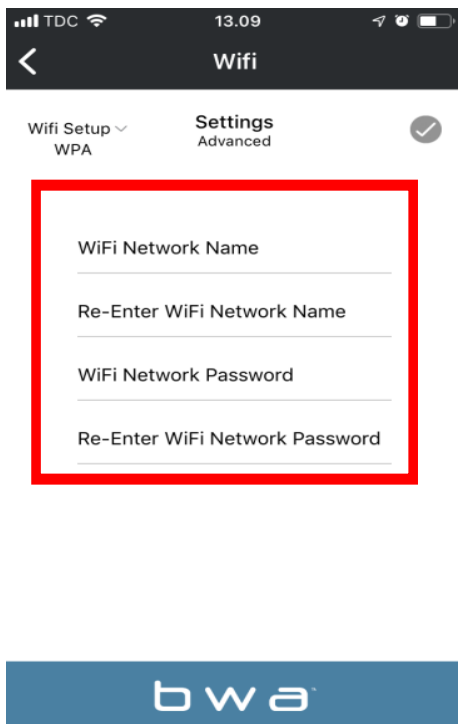


9- Once there is confirmation that the app communicates to the spa select the setting icon in the top right corner.

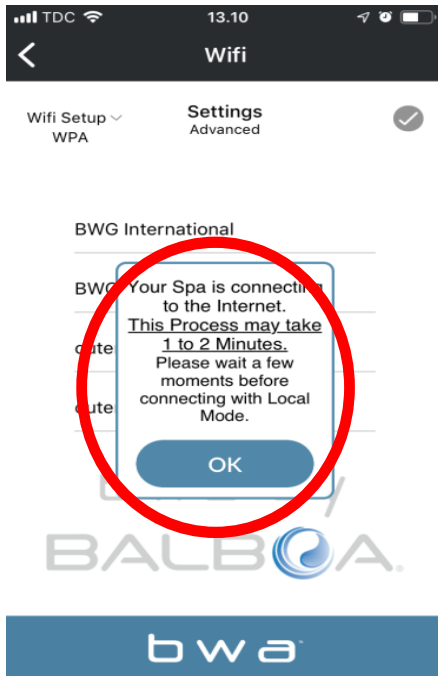
10- Select under settings the "Wifi" option.

11- Enter your home wifi's network information to begin pairing the spa to the home network.

12- Confirm the type of network security used by your home network and press the grey checkmark to proceed.

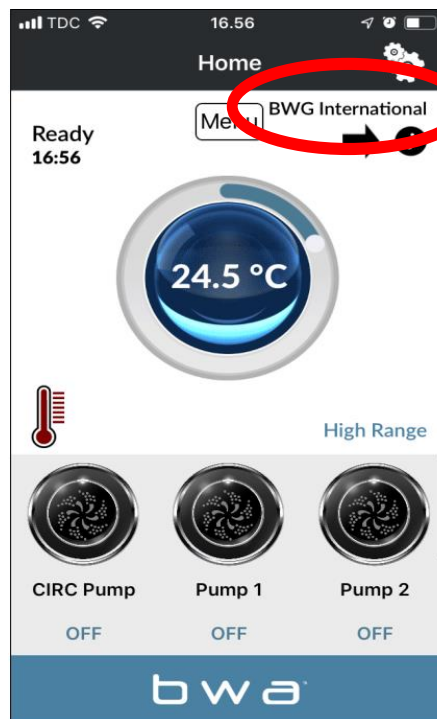
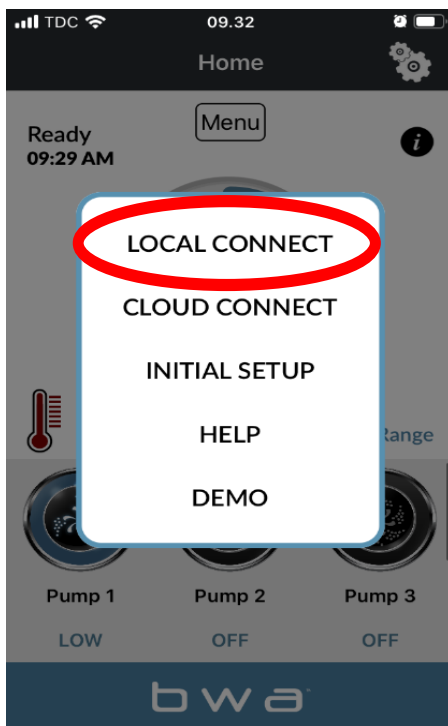


LOCAL CONNECT



13- If you have successfully entered your home wifi network information you will get a prompt to leave the device running for a few minutes the spas wifi module is now attempting to pair with your home wifi.

