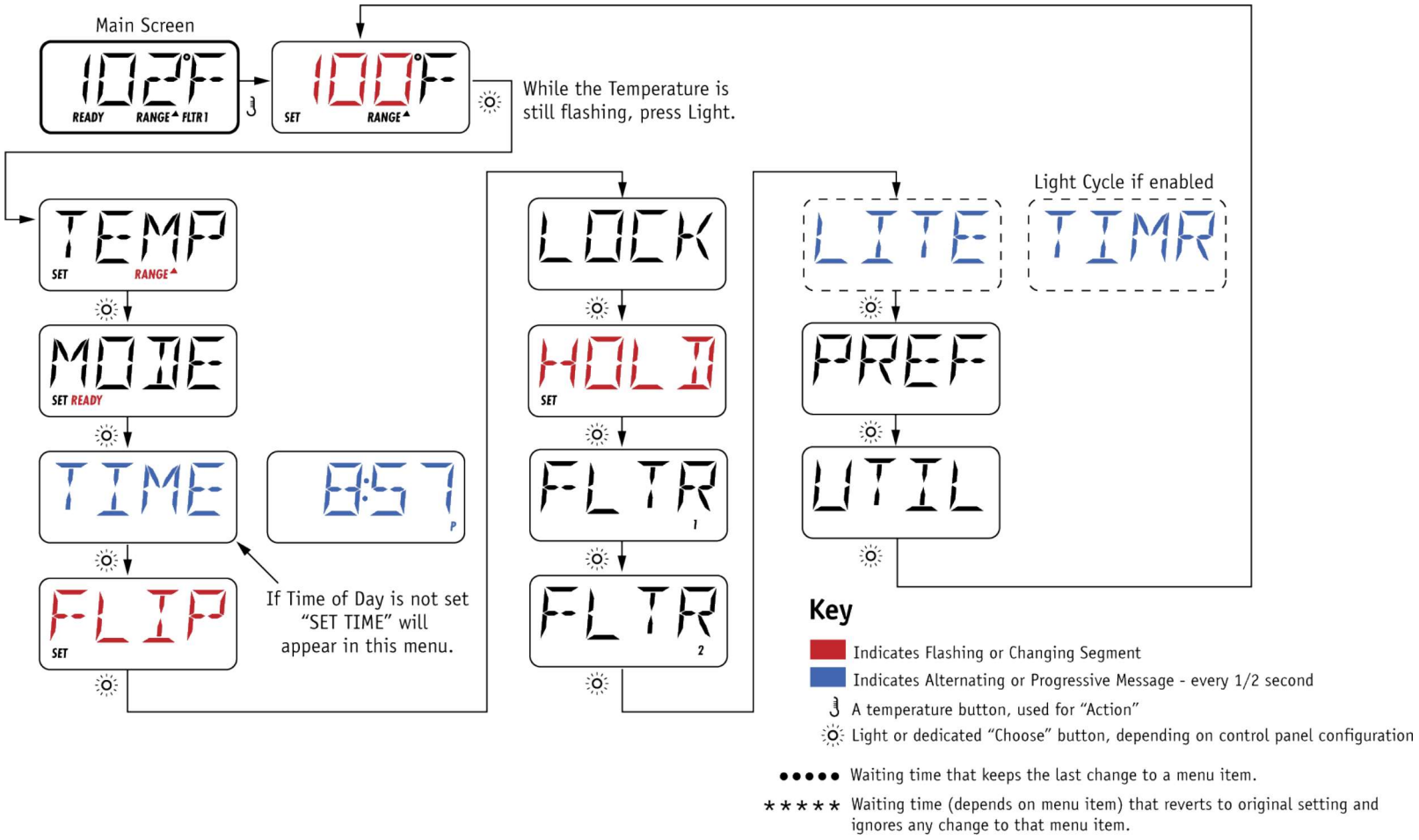
Topside Control Instructions for Spas with Multiple Pumps

Programming Menu Sequence

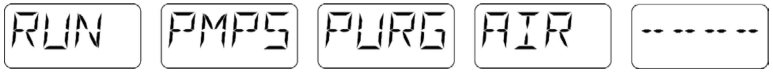


Powering on Your Spa

After filling the spa through the filter assembly to the correct level remove the water hose, replace the filter, the filter basket assembly and the filter cover. Turn the GFCI on. Every time the GFCI is powered on, your spa controls run diagnostic tests. During diagnostic testing, a series of messages are displayed on the topside controls. When diagnostic testing is complete, the spa begins priming mode.

Priming Mode

Each time you fill your spa some air may be trapped in the plumbing lines. Priming mode safely removes the air. To prevent failure, the heater is disabled during priming mode. Pumps should be observed one at a time. Your spa will automatically begin normal heating and filtering when priming is complete. Priming mode lasts approximately 5 minutes.

Run Pumps to Purge the Air 

When this message is displayed on your topside controls, push the “Pump 1” button once to start the pump on low speed. Press the “Pump 1” button a second time to switch to high speed. After confirming water is coming from all jets and the pump is not surging, press the “Pump 1” button to turn the pump off.

Pump 2 is a single speed pump. Press the “Pump 2” button once to start Pump 2. After confirming water is coming from all jets and the pump is not surging, press the “Pump 2” button to turn the pump off.

If the spa you purchased has 3 pumps, Pump 3 is a single speed pump. Press the “Pump 3” button to start Pump 3. After confirming water is coming from all jets and the pump is not surging, press the “Pump 3” button to turn the pump off.

Within 2 minutes of pressing each pump button, water should be flowing from the jets in every seat without surging. If none of the jets in a seat work or if water surges, turn the pump off. After the water is completely still, repeat the process a second time. If the pumps do not prime within 2 minutes on your second attempt, turn the GFCI off. Make sure the slice valves are locked in the OPEN position, that the diverter valves are centered for even distribution of the water, that jets without flow are rotated to the open position and remove any debris in the filter basket and on suction drain covers. Power the GFCI on and repeat the process to run each pump on HIGH SPEED. If the pumps don’t prime on the third attempt, call your local dealer for assistance.

Do not turn on any pump that will not prime. A pump that fails to prime should not be left on for more than 2 minutes under any circumstance. The heater will engage when priming mode is complete. If a pump is not properly primed when the heater engages, the spa may overheat causing serious damage.

