

spaTouch²™

User Guide

BRITISH HOT TUBS™

The SpaTouch2



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SpaTouch™
Getting Started

Balboa Water Group BP Series Systems
User Interface and Programming Reference

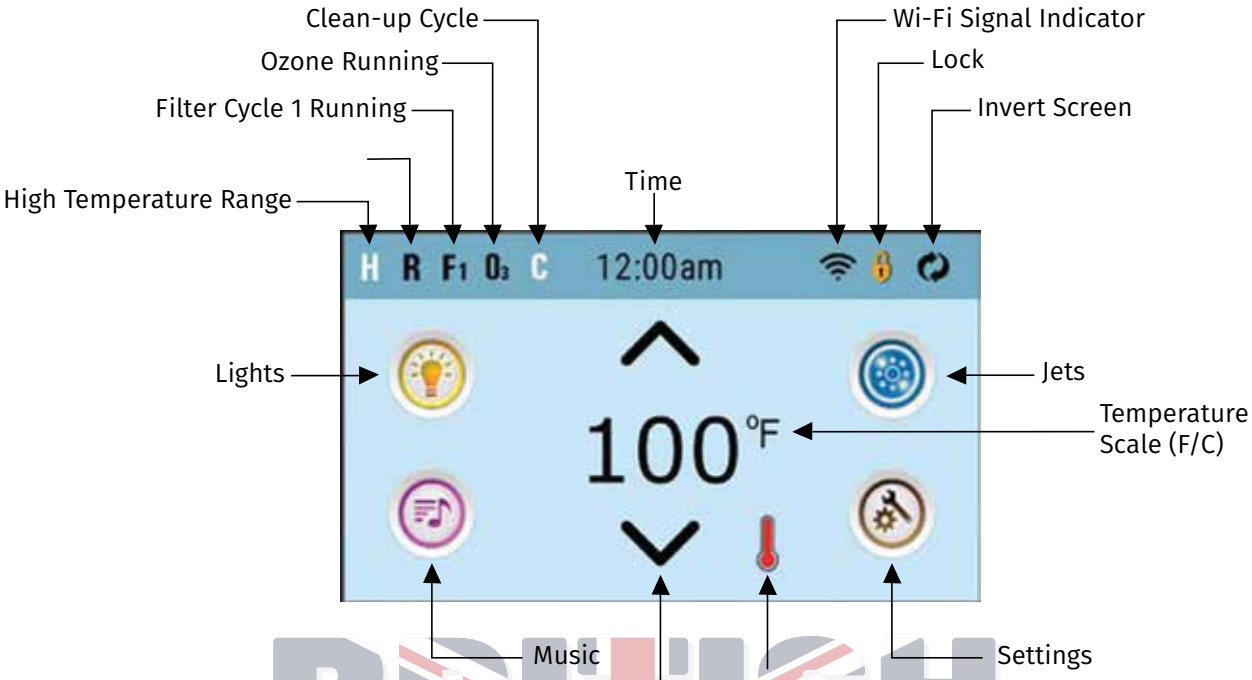
The spaTouch™ Icon Driven panel is compatible with all BP systems that already support the TP800 and/or the TP900.

If this panel is used with a system that supports only the TP400 and/or TP600, many screens will work correctly, and the spa screen will try to display all of your equipments, but in some cases it may not display correctly.



Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

The Main Screen



Spa Status

Important information about spa operation can be seen on the Main Screen. Most features, including Set Temperature adjustment, can be accessed from this screen. The actual water temperature can be seen, and the Set Temperature can be adjusted (see page 5). Time-of-Day, Ozone and Filter status is available, along with other messages and alerts. The selected Temperature Range is indicated in the upper left corner. The Spa Equipment Control Icon will spin if any pump is running. A Lock icon is visible if the panel or settings are locked.

Note: After 30 minutes* the display will automatically go into sleep mode, which turns the display off. This is normal operation. Touch anywhere on the screen to wake the panel up.

*The actual number of minutes can be customized. See page 20.

- H = High Temperature Range
  L = Low Temperature Range
- R = Ready Mode | RR = Ready/Rest Mode
  R = Rest Mode
- F1 = Filter Cycle 1 is running
  F2 = Filter Cycle 2 is running
  F+ = Filter Cycles 1 & 2 are both running
- O_3 = 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

*Continued on next page

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The Main Screen

- Lock Icon: When displayed, indicates the panel is in a locked mode. To unlock or lock a setting or panel lock, first press the corresponding icon onthe Lock Screen, then press and hold the word “Lock” for 5+ seconds until the text and icon change to the opposite state.

  There are 2 lock icons that can be shown on the title bar of most screens. A tall skinny one representing a settings lock is applied. It is shown on screens that are affected by the settings lock. And the standard lock icon Padlock which represents the Panel being locked. If both settings and panel are locked, only the panel lock will show since the settings lock doesn’t do much in that situation. When the panel is locked, the Settings Screen will only show items not affected by that lock (System Info and Lock Screens).

  Touch the Indicator to go to a Message Screen which shows the message.

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

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

- = Adjust set temperature lower

- = Adjust set temperature higher

- = on = inactive = disabled

- = 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

- = 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
  - = Information Message

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

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The Main Screen



NAVIGATION

Music Settings Spa Equipment

- Navigating the entire menu structure is done by touching the screen.
- The three screen selections indicated below can be selected. Touch one of these to enter a different screen with additional controls.
- Most menu screens time out and revert to the main screen after 30 seconds of no activity.

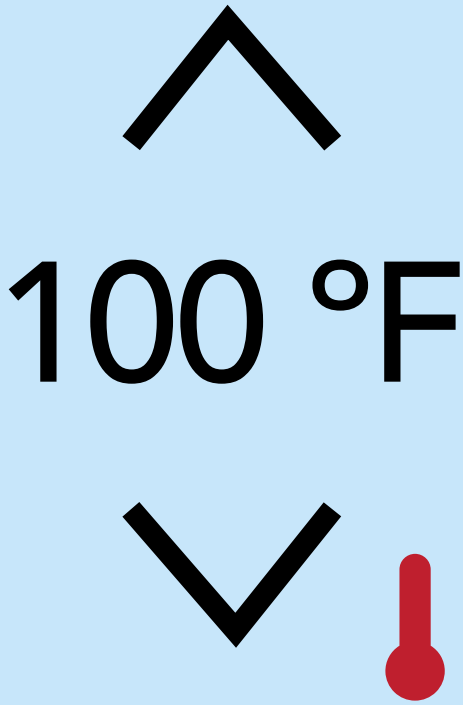
MESSAGES

A warning message is waiting

- At the bottom of the screen, at certain times an indicator may appear showing that a message is waiting. Touch this indicator to go to the Message Display Screen. On that Screen some of the messages can be dismissed. For more on theMessage Display Screen, see pages 25-30.

