

# TP200 PANEL

## User Guide

*Standard Menu*



Your Single Source Solution

# THANK YOU

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This user guide  
TP200, TP2

TP200 PANI

TP240 PANI

TP260 PANI

BP CONTROL  
Software Version: 7.0 a

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**25** **PANEL MESSAGES**

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# SEQU

**RED LCD CHARACTER**  
Red indicates flashing segments flash when Temperature.

**BLUE LCD CHARACTER**  
Blue indicates an alarm. When you view Temperature.

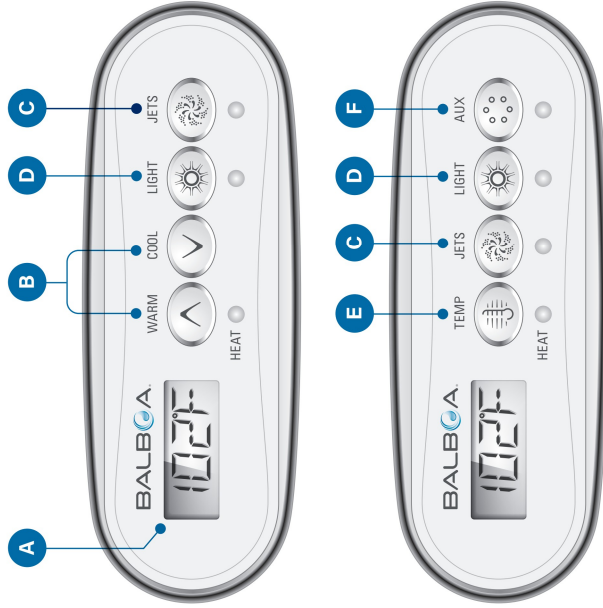
**TEMPERATURE ERROR**  
The TEMP button indicates the TEMP button in the Set Temperature setting the Heat Mode.

**LIGHT BUTTON**  
The LIGHT button indicates the LIGHT button.

**HOLLOW DOTS**  
Hollow dots indicate the temperature. For example, when you press the LIGHT button, the LIGHT button, the temperature, and your moments, and your moments.

**SOLID DOTS**  
Solid dots indicate the temperature. For example, when you change the Set Temperature, the Screen will appear the same applies to other.

# PANEL INTERFACE & TERMINOLOGY



## Main Screen

The Main Screen (A) displays the water temperature by default. The water temperature does not flash. If you press the TEMP button, the water temperature is replaced by the Set Temperature. The Set Temperature flashes.

## Set Temperature

The Set Temperature is programmed by you.

## TEMP

TEMP is an umbrella term that refers to panel buttons that control temperature. For example, TEMP refers to these buttons (B)(E).

## TEMP Button(s)

In addition to controlling the Set Temperature, use the TEMP buttons to initiate actions while changing various settings.

## LIGHT Button

In addition to turning On/Off the spa lights, use the LIGHT button (D) to navigate menus. Also, when you change settings such as Time-of-Day or Filter Cycle duration, make sure you press LIGHT to save your settings. If you don't press LIGHT, the Main Screen will appear automatically and your setting will not be saved in most cases.

## JETS Button

The JETS button (C) will control a one-speed pump or a two speed pump. It depends on how your spa is configured.

## AUX Button

# MAIN

Follow this sequence  
If you are navigating,  
you want to go back  
pause a few moments  
automatically.

## SEQUENCE KEY

(View page 2 for full description)

- Flashing characters
- Progressive message
- Press TEMP button for "Time-of-Day"
- Press LIGHT button to "Save"
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may be saved

# SET TIME-OF-DAY

# Be sure to set the Time-of-Day

Setting the Time-of-Day can be important for determining water filtration times and other background features.

In this example we will change the Time-of-Day from 8:57 PM to 7:30 PM. Follow the same sequence to set the Time-of-Day for your spa.

If Time-of-Day has not been set, SET TIME will flash on the display in the TIME menu.

You can choose a 12-hour or 24-hour time display (See Page 44). CE control systems default to a 24-hour time display.

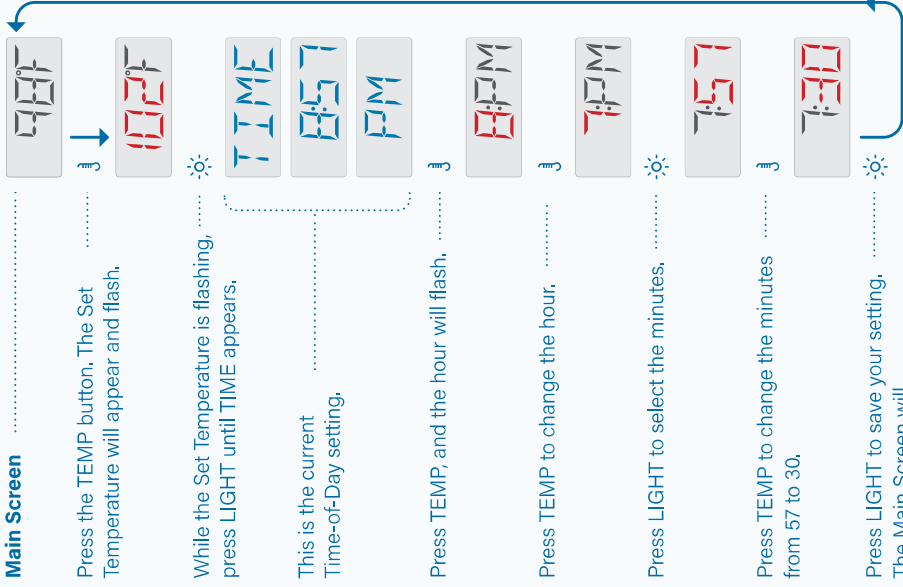
NOTE:

This note refers to systems that do not keep track of Time-of-Day when powered down.

If power is interrupted to such systems, Time-of-Day is not stored. The system will still operate and all other user settings will be stored. If filter cycles are required to run at a particular time of day, resetting the clock will return the filter times to the actual programmed periods.

## SEQUENCE

## Main Screen



If you do not press LIGHT, your setting will not be saved, and the Main Screen will appear momentarily.

# CHAN SETTI

## Change the Set Te

When using a panel temperature button, COOL will cause the Pressing a temperature the Set Temperature on the button. When spa will heat to the required.

If the panel has a single button, pressing TEMP will cause the display to flash. Pressing TEMP again will Set Temperature to 16°C (61°F) (DOWN). After allowing the display to flash, pressing the TEMP button again will Set Temperature to flash 18°C (64°F). To change the Set Temperature to 19°C (66°F) direction (e.g. DOWN), press the panel button again.

You can choose an  
(See Page 42). CE c

## Press-and-Hold

If a Temperature bulb is used, the temperature will be maintained when the Set Temperature is reached.