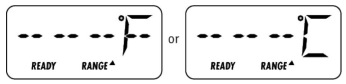
Pre-Programmed Factory Settings

Your spa will start in Ready Mode

The temperature is pre-programmed to 100° F

The Duel Temperatures are pre-programmed to a minimum of 80° F and a maximum of 104° F

The filtration cycle is pre-programmed to run once each day for 2 hours

Initial Temperature Display 

After briefly displaying the pre-programmed temperature setting, this message will be displayed on your topside controls. The water must circulate through the heater chamber for approximately one minute before the current water temperature can be displayed on the topside controls. When the water temperature reaches the pre-programmed temperature setting, the pump will turn off automatically. To display the current pre-programmed temperature setting, press the “Temp” button once. The current water temperature will flash on the display.

When the display is flashing, the spa controls are in programming mode. To prevent accidently changing pre-programmed settings, after you press a button, you should wait 5 seconds before pressing a different button.

Turning the Jets On and Off

Pump 1 is a two speed pump. Press the “Pump 1” button to operate pump 1 on LOW SPEED. Press the “Pump 1” button a second time to operate on HIGH SPEED. Press the “Pump 1” button a third time to turn it off. If the “Pump 1” button is not pressed to turn it off manually, it will shut sown automatically after 20 minutes. To turn it back on, press the “Pump 1” button and repeat the process. *The Ozonator engages when pump 1 is operating on LOW SPEED.*

Pump 2 is a single pump. Press the “Pump 2” button to turn it on. Press the “Pump 2” button a second time to turn it off. If the “Pump 2” button is not pressed to turn it off manually, it will shut down automatically after 20 minutes. Press the “Pump 2” button to turn the pump back on.

In spas equipped with 3 pumps, pump 3 is a single speed pump. Press the “Pump 3” button to turn it on . Press the “Pump 3” button a second time to turn it off. If the “Pump 3” button is not pressed to turn it off manually, it will shut down automatically after 20 minutes. Press the “Pump 3” button to turn it back on.

To ensure your safety and for optimal performance, your spa controls will automatically perform maintenance functions and run diagnostic testing. The pump will start automatically on low speed to circulate the water for a few minutes every hour to run a system check. During heating, filtration and diagnostic testing the pump runs on low speed. When the pump starts automatically and operates on low speed to perform these maintenance functions, pressing the pump button will not turn the pump off.
When a button is pressed to turn a pump on, a clean up cycle will begin 30 minutes after the pump shuts down. The pump will operate on LOW SPEED and the ozonator will engage. Both the pump and ozonator will operate for approximately 30 minutes to help eliminate dirt, bacteria and other particulates as soon as they are introduced to the water

Turning the Lights On and Off

Press the “Light” button once to turn the lights on. The colored light will rotate. Press the “Light” button to turn the light off. To display only one color, press the “Light” button repeatedly turning the lights on and off. When the color your desire turns on do not turn the light off. Press the button only when ready to turn the light off. If the “Light” button is not pressed to turn the lights off manually, the lights will turn off automatically after 2 hours. Press the “Light” button to turn the lights back on. If your spa is equipped with optional perimeter lighting, the perimeter lighting feature work in tandem with the main light.

Operating the Audio Components

Press the “Stereo” button to turn the built in audio components on. Press the “Stereo” button a second time to turn them off. If the button is not pressed to manually power off the audio components, they will power off automatically after 2 hours. Press the “Stereo” button to turn it back on. Music from your Mp3 player will play through the built in audio components when your the device is plugged into the audio jack. The Mp3 Cargo Bay is built into the spa cabinet on the same side as the topside controls. Use your Mp3 player to select music and to control the volume. If the model you purchased is equipped with Bluetooth capability, open the Bluetooth settings on your Mp3 player and connect it to the spa to stream your music wirelessly. Enter “0000” if a pairing code is required.

For your safety and to protect your device, your Mp3 player should always be stored in the Mp3 Cargo Bay. When you remove your Mp3 player from the Cargo Bay, always press the “Stereo” button to turn the speakers off. Leaving the audio components on causes overheating that will permanently damage the audio components. Damage to the audio components that occurs because the components were not turned off is not covered under the warranty.

Changing the Programmed Settings and Operating Modes

Press the "Temp" button once to enter programming mode.
When the display on the topside control is flashing, the spa is in programming mode.
In most cases, pressing the light button saves the change.
To prevent accidentally changing programmed settings, after pressing one button wait 5 seconds before pressing a different button.

Adjusting the Programmed Water Temperature Setting

To change to programmed temperature settings, press and release the "Temp" button. The display on the topside controls will flash, indicating you have entered programming mode. While the display is still flashing, press and hold the "Temp" button it until the desired temperature is reached. To move the temperature in the opposite direction, continue holding the button. The temperature will automatically begin moving in the opposite direction when the maximum temperature is reached. Release the "Temp" button when the desired temperature is displayed on the topside controls. Press the light button to save the change and exit programming mode. If the programmed temperature is increased, pump 1 will turn on automatically to begin heating the water.

Dual Temperature Ranges

When you are setting Duel Temperature Ranges, pay attention to the direction of the arrow displayed on the topside controls.