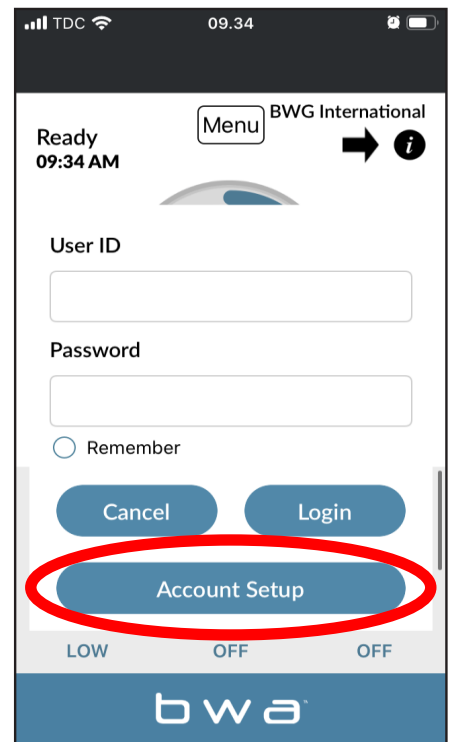
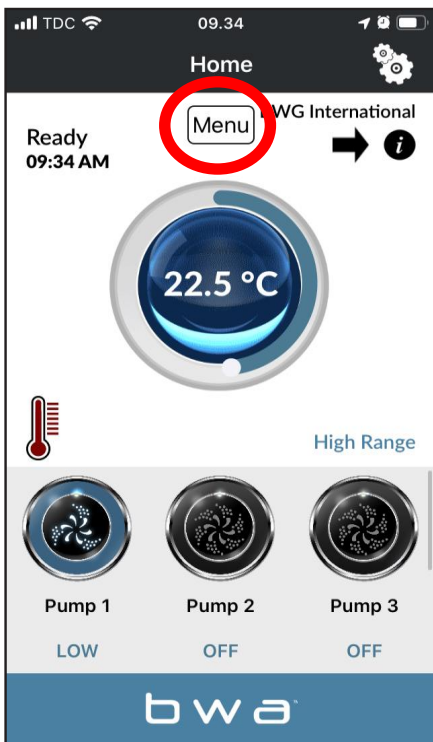
14- Check your mobile device network settings again and confirm that your mobile device has now paired back to your home wifi network and it is no longer connected to the temporary wifi network.



15- Switch back to the app and select local connect. it will now show your home wifi network name in the top corner.

You are now able to connect to your spa via your home network. As long as you are within range of your wifi network you will be able to

CLOUD CONNECT



- 1-** Select the Menu option on the top center of the app.
- 2-** Select Cloud Connect, the app will prompt you to a log in screen.
- 3-** You will need to create an account to access your spa via cloud connection. follow the steps presented, which will include the creation of a username, password, and security questions. we would sugest to write this log in on your manual for refrence.
- 4-** Once your account is created log in with your credencials, you have now unlocked the ability to control your spa through your cellphone network or other wifi networks when not at home or near the spa.

Basic Troubleshooting

The troubleshooting guidance provided here is intended to cover the most common problems a spa owner may encounter. For more in-depth troubleshooting, go to www.calspas.com/troubleshooting.

Symptom	Possible Solutions
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Problems starting up

Pump won't prime	See priming instructions
Breaker keeps shutting off	Reset the GFCI breaker. If this continues, contact your dealer or a qualified spa technician.

