

## User Guide

Panel Software Version: 1.02 and above (view page 19)





spaTouch™ 3+

7" Display (17.78 cm Display)



spaTouch™ 3

5" Display (12.70 cm Display)



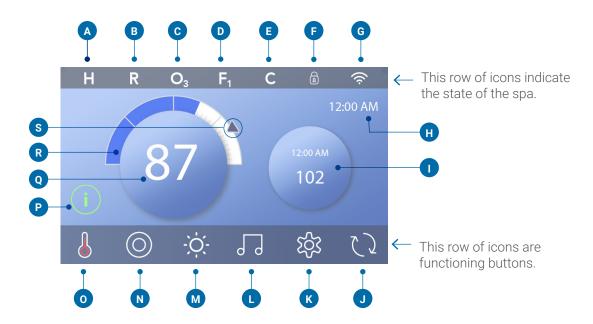


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# THE MAIN SCREEN



## **Main Screen Icons**

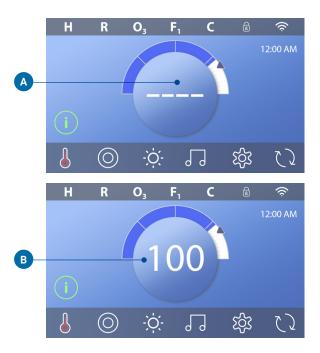
- A Temperature Range
  - High: H
  - Low: L
- **B** Heat Mode
  - Ready: R
  - Rest:
  - Ready-in-Rest: RR
- **C** Ozone Running: O<sub>3</sub>
- **D** Filter Cycles
  - Filter Cycle 1: F<sub>1</sub>
  - Filter Cycle 2: F2 (Optional Feature)
  - Filter Cycles 1 & 2: F+
- **E** Cleanup Cycle (Optional Feature)
- F Panel Locked and/or Settings Locked
- **G** WiFi (Local or Cloud Connection)
- **H** Time-of-Day
- - Secondary Button/Display

- J Invert Display
- K Settings
- L bba<sup>™</sup> versions 2 and 3 (Balboa Bluetooth Audio)
- M Light (or CHROMAZON∃™ <sup>®</sup> if installed).
   Both icons change from white to color when these devices are powered On.
- N Spa
- **0** Heater Status
- P Message Button (May Appear)
  - Information: (i)
  - Reminder: ®
  - Error Normal Error or Warning: 1
  - Error Spa will not function until fixed: 🗘
- **Q** Water Temperature
- R Water Temperature Bar
- **S** Set Temperature Arrow

The system configuration determines the number of icons that appear on the Main Screen. Your Main Screen may have fewer or different icons.

## **Spa Status**





Important information about spa operations 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 10). Time-of-Day, Ozone and Filter status are available, along with other messages and alerts. The selected Temperature Range is indicated in the upper left corner. A Lock icon (a) is visible if the Panel and/or Settings are locked. Near 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 the Message Display Screen, see page 27.

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When the spa is powered On, four dashes appear
(A) in the Water Temperature display for one minute.
The dashes indicate that the spa is checking the water temperature. After the pump runs for 1 minute, the dashes disappear and the water temperature is displayed (B). The dashes may reappear after the pump has not run for one hour.

# WAKE UP THE PANEL, NAVIGATION & COMMON BUTTONS

Controlling your spa is easy with the intuitive graphical user interface (GUI). This section describes how to navigate and use the GUI.

#### **Wake Up the Panel**

The screen is blank when it is in sleep mode. When you touch the blank screen, one of three screens will appear:

- 1 The Main screen will appear (A3). The panel is awake.
- 2 The  $\bigcirc$ 1 icon will appear (A2). Wake up the panel by pressing the  $\bigcirc$ 1 icon and then the  $\bigcirc$ 2 icon.
- 3 The hand icon will appear. Wake up the panel by pressing the hand icon (A1) and then swiping in the direction of the arrows.

The panel automatically goes into sleep mode when it is not used for a specified duration. The duration can be adjusted (view Panel oo on page 25).

### **Buttons**

A variety of button styles provide quick access to functions and settings. The large temperature display is a button (B) that controls the Set Temperature. The whole bottom row of the Main screen contains buttons (C).

## Mini Player Button (Set Temperature/Time)

The Mini Player button gives fast access to the Set Temperature and time (D). Show or hide the Mini Player button by pressing the Heater Status button once (E).