# SET FILTER CYCLE TIMES

## Main Filtration

Filter cycles are set using a start time and a duration. Hours are adjusted in 1-hour increments, and minutes are adjusted in 15-minute increments. The end time is calculated and displayed automatically.

## Filter Cycle 1

In this example, we will do the following:

- View the current start time
- View the duration
- Set the start time to 8:00 PM
- Set the duration to 3 hours

This means Filter Cycle 1 will end at 11:00 PM. Follow the same sequence to set Filter Cycle 1 for your spa.

View the next page to set the start time and duration for Filter Cycle 2.

### SEQUENCE KEY ( View page 2 for full description )

- Flashing characters
- Progressive message
- ⏏ Press TEMP button for "action"
- ☀ Press LIGHT button to "select"
- ⋮ Pause / back to Main Screen / setting not saved
- ⋮ Pause / back to Main Screen / setting saved
- ⋮ Menu Items may or may not appear

## SEQUENCE

### Main Screen

Press the TEMP button. The Set Temperature will appear and flash.

While the Set Temperature is flashing, press LIGHT until F1 appears. F1 is an abbreviation for "Filter Cycle 1".

Press TEMP. The following message means you are about to set the start time of Filter Cycle 1.

Press TEMP to view the current start time. In this example, the start time is 7:00 PM.

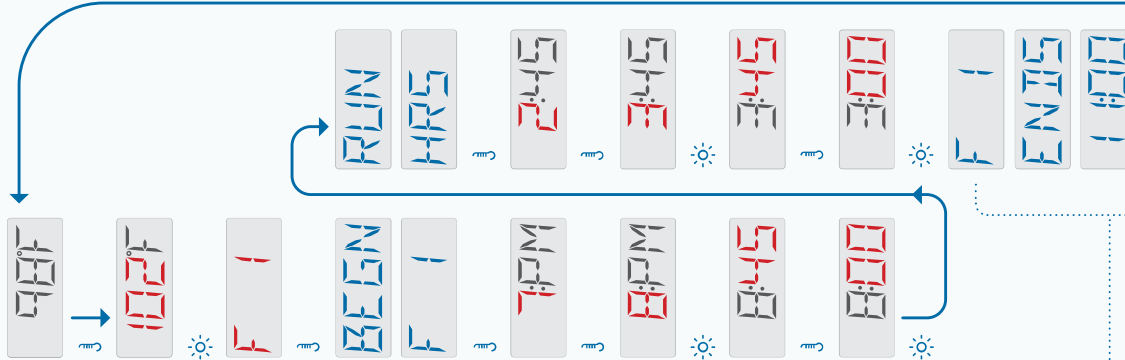
Press TEMP change the hour from 7 to 8.

Press LIGHT to select the minutes.

Press TEMP to change the minutes from 45 to 00.

Press LIGHT to save your setting. The following message means you are about to set the duration. The same sequence is used to set the start time and the duration.

This message means Filter Cycle 1 will end at 11:00 PM.



# SET FI

## Filter Cycle 2

In this example, we

- Turn On Filter Cycle 2
- View the current start time
- View the duration
- Set the start time
- Set the duration

This means Filter Cycle 2 is on at 11:00 AM. Follow the same sequence to set Filter Cycle 2 on your spa.

Filter Cycle 2 is optional. If you have a default on most controllers, you can turn it off. However, you can turn it on if you want. It is possible to over-ride the default. Filter Cycle 2, which is the duration of filtration by the over-ride.

## Purge Cycles

The heater pump (v) will run for the whole duration of the purge cycle. In order to maintain a secondary Pump, a secondary Pump will purge water from the plumbing by running the pump at the beginning of each filter cycle. If Filter Cycle 1 is set to 11:00 PM, enabling Filter Cycle 2 will purge when Filter Cycle 2 is on.

# RESTRICTING OPERATION

The panel can be restricted to prevent unwanted use.

## Lock Panel

Locking the panel prevents the panel from being used, but all automatic functions are still active. Follow this sequence to Lock the panel.

### SEQUENCE



If you do not press LIGHT, your setting will not be saved, and the Main Screen will appear momentarily.

## Unlock Panel

Follow this sequence to unlock the panel.  
This unlock sequence is a screen that may be restricted panel.

*NOTE: If the panel has a temperature button (view button) it will work in the L*

### SEQUENCE KEY

( View page 2 for full description )

- Flashing characters
- Progressive message
- Press TEMP button for “ ”
- Press LIGHT button to “ ”
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may

# RESTRICTING OPERATION (CONTINUED)

## Lock Temperature & Settings

Follow this sequence to lock the temperature and settings.

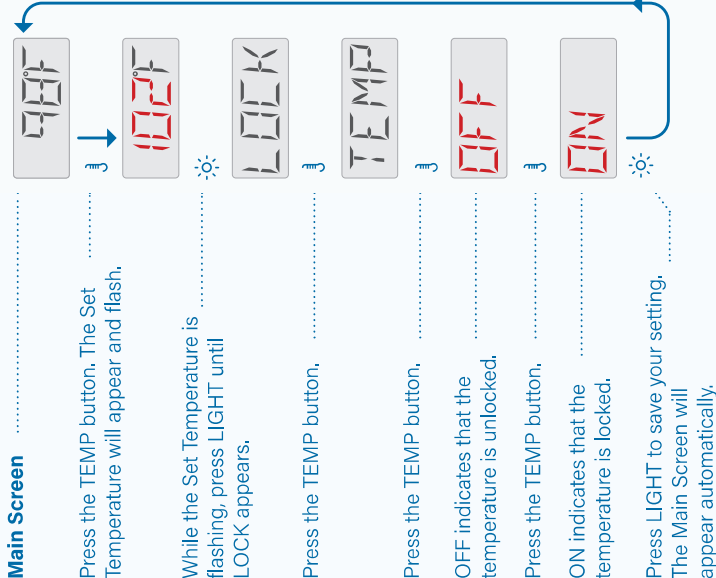
Locking the Temperature allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

Temperature Lock allows access to a reduced selection of menu items:

- View the Set Temperature
- FLIP
- LOCK
- UTIL
- INFO
- FAULT LOG

The next page illustrates how to Unlock the Temperature and Settings.

## SEQUENCE



If you do not press LIGHT, your setting will not be saved, and the Main Screen will appear momentarily.

## Unlock Temperature

Follow this sequence to unlock the temperature and settings.

This unlock sequence is shown on the screen that may be restricted panel.

*NOTE: If the panel has a temperature button (view button) it will work in the unlock sequence.*

## SEQUENCE KEY

(View page 2 for full description)

- Flashing characters
- Progressive message
- ⏸ Press TEMP button for "Pause"
- ☀ Press LIGHT button to "Save"
- ⋮ Pause / back to Main Screen
- ⋮ Pause / back to Main Screen
- ☐ Menu Items may be changed

# INVERT DISPLAY

Follow this sequence to invert the display.

This display is inverted (A), and this display is not inverted (B).



