



# SmartTouch™ Control Center Operation Guide

Effect. 6/2019



## Fill it Up

### Preparation and Filling

Fill the spa to its correct operating level. Be sure to open all valves and jets in the plumbing system before filling to allow as much air as possible to escape from the plumbing and the control system during the filling process.

After turning the power on at the main power panel, the top-side panel will display a company logo screen.

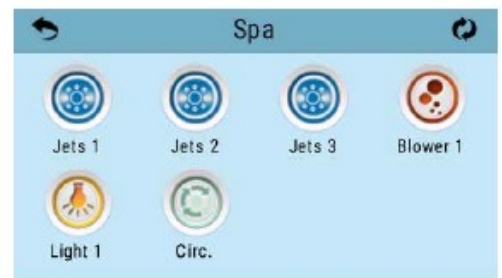
### Priming Mode

After the initial start-up sequence, the control will enter Priming Mode and display a Priming Mode screen. Only pump icons appear on the priming mode screen. During the priming mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater under low-flow or no-flow conditions. Nothing comes on automatically, but the pump(s) can be energized by selecting the “Jet” buttons.

### Priming the Pumps

As soon as the Priming Mode screen appears on the panel, select the “Jets 1” button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, select the other pumps, to turn them on. The pumps should be running in high-speed to facilitate priming. If the pumps have not primed after 2 minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process. Note: Turning the power off and back on again will initiate a new pump priming session. Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and call for service.

Important: A pump should not be allowed to run without priming for more than 2 minutes. Under NO circumstances should a pump be allowed to run without priming beyond the end of the 4-5 minute priming mode. Doing so may cause damage to the pump and cause the system to energize the heater and go into an overheat condition.



### Exiting Priming Mode

The system will automatically enter the normal heating and filtering at the end of the priming mode, which lasts 4-5 minutes.

You can manually exit Priming Mode by pressing the “Back” button on the Priming Mode Screen. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4-5 minutes. Be sure that the pump(s) have been primed by this time.

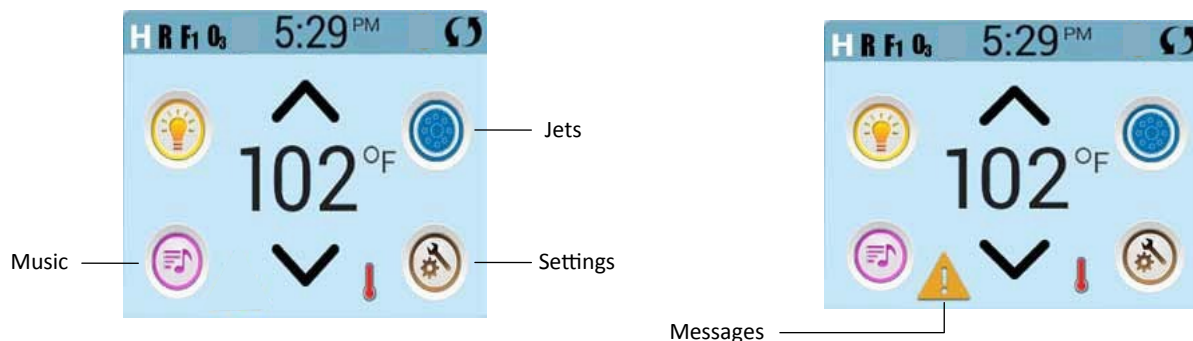
Once the system has exited Priming Mode, the top-side panel will display the Main Screen, but the display will not show the water temperature yet, as shown below. This is because the system requires approximately 1 minute of waterflowing through the heater to determine the water temperature and display it. ---°F ---°C

## Navigation

Navigating the entire menu structure is done by touching the screen.

The three screen selections indicated below can be selected. Touch one of these to enter a different screen with additional controls.

Most menu screens time out and revert to the main screen after 30 seconds of no activity.



## Messages

At the bottom of the screen, at certain times an indicator may appear showing that a message is waiting. Touch this indicator to go to the Message Display Screen. On that Screen some of the messages can be dismissed.