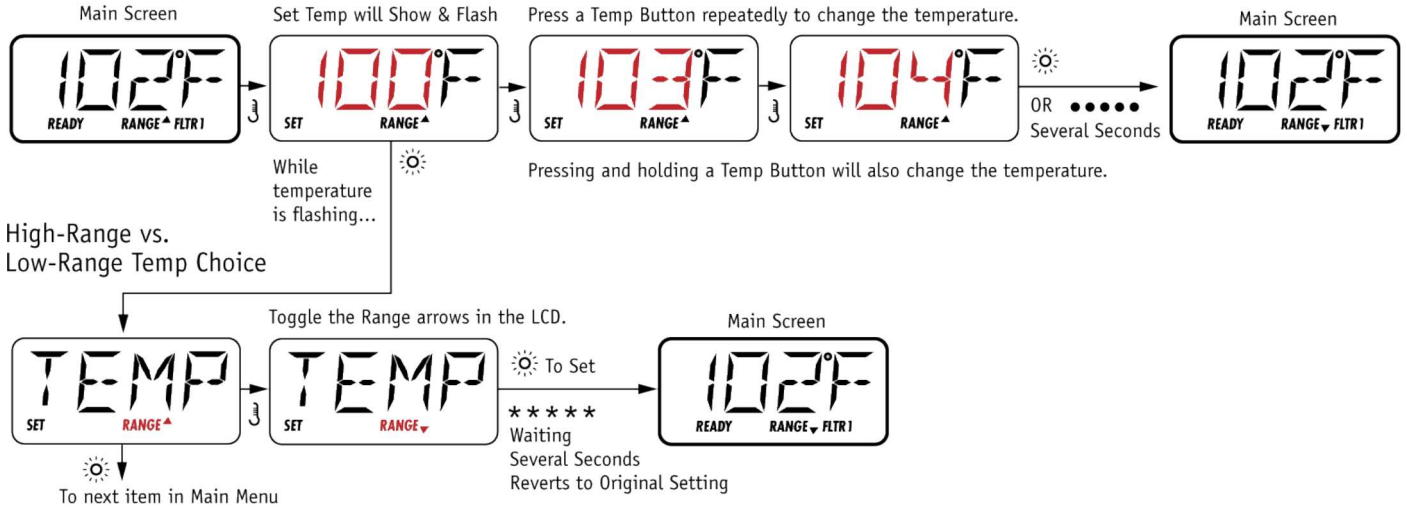
The spa controls allow you program two temperature range settings with independent temperature settings that are most commonly used to program a "Ready to Use" setting and a "Vacation" setting. When a range is chosen, the spa will heat to the temperature settings associated with that range. For example, the high range might the set with a low temperature of 80° F and a high temperature of 104° F and the low range might be set between 60° F and 99° F. Freeze protection is active in either range.

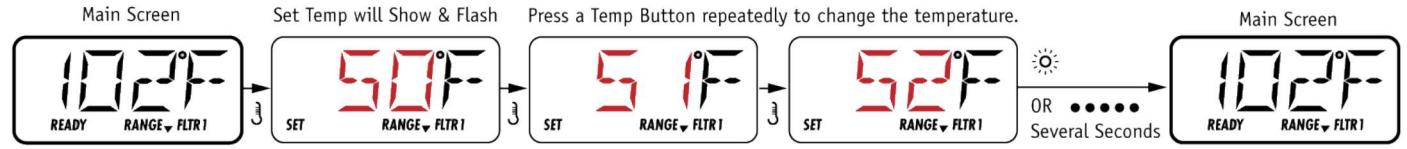
To program the first temperature range, press the "Temp" button. While the display is flashing, press the "Light" button. "TEMP" will be displayed on the controls. If the arrow beside the word "RANGE" is pointing up, program the HIGH temperature setting. If the arrow is pointing down, program the LOW temperature. Press and hold the "Temp" button until the desired temperature is reached. Press the "Light" button to save the change. Repeat the process to program the opposite temperature range. If necessary, press the "Temp" button to change the direction of the arrow. Press and hold the "Temp" button until the desired temperature is reached. Press the "Light button to save the changes.

Setting Dual Temperature Ranges

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- A temperature button, used for "Action"
- Light or dedicated "Choose" button, depending on control panel configuration
- ●●●●● Waiting time that keeps the last change to a menu item.
- ★★★★★ Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.





Freeze Protection

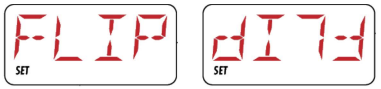
If the water temperature falls to 42° F, the spa will automatically turn on and will run for 4 minutes after the water temperature reaches 46° F to prevent freezing. If your spa is in Sleep Mode when the ambient temperature is 40° F or lower, the water temperature will likely operate in Freeze Protection Mode for extended periods if not continuously.

Show and Set the Time-of-Day

Setting the time of day is important for determining when filtration cycles and other functions will performed. If no time of day is set, "SET TIME" will flash on the display if no time-of-day is stored in the memory. When the power supply to the spa is interrupted, the time will not be saved. If filtration cycles must be run at a particular time resetting the time-of-day will be required. When the GFCI is powered on, the default time-of-day is 12:00 Noon. Though "SET TIME" will still flash on the display, if the GFCI is powered on at Noon, the filtration cycle will run at Noon.

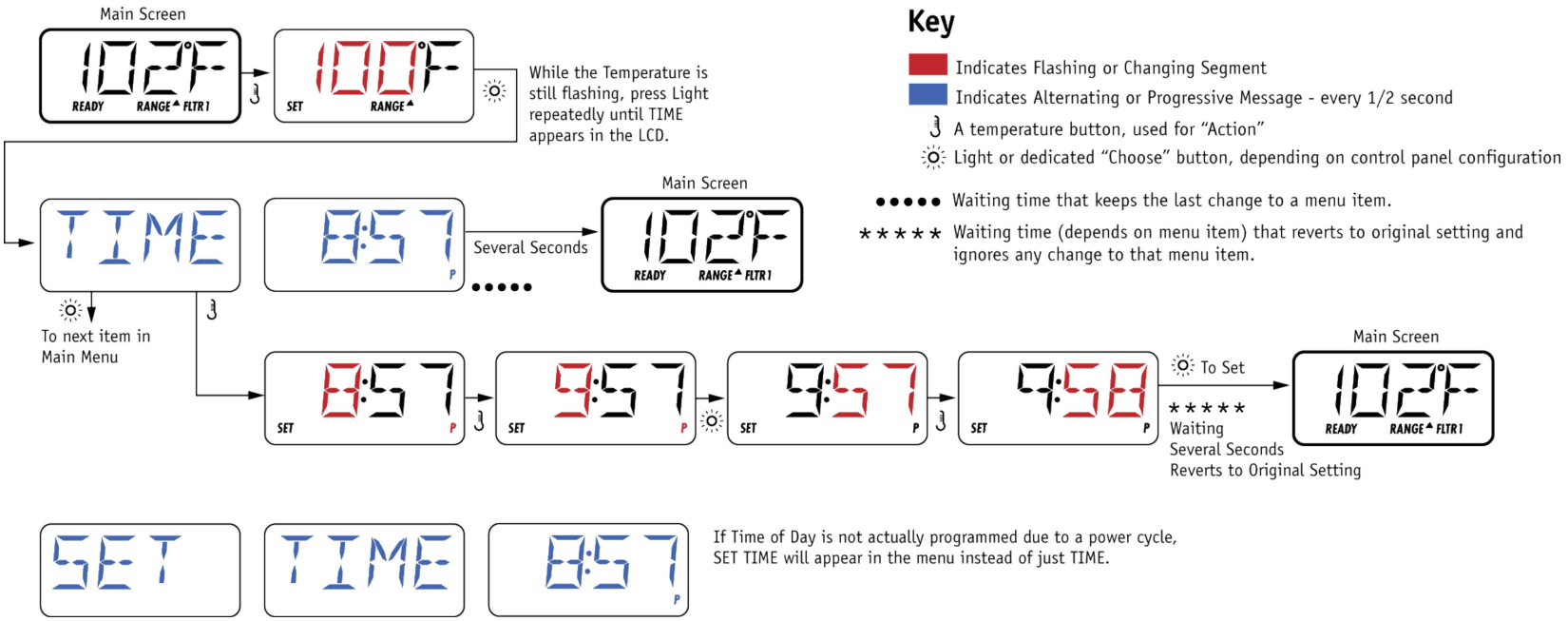
To set the time of day, press the "Temp" button. While the display is flashing, repeatedly press the "Light" button until "TIME" appears on the topside display. To set the HOUR, press and hold the "Temp" button until the correct hour is displayed. Press the "Light" button to save the hour and begin setting the MINUTES. Press and hold the "Temp" button until the correct time is displayed. Press the "Light" button to save your selection.

