

## NORTHSTAR CONTROL PANEL INSTRUCTIONS

Button	Menu Mode Button Functions
<b>MENU</b>	Begin menu mode and scroll through menu selections
<b>+</b> <b>=</b>	Toggle between programming options
<b>SET</b>	Confirm selection

**Menu Mode:** To change program settings in the menu mode, press the **MENU** button. Toggle through the menu selection with **+** or **=** button until "ON" is displayed on the LCD screen. Press the **SET** button to access the "Programming Mode." Once you are in the programming mode, pressing the **MENU** repeatedly will scroll through the various menu selections: Temp, FP1, FP2, ICE, DEF, QUIT.

To exit the programming mode, press until you see QUIT on the screen and then press **SET**. At any point during the programming phase if no button is pressed for 15 second, the system will automatically exit the programming sequence. Any programming changes entered prior to that time will be saved.

**Temperature Scale Selection (°F/°C):** After entering the menu mode, press **MENU** until **TEMP** shows up on the LCD screen. Use **+** and **=** to toggle between Fahrenheit (°F) and Celsius (°C) which will be displayed on the lower right hand corner. Press **SET** to confirm selection. Factory default setting for temperature scale is Fahrenheit °F.

**Filter Cycle Duration:** Press the **MENU** button until you see **FP1** on the LCD screen. This setting tells the spa how long to run each filter cycle. Use **+** and **=** to choose from 15, 30, 60, or 120 minutes cycle. During the filter cycle, Ozone generator will automatically be turned on and will be displayed on the LCD screen by the  icon.

**Filter cycle Frequency:** Press the **MENU** button until **FP2** is displayed on the LCD screen. This setting tells the spa the length of time between each filter cycle. Use **+** and **=** to toggle between 4, 6, 8, 12, and 24 hours. The factory default setting is 4 hours between each filter cycle. Press **SET** to confirm selection.

**Winter Mode:** Press the **MENU** button until **ICE** is displayed on the LCD screen. In this mode, the circulation pump and all Jet pumps will run for 2 minutes every hour to prevent freezing. Use **+** and **=** to toggle between on and off. Press **SET** to confirm selection.

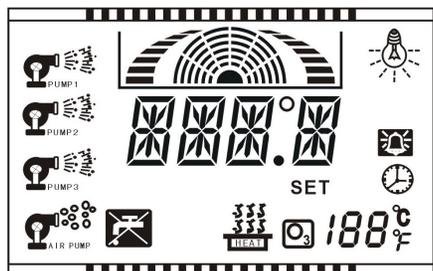
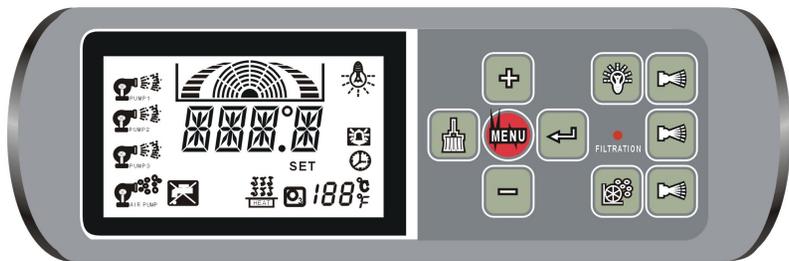
**Factory Default Setting:** The spa control system can be set back to factory default setting in this mode. Press **MENU** until **DEF** shows up on LCD screen. Press **+** until ON shows up on the lower right hand corner. Press **SET** to confirm selection.

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### DIAGNOSTIC AND PERIODIC REMINDER MESSAGES

LCD Error Display	Symptom	Warning/ Reminder
	Low Water Level	Pumps and Heater will be turned off. Add more water to minimum water level.
 & <b>HEAT</b>	Water temperature above 114°F / 45°C	Heater will turn off
 & <b>ICE</b>	Water temperature falls below 41°F / 5°C	Freeze protection mode will be enabled
 & <b>LD F</b>	Load Failure	Power to Heater will be shut off. Please check electrical.
 & <b>LEAK</b>	System detects a faulty wiring	Power output will be turned off.
<b>CLDF</b>	Poor Circulation	Circulation pump damaged or poorly connected.
<b>FHL</b>	Temperature difference over 5°C	Poor filtration
<b>RPH</b>	Every 7 days	Reminder to test and adjust pH
<b>RSA</b>	Every 7 days	Reminder to sanitize spa by adding spa chemicals
<b>RCL</b>	Every 30 days	Reminder to clean the filter
<b>RT9</b>	Every 30 days	Reminder to test GFCI breaker
<b>RDR</b>	Every 90 days	Reminder to drain and refill spa with fresh water
<b>RCO</b>	Every 180 days	Reminder to clean spa cover
<b>RTR</b>	Every 180 days	Reminder to clean spa side panel

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Button Functions		
		There are three Jet Pump buttons. Press the button once and the corresponding Jet Pump icon will appear in the adjacent LCD screen while the pump is on. A second press will turn off the Jet Pump and the icon will disappear from the LCD screen.
		Spa Light Button: Press button to turn the light on, a second press will turn the light off. The spa light icon will appear on the control panel while the light is on. The LED light will cycle through a color sequence. Each color duration is approximately 20 seconds.
		Blower Button: Press button to turn the blower on, a second press will turn the blower off. The Air Blower is only available as a factory installed option.
		Temperature Set Keys: The Control Panel displays the actual water temperature in the center of the LCD Screen. It will also show the temperature that you have selected as the set temperature in the bottom right corner of the LCD Screen. Press the button to increase the desired set temperature. Press the button to decrease the temperature. The temperature can be adjusted in 1°F/1°C increments from 50°F/10°C to 104°F/40°C. The new desired set temperature will be displayed in the bottom right hand corner of the LCD. When the temperature drops to 2° below the set temperature, the heater will be activated until the temperature is 1° above the set temperature. The Heater On icon will appear when the heater is activated.
		Clean Mode: Press the Clean button and the LCD will show CLE. In this mode, the three Jet pumps, circulation pump and ozone will run in succession. Cleaning time is 2 to 10 minutes depending on your preferred setting.

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## PROGRAMMING MODE

Button	Menu Mode Button Functions
	Begin menu mode and scroll through menu selections
	Toggle between programming options
	Confirm selection

**Menu Mode:** To change program settings in the menu mode, press the button. Toggle through the menu selection with or until "ON" is displayed on the LCD screen. Press the button to access the "Programming Mode". Once you are in the programming mode, pressing the button repeatedly will scroll through the various menu selections: Temp, Time, FP1, FP2, CLE, SLI, SILD, ICE, CALB, DEF, QUIT.

To Exit the programming mode, press until you see QUIT on the screen and then press .

At any point during the programming phase if no button is pressed for 15 second, the system will automatically exit the programming sequence. Any programming changes made up to that time will be saved.

### Menu Selection

Use to toggle between Fahrenheit °F and Celsius °C which will be displayed on the lower right hand corner. Press to confirm selection. Factory default setting for temperature scale is Fahrenheit °F.

Press to set Hours. Press to set Minutes. Press to confirm selection.

This setting tells the spa how long to run each filter cycle. Use and to choose from 15, 30, 60, or 120 minutes. During the filter cycle, Ozone generator will automatically turn on, as indicated by the icon on the LCD screen. Press to confirm selection.

This setting tells the spa the length of time between each filter cycle.

Use and to toggle between 4, 6, 8, 12, and 24 hours. The factory default setting is 4 hours. Press to confirm selection.