#### **Mini Player Button (Music)**

The Mini Player displays music controls (F), if your spa is equipped with  $bba^{TM}$  (Balboa Bluetooth Audio) and it is activated. Hide the Mini Player button by pressing the Heater Status button twice (G). The first press displays the Set Temperature/Time Mini Player button. The second press hides the Mini Player button.



## bba<sup>™</sup> button (H)

If  $bba^{TM}$  is activated, pressing the  $bba^{TM}$  button (H) once displays the Mini Player (F) with music controls. Pressing the  $bba^{TM}$  button (H) a second time opens the Music screen (1), If  $bba^{TM}$  is activated, a white ring appears around the button, as shown here (1).

If  $bba^{TM}$  is not activated, pressing the  $bba^{TM}$  button (H) once opens the Music screen ( I ).

If your spa is equipped with bba<sup>TM</sup>, refer to the bba<sup>TM</sup> user guide that came with the spa. If a user guide was not included, please contact the spa dealer or spa manufacturer.

#### **Screen Names**

Screen names appear in the top row of the screen. For example, this is the Settings screen (J). Screen names are referenced throughout this user guide.

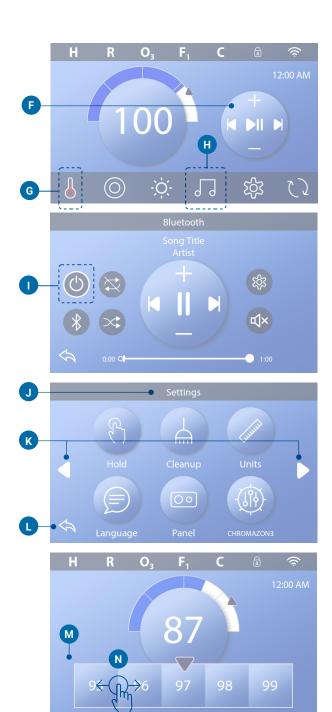
## **Navigation**

Navigate screens and/or lists with the following buttons:



## **Swiping & Selecting Items in Lists**

Swipe a list (N) to find the setting you want. The list will have an arrow (M) that indicates the current setting. If your desired setting appears but is not aligned with the arrow, tap the desired setting to make it align with the arrow. The temperature list will disappear when you tape anywhere outside of it.



## **Saving & Canceling**

After you input a new setting, press the Save button (B). After you press Save, the change is complete. If you don't want to apply a new setting, press the Cancel button (A).

## **Message Buttons**

Message buttons provide reminders to help you keep your spa running smoothly. Message buttons also provide warning information that helps spa technicians with troubleshooting.

When a message button appears (C), press it to view the corresponding message (D) or (G). Press the Exit button (E) to go back to the Main screen, or press the Clear button (F) to dismiss the message.

Buttons vary depending on the type of message. View the list below.





Error - Normal Error or Warning

Error - Spa will not function until fixed

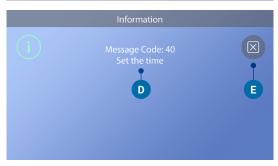
Clear Button

Exit Button



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# **SET THE TIME-OF-DAY**

## Be sure to set the Time-of-Day

Follow this sequence to set the time-of-day.

- In the Main screen, press the Settings button (B).
- In the Settings screen, press the Time button (C).
- In the Time of Day screen, press the Time button (D).
- Setting dials appear. Swipe these dials (F) to set the time. If your desired time value appears but is not aligned with the arrow, tap the desired time value to make it align with the arrow.
- Press the Save button (G) to save your settings. Or, press the Cancel button (E) to cancel your settings.

Setting the time-of-day is important for determining filtration times and other background features. If Time-of-Day needs to be set, the Information Message button (A) appears on the Main screen; view the previous page for more information on the different types of Message buttons.

NOTE: If power is interrupted to the system,
Time-of-Day will be maintained for several days (this only
applies to some systems).









# SET THE TEMPERATURE

# In this example we will set the Set Temperature to 102.

- Press the water temperature display button (A) to make the temperature menu appear (B). The center box with the arrow (C) indicates the current Set Temperature.
- If 102 is already showing, but just not centered (D), touch it to center it (E).
- If 102 is not showing (B), swipe the temperature menu until 102 appears (D).
- If 102 appears after swiping but does not stop in the center box (D), press 102. Pressing 102 makes it shift to the center box (E).
- Press the water temperature display (A) to make the temperature menu disappear. The Set Temperature is now 102.