Manufactured under one or more of these patents.
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The Main Screen



The Set Temperature

Press Up or Down once to display the Set Temperature (indicated by a flashing ºF or ºC, plus a change in color of the temperature). Pess Up or Down again to modify the Set Temperature. The Set Temperature changes immediately.

If you need to switch between High Temperature Range and Low Temperature Range you need to go to the Settings Screen.

Press & Hold

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

The Spa Screen

All Equipment Access

The Spa Screen shows all available equipment* to control. The display shows icons that are related to the equipment installed on a particular spa model, so this screen may change depending on the installation. The icon buttons are used to select and control individual devices.

Some devices, like pumps, may have more than one ON state, so the icon will change to reflect the state of the equipment. Below are some examples of 2-speed Pump indicators.


Jets Off


Jets Low


Jets High



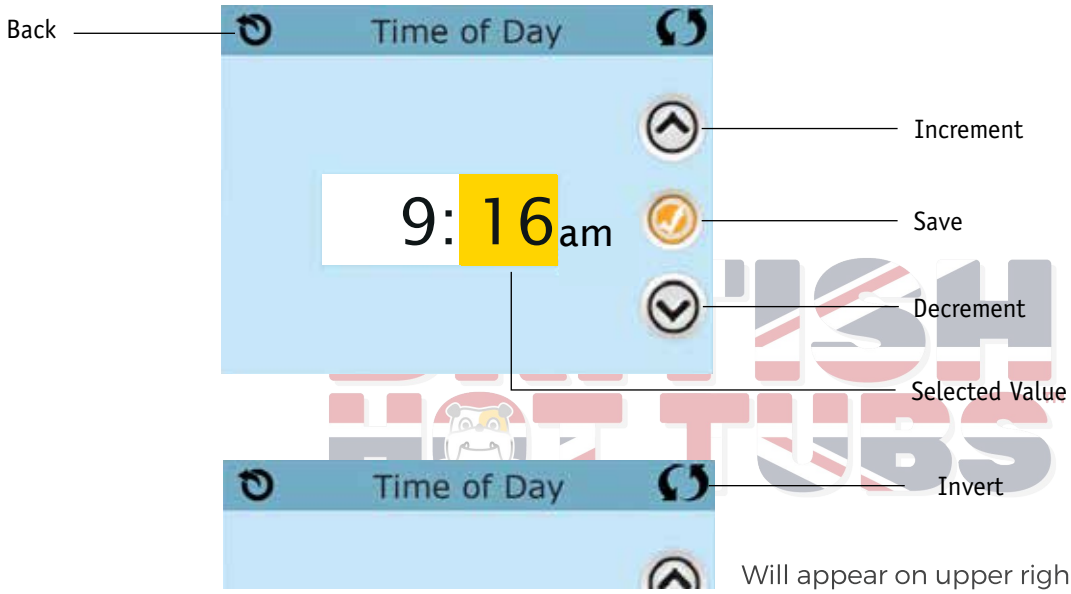
If the Spa has a Circ Pump, a Circ Pump Icon will appear to indicate its activity, but outside of Priming Mode, the Circ Pump cannot be controlled directly.

*One exception: The Main Spa Light is not shown on the Spa Screen; it is only shown (and controlled) on the Main Screen.

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Common Buttons

If an Up or Down button is shown and pressed when on an editing page, and a value has been selected (highlighted), the value can be incremented by pressing the up arrow or decremented by pressing the down arrow.



Will appear on upper right on all screens.

Exiting Screens

The Back button is on every screen except the Main Screen, the Priming Mode Screen are a Message Display Screen. When you see only this button, or this button plus an Inactive Save Button, it means Back or Exit. It appears on editing screens before you have changed any value, as well as on all other screens.

When you see both the Back button and an Active Save button, the Save button will Save, while the Back button will Cancel. If the screen times out due to no activity it will act like Cancel.



Active Save Button



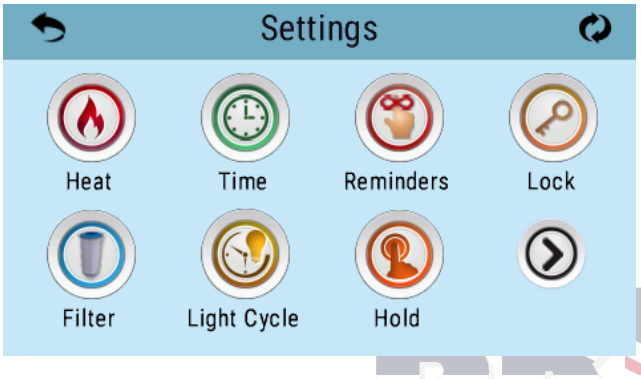
Inactive Save Button

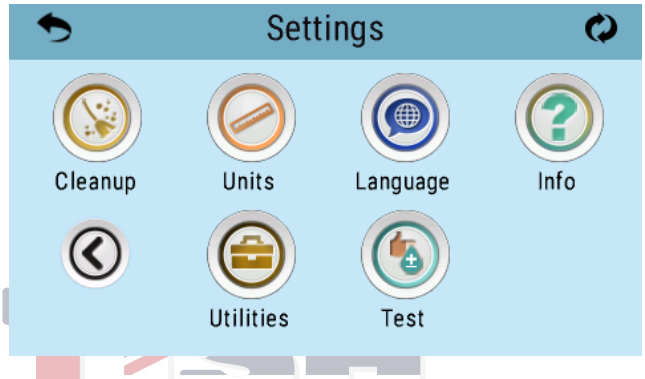
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Common Buttons

If there is a right arrow at the bottom of the screen, it takes you to the next page.

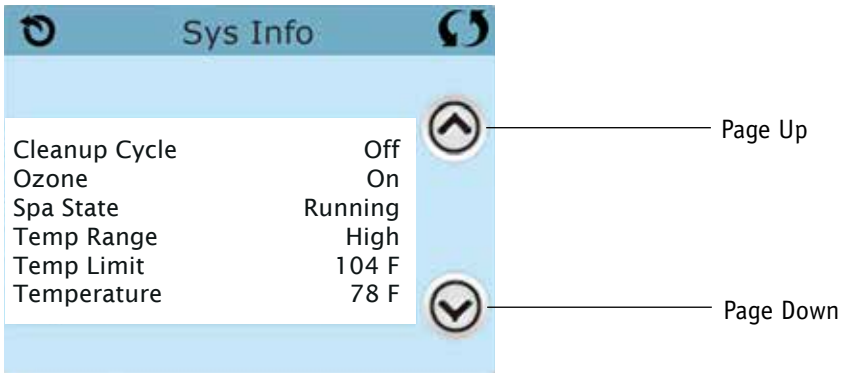
Page Left | Page Right





Page up | Down

If an Up or Down button is shown and pressed when on a page with a text list, the list can be scrolled a page at a time.