Flip the Display



The message on the topside display can be inverted for easy reading both inside and outside the spa. To invert the display, press the "Temp" button once. When the display is flashing, press the light button repeatedly until the word "FLIP" flashes on the topside controls. Press the "Temp" button to invert the display. "FLIP" will begin flashing in the inverted direction. Press the "Light" button to save the change.

Setting the Time of Day



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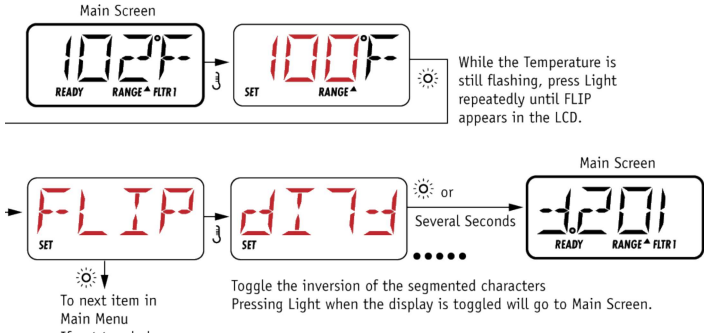
- ★★★★★ Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.

If Time of Day is not actually programmed due to a power cycle, SET TIME will appear in the menu instead of just TIME.

Flipping the Display



Programming Filtration Cycle Settings

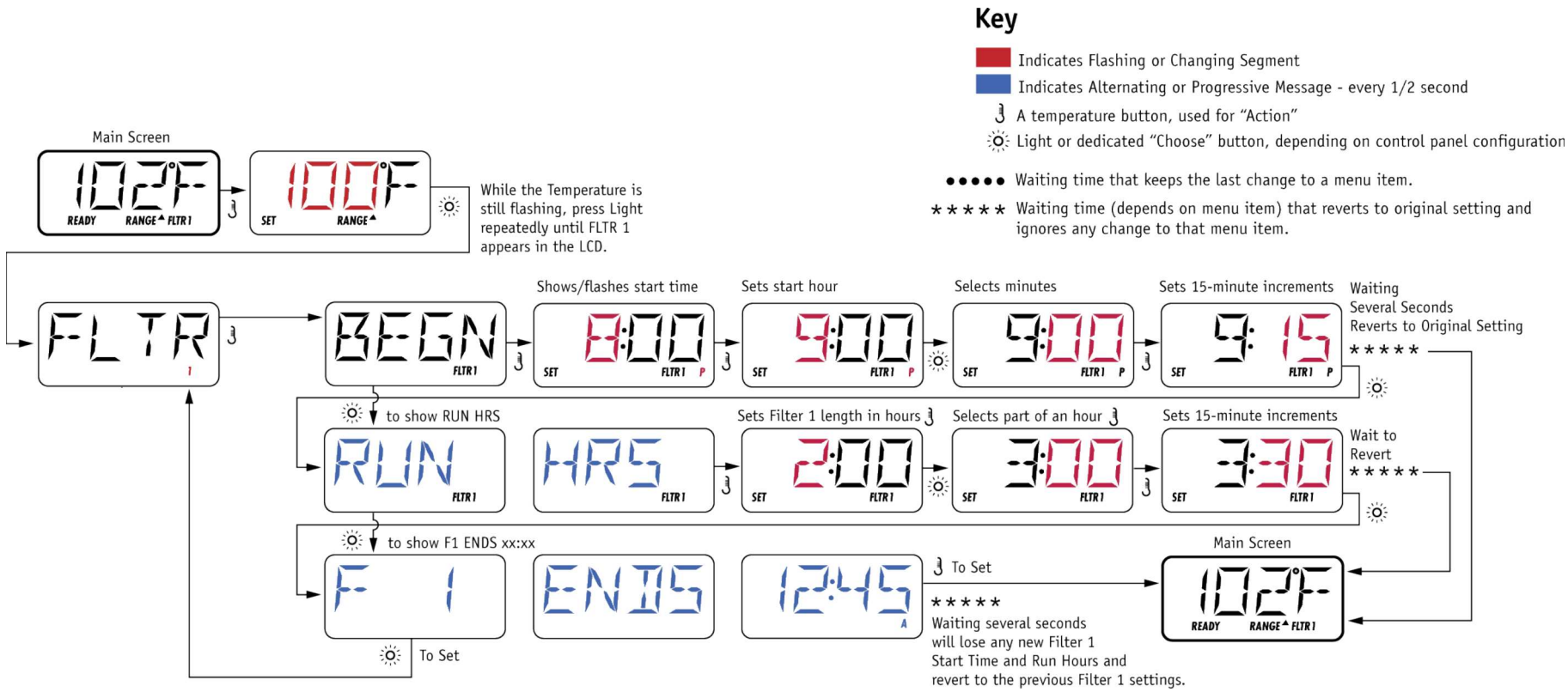
Your spa is pre-programmed to filter once each day for 2 hours.
When the filtration cycle begins, all pumps will turn on and operate on HIGH SPEED to purge the lines and shut down automatically.
When purging is complete, Pump 1 will start on LOW SPEED and will automatically shut down when filtration cycle is complete.
During filtration cycles, the water circulates to remove debris and small particulates.
Increasing filtration will not eliminate or reduce the need for chemical sanitization.