Power and system problems

System won't start up or breaker keeps shutting off	Power may be shut off. Turn on GFCI circuit breaker. If this continues, contact your dealer or a qualified spa technician.
Control panel doesn't respond	Turn on or reset the GFCI circuit breaker. If this does not solve the problem, contact your dealer or a qualified spa technician. If you hear the pump running but the control panel doesn't respond, contact your dealer
Spa does not turn off	Spa may be trying to heat up. Check if spa is in Ready or Rest mode In cold climates, if spa is not equipped with full foam or any kind of insulation, it will try to maintain the set temperature. Set the spa to low temperature range and set the temperature to 80°F. Spa may be in filter cycle. If it is, this is normal and no adjustment is necessary.
Message on the control panel	There may be a problem. See Diagnostic Messages

Heat problems

Spa water does not get hot	Spa may be in low temperature range. Set the spa to high temperature range. The filter may be dirty or may need to be replaced. Clean or replace the filter. The water level may be too low. Fill the spa with water level at 4 to 6 inches from the top. The temperature is not turned up high enough. Raise temperature on topside control. Cover the spa. The cover will keep heat in the spa and help keep heat from escaping. Make sure cover is on at all times when spa is not in use. The heater element may be old, deteriorated, coated with scale, or defective. Contact your dealer for more assistance. The gate valves may be partially or completely closed. NEVER OPERATE YOUR SPA WITH THE GATE VALVES CLOSED!
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Symptom	Possible Solutions
Spa overheats - temperature greater than 110°F / 43°C	<p>Overheating can occur during summer months and may not necessarily indicate a malfunction. When it occurs, a message code may also appear on the control panel.</p> <p>Temperature may be set too high. Turn the set temperature down to a lower temperature.</p> <p>Filtration time may be too long. Turn the filtration cycles down during the warm months.</p> <p>The spa may not be properly ventilated. Make sure the front of the spa is not blocked to allow air flow.</p> <p>High speed pumps may have been running too long. Limit pump running time to no more than 15 to 30 minutes.</p>

Water pressure problems

Low water pressure	<p>Jet valves may be partially or fully closed. Open the jet valves.</p> <p>Filter cartridge may be dirty. Clean or replace the filter.</p> <p>Pump may have airlock. Remove airlock by priming spa</p> <p>The suction fittings may be blocked. Remove any debris that may be blocking them.</p> <p>The filter skimmer may be blocked. Remove the blockage.</p> <p>Gate valves may be closed. Open gate valves. Note: Never operate your spa with the gate valves closed!</p> <p>Spa may be running in filtration mode. Press JETS or JETS 1 button to turn on high speed pump.</p>
No water pressure (no water stream from any jets)	<p>Power may be switched off. Turn the power back on.</p> <p>The pump may be defective. After you have tried all other troubleshooting, contact your dealer for assistance.</p>
Jets surge on and off	Water level may be too low. Add water to normal level.

Pump problems

Pump runs constantly – will not shut off	There may be a problem with circuit board. Contact your dealer.
Noisy pump	<p>The water level may be too low. Fill the spa with water level at 4 to 6 inches from the top.</p> <p>Filter cartridge may be dirty. Clean or replace the filter.</p> <p>Pump may have airlock. Remove airlock by priming spa</p> <p>The suction fittings may be blocked. Remove any debris that may be blocking the suction fittings.</p> <p>Gate valves may be closed. Open gate valves. Note: Never operate your spa with the gate valves closed!</p> <p>Air may be leaking into the suction line. Contact your dealer for assistance.</p> <p>Debris may be inside the pump. Contact your dealer for assistance.</p> <p>Noise may be a sign of damage. Contact your dealer for service.</p>

Symptom	Possible Solutions
Pump turns off during operation	Automatic timer may have completed its cycle. Press JETS or JETS 1 button to start the cycle again. Pump may have overheated due to the vents on the equipment door being blocked. Make sure the front of the spa is not blocked to allow air flow. The pump motor may be defective. Contact your dealer for assistance.
Pump has a burning smell while running	A burning smell may be a sign of damage. Contact your dealer for service.
Pump does not run	Pump may have over heated. Let it cool for an hour and try operating the spa for a shorter time. Power to the spa may be shut off. Turn on or reset the GFCI circuit breaker. If this does not solve the problem, contact your dealer or a qualified spa technician.

“Thermal Creep”

Our spas are designed with energy efficient components and systems that are meant to sustain heat generated by the equipment, the heat trapped inside the spa cabinet will cycle back into the spa water. In colder climates or in the winter this helps prevent the spa from freezing, as we recommend year round spa operation.

In hot weather or in situations where the spa is set to run extended filter cycles, **“Thermal Creep”** may occur, a condition where the measured water temperature can be higher than the set heater temperature. This is a normal occurrence and it does not mean that the heater or spa is malfunctioning, the ways to manage thermal creep go as follows.