# HOLD

## HOLD MODE

Follow this sequence to enter Hold Mode. Hold Mode is used during service function replacing the filter. This mode is active for 1 hour unless it is terminated by pressing the LIGHT button.

## SEQUENCE

### Main Screen

Press the TEMP button. The Set Temperature will appear and flash.

While the Set Temperature is flashing, press LIGHT until FLIP appears.

Press TEMP to flip the display.

Press LIGHT to save your setting. The Main Screen will appear automatically.

If you do not press LIGHT, your setting will not be saved, and the Main Screen will appear momentarily.

Follow the same sequence to restore the default display orientation (B).

### SEQUENCE KEY

(View page 2 for full description)

- Flashing characters
- Progressive message
- Press TEMP button for "HOLD"
- Press LIGHT button to "EXIT"
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may be displayed

# HOLD MODE + DRAIN MODE

## DRAIN MODE

Some control systems have Drain Mode, which is a component of Hold Mode. Drain Mode allows a pump to be employed when draining the water.

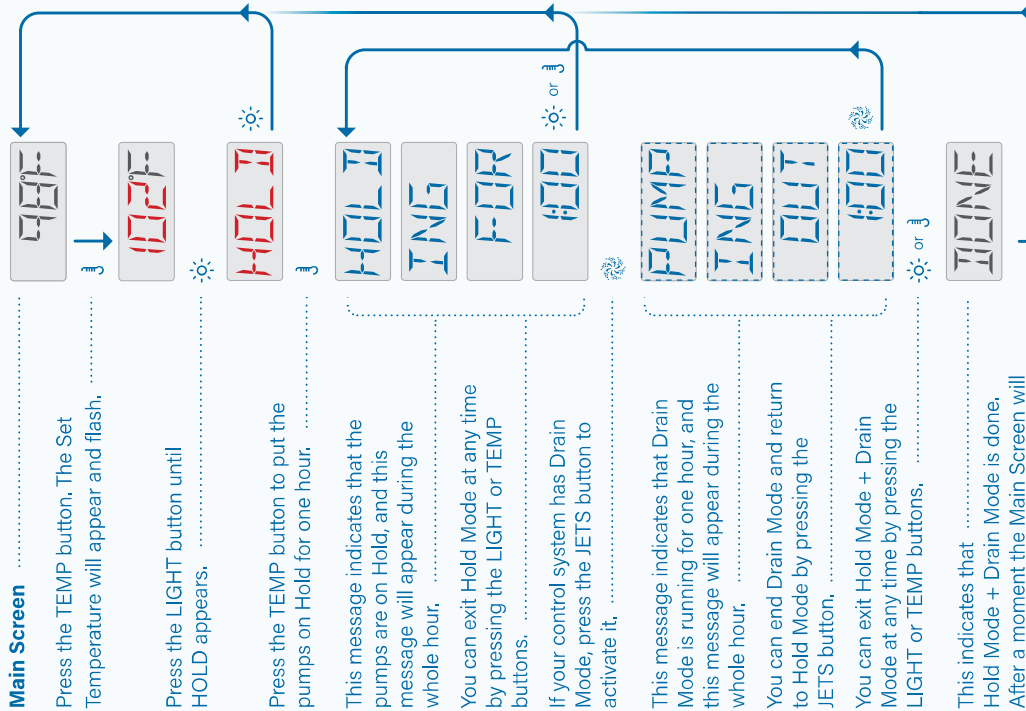
Follow this sequence to use Hold Mode + Drain Mode.

### SEQUENCE KEY

( View page 2 for full description )

- Flashing characters
- Progressive message
- ⏏ Press TEMP button for "action"
- ☀ Press LIGHT button to "select"
- ⋮ Pause / back to Main Screen / setting not saved
- ⋮ Pause / back to Main Screen / setting saved
- ☐ Menu Items may or may not appear

## SEQUENCE



# LIGHT PROG

## Light Timer Option

If LITE TIMR does r in the Main Menu, t Timer feature is not the manufacturer of

In this example, we the following:

- Turn On the Light T
- Set the start time to
- Set the duration to 3

This means the Light will end at 11:00 AM the same sequence Light Timer on your

When available, the Timer is OFF by def

# SPA BEHAVIOR

## FILTRATION AND OZONE

If your spa does not have a circulation pump, pump 1 low and the ozone generator will run during a filter cycle. If your spa has a circulation pump, the ozone will run with the circulation pump.

Many control systems are 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 cycle time and duration are programmable (view page 7). A second filter cycle can be enabled as needed.

On most systems at the start of each filter cycle, the blower (if there is one) or Pump 2 (if there is one) will run briefly to purge its plumbing to maintain good water quality.

On some systems, purge cycles may run several times a day, independent of the filter cycle.

## FREEZE PROTECTION

If the temperature sensors within the control system's heater detect a low enough temperature, then the pump(s) and the blower automatically activate to provide freeze protection. The pump(s) and blower will run either continuously or periodically depending on conditions.

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. Auxiliary freeze sensor protection acts similarly except with the

## CLEAN-UP CYCLE *(Optional)*

When a pump or blower is turned on by pressing a button on the panel, 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 control system. On some control systems, you can change this setting (view page 45).

## PUMPS

Press the **JETS** button once to turn Pump 1 On or Off, and to shift between low-speed and high-speed if equipped. If left running, Pump 1 will turn off after a time-out period.

The heater pump will run when the blower or any other pump is on.

If the spa is in Ready Mode (view page 20), Pump 1 low may also activate for at least 1 minute every once in a while 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.

## 3 CIRCULATION PUMP MODES

If the spa is equipped with a circulation pump, it will be configured to work in one of the following three modes:

**MODE 1:** The circulation pump will operate

**MODE 3:** A programmable pump will come on when the control system detects water temperature (polling) during freeze condition and the pump is on.

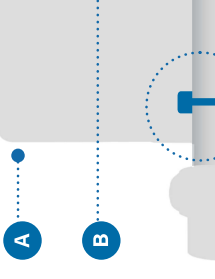
Circulation pump mode is set by the Manufacturer and cannot be changed in the field.

## HOW DOES YOUR SYSTEM CHECK THE WATER TEMPERATURE?

The control system (A) circulates water from the heater (B) shown below two temperature sensors around the sensors, then the water temperature. The control system polls the sensors as "polling" in this user

## HEATER PUMP

The heater pump is any pump circulating water through the spa. The heater pump will serve as the heater pump if the heater pump not have a circulation pump. The heater pump will serve as the heater pump if the heater pump is a two-speed pump, and the heater pump will automatically (for any reason) turn on the water temperature)



# HEAT SETTINGS

Keep your spa heated and ready to enjoy, or keep it cool and save energy. Heat Settings help you do both.

Heat Settings are divided into two groups.

- 1 - Heat Modes
- 2 - Temperature Ranges

## HEAT MODES

There are three Heat

### 1 - READY MODE

Ready Mode usually heats water temperature to Set Temperature 24 hours. If you use your spa you probably want to use Ready Mode.