## Spa Status

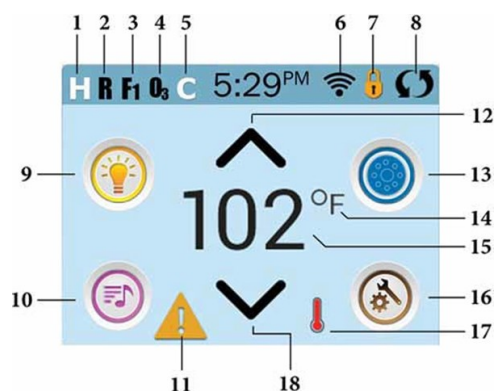
Important information about spa operation can be seen on the Main Screen.

Most features, including Set Temperature adjustment, can be accessed from this screen. The actual water temperature can be seen, and the Set Temperature can be adjusted. The selected Temperature Range is indicated in the upper left corner.

Time-of-Day, Ozone and Filter status is available, along with other messages and alerts. The Spa Equipment Control Icon will spin if any pump is running. A Lock icon is visible if the panel or settings are locked.












## ICON Specifications

1. H = High Temperature Range
2. R = Ready Mode
3. F1 = Filter Cycle 1 Running
4. O3 = Ozone Running
5. C = Cleanup Cycle
6. Wi-Fi Signal Indicator
7. Lock Indicator Icon
8. Invert Screen
9. Light Icon = Turns On/Off
10. Music Icon = Press To Enter Music Screen
11. Message Waiting Indicator
12. Set Temperature Up
13. Spa Equipment Control Icon
14. Temperature Scale (F/C)
15. Current Water Temperature
16. Settings Icon
17. Heat Indicator
18. Set Temperature Down





NOTE: After 30 minutes\* the display will automatically go into sleep mode, which turns the display off. This is normal operation. Touch anywhere on the screen to wake the panel back up.








## ICON Specifications

1.  = High Temperature Range.  = Low Temperature Range.
2.  = Ready Mode.  = Ready And Rest Mode.  = Rest Mode.
3.  = Filter Cycle 1 is running.  = Filter Cycle 2 is running.  = Filter Cycles 1 and 2 are both running.
4.  = Ozone is Running. If you don't see the icon that means the Ozone is OFF.
5.  = Cleanup Cycle is Running.
6.  = Wi-Fi icon just indicates that the Wi-Fi link is connected. It does not indicate signal strength.  
Note: Not all systems that support Wi-Fi display this icon.





7. Lock Icon: When displayed, indicates the panel is in a locked mode. To unlock or lock a setting or panel lock, first press the corresponding icon on the Lock Screen, then press and hold the word "Lock" for 5+ seconds until the text and icon change to the opposite state.

There are 2 lock icons that can be shown on the title bar of most screens. A tall skinny one  representing a settings lock is applied.

It is shown on screens that are affected by the settings lock. And the standard lock icon Padlock  which represents the Panel being locked. If both settings and panel are locked, only the panel lock will show since the settings lock doesn't do much in that situation. When the panel is locked, the Settings Screen will only show items not affected by that lock (System Info and LockScreens).

8.  = Invert (or flip) Screen.
9.  = Lights is turned ON.  = Light is Inactive.  = Light is Disabled.
10.  = Music is Active.  = Music is Inactive.  = Music is Disabled.













11. Message Waiting Indicator: The Message Waiting Indicator will show one of the following icons:

-  = fatal error (Spa can't function until it's fixed)
-  = Normal Error or Warning
-  = Reminder Message
-  = Information Message

Touch the Indicator to go to a Message Screen which shows the message.

Some messages will include the "Call for Service" text as it requires a service technician to fix the problem. If the panel is locked and a message alert appears, you will be taken to the Lock Screen (where you will need to Unlock the panel) before you can clear the message.

Touching the Error/Warning/Reminder/Info Icon on the Message Screen will take you to the System Information Screen to allow for troubleshooting over the phone or for a field service tech to better understand what is going on. Exiting the System information Screen will take you back to the Message Screen in that situation.