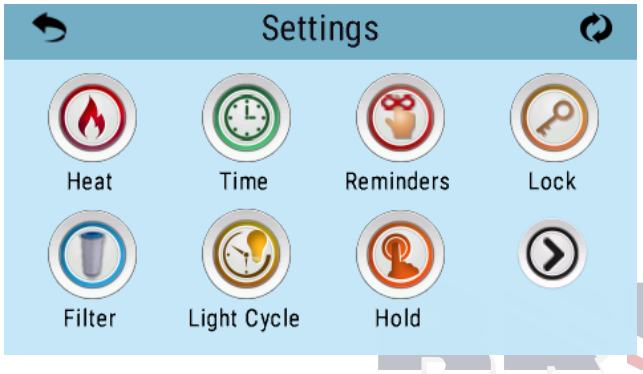


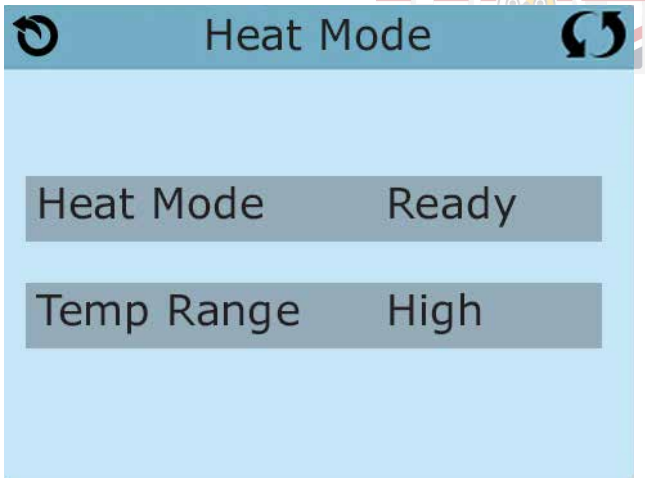
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The Settings Screen

Programming, etc.

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





The Heat Icon takes you to a screen where you control the Heat Mode and the Temperature Range.

Dual Temperature Ranges
High vs. Low

This system incorporates two temperature range settings with independent set temperatures. The specific range can be selected on the Settings screen and is visible on the Main Screen in the upper left corner of the display. These ranges can be used for various reasons, with a common use being a “ready to use” setting vs. a “vacation” setting. 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.

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

Low Range can 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.

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The Settings Screen

Heat Mode

Ready vs. Rest | Circulation Mode | Ready-in-Rest Mode

Heat Mode – Ready vs. 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 “heater pump.”
The heater pump can be either a 2-speed pump (Pump 1) or a circulation pump.
If the heater pump is a 2-Speed Pump 1, Ready Mode will circulate water every 1/2 hour, 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 will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the heater pump has been running for a minute or two.
When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off.

Circulation Mode

If the spa is configured for 24HR circulation, the heater pump generally runs continuously. Since the heater 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 24HR circulation mode.

Ready-in-Rest Mode

Ready in Rest Mode appears in the display if the spa is in Rest Mode and the Jets 1 Button is pressed. When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off. After 1 hour, the System will revert to Rest Mode. This mode can also be reset by selecting the Heat Mode line on the Screen shown here.

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Fill it up!

Preparation & Filling

Fill the spa to its correct operating level. Be sure to open all valves and jets in the plumbing system before filling to allow as much air as possible to escape from the plumbing and the control system during the filling process.
After turning the power on at the main power panel, the top-side panel will display a splash screen or startup screen.

Priming Mode – M019*

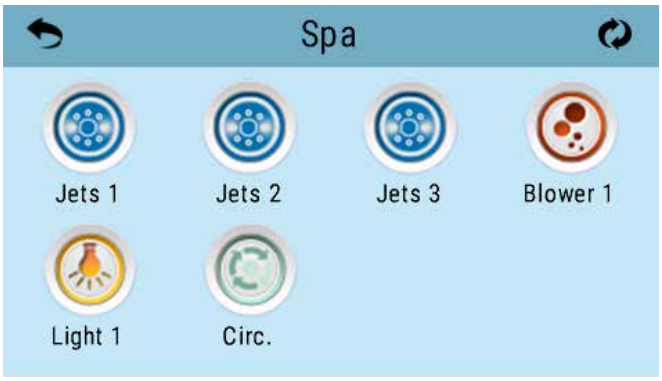
After the initial start-up sequence, the control will enter Priming Mode and display a Priming Mode screen. Only pump icons appear on the priming mode screen. During the priming mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater 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.

Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

The Settings Screen

Priming the Pumps

As soon as the Priming Mode screeen appears on the panel, select the “Jets 1” button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, select the other pumps, to turn them on. The pumps should be running in high-speed to facilitate priming. If the pumps have not primed after 2 minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process. Note: Turning the power off and back on again will initiate a new pump priming session. Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and call for service.



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

Exiting Priming Mode

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

You can manually exit Priming Mode by pressing the “Back” button on the Priming Mode Screen. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4-5 minutes. Be sure that the pump(s) have been primed by this time.



Once the system has exited Priming Mode, the top-side panel will display the Main Screen, but the display will not show the water temperature yet, as shown below. This is because the system requires approximately 1 minute of water flowing through the heater to determine the water temperature and display it.

M0XX is a Message Code.

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Spa Behavior

Pumps

On the Spa Screen, select a “Jets” button once to turn the pump on or off, and to shift between low- and high-speeds if equipped. If left running, the pump will turn off after a time-out period.

Non-Circ Systems

The low-speed of pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode (See page 11), Pump 1 low may also activate for at least 1 minute every 30 minutes to detect the spa temperature (polling) and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

Circulation Pump Modes

If the system is equipped with a circ pump, it will be configured to work in one of three different ways:

1. The circ pump operates continuously (24 hours) with the exception of turning off for 30 minutes at a time when the water temperature reaches 3°F (1.5°C) above the set temperature (most likely to happen in very hot climates).
2. The circ pump stays on continuously, regardless of water temperature.
3. A programmable circ pump will come on when the system is checking temperature (polling), during filter cycles, during freeze conditions, or when another pump is on.
   The specific Circulation Mode that is used has been determined by the Manufacturer and cannot be changed in the field.
   Other device options may be available, like Blower, Light, Mister, etc.

Filtration and Ozone

On non-circ systems, Pump 1 low and the ozone generator will run during filtration. On circ systems, the ozone will generally run with the circ pump, but can be limited to filtration cycles. (On some circs systems, Pump 1 low will run along with the circ Pump during filtration.)

The system is factory-programmed with one filter cycle that will run in the evening (assuming the time-of-day is properly set) when energy rates are often lower. The filter time and duration are programmable. A second filter cycle can be enabled as needed.