### 2 - REST MODE

Rest Mode only heats during filter cycles. Use your spa for an extended period of time, you will need to use Rest Mode.

### 3 - READY-IN-REST

This mode is a subfunction of Rest Mode. When you are in Rest Mode, and you press the JETS button, Ready-In-Rest Mode will automatically switch to In-Rest Mode for one hour. During this hour the heating system will attempt to maintain the water temperature. After the hour, it will return to Set Temperature.

# HEAT MODES

Follow this sequence to view the current Heat Mode and/or change the Heat Mode. There are two Heat Modes you can select from the panel menu:

- 1 - Ready Mode (RDY)
- 2 - Rest Mode (REST)

Ready-In-Rest Mode (RRST) is a third Heat Mode. But, it is a subfeature of Rest Mode and is not selectable from the panel menu.

However, when you follow the sequence to view the current Heat Mode, any of the three Heat Modes can be displayed as the current Heat Mode.

# TEMP

## SEQUENCE

### Main Screen

Press the TEMP button. The Set Temperature will appear and flash.

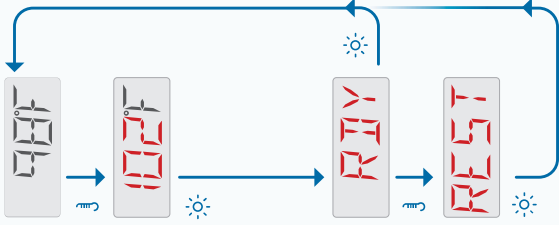
While the Set Temperature is flashing, press LIGHT until one of the following Heat Modes appears: RDY, REST, RRST. The first one to appear is the current Heat Mode setting.

In this example RDY appears first, which means the current Heat Mode is set to READY. If you wait for a moment, the Main Screen will appear automatically, and the Heat Mode setting will remain READY.

If you want to change the Heat Mode to REST, press the TEMP button.

REST indicates that the Heat Mode will be set to REST.

Press LIGHT to save your setting. The Main Screen will appear automatically. If you do not press LIGHT, your setting will not be saved, and the Main Screen will appear momentarily.



## NOTES

### REST MODE

When the spa is in REST Mode (REST), the Main Screen will alternate between displaying the water temperature and REST.

### READY-IN-REST MODE

If you press the JETS button while in Rest Mode, the spa will switch to Ready-In-Rest Mode (RRST) for one hour.

# 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 during the filling process. Air may be trapped in the plumbing after filling the spa. Remove trapped air by priming the pumps. Priming will be discussed shortly.

After powering On the spa at the main power panel, the spa panel display (view right) will go through a specific sequence. This sequence is normal and will display a variety of information regarding the configuration of the control system. After the sequence ends, the control system will start Priming Mode.

## PRIMING MODE

Priming Mode will last for 4-5 minutes, or you can manually exit Priming Mode after the pump(s) have primed.

Regardless of whether Priming Mode ends automatically or you manually exit Priming Mode, the control system automatically returns to normal heating and filtering at the end of Priming Mode. During Priming Mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater under low-water-flow or no-water-flow conditions. Nothing comes on automatically, but the pump(s) can be energized manually with the panel buttons.

## PRIMING THE PUMPS

This panel message (view right) indicates that the spa is in Priming Mode. Priming Mode lasts 4-5 minutes. Note: Turning the power Off and back On again will initiate a new pump priming session. If you need more than 4-5 minutes to prime all of the pumps, cycle power to the spa.

What is priming?



Spa Panel Display

Priming Mode  
Panel Message



**Follow these steps to**  
Press the button for the pump again to run the pump. If priming is not complete

**Follow these steps to**  
**circulation pump:**

Press the button for the priming is not complete. Sometimes momentarily this more than 5 times. call for service.

**Which pump is the heater**

When the spa has just water flows. If so, you have two-speed pump service the LIGHT button (in Priming Mode) pressing the JETS button

*The heater pump is an important pump*

Once the heater pump control one of these pumps. **IMPORTANT:** A pump should run for 4-5 minutes. Under NO circumstances should you go beyond the end of the 4-minute cycle. If the pump and in some cases overheat condition.

## EXITING PRIMING MODE

Priming Mode ends automatically. To exit Priming Mode during the 4-5 minute cycle

When Priming Mode ends, the control system will be replaced by the normal control system.

# PANEL MESSAGES

Helpful information to help keep  
your spa running smoothly

This chapter lists all of the Panel Messages and explains each one. Some Panel Messages have corresponding Message Codes. If so, the Message Code (B) appears next to the Panel Message (A).

## MESSAGE CODES

The easiest way to explain a Message Codes is with a troubleshooting scenario. For example, what happens if the spa water overheats? The panel will display this message (A). The control system will capture the following information and save it in a fault log:

- Time-Of-Day.
- Water temperature, Set Temperature.
- The number of days that have passed since the water overheated.
- Temperature Range.
- Heat Mode.
- Message Code (B).

The Message Code links the Panel Message to the corresponding Fault Log information. For example, this Message Code (B) will appear in the corresponding Fault Log. See how to review the Fault Log on page 55.



PANEL MESSAGES

# GENERAL



**This message indicates that the spa is in Priming Mode.**

Each time the spa is powered up, it will enter Priming Mode. The purpose of Priming Mode is to allow the user to run each pump and manually verify that the pumps are primed (air is purged) and water is flowing. This typically requires observing the output of each pump separately, and is generally not possible in

normal operation. Priming Mode lasts 4 minutes, but you can exit it earlier by pressing any Temp button. The heater is not allowed to run during Priming Mode.

NOTE: If your spa has a circulation pump, you can turn it On by pressing the LIGHT button during Priming Mode. The circulation pump will run by itself when Priming Mode is exited.



**The water temperature is unknown or out of date.**

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

This display may also appear if the pump has not run for more than one hour while the spa is in Ready Mode.



**The water is too cold - freeze protection.**

A potential freeze condition has been detected, or the Aux Freeze Switch has closed, so all pumps and blowers are activated. All pumps and blowers are ON for at least 4

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 spa water is too cold.**

One of the water temperature sensors has detected a temperature of 110° or below. The Control System will shut down the heater and the ambient air temperature will be displayed.



**J29 Warning.**

J29 is a connector for a heater disable input. If this message appears at power-up, this may indicate a heater disable input at power-up. This message will disappear if the heater is powered on. If this message appears at power-up, this may indicate a heater disable input at power-up. This message will disappear if the heater is powered on. If this message appears at power-up, this may indicate a heater disable input at power-up. This message will disappear if the heater is powered on.

## Water Flow

- Make sure the spa is properly vented for proper water flow to the heater.
- Closed valves can restrict water flow.

PANEL MESSAGES

# HEATER RELATED

Control System



HTR FLOW LOSS | MD 16 Message Code \*

**Low water flow through the heater. \*\***

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 "Water Flow Check List" on page 28.