12.  Adjust set temperature higher.
13.  = Spa Equipment Control Icon. Brings up a screen where the spa jets, blower or other equipment can be controlled. While on the Spa Equipment Screen, you can press a Jets button once for low speed, and if configured press it again for high speed.  = Jet is Inactive. Indicates if a pump is running or not.
14. Indicates if the temperature is in  = Fahrenheit or  = Celsius.
15. Current water temperature if  or  is solid; set temperature if  or  is flashing.
16. Setting Icon.  = Settings is Active.  = Settings is Inactive (when the panel is locked). Takes you to Settings Screen
17. Different animation sequences, including blinking, may indicate different stages of heating.
18.  Adjust set temperature lower.

## Settings Screen

### Heat Mode—Ready vs. Rest

In order for the spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the “heater pump.”

The heater pump is a 2-Speed Pump 1, Ready Mode will circulate water every 1/2 hour, using Pump 1 Low, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as “polling.”

Rest Mode will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the heater pump has been running for a minute or two.

When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off.

### Ready-in-Rest Mode


Ready in Rest Mode appears in the display if the spa is in Rest Mode and the Jets 1 Button is pressed. When the heater pump has come on automatically (for example for heating) you can switch between low speed and high speed but you cannot turn the heater pump off. After 1 hour, the System will revert to Rest Mode. This mode can also be reset by selecting the Heat Mode line.

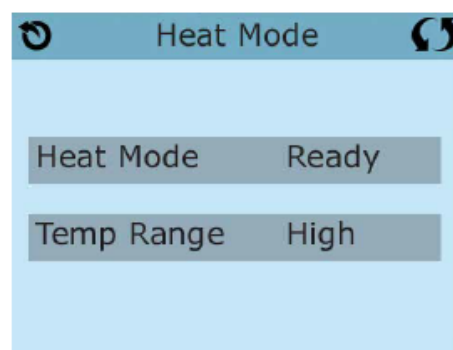
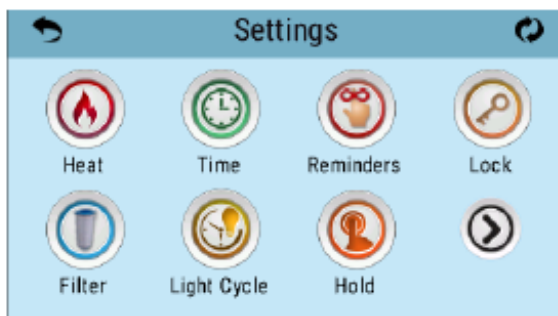
## Settings


### Programming, Etc.

The Settings Screen is where all programming and other spa behaviors are controlled.

Each icon on the Settings screen takes you to a different screen, where one or more setting may be viewed and/or edited.

The Heat Icon  takes you to a screen where you control the Heat Mode and the Temperature Range.



The Heat Icon  takes you to a screen where you control the Heat Mode and the Temperature Range.

### Dual Temperature Ranges (High vs. Low)


This system incorporates two temperature range settings with independent set temperatures. The specific range can be selected on the Settings screen and is visible on the Main Screen in the upper left corner of the display.

These ranges can be used for various reasons, with a common use being a “ready to use” setting vs. a “vacation” setting. Each range maintains its own set temperature as programmed by the user. This way, when a range is chosen, the spa will heat to the set temperature associated with that range.

*High Range can be set between 80°F and 104°F. Low Range can be set between 50°F and 99°F. More specific Temp Ranges may be determined by the Manufacturer. Freeze Protection is active in either range.*

## Time-of Day

### Be sure to set the Time-of Day


Setting the time-of-day is important for determining filtration times and other background features. The Heat Icon  on the Settings Screen takes you to a screen where you control the Time-of-Day.

On the Time-of-Day screen, simply select the Hours and Minutes. Use the Up and Down Buttons to make changes, then Save. If no time-of-day is set in the memory an Information Screen will appear. If you exit it and Information Icon will appear at the bottom of the Main Screen, until the time-of-day has been set. NOTE: If power is interrupted to the system, Time-of-Day will be maintained for several days.