How long your water needs to filter varies on a number of factors including how often the spa is used, for how long, and by how many people. In addition to the filtration cycle, the water circulates every 30 minutes for diagnostic testing and during clean up cycles that begin automatically 30 minutes after a pump button is pressed. Under normal use, adequate filtration should be achieved in two hours. If the spa is used for longer periods by more bathers it may be necessary to increase the duration of your filtration cycle which should not exceed 4 hours. Excessive filtration in may cause overheating. Your spa is pre-programmed to run one filtration cycle every day for two hours. You can program when the filtration cycle will begin and the duration. Settings can be adjusted in 15 minute intervals.

To program filtration cycles, press the “Temp” button, Wile the display is flashing, repeatedly press the “Light” button until “FLTR” is displayed on the topside controls. Press the “Temp” button. While “BEGN” is flashing on the display, press and hold the “Temp” button until the correct hour is displayed. Press the “Light” button to save the hour and move to minutes. Press and hold the “Temp button until the desired 1/4 hour is displayed. Press the “Light” button. While “RUN HRS” is flashing press and hold the “Temp” button until the desired number of hours is displayed. Press the “Light” button to save the selection and move to minutes. Press and hold the “Temp” button until the correct 1/4 hour is displayed. Press the “Light” button to save the selection and display the time of day the filtration cycle will end. Press the “Temp” button to save the selection.

When selecting the start time pay close attention to “A” or “P” in the bottom right corner of the display. The filtration cycle will run during the AM if “A” is displayed or PM if “P” is displayed. The system calculates the end time, so “A” or “P” are not included in that display.

Programming the Filtration Cycle



UNDERSTANDING OPERATING MODES

Your spa controls are equipped with three operating modes to help you regulate energy consumption and reduce operating costs. How often the spa is used and the ambient temperature will help you determine which mode is best for you.

Ready Mode

The water is always heater to the programmed temperature setting.
"Ready" is displayed on the topside controls.

When the spa is in Ready Mode, it's always ready to use when you're ready to use it because the programmed temperature setting is automatically maintained. The current water temperature will be displayed on the topside controls. Pump 1 will automatically circulate on low speed for a few minutes every half hour to check the water temperature keeping it consistent throughout the spa and to sanitize the water with Ozone.

Rest Mode

The water only heats during filtration cycles and may be too cool for immediate use
"Rest" is displayed on the topside controls.
DO NOT PUT THE SPA IN REST MODE WHEN THE AMBIENT TEMPERATURE IS 40° F OR LOWER!

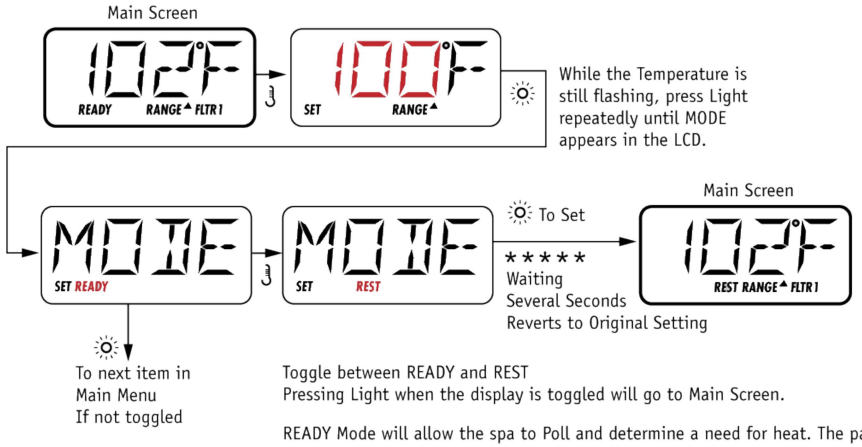
Rest Mode reduces energy consumption by heating the water only during filtration cycles only. In Ready Mode, the water automatically begins heating when the temperature falls a couple of degrees. In Rest Mode, the water temperature is allowed to fluctuate. When the spa is in Rest Mode, setting the filtration cycle to end right before use can be an effective way to reduce energy consumption. The topside controls will not display the current water temperature until pump 1 is turned on to circulate the water for approximately 1 minute.

Ready-In-Rest Mode

In Rest Mode, the water heats for 1 hour when the "Pump 1" button is pressed
Unless the "Pump 1" button is pressed, the water only heats during filtration cycles.

In Ready-In-Rest Mode the spa will operate in Rest Mode, heating only during filtration cycles, unless the "Pump" 1 button is pressed. When the "Pump 1" button is pressed, the system assumes it is in use and the water begins heating as it circulates for one hour. If the programmed temperature setting isn't reached within the hour, the pump automatically shuts off.

To change operating modes, press the "Temp button. While the display is flashing, repeatedly press the "Light" button until "MODE" appears on the topside display. Press the "Temp" button to toggle between operating modes. When the desired mode is displayed, press the "Light" button to save your selection.



READY Mode will allow the spa to Poll and determine a need for heat. The panel will maintain a "current" temperature display.

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- Light or dedicated "Choose" button, depending on control panel configuration
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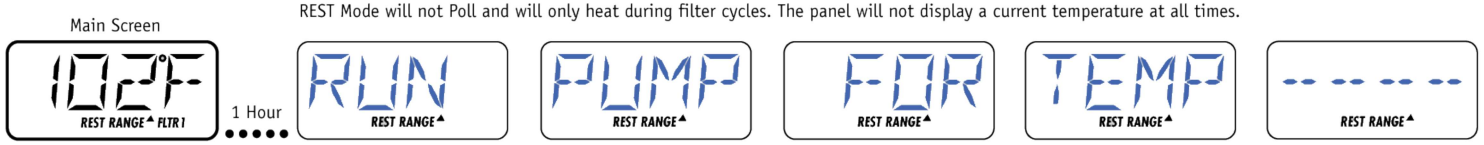
- ★★★★★ Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.