Vent your cover. This means placing a folded cloth about ¾” (2cm) thick under all four corners of the cover before you lock the cover down.

Open your cover. Opening the cover at night will also quickly cool the water down if desired.

Open all air controls. Set your filtration cycles to run during the cooler times of the day or night.

Reduce the length of your filter cycles.

Visit your local dealer for additional guidance.

Since Thermal Creep only occurs in well-insulated hot tubs, it is not indicative of something that is wrong with your spa or its equipment.

Appendix

Replacement Parts

Screw-in Jet Inserts

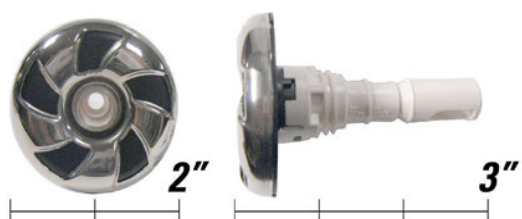
ELE 2" Euro No Eyeball

PLUCS2295021S



ED 2" Euro Directional

PLUCS2295051S



MED 3" XL Cluster Storm Directional

PLUCS2295031S



mfd 3" Micro Flow Directional

PLUCS2295061S



Screw-in Jet Inserts

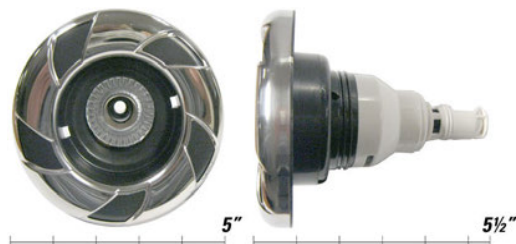
MFD 3.5" Maxi Flow Directional

PLUCS2295091S



PSD 5" Power Storm

PLUCS2295131S



ET 2" Cluster Storm Twin

PLUCS2295161S



MMP 3" Mini Multi-Massage

PLUCS2295171S



Screw-in Jet Inserts

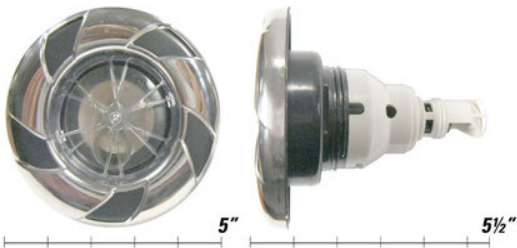
PSTR 5" Power Storm Twin Roto
PLUCS2295181S



MMP 5" Power Storm Riffed
PLUCS2295141S

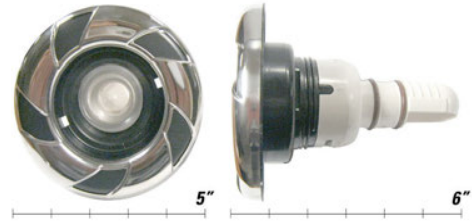


PST 5" Power Storm Wagon Wheel
PLUCS2295191S

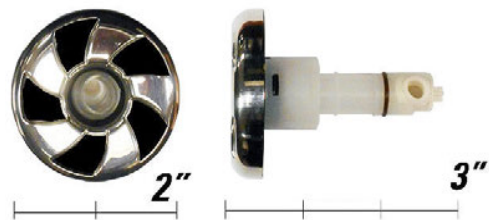


Screw-in Jet Inserts

T 5" Tornado Adjustable
PLUCS2295201S



2" Neck Jet Directional
PLU29923-014-000



Swim Jet Rip Current Metal DSG/clear w/ Load Washer
PLU21051685DSG



LED Lights

1-LED light string

Part #: LIT16100330



2-LED light string

Part #: LIT16100331



4-LED light string

Part #: LIT16100332



Cover Lock and Keys

Part #: ACC01800026, ACC01800020



Filters

50 sq ft

FIL50-5D13H15FCT-3



LED Lights

1 to 3 ext. cord

LIT16100335



1 to 1 port ext. cord

LIT16100338



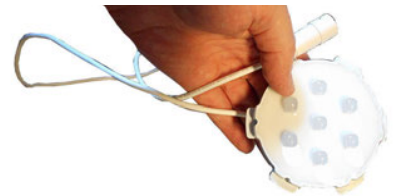
Interior light with logic (7 LED)

LIT16100333



Interior light without logic (7 LED)

LIT16100337



Main light housing, LED lens, fitting nut

LIT630-7048



Replacement of Cabinet Panels

The complete selection of replacement cabinets for all models is very extensive and too lengthy for this owner's manual. To order replacement panels for your spa, visit www.quickspaparts.com

LIMITED WARRANTY

This Limited Warranty is extended to the original purchaser of the spa produced by Lloyd's Material Supply company, Inc. Which Manufactures the Crystal Cove brand portable spa manufactured after January 1st, 2026 and installed for residential use in the United States of America and Canada. This Warranty begins on the date of delivery of the spa, but in no event later than one year from the date of manufacture.

