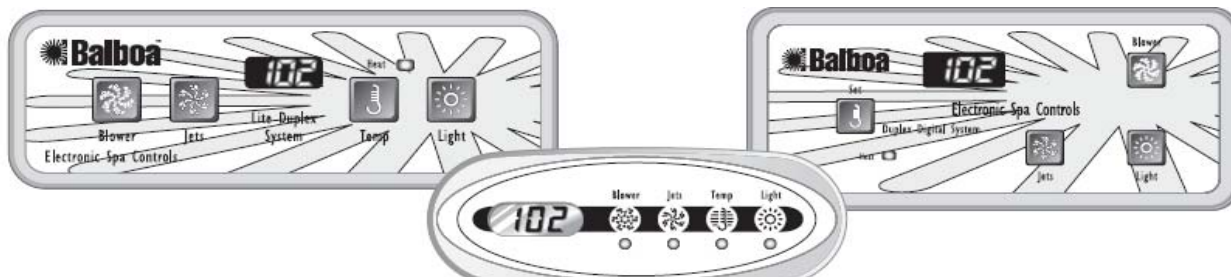


500 series Balboa Control Reference Card

Circulator "Circ" Pump Operation

Initial Start-up

When your spa is first actuated, it will go into priming mode, indicated by "Pr". The Priming mode will last for less than 5 minutes and then the spa will begin to heat and maintain the water temperature in the Standard mode.



* Your system has an independent programmable circ pump. The circ pump and the ozone generator run continuously when the circ pump is in operation.

Temp/Set (26°C - 40°C)

The start-up temperature is set at 37°C. The last measured temperature is constantly displayed on the LCD (actual water temperature).

Note that the last measured spa temperature displayed is current only when the circ pump has been running for at least 2 minutes.

To display the set temperature, press the "Temp" pad-button once.

To change the set temperature, press the "Temp" pad-button a second time before the LCD stops flashing.

Each press of the "Temp" pad will continue to either raise or lower the set temperature. If the opposite direction is desired, release the pad and let the display revert to the current water temperature.

Press the pad to display the set temperature, and again to make the temperature change in the desired direction.

After three seconds, the LCD will stop flashing and display the current spa temperature.

Note:

* Feb 2007 models feature separate "circ" pad-button with boost pump and blower operating from jets pad-button.

Jets

Touch the "Jets" pad-button once to turn pump 1 on and a second push to start the air blower. The Boost pump and blower will automatically turn off after 15 minutes.

Light

Press the "Light" button to turn the light on and off. If left on, the light automatically turns off after 4 hours.

Mode

Mode is changed by pressing the "Temp" pad-button, then pressing the "Light" button.

Standard Mode is programmed to maintain the desired temperature. Note that the last measured spa temperature displayed is current only when the circ pump has been running for at least 2 minutes. "SE" will be displayed momentarily when you switch into Standard Mode.

Economy Mode heats the spa to the set temperature only during filter cycles. "EC" will display solid when temperature is not current, and will alternate with temperature when temperature is current.

Sleep Mode heats the spa to within 10°C of the set temperature only during filter cycles. "SL" will display solid when temperature is not current, and will alternate with temperature when temperature is current.

Preset Filter Cycles

The first filter cycle begins 6 minutes after the spa is energized. The second filter cycle begins 12 hours later. Filter duration is programmable for 2, 4, 6, 8 hours or for continuous filtration (indicated by "FC"). The default filter time is 2 hours. To program, press "Temp" or "Set," then "Circ." Press "Temp" pad to adjust. Press "Circ" to exit programming. At the beginning of each filter cycle the blower purges for 30 seconds; the pump purges for 5 minutes. The only effect filter duration has is: 1) During the filter, the circ pump never turns off, and 2) In Economy and Sleep Modes, heating only occurs during the filter cycle.

Freeze Protection

If the temperature sensors detect a drop to below 6.7°C within the heater, the pump and blower will automatically activate to provide freeze protection. The equipment stays on until 4 minutes after the sensors detect that the spa temperature has risen to 7.2°C or higher. In colder climates, an optional additional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Aux freeze sensor protection acts similarly except with the temperature thresholds determined by the switch and without a 4-minute delay in turnoff. See your dealer for details.

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.



Diagnostic Messages

Meaning

No message on display.
Power has been cut off to the spa.

--

Temperature unknown.

HH

"Overheat" - The spa has shut down. One of the sensors has detected 118°F/48°C at the heater.

OH

"Overheat" - The spa has shut down. One of the sensors has detected that the spa water is 110°F/43°C.

IC

"Ice" - Potential freeze condition detected. Spa is shut down.

SA

The sensor that is plugged into the Sensor "A" jack is not working. Spa is shut down.

Sb

The sensor that is plugged into the Sensor "B" jack is not working.

Sn

Sensors are out of balance. If alternating with spa temperature, it may just be a temporary condition. If flashing by itself, spa is shut down.

HL

A significant difference between temperature sensors has been detected. This could indicate a flow problem.

LF

Persistent low flow problems. (Displays on the fifth occurrence of "HL" message within 24 hours.) Heater is shut down, but other spa functions continue to run normally.

dr

Possible inadequate water, poor flow, or air bubbles in detected in the heater. Spa is shut down for 15 minutes.

dy

Inadequate water detected in heater. (Displays on third occurrence of "dr" message.) Spa is shut down.

Action Required

The control panel will be disabled until power returns. Spa settings will be preserved until next power up.

After the circ pump has been running for 2 minutes, the temperature will be displayed.

DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. Once the heater has cooled, reset by pushing any button. If spa does not reset, shut off the power to the spa and call your dealer or service organization.

DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 42°C, the spa should automatically reset. If spa does not reset, shut off the power to the spa and call your dealer or service organization.

No action required. The pump and blower will automatically activate regardless of spa status.

If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat situation and disappear when the heater cools.)

If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat situation and disappear when the heater cools.)

If the problem persists, contact your dealer or service organization.

Check water level in spa. Refill if necessary. If the water level is okay, make sure the pumps have been primed. If problem persists, contact your dealer or service agent.

Follow action required for "HL" message. Heating capability of the spa will not reset automatically; you may press any pad-button to reset.

Check water level in spa. Refill if necessary. If water level is okay, make sure the pumps have been primed. Press any button to reset, or this message will automatically reset within 15 minutes. If problem persists, contact your dealer or service organization.

Follow action required for "dr" message. Spa will not automatically reset. Press any pad-button to reset.

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.