HTR FLOW FAIL | MD 17 Message Code \*

**Inadequate water flow through the heater. \*\***

There is not enough water flow through the heater to carry the heat away from the heating element, so the heater has been disabled. See "Water Flow Check List" on page 28. After the problem has been resolved, you must press any button on the panel to reset the control system and begin heater start up.

HTR MAY

**The heater may be dry. \*\***

Possible dry heater, The spa is shut down the heater start-up.

HTR TRY

**Heater is dry. \*\***

There is not enough water flow through the heater to carry the heat away from the heating element. After the problem has been resolved, you must press any button on the panel to reset the control system and begin heater start up.

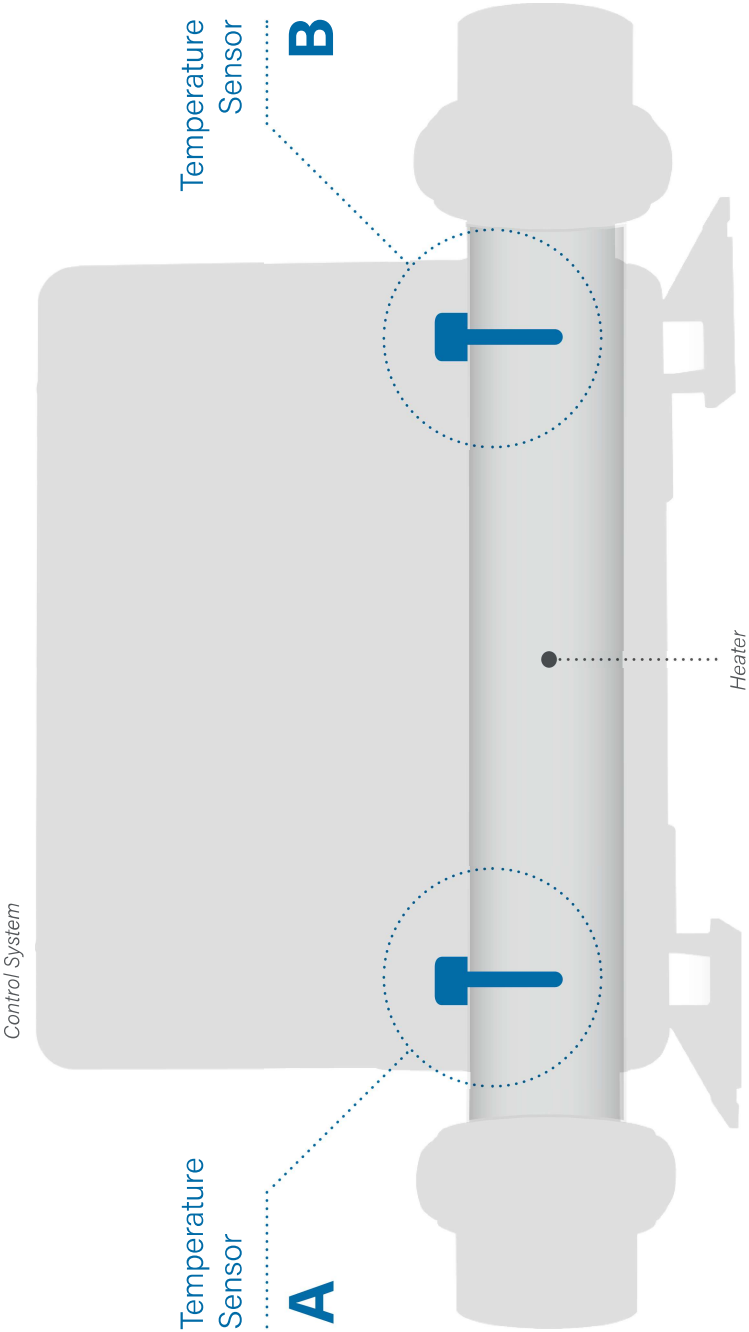
HTR TOO

**The heater is too hot. \*\***

One of the water temperature sensors in the heater and the control panel has failed. Press any button on the panel to reset the control system and begin heater start up.

PANEL MESSAGES

# TEMPERATURE SENSOR RELATED



**The temperature s**  
The temperature se  
the panel display, th  
Contact your dealer



**Temperature sens**  
Either temperature  
Contact your dealer



**Temperature sens**  
Either temperature  
Contact your dealer

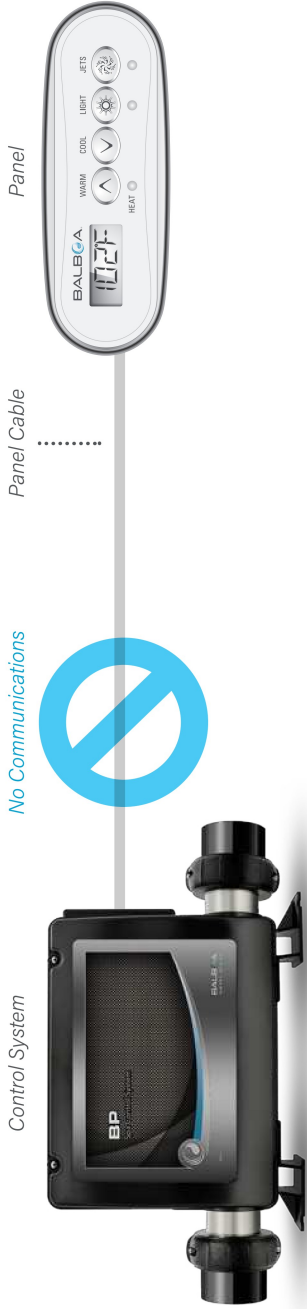
PANEL MESSAGES

# MISCELLANEOUS



### No Communications.

The panel is not receiving communication from the control system. Contact your dealer or service organization.



### °F or °C is replaced by °T.

The Control System is in Test Mode. Contact your dealer or service organization.

PANEL MESSAGE

# CONT



### Memory Failure - (

At Power-Up, the sy  
Test. This indicates  
program). Contact y



### Memory Warning

Appears after any s  
or service organizat  
than one power-up  
running normally fo



### Clock Error. \*\*

The clock that keep  
has failed. Contact  
*Note: Not Applicable on*



# REMIN

General m  
helps you

Reminder message  
Main Screen.

Reminder Message  
individually by the M  
be disabled entirely  
number of Reminde



CHECK CHECK

## Check the sanitiz

This message may  
Check sanitizer lev  
chemistry with a te

GFCI FAIL ----- | M036 Message Code \*

### GFCI Failure - System Could Not Test/Trip the GFCI.

NORTH AMERICA ONLY. May indicate an unsafe installation.  
Contact your dealer or service organization.