Crystal Cove Spas

Structural	Warrantied against spa shell collapse, leaks caused by the shell, or dangers of structural integrity due to defects in the spa shell.	5 Years
Shell Surface	Warrantied against spontaneous blistering, cracking, or delaminating of the interior spa shell.	2 Years
Equipment & Controls	Electrical Equipment- limited to spa pumps, standard heater, and control system/panels, are warranted against malfunction due to defects in workmanship or materials.	2 years
Plumbing	Warrantied against leaks/cracks due to defects in workmanship or materials	2 Years
Spa Cabinet	Warrantied against defects in workmanship or materials. Normal wear and weathering of the finish will occur naturally over time and are not defects.	1 Years
LED Lighting	LED lights are warranted against malfunction due to defects in workmanship and materials	1 Years
Ozone/UV	Ozone Generators and UV treatment systems are warranted against defects in workmanship and materials. (Excluding UV bulbs older than one year)	1 Years
Sound System	The Freedom Sound System is warranted against malfunction due to defects in workmanship and materials. This does not cover normal wear and tear.	1 Year

Warranty for Other Components

The Fuses, headrests, cabinet finish, and filters are warrantied to be free of defects in workmanship and material at the time of delivery. The factory installed water purification system is warrantied against malfunction due to defects in workmanship or material for one year from the original date of the spa delivery. All stereo-related components (receiver, speakers, power supply, Bluetooth antenna, etc) and Wifi modules are warrantied against malfunction due to defects in workmanship and material for one year from the original date of delivery. All other factory-installed components non mentioned specifically, including, but not limited to the wood frame, jets, diverter vales, filter lids, and mechanical components, are warrantied against malfunction due to defects in workmanship and material for 90 days from the original date of delivery.

The insulating spa cover is warrantied for 90 day from original date of delivery.

Structural

This limited warranty covers defects within the spas fiberglass structural shell. This includes sudden spa shell collapse, leaking through the shell, and separation between the spa shell and spa acrylic, caused by faulty bonding. This does not include separation due to micro-abrasions, pin holes in the shell, or warping/bubbling due to sun exposure. This limited warranty does not apply when abuse of the spa shell is evident. This includes but is not limited too, heavy impact craters, fractures on the spa surface due to poor spa care, sun exposure, or reckless use of the spa, and chemical abuse of the spa. This warranty does not cover damage caused by unlevelled ground/foundation. Spas must rest on level ground, ideally on a cement slab of 3-6" of thickness depending on the spa weight. Spas that are not placed on a leveled foundation are prone to cracks, delamination, and compromised structural rigidity of the spa. It is the responsibility of the spa owner to ensure that the spas foundation is leveled and inspected before placing the spa.

Shell Surface

This limited warranty covers defects on the spas acrylic surface due to workmanship or materials. This covers wrinkles on the acrylic, blistering, peeling, delamination, or spontaneous cracking. This warranty does not cover shell damage caused by chemical abuse, improper water chemistry, excessive sun exposure, micro-abrasions, or damage caused by impacts or sharp objects. This warranty does not cover discoloration, or deterioration of the spa shell when exposed to improper chemistry levels, hard water, soft water, or chemical abuse.

Equipment and Controls

This limited warranty covers malfunction of factory installed spa control systems, spa control panels, spa heater, and spa pumps due to defects in workmanship or materials. This covers sudden control box failure, malfunction of control panels or control boxes, malfunctioning heaters, and malfunctioning spa pumps. This warranty coverage is void if the electrical installation of the spa does not follow the outlined diagrams and specifications, mentioned in this manual. Failure to properly follow the specified GFCI requirements, wire type, wire thickness, compliance with NEC guidelines and local codes will void your warranty. This warranty does not cover acts of god or nature that can damage spa equipment, such examples are flooding, lighting strikes, wildfires, or other scenarios out of the control of the manufacturer.

