

2000LE M-7 Deluxe Control Reference Card

Non-Circ Operation

Initial Start-up

When your spa is first activated, it will go into Priming mode, indicated by "Pr." Please see the M-7 Installation Instruction Manual for complete instructions on Power-up and Pump Priming. The Priming mode will last for less than 5 minutes and then the spa will begin normal operation in Standard Mode.



Left Jet Icon: This icon indicates that Pump 1 is on. If the pump is a two-speed pump, the icon will blink when the low speed is on and will remain solid when the high speed is operating.



Right Jet Icon: This icon indicates that Pump 2 is on. If the pump is a two-speed pump, the icon will blink when the low speed is on and will remain solid when the high speed is operating.



Both Icons: This indicates that Pump 1 and Pump 2 are on. Each section may blink or remain solid independently as described above.

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

The start-up temperature is set at 100°F/37.5°C. The last measured temperature is constantly displayed on the LCD.

Note that the last measured spa temperature displayed is current only when pump 1 (Jets 1) has been running for at least 2 minutes.

Setting the Time of Day

When the spa is first powered up, the words "SET TIME" will flash on the display. To set the time, press "Time" then "Mode/Prog" followed by "Warm" or "Cool." After "Warm" or "Cool" is pressed once, the time will begin changing in one-minute increments. Press "Warm" or "Cool" to stop the time from changing. Press "Time" to enter your correct time into the system.

Mode/Prog

This button is used to switch between standard, economy, and sleep modes.

Standard mode is programmed to maintain the desired temperature. Note that the last measured spa temperature displayed is current only when pump 1 has been running for at least 2 minutes. The "STANDARD" icon will display until the mode is changed.

Economy mode heats the spa to set temperature only during filter cycles. The "ECONOMY" icon will display until mode is changed.

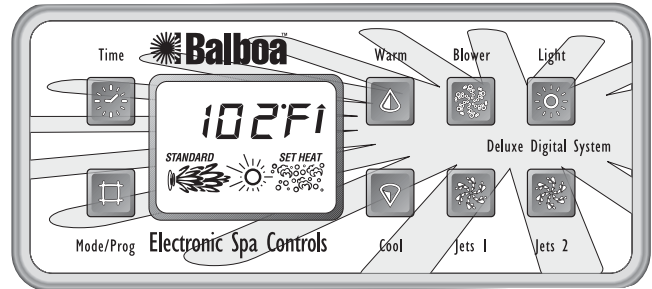
Sleep mode heats the spa to within 20°F/10.0°C of the set temperature only during filter cycles.

Jets 1

The operating sequence for the "Jets 1" is: low speed (left jet icon blinks); then off. If pump 1 is a two-speed pump, the operating sequence is low speed (left jet icon blinks); high speed (left jet icon is solid); then off. If left running, the low speed of pump turns off after 4 hours; the high speed turns off after 15 minutes. The low speed of pump 1 runs when the heater is turned on, when a filter cycle is activated, when the blower or pump 2 is on, or when a freeze condition is detected. It will also activate for at least 2 minutes every 30 minutes to detect the water temperature and then to heat to the set temperature if needed. When the low speed turns on automatically, it cannot be turned off from the topside panel; however, the high speed pump may be turned on.

Jets 2

The operating sequence for the "Jets 2" is: low speed (right jet icon blinks); then off. If pump 2 is a two-speed pump, the operating sequence is low speed (right jet icon blinks); high speed (right jet icon is solid); then off. If left running, pump 2 will automatically turn off after 15 minutes.



Note: Either pump can also be activated by an optional auxiliary control button.

Light

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

If a fiber optic light is installed, press the "Light" button once to start the light and wheel, press it again to stop the wheel, and then again to turn the light off.

Blower

This button turns the blower on and off. If left on, the blower will automatically turn off after 15 minutes.

Preset Filter Cycles

The first filter cycle is automatically activated at 8:00 AM and operates the low speed of pump 1 until 10:00 AM.

The second filter cycle is automatically activated at 8:00 PM and operates the low speed of pump 1 until 10:00 PM.

The low speed of pump 1 and the ozone generator will run during filtration. At the start of each filter cycle, the blower will run for 30 seconds to clean out the air channels. The high speed of pump 2 will run for 5 minutes.

Optional Filter Cycle Programming

While you are not required to set filter cycles, you may change the default settings described in the previous section by pressing "Time," "Mode/Prog," "Mode/Prog" within three seconds. "SET START FILTER 1" (AM cycle) will appear on the display. Press "Warm" or "Cool" to reset the filter start time. Press "Mode/Prog" to see "SET STOP FILTER 1" and adjust the time with the "Warm" and "Cool" pads as done in the Setting Time of Day section. Press "Mode/Prog" to see "SET START FILTER 2" (PM cycle) and proceed as above. Pressing "Mode/Prog" again will enter the new filter cycle times into the system and display the current water temperature.

Freeze Protection

If the temperature sensors detect a drop to approximately 44°F/6.7°C within the heater, then the pumps and the 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 approximately 45°F/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.

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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 the next power up.
--	Temperature unknown.	After the pump has been running for 2 minutes, the temperature will be displayed.
<i>OHH</i>	“Overheat” - The spa has shut down. One of the sensors has detected approximately 118°F/47.7°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.
<i>OH5</i>	“Overheat” - The spa has shut down. One of the sensors has detected that the spa water is 110°F/43.3°C.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At approximately 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.
<i>ICE</i>	“Ice” - Potential freeze condition detected.	No action required. The pump and blower will automatically activate regardless of spa status.
<i>SnA</i>	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 situation and disappear when the heater cools.)
<i>SnB</i>	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 situation and disappear when the heater cools.)
<i>Sns</i>	Sensors are out of balance. If alternating with 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.
<i>HFL</i>	A substantial difference in temperature has been detected between temperature sensors. This could indicate a flow problem.	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 organization.
<i>LF</i>	Persistent low flow problems. (Displays on the fifth occurrence of the “HFL” message within 24 hours.) Heater is shut down, but other spa functions continue to run normally.	Follow action required for “HFL” message. Turn spa off then back on again to restore heating capability.
<i>dr</i>	Inadequate water detected in heater.	Check water level in spa. Refill if necessary. If the water level is okay, make sure the pumps have been primed. Press any button to reset.
<i>dry</i>	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; you may press any 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.