STUCK PUMP ----- | M034 Message Code \*

### A Pump Appears to be Stuck ON.

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

HOT F-A-I-L-T ----- | C-A-L-L F-O-R S-E-R-V-I-C-E M035 Message Code \*

### 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.

WATER LEVEL

### The water level is too low.

Some systems have a water level detector, and this message appears if it detects that the water level is too low. Pumps are

TEST GFCI

Test the GFCI or RCD.

This message may appear every 30 days. The Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) is an important safety device and must be tested on a regular basis to verify its reliability.

Every user should 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.

CHNG WATER

Change the spa water.

This message may appear every 90 days. Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.

TRT WOOD

Treat the wood.

This message may appear every 180 days. Wood skirting and furniture should be cleaned

Warning:

If freezing conditions exist, a GFCI or RCD should be reset immediately or spa damage could result. If the GFCI or RCD does not reset and freezing conditions exist, drain the spa of all water until the spa is functional again.

The end user should always trained to test and reset the GFCI or RCD on a regular basis.

CLN COVER

Clean the spa cover.

This message may appear every 180 days. Vinyl covers should be cleaned and conditioned for maximum life.

CHNG FLTR

Change the water filter.

This message may appear every 360 days. Filters should be replaced occasionally to

CHNG CAR

Change the mineral as needed.

Install a new mineral manufacturer's instal

SRVC CHEM

Your spa needs a

This message may Contact your service service check.

# PREFERENCES

Fine-tune your spa's settings



# PREFERENCES MENU

This is the Preferences menu structure.



# DISPL

Follow this sequence to set your panel to Fahrenheit or Celsius. Most North American systems default to Fahrenheit and most European systems default to Celsius.

## SEQUENCE KEY

( View page 2 for full description )

- Flashing characters
- Progressive message
- Press TEMP button for "j"
- Press LIGHT button to "sun"
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may be changed

# TURN ON/OFF REMINDERS DISPLAY

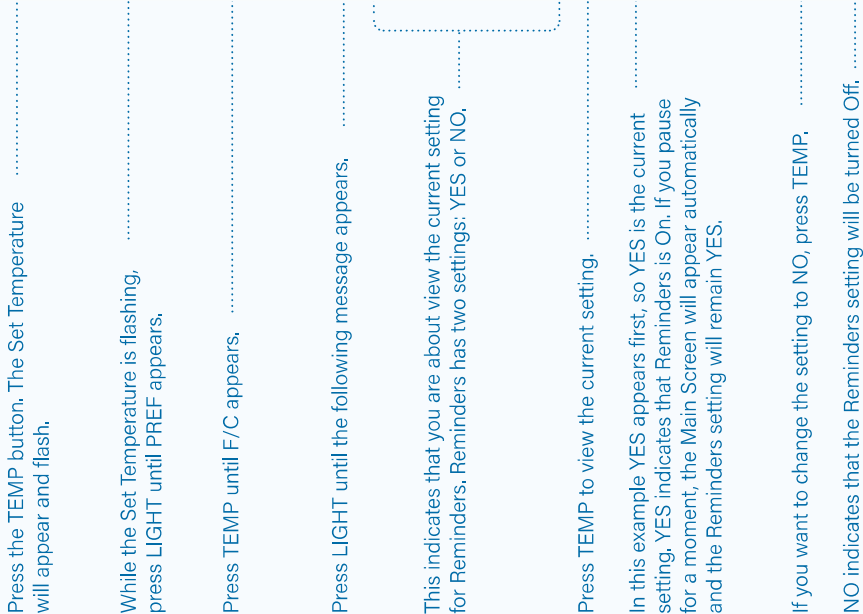
The Reminders Display feature has two settings: YES, NO. YES means the feature is On and Reminders will be displayed. NO means the feature is Off and Reminders will not be displayed.

Note: Reminders continue to run in the background even when not displayed. So, turning the display of Reminders On/Off does not reset any Reminder counts.

Follow this sequence to view the current setting and to turn this feature On or Off.

## SEQUENCE

### Main Screen



# SET 12 HOUR

The Clock feature has settings: 12 hours or Follow this sequence the current Clock settings change the setting.

## SEQUENCE KEY

- (View page 2 for full description)
- Flashing characters
- Progressive message
- Press TEMP button for "
- Press LIGHT button to "
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may

# SET CLEANUP CYCLE DURATION

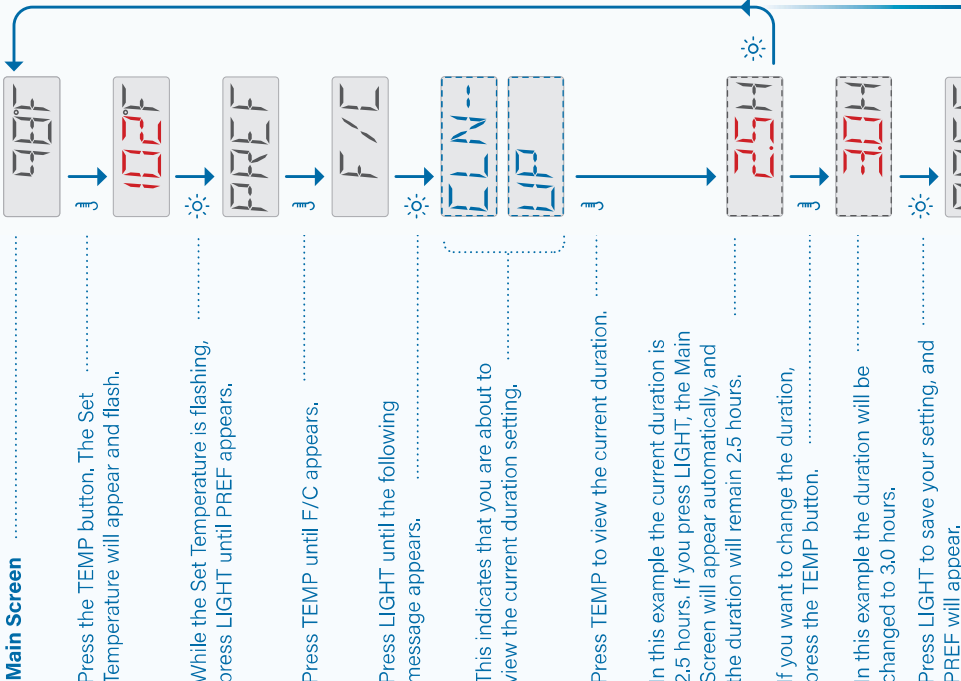
Follow this sequence to view the current Cleanup Cycle duration or change the duration.

The duration can be set from 0 - 4 hours in 30 minute increments.

The heater pump will run during a Cleanup Cycle. View page 18 for more information on the heater pump.

*Cleanup Cycle is not available on all control systems.*

## SEQUENCE



# TURN

Follow this sequence to view the current M8 setting and change the setting.

M8 is artificial intelligence contained in your system. M8 looks for opportunities to reduce device usage by evaluating temperature readings and temperatures equal to or less than the setpoint and less wear and tear on the system.