### Adjusting Main Filtration

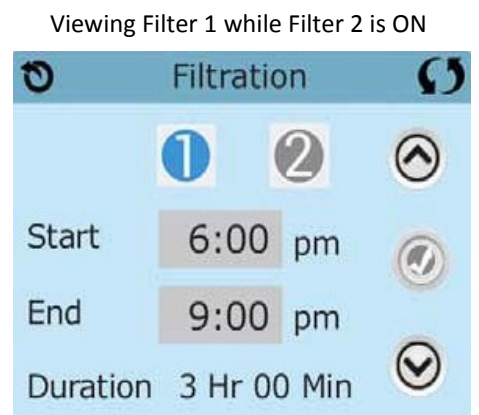
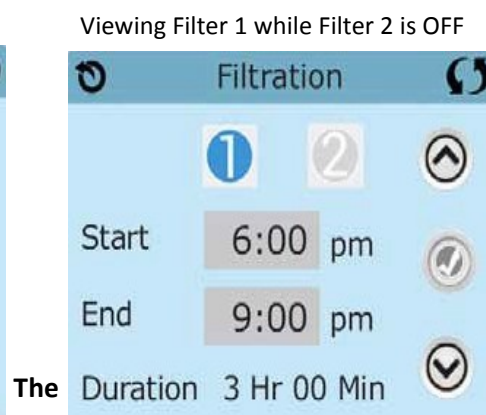
Using the same adjustment as Setting the Time, Filter Cycles are set using a start time and a duration. Each setting can be adjusted

in 15-minute increments. The panel calculates the end time and displays it automatically. The Filter Icon  on the Settings Screen takes you to a screen where you control the Filter Cycles.

### Filter Cycle 2 - Optional Filtration

Filter Cycle 2 is OFF by default. Press “1” to view Filter 1. Press “2” once to view Filter 2. Press “2” again to turn Filter 2 ON or OFF. When Filter Cycle 2 is ON, it can be adjusted in the same manner as Filter Cycle 1.

It is possible to overlap Filter Cycle 1 and Filter Cycle 2, which will shorten overall filtration by the overlap amount.



### Meaning of Filter Cycles

1. The heating pump always runs during the filter cycle\*
2. In Rest Mode, heating only occurs during the filter cycle
3. Purges happen at the start of each filter cycle

\*For example, if your spa is set up for 24/hour circulation except for shutting off when the water temperature is 3°F/1.3°C above the set temperature, that shutoff does not occur during filter cycles.

## Additional Settings

### Restricting

The control can be restricted to prevent unwanted use or temperature adjustments.

Locking the Panel prevents the controller from being used, but all automatic functions are still active.

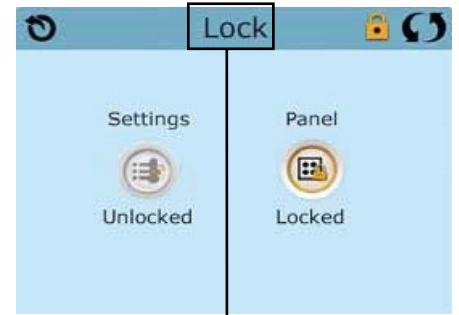
Locking the Settings allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

Settings Lock allows access to a reduced selection of menu items. These include Filter Cycles, Invert, Information and Fault Log.

They can be seen, but not changed or edited. To lock either Settings or Panel first select Settings (if it says “Unlocked”) or Panel (if it says “Unlocked”), then press the word “Lock” for at least 5 seconds. To unlock either Settings or Panel first select Settings (if it says “Locked”) or Panel (if it says “Locked”), then press the word “Lock” for at least 5 seconds. Press for 5 seconds to unlock.