When your spa is in Rest Mode, the actual water temperature cannot be displayed until Pump 1 is turned on to circulate the water.

REST Mode will not Poll and will only heat during filter cycles. The panel will not display a current temperature at all times.



The Main Screen will display RUN PUMP FOR TEMP if the filtration pump has not run for over 1 hour.
The Main Screen will display normally during Filter Cycles or when the spa is in use.

If the filtration pump has been off for an hour or more, when any function button, EXCEPT Light, is pressed on the panel, the pump used in conjuncton with the heater will run so that temperature can be sensed and displayed.

Restricting Access

To prevent unwanted use or accidental changes to programmed settings, lock the control panel to block use of the topside controls without interrupting the automatic functions.

Limited Access

Locking the Temperature allows the Jets and other features to be used, but blocks access to other menu items including the programmed temperature setting, “FLIP”, “LOCK,” “INFO” and “FAULT LOG”.

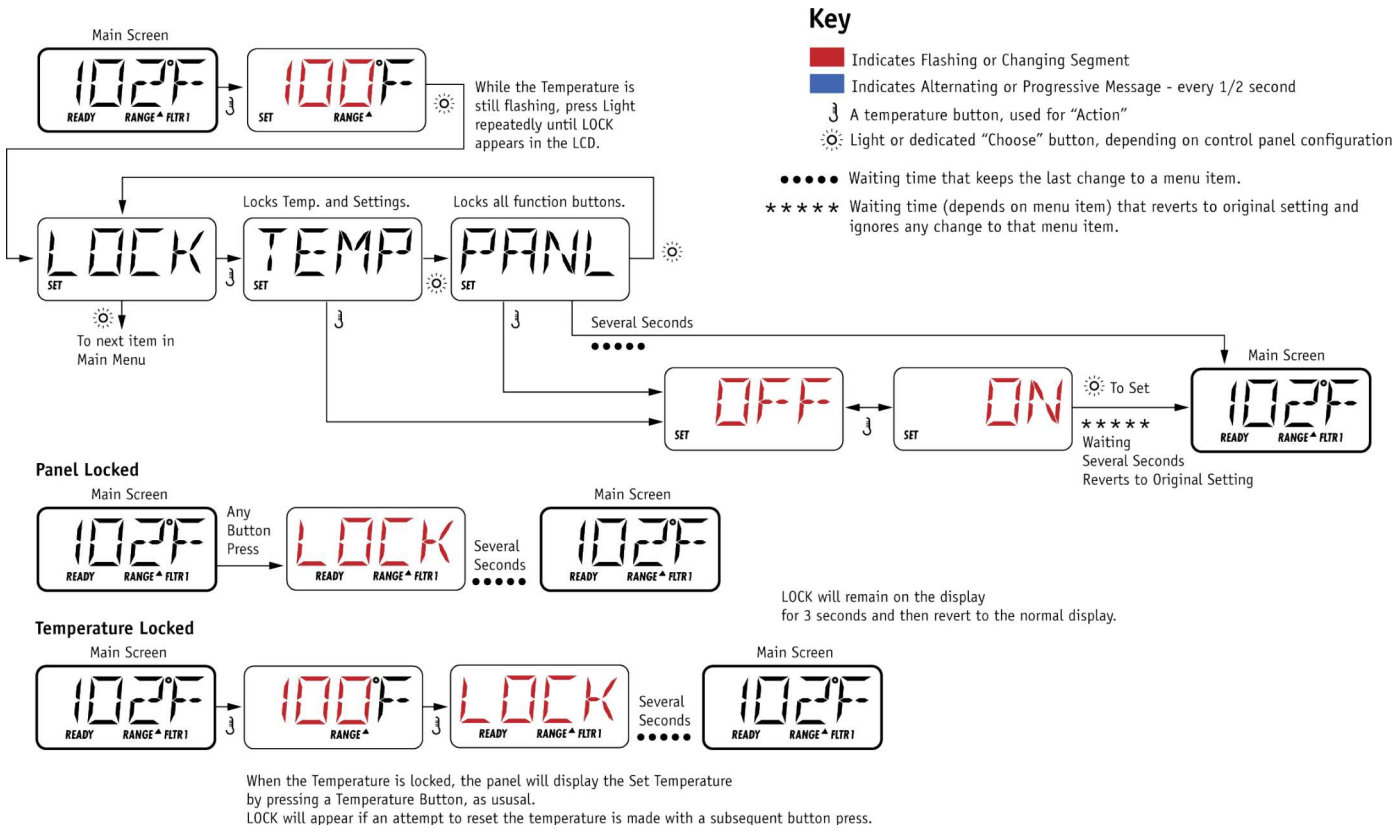
To lock the Temperature, press the “Temp” button once. While the display on the topside control is flashing, press the “Light” button repeatedly until “LOCK” is displayed on the topside controls. Press the “Temp” button. When “TEMP” is displayed, press the “Light” button. When “PANL” is displayed, press the “TEMP” button. When “OFF” appears on the display, press the “TEMP” button. When “ON” is displayed, press the “Light” button to lock and save the changes. When the Temperature Lock is activated, the word “LOCK” will appear when the “Temp” button is pressed twice.

Unlocking

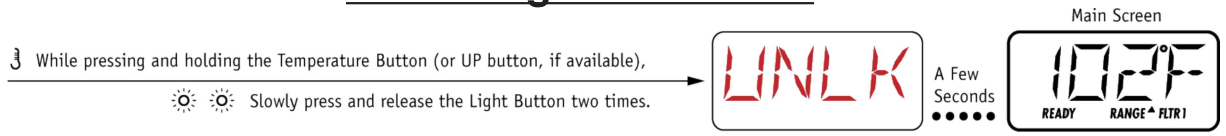
Press and hold the “Temp” button. Slowly press the “Light” button twice. The control panel is unlocked when “UNLK” is displayed on the topside control panel.