At the start of each filter cycle, the water devices like blower, mister device (if these exist) and other pumps will run briefly to purge the plumbing to maintain good water quality.

Freeze Protection

If the temperature sensors within the heater detect a low enough temperature, then the water devices automatically activate to provide freeze protection. The water devices will run either continuously or periodically depending on conditions.

In colder climates, an optional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Auxiliary freeze sensor protection acts similarly except with the temperature thresholds determined by the switch. See your dealer for details.

Clean-up Cycle (optional)

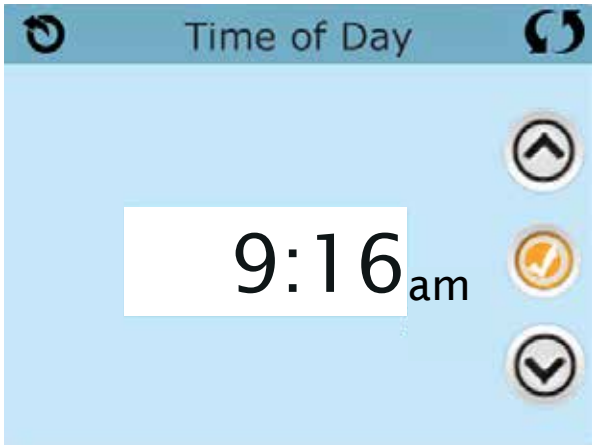
When a pump or blower is turned on by a button press, a clean-up cycle begins 30 minutes after the pump or blower is turned off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the system. On some systems, you can change this setting.

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Time of Day

Be sure to set the Time-of-Day

Setting the time-of-day is important for determining filtration times and other background features.
The Heat Icon on the Settings Screen takes you to a screen where you control the Time-of-Day.
On the Time-of-Day screen, simply select the Hours and Minutes. Use the Up and Down Buttons to make changes, then Save.



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If no Time-of-Day is set...

In the memory an Information Screen will appear. If you exit it and Information Icon will appear at the bottom of the Main Screen, until the time-of-day has been set.





NOTE:

This only applies to some systems:

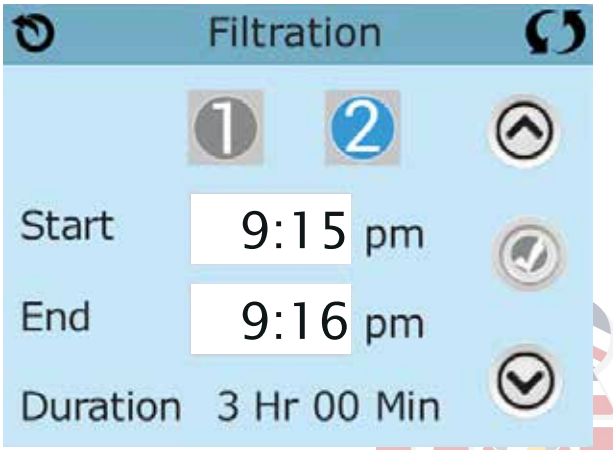
If power is interrupted to the system, Time-of-Day will be maintained for several days.

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Adjusting Filtration

Main Filtration

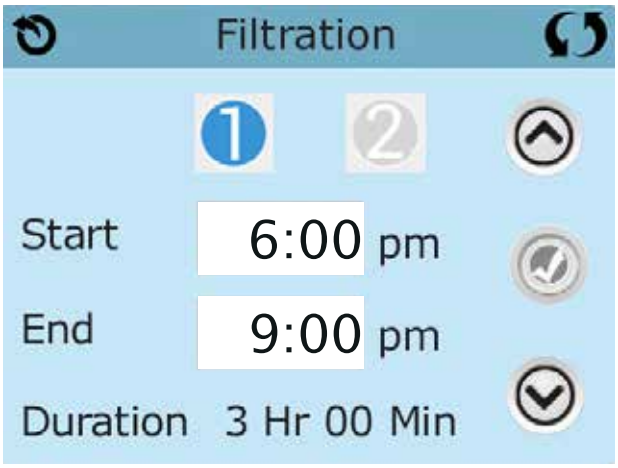
Using the same adjustment as Setting the Time, Filter Cycles are set using a start time and a duration. Each setting can be adjusted in 15-minute increments. The panel calculates the end time and displays it automatically.



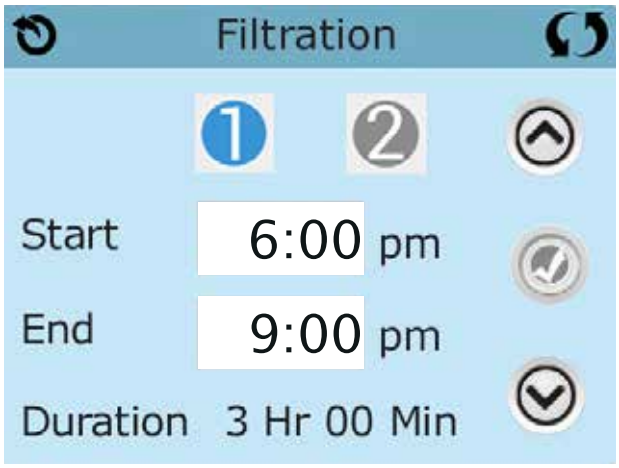
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Filter Cycle 2 - Optional Filtration

Filter Cycle 2 is OFF by default.



Viewing Filter 1 while Filter 2 is OFF:



Viewing Filter 1 while Filter 2 is ON:

Press “1” to view Filter 1. Press “2” once to view Filter 2. Press “2” again to turn Filter 2 ON or OFF.

When Filter Cycle 2 is ON, it can be adjusted in the same manner as Filter Cycle 1.

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

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Adjusting Filtration

Continued...

Circulation Pump Modes

Some spas may be manufactured with Circ Pump settings that allow programming filtration cycle duration. Some circ Modes are pre-programmed to operate 24 hours a day and are not programmable. Refer to the spa manufacturer's documentation for any Circ Mode details.

Purge Cycles

In order to maintain sanitary conditions, as well as protect against freezing, secondary water devices will purge water from their respective plumbing by running briefly at the beginning of each filter cycle. (Some systems will run a certain number of purge cycles per day, independent of the number of filter cycles per day. In this case, the purge cycles may not coincide with the start of the filter cycle).
If the Filter Cycle 1 duration is set for 24 hours, enabling Filter Cycle 2 will initiate a purge when Filter Cycle 2 is programmed to begin.