*M8 is not available on all control systems.*

## SEQUENCE KEY

(View page 2 for full description)

- Flashing characters
- Progressive message
- Press TEMP button for " "
- Press LIGHT button to " "
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may

# UTILITIES

Helpful tools and information  
for spa technicians





# GFCI TEST FEATURE

The GFCI test feature is not available on CE rated control systems.

A GFCI is an important safety device and is required equipment on a hot tub installation.

Your spa may be equipped with a GFCI Protection feature. (UL rated systems only.) If your spa has this feature enabled by the manufacturer, the GFCI Trip Test must occur to allow proper spa function.

Within 1 to 7 days after startup, the spa may trip the GFCI to test it. (The number of days is factory programmed.) The GFCI must be reset once it has tripped. After passing the GFCI Trip Test, any subsequent GFCI trips will indicate a ground fault or other unsafe condition and the power to the spa must be shut off until a service person can correct the problem.

## Forcing the GFCI Trip Test

The installer or spa owner can cause the GFCI Trip Test to occur at any time by following the sequence on the next page.

The GFCI should trip within a few seconds and the spa power should shut down. If the GFCI does not trip (see next page), shut down the power to the spa.

The installer or service technician should:

- Manually verify that a GFCI breaker is installed and that the circuit and spa are wired correctly.
- Verify the function of the GFCI with its own test button.
- Restore power to the spa and repeat the GFCI Trip Test.

Once the GFCI is tripped by the test, reset the GFCI and the spa will operate normally from that point. You can verify a successful test by following the sequence on page 54. PASS should appear after a temp button is pressed from the GFCI screen.

The end user should always be trained to test and reset the GFCI on a regular basis.

Follow this sequence:  
If the test is successful,  
If the test is unsuccessful,  
powered Off, and a  
fix the electrical problem.

## SEQUENCE KEY

(View page 2 for full description)

- Flashing characters
- Progressive message
- ⏏ Press TEMP button for "Off"
- ☀ Press LIGHT button to "On"
- ⋮ Pause / back to Main Screen
- ⋮ Pause / back to Main Screen
- ⋮ Menu Items may vary

# GFCI TEST FEATURE

(CONTINUED)

Follow this sequence to reset the GFCI test feature and bring it back to its armed state within the control system.

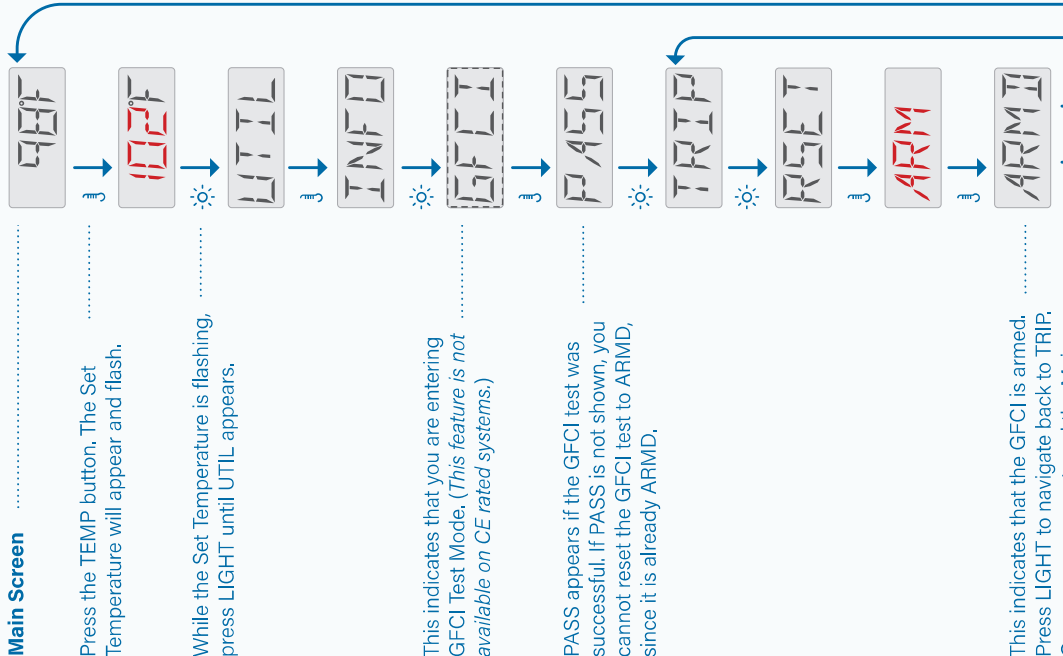
You may want to reset the GFCI test feature if the spa is about to be moved to a new location, so that it will need to be re-tested after installation at the new location.

### SEQUENCE KEY

( View page 2 for full description )

- Flashing characters
- Progressive message
- ⌄ Press TEMP button for "action"
- ☀ Press LIGHT button to "select"
- ⋯ Pause / back to Main Screen / setting not saved
- ⋯ Pause / back to Main Screen / setting saved
- Menu Items may or may not appear

### SEQUENCE - RESET GFCI TEST



Follow this sequence to reset the GFCI test feature and bring it back to its armed state within the control system.

You may want to reset the GFCI test feature if the spa is about to be moved to a new location, so that it will need to be re-tested after installation at the new location.

Follow this sequence to reset the GFCI test feature and bring it back to its armed state within the control system.

The current status is in the ARMED state.

If the last screen of the sequence displays PASS, the test was performed successfully.

If the last screen of the sequence displays ARMED, either the test has been performed successfully or the GFCI test was not performed.

UTILITIES

# FAULT LOG

A Little History can help a lot.

Useful information about your spa is captured when a fault occurs. The information is stored in a Fault Log. Up to 24 faults can be stored in the Fault Log. The diagram below shows the information that is captured in one fault. This information can help spa technicians

diagnose and fix issues. The sequence on the next page shows how to view the fault log.

Not every entry in the Fault Log is an actual "fault". For example, message code MO19 is inserted into the fault log to identify each time the spa restarts.

Fault Number

FT:24

"Message Code"

MO 16

Number of Days

0005

Each time a fault occurs, it is assigned a unique number, starting with number 1. The next fault is assigned number 2, and so on. Up to 24 faults can be stored in memory. In this example the fault number is 24. The fault with the highest fault number is the most recent fault.

Each fault is assigned a message code. The code corresponds with a panel message. In this example the message code is MO16. All panel messages and message codes are listed and explained in the chapter titled "Panel Messages".

This screen indicates the number of days that have passed since the fault occurred. In this example, 5 days have passed. Each time power to the spa is cycled Off and On again, a new day is added.

## INFORMATION CONTAINED IN ONE FAULT

Time when fault occurred

12:00 PM

Set Temperature

102°F

Temperature Range

TR:HI

Heat Mode

RTV

Water Temperature

Sensor Name

In this example the Set Temperature is 102°F. The Temperature Range setting is High, and the Heat Mode setting is Ready. View page 20 for information on Heat Modes. View page 20 for information on Temperature Ranges.