## How do I view the Set Temperature?

Press the Heater Status button (A), and the Set Temperature appears in the Mini Player button (B). Press the Heater Status button again to make the Mini Player button disappear.

Set Temperature is represented numerically and by a blue arrow (D). Water temperature is represented numerically and by a blue status bar (C). The difference between water temperature and Set Temperature is represented by the gap between the blue status bar and the blue arrow (E). If there is no gap, the water temperature and Set Temperature are equal.

# Can I change the Set Temperature with the mini player button?

Yes you can. The mini player button and temperature display button function the same way in this regard. Press the mini player button to view the temperature menu. Select the desired temperature, and press the mini player button again to make the temperature menu disappear. You have now programmed a new Set Temperature.

### How do I know when the heater is On?

The center of the Heater Status icon buturns red (A) when the heater is On. The Heater Status icon appears in the top left corner of the Spa screen (F) when the heater is On.

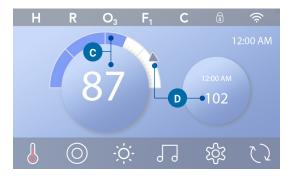




Note: the Heater Status button icon flashes during heater start-up; this is normal.











Heater Off

# **RUN SPA DEVICES**

Press the Spa button (A) to view the Spa screen.

Press these buttons (B) to run spa devices. Some devises may only turn On and Off, while other devices may have multiple speeds/states. Your spa configuration determines the number of buttons and the function of the buttons in the Spa screen. One Spa screen displays six buttons, maximum. If more than six buttons exists, a navigation button appears (D). Press the navigation button (D), or swipe, to view the next Spa screen. Press the Back button (C) to navigate to the Main screen.

If the Jets are left running, they will turn off after a time-out period.

If the Spa has a circulation pump, a circulation pump icon will appear in the Spa screen to indicate its activity only (the icon is not a functioning button). The circulation pump can be controlled with a button during Priming mode (view page 26).

If the spa does not have a circulation pump, then Jets 1 may turn On automatically at times. In these cases, pressing the Jets 1 button will just change speeds, but will not turn Off Jets 1.





# SET FILTER CYCLE TIME

# Keep your water clean and ready to enjoy

Follow these steps to set the time for Filter Cycle 1.

- Press the Settings button (A) on the Main screen.
- Press the Filter button (B) on the Settings screen.
- Press the Start button (E) on the Filter Cycles screen.
- Set the Start Time with these dials ( J ) on the F1 End screen.
- Press the Save button (K) to save your settings, or press the Cancel button (I) to cancel your settings.
- Press the End button (F) on the Filter Cycles screen, and follow the same steps to set the End Time.
- Once the Start and End Times are set, press the Save button (G) on the Filter Cycles screen.
- Once Start and End Times are set, the Duration appears here (H). You have now set the time for Filter Cycle 1. The white ring (C) indicates that Filter Cycle 1 is enabled (it is always enabled).

Follow the same steps noted above to set the time for Filter Cycle 2.

## How can you tell if Filter Cycle 2 is enabled?

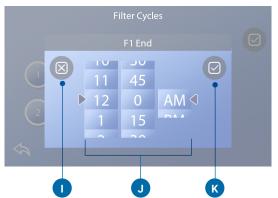
Filter Cycle 2 is enabled when a white ring appears around the ② button. For example, Filter Cycle 1 is enabled (C) in this screen, and Filter Cycle 2 is disabled (D). Press the ② button to enable/disable Filter Cycle 2. A Filter Cycle 2 will only run if it is enabled.

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









## **Adjusting Filtration**

#### **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 Circulation Pump 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 (on most systems).

## **Additional Settings**

## **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 12) and the equipment will behave in the same manner with each button press.

## **Auxiliary Panels**



Model #: AX10



Model #: AX20



Model #: AX40

<sup>\*</sup> 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.

# RESTRICT OPERATIONS

The following examples show how to lock and unlock the Panel.

