

M-7C Control Reference Card

Don't Panic! No Programming is Necessary!

Initial Start-up

When your spa is first actuated, it will go into Priming mode, indicated by "P-".

Please see the M-7 Installation Instruction Manual for complete instructions on Power-up and Pump Priming. The Priming mode will last for 4-5 minutes and then the spa will begin to heat the spa and maintain the water temperature in the Standard mode.

Temperature Adjustment (26°C - 40°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 has been running for at least 1 minute.

Press either pad once to display the set temperature. Each time either pad is pressed again, the set temperature will increase or decrease depending on which pad is pressed. After three seconds, the LCD will automatically display the last measured spa temperature.

Jets 1

The operating sequence for the "Jets 1" pad (pump1) is low speed (small jet icon blinks), high speed (small jet icon is solid), then off. If left running, the low speed turns off after 4 hours and the high speed turns off after 30 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 1 minute every 30 minutes to detect the spa temperature 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.

Jets 2

Press the "Jets 2" pad to turn pump 2 on and off. If left on, pump 2 will turn off after 30 minutes.

Blower

This pad turns the blower on and off. The blower automatically turns off after 30 minutes.

Light

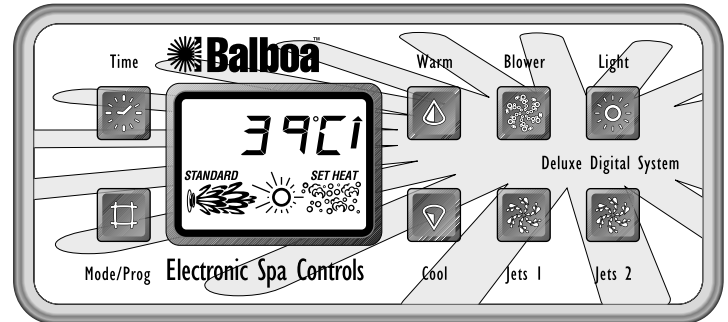
Your spa light has 3 settings. Cycle through from brightest to dimmest settings, then off. After 4 hours, the light will automatically turn off.

Mode

This pad 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 1 minute. "SLP" will be displayed momentarily when you switch into standard mode, and the "STANDARD" icon will display until the mode is changed.

Economy mode heats the spa to set temperature only during filter cycles. "ECON" will display solid when temperature is not current, and will alternate with temperature when temperature is current. The "ECONOMY" icon will display until mode is changed.



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

***Note:** In any mode, the heater will turn off after 75 seconds of the temperature residing at .5°C above set temperature, and turns off immediately should the water reach 1°C above set temperature.*

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  then , then  or . After  or  is pressed once, the time will begin changing in one-minute increments. Press  or  to stop the time from changing. Press  to enter your correct time into the system.

Optional Filter Cycle Programming

While you are not required to set filter cycles, if you want to change them, press    within 3 seconds. "SET START FILTER 1" (AM cycle) will appear on the display. Press  or  to reset the filter start time. Press  to see "SET STOP FILTER 1" and adjust the time with the  or  as done above. Press  to see "SET START FILTER 2" (PM cycle) and proceed as above.

Pressing  will enter the new filter cycle times into the system and display the current water temperature.

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 1 and pump 2 will run for 5 minutes.

Locking the Panel

Press the time, blower, and warm pads within 3 seconds. When locked, the display will show the spa temperature, along with the lock symbol. All pads are frozen except the time pad.

To unlock the panel, Press the time, blower, and cool pads within 2 seconds.

Locking the Temperature

While setting your spa water temperature, after you have pressed the warm or cool pad, press the time, blower, and warm pads within 3 seconds to activate the lock. When locked, the center display will show the spa temperature along with the lock symbol.

To unlock the panel, repeat the sequence.

Freeze Protection

If the temperature sensors detect a drop to 4°C within the heater, then the pump (and the heater if necessary) automatically activates to provide freeze protection. The equipment stays on until the sensors detect that the spa temperature has risen to within 7°C of the set temperature. Pump 1, pump 2, and the blower will purge for 30 seconds to 2 minutes at the end of the freeze condition. Freeze protection is enabled regardless of the spa's status. 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. See your dealer for details.

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 for 30 days with a battery back-up.
<i>QHH</i>	"Overheat" - The spa has shut down. One of the sensors has detected 48°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>QHS</i>	"Overheat" - The spa has shut down. One of the sensors has detected 43°C at the heater.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 43°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" - Auxiliary sensor detects potential freeze condition.	No action required. The pump(s) will automatically activate regardless of spa status.
<i>SnH</i>	Spa is shut down. The sensor that is plugged into the hi-limit 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>SnL</i>	Spa is shut down. The sensor that is plugged into the temperature 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>HFL</i>	There may be greater than 2.5°C difference 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 pump(s) have been primed. If problem persists, contact your dealer or service organization.
<i>dry</i>	Inadequate water detected in heater.	Check water level in spa. Refill if necessary. If the water level is okay, make sure the pump(s) have been primed. 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.