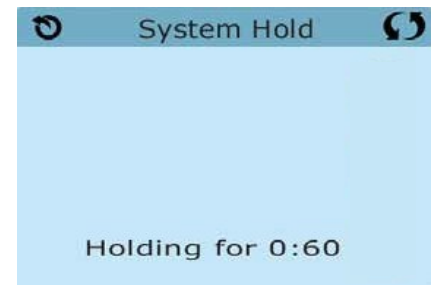
Panel locked and settings unlocked



Press here for 5 seconds to lock or unlock

### Hold—M037\*

Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. Hold Mode will last for 1 hour unless the mode is exited manually. If spa service will require more than an hour, it may be best to simply shut down power to the spa. The Hold Icon on the Settings Screen places the spa in Hold Mode and displays the System Hold screen. Touch Back to exit Hold Mode.



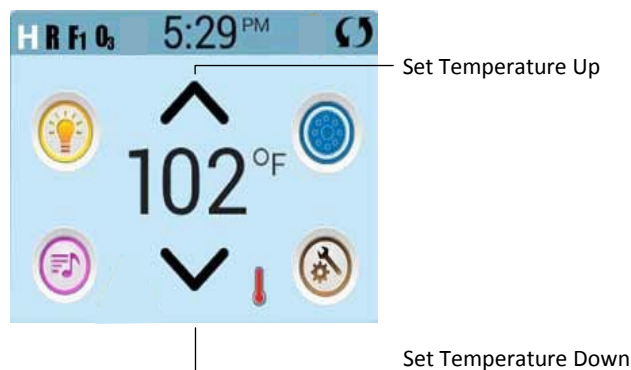
### Set Temperature

Press Up or Down once to display the Set Temperature (indicated by a flashing °F or °C, plus a change in color of the temperature). Press Up or Down again to modify the Set Temperature. The Set Temperature changes immediately.

If you need to switch between High Temperature Range and Low Temperature Range you need to go to the Settings Screen.

### Press and Hold

If Up or Down is pressed and held, the temperature will continue to change until you stop pressing, or until the Temperature Range limits are reached.





## Spa Screen

The Spa Screen shows all available equipment\* to control. The display shows icons that are related to the equipment installed on a particular spa model, so this screen may change depending on the installation.

The icon buttons are used to select and control individual devices.



Jets Off



Jets Low

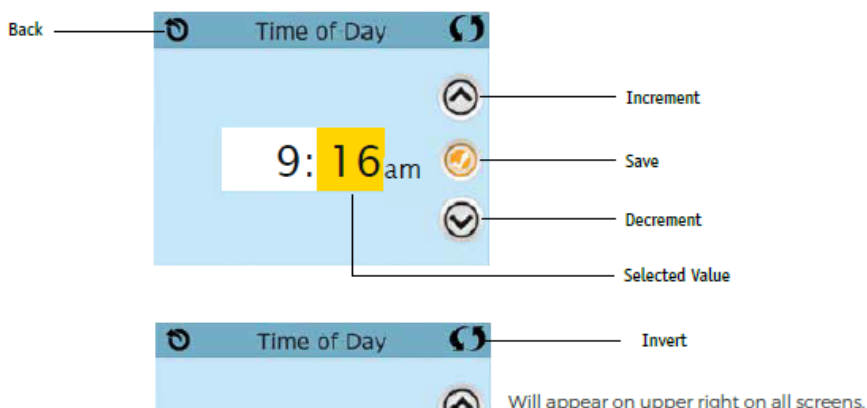


Jets High

Some devices, like pumps, may have more than one ON state, so the icon will change to reflect the state of the equipment. Below are some examples of 2-speed Pump indicators. \*One exception: The Main Spa Light is not shown on the Spa Screen; it is only shown (and controlled) on the Main Screen.

## Values Increment / Decrement and Invert

If an Up or Down button is shown and pressed when on an editing page, and a value has been selected (highlighted), the value can be incremented by pressing the up arrow or decremented by pressing the down arrow.



## Common Buttons

### Exiting Screens

The Back button is on every screen except the Main Screen, the Priming Mode Screen are a Message Display Screen.

When you see only this button, or this button plus an Inactive Save Button, it means Back or Exit. It appears on editing screens before you have changed any value, as well as on all other screens. When you see both the Back button and an Active Save button, the Save button will Save, while the Back button will Cancel. If the screen times out due to no activity it will act like Cancel.