#### **LOCK PANEL**

- Press the Settings button ☼ (A) on the Main screen.
- Press the Locks button (a) (B) on the Settings screen.
- Press the Panel button (C) on the Locks screen.
   "Lock Panel" will appear at the top of the screen (D).
- Press-&-hold "Lock Panel" (D) for five seconds. After five seconds a Lock icon (E) will appear in the top row. The lock icon also appears in the top row of the Main screen. The panel is now locked.











(Continued on next page)

#### **UNLOCK PANEL**

- Press the Panel button (F) in the Locks screen, and "Unlock Panel" will appear at the top of the screen (G).
- Press-&-hold "Unlock Panel" (G) for five seconds.
   After five seconds the Lock icon a will disappear from the top row (I) of the Locks screen. The panel is now Unlocked.

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.

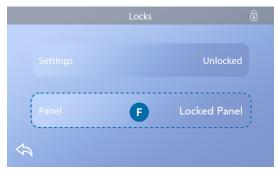
#### **LOCK & UNLOCK SETTINGS**

Follow the same steps noted above to lock and unlock Settings.

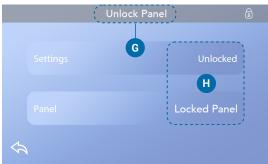
Locking the Settings allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted. Settings Lock allows access to a reduced selection of menu items. These include Filter Cycles (view only), Invert, Information and Fault Log. They can be seen, but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

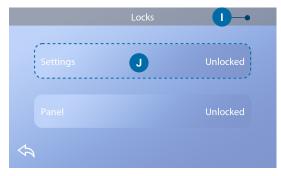
## Can Settings and Panel be locked simultaneously?

Yes. The lock icon (a) (K) appears if Settings or Panel or both are locked. The current lock states are noted on the right side of the buttons (H).



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# **SPA BEHAVIOR**



## **Pumps**

Pumps drive water and air through the jets. A pump typically has one or two speeds. If left running, a pump will turn off after a time-out period.

## **Circulation Pump**

A circulation pump is usually smaller, quieter, and requires less energy than a pump used for jets. A circulation pump typically has one speed and circulates water through the spa's filtration system to keep the water clean. the circulation pump also runs when the blower or any other pump is on.

# Non-Circulation Pump Systems (or "non-circ systems")

If a spa does not have a circulation pump, another pump will function in its place. 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 22), Pump 1 low may also activate for at least 1 minute at various intervals 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 circulation pump, it will be configured to work in one of three different ways:

- 1. The circulation 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 circulation pump stays on continuously, regardless of water temperature.
- 3. A programmable circulation 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.

## **Filtration and Ozone**

If a spa does not have a circulation pump, Pump 1 low and the ozone generator will run during filtration. On circ systems, the ozone will generally run with the circulation pump, but can be limited to filtration cycles. (On some circ systems, Pump 1 low will run along with the circulation pump during filtration.)

Most systems are 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.

Clean-up cycles allow the spa to filter less when the spa is used less often, and to filter more when the spa is used more often.

# **DIAGNOSTICS SCREEN**

# The Diagnostics screen is helpful for spa technicians.

Here is how to navigate to the Diagnostics screen starting from the Main screen. Pressing the Settings button 2 and then the Diagnostics button 2.



Info (A) displays various settings and identifications of this system.

## **System Model**

Displays the Model Number of the System.

## **Panel Version**

Displays a number of the software in the topside control panel (D).

## 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 Type**

Displays a heater type ID number, or "Standard".

## Heater Voltage (North American system / UL)

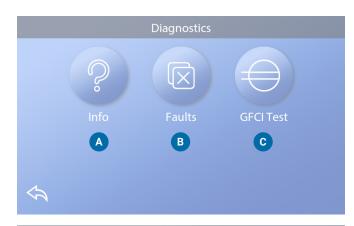
North American/UL control systems display operating voltage configured for the heater.

## **Heater Wattage (International System / CE)**

International/CE control systems display the heater wattage range that is configured for the control system.

## Faults 🗵

Faults (B) is a record of the last 24 faults that can be reviewed by a service tech. Use the arrow buttons to view each entry in the Fault Log. 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 ⊕



(North America Only. 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.)

The GFCI Test button (C) will appear on the Diagnostics screen only if the GFCI is enabled.

