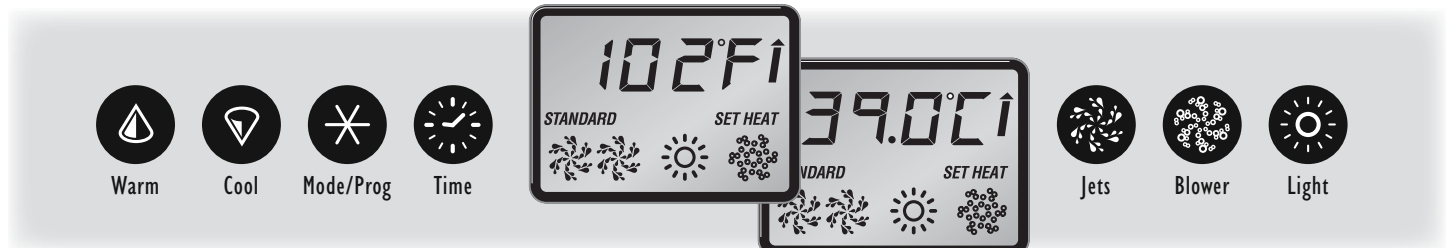# Balboa 500DZ-Series Operation Guide

Initial Start-up

Your spa will enter Priming Mode (*Pr*) when it is energized. **During Priming Mode, press "Jets" button(s) repeatedly and be sure all pumps are free of air.** Priming Mode lasts less than 5 minutes. Press "Warm" or "Cool" to exit. After Priming Mode, the spa will run in Standard Mode (see Mode/Prog section).

The pump responsible for heating and filtration (pump 1 low-speed on non-circ system, or the circ pump on circ systems) will be referred to simply as the pump.

In multi-button sequences, if the buttons are pressed too quickly in the sequence, they may not register.

Button shapes and labels may vary.

Temp Control (80°F - 104°F / 26.0°C - 40.0°C)

The last measured water temperature is constantly displayed.

The water temperature displayed is current only when the pump has been running for at least 2 minutes.

To display the set temperature, press "Warm" or "Cool" once. To change the set temp, press a temp button again before the display stops flashing. After three seconds, the display will stop flashing and begin to display the current spa temperature.

Jets 1

Press "Jets 1" to turn pump 1 on or off, and to shift between low and high speeds (if equipped). The low-speed will turn off after 4 hours. High-speed will turn off after 15 minutes. Low-speed may run automatically at times, during which it cannot be deactivated from the panel, but high-speed may be operated.

Jets 2/Jets 3/Blower (If equipped)

Press the corresponding button once to turn the device on or off. The device will turn off after 15 minutes. Pump 2 may be two-speed on some systems.

If the panel has a button with 2 devices assigned to it, like Pump 2 and Pump 3, press the button repeatedly to step through the various combinations of On and Off for both devices.

Light

Press "Light" to operate the spa light. Turns off after 4 hours.

Setting the Time of Day

When the spa is first powered up, the words **SET TIME** will flash on the display. Press "Time," then "Mode/Prog," then "Warm" or "Cool." The time will begin changing in one-minute increments. Press "Warm" or "Cool" to stop the time from changing. Press "Time" to confirm.

Mode/Prog

Mode is changed by pressing "Warm" or "Cool," then pressing "Mode/Prog" button.

Standard Mode maintains set temperature and the **STANDARD** icon will be displayed.

Economy Mode heats the spa to the set temperature only during filter cycles. *Ecn* will display when water temp is not current, and will alternate with water temp when the pump is running. The **ECONOMY** icon will be displayed.

Sleep Mode heats the spa to within 20°F/10°C of the set temperature only during filter cycles. *SLP* will display when water temp is not current, and will alternate with current water temp when the pump is running.

Preset Filter Cycles

The first preset filter cycle starts at 8:00 AM and ends at 10:00 AM. The second preset filter cycle starts at 8:00 PM and ends at 10:00 PM.