Active Save Button

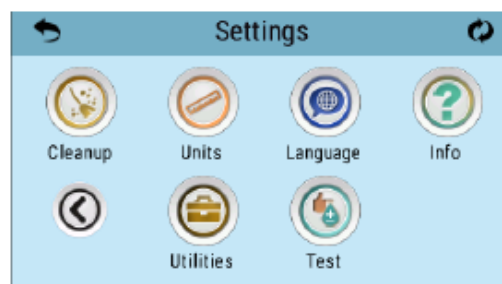
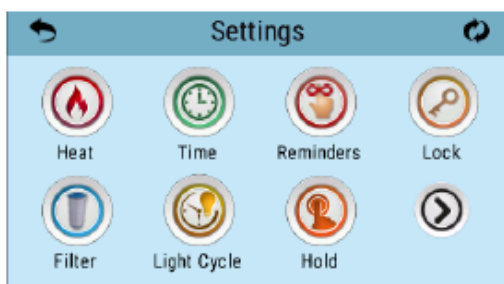


Inactive Save Button

### Page Right / Left

If there is a right arrow at the bottom of the screen, it takes you to the next page.

If there is a left arrow at the bottom of the screen, it takes you to the previous page.



## Page Up / Down

If an Up or Down button is shown and pressed when on a page with a text list, the list can be scrolled a page at a time.



## Hot Tub Spa Unit

### Pumps

On the Spa Screen, select a “Jets” button once to turn the pump on or off, and to shift between low- and high-speeds if equipped. If left running, the pump will turn off after a time-out period. The low-speed of pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode, Pump 1 low may also activate for at least 1 minute every 30 minutes to detect the spa temperature (polling) 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.

### Filtration and Ozone

Pump 1 low and the ozone generator will run during filtration. The system is factory-programmed with one filter cycle that will run in the evening (assuming the time-of-day is properly set) when energy rates are often lower. The filter time and duration are programmable.

A second filter cycle can be enabled as needed.

At the start of each filter cycle, the water devices like blower and other pumps will run briefly to purge the plumbing to maintain good water quality.

### Clean-Up Cycle

When a pump or blower is turned on by a button press, a clean-up cycle begins 30 minutes after the pump or blower is turned off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the system. On some systems, you can change this setting.

### Freeze Protection

If the temperature sensors within the heater detect a low enough temperature, then the water devices automatically activate to provide freeze protection. The water devices will run either continuously or periodically depending on conditions.

In colder climates, an optional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Auxiliary freeze sensor protection acts similarly except with the temperature thresholds determined by the switch. See your dealer for details.

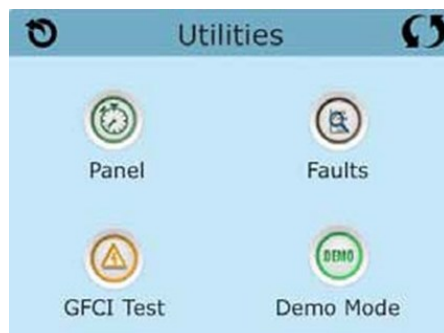
## Utilities Screen

### Utilities

The Utilities Icon on the Settings Screen takes you to the Utilities Screen.

#### Panel

Touching the Panel Icon you to the Panel Screen, where you can set how long it takes the panel to go to sleep after the last activity. The Sleep Timer can be set from 1 to 60 minutes. The default is 30 minutes.





## Fault Log

The Fault Log is a record of the last 24 faults that can be reviewed by a service tech. Use the Up and Down buttons to view each of the Faults. When Priming Mode shows in the Fault Log, it is not a fault. Rather, it is used to keep track of spa restarts.

## GFCI Test

The Ground Fault Circuit Interrupter (GFCI) or Residual Current Detector (RCD) is an important safety device and is required equipment on a hot tub installation.