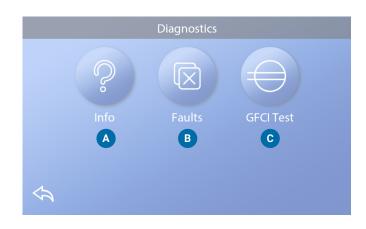
The GFCI Test screen (view next page) allows the GFCI to be tested manually from the panel and can be used to reset the automatic test feature.

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 Test 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.

On systems that do not have the automatic GFCI test, the manual GFCI test must be done.

## Forcing a manual GFCI Trip Test

The installer can cause the GFCI Trip Test to occur at any time 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 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.

## **GFCI Test** ⊕ (Continued)

#### **Perform a GFCI Test**

Start at the Main screen and follow these steps to manually test the GFCI.

- Press the Settings button 🕸 on the Main screen.
- Press the Diagnostics button point on the Settings screen.
- Press the GFCI Test button (C) on the Diagnostics screen. The GFCI Test screen will appear.

If the GFCI Test status is "Passed" (F), you may not need to perform this test.

If the GFCI Test status is "Armed" (D), proceed to the next step.

- Press the Test button (E).
   Within approximately 12 seconds, one of the following two things will happen:
- 1 The spa powers down. After the spa powers down, go to the GFCI and power up the spa. The spa goes into Priming Mode when it is powered up. When Priming Mode is complete, navigate to the GFCI Test screen and confirm that it says

"GFCI Status - Passed" (F).

**2** - A "GFCI Test Failed" message appears. In this case, contact a qualified service technician. While you wait for the spa technician to arrive, the spa can be run normally for a time by cycling the power.

## **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.



#### **CE Product**

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

# **HEAT SETTINGS**

## Ready to enjoy!

Make sure your spa is heated and ready to enjoy with Heat Settings. Navigate to the Heat Settings screen from the Main screen by pressing the Settings button . Press the Heat button , and the Heat Settings screen appears (A). The Heat Setting screen does not have Save or Cancel buttons, so changes you make take effect immediately.

## **Heat Mode (B)**

## Ready R

Ready Mode (B) keeps the water temperature within 1° F (0.5° C) of the Set temperature. For example, if the set temperature is  $102^{\circ}$  F (39.0° C), the water temperature will be within +/- 1° F (0.5° C) of  $102^{\circ}$  (39.0° C). Press the Heat Mode button (B) to switch between Read and Rest Mode. The  $\bf R$  icon appears on the Main screen when the spa is in Ready Mode.

## Rest ≝

Rest Mode functions the same as Ready Mode, except
Rest Mode only heats the water during filter cycles (view
page 13). Press the Heat Mode button (B) to switch
between Read and Rest Mode. The icon appears on
the Main screen when the spa is in
Rest Mode.

## Ready-in-Rest RR

Ready-in-Rest Mode is the same as Rest Mode, except Ready-in-Rest Mode heats the water, if necessary, for one hour when you turn On Jets 1. The **RR** icon appears on the Main screen when the spa is in Rest-in-Rest Mode.

If the spa is in Ready-in-Rest mode and you go to the Heat Settings screen (A), that cancels Ready-in-Rest Mode and puts you back into Rest Mode, even if you press no buttons while on the Heat Settings screen.



#### **Heater Pump**

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 at various intervals, 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.

## **Temp Range (C)**

There are two Temp Range settings: High and Low.

## High H

The water temperature can be set between  $80^{\circ}$  -  $104^{\circ}$  F ( $26.6^{\circ}$  - 40.0 C) when Temp Range is set to High. Press the Temp Range button (C) to switch between High and Low Range. The  $\mathbf{H}$  icon appears in the top row of the Main screen when the spa is in High Range.

## Low L

The water temperature can be set between  $50^{\circ}$  -  $99^{\circ}$  F ( $10.0^{\circ}$  -  $37.2^{\circ}$  C) when Temp Range is set to Low. Press the Temp Range button (C) to switch between High and Low Range. The  $\ \ \ \ \ \$  icon appears in the top row of the Main screen when the spa is in Low Range.

Different High and Low Temp Ranges may be determined by the Manufacturer.

Freeze Protection is active in High and Low range.

## **M8**

Press the M8 button (D) to turn it On/Off. The M8 feature looks for opportunities to decrease pump usage, which may increase pump life and save energy. M8 is On by default. M8 is an optional feature and may not appear on all systems.