Plumbing

This limited warranty covers leaking of water through plumbing joints, tees, hoses, water features, and jet body grommets due to defects in workmanship and materials. This warranty does not cover damage caused by chemical abuse, improper water chemistry, or use of unapproved chemicals/sanitizers. This warranty does not cover freeze damage caused by frozen water expanding within the plumbing of the spa. The winterization procedure within this manual does not guarantee freeze damage prevention. The best method to ensure the spa does not encounter frozen water within the plumbing is to have the spa operating during the colder months of the year. This warranty does not cover freeze damage or damage to the plumbing due to acts of god and/or nature including but not limited too snowstorms, blizzards, power outages, etc. This warranty does not cover oxidation or warping of jets due to chemical abuse or exposing an empty spa to the elements with no secured cover.

Spa Cabinet

This limited warranty covers defects in workmanship and materials of spa cabinet panels. This warranty applies for warping of spa panels, cracking of corners and panels without clear impact markers, and buckling of spa panels. This warranty does not cover natural wear and tear, which occurs with plastics exposed to the sun. This warranty does not cover panel damage from excessive heat sources, calcium/water-spot build up from sprinklers or irrigation systems, or impact damage. Each claim for spa cabinets are evaluated on a case by case basis, it is the responsibility of the spa owner to acknowledge environmental factors, that can affect the maintenance of the spas cabinet panels. Using plastic spa protectants can prolong the life of your spa panels, and is highly recommended in high UV index climates. Deterioration/fading of color, natural wear and tear of plastic materials is expected over time, and is not considered a defect in materials. This coverage does not extend nor cover acts of god or nature that can damage spa panels, such examples are flooding, high winds, wildfires, tornadoes or other scenarios out of the control of the manufacturer

Sanitation

This limited warranty covers malfunctions of factory installed sanitation system, which is warranted against malfunction due to defects in workmanship or materials. This warranty does not cover negligent operation of sanitizer systems, chemical abuse, damage caused by improper water chemistry, or disregard of specified data points for safe operation; including but not limited to, incorrect ppm levels in water chemistry, improper maintenance of sanitation components, and high TDS levels. The spa filter is not a part of this warranty, and is considered a disposable item subject to regular wear and tear.

Ozone/UV Systems

This limited warranty covers malfunctions of the optional factory installed Ozone and/or UV water treatment systems. This includes leaks through welded components, water back-flow into the ozone generator, and short circuited Ozone or UV systems. This warranty does not cover UV bulbs that are older than 10 months, the UV light must be replaced every 10-12 months as this is normal wear and tear of component. This warranty is voided if alterations/modifications of these systems are evident, or if the spa electrical connections were not installed in accordance to defined specifications within this manual, evidence of chemical abuse, and acts of god and/or nature.

Sound System

This limited warranty covers malfunctions of factory installed sound system components. This includes the subwoofer/amplifier, speakers, speaker grills, power supply, or Bluetooth antenna. Natural wear and tear of speaker cones is not covered by this warranty, nor are deterioration of speakers exposed to chemical abuse.

Spa Cover

The spa cover is warranted against defects of materials and workmanship for the defined period mentioned in this warranty. Exposure to UV rays on untreated or poorly maintained spa covers are not covered by this warranty. It is the responsibility of the spa owner to use spa UV plastic protectants on their spa covers, especially in high UV index climates. Exposure to UV light without proper treatment leads to problems such as cracking/peeling of vinyl covers, and sudden fading of color. This warranty does not warrant against damage caused by chemical abuse, nor yellowing or oxidation of the spa cover when exposed to excess sanitizer. If a defect is found within the first 90 days of ownership, your Crystal Cove dealer can directly assist the spa owner by filing a claim and replacing the spa cover if deemed necessary. This warranty will cover the material cost of issuing a new vinyl sleeve for the cover, and/or replacement foam for your cover. Shipping/freight costs are not covered in this warranty, and are the sole responsibility of the spa owner. Images of the cover from all sides including the top and underside are necessary to file a claim.