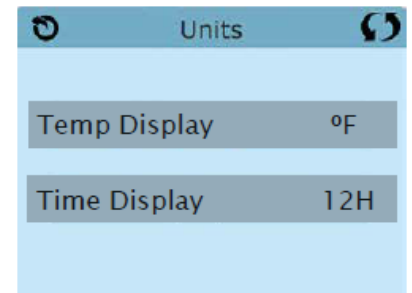
CE registered systems do not have an RCD Test Feature due to the nature of the electrical service. The end-user must be trained how to properly test and reset the RCD.

**It is mandatory to verify proper installation and function of the GFCI or RCD. Users / owners are to manually test this safety device prior to each use. Should the device not function properly, shut the hot tub off at the breaker and contact service tech.**


## Units Screen

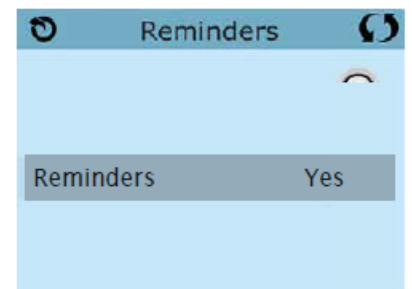
The Units Icon  on the Settings Screen takes you to the Units Screen.

1. Press "Temp Display" to change the temperature between Fahrenheit and Celsius.
2. Press "Time Display" to change the clock between 12 hr and 24 hr display.



## Reminders

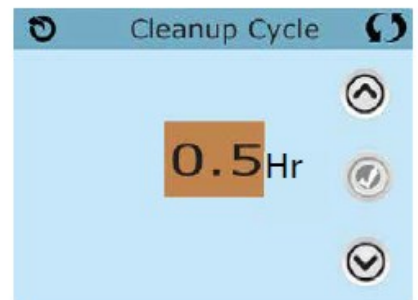
The Reminder Icon  on the Settings Screen takes you to the Reminders screen. Press "Reminders" to turn the reminder messages (like "Clean Filter") ON (Yes) or OFF (No).




## Clean-Up Cycle

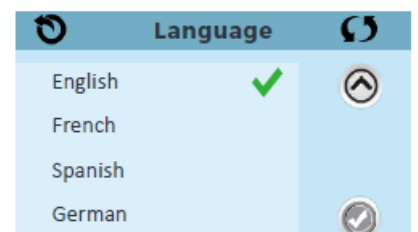
Cleanup Cycle Duration is not always enabled, so it may not appear. When it is available, set the length of time Pump 1 will run after each use. 0-4 hours are available. Settings it to 0.0 Hr keeps the Cleanup Cycles from running.

The Cleanup Icon  on the Settings Screen takes you to the Cleanup Cycle screen.



## Language

The Language Icon  on the Settings Screen takes you to the Language screen. Change the language displayed on the panel.



## Reset Button

Only use the Reset Button prior to moving the spa to a new location. Pressing the Reset the button forces a new Test to be performed at the new location.

## General

Most messages and alerts will appear at the bottom of the normally used screens. Several alerts and messages may be displayed in a sequence.

### Water Temperature is Unknown

After the pump has been running for 1 minute, the temperature will be displayed

— — — °F      — — — °C

### Possible Freezing Condition

A potential freeze condition has been detected, or the Aux Freeze Switch has closed. All water devices are activated. In some cases, pumps may turn on and off and the heater may operate during Freeze Protection. This is an operational message, not an error indication.



### The Water is Too Hot—M029\*

The system has detected a spa water temp of 110°F (43.3°C) or more, and spa functions are disabled. System will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.

### The Water Level is Too Low

This message can only appear on a system that uses a water level sensor. It appears whenever the water level get too low (or the water level sensor is disconnected), and automatically disappears when the water level is adequate. Pumps and the heater turn OFF when this message appears.

## Heater Related

### The Water Flow is Low—M016\*

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater start up will begin again after about 1 min. See “Flow Related Checks” below.

### The Water Flow had Failed\* - M017\*

There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. See “Flow Related Checks” below. After the problem has been resolved, reset the message\*.

### The Heater may be Dry\* - M028\*\*

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Reset this message\* to reset the heater start-up. See “Flow Related Checks” below.

### The Heater is Dry\* - M027\*\*

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must reset the message\* to restart heater start up. See “Flow Related Checks” below.