The Meaning of Filter Cycles

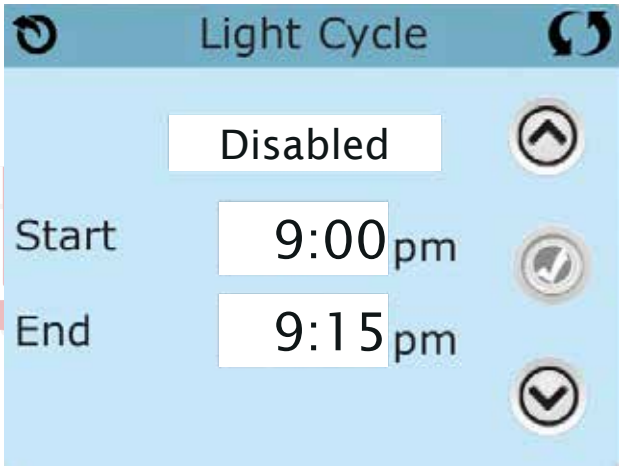
1. The heating pump always runs during the filter cycle*
2. In Rest Mode, heating only occurs during the filter cycle
3. Purges happen at the start of each filter cycle

* For example, if your spa is set up for 24/hour circulation except for shutting off when the water temperature is 3˚F/1.3˚C above the set temperature, that shutoff does not occur during filter cycles.

Additional Settings

Light Cycle Option

If Light Cycle does not appear on the Settings Screen, the Light Timer feature is not enabled by the manufacturer. The Light Cycle Icon on the Settings Screen takes you to a screen where you control the Light Cycle. When available, the Light Timer is ("Disabled") by default. Press "Disabled" to change it to "Enabled" (ON). The settings can be edited the same way that Filter Cycles are edited.



Auxiliary Panel(s)

Specific Buttons for Specific Devices

If the spa has an Auxiliary Panel(s) installed, pressing buttons on that panel will activate the device indicated for that button.
These dedicated buttons will operate just like the Spa Screen buttons (see page 6) and the equipment will behave in the same manner with each button press.

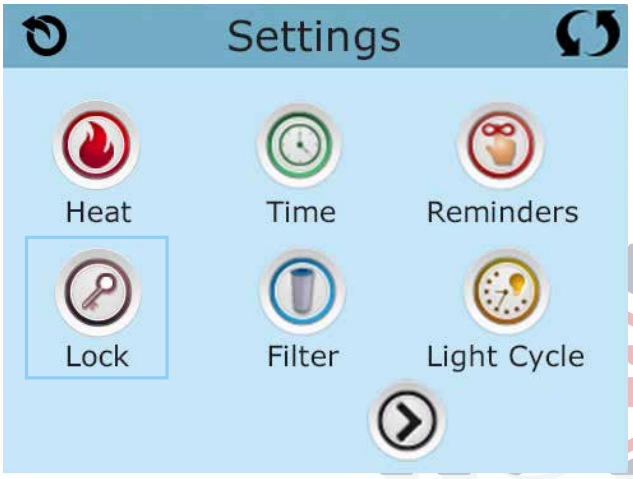
Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

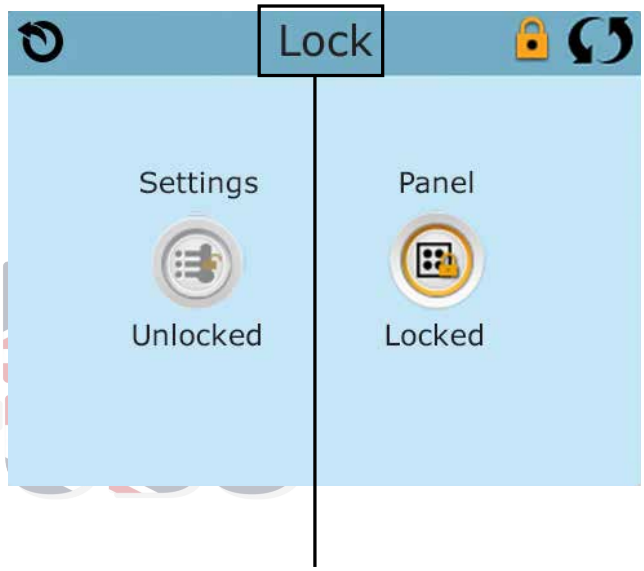
Restricting Operation

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 Settings allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted. Settings Lock allows access to a reduced selection of menu items. These include Filter Cycles, Invert, Information and Fault Log. They can be seen, but not changed or edited.

Locking/Unlocking

The same steps are used to Lock and Unlock.
To lock either Settings or Panel first select Settings (if it says “Unlocked”) or Panel (if it says “Unlocked”), than press the word “Lock“ for at least 5 seconds.
To unlock either Settings or Panel first select Settings (if it says “Locked”) or Panel (if it says “Locked”), than press the word “Lock“ for at least 5 seconds.





Press here for 5 seconds to lock or unlock



Panel Locked and Settings Unlocked

Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

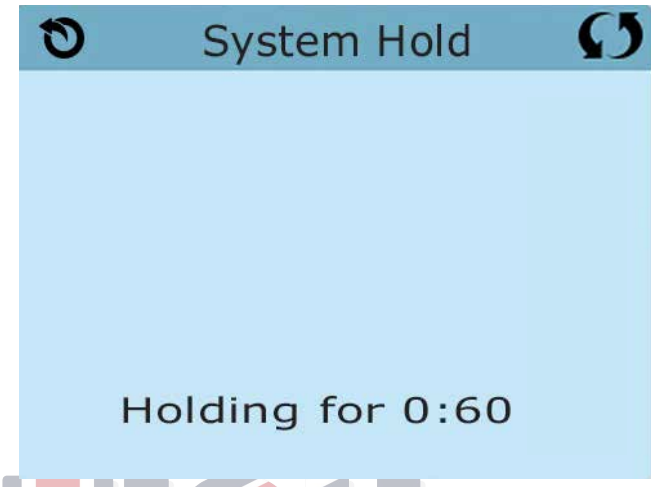
Additional Settings

Continued...

Hold - M037*

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

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

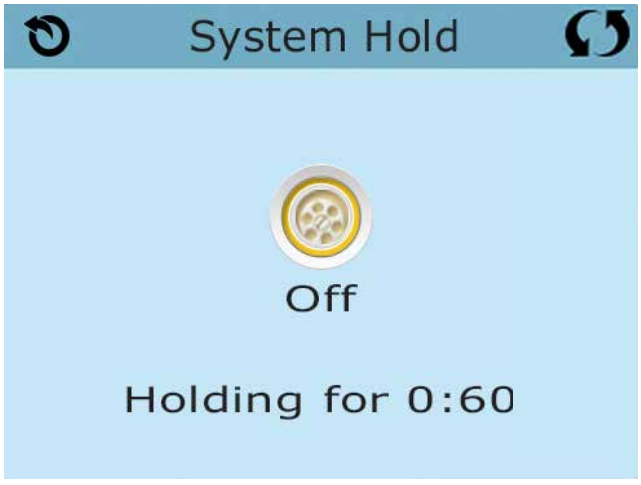


BRITISH HOT TUBS™

Drain Mode

Some spas have a special feature that allows Pump 1 to be employed when draining the water. When available, this feature is a component of Hold Mode.