To lock the topside control panel and prevent use, press the “Temp” button once. While the display on the topside controls is flashing, press the “Light” button until “LOCK” is displayed on the topside controls. Press the Temp Button once. When “TEMP” appears on the display, press the “Light” button once. When “PANL” is displayed, press the “Temp” button. When “OFF” is displayed, press the “Temp” button. When “ON” is displayed, press the “Light” button save the change and lock the controls. When the panel lock is activated, “LOCK” will appear when any button is pressed.

Restricting Access



Unlocking the Controls



Setting Preferences

Selecting ºF OR ºC

To change the water temperature reading from Fahrenheit to Celsius, Press the “Temp” button once. While the display is flashing, press the “Light” button until “PREF” is displayed. Press the “Temp” button. When “F/C” is displayed, press the “Temp” button to toggle between “F” and “C”. Press the “Light” button to set your preference. “PREF” will display on the control allowing you to set the next preference parameter. The system will automatically exit if the setting is not adjusted while “PREF” is flashing on the display.

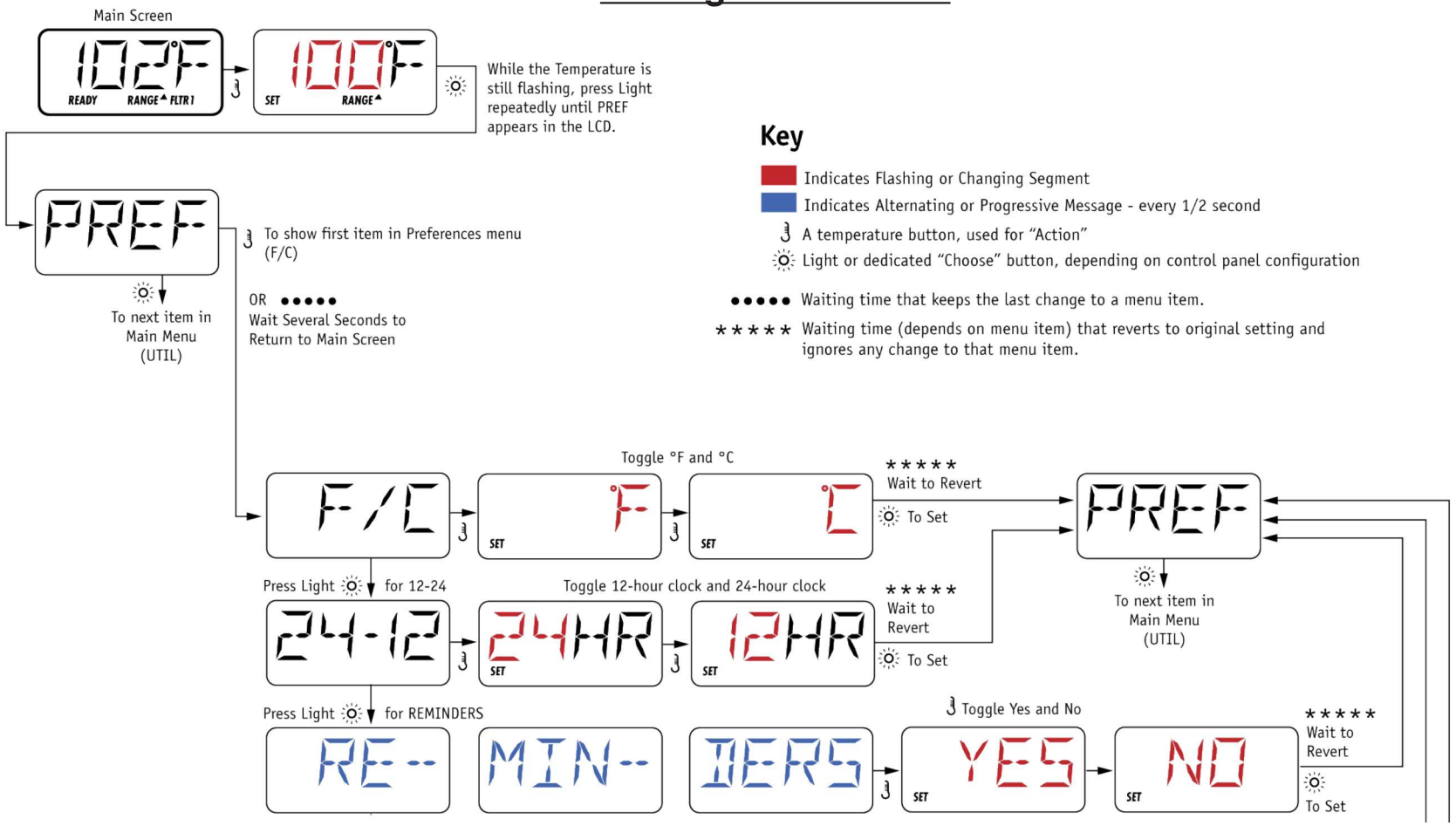
Selecting Standard or Military Time

To change the clock setting to Military Time, press the “Light” button. “24- 12” will be displayed on the topside control. Use the “Temp” button to toggle between “24 HR” and “ 12 HR”. Use the light button to set your preference. “PREF” will display on the control.

Setting Maintenance Reminders

To set maintenance reminders, press the “Light” button when “RE--” “MIN-” “DERS” is displayed. Press the “Temp” button to toggle between “YES” and “No”. Press the “Light” button to set your preference.

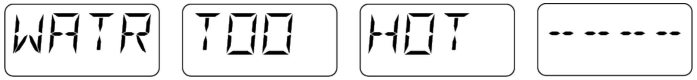
Setting Preferences



General Messages

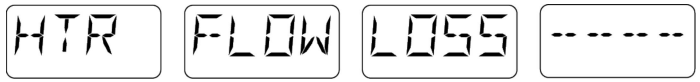
Too Cold - Freeze Protection

A potential freeze condition has been detected and all pumps have been activated. Pumps will stay on for at least 4 minutes after the potential freeze condition has ended. Pumps may turn on and off automatically during freeze protection.