For non-circ systems, low-speed pump 1 and the ozone generator (if installed) run during filtration.

For 24 hour circulation systems, the circ pump and the ozone generator (if installed) run 24 hours. In hot environments, the circ pump may turn off for 30 minute periods, except during filter cycles.

For non-24 hour circulation systems, the circ pump and ozone generator (if installed) run during filtration (and may also run automatically at other times).

At the beginning of each filter cycle all other equipment will run briefly to purge the plumbing.

Optional Filter Cycle Programming

You are not required to change the filter cycles, but if you wish to, press "Time," "Mode/Prog," "Mode/Prog" within 3 seconds. **SET START FILTER 1** (AM) will appear. Press "Warm" or "Cool" to reset the filter start time.

Press "Mode/Prog" to see **SET STOP FILTER 1** and adjust the time with "Warm" or "Cool" as done above. Press "Mode/Prog" to see **SET START FILTER 2** (PM) and proceed as above. Press "Mode/Prog" to see **SET STOP FILTER 2** and proceed as above. Press "Mode/Prog" to confirm.

Locking the Panel

Press "Time," "Blower," and "Warm" within 3 seconds. The Panel is now locked.

To unlock the panel, press the "Time," "Blower," and "Cool" within 2 seconds.

Note: On some systems, "Jets 1," instead of "Blower," is used in Lock/Unlock sequences.

Locking the Temperature

Press "Warm," "Time," "Blower," and "Warm" within 3 seconds. The "Warm" and "Cool" buttons are now disabled.

To unlock the temperature, press "Time," "Blower," and "Cool" within 2 seconds.

Diagnostic Messages

Message	Meaning	Action Required
	No message on display. Power has been cut off to the spa.	The control panel will be disabled until power returns. Spa settings will be preserved until next power up.
--	Temperature unknown.	After the pump has been running for 2 minutes, the current water temperature will be displayed.
OHH	"Overheat" - The spa has shut down.* One of the sensors has detected 118°F/47.8°C at the heater.	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.
OHS	"Overheat" - The spa has shut down.* One of the sensors has detected that the spa water is 110°F/43.5°C.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 107°F/41.7°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.
SnA	Spa is shut down.* The sensor that is plugged into the Sensor "A" jack is not working.	If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat condition).
Snb	Spa is shut down.* The sensor that is plugged into the Sensor "B" jack is not working.	If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat condition).
SnS	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.*	If the problem persists, contact your dealer or service organization.
HFL	A significant difference between temperature sensors has been detected. This could indicate a flow problem.	If the water level is normal, make sure all pumps have been primed. If problem persists, contact your dealer or service organization.
LF	Persistent low flow problems. (Displays on the fifth occurrence of *HFL* message within 24 hours.) Heater is shut down, but other spa functions continue to run normally.	Follow action required for *HFL* message. Heating capability of the spa will not reset automatically; you may press any button to reset.
dr	Possible inadequate water, poor flow, or air bubbles in detected in the heater. Spa is shut down for 15 minutes.	If water level is normal, make sure all pumps have been primed. Press any button to reset. This message will reset within 15 minutes. If problem persists, contact your dealer or service organization.
drY	Inadequate water detected in heater. (Displays on third occurrence of *dr* message.) Spa is shut down.*	Follow action required for *dr* message. Spa will not automatically reset. Press any button to reset manually.
ICE	"Ice" - Potential freeze condition detected. ** - Even when spa is shut down, some equipment will turn on if freeze protection is needed.*	No action required. All equipment will automatically activate regardless of spa status. The equipment stays on 4 minutes after the sensors detect that the spa temperature has risen to 45°F/7.2°C or higher. An optional freeze sensor may be added to protect against extraordinary freeze conditions. Auxiliary freeze sensor protection is advisable is colder climates. 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.

BALBOA
water group