***M0XX is a Message Code.**
Codes like this will be seen in the Fault Log

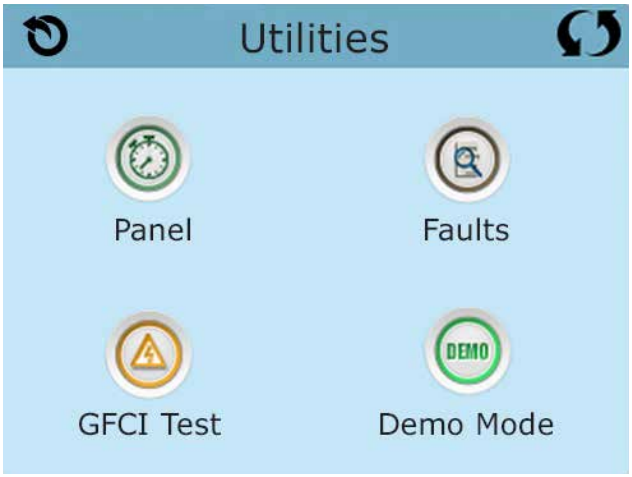


Manufactured under one or more of these patents.
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Utilities Screen

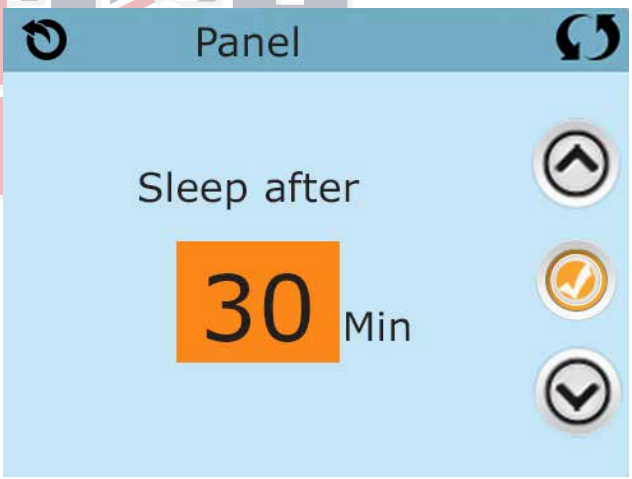
Utilities

The Utilities Icon on the Settings Screen takes you to the Utilities Screen. The Utilities Screen contains the following:



Panel

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



Demo Mode

Demo Mode is not always enabled, so it may not appear. This is designed to operate several devices in a sequence in order to demonstrate the various features of a particular hot tub.

Fault Log

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

GFCI Test

(Feature not available on CE rated systems.)

Your systems may have GFCI configured in one of three ways:

1. GFCI test is not enabled
2. Manual GFCI test is enabled but automatic GFCI test is not enabled
3. Both manual and automatic GFCI tests are enabled. The automatic test will happen within 7 days of the spa being installed and if successful will not repeat. (If the automatic test fails it will repeat after the spa is restarted.) GFCI Test will not appear on the screen if it is not enabled. This screen allows the GFCI to be tested manually from the panel and can be used to reset the automatic test feature.

GFCI Test will not appear on the screen if it is not enabled. This screen allows the GFCI to be tested manually from the panel and can be used to reset the automatic test feature.

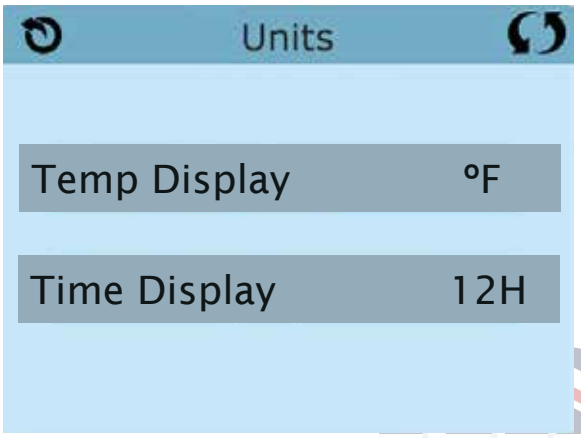
Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

Additional Settings

Continued...

Units Screen

The Units Icon on the Settings Screen takes you to the Units Screen.

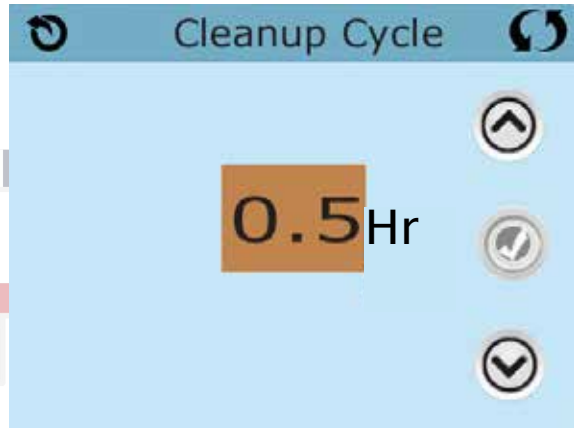


1. Press “Temp Display” to change the temperature between Fahrenheit and Celsius.
2. Press “Time Display“ to change the clock between 12 hr and 24 hr display.

Cleanup Cycle

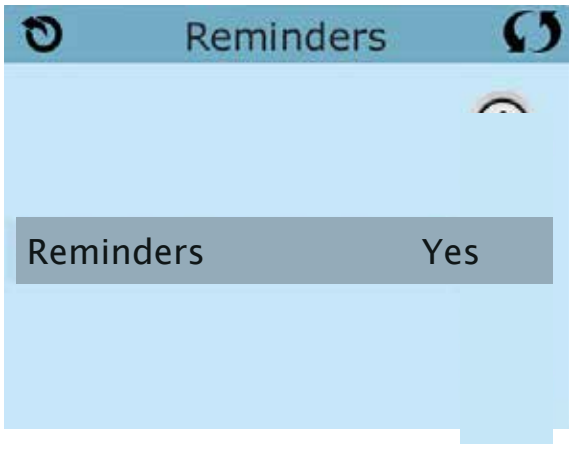
Cleanup Cycle Duration is not always enabled, so it may not appear. When it is available, set the length of time Pump 1 will run after each use. 0-4 hours are available. Settings it to 0.0 Hr keeps the Cleanup Cycles from running.

The Cleanup Icon on the Settings Screen takes you to the Cleanup Cycle screen.