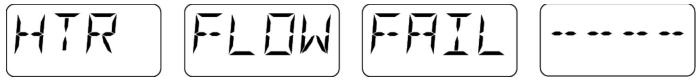
Water is too Hot 

One of the temperature sensors has detected high temperature in the heater chamber and spa functions have been disabled. DO NOT ENTER THE WATER! The probable cause is pumps running excessively or high ambient temperatures. Remove the spa cover and add water allowing the water to cool. Reduce duration of filtration cycle. Operation will resume when the water temperature has fallen.

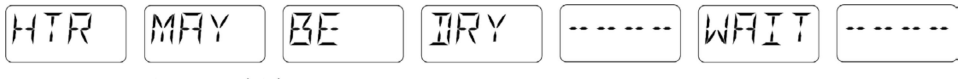
Heater Related Messages

Reduced Heater Flow 

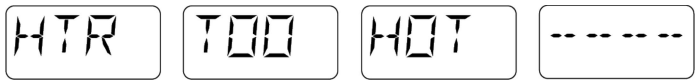
There may not be enough water flow away from the heater. DO NOT ENTER THE WATER! Water temperature readings in the heater chamber are too high. Heater will restart in approximately 1 minute.

Reduced Heater Flow 

Not enough flow to carry water away from the heating element and the heater has been disabled. DO NOT ENTER THE WATER! Power off GFCI, make sure slice valves locked in open position, that water level is adequate and remove debris from filter, filter basket and suction drain cover. Press any button to resume operation. If problem is not resolved, call your local dealer for assistance.

Heater may be Dry 

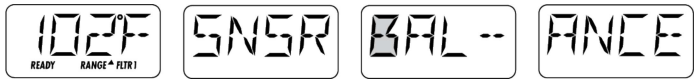
There is not enough water in the heater. Add water to the spa if the water level is too low, check to be sure slice valves are locked in the open position, that pumps are primed and jets are open. When problem is resolved, press any button to resume operation.

Heater is too Hot 

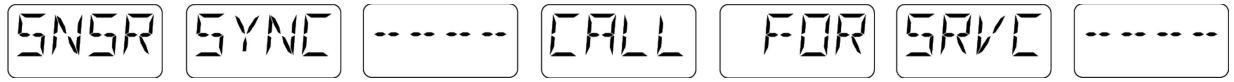
One of the temperature sensors has detected high temperature in the heater chamber and the spa is shut down. DO NOT ENTER THE WATER! Power off GFCI, make sure slice valves locked in open position, that water level is adequate and remove debris from filter, filter basket and suction drain cover. Press any button to resume operation. If problem is not resolved, call your local dealer for assistance.

Reset GFCI

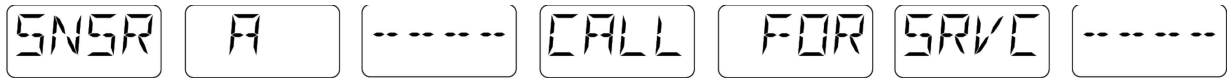
When this message appears with another message, the GFCI must be turned off to reset the spa controls. After 10 minutes, turn the GFCI on.

Sensor Related Messages 

Sensor Balance is Poor - Temperature sensors are out of balance by 2 to 3 Degrees. Call your local dealer for assistance.

Sensor Balance is Poor 

Temperature sensors are out of balance and fault has been established for at least 1 hour. Call your local dealer for assistance

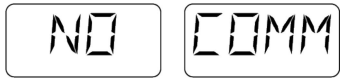
Sensor A Failure 

Temperature sensor or sensor circuit (A) has failed. Call your local dealer for assistance.

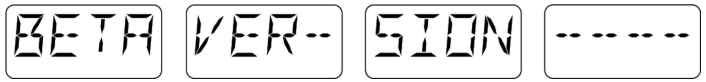
Sensor A Failure

Temperature sensor or sensor circuit (B) has failed. Call your local dealer for assistance.

Miscellaneous Messages

No Communication 

The topside control is not communicating with the spa controls. Call your local dealer for assistance.

Pre-Production Software 

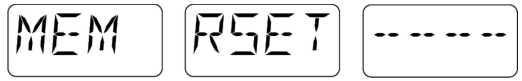
The spa controls is operating with test controls. Call 877-722-8097 for assistance.

ºF or ºC replaced by ºT

Spa controls are operating in Test Mode. Call your local dealer for assistance.

Memory Failure

When the spa was powered on the system failed the Program Checksum Test. There is a problem with the firmware. Call your local dealer for assistance.

Memory Warning - Persistent Memory Reset 

Message appears after system set up change. If this message appears on more than one power up, or it appears after operating normally for a period of time, call your local dealer for assistance.

Memory Failure - Clock Error

Call your local dealer for assistance.

Configuration Error - Spa will not Power On

Call your local dealer for assistance.

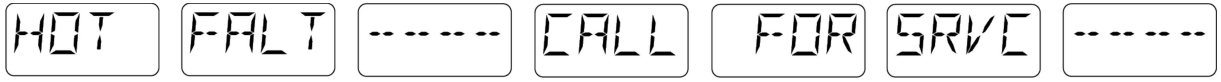
GFCI Failure - System could not Test/Trip GFCI

Call your local dealer for assistance.

Pump appears to be stuck on

Water may be overheating.

Pump appears to have been stuck ON when the spa was last powered on



DO NOT ENTER THE WATER. Turn the GFCI off and call your local dealer for assistance.

If Reminders are Programmed, These Messages will Appear on a Regular Basis Alternating with Current Water Temperature

Check pH and adjust if required. CHEK PH

Check sanitizer and adjust if required. CHEK CHEM

Clean or replace the filter if necessary. CLN FLTR

Test the GFCI. TEST GFCI
The manufacturer requires installation of a Ground Fault Circuit Interrupter by a qualified, licensed electrician. The GFCI is an extremely important safety device and must be checked on a regular basis to verify its reliability.

Change water to maintain chemical balance and sanitary conditions. CHNG WATR

Clean and condition cover for maximum life. CLN COVR

Clean and condition cabinet for maximum life. TRT WOOD

Change filter to ensure adequate water flow, optimal performance and sanitary conditions. CLN FLTR

Install new mineral cartridge to ensure adequate sanitation. CHNG CART