# **SETTINGS SCREEN**

# Fine tune your spa with a wide variety of Settings.

Starting from the Main screen, press the Settings button to view the Settings screen (A). Press the navigation arrows or swipe to view all of the Settings screens.

## Heat &

Make sure your spa is heated and ready to enjoy with Heat Settings. (view page 22).

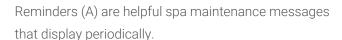
## Filter 7

Keep your spa water clean and ready to enjoy by setting Filter Cycles (view page 13).

## Time U

Set the Time to insure scheduled features have proper timing (view page 9).

## **Reminders** $\bigcirc$



## Locks (2)

Lock the Panel and/or Setting (view page 15).

## Light Cycle (Optional)

If you want the spa lights to turn On and Off at a specific times, use Light Cycle (A).

## Hold 🖔

Hold (B) 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.





## Hold (continued)

## **Drain Mode** (Optional)

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.

## Cleanup 📥

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.

## Units 🖟

Specify Time and Temperature Units (B). The temperature choices are Fahrenheit or Celsius. The time display choices are 12 hour or 24 hour.

## Language 🗐

Select from a variety of languages.

## Panel oo

Set how long it takes the panel to go to sleep after the last activity. Short times are recommended because it decreases the chance of water activating buttons.

Also you can set whether or not you need to do an extra action to wake the panel (see page 6). The purpose of the extra action to wake the panel is to make it very unlikely that water can wake the panel.

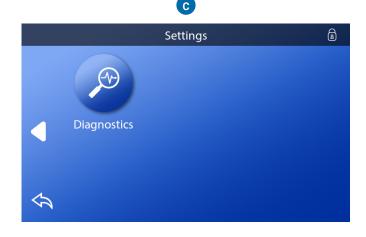
## CHROMAZON3<sup>™</sup> (Optional)

If your spa is equipped with CHROMAZON3 $^{TM}$ , refer to the CHROMAZON3 $^{TM}$  user guide that came with the spa. If a user guide was not included, please contact the spa dealer or manufacturer.

## Diagnostics 🎤

Spa technicians can find useful information and features in Diagnostics (C) (view page 19).





# FILL IT UP!

# Follow these steps to prepare you spa.

## **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.

## **Priming the Pumps**

As soon as the Priming Mode screen appears on the panel, select the "Jets 1" button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, 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 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 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 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. 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.

# **MESSAGES**

## **General Messages**

Several alerts and messages may be displayed in a sequence.

## **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 (about 43°C) or more, and spa functions are disabled. System will auto reset when the spa water temp is below 108°F (about 42°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.

## **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 minute. 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 minute. 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 (about 48°C) in the heater and the spa is shut down. You must reset the message\* when water is below 108°F (about 42°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.

## **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.

## **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**

The 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.

## **Reminder Messages**

Reminder messages can be reset from the panel. Press the Clear Icon to reset the Reminder message.

## 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.

## **Check ozone**

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

## **Reminder Messages**

(Continued)

## Service check-up

May appear on a regular schedule. Do a service checkup as instructed by the manufacturer.

Additional messages may appear on specific systems.

#### 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.

## Miscellaneous Messages

## **Set the Time-of-Day**

When a control system that displays this message is powered On, its time-of-day is initialized to 12:00 PM. Setting the proper time-of-day is important for determining filtration times and other background features (view page 9).

#### **Communications error**

The control panel is not receiving communication from the System. This can appear briefly during system startups. This is normal. If it does not go away quickly, Call for Service.

#### **Test software installed**

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

## **Message Notes**

Some messages 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.

# **APPENDIX**

30

# The finer details of the spa controls

## spaTouch™ 3 Panel Compatibility

spaTouch™ 3 panels are compatible with all BP systems that already support the TP800 panel and/or the TP900 panel (B). If a spaTouch 3 panel is used with a system that supports only the TP400 panel and/or TP600 panel (A), many screens will work correctly, and the spa screen will try to display all of your equipment, but in some cases it may not display correctly.

## **Panel Models**





## 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 Enclosure 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.

# Information

## spaTouch™ SUPPORT

## Trademark | Patent Notices

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Products are covered under one of more of the following US Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6282370, 6590188, 7030343, 7, 417, 834 B2 & Canadian Pt 2342614 plus others. Other patents both foreign and domestic applied for and pending.

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# **THANKS**

for choosing Balboa Water Group spa controls





## spaT@uch 3



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