Reminders

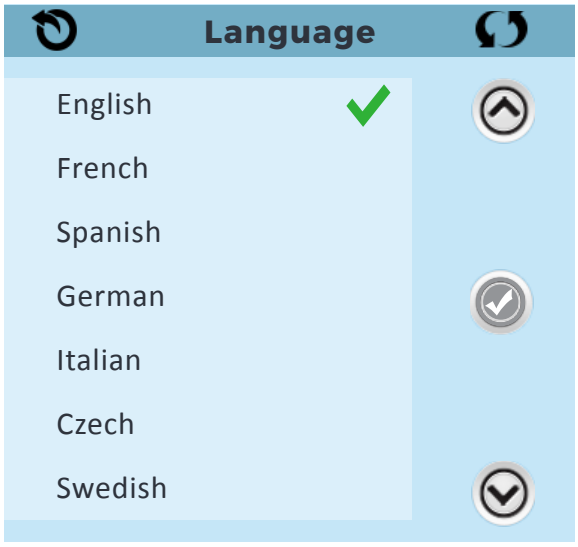
The Reminder Icon on the Settings Screen takes you to the Reminders screen.



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

Cleanup Cycle

The Language Icon on the Settings Screen takes you to the Language screen. Change the language displayed on the panel.

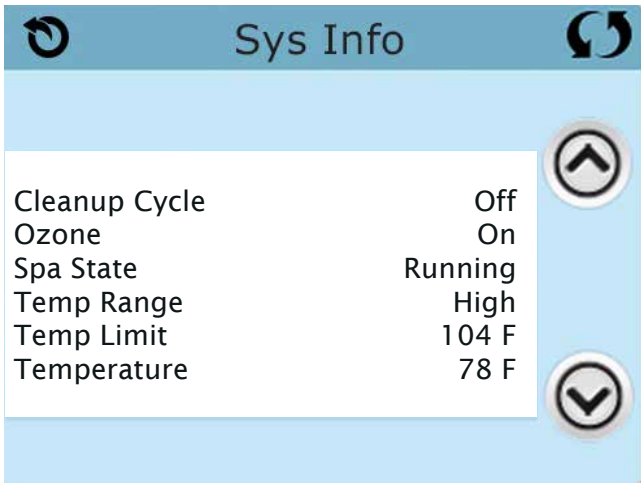


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Information

System Information

The System Information Screen displays various settings and identification of the particular system.



System Model

Displays the Model Number of the System.

Panel Version

Displays a number of the software in the topside control panel.

Software ID (SSID)

Displays the software ID number for the System.

Configuration Signature

Displays the checksum for the system configuration file.

Current Setup

Displays the currently selected Configuration Setup Number.

Dip Switch Settings

Displays a number that represents the DIP switch positions of S1 on the main circuit board.

Heater Voltage

(Feature not used on CE rated systems).

Displays the operating voltage configured for the heater.

Heater Type

Displays a heater type ID number.

Manufactured under one or more of these patents.
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Utilities

GFCI Test Feature

The Ground Fault Circuit Interrupter (GFCI) or Residual Current Detector(RCD) is an important safety device and is required equipment on a hot tub installation.
(The GFCI Test Feature is not available on CE rated systems).

Used for verifying a proper installation

Your spa may be equipped with a GFCI Protection feature. If your spa has this feature enabled by the manufacturer, the GFCI Trip Test must occur to allow proper spa function.
On some systems:

Within 1 to 7 days after startup, the spa will trip the GFCI to test it. (The number of days is factory programmed.) The GFCI must be reset once it has tripped. After passing the GFCI Trip Test, any subsequent GFCI trips will indicate a ground fault or other unsafe condition and the power to the spa must be shut off until a service person can correct the problem.

Forcing the GFCI Trip Test
(North America Only)

Touching the GFCI Test Icon on the Utilities Screen takes you to the GFCI Test screen..

The installer can cause the GFCI Trip Test to occur sooner by pressing Test on the GFCI Test screen.
The GFCI should trip within several seconds and the spa should shut down. If it does not, shut down the power and manually verify that a GFCI breaker is installed and that the circuit and spa are wired correctly. Verify the function of the GFCI with its own test button. Restore power to the spa and repeat the GFCI Trip Test.
Once the GFCI is tripped by the test, reset the GFCI and the spa will operate normally from that point. You can verify a successful test by navigating to the above screen. “Passed” should appear after the Reset line is selected on the GFCI screen.

Warning:

On those systems that automatically test the GFCI within 1 to 7 days after startup:



The end-user must be trained to expect this one-time test to occur. The end-user must be trained how to properly reset the GFCI. If freezing conditions exist, the GFCI or RCD should be reset immediately or spa damage could result.

CE Product

CE registered systems do not have an RCD Test Feature due to the nature of the electrical service. Some UL registered systems do not have the GFCI Test Feature activated. The end-user must be trained how to properly test and reset the RCD.

Reset Button:

Only use the Reset Button prior to moving the spa to a new location. Pressing the Reset the button forces a new Test to be performed at the new location.

Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

General Messages

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

– – – –°F – – – –°C

Water Temperature is Unknown

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

Possible freezing condition

A potential freeze condition has been detected, or the Aux Freeze Switch has closed. All water devices are activated. In some cases, pumps may turn on and off and the heater may operate during Freeze Protection. This is an operational message, not an error indication.



The water is too hot – M029*

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

The water level is too low

This message can only appear on a system that uses a water level sensor. It appears whenever the water level get too low (or the water level sensor is disconnected), and automatically disappears when the water level is adequate. Pumps and the heater turn OFF when this message appears.

*M0XX is a Message Code. Codes like this will be seen in the Fault Log

Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

Heater-Related Messages

The 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 start up will begin again after about 1 min. See “Flow Related Checks” below.

The 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. See “Flow Related Checks” below. After the problem has been resolved, reset the message*.

The heater may be dry* – M028**

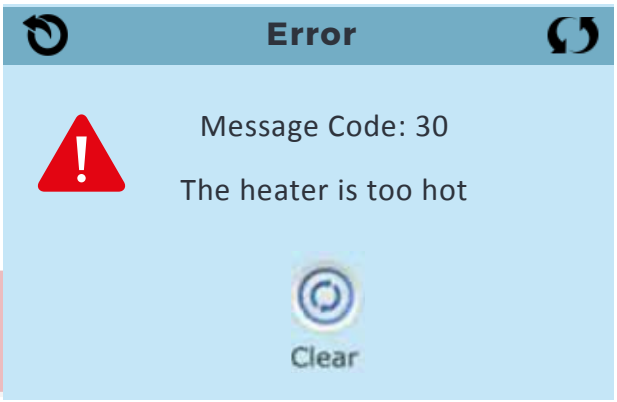
Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Reset this message* to reset the heater start-up. See “Flow Related Checks” below.

The heater is 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. See “Flow Related Checks” below.