Genuine Parts & Accessories

This Limited Warranty is void if Lloyd's Material Supply Company, Inc., Manufacturer of the Crystal Cove brand or its designated representative determines that the spa has been subjected to damage or failure due to installation of aftermarket parts that are not genuine factory parts and accessories. This disclaimer includes, but is not limited to filters, UV bulbs, ozone systems, salt systems, replacement parts and other accessories. Genuine Crystal Cove brand parts and accessories are built to our highest standards of quality, durability and performance, and they are designed to work with your spa to ensure optimal performance and function. Only parts/components approved by Crystal Cove spas, should be used when performing a warranty repair. If parts are required to complete a warranty claim, the cost of the parts are covered by this warranty. Approved labor and genuine part costs are covered when a warranty claim is approved, the cost of shipping parts/components is not covered by this warranty, and is the sole responsibility of the spa owner.

Performance

This warranty begins on the date of delivery of the spa, but in no event later than one year from the date of manufacture. To obtain service in the event of a defect covered by this Limited Warranty, notify your spa dealer or Crystal Cove spas as soon as possible and use all reasonable means to protect the spa from further damage. Upon proof of purchase, a designated service representative will correct the defect subject to the terms and conditions contained in this Limited Warranty. There will be no charge for parts or Labor to repair the defect, although providing access to affect the repair is your responsibility as the spa owner. Freight charges for replacement parts is the responsibility of the spa owner. Parts and components can be shipped to the servicing dealer or to the customer. The servicing dealer may charge the owner a travel/service fee as well as a diagnose fee if the cause of the issue is unknown, these charges are not covered under warranty. Your spa dealer nor Lloyd's Material Supply company is responsible for damages or costs to rebuild decks, cement structures, or other decor/structures placed against the sides of the spa. Minimum clearance of 3 feet on each side is mandatory for all spas. In the event that the spa is removed to a repair facility for repair and reinstalled, the cost of removal and re-installation will be your responsibility as the spa owner. If Lloyd's Material Supply Company Inc., The manufacture of Crystal Cove brand determines that repair of the covered defect is not feasible, it reserves the right to provide a replacement spa of equal or lesser value to the original purchase price. In such an event reasonable costs for removal of the original spa, shipping costs from the factory for the replacement spa, and delivery and installation of the replacement spa will be the responsibility of the spa owner. The replacement spa will carry the balance of the original spa's warranty. Spa covers are not included. This warranty ends either by specified time frame, owner-transfer of the spa, relocation, or installation of any component other than by the manufacture. If the desired spa is more expensive than what the spa owner originally financed or paid for, the price difference shall be paid by the spa owner. Additional costs can be incurred if the use of heavy machinery such as a crane, bulldozer, etc, is considered necessary to access, remove, or perform a repair/correction to the affected spa.

Warranty limitations

This Limited Warranty is void if Crystal Cove or its designated representative determines that the spa has been subjected to alteration, neglect, misuse or abuse, or freight damage caused by the common carrier; any repairs have been attempted by anyone other than a designated representative; or if the failure is caused by accident, acts of God or other causes beyond the control of the Manufacturer including acts of nature (damage caused by animals, rodents, or other pests) are not covered by this warranty. Additionally; the limited warranty is void for spas that were subject to neglect, misuse and abuse including any installation, operation or maintenance of the spa other than in accordance with the instructions contained in the owner's manual provided with the spa, including but not limited to the failure to maintain proper water chemistry, chemical balancing, the use of abrasives or improper cleaners, and the use of non-genuine parts and accessories. This Limited Warranty does not provide coverage for any item attached to or installed on the spa after the date of manufacture or for gaining access to any component for repair or replacement. Spa units in commercial use are excluded from any coverage whatsoever. The spa owner accepts liability for repair work performed by anyone other than Lloyd's Material Supply Company Inc, or a designated Crystal Cove spas representative. This Limited Warranty is void if damage occurs to the spa shell because of excessive heat buildup due to failure to cover a spa that is empty while exposed to direct sunlight.

Proration of Warranty

Units determined by the manufacture to be non-repairable will be replaced on a prorated basis with the same or a comparable unit. The owner will be charged 1% of the current retail cost for each full month of ownership from the date of purchase through the date failure is determined to be non-repairable. This charge will be waived during the first 6 months of ownership. [example]: Product failure is determined during seven months of ownership. Owner will be responsible to pay for 7% of the products current cost. As the spa owner you have the choice to replace the spa, with a spa equal to or less than the value of the originally financed/purchased spa; if the desired replacement spa is of a higher cost than the originally financed/purchased spa, the spa owner will pay the difference of price, including any percent value lost over time through the spas proration period. The cost of shipping a new spa and its installation is not covered by this warranty as stated in the "Performance" section of this warranty.