## SEQUENCE

### Main Screen

- Press the TEMP button. The Temperature will appear and
- While the Set Temperature is flashing, press LIGHT until UTIL appears.
- Press TEMP until INFO appears
- Press LIGHT until FAULT LOG appears,
- This indicates that you are entering the Fault Log list.
- This is Fault number 24. Press TEMP to view the information Fault 24. Or, press LIGHT to view fault 23.
- This is the Message Code. View the chapter titled "Panel Messages" for an explanation of the message codes.
- This is the number of days that have passed since the fault occurred.
- The fault occurred at this time
- This was the Set Temperature
- This was the Temperature Range
- This was the Heat Mode.

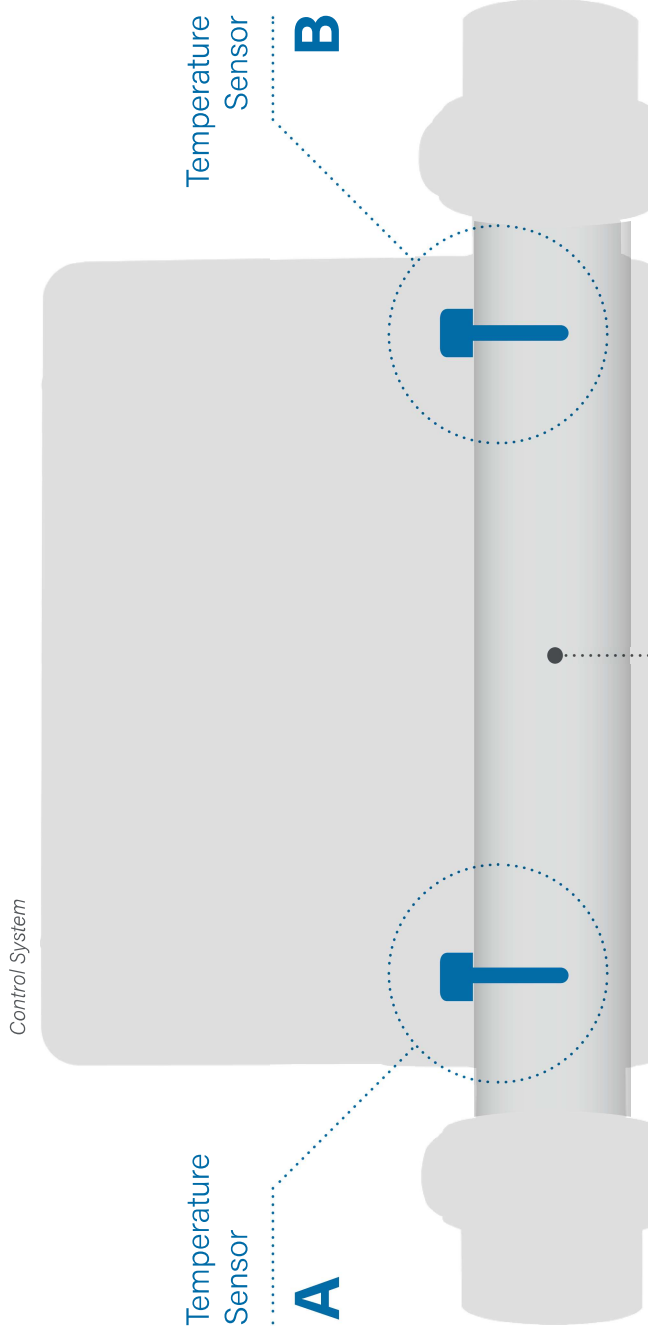
UTILITIES

# TEMPERATURE SENSOR READINGS

The control system calculates water temperature by using readings from two sensors located inside the heater (view below). One sensor is named A; the other, B.

*Going from left to right, the sensor order may be A and B, or B and A. The order depends on how the sensors are connected to the control system.*

Spa technicians can view separate readings directly from sensor A and sensor B for diagnostic purposes.



Follow this sequence to view temperature readings from sensor A and sensor B on the

**SEQUENCE KEY**  
(View page 2 for full description)

- Flashing characters
- Progressive message
- Press TEMP button for " "
- Press LIGHT button to " "
- Pause / back to Main Screen
- Pause / back to Main Screen
- Menu Items may

# WARNING! Qualified Technician Required for Service and Installation.

## Basic Installation and Configuration Guidelines

- Use minimum 6AWG copper conductors only.
- Torque field connections between 21 and 23 in lbs.
- Readily accessible disconnecting means to be provided at time of installation.
- Permanently connected.
- Connect only to a circuit protected by a Class A Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) mounted at least 5' (1.52M) from the inside walls of the spa/hot tub and in line of sight from the equipment compartment.
- CSA enclosure: Type 2
- Refer to Wiring Diagram inside the cover of the control enclosure.
- Refer to Installation and Safety Instructions provided by the spa manufacturer.

**Warning:** People with infectious diseases should not use a spa or hot tub.

**Warning:** To avoid injury, exercise care when entering or exiting the spa or hot tub.

**Warning:** Do not use a spa or hot tub immediately following strenuous exercise.

**Warning:** Prolonged immersion in a spa or hot tub may be injurious to your health.

**Warning:** Maintain water chemistry in accordance with the Manufacturers instructions.

**Warning:** The equipment and controls shall be located not less than 1.5 meters horizontally from the spa or hot tub.

## Warning! GFCI or RCD Protection.

The Owner should test and reset the GFCI or RCD on a regular basis to verify its function.

## CSA Compliance/Conformité

### Caution:

- Test the ground fault circuit interrupter or residual current device before each use of the spa.
- Read the instruction manual.
- Adequate drainage must be provided if the equipment is to be installed in a pit.
- For use only within an enclosure rated CSA Enclosure 3.
- Connect only to a circuit protected by a Class A ground fault circuit interrupter or residual current device.
- To ensure continued protection against shock hazard, use only identical replacement parts when servicing.
- Install a suitably rated suction guard to match the maximum flow rate marked.

### Warning:

- Water temperature in excess of 38°C may be injurious to your health.
- Disconnect the electrical power before servicing.

### Attention:

- Toujours vérifier l'efficacité du disjoncteur différentiel avant d'utiliser différentiel avant d'utiliser le bain.
- Lire la notice technique.
- Lorsque l'appareillage est installé dans une fosse, on doit assurer un drainage adéquat.
- Employer uniquement a l'intérieur d'une clôture CSA Enclosure 3.
- Connecter uniquement a un circuit protege par un disjoncteur différentiel de Class A.
- Afin d'assurer une protection permanente contre le danger de shock électrique, lors de l'entretien employer seulement des pieces de rechange identiques.
- Les prises d'aspiration doivent etre equipees de grilles convenant au debit maximal indique.

### Avertissement:

- Des températures de l'eau supérieures a 38°C peuvent presenter un danger pour la sante.

# INFORM

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