The heater is too hot* – M030**

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



Flow-related checks

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime. On some systems, even when spa is shut down by an error condition, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

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



**M0XX is a Message Code.
Codes like this will be seen in the Fault Log

Manufactured under one or more of these patents.
U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

Sensor-Related Messages

Sensors are out of sync – M015**

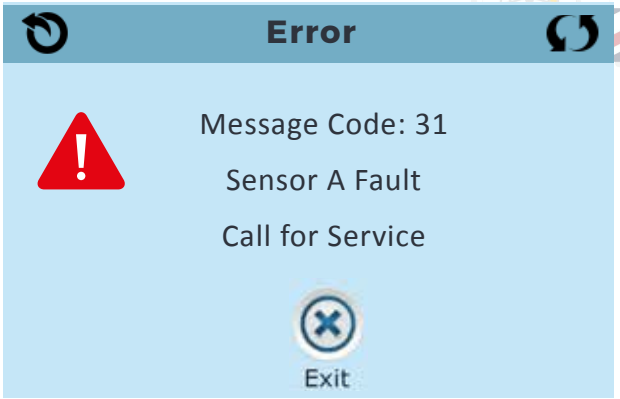
The temperature sensors MAY be out of sync by 3°F. Call for Service if this message does not disappear within a few minutes.

Sensors are out of sync -- Call for service* – M026**

The temperature sensors ARE out of sync. The fault above has been established for at least 1 hour. Call for Service.

Sensor A Fault, Senor B Fault – Sensor A: M031**, Sensor B: M032**

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



Miscellaneous Messages

Communications error

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

Test software installed

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

**** Some messages can be reset from the panel.***

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



**M0XX is a Message Code.
Codes like this will be seen in the Fault Log

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U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. All material copyright of Balboa Water Group.

System-Related Messages

Program memory failure* – M022**

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.

The settings have been reset (Persistent Memory Error)* – M021**

Contact your dealer or service organization if this message appears on more than one power-up.

The clock has failed* – M020**

Contact your dealer or service organization.

Configuration error (Spa will not Start Up)

Contact your dealer or service organization.

The GFCI test failed (System Could Not Test the GFCI) – M036**

(North America Only) May indicate an unsafe installation. Contact your dealer or service organization.

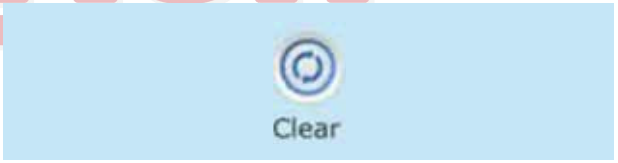
A pump may be stuck on – M034**

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

Hot fault – M035**

A Pump Appears to have been Stuck ON when spa was last powered POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

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



**M0XX is a Message Code.
Codes like this will be seen in the Fault Log

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Reminder Messages

General maintenance helps

Reminder Messages can be suppressed by using the Reminders Screen. 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 (i.e. 7 days) can be specified by the Manufacturer.

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, i.e. every 30 days.
Clean the filter media as instructed by the manufacturer.

Test the GFCI (or RCD)

May appear on a regular schedule, i.e. every 30 days.
The GFCI or 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.

Change the water

May appear on a regular schedule, i.e. every 90 days.
Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.

Clean the cover

May appear on a regular schedule, i.e. every 180 days.
Vinyl covers should be cleaned and conditioned for maximum life.

Treat the wood

May appear on a regular schedule, i.e. every 180 days.
Wood skirting and furniture should be cleaned and conditioned per the manufacturers instructions for maximum life.

Change the filter

May appear on a regular schedule, i.e. every 365 days.
Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.

Change the UV

May appear on a regular schedule.
Change the UV as instructed by the manufacturer.

Check ozone

May appear on a regular schedule.
Change the UV as instructed by the manufacturer.

Service check-up

May appear on a regular schedule.
Do a service check-up as instructed by the manufacturer.

Additional messages may appear on specific systems.

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



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Warning!

Qualified Technician Required for Service and Installation

Basic Installation & Configuration Guidelines

Use minimum 6AWG copper conductors only.

Torque field connections between 21 and 23 in lbs.

Readily accessible disconnecting means to be provided at time of installation.

Permanently connected power supply.

Connect only to a circuit protected by a Class A Ground Fault

Circuit Interrupter (GFCI) or Residual Current Device (RCD) mounted at least 5' (1.52M) from the inside walls of the spa/hot tub and in line of sight from the equipment compartment.

CSA enclosure: Type 2

Refer to Wiring Diagram inside the cover of the control enclosure.

Refer to Installation and Safety Instructions provided by the spa manufacturer.

Warning:
People with infectious diseases should not use a spa or hot tub.

Warning:
To avoid injury, exercise care when entering or exiting the spa or hot tub.

Warning:
Do not use a spa or hot tub immediately following strenuous exercise.

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

Warning:
Maintain water chemistry in accordance with the Manufacturers instructions.

Warning:
The equipment and controls shall be located not less than 1.5 meters horizontally from the spa or hot tub.

Warning! GFCI or RCD Protection.

The Owner should test and reset the GFCI or RCD

Warning! Shock Hazard! No User Serviceable Parts.

Do not attempt service of this control system. Contact your dealer or service organization for assistance. Follow all owner's manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.

CSA Compliance/Conformité

Caution:

- Test the ground fault circuit interrupter before each use of the spa.
- Read the instruction manual.
- Adequate drainage must be provided if the equipment is to be installed in a pit.
- For use only within an enclosure rated CSA Enclosure 3.
- Connect only to a circuit protected by a Class A ground fault circuit interrupter or residual current device.
- To ensure continued protection against shock hazard, use only identical replacement parts when servicing.
- Install a suitably rated suction guard to match the maximum flow rate marked

Warning:

- Water temperature in excess of 38°C may be injurious to your health.
- Disconnect the electrical power before servicing.

Attention:

- Toujours verifier l'efficacite du disjoncteur differentiel avant d'utiliser differentiel avant d'utiliser le bain.
- Lire la notice technique.
- Lorsque l'appareillage est installe dans une fosse, on doit assurer un drainage adequat.
- Employer uniquement a l'interieur d'une cloture CSA Enclo sure 3.
- Connecter uniquement a un circuit protege par un disjoncteur differentiel de Class A.
- Afin d'assurer une protection permanente contre le danger de shock electrique, lors de l'entretien employer seulement des pieces de rechange identiques.
- Les prises d'aspiration doivent etre equipees de grilles convenant au debit maximal indique.

Avertissement:

- Des temperatures de l'eau superieures a 38°C peuvent pre senter un danger pour la sante.
- Deconnecter du circuit d'alimentation electrique avante l'entretien.

Warning/Advertissement:

- Disconnect the electric power before servicing. Keep access door closed.
- Deconnecter du circuit d'alimentation electrique avant l'entretien. Garder la porte fermer.

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