Limitations

The manufacture disclaims all warranties, expressed or implies, in fact or in law, to the extent allowed by your State's law, including the warranty of merchantability and fitness for use, except as stated specifically herein. All warranty service must be performed by the manufacture or its designated representative using authorized Crystal Cove parts. No agent, dealer, distributor, service company, or other party is authorized to change, modify, or extend the terms of this limited warranty in any manner whatsoever. The manufacture will not be responsible for any statements or representations made in any form that go beyond, are broader than, or are inconsistent with any authorized literature or specifications furnished by Crystal Cove spas. Extended warranties or care plans offered to you by a spa dealer is an agreement strictly between the spa owner and the spa dealer, out of the control of the manufacture of Crystal Cove spas.

Disclaimers

Lloyd's Material Supply Company, Inc., Manufacture of the Crystal Cove spa brand and its representatives shall not be liable for any injury, loss, cost, or other damage whether incidental or consequential, arising out of any defect covered by this limited warranty, including without limitation, loss of use of the spa and cost for removal of defective produce even if the manufacture was advised of the possibility of damage. The liability of the manufacture under this limited warranty, if any shall not exceed the original amount paid for the defective product. Coverage under this limited warranty shall commence as of the original date of delivery and the duration of such coverage shall not extend for any reason whatsoever beyond the stated time periods. These disclaimers shall be equally applicable to any service provided by the manufacture and its designated representatives.

Legal Rights

This limited warranty gives you specific legal rights. You may also have other rights that vary from state to state depending on consumer regulations. Some states do not allow limitations on how long an implied warranty lasts, so this time limitation may not apply to you.

Chemical Abuse

Chemical abuse is defined as improper use of approved spa chemicals, and the usage of unapproved chemicals, including but not limited to sanitizers, water chemistry adjustment chemicals, water clarifier's, etc. Abuse of chemicals can cause damage to the spas finish, acrylic shell, jet body seals, jets, pillows, and other spa internals. Chemical abuse damage is not covered by this limited warranty, such damage to the spa can be avoided with proper maintenance of the spa waters chemistry.

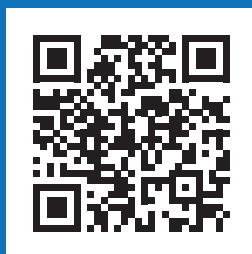
Additional Disclaimers

Spa owners who have purchased a Crystal Cove spa, and the spas final resting place is not in the United States or Canada, Crystal Cove spas will be able to send components and parts directly to the spa customer if the original spa dealer is not within range of the spa. It is the responsibility of the spa owner to find a experienced electrician, plumber, or technician to perform the necessary repairs. A preliminary over the phone technical meeting with a Crystal Cove spa representative is necessary, to ensure the experienced laborer is familiar with the spas operation, and recommended repair methods. Labor costs of a repair in such circumstances must be first approved by a Crystal Cove representative, before moving forward with any repairs covered in this warranty. It is advised to request a labor quote from said experienced laborer, and to send this quote to a Crystal Cove representative. If all prerequisites are met and the repair is approved, Lloyd's Material Supply Company will reimburse the cost of labor, directly to the spa owner upon completion of repairs. Reimbursements of charged labor will be sent as a check to the spa owners residence, with a varying estimated disbursement window.

For all repairs/warranty claims within the United States and Canada and other nations, may be required to send parts/components back to the manufacturer of Crystal Cove spas when deemed necessary. In some circumstance where shipping the component/part is necessary, Crystal Cove spas will provide a shipping label to send the affected or requested components/parts. It is the responsibility of the spa owner to properly package and secure the package for shipping. In some circumstances only images and proof of purchase would be necessary to file a warranty claim, in such circumstances if a Crystal Cove spas representative deems that the replaced parts do not have to be returned, follow all local regulations and laws to properly dispose of said components.



CRYSTAL COVE SPAS



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Confidential pricing for authorized Crystal Cove Spas dealers only. Crystal Cove Spas reserves the right to update specifications and pricing without notice. Possession of this document does not qualify you to purchase products for printed prices. Crystal Cove Spas reserves the right to enhance, modify or discontinue products at any time without notice. Pricing and specifications may change without notice.

LTR20261146-HPS-NC
12/8/2025