### The Heater is Too Hot\* - M030\*\*

One of the water temp sensors has detected 118°F (47.8°C) in the heater and the spa is shut down. You must reset the message\* when water is below 108°F (42.2°C).

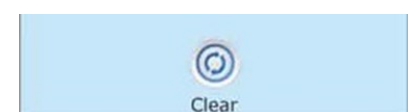


## Flow-Related Checks

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime.

On some systems, even when spa is shut down by an error condition, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

\* **Some messages can be reset from the panel.** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.



## Sensor-Related

### Sensors are Out of Sync—M015\*\*

The temperature sensors MAY be out of sync by 3°F. Call for Service if this message does not disappear within a few minutes.

### Sensors are Out of Syn—Call for Service\* - M026\*\*

The temperature sensors ARE out of sync. The fault above has been established for at least 1 hour. Call for service.

### Sensor A Fault, Sensor B Fault—Sensor A: M031\*\*, Sensor B: M032\*\*

A temperature sensor or sensor circuit has failed. Call for Service.

## Communications Error

The control panel is not receiving communication from the System. Call for Service.



\* ***Some messages can be reset from the panel.*** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.

## System Related

### Program memory failure\* – M022\*\*

At Power-Up, the system has failed the Program Checksum Test. This indicates a problem with the firmware (operation program) and requires a service call.

### The Settings have been Reset (Persistent Memory Error)\* – M021\*\*

Contact your dealer or service organization if this message appears on more than one power-up.

### The clock has failed\* – M020\*\*

Contact your dealer or service organization.

### Configuration error (Spa will not Start Up)

Contact your dealer or service organization.

### The GFCI test failed (System Could Not Test the GFCI) – M036\*\*

(North America Only) May indicate an unsafe installation. Contact your dealer or service organization.

### A Pump may be Stuck On – M034\*\*

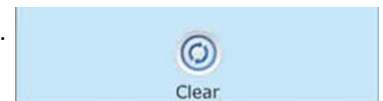
Water may be overheated. POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

### Hot Fault – M035\*\*

A Pump Appears to have been Stuck ON when spa was last powered

POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.

\* ***Some messages can be reset from the panel.*** Messages that can be reset will appear with a Clear Icon at the bottom of the Message Screen. Press the Clear Icon text to reset the message.



## General Maintenance Reminders

Reminder Messages can be suppressed by using the Reminders Screen.

Reminder Messages can be chosen individually by the Manufacturer. They may be disabled entirely, or there may be a limited number of reminders on a specific model. The frequency of each reminder (i.e. 7 days) can be specified by the Manufacturer.

### Check the pH

May appear on a regular schedule, i.e. every 7 days. Check pH with a test kit and adjust pH with the appropriate chemicals.

### **Check the sanitizer**

May appear on a regular schedule, i.e. every 7 days.

Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.

### **Clean the filter**

May appear on a regular schedule, i.e. every 30 days.

Clean the filter media as instructed by the manufacturer. See Hold on page 19.

### **Test the GFCI (or RCD)**

May appear on a regular schedule, i.e. every 30 days. The GFCI or RCD is an important safety device and must be tested on a regular basis to verify its reliability. Every user and owner is to be trained to safely test the GFCI or RCD associated with the hot tub installation. A GFCI or RCD will have a TEST and RESET button on it that allows a user to verify proper function.

### **Change the water**

May appear on a regular schedule, i.e. every 90 days. Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.

### **Clean the cover**

May appear on a regular schedule, i.e. every 180 days.

Vinyl covers should be cleaned and conditioned for maximum life

### **Change the filter**

May appear on a regular schedule, i.e. every 365 days.

Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.

### **Change the UV**

May appear on a regular schedule.

Change the UV as instructed by the manufacturer.

### **Check ozone**

May appear on a regular schedule.

Check the ozone generator as instructed by the manufacturer.

### **Service check-up**

May appear on a regular schedule.

Do a service check-up as instructed by the manufacturer.

## **Warning! Qualified Technician Required for Service and Installation**

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.